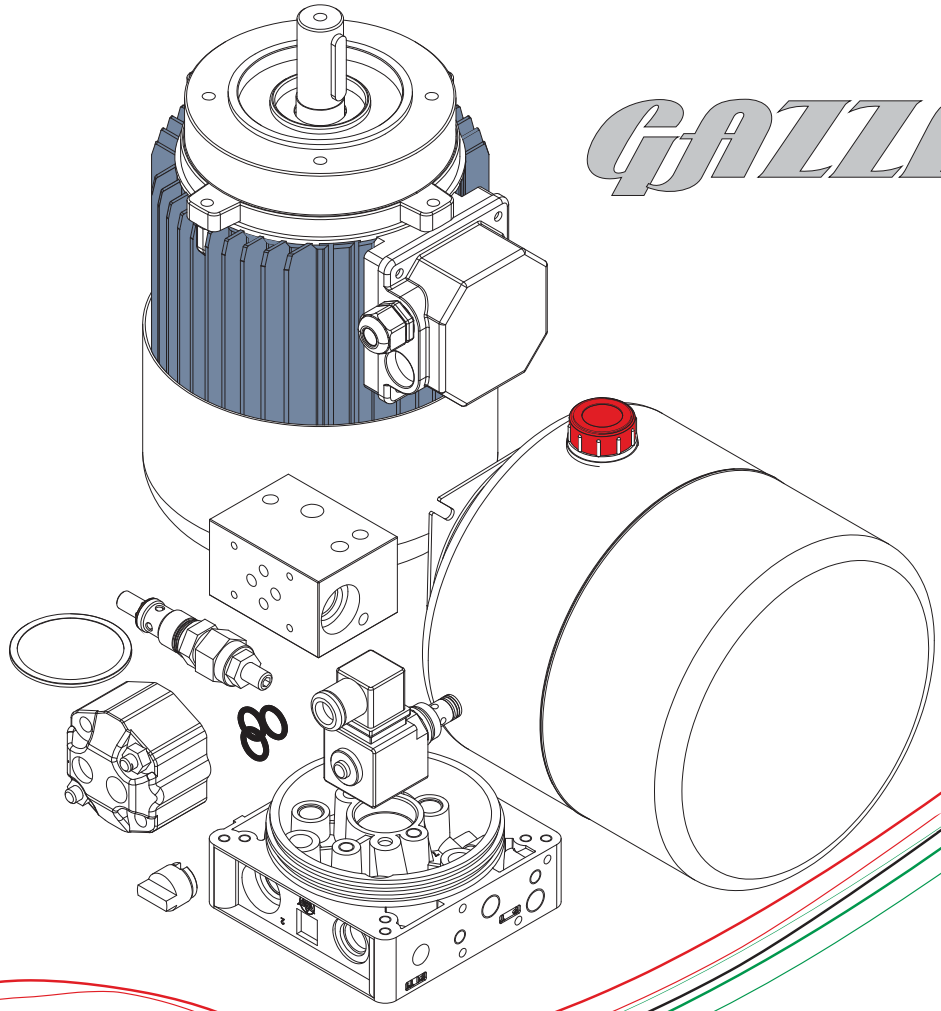
GAZZERA SRL

hydraulic division



HYDRAULIC POWER PACK

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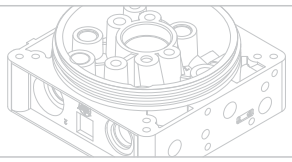
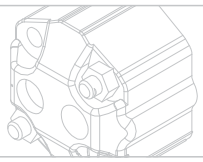
italian quality
since 1989

2020/a

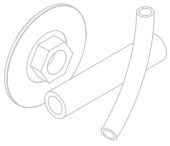
1 Collettori centrali
central manifolds



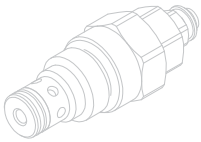
2 Pompe
pumps



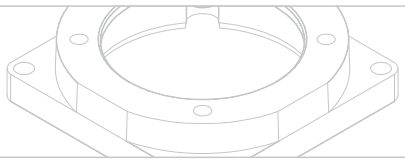
3 Aspirazione e scarico
suction and return



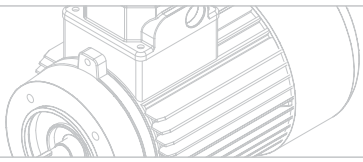
4 Valvole e tappi
valves and plugs



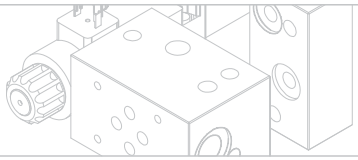
5 Elementi di connessione
junction elements



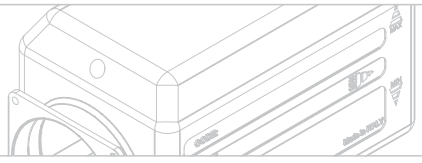
6 Motori elettrici
electric motors



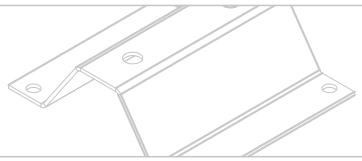
7 Elementi modulari
modular elements



8 Serbatoi
oil tanks



9 Accessori
accessories



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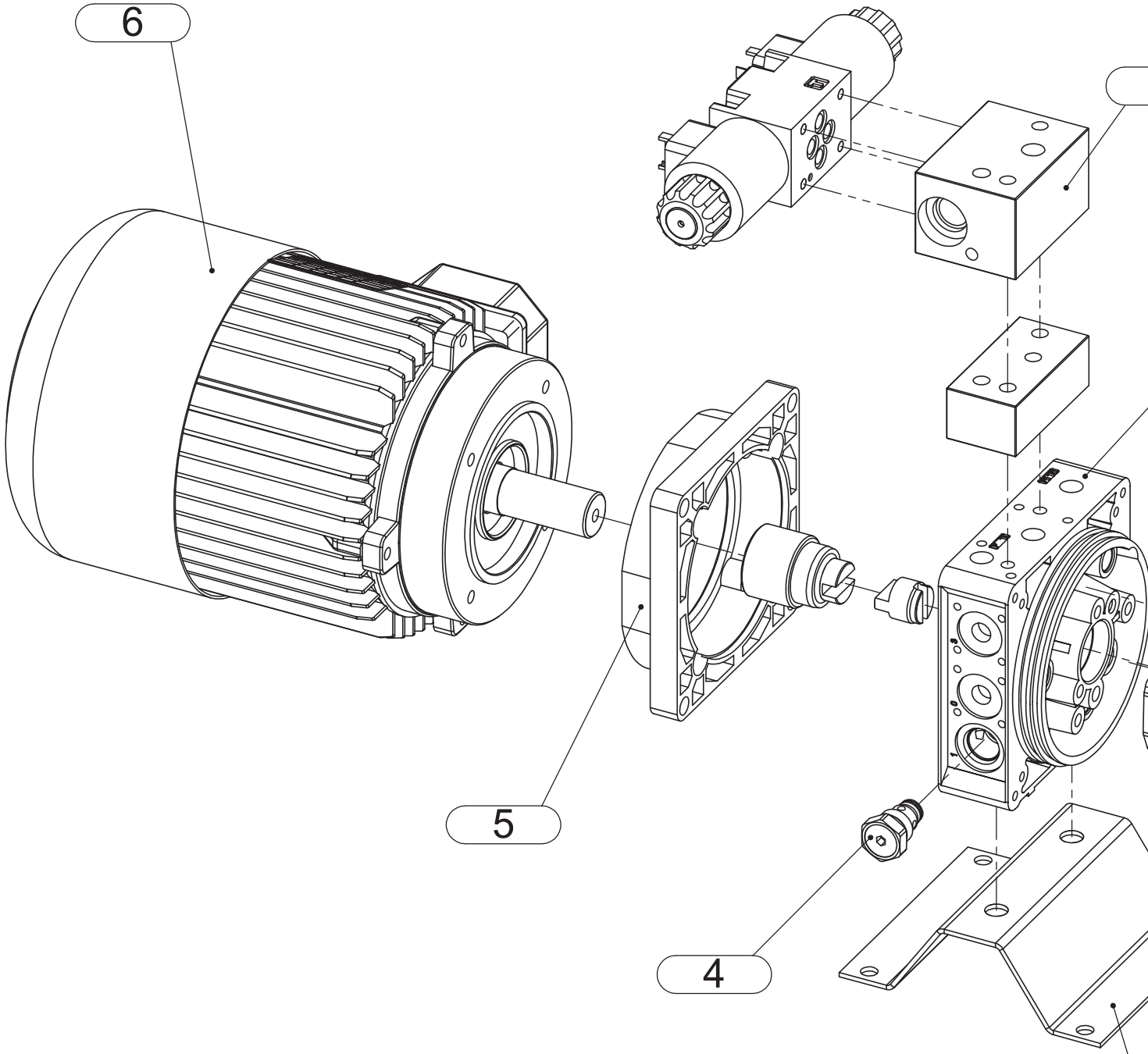

Cap.	Descrizione - *description*	Pag.
1	Collettore centrale - *central manifold*	2
2	Pompe - *pump*	12
3	Aspirazione e scarico - *suction and return*	15
4	Valvole e tappi - *valves and plugs*	22
5	Elementi di connessione - *junction elements*	40
6	Motori elettrici - *electric motors*	44
7	Elementi modulari - *modular elements*	48
8	Serbatoi - *oil tanks*	56
9	Accessori - *accessories*	69

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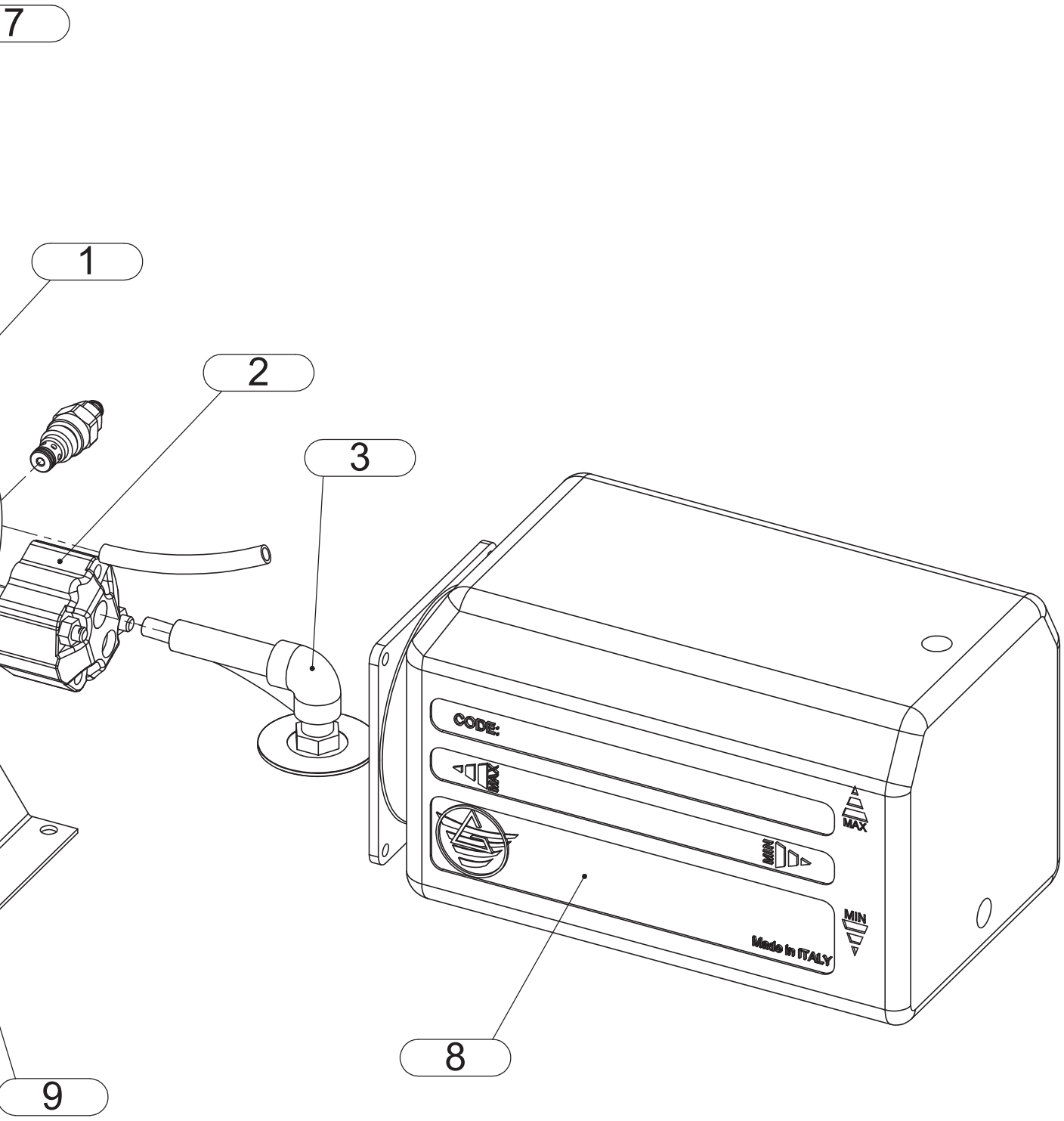


Limiti di funzionamento - *working constraints*

Temperatura olio - *oil temperature*
temperatura ambiente -15 +40 °C (con picchi di 50°C)
environment temperature -15 +40 °C (with peaks of 50°C)

Viscosità - *viscosity*
min 15 mm^2/s
max 80 mm^2/s
massima viscosità all'avviamento - *max viscosity at start up* 250 mm^2/s

Pressione - *pressure*
Pressione massima in funzione della pompa e della valvola di massima montate
maximum pressure depending on pump and relief valve used

Istruzioni di montaggio
mounting istructions

Valvole ed elettrovalvole devono essere ingrassate in corrispondenza di tutti gli o-ring montati su di esse e chiuse con la coppia di serraggio indicata sulla scheda tecnica corrispondente.
Valves and solenoid valves must be greased where o-ring are mounted on them and closed with the torque indicated on the data sheet.

Le valvole di massima (con filettatura M20x1,5) sono corredate di rondella in rame che deve essere alloggiata sul codolo della valvola prima della chiusura della stessa.
Relif valves (with M20x1,5 thread) are provided with a copper washer that must be filled on the shank of the valve before the close of it.

Tutti i collari dei serbatoi devono essere ingrassati prima dell'accoppiamento con i corpi centrali e controllare che siano lisci, esenti da bave o da scorie di saldatura.
All the tank's collars must be greased before coupling with the center manifolds and check that they are smooth and free of burrs or welding slag.

I giunti motore ed i giunti pompa devono essere ingrassati nelle zone di accoppiamento.
Motor couplings and pump couplings must be greased in the coupling zones.

Il montaggio della pompa deve avvenire previo ingrassaggio del codolo anteriore che accoppierà con il centraggio del corpo. La chiusura delle due viti deve essere effettuata con una coppia di serraggio indicata sulla scheda tecnica corrispondente.
The pump mounting must be placed after greasing the front shank that will coupling with the centering of the manifold. The closure of the screws must be made with the torque indicated on the data sheet.

Installazione
installation

Non ci sono limiti nella posizione di montaggio, evitare qualsiasi installazione che potrebbe compromettere l'aspirazione della pompa.
Quando la centrale deve essere montata su strutture soggette a vibrazione, sarebbe meglio posizionare dei blocchi anti-vibranti nei punti di fissaggio.
There are no limits in mounting positions, just avoid any istallation that could compromise pump's suction.
When power module is to be fitted on struttures liable to vibrations, it is better to place vibration-clamping blocks in fixing points.

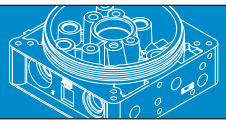
Pulizia e manutenzione
cleaning and maintenance

La sostituzione dell'olio viene effettuata la prima volta dopo 100 ore di lavoro, e poi ogni 3000 ore di lavoro (in ogni caso almeno una volta l'anno).
You have to substitute the oil after 100 hours of duty the first time, and then every 3000 hours of duty (in any case at least once a year).

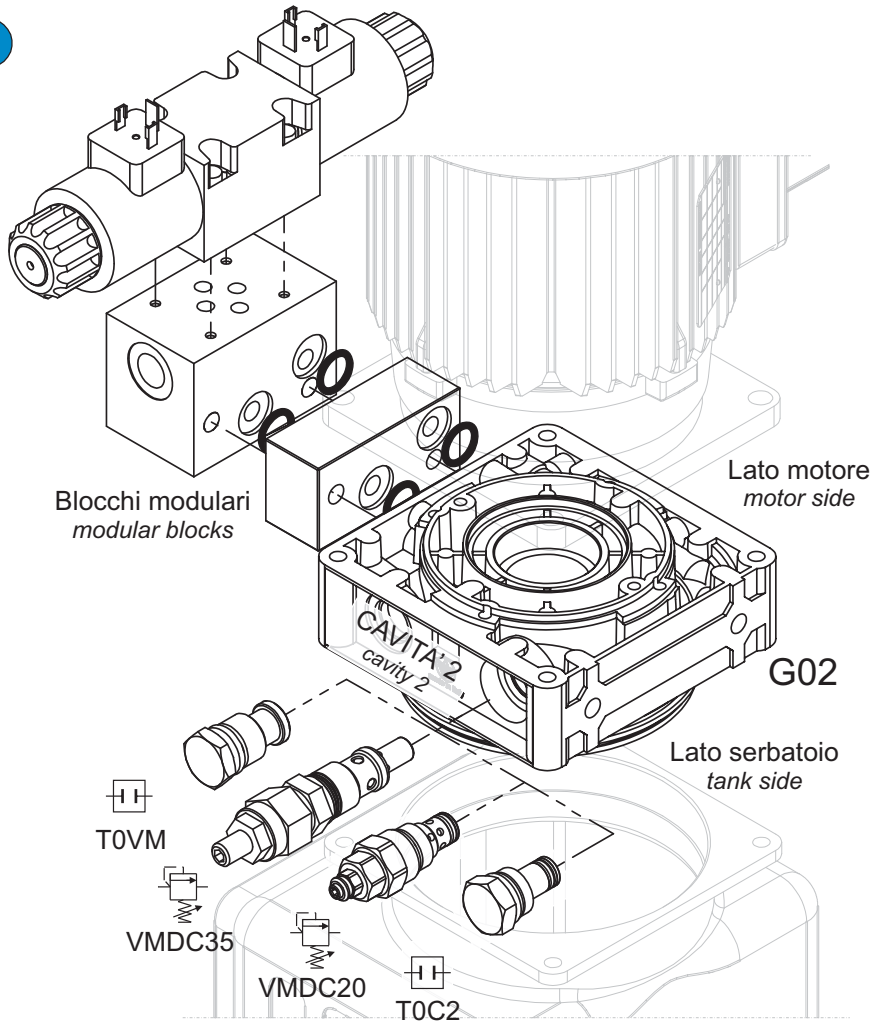
Cablaggio e avviamento
wiring and starting

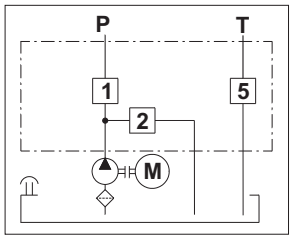
All'avviamento assicurarsi della corretta rotazione della pompa. E' rigorosamente vietato invertire la direzione di rotazione. Effettuare l'avvio previo svitamento totale della valvola di massima pressione.
The starting must assure proper pump direction of rotation. It is strictly forbidden to invert the direction of rotation. The start-up must be done after the total unscewing of the relief valve.

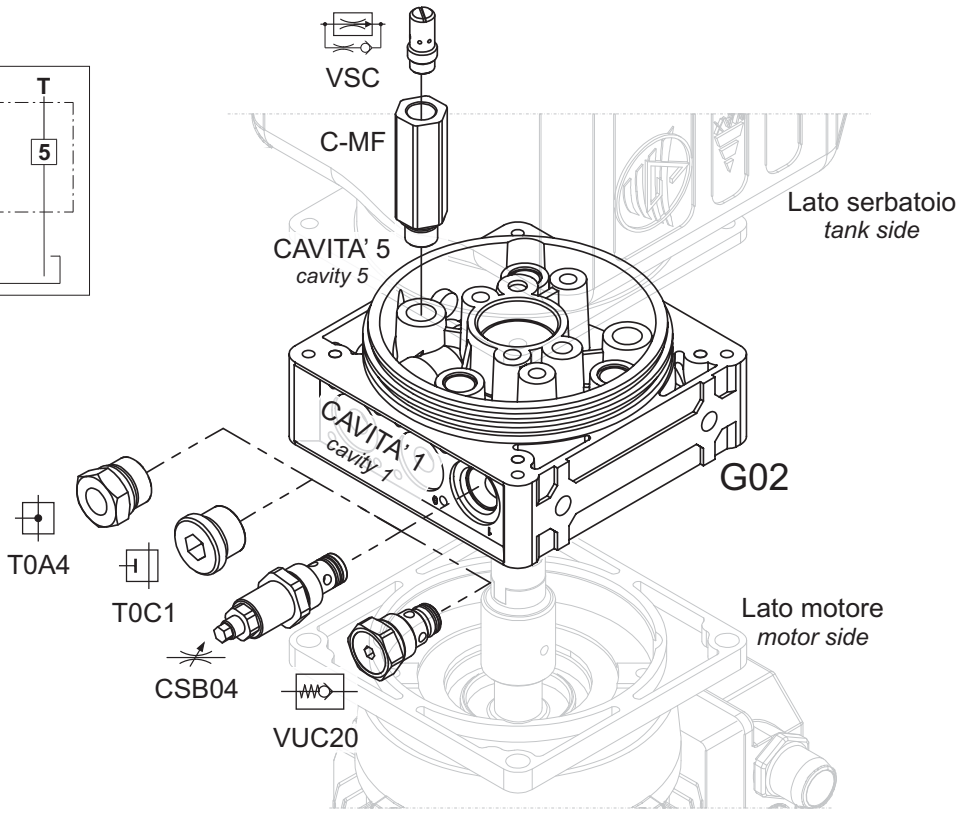
Collettori centrali
central manifolds



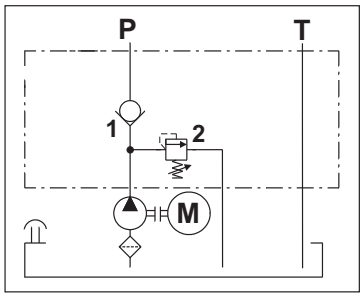
G02

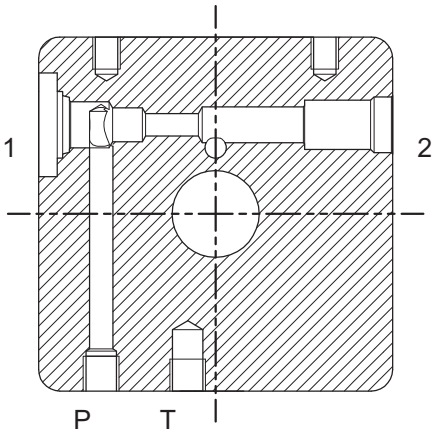


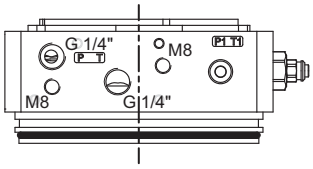


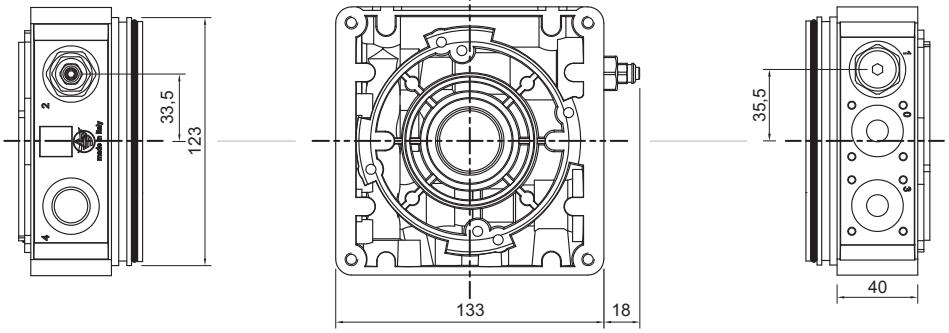


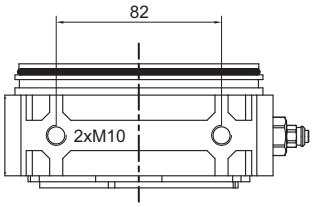
G02

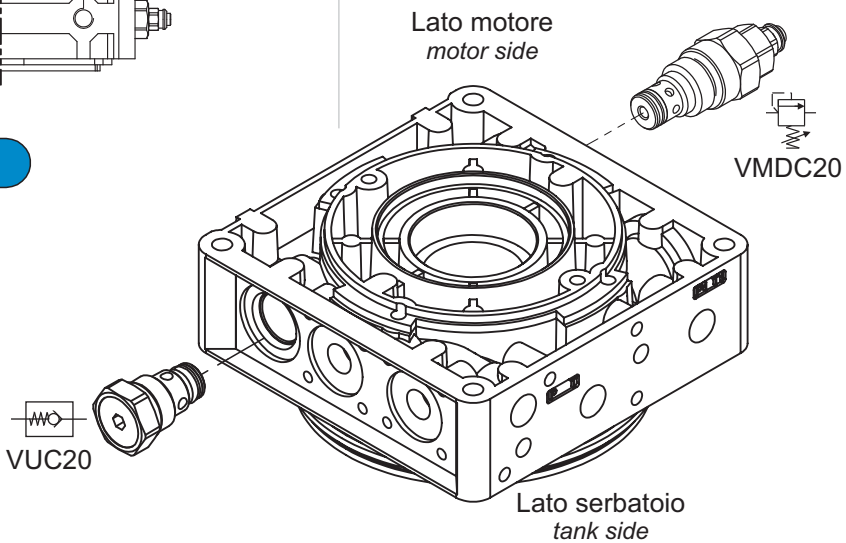












Codice ordinazione - *ordering code*

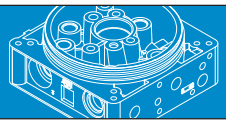
G	0	2
1		2

1 Tipo - *type*

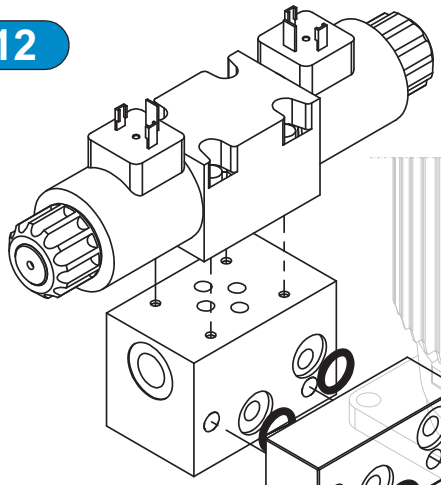
G0 = Collettore 2 cavità
central manifold 2 cavities

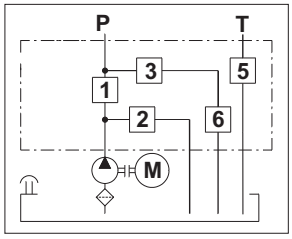
2 Serie - *series*

0 = M20x1,5
2 = 3/4" - 16 UNF (std)



G12





Blocchi modulari
modular blocks

Lato motore
motor side

G12

CAVITA' 2
cavity 2

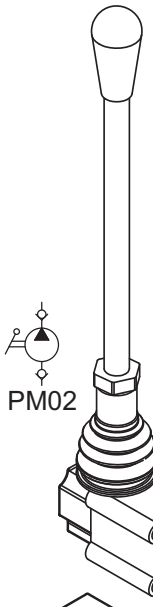
Lato serbatoio
tank side

T0VM

VMDC35

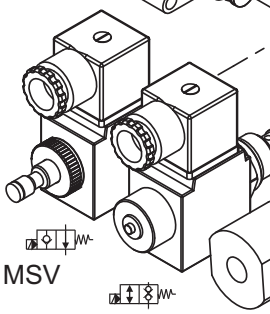
VMDC20

T0C2



PM02

CM04L



MSV

MDV

VPN

CPE

CSB04

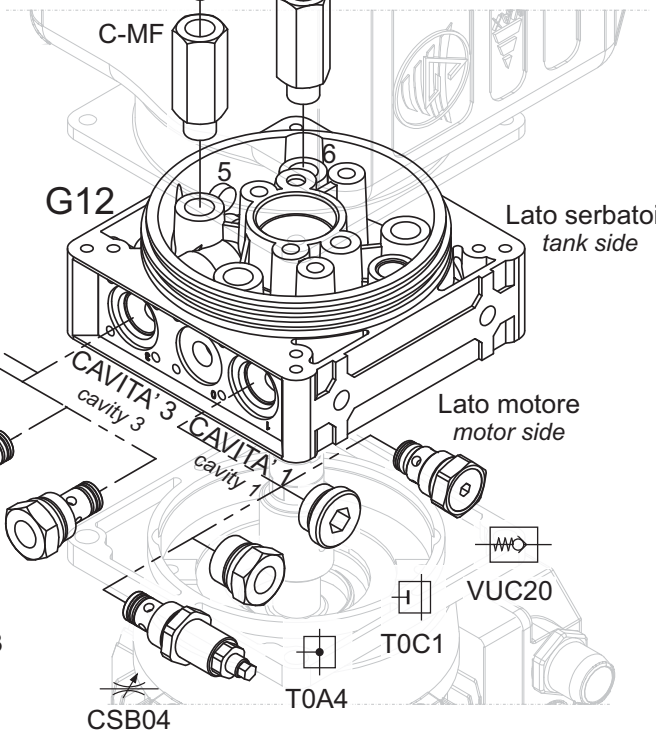
T0C2

T0A2

T0A3

VSC

C-MF



Lato serbatoio
tank side

Lato motore
motor side

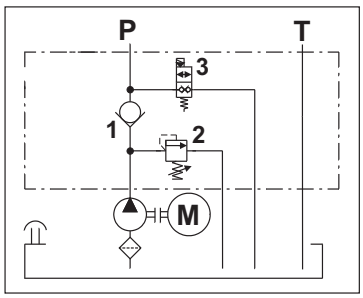
VUC20

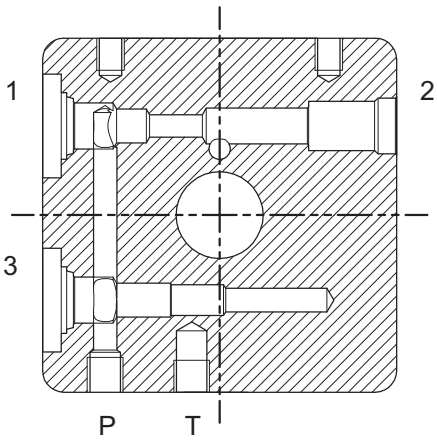
T0C1

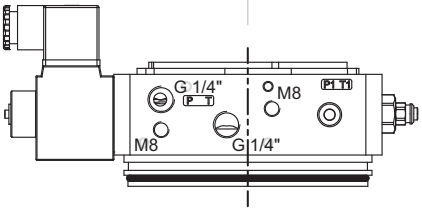
T0A4

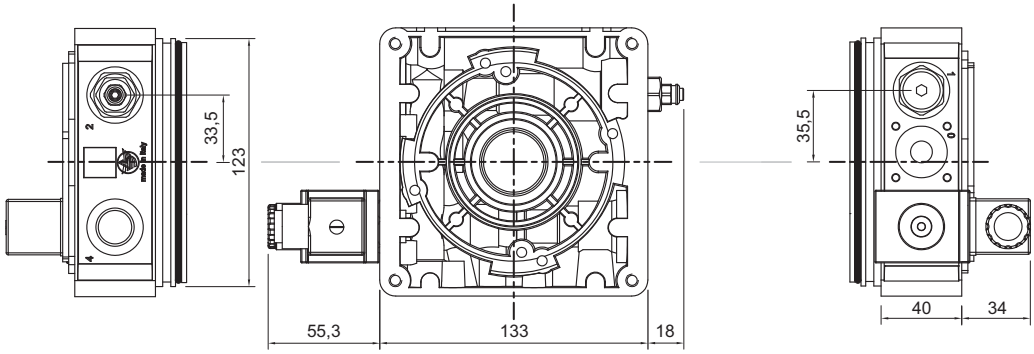
CSB04

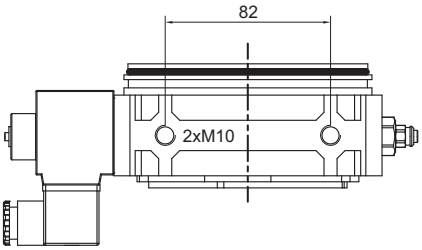
G12

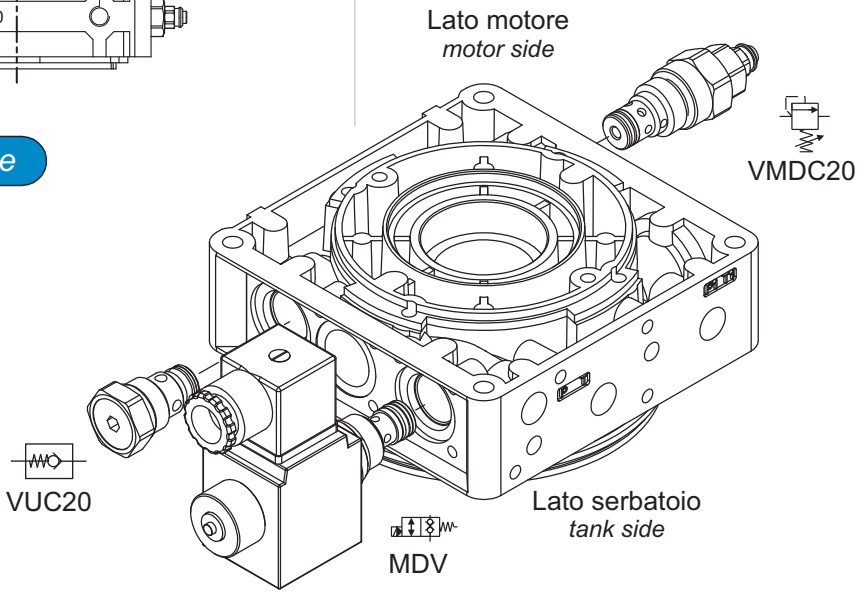












Codice ordinazione - *ordering code*

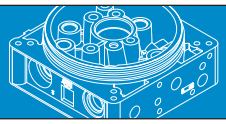
G	1	2
	1	2

1 Tipo - *type*

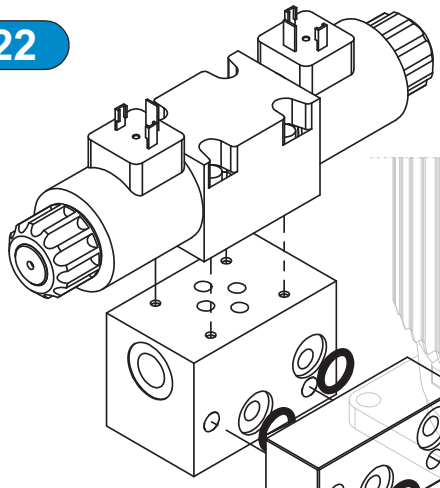
G1 = Collettore 3 cavità
central manifold 3 cavities

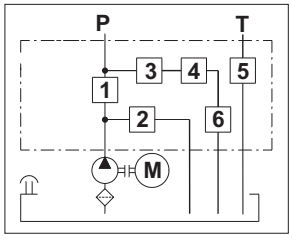
2 Serie (cavità 2 - *cavity 2*)

0 = M20x1,5
2 = 3/4" - 16 UNF (std)



G22





Lato motore
motor side

G22

Blocchi modulari
modular blocks

T0C1

Cav. 4

T0A2

VSC6

CSB04

CSC04

T0VM

Lato serbatoio
tank side

Cav. 2

VMDC35

VMDC20

T0C2

PM02

CM04L

VSC

C-MF

5

6

G22

Lato serbatoio
tank side

MSV

MDV

VPN

CPE

CSB04

T0C2

T0A2

T0A3

CAVITA' 3
cavity 3

CAVITA' 1
cavity 1

Lato motore
motor side

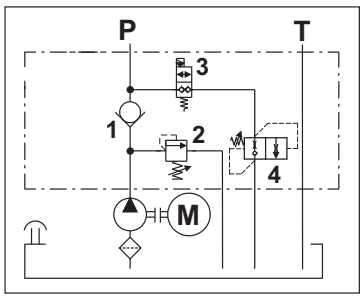
VUC20

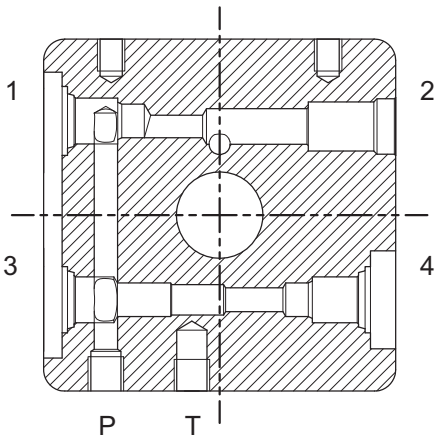
T0C1

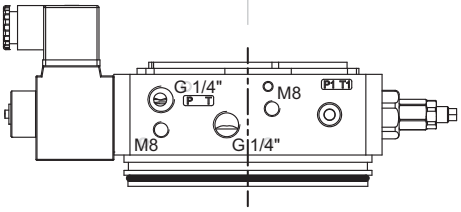
T0A4

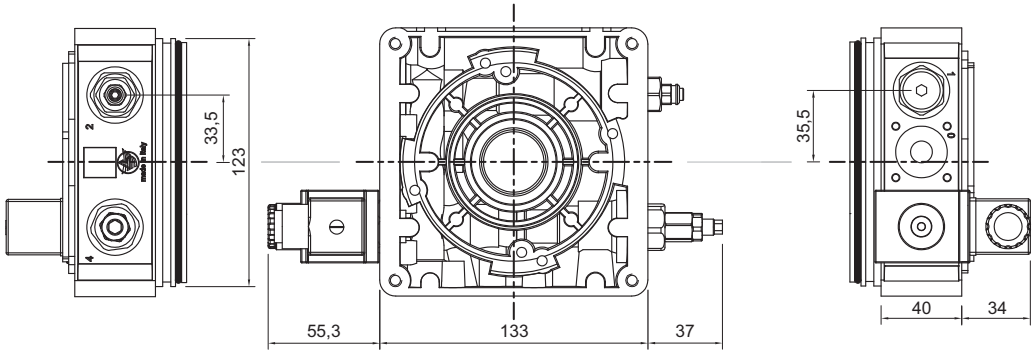
CSB04

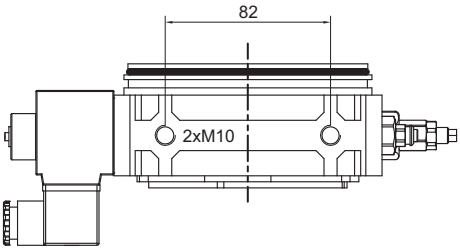
G22

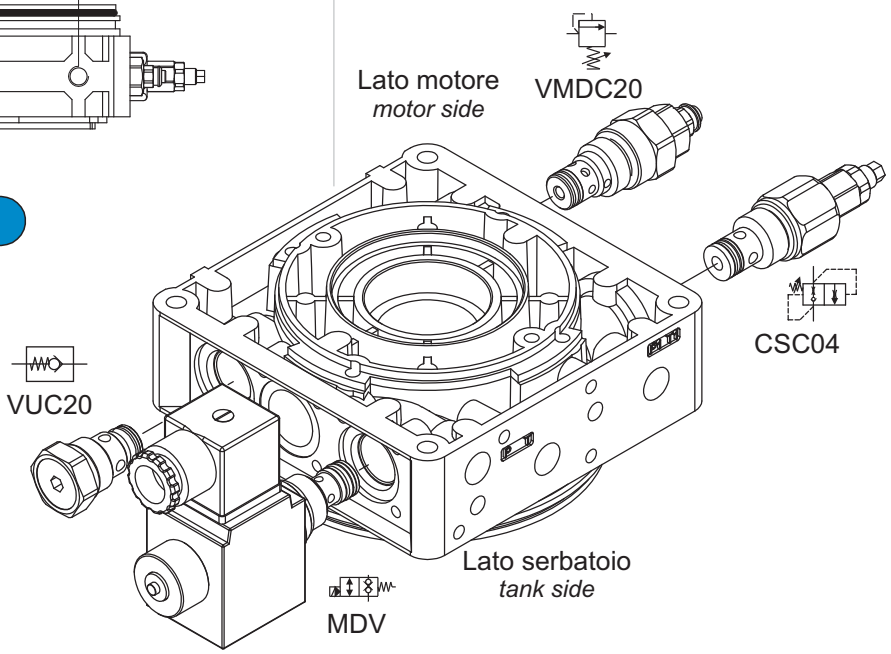












Codice ordinazione - *ordering code*

G	2	2
	1	2

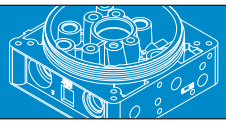
1 Tipo - *type*

G2 = Collettore 4 cavità
central manifold 4 cavities

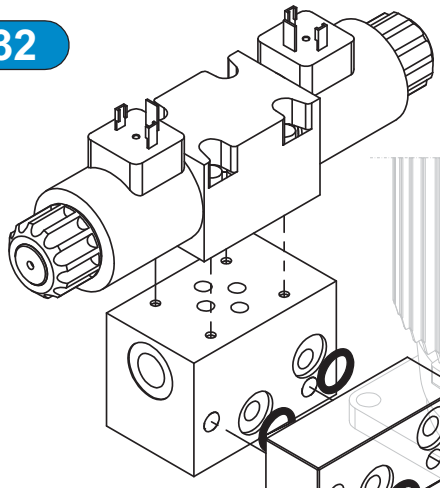
2 Serie - *series*

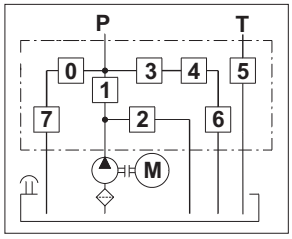
0 = M20x1,5
2 = 3/4" - 16 UNF (std)

