

DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES



F

DISTRIBUTORI COMPONENTI
SECTIONAL DIRECTIONAL CONTROL VALVES



G

**DISTRIBUTORI A COMANDO ELETTRICO
DIRETTO CON FIANCATA PROPORZIONALE**
*DIRECTIONAL CONTROL VALVE WITH DIRECT
ELECTRICAL CONTROL AND
PROPORTIONAL SECTION*



H

DEVIATORI DI FLUSSO
FLOW DIVERTERS



I

VALVOLE AUSILIARIE
AUXILIARIES VALVES



L

Quality System in accordance UNI EN ISO 9001 cert. ICIM N° 0292

TCV IE P01W01 - LM

I dati del seguente catalogo non sono impegnativi, Hydreco si riserva il diritto di apportare le modifiche che riterrà necessarie al miglioramento del prodotto, senza impegno di aggiornamento del presente catalogo.

Data and specifications are not binding, Hydreco reserves the right to modify all the data deemed necessary for the improvement of products without being involved in revising the present catalogue.

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES


Pag.
Page

CARATTERISTICHE FEATURES	F-2
CARATTERISTICHE TECNICHE TECHNICAL CHARACTERISTICS	F-3
ESEMPIO DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLE	F-5
Q35	F-6
Q15	F-8
Q25	F-10
Q45	F-12
Q65	F-14
Q75	F-16
Q95	F-18

CARATTERISTICHE

- Elevate prestazioni tecniche che consentono una vasta applicazione.
- Corpo in ghisa speciale ad alta resistenza per essere adatto alle alte pressioni di lavoro.
- Cursori nichelati ad alto scorrimento che permettono di poter lavorare ad alte pressioni con lunga durata di vita.
- Il circuito standard in parallelo offre manovre simultanee e, grazie a ricoprimenti negativi e metering dedicati, si ottengono movimenti proporzionali agli utilizzi.
- Trafilamenti di valore ridottissimo.
- Intercambiabilità dei cursori, anche con quelli dei distributori componibili aventi schema "parallelo" o "singolo".
- Possibilità di inversione del lato di comando ruotando il cursore di 180°, consentendo così unificazione, versatilità, bassi valori di particolari a magazzino.
- Il tipo di libera circolazione a "Y" permette alte portate con basse perdite di carico, in rapporto alle ridotte dimensioni del distributore.
- Fa eccezione Q35 che ha ricoprimento positivo e una gamma di cursori apposita, sempre intercambiabili tra loro.

CHARACTERISTICS

- *High technical performances granting larger application range.*
- *Special high resistance cast-iron body, suitable for high working pressures.*
- *Nickel-plated offering granting long working life under high pressure conditions (see attached scheme).*
- *Standard circuit in parallel grants simultaneous operations, and due to negative overlaps and dedicate metering, there is proportional movement at the working ports.*
- *Minimal internal leakages.*
- *Interchangeability of the spools also with the ones of the sectional valves with "parallel" or "single" scheme*
- *Possibility to reverse the control side, turning the spool of 180° permits unification, versatility and low value of some parts in stock.*
- *Free movement version "Y shape" allows high oil flow with low pressure drops, in relation with the small dimensions of the control valves.*
- *Above features not valid for Q35 having positive overlap. The Q35 spools are interchangeable.*



**AVVERTENZA PER L'INSTALLAZIONE
DEI DISTRIBUTORI**

- I tre piedini dei distributori devono sempre appoggiare su una superficie perfettamente piana
- Non utilizzare raccordi conici su filetti cilindrici.
- Per pulire il distributore, prima della verniciatura, non utilizzare diluenti/solventi o qualsiasi prodotto che possa intaccare le parti in gomma.

**NOTES FOR DIRECTIONAL CONTROL
VALVES ASSEMBLY**

- *The three feet of the valve must always and perfectly rest on a 180° degree flat surface.*
- *No conical nipples with JIC thread must be used.*
- *Before painting the control valve, do not use diluents or any products that could damage rubber parts.*

CARATTERISTICHE TECNICHE

TECHNICAL CHARACTERISTICS

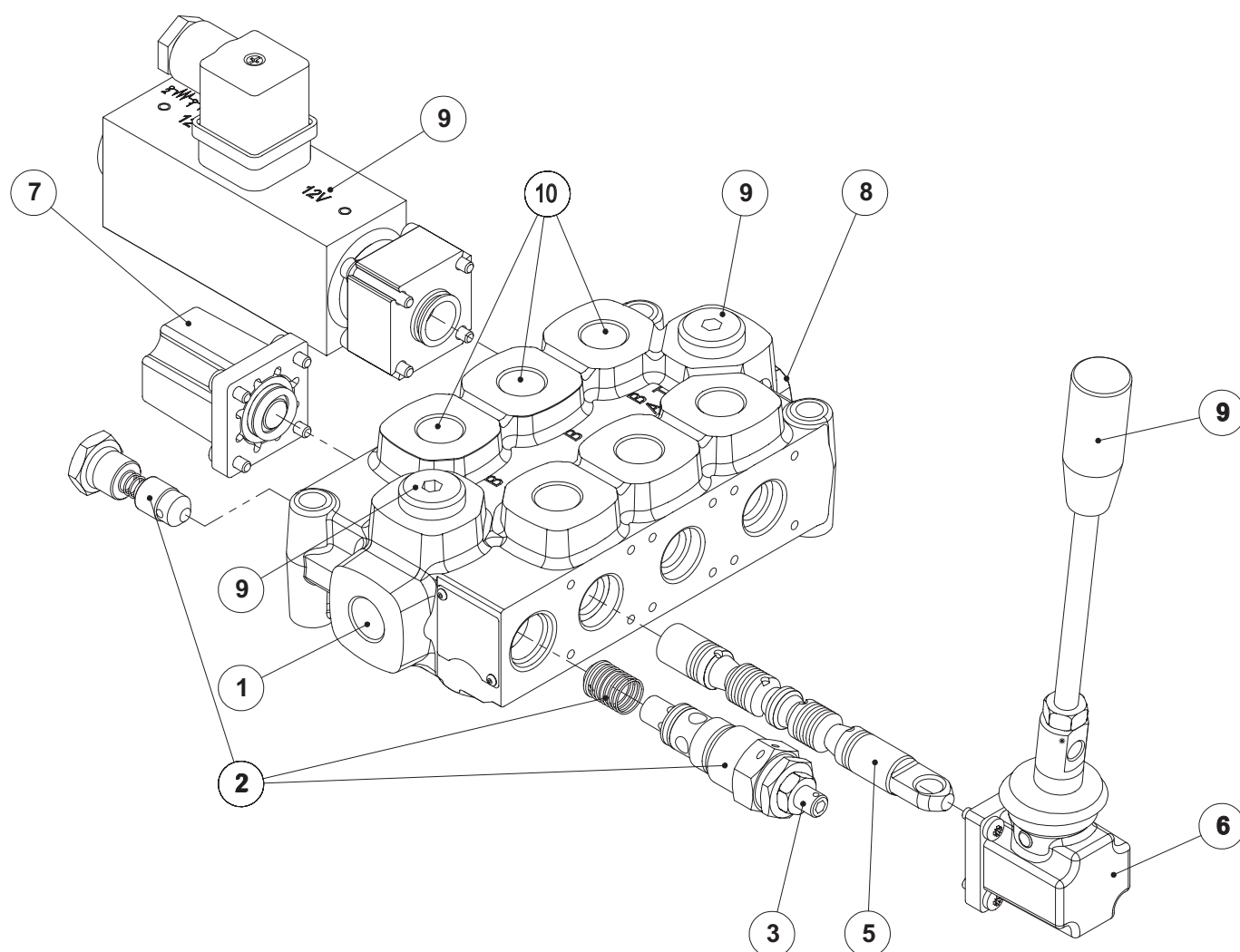
	Q35	Q15	Q25	Q45	Q65	Q75	Q95
Numero massimo di sezioni di lavoro <i>Working sections maximum</i>	1	1	8	1	6	6	6
Limiti temperatura olio <i>Oil temperature range</i>	-30 ÷ 80 °C						
Temperatura olio consigliata <i>Recommended oil temperature</i>	30° ÷ 60 °C						
Filtraggio consigliato <i>Recommended filtration</i>	26/23µm ISO DIS 4406						
Fluido <i>Hdraulic fluid</i>	Olio minerale <i>Mineral oil</i>						
Viscosità <i>Viscosity</i>	10 ÷ 400 mm²/s						

