

Pompe e motori in alluminio

Aluminium pumps and motors



SERIE Z2
Z2 SERIES

RONZIO

La Ronzio Oleodinamica fu fondata nel 1950 da Dante Ronzio esperto in meccanica di precisione.

La prima attività dell'azienda fu la lavorazione di pompe per motori diesel, seguita, qualche anno più tardi, dalla costruzione di pompe oleodinamiche ad ingranaggi, che presto divenne la produzione prevalente.

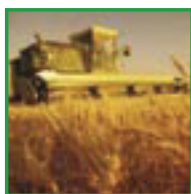
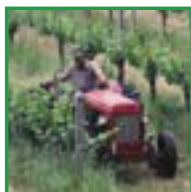
La passione del fondatore per la meccanica fine ha lasciato nella Ronzio Oleodinamica un'impronta significativa; il motto dell'azienda è sempre stato quello di operare all'insegna della qualità e precisione, sia nell'impiego delle materie prime sia nel controllo del processo produttivo.

La Ronzio Oleodinamica produce ora pompe, motori e divisori di flusso che trovano impiego in molti settori industriali sia nel veicolo che negli impianti fissi, nelle macchine agricole, forestali e nel movimento terra.

La struttura snella della nostra azienda e la nostra esperienza sono la risposta ai clienti che cercano in noi non solo un fornitore ma un partner nello sviluppo dei loro progetti.

Il nostro sistema qualità è certificato da DNV dal 1998.

SERIE Z2



Ronzio Oleodinamica was established in 1950 by Mr. Dante Ronzio, fond of precision mechanics.

The Company started its activity machining pumps for diesel motors. The passion of the founder for fine mechanics left an important mark in the Company. The production of hydraulic gear pumps started some years later, and became soon the main activity of the Company.

Since the beginning Ronzio Oleodinamica has been focusing on quality and precision. Our Company uses top quality components, and the most advanced computerized machines, in both the production and the testing process.

Ronzio Oleodinamica manufactures gear pumps, motors and flow dividers in aluminium and in cast iron for a wide range of industries including: construction, forestry, agriculture, industrial vehicle, earth moving, industrial.

Today, our products are worldwide appreciated.

Our experience and our lean structure are suitable for customers who need a direct involvement of the supplier in their projects.

Our quality system has been certified by DNV since 1998.

Caratteristiche principali

- ❖ Coperchi in ghisa per elevate prestazioni.
- ❖ Possibilità di funzionare ad alte pressioni: fino a 300 bar di pressione massima in funzionamento continuo.
- ❖ Compensazione assiale per il recupero dei giochi
- ❖ Alto rendimento volumetrico: 95% medio.
- ❖ Ampia disponibilità di cilindrata: 4-6-8-11-14-17-20-25-31 cm³/giro.
- ❖ Corpo in alluminio estruso
- ❖ Progetto accurato del profilo del dente per avere una bassa rumorosità.
- ❖ Vasta gamma di flange, alberi e connessioni compatibili con i principali standard del mercato.
- ❖ Disponibilità di guarnizioni per alte temperature
- ❖ Pompe e motori unidirezionali
- ❖ Pompe e motori bidirezionali
- ❖ Possibilità di montaggio di pompe multiple sia nelle serie in alluminio che con altre serie in ghisa prodotte dalla Ronzio Oleodinamica
- ❖ Facilità di trasformazione: da pompa singola in pompa multipla e di cambio rotazione.

Main Features

- ❖ *Cast iron covers for high performances*
- ❖ *High pressure option: up to 300 bar max. continuous pressure (4350 psi)*
- ❖ *Axial compensation achieved using pressure balanced bushing blocks.*
- ❖ *High volumetric efficiency: average 95%*
- ❖ *Wide range of capacities : 4-6-8-11-14-17-20-25-31 cm³/rev.*
- ❖ *Extruded aluminium body*
- ❖ *Gear tooth profile accurately projected providing low noise operation.*
- ❖ *A wide variety of shafts, flanges and ports are available to meet specific application requirements.*
- ❖ *High-temperature seals available.*
- ❖ *Single rotational pumps and motors.*
- ❖ *Bi-rotational pumps and motors.*
- ❖ *Multiple pumps availability: tandem pumps are possible both in aluminium series and with other cast iron series produced by Ronzio Oleodinamica*
- ❖ *Easy-to-make tandem pumps and easy change of rotation.*

CONDIZIONI PER L'UTILIZZO DELLE POMPE "Z2"

CONDITIONS OF USE FOR PUMPS "Z2"

Nell'utilizzo della pompa evitare carichi radiali e assiali sull'albero.

Il giunto di trascinamento deve compensare eventuali errori di allineamento, deve essere di tipo elastico oppure di tipo Oldham.

Per un corretto funzionamento e una lunga durata della pompa, osservare i valori riportati nella tabella seguente.

Avoid radial and axial loads on the pump shaft during the use.

The pump must be in line with the P.T.O. To compensate misalignment errors, use flexible or "Oldham" coupling.

We recommend to read the specifications in this catalogue very carefully. This will help you in getting the best, in terms of working conditions and life, from Ronzio gear pumps.

Le caratteristiche dei prodotti illustrati nel presente catalogo potranno essere variate senza preavviso.
The technical characteristics in this catalogue can be changed in any moment.