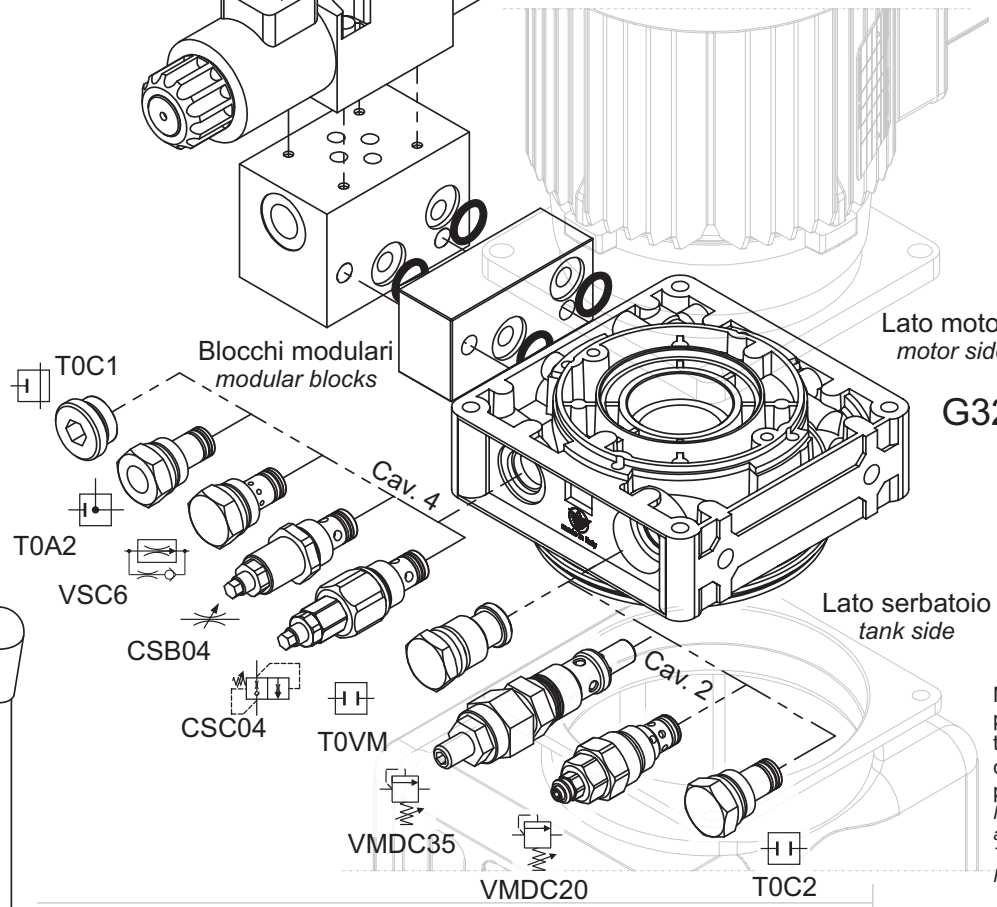
Collettori centrali
central manifolds



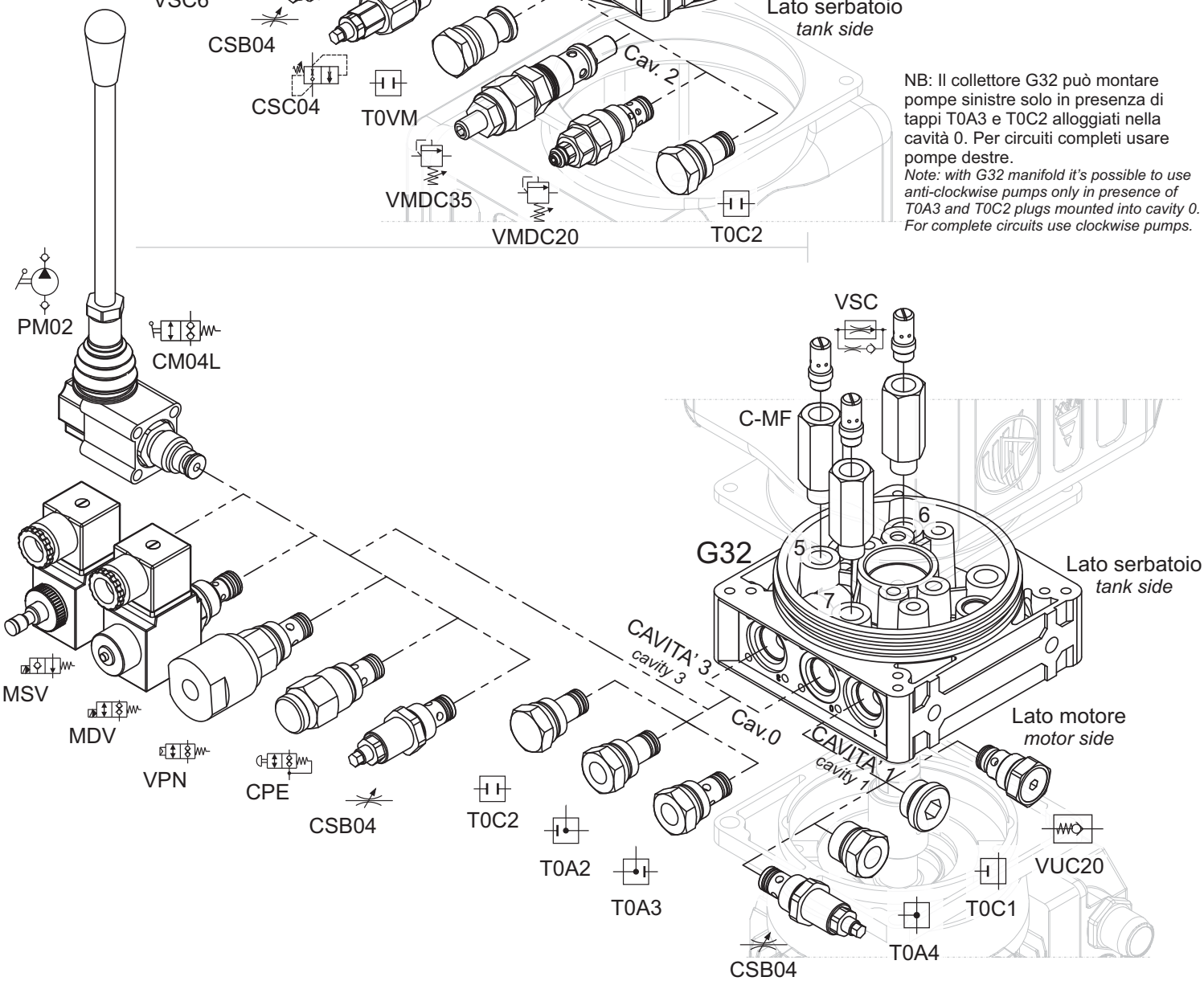
G32



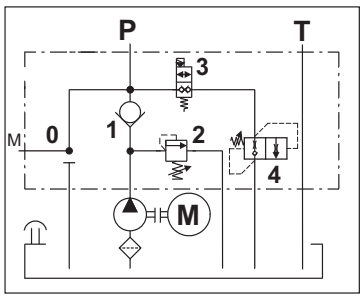


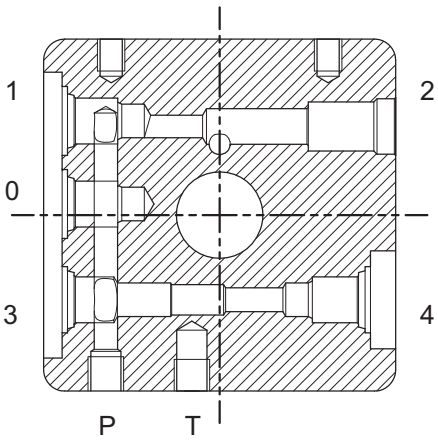


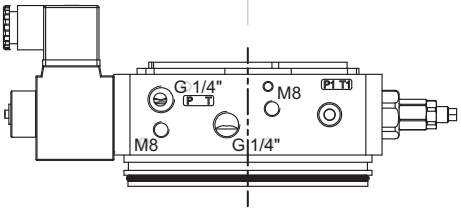
NB: Il collettore G32 può montare pompe sinistre solo in presenza di tappi T0A3 e T0C2 alloggiati nella cavità 0. Per circuiti completi usare pompe destre.
Note: with G32 manifold it's possible to use anti-clockwise pumps only in presence of T0A3 and T0C2 plugs mounted into cavity 0. For complete circuits use clockwise pumps.



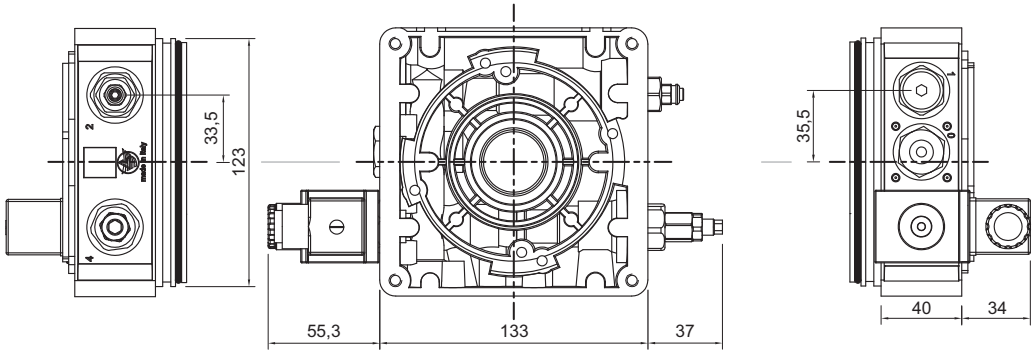
G32

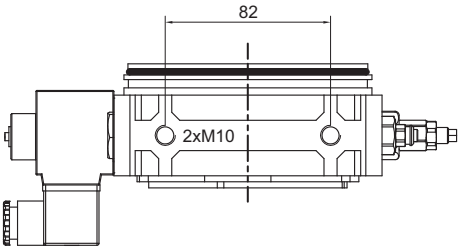


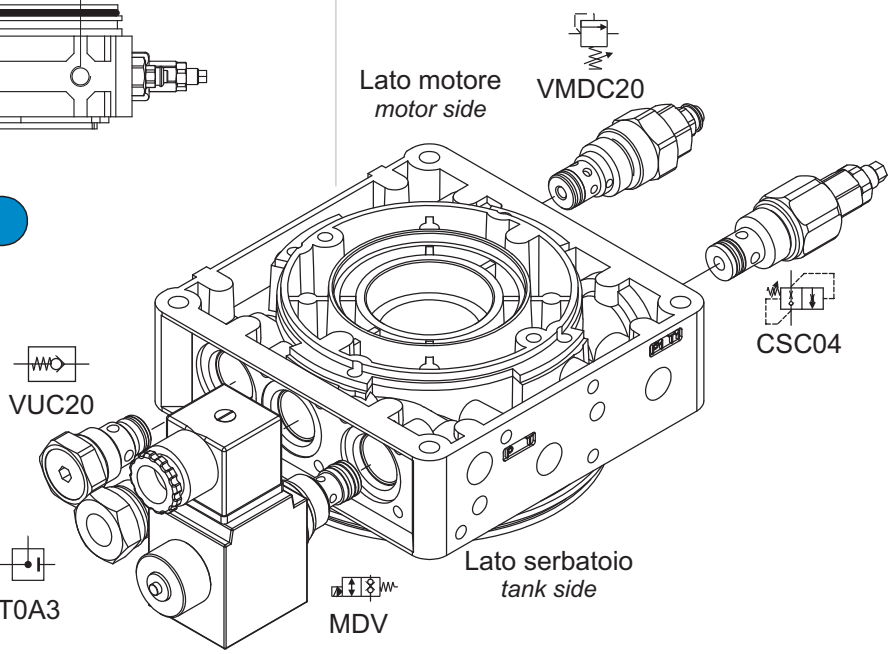




NB: Il collettore G32 può montare pompe sinistre solo in presenza di tappi T0A3 e T0C2 alloggiati nella cavità 0.
Per circuiti completi usare pompe destre.
Note: with G32 manifold it's possible to use anti-clockwise pumps only in presence of T0A3 and T0C2 plugs mounted into cavity 0. For complete circuits use clockwise pumps.







Codice ordinazione - *ordering code*

G	3	2
	1	2

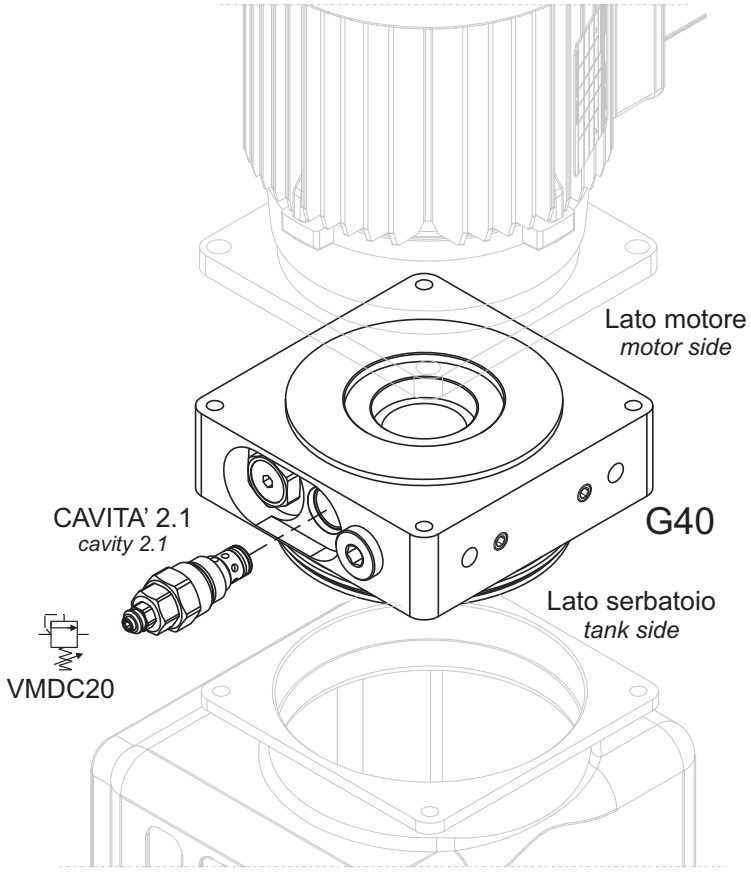
1 Tipo - *type*

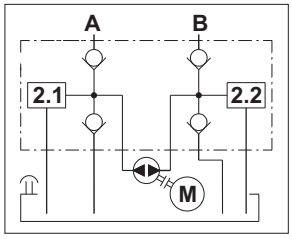
G3 = Collettore 5 cavità
central manifold 5 cavities

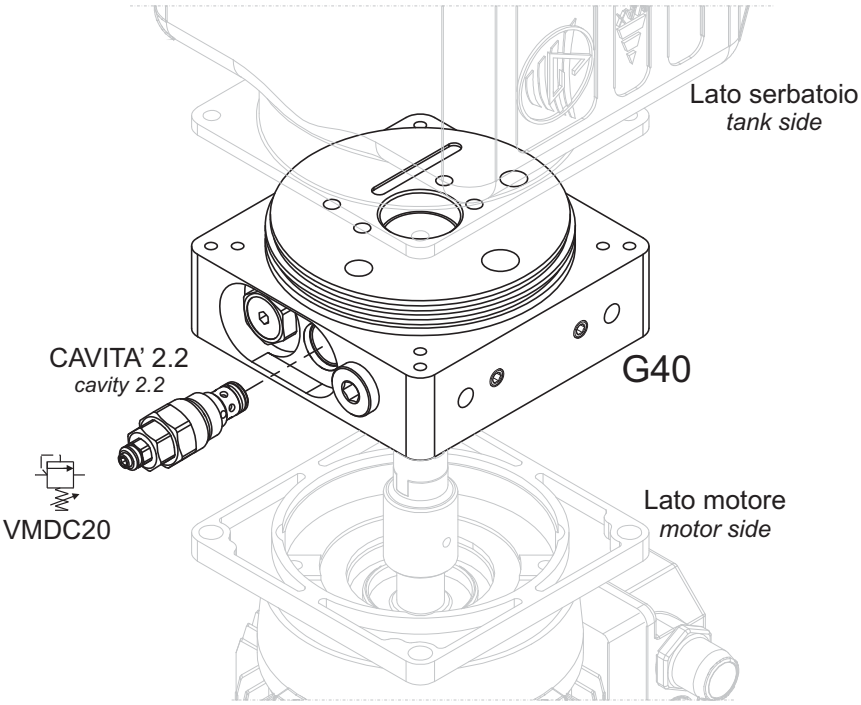
2 Serie - *series*

0 = M20x1,5
2 = 3/4" - 16 UNF (std)

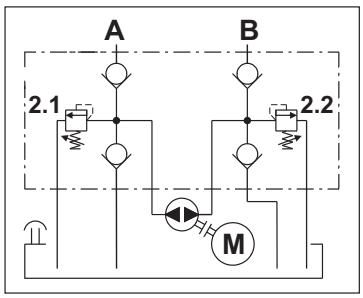
G40

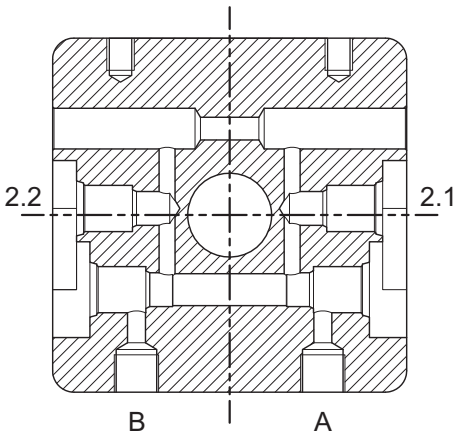

Lato motore
motor side
CAVITA' 2.1
cavity 2.1
G40
Lato serbatoio
tank side
VMDC20

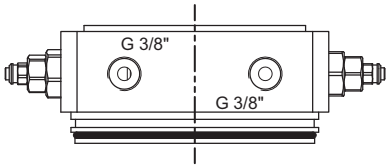

A
B
2.1
2.2
M

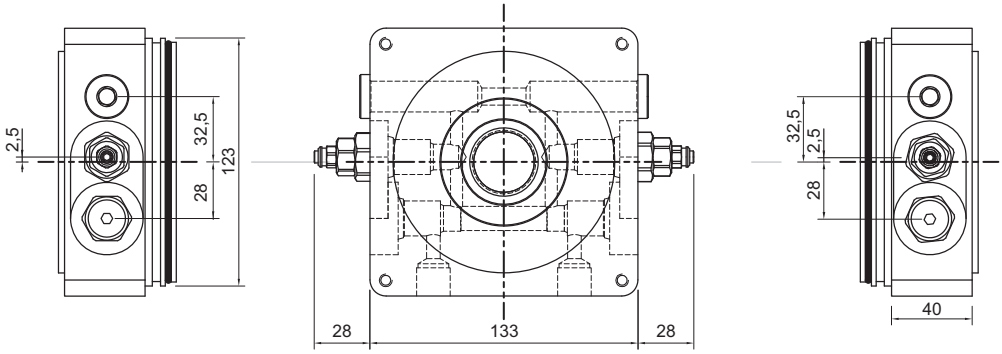

Lato serbatoio
tank side
CAVITA' 2.2
cavity 2.2
G40
VMDC20
Lato motore
motor side

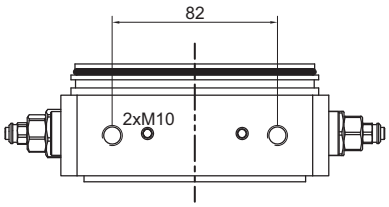
G40

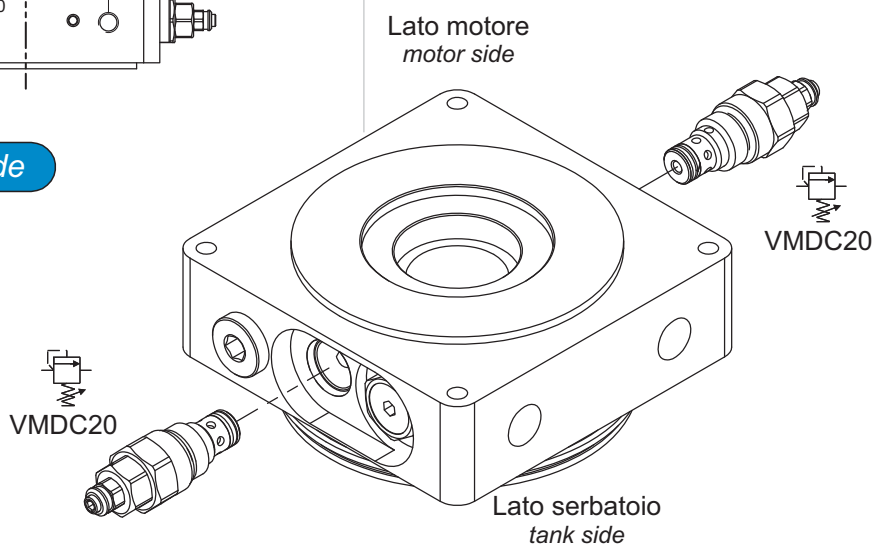












Codice ordinazione - *ordering code*

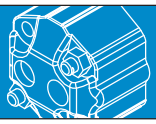
G	4	0
1		2

1 Tipo - *type*

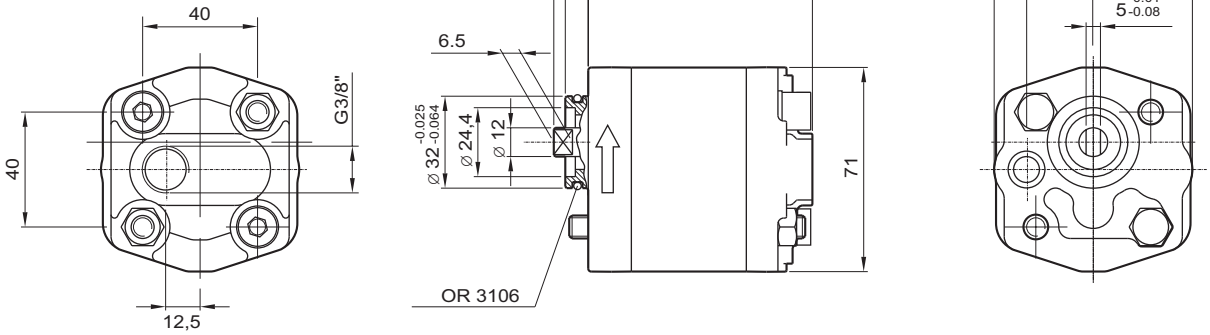
G4 = Collettore reversibile
reversible central manifold

2 Serie - *series*

0 = Standard



Pompe ad ingranaggi singole - *single gear pumps*



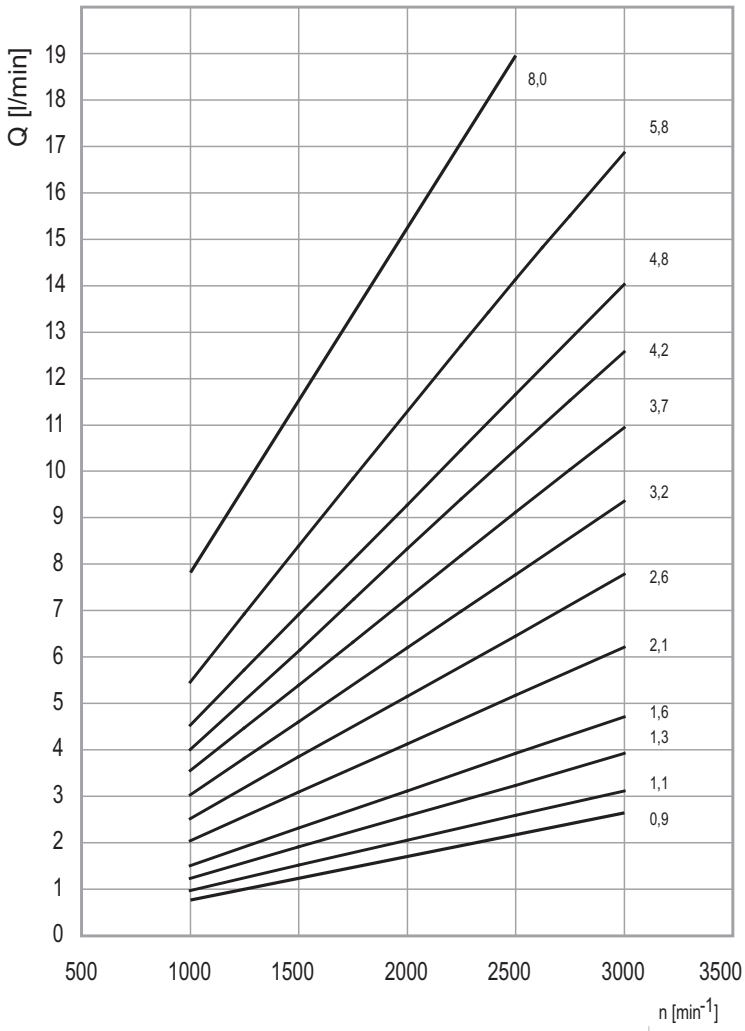
Pompe standard rotazione sinistra. Rotazione destra su richiesta.
Standard pump anti-clockwise rotation. Clockwise rotation on request.

Montaggio pompa: n°2 viti M8, con coppia di serraggio fissata a 23 ÷ 24 Nm.
To mount the pump: nr. 2 M8 screws, with a torque wrench setting fixed at 23 ÷ 24 Nm.

Modelli - *models*

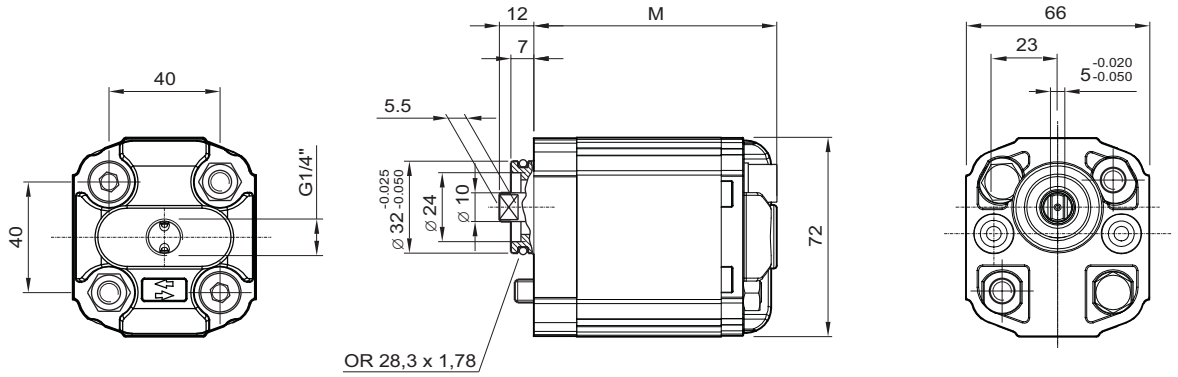
Code	cc/rev	P.max	M mm
PA109	0,9	210	47
PA111	1,1	210	47,5
PA113	1,3	210	48,5
PA116	1,6	210	49,5
PA121	2,1	210	51
PA126	2,6	210	53
PA132	3,2	190	54,5
PA137	3,7	190	56,5
PA142	4,2	190	58
PA148	4,8	170	60
PA158	5,8	170	63,5
PA180	8,0	160	100

Pompa per applicazione immersa
Immersed pump application



Le curve sono indicative e sono state ottenute alla temperatura di 50 °C, utilizzando olio con viscosità 30 cSt.
Each curve are only indicative and have been obtained at 50 °C, using oil with viscosity 30 cSt.

Pompe reversibili - *reversible pumps*

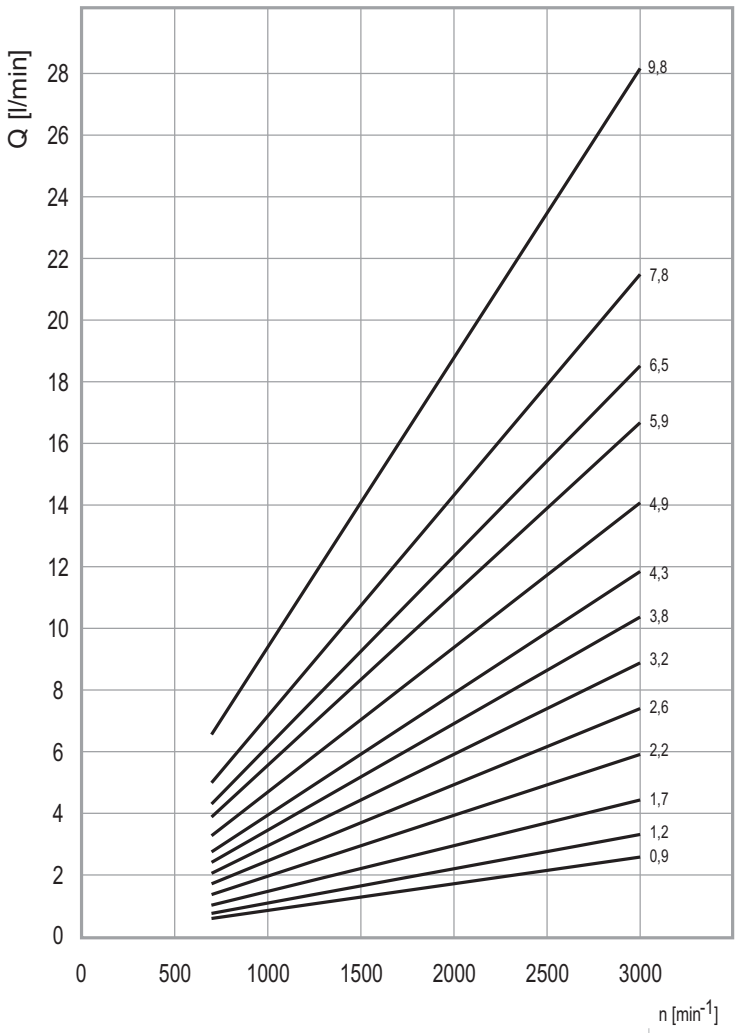


Pressione massima drenaggio 0,3 ÷ 0,5 bar.
Max drain pressure: 0,3 ÷ 0,5 bar.

Montaggio pompa: n°2 viti M8, con coppia di serraggio fissata a 24,5 ÷ 29,4 Nm.
To mount the pump: nr. 2 M8 screws, with a torque wrench setting fixed at 24,5 ÷ 29,4 Nm.

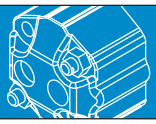
Modelli - *models*

Code	cc/rev	P.max	M mm
PR109	0,9	240	77,1
PR112	1,2	250	78
PR117	1,7	250	79
PR122	2,2	250	81,5
PR126	2,6	250	83,5
PR132	3,2	250	85,5
PR138	3,8	250	87,5
PR143	4,3	250	89,5
PR149	4,9	250	92,5
PR159	5,9	250	96
PR165	6,5	250	97,5
PR178	7,8	220	102,5
PR198	9,8	190	111,5



Pompa per applicazione immersa
Immersed pump application

Le curve sono indicative e sono state ottenute alla temperatura di 40 °C, utilizzando olio con viscosità 68 cSt.
Each curve are only indicative and have been obtained at 40 °C, using oil with viscosity 68 cSt.



Note

Pulizia dell'impianto e filtrazione
Cleaning and filtering the system

È ormai universalmente riconosciuto che la maggior parte dei prematuri cali di prestazioni delle pompe è dovuta ad un loro funzionamento con fluidi contaminati; l'estrema riduzione delle tolleranze che contraddistinguono i componenti delle pompe e il loro conseguente funzionamento con giochi ridotti, possono essere irrimediabilmente compromessi se non si pone estrema cura nel mantenere il fluido pulito.
It is widely known that most pumps early failures are due to contaminated fluids. The extreme reduction of the tolerances required in the design of the pumps and therefore their operation with minimum clearances, are heavily influenced by a fluid that is not perfectly clean.

È comunemente accertato che le particelle circolanti continuamente nel fluido agiscono come agente abrasivo danneggiando le superfici con cui vengono a contatto e contribuendo alla formazione di ulteriore contaminante.
It is proved that particles circulating in the fluid act as abrasive agents, damaging the surfaces they touch and increasing the quantity of contaminant.

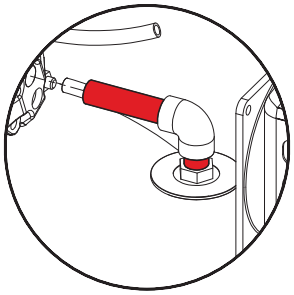
Per questo raccomandiamo di porre molta attenzione alla pulizia in fase di avviamento e al mantenimento della stessa nell'impianto. Gli interventi necessari per controllare e limitare il grado di contaminazione devono essere effettuati in maniera preventiva e correttiva.
For this reason, ensure that system is perfectly clean during startup and keep it clean for its whole operating life. Necessary interventions to check and limit contamination should be performed in a preventive and corrective way.

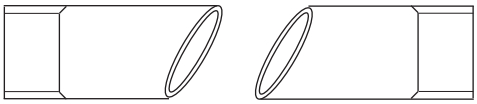
Le azioni preventive comprendono l'accurata pulizia dell'impianto durante la fase di montaggio, la conseguente eliminazione delle bave residue, delle scorie delle saldature ecc., ed il trattamento del fluido prima del riempimento; prevedere una adeguata filtrazione anche al momento del riempimento dell'impianto e comunque ad ogni rabbocco. Dimensionare adeguatamente il serbatoio facendo in modo che abbia una capacità proporzionata al volume del fluido spostato dalla pompa in un minuto di funzionamento.
Preventive actions include: proper cleaning of the system during assembly, deburring, eliminating the welding scum and fluid filtering before filling up. Always pre-filter the fluid when filling up or topping up the system. Fit a proper tank; its capacity should be proportional to the volume displaced by the pump in one working minute.

Il controllo e la correzione dei livelli di contaminazione del fluido durante il funzionamento si ottiene attraverso l'installazione di filtri aventi la funzione di trattenere le particelle trasportate dal fluido. Due sono i parametri che determinano la buona scelta del filtro: il potere assoluto di filtrazione e il rapporto di filtrazione ß. Bassi valori di potere assoluto di filtrazione e alti valori del rapporto di filtrazione ß per particelle di piccole dimensioni concorrono a garantire buone caratteristiche di filtrazione. È pertanto molto importante limitare, oltre alle dimensioni massime, anche il numero delle particelle di più piccole dimensioni che oltrepassano il filtro. Risulta pertanto evidente che, all'aumentare della pressione di esercizio e al grado di sofisticazione dell'impianto, la filtrazione deve diventare sempre più efficace.
Fluid contamination level check and correction during operation can be obtained through filters that retain the particles in the fluid. Two parameters tell which filter is most suitable: absolute filtering power and ß filtering ratio. Low absolute filtering power and high ß filtering ratio for small particles help ensuring good filtration. It is then very important to limit not only max. dimensions, but also the number of smaller particles that pass through the filter. It goes without saying that with an operating pressure increase and according to the system sophistication degree, filtering should become more and more efficient.

