

# F indynamica

drive and control products

## Handbediende stuurschuiven



## INDICAZIONI GENERALI

### AVVERTENZE

Il corretto funzionamento dei prodotti di cui al presente catalogo è rigorosamente subordinato al rispetto delle indicazioni, istruzioni e caratteristiche qui riportate; impieghi, utilizzazioni e interventi diversi da quelli descritti potranno dar luogo a difetti e anomalie dei quali BLB non potrà essere responsabile. Per garantire le caratteristiche indicate dei distributori, occorre essere certi che i parametri massimi non siano superati durante il funzionamento.

**Le indicazioni seguenti sono essenziali:**

- Portata massima
- Pressione massima di funzionamento
- Quantità e tipologia delle funzioni
- Sistema di alimentazione dell'olio (parallelo / serie)

### Avvertenze importanti

**Non usare i distributori come organi di tenuta.**

I distributori della Blb hanno una trafila d'olio interna dagli utilizzi (A e B) verso lo scarico (T) di valore compreso tra 5 e 30 cc<sup>3</sup>/min. Detta trafila è influenzata dalla tolleranza di lavorazione interna del distributore e dalle condizioni di impiego (pressione, viscosità e temperatura dell'olio). **Ove sia richiesto avere assenza di trafilemanti interni bisogna prevedere l'installazione di valvole ausiliarie adatte allo scopo.** E' necessario avere delle conoscenze precise, particolarmente quando si tratta di completare o modificare sistemi preesistenti.

**Qui di seguito alcune delle possibilità di installazione:**

**Installazione di un circuito semplice con pompa a cilindrata costante**

- Distributore standard
- Regolazione della valvola di massima pressione (VL) al momento della messa in funzione

**Installazione di un circuito a più distributori montati in serie con pompa a cilindrata costante**

- Distributore con continuazione della linea di pressione (CO)
- Regolazione della valvola di massima pressione (VL) al momento della messa in funzione

**Installazione in sistemi alimentati da pompa a portata variabile con regolatore di pressione**

- Distributore con centro chiuso (CCP)
- La valvola di massima pressione (VL) deve essere tolta e sostituita dal relativo tappo (RVP).

### Istruzioni di montaggio

Condizioni di pulizia assoluta sono necessarie durante il montaggio. Eventuali impurità possono provocare usura ed il deterioramento delle funzioni. **Non utilizzare viti e raccordi conici.** Il distributore deve essere montato su una superficie piana, in assenza di tensioni e vibrazioni. Deve essere protetto con un trattamento antiruggine (vernice). Bisogna tuttavia evitare che guarnizioni ed articolazioni di comando entrino in contatto con solventi all'atto del decappaggio.

### Messa in funzione

Verificare l'esattezza dei collegamenti e controllare che tutti i raccordi siano serrati. Utilizzare unicamente olio idraulico. Raccomandiamo una filtrazione dell'olio di 20 µm. Le valvole di massima pressione (VL) debbono essere regolate alla portata massima.

### Manutenzione

Tutte le parti mobili debbono essere lubrificate di tanto in tanto. Occorre inoltre effettuare periodicamente la manutenzione dei filtri olio. Verificare i parametri di pressione.

## GENERAL INDICATIONS

### PRECAUTIONS

The proper functioning of the products in this catalog presented is strictly subordinate to the respect of indications, instructions and characteristics here listed. Utilization, usage and interventions different to those here described might cause defects and anomalies for which BLB can not be considered liable. To guarantee the characteristics of the valves that we indicate, make sure that maximum parameters are not exceeded during the functioning.

**Following indications are essential:**

- Maximum flow
- Maximum working pressure
- Quantity and kind of functions
- Oil supply system (parallel / series)

### Important warning

**Never use control valves as holding instruments.**

Blb valves have internal oil leakage from ports (A and B) to tank line (T) for a quantity included between 5 e 30 cc<sup>3</sup>/min. This leakage is influenced by internal work tolerances of the valve and by conditions of use (pressure, viscosity and temperature of oil). **To get a complete leakage free function the installation of suitable auxiliary valve has to be foreseen.**

**The following are some possibilities of installation:**

**Installation in a simple circuit with constant capacity pump**

- Standard valve
- Regulation of the main relief valve (VL) when starting

**Installation in a circuit having more valves in series with constant capacity pump**

- Valve must have high pressure carry over (CO - power beyond)
- Regulation of the main relief valve (VL) when starting

**Installation in systems fed by variable capacity pumps with pressure regulator**

- Valve with closed center plug (CCP)
- Main relief valve (VL) must be removed and replaced with the relative plug (RVP).

### Mounting instructions

An absolute cleanness is necessary during the mounting. Impurities can cause wear and deterioration of the functions. **Do not use tapered screws or nipples.** Valves must be mounted on an even surface, free from stress and vibrations. Valves should be protected by a rust preventer (paint). All seals and control joints should not contact any solvent during the pickling operations.

### Starting

Check that all connections are correct and that all fastenings are tight. **Use exclusively hydraulic oil.** A 20 µm oil filtration is recommended. The main relief valves (VL) must be adjusted at the maximum capacity.

### Maintenance

All movable parts must be lubricated from time to time. The maintenance of the oil filters should be periodically made. Check the parameters of the pressure and flow.

**PARTE PRIMA  
CATALOGO GENERALE**

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**PARTE SECONDA  
SCELTA, USO, MANUTENZIONE  
E GARANZIA**

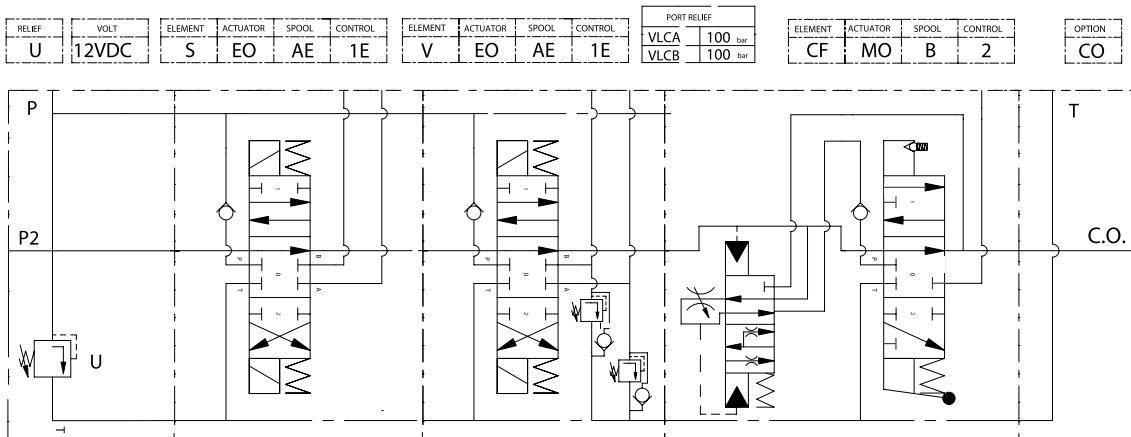
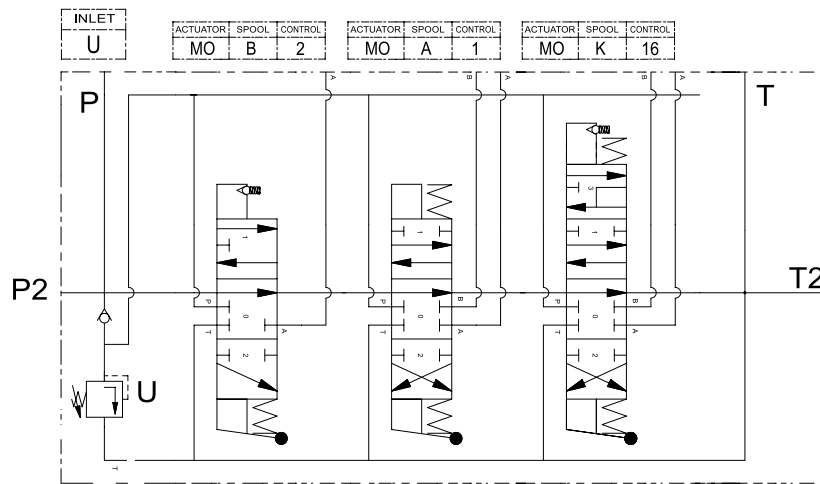
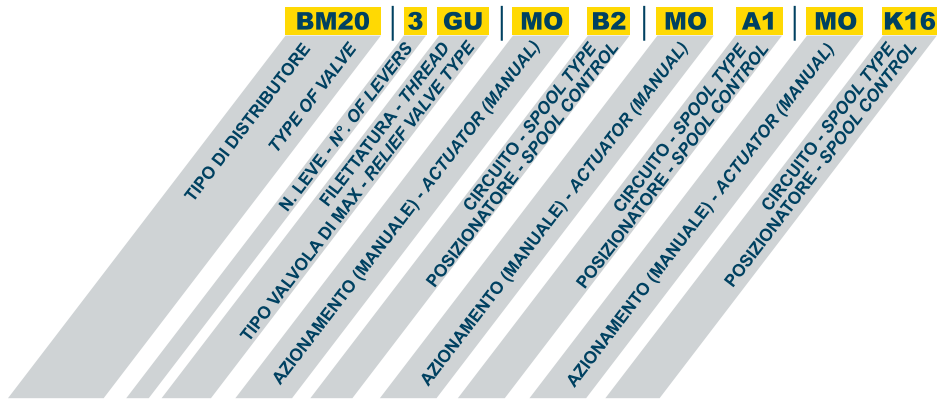
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# ESEMPI DI DESIGNAZIONE

# DESIGNATION SAMPLES



## Distributori monoblocco BM

### Serie BM

I distributori monoblocco sono caratterizzati da un corpo unico avente:

- Economicità di fabbricazione
- Costruzione robusta
- Dimensioni contenute
- Peso ridotto

Vengono comunemente preferiti quando non ci sia la necessità di valvole ausiliarie e non esistano circuiti così complessi da richiedere l'utilizzazione di distributori con diverse caratteristiche. L'assenza di tiranti e di guarnizioni intermedie inoltre fa sì che i distributori monoblocco abbiano:

- Maggiore affidabilità
- Particolari costruttivi meno sofisticati
- Minor necessità di manutenzione

Rendendone pertanto l'applicazione consigliata nel settore della macchina mobile.

Caratteristiche generali						
• Portata	<table border="1"> <thead> <tr> <th>l/min</th> <th>GPM</th> </tr> </thead> <tbody> <tr> <td>fino a 180</td> <td>fino a 48</td> </tr> </tbody> </table>		l/min	GPM	fino a 180	fino a 48
l/min	GPM					
fino a 180	fino a 48					
• Pressione	<table border="1"> <thead> <tr> <th>bar</th> <th>PSI</th> </tr> </thead> <tbody> <tr> <td>fino a 320</td> <td>fino a 4700</td> </tr> </tbody> </table>		bar	PSI	fino a 320	fino a 4700
bar	PSI					
fino a 320	fino a 4700					
• Collegamento standard	Parallelo					
• Ricoprimento spole	Negativo					

Le applicazioni con pressione di esercizio superiori a 200 bar devono essere verificate con il nostro ufficio tecnico.

## Monoblock valves BM

### BM Series

The monoblock valves of the BM series are characterized by a single body having the following features:

- Low production cost
- Sound construction
- Compact size
- Reduced weight

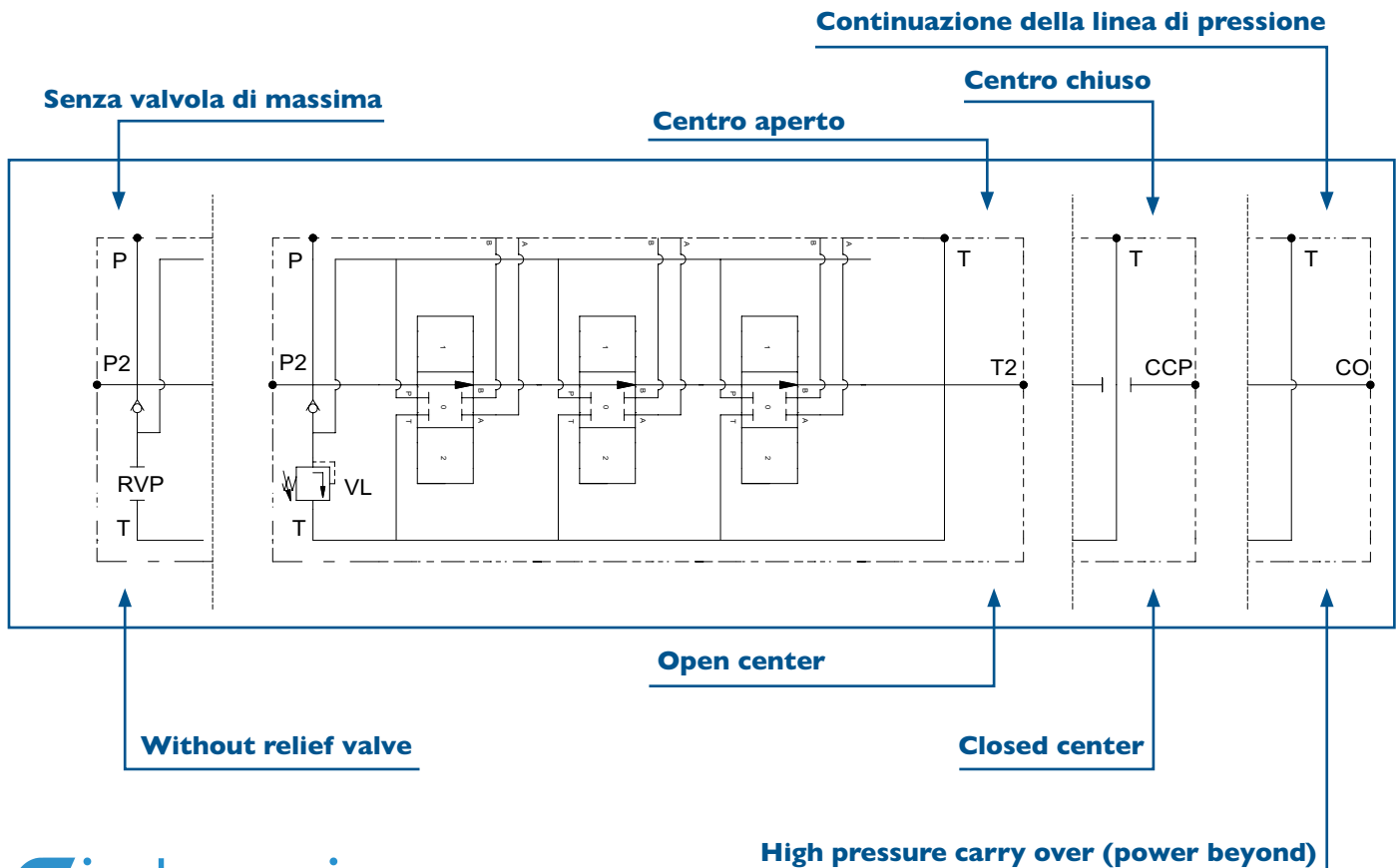
Valves of this kind are in general used when no auxiliary valves are required and the inside circuits are not so complicated that other kind of valves needs to be used. Furthermore the absence of tie rods and intermediate seals enables monoblock valves to have:

- Higher dependability
- Lower constructive delicacy and fewer leak points
- Lower maintenance needs

Above characteristics suggest that monoblock valves should be used in the mobile machines field.

Specifications						
• Nominal flow	<table border="1"> <thead> <tr> <th>l/min</th> <th>GPM</th> </tr> </thead> <tbody> <tr> <td>up to 180</td> <td>up to 48</td> </tr> </tbody> </table>		l/min	GPM	up to 180	up to 48
l/min	GPM					
up to 180	up to 48					
• Maximum pressure	<table border="1"> <thead> <tr> <th>bar</th> <th>PSI</th> </tr> </thead> <tbody> <tr> <td>up to 320</td> <td>up to 4700</td> </tr> </tbody> </table>		bar	PSI	up to 320	up to 4700
bar	PSI					
up to 320	up to 4700					
• Standard connection	Parallelo					
• Spool covering	Negative					

Application with working pressure over 200 bar must be verified with our technical office.



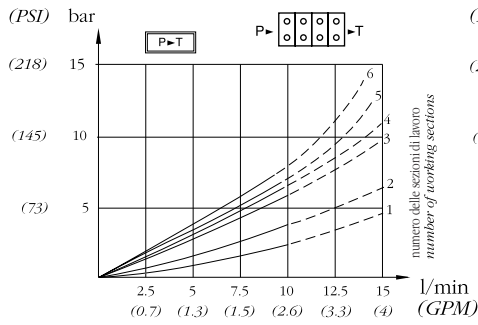
# BM10 from 1 to 6 levers

## Caratteristiche generali / Technical characteristics

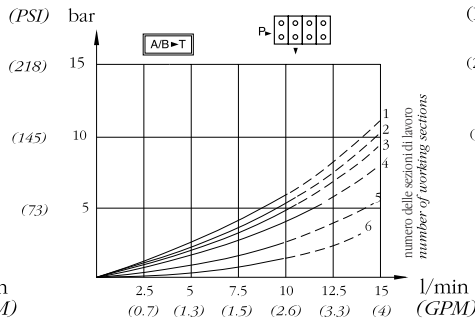
	l/min	GPM
• Portata nominale / Nominal flow	10	2,5
• Portata limite / Max flow	15	4
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



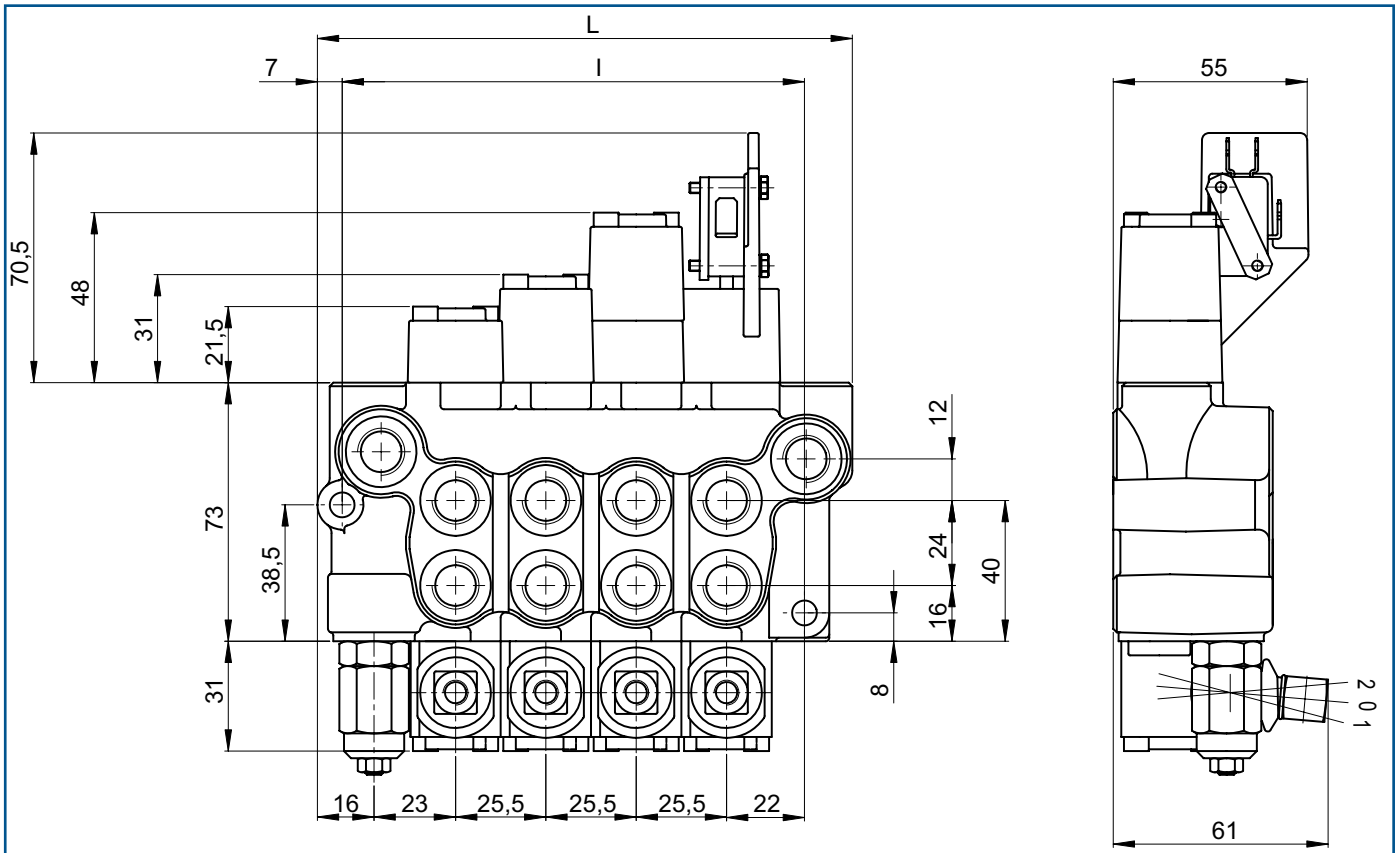
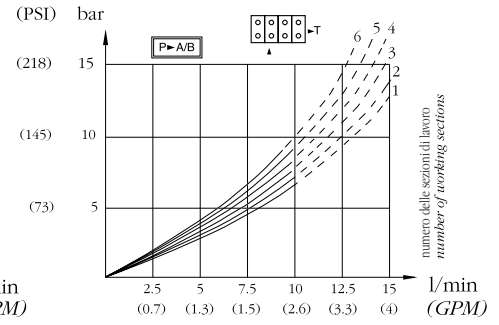
P>T- TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



P>A/B- TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



A/B>T- TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

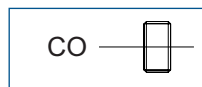
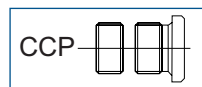
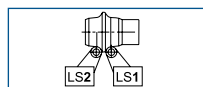
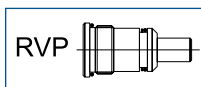
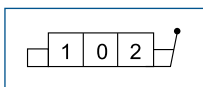


MOD	L	I	Kg
BM10/1	75	54	1,1
BM10/2	100,5	79,5	1,6
BM10/3	126	105	2,23
BM10/4	151,5	130,5	2,7
BM10/5	177	156	3,2
BM10/6	202,5	181,5	3,7

### FILETTATURA STANDARD - STANDARD THREADS

COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/4"	1/4"	1/4"	1/4"	1/4"
F	9/16" - 18	9/16" - 18	9/16" - 18	9/16" - 18	9/16" - 18

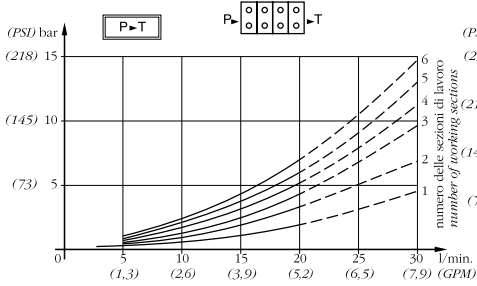
◀ Su richiesta filettature diverse  
Other threads available on request



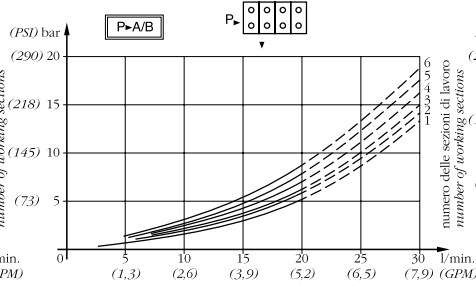
Caratteristiche generali / Technical characteristics		
	l/min	GPM
• Portata nominale / Nominal flow	17	4,5
• Portata limite / Max flow	25	6,6
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



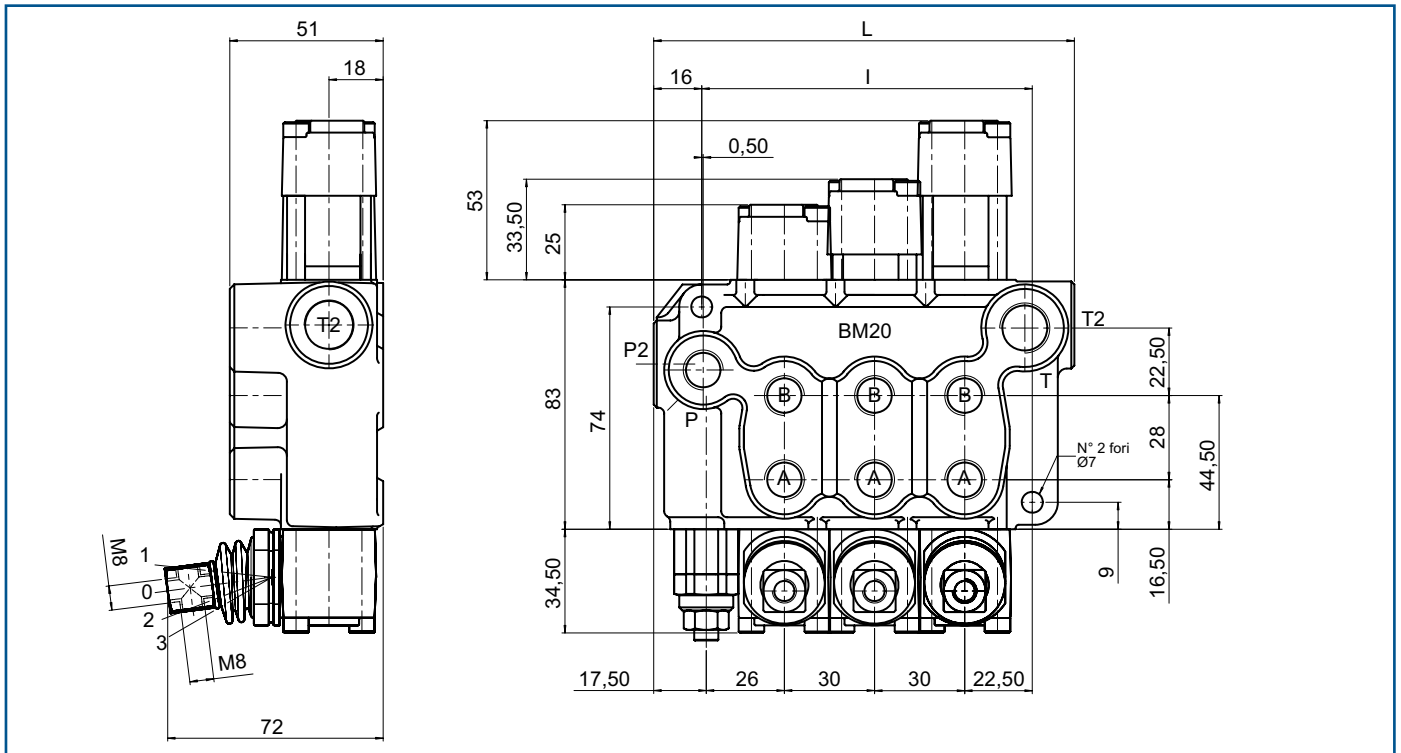
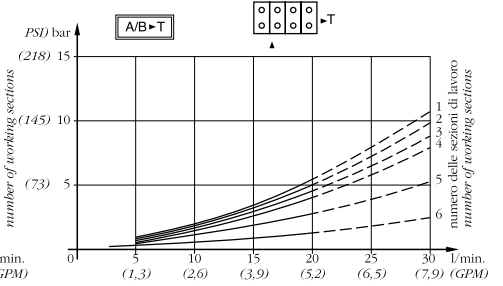
P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

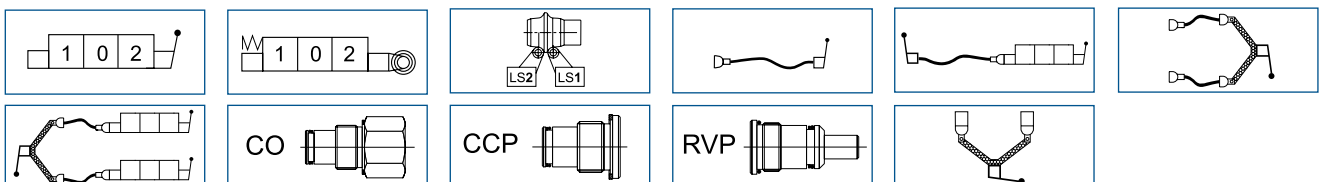


MOD	L	I	Kg
BM20/1	76	50	1,5
BM20/2	106	80	2,3
BM20/3	136	110	3,1
BM20/4	166	140	3,9
BM20/5	196	170	4,7
BM20/6	226	200	5,5

