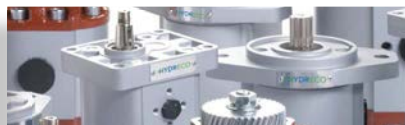


PUMPS
GEAR PUMPS AND
GEAR MOTORS



POMPE AD INGRANAGGI
GEAR PUMPS


A

POMPE MULTIPLE AD INGRANAGGI
MULTIPLE GEAR PUMPS


B

MOTORI AD INGRANAGGI
GEAR MOTORS


C

ACCESSORI POMPE E MOTORI
PUMPS AND MOTOR ACCESSORIES


D

Quality System in accordance UNI EN ISO 9001 cert. ICIM N° 0292

TCP IE P02W00 - GM

I dati del presente catalogo non sono impegnativi, Hydreco si riserva il diritto di apportare le modifiche che riterrà necessarie al miglioramento del prodotto, senza impegno di aggiornamento del presente catalogo.

Data and specifications are not binding, Hydreco reserves the right to modify all the data deemed necessary for the improvement of products without being involved in revising the present catalogue.

POMPE AD INGRANAGGI GEAR PUMPS


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CARATTERISTICHE

La Hydreco è specializzata nella produzione di pompe dal gruppo A1 al gruppo A3 suddivise in 34 cilindrate da 0,9 a 120 cc/g, e fino a 320 bar di pressione massima di esercizio.

Sono disponibili versioni con flange e coperchi in ghisa per ridurre il livello di rumorosità.

Il bilanciamento idrostatico è a ripresa del gioco assiale mediante pressione inviata ad un'area definita della boccola.

La lubrificazione dei supporti è automatica e proporzionale alla pressione di impiego della pompa.

Ogni pompa può essere assemblata o in totale interambiabilità sia con flange standard (europea, tedesca, SAE) sia con quelle speciali (ZF, Perkins Renault) e con alberi o nicchie cilindriche e anallati.

E' possibile inoltre montare o per il controllo delle limitatrici di pressione e valvole regolatrici di flusso.

Tutte le pompe sono predisposte per il traino posteriore di una o più pompe interponendo il kit di accoppiamento disponibile anche in versione ortogonale.

FEATURES

Hydreco is specialized in pumps production from group A1 to group A3, divided into 34 displacements from 0,9 to 120 cc rev, and up to 320 bar of max working pressure.

Pumps are available with cast iron flanges and covers version to reduce the loudness level.

Hydrostatic balance takes up axial backlash through the pressure supplied to a defined bushing area.

Bearings lubrication is automatic and proportional to the pump operating pressure.

Each pump can be assembled whether with standard flanges (european, german or SAE) or with special ones (ZF, Perkins and Renault), with tapered, cylindrical or lined shafts

Furthermore it is possible to assemble pumps with pressure relief valves and flow control valves.

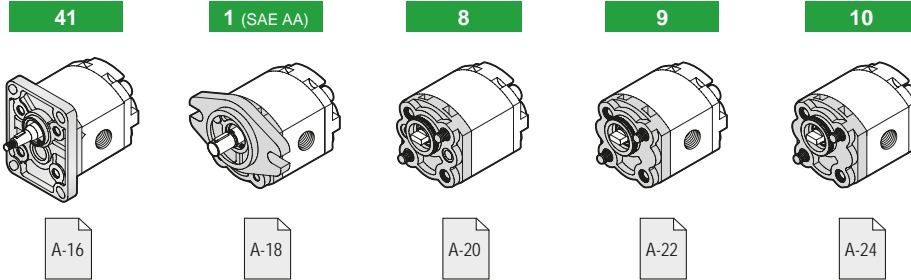
All standard pumps are arranged to drive a complementary pumps using the coupling kits available also in the orthogonal version.



GAMMA DI PRODOTTO

PRODUCT RANGE

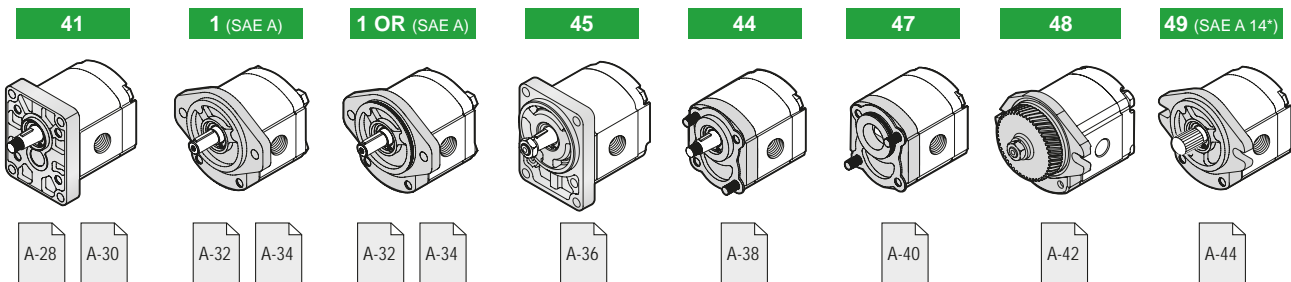
**POMPE GRUPPO
PUMPS GROUP** **A1**



Grandezza Size	Cilindrata Displacement [cm ³ /g] - (in ³ /rev)	Velocità max Max speed [g/min] - (rpm)	Portata max Max. flow [l/min] - (Gal/min)	Velocità min. Min. speed [g/min] - (rpm)	Portata min. Min. flow [l/min] - (Gal/min)	Rendimento Min. volumetric efficiency %
A1090	0.89 (0.05)	6000	5.3 (1.40)	600	0.49 (0.13)	92*
A1001	1.18 (0.07)	6000	7.1 (1.88)	600	0.65 (0.17)	
A1160	1.6 (0.10)	6000	9.6 (2.54)	400	0.61 (0.16)	95*
A1002	2.0 (0.12)	5500	11 (2.91)	400	0.76 (0.20)	
A1250	2.5 (0.15)	5000	12.5 (3.30)	400	0.95 (0.25)	
A1003	3.2 (0.20)	4500	14.4 (3.80)	400	1.21 (0.32)	
A1370	3.7 (0.23)	4000	14.8 (3.91)	400	1.40 (0.37)	
A1004	4.2 (0.26)	3500	14.7 (3.88)	400	1.60 (0.42)	
A1005	5.0 (0.31)	3000	15 (3.96)	400	1.90 (0.50)	
A1006	6.3 (0.38)	2700	17 (4.49)	400	2.39 (0.63)	
A1008	7.76 (0.47)	2500	19.4 (5.13)	400	2.95 (0.78)	
A1009	9.78 (0.60)	2000	19.6 (5.18)	400	3.71 (0.98)	

* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

**POMPE GRUPPO
PUMPS GROUP** **A2**



Grandezza Size	Cilindrata Displacement [cm ³ /g] - (in ³ /rev)	Velocità max Max speed [g/min] - (rpm)	Portata max Max. flow [l/min] - (Gal/min)	Velocità min. Min. speed [g/min] - (rpm)	Portata min. Min. flow [l/min] - (Gal/min)	Rendimento Min. volumetric efficiency %
A2004	4 (0.24)	4000	16 (4.23)	500	1.9 (0.50)	95*
A2006	6 (0.37)	4000	24 (6.34)	500	2.85 (0.75)	
A2008	8.5 (0.52)	3500	29.7 (7.85)	500	4.03 (1.06)	
A2011	11 (0.67)	3500	38.5 (10.17)	500	5.22 (1.38)	
A2014	14 (0.85)	3500	49 (12.95)	500	6.65 (1.76)	
A2016	16.5 (1.01)	3500	57.7 (15.24)	500	7.83 (2.07)	
A2019	19.5 (1.19)	3300	64.3 (16.99)	500	9.26 (2.45)	
A2022	22.5 (1.37)	2800	63 (16.64)	500	10.68 (2.82)	
A2026	26 (1.59)	2500	65 (17.17)	500	12.35 (3.26)	

* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

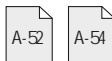
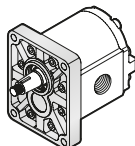
GAMMA DI PRODOTTO

PRODUCT RANGE

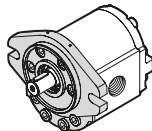
POMPE GRUPPO
PUMPS GROUP

A3

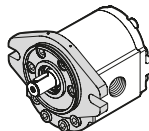
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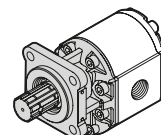
2 (SAE B)



2 OR (SAE B)



60



Grandezza Size	Cilindrata Displacement	Velocità max Max speed	Portata max Max. flow	Velocità min. Min. speed	Portata min. Min. flow	Rendimento Min. volumetric efficiency
	[cm ³ /g] - (in ³ /rev)	[g/min] - (rpm)	[lt/min] - (Gal/min)	[g/min] - (rpm)	[lt/min] - (Gal/min)	%
A3019	19 (1.16)	3500	66.5 (17.57)	700	12.64 (3.34)	95*
A3022	22.3 (1.36)	3500	78 (20.61)	700	14.83 (3.92)	
A3029	29.3 (1.79)	3300	96.7 (25.55)	700	19.48 (5.15)	
A3033	32.9 (2.01)	3300	108.6 (28.69)	700	21.88 (5.78)	
A3036	36.4 (2.22)	3300	120.1 (31.73)	700	24.21 (6.40)	
A3044	43.5 (2.65)	3000	130.5 (34.48)	700	28.93 (7.64)	
A3052	51.7 (3.15)	3000	155.1 (40.98)	700	34.38 (9.08)	
A3062	61.1 (3.73)	2500	152.7 (40.34)	700	40.63 (10.73)	

* (Valori rilevati in fase di collaudo a 1500 giri/min / Value tabulated during the testing at 1500 rpm)

INFORMAZIONI TECNICHE

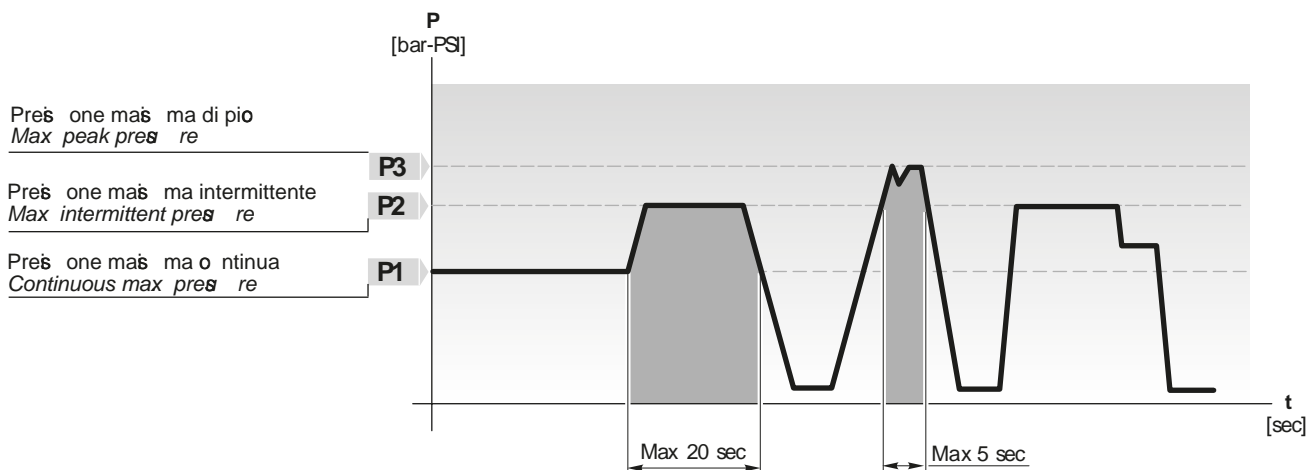
TECHNICAL INFORMATION

Definizione delle pressioni

Le pompe possono essere sottoposte alle pressioni P1, P2, P3 indicate nelle tabelle delle prestazioni. Il grafico seguente ne illustra le definizioni e l'applicabilità rispettando i limiti delle velocità di rotazione riportati.

Definition of pressures

The pumps are not be subjected to the pressures P1, P2 or P3 indicated in the performance tables. The following diagram illustrates the definitions and applicability of these, compared to the rotation speed limits included.



**Misure idrauliche
Hydraulic measures**

Q	Portata Flow	[l/min - Gal/min]
M	Coppia Torque	[Nm - lbf.in]
P	Potenza Power	[kW - HP]
V	Cilindrata Displacement	[cm ³ /rev - in ³ /rev]
N	Velocità Speed	[min ⁻¹ - rpm]
Δp	Pressione Pressure	[bar - PSI]
η_v	Rendimento volumetrico Volumetric efficiency	
η_m	Rendimento meccanico Mechanical efficiency	
η_t	Rendimento totale Overall efficiency	

**Formule utili
Useful formulas**

$$Q = V \text{ [cm}^3\text{/rev]} \times \eta_v \times n \times 10^{-3} \text{ l/min}$$

$$M = \frac{\Delta p \text{ [bar]} \times V \text{ [cm}^3\text{/rev]}}{62.83 \times \eta_m} \text{ Nm}$$

$$P = \frac{\Delta p \text{ [bar]} \times V \text{ [cm}^3\text{/rev]} \times n}{600 \times 1000 \times \eta_t} \text{ kW}$$

**Fattore di conversione
Conversion factors**

1 l/min = 0.2641 US Gal/min
1 Nm = 8.851 in-lbs
1 Nm = 0.7375 ft-lbs
1 N = 0.2248 lbs
1kW = 1.34 HP
1m ³ /giro = 0.061 in ³ /rev
1 bar = 14.5 PSI
1 mm = 0.0394 in
1 kg = 2.205 lbs

INFORMAZIONI TECNICHE

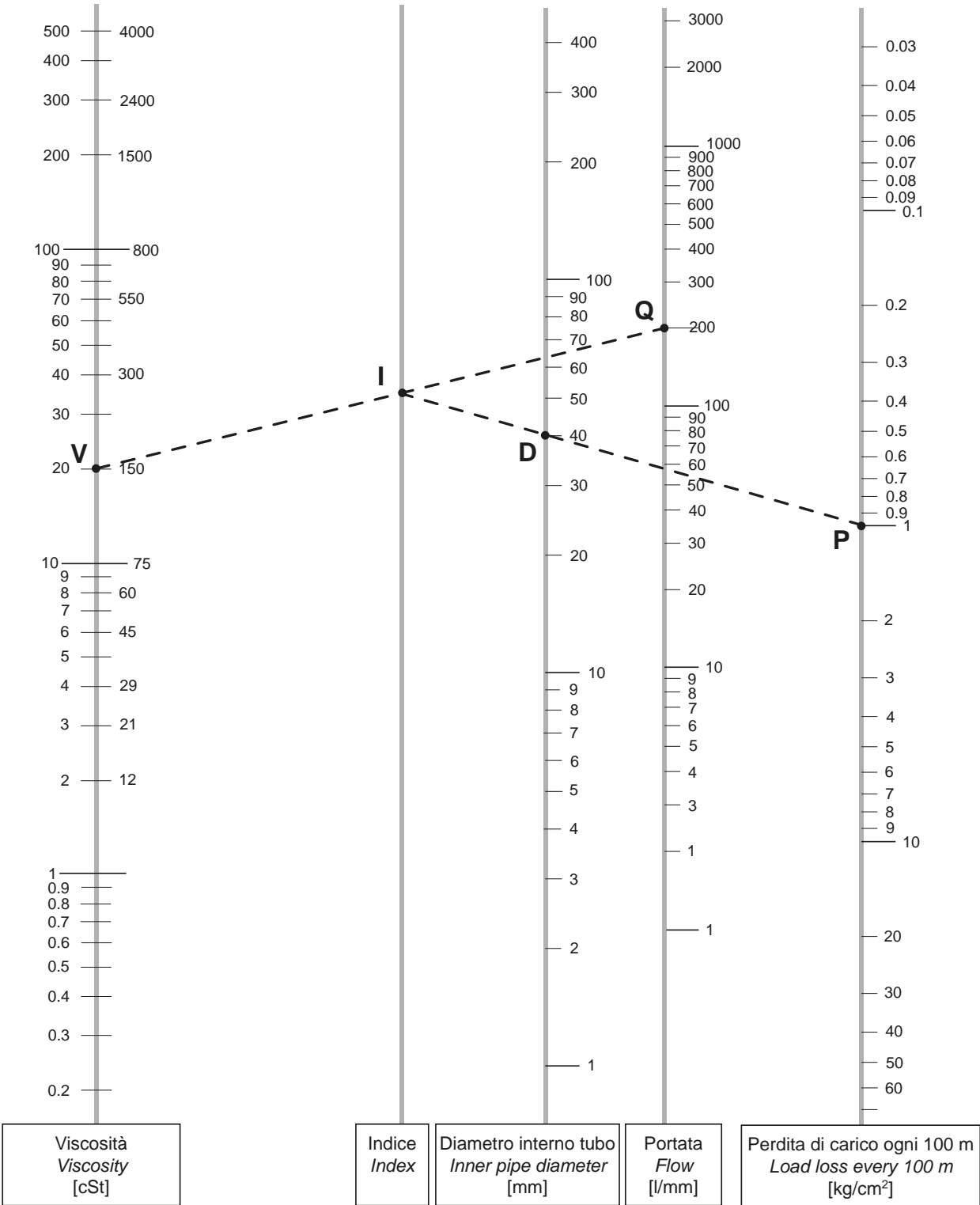
Perdita di carico

Il nomogramma seguente permette di calcolare la perdita di carico per ogni 100 m di tubazione conoscendo la viscosità dell'olio, la portata della pompa e il diametro della condotta. Sulle rispettive scale, si fissano i valori della viscosità (V), della portata (Q) e del diametro (D); si traccia una retta che congiunge i due punti V e Q; dove questa interseca la linea indice viene definito il punto I. Prolungando la retta che congiunge il punto I al punto D, all'intersezione con l'ultima scala si leggerà il valore della perdita di carico.

TECHNICAL INFORMATION

Pressure drops

The following nomogram allows you to calculate the pressure drops for each 100 m of piping when the viscosity of the oil, the delivery capacity of the pump and the diameter of the piping are known. The viscosity (V), flow capacity (Q) and diameter (D) values are fixed on the respective scales; a line is drawn joining the points V and Q; the point where this intersects the index line is defined as point I. If the line joining point I to point D is extended, the load pressure drops can then be read at the intersection with the last scale.



INFORMAZIONI TECNICHE

Fluidi idraulici

È consigliabile utilizzare oli idraulici di origine minerale o natura - caratterizzati da anti-ossidazione, anti-ossidante, anti-ruggine e un elevato indice di viscosità;

- Viscosità mandata 15 ÷ 92 mm²/s
- Viscosità limite d'aumento 3000 mm²/s

Durante il normale funzionamento la temperatura dell'olio dovrà essere compresa fra 20°C e 65°C o naturali limite compreso fra -15°C e 80°C.

Pressione in aspirazione

La pressione di esercizio in alimentazione ammassa deve essere compresa nell'intervallo 0.7 - 3 bar (absolute).

Per valori superiori (fino a 30 bar) è necessario ricorrere alle versioni dotate di guarnizione K.

Condotti di aspirazione e mandata

Particolare attenzione dovrà essere posta nel dimensionamento delle tubazioni (rigide o flessibili) evitando lunghezze sproporzionate, improvvisazioni di sezione, piccoli raggi di curvatura e glielo o comunque sezioni dei condotti ben garantite da una velocità dell'olio compresa fra 0.6 e 12 m/s

Filtrazione

Per eliminare eventuali impurità presenti nell'olio e garantire una durata superiore alla pompa, è necessario introdurre nell'impianto un'efficace filtrazione verificandone periodicamente la funzionalità.

I livelli di filtrazione raccomandati sono i seguenti:

- 26/23 ISO DIS 4406 fino a 150 bar
- 23/20 ISO DIS 4406 per pressioni superiori.

Note per l'installazione

- Assicurarsi che il giunto utilizzato per il trascinamento o movimento di alberi e linee di condotta siano allineati e potrebbero pregiudicare l'integrità della pompa.
- Nel caso in cui siano presenti dei carichi radiali e/o assiali sull'albero della pompa (come ad esempio quando il trascinamento viene effettuato tramite pulegge e cinghie) è necessario optare per le versioni disponibili con supporto rinforzato.
- Il giunto di collegamento fra alberi è nato dovrà essere opportunamente lubrificato, libero di muoversi assialmente e di lunghezza adatta a coprire tutta l'estensione dei due alberi (motore e pompa).
- Se la pompa è sottoposta a verniciatura, proteggere l'anello di tenuta verificando anche che la zona di contatto fra anello di tenuta e albero sia priva di polvere o di sedimenti abrasivi.

Senso di rotazione

Il senso di rotazione viene definito C (orario) e A (antiorario) osservando l'albero frontalmente.

Le pompe sono monodirezionali per cui in fase di ordine è necessario precisare il senso di rotazione desiderato, oppure intervenire modificando l'assetto interno come illustrato di seguito (inversione del senso di rotazione).

Nelle pagine con le caratteristiche delle pompe sono evidenziate le direzioni dei flussi di mandata e aspirazione per ogni versione e per il senso di rotazione.

TECHNICAL INFORMATION

Hydraulic fluids

It is advisable to use hydraulic oils of mineral origin with anti-foaming, anti-oxidant and anti-rust characteristics and a high viscosity index

- Recommended viscosity 15 ÷ 92 mm²/s (St)
- Start-up viscosity limit 3000 mm²/s (St)

During normal operation, the temperature of the oil must be between 20°C and 65°C and limit values between -15°C and 80°C.

Suction pressure

The allowed working pressure applied must be in the range 0.7 - 3 bar (absolute).

For higher values (up to 30 bar), versions with a K seal must be used.

Suction and delivery pipes

Particular attention must be given to the sizing of pipes (rigid or flexible), avoiding disproportionate lengths, sudden variations in cross section or small curvature radius in any case allowing pipe sections that guarantee an oil speed between 0.6 and 12 m/s

Filtration

In order to eliminate any impurities present in the oil and to guarantee a longer duration of the pump, the system must be equipped with effective filtration which must be periodically checked to ensure that it is operating correctly.

The following are the recommended filtration levels:

- 26/23 ISO DIS 4406 up to 150 bar
- 23/20 ISO DIS 4406 for higher pressures

Installation notes

- Make sure that the coupling used for pulling or movement of shafts or lines are aligned that could compromise the integrity of the pump.
- If there are radial and/or axial loads on the pump shaft (as is the case, for example, when pulling is carried out using pulleys and belts) the versions available with a reinforced support must be chosen.
- The connection coupling between shafts must be appropriately lubricated, free to move axially and of an adequate length to cover the entire extension of the two shafts (motor and pump).
- If the pump is painted, protect the shaft seal and also make sure that the contact zone between the shaft seal and the shaft is free of dust or abrasive sediments

Rotation direction

The rotation direction is defined as C (clockwise) or A (anti-clockwise) by observing the shaft from the front.

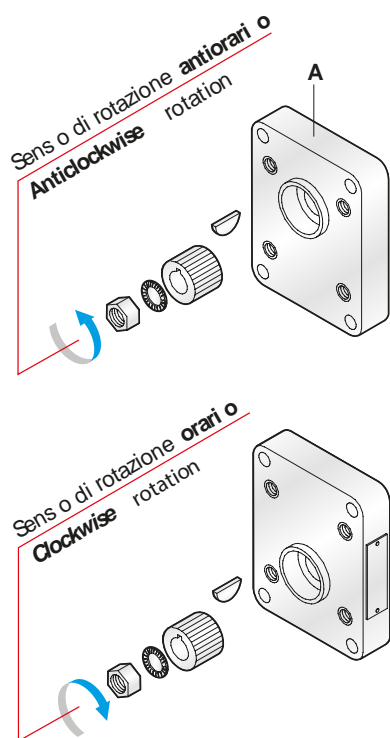
The pumps are monodirectional and therefore when ordering the required rotation direction must be specified; alternatively it is possible to modify the internal set-up as illustrated below (inversion of the rotation direction).

The pages regarding the pump characteristics highlight the directions of the delivery and suction flows for each version and rotation direction.

INFORMAZIONI TECNICHE

TECHNICAL INFORMATION

Inversione del senso di rotazione



Wise rotation reversal

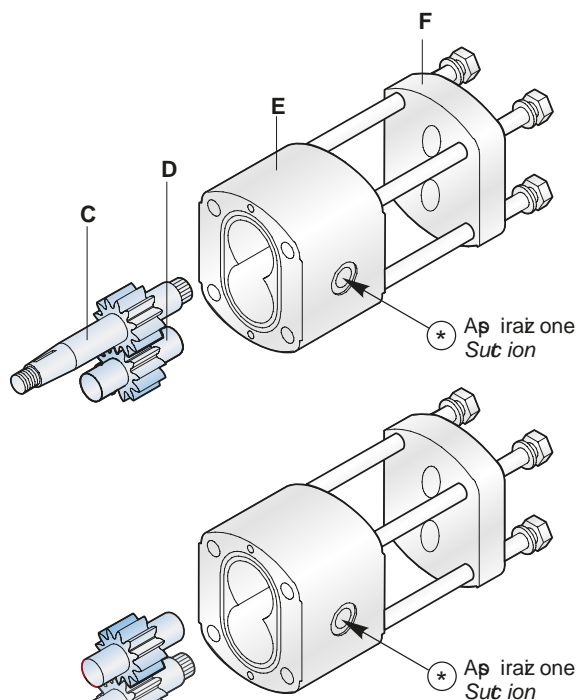


Fig. 1

Fig. 2

* Nelle pagine relative ai dati tecnici sono specificati gli attacchi in funzione del senso di rotazione C o A preconfigurato.
The technical data pages specify the connections depending on the preconfigured rotation direction (C or A).

Il senso di rotazione delle pompe è evidenziato da una freccia sulla targhetta.

L'inversione del senso di rotazione di una pompa si esegue nel seguente modo:

- Smontare la pompa come da figura 1.
- Sfilare gli ingranaggi C e D e rimontarli secondo la figura 2.
- Rimontare la boccia B nella stessa posizione della figura 1.
- Capovolgere la flangia A e rimontare la pompa serrando le viti con una bilancia dinamometrica.
- Per le pompe GR3 smontare solo la flangia anteriore.

Pumps wise rotation is indicated by an arrow on the label.

How to invert the pump wise rotation:

- Disassemble pump as shown in figure 1.
- Pull off gears C - D and reassemble according to figure 2.
- Reassemble bushing B as before.
- Reverse the flange A and reassemble the pump tightening the screws by dynamic wrench.
- For the pumps GR3 disassemble only front flange..

Tipo di pompa Type of pump	A1	A2	A3
Numero di viti Numbers of screws	4	4	16
Tipo di filetto Type of threads	M8	M10	M10
Coppia di serraggio viti Tightening torque of screws	30 Nm (266 in-lb)	50 Nm (443 in-lb)	60 Nm (531 in-lb)
Tipo di giunto Type of coupling	1IS 12M	2IS 14M 2IS 15M	3IS 18M
Coppia di serraggio dado giunto Tightening torque at nut coupling	9 ÷ 10 Nm (80 ÷ 89 in-lb)	22 ÷ 25 Nm (195 ÷ 221 in-lb) 32 ÷ 35 Nm (283 ÷ 310 in-lb)	50 ÷ 55 Nm (443 ÷ 487 in-lb)

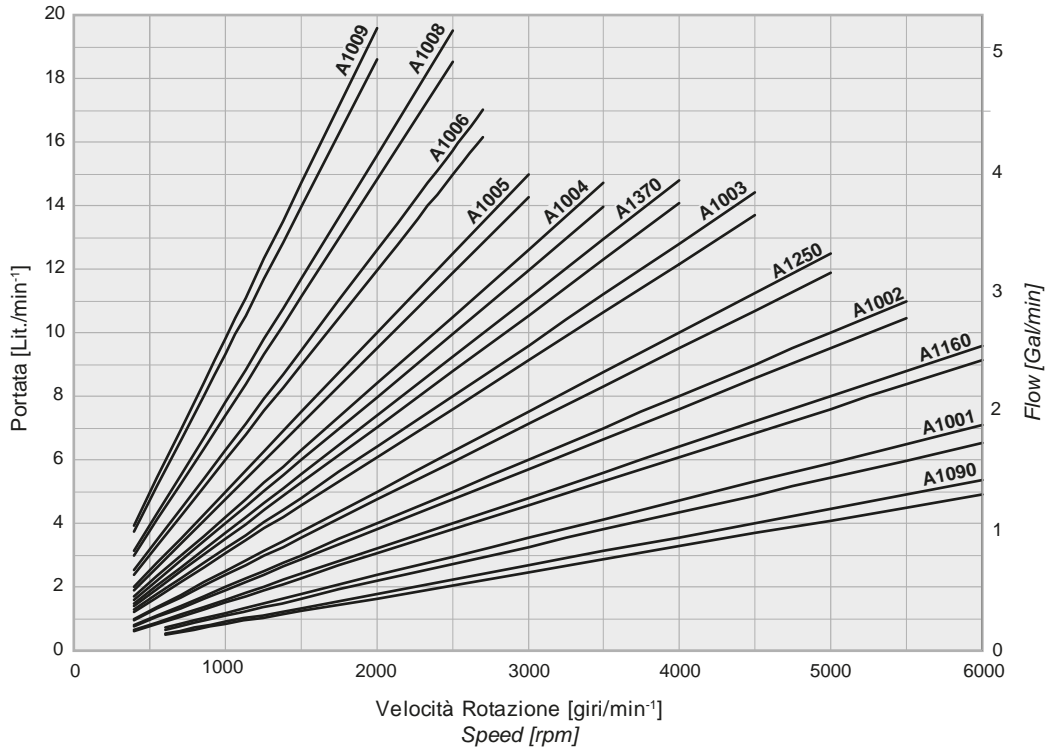
PRESTAZIONI

PERFORMANCES

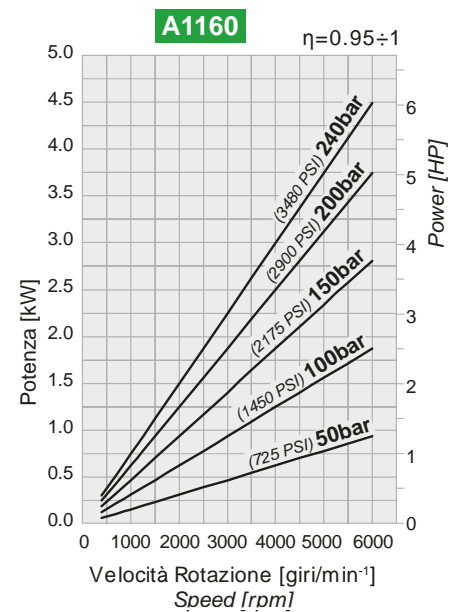
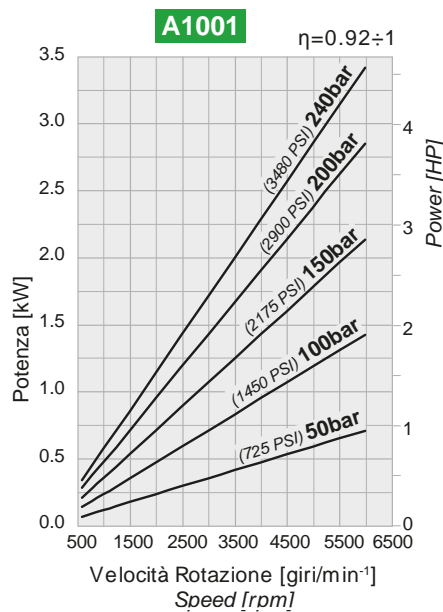
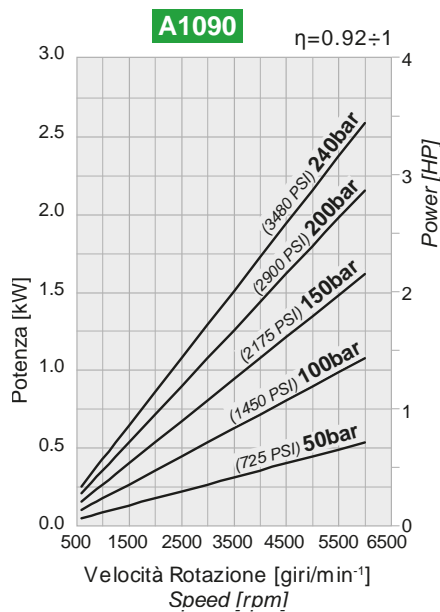
**POMPE GRUPPO
PUMPS GROUP**

A1

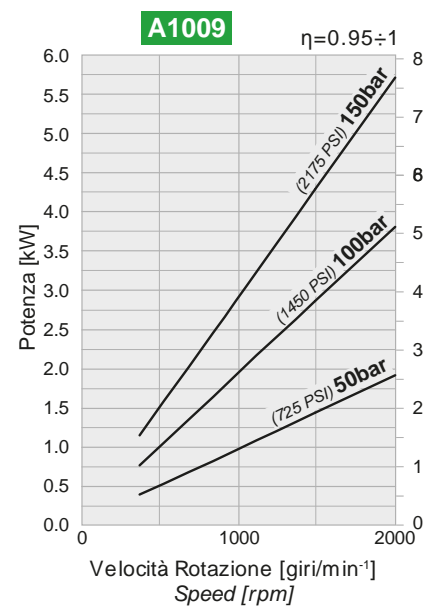
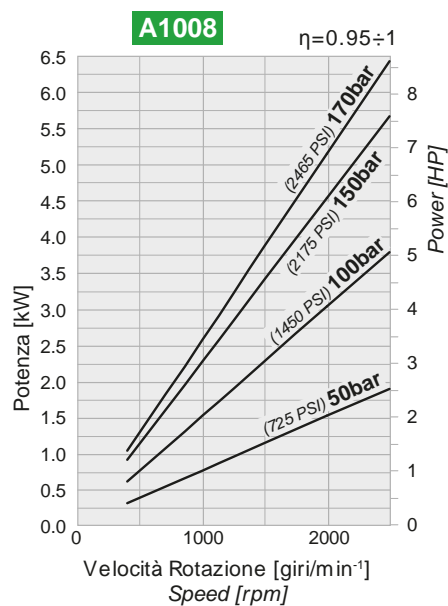
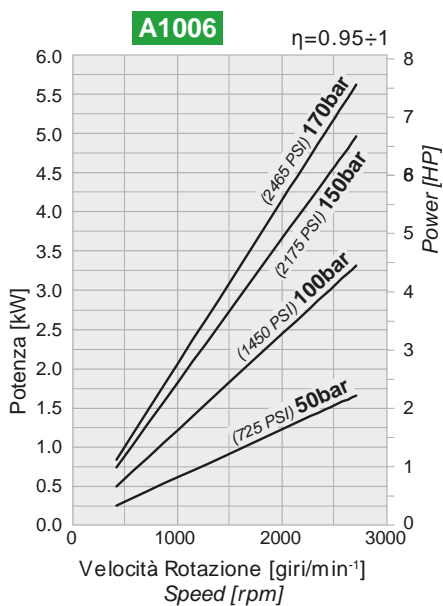
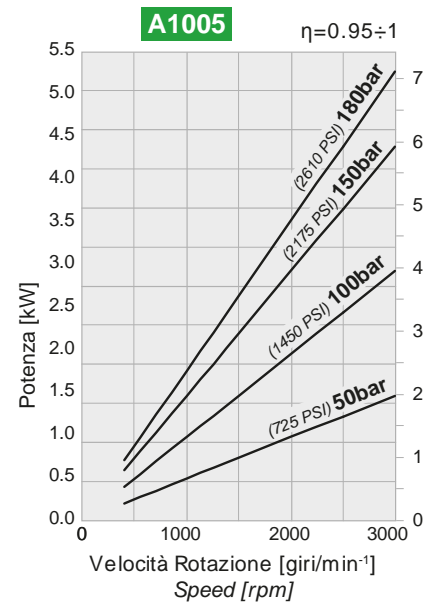
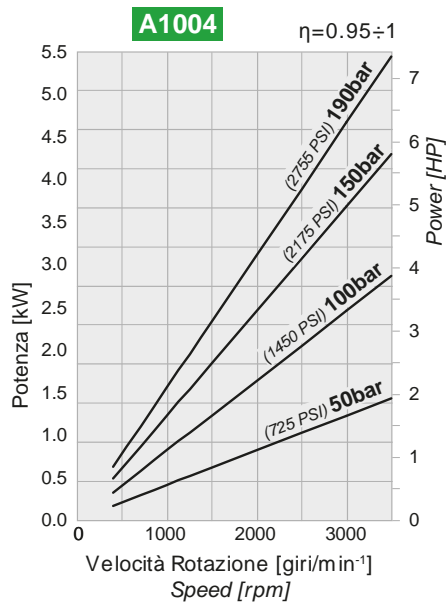
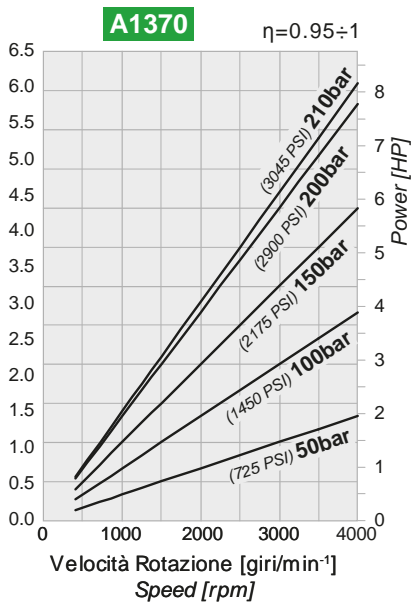
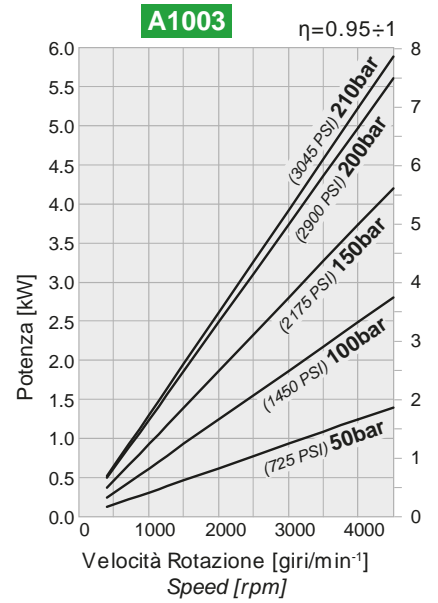
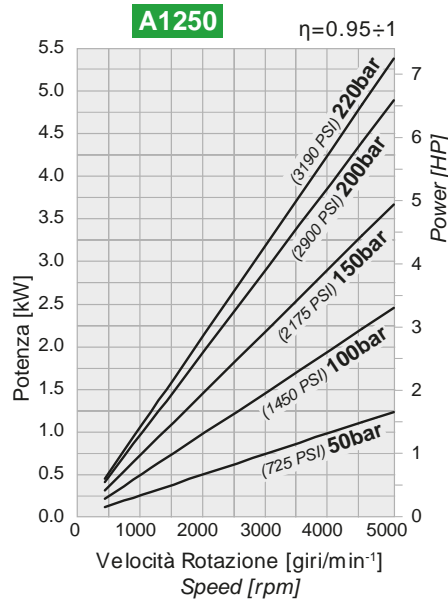
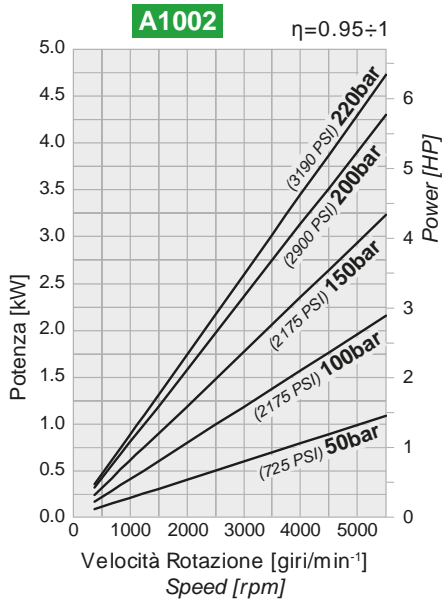
Diagramma Portata - Velocità di rotazione
Flow - Speed chart



Pompe Gruppo 1 Diagrammi Potenza - n°/giri / Pumps group 1 Diagrams Power- n°Rev

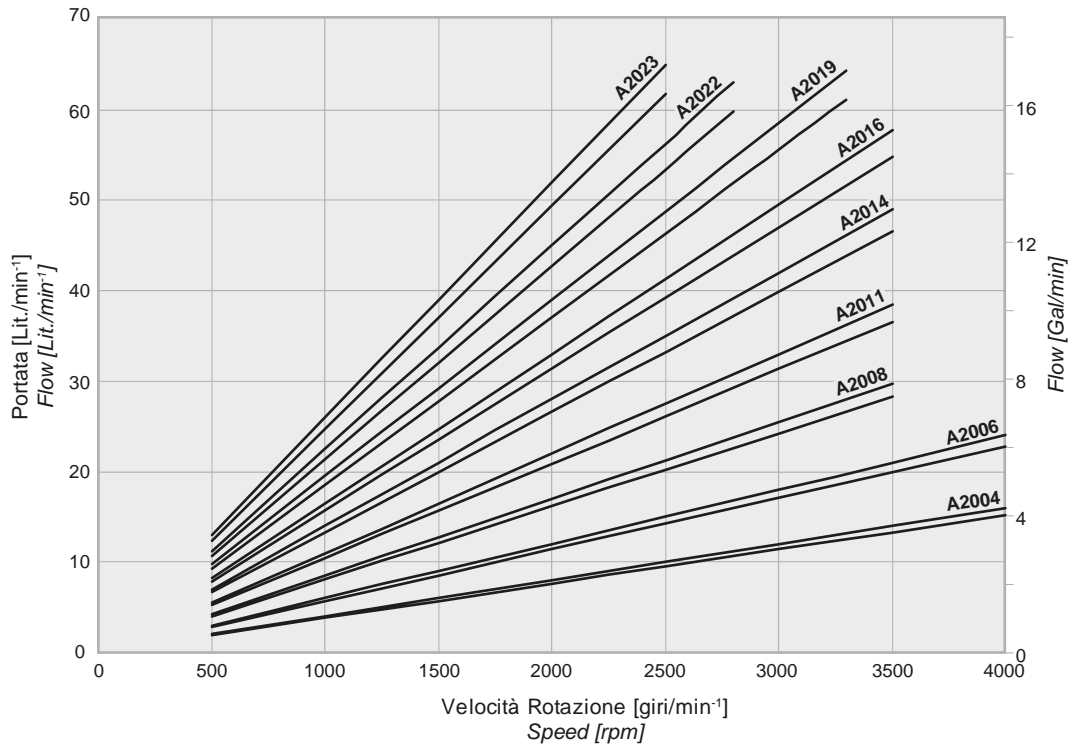


Pompe Gruppo 1 Diagrammi Potenza - n°/giri / Pumps group 1 Diagrams Power- n°Rev

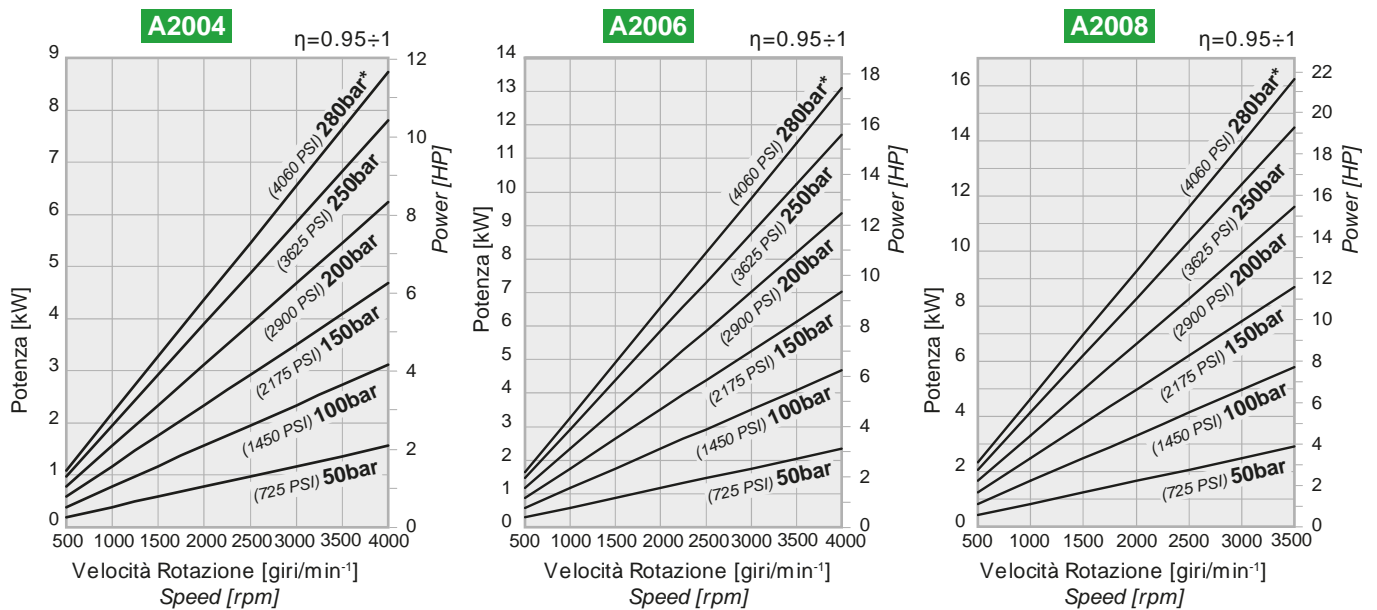


**POMPE GRUPPO
PUMPS GROUP** **A2**

Diagramma Portata - Velocità di rotazione
Flow - Speed chart

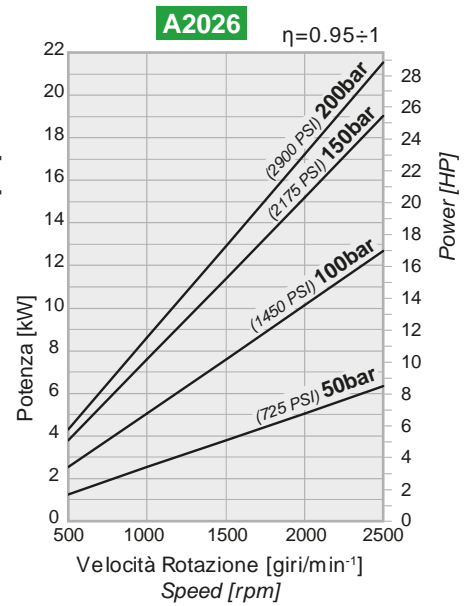
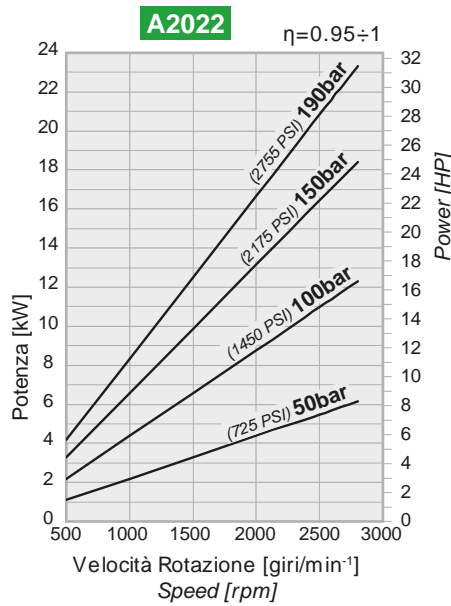
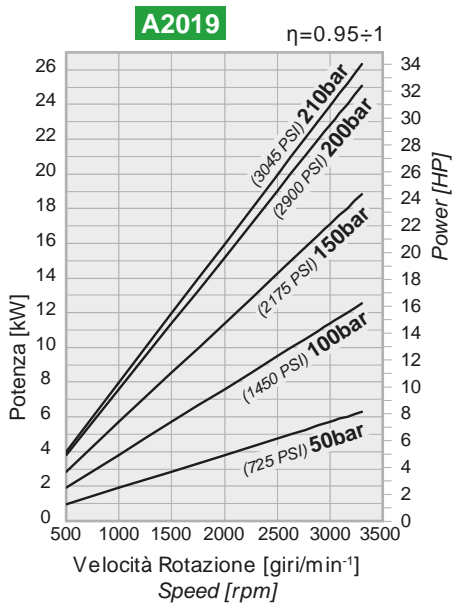
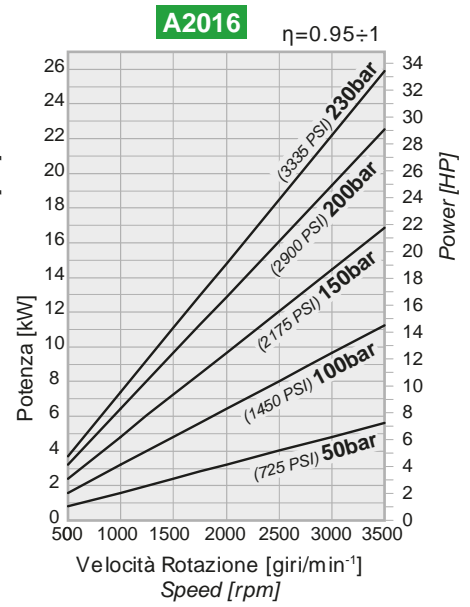
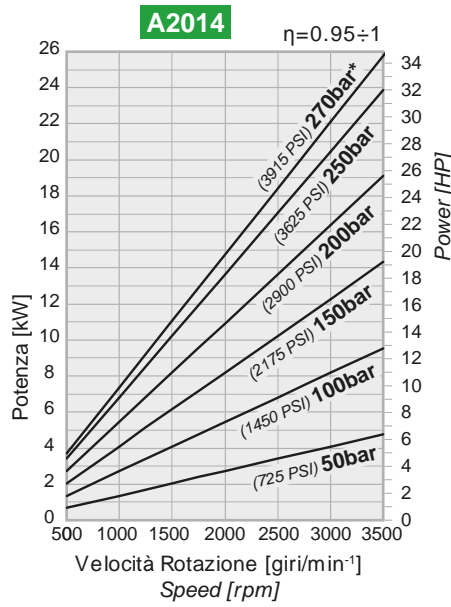
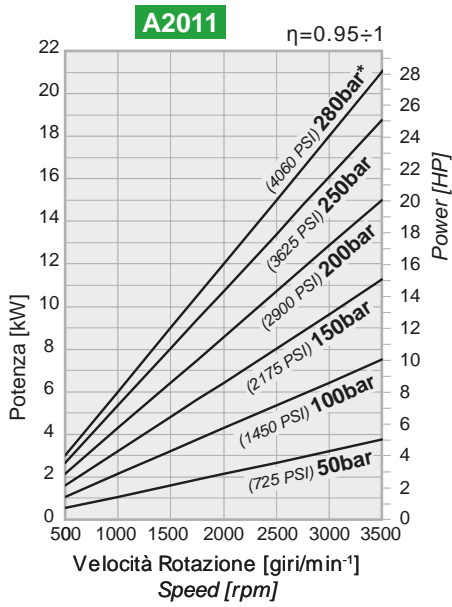


Pompe Gruppo 2 Diagrammi Potenza - n°/giri / Pumps group 1 Diagrams Power- n°Rev



* Solo pompe in ghisa / Only for cast iron pumps

Pompe Gruppo 2 Diagrammi Potenza - n°giri / Pumps group 1 Diagrams Power- n°Rev

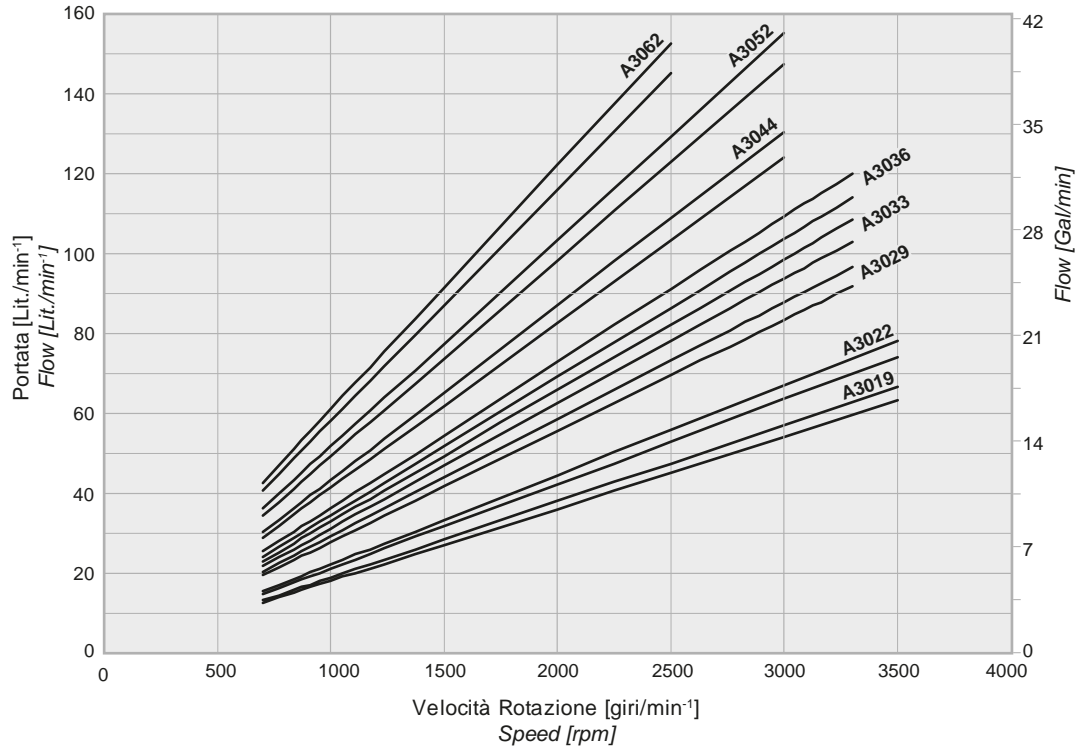


* Solo pompe in ghisa / Only for cast iron pumps

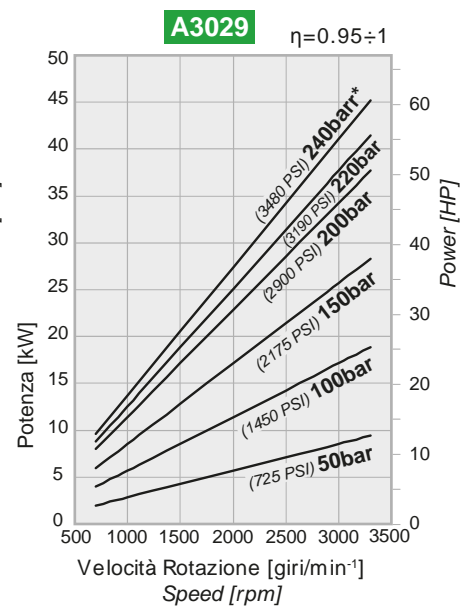
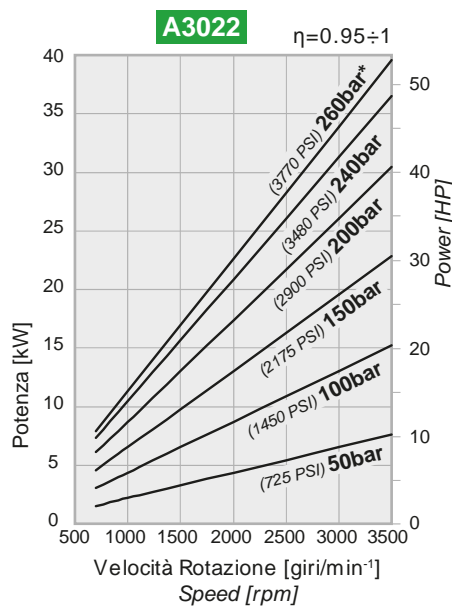
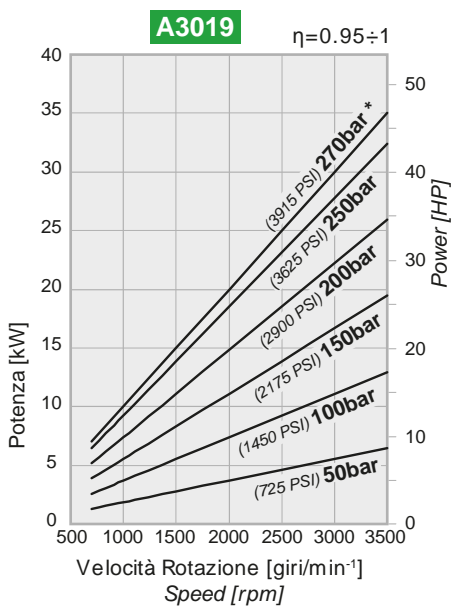
**POMPE GRUPPO
PUMPS GROUP**

A3

Diagramma Portata - Velocità di rotazione
Flow - Speed chart

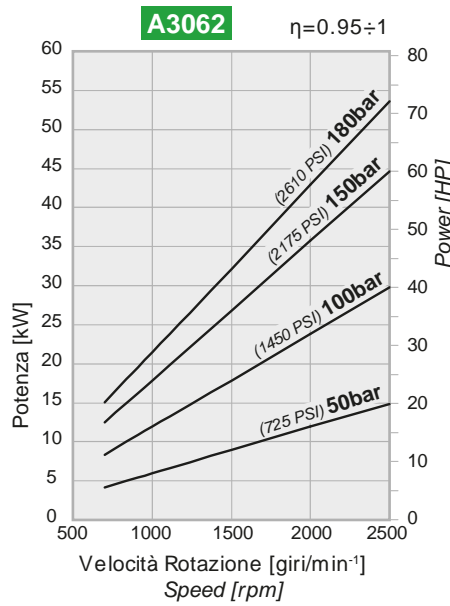
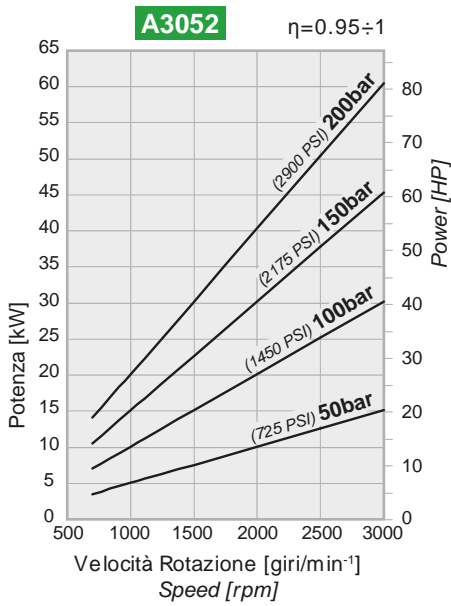
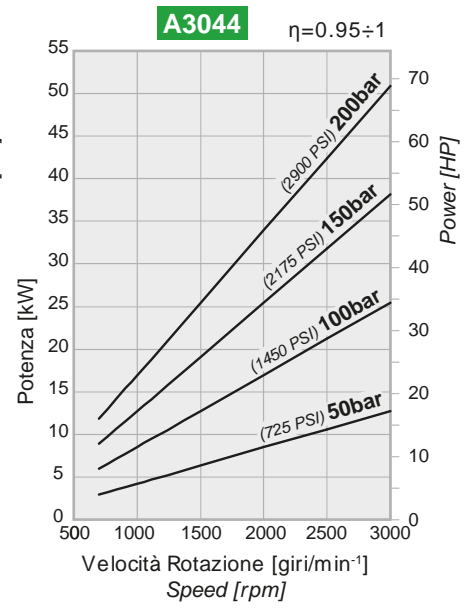
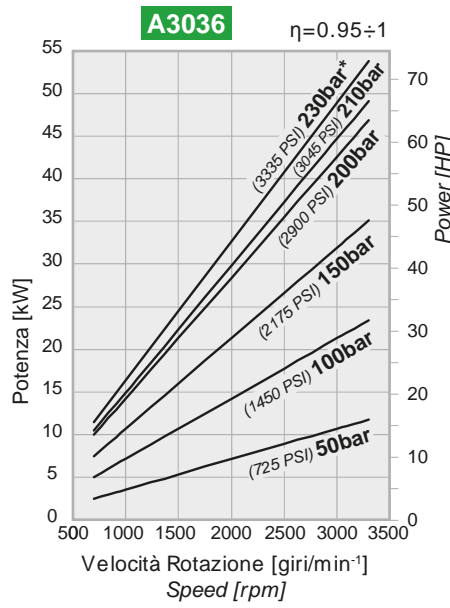
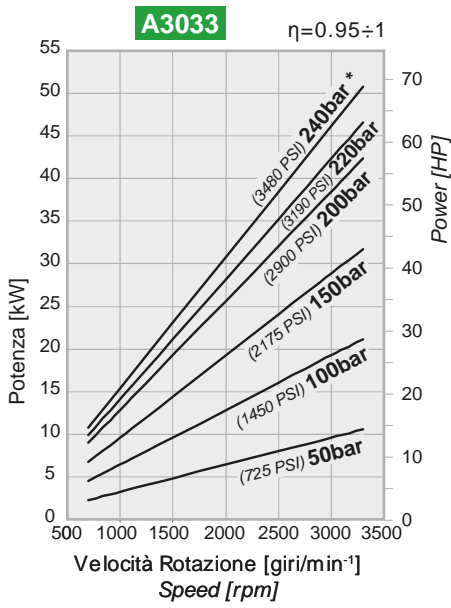


Pompe Gruppo 3 Diagrammi Potenza - n°/giri / Pumps group 1 Diagrams Power- n°Rev



* Solo pompe in ghisa / Only for cast iron pumps

Pompe Gruppo 3 Diagrammi Potenza - n°/giri / Pumps group 1 Diagrams Power- n°Rev



* Solo pompe in ghisa / Only for cast iron pumps

**POMPE GRUPPO
PUMPS GROUP**

A1

41

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] [in ³ /rev]	Pressione max. di esercizio Max working pressure			Velocità max. Max speed [g/min] [rpm]	Portata max. Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Massa Mass [Kg] [lbs]	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [in]	B [mm] [in]		
A1090	0.89 (0.05)	240 (3480)	260 (3770)	290 (4205)	6000	5.3 (1.40)	600	0.49 (0.13)	34.80 (1.370)	73.6 (2.898)	0.91 (2.01)	92*
A1001	1.18 (0.07)	240 (3480)	260 (3770)	290 (4205)	6000	7.1 (1.88)	600	0.65 (0.17)	35.35 (1.392)	74.7 (2.941)	0.93 (2.05)	
A1160	1.6 (0.10)	240 (3480)	260 (3770)	290 (4205)	6000	9.6 (2.54)	400	0.61 (0.16)	36.20 (1.425)	76.4 (3.008)	0.95 (2.09)	
A1002	2.0 (0.12)	220 (3190)	250 (3625)	270 (3915)	5500	11 (2.91)	400	0.76 (0.20)	36.95 (1.455)	77.9 (3.067)	0.97 (2.14)	95*
A1250	2.5 (0.15)	220 (3190)	250 (3625)	270 (3915)	5000	12.5 (3.30)	400	0.95 (0.25)	37.95 (1.494)	79.9 (3.146)	1.00 (2.21)	
A1003	3.2 (0.20)	210 (3045)	240 (3480)	260 (3770)	4500	14.4 (3.80)	400	1.21 (0.32)	39.30 (1.547)	82.6 (3.252)	1.04 (2.29)	
A1370	3.7 (0.23)	210 (3045)	240 (3480)	260 (3770)	4000	14.8 (3.91)	400	1.40 (0.37)	40.30 (1.587)	84.6 (3.331)	1.07 (2.36)	
A1004	4.2 (0.26)	190 (2755)	210 (3045)	230 (3335)	3500	14.7 (3.88)	400	1.60 (0.42)	41.25 (1.624)	86.5 (3.406)	1.10 (2.43)	
A1005	5.0 (0.31)	180 (2610)	210 (3045)	230 (3335)	3000	15 (3.96)	400	1.90 (0.50)	42.80 (1.685)	89.6 (3.528)	1.14 (2.51)	
A1006	6.3 (0.38)	170 (2465)	190 (2755)	210 (3045)	2700	17 (4.49)	400	2.39 (0.63)	45.35 (1.785)	94.7 (3.728)	1.22 (2.69)	
A1008	7.76 (0.47)	170 (2465)	190 (2755)	210 (3045)	2500	19.4 (5.13)	400	2.95 (0.78)	48.20 (1.898)	100.4 (3.953)	1.30 (2.87)	
A1009	9.78 (0.60)	150 (2175)	170 (2465)	190 (2755)	2000	19.6 (5.18)	400	3.71 (0.98)	52.15 (2.053)	108.3 (4.264)	1.41 (3.11)	

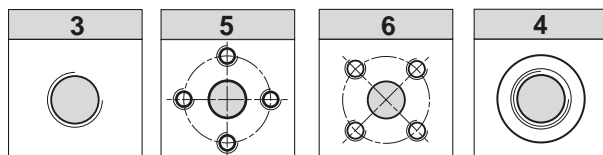
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

