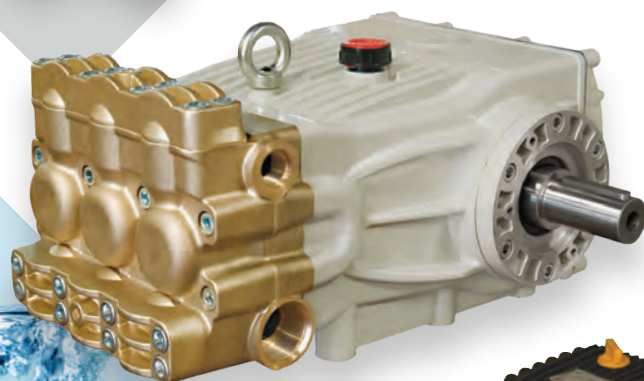


Your Partner for  
Industrial Applications

since 1918

**BERTOLINI**<sup>®</sup>  
pumps



# Piston Pumps

Master catalogue



**100%**  
made in **ITALY**

*Not just design...*

**more than 100 years of Engineering...**

*Piston Pumps*

L'Idromeccanica Bertolini nasce nel 1918, quando il fondatore, Ugo Bertolini, sognava di mettere la meccanica al servizio dell'uomo, alleviandolo dalla fatica del lavoro nei campi ed aumentando la fertilità e la resa economica delle colture.

*The Idromeccanica Bertolini dates all the way back to 1918 when the founder, Ugo Bertolini, dreamt to experiment with revolutionary solutions that would relieve the tiring hard work of the farm fields and would step up the fertility and the yield*

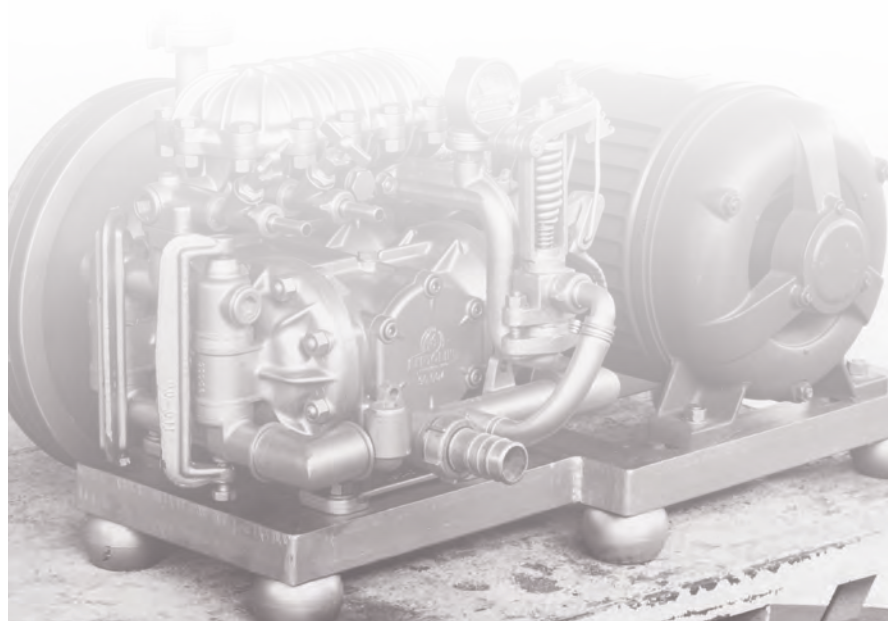




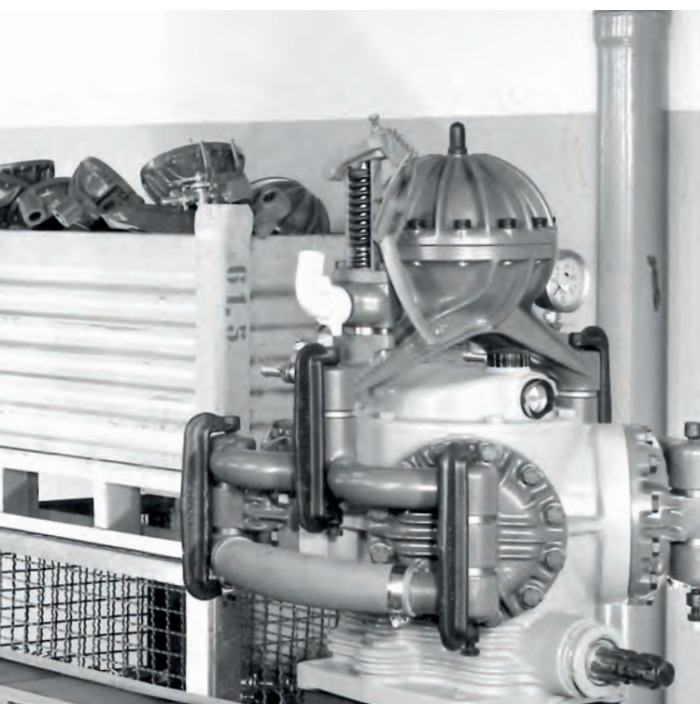
# Since 1918

Oggi la Bertolini è un'azienda moderna in grado di affrontare le sfide che il mercato propone quotidianamente con serenità e competenza, con uomini e mezzi di prim'ordine. In un mercato in evoluzione costante, l'ESPERIENZA acquisita negli anni dalla Bertolini è garanzia della sua capacità di rispondere a tutti i bisogni dei clienti, sia nel settore industriale che in quello agricolo.

*Today Bertolini is a modern Company able to handle daily market challenges professionally and with serenity, with its good people and its first class means. In a market that is progressing steadily, the EXPERIENCE acquired in the past are a guarantee of the Bertolini commitment to the customers needs today, with an eye on what the customers needs will be tomorrow and beyond, both in the industrial and in the agricultural sector.*



*“How many MILLIONS of  
BERTOLINI PUMPS  
are working in the world?  
Incalculable ...”*



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|                     |                                                                                                                                                                                                                                                     |                     |                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>BZ</b> <b>BZ</b> | Bielle in bronzo<br>Bronze conrods<br>Bielles en bronze<br>Bielas en bronce                                                                                                                                                                         | <b>T</b> <b>T</b>   | Bielle in lega Tonolli 328<br>Conrods in hyper 328 Tonolli alloy<br>Bielles en alliage Tonolli 328<br>Bielas en aleación Tonolli 328                                                                                      |
| <b>DX</b> <b>DX</b> | Uscita albero lato destro<br>Right drive shaft<br>Arbre côté droit<br>Cigüeñal lado derecho                                                                                                                                                         | <b>SX</b> <b>SX</b> | Uscita albero lato sinistro<br>Left drive shaft<br>Arbre côté gauche<br>Cigüeñal lado izquierdo                                                                                                                           |
| <b>F</b> <b>F</b>   | Flangia e giunto elastico per motore elettrico B3 -B14<br>Bell housing and flexible coupling for electric motor B3- B14<br>Brides avec accouplement elastique pour moteur électrique B3-B14<br>Brida con junta elástica para motor eléctrico B3-B14 | <b>R</b> <b>R</b>   | Carter reversibile, per uscita albero sinistra o destra<br>Reversible crankcase for left or right handed<br>Carter réversible pour arbre côté gauche ou droit<br>Cárter reversible para cigüeñal lado izquierdo o derecho |
| <b>O</b> <b>O</b>   | Pistone in ceramica di grande spessore idoneo per acqua calda<br>Increased thickness of ceramic piston for hot water use<br>Piston en céramique de forte épaisseur pour eau chaude<br>Pistón en cerámica de gran espesor para agua caliente         | <b>B</b> <b>B</b>   | Guarnizioni tenuta acqua in NBR (Buna)<br>NBR (Buna) water seals<br>Joints d'étanchéité eau en NBR (Buna)<br>Juntas agua en NBR (Buna)                                                                                    |
| <b>SS</b> <b>SS</b> | Corpo pompa in acciaio inox<br>Stainless steel pump head<br>Culasse pompe en acier inox<br>Culata bomba en acero inox                                                                                                                               | <b>M</b> <b>M</b>   | Kit piedini in lamiera d'acciaio zincati<br>Galvanized steel mounting rails kit<br>Kit supports en acier galvanisé<br>Kit soportes en acero zincado                                                                       |
| <b>G</b> <b>G</b>   | Riduttore per motore termico<br>Gearbox for gas/diesel engine<br>Réducteur pour moteur à essence/diesel<br>Reductor para motor térmico                                                                                                              |                     |                                                                                                                                                                                                                           |



Guarnizioni di assoluta affidabilità per acqua fino a 74°C (165°F)  
Superior sealing system for water up to 74° C (165°F)  
Joints d'étanchéité qui A des performances optimales pour eau jusqu'à 74°C (165°F)  
Juntas de gran fiabilidad para agua hasta 74°C (165°F)



Guarnizioni speciali per acqua calda fino a 85° C -185° F  
Premium seals for hot water up to 85°C -185°F  
Joints d'étanchéité spéciaux pour eau chaude jusqu'à 85°C-185°F  
Juntas especiales para agua caliente hasta 85°C-185°F

## APPLICAZIONI / APPLICATIONS / APPLICATIONS / APLICACIONES

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| Pulizia conto terzi<br>Contract cleaning<br>Nettoyage compte de tiers<br>Limpieza por cuenta de terceros   | Spurgo fogne<br>Sewer maintenance<br>Vidange d'égouts<br>Espurgo cloacas                                                                | Impianti anti-incendio<br>Fire alarm systems<br>Systèmes contre les incendies<br>Sistemas anti-incendio                                 | Automobile<br>Automotive<br>Automobile<br>Automóvil                                                                                                         |
| Processi industriali<br>Industrial process<br>Procédés industriels<br>Procesos industriales                | Tunnel di lavaggio<br>Tunnel wash<br>Tunnel de lavage<br>Túnel de lavado                                                                | Pulizia domestica di esterni<br>Household exterior cleaning<br>Nettoyage de la maison à l'extérieur<br>Limpieza domestica de exteriores | Pulizia di superfici<br>Surface cleaning<br>Nettoyage de surfaces<br>Limpieza de superficies                                                                |
| Pulizia vasche<br>Tank cleaning<br>Nettoyage cuves<br>Limpieza tanques                                     | Navi e aeroplani<br>Boats and pleasure craft<br>Bateaux et avions<br>barcos y aviones                                                   | Lavaggio Self-service<br>Self-service wash<br>Lavage Self-Service<br>Autolavado                                                         | Preparazione di superfici da verniciare<br>Pre-painting surface preparation<br>Préparation des surface à peindre<br>Preparación de superficies que barnizar |
| Tecnologia a getto d'acqua<br>Water jet technology<br>Technologie à jet d'eau<br>Tecnología chorro de agua | Manutenzione di attrezzatura pesante<br>Heavy equipment maintenance<br>Entretien d'équipement lourd<br>Mantenimiento de equipos pesados | Industria alimentare<br>Food processing<br>Industrie alimentaire<br>Industria alimentar                                                 | Impianti industriali<br>Industrial systems<br>Installations industrielles<br>Equipos industriales                                                           |
| Agricoltura<br>Agriculture<br>Agriculture<br>Agricultura                                                   | Lavaggio automatico<br>Automatic wash<br>Lavage automatique<br>Lavado automatico                                                        | Impianti umidificazione<br>Misting/Fogging<br>Systèmes de brumisation<br>Equipos para humidificación                                    | Olio e gas<br>Oil and gas<br>Huile et gas<br>Aceite y gas                                                                                                   |



# Innovative Technical News

INTELLIseal™

LowStressthread™

CorrosionFree™

EASYlube™

Anti-LeakSystem™

LifeTimerod™

SuperCoolingSystem™

SmartCase™

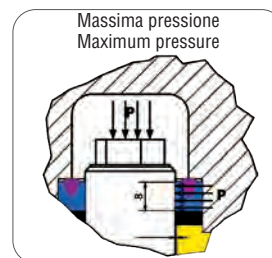
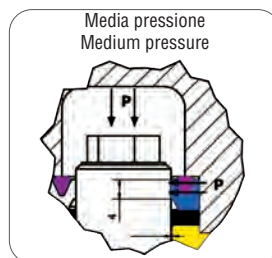
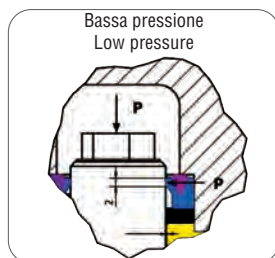
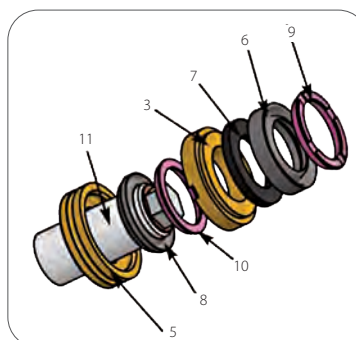
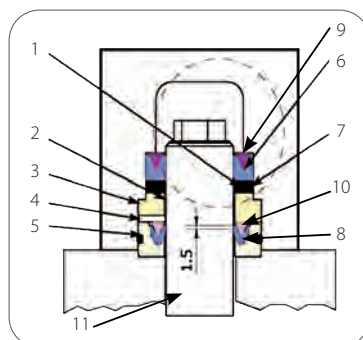
Edited by  
R&D Bertolini Pumps



100% European-American  
Components



INTELLIseal™



- 1 Perfetto centraggio fra pistone e guarnizioni
- 2 Nessun contatto fra metallo e ceramica
- 3 Lanterna anteriore
- 4 Drenaggio
- 5 Lanterna posteriore
- 6 Guarnizione di alta pressione a deformazione progressiva con rivestimento antifrizione (MoS2)
- 7 Anello anti-estrusione
- 8 Guarnizione di bassa pressione con rivestimento antifrizione (MoS2) e labbro di tenuta ridotto
- 9 Premiguarnizione anteriore
- 10 Premiguarnizione posteriore
- 11 Pistone Al203 99%

## Tre punti chiave per un sistema di tenute intelligente

### A - Guarnizione di alta pressione

La sua geometria e la speciale miscela con cui è realizzata ne consente una deformazione controllata in funzione della pressione di esercizio. L'ampiezza del bordo di tenuta aumenta progressivamente, mantenendo sempre al valore ottimale la pressione di contatto fra guarnizione e pistone. L'attrito è sempre ridotto al minimo assicurando una perfetta tenuta, in qualsiasi condizione, per lungo tempo. Il materiale lubrificante di cui è ricoperta si deposita progressivamente sul pistone formando una pellicola che ne aumenta la scorrevolezza.

### B - Anello antiestrusione

Di forte spessore, realizzato in PTFE+Grafite, grazie alle sue superiori proprietà autolubrificanti, si combina perfettamente al pistone strisciando su di esso senza nessun attrito e assicurandone il centraggio alle guarnizioni. La sua indeformabilità fornisce un supporto ottimale alla guarnizione e consente di aumentare il gioco fra pistone e boccia evitando, in qualsiasi condizione, il contatto diretto metallo-ceramica.

### C - Guarnizione posteriore

Specificamente studiata per lavorare sempre in bassa pressione, ha un bordo di tenuta ridotto per ridurre al minimo l'attrito con il pistone. È realizzata con una speciale miscela, impregnata di materiali autolubrificanti e rivestita di MoS2 che contribuisce ad aumentare la lubrificazione del pistone.



- 1 Perfect centering between piston and seal
- 2 No contact between metal-ceramic
- 3 Front Gland
- 4 Draining
- 5 Back Gland
- 6 High Pressure Seal Expandable covered with anti-friction (MoS2)
- 7 Extra thick self-lubricating anti-extrusion ring
- 8 Low Pressure Seal covered with anti-friction (MoS2) and lower tension
- 9 High Pressure Thrust Ring
- 10 Low pressure thrust ring
- 11 Piston Al203 99%

## Three key-points for an intelligent packing sealing system

### A - High Pressure Seal

It is made from a special mixture which allows expansion, depending on the amount of pressure applied. The strength of tension progressively increases, but always maintaining the optimal value of contact pressure between the seal and the piston. Friction is always reduced to the minimum assuring a perfect hold, in any condition for a longer period of time. The self-lubricating material which covers the seal continuously lubricates the piston, thus forming a film that increases smoothness.

### B - Anti-extrusion ring

Made of PTFE and Graphite, it is thicker than normal. Thanks to its superior self-lubricating properties, it is a precise match for the piston, sliding on it without any friction, thus assuring a perfect centering to the seals. Its ability to never lose form provides an excellent support to the seal, and allows an increase in play between the piston and gland, therefore avoiding, in any condition, direct contact metal-ceramic.

### C - Low Pressure Seal

Specifically designed to always work in low pressure, it has lower tension in order to reduce to the minimum friction with the piston. It is made from a special mixture containing self-lubricating materials, and covered with MoS2 to increase lubrication of the piston.



- 1 Centrage parfait entre piston et joints
- 2 Aucun contact entre métal et céramique
- 3 Bague avant
- 4 Drainage
- 5 Bague arrière
- 6 Joint haute pression à déformation progressive et revêtement anti-friction (MoS2)
- 7 Bague anti-extrusion
- 8 Joint basse pression avec revêtement anti-friction (MoS2) et lèvre d'étanchéité réduite
- 9 Bague presse-joint avant
- 10 Bague presse-joint arrière
- 11 Piston Al203 99%

## Trois points forts pour un système d'étanchéité intelligent

### A - Joint de haute pression

Sa géométrie et le mélange spécial avec lequel le joint est réalisé permettent une déformation contrôlée en fonction de la pression de service. La largeur du bord d'étanchéité augmente progressivement au fur et à mesure que la contrainte augmente, en assurant toujours une pression de contact optimale entre le joint et le piston. La friction se réduit ainsi au minimum en assurant une étanchéité parfaite dans toute condition et pour longtemps. Le produit lubrifiant qui recouvre le joint se dépose progressivement sur le piston en formant un film qui augmente son coulisement.

### B - Bague anti-extrusion

De forte épaisseur, réalisée en PTFE+Graphite, grâce à ses propriétés autolubrifiantes supérieures, elle réalise une liaison précise avec le piston en glissant sur celui-ci sans aucune friction et en assurant un centrage parfait par rapport aux joints. Son indéformabilité offre un support optimal au joint et permet d'augmenter le jeu entre le piston et la bague, en évitant totalement le contact direct métal-céramique.

### C - Joint arrière

Conçu spécialement pour travailler toujours en basse pression, il a un bord d'étanchéité réduit pour réduire au minimum la friction avec le piston. Réalisé avec un mélange spécial, il est imprégné de produits autolubrifiants et revêtu de MoS2 de manière à déposer lui-même un film lubrifiant sur la surface du piston.



- 1 Centrado perfecto entre pistón y junta
- 2 Ningún contacto entre metal y cerámica
- 3 Casquillo anterior
- 4 Drenaje
- 5 Casquillo posterior
- 6 Junta de alta presión a deformación progresiva con capa antifricción (MoS2)
- 7 Anillo de apoyo autolubrificante de gran espesor
- 8 Junta de baja presión con capa antifricción (MoS2) y labio de estanqueidad reducido
- 9 Anillo de empuje anterior
- 10 Anillo de empuje posterior
- 11 Pistón Al203 99%

## Tres puntos clave para un sistema de juntas inteligente

### A - Junta de alta presión

Realizada con una mezcla especial que permite una deformación controlada en función de la presión de servicio. La amplitud de la superficie de estanqueidad aumenta de manera progresiva manteniendo siempre al valor óptimo la presión de contacto entre la junta y el pistón. La fricción es siempre reducida al mínimo asegurando una perfecta estanqueidad, en cualquier condición, por largo tiempo. El material lubricante que recubre la junta se deposita progresivamente sobre el pistón formando una capa que favorece su deslizamiento.

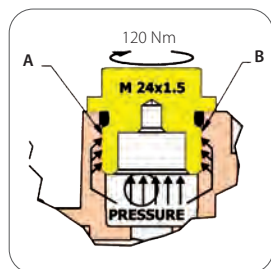
### B - Anillo antiextrusión

De gran espesor, realizado en PTFE+Grafito, gracias a sus propiedades superiores autolubrificantes, se acopla perfectamente al pistón deslizando sobre éste sin fricción alguna y asegurando el centrado perfecto respecto a las juntas. Su indeformabilidad provee un soporte óptimo a la junta y permite aumentar el juego entre pistón y casquillo evitando, en cualquier condición, el contacto directo metal-cerámica.

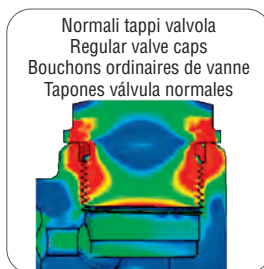
### C - Junta posterior

Estudiada expresamente para trabajar siempre en baja presión, con una superficie de estanqueidad reducida para disminuir al mínimo la fricción con el pistón. Realizada con una mezcla especial, impregnada de materiales autolubrificantes y recubierta de MoS2 que contribuye al aumento de la lubricación del pistón.

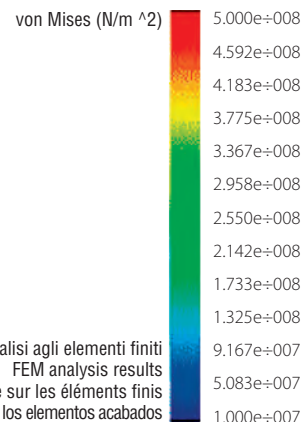
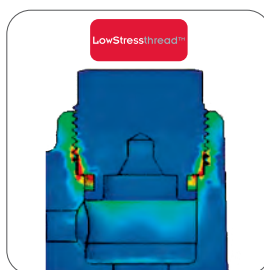
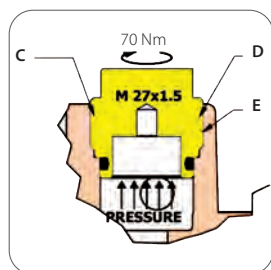
## LowStressthread™



- A** Loctite  
**B** Forti sollecitazioni a fatica  
 High fatigue stress  
 Fortes contraintes  
 Fuertes esfuerzos



- C** No Loctite  
 No Loctite  
 Pas de Loctite  
 No Loctite  
**D** No pressione  
 No pressure  
 Pas de pression  
 Ninguna presión  
**E** No sollecitazioni a fatica  
 Low fatigue stress  
 Pas de contraintes  
 Esfuerzos reducidos



Introdotta dalla Idromeccanica Bertolini fin dal 2002, l'innovativo disegno dei tappi valvola elimina la presenza di acqua in pressione all'interno della filettatura.

### Normali tappi valvola

- Pressione nelle gole dei filetti
- Rischio di svitamento durante il funzionamento
- Alta coppia di serraggio
- Uso di Loctite - Rischio di danni allo smontaggio
- Forti sollecitazioni delle filettature
- Rischio di rottura delle testate

### LowStressthread™

- Nessuna pressione nelle gole di filetti
- Nessun rischio di svitamento durante il funzionamento
- Coppia di serraggio ridotta del 40%
- Facilità di smontaggio senza rischio di danneggiamento
- Sollecitazione delle filettature ridotta del 60%
- Nessun rischio di rottura della testata



Introduced by Idromeccanica Bertolini since 2002 this innovative design of the Valve Caps eliminates the presence of water under pressure within the threads.

### Regular Valve Caps

- Pressure in the thread grooves
- Risk of loosening during operation
- High Torque in tightening
- Use of Loctite - Risk of damage during removal
- High stress on the threads
- Low security efficiency with the risk of head cracks

### LowStressthread™

- No pressure on thread grooves
- No risk of loosening during operation
- Torque reduced by 40%
- Easy to remove without risk of damage
- Stress on threads reduced by 60%
- High security efficiency without the risk of head cracks



Introduit par Idromeccanica Bertolini dès l'année 2002, le design innovant des bouchons de vanne élimine la présence d'eau sous pression à l'intérieur du filet.

### Bouchons ordinaires de vanne

- Pression dans les rainures des filets
- Risque de dévissage pendant le fonctionnement
- Couple de serrage élevé
- Utilisation de Loctite - Risque de dommages au démontage
- Fortes contraintes des filets à la fatigue
- Risque de rupture des culasses

### LowStressthread™

- Aucune pression dans les rainures des filets
- Aucun risque de dévissage pendant le fonctionnement
- Couple de serrage réduit de 40%
- Facilité de démontage sans risque de dommages
- Contraintes des filets réduites de 60%
- Aucun risque de rupture de la culasse



Introducido por Idromeccanica Bertolini desde 2002, el innovador diseño de los tapones válvulas elimina la presencia de agua en presión al interior de la rosca.

### Tapones válvula normales

- Presión en las gargantas de las roscas
- Riesgo de desatornillamiento en funcionamiento
- Par de apriete alto
- Uso de Loctite - Riesgo de daños en el desmontaje
- Fuertes esfuerzos de las roscas
- Riesgo de rotura de las culatas

### LowStressthread™

- Ninguna presión en las gargantas de las roscas
- Ningún riesgo de desatornillamiento en funcionamiento
- Par de apriete reducido del 40%
- Desmontaje sencillo sin riesgo de daños
- Esfuerzo de las roscas reducido del 60%
- Ningún riesgo de rotura de la culata

## CorrosionFree™

- Le testate delle pompe serie INOX sono realizzate in acciaio AISI 316 che, fra gli acciai inossidabili, è quello che garantisce il massimo di resistenza alla corrosione.
- I tappi valvola in acciaio inox AISI 316 sono realizzati secondo l'esclusivo disegno LowStressthread™ che elimina la pressione dall'interno dei filetti e la possibilità di qualsiasi tipo di problema in esercizio.
- Viti e dadi fissaggio pistone in acciaio inox AISI 316
- Pacco guarnizioni per alta temperatura (TAM) con boccole portaguarnizioni in acciaio inox AISI 316, anello di spinta in acciaio AISI 316 ed anello antiextrusione in PTFE.
- Valvole di aspirazione e mandata ad alta efficienza con molla, sede e otturatore in acciaio inox AISI 316

- The INOX series heads are constructed in stainless steel AISI 316, which is a Stainless Steel, and it's the one that guarantees maximum resistance to corrosion.
- The AISI 316 valve caps are constructed according to the exclusive label LowStressthread™. It eliminates internal pressure within the threads and the possibility of any problems during operation.
- Screws and bolts in stainless steel AISI 316.
- High Pressure Seals (TAM) with intermediate ring in AISI 316, retainer in AISI 316 and anti-extrusion ring in PTFE.
- Rapid action check valves with spring, poppet and seat made of 316 stainless steel.

- Les culasses des pompes série INOX sont réalisées en AISI 316 qui, parmi les aciers inoxydables, est celui qui assure la meilleure résistance à la corrosion.
- Les bouchons des clapets en acier AISI 316 sont réalisés selon la nouvelle technique LowStressthread™ qui élimine la pression à l'intérieur des filets et la possibilité de tout type de problème pendant le service.
- Vis et écrous en acier inox AISI 316
- Ensemble d'étanchéité de haute température (TAM) avec bagues porte joints en acier AISI 316, bague de poussée en acier inox AISI 316 et bague anti extrusion en PTFE.
- Clapets d'aspiration et refoulement très performants avec ressort, siège et obturateur en acier inox AISI 316.

- Las culatas de las bombas serie INOX son realizadas en acero inox AISI 316 que, entre los aceros inoxidables, es lo que asegura la máxima resistencia de desgaste.
- Los tapones válvulas, en acero inox AISI 316, son realizados según el exclusivo diseño LowStressthread™ que elimina la presión al interior de las roscas y evita todo tipo de problema durante el funcionamiento.
- Tornillos y tuercas en acero inox AISI 316.
- Paquete de juntas de alta temperatura (TAM) con soporte anterior y posterior en acero inox AISI 316, anillo de empuje en acero inox AISI 316 y anillo antiextrusión en PTFE.
- Válvulas de aspiración y envío de alto rendimiento con resorte, sede y obturador en acero inox AISI 316.



## Anti-LeakSystem™

Esclusivo sistema tra carter e testata che impedisce l'ingresso della polvere nella zona delle tenute.



Exclusive system between head and crankcase preventing dust into the packing sealings.



Système exclusif entre le carter et la culasse qui empêche l'entrée de poussière dans la zone des joints.



Sistema esclusivo entre cárter y culata que evita la entrada de polvo en la zona de las juntas.

## EASYlube™

- Lo speciale olio utilizzato al primo montaggio, SynPower Gear oil 75W-90, grazie alla sua esclusiva formulazione ed agli additivi in esso contenuti, deposita una sottile pellicola antiusura, perfettamente aderente alle superfici delle parti lubrificate, per tutta la loro vita.
- Le sostanze detergenti contenute nell'olio rimuovono e portano in sospensione tutti i residui che si formano durante il rodaggio/ le prime ore di funzionamento della pompa.
- Trascorse 50-100 ore di lavoro è sufficiente sostituire l'olio con un normale olio da trasmissioni "75 W 90" per assicurare una lubrificazione efficace per tutta la vita della pompa.

- The special oil used on shipment SynPower Gear oil 75W-90, thanks to its exclusive formulation and the additives, deposits a soft anti-wear film, perfectly adherent to the lubricated parts for the rest of their life.
- The detergent substances contained by the oil remove and suspend all the residues that form during the break-in period and the first few hours of pump function.
- After 50-100 hours of operation, it is sufficient to change the oil only once with a regular transmission oil 75W90 to assure an efficient lubrication for the rest of that pump's life.

- L'huile spéciale utilisée au premier montage, SynPower Gear oil 75W-90, grâce à sa formulation exclusive et aux additifs contenus, laisse un film très fin anti-usure, qui adhère parfaitement aux surfaces des pièces lubrifiées, pour toute leur vie.
- Les substances détergentes contenues dans l'huile détachent et mettent en suspension tous les résidus qui se forment pendant le rodage et les premières heures de fonctionnement de la pompe.
- Au bout de 50-100 heures de travail, il suffit de vidanger cette huile et de mettre une huile pour transmissions "75 W 90" pour assurer une lubrification efficace pour toute la vie de la pompe.

- El aceite especial utilizado al primer montaje, SynPower Gear oil 75W-90, gracias a su exclusiva formulación y a los aditivos que contiene, deposita una capa sutil antidesgaste que adhiere perfectamente a las superficies de las partes lubricadas, durante toda su vida.
- Las sustancias detergentes contenidas en el aceite remueven y sacan a flote todos los residuos formados durante el rodaje/ las primeras horas de funcionamiento de la bomba.
- Después de 50-100 horas de trabajo es suficiente remplazar el aceite con un aceite normal para transmisión "75 W 90" para garantizar una lubricación eficaz por toda la vida de la bomba.

## LifeTimeRod™

I pattini dei pistoni sono realizzati in acciaio inossidabile martensitico bonificato. La loro superficie, successivamente temprata e lucidata a specchio, grazie alla elevatissima durezza ed alla qualità della finitura, è esente da usura per tutta la vita della pompa.

Stainless steel martensitic pistons, quenched, tempered and case hardened; polished with very high strength, without fear of wear for the rest of the pump's life.

Les guides des pistons sont réalisés en acier inoxydable martensitique bonifié. Leur surface, trempée et polie miroir, n'a pas d'usure pour toute la durée de vie de la pompe, grâce à sa dureté très élevée et à la qualité de la finition.

Las guías de los pistones son realizados en acero inoxidable martensítico bonificado. Su superficie, sucesivamente templada y lustrada, gracias a una dureza muy elevada y a la calidad del acabado no está sujeta a desgaste durante toda la vida de la bomba.

## SuperCoolingSystem™

Le pompe serie RA-RB sono dotate di un esclusivo e brevettato sistema di alimentazione della pompa. Il condotto di aspirazione, ricavato nel carter, fa sì che l'olio in esso contenuto venga fortemente raffreddato dal passaggio dell'acqua di alimentazione. Un ulteriore beneficio deriva dal fatto che le guarnizioni di bassa pressione, essendo sempre in contatto con l'acqua di alimentazione, sono perennemente lubrificate e raffreddate con vantaggi per la loro durata pari al 50% superiore a una guarnizione che lavora a secco.

The pump series RA-RB are equipped with an exclusive and patented inlet water feeding system. The breathing channel, built in the crankcase, strongly cools the oil contained, with the inlet water feed. Another benefit is derived from the fact that the Low-Pressure Seals, being always in contact with the inlet water feed, are constantly being lubricated and cooled, giving them a duration increase by 50% higher than a seal working dry.

Les pompes série RA-RB sont équipées d'un système exclusif et breveté d'alimentation de la pompe. Le conduit d'aspiration dans le carter permet à l'huile contenue d'être refroidie fortement par le passage de l'eau d'alimentation. Les joints d'étanchéité de basse pression, qui sont toujours en contact avec l'eau d'alimentation, sont continuellement lubrifiés et refroidis, afin d'assurer des performances optimales et une grande longévité, 50% au-dessus d'un joint d'étanchéité qui fonctionne à sec.

Las bombas serie RA-RB están dotadas de un exclusivo y patentado sistema de alimentación de la bomba. El conducto de aspiración, sacado del cárter, hace enfriar el aceite contenido en éste por el pasaje del agua de alimentación. Un beneficio ulterior es debido al hecho de que las juntas de baja presión, estando siempre sumergidas en agua, están perennemente lubricadas y refrigeradas con ventajas por su duración de un 50% superiores a una junta que trabaja en seco.

## SmartCase™

Il carter pompa, realizzato in lega leggera anti corrosione con grande resistenza meccanica ed alto coefficiente di conducibilità termica, grazie anche al design dalla pronunciata alettatura, disperde all'esterno il calore generato dalla pompa contribuendo a mantenere bassa la temperatura. La lavorazione eseguita con utensili diamantati indurisce la superficie delle guide pistone, rendendole estremamente lisce e scivolose.

The pump crankcase is constructed of an anti-corrosion light alloy, with a great mechanical resistance and high thermal conductivity efficiency. This, also thanks to the design with pronounced fins, disperses the exterior the heat generated by the pump, thus contributing to keeping the temperature low. The workmanship done with diamond tools hardens the surface of the piston guides, making them extremely smooth and slick.

Le carter de la pompe, très robuste, en aluminium moulé sous pression, consolide la résistance mécanique et le coefficient de conductibilité thermique; grâce aussi à la nouvelle technique des ailettes marquées, il disperse la chaleur dégagée par la pompe à l'extérieur en contribuant à maintenir la température basse. L'usinage effectué avec des outils diamantés écrouit la surface des guides pistons en les rendant extrêmement lisses et coulissants.

El cárter de la bomba, realizado en aleación ligera anticorrosión con gran resistencia mecánica y alto coeficiente de conductividad térmica dispersa al exterior el calor generado por la bomba contribuyendo a mantener baja la temperatura. El procesamiento realizado con herramientas de diamante endurece la superficie de las guías del pistón, haciéndolas extremadamente lisas y resbaladizas.



# TABELLA ASSORBIMENTI PORTATA/PRESSIONE

## ABSORBED POWERS PERFORMANCE CHART

 Tabelle per determinare la potenza assorbita da un qualsiasi modello di pompa in funzione della pressione e portata di lavoro. Considerando le potenze assorbite precise in funzione delle condizioni di lavoro si facilita e migliora la progettazione dell'accoppiamento pompa-motore.

 Charts to calculate the power absorbed by any pump model according to the working pressure and flow. Considering the accurate absorbed power data with respect to the working conditions, the design of the motor-pump coupling becomes easier and simple.

| l/min | GPM   | PSI | 1160 | 1305 | 1450  | 1595  | 1740  | 1885  | 2030  | 2175  | 2537,5 | 2900  | 3262,5 | 3625  | 3987,5 | 4350  | 5075  | 5800  |
|-------|-------|-----|------|------|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|-------|-------|
|       |       | bar | 80   | 90   | 100   | 110   | 120   | 130   | 140   | 150   | 175    | 200   | 225    | 250   | 275    | 300   | 350   | 400   |
| 400   | 105,7 | KW  | 62,8 | 70,7 | 78,5  | 86,4  | 94,3  | 102,1 | 110,0 | 117,8 | 137,5  | 157,1 | 176,7  | 196,4 | 216,0  | 235,6 | 274,9 | 314,2 |
|       |       | HP  | 85,5 | 96,1 | 106,8 | 117,5 | 128,2 | 138,9 | 149,6 | 160,2 | 186,9  | 213,6 | 240,4  | 267,1 | 293,8  | 320,5 | 373,9 | 427,3 |
| 380   | 100,4 | KW  | 59,7 | 67,2 | 74,6  | 82,1  | 89,5  | 97,0  | 104,5 | 111,9 | 130,6  | 149,2 | 167,9  | 186,5 | 205,2  | 223,9 | 261,2 | 298,5 |
|       |       | HP  | 81,2 | 91,3 | 101,5 | 111,6 | 121,8 | 131,9 | 142,1 | 152,2 | 177,6  | 203,0 | 228,3  | 253,7 | 279,1  | 304,4 | 355,2 | 405,9 |
| 360   | 95,1  | KW  | 56,6 | 63,6 | 70,7  | 77,8  | 84,8  | 91,9  | 99,0  | 106,0 | 123,7  | 141,4 | 159,1  | 176,7 | 194,4  | 212,1 | 247,4 | 282,8 |
|       |       | HP  | 76,9 | 86,5 | 96,1  | 105,8 | 115,4 | 125,0 | 134,6 | 144,2 | 168,2  | 192,3 | 216,3  | 240,4 | 264,4  | 288,4 | 336,5 | 384,6 |
| 340   | 89,8  | KW  | 53,4 | 60,1 | 66,8  | 73,4  | 80,1  | 86,8  | 93,5  | 100,1 | 116,8  | 133,5 | 150,2  | 166,9 | 183,6  | 200,3 | 233,7 | 267,1 |
|       |       | HP  | 72,6 | 81,7 | 90,8  | 99,9  | 109,0 | 118,0 | 127,1 | 136,2 | 158,9  | 181,6 | 204,3  | 227,0 | 249,7  | 272,4 | 317,8 | 363,2 |
| 320   | 84,5  | KW  | 50,3 | 56,6 | 62,8  | 69,1  | 75,4  | 81,7  | 88,0  | 94,3  | 110,0  | 125,7 | 141,4  | 157,1 | 172,8  | 188,5 | 219,9 | 251,3 |
|       |       | HP  | 68,4 | 76,9 | 85,5  | 94,0  | 102,6 | 111,1 | 119,6 | 128,2 | 149,6  | 170,9 | 192,3  | 213,6 | 235,0  | 256,4 | 299,1 | 341,8 |
| 300   | 79,3  | KW  | 47,1 | 53,0 | 58,9  | 64,8  | 70,7  | 76,6  | 82,5  | 88,4  | 103,1  | 117,8 | 132,5  | 147,3 | 162,0  | 176,7 | 206,2 | 235,6 |
|       |       | HP  | 64,1 | 72,1 | 80,1  | 88,1  | 96,1  | 104,2 | 112,2 | 120,2 | 140,2  | 160,2 | 180,3  | 200,3 | 220,3  | 240,4 | 280,4 | 320,5 |
| 280   | 74,0  | KW  | 44,0 | 49,5 | 55,0  | 60,5  | 66,0  | 71,5  | 77,0  | 82,5  | 96,2   | 110,0 | 123,7  | 137,5 | 151,2  | 164,9 | 192,4 | 219,9 |
|       |       | HP  | 59,8 | 67,3 | 74,8  | 82,3  | 89,7  | 97,2  | 104,7 | 112,2 | 130,9  | 149,6 | 168,2  | 186,9 | 205,6  | 224,3 | 261,7 | 299,1 |
| 260   | 68,7  | KW  | 40,8 | 45,9 | 51,1  | 56,2  | 61,3  | 66,4  | 71,5  | 76,6  | 89,3   | 102,1 | 114,9  | 127,6 | 140,4  | 153,2 | 178,7 | 204,2 |
|       |       | HP  | 55,5 | 62,5 | 69,4  | 76,4  | 83,3  | 90,3  | 97,2  | 104,2 | 121,5  | 138,9 | 156,2  | 173,6 | 190,9  | 208,3 | 243,0 | 277,7 |
| 240   | 63,4  | KW  | 37,7 | 42,4 | 47,1  | 51,8  | 56,6  | 61,3  | 66,0  | 70,7  | 82,5   | 94,3  | 106,0  | 117,8 | 129,6  | 141,4 | 164,9 | 188,5 |
|       |       | HP  | 51,3 | 57,7 | 64,1  | 70,5  | 76,9  | 83,3  | 89,7  | 96,1  | 112,2  | 128,2 | 144,2  | 160,2 | 176,3  | 192,3 | 224,3 | 256,4 |
| 230   | 60,8  | KW  | 36,1 | 40,6 | 45,2  | 49,7  | 54,2  | 58,7  | 63,2  | 67,7  | 79,0   | 90,3  | 101,6  | 112,9 | 124,2  | 135,5 | 158,1 | 180,7 |
|       |       | HP  | 49,1 | 55,3 | 61,4  | 67,6  | 73,7  | 79,9  | 86,0  | 92,1  | 107,5  | 122,8 | 138,2  | 153,6 | 168,9  | 184,3 | 215,0 | 245,7 |
| 220   | 58,1  | KW  | 34,6 | 38,9 | 43,2  | 47,5  | 51,8  | 56,2  | 60,5  | 64,8  | 75,6   | 86,4  | 97,2   | 108,0 | 118,8  | 129,6 | 151,2 | 172,8 |
|       |       | HP  | 47,0 | 52,9 | 58,8  | 64,6  | 70,5  | 76,4  | 82,3  | 88,1  | 102,8  | 117,5 | 132,2  | 146,9 | 161,6  | 176,3 | 205,6 | 235,0 |
| 210   | 55,5  | KW  | 33,0 | 37,1 | 41,2  | 45,4  | 49,5  | 53,6  | 57,7  | 61,9  | 72,2   | 82,5  | 92,8   | 103,1 | 113,4  | 123,7 | 144,3 | 164,9 |
|       |       | HP  | 44,9 | 50,5 | 56,1  | 61,7  | 67,3  | 72,9  | 78,5  | 84,1  | 98,1   | 112,2 | 126,2  | 140,2 | 154,2  | 168,2 | 196,3 | 224,3 |
| 200   | 52,8  | KW  | 31,4 | 35,3 | 39,3  | 43,2  | 47,1  | 51,1  | 55,0  | 58,9  | 68,7   | 78,5  | 88,4   | 98,2  | 108,0  | 117,8 | 137,5 | 157,1 |
|       |       | HP  | 42,7 | 48,1 | 53,4  | 58,8  | 64,1  | 69,4  | 74,8  | 80,1  | 93,5   | 106,8 | 120,2  | 133,5 | 146,9  | 160,2 | 186,9 | 213,6 |
| 190   | 50,2  | KW  | 29,8 | 33,6 | 37,3  | 41,0  | 44,8  | 48,5  | 52,2  | 56,0  | 65,3   | 74,6  | 83,9   | 93,3  | 102,6  | 111,9 | 130,6 | 149,2 |
|       |       | HP  | 40,6 | 45,7 | 50,7  | 55,8  | 60,9  | 66,0  | 71,0  | 76,1  | 88,8   | 101,5 | 114,2  | 126,9 | 139,5  | 152,2 | 177,6 | 203,0 |
| 180   | 47,6  | KW  | 28,3 | 31,8 | 35,3  | 38,9  | 42,4  | 45,9  | 49,5  | 53,0  | 61,9   | 70,7  | 79,5   | 88,4  | 97,2   | 106,0 | 123,7 | 141,4 |
|       |       | HP  | 38,5 | 43,3 | 48,1  | 52,9  | 57,7  | 62,5  | 67,3  | 72,1  | 84,1   | 96,1  | 108,2  | 120,2 | 132,2  | 144,2 | 168,2 | 192,3 |
| 170   | 44,9  | KW  | 26,7 | 30,0 | 33,4  | 36,7  | 40,1  | 43,4  | 46,7  | 50,1  | 58,4   | 66,8  | 75,1   | 83,5  | 91,8   | 100,1 | 116,8 | 133,5 |
|       |       | HP  | 36,3 | 40,9 | 45,4  | 49,9  | 54,5  | 59,0  | 63,6  | 68,1  | 79,5   | 90,8  | 102,2  | 113,5 | 124,9  | 136,2 | 158,9 | 181,6 |
| 160   | 42,3  | KW  | 25,1 | 28,3 | 31,4  | 34,6  | 37,7  | 40,8  | 44,0  | 47,1  | 55,0   | 62,8  | 70,7   | 78,5  | 86,4   | 94,3  | 110,0 | 125,7 |
|       |       | HP  | 34,2 | 38,5 | 42,7  | 47,0  | 51,3  | 55,5  | 59,8  | 64,1  | 74,8   | 85,5  | 96,1   | 106,8 | 117,5  | 128,2 | 149,6 | 170,9 |
| 150   | 39,6  | KW  | 23,6 | 26,5 | 29,5  | 32,4  | 35,3  | 38,3  | 41,2  | 44,2  | 51,5   | 58,9  | 66,3   | 73,6  | 81,0   | 88,4  | 103,1 | 117,8 |
|       |       | HP  | 32,0 | 36,1 | 40,1  | 44,1  | 48,1  | 52,1  | 56,1  | 60,1  | 70,1   | 80,1  | 90,1   | 100,1 | 110,2  | 120,2 | 140,2 | 160,2 |
| 140   | 37,0  | KW  | 22,0 | 24,7 | 27,5  | 30,2  | 33,0  | 35,7  | 38,5  | 41,2  | 48,1   | 55,0  | 61,9   | 68,7  | 75,6   | 82,5  | 96,2  | 110,0 |
|       |       | HP  | 29,9 | 33,6 | 37,4  | 41,1  | 44,9  | 48,6  | 52,3  | 56,1  | 65,4   | 74,8  | 84,1   | 93,5  | 102,8  | 112,2 | 130,9 | 149,6 |
| 130   | 34,3  | KW  | 20,4 | 23,0 | 25,5  | 28,1  | 30,6  | 33,2  | 35,7  | 38,3  | 44,7   | 51,1  | 57,4   | 63,8  | 70,2   | 76,6  | 89,3  | 102,1 |
|       |       | HP  | 27,8 | 31,2 | 34,7  | 38,2  | 41,7  | 45,1  | 48,6  | 52,1  | 60,8   | 69,4  | 78,1   | 86,8  | 95,5   | 104,2 | 121,5 | 138,9 |
| 120   | 31,7  | KW  | 18,9 | 21,2 | 23,6  | 25,9  | 28,3  | 30,6  | 33,0  | 35,3  | 41,2   | 47,1  | 53,0   | 58,9  | 64,8   | 70,7  | 82,5  | 94,3  |
|       |       | HP  | 25,6 | 28,8 | 32,0  | 35,3  | 38,5  | 41,7  | 44,9  | 48,1  | 56,1   | 64,1  | 72,1   | 80,1  | 88,1   | 96,1  | 112,2 | 128,2 |
| 110   | 29,1  | KW  | 17,3 | 19,4 | 21,6  | 23,8  | 25,9  | 28,1  | 30,2  | 32,4  | 37,8   | 43,2  | 48,6   | 54,0  | 59,4   | 64,8  | 75,6  | 86,4  |
|       |       | HP  | 23,5 | 26,4 | 29,4  | 32,3  | 35,3  | 38,2  | 41,1  | 44,1  | 51,4   | 58,8  | 66,1   | 73,4  | 80,8   | 88,1  | 102,8 | 117,5 |
| 100   | 26,4  | KW  | 15,7 | 17,7 | 19,6  | 21,6  | 23,6  | 25,5  | 27,5  | 29,5  | 34,4   | 39,3  | 44,2   | 49,1  | 54,0   | 58,9  | 68,7  | 78,5  |
|       |       | HP  | 21,4 | 24,0 | 26,7  | 29,4  | 32,0  | 34,7  | 37,4  | 40,1  | 46,7   | 53,4  | 60,1   | 66,8  | 73,4   | 80,1  | 93,5  | 106,8 |
| 95    | 25,1  | KW  | 14,9 | 16,8 | 18,7  | 20,5  | 22,4  | 24,3  | 26,1  | 28,0  | 32,6   | 37,3  | 42,0   | 46,6  | 51,3   | 56,0  | 65,3  | 74,6  |
|       |       | HP  | 20,3 | 22,8 | 25,4  | 27,9  | 30,4  | 33,0  | 35,5  | 38,1  | 44,4   | 50,7  | 57,1   | 63,4  | 69,8   | 76,1  | 88,8  | 101,5 |
| 90    | 23,8  | KW  | 14,1 | 15,9 | 17,7  | 19,4  | 21,2  | 23,0  | 24,7  | 26,5  | 30,9   | 35,3  | 39,8   | 44,2  | 48,6   | 53,0  | 61,9  | 70,7  |
|       |       | HP  | 19,2 | 21,6 | 24,0  | 26,4  | 28,8  | 31,2  | 33,6  | 36,1  | 42,1   | 48,1  | 54,1   | 60,1  | 66,1   | 72,1  | 84,1  | 96,1  |
| 85    | 22,5  | KW  | 13,4 | 15,0 | 16,7  | 18,4  | 20,0  | 21,7  | 23,4  | 25,0  | 29,2   | 33,4  | 37,6   | 41,7  | 45,9   | 50,1  | 58,4  | 66,8  |
|       |       | HP  | 18,2 | 20,4 | 22,7  | 25,0  | 27,2  | 29,5  | 31,8  | 34,1  | 39,7   | 45,4  | 51,1   | 56,8  | 62,4   | 68,1  | 79,5  | 90,8  |
| 80    | 21,1  | KW  | 12,6 | 14,1 | 15,7  | 17,3  | 18,9  | 20,4  | 22,0  | 23,6  | 27,5   | 31,4  | 35,3   | 39,3  | 43,2   | 47,1  | 55,0  | 62,8  |
|       |       | HP  | 17,1 | 19,2 | 21,4  | 23,5  | 25,6  | 27,8  | 29,9  | 32,0  | 37,4   | 42,7  | 48,1   | 53,4  | 58,8   | 64,1  | 74,8  | 85,5  |
| 75    | 19,8  | KW  | 11,8 | 13,3 | 14,7  | 16,2  | 17,7  | 19,1  | 20,6  | 22,1  | 25,8   | 29,5  | 33,1   | 36,8  | 40,5   | 44,2  | 51,5  | 58,9  |
|       |       | HP  | 16,0 | 18,0 | 20,0  | 22,0  | 24,0  | 26,0  | 28,0  | 30,0  | 35,1   | 40,1  | 45,1   | 50,1  | 55,1   | 60,1  | 70,1  | 80,1  |
| 70    | 18,5  | KW  | 11,0 | 12,4 | 13,7  | 15,1  | 16,5  | 17,9  | 19,2  | 20,6  | 24,1   | 27,5  | 30,9   | 34,4  | 37,8   | 41,2  | 48,1  | 55,0  |
|       |       | HP  | 15,0 | 16,8 | 18,7  | 20,6  | 22,4  | 24,3  | 26,2  | 28,0  | 32,7   | 37,4  | 42,1   | 46,7  | 51,4   | 56,1  | 65,4  | 74,8  |
| 65    | 17,2  | KW  | 10,2 | 11,5 | 12,8  | 14,0  | 15,3  | 16,6  | 17,9  | 19,1  | 22,3   | 25,5  | 28,7   | 31,9  | 35,1   | 38,3  | 44,7  | 51,1  |
|       |       | HP  | 13,9 | 15,6 | 17,4  | 19,1  | 20,8  | 22,6  | 24,3  | 26,0  | 30,4   | 34,7  | 39,1   | 43,4  | 47,7   | 52,1  | 60,8  | 69,4  |
| 60    | 15,9  | KW  | 9,4  | 10,6 | 11,8  | 13,0  | 14,1  | 15,3  | 16,5  | 17,7  | 20,6   | 23,6  | 26,5   | 29,5  | 32,4   | 35,3  | 41,2  | 47,1  |
|       |       | HP  | 12,8 | 14,4 | 16,0  | 17,6  | 19,2  | 20,8  | 22,4  | 24,0  | 28,0   | 32,0  | 36,1   |       |        |       |       |       |

# TABLEAUX PUISSANCES ABSORBEES DEBIT/PRESSION

## TABLA DE RENDIMIENTO CAUDAL/PRESION

 Ces tableaux permettent de déterminer la puissance absorbée par tout les modèles de pompe en fonction de la pression de travail et du débit. Compte tenu des puissances absorbées précises en fonction des conditions de travail, l'étude de l'accouplement pompe-moteur est simplifié.

 La tabla de rendimiento GPM/LT permite calcular la potencia absorbida por cualquier modelo de bomba en función de la presión de trabajo y del caudal. Considerando las potencias absorbidas en función de las condiciones de trabajo, se simplifica el diseño del acoplamiento bomba-motor.

| I/min | GPM  | PSI<br>bar | 1450<br>100 | 1812.5<br>125 | 2175<br>150 | 2537.5<br>175 | 2900<br>200 | 3262.5<br>225 | 3625<br>250 | 3987.5<br>275 | 4350<br>300 | 5075<br>350 | 5800<br>400 | 6525<br>450 | 7250<br>500 | 7975<br>550 | 8700<br>600 | 10875<br>750 | 14500<br>1000 |
|-------|------|------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|
| 50    | 13,2 | KW         | 9.8         | 12.3          | 14.7        | 17.2          | 19.6        | 22.1          | 24.5        | 27.0          | 29.5        | 34.4        | 39.3        | 44.2        | 49.1        | 54.0        | 58.9        | 73.6         | 98.2          |
|       |      | HP         | 13.4        | 16.7          | 20.0        | 23.4          | 26.7        | 30.0          | 33.4        | 36.7          | 40.1        | 46.7        | 53.4        | 60.1        | 66.8        | 73.4        | 80.1        | 100.1        | 133.5         |
| 48    | 12,7 | KW         | 9.4         | 11.8          | 14.1        | 16.5          | 18.9        | 21.2          | 23.6        | 25.9          | 28.3        | 33.0        | 37.7        | 42.4        | 47.1        | 51.8        | 56.6        | 70.7         | 94.3          |
|       |      | HP         | 12.8        | 16.0          | 19.2        | 22.4          | 25.6        | 28.8          | 32.0        | 35.3          | 38.5        | 44.9        | 51.3        | 57.7        | 64.1        | 70.5        | 76.9        | 96.1         | 128.2         |
| 46    | 12,2 | KW         | 9.0         | 11.3          | 13.5        | 15.8          | 18.1        | 20.3          | 22.6        | 24.8          | 27.1        | 31.6        | 36.1        | 40.6        | 45.2        | 49.7        | 54.2        | 67.7         | 90.3          |
|       |      | HP         | 12.3        | 15.4          | 18.4        | 21.5          | 24.6        | 27.6          | 30.7        | 33.8          | 36.9        | 43.0        | 49.1        | 55.3        | 61.4        | 67.6        | 73.7        | 92.1         | 122.8         |
| 44    | 11,6 | KW         | 8.6         | 10.8          | 13.0        | 15.1          | 17.3        | 19.4          | 21.6        | 23.8          | 25.9        | 30.2        | 34.6        | 38.9        | 43.2        | 47.5        | 51.8        | 64.8         | 86.4          |
|       |      | HP         | 11.8        | 14.7          | 17.6        | 20.6          | 23.5        | 26.4          | 29.4        | 32.3          | 35.3        | 41.1        | 47.0        | 52.9        | 58.8        | 64.6        | 70.5        | 88.1         | 117.5         |
| 42    | 11,1 | KW         | 8.2         | 10.3          | 12.4        | 14.4          | 16.5        | 18.6          | 20.6        | 22.7          | 24.7        | 28.9        | 33.0        | 37.1        | 41.2        | 45.4        | 49.5        | 61.9         | 82.5          |
|       |      | HP         | 11.2        | 14.0          | 16.8        | 19.6          | 22.4        | 25.2          | 28.0        | 30.8          | 33.6        | 39.3        | 44.9        | 50.5        | 56.1        | 61.7        | 67.3        | 84.1         | 112.2         |
| 40    | 10,6 | KW         | 7.9         | 9.8           | 11.8        | 13.7          | 15.7        | 17.7          | 19.6        | 21.6          | 23.6        | 27.5        | 31.4        | 35.3        | 39.3        | 43.2        | 47.1        | 58.9         | 78.5          |
|       |      | HP         | 10.7        | 13.4          | 16.0        | 18.7          | 21.4        | 24.0          | 26.7        | 29.4          | 32.0        | 37.4        | 42.7        | 48.1        | 53.4        | 58.8        | 64.1        | 80.1         | 106.8         |
| 38    | 10,0 | KW         | 7.5         | 9.3           | 11.2        | 13.1          | 14.9        | 16.8          | 18.7        | 20.5          | 22.4        | 26.1        | 29.8        | 33.6        | 37.3        | 41.0        | 44.8        | 56.0         | 74.6          |
|       |      | HP         | 10.1        | 12.7          | 15.2        | 17.8          | 20.3        | 22.8          | 25.4        | 27.9          | 30.4        | 35.5        | 40.6        | 45.7        | 50.7        | 55.8        | 60.9        | 76.1         | 101.5         |
| 36    | 9,5  | KW         | 7.1         | 8.8           | 10.6        | 12.4          | 14.1        | 15.9          | 17.7        | 19.4          | 21.2        | 24.7        | 28.3        | 31.8        | 35.3        | 38.9        | 42.4        | 53.0         | 70.7          |
|       |      | HP         | 9.6         | 12.0          | 14.4        | 16.8          | 19.2        | 21.6          | 24.0        | 26.4          | 28.8        | 33.6        | 38.5        | 43.3        | 48.1        | 52.9        | 57.7        | 72.1         | 96.1          |
| 34    | 9,0  | KW         | 6.7         | 8.3           | 10.0        | 11.7          | 13.4        | 15.0          | 16.7        | 18.4          | 20.0        | 23.4        | 26.7        | 30.0        | 33.4        | 36.7        | 40.1        | 50.1         | 66.8          |
|       |      | HP         | 9.1         | 11.4          | 13.6        | 15.9          | 18.2        | 20.4          | 22.7        | 25.0          | 27.2        | 31.8        | 36.3        | 40.9        | 45.4        | 49.9        | 54.5        | 68.1         | 90.8          |
| 32    | 8,5  | KW         | 6.3         | 7.9           | 9.4         | 11.0          | 12.6        | 14.1          | 15.7        | 17.3          | 18.9        | 22.0        | 25.1        | 28.3        | 31.4        | 34.6        | 37.7        | 47.1         | 62.8          |
|       |      | HP         | 8.5         | 10.7          | 12.8        | 15.0          | 17.1        | 19.2          | 21.4        | 23.5          | 25.6        | 29.9        | 34.2        | 38.5        | 42.7        | 47.0        | 51.3        | 64.1         | 85.5          |
| 30    | 7,9  | KW         | 5.9         | 7.4           | 8.8         | 10.3          | 11.8        | 13.3          | 14.7        | 16.2          | 17.7        | 20.6        | 23.6        | 26.5        | 29.5        | 32.4        | 35.3        | 44.2         | 58.9          |
|       |      | HP         | 8.0         | 10.0          | 12.0        | 14.0          | 16.0        | 18.0          | 20.0        | 22.0          | 24.0        | 28.0        | 32.0        | 36.1        | 40.1        | 44.1        | 48.1        | 60.1         | 80.1          |
| 29    | 7,7  | KW         | 5.7         | 7.1           | 8.5         | 10.0          | 11.4        | 12.8          | 14.2        | 15.7          | 17.1        | 19.9        | 22.8        | 25.6        | 28.5        | 31.3        | 34.2        | 42.7         | 56.9          |
|       |      | HP         | 7.7         | 9.7           | 11.6        | 13.6          | 15.5        | 17.4          | 19.4        | 21.3          | 23.2        | 27.1        | 31.0        | 34.9        | 38.7        | 42.6        | 46.5        | 58.1         | 77.4          |
| 28    | 7,4  | KW         | 5.5         | 6.9           | 8.2         | 9.6           | 11.0        | 12.4          | 13.7        | 15.1          | 16.5        | 19.2        | 22.0        | 24.7        | 27.5        | 30.2        | 33.0        | 41.2         | 55.0          |
|       |      | HP         | 7.5         | 9.3           | 11.2        | 13.1          | 15.0        | 16.8          | 18.7        | 20.6          | 22.4        | 26.2        | 29.9        | 33.6        | 37.4        | 41.1        | 44.9        | 56.1         | 74.8          |
| 27    | 7,1  | KW         | 5.3         | 6.6           | 8.0         | 9.3           | 10.6        | 11.9          | 13.3        | 14.6          | 15.9        | 18.6        | 21.2        | 23.9        | 26.5        | 29.2        | 31.8        | 39.8         | 53.0          |
|       |      | HP         | 7.2         | 9.0           | 10.8        | 12.6          | 14.4        | 16.2          | 18.0        | 19.8          | 21.6        | 25.2        | 28.8        | 32.4        | 36.1        | 39.7        | 43.3        | 54.1         | 72.1          |
| 26    | 6,9  | KW         | 5.1         | 6.4           | 7.7         | 8.9           | 10.2        | 11.5          | 12.8        | 14.0          | 15.3        | 17.9        | 20.4        | 23.0        | 25.5        | 28.1        | 30.6        | 38.3         | 51.1          |
|       |      | HP         | 6.9         | 8.7           | 10.4        | 12.2          | 13.9        | 15.6          | 17.4        | 19.1          | 20.8        | 24.3        | 27.8        | 31.2        | 34.7        | 38.2        | 41.7        | 52.1         | 69.4          |
| 25    | 6,6  | KW         | 4.9         | 6.1           | 7.4         | 8.6           | 9.8         | 11.0          | 12.3        | 13.5          | 14.7        | 17.2        | 19.6        | 22.1        | 24.5        | 27.0        | 29.5        | 36.8         | 49.1          |
|       |      | HP         | 6.7         | 8.3           | 10.0        | 11.7          | 13.4        | 15.0          | 16.7        | 18.4          | 20.0        | 23.4        | 26.7        | 30.0        | 33.4        | 36.7        | 40.1        | 50.1         | 66.8          |
| 24    | 6,3  | KW         | 4.7         | 5.9           | 7.1         | 8.2           | 9.4         | 10.6          | 11.8        | 13.0          | 14.1        | 16.5        | 18.9        | 21.2        | 23.6        | 25.9        | 28.3        | 35.3         | 47.1          |
|       |      | HP         | 6.4         | 8.0           | 9.6         | 11.2          | 12.8        | 14.4          | 16.0        | 17.6          | 19.2        | 22.4        | 25.6        | 28.8        | 32.0        | 35.3        | 38.5        | 48.1         | 64.1          |
| 23    | 6,1  | KW         | 4.5         | 5.6           | 6.8         | 7.9           | 9.0         | 10.2          | 11.3        | 12.4          | 13.5        | 15.8        | 18.1        | 20.3        | 22.6        | 24.8        | 27.1        | 33.9         | 45.2          |
|       |      | HP         | 6.1         | 7.7           | 9.2         | 10.7          | 12.3        | 13.8          | 15.4        | 16.9          | 18.4        | 21.5        | 24.6        | 27.6        | 30.7        | 33.8        | 36.9        | 46.1         | 61.4          |
| 22    | 5,8  | KW         | 4.3         | 5.4           | 6.5         | 7.6           | 8.6         | 9.7           | 10.8        | 11.9          | 13.0        | 15.1        | 17.3        | 19.4        | 21.6        | 23.8        | 25.9        | 32.4         | 43.2          |
|       |      | HP         | 5.9         | 7.3           | 8.8         | 10.3          | 11.8        | 13.2          | 14.7        | 16.2          | 17.6        | 20.6        | 23.5        | 26.4        | 29.4        | 32.3        | 35.3        | 44.1         | 58.8          |
| 21    | 5,5  | KW         | 4.1         | 5.2           | 6.2         | 7.2           | 8.2         | 9.3           | 10.3        | 11.3          | 12.4        | 14.4        | 16.5        | 18.6        | 20.6        | 22.7        | 24.7        | 30.9         | 41.2          |
|       |      | HP         | 5.6         | 7.0           | 8.4         | 9.8           | 11.2        | 12.6          | 14.0        | 15.4          | 16.8        | 19.6        | 22.4        | 25.2        | 28.0        | 30.8        | 33.6        | 42.1         | 56.1          |
| 20    | 5,3  | KW         | 3.9         | 4.9           | 5.9         | 6.9           | 7.9         | 8.8           | 9.8         | 10.8          | 11.8        | 13.7        | 15.7        | 17.7        | 19.6        | 21.6        | 23.6        | 29.5         | 39.3          |
|       |      | HP         | 5.3         | 6.7           | 8.0         | 9.3           | 10.7        | 12.0          | 13.4        | 14.7          | 16.0        | 18.7        | 21.4        | 24.0        | 26.7        | 29.4        | 32.0        | 40.1         | 53.4          |
| 19    | 5,0  | KW         | 3.7         | 4.7           | 5.6         | 6.5           | 7.5         | 8.4           | 9.3         | 10.3          | 11.2        | 13.1        | 14.9        | 16.8        | 18.7        | 20.5        | 22.4        | 28.0         | 37.3          |
|       |      | HP         | 5.1         | 6.3           | 7.6         | 8.9           | 10.1        | 11.4          | 12.7        | 14.0          | 15.2        | 17.8        | 20.3        | 22.8        | 25.4        | 27.9        | 30.4        | 38.1         | 50.7          |
| 18    | 4,8  | KW         | 3.5         | 4.4           | 5.3         | 6.2           | 7.1         | 8.0           | 8.8         | 9.7           | 10.6        | 12.4        | 14.1        | 15.9        | 17.7        | 19.4        | 21.2        | 26.5         | 35.3          |
|       |      | HP         | 4.8         | 6.0           | 7.2         | 8.4           | 9.6         | 10.8          | 12.0        | 13.2          | 14.4        | 16.8        | 19.2        | 21.6        | 24.0        | 26.4        | 28.8        | 36.1         | 48.1          |
| 17    | 4,5  | KW         | 3.3         | 4.2           | 5.0         | 5.8           | 6.7         | 7.5           | 8.3         | 9.2           | 10.0        | 11.7        | 13.4        | 15.0        | 16.7        | 18.4        | 20.0        | 25.0         | 33.4          |
|       |      | HP         | 4.5         | 5.7           | 6.8         | 7.9           | 9.1         | 10.2          | 11.4        | 12.5          | 13.6        | 15.9        | 18.2        | 20.4        | 22.7        | 25.0        | 27.2        | 34.1         | 45.4          |
| 16    | 4,2  | KW         | 3.1         | 3.9           | 4.7         | 5.5           | 6.3         | 7.1           | 7.9         | 8.6           | 9.4         | 11.0        | 12.6        | 14.1        | 15.7        | 17.3        | 18.9        | 23.6         | 31.4          |
|       |      | HP         | 4.3         | 5.3           | 6.4         | 7.5           | 8.5         | 9.6           | 10.7        | 11.8          | 12.8        | 15.0        | 17.1        | 19.2        | 21.4        | 23.5        | 25.6        | 32.0         | 42.7          |
| 15    | 4,0  | KW         | 2.9         | 3.7           | 4.4         | 5.2           | 5.9         | 6.6           | 7.4         | 8.1           | 8.8         | 10.3        | 11.8        | 13.3        | 14.7        | 16.2        | 17.7        | 22.1         | 29.5          |
|       |      | HP         | 4.0         | 5.0           | 6.0         | 7.0           | 8.0         | 9.0           | 10.0        | 11.0          | 12.0        | 14.0        | 16.0        | 18.0        | 20.0        | 22.0        | 24.0        | 30.0         | 40.1          |
| 14    | 3,7  | KW         | 2.7         | 3.4           | 4.1         | 4.8           | 5.5         | 6.2           | 6.9         | 7.6           | 8.2         | 9.6         | 11.0        | 12.4        | 13.7        | 15.1        | 16.5        | 20.6         | 27.5          |
|       |      | HP         | 3.7         | 4.7           | 5.6         | 6.5           | 7.5         | 8.4           | 9.3         | 10.3          | 11.2        | 13.1        | 15.0        | 16.8        | 18.7        | 20.6        | 22.4        | 28.0         | 37.4          |
| 13    | 3,4  | KW         | 2.6         | 3.2           | 3.8         | 4.5           | 5.1         | 5.7           | 6.4         | 7.0           | 7.7         | 8.9         | 10.2        | 11.5        | 12.8        | 14.0        | 15.3        | 19.1         | 25.5          |
|       |      | HP         | 3.5         | 4.3           | 5.2         | 6.1           | 6.9         | 7.8           | 8.7         | 9.5           | 10.4        | 12.2        | 13.9        | 15.6        | 17.4        | 19.1        | 20.8        | 26.0         | 34.7          |
| 12    | 3,2  | KW         | 2.4         | 2.9           | 3.5         | 4.1           |             |               |             |               |             |             |             |             |             |             |             |              |               |

# WJ-U - 3" P" - U SERIES



100% European-American  
Components

Pressione - Pressure - Pression - Presión

100 bar  
1450 psi

Portata - Flow - Débit - Caudal

0,7÷7 l/min  
0.2÷1.8 GPM

Versioni - Versions - Versions - Versiones

WJC-U



La serie WJC-U rientra nella fascia delle potenze basse (fino a 2HP) ed è destinata principalmente agli impianti di nebulizzazione (serre, raffreddamento di ambienti esterni, eliminazione polvere/ controllo cattivi odori, umidificazione, raffreddamento di ambienti che ospitano bestiame/animali, effetti speciali etc.). Queste pompe sono applicabili direttamente a motori elettrici con le seguenti caratteristiche: 1450 RPM, albero maschio cilindrico Ø 19-24mm, grandezza IEC 80-90, 4 poli, flangia B14. Pompe compatte, maneggevoli e silenziose, strutturate in modo tale da rendere agevole la sostituzione delle parti soggette ad usura.

3" P" L-U



The WJC-U series covers the low power range (up to 2HP) and is specially suited for misting/fogging systems (greenhouses, climate control systems, industrial humidification systems, outdoor cooling, poultry, horse and cattle cooling, odour neutralization systems, dust control systems, special fog effects, etc.). Direct drive to electric motors with the following specifications: 1450 RPM, solid shaft Ø 19-24mm, size IEC 80-90, 4 poles, flange B14. Compact, easy to handle and noiseless pumps, structured to make easily accessible the inspection and the maintenance.

3" P" C-U



Les pompes de la série WJC-U couvrent la gamme des puissances basses (jusqu'à 2 CV) et elles sont indiquées surtout pour l'installation des systèmes de brumisation (serres, climatisation extérieure, rafraîchissement de grands volumes, traitement d'odeurs, rabattement de poussières, humidification agricole et industrielle, effets spéciaux, etc.). Transmission directe à moteurs électriques à 1450 t/min., arbre cylindrique Ø 19-24 mm, grandeur IEC 80-90, 4 pôles, bride B14. Pompes compactes, maniables et silencieuses; entretien simple des pièces d'usage.

La serie WJC pertenece a la categoría de las potencias bajas (hasta 2HP) y es destinada principalmente a las plantas de nebulización (invernaderos, enfriamiento de ambientes exteriores, eliminación polvo/control de malos olores, humidificación, enfriamiento de ambientes que huéspedes ganado/animales, efectos especiales etc.). Estas bombas se pueden acoplar directamente con motores eléctricos con las siguientes características: 1450 Rev./min., cigüeñal cilíndrico Ø 19-24mm, tamaño IEC 80-90, 4 polos, brida B14. Bombas compactas, manejables y silenciosas, estructuradas de manera que sea fácil la substitución de las partes sujetas a deterioro.

Applicazioni - Applications - Applications - Aplicaciones



Impianti umidificazione  
Misting/Fogging  
Systèmes de brumisation  
Equipos para humidificación

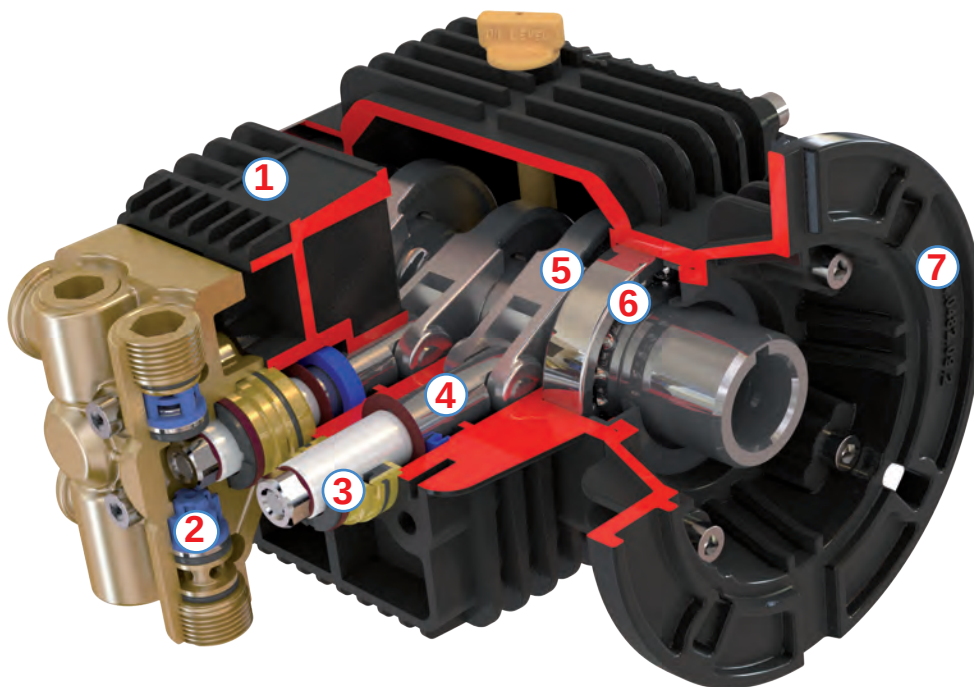




- 1 Nuovo corpo pompa con tecnologia delle valvole di aspirazione e mandata contrapposte per ridurre gli spazi negativi; aumentata la capacità di adescamento della pompa a basse portate
- 2 Valvole di aspirazione e mandata ad elevata efficienza in acciaio inox 316. Garantiscono la massima resistenza alla corrosione e sono facilmente ispezionabili.
- 3 Nuovo sistema di tenuta a "V" e ad "U" con camera di ricircolo in grado di mantenere costantemente pulita la superficie del pistone aumentando la durata delle guarnizioni.
- 4 Guida pistone in acciaio inox con esclusivo trattamento di nitrurazione e lucidatura delle superfici per prevenire l'usura ed aumentare la durata delle tenute olio.
- 5 Bielle di costruzione integrale (monopezzo) realizzate in lega di alluminio e con scarichi sagomati che conferiscono una perfetta lubrificazione.
- 6 Cuscinetti di prima scelta sovradimensionati per ottimizzare la durata anche in condizioni di lavoro gravose.
- 7 Nuova flangia in alluminio pressofuso per garantire la massima precisione di accoppiamento con il motore.



- 1 New brass head completely redesigned to accommodate unique check valves, specifically built to reduce clearance volumes. Rapid action time capacity when the pump is starting up.
- 2 Rapid action, mirror finish stainless steel check valves prevent corrosion and enhance high fluid dynamic efficiency. Easily accessible.
- 3 Innovative "V" and "U" packing sealing system designed with re-cycling area, assuring longer life of the seals, since the piston surface remains constantly clean.
- 4 Stainless steel plunger rod nitrating treatment resulting in a harder smoother surface for increased oil seal life
- 5 Oversized aluminium connecting rods (one piece unit), for maximum strength and perfect lubrication
- 6 Premium oversized bearings provide extended working conditions.
- 7 New die cast aluminium flange for close coupling with the motor



- 1 Nouvelle culasse en laiton et nouvelle technique des clapets aspiration refoulement conçue pour réduire les passages mauvais; amorçage de la pompe très rapide, aucune force de recul au démarrage.
- 2 Clapets d'aspiration et de refoulement en acier inox 316, de conception moderne, d'une finition très soignée, préviennent de la corrosion. Maintenance et remplacement faciles.
- 3 L'ensemble d'étanchéité, joints en "V" et "U", sont conçus pour assurer des performances optimales. Le système de recyclage assure une grande longévité des joints, qui sont toujours propres.
- 4 Guides de pistons en acier inox, traitements spéciaux de nitruration et polissage pour permettre d'éviter l'usure, son état de surface parfait augmente significativement la durée de vie des joints d'huile à son contact.
- 5 Bielles une pièce en aluminium, d'une grande robustesse, lubrification facilitée.
- 6 Roulements de première qualité, surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 7 Bride en aluminium moulé sous pression pour assurer la liaison parfaite moteur-pompe.



- 1 Nuevo cuerpo bomba con las válvulas de aspiración y envío opuestas para reducir los espacios negativos; aumento de la capacidad para cebar la bomba a caudales bajos.
- 2 Válvulas de aspiración y envío en acero inox 316. Aseguran la máxima resistencia a la corrosión y pueden ser inspeccionadas fácilmente.
- 3 Nuevo sistema de sellado en "V" y "U" con cámara de recirculación capaz de mantener constantemente limpia la superficie del pistón prolongando así la vida de los sellos.
- 4 Guía pistón de acero inoxidable con exclusivo tratamiento de nitruración de las superficies para evitar el desgaste y aumentar la duración de los retenes de aceite.
- 5 Bielas con construcción integral (de una pieza) de aleación de aluminio y de lubricación perfecta.
- 6 Rodamientos de gran tamaño de primera marca para optimizar la duración incluso en las condiciones de trabajo más difíciles.
- 7 Nueva brida de aluminio fundido para asegurar la máxima precisión de acoplamiento con el motor.

### Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 3/8 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 24 mm         |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 5,5 kg (12.1 lbs)    |
| MOTOR  | Type        | IEC 80 B14-19 mm     |
|        |             | IEC 90 B14-24 mm     |

R DX T B SX BZ



IEC 90



IEC 80

### Guarnizioni - Seals - Juntas

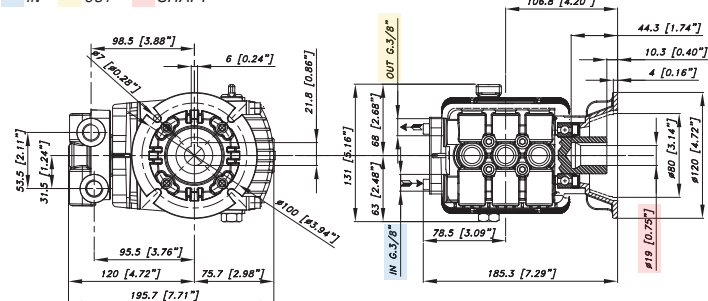
|                   |     |
|-------------------|-----|
| Anteriori - Front | "V" |
| Posteriori - Rear | "U" |



| IEC 80         | IEC 90         |                  |                         |      |          |     |     |     |                    |                 |
|----------------|----------------|------------------|-------------------------|------|----------|-----|-----|-----|--------------------|-----------------|
| Codice<br>Code | Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pres. |      | 1450 RPM |     |     |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                |                |                  | bar                     | PSI  | l/min    | GPM | kW  | hp  | Ø mm               | mm              |
| 02.6044.97.3   | 02.6040.97.3   | WJC-U 110        | 100                     | 1450 | 1,3      | 0,3 | 0,3 | 0,4 | 15                 | 2               |
| 02.6045.97.3   | 02.6041.97.3   | WJC-U 210        | 100                     | 1450 | 2,0      | 0,5 | 0,5 | 0,6 | 15                 | 3               |
| 02.6046.97.3   | 02.6042.97.3   | WJC-U 410        | 100                     | 1450 | 4,0      | 1,0 | 0,9 | 1,2 | 15                 | 6               |
| -              | 02.6043.97.3   | WJC-U 710        | 100                     | 1450 | 7,0      | 1,8 | 1,4 | 1,9 | 15                 | 10              |

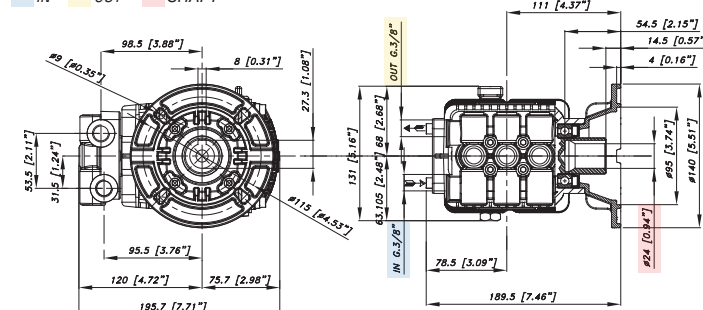
### IEC 80

IN OUT SHAFT



### IEC 90

IN OUT SHAFT



### Accessori di completamento - Complementary accessories - Accessoires complémentaires - Accesorios complementarios

TV



Valvole regolazione pressione APR.U: attacco con viti cave - Pressure relief valves APR.U with banjo connections  
Régulateurs de pression by-pass APR.U - Válvulas de regulación de presión APR.U: conexión con tornillos de fijación

| Codice<br>Code | Uscita<br>Outlet | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Attacco pompa<br>Port size | Entrata<br>Inlet | Peso<br>Weight |     |
|----------------|------------------|------------------|-------------------------|------|-----------------|-----|----------------------------|------------------|----------------|-----|
|                |                  |                  | bar                     | PSI  | l/min           | GPM | BSP                        | BSP              | kg             | lbs |
| 05.8708.97.U   | 3/8 BSP-M        | APR.U 14         | 100                     | 1450 | 21              | 5.5 | 3/8                        | 1/2 - M          | 0.83           | 1.8 |
| 05.8711.97.U   | 22x1.5-M         |                  |                         |      |                 |     |                            |                  | 0.87           | 1.9 |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F

Valvole regolazione pressione UNIFIT.U con by-pass esterno - Pressure relief valves UNIFIT.U with external by-pass  
Régulateurs de Pression UNIFIT.U - Válvulas de regulación de presión UNIFIT.U

| Codice<br>Code | Uscita<br>Outlet | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Attacco pompa<br>Port size | Entrata<br>Inlet | Peso<br>Weight |      |
|----------------|------------------|------------------|-------------------------|------|-----------------|-----|----------------------------|------------------|----------------|------|
|                |                  |                  | bar                     | PSI  | l/min           | GPM | BSP                        | BSP              | kg             | lbs  |
| 05.8730.97.U   | 3/8 BSP-M        | UNIFIT.U 14      | 100                     | 1450 | 30              | 8.0 | 3/8 - M                    | 3/8 - M          | 0.57           | 1.25 |
| 05.8733.97.U   | 22x1.5-M         |                  |                         |      |                 |     |                            |                  | 0.61           | 1.35 |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F

## Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                              |
|--------|-------------|------------------------------|
| IN     | Ø           | 3/8 BSP                      |
|        | Press. Min. | 1 bar (15 PSI)               |
|        | Press. Max. | 6 bar (87 PSI)               |
|        | Temp. Max.  | 60°C (140°F)                 |
| OUT    | Ø           | 3/8 BSP                      |
| SHAFT  | Ø           | 24 mm                        |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.)         |
| WEIGHT | kg (lbs)    | 5,5 kg (12.1 lbs)            |
| MOTOR  | Type        | IEC 80 B14-19 mm (3" P" C-U) |

DX T B SX M



3" P" L-U

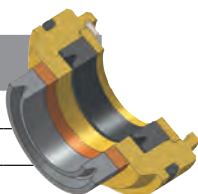


3" P" C-U (IEC 80)

Guarnizioni - Seals  
Joints - Juntas

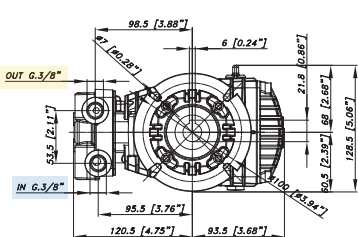
Anteriori - Front Super "U"

Posteriori - Rear "U"

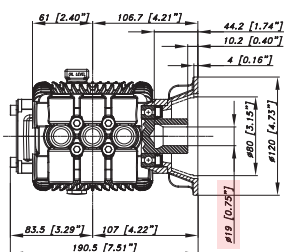


| 3 "P"C-U     |               | 3 "P"L-U     |               |                      |      |          |     |     |     |          |     |     |     |          |     |     |     |                 |              |  |
|--------------|---------------|--------------|---------------|----------------------|------|----------|-----|-----|-----|----------|-----|-----|-----|----------|-----|-----|-----|-----------------|--------------|--|
| Codice Code  | Modello Model | Codice Code  | Modello Model | Press. Max Max Pres. |      | 1000 RPM |     |     |     | 1250 RPM |     |     |     | 1450 RPM |     |     |     | Pistone Plunger | Corsa Stroke |  |
|              |               |              |               | bar                  | PSI  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp  |                 |              |  |
| 02.7080.97.3 | 3 "P"C-U 110  | 02.7070.97.3 | 3 "P"L-U 110  | 100                  | 1450 | 0,7      | 0,2 | 0,1 | 0,2 | 0,9      | 0,2 | 0,2 | 0,2 | 1,0      | 0,3 | 0,2 | 0,3 | 13              | 3            |  |
| 02.7081.97.3 | 3 "P"C-U 210  | 02.7071.97.3 | 3 "P"L-U 210  | 100                  | 1450 | 1,7      | 0,4 | 0,3 | 0,4 | 2,1      | 0,5 | 0,4 | 0,5 | 2,4      | 0,6 | 0,5 | 0,6 | 13              | 4,8          |  |
| 02.7082.97.3 | 3 "P"C-U 310  | 02.7072.97.3 | 3 "P"L-U 310  | 100                  | 1450 | 2,1      | 0,6 | 0,4 | 0,6 | 2,7      | 0,7 | 0,5 | 0,7 | 3,0      | 0,8 | 0,6 | 0,8 | 13              | 6            |  |
| 02.7083.97.3 | 3 "P"C-U 410  | 02.7073.97.3 | 3 "P"L-U 410  | 100                  | 1450 | 2,9      | 0,8 | 0,6 | 0,8 | 3,6      | 0,9 | 0,7 | 0,9 | 4,1      | 1,1 | 0,8 | 1,1 | 13              | 8            |  |
| -            | -             | 02.7074.97.3 | 3 "P"L-U 510  | 100                  | 1450 | 3,7      | 1,0 | 0,7 | 1,0 | 4,6      | 1,2 | 0,9 | 1,2 | 5,2      | 1,4 | 1,0 | 1,4 | 13              | 10           |  |
| -            | -             | 02.7075.97.3 | 3 "P"L-U 710  | 100                  | 1450 | 4,5      | 1,2 | 0,9 | 1,2 | 5,7      | 1,5 | 1,1 | 1,5 | 6,4      | 1,7 | 1,3 | 1,7 | 13              | 12,4         |  |

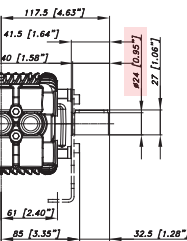
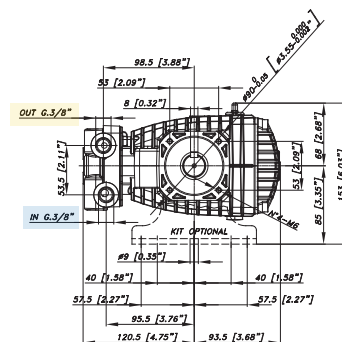
## 3" P" C-U (IEC 80)



IN OUT SHAFT



## 3" P" L-U



IN OUT SHAFT

## Accessori di completamento - Complementary accessories - Accessoires complémentaires - Accesorios complementarios

TV

Valvole regolazione pressione APR.U: attacco con viti cave - Pressure relief valves APR.U with banjo connections  
Régulateurs de pression by-pass APR.U - Válvulas de regulación de presión APR.U: conexión con tornillos de fijación

| Codice<br>Code | Uscita<br>Outlet | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Attacco pompa<br>Port size | Entrata<br>Inlet | Peso<br>Weight |     |
|----------------|------------------|------------------|-------------------------|------|-----------------|-----|----------------------------|------------------|----------------|-----|
|                |                  |                  | bar                     | PSI  | l/min           | GPM |                            |                  | BSP            | BSP |
| 05.8708.97.U   | 3/8 BSP-M        | APR.U 14         | 100                     | 1450 | 21              | 5.5 | 3/8                        | 1/2 - M          | 0.83           | 1.8 |
| 05.8711.97.U   | 22x1.5-M         |                  |                         |      |                 |     |                            |                  | 0.87           | 1.9 |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F

Valvole regolazione pressione UNIFIT.U con by-pass esterno - Pressure relief valves UNIFIT.U with external by-pass  
Régulateurs de Pression UNIFIT.U - Válvulas de regulación de presión UNIFIT.U

| Codice<br>Code | Uscita<br>Outlet | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Attacco pompa<br>Port size | Entrata<br>Inlet | Peso<br>Weight |      |
|----------------|------------------|------------------|-------------------------|------|-----------------|-----|----------------------------|------------------|----------------|------|
|                |                  |                  | bar                     | PSI  | l/min           | GPM |                            |                  | kg             | lbs  |
| 05.8730.97.U   | 3/8 BSP-M        | UNIFIT.U 14      | 100                     | 1450 | 30              | 8.0 | 3/8 - M                    | 3/8 - M          | 0.57           | 1.25 |
| 05.8733.97.U   | 22x1.5-M         |                  |                         |      |                 |     |                            |                  | 0.61           | 1.35 |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F



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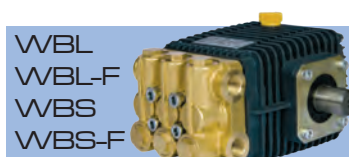
Pressione - Pressure - Pression - Presión

Portata - Flow - Débit - Caudal

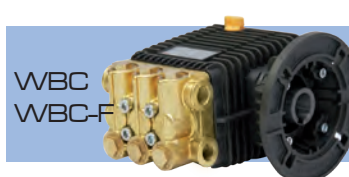
90÷175 bar  
1300÷2500 psi

7,6÷14 l/min  
2.0÷3.7 GPM

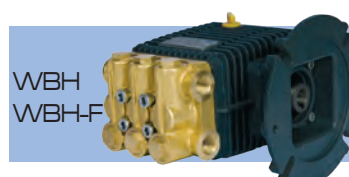
Versioni - Versions - Versions - Versiones



WBL  
WBL-F  
WBS  
WBS-F



WBC  
WBC-F



WBH  
WBH-F



WBG  
WBG-W



Gamma di pompe a tre pistoni in linea, "consumer segment", ma costruite con la medesima tecnologia delle pompe professionali. Accoppiamento diretto a tutti i tipi di motore elettrico e a scoppio, disponibili a tutte le velocità di rotazione, fino a 3450 g/min. L'albero eccentrico è posizionato su cuscinetti a sfera di primaria marca.

Dotate del nuovo sistema di tenuta dei tappi valvola idoneo per pressioni elevate e per prevenire fenomeni di sovrappressioni accidentali. Disponibili anche nelle versioni con valvola depressurizzatrice integrata nella testata.



Piston pumps range for "consumer segment", built with the same technology of professional pumps. Direct drive to electric motors and gasoline engines, to cover the entire RPM range. The crankshaft runs on premium oversized ball bearings. Valve caps fitted with new sealing system designed for high pressure and to prevent accidental over pressure. Models with built-in unloader are available.