### FILETTATURA STANDARD - STANDARD THREADS

COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/4"	1/4"	3/8"	3/8"	3/8"
F	9/16" - 18	9/16" - 18	9/16" - 18	3/4" - 16	3/4" - 16

◀ Su richiesta filettature diverse  
Other threads available on request



## BB20 from 1 to 6 levers

### Caratteristiche generali / Technical characteristics

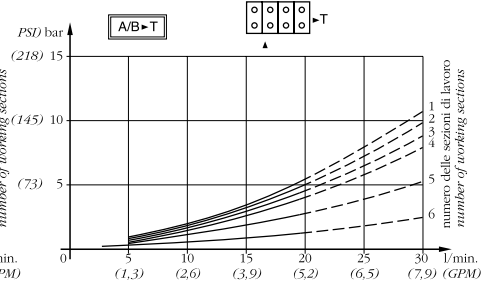
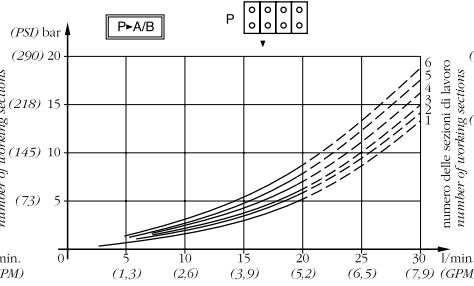
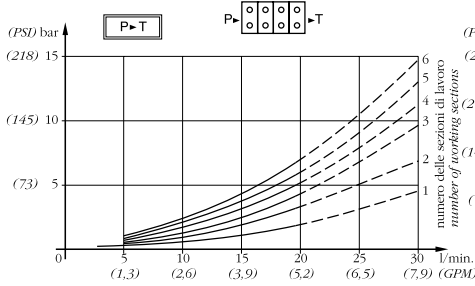
	l/min	GPM
• Portata nominale / Nominal flow	17	4,5
• Portata limite / Max flow	25	6,6
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



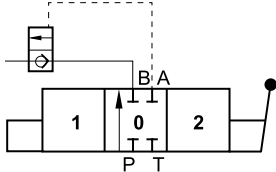
P>T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P>A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B>T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

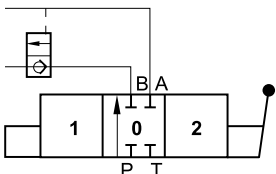


### VBS



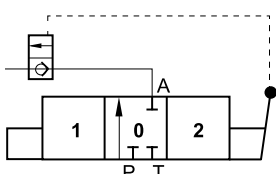
Valvola di blocco per sezione semplice effetto  
Pilot operated check valves for simple acting section

### VBD

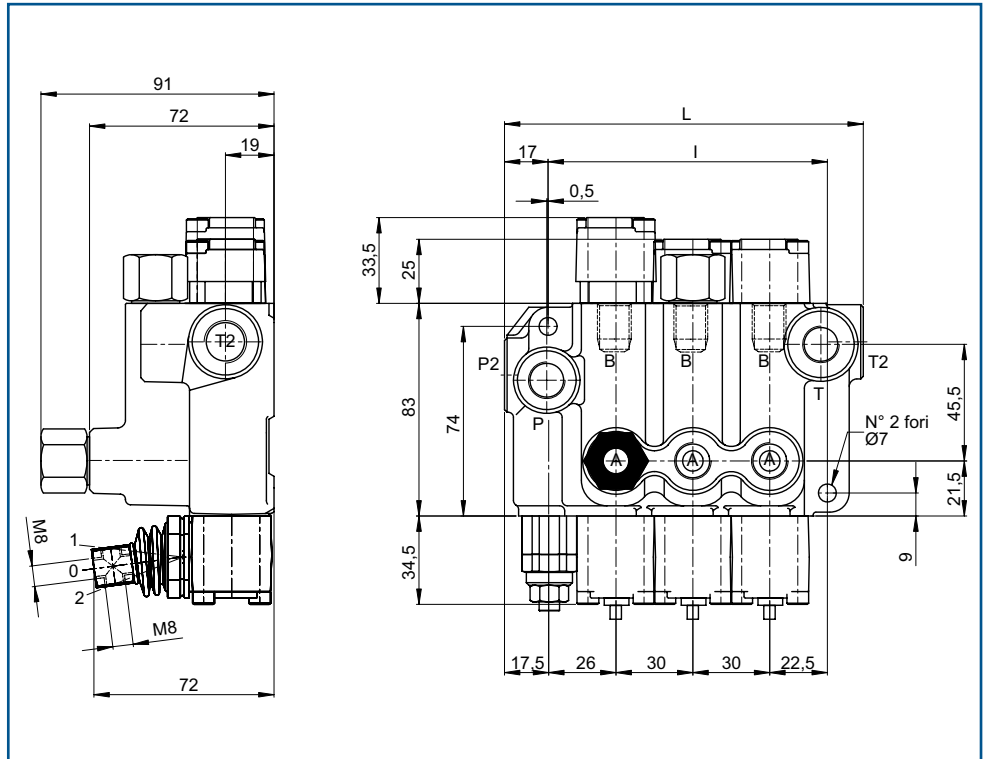


Valvola di blocco per sezione doppio effetto  
Pilot operated check valves for double acting section

### VBM



Valvola di blocco a sblocco meccanico  
Pilot operated check valves with mechanical release



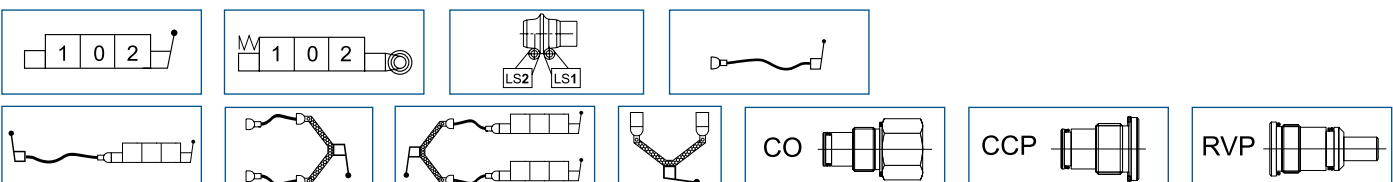
MOD	L	I	Kg
BB20/1*	76	50	1,8
BB20/2	106	80	2,9
BB20/3	136	110	4
BB20/4*	166	140	5
BB20/5*	196	170	6,1
BB20/6	226	200	7,2

\*Disponibile per grosse quantità  
Available for big quantity

### FILETTATURA STANDARD - STANDARD THREADS

COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/4"	1/4"	3/8"	3/8"	3/8"
F	9/16" - 18	9/16" - 18	9/16" - 18	3/4" - 16	3/4" - 16

\*Su richiesta filettature diverse  
Other threads available on request

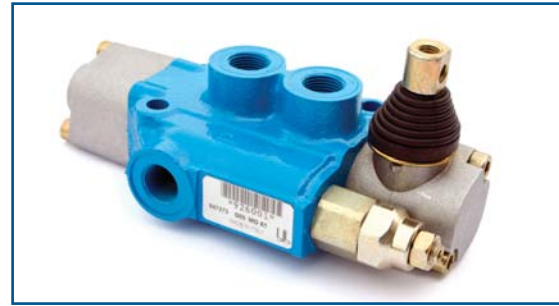




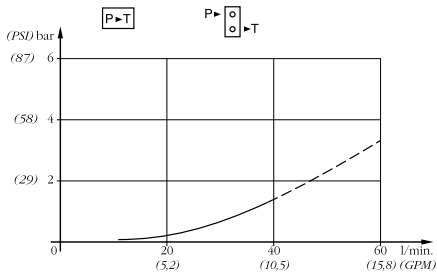
### BM30

Caratteristiche generali / Technical characteristics		
	l/min	GPM
• Portata nominale / Nominal flow	35	9
• Portata limite / Max flow	45	12
• Portata limite EO / Max flow EO	35	9
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione nominale EO / Nominal pressure EO	180	2600
• Contropressione max allo scarico / Max pressure in tank-line	80	1100

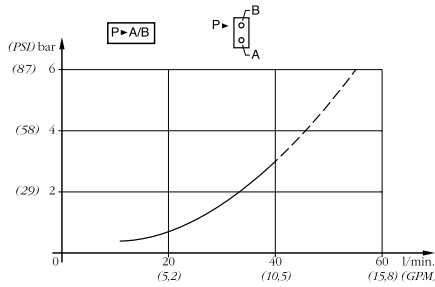
### BM30



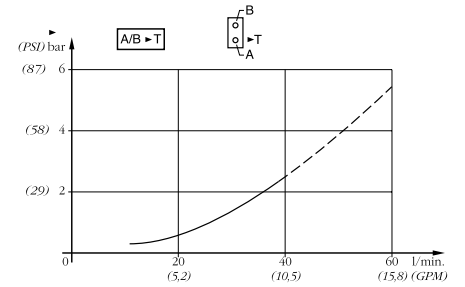
P→T TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



P→A/B TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



A/B→T TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



**BM 30/L** = ENTRATA SINISTRA (A - B - C)  
LEFT INLET (A - B - C)

**X** = POSIZIONATORE - SPOOL CONTROL 2-3-12-14

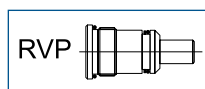
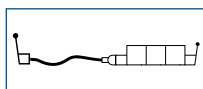
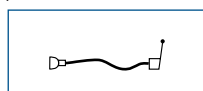
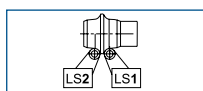
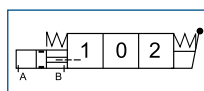
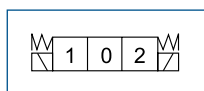
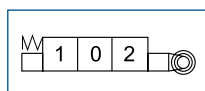
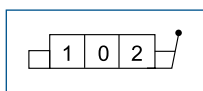
**BM 30/R** = ENTRATA DESTRA (A - B - C - D)  
RIGHT INLET (A - B - C - D)

**X** = POSIZIONATORE - SPOOL CONTROL 2-3-12-14

MOD	L	I	Kg
BM30			2,2

FILETTATURA STANDARD - STANDARD THREADS			
COD	A-B	P <sub>2</sub>	T <sub>2</sub>
G	3/8"	3/8"	3/8"
F	3/4" - 16	3/4" - 16	3/4" - 16

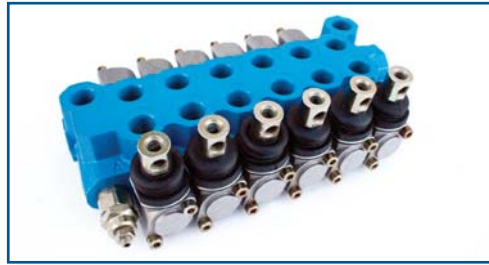
◀ Su richiesta filettature diverse  
Other threads available on request



# BM35 from 1 to 6 levers

## Caratteristiche generali / Technical characteristics

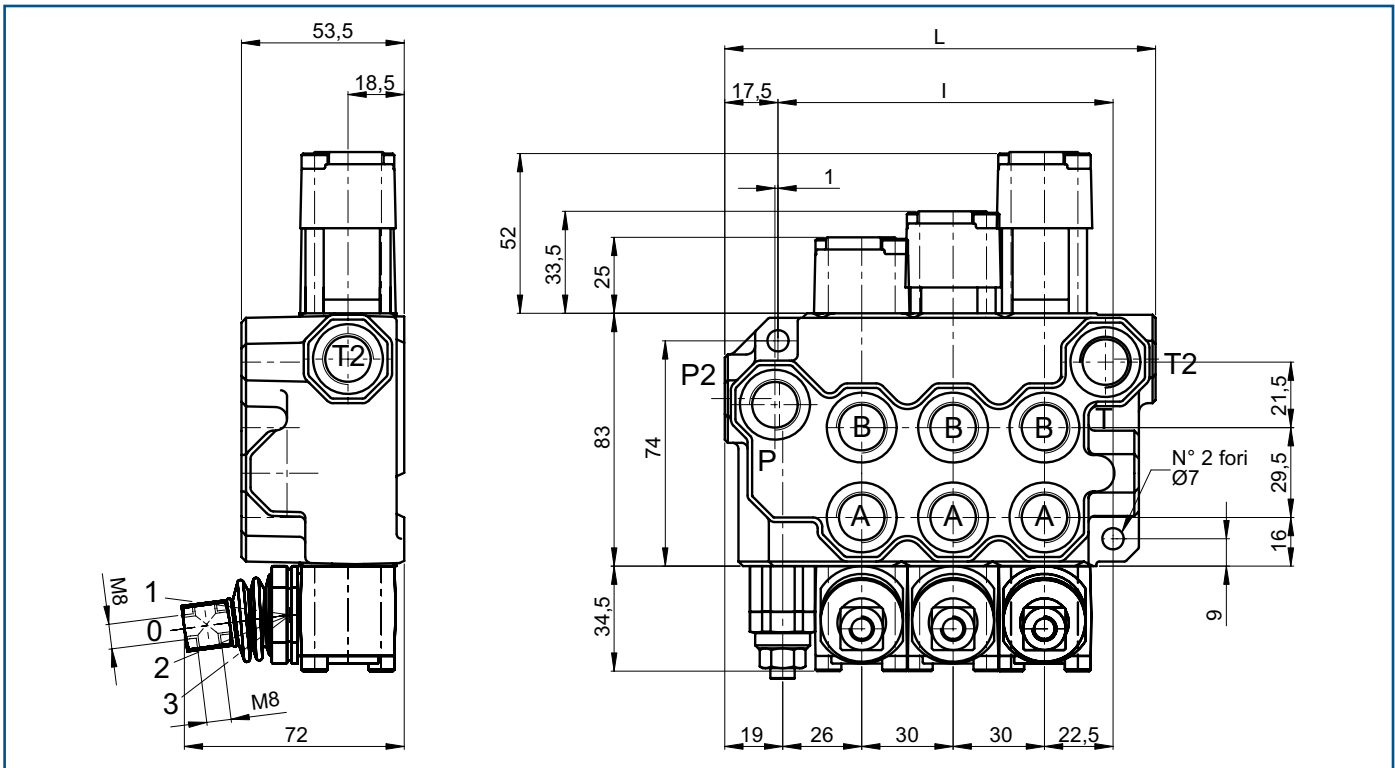
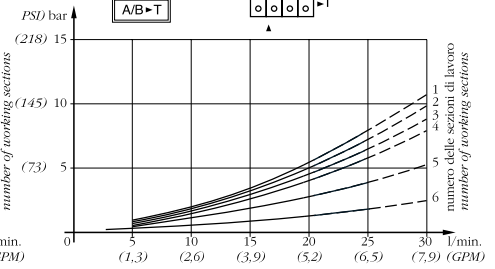
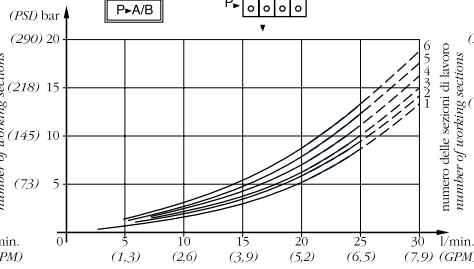
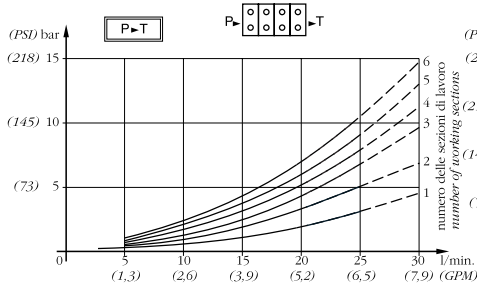
	l/min	GPM
• Portata nominale / Nominal flow	25	6,6
• Portata limite / Max flow	35	9,2
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

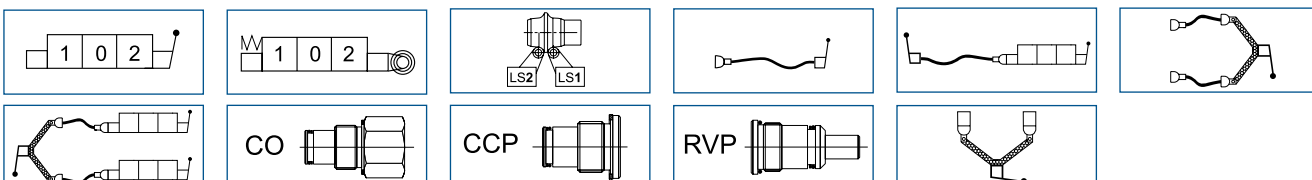


MOD	L	I	Kg
BM35/1	81,5	50	1,8
BM35/2	111,5	80	2,7
BM35/3	141,5	110	3,8
BM35/4	171,5	140	4,6
BM35/5	201,5	170	5,4
BM35/6	231,5	200	6,2

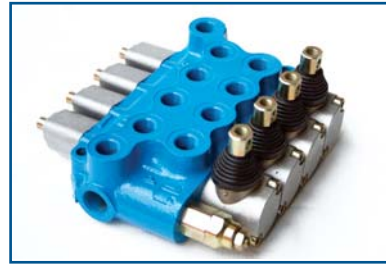
### FILETTATURA STANDARD - STANDARD THREADS

COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	3/8"	3/8"	3/8"	3/8"	3/8"
F	3/4" - 16	3/4" - 16	3/4" - 16	3/4" - 16	3/4" - 16

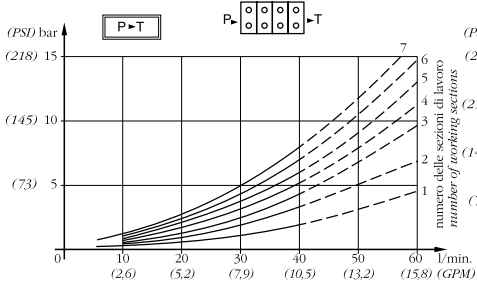
◀ Su richiesta filettature diverse  
Other threads available on request



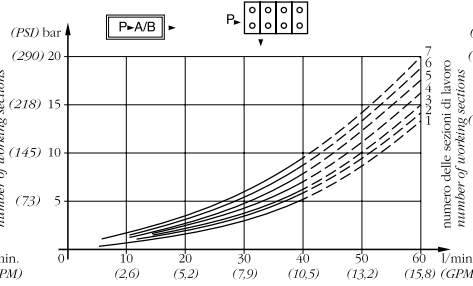
Caratteristiche generali / Technical characteristics		
	<b>l/min</b>	<b>GPM</b>
• Portata nominale / Nominal flow	35	9
• Portata limite / Max flow	45	12
	<b>bar</b>	<b>PSI</b>
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



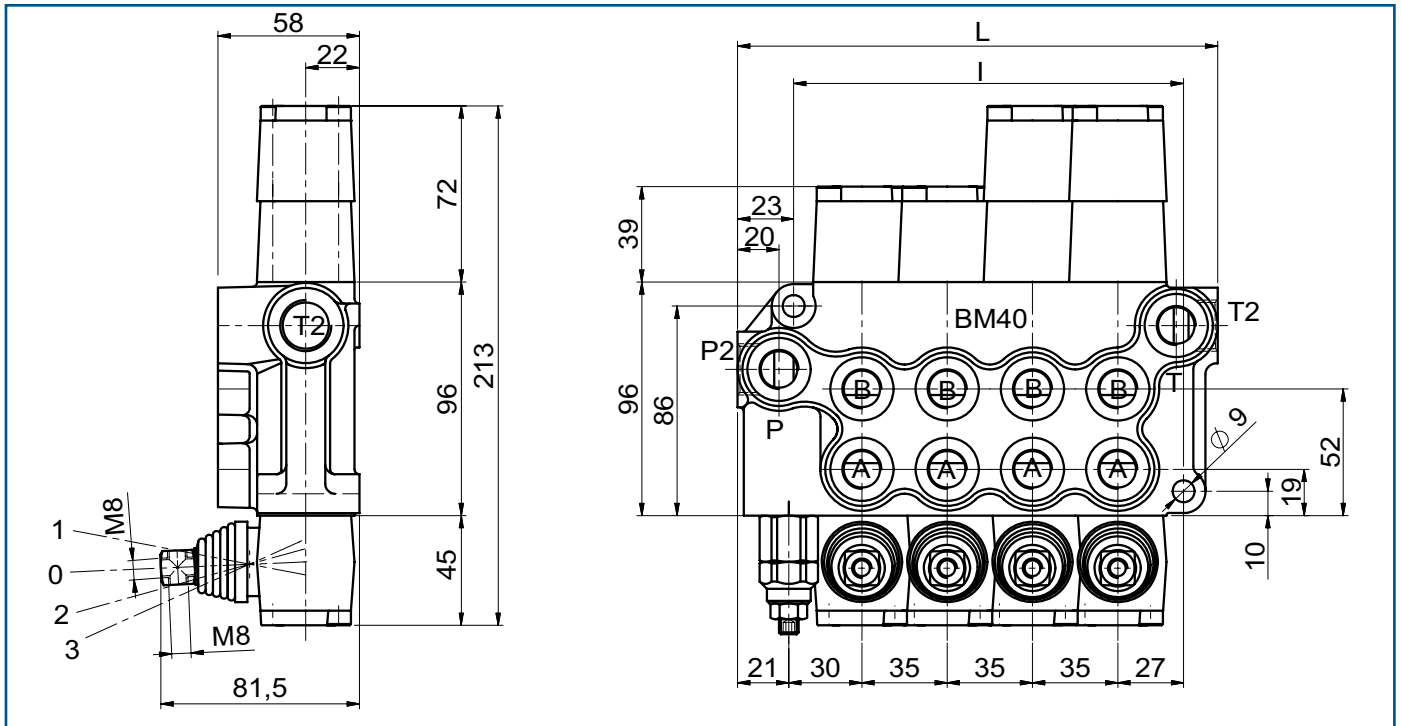
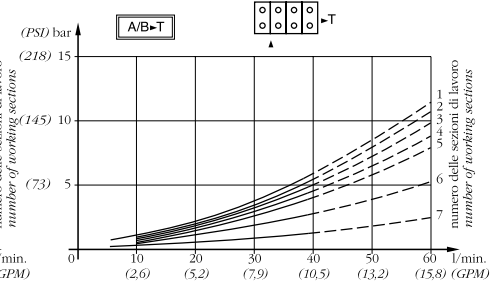
P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

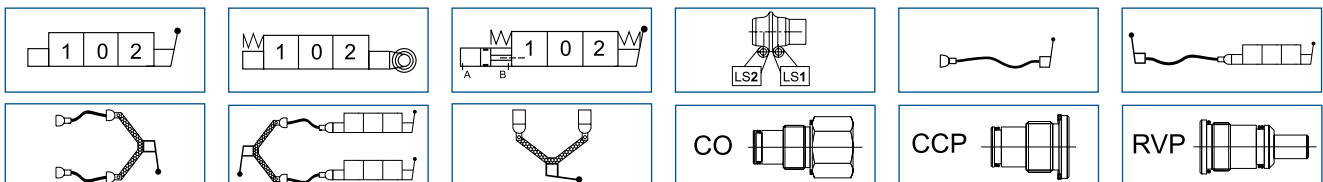


MOD	L	I	Kg
BM40/1	90	55	2,5
BM40/2	125	90	3,7
BM40/3	160	125	5
BM40/4	195	160	6,2
BM40/5	230	195	7,4
BM40/6	265	230	8,6
BM40/7	300	265	9,8

### FILETTATURA STANDARD - STANDARD THREADS

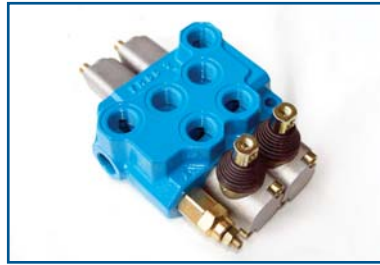
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	3/8"	3/8"	3/8"	1/2"	1/2"
F	3/4" - 16	3/4" - 16	3/4" - 16	7/8" - 14	7/8" - 14

◀ Su richiesta filettature diverse  
Other threads available on request



### Caratteristiche generali / Technical characteristics

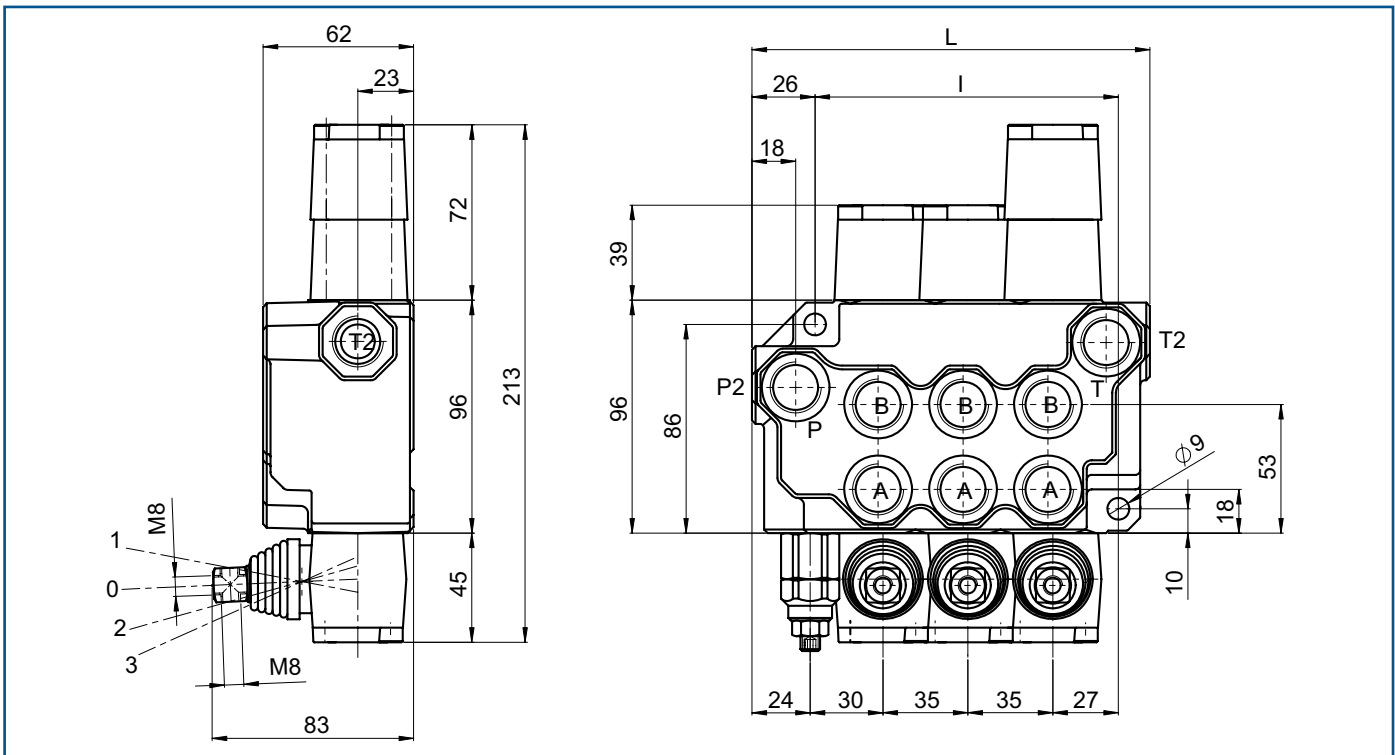
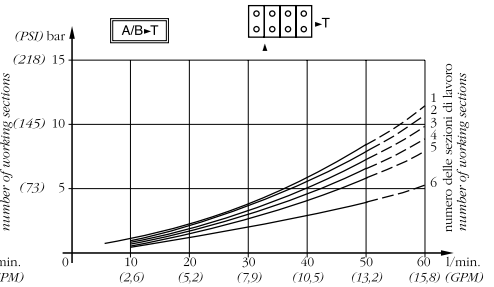
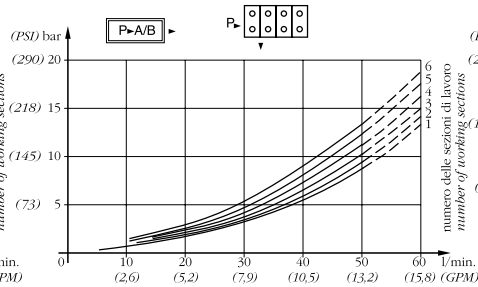
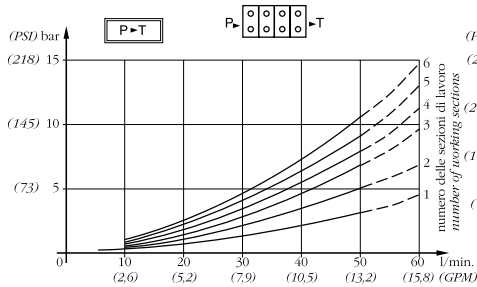
	l/min	GPM
• Portata nominale / Nominal flow	50	13,1
• Portata limite / Max flow	60	15,9
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