CONDIZIONI PER L'UTILIZZO DELLE POMPE Z2
USE CONDITIONS FOR THE PUMPS Z2

Fluidi idraulici	Oli idraulici a base minerale (DIN 51524) Per utilizzo di fluidi non infiammabili come acqua e glicole , emulsione di olio in acqua,o esteri fosforici, contattare il nostro ufficio tecnico o commerciale		
Hydraulic fluids	<i>Mineral oil (DIN 51524)</i> <i>For use with fire resistant fluids like water glycol,. water- oil emulsion and phosphate-esters, contact our technical or commercial office.</i>		
Pressione in aspirazione <i>Inlet pressure</i>		0.7 - 3 bar (Assoluti / Absolute)	
Velocità olio nella linea di aspirazione <i>Oil speed on suction line</i>		0.5 ÷ 1.5 m/s	
Velocità olio nella linea di mandata <i>Oil speed on pressure line</i>		6 ÷ 10 m/s	
Temperatura olio <i>Oil temperature</i>		-10°C ÷ 80°C	
Viscosità olio <i>Oil viscosity</i>		20 ÷ 120 mm ² / s (Cst)	
Massima viscosità olio all'avvio <i>Max starting viscosity</i>		700 mm ² / s (Cst)	
Filtraggio olio <i>Oil filtration</i>	Pressione <i>Pressure</i>	< 200 bar	> 200 bar
	Classe di contaminazione NAS 1638 <i>Contamination class NAS 1638</i>	10	9
	Classe di contaminazione ISO 4406 <i>Contamination class ISO 4406</i>	19/16	18/15
	Rapporto β_x <i>Ratio β_x</i>	25µm	15µm

CARATTERISTICHE PRINCIPALI MAIN CHARACTERISTICS

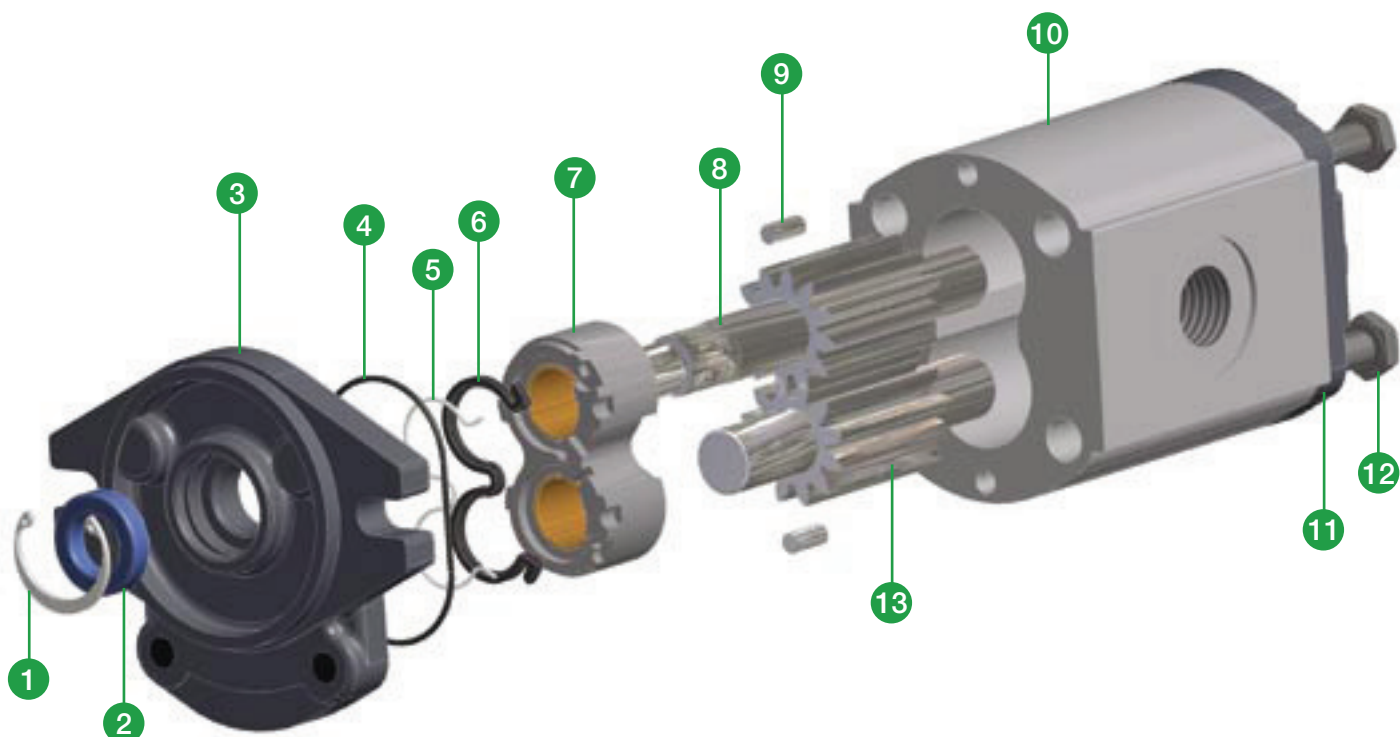
Tipo - Type		04	06	08	11	14	17	20	25	31
Cilindrata Capacity	Cm ³ / giro Cm ³ / rev	4.4	6.28	8.16	11.3	14.45	16.95	20.1	25.75	31.4
P1 Pressione max continua Max working pressure	Bar	300	300	300	300	300	270	230	180	160
P2 Pressione max di picco Max peak pressure	Bar	360	360	360	360	360	330	290	230	200
Velocità max per pressione P1 Max speed for P1 pressure	Giri / min Rpm	4500	4500	3700	3300	2700	2500	2500	2500	2200
Velocità max a vuoto Max speed without load	Giri / min Rpm	5500	5500	4700	4000	3300	3000	3000	3000	2700
Velocità min. per pressione P1 Min speed for P1 pressure	Giri / min Rpm	1000	700	550	450	400	350	300	250	200

Questi valori sono per le pompe con ingranaggi tipo E-F-L- M e per cilindrata oltre 14 cc <i>This value , are for the pumps with gear type E-F-L-M and for capacity over 14 cc</i>	Tipo - Type		14	17	20	25	31
	Cilindrata Capacity	Cm ³ / giro Cm ³ / rev	14.45	16.95	20.1	25.75	31.4
	P1 Pressione max continua Max working pressure	Bar	300	250	210	160	130
	P2 Pressione max di picco Max peak pressure	Bar	330	310	270	210	150
	Velocità max per pressione P1 Max speed for P1 pressure	Giri / min Rpm	2700	2500	2500	2500	2200
	Velocità max a vuoto Max speed without load	Giri / min Rpm	3300	3000	3000	3000	2700
	Velocità min. per pressione P1 Min speed for P1 pressure	Giri / min Rpm	400	350	300	250	200

