



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 cilindrata:
1.1-1.6-2.1-2.6-3.2-3.7-4.2-4.8-5.5
6.2-7.8-8.8 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

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 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*

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.

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	<p>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</p>		
Hydraulic fluids	<p><i>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.</i></p>		
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

Flangia e coperchio in alluminio <i>Alloy cover and flange</i>	Tipo <i>Type</i>	11	16	21	26	32	37	42	48	55	62	78	88
Cilindrata <i>Capacity</i>	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 <i>Max working pressure</i>	Bar	210	210	210	210	210	210	190	180	160	140	120	100
P2 Pressione max di picco <i>Max peak pressure</i>	Bar	250	250	250	250	250	250	230	220	200	180	160	140
Velocità max per pressione P1 <i>Max speed for P1 pressure</i>	Giri / min Rpm	6000	6000	6000	5500	4500	4000	3800	3500	3500	3000	3000	3000
Velocità max a vuoto <i>Max speed without load</i>	Giri / min Rpm	8000	8000	8000	8000	7000	6000	5500	5000	4500	4500	4000	4000
Velocità min. per pressione P1 <i>Min speed for P1 pressure</i>	Giri / min Rpm	1100	950	800	700	600	500	450	400	400	400	400	400

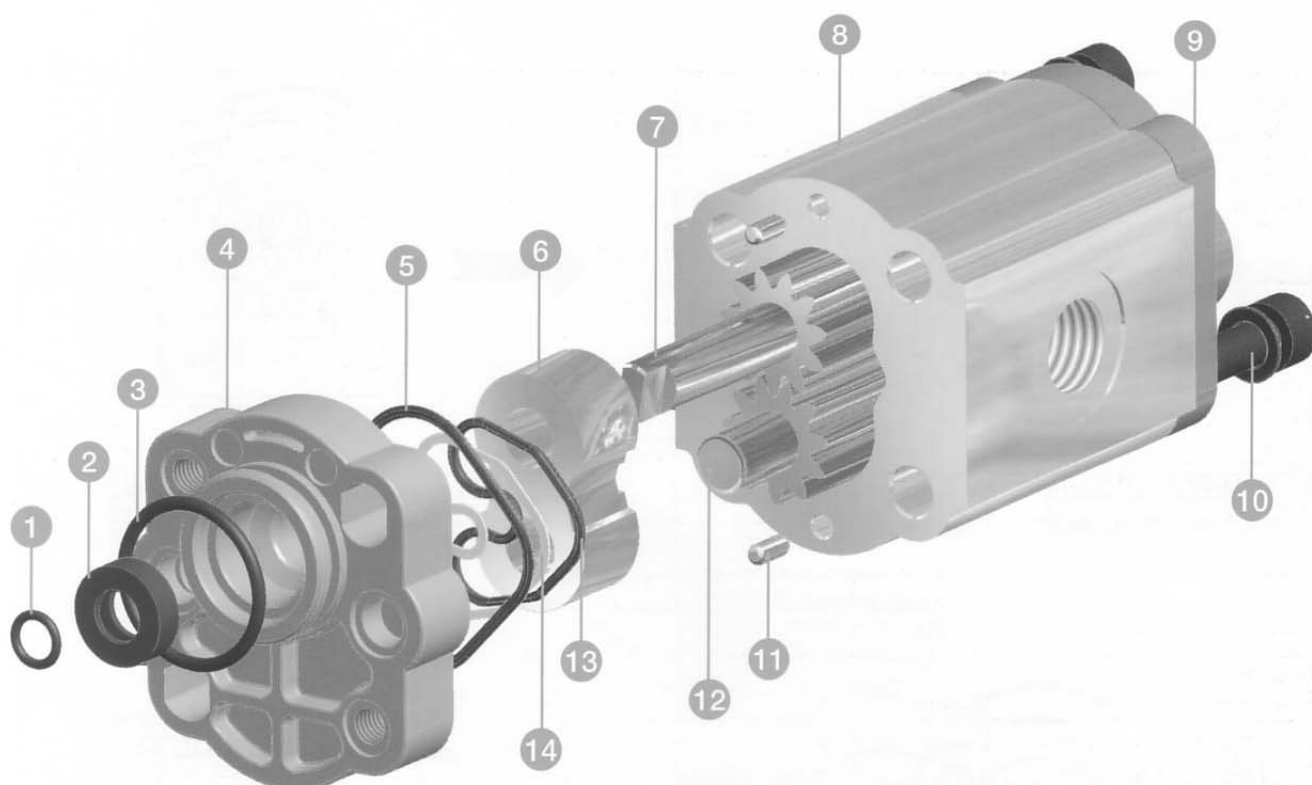
Flangia e coperchi in ghisa <i>Cast iron cover and flange</i>	Tipo <i>Type</i>	11	16	21	26	32	37	42	48	55	62	78	88
Cilindrata <i>Capacity</i>	Cm ³ / giro Cm ³ / rev	1.08	1.59	2.09	2.59	3.15	3.68	4.19	4.79	5.49	6.2	7.81	8.82
P1 Pressione max continua <i>Max working pressure</i>	Bar	300	300	300	300	280	250	220	210	180	150	130	120
P2 Pressione max di picco <i>Max peak pressure</i>	Bar	350	350	350	350	330	300	270	250	210	180	160	150
Velocità max per pressione P1 <i>Max speed for P1 pressure</i>	Giri / min Rpm	8000	8000	7000	5500	4500	4500	4500	4000	4000	4000	3800	3500
Velocità max a vuoto <i>Max speed without load</i>	Giri / min Rpm	8000	8000	8000	8000	7000	6000	5500	5000	4500	4500	4000	4000
Velocità min. per pressione P1 <i>Min speed for P1 pressure</i>	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 cm³ / giro
The pumps with shaft code B , have capacity from 1,08 to 3,68 cm³ / rev