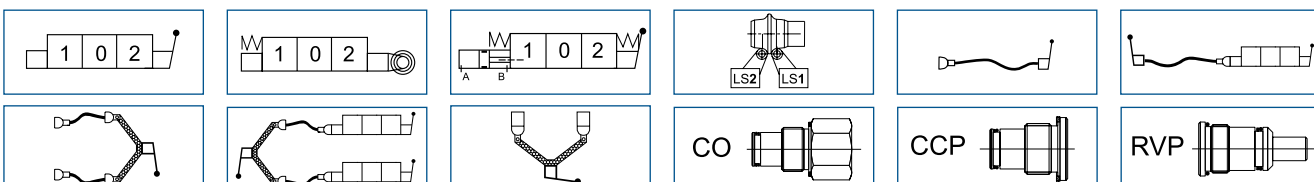


MOD	L	I	Kg
BM50/1	94	55	2,8
BM50/2	129	90	4,2
BM50/3	164	125	5,5
BM50/4	199	160	6,7
BM50/5	234	195	7,9
BM50/6	269	230	9,3

### FILETTATURA STANDARD - STANDARD THREADS

COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/2"	1/2"	1/2"	1/2"	1/2"
F	7/8" - 14	7/8" - 14	7/8" - 14	7/8" - 14	7/8" - 14

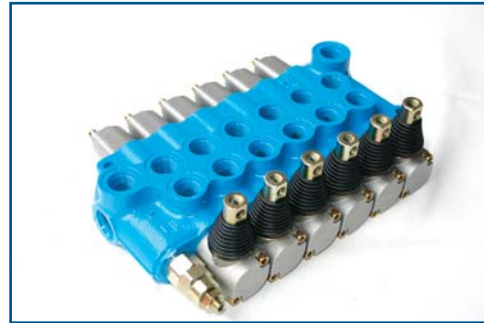
◀ Su richiesta filettature diverse  
Other threads available on request



# BM70 from 1 to 6 levers

## Caratteristiche generali / Technical characteristics

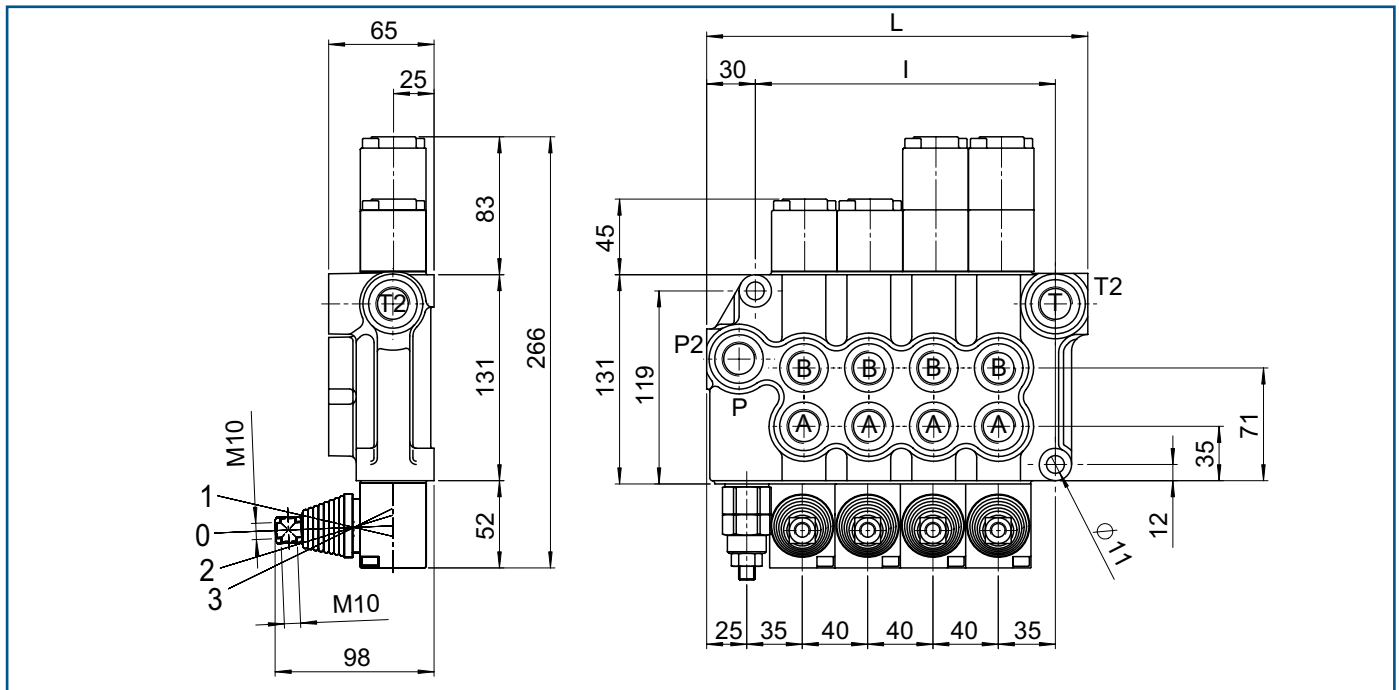
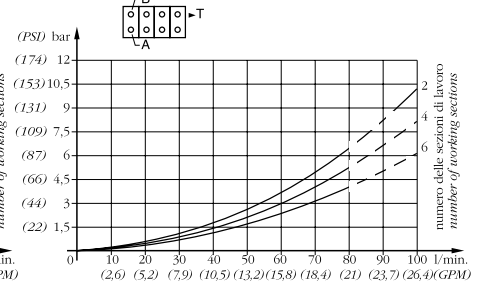
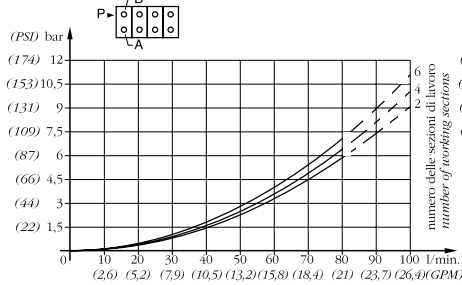
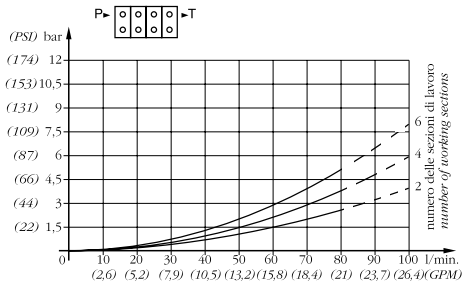
	l/min	GPM
• Portata nominale / Nominal flow	65	17
• Portata limite / Max flow	90	24
• Portata limite EO / Max flow EO	65	17
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione nominale EO / Nominal pressure EO	160	2320
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

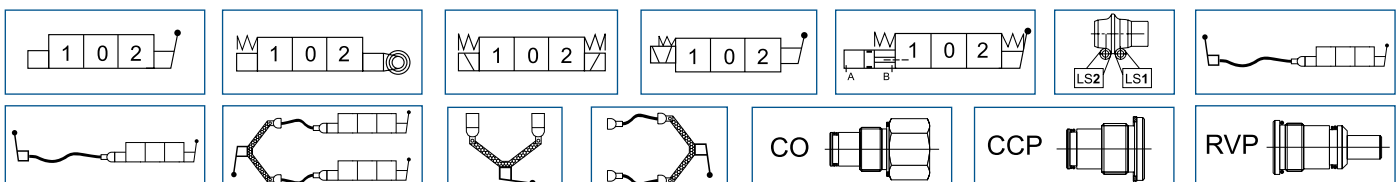


MOD	L	I	Kg
BM70/1	117	66	4,6
BM70/2	157	106	7
BM70/3	197	146	9,2
BM70/4	237	186	11,5
BM70/5	277	226	13,7
BM70/6	317	266	16

### FILETTATURA STANDARD - STANDARD THREADS

COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/2"	1/2"	1/2"	3/4"	3/4"
F	7/8" - 14	7/8" - 14	7/8" - 14	1.1/16" - 12	1.1/16" - 12

◀ Su richiesta filettature diverse  
Other threads available on request



### Caratteristiche generali / Technical characteristics

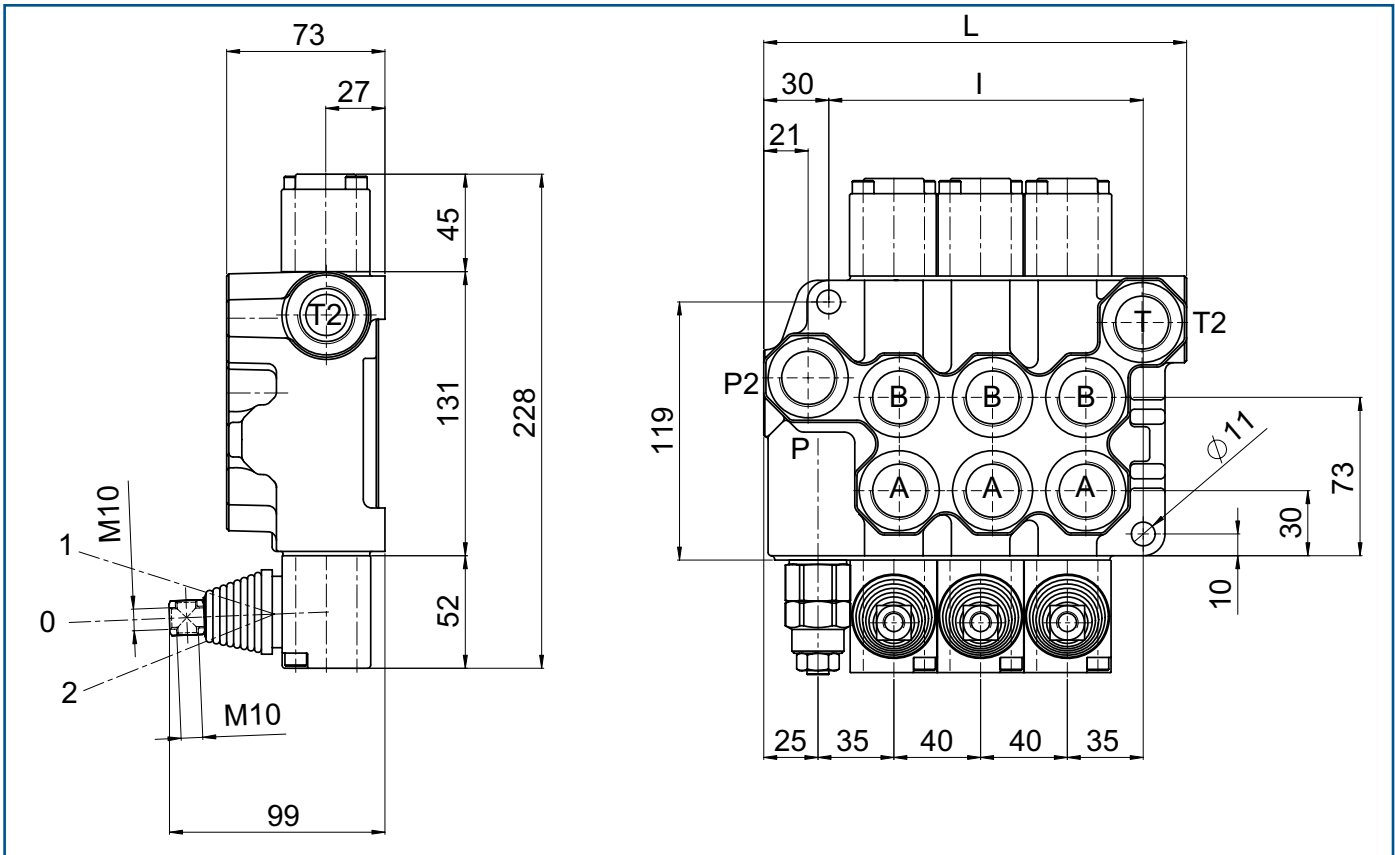
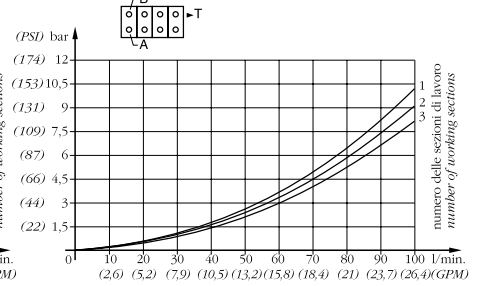
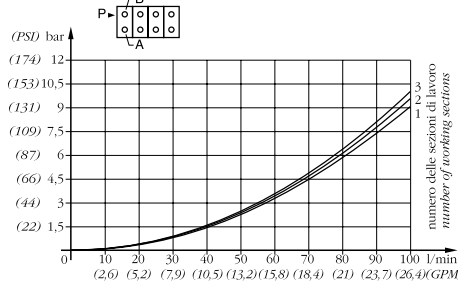
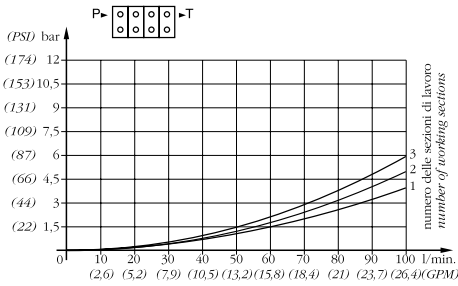
	l/min	GPM
• Portata nominale / Nominal flow	90	24
• Portata limite / Max flow	100	26
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P/A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

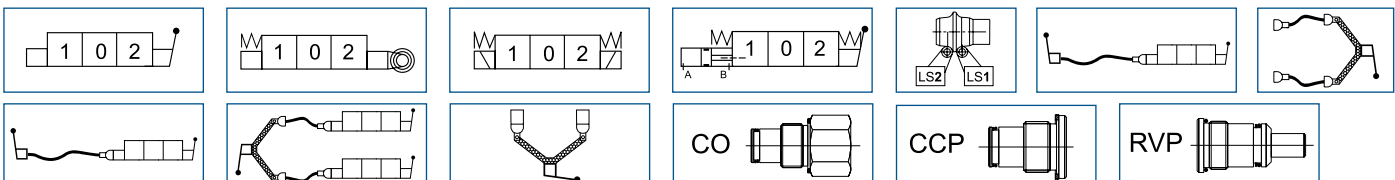
A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



MOD	L	I	Kg
BM100/1	115	66	4,7
BM100/2	155	106	7,2
BM100/3	195	146	9,5

FILETTATURA STANDARD - STANDARD THREADS					
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	3/4"	3/4"	3/4"	3/4"	3/4"
F	1.1/16" - 12	1.1/16" - 12	1.1/16" - 12	1.1/16" - 12	1.1/16" - 12

◀ Su richiesta filettature diverse  
Other threads available on request

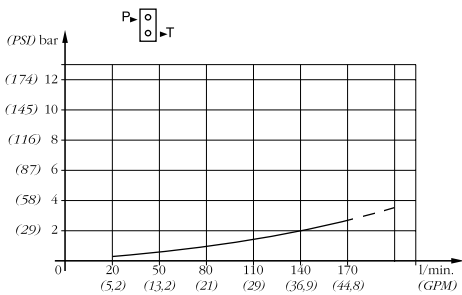


**Caratteristiche generali / Technical characteristics**

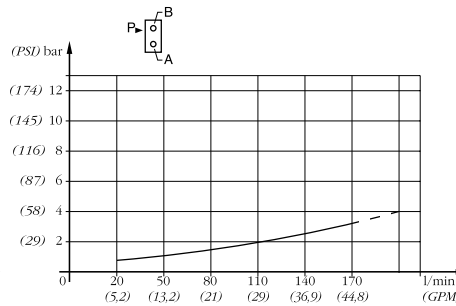
	l/min	GPM
• Portata nominale / Nominal flow	140	37
• Portata limite / Max flow	180	48
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



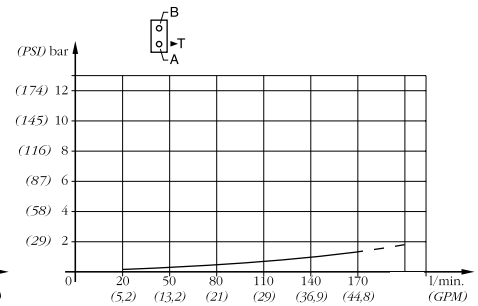
P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

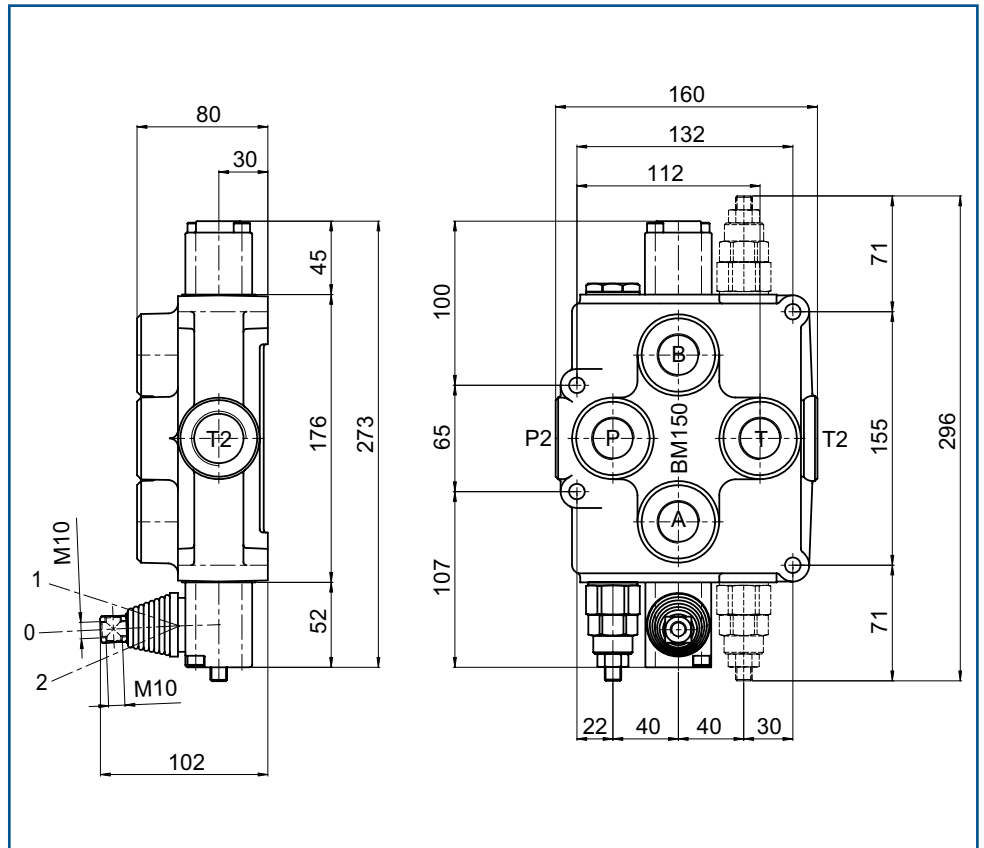
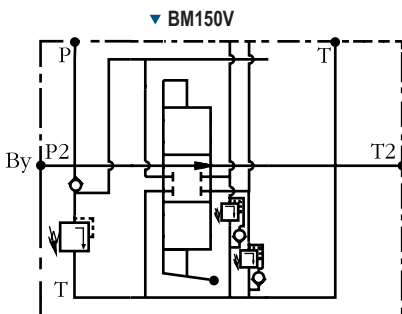


A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



Possibilità di valvole ausiliarie (vedi schema)  
Possibility to have auxiliary valves (see diagram)

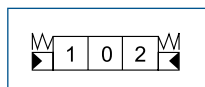
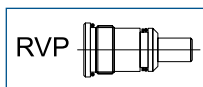
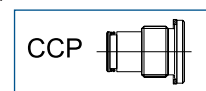
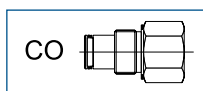
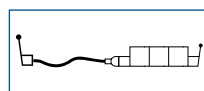
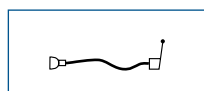
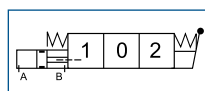
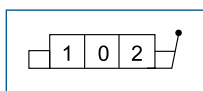
VL = limitatrici di pressione	VL = relief valve
VC = anticavitazione	VC = anticavitation valve
VLC = limitatrice e anticavitazione	VLC = combined relief and anticavitation



MOD	L	I	Kg
BM150			8,2

FILETTATURA STANDARD - STANDARD THREADS					
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	3/4"	3/4"	3/4"	1"	1"
F	1.1/16" - 12	1.1/16" - 12	1.1/16" - 12	1.5/16" - 12	1.5/16" - 12

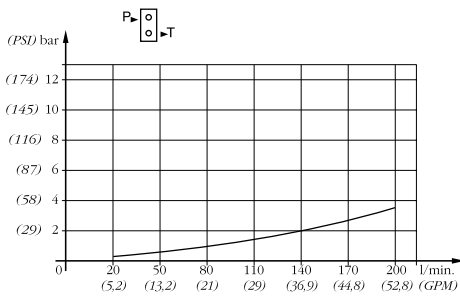
◀ Su richiesta filettature diverse  
Other threads available on request



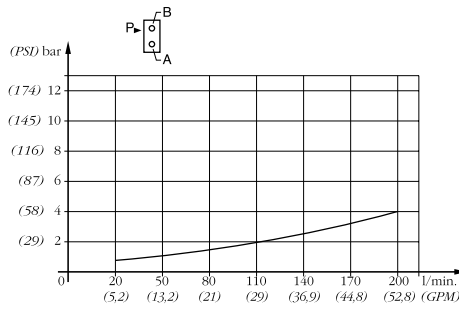
Caratteristiche generali / Technical characteristics		
	<b>l/min</b>	<b>GPM</b>
• Portata nominale / Nominal flow	<b>170</b>	<b>45</b>
• Portata limite / Max flow	<b>190</b>	<b>50</b>
	<b>bar</b>	<b>PSI</b>
• Pressione nominale / Nominal pressure	<b>250</b>	<b>3600</b>
• Pressione max sugli utilizzi / Max pressure on ports	<b>320</b>	<b>4700</b>
• Contropressione max allo scarico / Max pressure in tank-line	<b>80</b>	<b>1100</b>



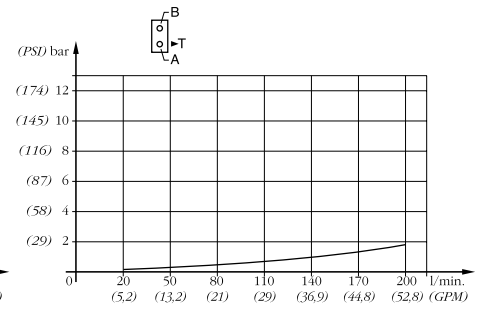
P<T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



P<A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

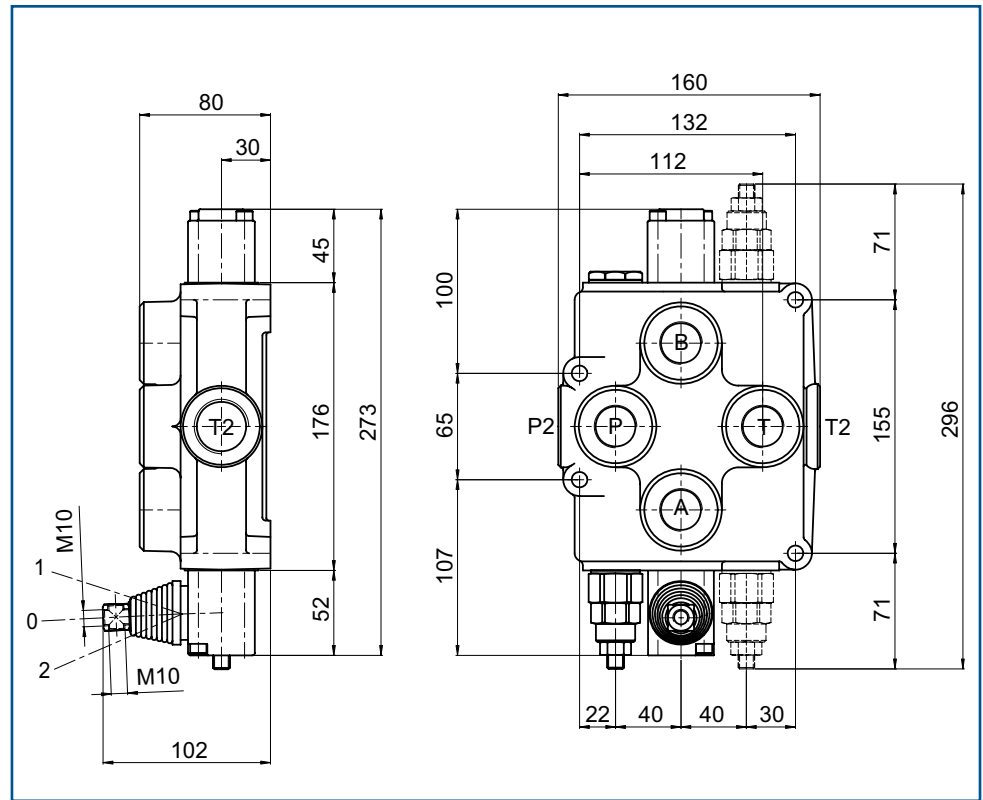
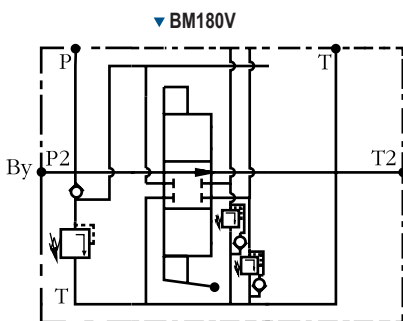


A/B<T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



Possibilità di valvole ausiliarie (vedi schema)  
Possibility to have auxiliary valves (see diagram)

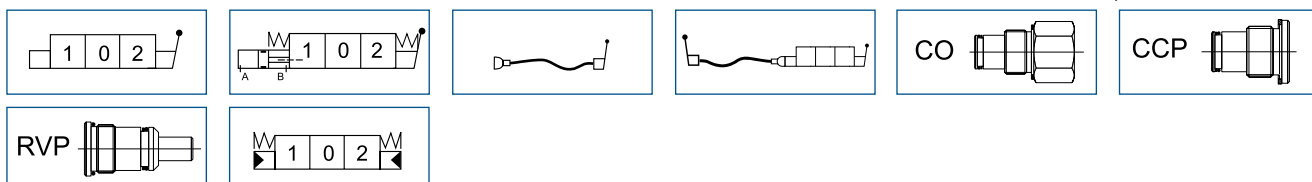
VL = limitatrici di pressione	VL = relief valve
VC = anticavitazione	VC = anticavitation valve
VLC = limitatrice e anticavitazione	VLC = combined relief and anticavitation



MOD	L	I	Kg
BM180			8,2

FILETTATURA STANDARD - STANDARD THREADS					
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1"	1"	1"	1"	1"
F	1.5/16" - 12	1.5/16" - 12	1.5/16" - 12	1.5/16" - 12	1.5/16" - 12

◀ Su richiesta filettature diverse  
Other threads available on request

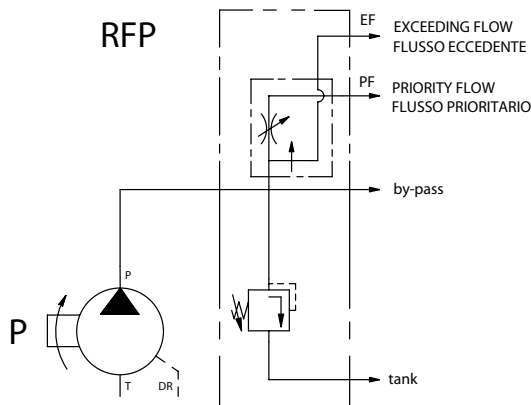




## Distributori monoblocco BF

### Serie BF (brevettato)

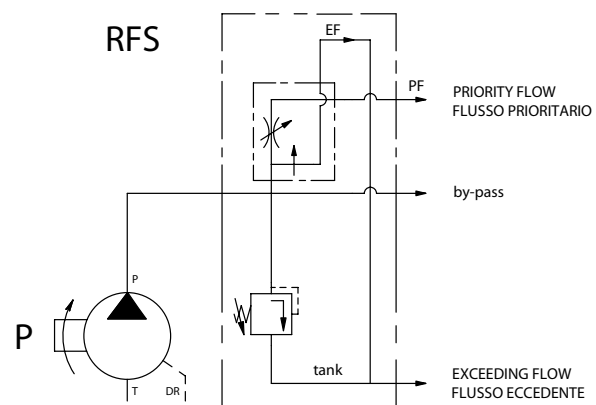
I distributori monoblocco della serie **BF** si distinguono dai distributori della serie **BM** (dai quali sono derivati), per il fatto di **avere integrato in entrata un divisore di flusso prioritario regolabile a tre vie compensato (RFP) o un regolatore di flusso a due vie compensato (RFS)**. Nel primo caso il flusso eccedente viene recuperato, così da permettere l'utilizzo contemporaneo di due utenti, l'uno servito dal flusso prioritario (**PF**) e l'altro dal flusso eccedente (**EF**). Nel secondo caso invece, il flusso eccedente (**EF**) viene mandato a scarico. Una particolarità importante è che **il divisore di flusso regolabile entra in funzione solo quando viene azionato un elemento prioritario**. In caso contrario, l'olio va allo scarico senza che il divisore funzioni, e quindi senza problemi di perdite di carico ed inutili riscaldamenti. Le sezioni non prioritarie ricevono tutta la portata del distributore quando sono azionate singolarmente; nel caso dell'RFP il solo flusso eccedente quando è azionato un prioritario. **Si possono avere uno o più elementi prioritari**.