Pompes à trois pistons réservées au secteur "consumer", mais conçues avec la même technologie des pompes de haute gamme.

Transmission directe aux moteurs électriques et à essence; modèles disponibles à toutes les vitesses de rotation, jusqu'à 3450 t/min. L'arbre de transmission travaille sur des roulements à bille de première marque. Bouchons clapets avec nouveau système d'étanchéité pour travailler aux pressions élevées et prévenir les surpressions accidentelles. Modèles disponibles avec régulateur by-pass incorporé dans la culasse.



Gama de bombas de tres pistones en línea, "sector consumidor", pero construidas con la misma tecnología de las bombas profesionales. Acoplamiento directo con todo tipo de motores eléctricos y de explosión, disponible a todas las velocidades de rotación, hasta 3450 Rev./min. El cigüeñal excéntrico es posicionado sobre cojinetes de esfera de primera marca. Dotadas del nuevo sistema de juntas de las tapas de válvulas apto para presiones elevadas y para prevenir fenómenos de sobrepresiones accidentales. Disponibles también en las versiones con válvula de regulación de presión integrada en la culata.

Applicazioni - Applications - Applications - Aplicaciones



Manutenzione di attrezzatura pesante  
Heavy equipment maintenance  
Entretien d'équipement lourd  
Mantenimiento de equipos pesados



Lavaggio Self-service  
Self-service wash  
Lavage Self-Service  
Autolavado



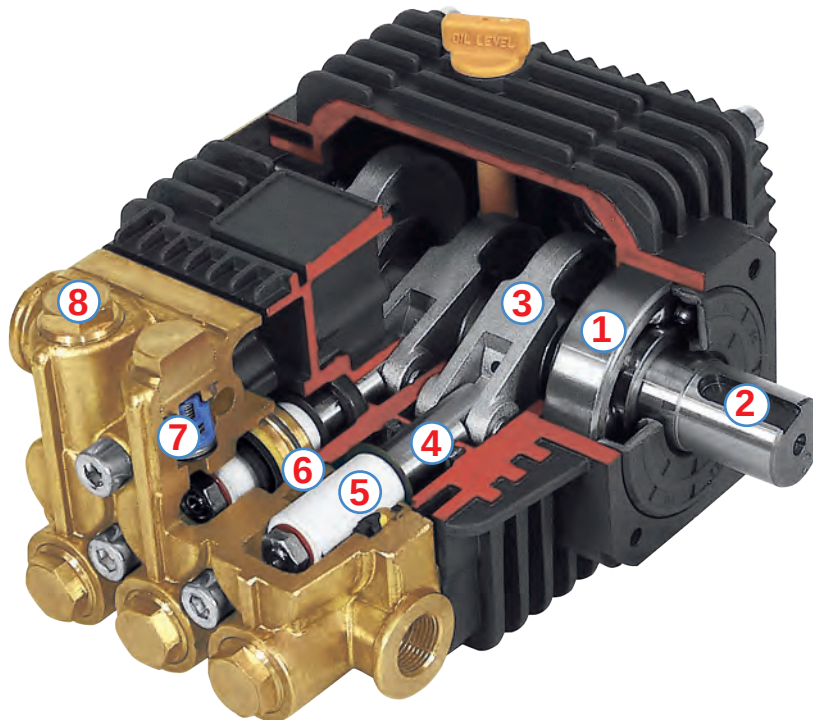
Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



- 1 Cuscinetti di prima scelta sovradimensionati per una durata più lunga, anche in condizioni di lavoro gravose.
- 2 Albero in acciaio forgiato con sporgenza maggiorata per rinforzare l'accoppiamento pompa – motore (in qualsiasi versione).
- 3 Bielle di costruzione integrale (monopezzo), realizzate in lega di bronzo o alluminio (secondo i modelli), di elevata resistenza e affidabilità con lubrificazione facilitata.
- 4 Guida pistone in acciaio inox con esclusivo trattamento di nitrurazione e lucidatura delle superfici per prevenire l'usura e aumentare la durata delle guarnizioni.
- 5 Pistoni in ceramica integrale, la cui perfetta finitura superficiale garantisce una lunga durata delle guarnizioni.
- 6 Nuovo sistema a doppia tenuta a "V" e a "U" concepito per una lunga durata e prestazioni ottimali.
- 7 Valvole di aspirazione-mandata ad alta efficienza in acciaio inox 316 anticorrosione.
- 8 Testata in ottone stampato ad alta resistenza meccanica, di forte spessore, per evitare deformazioni alle pressioni più elevate.



- 1 Premium oversized bearings.
- 2 Extended length of forged steel crankshaft for a solid coupling pump-motor/engine.
- 3 Oversized aluminum connecting rods (one piece unit), or brass rods on some models, for maximum strength and easier lubrication.
- 4 Stainless steel plunger rod nitriding treatment resulting in a harder smoother surface for increased oil seal life.
- 5 High quality pure ceramic pistons for years of uninterrupted high-pressure performance.
- 6 Exclusive double "V" and "U" self-lubricating packing seals with an elastometer designed to prevent water from contaminating the oil in the crankcase. This gives you years of leak-free operation.
- 7 Rapid action, mirror finish stainless steel 316 check valves prevent corrosion.
- 8 Brass head with higher thickness to withstand high pressure.



- 1 Roulements de première qualité, surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 2 Arbre en acier forgé surdimensionné en longueur pour renforcer la liaison moteur-pompe.
- 3 Bielles une pièce surdimensionnées en aluminium ou bronze (suivant modèles) d'une grande robustesse, lubrification facilitée.
- 4 Guides de pistons en acier inox, traitements spéciaux de nitruration et polissage pour permettre d'éviter l'usure, son état de surface parfait augmente significativement la durée de vie des joints d'huile à son contact.
- 5 Pistons en céramique intégrale parfaitement traités et une finition de surface impeccable augmente l'étanchéité des joints.
- 6 L'ensemble d'étanchéité, double joints en "V" et en "U", sont conçus pour assurer une parfaite étanchéité, des performances optimales et une grande longévité.
- 7 Clapets d'aspiration-refoulement en acier inox 316, d'une finition très soignée préviennent de la corrosion.
- 8 Culasse en laiton très robuste, de forte épaisseur, afin d'éviter les déformations aux pressions les plus élevées.



- 1 Cojinetes de primera marca de grandes dimensiones para una más larga duración, también en condiciones de trabajo gravosas.
- 2 Cigüeñal en acero forjado con saliente más grande para reforzar el acoplamiento bomba-motor (en cualquier versión).
- 3 Bielas de construcción integral (una pieza), realizadas en aleación de bronce o aluminio (según los modelos) de elevada resistencia y confiabilidad con lubricación facilitada.
- 4 Guía pistón de acero inoxidable con exclusivo tratamiento de nitruración de las superficies para evitar el desgaste y aumentar la duración de los retenes de aceite.
- 5 Pistones en cerámica integral, cuya perfecta finura superficial garantiza una larga duración de los collarines.
- 6 Nuevo sistema de doble juntas "V" y "U" autolubrificantes en material mixto proyectado para una larga duración y prestaciones óptimas.
- 7 Válvulas de aspiración – envío en acero inox. 316 de alta eficiencia que previenen la corrosión.
- 8 Culata en latón de alta resistencia mecánica, de grueso espesor, para evitar deformaciones a las temperaturas más elevadas.

|        |             | WBL                  | WBL-F                |
|--------|-------------|----------------------|----------------------|
| IN     | Ø           | 3/8 BSP              | 3/8 BSP              |
|        | Press. Min. | -0.1 bar (-1.5 PSI)  | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                | 24 mm                |
| OIL    | SAE 75W 90  | 0.5l (0.13 U.S.gal.) | 0.5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 5.8 kg (12.8 lbs)    | 5.8 kg (12.8 lbs)    |



R DX T B  
SX BZ F

| WBL 1450 RPM   |               |                      |      |              |     |               |     |                 |              |
|----------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| Codice Code    | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6000.97.3   | WBL 810       | 100                  | 1450 | 8            | 2,1 | 1,4           | 1,9 | 18              | 7            |
| 02.6001.97.3   | WBL 813       | 130                  | 1900 | 8            | 2,1 | 1,9           | 2,5 | 18              | 7            |
| 02.6002.97.3   | WBL 816       | 160                  | 2300 | 8            | 2,1 | 2,2           | 3   | 18              | 7            |
| 02.6003.97.3   | WBL 911       | 110                  | 1600 | 9            | 2,3 | 1,8           | 2,4 | 18              | 8            |
| 02.6004.97.3   | WBL 913       | 130                  | 1900 | 9            | 2,3 | 2,1           | 2,8 | 18              | 8            |
| 02.6005.97.3   | WBL 917       | 170                  | 2400 | 9            | 2,3 | 2,7           | 3,6 | 18              | 8            |
| 02.6006.97.3   | WBL 1010      | 100                  | 1450 | 10           | 2,6 | 1,9           | 2,5 | 18              | 9,2          |
| 02.6007.97.3   | WBL 1012      | 120                  | 1750 | 10           | 2,6 | 2,3           | 3   | 18              | 9,2          |
| 02.6008.97.3   | WBL 1016      | 160                  | 2300 | 10           | 2,6 | 2,9           | 3,9 | 18              | 9,2          |
| 02.6009.97.3   | WBL 1109      | 90                   | 1300 | 11           | 2,9 | 1,8           | 2,5 | 18              | 10           |
| 02.6010.97.3   | WBL 1111      | 110                  | 1600 | 11           | 2,9 | 2,2           | 3   | 18              | 10           |
| 02.6011.97.3   | WBL 1115      | 150                  | 2200 | 11           | 2,9 | 3             | 4   | 18              | 10           |
| 02.6012.97.3   | WBL 1312      | 120                  | 1750 | 13           | 3,4 | 3             | 4   | 18              | 12,4         |
| WBL-F 2800 RPM |               |                      |      |              |     |               |     |                 |              |
| CODICE CODE    | MODELLO MODEL | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6020.97.3   | WBL 809-F     | 90                   | 1300 | 8            | 2,1 | 1,4           | 1,9 | 15              | 6            |
| 02.6021.97.3   | WBL 812-F     | 120                  | 1750 | 8            | 2,1 | 1,9           | 2,5 | 15              | 6            |
| 02.6022.97.3   | WBL 814-F     | 140                  | 2000 | 8            | 2,1 | 2,2           | 2,9 | 15              | 6            |
| 02.6023.97.3   | WBL 1010-F    | 100                  | 1450 | 10           | 2,6 | 1,8           | 2,5 | 15              | 7            |
| 02.6024.97.3   | WBL 1012-F    | 120                  | 1750 | 10           | 2,6 | 2,2           | 2,9 | 15              | 7            |
| 02.6025.97.3   | WBL 1016-F    | 160                  | 2300 | 10           | 2,6 | 2,9           | 3,9 | 15              | 7            |
| 02.6026.97.3   | WBL 1110-F    | 100                  | 1450 | 11           | 2,9 | 2,1           | 2,8 | 15              | 8            |
| 02.6027.97.3   | WBL 1114-F    | 140                  | 2000 | 11           | 2,9 | 2,9           | 3,9 | 15              | 8            |
| 02.6028.97.3   | WBL 1309-F    | 90                   | 1300 | 13           | 3,4 | 2,2           | 2,9 | 15              | 9,2          |
| 02.6029.97.3   | WBL 1312-F    | 120                  | 1750 | 13           | 3,4 | 2,8           | 3,8 | 15              | 9,2          |
| 02.6032.97.3   | WBL 1410-F    | 110                  | 1600 | 14           | 3,7 | 2,9           | 3,9 | 15              | 10           |

[illegible]

|                   |     |
|-------------------|-----|
| Anteriori - Front | “V” |
| Posteriori - Rear | “U” |



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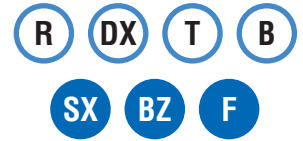
pag.124

pag.126



## Caratteristiche - Specifications - Caractéristiques - Características

|        |             | WBS                  | WBS-F                |
|--------|-------------|----------------------|----------------------|
| IN     | Ø           | 3/8 BSP              | 3/8 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                | 24 mm                |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 5,8 kg (12.8 lbs)    | 5,8 kg (12.8 lbs)    |

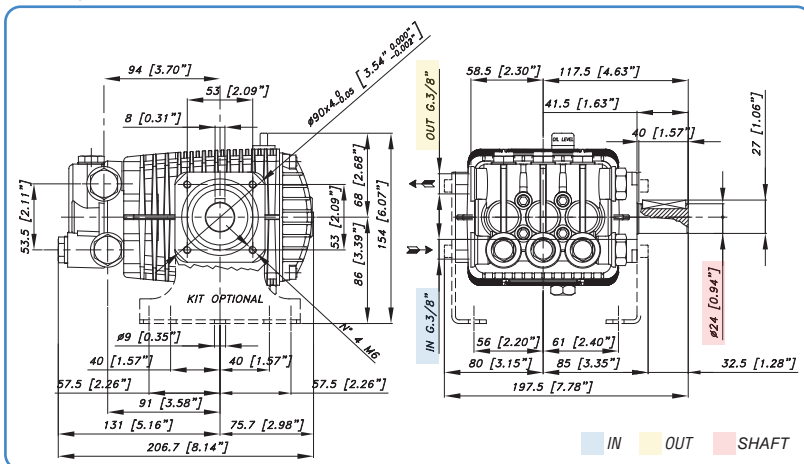


| WBS - 1725 RPM |               |                      |      |              |     |               |     |                 |              |
|----------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| Codice Code    | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6090.97.3   | WBS 1520      | 105                  | 1500 | 7,6          | 2   | 1,5           | 2   | 15              | 8,6          |
| 02.6091.97.3   | WBS 1920      | 130                  | 1900 | 7,6          | 2   | 1,8           | 2,5 | 15              | 8,6          |
| 02.6092.97.3   | WBS 2320      | 160                  | 2300 | 7,6          | 2   | 2,2           | 3   | 15              | 8,6          |
| 02.6093.97.3   | WBS 1832      | 125                  | 1800 | 12,2         | 3,2 | 2,9           | 3,9 | 18              | 10           |
| 02.6094.97.3   | WBS 2532      | 175                  | 2500 | 12,2         | 3,2 | 4             | 5,4 | 18              | 10           |
| 02.6095.97.3   | WBS 1735      | 115                  | 1700 | 13,2         | 3,5 | 3             | 4   | 18              | 10,8         |
| 02.6096.97.3   | WBS 2335      | 160                  | 2300 | 13,2         | 3,5 | 4             | 5,3 | 18              | 10,8         |

| WBS-F - 3450 RPM |               |                      |      |              |     |               |     |                 |              |
|------------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| Codice Code      | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                  |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6110.97.3     | WBS 1421-F    | 95                   | 1400 | 8            | 2,1 | 1,5           | 2   | 15              | 4,8          |
| 02.6111.97.3     | WBS 1821-F    | 125                  | 1800 | 8            | 2,1 | 1,9           | 2,5 | 15              | 4,8          |
| 02.6112.97.3     | WBS 2121-F    | 145                  | 2100 | 8            | 2,1 | 2,2           | 2,9 | 15              | 4,8          |
| 02.6113.97.3     | WBS 1335-F    | 90                   | 1300 | 13           | 3,4 | 2,2           | 3   | 15              | 8            |
| 02.6114.97.3     | WBS 1735-F    | 115                  | 1700 | 13           | 3,4 | 3             | 4   | 15              | 8            |
| 02.6115.97.3     | WBS 2235-F    | 150                  | 2200 | 13           | 3,4 | 3,8           | 5,1 | 15              | 8            |

## WBS / WBS-F



## Guarnizioni - Seals Joints - Juntas

Anteriori - Front

"V"

Posteriori - Rear

"U"



## Accessori di completamento - Complementary accessories Accessoires complémentaires - Accesorios complementarios



pag.115

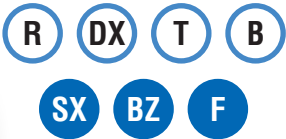
pag.124



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Caratteristiche - Specifications - Caractéristiques - Características

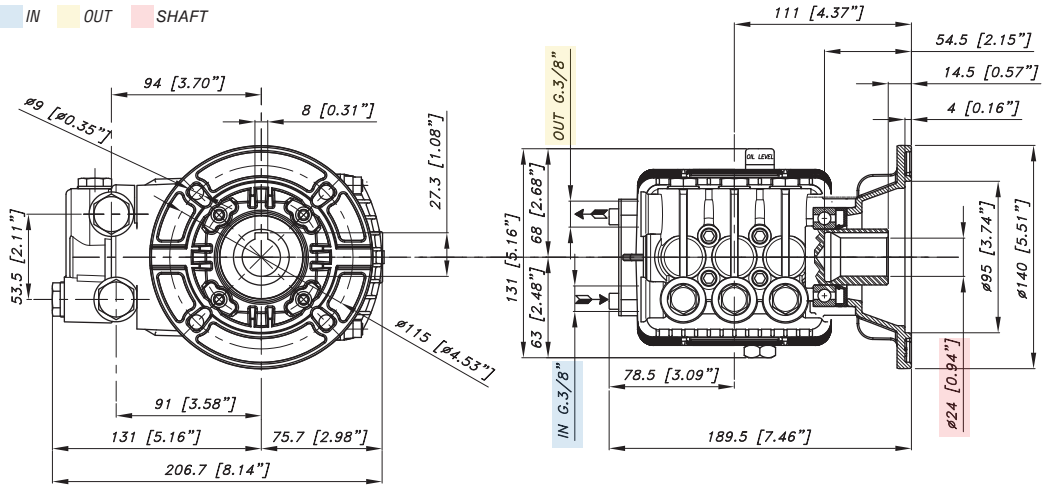
| IN     | Ø           | 3/8 BSP              | 3/8 BSP              |
|--------|-------------|----------------------|----------------------|
|        | Press. Min. | -0,1 bar (-1.5 PSI)  | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 24 mm         | Hollow 24 mm         |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 6 kg (13.2 lbs)      | 6 kg (13.2 lbs)      |
| MOTOR  | Type        | IEC 90 B14-24 mm     |                      |



| WBC - 1450 RPM |               |                      |      |              |     |               |     |                 |              |
|----------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| Codice Code    | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6051.97.3   | WBC 911       | 110                  | 1600 | 9            | 2,3 | 1,8           | 2,4 | 18              | 8            |
| 02.6052.97.3   | WBC 1111      | 110                  | 1600 | 11           | 2,9 | 2,2           | 3   | 18              | 10           |
| 02.6053.97.3   | WBC 1312      | 120                  | 1750 | 13           | 3,4 | 3             | 4   | 18              | 12,4         |

| WBC-F - 2800 RPM |               |                      |      |              |     |               |     |                 |              |
|------------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| Codice Code      | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                  |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6060.97.3     | WBC 812-F     | 120                  | 1750 | 8            | 2,1 | 1,9           | 2,5 | 15              | 6            |
| 02.6061.97.3     | WBC 814-F     | 140                  | 2000 | 8            | 2,1 | 2,2           | 2,9 | 15              | 6            |
| 02.6062.97.3     | WBC 1114-F    | 140                  | 2000 | 11           | 2,9 | 2,9           | 3,9 | 15              | 8            |
| 02.6063.97.3     | WBC 1411-F    | 110                  | 1600 | 14           | 3,7 | 2,8           | 3,8 | 15              | 10           |
| 02.6064.97.3     | WBC 1415-F    | 150                  | 2200 | 14           | 3,7 | 3,8           | 5,1 | 15              | 10           |

WBC / WBC-F



| Guarnizioni - Seals<br>Joints - Juntas |     |
|----------------------------------------|-----|
| Anteriori - Front                      | "V" |
| Posteriori - Rear                      | "U" |

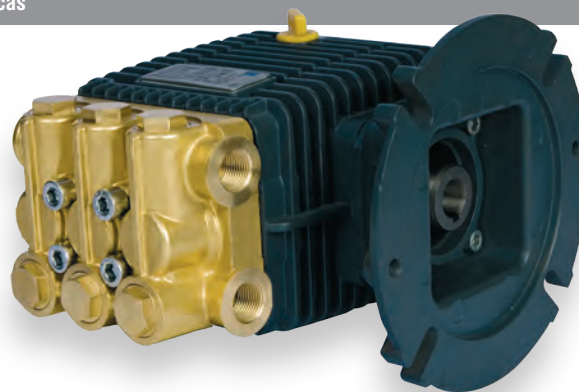
Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



pag.115

## Caratteristiche - Specifications - Caractéristiques - Características

| IN     | Ø           | WBH                            | WBH-F                     |
|--------|-------------|--------------------------------|---------------------------|
|        | Press. Min. | 3/8 BSP<br>-0,1 bar (-1.5 PSI) | 3/8 BSP<br>1 bar (15 PSI) |
|        | Press. Max. | 6 bar (87 PSI)                 | 6 bar (87 PSI)            |
|        | Temp. Max.  | 60°C (140°F)                   | 60°C (140°F)              |
| OUT    | Ø           | 3/8 BSP                        | 3/8 BSP                   |
| SHAFT  | Ø           | Hollow 5/8"                    | Hollow 5/8"               |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.)           | 0,5l (0.13 U.S.gal.)      |
| WEIGHT | kg (lbs)    | 6,1 kg (13.4 lbs)              | 6,1 kg (13.4 lbs)         |
| MOTOR  | Type        | NEMA 56C - 5/8"                |                           |

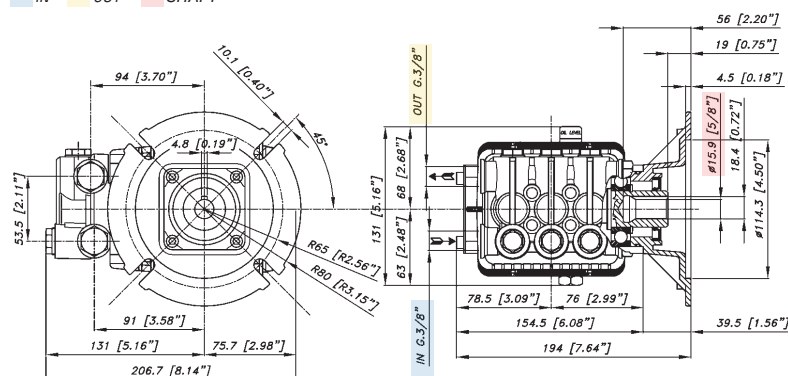


| WBH 1725 RPM |               |                      |      |              |     |               |     |                 |              |
|--------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| Codice Code  | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|              |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6100.97.3 | WBH 1520      | 105                  | 1500 | 7,6          | 2   | 1,5           | 2   | 18              | 6            |
| 02.6101.97.3 | WBH 1920      | 130                  | 1900 | 7,6          | 2   | 1,8           | 2,5 | 18              | 6            |
| 02.6102.97.3 | WBH 1525      | 105                  | 1500 | 8,7          | 2,3 | 1,8           | 2,4 | 18              | 7,2          |
| 02.6103.97.3 | WBH 1925      | 130                  | 1900 | 8,7          | 2,3 | 2,2           | 3   | 18              | 7,2          |
| 02.6104.97.3 | WBH 2525      | 175                  | 2500 | 8,7          | 2,3 | 2,9           | 3,9 | 18              | 7,2          |
| 02.6105.97.3 | WBH 1530      | 105                  | 1500 | 10,4         | 2,8 | 2,1           | 2,8 | 18              | 8,6          |
| 02.6106.97.3 | WBH 2130      | 145                  | 2100 | 10,4         | 2,8 | 2,9           | 3,9 | 18              | 8,6          |
| 02.6107.97.3 | WBH 1432      | 95                   | 1400 | 12           | 3,1 | 2,2           | 3   | 18              | 9,8          |
| 02.6108.97.3 | WBH 1932      | 130                  | 1900 | 12           | 3,1 | 3             | 4   | 18              | 9,8          |

| WBH-F 3450 RPM |               |                      |      |              |     |               |     |                 |              |
|----------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| CODICE CODE    | MODELLO MODEL | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 02.6120.97.3   | WBH 1521-F    | 105                  | 1500 | 7,8          | 2,1 | 1,6           | 2,1 | 15              | 4,8          |
| 02.6121.97.3   | WBH 2021-F    | 140                  | 2000 | 7,8          | 2,1 | 2,1           | 2,8 | 15              | 4,8          |
| 02.6122.97.3   | WBH 2521-F    | 175                  | 2500 | 7,8          | 2,1 | 2,6           | 3,5 | 15              | 4,8          |
| 02.6123.97.3   | WBH 1725-F    | 115                  | 1700 | 9,5          | 2,5 | 2,2           | 3   | 15              | 6            |
| 02.6124.97.3   | WBH 2525-F    | 175                  | 2500 | 9,5          | 2,5 | 3,2           | 4,3 | 15              | 6            |
| 02.6125.97.3   | WBH 1430-F    | 95                   | 1400 | 11,7         | 3,1 | 2,2           | 3   | 15              | 7,2          |
| 02.6126.97.3   | WBH 1930-F    | 130                  | 1900 | 11,7         | 3,1 | 3             | 4   | 15              | 7,2          |
| 02.6127.97.3   | WBH 2430-F    | 170                  | 2400 | 11,7         | 3,1 | 3,7           | 5   | 15              | 7,2          |
| 02.6128.97.3   | WBH 1537-F    | 105                  | 1500 | 14           | 3,7 | 2,8           | 3,8 | 15              | 8,6          |
| 02.6129.97.3   | WBH 2037-F    | 140                  | 2000 | 14           | 3,7 | 3,7           | 5   | 15              | 8,6          |

## WBH / WBH-F

IN OUT SHAFT

Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front

"V"

Posteriori - Rear

"U"

Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios

pag.115



## Caratteristiche - Specifications - Caractéristiques - Características

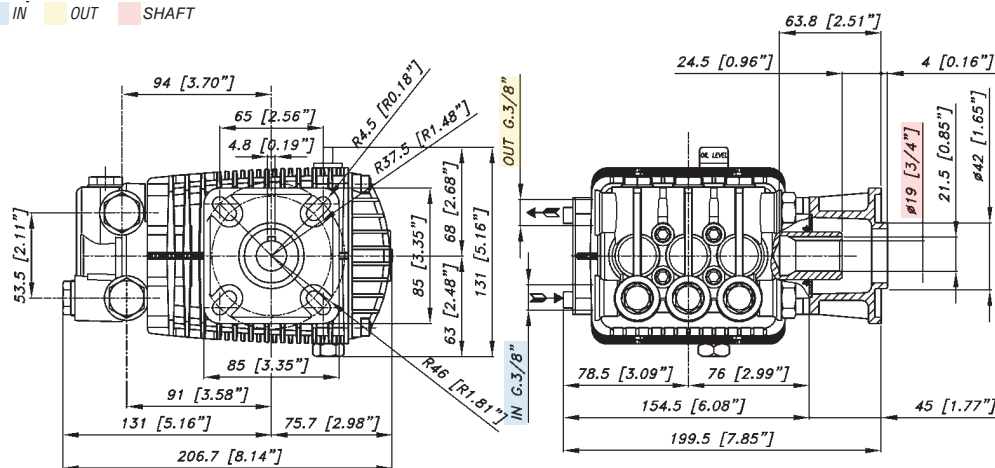
|               |                    |                      |
|---------------|--------------------|----------------------|
| <b>IN</b>     | <b>Ø</b>           | 3/8 BSP              |
|               | <b>Press. Min.</b> | 1 bar (15 PSI)       |
|               | <b>Press. Max.</b> | 6 bar (87 PSI)       |
|               | <b>Temp. Max.</b>  | 60°C (140°F)         |
| <b>OUT</b>    | <b>Ø</b>           | 3/8 BSP              |
| <b>SHAFT</b>  | <b>Ø</b>           | Hollow 3/4"          |
| <b>OIL</b>    | <b>SAE 75W 90</b>  | 0,5l (0.13 U.S.gal.) |
| <b>WEIGHT</b> | <b>kg (lbs)</b>    | 6 kg (13.2 lbs)      |
| <b>ENGINE</b> | <b>Type</b>        | SAE J609-3/4"        |



| 3450 RPM     |               |                      |      |              |     |               |     |           |                 |              |
|--------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------|-----------------|--------------|
| Codice Code  | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     |           | Pistone Plunger | Corsa Stroke |
|              |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | hp Engine | Ø mm            | mm           |
| 02.6150.97.3 | WBG 1521      | 105                  | 1500 | 8            | 2,1 | 1,6           | 2,1 | 3,5       | 15              | 4,8          |
| 02.6151.97.3 | WBG 2021      | 140                  | 2000 | 8            | 2,1 | 2,1           | 2,8 | 4         | 15              | 4,8          |
| 02.6152.97.3 | WBG 2521      | 175                  | 2500 | 8            | 2,1 | 2,6           | 3,5 | 5         | 15              | 4,8          |
| 02.6153.97.3 | WBG 1625      | 110                  | 1600 | 9,5          | 2,5 | 2,1           | 2,8 | 4         | 15              | 6            |
| 02.6154.97.3 | WBG 2025      | 140                  | 2000 | 9,5          | 2,5 | 2,6           | 3,5 | 5         | 15              | 6            |
| 02.6155.97.3 | WBG 2525      | 175                  | 2500 | 9,5          | 2,5 | 3,2           | 4,3 | 6         | 15              | 6            |
| 02.6156.97.3 | WBG 1630      | 110                  | 1600 | 11,4         | 3   | 2,5           | 3,4 | 5         | 15              | 7,2          |
| 02.6157.97.3 | WBG 2030      | 140                  | 2000 | 11,4         | 3   | 3,1           | 4,2 | 5,5       | 15              | 7,2          |
| 02.6158.97.3 | WBG 2530      | 175                  | 2500 | 11,4         | 3   | 3,8           | 5,1 | 6,5       | 15              | 7,2          |
| 02.6159.97.3 | WBG 1535      | 105                  | 1500 | 13,2         | 3,5 | 2,6           | 3,5 | 5         | 15              | 8            |
| 02.6160.97.3 | WBG 2035      | 140                  | 2000 | 13,2         | 3,5 | 3,5           | 4,7 | 6,5       | 15              | 8            |
| 02.6161.97.3 | WBG 2535      | 175                  | 2500 | 13,2         | 3,5 | 4,3           | 5,8 | 6,5       | 15              | 8            |

**WBG**

IN OUT SHAFT



**Accessori di completamento - Complementary accessories**  
**Accessoires complémentaires - Accesorios complementarios**

| Guarnizioni - Seals<br>Joints - Juntas |     |
|----------------------------------------|-----|
| Anteriori - Front                      | “V” |
| Posteriori - Rear                      | “U” |



Caratteristiche - Specifications - Caractéristiques

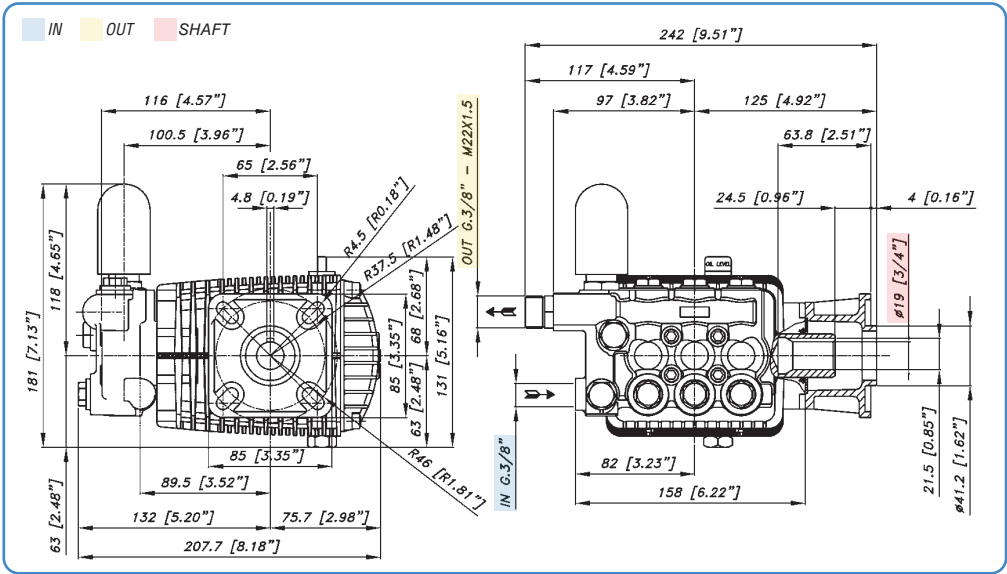
Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 3/8 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 3/4"          |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7 kg (15.4 lbs)      |
| ENGINE | Type        | SAE J609-3/4"        |



| 3450 RPM     |               |                      |      |              |     |               |     |           |                 |              |
|--------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------|-----------------|--------------|
| Codice Code  | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     |           | Pistone Plunger | Corsa Stroke |
|              |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | hp Engine | Ø mm            | mm           |
| 02.6180.97.A | WBG 1521-W    | 105                  | 1500 | 8            | 2,1 | 1,6           | 2,1 | 3,5       | 15              | 4,8          |
| 02.6181.97.A | WBG 2021-W    | 140                  | 2000 | 8            | 2,1 | 2,1           | 2,8 | 4         | 15              | 4,8          |
| 02.6182.97.A | WBG 2521-W    | 175                  | 2500 | 8            | 2,1 | 2,6           | 3,5 | 5         | 15              | 4,8          |
| 02.6183.97.A | WBG 1625-W    | 110                  | 1600 | 9,5          | 2,5 | 2,1           | 2,8 | 4         | 15              | 6            |
| 02.6184.97.A | WBG 2025-W    | 140                  | 2000 | 9,5          | 2,5 | 2,6           | 3,5 | 5         | 15              | 6            |
| 02.6185.97.A | WBG 2525-W    | 175                  | 2500 | 9,5          | 2,5 | 3,2           | 4,3 | 6         | 15              | 6            |
| 02.6186.97.A | WBG 1630-W    | 110                  | 1600 | 11,4         | 3   | 2,5           | 3,4 | 5         | 15              | 7,2          |
| 02.6187.97.A | WBG 2030-W    | 140                  | 2000 | 11,4         | 3   | 3,1           | 4,2 | 5,5       | 15              | 7,2          |
| 02.6188.97.A | WBG 2530-W    | 175                  | 2500 | 11,4         | 3   | 3,8           | 5,1 | 6,5       | 15              | 7,2          |
| 02.6189.97.A | WBG 1535-W    | 105                  | 1500 | 13,2         | 3,5 | 2,6           | 3,5 | 5         | 15              | 8            |
| 02.6190.97.A | WBG 2035-W    | 140                  | 2000 | 13,2         | 3,5 | 3,5           | 4,7 | 6,5       | 15              | 8            |
| 02.6191.97.A | WBG 2535-W    | 175                  | 2500 | 13,2         | 3,5 | 4,3           | 5,8 | 6,5       | 15              | 8            |

WBG-W



Guarnizioni - Seals  
Joints - Juntas

|                   |     |
|-------------------|-----|
| Anteriori - Front | "V" |
| Posteriori - Rear | "U" |





100% European-American  
Components

Pressione - Pressure - Pression - Presión

160÷240 bar  
2300÷3500 psi

Portata - Flow - Débit - Caudal

11,4÷15 l/min  
3.0÷4.0 GPM

Versioni - Versions - Versions - Versiones

WBXL  
WBXL-F



Pompe ad elevate prestazioni con sistema di tenuta innovativo. Tappi valvola con sistema di tenuta "Bertolini" che permette di aumentare l'efficienza ad elevate pressioni di lavoro. Alto rendimento volumetrico bilanciato in pressione o depressione all'aspirazione.

WBXG 1"



High performance pumps, with extra-strength sealing system. Valve caps fitted with Bertolini sealing system designed for extended higher operating pressures. High volumetric efficiency distributed (positive/negative inlet pressure).

WHY 1520



Bombas de elevadas prestaciones con sistema de juntas innovador. Tapas de válvulas con sistema de juntas "Bertolini" que permite aumentar la eficiencia con elevadas presiones de trabajo. Alto rendimiento volumétrico balanceado en presión o depresión en aspiración.

Applicazioni - Applications - Applications - Aplicaciones



Manutenzione di attrezzatura pesante  
Heavy equipment maintenance  
Entretien d'équipement lourd  
Mantenimiento de equipos pesados



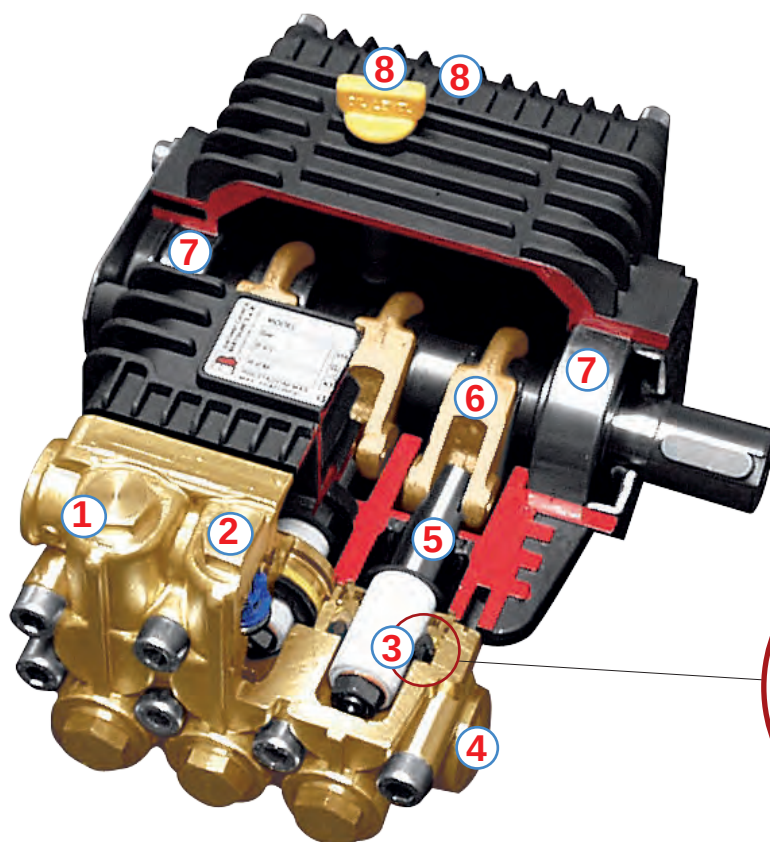
Lavaggio Self-service  
Self-service wash  
Lavage Self-Service  
Autolavado



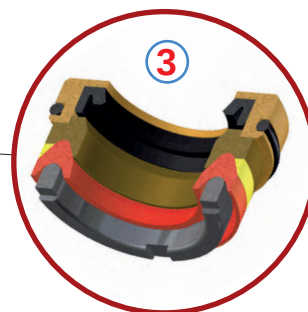
Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



- 1 Nuova testata in ottone stampato e nuovi tappi valvola. Testata di forte spessore completamente ridisegnata. L'utilizzo di 8 viti M8 per il bloccaggio della testata sul carter conferisce la massima rigidità alle pressioni più elevate ed anche in caso di sovrappressioni eccezionali evitando gravi danni in caso di malfunzionamenti della valvola di by-pass. Le viti sono in acciaio ad alta resistenza e protette contro la corrosione.
- 2 Nuovi tappi valvola M22x1 con O-R di tenuta montato prima della filettatura. Il filetto non è in contatto con l'acqua in pressione e vengono eliminati i rischi di rottura della testata. Vengono eliminati anche i rischi di allentamento dei tappi che possono essere montati senza loctite e con coppie di serraggio ridotte.
- 3 Nuovo sistema di tenuta che garantisce assoluta affidabilità alle elevate velocità di rotazione. Anello "long life" autolubrificante. Riduce al minimo gli attriti fra pistone e guarnizione, anello premi-guarnizione, guarnizione in elastomero rinforzato, boccia porta-guarnizione anteriore in ottone, guarnizione posteriore autolubrificante per evitare surriscaldamenti del pistone nel caso in cui la pompa possa lavorare accidentalmente senza acqua.
- 4 Condotti di grande diametro per garantire alla pompa un'alta efficienza volumetrica in ogni condizione (aspirazione in depressione o sovralimentazione).
- 5 Guida pistone in acciaio inox con esclusivo trattamento di nitrurazione e lucidatura delle superfici per prevenire l'usura e aumentare la durata delle guarnizioni.
- 6 Bielle in bronzo maggiorate per distribuire i carichi di lavoro con minor fatica. Speciale disegno biella studiato per avere un carico pressoché costante su tutta la superficie della testa di biella. Funzionamento ottimale in tutte le condizioni, eliminati i rischi di grippaggio anche durante la fase critica di rodaggio.
- 7 Cuscinetti a sfera di primaria marca sovradimensionati per una durata più lunga anche in condizioni di lavoro gravose.
- 8 Spia olio pressata nel coperchio dall'interno. Tappo riempimento olio con sistema sfiato olio per evitare sovrappressioni nel carter e perdite dalle tenute.



- 1 New forged brass head and valve caps. The head is completely redesigned thicker to make it stronger and more resistant. The 8 bolts M8 that lock the head onto the crankcase are designed to endure higher pressure and even overpressure. Ultimately reducing the risk from any unloader malfunctions. The steel bolts are corrosive resistant and provide ultimate strength.
- 2 Unique design of valve caps M22X1 with recessed o-rings. The thread doesn't come in contact with water under pressure, therefore eliminating the risk of head failure. Also eliminated is the risk of valve caps loosening, even without the use of loctite. Torque wrench settings are reduced.
- 3 Higher reliability of the new packing seal system designed for high speed. A special "long-life" self-lubricating ring reduces friction between piston and seal. Thrust ring, reinforced elastomer seal, brass high pressure seal bushing holder, low pressure self-lubricating seal to eliminate piston overheating, even when pump has accidentally run out of water.
- 4 Large ducts to increase the pump flow capacity under any condition (suction or pressure feed)
- 5 Stainless steel plunger rod nitrating treatment resulting in a harder smoother surface for increased oil seal life.
- 6 Extra wide bronze connecting rods, oversized to absorb and distribute heavier loads with minimum fatigue. Special design resulting in a smooth load on the surface of the larger end of the connecting rod. Works perfectly under any condition; no risk of seizure, especially during that delicate first run.
- 7 Premium oversized ball bearings for longer life, even under extreme working condition.
- 8 Convenient, pressed in site glass for leak free monitoring of oil level. Ventilated, performance designed oil dipstick reduces the risk of crankcase leakage due to over pressures.



- 1 Nouvelle culasse en laiton forgé de forte épaisseur et nouvelle technique des bouchons clapets. L'emploi de 8 boulons M8 pour adapter la culasse sur le carter lui donne la rigidité max. aux pressions les plus élevées, même dans les conditions de surpression accidentelle, permettant d'éviter de sérieux ennuis en cas d'anomalies du by-pass. Boulons en acier très résistants et protégés contre la corrosion.
- 2 Nouveau système bouchon clapets M22x1 contre les risques de dévissage et de rupture de la culasse. Les bouchons peuvent être montés sans loctite, aux couples de serrage moins importants. Le joint torique incorporé en bas du bouchon protégé par le filetage consolide la résistance et l'étanchéité.
- 3 Ensemble d'étanchéité conçu pour assurer des performances optimales aux grandes vitesses. Bague "long life" autolubrifiante qui limite invariablement l'effet friction entre piston et joint, bague presse-joint, joint en élastomère renforcé, douille porte-joint avant en laiton, joint arrière autolubrifiant évite les risques de surchauffe du piston dans les conditions de fonctionnement à sec accidentel.
- 4 Conduits surdimensionnés pour consolider le rendement volumétrique de la pompe dans toutes les conditions de travail (alimentation en pression ou dépression).
- 5 Guides de pistons en acier inox, traitements spéciaux de nitruration et polissage pour permettre d'éviter l'usure, son état de surface parfait augmente significativement la durée de vie des joints d'huile à son contact.
- 6 Bielles en bronze surdimensionnées. Dessin bielle étudié pour obtenir une charge quasiment constante sur toute la surface de la tête. Fonctionnement optimal dans toutes les conditions ; éliminés tous les risques de grippage même dans la condition critique de rodage.
- 7 Roulements à bille de première qualité, surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 8 Témoin d'huile optique pressé dans le couvercle à l'intérieur du carter. Jauge avec bouchon reniflard pour éviter la surpression dans le carter et les fuites d'huile.



- 1 Nueva culata en latón impreso y nuevas tapas de válvula. Culata de grueso espesor completamente reproyectada. El uso de 8 tornillos M8 para el bloqueo de la culata sobre el cárter garantiza la máxima rigidez también con presiones muy elevadas, aun en caso de sobrepresiones excepcionales, evitando daños en la eventualidad de malos funcionamientos de la válvula by-pass. Los tornillos son de acero de alta resistencia y protegidos contra la corrosión.
- 2 Nuevas tapas de válvula M22x1 con O-Ring montado antes de la rosca, que no está en contacto con el agua en presión, eliminando así los riesgos de ruptura de la culata. También se eliminan los riesgos de aflojamiento de las tapas que pueden ser montadas sin loctite y con torques de serraje reducidos.
- 3 Nuevo sistema de juntas que garantiza máxima confiabilidad con elevadas velocidades de rotación. Anillo "long life" autolubrificante. Reduce notablemente las fricciones entre pistón y junta. Anillo aprieta-junta. Junta en elastómero reforzado. Casquillo portajunta anterior en latón. Junta posterior autolubrificante para evitar sobrecalentamientos del pistón en caso de que la bomba trabaje accidentalmente sin agua.
- 4 Conductos de grande diámetro para garantizar una alta eficiencia volumétrica a la bomba en cualquier condición (aspiración en depresión o sobrealimentación).
- 5 Guía pistón de acero inoxidable con exclusivo tratamiento de nitruración de las superficies para evitar el desgaste y aumentar la duración de los retenes de aceite.
- 6 Bielas en bronce de grandes dimensiones para repartir la carga de trabajo con menor fatiga. Especial diseño biela estudiado para tener una carga más o menos constante sobre toda la superficie de la cabeza de la biela. Funcionamiento optimal en toda condición, eliminados los riesgos de agarrotamiento también durante la fase crítica de rodaje.
- 7 Cojinetes de esfera de primera marca de grandes dimensiones para una duración más larga también en condiciones de trabajo gravosas.
- 8 Indicador de nivel aceite compuesto en la tapa desde el interior. Tapa de llenado aceite con sistema de respiradero para evitar sobrepresiones en el cárter y pérdidas de las juntas.



# WBXL/WBXL-F WBX SERIES

## Caratteristiche - Specifications - Caractéristiques - Características

| IN     | Ø           | 3/8 BSP              | 3/8 BSP              |
|--------|-------------|----------------------|----------------------|
|        | Press. Min. | -0,1 bar (-1.5 PSI)  | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                | 24 mm                |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 6 kg (13.2 lbs)      | 6 kg (13.2 lbs)      |



### Guarnizioni - Seals Joints - Juntas

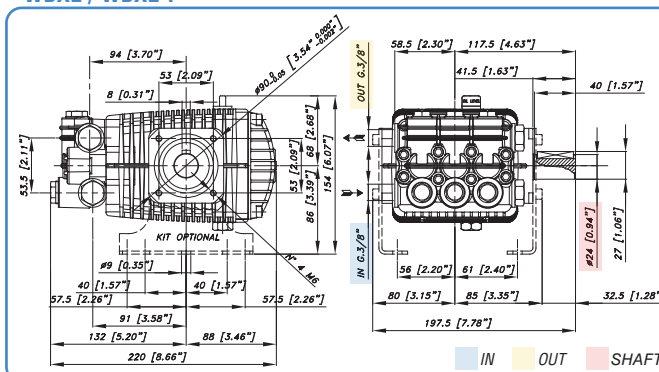
| Anteriori - Front | "V" |
|-------------------|-----|
| Posteriori - Rear | "U" |



**R DX BZ B SX F**

| WBXL - 1450 RPM   |                  |                         |      |                 |     |                  |     |                    |                 |
|-------------------|------------------|-------------------------|------|-----------------|-----|------------------|-----|--------------------|-----------------|
| Codice<br>Code    | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                   |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  | Ø mm               | mm              |
| 02.6013.97.3      | WBXL 1316        | 160                     | 2300 | 13              | 3,4 | 4                | 5,4 | 18                 | 12,4            |
| 02.6014.97.3      | WBXL 1320        | 200                     | 2900 | 13              | 3,4 | 5                | 6,6 | 18                 | 12,4            |
| WBXL-F - 2800 RPM |                  |                         |      |                 |     |                  |     |                    |                 |
| Codice<br>Code    | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                   |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  | Ø mm               | mm              |
| 02.6030.97.3      | WBXL 1317-F      | 170                     | 2400 | 13              | 3,4 | 4                | 5,4 | 15                 | 9,2             |
| 02.6031.97.3      | WBXL 1320-F      | 200                     | 2900 | 13              | 3,4 | 4,8              | 6,4 | 15                 | 9,2             |
| 02.6033.97.3      | WBXL 1416-F      | 160                     | 2300 | 14              | 3,7 | 4,1              | 5,6 | 15                 | 10              |
| 02.6034.97.3      | WBXL 1420-F      | 200                     | 2900 | 14              | 3,7 | 5,2              | 7   | 15                 | 10              |

### WBXL / WBXL-F



Accessori di completamento  
Complementary accessories  
Accessoires complémentaires  
Accesorios complementarios



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# WBXG 1" WBX SERIES

## Caratteristiche - Specifications - Caractéristiques - Características

| IN     | Ø           | 3/8 BSP              |
|--------|-------------|----------------------|
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 1"            |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7 kg (14.4 lbs)      |
| ENGINE | Type        | SAE J609-1"          |



### Guarnizioni - Seals Joints - Juntas

| Anteriori - Front | "V" |
|-------------------|-----|
| Posteriori - Rear | "U" |



**R DX BZ B SX**

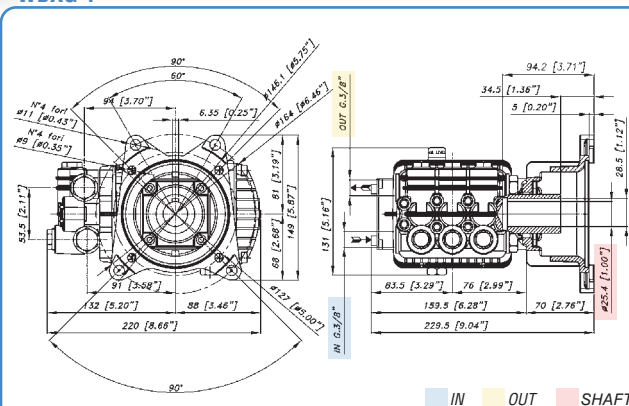
| 3450 RPM       |                  |                         |      |                 |     |                  |     |                    |                 |
|----------------|------------------|-------------------------|------|-----------------|-----|------------------|-----|--------------------|-----------------|
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  | Ø mm               | mm              |
| 02.6170.97.3   | WBXG 3030        | 210                     | 3000 | 11,4            | 3   | 4,7              | 6,2 | 7                  | 7,2             |
| 02.6171.97.3   | WBXG 3530        | 240                     | 3500 | 11,4            | 3   | 5,4              | 7,3 | 8                  | 7,2             |
| 02.6172.97.3   | WBXG 3035        | 210                     | 3000 | 13,2            | 3,5 | 5,4              | 7,3 | 8                  | 8,6             |
| 02.6173.97.3   | WBXG 3535        | 240                     | 3500 | 13,2            | 3,5 | 6,3              | 8,4 | 10                 | 8,6             |
| 02.6174.97.3   | WBXG 3040        | 210                     | 3000 | 15              | 4   | 6,2              | 8,3 | 10                 | 9,8             |
| 02.6175.97.3   | WBXG 3540        | 240                     | 3500 | 15              | 4   | 7,1              | 9,6 | 12                 | 9,8             |

Accessori di completamento  
Complementary accessories  
Accessoires complémentaires  
Accesorios complementarios



pag.114

### WBXG 1"



IN OUT SHAFT

Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                                  |
|--------|-------------|----------------------------------|
| IN     | Ø           | 3/8 BSP (Pump)<br>1/2BSP (Valve) |
|        | Press. Min. | 1 bar (15 PSI)                   |
|        | Press. Max. | 6 bar (87 PSI)                   |
|        | Temp. Max.  | 60°C (140°F)                     |
| OUT    | Ø           | 3/8 BSP                          |
| SHAFT  | Ø           | Hollow 14X17 DIN 5482            |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.)             |
|        | Pump        | 5,8 kg (12.7 lbs)                |
| WEIGHT | Motor pump  | 11,8 kg (26 lbs)                 |
|        | PULGER      | Ø 18 mm                          |
| STROKE | Lenght      | 12,4 mm                          |

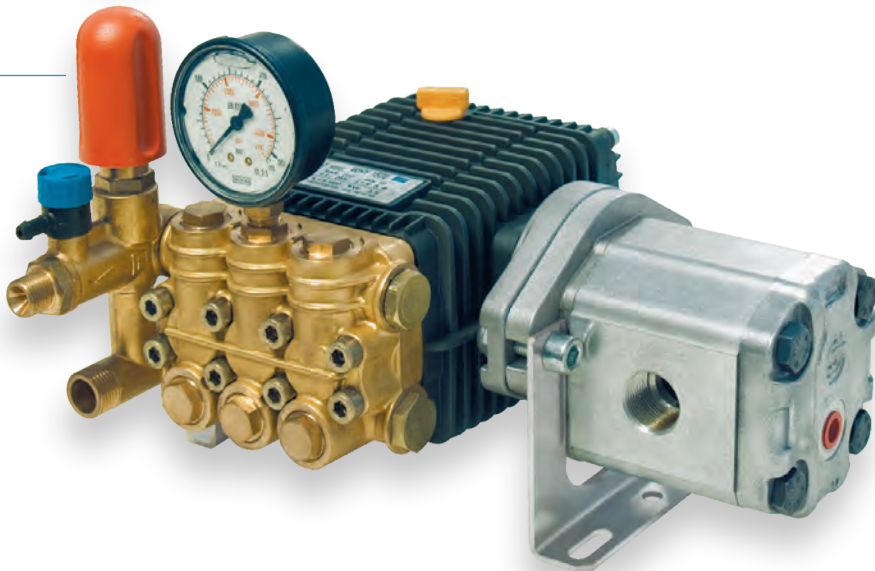


02.6195.97.3

- POMPA PER MOTORE IDRAULICO  
(Manometro e kit piedini inclusi)
- PUMP FOR HYDRAULIC MOTOR  
(Pressure gauge and mounting rail kit included)
- POMPE POUR MOTEUR HYDRAULIQUE  
(Equipement fourni: manomètre et kit supports)
- BOMBA PARA MOTOR HIDRÁULICO  
(Manómetro y juego de pies incluidos)

02.6196.97.3

- POMPA CON MOTORE IDRAULICO
- PUMP WITH HYDRAULIC MOTOR
- POMPE AVEC MOTEUR HYDRAULIQUE
- BOMBA CON MOTOR HIDRÁULICO



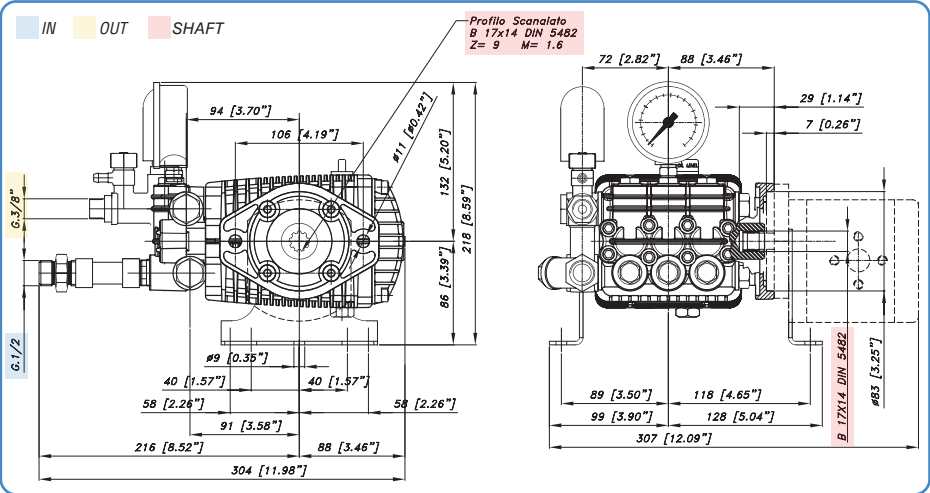
02.6198.97.A

KIT ACCESSORI - ACCESSORIES KIT - KIT ACCESSOIRES - KIT ACCESORIOS  
(OPTIONAL)

- Lancia- Pistola- Ugello – Filtro- Tubo di mandata 5/16"
- Lance - Gun - Nozzle - Filter - High pressure hose 5/16"
- Lance - Pistolet - Buse - Filtre - Flexible H.P. 5/16"
- Lanza - Pistola - Boquilla - Filtro - Manguera de alta presión 5/16"

| Codice<br>Code                                            | Modello<br>Model                     | Press Max<br>Max Pressure |      | 950 RPM |     |     |     | 1450 RPM |     |     |     | 1725 RPM |     |     |     | Oil Pressure<br>(hydraulic motor) |      |
|-----------------------------------------------------------|--------------------------------------|---------------------------|------|---------|-----|-----|-----|----------|-----|-----|-----|----------|-----|-----|-----|-----------------------------------|------|
|                                                           |                                      | bar                       | PSI  | l/min   | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | bar                               | PSI  |
| 02.6195.97.3                                              | WHY 1520<br>(Pump only)              | 200                       | 2900 | 8,6     | 2,3 | 3,4 | 4,5 | 12,9     | 3,4 | 5,1 | 6,8 | 14,9     | 3,9 | 5,8 | 7,8 | 80                                | 1160 |
| 02.6196.97.3                                              | WHY 1520<br>(Pump + Hydraulic motor) | 200                       | 2900 | 8,6     | 2,3 | 3,4 | 4,5 | 12,9     | 3,4 | 5,1 | 6,8 | 14,9     | 3,9 | 5,8 | 7,8 | 80                                | 1160 |
| PORTATA OLIO MOTORE IDRAULICO<br>HYDRAULIC MOTOR OIL FLOW |                                      |                           |      | 22      | 5,8 |     |     | 32       | 8,4 |     |     | 38       | 10  |     |     |                                   |      |

WHY 1520



| Guarnizioni - Seals<br>Joints - Juntas |     |
|----------------------------------------|-----|
| Anteriori - Front                      | "V" |
| Posteriori - Rear                      | "U" |





100% European-American  
Components

Pressione - Pressure - Pression - Presión

130÷280 bar  
1885÷4060 psi

Portata - Flow - Débit - Caudal

8,8÷16,1 l/min  
2.3÷4.2 GPM

Versioni - Versions - Versions - Versiones

3"P"G-W 3/4"



Pompe compatte ad elevate prestazioni. Tappi valvola con sistema di tenuta "Bertolini" presente anche sulle pompe con prestazioni più elevate, che permette di aumentare le pressioni di esercizio della pompa. Valvola di regolazione pressione, eiettore e valvola termica integrate sulla testata e di serie.



Compact pumps with superior performances. Valve caps fitted with "Bertolini" sealing system, the very same used on pumps of higher performance. Unloader valve, injector and thermal valve come standard and built-into the head.

3"P"G-W 1"



Pompes compactes, bouchons clapets avec système d'étanchéité qui se retrouve même sur les pompes plus performantes, pour permettre d'élever la pression de travail. Régulateur de pression, valve de sécurité thermique et injecteur incorporés dans la culasse.



Bombas compactas de alto rendimiento. Tapones de válvulas con el sistema de sellado "Bertolini", también presente en las bombas de mayor rendimiento, lo que permite incrementar la presión de funcionamiento de la bomba. Válvula reguladora de presión, eyector y válvula térmica integrados en la cabeza y estándar.

Applicazioni - Applications - Applications - Aplicaciones



Manutenzione di attrezzatura pesante  
Heavy equipment maintenance  
Entretien d'équipement lourd  
Mantenimiento de equipos pesados



Preparazione di superfici da verniciare  
Pre-painting surface preparation  
Préparation des surface à peindre  
Preparación de superficies que barnizar



Lavaggio Self-service  
Self-service wash  
Lavage Self-Service  
Autolavado



Pulizia vasche  
Tank cleaning  
Nettoyage cuves  
Limpieza tanques



Pulizia di superfici  
Surface cleaning  
Nettoyage de surfaces  
Limpieza de superficies

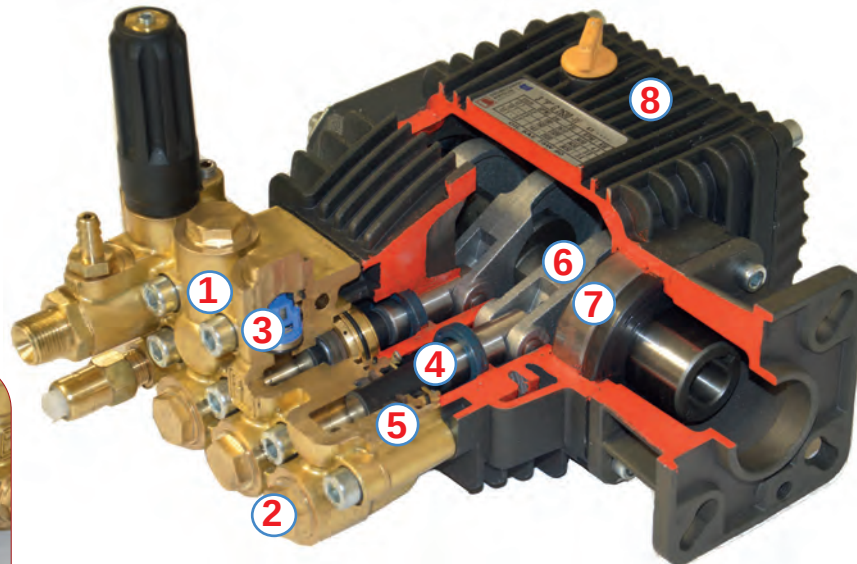




- 1 Testata in ottone stampato ad alta resistenza meccanica. Il fissaggio al carter con 8 viti conferisce la massima rigidità alle pressioni più elevate ed anche in caso di sovrappressioni eccezionali evitando gravi danni in casi di malfunzionamenti della valvola By-pass.
- 2 Tappi valvola con O-R di tenuta montato prima della filettatura. Filetto non è a contatto con l'acqua in pressione quindi si eliminano i rischi di rottura testata e allentamenti in fase di funzionamento. Montaggio senza sigillanti e con coppie di serraggio ridotte.
- 3 Valvole aspirazione mandata ad alta efficienza in acciaio inox AISI 316 anticorrosione e in tecnopolimero antiusura.
- 4 Guida pistone di nuova concezione che permette di ridurre le aree negative, quindi aumentare il rendimento volumetrico della pompa. Rivestimento in carburo di tungsteno per assicurare la massima resistenza all'usura.
- 5 Nuovo sistema a doppia tenuta a "U" in materiale composito per una lunga durata e prestazioni ottimali.
- 6 Bielle di costruzione integrale (monopezzo), realizzate in speciale lega di bronzo, materiale ad elevata resistenza e con elevate caratteristiche antifrizione. Temperature di lavoro ridotte e minor usura.
- 7 Cuscinetti di prima scelta sovradimensionati per una durata più lunga anche in condizioni gravose.
- 8 Carter in lega leggera di alluminio pressofuso ad elevata capacità di olio con alettature studiate appositamente per migliorare il raffreddamento.



- 1 Forged brass head providing great mechanical strength. The 8 bolts that lock the head onto the crankcase, are designed to endure higher pressure and even overpressures, ultimately reducing the risk from any unloader malfunctions.
- 2 Unique design of valve caps with recessed O-rings. The thread doesn't come in contact with water under pressure, therefore eliminating the risk of head failure. Also eliminated the risk of valve caps loosening, even without the use of Loctite®. Torque wrench settings are reduced.
- 3 Rapid action, mirror finish stainless steel AISI 316 check valves prevent corrosion and enhance high fluid dynamic efficiency, easy access for maintenance and repairs.
- 4 New plunger rod to reduce the negative areas, therefore to increase the pump volumetric efficiency. Tungsten carbide coated to ensure maximum resistance to wear.
- 5 Exclusive double "U" self-lubricating packing seals in elastomer, designed to prevent water from contaminating the oil in the crankcase. This gives you years of leak-free operation.
- 6 Oversized special bronze alloy connecting rods (one piece unit) for maximum strength and easier lubrication.
- 7 Premium oversized bearings for extended life even under extreme working conditions.
- 8 Die-cast aluminium crankcase with an increased number of cooling fins on the housing.



- 1 Culasse en laiton forgé très robuste. L'emploi de 8 boulons pour adapter la coulisse sur le carter lui donne la rigidité maximum aux pressions les plus élevées, même dans les conditions de surpression accidentelles, permettant d'éviter de sérieux ennuis en cas d'anomalies du by-pass.
- 2 Système bouchon clapets contre le risque de dévissage et de rupture de la culasse. Les bouchons peuvent être montés sans Loctite®, aux couples de serrage moins importants. Le joint torique incorporé au bas du bouchon, protégé par le filetage consolide la résistance et l'étanchéité.
- 3 Clapets aspiration-refoulement en acier inox AISI 316 d'une finition très soignée préviennent de la corrosion.
- 4 Guide de piston de nouvelle conception permettant de réduire les zones négatives, donc d'augmenter le rendement volumétrique de la pompe. Revêtement en carbure de tungstène qui prévient de l'usure.
- 5 L'ensemble d'étanchéité, double joint en "U" sont conçus pour assurer une parfaite étanchéité, des performances optimales et une grande longévité.
- 6 Bielles une pièce en alliage de bronze spécial, d'une grande robustesse, lubrification facilitée. Températures de travail et usure réduites.
- 7 Roulements de première qualité, surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficiles.
- 8 Carter en alliage d'aluminium moulé sous pression, permet d'avoir une importante capacité d'huile pour une meilleure lubrification des bielles.



- 1 Cabeza de latón moldeado con alta resistencia mecánica. La fijación al cárter con 8 tornillos proporciona la máxima rigidez a las presiones más altas, incluso en el caso de sobrepresiones excepcionales, evitando daños graves en caso de mal funcionamiento de la válvula de desvío.
- 2 Tapones de válvula con junta tórica de sellado colocada antes del roscado. El hilo no está en contacto con el agua bajo presión, esto elimina los riesgos de rotura de la cabeza y el aflojamiento durante la operación. Montaje sin sellantes y con pares de apriete reducidos.
- 3 Válvulas de aspiración y succión de alta eficiencia, en acero inoxidable anticorrosión AISI 316 y tecnopolímero anti-desgaste.
- 4 Guía de pistón de nueva concepción que permite reducir las zonas negativas, incrementando así la eficiencia volumétrica de la bomba. Revestimiento de carburo de tungsteno para garantizar la máxima resistencia al desgaste.
- 5 Nuevo sistema de sello doble en "U" hecho de material compuesto, para una larga vida útil y un rendimiento óptimo.
- 6 Bielas de construcción integral (una única pieza), hechas de un material especial en aleación de bronce con alta resistencia y características antifricción. Bajas temperaturas de trabajo y menor desgaste.
- 7 Rodamientos de gran calidad y de gran tamaño, para una vida más larga incluso en condiciones pesadas.
- 8 Cáster en aleación de aluminio fundido a presión con alta capacidad de aceite, con aletas especialmente diseñadas para mejorar el enfriamiento.



Caratteristiche - Specifications - Caractéristiques - Características

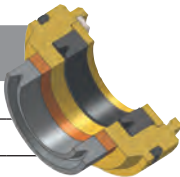
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 3/8 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 3/4"          |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 6,1 kg (12.6 lbs)    |
| MOTOR  | Type        | SAE J609-3/4"        |



Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super “U”

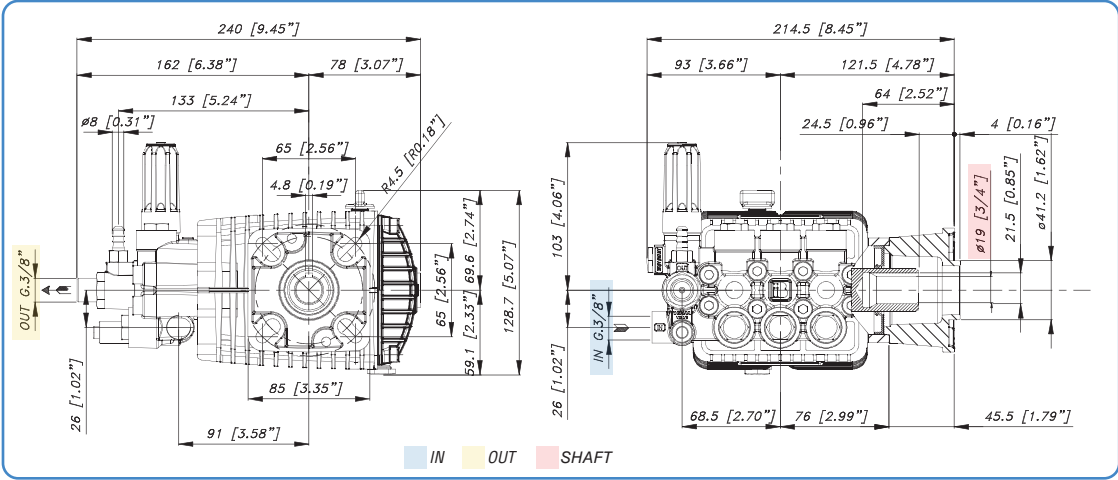
Posteriori - Rear “U”



| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 2800 RPM |     |     |     | 3000 RPM |     |     |     | 3450 RPM |     |     |     | Pistone<br>Plunger | Corsa<br>Stroke |
|----------------|------------------|----------------------------|------|----------|-----|-----|-----|----------|-----|-----|-----|----------|-----|-----|-----|--------------------|-----------------|
|                |                  | bar                        | PSI  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | Ø mm               | mm              |
| 02.7060.97.3   | 3PG 1940-W       | 130                        | 1885 | 13,3     | 3,5 | 3,4 | 4,6 | 14,2     | 3,8 | 3,6 | 4,9 | 16,1     | 4,2 | 4,1 | 5,5 | 13                 | 13              |
| 02.7061.97.3   | 3PG 2235-W       | 150                        | 2175 | 11,7     | 3,1 | 3,4 | 4,6 | 12,5     | 3,3 | 3,7 | 4,9 | 14,1     | 3,7 | 4,1 | 5,6 | 13                 | 11,4            |
| 02.7062.97.3   | 3PG 2630-W       | 180                        | 2610 | 10,0     | 2,6 | 3,5 | 4,8 | 10,7     | 2,8 | 3,8 | 5,1 | 12,1     | 3,2 | 4,3 | 5,7 | 13                 | 9,8             |
| 02.7063.97.3   | 3PG 3025-W       | 210                        | 3000 | 8,8      | 2,3 | 3,6 | 4,8 | 9,4      | 2,5 | 3,8 | 5,1 | 10,6     | 2,8 | 4,3 | 5,8 | 13                 | 8,6             |

Con valvola depressurizzatrice incorporata ed eiettore detergente regolabile  
With unloader valve and adjustable injector built-in  
Avec régulateur de pression by-pass et éjecteur réglable incorporés  
Con válvula de regulación de presión y eyector regulable incorporados

3”P”G-W 3/4”



## Caratteristiche - Specifications - Caractéristiques - Características

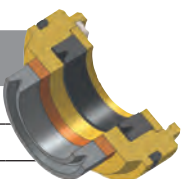
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 3/8 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 1"            |
| OIL    | SAE 75W 90  | 0,5l (0.13 U.S.gal.) |
| WEIGHT | kg (lbs)    | 6,3 kg (13 lbs)      |
| MOTOR  | Type        | SAE J609-1"          |



Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"

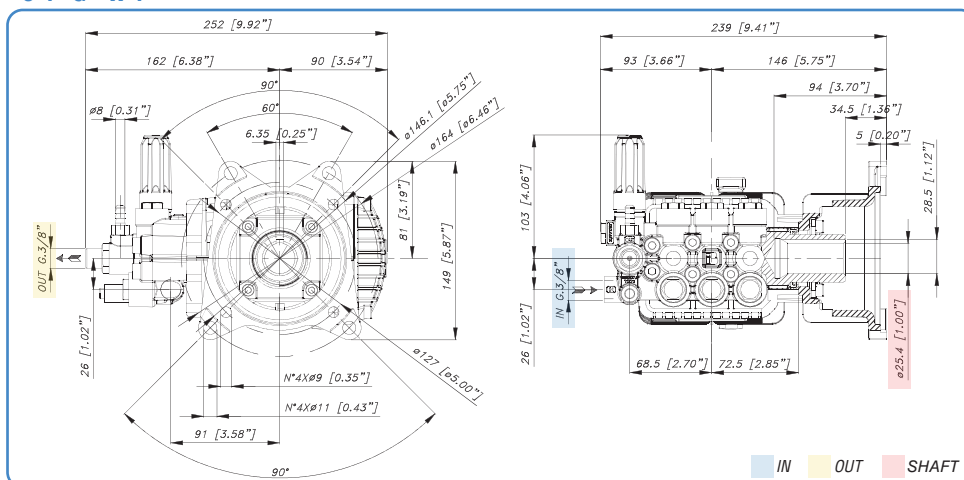
Posteriori - Rear "U"



| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 2800 RPM |     |     |     | 3000 RPM |     |     |      | 3450 RPM |     |     |      | Pistone<br>Plunger | Corsa<br>Stroke |
|----------------|------------------|----------------------------|------|----------|-----|-----|-----|----------|-----|-----|------|----------|-----|-----|------|--------------------|-----------------|
|                |                  | bar                        | PSI  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp   | l/min    | GPM | kW  | hp   | Ø mm               | mm              |
| 02.7050.97.3   | 3PG 4040-W       | 280                        | 4060 | 13,3     | 3,5 | 7,3 | 9,8 | 14,2     | 3,8 | 7,8 | 10,5 | 16,1     | 4,2 | 8,8 | 11,8 | 13                 | 13              |
| 02.7051.97.3   | 3PG 4035-W       | 280                        | 4060 | 11,7     | 3,1 | 6,4 | 8,6 | 12,5     | 3,3 | 6,9 | 9,2  | 14,1     | 3,7 | 7,7 | 10,4 | 13                 | 11,4            |
| 02.7052.97.3   | 3PG 4030-W       | 280                        | 4060 | 10,0     | 2,6 | 5,5 | 7,4 | 10,7     | 2,8 | 5,9 | 7,9  | 12,1     | 3,2 | 6,7 | 8,9  | 13                 | 9,8             |
| 02.7053.97.3   | 3PG 4025-W       | 280                        | 4060 | 8,8      | 2,3 | 4,8 | 6,5 | 9,4      | 2,5 | 5,2 | 7,0  | 10,6     | 2,8 | 5,8 | 7,8  | 13                 | 8,6             |

Con valvola depressurizzatrice incorporata ed eiettore detergente regolabile  
With unloader valve and adjustable injector built-in  
Avec régulateur de pression by-pass et éjecteur réglable incorporés  
Con válvula de regulación de presión y eyector regulable incorporados

## 3"P"G-W 1"





100% European-American  
Components

Pressione - Pressure - Pression - Presión

105÷280 bar  
1500÷4000 psi

Portata - Flow - Débit - Caudal

9,5÷17 l/min  
2.5÷4.5 GPM

Versioni - Versions - Versions - Versiones

WML  
WML-F  
WMS  
WMS-F



WMC  
WMC-F  
WMH  
WMH-F



WMG 1"  
WMG-W 1"



Pompe compatte con tappi valvola costruiti con un nuovo sistema di tenuta innovativo, presente anche sulle pompe con prestazioni più elevate, che permette di aumentare le pressioni di esercizio della pompa stessa. Guarnizioni in gomma-tela che offrono una lunga resistenza all'usura. Nuovi modelli con valvola di regolazione integrata nella testata.



Compact pumps with valve caps fitted with a new sealing system, the very same used in pumps of a higher performance. Fabric reinforced nitrile buna packings to resist wear. New models with unloader valve built-into the head for convenience.



Pompes compactes, bouchons clapets avec un nouveau système d'étanchéité qui se retrouve même sur les pompes plus performantes, pour permettre d'élever la pression de travail. Joints d'étanchéité en caoutchouc-toile pour résister à l'usure. Nouveaux modèles avec régulateur de pression incorporé dans la culasse.



Bombas compactas con tapas de válvulas construidas con un nuevo sistema de juntas innovador, presente también en las bombas con prestaciones más elevadas, que permite aumentar las presiones de trabajo de la misma bomba. Juntas en goma-tela que otorgan larga resistencia al desgaste. Nuevos modelos con válvula de regulación integrada en la culata.

Applicazioni - Applications - Applications - Aplicaciones



Manutenzione di attrezzatura pesante  
Heavy equipment maintenance  
Entretien d'équipement lourd  
Mantenimiento de equipos pesados



Preparazione di superfici da verniciare  
Pre-painting surface preparation  
Préparation des surface à peindre  
Preparación de superficies que barnizar



Lavaggio Self-service  
Self-service wash  
Lavage Self-Service  
Autolavado



Pulizia vasche  
Tank cleaning  
Nettoyage cuves  
Limpieza tanques

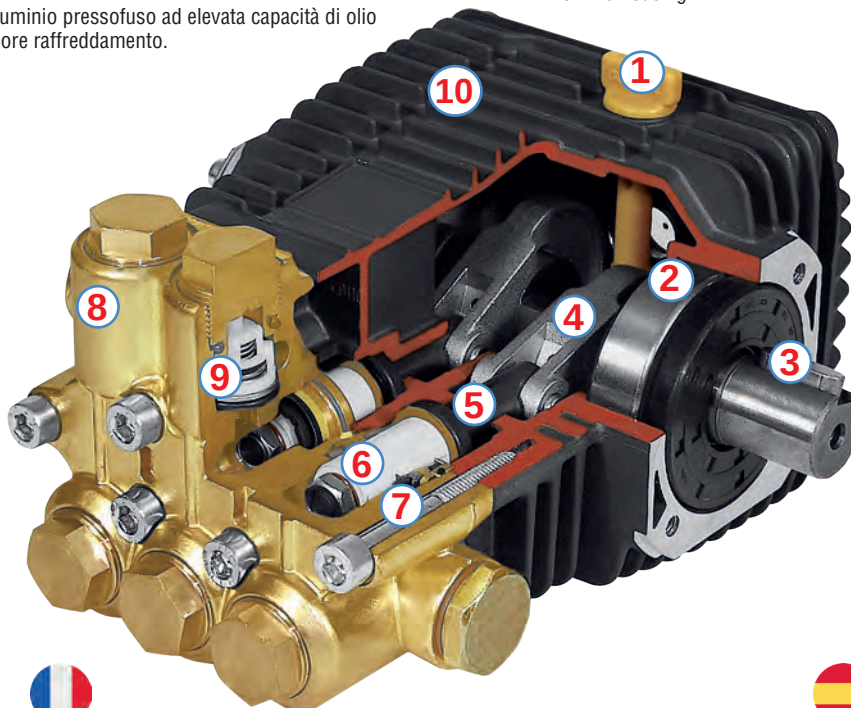




- 1 Tappo riempimento con sistema di sfizio dei vapori al fine di evitare sovrappressioni nel carter e perdite dalle tenute.
- 2 Cuscinetti di prima scelta sovradimensionati per una durata più lunga, anche in condizioni di lavoro gravose.
- 3 Albero in acciaio forgiato con sporgenza maggiorata per rinforzare l'accoppiamento pompa – motore (in qualsiasi versione).
- 4 Bielle di costruzione integrale (monopezzo), realizzate in lega di bronzo o alluminio (secondo i modelli), di elevata resistenza e affidabilità con lubrificazione facilitata.
- 5 Guida pistone in acciaio inox con esclusivo trattamento di nitrurazione e lucidatura delle superfici per prevenire l'usura e aumentare la durata delle guarnizioni.
- 6 Pistoni in ceramica integrale, la cui perfetta finitura superficiale garantisce una lunga durata delle guarnizioni.
- 7 Nuovo sistema a doppia tenuta a "V" e a "U" in materiale composito per una lunga durata e prestazioni ottimali.
- 8 Testata in ottone stampato ad alta resistenza meccanica, di forte spessore, per evitare deformazioni alle pressioni più elevate.
- 9 Valvole di aspirazione-mandata ad alta efficienza in acciaio inox 316 anticorrosione.
- 10 Carter in lega leggera di alluminio pressofuso ad elevata capacità di olio con alettature per un migliore raffreddamento.



- 1 Ventilated performance designed oil dipstick, reduces the risk of crankcase leakage due to over pressure.
- 2 Premium oversized bearings for extended life even under extreme working conditions.
- 3 Extended length of forged steel crankshaft for a solid coupling pump-motor/engine.
- 4 Oversized aluminum connecting rods (one piece unit), or bronze rods on some models, for maximum strength and easier lubrication.
- 5 Stainless steel plunger rod nitriding treatment resulting in a harder smoother surface for increased oil seal life.
- 6 High-quality ceramic pistons for years of uninterrupted high pressure performance.
- 7 Exclusive double "V" and "U" self-lubricating packing seals with an elastomer designed to prevent water from contaminating the oil in the crankcase. This gives you years of leak-free operation.
- 8 Increased thickness of brass head to withstand higher pressure.
- 9 Rapid action, mirror finish stainless steel 316 check valves prevent corrosion.
- 10 Die-cast aluminum crankcase with an increased number of cooling fins on the housing.



- 1 Jauge avec bouchon reniflard pour évacuer et éviter la surpression dans le carter, et les fuites d'huiles.
- 2 Roulements de première qualité, surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 3 Arbre en acier forgé surdimensionné en longueur pour renforcer la liaison moteur-pompe.
- 4 Bielles une pièce surdimensionnées en aluminium ou bronze (suivant modèles) d'une grande robustesse, lubrification facilitée.
- 5 Guides de pistons en acier inox, traitements spéciaux de nitruration et polissage pour permettre d'éviter l'usure, son état de surface parfait augmente significativement la durée de vie des joints d'huile à son contact.
- 6 Pistons en céramique intégrale parfaitement traités et une finition de surface impeccable augmente l'étanchéité des joints.
- 7 L'ensemble d'étanchéité, double joints en "V" et en "U" sont conçus pour assurer une parfaite étanchéité, des performances optimales et une grande longévité.
- 8 Culasse en laiton très robuste, de forte épaisseur, afin d'éviter les déformations aux pressions les plus élevées.
- 9 Clapets d'aspiration-refoulement en acier inox 316 d'une finition très soignée préviennent de la corrosion.
- 10 Grand carter en aluminium moulé sous pression permet d'avoir une importante capacité d'huile pour une meilleure lubrification des bielles.