EPD60R 3/8

Serie tubi di aspirazione G3/8" in EPD
Series of EPD G3/8" suction hoses

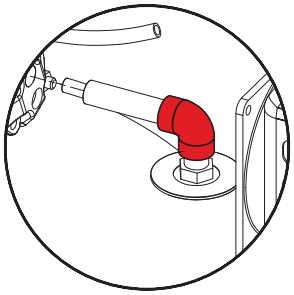


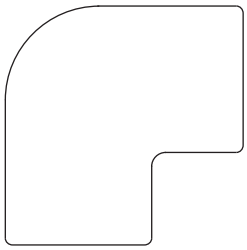


Lunghezze disponibili *available lenghts*		
30	40	60
80	100	120
140	160	180
185	200	225
250	350	385

E602

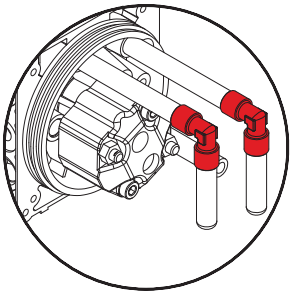
Raccordo G3/8" in PVC 90° per kit aspirazione orizzontale
90° G3/8" PVC fitting for horizontal suction kit

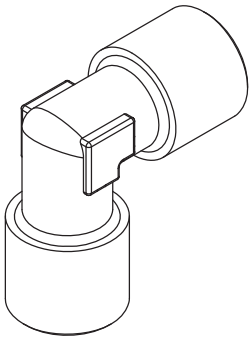




SZ31440

Raccordo G1/4" in ottone nichelato 90° per kit di scarico
90° G1/4" nickel-plated brass fitting for return kit

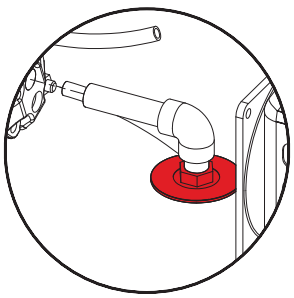


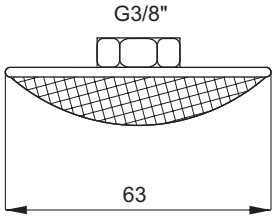


Raccordo per kit di scarico ad uso orizzontale (KR)
Fitting for return kit to horizontal use (KR)

FT90

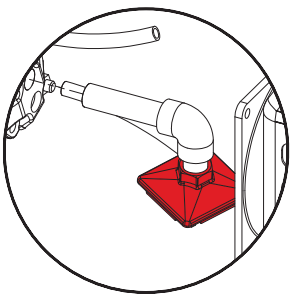
Elemento filtrante 90µ Reps FeZN 12 lt/min ΔP 0,1 bar
Filtering element 90µ Reps FeZN 12 lt/min ΔP 0,1 bar

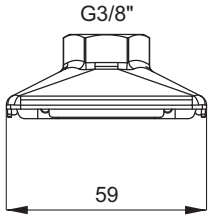




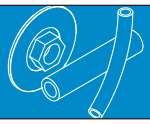
FT180

Elemento filtrante 180µ Reps FeZN 15 lt/min ΔP 0,1 bar
Filtering element 180µ Reps FeZN 15 lt/min ΔP 0,1 bar



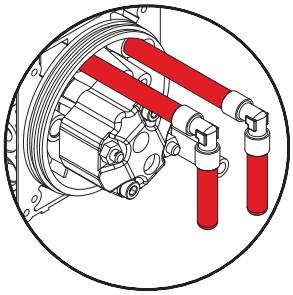


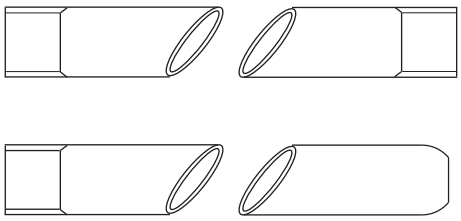
Aspirazione e scarico
suction and return



EPD60R 1/4

Tubo rigido per linee di scarico G1/4" in EPD
EPD G1/4" rigid pipes for return lines



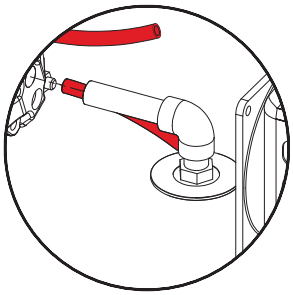


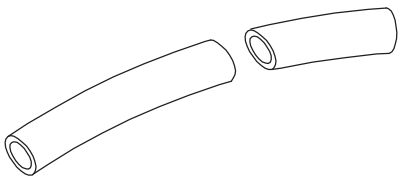
Lunghezze 115mm
lenghts 115mm

Lunghezze 60mm
(filettato da una sola parte)
lenghts 60mm
(threaded on one side only)

C010-T12-10

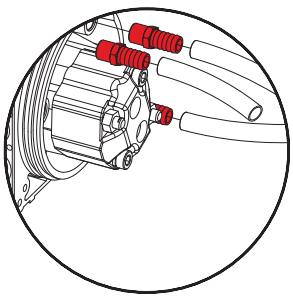
Tubo rilsan per linee di scarico antischiuma nel serbatoio
Rilsan hose for in-tank anti foam return lines

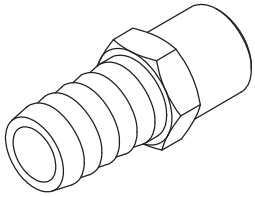




SS21042

Portagomma
Hose connector

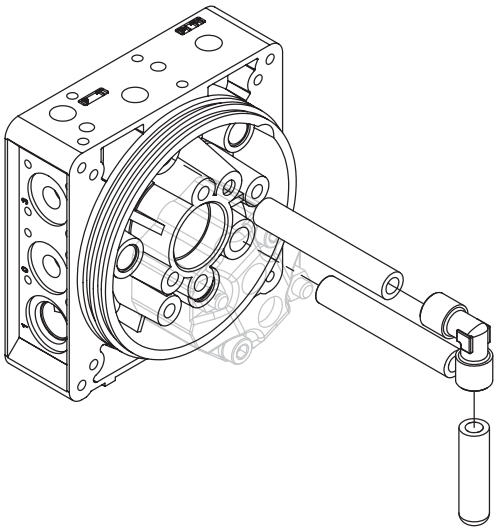




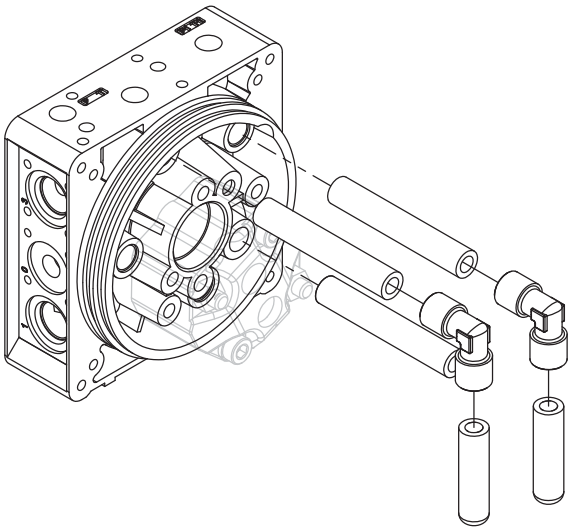
Caratteristiche principali *main features*	
Materiale *material*	Ottone nichelato *nickel-plated brass*
Filettatura *thread*	G 1/4"

KR

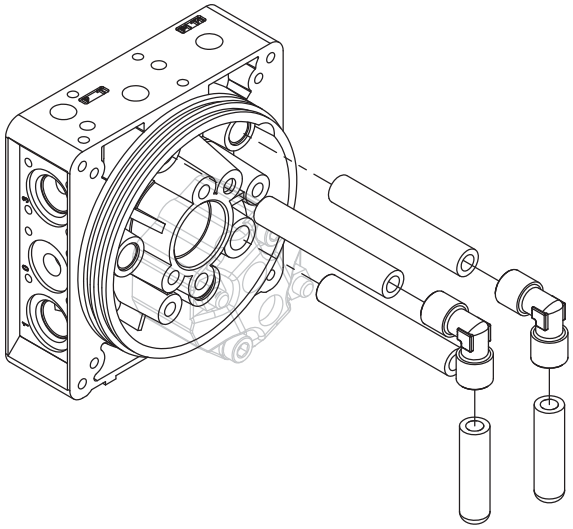
Kit di scarico per serbatoi orizzontali
Return kit for horizontal tanks



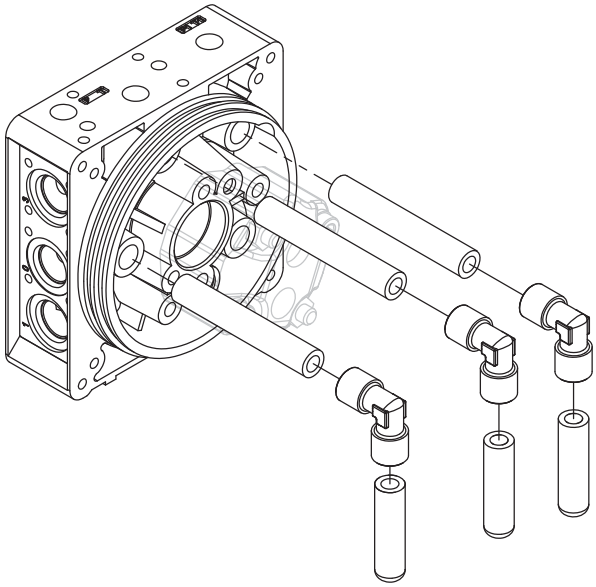
G0 collettore G02 - *G02 manifold*



G1 collettore G12 - *G12 manifold*



G2 collettore G22 - *G22 manifold*



G3 collettore G32 - *G32 manifold*

In caso di serbatoi CS01O e CS02O o collettori reversibili (G40), per il kit di scarico contattare l'ufficio tecnico
in case of CS01O and CS02O tanks or reversible manifold (G40), for the return kit, contact our technical department

Codici ordinazione - *ordering codes*

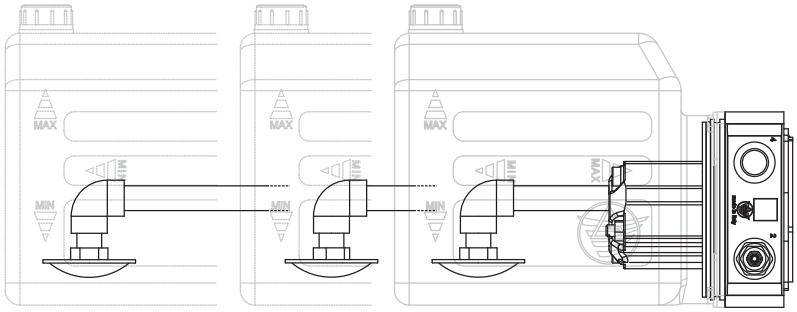
K	R	G	2
1		2	

1 Kit scarico - *return kit*	2 Collettore - *manifold*
KR	G0 = 2xEPD60R1/4 115 + SZ31440 + EPD60R1/4 60 G1 = 3xEPD60R1/4 115 + 2xSZ31440 + 2xEPD60R1/4 60 G2 = 3xEPD60R1/4 115 + 2xSZ31440 + 2xEPD60R1/4 60 G3 = 3xEPD60R1/4 115 + 3xSZ31440 + 3xEPD60R1/4 60

Aspirazione e scarico
suction and return

KOPE

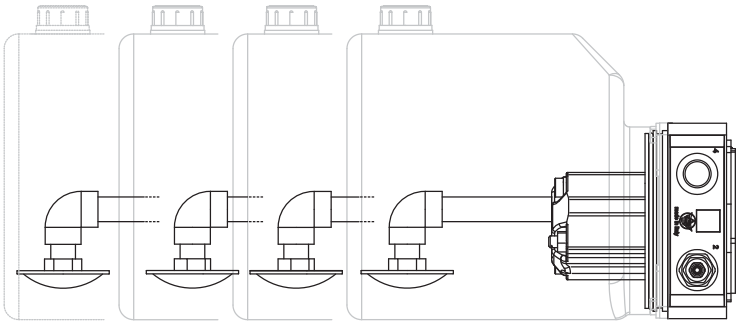
Kit aspirazione orizzontale per serbatoi PE
Suction horizzontal kit for PE tanks



PE12O	12 lt.	PE08O	8 lt.	PE05O	5 lt.

KOPC

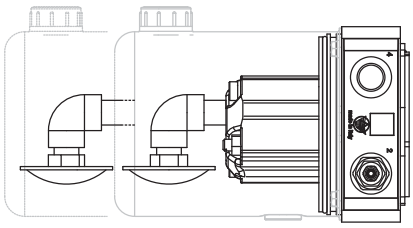
Kit aspirazione orizzontale per serbatoi PC
Suction horizzontal kit for PC tanks



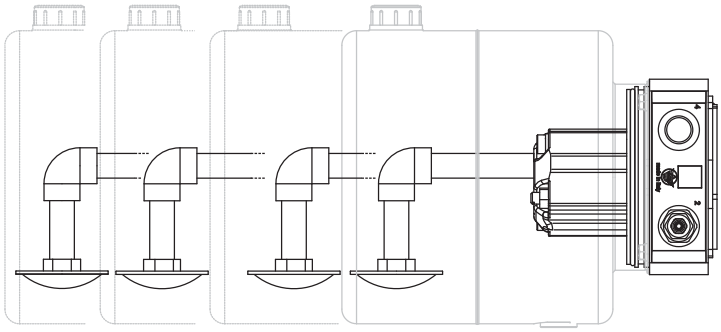
PC11O	11 lt.	PC09O	9 lt.	PC07O	7 lt.	PC05O	5 lt.

KOCS

Kit aspirazione orizzontale per serbatoi CS
Suction horizzontal kit for CS tanks



CS02O	2,5 lt.	CS01O	1,5 lt.



CS12O	12 lt.	CS10O	10 lt.	CS08O	8 lt.	CS05O	5 lt.

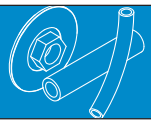
NB: I kit aspirazione sono validi per tutti i tipi di collettori e pompe, esclusi il G40 (collettore reversibile) e PA180 (pompa 8cc/rev). In caso di impiego di questi componenti, rivolgersi al nostro ufficio tecnico.
Note: Suction kits are valid for all type of manifolds and pumps, except G40 (reverible manifold) and PA180 (8cc/rev pump). When using these components, please contact our technical department.

Codici ordinazione - *ordering codes*

K	O	P	E	0	8
1		2		3	

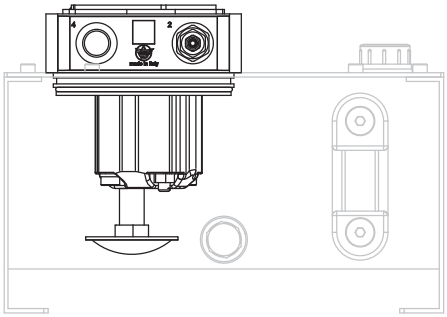
1 Kit orizzontale - *horizzontal kit*	2 Serie serbatoio - *tank series*	3 Volume serbatoio - *tank volume*		
KO (2xEPD60R3/8 + E602 + FT90)	PE PC CS	PE 05 = 5,0 lt 08 = 8,0 lt 12 = 12,0 lt	PC 05 = 5,0 lt 07 = 7,0 lt 09 = 9,0 lt 11 = 11,0 lt	CS 01 = 1,5 lt 02 = 2,5 lt 05 = 5,0 lt 08 = 8,0 lt 10 = 10,0 lt 12 = 12,0 lt

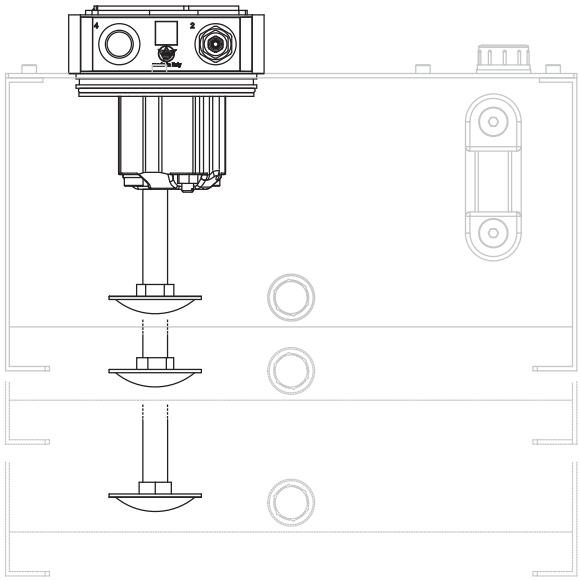
Aspirazione e scarico
suction and return



KVLM

Kit aspirazione per serbatoi LM
Suction kit for LM tanks

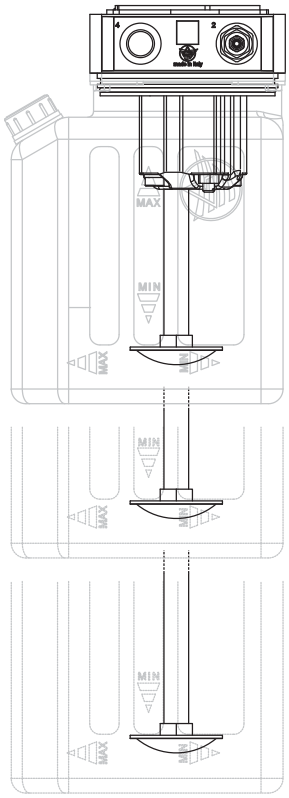




LM07	7 lt.	LM15	15 lt.	LM20	20 lt.	LM30	30 lt.

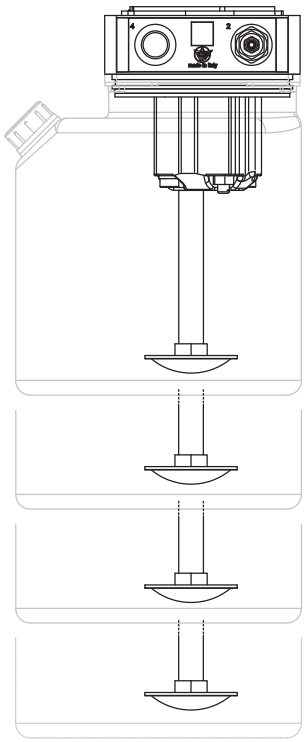
KVPE

Kit aspirazione verticale per serbatoi PE
Suction vertical kit for PE tanks



KVPC

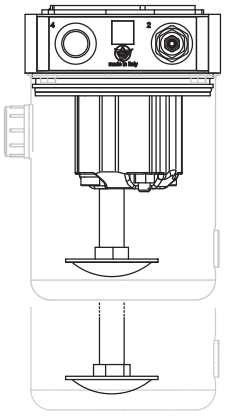
Kit aspirazione verticale per serbatoi PC
Suction vertical kit for PC tanks

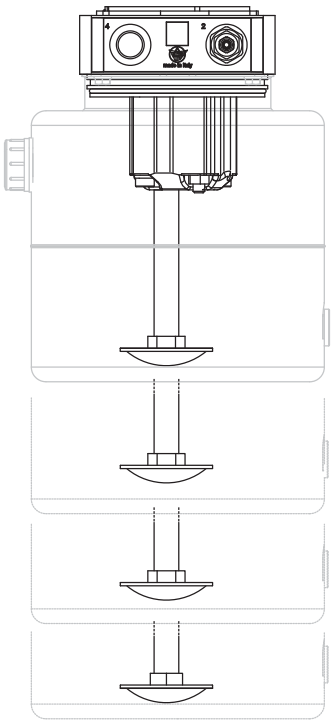


PE05V	5 lt.	PE08V	8 lt.	PE12V	12 lt.	PC05V	5 lt.	PC07V	7 lt.	PC09V	9 lt.	PC11V	11 lt.

KVCS

Kit aspirazione verticale per serbatoi CS
Suction certical kit for CS tanks





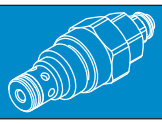
CS01V	1,5 lt.	CS02V	2,5 lt.	CS05V	5 lt.	CS08V	8 lt.	CS10V	10 lt.	CS12V	12 lt.

NB: I kit aspirazione sono validi per tutti i tipi di collettori e pompe, esclusi il G40 (collettore reversibile) e PA180 (pompa 8cc/rev). In caso di impiego di questi componenti, rivolgersi al nostro ufficio tecnico.
Note: Suction kits are valid for all type of manifolds and pumps, except G40 (reverible manifold) and PA180 (8cc/rev pump). When using these components, please contact our technical department.

Codici ordinazione - *ordering codes*

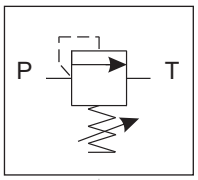
K	V	C	S	1	0
1		2		3	

1 Kit verticale - *vertical kit*	2 Serie serbatoio - *tank series*	3 Volume serbatoio - *tank volume*			
		LM	PE	PC	CS
KV (EPD60R3/8 + FT90)	PE	07 = 7,0 lt	05 = 5,0 lt	05 = 5,0 lt	01 = 1,5 lt
	PC	15 = 15,0 lt	08 = 8,0 lt	07 = 7,0 lt	02 = 2,5 lt
	CS	20 = 20,0 lt	12 = 12,0 lt	09 = 9,0 lt	05 = 5,0 lt
	LM	30 = 30,0 lt		11 = 11,0 lt	08 = 8,0 lt
					10 = 10,0 lt
					12 = 12,0 lt

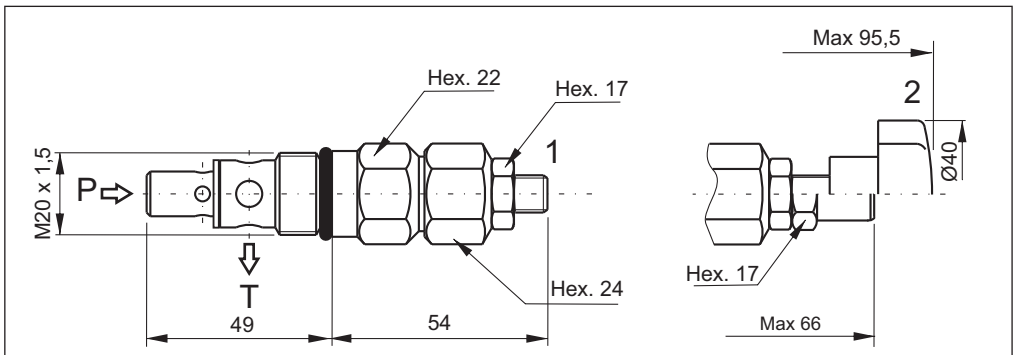


VMDC35

Valvola di massima pressione ad azione diretta
Direct acting relief valve

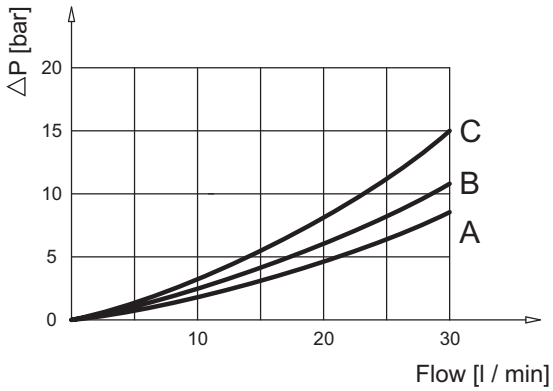


Caratteristiche principali *main features*	
Pressione max *max pressure*	320 bar
Portata max *max flow*	30 l/min
Peso *weight*	0,16 Kg

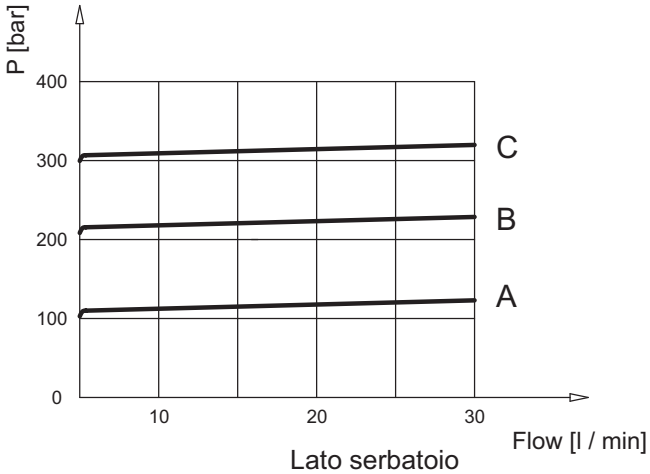


Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

Pressione minima di taratura - *minimum setting pressure*



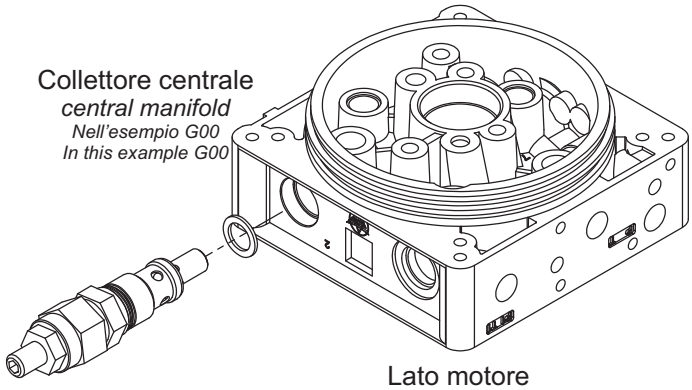
Pressione vs flusso - *pressure vs flow*



NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.

Lato serbatoio
tank side

Collettore centrale
central manifold
Nell'esempio G00
In this example G00



Lato motore
motor side

Codice ordinazione - *ordering code*

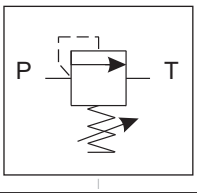
V	M	D	C	3	5	B	1	0
1				2		3	4	5

1 Tipo di valvola - *valve type*	2 Grandezza nominale - *nominal size*	3 Range di lavoro - *working range*
VMDC	M20x1,5	A = 10 ÷ 90 bar B = 20 ÷ 210 bar C = 70 ÷ 350 bar

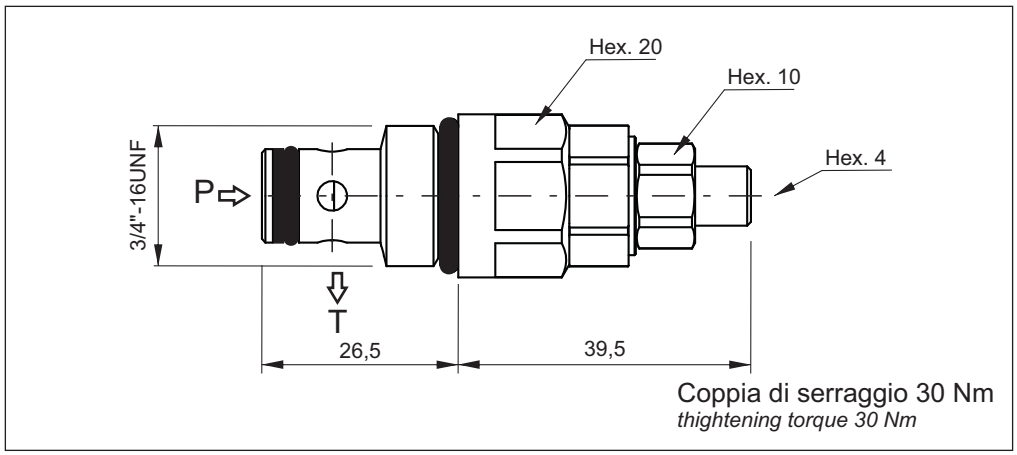
4 Dispositivo di regolazione - *adjusting device*	5 Serie - *series*
1 = Vite - *screw* (standard) 2 = Manopola - *handknob*	0 = Standard

VMDC20

Valvola di massima pressione ad azione diretta
Direct acting relief valve

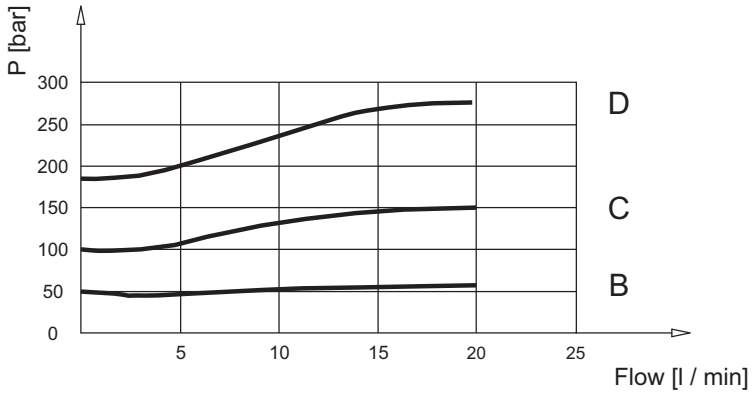


Caratteristiche principali *main features*	
Pressione max *max pressure*	350 bar
Portata max *max flow*	20 l/min
Peso *weight*	0,10 Kg

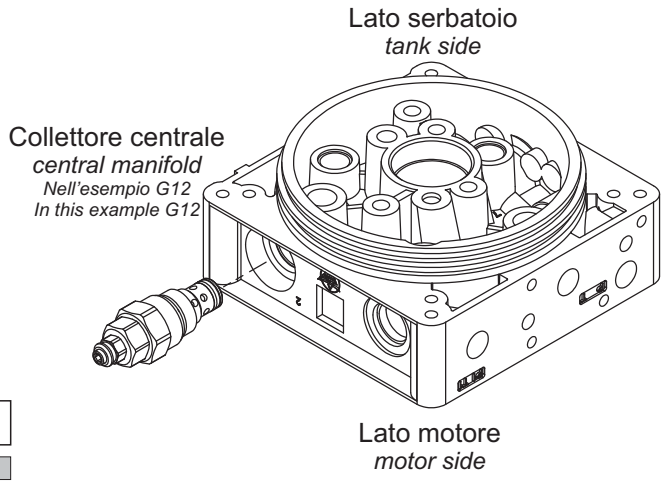


Coppia di serraggio 30 Nm
thightening torque 30 Nm

Pressione vs flusso - *pressure vs flow*



NB: Per esigenze grafiche non è riportata la curva A.
Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 32 cSt.
Note: For graphic reasons it has not shown the A curve.
The curves above, have been obtained at 40°C, using oil with viscosity 32 cSt.



Codice ordinazione - *ordering code*

V	M	D	C	2	0	C	1	0
1				2		3	4	5

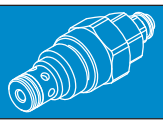
1 Tipo di valvola - *valve type*
VMDC

2 Grandezza nominale - *nominal size*
3/4"-16 UNF

3 Range di lavoro - *working range*
A = 5 ÷ 30 bar
B = 20 ÷ 100 bar
C = 50 ÷ 200 bar
D = 150 ÷ 350 bar

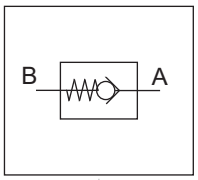
4 Dispositivo di regolazione - *adjusting device*
1 = Vite - *screw*

5 Serie - *series*
0 = Standard

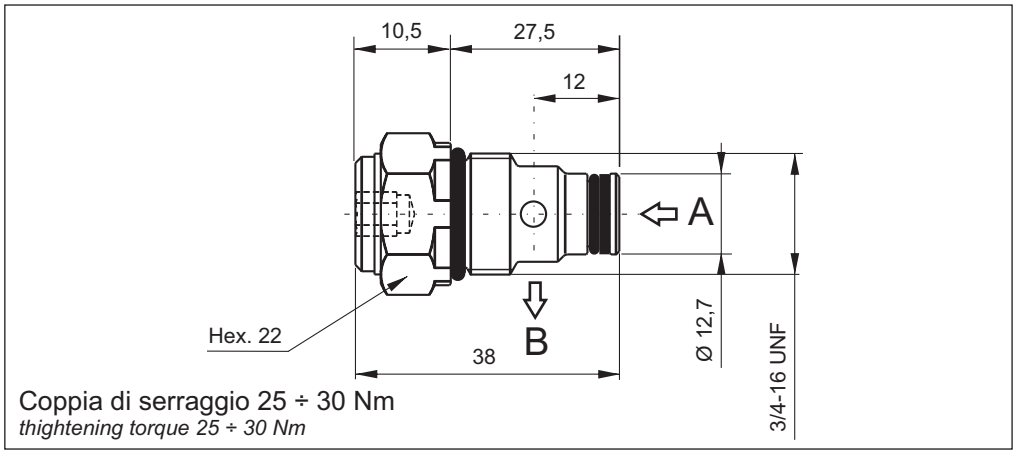


VUC20

Valvola unidirezionale a sfera
Check valve

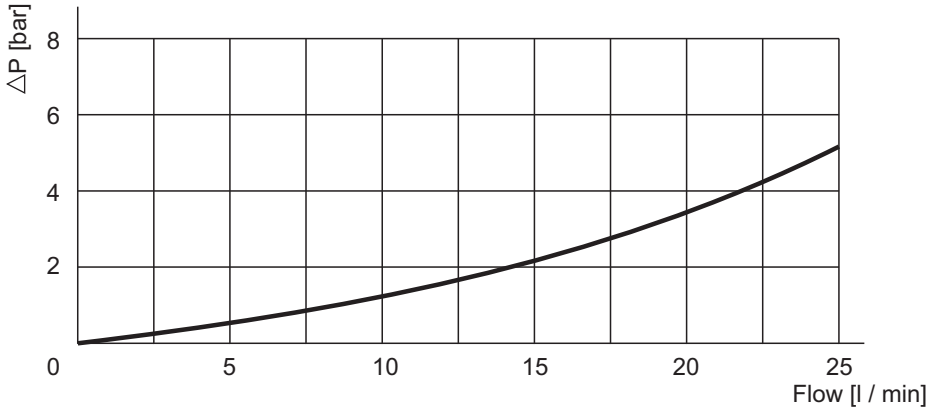


Caratteristiche principali *main features*	
Pressione max *max pressure*	350 bar
Portata max *max flow*	25 l/min
Peso *weight*	0,07 Kg

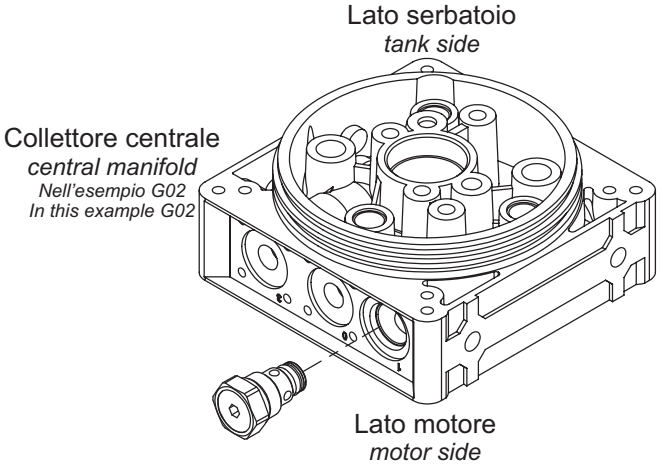


Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

Diagramma perdita di carico - *pressure drop diagram*



NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.



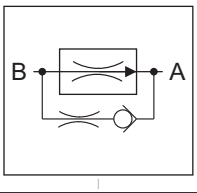
Codice ordinazione - *ordering code*

V	U	C	2	0	0
1			2		3

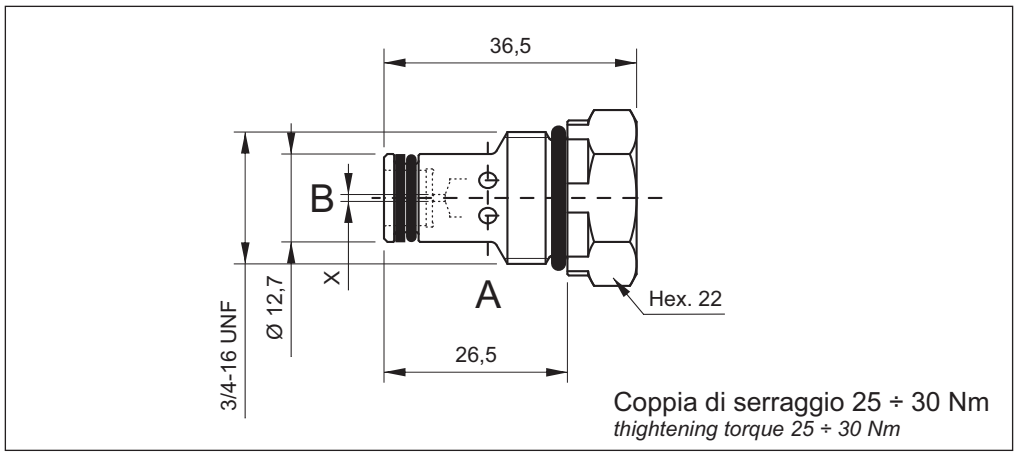
1 Tipo di valvola - *valve type*	2 Grandezza nominale - *nominal size*	3 Serie - *series*
VUC	3/4"-16 UNF	0 = Standard

VSC6

Strozzatore fisso a pressione compensata
Fixed compensated pressure throttle



Caratteristiche principali *main features*	
Pressione max *max pressure*	250 bar
Portata max *max flow*	12 l/min
Peso *weight*	0,06 Kg

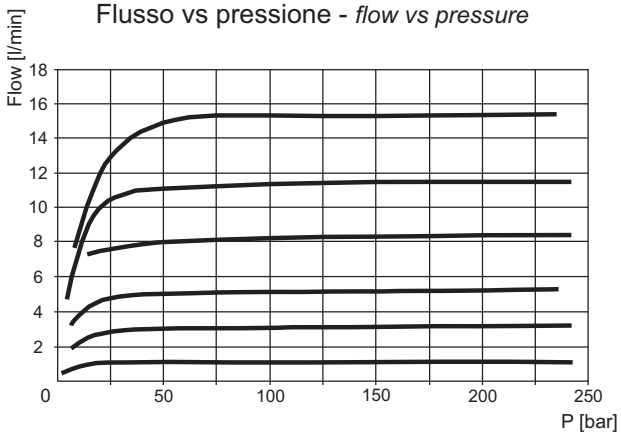


Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

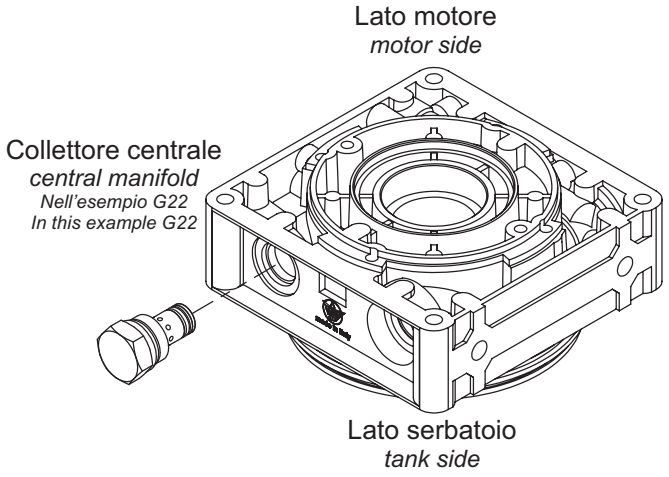
Flusso controllato - *controlled flow*

Code	ø X [mm]
VSC60	chiusa *closed*
VSC6A	0,8
VSC6B	1
VSC6C	1,25
VSC6D	1,5
VSC6E	1,75
VSC6F	1,8
VSC6G	1,9
VSC6H	2
VSC6I	2,25
VSC6L	2,6

Flusso vs pressione - *flow vs pressure*



NB: Portata nominale controllata, misurata a 50bar. La caduta di pressione può variare a seconda della viscosità e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: nominal controlled flow, measured at 50bar. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.



