OIL SOLUTIONS
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"For All Your Hydraulic Needs"

ronzio OLEODINAMICA

Z1 Series Gear Pumps

Caratteristiche principali

- ❖ Coperchi in ghisa e in alluminio
- ❖ 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 cilindrate: 1.1-1.6-2.1-2.6-3.2-3.7-4.2-4.8-5.5 6.2-7.8-8.8 cm^3/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

Main Features

- ❖ *Cast iron and alloy covers*
- ❖ *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 : 1.1-1.6-2.1-2.6-3.2-3.7-4.2-4.8-5.5 6.2-7.8-8.8 cm^3/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*

CONDIZIONI PER L'UTILIZZO DELLE POMPE "Z1"
CONDITIONS OF USE FOR PUMPS "Z1"

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.

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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 Z1
USE CONDITIONS FOR THE PUMPS Z1

Fluidi idraulici ***Hydraulic fluids***	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 *Mineral oil (DIN 51524)* *For use with fire resistant fluids like water glycol,. water- oil emulsion and phosphate-esters, contact our technical or commercial office.*

Pressione in aspirazione ***Inlet pressure***	0.7 - 3 bar (Assoluti / Absolute)
Velocità olio nella linea di aspirazione ***Oil speed on suction line***	0.5 ÷ 1.5 m/s
Velocità olio nella linea di mandata ***Oil speed on pressure line***	6 ÷ 10 m/s
Temperatura olio ***Oil temperature***	-10°C ÷ 80°C
Viscosità olio ***Oil viscosity***	20 ÷ 120 mm^2 / s (Cst)
Massima viscosità olio all'avvio ***Max starting viscosity***	700 mm^2 / s (Cst)

Filtraggio olio ***Oil filtration***	**Pressione** ***Pressure***	**< 200 bar**	**> 200 bar**
	Classe di contaminazione NAS 1638 *Contamination class NAS 1638*	10	9
	Classe di contaminazione ISO 4406 *Contamination class ISO 4406*	19/16	18/15
	Rapporto β_x *Ratio* β_x	25µm	15µm

CARATTERISTICHE PRINCIPALI
MAIN CHARACTERISTICS

Flangia e coperchio in alluminio *Alloy cover and flange*	Tipo *Type*	11	16	21	26	32	37	42	48	55	62	78	88
Cilindrata *Capacity*	Cm^3 / giro Cm^3 / rev	1.08	1.59	2.09	2.59	3.15	3.68	4.19	4.79	5.49	6.2	7.81	8.82
P1 Pressione max continua *Max working pressure*	Bar	210	210	210	210	210	210	190	180	160	140	120	100
P2 Pressione max di picco *Max peak pressure*	Bar	250	250	250	250	250	250	230	220	200	180	160	140
Velocità max per pressione P1 *Max speed for P1 pressure*	Giri / min Rpm	6000	6000	6000	5500	4500	4000	3800	3500	3500	3000	3000	3000
Velocità max a vuoto *Max speed without load*	Giri / min Rpm	8000	8000	8000	8000	7000	6000	5500	5000	4500	4500	4000	4000
Velocità min. per pressione P1 *Min speed for P1 pressure*	Giri / min Rpm	1100	950	800	700	600	500	450	400	400	400	400	400

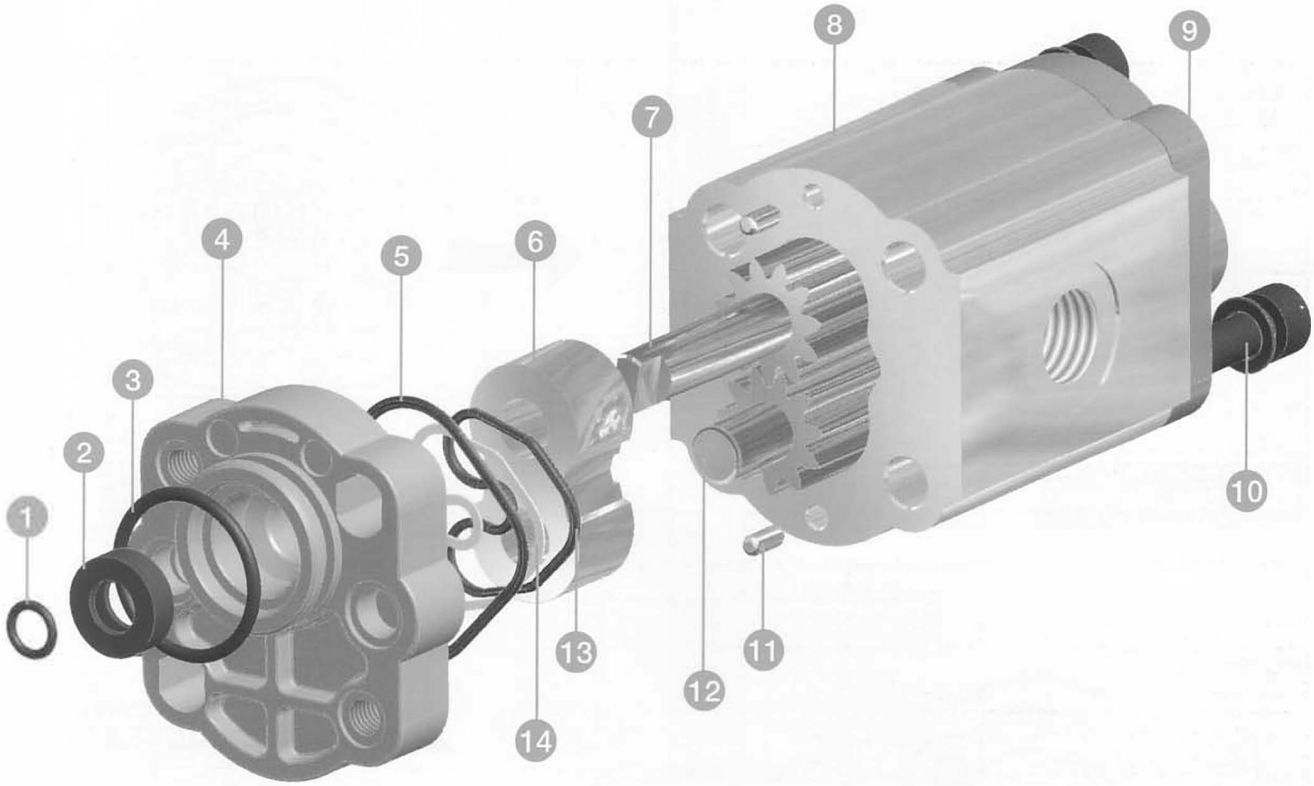
Flangia e coperchi in ghisa *Cast iron cover and flange*	Tipo *Type*	11	16	21	26	32	37	42	48	55	62	78	88
Cilindrata *Capacity*	Cm^3 / giro Cm^3 / rev	1.08	1.59	2.09	2.59	3.15	3.68	4.19	4.79	5.49	6.2	7.81	8.82
P1 Pressione max continua *Max working pressure*	Bar	300	300	300	300	280	250	220	210	180	150	130	120
P2 Pressione max di picco *Max peak pressure*	Bar	350	350	350	350	330	300	270	250	210	180	160	150
Velocità max per pressione P1 *Max speed for P1 pressure*	Giri / min Rpm	8000	8000	7000	5500	4500	4500	4500	4000	4000	4000	3800	3500
Velocità max a vuoto *Max speed without load*	Giri / min Rpm	8000	8000	8000	8000	7000	6000	5500	5000	4500	4500	4000	4000
Velocità min. per pressione P1 *Min speed for P1 pressure*	Giri / min Rpm	1100	1000	900	800	700	600	500	400	400	400	400	400