Massa [Kg] <i>Weight (lbs)</i>	1 Sezione di lavoro <i>Working section</i>	1.85 (4.1)	1.20 (2.6)	3.00 (6.6)	3.40 (7.5)	5.70 (12.6)	5.70 (12.6)
	2 Sezioni di lavoro <i>Working sections</i>	—	—	4.50 (9.9)	—	7.60 (16.8)	7.60 (16.8)
	3 Sezioni di lavoro <i>Working sections</i>	—	—	5.60 (12.3)	—	10.40 (22.9)	10.40 (22.9)
	4 Sezioni di lavoro <i>Working sections</i>	—	—	7.30 (16.1)	—	12.40 (27.3)	—
	5 Sezioni di lavoro <i>Working sections</i>	—	—	8.90 (19.6)	—	14.50 (32.0)	14.8 (32.6)
	6 Sezioni di lavoro <i>Working sections</i>	—	—	10.1 (22.3)	—	16.60 (36.6)	18.3 (40.4)
	7 Sezioni di lavoro <i>Working sections</i>	—	—	11.0 (24.3)	—	—	—
	8 Sezioni di lavoro <i>Working sections</i>	—	—	13.6 (30.0)	—	—	—

Pressioni massime di lavoro [bar] <i>Max working pressure (PSI)</i>	1 o 2 sezioni di lavoro <i>from 1 up to 2 sections</i>	300 (4350)	250 (3625)	350 (5075)	350 (5075)	350 (5075)	350 (5075)
	3 sezioni <i>3 sections</i>	—	—	320 (4640)	—	300 (4350)	300 (4350)
	da 4 a 8 sezioni <i>from 4 up to 8 sections</i>	—	—	300 (4350)	—	270 (3915)	270 (3915)
Pressione massima sullo scarico [bar] <i>Max back pressure (PSI)</i>		25 (363)					
A richiesta, solo su monoblocco 1 o 2 sezioni, contropressione sullo scarico 180 bar (indicare la lettera "S" al termine del codice) On request, 1 or 2 section monoblock valve only, max back pressure allowable is 2610 PSI (indicate the letter "S" at the end of code)		•	—	•	•	—	—

ESEMPIO DI ORDINAZIONE IN CODICE
ORDERING CODE EXAMPLE

Tipo Type	Fiancata d'ingresso Inlet section		Sezione di lavoro Working section				Fiancata di scarico Outlet section	Note aggiuntive Additional notes	
Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9



ESEMPIO DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLE

Tipo

1 - Tipo

Q15, Q35, Q25, Q45, Q65, Q75, Q95

Indica il tipo di distributore; le caratteristiche dimensionali sono riportate da pag. F6 a pag. F19

Type

1 - Type

Q15, Q35, Q25, Q45, Q65, Q75, Q95

Indicates model valve, characteristics and dimensions found on pages F6 to page F19.

Fiancata d'ingresso

2 - Tipo fiancata d'ingresso (pag. F-20)

3 - Tipo molla e taratura valvola (pag. F-20)

Dove è presente la valvola VLP (fiancate F1S e F7S), deve essere specificato il tipo di molla (**B, N o R**) e la sua pressione di taratura; se quest'ultima viene omessa verrà montata la molla N tarata a **150 bar**.

Inlet section

2 - Inlet section type (page F-20)

3 - Type of spring and valve setting (page F-20)

*If valve VLP is installed (inlet section F1S and F7S), specify the type of spring (**B, N or R**) and its pressure setting. If omitted, spring N with a **150 bar** setting will be installed.*

Sezione di lavoro

I campi da 4 a 6 sono da ripetere per ogni sezione. Nel caso in cui due sezioni contigue siano identiche, è sufficiente descriverne solo una anteponendo **2x** al campo 4.

N.B. Il numero massimo complessivo di sezioni di lavoro sono indicate a pag. F3.

4 - Tipo cursore (pag. F-21)

5 - Tipo di comando (pag. F-25)

6 - Tipo posizionatore (pag. F-31)

Working section

*Fields 4 to 6 must be repeated for each section. If two adjacent sections are identical, just describe one and put **2x** before field 4.*

NOTE. The maximum overall number of working sections is indicated on page F3.

4 - Spool type (page F-21)

5 - Control type (page F-25)

6 - Positioner type (page F-31)

Fiancata di scarico

7 - Tipo fiancata di scarico (pag. F-58)

Outlet section

7 - Outlet section type (page F-58)

Note aggiuntive

8 - Note aggiuntive (pag. F-59)

9 - Numero elementi (pag. F-59)

Specificare il numero delle sezioni di lavoro (es. 2E) previste.

Additional notes

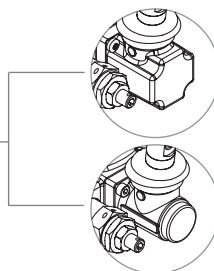
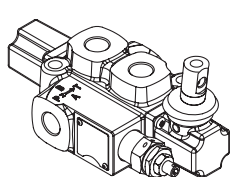
8 - Additional notes (page F-59)

9 - Number of sections (page F-59)

Specify the number of working sections needed (e.g. 2E).

Q35

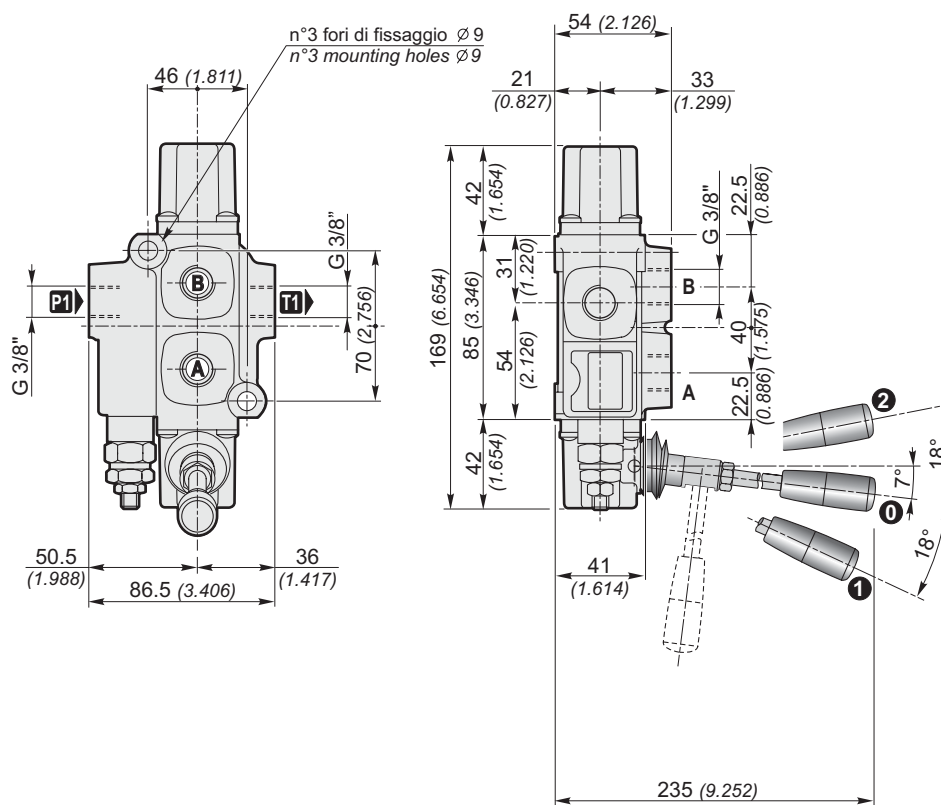
**DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES**



(Standard)
Comando e posizionario in plastica
Control and positioner plastic

S
Comando e posizionario in Alluminio
Control and positioner Aluminium

Q35 — F7S R250 — 103 A1 M1 — F3D — **S** — 1E
1 2 3 4 5 6 7 8 9



Q35 — F7S R250 — 103 A1 M1 — F3D — 12V — 2E
1 2 3 4 5 6 7 8 9

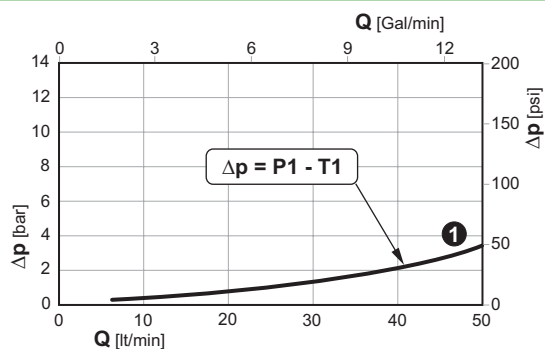
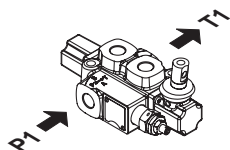
Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE	BSP G 1/2"
P1	G 3/8"	3/4" - 16 UNF (SAE8)	BSP G 1/2"
A-B	G 3/8"	3/4" - 16 UNF (SAE8)	BSP G 1/2"
T1	G 3/8"	3/4" - 16 UNF (SAE8)	BSP G 1/2"

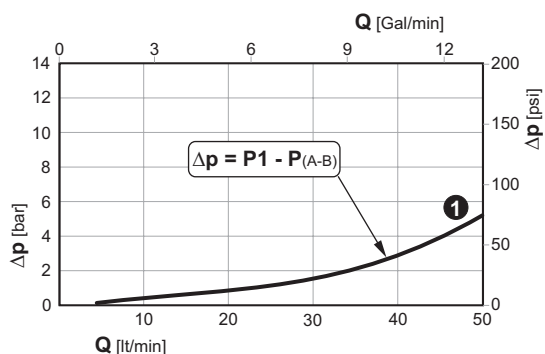
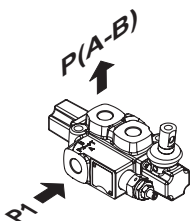
Q35