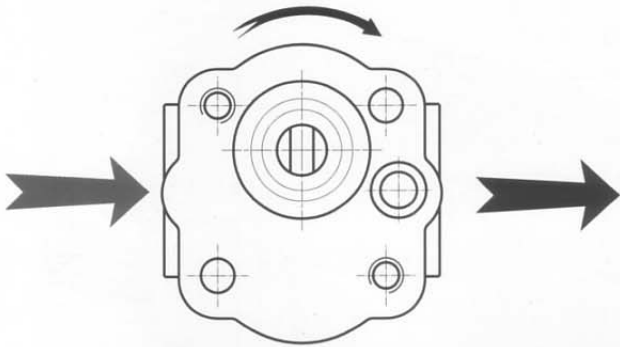
Coppia massima applicabile <i>Shaft load capacity</i>		Quando si utilizzano pompe multiple , la coppia sull'albero di trascinamento, è la somma dei valori di coppia delle singole sezioni. Questo valore non può essere maggiore del valore indicato in tabella. <i>When applying a multiple pump, the drive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

COMPONENTI
PARTS

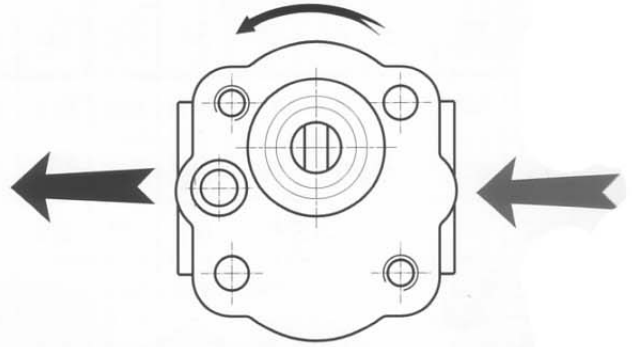


Rif.	Descrizione	Description	Qt.
1	OR Mandata	Outlet seal	1
2	Anello di tenuta	Rotary shaft seal	1
3	OR Flangia	Seal flage	1
4	Flangia	Front flange	1
5	Guarnizione sotto-coperchio	Under cover seal	2
6	Rasamento	Bushing block	2
7	Ingranaggio conduttore	Drive gear	1
8	Corpo	Housing	1
9	Coperchio	Cover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

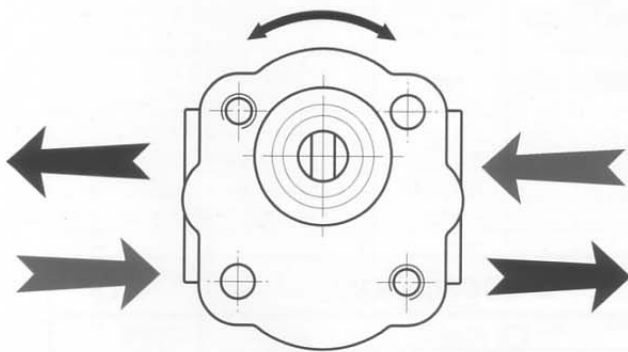
SENSO DI ROTAZIONE
SENSE OF ROTATION



Rotazione destra Clockwise rotation	Codice Code	D
--	----------------	----------



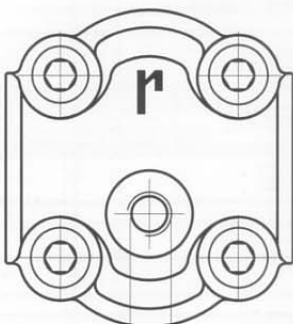
Rotazione sinistra Anti - Clockwise rotation	Codice Code	S
---	----------------	----------