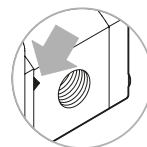
A	1	A	1	002	BB	41	F	3	C	0	(H)	(VT)
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A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma o stile rotella / Design mark	1
A	Guarnizione standard / Standard shaft seal	A = Standard V = Guarnizione in Viton / Viton seal
1	Gruppo / Group	1 di tabella / 1 of table
002	Cilindrata / Displacement	1 di tabella / 1 of table
BB	Tipo albero / Shaft type	BB - BF - E - A - BG - BZ
41	Tipo flangitura / Mounting flange	41 (Standard)
F	Configurazione delle connessioni / Standard port configuration	F
3	Tipo connessioni / Connections type	3 - 5 - 6 - 4 - NG - TG - UG
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
0	Posizioni connessioni / Connections positions	0 - 1 - 3 - 4
(H)	Anello di rinforzo per bassa pressione in aspirazione / Stiffening seal for low suction pressure	(a richiesta / optional)
(VT)	Opzioni / Optional	VLP-I (N) Valvola limitatrice di pressione (pag. A-27) Press. relief valve (page A-27)

Connessioni / Connections

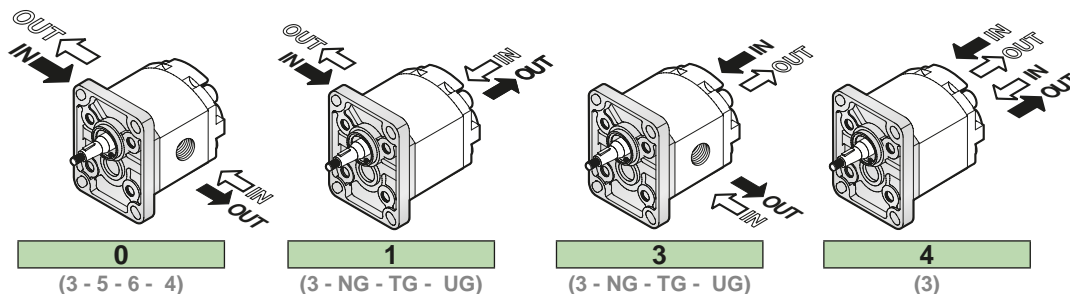


A-26



Il segno sul corpo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

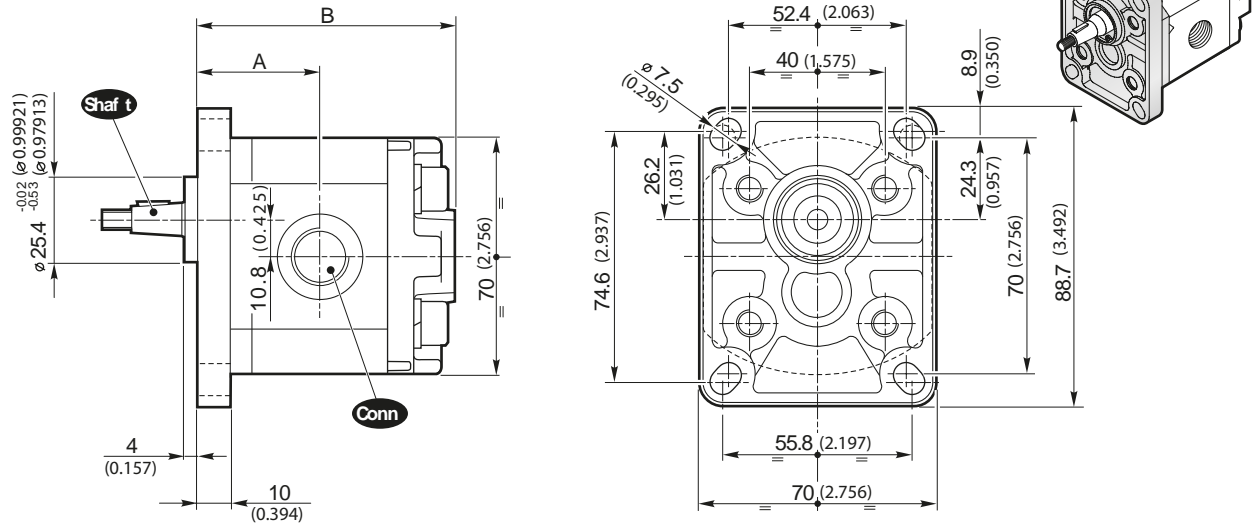
Posizioni delle connessioni / Connection positions



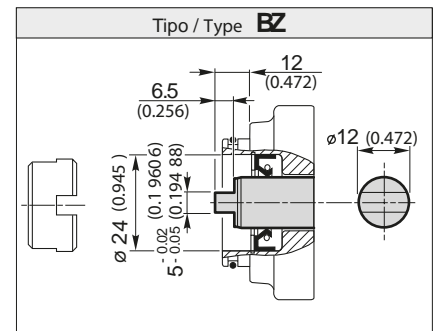
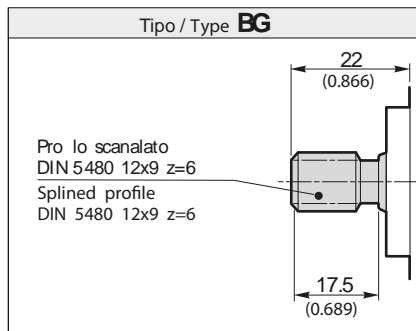
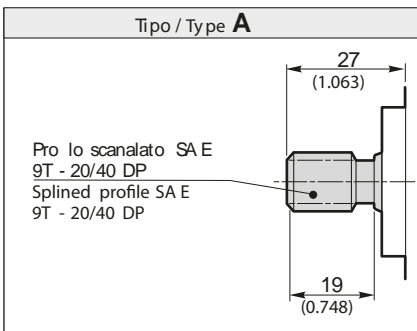
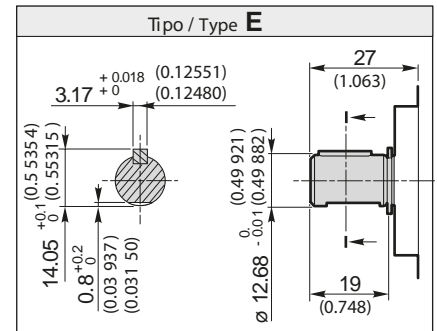
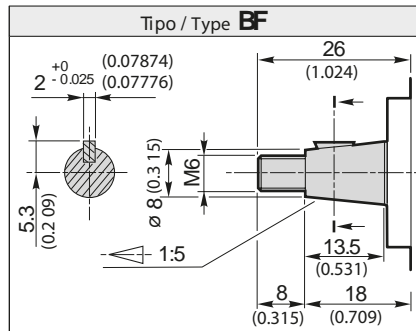
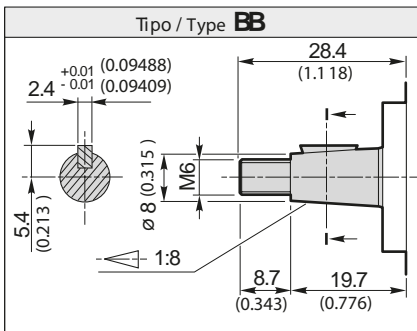
Rotazione / Rotation	
C	A

41 **POMPE GRUPPO**
PUMPS GROUP **A1**

Dimensoni / Dimensions mm (in)



Shaft Alberi disponibili / Available shafts



**POMPE GRUPPO
PUMPS GROUP**

A1

1 (SAE AA)

Dati tecnici / Technical data

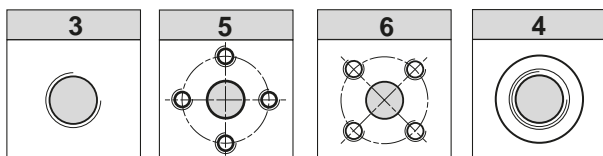
Grandezza Size	Cilindrata Displacement [cm ³ /rev] [in ³ /rev]	Pressione max. d' esercizio Max working pressure			Velocità max. Max speed [g/min] [rpm]	Portata max. Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Massa Mass [Kg] [lbs]	Rendimento olumetrico min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [in.]	B [mm] [in.]		
A1090	0.89 (0.05)	240 (3480)	260 (3770)	290 (4205)	6000	5.3 (1.40)	600	0.49 (0.13)	38.3 (1.508)	77.1 (3.035)	0.91 (2.01)	92*
A1001	1.18 (0.07)	240 (3480)	260 (3770)	290 (4205)	6000	7.1 (1.88)	600	0.65 (0.17)	38.85 (1.530)	78.2 (3.079)	0.93 (2.05)	
A1160	1.6 (0.10)	240 (3480)	260 (3770)	290 (4205)	6000	9.6 (2.54)	400	0.61 (0.16)	39.7 (1.563)	79.9 (3.146)	0.95 (2.09)	95*
A1002	2.0 (0.12)	220 (3190)	250 (3625)	270 (3915)	5500	11 (2.91)	400	0.76 (0.20)	40.45 (1.593)	81.4 (3.205)	0.97 (2.14)	
A1250	2.5 (0.15)	220 (3190)	250 (3625)	270 (3915)	5000	12.5 (3.30)	400	0.95 (0.25)	41.45 (1.632)	83.4 (3.283)	1.00 (2.21)	
A1003	3.2 (0.20)	210 (3045)	240 (3480)	260 (3770)	4500	14.4 (3.80)	400	1.21 (0.32)	42.8 (1.685)	86.1 (3.390)	1.04 (2.29)	
A1370	3.7 (0.23)	210 (3045)	240 (3480)	260 (3770)	4000	14.8 (3.91)	400	1.40 (0.37)	43.8 (1.724)	88.1 (3.469)	1.07 (2.369)	
A1004	4.2 (0.26)	190 (2755)	210 (3045)	230 (3335)	3500	14.7 (3.88)	400	1.60 (0.42)	44.75 (1.762)	90 (3.543)	1.10 (2.43)	
A1005	5.0 (0.31)	180 (2610)	210 (3045)	230 (3335)	3000	15 (3.96)	400	1.90 (0.50)	46.3 (1.823)	93.1 (3.665)	1.14 (2.51)	
A1006	6.3 (0.38)	170 (2465)	190 (2755)	210 (3045)	2700	17 (4.49)	400	2.39 (0.63)	48.85 (1.923)	98.2 (3.866)	1.22 (2.69)	
A1008	7.76 (0.47)	170 (2465)	190 (2755)	210 (3045)	2500	19.4 (5.13)	400	2.95 (0.78)	51.7 (2.035)	103.9 (4.091)	1.30 (2.87)	
A1009	9.78 (0.60)	150 (2175)	170 (2465)	190 (2755)	2000	19.6 (5.18)	400	3.71 (0.98)	55.65 (2.191)	111.8 (4.402)	1.41 (3.11)	

* (Valori riferiti in fase di collaudo a 1500 giri/min / Value reported during the testing at 1500 rpm)

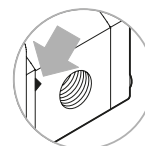
Esempio di ordinazione in codice / Example of ordering code

A	1	A	1	002	BB	1	F	3	C	0	(H)	VLP-I (N)
A	Tipo pompa / Pump type							A = Alluminio / Aluminium				
1	Forma costruttiva / Design mark							1				
A	Guarnizione standard / Standard gasket							A = Standard V = Guarnizione in Viton / Viton gasket				
1	Gruppo / Group							vedi tabella / see table				
002	Cilindrata / Displacement							vedi tabella / see table				
BB	Tipo albero / Shaft type							BB - BF - E - A - BG - BZ				
1	Tipo flangatura / Mounting flange							1				
F	Configurazione delle connessioni / Standard port configuration							F				
3	Tipo connessioni / Connections type							3 - 5 - 6 - 4 - NG - TG - UG				
C	Rotazione oraria / Clockwise rotation							C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation				
0	Posizioni connessioni / Connections positions							0 - 1 - 3 - 4				
(H)	Anello di rinforzo per bassa pressione in aspirazione / Stiffening gasket for low suction pressure							(a richiesta / optional)				
VLP-I (N)	Opzioni / Optional							VLP-I (N) Valore limitativo di pressione (pag. A-27) Pressure relief valve (page A-27)				

Connessioni / Connections

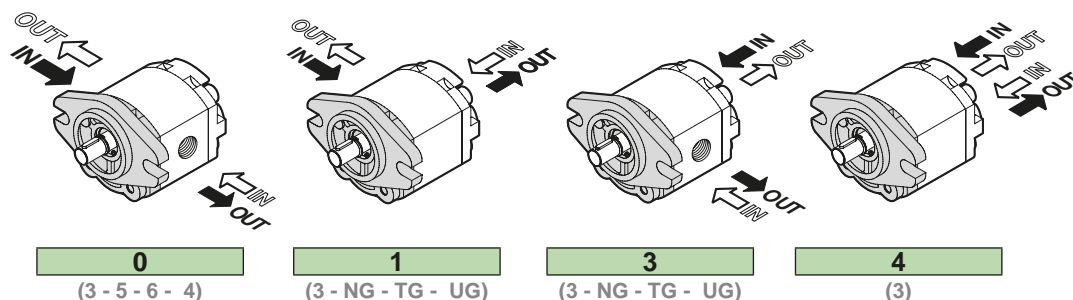


A-26



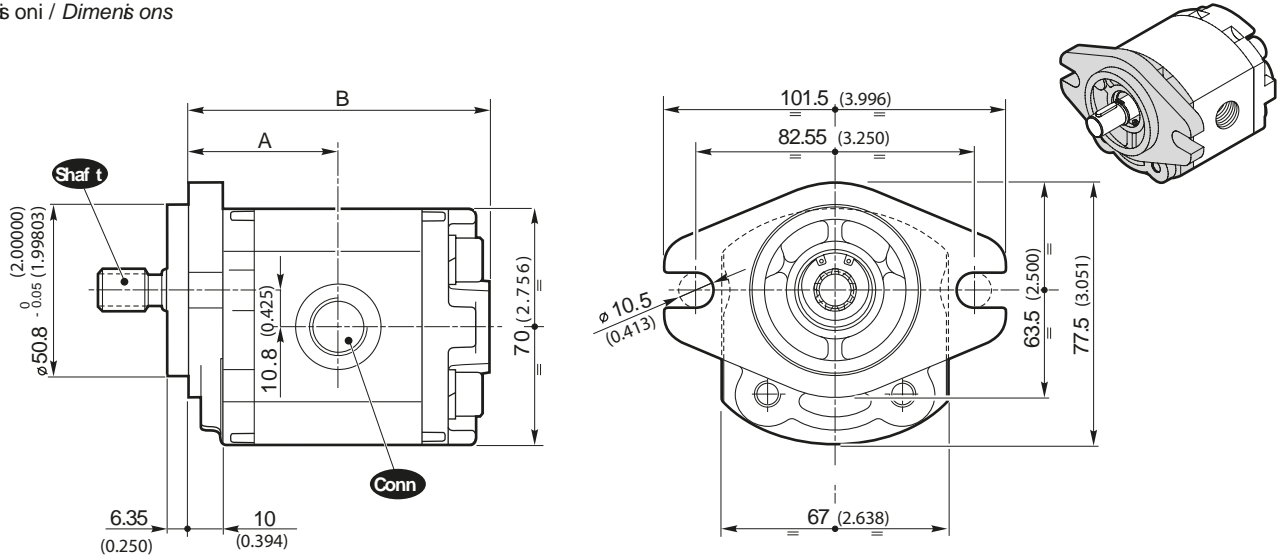
Il segno sul corpo indica il lato aspirazione per le pompe.
The sign on the body identify the suction side for the pumps

Posizioni delle connessioni / Connection positions

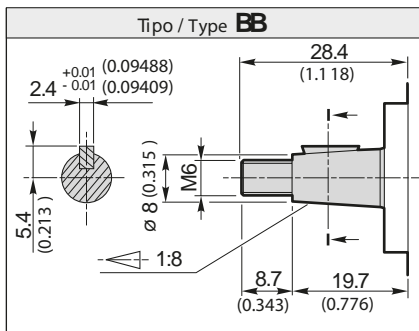


1 (SAE AA) **POMPE GRUPPO PUMPS GROUP** **A1**

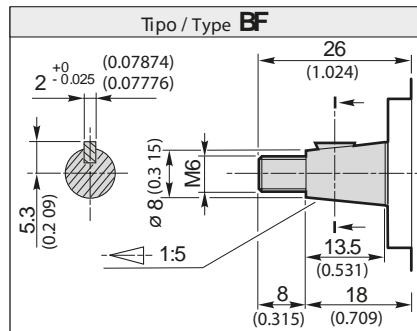
Dimens oni / Dimens ons



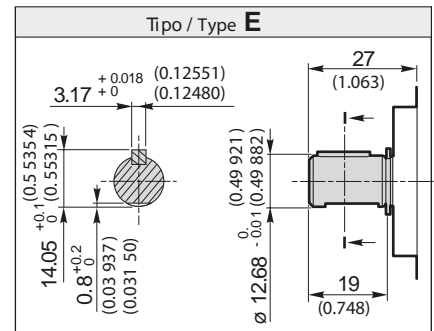
Shaf t Alberi dip onibili / **Aa ilabile b afts**



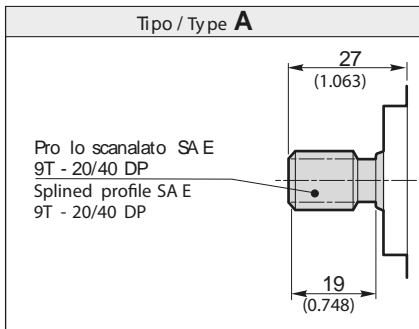
Coppia 18 Nm / Torque 13.3 ft-lbs



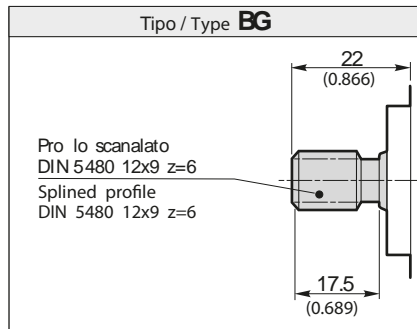
Coppia 18 Nm / Torque 13.3 ft-lbs



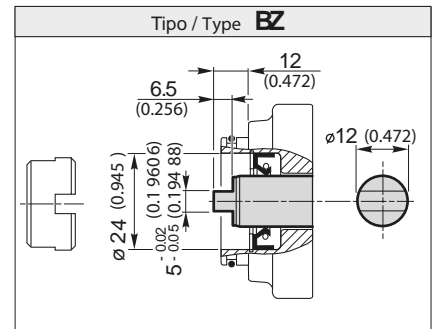
Coppia 30 Nm / Torque 22.1 ft-lbs



Coppia 30 Nm / Torque 22.1 ft-lbs



Coppia 30 Nm / Torque 22.1 ft-lbs



Coppia 12 Nm / Torque 8.9 ft-lbs

**POMPE GRUPPO
PUMPS GROUP**

A1

8

**Minicentralina
Power-pack**

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [cm ³ /rev] (in ³ /rev)	Pressione max. di esercizio Max working pressure			Velocità max. Max speed [g/min] (rpm)	Portata max. Max. flow [lt/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [lt/min] (Gal/min)	Dimensioni Dimensions			Massa Mass [Kg] (lbs)	Rendimento Min. volumetric efficiency %
		P1 [bar] (PSI)	P2 [bar] (PSI)	P3 [bar] (PSI)					A [mm] (in)	B [mm] (in)	L ¹ [mm] (in)		
A1090	0.89 (0.05)	210 (3045)	240 (3480)	260 (3770)	6000	5.3 (1.40)	600	0.49 (0.13)	73.1 (2.878)	61.6 (2.425)	80 (3.150)	0.91 (2.01)	92*
A1001	1.18 (0.07)	210 (3045)	240 (3480)	260 (3770)	6000	7.1 (1.88)	600	0.65 (0.17)	74.2 (2.921)	62.7 (2.469)	80 (3.150)	0.93 (2.05)	
A1160	1.6 (0.10)	210 (3045)	240 (3480)	260 (3770)	6000	9.6 (2.54)	400	0.61 (0.16)	75.9 (2.988)	64.4 (2.535)	80 (3.150)	0.95 (2.09)	
A1002	2.0 (0.12)	210 (3045)	240 (3480)	260 (3770)	5500	11 (2.91)	400	0.76 (0.20)	77.4 (3.047)	65.9 (2.594)	80 (3.150)	0.97 (2.14)	95*
A1250	2.5 (0.15)	210 (3045)	240 (3480)	260 (3770)	5000	12.5 (3.30)	400	0.95 (0.25)	79.4 (3.126)	67.9 (2.673)	85 (3.346)	1.00 (2.21)	
A1003	3.2 (0.20)	200 (2900)	230 (3335)	250 (3625)	4500	14.4 (3.80)	400	1.21 (0.32)	82.1 (3.232)	70.6 (2.780)	85 (3.346)	1.04 (2.29)	
A1370	3.7 (0.23)	200 (2900)	230 (3335)	250 (3625)	4000	14.8 (3.91)	400	1.40 (0.37)	84.1 (3.311)	72.6 (2.858)	90 (3.543)	1.07 (2.36)	
A1004	4.2 (0.26)	180 (2610)	210 (3045)	230 (3335)	3500	14.7 (3.88)	400	1.60 (0.42)	86 (3.386)	74.5 (2.933)	90 (3.543)	1.10 (2.43)	
A1005	5.0 (0.31)	180 (2610)	210 (3045)	230 (3335)	3000	15 (3.96)	400	1.90 (0.50)	89.1 (3.508)	77.6 (3.055)	95 (3.740)	1.14 (2.51)	
A1006	6.3 (0.38)	170 (2465)	190 (2755)	210 (3045)	2700	17 (4.49)	400	2.39 (0.63)	94.2 (3.709)	82.7 (3.256)	100 (3.937)	1.22 (2.69)	
A1008	7.76 (0.47)	170 (2465)	190 (2755)	210 (3045)	2500	19.4 (5.13)	400	2.95 (0.78)	99.9 (3.933)	88.4 (3.480)	105 (4.134)	1.30 (2.87)	
A1009	9.78 (0.60)	150 (2175)	170 (2465)	190 (2755)	2000	19.6 (5.18)	400	3.71 (0.98)	107.8 (4.244)	96.3 (3.791)	115 (4.528)	1.41 (3.11)	

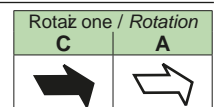
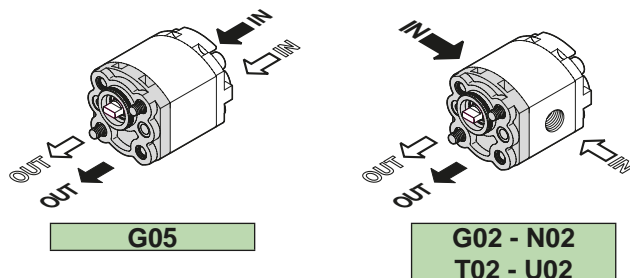
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

A 1 A 1 004 BZ 8 F G05 C

A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Formazione / Design mark	1
A	Guarnizione standard / Standard seal	A = Standard V = Guarnizione in Viton / Viton seal
1	Gruppo / Group	1 di tabella / see table
004	Cilindrata / Displacement	004 di tabella / see table
BZ	Tipo albero / Shaft type	BB - BF - E - A - BG - BZ
8	Tipo flangiatura / Mounting flange	8
F	Configurazione delle connessioni / Standard port configuration	F
G05	Tipo connessioni / Connections type	G05 - G02 - N02 - T02 - U02
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation

Conn. Tipo e posizione connessioni / Connections type and position



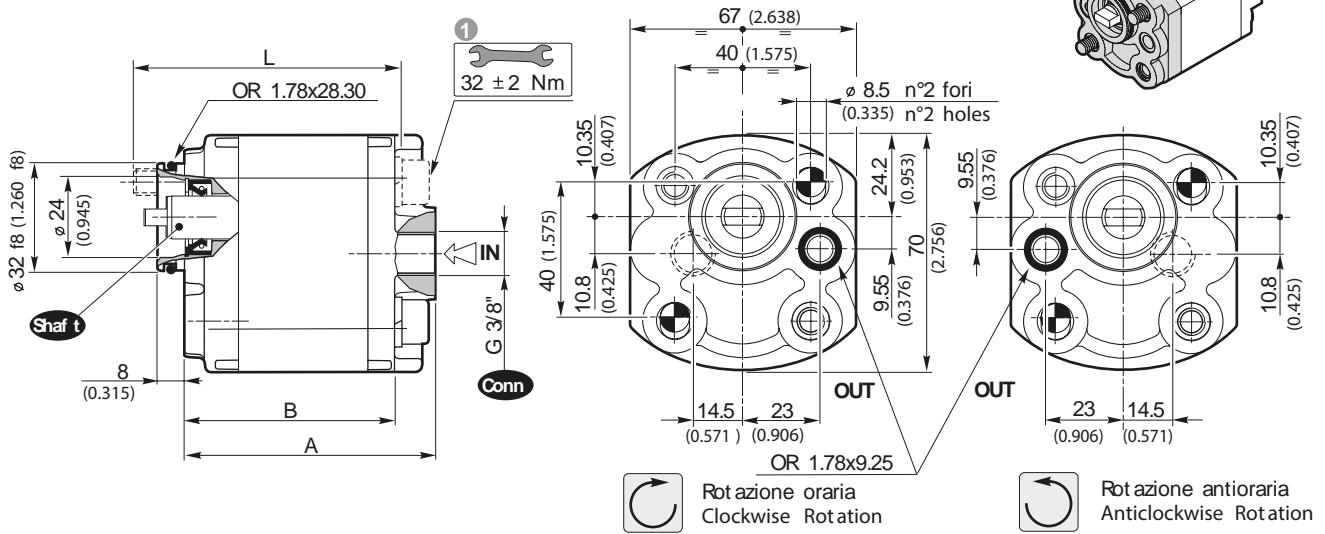
**Minicentralina
Power-pack**

8

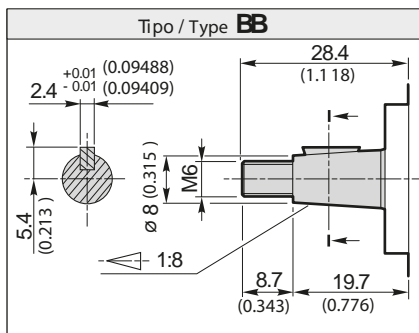
**POMPE GRUPPO
PUMPS GROUP**

A1

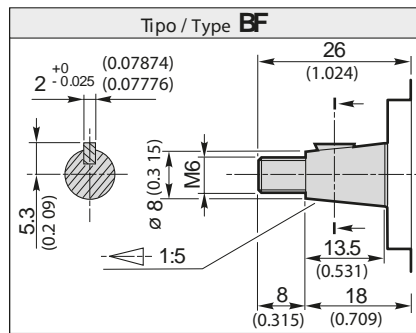
Dimensioni / Dimensions



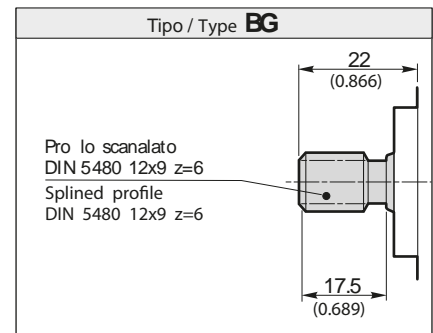
Shaf t Alberi di p onibili / A^o ilabile b affts



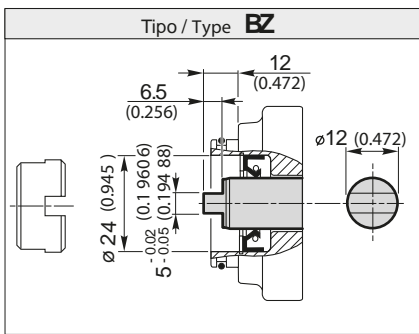
Coppia 18 Nm / Torque 13.3 ft-lbs



Coppia 18 Nm / Torque 13.3 ft-lbs



Coppia 30 Nm / Torque 22.1 ft-lbs



Coppia 12 Nm / Torque 8.9 ft-lbs

1 Coppia di serraggio vite: 32 \pm 2Nm. Utilizzare le viti classe 10.9 - 12.9 UNI EN 20898/1.
Il Kit di viti per il fissaggio della pompa è da ordinare separatamente.
Codice di ordinazione del Kit di fissaggio:

0019W + Lunghezza L (vedi tabella)
+ Length L (see table)

Il fissaggio della pompa può essere effettuato con 2 viti prigioniere in materiale classe 10.9 - 12.9 pre-tirate a 25 \pm 2Nm.
Fissare la pompa mediante dadi autobloccanti o coppia di serraggio 32 \pm 2Nm.

Il senso di rotazione della pompa deve essere ribisposto in fase di ordinazione perché questo tipo di intervento deve essere sempre eseguito in fabbrica.

1 Tightening torque of screws 283 \pm 18 lb-in. Use screws type 10.9 - 12.9 UNI EN 20898/1.
The screw kit for the pump assembling should be ordered separately.
Ordering code of assembling Kit:

The assembling of the pump should be effected by 2 screws used type 10.9 - 12.9 pre-tighten at 221 \pm 18 lb-in.
Fix the pump by self-locking nuts with tightening torque 283 \pm 18 lb-in.

The rotation direction shall be specified while issuing the order because this kind of operation must necessarily be carried out at our premises.

POMPE GRUPPO
PUMPS GROUP **A1**

9

(Fissaggio da minicentralina)
(Power-pack fixing)

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] [in ³ /rev]	Pressione max. di esercizio Max working pressure			Velocità max. Max speed [g/min] [rpm]	Portata max. Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions				Massa Mass [Kg] [lbs]	Rendimento volumetrico min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [in.]	B [mm] [in.]	C [mm] [in.]	L ¹ [mm] [in.]		
A1090	0.89 (0.05)	210 (3045)	240 (3480)	260 (3770)	6000	5.3 (1.40)	600	0.49 (0.13)	73.6 (2.898)	34.8 (1.370)	61.6 (2.425)	80 (3.150)	0.91 (2.01)	92*
A1001	1.18 (0.07)	210 (3045)	240 (3480)	260 (3770)	6000	7.1 (1.88)	600	0.65 (0.17)	74.7 (2.941)	35.35 (1.392)	62.7 (2.469)	80 (3.150)	0.93 (2.05)	
A1160	1.6 (0.10)	210 (3045)	240 (3480)	260 (3770)	6000	9.6 (2.54)	400	0.61 (0.16)	76.4 (3.008)	36.2 (1.425)	64.4 (2.535)	80 (3.150)	0.95 (2.09)	
A1002	2.0 (0.12)	210 (3045)	240 (3480)	260 (3770)	5500	11 (2.91)	400	0.76 (0.20)	77.9 (3.067)	36.95 (1.455)	65.9 (2.594)	80 (3.150)	0.97 (2.14)	95*
A1250	2.5 (0.15)	210 (3045)	240 (3480)	260 (3770)	5000	12.5 (3.30)	400	0.95 (0.25)	79.9 (3.146)	37.95 (1.494)	67.9 (2.673)	85 (3.346)	1.00 (2.21)	
A1003	3.2 (0.20)	200 (2900)	230 (3335)	250 (3625)	4500	14.4 (3.80)	400	1.21 (0.32)	82.6 (3.252)	39.3 (1.547)	70.6 (2.780)	85 (3.346)	1.04 (2.29)	
A1370	3.7 (0.23)	200 (2900)	230 (3335)	250 (3625)	4000	14.8 (3.91)	400	1.40 (0.37)	84.6 (3.331)	40.3 (1.587)	72.6 (2.858)	90 (3.543)	1.07 (2.36)	
A1004	4.2 (0.26)	180 (2610)	210 (3045)	230 (3335)	3500	14.7 (3.88)	400	1.60 (0.42)	86.5 (3.406)	41.25 (1.624)	74.5 (2.933)	90 (3.543)	1.10 (2.43)	
A1005	5.0 (0.31)	180 (2610)	210 (3045)	230 (3335)	3000	15 (3.96)	400	1.90 (0.50)	89.6 (3.528)	42.8 (1.685)	77.6 (3.055)	95 (3.740)	1.14 (2.51)	
A1006	6.3 (0.38)	170 (2465)	190 (2755)	210 (3045)	2700	17 (4.49)	400	2.39 (0.63)	94.7 (3.728)	45.35 (1.785)	82.7 (3.256)	100 (3.937)	1.22 (2.69)	
A1008	7.76 (0.47)	170 (2465)	190 (2755)	210 (3045)	2500	19.4 (5.13)	400	2.95 (0.78)	100.4 (3.953)	48.2 (1.898)	88.4 (3.480)	105 (4.134)	1.30 (2.87)	
A1009	9.78 (0.60)	150 (2175)	170 (2465)	190 (2755)	2000	19.6 (5.18)	400	3.71 (0.98)	108.3 (4.264)	52.15 (2.053)	96.3 (3.791)	115 (4.528)	1.41 (3.11)	

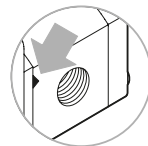
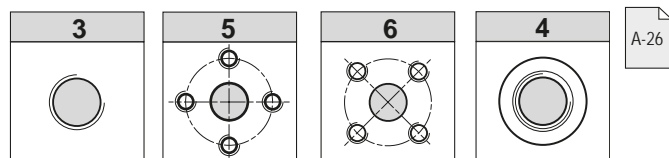
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

A 1 A 1 004 BJ 9 F 3 C 0 VLP-I (N)

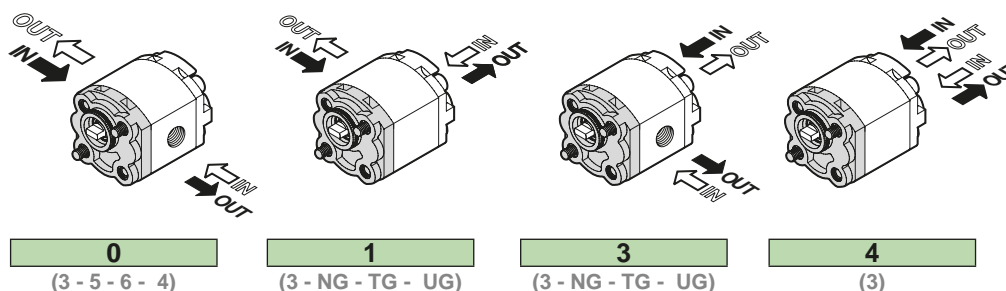
A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard seal	A = Standard V = Guarnizione in Viton / Viton seal
1	Gruppo / Group	e di tabella / see table
004	Cilindrata / Displacement	e di tabella / see table
BJ	Tipo albero / Shaft type	BJ - BM
9	Tipo flangiatura / Mounting flange	9
F	Configurazione delle connessioni / Standard port configuration	F
3	Tipo connessioni / Connections type	3 - 5 - 6 - 4 - NG - TG - UG
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
0	Posizione connessioni / Connections positions	0 - 1 - 3 - 4
VLP-I (N)	Opzioni / Optional	VLP-I (N) Valvola limitatrice di pressione (pag. A-27) Pressure relief valve (page A-27)

Conn Connessioni / Connections



Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identify the **suction side** for the pumps

Posizione delle connessioni / Connection positions



Rotazione / Rotation	
C	A

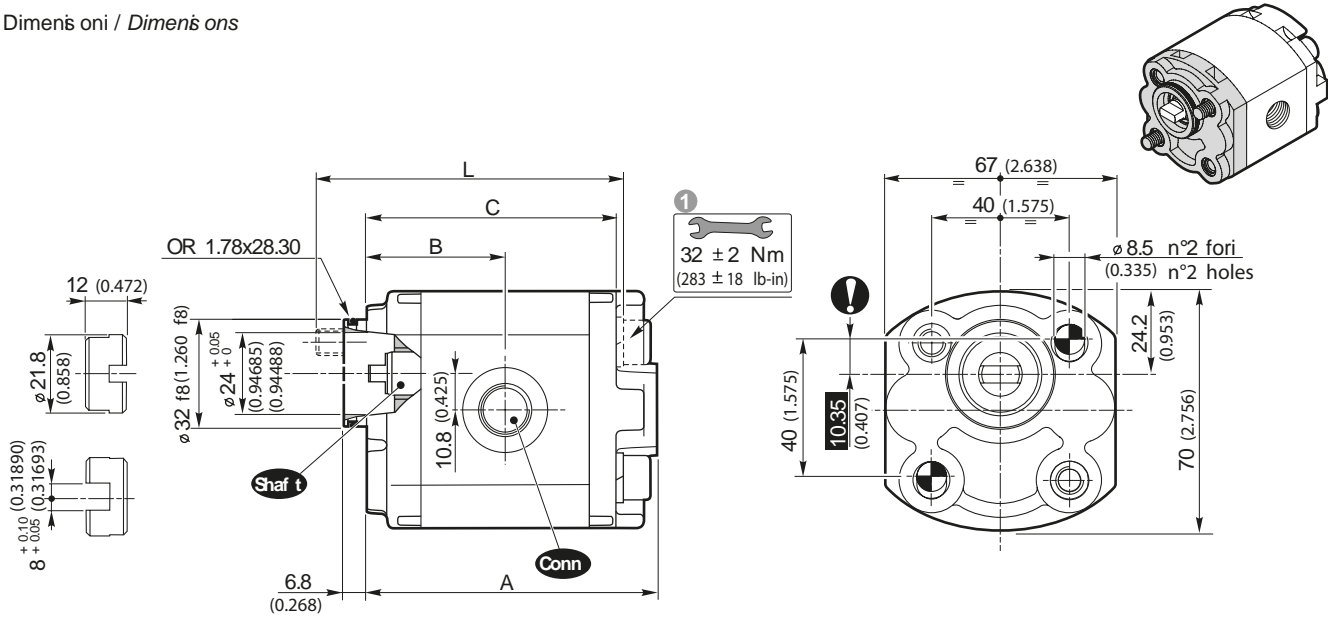
**(Fissaggio da minicentralina)
(Power-pack fixing)**

9

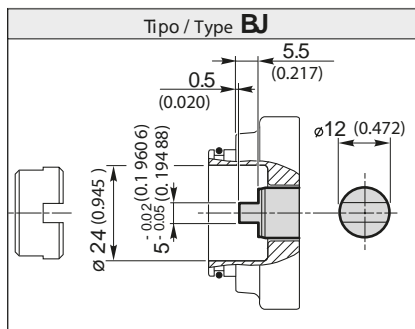
**POMPE GRUPPO
PUMPS GROUP**

A1

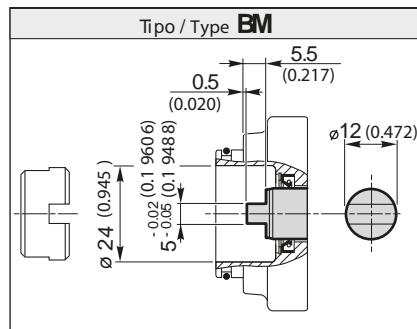
Dimensioni / Dimensions



Shaf t Alberi dip onibili / **A** ilabile **b** afts



Coppia 12 Nm / Torque 8.9 ft-lbs



Coppia 12 Nm / Torque 8.9 ft-lbs

1 Coppia di viti a raggio viventi: 32 ± 2 Nm. Utilizzare viti classe 10.9 - 12.9 UNI EN 20898/1.
Il Kit di viti per il fissaggio della pompa è da ordinare separatamente.
Codice di ordinazione del Kit di fissaggio:

1 Tightening torque of screws: 283 ± 18 lb-in. Use screws type 10.9 - 12.9 UNI EN 20898/1.
The screws kit for the pump assembling should be ordered separately.
Ordering code of assembling Kit:

0019W + Lunghezza L (vedi tabella)
+ Length L (see table)

Il fissaggio della pompa può essere effettuato con 2 viti prigioniere in materiale classe 10.9 - 12.9 pre-tirate a 25 ± 2 Nm.
Fissare la pompa mediante dadi autobloccanti o non oppia di raggio 32 ± 2 Nm.

The assembling of the pump should be effected with 2 screws used type 10.9 - 12.9 pre-tighten at 221 ± 18 lb-in.
Fix the pump by self-locking nuts with tightening torque 283 ± 18 lb-in.

**POMPE GRUPPO
PUMPS GROUP**

A1

10

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] [in ³ /rev]	Pressione massima d'ingresso Max working pressure			Velocità max Max speed [g/min] [rpm]	Portata max Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions				Massa Mass [Kg] [lbs]	Rendimento volumetrico min. Min. volumetric efficiency %
		P1	P2	P3					A	B	C	L 1		
		[bar] (PSI)	[bar] (PSI)	[bar] (PSI)					[mm] (in)	[mm] (in)	[mm] (in)	[mm] (in)		
A1090	0.89 (0.05)	210 (3045)	240 (3480)	260 (3770)	6000	5.3 (1.40)	600	0.49 (0.13)	73.6 (2.898)	34.8 (1.370)	61.6 (2.425)	80 (3.150)	0.91 (2.01)	92*
A1001	1.18 (0.07)	210 (3045)	240 (3480)	260 (3770)	6000	7.1 (1.88)	600	0.65 (0.17)	74.7 (2.941)	35.35 (1.392)	62.7 (2.469)	80 (3.150)	0.93 (2.05)	
A1160	1.6 (0.10)	210 (3045)	240 (3480)	260 (3770)	6000	9.6 (2.54)	400	0.61 (0.16)	76.4 (3.008)	36.2 (1.425)	64.4 (2.535)	80 (3.150)	0.95 (2.09)	
A1002	2.0 (0.12)	210 (3045)	240 (3480)	260 (3770)	5500	11 (2.91)	400	0.76 (0.20)	77.9 (3.067)	36.95 (1.455)	65.9 (2.594)	80 (3.150)	0.97 (2.14)	95*
A1250	2.5 (0.15)	210 (3045)	240 (3480)	260 (3770)	5000	12.5 (3.30)	400	0.95 (0.25)	79.9 (3.146)	37.95 (1.494)	67.9 (2.673)	85 (3.346)	1.00 (2.21)	
A1003	3.2 (0.20)	200 (2900)	230 (3335)	250 (3625)	4500	14.4 (3.80)	400	1.21 (0.32)	82.6 (3.252)	39.3 (1.547)	70.6 (2.780)	85 (3.346)	1.04 (2.29)	
A1370	3.7 (0.23)	200 (2900)	230 (3335)	250 (3625)	4000	14.8 (3.91)	400	1.40 (0.37)	84.6 (3.331)	40.3 (1.587)	72.6 (2.858)	90 (3.543)	1.07 (2.36)	
A1004	4.2 (0.26)	180 (2610)	210 (3045)	230 (3335)	3500	14.7 (3.88)	400	1.60 (0.42)	86.5 (3.406)	41.25 (1.624)	74.5 (2.933)	90 (3.543)	1.10 (2.43)	
A1005	5.0 (0.31)	180 (2610)	210 (3045)	230 (3335)	3000	15 (3.96)	400	1.90 (0.50)	89.6 (3.528)	42.8 (1.685)	77.6 (3.055)	95 (3.740)	1.14 (2.51)	
A1006	6.3 (0.38)	170 (2465)	190 (2755)	210 (3045)	2700	17 (4.49)	400	2.39 (0.63)	94.7 (3.728)	45.35 (1.785)	82.7 (3.256)	100 (3.937)	1.22 (2.69)	
A1008	7.76 (0.47)	170 (2465)	190 (2755)	210 (3045)	2500	19.4 (5.13)	400	2.95 (0.78)	100.4 (3.953)	48.2 (1.898)	88.4 (3.480)	105 (4.134)	1.30 (2.87)	
A1009	9.78 (0.60)	150 (2175)	170 (2465)	190 (2755)	2000	19.6 (5.18)	400	3.71 (0.98)	108.3 (4.264)	52.15 (2.053)	96.3 (3.791)	115 (4.528)	1.41 (3.11)	

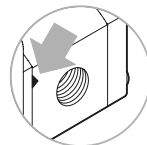
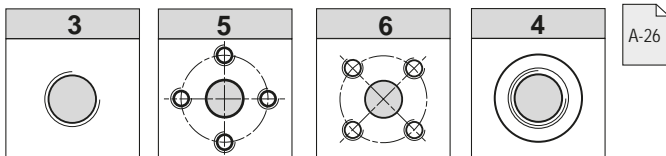
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

A 1 A 1 004 BJ 10 F 3 C 0 VLP-I (N)

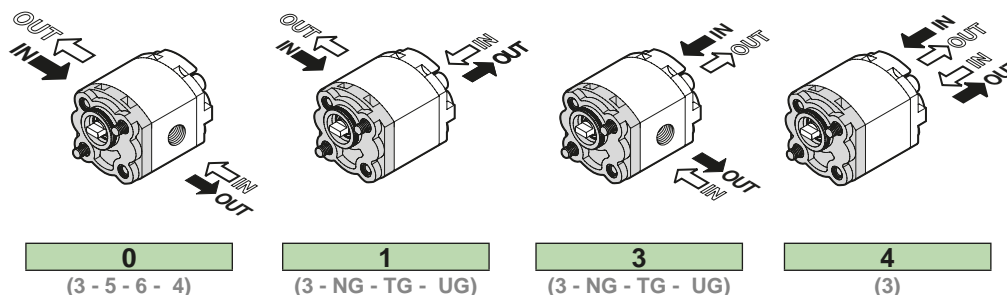
A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard shaft seal	A = Standard V = Guarnizione in Viton / Viton seal
1	Gruppo / Group	vedi tabella / see table
004	Cilindrata / Displacement	vedi tabella / see table
BJ	Tipo albero / Shaft type	BJ - E32BC
10	Tipo flangiatura / Mounting flange	10
F	Configurazione delle connessioni / Standard port configuration	F
3	Tipo connessioni / Connections type	3 - 5 - 6 - 4 - NG - TG - UG
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
0	Posizione connessioni / Connections positions	0 - 1 - 3 - 4
VLP-I (N)	Opzioni / Optional	VLP-I (N) Valore limitativo di pressione (pag. A-27) Pressione relieva (page A-27)

Conn Connessioni / Connections



Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

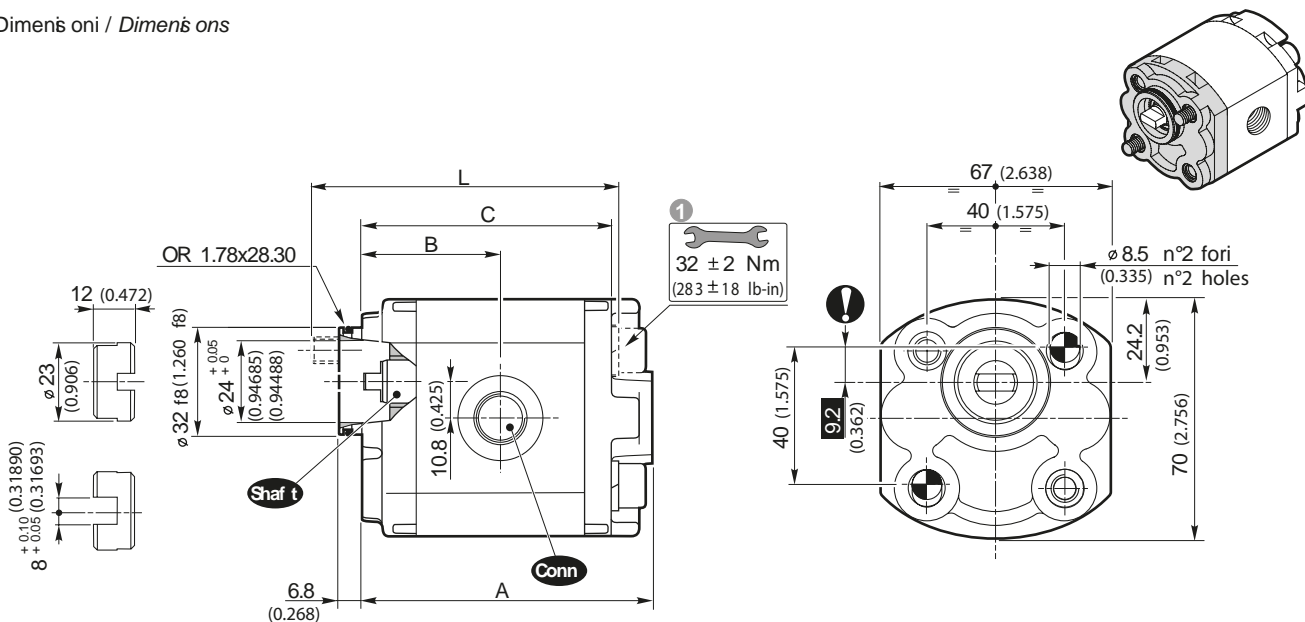
Posizione delle connessioni / Connection positions



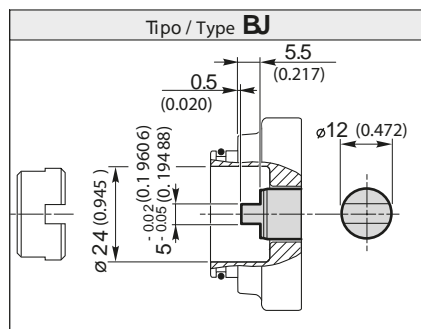
Rotazione / Rotation	
C	A

10 **POMPE GRUPPO**
PUMPS GROUP **A1**

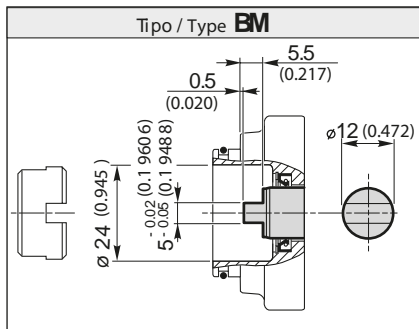
Dimens oni / Dimens ons



Shaf t Alberi dip onibili / **Aa ilable b afts**



Coppia 12 Nm / Torque 8.9 ft-lbs



Coppia 12 Nm / Torque 8.9 ft-lbs

1 Coppia di serraggio viti: 32 ± 2Nm. Utilizzare viti classe 10.9 - 12.9 UNI EN 20898/1.
Il Kit di viti per il fissaggio della pompa è da ordinare separatamente.
Codice di ordinazione del Kit di fissaggio:

1 Tightening torque of screws 283 ± 18 lb-in. Use screws type 10.9 - 12.9 UNI EN 20898/1.
The screws kit for the pump assembling should be ordered separately.
Ordering code of assembling Kit:

0019W + Lunghezza L (vedi tabella)
+ Length L (see table)

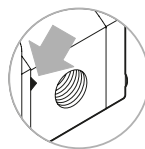
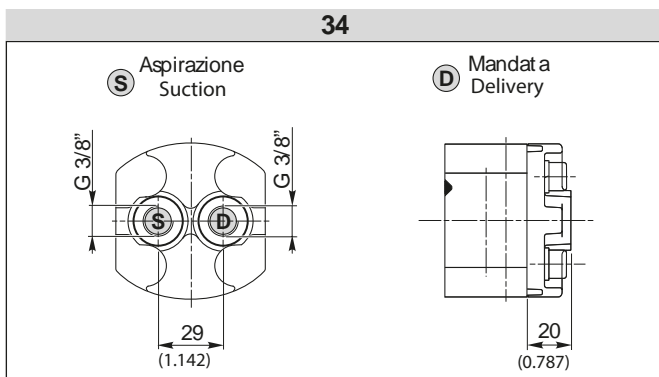
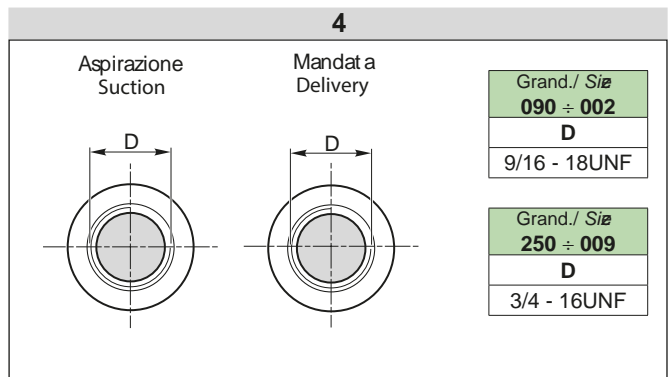
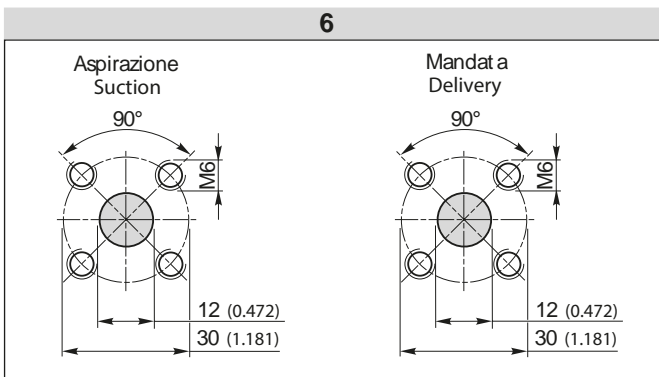
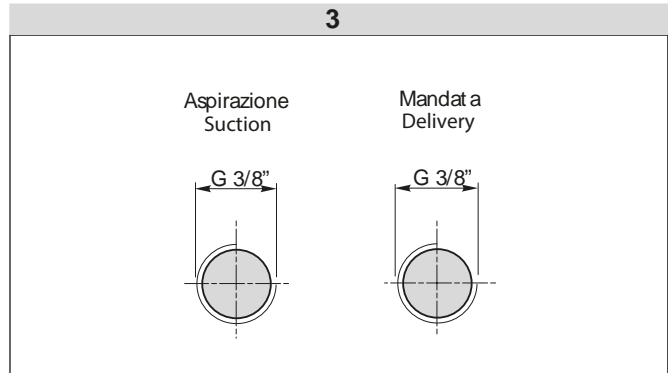
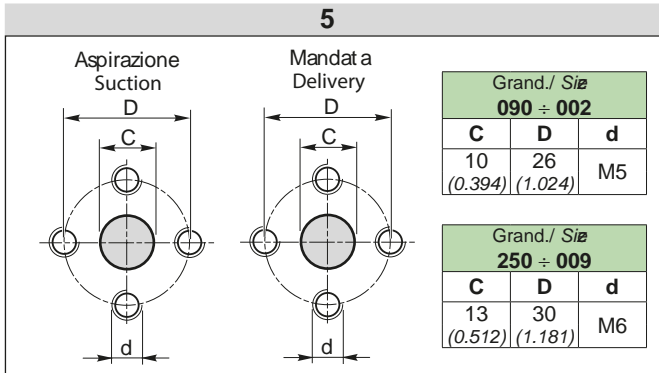
Il fissaggio della pompa può essere effettuato con 2 viti prigioniere in materiale classe 10.9 - 12.9 pre-tirate a 25 ± 2Nm.
Fissare la pompa mediante dadi autobloccanti o coppia di serraggio 32 ± 2Nm.

The assembling of the pump should be effected with 2 screws pre-tightened at 221 ± 18 lb-in.
Fix the pump by self-locking nuts with tightening torque 283 ± 18 lb-in.

**POMPE GRUPPO
PUMPS GROUP**

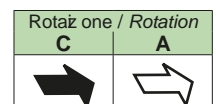
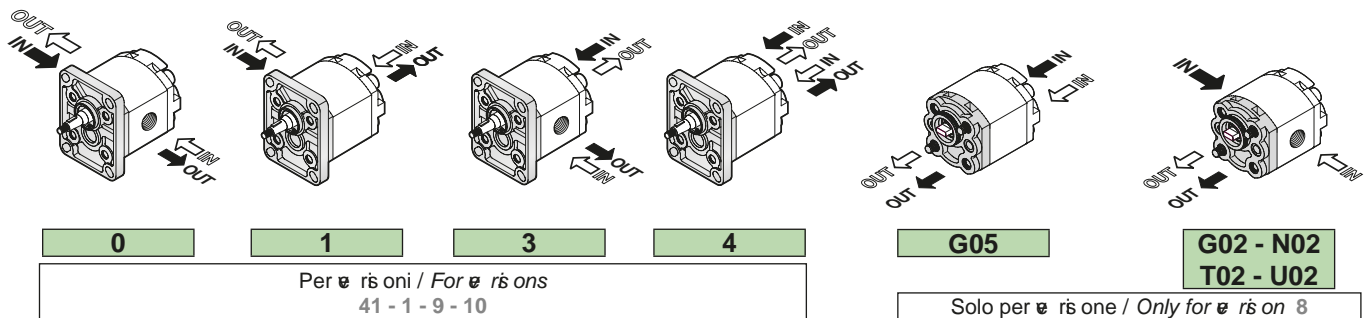
A1

CONNESSIONI / CONNECTIONS



Il segno a lo rpo indica il **lato aspirazione** per le pompe.
The sign on the body identify the **suction side** for the pumps

Posizione delle connessioni / Connections positions



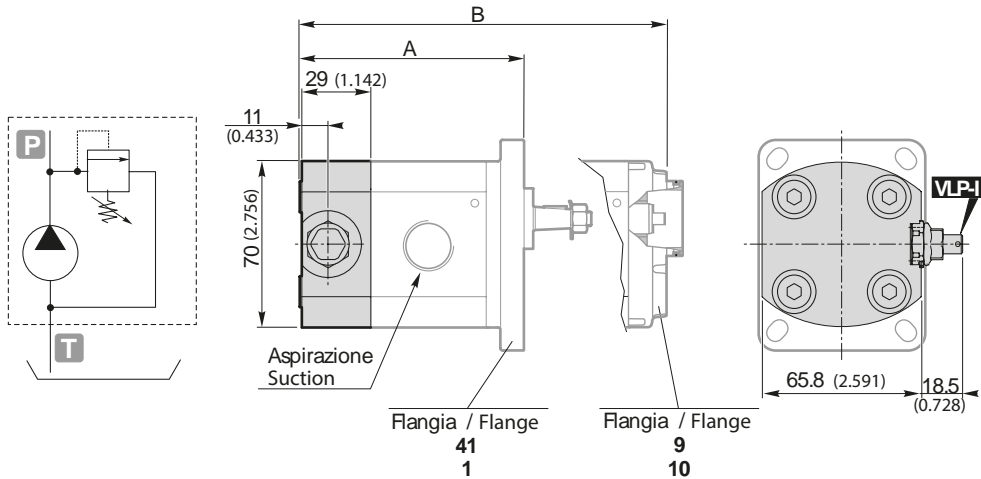
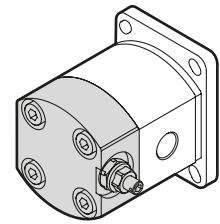
OPZIONI / OPTIONAL

**POMPE GRUPPO
PUMPS GROUP**

A1

VLP- I (N)

**Valvola limitatrice di pressione
Pressure relief valve**



	A		B
	41	1	9 - 10
A1090	82.6 (3.252)	86.1 (3.390)	82.6 (3.252)
A1001	83.7 (3.295)	87.2 (3.433)	83.7 (3.295)
A1160	85.4 (3.362)	88.9 (3.500)	85.4 (3.362)
A1002	86.9 (3.421)	90.4 (3.559)	86.9 (3.421)
A1250	88.9 (3.500)	92.4 (3.638)	88.9 (3.500)
A1003	91.6 (3.606)	95.1 (3.744)	91.6 (3.606)
A1370	93.6 (3.685)	97.1 (3.823)	93.6 (3.685)
A1004	95.5 (3.760)	99.0 (3.898)	95.5 (3.760)
A1005	98.6 (3.882)	102.1 (4.020)	98.6 (3.882)
A1006	103.7 (4.083)	107.2 (4.220)	103.7 (4.083)
A1008	109.4 (4.307)	112.9 (4.445)	109.4 (4.307)
A1009	117.3 (4.618)	120.8 (4.756)	117.3 (4.618)

NB.
La valvola limitatrice di pressione si applica sostituendo il coperchio posteriore (previsto o con il serbatoio interno).

L'apertura della valvola limitatrice di pressione deve avvenire per tempi non superiori ai 10 secondi ogni minuto per evitare il surriscaldamento della pompa.

Warning.
The pressure relief valve can be applied by substituting the rear cover (only internal relief is set).

The opening of the pressure relief valve should carry out for times not over 10" each minute to avoid the overheating of the pump.

Esempio di ordinazione in codice / Example of ordering code

A	1	A	1	002	BB	1	F	3	C	0	VLP-I	(N)
---	---	---	---	-----	----	---	---	---	---	---	-------	-----

VLP-I	Coperchio con VPL a serbatoio interno Cover with VPL at internal tank	VLP-I
(N)	Tipo di molla / Spring type	B - N - G - R (vedi tabella / See table)

		Tipo di molla / Spring type			
		B	N	G	R
		molla bianca white spring	molla nera black spring	molla gialla yellow spring	molla rossa red spring
Campi di taratura* Calibration fields*	[bar] (psi)	30 ÷ 80 (435 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 300 (2915 ÷ 4350)	301 ÷ 400 (4365 ÷ 5800)

* In caso di omissione del valore di taratura, esso sarà inteso standard (molla nera con taratura 120 bar).

* Without setting request, it will be considered standard (black spring: 1740 psi).