Per pompe o motori bidirezionali, diminuire la pressione del 15%
With bidirectional pumps or motors, pressure is reduced by 15%

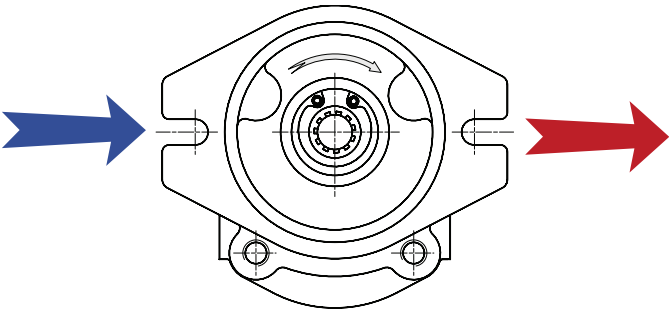
Coppia massima applicabile Shaft load capacity		
Codice albero (vedi pag. 10) Shaft code (see page 10)	Coppia massima [Nm] Max Torque [Nm]	Quando si utilizzano pompe multiple , la coppia sull'albero di trascinamento, è la somma dei valori di coppia delle singole sezioni. Questo valore non può essere maggiore del valore indicato in tabella. <i>When applying a multiple pump, the drive shaft load is the sum of torque of the each section. This value cannot be major of the value in the table.</i>
A	110	
B	110	
C	150	
E	75	
F	75	
L	75	
M	75	
N	110	
S	75	

COMPONENTI
PARTS

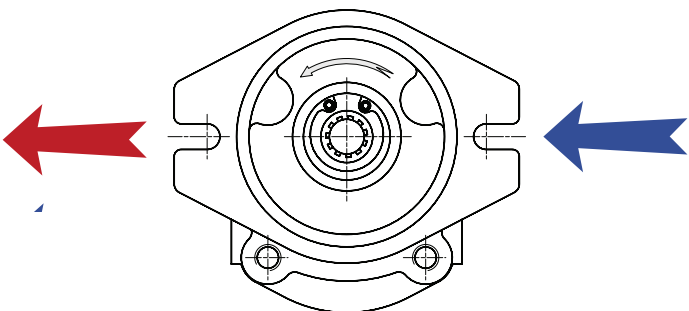


Rif.	Descrizione	Description	Qt.
1	Anello elastico	Snap ring	1
2	Anello di tenuta	Rotary shaft seal	1
3	Flangia	Front flange	1
4	Guarnizione sotto-coperchio	Under cover seal	2
5	Antiestrusore	Seal against extruding	2
6	Guarnizione di compensazione	Compensation seal	2
7	Rasamento	Bushing block	2
8	Ingranaggio conduttore	Drive gear	1
9	Spina cilindrica	Pin	4
10	Corpo	Housing	1
11	Coperchio	Rear cover	1
12	Vite	Bolt	4
13	Ingranaggio condotto	Idle gear	1

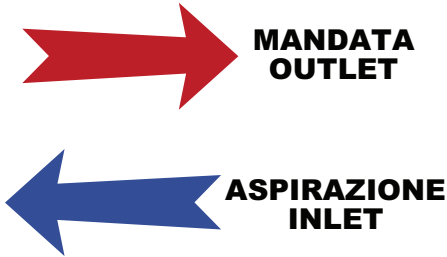
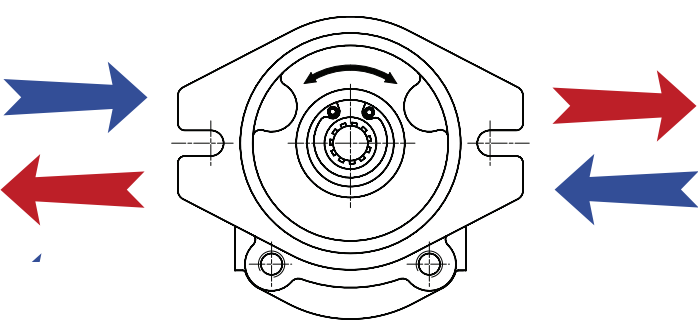
SENSO DI ROTAZIONE
SENSE OF ROTATION



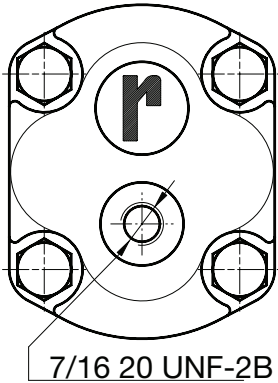
Rotazione destra Clockwise rotation	Codice Code	D
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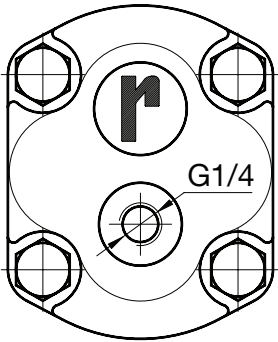
Rotazione sinistra Anti - Clockwise rotation	Codice Code	S
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Pompe e motori bidirezionali con drenaggio esterno <i>Bidirectional pumps and motors with external drain</i>	Codice Code	R
Pompe e motori bidirezionali con drenaggio interno <i>Bidirectional pumps and motors with internal drain</i>	Codice Code	Y