Codice ordinazione - *ordering code*

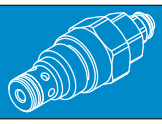
V	S	C	6	C	0
1			2	3	4

1 Tipo di valvola - *valve type*
VSC

2 Grandezza nominale - *nominal size*
3/4"-16 UNF

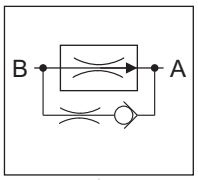
3 Flusso controllato - *controlled flow*
A = 1,0 lt/min D = 4,0 lt/min G = 7,0 lt/min L = 12 lt/min
B = 2,0 lt/min E = 5,0 lt/min H = 8,0 lt/min 0 = chiusa - *closed*
C = 3,0 lt/min F = 6,0 lt/min I = 10 lt/min

4 Serie - *series*
0 = Standard

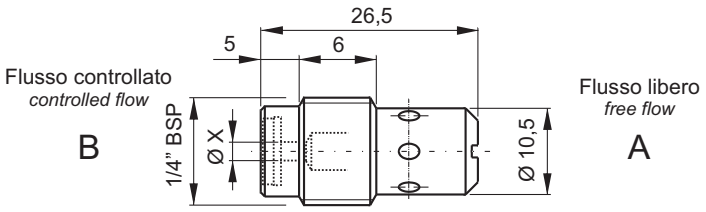


VSC01

Strozzatore fisso a pressione compensata
Fixed compensated pressure throttle



Caratteristiche principali *main features*	
Pressione max *max pressure*	250 bar
Portata max *max flow*	12 l/min
Peso *weight*	0,015 Kg



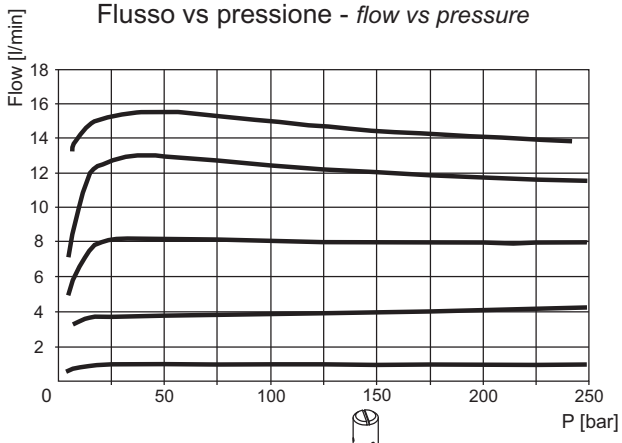
Coppia di serraggio 6 Nm
thightening torque 6 Nm

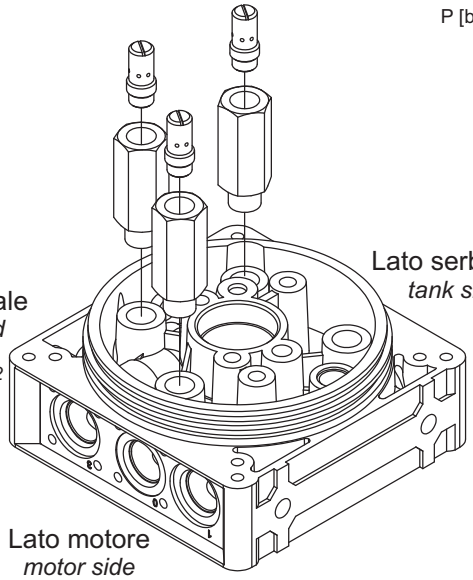
Flusso controllato - *controlled flow*

Code	ø X [mm]
VSC010	chiusa *closed*
VSC01A	1
VSC01B	1,2
VSC01C	1,5
VSC01D	1,7
VSC01E	1,9
VSC01F	2,1
VSC01G	2,3
VSC01H	2,4
VSC01I	2,8
VSC01L	3,3

NB: Portata nominale controllata, misurata a 50bar. La caduta di pressione può variare a seconda della viscosità e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: nominal controlled flow, measured at 50bar. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.

Flusso vs pressione - *flow vs pressure*





Codice ordinazione - *ordering code*

V	S	C	0	1	E	0
1			2		3	4

1 Tipo di valvola - *valve type*
VSC

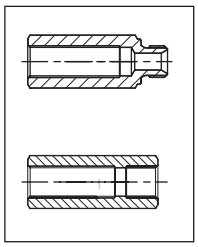
2 Grandezza nominale - *nominal size*
1/4" BSP

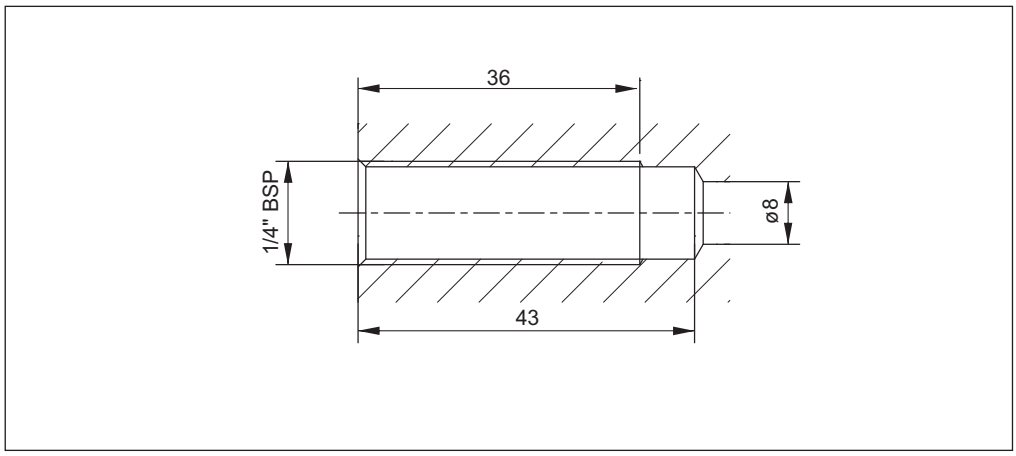
3 Flusso controllato - *controlled flow*
A = 1,0 lt/min
B = 2,0 lt/min
C = 3,0 lt/min
D = 4,0 lt/min
E = 5,0 lt/min
F = 6,0 lt/min
G = 7,0 lt/min
H = 8,0 lt/min
I = 10 lt/min
L = 12 lt/min
0 = chiusa - *closed*

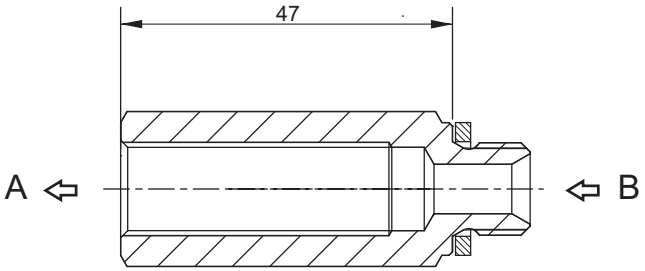
4 Serie - *series*
0 = Standard

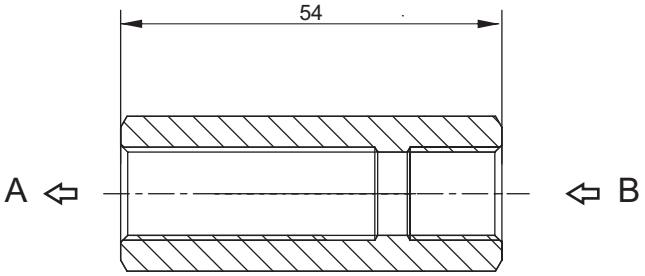
CMF

Corpo per montaggio in linea VSC
Body for VSC in-line mount

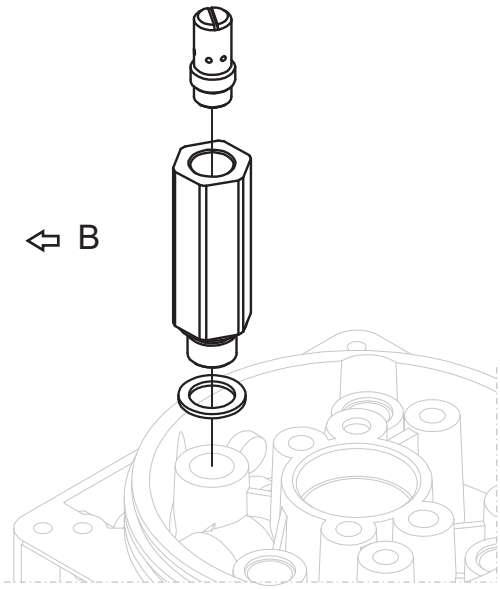








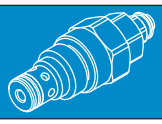
Code	Tipo *type*
CMF059	F - M
CMF060	F - F



Codice ordinazione - *ordering code*

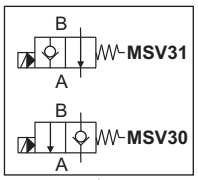
C	M	F	0	5	9	0
1			2			3

1 Corpo - *body*	2 Tipo - *type*	3 Serie - *series*
CMF	059 = MF (Std) 060 = FF	0 = Standard



MSV

Valvola elettrica pilotata singola tenuta
Pilot operated two-ways single locking solenoid valve



Caratteristiche principali *main features*	
Pressione max *max pressure*	350 bar
Portata max *max flow*	40 l/min
Peso (con bobina) *weight (with coil)*	0,27 Kg

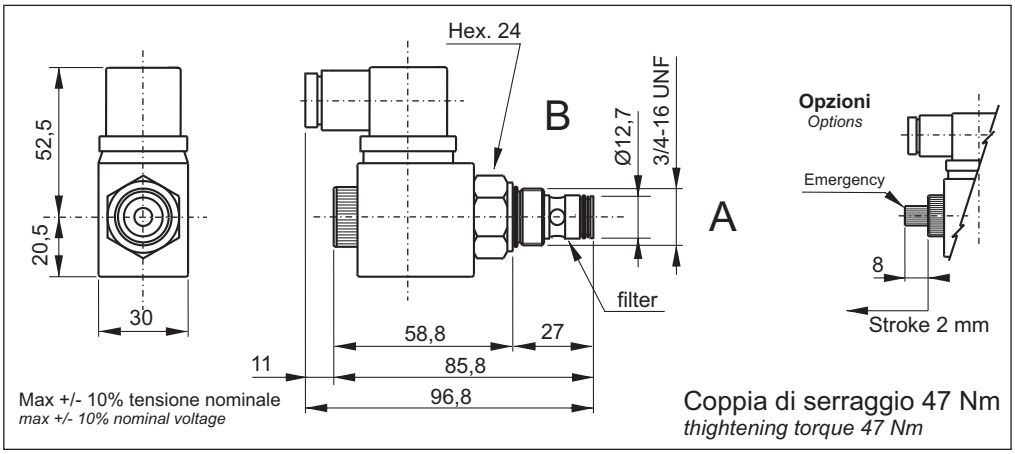
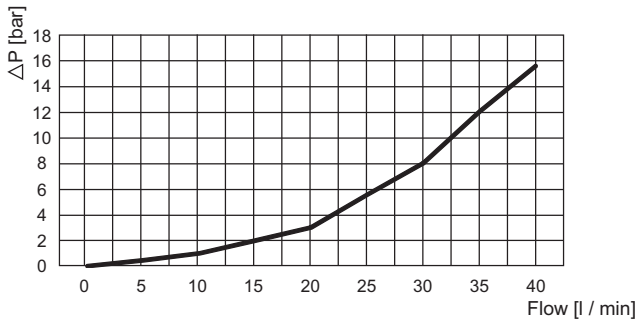
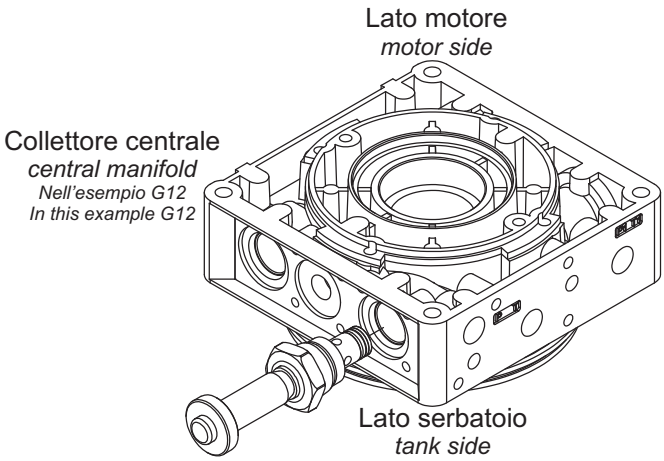


Diagramma perdita di carico - *pressure drop diagram*



Tipologia valvola *valve type*	Tipologia bobina *coil type*	Potenza assorbita *power consumption*
MSV3000	HDB...DC/RAC	18W
MSV30E0	HDB...DC/RAC	18W
MSV3100	HDB...DC/RAC	18W
MSV31E0	HDB...DC/RAC	18W

NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 32 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 32 cSt.



Codice ordinazione - *ordering code*

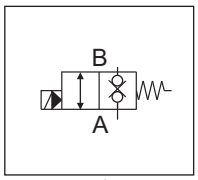
M	S	V	3	0	0	0
1			2		3	4

1 Tipo di valvola - *valve type*	2 Operazione - *operation*	3 Opzioni - *options*
MSV	30 = normalmente chiusa - *normally closed* 31 = normalmente aperta - *normally open*	0 = Senza opzioni - *no options* (Std) E = Comando manuale - *manual override*

4 Serie - *series*
0 = Standard

MDV

Valvola elettrica pilotata doppia tenuta
Direct operated two-ways double locking solenoid valve



Caratteristiche principali *main features*	
Pressione max *max pressure*	250 bar
Portata max *max flow*	30 l/min
Peso (con bobina) *weight (with coil)*	0,35 Kg

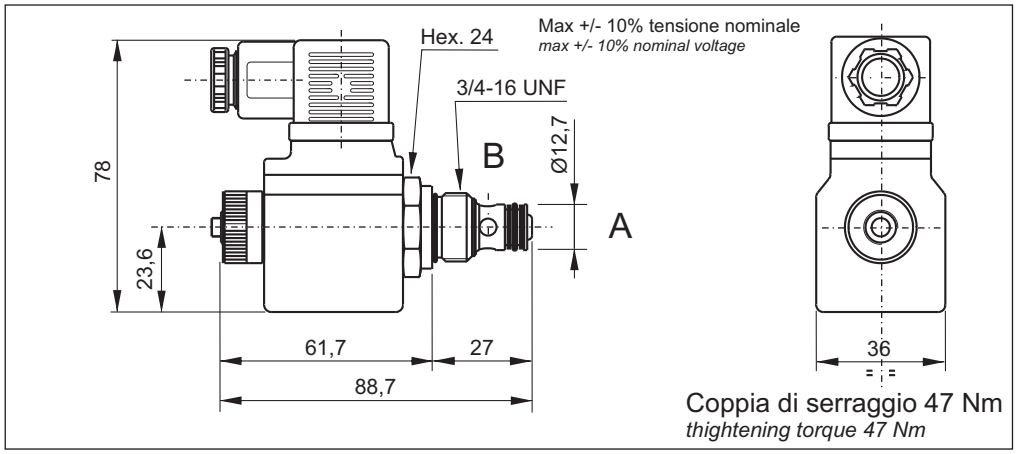
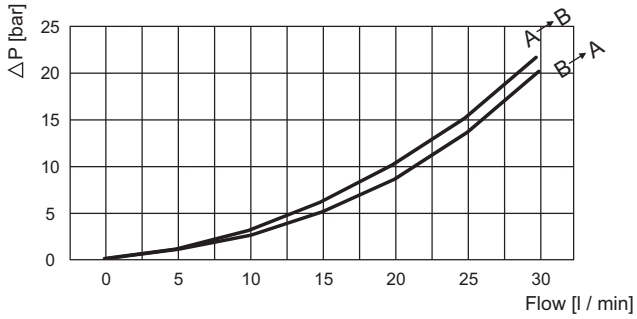
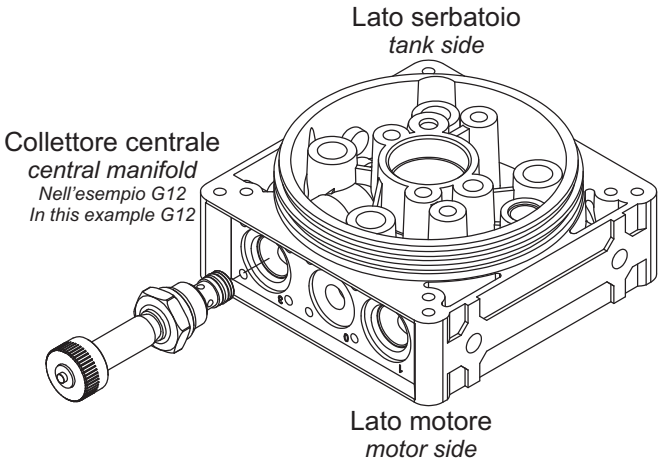


Diagramma perdita di carico - *pressure drop diagram*



Tipologia valvola *valve type*	Tipologia bobina *coil type*	Potenza assorbita *power consumption*
MDV30E0	HDB...DC/RAC	18W

NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 32 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 32 cSt.

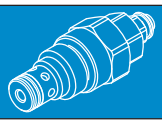


Codice ordinazione - *ordering code*

M	D	V	3	0	E	0
1			2		3	4

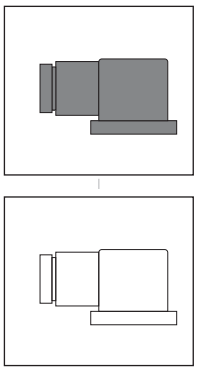
1 Tipo di valvola - *valve type*	2 Operazione - *operation*	3 Opzioni - *options*
MDV	30 = normalmente chiusa - *normally closed*	E = Comando manuale - *manual override*

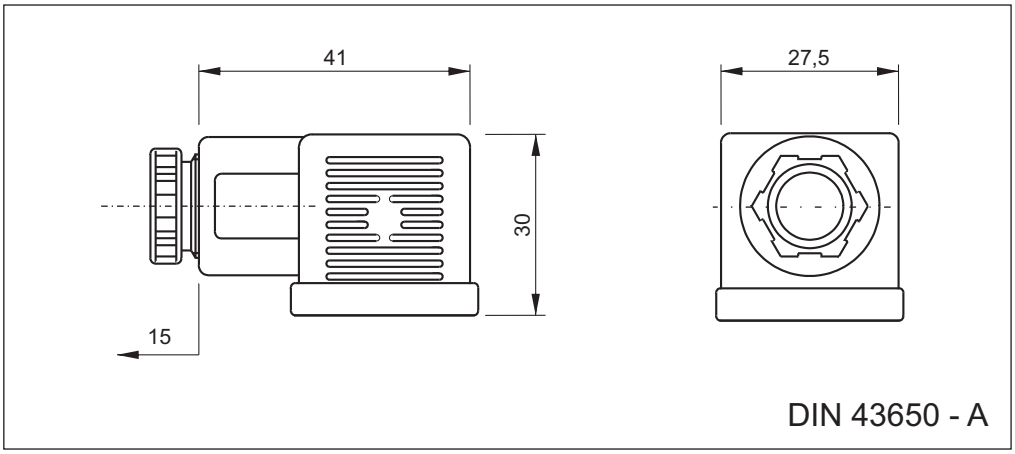
4 Serie - *series*
0 = Standard



AM

Connettori elettrici
Electric connectors



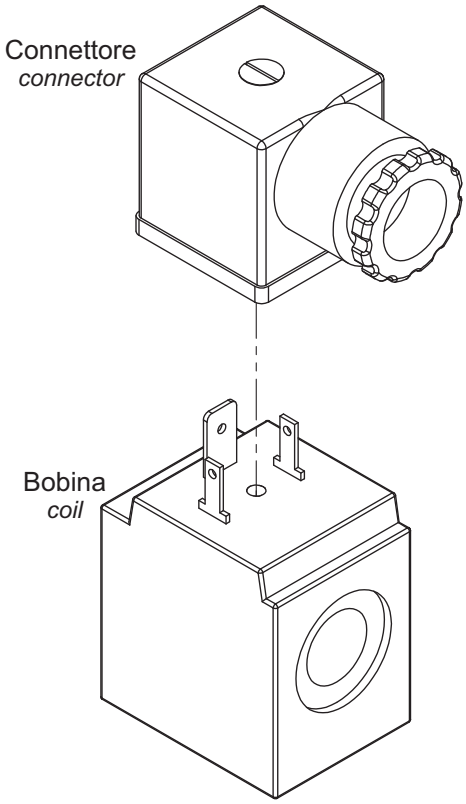


DIN 43650 - A

HDB — HDC

Bobine
coils

cod. connettore *connector code*	cod. bobina *coil code*
18 W Potenza - *power*	
AM5111, AM5128/1	HDB0012DC0
AM5111, AM5128/2	HDB0024DC0
AM5111/RD, AM5128/2/RD	HDB024RAC0
AM5111/RD, AM5128/4/RD	HDB110RAC0
AM5111/RD, AM5128/4/RD	HDB220RAC0



Codici ordinazione - *ordering codes*

A	M	5	1	2	8	/	2	/	R	D
1							2		3	

1 Connettore - *connector*	2 Tensione (solo LED) - *voltage (only LED)*	3 Raddrizzatore - *rectifier*
AM5111 = nero - *black* (Std) AM5128 = luminoso - *LED*	1 = 12 V 2 = 24 V 3 = 110 - 220 V	RD = con raddrizzatore - *with rectifier* Omettere se non richiesto - *omit if not request*

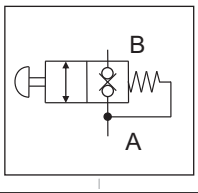
Per connettore AM5111 omettere punto 2 - *for AM5111 omit point 2*

H	D	B	2	2	0	R	A	C	0
1			2						3

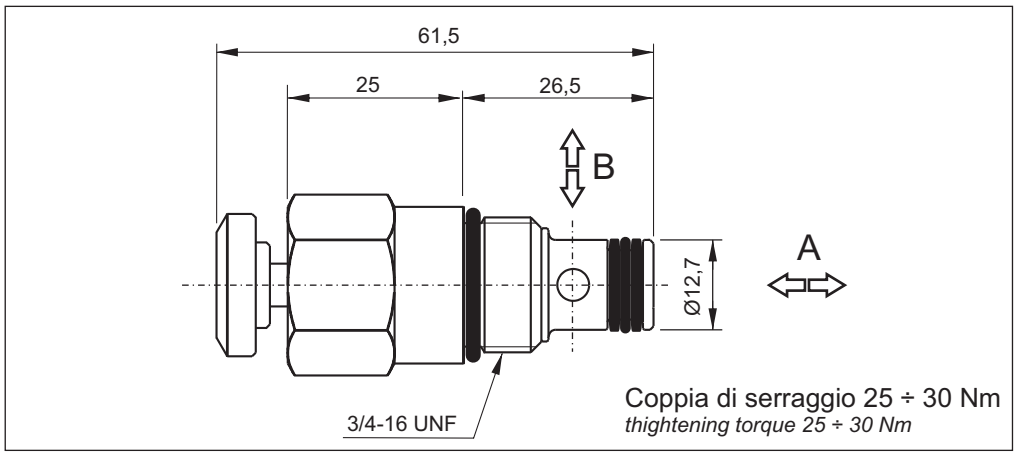
1 Bobina - *coil*	2 Tensione - *voltage*	3 Serie - *series*
HDB = 18W	0012DC, 0024DC = corrente continua - *DC current* 024RAC, 110RAC, 220RAC = corrente raddrizzata - *RAC current*	0 = Standard

CPE

Valvola direzionale a due vie con comando a pulsante
Button operated two-ways directional valve

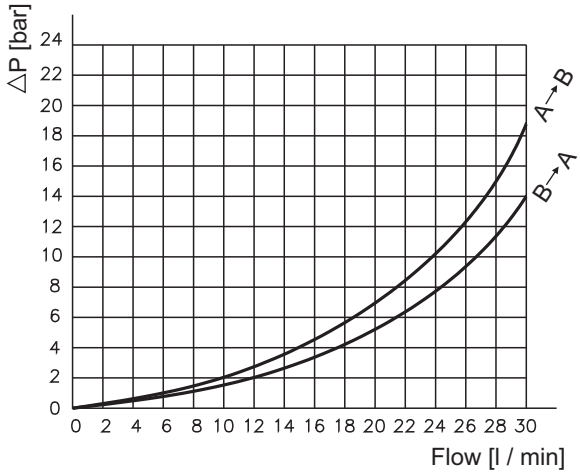


Caratteristiche principali *main features*	
Pressione max *max pressure*	320 bar
Portata max *max flow*	30 l/min
Peso *weight*	0,12 Kg

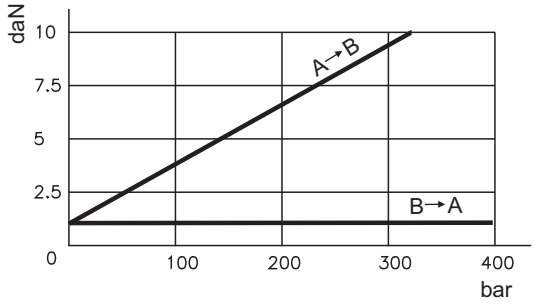


Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

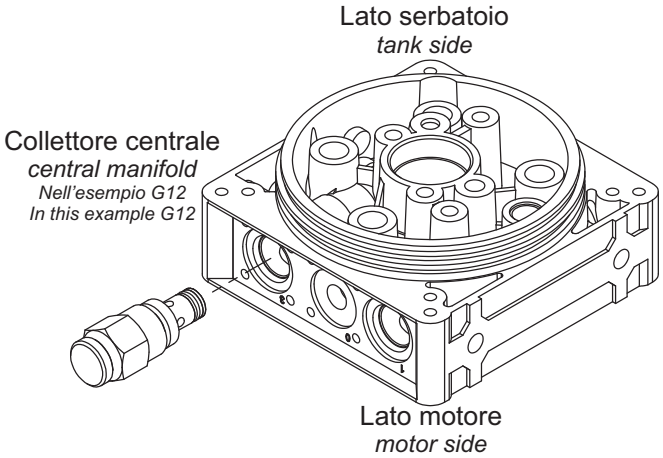
Diagramma perdita di carico - *pressure drop diagram*



Forza azionamento (daN) sul pulsante
actuation force (daN) on the button



NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.

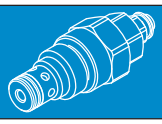


Codice ordinazione - *ordering code*

C	P	E	0	4	P	0
1			2		3	4

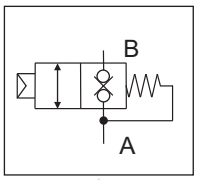
1 Tipo di valvola - *valve type*	2 Grandezza nominale - *nominal size*	3 Dispositivo di comando - *operation device*
CPE	3/4"-16 UNF	P = bottone - *press button*

4 Serie - *series*
0 = Standard



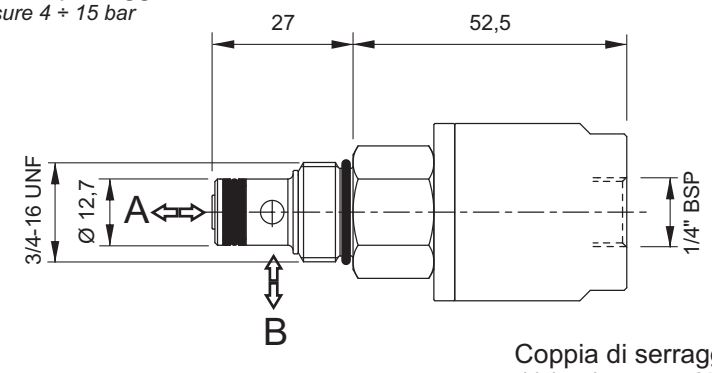
VPN

Valvola direzionale a due vie a cartuccia con comando pneumatico
Pneumatic operated two-ways directional cartridge valve



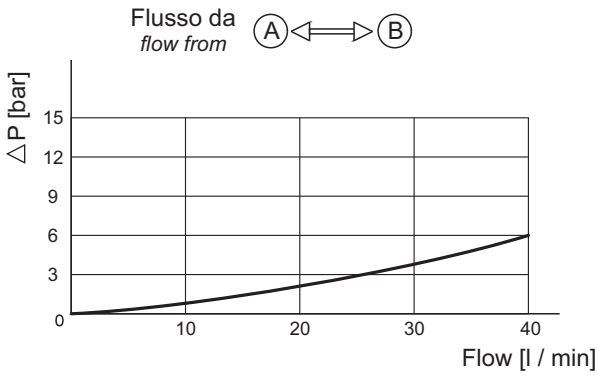
Caratteristiche principali *main features*	
Pressione max *max pressure*	350 bar
Portata max *max flow*	40 l/min
Peso *weight*	0,16 Kg

Pressione di pilotaggio 4 ÷ 15 bar
pilot pressure 4 ÷ 15 bar

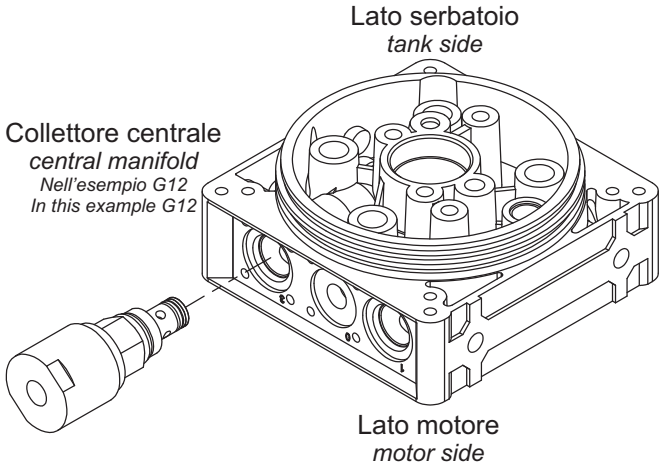


Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

Diagramma perdita di carico - *pressure drop diagram*



NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.



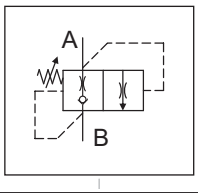
Codice ordinazione - *ordering code*

V	P	N	0
	1		2

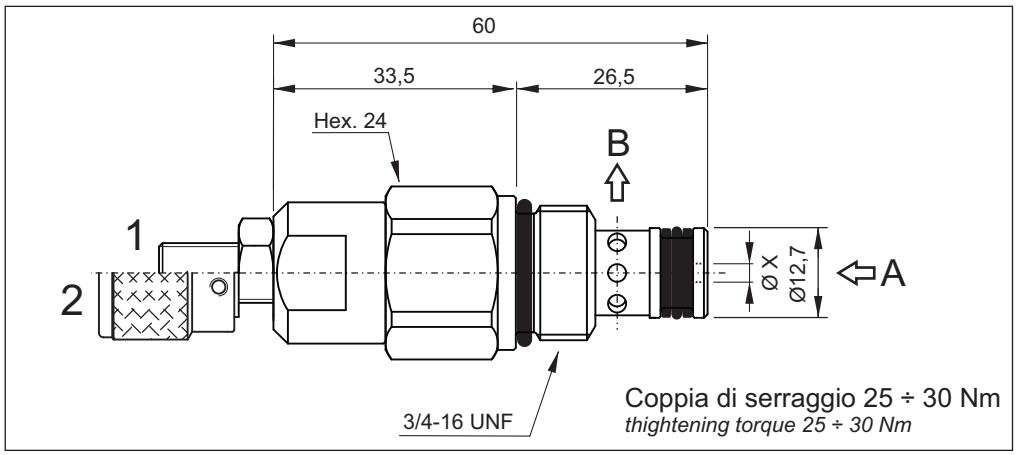
1 Tipo di valvola - *valve type*	2 Serie - *series*
VPN	0 = Standard

CSC04

Valvola di controllo flusso compensata regolabile
Adjustable compensated flow control valve



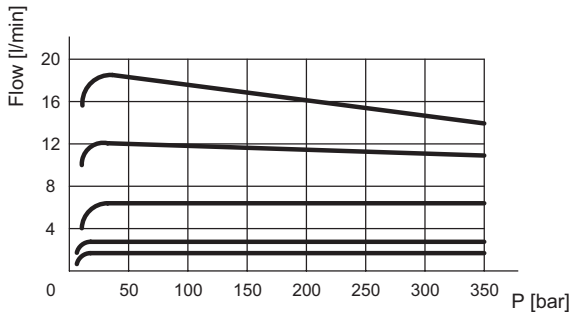
Caratteristiche principali *main features*	
Pressione max *max pressure*	350 bar
Portata max *max flow*	18 l/min
Peso *weight*	0,21 Kg



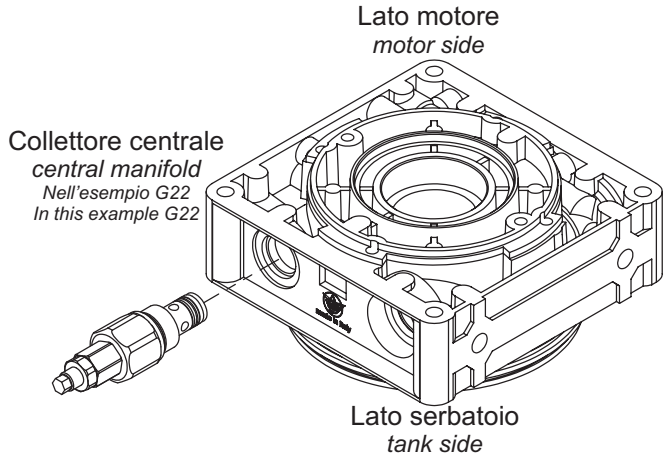
Flusso controllato - *controlled flow*

Code	ø X [mm]
CSC04A	0,9
CSC04B	1
CSC04C	1,3
CSC04D	1,5
CSC04E	1,7
CSC04F	2,2
CSC04G	2,8

Diagramma perdita di carico - *pressure drop diagram*



NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.



Codice ordinazione - *ordering code*

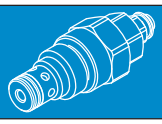
C	S	C	0	4	C	1	0
1					2	3	4

1 Tipo di valvola - *valve type*
CSC04

2 Flusso controllato - *controlled flow*
A = 0,6 ÷ 2,2 lt/min
B = 0,8 ÷ 3,0 lt/min
C = 1,3 ÷ 5,1 lt/min
D = 1,9 ÷ 6,8 lt/min
E = 2,6 ÷ 9,1 lt/min
F = 4,0 ÷ 14,4 lt/min
G = 7,2 ÷ 18,0 lt/min

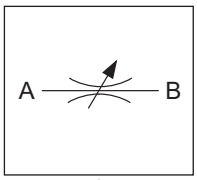
3 Dispositivo di regolazione - *adjusting device*
1 = Vite - *screw* (standard)
2 = Manopola - *handknob*

4 Serie - *series*
0 = Standard

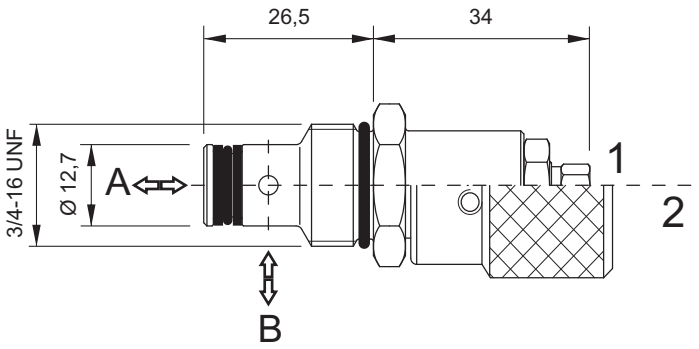


CSB

Valvola bidirezionale di controllo di flusso
Bidirectional flow control valve

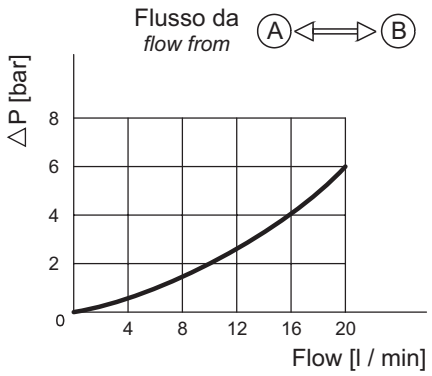


Caratteristiche principali *main features*	
Pressione max *max pressure*	300 bar
Portata max *max flow*	30 l/min
Peso *weight*	0,09 Kg

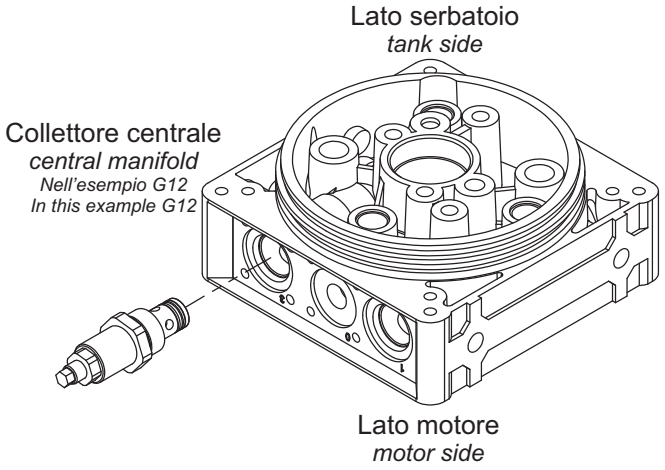


Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

Diagramma perdita di carico - *pressure drop diagram*



NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura. Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature. The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.



Codice ordinazione - *ordering code*

C	S	B	0	4	C	0
1			2		3	4

1 Tipo di valvola - *valve type*
CSB

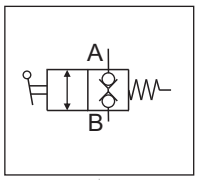
2 Grandezza nominale - *nominal size*
3/4"-16 UNF

3 Dispositivo di regolazione - *adjusting device*
C = Vite - *screw* (standard)
V = Manopola - *handknob*

4 Serie - *series*
0 = Standard

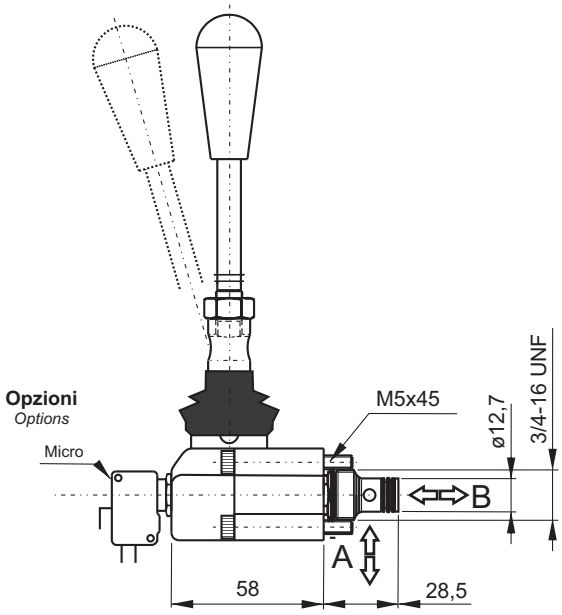
CM04L

Valvola direzionale a due vie a cartuccia con comando a leva
Lever operated two-ways directional valve



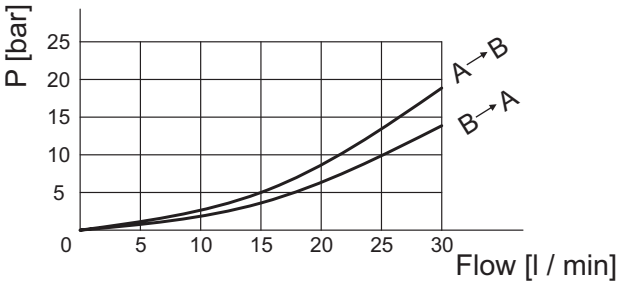
Caratteristiche principali *main features*	
Pressione max *max pressure*	320 bar
Portata max *max flow*	25 l/min
Peso *weight*	0,39 Kg

NB: Valori misurati sulla sola valvola.
La perdita di carico potrebbe variare a seconda della viscosità del liquido e della temperatura.
Note: Values measured on valve alone. Pressure drop may change depending on fluid viscosity and temperature.