**POMPE GRUPPO
PUMPS GROUP** **2**

41

**Flangia e coperchio in Alluminio
Flange and cover in Aluminium**

Dati tecnici / Technical data

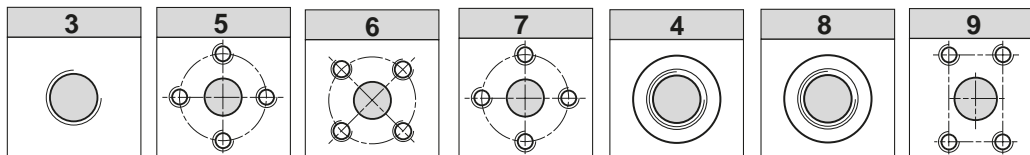
Grandezza Size	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max d' esercizio Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max. flow [lt/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [lt/min] (Gal/min)	Dimensioni Dimensions		Massa Mass [Kg] (lbs)	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] (PSI)	P2 [bar] (PSI)	P3 [bar] (PSI)					A [mm] (in)	B [mm] (in)		
A2004	4 (0.24)	250 (3625)	270 (3915)	290 (4205)	4000	16 (4.23)	500	1.9 (0.50)	44.4 (1.748)	93 (3.661)	2.30 (5.07)	95*
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	46 (1.811)	96.3 (3.791)	2.45 (5.40)	
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	48.1 (1.894)	100.5 (3.957)	2.60 (5.73)	
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	2.70 (5.95)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	52.7 (2.075)	109.6 (4.315)	2.80 (6.17)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	54.8 (2.157)	113.8 (4.480)	2.95 (6.51)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	57.3 (2.256)	118.8 (4.677)	3.10 (6.84)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	59.8 (2.354)	123.8 (4.874)	3.25 (7.17)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	62.7 (2.469)	129.6 (5.102)	3.40 (7.50)	

* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

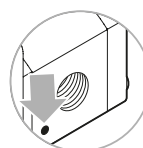
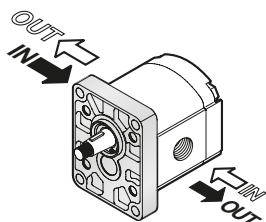
Esempio di ordinazione in codice / Example of ordering code

A	1	A	2	014	BB	41	F	3	C	(H)	VLP-I (N)	
A	Tipo pompa / Pump type					A = Alluminio / Aluminium						
1	Forma di serratura / Design mark					1						
A	Guarnizione standard / Standard gasket					A = Standard V = Guarnizione in Viton / Viton gasket						
2	Gruppo / Group					# di tabella / # of table						
014	Cilindrata / Displacement					# di tabella / # of table						
BB	Tipo albero / Shaft type					BB - BF - BH - E - A - BG - BL						
41	Tipo flangiatura / Mounting flange					41						
F	Configurazione delle connessioni / Standard port configuration					F (004-008) A (011-026)						
3	Tipo connessioni / Connections type					3 - 5 - 6 - 7 - 4 - 8 - 9						
C	Rotazione oraria / Clockwise rotation					C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation						
(H)	Anello di rinforzo per bassa pressione in applicazioni Stiffening seal for low pressure applications					(a richiesta / optional)						
VLP-I (N)	Opzioni / Optional					VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-49) Pressure relief valve (page A-49)						

Conn Connessioni / Connections



A-48



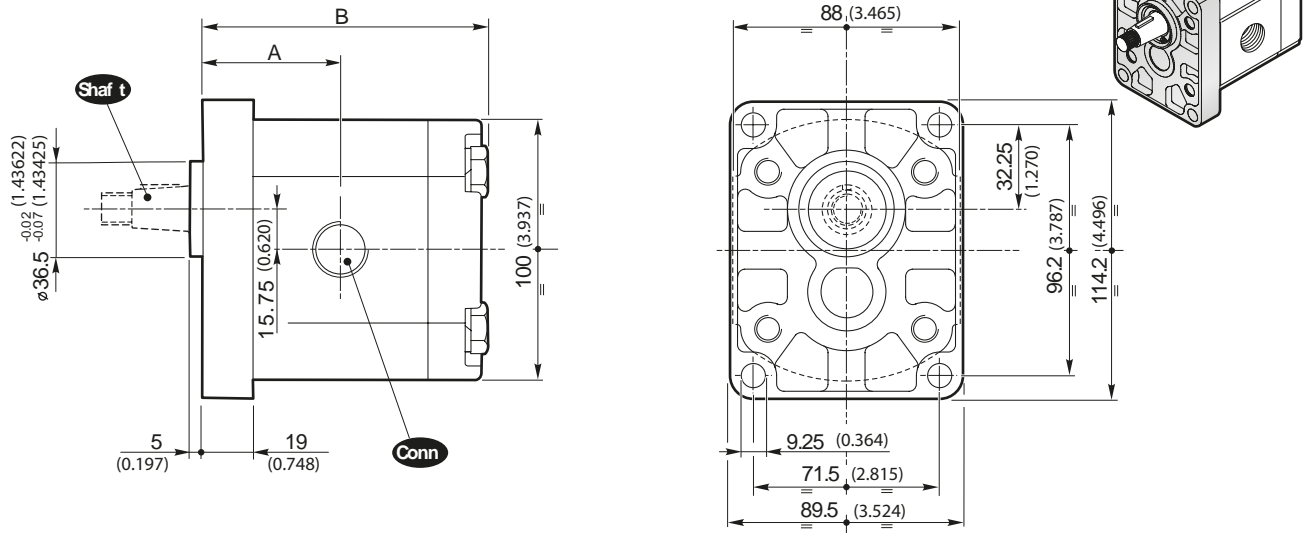
Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

Rotazione / Rotation	
C	A

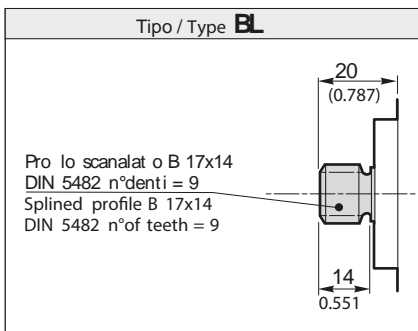
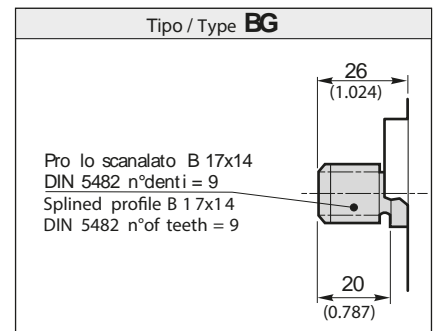
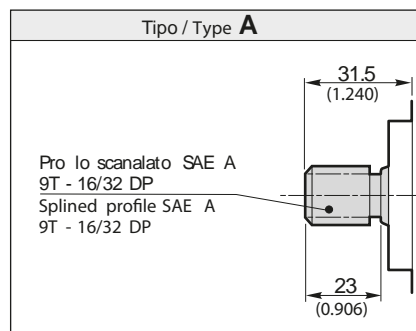
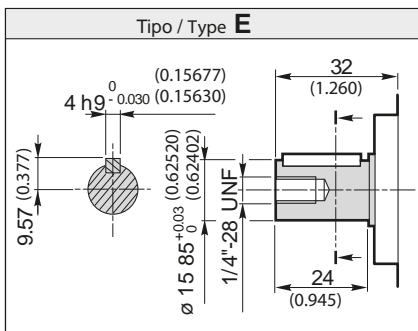
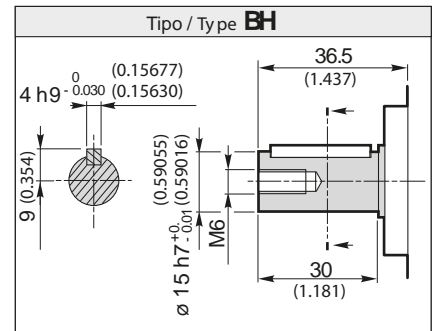
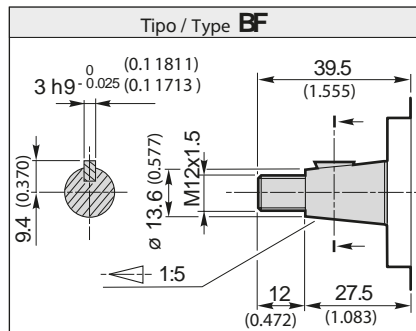
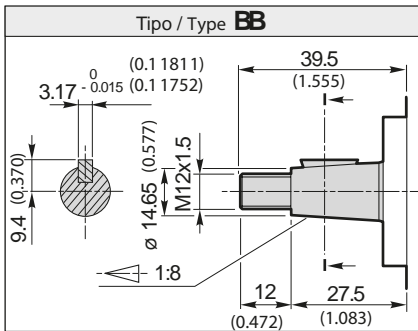
Flangia e coperchio in Alluminio
Flange and cover in Aluminium

41 **POMPE GRUPPO**
PUMPS GROUP **2**

Dimensi on i / Dimens ons



Shaf t Alberi dip onibili / Aa ilabile b afts



**POMPE GRUPPO
PUMPS GROUP**

2

41

**Flangia e coperchio in Ghisa
Flange and cover in Cast iron**

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max d'operazione Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max. flow [lt/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [lt/min] (Gal/min)	Dimensioni Dimensions		Massa Mass [Kg] (lbs)	Rendimento Efficiency Min. efficiency %
		P1 [bar] (PSI)	P2 [bar] (PSI)	P3 [bar] (PSI)					A [mm] (in)	B [mm] (in)		
A2004	4 (0.24)	280 (4060)	300 (4350)	320 (4640)	4000	16 (4.23)	500	1.9 (0.50)	44.4 (1.748)	93 (3.661)	3.40 (7.50)	95*
A2006	6 (0.37)	280 (4060)	300 (4350)	320 (4640)	4000	24 (6.34)	500	2.85 (0.75)	46 (1.811)	96.3 (3.791)	3.55 (7.83)	
A2008	8.5 (0.52)	280 (4060)	300 (4350)	320 (4640)	3500	29.7 (7.85)	500	4.03 (1.06)	48.1 (1.894)	100.5 (3.957)	3.70 (8.16)	
A2011	11 (0.67)	280 (4060)	300 (4350)	320 (4640)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	3.80 (8.38)	
A2014	14 (0.85)	270 (3915)	280 (4060)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	52.7 (2.075)	109.6 (4.315)	3.90 (8.60)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	54.8 (2.157)	113.8 (4.480)	4.05 (8.93)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	57.3 (2.256)	118.8 (4.677)	4.20 (9.26)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	59.8 (2.354)	123.8 (4.874)	4.35 (9.59)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	62.7 (2.469)	129.6 (5.102)	4.50 (9.92)	

* (Valori relativi in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

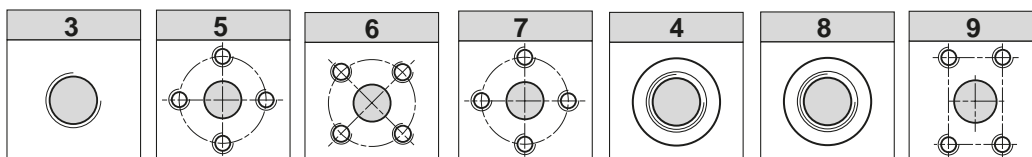
Esempio di ordinazione in codice / Example of ordering code

C 1 A 2 014 BB 41 F 3 C (H) VLP-I (N)

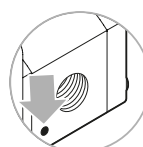
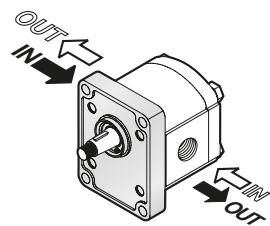
C	Tipo pompa / Pump type	C = Ghisa / Cast iron
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard gasket	A = Standard V = Guarnizione in Viton / Viton gasket
2	Gruppo / Group	vedi tabella / see table
014	Cilindrata / Displacement	vedi tabella / see table
BB	Tipo albero / Shaft type	BB - BF - BH - E - A - BG - BL
41	Tipo flangiatura / Mounting flange	41
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in aspirazione / Stiffening ring for low suction pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-49) Pressure relief valve (page A-49)

(1) Non è necessario indicare la flangia STANDARD / It is not necessary indicate STANDARD flange

Conn Connessioni / Connections



A-48



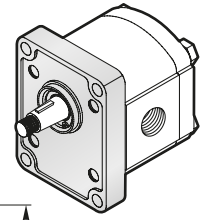
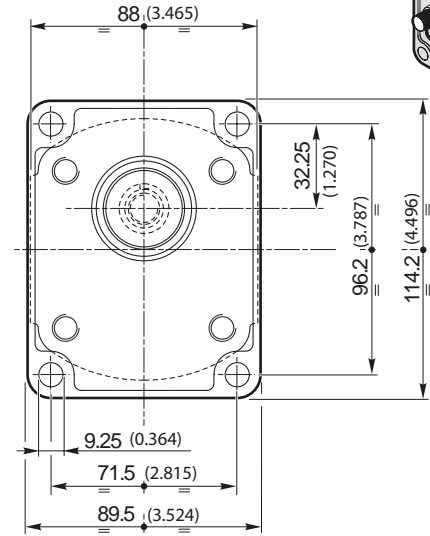
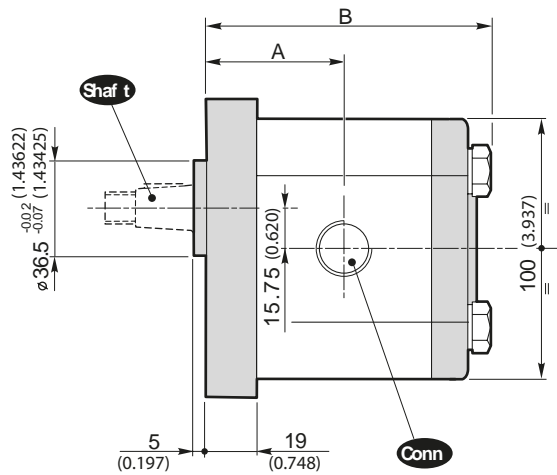
Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

Rotazione / Rotation	
C	A

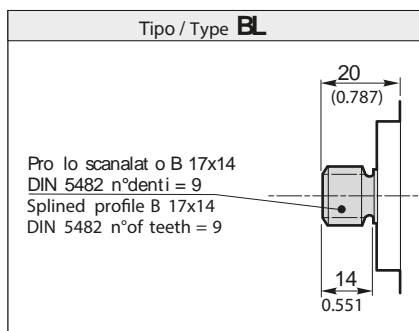
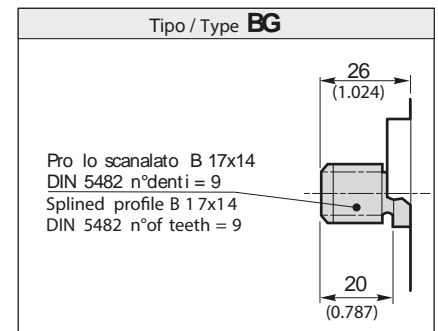
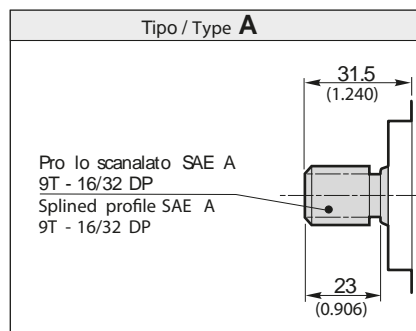
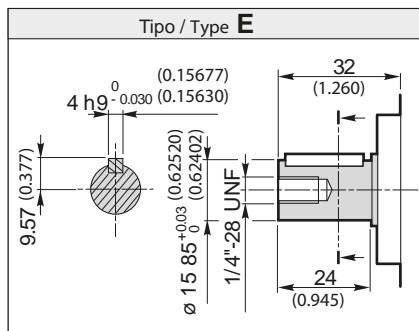
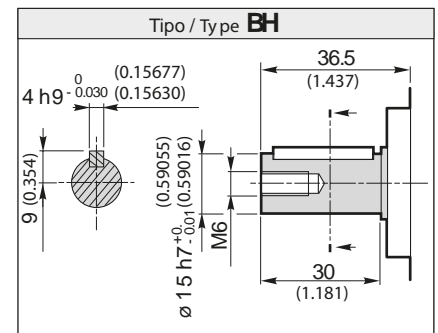
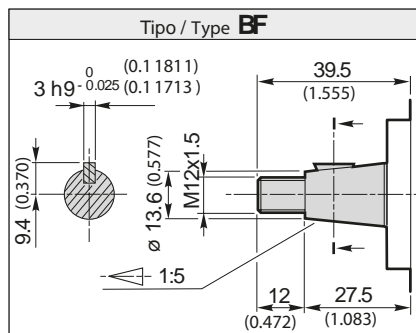
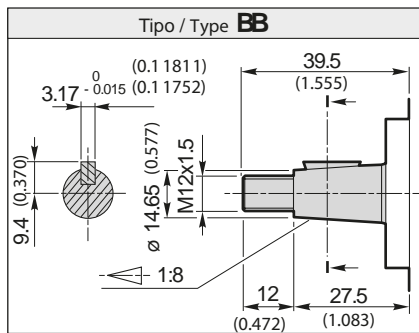
Flangia e coperchio in Ghisa
Flange and cover in Cast iron

41 **POMPE GRUPPO**
PUMPS GROUP **2**

Dimensi oni / Dimensi ons



Shaf t Alberi dip onibili / **Ax ilable b afts**



**POMPE GRUPPO
PUMPS GROUP**

2

1, 1 OR (SAE A)

**Flangia e coperchio in Alluminio
Flange and cover in Aluminium**

Dati tecnici / Technical data

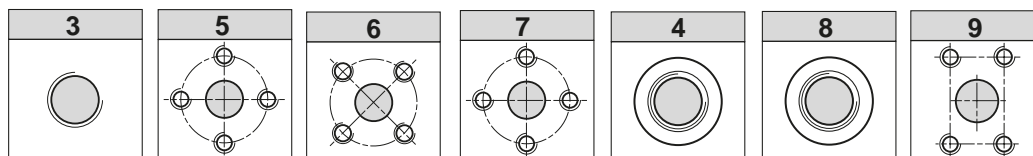
Grandezza Size	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max d' esercizio Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max. flow [lt/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [lt/min] (Gal/min)	Dimensioni Dimensions		Massa Mass [Kg] (lbs)	Rendimento olumetric min. Min. volumetric efficiency %
		P1	P2	P3					A	B		
		[bar] (PSI)	[bar] (PSI)	[bar] (PSI)					[mm] (in)	[mm] (in)		
A2004	4 (0.24)	250 (3625)	270 (3915)	290 (4205)	4000	16 (4.23)	500	1.9 (0.50)	44.4 (1.748)	93 (3.661)	2.30 (5.07)	95*
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	46 (1.811)	96.3 (3.791)	2.45 (5.40)	
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	48.1 (1.894)	100.5 (3.957)	2.60 (5.73)	
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	2.70 (5.95)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	52.7 (2.075)	109.6 (4.315)	2.80 (6.17)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	54.8 (2.157)	113.8 (4.480)	2.95 (6.51)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	57.3 (2.256)	118.8 (4.677)	3.10 (6.84)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	59.8 (2.354)	123.8 (4.874)	3.25 (7.17)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	62.7 (2.469)	129.6 (5.102)	3.40 (7.50)	

* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

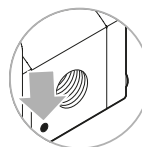
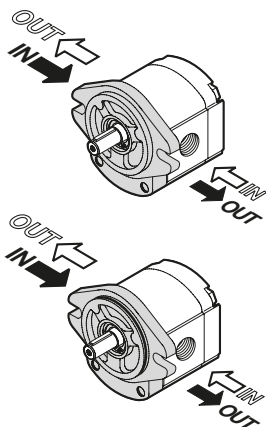
Esempio di ordinazione in codice / Example of ordering code

A	1	A	2	014	BB	1	F	3	C	(H)	VLP-I (N)	
A	Tipo pompa / Pump type							A = Alluminio / Aluminium				
1	Forma o struttura / Design mark							1				
A	Guarnizione standard / Standard gasket							A = Standard V = Guarnizione in Viton / Viton gasket				
2	Gruppo / Group							e di tabella / e table				
014	Cilindrata / Displacement							e di tabella / e table				
BB	Tipo albero / Shaft type							BB - BF - BH - E - A - BG - BL				
1	Tipo flangia / Mounting flange							1 - 1 OR				
F	Configurazione delle connessioni / Standard port configuration							F (004-008) A (011-026)				
3	Tipo connessioni / Connections type							3 - 5 - 6 - 7 - 4 - 8 - 9				
C	Rotazione oraria / Clockwise rotation							C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation				
(H)	Anello di rinforzo per la pressione in aspirazione / Stiffening seal for low suction pressure							(a richiesta / optional)				
VLP-I (N)	Opzioni / Optional							VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-49) Pressure relief valve (page A-49)				

Connessioni / Connections



A-48



Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

Rotazione / Rotation	
C	A

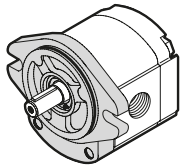
Flangia e coperchio in Alluminio
Flange and cover in Aluminium

1, 1 OR (SAE A)

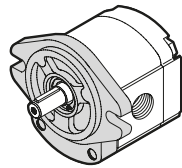
POMPE GRUPPO
PUMPS GROUP

2

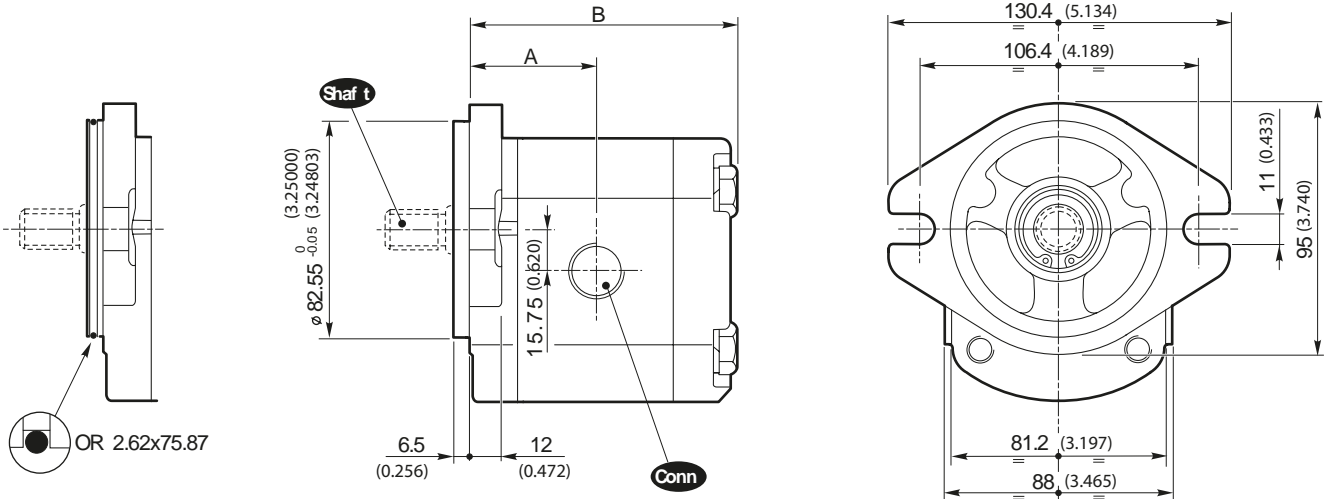
Dimens oni / Dimens ons



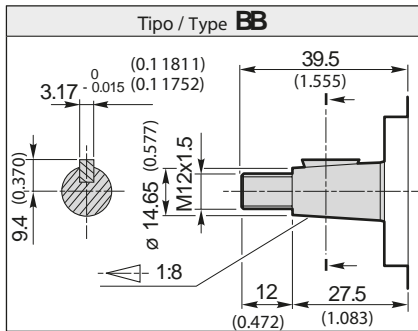
1 OR



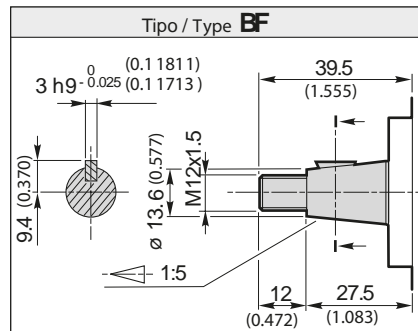
1



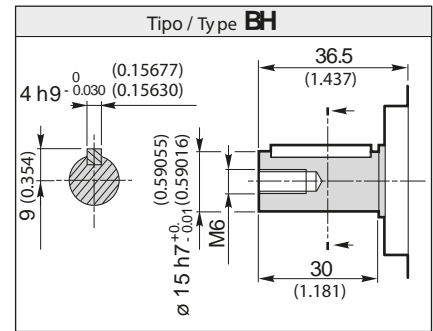
Shaf t Alberi dip onibili / *Available shafts*



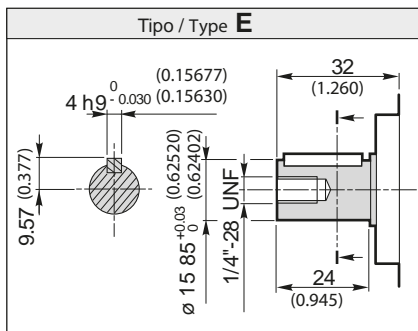
Coppia 98 Nm / Torque 72.3 ft-lbs



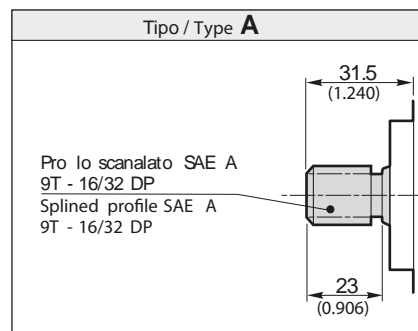
Coppia 98 Nm / Torque 72.3 ft-lbs



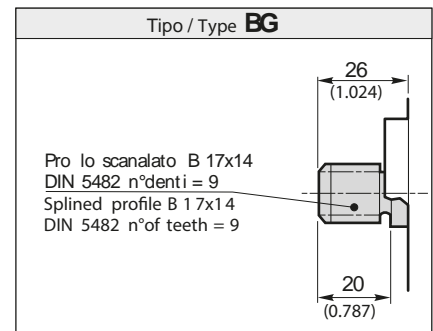
Coppia 98 Nm / Torque 72.3 ft-lbs



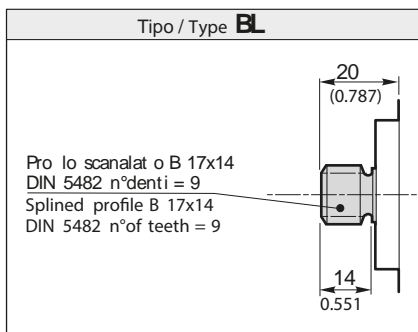
Coppia 98 Nm / Torque 72.3 ft-lbs



Coppia 98 Nm / Torque 72.3 ft-lbs



Coppia 98 Nm / Torque 72.3 ft-lbs



Coppia 98 Nm / Torque 72.3 ft-lbs

**POMPE GRUPPO
PUMPS GROUP**

2

1, 1 OR (SAE A)

**Flangia e coperchio in Ghisa
Flange and cover in Cast iron**

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [in ³ /rev] [in ³ /rev]	Pressione max. d'ess. ricircolo Max working pressure			Velocità max. Max speed [g/min] [rpm]	Portata max. Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Massa Mass [Kg] [lbs]	Rendimento olumetrico min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [inb.]	B [mm] [inb.]		
A2004	4 (0.24)	280 (4060)	300 (4350)	320 (4640)	4000	16 (4.23)	500	1.9 (0.50)	44.4 (1.748)	93 (3.661)	3.40 (7.50)	95*
A2006	6 (0.37)	280 (4060)	300 (4350)	320 (4640)	4000	24 (6.34)	500	2.85 (0.75)	46 (1.811)	96.3 (3.791)	3.55 (7.83)	
A2008	8.5 (0.52)	280 (4060)	300 (4350)	320 (4640)	3500	29.7 (7.85)	500	4.03 (1.06)	48.1 (1.894)	100.5 (3.957)	3.70 (8.16)	
A2011	11 (0.67)	280 (4060)	300 (4350)	320 (4640)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	3.80 (8.38)	
A2014	14 (0.85)	270 (3915)	280 (4060)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	52.7 (2.075)	109.6 (4.315)	3.90 (8.60)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	54.8 (2.157)	113.8 (4.480)	4.05 (8.93)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	57.3 (2.256)	118.8 (4.677)	4.20 (9.26)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	59.8 (2.354)	123.8 (4.874)	4.35 (9.59)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	62.7 (2.469)	129.6 (5.102)	4.50 (9.92)	

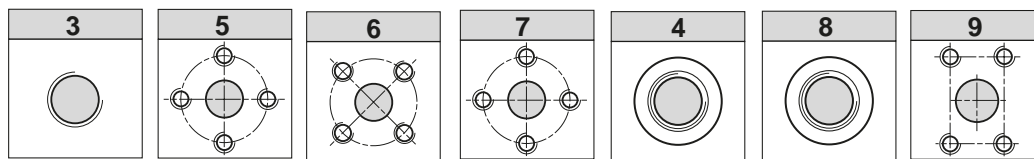
* (Valori riferiti in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

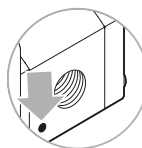
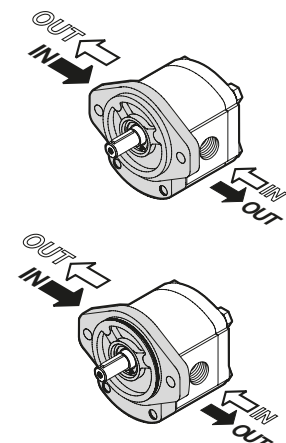
C 1 A 2 014 BB 1 F 3 C (H) VLP-I (N)

C	Tipo pompa / Pump type	C = Ghisa / Cast iron
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard shaft seal	A = Standard V = Guarnizione in Viton / Viton seal
2	Gruppo / Group	2 di tabella / 2 of table
014	Cilindrata / Displacement	014 di tabella / 014 of table
BB	Tipo albero / Shaft type	BB - BF - BH - E - A - BG - BL
1	Tipo flangitura / Mounting flange	1 - 1 OR
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in applicazione Stiffening seal for low pressure application	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-49) Pressure relief valve (page A-49)

Connessioni / Connections



A-48



Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the **suction side** for the pumps

Rotazione / Rotation	
C	A

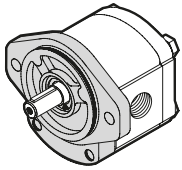
Flangia e coperchio in Ghisa
Flange and cover in Cast iron

1, 1 OR (SAE A)

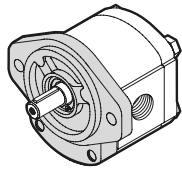
**POMPE GRUPPO
PUMPS GROUP**

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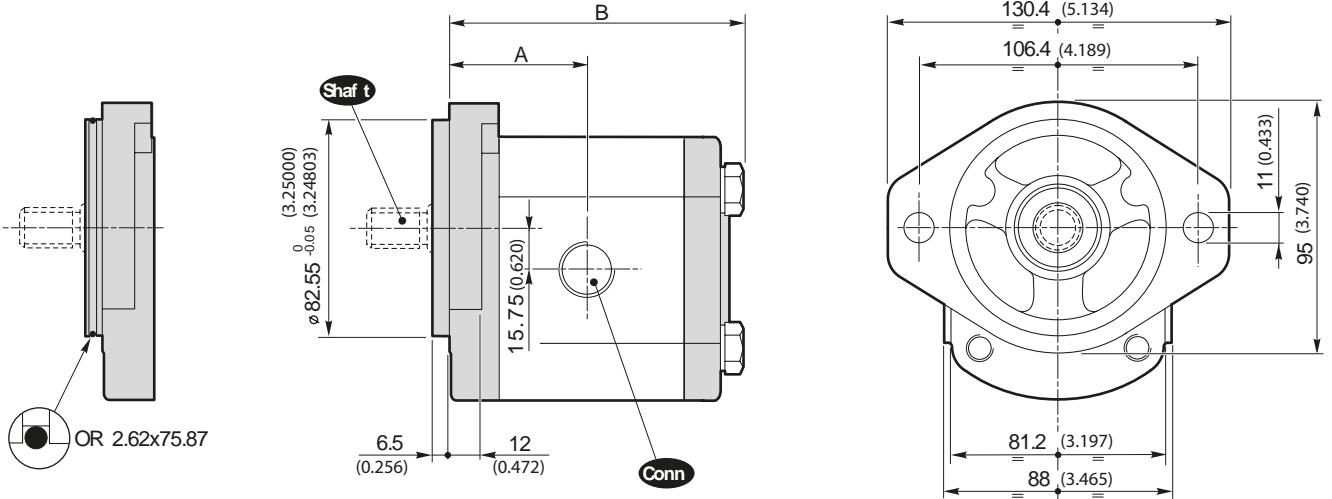
Dimens oni / Dimens ons



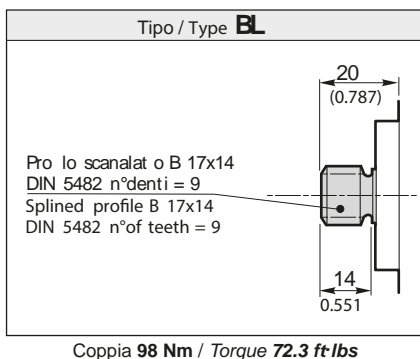
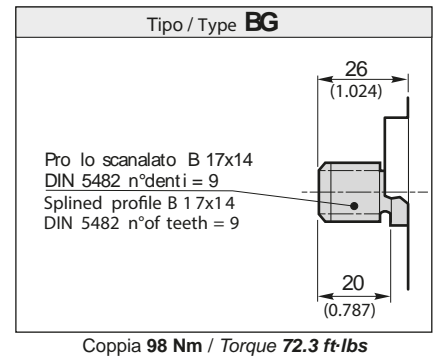
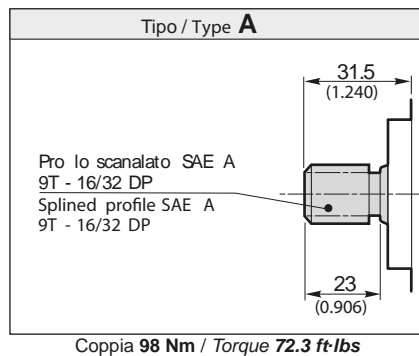
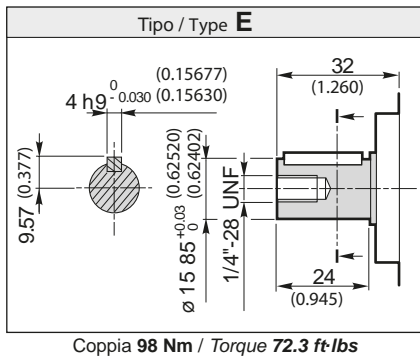
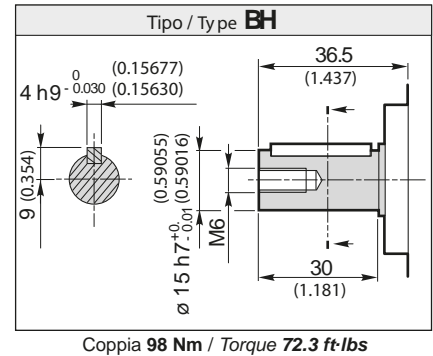
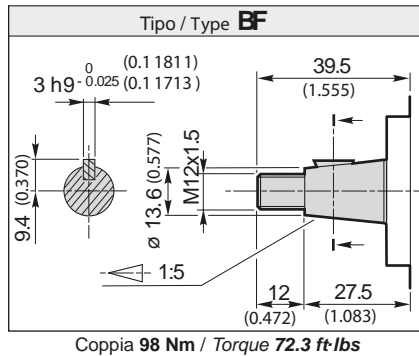
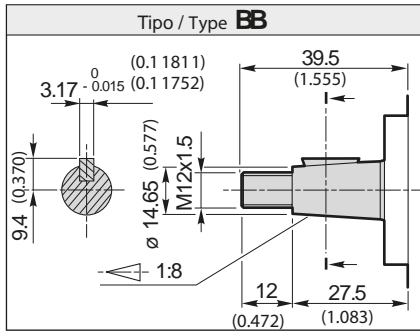
1 OR



1



Shaf t Alberi dip onibili / Aa ilabile b afts



**POMPE GRUPPO
PUMPS GROUP**

2

45

Dati tecnici / *Tecnica / data*

Grandezza Size	Cilindrata Displacement [cm ³ /rev] (in ³ /rev)	Pressione max d' esercizio Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max. flow [lt/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [lt/min] (Gal/min)	Dimensioni Dimensions		Massa Mass [Kg] (lbs)	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] (PSI)	P2 [bar] (PSI)	P3 [bar] (PSI)					A [mm] (in)	B [mm] (in)		
A2004	4 (0.24)	250 (3625)	270 (3915)	290 (4205)	4000	16 (4.23)	500	1.9 (0.50)	46.4 1.827	95 3.740	2.30 (5.07)	95*
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	48 1.890	98.3 3.870	2.45 (5.40)	
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	50.1 1.972	102.5 4.035	2.60 (5.73)	
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	52.2 2.055	106.6 4.197	2.70 (5.95)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	54.7 2.154	111.6 4.394	2.80 (6.17)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	56.8 2.236	115.8 4.559	2.95 (6.51)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	59.3 2.335	120.8 4.756	3.10 (6.84)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	61.8 2.433	125.8 4.953	3.25 (7.17)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	64.7 2.547	131.6 5.181	3.40 (7.50)	

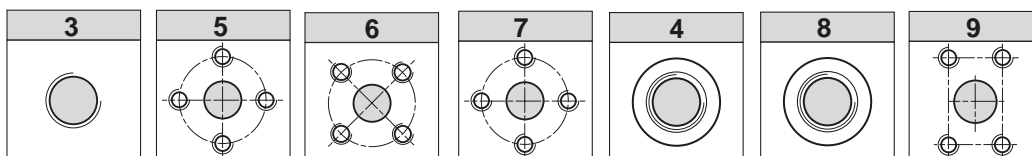
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

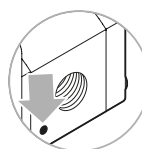
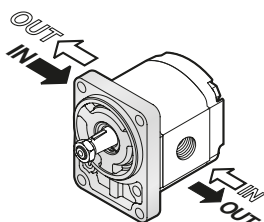
A	1	A	2	014	BB	45	F	3	C	(H)	VLP-I (N)
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A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard gasket	A = Standard
2	Gruppo / Group	V = Guarnizione in Viton / Viton gasket
014	Cilindrata / Displacement	vedi tabella / see table
BB	Tipo albero / Shaft type	BB - BF - BH - E - A - BG - BL
45	Tipo flangitura / Mounting flange	1 - 1 OR
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation
A	Rotazione antioraria / Anticlockwise rotation	A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in aspirazione / Stiffening gasket for low suction pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valvola limitatrice di pressione (pag. A-49) Pressure relief valve (page A-49)

Conn Connessioni / Connections



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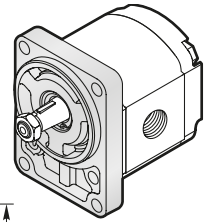
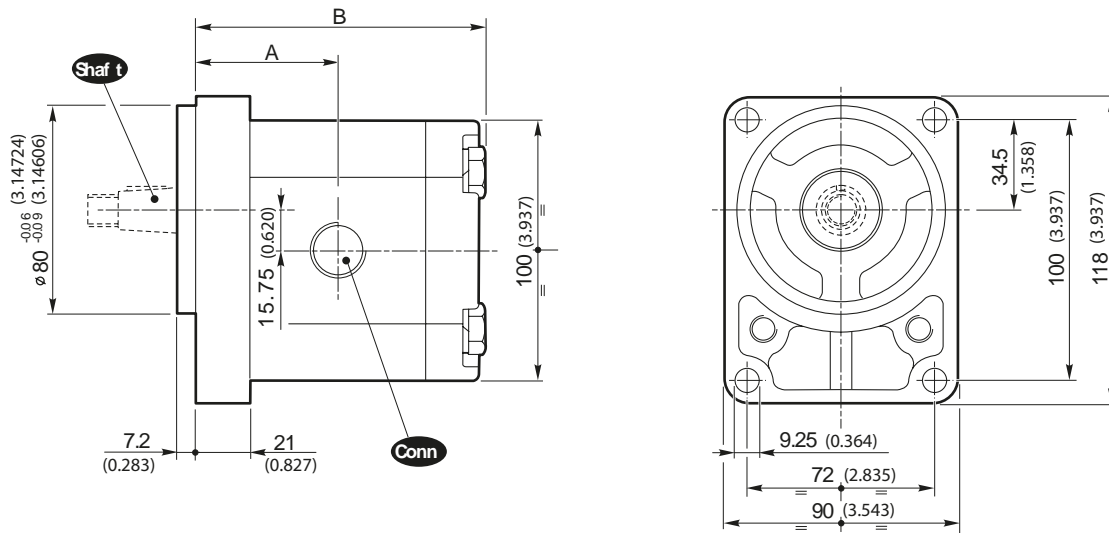


Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

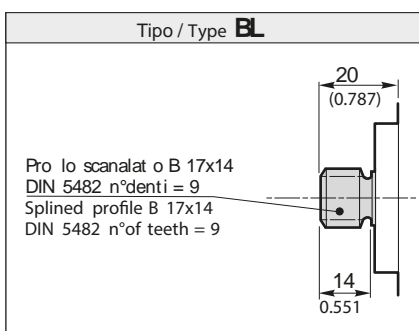
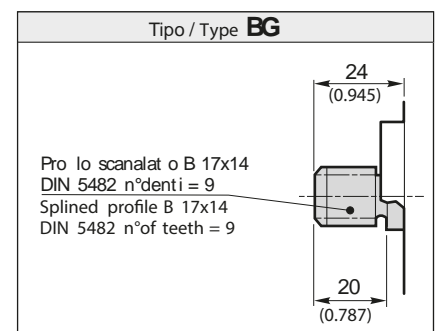
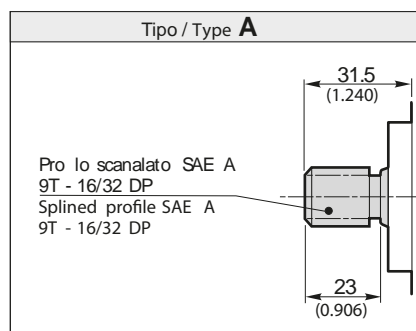
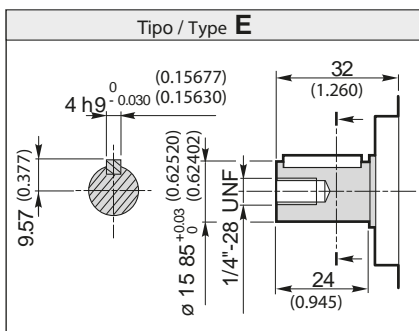
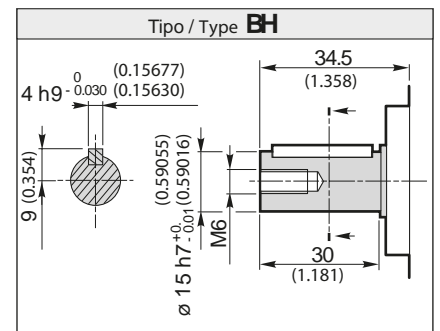
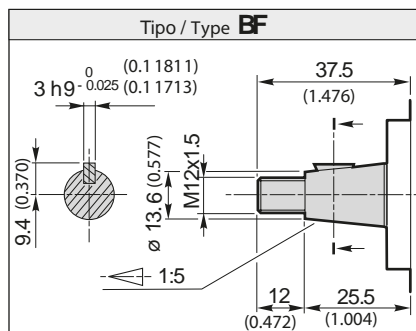
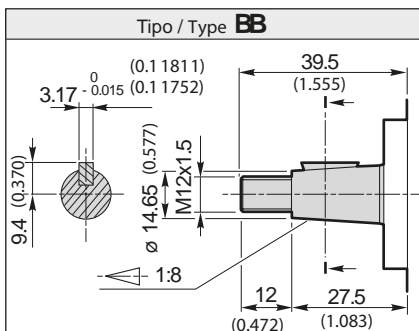
Rotazione / Rotation	
C	A

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POMPE GRUPPO
PUMPS GROUP
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Dimensi on i / Dimens ions



Shaf t Alberi dip onibili / **Aa** ilabile b afts



**POMPE GRUPPO
PUMPS GROUP**

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Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max d'operazione Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max. flow [lt/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [lt/min] (Gal/min)	Dimensioni Dimensions				Peso Weight [Kg] (lbs)	Rendimento Efficiency Min. efficiency %
		P1	P2	P3					A	B	C	L 1		
		[bar] (PSI)	[bar] (PSI)	[bar] (PSI)					[mm] (in)	[mm] (in)	[mm] (in)	[mm] (in)		
A2004	4 (0.24)	250 (3625)	270 (3915)	290 (4205)	4000	16 (4.23)	500	1.9 (0.50)	44.4 (1.748)	93 (3.661)	84 (3.307)	105 (4.134)	2.30 (5.07)	95*
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	46 (1.811)	96.3 (3.791)	87.3 (3.437)	105 (4.134)	2.45 (5.40)	
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	48.1 (1.894)	100.5 (3.957)	91.5 (3.602)	110 (4.331)	2.60 (5.73)	
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	95.6 (3.764)	115 (4.528)	2.70 (5.95)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	52.7 (2.075)	109.6 (4.315)	100.6 (3.961)	120 (4.724)	2.80 (6.17)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	54.8 (2.157)	113.8 (4.480)	104.8 (4.126)	125 (4.921)	2.95 (6.51)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	57.3 (2.256)	118.8 (4.677)	109.8 (4.323)	130 (5.118)	3.10 (6.84)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	59.8 (2.354)	123.8 (4.874)	114.8 (4.520)	135 (5.315)	3.25 (7.17)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	62.7 (2.469)	129.6 (5.102)	120.6 (4.748)	140 (5.512)	3.40 (7.50)	

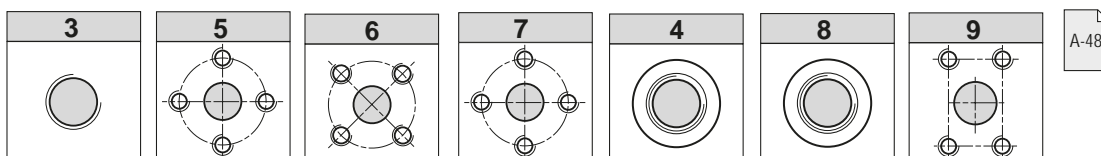
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

A	1	A	2	014	BB	44	F	3	C	(H)	VLP-I (N)
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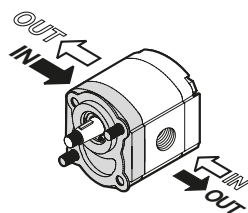
A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma di montaggio / Design mark	1
A	Guarnizione standard / Standard seal	A = Standard V = Guarnizione in Viton / Viton seal
2	Gruppo / Group	2 di tabella / 2 of table
014	Cilindrata / Displacement	2 di tabella / 2 of table
BB	Tipo albero / Shaft type	BB - BF - BH - E - A - BG - BL
44	Tipo flangiatura / Mounting flange	1 - 1 OR
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per la pressione in aspirazione / Stiffening seal for low suction pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-49) Pressure relief seal (page A-49)

Connessioni / Connections

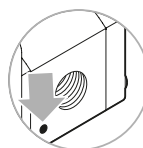
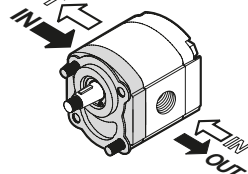


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Versione
Version
B50CX



Versione
Version
B50CY



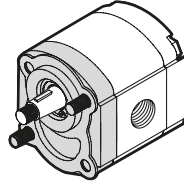
Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identify the suction side for the pumps

Rotazione / Rotation	
C	A

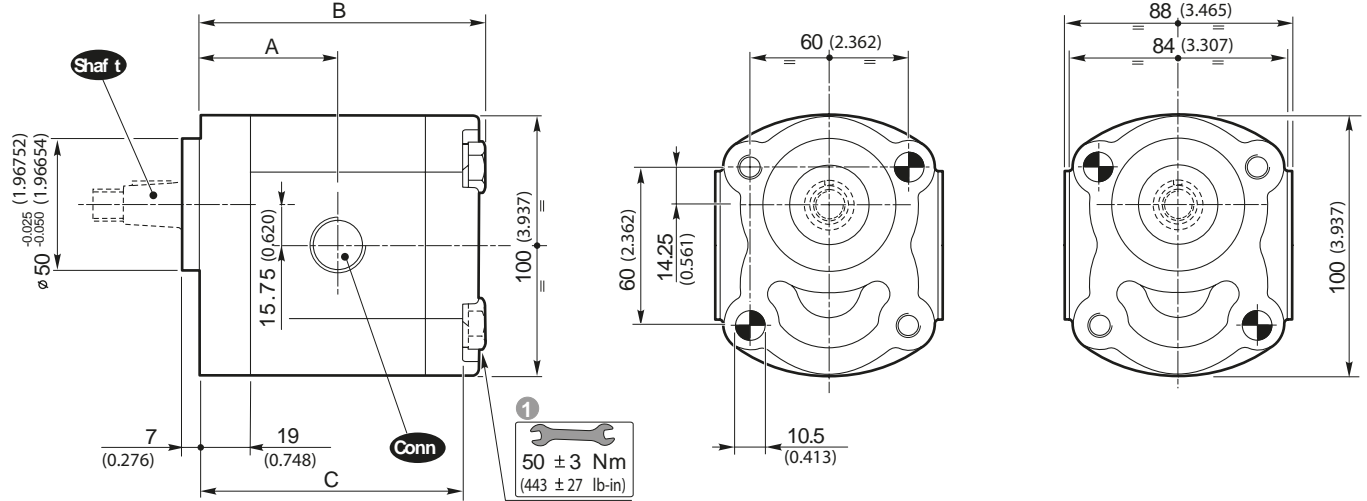
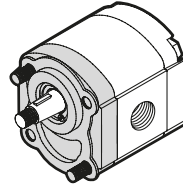
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PUMPS GROUP

Dimens oni / Dimens ons

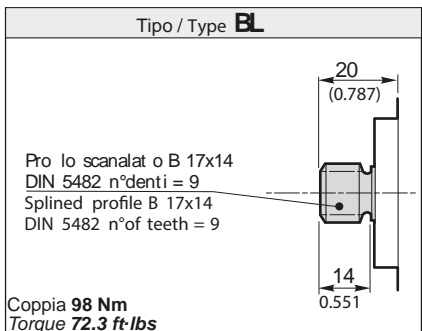
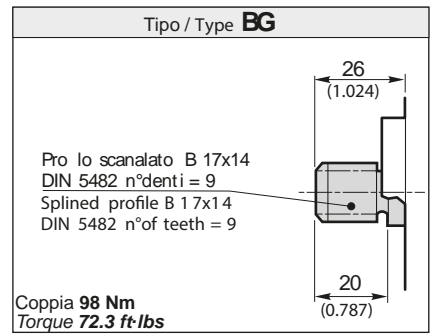
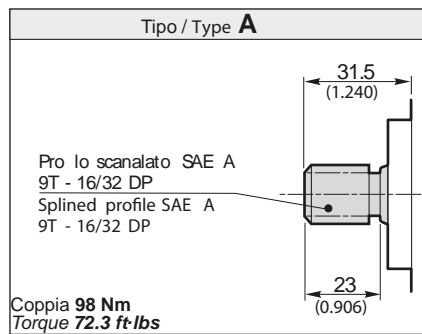
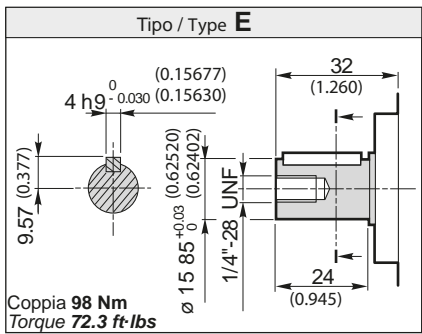
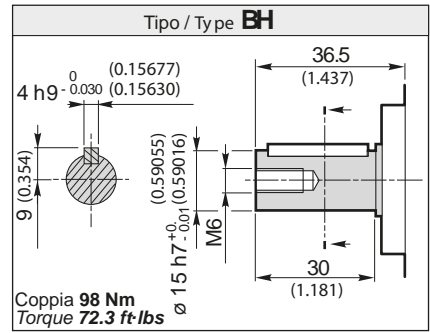
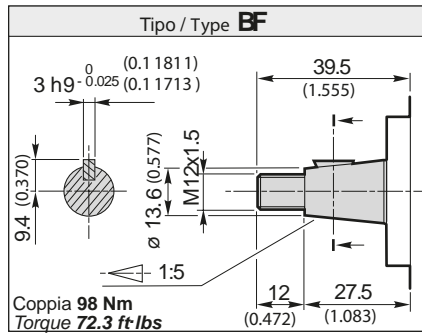
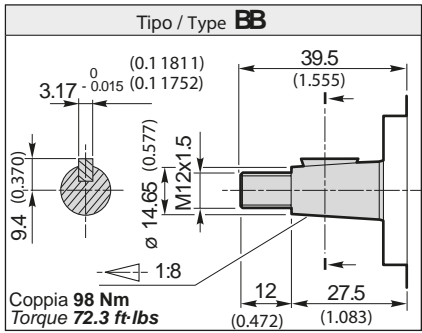
Veris one
Veris on
B50CX



Veris one
Veris on
B50CY



Shaft Alberi dip onibili / **Ass** ilabile **ts** afts



1 Coppia di serraggio viti: 50 ± 3 Nm. Utilizzare viti classe 10.9 - 12.9 UNI EN 20898/1.

Il fissaggio della pompa può essere effettuato con 2 viti prigioniere in materiale classe 10.9 - 12.9 pre-tirate a 40 ± 3 Nm.
Fissare la pompa mediante dadi autobloccanti o coppia di serraggio 50 ± 3 Nm.

1 Tightening torque of screws 443 ± 27 lb-in. Use screws type 10.9 - 12.9 UNI EN 20898/1.

The assembling of the pump could be effected with 2 screws type 10.9 - 12.9 pre-tighten at 354 ± 27 lb-in.
Fix the pump by self-locking nuts with tightening torque 443 ± 27 lb-in.

Il Kit di viti per il fissaggio della pompa è da ordinare separatamente. Codice di ordinazione del Kit di fissaggio:

The screws kit for the pump assembling could be ordered separately. Ordering code of fixing Kit:

0029W + Lunghezza L (vedere di tabella)
+ Length L (see table)

**POMPE GRUPPO
PUMPS GROUP**

2

47

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] [in ³ /rev]	Pressione max d' esercizio Max working pressure			Velocità max Max speed [g/min] [rpm]	Portata max Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions				Massa Mass [Kg] [lbs]	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [inb.]	B [mm] [inb.]	C [mm] [inb.]	L 1 [mm] [inb.]		
A2004	4 (0.24)	250 (3625)	270 (3915)	290 (4205)	4000	16 (4.23)	500	1.9 (0.50)	41.7 (1.642)	90.3 (3.555)	81.3 (3.201)	100 (3.937)	2.30 (5.07)	95*
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	43.3 (1.705)	93.6 (3.685)	84.6 (3.331)	105 (4.134)	2.45 (5.40)	
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	45.4 (1.787)	97.8 (3.850)	88.8 (3.496)	110 (4.331)	2.60 (5.73)	
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	47.5 (1.870)	101.9 (4.012)	92.9 (3.657)	115 (4.528)	2.70 (5.95)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	50 (1.969)	106.9 (4.209)	97.9 (3.854)	120 (4.724)	2.80 (6.17)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	52.1 (2.051)	111.1 (4.374)	102.1 (4.020)	120 (4.724)	2.95 (6.51)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	54.6 (2.150)	116.1 (4.571)	107.1 (4.217)	125 (4.921)	3.10 (6.84)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	57.1 (2.248)	121.1 (4.768)	112.1 (4.413)	130 (5.118)	3.25 (7.17)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	60 (2.362)	126.9 (4.996)	117.9 (4.642)	140 (5.512)	3.40 (7.50)	

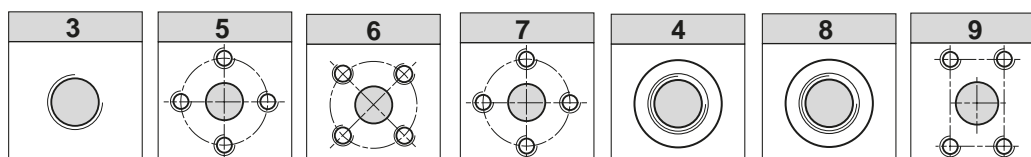
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

A 1 A 2 014 BJ 47 F 3 C (H) VLP-I (N)

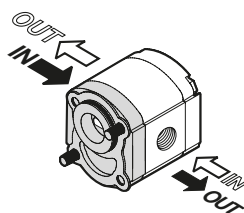
A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard bearing	A = Standard V = Guarnizione in Viton / Viton bearing
2	Gruppo / Group	2 di tabella / 2 of table
014	Cilindrata / Displacement	014 di tabella / 014 of table
BJ	Tipo albero / Shaft type	BJ
47	Tipo flangiatura / Mounting flange	1 - 1 OR
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in applicazioni Stiffening seal for low static pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-49) Pressure relief valve (page A-49)

Connessioni / Connections

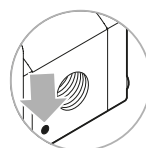
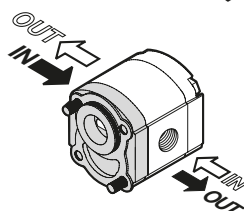


A-48

Versione
Version
E52CX



Versione
Version
E52CY

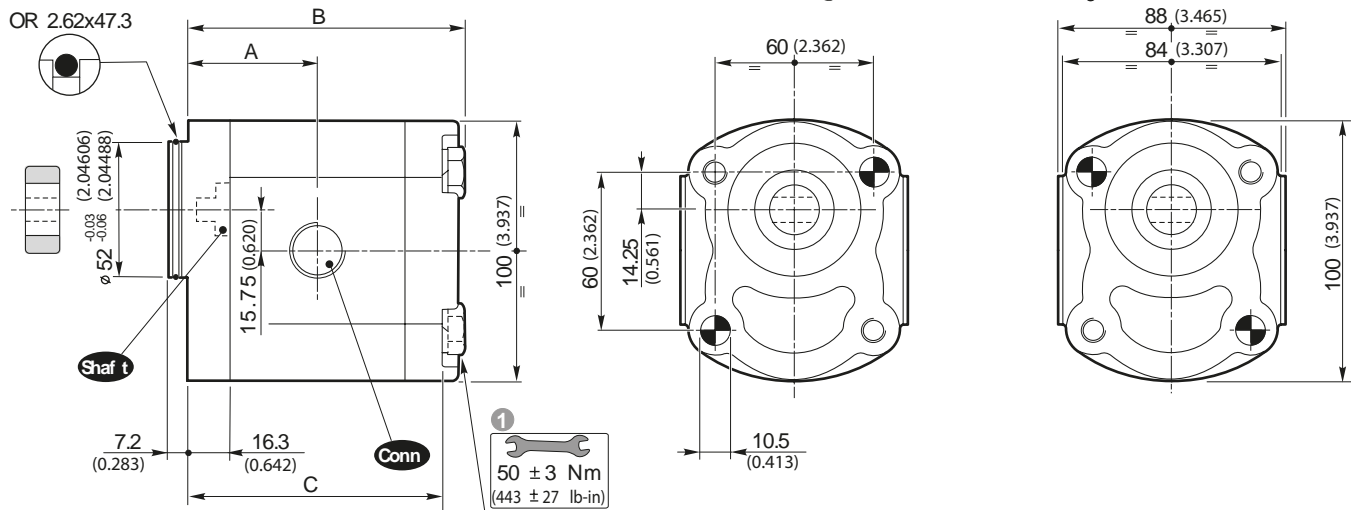
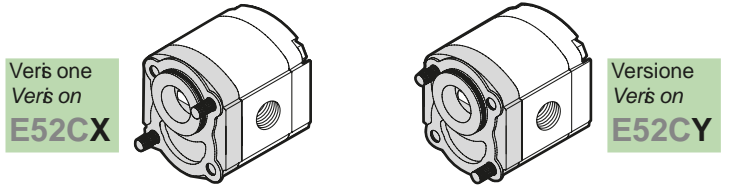


Il segno sul corpo indica il lato aspirazione per le pompe.
The sign on the body identify the suction side for the pumps

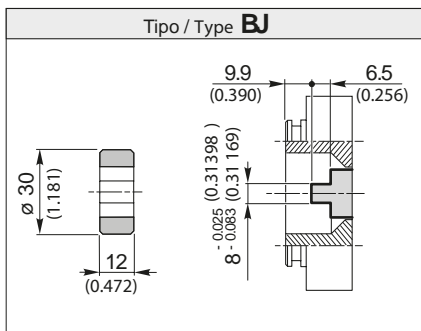
Rotazione / Rotation	
C	A

47 **POMPE GRUPPO** **2**
PUMPS GROUP

Dimensioni / Dimensions



Shaf t Alberi disponibili / Available shafts



Coppia 70 Nm / Torque 51.6 ft-lbs

1 Coppia di viti: 50 ± 3 Nm. Utilizzare viti classe 10.9 - 12.9 UNI EN 20898/1.

Il fissaggio della pompa può essere effettuato con 2 viti prigioniere in materiale classe 10.9 - 12.9 pre-tirate a 40 ± 3 Nm. Fissare la pompa mediante dadi autobloccanti o coppia di viti 50 ± 3 Nm.

Il Kit di viti per il fissaggio della pompa è da ordinare separatamente. Codice di ordinazione del Kit di fissaggio:

1 Tightening torque of screws 443 ± 27 lb-in. Use screws type 10.9 - 12.9 UNI EN 20898/1.

The assembling of the pump could be effected with 2 screws used type 10.9 - 12.9 pre-tighten at 354 ± 27 lb-in. Fix the pump by self-locking nuts with tightening torque 443 ± 27 lb-in.