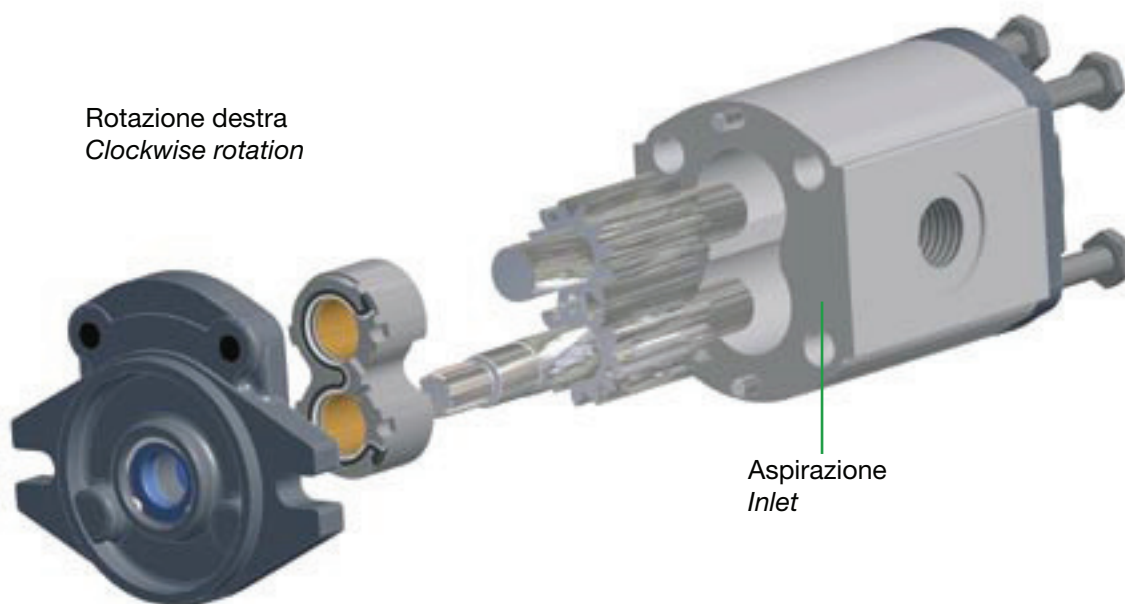
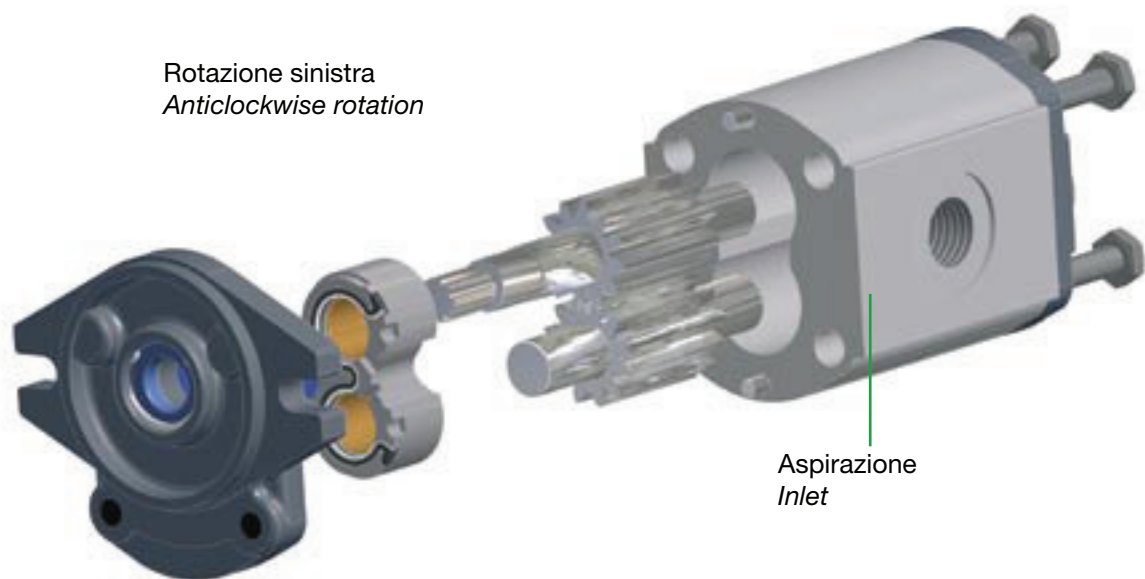


Drenaggio per pompe con flange Drain for pumps with flanges	C4
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Drenaggio per pompe con flange Drain for pumps with flanges	A0 / B1 / D3 / M3 E3 / F5 / G3 / L3
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CAMBIO DEL SENSO DI ROTAZIONE DELLE POMPE Z2 **CHANGING THE SENSE OF ROTATION OF THE PUMP Z2**

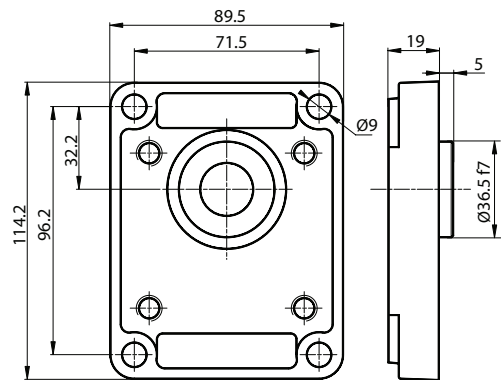


Il senso di rotazione, è indicato con una freccia sul corpo della pompa.
An arrow on the housing of the pump indicates the sense of rotation.

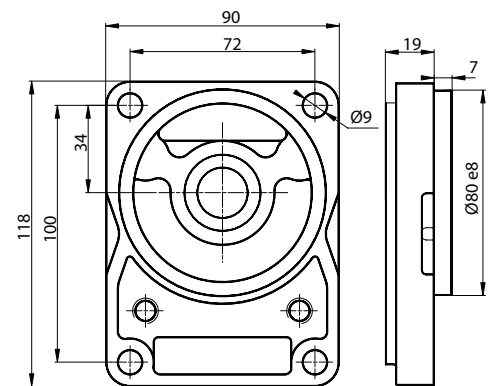
Svitare le quattro viti , rimuovere la flangia, il rasamento e gli ingranaggi.
Ruotare la flangia e inserire l'ingranaggio conduttore nella sede prima occupata dal condotto.
Posizionare il rasamento nella posizione originale.
Serrare le quattro viti con una coppia di serraggio di 60-65 Nm.
(se si cambia il senso di rotazione, consigliamo di cancellare la freccia e la lettera S o D dal codice).