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

Le pompe con codice albero B, hanno cilindrata da 1,08 a 3,68 cm^3 / giro
The pumps with shaft code B , have capacity from 1,08 to 3,68 cm^3 / rev

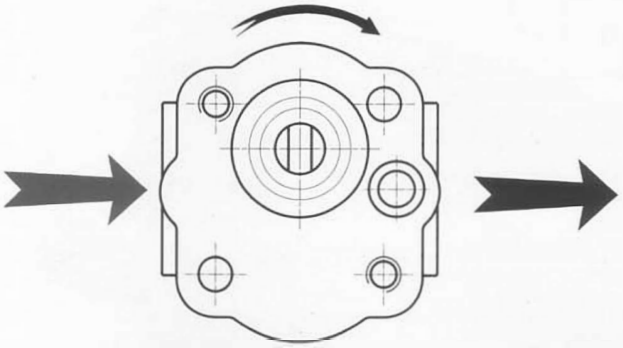
Coppia massima applicabile Shaft load capacity		
Codice albero (vedi pag. 8) Shaft code (see page 8)	Coppia massima (Nm) Max Torque (Nm)	Quando si utilizzano pompe multiple , la coppia sull'albero di trascinamento, è la somma dei valori di coppia delle singole sezioni. Questo valore non può essere maggiore del valore indicato in tabella. *When applying a multiple pump, the drive shaft load is the sum of the torque of each section.* *This value cannot be higher than the value in the table*
B	14	
C	36	
D	37	
F	18	
M	16	
G	16	

COMPONENTI
PARTS

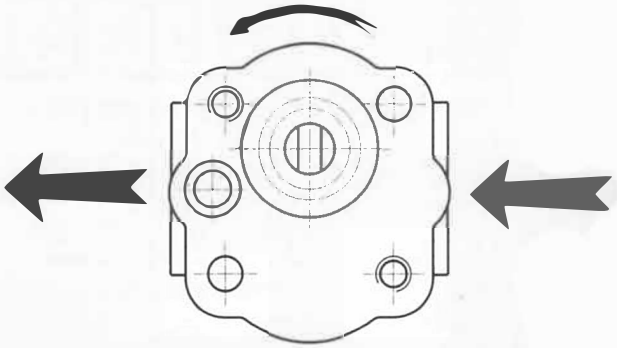


Rif.	Descrizione	*Description*	Qt.
1	OR Mandata	Outlet seal	1
2	Anello di tenuta	*Rotary shaft seal*	1
3	OR Flangia	*Seal flage*	1
4	Flangia	*Front flange*	1
5	Guamizione sotto-coperchio	*Under cover seal*	2
6	Rasamento	*Bushing block*	2
7	Ingranaggio conduttore	*Drive gear*	1
8	Corpo	*Housing*	1
9	Coperchio	*Cover*	1
10	Vite	*Bolt*	2
11	Spina cilindrica	*Pin*	4
12	Ingranaggio condotto	*Idle gear*	1
13	Guamizione di compensazione	*Compensation seal*	2
14	Antiestrusore	*Seal aganist extruding*	2