**MANDATA
OUTLET**

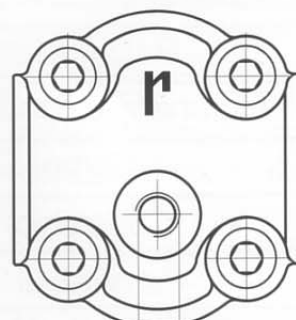
**ASPIRAZIONE
INLET**

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



7/16 20UNF-2B

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

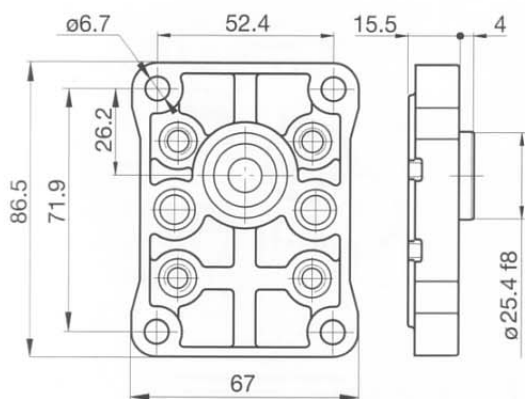


G 1/8"

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

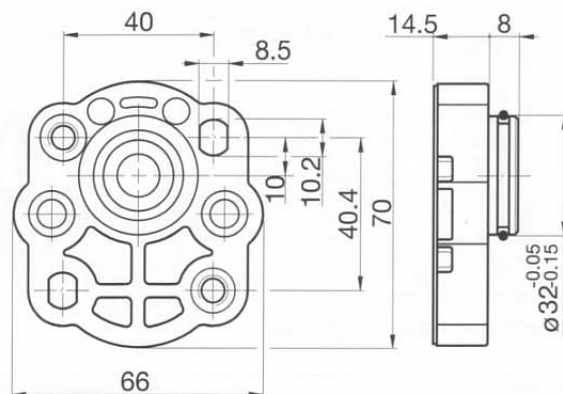
Il senso di rotazione, è indicato con una freccia sul corpo della pompa .
The sense of rotation, is indicated by an arrow on the body of the pump.

FLANGE FLANGES



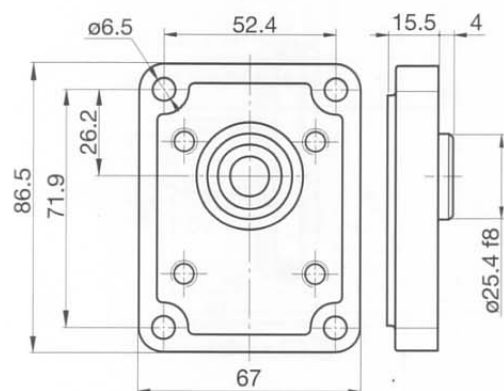
CODICE	A	0	4
CODE			

NOTA: Materiale Alluminio
NOTE: Material Alloy



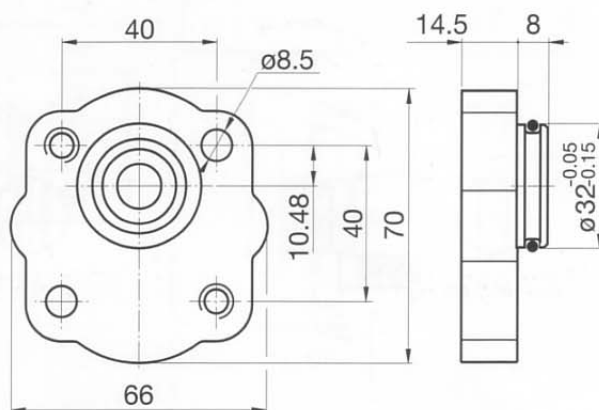
CODICE	B	0	1
CODE			

NOTA: Materiale Alluminio
NOTE: Material Alloy



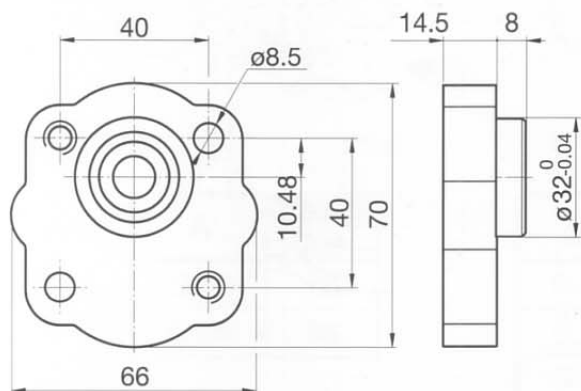
CODICE	A	G	4
CODE			

NOTA: Materiale Ghisa
NOTE: Material Cast Iron



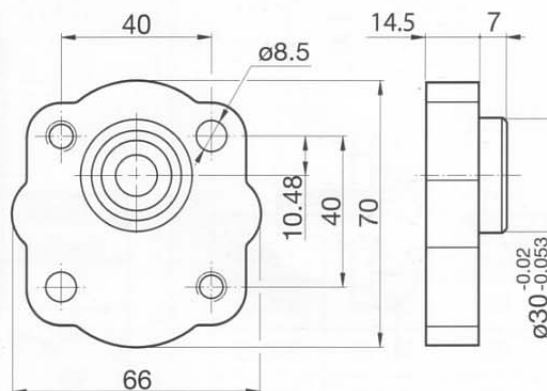
CODICE	B	G	1
CODE			

NOTA: Materiale Ghisa
NOTE: Material Cast Iron



CODICE	B	G	5
CODE			

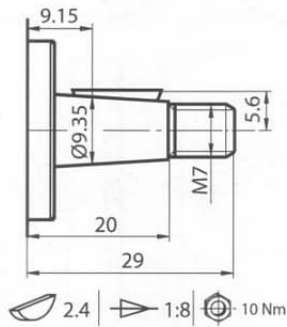
NOTA: Materiale Ghisa
NOTE: Material Cast Iron