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

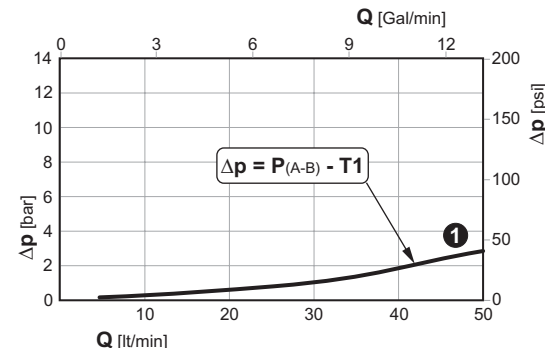
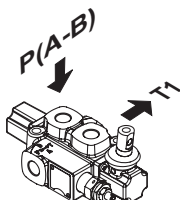
Perdite di carico con il cursore in posizione neutra
Pressure drop with spool in neutral position



Perdite di carico con il cursore in posizione di lavoro
Pressure drop with spool in working position

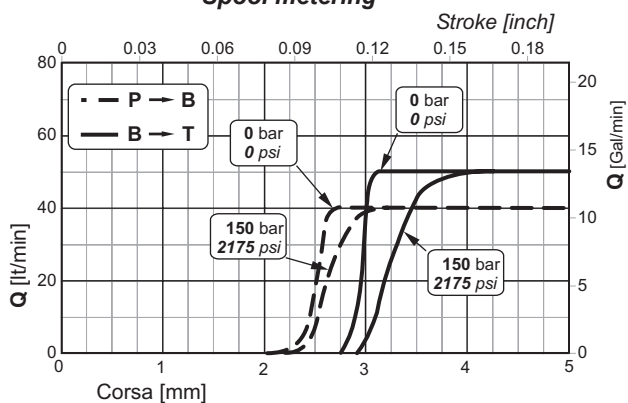


Perdite di carico con il cursore in posizione di lavoro
Pressure drop with spool in working position

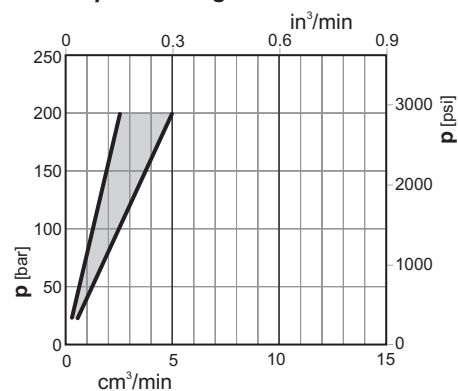


① Sezioni / Sections

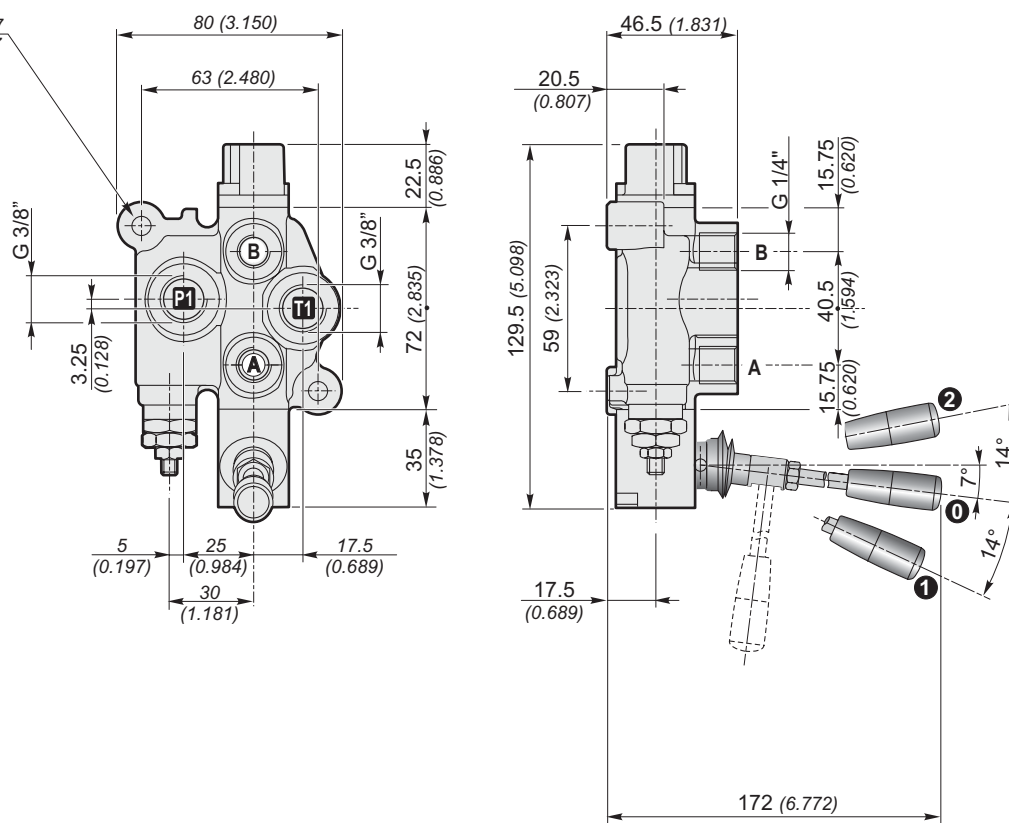
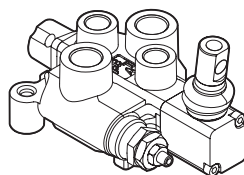
Curve di progressività
Spool metering



Trafilamenti sul cursore
Spool leakage



DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES



1

2

3

4

5

6

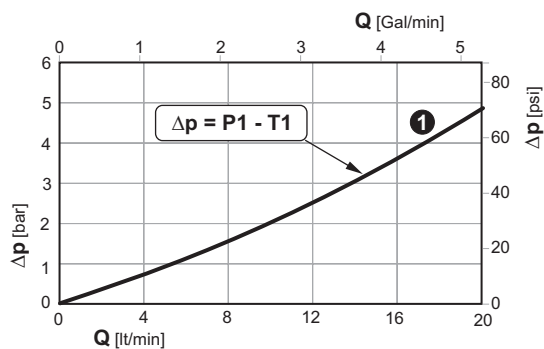
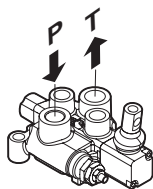
7

Bocche Ports	BSP (standard)	SAE
P - T	G 3/8"	9/16" - 18 UNF
A - B	G 1/4"	1/2" - 20 UNF

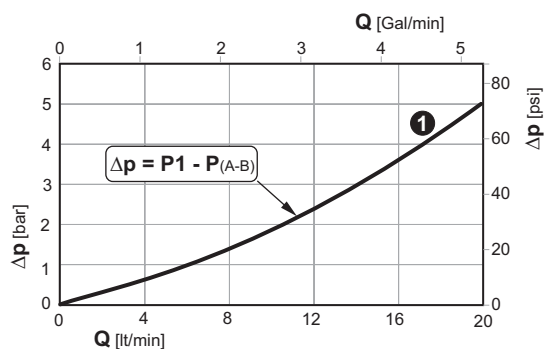
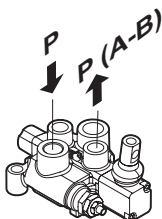
Q15

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

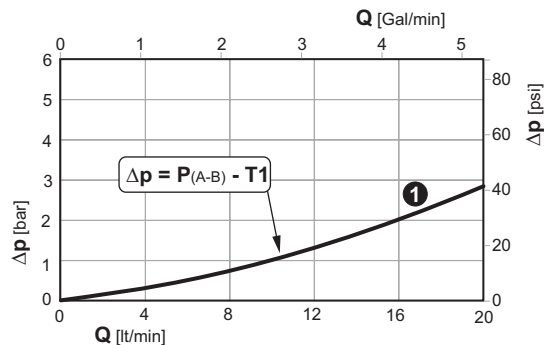
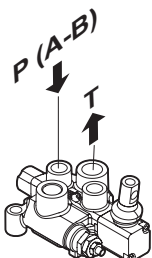
Perdite di carico con il cursore in posizione neutra
Pressure drop with spool in neutral position