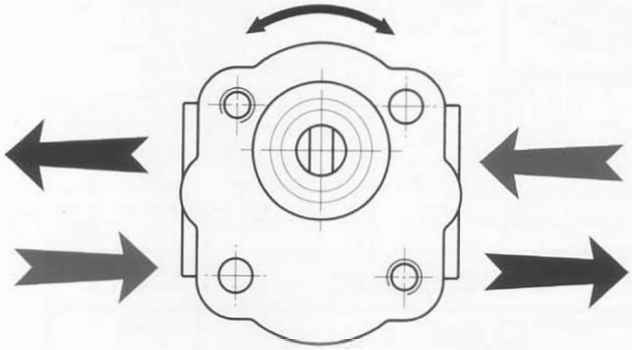
SENSO DI ROTAZIONE
SENSE OF ROTATION



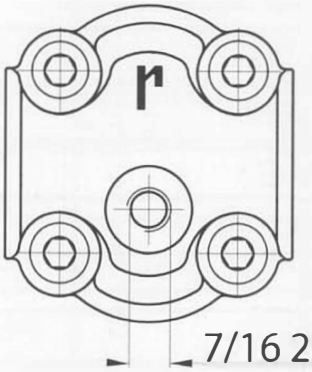
Rotazione destra *Clockwise rotation*	Codice *Code*	D



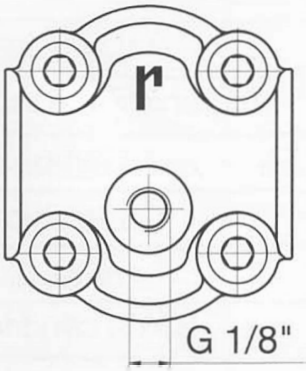
Rotazione sinistra *Anti - Clockwise rotation*	Codice *Code*	S



Rotazione bidirezionale drenaggio esterno Bidirectional rotation with external drain	Codice *Code*	R



Drenaggio per pompe o motori con forature SAE
Drain for pumps or motors with SAE thread



Drenaggio per pompe o motori con bocche Europee
Drain for pumps or motors with European ports

Il senso di rotazione, è indicato con una freccia sul corpo della pompa .
The sense of rotation, is indicated by an arrow on the body of the pump.

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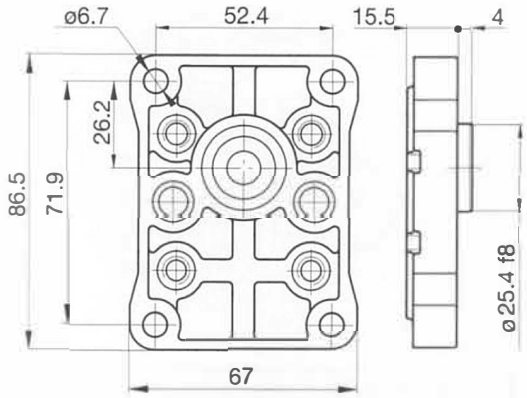
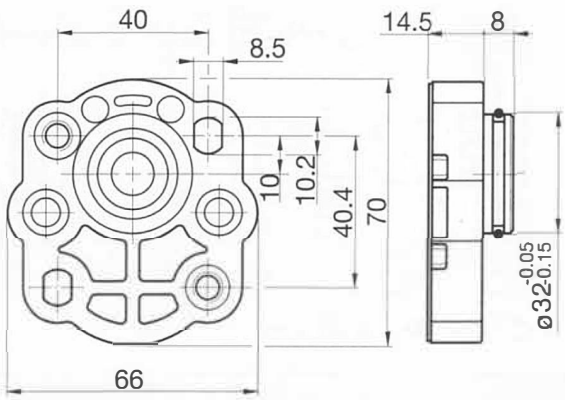
FLANGE
FLANGES