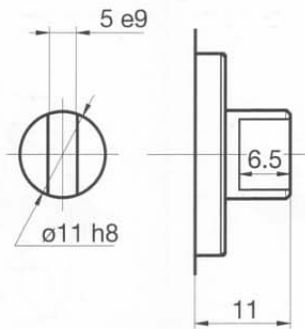
CODICE	B	G	2
CODE			

NOTA: Materiale Ghisa
NOTE: Material Cast Iron

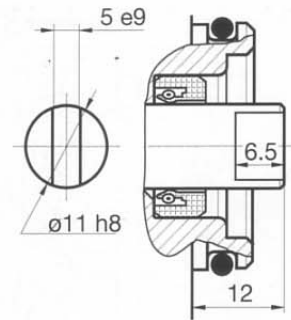
**ALBERI
SHAFTS**



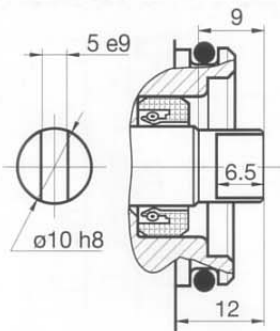
CODICE/CODE	C		
PER FLANGE/FOR FLANGES	A	G	4
	A	0	4



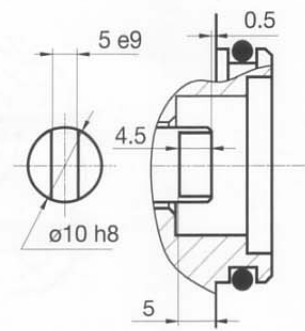
CODICE/CODE	F		
PER FLANGE/FOR FLANGES	A	G	4
	A	0	4



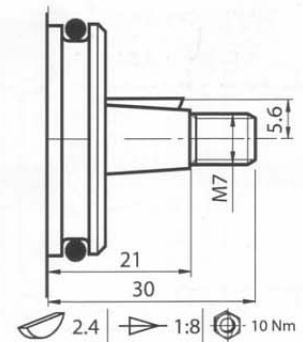
CODICE/CODE	F		
PER FLANGE/FOR FLANGES	B	G	1
	B	0	1



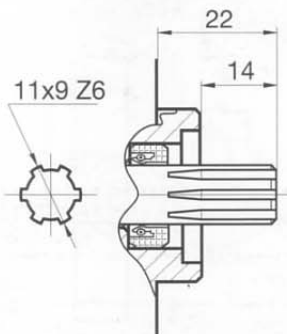
CODICE/CODE	M		
PER FLANGE/FOR FLANGES	B	G	1
	B	0	1



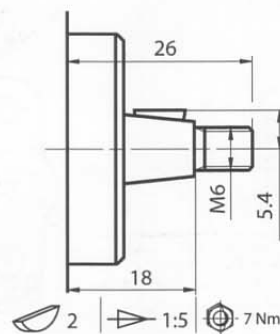
CODICE/CODE	G		
PER FLANGE/FOR FLANGES	B	G	1
	B	0	1



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



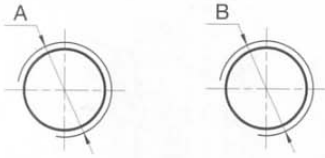
CODICE/CODE	B		
PER FLANGE/FOR FLANGES	B	G	5
	B	0	5