## Monoblock valves BF

### BF Series (patented)

The monoblock valves of the **BF** series derive from the **BM** series, and differ from them **by having at the inlet a three ways priority integrated and pressure compensated flow regulator (RFP) or two ways integrated pressure compensated (RFS)**. In the RFP type the exceeding flow is recuperated into the system and allows the simultaneous use of the two spool, the first ruled by the priority (**PF**) and the second by the exceeding flow (**EF**). In the RFS type the exceeding flow (**EF**) goes to tank. **An important particularity is that the flow regulator only works when a priority element is actuated**. On the contrary the oil goes to tank without the regulator being actuated, therefore without loss of flow and unnecessary heating. The other elements get the whole flow when they are individually operated, and for the RFP the exceeding flow only, when a priority element is working. **One or more priority element are available**.



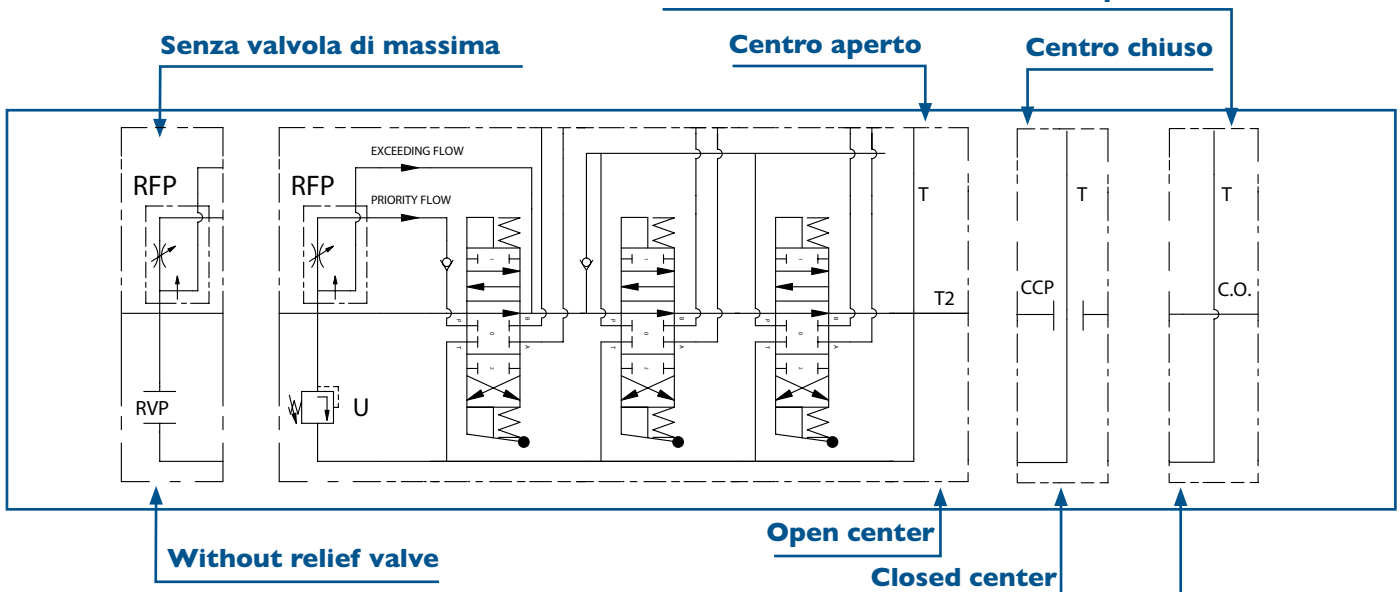
Caratteristiche generali	
• Portata	I/min GPM
	fino a <b>90</b> fino a <b>24</b>
• Pressione	bar PSI
	fino a <b>320</b> fino a <b>4700</b>
• Collegamento standard	Parallelo
• Ricoprimento spole	Negativo

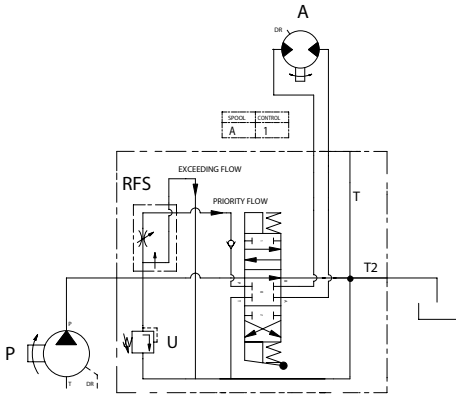
Le applicazioni con pressione di esercizio superiori a 200 bar devono essere verificate con il nostro ufficio tecnico.

Specifications	
• Nominal flow	I/min GPM
	up to <b>90</b> up to <b>24</b>
• Maximum pressure	bar PSI
	up to <b>320</b> up to <b>4700</b>
• Standard connection	Parallel
• Spool covering	Negative

Application with working pressure over 200 bar must be verified with our technical office.

### Con continuazione della linea di pressione



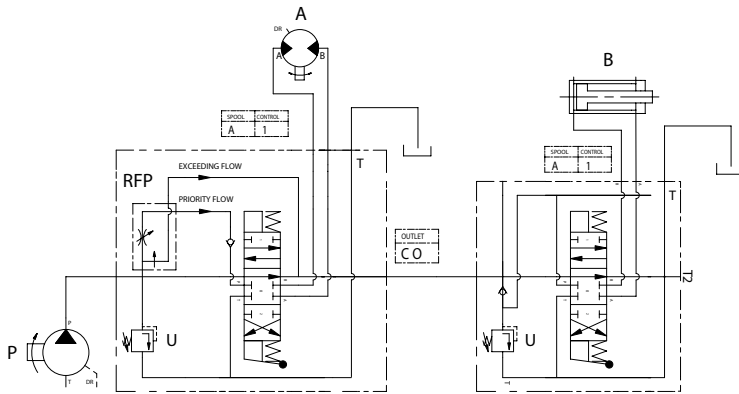


BF201/1 RFS GU/MO A1/



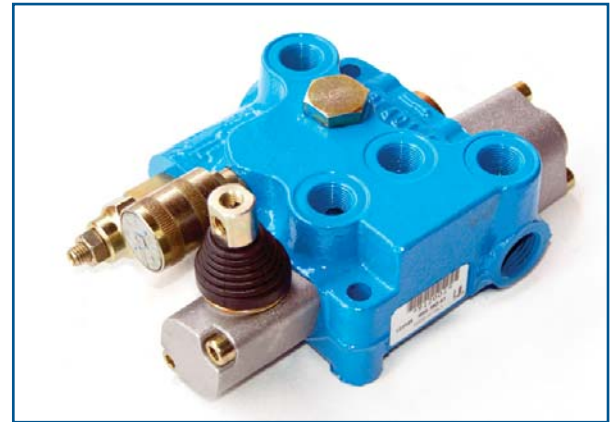
Il motore (A) viene alimentato dal flusso prioritario (PF) regolabile agendo sulla manopola del distributore. Il flusso eccedente (EF) viene mandato allo scarico.

The motor (A) is fed by the priority flow (PF) which is adjustable through the flow control knob on the directional control valve. The exceeding flow (EF) goes to tank.



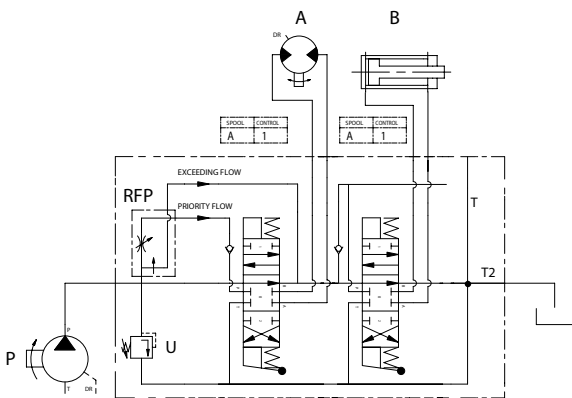
BF401/1 GU/MO A1/

BM40/1 GU/MO A1/



Il motore (A) viene alimentato dal flusso prioritario (PF) regolabile agendo sulla manopola del distributore. Il flusso eccedente (EF) viene recuperato in modo da permettere l'utilizzo contemporaneo di un altro distributore aggiungendo un CO. Il cilindro (B) viene alimentato da tutta la portata della pompa (P) se azionato singolarmente e dal solo flusso eccedente (EF) se il motore (A) è inserito.

The motor (A) is fed by the priority flow (PF) which is adjustable through the flow control knob on the directional control valve. The exceeding flow (EF) is recuperated so that it allows the contemporaneous usage of another valve by adding a CO plug. The cylinder (B) is fed by the whole flow of the pump (P) if the motor (A) is not in work. When the motor (A) is in work, the cylinder (B) is fed only by the exceeding flow (EF).

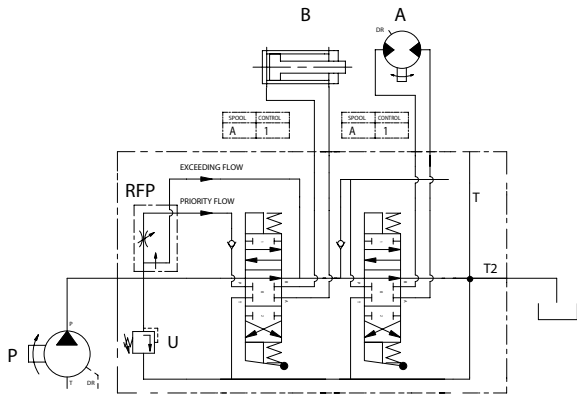


BF401/2 GU/MO A1/MO A1/



Il motore (A) viene alimentato dal flusso prioritario (PF) regolabile agendo sulla manopola del distributore. Il cilindro (B) viene alimentato da tutta la portata della pompa (P) se azionato singolarmente. Se azionati simultaneamente il motore viene alimentato dal flusso prioritario (PF) e il cilindro da quello eccedente (EF). Se si aziona il cilindro mentre il motore è inserito, il motore stesso non varierà la propria velocità di rotazione.

The motor (A) is fed by the priority flow (PF) which is adjustable through the flow control knob on the directional control valve. The cylinder (B) is fed by the whole flow of the pump (P) if the motor (A) is not in work. When simultaneously actuated, the motor is fed by the priority flow (PF) and the cylinder by the exceeding flow (EF). If the cylinder is actuated while the motor is in work, this last will not vary its rotation speed.

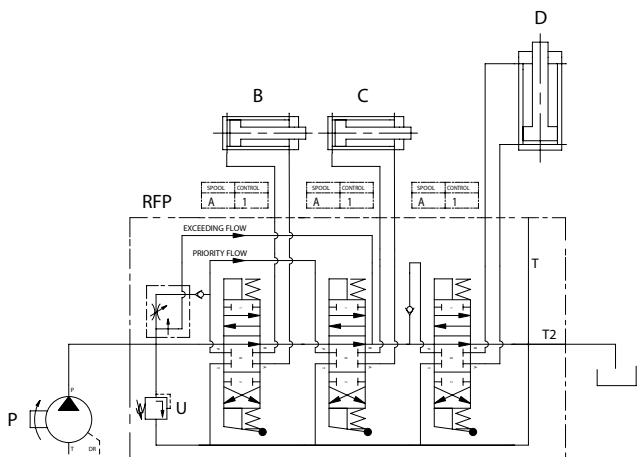


**BF401/2 GU/MO A1/MO A1/**

Il motore (A) viene alimentato da tutta la portata della pompa (P) se azionato singolarmente. Il cilindro (B) viene alimentato dal solo flusso prioritario (PF) regolabile agendo sulla manopola del distributore. Se azionati simultaneamente il cilindro viene alimentato dal flusso prioritario (PF) e il motore dal flusso eccedente (EF). Se si aziona il cilindro mentre il motore è inserito, il motore stesso diminuirà la propria velocità in misura proporzionale alla quantità d'olio sottratta per azionare il cilindro.

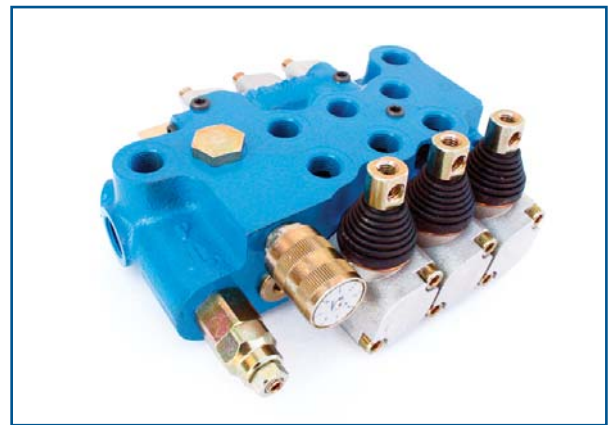


*When singly actuated, the motor (A) is fed by the whole flow of the pump (P). The cylinder (B) is fed only by the priority flow (PF) which is adjustable through the flow control knob on the directional control valve. When simultaneously actuated, the cylinder is fed by the priority flow (PF) and the motor by the exceeding flow (EF). If the cylinder is actuated while the motor is in work, this last will decrease its speed in proportion to the quantity of oil used to actuate the cylinder.*

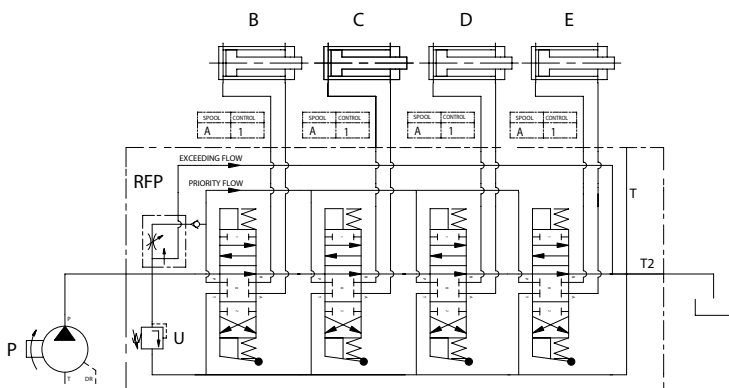


**BF402/3 GU/MO A1/MO A1/MO A1/**

I cilindri (B, C) sono alimentati dal flusso prioritario (PF) regolabile agendo sulla manopola del distributore. Il cilindro (D) è alimentato da tutta la portata della pompa (P) se azionato singolarmente. Se si aziona simultaneamente il cilindro (D) con uno dei due cilindri (B, C) esso sarà alimentato dal solo flusso eccedente (EF).

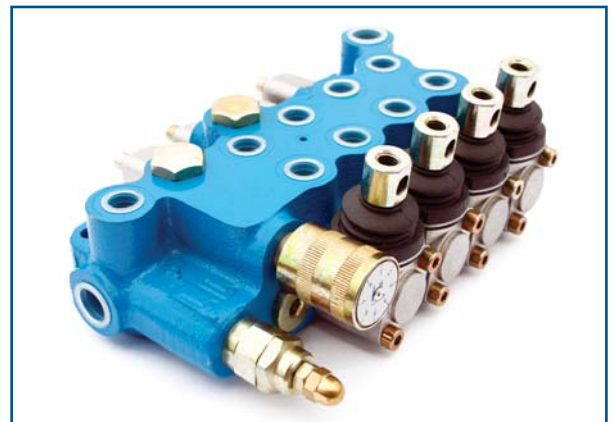


*The cylinders (B, C) are fed by the priority flow (PF) which is adjustable through the flow control knob on the directional control valve. The cylinder (D) is fed by the whole flow of the pump (P) if it is singly actuated. When actuated together with one of the two other cylinders (B, C), the cylinder (D) is fed only by the exceeding flow (EF).*



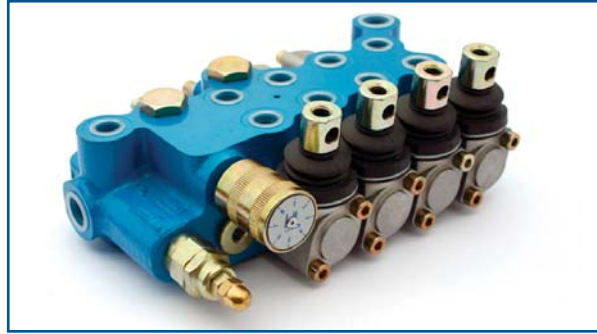
**BF204/4 GU/MO A1/MO A1/MO A1/MO A1/**

Tutti i cilindri (B, C, D, E) sono alimentati dal flusso prioritario (PF) regolabile agendo sulla manopola del distributore. Il flusso eccedente (EF) viene recuperato in modo da permettere, aggiungendo un CO, l'eventuale utilizzo di un altro distributore.



*All cylinders (B, C, D, E) are fed by the prioieity flow (PF) which is adjustable through the flow control knob on the directional control valve. The exceeding flow (EF) is recuperated so that it allows the contemporaneous usage of another valve by adding a CO plug.*

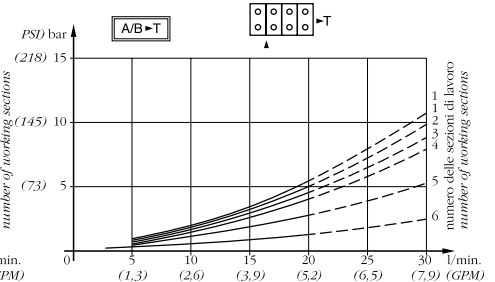
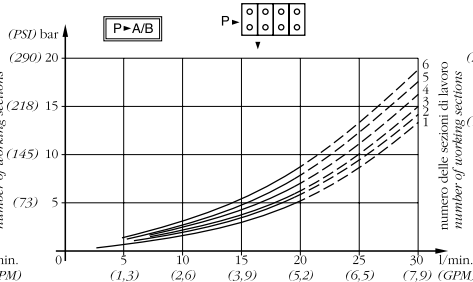
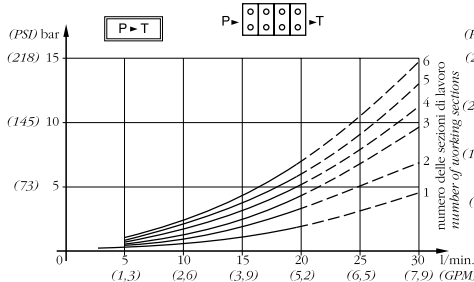
Caratteristiche generali / Technical characteristics		
	l/min	GPM
• Portata nominale / Nominal flow	17	4,5
• Portata limite / Max flow	25	6,6
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



P→T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P→A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

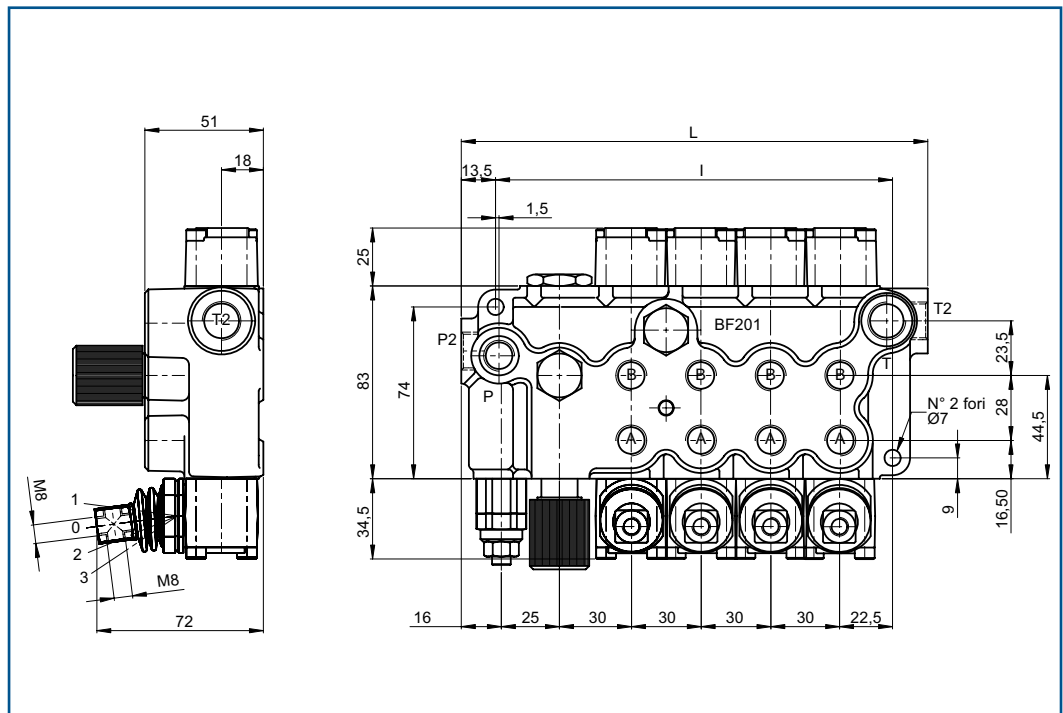
A/B→T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



Gli elementi prioritari hanno 5÷8 bar in più a seconda della portata regolata

Priority elements get 5÷8 bar (72÷116 PSI) more according to related flow.

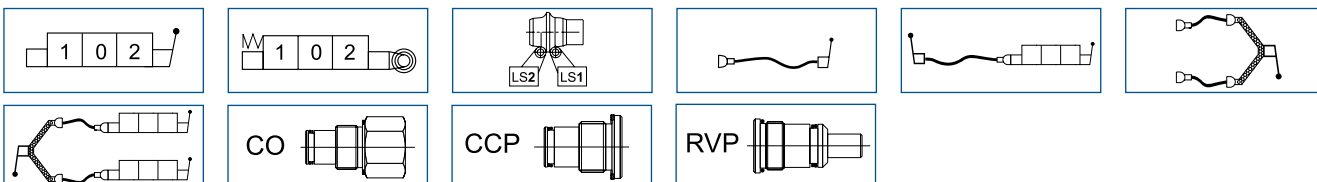
BF201/...=	n° 1 elemento prioritario
	n° 1 priority element
BF202/...=	n° 2 elementi prioritari
	n° 2 priority elements
BF203/...=	n° 3 elementi prioritari
	n° 3 priority elements
BF204/...=	n° 4 elementi prioritari
	n° 4 priority elements
BF205/...=	n° 5 elementi prioritari
	n° 5 priority elements



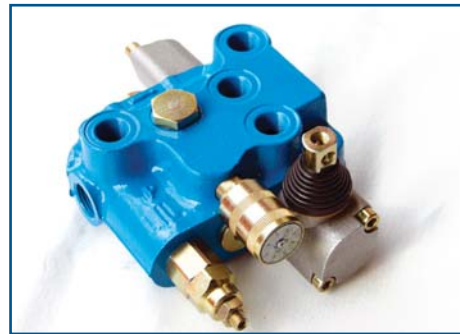
MOD	L	I	Kg
BF20.../1	106	80	2,4
BF20.../2	136	110	3,2
BF20.../3	166	140	4,0
BF20.../4	196	170	4,8
BF20.../5	226	200	5,6

FILETTATURA STANDARD - STANDARD THREADS							
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>	P <sub>3</sub>	T <sub>3</sub>
G	1/4"	1/4"	3/8"	3/8"	3/8"	1/4"	1/4"
F	9/16" - 18	9/16" - 18	3/4" - 16	3/4" - 16	3/4" - 16		

◀ Su richiesta filettature diverse  
Other threads available on request



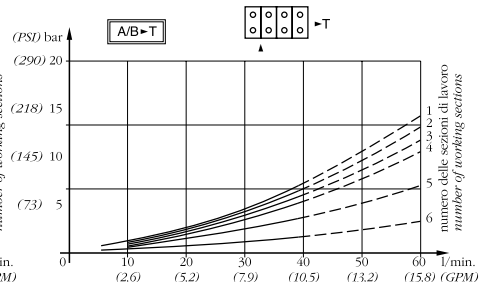
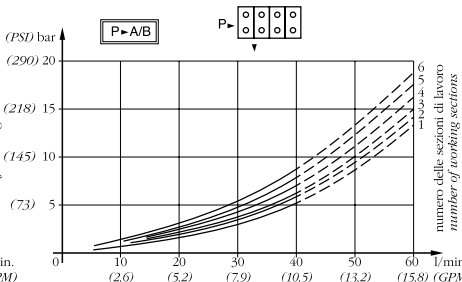
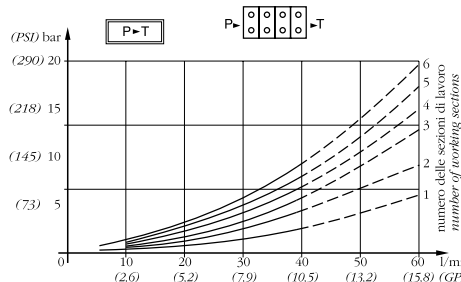
Caratteristiche generali / Technical characteristics		
	l/min	GPM
• Portata nominale / Nominal flow	35	9
• Portata limite / Max flow	45	12
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

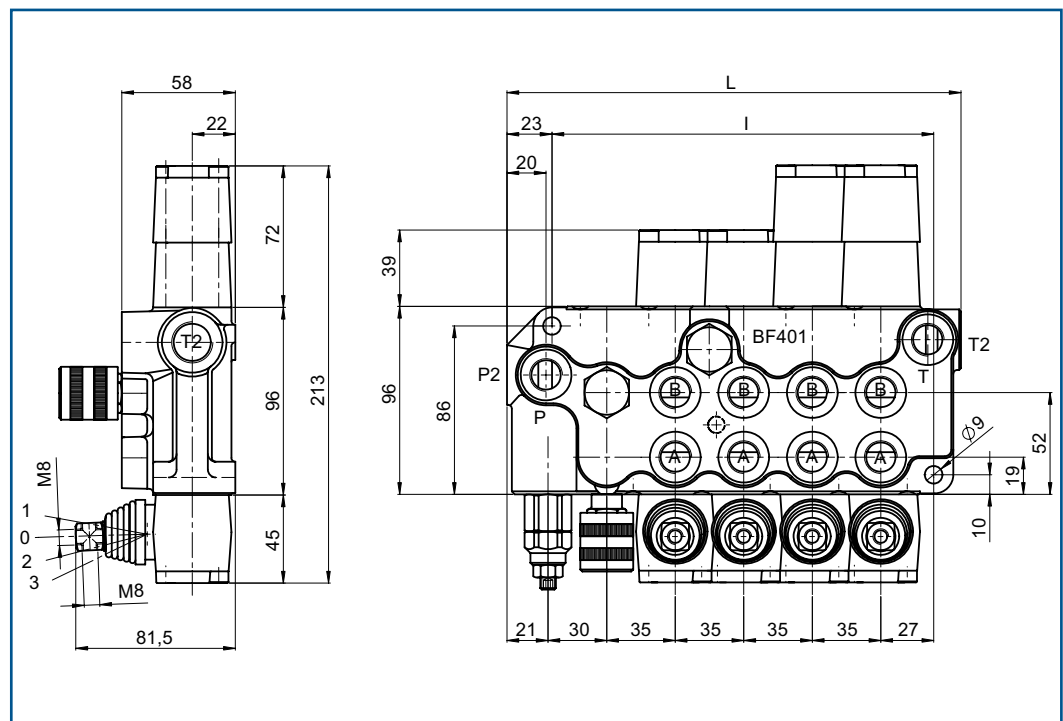
A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



Gli elementi prioritari hanno 5÷8 bar in più a seconda della portata regolata

Priority elements get 5÷8 bar (72÷116 PSD) more according to related flow.