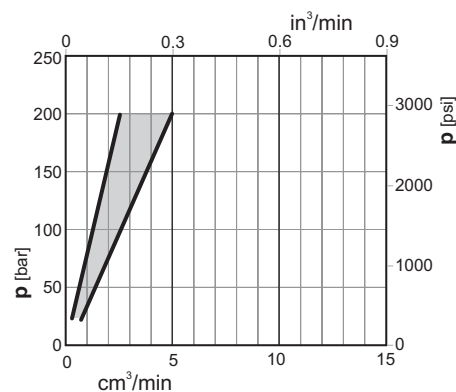
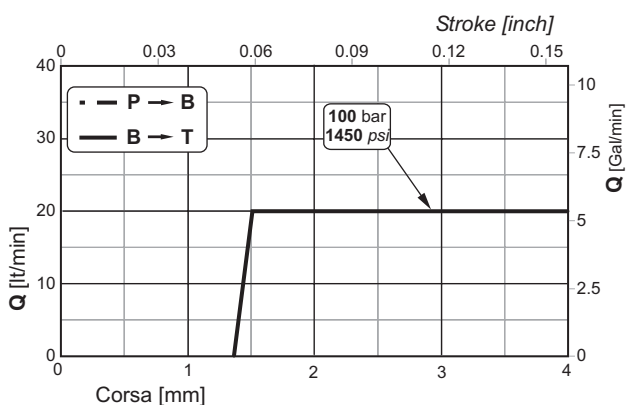
Perdite di carico con il cursore in posizione di lavoro
Pressure drop with spool in working position



Perdite di carico con il cursore in posizione di lavoro
Pressure drop with spool in working position



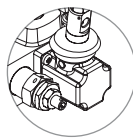
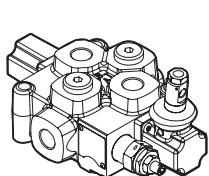
1 Sezioni / Sections



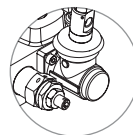
N.B. Le curve sono ricavate con cursore 103 / NOTE. Performance curves measured using spool 103 type.

Q25

**DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES**

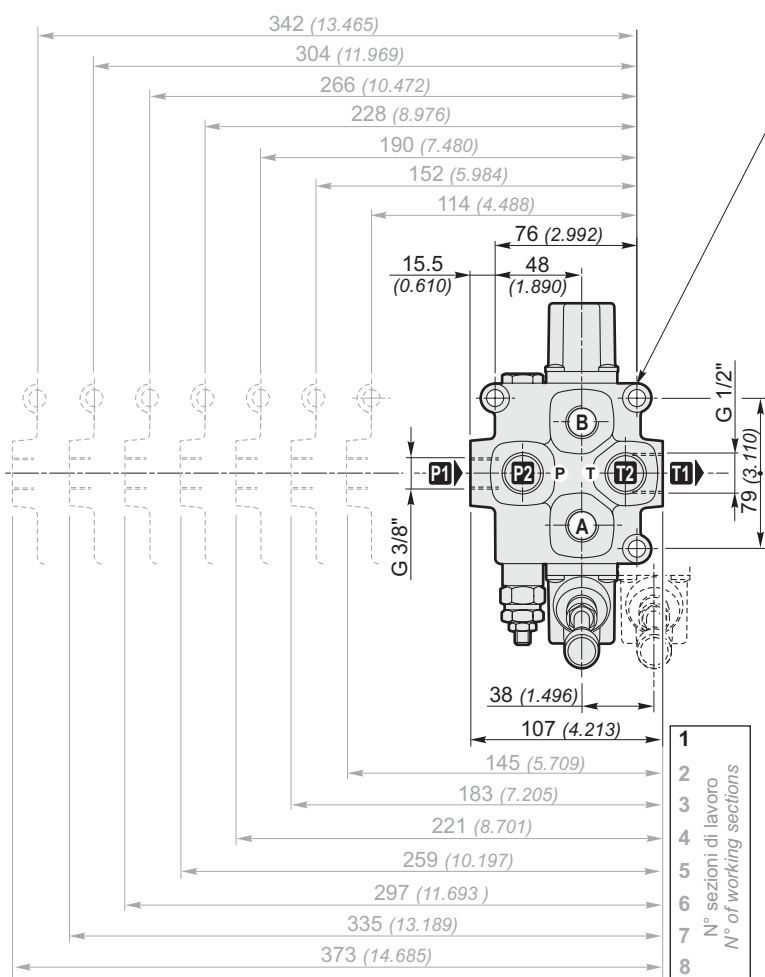


(Standard)
Comando e posizionario in plastica
Control and positioner plastic

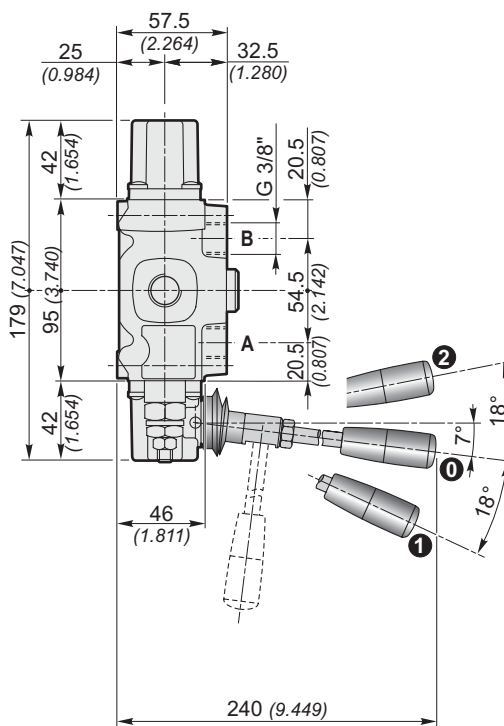


S
Comando e posizionario in Alluminio
Control and positioner Aluminium

Q25 — F7S R250 — 2x 103 A1 M1 — F3D — **S** — 1E
1 2 3 4 5 6 7 8 9



n°3 fori di fissaggio $\varnothing 9$
n°3 mounting holes $\varnothing 9$



Q25 — F7S R250 — 2x 103 A1 M1 — F3D — 12V — 2E
1 2 3 4 5 6 7 8 9

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 3/8"	9/16" - 18UNF (SAE 6)
P2	G 3/8"	9/16" - 18UNF (SAE 6)
A-B	G 3/8"	9/16" - 18UNF (SAE 6)
T1	G 1/2"	7/8" - 14UNF (SAE 10)
T2	G 3/8"	9/16" - 18UNF (SAE 6)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

	T1	X
	G 1/2"	7/8"-14UNF (SAE 10)
	G 1/2"	3/4" - 16UNF (SAE 8)

Q25

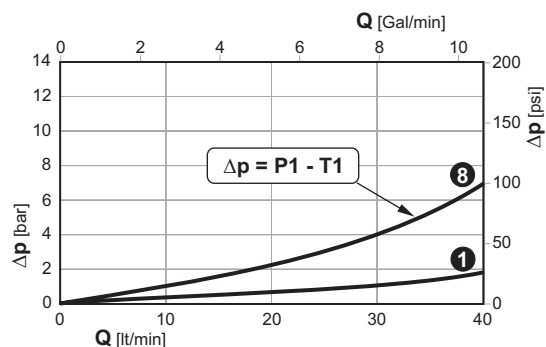
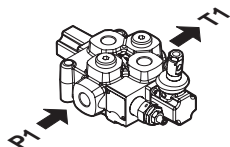
DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

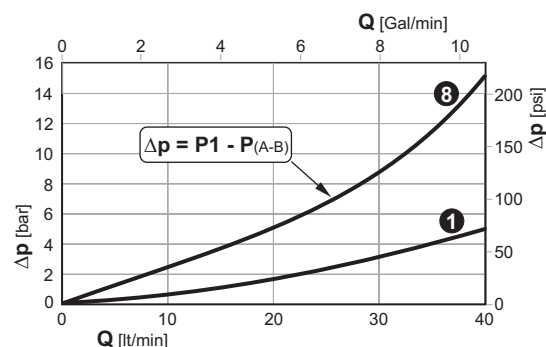
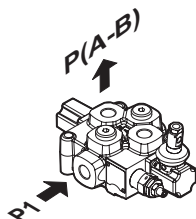


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)

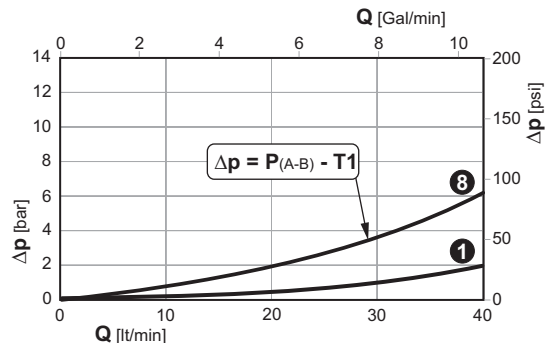
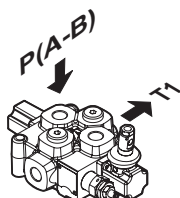


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

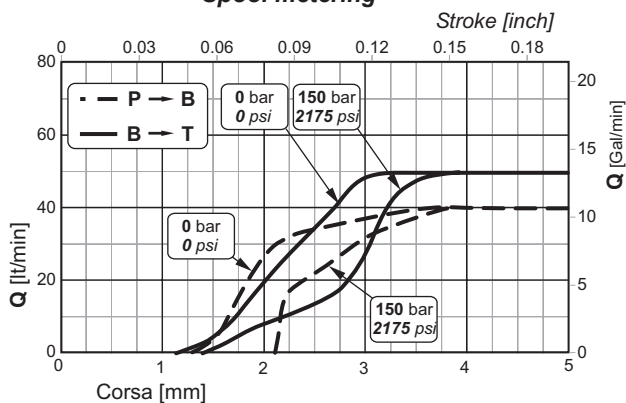
Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)