BOCCHIE DI ASPIRAZIONE E MANDATA

INLET AND OUTLET PORTS

ASPIRAZIONE LATERALE
SIDE INLET

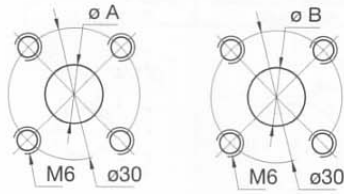
MANDATA LATERALE
SIDE OUTLET



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

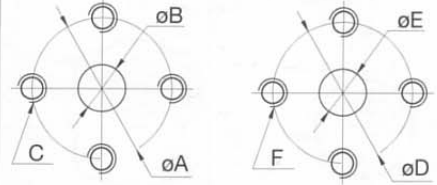
MANDATA LATERALE
SIDE OUTLET



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

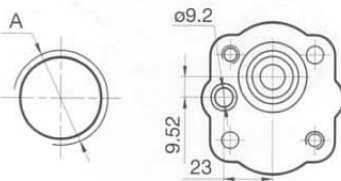
MANDATA LATERALE
SIDE OUTLET



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

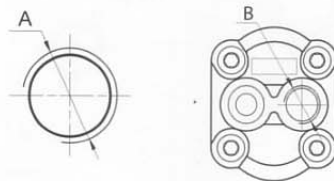
MANDATA ANTERIORE
FRONT OUTLET



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

ASPIRAZIONE LATERALE
SIDE INLET

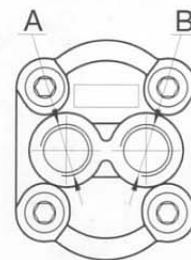
MANDATA POSTERIORE
REAR OUTLET



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

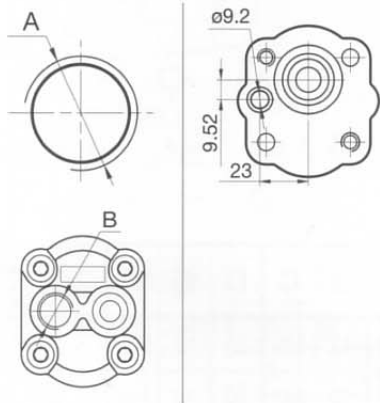


A	B	Codice Code
G 3/8	G 3/8	19
G 3/8	G 1/4	20
G 1/4	G 1/4	21

BOCCHIE DI ASPIRAZIONE E MANDATA

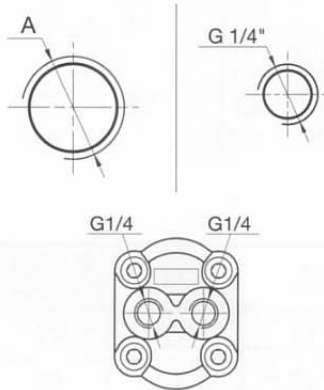
INLET AND OUTLET PORTS

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



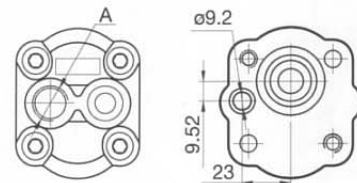
A	B	Codice Code
G 1/4	G 3/8	23
G 1/4	G 1/4	25