- 1 Tapa de llenado con sistema de respiradero de los vapores para evitar sobrepresiones en el cárter y goteo de las juntas.
- 2 Cojinetes de primera marca de grandes dimensiones para una más larga duración, también en condiciones de trabajo gravosas.
- 3 Cigüeñal en acero forjado con saliente más grande para reforzar el acoplamiento bomba-motor (en cualquier versión).
- 4 Bielas de construcción integral (una pieza), realizadas en aleación de bronce o aluminio (según los modelos) de elevada resistencia y confiabilidad con lubricación facilitada.
- 5 Guía pistón de acero inoxidable con exclusivo tratamiento de nitruración de las superficies para evitar el desgaste y aumentar la duración de los retenes de aceite.
- 6 Pistones en cerámica integral, cuya perfecta finura superficial garantiza una larga duración de los collarines.
- 7 Nuevo sistema de doble juntas "V" y "U" autolubrificantes en material mixto proyectado para una larga duración y prestaciones optimales.
- 8 Culata en latón de alta resistencia mecánica, de grueso espesor, para evitar deformaciones a las temperaturas más elevadas.
- 9 Válvulas de aspiración – envío en acero inox. 316 de alta eficiencia que previenen la corrosión.
- 10 Carter en aleación ligera de aluminio fundido a presión de alta capacidad de aceite con aletas para un mayor enfriamiento.

|        |             | WML                  | WML-F                |
|--------|-------------|----------------------|----------------------|
| IN     | Ø           | 1/2 BSP              | 1/2 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                | 24 mm                |
| OIL    | SAE 75W 90  | 0,6l (0.16 U.S.gal.) | 0,6l (0.16 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7 kg (14.4 lbs)      | 7 kg (14.4 lbs)      |

WML **DX** **T** **B** **SX** **BZ** **M** **G**

WML-F **DX** **BZ** **B** **SX** **M** **G**

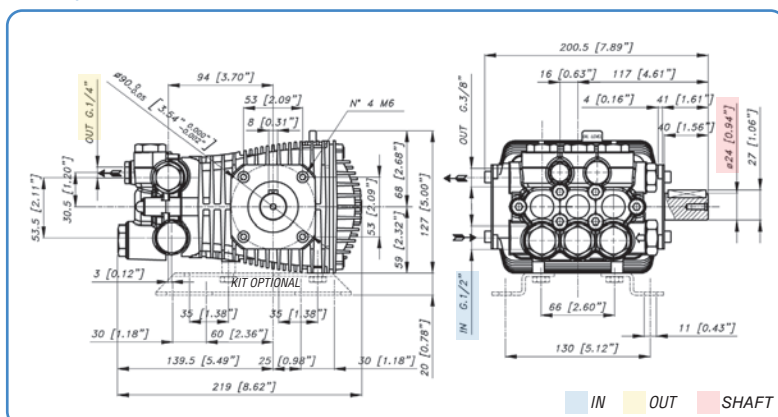


|                   |     |
|-------------------|-----|
| Anteriori - Front | “V” |
| Posteriori - Rear | “U” |



| WML - 1450 RPM   |               |                      |      |              |     |               |     |                 |              |
|------------------|---------------|----------------------|------|--------------|-----|---------------|-----|-----------------|--------------|
| Codice Code      | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                  |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 04.8000.97.3     | WML 1117      | 170                  | 2500 | 11           | 2,9 | 3,3           | 4,5 | 18              | 9,8          |
| 04.8001.97.3     | WML 1214      | 140                  | 2000 | 12           | 3,2 | 2,9           | 4   | 18              | 10,8         |
| 04.8002.97.3     | WML 1217      | 170                  | 2500 | 12           | 3,2 | 3,6           | 5   | 18              | 10,8         |
| 04.8003.97.3     | WML 1317      | 170                  | 2500 | 13           | 3,4 | 4             | 5,5 | 18              | 12,4         |
| 04.8004.97.3     | WML 1515      | 150                  | 2200 | 15           | 4   | 4             | 5,5 | 18              | 13,6         |
| 04.8009.97.3     | WML 1520-B    | 200                  | 2900 | 15           | 4   | 5,5           | 7,4 | 18              | 13,6         |
| WML-F - 2800 RPM |               |                      |      |              |     |               |     |                 |              |
| Codice Code      | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |     | Pistone Plunger | Corsa Stroke |
|                  |               | bar                  | PSI  | l/min        | GPM | kW            | hp  | Ø mm            | mm           |
| 04.8100.97.3     | WML 1114-F    | 140                  | 2000 | 11           | 2,9 | 2,9           | 4   | 15              | 8            |
| 04.8101.97.3     | WML 1117-F    | 170                  | 2500 | 11           | 2,9 | 3,6           | 5   | 15              | 8            |
| 04.8102.97.3     | WML 1120-F    | 200                  | 2900 | 11           | 2,9 | 4             | 5,5 | 15              | 8            |
| 04.8103.97.3     | WML 1316-F    | 160                  | 2350 | 13           | 3,4 | 4             | 5,5 | 15              | 9,8          |
| 04.8104.97.3     | WML 1320-F    | 200                  | 2900 | 13           | 3,4 | 5,1           | 7   | 15              | 9,8          |
| 04.8105.97.3     | WML 1515-F    | 150                  | 2200 | 15           | 4   | 4             | 5,5 | 15              | 10,8         |
| 04.8106.97.3     | WML 1520-F    | 200                  | 2900 | 15           | 4   | 5,5           | 7,5 | 15              | 10,8         |

**Accessori di completamento - Complementary accessories**  
**Accessoires complémentaires - Accesorios complementarios**



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pag.124



pag.126

## Caratteristiche - Specifications - Caractéristiques - Características

|        |             | WMS                  | WMS-F                |
|--------|-------------|----------------------|----------------------|
| IN     | Ø           | 1/2 BSP              | 1/2 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                | 24 mm                |
| OIL    | SAE 75W 90  | 0,6l (0.16 U.S.gal.) | 0,6l (0.16 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7 kg (14.4 lbs)      | 7 kg (14.4 lbs)      |

WMS **DX** **T** **B** **SX** **BZ** **M** **G**

WMS-F **DX** **BZ** **B** **SX** **M** **G**

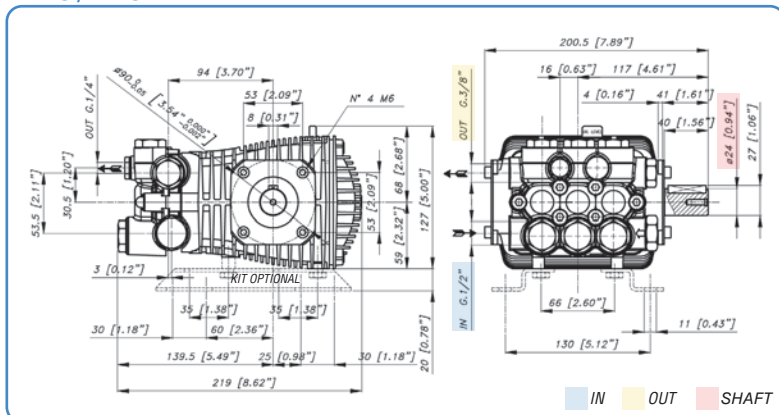


| WML - 1725 RPM |                  |                         |      |                 |     |                  |     |                    |                 |
|----------------|------------------|-------------------------|------|-----------------|-----|------------------|-----|--------------------|-----------------|
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  |                    |                 |
| 04.8200.97.3   | WMS 2530         | 170                     | 2500 | 11,4            | 3   | 3,6              | 5   | 18                 | 9,2             |
| 04.8201.97.3   | WMS 2035         | 140                     | 2000 | 13,2            | 3,5 | 3,6              | 5   | 18                 | 10,8            |
| 04.8202.97.3   | WMS 2535         | 170                     | 2500 | 13,2            | 3,5 | 4,1              | 5,5 | 18                 | 10,8            |
| 04.8203.97.3   | WMS 2040         | 140                     | 2000 | 15,2            | 4   | 4,1              | 5,5 | 18                 | 12,4            |
| 04.8204.97.3   | WMS 2540         | 170                     | 2500 | 15,2            | 4   | 5,1              | 7   | 18                 | 12,4            |

| WML-F - 3450 RPM |                  |                         |      |                 |     |                  |     |                    |                 |
|------------------|------------------|-------------------------|------|-----------------|-----|------------------|-----|--------------------|-----------------|
| Codice<br>Code   | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                  |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  |                    |                 |
| 04.8400.97.3     | WMS 2035-F       | 140                     | 2000 | 13,2            | 3,5 | 3,6              | 5   | 15                 | 8               |
| 04.8401.97.3     | WMS 2535-F       | 170                     | 2500 | 13,2            | 3,5 | 4                | 5,5 | 15                 | 8               |
| 04.8402.97.3     | WMS 2040-F       | 140                     | 2000 | 15,2            | 4   | 4                | 5,5 | 15                 | 9,2             |
| 04.8403.97.3     | WMS 2540-F       | 170                     | 2500 | 15,2            | 4   | 4,8              | 6,5 | 15                 | 9,2             |
| 04.8404.97.3     | WMS 2045-F       | 140                     | 2000 | 17              | 4,5 | 4,4              | 6   | 15                 | 10,8            |
| 04.8405.97.3     | WMS 2545-F       | 170                     | 2500 | 17              | 4,5 | 5,5              | 7,5 | 15                 | 10,8            |

## WMS / WMS-F



## Accessori di completamento - Complementary accessories Accessoires complémentaires - Accesorios complementarios





Caratteristiche - Specifications - Caractéristiques - Características

| IN     | Ø           | WMC                   | WMC-F                |
|--------|-------------|-----------------------|----------------------|
|        | Press. Min. | -0,1 bar (-1.5 PSI)   | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)        | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)          | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP               | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 28 mm          | Hollow 28 mm         |
| OIL    | SAE 75W 90  | 0,6l (0.16 U.S.gal.)  | 0,6l (0.16 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7.6 kg (16.7 lbs)     | 7.6 kg (16.7 lbs)    |
| MOTOR  | Type        | IEC 100-112 B14-28 mm |                      |

WMC

DX

T

R

B

SX

BZ

WMC-F

DX

BZ

R

B

SX

Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front

“V”

Posteriori - Rear

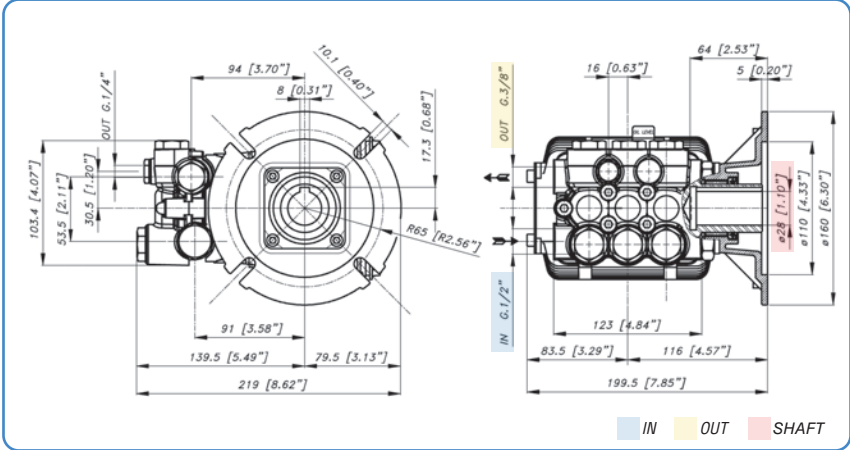
“U”



| WML - 1450 RPM |                  |                         |      |                 |     |                  |     |                    |                 |
|----------------|------------------|-------------------------|------|-----------------|-----|------------------|-----|--------------------|-----------------|
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  | Ø mm               | mm              |
| 04.8050.97.3   | WMC1117          | 170                     | 2500 | 11              | 2,9 | 3,3              | 4,5 | 18                 | 9,8             |
| 04.8051.97.3   | WMC 1217         | 170                     | 2500 | 12              | 3,1 | 3,6              | 5   | 18                 | 10,8            |
| 04.8052.97.3   | WMC 1317         | 170                     | 2500 | 13              | 3,4 | 4                | 5,5 | 18                 | 12,4            |
| 04.8053.97.3   | WMC 1515         | 150                     | 2200 | 15              | 3,9 | 4                | 5,5 | 18                 | 13,6            |

| WML-F - 2800 RPM |                  |                         |      |                 |      |                  |     |                    |                 |
|------------------|------------------|-------------------------|------|-----------------|------|------------------|-----|--------------------|-----------------|
| Codice<br>Code   | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |      | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                  |                  | bar                     | PSI  | l/min           | GPM  | kW               | hp  | Ø mm               | mm              |
| 04.8060.97.3     | WMC 1114-F       | 140                     | 2000 | 11              | 2,9  | 2,9              | 4   | 15                 | 8               |
| 04.8061.97.3     | WMC 1120-F       | 200                     | 2900 | 11              | 2,9  | 4                | 5,5 | 15                 | 8               |
| 04.8062.97.3     | WMC 1316-F       | 160                     | 2350 | 13              | 3,43 | 4                | 5,5 | 15                 | 9,8             |
| 04.8063.97.3     | WMC 1320-F       | 200                     | 2900 | 13              | 3,43 | 5,1              | 7   | 15                 | 9,8             |
| 04.8064.97.3     | WMC 1515-F       | 150                     | 2200 | 15              | 3,96 | 4                | 5,5 | 15                 | 10,8            |
| 04.8065.97.3     | WMC 1520-F       | 200                     | 2900 | 15              | 3,96 | 5,5              | 7,5 | 15                 | 10,8            |

WMC / WMC-F



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



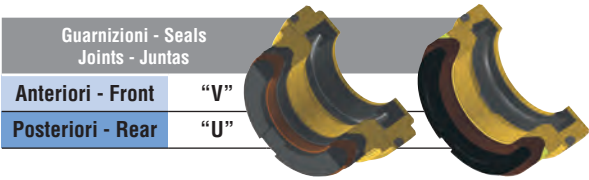
pag.125

Caratteristiche - Specifications - Caractéristiques - Características

| IN     | Ø           | WMH                  | WMH-F                |
|--------|-------------|----------------------|----------------------|
|        | Press. Min. | -0,1 bar (-1.5 PSI)  | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 5/8"          | Hollow 5/8"          |
| OIL    | SAE 75W 90  | 0,6l (0.16 U.S.gal.) | 0,6l (0.16 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7.6 kg (16.7 lbs)    | 7.6 kg (16.7 lbs)    |
| MOTOR  | Type        | NEMA 56C-5/8"        |                      |

WMH **DX** **T** **R** **B** **SX** **BZ**

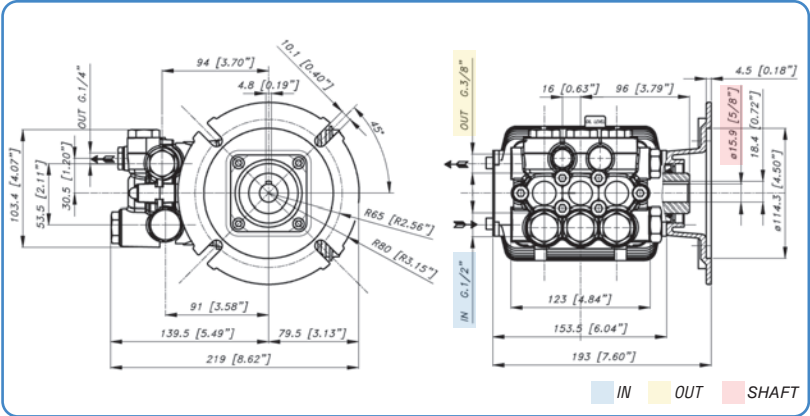
WMH-F **DX** **BZ** **R** **B** **SX**



| WML - 1725 RPM |                  |                         |      |                 |     |                  |     |                    |                 |
|----------------|------------------|-------------------------|------|-----------------|-----|------------------|-----|--------------------|-----------------|
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  | Ø mm               | mm              |
| 04.8300.97.3   | WMH 1525         | 103                     | 1500 | 9,5             | 2,5 | 1,8              | 2,5 | 18                 | 7,2             |
| 04.8301.97.3   | WMH 1825         | 125                     | 1800 | 9,5             | 2,5 | 2,3              | 3   | 18                 | 7,2             |
| 04.8302.97.3   | WMH 2525         | 170                     | 2500 | 9,5             | 2,5 | 2,9              | 4   | 18                 | 7,2             |
| 04.8303.97.3   | WMH 2228         | 150                     | 2200 | 10,6            | 2,8 | 2,9              | 4   | 18                 | 8,6             |
| 04.8304.97.3   | WMH 1833         | 125                     | 1800 | 12,5            | 3,3 | 2,9              | 4   | 18                 | 9,8             |

| WML-F - 3450 RPM |                  |                         |      |                 |     |                  |     |                    |                 |
|------------------|------------------|-------------------------|------|-----------------|-----|------------------|-----|--------------------|-----------------|
| Codice<br>Code   | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |     | Pistone<br>Plunger | Corsa<br>Stroke |
|                  |                  | bar                     | PSI  | l/min           | GPM | kW               | hp  | Ø mm               | mm              |
| 04.8513.97.3     | WMH 1528-F       | 105                     | 1500 | 10,2            | 2,7 | 2,1              | 2,8 | 15                 | 6               |
| 04.8512.97.3     | WMH 2528-F       | 175                     | 2500 | 10              | 2,6 | 3,4              | 4,5 | 15                 | 6               |
| 04.8500.97.3     | WMH 1932-F       | 130                     | 1900 | 12              | 3,2 | 3,1              | 4,1 | 15                 | 7,2             |
| 04.8501.97.3     | WMH 2532-F       | 175                     | 2500 | 12              | 3,2 | 4,1              | 5,4 | 15                 | 7,2             |
| 04.8502.97.3     | WMH 1638-F       | 110                     | 1600 | 14,3            | 3,8 | 3,1              | 4,2 | 15                 | 8,6             |
| 04.8503.97.3     | WMH 2038-F       | 140                     | 2000 | 14,3            | 3,8 | 3,9              | 5,2 | 15                 | 8,6             |
| 04.8504.97.3     | WMH 1543-F       | 105                     | 1500 | 16,3            | 4,3 | 3,3              | 4,4 | 15                 | 9,8             |
| 04.8505.97.3     | WMH 1843-F       | 125                     | 1800 | 16,3            | 4,3 | 4                | 5,3 | 15                 | 9,8             |

WMH / WMH-F



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1/2 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 1"            |
| OIL    | SAE 75W 90  | 0,6l (0.16 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7.8 kg (17.2 lbs)    |
| MOTOR  | Type        | SAE J609-1"          |

DX BZ R B SX



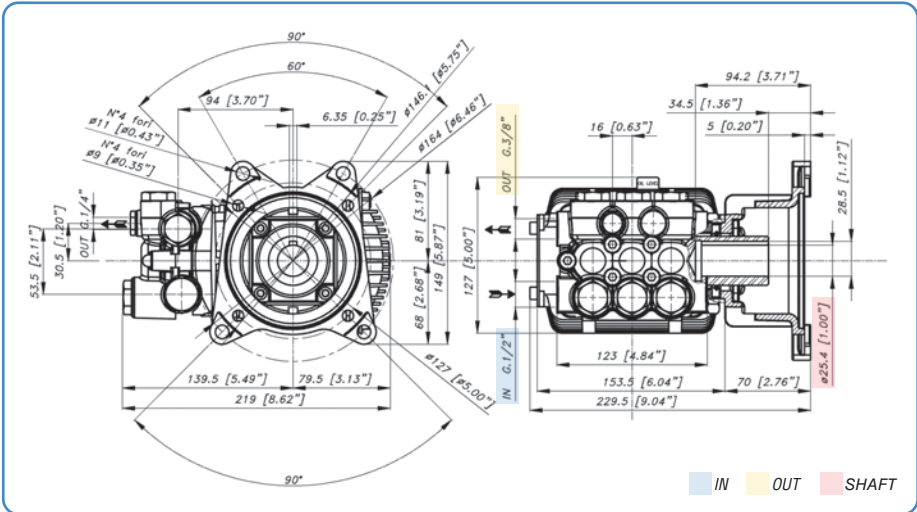
Guarnizioni - Seals  
Joints - Juntas

|                   |     |
|-------------------|-----|
| Anteriori - Front | "V" |
| Posteriori - Rear | "U" |



| WMG1" - 3450 RPM |                  |                         |      |                 |     |                  |      |           |                            |                       |
|------------------|------------------|-------------------------|------|-----------------|-----|------------------|------|-----------|----------------------------|-----------------------|
| Codice<br>Code   | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |      |           | Pistone<br>Plunger<br>Ø mm | Corsa<br>Stroke<br>mm |
|                  |                  | bar                     | PSI  | l/min           | GPM | kW               | hp   | hp Engine |                            |                       |
| 04.8600.97.3     | WMG 4031         | 280                     | 4000 | 11,8            | 3,1 | 6,4              | 8,6  | 11        | 15                         | 7,2                   |
| 04.8602.97.3     | WMG 4037         | 280                     | 4000 | 14,1            | 3,7 | 7,7              | 10,3 | 12        | 15                         | 8,6                   |
| 04.8604.97.3     | WMG 4043         | 280                     | 4000 | 16,1            | 4,3 | 8,7              | 11,7 | 14        | 15                         | 9,8                   |

WMG 1"



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



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## Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1/2 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 1"            |
| OIL    | SAE 75W 90  | 0,6l (0.16 U.S.gal.) |
| WEIGHT | kg (lbs)    | 7.8 kg (17.2 lbs)    |
| MOTOR  | Type        | SAE J609-1"          |



Guarnizioni - Seals  
Joints - Juntas

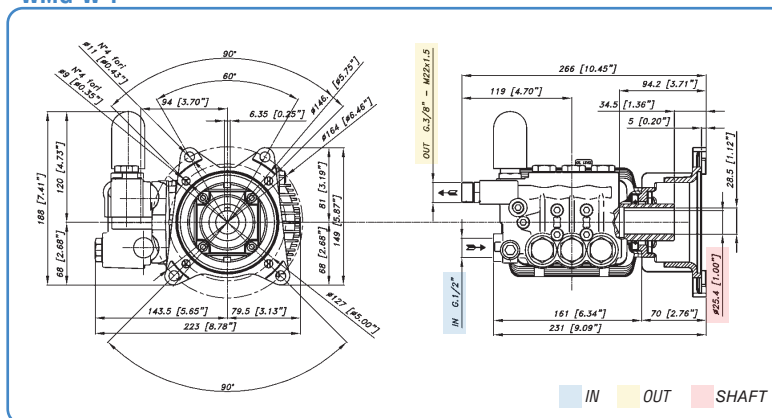
|                   |     |
|-------------------|-----|
| Anteriori - Front | "V" |
| Posteriori - Rear | "U" |



| WML-F - 3450 RPM |                  |                         |      |                 |     |                  |      |           |                    |                 |
|------------------|------------------|-------------------------|------|-----------------|-----|------------------|------|-----------|--------------------|-----------------|
| Codice<br>Code   | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |      |           | Pistone<br>Plunger | Corsa<br>Stroke |
|                  |                  | bar                     | PSI  | l/min           | GPM | kW               | hp   | hp Engine |                    |                 |
| 04.8760.97.3     | WMG 4031-W       | 280                     | 4000 | 11,8            | 3,1 | 6,4              | 8,6  | 11        | 15                 | 7,2             |
| 04.8762.97.3     | WMG 4037-W       | 280                     | 4000 | 14,1            | 3,7 | 7,7              | 10,3 | 12        | 15                 | 8,6             |
| 04.8764.97.3     | WMG 4043-W       | 280                     | 4000 | 16,1            | 4,3 | 8,7              | 11,7 | 14        | 15                 | 9,8             |

Con valvola depressurizzatrice incorporata e eiettore detergente regolabile  
With unloader valve and adjustable injector built-in  
Avec régulateur de pression by-pass et éjecteur réglable incorporés  
Con válvula de regulación de presión y eector regulable incorporados

## WMG-W 1"





150÷280 bar      2175÷4000 psi  
7,6÷26,8 l/min      2.0÷7.1 GPM

## Versioni - Versions - Versions - Versiones



Pompe costruite utilizzando un nuovo sistema di tenute esclusivo "Bertolini" per una elevata durata. Con queste pompe si possono raggiungere elevate prestazioni. La tecnologia costruttiva di progettazione ne esalta l'affidabilità nel tempo.



Fitted with a new exclusive "Bertolini" sealing system for a longer life. Using these models you can match the most efficient technology. The building technology makes them stronger and more resistant. All models come with Super "U" seals.



Pompes équipées d'un nouveau système de joints d'étanchéité exclusif "Bertolini" pour optimiser la durée de la pompe. Très performantes et très fiables. Technologie des véhicules industriels.



Bombas construidas utilizando un nuevo sistema de juntas exclusivo "Bertolini" para una larga duración. Con estas bombas se pueden alcanzar elevadas prestaciones. La tecnología constructiva de diseño garantiza la confiabilidad en el tiempo.

## Applicazioni - Applications - Applications - Aplicaciones



Manutenzione di attrezzatura pesante  
Heavy equipment maintenance  
Entretien d'équipement lourd  
Mantenimiento de equipos pesados



Preparazione di superfici da verniciare  
Pre-painting surface preparation  
Préparation des surface à peindre  
Preparación de superficies que barnizar



Lavaggio Self-service  
Self-service wash  
Lavage Self-Service  
Autolavado



Pulizia vasche  
Tank cleaning  
Nettoyage cuves  
Limpieza tanques



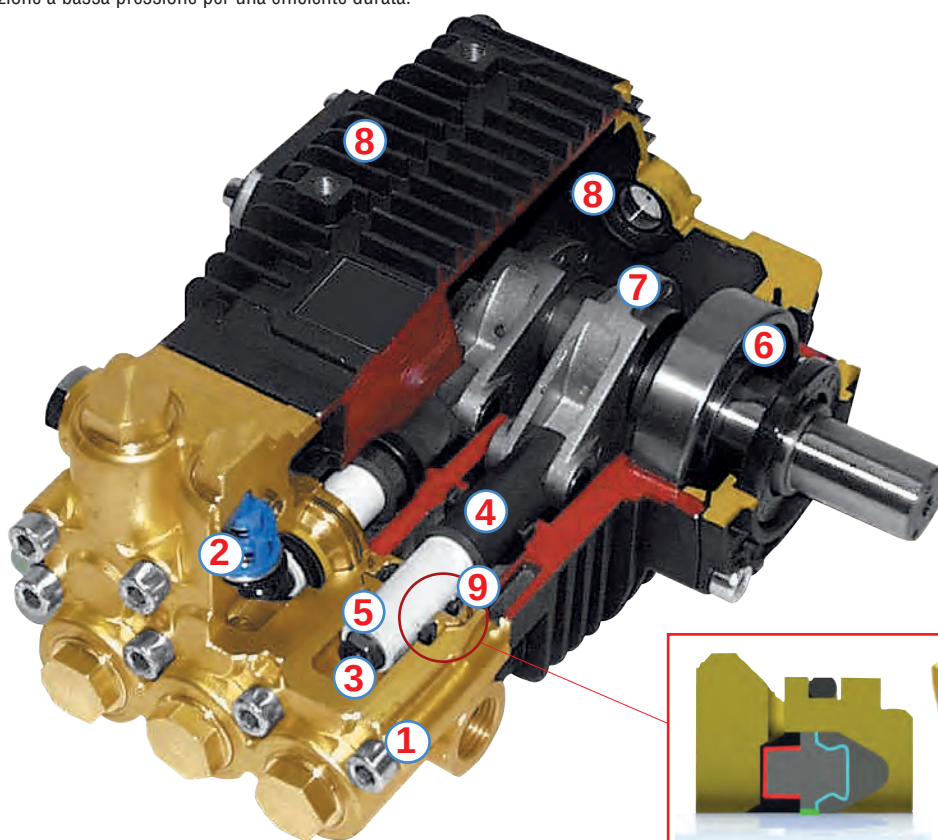
Lavaggio automatico  
Automatic wash  
Lavage automatique  
Lavado automatico



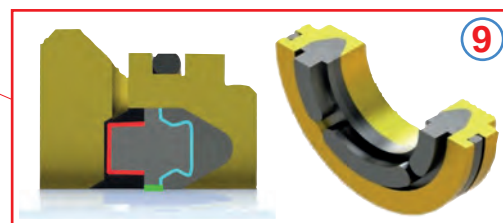
Tunnel di lavaggio  
Tunnel wash  
Tunnel de lavage  
Túnel de lavado



- 1 Nuova testata in ottone forgiato, di forte spessore, completamente ridisegnata per alloggiare nuove valvole e nuovi tappi.
- 2 Valvole di aspirazione mandata in acciaio inox 316 resistenti alla corrosione e ad alto rendimento fluido-dinamico: manutenzione semplice.
- 3 Efficienza volumetrica per garantire il massimo rendimento.
- 4 Pattino porta-pistone in acciaio inox trattato al Tenifer® per una migliore tenuta.
- 5 Pistoni in ceramica integrale di alta qualità.
- 6 Cuscinetti di primaria marca. Sporgenza albero aumentata per un accoppiamento più sicuro con la puleggia o con albero motore.
- 7 Nuove bielle in un solo pezzo a sezione variabile con innovativo sistema auto-lubrificante.
- 8 Nuovo carter e coperchio posteriore a dimensione e disegno calcolato per un sicuro raffreddamento in ogni applicazione.
- 9 Nuovo sistema di guarnizioni con elemento energizzante integrato nella guarnizione a bassa pressione per una efficiente durata.



- 1 Increased thickness of new forged brass head completely redesigned to accommodate new valves and caps.
- 2 New rapid action, mirror finish stainless steel 316 check valves prevent corrosion and enhance high fluid dynamic efficiency, easy access for maintenance and repairs.
- 3 Volumetric efficiency assured under any condition.
- 4 Stainless steel plunger rod Tenifer® treated for strength.
- 5 Highly polished solid ceramic plungers.
- 6 Premium oversized bearings. Extended length of crankshaft for a solid grip of pulleys on belt-driven units or for close coupling with the motor.
- 7 New revolutionary one-piece extra wide connecting-rod.
- 8 New crankcase and back cover.
- 9 New pressure seal system with energizing element integrated into the low-pressure seal for efficient life.



- 1 Culasse en laiton de forte épaisseur pour adapter les nouveaux clapets et la nouvelle technique d'étanchéité des bouchons.
- 2 Clapets d'aspiration et de refoulement en acier inox 316 de conception moderne, d'une finition très soignée.
- 3 Rendement volumétrique dans toutes les conditions de travail.
- 4 Guides de pistons en acier inox, traitement spécial au Tenifer®, permet d'éviter l'usure, son état de surface parfait augmente significativement la durée de vie des joints d'huile à son contact.
- 5 Pistons en céramique intégrale parfaitement traités.
- 6 Roulements de première qualité. Arbre surdimensionné en longueur pour renforcer la liaison moteur pompe et la tenue des poulies.
- 7 Bielles une pièce renforcées, lubrification facilitée.
- 8 Grand carter en aluminium moulé sous pression, très résistant.
- 9 Nouveau système de joints avec élément énergisant intégré dans le joint basse pression pour augmenter la durée de vie.



- 1 Nueva culata en latón forjado, de grueso espesor, completamente re-proyectada para el alojamiento de nuevas válvulas y nuevas tapas.
- 2 Válvulas aspiración-envío en acero inox. 316 resistentes a la corrosión y de alto rendimiento fluidodinámico: simple mantenimiento.
- 3 Eficiencia volumétrica para garantizar el máximo rendimiento.
- 4 Guía de pistón en acero inox. tratado al Tenifer® para una larga duración.
- 5 Pistones en cerámica integral de alta calidad.
- 6 Cojinetes de primera marca. Saliente cigüeñal aumentado para un seguro acoplamiento con la polea o con el cigüeñal del motor.
- 7 Nuevas bielas en una única pieza con sección variable y con sistema de autolubricación innovador.
- 8 Nuevo cárter y tapa posterior de dimensión y diseño calculados para un seguro enfriamiento en toda aplicación.
- 9 Nuevo sistema de juntas con elemento energizante integrado en la junta de baja presión para una duración más eficiente.



### Caratteristiche - Specifications - Caractéristiques - Características

|       |             |                      |
|-------|-------------|----------------------|
| IN    | Ø           | 1/2 BSP              |
|       | Press. Min. | -0,1 bar (-1.5 PSI)  |
|       | Press. Max. | 6 bar (87 PSI)       |
|       | Temp. Max.  | 60°C (140°F)         |
| OUT   | Ø           | 3/8 BSP              |
| SHAFT | Ø           | 24 mm                |
| OIL   | SAE 75W 90  | 0,71 (0.18 U.S.gal.) |



| Codice Code  | Modello Model | Press. Max Max Press. |      | 950 RPM |     |     |     | 1450 RPM |     |     |      | 1725 RPM |     |     |      | Pistone Plunger | Corsa Stroke | Peso Weight |     |
|--------------|---------------|-----------------------|------|---------|-----|-----|-----|----------|-----|-----|------|----------|-----|-----|------|-----------------|--------------|-------------|-----|
|              |               | bar                   | PSI  | l/min   | GPM | kW  | hp  | l/min    | GPM | kW  | hp   | l/min    | GPM | kW  | hp   | Ø mm            | mm           | kg          | lbs |
| 07.1000.97.A | TML 1220      | 200                   | 2900 | 8       | 2,1 | 3,0 | 4,0 | 12       | 3,2 | 4,7 | 6,3  | 14       | 3,7 | 5,3 | 7,1  | 18              | 11,2         | 9,5         | 21  |
| 07.1001.97.A | TML 1320      | 200                   | 2900 | 9       | 2,4 | 3,3 | 4,4 | 13       | 3,4 | 5,1 | 6,8  | 15       | 4,0 | 5,9 | 7,9  | 18              | 12,4         | 9,5         | 21  |
| 07.1002.97.A | TML 1520      | 200                   | 2900 | 10      | 2,6 | 3,8 | 5,2 | 15       | 4,0 | 5,9 | 7,9  | 18       | 4,8 | 6,8 | 9,2  | 18              | 14,4         | 9,5         | 21  |
| 07.1004.97.A | TML 1720      | 200                   | 2900 | 11      | 2,9 | 4,3 | 5,7 | 17       | 4,5 | 6,7 | 9,0  | 20       | 5,3 | 7,6 | 10,2 | 18              | 16           | 9,5         | 21  |
| 07.1006.97.A | TML 2020      | 200                   | 2900 | 13      | 3,4 | 5,0 | 6,7 | 20       | 5,3 | 7,8 | 10,5 | 23       | 6,1 | 8,9 | 11,9 | 18              | 18,7         | 9,5         | 21  |
| 07.1028.97.3 | TML 2120      | 200                   | 2900 | 14      | 3,7 | 5,3 | 7,1 | 21       | 5,5 | 8,3 | 11,1 | 24       | 6,3 | 9,4 | 12,6 | 20              | 16           | 10          | 22  |
| 07.1029.97.3 | TML 2420      | 200                   | 2900 | 16      | 4,2 | 6,2 | 8,3 | 24       | 6,3 | 9,4 | 12,6 | -        | -   | -   | -    | 20              | 18,7         | 10          | 22  |
| 07.1047.97.3 | TML 3016      | 160                   | 2320 | 19      | 5,0 | 6,0 | 8,0 | 29       | 7,7 | 9,1 | 12,2 | -        | -   | -   | -    | 22              | 18,7         | 10          | 22  |

#### PISTONE - PLUNGER Ø18

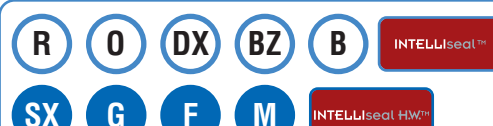


Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front "V"  
Posteriori - Rear "V"



#### PISTONE - PLUNGER Ø20

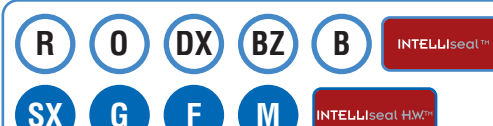


Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"  
Posteriori - Rear "V"



#### PISTONE - PLUNGER Ø22

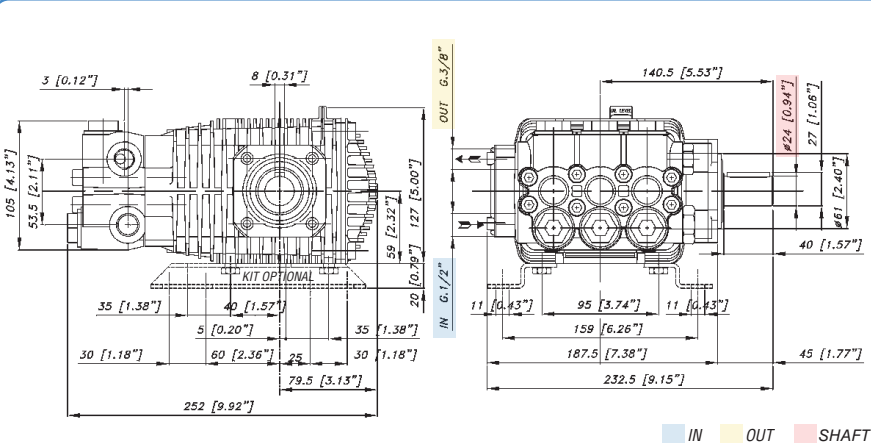


Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"  
Posteriori - Rear "U"



#### TML



#### Accessori di completamento - Complementary accessories Accessoires complémentaires - Accesorios complementarios



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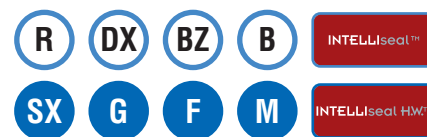
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## Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1/2 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 74°C (165°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 0,7l (0.18 U.S.gal.) |
| WEIGHT | kg (lbs)    | 10 kg (22 lbs)       |



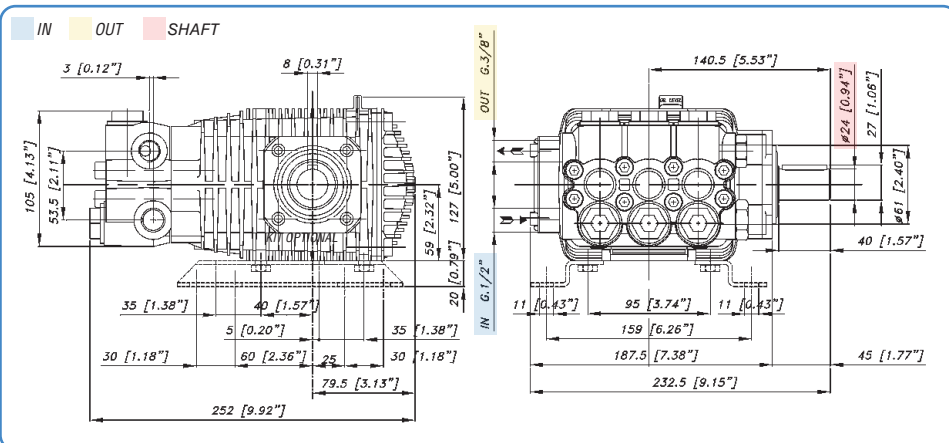
| Codice Code  | Modello Model | Press. Max Max Press. |      | 950 RPM |     |     |     | 1450 RPM |     |      |      | 1725 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-----------------------|------|---------|-----|-----|-----|----------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|              |               | bar                   | PSI  | l/min   | GPM | kW  | hp  | l/min    | GPM | kW   | hp   | l/min    | GPM | kW   | hp   |                 |              |
| 07.1051.97.3 | TML 1328-HP   | 280                   | 4060 | 8       | 2,1 | 4,6 | 6,2 | 13       | 3,4 | 7,0  | 9,4  | 15       | 4,0 | 8,2  | 11,0 | 18              | 12,4         |
| 07.1052.97.3 | TML 1528-HP   | 280                   | 4060 | 10      | 2,6 | 5,3 | 7,1 | 15       | 4,0 | 8,1  | 10,9 | 17       | 4,5 | 9,5  | 12,7 | 18              | 14,4         |
| 07.1053.97.3 | TML 1728-HP   | 280                   | 4060 | 11      | 2,9 | 5,9 | 7,9 | 17       | 4,5 | 9,2  | 12,4 | 19       | 5,0 | 10,5 | 14,1 | 18              | 16           |
| 07.1054.97.3 | TML 2028-HP   | 280                   | 4060 | 13      | 3,4 | 6,9 | 9,3 | 20       | 5,3 | 10,9 | 14,6 | 23       | 6,1 | 12,3 | 16,5 | 18              | 18,7         |

Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"  
Posteriori - Rear "V"



## TML-HP



## Accessori di completamento - Complementary accessories - Accessoires complémentaires - Accesorios complementarios



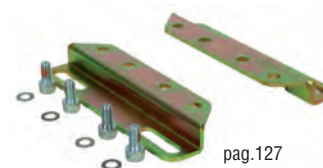
pag.115



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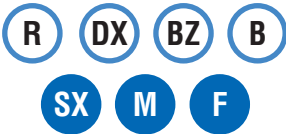
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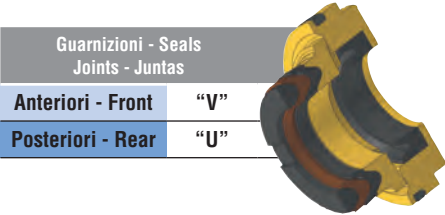
pag.127

Caratteristiche - Specifications - Caractéristiques - Características

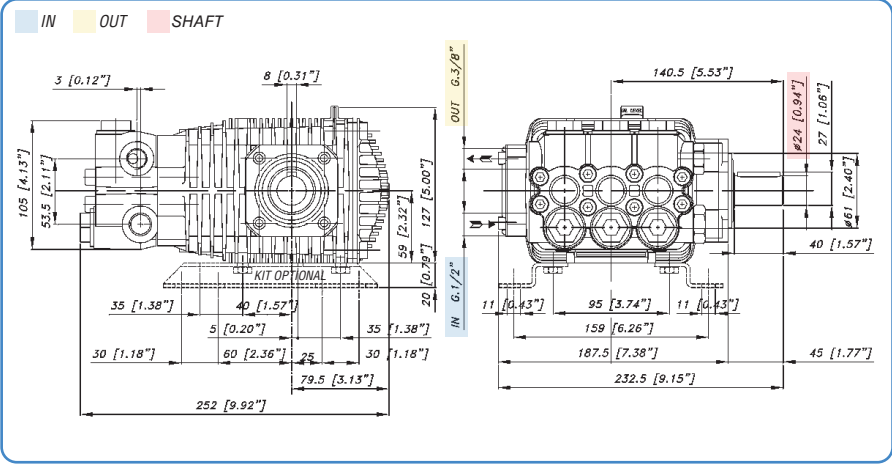
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1/2 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 0,7l (0.18 U.S.gal.) |
| WEIGHT | kg (lbs)    | 9,5 kg (21 lbs)      |



| Codice Code  | Modello Model | Press. Max Max Press. |      | 1450 RPM |     |     |     | 2800 RPM |     |      |      | 32450 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-----------------------|------|----------|-----|-----|-----|----------|-----|------|------|-----------|-----|------|------|-----------------|--------------|
|              |               | bar                   | PSI  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW   | hp   | l/min     | GPM | kW   | hp   | Ø mm            | mm           |
| 07.1101.97.A | TML 1528-F    | 280                   | 4060 | 8        | 2,1 | 4,4 | 6,0 | 15       | 4,0 | 8,3  | 11,1 | 18        | 4,8 | 9,8  | 13,1 | 15              | 11,2         |
| 07.1104.97.A | TML 1728-F    | 280                   | 4060 | 9        | 2,4 | 4,9 | 6,6 | 17       | 4,5 | 9,2  | 12,3 | 20        | 5,3 | 10,8 | 14,5 | 15              | 12,4         |
| 07.1106.97.A | TML 2028-F    | 280                   | 4060 | 11       | 2,9 | 6,0 | 8,0 | 20       | 5,3 | 11,1 | 14,9 | 24        | 6,3 | 13,1 | 17,6 | 15              | 15           |



TML-F



Accessori di completamento - Complementary accessories - Accessoires complémentaires - Accesorios complementarios



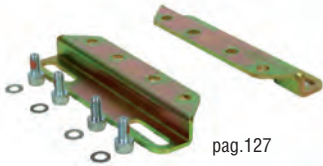
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## Caratteristiche - Specifications - Caractéristiques - Características

|               |                    |                       |
|---------------|--------------------|-----------------------|
| <b>IN</b>     | <b>Ø</b>           | 1/2 BSP               |
|               | <b>Press. Min.</b> | -0,1 bar (-1.5 PSI)   |
|               | <b>Press. Max.</b> | 6 bar (87 PSI)        |
|               | <b>Temp. Max.</b>  | 60°C (140°F)          |
| <b>OUT</b>    | <b>Ø</b>           | 3/8 BSP               |
| <b>SHAFT</b>  | <b>Ø</b>           | Hollow 1" 1/8         |
| <b>OIL</b>    | <b>SAE 75W 90</b>  | 0,7 l (0.18 U.S.gal.) |
| <b>WEIGHT</b> | <b>kg (lbs)</b>    | 10,8 kg (23.7 lbs)    |
| <b>MOTOR</b>  | <b>Type</b>        | NEMA 184TC-1" 1/8     |



TMH R DX T B SX BZ

TMH-F **R** **DX** **BZ** **B** **SX**

| 1725 RPM       |                  |                         |      |                 |     |                  |      |                            |                       |
|----------------|------------------|-------------------------|------|-----------------|-----|------------------|------|----------------------------|-----------------------|
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |      | Pistone<br>Plunger<br>Ø mm | Corsa<br>Stroke<br>mm |
|                |                  | bar                     | PSI  | l/min           | GPM | kW               | hp   |                            |                       |
| 07.1300.97.A   | TMH 3036         | 210                     | 3000 | 13              | 3,4 | 5,5              | 7,5  | 18                         | 11,2                  |
| 07.1301.97.A   | TMH 3040         | 210                     | 3000 | 15              | 4,0 | 5,9              | 8    | 18                         | 12,4                  |
| 07.1302.97.A   | TMH 2250         | 150                     | 2200 | 19              | 5,0 | 5,5              | 7,5  | 18                         | 15,4                  |
| 07.1303.97.A   | TMH 3050         | 210                     | 3000 | 19              | 5,0 | 7,4              | 10   | 18                         | 15,4                  |
| 07.1304.97.A   | TMH 1955         | 130                     | 1900 | 21              | 5,5 | 5,5              | 7,5  | 18                         | 17                    |
| 07.1305.97.A   | TMH 3055         | 210                     | 3000 | 21              | 5,5 | 8,1              | 11   | 18                         | 17                    |
| 3450 RPM       |                  |                         |      |                 |     |                  |      |                            |                       |
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pres. |      | Portata<br>Flow |     | Potenza<br>Power |      | Pistone<br>Plunger<br>Ø mm | Corsa<br>Stroke<br>mm |
|                |                  | bar                     | PSI  | l/min           | GPM | kW               | hp   |                            |                       |
| 07.1500.97.A   | TMH 3035-F       | 210                     | 3000 | 13              | 3,4 | 5,5              | 7,5  | 15                         | 8,6                   |
| 07.1501.97.A   | TMH 4035-F       | 280                     | 4000 | 13              | 3,4 | 7                | 9,5  | 15                         | 8,6                   |
| 07.1502.97.A   | TMH 2740-F       | 185                     | 2700 | 15              | 4,0 | 5,5              | 7,5  | 15                         | 9,8                   |
| 07.1503.97.A   | TMH 4040-F       | 280                     | 4000 | 15              | 4,0 | 8,1              | 11   | 15                         | 9,8                   |
| 07.1504.97.A   | TMH 3045-F       | 210                     | 3000 | 17              | 4,5 | 7,4              | 10   | 15                         | 11,2                  |
| 07.1505.97.A   | TMH 4045-F       | 280                     | 4000 | 17              | 4,5 | 9,2              | 12,5 | 15                         | 11,2                  |
| 07.1506.97.A   | TMH 2950-F       | 200                     | 2900 | 19              | 5,0 | 7,4              | 10   | 15                         | 12,4                  |
| 07.1507.97.A   | TMH 4050-F       | 280                     | 4000 | 19              | 5,0 | 10               | 13,5 | 15                         | 12,4                  |
| 07.1508.97.A   | TMH 2460-F       | 170                     | 2400 | 22              | 5,8 | 7,4              | 10   | 15                         | 15,4                  |
| 07.1509.97.A   | TMH 3560-F       | 240                     | 3500 | 22              | 5,8 | 10,7             | 14,5 | 15                         | 15,4                  |

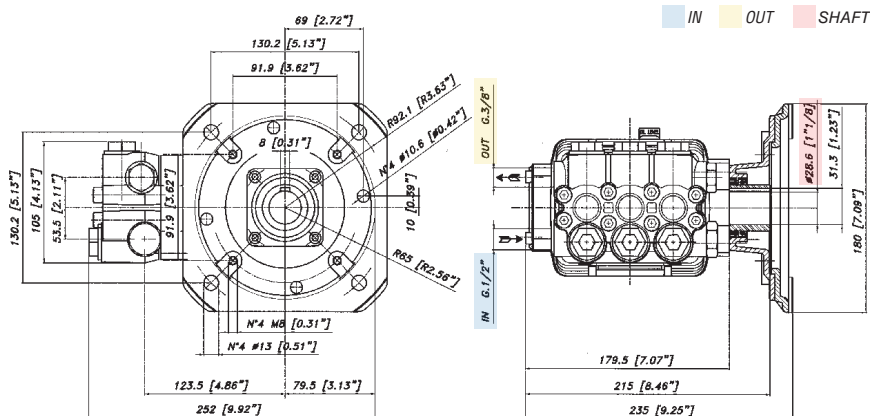
|                                        |     |                                                                                     |
|----------------------------------------|-----|-------------------------------------------------------------------------------------|
| Guarnizioni - Seals<br>Joints - Juntas | TMH |  |
| Anteriori - Front                      | "V" |                                                                                     |
| Posteriori - Rear                      | "V" |                                                                                     |



|                                        |           |                                                                                       |
|----------------------------------------|-----------|---------------------------------------------------------------------------------------|
| Guarnizioni - Seals<br>Joints - Juntas | TMH-F     |  |
| Anteriori - Front                      | Super "U" |                                                                                       |
| Posteriori - Rear                      | "U"       |                                                                                       |



## TMH



**Accessori di completamento - Complementary accessories**  
**Accessoires complémentaires - Accesorios complementarios**

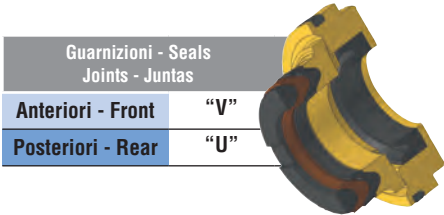


Caratteristiche - Specifications - Caractéristiques - Características

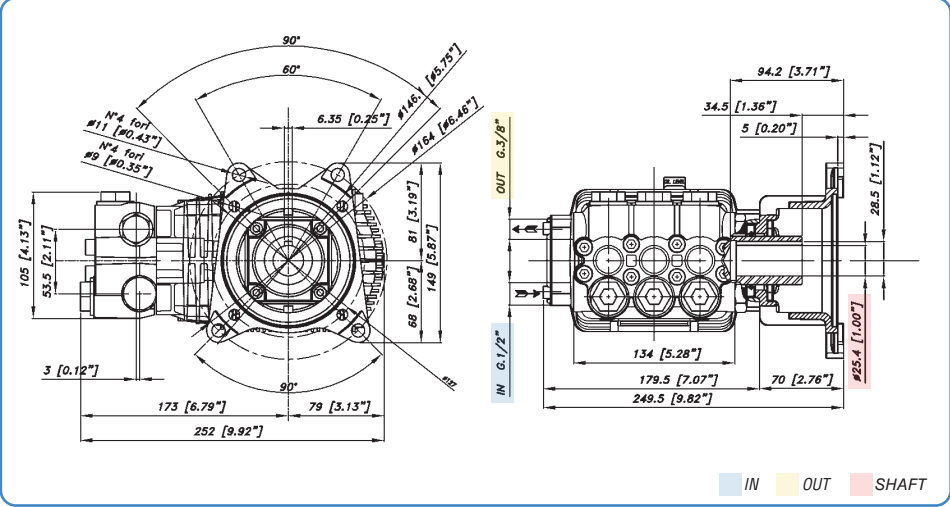
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1/2 BSP              |
|        | Press. Min. | 1 bar (15 PSI)       |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | Hollow 1"            |
| OIL    | SAE 75W 90  | 0,7l (0.18 U.S.gal.) |
| WEIGHT | kg (lbs)    | 10,8 kg (23.7 lbs)   |
| ENGINE | Type        | SAE J609-1"          |



| 3450 RPM     |               |                      |      |              |     |               |      |           |                 |              |
|--------------|---------------|----------------------|------|--------------|-----|---------------|------|-----------|-----------------|--------------|
| Codice Code  | Modello Model | Press. Max Max Pres. |      | Portata Flow |     | Potenza Power |      |           | Pistone Plunger | Corsa Stroke |
|              |               | bar                  | PSI  | l/min        | GPM | kW            | hp   | hp Engine | Ø mm            | mm           |
| 07.1600.97.A | TMG 3535      | 240                  | 3500 | 13           | 3,4 | 6,3           | 8,5  | 11        | 15              | 8,6          |
| 07.1601.97.A | TMG 4035      | 280                  | 4000 | 13           | 3,4 | 7             | 9,5  | 13        | 15              | 8,6          |
| 07.1602.97.A | TMG 3540      | 240                  | 3500 | 15           | 4,0 | 7             | 9,6  | 13        | 15              | 9,8          |
| 07.1603.97.A | TMG 4040      | 280                  | 4000 | 15           | 4,0 | 8,1           | 11   | 14,5      | 15              | 9,8          |
| 07.1604.97.A | TMG 3545      | 240                  | 3500 | 17           | 4,5 | 6             | 8,1  | 14        | 15              | 11,2         |
| 07.1605.97.A | TMG 4045      | 280                  | 4000 | 17           | 4,5 | 9,2           | 12,5 | 16        | 15              | 11,2         |
| 07.1606.97.A | TMG 3550      | 240                  | 3500 | 19           | 5,0 | 8,8           | 12   | 16        | 15              | 12,4         |
| 07.1607.97.A | TMG 4050      | 280                  | 4000 | 19           | 5,0 | 9,9           | 13,5 | 18        | 15              | 12,4         |
| 07.1608.97.A | TMG 3555      | 240                  | 3500 | 21           | 5,5 | 9,9           | 13,5 | 18        | 15              | 14           |



TMG 1"



Accessori di completamento - Complementary accessories  
 Accessoires complémentaires - Accesorios complementarios



Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                                   |
|--------|-------------|-----------------------------------|
| IN     | Ø           | 1/2 BSP (Pump)<br>1/2 BSP (Valve) |
|        | Press. Min. | 1 bar (15 PSI)                    |
|        | Press. Max. | 6 bar (87 PSI)                    |
|        | Temp. Max.  | 60°C (140°F)                      |
| OUT    | Ø           | 3/8 BSP                           |
| SHAFT  | Ø           | Hollow 14X17 DIN 5482             |
| OIL    | SAE 75W 90  | 0,71 (0.18 U.S.gal.)              |
|        | Pump        | 10,9 kg (24 lbs)                  |
| WEIGHT | Motor pump  | 15,5 kg (34,1 lbs)                |
|        |             |                                   |
| PULGER | Ø           | 20 mm                             |
| STROKE | Lenght      | 18 mm                             |



07.3090.97.3

POMPA PER MOTORE IDRAULICO  
(Manometro e kit piedini inclusi)

PUMP FOR HYDRAULIC MOTOR  
(Pressure gauge and mounting rail kit included)

POMPE POUR MOTEUR HYDRAULIQUE  
(Equipelement fourni: manomètre et kit supports)

BOMBA PARA MOTOR HIDRÁULICO  
(Manómetro y juego de pies incluidos)

07.3091.97.3

POMPA CON MOTORE IDRAULICO

PUMP WITH HYDRAULIC MOTOR

POMPE AVEC MOTEUR HYDRAULIQUE

BOMBA CON MOTOR HIDRÁULICO



02.6198.97.A

KIT ACCESSORI - ACCESSORIES KIT - KIT ACCESSOIRES - KIT ACCESORIOS  
(OPTIONAL)

Lancia- Pistola- Ugello – Filtro- Tubo di mandata 5/16"

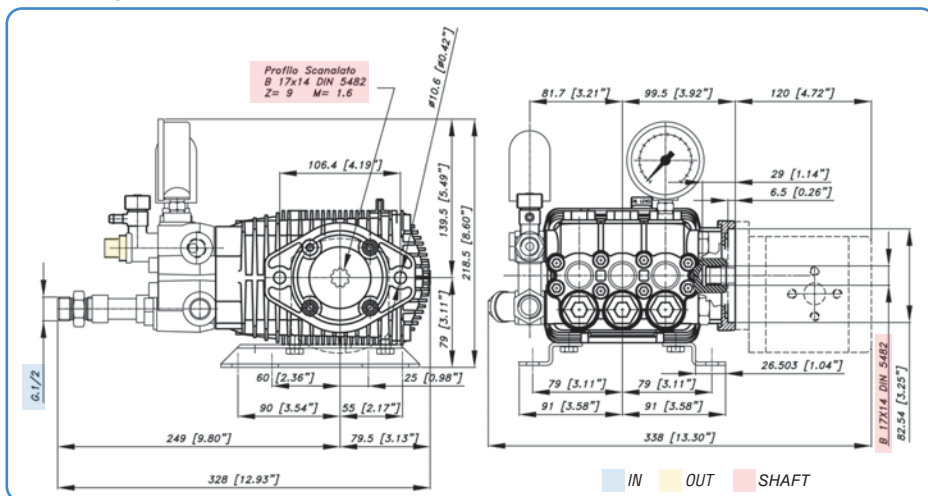
Lance - Gun - Nozzle - Filter - High pressure hose 5/16"

Lance - Pistolet - Buse - Filtre - Flexible H.P. 5/16"

Lanza - Pistola - Boquilla - Filtro - Manguera de alta presión 5/16"

| Codice<br>Code                                            | Modello<br>Model                     | Press Max<br>Max Pressure |      | 950 RPM |     |     |     | 1450 RPM |     |     |     | 1725 RPM |     |     |      | Oil Pressure<br>(hydraulic motor) |      |
|-----------------------------------------------------------|--------------------------------------|---------------------------|------|---------|-----|-----|-----|----------|-----|-----|-----|----------|-----|-----|------|-----------------------------------|------|
|                                                           |                                      | bar                       | PSI  | l/min   | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp   | bar                               | PSI  |
| 07.3090.97.3                                              | THY 2715<br>(Pump only)              | 150                       | 2175 | 15,5    | 4,1 | 4,6 | 6,1 | 23,2     | 6,1 | 6,8 | 9,2 | 26,8     | 7,1 | 7,9 | 10,6 | 100                               | 1450 |
| 07.3091.97.3                                              | THY 2715<br>(Pump + Hydraulic motor) | 150                       | 2175 | 15,5    | 4,1 | 4,6 | 6,1 | 23,2     | 6,1 | 6,8 | 9,2 | 26,8     | 7,1 | 7,9 | 10,6 | 100                               | 1450 |
| PORTATA OLIO MOTORE IDRAULICO<br>HYDRAULIC MOTOR OIL FLOW |                                      |                           |      | 22      | 5,8 |     |     | 32       | 8,4 |     |     | 38       | 10  |     |      |                                   |      |

## THY 2715



Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"

Posteriori - Rear "V"





INTELLIseal H.W.™



100% European-American Components

Versioni Acqua calda 85°C  
Hot water versions 185°F  
Versions eau chaude 85°C  
Versiones agua caliente 85°C



KIT per conversione pompe standard in H.W.

L'innovativa tecnologia dell'**INTELLI seal™** consente già oggi alla maggior parte delle pompe Bertolini (TML-HP, TTL, KTL, KKL, RA, RB) di lavorare con acqua fino a 74°C (165°F). Gli stessi collaudati principi costruttivi sono stati trasferiti nell'**INTELLI seal H.W.™** utilizzando, in questo caso, materiali e mescole particolarmente studiati dalla Parker per l'impiego con acqua calda. Il risultato è un pacco di guarnizioni che può lavorare indifferentemente, alle stesse pressioni di esercizio, con acqua, dalla temperatura ambiente fino a 85°C (185°F).



H.W. packing sealing system conversion kit (STD pumps)

The innovative technology of **INTELLI seal™** enables most of Bertolini pumps (TML-HP, TTL, KTL, KKL, RA, RB) to work with water up to 74°C (165°F). The same tested building technology has been transferred to **INTELLI seal H.W.™** using, in this case, materials and mixtures particularly studied and formulated by Parker for the use with hot water. The result is a packing seal kit that can work, at the same operating pressures, with water at room temperature up to 85°C (185°F). The HW kit components are dimensionally identical and perfectly interchangeable with the components of standard pumps.



KIT pour la conversion des pompes standard en H.W.

La technologie **INTELLI seal™** permet déjà aujourd'hui, à la plupart des pompes Bertolini (TML-HP, TTL, KTL, KKL, RA, RB), de travailler avec de l'eau jusqu'à 74°C (165°F). Ces mêmes principes de construction essayés depuis longtemps ont été adoptés sur l'**INTELLI seal H.W.™**, mais en utilisant, dans ce cas, des matériaux et des mélanges étudiés spécialement par Parker pour l'utilisation à l'eau chaude. Le résultat est un ensemble d'étanchéité qui peut travailler indifféremment aux mêmes pressions de service, avec de l'eau allant de la température ambiante jusqu'à 85°C (185°F). Les composants du kit HW ont des dimensions identiques à ceux des pompes standards et sont parfaitement interchangeables.



KIT para la conversión de las bombas estándar en H.W.

La innovadora tecnología del sistema **INTELLI seal™** permite, ya hoy, a la mayoría de las bombas Bertolini (TML-HP, TTL, KTL, KKL, RA, RB) trabajar con agua a una temperatura de hasta 74°C (165°F). Los principios de construcción ya testados han sido transferidos al **INTELLI seal H.W.™** utilizando, en este caso, materiales y mezclas estudiadas específicamente por Parker para el empleo con agua caliente. El resultado obtenido es un paquete de juntas que puede trabajar indiferentemente con agua a temperatura ambiente y hasta 85°C (185°F), con las mismas presiones de servicio. Los componentes del kit HW son, en lo referente al tamaño, idénticos y perfectamente intercambiables con aquellos de las bombas estándar.

### Caratteristiche materiali

- Speciale termoplastico a base di Polyoximetilene (POM)
- PTFE bronzo
- Speciale mescola NBR 90 Shore
- Ottone
- Compound speciale Parker
- PTFE + graphite con molla energizzante in acciaio inox

### Materials properties

- Special plastic material containing Polyoxymethylene (POM)
- PTFE bronze
- Special mixture NBR 90 Shore
- Brass
- Special compound Parker
- PTFE + graphite with stainless steel pre-loading spring

### Caractéristiques matériaux

- Matériau composite en plastique spécial à base de Polyoxyméthylène (POM)
- PTFE bronze
- Matériau composite spécial NBR 90 Shore
- Laiton
- Matériau composite spécial Parker
- PTFE + graphite avec ressort de précharge en acier inox

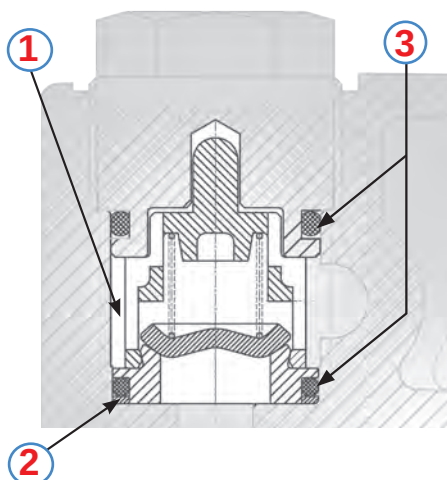
### Características materiales

- Mezcla especial a base de Polioxi-metileno (POM)
- PTFE bronce
- Mezcla especial NBR 90 Shore
- Latón
- Mezcla especial Parker
- PTFE + grafito con resorte precargado de acero inoxidable

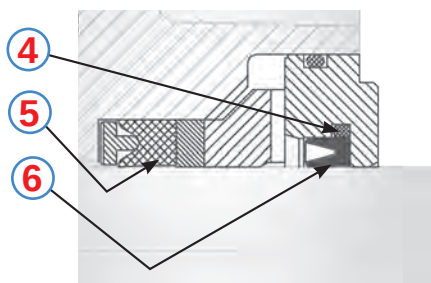




- 1 Guide valvola realizzate in una speciale miscela a base di Polyoxymetilene (POM) in grado di mantenere inalterate le proprie caratteristiche di resistenza meccanica e all'usura fino a 120°C. (248°F).
- 2 Anello antiestrusione in Teflon caricato bronzo.
- 3 Anelli O-Ring in speciale miscela nitrilica per temperature di esercizio fino a 120°C (248°F).
- 4 Esclusivo disegno della boccola posteriore con un anello O-Ring interno che previene qualsiasi infiltrazione di acqua fra il bordo esterno della guarnizione e la boccola stessa.
- 5 Guarnizione di alta pressione Parker realizzata in miscela speciale con temperatura limite di utilizzo di 120°C (248°F) e con temperatura dell'acqua di 85°C (185°F).
- 6 Guarnizione posteriore in PTFE + graphite con molla di precarico in acciaio inossidabile per assicurare, in ogni condizione, una superficie di contatto omogenea fra il pistone ed il labbro della guarnizione.



- 1 Valve cages made from a special mixture containing Polyoxymetilene (POM) able to maintain their mechanical and wear resistance up to 120°C. (248°F).
- 2 Anti-extrusion ring made of PTFE +bronze. It is thicker than normal.
- 3 O-Rings made from a special compound containing nitrile rubber, operating temperature up to 120°C. (248°F).
- 4 Exclusive design of the back bushing with internal O-ring to prevent any water infiltration between the outer edge of the seal and the bushing itself.
- 5 Parker high pressure seal made of a special compound, max. temperature 120 °C (248 °F), water temperature up to 85 °C (185 °F).
- 6 Back seal made of graphite +PTFE with stainless steel pre-loading spring to ensure, in any condition, the optimal value of contact pressure between the seal lip and the piston.



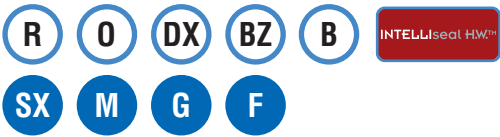
- 1 Cages de clapet en matériau composite spécial à base de Polyoxyméthylène (POM) qui maintient ses propriétés de résistance mécanique et à l'usure inchangées jusqu'à 120°C (248°F).
- 2 Bague anti-extrusion en PTFE chargé en bronze.
- 3 Joints toriques en matériau composite spécial à base de nitrile pour température jusqu'à 120°C (248°F).
- 4 Système exclusif de la bague arrière avec joint torique interne qui prévient toute infiltration d'eau entre le bord extérieur du joint et la bague même.
- 5 Joint Parker de haute pression en matériau composite spécial, pour température limite de 120°C (248°F) et température de l'eau jusqu'à 85°C (185°F).
- 6 Joint arrière en PTFE + graphite à ressort de précharge en acier inox pour permettre, dans toutes les conditions de travail, une surface de contact homogène entre le piston et la lèvre du joint.



- 1 Las guías válvulas han sido realizadas con una mezcla especial a base de Polioximetileno (POM) que puede mantener inalteradas, hasta una temperatura de 120°C. 248°F, sus características de resistencia mecánica y de resistencia al desgaste.
- 2 Anillo antiextrusión de PTFE cargado en bronce.
- 3 Orings realizados con una mezcla especial de goma nitrilica para temperaturas de servicio de hasta 120°C o 248°F.
- 4 Diseño exclusivo del casquillo posterior con oring interno que evita las infiltraciones de agua entre el borde exterior de la junta y el casquillo mismo.
- 5 Junta de alta presión Parker realizada con una mezcla especial, temperatura max.de empleo de 120 °C (248°F) y temperatura agua hasta 85°C (185°F).
- 6 Junta posterior de PTFE + grafito con resorte precargado de acero inoxidable para asegurar, en cualquier tipo de condición, una superficie de contacto homogénea entre el pistón y el labio de la junta.

Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1/2 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 85°C (185°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 0,7l (0.18 U.S.gal.) |
| WEIGHT | kg (lbs)    | 10 kg (22 lbs)       |

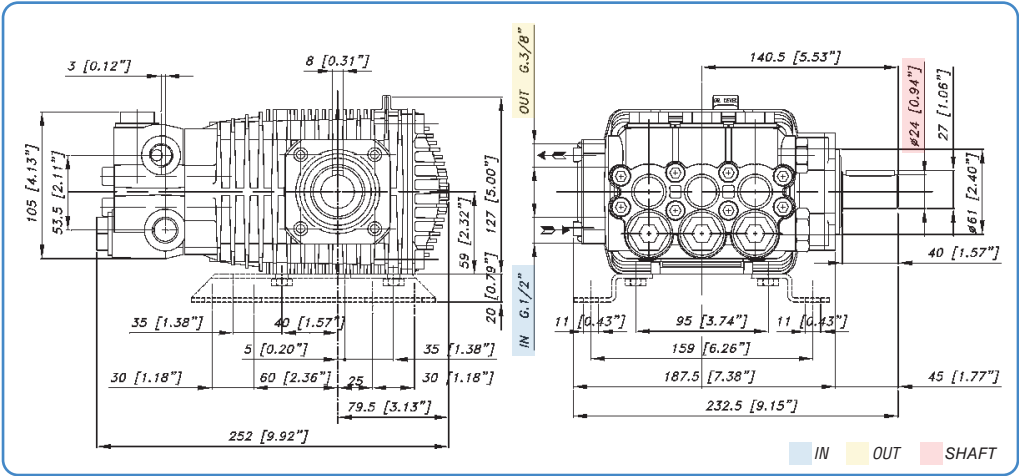


|                                        |                          |
|----------------------------------------|--------------------------|
| Guarnizioni - Seals<br>Joints - Juntas |                          |
| Anteriori - Front                      | Super "U" - 85°C (185°F) |
| Posteriori - Rear                      | "U" PTFE - 85°C (185°F)  |



| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Press. |      | 950 RPM |     |     |     | 1450 RPM |     |     |     | 1725 RPM |     |     |     | Pistone<br>Plunger | Corsa<br>Stroke |
|----------------|------------------|--------------------------|------|---------|-----|-----|-----|----------|-----|-----|-----|----------|-----|-----|-----|--------------------|-----------------|
|                |                  | bar                      | PSI  | l/min   | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | Ø mm               | mm              |
| 07.1034.97.A   | TML 1328-HW      | 150                      | 2175 | 9       | 2,4 | 2,5 | 3,4 | 13       | 3,4 | 3,8 | 5,1 | 15       | 4,0 | 4,5 | 6   | 18                 | 12,4            |
| 07.1035.97.A   | TML 1528-HW      | 150                      | 2175 | 10      | 2,6 | 2,9 | 3,9 | 15       | 4,0 | 4,4 | 5,9 | 18       | 4,8 | 5,2 | 6,9 | 18                 | 14,4            |
| 07.1036.97.A   | TML 1728-HW      | 150                      | 2175 | 11      | 2,9 | 3,2 | 4,3 | 17       | 4,5 | 4,9 | 6,6 | 20       | 5,3 | 5,8 | 7,7 | 18                 | 16              |
| 07.1037.97.A   | TML 2028-HW      | 150                      | 2175 | 13      | 3,4 | 3,8 | 5,1 | 20       | 5,3 | 5,7 | 7,7 | 23       | 6,1 | 6,7 | 9   | 18                 | 18,7            |
| 07.1038.97.3   | TML 2120-HW      | 150                      | 2175 | 14      | 3,7 | 4,0 | 5,4 | 21       | 5,5 | 6,1 | 8,1 | 24       | 6,3 | 7,2 | 9,6 | 20                 | 16              |
| 07.1039.97.3   | TML 2420-HW      | 150                      | 2175 | 16      | 4,2 | 4,7 | 6,3 | 24       | 6,3 | 7,1 | 9,5 | -        | -   | -   | -   | 20                 | 18,7            |

TML-HW



Accessori di completamento - Complementary accessories - Accessoires complémentaires - Accesorios complementarios



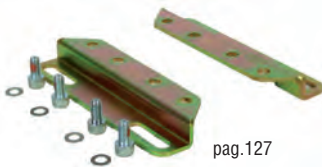
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KIT PER CONVERSIONE POMPE STD IN POMPE HW 85°C  
 SEALING SYSTEM CONVERSION KIT OF STD PUMPS INTO HW 85°C / 185°F  
 KIT DE TRANSFORMATION POMPES STD EN POMPES HW 85°  
 KIT DE TRANSFORMACIÓN BOMBAS STD EN BOMBAS HW 85°

PACCO GUANIZIONI H.W.  
H.W. PACKING SEALING KIT



VALVOLE H.W.  
H.W. CHECK VALVES



| Modello Pompa<br>Pump Model | Ø Pistone<br>Plunger Ø | Kit Nr. | Codice<br>Code | Kit Nr. | Codice<br>Code |
|-----------------------------|------------------------|---------|----------------|---------|----------------|
| TML 1328-HP                 | 18                     | 198     | 07.9827.97.3   | 249     | 06.9956.97.3   |
| TML 1528-HP                 |                        |         |                |         |                |
| TML 1728-HP                 |                        |         |                |         |                |
| TML 2028-HP                 |                        |         |                |         |                |
| TML 2120                    | 20                     | 218     | 07.9866.97.3   | 249     | 06.9956.97.3   |
| TML 2420                    |                        |         |                |         |                |
| KTL 1535                    | 18                     | 199     | 06.9883.97.3   | 249     | 06.9956.97.3   |
| KTL 1835                    |                        |         |                |         |                |
| KTL 2035                    |                        |         |                |         |                |
| TTL 1330                    | 18                     | 199     | 06.9883.97.3   | 249     | 06.9956.97.3   |
| TTL 1530                    |                        |         |                |         |                |
| TTL 1730                    |                        |         |                |         |                |
| TTL 2030                    |                        |         |                |         |                |
| TTL 1320                    | 20                     | 200     | 06.9884.97.3   | 249     | 06.9956.97.3   |
| TTL 1520                    |                        |         |                |         |                |
| TTL 1820                    |                        |         |                |         |                |
| TTL 2120                    |                        |         |                |         |                |
| TTL 2420                    |                        |         |                |         |                |
| TTK 2130                    | 20                     | 200     | 06.9884.97.3   | 249     | 06.9956.97.3   |
| TTK 2521                    | 22                     | 201     | 06.9885.97.3   | 253     | 06.9958.97.3   |
| TTK 3021                    |                        |         |                |         |                |
| KKL 3021                    | 22                     | 201     | 06.9885.97.3   | 250     | 06.9957.97.3   |
| KKL 3316                    | 25                     | 202     | 06.9886.97.3   | 250     | 06.9957.97.3   |
| KKL 3816                    |                        |         |                |         |                |
| RAL 2035                    | 20                     | 219     | 08.9844.97.3   | 249     | 06.9956.97.3   |
| RAL 2335                    |                        |         |                |         |                |
| RAL 2535                    |                        |         |                |         |                |
| KA 2815                     | 25                     | 214     | 06.9914.97.3   | 250     | 06.9957.97.3   |
| KA 3215                     |                        |         |                |         |                |
| KA 3815                     |                        |         |                |         |                |
| KA 4215                     |                        |         |                |         |                |
| CA 2214.1                   | 30                     | 216     | 73.9878.97.3   | 251     | 73.9916.97.3   |
| CA 2216.1                   |                        |         |                |         |                |
| CA 2220.1                   |                        |         |                |         |                |
| CA 1523.1                   | 38                     | 215     | 73.9877.97.3   | 251     | 73.9916.97.3   |
| CA 1525.1                   |                        |         |                |         |                |
| CK 2216.1                   | 30                     | 203     | 73.9874.97.3   | 251     | 73.9916.97.3   |
| CK 2220.1                   |                        |         |                |         |                |
| CKL 2226.1                  |                        |         |                |         |                |
| CKL 2230.1                  |                        |         |                |         |                |
| CKL 2233.1                  | 45                     | 205     | 73.9876.97.3   | 251     | 73.9916.97.3   |
| CK 1224.1                   |                        |         |                |         |                |
| CK 1229.1                   |                        |         |                |         |                |
| CK 1235.1                   |                        |         |                |         |                |



100% European-American Components

Pressione - Pressure - Pression - Presión

120÷500 bar  
1750÷7250 psi

Portata - Flow - Débit - Caudal

8,4÷47,6 l/min  
2.2÷12.6 GPM

Versioni - Versions - Versions - Versiones



Pompe ad elevate prestazioni con sistema di tenute innovativo. Boccole di scorrimento delle guide pistoni antifrizione in materiale PTFE brevettato. Tappi valvola con il nuovo sistema di tenuta "Bertolini" che permette di aumentare l'efficienza ad elevate pressioni di lavoro. Alto rendimento volumetrico bilanciato in pressione o depressione all'aspirazione.



Very heavy duty with a sealing system providing great strength. Plunger rod bushing PTFE coated for friction reduction. Valve caps fitted with a new Bertolini sealing system designed for higher pressure and longer working hours.



Pompes de haute gamme. Nouveau système de joints d'étanchéité. Bagues autolubrifiantes antifriction brevetées PTFE. Bouchons clapets avec système d'étanchéité exclusif "Bertolini" conçu pour durer, évitant les fuites. Rendement volumétrique équilibré (pression ou dépression à l'aspiration).



Bombas de elevadas prestaciones con sistema de juntas innovador. Casquillos de deslizamiento de las guías pistones antifricción en material PTFE patentado. Tapas de válvulas con nuevo sistema de juntas "Bertolini" que permite aumentar la eficiencia con elevadas presiones de trabajo. Alto rendimiento volumétrico balanceado en presión o depresión en aspiración.

Applicazioni - Applications - Applications - Aplicaciones



Manutenzione di attrezzatura pesante  
Heavy equipment maintenance  
Entretien d'équipement lourd  
Mantenimiento de equipos pesados



Lavaggio automatico  
Automatic wash  
Lavage automatique  
Lavado automatico



Lavaggio Self-service  
Self-service wash  
Lavage Self-Service  
Autolavado



Tunnel di lavaggio  
Tunnel wash  
Tunnel de lavage  
Túnel de lavado



Preparazione di superfici da verniciare  
Pre-painting surface preparation  
Préparation des surface à peindre  
Preparación de superficies que barnizar



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnología chorro de agua



Pulizia di superfici  
Surface cleaning  
Nettoyage de surfaces  
Limpieza de superficies



Navi e aeroplani  
Boats and pleasure craft  
Bateaux et avions  
barcos y aviones



Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales

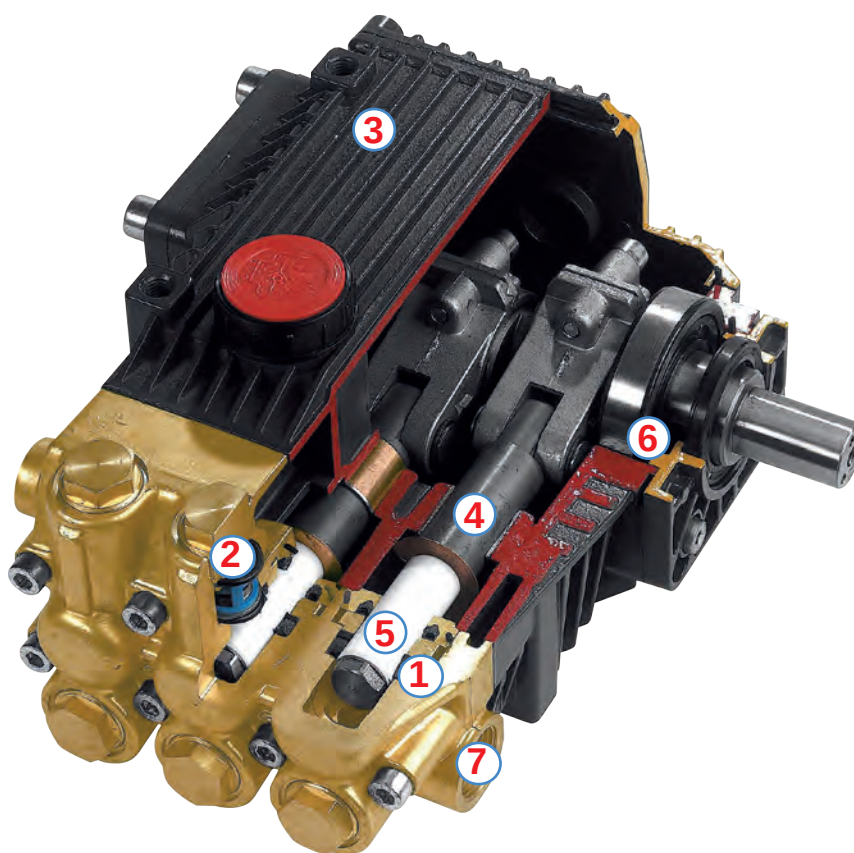




- 1 Guarnizioni di alta pressione con speciale mescola antiusura ed anello antiestrusione in Teflon rinforzato.
- 2 Valvole di aspirazione-mandata in acciaio inox 316 resistenti alla corrosione e ad alto rendimento fluido-dinamico; manutenzione semplice, antistrappo e antisvitamento.
- 3 Carter simmetrico in alluminio pressofuso.
- 4 Guida pistone in acciaio inox trattato al Tenifer® per una migliore tenuta.
- 5 Pistoni in ceramica integrale.
- 6 Cuscinetti a rulli cilindrici maggiorati per condizioni di lavoro estese ad ogni applicazione.
- 7 Condotti di aspirazione maggiorati per prevenire fenomeni di cavitazione.



- 1 High pressure seals made up of special compound for wear resistance and Teflon reinforced anti-extrusion ring.
- 2 New rapid action ,mirror finish stainless steel 316 check valves prevent corrosion and enhance high fluid dynamic efficiency: easily accessible for repair or replacement.
- 3 Double die-cast aluminium crankcase.
- 4 Stainless steel plunger rod Tenifer® treated resulting in a harder, smoother surface for increased seal life.
- 5 Highly polished solid ceramic plungers.
- 6 Oversized straight roller bearings provide extended working conditions for any application.
- 7 Oversized suction line to prevent cavitation.



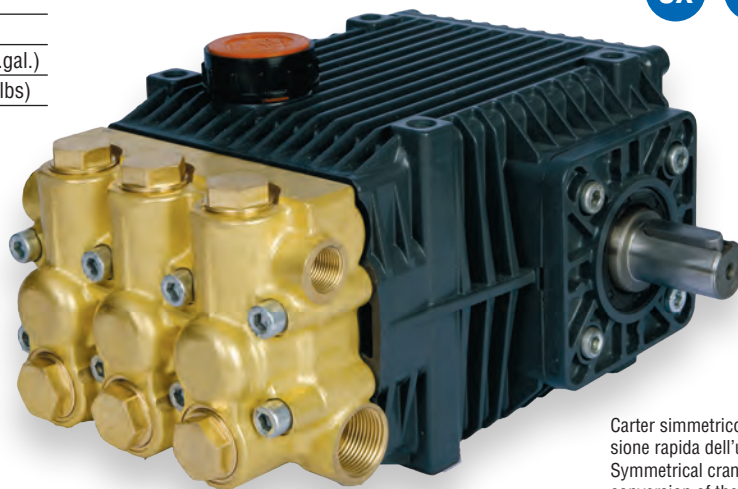
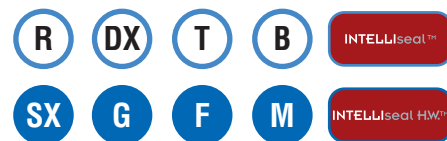
- 1 Joints de haute pression en matériau composite spécial qui évite de l'usure sur la bague anti-extrusion en Teflon renforcé.
- 2 Clapets d'aspiration et refoulement en acier inox 316 préviennent de la corrosion et augmentent le rendement dynamique des fluides. Maintenance et remplacement faciles.
- 3 Carter compact en aluminium moulé sous pression, léger et très résistant.
- 4 Guides de pistons en acier inox, traitement spécial au Tenifer®, permet d'éviter l'usure, son état de surface parfait augmente significativement la durée de vie des joints d'huile à son contact.
- 5 Pistons en céramique intégrale parfaitement traités et une finition de surface impeccable augmente l'étanchéité des joints.
- 6 Roulements à rouleaux cylindriques de première qualité surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 7 Conduits d'aspiration surdimensionnés pour éviter les phénomènes de cavitation.



- 1 Juntas de alta presión en especial mezcla anti-deterioro y anillo anti-extrusión de Teflón reforzado.
- 2 Válvulas de aspiración-envío en acero inox. 316. Resistentes a la corrosión y de alto rendimiento fluidodinámico; simple mantenimiento. Anti-rasgadura, anti-destornillamiento.
- 3 Cáster simétrico en aluminio fundido a presión.
- 4 Guía pistón en acero inox. tratado al Tenifer® para una larga duración.
- 5 Pistones en cerámica integral.
- 6 Cojinetes de rodillos de grandes dimensiones para condiciones de trabajo extensas a todo tipo de aplicación.
- 7 Línea de aspiración sobredimensionada para evitar cavitación.

## Caratteristiche - Specifications - Caractéristiques - Características

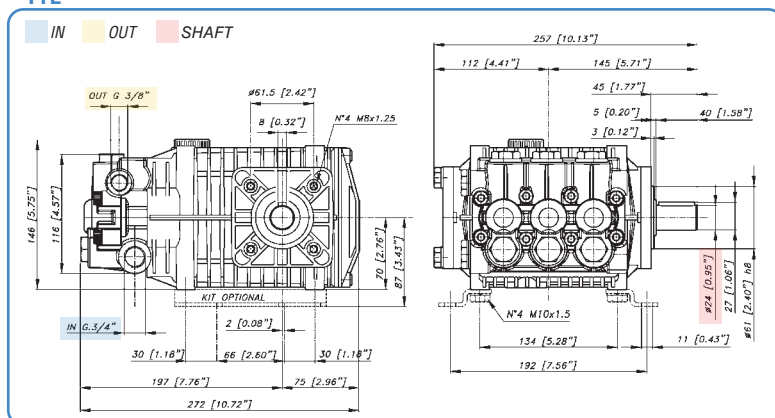
|               |                    |                      |
|---------------|--------------------|----------------------|
| <b>IN</b>     | <b>Ø</b>           | 3/4 BSP              |
|               | <b>Press. Min.</b> | -0,1 bar (-1.5 PSI)  |
|               | <b>Press. Max.</b> | 6 bar (87 PSI)       |
|               | <b>Temp. Max.</b>  | 74°C (165°F)         |
| <b>OUT</b>    | <b>Ø</b>           | 3/8 BSP              |
| <b>SHAFT</b>  | <b>Ø</b>           | 24 mm                |
| <b>OIL</b>    | <b>SAE 75W 90</b>  | 1,3l (0.34 U.S.gal.) |
| <b>WEIGHT</b> | <b>kg (lbs)</b>    | 14,2 kg (31.2 lbs)   |



Carter simmetrico con doppio fissaggio per conversione rapida dell'uscita albero (destra o sinistra).  
Symmetrical crankcase with double fixing for quick conversion of the shaft drive (right or left).