The screws kit for the pump assembling could be ordered separately. Ordering code of fixing Kit:

0029W + Lunghezza L (vedi tabella)
+ Length L (see table)

**POMPE GRUPPO
PUMPS GROUP**

2

48

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max d'ess Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max. flow [l/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [l/min] (Gal/min)	Dimensioni Dimensions		Masa Mass [Kg] (lbs)	Rendimento Efficiency Min. volumetric efficiency %
		P1 [bar] (PSI)	P2 [bar] (PSI)	P3 [bar] (PSI)					A [mm] (in)	B [mm] (in)		
A2004	4 (0.24)	250 (3625)	270 (3915)	290 (4205)	4000	16 (4.23)	500	1.9 (0.50)	44.4 (1.748)	93 (3.661)	2.30 (5.07)	95*
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	46 (1.811)	96.3 (3.791)	2.45 (5.40)	
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	48.1 (1.894)	100.5 (3.957)	2.60 (5.73)	
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	2.70 (5.95)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	52.7 (2.075)	109.6 (4.315)	2.80 (6.17)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	54.8 (2.157)	113.8 (4.480)	2.95 (6.51)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	57.3 (2.256)	118.8 (4.677)	3.10 (6.84)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	59.8 (2.354)	123.8 (4.874)	3.25 (7.17)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	62.7 (2.469)	129.6 (5.102)	3.40 (7.50)	

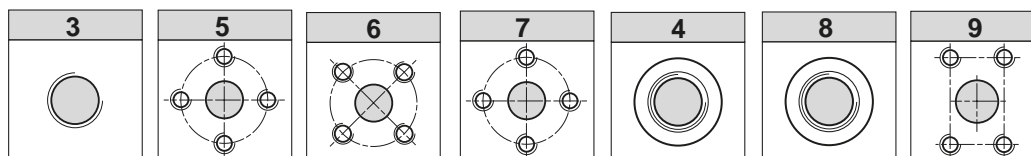
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

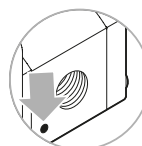
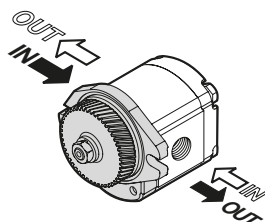
A 1 A 2 014 BB 48 F 3 C

A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard gasket	A = Standard V = Guarnizione in Viton / Viton gasket
2	Gruppo / Group	e di tabella / e table
014	Cilindrata / Displacement	e di tabella / e table
BB	Tipo albero / Shaft type	BB
48	Tipo flangiatura / Mounting flange	48
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation

Conn Connessioni / Connections



A-48

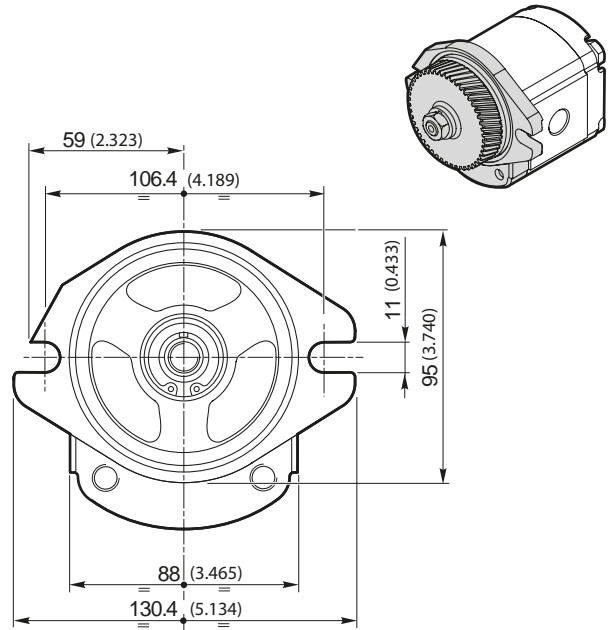
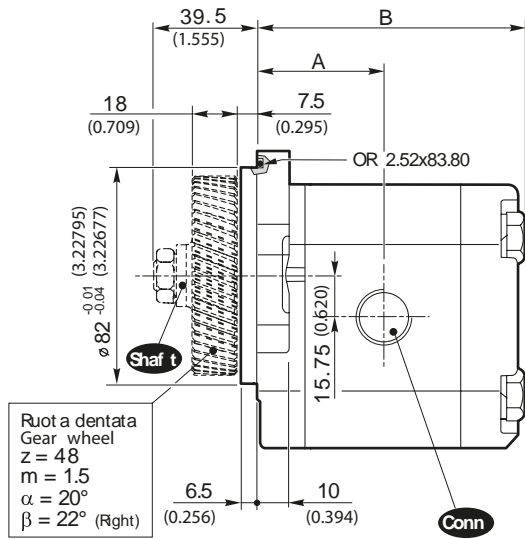


Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

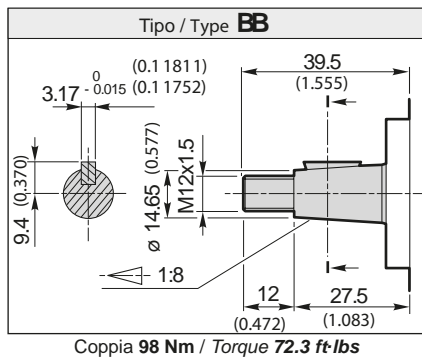
Rotazione / Rotation	
C	A

48 POMPE GRUPPO
PUMPS GROUP 2

Dimensioni / Dimensions



Shaf t Alberi dip onibili / **Aa ilable b afts**



**POMPE GRUPPO
PUMPS GROUP**

2

49

Dati tecnici / Technical data

49* z = 10

Grandezza Size	Cilindrata Displacement [m ³ /rev] [in ³ /rev]	Pressione max. d'ess. r. z. o Max working pressure			Velocità max Max speed [g/min] [rpm]	Portata max Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Masse Mass [Kg] [lbs]	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [inb.]	B [mm] [inb.]		
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	48.1 (1.894)	100.5 (3.957)	2.65 (5.84)	95*
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	2.75 (6.06)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.5 (15.18)	500	7.83 (2.07)	54.8 (2.157)	113.8 (4.480)	3.00 (6.62)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.98)	500	9.26 (0.365)	57.3 (2.256)	118.8 (4.677)	3.15 (6.95)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	62.7 (2.469)	129.6 (5.102)	3.45 (7.61)	

49 z = 11**

Grandezza Size	Cilindrata Displacement [m ³ /rev] [in ³ /rev]	Pressione max. d'ess. r. z. o Max working pressure			Velocità max Max speed [rpm]	Portata max Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Masse Mass [Kg] [lbs]	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm]	B [mm]		
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	46 (1.811)	96.3 (3.791)	2.45 (5.40)	95*
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	50.2 (1.976)	104.6 (4.118)	2.70 (5.95)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	52.7 (2.075)	109.6 (4.315)	2.80 (6.17)	

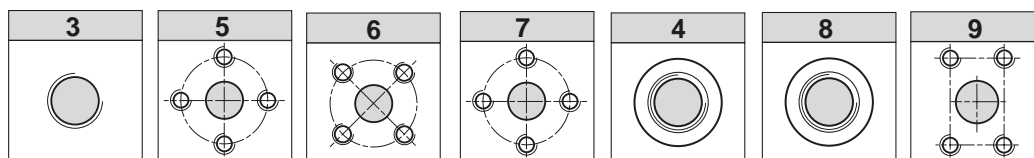
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

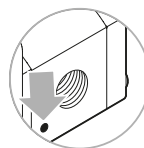
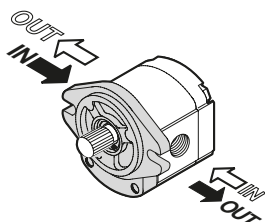
A 1 A 2 026 BL 49 F 3 C

A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma costruttiva / Design mark	1
A	Guarnizione standard / Standard seal	A = Standard V = Guarnizione in Viton / Viton seal
2	Gruppo / Group	e di tabella / e table
014	Cilindrata / Displacement	e di tabella / e table
BL	Tipo albero / Shaft type	BL - BP
49	Tipo flangiatura / Mounting flange	49
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation

Connessioni / Connections



A-48

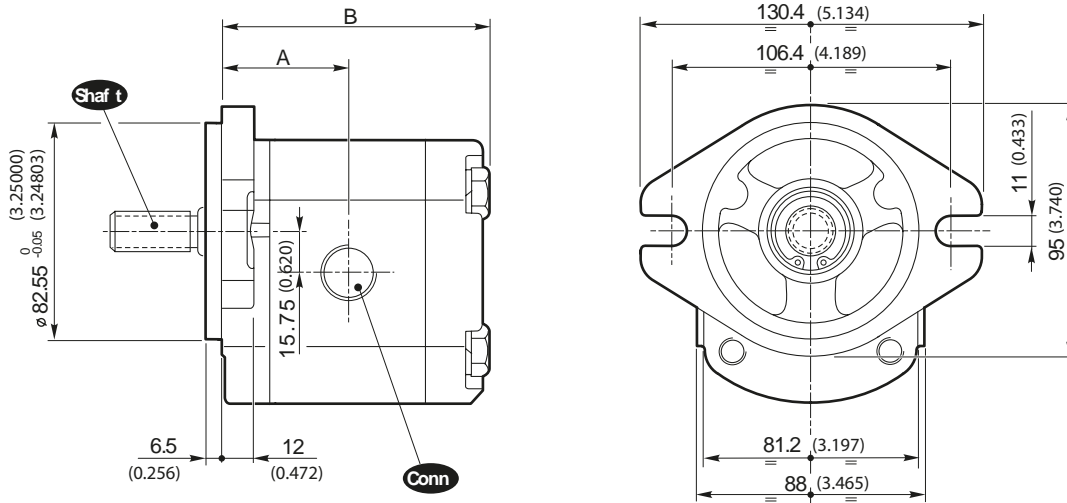


Il segno sul corpo indica il lato aspirazione per le pompe.
The sign on the body identify the suction side for the pumps

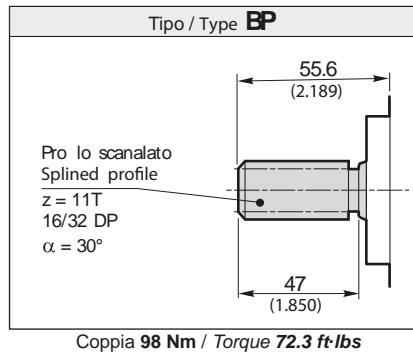
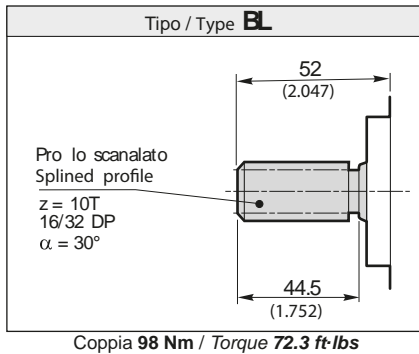
Rotazione / Rotation	
C	A

49 **POMPE GRUPPO** **2**
PUMPS GROUP

Dimensoni / Dimensions



Shaf t Alberi disponibili / Available shafts



**POMPE GRUPPO
PUMPS GROUP**

2

41S

Versione da utilizzare in presenza di carichi assiali e/o radiali
Version to use with axial and/or radial loads

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max d'essiccazione Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max flow [lt/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [lt/min] (Gal/min)	Dimensioni Dimensions		Massa Mass [Kg] (lbs)	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] (PSI)	P2 [bar] (PSI)	P3 [bar] (PSI)					A [mm] (in)	B [mm] (in)		
A2004	4 (0.24)	250 (3625)	270 (3915)	290 (4205)	4000	16 (4.23)	500	1.9 (0.50)	64.4 (2.535)	113 (4.449)	2.8 (6.17)	95*
A2006	6 (0.37)	250 (3625)	270 (3915)	290 (4205)	4000	24 (6.34)	500	2.85 (0.75)	66 (2.598)	116.3 (4.579)	2.95 (6.50)	
A2008	8.5 (0.52)	250 (3625)	270 (3915)	290 (4205)	3500	29.7 (7.85)	500	4.03 (1.06)	68.1 (2.681)	120.5 (4.744)	3.1 (6.84)	
A2011	11 (0.67)	250 (3625)	270 (3915)	290 (4205)	3500	38.5 (10.17)	500	5.22 (1.38)	70.2 (2.764)	124.6 (4.906)	3.2 (7.06)	
A2014	14 (0.85)	250 (3625)	270 (3915)	290 (4205)	3500	49 (12.95)	500	6.65 (1.76)	72.7 (2.862)	129.6 (5.102)	3.3 (7.28)	
A2016	16.5 (1.01)	230 (3335)	240 (3480)	250 (3625)	3500	57.7 (15.24)	500	7.83 (2.07)	74.8 (2.945)	133.8 (5.268)	3.45 (7.61)	
A2019	19.5 (1.19)	210 (3045)	220 (3190)	230 (3335)	3300	64.3 (16.99)	500	9.26 (2.45)	77.3 (3.043)	138.8 (5.465)	3.6 (7.94)	
A2022	22.5 (1.37)	190 (2755)	200 (2900)	210 (3045)	2800	63 (16.64)	500	10.68 (2.82)	79.8 (3.142)	143.8 (5.661)	3.75 (8.27)	
A2026	26 (1.59)	170 (2465)	180 (2610)	190 (2755)	2500	65 (17.17)	500	12.35 (3.26)	82.7 (3.256)	149.6 (5.890)	3.9 (8.60)	

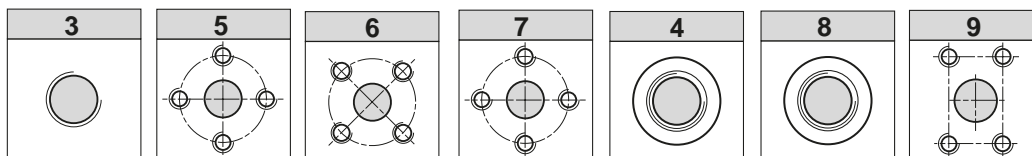
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

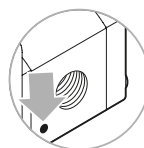
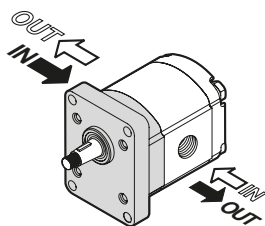
A	1	A	2	014	BB	41S	F	3	C	(H)	VLP-I (N)
----------	----------	----------	----------	------------	-----------	------------	----------	----------	----------	------------	------------------

A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma di montaggio / Design mark	1
A	Guarnizione standard / Standard seal kit	A = Standard V = Guarnizione in Viton / Viton seal
2	Gruppo / Group	2 = di tabella / see table
014	Cilindrata / Displacement	014 = di tabella / see table
BB	Tipo albero / Shaft type	BB
41S	Tipo flangia / Mounting flange	41S
F	Configurazione delle connessioni / Standard port configuration	F (004-008) A (011-026)
3	Tipo connessioni / Connections type	3 - 5 - 6 - 7 - 4 - 8 - 9
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in aspirazione / Stiffening seal for low suction pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-49) Pressure relief valve (page A-49)

Connessioni / Connections



A-48



Il segno sul corpo indica il lato aspirazione per le pompe.
The sign on the body identify the suction side for the pumps

Rotazione / Rotation	
C	A

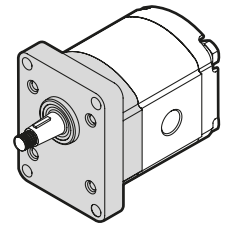
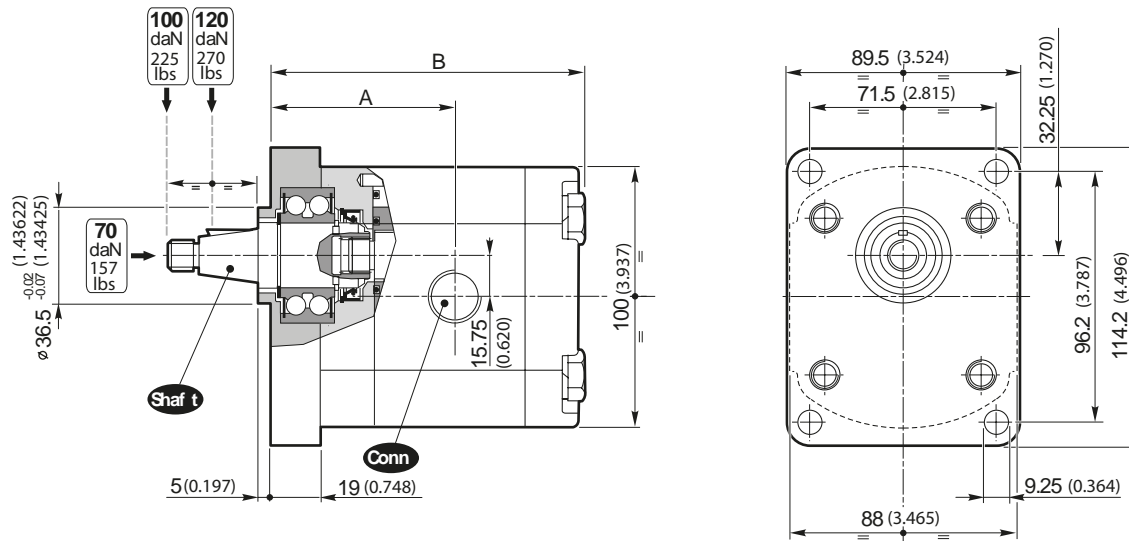
Versione da utilizzare in presenza di carichi assiali e/o radiali
Version to be chosen with axial and/or radial loads

41S

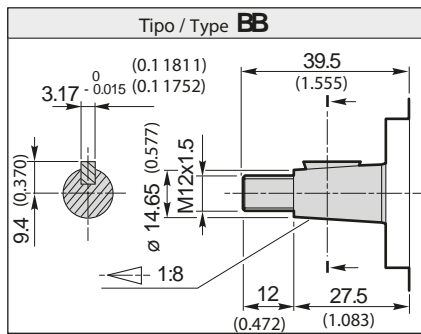
**POMPE GRUPPO
PUMPS GROUP**

2

Dimensioni / Dimensions



Shaft Alberi disponibili / Available shafts



Coppia 98 Nm / Torque 72.3 ft lbs

**POMPE GRUPPO
PUMPS GROUP**

2

CONNESSIONI / CONNECTIONS

3

Aspirazione
Suction

Mandat a
Delivery

Grand./ Size	004 ÷ 008	
C	G 1/2"	
Grand./ Size	011 ÷ 026	
C	G 3/4"	

5

Aspirazione
Suction

Mandat a
Delivery

Grand./ Size	004 ÷ 008		
C	D	d	
13 (0.512)	30 (1.181)	M6	
Grand./ Size	011 ÷ 026		
C	D	d	
19 (0.748)	40 (1.575)	M8	

6

Aspirazione
Suction

Mandat a
Delivery

7

Aspirazione
Suction

Mandat a
Delivery

Grand./ Size	011 ÷ 026	
C	D	
19 (0.748)	40 (1.575)	

4

Aspirazione
Suction

Mandat a
Delivery

Grand./ Size	004 ÷ 008	
C	7/8 14UNF	
Grand./ Size	011 ÷ 026	
C	1" 1/16 12UN	

8

Aspirazione
Suction

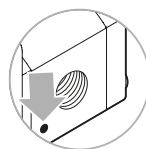
Mandat a
Delivery

9

Aspirazione
Suction

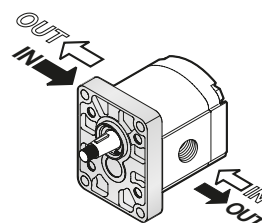
Mandat a
Delivery

Grand./ Size	004 ÷ 011		
C	D	E	
20 (0.787)	38 (1.496)	17.4 (0.685)	
Grand./ Size	014 ÷ 026		
C	D	E	
26 (1.024)	22.4 (0.882)	47.6 (1.874)	



Il segno lo rpo indica il lato aspirazione per le pompe.
The sign on the body identify the **suction side** for the pumps

Posizione delle connessioni / Connections positions



Rotazione / Rotation	
C	A

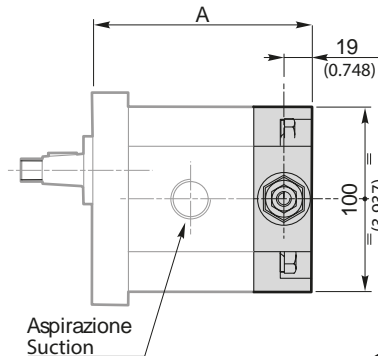
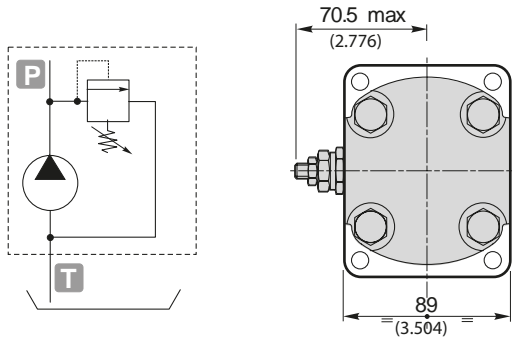
OPZIONI / OPTIONAL

**POMPE GRUPPO
PUMPS GROUP**

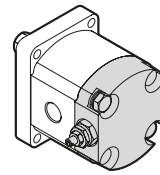
2

VLP- I (N)

Valvola limitatrice di pressione a scarico interno
Pressure relief valve with internal exhaust

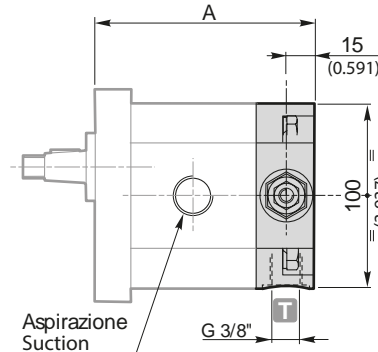
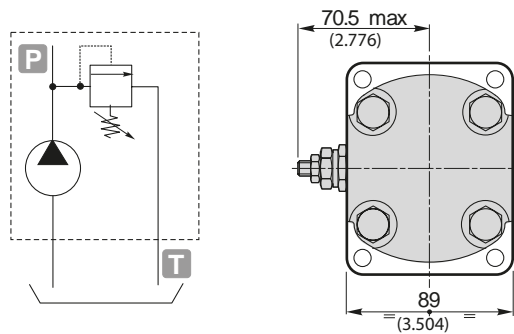


	A		
	1- 44	45	47
A2004	104.8 (4.126)	106.8 (4.205)	102.1 (4.020)
A2006	108.1 (4.256)	110.1 (4.335)	105.4 (4.150)
A2008	112.3 (4.421)	114.3 (4.500)	109.6 (4.315)
A2011	116.4 (4.583)	118.4 (4.661)	113.7 (4.476)
A2014	121.4 (4.780)	123.4 (4.858)	118.7 (4.673)
A2016	125.6 (4.945)	127.6 (5.024)	122.9 (4.839)
A2019	130.6 (5.142)	132.6 (5.220)	127.9 (5.035)
A2022	135.6 (5.339)	137.6 (5.417)	132.9 (5.232)
A2026	141.4 (5.567)	143.4 (5.646)	138.7 (5.461)



VLP- E (N)

Valvola limitatrice di pressione a scarico esterno
Pressure relief valve with external exhaust



	A		
	1- 44	45	47
A2004	100.8 (3.969)	102.8 (4.047)	98.1 (3.862)
A2006	104.1 (4.098)	106.1 (4.177)	101.4 (3.992)
A2008	108.3 (4.264)	110.3 (4.343)	105.6 (4.157)
A2011	112.4 (4.425)	114.4 (4.504)	109.7 (4.319)
A2014	117.4 (4.622)	119.4 (4.701)	114.7 (4.516)
A2016	121.6 (4.787)	123.6 (4.866)	118.9 (4.681)
A2019	126.6 (4.984)	128.6 (5.063)	123.9 (4.878)
A2022	131.6 (5.181)	133.6 (5.260)	128.9 (5.075)
A2026	137.4 (5.409)	139.4 (5.488)	134.7 (5.303)

NB.
La valvola limitatrice di pressione è applicata istituendo il portoposteriore.
Fornitura solo con flangia e coperchio in Alluminio.
Sono rappresentate pompe a rotazione antioraria.
Nelle pompe a rotazione oraria, il foro T è in alto.

Warning
The pressure relief valve should be applied by instituting the rear port.
It is supplied only with aluminium flange and cover.
The bowed pumps are anti-clockwise rotation.
Pumps with clockwise rotation, T port is above.

L'apertura della valvola limitatrice di pressione deve avvenire per tempi non superiori ai 10 secondi ogni minuto per evitare il surriscaldamento della pompa.

The opening of the pressure relief valve should carry out for times not over 10" each minute to avoid the overheating of the pump.

Esempio di ordinazione in codice / Example of ordering code

A	1	A	2	014	BB	1	F	3	C	VLP-I	(N)
---	---	---	---	-----	----	---	---	---	---	-------	-----

VLP-I	Coperchio con VLP Cover with VLP	VLP-I (a scarico interno / at internal exhaust) VLP-E (a scarico esterno / at external exhaust)
(N)	Tipo di molla / Spring type	B - N - R (vedi tabella / See table)

Tipo di molla / Spring type		
B	N	R
molla bianca white spring	molla nera black spring	molla rossa red spring
Campi di taratura* Calibration fields*	[bar] [psi]	
10 ÷ 100 (145 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)

* In caso di omissione del valore di taratura, esso sarà inteso standard (molla nera con taratura 150 bar).

* Without setting request, it will be considered standard (black spring: 2175 psi).

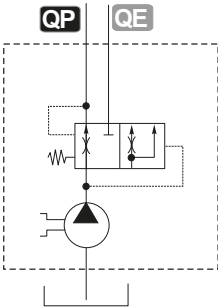
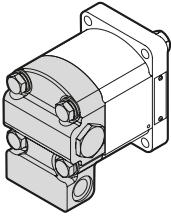
**POMPE GRUPPO
PUMPS GROUP**

2

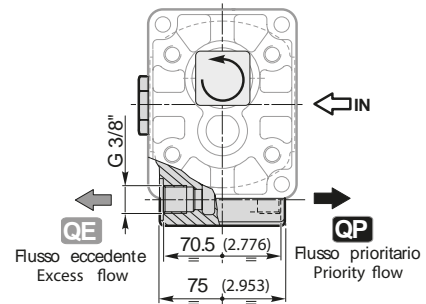
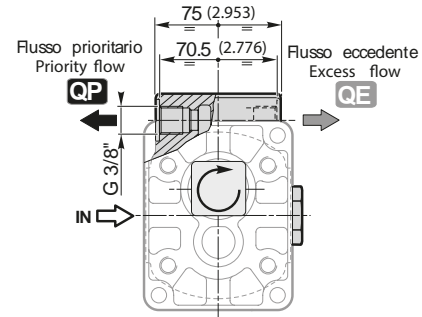
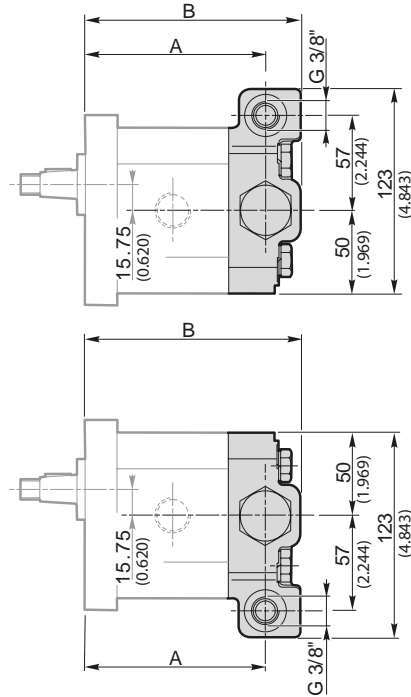
OPZIONI / OPTIONAL

VRF

**Valvola regolatrice di flusso
Priority flow divider valve**



Flusso eccedente per utilizzatore o serbatoio
Exceeding flow to actuator or to tank



		A2004	A2006	A2008	A2011	A2014	A2016	A2019	A2022	A2026
A	1-44	91.8 (3.614)	95.1 (3.744)	99.3 (3.909)	103.4 (4.071)	108.4 (4.268)	112.6 (4.433)	117.6 (4.630)	122.6 (4.827)	128.4 (5.055)
	45	93.8 (3.693)	97.1 (3.823)	101.3 (3.988)	105.4 (4.150)	110.4 (4.346)	114.6 (4.512)	119.6 (4.709)	124.6 (4.906)	130.4 (5.134)
	47	89.1 (3.508)	92.4 (3.638)	96.6 (3.803)	100.7 (3.965)	105.7 (4.161)	109.9 (4.327)	114.9 (4.524)	119.9 (4.720)	125.7 (4.949)
B	1-44	112.8 (4.441)	116.1 (4.571)	120.3 (4.736)	124.4 (4.898)	129.4 (5.094)	133.6 (5.260)	138.6 (5.457)	143.6 (5.654)	149.4 (5.882)
	45	114.8 (4.520)	118.1 (4.650)	122.3 (4.815)	126.4 (4.976)	131.4 (5.173)	135.6 (5.339)	140.6 (5.535)	145.6 (5.732)	151.4 (5.961)
	47	110.1 (4.335)	113.4 (4.465)	117.6 (4.630)	121.7 (4.791)	126.7 (4.988)	130.9 (5.154)	135.9 (5.350)	140.9 (5.547)	146.7 (5.776)

Esempio di ordinazione in codice / Example of ordering code

A	1	A	2	014	BB	1	F	3	C	VRF	(d)	
VRF	Coperchio con VRF Cover with VRF						VRF					
(d)	Diametro del foro a libretto Diameter of calibrated orifice						2.5 - 3 - 3.25 - 4 - 4.25 - 5.5 (Vedi tabella / See table)					

d [mm]	Q [l/min] (US.gal/min)
2.5	5 (1.32)
3	7 (1.32)
3.25	8 (1.32)
4	11 (1.32)
4.25	14 (1.32)
5.5	21 (1.32)

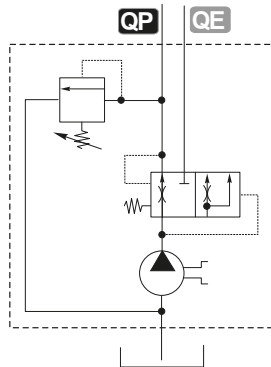
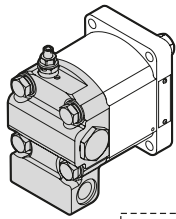
OPZIONI / OPTIONAL

**POMPE GRUPPO
PUMPS GROUP**

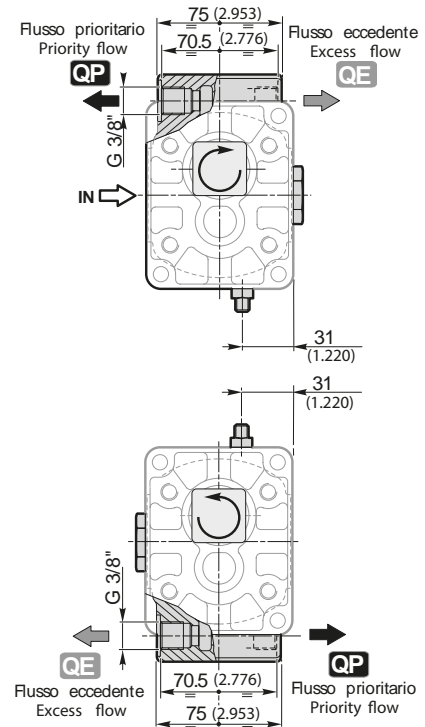
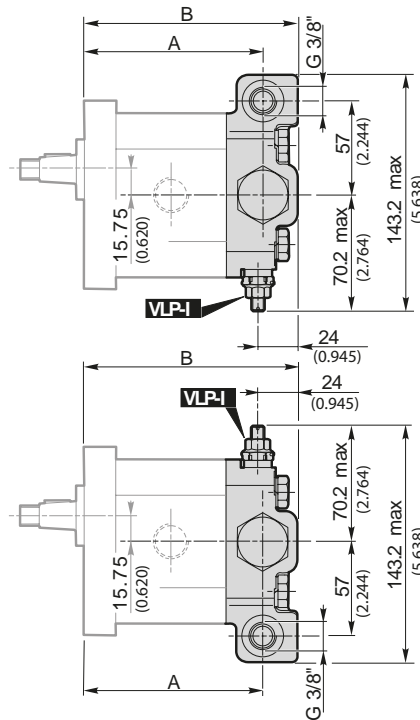
2

VRF - VLP-I

Valvola regolatrice di flusso e valvola limitatrice di pressione
Priority flow divider valve and pressure relief valve



Flusso eccedente per
utilizzo a ritorno
Exceeding flow to
turbator or to tank



		A2004	A2006	A2008	A2011	A2014	A2016	A2019	A2022	A2026
A	1- 44	91.8 (3.614)	95.1 (3.744)	99.3 (3.909)	103.4 (4.071)	108.4 (4.268)	112.6 (4.433)	117.6 (4.630)	122.6 (4.827)	128.4 (5.055)
	45	93.8 (3.693)	97.1 (3.823)	101.3 (3.988)	105.4 (4.150)	110.4 (4.346)	114.6 (4.512)	119.6 (4.709)	124.6 (4.906)	130.4 (5.134)
	47	89.1 (3.508)	92.4 (3.638)	96.6 (3.803)	100.7 (3.965)	105.7 (4.161)	109.9 (4.327)	114.9 (4.524)	119.9 (4.720)	125.7 (4.949)
B	1- 44	112.8 (4.441)	116.1 (4.571)	120.3 (4.736)	124.4 (4.898)	129.4 (5.094)	133.6 (5.260)	138.6 (5.457)	143.6 (5.654)	149.4 (5.882)
	45	114.8 (4.520)	118.1 (4.650)	122.3 (4.815)	126.4 (4.976)	131.4 (5.173)	135.6 (5.339)	140.6 (5.535)	145.6 (5.732)	151.4 (5.961)
	47	110.1 (4.335)	113.4 (4.465)	117.6 (4.630)	121.7 (4.791)	126.7 (4.988)	130.9 (5.154)	135.9 (5.350)	140.9 (5.547)	146.7 (5.776)

Esempio di ordinazione in codice / Example of ordering code

A	1	A	2	014	BB	1	F	3	C	VRF	(d)	—	VLP-I	(N)
VRF	Coperchio con VRF Cover with VRF									VRF				
(d)	Diametro del foro a libretto Diameter of calibrated orifice									2.5 - 3 - 3.25 - 4 - 4.25 - 5.5 (Vedi tabella / See table)				
VLP-I	Coperchio con VLP Cover with VLP									VLP-I (a a rioro interno /at internal elbow)				
(N)	Tipo di molla / Spring type									B - N - R (vedi tabella / See table)				

Tipo di molla / Spring type		
B	N	R
molla bianca white β ring	molla nera black β ring	molla rossa red β ring
Campi di taratura* [bar] Calibration fields* (ps)	10 ÷ 100 (145 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)
Il range completo si ottiene mediante l'aggiunta di pesi The complete range can be obtained with additional weights		

d	Q
[mm]	[l/min] (US.gal/min)
2.5	5 (1.32)
3	7 (1.32)
3.25	8 (1.32)
4	11 (1.32)
4.25	14 (1.32)
5.5	21 (1.32)

* In caso di omissione del valore di taratura, esso sarà inteso standard (molla nera con taratura 150 bar).

* Without setting request, it will be considered standard (black spring: 2175 psi).

**POMPE GRUPPO
PUMPS GROUP**

3

41

**Flangia e coperchio in Alluminio
Flange and cover in Aluminium**

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [m ³ /rev] [in ³ /rev]	Pressione max d'azione Max working pressure			Velocità max Max. speed [g/min] [rpm]	Portata max Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Masse Mass [Kg] [lbs]	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [in]	B [mm] [in]		
A3019	19 (1.16)	250 (3625)	270 (3915)	300 (4350)	3500	66.5 (17.57)	700	12.64 (3.34)	62.4 (2.457)	128.3 (5.051)	5.23 (11.53)	95*
A3022	22.3 (1.36)	240 (3480)	260 (3770)	290 (4205)	3500	78 (20.61)	700	14.83 (3.92)	63.9 (2.516)	131.3 (5.169)	5.36 (11.82)	
A3029	29.3 (1.79)	220 (3190)	240 (3480)	260 (3770)	3300	96.7 (25.55)	700	19.48 (5.15)	66.9 (2.634)	137.3 (5.406)	5.64 (12.44)	
A3033	32.9 (2.01)	220 (3190)	230 (3335)	260 (3770)	3300	108.6 (28.69)	700	21.88 (5.78)	68.4 (2.693)	140.3 (5.524)	5.78 (12.75)	
A3036	36.4 (2.22)	210 (3045)	230 (3335)	250 (3625)	3300	120.1 (31.73)	700	24.21 (6.40)	69.9 (2.752)	143.3 (5.642)	5.91 (13.03)	
A3044	43.5 (2.65)	200 (2900)	220 (3190)	240 (3480)	3000	130.5 (34.48)	700	28.93 (7.64)	72.9 (2.870)	149.3 (5.878)	6.19 (13.65)	
A3052	51.7 (3.15)	200 (2900)	210 (3045)	240 (3480)	3000	155.1 (40.98)	700	34.38 (9.08)	76.4 (3.008)	156.3 (6.154)	6.50 (14.33)	
A3062	61.1 (3.73)	180 (2610)	190 (2755)	200 (2900)	2500	152.7 (40.34)	700	40.63 (10.73)	80.4 (3.165)	164.3 (6.469)	6.87 (15.15)	

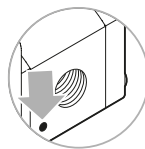
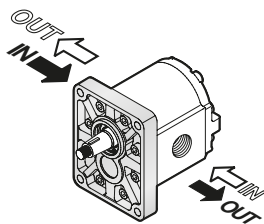
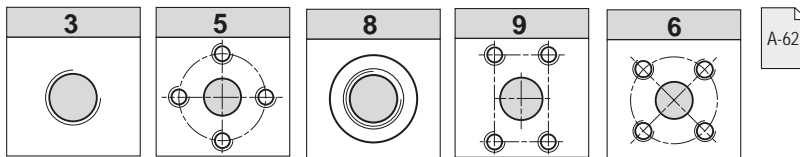
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

A 1 A 3 022 BB 41 A 3 C (H) VLP-I (N)

A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma coperchio / Cover mark	1
A	Guarnizione standard / Standard seal	A = Standard V = Guarnizione in Viton / Viton seal
3	Gruppo / Group	vedi tabella / see table
022	Cilindrata / Displacement	vedi tabella / see table
BB	Tipo albero / Shaft type	BB - E - A
41	Tipo flangiatura / Mounting flange	41
A	Configurazione delle connessioni / Standard port configuration	A
3	Tipo connessioni / Connections type	3 - 5 - 8 - 9 - 6
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in aspirazione Stiffening seal for low suction pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-63) Pressure relief valve (page A-63)

Conn Connessioni / Connections



Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the **suction side** for the pumps

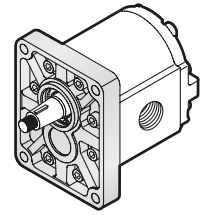
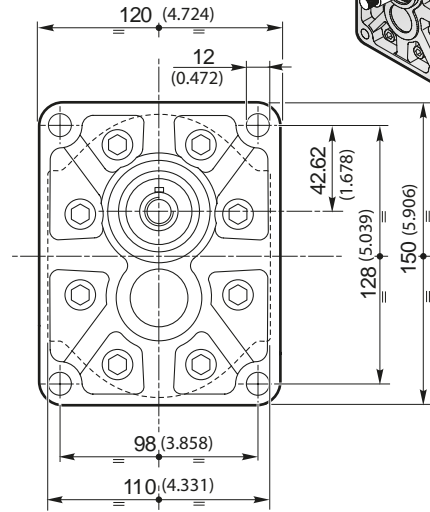
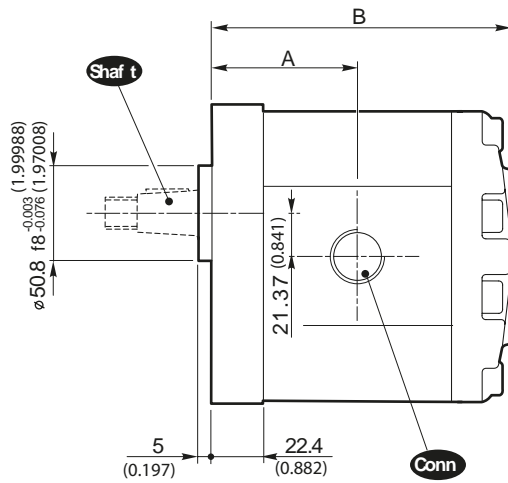
Rotazione / Rotation	
C	A

Flangia e coperchio in **Alluminio**
Flange and cover in **Aluminium**

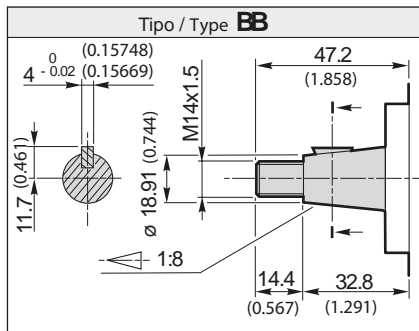
41

POMPE GRUPPO
PUMPS GROUP

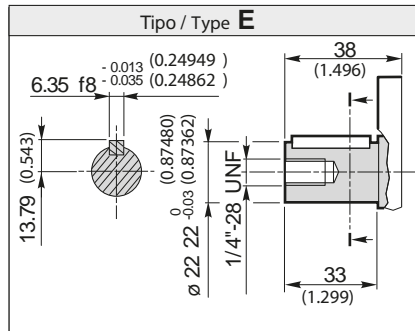
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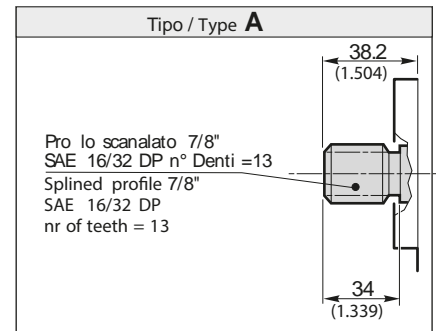
Shaf t Alberi dip onibili / *A w ilable b afts*



Coppia 240 Nm / Torque 177 ft lbs



Coppia 240 Nm / Torque 177 ft lbs



Coppia 240 Nm / Torque 177 ft lbs

**POMPE GRUPPO
PUMPS GROUP**

3

41

**Flangia e coperchio in Ghisa
Flange and cover in Cast iron**

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [cm ³ /rev] [in ³ /rev]	Pressione max. d' esercizio Max working pressure			Velocità max. Max speed [g/min] [rpm]	Portata max. Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Massa Mass [Kg] [lbs]	Rendimento volumetrico min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [in.]	B [mm] [in.]		
A3019	19 (1.16)	270 (3915)	290 (4205)	320 (4640)	3500	66.5 (17.57)	700	12.64 (3.34)	62.4 (2.457)	128.3 (5.051)	7.53 (16.60)	95*
A3022	22.3 (1.36)	260 (3770)	280 (4060)	300 (4350)	3500	78 (20.61)	700	14.83 (3.92)	63.9 (2.516)	131.3 (5.169)	7.66 (16.89)	
A3029	29.3 (1.79)	240 (3480)	260 (3770)	280 (4060)	3300	96.7 (25.55)	700	19.48 (5.15)	66.9 (2.634)	137.3 (5.406)	7.94 (17.51)	
A3033	32.9 (2.01)	240 (3480)	260 (3770)	280 (4060)	3300	108.6 (28.69)	700	21.88 (5.78)	68.4 (2.693)	140.3 (5.524)	8.08 (17.82)	
A3036	36.4 (2.22)	230 (3335)	250 (3625)	270 (3915)	3300	120.1 (31.73)	700	24.21 (6.40)	69.9 (2.752)	143.3 (5.642)	8.21 (18.10)	
A3044	43.5 (2.65)	200 (2900)	220 (3190)	240 (3480)	3000	130.5 (34.48)	700	28.93 (7.64)	72.9 (2.870)	149.3 (5.878)	8.49 (18.72)	
A3052	51.7 (3.15)	200 (2900)	220 (3190)	240 (3480)	3000	155.1 (40.98)	700	34.38 (9.08)	76.4 (3.008)	156.3 (6.154)	8.80 (19.40)	
A3062	61.1 (3.73)	180 (2610)	190 (2755)	200 (2900)	2500	152.7 (40.34)	700	40.63 (10.73)	80.4 (3.165)	164.3 (6.469)	9.17 (20.22)	

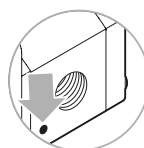
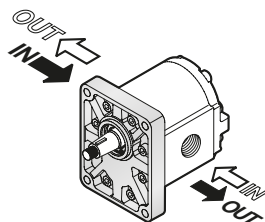
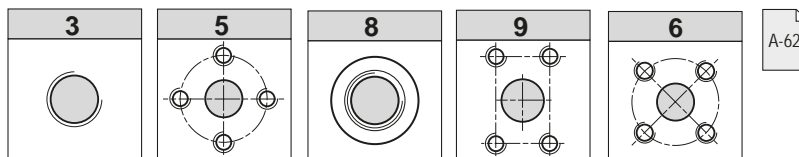
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

C 1 A 3 022 BB 41 A 3 C (H) VLP-I (N)

C	Tipo pompa / Pump type	C = Ghisa / Cast iron
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard bearing seal	A = Standard V = Guarnizione in Viton / Viton seal
3	Gruppo / Group	e di tabella / see table
022	Cilindrata / Displacement	e di tabella / see table
BB	Tipo albero / Shaft type	BB - E - A
41	Tipo flangiatura / Mounting flange	41
A	Configurazione delle connessioni / Standard port configuration	A
3	Tipo connessioni / Connections type	3 - 5 - 8 - 9 - 6
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in applicazioni Stiffening seal for low pressure applications	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valvola limitatrice di pressione (pag. A-63) Pressure relief valve (page A-63)

Connessioni / Connections



Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps

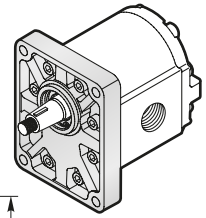
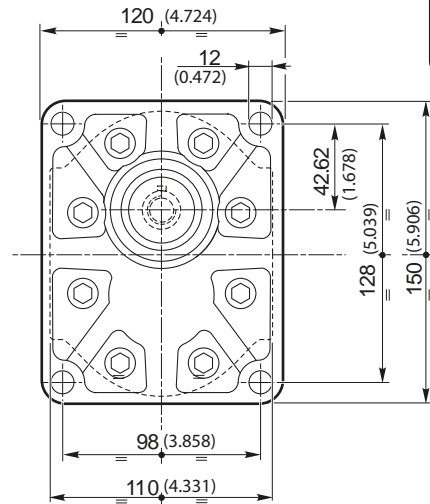
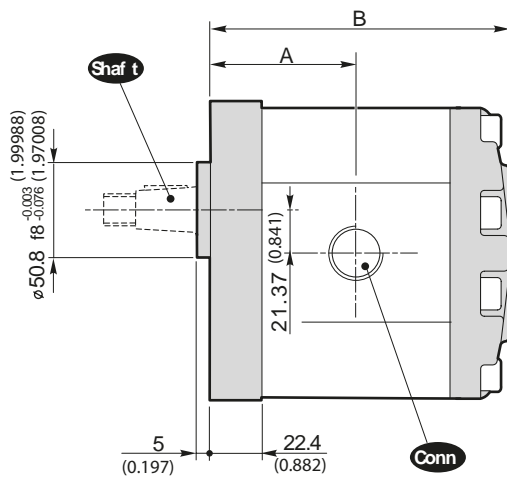
Rotazione / Rotation	
C	A

Flangia e coperchio in Ghisa
Flange and cover in Cast iron

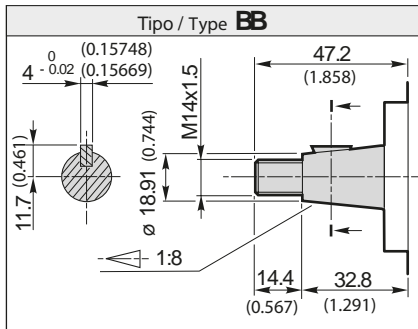
41

POMPE GRUPPO
PUMPS GROUP

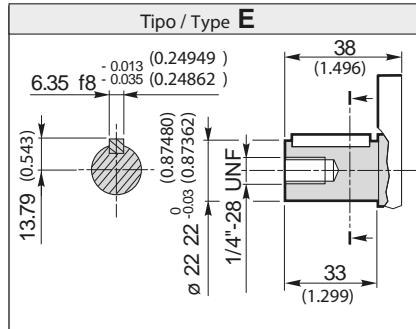
3



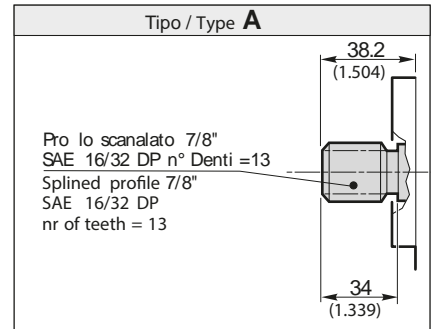
Shaf t Alberi dip onibili / **Ax ilable b afts**



Coppia 240 Nm / Torque 177 ft-lbs



Coppia 240 Nm / Torque 177 ft-lbs



Coppia 240 Nm / Torque 177 ft-lbs

**POMPE GRUPPO
PUMPS GROUP**

3

2, 2 OR (SAE B)

**Flangia e coperchio in Alluminio
Flange and cover in Aluminium**

Dati tecnici / Technical data

Grandezza Serie	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max. d' esercizio Max working pressure			Velocità max. Max. speed [g/min] (rpm)	Portata max. Max. flow [l/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [l/min] (Gal/min)	Dimensioni Dimensions		Massa Mass [Kg] (lbs)	Rendimento volumetrico min. Min. volumetric efficiency %
		P1 [bar] (PSI)	P2 [bar] (PSI)	P3 [bar] (PSI)					A [mm] (in)	B [mm] (in)		
A3019	19 (1.16)	250 (3625)	270 (3915)	300 (4350)	3500	66.5 (17.57)	700	12.64 (3.34)	59.4 (2.339)	125.3 (4.933)	5.23 (11.53)	95*
A3022	22.3 (1.36)	240 (3480)	260 (3770)	290 (4205)	3500	78 (20.61)	700	14.83 (3.92)	60.9 (2.398)	128.3 (5.051)	5.36 (11.82)	
A3029	29.3 (1.79)	220 (3190)	240 (3480)	260 (3770)	3300	96.7 (25.55)	700	19.48 (5.15)	63.9 (2.516)	134.3 (5.287)	5.64 (12.44)	
A3033	32.9 (2.01)	220 (3190)	230 (3335)	260 (3770)	3300	108.6 (28.69)	700	21.88 (5.78)	65.4 (2.575)	137.3 (5.406)	5.78 (12.75)	
A3036	36.4 (2.22)	210 (3045)	230 (3335)	250 (3625)	3300	120.1 (31.73)	700	24.21 (6.40)	66.9 (2.634)	140.3 (5.124)	5.91 (13.03)	
A3044	43.5 (2.65)	200 (2900)	220 (3190)	240 (3480)	3000	130.5 (34.48)	700	28.93 (7.64)	69.9 (2.752)	146.3 (5.760)	6.19 (13.65)	
A3052	51.7 (3.15)	200 (2900)	210 (3045)	240 (3480)	3000	155.1 (40.98)	700	34.38 (9.08)	73.4 (2.890)	153.3 (6.035)	6.50 (14.33)	
A3062	61.1 (3.73)	180 (2610)	190 (2755)	200 (2900)	2500	152.7 (40.34)	700	40.63 (10.73)	77.4 (3.047)	161.3 (6.350)	6.87 (15.15)	

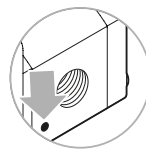
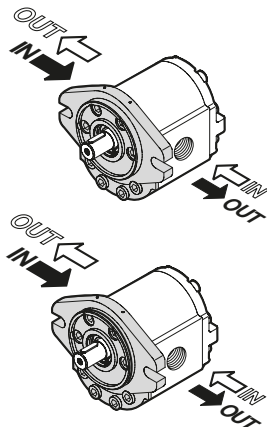
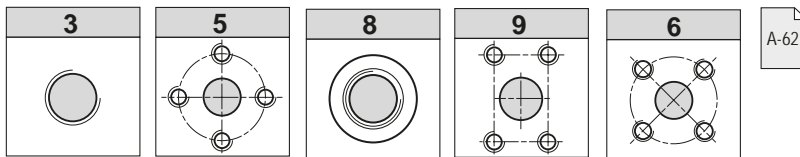
* (Valori relativi in fase di collaudo a 1500 giri/min / Value relative during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

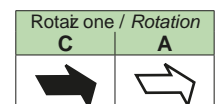
A 1 A 3 022 BB 2 A 3 C (H) VLP-I (N)

A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Forma cover / Cover mark	1
A	Guarnizione standard / Standard seal	A = Standard V = Guarnizione in Viton / Viton seal
3	Gruppo / Group	vedi tabella / see table
022	Cilindrata / Displacement	vedi tabella / see table
BB	Tipo albero / Shaft type	BB - E - A
2	Tipo flangitura / Mounting flange	2 - 2 OR
A	Configurazione delle connessioni / Standard port configuration	A
3	Tipo connessioni / Connections type	3 - 5 - 8 - 9 - 6
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per bassa pressione in aspirazione / Stiffening seal for low suction pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valvola limitatrice di pressione (pag. A-63) Pressure relief valve (page A-63)

Conn Connessioni / Connections



Il segno sul corpo indica il lato aspirazione per le pompe.
The sign on the body identifies the suction side for the pumps



Flangia e coperchio in **Alluminio**
Flange and cover in **Aluminium**

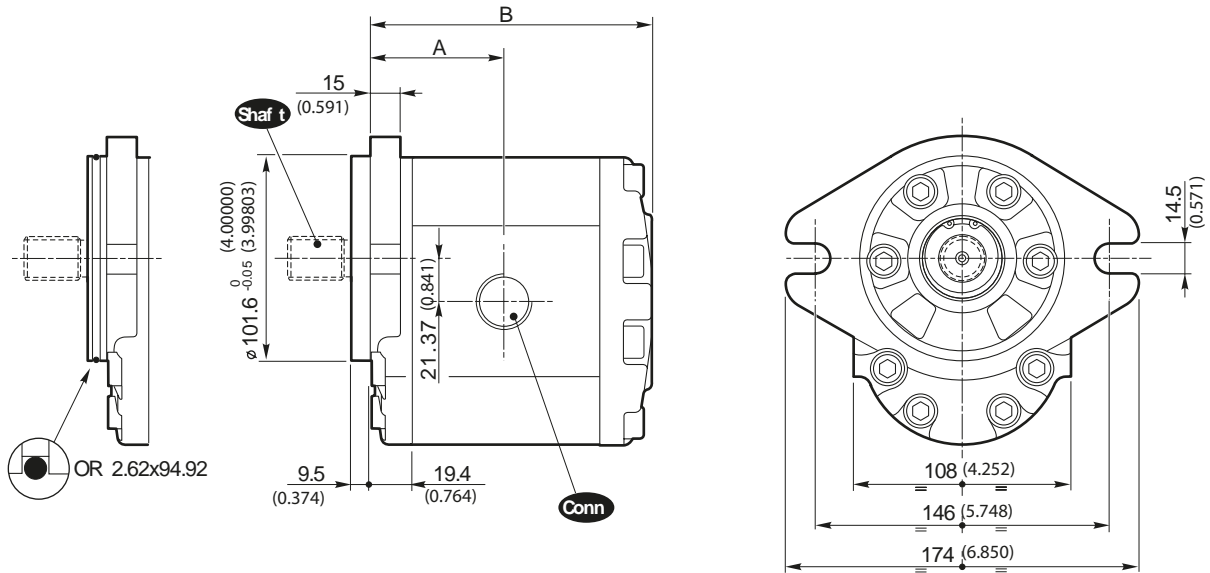
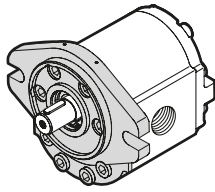
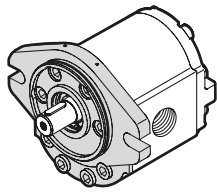
2, 2 OR (SAE B)

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PUMPS GROUP

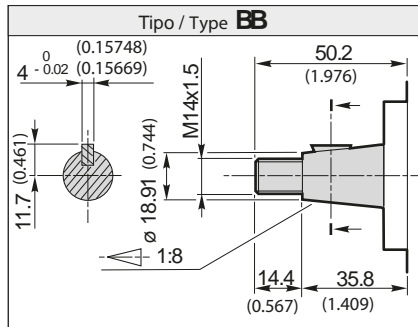
3

2 OR

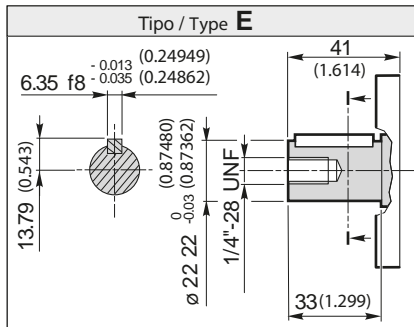
2



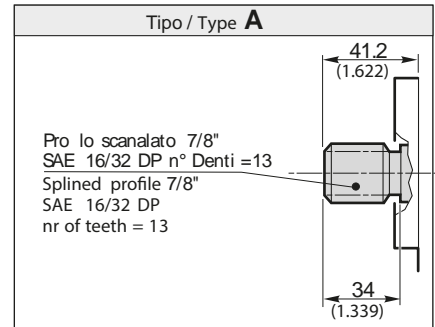
Shaf t Alberi dip onibili / **Aa** ilable **b** afts



Coppia 240 Nm / Torque 177 ft-lbs



Coppia 240 Nm / Torque 177 ft-lbs



Coppia 240 Nm / Torque 177 ft-lbs

**POMPE GRUPPO
PUMPS GROUP**

3

2, 2 OR (SAE B)

**Flangia e coperchio in Ghisa
Flange and cover in Cast iron**

Dati tecnici / Technical data

Grandezza Size	Cilindrata Displacement [cm ³ /rev] [in ³ /rev]	Pressione max d'essercizio Max working pressure			Velocità max Max speed [g/min] [rpm]	Portata max Max. flow [lt/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [lt/min] [Gal/min]	Dimensioni Dimensions		Masse Mass [Kg] [lbs]	Rendimento olumetric min. Min. volumetric efficiency %
		P1 [bar] [PSI]	P2 [bar] [PSI]	P3 [bar] [PSI]					A [mm] [in.]	B [mm] [in.]		
A3019	19 (1.16)	270 (3915)	290 (4205)	320 (4640)	3500	66.5 (17.57)	700	12.64 (3.34)	59.4 (2.339)	125.3 (4.933)	7.59 (16.74)	95*
A3022	22.3 (1.36)	260 (3770)	280 (4060)	300 (4350)	3500	78 (20.61)	700	14.83 (3.92)	60.9 (2.398)	128.3 (5.051)	7.72 (17.02)	
A3029	29.3 (1.79)	240 (3480)	260 (3770)	280 (4060)	3300	96.7 (25.55)	700	19.48 (5.15)	63.9 (2.516)	134.3 (5.287)	8.00 (17.64)	
A3033	32.9 (2.01)	240 (3480)	260 (3770)	280 (4060)	3300	108.6 (28.69)	700	21.88 (5.78)	65.4 (2.575)	137.3 (5.406)	8.14 (17.95)	
A3036	36.4 (2.22)	230 (3335)	250 (3625)	270 (3915)	3300	120.1 (31.73)	700	24.21 (6.40)	66.9 (2.634)	140.3 (5.524)	8.27 (18.24)	
A3044	43.5 (2.65)	200 (2900)	220 (3190)	240 (3480)	3000	130.5 (34.48)	700	28.93 (7.64)	69.9 (2.752)	146.3 (5.760)	8.55 (18.85)	
A3052	51.7 (3.15)	200 (2900)	220 (3190)	240 (3480)	3000	155.1 (40.98)	700	34.38 (9.08)	73.4 (2.890)	153.3 (6.035)	8.86 (19.54)	
A3062	61.1 (3.73)	180 (2610)	190 (2755)	200 (2900)	2500	152.7 (40.34)	700	40.63 (10.73)	77.4 (3.047)	161.3 (6.350)	9.23 (20.35)	

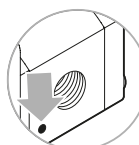
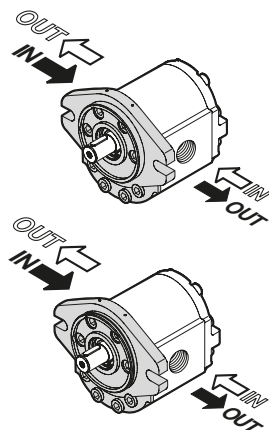
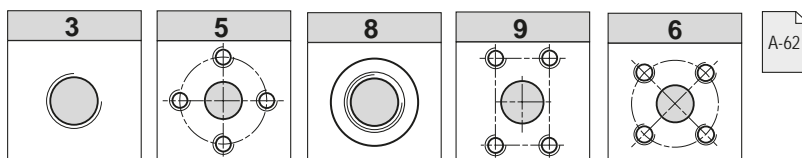
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

C	1	A	3	022	BB	2	A	3	C	(H)	VLP-I (N)
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C	Tipo pompa / Pump type	C = Ghisa / Cast iron
1	Forma o struttura / Design mark	1
A	Guarnizione standard / Standard bearing	A = Standard V = Guarnizione in Viton / Viton bearing
3	Gruppo / Group	3 = di tabella / see table
022	Cilindrata / Displacement	022 = di tabella / see table
BB	Tipo albero / Shaft type	BB - E - A
2	Tipo flangiatura / Mounting flange	2 - 2 OR
A	Configurazione delle connessioni / Standard port configuration	A
3	Tipo connessioni / Connections type	3 - 5 - 8 - 9 - 6
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation
A	Rotazione antioraria / Anticlockwise rotation	A = Rotazione antioraria / Anticlockwise rotation
(H)	Anello di rinforzo per la pressione in applicazioni / Stiffening ring for low static pressure	(a richiesta / optional)
VLP-I (N)	Opzioni / Optional	VLP-I (N) - VLP-E (N) Valore limitativo di pressione (pag. A-63) Pressure relief valve (page A-63)

Connessioni / Connections



Il segno lo indica il lato aspirazione per le pompe.
The sign on the body identify the suction side for the pumps

Rotazione / Rotation	
C	A

Flangia e coperchio in **Ghisa**
Flange and cover in **Cast iron**

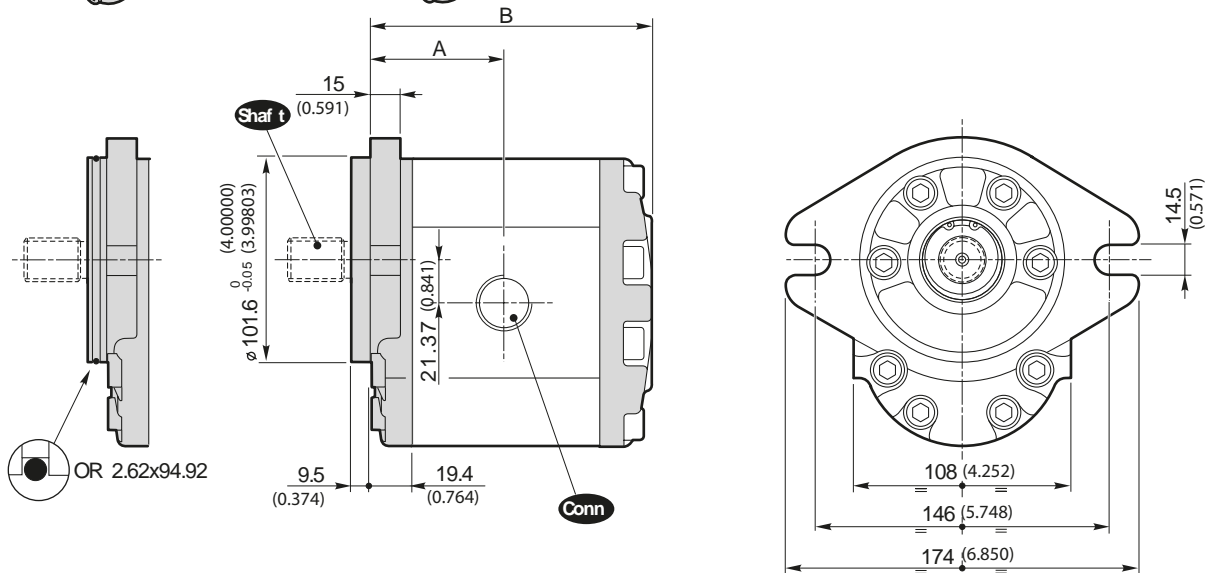
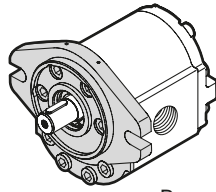
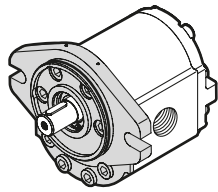
2, 2 OR (SAE B)

POMPE GRUPPO
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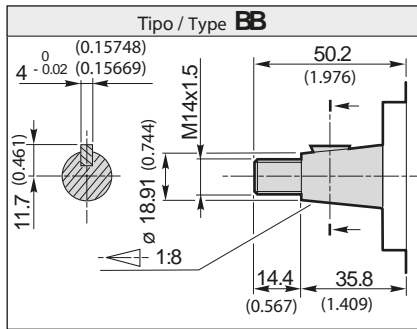
3

2 OR

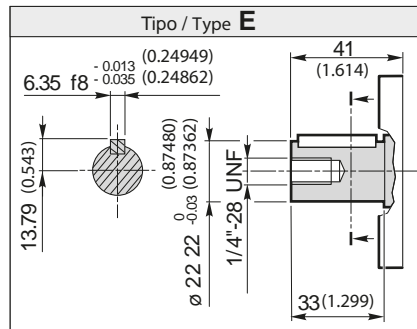
2



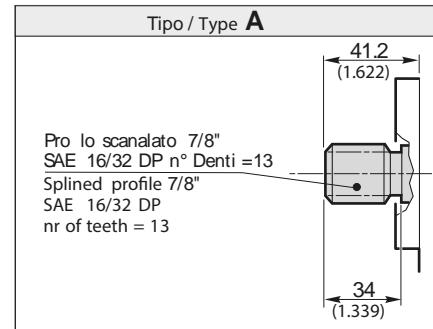
Shaf t Alberi dip onibili / **Aa** ilabile **a** afts



Coppia 240 Nm / Torque 177 ft-lbs



Coppia 240 Nm / Torque 177 ft-lbs



Coppia 240 Nm / Torque 177 ft-lbs

**POMPE GRUPPO
PUMPS GROUP**

3

60

Dati tecnici / *Teb nia / data*

Grandezza Size	Cilindrata Displacement [m ³ /rev] (in ³ /rev)	Pressione max d'esercizio Max working pressure			Velocità max Max speed [g/min] (rpm)	Portata max Max. flow [l/min] (Gal/min)	Velocità min. Min. speed [g/min] (rpm)	Portata min. Min. flow [l/min] (Gal/min)	Dimensioni Dimensions		Massa Mass [Kg] (lbs)	Rendimento olumetric min. Min. volumetric efficiency %
		P1	P2	P3					A	B		
		[bar] (PSI)	[bar] (PSI)	[bar] (PSI)					[mm] (in)	[mm] (in)		
A3019	19 (1.16)	270 (3915)	290 (4205)	320 (4640)	3500	66.5 (17.57)	700	12.64 (3.34)	110.5 (4.350)	176.4 (6.945)	7.58 (16.71)	95*
A3022	22.3 (1.36)	260 (3770)	280 (4060)	300 (4350)	3500	78 (20.61)	700	14.83 (3.92)	112.0 (4.409)	179.4 (7.063)	7.72 (17.02)	
A3029	29.3 (1.79)	240 (3480)	260 (3770)	280 (4060)	3300	96.7 (25.55)	700	19.48 (5.15)	115.0 (4.528)	185.4 (7.299)	8.0 (17.64)	
A3033	32.9 (2.01)	240 (3480)	260 (3770)	280 (4060)	3300	108.6 (28.69)	700	21.88 (5.78)	116.5 (4.587)	188.4 (7.417)	8.14 (17.95)	
A3036	36.4 (2.22)	230 (3335)	250 (3625)	270 (3915)	3300	120.1 (31.73)	700	24.21 (6.40)	118.0 (4.646)	191.4 (7.535)	8.28 (18.26)	
A3044	43.5 (2.65)	200 (2900)	220 (3190)	240 (3480)	3000	130.5 (34.48)	700	28.93 (7.64)	121.0 (4.764)	197.4 (7.772)	8.55 (18.85)	
A3052	51.7 (3.15)	200 (2900)	220 (3190)	240 (3480)	3000	155.1 (40.98)	700	34.38 (9.08)	124.5 (4.902)	204.4 (8.047)	8.88 (19.58)	
A3062	61.1 (3.73)	180 (2610)	190 (2755)	200 (2900)	2500	152.7 (40.34)	700	40.63 (10.73)	128.5 (5.059)	212.4 (8.362)	9.25 (20.40)	

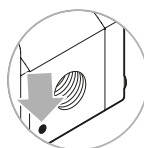
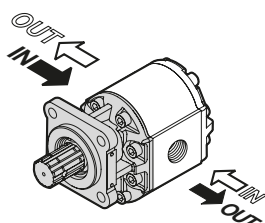
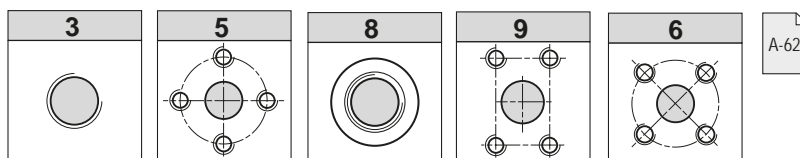
* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

A 1 A 3 022 Z 60 A 3 C

A	Tipo pompa / Pump type	A = Alluminio / Aluminium
1	Formazione serie / Design mark	1
A	Guarnizione standard / Standard seal	A = Standard V = Guarnizione in Viton / Viton seal
3	Gruppo / Group	3 = di tabella / see table
022	Cilindrata / Displacement	022 = di tabella / see table
Z	Tipo albero / Shaft type	Z
60	Tipo flangiatura / Mounting flange	60
A	Configurazione delle connessioni / Standard port configuration	A
3	Tipo connessioni / Connections type	3 - 5 - 8 - 9 - 6
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation

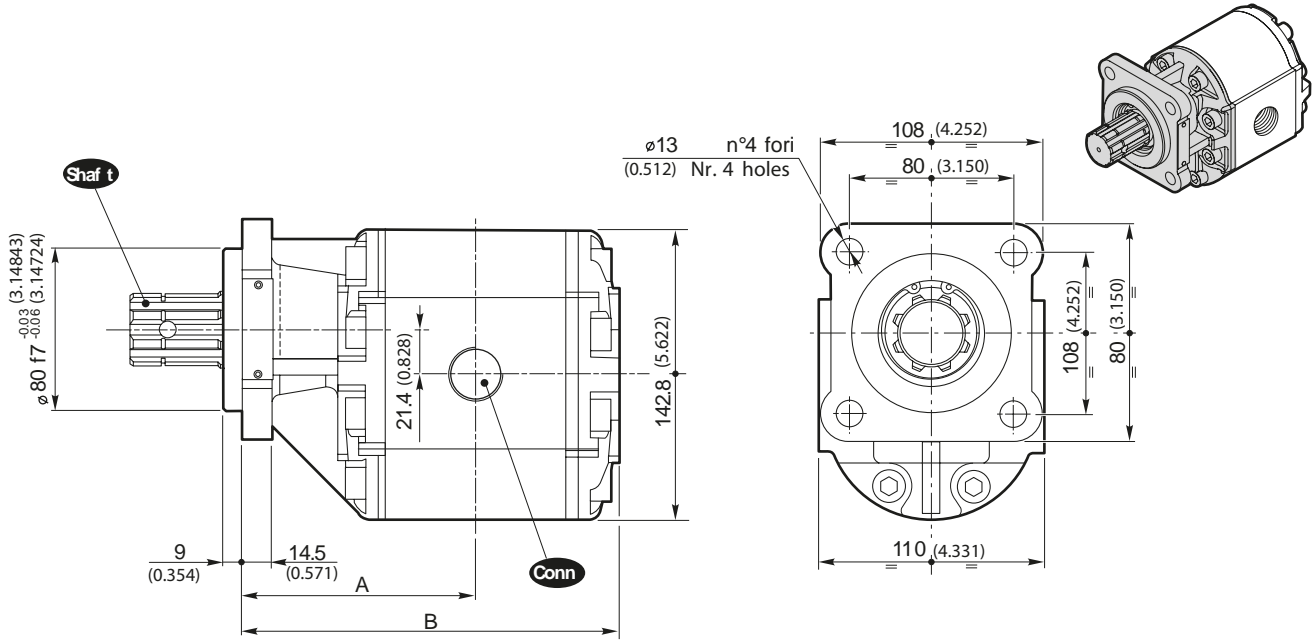
Connessioni / Connections



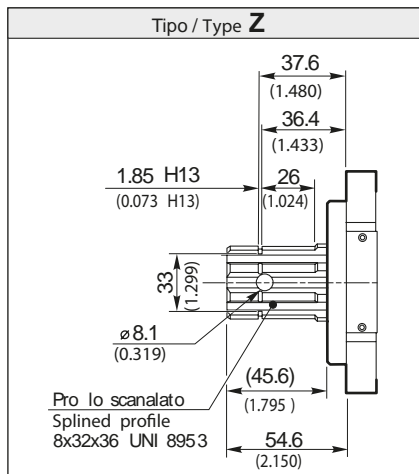
Il segno sul corpo indica il lato aspirazione per le pompe.
The sign on the body identify the suction side for the pumps

Rotazione / Rotation	
C	A

60 **POMPE GRUPPO** **3**
PUMPS GROUP



Shaf t Alberi dip onibili / **Aa** ilabile **b** afts

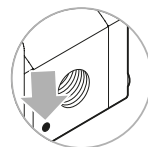
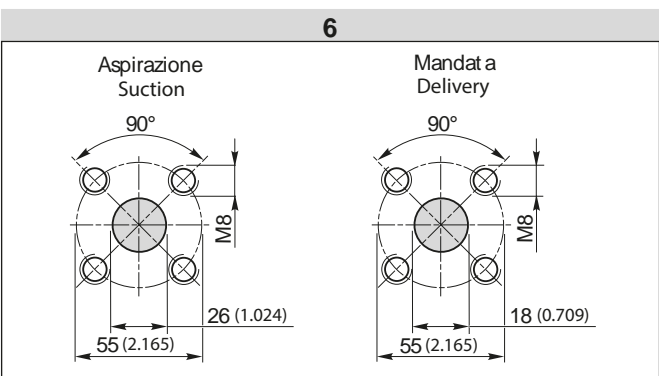
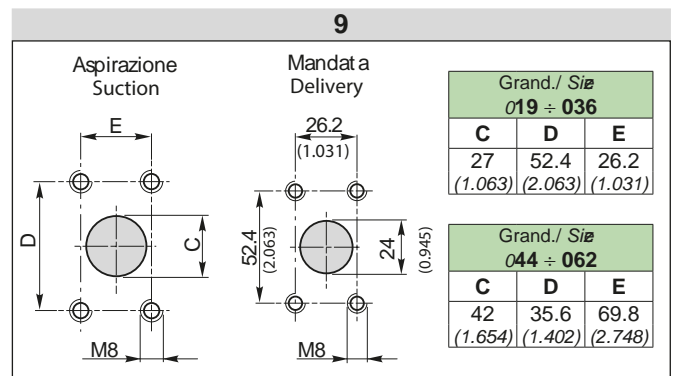
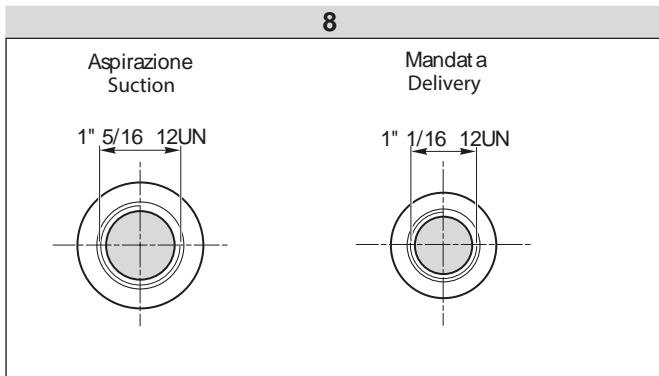
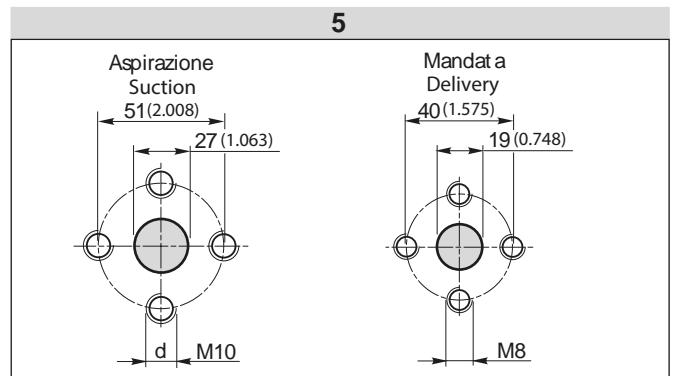
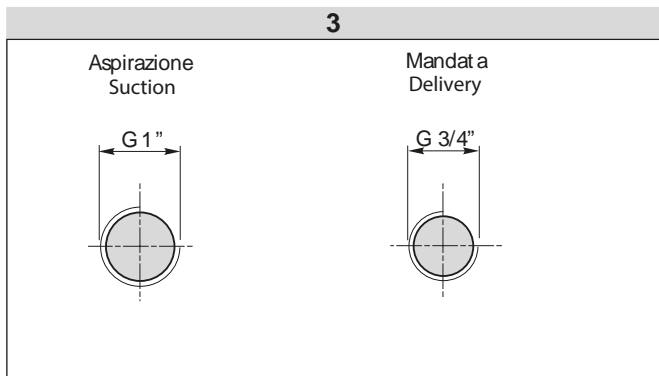


Coppia 240 Nm / Torque 177 ft-lbs

**POMPE GRUPPO
PUMPS GROUP**

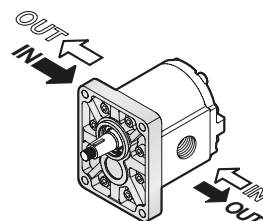
3

CONNESSIONI / CONNECTIONS



Il segno a lato indica il lato aspirazione per le pompe.
The sign on the body identify the **suction side** for the pumps

Posizione delle connessioni / Connections positions



Rotazione / Rotation	
C	A

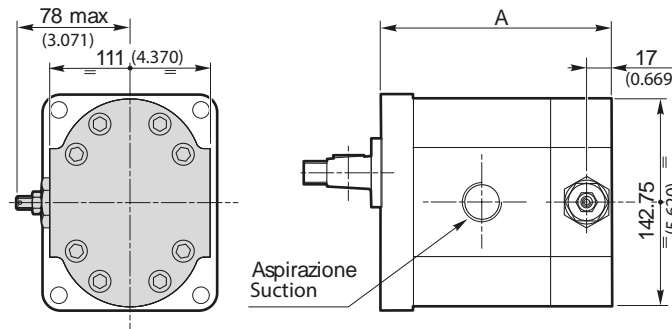
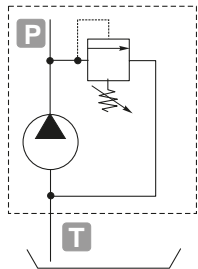
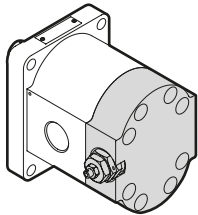
OPZIONI / OPTIONAL

**POMPE GRUPPO
PUMPS GROUP**

3

VLP- I (N)

**Valvola limitatrice di pressione a scarico interno
Pressure relief valve with internal exhaust**



	A	
	41	2
A3019	144.3 (5.681)	141.3 (5.563)
A3022	147.3 (5.799)	144.3 (5.681)
A3029	153.3 (6.035)	150.3 (5.917)
A3033	156.3 (6.154)	153.3 (6.035)
A3036	159.3 (6.272)	156.3 (6.154)
A3044	165.3 (6.508)	162.3 (6.390)
A3052	172.3 (6.783)	169.3 (6.665)
A3062	180.3 (7.098)	177.3 (6.980)

NB.