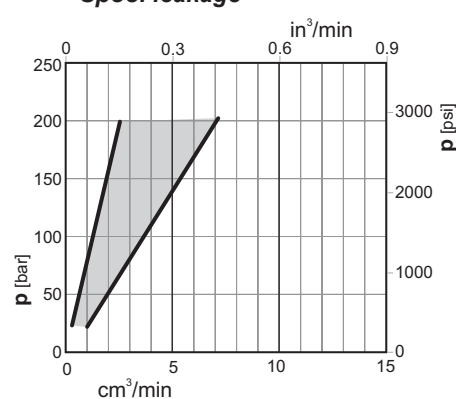


1 8 Sezioni / Sections

Curve di progressività Spool metering

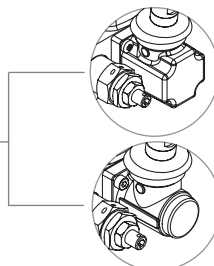
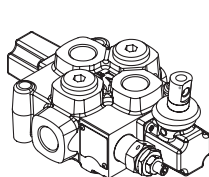


Trafilamenti sul cursore Spool leakage



Q45

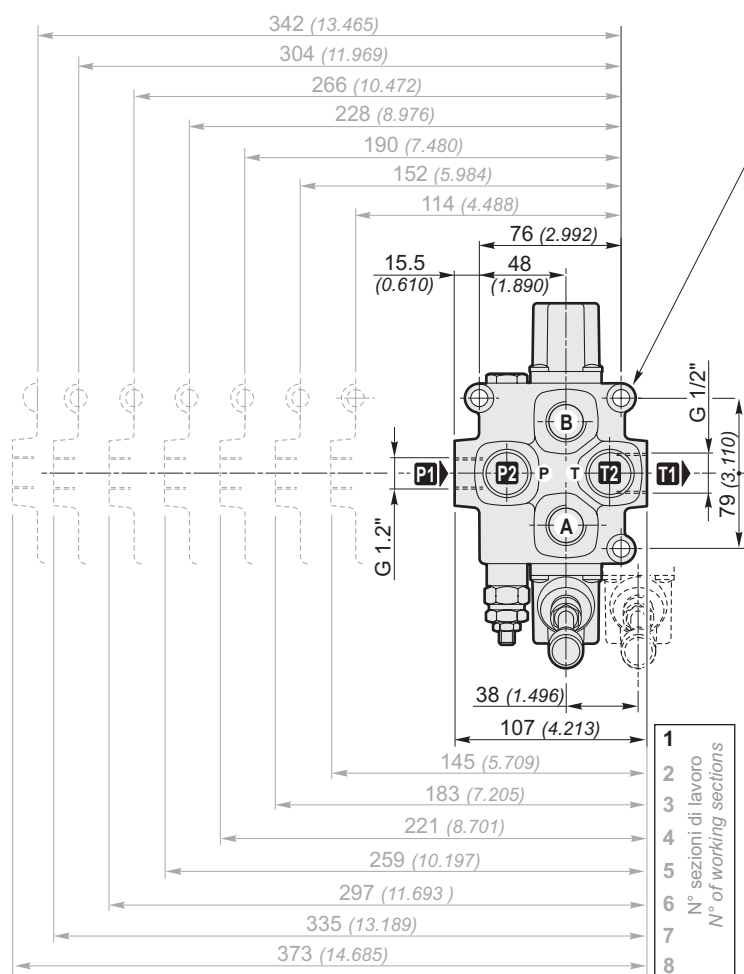
**DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES**



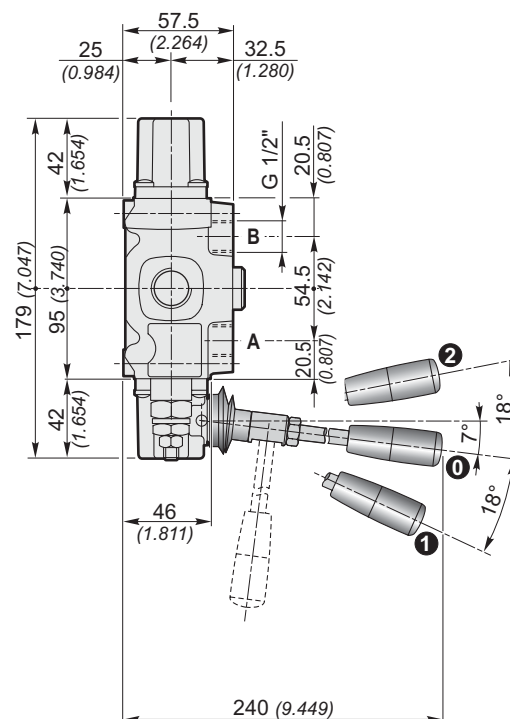
(Standard)
Comando e posizionario in plastica
Control and positioner plastic

S
Comando e posizionario in Alluminio
Control and positioner Aluminium

Q45 — F7S R250 — 2x 103 A1 M1 — F3D — **S** — 1E
1 2 3 4 5 6 7 8 9



n°3 fori di fissaggio Ø9
n°3 mounting holes Ø9

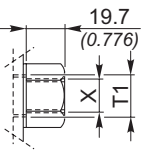


Q45 — F7S R250 — 2x 103 A1 M1 — F3D — 12V — 2E
1 2 3 4 5 6 7 8 9

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 1/2"	3/4" - 16 UNF (SAE 8)
P2	G 1/2"	3/4" - 16 UNF (SAE 8)
A-B	G 1/2"	3/4" - 16 UNF (SAE 8)
T1	G 1/2"	7/8" - 14 UNF (SAE 10)
T2	G 1/2"	3/4" - 16 UNF (SAE 8)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

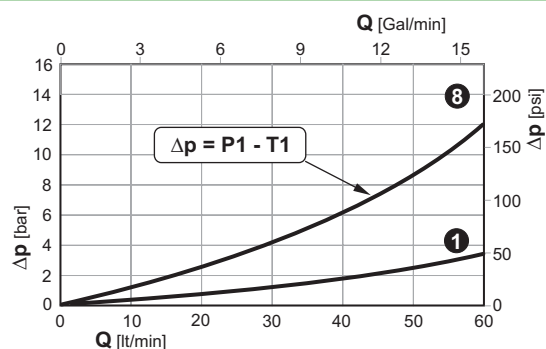
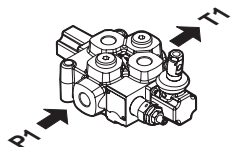
	T1	X
	G 1/2"	7/8"-14UNF (SAE 10)
		G 3/8"
		G 1/2"
		3/4" - 16UNF (SAE 8)
		7/8" - 14UNF (SAE 10)

Q45

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

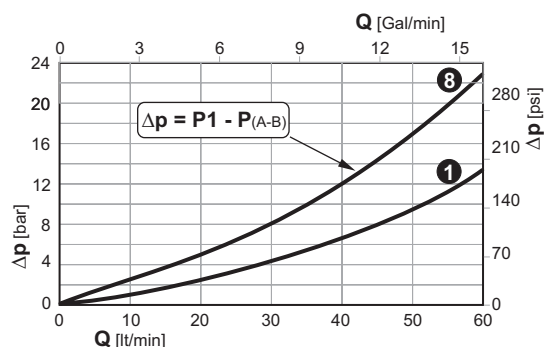
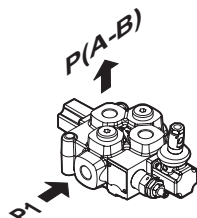
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



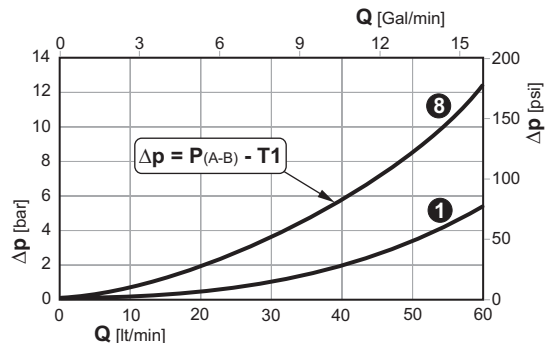
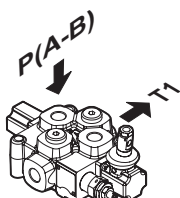
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