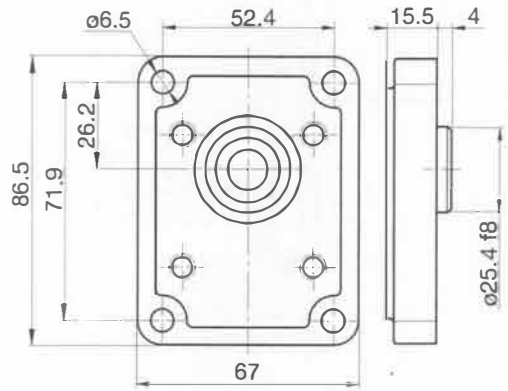
CODICE CODE	A	0	4

NOTA: Materiale Alluminio
NOTE: Material Alloy



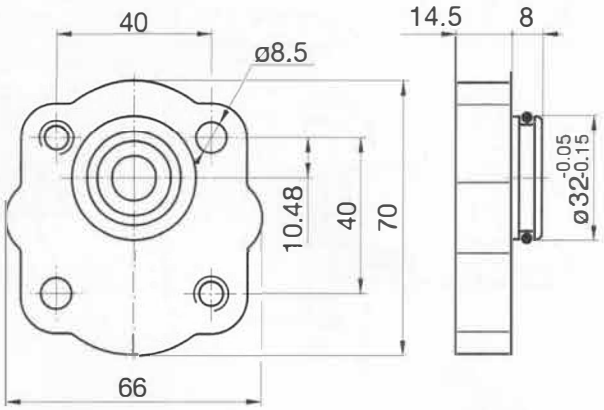
CODICE CODE	B	0	1

NOTA: Materiale Alluminio
NOTE: Material Alloy



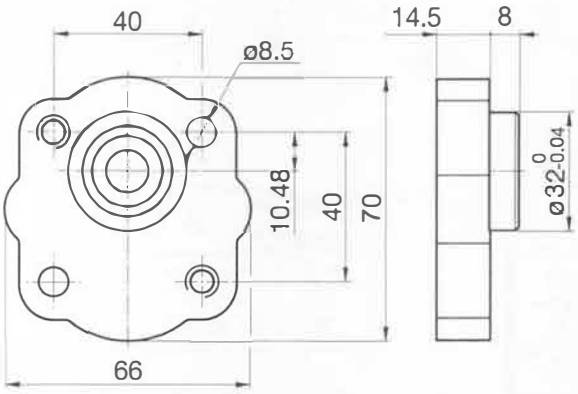
CODICE CODE	A	G	4

NOTA: Materiale Ghisa
NOTE: Material Cast Iron



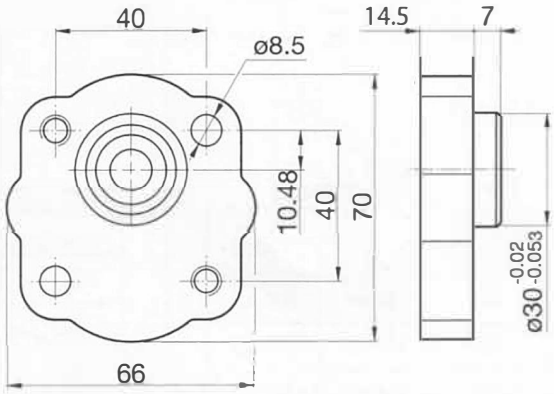
CODICE CODE	B	G	1

NOTA: Materiale Ghisa
NOTE: Material Cast Iron



CODICE CODE	B	G	5

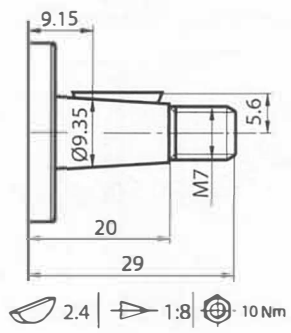
NOTA: Materiale Ghisa
NOTE: Material Cast Iron



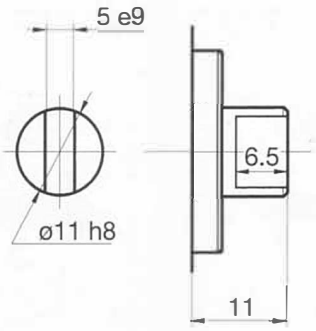
CODICE CODE	B	G	2

NOTA: Materiale Ghisa
NOTE: Material Cast Iron

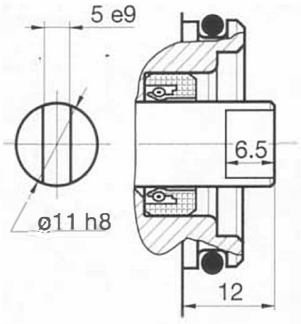
ALBERI
SHAFTS



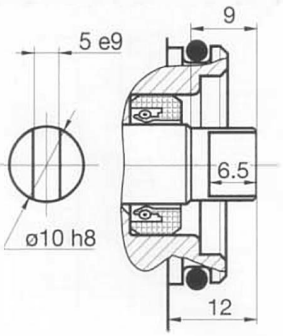
CODICE/CODE	C		
PER FLANGE/FOR FLANGES	A	G	4
	A	0	4



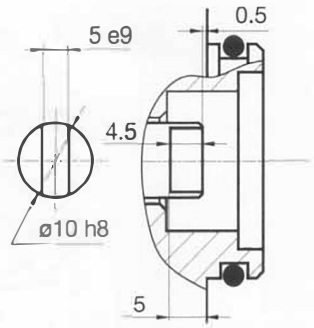
CODICE/CODE	F		
PER FLANGE/FOR FLANGES	A	G	4
	A	0	4



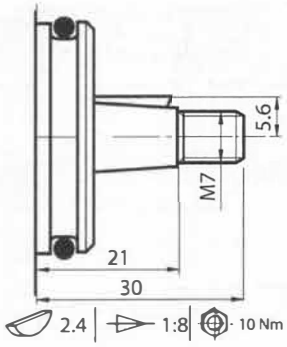
CODICE/CODE	F		
PER FLANGE/FOR FLANGES	B	G	1
	B	0	1



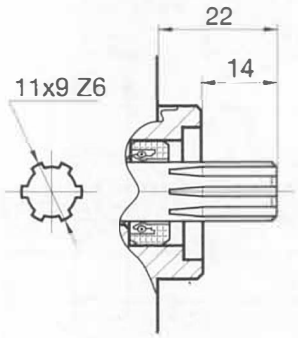
CODICE/CODE	M		
PER FLANGE/FOR FLANGES	B	G	1
	B	0	1



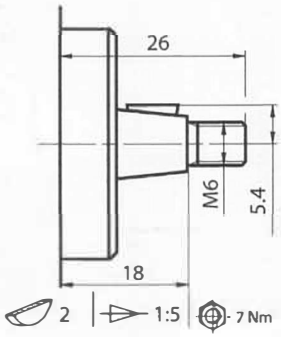
CODICE/CODE	G		
PER FLANGE/FOR FLANGES	B	G	1
	B	0	1



CODICE/CODE	C		
PER FLANGE/FOR FLANGES	B	G	1
	B	0	1



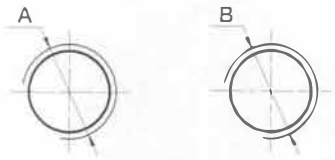
CODICE/CODE	D		
PER FLANGE/FOR FLANGES	B	G	5
	B	0	5



CODICE/CODE	B		
PER FLANGE/FOR FLANGES	B	G	5
	B	0	5

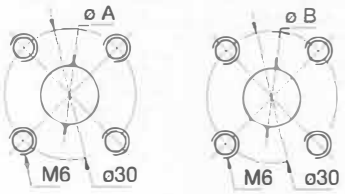
BOCCHE DI ASPIRAZIONE E MANDATA
INLET AND OUTLET PORTS