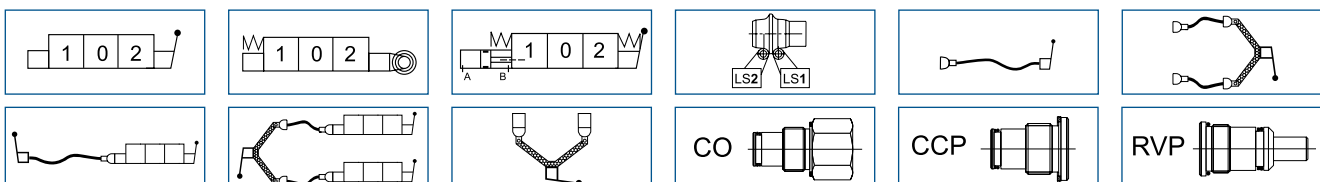
BF401/...=	n° 1 elemento prioritario n° 1 priority element
BF402/...=	n° 2 elementi prioritari n° 2 priority elements
BF403/...=	n° 3 elementi prioritari n° 3 priority elements
BF404/...=	n° 4 elementi prioritari n° 4 priority elements
BF405/...=	n° 5 elementi prioritari n° 5 priority elements
BF406/...=	n° 6 elementi prioritari n° 6 priority elements



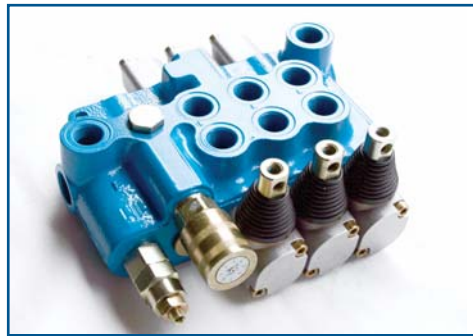
MOD	L	I	Kg
BF40.../1	125	90	3.9
BF40.../2	160	125	5.2
BF40.../3	195	160	6.4
BF40.../4	230	195	7.6
BF40.../5	265	230	8.8
BF40.../6	300	265	10

FILETTATURA STANDARD - STANDARD THREADS					
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	3/8"	3/8"	3/8"	1/2"	1/2"
F	3/4" - 16	3/4" - 16	3/4" - 16	7/8" - 14	7/8" - 14

◀ Su richiesta filettature diverse  
Other threads available on request



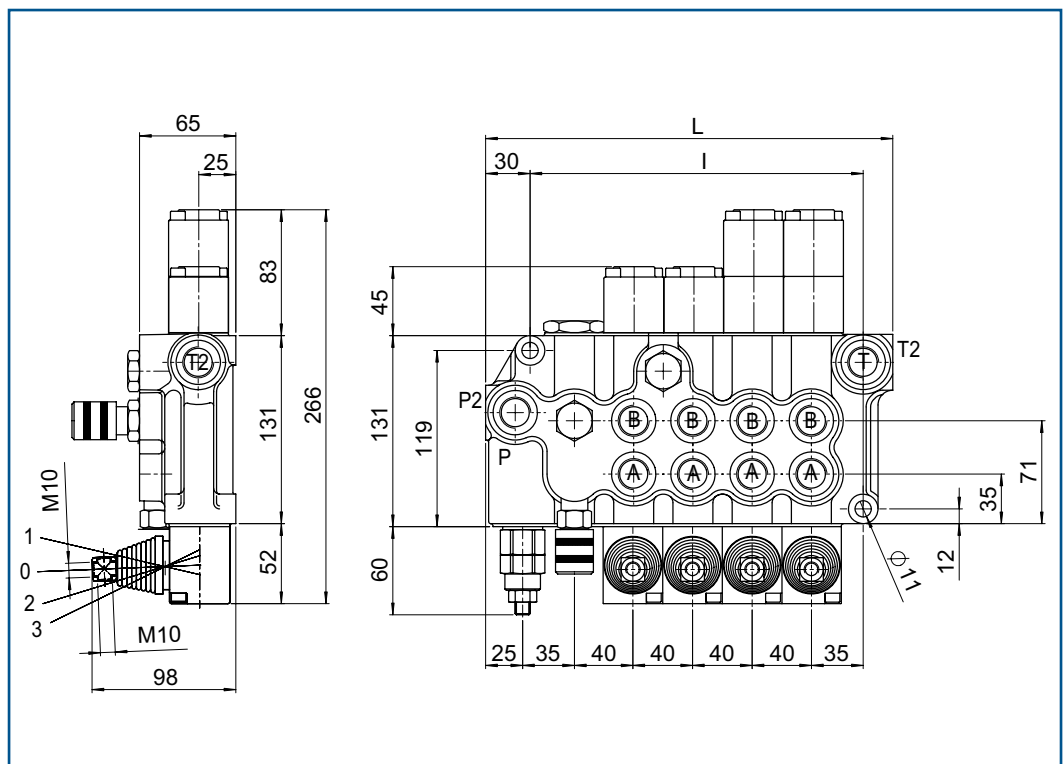
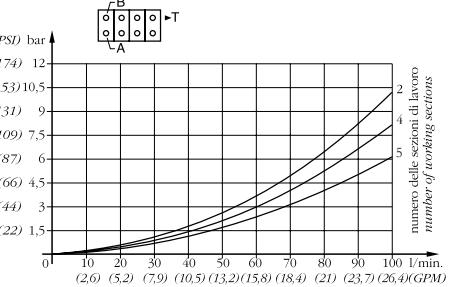
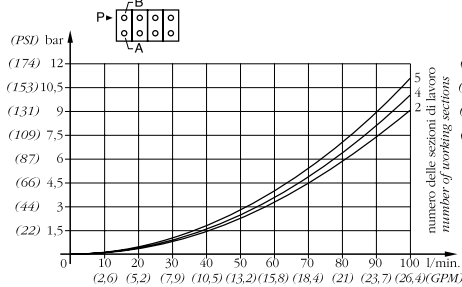
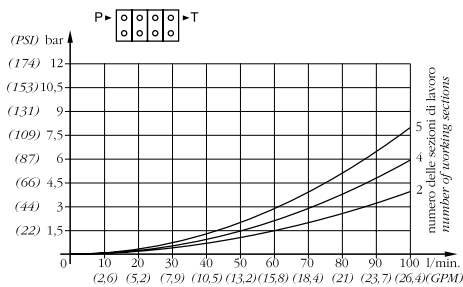
Caratteristiche generali / Technical characteristics		
	l/min	GPM
• Portata nominale / Nominal flow	65	17
• Portata limite / Max flow	90	24
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Contropressione max allo scarico / Max pressure in tank-line	80	1100



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



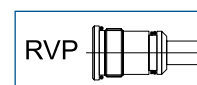
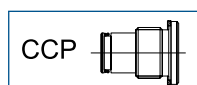
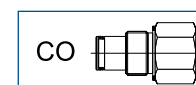
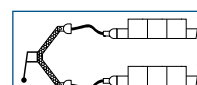
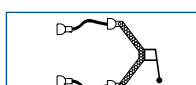
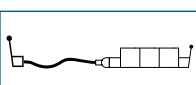
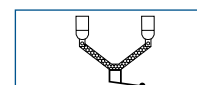
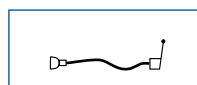
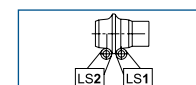
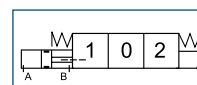
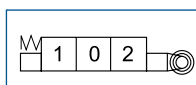
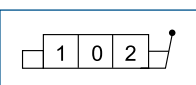
BF701/...=	n° 1 elemento prioritario n° 1 priority element
BF702/...=	n° 2 elementi prioritari n° 2 priority elements
BF703/...=	n° 3 elementi prioritari n° 3 priority elements
BF704/...=	n° 4 elementi prioritari n° 4 priority elements
BF705/...=	n° 5 elementi prioritari n° 5 priority elements

MOD	L	I	Kg
BF70.../1	157	106	6.6
BF70.../2	197	146	9
BF70.../3	237	186	11.2
BF70.../4	277	226	13.5
BF70.../5	317	266	15.7

### FILETTATURA STANDARD - STANDARD THREADS

COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/2"	1/2"	1/2"	3/4"	3/4"
F	7/8" - 14	7/8" - 14	7/8" - 14	1.1/16" - 12	1.1/16" - 12

◀ Su richiesta filettature diverse  
Other threads available on request



## Distributori componibili

### Serie BC

I distributori componibili, con la loro particolarità di:

- Poter montare valvole limitatrici di pressione (**VL**), anticavitazione (**VC**) o combinate (**VLC**) su ogni singolo utilizzo
- Avere una valvola di non ritorno su ogni sezione, ad impedire qualsiasi interferenza da elemento ad elemento
- Assicurare il controllo del flusso e l'azionamento di due o più movimenti contemporanei, mediante gli elementi regolatori di flusso (**RF**) o integrati (**CF** brevettato).
- Riescono a soddisfare i requisiti di flessibilità e di elevato rendimento richiesti dalle moderne macchine mobili.

Caratteristiche generali		
• Portata	<b>l/min GPM</b>	
	fino a <b>180</b>	fino a <b>48</b>
• Pressione	<b>bar PSI</b>	
	fino a <b>320</b>	fino a <b>4700</b>
• Collegamento standard	Parallelo	
• Ricoprimento spole	Negativo	

Le applicazioni con pressione di esercizio superiori a 200 bar devono essere verificate con il nostro ufficio tecnico.

## Stackable valves

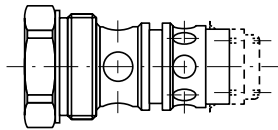
### BC Series

The stackable valves present following characteristic:

- Relief valves (**VL**), anti-cavitation valves (**VC**) or combined (**VLC**) available on each port
- No return valve on every section, to avoid any interference from element to element
- Possibility to control the flow and the simultaneous operation of two or more movements through flow regulators (**RF**) or the integrated flow control (**CF** patented).
- Stackable valves are able to meet the requirements of flexibility and high efficiency that modern mobile machines need.

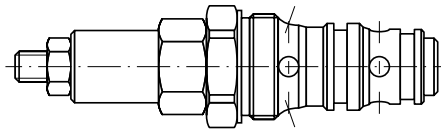
Specifications		
• Nominal flow	<b>l/min GPM</b>	
	up to <b>180</b>	up to <b>48</b>
• Maximum pressure	<b>bar PSI</b>	
	up to <b>320</b>	up to <b>4700</b>
• Standard connection	Parallel	
• Spool covering	Negative	

Application with working pressure over 200 bar must be verified with our technical office.



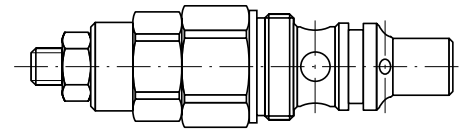
**VC**

**ANTICAVITAZIONE**  
**ANTICAVITATION VALVE**



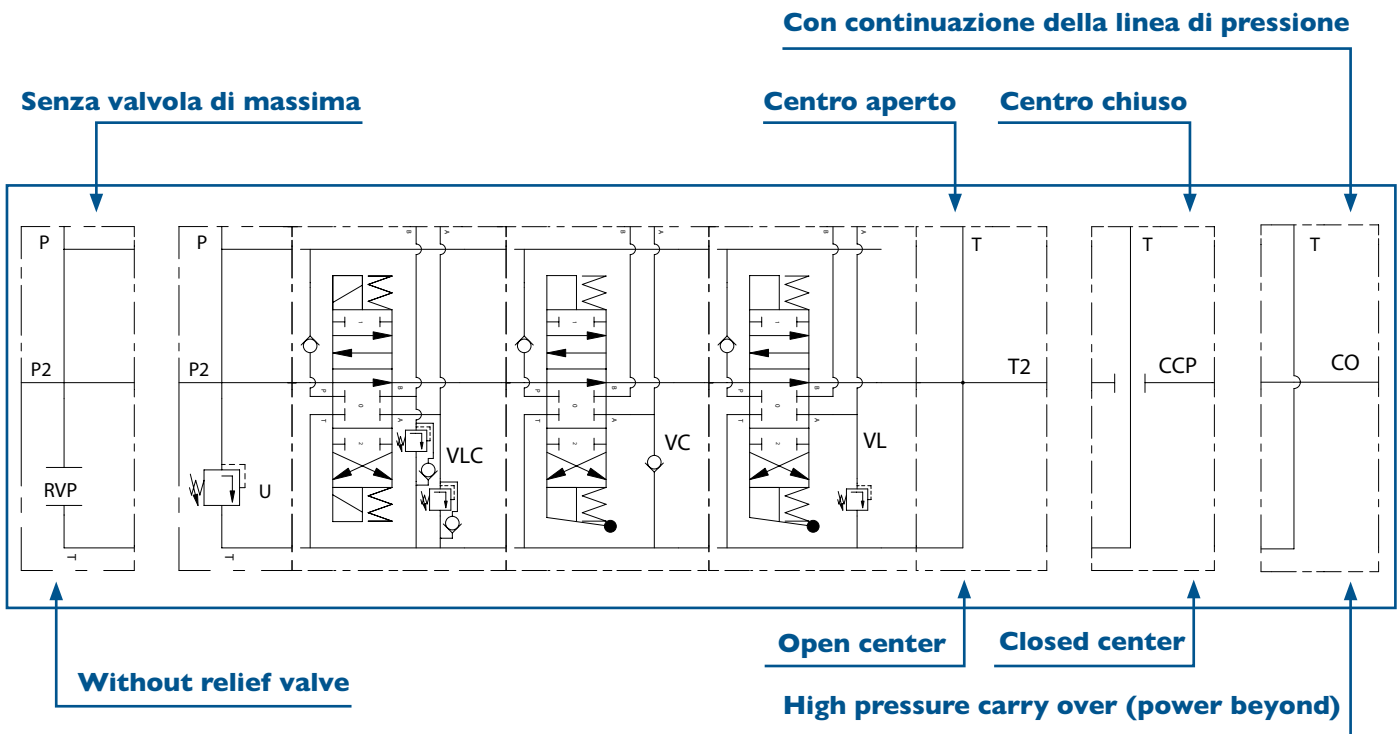
**VLC**

**COMBINATA**  
**ANTISHOCK PLUS ANTICAVITATION VALVE**



**VL**

**LIMITATRICE DI PRESSIONE**  
**ANTISHOCK VALVE**



## Distributori componibili

### Divisore di flusso regolabile compensato (RF)

Il divisore di flusso regolabile compensato (RF) ripartisce in due rami l'olio in circolazione nel by-pass (By):

- Il primo prioritario (PF), regolabile mediante una manopola esterna.
- Il secondo eccedente (EF), riceve l'olio eccedente non utilizzato dal ramo prioritario.

La combinazione di diversi tipi di RF (tre) con diversi tipi di elementi speciali (P-R-PR) permette la realizzazione di svariati circuiti dei quali daremo esempio di seguito. L'uso che vorremo fare del flusso prioritario (PF) e dell'eccedente (EF) determinerà la scelta del divisore di flusso e degli elementi speciali, qui di seguito riportati.

## Stackable valves

### Pressure compensated adjustable flow control (RF)

The pressure compensated adjustable flow control (RF) divides into two lines the oil flow that circulates in the by-pass (By):

- The first **priority (PF)**, adjustable with an external knob
- The second **exceeding (EF)**, gets the exceeding oil, not used by the priority line

The combination of the various types of RF (three) with different type of special elements (P-R-PR) allows the execution of many circuits, samples of which are reported hereunder. The use that we do of the priority (PF) and of the exceeding (EF) flow, shall determine the choice of the flow divider and the special elements that we hereby list.

Tipo	Flusso prioritario	Flusso eccedente	Note
RFS	Ad uno o più elementi successivi al divisore	Allo scarico (T)	Utilizza solo elementi standard (S-V)
RFP	Ad uno o più elementi (P) successivi al divisore	Ad uno o più elementi successivi a quelli prioritari	Il primo degli elementi utilizzando il flusso eccedente deve essere un elemento (R); gli altri devono essere standard (S-V)
RFPP	Allo scarico (T)	Ad uno o più elementi successivi al divisore	Come sopra

Type	Priority flow	Exceeding flow	Remarks
RFS	To one or more elements following the divider	To tank (T)	Uses only standard elements (S-V)
RFP	To one or more elements (P) following the divider	To one or more elements following the priority ones	First element to use the exceeding flow must be an (R) element; the other are standard (S-V)
RFPP	To tank (T)	To one or more elements following the divider	See above

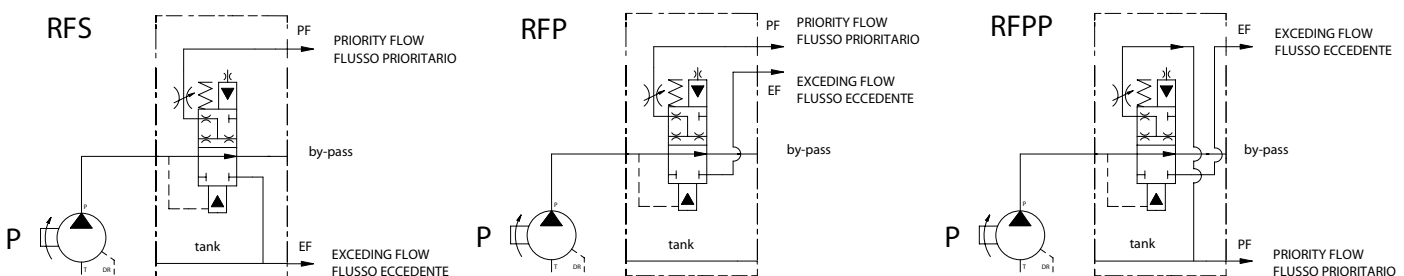
S-V	Elementi standard		
P-PV	Elementi prioritari		Da usare solo con RFP
R-RV	Elementi che recuperano il flusso eccedente (EF)		Da usare con RFP - RFPP e dopo un elemento CF - CFV
PR-PRV	Elementi che utilizzano il flusso prioritario (P) e recuperano quello eccedente in by-pass (By)		Deve essere usato solo come ultimo o unico elemento prima della testata di uscita

S-V	Standard elements		
P-PV	Priority elements		To be used only in connection with RFP
R-RV	Elements that recuperate the exceeding flow (EF)		To be used only with RFP - RFPP and after a CF - CFV element
PR-PRV	Elements using the priority flow (P) and recuperating the exceeding flow into by-pass (By)		Has to be used exclusively as last or only element before the outlet

CF-CFV	All'elemento stesso	Ad uno o più elementi successivi	Dopo un elemento CF-CFV bisogna utilizzare un elemento R o RV o elementi CF o CFV
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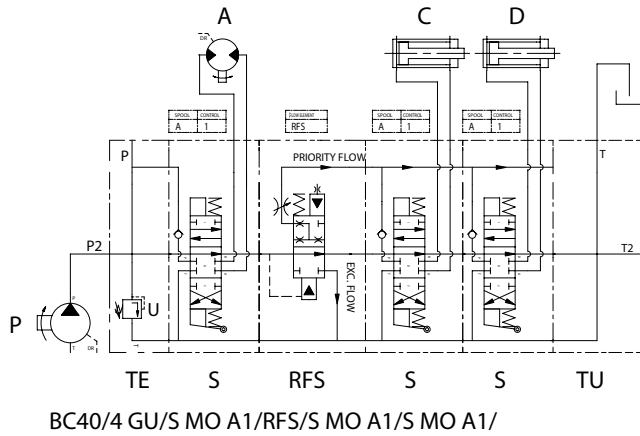
CF-CFV	To the same element	To one or more following elements	After an element CF or CFV only elements R, RV, CF or CFV can be used
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### ESEMPIO DI UTILIZZO DEI DIVISORI DI FLUSSO PRIORITARI REGOLABILI NEI DISTRIBUTORI DI FLUSSO (BC) SOME EXAMPLE ON HOW TO USE THE ADJUSTABLE PRIORITY FLOW DIVIDERS IN THE STACKABLE VALVES (BC)



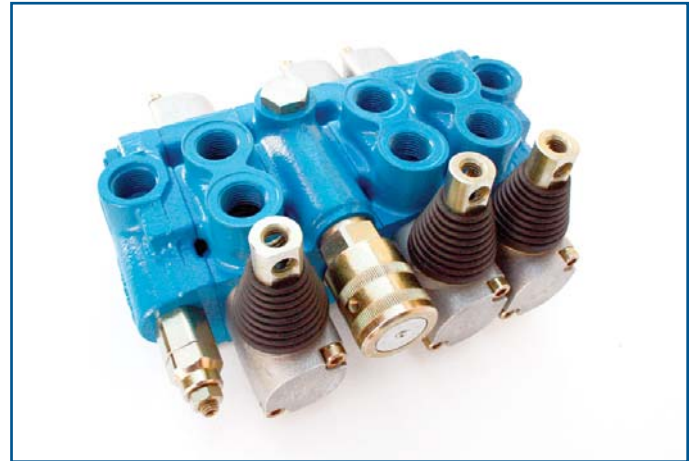


## Applicazioni BC

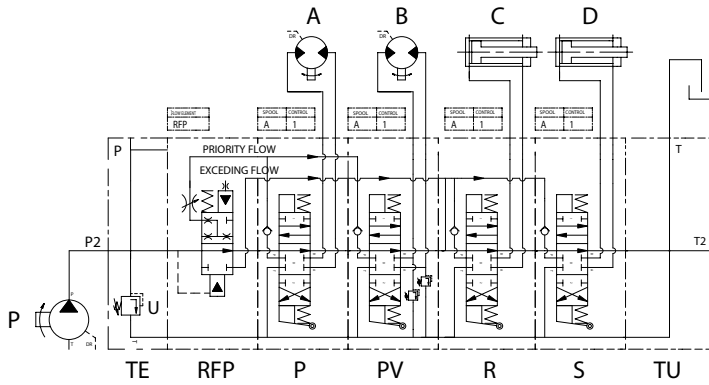


Il motore (A) viene alimentato da tutta la portata della pompa (P). I cilindri (C, D) a valle dell'elemento regolatore (RFS) sono alimentati dal solo flusso prioritario (PF) regolabile agendo sulla manopola del regolatore stesso. Il flusso eccedente va allo scarico.

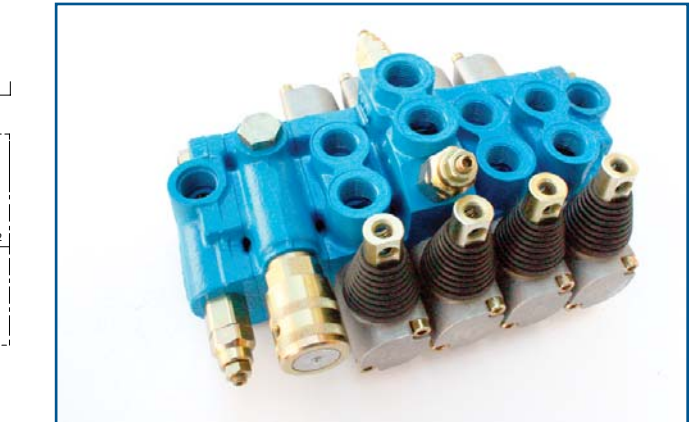
## BC Applications



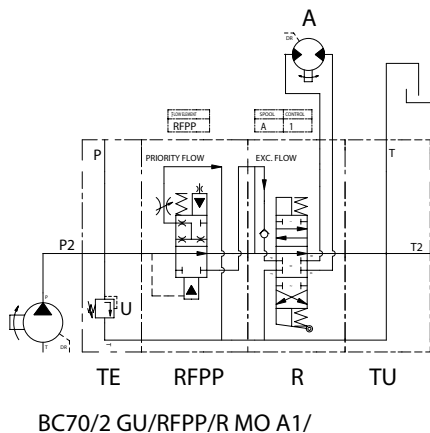
The motor (A) is fed by the whole flow of the pump (P). The cylinders (C, D) downstream the flow control element (RFS) are fed only by the priority flow (PF) which is adjustable through the flow control knob on the element. The excess flow go to the tank.



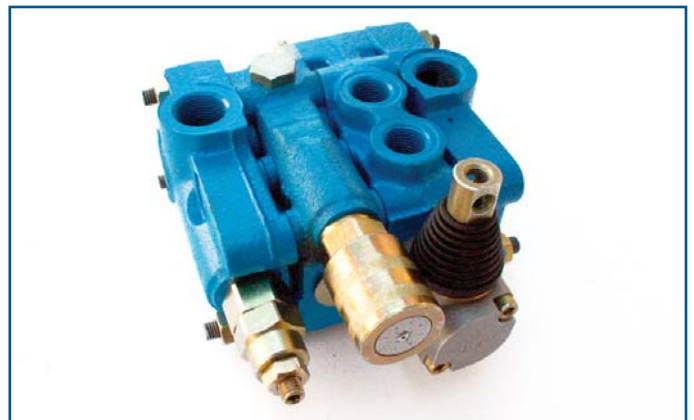
I motori (A, B) sono alimentati dal flusso prioritario (PF) regolabile agendo sulla manopola del regolatore stesso. I cilindri (C, D) sono alimentati da tutta la portata della pompa (P) se azionati singolarmente. Se azionati simultaneamente un motore e un cilindro, il motore sarà alimentato dal flusso prioritario (PF) mentre il cilindro dal solo flusso eccedente (EF). Se si aziona un cilindro mentre un motore è inserito, il motore non varierà la propria velocità di rotazione.



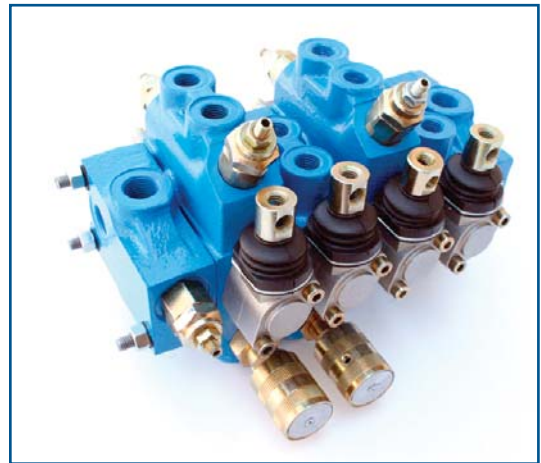
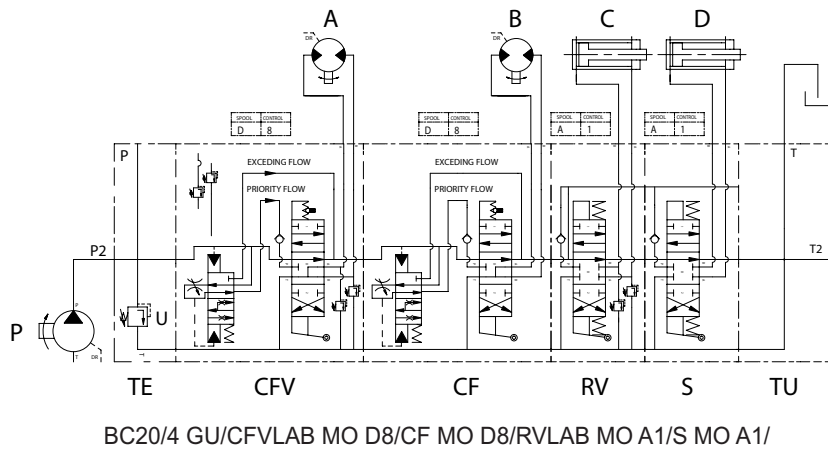
The motors (A, B) are fed by the priority flow (PF) which is adjustable through the flow control knob on the element. The cylinders (C, D) are fed by the whole flow of the pump (P) when singly actuated. When a cylinder and a motor are simultaneously actuated, the motor is fed by the priority flow (PF) and the cylinder by the exceeding flow (EF). If a cylinder is actuated while a motor is in work, this last will not vary its rotation speed.