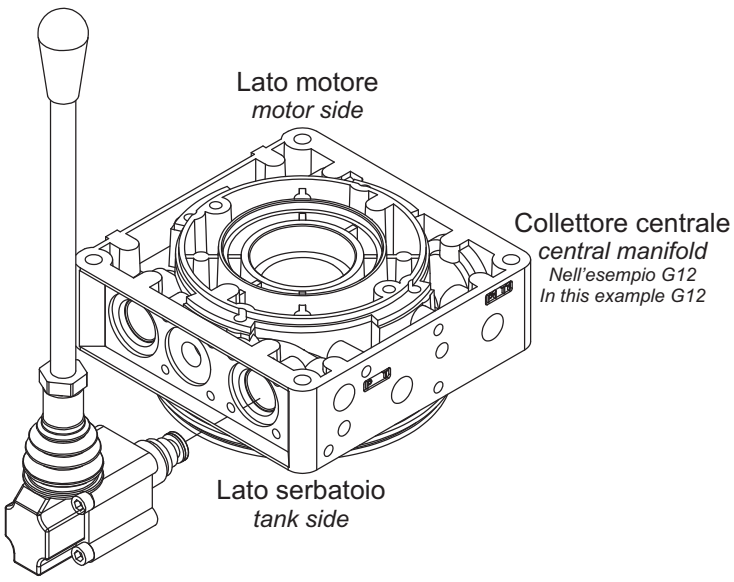


Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

Diagramma perdita di carico - *pressure drop diagram*



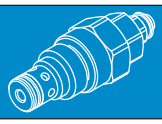
Le curve sopra riportate sono state ottenute alla temperatura di 40°C, utilizzando olio con viscosità 46 cSt.
The curves above, have been obtained at 40°C, using oil with viscosity 46 cSt.



Codice ordinazione - *ordering code*

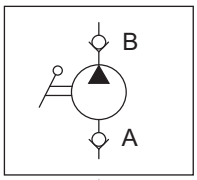
C	M	0	4	L	M	0
1					2	3

1 Tipo di valvola - *valve type*	2 Opzioni - *options*	3 Serie - *series*
CM04L	0 = senza micro - *without micro* (Std) M = con micro - *with micro*	0 = Standard



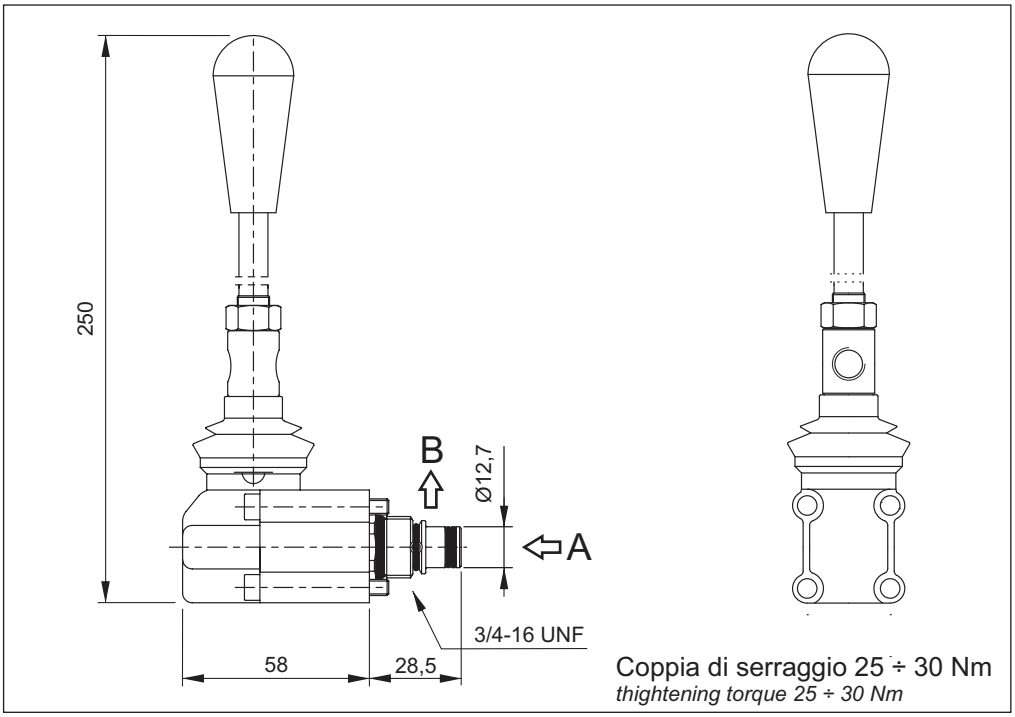
PM02

Pompa manuale
Hand pump



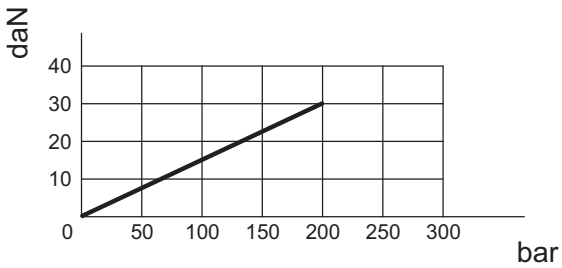
Caratteristiche principali *main features*	
Pressione max *max pressure*	200 bar
Cilindrata *displacement*	2 cc/rev
Peso *weight*	0,40 Kg

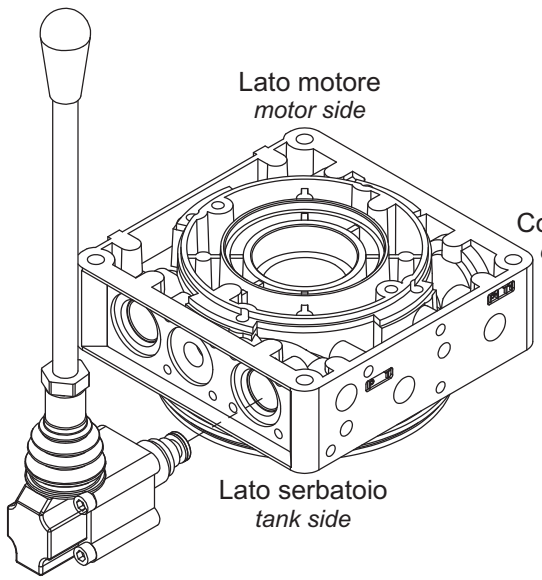
NB: Valori misurati sulla sola valvola.
Note: Values measured on valve alone.



Coppia di serraggio 25 ÷ 30 Nm
thightening torque 25 ÷ 30 Nm

Diagramma forze azionamento - *actuating forces diagram*



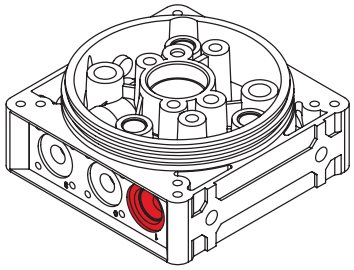


Codice ordinazione - *ordering code*

P	M	0	2	0
1				2

1 Tipo di valvola - *valve type*	2 Serie - *series*
PM02	0 = Standard

CAV. 1

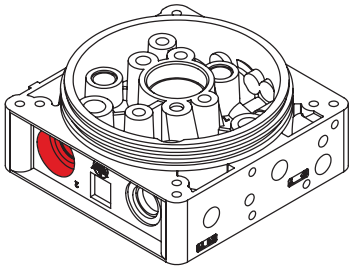


Collettori - *manifolds*
Tutti - *all*

Cavità - *cavity*
3/4"-16 UNF-2B

Valvole - *valves*
VUC20
CSB04
T0A4
T0C1

CAV. 2

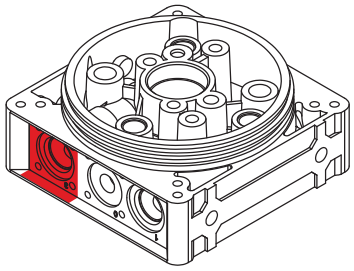


Collettori - *manifolds*
Tutti - *all*

Cavità - *cavity*
M20x1,5
3/4"-16 UNF-2B (std)

Valvole - *valves*
VMDC35 (G10)
T0VM
VMDC20

CAV. 3

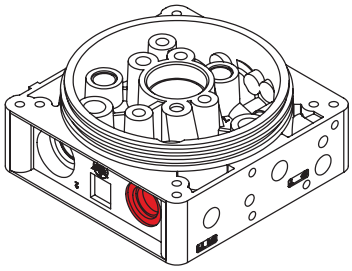


Collettori - *manifolds*
G12, G22, G32

Cavità - *cavity*
3/4"-16 UNF-2B

Valvole - *valves*
MSV
MDV
VPN
CPE
CSB04
PM02
CM04L
T0C2
T0A2
T0A3

CAV. 4

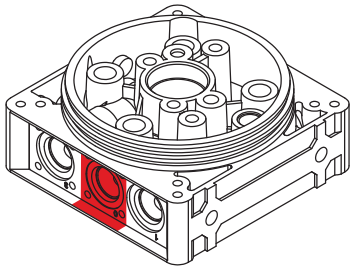


Collettori - *manifolds*
G22, G32

Cavità - *cavity*
3/4"-16 UNF-2B

Valvole - *valves*
CSC04
CSB04
VSC6
T0A2
T0C1

CAV. 0

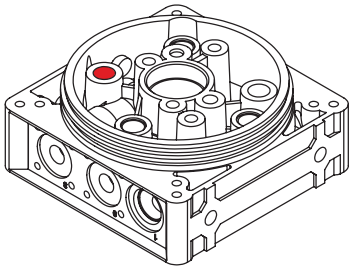


Collettori - *manifolds*
G32

Cavità - *cavity*
3/4"-16 UNF-2B

Valvole - *valves*
MSV
MDV
VPN
CPE
CSB04
PM02
CM04L
T0C2
T0A2
T0A3

CAV. 5

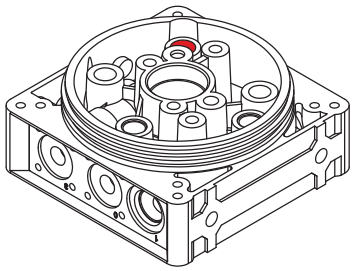


Collettori - *manifolds*
Tutti - *all*

Cavità - *cavity*
G 1/4"

Valvole - *valves*
VSC

CAV. 6

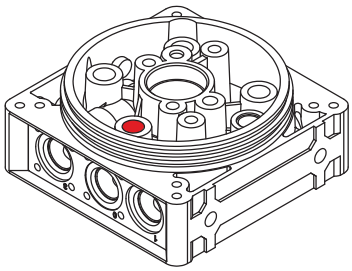


Collettori - *manifolds*
Tutti - *all*

Cavità - *cavity*
G 1/4"

Valvole - *valves*
VSC

CAV. 7

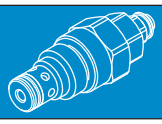


Collettori - *manifolds*
G32

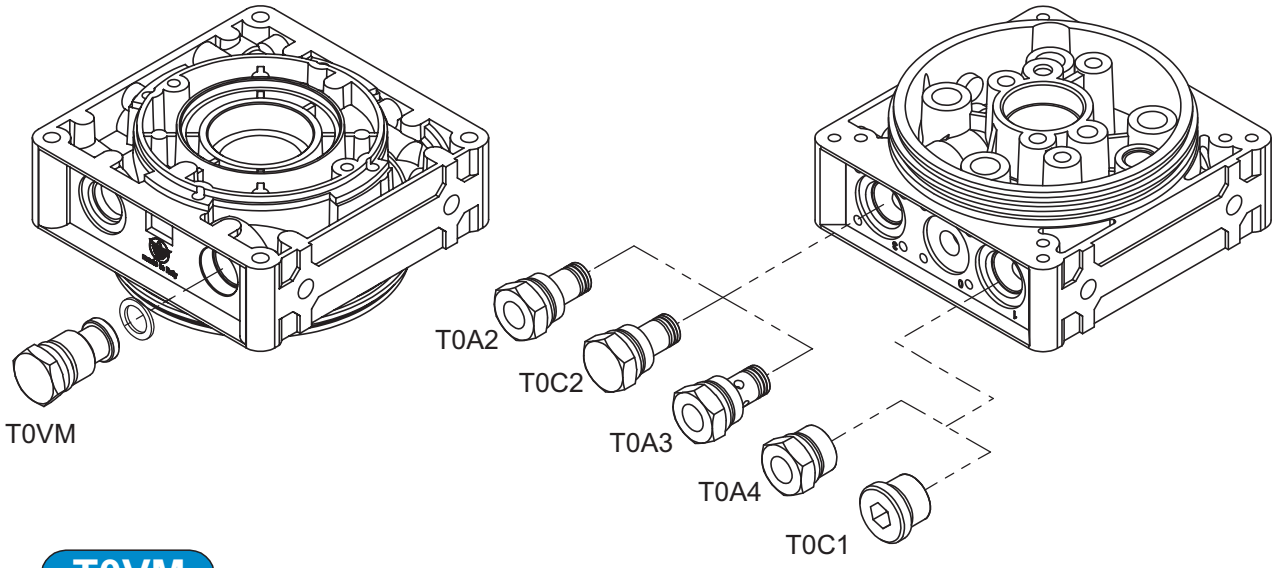
Cavità - *cavity*
G 1/4"

Valvole - *valves*
VSC

Valvole e tappi
valves and plugs

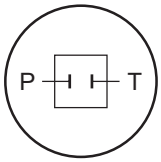


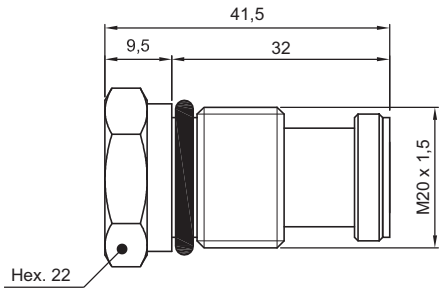
Tappi funzionali - *function plugs*

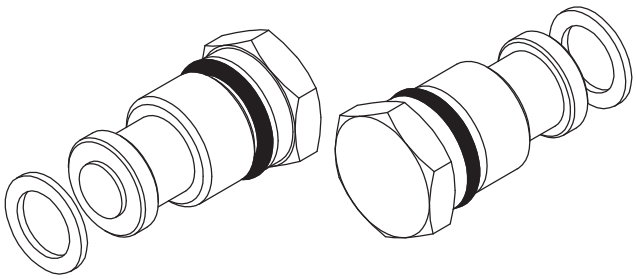


T0VM

Simbolo
symbol

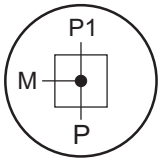


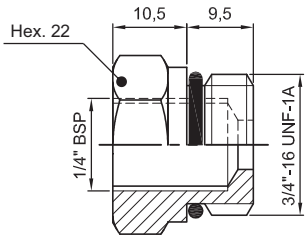


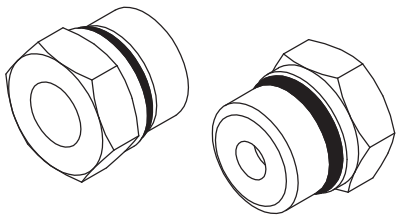


T0A4

Simbolo
symbol

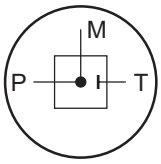


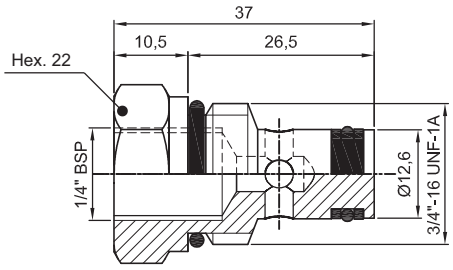


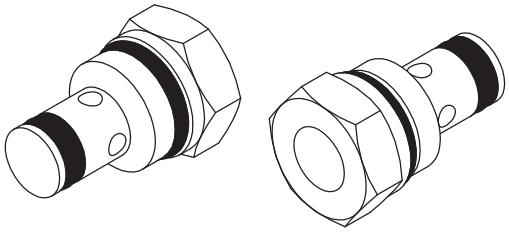


T0A3

Simbolo
symbol

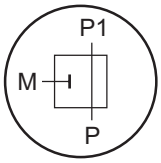


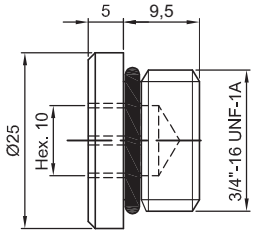


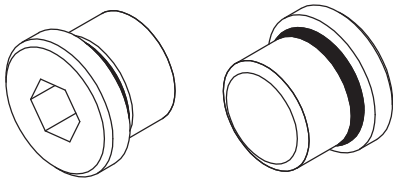


T0C1

Simbolo
symbol

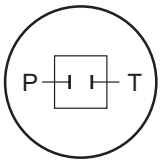


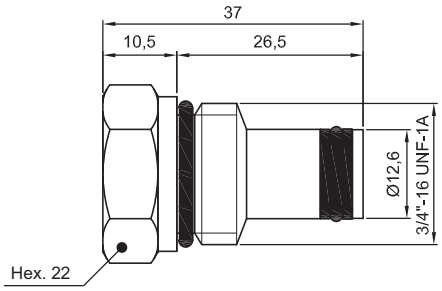


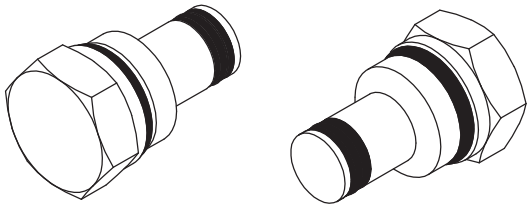


T0C2

Simbolo
symbol

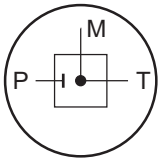


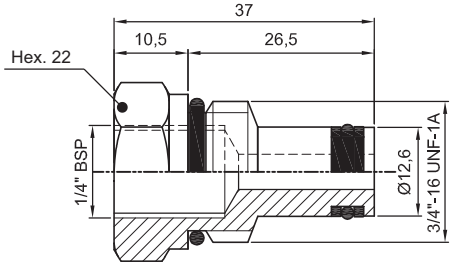


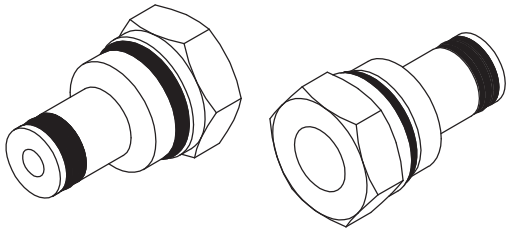


T0A2

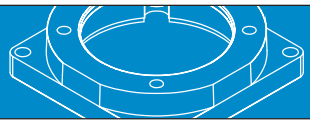
Simbolo
symbol





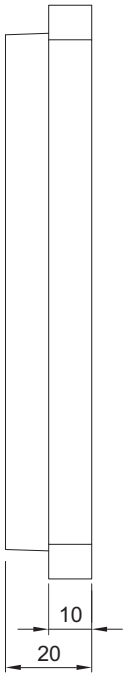


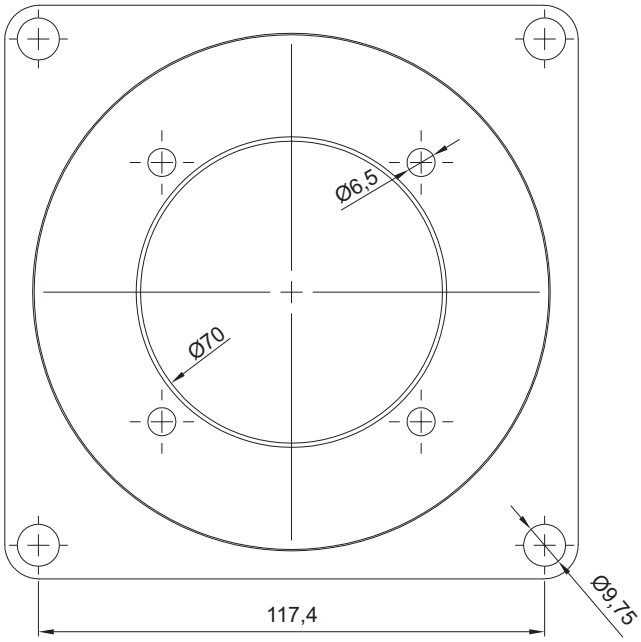
Elementi di connessione
junction elements



FA 71

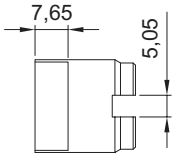
Flangia di adattamento
Adapter flange



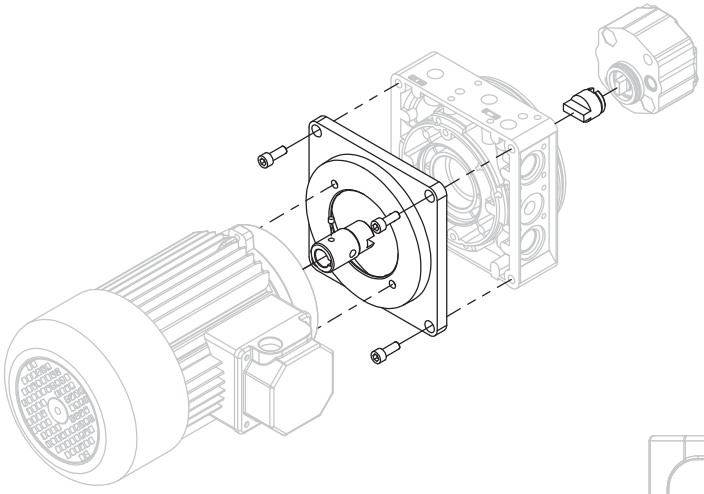


Assemblaggio lato collettore: 4 x viti DIN 6921 M8 x 25
Manifold side assembly: 4 x screws DIN 6921 M8 x 25
Assemblaggio lato motore: 4 x viti DIN 5931 M6 x 16
Motorside assembly: 4 x screws DIN 5931 M6 x 16

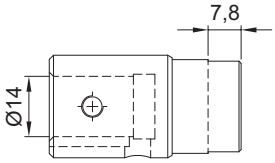
K00



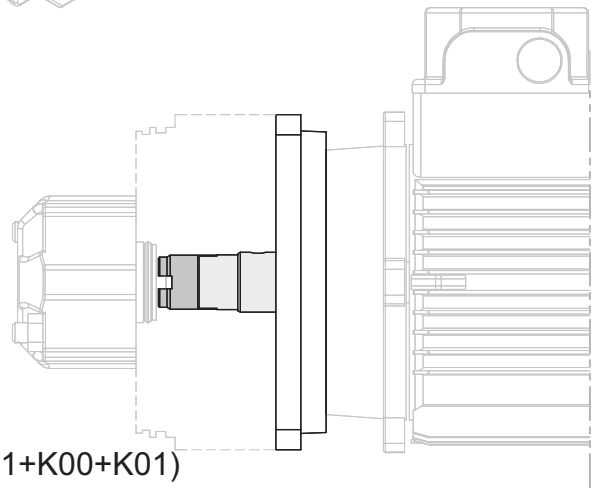
Giunto lato pompa
pump side coupling



K01



Giunto lato motore
motor side coupling

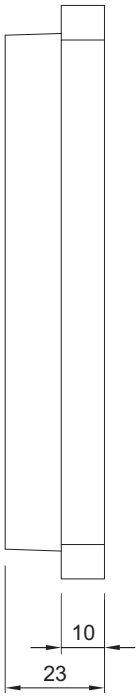


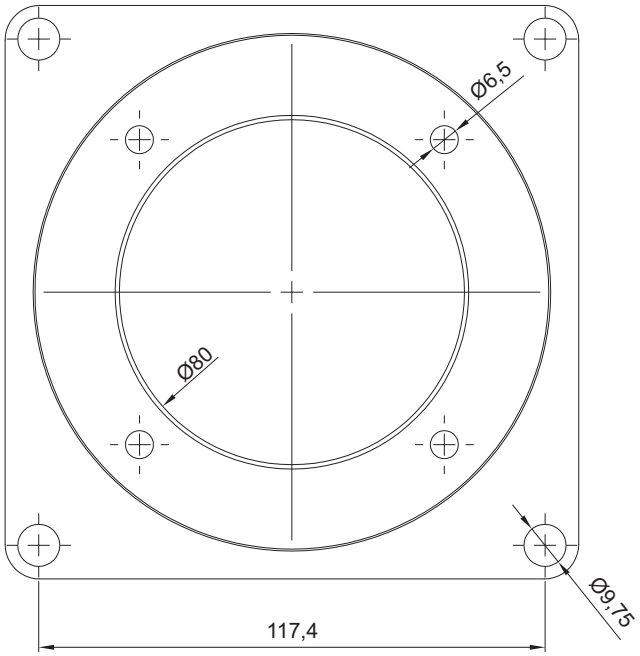
KIT1471

Codice di ordinazione per kit completo (FA71+K00+K01)
Ordering code for complete kit (FA71+K00+K01)

FA 80

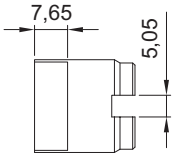
Flangia di adattamento
Adapter flange



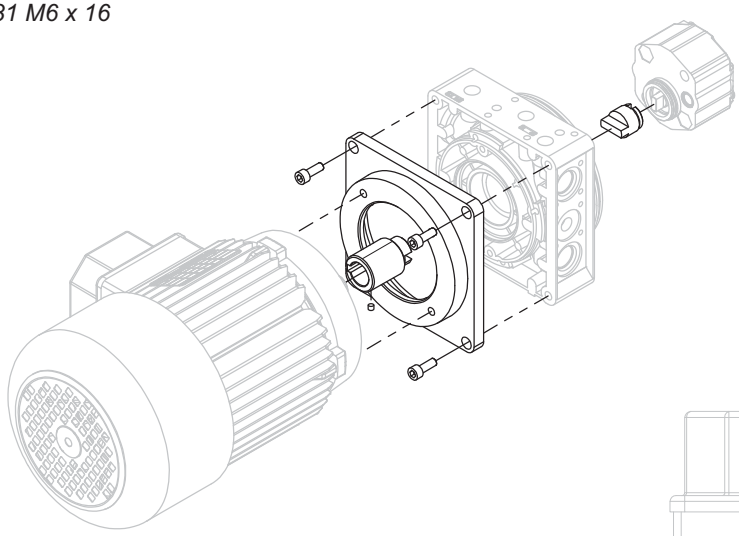


Assemblaggio lato collettore: 4 x viti DIN 6921 M8 x 25
Manifold side assembly: 4 x screws DIN 6921 M8 x 25
Assemblaggio lato motore: 4 x viti DIN 5931 M6 x 16
Motorside assembly: 4 x screws DIN 5931 M6 x 16

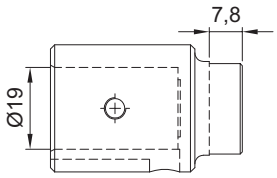
K00



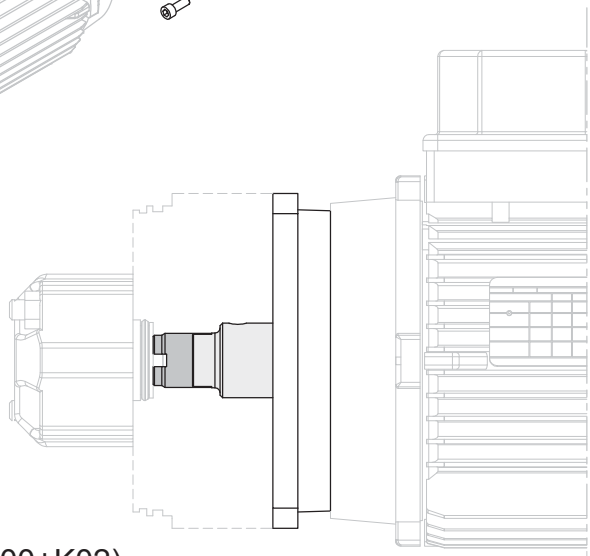
Giunto lato pompa
pump side coupling



K02



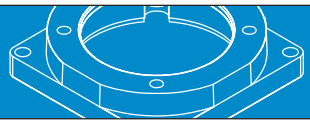
Giunto lato motore
motor side coupling



KIT1480

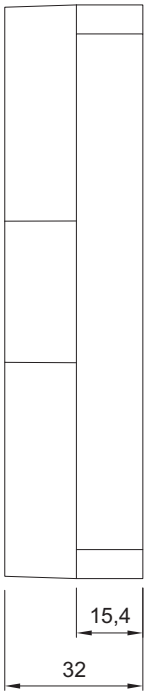
Codice di ordinazione per kit completo (FA80+K00+K02)
Ordering code for complete kit (FA80+K00+K02)

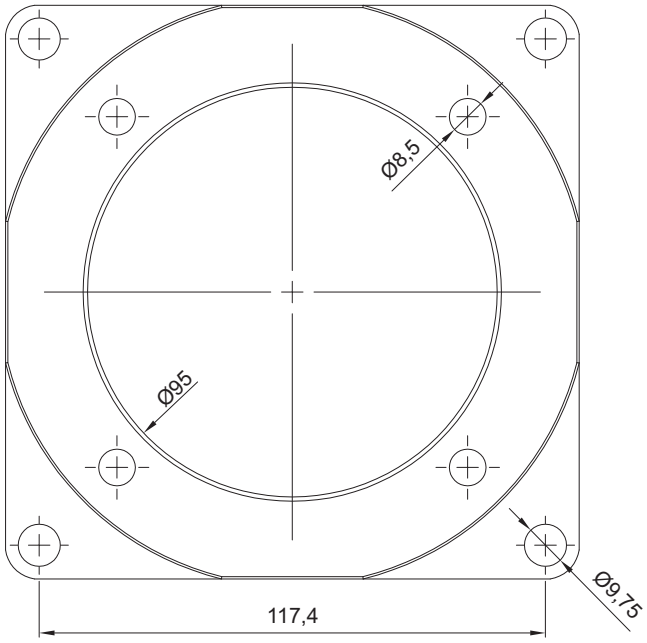
Elementi di connessione
junction elements



FA 90

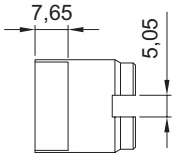
Flangia di adattamento
Adapter flange



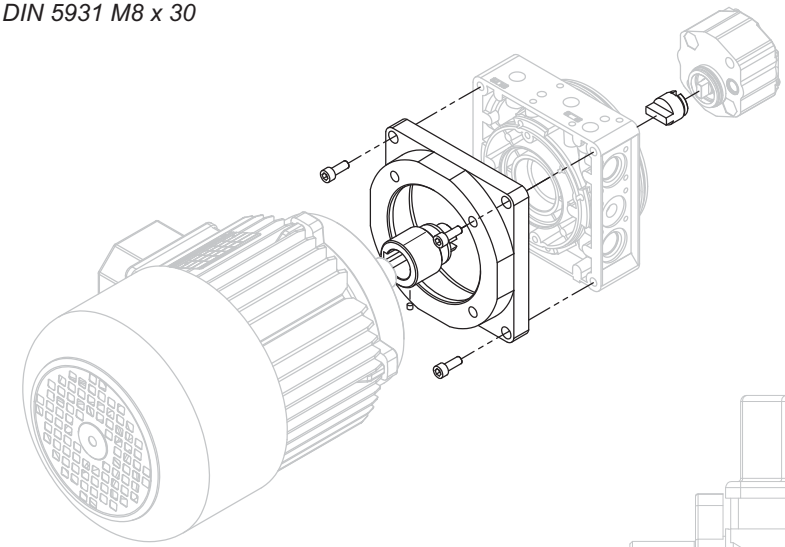


Assemblaggio lato collettore: 4 x viti DIN 6921 M8 x 30
Manifold side assembly: 4 x screws DIN 6921 M8 x 30
Assemblaggio lato motore: 4 x viti DIN 5931 M8 x 30
Motorside assembly: 4 x screws DIN 5931 M8 x 30

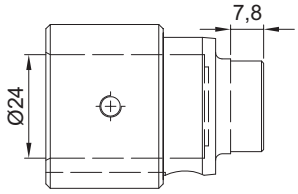
K00



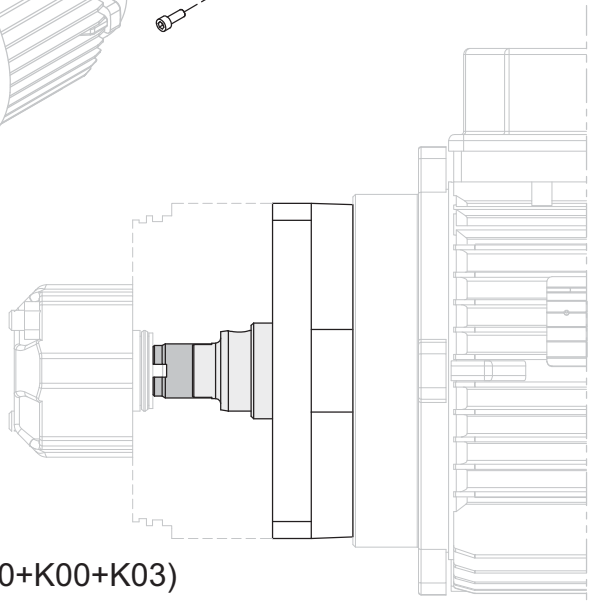
Giunto lato pompa
pump side coupling



K03



Giunto lato motore
motor side coupling

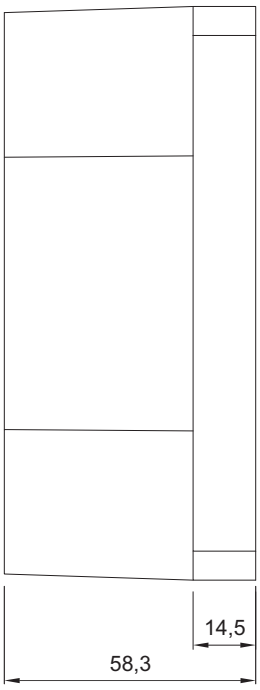


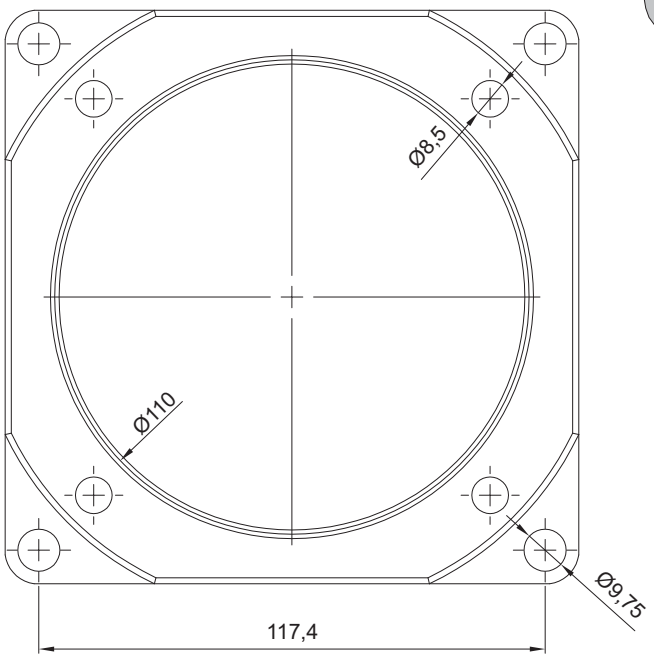
KIT1490

Codice di ordinazione per kit completo (FA90+K00+K03)
Ordering code for complete kit (FA90+K00+K03)

FA 100

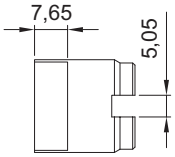
Flangia di adattamento
Adapter flange



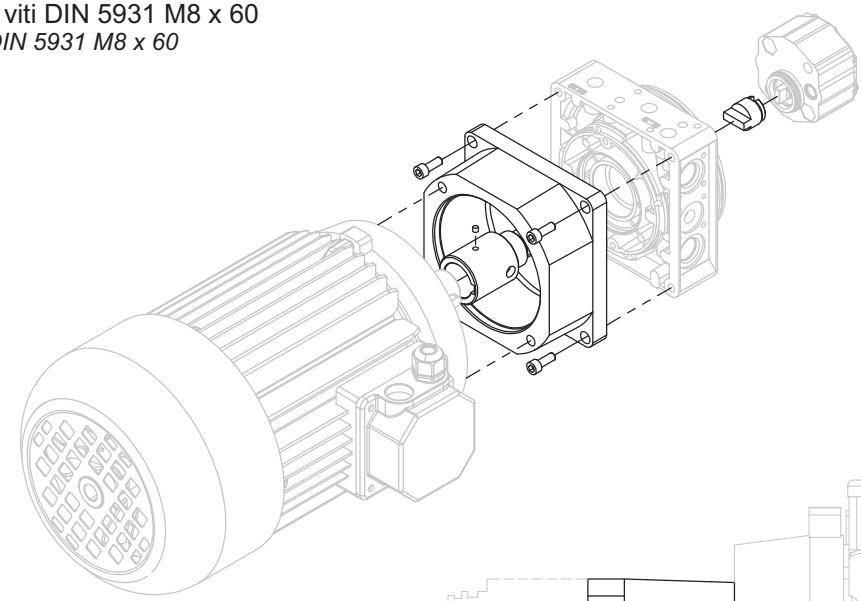


Assemblaggio lato collettore: 4 x viti DIN 6921 M8 x 30
Manifold side assembly: 4 x screws DIN 6921 M8 x 30
Assemblaggio lato motore: 4 x viti DIN 5931 M8 x 60
Motorside assembly: 4 x screws DIN 5931 M8 x 60

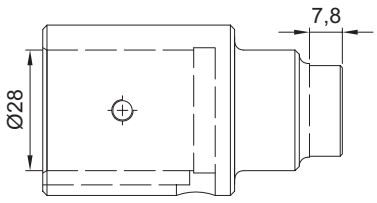
K00



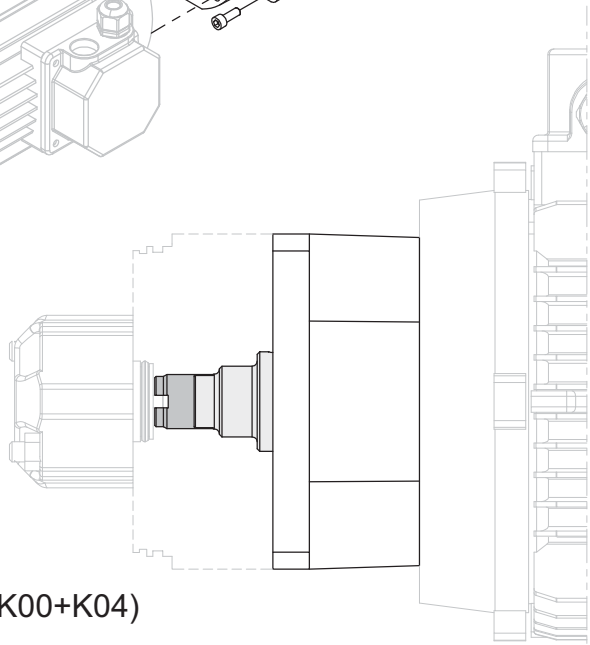
Giunto lato pompa
pump side coupling



K04

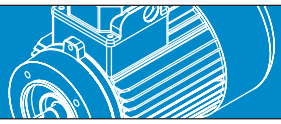


Giunto lato motore
motor side coupling



KIT14100

Codice di ordinazione per kit completo (FA100+K00+K04)
Ordering code for complete kit (FA100+K00+K04)



Motori CA B14 - *AC B14 motors*

Motori S1 IP 55 50Hz - *IP55 50Hz S1 motors*								
Codice *code*	**Potenza** *power*	**Flangia** *flange*	**A**	**øB**	**C**	**Flangia** *flange*	**Potenza** *power*	**Codice** *code*
Monofase - *single-phase*								
2 poli - *two poles*							4 poli - *four poles*	
MM 711-2	0,37	FA71	211	147	125	FA71	0,25	MM 711-4
MM 712-2	0,55	FA71	211	147	125	FA71	0,37	MM 712-4
MM 801-2	0,75	FA80	250	163	146	FA80	0,55	MM 801-4
MM 802-2	1,1	FA80	250	163	146	FA80	0,75	MM 802-4
MM 90S-2	1,5	FA90	262	183	153	FA90	1,1	MM 90S-4
MM 90L-2	2,2	FA90	287	183	153	FA90	1,5	MM 90L-4
	-	-	309	205	165	FA100	2,2	MM100L1-4
Trifase - *three-phase*								
2 poli - *two poles*							4 poli - *four poles*	
MT 711-2	0,37	FA71	211	147	115	FA71	0,25	MT 711-4
MT 712-2	0,55	FA71	211	147	115	FA71	0,37	MT 712-4
MT 801-2	0,75	FA80	250	163	133	FA80	0,55	MT 801-4
MT 802-2	1,1	FA80	250	163	133	FA80	0,75	MT 802-4
MT 90S-2	1,5	FA90	262	183	139	FA90	1,1	MT 90S-4
MT 90L1-2	2,2	FA90	287	183	139	FA90	1,5	MT 90L1-4
MT 100L1-2	3	FA100	309	205	152	FA100	2,2	MT 100L1-4
MT 100L2-2	4	FA100	309	205	152	FA100	3	MT 100L2-4
MT 112L1-2	5,5	FA100	330	221	155	FA100	4	MT 112M-4
	-	-	330	221	155	FA100	5,5	MT 112L1-4

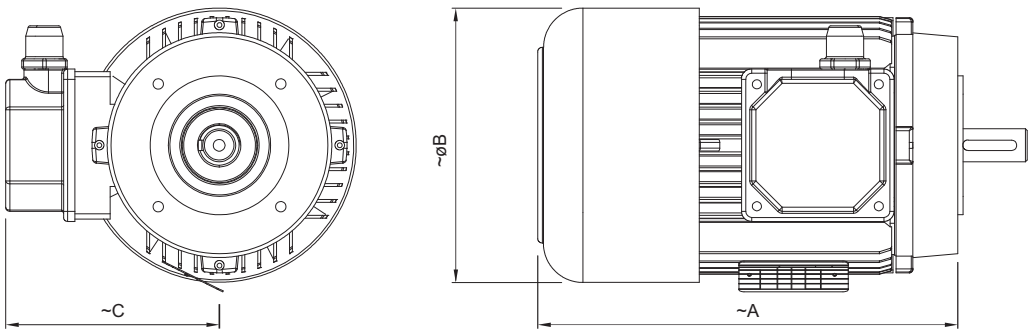
Potenza espressa in KW - *power in KW*

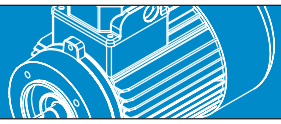
Per i kit di accoppiamento vedi capitolo precedente (6 - elementi di connessione).
For coupling kits see previous section (6 - junction elements).