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA LATERALE *SIDE OUTLET*



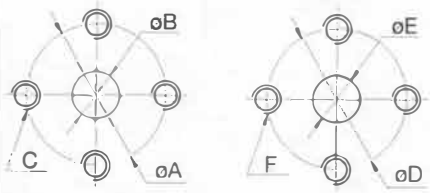
A	B	Codice *Code*
G 1/2	G 3/8	**00**
G 3/8	G 3/8	**01**
G 3/8	G1/4	**02**
G1/4	G1/4	**06**
M18x1.5	M14x1.5	**09**
M14x1.5	M14x1.5	**10**

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA LATERALE *SIDE OUTLET*



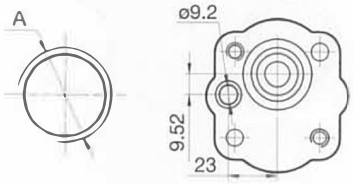
A	B	Codice *Code*
13	12	**11**
13	10	**12**
13	8	**13**
12	10	**15**
12	8	**16**
10	10	**17**
10	8	**18**
12	12	**42**

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA LATERALE *SIDE OUTLET*



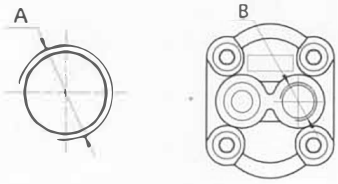
A	B	C	D	E	F	Codice *Code*
30	12	M6	30	12	M6	**14**
30	10	M6	30	10	M6	**27**
26	10	M5	26	10	M5	**28**
26	10	M6	26	10	M6	**29**

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA ANTERIORE *FRONT OUTLET*



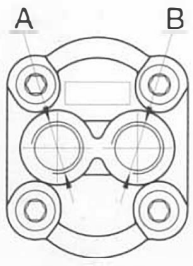
A	Codice *Code*
G 3/8	**05**
G 1/4	**08**

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA POSTERIORE *REAR OUTLET*



A	B	Codice *Code*
G 3/8	G 3/8	**03**
G 3/8	G 1/4	**04**
G 1/4	G 1/4	**07**

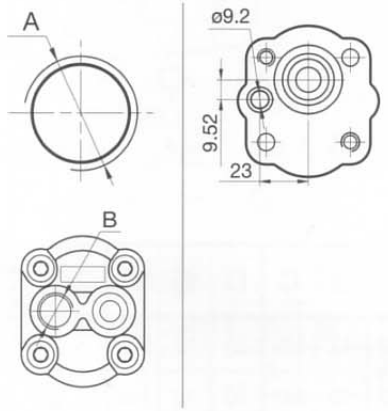
ASPIRAZIONE POSTERIORE *REAR INLET*	MANDATA POSTERIORE *REAR OUTLET*



A	B	Codice *Code*
G 3/8	G 3/8	**19**
G 3/8	G 1/4	**20**
G 1/4	G 1/4	**21**

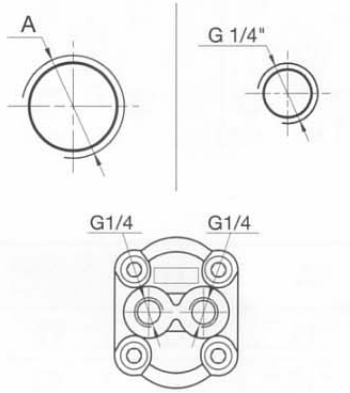
BOCCHE DI ASPIRAZIONE E MANDATA
INLET AND OUTLET PORTS

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA ANTERIORE *FRONT OUTLET*
ASPIRAZIONE POSTERIORE *REAR INLET*	



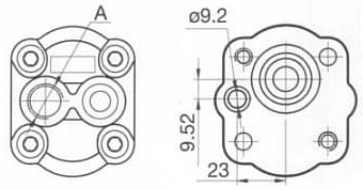
A	B	Codice *Code*
G 1/4	G 3/8	**23**
G 1/4	G 1/4	**25**

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA LATERALE *SIDE OUTLET*
ASPIRAZIONE POSTERIORE *REAR INLET*	MANDATA POSTERIORE *REAR OUTLET*



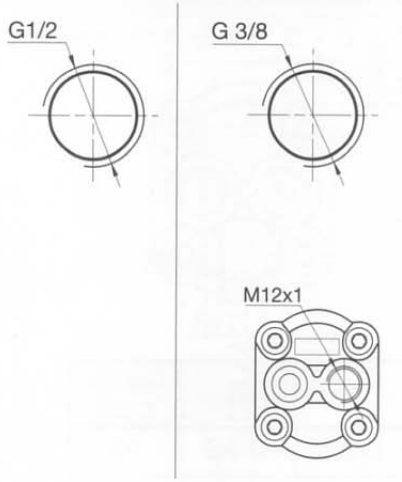
A	Codice *Code*
G 3/8	**22**
G 1/4	**31**

ASPIRAZIONE POSTERIORE *REAR INLET*	MANDATA ANTERIORE *FRONT OUTLET*



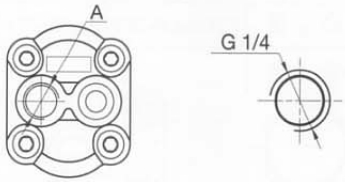
A	Codice *Code*
G 1/4	**24**
G 3/8	**30**

ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA LATERALE *SIDE OUTLET*
	MANDATA POSTERIORE *REAR OUTLET*



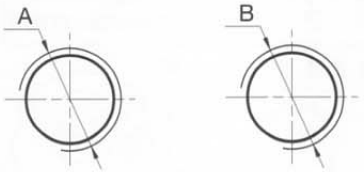
Codice *Code*	26

ASPIRAZIONE POSTERIOE *REAR INLET*	MANDATA LATERALE *SIDE OUTLET*



A	Codice *Code*
G 1/4	**40**
G 3/8	**43**

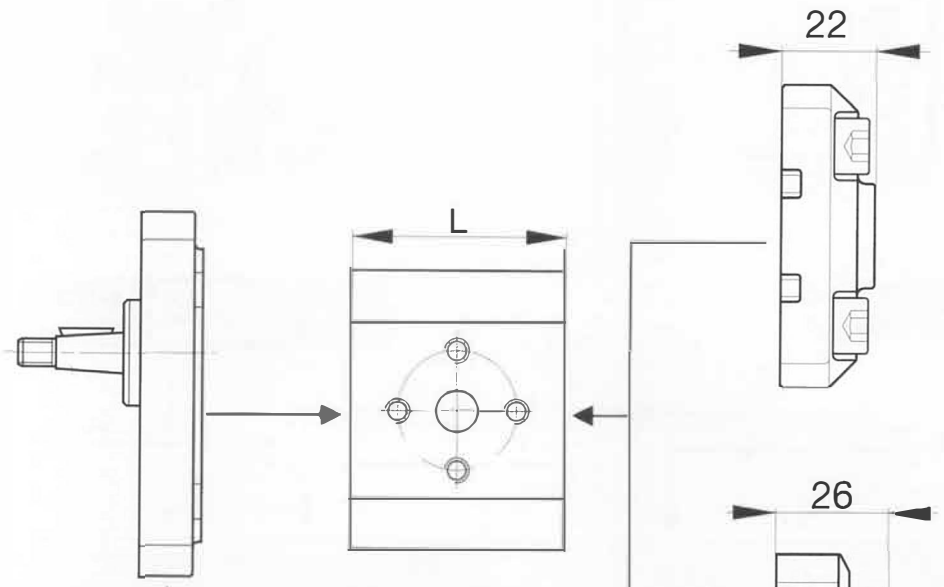
ASPIRAZIONE LATERALE *SIDE INLET*	MANDATA LATERALE *SIDE OUTLET*



A	B	Codice *Code*
7/16-20 UNF	7/16-20 UNF	**53**
9/16-18 UNF	9/16-18 UNF	**54**

DIMENSIONI D'INGOMBRO
OVERALL DIMENSIONS

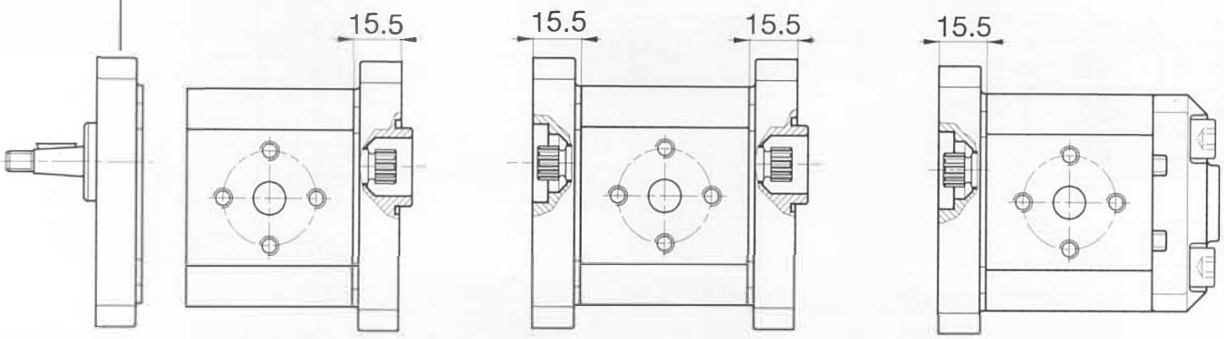
Coperchio in alluminio
Alloy cover



TIPO *TYPE*	L
11	38,3
16	40,3
21	42,3
26	44,3
32	46,5
37	48,6
42	50,6
48	53
55	55,8
62	58,6
78	65
88	69

Vedi a pag. 7
See at pag. 7

Coperchio in ghisa
Cast iron cover



POMPA ANTERIORE
FRONT PUMP

POMPA INTERMEDIA
MIDDLE PUMP

POMPA POSTERIORE
REAR PUMP

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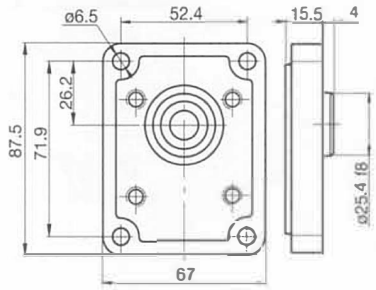
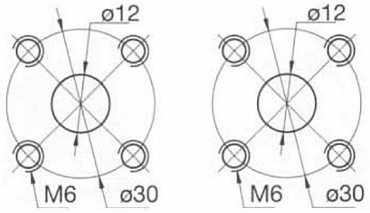
1800-645765
https://oilsolutions.com.au/
sales@oilsolutions.com.au

ISTRUZIONI PER L'ORDINAZIONE DELLE POMPE Z1
ORDERING ISTRUCTION OF THE PUMPS Z1



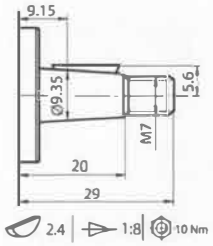


FLANGIA *FLANGE*	A	G	4

BOCCHE *PORTS*	42

0	1	Z	A	G	11	C	4	42	S

Cm³/giro *Cm³/rev*	TIPO *TYPE*
1.08	11
1.59	16
2.09	21
2.59	26
3.15	32
3.68	37
4.19	42
4.79	48
5.49	55
6.2	62
7.81	78
8.82	88