La valvola limitatrice di pressione si applica e si installa situando il corpo verso il posteriore.

Fornitura solo con flangia e coperchio in Alluminio.

E' rappresentata una pompa a non rotazione sensibile.

L'apertura della valvola limitatrice di pressione deve avvenire per tempi non superiori ai 7 secondi ogni minuto per evitare il surriscaldamento della pompa.

Warning.

The pressure relief valve can be applied by installing the rear cover.

It is supplied only with aluminium flange and cover.

The bonded pump is anti-clockwise rotation.

The opening of the pressure relief valve should be carry out for times not over 7" each minute to avoid the overheating of the pump.

Esempio di ordinazione in codice / Example of ordering code

A	1	A	3	022	BB	2	A	3	C	VLP-I	(N)
---	---	---	---	-----	----	---	---	---	---	-------	-----

VLP-I	Coperchio con VLP Cover with VLP	VPL-I (a scarico interno / at internal exhaust)
(N)	Tipo di molla / Spring type	B - N - R (vedi tabella / See table)

		Tipo di molla / Spring type		
		B	N	R
		molla bianca white spring	molla nera black spring	molla rossa red spring
Campi di taratura* Calibration fields*	[bar] (psi)	10 ÷ 100 (145 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)

* In caso di omissione del valore di taratura, esso sarà inteso standard (molla nera con taratura 150 bar).

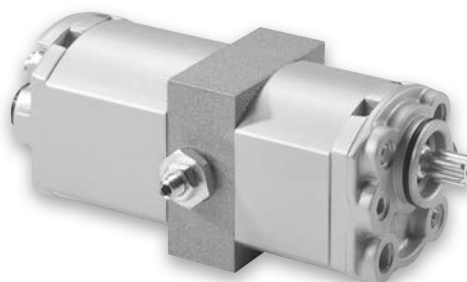
* Without setting request, it will be considered standard (black spring: 2175 psi).

POMPE MULTIPLE AD INGRANAGGI MULTIPLE GEAR PUMPS



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PRESENTAZIONE

Le pompe in Tandem (o pompe multiple) sono disponibili in versione STANDARD e T.C. (Tandem o rto) e possono essere a due o più stadi.

La versatilità delle nostre pompe consente il montaggio di una pompa multipla utilizzando pompe singole ed effettuando le operazioni di disassemblaggio/assembleaggio di estrema semplicità.

- Tutte le pompe sono già predisposte per il traino di una seconda pompa.
- La quantità molto limitata di kit "flangia di collegamento e accessori" permette di mantenere un basso costo nel magazzino e soprattutto di dare un servizio rapido agli utilizzatori finali.

DESCRIPTION

The multiple pumps are available in STANDARD and T.C. (port-tandem) versions

The versatility of our pumps permits the assembling of a multiple pump using a single pump and making only a simple operation of disassembly/assembly.

- All our standard pumps are already present to engage another pump.
- A very limited quantity of kit "flange connections and accessories" allows a small stock and mainly a rapid answer to final users

CARATTERISTICHE TECNICHE

- Le prestazioni delle unità ben si fondono la pompa multipla sono identiche a quelle delle singole pompe corrispondenti.
- La coppia massima di rotazione della pompa multipla è determinata dalla pompa o n. velocità minore.
- La coppia massima assorbita da ogni singola unità, tale da consentire il limite di funzionamento alla pressione massima di impiego, è la loro media:

$$M = \frac{c \times p}{64}$$

dove :

- M = Coppia massima assorbita (Nm)
- c = Cilindrata pompa (m³/giro)
- p = Pressione massima di impiego (bar)

- La somma delle coppie assorbite dalle singole pompe non deve essere superiore alla coppia massima ammissibile sull'albero principale (vedi tabella).

La coppia massima assorbita dalle pompe sequenti non deve essere superiore alla coppia trasmessa dal tramo della pompa precedente.

- La potenza assorbita dalla pompa multipla è data dalla somma delle potenze assorbite dalle singole pompe, è la loro media:

$$P = \frac{c \times n \times p}{603000}$$

dove :

- P = Potenza massima assorbita (Kw)
- c = Cilindrata pompa (m³/giro)
- n = Numero di giri al minuto (giri/min)
- p = Pressione massima di impiego (bar)

TECHNICAL FEATURES

- Performance of units composing multiple pumps are the same as those of the corresponding single pumps
- Max rotation speed of multiple pumps is given by lower pump.
- Max torque absorbed by each simple unit to grant a working limit at max working pressure is calculated in the following way

$$M = \frac{c \times p}{64}$$

in which :

- M = Max absorbed input torque (ft-lb)
- c = Pump displacement (m³/rev)
- p = Max working pressure (bar)

- The total of the torque absorbed by each pump shall be not in excess of the max allowed torque on main shaft (see below table)

The max torque absorbed by the follow pumps shall be not in excess of the torque transmitted by the rear draft gear.

- The power absorbed by the multiple pump is determined from total powers that each pump absorbed and it is calculated as follow:

$$P = \frac{c \times n \times p}{603000}$$

in which :

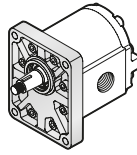
- P = Max absorbed power (Kw)
- c = Pump displacement (m³/rev)
- n = Max working rpm
- p = Max working pressure (bar)

	Coppia trasmessa dall'albero principale Torque transmitted by the draft pump [Nm] (ft-lbs)								Coppia trasmessa dal traino pompa Torque transmitted by rear draft [Nm] (ft-lbs)
	Tipo BB Type BB	Tipo BF Type BF	Tipo BH Type BH	Tipo E Type E	Tipo A Type A	Tipo BG Type BG	Tipo BL Type BL	Tipo BJ/BZ Type B/BZ	
GR 1	18 (13.3)	18 (13.3)		30 (22.1)	30 (22.1)	30 (22.1)		12 (8.9)	18 (13.3)
GR 2	98 (72.3)	98 (72.3)	98 (72.3)	98 (72.3)	98 (72.3)	98 (72.3)	98 (72.3)	70 (51.6)	75 (55.3)
GR 3	240 (177)			240 (177)	240 (177)				240 (177)
GR 4	750 (553)								750 (553)

GAMMA DI PRODOTTO

PRODUCT RANGE

Standard
Con albero tipo BB
With shaft type BB



A-16

1^a pompa / 1st pump **2^a (..3^a,..) pompa / 2nd (..3rd,..) pump**

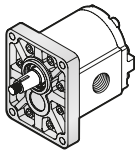
	3	2	1
1			01091100000000 010911308680_00
2		01092200000000 010922291890_00	01092110000000 01092101000000
3	01093300000000 01093310000000	01093200000000 01093210000000	01093110000000 01093101000000

Kit codice / Kit code

Tandem STANDARD
Tandem STANDARD

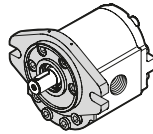
Tandem CORTO
SHORT Tandem

41



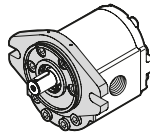
A-52 A-54

2 (SAE B)



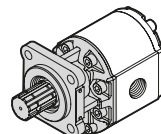
A-56 A-58

2 OR (SAE B)



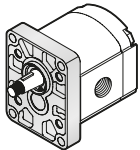
A-56 A-58

60



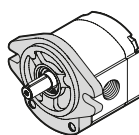
A-60

41



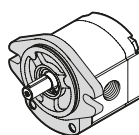
A-28 A-30

1 (SAE A)



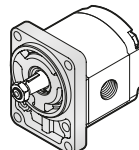
A-32 A-34

1 OR (SAE A)



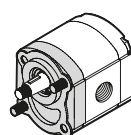
A-32 A-34

45



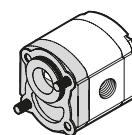
A-36

44



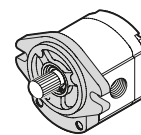
A-38

47



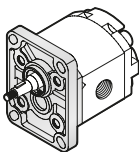
A-40

49 (SAE A 14*)



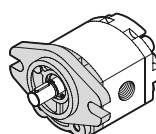
A-44

41



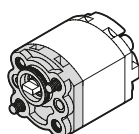
A-16

1 (SAE AA)



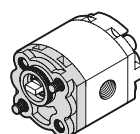
A-18

8



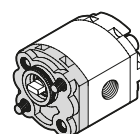
A-20

9



A-22

10



A-24

DESIGNAZIONE

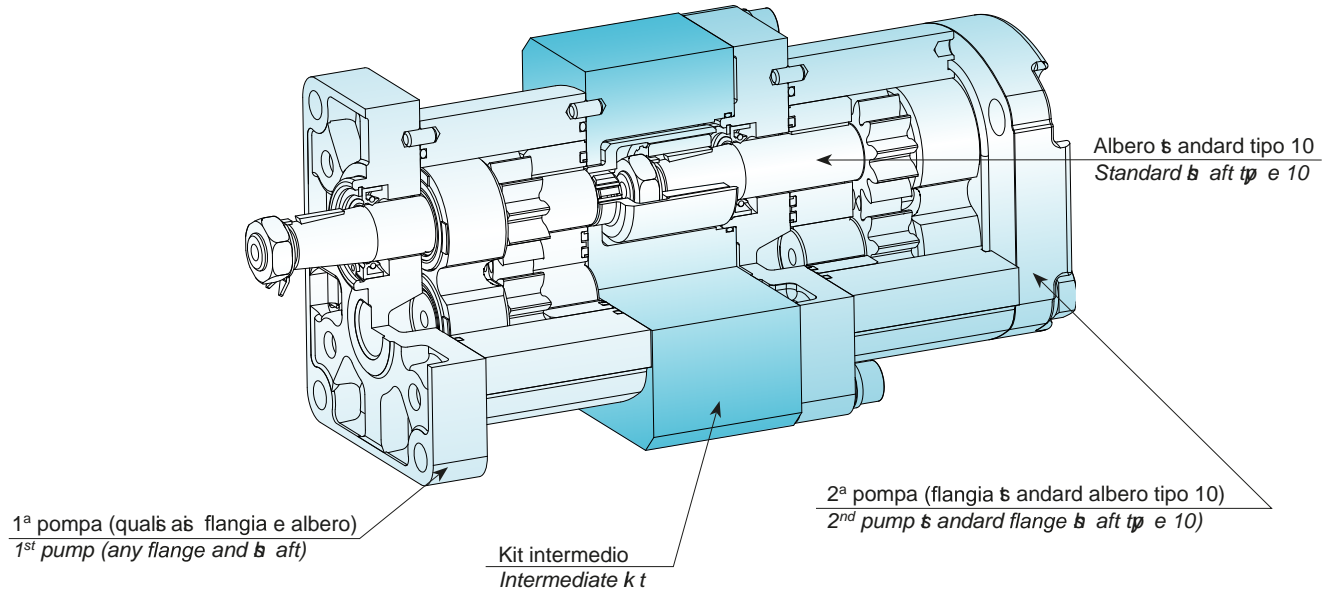
DESIGNATION

Tandem STANDARD

Sono possibili combinazioni di tutti i gruppi pompa (Gr.1 - Gr.2 - Gr.3)
L'aspirazione di ogni singola unità è indipendente.

Tandem STANDARD

Are possible different combinations of all the group pumps (Gr.1 - Gr.2 - Gr.3).
The suction of each pump is independent.



Esempio di ordinazione in codice / Example of ordering code

A	1	A2014	1004	BB	41	F	5	C	(H)
----------	----------	--------------	-------------	-----------	-----------	----------	----------	----------	------------

A	Tipo pompa / Pump type	A = Alluminio / Aluminium C = Ghisa / Cast iron
1	Forma o smontaggio / Design mark	1
A2014	Tipo prima pompa / First pump type	
1004	Tipo seconda pompa / Second pump type	
BB	Tipo albero prima pompa / Shaft type first pump	
41	Tipo e posizione flangia 1ª pompa / Flange and position on first pump flange	Vedi pompa singola corrispondente (es. z A) See corresponding single pump
F	Configurazione delle porte / Standard port configuration	
5	Tipo connessioni / Connections type	
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Opzioni / Optional	

Esempio di ordinazione in codice / Example of ordering code

A	1	A3036	2014	1003	BB	2	F	5	C	(H)
----------	----------	--------------	-------------	-------------	-----------	----------	----------	----------	----------	------------

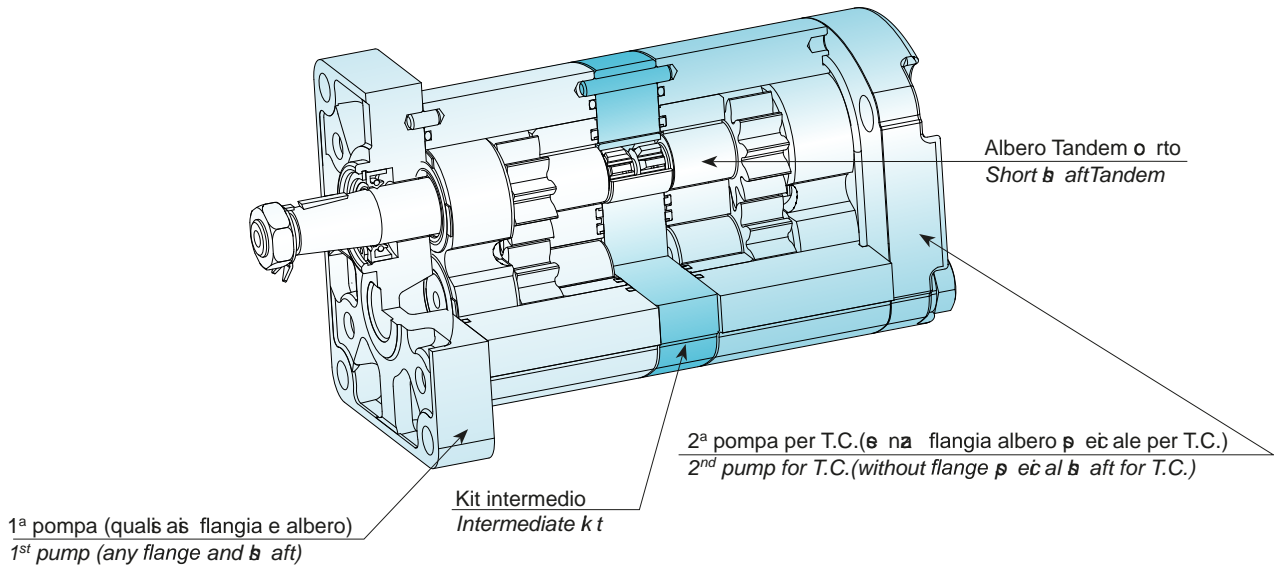
A	Tipo pompa / Pump type	A = Alluminio / Aluminium C = Ghisa / Cast iron
1	Forma o smontaggio / Design mark	1
A2014	Tipo prima pompa / First pump type	
1004	Tipo seconda pompa / Second pump type	
BB	Tipo albero prima pompa / Shaft type first pump	
2	Tipo e posizione flangia 1ª pompa / Flange and position on first pump flange	Vedi pompa singola corrispondente (es. z A) See corresponding single pump
F	Configurazione delle porte / Standard port configuration	
5	Tipo connessioni / Connections type	
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation
(H)	Opzioni / Optional	

Tandem CORTO

- Dimensioni più contenute rispetto al tandem standard.
- Le aperture dei vari assi sono in comunicazione fra loro.
- Possibilità di apertura uniaxiale fra i vari assi (consigliare non si sa l'età)

SHORT Tandem

- Low dimensions respect to the standard tandem.
- The sections of the different pumps are connected.
- Possibility to have only one section among the different pumps (consult our factory)



Esempio di ordinazione in codice / Example of ordering code

A	1	A2014	1004	BB	1	F	3	C	TC	(H)
----------	----------	--------------	-------------	-----------	----------	----------	----------	----------	-----------	------------

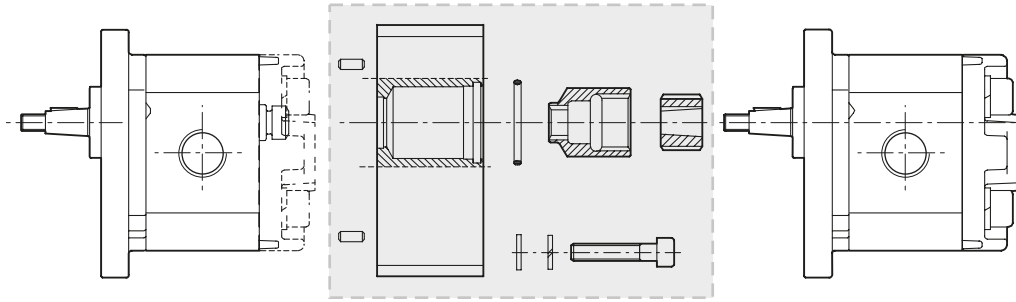
A	Tipo pompa / Pump type	A = Alluminio / Aluminium C = Ghisa / Cast iron	
1	Forma o struttura / Design mark	1	
A2014	Tipo prima pompa / First pump type		
1004	Tipo seconda pompa / Second pump type		
BB	Tipo albero prima pompa / Shaft type first pump		
1	Tipo e dimensione flangia 1ª pompa / Flange and size on first pump flange	Vedi pompa e ingola o rripendente (vedi A)	
F	Configurazione delle connessioni / Standard port configuration	See orienting angle pump	
3	Tipo connessioni / Connections type		
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation	
TC	Tipo Tandem / Type Tandem		
(H)	Opzioni / Optional		

Esempio di ordinazione in codice / Example of ordering code

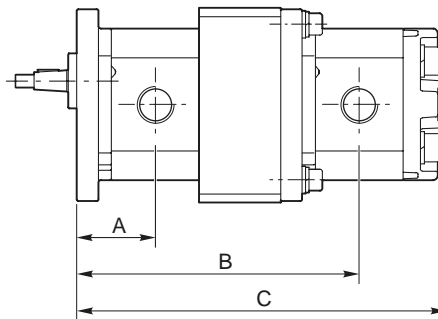
A	1	A3036	2014	1003	BB	2	F	5	C	TC	(H)
----------	----------	--------------	-------------	-------------	-----------	----------	----------	----------	----------	-----------	------------

A	Tipo pompa / Pump type	A = Alluminio / Aluminium C = Ghisa / Cast iron	
1	Forma o struttura / Design mark	1	
A2014	Tipo prima pompa / First pump type		
1004	Tipo seconda pompa / Second pump type		
BB	Tipo albero prima pompa / Shaft type first pump		
2	Tipo e dimensione flangia 1ª pompa / Flange and size on first pump flange	Vedi pompa e ingola o rripendente (vedi A)	
F	Configurazione delle connessioni / Standard port configuration	See orienting angle pump	
5	Tipo connessioni / Connections type		
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation	
TC	Tipo Tandem / Type Tandem		
(H)	Opzioni / Optional		

GR 1 + GR 1



Codie ordinaž one kt / kt order o de **01091100000000**



Codie ordinaž one kt / kt order o de **01091100000000**

Codie ordinaž one kt / kt order o de **01091100000000**

		mm (inb)		
		A	B	C
A1009	A1009	52.2 (2.053)	177.9 (7.006)	234.1 (9.217)
	A1008	52.2 (2.053)	174.0 (6.850)	226.2 (8.906)
	A1006	52.2 (2.053)	171.2 (6.738)	220.5 (8.681)
	A1005	52.2 (2.053)	168.6 (6.638)	215.4 (8.480)
	A1004	52.2 (2.053)	167.1 (6.577)	212.3 (8.358)
	A1370	52.2 (2.053)	166.1 (6.539)	210.4 (8.283)
	A1003	52.2 (2.053)	165.1 (6.500)	208.4 (8.205)
	A1250	52.2 (2.053)	163.8 (6.447)	205.7 (8.098)
	A1002	52.2 (2.053)	162.8 (6.407)	203.7 (8.020)
	A1160	52.2 (2.053)	162.0 (6.378)	202.2 (7.961)
	A1001	52.2 (2.053)	161.2 (6.344)	200.5 (7.894)
	A1090	52.2 (2.053)	160.6 (6.323)	199.4 (7.850)

		mm (inb)		
		A	B	C
A1008	A1008	48.2 (1.898)	166.1 (6.539)	218.3 (8.594)
	A1006	48.2 (1.898)	163.3 (6.427)	212.6 (8.370)
	A1005	48.2 (1.898)	160.7 (6.327)	207.5 (8.169)
	A1004	48.2 (1.898)	159.2 (6.266)	204.4 (8.047)
	A1370	48.2 (1.898)	158.2 (6.228)	202.5 (7.972)
	A1003	48.2 (1.898)	157.2 (6.189)	200.5 (7.894)
	A1250	48.2 (1.898)	155.9 (6.136)	197.8 (7.787)
	A1002	48.2 (1.898)	154.9 (6.096)	195.8 (7.709)
	A1160	48.2 (1.898)	154.1 (6.067)	194.3 (7.650)
	A1001	48.2 (1.898)	153.3 (6.033)	192.6 (7.583)
	A1090	48.2 (1.898)	152.7 (6.012)	191.5 (7.539)

Con la flangia 1 inc ementare le quote A, B, e C di 3.5 mm

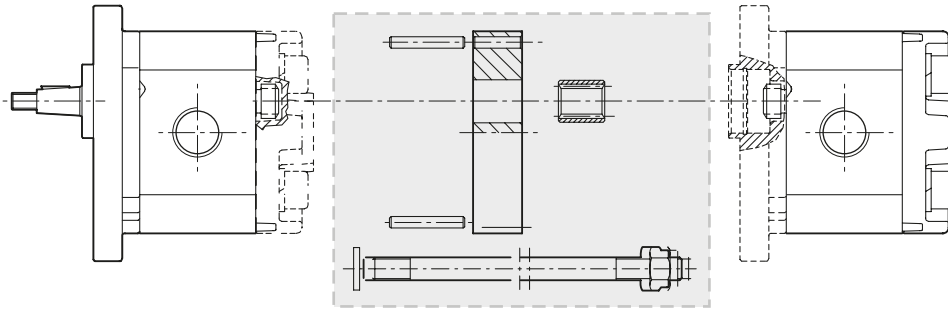
With 1 flange inc eae A, B, and C dimenis ons of 0.138 inb

Codie ordinaž one kt / kt order o de **01091100000000**Codie ordinaž one kt / kt order o de **01091100000000**

		mm (inb)		
		A	B	C
A1006	A1006	45.4 (1.785)	157.6 (6.203)	206.9 (8.146)
	A1005	45.4 (1.785)	155.0 (6.102)	201.8 (7.945)
	A1004	45.4 (1.785)	153.5 (6.041)	198.7 (7.823)
	A1370	45.4 (1.785)	152.5 (6.004)	196.8 (7.748)
	A1003	45.4 (1.785)	151.5 (5.965)	194.8 (7.669)
	A1250	45.4 (1.785)	150.2 (5.911)	192.1 (7.563)
	A1002	45.4 (1.785)	149.2 (5.872)	190.1 (7.484)
	A1160	45.4 (1.785)	148.4 (5.843)	188.6 (7.425)
	A1001	45.4 (1.785)	147.6 (5.809)	186.9 (7.358)
	A1090	45.4 (1.785)	147.0 (5.787)	185.8 (7.315)
A1005	A1005	42.8 (1.685)	149.9 (5.902)	196.7 (7.744)
	A1004	42.8 (1.685)	148.4 (5.841)	193.6 (7.622)
	A1370	42.8 (1.685)	147.4 (5.803)	191.7 (7.547)
	A1003	42.8 (1.685)	146.4 (5.764)	189.7 (7.469)
	A1250	42.8 (1.685)	145.1 (5.711)	187.0 (7.362)
	A1002	42.8 (1.685)	144.1 (5.671)	185.0 (7.283)
	A1160 TC	42.8 (1.685)	143.3 (5.642)	183.5 (7.224)
	A1001 TC	42.8 (1.685)	142.5 (5.608)	181.8 (7.157)
	A1090 TC	42.8 (1.685)	141.9 (5.587)	180.7 (7.114)
	A1004 TC	41.3 (1.624)	145.3 (5.719)	190.5 (7.500)
A1370 TC	41.3 (1.624)	144.3 (5.681)	188.6 (7.425)	
A1003 TC	41.3 (1.624)	143.3 (5.642)	186.6 (7.346)	
A1250 TC	41.3 (1.624)	141.9 (5.589)	183.9 (7.240)	
A1002 TC	41.3 (1.624)	140.9 (5.549)	181.9 (7.161)	
A1160 TC	41.3 (1.624)	140.2 (5.520)	180.4 (7.102)	
A1001 TC	41.3 (1.624)	139.4 (5.486)	178.7 (7.035)	
A1090 TC	41.3 (1.624)	138.8 (5.465)	177.6 (6.992)	

		mm (inb)		
		A	B	C
A1370	A1370 TC	40.3 (1.587)	142.4 (5.606)	186.7 (7.350)
	A1003 TC	40.3 (1.587)	141.4 (5.567)	184.7 (7.272)
	A1250 TC	40.3 (1.587)	140.1 (5.514)	182.0 (7.165)
	A1002 TC	40.3 (1.587)	139.1 (5.474)	180.0 (7.087)
	A1160 TC	40.3 (1.587)	138.3 (5.445)	178.5 (7.028)
	A1001 TC	40.3 (1.587)	137.5 (5.411)	176.8 (6.961)
	A1090 TC	40.3 (1.587)	136.9 (5.390)	175.7 (6.917)
	A1003 TC	39.3 (1.547)	139.4 (5.488)	182.7 (7.193)
	A1250 TC	39.3 (1.547)	138.1 (5.435)	180.0 (7.087)
	A1002 TC	39.3 (1.547)	137.1 (5.396)	178.0 (7.008)
A1003	A1160 TC	39.3 (1.547)	136.3 (5.366)	176.5 (6.949)
	A1001 TC	39.3 (1.547)	135.5 (5.333)	174.8 (6.882)
	A1090 TC	39.3 (1.547)	134.9 (5.311)	173.7 (6.839)
	A1250 TC	37.9 (1.494)	135.4 (5.329)	177.3 (6.980)
	A1002 TC	37.9 (1.494)	134.4 (5.289)	175.3 (6.902)
	A1160 TC	37.9 (1.494)	133.6 (5.260)	173.8 (6.843)
	A1001 TC	37.9 (1.494)	132.8 (5.226)	172.1 (6.776)
	A1090 TC	37.9 (1.494)	132.2 (5.205)	171.0 (6.732)
	A1002 TC	36.9 (1.455)	132.4 (5.211)	173.3 (6.823)
	A1160 TC	36.9 (1.455)	131.6 (5.181)	171.8 (6.764)
A1002	A1001 TC	36.9 (1.455)	130.8 (5.148)	170.1 (6.697)
	A1090 TC	36.9 (1.455)	130.2 (5.126)	169.0 (6.654)
	A1160 TC	36.2 (1.425)	130.1 (5.122)	170.3 (6.705)
	A1001 TC	36.2 (1.425)	129.3 (5.089)	168.6 (6.638)
	A1090 TC	36.2 (1.425)	128.7 (5.067)	167.5 (6.594)
	A1001 TC	35.4 (1.392)	127.6 (5.022)	166.9 (6.571)
	A1090 TC	35.35 (1.392)	127.0 (5.000)	165.8 (6.528)
	A1090 TC	34.8 (1.370)	125.9 (4.957)	164.7 (6.484)

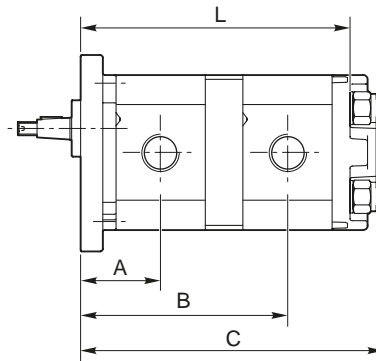
GR 1 + GR 1 TC



Codice ordinaz one kt / kt order o de

Il Kit standard viene fornito con tiranti e dadi autobloccanti (max ingombro C); se le pompe tandem sono fornite già assemblate, l'ingombro C è leggermente inferiore in quanto vengono utilizzate i tipi TCEI (ossia l'installazione dei testate per avere gli ingombri esatti).

The Standard Kit is supplied with tension rods and self-locking nuts (max dimension C); if the tandem pumps are supplied already assembled, the external dimensions of C are slightly less because the test-head screws are used (to obtain our technical service for the exact dimensions).



mm (inb)

	A	B	C	L*
Codice ordinaz one kit / kt order o de	010911308680600			
A1009 TC	52.2 (2.053)	141.5 (5.569)	200.5 (7.894)	185.6 (7.307)
A1008 TC	52.2 (2.053)	137.5 (5.413)	200.5 (7.894)	177.7 (6.996)
Codice ordinaz one kit / kt order o de	010911308680500			
A1006 TC	52.2 (2.053)	134.7 (5.301)	188.5 (7.421)	172.0 (6.772)
A1005 TC	52.2 (2.053)	132.1 (5.201)	188.5 (7.421)	166.9 (6.571)
Codice ordinaz one kit / kt order o de	010911308680400			
A1004 TC	52.2 (2.053)	130.6 (5.140)	176.5 (6.949)	163.8 (6.449)
A1009 + A1370 TC	52.2 (2.053)	129.6 (5.102)	176.5 (6.949)	161.9 (6.374)
A1003 TC	52.2 (2.053)	128.6 (5.063)	176.5 (6.949)	159.9 (6.295)
A1250 TC	52.2 (2.053)	127.3 (5.010)	176.5 (6.949)	157.2 (6.189)
A1002 TC	52.2 (2.053)	126.3 (4.970)	176.5 (6.949)	155.2 (6.110)
Codice ordinaz one kit / kt order o de	010911308680300			
A1160 TC	52.2 (2.053)	125.5 (4.941)	165.7 (6.524)	153.7 (6.051)
A1001 TC	52.2 (2.053)	124.7 (4.907)	164.5 (6.476)	152.0 (5.984)
A1090 TC	52.2 (2.053)	124.1 (4.886)	164.5 (6.476)	150.9 (5.941)

Con la flangia 1 inch e mentare le quote A, B e C di 3.5 mm
* La quota L è per il fissaggio di pompe con flangia 8, 9, 10

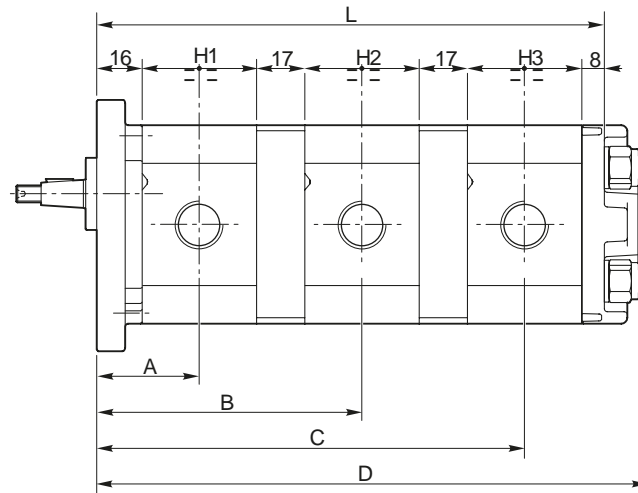
mm (inb)

	A	B	C	L*
Codice ordinaz one kit / kt order o de	010911308680500			
A1008 TC	48.2 (1.898)	129.6 (5.102)	188.5 (7.421)	169.8 (6.685)
Codice ordinaz one kit / kt order o de	010911308680400			
A1006 TC	48.2 (1.898)	126.8 (4.990)	176.5 (6.949)	164.1 (6.461)
A1005 TC	48.2 (1.898)	124.2 (4.890)	176.5 (6.949)	159.0 (6.260)
A1004 TC	48.2 (1.898)	122.7 (4.829)	176.5 (6.949)	155.9 (6.138)
A1370 TC	48.2 (1.898)	121.7 (4.791)	176.5 (6.949)	154.0 (6.063)
A1008 +	Codice ordinaz one kit / kt order o de			
	010911308680300			
A1003 TC	48.2 (1.898)	120.7 (4.752)	164.5 (6.476)	152.0 (5.984)
A1250 TC	48.2 (1.898)	119.4 (4.699)	164.5 (6.476)	149.3 (5.878)
A1002 TC	48.2 (1.898)	118.4 (4.659)	164.5 (6.476)	147.3 (5.799)
A1160 TC	48.2 (1.898)	117.6 (4.630)	164.5 (6.476)	145.8 (5.740)
A1001 TC	48.2 (1.898)	116.8 (4.596)	164.5 (6.476)	144.1 (5.673)
A1090 TC	48.2 (1.898)	116.2 (4.575)	164.5 (6.476)	143.0 (5.630)

With 1 flange inch ease A, B, and C dimensions of 0.138 inch
* The L dimension is necessary for the fitting of pumps with 8, 9, 10 flange only

		mm (inb)						mm (inb)					
		A	B	C	L*			A	B	C	L*		
A1006	+	Codice ordinaz one kit / k t order o de		010911308680400				Codice ordinaz one kit / k t order o de		010911308680200			
		A1006 TC	45.4 (1.785)	121.1 (4.766)	176.5 (6.949)	158.4 (6.236)	A1370 TC	40.3 (1.587)	105.9 (4.169)	152.5 (6.004)	138.2 (5.441)		
	+	Codice ordinaz one kit / k t order o de		010911308680300				A1370	A1003 TC	40.3 (1.587)	104.9 (4.130)	152.5 (6.004)	136.2 (5.362)
		A1005 TC	45.4 (1.785)	118.5 (4.665)	165.3 (6.508)	153.3 (6.035)	A1250 TC		40.3 (1.587)	103.6 (4.077)	152.5 (6.004)	133.5 (5.256)	
		A1004 TC	45.4 (1.785)	116.9 (4.604)	164.5 (6.476)	150.2 (5.913)	A1002 TC		40.3 (1.587)	102.6 (4.037)	152.5 (6.004)	131.5 (5.177)	
		A1370 TC	45.4 (1.785)	116.0 (4.567)	164.5 (6.476)	148.3 (5.839)	A1160 TC		40.3 (1.587)	101.8 (4.008)	152.5 (6.004)	130.0 (5.118)	
		A1003 TC	45.4 (1.785)	115.0 (4.528)	164.5 (6.476)	146.3 (5.760)	Codice ordinaz one kit / k t order o de		010911308680100				
		A1250 TC	45.4 (1.785)	113.7 (4.474)	164.5 (6.476)	143.6 (5.654)	A1001 TC		40.3 (1.587)	100.9 (3.974)	140.5 (5.532)	128.3 (5.051)	
		Codice ordinaz one kit / k t order o de		010911308680200					A1090TC	40.3 (1.587)	100.4 (3.953)	140.5 (5.532)	127.2 (5.008)
		A1002 TC	45.4 (1.785)	112.7 (4.435)	153.6 (6.047)	141.6 (5.575)	Codice ordinaz one kit / k t order o de		010911308680200				
		A1160 TC	45.4 (1.785)	111.9 (4.406)	152.5 (6.004)	140.1 (5.516)	A1003 TC		39.3 (1.547)	102.9 (4.051)	152.5 (6.004)	134.2 (5.283)	
		A1001 TC	45.4 (1.785)	111.1 (4.372)	152.5 (6.004)	138.4 (5.449)	A1250 TC		39.3 (1.547)	101.6 (3.998)	152.5 (6.004)	131.5 (5.177)	
A1090 TC	45.4 (1.785)	110.5 (4.350)	152.5 (6.004)	137.3 (5.406)	Codice ordinaz one kit / k t order o de		010911308680100						
A1005	+	Codice ordinaz one kit / k t order o de		010911308680300				A1003	A1002 TC	39.3 (1.547)	100.6 (3.959)	141.50 (5.571)	129.5 (5.098)
		A1005 TC	42.8 (1.685)	113.4 (4.465)	164.5 (6.476)	148.5 (5.846)	A1160 TC		39.3 (1.547)	99.8 (3.929)	140.5 (5.532)	128.0 (5.039)	
	+	A1004 TC	42.8 (1.685)	111.9 (4.404)	164.5 (6.476)	145.1 (5.713)	A1001 TC	39.3 (1.547)	98.9 (3.896)	140.5 (5.532)	126.3 (4.972)		
		A1370 TC	42.8 (1.685)	110.9 (4.366)	164.5 (6.476)	143.2 (5.638)	A1090 TC	39.3 (1.547)	98.4 (3.874)	140.5 (5.532)	125.2 (4.929)		
		Codice ordinaz one kit / k t order o de		010911308680200				Codice ordinaz one kit / k t order o de		010911308680100			
		A1003 TC	42.8 (1.685)	109.9 (4.327)	153.2 (6.032)	141.2 (5.559)	A1250 TC	37.9 (1.494)	98.9 (3.892)	140.8 (5.543)	128.8 (5.071)		
		A1250 TC	42.8 (1.685)	108.6 (4.274)	152.5 (6.004)	138.5 (5.453)	A1002 TC	37.9 (1.494)	97.9 (3.852)	140.5 (5.532)	126.8 (4.992)		
		A1002 TC	42.8 (1.685)	107.6 (4.234)	152.5 (6.004)	136.5 (5.374)	A1160 TC	37.9 (1.494)	97.1 (3.823)	140.5 (5.532)	125.3 (4.933)		
		Codice ordinaz one kit / k t order o de		010911308680200				A1001 TC	37.9 (1.494)	96.3 (3.789)	140.5 (5.532)	123.6 (4.866)	
		A1160 TC	42.8 (1.685)	106.8 (4.205)	152.5 (6.004)	135.0 (5.315)	A1090 TC	37.9 (1.494)	95.7 (3.768)	140.5 (5.532)	122.5 (4.823)		
		A1001 TC	42.8 (1.685)	105.9 (4.171)	152.5 (6.004)	133.3 (5.248)	Codice ordinaz one kit / k t order o de		010911308680100				
		A1090 TC	42.8 (1.685)	105.4 (4.150)	152.5 (6.004)	132.2 (5.205)	A1002 TC	36.9 (1.455)	95.9 (3.774)	140.5 (5.532)	124.8 (4.913)		
A1004	+	Codice ordinaz one kit / k t order o de		010911308680300				A1002	A1160 TC	36.9 (1.455)	95.1 (3.744)	140.5 (5.532)	123.3 (4.854)
		A1004 TC	41.3 (1.624)	108.8 (4.282)	164.5 (6.476)	142.0 (5.591)	A1001 TC		36.9 (1.455)	94.3 (3.711)	140.5 (5.532)	121.6 (4.787)	
	+	Codice ordinaz one kit / k t order o de		010911308680200				A1090 TC	36.9 (1.455)	93.7 (3.689)	140.5 (5.532)	120.5 (4.744)	
		A1370 TC	41.3 (1.624)	107.8 (4.244)	152.5 (6.004)	140.1 (5.516)	Codice ordinaz one kit / k t order o de		010911308680100				
		A1003 TC	41.3 (1.624)	106.8 (4.205)	152.5 (6.004)	138.1 (5.437)	A1160 TC	36.2 (1.425)	93.6 (3.685)	140.5 (5.532)	121.8 (4.795)		
		A1250 TC	41.3 (1.624)	105.5 (4.152)	152.5 (6.004)	135.4 (5.331)	A1001 TC	36.2 (1.425)	92.8 (3.652)	140.5 (5.532)	120.1 (4.728)		
		A1002 TC	41.3 (1.624)	104.5 (4.112)	152.5 (6.004)	133.4 (5.252)	A1090 TC	36.2 (1.425)	92.2 (3.630)	140.5 (5.532)	119.0 (4.685)		
		A1160 TC	41.3 (1.624)	103.7 (4.083)	152.5 (6.004)	131.9 (5.193)	Codice ordinaz one kit / k t order o de		010911308680100				
		A1001 TC	41.3 (1.624)	102.9 (4.049)	152.5 (6.004)	130.2 (5.126)	A1001 TC	35.4 (1.392)	91.1 (3.585)	140.5 (5.532)	118.4 (4.661)		
		Codice ordinaz one kit / k t order o de		010911308680100				A1090TC	35.4 (1.392)	90.5 (3.563)	140.5 (5.532)	117.3 (4.618)	
		A1090 TC	41.3 (1.624)	102.3 (4.028)	141.1 (5.555)	129.1 (5.083)	Codice ordinaz one kit / k t order o de		010911308680100				
		A1090	+	Codice ordinaz one kit / k t order o de		010911308680100				A1090	A1090 TC	34.8 (1.370)	89.4 (3.520)

GR 1 + GR 1 + GR 1 TC



mm (inb)

	H1	H2	H3	L
A1009		72.3 (2.846)		...
A1008		64.4 (2.535)		...
A1006		58.7 (2.311)		...
A1005		53.6 (2.110)		...
A1004		50.5 (1.988)		...
A1370		48.6 (1.913)		...
A1003		46.6 (1.835)		...
A1250		43.9 (1.728)		...
A1002		41.9 (1.650)		...
A1160		40.4 (1.591)		...
A1001		38.7 (1.524)		...
A1090		37.6 (1.480)		...

mm (inb)

L	D
L < 179.5 L < (7.067)	188.5 ^{+1.5} ₀ (7.421) ^{+0.059} ₀
179.6 < L < 191.4 (7.071) < L < (7.535)	200.5 ^{+1.5} ₀ (7.894) ^{+0.059} ₀
191.5 < L < 206.4 (7.539) < L < (8.126)	215.5 ^{+1.5} ₀ (8.484) ^{+0.059} ₀
206.5 < L < 220 (8.130) < L < (8.661)	229.5 ^{+1.5} ₀ (9.035) ^{+0.059} ₀
220.1 < L < 235.5 (8.665) < L < (9.272)	243.5 ^{+1.5} ₀ (9.587) ^{+0.059} ₀
235.6 < L < 249.5 (9.276) < L < (9.823)	258.5 ^{+1.5} ₀ (10.177) ^{+0.059} ₀
249.6 < L < 262 (9.827) < L < (10.315)	271.5 ^{+1.5} ₀ (10.689) ^{+0.059} ₀
262.1 < L (10.280) < L	287.5 ^{+1.5} ₀ (11.319) ^{+0.059} ₀

Con la flangia 1 inc ementare le quote A, B, e C di 3.5 mm

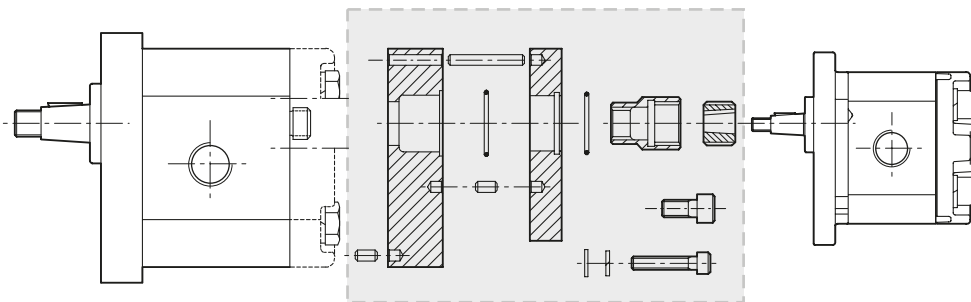
With 1 flange inc ease A, B, and C dimenš ons of 0.138 inb

Esempio di ordinazione in codice / Example of ordering code

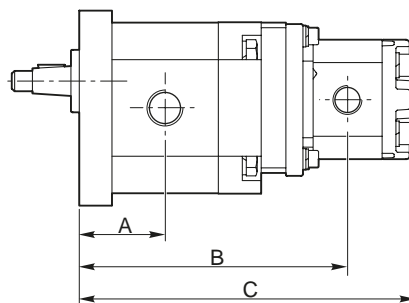
A	1	A1006	1250	1001	BB	2	F	5	C	TC	(H)
----------	----------	--------------	-------------	-------------	-----------	----------	----------	----------	----------	-----------	------------

A	Tipo pompa / Pump type	A = Alluminio / Aluminium C = Ghiaia / Cast iron	
1	Forma o sbuttatura / Design mark	1	
A2014	Tipo prima pompa / First pump type		
1004	Tipo seconda pompa / Second pump type		
BB	Tipo albero prima pompa / Shaft type and first pump		
2	Tipo e posizione flangia 1ª pompa / Flange and position on first pump flange	Vedi pompa sbrogliata o riprendente (se z A) See corresponding single pump	
F	Configurazione delle connessioni / Standard port configuration		
5	Tipo connessioni / Connections type		
C	Rotazione oraria / Clockwise rotation	C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation	
TC	Tipo Tandem / Tandem		
(H)	Opzioni / Optional		

GR 2 + GR 1



Codice ordinaz one kt / kt order o de **010921100000000**



Codice ordinaz one kt / kt order o de **010921100000000**

Codice ordinaz one kt / kt order o de **010921100000000**

		mm (inb)			
		A	B	C	
A2026	+ A1	009	62.7 (2.469)	198.1 (7.797)	254.2 (10.008)
		008	62.7 (2.469)	194.1 (7.642)	246.3 (9.697)
		006	62.7 (2.469)	191.3 (7.530)	240.6 (9.472)
		005	62.7 (2.469)	188.7 (7.429)	235.5 (9.272)
		004	62.7 (2.469)	187.2 (7.368)	232.4 (9.150)
		370	62.7 (2.469)	186.2 (7.331)	230.5 (9.075)
		003	62.7 (2.469)	185.2 (7.291)	228.5 (8.996)
		250	62.7 (2.469)	183.9 (7.238)	225.8 (8.890)
		002	62.7 (2.469)	182.9 (7.199)	223.8 (8.811)
		160	62.7 (2.469)	182.1 (7.169)	222.3 (8.752)
		001	62.7 (2.469)	181.3 (7.136)	220.6 (8.685)
090	62.7 (2.469)	180.7 (7.114)	219.5 (8.642)		

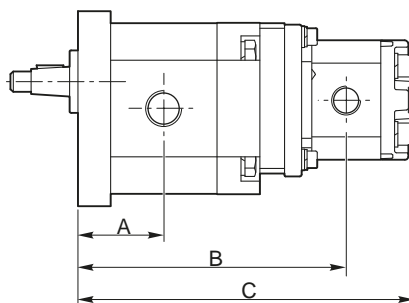
		mm (inb)			
		A	B	C	
A2022	+ A1	009	59.8 (2.354)	192.3 (7.569)	248.4 (9.780)
		008	59.8 (2.354)	188.3 (7.413)	240.5 (9.469)
		006	59.8 (2.354)	185.5 (7.301)	234.8 (9.244)
		005	59.8 (2.354)	182.9 (7.201)	229.7 (9.043)
		004	59.8 (2.354)	181.4 (7.140)	226.6 (8.921)
		370	59.8 (2.354)	180.4 (7.102)	224.7 (8.846)
		003	59.8 (2.354)	179.4 (7.063)	222.7 (8.768)
		250	59.8 (2.354)	178.05 (7.010)	220.0 (8.661)
		002	59.8 (2.354)	177.1 (6.970)	218.0 (8.583)
		160	59.8 (2.354)	176.3 (6.941)	216.5 (8.524)
		001	59.8 (2.354)	175.5 (6.907)	214.8 (8.457)
090	59.8 (2.354)	174.9 (6.886)	213.7 (8.413)		

Con la flangia 45 inc ementare le quote A, B e C di 2 mm
 Con la flangia 47 diminuire le quote A, B e C di 2.7 mm

With 45 flange inc eae A, B, and C dimens ons of 0.079 inch
 With 47 flange dec eae A, B, and C dimens ons of 0.106 inch

MULTIPLE GEAR PUMPS

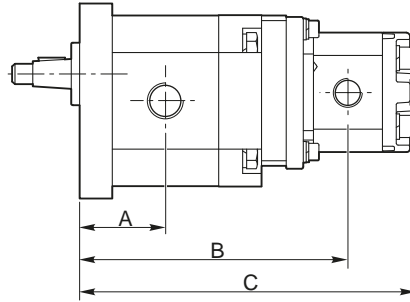
GR 2 + GR 1

Codice ordinaz one kt / kt order o de **01092110000000**Codice ordinaz one kt / kt order o de **01092110000000**

		mm (inb)			
		A	B	C	
A2019	+ A1	009	57.3 (2.256)	187.3 (7.372)	243.4 (9.583)
		008	57.3 (2.256)	183.3 (7.217)	235.5 (9.272)
		006	57.3 (2.256)	180.5 (7.104)	229.8 (9.047)
		005	57.3 (2.256)	177.9 (7.004)	224.7 (8.846)
		004	57.3 (2.256)	176.4 (6.943)	221.6 (8.724)
		370	57.3 (2.256)	175.4 (6.906)	219.7 (8.650)
		003	57.3 (2.256)	174.4 (6.866)	217.7 (8.571)
		250	57.3 (2.256)	173.1 (6.813)	215.0 (8.465)
		002	57.3 (2.256)	172.1 (6.774)	213.0 (8.386)
		160	57.3 (2.256)	171.3 (6.744)	211.5 (8.327)
001	57.3 (2.256)	170.5 (6.711)	209.8 (8.260)		
090	57.3 (2.256)	169.9 (6.689)	208.7 (8.217)		
A2016	+ A1	009	54.8 (2.157)	182.3 (7.175)	238.4 (9.386)
		008	54.8 (2.157)	178.3 (7.020)	230.5 (9.075)
		006	54.8 (2.157)	175.5 (6.907)	224.8 (8.850)
		005	54.8 (2.157)	172.9 (6.807)	219.7 (8.650)
		004	54.8 (2.157)	171.4 (6.746)	216.6 (8.528)
		370	54.8 (2.157)	170.4 (6.709)	214.7 (8.453)
		003	54.8 (2.157)	169.4 (6.669)	212.7 (8.374)
		250	54.8 (2.157)	168.1 (6.616)	210.0 (8.268)
		002	54.8 (2.157)	167.1 (6.577)	208.0 (8.189)
		160	54.8 (2.157)	166.3 (6.547)	206.5 (8.130)
001	54.8 (2.157)	165.5 (6.514)	204.8 (8.063)		
090	54.8 (2.157)	164.9 (6.492)	203.7 (8.020)		

		mm (inb)			
		A	B	C	
A2014	+ A1 ...	009	52.7 (2.075)	178.1 (7.010)	234.2 (9.220)
		008	52.7 (2.075)	174.1 (6.854)	226.3 (8.909)
		006	52.7 (2.075)	171.3 (6.742)	220.6 (8.685)
		005	52.7 (2.075)	168.7 (6.642)	215.5 (8.484)
		004	52.7 (2.075)	167.2 (6.581)	212.4 (8.362)
		370	52.7 (2.075)	166.2 (6.543)	210.5 (8.287)
		003	52.7 (2.075)	165.2 (6.504)	208.5 (8.209)
		250	52.7 (2.075)	163.9 (6.451)	205.8 (8.102)
		002	52.7 (2.075)	162.9 (6.411)	203.8 (8.024)
		160	52.7 (2.075)	162.1 (6.382)	202.3 (7.965)
001	52.7 (2.075)	161.3 (6.348)	200.6 (7.898)		
090	52.7 (2.075)	160.7 (6.327)	199.5 (7.854)		
A2011	+ A1 ...	009	50.2 (1.976)	173.1 (6.813)	229.2 (9.024)
		008	50.2 (1.976)	169.1 (6.657)	221.3 (8.713)
		006	50.2 (1.976)	166.3 (6.545)	215.6 (8.488)
		005	50.2 (1.976)	163.7 (6.445)	210.5 (8.287)
		004	50.2 (1.976)	162.2 (6.384)	207.4 (8.165)
		370	50.2 (1.976)	161.2 (6.346)	205.5 (8.091)
		003	50.2 (1.976)	160.2 (6.307)	203.5 (8.012)
		250	50.2 (1.976)	158.9 (6.254)	200.8 (7.906)
		002	50.2 (1.976)	157.9 (6.215)	198.8 (7.827)
		160	50.2 (1.976)	157.1 (6.185)	197.3 (7.768)
001	50.2 (1.976)	156.3 (6.152)	195.6 (7.701)		
090	50.2 (1.976)	155.7 (6.130)	194.5 (7.657)		

GR 2 + GR 1


 Codice ordinazione k t / k t order o de **010921100000000**

 Codice ordinazione k t / k t order o de **010921100000000**

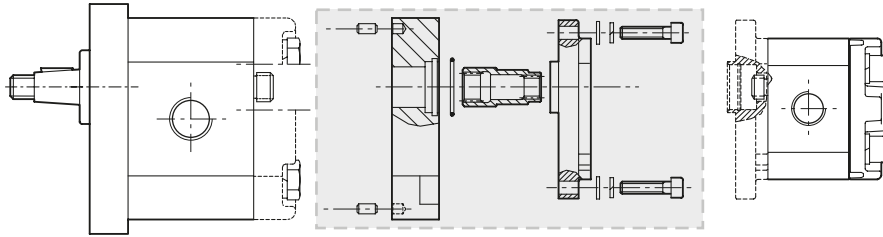
		mm (inb)		
		A	B	C
A2008	+ A1 ...			
	009	48.2 (1.896)	168.9 (6.652)	225.1 (8.862)
	008	48.2 (1.896)	165.0 (6.496)	217.2 (8.551)
	006	48.2 (1.896)	162.2 (6.384)	211.5 (8.327)
	005	48.2 (1.896)	159.6 (6.283)	206.4 (8.126)
	004	48.2 (1.896)	158.1 (6.222)	203.3 (8.004)
	370	48.2 (1.896)	157.1 (6.185)	201.4 (7.929)
	003	48.2 (1.896)	156.1 (6.146)	199.4 (7.850)
	250	48.2 (1.896)	154.8 (6.093)	196.7 (7.744)
	002	48.2 (1.896)	153.8 (6.053)	194.7 (7.665)
	160	48.2 (1.896)	153.0 (6.024)	193.2 (7.606)
	001	48.2 (1.896)	152.2 (5.990)	191.5 (7.539)
090	48.2 (1.896)	151.6 (5.969)	190.4 (7.496)	
A2006	+ A1 ...			
	009	46.1 (1.813)	164.8 (6.486)	220.9 (8.697)
	008	46.1 (1.813)	160.8 (6.331)	213.0 (8.386)
	006	46.1 (1.813)	157.9 (6.219)	207.3 (8.161)
	005	46.1 (1.813)	155.4 (6.118)	202.2 (7.961)
	004	46.1 (1.813)	153.9 (6.057)	199.1 (7.839)
	370	46.1 (1.813)	152.9 (6.020)	197.2 (7.764)
	003	46.1 (1.813)	151.9 (5.980)	195.2 (7.685)
	250	46.1 (1.813)	150.6 (5.927)	192.5 (7.579)
	002	46.1 (1.813)	149.6 (5.888)	190.5 (7.500)
	160	46.1 (1.813)	148.8 (5.858)	189.0 (7.441)
	001	46.1 (1.813)	147.9 (5.825)	187.3 (7.374)
090	46.1 (1.813)	147.4 (5.803)	186.2 (7.331)	

		mm (inb)		
		A	B	C
A2004	+ A1 ...			
	009	44.4 (1.748)	168.9 (6.652)	217.6 (8.567)
	008	44.4 (1.748)	194.1 (7.642)	209.7 (8.256)
	006	44.4 (1.748)	191.3 (7.530)	204.0 (8.032)
	005	44.4 (1.748)	188.7 (7.429)	198.9 (7.831)
	004	44.4 (1.748)	187.2 (7.368)	195.8 (7.709)
	370	44.4 (1.748)	186.2 (7.331)	193.9 (7.634)
	003	44.4 (1.748v)	185.2 (7.291)	191.9 (7.555)
	250	44.4 (1.748)	183.9 (7.238)	189.2 (7.449)
	002	44.4 (1.748)	182.9 (7.199)	187.2 (7.370)
	160	44.4 (1.748)	182.1 (7.169)	185.7 (7.311)
	001	44.4 (1.748)	181.3 (7.136)	184.0 (7.244)
090	44.4 (1.748)	180.7 (7.114)	182.9 (7.201)	