*Unscrew the four clamping bolts, remove the flange, the bushing block and the gears.
Reverse the flange and replace the drive gear in the position the idle gear was before.
Replace the bushing block in the original position.
Retighten the four bolts to a torque rating of between 44-48 ft/lbs
(We suggest to erase the arrow and the letter S or D from the code if rotation is changed).*

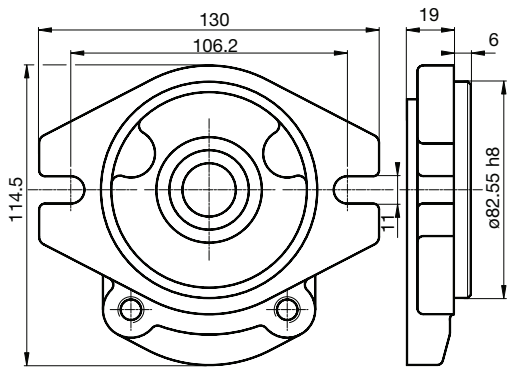
FLANGE
FLANGES



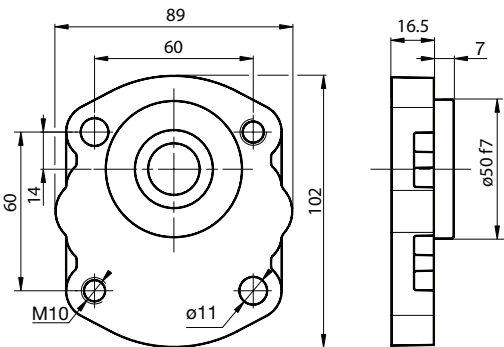
CODICE CODE	A	0
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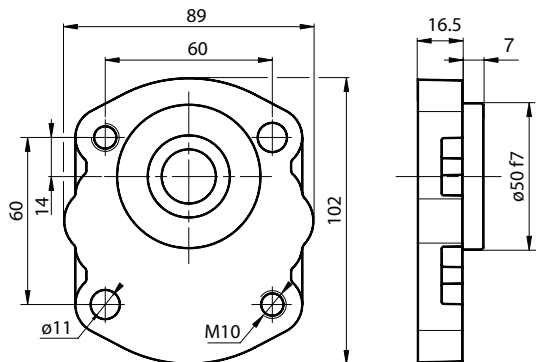
CODICE CODE	B	1
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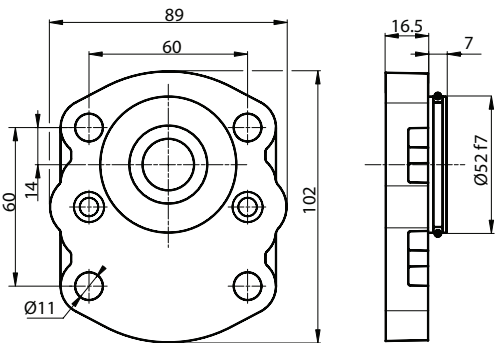
CODICE CODE	C	4
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CODICE CODE	D	3
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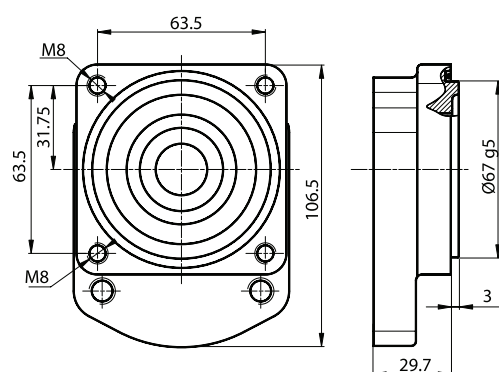


CODICE CODE	M	3
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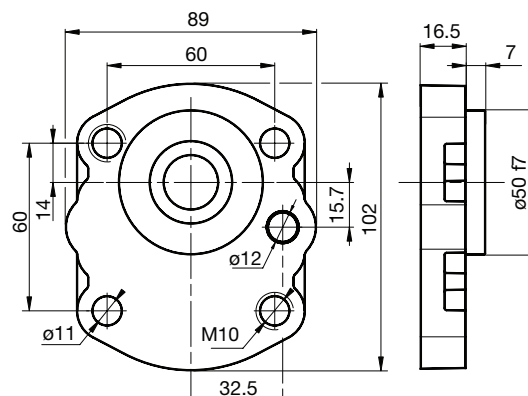


CODICE CODE	E	2
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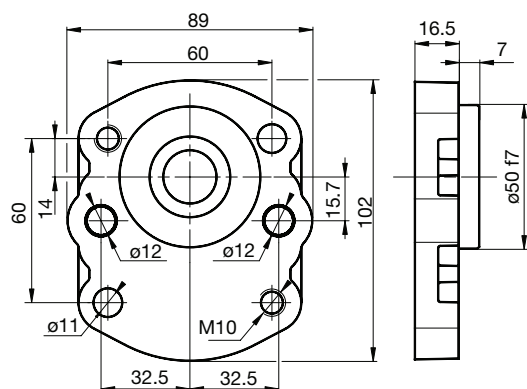
FLANGE FLANGES



CODICE CODE	F	5
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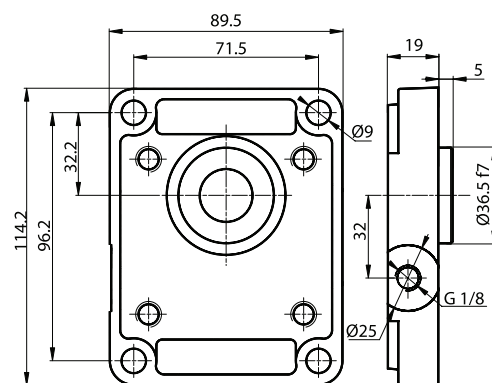


CODICE CODE	G	3
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CODICE CODE	L	3
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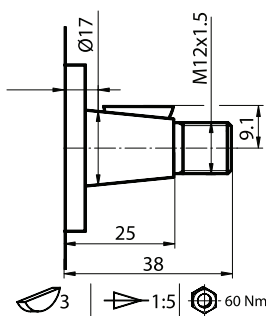
FLANGIA A0 CON DRENAGGIO G1/8
FLANGE A0 WITH DRAIN G1/8