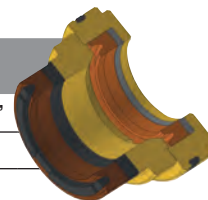
| Codice Code   | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |     |     | 1450 RPM |     |     |      | 1725 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|---------------|---------------|-------------------------|------|---------|-----|-----|-----|----------|-----|-----|------|----------|-----|------|------|-----------------|--------------|
|               |               | bar                     | PSI  | l/min   | GPM | kW  | hp  | l/min    | GPM | kW  | hp   | l/min    | GPM | kW   | hp   | Ø mm            | mm           |
| 06.2059.97.GU | TTL 1320      | 210                     | 3045 | 9       | 2,4 | 3,5 | 4,6 | 13       | 3,4 | 5,2 | 7,0  | 15       | 4,0 | 6,2  | 8,3  | 20              | 10           |
| 06.2060.97.GU | TTL 1520      | 210                     | 3045 | 10      | 2,6 | 4,1 | 5,5 | 15       | 4,0 | 6,1 | 8,2  | 18       | 4,8 | 7,2  | 9,7  | 20              | 11,7         |
| 06.2061.97.GU | TTL 1820      | 210                     | 3045 | 12      | 3,2 | 5,0 | 6,7 | 18       | 4,8 | 7,5 | 10,1 | 22       | 5,8 | 8,9  | 11,9 | 20              | 14,4         |
| 06.2062.97.GU | TTL 2120      | 210                     | 3045 | 14      | 3,7 | 5,7 | 7,6 | 21       | 5,5 | 8,6 | 11,5 | 25       | 6,6 | 10,1 | 13,6 | 20              | 16,4         |
| 06.2063.97.GU | TTL 2420      | 210                     | 3045 | 16      | 4,2 | 6,6 | 8,8 | 24       | 6,3 | 9,9 | 13,3 | -        | -   | -    | -    | 20              | 19           |

## TTL

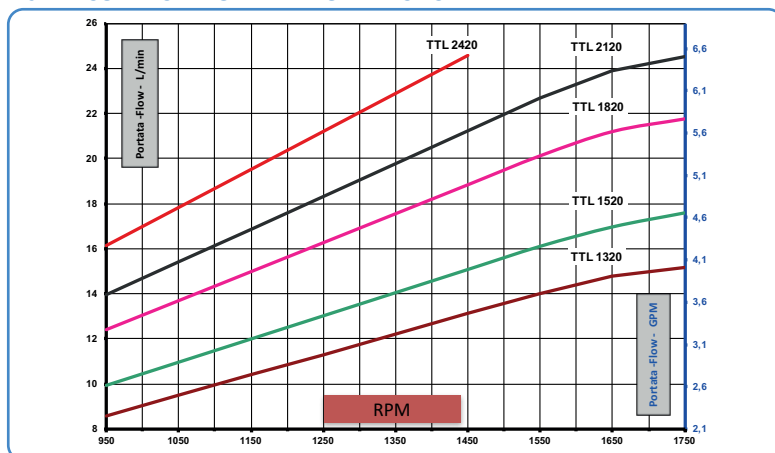


**Guarnizioni - Seals**  
**Joints - Juntas**

|                   |           |
|-------------------|-----------|
| Anteriori - Front | Super "U" |
| Posteriori - Rear | "U"       |



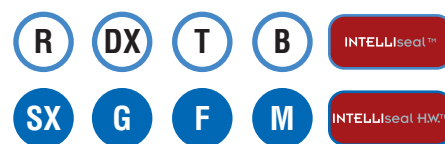
## GRAFICO PRESTAZIONI - PERFORMANCE CHART



**Accessori di completamento - Complementary accessories**  
**Accessoires complémentaires - Accesorios complementarios**



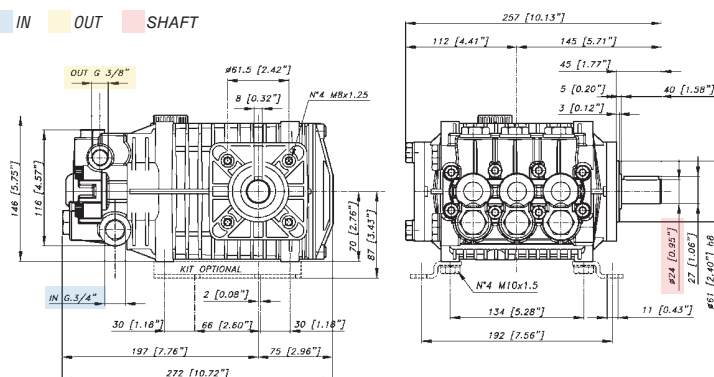
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|---------------|--------------------|----------------------|
| <b>IN</b>     | <b>Ø</b>           | 3/4 BSP              |
|               | <b>Press. Min.</b> | -0,1 bar (-1.5 PSI)  |
|               | <b>Press. Max.</b> | 6 bar (87 PSI)       |
|               | <b>Temp. Max.</b>  | 74°C (165°F)         |
| <b>OUT</b>    | <b>Ø</b>           | 3/8 BSP              |
| <b>SHAFT</b>  | <b>Ø</b>           | 24 mm                |
| <b>OIL</b>    | <b>SAE 75W 90</b>  | 1,3l (0.34 U.S.gal.) |
| <b>WEIGHT</b> | <b>kg (lbs)</b>    | 14,2 kg (31.2 lbs)   |



Carter simmetrico con doppio fissaggio per conversione rapida dell'uscita albero (destra o sinistra).  
Symmetrical crankcase with double fixing for quick conversion of the shaft drive (right or left).

| Codice Code   | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |     |      | 1450 RPM |     |      |      | 1725 RPM |     |      |      | Pistone Plunger Ø mm | Corsa Stroke mm |
|---------------|---------------|-------------------------|------|---------|-----|-----|------|----------|-----|------|------|----------|-----|------|------|----------------------|-----------------|
|               |               | bar                     | PSI  | l/min   | GPM | kW  | hp   | l/min    | GPM | kW   | hp   | l/min    | GPM | kW   | hp   |                      |                 |
| 06.2041.97.GU | TTL 1330      | 300                     | 4350 | 9       | 2,4 | 5,0 | 6,7  | 13       | 3,4 | 7,6  | 10,2 | 15       | 4,0 | 8,9  | 12,0 | 18                   | 10              |
| 06.2042.97.GU | TTL 1530      | 300                     | 4350 | 10      | 2,6 | 5,8 | 7,7  | 15       | 4,0 | 8,7  | 11,7 | 18       | 4,8 | 10,3 | 13,8 | 18                   | 14,4            |
| 06.2043.97.GU | TTL 1730      | 300                     | 4350 | 11      | 2,9 | 6,6 | 8,8  | 17       | 4,5 | 9,9  | 13,3 | 20       | 5,3 | 11,7 | 15,7 | 18                   | 16,4            |
| 06.2044.97.GU | TTL 2030      | 300                     | 4350 | 13      | 3,4 | 7,6 | 10,2 | 20       | 5,3 | 11,5 | 15,4 | 23       | 6,1 | 13,6 | 18,2 | 18                   | 19              |

IN OUT SHAFT



**Guarnizioni - Seals**  
**Joints - Juntas**

|                   |           |
|-------------------|-----------|
| Anteriori - Front | Super "U" |
| Posteriori - Rear | "U"       |



The graph illustrates the relationship between RPM (X-axis) and Portata Flow (Y-axis) for different TTL values. The X-axis ranges from 950 to 1750 RPM. The Y-axis has two scales: L/min (left, 8 to 24) and GPM (right, 2.1 to 6.1). Four curves are shown, representing different TTL values: 1330 (red), 1530 (green), 1730 (magenta), and 2030 (black). All curves show a positive correlation between RPM and Portata Flow.

| RPM  | TTL 1330 (GPM) | TTL 1530 (GPM) | TTL 1730 (GPM) | TTL 2030 (GPM) |
|------|----------------|----------------|----------------|----------------|
| 950  | 2.6            | 3.1            | 3.3            | 3.6            |
| 1050 | 2.8            | 3.3            | 3.5            | 3.8            |
| 1150 | 3.0            | 3.5            | 3.7            | 4.0            |
| 1250 | 3.2            | 3.7            | 3.9            | 4.2            |
| 1350 | 3.4            | 3.9            | 4.1            | 4.4            |
| 1450 | 3.6            | 4.1            | 4.3            | 4.6            |
| 1550 | 3.8            | 4.3            | 4.5            | 4.8            |
| 1650 | 4.0            | 4.5            | 4.7            | 5.0            |
| 1750 | 4.2            | 4.7            | 4.9            | 5.2            |

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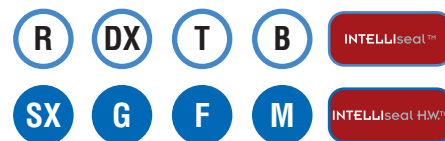
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### Caratteristiche - Specifications - Caractéristiques - Características

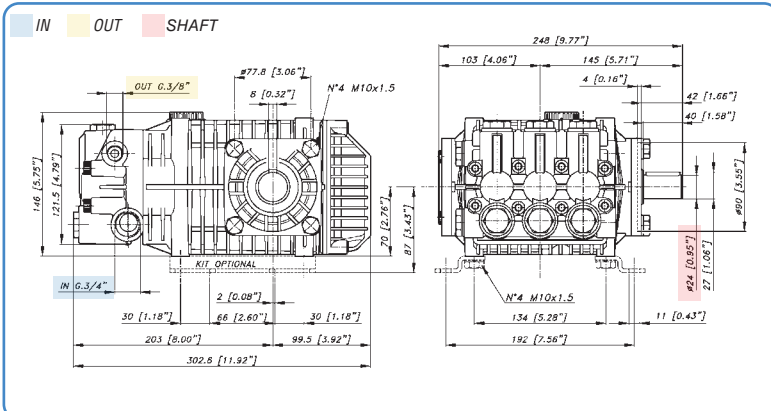
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 3/4 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 74°C (165°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 1,3l (0.34 U.S.gal.) |
| WEIGHT | kg (lbs)    | 15,7 kg (34.5 lbs)   |



Carter simmetrico con doppio fissaggio per conversione rapida dell'uscita albero (destra o sinistra).  
Symmetrical crankcase with double fixing for quick conversion of the shaft drive (right or left).

| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 950 RPM |     |     |      | 1450 RPM |     |      |      | 1725 RPM |     |      |      | Pistone<br>Plunger | Corsa<br>Stroke |
|----------------|------------------|----------------------------|------|---------|-----|-----|------|----------|-----|------|------|----------|-----|------|------|--------------------|-----------------|
|                |                  | bar                        | PSI  | l/min   | GPM | kW  | hp   | l/min    | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | Ø mm               | mm              |
| 06.2066.97.GU  | TTK 2130         | 300                        | 4350 | 14      | 3,7 | 8,1 | 10,9 | 21       | 5,5 | 12,3 | 16,4 | 25       | 6,6 | 14,4 | 19,4 | 20                 | 16,4            |
| 06.2067.97.GU  | TTK 2521         | 210                        | 3045 | 17      | 4,5 | 6,9 | 9,2  | 25       | 6,6 | 10,4 | 13,9 | 30       | 7,9 | 12,2 | 16,4 | 22                 | 16,4            |
| 06.2068.97.GU  | TTK 3021         | 210                        | 3045 | 19      | 5,0 | 8,0 | 10,7 | 29       | 7,7 | 12,0 | 16,1 | -        | -   | -    | -    | 22                 | 19              |

### TTK

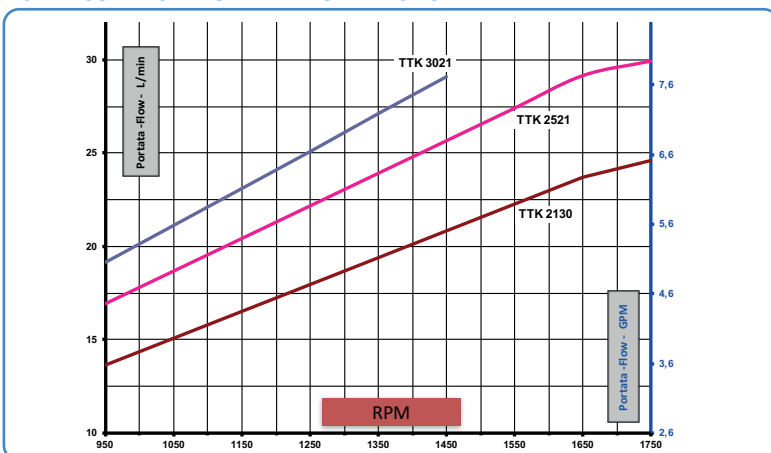


### Guarnizioni - Seals Joints - Juntas

|                   |           |
|-------------------|-----------|
| Anteriori - Front | Super "U" |
| Posteriori - Rear | "U"       |



### GRAFICO PRESTAZIONI - PERFORMANCE CHART



### Accessori di completamento - Complementary accessories Accessoires complémentaires - Accesorios complementarios



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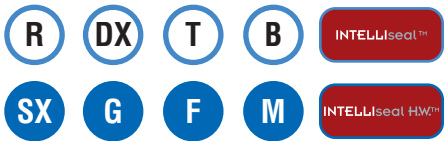


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Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 3/4 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 74°C (165°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 1,3l (0.34 U.S.gal.) |
| WEIGHT | kg (lbs)    | 15,7 kg (34.5 lbs)   |



Carter simmetrico con doppio fissaggio per conversione rapida dell'uscita albero (destra o sinistra).  
Symmetrical crankcase with double fixing for quick conversion of the shaft drive (right or left).

| Codice Code   | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |     |      | 1450 RPM |     |      |      | 1725 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|---------------|---------------|-------------------------|------|---------|-----|-----|------|----------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|               |               | bar                     | PSI  | l/min   | GPM | kW  | hp   | l/min    | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | Ø mm            | mm           |
| 06.3021.97.GU | KTL 1535      | 350                     | 5075 | 10      | 2,6 | 6,7 | 9,0  | 15       | 4,0 | 10,2 | 13,6 | 18       | 4,8 | 12,0 | 16,1 | 18              | 14,4         |
| 06.3022.97.GU | KTL 1735      | 350                     | 5075 | 11      | 2,9 | 7,7 | 10,3 | 17       | 4,5 | 11,6 | 15,5 | 20       | 5,3 | 13,6 | 18,3 | 18              | 16,4         |
| 06.3023.97.GU | KTL 2035      | 350                     | 5075 | 13      | 3,4 | 8,9 | 11,9 | 20       | 5,3 | 13,4 | 18,0 | 23       | 6,1 | 15,8 | 21,2 | 18              | 19           |

KTL

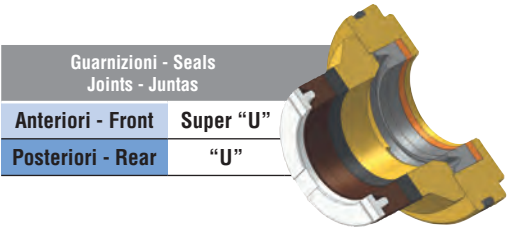
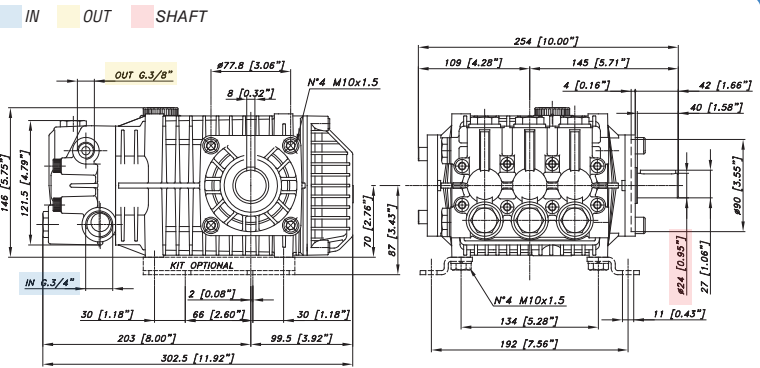
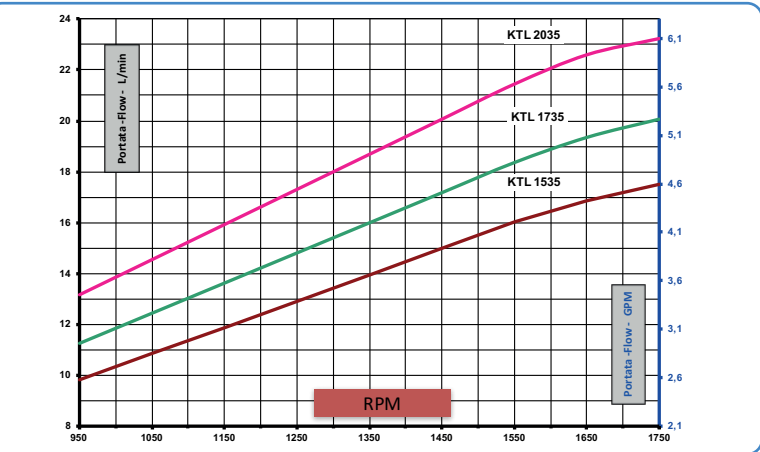


GRAFICO PRESTAZIONI - PERFORMANCE CHART

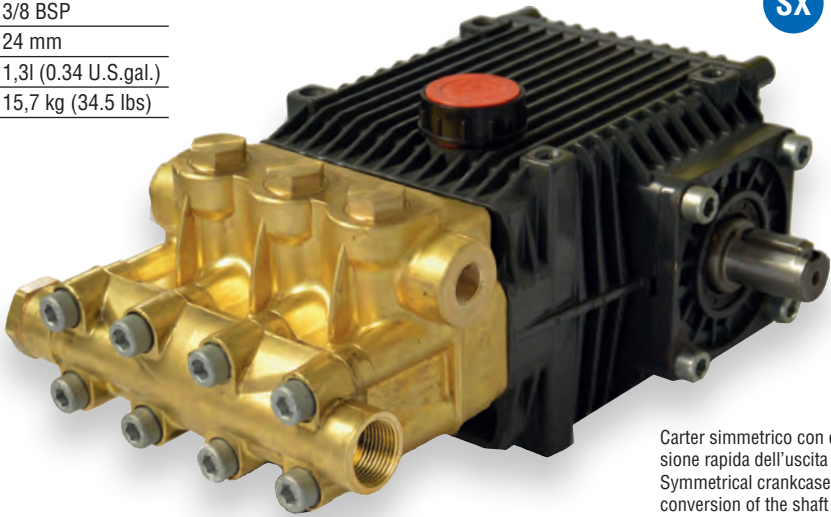
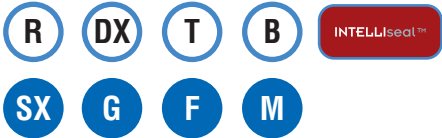


Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



Caratteristiche - Specifications - Caractéristiques - Características

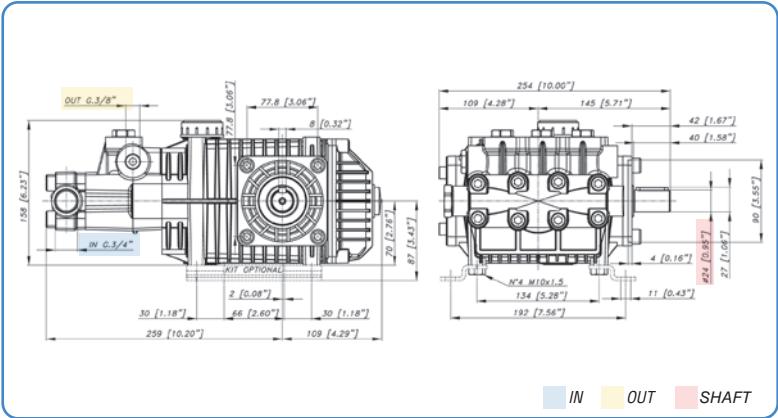
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 3/4 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 74°C (165°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 1,3l (0.34 U.S.gal.) |
| WEIGHT | kg (lbs)    | 15,7 kg (34.5 lbs)   |



Carter simmetrico con doppio fissaggio per conversione rapida dell'uscita albero (destra o sinistra).  
Symmetrical crankcase with double fixing for quick conversion of the shaft drive (right or left).

| Codice Code  | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |      |      | 1450 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM | kW   | hp   | l/min    | GPM | kW   | hp   |                 |              |
| 06.3026.97.3 | KTL 1550      | 500                     | 7250 | 10      | 2,6 | 9,6  | 13,0 | 15       | 4,0 | 14,8 | 20,0 | 18              | 14,4         |
| 06.3027.97.3 | KTL 1750      | 500                     | 7250 | 11      | 2,9 | 11,0 | 14,9 | 17       | 4,5 | 16,9 | 22,8 | 18              | 16,4         |
| 06.3028.97.3 | KTL 2050      | 500                     | 7250 | 13      | 3,4 | 12,8 | 17,3 | 20       | 5,3 | 19,5 | 26,4 | 18              | 19           |

KTL500



| Guarnizioni - Seals<br>Joints - Juntas |           |
|----------------------------------------|-----------|
| Anteriori - Front                      | Super "U" |
| Posteriori - Rear                      | "U"       |

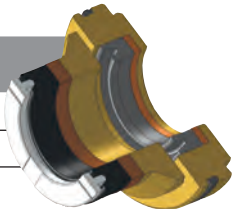
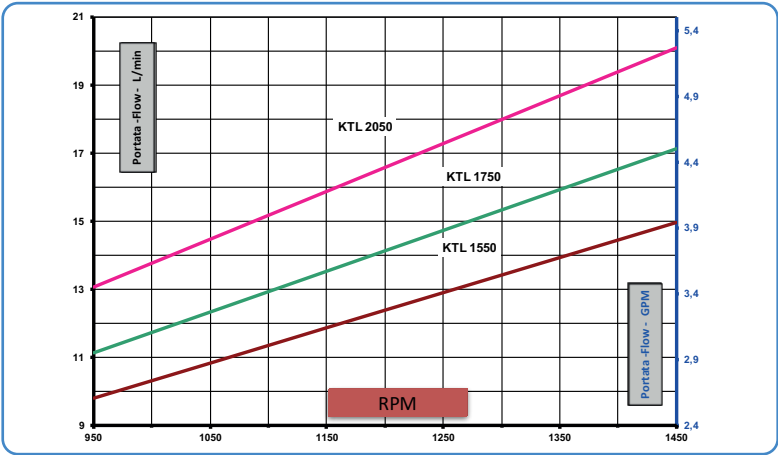


GRAFICO PRESTAZIONI - PERFORMANCE CHART

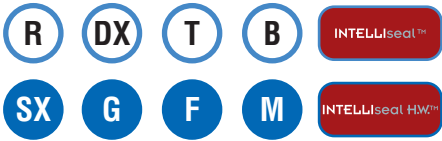


Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" BSP               |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 74°C (165°F)         |
| OUT    | Ø           | 1/2 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 1,4l (0.37 U.S.gal.) |
| WEIGHT | kg (lbs)    | 16,1 kg (35.4 lbs)   |



Carter simmetrico con doppio fissaggio per conversione rapida dell'uscita albero (destra o sinistra).  
Symmetrical crankcase with double fixing for quick conversion of the shaft drive (right or left).

| Codice Code   | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |     |      | 1450 RPM |      |      |      | 1725 RPM |      |      |      | Pistone Plunger | Corsa Stroke |
|---------------|---------------|-------------------------|------|---------|-----|-----|------|----------|------|------|------|----------|------|------|------|-----------------|--------------|
|               |               | bar                     | PSI  | l/min   | GPM | kW  | hp   | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   | Ø mm            | mm           |
| 06.4017.97.GU | KKL 3021      | 210                     | 3045 | 19      | 5,0 | 8,0 | 10,7 | 29       | 7,7  | 12,0 | 16,1 | 35       | 9,2  | 14,2 | 19,0 | 22              | 19           |
| 06.4018.97.GU | KKL 3316      | 160                     | 2320 | 22      | 5,8 | 6,8 | 9,1  | 33       | 8,7  | 10,2 | 13,7 | 38       | 10,0 | 12,0 | 16,1 | 25              | 16,4         |
| 06.4019.97.GU | KKL 3816      | 160                     | 2320 | 25      | 6,6 | 7,8 | 10,5 | 38       | 10,0 | 11,8 | 15,9 | 45       | 11,9 | 13,9 | 18,7 | 25              | 19           |
| 06.4035.97.GU | KKL 4216      | 160                     | 2320 | 28      | 7,4 | 8,7 | 11,6 | 42       | 11,1 | 13,1 | 17,5 | -        | -    | -    | -    | 25              | 21           |
| 06.4033.97.GU | KKL 5016      | 160                     | 2320 | 32      | 8,5 | 9,9 | 13,3 | 50       | 13,2 | 15,0 | 20,1 | -        | -    | -    | -    | 25              | 24           |

KKL

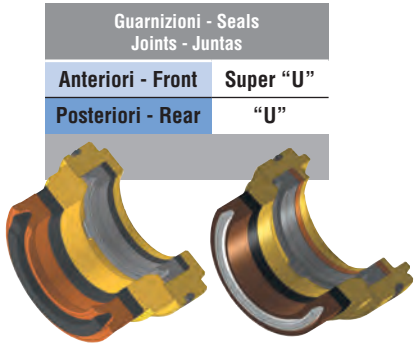
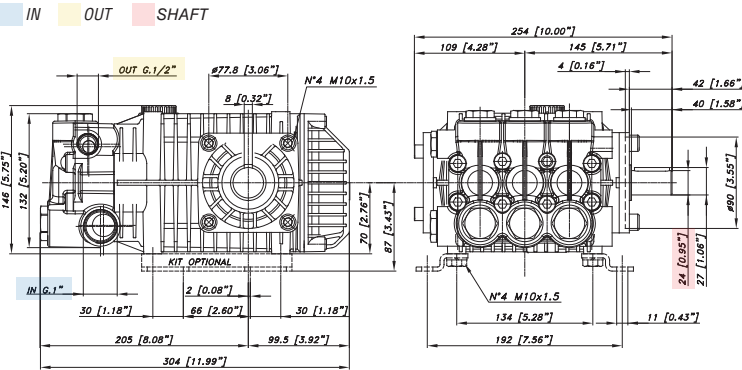
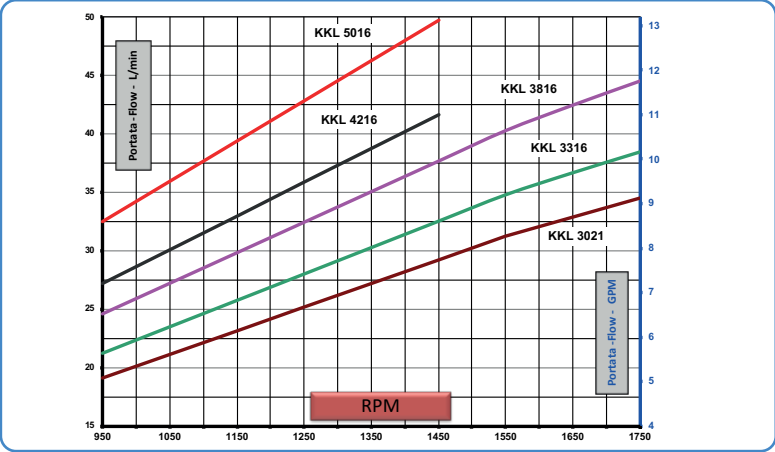


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios





## + Premium models



190÷500 bar      2800÷7250 psi  
11÷73 l/min      2.9÷19.3 GPM

### Versioni - Versions - Versions - Versiones



RAL  
RBL  
RBS  
RD



RA  
RX



RB



#### RA-RB-RD (Brevettate)

La serie RA-RB-RD rappresenta la massima espressione dei livelli tecnologici nell'ambito delle pompe a pistoni in linea. Le prestazioni (pressioni fino a 500 bar, portate fino a 75 L/min.) le rendono idonee per un uso esclusivamente professionale. Destinate principalmente all'industria, edilizia, posti fissi di lavaggio, macchine spurgatubi, idropulitrici su rimorchio, allevamenti di animali/bestiami, etc. Applicabili direttamente a motori elettrici con albero cavo o mediante flangia/giunto elastico o puleggia. I principi costruttivi altamente innovativi ed esclusivi da cui deriva il brevetto di queste pompe garantiscono un'elevatissima affidabilità nel tempo di tutte le componenti.



#### RA-RB-RD (Patented)

The RA-RB-RD series offer pressure performances of up to 500 bar (7250 psi) and flows up to 75L/min. (19.8 GPM). Superior construction and outstanding material quality with innovative technology (patented by Bertolini), provide efficient long life of all components with easy maintenance. These great pistons pumps provide a new top level of design with efficiency and performance. Ideal for the hardest industrial jobs, such as in-plant stationary systems, trailer mounted cleaning systems, multiple gun washing stations, high volume pressure washers.



#### RA-RB-RD (Brevetées)

La série RA-RB-RD représente le tout dernier résultat du niveau technologique dans le cadre des pompes à pistons. Débit jusqu'à 75 L/min. et pression jusqu'à 500 bar, ces pompes sont indiquées pour transmission exclusivement professionnelles. Utilisées surtout dans l'industrie, bâtiment, installations industrielles fixes, d'égouts et de vidange, nettoyeurs sur remorque, élevages d'animaux/bétail etc. Transmission directe à moteurs électriques avec arbre creux ou par bride/accouplement flexible ou poulies. La construction solide, la haute qualité des matériaux, les solutions technologiques exclusives adoptées (brevet Bertolini) assurent des performances optimales et une grande longévité des composants.



#### RA-RB-RD (Patentadas)

La serie RA-RB-RD representa la máxima expresión de los niveles tecnológicos en el sector de las bombas de pistones en línea. Las prestaciones (presiones hasta 500 bar, caudales hasta 75 L/min.) las hacen aptas para un uso exclusivamente profesional. Destinadas principalmente a industria, albañilería, posiciones fijas de lavado, máquinas expurgacañas, hidropulidoras sobre remolque, cría de animales/ganado, etc. Aplicables directamente a motores eléctricos con brida/junta elástica o polea. Los principios constructivos extremadamente innovadores y exclusivos, de los que deriva la patente de estas bombas, garantizan una elevadísima confiabilidad en el tiempo de todos los componentes.

### Applicazioni - Applications - Applications - Aplicaciones



Pulizia di superfici  
Surface cleaning  
Nettoyage de surfaces  
Limpieza de superficies



Pulizia conto terzi  
Contract cleaning  
Nettoyage compte de tiers  
Limpieza por cuenta de terceros



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnología chorro de agua



Tunnel di lavaggio  
Tunnel wash  
Tunnel de lavage  
Túnel de lavado



Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



Navi e aeroplani  
Boats and pleasure craft  
Bateaux et avions  
barcos y aviones

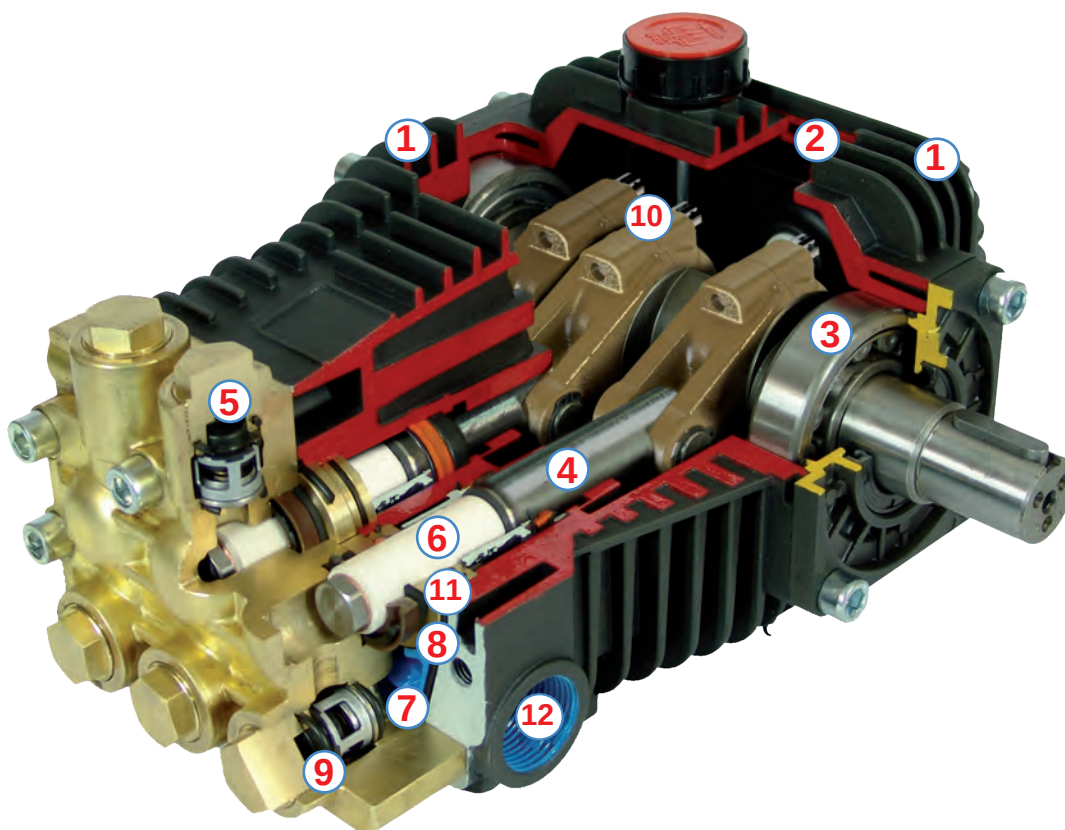




- 1 Due spie olio. Consentono di monitorare il livello olio da diverse posizioni.
- 2 Gola O-Ring nel coperchio carter. Aumenta la tenuta e la resistenza del coperchio posteriore.
- 3 Doppio cuscinetto a rulli. Vita pompa più lunga.
- 4 Guida pistone in acciaio inox trattato al Tenifer®. Migliore tenuta. Aumenta la resistenza e riduce l'usura.
- 5 **Tappo valvole anti-strappo/antisvitamento.** L'O-Ring incorporato a protezione filetto migliora la resistenza e previene il trafilamento.
- 6 Pistoni in ceramica 99,5% allumina.
- 7 **Disegno innovativo collettore/testata pompa. Raffreddamento cinematisma pompa.** Aumento area ricircolo. Ottimizza le condizioni lavoro della guarnizione posteriore perché in ambiente perennemente umido.
- 8 **Esclusivo disegno tenuta testata/carter (brevettato).** Garantisce perfetta aspirazione delle guarnizioni alta/bassa pressione che lavorano sempre nelle stesse condizioni di umidità.
- 9 Valvole aspirazione mandata ad alto rendimento volumetrico.
- 10 Bielle in bronzo stampate a due corpi con ridotti angoli di lavoro. Maggiore durata.
- 11 **Nuovi pacchi guarnizione: doppia tenuta ad "U" autolubrificante con camera di ricircolo che assicura costante lubrificazione grazie all'esclusivo principio "Bertolini".**
- 12 Condotti di aspirazione maggiorati per prevenire fenomeni di cavitazione.



- 1 Two sight glasses. Makes it easier to monitor oil level.
- 2 O-ring groove in cover crankcase Increases sealing and strength of rear cover.
- 3 Double cylindrical roller bearing. Increases life of pump.
- 4 Plunger rod in stainless steel Tenifer® treatment. Superior strength surface, increases resistance and reduces wearing
- 5 **Valve cap design to prevent loosening.** Deeper o-ring prevents o-ring extrusion to increase endurance and prevent water leaks.
- 6 Ceramic plungers, 99,5% alumina ceramic.
- 7 **Innovative suction manifold for better cooling.** Increases the volume of re-cycling, assuring longer life and a quieter operation of the back-flow pressure seals, since they remain always wet.
- 8 **Sealed space between crankcase/head (patented).** Guarantees perfect suction feed of high/low pressure seals in constant wet conditions.
- 9 Efficient volumetric check valves Stainless steel.
- 10 Bronze connecting rods matched "two piece" pairs designed to absorb and distribute heavier loads with minimum fatigue and wear.
- 11 **Superior double "U" packing self-lubricating sealing system, with re-cycling area (exclusive Bertolini technology) to ensure continuous lubrication in any condition.**
- 12 Oversized suction line to prevent cavitation.



- 1 Deux témoins d'huile optique. Permettant de contrôler facilement le niveau d'huile.
- 2 Joint torique dans le couvercle carter. Augmente l'étanchéité et la résistance du couvercle arrière.
- 3 Roulements de première qualité. Surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 4 Guides de piston en acier inox, traitement spécial au Tenifer®. Permet d'éviter l'usure, son état de surface parfait augmente significativement la durée de vie des joints d'huile à son contact.
- 5 **Système bouchon clapets contre les risques de dévissage et de rupture.** Le joint torique incorporé en bas du bouchon, protégé par le filetage, consolide la résistance et l'étanchéité, ainsi sa longévité.
- 6 Pistons en céramique une pièce, 99,5% d'alumine.
- 7 **Configuration collecteur/culasse pompe.** Meilleur refroidissement. Augmente la surface de recyclage offrant une meilleure condition de travail du joint arrière qui est toujours mouillé.
- 8 **Système d'étanchéité culasse/carter (breveté).** Pour assurer une parfaite aspiration des joints de haute/basse pression dans les mêmes conditions d'humidité.
- 9 Clapets aspiration/refoulement assurant un grand rendement volumétrique.
- 10 Bielles deux pièces en bronze permettant de répartir les charges lourdes et limiter la détérioration.
- 11 **Ensemble d'étanchéité à double joints en "U" auto-lubrifiants avec un système exclusif "Bertolini" de recyclage permettant la lubrification constante.**
- 12 Conduits d'aspiration surdimensionnés pour éviter les phénomènes de cavitation.



- 1 Dos indicadores aceite. Permiten controlar el nivel de aceite desde diferentes posiciones.
- 2 Garganta O-Ring en la tapa del carter Acrece la resistencia de la tapa posterior.
- 3 Doble cojinete de rodillos. Para una duración de la bomba más larga.
- 4 Guías pistón en acero inox especial tratamiento al Tenifer®. Aumenta la resistencia y reduce el deterioro.
- 5 **Nuevo diseño tapa de válvula antirasgadura/anti-destornillamiento.** El O-R incorporado para proteger la rosca acrece la resistencia y prolonga la duración.
- 6 Pistones en cerámica, 99,5% de alúmina.
- 7 **Configuración inovadora colector/culata bomba.** Enfriamiento cinematisma bomba. Acrecimiento area recirculo. Garantiza mejores condiciones de trabajo porque la junta posterior es en ambiente húmedo.
- 8 **Exclusivo sistema de retén culata/carter (patentado).** Garantiza una perfecta aspiración de las juntas alta/baja presión siempre en las mismas condiciones de humedad y, luego, funcionalidad.
- 9 Válvulas de aspiración-envío de alto rendimiento volumétrico.
- 10 Bielas en bronce en dos piezas. Ángulos de trabajo reducidos para mejor duración.
- 11 **Nuevas juntas con sello de doble "U" auto-lubrificante con cámara de recirculación y lubricación constante con principio exclusivo "Bertolini".**
- 12 Línea de aspiración sobredimensionada para evitar cavitación.

Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 1" BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 3/8 BSP             |
| SHAFT  | Ø           | 30 mm               |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 19,5 kg (43 lbs)    |

BZ

DX

O

B

INTELLISEAL™

SX

G

F

M



| Codice Code  | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |      |      | 1450 RPM |     |      |      | 1725 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|-----|------|------|----------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | l/min    | GPM | kW   | hp   |                 |              |
| 08.1019.97.A | RAL 1640-P    | 400                     | 5800 | 11      | 2,9 | 8,5  | 11,5 | 17       | 4,5 | 12,9 | 17,3 | 20       | 5,3 | 15,2 | 20,4 | 18              | 16           |
| 08.1005.97.A | RAL 1840-P    | 400                     | 5800 | 12      | 3,2 | 9,6  | 12,9 | 19       | 5,0 | 14,5 | 19,5 | 22       | 5,8 | 17,1 | 23,0 | 18              | 18           |
| 08.1021.97.A | RAL 2035-P    | 350                     | 5075 | 14      | 3,7 | 9,2  | 12,4 | 20       | 5,3 | 14,0 | 18,7 | 24       | 6,3 | 16,4 | 22,0 | 20              | 16           |
| 08.1022.97.A | RAL 2335-P    | 350                     | 5075 | 15      | 4,0 | 10,4 | 13,9 | 23       | 6,1 | 15,7 | 21,1 | -        | -   | -    | -    | 20              | 18           |
|              |               |                         |      | 950 RPM |     |      |      | 1200 RPM |     |      |      | 1450 RPM |     |      |      |                 |              |
| 08.1000.97.A | RAL 2535-P    | 350                     | 5075 | 17      | 4,5 | 11,3 | 15,1 | 21       | 5,5 | 14,1 | 18,9 | 25       | 6,6 | 16,8 | 22,6 | 20              | 19,5         |
| 08.1036.97.A | RAL 2830-P    | 300                     | 4350 | 18      | 4,8 | 10,8 | 14,4 | 23       | 6,1 | 13,5 | 18,1 | 27       | 7,1 | 16,1 | 21,6 | 22              | 18           |
| 08.1002.97.A | RAL 3030-P    | 300                     | 4350 | 20      | 5,3 | 11,5 | 15,5 | 25       | 6,6 | 14,4 | 19,4 | 29       | 7,7 | 17,3 | 23,2 | 22              | 19,5         |

RAL Premium

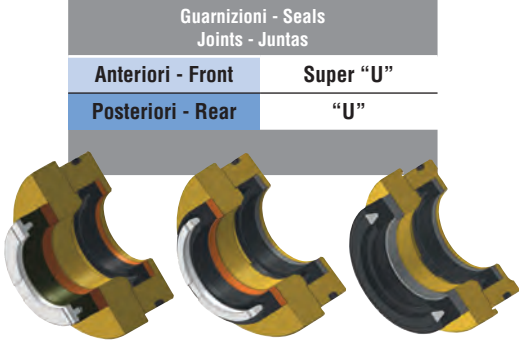
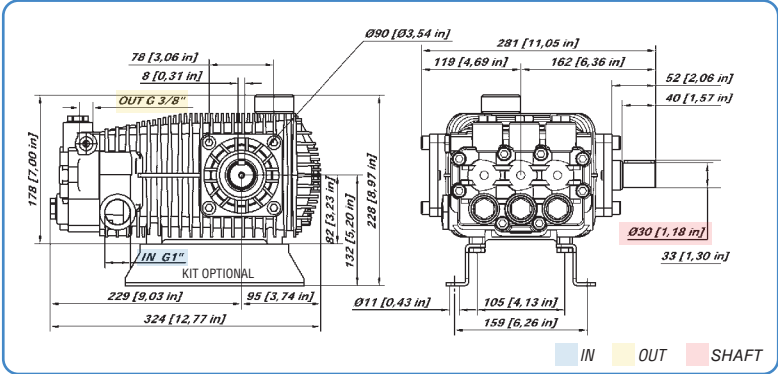
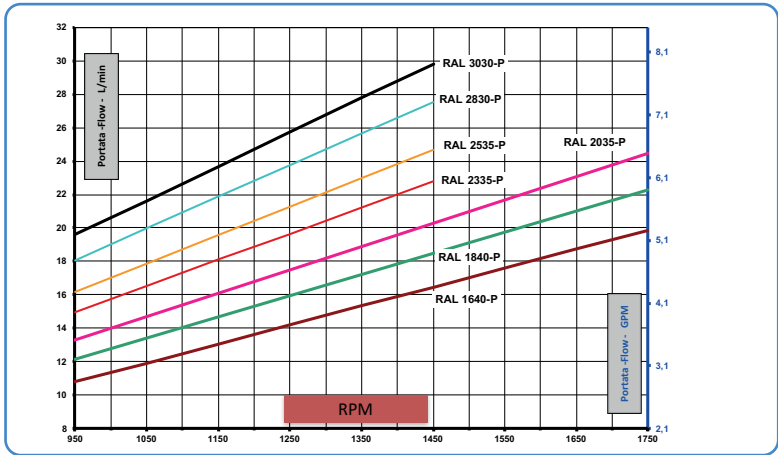


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 1" BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 1/2 BSP             |
| SHAFT  | Ø           | 1" 3/8 DIN 9611A    |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 22 kg (48.5 lbs)    |



| Codice Code  | Modello Model    | Press. Max Max Pressure |      | 550 RPM |     |     |     | 750 RPM |     |      |      | 1000 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|------------------|-------------------------|------|---------|-----|-----|-----|---------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|              |                  | bar                     | PSI  | l/min   | GPM | kW  | hp  | l/min   | GPM | kW   | hp   | l/min    | GPM | kW   | hp   |                 |              |
| 08.1010.97.A | <b>RB 1719-P</b> | 190                     | 2755 | 17      | 4,5 | 6,2 | 8,3 | 23      | 6,1 | 8,4  | 11,2 | 30       | 7,9 | 11,1 | 14,8 | 25              | 21           |
| 08.1011.97.A | <b>RB 2019-P</b> | 190                     | 2755 | 20      | 5,3 | 7,4 | 9,9 | 27      | 7,1 | 10,0 | 13,4 | 35       | 9,2 | 13,2 | 17,7 | 25              | 25           |

RB Premium

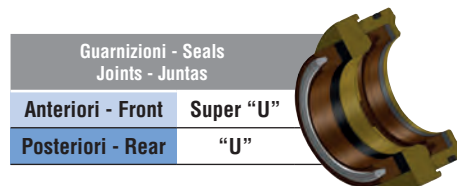
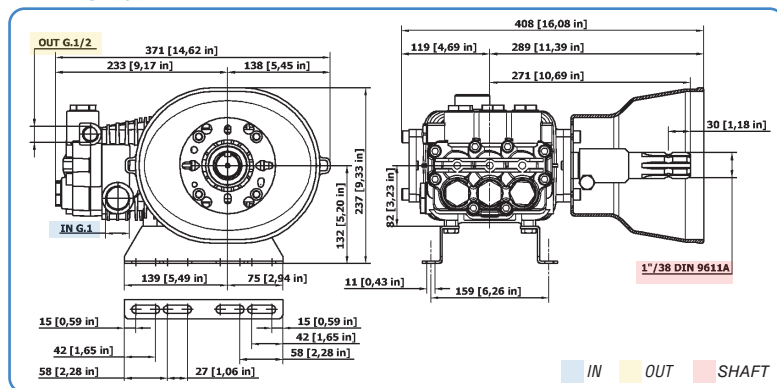
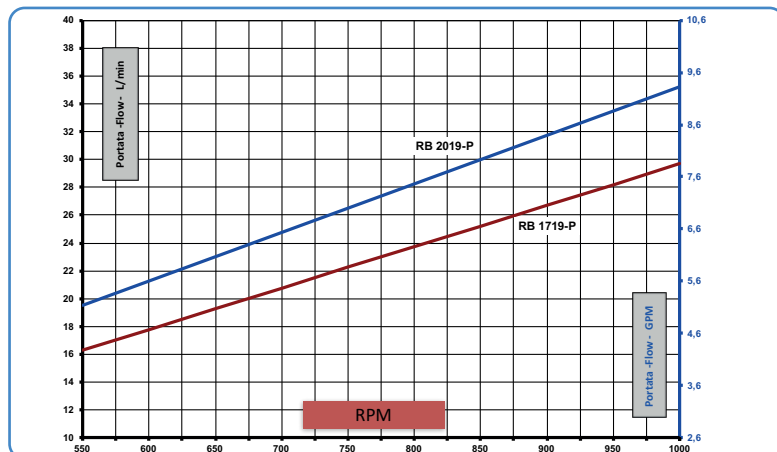


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios

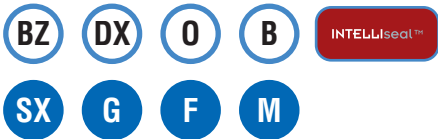


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Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 1" BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 1/2 BSP             |
| SHAFT  | Ø           | 30 mm               |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 20,5 kg (45.2 lbs)  |



| Codice Code  | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |      |      | 1450 RPM |      |      |      | 1725 RPM |      |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|-----|------|------|----------|------|------|------|----------|------|------|------|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM | kW   | hp   | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   |                 |              |
| 08.1042.97.A | RBL 4219-P    | 190                     | 2755 | 27      | 7,1 | 10,2 | 13,6 | 42       | 11,1 | 15,4 | 20,6 | 49       | 12,9 | 18,1 | 24,3 | 25              | 21           |
| 08.1004.97.A | RBL 5019-P    | 190                     | 2755 | 33      | 8,7 | 12,2 | 16,4 | 50       | 13,2 | 18,5 | 24,8 | -        | -    | -    | -    | 25              | 25           |

RBL Premium

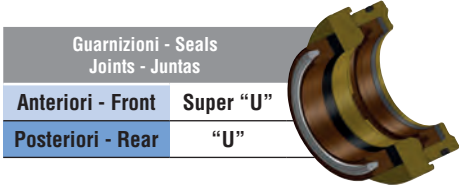
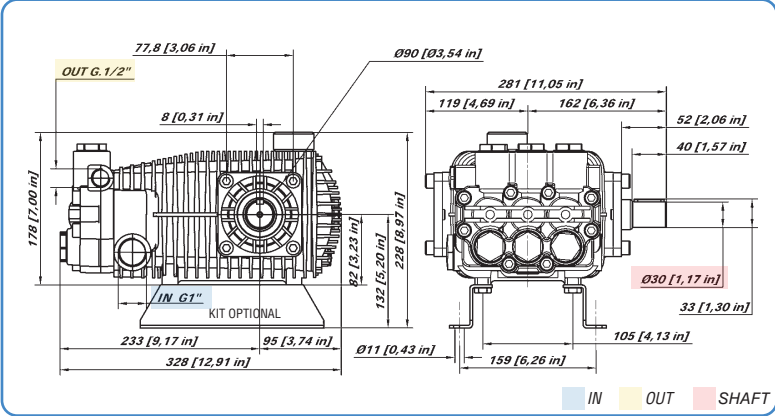
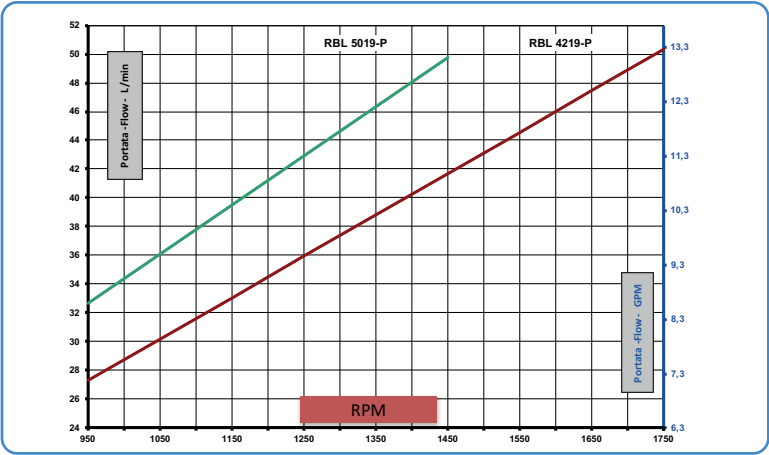


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



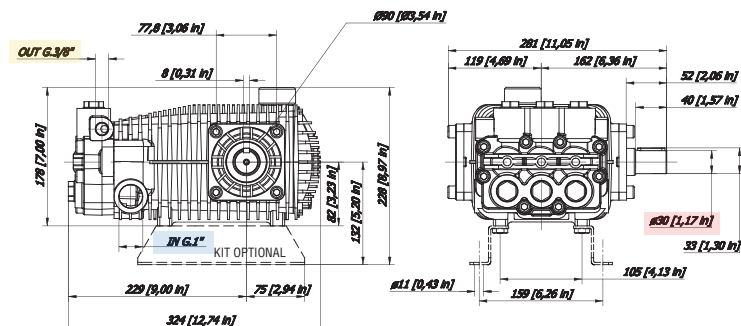


|               |                    |                     |
|---------------|--------------------|---------------------|
| <b>IN</b>     | <b>Ø</b>           | 1" BSP              |
|               | <b>Press. Min.</b> | -0,1 bar (-1.5 PSI) |
|               | <b>Press. Max.</b> | 6 bar (87 PSI)      |
|               | <b>Temp. Max.</b>  | 74°C (165°F)        |
| <b>OUT</b>    | <b>Ø</b>           | 3/8 BSP             |
| <b>SHAFT</b>  | <b>Ø</b>           | 30 MM               |
| <b>OIL</b>    | <b>SAE 75W 90</b>  | 1,5l (0.4 U.S.gal.) |
| <b>WEIGHT</b> | <b>kg (lbs)</b>    | 20,5 kg (45.2 lbs)  |



| Codice Code  | Modello Model | Press. Max Max Pressure |      | 700 RPM |     |      |      | 850 RPM |     |      |      | 1000 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|-----|------|------|---------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM | kW   | hp   | l/min   | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | Ø mm            | mm           |
| 08.1087.97.3 | RBS 2335      | 350                     | 5075 | 16      | 4,2 | 11,2 | 15,0 | 20      | 5,3 | 13,4 | 18,0 | 23       | 6,1 | 15,6 | 21,0 | 22              | 21           |
| 08.1088.97.3 | RBS 2735      | 350                     | 5075 | 19      | 5,0 | 13,3 | 17,8 | 23      | 6,1 | 16,0 | 21,4 | 27       | 7,1 | 18,6 | 24,9 | 22              | 25           |

IN OUT SHAFT



|                   |           |
|-------------------|-----------|
| Anteriori - Front | Super "U" |
| Posteriori - Rear | "U"       |



The graph illustrates the relationship between RPM and Portata-Flow (L/min and GPM) for two models: RBS 2735 and RBS 2335. The X-axis represents RPM (700 to 1000). The left Y-axis represents Portata-Flow in L/min (14 to 26). The right Y-axis represents Portata-Flow in GPM (3,7 to 6,7). Two lines are plotted: a green line for RBS 2735 and a red line for RBS 2335. Both lines show a linear increase in flow with increasing RPM.

| RPM  | RBS 2735 (L/min) | RBS 2735 (GPM) | RBS 2335 (L/min) | RBS 2335 (GPM) |
|------|------------------|----------------|------------------|----------------|
| 700  | 18,5             | 4,7            | 15,5             | 4,2            |
| 750  | 20,0             | 5,2            | 16,7             | 4,4            |
| 800  | 21,5             | 5,7            | 17,9             | 4,6            |
| 850  | 23,0             | 6,2            | 19,1             | 4,8            |
| 900  | 24,5             | 6,7            | 20,3             | 5,0            |
| 950  | 26,0             | 7,2            | 21,5             | 5,2            |
| 1000 | 27,5             | 7,7            | 22,7             | 5,4            |

pag.119

pag.125

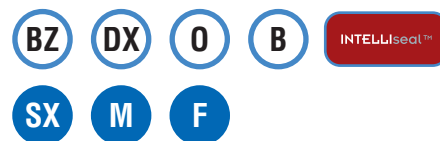
pag.126

# RX 400

RA / RB / RD SERIES

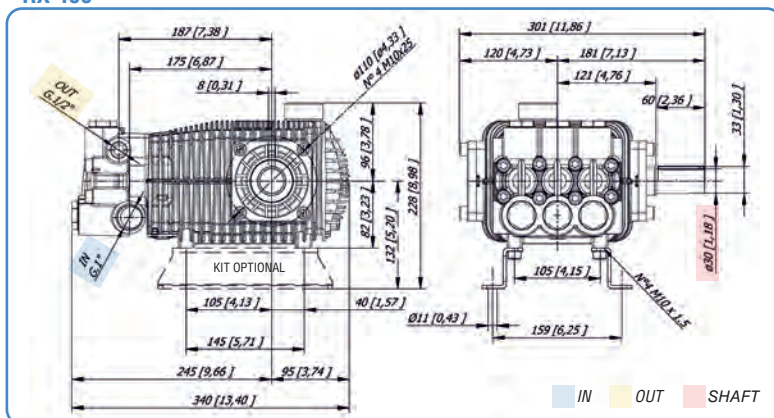
## Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 1" BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 1/2 BSP             |
| SHAFT  | Ø           | 30 mm               |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 23 kg (50.7 lbs)    |



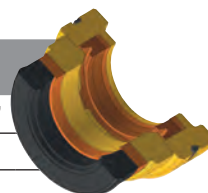
| Codice Code  | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |      |      | 1200 RPM |     |      |      | 1450 RPM |      |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|-----|------|------|----------|-----|------|------|----------|------|------|------|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | l/min    | GPM  | kW   | hp   |                 |              |
| 18.2003.97.3 | RX 2340       | 400                     | 5800 | 15      | 4,0 | 11,6 | 15,6 | 19       | 5,0 | 14,5 | 19,5 | 22       | 5,8  | 17,4 | 23,3 | 22              | 14,4         |
| 18.2002.97.3 | RX 2840       | 400                     | 5800 | 18      | 4,8 | 14,1 | 18,9 | 23       | 6,1 | 17,7 | 23,7 | 27       | 7,1  | 21,1 | 28,3 | 22              | 17,5         |
| 18.2001.97.3 | RX 3540       | 400                     | 5800 | 24      | 6,3 | 18,4 | 24,6 | 29       | 7,7 | 23,0 | 30,8 | 35       | 9,2  | 27,5 | 36,8 | 22              | 23           |
| 18.2007.97.3 | RX 3840       | 400                     | 5800 | 25      | 6,6 | 19,7 | 26,5 | 32       | 8,5 | 24,7 | 33,1 | 38       | 10,0 | 29,5 | 39,6 | 22              | 25           |

## RX 400

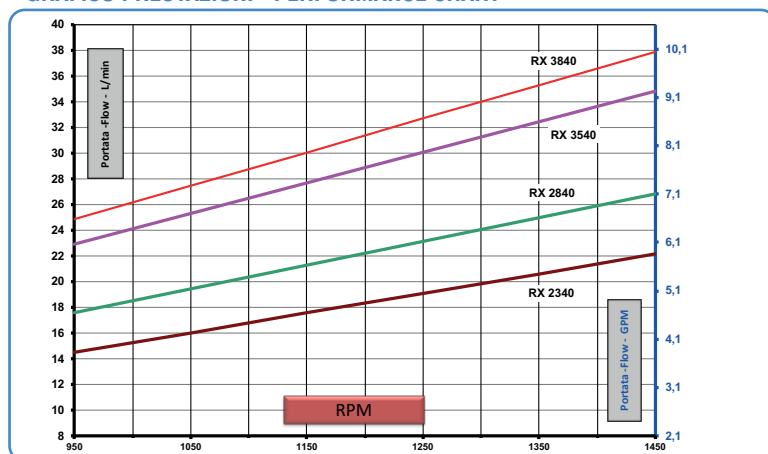


Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"  
Posteriori - Rear "U"



## GRAFICO PRESTAZIONI - PERFORMANCE CHART

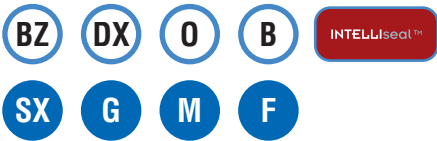


Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 1" BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 1/2 BSP             |
| SHAFT  | Ø           | 30 mm               |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 23 kg (50.7 lbs)    |



| Codice Code  | Modello Model  | Press. Max Max Pressure |      | 950 RPM |      |      |      | 1200 RPM |      |      |      | 1450 RPM |      |      |      | Pistone Plunger | Corsa Stroke |
|--------------|----------------|-------------------------|------|---------|------|------|------|----------|------|------|------|----------|------|------|------|-----------------|--------------|
|              |                | bar                     | PSI  | l/min   | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   |                 |              |
| 08.1086.97.3 | <b>RD 6315</b> | 150                     | 2175 | 41      | 10,8 | 12,1 | 16,2 | 51       | 13,5 | 15,1 | 20,2 | 61       | 16,1 | 18,1 | 24,2 | 30              | 21           |
| 08.1085.97.3 | <b>RD 7515</b> | 150                     | 2175 | 49      | 12,9 | 14,4 | 19,3 | 61       | 16,1 | 18,0 | 24,1 | 73       | 19,3 | 21,5 | 28,8 | 30              | 25           |

RD

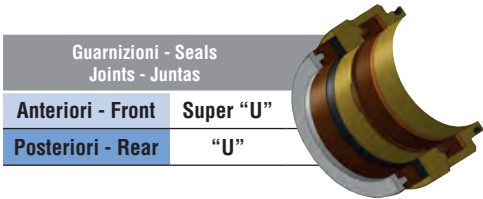
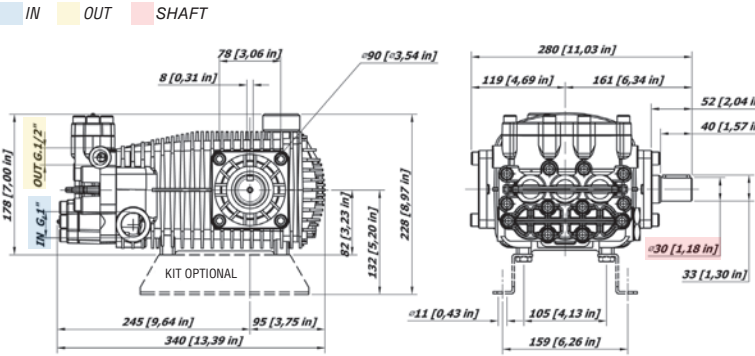
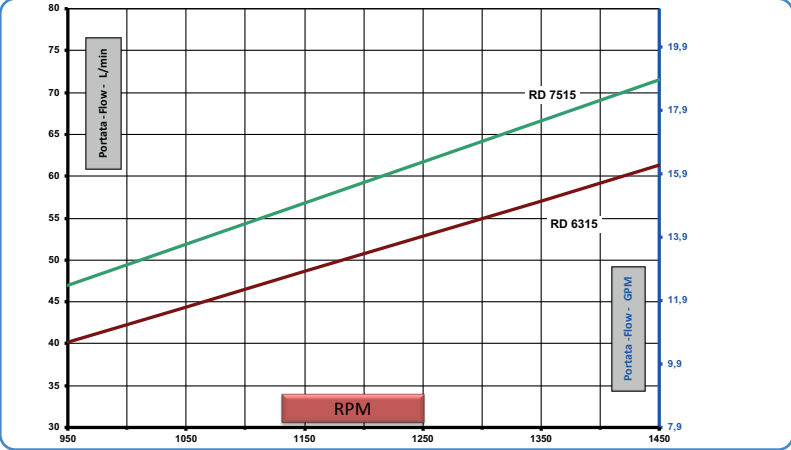


GRAFICO PRESTAZIONI - PERFORMANCE CHART



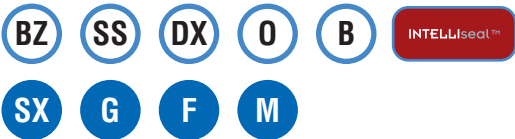
Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios





Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 1" BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 3/8 BSP             |
| SHAFT  | Ø           | 30 mm               |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 20,8 kg (46 lbs)    |



TESTATA IN ACCIAIO INOX  
HEAD IN STAINLESS STEEL



| Codice Code  | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |      |      | 1200 RPM |     |      |      | 1450 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|-----|------|------|----------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | l/min    | GPM | kW   | hp   |                 |              |
| 08.1070.97.A | RA 1650-P     | 500                     | 7250 | 11      | 2,9 | 10,2 | 13,7 | 13       | 3,4 | 12,8 | 17,1 | 16       | 4,2 | 15,4 | 20,7 | 20              | 12,5         |
| 08.1071.97.A | RA 1850-P     | 500                     | 7250 | 12      | 3,2 | 11,4 | 15,3 | 15       | 4,0 | 14,3 | 19,2 | 18       | 4,8 | 17,3 | 23,1 | 20              | 14           |
| 08.1072.97.A | RA 2150-P     | 500                     | 7250 | 14      | 3,7 | 13,9 | 18,6 | 18       | 4,8 | 17,3 | 23,3 | 21       | 5,5 | 21,0 | 28,1 | 20              | 17           |
| 08.1074.97.A | RA 2450-P     | 500                     | 7250 | 16      | 4,2 | 15,5 | 20,8 | 20       | 5,3 | 19,4 | 26,0 | 24       | 6,3 | 23,4 | 31,4 | 20              | 19,5         |

RA Premium

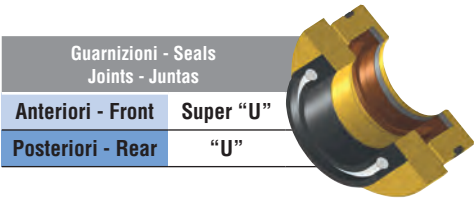
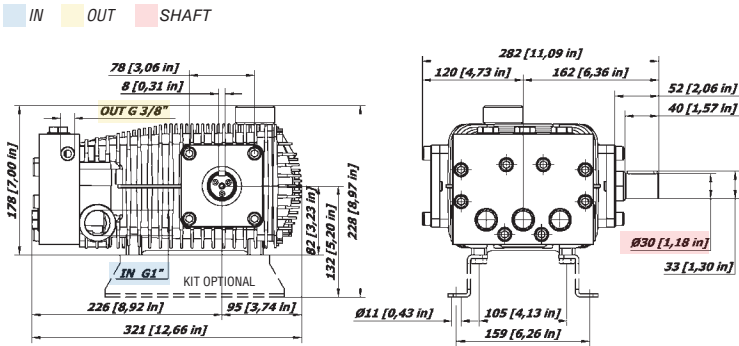
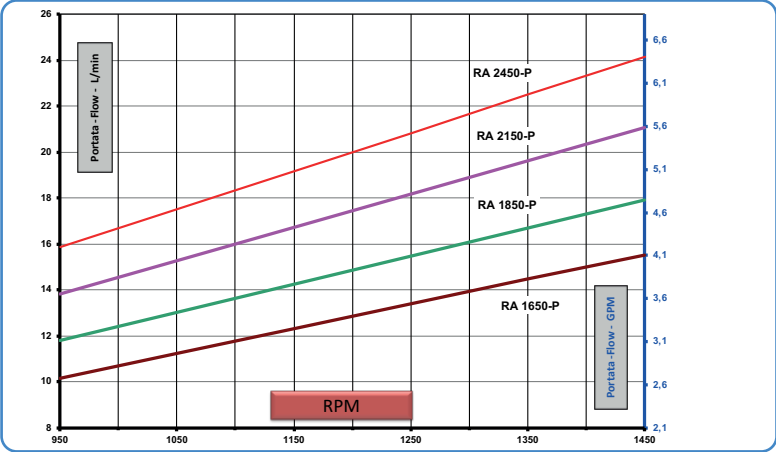


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios

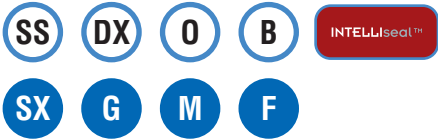




**NEW**

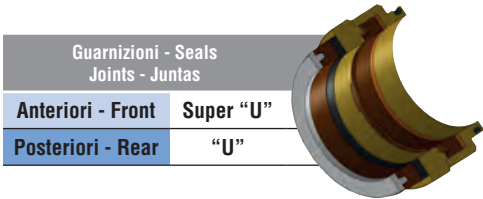
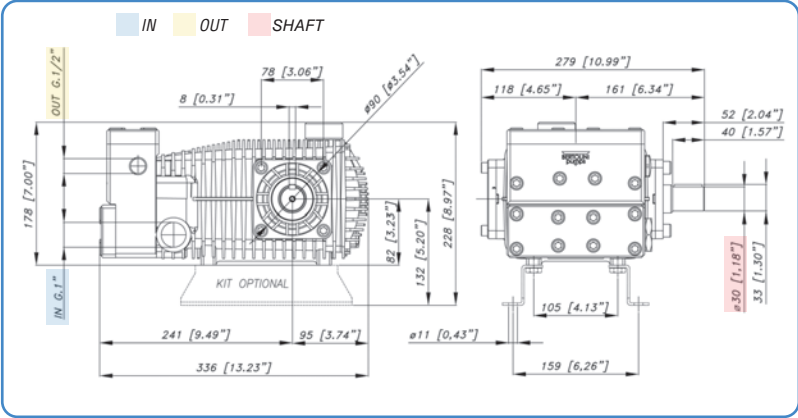
Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 1" BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 1/2 BSP             |
| SHAFT  | Ø           | 30 mm               |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 27 kg (59.5 lbs)    |

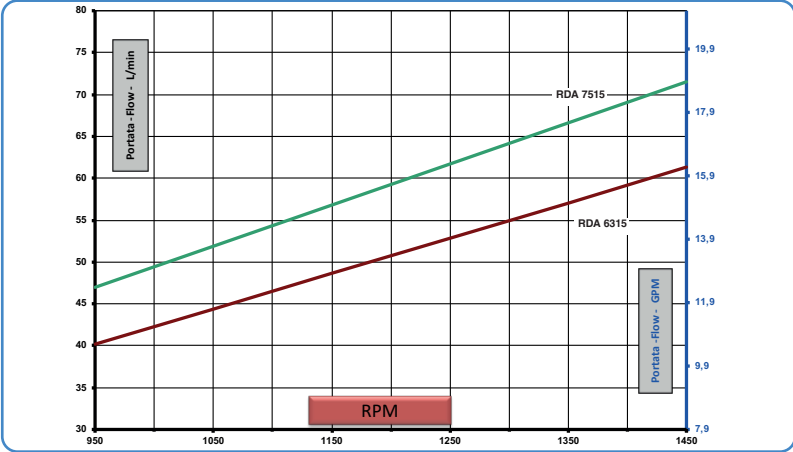


| Codice Code  | Modello Model   | Press. Max Max Pressure |      | 950 RPM |      |      |      | 1200 RPM |      |      |      | 1450 RPM |      |      |      | Pistone Plunger | Corsa Stroke |
|--------------|-----------------|-------------------------|------|---------|------|------|------|----------|------|------|------|----------|------|------|------|-----------------|--------------|
|              |                 | bar                     | PSI  | l/min   | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   |                 |              |
| 08.1090.97.3 | <b>RDA 6315</b> | 150                     | 2175 | 41      | 10,8 | 12,1 | 16,2 | 51       | 13,5 | 15,1 | 20,2 | 61       | 16,1 | 18,1 | 24,2 | 30              | 21           |
| 08.1091.97.3 | <b>RDA 7515</b> | 150                     | 2175 | 49      | 12,9 | 14,4 | 19,3 | 61       | 16,1 | 18,0 | 24,1 | 73       | 19,3 | 21,5 | 28,8 | 30              | 25           |

**RDA**



**GRAFICO PRESTAZIONI - PERFORMANCE CHART**



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios





100% European-American Components



500 bar  
19÷32 l/min

7250 psi  
4.8÷8.4 GPM



### RXZ 500 (Brevettata)

La pompa RXZ 500 rappresenta la massima espressione dei livelli tecnologici nell'ambito delle pompe a pistoni in linea. Le prestazioni (pressioni fino a 500 bar, portate fino a 32 l/min.) la rendono idonea per un uso esclusivamente professionale. Destinata principalmente all'industria, edilizia, posti fissi di lavaggio, macchine spurgatubi, idropulitrici su rimorchio, allevamenti di animali/bestiami, etc. Applicabile direttamente a motori elettrici con albero cavo o mediante flangia/giunto elastico o puleggia. I principi costruttivi altamente innovativi ed esclusivi da cui deriva il brevetto di questa pompa garantiscono un'elevatissima affidabilità nel tempo di tutte le componenti.



### RXZ 500 (Patented)

The RXZ 500 pump offers pressure performances up to 500 bar (7250 psi) and flows up to 32 l/min (8.4 GPM). Superior construction and outstanding material quality with innovative technology (patented by Bertolini), provide efficient long life of all components with easy maintenance. This great piston pump provides a new top level of design with efficiency and performance. Ideal for the hardest industrial jobs, such as in-plant stationary systems, trailer mounted cleaning systems, multiple gun washing stations, high volume pressure washers.



### RXZ 500 (Brevetée)

La pompe RXZ 500 représente le tout dernier résultat du niveau technologique dans le cadre des pompes à pistons. Débit jusqu'à 32 l/min. et pression jusqu'à 500 bar, cette pompe est indiquée pour transmission exclusivement professionnelles. Utilisée surtout dans l'industrie, bâtiment, installations industrielles fixes, d'égouts et de vidange, nettoyeurs sur remorque, élevages d'animaux/bétail etc. Transmission directe à moteurs électriques avec arbre creux ou par bride/accouplement flexible ou poulies. La construction solide, la haute qualité des matériaux, les solutions technologiques exclusives adoptées (brevet Bertolini) assurent des performances optimales et une grande longévité des composants.



### RXZ 500 (Patentada)

La bomba RXZ 500 representa la máxima expresión de los niveles tecnológicos en el sector de las bombas de pistones en línea. Las prestaciones (presiones hasta 500 bar, caudales hasta 32 l/min) la hacen apta para un uso exclusivamente profesional. Destinada principalmente a industria, albañilería, equipos fijos de lavado, máquinas expurgacañas, hidrolimpiadoras sobre remolque, naves ganaderas, etc. Aplicable directamente a motores eléctricos con brida/junta elástica o polea. Los principios constructivos extremadamente innovadores y exclusivos, de los que deriva la patente de esta bomba, garantizan una elevadísima confiabilidad en el tiempo de todos los componentes.

### Applicazioni - Applications - Applications - Aplicaciones



Pulizia di superfici  
Surface cleaning  
Nettoyage de surfaces  
Limpieza de superficies



Pulizia conto terzi  
Contract cleaning  
Nettoyage compte de tiers  
Limpieza por cuenta de terceros



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnología chorro de agua



Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



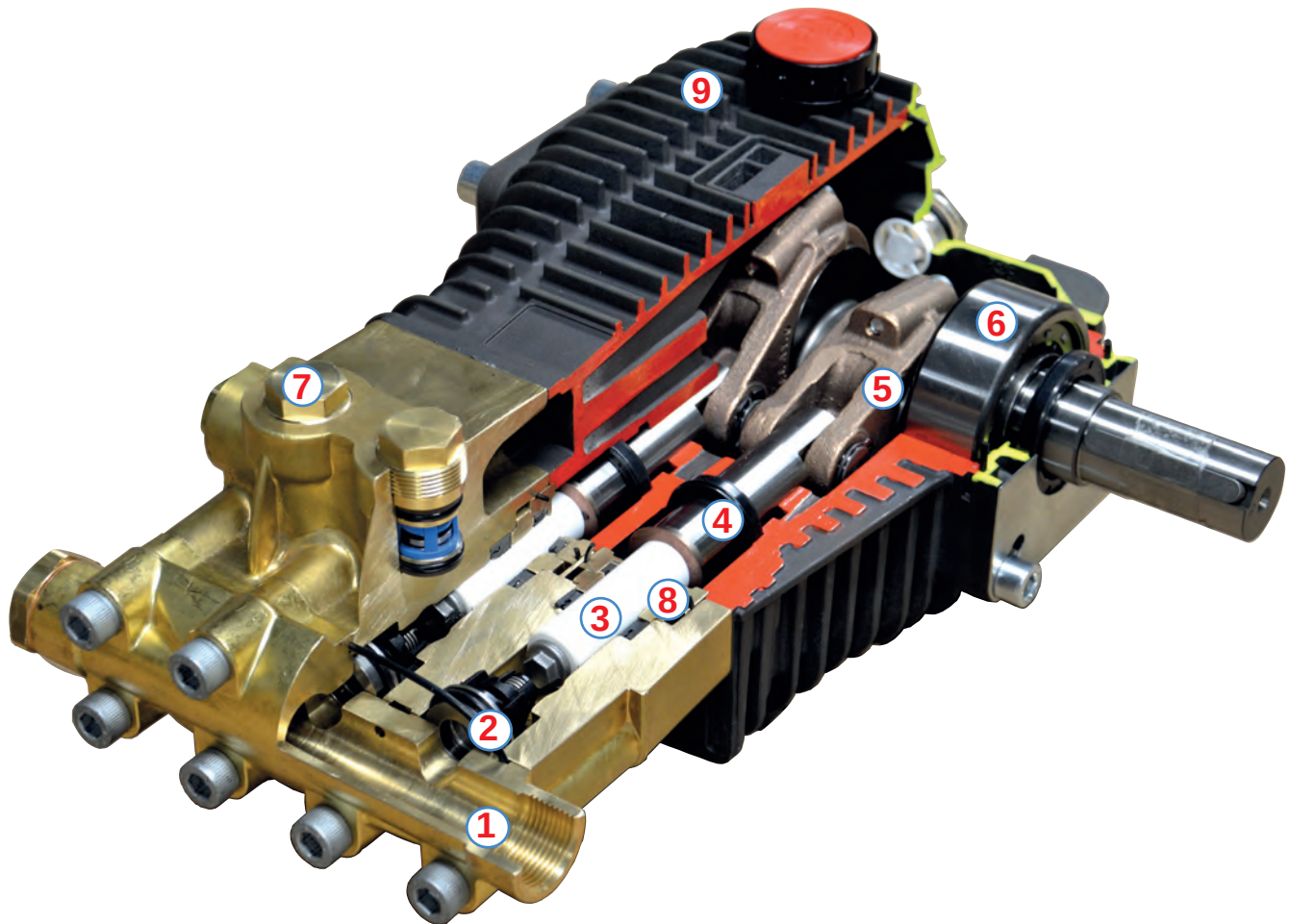
Navi e aeroplani  
Boats and pleasure craft  
Bateaux et avions  
barcos y aviones



- 1 Aspirazione posta anteriormente alla testata sovradimensionata per garantire un corretto funzionamento della pompa
- 2 Valvole aspirazione poste assialmente al pistone per ridurre le perdite di carico e quindi aumentare l'efficienza.
- 3 Pistoni in ceramica 99.5% allumina.
- 4 Guida pistone in acciaio inox temprato.
- 5 Bielle in bronzo stampate a due corpi.
- 6 Cuscinetti a rulli di primaria marca.
- 7 Tappo valvole anti-strappo/anti-svitamento.
- 8 Pacchi guarnizione a doppia tenuta ad "U" con elemento energizzante metallico. Camera di ricircolo che assicura una lubrificazione costante.
- 9 Carter in alluminio pressofuso.



- 1 Suction in front of the oversized head to ensure correct pump operation.
- 2 Suction valves fitted axially to the piston in order to reduce the suction losses and thus increase efficiency.
- 3 Highly solid plungers made up of 99.5% alumina ceramic
- 4 Plunger rod in hardened stainless steel.
- 5 Bronze connecting rods matched "two piece" pairs
- 6 Premium brand roller bearings.
- 7 Valve cap design to prevent loosening and tearing.
- 8 Superior double "U" packing sealing system with metallic energizing element. The re-cycling area ensures continuous lubrication.
- 9 Die-cast aluminum crankcase.



- 1 Aspiration en face à la culasse surdimensionnée pour assurer le bon fonctionnement de la pompe
- 2 Clapets d'aspiration montés axialement au piston pour réduire les pertes de charge et ainsi augmenter l'efficacité.
- 3 Pistons en céramique 99,5% d'alumine.
- 4 Guide piston en acier inox trempé.
- 5 Bielles deux pièces en bronze
- 6 Roulements à rouleaux de première qualité.
- 7 Système bouchon clapets contre les risques de dévissage et arrachement.
- 8 Ensemble étanchéité, double joint en «U» avec élément d'alimentation métallique. Chambre de recirculation qui assure une lubrification constante.
- 9 Carter compact en aluminium moulé sous pression.

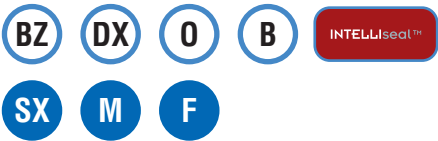


- 1 Aspiración colocada anteriormente de la cabeza sobredimensionada para asegurar un correcto funcionamiento de la bomba.
- 2 Válvulas de succión colocadas axialmente al pistón para reducir las caídas de presión y así aumentar la eficiencia.
- 3 Pistones cerámicos de alúmina al 99,5%.
- 4 Guía de pistón en acero inoxidable templado.
- 5 Bielas en bronce en dos piezas.
- 6 Cojinetes de rodillos de primera marca.
- 7 Tapón de válvulas anti-rasgadura y anti-destornillamiento.
- 8 Juntas con sello de doble "U" con elemento energizante metálico. Cámara de recirculación que asegura una lubricación constante.
- 9 Cáster en aluminio fundido a presión.



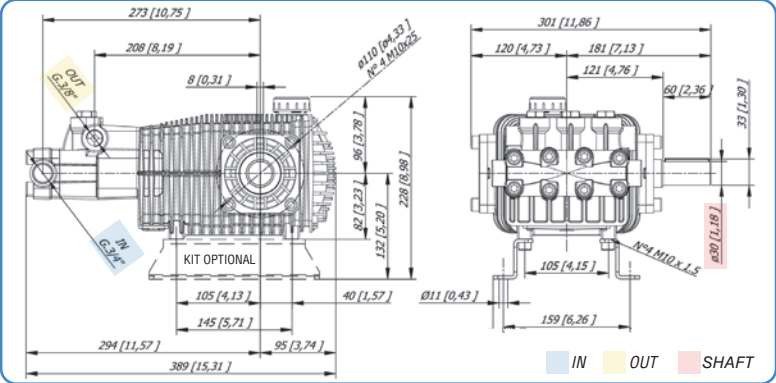
Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                     |
|--------|-------------|---------------------|
| IN     | Ø           | 3/4 BSP             |
|        | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 74°C (165°F)        |
| OUT    | Ø           | 3/8 BSP             |
| SHAFT  | Ø           | 30 MM               |
| OIL    | SAE 75W 90  | 1,5l (0.4 U.S.gal.) |
| WEIGHT | kg (lbs)    | 23 kg (50.7 lbs)    |



| Codice Code  | Modello Model   | Press. Max Max Pressure |      | 950 RPM |     |      |      | 1200 RPM |     |      |      | 1450 RPM |     |      |      | Pistone Plunger | Corsa Stroke |
|--------------|-----------------|-------------------------|------|---------|-----|------|------|----------|-----|------|------|----------|-----|------|------|-----------------|--------------|
|              |                 | bar                     | PSI  | l/min   | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | l/min    | GPM | kW   | hp   | Ø mm            | mm           |
| 18.2005.97.3 | <b>RXZ 1950</b> | 500                     | 7250 | 12      | 3,2 | 12,0 | 16,1 | 15       | 4,0 | 15,0 | 20,1 | 19       | 4,8 | 18,0 | 24,1 | 20              | 14,4         |
| 18.2004.97.3 | <b>RXZ 2350</b> | 500                     | 7250 | 15      | 3,9 | 14,6 | 19,6 | 19       | 4,9 | 18,2 | 24,5 | 22       | 5,9 | 21,8 | 29,3 | 20              | 17,5         |
| 18.2000.97.3 | <b>RXZ 3050</b> | 500                     | 7250 | 20      | 5,2 | 19,4 | 26,0 | 25       | 6,5 | 24,2 | 32,5 | 30       | 7,8 | 29,0 | 38,9 | 20              | 23           |
| 18.2006.97.3 | <b>RXZ 3250</b> | 500                     | 7250 | 21      | 5,6 | 20,8 | 27,9 | 27       | 7,0 | 26,1 | 34,9 | 32       | 8,4 | 31,2 | 41,8 | 20              | 25           |

RX 500



| Guarnizioni - Seals<br>Joints - Juntas |           |
|----------------------------------------|-----------|
| Anteriori - Front                      | Super "U" |
| Posteriori - Rear                      | "U"       |

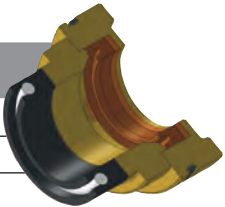
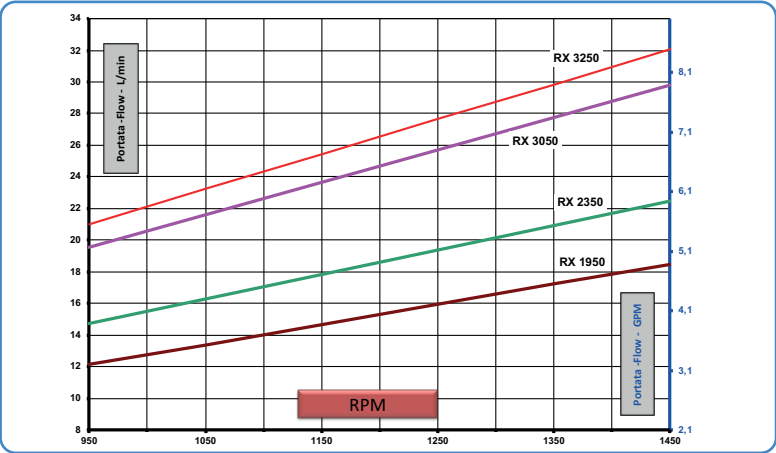
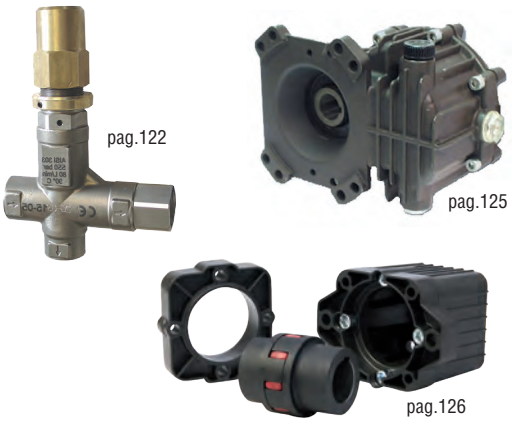


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios







Pompe con testata in acciaio inox AISI 316 per impiego nel campo dell'osmosi inversa, desalinazione dell'acqua, industrie alimentari, farmaceutica e chimica. Applicabili direttamente a motori elettrici (1450-1725 G/min.), e a scoppio, a mezzo riduttore o puleggia. Configurazione compatta, di facile installazione, costruite con soluzioni tecnologiche avanzate e materiali di alta qualità per l'uso specifico nel settore a cui sono destinate, assicurano performance di durata e affidabilità, nel rispetto della filosofia Bertolini.



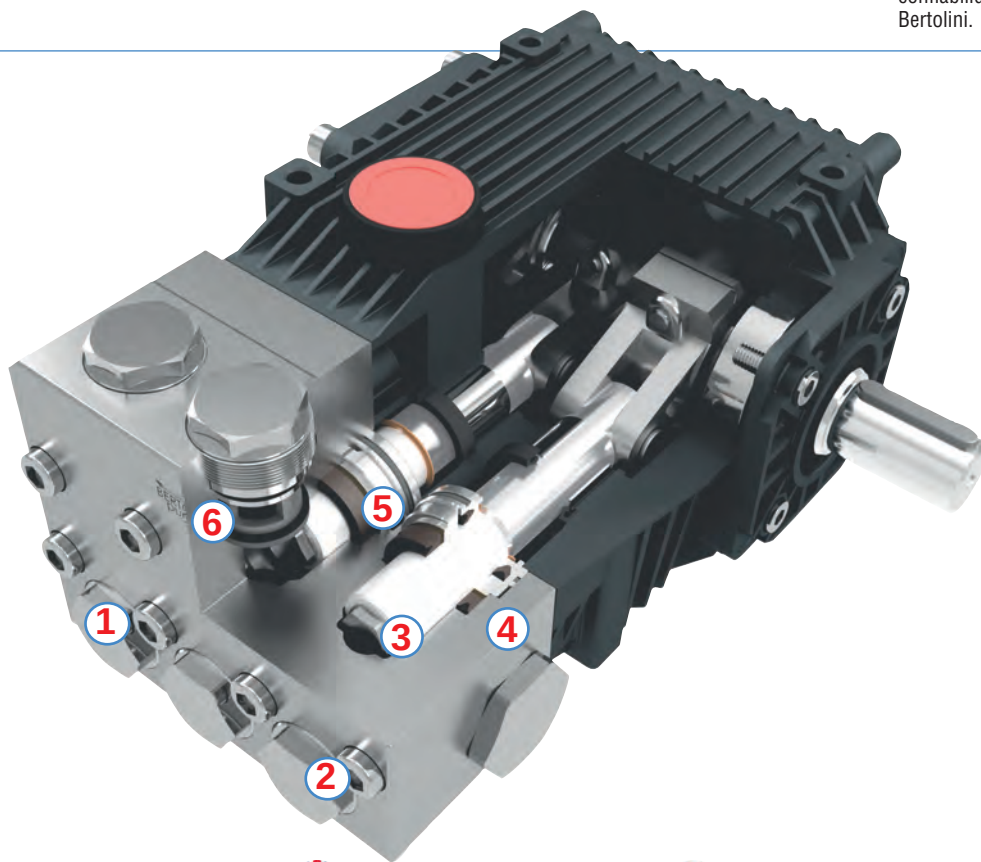
Pumps with the head made of AISI 316 Stainless steel. Great for reverse osmosis, desalination, food industry, pharmaceutical and chemical industries. Can be used as a direct drive to electric motors (1450-1725 rpm), as well as gasoline engines through a gearbox or pulleys. Compact design, easy to install, built with strong state-of-the-art components.



Pompes avec culasse en acier inox AISI 316 utilisées dans le domaine de l'osmose inverse, dessalement de l'eau, industries alimentaires, chimique et pharmaceutique. Transmission directe à moteurs électriques (1450-1725 t/min.) et à essence par réducteur ou poulies. Configuration compacte, donc d'installation facile, fabriquées avec des solutions technologiques à l'avant-garde et composants sélectionnés pour leur fiabilité et leur performance.



Bombas con culata en acero inox AISI 316 para el empleo en el sector de la ósmosis inversa, desalación del agua, industrias alimentaria, farmacéutica y química. Aplicables directamente a motores eléctricos (1450-1725 Rev./min.) y de explosión, con reductor o poleas. Configuración compacta, luego de fácil instalación, construida con soluciones tecnológicas avanzadas y materiales de alta calidad, para el utilizzo específico en el sector al que ha sido destinada, que aseguran prestaciones de duración y confiabilidad, en el respeto de la filosofía Bertolini.



- 1 Tappi valvola aspirazione/mandata antistrappo e antistrappo in AISI 316 con O-RING ribassato a protezione filettatura (principio esclusivo Bertolini).
- 2 Viti in acciaio inox AISI 316.
- 3 Vite serraggio pistone ceramico in acciaio inox AISI 316.
- 4 Testata pompa in acciaio inox AISI 316 a sezione variabile in funzione della portata.
- 5 Pacco guarnizioni per alta temperatura (TAM) con supporto anteriore e posteriore in acciaio inox AISI 316 ed anello antiestrusione in PTFE.
- 6 Valvole aspirazione/mandata con molla, otturatore e sede in acciaio AISI 316.



- 1 Innovative stainless steel 316 valve caps design prevents cap failure due to over pressurization by isolating valve caps threads (exclusive Bertolini design).
- 2 Stainless steel 316 screws.
- 3 Stainless steel 316 piston bolt.
- 4 Stainless steel 316 pump head with section proportional to the flow box.
- 5 High temperature packings system (TAM) with stainless steel 316 intermediate ring, stainless steel 316 retainer and PTFE anti-extrusion ring.
- 6 Rapid action check valves with spring, poppet and seat made of 316 stainless steel.



- 1 Nouveau système bouchons clapets pour éviter les risques de dévissage et de rupture en acier inox AISI 316. Le joint torique incorporé en bas du bouchon, protégé par le filetage, consolide la résistance et l'étanchéité, ainsi sa longévité (point fort exclusif Bertolini).
- 2 Vis en acier inox AISI 316.
- 3 Vis serrage du piston en céramique en acier inox AISI 316.
- 4 Culasse pompe en acier inox AISI 316 avec section variable en fonction du débit.
- 5 Ensemble d'étanchéité conçu pour températures élevées (série TAM), avec bague de support avant-arrière en acier inox AISI 316 et bague antiextrusion en PTFE.
- 6 Clapets aspiration /refoulement avec ressort, obturateur et siège en acier inox AISI 316.



- 1 Tapones válvulas aspiración/envío contra el destornillamiento y la rotura, en acero inox AISI 316 con OR colocado bajo del tapón a protección del roscado (exclusiva Bertolini).
- 2 Tornillos en acero inox AISI 316.
- 3 Tornillo de fijación del pistón cerámico en acero inox AISI 316.
- 4 Culata bomba en acero inox AISI 316 de sección variable en función del caudal.
- 5 Juntas para altas temperaturas (serie TAM) con soporte anterior y posterior en acero inox AISI 316 y anillo antiextrusión en PTFE.
- 6 Válvulas aspiración/envío con resorte, obturador y alojamiento en acero AISI 316.

# TAM 316

SERIES 316

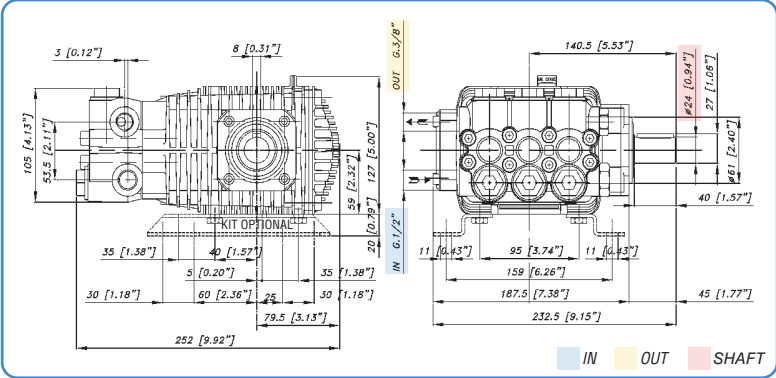
Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1/2 BSP              |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 85°C (185°F)         |
| OUT    | Ø           | 3/8 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 0,71 (0.18 U.S.gal.) |
| WEIGHT | kg (lbs)    | 10,6 kg (23.3 lbs)   |



| Codice Code  | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |     |     | 1450 RPM |     |     |     | 1725 RPM |     |     |     | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|-----|-----|-----|----------|-----|-----|-----|----------|-----|-----|-----|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM | kW  | hp  | l/min    | GPM | kW  | hp  | l/min    | GPM | kW  | hp  |                 |              |
| 07.1018.97.A | TAM 1215      | 150                     | 2175 | 8       | 2,1 | 2,3 | 3,1 | 12       | 3,2 | 3,4 | 4,6 | 14       | 3,7 | 4,0 | 5,4 | 18              | 11,2         |
| 07.1024.97.A | TAM 1315      | 150                     | 2175 | 9       | 2,4 | 2,5 | 3,4 | 13       | 3,4 | 3,8 | 5,1 | 15       | 4,0 | 4,5 | 6,0 | 18              | 12,4         |
| 07.1025.97.A | TAM 1515      | 150                     | 2175 | 10      | 2,6 | 2,9 | 3,9 | 15       | 4,0 | 4,4 | 5,9 | 18       | 4,8 | 5,2 | 7,0 | 18              | 14,4         |
| 07.1026.97.A | TAM 1715      | 150                     | 2175 | 11      | 2,9 | 3,2 | 4,3 | 17       | 4,5 | 4,9 | 6,6 | 20       | 5,3 | 5,8 | 7,8 | 18              | 16           |
| 07.1027.97.A | TAM 2015      | 150                     | 2175 | 13      | 3,4 | 3,8 | 5,1 | 20       | 5,3 | 5,7 | 7,6 | 23       | 6,1 | 6,7 | 9,0 | 18              | 18,7         |

TAM 316

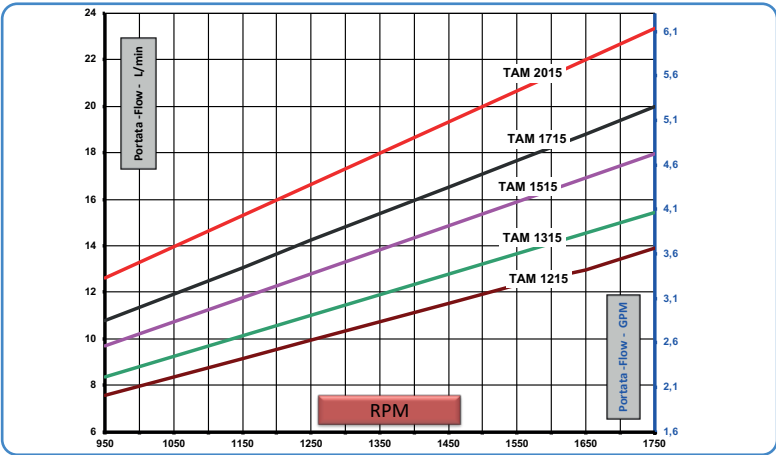


Guarnizioni - Seals  
Joints - Juntas

|                   |                         |
|-------------------|-------------------------|
| Anteriori - Front | Super "U"               |
| Posteriori - Rear | "U" PTFE - 85°C (185°F) |



GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



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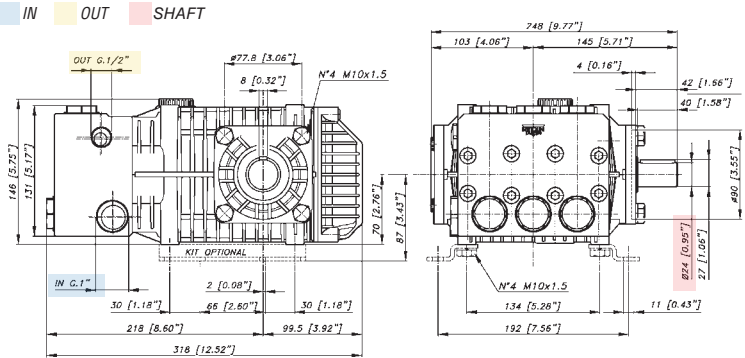
Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" BSP               |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 74°C (165°F)         |
| OUT    | Ø           | 1/2 BSP              |
| SHAFT  | Ø           | 24 mm                |
| OIL    | SAE 75W 90  | 1,4l (0.37 U.S.gal.) |
| WEIGHT | kg (lbs)    | 19,3 kg (42.5 lbs)   |



| Codice Code   | Modello Model | Press. Max Max Pressure |      | 950 RPM |     |     |      | 1450 RPM |      |      |      | 1725 RPM |      |      |      | Pistone Plunger | Corsa Stroke |
|---------------|---------------|-------------------------|------|---------|-----|-----|------|----------|------|------|------|----------|------|------|------|-----------------|--------------|
|               |               | bar                     | PSI  | l/min   | GPM | kW  | hp   | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   | Ø mm            | mm           |
| 06.4020.97.GU | KA 2815       | 150                     | 2175 | 19      | 5,0 | 5,6 | 7,5  | 29       | 7,7  | 8,4  | 11,3 | 34       | 9,0  | 9,9  | 13,3 | 25              | 14,4         |
| 06.4021.97.GU | KA 3215       | 150                     | 2175 | 22      | 5,8 | 6,3 | 8,4  | 33       | 8,7  | 9,6  | 12,9 | 38       | 10,0 | 11,3 | 15,1 | 25              | 16,4         |
| 06.4022.97.GU | KA 3815       | 150                     | 2175 | 25      | 6,6 | 7,3 | 9,8  | 38       | 10,0 | 11,1 | 14,9 | 45       | 11,9 | 13,1 | 17,6 | 25              | 19           |
| 06.4023.97.GU | KA 4215       | 150                     | 2175 | 28      | 7,4 | 8,1 | 10,9 | 42       | 11,1 | 12,3 | 16,5 | -        | -    | -    | -    | 25              | 21           |
| 06.4024.97.GU | KA 4815       | 150                     | 2175 | 32      | 8,5 | 9,3 | 12,5 | 48       | 12,7 | 14   | 18,8 | -        | -    | -    | -    | 25              | 24           |

KA 316



Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"  
Posteriori - Rear "U"

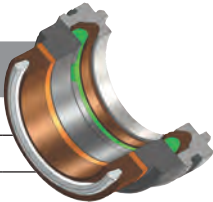
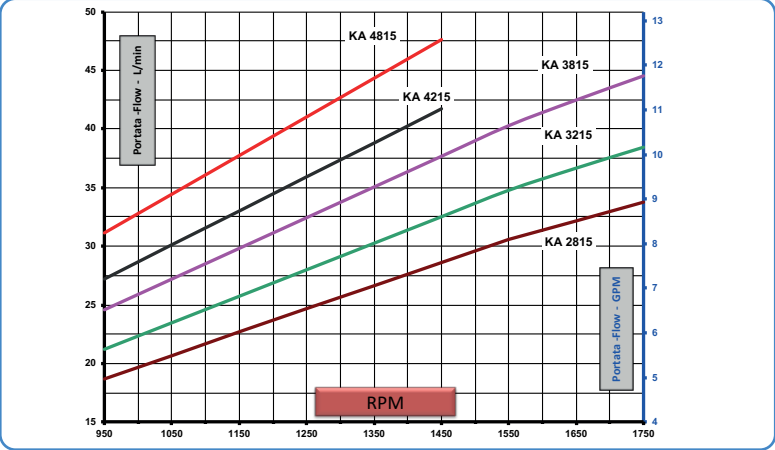


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



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Caratteristiche - Specifications - Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" 1/4 BSP           |
|        | Press. Min. | -0,2 bar (-3 PSI)    |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/4 BSP              |
| SHAFT  | Ø           | 35 mm                |
| OIL    | SAE 75W 90  | 2,8l (0.74 U.S.gal.) |
| WEIGHT | kg (lbs)    | 52 kg (114.4 lbs)    |



Guarnizioni - Seals  
Joints - Juntas

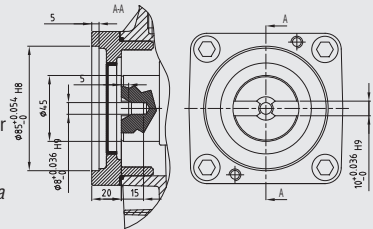
|                   |     |
|-------------------|-----|
| Anteriori - Front | "V" |
| Posteriori - Rear | "V" |



| Codice Code  | Modello Model | Press. Max Max Pressure |      | 950 RPM |      |      |      | 1450 RPM |      |      |      | 1725 RPM |      |      |      | Pistone Plunger | Corsa Stroke |
|--------------|---------------|-------------------------|------|---------|------|------|------|----------|------|------|------|----------|------|------|------|-----------------|--------------|
|              |               | bar                     | PSI  | l/min   | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   |                 |              |
| 73.8514.97.A | CA 2214.1     | 150                     | 2175 | 37      | 9,8  | 10,8 | 14,6 | 56       | 14,8 | 16,4 | 22,3 | 66       | 17,4 | 19,4 | 26,4 | 30              | 19,5         |
| 73.8515.97.A | CA 2216.1     | 150                     | 2175 | 41      | 10,8 | 12,1 | 16,5 | 63       | 16,6 | 18,5 | 25,2 | 74       | 19,6 | 21,9 | 29,8 | 30              | 22           |
| 73.8516.97.A | CA 2220.1     | 150                     | 2175 | 53      | 14,0 | 15,5 | 21,0 | 80       | 21,1 | 23,6 | 32,1 | 95       | 25,1 | 27,9 | 37,9 | 30              | 28           |
| 73.8525.97.A | CA 2226       | 150                     | 2175 | 64      | 16,9 | 18,8 | 25,5 | 98       | 25,9 | 28,6 | 39,0 | -        | -    | -    | -    | 30              | 34           |
| 73.8526.97.A | CA 2230       | 150                     | 2175 | 75      | 19,8 | 22,1 | 30,0 | 114      | 30,1 | 33,7 | 45,8 | -        | -    | -    | -    | 30              | 40           |
| 73.8527.97.A | CA 2233       | 150                     | 2175 | 83      | 21,9 | 24,3 | 33,0 | 126      | 33,3 | 37,1 | 50,4 | -        | -    | -    | -    | 30              | 44           |

USCITA POTENZA - OUTLET POWER SOURCE

- Accoppiamento albero uscita supplementare, per azionamento accessori (es. pompe idrauliche, pompe centrifughe, ecc.)
- Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrifugas, etc.)