Il motore (A) viene alimentato dal flusso eccedente (EF) mentre il flusso prioritario (PF) viene mandato a scarico. Essendo costante la quantità di flusso inviata allo scarico, al variare della portata della pompa si avrà una variazione della velocità di rotazione del motore.

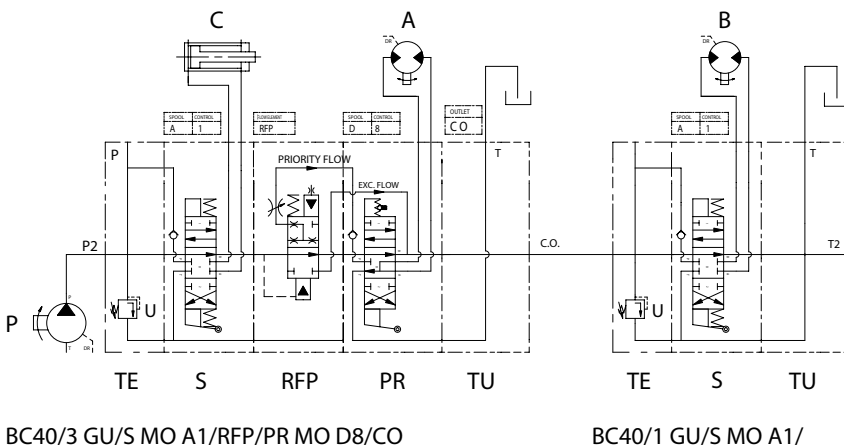


The motor (A) is fed by the exceeding flow (EF). The priority flow (PF) goes to tank. As the quantity of oil sent to the tank is constant, whenever the pump flow changes the motor's rotation speed will vary.



I motori (A, B) sono alimentati dal flusso prioritario (PF) di due elementi CF che integrano il regolatore di flusso permettendo di regolare la velocità di rotazione singolarmente. Il flusso eccedente (EF) viene recuperato in by-pass e quindi utilizzabile dagli elementi successivi. I cilindri (C, D) sono alimentati da tutta la portata della pompa (P) se azionati singolarmente. Se azionati simultaneamente uno o entrambi i motori e un cilindro, il cilindro stesso sarà alimentato dal solo flusso eccedente.

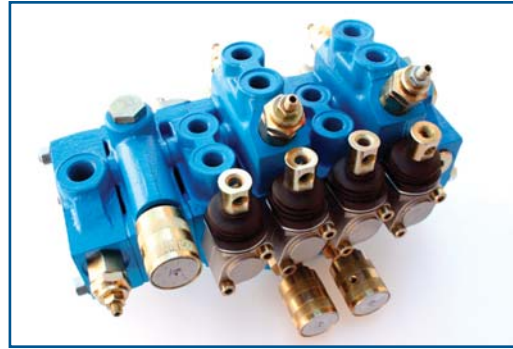
The motors (A, B) are fed by the priority flow (PF) of two CF elements which, having the flow control integrated, allow to adjust the rotation speed one by one. The exceeding flow (EF) is recuperated into the by-pass channel and therefore it is available for the following elements. The cylinders (C, D) are fed by the whole flow of the pump (P) when singly actuated. When a motor (or both) and a cylinder are simultaneously actuated, the cylinder is fed only by the exceeding flow (EF).



Il cilindro (C) viene alimentato da tutta la portata della pompa (P). Il motore (A) viene alimentato dal flusso prioritario (PF) regolabile agendo sulla manopola del regolatore stesso. Il flusso eccedente (EF) viene recuperato in by-pass permettendo, con l'utilizzo di un CO, l'alimentazione simultanea di un distributore a valle.

The cylinder (C) is fed by the whole flow of the pump (P). The motor (A) is fed by the priority flow (PF) which is adjustable through the flow control knob on the element. The exceeding flow (EF) is recuperated into the by-pass channel so that it allows the contemporaneous usage of another valve downstream by adding a CO plug.

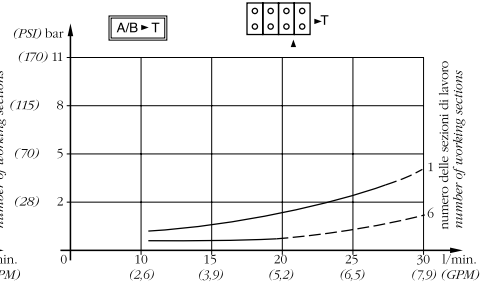
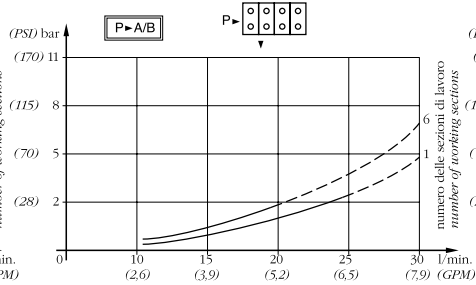
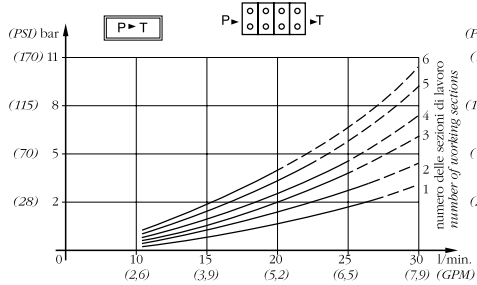
Caratteristiche generali / Technical characteristics		
	l/min	GPM
• Portata nominale / Nominal flow	20	5,3
• Portata limite / Max flow	25	6,6
• Portata limite EO / Max flow EO	20	5,3
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione nominale EO / Nominal pressure EO	140	2030
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Pressione max sugli utilizzi EO / Max pressure on ports EO	180	2600
• Contropressione max allo scarico / Max pressure in tank-line	40	550



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

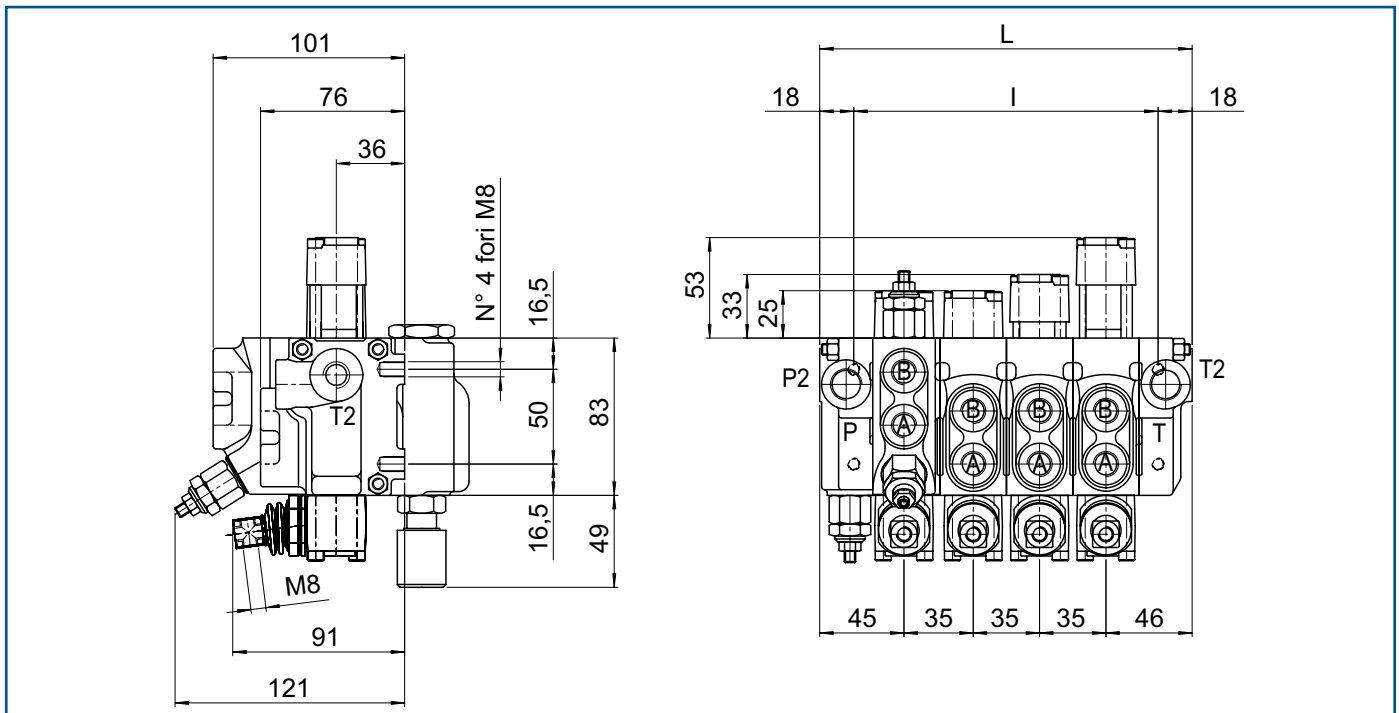
P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



Gli elementi prioritari hanno 5÷8 Bar in più a seconda della portata regolata

Priority elements get 5÷8 Bar (72÷116 PSI) more according to related flow.

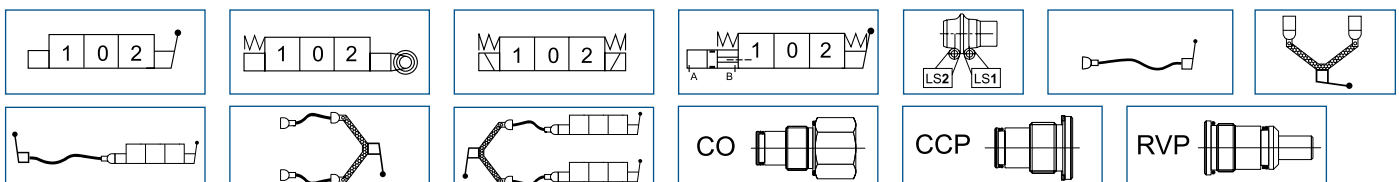


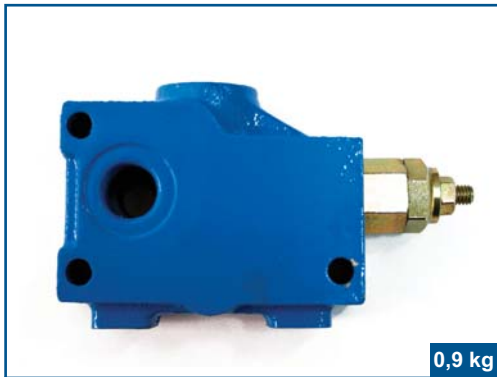
MOD	L	I	Kg
BC20/1	91	55	
BC20/2	126	90	
BC20/3	161	125	
...	...	...	
...	...	...	

**FILETTATURA STANDARD - STANDARD THREADS**

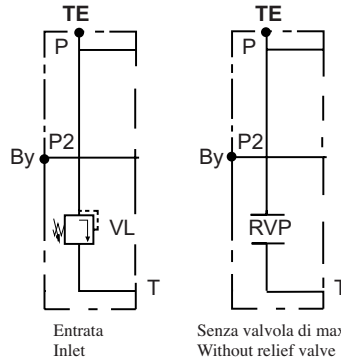
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/4"	3/8"	3/8"	3/8"	3/8"
F	9/16" - 18	3/4" - 16	3/4" - 16	3/4" - 16	3/4" - 16

◀ Su richiesta filettature diverse  
Other threads available on request



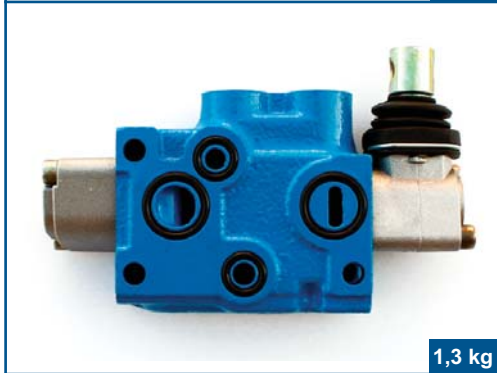


0,9 kg

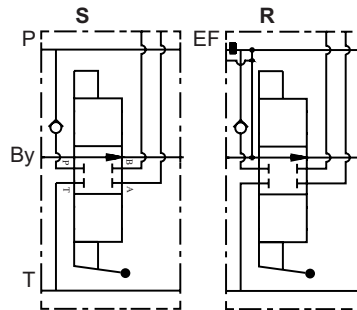


Testata d'entrata

Inlet

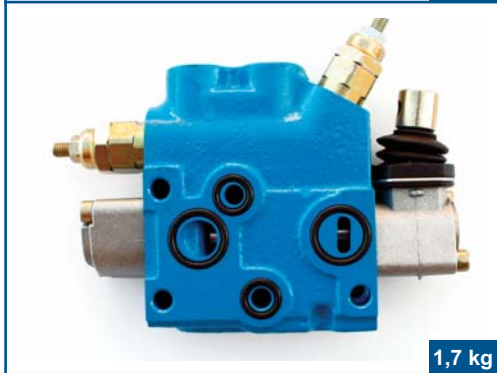


1,3 kg

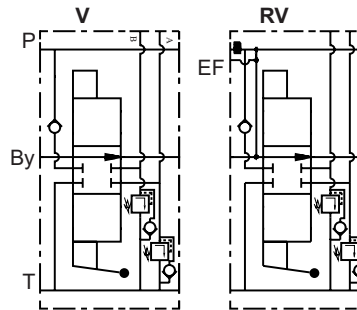


Elemento standard

Standard element



1,7 kg



Elemento per valvole ausiliarie

Element for auxiliary valves

VC= Anticavitazione

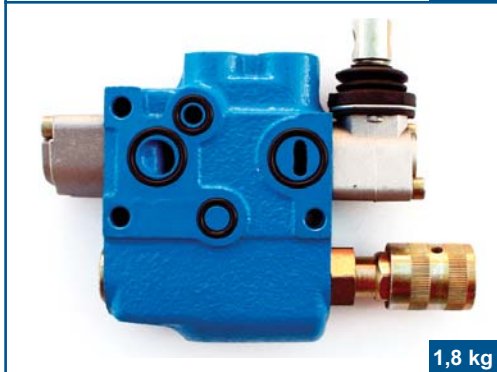
VC= Anticavitation valve

VL = Limitatrice di pressione

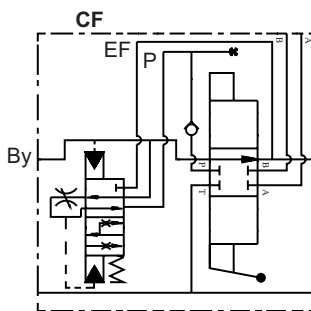
VL = Antishock valve

VLC = Combinata antiurto - anticavitazione

VL = Combined anticavitation - antishock



1,8 kg



Elemento con regolatore di flusso integrato

(brevettato)

Element with integrated pressure compensated flow control

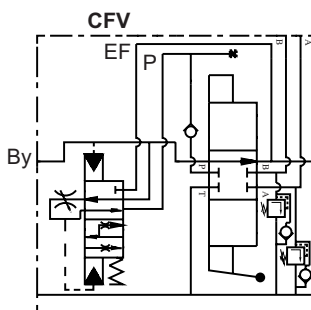
(patented)

Per utilizzare elementi senza regolazione dopo un elemento CF - CFV, il primo deve essere un elemento R

To use elements without regulator after a CF - CFV element, the first among them must be a R element



2,2 kg



Elemento con regolatore di flusso integrato per valvole ausiliarie

(brevettato)

Element with integrated pressure compensated flow control for auxiliary valves

(patented)

Per utilizzare elementi senza regolazione dopo un elemento CF - CFV, il primo deve essere un elemento R

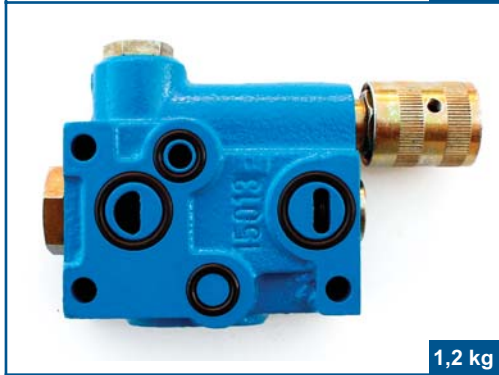
To use elements without regulator after a CF - CFV element, the first among them must be a R element

**BC20**

**BC20**



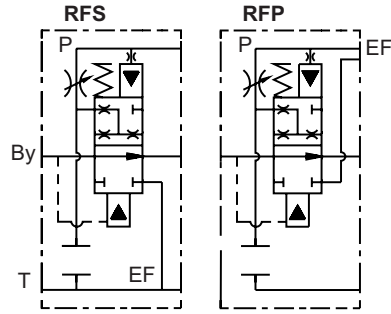
1,2 kg



1,2 kg

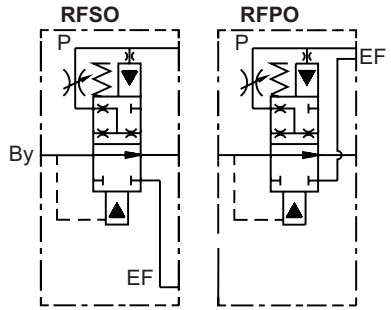


1 kg



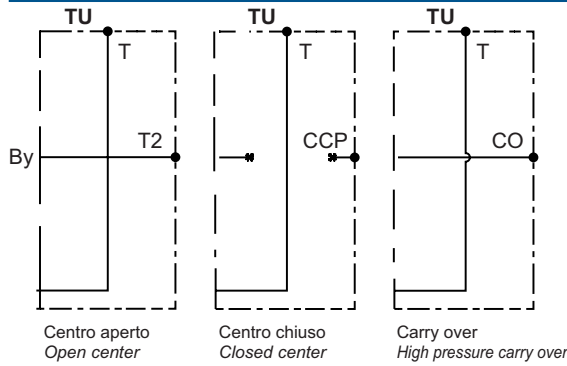
**Elemento divisore di flusso prioritario regolabile - verticale**

*Priority adjustable pressure compensated flow control element - vertical*



**Elemento divisore di flusso prioritario regolabile - orizzontale**

*Priority adjustable pressure compensated flow control element - horizontal*



**Testata d'uscita**

*Outlet*

**Caratteristiche generali / Technical characteristics**

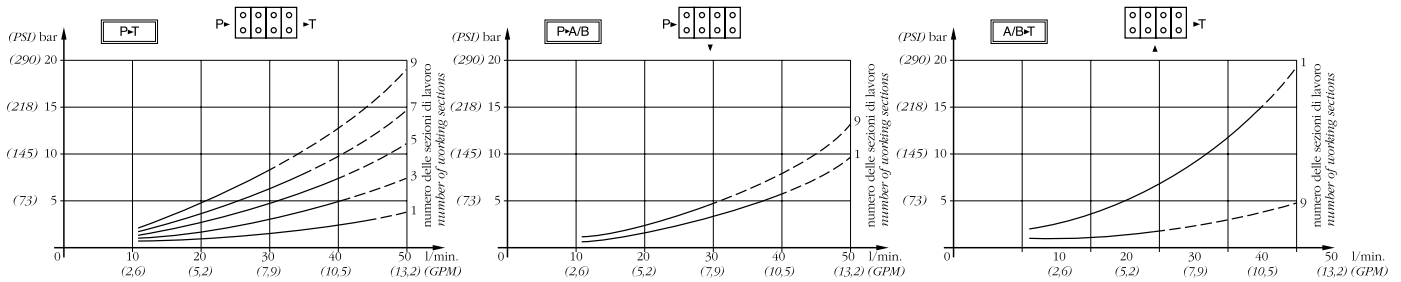
	l/min	GPM
• Portata nominale / Nominal flow	35	9
• Portata limite / Max flow	45	12
• Portata limite EO / Max flow EO	35	9
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione nominale EO / Nominal pressure EO	180	2600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Pressione max sugli utilizzi EO / Max pressure on ports EO	250	3600
• Contropressione max allo scarico / Max pressure in tank-line	40	550



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

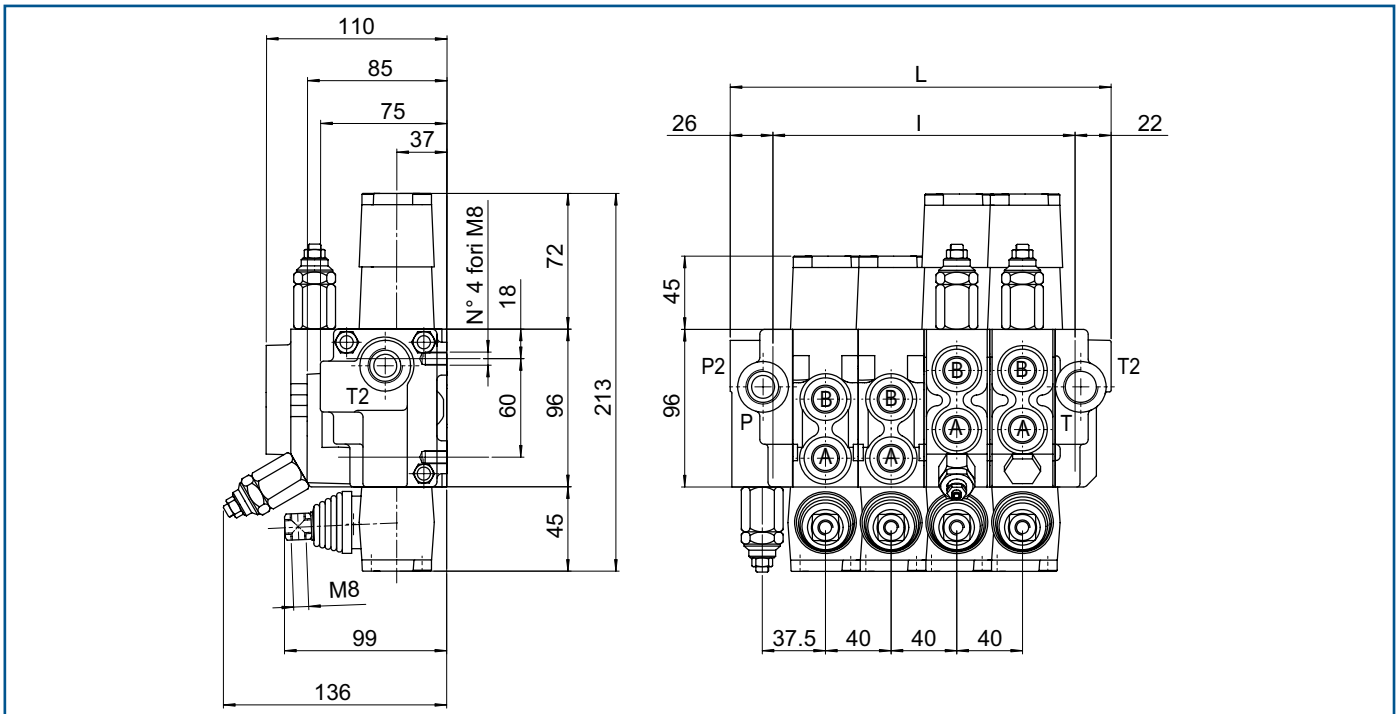
P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



Gli elementi prioritari hanno 5÷8 Bar in più a seconda della portata regolata

Priority elements get 5÷8 Bar (72÷116 PSI) more according to related flow.

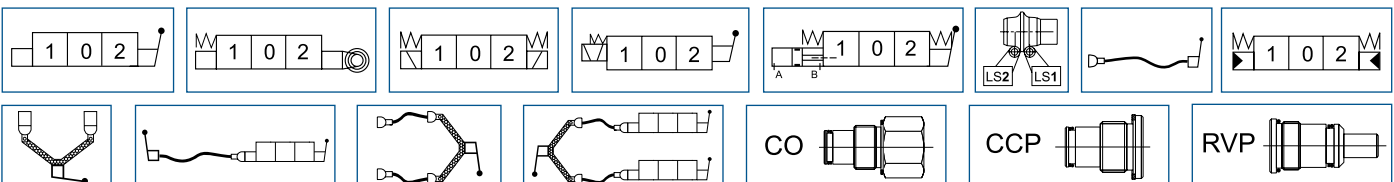


MOD	L	I	Kg
BC40/1	107	60	
BC40/2	147	100	
BC40/3	187	140	
...	...	...	