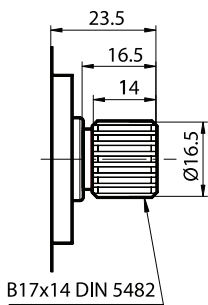
CODICE CODE	N	0
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La nostra produzione standard Our standard production			Per soluzioni diverse vedi pag. da 10 a 12 For different solution, see page from 10 to 12
FLANGE FLANGES	ALBERO SHAFT	BOCCHIE INLET / OULET	TIPO TYPE
A0 - N0	C - E	32-34 33-35 41-43	Fino a 11 / Up to 11 da14 a 31 / From 14 to 31 da14 a 31 bidirezionale / From 14 to 31 bidirectional
B1	A - B	36 44	Tutti i tipi / All of types Tutti i tipi bidirezionale / All of types bidirectional
C4	L - S - N	37 38 39	Fino a 11 / Up to 11 da14 a 31 / From 14 to 31 da14 a 31 bidirezionale / From 14 to 31 bidirectional
D3 - M3	A - B	35 44	Tutti i tipi / All of types Tutti i tipi bidirezionale / All of types bidirectional
E2	F	35 44	Tutti i tipi / All of types Tutti i tipi bidirezionale / All of types bidirectional
F5	M	35 44	Tutti i tipi / All of types Tutti i tipi bidirezionale / All of types bidirectional
G3 - L3	A - B	49 - 50 - 51	Tutti i tipi / All of types

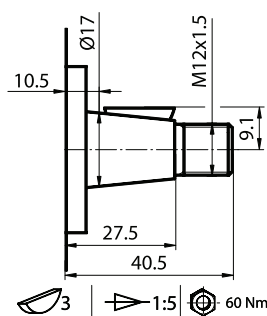
ALBERI
SHAFTS



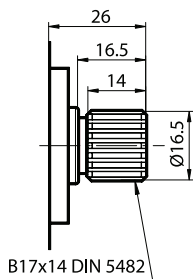
CODICE / CODE	A	
PER FLANGIA / FOR FLANGE	B	1



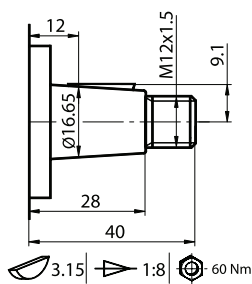
CODICE / CODE	B	
PER FLANGIA / FOR FLANGE	B	1



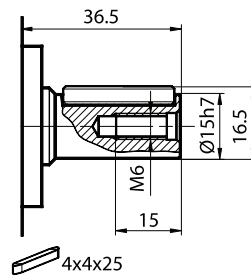
CODICE / CODE	A	
PER FLANGIA / FOR FLANGE	D	3
	L	3
	M	3



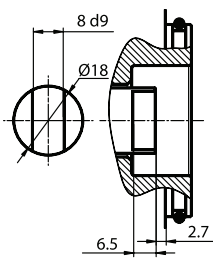
CODICE / CODE	B	
PER FLANGIA / FOR FLANGE	D	3
	L	3
	M	3



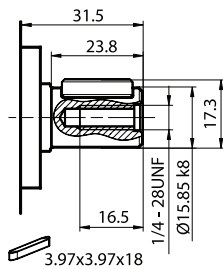
CODICE / CODE	C	
PER FLANGIA / FOR FLANGE	A	0



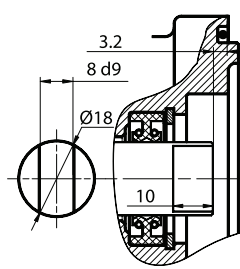
CODICE / CODE	E	
PER FLANGIA / FOR FLANGE	A	0



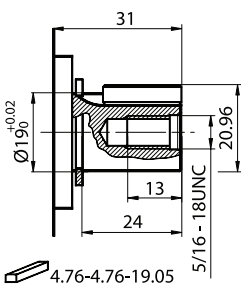
CODICE / CODE	F	
PER FLANGIA / FOR FLANGE	E	2



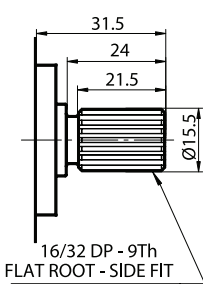
CODICE / CODE	L	
PER FLANGIA / FOR FLANGE	C	4