CA 316

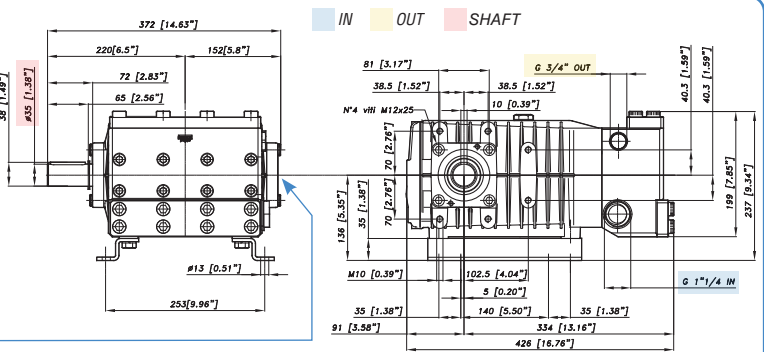
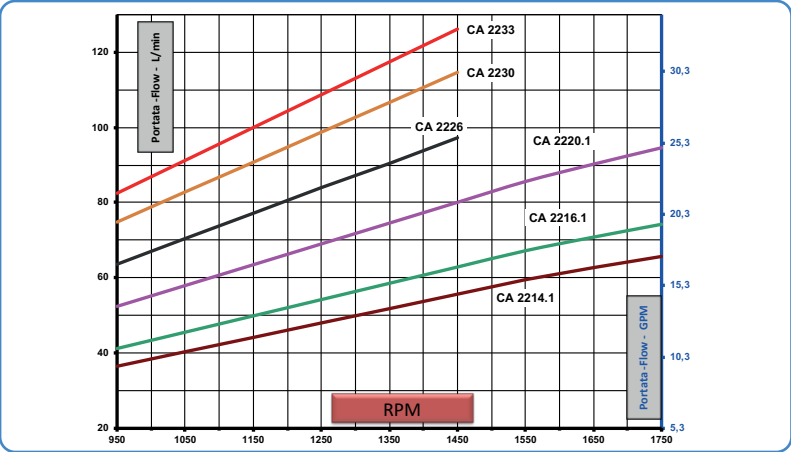


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



pag.121



The background features a dynamic, abstract composition of flowing golden liquid, possibly oil or honey, creating elegant, curved lines and splashes. A large, semi-transparent, stylized 'X' shape is overlaid on the image, composed of two intersecting rounded rectangular outlines. The overall color palette is dominated by warm golds, yellows, and oranges, set against a darker, textured background.

# Heavy Duty Pumps





# Heavy Duty

100% European-American  
Components



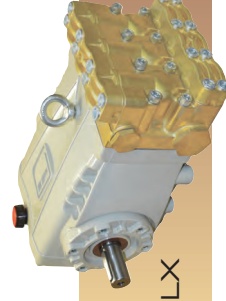

CR  
Pag. 78



CK3003  
Pag. 80



CPQ  
Pag. 84



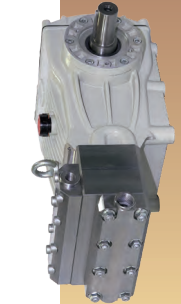
CPQLX  
Pag. 86



CK3006  
Pag. 88



CX  
Pag. 90



CAX  
Pag. 98



CHX  
Pag. 100



CPQLCK  
Pag. 94



CPQLCX  
Pag. 96





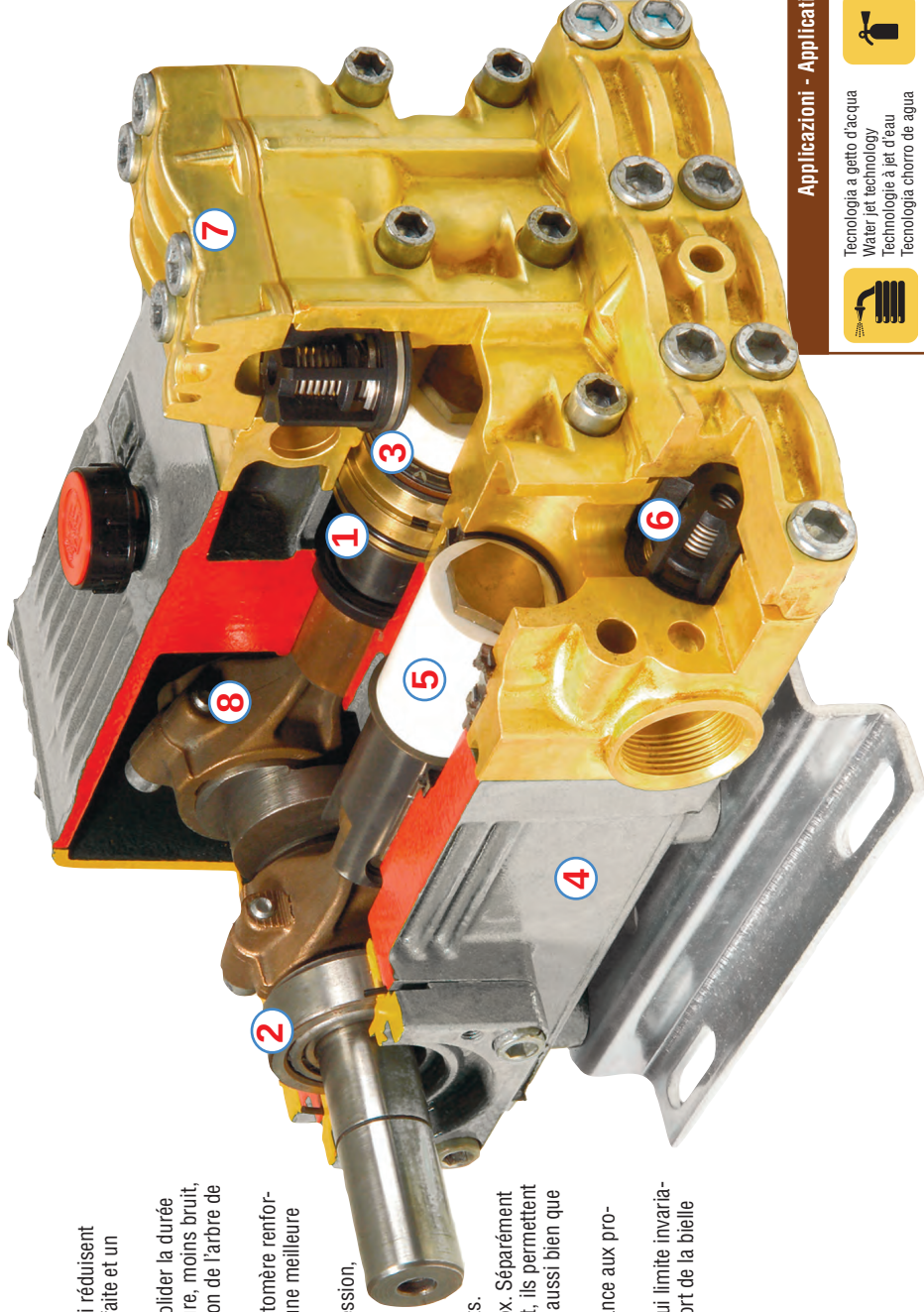
- 1 Boccole autolubrificanti antifrizione brevettate in PTFE, riducono l'effetto frizione e garantiscono un'operatività a progressione continua.
- 2 Cuscinetti a rulli conici di primaria marca per condizioni di lavoro estese ad ogni applicazione.
- 3 Doppia guarnizione a "V" autolubrificante in elastomero rinforzato che ne ottimizza la durata.
- 4 Carter in alluminio pressofuso con caratteristiche di alta resistenza e trattamento di verniciatura speciale anti-corrosiva.
- 5 Pistoni in ceramica integrale di grande qualità.
- 6 Valvole aspirazione e mandata in acciaio inox 316. Intercambiabili: aspirazione e mandata, con alta efficienza volumetrica e massima capacità di aspirazione.
- 7 Testata in ottone forgiato per coniugare la resistenza alla compatibilità chimica.
- 8 Biella con sistema a interfaccia autoallineante e superficie speculare in lega di bronzo. Riduce definitivamente l'effetto frizione e l'usura per riscaldamento.



- 1 Bagues autolubrifiantes brevetées PTFE qui réduisent l'effet friction, assurent une étanchéité parfaite et un fonctionnement régulier.
- 2 Roulements à rouleaux coniques pour consolider la durée de la pompe, permettent d'avoir moins usure, moins bruit, moins effort et surtout une meilleure rotation de l'arbre de la pompe.
- 3 Doubles joints à "V" autolubrifiants en élastomère renforcé pour optimiser leur durée et permettre une meilleure étanchéité.
- 4 Grand carter en aluminium moulé sous pression, très résistant, traitement de vernissage spécial anticorrosion.
- 5 Pistons en céramique intégrale parfaitement traités et une finition de surface impeccable augmente l'étanchéité des joints.
- 6 Clapets aspiration-refoulement en acier inox. Séparément interchangeables: aspiration et refoulement, ils permettent d'obtenir le plein rendement volumétrique, aussi bien que la capacité d'aspiration max.
- 7 Culasse en laiton pour consolider la résistance aux produits chimiques.
- 8 Bielle avec surface importante en bronze qui limite invariablement l'effet friction et l'usure due à l'effort de la bielle sur l'arbre de la pompe.



- 1 Casquillos autolubrificantes antifricción patentados PTFE que reducen el efecto fricción y garantizan una operatividad a progresión continua.
- 2 Cojinetes de rodillos cónicos de primera marca resistentes a condiciones de trabajo extremas y de todo tipo.
- 3 Doble junta "V" autolubrificante en elastómero reforzado que optimiza la duración.
- 4 Cáter en aluminio fundido a presión con características de alta resistencia y tratamiento de pintura especial anticorrosivo.
- 5 Pistones de cerámica integral de alta calidad.
- 6 Válvulas de aspiración y envío en acero inox 316. Intercambiables: aspiración y envío, con alta eficiencia volumétrica y máxima capacidad de aspiración.
- 7 Culata en latón para juntar la resistencia y la compatibilidad química.
- 8 Biela con sistema de interfase autoalineante y superficie especular en aleación de bronce. Reduce definitivamente el efecto fricción y el deterioro por recalentamiento.



### Applicazioni - Applications - Aplicaciones



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnología chorro de agua



Impianti anti-incendio  
Fire alarm systems  
Sistemas contre les incendies  
Sistemas anti-incendio



Spurgo fognie  
Sewer maintenance  
Vidange d'égouts  
Espurgo cloacas



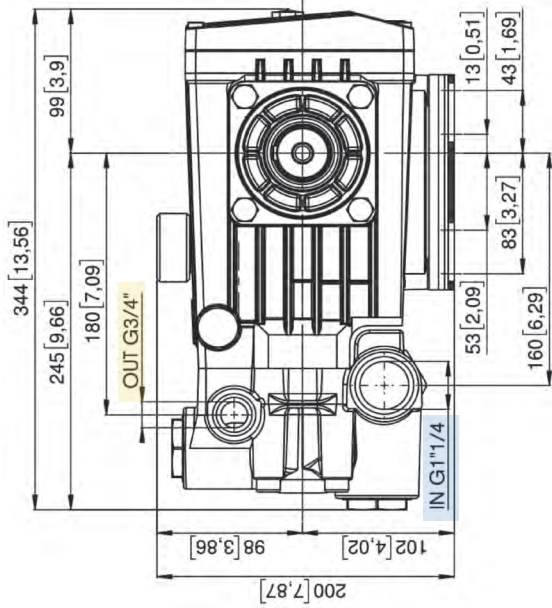
| Caratteristiche - Specifications<br>Caractéristiques - Características |                                  |
|------------------------------------------------------------------------|----------------------------------|
| IN                                                                     | Ø 1" 1/4 BSP                     |
|                                                                        | Press. Min. -0,1 bar (-1.5 PSI)  |
|                                                                        | Press. Max. 6 bar (87 PSI)       |
|                                                                        | Temp. Max. 60°C (140°F)          |
| OUT                                                                    | Ø 3/4 BSP                        |
| SHAFT                                                                  | Ø 35 mm                          |
| OIL                                                                    | SAE 75W 90 1,69l (0.45 U.S.gal.) |
| WEIGHT                                                                 | 25 kg (55 lbs)                   |

Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front Super "U"  
Posteriori - Rear "U"



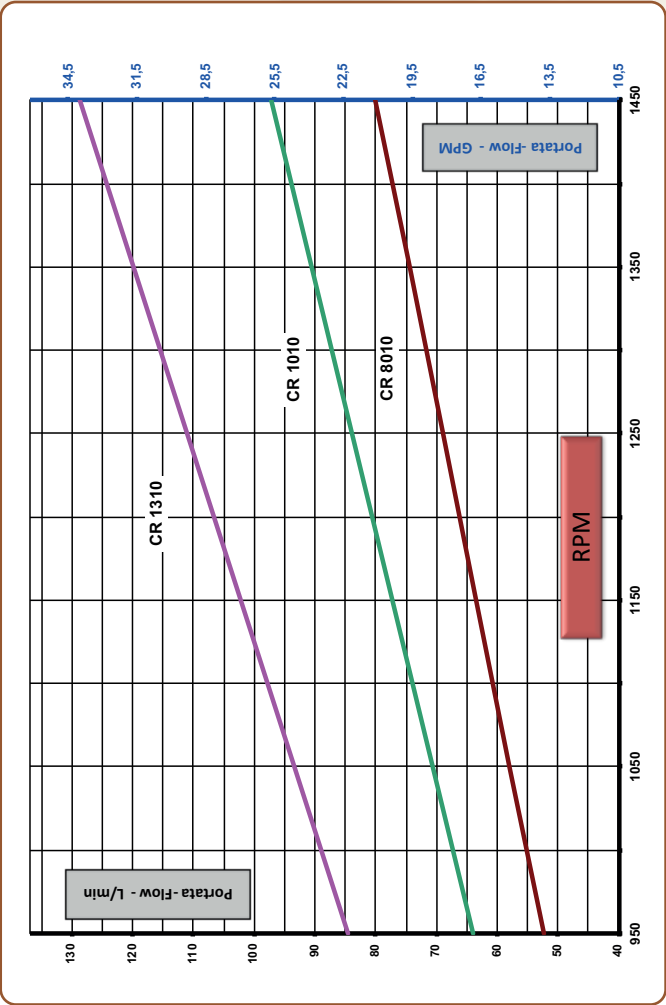
CR





| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 950 RPM |      |      | 1200 RPM |       |      | 1450 RPM |      |       | Pistone<br>Plunger | Corsa<br>Stroke |      |    |
|----------------|------------------|----------------------------|------|---------|------|------|----------|-------|------|----------|------|-------|--------------------|-----------------|------|----|
|                |                  | bar                        | PSI  | l/min   | GPM  | kW   | hp       | l/min | GPM  | kW       | hp   | l/min |                    |                 | GPM  | kW |
| 53.5000.97.3   | CR 8010          | 100                        | 1450 | 53      | 14,0 | 10,3 | 14,0     | 66    | 17,4 | 13,0     | 17,7 | 79    | 20,9               | 15,4            | 20,9 | 28 |
| 53.5001.97.3   | CR 1010          | 100                        | 1450 | 64      | 16,9 | 12,5 | 17,0     | 81    | 21,4 | 15,8     | 21,5 | 96    | 25,4               | 18,7            | 25,4 | 34 |
| 53.5002.97.3   | CR 1310          | 100                        | 1450 | 84      | 22,2 | 16,6 | 22,5     | 106   | 28,0 | 20,9     | 28,5 | 129   | 34,1               | 25,3            | 34,4 | 40 |

GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di complemento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



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Caratteristiche - Specifications  
Caractéristiques - Características

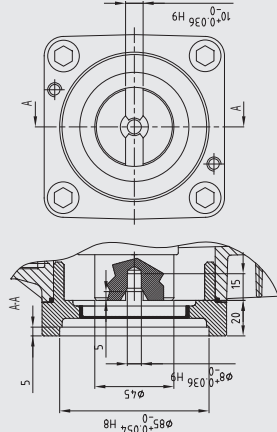
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" 1/4 BSP           |
|        | Press. Min. | -0,2 bar (-3 PSI)    |
|        | Press. Max. | 6 bar (87 PSI)       |
| OUT    | Temp. Max.  | 60°C (140°F)         |
|        | Ø           | 3/4 BSP              |
| SHAFT  | Ø           | 35 mm                |
| OIL    | SAE 75W 90  | 2,8l (0.74 U.S.gal.) |
| WEIGHT | kg (lbs)    | 52 kg (114.4 lbs)    |



Guarnizioni - Seals  
Joints - Juntas

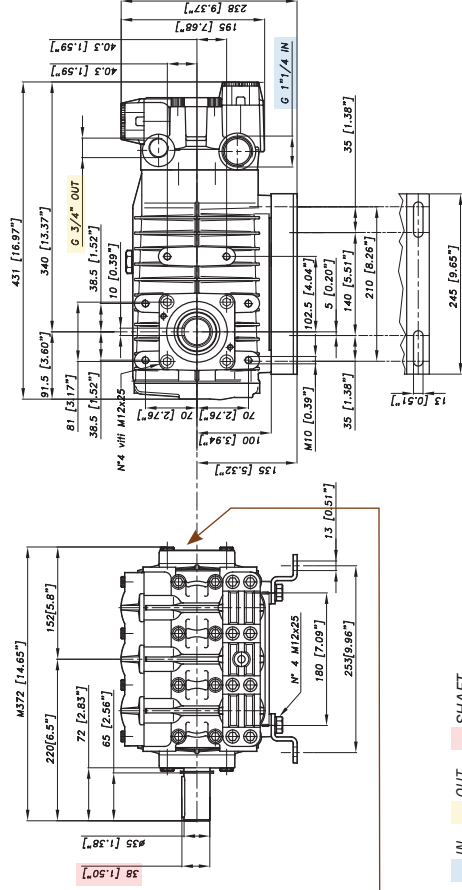
|                   |     |
|-------------------|-----|
| Anteriori - Front | "V" |
| Posteriori - Rear | "V" |

USCITA POTENZA - OUTLET POWER SOURCE



- Accoppiamento albero uscita supplementare, per azionamento accessori (es. pompa idrauliche, pompe centrifughe, ecc.)
- Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrífugas, etc.)

CK 3003



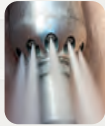
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 1000 RPM |      |      |      | 1450 RPM |      |      |      | 1725 RPM |      |      |      | Pistone<br>Plunger | Corsa<br>Stroke |
|----------------|------------------|----------------------------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|--------------------|-----------------|
|                |                  | bar                        | PSI  | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   | l/min    | GPM  | kW   | hp   |                    |                 |
| 73.8510.97.A   | CK 2216.1        | 150                        | 2175 | 45       | 11,9 | 13,2 | 17,7 | 62       | 16,4 | 18,3 | 24,6 | 69       | 18,2 | 20,4 | 27,3 | 30                 | 22              |
| 73.8506.97.A   | CK 2220.1        | 150                        | 2175 | 57       | 15,1 | 16,8 | 22,5 | 79       | 20,9 | 23,3 | 31,3 | -        | -    | -    | -    | 30                 | 28              |
| 73.8616.97.A   | CKL 2226.1       | 150                        | 2175 | 69       | 18,2 | 20,4 | 27,3 | 96       | 25,4 | 28,3 | 38,0 | -        | -    | -    | -    | 30                 | 34              |
| 73.8617.97.A   | CKL 2230.1       | 150                        | 2175 | 82       | 21,7 | 24,0 | 32,1 | 113      | 29,9 | 33,3 | 44,7 | -        | -    | -    | -    | 30                 | 40              |
| 73.8618.97.A   | CKL 2233.1       | 150                        | 2175 | 90       | 23,8 | 26,4 | 35,4 | 125      | 33,0 | 36,6 | 49,1 | -        | -    | -    | -    | 30                 | 44              |

(\*) Per specificare la versione aggiungere al codice:  
R = albero destro Ø 35 mm  
l = albero speciale sinistro per applicazioni a motori idraulici (pompe CKl)

(\*) To specify the version pls. add to the last number:  
R = right side shaft Ø 35 mm  
l = special left side shaft for hydraulic motors applications (pumps CKl)

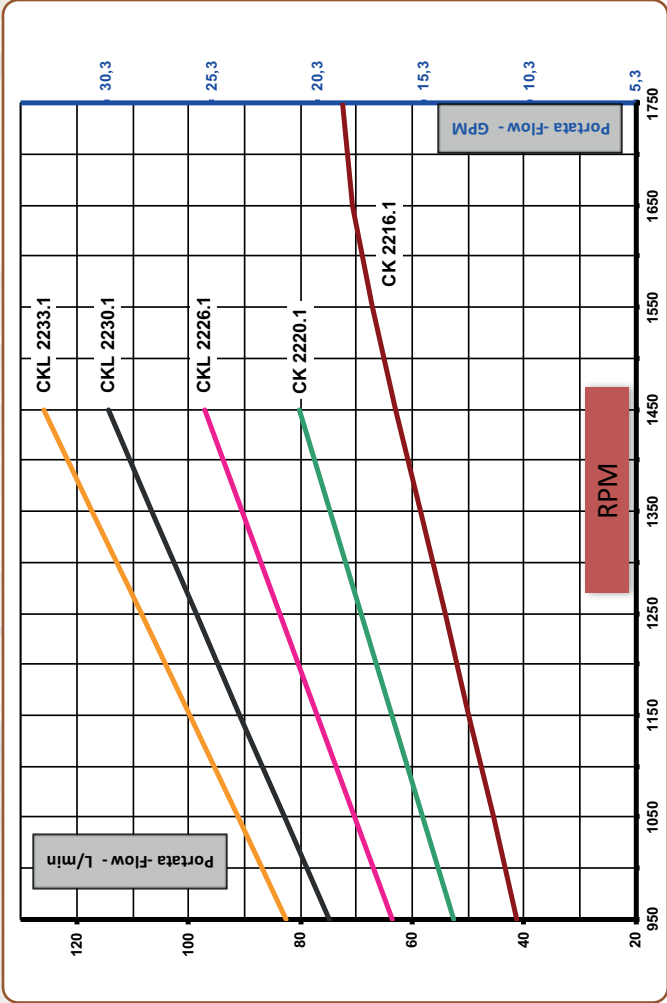
(\*) Pour spécifier la version ajouter à la réf.:  
R = arbre côté droit Ø 35 mm  
l = arbre côté gauche spécial pour accouplement aux moteurs hydrauliques (pompes CKl)

(\*) Para especificar la versión añadir a la referencia:  
R = cigüeñal a la derecha Ø 35 mm  
l = cigüeñal especial a la izquierda para aplicaciones con motores hidráulicos (bombas CKl)



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GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios

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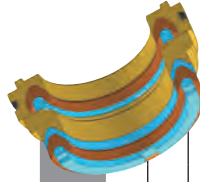
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Caratteristiche - Specifications  
Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" 1/4 BSP           |
|        | Press. Min. | -0,2 bar (-3 PSI)    |
|        | Press. Max. | 6 bar (87 PSI)       |
| OUT    | Temp. Max.  | 60°C (140°F)         |
|        | Ø           | 3/4 BSP              |
| SHAFT  | Ø           | 35 mm                |
| OIL    | SAE 75W 90  | 2,8l (0.74 U.S.gal.) |
| WEIGHT | kg (lbs)    | 52 kg (114.4 lbs)    |

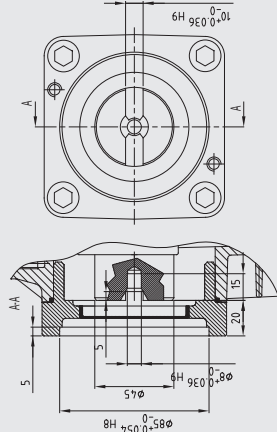


Guarnizioni - Seals  
Joints - Juntas

Anteriori - Front "V"

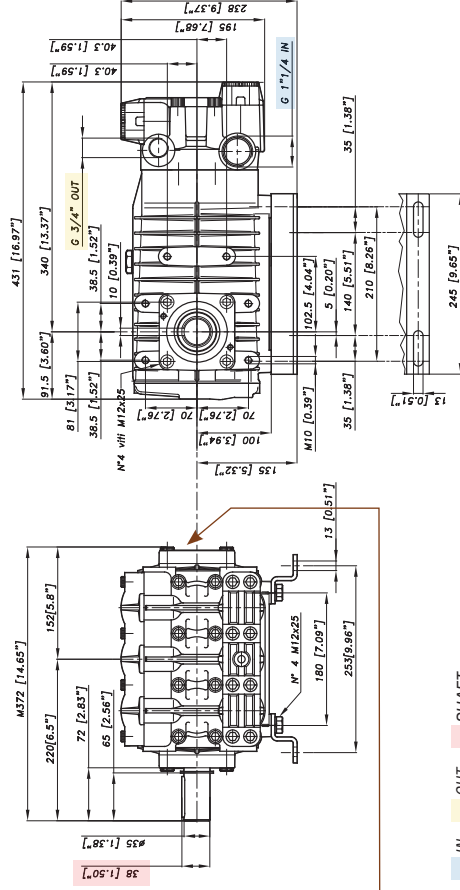
Posteriori - Rear "V"

USCITA POTENZA - OUTLET POWER SOURCE



- Accoppiamento albero uscita supplementare, per azionamento accessori (es. pompa idrauliche, pompe centrifughe, ecc.)
- Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrífugas, etc.)

CK 3003





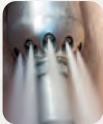
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 550 RPM |      |      | 750 RPM |       |      | 1000 RPM |      |       | Pistone<br>Plunger | Corsa<br>Stroke |      |    |
|----------------|------------------|----------------------------|------|---------|------|------|---------|-------|------|----------|------|-------|--------------------|-----------------|------|----|
|                |                  | bar                        | PSI  | I/min   | GPM  | kW   | hp      | I/min | GPM  | kW       | hp   | I/min |                    |                 | GPM  | kW |
| 73.8500.97.A   | CK 1426.1        | 100                        | 1450 | 56      | 14,8 | 10,9 | 14,7    | 75    | 19,8 | 14,8     | 19,8 | 100   | 26,4               | 19,7            | 26,4 | 28 |
| 73.8501.97.A   | CK 1433.1        | 100                        | 1450 | 72      | 19,0 | 14,1 | 18,9    | 97    | 25,6 | 19,0     | 25,5 | 126   | 33,3               | 24,8            | 33,2 | 36 |
| 73.8502.97.A   | CK 1440.1        | 100                        | 1450 | 87      | 23,0 | 17,2 | 23,1    | 118   | 31,2 | 23,2     | 31,1 | 153   | 40,4               | 30,0            | 40,2 | 44 |

(\*) Per specificare la versione aggiungere al codice:  
R = albero destro Ø 35 mm  
I = albero speciale sinistro per applicazioni a motori idraulici (pompe CKI)

(\*) To specify the version pls. add to the last number:  
R = right side shaft Ø 35 mm  
I = special left side shaft for hydraulic motors applications (pumps CKI)

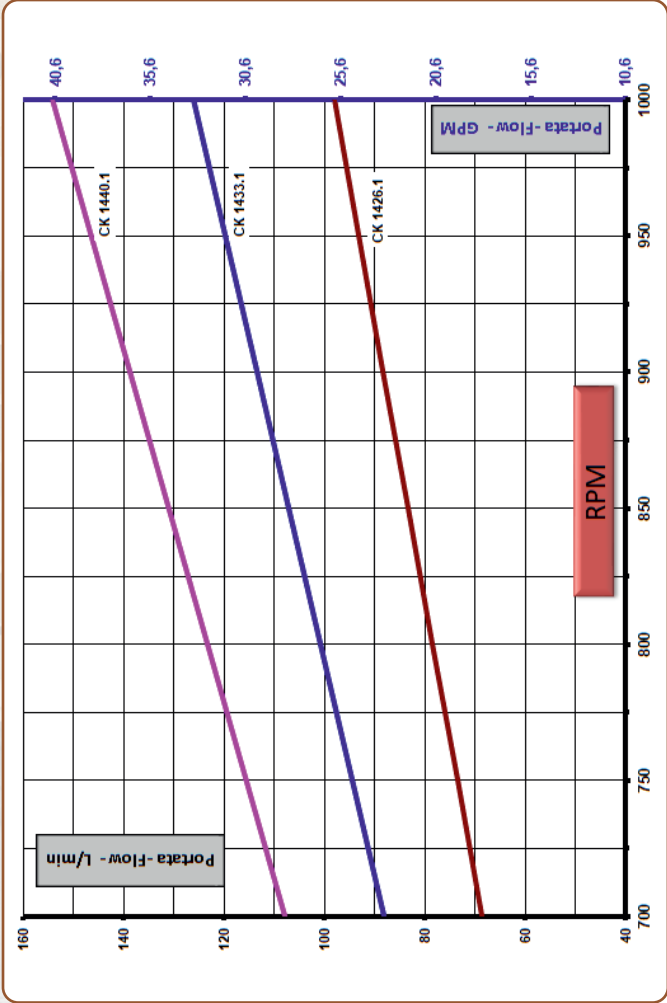
(\*) Pour spécifier la version ajouter à la réf.:  
R = arbre côté droit Ø 35 mm  
I = arbre côté gauche spécial pour accouplement aux moteurs hydrauliques (pompes CKI)

(\*) Para especificar la versión añadir a la referencia:  
R = cigüeñal a la derecha Ø 35 mm  
I = cigüeñal especial a la izquierda para aplicaciones con motores hidráulicos (bombas CKI)



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GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



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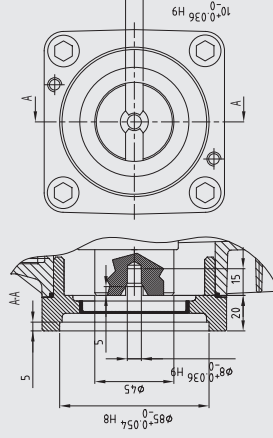
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**Caratteristiche - Specifications  
Caractéristiques - Características**

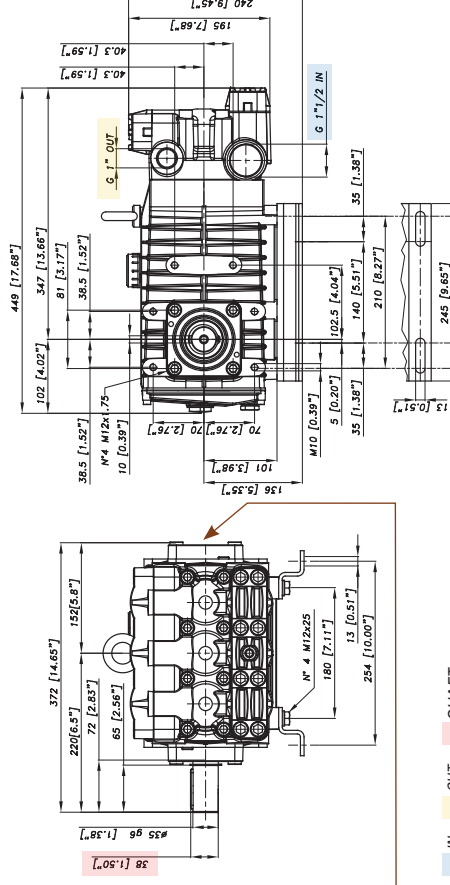
|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" 1/2 BSP           |
|        | Press. Min. | -0.2 bar (-3 PSI)    |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 1" BSP               |
| SHAFT  | Ø           | 35 mm                |
| OIL    | SAE 75W 90  | 2,8l (0.74 U.S.gal.) |
| WEIGHT | kg (lbs)    | 55 kg (121.3 lbs)    |

## USCITA POTENZA - OUTLET POWER SOURCE



- Accoppiamento albero uscita supplementare, per azionamento accessorio (es. pompe idrauliche, pompe centrifughe, ecc.)
- *Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)*
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- *Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrifugas, etc.)*

## CPQ





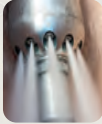
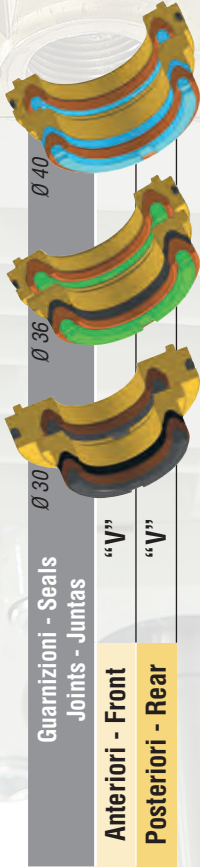
| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 700 RPM |      |         |      | 850 RPM |      |          |      | 1000 RPM |      |          |      | Pistone<br>Plunger | Corsa<br>Stroke |  |  |
|----------------|------------------|----------------------------|------|---------|------|---------|------|---------|------|----------|------|----------|------|----------|------|--------------------|-----------------|--|--|
|                |                  | bar                        | PSI  | l/min   | GPM  | kw      | hp   | l/min   | GPM  | kw       | hp   | l/min    | GPM  | kw       | hp   |                    |                 |  |  |
| 73.8626.97.A   | CPQ 9020.1       | 200                        | 2900 | 62      | 16,4 | 24,4    | 32,7 | 75      | 19,8 | 29,3     | 39,2 | 87       | 23,0 | 34,1     | 45,7 | 30                 | 44              |  |  |
| 73.8628.97.A   | CPQ 1316.1       | 160                        | 2320 | 89      | 23,5 | 28,1    | 37,6 | 107     | 28,3 | 33,7     | 45,2 | 125      | 33,0 | 39,2     | 52,6 | 36                 | 44              |  |  |
| 73.8629.97.A   | CPQ 1413.1       | 130                        | 1885 | 100     | 26,4 | 25,6    | 34,3 | 121     | 32,0 | 30,7     | 41,2 | 140      | 37,0 | 35,8     | 48,0 | 40                 | 40              |  |  |
| 73.8630.97.A   | CPQ 1613.1       | 130                        | 1885 | 110     | 29,1 | 28,1    | 37,7 | 133     | 35,1 | 33,8     | 45,3 | 154      | 40,7 | 39,4     | 52,8 | 40                 | 44              |  |  |
|                |                  |                            |      |         |      | 950 RPM |      |         |      | 1200 RPM |      |          |      | 1450 RPM |      |                    |                 |  |  |
| 73.8672.97.3   | CPQ 1318-F       | 180                        | 2610 | 83      | 21,9 | 29,1    | 39,6 | 104     | 27,5 | 36,8     | 50,1 | 125      | 33,0 | 44,0     | 59,8 | 30                 | 44              |  |  |
| 73.8673.97.3   | CPQ 1613-F       | 130                        | 1885 | 108     | 28,5 | 27,6    | 37,5 | 136     | 35,9 | 34,8     | 47,3 | 163      | 43,1 | 41,6     | 56,6 | 36                 | 40              |  |  |

(\*) Per specificare la versione aggiungere al codice:  
R = albero destro Ø 35 mm  
l = albero speciale sinistro per applicazioni a motori idraulici (pompe CKI)

(\*) To specify the version pls. add to the last number:  
R = right side shaft Ø 35 mm  
l = special left side shaft for hydraulic motors applications (pumps CKI)

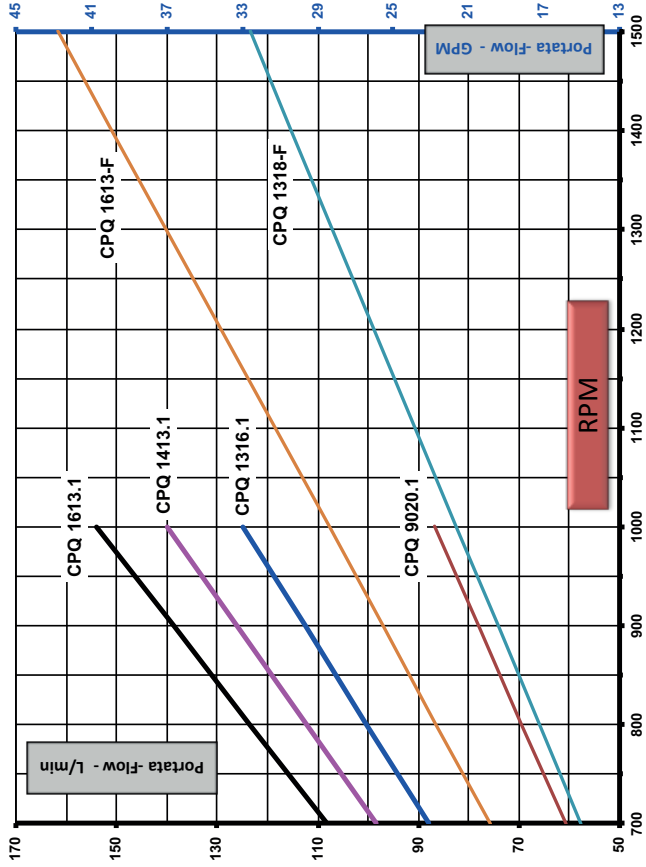
(\*) Pour spécifier la version ajouter à la réf.:  
R = arbre côté droit Ø 35 mm  
l = arbre côté gauche spécial pour accouplement aux moteurs hydrauliques (pompes CKI)

(\*) Para especificar la versión añadir a la referencia:  
R = cigüeñal a la derecha Ø 35 mm  
l = cigüeñal especial a la izquierda para aplicaciones con motores hidráulicos (bombas CKI)



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GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di complemento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios







Applicazioni: Soluzioni complete per la pulizia delle tubazioni p.136  
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Applications: Solutions complètes pour le nettoyage des canalisations p.136  
Aplicaciones: Soluciones completas para la limpieza de tuberías p.136



- 1 Cuscinetti a rulli conici di primaria marca.
- 2 Doppia guarnizione a "V" autolubrificante in elastomero rinforzato che ne ottimizza la durata.
- 3 Carter rinforzato con grande capienza d'olio studiata per garantire un'ottimale lubrificazione per usi continuativi.
- 4 Pistoni in ceramica 99,5% allumina ad elevato spessore.
- 5 Valvole aspirazione e mandata in acciaio inox AISI 316. Con alta efficienza volumetrica e massima capacità d'aspirazione.
- 6 Testata in ottone forgiato per coniugare resistenza e compatibilità chimica.
- 7 Bielle in bronzo stampate a due corpi.
- 8 Guida pistone in acciaio inox temprato



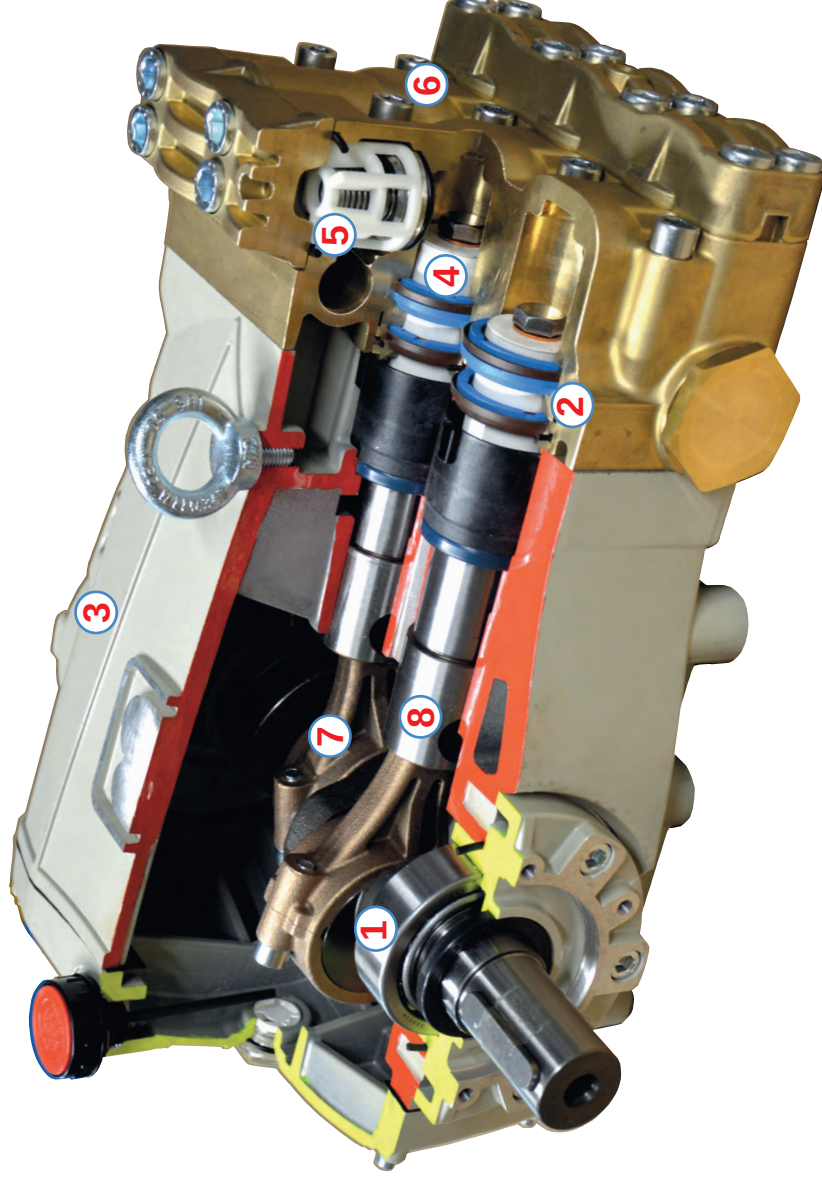
- 1 Roulements à rouleaux coniques de première qualité.
- 2 Ensemble étanchéité, double joint autolubrifiant en « V » en élastomère renforcé conçu pour une grande longévité.
- 3 Grand carter permet d'avoir une importante capacité d'huile pour une meilleure lubrification dans les conditions de travail difficiles.
- 4 Pistons en céramique 99,5% d'alumine, de forte épaisseur.
- 5 Clapets aspiration et refoulement en acier inox AISI 316, assurant un grand rendement volumétrique.
- 6 Culasse en laiton forgé pour allier résistance et compatibilité chimique.
- 7 Bielles deux pièces en bronze.
- 8 Guide piston en acier inox trempé.



- 1 Premium-brand oversized tapered roller bearings.
- 2 Double self-lubricating "V" seal made up of reinforced elastomer that optimizes its duration.
- 3 Reinforced crankcase with large oil capacity designed to ensure optimum lubrication for intensive use.
- 4 Highly solid plungers made up of 99.5% alumina ceramic.
- 5 Check-valves in AISI 316 stainless steel. They ensure high volumetric efficiency and maximum suction capacity.
- 6 Forged brass head to combine great resistance and chemical compatibility.
- 7 Bronze connecting rods matched "two piece" pairs
- 8 Plunger rod in hardened stainless steel.



- 1 Cojinetes de rodillos cónicos de primera marca.
- 2 Junta doble en "V" auto-lubrificante en elastómero reforzado que optimiza su duración.
- 3 Cáster reforzado con gran capacidad de aceite diseñado para asegurar una lubricación óptima para un uso continuo.
- 4 Pistones cerámicos de alumina al 99,5%, de alto espesor.
- 5 Válvulas de aspiración y descarga en acero inoxidable AISI 316. Con alta eficiencia volumétrica y máxima capacidad de aspiración.
- 6 Cabeza en latón forjado para combinar resistencia y compatibilidad química.
- 7 Bielas en bronce en dos piezas.
- 8 Guía de pistón en acero inoxidable templado.



### Applicazioni - Applications - Applications - Aplicaciones



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnología chorro de agua



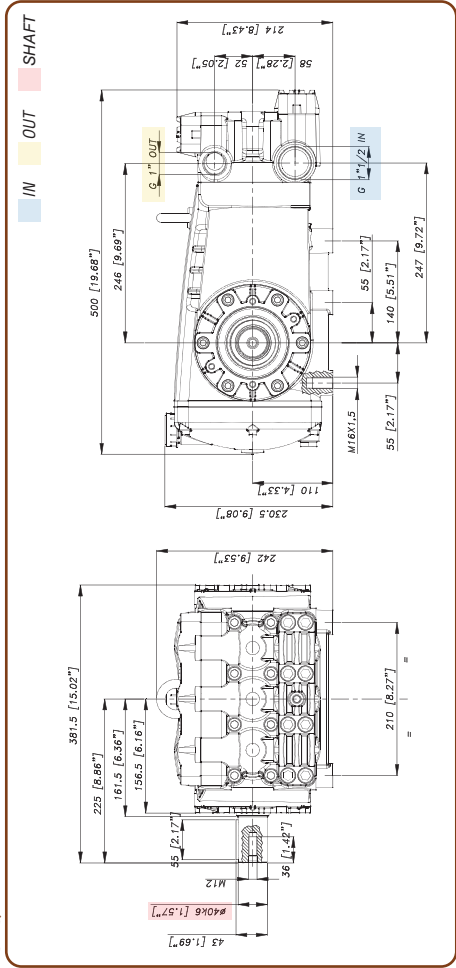
Impianti anti-incendio  
Fire alarm systems  
Systèmes contre les incendies  
Sistemas anti-incendio



Surgo fogne  
Sewer maintenance  
Vidange d'égouts  
Espurgo cloacas



CPQ LX



| Caratteristiche - Specifications |             | Caractéristiques - Características |  |
|----------------------------------|-------------|------------------------------------|--|
| IN                               | Ø           | 1" 1/2 BSP                         |  |
|                                  | Press. Min. | -0.2 bar (-3 PSI)                  |  |
|                                  | Press. Max. | 6 bar (87 PSI)                     |  |
|                                  | Temp. Max.  | 60°C (140°F)                       |  |
| OUT                              | Ø           | 1" BSP                             |  |
| SHAFT                            | Ø           | 40 mm                              |  |
| OIL                              | SAE 75W 90  | 3.3l (0.87 U.S.gal.)               |  |
| WEIGHT                           | kg (lbs)    | 57 kg (125.6 lbs)                  |  |

| Codice<br>Code   | Modello<br>Model | Press. Max<br>Max Pressure<br>bar | 700 RPM |      |      | 850 RPM |      |      | 1000 RPM |      |      | Pistone<br>Plunger<br>Ø mm | Cursa<br>Stroke<br>mm |
|------------------|------------------|-----------------------------------|---------|------|------|---------|------|------|----------|------|------|----------------------------|-----------------------|
|                  |                  |                                   | I/min   | GPM  | hp   | I/min   | GPM  | hp   | I/min    | GPM  | hp   |                            |                       |
| 73.8631.97.A (*) | CPQ 9020.1 LX    | 200                               | 62      | 16,4 | 24,4 | 75      | 19,8 | 29,3 | 87       | 23,0 | 34,1 | 30                         | 44                    |
| 73.8632.97.A (*) | CPQ 1316.1 LX    | 160                               | 89      | 23,5 | 28,1 | 107     | 28,3 | 33,7 | 125      | 33,0 | 39,2 | 36                         | 44                    |
| 73.8633.97.A (*) | CPQ 1413.1 LX    | 130                               | 100     | 26,4 | 25,6 | 121     | 32,0 | 30,7 | 140      | 37,0 | 35,8 | 40                         | 40                    |
| 73.8634.97.A (*) | CPQ 1613.1 LX    | 130                               | 185     | 110  | 29,1 | 133     | 35,1 | 33,8 | 154      | 40,7 | 39,4 | 40                         | 44                    |

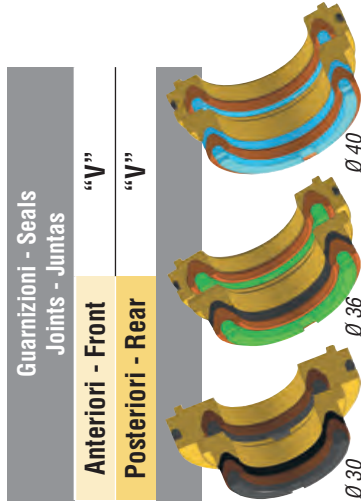
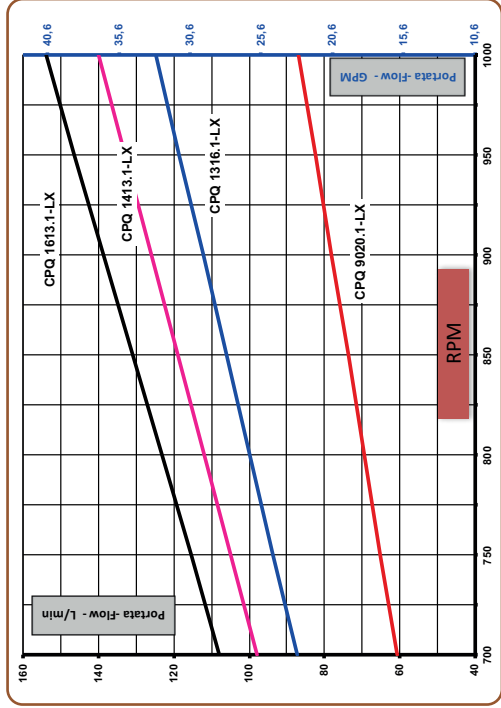
(\*) Per specificare la versione aggiungere al codice:  
R = albero destro Ø 40 mm

(\*) To specify the version pls. add to the last number:  
R = right side shaft Ø 40 mm

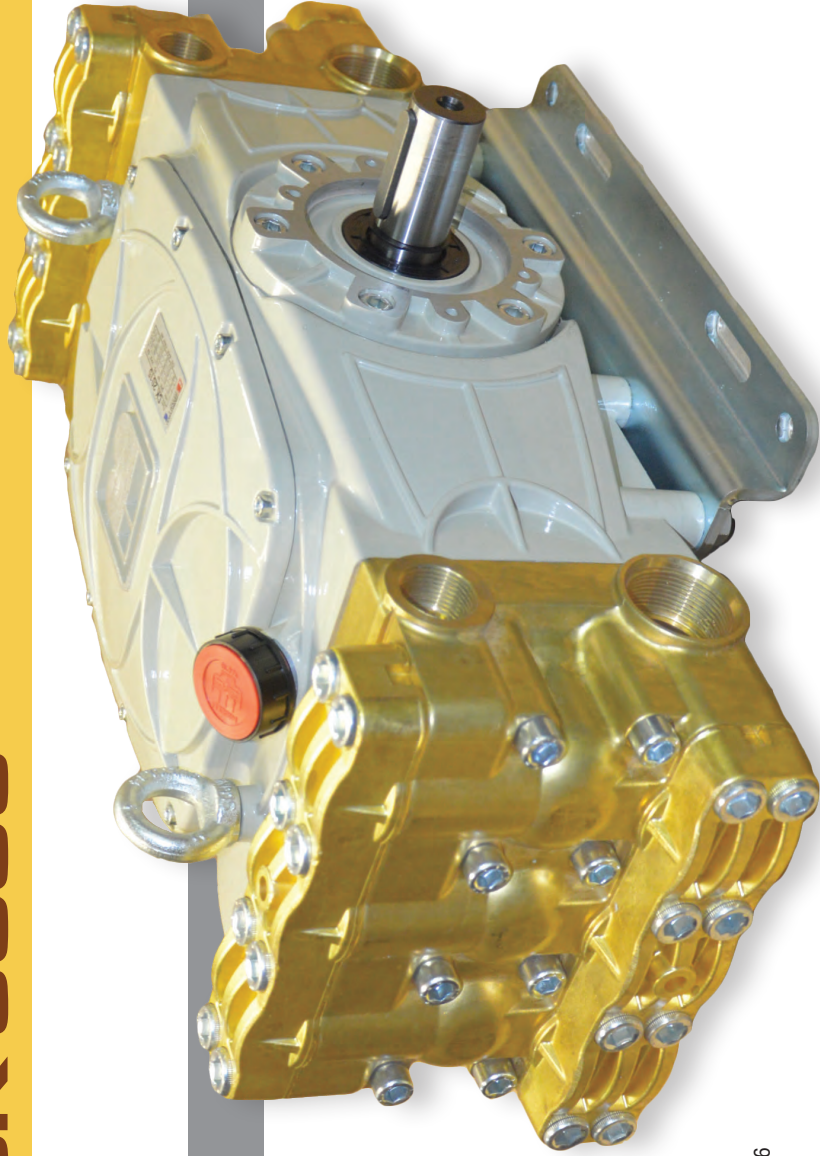
(\*) Pour spécifier la version ajouter à la réf.:  
R = arbre côté droit Ø 40 mm

(\*) Para especificar la versión añadir a la referencia:  
R = cigüeñal a la derecha Ø 40 mm

GRAFICO PRESTAZIONI - PERFORMANCE CHART





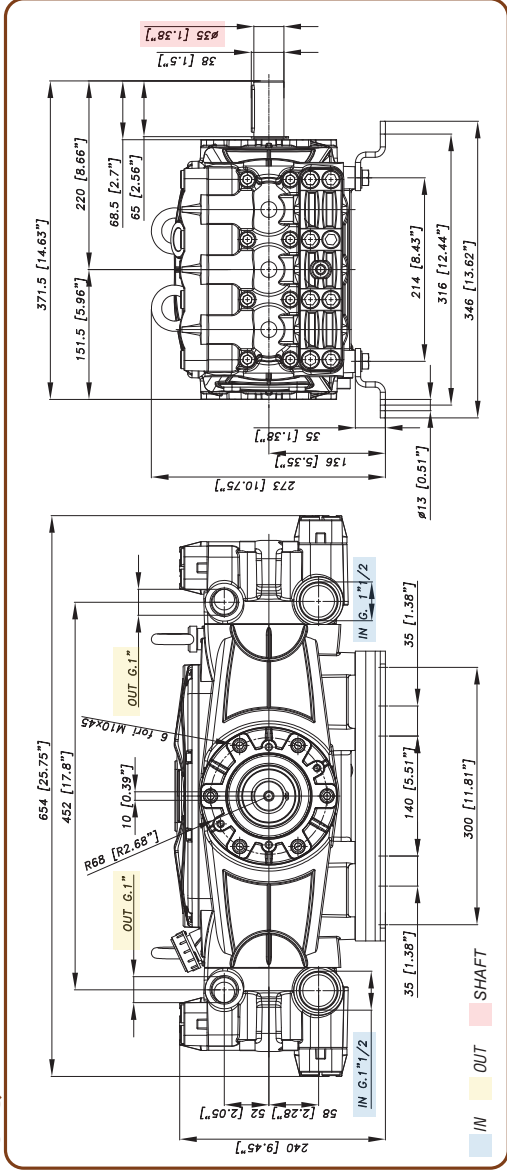


| Caratteristiche - Specifications<br>Caractéristiques - Características |                                 |
|------------------------------------------------------------------------|---------------------------------|
| IN                                                                     | Ø 1" 1/2 BSP (nr.2)             |
|                                                                        | Press. Min. -0,2 bar (-3 PSI)   |
|                                                                        | Press. Max. 6 bar (87 PSI)      |
| OUT                                                                    | Temp. Max. 60°C (140°F)         |
|                                                                        | Ø 1" BSP (nr.2)                 |
| SHAFT                                                                  | Ø 35 mm                         |
| OIL                                                                    | SAE 75W 90 2,8l (0.74 U.S.gal.) |
| WEIGHT                                                                 | kg (lbs) 75.2 kg (169.8 lbs)    |



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Aplicaciones: Soluciones completas para la limpieza de tuberías p.136

## CPQ





| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 950 RPM |      |         |      | 1200 RPM |      |          |      | 1450 RPM |      |      |      | Pistone<br>Plunger | Corsa<br>Stroke |
|----------------|------------------|----------------------------|------|---------|------|---------|------|----------|------|----------|------|----------|------|------|------|--------------------|-----------------|
|                |                  | bar                        | PSI  | l/min   | GPM  | kW      | hp   | l/min    | GPM  | kW       | hp   | l/min    | GPM  | kW   | hp   | Ø mm               | mm              |
| 76.8030.97.3   | CK 2015          | 150                        | 2175 | 129     | 34,1 | 37,8    | 50,8 | 161      | 42,5 | 47,3     | 63,5 | 192      | 50,7 | 56,6 | 75,9 | 30                 | 34              |
| 76.8031.97.3   | CK 2313          | 125                        | 1813 | 153     | 40,4 | 37,4    | 50,2 | 191      | 50,5 | 46,8     | 62,7 | 228      | 60,2 | 56,0 | 75,0 | 36                 | 28              |
| 76.8032.97.3   | CK 2810          | 100                        | 1450 | 185     | 48,9 | 36,3    | 48,7 | 232      | 61,3 | 45,4     | 60,9 | 277      | 73,2 | 54,4 | 72,9 | 36                 | 34              |
|                |                  | 550 RPM                    |      |         |      | 750 RPM |      |          |      | 1000 RPM |      |          |      |      |      |                    |                 |
| 76.8033.97.3   | CK 2010          | 100                        | 1450 | 109     | 28,8 | 21,4    | 28,7 | 147      | 38,8 | 28,9     | 38,7 | 194      | 51,3 | 38,1 | 51,1 | 40                 | 28              |
| 76.8034.97.3   | CK 2580          | 80                         | 1160 | 140     | 37,0 | 22,0    | 29,5 | 189      | 49,9 | 29,7     | 39,8 | 250      | 66,1 | 39,2 | 52,6 | 40                 | 36              |

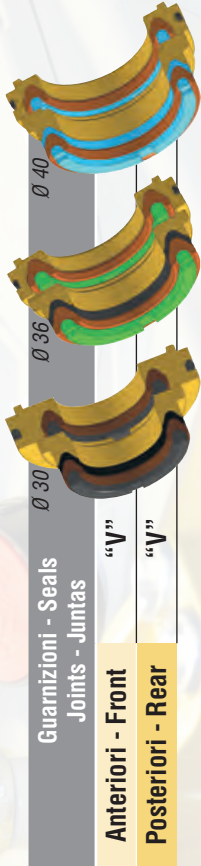
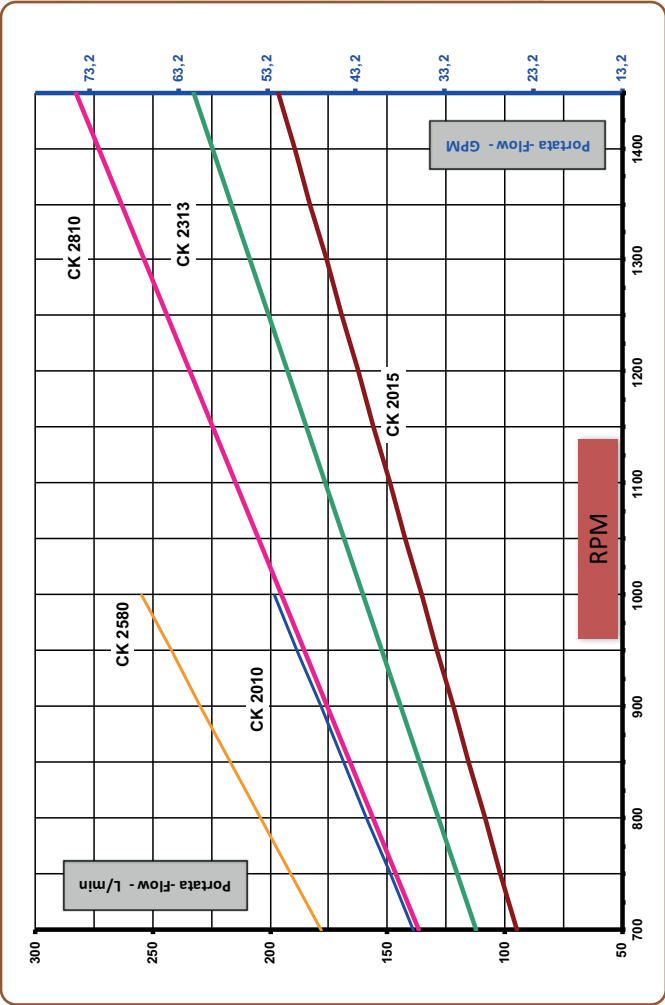


GRAFICO PRESTAZIONI - PERFORMANCE CHART



# Heavy Duty



- 1 Guida pistone in acciaio inox caratterizzata da doppio diametro. La guida non viene mai in contatto con l'anello parafango del carter; in questo modo si riduce notevolmente l'usura della guida e si determina una migliore lubrificazione
- 2 Boccole autolubrificanti brevettate in PTFE, riducono l'effetto frizione e garantiscono un'operatività a progressione continua.
- 3 Cuscinetti a rulli conici di primaria marca per condizioni di lavoro estese ad ogni applicazione
- 4 Doppia guarnizione a "V" autolubrificante in elastomero rinforzato che ne ottimizza la durata. L'area della guarnizione è stata aumentata per migliorare la tenuta in ogni condizione di lavoro
- 5 Carter fuso in alluminio: compatto per garantire un'elevata resistenza meccanica e trattato con vernice epossidica per resistere ad ogni agente corrosivo.
- 6 Nuovo sistema di fissaggio pistone con vite speciale in acciaio inox.
- 7 Valvole aspirazione e mandata ad ispezione rapida con componenti in acciaio inox 316. Intercambiabili mandata/aspirazione con alta efficienza volumetrica e massima capacità di aspirazione.
- 8 Testata in ottone per coniugare la resistenza meccanica alla compatibilità chimica.
- 9 Biella con sistema ad interfaccia autoallineante e superficie speculare in lega di bronzo. Realizzata in due parti per facilitare il montaggio e lo smontaggio, riduce definitivamente l'effetto frizione e l'usura per riscaldamento.



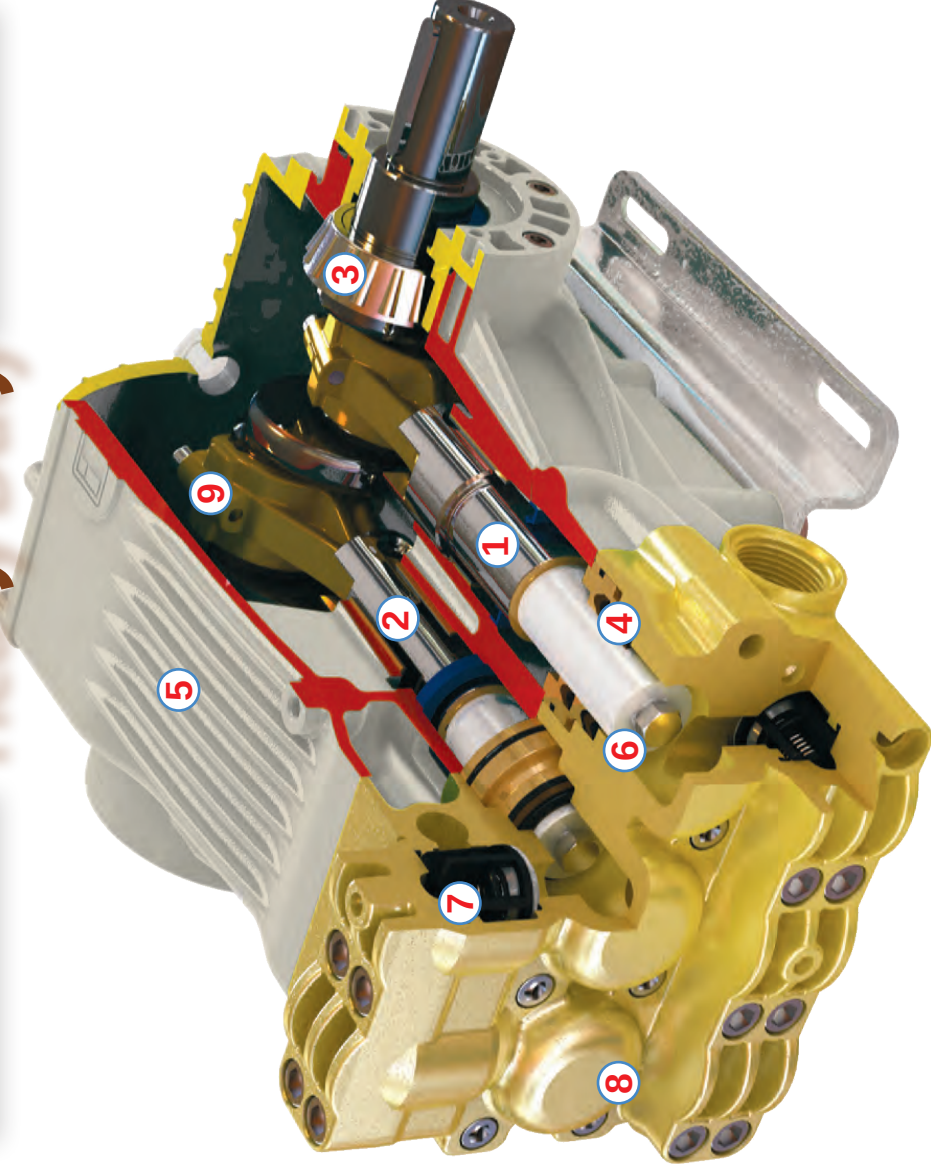
- 1 Guide piston en acier inox en double diamètre. La guide n'est jamais en contact avec la bague d'étanchéité du carter; ceci réduit considérablement l'usure et détermine une meilleure lubrification
- 2 Bagues autolubrifiantes brevetées en PTFE réduisent l'effet friction et assurent une étanchéité parfaite et un fonctionnement régulier.
- 3 Roulements à rouleaux coniques de première qualité augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 4 Double joints à "V" autolubrifiants en élastomère renforcé pour optimiser leur durée et permettre une meilleure étanchéité.
- 5 Grand carter en aluminium moulé sous pression, très résistant, traité par peinture epoxy contre les produits corrosifs.
- 6 Vis de blocage piston en acier inox.
- 7 Clapets d'aspiration et refoulement en acier inox 316. Separément interchangeables : aspiration et refoulement, ils permettent d'obtenir le plein rendement volumétrique, aussi bien que la capacité d'aspiration maxi.
- 8 Culasse en laiton pour consolider la résistance aux produits chimiques.
- 9 Bielle avec surface importante en bronze qui limite invariabement l'effet friction et l'usure dues à l'effort de la bielle sur l'arbre de la pompe.



- 1 Double diameter piston guide made of stainless steel: the radial ring never comes in contact with the moving rod; thus eliminating wear and allowing better lubrication.
- 2 Patented du-dry plunger rod bushing PTFE coated, greatly reduces friction for smoother operation.
- 3 Premium oversized taper roller bearings designed to endure heavier loads and extend operations.
- 4 Double "V" packing self-lubricating sealing system in elastomer maximizes seal life. The seal area has been enlarged to improve sealing under any condition.
- 5 Compact die cast aluminium crankcase for high strength and epoxy coated for corrosion resistance.
- 6 New system of attaching pistons with special screws made of stainless steel.
- 7 Rapid action check valves with spring, poppet and seat made of 316 stainless steel. Interchangeable between inlet and outlet, and with a very high efficiency of volume. Maximum capacity of suction (inlet).
- 8 Forged brass head assures chemical resistance.
- 9 Interlocking "self-aligning" connecting rods capable of high loads made of two parts to facilitate installation and removal. It forever reduces friction and wear due to overheating.



- 1 Guía pistón en acero inox con diámetro doble. La guía no se encuentra jamás en contacto con el anillo radial del cárter; eso reduce el desgaste y favorece una mejor lubricación.
- 2 Casquillos autolubrificantes antifricción patentados PTFE, reducen el efecto fricción y garantizan una operatividad a progresión continua.
- 3 Cojinetes de rodillos de primera calidad para condiciones de trabajo extremas y de todo tipo.
- 4 Doble junta "V" autolubrificante en elastómero reforzado que optimiza la duración.
- 5 Carter en aluminio fundido a presión con características de alta resistencia mecánica y barnizado con pintura epoxy para resistir a la corrosión.
- 6 Nuevo sistema de fijación pistón con tornillo especial en acero inox.
- 7 Válvulas aspiración y envío en acero inox 316. Intercambiables: aspiración y envío con alta eficiencia volumétrica y máxima capacidad de aspiración.
- 8 Culata en latón para juntar la elevada resistencia mecánica y la compatibilidad química.
- 9 Biela con sistema de interfase autoalineante y superficie especular en aleación de bronce. Realizada en dos partes para simplificar el montaje y desmontaje, reduce definitivamente el efecto fricción y el deterioro por recalentamiento.



150÷250 bar  
55÷175 l/min  
2175÷3625 psi  
14.5÷46 GPM

## Applicazioni - Applications - Applications



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnologia chorro de agua



Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



Navi e aeronauti  
Boats and pleasure craft  
Bateaux et avions  
barcos y aviones



Spurgo fognie  
Sewer maintenance  
Vidange d'égouts  
Espurgo cloacas

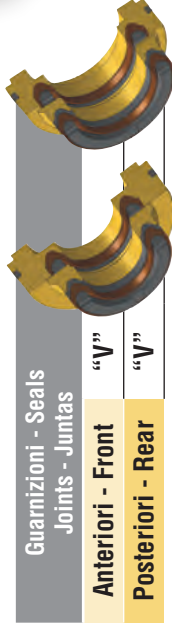




Applicazioni: Soluzioni complete per la pulizia delle tubazioni p.136  
Applications: Complete solutions for pipe and sewer cleaning p.136  
Applications: Solutions complètes pour le nettoyage des canalisations p.136  
Aplicaciones: Soluciones completas para la limpieza de tuberías p.136

Caratteristiche - Specifications  
Caractéristiques - Características

|        |             |                                               |
|--------|-------------|-----------------------------------------------|
| IN     | Ø           | 1" 1/2 BSP                                    |
|        | Press. Min. | -0,2 bar (-3 PSI)                             |
|        | Press. Max. | 6 bar (87 PSI)                                |
| OUT    | Temp. Max.  | 60°C (140°F)                                  |
|        | Ø           | 3/4 BSP (CX 1025)<br>1" BSP (CX 1515-CX 1715) |
| SHAFT  | Ø           | 40 mm                                         |
| OIL    | SAE 75W 90  | 4l (1.05 U.S.gal.)                            |
| WEIGHT | kg (lbs)    | 83 kg (183 lbs)                               |



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



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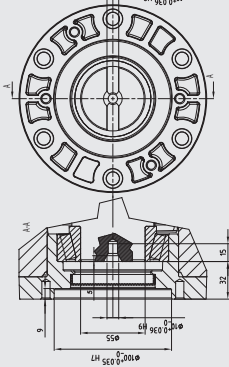
pag.120



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USCITA POTENZA - OUTLET POWER SOURCE

- Accoppiamento albero uscita supplementare, per azionamento accessori (es. pompe idrauliche, pompe centrifughe, ecc.)
- Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrifugas, etc.)



CPQ

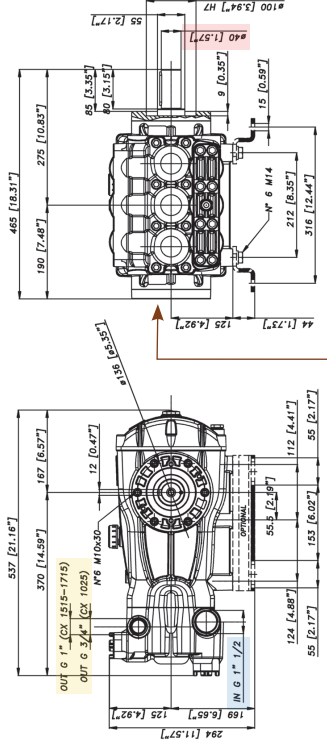
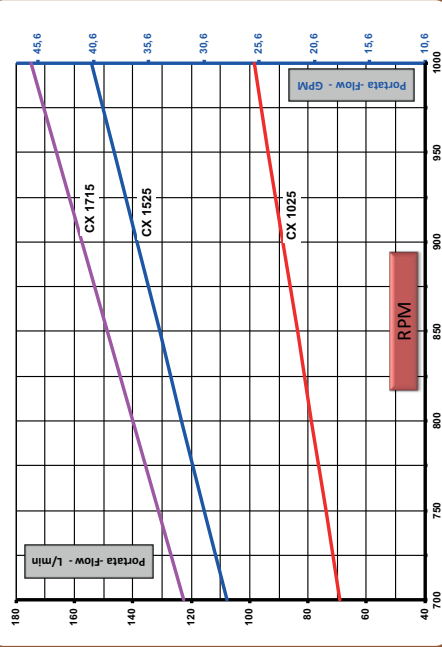


GRAFICO PRESTAZIONI - PERFORMANCE CHART



| Codice<br>Code  | Modello<br>Model | Press. Max<br>Max Pressure<br>bar | 550 RPM |       |      |      | 750 RPM |     |      |      | 1000 RPM |     |      |      | Pistone<br>Plunger<br>Ø mm | Corsa<br>Stroke<br>mm |
|-----------------|------------------|-----------------------------------|---------|-------|------|------|---------|-----|------|------|----------|-----|------|------|----------------------------|-----------------------|
|                 |                  |                                   | PSI     | l/min | GPM  | hp   | l/min   | GPM | hp   | kW   | l/min    | GPM | kW   | hp   |                            |                       |
| 74.1023.97.3(*) | CX 1025          | 250                               | 3625    | 55    | 14,5 | 26,9 | 36,0    | 74  | 19,6 | 36,3 | 48,6     | 98  | 25,9 | 47,9 | 30                         | 50                    |
| 74.1021.97.3(*) | CX 1515          | 150                               | 2175    | 86    | 22,7 | 25,2 | 33,8    | 116 | 30,6 | 34,0 | 45,6     | 153 | 40,4 | 44,9 | 40                         | 44                    |
| 74.1022.97.3(*) | CX 1715          | 150                               | 2175    | 97    | 25,6 | 28,6 | 38,4    | 131 | 34,6 | 38,7 | 51,9     | 174 | 46,0 | 51,1 | 40                         | 50                    |

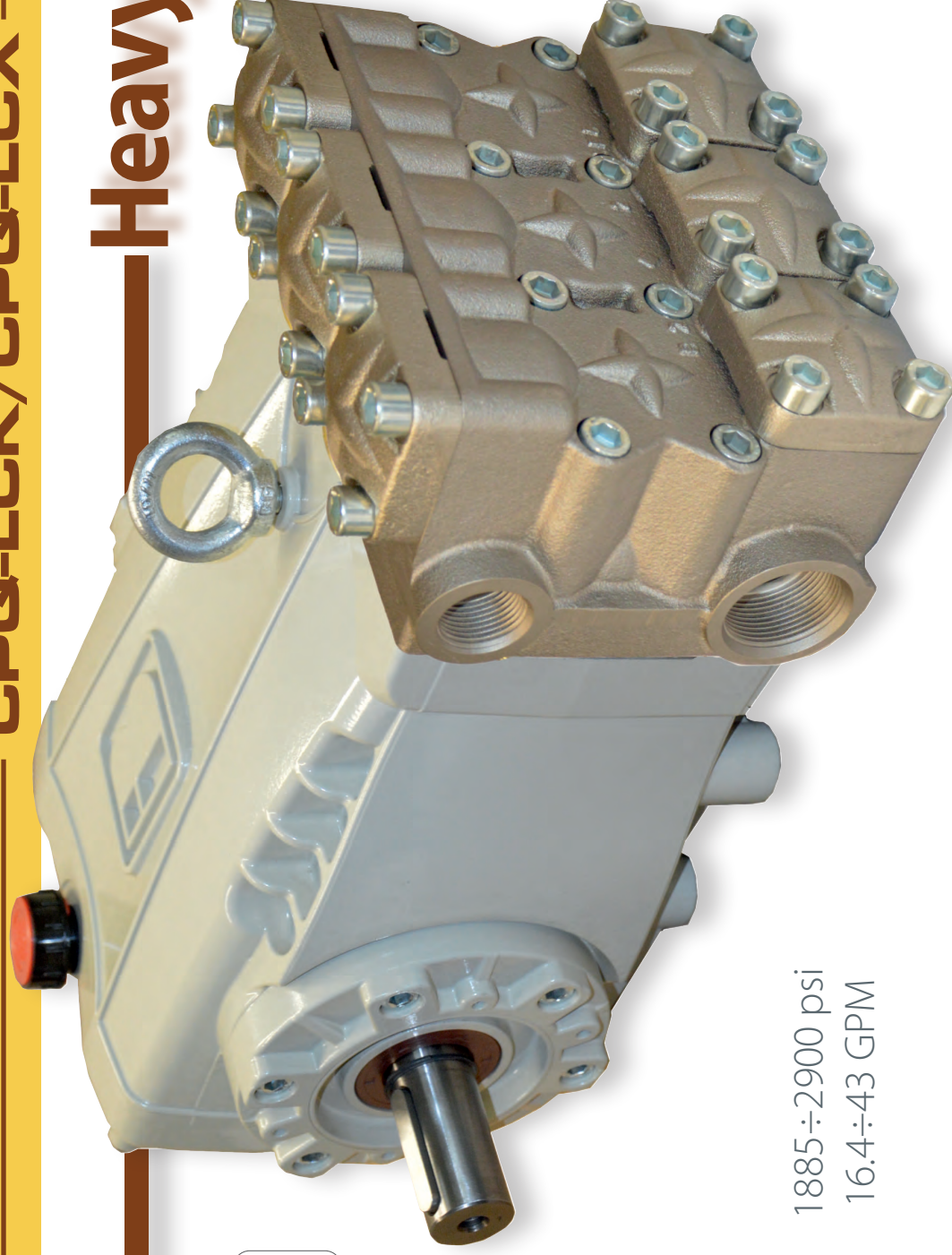
(\*) Per specificare la versione aggiungere al codice:  
R = albero destro Ø 40 mm  
(\*) To specify the version pls. add to the last number:  
R = right shaft Ø 40 mm  
(\*) Para especificar la versión añadir a la referencia:  
R = cigüeñal a la derecha Ø 40 mm



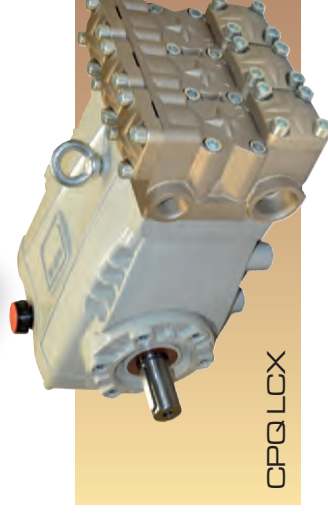
# Heavy Duty



TESTATA IN GHISA  
CAST IRON HEAD



130÷200 bar      1885÷2900 psi  
62÷163 l/min    16.4÷43 GPM

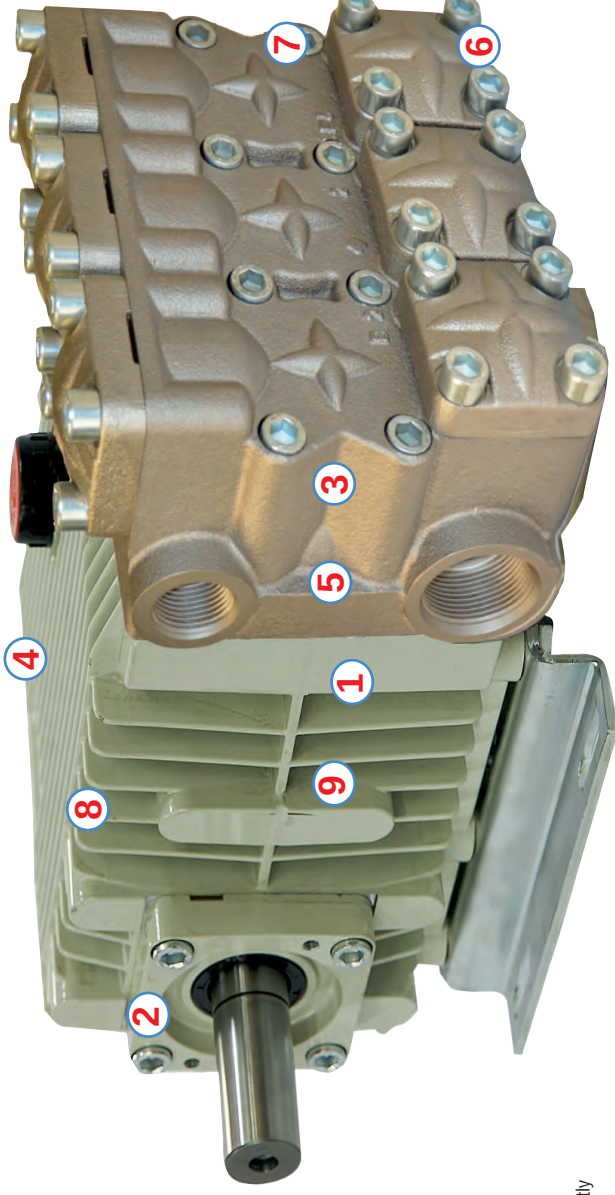




- 1 Boccole autolubrificanti antifrizione brevettate in PTFE, riducono l'effetto frizione e garantiscono un'operatività a progressione continua.
- 2 Cuscinetti a rulli conici di primaria marca per condizioni di lavoro estese ad ogni applicazione.
- 3 Doppia guarnizione a "V" autolubrificante in elastomero rinforzato che ne ottimizza la durata.
- 4 Carter in alluminio pressofuso con caratteristiche di alta resistenza e trattamento di verniciatura speciale anti-corrosiva.
- 5 Pistoni in ceramica integrale di grande qualità.
- 6 Valvole aspirazione e mandata in acciaio inox 316. Intercambiabili: aspirazione e mandata, con alta efficienza volumetrica e massima capacità di aspirazione.
- 7 Testata in ghisa con trattamento di nichelatura per coniugare la resistenza alla compatibilità chimica.
- 8 Biella con sistema a interfaccia autoallineante e superficie speculare in lega di bronzo. Riduce definitivamente l'effetto frizione e l'usura per riscaldamento.
- 9 Pompa per usi gravosi e continui. Guida pistone in acciaio inox a scorrimento guidato. Esclusivo disegno per una minore usura e lunga durata.



- 1 Patented du-dry plunger rod bushing PTFE coated greatly reduces friction for smooth operation.
- 2 Premium oversized taper roller bearings designed to endure heavier loads and extended operations.
- 3 Double "V" packing self-lubricating sealing system in elastomer maximizes seal life.
- 4 Compact die cast aluminum crankcase to ensure high strength, with special corrosion proof painting treatment.
- 5 Highly polished solid ceramic pistons reduce friction and prolong seal life.
- 6 Stainless steel check valves. Separately interchangeable inlet-outlet, they ensure the greatest volumetric efficiency and suction capability.
- 7 Cast iron head has undergone a nickel-plating treatment to assure chemicals resistance.
- 8 Interlocking "self-aligning" connecting rods in bronze guarantee perfect alignment, ultimately reducing friction, heat, wear and noise.
- 9 Heavy duty pump for continuous and intensive use. Stainless steel plunger rod with self-driven system. Exclusive design for less wear and long life.

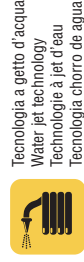


- 1 Bagues autolubrificantes brevétées PTFE qui réduisent l'effet friction, assurent une étanchéité parfaite et un fonctionnement régulier.
- 2 Roulements à rouleaux coniques pour consolider la durée de la pompe, permettent d'avoir moins usure, moins bruit, moins effort et surtout une meilleure rotation de l'arbre de la pompe.
- 3 Doubles joints à "V" autolubrifiants en élastomère renforcé pour optimiser leur durée et permettre une meilleure étanchéité.
- 4 Grand carter en aluminium moulé sous pression, très résistant, traitement de vernissage spécial anticorrosion.
- 5 Pistons en céramique intégrale parfaitement traités et une finition de surface impeccable augmente l'étanchéité des joints.
- 6 Clapets aspiration-refoulement en acier inox. Séparément interchangeables: aspiration et refoulement, ils permettent d'obtenir le plein rendement volumétrique, aussi bien que la capacité d'aspiration max.
- 7 Culasse en fonte, traitement nickel-chimique, pour consolider la résistance aux produits chimiques.
- 8 Bielle avec surface importante en bronze qui limite invariablement l'effet friction et l'usure due à l'effort de la bielle sur l'arbre de la pompe.
- 9 Pour gros travaux intensifs. Guide de piston en acier inox très solide. Système exclusif pour réduire l'usure et augmenter sa longévité.



- 1 Casquillos autolubrificantes antifricción patentados PTFE que reducen el efecto fricción y garantizan una operatividad a progresión continua.
- 2 Cojinetes de rodillos cónicos de primera marca resistentes a condiciones de trabajo extremas y de todo tipo.
- 3 Doble junta "V" autolubrificante en elastómero reforzado que optimiza la duración.
- 4 Carter en aluminio fundido a presión con características de alta resistencia y tratamiento de pintura especial anticorrosivo.
- 5 Pistones en cerámica integral de alta calidad.
- 6 Válvulas de aspiración y envío en acero inox 316. Intercambiables: aspiración y envío, con alta eficiencia volumétrica y máxima capacidad de aspiración.
- 7 Culata en hierro fundido con tratamiento de níquel, para juntar la resistencia y la compatibilidad química.
- 8 Biela con sistema de interfase autoalineante y superficie especular en aleación de bronce. Reduce definitivamente el efecto fricción y el deterioro por recalentamiento.
- 9 Guía de pistón de acero inoxidable con función deslizando guiada y controlada. Diseño exclusivo para un menor desgaste y duración más prolongada.

#### Applicazioni - Applications - Aplicaciones



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnologia chorro de agua



Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



Navi e aeroplani  
Boats and pleasure craft  
Bateaux et avions  
barcos y aviones



Spurgo fogne  
Sewer maintenance  
Vidange d'égouts  
Espurgo cloacas



SX

BZ

B

M

DX

INTELLISEAL™



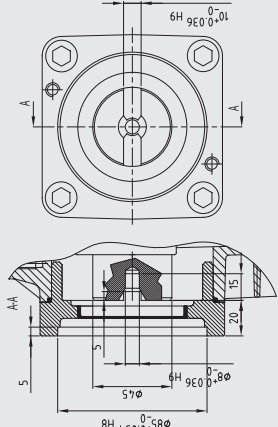
| Caratteristiche - Specifications<br>Caractéristiques - Características |                                 |
|------------------------------------------------------------------------|---------------------------------|
| IN                                                                     | Ø 1" 1/2 BSP                    |
|                                                                        | Press. Min. -0,2 bar (-3 PSI)   |
|                                                                        | Press. Max. 6 bar (87 PSI)      |
| OUT                                                                    | Temp. Max. 60°C (140°F)         |
|                                                                        | Ø 1" BSP                        |
| SHAFT                                                                  | Ø 35 mm                         |
| OIL                                                                    | SAE 75W 90 2,8l (0.74 U.S.gal.) |
| WEIGHT                                                                 | kg (lbs) 55 kg (121.3 lbs)      |



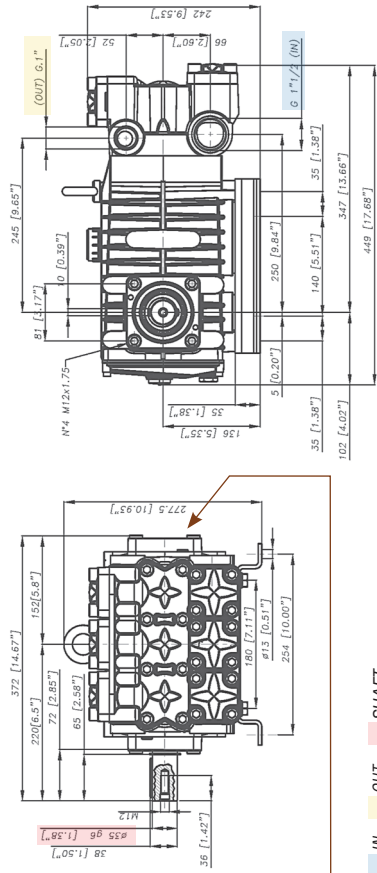
Applicazioni: Soluzioni complete per la pulizia delle tubazioni p.136  
Applications: Complete solutions for pipe and sewer cleaning p.136  
Applications : Solutions complètes pour le nettoyage des canalisations p.136  
Aplicaciones: Soluciones completas para la limpieza de tuberías p.136

USCITA POTENZA - OUTLET POWER SOURCE

- Accoppiamento albero uscita supplementare, per azionamento accessori (es. pompa idraulica, pompe centrifuges, ecc.)
- Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrifugas, etc.)