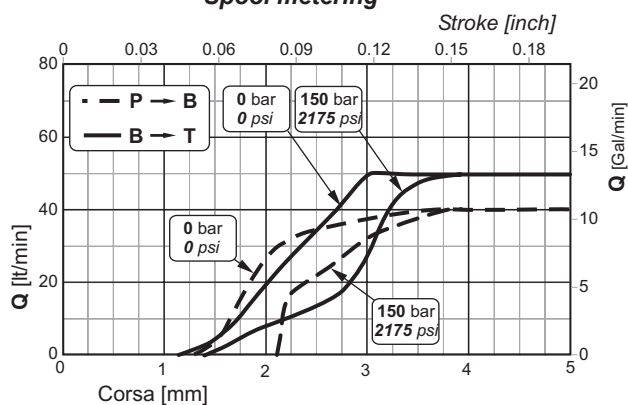
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)

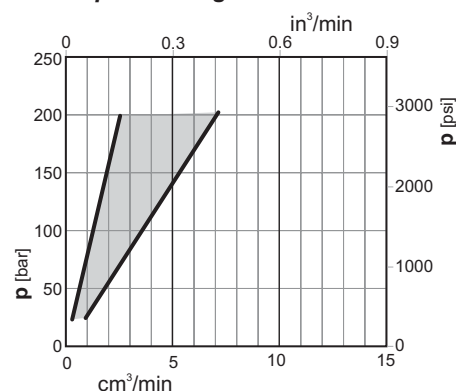


1 8 Sezioni / Sections

Curve di progressività
Spool metering

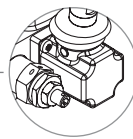
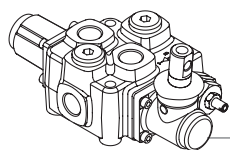


Trafilamenti sul cursore
Spool leakage

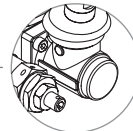


Q65

**DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES**

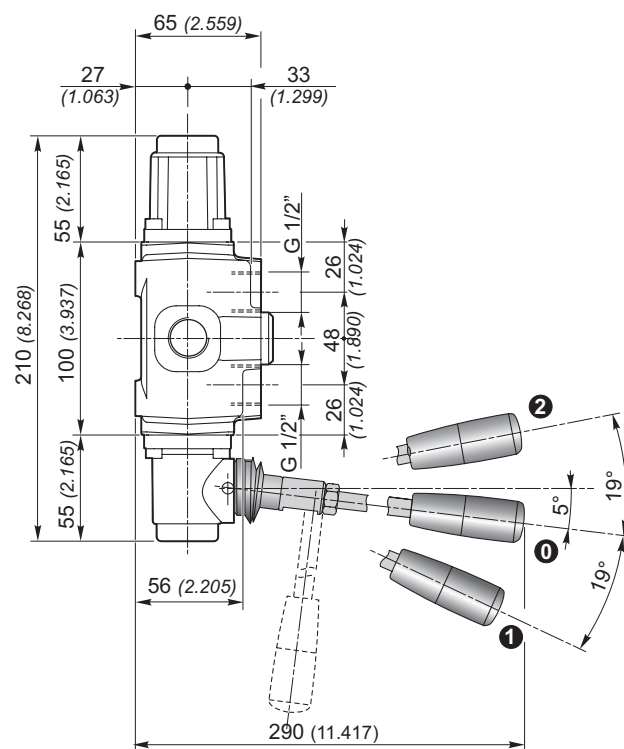
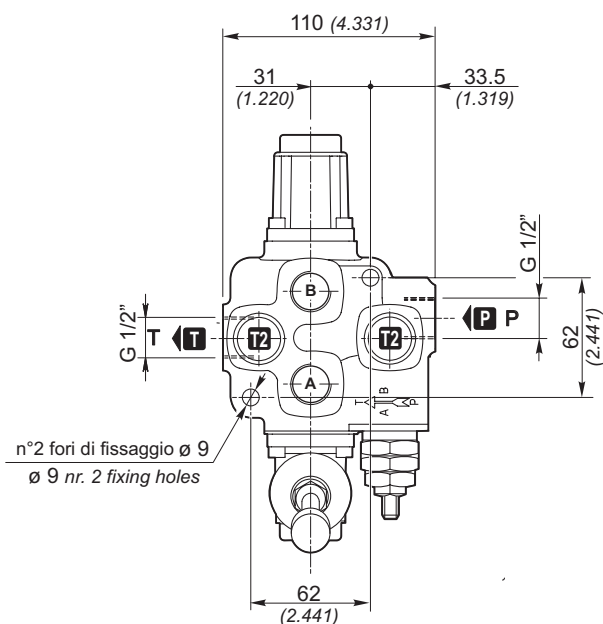


(Standard)
Comando e posizionate in plastica
Control and positionner plastic



S
Comando e posizionate in Alluminio
Control and positionner Aluminium

Q65 — F7S R250 — 2x 103 A1 M1 — F3D — **S** — 1E
1 2 3 4 5 6 7 8 9



Q65 — F7S R250 — 2x 103 A1 M1 — F3D — 12V — 2E
1 2 3 4 5 6 7 8 9

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 1/2"	7/8" - 14 UNF (SAE 10)
P2	G 1/2"	7/8" - 14 UNF (SAE 10)
A-B	G 1/2"	7/8" - 14 UNF (SAE 10)
T1	G 1/2"	7/8" - 14 UNF (SAE 10)
T2	G 1/2"	7/8" - 14 UNF (SAE 10)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

T1		X	
G 1/2"	7/8"-14UNF (SAE 10)	G 3/8"	3/4" - 16UNF (SAE 8)
		G 1/2"	7/8" - 14UNF (SAE 10)

Q65

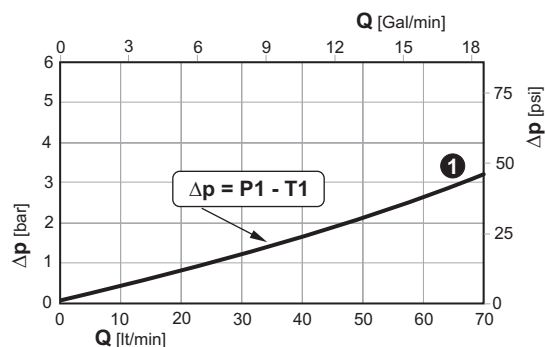
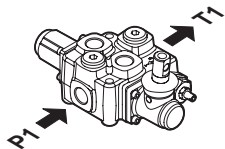
DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

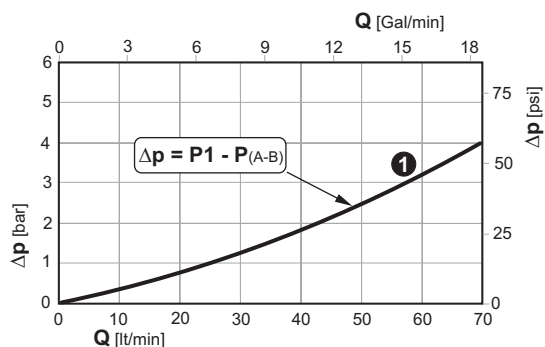
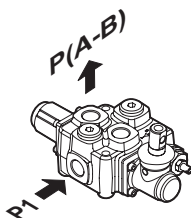


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)

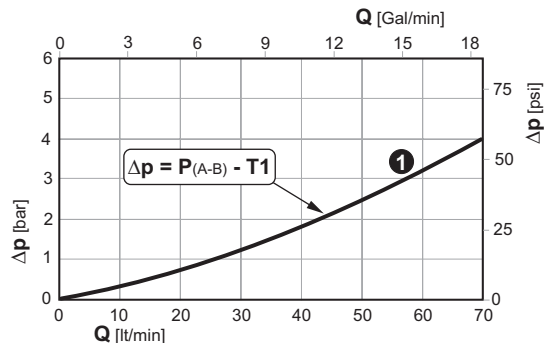
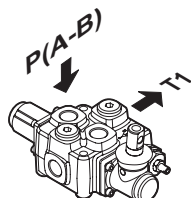


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

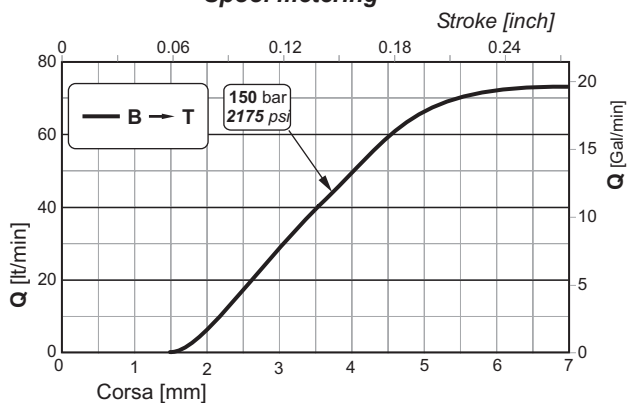
Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)

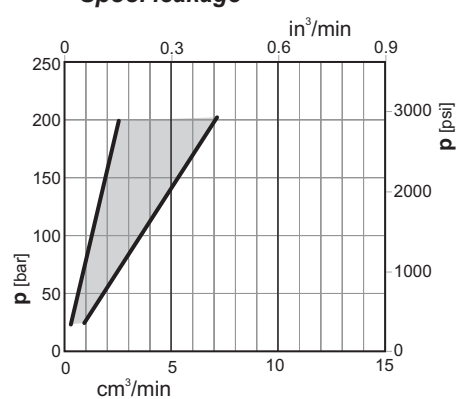


① Sezioni / Sections

Curve di progressività Spool metering

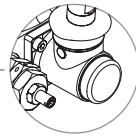
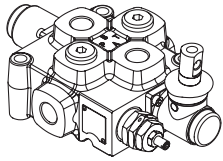