CODICE / CODE	M	
PER FLANGIA / FOR FLANGE	F	5

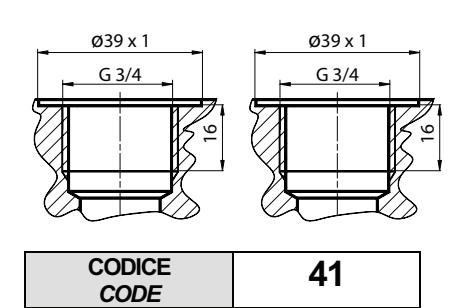
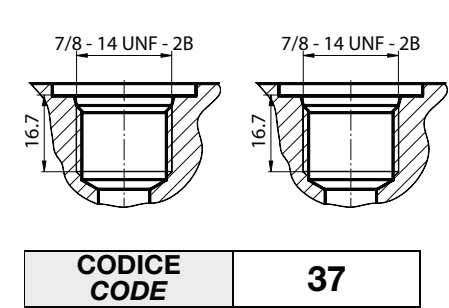
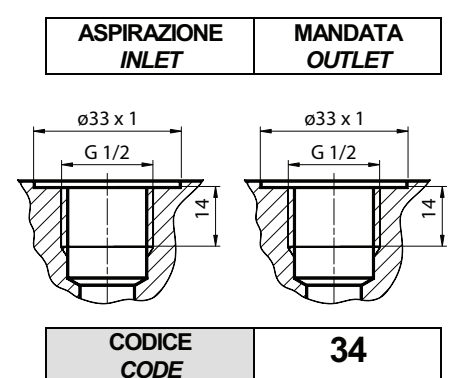
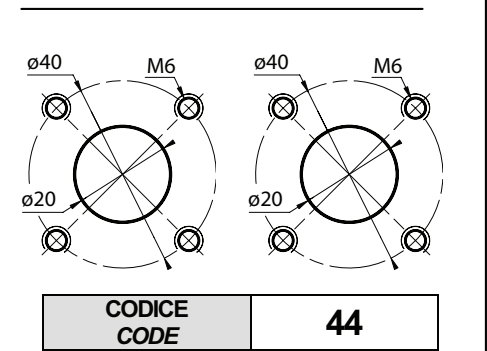
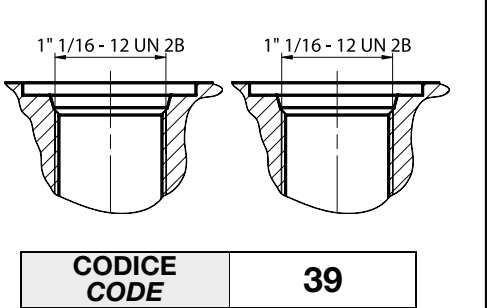
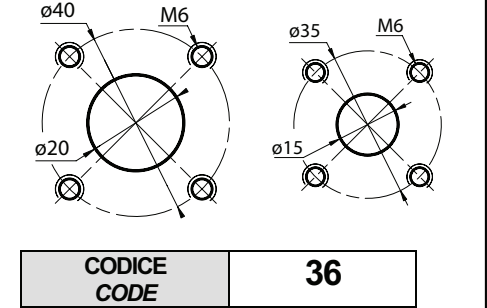
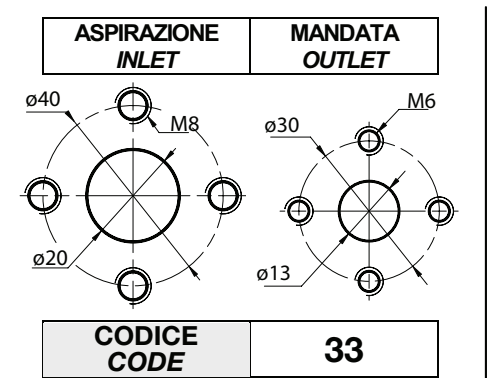
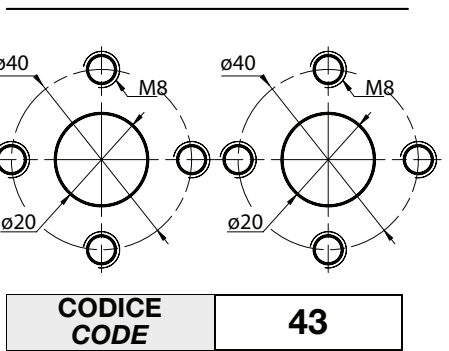
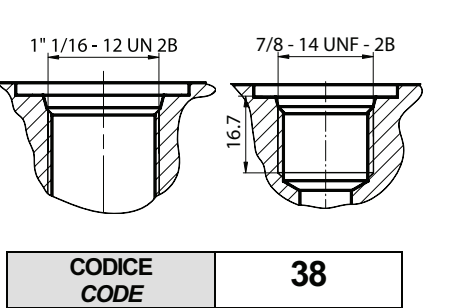
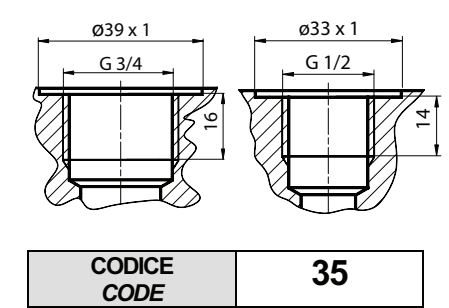
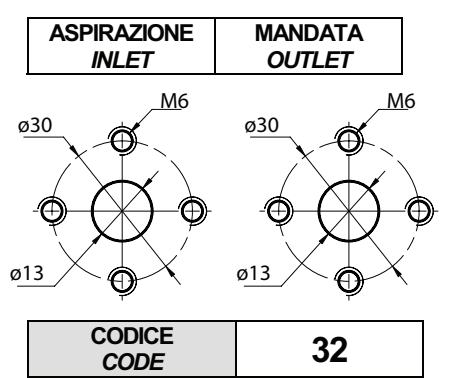