CPQ-LCK





| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 550 RPM |         |      | 850 RPM |          |      | 1000 RPM |          |       | Pistone<br>Plunger | Corsa<br>Stroke |      |    |    |
|----------------|------------------|----------------------------|------|---------|---------|------|---------|----------|------|----------|----------|-------|--------------------|-----------------|------|----|----|
|                |                  | bar                        | PSI  | I/min   | GPM     | kW   | hp      | I/min    | GPM  | kW       | hp       | I/min |                    |                 | GPM  | kW | hp |
| 73.8635.97.3   | CPQ 9020 LCK     | 200                        | 2900 | 62      | 16,4    | 24,4 | 32,7    | 75       | 19,8 | 29,3     | 39,2     | 87    | 23,0               | 34,1            | 45,7 | 30 | 44 |
| 73.8636.97.3   | CPQ 1316 LCK     | 160                        | 2320 | 89      | 23,5    | 28,1 | 37,6    | 107      | 28,3 | 33,7     | 45,2     | 125   | 33,0               | 39,2            | 52,6 | 36 | 44 |
| 73.8637.97.3   | CPQ 1413 LCK     | 130                        | 1885 | 100     | 26,4    | 25,6 | 34,3    | 121      | 32,0 | 30,7     | 41,2     | 141   | 37,3               | 35,8            | 48,0 | 40 | 40 |
| 73.8638.97.3   | CPQ 1613 LCK     | 130                        | 1885 | 110     | 29,1    | 28,1 | 37,7    | 133      | 35,1 | 33,8     | 45,3     | 155   | 41,0               | 39,4            | 52,8 | 40 | 44 |
|                |                  |                            |      |         | 950 RPM |      |         | 1200 RPM |      |          | 1450 RPM |       |                    |                 |      |    |    |
| 73.8643.97.3   | CPQ 1318-F LCK   | 180                        | 2610 | 83      | 21,9    | 29,1 | 39,6    | 104      | 27,5 | 36,8     | 50,1     | 125   | 33,0               | 44,0            | 59,8 | 30 | 44 |
| 73.8644.97.3   | CPQ 1613-F LCK   | 130                        | 1885 | 108     | 28,5    | 27,6 | 37,5    | 136      | 35,9 | 34,8     | 47,3     | 163   | 43,1               | 41,6            | 56,6 | 36 | 40 |

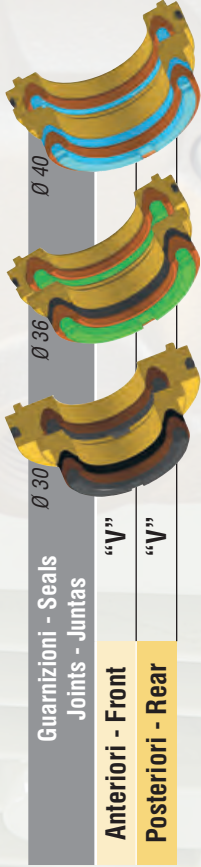
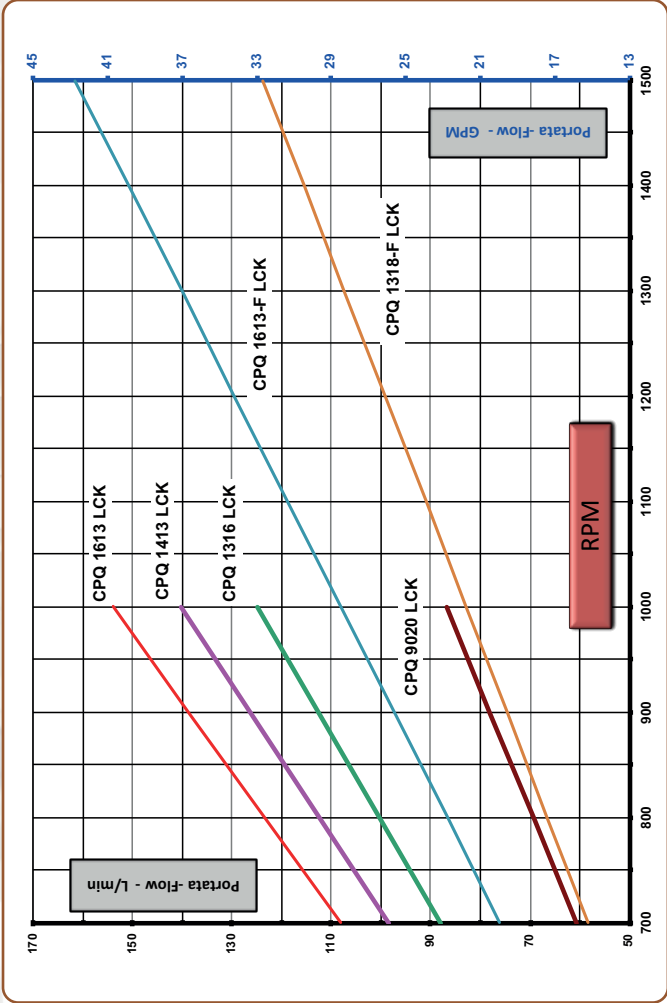
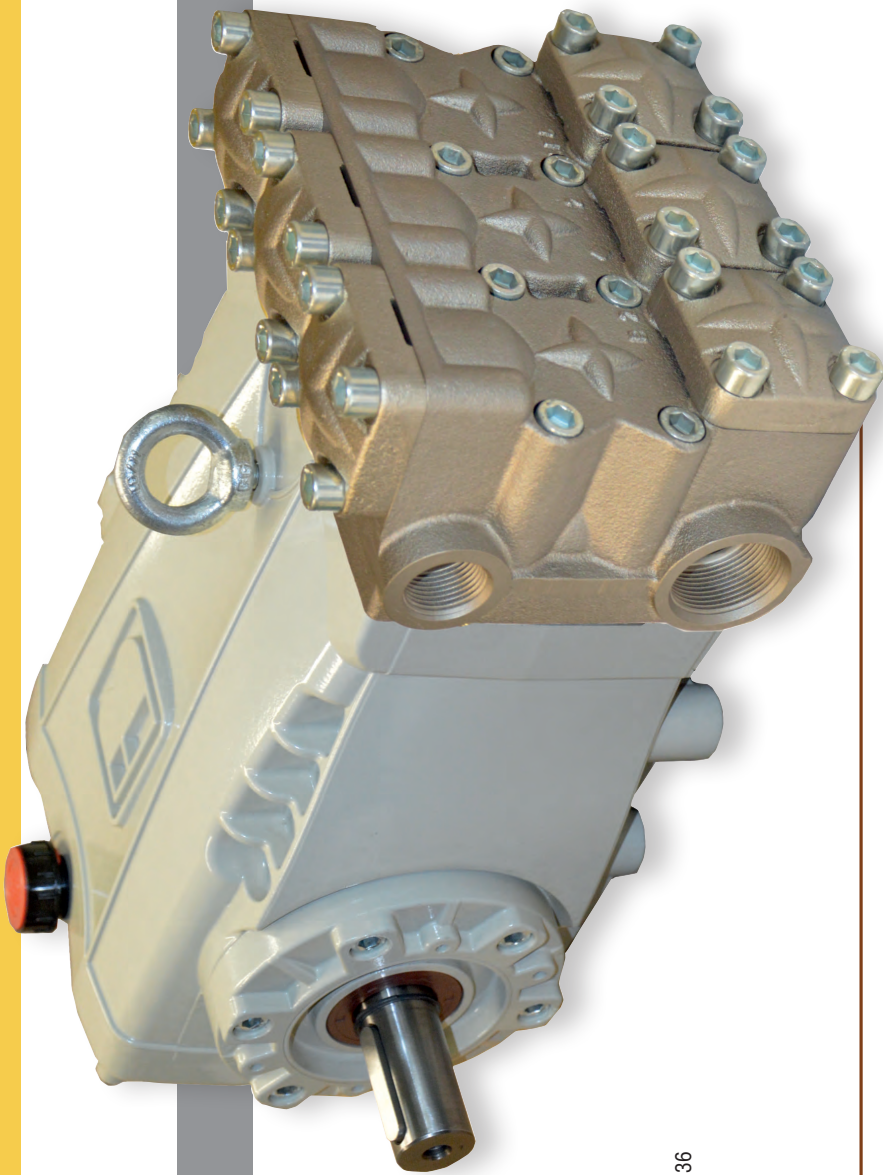


GRAFICO PRESTAZIONI - PERFORMANCE CHART



Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios





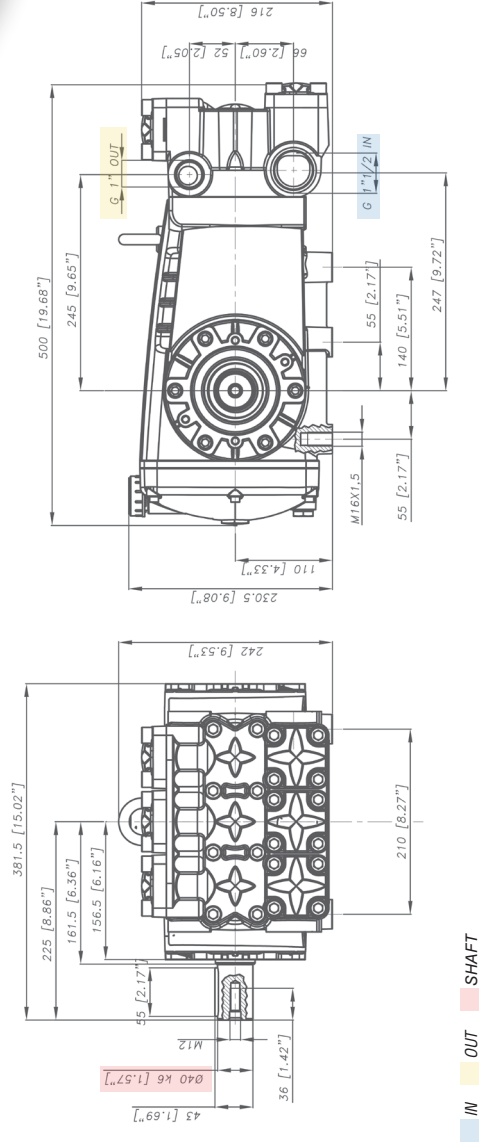
Caratteristiche - Specifications  
Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" 1/2 BSP           |
|        | Press. Min. | -0,2 bar (-3 PSI)    |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 1" BSP               |
| SHAFT  | Ø           | 40 mm                |
| OIL    | SAE 75W 90  | 3.3l (0.87 U.S.gal.) |
| WEIGHT | kg (lbs)    | 57 kg (125.6 lbs)    |



Applicazioni: Soluzioni complete per la pulizia delle tubazioni p.136  
Applications: Complete solutions for pipe and sewer cleaning p.136  
Applications : Solutions complètes pour le nettoyage des canalisations p.136  
Aplicaciones: Soluciones completas para la limpieza de tuberías p.136

**CPQ-LCX**



| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |      | 700 RPM |      |      | 850 RPM |       |      | 1000 RPM |      |       | Pistone<br>Plunger | Corsa<br>Stroke |      |    |    |
|----------------|------------------|----------------------------|------|---------|------|------|---------|-------|------|----------|------|-------|--------------------|-----------------|------|----|----|
|                |                  | bar                        | PSI  | I/min   | GPM  | kW   | hp      | I/min | GPM  | kW       | hp   | I/min |                    |                 | GPM  | kW | hp |
| 73.8639.97.3   | CPQ 9020 LCX     | 200                        | 2900 | 62      | 16,4 | 24,4 | 32,7    | 75    | 19,8 | 29,3     | 39,2 | 87    | 23,0               | 34,1            | 45,7 | 30 | 44 |
| 73.8640.97.3   | CPQ 1316 LCX     | 160                        | 2320 | 89      | 23,5 | 28,1 | 37,6    | 107   | 28,3 | 33,7     | 45,2 | 125   | 33,0               | 39,2            | 52,6 | 36 | 44 |
| 73.8641.97.3   | CPQ 1413 LCX     | 130                        | 1885 | 100     | 26,4 | 25,6 | 34,3    | 121   | 32,0 | 30,7     | 41,2 | 140   | 37,0               | 35,8            | 48,0 | 40 | 40 |
| 73.8642.97.3   | CPQ 1613 LCX     | 130                        | 1885 | 110     | 29,1 | 28,1 | 37,7    | 133   | 35,1 | 33,8     | 45,3 | 154   | 40,7               | 39,4            | 52,8 | 40 | 44 |

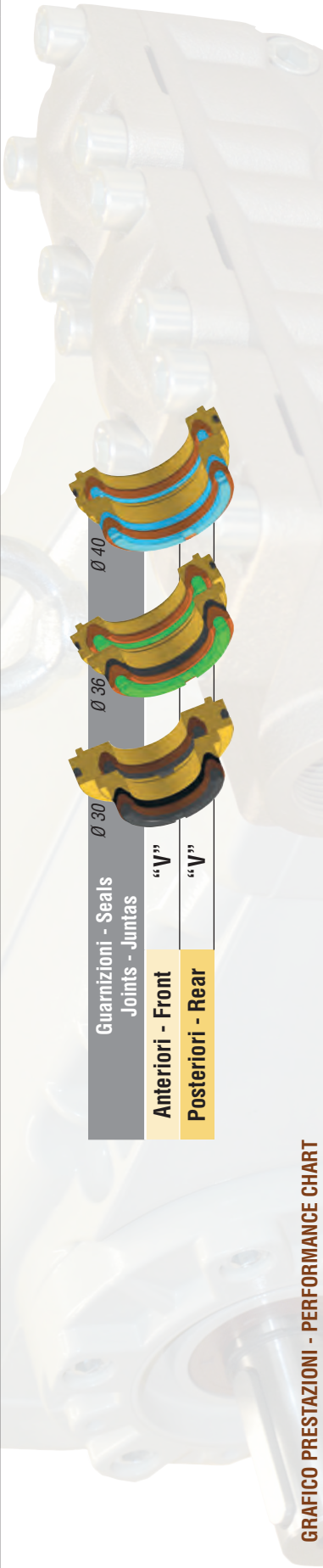
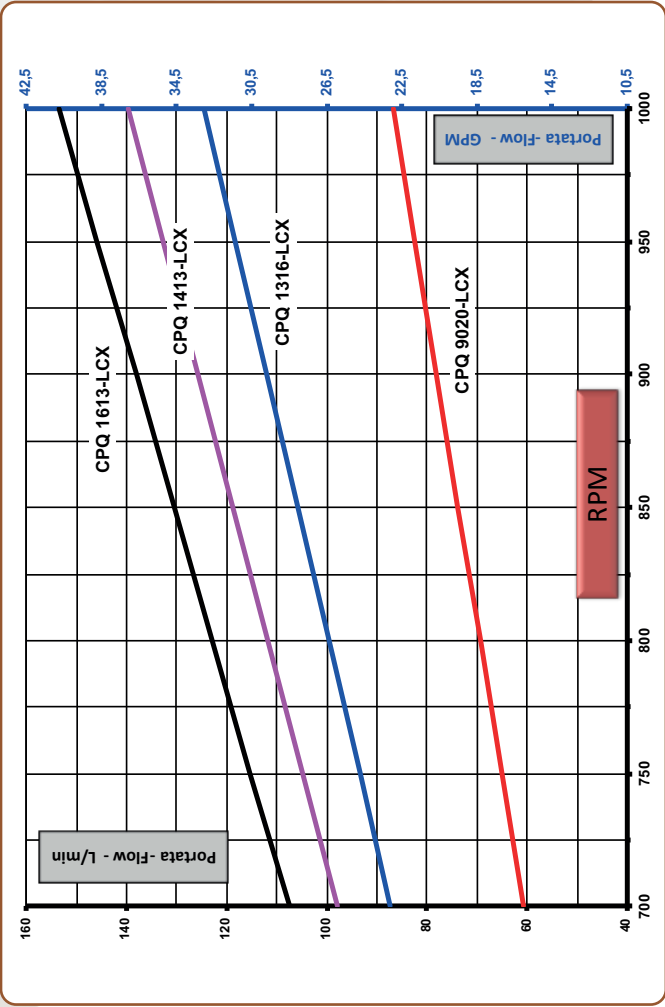


GRAFICO PRESTAZIONI - PERFORMANCE CHART







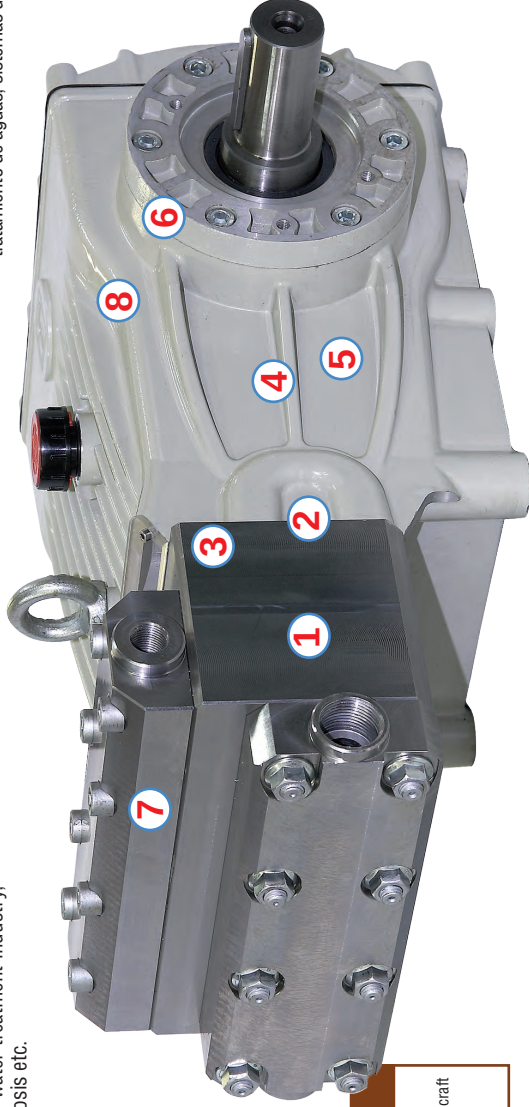
Serie di pompe particolarmente indicate per servizi gravosi ad altissima pressione. Le elevate prestazioni e la compatibilità dei materiali impiegati con numerosi tipi di liquido ne consentono l'impiego in quasi tutti i settori industriali. Alcune delle tipiche applicazioni sono: lavaggio industriale, impianti petrolchimici e siderurgici, settore edile, navale, trattamento acque, osmosi inversa.

Powerful big pumps, they perform very high pressure and represent the top level of the Bertolini Pumps range, to provide cleaning professionals with pumps built with the strongest state-of-the-art components. Because of the great manufacturing techniques they are ideal for many industrial applications, such as: desalination, petrochemical, steel and iron industry, construction/building, marine & off-shore, water treatment industry, jetting systems, reverse osmosis etc.

Série de pompes à haute pression (jusqu'à 750 bars) destinées aux mondes professionnels et industriels pour gros travaux intensifs de longue durée. Fabriquées avec des composants sélectionnés pour leur fiabilité et leur performance, elles sont utilisées dans les secteurs aussi variés que : -bâtiment, travaux publics, osmose inverse, traitement d'eau, installations pétrochimiques et sidérurgiques, industrie navale.

Serie de bombas para uso continuo a muy alta presión. El alto rendimiento y la compatibilidad de los materiales utilizados con diferentes tipos de líquido permite su uso en casi todos los sectores industriales. Gracias a las excelentes técnicas de fabricación son ideales para muchas aplicaciones industriales, tales como: desalinización, petroquímica, industria siderúrgica, construcción, industria naval y offshore, tratamiento de aguas, sistemas de chorro, ósmosis inversa.

600÷750 bar 8700÷10875 psi  
14÷31 l/min 3.6÷8.2 GPM



### Applicazioni - Applications - Aplicaciones



Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnología chorro de agua



Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



Navi e aeroplani  
Boats and pleasure craft  
Bâteaux et avions  
barcos y aviones

- 1 Testata in acciaio inossidabile di elevato spessore per garantire la massima compatibilità chimica in qualsiasi tipo di applicazione.
- 2 Pistoni con rivestimento in carburo di tungsteno per assicurare la massima resistenza all'usura ed aumentare la durata delle guarnizioni di alta e bassa pressione.
- 3 Guarnizioni di alta pressione in PTFE con materiale elastico energizzato in grado di ridurre i coefficienti di attrito, e assicurare elevate prestazioni meccaniche, nonché massima resistenza ad agenti chimici e solventi, grazie al sistema camera di ricircolo.
- 4 Boccole autolubrificanti antirifrazione brevettate in PTFE garantiscono un'operatività a progressione continua.
- 5 Guida pistone in acciaio inox a doppio diametro: la guida non viene mai a contatto con i paraoli: l'usura della guida è ridotta drasticamente e la lubrificazione è ottimizzata.
- 6 Cuscinetti di primaria marca sovradimensionati, per condizioni di lavoro estese ad ogni applicazione.
- 7 Valvole in acciaio inossidabile speciale, di forte spessore e con sistema di tenuta sferico per sviluppare il massimo rendimento volumetrico.
- 8 Biella con sistema ad interfaccia autoallineante e superficie speculare in lega di bronzo: realizzata in due parti autocentranti, riduce definitivamente l'effetto frizione e l'usura per riscaldamento.

- 1 Stainless steel head - provides great strength to maximize chemical resistance in any type of application.
- 2 Solid pistons tungsten carbide coated, to reduce wear and prolong the high and low pressure seals life.
- 3 High-pressure seals made of PTFE and energized component: friction is reduced to the minimum, assuring a perfect hold, in any condition for a longer period of time. They provide chemicals/solvents resistance and superior performance.
- 4 Patented du-dry plunger rod bushing PTFE coated, greatly reduces friction for smooth operation.
- 5 Large stainless steel plunger rods, double diameter: the moving rod does not come in contact with the oil seal, thus reducing wear and assuring an efficient lubrication of the piston.
- 6 Premium bearings designed to endure heavier loads and extend operations.
- 7 Check valves made of special stainless steel, they are thicker to withstand high pressure operations, and fitted with spheric sealing system to enhance the high fluid dynamic efficiency and maximize duration.
- 8 Interlocking "self-aligning", extra wide connecting rods in bronze ("two piece" pairs) guarantee perfect alignment, ultimately reducing friction, heat, wear and noise.

- 1 Culasse en acier inox très robuste, de forte épaisseur, conçue pour assurer une grande résistance contre l'agressivité des produits chimiques de traitement.
- 2 Pistons avec revêtement en carbure de tungstène qui prévient de l'usure, son état de surface paraît augmenter significativement la durée de vie des joints de haute et basse pression.
- 3 Joint de haute pression en PTFE avec matériau composite "énergisant" qui limite l'effet friction, offre performances optimales et permet de travailler avec les solutions chimiques les plus difficiles, grâce au système de récupération à l'aspiration des fuites éventuelles.
- 4 Bagues autolubrifiantes brevetées PTFE qui réduisent l'effet de friction, assurent une étanchéité parfaite et un fonctionnement régulier.
- 5 Guides de pistons en acier inox de double diamètre. La guide n'est jamais en contact avec les bagues d'étanchéité, ceci réduit considérablement l'usure et détermine une lubrification impeccable.
- 6 Roulements de première qualité surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficile.
- 7 Clapets d'aspiration /refoulement en acier inox, de forte épaisseur, avec système d'étanchéité sphérique pour optimiser le rendement volumétrique.
- 8 Bielle deux pièces avec surface importante en bronze qui limite inévitablement l'effet friction et l'usure due à l'effort de la bielle sur l'arbre de la pompe.

- 1 Cabezal de acero inoxidable de alta resistencia para asegurar la máxima compatibilidad química en cualquier tipo de aplicación.
- 2 Pistones con revestimiento de carburo de tungsteno para asegurar la máxima resistencia al desgaste y aumentar la durabilidad de las juntas de alta y baja presión.
- 3 Juntas de alta presión en PTFE con elemento elástico: la fricción se reduce al mínimo, asegurando una sujeción perfecta en cualquier condición, durante un período de tiempo más largo. Proporcionan resistencia a los productos químicos y a los disolventes y rendimiento superior.
- 4 Casquillos autolubrificantes antirifricción patentados PTFE que reducen el efecto fricción y garantizan operatividad a progresión continua.
- 5 Guía pistón en acero inox con diámetro doble. La guía no se encuentra jamás en contacto con el anillo radial del cárter; eso reduce el desgaste y favorece una mejor lubricación.
- 6 Cojinetes de rodillos de primera calidad para condiciones de trabajo extremas y de todo tipo.
- 7 Nuevo diseño de las válvulas de retención hechas en especial acero inoxidable, más grueso para resistir las operaciones en alta presión, y equipado con sistema de estanqueidad esférico para mejorar la alta eficiencia dinámica de fluidos y maximizar la duración.
- 8 Bielas con sistema de interfase autoalineante en aleación de bronce. Realizadas en dos partes, garantizan una perfecta alineación y reducen definitivamente la fricción, el calor, el desgaste y el ruido.

SS

BZ

DX

B

O

M

SX

INTELLISEAL™



Applicazioni: Soluzioni complete per la pulizia delle tubazioni p.136  
Applications: Complete solutions for pipe and sewer cleaning p.136  
Applications: Solutions complètes pour le nettoyage des canalisations p.136  
Aplicaciones: Soluciones completas para la limpieza de tuberías p.136

Accessori di completamento - Complementary accessories  
Accessoires complémentaires - Accesorios complementarios



pag.122



pag.125



pag.127



Caratteristiche - Specifications  
Caractéristiques - Características

|        | Ø           | 1" BSP              |
|--------|-------------|---------------------|
| IN     | Press. Min. | -0,1 bar (-1.5 PSI) |
|        | Press. Max. | 6 bar (87 PSI)      |
|        | Temp. Max.  | 60°C (140°F)        |
| OUT    | Ø           | 1/2 BSP             |
| SHAFT  | Ø           | 40 mm               |
| OIL    | SAE 75W 90  | 4l (1.05 U.S.gal.)  |
| WEIGHT | kg (lbs)    | 87,8 kg (193 lbs)   |

Guarnizioni - Seals  
Joints - Juntas

|                   |           |
|-------------------|-----------|
| Anteriori - Front | Super "U" |
| Posteriori - Rear | "U"       |

| Codice<br>Code   | Modello<br>Model | Press. Max<br>Max Pressure |       | 550 RPM |     |      | 850 RPM |       |     | 1000 RPM |      |       | Pistone<br>Plunger | Corsa<br>Stroke |      |    |    |
|------------------|------------------|----------------------------|-------|---------|-----|------|---------|-------|-----|----------|------|-------|--------------------|-----------------|------|----|----|
|                  |                  | bar                        | PSI   | l/min   | GPM | kW   | hp      | l/min | GPM | kW       | hp   | l/min |                    |                 | GPM  | kW | hp |
| 74.1016.97.3 (*) | CAX 2475         | 750                        | 10875 | 14      | 3,7 | 20,2 | 27,0    | 19    | 5,0 | 27,2     | 36,5 | 25    | 6,6                | 35,9            | 48,2 | 16 | 44 |
| 74.1010.97.3 (*) | CAX 3060         | 600                        | 8700  | 17      | 4,5 | 20,4 | 27,4    | 24    | 6,3 | 27,6     | 37,0 | 31    | 8,2                | 36,4            | 48,8 | 18 | 44 |

(\*) Per specificare la versione aggiungere al codice:  
R = albero destro Ø 40 mm

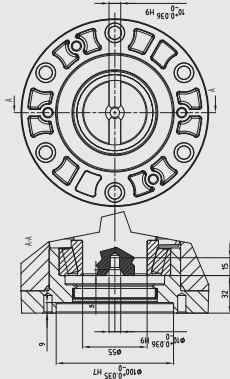
(\*) To specify the version pls. add to the last number:  
R = right side shaft Ø 40 mm

(\*) Pour spécifier la version ajouter à la réf.:  
R = arbre côté droit Ø 40 mm

(\*) Para especificar la versión añadir a la referencia:  
R = cigüeñal a la derecha Ø 40 mm

USCITA POTENZA - OUTLET POWER SOURCE

- Accoppiamento albero uscita supplementare, per azionamento accessori (es. pompe idrauliche, pompe centrifughe, ecc.)
- Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrífugas, etc.)



CAX

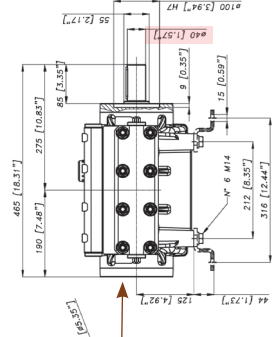
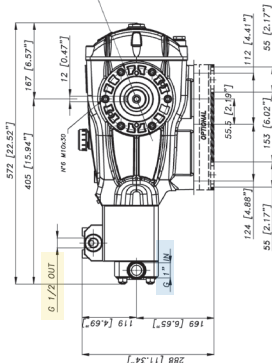
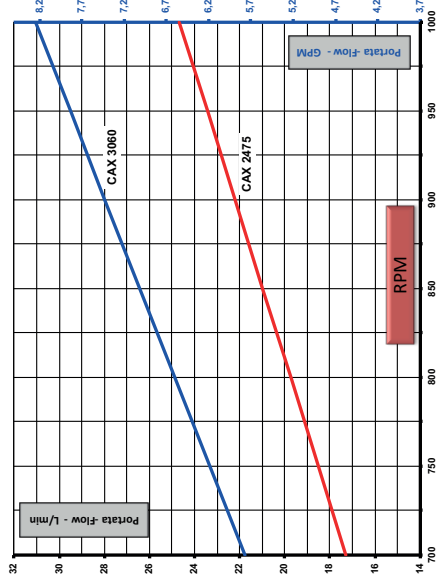
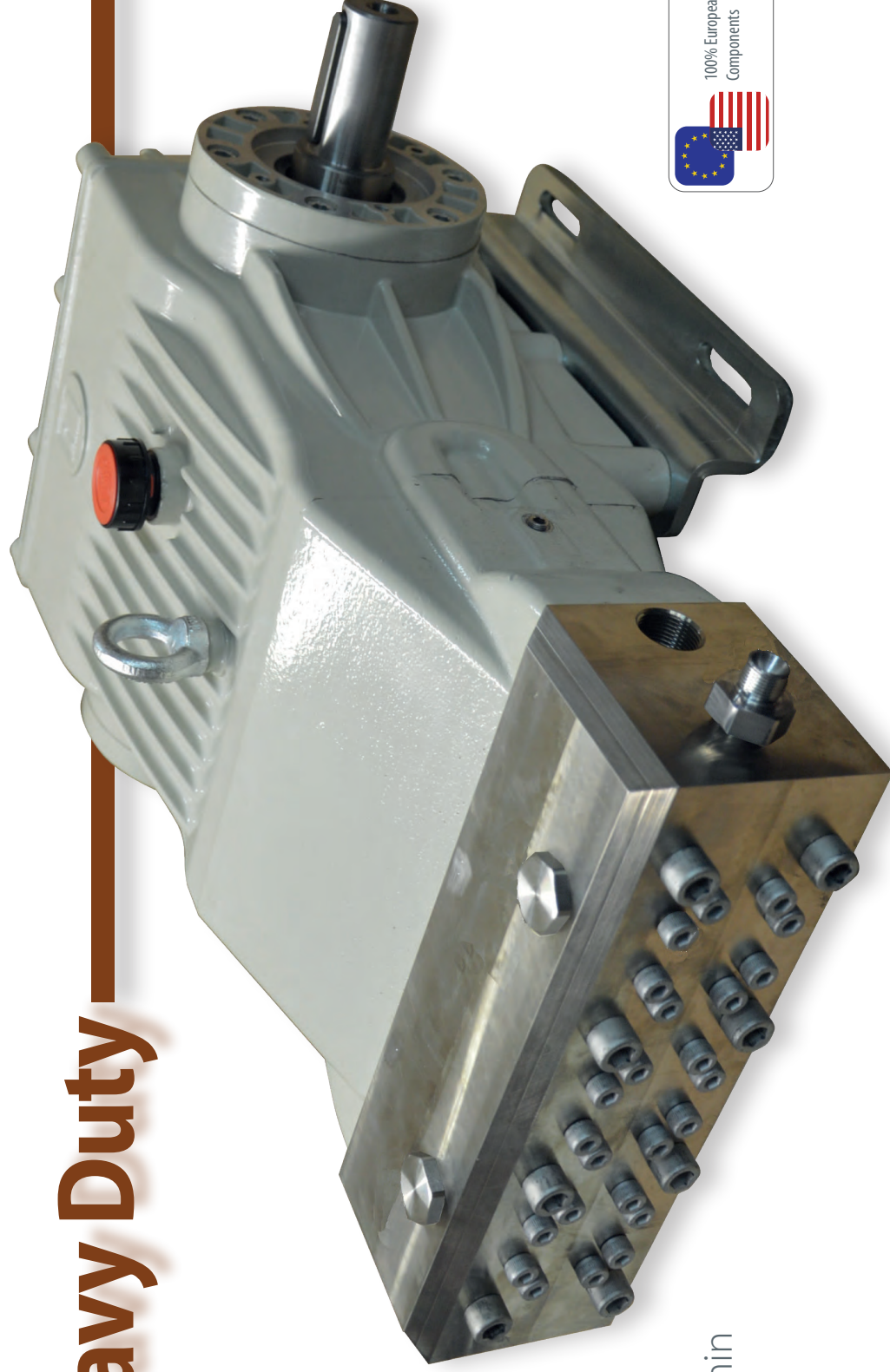


GRAFICO PRESTAZIONI - PERFORMANCE CHART





# Heavy Duty



1000 bar  
15,2÷24,4 l/min  
14500 psi  
4÷6.4 GPM



Pompe particolarmente indicate per servizi gravosi ad altissima pressione. Le elevate prestazioni e la compatibilità dei materiali impiegati con numerosi tipi di liquido ne consentono l'impiego in quasi tutti i settori industriali. Alcune delle tipiche applicazioni sono: lavaggio industriale, impianti petrolchimici e siderurgici, settore edile, navale, trattamento acque, osmosi inversa.



Powerful big pumps, they perform very high pressure and represent the top level of the Bertolini Pumps range, to provide cleaning professionals with pumps built with the strongest state-of-the-art components. Because of the great manufacturing techniques they are ideal for many industrial applications, such as: desalination, petrochemical, steel and iron industry, construction/building, marine & off-shore, water treatment industry, jetting systems, reverse osmosis etc.



Série de pompes à haute pression destinées aux mondes professionnels et industriels pour gros travaux intensifs de longue durée. Fabriquées avec des composants sélectionnés pour leur fiabilité et leur performance, elles sont utilisées dans les secteurs aussi variés que: bâtiment, travaux publics, osmose inverse, traitement d'eau, installations pétrochimiques et sidérurgiques, industrie navale.



Serie de bombas para uso continuo a muy alta presión. El alto rendimiento y la compatibilidad de los materiales utilizados con diferentes tipos de líquido permite su uso en casi todos los sectores industriales. Gracias a las excelentes técnicas de fabricación son ideales para muchas aplicaciones industriales, tales como: desalinización, petroquímica, industria siderúrgica, construcción, industria naval y offshore, tratamiento de aguas, sistemas de chorro, ósmosis inversa.



### Applicazioni - Applications - Aplicaciones



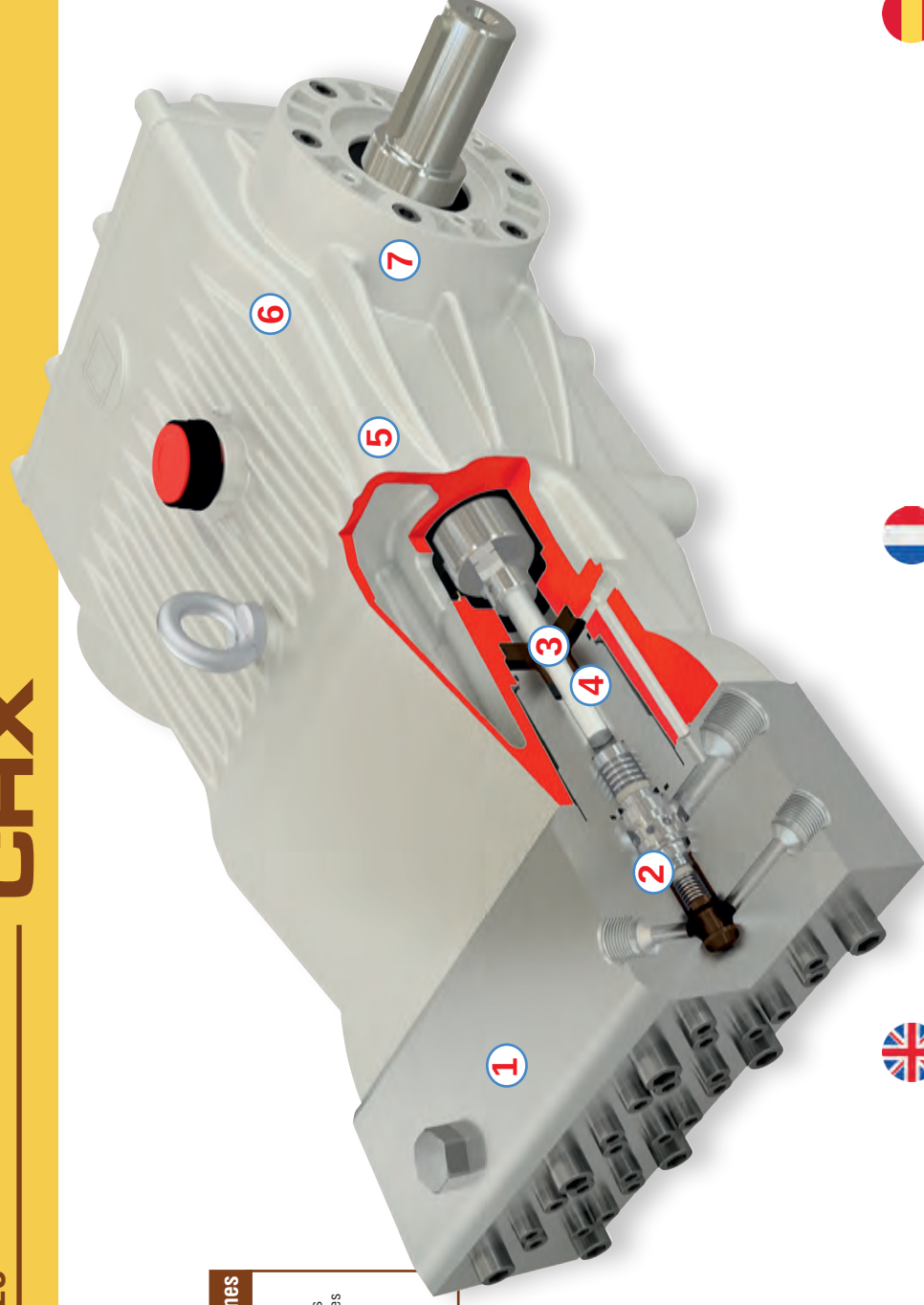
Tecnologia a getto d'acqua  
Water jet technology  
Technologie à jet d'eau  
Tecnología chorro de agua



Processi industriali  
Industrial process  
Procédés industriels  
Procesos industriales



Navi e aeroplani  
Boats and pleasure craft  
Bateaux et avions  
barcos y aviones



- 1 Testata in acciaio inox con speciale trattamento termico per garantire la massima resistenza e compatibilità chimica.
- 2 Valvole assiali in acciaio inox con speciale trattamento termico per garantire la massima durata. Posizionate assialmente al pistone per garantire il massimo rendimento volumetrico.
- 3 Pistone in ceramica integrale fissato senza sistemi meccanici (viti) ma con nuovo e innovativo sistema a interferenza.
- 4 Guarnizioni ad alte prestazioni a raffreddamento forzato.
- 5 Boccole autolubrificanti anti-frizione brevettate in PTFE garantiscono un'operatività continua.
- 6 Biella in lega di bronzo, realizzata in due parti, riduce l'effetto frizione e l'usura per riscaldamento.
- 7 Cuscinetti di primaria marca sovradimensionati, per condizioni di lavoro estese ad ogni applicazione.



- 1 Stainless steel head. Provides great strength to maximize chemical resistance in any type of application.
- 2 Stainless steel axial check valves have undergone a special thermal treatment for increased life. Mounted in axial position to the piston to ensure the maximum volumetric efficiency.
- 3 High quality ceramic piston fixed without screws, but by an innovative "interference" system.
- 4 Premium sealing system to provide superior performance forced cooling.
- 5 Patented du-dry plunger rod bushing PTFE coated, greatly reduces friction for smooth operation.
- 6 Extra wide connecting rod in bronze ("two piece" pairs) assure perfect alignment, ultimately reducing friction, heat, wear and noise.
- 7 Premium bearings designed to endure heavier loads and extend operations.



- 1 Culasse en acier inoxydable très robuste, de forte épaisseur, conçue pour assurer une grande résistance contre l'agressivité des produits chimiques de traitement.
- 2 Clapets axiaux en acier inox, traitement thermique spécial pour assurer une grande longévité. Montés en axe au piston pour augmenter le rendement volumétrique.
- 3 Piston en céramique intégrale fixé sans vis mais par un système d'interférence moderne.
- 4 Joints de première qualité qui assurent des performances optimales. Refroidissement forcé.
- 5 Bagues autolubrifiantes brevetées PTFE qui réduisent l'effet de friction, assurent une étanchéité parfaite et un fonctionnement régulier.
- 6 Bielle deux pièces avec surface importante en bronze qui limite invariablement l'effet friction et l'usure due à l'effort de la bielle sur l'arbre de la pompe.
- 7 Roulements de première qualité surdimensionnés, augmentent la durée de vie de la pompe, même dans les conditions de travail difficiles.



- 1 Cabeza en acero inoxidable con tratamiento térmico especial, para garantizar la máxima resistencia y compatibilidad química.
- 2 Válvulas axiales en acero inoxidable con tratamiento térmico especial, para garantizar la máxima durabilidad. Se colocan axialmente al pistón, para asegurar la máxima eficiencia volumétrica.
- 3 Pistón de cerámica fijado sin sistemas mecánicos (tornillos) pero con un sistema de interferencia nuevo e innovador.
- 4 Juntas de alto rendimiento con enfriamiento forzado.
- 5 Casquillos antifricción PTFE autolubricados patentados garantizan un funcionamiento continuo.
- 6 Biela de aleación de bronce, hecha en dos partes, reduce la fricción y el desgaste debido al calentamiento.
- 7 Rodamientos de primaria marca de gran tamaño, para condiciones de trabajo extendidas para cada aplicación.



Caratteristiche - Specifications  
Caractéristiques - Características

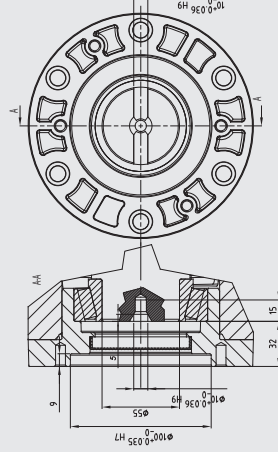
|        |             |                    |
|--------|-------------|--------------------|
|        | Ø           | 3/4" BSP           |
| IN     | Press. Min. | 2 bar (29 PSI)     |
|        | Press. Max. | 6 bar (87 PSI)     |
|        | Temp. Max.  | 60°C (140°F)       |
| OUT    | Ø           | 3/8 BSP-M-60°      |
| SHAFT  | Ø           | 40 mm              |
| OIL    | SAE 75W 90  | 4l (1.05 U.S.gal.) |
| WEIGHT | kg (lbs)    | 91 kg (200.6 lbs)  |



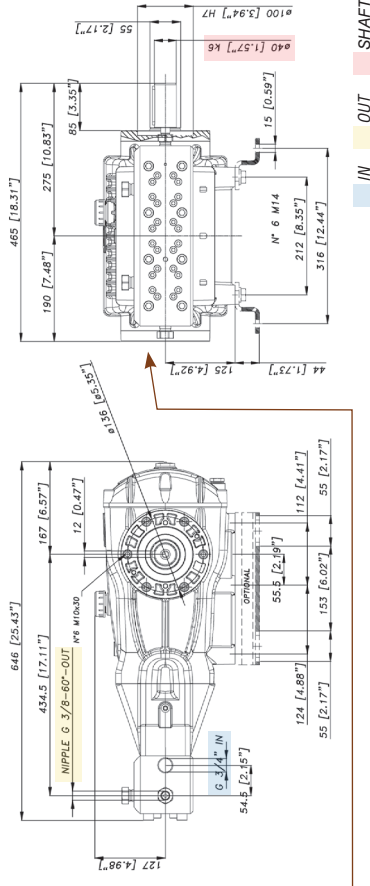
Applicazioni: Soluzioni complete per la pulizia delle tubazioni p. 136  
Applications: Complete solutions for pipe and sewer cleaning p. 136  
Applications : Solutions complètes pour le nettoyage des canalisations p. 136  
Aplicaciones: Soluciones completas para la limpieza de tuberías p. 136

**USCITA POTENZA - OUTLET POWER SOURCE**

- Accoppiamento albero uscita supplementare, per azionamento accessori (es. pompe idrauliche, pompe centrifughe, ecc.)
- Extra shaft coupling to drive accessories (for ex. hydraulic pumps, centrifugal pumps, etc)
- Accouplement supplémentaire de l'arbre pour l'entraînement d'accessoires (par ex. pompes hydrauliques, pompes centrifuges, etc.)
- Acoplamiento eje a la salida adicional para accionar accesorios (por ejemplo bombas hidráulicas, bombas centrifugas, etc.)



**CHX**



| Codice<br>Code | Modello<br>Model | Press. Max<br>Max Pressure |       | 700 RPM |     |      | 850 RPM |     |      | 1000 RPM |     |      | Pistone<br>Plunger | Corsa<br>Stroke |
|----------------|------------------|----------------------------|-------|---------|-----|------|---------|-----|------|----------|-----|------|--------------------|-----------------|
|                |                  | bar                        | PSI   | l/min   | GPM | hp   | l/min   | GPM | hp   | l/min    | GPM | hp   | Ø mm               | mm              |
| 74.1030.97.3   | CHX 21-1000      | 1000                       | 14500 | 15      | 4   | 29,8 | 18      | 4,8 | 35,8 | 21       | 5,5 | 41,7 | 14                 | 50              |
| 74.1037.97.3   | CHX 25-1000      | 1000                       | 14500 | 18      | 4,6 | 34,2 | 21      | 5,5 | 41,1 | 25       | 6,6 | 47,9 | 15                 | 50              |

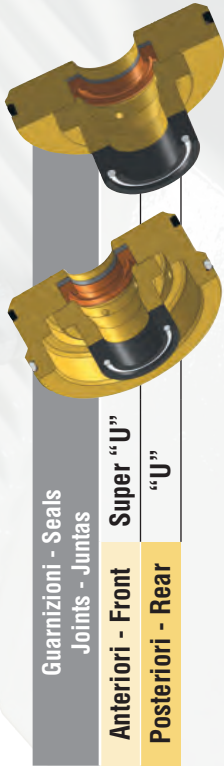
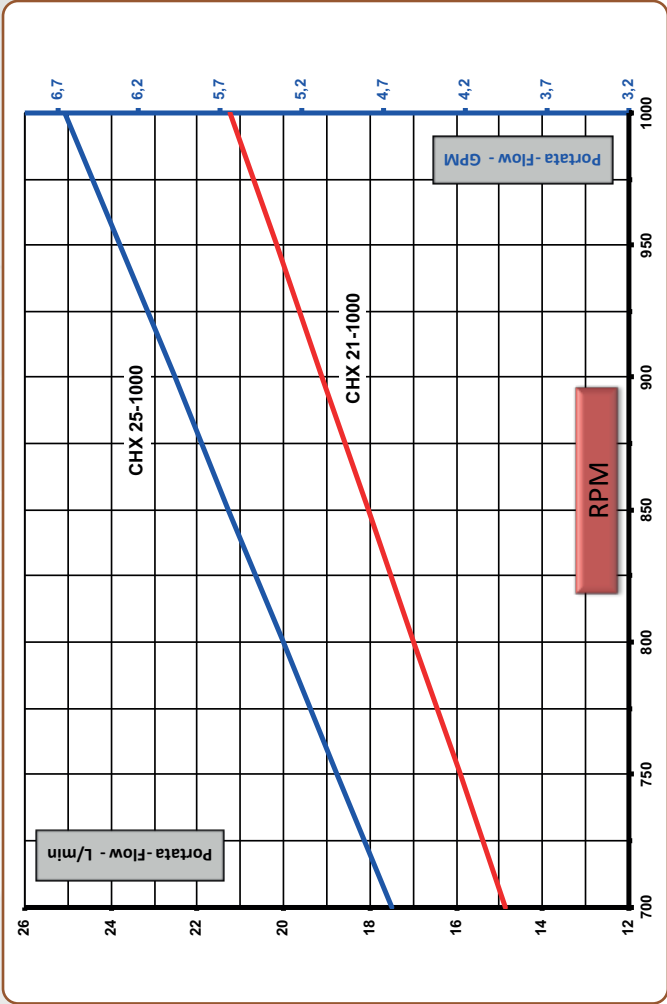
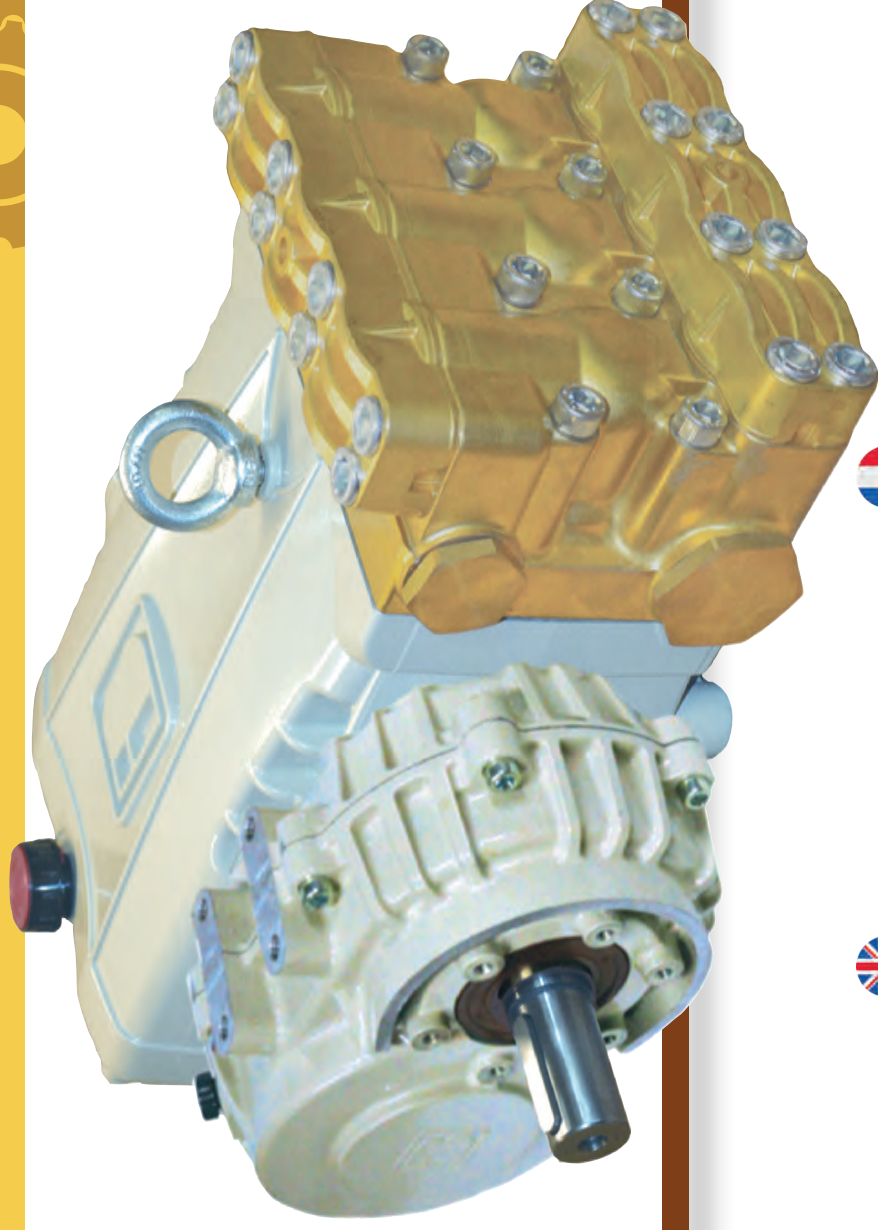


GRAFICO PRESTAZIONI - PERFORMANCE CHART







## Heavy Duty Applications



Applicazioni heavy duty con riduttore per adattare la pompa alla forza motrice disponibile.

- Ingranaggi con denti a profilo elicoidale per un azionamento silenzioso.
- Cuscinetti ed ingranaggi sovradimensionati per resistere alle applicazioni più gravose.
- Rapporti di riduzione / moltiplicazione disponibili 1:1,81 e 1,81:1.
- Possibilità di fissaggio ulteriore tramite 4 fori filettati.
- Montaggio a dx o sx della pompa con 4 diverse angolazioni spaziate di 60°.



Heavy duty applications with gearbox to adapt the pump to the available driving force.

- Helical gears for quiet operation.
- Oversized bearings and gears to withstand the toughest applications.
- Available gear ratios 1:1,81 and 1,81:1.
- Possibility of additional fixing through 4 threaded holes.
- Right or left mounting of the pump with 4 different angles spaced 60°.



Applications lourdes avec réducteur pour adapter la pompe à la force motrice disponible.

- Engrenages à denture hélicoïdale pour un fonctionnement silencieux.
- Roulements et engrenages surdimensionnés pour résister aux applications les plus difficiles.
- Rapports de réduction / multiplication disponibles 1:1,81 et 1,81:1.
- Possibilité de fixation supplémentaire par 4 trous filetés.
- Montage à droite ou à gauche de la pompe avec 4 angles différents espacés de 60°.



Aplicaciones de servicio pesado con reductor para adaptar la bomba a la fuerza motriz disponible.

- Engranajes helicoidales para un funcionamiento silencioso.
- Cojinetes y engranajes sobre dimensionados para soportar las aplicaciones más difíciles.
- Relaciones de reducción / multiplicación disponibles 1:1,81 y 1,81:1.
- Posibilidad de fijación adicional a través de 4 orificios roscados.
- Montaje derecho o izquierdo de la bomba con 4 ángulos diferentes espaciados 60°.

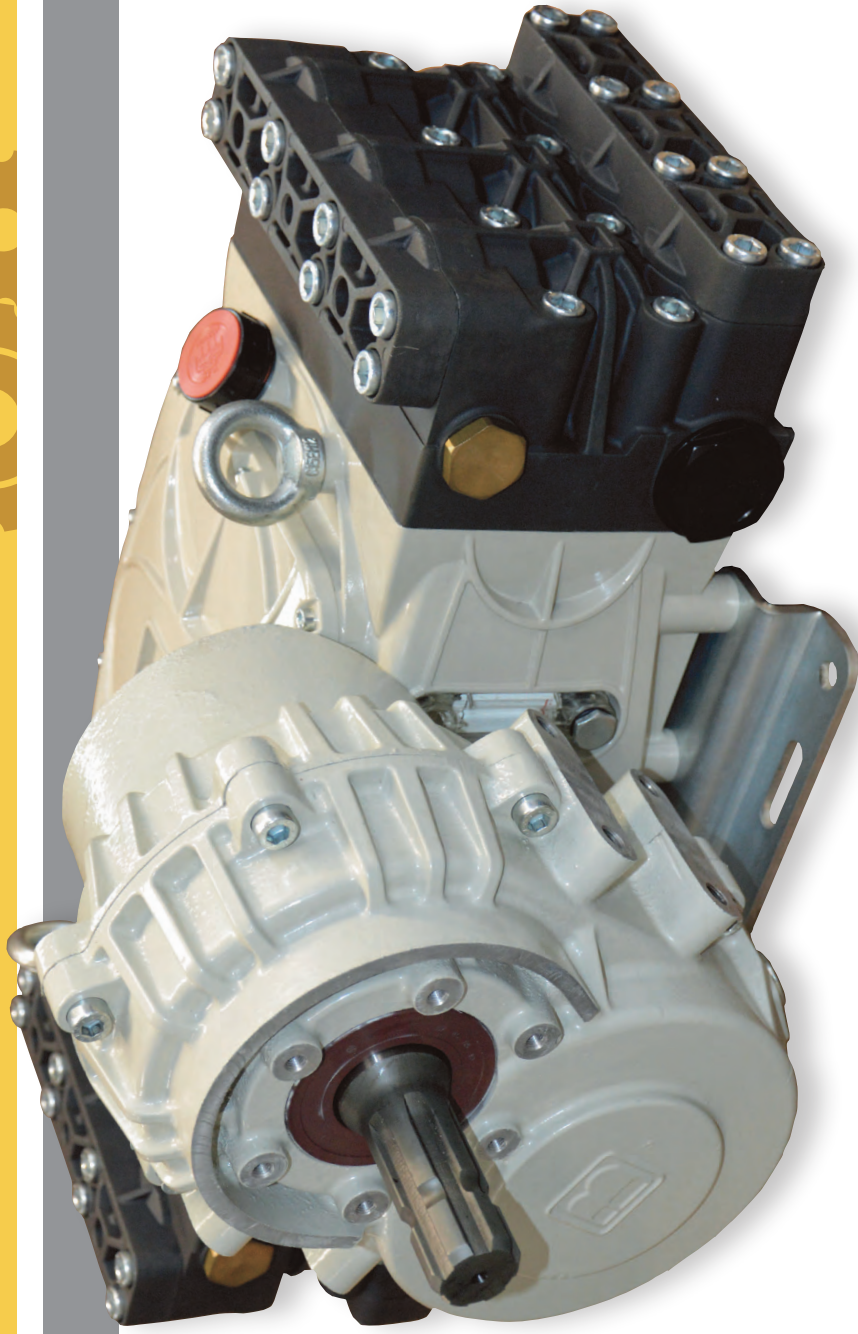
## Caratteristiche - Specifications Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 2x40 mm (2x 1" 9/16) |
|        | Press. Min. | -0,2 bar (-3 PSI)    |
|        | Press. Max. | 6 bar (87 PSI)       |
|        | Temp. Max.  | 60°C (140°F)         |
| OUT    | Ø           | 3/4" BSP             |
| SHAFT  | Ø           | spline 1" 3/8        |
| OIL    | SAE 75W 90  | 2,8l (0.74 U.S.gal.) |
| WEIGHT | kg (lbs)    | 58 kg (127 lbs)      |



### Guarnizioni - Seals Joints - Juntas

|                   |     |
|-------------------|-----|
| Anteriori - Front | "V" |
| Posteriori - Rear | "V" |



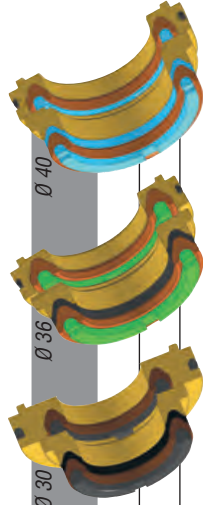
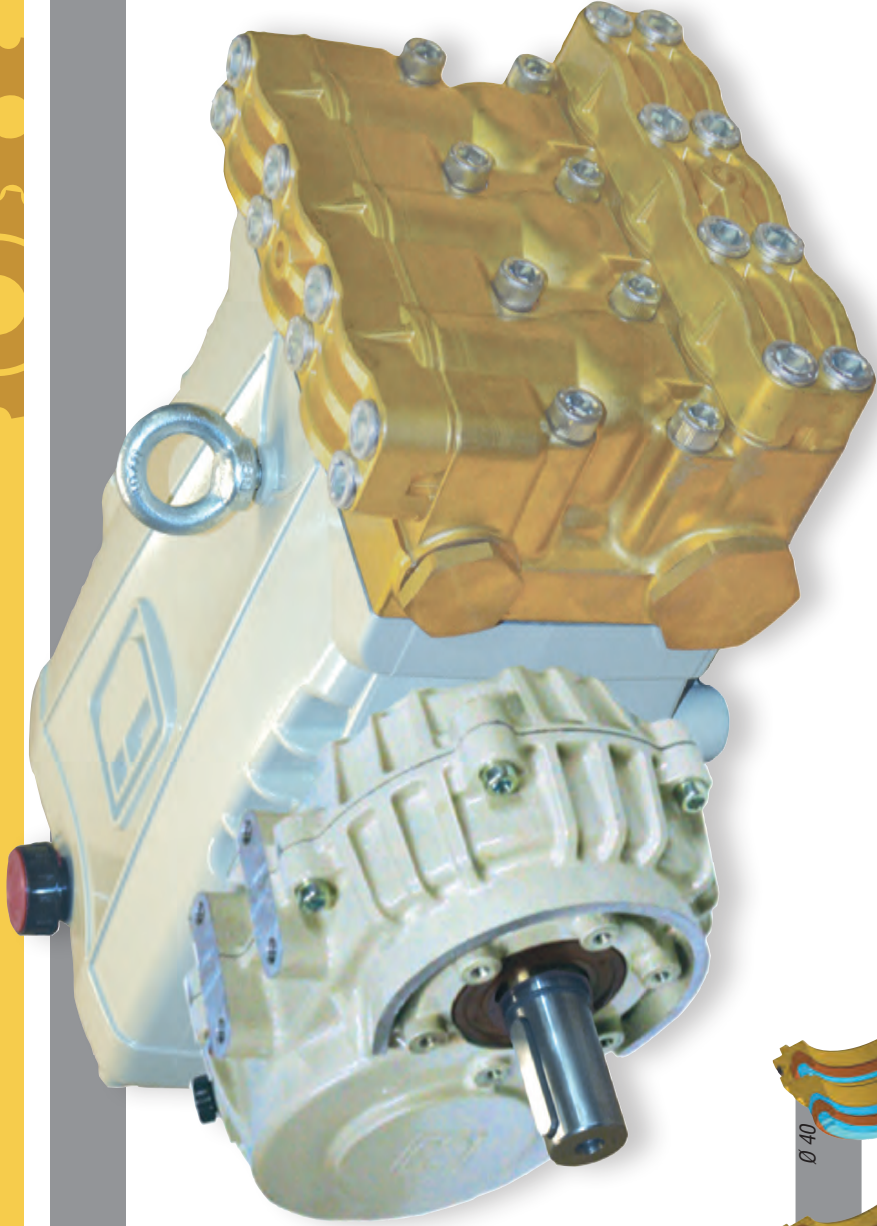
| Modello<br>Model | Rapporto di riduzione<br>Gear ratio | Press. Max<br>Max Pressure |     | 550 RPM (P.T.O. / MOTOR)<br>1000 RPM (PUMP) |      |      |      | Pistone<br>Plunger | Corsa<br>Stroke |
|------------------|-------------------------------------|----------------------------|-----|---------------------------------------------|------|------|------|--------------------|-----------------|
|                  |                                     | bar                        | PSI | l/min                                       | GPM  | kW   | hp   |                    |                 |
| CKA 300-G        | 1:1,81                              | 2                          | 29  | 301                                         | 79.5 | 1,2  | 1,6  | 45                 | 34              |
|                  |                                     | 40                         | 580 | 300                                         | 79.3 | 23,6 | 31,6 |                    |                 |
|                  |                                     | 50                         | 725 | 299                                         | 79.0 | 29,3 | 39,2 |                    |                 |
|                  |                                     | 60                         | 870 | 298                                         | 78.7 | 35,1 | 47,0 |                    |                 |

Disponibili su richiesta con albero cilindrico cavo per accoppiamento diretto del motore sul riduttore  
Available on request with hollow cylindrical shaft for direct coupling of the motor to the gearbox  
Disponible sur demande avec arbre cylindrique creux pour l'accouplement direct du moteur au réducteur  
Disponible bajo pedido con eje cilíndrico hueco para acoplamiento directo del motor al reductor



## Caratteristiche - Specifications Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" 1/2 BSP           |
|        | Press. Min. | -0,2 bar (-3 PSI)    |
|        | Press. Max. | 6 bar (87 PSI)       |
| OUT    | Temp. Max.  | 60°C (140°F)         |
|        | Ø           | 1" BSP               |
| SHAFT  | Ø           | 40 mm                |
| OIL    | SAE 75W 90  | 3,3l (0.87 U.S.gal.) |
| WEIGHT | kg (lbs)    | 76 kg (167.5 lbs)    |



Guarnizioni - Seals  
Joints - Juntas

Ø 30

Ø 36

Ø 40

Anteriori - Front

“V”

Posteriori - Rear

“V”

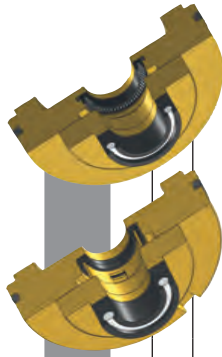
| Modello<br>Model | Rapporto di riduzione<br>Gear ratio | Press. Max<br>Max Pressure |      | 1800 RPM (MOTOR)<br>1000 RPM (PUMP) | Pistone<br>Plunger | Corsa<br>Stroke |
|------------------|-------------------------------------|----------------------------|------|-------------------------------------|--------------------|-----------------|
|                  |                                     | bar                        | PSI  |                                     |                    |                 |
| CPQ 9020.1 LX-G  | 1:1,81                              | 200                        | 2900 | GPM 23.0<br>kW 34,1<br>hp 45,7      | Ø mm 30            | 44              |
| CPQ 1316.1 LX-G  | 1:1,81                              | 160                        | 2320 | GPM 33.0<br>kW 39,2<br>hp 52,6      | Ø mm 36            | 44              |
| CPQ 1413.1 LX-G  | 1:1,81                              | 130                        | 1885 | GPM 37.0<br>kW 35,8<br>hp 48,0      | Ø mm 40            | 40              |
| CPQ 1613.1 LX-G  | 1:1,81                              | 130                        | 1885 | GPM 40.7<br>kW 39,4<br>hp 52,8      | Ø mm 40            | 44              |

Disponibili su richiesta con albero cilindrico cavo per accoppiamento diretto del motore sul riduttore  
Available on request with hollow cylindrical shaft for direct coupling of the motor to the gearbox  
Disponible sur demande avec arbre cylindrique creux pour l'accouplement direct du moteur au réducteur  
Disponible bajo pedido con eje cilíndrico hueco para acoplamiento directo del motor al reductor



Caratteristiche - Specifications  
Caractéristiques - Características

|        |             |                      |
|--------|-------------|----------------------|
| IN     | Ø           | 1" BSP               |
|        | Press. Min. | -0,1 bar (-1.5 PSI)  |
|        | Press. Max. | 6 bar (87 PSI)       |
| OUT    | Temp. Max.  | 60°C (140°F)         |
|        | Ø           | 1/2" BSP             |
| SHAFT  | Ø           | 40 mm                |
| OIL    | SAE 75W 90  | 4l (1.05 U.S.gal.)   |
| WEIGHT | kg (lbs)    | 106,8 kg (235.4 lbs) |

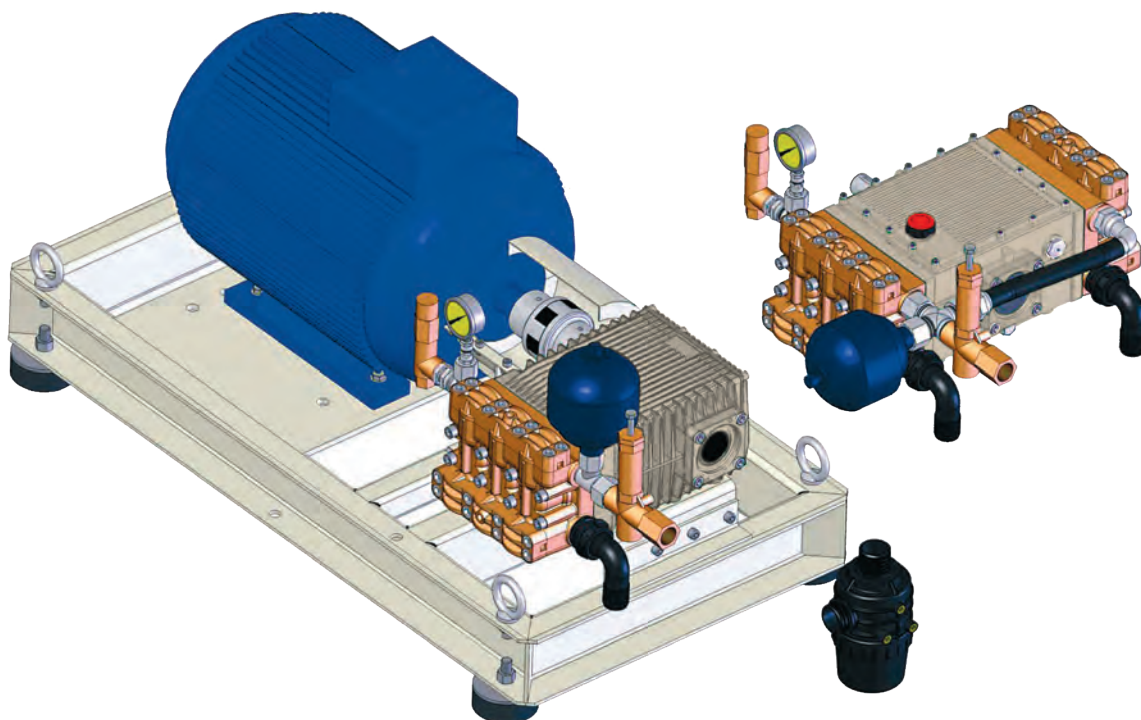


Guarnizioni - Seals  
Joints - Juntas

|                   |           |
|-------------------|-----------|
| Anteriori - Front | Super "U" |
| Posteriori - Rear | "U"       |

| Modello<br>Model | Rapporto di riduzione<br>Gear ratio | Press. Max<br>Max Pressure |       | 1800 RPM (MOTOR)<br>1000 RPM (PUMP) |     |      | Pistone<br>Plunger<br>Ø mm | Corsa<br>Stroke<br>mm |
|------------------|-------------------------------------|----------------------------|-------|-------------------------------------|-----|------|----------------------------|-----------------------|
|                  |                                     | bar                        | PSI   | l/min                               | GPM | kw   |                            |                       |
| CAX 2475-G       | 1:1,81                              | 750                        | 10875 | 25                                  | 6.6 | 35,9 | 16                         | 44                    |
| CAX 3060-G       | 1:1,81                              | 600                        | 8700  | 31                                  | 8.2 | 36,4 | 18                         | 44                    |

Disponibili su richiesta con albero cilindrico cavo per accoppiamento diretto del motore sul riduttore  
Available on request with hollow cylindrical shaft for direct coupling of the motor to the gearbox  
Disponible sur demande avec arbre cylindrique creux pour l'accouplement direct du moteur au réducteur  
Disponible bajo pedido con eje cilíndrico hueco para acoplamiento directo del motor al reductor



## A - GRUPPO ELETTROPOMPA

- 1 Motore elettrico trifase 400V-50 Hz a 4 o 6 poli; assicura elevate prestazioni e grande affidabilità nel tempo.
- 2 Giunto elastico in ghisa di alta qualità in grado di assorbire in modo ottimale le vibrazioni derivanti dalla trasmissione di potenza fra il motore elettrico e la pompa.
- 3 Gamma di pompe professionali a tre e sei pistoni particolarmente adatte per impiego continuo.
- 4 Valvola di regolazione pressione con scarico automatico: alla chiusura della lancia il flusso dell'acqua viene bypassato al serbatoio. Il tubo rimane in pressione tra la lancia e la valvola, mentre la pompa lavora ad una pressione compresa fra 0 e 10 bar.



## A - POWER UNIT

- 1 Three-phase electric motor 400 V-50 Hz 4 or 6 poles; to ensure high performance and long life.
- 2 High quality flexible coupling made of cast iron able to absorb vibrations due to power transmission between electric motor and pump.
- 3 3/6 ceramic pistons pumps range. Heavy duty pumps ensuring great performance at non stop service.
- 4 Pressure regulating valve with automatic bypass. When the spray gun is closed the valve redirects the water flow to the bypass tank. The hose between the lance and the valve remains on pressure while the pump is working between 0 and 10 bar (0÷145 P.S.I.).



## A - ENSEMBLE POMPE/MOTEUR

- 1 Moteur électrique triphasé 400V-50 Hz à 4 ou 6 pôles; pour assurer des performances optimales et une grande longévité.
- 2 Accouplement élastique en fonte de qualité supérieure en mesure d'absorber de manière optimale les vibrations dues à la transmission de puissance entre le moteur électrique et la pompe.
- 3 Gamme de pompes professionnelles à trois et six pistons en céramique, particulièrement indiquées pour gros travaux intensifs.
- 4 Régulateur de pression avec by-pass automatique: lors de la fermeture de la lance, le flux de l'eau est bypassé au réservoir. Le tuyau reste sous pression entre la lance et le régulateur pendant que la pompe travaille à une pression entre 0 et 10 bars.



## A - GRUPO ELECTROBOMBA

- 1 Motor eléctrico trifásico 400V-50 Hz de 4 o 6 polos; garantiza prestaciones elevadas y gran fiabilidad en el tiempo.
- 2 Acoplamiento elástico en hierro fundido de alta calidad que puede absorber de un modo perfecto las vibraciones derivadas de la transmisión de potencia entre el motor eléctrico y la bomba.
- 3 Gama de bombas profesionales de tres y seis pistones particularmente idóneas para un uso continuo.
- 4 Válvula de regulación de la presión con descarga automática: durante el cierre de la lanza, el flujo del agua es desviado hacia el depósito. El tubo mantiene la presión entre la lanza y la válvula, mientras la bomba trabaja con una presión entre 0 y 10 bar.

## B - BASAMENTO

- 5 Basamento zincato e verniciato in profili di acciaio elettrosaldati di grande spessore per garantire la massima capacità di carico e grande rigidità alla flessione.
- 6 Protezione giunto in acciaio zincato e verniciato per una totale sicurezza operativa in ogni condizione di lavoro.
- 7 Golfari per il sollevamento del gruppo.

## B - BASE ASSEMBLY

- 5 Heavy-duty steel section frame welded and painted for maximum weight load and minimal flexing.
- 6 Galvanized and painted stainless steel coupling cover to ensure operator safety in any working conditions.
- 7 Base eyebolts for easy lifting of the power unit.

## B - SEMELLE

- 5 Semelle galvanisée et peinte en profilés d'acier électrosoudés de forte épaisseur pour permettre la capacité de charge maxi. et une grande rigidité à la flexion.
- 6 Protection de l'accouplement élastique en acier galvanisé et peint, qui assure invariablement la sécurité de l'opérateur en toute condition de travail.
- 7 Anneaux de levage du groupe.

## B - BANCADA

- 5 Bancada galvanizada y barnizada de perfiles de acero electrosoldados de gran espesor, para garantizar la máxima capacidad de carga y gran rigidez a la flexión.
- 6 Protección del acoplamiento en acero galvanizado y barnizado, garantiza una seguridad operativa total en cualquier condición de trabajo.
- 7 Anillos para la elevación del grupo.

## C - OPTIONAL (pag. 114, 115, 116, 117, 129)

- 8 Valvola di sicurezza
- 9 Manometro
- 10 Accumulatore
- 11 Filtro aspirazione
- 12 Supporti antivibranti

## C - OPTIONALS (pages 114, 115, 116, 117, 129)

- 8 Pressure relief valve
- 9 Pressure gauge
- 10 Pulsation damper
- 11 Inlet strainer
- 12 Shock-isolating mountings

## C - OPTIONS (pages 114, 115, 116, 117, 129)

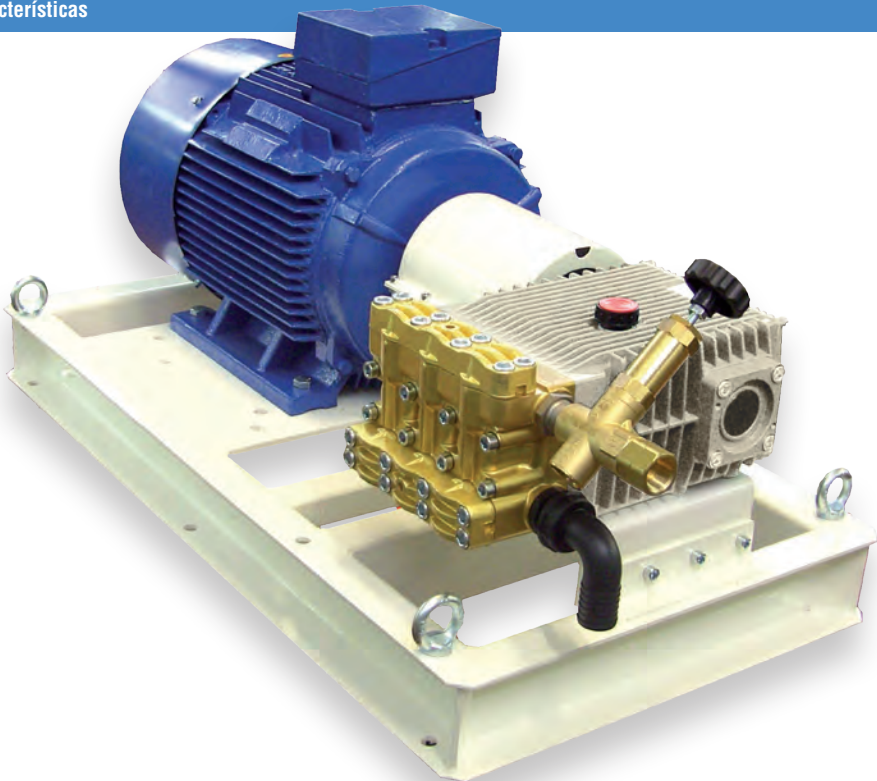
- 8 Soupape de sécurité
- 9 Manomètre
- 10 Accumulateur
- 11 Filtre aspiration
- 12 Supports antivibratiles

## C - ACCESORIOS (pág.114, 115, 116, 117, 129)

- 8 Válvula de seguridad
- 9 Manómetro
- 10 Acumulador
- 11 Filtro de aspiración
- 12 Soportes antivibraciones

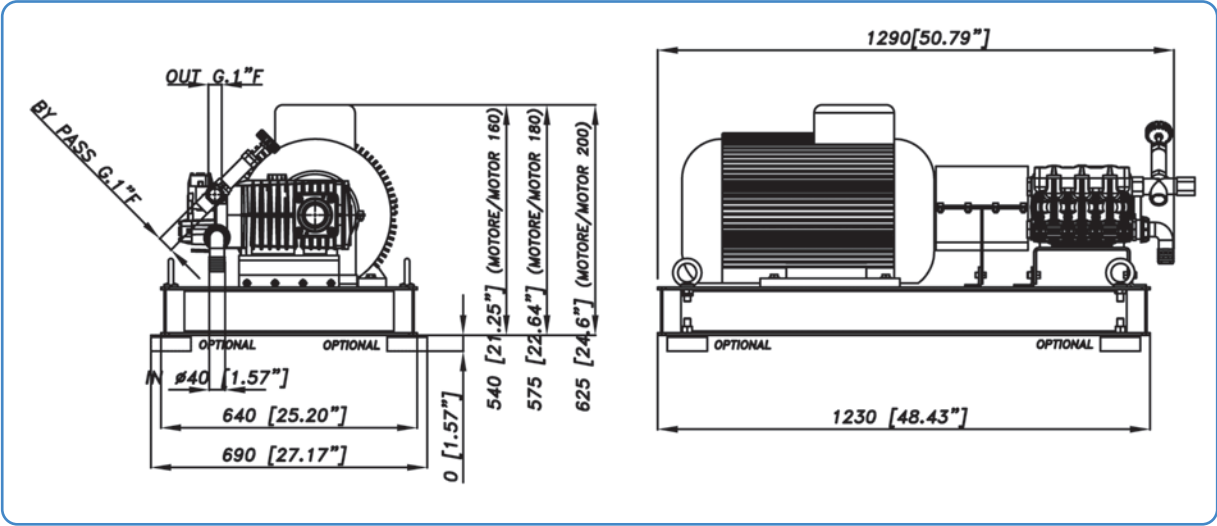
Caratteristiche - Specifications - Caractéristiques - Características

|                                      |               |                               |
|--------------------------------------|---------------|-------------------------------|
| IN                                   | Ø             | 1" 1/2 BSP                    |
|                                      | Press. Min.   | -0.2 bar (-3 PSI)             |
|                                      | Press. Max.   | 6 bar (87 PSI)                |
|                                      | Temp. Max.    | 60°C (140°F)                  |
| OUT                                  | Ø             | 3/4" BSP                      |
|                                      | Valve Out     | 1" BSP                        |
|                                      | Valve by-pass | 1" BSP                        |
| OIL                                  | SAE 75W 90    | 2,8 l (0.74 U.S.gal.)         |
| Basamento - Base - Semelle - Bancada |               |                               |
| SIZE                                 | mm (inches)   | 1230x640 mm (48.43" x 25.20") |
| WEIGHT                               | kg (lbs)      | 65 kg (143 lbs)               |



| CODICI<br>CODES                          |                          |                                                 | POMPA<br>PUMP | MOTORE TRIFASE<br>THREE-PHASE MOTOR |      |      | RPM  | PRESSIONE<br>PRESSURE |      | PORTATA<br>FLOW |      | PESO GRUPPO COMPLETO<br>POWER UNIT WEIGHT |       |
|------------------------------------------|--------------------------|-------------------------------------------------|---------------|-------------------------------------|------|------|------|-----------------------|------|-----------------|------|-------------------------------------------|-------|
| GRUPPO ELETTROPOMPA<br>POWER UNIT<br>(A) | BASAMENTO<br>BASE<br>(B) | GRUPPO COMPLETO<br>COMPLETE POWER UNIT<br>(A+B) |               | 50Hz - 400V                         | kW   | A    |      | bar                   | PSI  | l/min           | GPM  | kg                                        | lbs   |
| 73.9103.97.3                             | 73.9502.97.3             | 73.9203.97.3                                    | CK 2216.1     | 160L 4 POLI                         | 15   | 29.5 | 1450 | 100                   | 1450 | 63              | 16.6 | 270                                       | 594   |
| 73.9106.97.3                             | 73.9500.97.3             | 73.9206.97.3                                    | CK 2216.1     | 180L 4 POLI                         | 22   | 42.0 | 1450 | 150                   | 2175 | 63              | 16.6 | 326                                       | 717   |
| 73.9104.97.3                             | 73.9500.97.3             | 73.9204.97.3                                    | CK 2220.1     | 180M 4 POLI                         | 18.5 | 35.0 | 1450 | 100                   | 1450 | 80              | 21.1 | 312                                       | 686   |
| 73.9107.97.3                             | 73.9501.97.3             | 73.9207.97.3                                    | CK 2220.1     | 200L 4 POLI                         | 30   | 56.6 | 1450 | 150                   | 2175 | 80              | 21.1 | 382                                       | 840.4 |
| 73.9105.97.3                             | 73.9500.97.3             | 73.9205.97.3                                    | CKL 2226.1    | 180L 4 POLI                         | 22   | 42.0 | 1450 | 100                   | 1450 | 97              | 25.7 | 326                                       | 717   |
| 73.9108.97.3                             | 73.9501.97.3             | 73.9208.97.3                                    | CKL 2226.1    | 200L 4 POLI                         | 30   | 56.6 | 1450 | 150                   | 2175 | 97              | 25.7 | 382                                       | 840.4 |
| 73.9109.97.3                             | 73.9501.97.3             | 73.9209.97.3                                    | CKL 2233.1    | 200L 4 POLI                         | 30   | 56.6 | 1450 | 120                   | 1740 | 126             | 33.2 | 382                                       | 840.4 |
| 73.9100.97.3                             | 73.9501.97.3             | 73.9200.97.3                                    | CK 1224.1     | 200L 6 POLI                         | 18.5 | 37.3 | 975  | 80                    | 1160 | 97              | 25.7 | 371                                       | 816   |
| 73.9101.97.3                             | 73.9501.97.3             | 73.9201.97.3                                    | CK 1229.1     | 200L 6 POLI                         | 22   | 43.9 | 975  | 80                    | 1160 | 124             | 32.7 | 380                                       | 836   |
| 73.9102.97.3                             | 73.9501.97.3             | 73.9202.97.3                                    | CK 1235.1     | 200L 6 POLI                         | 22   | 43.9 | 975  | 70                    | 1015 | 150             | 39.7 | 380                                       | 836   |

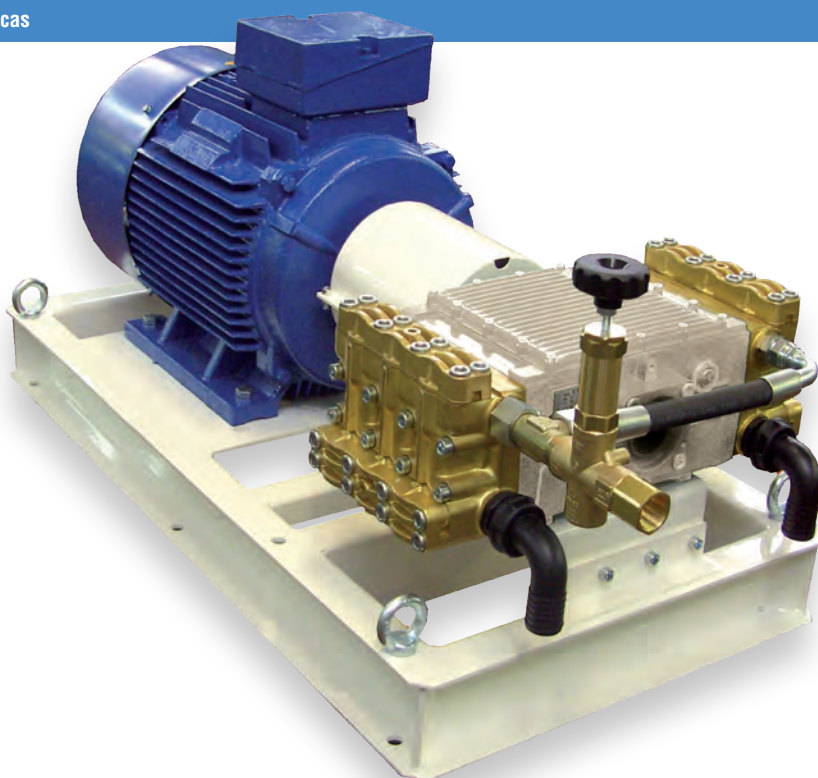
CK 3003 POWER UNIT





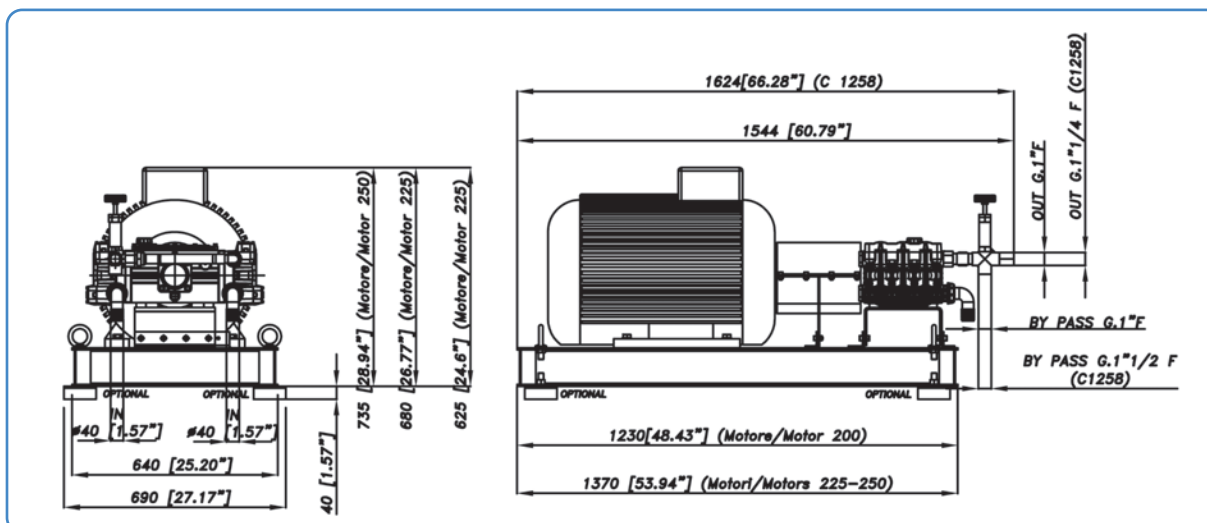
### Caratteristiche - Specifications - Caractéristiques - Características

|                                      |               |                                                                    |
|--------------------------------------|---------------|--------------------------------------------------------------------|
| IN                                   | Ø             | 1" 1/2 BSP (nr.2)                                                  |
|                                      | Press. Min.   | -0.2 bar (-3 PSI)                                                  |
|                                      | Press. Max.   | 6 bar (87 PSI)                                                     |
|                                      | Temp. Max.    | 60°C (140°F)                                                       |
| OUT                                  | Ø             | 1" BSP (nr.2)                                                      |
|                                      | Valve Out     | 1" BSP / 1" 1/4 BSP (C1258)                                        |
|                                      | Valve by-pass | 1" BSP / 1" 1/2 BSP (C1258)                                        |
| OIL                                  | SAE 75W 90    | 2,8 l (0.74 U.S.gal.)                                              |
| Basamento - Base - Semelle - Bancada |               |                                                                    |
| SIZE                                 | mm (inches)   | 1230 x 640 mm (48.43" x 25.20")<br>1370 x 640 mm (53.93" x 25.20") |
| WEIGHT                               | kg (lbs)      | 70 kg (154 lbs)                                                    |



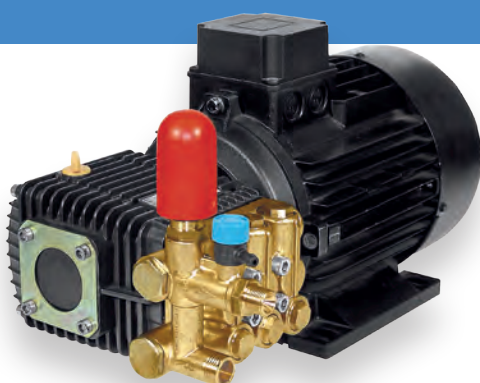
| Codici Codes                       |                     |                                           | POMPA PUMP | MOTORE TRIFASE THREE-PHASE MOTOR |    |      | RPM | PRESSIONE PRESSURE |      | PORTATA FLOW |      | PESO GRUPPO COMPLETO POWER UNIT WEIGHT |      |
|------------------------------------|---------------------|-------------------------------------------|------------|----------------------------------|----|------|-----|--------------------|------|--------------|------|----------------------------------------|------|
| GRUPPO ELETTROPOMPA POWER UNIT (A) | BASAMENTO BASE (B)  | GRUPPO COMPLETO COMPLETE POWER UNIT (A+B) |            | 50Hz - 400V                      | kW | A    |     | bar                | PSI  | l/min        | GPM  | kg                                     | lbs  |
| 76.9105.97.3                       | <b>73.9503.97.3</b> | 76.9205.97.3                              | CK 2010    | 225M 6 poli                      | 30 | 58,9 | 975 | 90                 | 1305 | 189          | 50   | 475                                    | 1045 |
| 76.9106.97.3                       | <b>73.9504.97.3</b> | 76.9206.97.3                              | CK 2580    | 250M 6 poli                      | 37 | 69,3 | 975 | 70                 | 1015 | 243          | 64,3 | 591                                    | 1300 |

### CK 3006 POWER UNIT



# ELETTROPOMPE - ELECTRIC PUMPS

## POMPES ELECTRIQUES - ELECTROBOMBAS



| 1450 rpm       | MONOFASE - SINGLE PHASE - MONOPHASE - MONOFÁSICO |                        |      |                |     |                 |     |               |       |
|----------------|--------------------------------------------------|------------------------|------|----------------|-----|-----------------|-----|---------------|-------|
| Codice<br>Code | Modello<br>Model                                 | Press. Max / Max Pres. |      | Portata / Flow |     | Potenza / Power |     | Peso / Weight |       |
|                |                                                  | bar                    | psi  | l/min          | GPM | kW              | HP  | Kg            | LBS   |
| 04.7050.97.3   | WBL 813                                          | 130                    | 1900 | 8              | 2.1 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7051.97.3   | WBL 911                                          | 110                    | 1600 | 9              | 2.3 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7052.97.3   | WBL 1010                                         | 100                    | 1450 | 10             | 2.6 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7053.97.3   | WBL 1012                                         | 120                    | 1750 | 10             | 2.6 | 2.2             | 3.0 | 27            | 59.4  |
| 04.7054.97.3   | WBL 1109                                         | 90                     | 1300 | 11             | 2.9 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7055.97.3   | WBL 1111                                         | 110                    | 1600 | 11             | 2.9 | 2.2             | 3.0 | 27            | 59.4  |
| 2800 rpm       | MONOFASE - SINGLE PHASE - MONOPHASE - MONOFÁSICO |                        |      |                |     |                 |     |               |       |
| Codice<br>Code | Modello<br>Model                                 | Press. Max / Max Pres. |      | Portata / Flow |     | Potenza / Power |     | Peso / Weight |       |
|                |                                                  | bar                    | psi  | l/min          | GPM | kW              | HP  | Kg            | LBS   |
| 04.7056.97.3   | WBL 812-F                                        | 120                    | 1750 | 8              | 2.1 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7057.97.3   | WBL 1010-F                                       | 100                    | 1450 | 10             | 2.6 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7058.97.3   | WBL 1012-F                                       | 120                    | 1750 | 10             | 2.6 | 2.2             | 3.0 | 27            | 59.4  |
| 04.7059.97.3   | WBL 1110-F                                       | 100                    | 1450 | 11             | 2.9 | 2.2             | 3.0 | 27            | 59.4  |
| 1450 rpm       | Trifase - Three phase - Triphase - Trifásico     |                        |      |                |     |                 |     |               |       |
| Codice<br>Code | Modello<br>Model                                 | Press. Max / Max Pres. |      | Portata / Flow |     | Potenza / Power |     | Peso / Weight |       |
|                |                                                  | bar                    | psi  | l/min          | GPM | kW              | HP  | Kg            | LBS   |
| 04.7160.97.3   | WBL 813                                          | 130                    | 1900 | 8              | 2.1 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7161.97.3   | WBL 816                                          | 160                    | 2300 | 8              | 2.1 | 2.2             | 3.0 | 27            | 59.4  |
| 04.7162.97.3   | WBL 911                                          | 110                    | 1600 | 9              | 2.3 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7163.97.3   | WBL 917                                          | 170                    | 2400 | 9              | 2.3 | 3               | 4.0 | 29            | 63.8  |
| 04.7164.97.3   | WBL 1010                                         | 100                    | 1450 | 10             | 2.6 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7165.97.3   | WBL 1012                                         | 120                    | 1750 | 10             | 2.6 | 2.2             | 3.0 | 27            | 59.4  |
| 04.7166.97.3   | WBL 1016                                         | 160                    | 2300 | 10             | 2.6 | 3               | 4.0 | 29            | 63.8  |
| 04.7167.97.3   | WBL 1109                                         | 90                     | 1300 | 11             | 2.9 | 1.8             | 2.5 | 24            | 52.8  |
| 04.7168.97.3   | WBL 1111                                         | 110                    | 1600 | 11             | 2.9 | 2.2             | 3.0 | 27            | 59.4  |
| 04.7169.97.3   | WBL 1115                                         | 150                    | 2200 | 11             | 2.9 | 3               | 4.0 | 29            | 63.8  |
| 04.7122.97.3   | WML 1214                                         | 140                    | 2000 | 12             | 3.1 | 3               | 4.0 | 30            | 66    |
| 07.6500.97.3   | TML 1220                                         | 200                    | 2900 | 12             | 3.1 | 4               | 5.5 | 40            | 88    |
| 04.7125.97.3   | WML 1317                                         | 175                    | 2500 | 13             | 3.4 | 4               | 5.5 | 39            | 85.8  |
| 07.6502.97.3   | TML 1320                                         | 200                    | 2900 | 13             | 3.4 | 5.5             | 7.5 | 50            | 110   |
| 04.7127.97.3   | WML 1515                                         | 150                    | 2200 | 15             | 3.9 | 4               | 5.5 | 39            | 85.8  |
| 07.6503.97.3   | TML 1520                                         | 200                    | 2900 | 15             | 3.9 | 5.5             | 7.5 | 50            | 110   |
| 07.6504.97.3   | TML 1720                                         | 170                    | 2400 | 17             | 4.5 | 5.5             | 7.5 | 50            | 110   |
| 07.6505.97.3   | TML 1720                                         | 200                    | 2900 | 17             | 4.5 | 7.5             | 10  | 60            | 132   |
| 07.6506.97.3   | TML 2020                                         | 150                    | 2200 | 20             | 5.3 | 5.5             | 7.5 | 50            | 110   |
| 07.6507.97.3   | TML 2020                                         | 200                    | 2900 | 20             | 5.3 | 7.5             | 10  | 60            | 132   |
| 06.6004.97.3   | TTL 2120                                         | 200                    | 2900 | 21             | 5.5 | 7.5             | 10  | 61            | 134.2 |
| 06.6005.97.3   | TTL 2420                                         | 150                    | 2200 | 24             | 6.3 | 7.5             | 10  | 61            | 134.2 |
| 2800 rpm       | Trifase - Three phase - Triphase - Trifásico     |                        |      |                |     |                 |     |               |       |
| Codice<br>Code | Modello<br>Model                                 | Press. Max / Max Pres. |      | Portata / Flow |     | Potenza / Power |     | Peso / Weight |       |
|                |                                                  | bar                    | psi  | l/min          | GPM | kW              | HP  | Kg            | LBS   |
| 04.7070.97.3   | WBL 1114 F                                       | 140                    | 2000 | 11             | 2.9 | 3.0             | 4.0 | 29            | 63.8  |
| 04.7071.97.3   | WBL 1410 F                                       | 110                    | 1600 | 14             | 3.7 | 3.0             | 4.0 | 29            | 63.8  |

1450 RPM: motori elettrici 4 poli – 2800 RPM: motori elettrici 2 poli  
1450 RPM: 4 poles, electric motors – 2800 RPM: 2 poles, electric motors  
1450 TR/min: moteurs électriques 4 pôles – 2800 TR/min: moteurs électriques 2 pôles  
1450 RPM: 4 polos, motores eléctricos – 2800 RPM: 2 polos, motores eléctricos

# ACCESSORI - ACCESSORIES ACCESSOIRES - ACCESORIOS



VALVOLE  
UNLOADER VALVES  
REGULATEURS  
REGULADORES



TUBI FLESSIBILI  
FLEXIBLE HOSES  
TUYAUX FLEXIBLES  
MANGUERAS FLEXIBLES



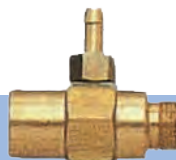
RIDUTTORI  
GEARBOXES  
REDUCTEURS  
REDUCTORES



ATTACCHI  
CONNECTIONS  
ATTELAGES  
CONEXIONES



PULEGGE  
PULLEYS  
POULIES  
POLEAS



EIETTORI  
INJECTORS  
ÉJECTEURS  
EYECTORES



GIUNTI  
COUPLINGS  
ACCOUPEMENTS  
ACOPLAMIENTOS



ACCESSORI VARI  
SUNDRY ACCESSORIES  
ACCESSOIRES DIFFERENTS  
ACCESORIOS VARIOS



PISTOLE  
GUNS  
PISTOLETS  
PISTOLAS



UGELLI  
NOZZLES  
BUSES  
BOQUILLAS



LANCE  
LANCES  
LANCES  
LANZAS



## DISPOSITIVI PREMIUM / PREMIUM DEVICES DISPOSITIFS PREMIUM / DISPOSITIVOS PREMIUM

### ES ENERGY SAVING



Il nuovo dispositivo ENERGY SAVING by-passa l'ugello eiettore in alta pressione eliminando le perdite di carico e aumentando la potenza disponibile alla lancia.