Le caratteristiche tecniche, le dimensioni e gli altri dati non sono vincolanti. Gazzera S.r.l. si riserva il diritto di cambiarle o modificarle in qualsiasi momento senza preavviso e senza obblighi.
The technical characteristics, dimensions and other data are not bindings. Gazzera S.r.l. reserve the right to change them or modify them at any time and without notice.

Motori S3 IP 55 50Hz - *IP55 50Hz S3 motors*								
Codice *code*	**Potenza** *power*	**Flangia** *flange*	**A**	**øB**	**C**	**Flangia** *flange*	**Potenza** *power*	**Codice** *code*
Monofase - *single-phase*								
2 poli - *two poles*							4 poli - *four poles*	
MM3711-2	0,75	FA71	250	163	146	FA71	0,55	MM3711-4
MM3712-2	1,1	FA71	250	163	146	FA80	0,75	MM3801-4
MM3801-2	1,5	FA80	262	183	153	FA80	1,1	MM3802-4
MM390L-2	2,2	FA90	287	183	153	FA90	1,5	MM390S-4
	-	-	309	205	165	FA90	2,2	MM390L-4
	-	-	327	205	165	FA100	3	MM3100L1-4
Trifase - *three-phase*								
2 poli - *two poles*							4 poli - *four poles*	
MT3711-2	0,37	FA71	211	147	115	FA71	0,25	MT3711-4
MT3712-2	0,55	FA71	211	147	115	FA71	0,37	MT3712-4
MT3801-2	0,75	FA80	250	163	133	FA80	0,55	MT3801-4
MT3802-2	1,1	FA80	250	163	133	FA80	0,75	MT3802-4
MT390S-2	1,5	FA90	262	183	139	FA90	1,1	MT390S-4
MT390L1-2	2,2	FA90	287	183	139	FA90	1,5	MT390L1-4
MT3100L1-2	3	FA100	309	205	152	FA100	2,2	MT3100L1-4
MT3100L2-2	4	FA100	309	205	152	FA100	3	MT3100L2-4
MT3112L1-2	5,5	FA100	335	229	167	FA100	4	MT3112M-4
	-	-	335	229	167	FA100	5,5	MT3112L1-4

Potenza espressa in KW - *power in KW*





S1

Servizio continuo
Continuous running duty

Una volta partito, il motore lavora con un carico costante fino almeno a raggiungimento dell'equilibrio termico. Il motore può quindi funzionare per un tempo illimitato.
Once started, the motor works at a constant load at least until thermal equilibrium is reached. Then that motor may be operated for an unlimited period.

I motori con servizio S1 sono inclusi nel regolamento europeo riguardante i motori ad alta efficienza.
Motors with duty S1 are included in high efficiency European regulation.

S3

Servizio intermittente periodico
Intermittent periodic duty

Sequenza di cicli di funzionamento uguali composti da un periodo di funzionamento a carico costante ed un periodo senza carico e senza alimentazione elettrica.
A sequence of identical duty cycles, made up with a time of operation at costant load and a time at rest. When at rest, the motor is not fed.

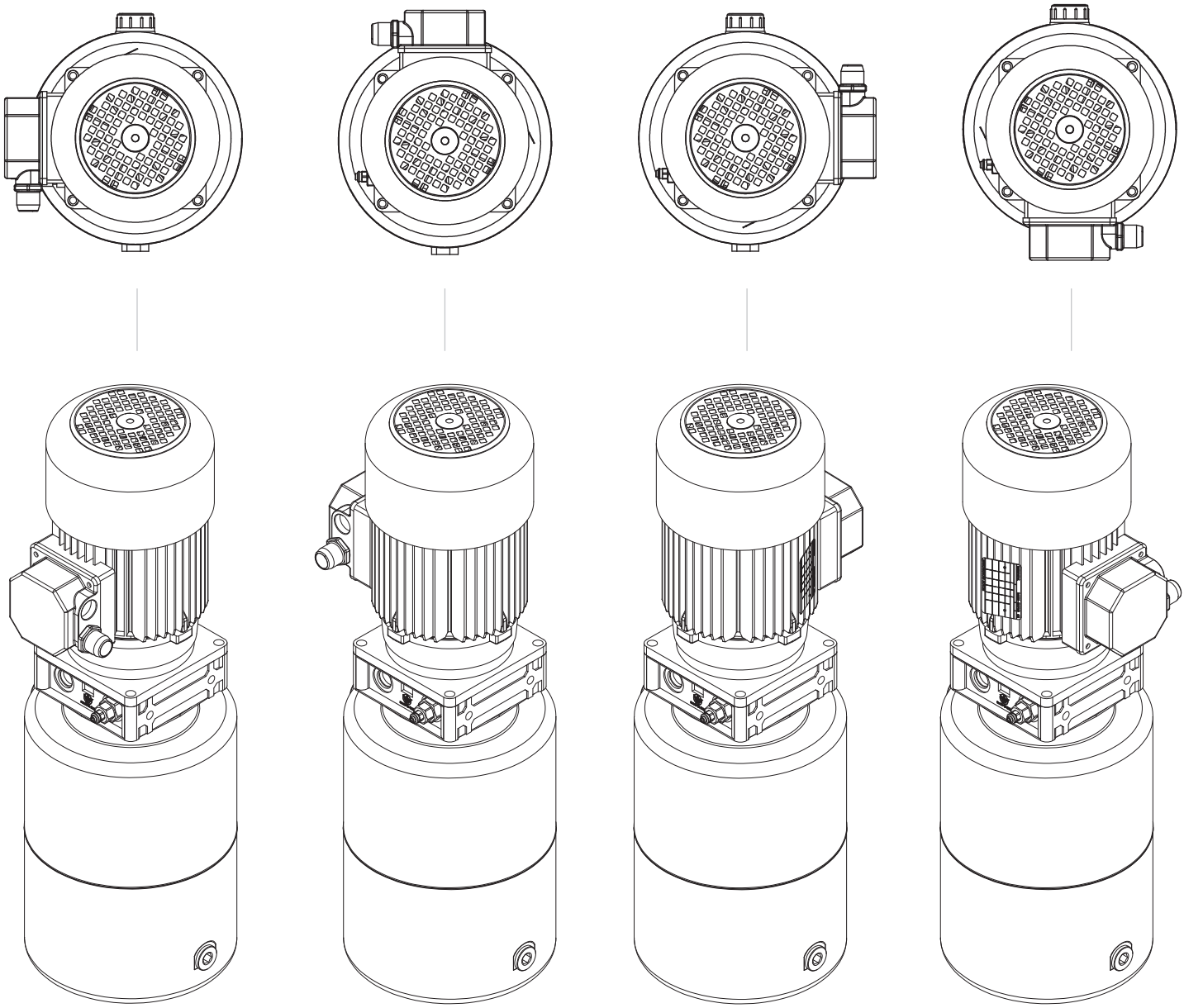
La corrente di avviamento non influenza l'innalzamento di temperatura.
Starting current does not significantly influence temperature rise.

Se non diversamente specificato, la durata di un ciclo per il servizio S3 è di 10 minuti e i rapporti di intermittenza dovranno assumere un valore tra i seguenti: 15%, 25%, 40%, 60%.
Unless otherwise specified, the duration of a cycle for S3 duty shall be 10 minutes and the cycle duration factor shall be one of the following values: 15%, 25%, 40%, 60%.

Il tipo di servizio S3 ha un tempo di riposo (cioè senza carichi esterni applicati) durante il quale il motore ha il tempo di raffreddarsi, permettendo così di sovraccaricarlo rispetto a quando lo stesso è utilizzato con un servizio S1 (e quindi ininterrottamente sotto carico). Inoltre i motori con servizio diverso da S1 non sono inclusi nel regolamento europeo riguardante i motori ad alta efficienza.
The duty type S3 share a time to rest (no external load is applied) during which the motor lowers its temperature, thus affording to overload such motor with respect to the same motor when loaded with S1 duty cycle (then continuosly loaded). Moreover motors with duty types different from S1 are not included in high efficiency European regulation.

Per ulteriori informazioni si rimanda alla Norma IEC 60034-1.
Further information can be found in IEC 60034-1 standard.

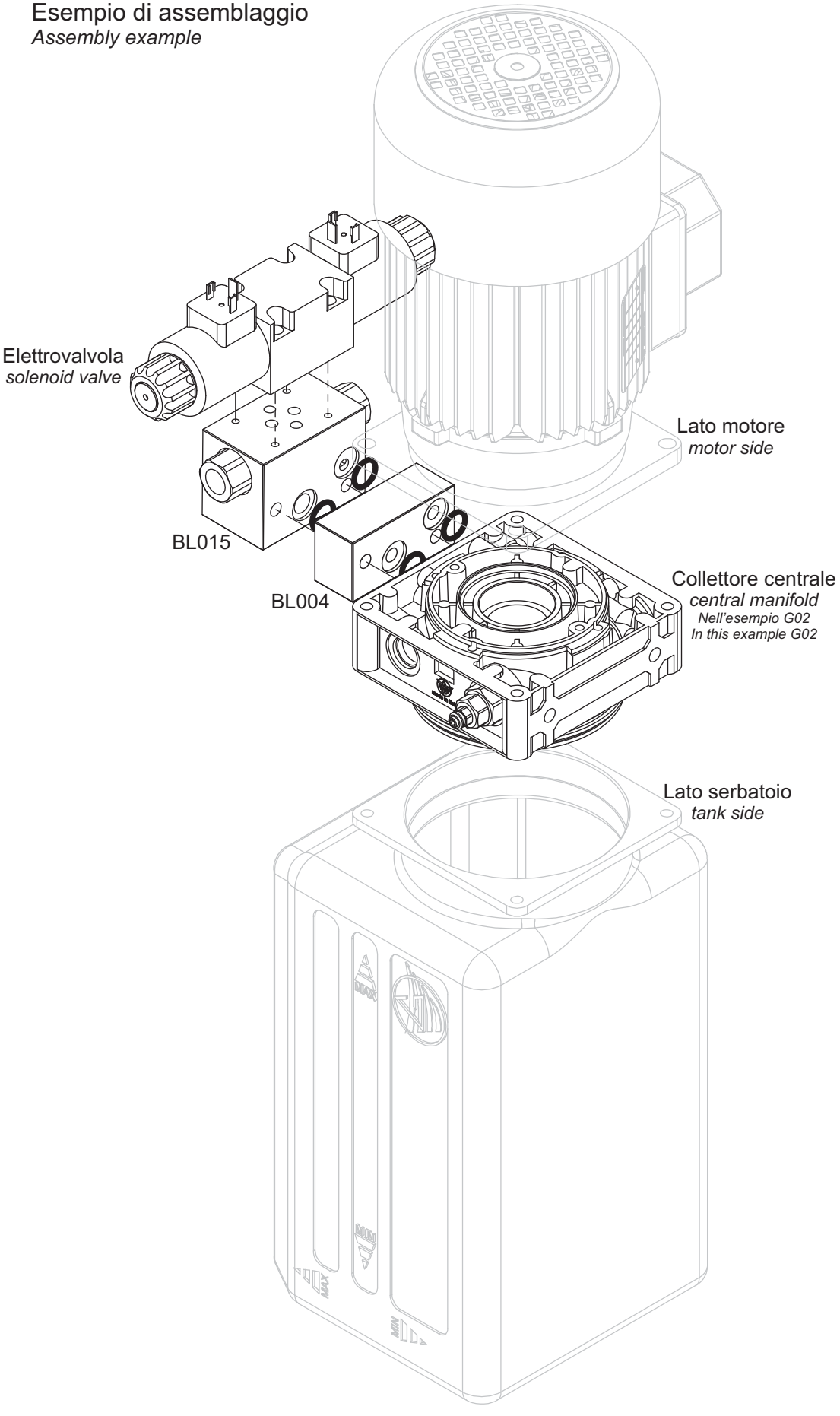
Orientamento motore - *motor positioning*



1 Sinistra - *left* (std)	2 Anteriore - *front*	3 Destra - *right*	4 Posteriore - *rear*
morsettiera stesso lato della valvola di massima *terminal box same side of the relief valve*	morsettiera lato blocchi modulari *terminal box on modular blocks side*	morsettiera lato opposto della valvola di massima *terminal box on opposite side of the relief valve*	morsettiera lato opposto blocchi modulari *terminal box on opposite side of the modular blocks*

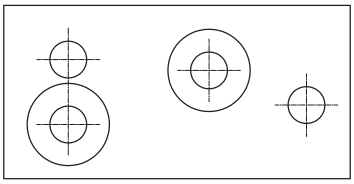
Blocchi valvole - *valve blocks*

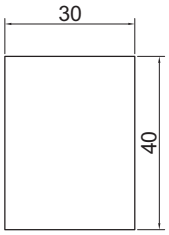
Esempio di assemblaggio
Assembly example



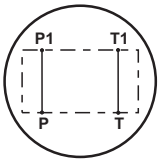
BL004

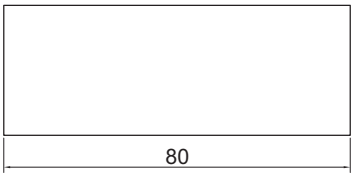
Distanziale
Spacer element

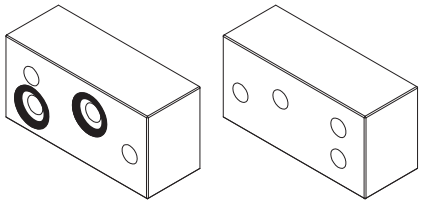




Simbolo
symbol

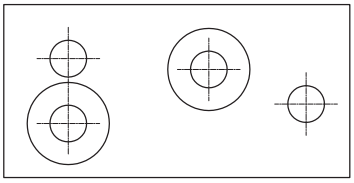


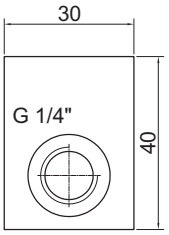




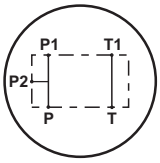
BL004-1

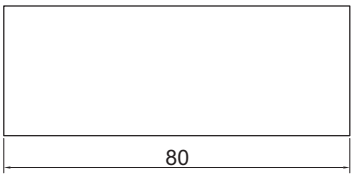
Distanziale con connessione aggiuntiva 1/4" BSP
Spacer element with additional 1/4" BSP port

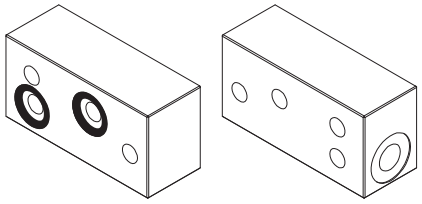




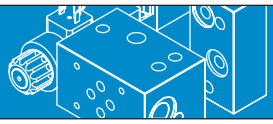
Simbolo
symbol





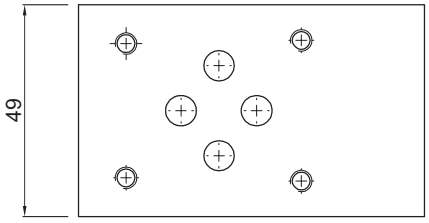


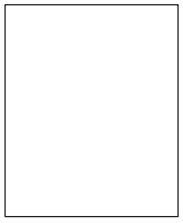
NB: Versione larghezza 40 disponibile con il codice BL004-2 (indispensabile per blocchi in presenza di motore taglia 112).
Note: version width 40 available with code BL004-2 (essential for manifolds in presence of motors size 112).



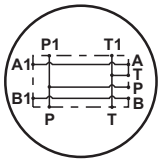
BL008

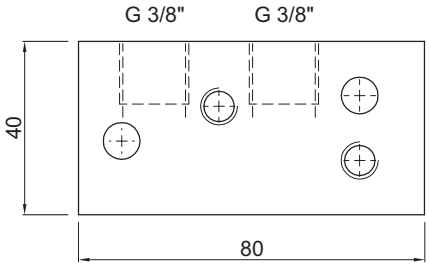
Blocco modulare con porte posteriori 3/8" BSP
Modular manifold with rear 3/8" BSP ports

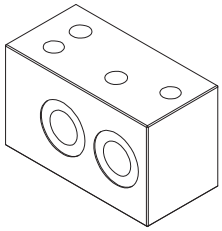


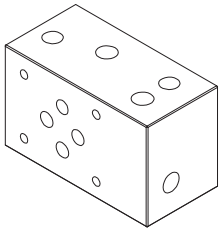


Simbolo
symbol



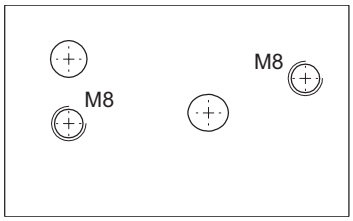


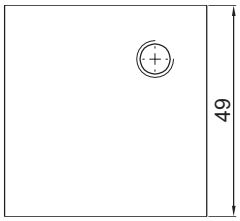




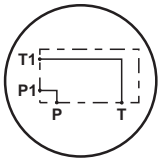
BL009

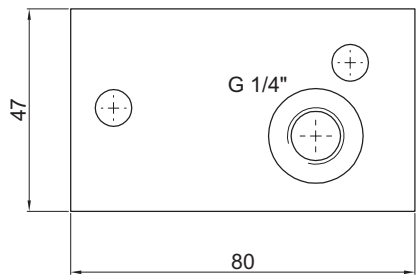
Blocco per rotazione 90° con connessione aggiuntiva 1/4" BSP
90° rotation manifold with additional 1/4" BSP port

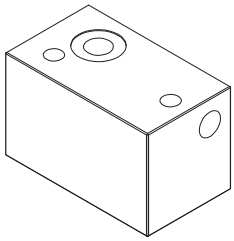


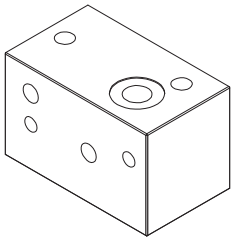


Simbolo
symbol



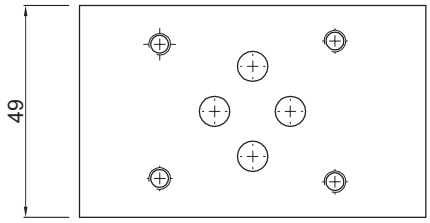


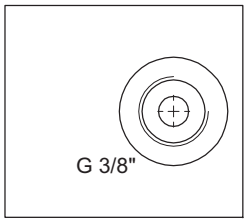




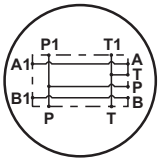
BL010

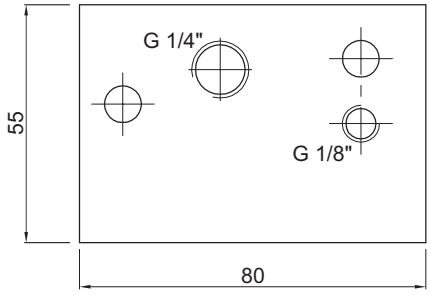
Blocco modulare con porte laterali 3/8" BSP
Modular manifold with lateral 3/8" BSP ports

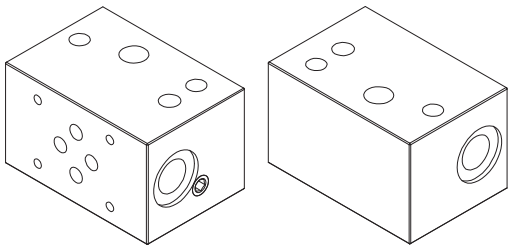




Simbolo
symbol

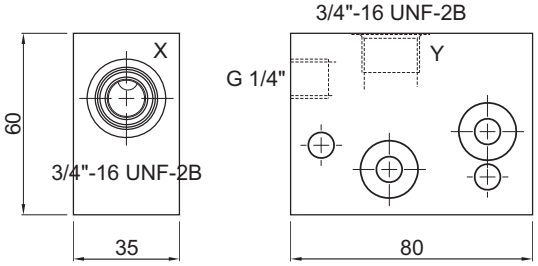




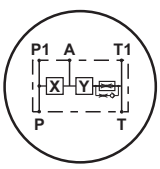


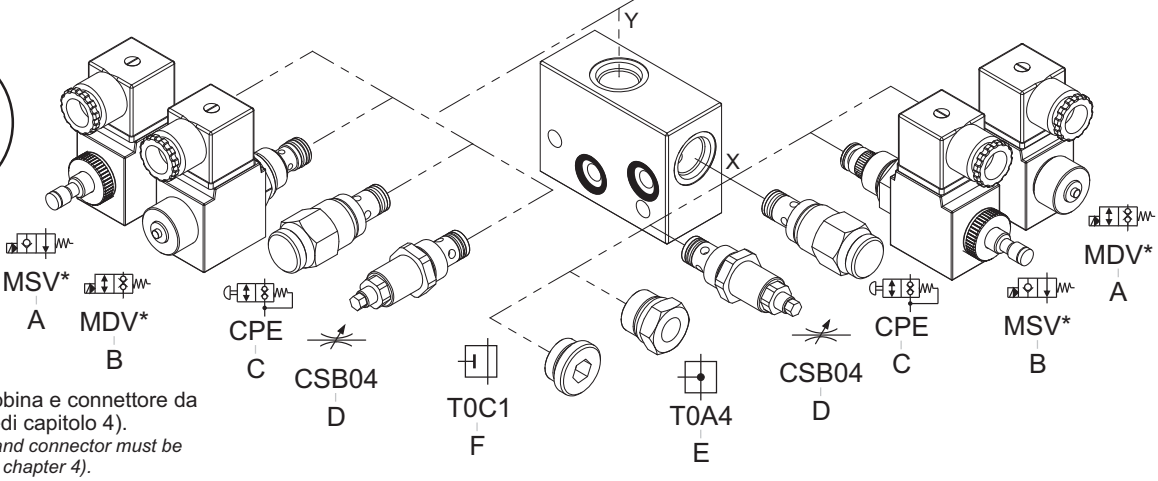
BL011-X-Y

Blocco per circuito semplice effetto aggiuntivo
Manifold for additional single acting circuit

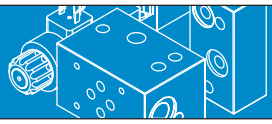


Simbolo
symbol





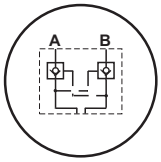
*NB: Tipo, tensione bobina e connettore da specificare a parte (vedi capitolo 4).
**Note: type, coil voltage and connector must be specified separately (see chapter 4).*

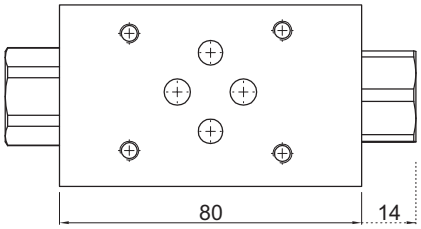


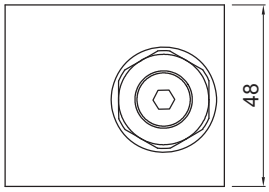
BL015

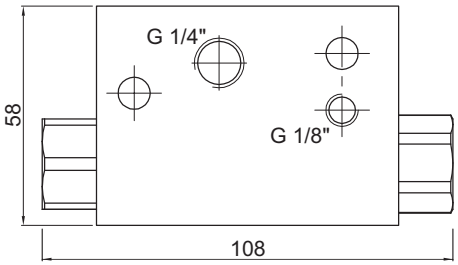
Blocco con valvola di ritegno pilotata
Manifold with pilot check valve

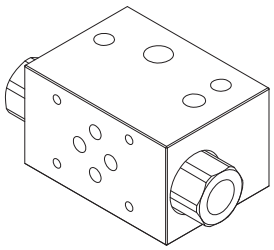
Simbolo
symbol

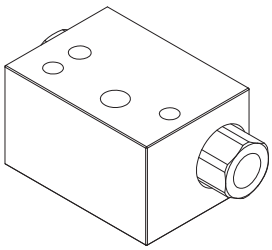






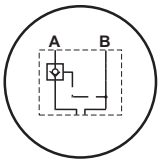






BL016

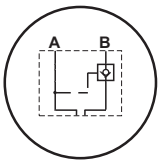
Blocco con valvola di ritegno pilotata su A
Manifold with pilot check valve on A



Simbolo
symbol

BL017

Blocco con valvola di ritegno pilotata su B
Manifold with pilot check valve on B

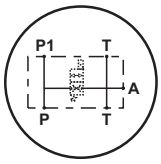


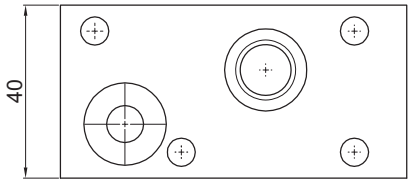
Simbolo
symbol

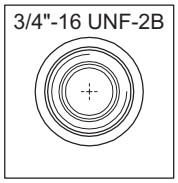
BL021

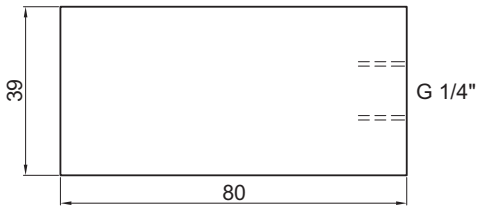
Blocco per valvole MSV e MDV
Manifold for MSV and MDV valves

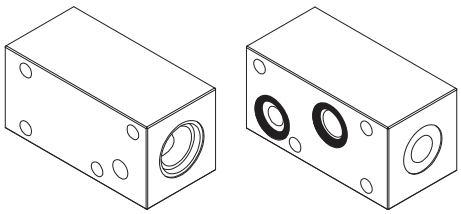
Simbolo
symbol







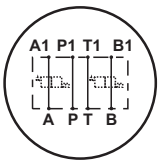


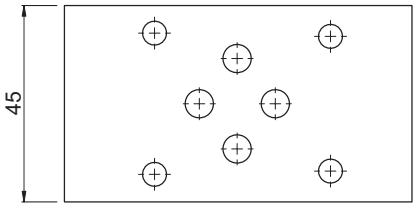


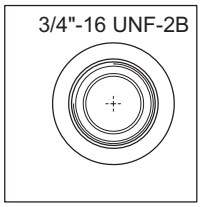
BL022

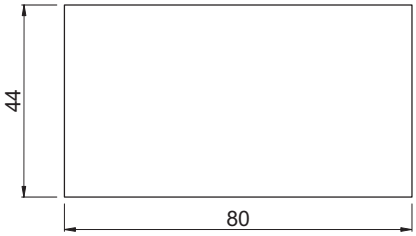
Blocco modulare per valvole MSV e MDV
Modular manifold for MSV and MDV valves

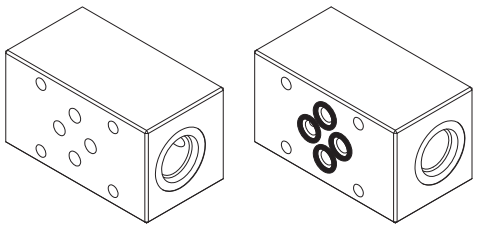
Simbolo
symbol

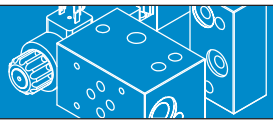






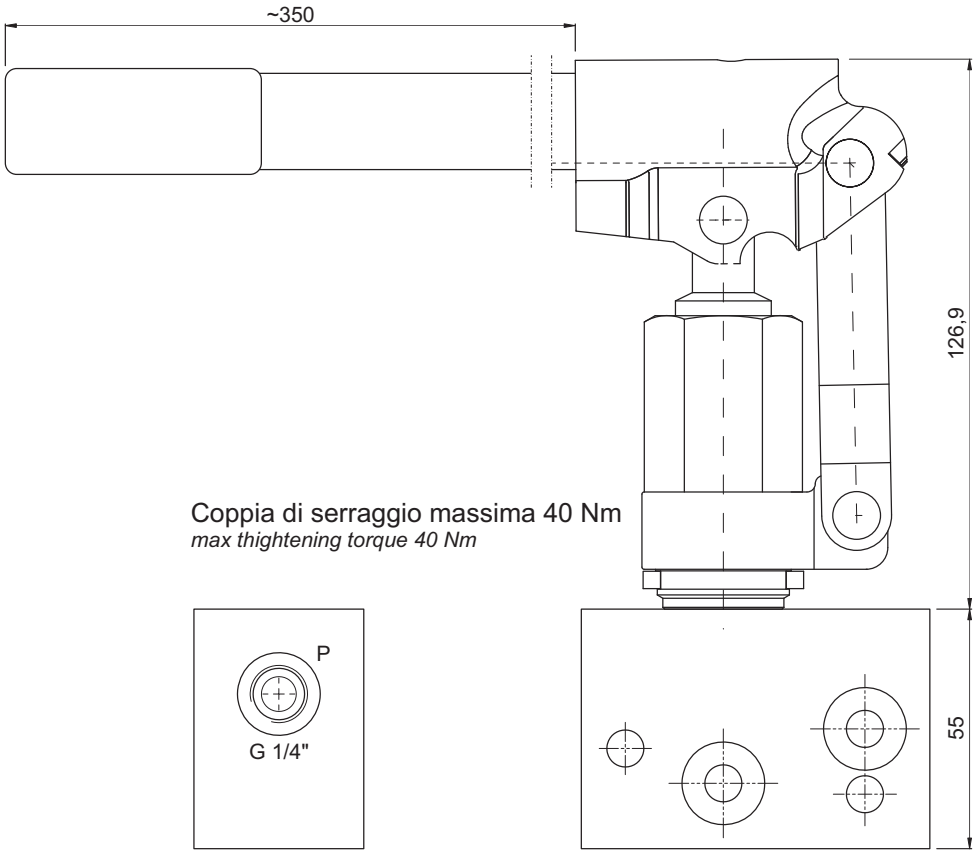




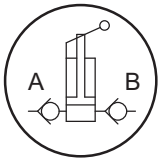


BL023

Blocco pompa manuale
Hand pump modular manifold

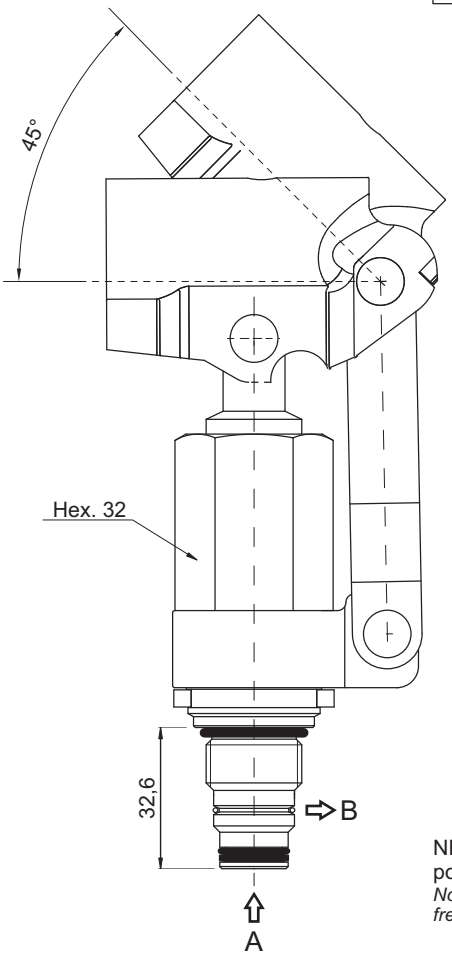


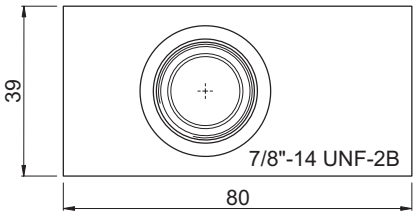
Simbolo
symbol

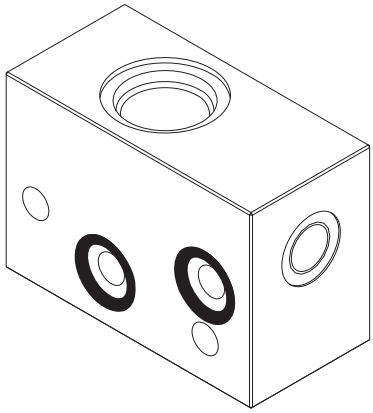


Caratteristiche principali *main features*	
Pressione max *max pressure*	210 bar
cc/corsa *cc/stroke*	8,8
Peso *weight*	1,9 Kg

Coppia di serraggio massima 40 Nm
max thightening torque 40 Nm

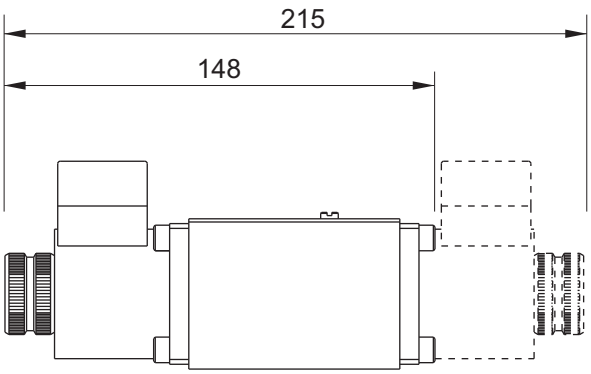




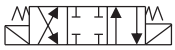
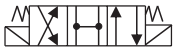
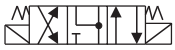
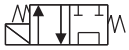
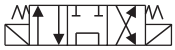


NB: Per facilitare l'aspirazione della pompa, lasciare libero il percorso P
Note: to make suction easier, leave P path free

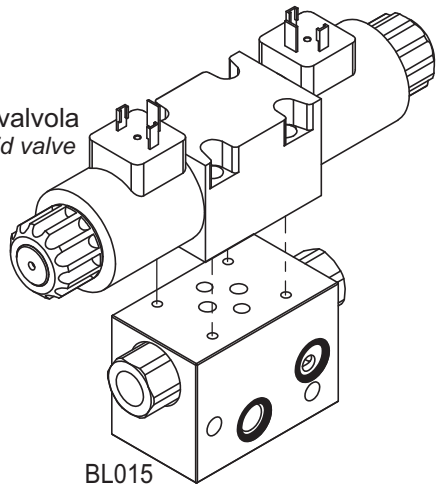
Elettrovalvole - *solenoid valves*



Schema idraulico - *hydraulic scheme*

Code	Schema *scheme*	Code	Schema *scheme*
DM01		DD01	
DM02		DD02	
DM03		DD03	
DM04		DD04	
		DD05	

Tensioni standard per elettrovalvole: 12DC, 24DC, 48DC, 110/50AC, 230/50AC.
Altre tensioni su richiesta.
Standard voltages for solenoid valves: 12DC, 24DC, 48DC, 110/50AC, 230/50AC.
Others voltages on request.