CODICE / CODE	N	
PER FLANGIA / FOR FLANGE	C	4



CODICE / CODE	S	
PER FLANGIA / FOR FLANGE	C	4

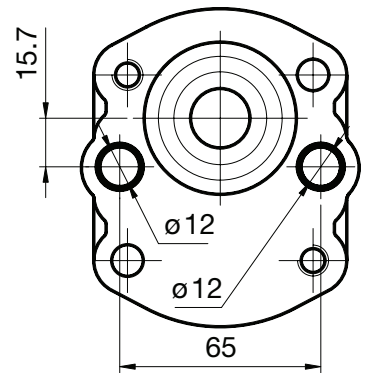
BOCCHIE DI ASPIRAZIONE E MANDATA LATERALI
SIDE INLET AND OUTLET PORTS



BOCCHIE DI ASPIRAZIONE E MANDATA ANTERIORE / POSTERIORI
FRONT AND REAR INLET AND OUTLET PORTS

ASPIRAZIONE ANTERIORE
FRONT INLET

MANDATA ANTERIORE
FRONT OUTLET

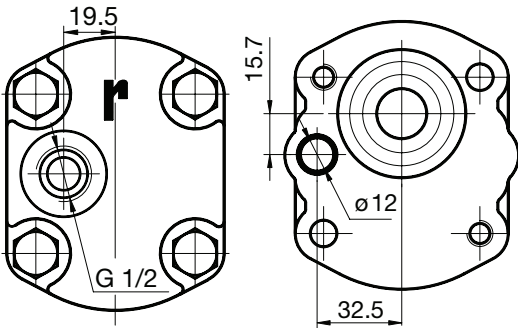


CODICE
CODE

49

ASPIRAZIONE POSTERIORE
REAR INLET

MANDATA ANTERIORE
FRONT OUTLET

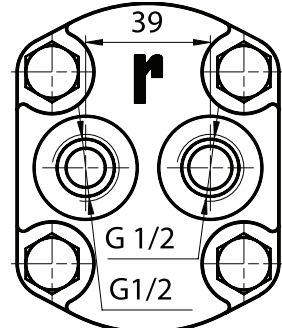


CODICE
CODE

50

ASPIRAZIONE POSTERIORE
REAR INLET

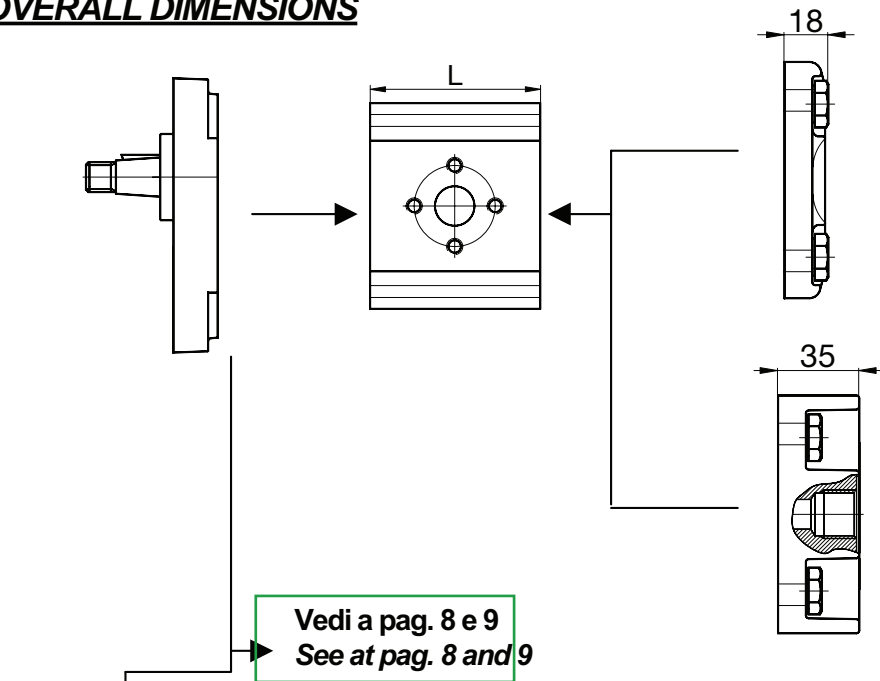
MANDATA POSTERIORE
REAR OUTLET



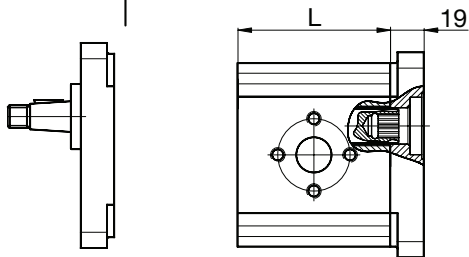
CODICE
CODE

51

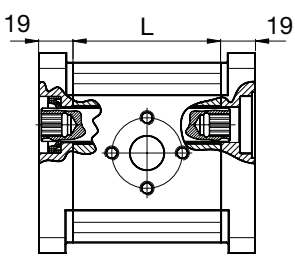
DIMENSIONI D'INGOMBRO
OVERALL DIMENSIONS



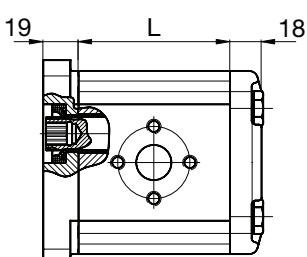
TIPO TYPE	L
04	51
06	54
08	57
11	70
14	75
17	79
20	84
25	93
31	102



POMPA ANTERIORE
FRONT PUMP



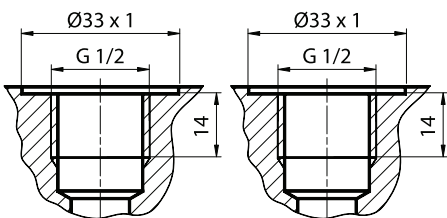
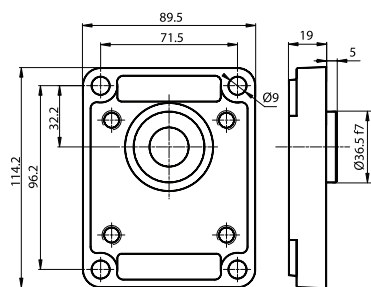
POMPA INTERMEDIA
MIDDLE PUMP



POMPA POSTERIORE
REAR PUMP

ISTRUZIONE PER L'ORDINAZIONE POMPE Z2

ORDERING ISTRUCTION OF THE PUMPS Z2



FLANGIA
FLANGE

A

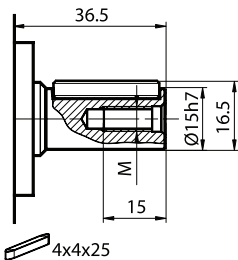
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BOCCHIE
PORTS

34

0 2 Z A G 06 E 0 34 S

Cm ³ /giro Cm ³ /rev	TIPO TYPE
4.4	04
6.28	06
8.16	08
11.3	11
14.45	14
16.95	17
20.1	20
25.75	25
31.4	31



ALBERO
SHAFT

E

PARTE FISSA
FIXED PART

PARTE COMBINIBILE
PART TO BE COMPILED

ROTAZIONE ROTATION	
DESTRA CLOCKWISE	D
SINISTRA ANTI-CLOCKWISE	S
BIDIREZIONALE BIDIRECTIONAL	R



ronzio
OLEODINAMICA

Viale Industria, 37-38 • 20010 Boffalora Ticino MI
Tel. +39 02 9754057 Fax +39 02 97255070 - email: sales@ronzio.com - www.ronzio.com