The new ENERGY SAVING device has been specifically designed to bypass the injector nozzle in high pressure, thus eliminating the losses of load and increasing the power available to the lance.



Le nouveau dispositif ENERGY SAVING (économie d'énergie) dévie la buse d'éjecteur en haute pression, ce qui évite les pertes de charge et augmente la puissance disponible à la lance.



El nuevo dispositivo ENERGY SAVING desvía la boquilla del eyector en alta presión, eliminando las pérdidas de carga y aumentando la potencia disponible a la lanza.

### TS TOTAL STOP



Dispositivo di spegnimento automatico del motore alla chiusura della pistola.



Device for automatic motor shutdown when gun is closed.



Dispositif d'arrêt automatique du moteur lorsque le pistolet est fermé.



Dispositivo de parada automática del motor cuando la pistola está cerrada.

### PF EASY START



Dispositivo che facilita la partenza del motore in ogni condizione.



Device that facilitates the engine start-up in all conditions.



Dispositif qui facilite le démarrage du moteur dans toutes les conditions.



Dispositivo que facilita el arranque del motor en todas las condiciones.

**NEW**



### TV THERMAL VALVE



Valvola termica pretarata che entra in funzione automaticamente prevenendo il surriscaldamento della pompa.



Pre-set thermal valve that starts-up automatically preventing the pump from overheating.



Valve de sécurité thermique pré-tarée, entre en fonction automatiquement, et évite la surchauffe de la pompe.



Válvula térmica preconfigurada que entra en funcionamiento automáticamente evitando el sobrecalentamiento de la bomba.

# VALVOLE - UNLOADER VALVES

## REGULATEURS - REGULADORES

VALVOLE REGOLAZIONE PRESSIONE APR: ATTACCO CON VITI CAVE  
 UNLOADER VALVES APR WITH BANJO CONNECTIONS  
 RÉGULATEURS DE PRESSION BY-PASS APR AVEC VIS DE FIXATION  
 VÁLVULAS DE REGULACIÓN DE PRESIÓN APR: CONEXIÓN CON TORNILLOS DE FIJACIÓN



|   |  | Codice Code                            | Uscita Outlet | Modello Model                                                                       | Pressione Max Max Pressure   |      | Inj. Dia. | Portata Flow |     | Attacco pompa Port size BSP | Entrata Inlet BSP | Peso Weight |      | Serie Series |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------|---------------|-------------------------------------------------------------------------------------|------------------------------|------|-----------|--------------|-----|-----------------------------|-------------------|-------------|------|--------------|---------------|
|                                                                                                                                                                     |  |                                        |               |                                                                                     | bar                          | PSI  |           | l/min        | GPM |                             |                   | kg          | lbs  |              |               |
|  <b>APR 20</b>                                                                     |  | <b>APR - APR.I 20<br/>ORANGE COLOR</b> | 05.8708.97.3  | 3/8 BSP-M                                                                           | APR 20                       | 140  | 2000      | /            | 21  | 5.5                         | 3/8               | 1/2 - M     | 0.86 | 1.9          | <b>WB-WBX</b> |
|                                                                                                                                                                     |  |                                        | 05.8711.97.3  | 22x1.5-M                                                                            |                              |      |           |              |     |                             | 3/8               |             | 0.90 | 2.0          |               |
|  <b>APR.I 20</b>                                                                   |  |                                        | 05.8707.97..  | 3/8 BSP-M                                                                           | APR.I 20<br>Fixed injector   | 140  | 2000      | <b>16</b>    | 9.5 | 2.5                         | 3/8               | 1/2 - M     | 0.90 | 2.0          |               |
|                                                                                                                                                                     |  |                                        | 05.8710.97..  | 22x1.5-M                                                                            |                              |      |           | <b>18</b>    | 11  | 2.9                         |                   |             | 3/8  | 0.95         |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      |           | <b>21</b>    | 15  | 4.0                         | 3/8               |             |      |              |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      |           | <b>23</b>    | 21  | 5.5                         |                   |             |      |              |               |
|  <b>APR.I 20 Adj.</b> <b>APR.ES20</b>                                              |  | 05.8706.97..                           | 3/8 BSP-M     | APR.I 20<br>Fixed injector                                                          | 140                          | 2000 | <b>16</b> | 9.5          | 2.5 | 3/8                         | 1/2 - M           | 0.90        | 2.0  |              |               |
|                                                                                                                                                                     |  | 05.8709.97..                           | 22x1.5-M      |                                                                                     |                              |      | <b>18</b> | 11           | 2.9 |                             |                   | 3/8         | 0.95 | 2.1          |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      | <b>21</b> | 15           | 4.0 | 3/8                         |                   |             |      |              |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      | <b>23</b> | 21           | 5.5 |                             |                   |             |      |              |               |
|                                                                                                                                                                     |  |                                        |               |    | 11                           | 2.9  |           |              |     |                             |                   |             |      |              |               |
|  <b>APR 25</b>                                                                    |  | <b>APR - APR.I 25<br/>BLUE COLOR</b>   | 05.8714.97.3  | 3/8 BSP-M                                                                           | APR 25                       | 175  | 2500      | /            | 21  | 5.5                         | 3/8               | 1/2 M       | 0.86 | 1.9          | <b>WB-WBX</b> |
|                                                                                                                                                                     |  |                                        | 05.8717.97.3  | 22x1.5-M                                                                            |                              |      |           |              |     |                             | 3/8               |             | 0.90 | 2.0          |               |
|  <b>APR.I 25</b>                                                                 |  |                                        | 05.8713.97..  | 3/8 BSP-M                                                                           | APR.I 25<br>Fixed injector   | 175  | 2500      | <b>16</b>    | 9.5 | 2.5                         | 3/8               | 1/2 M       | 0.90 | 2.0          |               |
|                                                                                                                                                                     |  |                                        | 05.8716.97..  | 22x1.5-M                                                                            |                              |      |           | <b>18</b>    | 11  | 2.9                         |                   |             | 3/8  | 0.95         |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      |           | <b>21</b>    | 15  | 4.0                         | 3/8               |             |      |              |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      |           | <b>23</b>    | 21  | 5.5                         |                   |             |      |              |               |
|  <b>APR.I 25 Adj.</b> <b>APR.ES25</b>                                            |  |                                        | 05.8712.97..  | 3/8 BSP-M                                                                           | APR.I 25<br>Adjust. injector | 175  | 2500      | <b>16</b>    | 9.5 | 2.5                         | 3/8               | 1/2 M       | 0.90 | 2.0          |               |
|                                                                                                                                                                     |  |                                        | 05.8715.97..  | 22x1.5-M                                                                            |                              |      |           | <b>18</b>    | 11  | 2.9                         |                   |             | 3/8  | 0.95         |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      |           | <b>21</b>    | 15  | 4.0                         | 3/8               |             |      |              |               |
|                                                                                                                                                                     |  |                                        |               |                                                                                     |                              |      |           | <b>23</b>    | 21  | 5.5                         |                   |             |      |              |               |
|                                                                                                                                                                     |  |                                        |               |  | 11                           | 2.9  |           |              |     |                             |                   |             |      |              |               |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F

.. Aggiungere al codice - Add to the last number - Ajouter à la réf. - Añadir a la ref.:

16: valvola con ugello eiettore dia. 1.6mm- valve with injector nozzle dia. 1.6mm - régulateur avec buse d'éjecteur dia. 1.6mm - regulador con boquilla eyector dia. 1.6mm  
 18: valvola con ugello eiettore dia. 1.8mm- valve with injector nozzle dia. 1.8mm - régulateur avec buse d'éjecteur dia. 1.8mm - regulador con boquilla eyector dia. 1.8mm  
 21: valvola con ugello eiettore dia. 2.1mm- valve with injector nozzle dia. 2.1mm - régulateur avec buse d'éjecteur dia. 2.1mm - regulador con boquilla eyector dia. 2.1mm  
 23: valvola con ugello eiettore dia. 2.3mm- valve with injector nozzle dia. 2.3mm - régulateur avec buse d'éjecteur dia. 2.3mm - regulador con boquilla eyector dia. 2.3mm  
 ES: valvola con dispositivo Energy Saving - valve with Energy Saving Device - régulateur avec dispositif Energy Saving - regulador con dispositivo Ahorro Energia

# VALVOLE - UNLOADER VALVES REGULATEURS - REGULADORES



APR 30



APR.I 30



APR.I 30 Adj.

APR.ES30

| Codice Code  | Uscita Outlet | Modello Model             | Pressione Max Max Pressure |      | Inj. Dia. | Portata Flow |     | Attacco pompa Port size | Entrata Inlet | Peso Weight |     | Serie Series |
|--------------|---------------|---------------------------|----------------------------|------|-----------|--------------|-----|-------------------------|---------------|-------------|-----|--------------|
|              |               |                           | bar                        | PSI  |           | I/min GPM    | BSP |                         |               | Kg          | lbs |              |
| 05.8720.97.3 | 3/8 BSP-M     | APR 30                    | 210                        | 3000 | /         | 21           | 5.5 | 3/8 1/2                 | 1/2 - M       | 0.86        | 1.9 | WM - TM      |
| 05.8723.97.3 | 22x1.5-M      |                           |                            |      |           |              |     |                         |               | 0.90        | 2.0 |              |
| 05.8719.97.. | 3/8 BSP-M     | APR.I 30 Fixed injector   | 210                        | 3000 |           | 16           | 9.5 | 3/8 1/2                 | 1/2 - M       | 0.90        | 2.0 |              |
|              |               |                           |                            |      |           | 18           | 11  |                         |               |             |     |              |
| 05.8722.97.. | 22x1.5-M      |                           |                            |      |           | 21           | 15  |                         |               | 0.95        | 2.1 |              |
|              |               |                           |                            |      |           | 23           | 21  |                         |               |             |     |              |
| 05.8718.97.. | 3/8 BSP-M     | APR.I 30 Adjust. injector | 210                        | 3000 |           | 16           | 9.5 | 3/8 1/2                 | 1/2 - M       | 0.90        | 2.0 |              |
|              |               |                           |                            |      |           | 18           | 11  |                         |               |             |     |              |
| 05.8721.97.. | 22x1.5-M      |                           |                            |      |           | 21           | 15  |                         |               | 0.95        | 2.1 |              |
|              |               |                           |                            |      |           | 23           | 21  |                         |               |             |     |              |
|              |               |                           |                            |      |           | ES           | 11  | 2.9                     |               |             |     |              |



APR 35



APR.I 35



APR.I 35 Adj.

| Codice Code  | Uscita Outlet | Modello Model             | Pressione Max Max Pressure |      | Inj. Dia. | Portata Flow |     | Attacco pompa Port size | Entrata Inlet | PESO WEIGHT |      | Serie Series |
|--------------|---------------|---------------------------|----------------------------|------|-----------|--------------|-----|-------------------------|---------------|-------------|------|--------------|
|              |               |                           | bar                        | psi  |           | I/min GPM    | BSP |                         |               | Kg          | lbs  |              |
| 05.8751.97.3 | 3/8 BSP- M    | APR 35                    | 240                        | 3500 | /         | 21           | 5.5 | 3/8 3/8                 | 1/2 - M       | 1.10        | 2.4  | WBX          |
| 05.8754.97.3 | 22x1.5-M      |                           |                            |      |           |              |     |                         |               | 1.15        | 2.5  |              |
| 05.8752.97.. | 3/8 BSP-M     | APR.I 35 Fixed injector   | 240                        | 3500 |           | 16           | 9.5 | 3/8 3/8                 | 1/2 - M       | 1.15        | 2.5  |              |
|              |               |                           |                            |      |           | 18           | 11  |                         |               |             |      |              |
| 05.8755.97.. | 22x1.5-M      |                           |                            |      |           | 21           | 15  |                         |               | 1.20        | 2.65 |              |
|              |               |                           |                            |      |           | 23           | 21  |                         |               |             |      |              |
| 05.8753.97.. | 3/8 BSP-M     | APR.I 35 Adjust. injector | 240                        | 3500 |           | 16           | 9.5 | 3/8 3/8                 | 1/2 - M       | 1.15        | 2.5  | WM - TM      |
|              |               |                           |                            |      |           | 18           | 11  |                         |               |             |      |              |
| 05.8759.97.. | 22x1.5- M     |                           |                            |      |           | 21           | 15  |                         |               | 1.20        | 2.65 |              |
|              |               |                           |                            |      |           | 23           | 21  |                         |               |             |      |              |
| 05.8702.97.3 | 3/8 BSP-M     | APR 40                    | 280                        | 4000 | /         | 21           | 5.5 | 3/8 1/2                 | 1/2 - M       | 1.10        | 2.4  | WM - TM      |
| 05.8705.97.3 | 22x1.5-M      |                           |                            |      |           |              |     |                         |               | 1.15        | 2.5  |              |
| 05.8701.97.. | 3/8 BSP-M     | APR.I 40 Fixed injector   | 280                        | 4000 |           | 16           | 9.5 | 3/8 1/2                 | 1/2 - M       | 1.15        | 2.5  |              |
|              |               |                           |                            |      |           | 18           | 11  |                         |               |             |      |              |
| 05.8704.97.. | 22x1.5-M      |                           |                            |      |           | 21           | 15  |                         |               | 1.20        | 2.65 |              |
|              |               |                           |                            |      |           | 23           | 21  |                         |               |             |      |              |
| 05.8700.97.. | 3/8 BSP-M     | APR.I 40 Adjust. injector | 280                        | 4000 |           | 16           | 9.5 | 3/8 1/2                 | 1/2 - M       | 1.15        | 2.5  |              |
|              |               |                           |                            |      |           | 18           | 11  |                         |               |             |      |              |
| 05.8703.97.. | 22x1.5-M      |                           |                            |      |           | 21           | 15  |                         |               | 1.20        | 2.65 |              |
|              |               |                           |                            |      |           | 23           | 21  |                         |               |             |      |              |

.. Aggiungere al codice - Add to the last number - Ajouter à la réf. - Añadir a la ref.:

16: valvola con ugello eiettore dia. 1.6mm- valve with injector nozzle dia. 1.6mm - régulateur avec buse d'éjecteur dia. 1.6mm - regulador con boquilla eyector dia. 1.6mm

18: valvola con ugello eiettore dia. 1.8mm- valve with injector nozzle dia. 1.8mm - régulateur avec buse d'éjecteur dia. 1.8mm - regulador con boquilla eyector dia. 1.8mm

21: valvola con ugello eiettore dia. 2.1mm- valve with injector nozzle dia. 2.1mm - régulateur avec buse d'éjecteur dia. 2.1mm - regulador con boquilla eyector dia. 2.1mm

23: valvola con ugello eiettore dia. 2.3mm- valve with injector nozzle dia. 2.3mm - régulateur avec buse d'éjecteur dia. 2.3mm - regulador con boquilla eyector dia. 2.3mm

ES: valvola con dispositivo Energy Saving - valve with Energy Saving Device - régulateur avec dispositif Energy Saving - regulador con dispositivo Ahorro Energia



# VALVOLE - UNLOADER VALVES

## REGULATEURS - REGULADORES

VALVOLE REGOLAZIONE PRESSIONE UNIFIT CON BY-PASS ESTERNO  
UNLOADER VALVES UNIFIT WITH EXTERNAL BY-PASS  
RÉGULATEURS DE PRESSION UNIFIT AVEC BY-PASS EXTÉRIEUR  
VÁLVULAS DE REGULACIÓN DE PRESIÓN UNIFIT CON BY-PASS EXTERNO



| <div><div>ES</div><div>TV</div></div>                                                                                                             |  | Codice<br>PART NR. | Uscita<br>Outlet | Modello<br>Model                   | Pressione Max<br>Max Pressure |      | Inj.<br>Dia. | Portata<br>Flow |       | Attacco pompa | Entrata | Peso        |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|------------------|------------------------------------|-------------------------------|------|--------------|-----------------|-------|---------------|---------|-------------|-----|
|                                                                                                                                                   |  |                    |                  |                                    | bar                           | PSI  |              | BSP             | Inlet | Kg            | lbs     |             |     |
| <div><div>UNIFIT 20</div></div>                                  |  | 05.8730.97.3       | 3/8 BSP-M        | UNIFIT 20                          | 140                           | 2000 | /            | 30              | 8.0   | 3/8 - M       | 3/8 - M | 0.6<br>1.3  | 1.3 |
|                                                                                                                                                   |  | 05.8733.97.3       | 22x1.5-M         |                                    |                               |      |              |                 |       |               |         | 0.64<br>1.4 | 1.4 |
| <div><div>UNIFIT.I 20</div></div>                                |  | 05.8731.97..       | 3/8 BSP-M        | UNIFIT.I<br>20 Fixed<br>injector   | 140                           | 2000 | 16           | 9.5             | 2.5   | 3/8 - M       | 3/8 - M | 0.64<br>1.4 | 1.4 |
|                                                                                                                                                   |  | 05.8734.97..       | 22x1.5-M         |                                    |                               |      | 18           | 11              | 2.9   |               |         | 0.68<br>1.5 | 1.5 |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 21           | 15              | 4.0   |               |         |             |     |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 23           | 21              | 5.5   |               |         |             |     |
| <div><div>UNIFIT.I 20 Adj.</div><div>UNIFIT. ES 20</div></div>  |  | 05.8732.97..       | 3/8 BSP-M        | UNIFIT.I<br>20 Adjust.<br>injector | 140                           | 2000 | 16           | 9.5             | 2.5   | 3/8 - M       | 3/8 - M | 0.64<br>1.4 | 1.4 |
|                                                                                                                                                   |  | 05.8735.97..       | 22x1.5-M         |                                    |                               |      | 18           | 11              | 2.9   |               |         | 0.68<br>1.5 | 1.5 |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 21           | 15              | 4.0   |               |         |             |     |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 23           | 21              | 5.5   |               |         |             |     |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | ES           | 11              | 2.9   |               |         |             |     |
| <div><div>UNIFIT 30</div></div>                                |  | 05.8736.97.3       | 3/8 BSP-M        | UNIFIT 30                          | 210                           | 3000 | /            | 30              | 8.0   | 3/8 - M       | 3/8 - M | 0.6         | 1.3 |
|                                                                                                                                                   |  | 05.8739.97.3       | 22x1.5-M         |                                    |                               |      |              |                 |       |               |         | 0.64        | 1.4 |
| <div><div>UNIFIT.I 30</div></div>                              |  | 05.8737.97..       | 3/8 BSP-M        | UNIFIT.I<br>30 Fixed<br>injector   | 210                           | 3000 | 16           | 9.5             | 2.5   | 3/8 - M       | 3/8 - M | 0.64        | 1.4 |
|                                                                                                                                                   |  | 05.8740.97..       | 22x1.5-M         |                                    |                               |      | 18           | 11              | 2.9   |               |         | 0.68        | 1.5 |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 21           | 15              | 4.0   |               |         |             |     |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 23           | 21              | 5.5   |               |         |             |     |
| <div><div>UNIFIT.I 30 Adj.</div><div>UNIFIT. ES 30</div></div> |  | 05.8738.97..       | 3/8 BSP-M        | UNIFIT.I<br>30 Adjust.<br>injector | 210                           | 3000 | 16           | 9.5             | 2.5   | 3/8 - M       | 3/8 - M | 0.64        | 1.4 |
|                                                                                                                                                   |  | 05.8741.97..       | 22x1.5-M         |                                    |                               |      | 18           | 11              | 2.9   |               |         | 0.68        | 1.5 |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 21           | 15              | 4.0   |               |         |             |     |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | 23           | 21              | 5.5   |               |         |             |     |
|                                                                                                                                                   |  |                    |                  |                                    |                               |      | ES           | 11              | 2.9   |               |         |             |     |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F                    |  |                    |                  |                                    |                               |      |              |                 |       |               |         |             |     |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F

.. Aggiungere al codice - Add to the last number - Ajouter à la réf. - Añadir a la ref.:

16: valvola con ugello eiettore dia. 1.6mm- valve with injector nozzle dia. 1.6mm - régulateur avec buse d'éjecteur dia. 1.6mm - regulador con boquilla eyector dia. 1.6mm  
18: valvola con ugello eiettore dia. 1.8mm- valve with injector nozzle dia. 1.8mm - régulateur avec buse d'éjecteur dia. 1.8mm - regulador con boquilla eyector dia. 1.8mm  
21: valvola con ugello eiettore dia. 2.1mm- valve with injector nozzle dia. 2.1mm - régulateur avec buse d'éjecteur dia. 2.1mm - regulador con boquilla eyector dia. 2.1mm  
23: valvola con ugello eiettore dia. 2.3mm- valve with injector nozzle dia. 2.3mm - régulateur avec buse d'éjecteur dia. 2.3mm - regulador con boquilla eyector dia. 2.3mm  
ES: valvola con dispositivo Energy Saving - valve with Energy Saving Device - régulateur avec dispositif Energy Saving - regulador con dispositivo Ahorro Energia

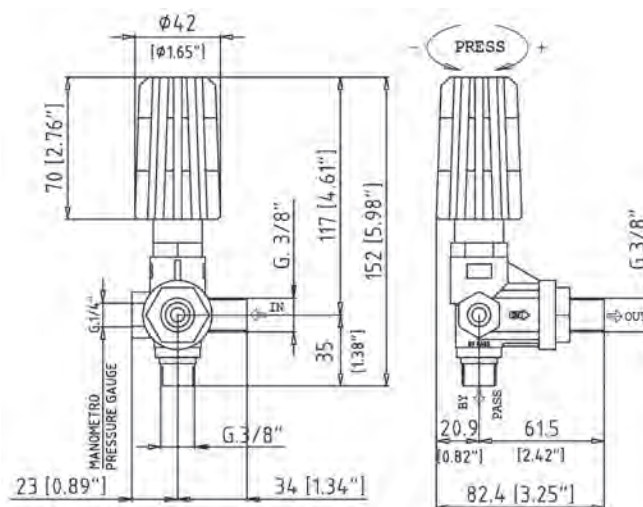
# VALVOLE - UNLOADER VALVES REGULATEURS - REGULADORES

VALVOLE REGOLAZIONE PRESSIONE CON BY-PASS ESTERNO  
UNLOADER VALVES WITH EXTERNAL BY-PASS  
RÉGULATEURS DE PRESSION SÉPARÉS DE LA CULASSE  
VÁLVULAS DE REGULACIÓN DE PRESIÓN



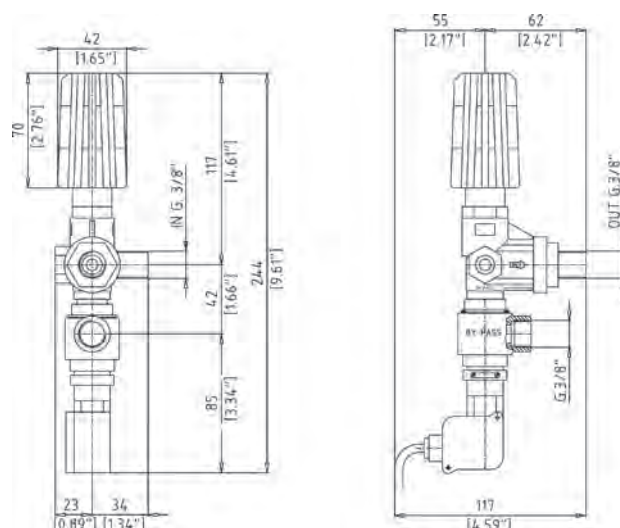
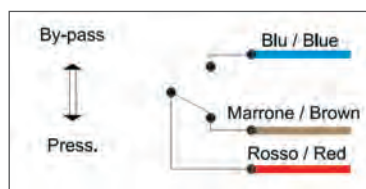
|                                                                                                                                | VD 140 - VD 200 - VD 280 |                  |                               |      |                |     |                            |                  |                    |               |     |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------|-------------------------------|------|----------------|-----|----------------------------|------------------|--------------------|---------------|-----|
|                                                                                                                                | Codice<br>Code           | Modello<br>Model | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |     |
|                                                                                                                                |                          |                  | bar                           | PSI  | l/min          | GPM |                            |                  |                    | Kg            | lbs |
| GREEN COLOR                                                                                                                    | 05.9899.97.3             | VD 140           | 140                           | 2000 | 30             | 8.0 | 3/8 BSP - M                | 3/8 BSP - M      | 3/8 BSP - M        | 0.73          | 1.6 |
|                                                                                                                                | 05.9903.97.3             | VD 200           | 210                           | 3000 | 30             | 8.0 | 3/8 BSP - M                | 3/8 BSP - M      | 3/8 BSP - M        | 0.73          | 1.6 |
|                                                                                                                                | 05.9955.97.3             | VD 280           | 280                           | 4000 | 30             | 8.0 | 3/8 BSP - M                | 3/8 BSP - M      | 3/8 BSP - M        | 0.73          | 1.6 |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F |                          |                  |                               |      |                |     |                            |                  |                    |               |     |

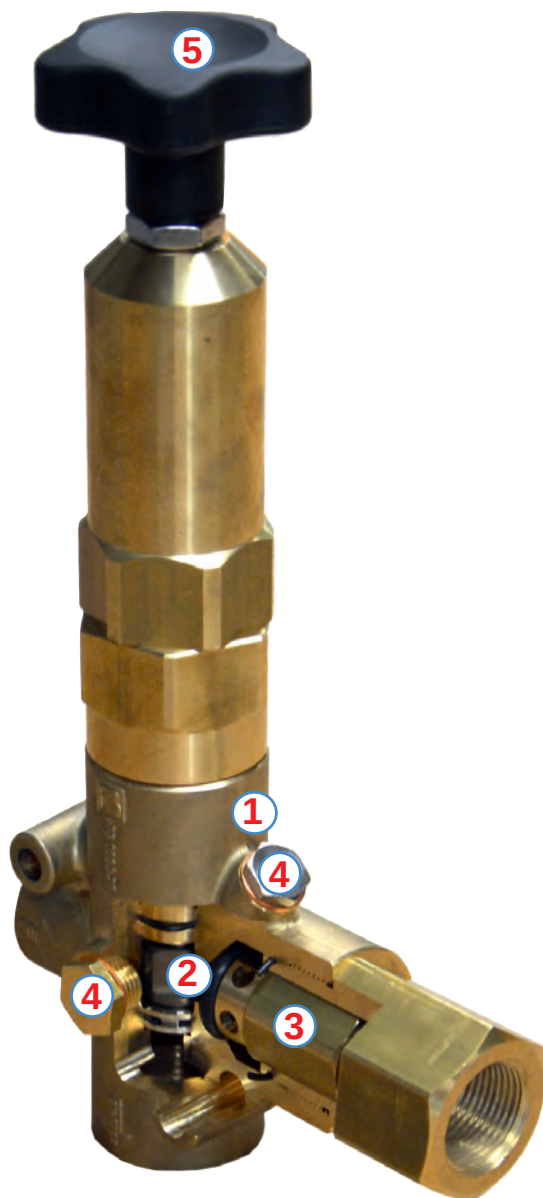
Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F



|                                                                                                                                |              | VD con Microinterruttore / with Micro-Switch |                  |                               |     |                |             |                               |                  |                    |               |     |
|--------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------|------------------|-------------------------------|-----|----------------|-------------|-------------------------------|------------------|--------------------|---------------|-----|
|                                                                                                                                |              | Codice<br>Code                               | Modello<br>Model | Pressione Max<br>Max Pressure |     | Portata - Flow |             | Attacco<br>pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |     |
|                                                                                                                                |              |                                              |                  | bar                           | PSI | l/min          | GPM         |                               |                  |                    | Kg            | lbs |
| GREEN COLOR                                                                                                                    | 05.8762.97.3 | VD 140<br>MICRO-SWITCH                       | 140              | 2000                          | 30  | 8.0            | 3/8 BSP - M | 3/8 BSP - M                   | 3/8 BSP - F      | 0.95               | 2.1           |     |
|                                                                                                                                | 05.8763.97.3 | VD 200<br>MICRO-SWITCH                       | 210              | 3000                          | 30  | 8.0            | 3/8 BSP - M | 3/8 BSP - M                   | 3/8 BSP - F      | 0.95               | 2.1           |     |
|                                                                                                                                | 05.8764.97.3 | VD 280<br>MICRO-SWITCH                       | 280              | 4000                          | 30  | 8.0            | 3/8 BSP - M | 3/8 BSP - M                   | 3/8 BSP - F      | 0.95               | 2.1           |     |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F |              |                                              |                  |                               |     |                |             |                               |                  |                    |               |     |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F





- 1 Corpo in ottone forgiato.
- 2 Otturatore conico in acciaio inox temprato.
- 3 Otturatore di ritegno a tenuta conica con elemento elastico per garantire l'affidabilità nel tempo della funzione depressurizzatrice della valvola.
- 4 Connessioni supplementari per manometro o trasduttore di pressione per il monitoraggio delle pressioni di lavoro.
- 5 Regolazione pressione di lavoro a pomolo o a vite in funzione della tipologia di valvola.



- 1 Forged brass body.
- 2 Conical poppet in hardened stainless steel.
- 3 Conical seal for non-return valve poppet with elastic element to ensure long reliability of the unloader function.
- 4 Additional connections for pressure gauge or pressure transducer to monitor the working pressure.
- 5 Working pressure adjustment through knob or screw according to the valve models.



- 1 Corps en laiton forgé.
- 2 Clapet conique en acier inox trempé.
- 3 Clapet de retenue de contrôle d'étanchéité conique avec élément élastique pour assurer la fiabilité de la fonction de la vanne à retombée de pression.
- 4 Connexions supplémentaires pour manomètre ou transducteur de pression pour le monitoring des pressions de service.
- 5 Réglage de la pression de travail par pommeau ou vis selon le modèle de vanne.



- 1 Cuerpo en latón forjado.
- 2 Obturador cónico en acero inoxidable templado.
- 3 Válvula de retención de sello cónico con elemento elástico para asegurar confiabilidad en el tiempo de la función de la válvula.
- 4 Conexiones adicionales para manómetro o transductor de presión para controlar la presión de trabajo.
- 5 Regulación de la presión de trabajo a través de un pomo o un tornillo según el tipo de válvula.



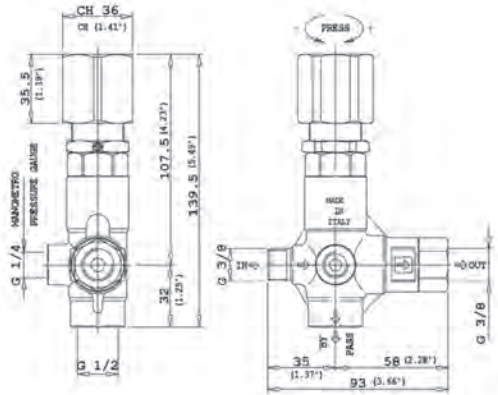
# VALVOLE - UNLOADER VALVES RÉGULATEURS - REGULADORES

VALVOLE REGOLAZIONE PRESSIONE CON BY-PASS ESTERNO  
UNLOADER VALVES WITH EXTERNAL BY-PASS  
RÉGULATEURS DE PRESSION SÉPARÉS DE LA CULASSE  
VÁLVULAS DE REGULACIÓN DE PRESIÓN



| VD 25/350                                                                                                                      |                  |                               |      |                |     |                            |                  |                    |               |     |
|--------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------|------|----------------|-----|----------------------------|------------------|--------------------|---------------|-----|
| Codice<br>Code                                                                                                                 | Modello<br>Model | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |     |
|                                                                                                                                |                  | bar                           | PSI  | l/min          | GPM |                            |                  |                    | Kg            | lbs |
| 06.9818.97.3                                                                                                                   | VD 25/350        | 350                           | 5100 | 25             | 6.5 | 3/8 BSP - M                | 3/8 BSP - F      | 3/8 BSP - F        | 0.86          | 1.9 |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F |                  |                               |      |                |     |                            |                  |                    |               |     |

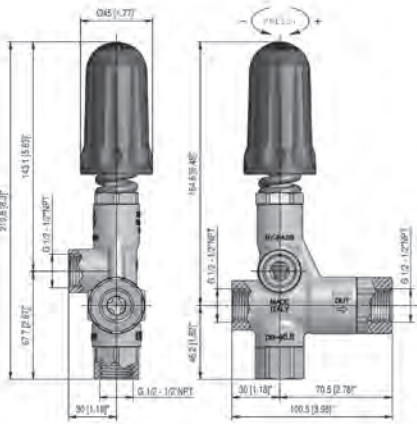
Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F



Valvola depressurizzatrice  
Unloader Valve  
Régulateur de pression  
Válvula de regulación presión

| VD 85/280                                                                                                                      |                  |                               |      |                |     |                            |                  |                    |               |     |
|--------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------|------|----------------|-----|----------------------------|------------------|--------------------|---------------|-----|
| Codice<br>Code                                                                                                                 | Modello<br>Model | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |     |
|                                                                                                                                |                  | bar                           | PSI  | l/min          | GPM |                            |                  |                    | Kg            | lbs |
| 06.9819.97.3                                                                                                                   | VD 85/280        | 280                           | 4000 | 80             | 21  | 1/2 BSP - F                | 1/2 BSP - F      | 1/2 BSP - F        | 1.19          | 2.6 |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F |                  |                               |      |                |     |                            |                  |                    |               |     |

Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F



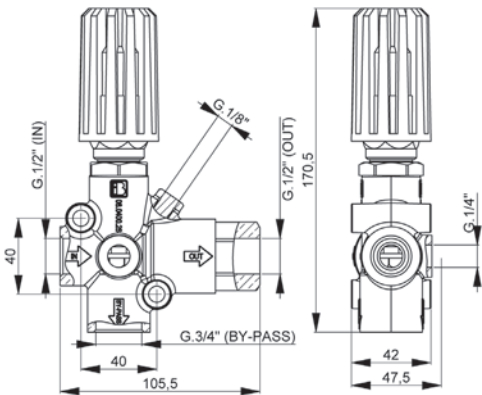
# VALVOLE - UNLOADER VALVES REGULATEURS - REGULADORES

NEW

VALVOLE REGOLAZIONE PRESSIONE CON BY-PASS ESTERNO  
UNLOADER VALVES WITH EXTERNAL BY-PASS  
RÉGULATEURS DE PRESSION SÉPARÉS DE LA CULASSE  
VÁLVULAS DE REGULACIÓN DE PRESIÓN



Valvola depressurizzatrice  
Unloader Valve  
Régulateur de pression  
Válvula de regulación presión

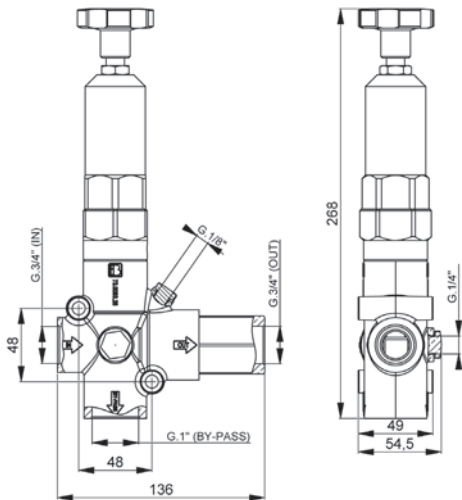


| VD 110/200                                                                                                                     |                  |                               |      |                |     |                            |                  |                    |               |      |
|--------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------|------|----------------|-----|----------------------------|------------------|--------------------|---------------|------|
| Codice<br>Code                                                                                                                 | Modello<br>Model | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |      |
|                                                                                                                                |                  | bar                           | PSI  | l/min          | GPM |                            |                  |                    | Kg            | lbs  |
| 08.9832.97.3                                                                                                                   | VD 110/200       | 200                           | 2900 | 110            | 29  | 1/2 BSP - F                | 1/2 BSP - F      | 3/4 BSP - F        | 1,31          | 2.88 |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F |                  |                               |      |                |     |                            |                  |                    |               |      |

\*Versioni con volantino  
Version with knob



Valvola depressurizzatrice  
Unloader Valve  
Régulateur de pression  
Válvula de regulación presión

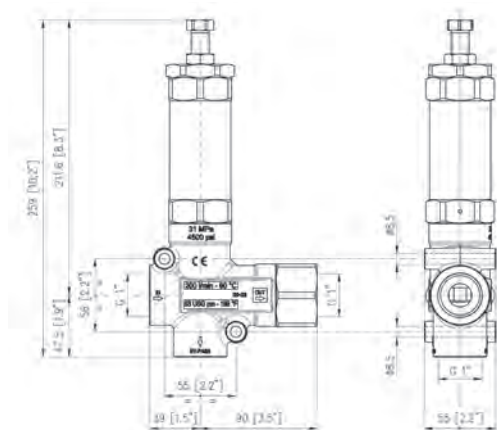


| VD 200                                                                                                                         |                  |                               |           |                |     |                               |                  |                    |               |      |
|--------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------|-----------|----------------|-----|-------------------------------|------------------|--------------------|---------------|------|
| Codice<br>Code                                                                                                                 | Modello<br>Model | Pressione Max<br>Max Pressure |           | Portata - Flow |     | Attacco<br>pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |      |
|                                                                                                                                |                  | bar                           | PSI       | l/min          | GPM |                               |                  |                    | Kg            | lbs  |
| 73.9945.97.3                                                                                                                   | VD 200/80-130    | 80÷130                        | 1160÷1885 | 200            | 53  | 3/4"BSP - F                   | 3/4"BSP - F      | 1"BSP - F          | 2,84          | 6.26 |
| 73.9948.97.3*                                                                                                                  |                  |                               |           |                |     |                               |                  |                    |               |      |
| 73.9946.97.3                                                                                                                   | VD 200/130-190   | 130÷190                       | 1885÷2755 |                |     |                               |                  |                    |               |      |
| 73.9949.97.3*                                                                                                                  |                  |                               |           |                |     |                               |                  |                    |               |      |
| 73.9947.97.3                                                                                                                   | VD 200/190-250   | 190÷250                       | 2755÷3625 |                |     |                               |                  |                    |               |      |
| 73.9950.97.3*                                                                                                                  |                  |                               |           |                |     |                               |                  |                    |               |      |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F |                  |                               |           |                |     |                               |                  |                    |               |      |

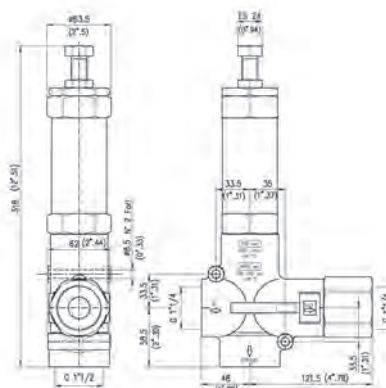
# VALVOLE - UNLOADER VALVES REGULATEURS - REGULADORES



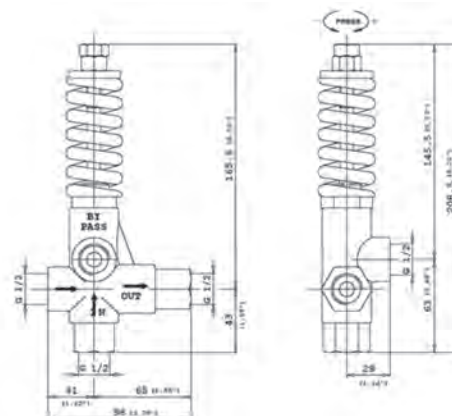
| VD 200/280     |                  |                               |      |                |     |                               |                  |                    |               |      |
|----------------|------------------|-------------------------------|------|----------------|-----|-------------------------------|------------------|--------------------|---------------|------|
| Codice<br>Code | Modello<br>Model | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco<br>pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |      |
|                |                  | bar                           | PSI  | l/min          | GPM |                               |                  |                    | Kg            | lbs  |
| 73.9910.97.3   | VD 200/280       | 280                           | 4000 | 200            | 53  | 1"BSP-F                       | 1"BSP-F          | 1"BSP-F            | 3.44          | 7.58 |



| VD 450/200     |                  |                               |      |                |     |                               |                  |                    |               |     |
|----------------|------------------|-------------------------------|------|----------------|-----|-------------------------------|------------------|--------------------|---------------|-----|
| Codice<br>Code | Modello<br>Model | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco<br>pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |     |
|                |                  | bar                           | PSI  | l/min          | GPM |                               |                  |                    | Kg            | lbs |
| 74.9800.97.3   | VD 450/200       | 210                           | 3045 | 450            | 120 | 1"1/4 BSP-F                   | 1"1/4 BSP-F      | 1"1/2 BSP-F        | 5.95          | 13  |



| VD 80/150                                                                                                                         |                         |                               |      |                |     |                            |                  |                    |               |     |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|------|----------------|-----|----------------------------|------------------|--------------------|---------------|-----|
| Valvole regolazione pressione in acciaio inossidabile con by-pass esterno - Stainless steel unloader valves with external by-pass |                         |                               |      |                |     |                            |                  |                    |               |     |
| Régulateurs de pression en acier inox séparés de la culasse - Válvulas de regulación de presión en acero inox                     |                         |                               |      |                |     |                            |                  |                    |               |     |
| Codice<br>Code                                                                                                                    | Modello<br>Model        | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |     |
|                                                                                                                                   |                         | bar                           | PSI  | l/min          | GPM |                            |                  |                    | Kg            | lbs |
| 06.9915.97.3                                                                                                                      | VD 80/150<br>(AISI 316) | 150                           | 2200 | 80             | 21  | 1/2 BSP - F                | 1/2 BSP - F      | 1/2 BSP - F        | 1.2           | 2.7 |
| Temperatura max: 90°C - 195°F - Max temperature: 90°C - 195°F - Température maxi: 90°C - 195°F - Temperatura máx: 90°C - 195°F    |                         |                               |      |                |     |                            |                  |                    |               |     |



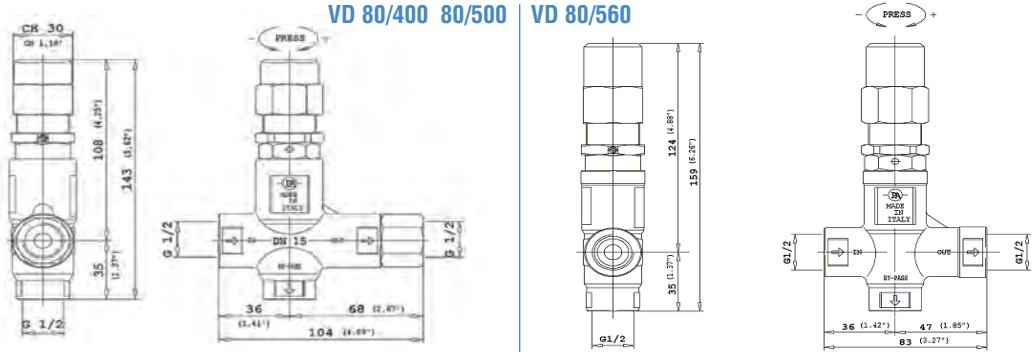


# VALVOLE - UNLOADER VALVES

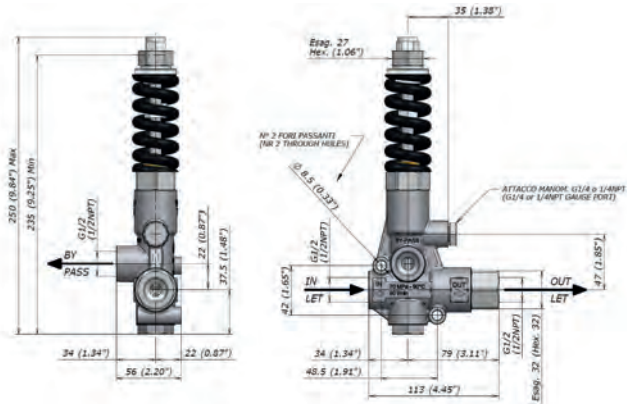
## REGULATEURS - REGULADORES



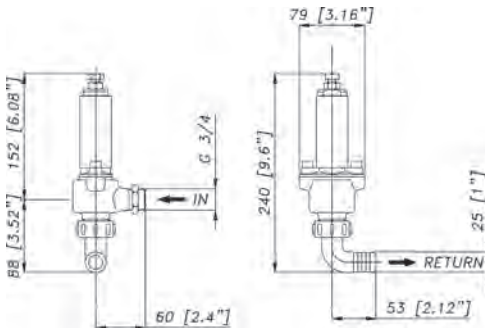
| VD 80/400 - VD 80/500 - VD 80/560                                                                                                 |                         |                               |      |                |     |                               |                  |                    |               |      |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------|------|----------------|-----|-------------------------------|------------------|--------------------|---------------|------|
| Valvole regolazione pressione in acciaio inossidabile con by-pass esterno - Stainless steel unloader valves with external by-pass |                         |                               |      |                |     |                               |                  |                    |               |      |
| Régulateurs de pression en acier inox séparés de la culasse - Válvulas de regulación de presión en acero inox                     |                         |                               |      |                |     |                               |                  |                    |               |      |
| Codice<br>Code                                                                                                                    | Modello<br>Model        | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco<br>pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |      |
|                                                                                                                                   |                         | bar                           | PSI  | l/min          | GPM |                               |                  |                    | Kg            | lbs  |
| 08.9828.97.3                                                                                                                      | VD 80/400<br>(AISI 303) | 400                           | 5800 | 80             | 21  | 1/2 BSP - F                   | 1/2 BSP - F      | 1/2 BSP - F        | 0.89          | 1.95 |
| 08.9842.97.3                                                                                                                      | VD 80/500<br>(AISI 303) | 500                           | 7250 | 80             | 21  | 1/2 BSP - F                   | 1/2 BSP - F      | 1/2 BSP - F        | 1.23          | 2.7  |
| 08.9867.97.3                                                                                                                      | VD 80/560<br>(AISI 303) | 560                           | 8120 | 80             | 21  | 1/2 BSP - F                   | 1/2 BSP - F      | 1/2 BSP - F        | 0.84          | 1.85 |
| Temperatura max: 90°C - 195°F - Max temperature: 90°C - 195°F - Température maxi: 90°C - 195°F - Temperatura máx: 90°C - 195°F    |                         |                               |      |                |     |                               |                  |                    |               |      |



| VRP 750      |               |                            |       |                |     |                         |               |                 |               |      |
|--------------|---------------|----------------------------|-------|----------------|-----|-------------------------|---------------|-----------------|---------------|------|
| Codice Code  | Modello Model | Pressione Max Max Pressure |       | Portata - Flow |     | Attacco pompa Port size | Uscita Outlet | Scarico By-pass | Peso - Weight |      |
|              |               | bar                        | PSI   | l/min          | GPM |                         |               |                 | Kg            | lbs  |
| 74.1050.97.3 | VRP 750       | 700                        | 10150 | 80             | 21  | 1/2" BSP - F            | 1/2" BSP - F  | 1/2" BSP - F    | 2,1           | 10,3 |



| VS 1500                                                                                                                        |                  |                               |      |                |     |                            |                  |                    |               |     |
|--------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------|------|----------------|-----|----------------------------|------------------|--------------------|---------------|-----|
| Valvole di massima pressione - Pressure relief valves - Régulateur de pression - Válvulas de presión                           |                  |                               |      |                |     |                            |                  |                    |               |     |
| Codice<br>Code                                                                                                                 | Modello<br>Model | Pressione Max<br>Max Pressure |      | Portata - Flow |     | Attacco pompa<br>Port size | Uscita<br>Outlet | Scarico<br>By-pass | Peso - Weight |     |
|                                                                                                                                |                  | bar                           | PSI  | l/min          | GPM |                            |                  |                    | Kg            | lbs |
| 73.9832.97.3                                                                                                                   | VS 1500          | 105                           | 1500 | 220            | 58  | 3/4 BSP - M                | ---              | 1" BSP - M         | 1.62          | 3.5 |
| Temperatura max: 60°C - 140°F - Max temperature: 60°C - 140°F - Température maxi: 60°C - 140°F - Temperatura máx: 60°C - 140°F |                  |                               |      |                |     |                            |                  |                    |               |     |



| VALVOLE DI SICUREZZA - SAFETY VALVES - SOUPAPES DE SÉCURITÉ - VÁLVULAS DE SEGURIDAD                                            |                                             |                            |       |                |     |                         |                 |               |     |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------|-------|----------------|-----|-------------------------|-----------------|---------------|-----|
| Codice Code                                                                                                                    | Modello Model                               | Pressione Max Max Pressure |       | Portata - Flow |     | Attacco pompa Port size | Scarico By-pass | Peso - Weight |     |
|                                                                                                                                |                                             | bar                        | psi   | l/min          | GPM |                         |                 | Kg            | lbs |
|                                               | 86.1670.00.2 <b>VS 250</b>                  | 250                        | 3600  | 24             | 6.3 | 3/8 BSP - F             | 3/8 BSP - F     | 0.36          | 0.8 |
|                                               | 86.1675.00.2 <b>VS 250-2</b><br>BY-PASS 1/4 | 250                        | 3600  | 24             | 6.3 | nr.2 x 3/8 BSP - F      | 1/4 BSP - F     | 0.46          | 1.0 |
|                                                                                                                                | 86.1660.00.2 <b>VS 250-2</b><br>BY-PASS 3/8 | 250                        | 3600  | 24             | 6.3 | nr.2 x 3/8 BSP - F      | 3/8 BSP - F     | 0.46          | 1.0 |
|                                              | 86.1676.00.2 <b>VS 350</b>                  | 350                        | 5100  | 24             | 6.3 | nr.2 x 3/8 BSP - F      | 3/8 BSP - F     | 0.46          | 1.0 |
|                                             | 86.1677.00.2 <b>VS 280</b><br>(AISI 303)    | 280                        | 4000  | 80             | 21  | nr.2 x 1/2 BSP - F      | 1/2 BSP - F     | 1.21          | 2.7 |
|                                                                                                                                | 86.1678.00.2 <b>VS 400</b><br>(AISI 303)    | 400                        | 5800  | 80             | 21  | nr.2 x 1/2 BSP - F      | 1/2 BSP - F     | 1.21          | 2.7 |
|                                             | 86.1679.00.2 <b>VS 500</b>                  | 500                        | 7250  | 80             | 21  | 1/2 BSP - F             | 1/2 BSP - F     | 1.42          | 3.1 |
|                                             | 86.1779.00.2 <b>VS 180</b>                  | 180                        | 2610  | 200            | 53  | 3/4 BSP - F             | 1/2 BSP - F     | 0.82          | 1.8 |
|                                             | 86.1680.00.2 <b>VS 200</b>                  | 200                        | 2900  | 450            | 119 | 1"1/4 BSP-F             | 1"1/4 BSP-F     | 3.8           | 8.4 |
|                                             | 74.1051.97.3 <b>VS 750</b>                  | 720                        | 10450 | 60             | 16  | Rc 3/8" - F             | 1/2" BSP - F    | 2             | 4.4 |
| Temperatura max: 90°C - 195°F - Max temperature: 90°C - 195°F - Température maxi: 90°C - 195°F - Temperatura máx: 90°C - 195°F |                                             |                            |       |                |     |                         |                 |               |     |

RIDUTTORI - GEARBOXES

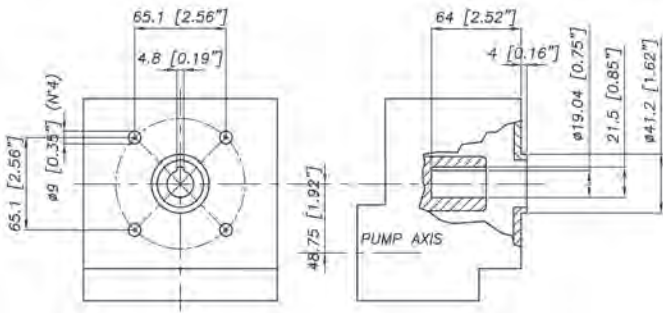
REDUCTEURS - REDUCTORES

RTI 126 3/4"

MOTOR SAE J609 -3/4"



| Riduttore - Gearbox |                          | Pompe - Pumps           |                | Motore - Engine          |     |                |
|---------------------|--------------------------|-------------------------|----------------|--------------------------|-----|----------------|
| Codice Code         | Rapporto Riduzione Ratio | Serie - Series          | Albero - Shaft | Potenza Max - Max. Power |     | Albero - Shaft |
| 32.1007.97.3        | 1:2.6                    | WBL - WBXL<br>WML - WMS | SOLID Ø24      | kW                       | hp  | Ø              |
|                     |                          |                         |                | 4.8                      | 6.5 | 3/4"           |

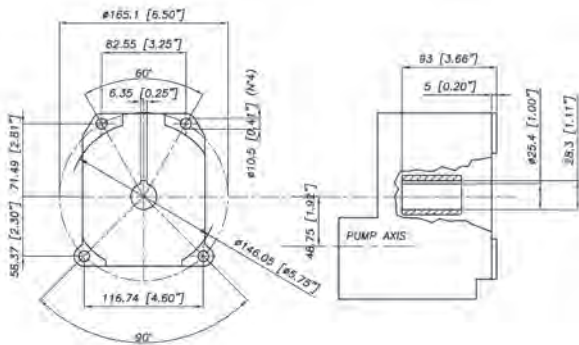


RTI 126 1"

MOTOR SAE J609 -1"



| Riduttore - Gearbox |                          | Pompe - Pumps           |                | Motore - Engine          |    |                |
|---------------------|--------------------------|-------------------------|----------------|--------------------------|----|----------------|
| Codice Code         | Rapporto Riduzione Ratio | Serie - Series          | Albero - Shaft | Potenza Max - Max. Power |    | Albero - Shaft |
| 32.1008.97.3        | 1:2.6                    | WBL - WBXL<br>WML - WMS | SOLID Ø24      | kW                       | hp | Ø              |
|                     |                          |                         |                | 8.2                      | 11 | 1"             |

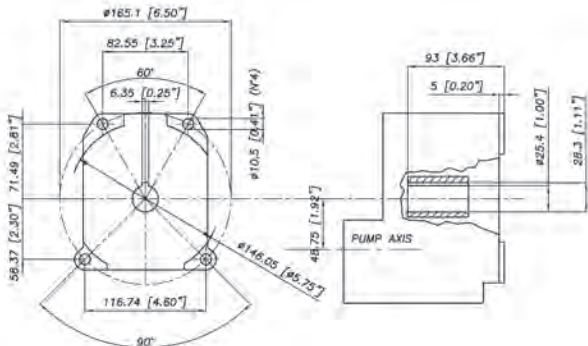


RTI 118 1"

MOTOR SAE J609 -1"



| Riduttore - Gearbox |                          | Pompe - Pumps           |                | Motore - Engine          |    |                |
|---------------------|--------------------------|-------------------------|----------------|--------------------------|----|----------------|
| Codice Code         | Rapporto Riduzione Ratio | Serie - Series          | Albero - Shaft | Potenza Max - Max. Power |    | Albero - Shaft |
| 32.1001.97.3        | 1:1.8                    | WBL - WBXL<br>WML - WMS | SOLID Ø24      | kW                       | hp | Ø              |
|                     |                          |                         |                | 8.2                      | 11 | 1"             |



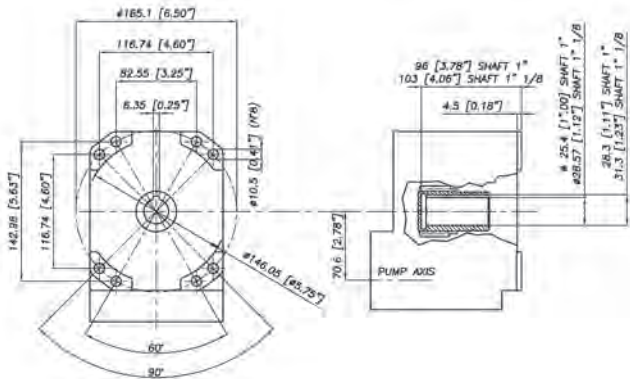


# RIDUTTORI - GEARBOXES REDUCTEURS - REDUCTORES



|                   |                        |
|-------------------|------------------------|
| RTI 121 1"        | MOTOR SAE J609 -1"     |
| RTI 121 1" 1/8    | MOTOR SAE J609 -1" 1/8 |
| RTI 123 DC 1" 1/8 | MOTOR SAE J609 -1" 1/8 |

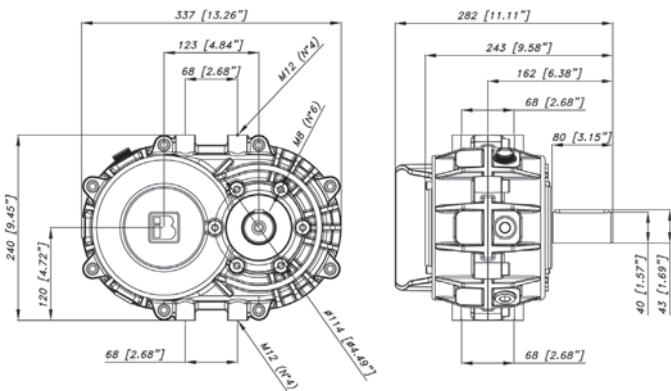
| Riduttore - Gearbox |                         | Pompe - Pumps           |                | Motore - Engine          |                |          |
|---------------------|-------------------------|-------------------------|----------------|--------------------------|----------------|----------|
| Codice - Code       | Rapp. Riduzione - Ratio | Serie - Series          | Albero - Shaft | Potenza Max - Max. Power | Albero - Shaft |          |
| 31.8871.97.3        | 1:2.1                   | WBL - WBLX<br>WML - WMS | SOLID Ø 24     | <b>kW</b>                | <b>hp</b>      | <b>Ø</b> |
|                     |                         |                         |                | 13.4                     | 18             | 1"       |
| 31.8870.97.3        | 1:2.1                   | TML - TTL               | SOLID Ø 24     | 13.4                     | 18             | 1"       |
| 31.9110.97.3        | 1:2.1                   | TTK - KTL - KKL         | SOLID Ø 24     | 13.4                     | 18             | 1"       |
| 31.9111.97.3        | 1:2.1                   | TTK - KTL - KKL         | SOLID Ø 24     | 14.9                     | 20             | 1" 1/8   |
| 31.8855.97.3        | 1:2.1                   | RA - RB - RD            | SOLID Ø 30     | 13.4                     | 18             | 1"       |
| 31.8880.97.3        | 1:2.1                   | RA - RB - RD            | SOLID Ø 30     | 14.9                     | 20             | 1" 1/8   |
| 31.9219.97.3        | 1:2.3                   | RA - RB - RD            | SOLID Ø 30     | 26                       | 35             | 1" 1/8   |



NEW



| Riduttore - Gearbox |                         | Pompe - Pumps        |                | Motore - Engine          |                |          |
|---------------------|-------------------------|----------------------|----------------|--------------------------|----------------|----------|
| Codice - Code       | Rapp. Riduzione - Ratio | Serie - Series       | Albero - Shaft | Potenza Max - Max. Power | Albero - Shaft |          |
| 32.1072.97.3        | 1:1.81 / 1.81:1         | CPQ-LX, CX, CAX, CHX | SOLID Ø 35     | <b>kW</b>                | <b>hp</b>      | <b>Ø</b> |
|                     |                         |                      |                | 49                       | 65,7           | 40 mm    |



# PULEGGE - PULLEYS POULIES - POLEAS



| Codice - Code | Modello - Model | Applicazioni - Applications         |   |
|---------------|-----------------|-------------------------------------|---|
| 31.8730.97.3- | 2A ØP 80        | WML - TML<br>TTL - TTK<br>KTL - KKL |   |
| 31.8731.97.3  | 2A ØP 90        |                                     |   |
| 38.9873.97.3  | 2A ØP 130       |                                     |   |
| 31.8733.97.3  | 3A ØP 130       |                                     |   |
| 31.8734.97.3  | 2A ØP 160       |                                     |   |
| 31.8735.97.3  | 3A ØP 160       |                                     |   |
| 31.8864.97.3  | 3B ØP 160       | RA - RB - RD                        | - |

# GIUNTI - COUPLINGS

## ACCOUPELEMENTS - ACOPLAMIENTOS



| FLANGIATURA CON GIUNTO ELASTICO PER MOTORI ELETTRICI - BELL HOUSING + FLEXIBLE COUPLING FOR ELECTRIC MOTORS<br>BRIDES AVEC ACCOUPLEMENT ELASTIQUE POUR MOTEURS ELECTRIQUES - BRIDA CON JUNTA ELÁSTICA PARA MOTORES ELECTRICOS |                                   |                                   |               |    |           |                 |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|---------------|----|-----------|-----------------|--------------|
| Codice<br>Code                                                                                                                                                                                                                | Motore Elettrico - Electric Motor |                                   | Pompe - Pumps |    |           |                 |              |
|                                                                                                                                                                                                                               | Albero - Shaft                    | Tipo - Frame                      | WBL - WBXL    | WM | TML - TTL | TTK - KTL - KKL | RA - RB - RD |
| 31.8930.97.3                                                                                                                                                                                                                  | 28                                | B3/B14 - H100-112<br>(HP 4 ÷ 7.5) |               |    | •         |                 |              |
| 31.8949.97.3                                                                                                                                                                                                                  |                                   |                                   | •             | •  |           |                 |              |
| 31.8986.97.3                                                                                                                                                                                                                  | 1"1/8                             | NEMA 184TC                        | •             | •  |           |                 |              |
| 31.8947.97.3                                                                                                                                                                                                                  | 38                                | B3/B14 - H132<br>(HP 10÷15)       |               |    | •         |                 |              |
| 31.9112.97.3                                                                                                                                                                                                                  |                                   |                                   |               |    |           | •               |              |
| 31.8948.97.3                                                                                                                                                                                                                  |                                   |                                   |               |    |           |                 | •            |
| 31.9113.97.3                                                                                                                                                                                                                  | 42                                | B3/B14 - H160<br>(HP 15÷30)       |               |    |           | •               |              |
| 31.8946.97.3                                                                                                                                                                                                                  |                                   |                                   |               |    |           |                 | •            |



| FLANGIATURA CON GIUNTO RIGIDO - BELL HOUSING + RIGID COUPLING<br>BRIDES AVEC ACCOUPLEMENT RIGIDE - BRIDA CON JUNTA RÍGIDA |                                   |                    |               |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------|---------------|
| Codice<br>Code                                                                                                            | Motore Elettrico - Electric Motor |                    | Pompe - Pumps |
|                                                                                                                           | Albero - Shaft                    | Tipo - Frame       | WBL - WBXL    |
| 31.8711.97.3                                                                                                              | 28                                | B3/B14<br>H100/112 | •             |



| FLANGIATURA CON GIUNTO ELASTICO PER MOTORI IDRAULICI - BELL HOUSING + FLEXIBLE COUPLING FOR HYDRAULIC MOTORS<br>BRIDE AVEC ACCOUPLEMENT ÉLASTIQUE POUR MOTEURS HYDRAULIQUES - BRIDA CON JUNTA ELÁSTICA PARA MOTORES HIDRÁULICOS |                                                        |                                                       |                                                                                                                                   |               |                    |                         |    |             |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|-------------------------|----|-------------|----------------|
| Codice<br>Code                                                                                                                                                                                                                  | Motore Idraulico - Hydraulic motor                     |                                                       |                                                                                                                                   | Pompe - Pumps |                    |                         |    |             | Coppia<br>max. |
|                                                                                                                                                                                                                                 | Tipo<br>Frame                                          | Albero<br>Shaft                                       | Flangia<br>Bell housing                                                                                                           | TTL           | TTL-TTK<br>KTL-KKL | RAL-RA-RBL<br>RBS-RD-RX | KA | CKI-CAI (*) |                |
| 31.9211.97.3                                                                                                                                                                                                                    | GRUPPO 2<br>GROUP 2                                    | 3/4" SAE A<br>CILINDRICO<br>SOLID SHAFT<br>3/4" SAE A | SAE A (CENTRAGGIO<br>Ø82.55mm)<br>2 FORI (INTERASSE<br>106.2mm)<br>SAE A (CENTERING<br>Ø82.55mm)<br>2 HOLES (DISTANCE<br>106.2mm) | •             |                    |                         |    |             | 50Nm           |
| 31.9212.97.3                                                                                                                                                                                                                    | GRUPPO 3<br>GROUP 3                                    | 1" SAE BB<br>CILINDRICO<br>SOLID SHAFT 1"<br>SAE BB   | SAE B (CENTRAGGIO<br>Ø101.6mm)<br>2 FORI (INTERASSE<br>146mm )<br>SAE B (CENTERING<br>Ø101.6mm)<br>2 HOLES (DISTANCE<br>146mm)    |               | •                  |                         | •  |             | 120Nm          |
| 31.9213.97.3                                                                                                                                                                                                                    |                                                        |                                                       |                                                                                                                                   |               |                    | •                       |    |             | 120Nm          |
| 31.9214.97.3                                                                                                                                                                                                                    |                                                        |                                                       |                                                                                                                                   |               |                    | •                       |    |             | 230Nm          |
| 31.9215.97.3                                                                                                                                                                                                                    |                                                        |                                                       |                                                                                                                                   |               |                    |                         |    | •           | 120Nm          |
| 31.9216.97.3                                                                                                                                                                                                                    |                                                        |                                                       |                                                                                                                                   |               |                    |                         |    | •           | 230Nm          |
| 31.9217.97.3                                                                                                                                                                                                                    | Motore orbitale<br>OMR-OMS<br>Orbital motor<br>OMR-OMS |                                                       |                                                                                                                                   |               |                    |                         |    | •           | 230Nm          |

(\*) POMPE IN VERSIONE PER MOTORE IDRAULICO - PUMPS FOR HYDRAULIC MOTOR

# GIUNTI - COUPLINGS

## ACCOUPELEMENTS - ACOPLAMIENTOS



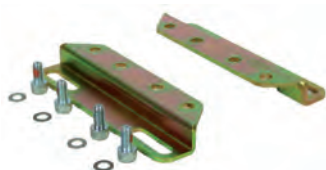
| GIUNTI ELASTICI - FLEXIBLE COUPLINGS - ACCOUELEMENTS ELASTIQUES - JUNTAS ELÁSTICAS |                                   |                |                |                   |    |
|------------------------------------------------------------------------------------|-----------------------------------|----------------|----------------|-------------------|----|
| Codice<br>Code                                                                     | Motore Elettrico - Electric Motor |                | Pompe - Pumps  |                   |    |
|                                                                                    | Tipo - Frame                      | Albero - Shaft | Albero - Shaft | CA-CK-CPQ-CK 3006 | CX |
| 31.1788.97.3                                                                       | H 160                             | 42x110         | 35x65          | •                 |    |
| 31.1787.97.3                                                                       | H 180                             | 48x110         | 35x65          | •                 |    |
| 31.1786.97.3                                                                       | H 200-225                         | 55x110         | 35x65          | •                 |    |
| 31.1784.97.3                                                                       | H 225-250                         | 60x110         | 35x65          | •                 |    |
| 31.1926.97.3                                                                       | H 225-250                         | 60x110         | 40x80          |                   | •  |
| 31.1785.97.3                                                                       | H 250-280                         | 65x140         | 35x65          | •                 |    |
| 31.1927.97.3                                                                       | H 250-280                         | 65x140         | 40x80          |                   | •  |
| 31.1928.97.3                                                                       | H 280 M                           | 75x140         | 40x80          |                   | •  |



| GIUNTO SCANALATO - SPLINE COUPLING - ACCOUELEMENT CANNELE - JUNTA ESTRIADA |                           |                    |                                |
|----------------------------------------------------------------------------|---------------------------|--------------------|--------------------------------|
| Codice<br>Code                                                             | Albero Pompa - Pump Shaft | Scanalato - Spline | Pompe - Pumps                  |
| 31.1648.00.2                                                               | 30                        | 1"3/8              | RAL - RA - RB - RBL - RBS - RD |



| KIT GIUNTO SCANALATO - SPLINE COUPLING KIT - KIT ACCOUELEMENT CANNELE - KIT JUNTA ESTRIADA |                           |                    |                                |
|--------------------------------------------------------------------------------------------|---------------------------|--------------------|--------------------------------|
| Codice<br>Code                                                                             | Albero Pompa - Pump Shaft | Scanalato - Spline | Pompe - Pumps                  |
| 31.8954.97.3                                                                               | 30                        | 1"3/8              | RAL - RA - RB - RBL - RBS - RD |



| Kit piedini - Mounting rails Kit - Kit supports - Juego pies de soporte |               |    |                    |    |                                 |
|-------------------------------------------------------------------------|---------------|----|--------------------|----|---------------------------------|
| Codice<br>Code                                                          | Pompe - Pumps |    |                    |    |                                 |
|                                                                         | WB<br>WBX     | WM | TTL TTK<br>KTL KKL | TM | RAL - RA - RB<br>RBL - RBS - RD |
| 02.9829.97.3                                                            | •             |    |                    |    |                                 |
| 04.9833.97.3                                                            |               | •  |                    |    |                                 |
| 05.9890.97.3                                                            |               |    | •                  |    |                                 |
| 07.9802.97.3                                                            |               |    |                    | •  |                                 |
| 08.9829.97.3                                                            |               |    |                    |    | •                               |



# PISTOLE/LANCE - GUNS/LANCES

## PISTOLETS/LANCES - PISTOLAS/LANZAS



| PISTOLE TIPO "A" - GUNS TYPE "A" - PISTOLETS TYPE "A" - PISTOLAS TIPO "A"<br>Senza prolunga - Without extension - Sans rallonge - Sin extensión |                  |                  |                               |      |                |     |             |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|-------------------------------|------|----------------|-----|-------------|-----|
| Codice<br>Code                                                                                                                                  | Entrata<br>Inlet | Uscita<br>Outlet | Pressione max<br>Max pressure |      | Portata - Flow |     | Temp. - Max |     |
|                                                                                                                                                 |                  |                  | bar                           | psi  | l/min          | GPM | °C          | °F  |
| 84.5900.00.2                                                                                                                                    | 3/8BSP - F       | 1/4 BSP - F      | 200                           | 2900 | 30             | 7,9 | 160         | 320 |
| 84.5900.05.2                                                                                                                                    | 3/8 BSP - M      | 1/4 BSP - F      | 200                           | 2900 | 30             | 7,9 | 160         | 320 |
| 84.5900.06.2                                                                                                                                    | 22x1,5 - M       | 1/4 BSP - F      | 200                           | 2900 | 30             | 7,9 | 160         | 320 |



| Codice<br>Code                 | Entrata<br>Inlet | Uscita<br>Outlet | Pressione max<br>Max pressure |      | Portata - Flow |      | Temp. - Max |     |
|--------------------------------|------------------|------------------|-------------------------------|------|----------------|------|-------------|-----|
|                                |                  |                  | bar                           | psi  | l/min          | GPM  | °C          | °F  |
| 84.5900.10.2<br>"professional" | 3/8 BSP - F      | 1/4 BSP - F      | 280                           | 4000 | 40             | 10,6 | 160         | 320 |
| 84.5900.13.2<br>"professional" | 3/8NPT - F       | 1/4NPT - F       | 400                           | 5800 | 30             | 8    | 160         | 320 |



| PISTOLE TIPO "B" - GUNS TYPE "B" - PISTOLETS TYPE "B" - PISTOLAS TIPO "B"<br>Con prolunga L=450mm - With extension L=450mm - Avec rallonge L=450mm - Con extensión L= 450mm |                  |                  |                               |      |                |      |             |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|-------------------------------|------|----------------|------|-------------|-----|
| Codice<br>Code                                                                                                                                                              | Entrata<br>Inlet | Uscita<br>Outlet | Pressione max<br>Max pressure |      | Portata - Flow |      | Temp. - Max |     |
|                                                                                                                                                                             |                  |                  | bar                           | psi  | l/min          | GPM  | °C          | °F  |
| 84.6561.00.2                                                                                                                                                                | 3/8 BSP - F      | M22x1,5-F        | 200                           | 2900 | 30             | 7,9  | 160         | 320 |
| 84.6562.00.2<br>"professional"                                                                                                                                              | 3/8 BSP - F      | M22x1,5-F        | 280                           | 4000 | 40             | 10,6 | 160         | 320 |



| LANCE SINGOLE CON IMPUGNATURA FUSA E TESTINA PORTA UGELLO - LANCES WITH MELTED HANDLE AND NOZZLE HEAD<br>LANCES SIMPLS AVEC POIGNÉE MOULÉE ET PORTE BUSE - LANZAS SIMPLS CON EMPUÑADURA FUNDIDA Y PORTABOQUILLA |                  |                  |                       |      |                                    |      |                |      |             |     |                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|-----------------------|------|------------------------------------|------|----------------|------|-------------|-----|--------------------------------------|
| Codice<br>Code                                                                                                                                                                                                  | Entrata<br>Inlet | Uscita<br>Outlet | Lunghezza -<br>Length |      | Prestazioni max<br>Max performance |      | Portata - Flow |      | Temp. - Max |     | Applicazioni<br>Applications         |
|                                                                                                                                                                                                                 |                  |                  | mm                    | Inch | bar                                | psi  | l/min          | GPM  | °C          | °F  |                                      |
| 84.6591.00.2                                                                                                                                                                                                    | 1/4 BSP – M      | 1/4"NPT- F       | 700                   | 28"  | 280                                | 4000 | 40             | 10,6 | 160         | 320 | Per pistole tipo A<br>For gun type A |
| 84.6592.00.2                                                                                                                                                                                                    | 1/4 BSP – M      | 1/4"NPT- F       | 900                   | 36"  | 280                                | 4000 | 40             | 10,6 | 160         | 320 | Per pistole tipo A<br>For gun type A |
| 84.6593.00.2                                                                                                                                                                                                    | 1/4 BSP – M      | 1/4"NPT- F       | 1200                  | 47"  | 280                                | 4000 | 40             | 10,6 | 160         | 320 | Per pistole tipo A<br>For gun type A |
| 84.6595.00.2                                                                                                                                                                                                    | 1/4NPT – M       | 1/4NPT- F        | 1041                  | 41"  | 400                                | 5800 | 30             | 8    | 160         | 320 | Per pistole tipo A<br>For gun type A |



| CON ATTACCO RAPIDO E TESTINA PORTAUGELLO - WITH QUICK COUPLING AND NOZZLE HEAD<br>AVEC ATTACHE RAPIDE ET PORTE BUSES - CON CONEXIÓN RÁPIDA Y PORTABOQUILLA |                  |                  |                       |      |                                    |      |                |      |             |     |                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|-----------------------|------|------------------------------------|------|----------------|------|-------------|-----|--------------------------------------|
| Codice<br>Code                                                                                                                                             | Entrata<br>Inlet | Uscita<br>Outlet | Lunghezza -<br>Length |      | Prestazioni max<br>Max performance |      | Portata - Flow |      | Temp. - Max |     | Applicazioni<br>Applications         |
|                                                                                                                                                            |                  |                  | mm                    | Inch | bar                                | psi  | l/min          | GPM  | °C          | °F  |                                      |
| 84.6575.00.2                                                                                                                                               | M22x1,5-M        | 1/4"NPT- F       | 500                   | 20"  | 280                                | 4000 | 40             | 10,6 | 160         | 320 | Per pistole tipo B<br>For gun type B |
| 84.6570.00.2                                                                                                                                               | M22x1,5-M        | 1/4"NPT- F       | 700                   | 28"  | 280                                | 4000 | 40             | 10,6 | 160         | 320 | Per pistole tipo B<br>For gun type B |
| 84.6580.00.2<br>"professional"                                                                                                                             | M22x1,5-M        | 1/4"NPT- F       | 700                   | 28"  | 280                                | 4000 | 40             | 10,6 | 160         | 320 | Per pistole tipo B<br>For gun type B |
| 84.6590.00.2<br>"professional"                                                                                                                             | M22x1,5-M        | 1/4"NPT- F       | 900                   | 36"  | 280                                | 4000 | 40             | 10,6 | 160         | 320 | Per pistole tipo B<br>For gun type B |



| LANCE DOPPIE CON ATTACCO RAPIDO E TESTINA PORTAUGELLO - DOUBLE LANCES WITH QUICK COUPLING AND NOZZLE HEAD<br>LANCES DOUBLES AVEC ATTACHE RAPIDE ET PORTE BUSES- LANZAS DOBLES CON CONEXIÓN RÁPIDA Y PORTABOQUILLA |                  |                  |                     |      |                                    |      |                |      |             |     |                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|---------------------|------|------------------------------------|------|----------------|------|-------------|-----|--------------------------------------|
| Codice<br>Code                                                                                                                                                                                                    | Entrata<br>Inlet | Uscita<br>Outlet | Lunghezza<br>Length |      | Prestazioni max<br>Max performance |      | Portata - Flow |      | Temp. - Max |     | Applicazioni<br>Applications         |
|                                                                                                                                                                                                                   |                  |                  | mm                  | Inch | bar                                | psi  | l/min          | GPM  | °C          | °F  |                                      |
| 84.6604.10.2                                                                                                                                                                                                      | M22x1,5-M        | 1/4"NPT- F       | 700                 | 28"  | 280                                | 4000 | 40             | 10,6 | 150         | 302 | Per pistole tipo B<br>For gun type B |
| 84.6604.20.2<br>"professional"                                                                                                                                                                                    | M22x1,5-M        | 1/4"NPT- F       | 900                 | 36"  | 280                                | 4000 | 40             | 10,6 | 150         | 302 | Per pistole tipo B<br>For gun type B |

# PISTOLE/LANCE - GUNS/LANCES PISTOLETS/LANCES - PISTOLAS/LANZAS



| Codice<br>Code                 | Descrizione<br>Description                                                                             | Entrata<br>Inlet | Uscita<br>Outlet                 | Applicazioni<br>Application                                           |
|--------------------------------|--------------------------------------------------------------------------------------------------------|------------------|----------------------------------|-----------------------------------------------------------------------|
| 84.6650.00.2                   | Testina portaugello regolabile<br>Adjustable nozzle<br>Tête réglable<br>Cabeza portaboquilla regulable | 1/4 BSP – F      | 1/4 NPT- F                       | Tutte le lance<br>All lances<br>Toutes les lances<br>Todas las lanzas |
| 84.6647.00.2                   | Testina portaugello doppia<br>Change over nozzle<br>Buse à bille<br>Cabeza portaboquilla doble         | 1/4 BSP – F      | 1/4 NPT- F                       | Tutte le lance<br>All lances<br>Toutes les lances<br>Todas las lanzas |
| 84.6648.50.2                   | Testina sabbiente<br>Sand blasting head<br>Tête de sablage<br>Cabeza para arenar                       | 1/4 BSP – F      | Ugello<br>Nozzle<br>1.4          | Tutte le lance<br>All lances<br>Toutes les lances<br>Todas las lanzas |
| 84.6648.00.2<br>“professional” | Testina sabbiente<br>Sand blasting head<br>Tête de sablage<br>Cabeza para arenar                       | 1/4 BSP – F      | Ugello<br>Nozzle<br>1.5          | Tutte le lance<br>All lances<br>Toutes les lances<br>Todas las lanzas |
| 84.6650.05.2                   | Testina schiumogena<br>Foam injector<br>Canon à mousse<br>Cabeza espumadora                            | 1/4 BSP – F      | Con serbatoio<br>With tank       | Tutte le lance<br>All lances<br>Toutes les lances<br>Todas las lanzas |
| 84.6567.00.2<br>“professional” | Testina schiumogena<br>Foam injector<br>Canon à mousse<br>Cabeza espumadora                            | 1/4 BSP – F      | Con serbatoio<br>With tank       | Tutte le lance<br>All lances<br>Toutes les lances<br>Todas las lanzas |
| 84.6425.00                     | Spazzola rotante<br>Rotating brush<br>Brosse rotative<br>Cepillo rotatorio                             | M22x1,5-M        | Max press.:<br>30 bar<br>435 Psi | Tutte le lance<br>All lances<br>Toutes les lances<br>Todas las lanzas |

# TUBI FLESSIBILI - FLEXIBLE HOSES TUYAUX FLEXIBLES - MANGUERAS FLEXIBLES



| TUBI FLESSIBILI - FLEXIBLE HOSES - TUYAUX FLEXIBLES - MANGUERAS FLEXIBLES<br>Tipo - Type: Sae 100 5/16" |                        |              |                     |                               |
|---------------------------------------------------------------------------------------------------------|------------------------|--------------|---------------------|-------------------------------|
| Codice<br>Code                                                                                          | Raccordo<br>Connection | Tipo<br>Type | Lunghezza<br>Length | Pressione Max<br>Max Pressure |
| 86.0805.00.2                                                                                            | 2 x 3/8" F             | R1           | 6 m                 | 200 bar 2900 Psi              |
| 86.0806.00.2                                                                                            | 2 x 3/8" F             | R1           | 10 m                | 200 bar 2900 Psi              |
| 86.0808.00.2                                                                                            | 2 x 3/8" F             | R1           | 15 m                | 200 bar 2900 Psi              |
| 86.0810.05.2                                                                                            | 2 x 22x1.5 F           | R1           | 10 m                | 200 bar 2900 Psi              |
| 86.0807.00.2                                                                                            | 2 x 3/8" F             | R2           | 10 m                | 300 bar 4350 Psi              |

# ATTACCHI - CONNECTIONS ATTELAGES - CONEXIONES



| ATTACCHI RAPIDI - SCREW QUICK COUPLINGS - RACCORDS RAPIDES - CONEXIONES RÁPIDAS |                                                    |               |               |                                        |
|---------------------------------------------------------------------------------|----------------------------------------------------|---------------|---------------|----------------------------------------|
| Codice Code                                                                     | Descrizione Description                            | Entrata Inlet | Uscita Outlet | Applicazioni Application               |
| 84.6650.30.2                                                                    | Attacco rapido fisso<br>Fixed Screw quick coupling | 1/4 BSP – M   | M22x1,5-F     | Tutti gli accessori<br>All accessories |
| 84.6650.45.2                                                                    | Attacco rapido fisso<br>Fixed Screw quick coupling | 1/4 BSP – F   | M22x1,5-F     | Tutti gli accessori<br>All accessories |
| 84.6650.25.2                                                                    | Attacco rapido girevole<br>Screw quick coupling    | 3/8 BSP – M   | M22x1,5-F     | Tutti gli accessori<br>All accessories |
| 84.6650.35.2                                                                    | Attacco rapido girevole<br>Screw quick coupling    | 3/8 BSP – F   | M22x1,5-F     | Tutti gli accessori<br>All accessories |
| 84.6650.26.2                                                                    | Attacco rapido fisso<br>Fixed Screw quick coupling | 3/8 BSP – M   | M22x1,5-F     | Tutti gli accessori<br>All accessories |