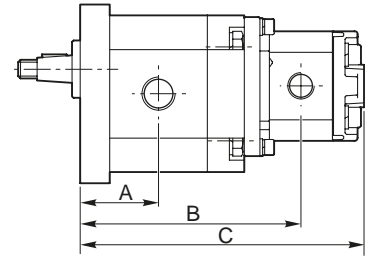
Con la flangia 45 incrementare le quote A, B e C di 2 mm
 Con la flangia 47 diminuire le quote A, B e C di 2.7 mm

With 45 flange increase A, B, and C dimensions of 0.079 inb
 With 47 flange decrease A, B, and C dimensions of 0.106 inb

GR 2 + GR 1 TC



Codice ordinazione kt / kt order o de **01092101000000**



Codice ordinazione kt / kt order o de **01092101000000**

Codice ordinazione kt / kt order o de **01092101000000**

		mm (inb)		
		A	B	C
A2026	+ A1 ...			
	009 TC	62.7 (2.469)	182.1 (7.167)	238.2 (9.378)
	008 TC	62.7 (2.469)	178.1 (7.012)	230.3 (9.067)
	006 TC	62.7 (2.469)	175.3 (6.900)	224.6 (8.843)
	005 TC	62.7 (2.469)	172.7 (6.799)	219.5 (8.642)
	004 TC	62.7 (2.469)	171.2 (6.738)	216.4 (8.520)
	370 TC	62.7 (2.469)	170.2 (6.701)	214.5 (8.445)
	003 TC	62.7 (2.469)	169.2 (6.661)	212.5 (8.366)
	250 TC	62.7 (2.469)	167.9 (6.608)	209.8 (8.260)
	002 TC	62.7 (2.469)	166.9 (6.569)	207.8 (8.181)
160 TC	62.7 (2.469)	166.1 (6.539)	206.3 (8.122)	
001 TC	62.7 (2.469)	165.3 (6.506)	204.6 (8.055)	
090 TC	62.7 (2.469)	164.7 (6.484)	203.5 (8.012)	
A2022	+ A1 ...			
	009 TC	59.8 (2.354)	176.3 (6.939)	232.4 (9.150)
	008 TC	59.8 (2.354)	172.3 (6.783)	224.5 (8.839)
	006 TC	59.8 (2.354)	169.5 (6.671)	218.8 (8.614)
	005 TC	59.8 (2.354)	166.9 (6.571)	213.7 (8.413)
	004 TC	59.8 (2.354)	165.4 (6.510)	210.6 (8.291)
	370 TC	59.8 (2.354)	164.4 (6.472)	208.7 (8.217)
	003 TC	59.8 (2.354)	163.4 (6.433)	206.7 (8.138)
	250 TC	59.8 (2.354)	162.1 (6.380)	204.0 (8.032)
	002 TC	59.8 (2.354)	161.1 (6.341)	202.0 (7.953)
160 TC	59.8 (2.354)	160.3 (6.311)	200.5 (7.894)	
001 TC	59.8 (2.354)	159.5 (6.278)	198.8 (7.827)	
090 TC	59.8 (2.354)	158.9 (6.256)	197.7 (7.783)	

		mm (inb)		
		A	B	C
A2019	+ A1 ...			
	009 TC	57.3 (2.256)	171.3 (6.742)	227.4 (8.953)
	008 TC	57.3 (2.256)	167.3 (6.587)	219.5 (8.642)
	006 TC	57.3 (2.256)	164.5 (6.474)	213.8 (8.417)
	005 TC	57.3 (2.256)	161.9 (6.374)	208.7 (8.217)
	004 TC	57.3 (2.256)	160.4 (6.313)	205.6 (8.094)
	370 TC	57.3 (2.256)	159.4 (6.276)	203.7 (8.020)
	003 TC	57.3 (2.256)	158.4 (6.236)	201.7 (7.941)
	250 TC	57.3 (2.256)	157.1 (6.183)	199.0 (7.835)
	002 TC	57.3 (2.256)	156.1 (6.144)	197.0 (7.756)
160 TC	57.3 (2.256)	155.3 (6.114)	195.5 (7.697)	
001 TC	57.3 (2.256)	154.5 (6.081)	193.8 (7.630)	
090 TC	57.3 (2.256)	153.9 (6.059)	192.7 (7.587)	
A2016	+ A1 ...			
	009 TC	54.8 (2.157)	166.3 (6.545)	222.4 (8.756)
	008 TC	54.8 (2.157)	162.3 (6.390)	214.5 (8.445)
	006 TC	54.8 (2.157)	159.5 (6.278)	208.8 (8.220)
	005 TC	54.8 (2.157)	156.9 (6.177)	203.7 (8.020)
	004 TC	54.8 (2.157)	155.4 (6.116)	200.6 (7.898)
	370 TC	54.8 (2.157)	154.4 (6.079)	198.7 (7.823)
	003 TC	54.8 (2.157)	153.4 (6.039)	196.7 (7.744)
	250 TC	54.8 (2.157)	152.1 (5.986)	194.0 (7.638)
	002 TC	54.8 (2.157)	151.1 (5.947)	192.0 (7.559)
160 TC	54.8 (2.157)	150.3 (5.917)	190.5 (7.500)	
001 TC	54.8 (2.157)	149.5 (5.884)	188.8 (7.433)	
090 TC	54.8 (2.157)	148.9 (5.862)	187.7 (7.390)	

Codice ordinazione kt / kt order o de **01092101000000**Codice ordinazione kt / kt order o de **01092101000000**

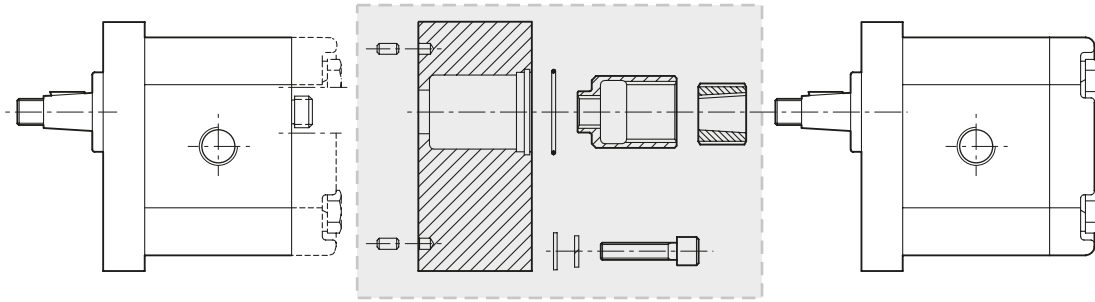
		mm (inb)			
		A	B	C	
A2014	+ A1 ...	009 TC	52.7 (2.075)	162.1 (6.380)	218.2 (8.591)
		008 TC	52.7 (2.075)	158.1 (6.224)	210.3 (8.280)
		006 TC	52.7 (2.075)	155.3 (6.112)	204.6 (8.055)
		005 TC	52.7 (2.075)	152.7 (6.012v)	199.5 (7.854)
		004 TC	52.7 (2.075)	151.2 (5.951)	196.4 (7.732)
		370 TC	52.7 (2.075)	150.2 (5.913)	194.5 (7.657)
		003 TC	52.7 (2.075)	149.2 (5.874)	192.5 (7.579)
		250 TC	52.7 (2.075)	147.9 (5.821)	189.8 (7.472)
		002 TC	52.7 (2.075)	146.9 (5.782)	187.8 (7.394)
		160 TC	52.7 (2.075)	146.1 (5.752)	186.3 (7.335)
		001 TC	52.7 (2.075)	145.3 (5.719)	184.6 (7.268)
		090 TC	52.7 (2.075)	144.7 (5.697)	183.5 (7.224)
A2011	+ A1 ...	009 TC	50.2 (1.976)	157.1 (6.183)	213.2 (8.394)
		008 TC	50.2 (1.976)	153.1 (6.028)	205.3 (8.083)
		006 TC	50.2 (1.976)	150.3 (5.915)	199.6 (7.858)
		005 TC	50.2 (1.976)	147.7 (5.815)	194.5 (7.657)
		004 TC	50.2 (1.976)	146.2 (5.754)	191.4 (7.535)
		370 TC	50.2 (1.976)	145.2 (5.717)	189.5 (7.461)
		003 TC	50.2 (1.976)	144.2 (5.677)	187.5 (7.382)
		250 TC	50.2 (1.976)	142.9 (5.624)	184.8 (7.276)
		002 TC	50.2 (1.976)	141.9 (5.585)	182.8 (7.197)
		160 TC	50.2 (1.976)	141.1 (5.555)	181.3 (7.138)
		001 TC	50.2 (1.976)	140.3 (5.522)	179.6 (7.071)
		090 TC	50.2 (1.976)	139.7 (5.500)	178.5 (7.028)
A2008	+ A1 ...	009 TC	48.2 (1.896)	152.9 (6.022)	209.1 (8.232)
		008 TC	48.2 (1.896)	149.0 (5.866)	201.2 (7.921)
		006 TC	48.2 (1.896)	146.2 (5.754)	195.5 (7.697)
		005 TC	48.2 (1.896)	143.6 (5.654)	190.4 (7.496)
		004 TC	48.2 (1.896)	142.1 (5.593)	187.3 (7.374)
		370 TC	48.2 (1.896)	141.1 (5.555)	185.4 (7.299)

		mm (inb)			
		A	B	C	
A2008	+ A1 ...	003 TC	48.2 (1.896)	140.1 (5.516)	183.4 (7.220)
		250 TC	48.2 (1.896)	138.8 (5.463)	180.7 (7.114)
		002 TC	48.2 (1.896)	137.8 (5.423)	178.7 (7.035)
		160 TC	48.2 (1.896)	137.0 (5.394)	177.2 (6.976)
		001 TC	48.2 (1.896)	136.2 (5.360)	175.5 (6.909)
		090 TC	48.2 (1.896)	135.6 (5.339)	174.4 (6.866)
		009 TC	46.1 (1.813)	148.8 (5.856)	204.9 (8.067)
		008 TC	46.1 (1.813)	144.8 (5.701)	197.0 (7.756)
		006 TC	46.1 (1.813)	141.9 (5.589)	191.3 (7.532)
		005 TC	46.1 (1.813)	139.4 (5.488)	186.2 (7.331)
		004 TC	46.1 (1.813)	137.9 (5.427)	183.1 (7.209)
		370 TC	46.1 (1.813)	136.9 (5.390)	181.2 (7.134)
A2006	+ A1 ...	003 TC	46.1 (1.813)	135.9 (5.350)	179.2 (7.055)
		250 TC	46.1 (1.813)	134.6 (5.297)	176.5 (6.949)
		002 TC	46.1 (1.813)	133.6 (5.258)	174.5 (6.870)
		160 TC	46.1 (1.813)	132.8 (5.228)	173.0 (6.811)
		001 TC	46.1 (1.813)	131.9 (5.195)	171.3 (6.744)
		090 TC	46.1 (1.813)	131.4 (5.173)	170.2 (6.701)
		009 TC	44.4 (1.748)	145.5 (5.726)	201.6 (7.937)
		008 TC	44.4 (1.748)	141.5 (5.571)	193.7 (7.626)
		006 TC	44.4 (1.748)	138.7 (5.459)	188.0 (7.402)
		005 TC	44.4 (1.748)	136.1 (5.358)	182.9 (7.201)
		004 TC	44.4 (1.748)	134.6 (5.297)	179.8 (7.079)
		370 TC	44.4 (1.748)	133.6 (5.260)	177.9 (7.004)
A2004	+ A1 ...	003 TC	44.4 (1.748)	132.6 (5.220)	175.9 (6.925)
		250 TC	44.4 (1.748)	131.3 (5.167)	173.2 (6.819)
		002 TC	44.4 (1.748)	130.3 (5.128)	171.2 (6.740)
		160 TC	44.4 (1.748)	129.5 (5.098)	169.7 (6.681)
		001 TC	44.4 (1.748)	128.7 (5.065)	168.0 (6.614)
		090 TC	44.4 (1.748)	128.1 (5.043)	166.9 (6.571)

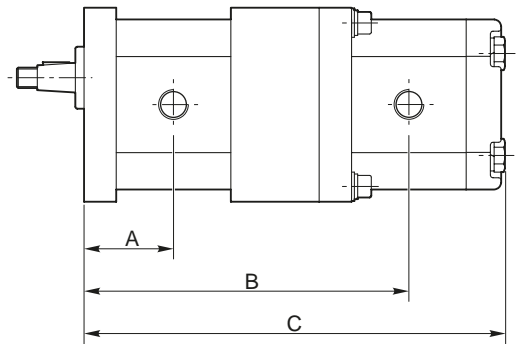
Con la flangia 45 incrementare le quote A, B e C di 2 mm
 Con la flangia 47 diminuire le quote A, B e C di 2.7 mm

With 45 flange increase A, B, and C dimensions of 0.079 inb
 With 47 flange decrease A, B, and C dimensions of 0.106 inb

GR 2 + GR 2



Codie ordinaž one kit / k t order o de **01092200000000**



Codie ordinaž one kt / k t order o de **010922000000000**

			mm (inb)		
			A	B	C
A2004	+	A2 ...	44.4 (1.748)	166.2 (6.543)	214.8 (8.457)
A2006	+	A2 ...	46.0 (1.811)	171.2 (6.740)	221.4 (8.717)
		A2 ...	46.0 (1.811)	169.5 (6.673)	218.1 (8.587)
A2008	+	A2 ...	48.1 (1.894)	177.5 (6.988)	229.8 (9.047)
		A2 ...	48.1 (1.894)	175.4 (6.906)	225.6 (8.882)
		A2 ...	48.1 (1.894)	173.7 (6.839)	222.3 (8.752)

Codie ordinaž one kt / k t order o de **010922000000000**

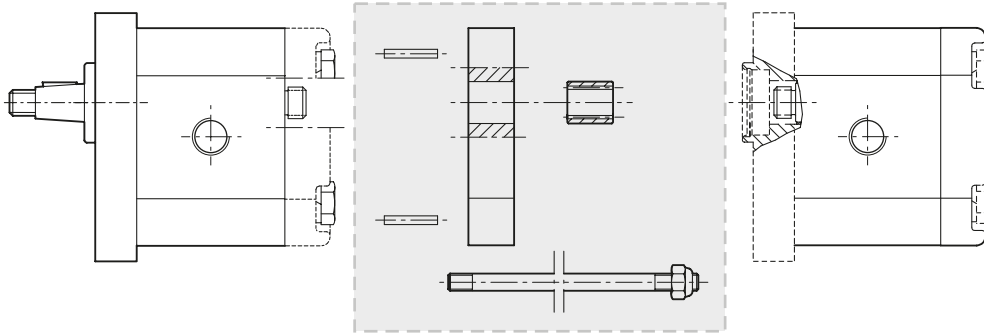
			mm (inb)		
			A	B	C
A2011	+	A2 ...	50.2 (1.976)	183.6 (7.228)	238.0 (9.370)
		A2 ...	50.2 (1.976)	181.6 (7.150)	233.9 (9.209)
		A2 ...	50.2 (1.976)	179.5 (7.067)	229.7 (9.043)
		A2 ...	50.2 (1.976)	177.8 (7.000)	226.4 (8.913)
A2014	+	A2 ...	52.7 (2.075)	191.1 (7.524)	248.0 (9.764)
		A2 ...	52.7 (2.075)	188.6 (7.425)	243.0 (9.567)
		A2 ...	52.7 (2.075)	186.6 (7.346)	238.9 (9.406)
		A2 ...	52.7 (2.075)	184.5 (7.264)	234.7 (9.240)
		A2 ...	52.7 (2.075)	182.8 (7.197)	231.4 (9.110)

Codie ordinaz one kt / kt order o de **01092200000000**Codie ordinaz one kt / kt order o de **01092200000000**

		mm (inb)			
		A	B	C	
A2016	+ A2 ...	016	54.8 (2.157)	197.4 (7.772)	256.4 (10.094)
		014	54.8 (2.157)	195.3 (7.689)	252.2 (9.929)
		011	54.8 (2.157)	192.8 (7.591)	247.2 (9.732)
		008	54.8 (2.157)	190.8 (7.512)	243.1 (9.571)
		006	54.8 (2.157)	188.7 (7.429)	238.9 (9.406)
		004	54.8 (2.157)	187.0 (7.362)	235.6 (9.276)
A2019	+ A2 ...	019	57.3 (2.256)	204.9 (8.067)	266.4 (10.488)
		016	57.3 (2.256)	202.4 (7.969)	261.4 (10.291)
		014	57.3 (2.256)	200.3 (7.886)	257.2 (10.126)
		011	57.3 (2.256)	197.8 (7.787)	252.2 (9.929)
		008	57.3 (2.256)	195.8 (7.709)	248.1 (9.768)
		006	57.3 (2.256)	193.7 (7.626)	243.9 (9.602)
A2022	+ A2 ...	004	57.3 (2.256)	192.0 (7.559)	240.6 (9.472)
		022	59.8 (2.354)	212.4 (8.362)	276.4 (10.882)
		019	59.8 (2.354)	209.9 (8.264)	271.4 (10.685)
		016	59.8 (2.354)	207.4 (8.165)	266.4 (10.488)
		014	59.8 (2.354)	205.3 (8.083)	262.2 (10.323)
		011	59.8 (2.354)	202.8 (7.984)	257.2 (10.126)
		008	59.8 (2.354)	200.8 (7.906)	253.1 (9.965)
		006	59.8 (2.354)	198.7 (7.823)	248.9 (9.799)
		004	59.8 (2.354)	197.0 (7.756)	245.6 (9.669)

		mm (inb)			
		A	B	C	
A2026	+ A2 ...	026	62.7 (2.469)	221.1 (8.705)	288.0 (11.339)
		022	62.7 (2.469)	218.2 (8.591)	282.2 (11.110)
		019	62.7 (2.469)	215.7 (8.492)	277.2 (10.913)
		016	62.7 (2.469)	213.2 (8.394)	272.2 (10.717)
		014	62.7 (2.469)	211.1 (8.311)	268.0 (10.551)
		011	62.7 (2.469)	208.6 (8.213)	263.0 (10.354)
		008	62.7 (2.469)	206.6 (8.134)	258.9 (10.193)
		006	62.7 (2.469)	204.5 (8.051)	254.7 (10.028)
		004	62.7 (2.469)	202.8 (7.984)	251.4 (9.898)

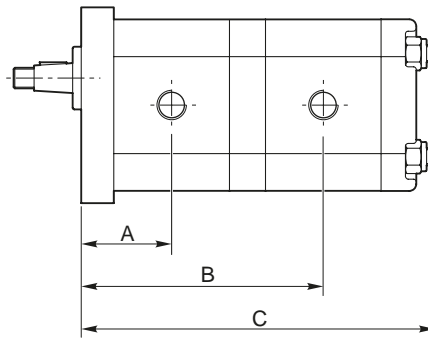
GR 2 + GR 2 TC



Codice ordinazione kt / kt order o de

Il Kit standard viene fornito con tiranti e dadi autobloccanti (max ingombro C); se le pompe tandem sono fornite già assemblate, l'ingombro C è leggermente inferiore in quanto vengono utilizzati i viti TCEI (consultare il nostro rivoltone per avere gli ingombri esatti).

The standard Kit is supplied with tension rods and self-locking nuts (max dimension C); if the tandem pumps are supplied already assembled, the external dimensions of C are slightly less because the TCEI head screws are used (consult our technical service for the exact dimensions).



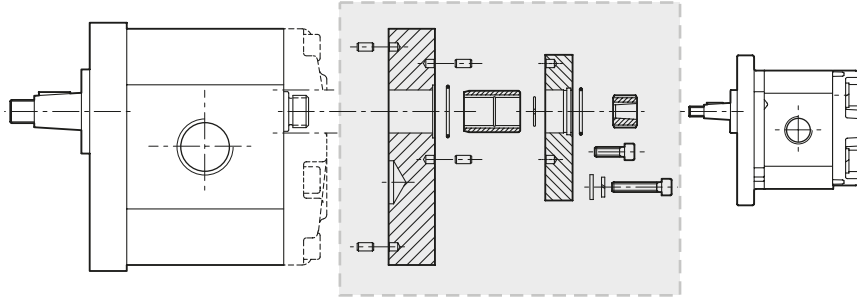
			mm (inb)			
			A	B	C	
A2004	+	A2 ...	Codice ordinazione kt / kt order o de 010922291890100			
			004 TC	44.4 (1.748)	116.2 (4.575)	180 (7.087)
			006 TC	46.0 (1.811)	121.2 (4.772)	180 (7.087)
A2006	+	A2 ...	004 TC	46.0 (1.811)	119.5 (4.705)	180 (7.087)
			Codice ordinazione kt / kt order o de 010922291890200			
			008 TC	48.1 (1.894)	127.5 (5.020)	195 (7.677)
A2008	+	A2 ...	Codice ordinazione kt / kt order o de 010922291890100			
			006 TC	48.1 (1.894)	125.5 (4.941)	180 (7.087)
			004 TC	48.1 (1.894)	123.7 (4.870)	180 (7.087)
A2011	+	A2 ...	Codice ordinazione kt / kt order o de 010922291890200			
			011 TC	50.2 (1.976)	133.6 (5.260)	195 (7.677)
			008 TC	50.2 (1.976)	131.6 (5.181)	195 (7.677)
A2011	+	A2 ...	006 TC	50.2 (1.976)	129.5 (5.098)	195 (7.677)
			Codice ordinazione kt / kt order o de 010922291890100			
			004 TC	50.2 (1.976)	127.8 (5.032)	180 (7.087)

			mm (inb)			
			A	B	C	
A2014	+	A2 ...	Codice ordinazione kt / kt order o de 010922291890300			
			014 TC	52.7 (2.075)	141.1 (5.555)	208 (8.189)
			011 TC	52.7 (2.075)	138.6 (5.457)	208 (8.189)
A2014	+	A2 ...	Codice ordinazione kt / kt order o de 010922291890200			
			008 TC	52.7 (2.075)	136.6 (5.378)	195 (7.677)
			006 TC	52.7 (2.075)	134.5 (5.295)	195 (7.677)
A2014	+	A2 ...	004 TC	52.7 (2.075)	132.8 (5.228)	195 (7.677)
			Codice ordinazione kt / kt order o de 010922291890400			
			016 TC	54.8 (2.157)	147.4 (5.803)	219 (8.622)
A2016	+	A2 ...	Codice ordinazione kt / kt order o de 010922291890300			
			014 TC	54.8 (2.157)	145.3 (5.720)	208 (8.189)
			011 TC	54.8 (2.157)	142.8 (5.622)	208 (8.189)
A2016	+	A2 ...	008 TC	54.8 (2.157)	140.8 (5.543)	208 (8.189)
			Codice ordinazione kt / kt order o de 010922291890200			
			006 TC	54.8 (2.157)	138.7 (5.461)	195 (7.677)
A2016	+	A2 ...	004 TC	54.8 (2.157)	137 (5.394)	195 (7.677)

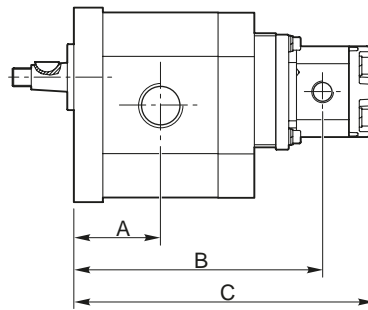
		mm (inb)			
		A	B	C	
		Codice ordinaz one kt / kt order o de 010922291890500			
A2019	A2 ...	019 TC	57.3 (2.256)	153.9 (6.059)	232 (9.134)
	Codice ordinaz one kt / kt order o de 010922291890400				
	A2 ...	016 TC	57.3 (2.256)	152.4 (6.000)	219 (8.622)
014 TC		57.3 (2.256)	150.3 (5.917)	219 (8.622)	
A2019	+ Codice ordinaz one kt / kt order o de 010922291890300				
	A2 ...	011 TC	57.3 (2.256)	147.8 (5.819)	208 (8.189)
		008 TC	57.3 (2.256)	145.8 (5.740)	208 (8.189)
006 TC		57.3 (2.256)	143.7 (5.657)	208 (8.189)	
		Codice ordinaz one kt / kt order o de 010922291890200			
A2 ...	004 TC	57.3 (2.256)	142 (5.591)	192 (7.559)	
		Codice ordinaz one kt / kt order o de 010922291890500			
A2022	A2 ...	022 TC	59.8 (2.354)	162.4 (6.394)	232 (9.134)
		019 TC	59.8 (2.354)	159.9 (6.295)	232 (9.134)
		016 TC	59.8 (2.354)	157.4 (6.197)	232 (9.134)
		Codice ordinaz one kt / kt order o de 010922291890400			
A2022	A2 ...	014 TC	59.8 (2.354)	155.3 (6.114)	219 (8.622)
		011 TC	59.8 (2.354)	152.8 (6.016)	219 (8.622)
		Codice ordinaz one kt / kt order o de 010922291890300			
A2022	A2 ...	008 TC	59.8 (2.354)	150.8 (5.937)	208 (8.189)
		006 TC	59.8 (2.354)	148.7 (5.854)	208 (8.189)
		004 TC	59.8 (2.354)	147 (5.787)	208 (8.189)

		mm (inb)			
		A	B	C	
		Codice ordinaz one kt / kt order o de 010922291890600			
A2026	A2 ...	026 TC	62.7 (2.469)	171.1 (6.736)	244 (9.606)
		022 TC	62.7 (2.469)	168.2 (6.622)	244 (9.606)
		Codice ordinaz one kt / kt order o de 010922291890500			
A2026	A2 ...	019 TC	62.7 (2.469)	165.7 (6.524)	232 (9.134)
		016 TC	62.7 (2.469)	163.2 (6.425)	232 (9.134)
		014 TC	62.7 (2.469)	161.1 (6.343)	232 (9.134)
		Codice ordinaz one kt / kt order o de 010922291890400			
A2026	A2 ...	011 TC	62.7 (2.469)	158.6 (6.244)	219 (8.622)
		008 TC	62.7 (2.469)	156.6 (6.165)	219 (8.622)
		006 TC	62.7 (2.469)	154.5 (6.083)	219 (8.622)
		Codice ordinaz one kt / kt order o de 010922291890300			
A2026	A2 ...	004 TC	62.7 (2.469)	152.8 (6.016)	208 (8.189)

GR 3 + GR 1



Codice ordinazione kt / kt order o de **01093110000000**



Codice ordinazione kt / kt order o de **01093110000000**

		mm (inb)		
		A	B	C
A3062	+ A1 ...			
	009	80.4 (3.163)	234.9 (9.250)	291.1 (11.461)
	008	80.4 (3.163)	231.0 (9.094)	283.2 (11.150)
	006	80.4 (3.163)	228.2 (8.982)	277.5 (10.925)
	005	80.4 (3.163)	225.6 (8.882)	272.4 (10.724)
	004	80.4 (3.163)	224.1 (8.821)	269.3 (10.602)
	370	80.4 (3.163)	223.1 (8.783)	267.4 (10.528)
	003	80.4 (3.163)	222.1 (8.744)	265.4 (10.449)
	250	80.4 (3.163)	220.8 (8.691)	262.7 (10.343)
	002	80.4 (3.163)	219.8 (8.652)	260.7 (10.264)
	160	80.4 (3.163)	219.0 (8.622)	259.2 (10.205)
	001	80.4 (3.163)	218.2 (8.589)	257.5 (10.138)
090	80.4 (3.163)	217.6 (8.567)	256.4 (10.094)	

Con la flangia 2 incrementare le quote A, B e C di 3 mm

Codice ordinazione kt / kt order o de **01093110000000**

		mm (inb)		
		A	B	C
A3052	+ A1 ...			
	009	76.4 (3.006)	226.9 (8.935)	283.1 (11.146)
	008	76.4 (3.006)	223.0 (8.780)	275.2 (10.835)
	006	76.4 (3.006)	220.2 (8.667)	269.5 (10.610)
	005	76.4 (3.006)	217.6 (8.567)	264.4 (10.409)
	004	76.4 (3.006)	216.1 (8.506)	261.3 (10.287)
	370	76.4 (3.006)	215.1 (8.469)	259.4 (10.213)
	003	76.4 (3.006)	214.1 (8.429)	257.4 (10.134)
	250	76.4 (3.006)	212.8 (8.376)	254.7 (10.028)
	002	76.4 (3.006)	211.8 (8.337)	252.7 (9.949)
	160	76.4 (3.006)	211.0 (8.307)	251.2 (9.890)
	001	76.4 (3.006)	210.2 (8.274)	249.5 (9.823)
090	76.4 (3.006)	209.6 (8.252)	248.4 (9.780)	

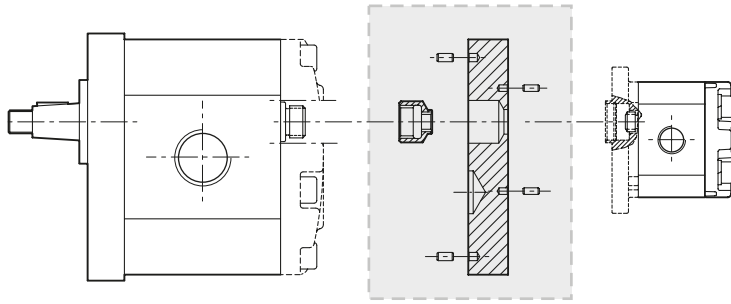
With 2 flange increase the A, B, and C dimensions of 0.118 inb

Codie ordinaz one kt / kt order o de **01093110000000**Codie ordinaz one kt / kt order o de **01093110000000**

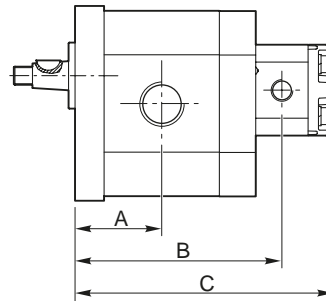
		mm (inb)		
		A	B	C
A3044	+ A1 ...			
	009	72.9 (2.868)	219.9 (8.659)	276.1 (10.870)
	008	72.9 (2.868)	216.0 (8.504)	268.2 (10.559)
	006	72.9 (2.868)	213.2 (8.392)	262.5 (10.335)
	005	72.9 (2.868)	210.6 (8.291)	257.4 (10.134)
	004	72.9 (2.868)	209.1 (8.230)	254.3 (10.012)
	370	72.9 (2.868)	208.1 (8.193)	252.4 (9.937)
	003	72.9 (2.868)	207.1 (8.154)	250.4 (9.858)
	250	72.9 (2.868)	205.8 (8.100)	247.7 (9.752)
	002	72.9 (2.868)	204.8 (8.061)	245.7 (9.673)
	160	72.9 (2.868)	204.0 (8.032)	244.2 (9.614)
	001	72.9 (2.868)	203.2 (7.998)	242.5 (9.547)
090	72.9 (2.868)	202.6 (7.976)	241.4 (9.504)	
A3036	+ A1 ...			
	009	69.9 (2.750)	213.9 (8.423)	270.1 (10.634)
	008	68.4 (2.691)	210.0 (8.268)	262.2 (10.323)
	006	69.9 (2.750)	207.2 (8.156)	256.5 (10.098)
	005	69.9 (2.750)	204.6 (8.055)	251.4 (9.898)
	004	69.9 (2.750)	203.1 (7.994)	248.3 (9.776)
	370	69.9 (2.750)	202.1 (7.957)	246.4 (9.701)
	003	69.9 (2.750)	201.1 (7.917)	244.4 (9.622)
	250	69.9 (2.750)	199.8 (7.864)	241.7 (9.516)
	002	69.9 (2.750)	198.8 (7.825)	239.7 (9.437)
	160	69.9 (2.750)	198.0 (7.795)	238.2 (9.378)
	001	69.9 (2.750)	197.2 (7.762)	236.5 (9.311)
090	69.9 (2.750)	196.60 (7.740)	235.4 (9.268)	
A3033	+ A1 ...			
	009	68.4 (2.691)	210.9 (8.305)	267.1 (10.516)
	008	68.4 (2.691)	207.0 (8.150)	259.2 (10.205)
	006	68.4 (2.691)	204.2 (8.037)	253.5 (9.980)
	005	68.4 (2.691)	201.6 (7.937)	248.4 (9.780)
	004	68.4 (2.691)	200.4 (7.876)	245.3 (9.657)
	370	68.4 (2.691)	199.1 (7.839)	243.4 (9.583)
	003	68.4 (2.691)	198.1 (7.799)	241.4 (9.504)
	250	68.4 (2.691)	196.8 (7.746)	238.7 (9.398)
	002	68.4 (2.691)	195.8 (7.707)	236.7 (9.319)
	160	68.4 (2.691)	195.0 (7.677)	235.2 (9.260)
	001	68.4 (2.691)	194.2 (7.644)	233.5 (9.193)
090	68.4 (2.691)	193.6 (7.622)	232.4 (9.150)	

		mm (inb)		
		A	B	C
A3029	+ A1 ...			
	009	66.9 (2.632)	207.9 (8.187)	264.1 (10.398)
	008	66.9 (2.632)	204.0 (8.032)	256.2 (10.087)
	006	66.9 (2.632)	201.2 (7.919)	250.5 (9.862)
	005	66.9 (2.632)	198.6 (7.819)	245.4 (9.661)
	004	66.9 (2.632)	197.1 (7.758)	242.3 (9.539)
	370	66.9 (2.632)	196.1 (7.720)	240.4 (9.465)
	003	66.9 (2.632)	195.1 (7.681)	238.4 (9.386)
	250	66.9 (2.632)	193.8 (7.628)	235.7 (9.280)
	002	66.9 (2.632)	192.8 (7.589)	233.7 (9.201)
	160	66.9 (2.632)	192.0 (7.559)	232.2 (9.142)
	001	66.9 (2.632)	191.2 (7.526)	230.5 (9.075)
090	66.9 (2.632)	190.6 (7.504)	229.4 (9.032)	
A3022	+ A1 ...			
	009	63.9 (2.514)	201.9 (7.951)	258.1 (10.161)
	008	63.9 (2.514)	198.0 (7.795)	250.2 (9.850)
	006	63.9 (2.514)	195.2 (7.683)	244.5 (9.626)
	005	63.9 (2.514)	192.6 (7.583)	239.4 (9.425)
	004	63.9 (2.514)	191.1 (7.522)	236.3 (9.303)
	370	63.9 (2.514)	190.1 (7.484)	234.4 (9.228)
	003	63.9 (2.514)	189.1 (7.445)	232.4 (9.150)
	250	63.9 (2.514)	187.8 (7.392)	229.7 (9.043)
	002	63.9 (2.514)	186.8 (7.352)	227.7 (8.965)
	160	63.9 (2.514)	186.0 (7.323)	226.2 (8.906)
	001	63.9 (2.514)	185.2 (7.289)	224.5 (8.839)
090	63.9 (2.514)	184.6 (7.268)	223.4 (8.795)	
A3019	+ A1 ...			
	009	62.4 (2.455)	198.9 (7.833)	255.1 (10.043)
	008	62.4 (2.455)	195.0 (7.677)	247.2 (9.732)
	006	62.4 (2.455)	192.2 (7.565)	241.5 (9.508)
	005	62.4 (2.455)	189.6 (7.465)	236.4 (9.307)
	004	62.4 (2.455)	188.1 (7.404)	233.3 (9.185)
	370	62.4 (2.455)	187.1 (7.366)	231.4 (9.110)
	003	62.4 (2.455)	186.1 (7.327)	229.4 (9.032)
	250	62.4 (2.455)	184.8 (7.274)	226.7 (8.925)
	002	62.4 (2.455)	183.8 (7.234)	224.7 (8.846)
	160	62.4 (2.455)	183.0 (7.205)	223.2 (8.787)
	001	62.4 (2.455)	182.2 (7.171)	221.5 (8.720)
090	62.4 (2.455)	181.6 (7.150)	220.4 (8.677)	

GR 3 + GR 1 TC



Codice ordinazione kt / kt order o de **01093101000000**



Codice ordinazione kt / kt order o de **01093101000000**

mm (inb)

		A	B	C	
A3062	+ A1 ...	009 TC	80.4 (3.163)	198.7 (7.821)	254.8 (10.032)
		008 TC	80.4 (3.163)	194.7 (7.665)	246.9 (9.720)
		006 TC	80.4 (3.163)	191.9 (7.553)	241.2 (9.496)
		005 TC	80.4 (3.163)	189.3 (7.453)	236.1 (9.295)
		004 TC	80.4 (3.163)	187.8 (7.392)	233.0 (9.173)
		370 TC	80.4 (3.163)	186.8 (7.354)	231.1 (9.098)
		003 TC	80.4 (3.163)	185.8 (7.315)	229.1 (9.020)
		250 TC	80.4 (3.163)	184.5 (7.262)	226.4 (8.913)
		002 TC	80.4 (3.163)	183.5 (7.222)	224.4 (8.835)
		160 TC	80.4 (3.163)	182.7 (7.193)	222.9 (8.776)
		001 TC	80.4 (3.163)	181.9 (7.159)	221.2 (8.709)
		090 TC	80.4 (3.163)	181.3 (7.138)	220.1 (8.665)

Con la flangia 2 inc ementare le quote A, B e C di 3 mm

Codice ordinazione kt / kt order o de **01093101000000**

mm (inb)

		A	B	C	
A3052	+ A1 ...	009 TC	76.4 (3.006)	190.7 (7.506)	246.8 (9.717)
		008 TC	76.4 (3.006)	186.7 (7.350)	238.9 (9.406)
		006 TC	76.4 (3.006)	183.9 (7.238)	233.2 (9.181)
		005 TC	76.4 (3.006)	181.3 (7.138)	228.1 (8.980)
		004 TC	76.4 (3.006)	179.8 (7.077)	225.0 (8.858)
		370 TC	76.4 (3.006)	178.8 (7.039)	223.1 (8.783)
		003 TC	76.4 (3.006)	177.8 (7.000)	221.1 (8.705)
		250 TC	76.4 (3.006)	176.5 (6.947)	218.4 (8.598)
		002 TC	76.4 (3.006)	175.5 (6.907)	216.4 (8.520)
		160 TC	76.4 (3.006)	174.7 (6.878)	214.9 (8.461)
		001 TC	76.4 (3.006)	173.9 (6.844)	213.2 (8.394)
		090 TC	76.4 (3.006)	173.3 (6.823)	212.1 (8.350)

With 2 flange inc eae A, B, and C dimenš ons of 0.118 inb

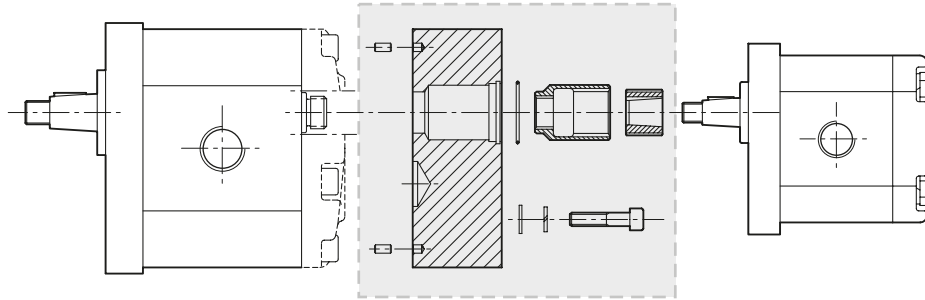
Codie ordinaz one kt / kt order o de 0109310100000

Codie ordinaz one kt / kt order o de 0109310100000

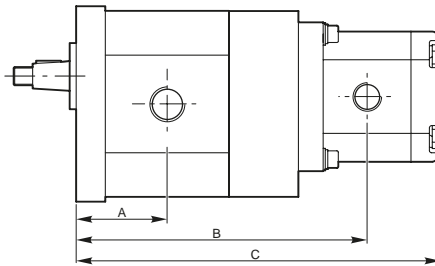
		mm (inb)			
		A	B	C	
A3044	+ A1 ...	009 TC	72.9 (2.868)	183.7 (7.230)	239.8 (9.441)
		008 TC	72.9 (2.868)	179.7 (7.075)	231.9 (9.130)
		006 TC	72.9 (2.868)	176.9 (6.963)	226.2 (8.906)
		005 TC	72.9 (2.868)	174.3 (6.862)	221.1 (8.705)
		004 TC	72.9 (2.868)	172.8 (6.801)	218.0 (8.583)
		370 TC	72.9 (2.868)	171.8 (6.764)	216.1 (8.508)
		003 TC	72.9 (2.868)	170.8 (6.724)	214.1 (8.429)
		250 TC	72.9 (2.868)	169.5 (6.671)	211.4 (8.323)
		002 TC	72.9 (2.868)	168.5 (6.632)	209.4 (8.244)
		160 TC	72.9 (2.868)	167.7 (6.602)	207.9 (8.185)
		001 TC	72.9 (2.868)	166.9 (6.569)	206.2 (8.118)
		090 TC	72.9 (2.868)	166.3 (6.547)	205.1 (8.075)
A3036	+ A1 ...	009 TC	69.9 (2.750)	177.7 (6.994)	233.8 (9.205)
		008 TC	69.9 (2.750)	173.7 (6.839)	225.9 (8.894)
		006 TC	69.9 (2.750)	170.9 (6.726)	220.2 (8.669)
		005 TC	69.9 (2.750)	168.3 (6.626)	215.1 (8.469)
		004 TC	69.9 (2.750)	166.8 (6.565)	212.0 (8.346)
		370 TC	69.9 (2.750)	165.8 (6.528)	210.1 (8.272)
		003 TC	69.9 (2.750)	164.8 (6.488)	208.1 (8.193)
		250 TC	69.9 (2.750)	163.5 (6.435)	205.4 (8.087)
		002 TC	69.9 (2.750)	162.5 (6.396)	203.4 (8.008)
		160 TC	69.9 (2.750)	161.7 (6.366)	201.9 (7.949)
		001 TC	69.9 (2.750)	160.9 (6.333)	200.2 (7.882)
		090 TC	69.9 (2.750)	160.3 (6.311)	199.1 (7.839)
A3033	+ A1 ...	009 TC	68.4 (2.691)	174.7 (6.876)	230.8 (9.087)
		008 TC	68.4 (2.691)	170.7 (6.720)	222.9 (8.776)
		006 TC	68.4 (2.691)	167.9 (6.608)	217.2 (8.551)
		005 TC	68.4 (2.691)	165.3 (6.508)	212.1 (8.350)
		004 TC	68.4 (2.691)	163.8 (6.447)	209.0 (8.228)
		370 TC	68.4 (2.691)	162.8 (6.409)	207.1 (8.154)
		003 TC	68.4 (2.691)	161.8 (6.370)	205.1 (8.075)
		250 TC	68.4 (2.691)	160.5 (6.317)	202.4 (7.969)
		002 TC	68.4 (2.691)	159.5 (6.278)	200.4 (7.890)
		160 TC	68.4 (2.691)	158.7 (6.248)	198.9 (7.831)
		001 TC	68.4 (2.691)	157.9 (6.215)	197.2 (7.764)
		090 TC	68.4 (2.691)	157.3 (6.193)	196.1 (7.720)

		mm (inb)			
		A	B	C	
A3029	+ A1 ...	009 TC	66.9 (2.632)	171.7 (6.758)	227.8 (8.969)
		008 TC	66.9 (2.632)	167.7 (6.602)	219.9 (8.657)
		006 TC	66.9 (2.632)	164.9 (6.490)	214.2 (8.433)
		005 TC	66.9 (2.632)	162.3 (6.390)	209.1 (8.232)
		004 TC	66.9 (2.632)	160.8 (6.329)	206.0 (8.110)
		370 TC	66.9 (2.632)	159.8 (6.291)	204.1 (8.035)
		003 TC	66.9 (2.632)	158.8 (6.252)	202.1 (7.957)
		250 TC	66.9 (2.632)	157.5 (6.199)	199.4 (7.850)
		002 TC	66.9 (2.632)	156.5 (6.159)	197.4 (7.772)
		160 TC	66.9 (2.632)	155.7 (6.130)	195.9 (7.713)
		001 TC	66.9 (2.632)	154.9 (6.096)	194.2 (7.646)
		090 TC	66.9 (2.632)	154.3 (6.075)	193.1 (7.602)
A3022	+ A1 ...	009 TC	63.9 (2.514)	165.7 (6.522)	221.8 (8.732)
		008 TC	63.9 (2.514)	161.7 (6.366)	213.9 (8.421)
		006 TC	63.9 (2.514)	158.9 (6.254)	208.2 (8.197)
		005 TC	63.9 (2.514)	156.3 (6.154)	203.1 (7.996)
		004 TC	63.9 (2.514)	154.8 (6.093)	200.0 (7.874)
		370 TC	63.9 (2.514)	153.8 (6.055)	198.1 (7.799)
		003 TC	63.9 (2.514)	152.8 (6.016)	196.1 (7.720)
		250 TC	63.9 (2.514)	151.5 (5.963)	193.4 (7.614)
		002 TC	63.9 (2.514)	150.5 (5.923)	191.4 (7.535)
		160 TC	63.9 (2.514)	149.7 (5.894)	189.9 (7.476)
		001 TC	63.9 (2.514)	148.9 (5.860)	188.2 (7.409)
		090 TC	63.9 (2.514)	148.3 (5.839)	187.1 (7.366)
A3019	+ A1 ...	009 TC	62.4 (2.455)	162.7 (6.404)	218.8 (8.614)
		008 TC	62.4 (2.455)	158.7 (6.248)	210.9 (8.303)
		006 TC	62.4 (2.455)	155.9 (6.136)	205.2 (8.079)
		005 TC	62.4 (2.455)	153.3 (6.035)	200.1 (7.878)
		004 TC	62.4 (2.455)	151.8 (5.974)	197.0 (7.756)
		370 TC	62.4 (2.455)	150.8 (5.937)	195.1 (7.681)
		003 TC	62.4 (2.455)	149.8 (5.898)	193.1 (7.602)
		250 TC	62.4 (2.455)	148.5 (5.844)	190.4 (7.496)
		002 TC	62.4 (2.455)	147.5 (5.805)	188.4 (7.417)
		160 TC	62.4 (2.455)	146.7 (5.776)	186.9 (7.358)
		001 TC	62.4 (2.455)	145.9 (5.742)	185.2 (7.291)
		090 TC	62.4 (2.455)	145.3 (5.720)	184.1 (7.248)

GR 3 + GR 2



Codice ordinaz one kt / kt order o de **01093200000000**



Codice ordinaz one kt / kt order o de **01093200000000**

Codice ordinaz one kt / kt order o de **01093200000000**

		mm (inb)		
		A	B	C
A3062	+ A2 ...			
	026	80.4 (3.165)	257.0 (10.118)	323.9 (12.752)
	022	80.4 (3.165)	254.1 (10.004)	318.1 (12.524)
	019	80.4 (3.165)	251.6 (9.906)	313.1 (12.327)
	016	80.4 (3.165)	249.1 (9.807)	308.1 (12.130)
	014	80.4 (3.165)	247.0 (9.724)	303.9 (11.965)
	011	80.4 (3.165)	244.5 (9.626)	298.9 (11.768)
	008	80.4 (3.165)	242.4 (9.543)	294.8 (11.606)
	006	80.4 (3.165)	240.3 (9.461)	290.6 (11.441)
004	80.4 (3.165)	238.7 (9.398)	287.3 (11.311)	

		mm (inb)		
		A	B	C
A3052	+ A2 ...			
	026	76.4 (3.008)	249.0 (9.803)	315.9 (12.437)
	022	76.4 (3.008)	246.1 (9.689)	310.1 (12.209)
	019	76.4 (3.008)	243.6 (9.591)	305.1 (12.012)
	016	76.4 (3.008)	241.1 (9.492)	300.1 (11.815)
	014	76.4 (3.008)	239.0 (9.409)	295.9 (11.650)
	011	76.4 (3.008)	236.5 (9.311)	290.9 (11.453)
	008	76.4 (3.008)	234.4 (9.228)	286.8 (11.291)
	006	76.4 (3.008)	232.3 (9.146)	282.6 (11.126)
004	76.4 (3.008)	230.7 (9.083)	279.3 (10.996)	

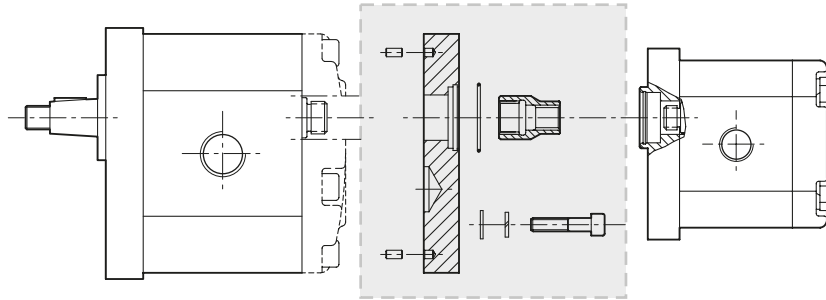
Codie ordinaž one kt / kt order o de 01093200000000

		mm (inb)			
		A	B	C	
A3044	+ A2 ...	026	72.9 (2.870)	242.0 (9.528)	308.9 (12.161)
		022	72.9 (2.870)	239.1 (9.413)	303.1 (11.933)
		019	72.9 (2.870)	236.6 (9.315)	298.1 (11.736)
		016	72.9 (2.870)	234.1 (9.217)	293.1 (11.539)
		014	72.9 (2.870)	232.0 (9.134)	288.9 (11.374)
		011	72.9 (2.870)	229.5 (9.035)	283.9 (11.177)
		008	72.9 (2.870)	227.4 (8.953)	279.8 (11.016)
		006	72.9 (2.870)	225.3 (8.870)	275.6 (10.850)
		004	72.9 (2.870)	223.7 (8.807)	272.3 (10.720)
A3036	+ A2 ...	026	69.9 (2.752)	236.0 (9.291)	302.9 (11.925)
		022	69.9 (2.752)	233.1 (9.177)	297.1 (11.697)
		019	69.9 (2.752)	230.6 (9.079)	292.1 (11.500)
		016	69.9 (2.752)	228.1 (8.980)	287.1 (11.303)
		014	69.9 (2.752)	226.0 (8.898)	282.9 (11.138)
		011	69.9 (2.752)	223.5 (8.799)	277.9 (10.941)
		008	69.9 (2.752)	221.4 (8.717)	273.8 (10.780)
		006	69.9 (2.752)	219.3 (8.634)	269.6 (10.614)
		004	69.9 (2.752)	217.7 (8.571)	266.3 (10.484)
A3033	+ A2 ...	026	68.4 (2.693)	232.0 (9.134)	299.9 (11.807)
		022	68.4 (2.693)	230.1 (9.059)	294.1 (11.579)
		019	68.4 (2.693)	227.6 (8.961)	289.1 (11.382)
		016	68.4 (2.693)	225.1 (8.862)	284.1 (11.185)
		014	68.4 (2.693)	223.0 (8.780)	279.9 (11.020)
		011	68.4 (2.693)	220.5 (8.681)	274.9 (10.823)
		008	68.4 (2.693)	218.4 (8.598)	270.8 (10.661)
		006	68.4 (2.693)	216.3 (8.516)	266.6 (10.496)
		004	68.4 (2.693)	214.7 (8.453)	263.3 (10.366)

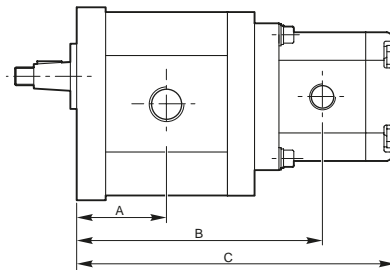
Codie ordinaž one kt / kt order o de 01093200000000

		mm (inb)			
		A	B	C	
A3029	+ A2 ...	026	66.9 (2.634)	230.0 (9.055)	296.9 (11.689)
		022	66.9 (2.634)	227.1 (8.941)	291.1 (11.461)
		019	66.9 (2.634)	224.6 (8.843)	286.1 (11.264)
		016	66.9 (2.634)	222.1 (8.744)	281.1 (11.067)
		014	66.9 (2.634)	220.0 (8.661)	276.9 (10.902)
		011	66.9 (2.634)	217.5 (8.563)	271.9 (10.705)
		008	66.9 (2.634)	215.4 (8.480)	267.8 (10.543)
		006	66.9 (2.634)	213.3 (8.398)	263.6 (10.378)
		004	66.9 (2.634)	201.7 (7.941)	260.3 (10.248)
A3022	+ A2 ...	026	63.9 (2.516)	224.0 (8.819)	290.9 (11.453)
		022	63.9 (2.516)	221.1 (8.705)	285.1 (11.224)
		019	63.9 (2.516)	218.6 (8.606)	280.1 (11.028)
		016	63.9 (2.516)	116.1 (4.571)	275.1 (10.831)
		014	63.9 (2.516)	214.0 (8.425)	270.9 (10.665)
		011	63.9 (2.516)	211.5 (8.327)	265.9 (10.469)
		008	63.9 (2.516)	209.4 (8.244)	261.8 (10.307)
		006	63.9 (2.516)	207.3 (8.161)	257.6 (10.142)
		004	63.9 (2.516)	305.7 (12.035)	254.3 (10.012)
A3019	+ A2 ...	026	62.4 (2.457)	221.0 (8.701)	287.9 (11.335)
		022	62.4 (2.457)	218.1 (8.587)	282.1 (11.106)
		019	62.4 (2.457)	215.6 (8.488)	277.1 (10.909)
		016	62.4 (2.457)	213.1 (8.390)	272.1 (10.713)
		014	62.4 (2.457)	211.0 (8.307)	267.9 (10.547)
		011	62.4 (2.457)	208.5 (8.209)	262.9 (10.350)
		008	62.4 (2.457)	306.4 (12.063)	258.8 (10.189)
		006	62.4 (2.457)	204.3 (8.043)	254.6 (10.024)
		004	62.4 (2.457)	202.7 (7.980)	251.3 (9.894)

GR 3 + GR 2 TC



Codice ordinazione kt / kt order o de **01093210000000**



Codice ordinazione kt / kt order o de **01093210000000**

Codice ordinazione kt / kt order o de **01093210000000**

		mm (inb)		
		A	B	C
A3062	+ A2 ...			
	026 TC	80.4 (3.165)	222.0 (8.740)	288.9 (11.374)
	022 TC	80.4 (3.165)	219.1 (8.626)	283.1 (11.146)
	019 TC	80.4 (3.165)	216.6 (8.528)	278.1 (10.949)
	016 TC	80.4 (3.165)	214.1 (8.429)	273.1 (10.752)
	014 TC	80.4 (3.165)	212.0 (8.346)	268.9 (10.587)
	011 TC	80.4 (3.165)	209.5 (8.248)	263.9 (10.390)
	008 TC	80.4 (3.165)	207.4 (8.165)	259.8 (10.228)
	006 TC	80.4 (3.165)	205.3 (8.083)	255.6 (10.063)
004 TC	80.4 (3.165)	203.7 (8.020)	252.3 (9.933)	

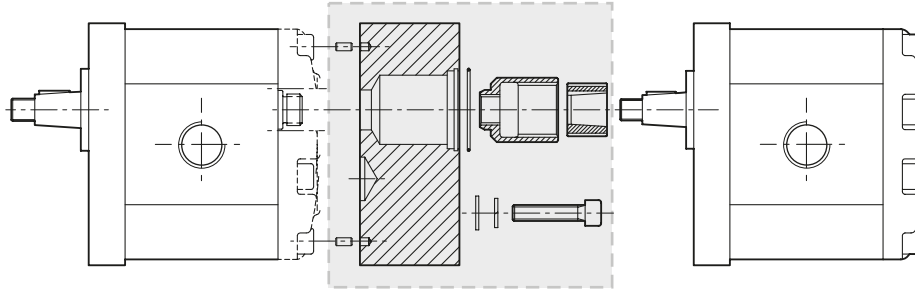
		mm (inb)		
		A	B	C
A3052	+ A2 ...			
	026 TC	76.4 (3.008)	214.0 (8.425)	280.9 (11.059)
	022 TC	76.4 (3.008)	211.1 (8.311)	275.1 (10.831)
	019 TC	76.4 (3.008)	208.6 (8.213)	270.1 (10.634)
	016 TC	76.4 (3.008)	206.1 (8.114)	265.1 (10.437)
	014 TC	76.4 (3.008)	204.0 (8.032)	260.9 (10.272)
	011 TC	76.4 (3.008)	201.5 (7.933)	255.9 (10.075)
	008 TC	76.4 (3.008)	199.4 (7.850)	251.8 (9.913)
	006 TC	76.4 (3.008)	197.3 (7.768)	247.6 (9.748)
004 TC	76.4 (3.008)	195.7 (7.705)	244.3 (9.618)	

Codie ordinaž one kt / k t order o de **01093210000000**Codie ordinaž one kt / k t order o de **01093210000000**

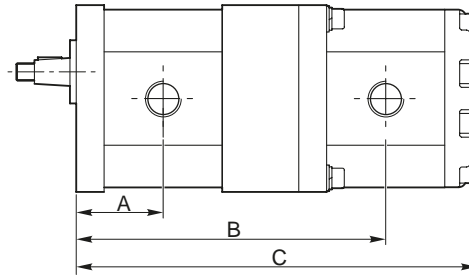
		mm (inb)			
		A	B	C	
A3044	+ A2 ...	026 TC	72.9 (2.870)	207.0 (8.150)	273.9 (10.783)
		022 TC	72.9 (2.870)	204.1 (8.035)	268.1 (10.555)
		019 TC	72.9 (2.870)	201.6 (7.937)	263.1 (10.358)
		016 TC	72.9 (2.870)	199.1 (7.839)	258.1 (10.161)
		014 TC	72.9 (2.870)	197.0 (7.756)	253.9 (9.996)
		011 TC	72.9 (2.870)	194.5 (7.657)	248.9 (9.799)
		008 TC	72.9 (2.870)	192.4 (7.575)	244.8 (9.638)
		006 TC	72.9 (2.870)	190.3 (7.492)	240.6 (9.472)
		004 TC	72.9 (2.870)	188.7 (7.429)	237.3 (9.343)
A3036	+ A2 ...	026 TC	69.9 (2.752)	201.0 (7.913)	267.9 (10.547)
		022 TC	69.9 (2.752)	198.1 (7.799)	262.1 (10.319)
		019 TC	69.9 (2.752)	195.6 (7.701)	257.1 (10.122)
		016 TC	69.9 (2.752)	193.1 (7.602)	252.1 (9.925)
		014 TC	69.9 (2.752)	191.0 (7.520)	247.9 (9.760)
		011 TC	69.9 (2.752)	188.5 (7.421)	242.9 (9.563)
		008 TC	69.9 (2.752)	186.4 (7.339)	238.8 (9.402)
		006 TC	69.9 (2.752)	184.3 (7.256)	234.6 (9.236)
		004 TC	69.9 (2.752)	182.7 (7.193)	231.3 (9.106)
A3033	+ A2 ...	026 TC	68.4 (2.693)	198.0 (7.795)	264.9 (10.429)
		022 TC	68.4 (2.693)	195.1 (7.681)	259.1 (10.201)
		019 TC	68.4 (2.693)	192.6 (7.583)	254.1 (10.004)
		016 TC	68.4 (2.693)	190.1 (7.484)	249.1 (9.807)
		014 TC	68.4 (2.693)	188.0 (7.402)	244.9 (9.642)
		011 TC	68.4 (2.693)	185.5 (7.303)	239.9 (9.445)
		008 TC	68.4 (2.693)	183.4 (7.220)	235.8 (9.283)
		006 TC	68.4 (2.693)	181.3 (7.138)	231.6 (9.118)
		004 TC	68.4 (2.693)	179.7 (7.075)	228.3 (8.988)

		mm (inb)			
		A	B	C	
A3029	+ A2 ...	026 TC	66.9 (2.634)	195.0 (7.677)	261.9 (10.311)
		022 TC	66.9 (2.634)	192.1 (7.563)	256.1 (10.083)
		019 TC	66.9 (2.634)	189.6 (7.465)	251.1 (9.886)
		016 TC	66.9 (2.634)	187.1 (7.366)	246.1 (9.689)
		014 TC	66.9 (2.634)	185.0 (7.283)	241.9 (9.524)
		011 TC	66.9 (2.634)	182.5 (7.185)	236.9 (9.327)
		008 TC	66.9 (2.634)	180.4 (7.102)	232.8 (9.165)
		006 TC	66.9 (2.634)	178.3 (7.020)	228.6 (9.000)
		004 TC	66.9 (2.634)	176.7 (6.957)	225.3 (8.870)
A3022	+ A2 ...	026 TC	63.9 (2.516)	189.0 (7.441)	255.9 (10.075)
		022 TC	63.9 (2.516)	186.1 (7.327)	250.1 (9.846)
		019 TC	63.9 (2.516)	183.6 (7.228)	245.1 (9.650)
		016 TC	63.9 (2.516)	181.1 (7.130)	240.1 (9.453)
		014 TC	63.9 (2.516)	179.0 (7.047)	235.9 (9.287)
		011 TC	63.9 (2.516)	176.5 (6.949)	230.9 (9.091)
		008 TC	63.9 (2.516)	174.4 (6.866)	226.8 (8.929)
		006 TC	63.9 (2.516)	172.3 (6.783)	222.6 (8.764)
		004 TC	63.9 (2.516)	170.7 (6.720)	219.3 (8.634)
A3019	+ A2 ...	026 TC	62.4 (2.457)	186.0 (7.323)	252.9 (9.957)
		022 TC	62.4 (2.457)	183.1 (7.209)	247.1 (9.728)
		019 TC	62.4 (2.457)	180.6 (7.110)	242.1 (9.532)
		016 TC	62.4 (2.457)	178.1 (7.012)	237.1 (9.335)
		014 TC	62.4 (2.457)	176.0 (6.929)	232.9 (9.169)
		011 TC	62.4 (2.457)	173.5 (6.831)	227.9 (8.972)
		008 TC	62.4 (2.457)	171.4 (6.748)	223.8 (8.811)
		006 TC	62.4 (2.457)	169.3 (6.665)	219.6 (8.646)
		004 TC	62.4 (2.457)	167.7 (6.602)	216.3 (8.516)

GR 3 + GR 3



Codice ordinazione kt / kt order o de **01093300000000**



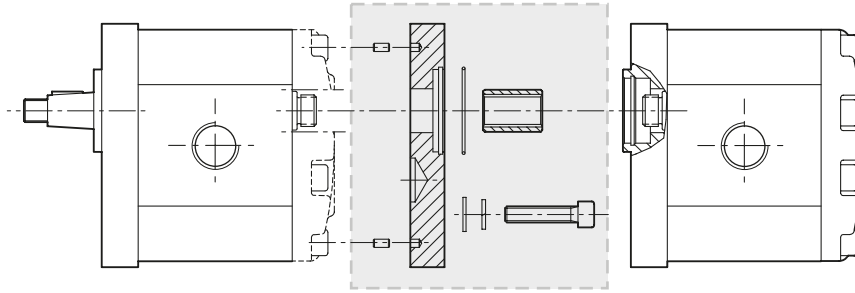
Codice ordinazione kt / kt order o de **01093300000000**

Codice ordinazione kt / kt order o de **01093300000000**

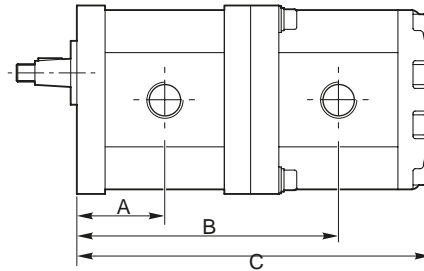
		mm (inb)					
		A	B	C			
A3062	+ A3 ..	062	80.4 (3.165)	283.7 (11.169)	367.6 (14.472)		
		052	80.4 (3.165)	279.7 (11.012)	359.6 (14.157)		
		044	80.4 (3.165)	276.2 (10.874)	352.6 (13.882)		
		036	80.4 (3.165)	273.2 (10.756)	346.6 (13.646)		
		033	80.4 (3.165)	272.7 (10.736)	343.6 (13.528)		
		029	80.4 (3.165)	270.2 (10.638)	340.6 (13.409)		
		022	80.4 (3.165)	267.2 (10.520)	334.6 (13.173)		
		019	80.4 (3.165)	265.7 (10.461)	331.6 (13.055)		
		A3052	+ A3 ..	052	76.4 (3.008)	271.7 (10.697)	351.6 (13.843)
044	76.4 (3.008)			268.2 (10.559)	344.6 (13.567)		
036	76.4 (3.008)			265.2 (10.441)	338.6 (13.331)		
033	76.4 (3.008)			263.7 (10.382)	335.6 (13.213)		
029	76.4 (3.008)			262.2 (10.323)	332.6 (13.094)		
022	76.4 (3.008)			259.2 (10.205)	326.6 (12.858)		
019	76.4 (3.008)			257.7 (10.146)	323.6 (12.740)		
A3044	+ A3 ..			044	72.9 (2.870)	261.2 (10.283)	337.6 (13.291)
				036	72.9 (2.870)	258.2 (10.165)	331.6 (13.055)
		033	72.9 (2.870)	256.7 (10.106)	328.6 (12.937)		
		029	72.9 (2.870)	255.2 (10.047)	325.6 (12.819)		
		022	72.9 (2.870)	252.2 (9.929)	319.6 (12.583)		
		019	72.9 (2.870)	250.7 (9.870)	316.6 (12.465)		

		mm (inb)			
		A	B	C	
A3036	+ A3 ..	036	69.9 (2.752)	252.2 (9.929)	325.6 (12.819)
		033	69.9 (2.752)	250.7 (9.870)	322.6 (12.701)
		029	69.9 (2.752)	249.2 (9.811)	319.6 (12.583)
		022	69.9 (2.752)	246.2 (9.693)	313.6 (12.346)
		019	69.9 (2.752)	244.7 (9.634)	310.6 (12.228)
A3033	+ A3 ..	033	68.4 (2.693)	247.7 (9.752)	319.6 (12.583)
		029	68.4 (2.693)	246.2 (9.693)	316.6 (12.465)
		022	68.4 (2.693)	243.2 (9.575)	310.6 (12.228)
		019	68.4 (2.693)	241.7 (9.516)	307.6 (12.110)
		A3029	+ A3 ..	029	66.9 (2.634)
022	66.9 (2.634)			240.2 (9.457)	307.6 (12.110)
019	66.9 (2.634)			238.7 (9.398)	304.6 (11.992)
A3022	+ A3 ..	022	63.9 (2.516)	234.2 (9.220)	301.6 (11.874)
		019	63.9 (2.516)	232.7 (9.161)	298.6 (11.756)
A3019	+ A3 ..	019	62.4 (2.457)	229.7 (9.043)	295.6

GR 3 + GR 3 TC



Codice ordinaz one kt / kt order o de **01093310000000**



Codice ordinaz one kt / kt order o de **01093310000000**

Codice ordinaz one kt / kt order o de **01093310000000**

		mm (inb)		
		A	B	C
A3062	+ A3 ..			
	062	80.4 (3.165)	239.7 (9.437)	323.6 (12.740)
	052	80.4 (3.165)	235.7 (9.280)	315.6 (12.425)
	044	80.4 (3.165)	232.2 (9.142)	308.6 (12.150)
	036	80.4 (3.165)	229.2 (9.024)	302.6 (11.913)
	033	80.4 (3.165)	227.7 (8.965)	299.6 (11.795)
	029	80.4 (3.165)	226.2 (8.906)	296.6 (11.677)
	022	80.4 (3.165)	223.2 (8.787)	290.6 (11.441)
A3052	+ A3 ..			
	019	80.4 (3.165)	221.7 (8.728)	287.6 (11.323)
	052	76.4 (3.008)	227.7 (8.965)	307.6 (12.110)
	044	76.4 (3.008)	224.2 (8.827)	300.6 (11.835)
	036	76.4 (3.008)	221.2 (8.709)	294.6 (11.598)
	033	76.4 (3.008)	219.7 (8.650)	291.6 (11.480)
	029	76.4 (3.008)	218.2 (8.591)	288.6 (11.362)
	022	76.4 (3.008)	215.2 (8.472)	282.6 (11.126)
A3044	+ A3 ..			
	019	76.4 (3.008)	213.7 (8.413)	279.6 (11.008)
	044	72.9 (2.870)	217.2 (8.551)	293.6 (11.559)
	036	72.9 (2.870)	214.2 (8.433)	287.6 (11.323)
	033	72.9 (2.870)	212.7 (8.374)	284.6 (11.205)
	029	72.9 (2.870)	211.2 (8.315)	281.6 (11.087)
	022	72.9 (2.870)	208.2 (8.197)	275.6 (10.850)
	019	72.9 (2.870)	206.7 (8.138)	272.6 (10.732)

		mm (inb)			
		A	B	C	
A3036	+ A3 ..				
	036	69.9 (2.752)	208.2 (8.197)	281.6 (11.087)	
	033	69.9 (2.752)	206.7 (8.138)	278.6 (10.969)	
	029	69.9 (2.752)	205.2 (8.079)	275.6 (10.850)	
	022	69.9 (2.752)	202.2 (7.961)	269.6 (10.614)	
	019	69.9 (2.752)	200.7 (7.902)	266.6 (10.496)	
	A3033	+ A3 ..			
		033	68.4 (2.693)	203.7 (8.020)	275.6 (10.850)
029		68.4 (2.693)	202.2 (7.961)	272.6 (10.732)	
022		68.4 (2.693)	199.2 (7.843)	266.6 (10.496)	
019		68.4 (2.693)	197.7 (7.783)	263.6 (10.378)	
A3029		+ A3 ..			
		029	66.9 (2.634)	199.2 (7.843)	269.6 (10.614)
		022	66.9 (2.634)	196.2 (7.724)	263.6 (10.378)
	019	66.9 (2.634)	194.7 (7.665)	260.6 (10.260)	
	A3022	+ A3 ..			
		022	63.9 (2.516)	190.2 (7.488)	257.6 (10.142)
		019	63.9 (2.516)	188.7 (7.429)	254.6 (10.024)
		A3019	+ A3 ..		
019			62.4 (2.457)	185.7 (7.311)	251.6 (9.906)

MOTORI AD INGRANAGGI GEAR MOTORS




CARATTERISTICHE FEATURES		C-2
CONDIZIONI D'IMPIEGO USE CONDITIONS		C-2
INFORMAZIONI TECNICHE TECHNICAL INFORMATION		C-3
GAMMA DI PRODOTTO PRODUCT RANGE		C-4
MOTORI GRUPPO MOTORS GROUP	2	C-6
MOTORI GRUPPO MOTORS GROUP	3	C-16

CARATTERISTICHE

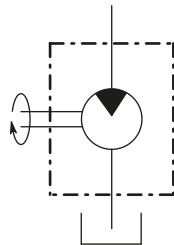
Motori ad ingranaggi esterni dal gruppo 2 al gruppo 3 suddivisi in 17 cilindrate da 4 a 61,1cc, fino a 270 bar di pressione massima di esercizio e velocità massima fino a 4000 giri/min., con bilanciamento idrostatico a ripresa del gioco assiale.