**FILETTATURA STANDARD - STANDARD THREADS**

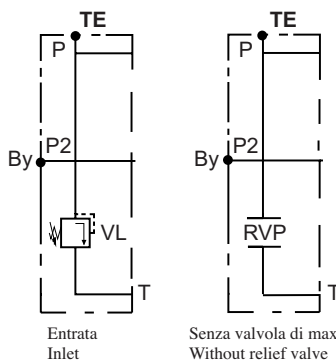
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	3/8"	1/2"	1/2"	1/2"	1/2"
F	3/4" - 16	7/8" - 14	7/8" - 14	7/8" - 14	7/8" - 14

◀ Su richiesta filettature diverse  
Other threads available on request



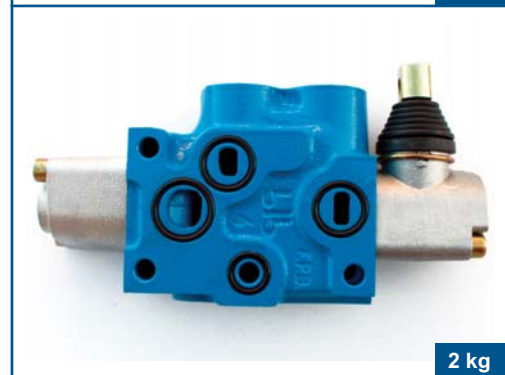


1,2 kg



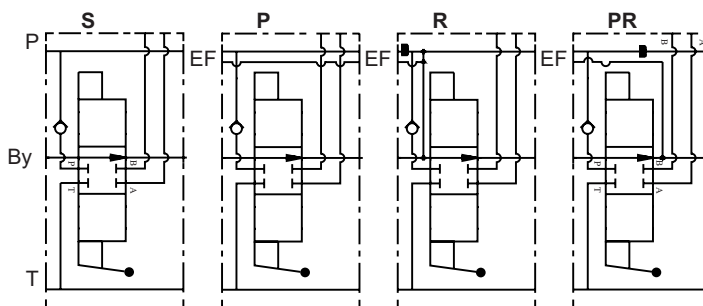
Testata d'entrata

Inlet



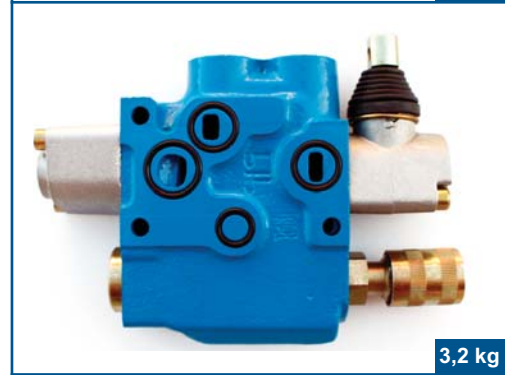
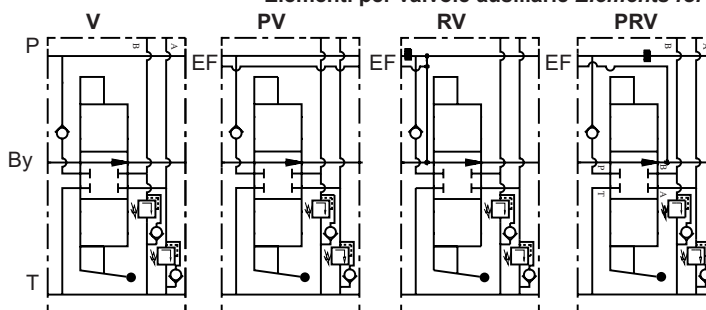
2 kg

Elementi standard *Standard elements*



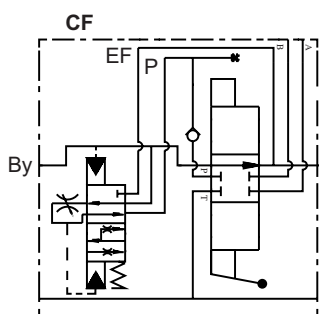
2,8 kg

Elementi per valvole ausiliarie *Elements for auxiliary valves*



3,2 kg

Elemento con regolatore di flusso integrato (brevettato)  
*Element with integrated pressure compensated flow control (patented)*



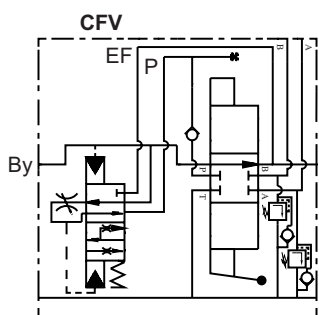
Per utilizzare elementi senza regolazione dopo un elemento CF - CFV, il primo deve essere un elemento R

*To use elements without regulator after a CF - CVF element, the first among them must be a R element*



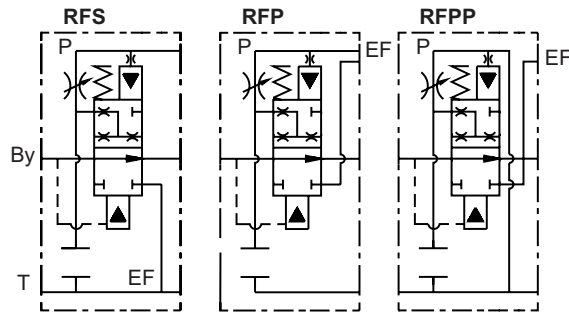
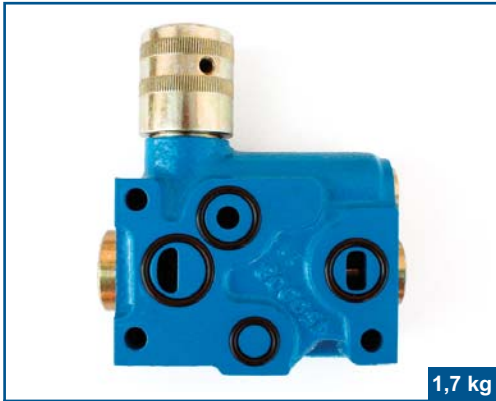
3,5 kg

Elemento con regolatore di flusso integrato per valvole ausiliarie (brevettato)  
*Element with integrated pressure compensated flow control for auxiliary valves (patented)*

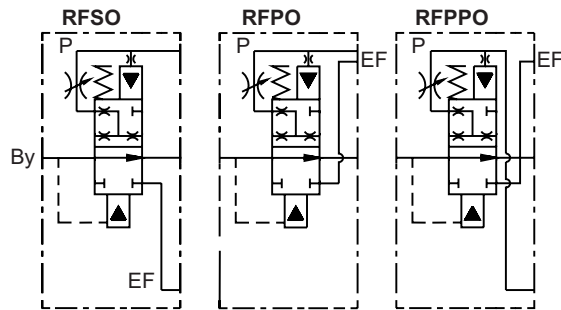
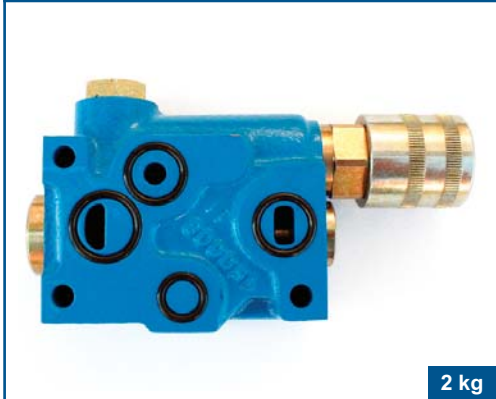


Per utilizzare elementi senza regolazione dopo un elemento CF - CFV, il primo deve essere un elemento R

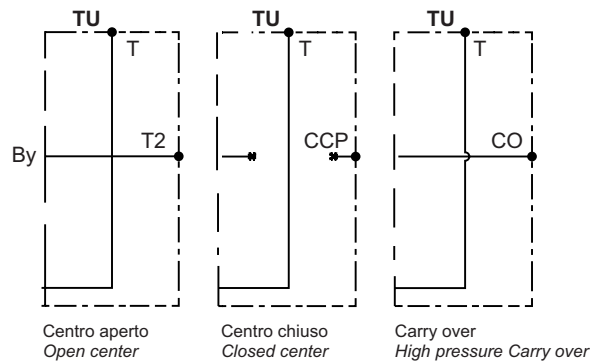
*To use elements without regulator after a CF - CVF element, the first among them must be a R element*



**Elemento divisore di flusso prioritario regolabile - verticale**  
*Priority adjustable pressure compensated flow control element - vertical*



**Elemento divisore di flusso prioritario regolabile - orizzontale**  
*Priority adjustable pressure compensated flow control element - horizontal*

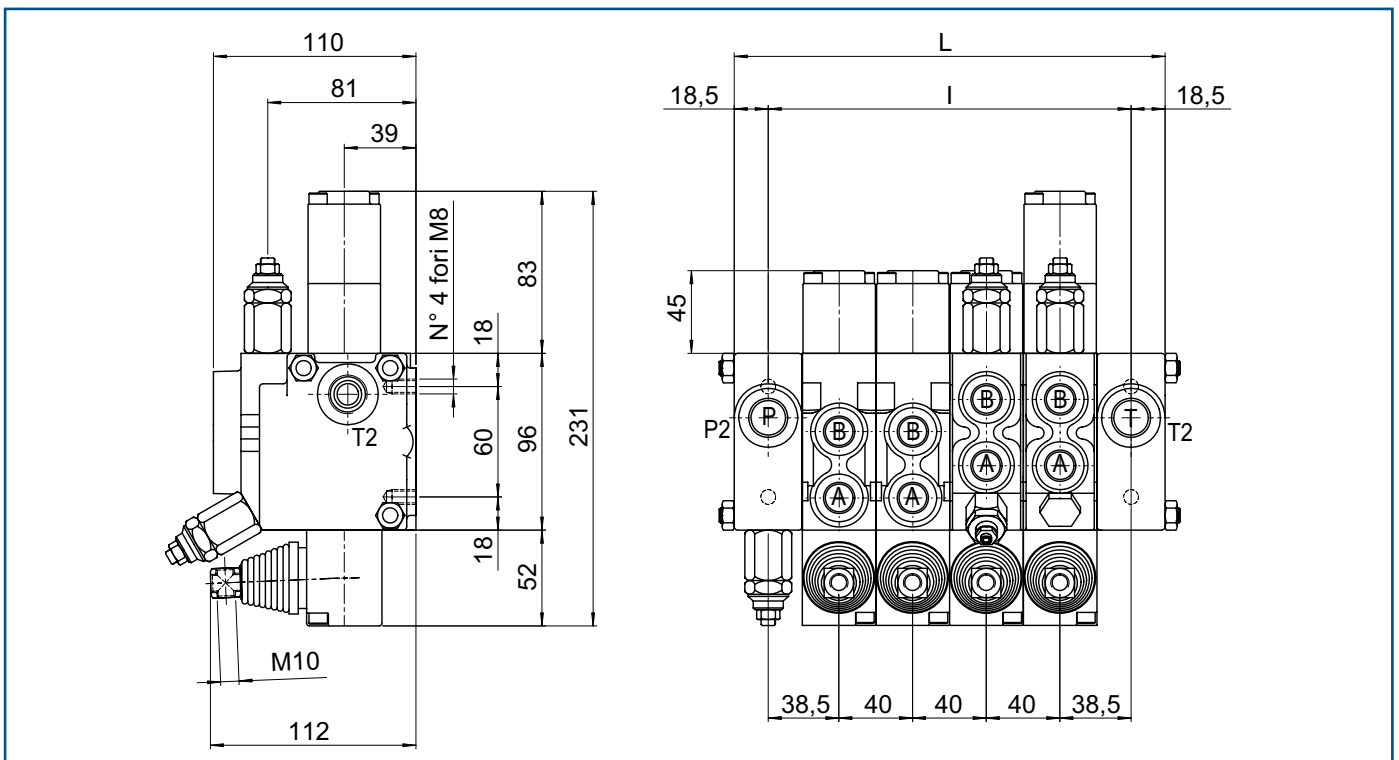
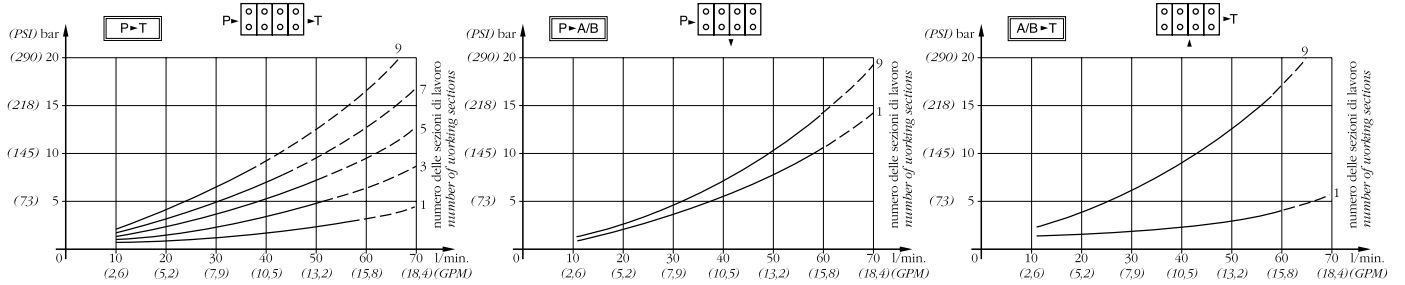
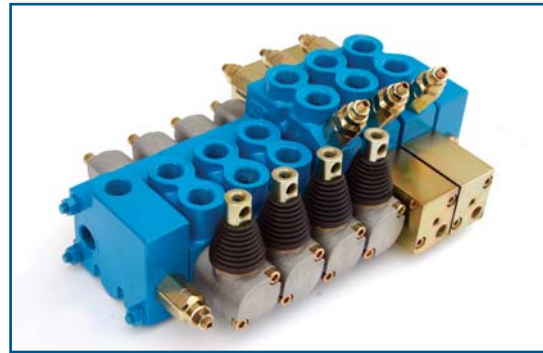


**Testata d'uscita**  
*Outlet*



**Caratteristiche generali / Technical characteristics**

	l/min	GPM
• Portata nominale / Nominal flow	60	16
• Portata limite / Max flow	70	18
• Portata limite EO / Max flow EO	40	10,6
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione nominale EO / Nominal pressure EO	180	2600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Pressione max sugli utilizzi EO / Max pressure on ports EO	250	3600
• Contropressione max allo scarico / Max pressure in tank-line	40	550

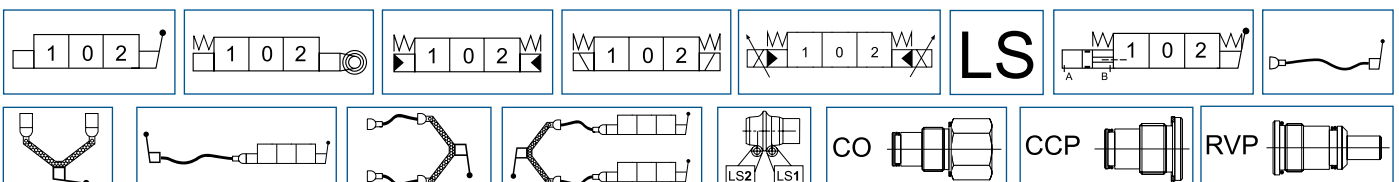


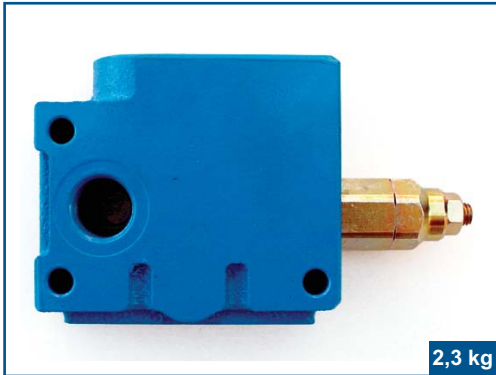
MOD	L	I	Kg
BC60/1	114	77	
BC60/2	154	117	
BC60/3	194	157	
...	...	...	

**FILETTATURA STANDARD - STANDARD THREADS**

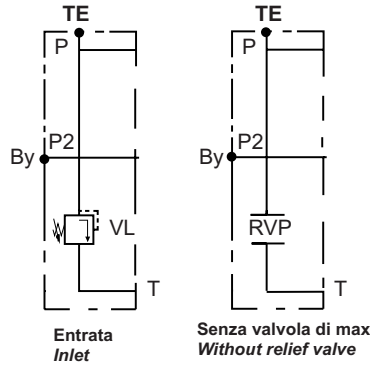
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/2"	1/2"	1/2"	1/2"	1/2"
F	7/8" - 14	7/8" - 14	7/8" - 14	7/8" - 14	7/8" - 14

◀ Su richiesta filettature diverse  
Other threads available on request

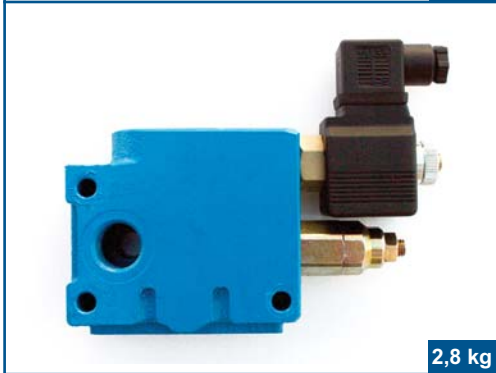




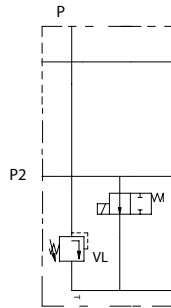
2,3 kg



Testata d'entrata  
*Inlet*



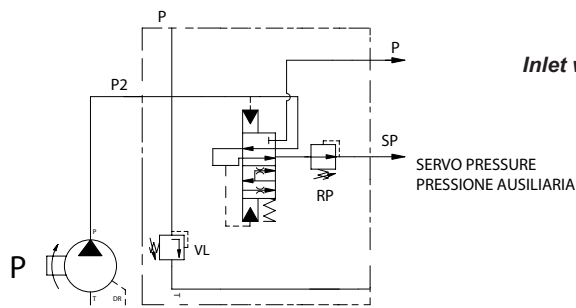
2,8 kg



Testata d'entrata con valvola  
elettrica di messa a scarico  
*Inlet with dump valve*



1,8 kg

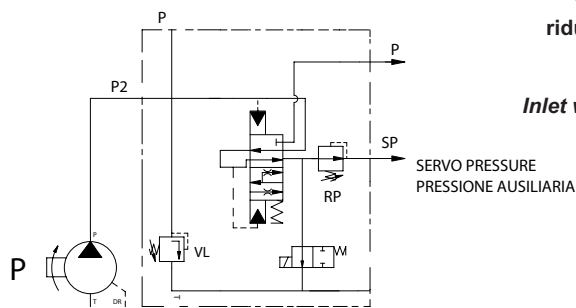


Testata d'entrata con valvola  
riduttrice di pressione  
*Inlet with pressure reducing valve*

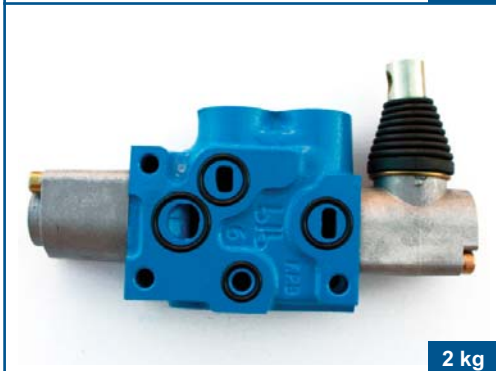
RP = Riduttrice di pressione  
RP = pressure reducing valve



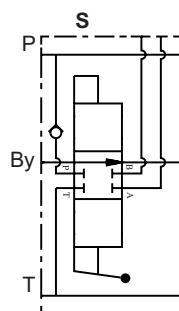
2,3 kg



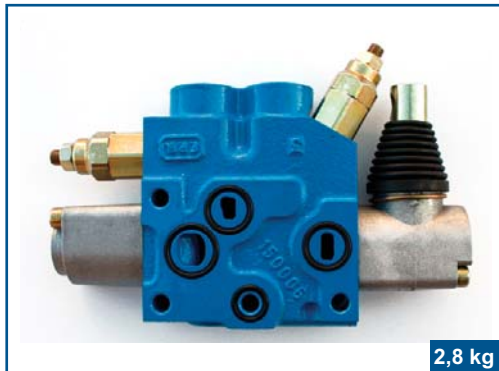
Testata d'entrata con valvola  
riduttrice di pressione e valvola  
elettrica di messa a scarico  
*Inlet with pressure reducing valve  
and dump valve*



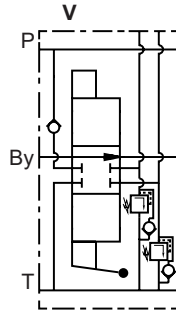
2 kg



Elemento standard  
*Standard element*



2,8 kg



Elemento per valvole ausiliarie

Element for auxiliary valves

L = Limitatrice di pressione

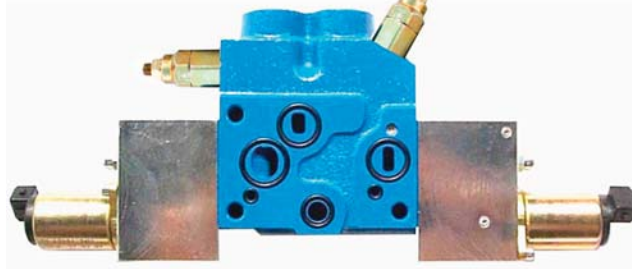
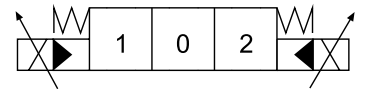
L = Relief valve



4 kg

Elemento HEO elettro-idraulico proporzionale

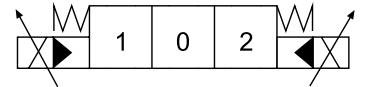
Proportional electro-hydraulic element



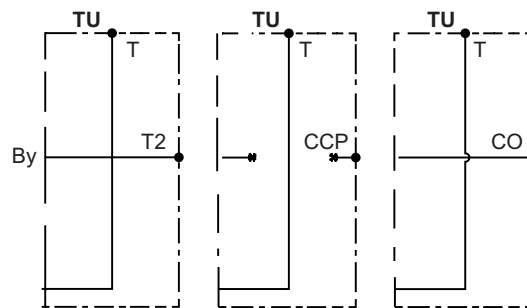
5 kg

Elemento HEO elettro-idraulico proporzionale con valvole ausiliarie

Proportional electro-hydraulic element with ports relief valves



2,1 kg



Centro aperto  
Open center

Centro chiuso  
Closed center

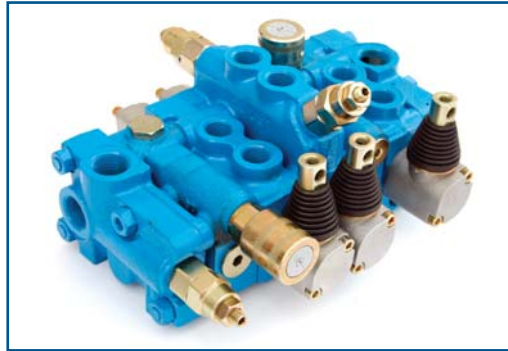
Carry over  
High pressure Carry over

Testata d'uscita

Outlet

**Caratteristiche generali / Technical characteristics**

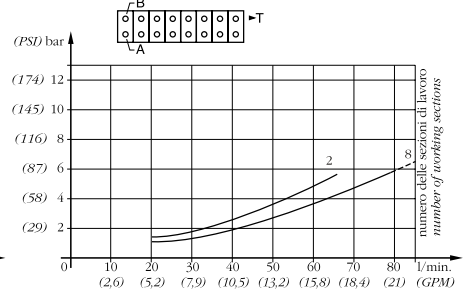
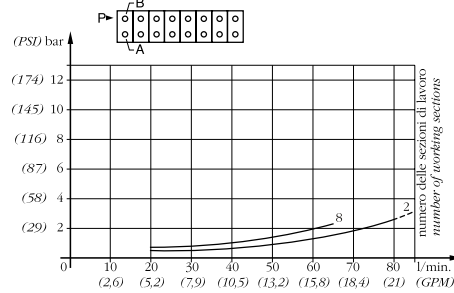
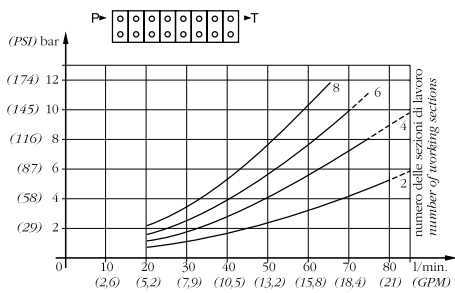
	l/min	GPM
• Portata nominale / Nominal flow	65	17
• Portata limite / Max flow	90	94
• Portata limite EO / Max flow EO	65	17
	bar	PSI
• Pressione nominale / Nominal pressure	250	3600
• Pressione nominale EO / Nominal pressure EO	180	2600
• Pressione max sugli utilizzi / Max pressure on ports	320	4700
• Pressione max sugli utilizzi EO / Max pressure on ports EO	250	3600
• Contropressione max allo scarico / Max pressure in tank-line	40	550



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

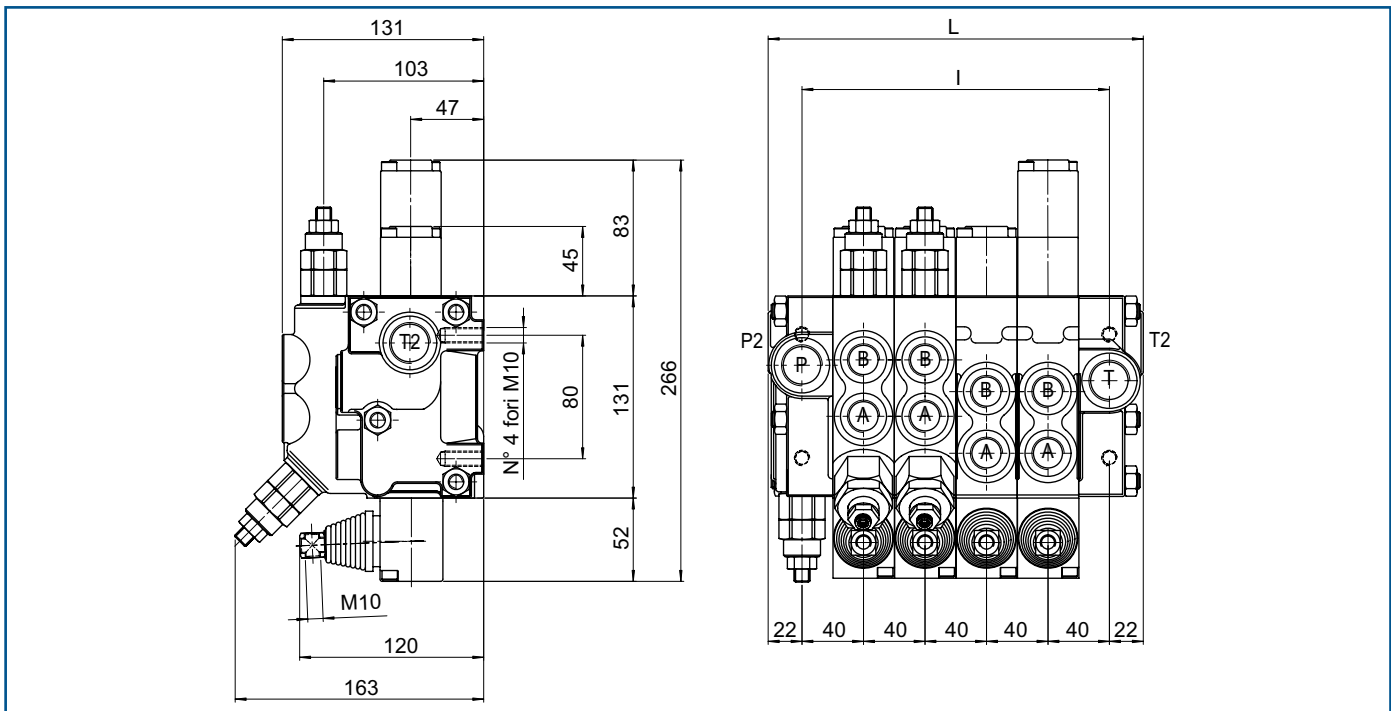
P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E



Gli elementi prioritari hanno 5÷8 Bar in più a seconda della portata regolata

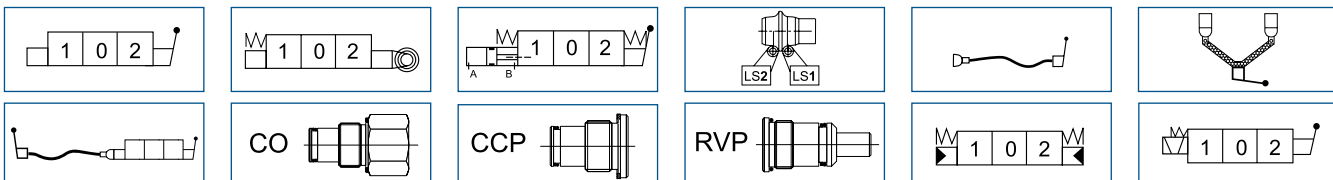
Priority elements get 5÷8 Bar (72÷116 PSI) more according to related flow.

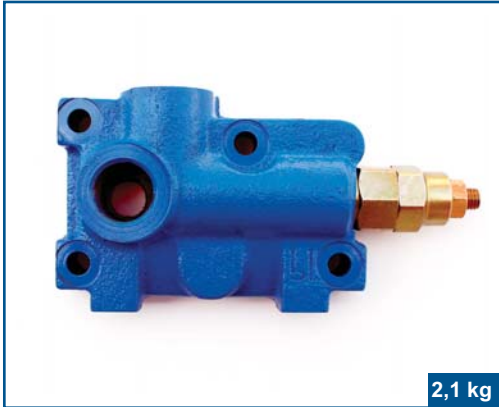


MOD	L	I	Kg
BC70/1	126	82	
BC70/2	168	124	
BC70/3	210	166	
...	...	...	