# EIETTORI - INJECTORS ÉJECTEURS - EYECTORES



| EIETTORI PER VALVOLE REGOLAZIONE - INJECTORS FOR INLOADER VALVES<br>EJECTEURS POUR RÉGULATEURS DE PRESSION - EYECTORES PARA VÁLVULAS DE REGULACIÓN DE PRESIÓN |                                            |               |               |               |                      |                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------|---------------|---------------|----------------------|-------------------------|
| Codice Code                                                                                                                                                   | Descrizione Description                    | Ugello Nozzle | Entrata Inlet | Uscita Outlet | Portata Max Max Flow | Serie Pompa Pump Series |
| 05.0137.00.2                                                                                                                                                  | Eiettore fisso<br>Fixed injector           | Ø2,3          | 3/8 BSP – F   | M22x1,5-M     | 20 l/min<br>5.3 GPM  | TM, TTL,TTK, KTL        |
| 05.0133.00.2                                                                                                                                                  | Eiettore fisso<br>Fixed injector           | Ø2,1          | 3/8 BSP – F   | M22x1,5-M     | 15 l/min<br>4.0 GPM  | WB, WM, TM              |
| 05.0150.00.2                                                                                                                                                  | Eiettore fisso<br>Fixed injector           | Ø1,8          | 3/8 BSP – F   | M22x1,5-M     | 11 l/min<br>2.9 GPM  | WB, WM                  |
| 05.0153.00.2                                                                                                                                                  | Eiettore fisso<br>Fixed injector           | Ø2,3          | 3/8 BSP – F   | 3/8 BSP – M   | 20 l/min<br>5.3 GPM  | TM, TTL,TTK, KTL        |
| 05.0152.00.2                                                                                                                                                  | Eiettore fisso<br>Fixed injector           | Ø2,1          | 3/8 BSP – F   | 3/8 BSP – M   | 15 l/min<br>4.0 GPM  | WB, WM, TM              |
| 05.0151.00.2                                                                                                                                                  | Eiettore fisso<br>Fixed injector           | Ø1,8          | 3/8 BSP – F   | 3/8 BSP – M   | 11 l/min<br>2.9 GPM  | WB, WM                  |
| 05.8551.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø2,3          | 3/8 BSP – F   | M22x1,5       | 20 l/min<br>5.3 GPM  | TM, TTL,TTK, KTL        |
| 05.8552.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø2,1          | 3/8 BSP – F   | M22x1,5       | 15 l/min<br>4.0 GPM  | WB, WM, TM              |
| 05.8553.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø1,8          | 3/8 BSP – F   | M22x1,5       | 11 l/min<br>2.9 GPM  | WB, WM                  |
| 05.8554.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø1,6          | 3/8 BSP – F   | M22x1,5       | 10 l/min<br>2.6 GPM  | WB, WM                  |
| 05.8555.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø2,3          | 3/8 BSP – F   | 3/8 BSP – M   | 20 l/min<br>5.3 GPM  | TM, TTL,TTK, KTL        |
| 05.8556.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø2,1          | 3/8 BSP – F   | 3/8 BSP – M   | 15 l/min<br>4.0 GPM  | WB, WM, TM              |
| 05.8557.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø1,8          | 3/8 BSP – F   | 3/8 BSP – M   | 11 l/min<br>2.9 GPM  | WB, WM                  |
| 05.8558.97.3                                                                                                                                                  | Eiettore regolabile<br>Adjustable injector | Ø1,6          | 3/8 BSP – F   | 3/8 BSP – M   | 10 l/min<br>2.6 GPM  | WB, WM                  |





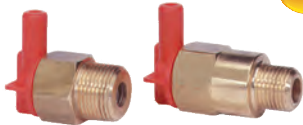
# ACCESSORI VARI - SUNDRY ACCESSORIES

## ACCESSOIRES DIFFERENTS - ACCESORIOS VARIOS



PF

| VALVOLA DI RITARDO AVVIAMENTO - EASY STARTER<br>RETARDEUR DU DÉPART - VALVULA DE RETRASO ARRANQUE |                       |                         |                                   |                               |                      |                           |
|---------------------------------------------------------------------------------------------------|-----------------------|-------------------------|-----------------------------------|-------------------------------|----------------------|---------------------------|
| Codice<br>Code                                                                                    | Attacco<br>Connection | Portagomma<br>Hose barb | Press. Nominale<br>Rated Pressure | Pressione Max<br>Max Pressure | Portata<br>Flow Rate | Temp. Nom.<br>Rated Temp. |
| 86.1650.00.2                                                                                      | 3/8 BSP - M           | 8 mm                    | 250 bar<br>3600 Psi               | 280 bar<br>4000 Psi           | 15 l/min<br>4 GPM    | 80 °C<br>175 °F           |



TV

| VALVOLE DI PROTEZIONE TERMICA - THERMO PROTECTOR VALVES<br>VALVES DE SÉCURITÉ THERMIQUE - VALVULAS DE PROTECCIÓN TÉRMICA |                            |                  |                         |                                   |                                    |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------|-------------------------|-----------------------------------|------------------------------------|
| Codice<br>Code                                                                                                           | Descrizione<br>Description | Entrata<br>Inlet | Portagomma<br>Hose barb | Press. Nominale<br>Rated Pressure | Temperatura Max<br>Max Temperature |
| 86.1630.00.2                                                                                                             | Thermo protector valve     | 1/2 BSP - M      | Ø 7 mm                  | 10 bar<br>145 PSI                 | 63 °C<br>145 °F                    |
| 86.1635.00.2                                                                                                             | Thermo protector valve     | 3/8 BSP - M      | Ø 7 mm                  | 10 bar<br>145 PSI                 | 63 °C<br>145 °F                    |



NIPPLI MASCHIO-MASCHIO  
HEX NIPPLES

| RACCORDI VARI - FITTINGS - RACCORDS - EMPALMES    |                |                     |                     |                                    |
|---------------------------------------------------|----------------|---------------------|---------------------|------------------------------------|
|                                                   | Codice<br>Code | Filetto 1<br>Size 1 | Filetto 2<br>Size 2 | Materiale<br>Material              |
| NIPPLI MASCHIO-MASCHIO<br>HEX NIPPLES             | 83.5019.00.2   | M22x1,5-M           | 3/8 BSP - M         | OTTONE - BRASS                     |
|                                                   | 83.5004.60.2   | 1/4 BSP - M         | M22x1,5-M           | OTTONE - BRASS                     |
|                                                   | 83.5016.50.2   | 3/8 BSP - M         | 3/8 BSP - M         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5051.00.2   | 1/2 BSP - M         | 1/2 BSP - M         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5036.00.2   | 1/2 BSP - M         | 3/8 BSP - M         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5060.35.2   | 3/4 BSP - M         | 3/4 BSP - M         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5062.30.2   | 3/4 BSP - M         | 1" BSP - M          | ACCIAIO ZINCATO - GALVANIZED STEEL |
| RIDUZIONI MASCHIO-FEMMINA<br>REDUCING BUSHING M-F | 83.5017.00.2   | M22x1,5-M           | 3/8 BSP - F         | OTTONE - BRASS                     |
|                                                   | 83.5069.51.2   | M18x1,5-M           | 3/4 BSP - F         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5019.50.2   | M22x1,5-M           | 1/4 BSP - F         | OTTONE - BRASS                     |
|                                                   | 83.5029.00.2   | 1/4 BSP - M         | 3/4 BSP - F         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5031.00.2   | 3/4 BSP - M         | 1" BSP - F          | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5097.00.2   | 1" BSP - M          | 3/4 BSP - F         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5032.50.2   | 1"1/4 - M           | 3/4 BSP - F         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5032.00.2   | 1"1/4 - M           | 1" BSP - F          | ACCIAIO ZINCATO - GALVANIZED STEEL |
| MANICOTTI<br>ADAPTERS                             | 83.5074.00.2   | 1/4 BSP - F         | 1/4 BSP - F         | ACCIAIO ZINCATO - GALVANIZED STEEL |
| RACCORDI A "T"<br>TEE                             | 83.5026.00.2   | 3/4 BSP - M         |                     | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5073.00.2   | 1" BSP - M          |                     | ACCIAIO ZINCATO - GALVANIZED STEEL |
| CROCE<br>CROSS 4<br>CONNECTS                      | 83.5071.00.2   | 1" BSP - M          |                     | ACCIAIO ZINCATO - GALVANIZED STEEL |
| RACC.<br>GIREVOLE<br>SWIVEL                       | 83.5060.40.2   | 3/4 BSP - M         | 3/4 BSP - F         | ACCIAIO ZINCATO - GALVANIZED STEEL |
|                                                   | 83.5060.45.2   | 3/4 BSP - M 90°     | 3/4 BSP - F         | ACCIAIO ZINCATO - GALVANIZED STEEL |



# ACCESSORI VARI - SUNDRY ACCESSORIES

## ACCESSOIRES DIFFERENTS - ACCESORIOS VARIOS

| FILTRI IN ASPIRAZIONE - INLET FILTERS<br>FILTRES ASPIRATION - FILTROS EN ASPIRACIÓN            |                                                                                                                                  |                                                                           |                  |                                                                                                                        |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------|
| Codice<br>Code                                                                                 | Descrizione<br>Description                                                                                                       | Entrata<br>Inlet                                                          | Uscita<br>Outlet | Applicazioni<br>Application                                                                                            |
|  31.1054.97.3 | Filtro aspirazione a "Y" 50mesh<br>Y" intake strainer 50 mesh<br>Filtre aspiration à "Y" 50mesh<br>Filtro aspiración "Y" 50 mesh | 1/2 BSP - F                                                               | 1/2 BSP - F      | Pompe con entrata 1/2" BSP<br>Pumps with inlet. 1/2" BSP<br>Pompes avec entrée 1/2" BSP<br>Bombas con entrada 1/2" BSP |
|  81.8610.00.2 | Filtro aspirazione in plastica<br>Plastic intake strainer<br>Filtre plastique<br>Filtro aspiración de plástico                   | 1/2 BSP - F                                                               | 1/2 BSP - M      | Pompe con entrata 1/2" BSP<br>Pumps with inlet. 1/2" BSP<br>Pompes avec entrée 1/2" BSP<br>Bombas con entrada 1/2" BSP |
|  81.8620.00.2 | Filtro aspirazione a "Y" 50mesh<br>Y" intake strainer 50 mesh<br>Filtre aspiration à "Y" 50mesh<br>Filtro aspiración "Y" 50 mesh | 3/4 BSP - F                                                               | 3/4 BSP - F      | Pompe con entrata 3/4" BSP<br>Pumps with inlet. 3/4" BSP<br>Pompes avec entrée 3/4" BSP<br>Bombas con entrada 3/4" BSP |
|  81.8630.00.2 | Filtro aspirazione a "Y" 50mesh<br>Y" intake strainer 50 mesh<br>Filtre aspiration à "Y" 50mesh<br>Filtro aspiración "Y" 50 mesh | 1 BSP - F                                                                 | 1 BSP - F        | Pompe con entrata 1" BSP<br>Pumps with inlet. 1" BSP<br>Pompes avec entrée 1" BSP<br>Bombas con entrada 1" BSP         |
|  10.9826.97.3 | Filtro aspirazione a detergente<br>Chemical suction strainer<br>Filtre aspiration détergent<br>Filtro aspiración detergente      | Portagomma Ø 7<br>Hose barb Ø 7<br>Arrivée d'eau Ø 7<br>Portaboquilla Ø 7 |                  | Per filtrare il detergente<br>To filter detergent<br>Pour filtrer le détergent<br>Para filtrar el detergente           |

| KIT PULSE-JET - PULSE-JET KIT<br>KIT PULSE-JET - JUEGO DE CHORRO                                 |                                  |
|--------------------------------------------------------------------------------------------------|----------------------------------|
| Codice<br>Code                                                                                   | Pompa<br>Pumps                   |
|  06.9888.97.3 | TM - TTL - TTK<br>KTL - KKL - RA |

| TAPPO VALVOLA CON FORO PER MANOMETRO - VALVE CAP KIT WITH BORE FOR PRESSURE GAUGE<br>KIT BOUCHON CLAPET AVEC TROU POUR MANOMÈTRE - TAPA VÁLVULA CON AGUJERO PARA MANÓMETRO |                  |                            |                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------------------|----------------------------------------|
| Codice<br>Code                                                                                                                                                             | Uscita<br>Outlet | Attacco Pompa<br>Port Size | Serie Pompa<br>Pump Series             |
|  02.9838.97.3                                                                           | 1/4 BSP - F      | M20x1                      | WJC-U                                  |
|  02.9811.97.3                                                                           | 1/4 BSP - F      | M22x1                      | WB                                     |
|  04.9889.97.3                                                                           | 1/4 BSP - F      | M27x1.5                    | WM - TM - TTL - TTK - KTL - RAL-RX 400 |
| 08.9838.97.3                                                                                                                                                               | 1/4 BSP - F      | M27x1.5 (AISI 316)         | RA                                     |
| 06.9868.97.3                                                                                                                                                               | 1/4 BSP - F      | M36x1.5                    | KKL - RBL                              |

# ACCESSORI VARI - SUNDRY ACCESSORIES

## ACCESSOIRES DIFFERENTS - ACCESORIOS VARIOS



| MANOMETRI - PRESSURE GAUGES - MANOMETRES - MANÓMETROS |                         |                                                               |                               |
|-------------------------------------------------------|-------------------------|---------------------------------------------------------------|-------------------------------|
| Codice Code                                           | Descrizione Description | Entrata Inlet                                                 | Scala Scale                   |
| 83.0096.20.2                                          | DN 63 - ABS             | 1/4 BSP - M ATTACCO RADIALE<br>1/4 BSP - M Radial connection  | 0 ÷ 250 bar<br>0 ÷ 3600 PSI   |
| 83.0096.50.2                                          | DN 63 - INOX            |                                                               | 0 ÷ 250 bar<br>0 ÷ 3600 PSI   |
| 83.0096.00.2                                          | DN 63 - ABS             |                                                               | 0 ÷ 315 bar<br>0 ÷ 4568 PSI   |
| 83.0097.50.2                                          | DN 63 - INOX            |                                                               | 0 ÷ 600 bar<br>0 ÷ 8700 PSI   |
| 83.0099.00.2                                          | DN 63 - INOX            |                                                               | 0 ÷ 1000 bar<br>0 ÷ 14500 PSI |
| 83.0100.00.2                                          | DN 160 - INOX           | 1/2 BSP - M ATTACCO RADIALE<br>1/2 BSP - M Radial connection  | 0 ÷ 1600 bar<br>0 ÷ 23200 PSI |
| 83.0096.25.2                                          | DN 63 - ABS             | 1/4 BSP - M ATTACCO POSTERIORE<br>1/4 BSP - M back connection | 0 ÷ 250 bar<br>0 ÷ 3600 PSI   |
| 83.0096.05.2                                          | DN 63 - ABS             |                                                               | 0 ÷ 315 bar<br>0 ÷ 4568 PSI   |
| 83.0097.50.2                                          | DN 63 - INOX            |                                                               | 0 ÷ 600 bar<br>0 ÷ 8700 PSI   |
| 83.0099.10.2                                          | DN 63 - INOX            |                                                               | 0 ÷ 1000 bar<br>0 ÷ 14500 PSI |



| FILTRI IN ASPIRAZIONE - INLET FILTERS - FILTRES ASPIRATION - FILTROS EN ASPIRACIÓN |                    |                             |      |                |
|------------------------------------------------------------------------------------|--------------------|-----------------------------|------|----------------|
| Codice Code                                                                        | Capacità filtrante | Entrata/Uscita Inlet/Outlet | mesh | Impiego l/min* |
| 87.1106.97.3                                                                       | 120 l/min max.     | 1"1/4 BSP - M               | 80   | 50             |
| 87.1126.97.3                                                                       | 100÷160 l/min      | 1"1/2 BSP - M               |      | 75             |
| 87.1136.97.3                                                                       | 160÷220 l/min      | 1"1/2 BSP - M               |      | 150            |
| 87.1156.97.3                                                                       | 200÷260 l/min      | 2" BSP - M                  |      | 200            |

\* Portata massima della pompa



| ACCUMULATORI DI PRESSIONE - PULSATION DAMPERS - ACCUMULATEURS DE PRESSION - ACUMULADORES DE PRESIÓN |                                                                              |     |                  |               |          |                                                                                                                     |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----|------------------|---------------|----------|---------------------------------------------------------------------------------------------------------------------|
| Codice<br>Code                                                                                      | Precarica - Pre charge                                                       |     | Entrata<br>Inlet | Volume - Flow |          | Descrizione<br>Description                                                                                          |
|                                                                                                     | bar                                                                          | PSI |                  | l             | U.S.GAL. |                                                                                                                     |
| 80.7100.00.2                                                                                        | 60                                                                           | 870 | M 18X1,5         | 0,75          | 0.2      | Accumulatore precaricato ad azoto in acciaio forgiato con membrana sostituibile; montaggio verticale o orizzontale. |
| 80.7101.00.2                                                                                        | 80                                                                           | 116 |                  | 0,75          | 0.2      |                                                                                                                     |
| 80.7102.00.2                                                                                        | 120                                                                          | 174 |                  | 0,75          | 0.2      |                                                                                                                     |
| 80.7110.00.2                                                                                        | 60                                                                           | 870 |                  | 0,35          | 0.1      | Pulsation damper, nitrogen precharged, fitted with replaceable diaphragm, vertical or horizontal mounting.          |
| 80.7111.00.2                                                                                        | 80                                                                           | 116 |                  | 0,35          | 0.1      |                                                                                                                     |
| 80.7112.00.2                                                                                        | 120                                                                          | 174 |                  | 0,35          | 0.1      |                                                                                                                     |
| 83.5069.51.2                                                                                        | Raccordo per connessione M18x1.5M - 3/4 BSP F - Adapter M18X1.5 M -3/4 BSP F |     |                  |               |          |                                                                                                                     |



**SCELTA DELL'ACCUMULATORE** - Volumi: 0,35 Lt per pompe fino a 100 L/min; 0,75 Lt per pompe oltre i 100 L/min  
Precarica: 60 bar per pressioni di lavoro fino a 80 bar; 80 bar per pressioni di lavoro fino a 100 bar; 120 bar per pressioni di lavoro fino a 150 bar



**CHOOSE THE CORRECT PULSATION DAMPER** - Volume: 0.35 Lt for pumps up to 100 L/min; 0.75 Lt for pumps over 100 L/min  
Pre-charge: 60 bar for working pressures up to 80 bar; 80 bar for working pressures up to 100 bar; 120 bar for working pressures up to 150 bar



**COMMENT CHOISIR L'ACCUMULATEUR** - Volumes: - 0,35 L pour les pompes jusqu'à 100 l/min; 0,75 L pour les pompes de plus de 100 l/min  
Pré-charge: 60 bars pour pression de travail jusqu'à 80 bars; 80 bars pour pression de travail jusqu'à 100 bars; 120 bars pour pression de travail jusqu'à 150 bars



**SELECCIÓN DEL ACUMULADOR** - Volúmenes: - 0,35 Lt para bombas de hasta 100 l/min; 0,75 Lt para bombas de más de 100 l/min  
Precarga: 60 bar para presiones de trabajo hasta 80 bar - 80 bar para presiones de trabajo hasta 100 bar - 120 bar para presiones de trabajo hasta 150 bar



| SUPPORTI ANTIVIBRANTI PER GRUPPI ELETTROPOMPA - SHOCK-ISOLATING MOUNTINGS FOR POWER UNITS             |                   |        |                |        |                     |
|-------------------------------------------------------------------------------------------------------|-------------------|--------|----------------|--------|---------------------|
| SUPPORTS ANTIVIBRATILES POUR ENSEMBLE POMPE/MOTEUR - SOPORTES ANTIVIBRANTES PARA GRUPOS ELECTROBOMBAS |                   |        |                |        |                     |
| Codice Code                                                                                           | Diametro Diameter |        | Altezza Height |        | Raccordo Connection |
|                                                                                                       | mm                | inches | mm             | inches |                     |
| 80.4010.97.3                                                                                          | 100               | 3.93   | 40             | 1.57   | M 16 x 2            |





| UGELLI INOX ALTA PRESSIONE - HIGH PRESSURE STAINLESS STEEL NOZZLES<br>BUSES INOX HAUTE PRESSION - BOQUILLAS EN ACERO INOX. DE ALTA PRESIÓN |      |                                 |              |              |
|--------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------|--------------|--------------|
| Specifiche ugello - Nozzle specifications                                                                                                  |      | Codice ugello - Nozzle part nr. |              |              |
| MEG                                                                                                                                        | Ø mm | Angolo di spruzzo - Spray angle |              |              |
|                                                                                                                                            |      | 0°                              | 15°          | 25°          |
| 02                                                                                                                                         | 0.91 | 84.6649.20.2                    | 84.6649.25.2 | 84.6649.30.2 |
| 025                                                                                                                                        | 1.0  | 84.6649.40.2                    | 84.6649.41.2 | 84.6649.42.2 |
| 03                                                                                                                                         | 1.09 | 84.6649.50.2                    | 84.6649.60.2 | 84.6649.65.2 |
| 035                                                                                                                                        | 1.15 | 84.6649.70.2                    | 84.6649.80.2 | 84.6649.90.2 |
| 04                                                                                                                                         | 1.19 | 84.6651.70.2                    | 84.6651.80.2 | 84.6651.90.2 |
| 045                                                                                                                                        | 1.27 | 84.6651.75.2                    | 84.6651.85.2 | 84.6651.95.2 |
| 05                                                                                                                                         | 1.35 | 84.6652.01.2                    | 84.6652.03.2 | 84.6652.00.2 |
| 055                                                                                                                                        | 1.4  | 84.6652.05.2                    | 84.6652.08.2 | 84.6652.10.2 |
| 06                                                                                                                                         | 1.47 | 84.6652.13.2                    | 84.6652.14.2 | 84.6652.16.2 |
| 065                                                                                                                                        | 1.52 | 84.6652.17.2                    | 84.6652.18.2 | 84.6652.12.2 |
| 07                                                                                                                                         | 1.6  | 84.6652.19.2                    | 84.6652.21.2 | 84.6652.15.2 |
| 075                                                                                                                                        | 1.65 | 84.6652.22.2                    | 84.6652.23.2 | 84.6652.24.2 |
| 08                                                                                                                                         | 1.7  | 84.6652.26.2                    | 84.6652.27.2 | 84.6652.20.2 |
| 085                                                                                                                                        | 1.75 | 84.6652.28.2                    | 84.6652.29.2 | 84.6652.25.2 |
| 09                                                                                                                                         | 1.8  | 84.6652.32.2                    | 84.6652.33.2 | 84.6652.30.2 |
| 095                                                                                                                                        | 1.85 | 84.6652.34.2                    | 84.6652.35.2 | 84.6652.31.2 |
| 10                                                                                                                                         | 1.9  | 84.6652.36.2                    | 84.6652.37.2 | 84.6652.38.2 |
| 11                                                                                                                                         | 1.98 | 84.6652.39.2                    | 84.6652.41.2 | 84.6652.42.2 |
| 12                                                                                                                                         | 2.08 | 84.6652.43.2                    | 84.6652.44.2 | 84.6652.45.2 |
| 125                                                                                                                                        | 2.13 | 84.6652.46.2                    | 84.6652.47.2 | 84.6652.48.2 |
| 13                                                                                                                                         | 2.16 | 84.6652.49.2                    | 84.6652.51.2 | 84.6652.52.2 |
| 14                                                                                                                                         | 2.26 | 84.6652.53.2                    | 84.6652.54.2 | 84.6652.55.2 |
| 15                                                                                                                                         | 2.34 | 84.6652.56.2                    | 84.6652.57.2 | 84.6652.50.2 |
| 16                                                                                                                                         | 2.41 | 84.6652.58.2                    | 84.6652.59.2 | 84.6652.60.2 |
| 18                                                                                                                                         | 2.54 | 84.6652.61.2                    | 84.6652.62.2 | 84.6652.63.2 |
| 20                                                                                                                                         | 2.69 | 84.6652.64.2                    | 84.6652.65.2 | 84.6652.66.2 |
| 25                                                                                                                                         | 2.99 | 84.6652.67.2                    | 84.6652.68.2 | 84.6652.69.2 |

TABELLA DI SCELTA / NOZZLE SIZE SELECTION CHART / CHOIX DES BUSES / TABLA DE ELECCIÓN

| MEG     | FORO / HOLE<br>TROU / AGUJERO<br>Ø | Portate in l/min alle pressioni indicate - Flow in l/min at the indicated pressures - Débit en l/min aux pressions indiquées - Caudales en l/min a las presiones indicadas |            |            |            |            |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|---------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|         |                                    | 20<br>bar                                                                                                                                                                  | 30<br>bar  | 40<br>bar  | 50<br>bar  | 60<br>bar  | 70<br>bar   | 80<br>bar   | 90<br>bar   | 100<br>bar  | 110<br>bar  | 120<br>bar  | 130<br>bar  | 140<br>bar  | 150<br>bar  | 160<br>bar  | 180<br>bar  | 200<br>bar  | 220<br>bar  | 250<br>bar  | 280<br>bar  | 310<br>bar  | 340<br>bar  | 370<br>bar  | 400<br>bar  | 450<br>bar  | 500<br>bar  |
|         |                                    | 290<br>psi                                                                                                                                                                 | 435<br>psi | 580<br>psi | 725<br>psi | 870<br>psi | 1015<br>psi | 1160<br>psi | 1305<br>psi | 1450<br>psi | 1595<br>psi | 1740<br>psi | 1885<br>psi | 2030<br>psi | 2175<br>psi | 2320<br>psi | 2610<br>psi | 2900<br>psi | 3190<br>psi | 3625<br>psi | 4060<br>psi | 4580<br>psi | 5000<br>psi | 5440<br>psi | 5880<br>psi | 6525<br>psi | 7250<br>psi |
| ..02    | 0,99                               | 2                                                                                                                                                                          | 2,5        | 2,8        | 3,2        | 3,5        | 3,7         | 4           | 4,2         | 4,5         | 4,7         | 4,9         | 5,1         | 5,3         | 5,5         | 5,7         | 6           | 6,4         | 6,7         | 7,6         | 7,7         | 8,1         | 8,2         | 8,8         | 9,2         | 9,8         | 10,3        |
| ..025   | 1,00                               | 2,5                                                                                                                                                                        | 3,1        | 3,5        | 4          | 4,3        | 4,7         | 5           | 5,3         | 5,6         | 5,9         | 6,1         | 6,4         | 6,6         | 6,9         | 7,1         | 7,5         | 7,9         | 8,3         | 8,9         | 9,4         | 9,9         | 10,3        | 10,8        | 11,2        | 11,9        | 12,5        |
| ..03    | 1,09                               | 3,1                                                                                                                                                                        | 3,7        | 4,3        | 4,8        | 5,3        | 5,7         | 6,1         | 6,3         | 6,8         | 7,2         | 7,4         | 7,7         | 8           | 8,3         | 8,7         | 9,2         | 9,6         | 10          | 10,8        | 11,4        | 12          | 12,5        | 13,1        | 13,6        | 14,4        | 15,2        |
| ▶ ..035 | 1,15                               | 3,6                                                                                                                                                                        | 4,4        | 5,1        | 5,6        | 6,2        | 6,7         | 7,3         | 7,7         | 8,1         | 8,4         | 8,8         | 9,2         | 9,6         | 9,9         | 10,4        | 10,9        | 11,4        | 12          | 12,6        | 13,4        | 14,1        | 14,8        | 15,4        | 16,0        | 17,0        | 17,9        |
| ..04    | 1,19                               | 4,2                                                                                                                                                                        | 5,2        | 5,9        | 6,6        | 7,3        | 7,8         | 8,4         | 8,9         | 9,4         | 9,8         | 10,3        | 10,7        | 11,1        | 11,5        | 11,9        | 12,4        | 13,2        | 14,1        | 14,4        | 14,7        | 16          | 16,9        | 17,5        | 18,2        | 19,3        | 20,3        |
| ..045   | 1,27                               | 4,5                                                                                                                                                                        | 5,5        | 6,4        | 7,1        | 7,8        | 8,4         | 9           | 9,6         | 10,2        | 10,6        | 11,2        | 11,6        | 11,8        | 12,5        | 12,6        | 13,2        | 14,4        | 15          | 16,3        | 17,2        | 18,1        | 19          | 19,5        | 20,6        | 21,8        | 23,0        |
| ..05    | 1,35                               | 5                                                                                                                                                                          | 6,2        | 7,1        | 8          | 8,7        | 9,4         | 10          | 10,7        | 11,3        | 11,7        | 12,1        | 12,9        | 13,4        | 13,8        | 14,3        | 15,1        | 15,9        | 16,9        | 17,9        | 18,9        | 19,9        | 20,9        | 21,8        | 22,7        | 24,2        | 25,5        |
| ..055   | 1,4                                | 5,6                                                                                                                                                                        | 6,8        | 7,8        | 8,7        | 9,6        | 10,3        | 11,1        | 11,8        | 12,4        | 13          | 13,5        | 14,1        | 14,7        | 15,2        | 15,7        | 16,4        | 17,5        | 18,6        | 19,8        | 20,9        | 22          | 23          | 24,0        | 25,0        | 26,5        | 28,0        |
| ..06    | 1,47                               | 6                                                                                                                                                                          | 7,4        | 8,6        | 9,6        | 10,4       | 11,3        | 12,1        | 12,8        | 13,6        | 14,2        | 14,9        | 15,5        | 16          | 16,6        | 17,2        | 18          | 19,2        | 20,4        | 21,5        | 22,9        | 24,1        | 25,3        | 26,4        | 27,4        | 29,1        | 30,6        |
| ..065   | 1,52                               | 6,6                                                                                                                                                                        | 8          | 9,3        | 10,4       | 11,3       | 12,3        | 13,2        | 14          | 14,7        | 15,5        | 16,1        | 16,7        | 17,4        | 18          | 18,6        | 19,4        | 20,7        | 22          | 22,9        | 24,8        | 26,1        | 27,3        | 28,5        | 29,6        | 31,4        | 33,1        |
| ..07    | 1,6                                | 7,1                                                                                                                                                                        | 8,6        | 10         | 11,2       | 12,2       | 13,2        | 14,1        | 15          | 15,8        | 16,6        | 17,3        | 18          | 18,7        | 19,3        | 20,1        | 21,3        | 22,3        | 23,7        | 25,3        | 26,8        | 28,2        | 29,5        | 30,8        | 32,0        | 33,9        | 35,8        |
| ..075   | 1,65                               | 7,6                                                                                                                                                                        | 9,3        | 10,7       | 12         | 13,1       | 14,2        | 15,2        | 16,1        | 16,9        | 17,7        | 18,5        | 19,2        | 20          | 20,7        | 21,4        | 22,6        | 23,8        | 25,3        | 27          | 28,6        | 30,1        | 31,5        | 32,9        | 34,2        | 36,3        | 38,2        |
| ..08    | 1,7                                | 8                                                                                                                                                                          | 9,8        | 11,3       | 12,7       | 14         | 11,1        | 16,1        | 17,1        | 18          | 18,9        | 19,7        | 20,5        | 21,3        | 22          | 22,8        | 23,8        | 25,4        | 27          | 28,8        | 30,5        | 32          | 33,6        | 35,0        | 36,4        | 36,8        | 40,7        |
| ..085   | 1,75                               | 8,5                                                                                                                                                                        | 10,4       | 12,1       | 13,5       | 14,8       | 16          | 17,1        | 18,1        | 19,1        | 20          | 20,9        | 21,7        | 22,5        | 23,4        | 24          | 25,5        | 27          | 28,2        | 30,7        | 32,5        | 34,2        | 35,8        | 37,3        | 38,8        | 41,2        | 43,4        |
| ..09    | 1,8                                | 9,8                                                                                                                                                                        | 11,5       | 13,3       | 14,8       | 16,3       | 17,6        | 18,8        | 19,9        | 21          | 22          | 23          | 23,9        | 24,8        | 25,7        | 26,6        | 28,2        | 29,7        | 31,1        | 33,2        | 33,5        | 37          | 38,7        | 40,4        | 42,0        | 44,5        | 47,0        |
| ..095   | 1,85                               | 9,7                                                                                                                                                                        | 11,9       | 13,4       | 15,4       | 16,8       | 18,1        | 19,4        | 20          | 21,7        | 22,7        | 23,8        | 24,7        | 25,9        | 26,9        | 27,8        | 29,5        | 31,1        | 32,6        | 34,8        | 36,8        | 38,7        | 40,6        | 42,3        | 44,0        | 46,7        | 49,2        |
| ..10    | 1,9                                | 10                                                                                                                                                                         | 12,3       | 14,2       | 16         | 17,8       | 19,2        | 20,6        | 21,8        | 23          | 24,1        | 25,2        | 26,2        | 27,2        | 28,2        | 29,1        | 30,9        | 32,5        | 34,1        | 35,4        | 38,5        | 40,5        | 42,4        | 44,2        | 46,0        | 48,8        | 51,4        |
| ..11    | 1,98                               | 11,1                                                                                                                                                                       | 13,6       | 15,7       | 17,6       | 19,3       | 20,8        | 22,2        | 23,6        | 24,9        | 26,2        | 27,4        | 28,5        | 29,6        | 30,6        | 31,6        | 33,5        | 35,4        | 37,1        | 39,5        | 41,8        | 44          | 46,1        | 48,1        | 50,0        | 53,0        | 55,9        |
| ..12    | 2,08                               | 12,1                                                                                                                                                                       | 14,8       | 17,2       | 19,2       | 21         | 22,7        | 24,3        | 25,8        | 27,1        | 28,1        | 29,4        | 30,6        | 31,8        | 32,9        | 34          | 36          | 38          | 39,8        | 42,4        | 45          | 47,6        | 50,2        | 51,9        | 54,0        | 57,3        | 60,4        |
| ..125   | 2,13                               | 12,7                                                                                                                                                                       | 15,6       | 18         | 20,1       | 22         | 23,8        | 25,5        | 27          | 28,5        | 29,5        | 30,8        | 32,1        | 33,3        | 34,5        | 35,6        | 37,8        | 39,8        | 41,8        | 44,5        | 46,9        | 49,3        | 51,6        | 53,9        | 56,0        | 59,4        | 62,6        |
| ..13    | 2,16                               | 13,2                                                                                                                                                                       | 16,1       | 18,6       | 20,8       | 22,8       | 24,6        | 26,3        | 27,9        | 29,4        | 30,8        | 32,2        | 33,5        | 34,8        | 36          | 37,2        | 38,9        | 42,5        | 44,5        | 47,4        | 50,2        | 52,8        | 55,3        | 57,7        | 60,0        | 63,6        | 67,1        |
| ..14    | 2,26                               | 14,2                                                                                                                                                                       | 17,4       | 20         | 22,4       | 24,5       | 26,5        | 28,4        | 30,1        | 31,7        | 33,2        | 34,7        | 36,1        | 37,5        | 38,8        | 40,1        | 42,5        | 44,8        | 47          | 50,1        | 53,2        | 56,3        | 59,4        | 61,7        | 64,4        | 67,9        | 71,6        |
| ..15    | 2,34                               | 15,1                                                                                                                                                                       | 18,5       | 21,3       | 23,9       | 26,1       | 28,3        | 30,2        | 32,1        | 33,8        | 35,6        | 37,2        | 38,7        | 40,2        | 41,6        | 43          | 45,6        | 48          | 50,4        | 53,7        | 57          | 59,9        | 62,7        | 65,4        | 68,0        | 72,1        | 76,0        |
| ..16    | 2,41                               | 16,2                                                                                                                                                                       | 19,8       | 22,9       | 25,6       | 28         | 30,3        | 32,4        | 34,4        | 36,2        | 37,8        | 39,5        | 41,1        | 42,7        | 44,2        | 45,6        | 48,4        | 51          | 53,5        | 57          | 60,2        | 63,4        | 66,4        | 69,2        | 72,0        | 76,4        | 80,5        |
| ..18    | 2,54                               | 18,2                                                                                                                                                                       | 22,3       | 25,7       | 29         | 31,8       | 34,3        | 36,7        | 38,6        | 41          | 43          | 44,9        | 46,7        | 48,5        | 50,2        | 51,9        | 55          | 58          | 60,8        | 64,8        | 68,6        | 72,2        | 75,6        | 78,9        | 82,0        | 87,0        | 91,7        |
| ..20    | 2,69                               | 20,1                                                                                                                                                                       | 24,7       | 28,5       | 32,5       | 35,6       | 38,5        | 41,1        | 43,6        | 46          | 48,2        | 50,4        | 52,4        | 54,4        | 56,3        | 58,2        | 61,7        | 65,1        | 68,2        | 72,7        | 77          | 81          | 84,8        | 88,5        | 92,0        | 97,6        | 102,9       |
| ..25    | 2,99                               | 25,2                                                                                                                                                                       | 30,9       | 35,7       | 39,8       | 43,6       | 47,1        | 50,4        | 53,4        | 56,4        | 59,1        | 61,8        | 64,3        | 67          | 69,1        | 71,3        | 75,1        | 79,8        | 84          | 89,3        | 94,6        | 99,9        | 105,2       | 109,8       | 114,1       | 120,9       | 127,5       |



La portata dei getti non deve superare il 90-95% della portata della pompa.

Nozzles output must not exceed 90-95% of pump output.

Le débit des jets ne doit pas dépasser le 90-95% du débit de la pompe.

El caudal de los chorros no debe superar el 90-95% del caudal de la bomba.

#### ESEMPIO LETTURA TABELLA:

■ = AREA applicazione portate per serie WB esempio scelta ugello per pompa: WBL 1115 150bar - 11 l/min (calcolare il 93% del valore della portata) = 10,2

#### HOW TO READ THE CHART:

■ = Flows AREA for WB pumps ex. of nozzle selection for pumps: WBL 1115 150bar - 11 l/min (calculate 93% of the flow value) = 10,2

#### COMMENT CONSULTER LE TABLEAU:

■ = Champ de débits pour pompes série WB ex. de choix de buse pour la pompe: WBL 1115 150bar - 11 l/min (calculer le 93% de la valeur du débit) = 10,2

#### COMO LEER LA TABLA:

■ = ÁREA aplicación caudal para serie WB ejemplo elección boquilla para bomba: WBL 1115 150bar - 11 l/min (calcular el 93% del valor del caudal) = 10,2

# BERTOLINI<sup>®</sup> pumps

SOLUZIONI COMPLETE  
PER LA PULIZIA  
DELLE TUBAZIONI

COMPLETE SOLUTIONS  
FOR PIPE AND  
SEWER CLEANING

## INNOVAZIONE E TECNOLOGIA

### Scopri la nuova linea di ugelli per lo spurgo

Con l'obiettivo di soddisfare sempre di più i clienti del settore pulizia condotti di piccole e grandi portate, Idromeccanica Bertolini amplia la sua gamma di prodotti, inserendo nel mercato una linea innovativa di ugelli per lo spurgo.

## INNOVATION AND TECHNOLOGY

### Discover the new line of nozzles for pipe and sewer cleaning systems

With the aim of satisfying more and more the customers in the pipe and sewer cleaning sector (for small and large flows), Idromeccanica Bertolini expands its product range, introducing into the market an innovative line of nozzles for sewer cleaning.



Su richiesta è possibile fornire una documentazione completa in merito alle tipologie di prodotti disponibili e accessori di completamento.  
*On request we can provide complete documentation of the types of products available and complementary accessories.*



# UGELLI PULIZIA DELLE TUBAZIONI PIPE AND SEWER CLEANING NOZZLES



## UGELLI A TESTA TONDA

Adatti per pulizia generale ed avanzamento nelle curve di piccole tubazioni.

### ROUND HEAD NOZZLES

Suitable for general cleaning uses, for washing and for going forward bends and corners into pipe and ducts.

#### Applicazione:

- Lavaggi e pulizia di piccole tubazioni e scarichi domestici
- Rimozione di residui oleosi, sapone, detriti, calcare, grasso, ecc.

#### Applications:

- Cleaning of domestic sewer
- Removal of oily debris, limestone, soap, grease, etc.



## UGELLI ROTANTI

Caratterizzati da fori di spinta e da fori laterali di rotazione che consentono una pulizia delle condotte uniforme e completa a 360°. Disponibili con quattro teste intercambiabili da utilizzare a seconda del materiale che si desidera asportare.

### ROTATING NOZZLES

This nozzle is equipped with thrusting rear jets and central rotating jets which can uniformly and completely clean all pipes and drains walls. Rotating nozzles are available with 4 interchangeable heads according to the material you need to remove.

#### Applicazione:

- Pulizia condotte completamente otturate da sabbia, terra, calcare o da materiali più resistenti come cemento
- Idonei ad eliminare radici di piccole dimensioni

#### Applications:

- Cleaning pipes completely obstructed by sand, compact soil, limestone or mineral deposit, concrete, gravel stones
- Suitable for removing small roots growth



## UGELLI VIBRANTI

L'ugello vibrante è caratterizzato da un corpo centrale eccentrico che produce dirompenti vibrazioni atte a spaccare e frantumare ostruzioni sedimentate. Libera qualsiasi tubatura ostruita dal cemento sedimentato.

### VIBRATING NOZZLES

Vibrant nozzle is characterized by an eccentric central body that produces disrupting vibrations that crush sedimented obstructions.

#### Applicazione:

- Rimozione all'interno delle condotte di cemento, calcestruzzo e calcare sedimentato.

#### Applications:

- Suitable for removing compact limestone, gravel, soil and concrete



## UGELLI AD ELICA

Dotati frontalmente di elica cilindrica e conica, che hanno un'azione perforante che permette di tagliare e fresare il sedimento all'interno della condotta.

### PROPELLER NOZZLES

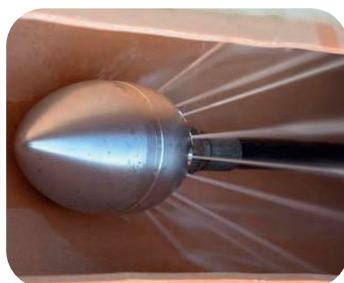
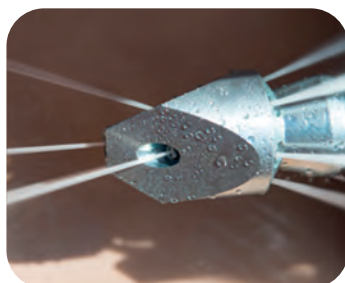
Equipped with cylindrical or conical cutting propeller that permit to cut and mill all deposits and debris.

#### Applicazione:

- Asportazione di calcare, terreno compatto
- Sabbia, schiuma, sapone, grasso
- Rimozione di radici, legno

#### Applications:

- Cleaning of limestone, soft blockage, compact soil
- Sand, foam, soap
- Removal of roots, wood



# UGELLI PULIZIA DELLE TUBAZIONI PIPE AND SEWER CLEANING NOZZLES

GETTI IN ACCIAIO INOX E CERAMICA PER IL COMPLETAMENTO DELLE VARIE TIPOLOGIE DI UGELLO  
STAINLESS STEEL AND CERAMIC JETS FOR THE COMPLETION OF THE VARIOUS TYPES OF NOZZLES



CALCOLO DIAMETRO GETTI: PRESSIONE > PORTATA > FORO Ø

HOLES DIAMETER CALCULATION: PRESSURE > L/MIN > HOLES Ø

Es. di calcolo: data una pompa con portata di 200 l/min e pressione di 150 bar, e un ugello a 6 getti posteriori, si determini il diametro dei fori, considerando una perdita di pressione del 10%

$P = 150 \text{ bar} - 10\% = 135 \text{ bar}$

Portata di 200 l/min ÷ 6 fori = 33,3 l/min per foro

Alla riga dei 135 bar, il valore più vicino a 33,3 l/min (34,2 l/min) riporta ad un valore per il diametro dei fori pari a 2,2 mm.

Calculation example: having a pump of 200 l/min at 150 bar, a 6 rear jets nozzle, it is possible to calculate holes diameter as follows, considering a 10% pressure loss:

$P = 150 \text{ bar} - 10\% \text{ (pressure loss)} = 135 \text{ bar}$

$200 \text{ l/min} \div 6 \text{ holes} = 33,3 \text{ l/min for each holes}$

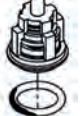
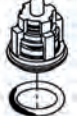
See below chart: 135 bar column corresponds to a value of 34,2 l/min (the nearest to 33,3 l/min), value refers to hole diameter, in this case the diameter of each hole is 2,20mm.

| PRESSIONE- PRESSURE<br>bar | FORO - HOLE Ø mm             |      |      |      |      |       |       |      |      |      |      |      |      |      |      |      |
|----------------------------|------------------------------|------|------|------|------|-------|-------|------|------|------|------|------|------|------|------|------|
|                            | 0,5                          | 0,6  | 0,7  | 0,8  | 1    | 1,2   | 1,4   | 1,6  | 1,8  | 2    | 2,2  | 2,4  | 2,6  | 2,8  | 3    | 3,2  |
|                            | PORTATA - FLOW RATE<br>l/min |      |      |      |      |       |       |      |      |      |      |      |      |      |      |      |
| 50                         | 1,08                         | 1,55 | 2,11 | 2,75 | 4,3  | 6,2   | 8,44  | 11   | 13,9 | 17,2 | 20,8 | 24,8 | 29,1 | 33,7 | 38,7 | 44,1 |
| 55                         | 1,13                         | 1,62 | 2,21 | 2,89 | 4,51 | 6,5   | 8,85  | 11,6 | 14,6 | 18,1 | 21,8 | 26   | 30,5 | 35,4 | 40,6 | 46,2 |
| 60                         | 1,18                         | 1,7  | 2,31 | 3,02 | 4,71 | 6,79  | 9,24  | 12,1 | 15,3 | 18,9 | 22,8 | 27,2 | 31,9 | 37   | 42,4 | 48,3 |
| 65                         | 1,23                         | 1,77 | 2,4  | 3,14 | 4,91 | 7,07  | 9,62  | 12,6 | 15,9 | 19,6 | 23,7 | 28,3 | 33,2 | 38,5 | 44,2 | 50,2 |
| 70                         | 1,27                         | 1,83 | 2,5  | 3,26 | 5,09 | 7,33  | 9,98  | 13   | 16,5 | 20,4 | 24,6 | 29,3 | 34,4 | 39,9 | 45,8 | 52,1 |
| 75                         | 1,32                         | 1,9  | 2,58 | 3,37 | 5,27 | 7,59  | 10,33 | 13,5 | 17,1 | 21,1 | 25,5 | 30,4 | 35,6 | 41,3 | 47,4 | 54   |
| 80                         | 1,36                         | 1,96 | 2,67 | 3,48 | 5,44 | 7,84  | 10,67 | 13,9 | 17,6 | 21,8 | 26,3 | 31,4 | 36,8 | 42,7 | 49   | 55,7 |
| 85                         | 1,4                          | 2,02 | 2,75 | 3,59 | 5,61 | 8,08  | 11    | 14,4 | 18,2 | 22,4 | 27,2 | 32,3 | 37,9 | 44   | 50,5 | 57,5 |
| 90                         | 1,44                         | 2,08 | 2,83 | 3,7  | 5,77 | 8,31  | 11,32 | 14,8 | 18,7 | 23,1 | 27,9 | 33,3 | 39   | 45,3 | 52   | 59,1 |
| 95                         | 1,48                         | 2,14 | 2,91 | 3,8  | 5,93 | 8,54  | 11,63 | 15,2 | 19,2 | 23,7 | 28,7 | 34,2 | 40,1 | 46,5 | 53,4 | 60,7 |
| 100                        | 1,52                         | 2,19 | 2,98 | 3,9  | 6,09 | 8,76  | 11,93 | 15,6 | 19,7 | 24,3 | 29,5 | 35,1 | 41,1 | 47,7 | 54,8 | 62,3 |
| 105                        | 1,56                         | 2,25 | 3,06 | 3,99 | 6,24 | 8,98  | 12,22 | 16   | 20,2 | 24,9 | 30,2 | 35,9 | 42,2 | 48,9 | 56,1 | 63,9 |
| 110                        | 1,6                          | 2,3  | 3,13 | 4,09 | 6,38 | 9,19  | 12,51 | 16,3 | 20,7 | 25,5 | 30,9 | 36,8 | 43,2 | 50   | 57,5 | 65,4 |
| 115                        | 1,63                         | 2,35 | 3,2  | 4,18 | 6,53 | 9,4   | 12,79 | 16,7 | 21,1 | 26,1 | 31,6 | 37,6 | 44,1 | 51,2 | 58,7 | 66,8 |
| 120                        | 1,67                         | 2,4  | 3,27 | 4,27 | 6,67 | 9,6   | 13,07 | 17,1 | 21,6 | 26,7 | 32,3 | 38,4 | 45,1 | 52,3 | 60   | 68,3 |
| 125                        | 1,7                          | 2,45 | 3,33 | 4,36 | 6,8  | 9,8   | 13,34 | 17,4 | 22   | 27,2 | 32,9 | 39,2 | 46   | 53,3 | 61,2 | 69,7 |
| 130                        | 1,73                         | 2,5  | 3,4  | 4,44 | 6,94 | 9,99  | 13,6  | 17,8 | 22,5 | 27,8 | 33,6 | 40   | 46,9 | 54,4 | 62,5 | 71,1 |
| 135                        | 1,77                         | 2,55 | 3,47 | 4,53 | 7,07 | 10,18 | 13,86 | 18,1 | 22,9 | 28,3 | 34,2 | 40,7 | 47,8 | 55,4 | 63,6 | 72,4 |
| 140                        | 1,8                          | 2,59 | 3,53 | 4,61 | 7,2  | 10,37 | 14,11 | 18,4 | 23,3 | 28,8 | 34,9 | 41,5 | 48,7 | 56,5 | 64,8 | 73,7 |
| 145                        | 1,83                         | 2,64 | 3,59 | 4,69 | 7,33 | 10,55 | 14,36 | 18,8 | 23,7 | 29,3 | 35,5 | 42,2 | 49,5 | 57,5 | 66   | 75   |
| 150                        | 1,86                         | 2,68 | 3,65 | 4,77 | 7,45 | 10,73 | 14,61 | 19,1 | 24,2 | 29,8 | 36,1 | 42,9 | 50,4 | 58,4 | 67,1 | 76,3 |
| 155                        | 1,89                         | 2,73 | 3,71 | 4,85 | 7,58 | 10,91 | 14,85 | 19,4 | 24,6 | 30,3 | 36,7 | 43,6 | 51,2 | 59,4 | 68,2 | 77,6 |
| 160                        | 1,92                         | 2,77 | 3,77 | 4,93 | 7,7  | 11,09 | 15,09 | 19,7 | 24,9 | 30,8 | 37,3 | 44,3 | 52   | 60,4 | 69,3 | 78,8 |
| 165                        | 1,95                         | 2,81 | 3,83 | 5    | 7,82 | 11,26 | 15,32 | 20   | 25,3 | 31,3 | 37,8 | 45   | 52,9 | 61,3 | 70,4 | 80,1 |
| 170                        | 1,98                         | 2,86 | 3,89 | 5,08 | 7,94 | 11,43 | 15,55 | 20,3 | 25,7 | 31,7 | 38,4 | 45,7 | 53,6 | 62,2 | 71,4 | 81,3 |
| 175                        | 2,01                         | 2,9  | 3,95 | 5,15 | 8,05 | 11,59 | 15,78 | 20,6 | 26,1 | 32,2 | 39   | 46,4 | 54,4 | 63,1 | 72,5 | 82,4 |
| 180                        | 2,04                         | 2,94 | 4    | 5,23 | 8,17 | 11,76 | 16    | 20,9 | 26,5 | 32,7 | 39,5 | 47   | 55,2 | 64   | 73,5 | 83,6 |
| 185                        | 2,07                         | 2,98 | 4,06 | 5,3  | 8,28 | 11,92 | 16,23 | 21,2 | 26,8 | 33,1 | 40,1 | 47,7 | 56   | 64,9 | 74,5 | 84,8 |
| 190                        | 2,1                          | 3,02 | 4,11 | 5,37 | 8,39 | 12,08 | 16,44 | 21,5 | 27,2 | 33,6 | 40,6 | 48,3 | 56,7 | 65,8 | 75,5 | 85,9 |
| 195                        | 2,12                         | 3,06 | 4,16 | 5,44 | 8,5  | 12,24 | 16,66 | 21,8 | 27,5 | 34   | 41,1 | 49   | 57,5 | 66,6 | 76,5 | 87   |
| 200                        | 2,15                         | 3,1  | 4,22 | 5,51 | 8,61 | 12,39 | 16,87 | 22   | 27,9 | 34,4 | 41,7 | 49,6 | 58,2 | 67,5 | 77,5 | 88,1 |

Su richiesta è possibile fornire una documentazione completa in merito alle tipologie di prodotti disponibili e accessori di completamento.  
On request we can provide complete documentation of the types of products available and complementary accessories.

# KIT RICAMBI - SPARE PARTS KIT

## KIT DE PIÈCES DE RECHANGE - KIT REPUESTOS

| KIT RICAMBI                                                         |                 |                                                                                   |                                                                                   |                                                                                   | KIT RICAMBI          |                      |                                                                                     |                                                                                     |                                                                                     |
|---------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Modello                                                             | D.ia<br>pistone | Kit guarnizioni                                                                   | Kit valvole                                                                       | Kit an. radiali                                                                   | Modello              | D.ia<br>pistone      | Kit guarnizioni                                                                     | Kit valvole                                                                         | Kit an. radiali                                                                     |
|                                                                     |                 |  |  |  |                      |                      |  |  |  |
| WJC-U                                                               | 15              | kit 288<br>029835973                                                              | kit 286<br>029833973                                                              | kit 64<br>049836973                                                               | RA                   | 20                   | kit 277<br>089861973                                                                | kit 209<br>089838973                                                                | kit 146<br>089816973                                                                |
| 3P                                                                  | 13              | kit 299<br>029839973                                                              |                                                                                   |                                                                                   | RB RBL               | 25                   | kit 275<br>089859973                                                                | kit 149<br>089819973                                                                |                                                                                     |
| WBL WBS<br>WBC WBH<br>WBX-L WHY                                     | 18              | kit 12<br>049813973                                                               | kit 141<br>019826973                                                              |                                                                                   | RX 400               | 22                   | kit 337<br>189813973                                                                | kit 363<br>189817973                                                                |                                                                                     |
| WBL-F WBS<br>WBS-F<br>WBC-F<br>WBH-F WBG<br>WBG-W<br>WBXL-F<br>WBXG | 15              | kit 73<br>049843973                                                               |                                                                                   |                                                                                   | RX 500               | 20                   | kit 333<br>189809973                                                                | kit 331<br>189807973                                                                |                                                                                     |
| WML WMS<br>WMC WMH                                                  | 18              | kit 12<br>049813973                                                               | kit 63<br>049835973                                                               |                                                                                   | RD                   | 30                   | kit 296<br>089870973                                                                | kit 262<br>089853973                                                                |                                                                                     |
| WML-F<br>WMS-F<br>WMC-F<br>WMH-F<br>WMG WMG-W                       | 15              | kit 73<br>049843973                                                               | kit 124<br>049890973                                                              |                                                                                   | TAM                  | 18                   | kit 173<br>079838973                                                                | kit 123<br>069867973                                                                | kit 65<br>049837973                                                                 |
| TML TMH                                                             | 18              | kit 76<br>079807973                                                               | kit 123<br>069867973                                                              | kit 65<br>049837973                                                               | KA                   | 25                   | kit 161<br>069892973                                                                | kit 40<br>069817973                                                                 | kit 37<br>069814973                                                                 |
| TML THY                                                             | 20              | kit 177<br>079842973                                                              |                                                                                   |                                                                                   | KA 4815              | 25                   |                                                                                     | kit 149<br>089819973                                                                |                                                                                     |
| TML                                                                 | 22              | kit 307<br>079883973                                                              |                                                                                   |                                                                                   | CA CK 3003<br>CPQ    | 30                   | kit 47<br>739837973                                                                 | kit 44<br>739835973                                                                 | kit 58<br>739842973                                                                 |
| TML-HP                                                              | 18              | kit 179<br>079844973                                                              |                                                                                   |                                                                                   | CK 3003              | 40                   | kit 281<br>739925973                                                                |                                                                                     |                                                                                     |
| TML-F                                                               | 15              | kit 69<br>079804973                                                               |                                                                                   |                                                                                   | CPQ                  | 36                   | kit 279<br>739923973                                                                |                                                                                     |                                                                                     |
| TMH-F TMG                                                           | 15              | kit 74<br>079806973                                                               |                                                                                   |                                                                                   |                      | 40                   | kit 281<br>739925973                                                                | kit 232<br>745003973                                                                |                                                                                     |
| TML-HW                                                              | 18              | kit 173<br>079838973                                                              | kit 249<br>069956973                                                              | CR                                                                                | 30                   | kit 346<br>539831973 | kit 345<br>539830973                                                                | kit 111<br>539817973                                                                |                                                                                     |
|                                                                     | 20              | kit 175<br>079840973                                                              |                                                                                   |                                                                                   | 32                   | kit 347<br>539832973 |                                                                                     |                                                                                     |                                                                                     |
| TTL KTL                                                             | 18              | kit 309<br>069962973                                                              | kit 123<br>069867973                                                              | kit 37<br>069814973                                                               | CK 3006              | 30                   | kit 49<br>769802973                                                                 | kit 45<br>769800973                                                                 | kit 59<br>769812973                                                                 |
| TTL TTK                                                             | 20              | kit 311<br>069964973                                                              |                                                                                   |                                                                                   |                      | 36                   | kit 325<br>769886973                                                                |                                                                                     |                                                                                     |
| TTK                                                                 | 22              | kit 313<br>069966973                                                              | kit 148<br>089818973                                                              |                                                                                   |                      | 40                   | kit 327<br>769888973                                                                | kit 330<br>769891973                                                                |                                                                                     |
| KTL 500                                                             | 18              | kit 309<br>069962973                                                              | kit 366<br>069820973                                                              | CX                                                                                | 30                   | kit 230<br>745001973 | kit 229<br>745000973                                                                | kit 235<br>745006973                                                                |                                                                                     |
| KKL                                                                 | 22              | kit 313<br>069966973                                                              | kit 40<br>069817973                                                               |                                                                                   | 40                   | kit 233<br>745004973 | kit 232<br>745003973                                                                |                                                                                     |                                                                                     |
|                                                                     | 25              | kit 315<br>069968973                                                              |                                                                                   | CAX                                                                               | 16                   | kit 266<br>745013973 | kit 263<br>745010973                                                                |                                                                                     |                                                                                     |
| RAL                                                                 | 18              | kit 269<br>89831973                                                               | kit 123<br>069867973                                                              |                                                                                   | kit 146<br>089816973 | 18                   |                                                                                     |                                                                                     | kit 264<br>745011973                                                                |
|                                                                     | 20              | kit 271<br>089855973                                                              |                                                                                   | CHX                                                                               |                      | 14                   | kit 341<br>745017973                                                                |                                                                                     | kit 339<br>745015973                                                                |
| RAL RBS                                                             | 22              | kit 273<br>089857973                                                              | kit 148<br>089818973                                                              | 15                                                                                | kit 358<br>745020973 |                      |                                                                                     |                                                                                     |                                                                                     |



# CONDIZIONI TECNICHE DI INSTALLAZIONE

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#### RISPARMIO DI ENERGIA / CORRETTO UTILIZZO DELLA POMPA

È abbastanza frequente che la portata della pompa sia sovradimensionata rispetto alle effettive necessità dell'utilizzo. Per un corretto funzionamento del sistema, l'acqua riciclata attraverso la valvola di regolazione non deve superare del 10-15% la portata della pompa. Altrimenti, oltre ad un inutile spreco di energia, si genera un surriscaldamento dell'acqua nella vasca di alimentazione che contribuisce ad aumentare i rischi di cavitazione. In più tutti i componenti del circuito, ed in particolare le valvole di regolazione, vengono sottoposti ad uno stress continuo ed eccessivo. Si raccomanda pertanto di adeguare la portata della pompa alle effettive necessità dell'impianto riducendo il regime di rotazione della pompa stessa.

#### FAQ

**Domanda:** Di quanto si deve ridurre il numero di giri della pompa per avere una portata più bassa?

**Risposta:**  $Nr. \text{ di giri richiesto} = \text{Portata desiderata} \times \frac{N. \text{ max di giri consentiti}}{\text{Portata max consentita}}$

**Domanda:** Che diametro deve avere la puleggia del motore per ottenere questo numero di giri?

**Risposta:**  $\text{Diam. est. puleggia motore} = \text{Diam. Est. Puleggia pompa} \times \frac{Nr. \text{ giri della pompa}}{Nr. \text{ giri del motore}}$

**Domanda:** E se non è possibile sostituire la puleggia del motore?

**Risposta:**  $\text{Diam. Est. Puleggia pompa} = \text{Diam. est. puleggia motore} \times \frac{Nr. \text{ giri del motore}}{Nr. \text{ giri della pompa}}$

**Domanda:** Se un motore presenta un regime più basso rispetto al max. regime indicato dalla targhetta, quale è la portata massima che è possibile ottenere?

**Risposta:**  $\text{Portata massima ottenibile} = N. \text{ di giri del motor} \times \frac{\text{Portata massima indicata dalla targhetta}}{Nr. \text{ max di giri indicato dalla targhetta}}$

**Domanda:** Qual è approssimativamente la potenza necessaria per ottenere le prestazioni max. consentite?

**Risposta:**  $\text{Potenza richiesta (HP mot. elettrici)} = \frac{\text{Portata max (l/min)} \times \text{Pressione max (bar)}}{385}$

Potenza richiesta (HP motori scoppio) = HP motori elettrici x 1,3

Il nostro servizio tecnico è a Vostra disposizione per qualsiasi ulteriore informazione.



#### ENERGY SAVING / PUMP CORRECT USE

It is quite normal that the pump flow is oversized in comparison with the real use needs. For a correct running of the system, the water circulated through the regulating valve does not have to exceed 10-15% of the pump flow. Otherwise, besides the useless energy waste, a water overheating will be generated in the supply tank, increasing the cavitation risks. Moreover, all the circuit parts, and in particular the regulating valves, are subject to a continuous and extreme stress. It is therefore recommended to adapt the pump capacity to the actual system needs, reducing the pump R.P.M.

#### FAQ

**Question:** How much you must reduce the pump R.P.M. in order to get a lower capacity?

**Answer:**  $\text{Required R.P.M.} = \text{Expected capacity} \times \frac{\text{Max R.P.M. allowed}}{\text{Max allowed capacity}}$

**Question:** Which diameter the engine/motor pulley must have to achieve these R.P.M.?

**Answer:**  $\text{Ext. } \varnothing \text{ of the engine/motor pulley} = \text{Ext. } \varnothing \text{ of the pumps pulley} \times \frac{\text{R.P.M. pump}}{\text{R.P.M. motor/engine}}$

**Question:** What's happening if it is not possible to replace the engine/motor pulley?

**Answer:**  $\text{Ext. } \varnothing \text{ of the pump pulley} = \text{Ext. } \varnothing \text{ engine/motor pulley} \times \frac{\text{R.P.M. motor/engine}}{\text{R.P.M. pump}}$

**Question:** If the engine/motor is running at lower R.P.M. than the max. R.P.M. indicated in the label, which is the maximum capacity to achieve?

**Answer:**  $\text{Attainable max. capacity} = \text{Engine /Motor R.P.M.} \times \frac{\text{Max. capacity indicated in the label}}{\text{Max. R.P.M. indicated in the label}}$

**Question:** What is the approximate power required to achieve the max. performances allowed?

**Answer:**  $\text{Required power (electric motors HP)} = \frac{\text{Max capacity (l/min)} \times \text{Max pressure (bar)}}{385}$

Required power (gas engines HP) = electric motors HP x 1.3

Our customer service is at Your disposal for any further information.



#### ECONOMIE D'ENERGIE / EMPLOI CORRECT DE LA POMPE

Souvent le débit de la pompe est surdimensionné par rapport aux besoins effectifs d'utilisation. Notre expérience nous indique que, pour l'emploi correct du système, l'eau recyclée par le régulateur de pression ne doit pas dépasser le 10-15% du débit de la pompe. Autrement, à part le gaspillage d'énergie, se produit une surchauffe d'eau dans la cuve d'alimentation qui augmente les risques de cavitation. En plus les composants du circuit, et surtout les régulateurs de pression, subissent des contraintes continues et excessives. Donc on recommande de rajuster le débit de la pompe aux besoins effectifs du système, en réduisant le régime de rotation de la pompe.

#### FAQ

**Demande:** Combien faut-il réduire le n.de tours de la pompe pour obtenir un débit plus faible?

**Réponse:**  $N. \text{ de tours demandé} = \text{débit souhaité} \times \frac{N. \text{ max de tours indiqués sur la plaque}}{\text{Débit max. indiqué sur la plaque}}$

**Demande:** Quel est le diamètre de la poulie moteur pour atteindre ce régime de tours?

**Réponse:**  $\varnothing \text{ ext. poulie moteur} = \varnothing \text{ ext. poulie pompe} \times \frac{N. \text{ tours de la pompe}}{N. \text{ tours du moteur}}$

**Demande:** Que se passe-t-il s'il n'est pas possible de remplacer la poulie moteur?

**Réponse:**  $\varnothing \text{ ext. Poulie pompe} = \varnothing \text{ ext. poulie moteur} \times \frac{N. \text{ tours du moteur}}{N. \text{ tours de la pompe}}$

**Demande:** J'ai un moteur qui marche à un régime réduit par rapport au régime de croisière: quel est le débit max. qu'on arrive à atteindre?

**Réponse:**  $\text{Débit max. qu'on peut obtenir} = N. \text{ tours moteur} \times \frac{\text{Débit max. indiqué sur la plaque}}{N. \text{ max de tours indiqués sur la plaque}}$

**Demande:** Quelle est approximativement la puissance nécessaire pour atteindre les performances optimales indiquées sur la plaque?

**Réponse:**  $\text{Puissance demandée (HP mot. électriques)} = \frac{\text{Débit max. (l/min)} \times \text{pression max. (bar)}}{385}$

Puissance demandée (HP moteurs à essence) = HP moteurs électriques x 1,3

Notre Bureau Technique est toujours à Votre disposition pour tout renseignement complémentaire.



#### AHORRO DE ENERGIA / CORRECTA UTILIZACIÓN DE LA BOMBA

Frecuentemente el caudal de la bomba es de un tamaño superior respecto a las necesidades reales de su utilización. Para un correcto funcionamiento del sistema, el agua reciclada a través de la válvula de regulación no debe superar el 10-15% del caudal de la bomba. De otro modo, además de un inútil desperdicio de energía, se genera un recalentamiento del agua en el tanque de alimentación que contribuye a aumentar los riesgos de cavitación. Además todos los componentes del circuito, y sobre todo las válvulas de regulación, son expuestos a un estrés continuo y excesivo. Se recomienda por lo tanto adecuar el caudal de la bomba a las efectivas necesidades de la instalación reduciendo el régimen de rotación de la bomba.

#### FAQ

**Pregunta:** ¿Cuánto se debe reducir el número de revoluciones de la bomba para obtener un caudal más bajo?

**Respuesta:**  $N^\circ \text{ de rev. necesario} = \text{Caudal deseado} \times \frac{N^\circ \text{ máx. rev. permitidas}}{\text{Caudal máx. permitido}}$

**Pregunta:** ¿Qué diámetro debe tener la polea del motor para obtener este número de revoluciones?

**Respuesta:**  $\text{Diám. est. polea motor} = \text{Diám. est. polea bomba} \times \frac{N^\circ \text{ rev. de la bomba}}{N^\circ \text{ rev. del motor}}$

**Pregunta:** ¿Y si no es posible sustituir la polea del motor?

**Respuesta:**  $\text{Diám. ext. polea bomba} = \text{Diám. ext. polea motor} \times \frac{N^\circ \text{ rev. del motor}}{N^\circ \text{ rev. de la bomba}}$

**Pregunta:** Si un motor presenta un régimen más bajo respecto al régimen máximo indicado en la etiqueta, ¿Cuál es el caudal máximo que se puede obtener?

**Respuesta:**  $\text{Caudal máximo obtenible} = N^\circ \text{ rev. del motor} \times \frac{\text{Caudal máx. indicada en la placa}}{N^\circ \text{ máx. rev. indicado en la placa}}$

**Pregunta:** ¿Cuál es aproximadamente el caudal necesario para obtener las prestaciones máximas permitidas?

**Respuesta:**  $\text{Caudal necesario (HP motor eléctrico)} = \frac{\text{Caudal máx. (L/min)} \times \text{Presión máx. (bar)}}{385}$

Caudal necesario (HP motor térmico) = HP motores eléctricos x 1,3

Nuestro Servicio Técnico está a Vuestra disposición para cualquier información ulterior.

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#### PREVENIRE LA CAVITAZIONE

Il valore minimo della pressione di alimentazione di una pompa è limitato dall'insorgere della cavitazione che consiste nella formazione di bolle di vapore quando la pressione locale è inferiore alla pressione di vapore del liquido. Le bolle fluiscono insieme al liquido e quando arrivano in una zona di maggior pressione esplodono generando sollecitazioni anomale e assai dannose su tutti i componenti della pompa.

Per prevenire la cavitazione è necessario che il dislivello minimo **H<sub>z</sub>** fra il livello dell'acqua e la pompa rispetti la seguente condizione:



#### TO PREVENT CAVITATION

The minimum inlet pressure value of the pump is limited by the cavitation phenomenon. Cavitation is the forming of vapour bubbles when the local pressure is below the vapour pressure of the liquid. Bubbles flow together with the liquid and when they reach a higher pressure area, they collide generating abnormal stresses that are extremely dangerous to the pump components.

To prevent cavitation the minimum difference in height **H<sub>z</sub>** between the water level and the pump must respect the following condition:



#### PREVENIR LA CAVITATION

La valeur minimale de la pression à l'entrée d'une pompe est limitée par le phénomène de la cavitation, qui consiste à la formation de bulles de vapeur au moment où la pression locale est au-dessous de la pression de vapeur du liquide. Les bulles s'écoulent avec le liquide et dès qu'elles touchent une zone de pression plus élevée, implosent. Par suite se produisent des contraintes anormales et très dangereuses pour les composants de la pompe.

Afin d'éviter la cavitation il faut que la dénivellation min. **H<sub>z</sub>** entre le niveau d'eau et la pompe respecte toujours la condition suivante:



#### PREVENIR LA CAVITACIÓN

El valor mínimo de la presión de alimentación de una bomba está limitado por el problema de la cavitación que es la formación de burbujas de vapor cuando la presión local es inferior a la presión de vapor del líquido. Las burbujas fluyen con el líquido y cuando llegan a una zona de mayor presión implosionan creando esfuerzos anómalos y muy perjudiciales en todos los componentes de la bomba.

Para prevenir la cavitación es necesario que el desnivel mínimo **H<sub>z</sub>** entre el nivel del agua y la bomba respete la condición siguiente:

$$H_z > (NPSH_r + C) + H_1 + H_2 - (H_{atm} - H_3) \text{ (m \& °C) or (ft \& °F)}$$

| NPSH <sub>r</sub>                                   | BERTOLINI PUMPS NPSH <sub>r</sub> |                   |           |
|-----------------------------------------------------|-----------------------------------|-------------------|-----------|
|                                                     | RPM                               | NPSH <sub>r</sub> |           |
| Altezza positiva netta di aspirazione richiesta (m) | 1000                              | 6.5 (m)           | 21.3 (ft) |
| Net positive suction head required (ft)             | 1450                              | 6.8 (m)           | 22.3 (ft) |
| Hauteur positive nette d'aspiration demandée (m)    | 1725                              | 7.0 (m)           | 23 (ft)   |
| Altura positiva neta de aspiración necesaria (m)    | 2800                              | 15 (m)            | 49 (ft)   |
|                                                     | 3450                              | 17 (m)            | 55.8 (ft) |

|                        |                                                                                                                                                                                                                                                                                                                                                                                              |                                                                       |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>H<sub>z</sub></b>   | Dislivello minimo (positivo o negativo) fra la pompa ed il livello dell'acqua nel serbatoio (m) Minimum difference in height (positive or negative) between pump and water level in the tank (ft) Dénivelée min. (positive ou negative) entre la pompe et le niveau de l'eau dans le réservoir (m) Desnivel mínimo (positivo o negativo) entre la bomba y el nivel del agua en el tanque (m) |                                                                       |
| <b>C</b>               | = 0.5m<br>= 1.65ft<br>= 0.5m<br>= 0.5m                                                                                                                                                                                                                                                                                                                                                       |                                                                       |
| <b>H<sub>1</sub></b>   | Perdite di carico nelle tubazioni e nei raccordi (m)<br>Suction loss (ft) in pipes and fittings<br>Pertes de charge dans les tubulures et dans les raccords (m)<br>Pérdidas de carga en los tubos y en los racores (m)                                                                                                                                                                       | (tab. 2 e 3)<br>(chart 2 and 3)<br>(tableaux 2 e 3)<br>(tablas 2 y 3) |
| <b>H<sub>2</sub></b>   | Perdita di carico dipendente dalla temperatura dell'acqua (m)<br>Suction loss (ft) depending on water temperature<br>Pertes de charge en fonction de la température de l'eau (m)<br>Pérdidas de carga por la temperatura del agua (m)                                                                                                                                                        | (tab. 4)<br>(chart 4)<br>(tableau 4)<br>(tabla 4)                     |
| <b>H<sub>atm</sub></b> | Pressione barometrica sul livello del mare = 10.33 m<br>Atmospheric pressure at sea level = 33.9 feet<br>Pression atmosphérique sur le niveau de la mer = 10.33 m<br>Presión atmosférica sobre el nivel del mar = 10.33 m                                                                                                                                                                    |                                                                       |
| <b>H<sub>3</sub></b>   | Perdita di carico (m) dovuta all'altezza sul livello del mare<br>Suction loss (ft) depending on elevation above sea level<br>Perte de charge en fonction du niveau au-dessus de la mer<br>Pérdida de carga (m) debida a la altura sobre el nivel del mar                                                                                                                                     | (tab.5)<br>(chart 5)<br>(tableau 5)<br>(tabla 5)                      |

Per calcolare le perdite nella tubazione di alimentazione occorre aggiungere, alla effettiva lunghezza dei tubi, la lunghezza equivalente dei vari raccordi come da tab. 2.

To calculate losses in the inlet plumbing you should add to the actual pipes length the equivalent length of the different pipe fittings, as shown at chart. 2.

Pour calculer les pertes de la tubulure à l'entrée il faut ajouter, à la longueur réelle des tuyaux, la longueur correspondante des raccords différents, (voir tableau 2).

Para calcular las pérdidas en el tubo de alimentación es necesario añadir, a la efectiva longitud de los tubos, la longitud equivalente de las diferentes juntas, como en la tabla 2.

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Tabella - Chart - Tableau - Tabla 2

Lunghezza equivalente dei raccordi, per varie dimensioni, in m di tubo acciaio.
Equivalent length of pipe fittings, of different sizes, in feet of steel pipe.
Longueur correspondante des raccords, de dimensions différentes, en mt de tuyau en acier.
Longitud equivalente de las juntas, por varias dimensiones, en mt de tubo de acero.

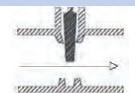
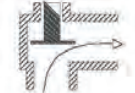
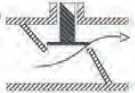
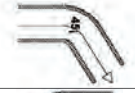
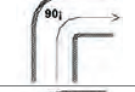
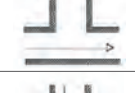
|                                                                                     |    | 1/2"  | 3/4"  | 1"    | 1" 1/4 | 1" 1/2 |
|-------------------------------------------------------------------------------------|----|-------|-------|-------|--------|--------|
|    | ft | 0,41  | 0,54  | 0,69  | 0,90   | 1,05   |
|                                                                                     | m  | 0,12  | 0,16  | 0,21  | 0,27   | 0,32   |
|    | ft | 18,50 | 24,50 | 31,20 | 41,00  | 48,00  |
|                                                                                     | m  | 5,64  | 7,47  | 9,51  | 12,50  | 14,63  |
|    | ft | 9,30  | 12,30 | 15,60 | 20,50  | 24,00  |
|                                                                                     | m  | 2,83  | 3,75  | 4,75  | 6,25   | 7,32   |
|    | ft | 0,78  | 1,03  | 1,31  | 1,73   | 2,15   |
|                                                                                     | m  | 0,24  | 0,31  | 0,40  | 0,53   | 0,66   |
|    | ft | 1,67  | 2,21  | 2,81  | 3,70   | 4,31   |
|                                                                                     | m  | 0,51  | 0,67  | 0,86  | 1,13   | 1,31   |
|   | ft | 3,71  | 4,90  | 6,25  | 8,22   | 9,59   |
|                                                                                     | m  | 1,13  | 1,49  | 1,91  | 2,51   | 2,92   |
|  | ft | 0,93  | 1,23  | 1,56  | 2,06   | 2,40   |
|                                                                                     | m  | 0,28  | 0,37  | 0,48  | 0,63   | 0,73   |
|  | ft | 3,33  | 4,41  | 5,62  | 7,40   | 3,08   |
|                                                                                     | m  | 1,01  | 1,34  | 1,71  | 2,26   | 0,94   |

Tabella - Chart - Tableau - Tabla 3

Perdite x 10 m di tubo acciaio per varie dimensioni e portate.
Loss calculated for 10 ft of steel pipe, of different sizes and flow rates.
Pertes par 10 mt de tuyau en acier, de dimensions et débits différents.
Pérdidas por 10 mt de tubo de acero, por diferentes dimensiones y caudales.

| GPM  | l/min | 1/2" | 3/4" | 1"   | 1" 1/4 | 1" 1/2 |
|------|-------|------|------|------|--------|--------|
| 1    | 3,785 | 0,2  |      |      |        |        |
| 2    | 7,6   | 0,50 |      |      |        |        |
| 2,1  | 8     | 0,60 |      |      |        |        |
| 3    | 11,4  | 1,10 | 0,3  |      |        |        |
| 3,2  | 12    | 1,40 | 0,35 |      |        |        |
| 3,5  | 13,2  | 1,50 | 0,4  |      |        |        |
| 4    | (15)  | 1,70 | 0,45 |      |        |        |
| 4,8  | 18    | 2,50 | 0,6  |      |        |        |
| 5,5  | (21)  | 3,4  | 0,7  | 0,1  |        |        |
| 6,3  | 24    | 4,3  | 1,1  | 0,2  |        |        |
| 8    | (30)  | 6,4  | 1,5  | 0,4  |        |        |
| 9,2  | 35    | 8,5  | 1,9  | 0,6  |        |        |
| 10,6 | 40    | 11,1 | 2,6  | 0,8  | 0,1    |        |
| 13,2 | 50    |      | 3,7  | 1,2  | 0,3    |        |
| 16   | (60)  |      | 5,5  | 1,5  | 0,4    | 0,1    |
| 18,5 | (70)  |      | 7,5  | 1,8  | 0,5    | 0,2    |
| 21   | (80)  |      | 9,5  | 2,2  | 0,6    | 0,3    |
| 26,5 | (100) |      |      | 4,5  | 1,2    | 0,6    |
| 31,5 | (120) |      |      | 8,5  | 2,2    | 1,1    |
| 37   | (140) |      |      | 12,8 | 3,5    | 1,5    |
| 40   | (150) |      |      |      | 3,8    | 1,8    |

Tabella - Chart - Tableau - Tabla 4

Perdita di aspirazione con la temperatura dell'acqua.
Suction loss depending on the water temperature.
Perte en aspiration en fonction de la température de l'eau.
Pérdida en aspiración por la temperatura del agua.

| °C | °F  | m    | ft   |
|----|-----|------|------|
| 10 | 50  | 0,08 | 0,26 |
| 15 | 59  | 0,12 | 0,39 |
| 20 | 68  | 0,20 | 0,66 |
| 25 | 77  | 0,28 | 0,92 |
| 30 | 86  | 0,40 | 1,31 |
| 35 | 95  | 0,52 | 1,71 |
| 40 | 104 | 0,70 | 2,30 |
| 45 | 113 | 0,92 | 3,02 |
| 50 | 122 | 1,20 | 3,94 |
| 55 | 131 | 1,80 | 5,91 |
| 60 | 140 | 2,00 | 6,56 |
| 65 | 149 | 2,60 | 8,53 |
|    |     |      | 10,8 |
| 70 | 158 | 3,30 | 3    |
|    |     |      | 15,0 |
| 75 | 167 | 4,60 | 9    |
|    |     |      | 16,4 |
| 80 | 176 | 5,00 | 0    |
|    |     |      | 19,6 |
| 85 | 185 | 6,00 | 9    |
|    |     |      | 24,2 |
| 90 | 194 | 7,40 | 8    |
|    |     |      | 30,5 |
| 95 | 203 | 9,30 | 1    |

Tabella - Chart - Tableau - Tabla 5

Perdita di aspirazione con l'altezza s.l.m.
Suction loss depending on the elevation above sea level.
Perte en aspiration en fonction du niveau au-dessus de la mer.
Pérdida en aspiración por altura sobre el nivel del mar.

| Altezza - Elevation<br>Haut - Altura |      | Perdita - Loss<br>Perte - Pérdida |       |
|--------------------------------------|------|-----------------------------------|-------|
| m                                    | ft   | m                                 | ft    |
| 500                                  | 1640 | 0,55                              | 1,80  |
| 1000                                 | 3281 | 1,1                               | 3,61  |
| 1500                                 | 4921 | 1,65                              | 5,41  |
| 2000                                 | 6562 | 2,2                               | 7,22  |
| 2500                                 | 8202 | 2,75                              | 9,02  |
| 3000                                 | 9843 | 3,3                               | 10,83 |



# CONDIZIONI TECNICHE DI INSTALLAZIONE INFORMATION ON TECHNICAL INSTALLATION CONDITIONS TECHNIQUES D'INSTALLATION CONDICIONES TÉCNICAS DE INSTALACIÓN



Esempio di calcolo per una pompa di portata 70l/min a 1450 rpm installata a 500m sul livello del mare.



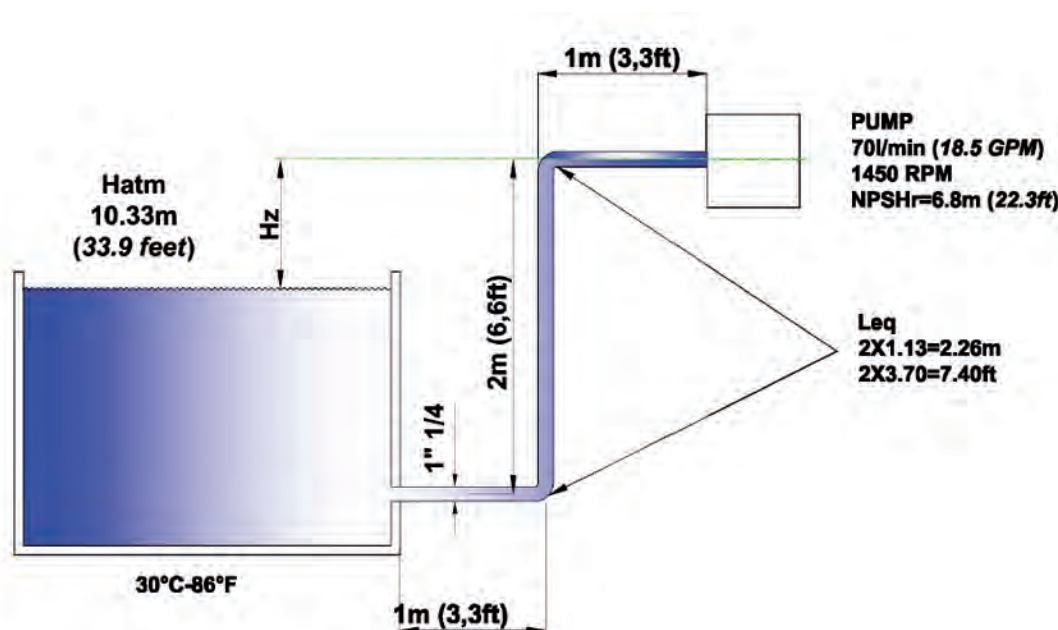
Example of calculation for pump 70l/min (18.5GPM) at 1450 rpm installed at 500m above sea level.



Exemple de calcul pour une pompe de débit 70l/min à 1450 rpm installée à 500m au-dessus du niveau de la mer.



Ejemplo de cálculo para una bomba de caudal 70l/min a 1450 rpm instalada a 500m sobre el nivel del mar.



La pompa può aspirare da un'altezza di 1.77 m. Se Hz fosse positivo la pompa dovrebbe essere alimentata sotto battente.

Pump is able to suck from 5.96 ft height. If Hz value is positive, pump should be under pressure feed.

La pompe est en mesure d'aspirer de 1.77 m. de haut. Si Hz était positif, la pompe devrait être alimentée en pression.

La bomba puede aspirar de una altura de 1.77 m. Si Hz fuese positivo, la bomba debería ser alimentada en presión.

Lunghezza dei tubi (disegno) 1+1+2 = 4m

Longueur tuyaux (croquis) 1+1+2 = 4m

Pipes length (diagram) 3.3+6.6+3.3 = 13.2 ft

Longitud tubos (esquema) 1+1+2 = 4m

Lungh. Eq. raccordi 2X1,13=2.26m

Equiv. length of fittings 2X3,70=7.40ft

Longueur correspondante raccords 2X1,13=2.26m

Longitud equiv. juntas 2X1,13=2.26m

Lungh. tot. tubi 4+2.26=6.26m

Total pipes length 13.2+7.40=20.60ft

Longueur totale tuyaux 4+2.26=6.26m

Longitud total tubos 4+2.26=6.26m

H1 (tab. 3) 0.5X6.26/10=0.31m

H1 (chart 3) 0.5X20.60/10=1.03ft

H1 (tableau 3) 0.5X6.26/10=0.31m

H1 (tabla 3) 0.5X6.26/10=0.31m

H2 (tab. 4) 30°C = 0.4 m

H2 (chart 4) 86°F = 1.31ft

H2 (tableau 4) 30°C = 0.4 m

H2 (tabla 4) 30°C = 0.4 m

H3 (tab. 5) 500m = 0.55 m

H3 (chart 5) 1640ft = 1.8 ft

H3 (tableau 5) 500m = 0.55 m

H3 (tabla 5) 500m = 0.55 m

NPSH r (tab. 1) RPM 1450=6.8m

NPSH r (chart 1) RPM 1450 : NPSHr= 22.3 ft

NPSH r (tableau 1) RPM 1450=6.8m

NPSH r (tabla 1) RPM 1450=6.8m

$$Hz > (6.8+0.5)+0.31+0.4-(10.33-0.55) = -1.77m$$

$$Hz > (22.3+1.65)+1.03+1.31-(33.9-1.65) = -5.96ft$$

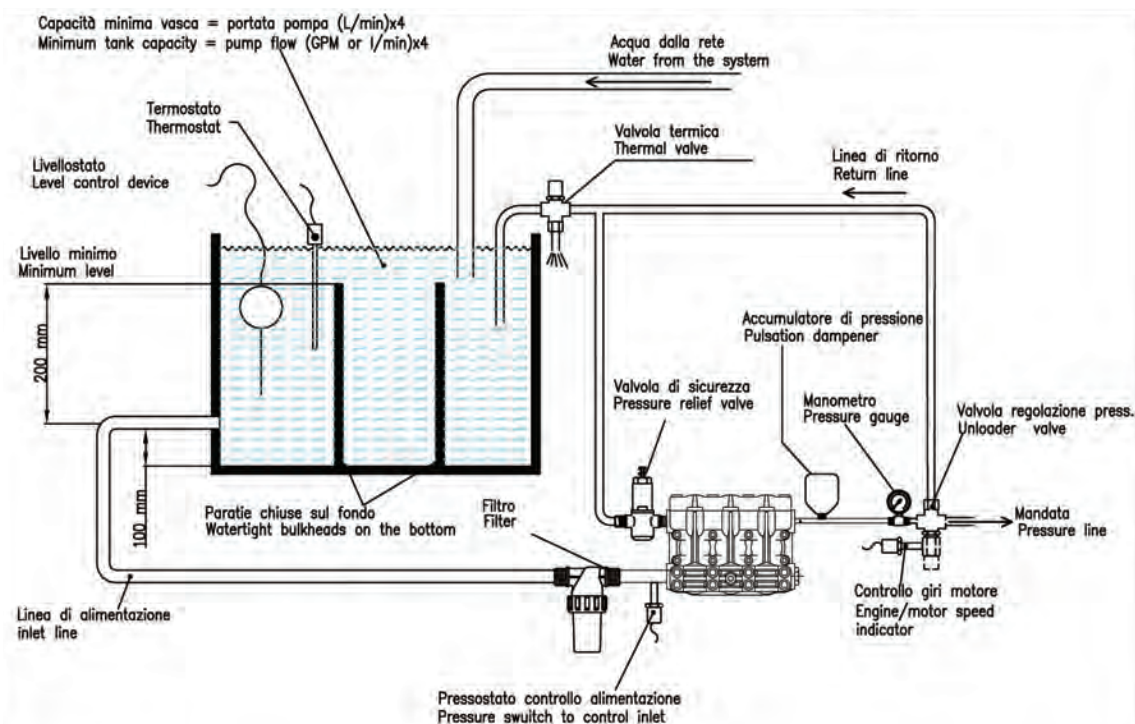
# CONDIZIONI TECNICHE DI INSTALLAZIONE

## INFORMATION ON TECHNICAL INSTALLATION

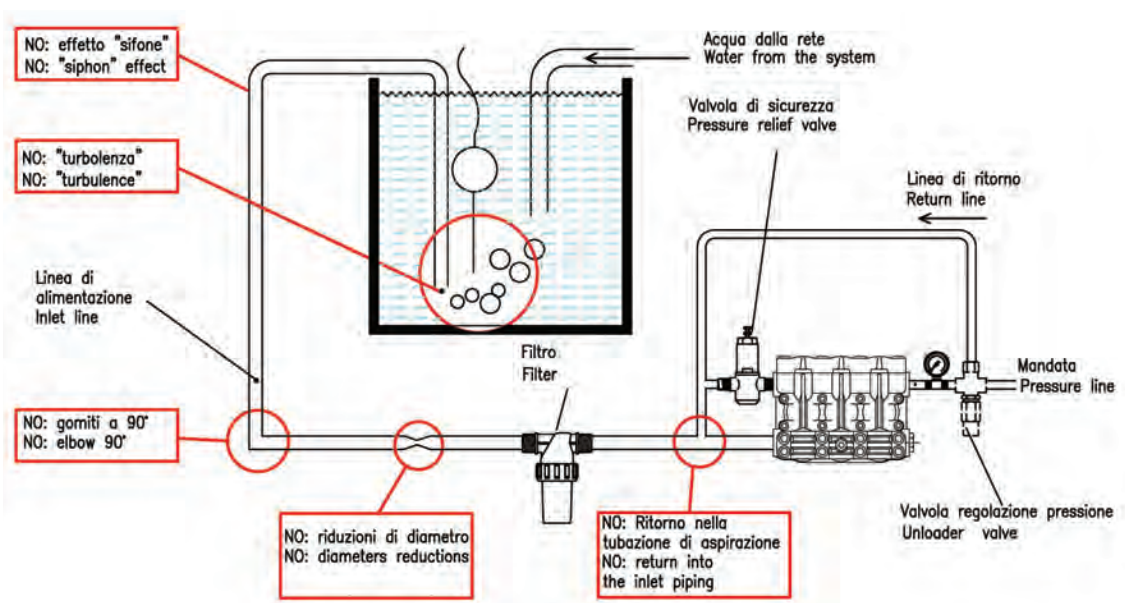
### CONDITIONS TECHNIQUES D'INSTALLATION

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Una corretta installazione è la prima ragione del buon funzionamento della pompa. Vedere sotto riportato di installazione tipica.  
Correct installation is the first reason of smooth running of the pump. For ex.: typical installation of pumps.



Errori da evitare - Errors to avoid - Erreurs à éviter - Errores que evitar



Ogni pompa Bertolini è corredata di manuale d'uso - manutenzione con indicazioni di corretta installazione.

All Bertolini pumps are supplied with the operating, service and safety instructions manual that contains information for correct installation.



# BERTOLINI<sup>®</sup> pumps