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



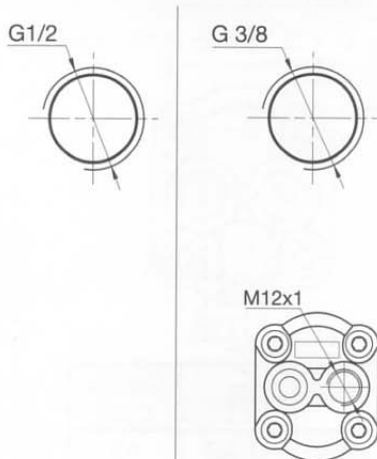
A	Codice Code
G 3/8	22
G 1/4	31

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



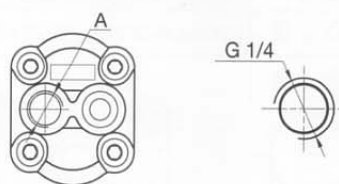
A	Codice Code
G 1/4	24
G 3/8	30

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



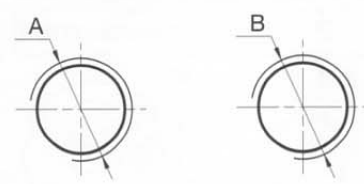
Codice Code	26
-------------	----

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



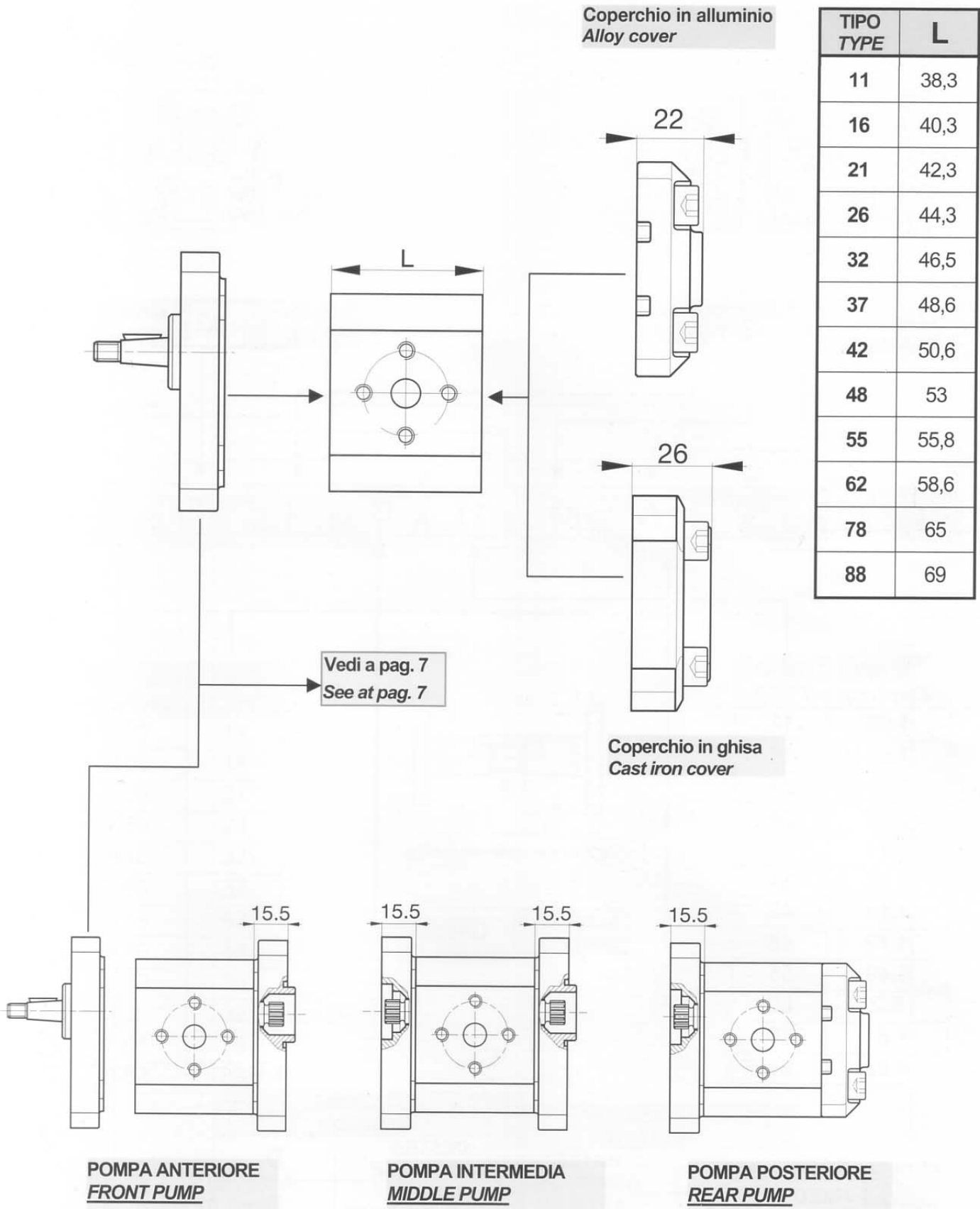
A	Codice Code
G 1/4	40
G 3/8	43

ASPIRAZIONE LATERALE SIDE INLET	MANDATA LATERALE SIDE OUTLET
------------------------------------	---------------------------------

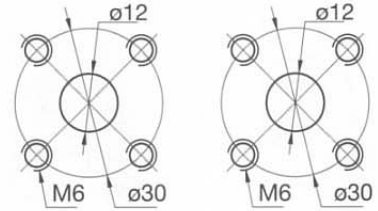
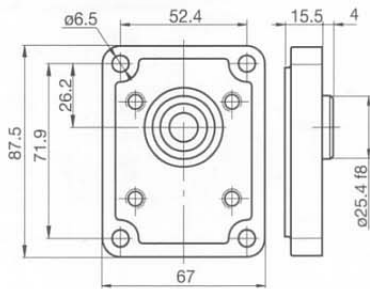


A	B	Codice Code
7/16-20 UNF	7/16-20 UNF	53
9/16-18 UNF	9/16-18 UNF	54

DIMENSIONI D'INGOMBRO
OVERALL DIMENSIONS



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

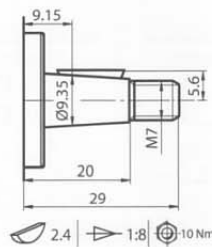


FLANGIA
FLANGE **A** **G** **4**

BOCCHIE
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



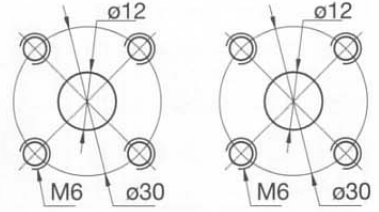
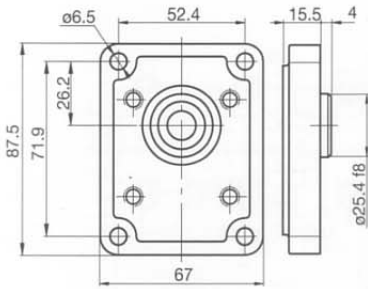
ALBERO
SHAFT **C**