ALBERO *SHAFT*	C

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

PARTE FISSA *FIXED PART*

PARTE COMPONIBILE *PART TO BE COMPILED*

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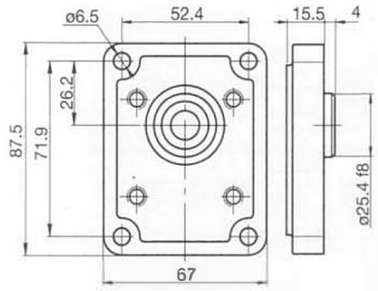
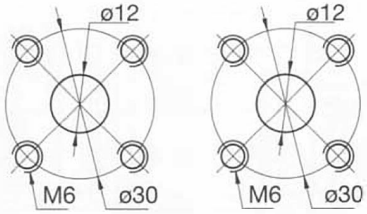
1800-645765
https://oilsolutions.com.au/
sales@oilsolutions.com.au

ISTRUZIONI PER L'ORDINAZIONE DEI MOTORI Z1
ORDERING ISTRUCTION OF THE MOTORS Z1



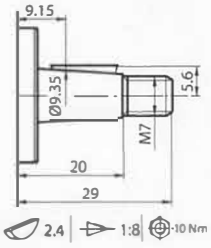


FLANGIA *FLANGE*	A	G	4

BOCCHE *PORTS*	42

0	1	Z	M	A	G	16	C	4	42	D

Cm³/giro *Cm³/rev*	TIPO *TYPE*
1.08	11
1.59	16
2.09	21
2.59	26
3.15	32
3.68	37
4.19	42
4.79	48
5.49	55
6.2	62
7.81	78
8.82	88



ALBERO *SHAFT*	C

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

PARTE FISSA *FIXED PART*

PARTE COMPONIBILE *PART TO BE COMPILED*

ISTRUZIONI PER L'ORDINAZIONE DELLE POMPE Z1 MULTIPLE
ORDERING ISTRUCTION OF THE MULTIPLE PUMPS Z1

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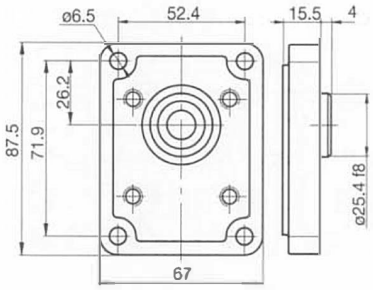
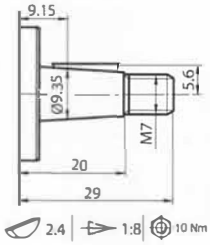
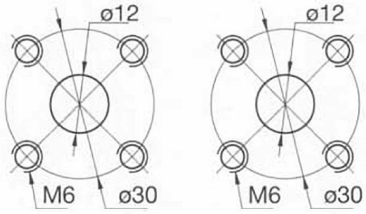
1800-645765







FLANGIA *FLANGE*	A	G	4

ALBERO *SHAFT*	C

BOCCHE *PORTS*	42

POMPA ANTERIORE *FRONT PUMP*	0	1	Z	A	G	88	C	4	42	A	S
POMPA INTERMEDIA *MIDDLE PUMP*	0	1	Z	A	G	42	0	0	42	I	S
POMPA POSTERIORE *REAR PUMP*	0	1	Z	A	G	21	0	0	42	P	S

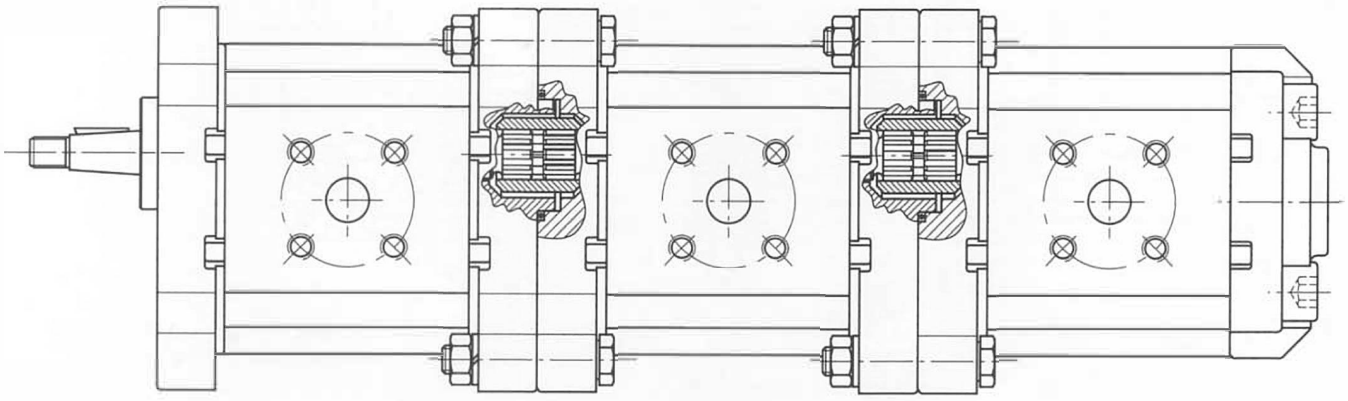
Cm³/giro *Cm³/rev*	TIPO *TYPE*
1.08	11
1.59	16
2.09	21
2.59	26
3.15	32
3.68	37
4.19	42
4.79	48
5.49	55
6.2	62
7.81	78
8.82	88