Codice ordinazione - *ordering code*

D	M	0	1	0	0	2	4	D	C
1		2		3					

1 Tipo di valvola - *valve type*

DM = Elettrovalvola singola - *single solenoid valve*
DD = Elettrovalvola doppia - *double solenoid valve*

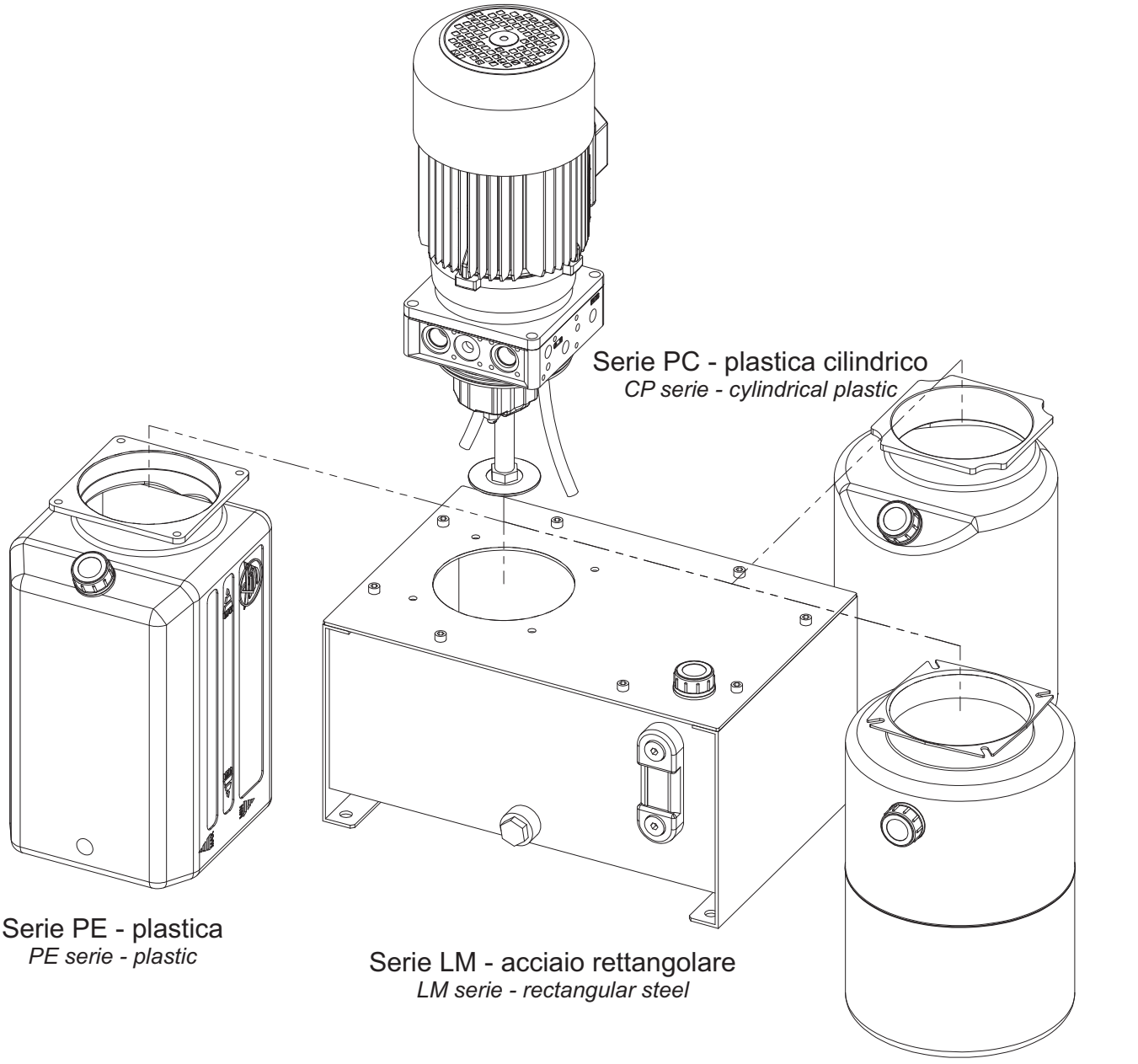
2 Schema idraulico - *hydraulic scheme*

Vedi tabella sopra - *see table above*

3 Tensione bobina - *coil voltage*

0012DC, 0024DC, 0048DC = corrente continua - *DC current*
0110AC, 0230AC = corrente alternata - *AC current*

Modello - *type*



Codice ordinazione - *ordering code*

P	E	1	2	V
	1		2	3

1 Serie - *series*

PE
LM
CS
PC

2 Volume serbatoio - *tank volume*

PE	LM	CS	PC
05 = 5,0 lt	07 = 7,0 lt	01 = 1,5 lt	05 = 5,0 lt
08 = 8,0 lt	15 = 15,0 lt	02 = 2,5 lt	07 = 7,0 lt
12 = 12,0 lt	20 = 20,0 lt	05 = 5,0 lt	09 = 9,0 lt
	30 = 30,0 lt	08 = 8,0 lt	11 = 11,0 lt
		10 = 10,0 lt	
		12 = 12,0 lt	

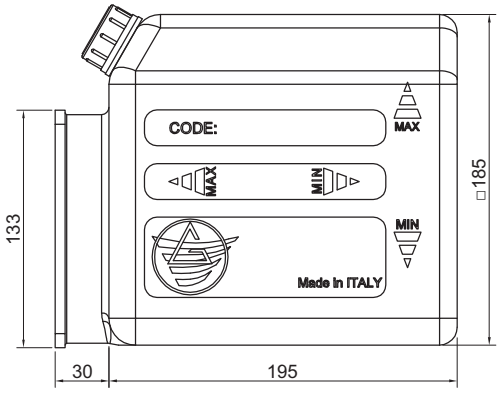
3 Tappo di carico - *filler cap*

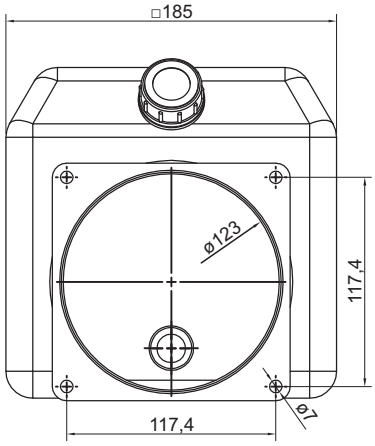
O = Orizzontale - *horizontal*
V = Verticale - *vertical*
TF= Stagno (solo LM07)
watertight (LM07 only)

Per serie LM omettere punto 3 - *for LM series omit point 3*

PE05

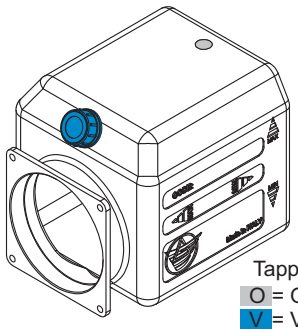
Serbatoio in plastica capacità 5 litri
Plastic tank 5 liters capacity





Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +70°C
Foro std *std hole*	G1/2"

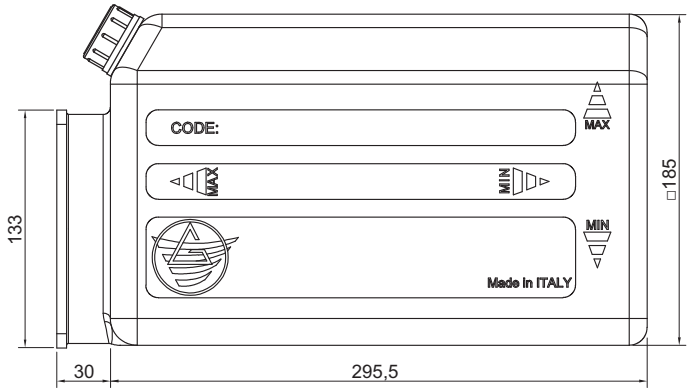
Predisposizione tappo di carico per montaggio orizzontale (O), o verticale (V)
predisposition for filler cap position for horizontal (O), or vertical (V) mounting

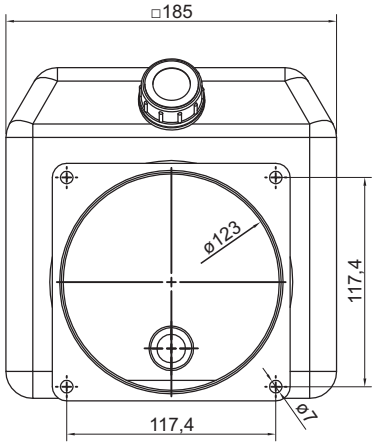


Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

PE08

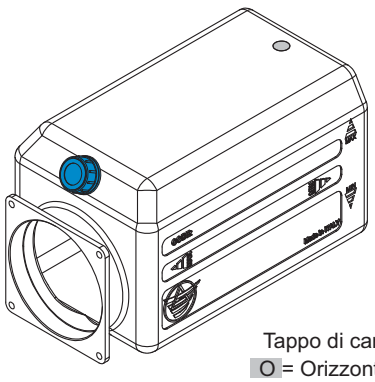
Serbatoio in plastica capacità 8 litri
Plastic tank 8 liters capacity





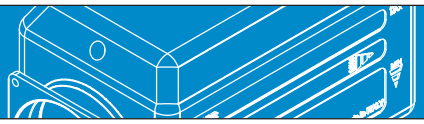
Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +70°C
Foro std *std hole*	G1/2"

Predisposizione tappo di carico per montaggio orizzontale (O), o verticale (V)
predisposition for filler cap position for horizontal (O), or vertical (V) mounting



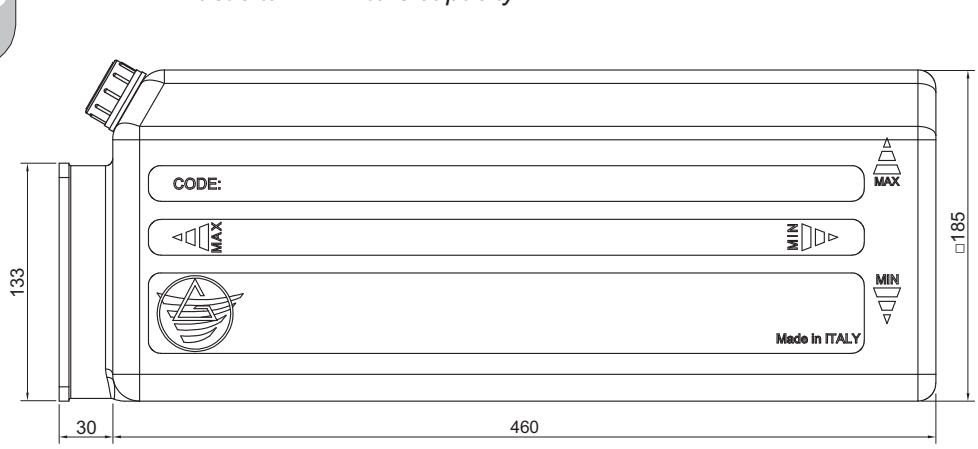
Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

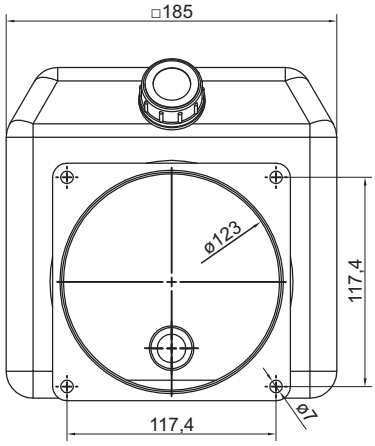
Serbatoi plastica
plastic oil tanks



PE12

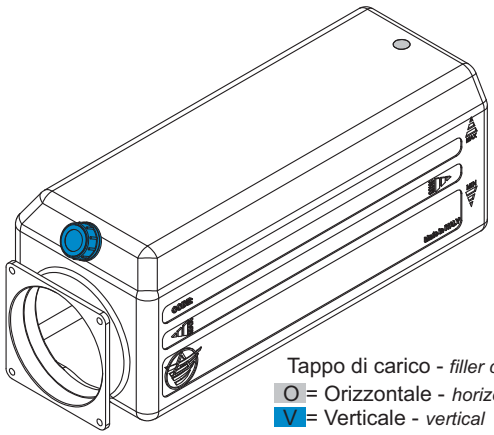
Serbatoio in plastica capacità 12 litri
Plastic tank 12 liters capacity



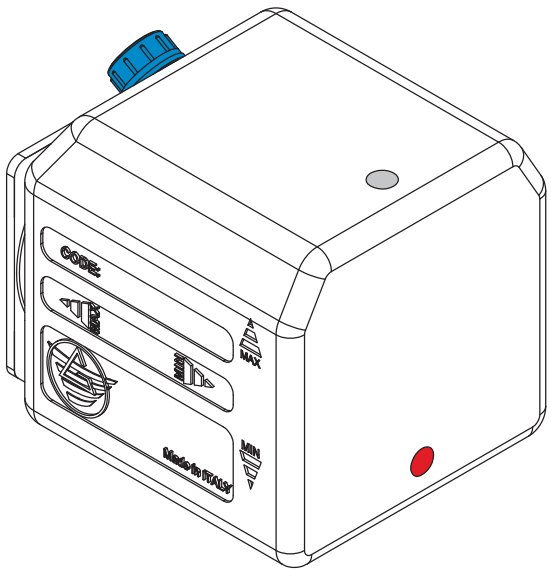


Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +70°C
Foro std *std hole*	G1/2"

Predisposizione tappo di carico per montaggio orizzontale (O), o verticale (V)
predisposition for filler cap position for horizontal (O), or vertical (V) mounting



Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*



NOTA - *NOTE*

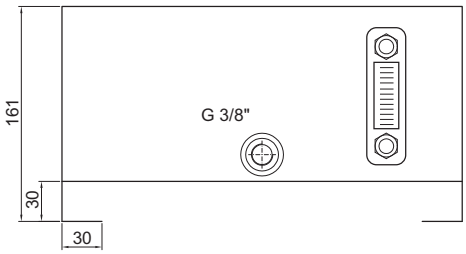
Versione verticale - *vertical version*:
- Tappo di carico - *filler cap*
- Chiuso (apribile a richiesta) - *closed (opened on request)*

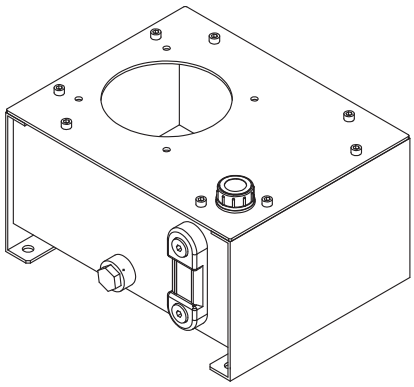
Versione orizzontale - *horizontal version*:
- Chiuso da tappo cieco G1/2" - *closed by G1/2" plug*
- Tappo di carico - *filler cap*

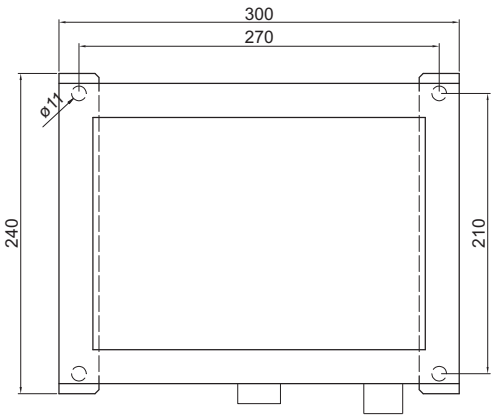
A richiesta, è inoltre possibile avere un ulteriore foro di scarico sul retro del serbatoio . In questo caso la cavità verrà tappata da tappo cieco G1/2".
Tutte le variazione rispetto allo standard sono da specificare in fase d'ordine.
On request, is possible to have an additional unloading hole on the rear of the tank .
In this case the cavity will be capped by G1/2" plug.
All changes compared to the standard, must be specified during the order phase.

LM07

Serbatoio rettangolare in acciaio capacità 7 litri
7 liters capacity rectangular steel tank

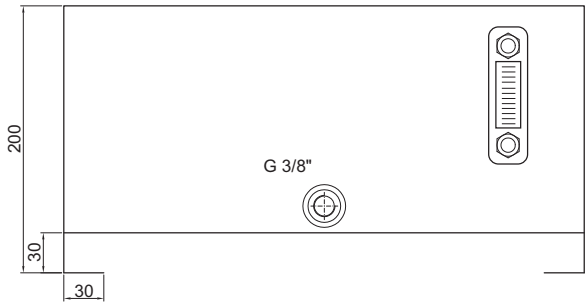


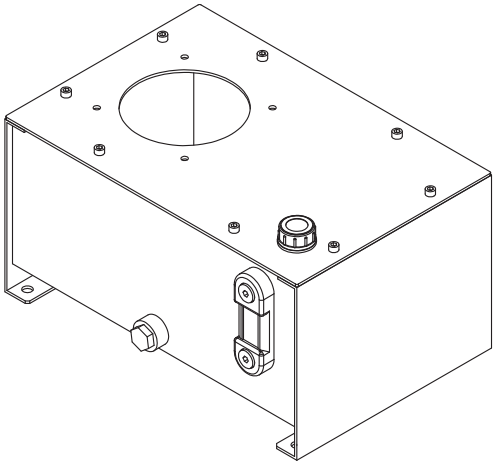


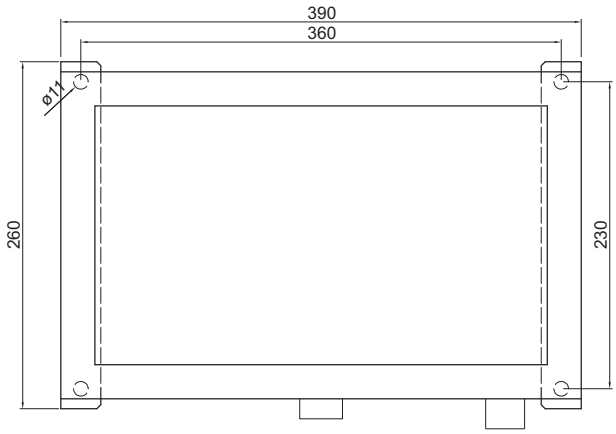


LM15

Serbatoio rettangolare in acciaio capacità 15 litri
15 liters capacity rectangular steel tank

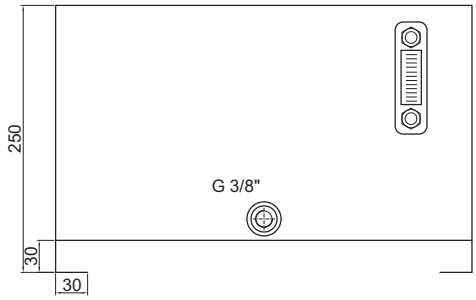


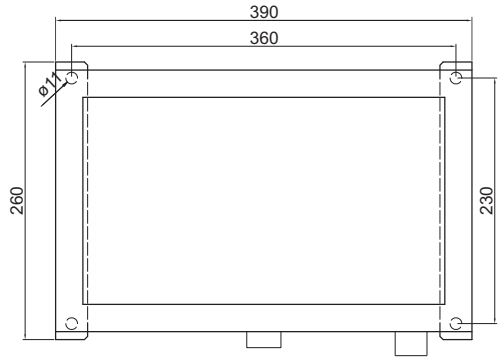


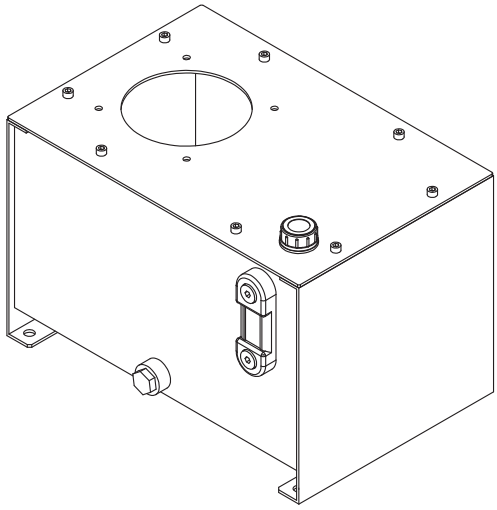


LM20

Serbatoio rettangolare in acciaio capacità 20 litri
20 liters capacity rectangular steel tank

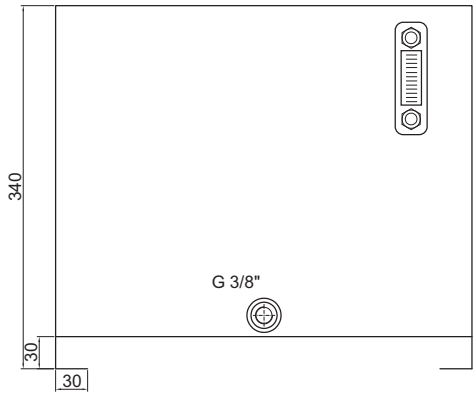


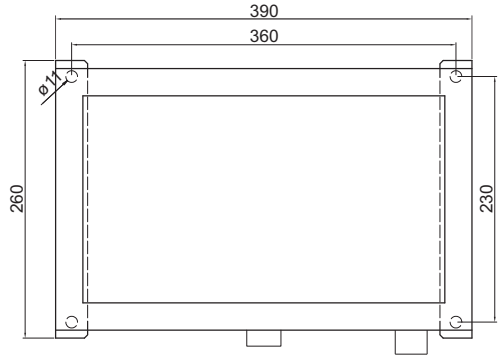


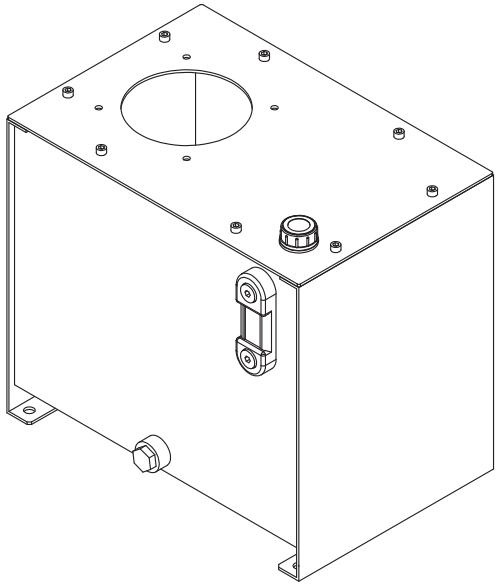


LM30

Serbatoio rettangolare in acciaio capacità 30 litri
30 liters capacity rectangular steel tank

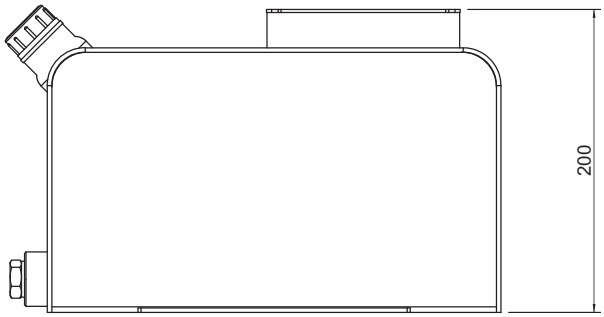


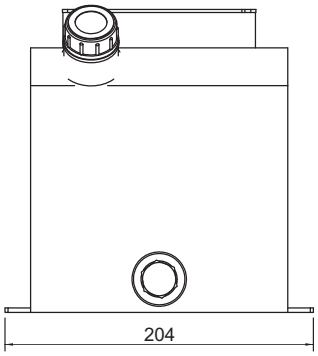


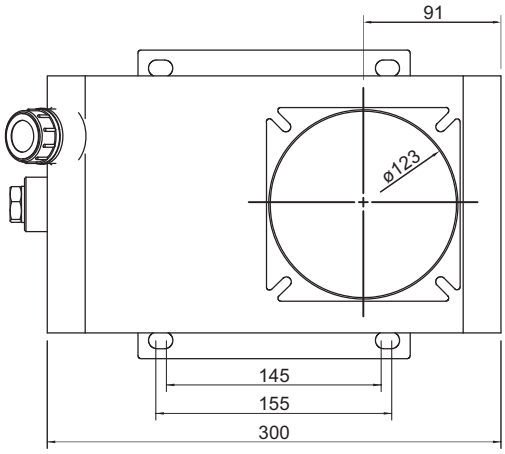


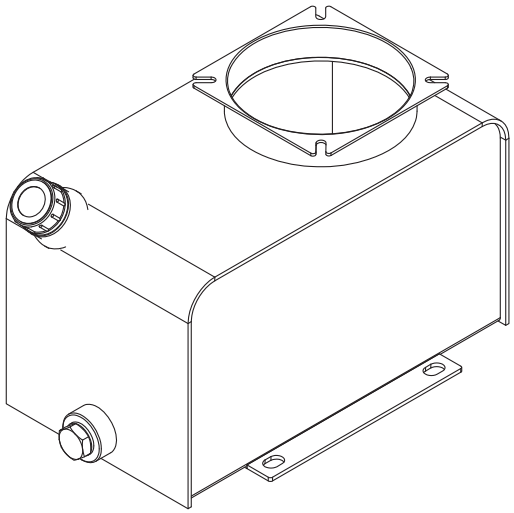
LM07TF

Serbatoio stagno in acciaio capacità 7 litri
7 liters capacity watertight steel tank





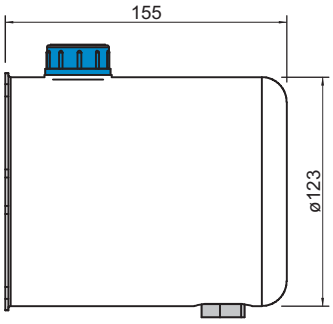


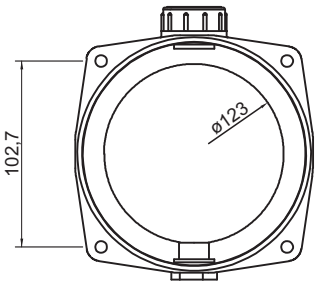


Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +80°C
Foro std *std hole*	G1/2"

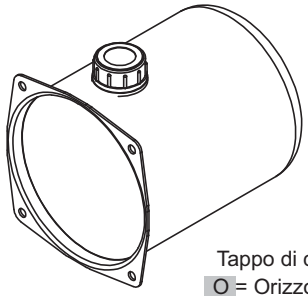
CS01

Serbatoio cilindrico in acciaio capacità 1,5 litri
1,5 liters capacity cylindrical steel tank





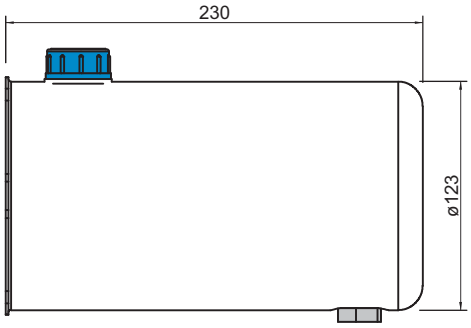
Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +80°C
Foro std *std hole*	G1/2"

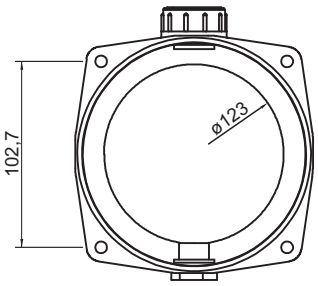


Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

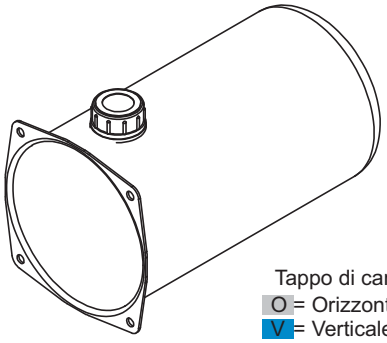
CS02

Serbatoio cilindrico in acciaio capacità 2,5 litri
2,5 liters capacity cylindrical steel tank





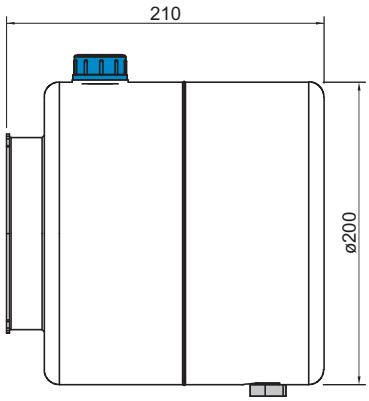
Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +80°C
Foro std *std hole*	G1/2"

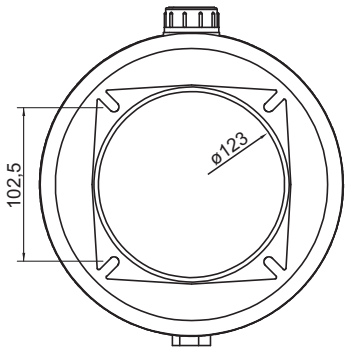


Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

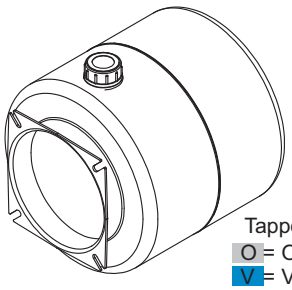
CS05

Serbatoio cilindrico in acciaio capacità 5 litri
5 liters capacity cylindrical steel tank





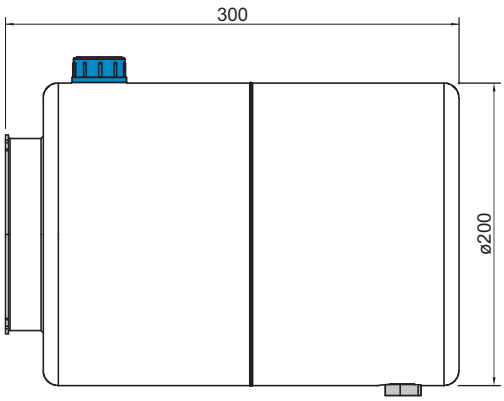
Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +80°C
Foro std *std hole*	G1/2"

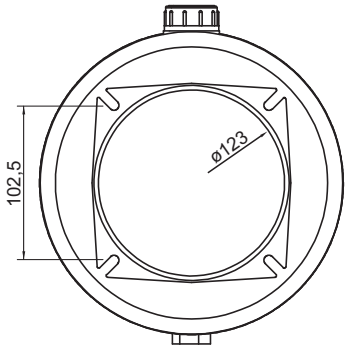


Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

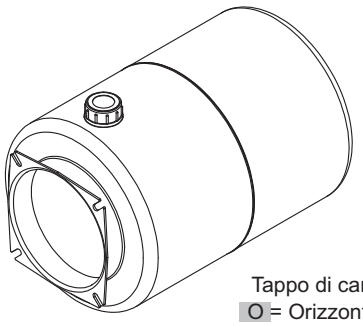
CS08

Serbatoio cilindrico in acciaio capacità 8 litri
8 liters capacity cylindrical steel tank





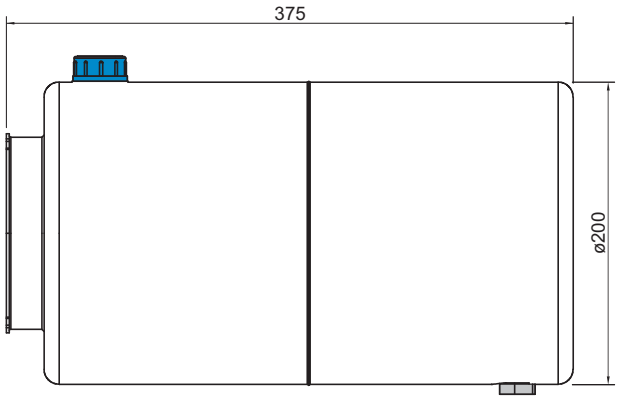
Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +80°C
Foro std *std hole*	G1/2"

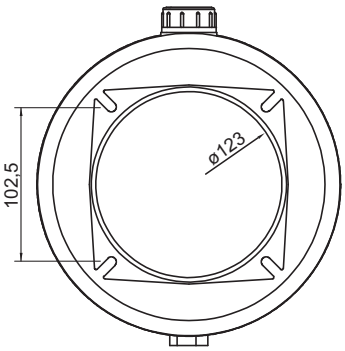


Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

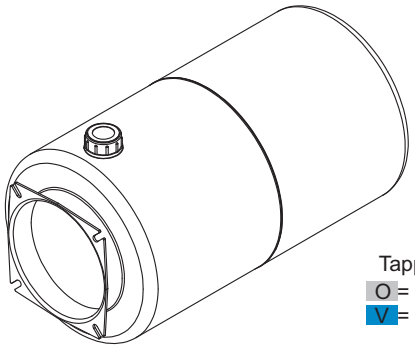
CS10

Serbatoio cilindrico in acciaio capacità 10 litri
10 liters capacity cylindrical steel tank





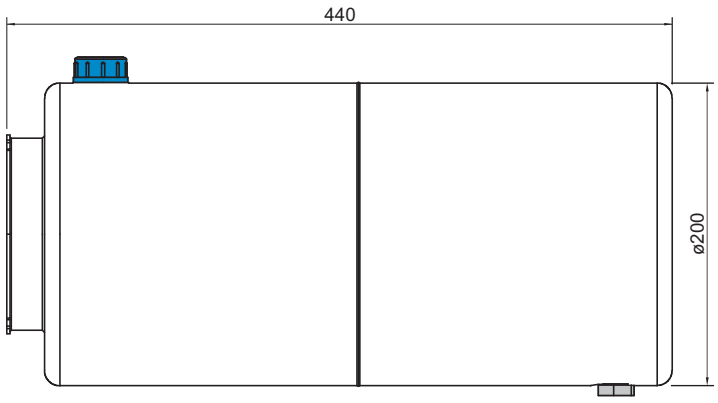
Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +80°C
Foro std *std hole*	G1/2"

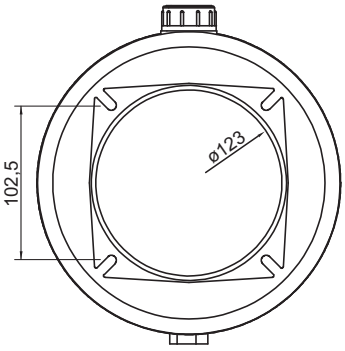


Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

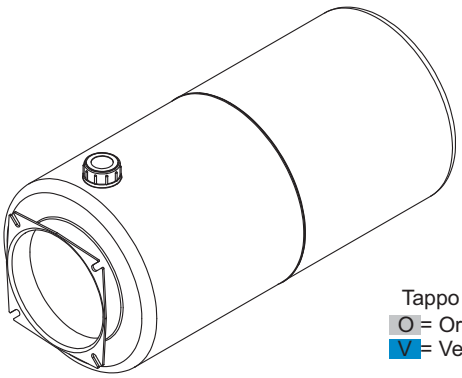
CS12

Serbatoio cilindrico in acciaio capacità 12 litri
12 liters capacity cylindrical steel tank





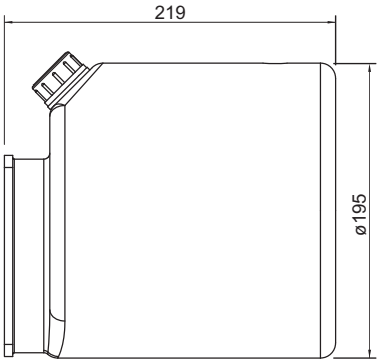
Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-10°C +80°C
Foro std *std hole*	G1/2"

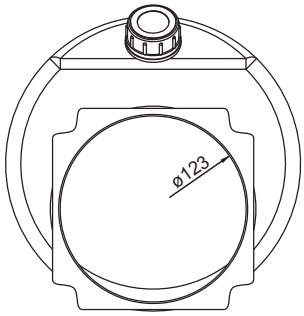


Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

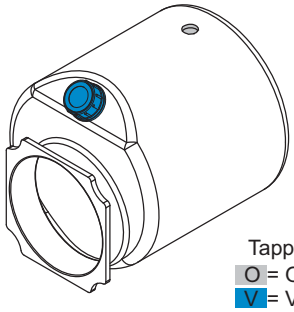
PC05

Serbatoio cilindrico in plastica capacità 5 litri
5 liters capacity cylindrical plastic tank





Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-15°C +70°C
Foro std *std hole*	G1/2"

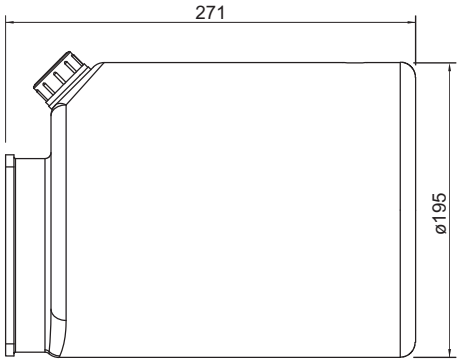


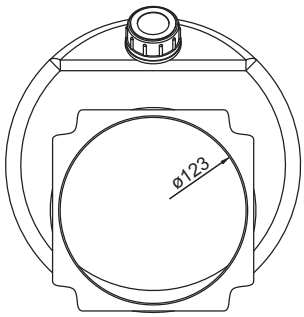
Predisposizione tappo di carico per montaggio orizzontale (O), o verticale (V)
predisposition for filler cap position for horizontal (O), or vertical (V) mounting

Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

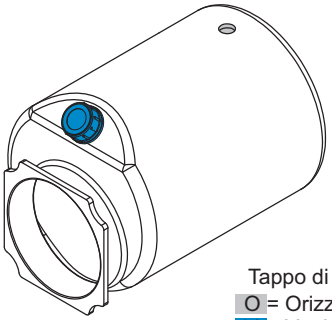
PC07

Serbatoio cilindrico in plastica capacità 7 litri
7 liters capacity cylindrical plastic tank





Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-15°C +70°C
Foro std *std hole*	G1/2"



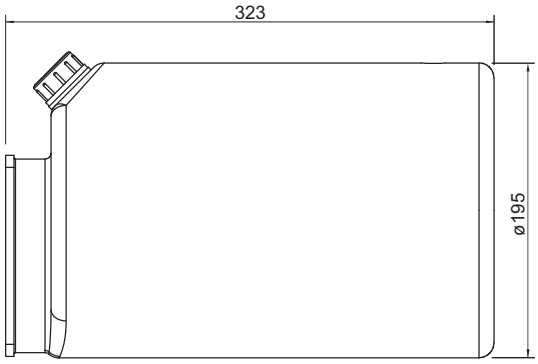
Predisposizione tappo di carico per montaggio orizzontale (O), o verticale (V)
predisposition for filler cap position for horizontal (O), or vertical (V) mounting