Disponibili in versione unidirezionale o reversibile (utilizzabili anche in serie).

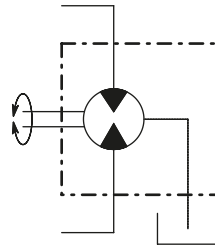
Ogni motore può essere assemblato con totale interambiabilità sia con flange standard (europea tedesca, SAE) sia con quelle speciali e con alberi o nicchie cilindriche e analati. E' possibile inoltre montare optional per due velocità e optional limitatore di pressione.

I motori sono disponibili nelle versioni unidirezionale e reversibile.

Motore unidirezionale (D-S)
Unidirectional motor (D-S)



Motore reversibile (R)
Reversible motor (R)



FEATURES

Motors with external gears from group 2 to group 3, divided into 17 displacements from 4 to 61,1cc up to 270 bar of maximum working pressure and maximum speed up to 4000 rpm, with hydrostatic balance to reduce the axial backlash.

Gear motors are available in unidirectional and reversible versions (reversible motors can be used also in series).

Each motor can be assembled with standard flanges (European, German or SAE) or with special ones (ZF, Perkins and Renault), with optional cylindrical and polished shafts. Furthermore it is possible to assemble motors with two speed function and with pressure relief valve.

The motors are available in unidirectional D-S and reversible R versions.

CONDIZIONI D'IMPIEGO

- Temperatura d'impiego 20°C ÷ 65°C
- Temperatura limite -15°C ÷ 80°C
- Pressione ammissibile in aspirazione min. 0.7 max 3 bar (absolute)
- Velocità massima mandata 15 ÷ 92 mm²/s
- Velocità limite d'aumento 3000 mm²/s
- Filtraggio 26/23 ISO DIS 4406 fino a 150 micrometri
23/20 ISO DIS 4406 per pressioni superiori

USE CONDITIONS

- Temperature 20°C ÷ 65°C
- Max temperature - 15°C ÷ 80°C
- Suction allowed pressure min. 0.7 max 3 bar (absolute)
- Recommended velocity 15 ÷ 92 mm²/s
- Start max velocity 3000 mm²/s
- Filtering 26/23 150 ISO DIS 4406 until 2175 micrometers
23/20 ISO DIS 4406 for higher pressure



INFORMAZIONI TECNICHE

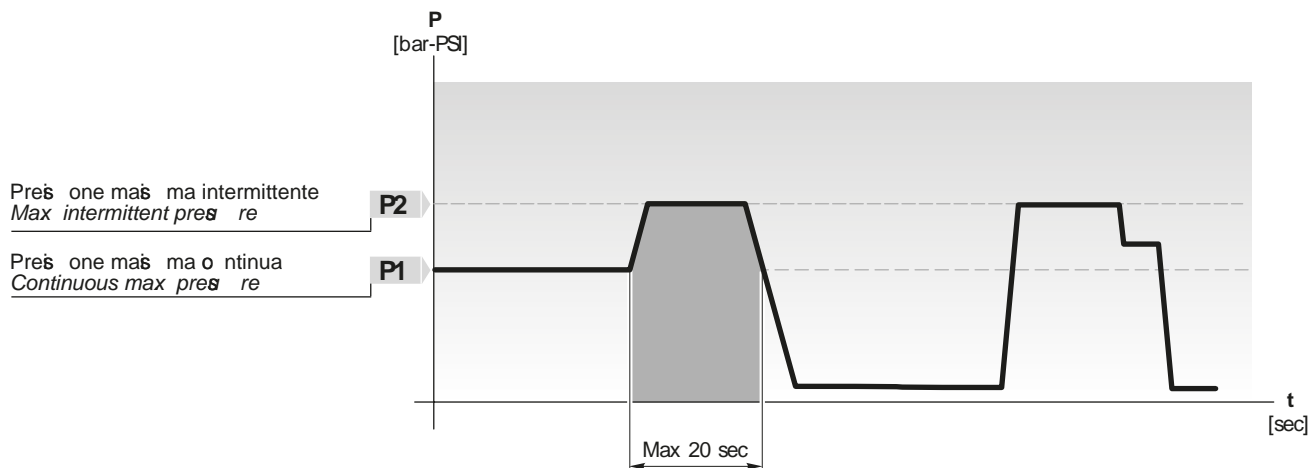
TECHNICAL INFORMATION

Definizione delle pressioni

I motori possono essere sottoposti alle pressioni P1, P2 indicate nelle tabelle delle prestazioni. Il grafico seguente ne illustra le definizioni e l'applicabilità rispettando i limiti delle velocità di rotazione riportati.

Definition of pressures

The motors can be subjected to the pressures P1, P2 indicated in the performance tables. The following diagram illustrates the definitions and applicability of these, compared to the rotation speed limits indicated.



Misure idrauliche
Hydraulic measures

Q	Portata <i>Flow</i>	[l/min - Gal/min]
M	Coppia <i>Torque</i>	[Nm - lbf.in]
P	Potenza <i>Power</i>	[kW - HP]
V	Cilindrata <i>Displacement</i>	[cm ³ /rev - in ³ /rev]
N	Velocità <i>Speed</i>	[min ⁻¹ - rpm]
Δp	Pressione <i>Pressure</i>	[bar - PSI]
η_v	Rendimento volumetrico <i>Volumetric efficiency</i>	
η_m	Rendimento meccanico <i>Mechanical efficiency</i>	
η_t	Rendimento totale <i>Overall efficiency</i>	

Formule utili
Useful formulas

$$Q = \frac{V \text{ [cm}^3\text{/rev]} \times n \times 10^3}{\eta_v} \text{ l/min}$$

$$M = \frac{\Delta p \text{ [bar]} \times V \text{ [cm}^3\text{/rev]} \times \eta_m}{62.83} \text{ Nm}$$

$$P = \frac{\Delta p \text{ [bar]} \times V \text{ [cm}^3\text{/rev]} \times n \times \eta_t}{600 \times 1000} \text{ kW}$$

Fattore di conversione
Conversion factors

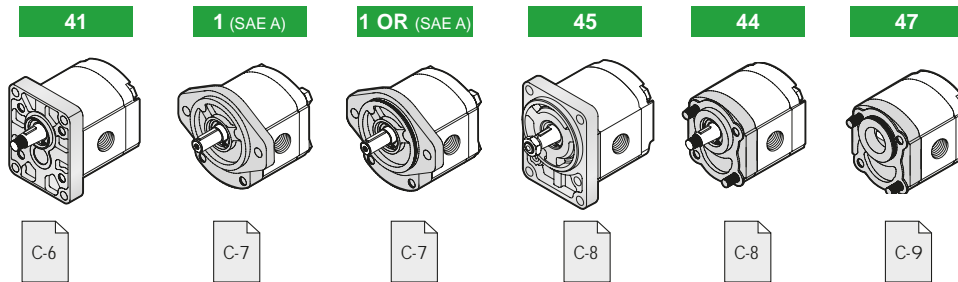
1 l/min = 0.2641 US Gal/min
1 Nm = 8.851 in-lbs
1 Nm = 0.7375 ft-lbs
1 N = 0.2248 lbs
1 kW = 1.34 HP
1 cm ³ /giro = 0.061 in ³ /rev
1 bar = 14.5 PSI
1 mm = 0.0394 in
1 kg = 2.205 lbs

GAMMA DI PRODOTTO

PRODUCT RANGE

**MOTORI GRUPPO
MOTORS GROUP 2**

C = Rotaż one des ra / Clock wise rotation
A = Rotaż one s nis ra / Anticlock wise rotation
D = Ree r s bile / Reverse



Grandezza Size	Cilindrata Displacement [cm ³ /rev] [in ³ /rev]	Pressione max d'ee rizio Max working pressure				Velocità max Max speed [g/min] [rpm]	Portata max Max flow [l/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [l/min] [Gal/min]
		P1 [bar] / (PSI)		P2 [bar] / (PSI)					
		S - D	R	S - D	R				
A2004	4 (0.24)	230 (3335)	230 (3335)	270 (3915)	230 (3335)	4000	16 (4.23)	500	1.9 (0.50)
A2006	6 (0.37)	230 (3335)	230 (3335)	270 (3915)	230 (3335)	4000	24 (6.34)	500	2.85 (0.75)
A2008	8.5 (0.52)	230 (3335)	230 (3335)	270 (3915)	230 (3335)	3500	29.7 (7.85)	500	4.03 (1.06)
A2011	11 (0.67)	230 (3335)	230 (3335)	270 (3915)	230 (3335)	3500	38.5 (10.17)	500	5.22 (1.38)
A2014	14 (0.85)	230 (3335)	230 (3335)	270 (3915)	230 (3335)	3500	49 (12.95)	500	6.65 (1.76)
A2016	16.5 (1.01)	230 (3335)	200 (2900)	240 (3480)	200 (2900)	3500	57.7 (15.24)	500	7.83 (2.07)
A2019	19.5 (1.19)	210 (3045)	185 (2683)	220 (3190)	185 (2683)	3300	64.3 (16.99)	500	9.26 (2.45)
A2022	22.5 (1.37)	190 (2755)	170 (2465)	200 (2900)	170 (2465)	2800	63 (16.64)	500	10.68 (2.82)
A2026	26 (1.59)	170 (2465)	150 (2175)	180 (2610)	155 (2248)	2500	65 (17.17)	500	12.35 (3.26)

* (Valori rilevati in fase di collaudo a 1500 giri/min / Value obtained during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

B	1	A	2	014	BB	41	F	3	C	(K)	VLP-I (N)
B	Tipo motore / Motor type									B = Alluminio / Aluminium D = Ghisa / Cast iron	
1	Forma costruttiva / Design mark									1	
A	Guarnizione standard / Standard seal kit									A = Standard V = Guarnizione in Viton / Viton seal	
2	Gruppo / Group									2 di tabella / see table	
014	Cilindrata / Displacement									014 di tabella / see table	
BB	Tipo albero / Shaft type									BB - BF - BH - E - A - BG - BL - BJ	
41	Tipo flangiatura / Mounting flange									41	
F	Configurazione delle connessioni / Standard port configuration									F (004-008) A (011-026)	
3	Tipo connessioni / Connections type									3 - 5 - 6 - 7 - 4 - 8 - 9	
C	Rotażone oraria / Clockwise rotation									C = Rotażone oraria / Clockwise rotation A = Rotażone antioraria / Anticlockwise rotation D = Reverse	
(K)	Anello di rinforzo per alta pressione sul serbatoio - max 30 bar Seal for high pressure on the tank return line - max 30 bar									(a richiesta / optional)	
VLP-I (N)	Opzioni / Optional									VLP-I (N)⁽²⁾ - VLP-E (N)⁽²⁾ Valore limitativo di pressione (pag. C-11) Pressure relief valve (page C-11)	

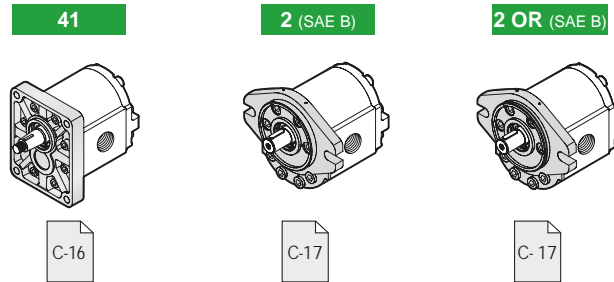
⁽²⁾ Solo per motori unidirezionali / Only for unidirectional motors

GAMMA DI PRODOTTO

PRODUCT RANGE

**MOTORI GRUPPO
MOTORS GROUP 3**

C = Rotazione destra / Clockwise rotation
A = Rotazione sinistra / Anticlockwise rotation
D = Reversibile / Reversible



Grandezza Size	Cilindrata Displacement [cm ³ /rev] [in ³ /rev]	Pressione max d'operazione Max working pressure				Velocità max Max speed [g/min] [rpm]	Portata max Max. flow [l/min] [Gal/min]	Velocità min. Min. speed [g/min] [rpm]	Portata min. Min. flow [l/min] [Gal/min]
		P1 [bar] / (PSI)		P2 [bar] / (PSI)					
		S - D	R	S - D	R				
A3019	19 (1.16)	250 (3625)	215 (3118)	270 (3915)	220 (3190)	3500	66.5 (17.57)	700	12.64 (3.34)
A3022	22.3 (1.36)	240 (3480)	205 (2973)	260 (3770)	220 (3190)	3500	78 (20.61)	700	14.83 (3.92)
A3029	29.3 (1.79)	220 (3190)	190 (2755)	240 (3480)	205 (2973)	3300	96.7 (25.55)	700	19.48 (5.15)
A3033	32.9 (2.01)	220 (3190)	190 (2755)	240 (3480)	205 (2973)	3300	108.6 (28.69)	700	21.88 (5.78)
A3036	36.4 (2.22)	210 (3045)	180 (2610)	230 (3335)	205 (2973)	3300	120.1 (31.73)	700	24.21 (6.40)
A3044	43.5 (2.65)	200 (2900)	170 (2465)	220 (3190)	185 (2683)	3000	130.5 (34.48)	700	28.93 (7.64)
A3052	51.7 (3.15)	200 (2900)	170 (2465)	220 (3190)	180 (2610)	3000	155.1 (40.98)	700	34.38 (9.08)
A3062	61.1 (3.73)	180 (2610)	160 (2320)	190 (2755)	160 (2320)	2500	152.7 (40.34)	700	40.63 (10.73)

* (Valori rilevati in fase di collaudo a 1500 giri/min / Value collected during the testing at 1500 rpm)

Esempio di ordinazione in codice / Example of ordering code

B	1	A	3	022	BB	41	A	3	C	(K)	VLP-I (N)
B	Tipo motore / Motor type						B = Alluminio / Aluminium D = Ghisa / Cast iron				
1	Forma di attacco / Design mark						1				
A	Guarnizione standard / Standard gasket						A = Standard V = Guarnizione in Viton / Viton gasket				
3	Gruppo / Group						vedi tabella / see table				
022	Cilindrata / Displacement						vedi tabella / see table				
BB	Tipo albero / Shaft type						BB - E - A				
41	Tipo flangitura / Mounting flange						41				
A	Configurazione delle connessioni / Standard port configuration						A				
3	Tipo connessioni / Connections type						3 - 5 - 6 - 8 - 9				
C	Rotazione oraria / Clockwise rotation						C = Rotazione oraria / Clockwise rotation A = Rotazione antioraria / Anticlockwise rotation D = Reversibile / Reversible				
(K)	Anello di rinforzo per alta pressione sul ritorno - max 30 bar Seal for high pressure on the tank return line - max 30 bar						(a richiesta / optional)				
VLP-I (N)	Opzioni / Optional						VLP-I (N) ⁽²⁾ - VLP-E (N) ⁽²⁾ Valvola limitatrice di pressione (pag. C-18) Pressure relief valve (page C-18)				

⁽²⁾ Solo per motori unidirezionali / Only for unidirectional motors

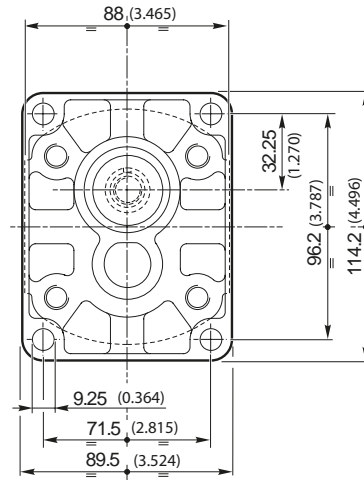
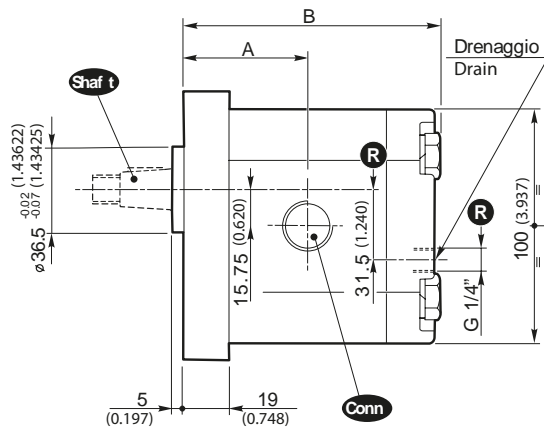
**MOTORI GRUPPO
MOTORS GROUP**

2

41

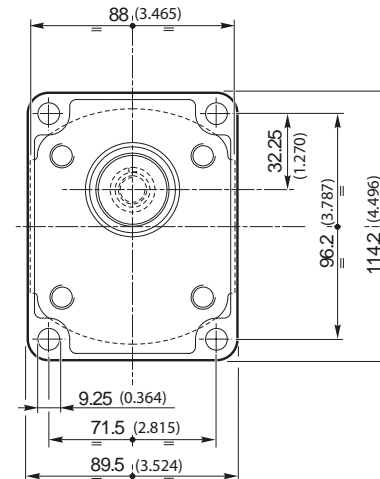
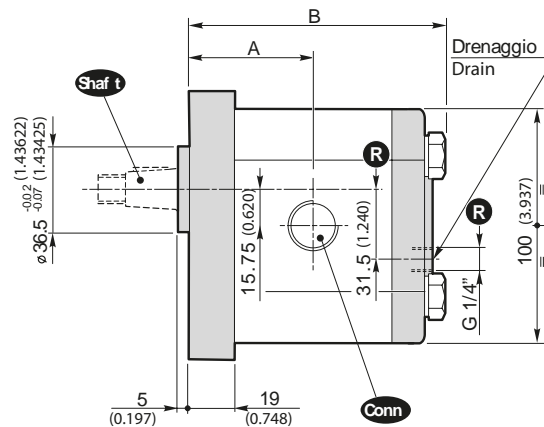
Dimensi on i / Dimensi ons

Flangia e coperchio in Alluminio / Flange and cover in Aluminium



R Solo per motori res is bili
Only for res is ble motors

Flangia e coperchio in Ghisa / Flange and cover in Cast iron



Grandezza Size	Cilindrata Displacement	41 (Alluminio / Aluminium)					41 (Ghisa / Cast iron)				
		Dimensi on i Dimensi ons		Maa Mas	Shaf t	Conn	Dimensi on i Dimensi ons		Maa Mas	Shaf t	Conn
		A	B				A	B			
[in ³ /rev] [in ³ /rev]	[mm] [inb.]	[mm] [inb.]	[Kg] [lb#]			[mm] [inb.]	[mm] [inb.]	[Kg] [lb#]			
A2004	4 (0.24)	44.4 (1.748)	93 (3.661)	2.30 (5.1)	BB BF BH E A BG BL	G N T M U W F	44.4 (1.748)	93 (3.661)	3.40 (7.5)	BB BF BH E A BG BL	3 5 6 7 4 8 9
A2006	6 (0.37)	46 (1.811)	96.3 (3.791)	2.45 (5.4)			46 (1.811)	96.3 (3.791)	3.60 (7.8)		
A2008	8.5 (0.52)	48.1 (1.894)	100.5 (3.957)	2.60 (5.7)			48.1 (1.894)	100.5 (3.957)	3.70 (8.2)		
A2011	11 (0.67)	50.2 (1.976)	104.6 (4.118)	2.70 (6.0)			50.2 (1.976)	104.6 (4.118)	3.80 (8.4)		
A2014	14 (0.85)	52.7 (2.075)	109.6 (4.315)	2.80 (6.2)			52.7 (2.075)	109.6 (4.315)	3.90 (8.6)		
A2016	16.5 (1.01)	54.8 (2.157)	113.8 (4.480)	2.95 (6.5)			54.8 (2.157)	113.8 (4.480)	4.05 (8.9)		
A2019	19.5 (1.19)	57.3 (2.256)	118.8 (4.677)	3.10 (6.8)			57.3 (2.256)	118.8 (4.677)	4.20 (9.3)		
A2022	22.5 (1.37)	59.8 (2.354)	123.8 (4.874)	3.25 (7.2)			59.8 (2.354)	123.8 (4.874)	4.35 (9.6)		
A2026	26 (1.59)	62.7 (2.469)	129.6 (5.102)	3.40 (7.5)			62.7 (2.469)	129.6 (5.102)	4.50 (9.9)		

**MOTORI GRUPPO
MOTORS GROUP**

2

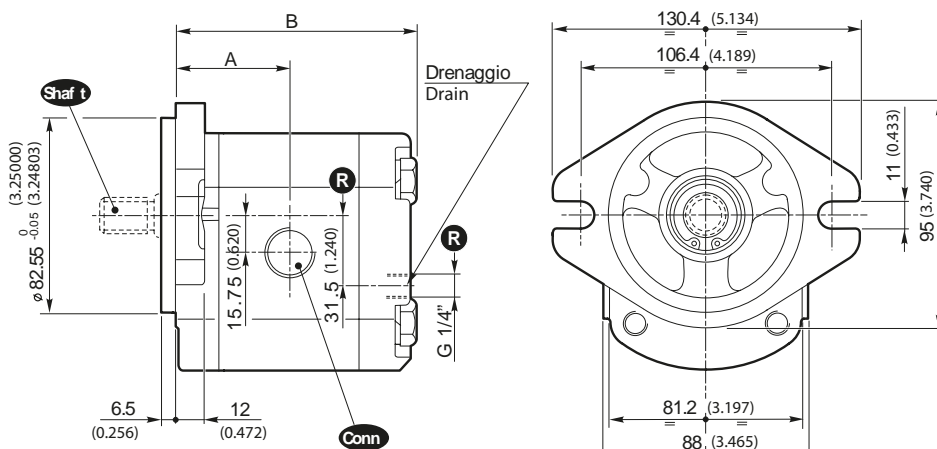
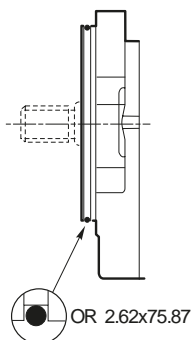
1, 1 OR (SAE A)

Dimensoni / Dimensons

1 OR

1

Flangia e coperchio in **Alluminio** / Flange and cover in **Aluminium**

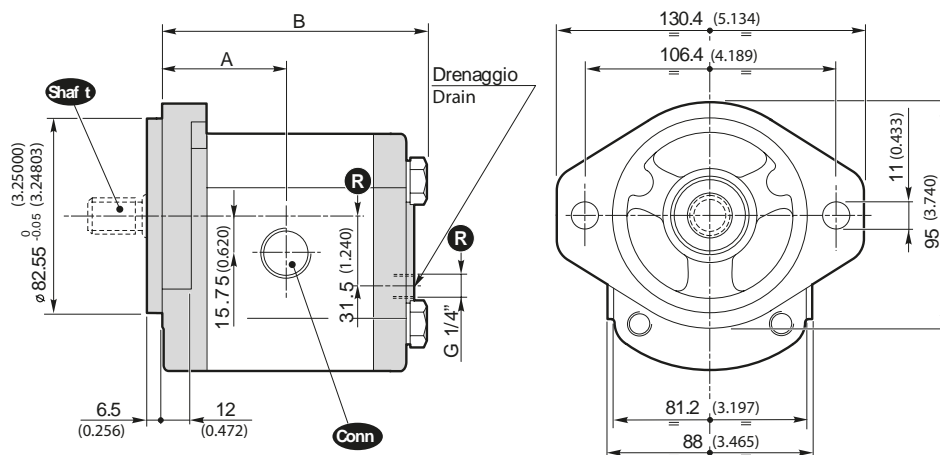
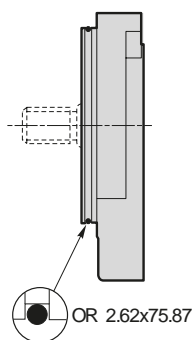


R Solo per motori reversibili
Only for reversible motors

1 OR

1

Flangia e coperchio in **Ghisa** / Flange and cover in **Cast iron**



1, 1 OR (All. / Aluminium)

1, 1 OR (Ghisa / Cast iron)

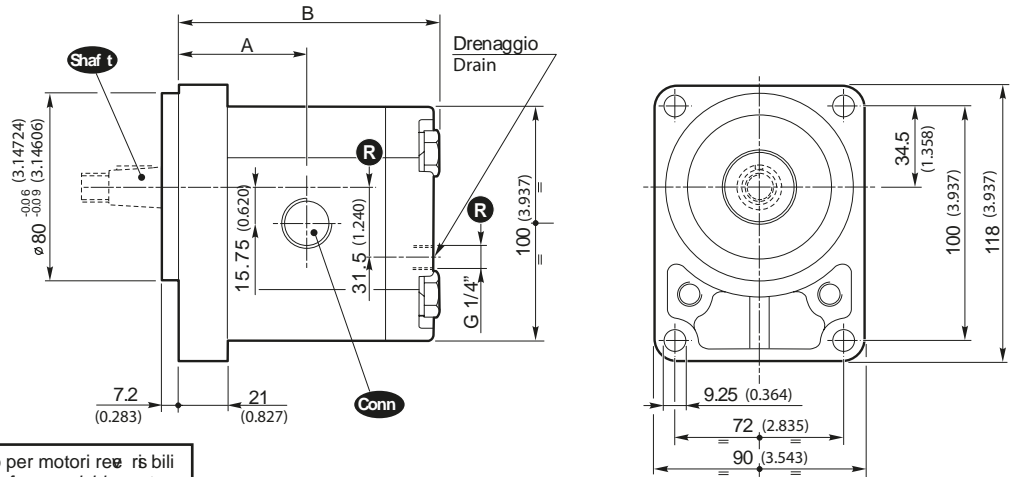
Grandezza Size	Cilindrata Displacement	Dimensoni Dimensions		Masa Mass	Shaft	Conn	Dimensoni Dimensions		Masa Mass	Shaft	Conn
		A	B				A	B			
	[cm ³ /rev] [in ³ /rev]	[mm] [inb.]	[mm] [inb.]	[Kg] [lb#]			[mm] [inb.]	[mm] [inb.]	[Kg] [lb#]		
A2004	4 (0.24)	44.4 (1.748)	93 (3.661)	2.30 (5.1)	BB BF BH E A BG BL	G N T M U W F	44.4 (1.748)	93 (3.661)	3.40 (7.5)	BB BF BH E A BG BL	3 5 6 7 4 8 9
A2006	6 (0.37)	46 (1.811)	96.3 (3.791)	2.45 (5.4)			46 (1.811)	96.3 (3.791)	3.55 (7.8)		
A2008	8.5 (0.52)	48.1 (1.894)	100.5 (3.957)	2.60 (5.7)			48.1 (1.894)	100.5 (3.957)	3.70 (8.2)		
A2011	11 (0.67)	50.2 (1.976)	104.6 (4.118)	2.70 (6.0)			50.2 (1.976)	104.6 (4.118)	3.80 (8.4)		
A2014	14 (0.85)	52.7 (2.075)	109.6 (4.315)	2.80 (6.2)			52.7 (2.075)	109.6 (4.315)	3.90 (8.6)		
A2016	16.5 (1.01)	54.8 (2.157)	113.8 (4.480)	2.95 (6.5)			54.8 (2.157)	113.8 (4.480)	4.05 (8.9)		
A2019	19.5 (1.19)	57.3 (2.256)	118.8 (4.677)	3.10 (6.8)			57.3 (2.256)	118.8 (4.677)	4.20 (9.3)		
A2022	22.5 (1.37)	59.8 (2.354)	123.8 (4.874)	3.25 (7.2)			59.8 (2.354)	123.8 (4.874)	4.35 (9.6)		
A2026	26 (1.59)	62.7 (2.469)	129.6 (5.102)	3.40 (7.5)			62.7 (2.469)	129.6 (5.102)	4.50 (9.9)		

**MOTORI GRUPPO
MOTORS GROUP**

2

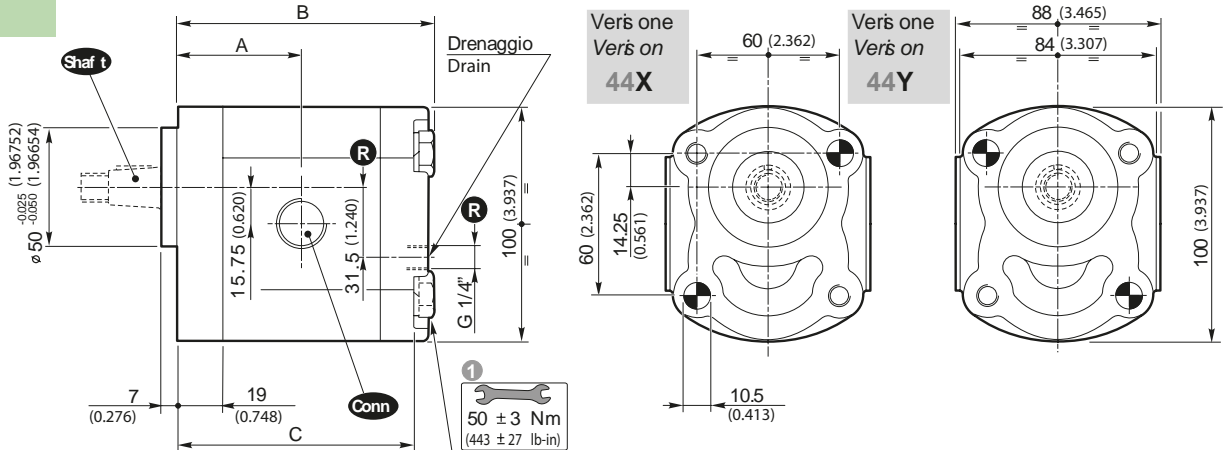
Dimens oni / Dimens ons

45



R Solo per motori res is bili
Only for res is ble motors

44



1 Coppia di e raggio v iti: 50 ± 3 Nm. Utiliz a re v iti b as e 10.9 - 12.9 UNI EN 20898/1.
Il fissaggio della pompa pu o essere affettuato con 2 viti prigioniere in materiale b as e 10.9 - 12.9 pre-tirate a 40 ± 3 Nm.
Fissare la pompa mediante dadi autobloccanti o coppia di e raggio 50 ± 3 Nm.
Il Kit di viti per il fissaggio della pompa e da ordinare separatamente.
Codice di ordinazione del Kit di fissaggio:

1 Tightening torque of s e ws 443 ± 27 lb-in. Use s e ws t p e 10.9 - 12.9 UNI EN 20898/1.
The as mbly of the pump b ould be effe ed with 2 s e w studs t p e 10.9 - 12.9 pre-tighten at 354 ± 27 lb-in.
Fix the pump by s lf-lok ng nuts with tightening torque 443 ± 27 lb-in.
The s e ws k t for the pump as mbly b ould be ordered s parately.
Ordering code of fixing Kit:

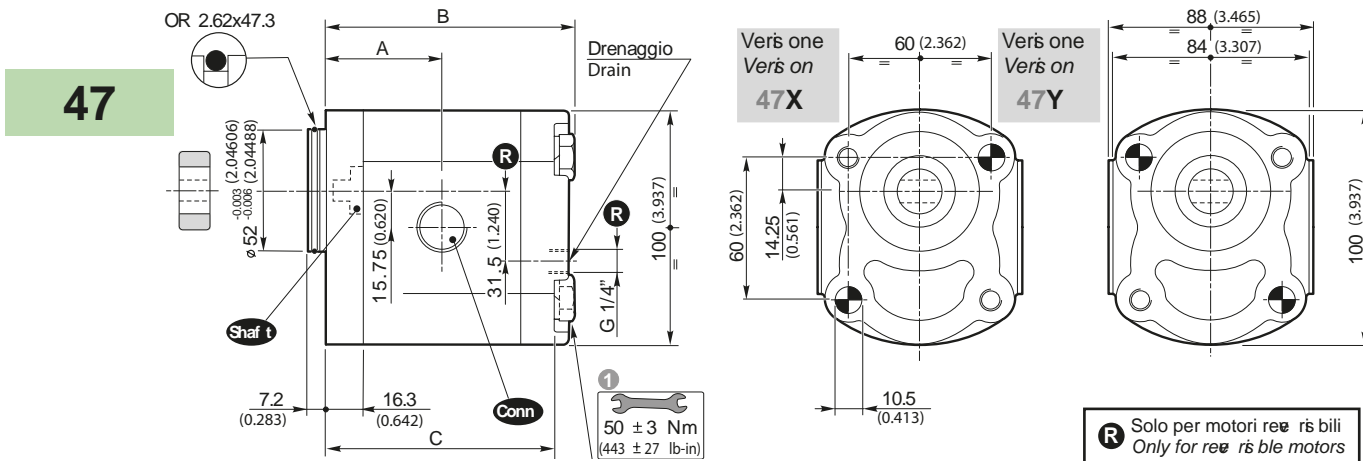
0029W + Lunghez a L (e di tabella)
+ Lenght L (e e table)

Grandezza Size	Cilindrata Displacement [in ³ /rev] [in ³ /rev]	45			Shaft	Conn	44				Shaft	Conn	
		Dimens oni / Dimens ons		Massa Mas [Kg] [lbs]			Dimens oni / Dimens ons						Massa Mas [Kg] [lbs]
		A [mm] [inb.]	B [mm] [inb.]				A [mm] [inb.]	B [mm] [inb.]	C [mm] [inb.]	L ¹ [mm] [inb.]			
A2004	4 (0.24)	46.4 (1.827)	95 (3.740)	2.30 (5.1)	BB BF BH E A BG BL	G N T M U V F	44.4 (1.748)	93 (3.661)	84 (3.307)	105 (4.134)	2.30 (5.1)	BB BF BH E A BG BL	3 5 6 7 4 8 9
A2006	6 (0.37)	48 (1.890)	98.3 (3.870)	2.45 (5.4)			46 (1.811)	96.3 (3.791)	87.3 (3.437)	105 (4.134)	2.45 (5.4)		
A2008	8.5 (0.52)	50.1 (1.972)	102.5 (4.035)	2.60 (5.7)			48.1 (1.894)	100.5 (3.957)	91.5 (3.602)	110 (4.331)	2.60 (5.7)		
A2011	11 (0.67)	52.2 (2.055)	106.6 (4.197)	2.70 (6.0)			50.2 (1.976)	104.6 (4.118)	95.6 (3.764)	115 (4.528)	2.70 (6.0)		
A2014	14 (0.85)	54.7 (2.154)	111.6 (4.394)	2.80 (6.2)			52.7 (2.075)	109.6 (4.315)	100.6 (3.961)	120 (4.724)	2.80 (6.2)		
A2016	16.5 (1.01)	56.8 (2.236)	115.8 (4.559)	2.95 (6.5)			54.8 (2.157)	113.8 (4.480)	104.8 (4.126)	125 (4.921)	2.95 (6.5)		
A2019	19.5 (1.19)	59.3 (2.335)	120.8 (4.756)	3.10 (6.8)			57.3 (2.256)	118.8 (4.677)	109.8 (4.323)	130 (5.118)	3.10 (6.8)		
A2022	22.5 (1.37)	61.8 (2.433)	125.8 (4.953)	3.25 (7.2)			59.8 (2.354)	123.8 (4.874)	114.8 (4.520)	135 (5.315)	3.25 (7.2)		
A2026	26 (1.59)	64.7 (2.547)	131.6 (5.181)	3.40 (7.5)			62.7 (2.469)	129.6 (5.102)	120.6 (4.748)	140 (5.512)	3.40 (7.5)		

**MOTORI GRUPPO
MOTORS GROUP**

2

Dimensì oni / Dimensì ons



1
Coppia di serraggio viti: 50 ± 3 Nm. Utilizzare viti classe 10.9 - 12.9 UNI EN 20898/1.
Il fissaggio della pompa può essere effettuato con 2 viti prigioniere in materiale classe 10.9 - 12.9 pre-serrate a 40 ± 3 Nm.
Fissare la pompa mediante dadi autobloccanti o coppia di serraggio 50 ± 3 Nm.
Il Kit di viti per il fissaggio della pompa è da ordinare separatamente.
Codice di ordinazione del Kit di fissaggio:

1
Tightening torque of screws 443 ± 27 lb-in. Use screws type 10.9 - 12.9 UNI EN 20898/1.
The assembling of the pump should be effected with 2 screw studs type 10.9 - 12.9 pre-tighten at 354 ± 27 lb-in.
Fix the pump by self-locking nuts with tightening torque 443 ± 27 lb-in.
The screws kit for the fixing of the pump should be ordered separately.
Ordering code of fixing Kit:

0029W + Lunghezza L (vedi tabella)
+ Length L (see table)

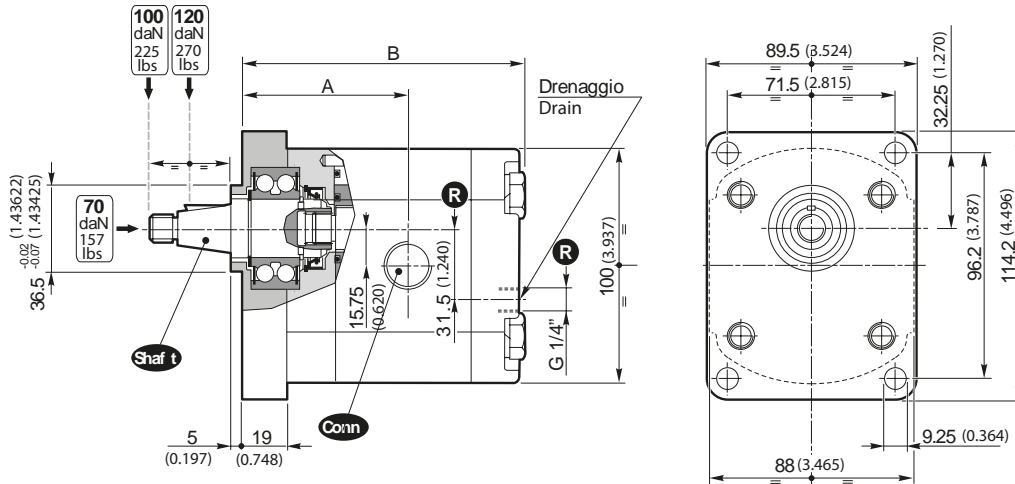
47									
Grandezza Serie	Cilindrata Dimensione [m ³ /rev] (in ³ /rev)	Dimensì oni / Dimensì ons				Masa [Kg] (lb)	Shaf t	Conn	
		A [mm] (in)	B [mm] (in)	C [mm] (in)	L 1 [mm] (in)				
A2004	4 (0.24)	41.7 (1.642)	90.3 (3.555)	81.3 (3.201)	100 (3.937)	2.30 (5.1)	BJ		
A2006	6 (0.37)	43.3 (1.705)	93.6 (3.685)	84.6 (3.331)	105 (4.134)	2.45 (5.4)			
A2008	8.5 (0.52)	45.4 (1.787)	97.8 (3.850)	88.8 (3.496)	110 (4.331)	2.60 (5.7)			
A2011	11 (0.67)	47.5 (1.870)	101.9 (4.012)	92.9 (3.657)	115 (4.528)	2.70 (6.0)			
A2014	14 (0.85)	50 (1.969)	106.9 (4.209)	97.9 (3.854)	120 (4.724)	2.80 (6.2)			
A2016	16.5 (1.01)	52.1 (2.051)	111.1 (4.374)	102.1 (4.020)	120 (4.724)	2.95 (6.5)			
A2019	19.5 (1.19)	54.6 (2.150)	116.1 (4.571)	107.1 (4.217)	125 (4.921)	3.10 (6.8)			
A2022	22.5 (1.37)	57.1 (2.248)	121.1 (4.768)	112.1 (4.413)	130 (5.118)	3.25 (7.2)			
A2026	26 (1.59)	60 (2.362)	126.9 (4.996)	117.9 (4.642)	140 (5.512)	3.40 (7.5)			

**MOTORI GRUPPO
MOTORS GROUP**

2

41S

Dimensioni / Dimen^ons



R Solo per motori ree r^s bili
Only for ree r^s ble motors

Versione da utilizza re in presen^a di carichi assiali e/o radiali
Version to use with axial and/or radial loads

41S

Grandezza Size	Cilindrata Displacement [cm ³ /rev] [in ³ /rev]	Dimensioni / Dimen ^o ns		Masa Mass [Kg] [lbs]	Shaf t	Conn
		A	B			
		[mm] (inb)	[mm] (inb)			
A2004	4 (0.24)	64.4 (2.535)	113 (4.449)	2.80 (6.2)	10	G N T M U W F
A2006	6 (0.37)	66 (2.598)	116.3 (4.579)	2.88 (6.4)		
A2008	8.5 (0.52)	68.1 (2.681)	120.5 (4.744)	3.00 (6.6)		
A2011	11 (0.67)	70.2 (2.764)	124.6 (4.906)	3.12 (6.9)		
A2014	14 (0.85)	72.7 (2.862)	129.6 (5.102)	3.27 (7.2)		
A2016	16.5 (1.01)	74.8 (2.945)	133.8 (5.268)	3.39 (7.5)		
A2019	19.5 (1.19)	77.3 (3.043)	138.8 (5.465)	3.53 (7.8)		
A2022	22.5 (1.37)	79.8 (3.142)	143.8 (5.661)	3.67 (8.1)		
A2026	26 (1.59)	82.7 (3.256)	149.6 (5.890)	3.84 (8.5)		

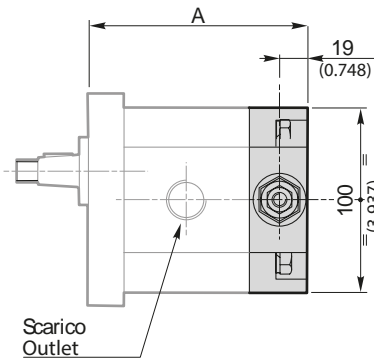
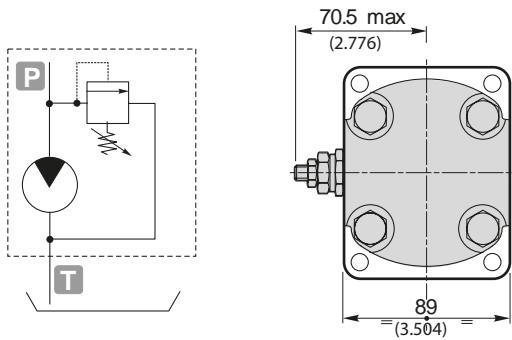
OPZIONI / OPTIONAL

**MOTORI GRUPPO
MOTORS GROUP**

2

VLP- I (N)

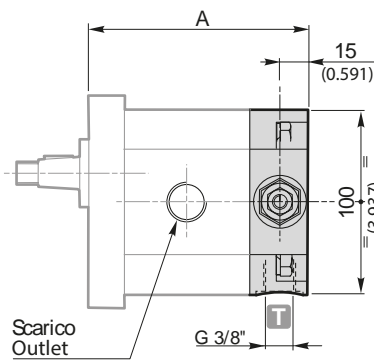
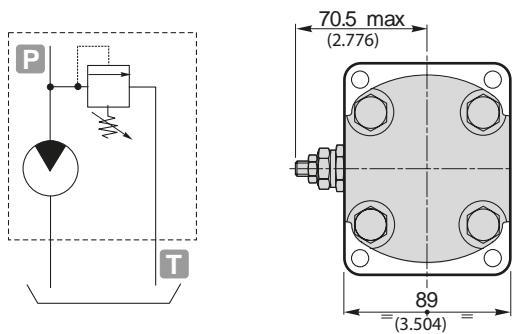
Valvola limitatrice di pressione a scarico interno
Pressure relief valve with internal exhaust



	A		
	1- 44	45	47
A2004	104.8 (4.126)	106.8 (4.205)	102.1 (4.020)
A2006	108.1 (4.256)	110.1 (4.335)	105.4 (4.150)
A2008	112.3 (4.421)	114.3 (4.500)	109.6 (4.315)
A2011	116.4 (4.583)	118.4 (4.661)	113.7 (4.476)
A2014	121.4 (4.780)	123.4 (4.858)	118.7 (4.673)
A2016	125.6 (4.945)	127.6 (5.024)	122.9 (4.839)
A2019	130.6 (5.142)	132.6 (5.220)	127.9 (5.035)
A2022	135.6 (5.339)	137.6 (5.417)	132.9 (5.232)
A2026	141.4 (5.567)	143.4 (5.646)	138.7 (5.461)

VLP- E (N)

Valvola limitatrice di pressione a scarico esterno
Pressure relief valve with external exhaust



	A		
	1- 44	45	47
A2004	100.8 (3.969)	102.8 (4.047)	98.1 (3.862)
A2006	104.1 (4.098)	106.1 (4.177)	101.4 (3.992)
A2008	108.3 (4.264)	110.3 (4.343)	105.6 (4.157)
A2011	112.4 (4.425)	114.4 (4.504)	109.7 (4.319)
A2014	117.4 (4.622)	119.4 (4.701)	114.7 (4.516)
A2016	121.6 (4.787)	123.6 (4.866)	118.9 (4.681)
A2019	126.6 (4.984)	128.6 (5.063)	123.9 (4.878)
A2022	131.6 (5.181)	133.6 (5.260)	128.9 (5.075)
A2026	137.4 (5.409)	139.4 (5.488)	134.7 (5.303)

NB.
La valvola limitatrice di pressione si applica e si installa situando il corpo per il lato posteriore.
Fornitura solo con flangia e coperchio in Alluminio.
Sono rappresentati motori a rotazione destra.
Nei motori a rotazione sinistra, il foro T è in alto.

Warning.
The pressure relief valve can be applied by installing the rear cover.
It is supplied only with aluminium flange and cover.
The shown motors are clockwise rotation.
Motors with counter rotation, T port is above.

L'apertura della valvola limitatrice di pressione deve avvenire per tempi non superiori ai 10 secondi ogni minuto per evitare il surriscaldamento della pompa.

The opening of the pressure relief valve should be carry out for times not over 10" each minute to avoid the overheating of the pump.

Esempio di ordinazione in codice / Example of ordering code

B	1	A	2	014	BB	1	F	3	C	VLP-I	(N)
VLP-I	Coperchio in VLP / Cover with VLP									VPL-I (a scarico interno / at internal exhaust) VLP-E (a scarico esterno / at external exhaust)	
(N)	Tipo di molla / Spring type									B - N - R (vedi tabella / See table)	

Tipo di molla / Spring type		
B	N	R
molla bianca white spring	molla nera black spring	molla rossa red spring
Campi di taratura* Calibration fields*	[bar] (psi)	
10 ÷ 100 (145 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)

* In caso di omissione del valore di taratura, esso sarà inteso standard (molla nera con taratura 150 bar).

* Without setting request, it will be considered standard (black spring: 2175 psi).

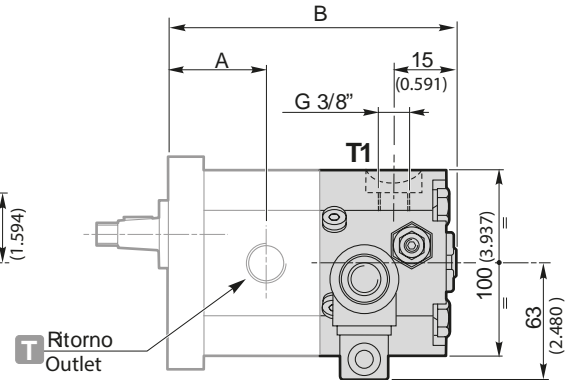
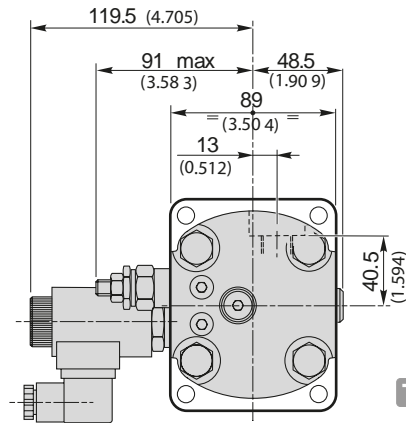
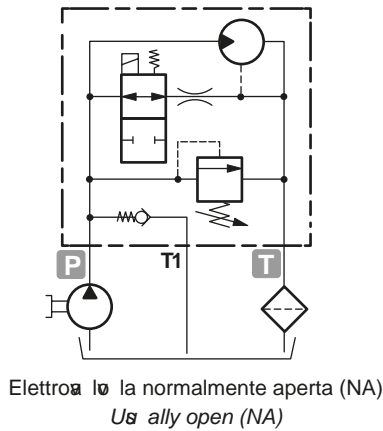
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2

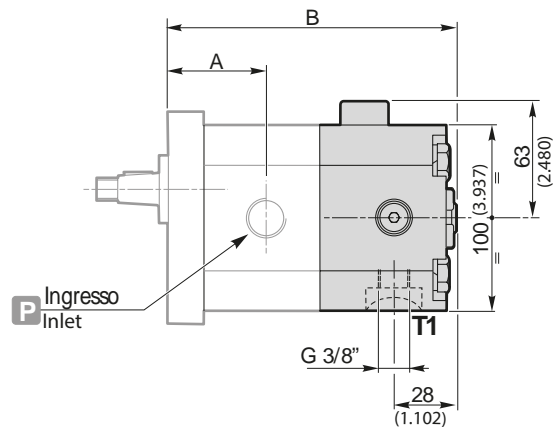
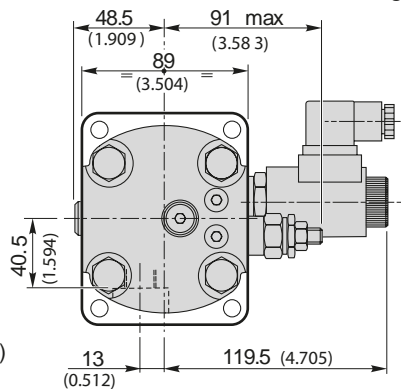
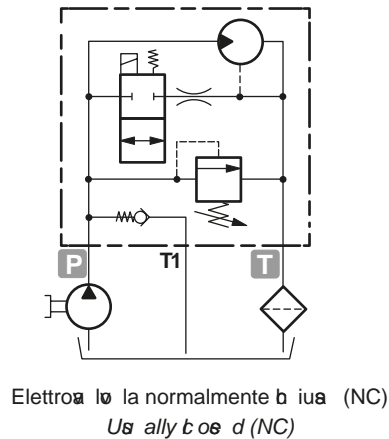
OPZIONI / OPTIONAL

Motore unidirezionale a due velocità con valvola limitatrice di pressione VLP
Two speed unidirectional motors with VLP pressure relief valve

Configurazione per rotazione destra
Configuration for clockwise rotation



Configurazione per rotazione sinistra
Configuration for anticlockwise rotation



	A2004	A2006	A2008	A2011	A2014	A2016	A2019	A2022	A2026
A	44.4 (1.748)	46 (1.811)	48.1 (1.894)	50.2 (1.976)	52.7 (2.075)	54.8 (2.157)	57.3 (2.256)	59.8 (2.354)	62.7 (2.469)
B	142.3 (5.602)	145.6 (5.732)	149.8 (5.898)	153.9 (6.059)	158.9 (6.256)	163.1 (6.421)	168.1 (6.618)	173.1 (6.815)	182 (7.165)

Esempio di ordinazione in codice / Example of ordering code

B1	A2014	BB	1	F	3	C	NA	(24VDC)	VLP	(N)	
NA	NA = Normalmente aperta / Solenoid normally open NC = Normalmente chiusa / Solenoid normally closed						NA = Normalmente aperta / Solenoid normally open NC = Normalmente chiusa / Solenoid normally closed				
24VDC	Tensione magnete / Electromagnet voltage						12 - 24 - 48 V. DC 24 - 48 - 110 - 220 V. AC (50 Hz)				
VLP	Coperchio con VLP Cover with VLP										
(N)	Tipo di molla / Spring type						B - N - R (vedi tabella / See table)				

N.B.
Solo per motori con flangia e coperchio in Alluminio
Only motors with flange and cover in Aluminium

		Tipo di molla / Spring type		
		B	N	R
		molla bianca white spring	molla nera black spring	molla rossa red spring
Campi di taratura* Calibration fields*	[bar] (psi)	10 ÷ 100 (145 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)

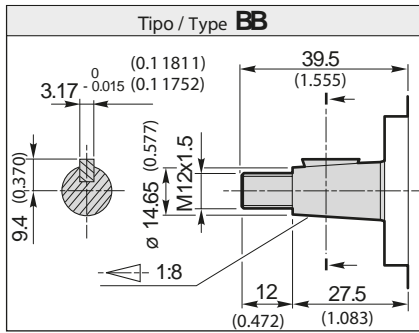
* In caso di omissione del valore di taratura, esso sarà inteso standard (molla nera con taratura 150 bar).

* Without setting request, it will be considered standard (black spring: 2175 psi).

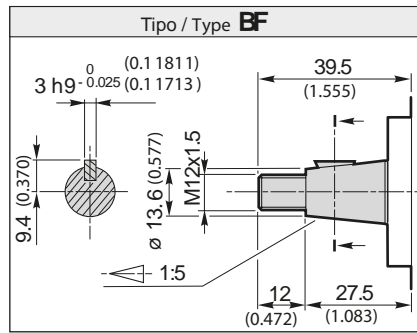
**MOTORI GRUPPO
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2

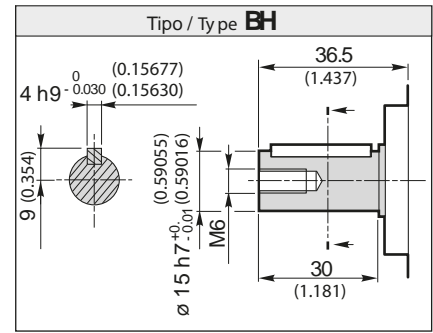
ALBERI DISPONIBILI / AVAILABLE SHAFTS



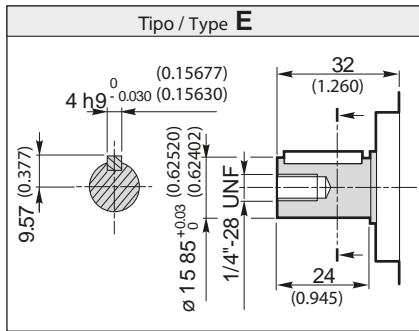
Coppia 98 Nm / Torque 72.3 ft-lbs



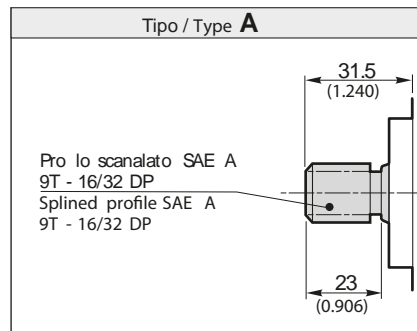
Coppia 98 Nm / Torque 72.3 ft-lbs



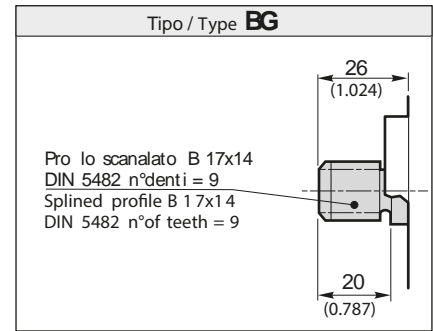
Coppia 98 Nm / Torque 72.3 ft-lbs



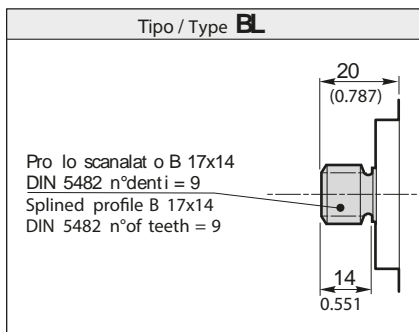
Coppia 98 Nm / Torque 72.3 ft-lbs



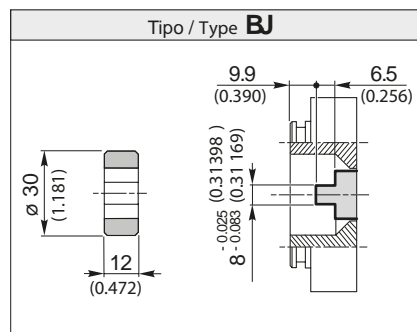
Coppia 98 Nm / Torque 72.3 ft-lbs



Coppia 98 Nm / Torque 72.3 ft-lbs



Coppia 98 Nm / Torque 72.3 ft-lbs



Coppia 70 Nm / Torque 51.6 ft-lbs

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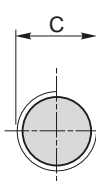
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**CONNESSIONI per motori C-A
CONNECTIONS for C-A motors**

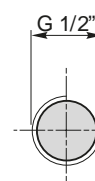
Conn

3

Aspirazione
Suction



Mandat a
Delivery

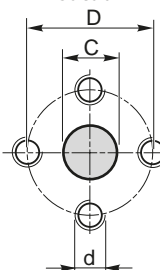


Grand./ Size	004 ÷ 008	
C	G 1/2"	

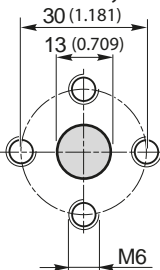
Grand./ Size	011 ÷ 026	
C	G 3/4"	

5

Aspirazione
Suction



Mandat a
Delivery

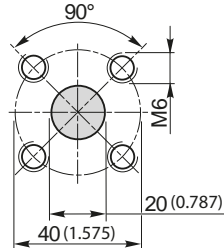


Grand./ Size	004 ÷ 008		
C	D	d	
13 (0.512)	30 (1.181)	M6	

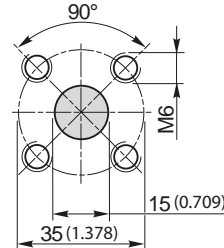
Grand./ Size	011 ÷ 026		
C	D	d	
19 (0.748)	40 (1.575)	M8	

6

Aspirazione
Suction

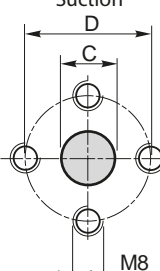


Mandat a
Delivery

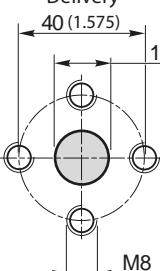


7

Aspirazione
Suction



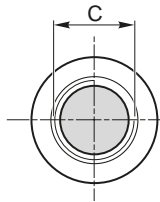
Mandat a
Delivery



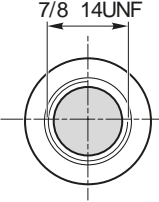
Grand./ Size	011 ÷ 026	
C	D	
19 (0.748)	40 (1.575)	

4

Aspirazione
Suction



Mandat a
Delivery

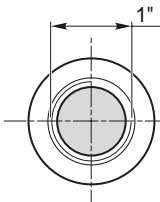


Grand./ Size	004 ÷ 008	
C	7/8 14UNF	

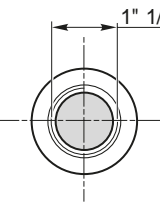
Grand./ Size	011 ÷ 026	
C	1" 1/16 12UN	

8

Aspirazione
Suction

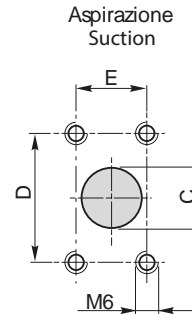


Mandat a
Delivery

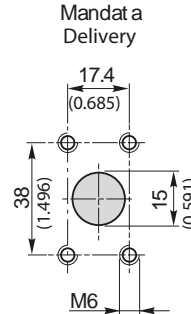


9

Aspirazione
Suction

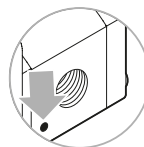


Mandat a
Delivery



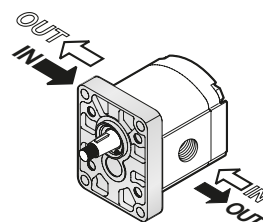
Grand./ Size	004 ÷ 011		
C	D	E	
20 (0.787)	38 (1.496)	17.4 (0.685)	



Grand./ Size	014 ÷ 026		
C	D	E	
26 (1.024)	22.4 (0.882)	47.6 (1.874)	



Il segno lo indica il lato scarico per i motori.
The sign on the body identify the **outlet side** for the motors

Posizione delle connessioni / Connections positions



Rotazione / Rotation	C	A
		

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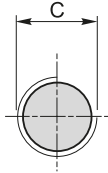
2

**CONNESSIONI per motori D
CONNECTIONS for D motors**

Conn

3

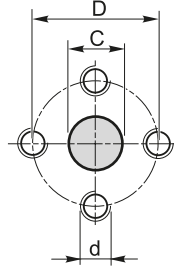
Mandata / Scarico
Delivery / Outlet



Grand./ Size	
004 ÷ 008	
C	
G 1/2"	
Grand./ Size	
011 ÷ 026	
C	
G 3/4"	

5

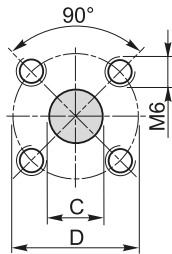
Mandata / Scarico
Delivery / Outlet



Grand./ Size		
004 ÷ 008		
C	D	d
13 (0.512)	30 (1.181)	M6
Grand./ Size		
011 ÷ 026		
C	D	d
19 (0.748)	40 (1.575)	M8

6

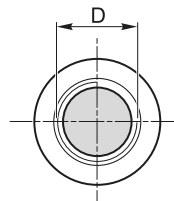
Mandata / Scarico
Delivery / Outlet



Grand./ Size	
004 ÷ 008	
C	D
15 (0.591)	35 (1.378)
Grand./ Size	
011 ÷ 026	
C	D
20 (0.787)	40 (1.575)

4

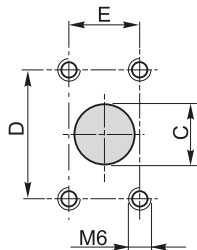
Mandata / Scarico
Delivery / Outlet



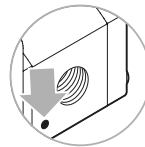
Grand./ Size	
004 ÷ 008	
D	
7/8 14UNF	
Grand./ Size	
011 ÷ 026	
D	
1" 1/16 12UN	

9

Mandata / Scarico
Delivery / Outlet

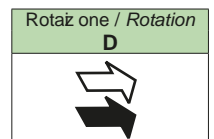
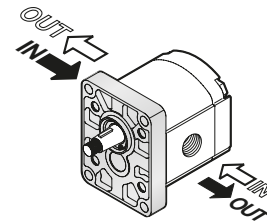


Grand./ Size		
004 ÷ 011		
C	D	E
20 (0.787)	38 (1.496)	17.4 (0.685)
Grand./ Size		
014 ÷ 026		
C	D	E
26 (1.024)	22.4 (0.882)	47.6 (1.874)



L'eventuale presenza di un foro nei motori reversibili non è da considerarsi.
Any sign on the body in reversible motors is not considered.