Trafilamenti sul cursore Spool leakage

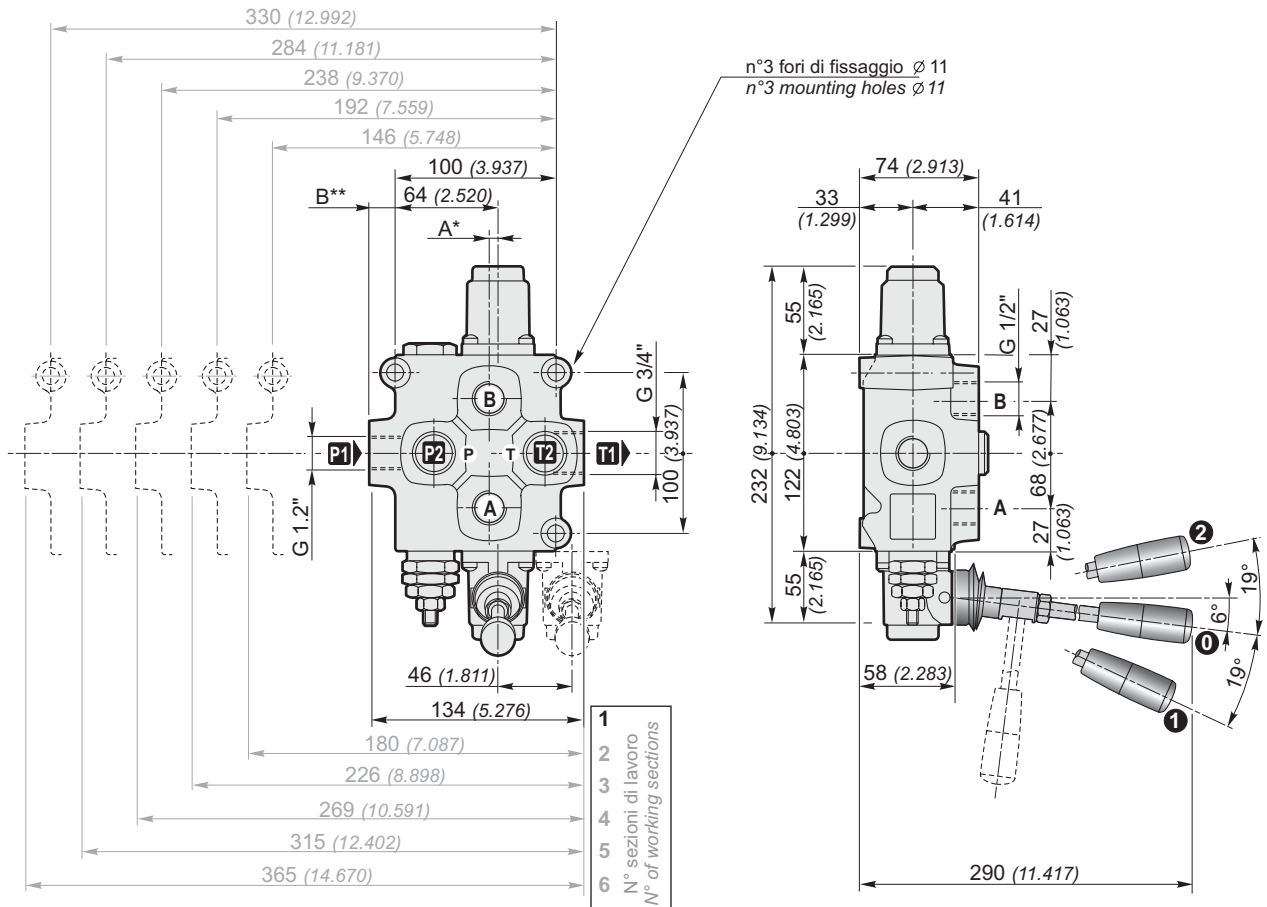


Q75

**DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES**



(Standard)
Comando e posizionario in Alluminio
Control and positioner Aluminium



- * **A=5.5** per monoblocco ad 1 sezione, **A=0** per monoblocchi a 2, 3, 4, 5, 6 sezioni di lavoro
 * **A =5.5** for 1 working section, **A=0** for 2, 3, 4, 5 and 6 working sections
 ** **B=16** per monoblocco ad 1, 2, 3, 6 sezioni, **B=13** per monoblocchi a 4 e 5 sezioni di lavoro
 ** **B=16** for 1, 2, 3, 6 working section, **B=13** for 4 and 5 working sections

Q75 — **F7S** **R250** — 2x **103** **A1** **M1** — **F3D** — **12V** — **2E**

1 2 3 4 5 6 7 8 9

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 1/2"	7/8" - 14 UNF (SAE 10)
P2	G 1/2"	7/8" - 14 UNF (SAE 10)
A-B	G 1/2"	7/8" - 14 UNF (SAE 10)
T1	G 3/4"	1" 1/16" - 12 UN (SAE 12)
T2	G 1/2"	7/8" - 14 UNF (SAE 10)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

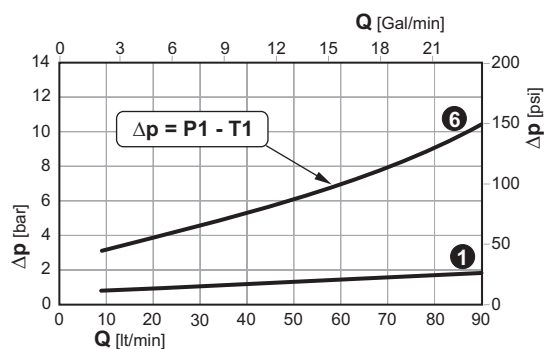
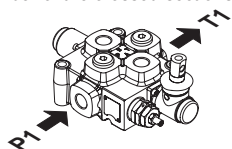
T1		X	
G 3/4"	1" 1/16" - 12 UN (SAE 12)	G 1/2" G 3/4"	7/8" - 14 UNF (SAE 10)

Q75

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

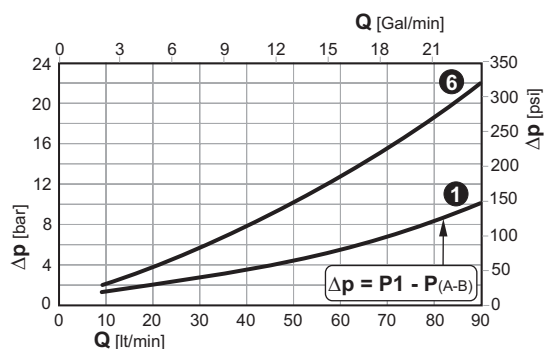
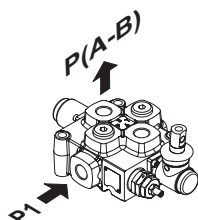
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



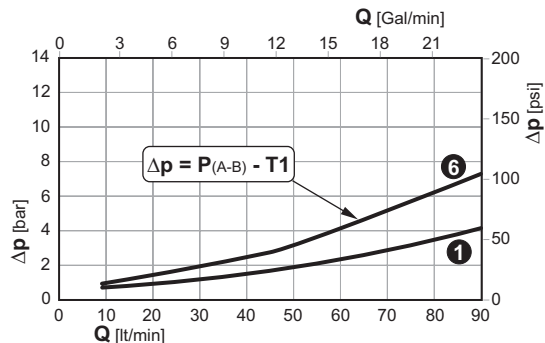
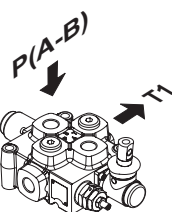
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



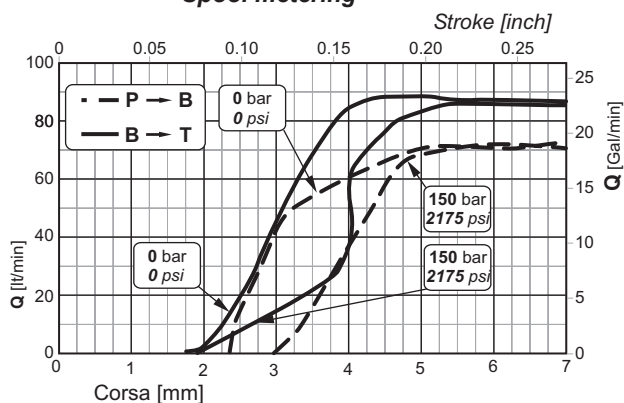
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)