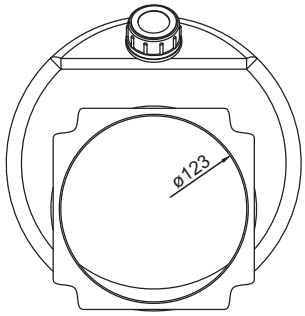
Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

Serbatoi plastica
plastic oil tanks

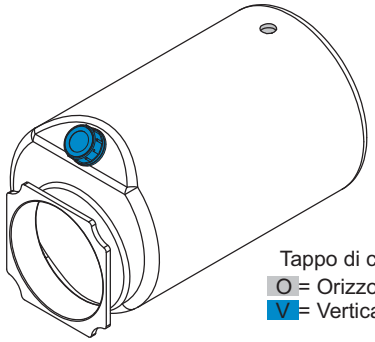
PC09

Serbatoio cilindrico in plastica capacità 9 litri
9 liters capacity cylindrical plastic tank





Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-15°C +70°C
Foro std *std hole*	G1/2"

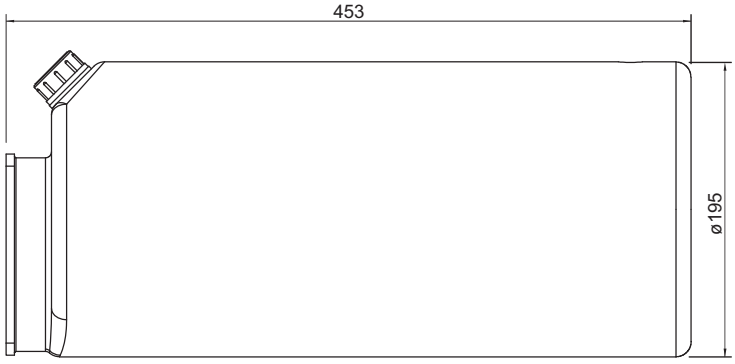


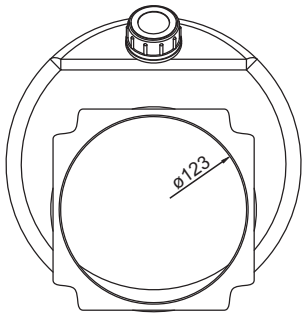
Predisposizione tappo di carico per montaggio orizzontale (O), o verticale (V)
predisposition for filler cap position for horizontal (O), or vertical (V) mounting

Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

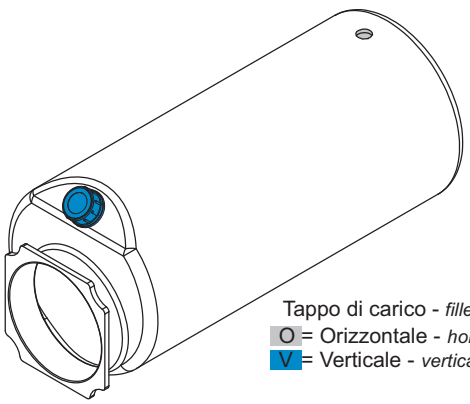
PC11

Serbatoio cilindrico in plastica capacità 11 litri
11 liters capacity cylindrical plastic tank





Caratteristiche principali *main features*	
Temperatura di impiego *working temperature*	-15°C +70°C
Foro std *std hole*	G1/2"

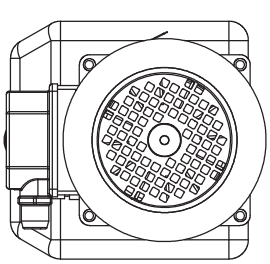
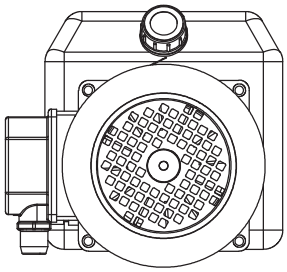
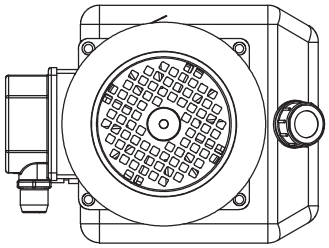
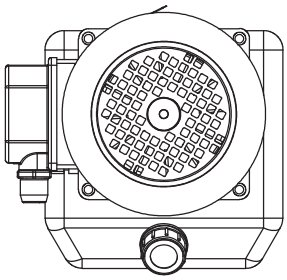


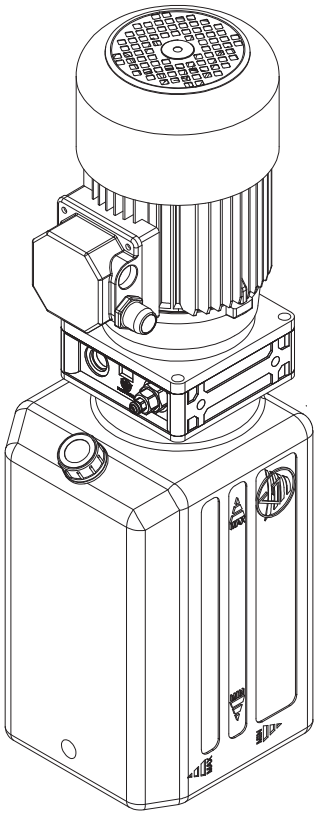
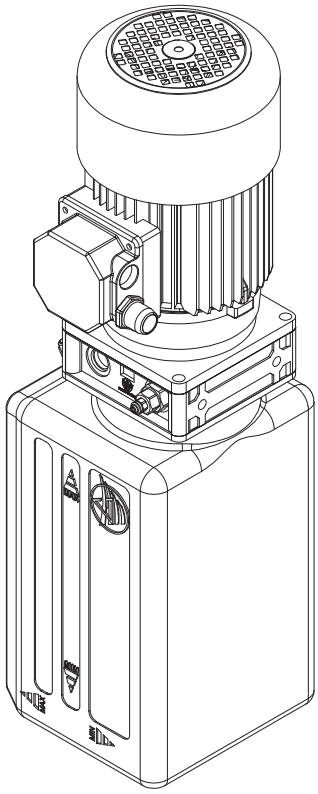
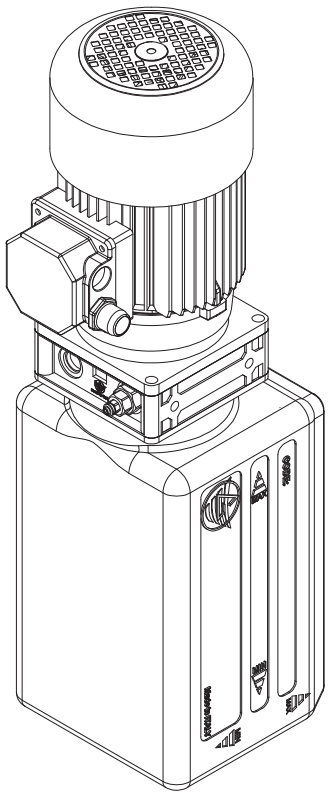
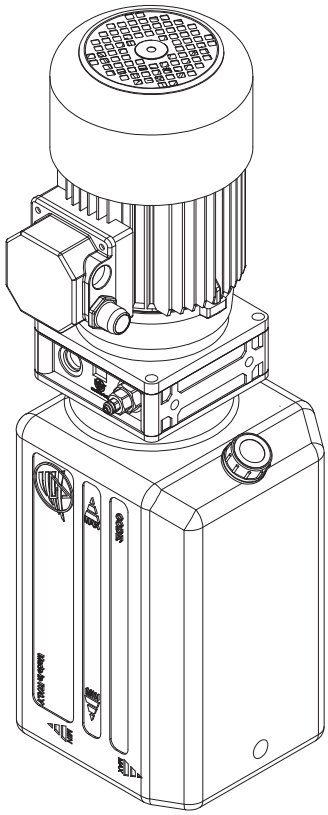
Predisposizione tappo di carico per montaggio orizzontale (O), o verticale (V)
predisposition for filler cap position for horizontal (O), or vertical (V) mounting

Tappo di carico - *filler cap*
O = Orizzontale - *horizontal*
V = Verticale - *vertical*

Orientamento Serbatoi - *tanks positioning*

Serie PE - CS - PC

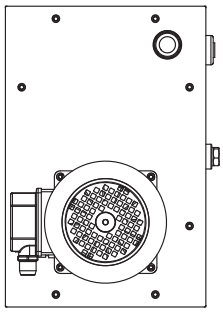
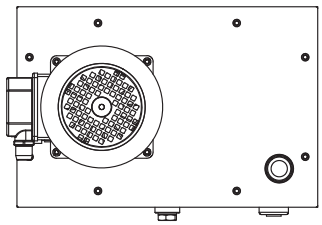
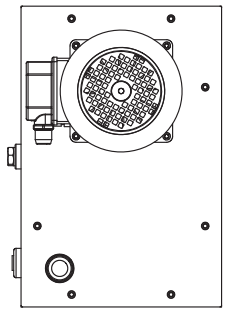
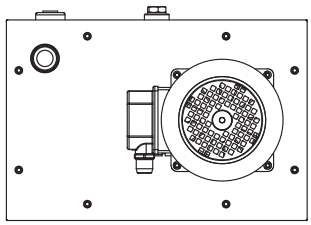





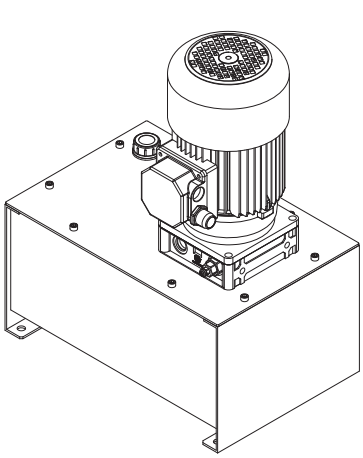
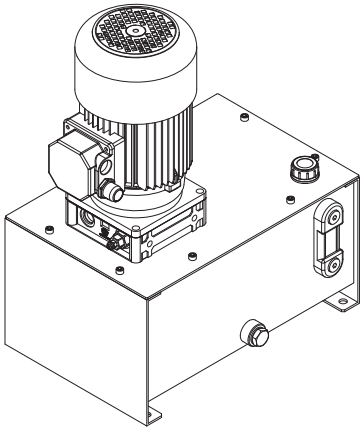
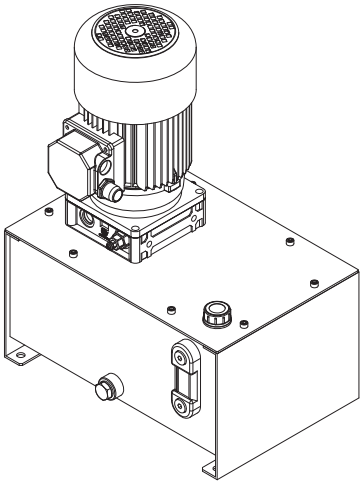
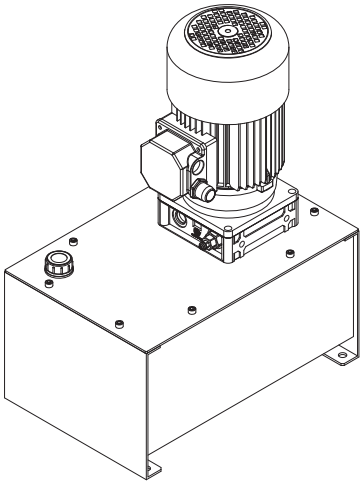





1 Sinistra - *left* (std)	2 Anteriore - *front*	3 Destra - *right*	4 Posteriore - *rear*
tappo di carico stesso lato della valvola di massima *filler cap same side of the relief valve*	tappo di carico lato blocchi modulari *filler cap on modular blocks side*	tappo di carico lato opposto della valvola di massima *filler cap on opposite side of the relief valve*	tappo di carico lato opposto blocchi modulari *filler cap on opposite side modular blocks*

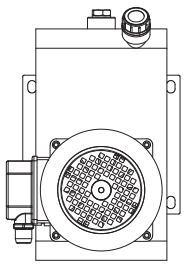
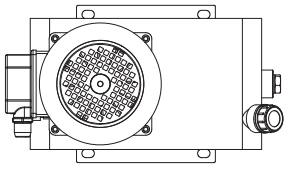
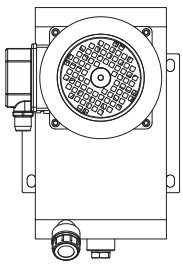
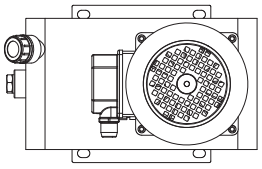
Orientamento Serbatoi - *tanks positioning*

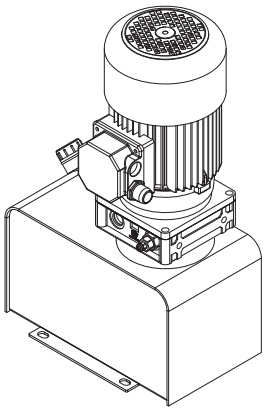
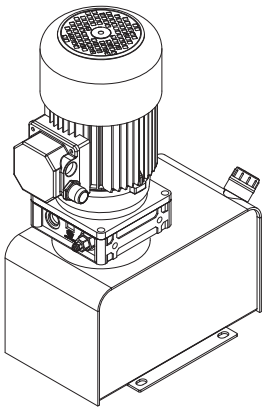
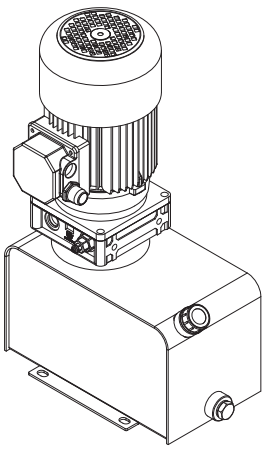
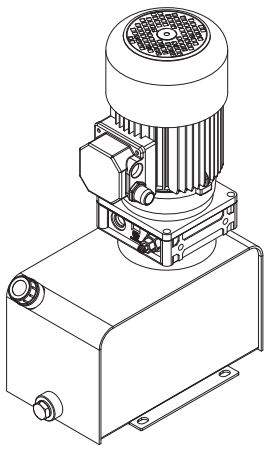
Serie LM

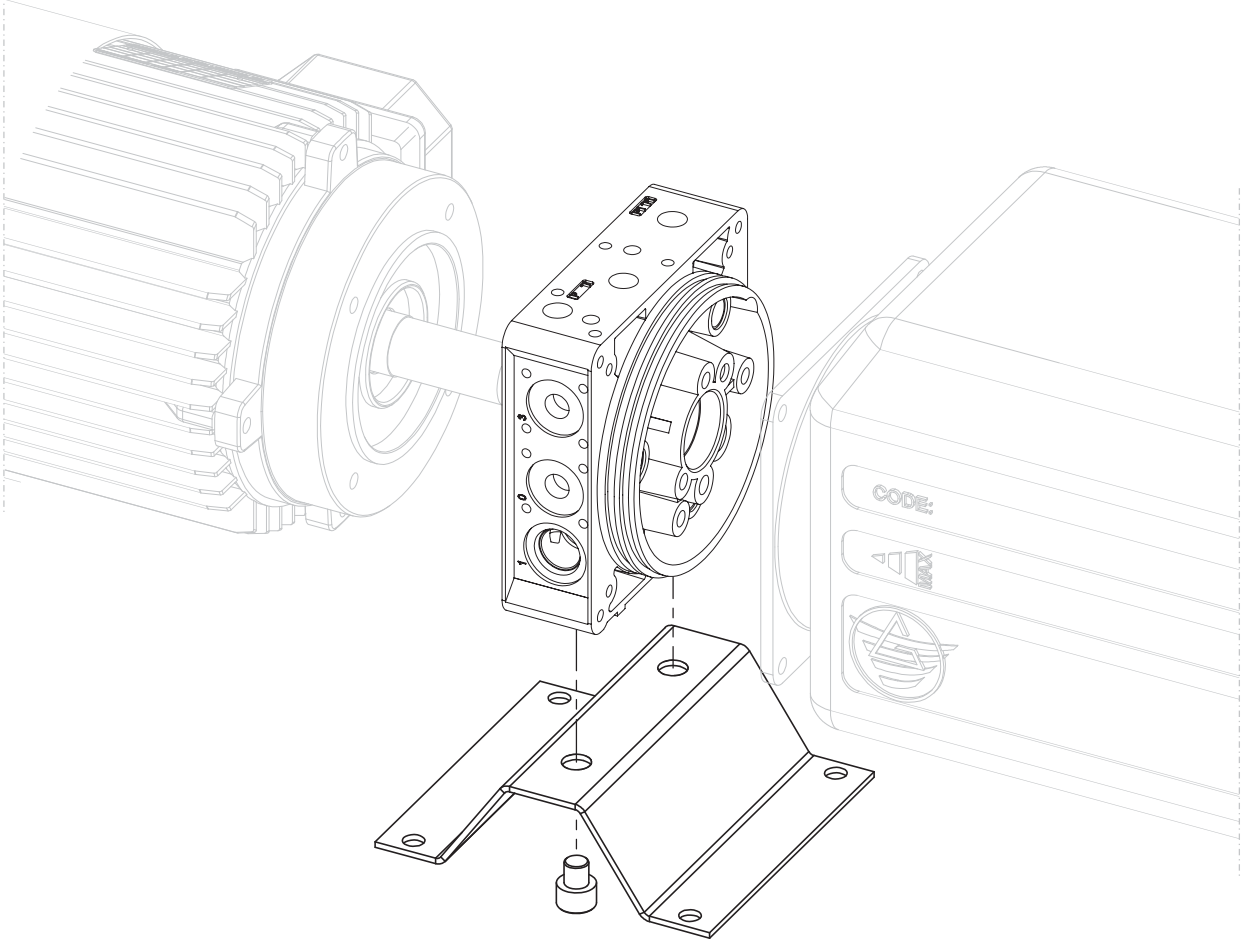
1 Sinistra - *left* (std)	2 Anteriore - *front*	3 Destra - *right*	4 Posteriore - *rear*
tappo di carico verso blocchi modulari *filler cap toward modular blocks*	tappo di carico opposto alla valvola di massima *filler cap on opposite side of the relief valve*	tappo di carico opposto a blocchi modulari *filler cap on opposite side of the modular blocks*	tappo di carico verso valvola di massima *filler cap toward relief valve*

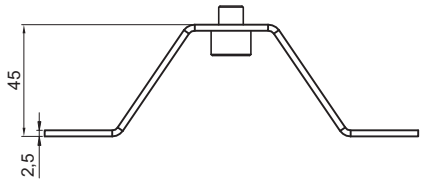





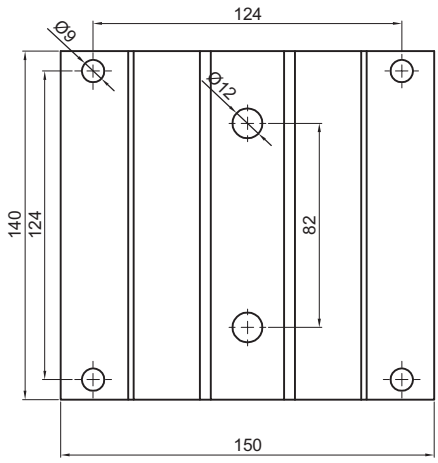





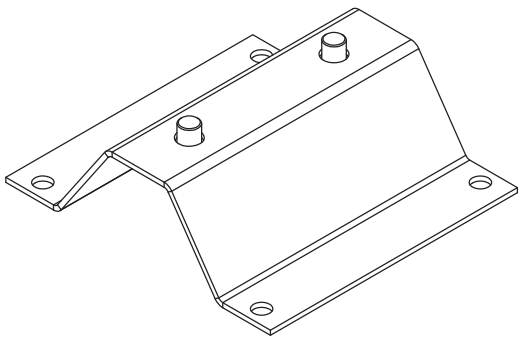
F01

Piedino di supporto centralina
Mounting foot support

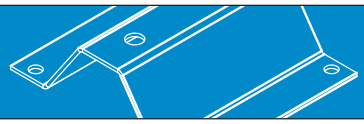






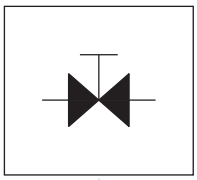


Accessori
accessories



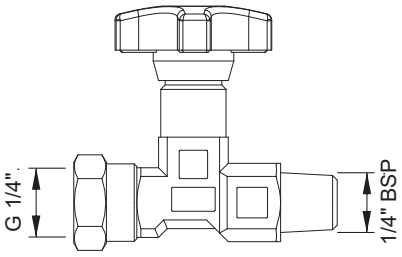
ES

Valvola di esclusione manometro
Pressure gauge isolator

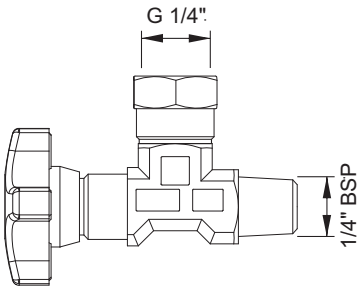


Caratteristiche principali *main features*	
Temp. di impiego *working temperature*	-20°C+100°C
Connessioni *connections*	G1/4"
Pressione max *max pressure*	400 bar

Esclusore manometro attacco in linea
Pressure gauge isolator in-line connection



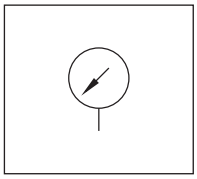
Esclusore manometro attacco 90°
Pressure gauge isolator 90° connection



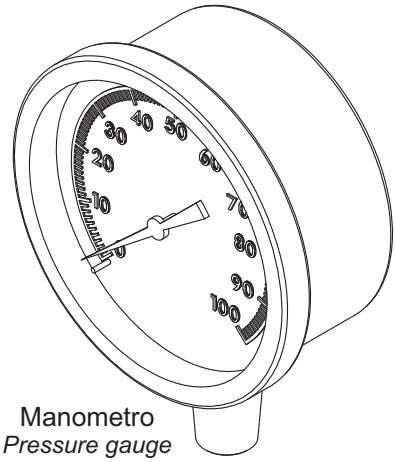
Versione con connessioni F-F a richiesta
F-F connection version on request

9022

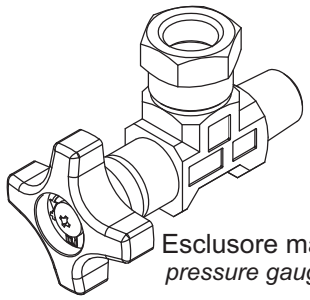
Manometro
Pressure gauge



Caratteristiche principali *main features*	
Connessione *connection*	G1/4"
Diametro nominale *nominal diameter*	63 mm
Classe di protezione *protection class*	1,6
Grado di protezione *protection degree*	IP 65
cod. *code*	**Scala** *scale*
90220310	0 - 60 bar
90220400	0 - 100 bar
90220580	0 - 160 bar
90220660	0 - 250 bar



Manometro
Pressure gauge



Esclusore manometro
pressure gauge isolator

Codici ordinazione - *ordering codes*

E	S	2	9	0	0
1		2			3

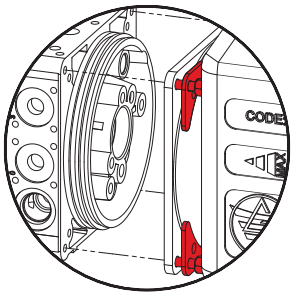
1 Esclusore - *isolator*	2 Tipo - *type*	3 Serie - *series*
ES	290 = Connessione in linea - *in-line connection* 291 = Connessione 90° - *90° connection*	0 = Standard

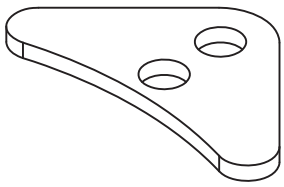
9	0	2	2	0	4	0	0
1				2			3

1 Manometro - *gauge*	2 Scala - *scale*	3 Serie - *series*
9022	031 = da 0 a 60 bar - *from 0 to 60 bar* 040 = da 0 a 100 bar - *from 0 to 100 bar* 058 = da 0 a 160 bar - *from 0 to 160 bar* 066 = da 0 a 250 bar - *from 0 to 250 bar*	0 = Standard

FFPL

Fazzoletti di fissaggio per serbatoi in plastica
Mounting kit for plastic tanks



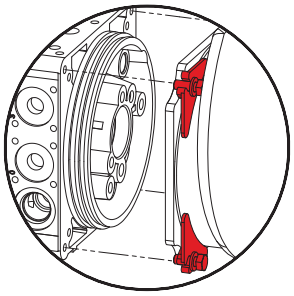


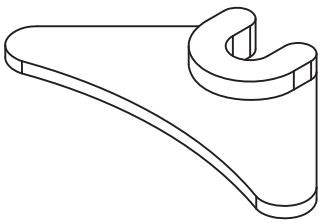
Caratteristiche principali *main features*	
Spessore *thickness*	2,5 mm
Materiale *material*	Acciaio zincato *galvanized steel*

Il kit prevede 4 piastrine di rinforzo
kit includes 4 reinforcement plates

FFPC

Fissaggio per serbatoi in plastica serie PC
Mounting kit for plastic tanks PC serie



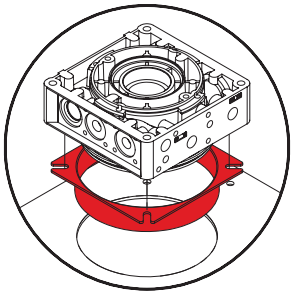


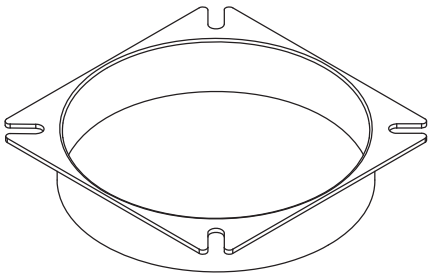
Caratteristiche principali *main features*	
Spessore *thickness*	2+3 mm
Materiale *material*	Al pressofuso *diecast Al*

Il kit prevede 4 piastre indispensabili per il montaggio dei serbatoi serie PC sul collettore
kit includes 4 indispensable plates for mounting the PC serie tanks of the manifold

FLTK

Collare per serbatoi in acciaio
Collar for steel tanks





Caratteristiche principali *main features*	
Materiale *material*	Acciaio *steel*
Altezza *height*	25mm

NB: Flangia non verniciata da saldare sul serbatoio. Foro Ø123
NOTE: unpainted flange, to be welded on tanks. Hole Ø123

Corpo centrale *central manifold*	Pompa *pump*	Valvola di massima *relief valve*	Valvole a cartuccia *cartridge valves*			Tensione elettrovalvole *solenoid voltage*	Regolatori di scarico *return regulator*	Motore AC *AC motor*		
		cavità 2 *cavity 2*	cavità 1, 3, 4, 0 *cavity 1, 3, 4, 0*			BA, BB, BC, BD, BE	cavità 5, 6, 7 *cavity 5, 6, 7*			
0	0	0	0	0	*1 ...	0	0	0	0	0
1	2	4	4			4	4	6		

cod.	des.	pag.
G0	2 cav.	2
G1	3 cav.	4
G2	4 cav.	6
G3	5 cav.	8
G4	rev.	10

cod.	des.	pag.
09	0,9 cc	12
11	1,1 cc	12
13	1,3 cc	12
16	1,6 cc	12
21	2,1 cc	12
26	2,6 cc	12
32	3,2 cc	12
37	3,7 cc	12
42	4,2 cc	12
48	4,8 cc	12
58	5,8 cc	12
80	8,0 cc	12

REVERSIBILE SOLO G40 — *Reversible only G40*

cod.	des.	pag.
09	0,9 cc	13
12	1,2 cc	13
17	1,7 cc	13
22	2,2 cc	13
26	2,6 cc	13
32	3,2 cc	13
38	3,8 cc	13
43	4,3 cc	13
49	4,9 cc	13
59	5,9 cc	13
65	6,5 cc	13
78	7,8 cc	13
98	9,8 cc	13

cod.	des.	pag.
00	no valv.	/
3/4"-16 UNF		std
A1	VMDC20A1	23
B1	VMDC20B1	23
C1	VMDC20C1	23
D1	VMDC20D1	23
E1	T0C2	39
M20x1,5		
A1	VMDC35A1	22
B1	VMDC35B1	22
C1	VMDC35C1	22
D1	T0VM	38
cavità - *cavity*		2.1
A	VMDC20A1	23
B	VMDC20B1	23
C	VMDC20C1	23
D	VMDC20D1	23
0	no valv.	/
cavità - *cavity*		2.2
1	VMDC20A1	23
2	VMDC20B1	23
3	VMDC20C1	23
4	VMDC20D1	23
0	no valv.	/

cod.	des.	pag.
AA	VUC20	24
BA	MSV30	28
BB	MSV30E	28
BC	MSV31	28
BD	MSV31E	28
BE	MDV30E	29
CA	CPE	31
CB	VPN	32
CC	CSC04	33
CD	CSB	34
CE	CM04L	35
CF	PM02	36
PA	T0A4	38
PB	T0C1	39
PC	T0A3	39
PD	T0A2	39
PE	T0C2	39
01	cava 1 libera *cavity 1 free*	/
03	cava 3 libera *cavity 3 free*	/
04	cava 4 libera *cavity 4 free*	/
00	cava 0 libera *cavity 0 free*	/

cod.	des.	pag.
C1	VSC6 1lt/min	25
C2	VSC6 2lt/min	25
C3	VSC6 3lt/min	25
C4	VSC6 4lt/min	25
C5	VSC6 5lt/min	25
C6	VSC6 6lt/min	25
C7	VSC6 7lt/min	25
C8	VSC6 8lt/min	25
C9	VSC6 10lt/min	25
C10	VSC6 12lt/min	25

Omettere se non necessario
omit if not required

cod.	Tensione - *voltage*
V1	12V DC
V2	24V DC
V3	24 RAC
V4	110 RAC
V5	220 RAC
00	no bobina *no coil*

Solo con valvole MSV e MDV
only with MSV and MDV valves
(BA, BB, BC, BD, BD)

cod.	des.	pag.
E1	VSC01 1lt/min	26
E2	VSC01 2lt/min	26
E3	VSC01 3lt/min	26
E4	VSC01 4lt/min	26
E5	VSC01 5lt/min	26
E6	VSC01 6lt/min	26
E7	VSC01 7lt/min	26
E8	VSC01 8lt/min	26
E9	VSC01 10lt/min	26
E10	VSC01 12lt/min	26

Omettere se non necessario
omit if not required

POTENZA — *Power*

cod.	des.	pag.
A	0,25KW	-
B	0,37KW	-
C	0,55KW	-
D	0,75KW	-
E	1,1KW	-
F	1,5KW	-
G	2,2KW	-
H	3KW	-
I	4KW	-
J	5,5KW	-
W	pred. TG 71	40
X	pred. TG 80	41
Y	pred. TG 90	42
Z	pred. TG 100	43
0	no motore *no motor*	/

POTENZIOMETRO — *Potentiometer*

cod.	des.	pag.
Trifase - *three-phase*		
A	2-P S1	44
B	4-P S1	44
C	2-P S3	45
D	4-P S3	45
Monofase - *single-phase*		
I	2-P S1	44
L	4-P S1	44
M	2-P S3	45
N	4-P S3	45
0	no motore *no motor*	/

POSIZIONE — *position*

cod.	des.	pag.
1	AC pos. 1	47
2	AC pos. 2	47
3	AC pos. 3	47
4	AC pos. 4	47
0	no motore *no motor*	/

Es. chiave di codifica - e.g. of *speaking code*

G1	/	21	/	B1	AA	BD	V2	/	DL3	/	B1	S1	D1	V4	/	FX1	/	24
1		2		4					6		7					8		9

NOTE:
*1 - In caso di valvole, blocchi modulari o accessori aggiuntivi, riportare i codici in modo consecutivo nella rispettiva categoria.
1 - In case of additional valves, modular elements or accessories, enter the codes consecutively in the respective category.
Tramite la chiave di codifica, se non specificato, vengono forniti i componenti nella loro versione standard. Eventuali personalizzazioni vanno specificate a parte.
Esempi: (4) CE - viene fornita la valvola CM04L senza micro. | I connettori di eventuali bobine vengono forniti neri (AM5111)
*Using the speaking code, if not specified, are provided the components in their standard version. Any customization, must be specified apart.
Examples: (4) CE - it's provided the CM04L valve without micro. | Connectors of eventual coils are provived black (AM5111)*

Blocchi modulari *modular blocks* | Elettrovalvole *solenoids* | Serbatoi *tanks* | Accessori *accessories*

Q.tà / Q.ty	Q.tà / Q.ty	P, Q, R / S, T, U	Q.tà / Q.ty							
0	0	– 0	0	*1	...	0	0	– 0	0			0	0	0		0	*1	...
7						7						8				9		

DISTANZ. *spacing ele.*

cod.	des.	pag.
A	BL004	49
B	BL004-1	49
C	BL004-2	49
D	BL009	50
0	no distanziale *no spacing ele.*	/

cod.	des.	pag.
P	BL008	50
Q	BL010	51
R	BL015	52
S	BL016	52
T	BL017	52
U	BL022	53
W	BL011-X-Y	51
X	BL021	53
Y	BL023	54
0	no blocchi *no blocks*	/

Per BL011 vedi pagina 51 *For BL011 see page 51*

cod.	des.	pag.
A	DM01	55
B	DM02	55
C	DM03	55
D	DM04	55
E	DD01	55
F	DD02	55
G	DD03	55
H	DD04	55
I	DD05	55
0	no elettrovalvole *no solenoids*	/

cod.	Tensione - *voltage*
V1	12V DC
V2	24V DC
V3	48V DC
V4	110V AC - 50Hz
V5	230V AC - 50Hz
00	no elettrovalvole *no solenoids*

Solo con blocchi - *only with blocks*: BL008, BL010, BL015, BL016, BL017

cod.	des.	pag.
A	PE05	57
B	PE08	57
C	PE12	58
D	LM07	59
E	LM15	59
F	LM20	60
G	LM30	60
H	LM07TF	61
I	CS01	62
L	CS02	62
M	CS05	63
N	CS08	63
O	CS10	64
P	CS12	64
Q	PC05	65
R	PC07	65
S	PC09	66
T	PC11	66
0	no serbatoio *no tank*	/

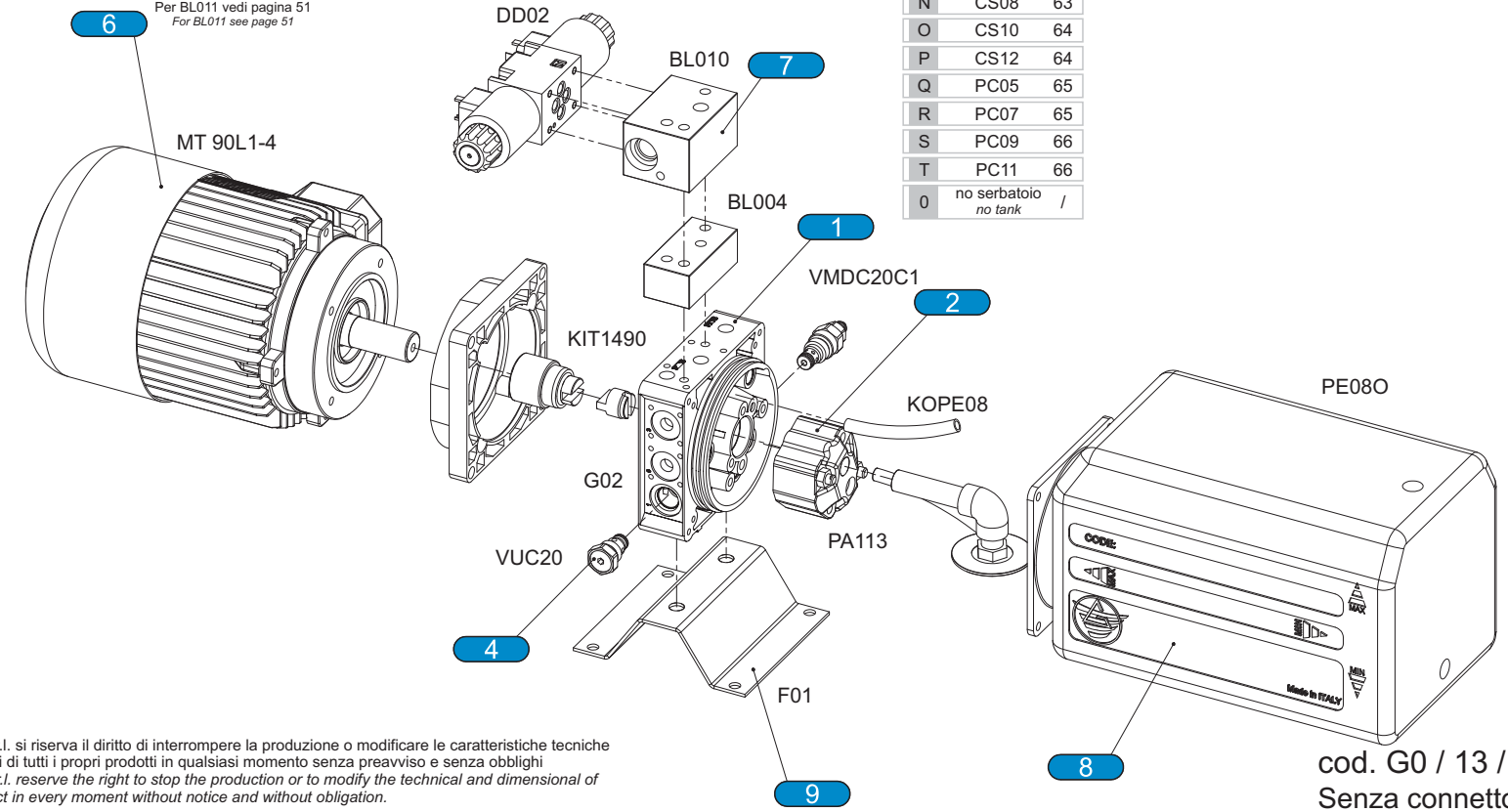
cod.	Tappo - *filler cap*
O	Orizz. - *horizontal*
V	Verticale - *vertical*
X	Serie LM
0	no serbatoio *no tank* /

POSIZIONE *Position*

cod.	des.	pag.
1	pos. 1	67-68
2	pos. 2	67-68
3	pos. 3	67-68
4	pos. 4	67-68
0	no serbatoio *no tank*	/

Orientamento LM a pagina 68 *LM positioning at page 68*

cod.	des.	pag.
1	F01	69
2	ES290	70
3	ES291	70
4	9022031	70
5	9022040	70
6	9022058	70
7	9022066	70
8	FFPL	71
9	FFPC	71
0	no accessori *no accessories*	/



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GAZZERA S.r.l. reserve the right to stop the production or to modify the technical and dimensional of all own product in every moment without notice and without obligation.

cod. G0 / 13 / C1AA / FB1 / A1Q1F1V2 / BO2 / 1
Senza connettori - *without connectors*

NOTE

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