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

PARTE FISSA
FIXED PART

PARTE COMPONENTE
PART TO BE COMPILED

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

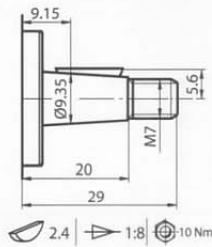


FLANGIA
FLANGE **A** **G** **4**

BOCCHE
PORTS **42**

0 1 Z M **A** **G** 16 C 4 42 D

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



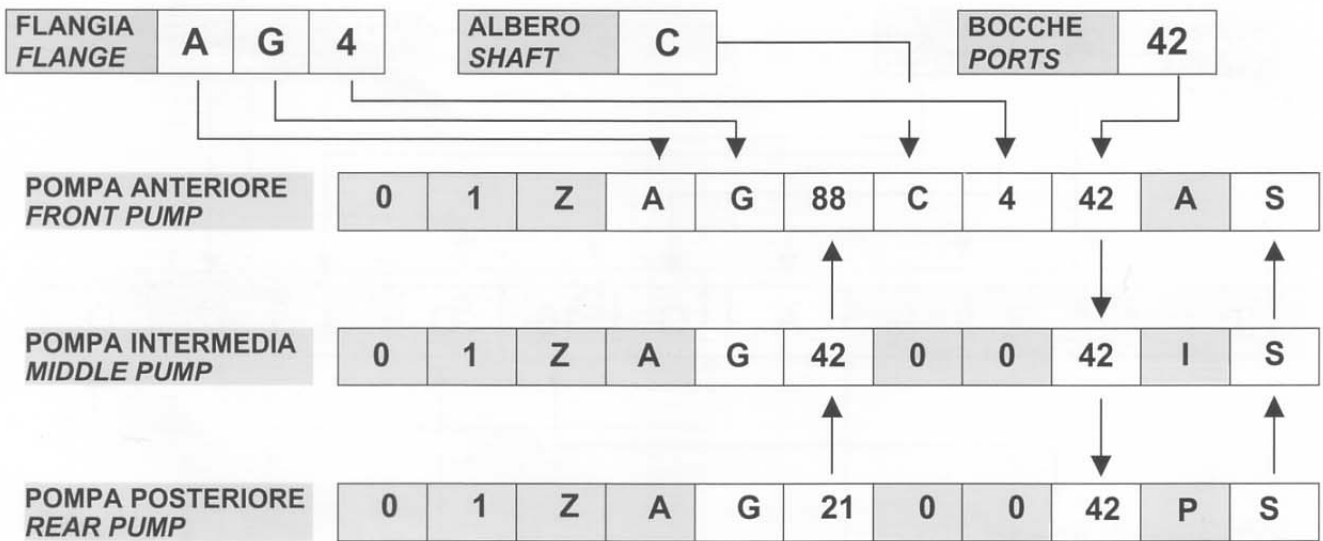
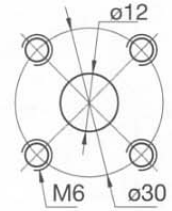
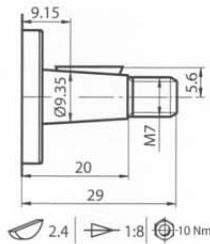
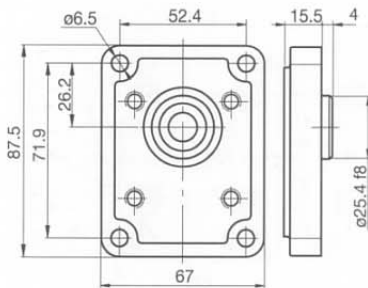
ALBERO
SHAFT **C**

PARTE FISSA
FIXED PART

PARTE COMPONENTE
PART TO BE COMPILED

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

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

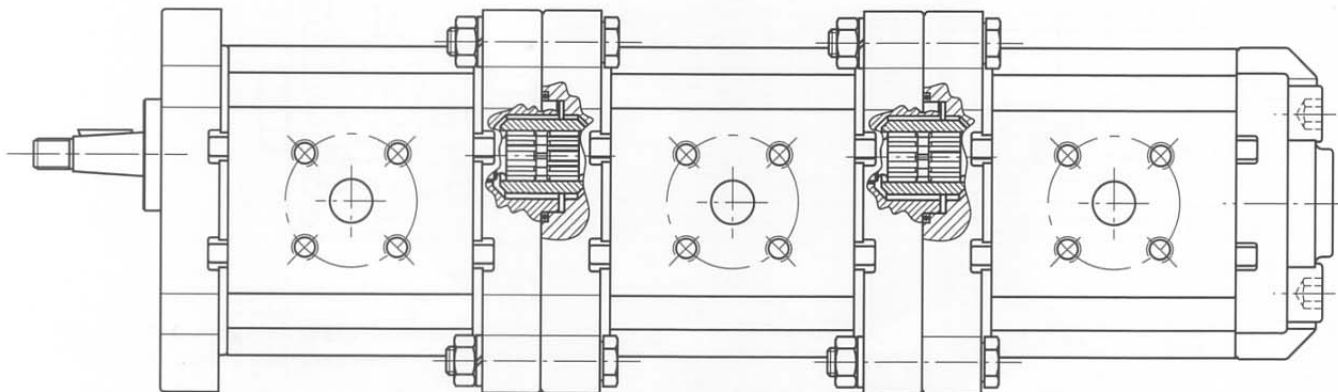


Cm³/giro Cm³/rev	TIPO TYPE
1.08	11
1.59	16
2.09	21
2.59	26
3.15	32
3.68	37
4.19	42
4.79	48
5.49	55
6.2	62
7.81	78
8.82	88