Posizione delle connessioni / Connections positions



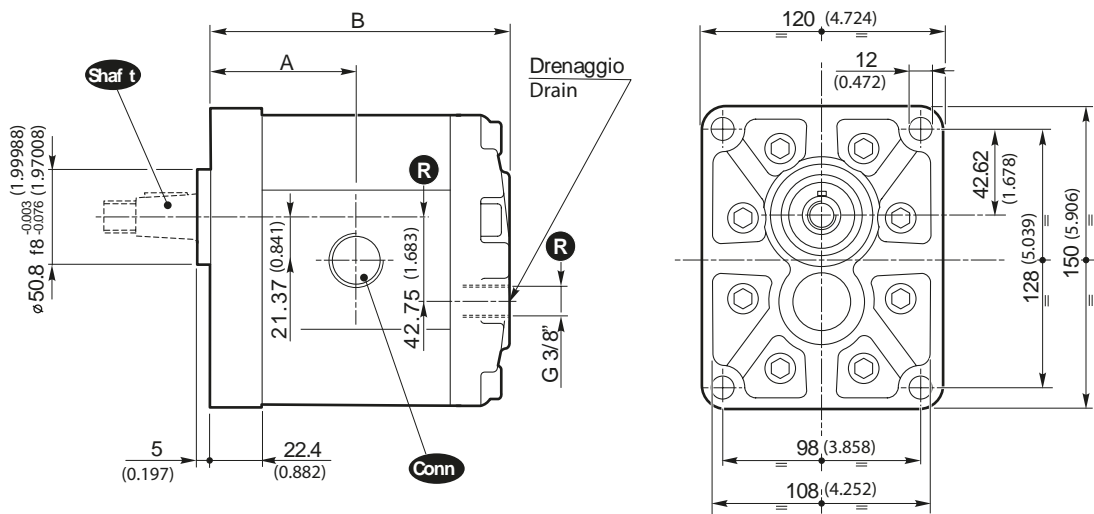
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MOTORS GROUP**

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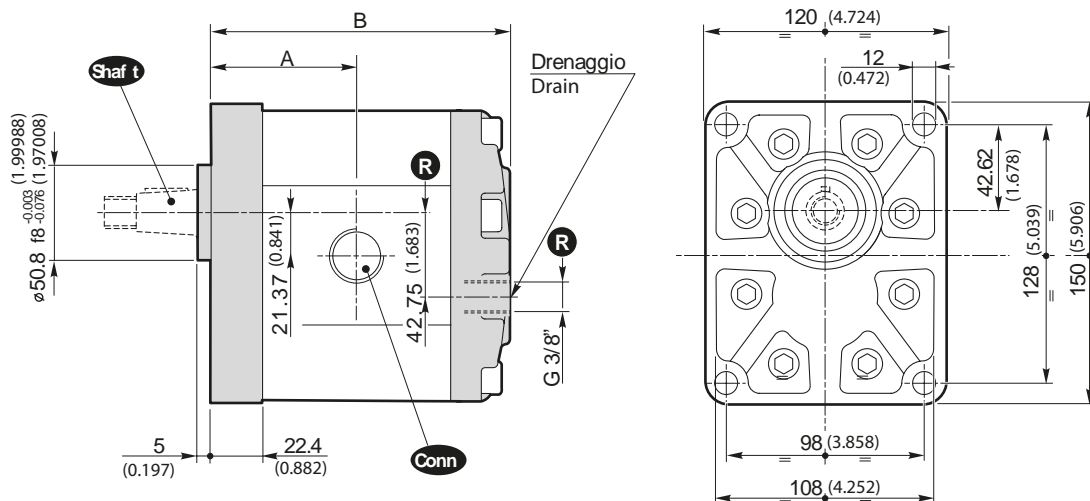
41

Dimensi on i / Dimensi ons

Flangia e coperchio in Alluminio / Flange and cover in Aluminium



Flangia e coperchio in Ghisa / Flange and cover in Cast iron



R Solo per motori ree rsibili
Only for ree rsible motors

Grandezza Size	Cilindrata Displacement [cm ³ /rev] [in ³ /rev]	41 (Alluminio / Aluminium)				41 (Ghisa / Cast iron)							
		Dimensi on i / Dimensi ons		Mas Mas	Shaf t	Conn	Dimensi on i / Dimensi ons		Mas Mas	Shaf t	Conn		
		A	B	A			B						
A3019	19 (1.16)	62.4 (2.457)	128.3 (5.051)	5.23 (11.5)	10 13 14	G N T W F	62.4 (2.457)	128.3 (5.051)	7.53 (16.6)	10 13 14	G N T W F		
A3022	22.3 (1.36)	63.9 (2.516)	131.3 (5.169)	5.36 (11.8)			63.9 (2.516)	131.3 (5.169)	7.66 (16.9)				
A3029	29.3 (1.79)	66.9 (2.634)	137.3 (5.406)	5.64 (12.4)			66.9 (2.634)	137.3 (5.406)	7.94 (17.5)				
A3033	32.9 (2.01)	68.4 (2.693)	140.3 (5.524)	5.78 (12.7)			68.4 (2.693)	140.3 (5.524)	8.08 (17.8)				
A3036	36.4 (2.22)	69.9 (2.752)	143.3 (5.642)	5.91 (13.0)			69.9 (2.752)	143.3 (5.642)	8.21 (18.1)				
A3044	43.5 (2.65)	72.9 (2.870)	149.3 (5.878)	6.19 (13.7)			72.9 (2.870)	149.3 (5.878)	8.49 (18.7)				
A3052	51.7 (3.15)	76.4 (3.008)	156.3 (6.154)	6.50 (14.3)			76.4 (3.008)	156.3 (6.154)	8.80 (19.4)			C-16	C-16
A3062	61.1 (3.73)	80.4 (3.165)	164.3 (6.469)	6.87 (15.1)			80.4 (3.165)	164.3 (6.469)	9.17 (20.2)			C-16	C-16

**MOTORI GRUPPO
MOTORS GROUP**

3

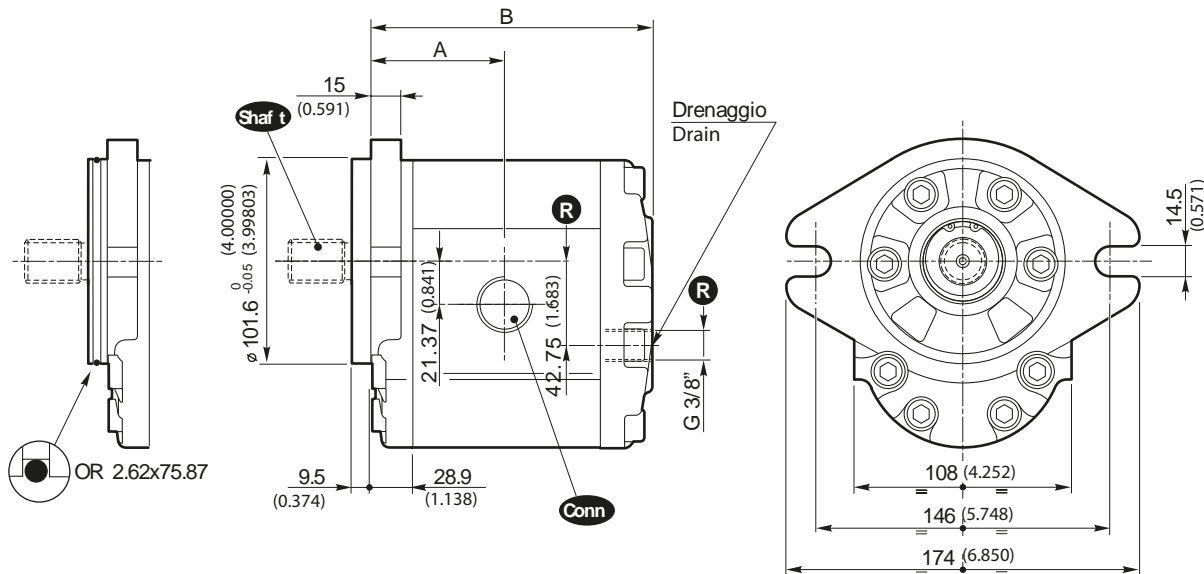
2, 2 OR (SAE B)

Dimensi on i / Dimens ò ns

2 OR

2

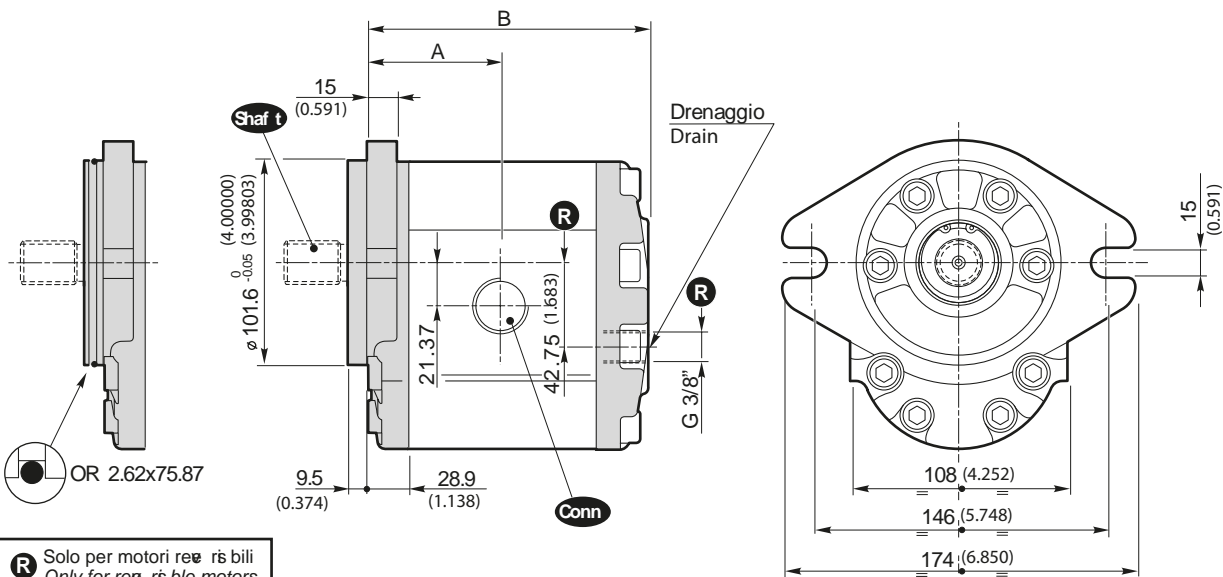
Flangia e coperchio in **Alluminio** / Flange and cover in **Aluminium**



2 OR

2

Flangia e coperchio in **Ghisa** / Flange and cover in **Cast iron**



R Solo per motori ree rì bili
Only for ree rì ble motors

2, 2 OR (All. / Aluminium)

2, 2 OR (Ghisa / Cast iron)

Grandeza Size	Cilindrata Displacement	Dimensi on i / Dimens ò ns		Mas Mass	Shaf t	Conn	Dimensi on i / Dimens ò ns		Mas Mass	Shaf t	Conn				
		A	B				A	B							
	[cm ³ /rev] [in ³ /rev]	[mm] [in.]	[mm] [in.]	[Kg] [lb]			[mm] [in.]	[mm] [in.]	[Kg] [lb]						
A3019	19 (1.16)	59.4 (2.339)	125.3 (4.933)	5.23 (11.5)	10 13 14	G N T W F	59.4 (2.339)	125.3 (4.933)	7.59 (16.7)	10 13 14	G N T W F				
A3022	22.3 (1.36)	60.9 (2.398)	128.3 (5.051)	5.36 (11.8)			60.9 (2.398)	128.3 (5.051)	7.72 (17.0)						
A3029	29.3 (1.79)	63.9 (2.516)	134.3 (5.287)	5.64 (12.4)			63.9 (2.516)	134.3 (5.287)	8.00 (17.6)						
A3033	32.9 (2.01)	65.4 (2.575)	137.3 (5.406)	5.78 (12.7)			65.4 (2.575)	137.3 (5.406)	8.14 (18.0)						
A3036	36.4 (2.22)	66.9 (2.634)	140.3 (5.524)	5.91 (13.0)			66.9 (2.634)	140.3 (5.524)	8.27 (18.2)						
A3044	43.5 (2.65)	69.9 (2.752)	146.3 (5.760)	6.19 (13.7)			69.9 (2.752)	146.3 (5.760)	8.55 (18.9)						
A3052	51.7 (3.15)	73.4 (2.890)	153.3 (6.035)	6.50 (14.3)			C-16	C-16	73.4 (2.890)			153.3 (6.035)	8.86 (19.5)	C-16	C-16
A3062	61.1 (3.73)	77.4 (3.047)	161.3 (6.350)	6.87 (15.1)			C-16	C-16	77.4 (3.047)			161.3 (6.350)	9.23 (20.4)	C-16	C-16

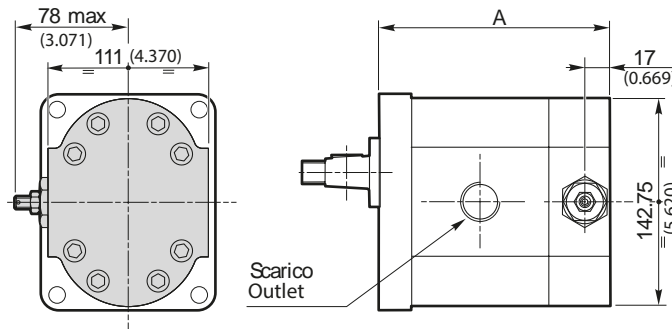
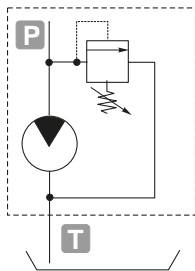
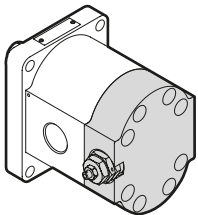
**MOTORI GRUPPO
MOTORS GROUP**

3

OPZIONI / OPTIONAL

VLP- I (N)

**Valvola limitatrice di pressione a scarico interno
Pressure relief valve with internal exhaust**



	A	
	41	2
A3019	144.3 (5.681)	141.3 (5.563)
A3022	147.3 (5.799)	144.3 (5.681)
A3029	153.3 (6.035)	150.3 (5.917)
A3033	156.3 (6.154)	153.3 (6.035)
A3036	159.3 (6.272)	156.3 (6.154)
A3044	165.3 (6.508)	162.3 (6.390)
A3052	172.3 (6.783)	169.3 (6.665)
A3062	180.3 (7.098)	177.3 (6.980)

NB.

La valvola limitatrice di pressione si applica sostituendo il copri-
postrero.

Fornitura solo con flangia e coperchio in Alluminio.

E' rappresentata un motore a rotazione destra.

L'apertura della valvola limitatrice di pressione deve avvenire
per tempi non superiori ai 7 secondi ogni minuto per evitare il
surriscaldamento della pompa.

Warning.

The pressure relief valve can be applied by substituting the rear
cover.

It is supplied only with aluminium flange and cover.

The allowed motor is clockwise rotation.

The opening of the pressure relief valve should be carry out for
times not over 7" each minute to avoid the overheating of the
pump.

Esempio di ordinazione in codice / Example of ordering code

B	1	A	3	022	BB	2	F	3	C	VLP-I	(N)
VLP-I	Coperchio con VLP Cover with VLP									VPL-I (a scarico interno / at internal exhaust)	
(N)	Tipo di molla / Spring type									B - N - R (vedi tabella / See table)	

		Tipo di molla / Spring type		
		B	N	R
		molla bianca white spring	molla nera black spring	molla rossa red spring
Campi di taratura* Calibration fields*	[bar] (psi)	10 ÷ 100 (145 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)

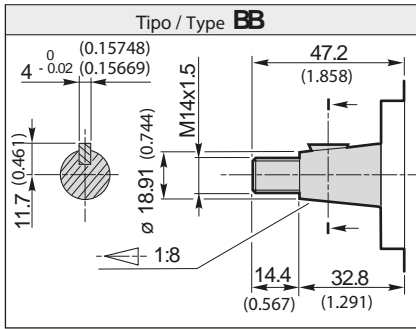
* In caso di omissione del valore di taratura, esso sarà inteso
standard (molla nera con taratura 150 bar).

* Without setting request, it will be considered standard (black
spring: 2175 psi).

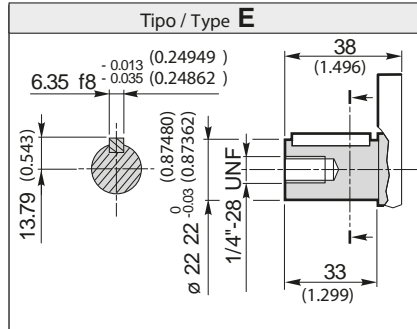
**MOTORI GRUPPO
MOTORS GROUP**

3

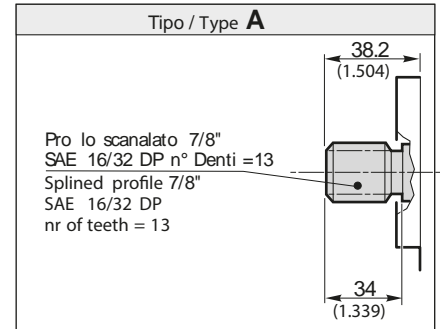
ALBERI DISPONIBILI / AVAILABLE SHAFTS



Coppia 240 Nm / Torque 177 ft·lbs

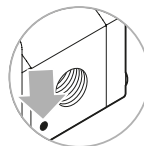
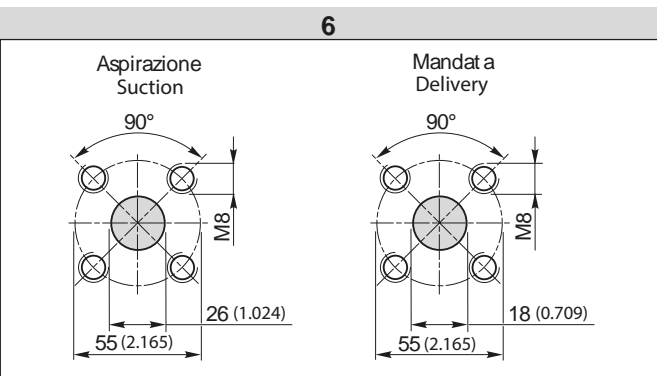
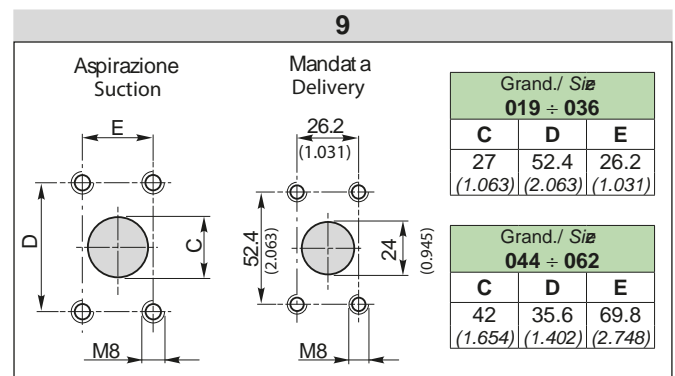
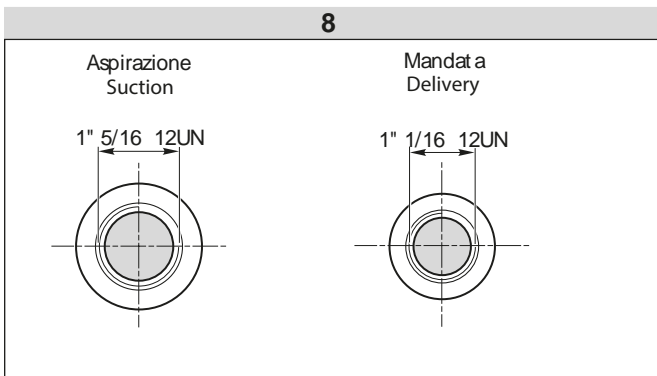
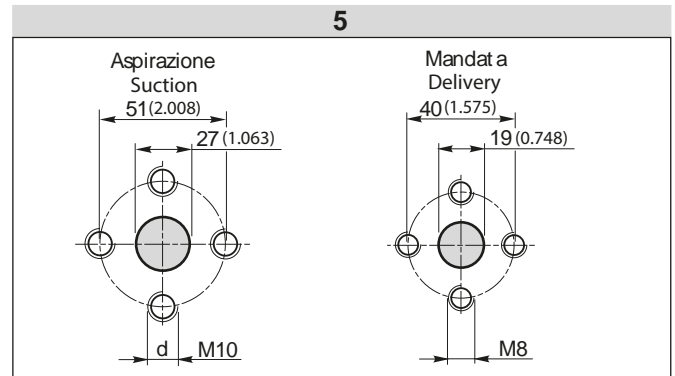
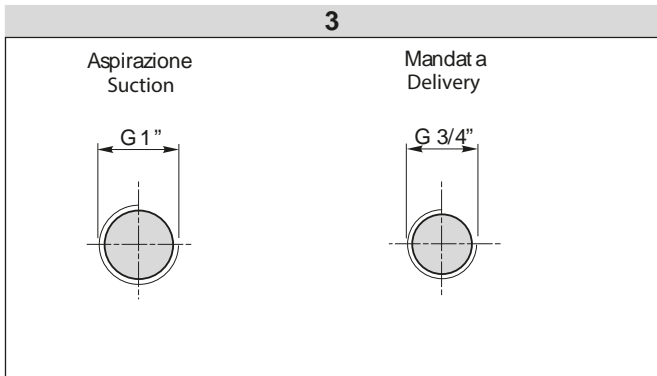


Coppia 240 Nm / Torque 177 ft·lbs



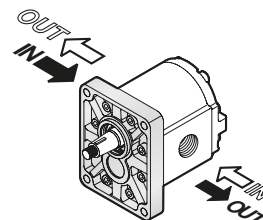
Coppia 240 Nm / Torque 177 ft·lbs

**CONNESSIONI per motori C-A
CONNECTIONS for C-A motors**



Il segno lo indica il lato scarico per i motori.
The sign on the body identify the **outlet side** for the motors

Posizione delle connessioni / Connections positions

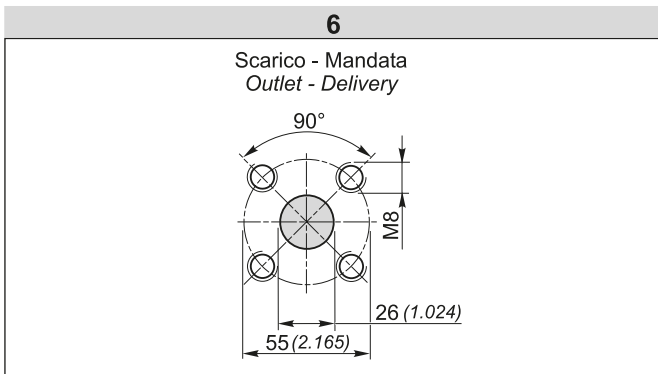
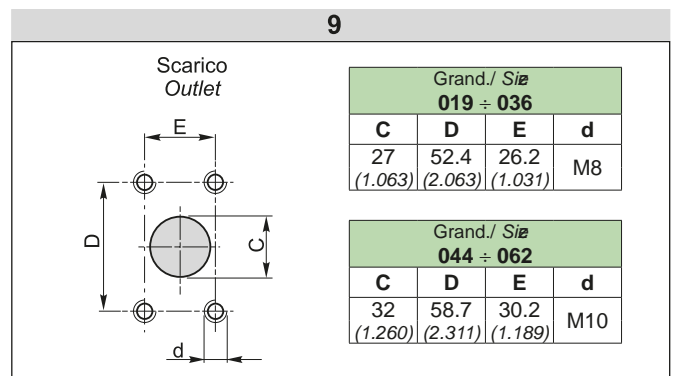
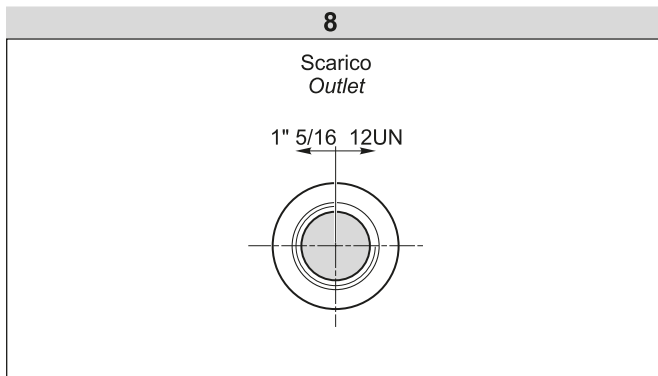
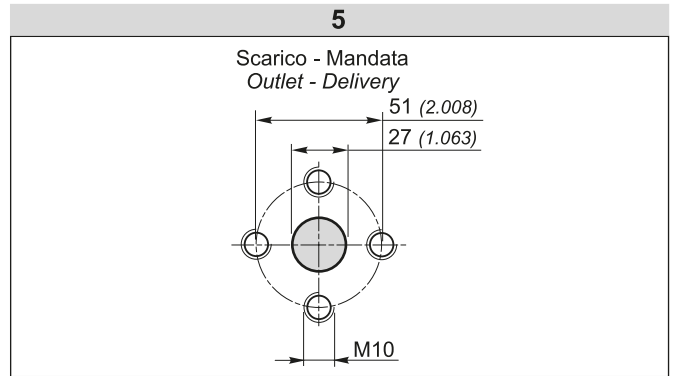
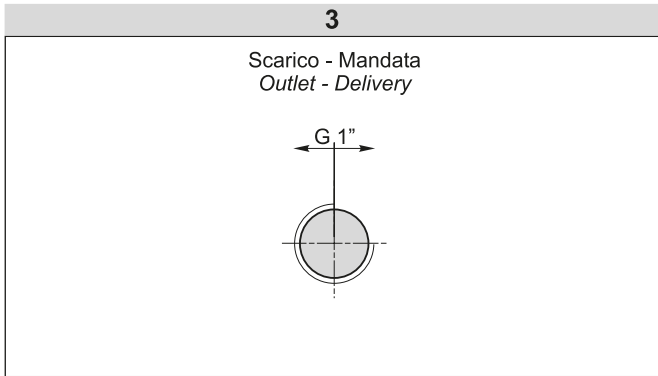


Rotazione / Rotation	
C	A

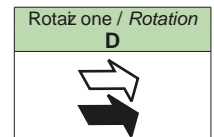
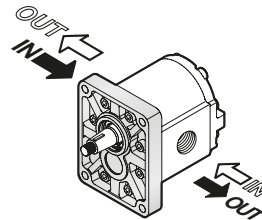
**MOTORI GRUPPO
MOTORS GROUP**

3

**CONNESSIONI per motori D
CONNECTIONS for D motors**



Posiz one delle o nnes oni / Connet ions pos tions



ACCESSORI POMPE E MOTORI PUMPS AND MOTORS ACCESSORIES



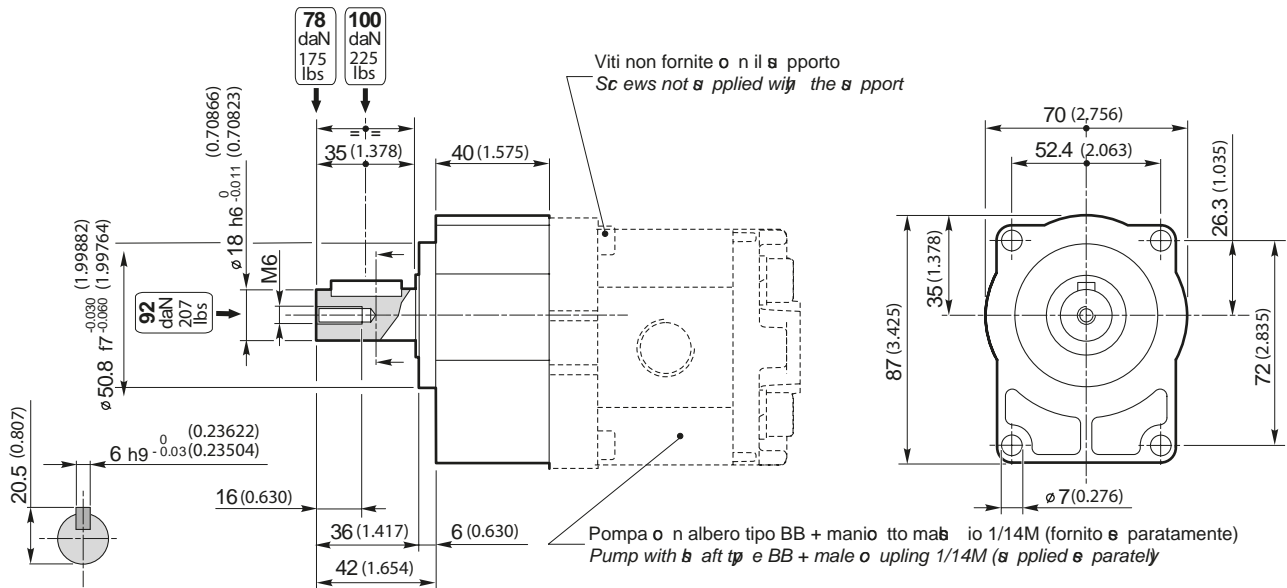
 Pag.
Page

SUPPORTI GRUPPO SUPPORTS GROUP	1	D-2
SUPPORTI GRUPPO SUPPORTS GROUP	2	D-3
SUPPORTI GRUPPO SUPPORTS GROUP	3	D-5
RACCORDI CONNECTORS		D-6
MANICOTTI DI TRASCINAMENTO MALES COUPLING		D-8

**SUPPORTI GRUPPO
SUPPORTS GROUP**

1

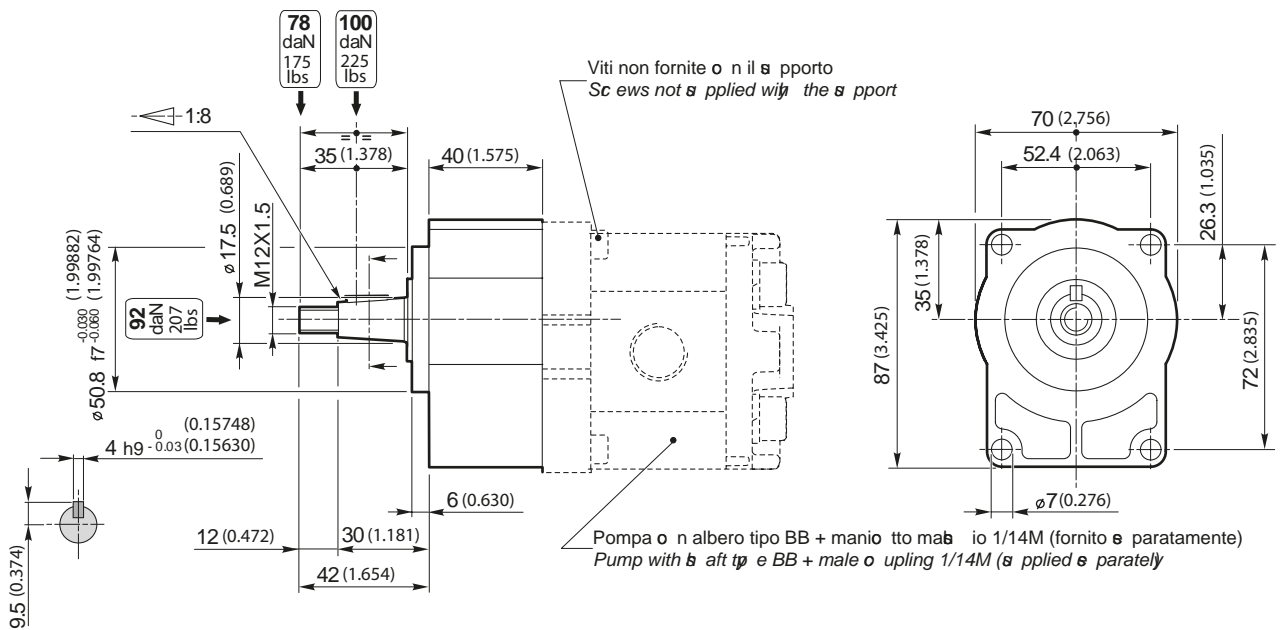
SUPPORTO CON ALBERO TIPO BH / SUPPORT WITH SHAFT TYPE BH



Codice di ordinazione / Order code

01510400000000

SUPPORTO CON ALBERO TIPO BB / SUPPORT WITH SHAFT TYPE BB



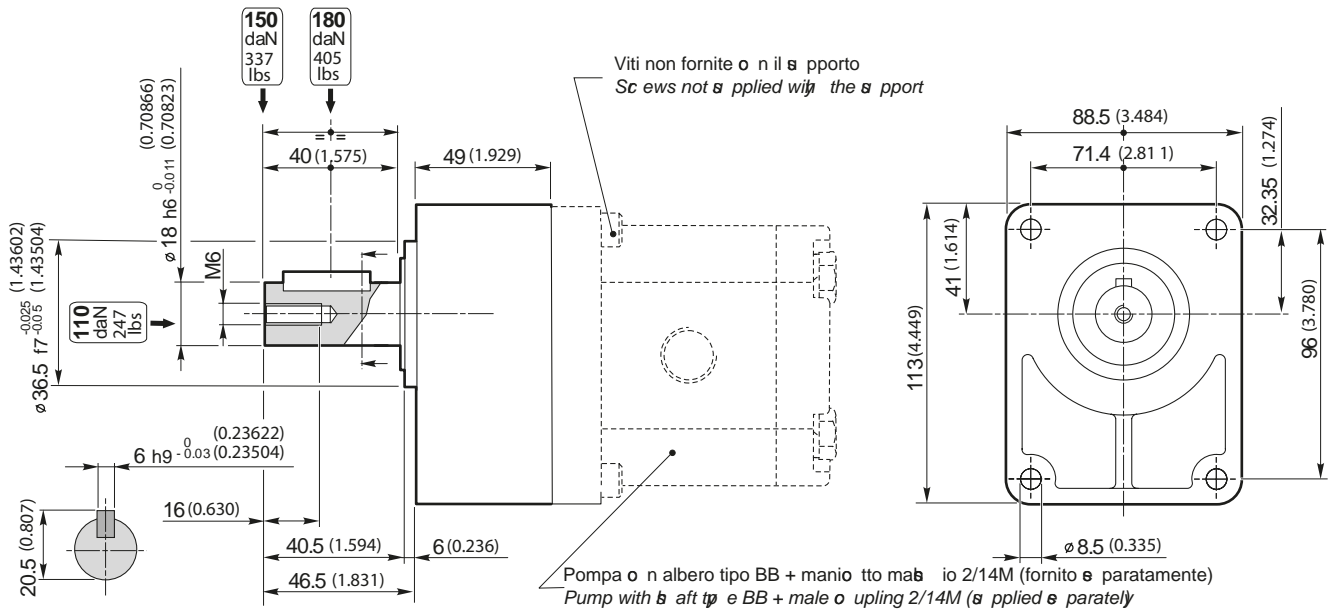
Codice di ordinazione / Order code

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**SUPPORTI GRUPPO
SUPPORTS GROUP**

2

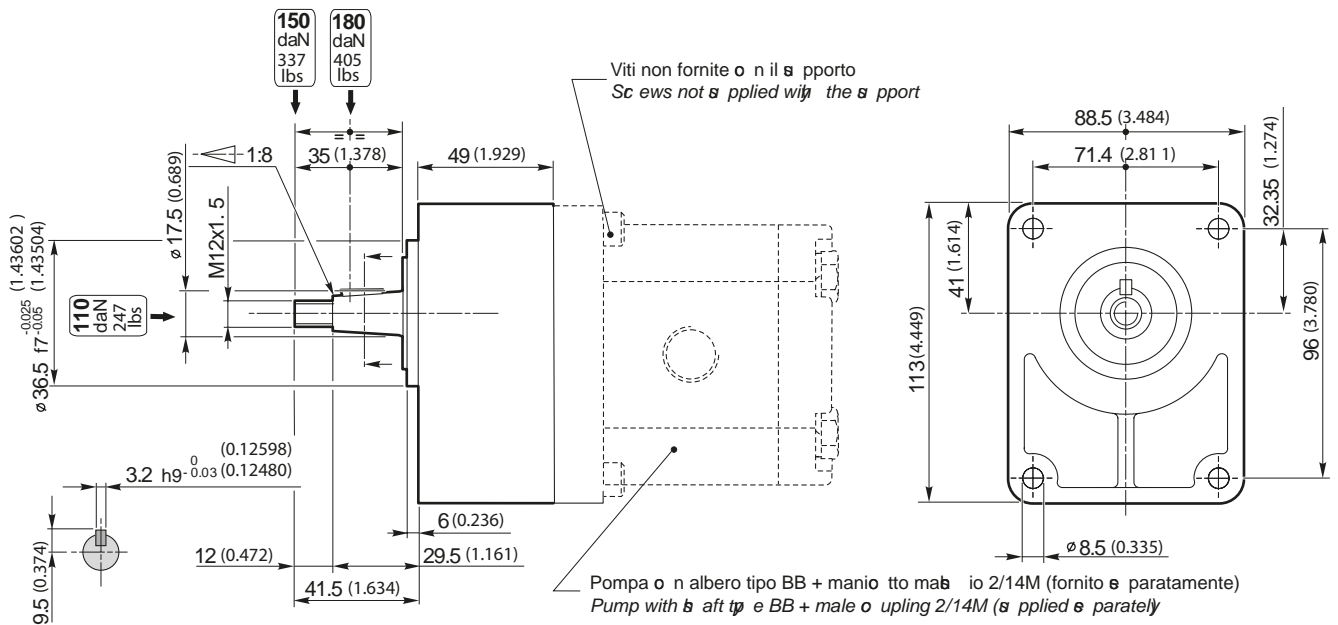
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Codice di ordinazione / Order code

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SUPPORTO CON ALBERO TIPO BB / SUPPORT WITH SHAFT TYPE BB



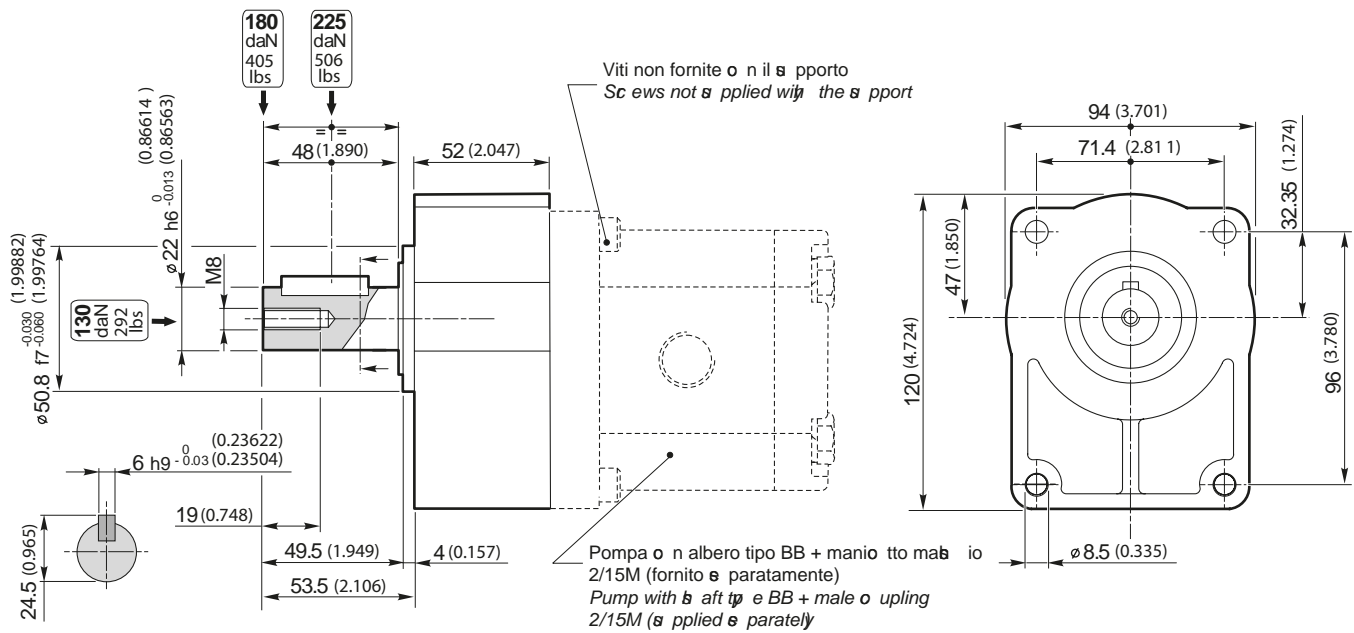
Codice di ordinazione / Order code

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SUPPORTI GRUPPO
SUPPORTS GROUP

2

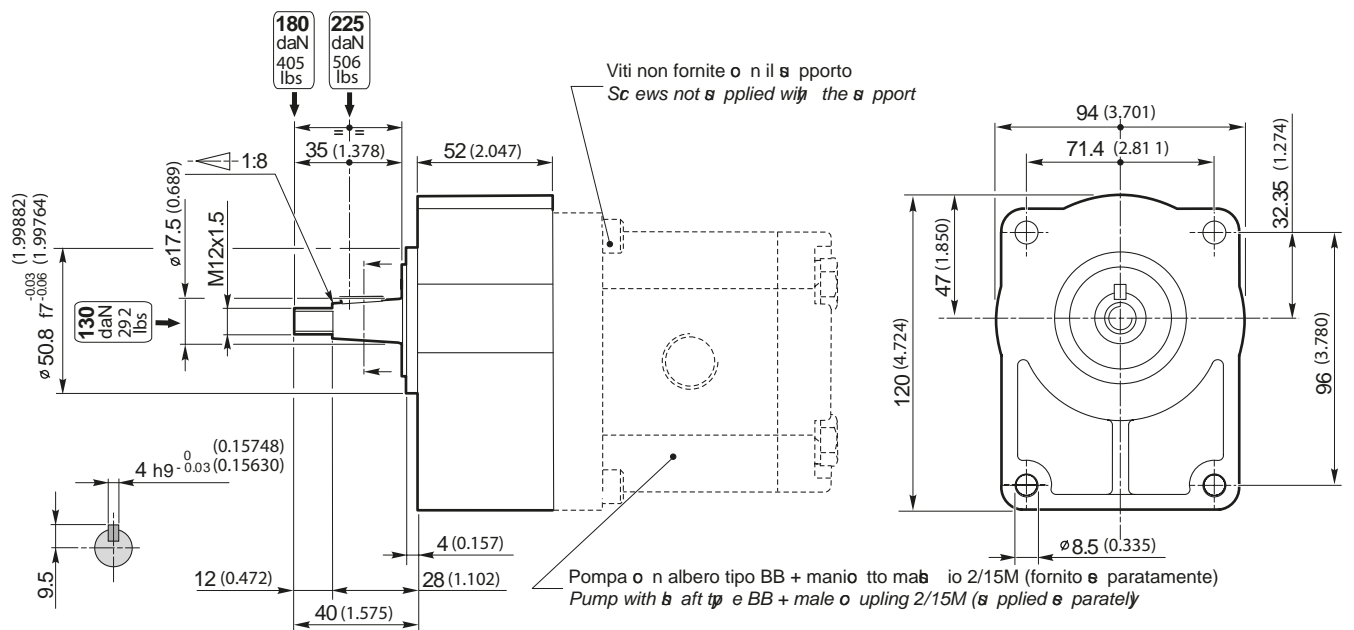
SUPPORTO RINFORZATO CON ALBERO TIPO BH / REINFORCED SUPPORT WITH SHAFT TYPE BH



Codice di ordinazione / Order code

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SUPPORTO RINFORZATO CON ALBERO TIPO BB / REINFORCED SUPPORT WITH SHAFT TYPE BB



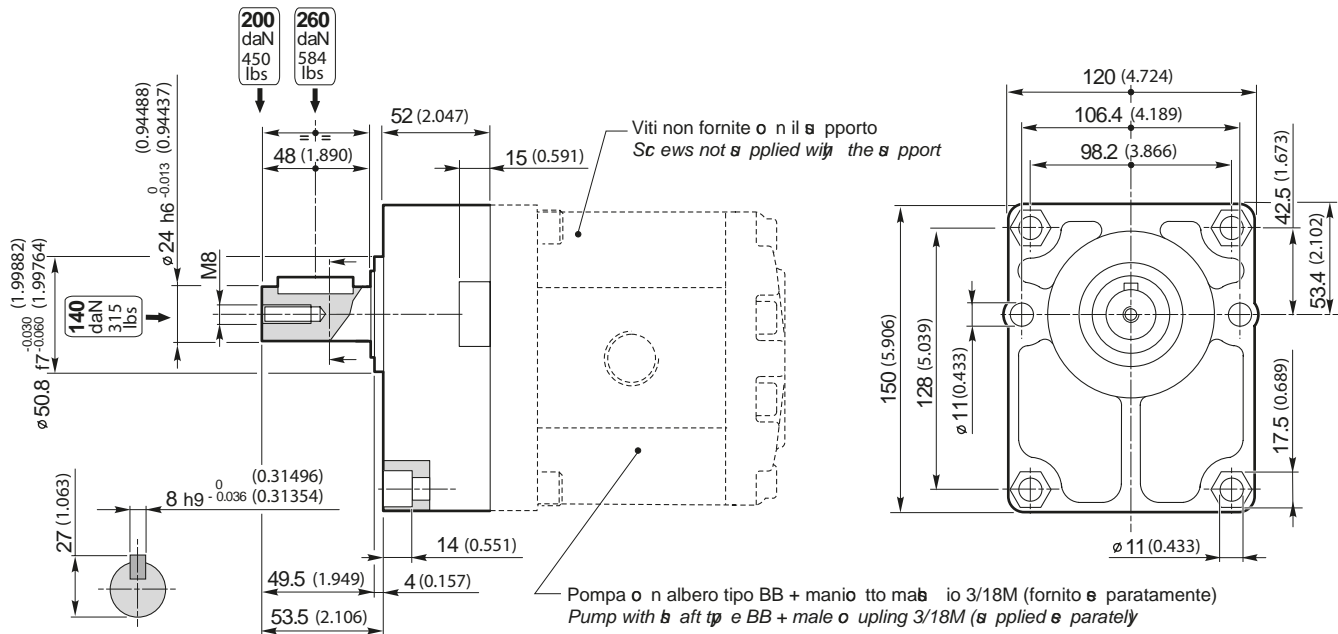
Codice di ordinazione / Order code

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SUPPORTI GRUPPO
SUPPORTS GROUP

3

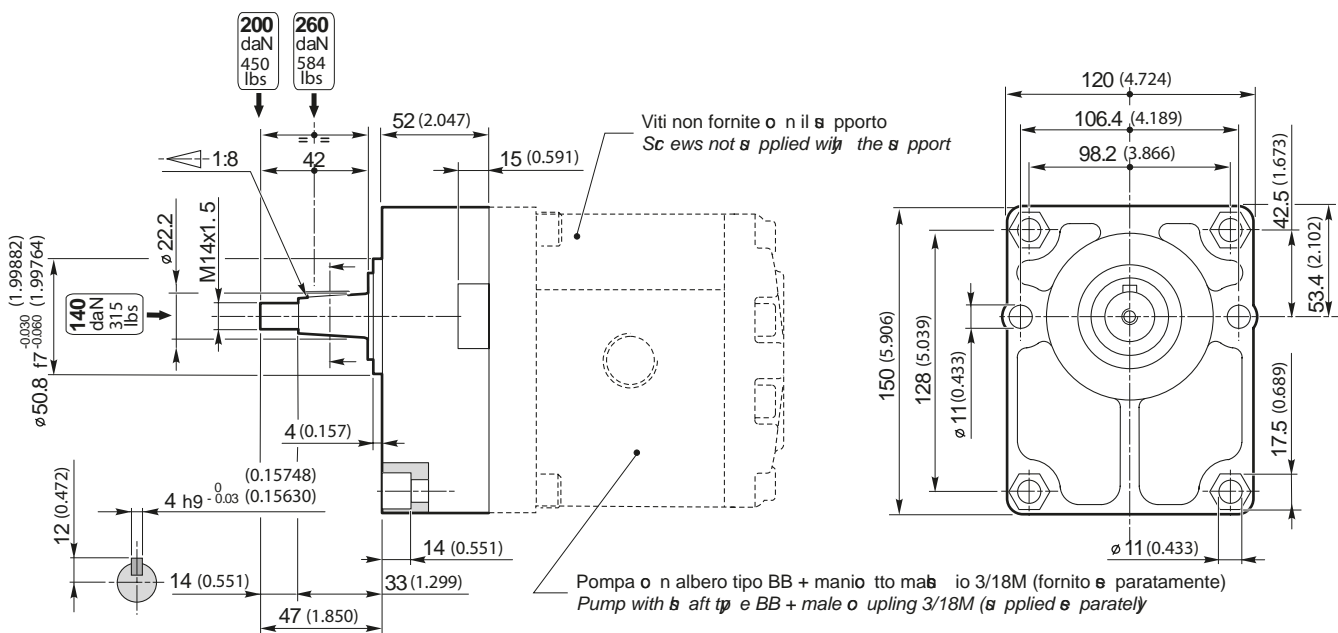
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Codice di ordinazione / Order code

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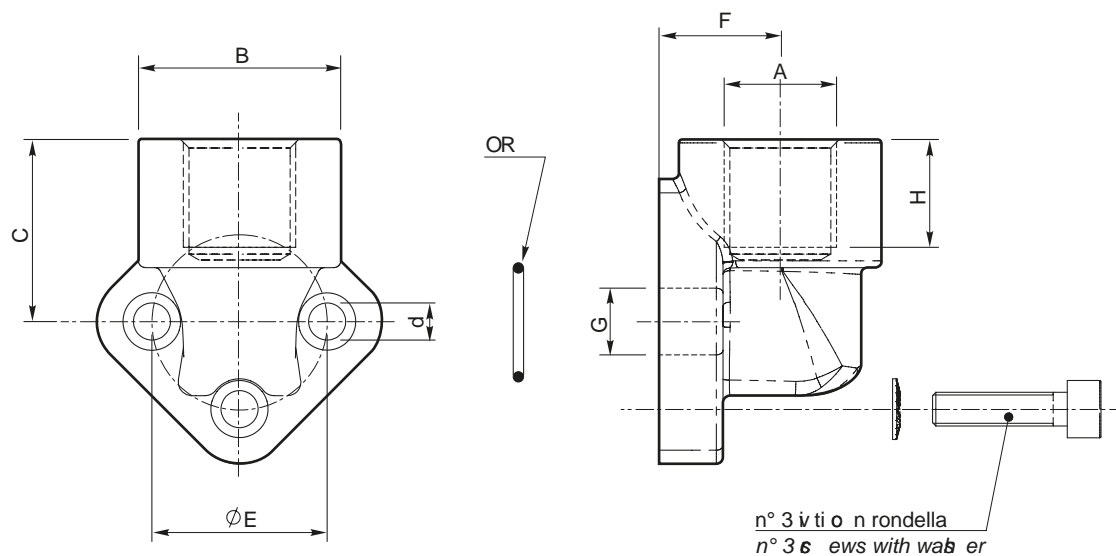
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Codice di ordinazione / Order code

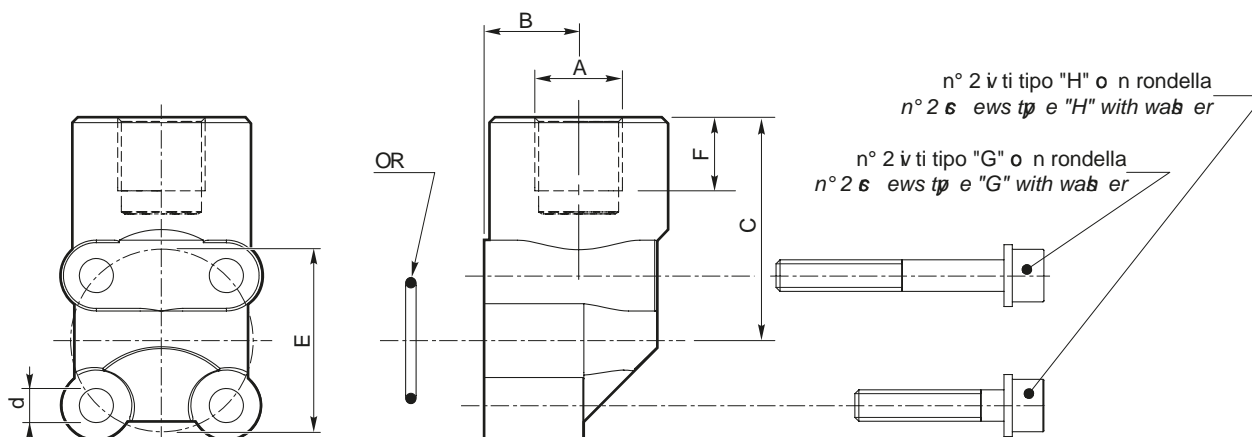
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RACCORDI A GOMITO / ELBOW CONNECTORS
 (per connessioni tipo "5" / for connections type "5")



ACCIAIO / STEEL

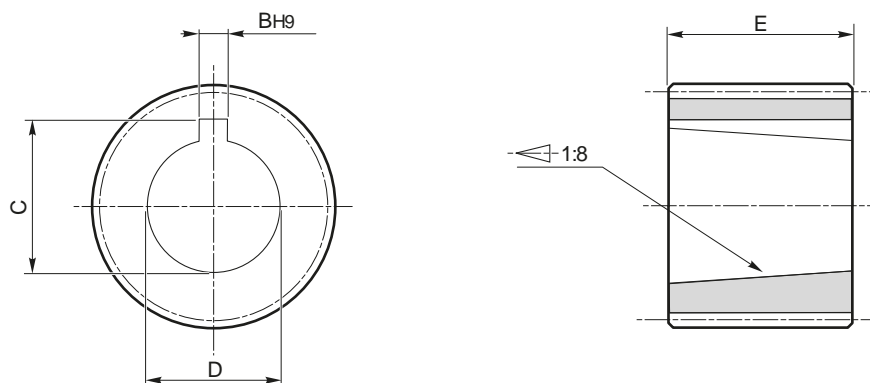
Tipo Type	A	B	C	d	E	F	G	H	OR
FG 3/8"- 26	3/8" BSP	30 (1.181)	27.5 (1.083)	5.5 (0.217)	26 (1.024)	17 (0.669)	11 (0.433)	12 (0.472)	14.00 x 1.78
FG 3/8"- 30	3/8" BSP	30 (1.181)	27.5 (1.083)	6.5 (0.256)	30 (1.181)	17 (0.669)	12 (0.472)	12 (0.472)	15.88 x 2.62
FG 1/2"- 30	1/2" BSP	30 (1.181)	27.5 (1.083)	6.5 (0.256)	30 (1.181)	17 (0.669)	12 (0.472)	12 (0.472)	15.88 x 2.62
FG 3/4"- 40	3/4" BSP	38 (1.496)	36 (1.417)	8.5 (0.335)	40 (1.575)	21 (0.817)	19 (0.748)	16 (0.630)	23.81 x 2.62
FG 1"- 51	1" BSP	45 (1.772)	47 (1.850)	10.5 (0.413)	51 (2.008)	26 (1.024)	25 (0.984)	18 (0.709)	31.42 x 2.62
FG 1"1/2-72.5	1"1/2 BSP	63 (2.480)	56 (2.205)	13 (0.512)	72.5 (2.854)	34.5 (1.358)	40 (1.575)	24 (0.945)	47.22 x 3.53

RACCORDI A GOMITO / ELBOW CONNECTORS
 (per connessioni tipo "6" / for connections type "6")

ACCIAIO / STEEL

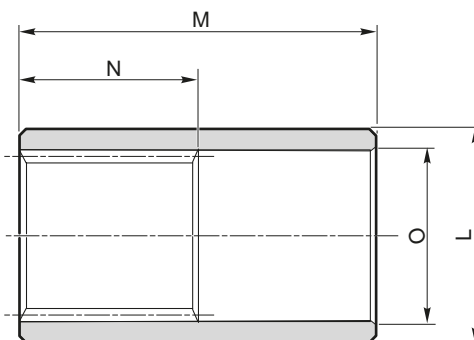
Tipo Type	A	B	C	d	E	F	OR	Viti tipo "H" Screws type "H"	Viti tipo "G" Screws type "G"
FG 3/8" 0.5 BKA	3/8" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	30 (1.181)	16 (0.630)	15.88 x 2.62	M6x 5 UNI 5931	M6x 5 UNI 5931
FG 1/2" 0.5 BKA	1/2" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	30 (1.181)	16 (0.630)	15.88 x 2.62	M6x 5 UNI 5931	M6x 5 UNI 5931
FG 3/8" 1 BKA	3/8" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	35 (1.378)	16 (0.630)	18.72 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931
FG 1/2" 1 BKA	1/2" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	35 (1.378)	16 (0.630)	18.72 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931
FG 1/2" 2 BKA	1/2" BSP	24 (0.945)	41.5 (1.634)	6.5 (0.256)	40 (1.575)	16 (0.630)	23.81 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931
FG 3/4" 2 BKA	3/4" BSP	24 (0.945)	41.5 (1.634)	6.5 (0.256)	40 (1.575)	16 (0.630)	23.81 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931

ALLUMINIO / ALUMINIUM

Tipo Type	A	B	C	d	E	F	OR	Viti tipo "H" Screws type "H"	Viti tipo "G" Screws type "G"
FG 3/8" 0.5 BKAL	3/8" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	30 (1.181)	14 (0.551)	15.88 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931
FG 1/2" 0.5 BKAL	1/2" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	30 (1.181)	14 (0.551)	15.88 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931
FG 3/8" 1 BKAL	3/8" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	35 (1.378)	16 (0.630)	18.72 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931
FG 1/2" 1 BKAL	1/2" BSP	18 (0.709)	40 (1.575)	6.5 (0.256)	35 (1.378)	16 (0.630)	18.72 x 2.62	M6x 0 UNI 5931	M6x 5 UNI 5931
FG 1/2" 2 BKAL	1/2" BSP	24 (0.945)	41.5 (1.634)	6.5 (0.256)	40 (1.575)	16 (0.630)	23.81 x 2.62	M6x 5 UNI 5931	M6x 5 UNI 5931
FG 3/4" 2 BKAL	3/4" BSP	24 (0.945)	41.5 (1.634)	6.5 (0.256)	40 (1.575)	16 (0.630)	23.81 x 2.62	M6x 5 UNI 5931	M6x 5 UNI 5931

MANICOTTO DI TRASCINAMENTO POMPE (MASCHIO) / MALE COUPLING FOR GEAR PUMPS


Tipo Type	Profilo Profile DIN 5482	N° di denti N° of teeth	B	C	D	E	Coppia di serraggio dado giunto Nut/joint screw tightening torque [Nm]
1/12M	B20 x 17	12	2.4 ^{+0.025} ₀ (0.094) ^{+0.00098} ₀	9.6 (0.378)	7.82 (0.308)	14.5 (0.571)	9 ÷ 10 (80 ÷ 89)
1/14M	B25 x 22	14	2.4 ^{+0.025} ₀ (0.094) ^{+0.00098} ₀	9.6 (0.378)	7.82 (0.308)	14.5 (0.571)	9 ÷ 10 (80 ÷ 89)
2/14M	B25 x 22	14	3.17 ^{+0.030} ₀ (0.125) ^{+0.00118} ₀	16.5 (0.650)	14.31 (0.563)	22 (0.866)	22 ÷ 25 (195 ÷ 221)
2/15M	B28 x 25	15	3.17 ^{+0.030} ₀ (0.125) ^{+0.00118} ₀	15.8 (0.622)	14.31 (0.563)	22 (0.866)	32 ÷ 35 (283 ÷ 310)
3/18M	B35 x 31	18	4 ^{+0.030} ₀ (0.157) ^{+0.00118} ₀	21 (0.827)	18.39 (0.724)	26 (1.024)	50 ÷ 55 (443 ÷ 487)
4/23M	B48 x 44	23	6.35 ^{+0.036} ₀ (0.250) ^{+0.00142} ₀	30.2 (1.189)	27.50 (1.083)	42 (1.654)	100 ÷ 120 (885 ÷ 1062)

MANICOTTO DI TRASCINAMENTO POMPE (FEMMINA) / FEMALE COUPLING FOR GEAR PUMPS


Tipo Type	Profilo Profile DIN 5482	N° di denti N° of teeth	L	M	N	O
1/12F	A20 x 17	12	25 (0.984)	50 (1.969)	25 (0.984)	20.5 (0.807)
2/14F	A25 x 22	14	32 (1.260)	60 (2.362)	30 (1.181)	25.5 (1.004)
2/15F	A28 x 25	15	34 (1.339)	60 (2.362)	30 (1.181)	28.5 (1.122)
3/18F	A35 x 31	18	42 (1.654)	60 (2.362)	30 (1.181)	35.5 (1.398)
4/23F	A48 x 44	23	62 (2.441)	90 (3.543)	45 (1.772)	48.5 (1.909)

Supported by a worldwide network



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