ROTAZIONE *ROTATION*	
DESTRA CLOCKWISE	D
SINISTRA ANTI-CLOCKWISE	S

PARTE FISSA
FIXED PART

PARTE COMPONIBILE
PART TO BE COMPILED

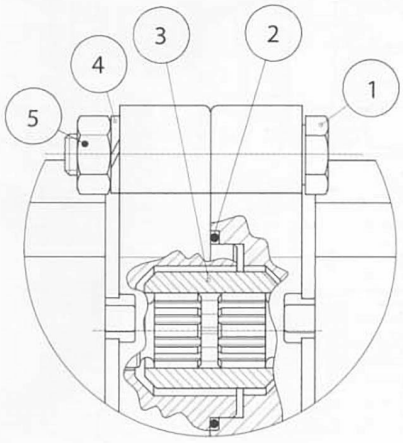
KIT DI MONTAGGIO DELLE POMPE MULTIPLE Z1
ASSEMBLING KIT FOR MULTIPLE PUMPS Z1



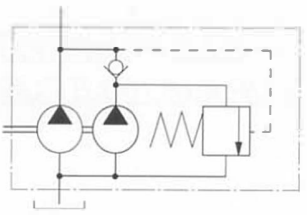
La pressione delle pompe intermedie e posteriori è limitata dalla tenuta del mozzo. La coppia max è **27 Nm**

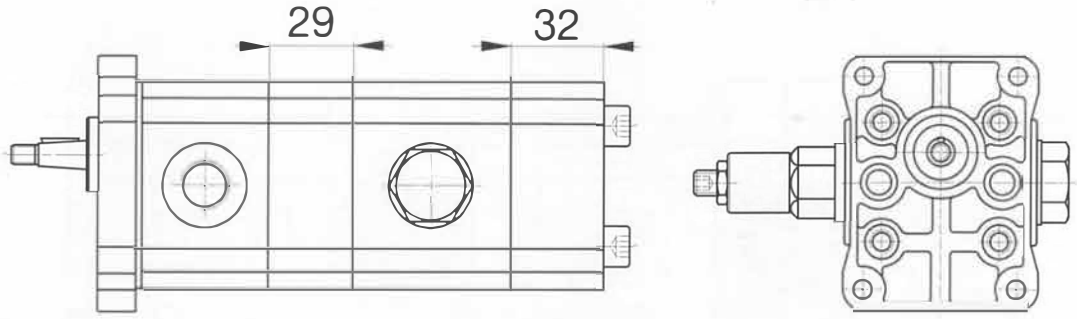
*Max shaft loading must conform to the limitation of coupling. Max torque is **27 Nm***

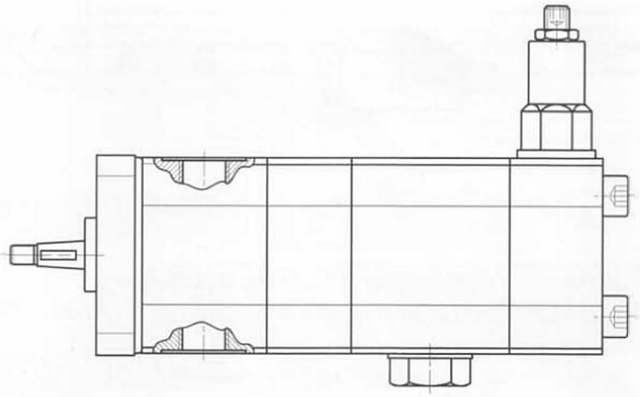
Ref	PARTI *PARTS*
1	M6 x 35 UNI 5737
2	OR 2100
3	Mozzo scanalato *Coupling*
4	Rosetta Washer
5	Dado M6 Stud nut M6
Codice KIT ***Code KIT***	K1000000



POMPA MULTIPLA Z1 CON VALVOLA DISGIUNTRICE
MULTIPLE PUMPS Z1 WITH SEQUENCE VALVE

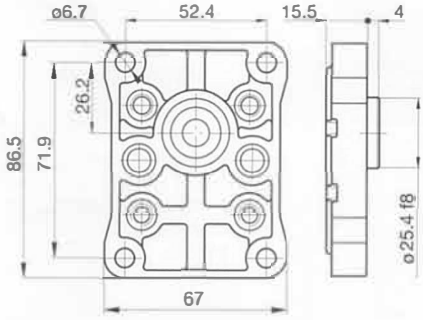


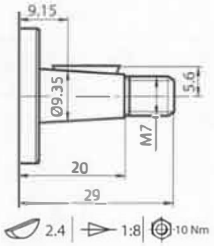




La pompa posteriore ha cilindrata massima 5.49 Cm^3/ giro
The rear pumps have capacity max 5.49 Cm^3/ rev

Cm^3/giro *Cm^3/rev*	TIPO *TYPE*
1.08	11
1.59	16
2.09	21
2.59	26
3.15	32
3.68	37
4.19	42
4.79	48
5.49	55
6.2	62
7.81	78
8.82	88





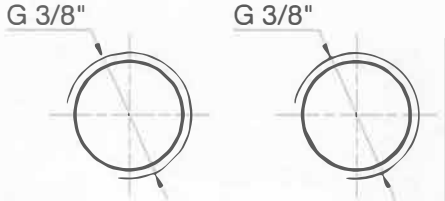
ALBERO *SHAFT*	C

FLANGIA *FLANGE*	A	0	4

Anteriore / *Front*

Posteriore / *Rear*

CODICE *CODE*	0	1	Z	A	0	D	11	55	C	4	01	S



BOCCHE *PORTS*	01

ROTAZIONE *ROTATION*	
DESTRA *CLOCKWISE*	D
SINISTRA *ANTI-CLOCKWISE*	S

PARTE FISSA *FIXED PART*

PARTE COMPONIBILE *PART TO BE COMPILED*

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