ROTAZIONE ROTATION	
DESTRA CLOCKWISE	D
SINISTRA ANTI-CLOCKWISE	S

- PARTE FISSA
FIXED PART**
- PARTE COMPONIBILE
PART TO BE COMPILED**

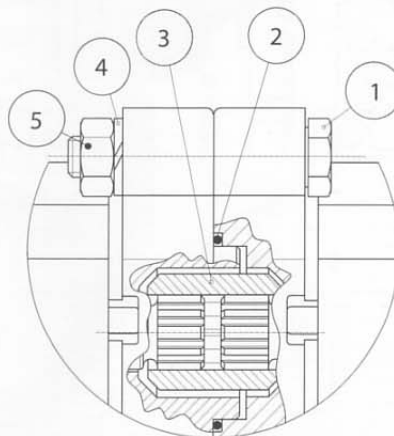
KIT DI MONTAGGIO DELLE POMPE MULTIPLE Z1
ASSEMBLING KIT FOR MULTIPLE PUMPS Z1



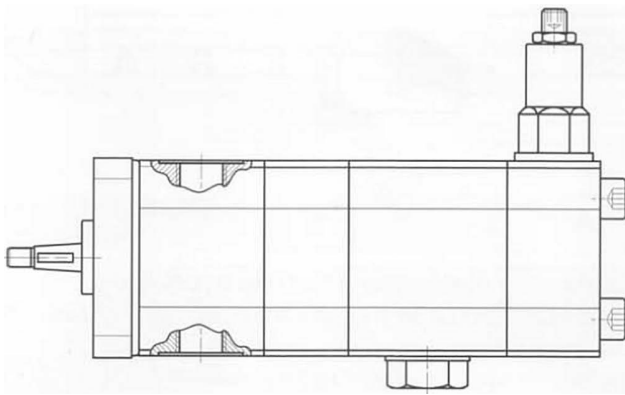
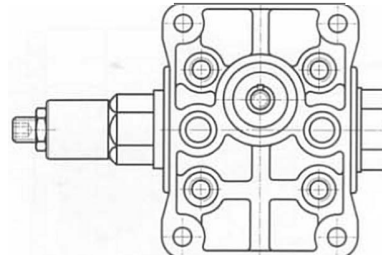
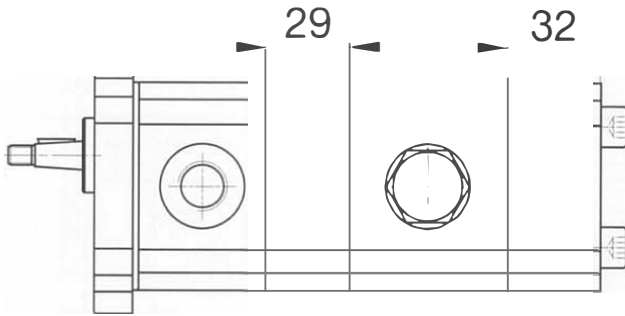
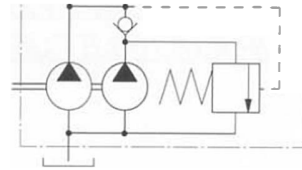
La pressione delle pompe intermedie e posteriori è limitata dalla tenuta del mozzo. La coppia max è **27 Nm**

*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 <i>Coupling</i>
4	Rosetta <i>Washer</i>
5	Dado M6 <i>Stud nut M6</i>
Codice KIT Code KIT	K1000000

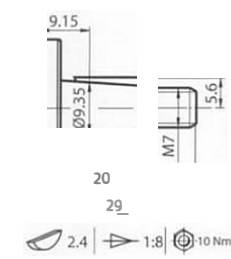
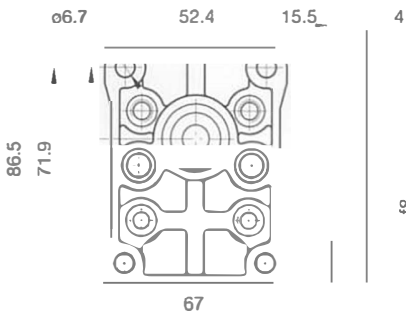


POMPA MULTIPLA Z1 CON VALVOLA DISGIUNTRICE
MULTIPLE PUMPS Z1 WITH SEQUENCE VALVE



La pompa posteriore ha cilindrata massima 5.49 Cm³/giro
 The rear pumps have capacity max 5.49 Cm³/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

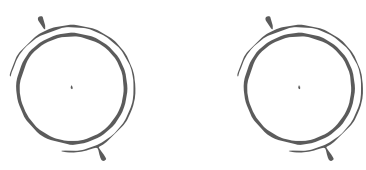


**ALBERO
SHAFT** C

**FLANGIA
FLANGE** A 0 4

Anteriore / Front
 Posteriore / Rear

**CODICE
CODE** 0 1 Z A 0 D 11 55 C 4 01 S
 G 3/8" G 3/8"



**BOCCHIE
PORTS** 01

ROTAZIONE ROTATION	
DESTRA CLOCKWISE	D
SINISTRA ANTI-CLOCKWISE	S

PARTE FISSA
FIXED PART
 PARTE COMPONENTE
PART TO BE COMPILED