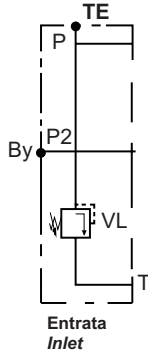
FILETTATURA STANDARD - STANDARD THREADS					
COD	A-B	P	T	P <sub>2</sub>	T <sub>2</sub>
G	1/2"	3/4"	3/4"	3/4"	3/4"
F	7/8" - 14	1.1/16" - 12	1.1/16" - 12	1.1/16" - 12	1.1/16" - 12

◀ Su richiesta filettature diverse  
Other threads available on request

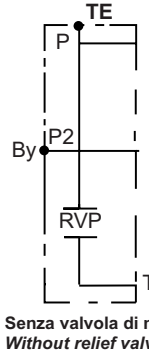




2,1 kg



Entrata  
Inlet

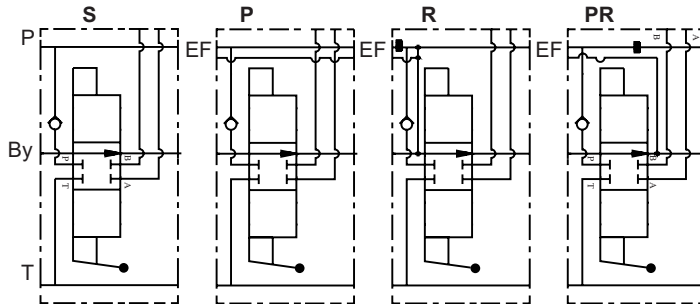


Senza valvola di max  
Without relief valve

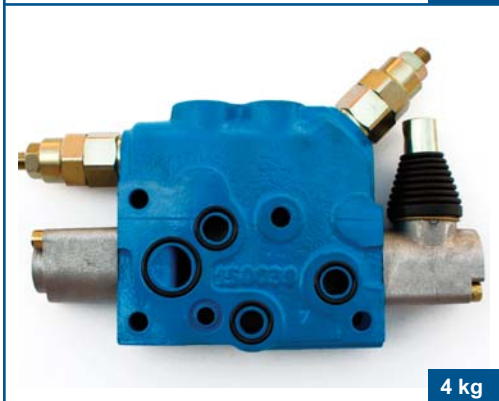
Testata d'entrata  
Inlet



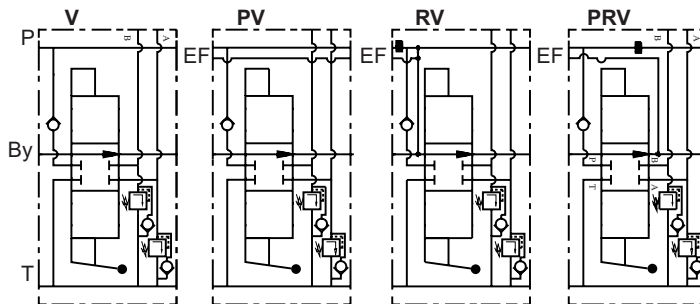
3 kg



Elemento standard Standard element



4 kg

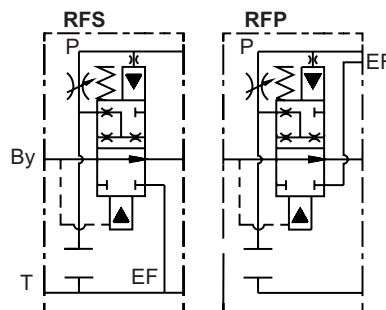


Elemento per valvole ausiliarie Element for auxiliary valves

- L = Limitatrice di pressione  
L = Relief valve
- C = Anticavitazione  
C = Anti cavitation
- LC = Limitatrice anticavitazione  
LC = Combined



2,4 kg

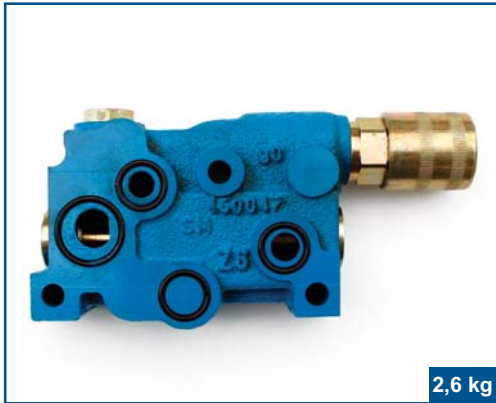


Elemento divisore di flusso prioritario  
regolabile - verticale

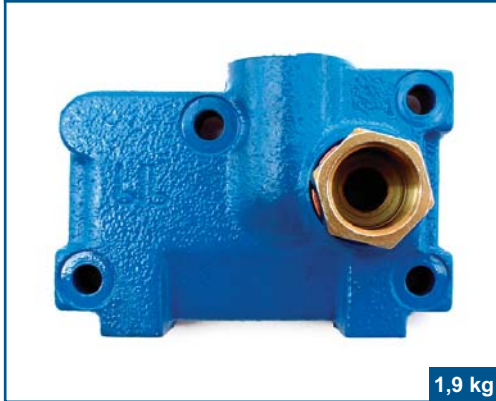
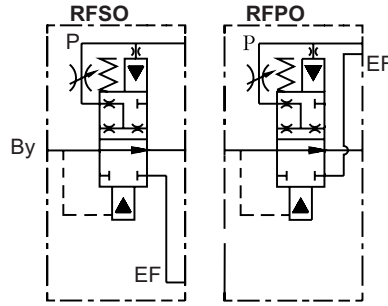
Priority adjustable pressure compensated  
flow control element - vertical

Elemento divisore di flusso prioritario  
regolabile - orizzontale

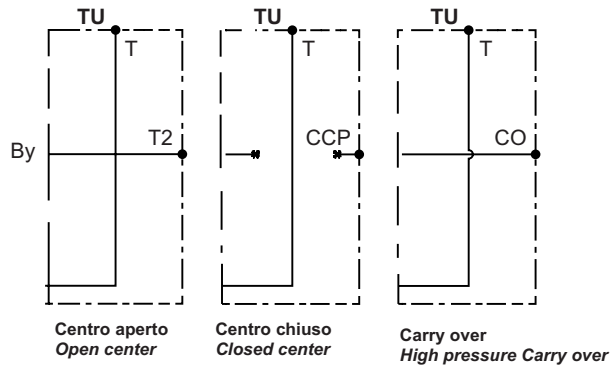
*Priority adjustable pressure compensated  
flow control element - horizontal*



2,6 kg



1,9 kg



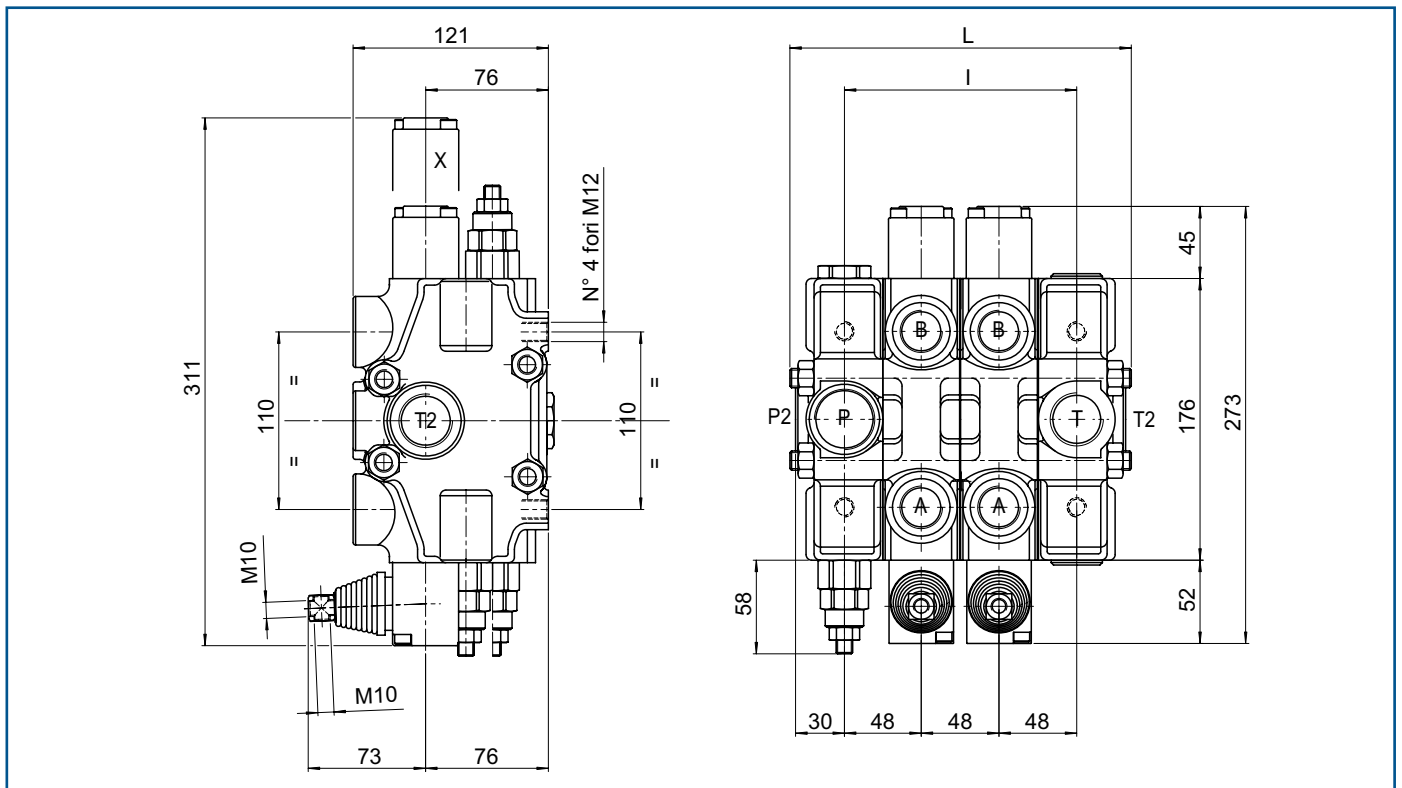
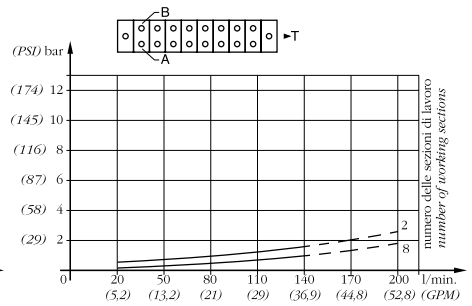
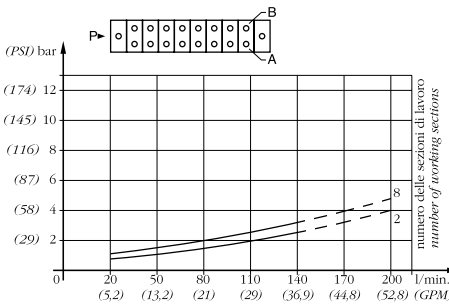
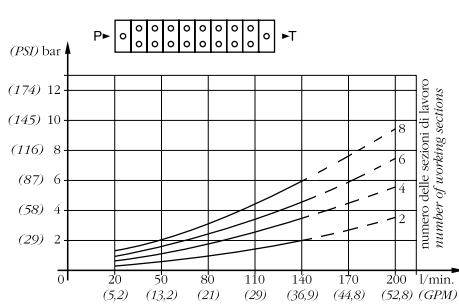
Caratteristiche generali / Technical characteristics		
	l/min	GPM
• Portata nominale / Nominal flow	140	37
• Portata limite / Max flow	180	48
	bar	PSI
• Pressione nominale / Nominal pressure	220	3200
• Pressione max sugli utilizzi / Max pressure on ports	300	4400
• Contropressione max allo scarico / Max pressure in tank-line	40	550



P-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

P-A/B - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

A/B-T - TEMPERATURA OLIO 50°C - VISCOSITÀ 3,5°E

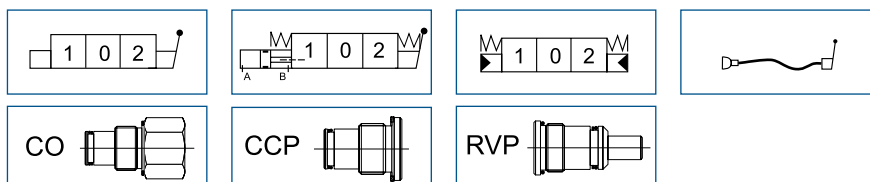


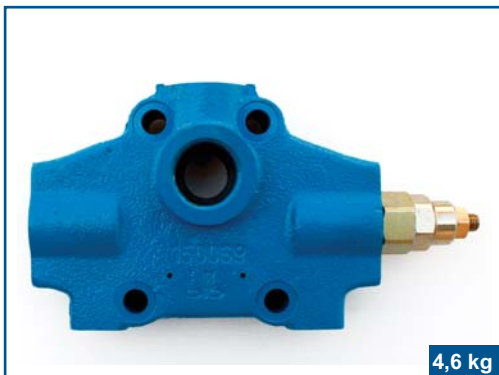
MOD	L	I	Kg
BC150/1	165	96	
BC150/2	213	144	
BC150/3	261	192	
...	...	...	

**FILETTATURA STANDARD - STANDARD THREADS**

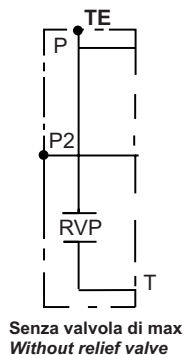
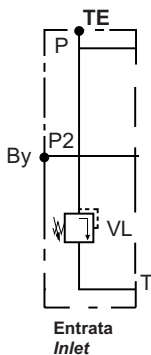
COD	A-B	P	T	P2	T2
G	3/4"	1"	1"	1"	1"
F	1.1/16" - 12	1.5/16" - 12	1.5/16" - 12	1.5/16" - 12	1.5/16" - 12

◀ Su richiesta filettature diverse  
Other threads available on request





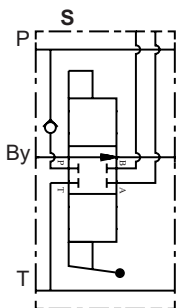
4,6 kg



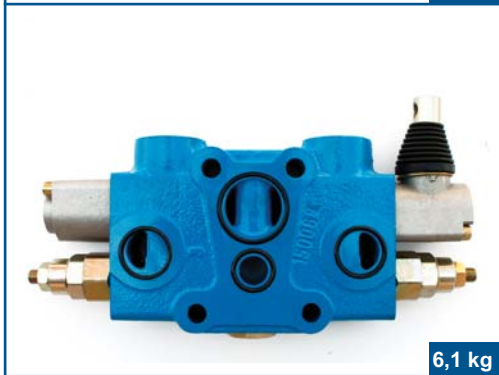
Testata d'entrata  
Inlet



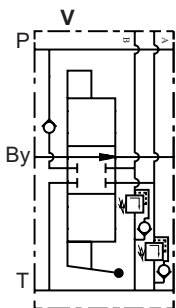
5,5 kg



Elemento standard  
Standard element



6,1 kg

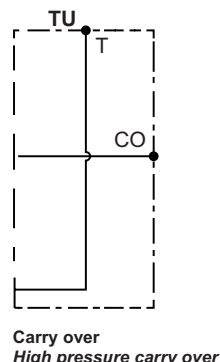
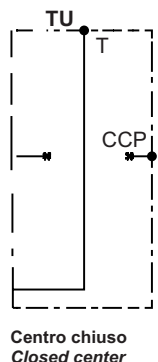
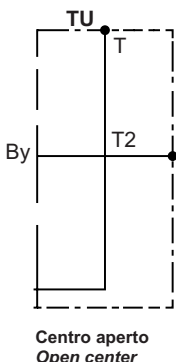


Elemento per valvole ausiliarie  
Element for auxiliary valves

- L = Limitatrice di pressione  
L = Relief valve
- C = Anticavitazione  
C = Anti cavitation
- LC = Limitatrice anticavitazione  
LC = Combined



4,3 kg



Testata d'uscita  
Outlet



	Azionamento manuale Manual operator						
	MO	BM10	BB20	BM30	BC60		BM150
			BM20	BM40	BM70		BC150
			BC20	BC40	BC70		BM180
			BM35	BM50	BM100		
			BF200	BF400	BF700		

	Azionamento manuale con camma Manual operator with cam						
	MC		BB20	BM30	BC60		BM150
			BM20	BM40	BM70		BC150
			BC20	BC40	BC70		BM180
			BM35	BM50	BM100		
			BF200	BF400	BF700		

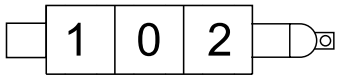

	Leva di sicurezza Safety lever						
	MX		BB20*	BM30*	BC60		
			BM20*	BM40*	BM70		
			BC20*	BC40*	BC70		
			BM35*	BM50*	BM100		
			BF200*	BF400*	BF700		

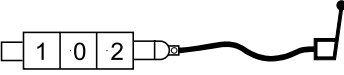
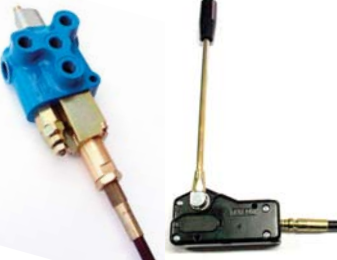
\* Disponibile anche nella versione orizzontale - Available also in horizontal version

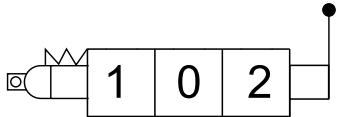

	Azionamento a camma Cam operator						
	DO		BB20	BM30	BC60		BM150
			BM20	BM40	BM70		BC150
			BC20	BC40	BC70		BM180
			BM35	BM50	BM100		
			BF200	BF400	BF700		

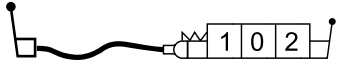

	Manipolatore Joystick						
	JS		BB20		BC60		
			BM20	BM40	BM70		BC150
			BC20	BC40	BC70		
			BM35	BM50	BM100		
			BF200	BF400	BF700		

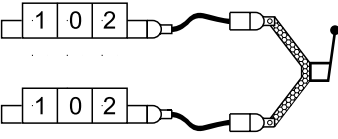

	Doppio comando Double control						
	1DC		BB20	BM30	BC60		BM150
			BM20	BM40	BM70		BC150
			BC20	BC40	BC70		BM180
			BM35	BM50	BM100		
			BF200	BF400	BF700		

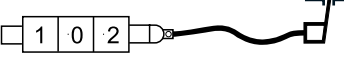

	Predisposizione attacco cavo <i>Cable connection</i>						
	FL		BB20	BM30	BC60		BM150
			BM20	BM40	BM70		BC150
			BC20	BC40	BC70		BM180
			BM35	BM50	BM100		
			BF200	BF400	BF700		

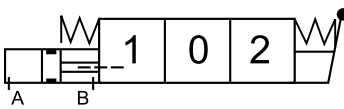

	Comando flessibile a distanza <i>Flexible remote control</i>							
	FO	Leva <i>Lever</i>		BB20	BM30		BC60	BM150
	CA	Cavo <i>Cable</i>		BM20	BM40		BM70	BC150
	FL	Adattatore <i>Adapter</i>		BC20	BC40		BC70	BM180
				BM35	BM50		BM100	
			BF200	BF400	BF700			

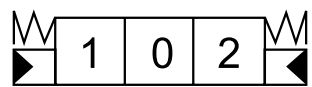
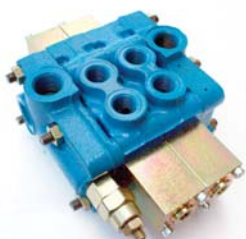
	Predisposizione per doppio comando flessibile a distanza <i>Cable connection pool control side</i>						
	1F		BB20	BM30	BC60		BM150
			BM20	BM40	BM70		BC150
			BC20	BC40	BC70		BM180
			BM35	BM50	BM100		
		BF200	BF400	BF700			

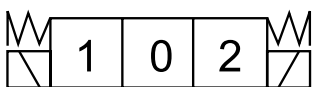

	Doppio comando flessibile a distanza <i>Double flexible remote control</i>							
	MO	Manuale <i>Manual</i>		BB20	BM30		BC60	BM150
	..1F	Adattatore <i>Adapter</i>		BM20	BM40		BM70	BC150
	CA	Cavo <i>Cable</i>		BC20	BC40		BC70	BM180
	FO	Leva <i>Lever</i>		BM35	BM50		BM100	
			BF200	BF400	BF700			

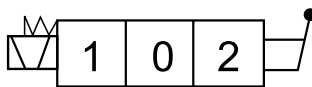
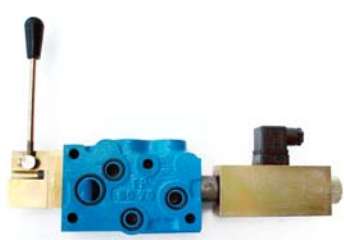
	Manipolatore per comando flessibile a distanza <i>Joystick for flexible remote control</i>							
	FJ	Joystick		BB20				
	CA	Cavo <i>Cable</i>		BM20	BM40			
	FL	Adattatore <i>Adapter</i>		BC20	BC40			
				BM35	BM50			
			BF200	BF400				

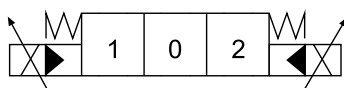

	Leva anti inversione per comando flessibile a distanza <i>Safety lever for flexible remote control</i>							
	FO	Leva <i>Lever</i>		BB20	BM30		BC60	BM150
	CA	Cavo <i>Cable</i>		BM20	BM40		BM70	BC150
	FL	Adattatore <i>Adapter</i>		BC20	BC40		BC70	BM180
				BM35	BM50		BM100	
			BF200	BF400	BF700			

	Azionamento pneumatico <i>Pneumatic operator</i>						
	1P			BM30	BC60		BM150
				BM40	BM70		BC150
				BC40	BC70		BM180
				BM50	BM100		
				BF400	BF700		

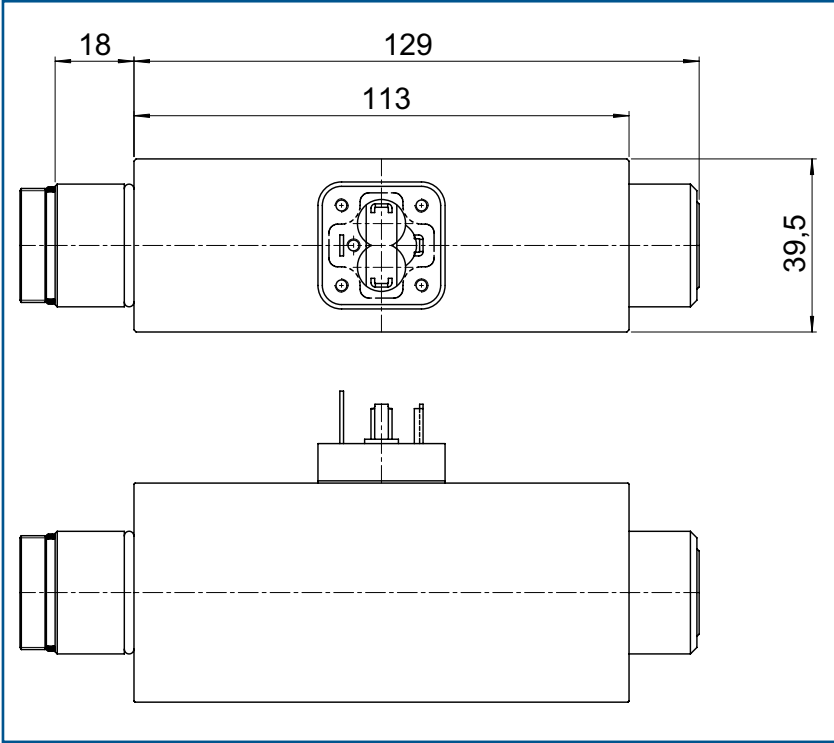
	Azionamento idraulico <i>Hydraulic operator</i>						
	HO			BM30	BC60		BM150
				BM40	BM70		BC150
				BC40	BC70		BM180
				BM50	BM100		
				BF400	BF700		

	Azionamento elettrico <i>Electric operator</i>						
	EO*			BM30	BC60		
					BM70		
			BC20	BC40	BC70		
					BF700		

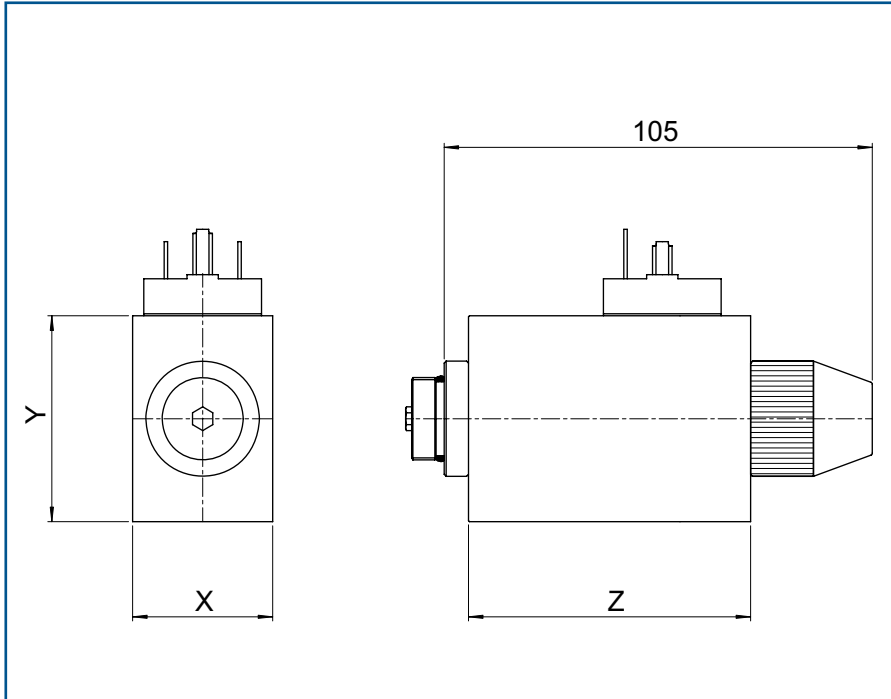
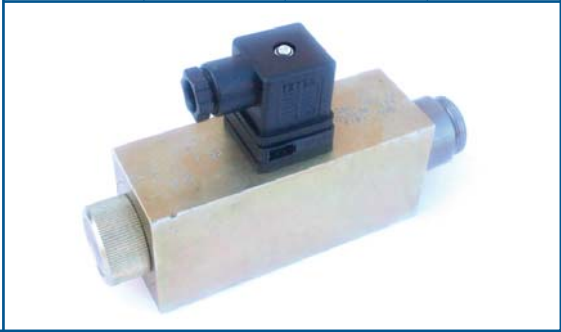
	Azionamento elettrico e manuale <i>Electric and manual operator</i>						
	MO...EO				BM70		
				BC40	BC70		

	Azionamento elettroidraulico proporzionale <i>Proportional electric hydraulic</i>						
	HEO				BC60		
					BC70		

**OPTIONAL**



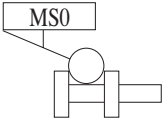
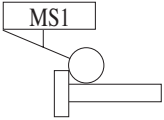
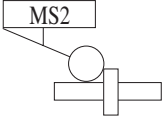
Doppio magnete Magnetic control push-pull			
	12 VDC	24 VDC	Watt
<b>BC40</b>	•	•	<b>48</b>
<b>BM70</b>	•	•	<b>48</b>
<b>BC70</b>	•	•	<b>48</b>

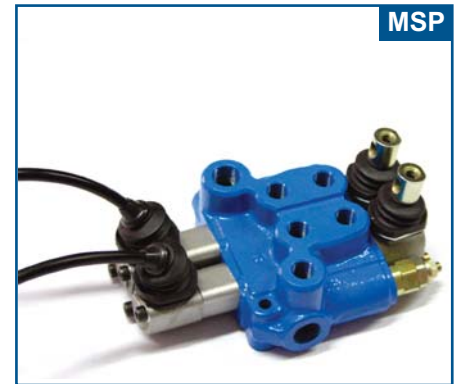


Magnete Magnetic control						
	12VDC	24VDC	X	Y	Z	Watt
<b>BC20</b>	•	•	34,5	50	69,5	48
<b>BM30</b>	•	•	34,5	50	69,5	48
<b>BC40</b>	•	•	39,5	50	69,5	48
<b>BM70</b>	•	•	39,5	50	69,5	48
<b>BC70</b>	•	•	39,5	50	69,5	48



Posizionatori Spool control	Circuito Circuit
<b>1E</b>	Due bobine per la mandata sugli utilizzi A e B <i>Two coils to deliver on ports A and B</i>
<b>1EA</b>	Una bobina per la mandata sull'utilizzo A <i>One coil to deliver on A port</i>
<b>1EB</b>	Una bobina per la mandata sull'utilizzo B <i>One coil to deliver on B port</i>
<b>MO1E</b>	Leva per comando manuale più doppia bobina per la mandata sugli utilizzi A e B <i>Lever for manual control and double coil to deliver on A and B</i>

		Microswitch					
	<b>0</b>	<b>MS</b>	<b>BM10</b>	<b>BB20</b>	<b>BM30</b>	<b>BM150</b>	
	<b>1</b>			<b>BM20</b>	<b>BM40</b>	<b>BM70</b>	<b>BC150</b>
	<b>2</b>			<b>BC20</b>	<b>BC40</b>	<b>BC70</b>	<b>BM180</b>
				<b>BM35</b>	<b>BM50</b>	<b>BM100</b>	
				<b>BF200</b>	<b>BF400</b>	<b>BF700</b>	



Disponibile solo per BM20, BM35 e BC20  
Available only for BM20, BM35 and BC20