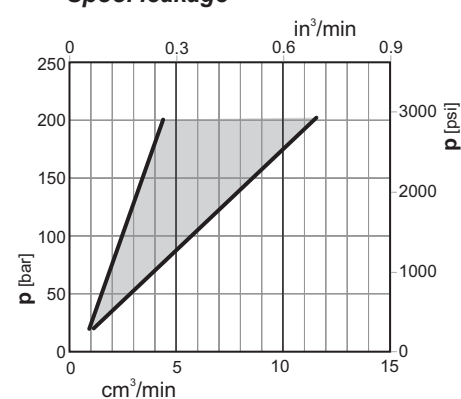


1 6 Sezioni / Sections

Curve di progressività Spool metering

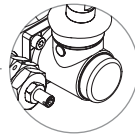
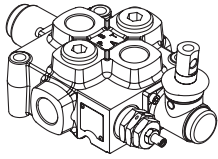


Trafilamenti sul cursore Spool leakage

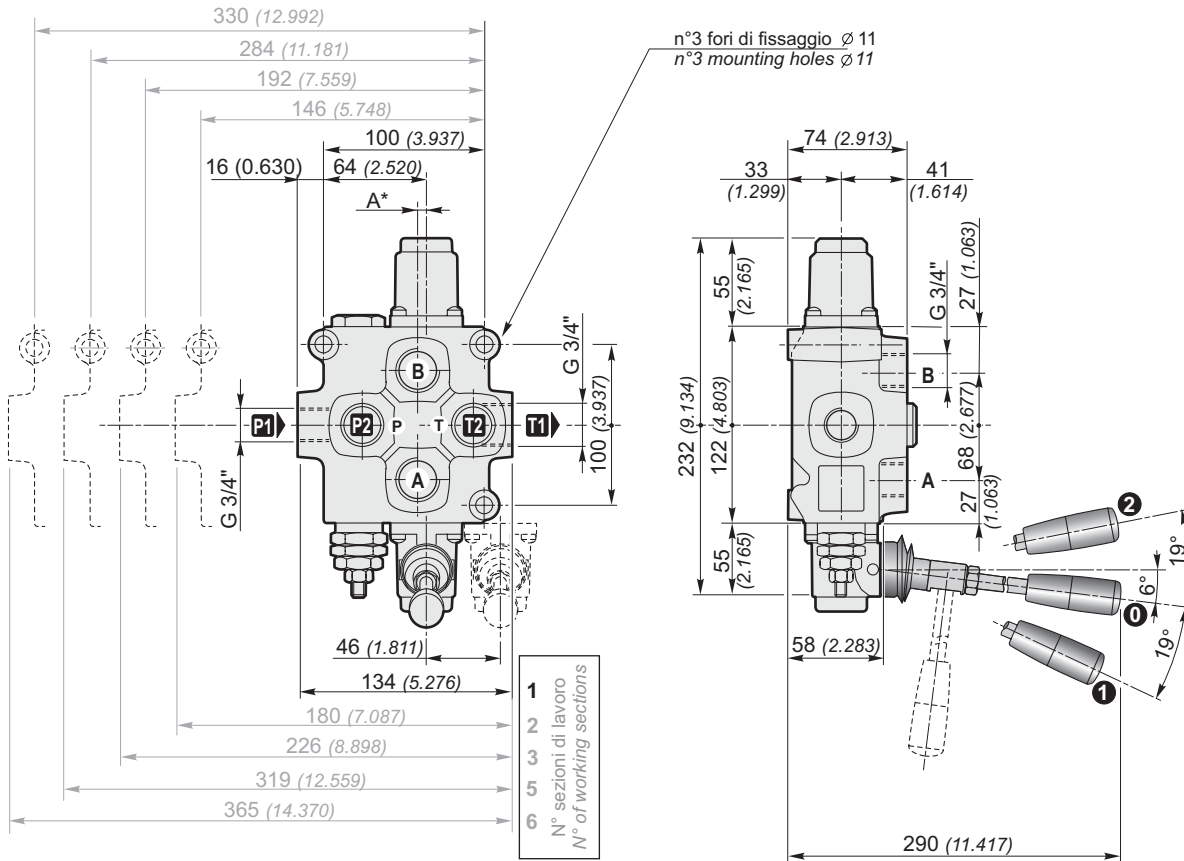


Q95

**DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES**



(Standard)
Comando e posizionario in Alluminio
Control and positioner Aluminium



* **A= 5.5** per monoblocco a 1 sezione; **A=0** per monoblocco a 2-3-5-6 sezioni di lavoro
* **A= 5.5** for 1 working section, **A=0** for 2-3-5-6 working section

Q95 — **F7S** **R250** — 2x **103** **A1** **M1** — **F3D** — **12V** — **2E**

1 2 3 4 5 6 7 8 9

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 3/4"	1" 1/16" - 12 UN (SAE 12)
P2	G 3/4"	1" 1/16" - 12 UN (SAE 12)
A-B	G 3/4"	1" 1/16" - 12 UN (SAE 12)
T1	G 3/4"	1" 1/16" - 12 UN (SAE 12)
T2	G 3/4"	1" 1/16" - 12 UN (SAE 12)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

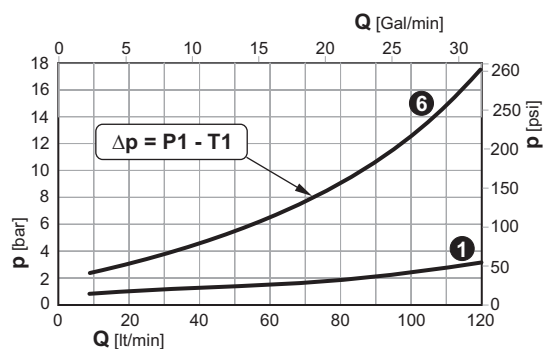
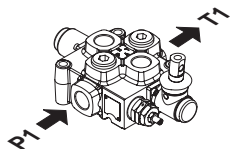
T1		X	
G 3/4"	1" 1/16" - 12 UN (SAE 12)	G 3/4"	7/8" - 14 UNF (SAE 10)

Q95

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

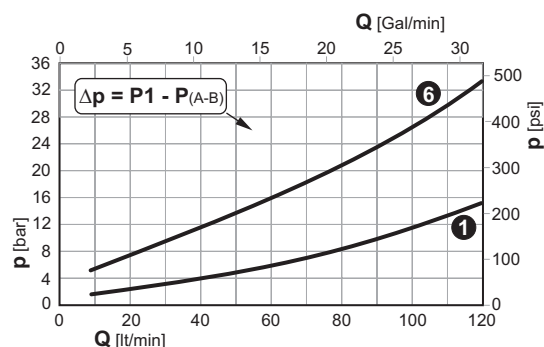
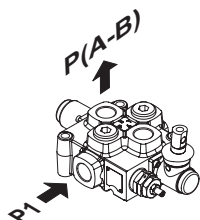
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



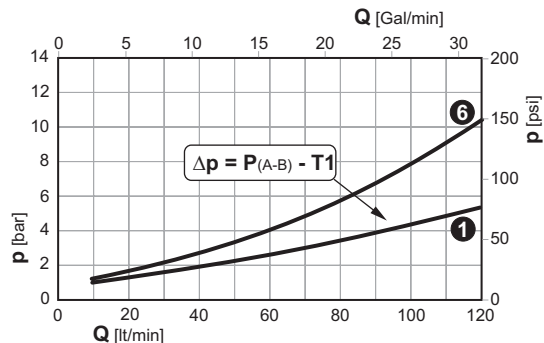
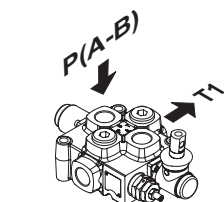
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



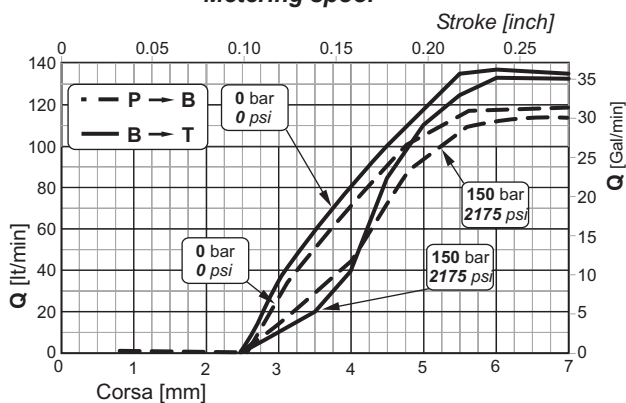
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)

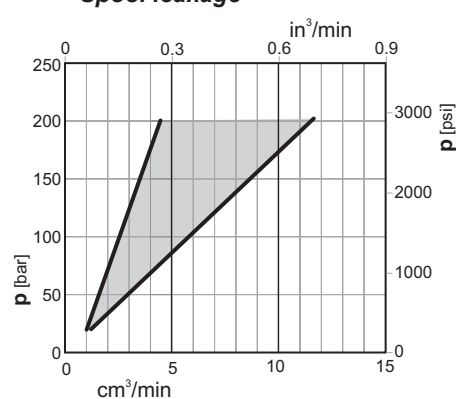


1 6 Sezioni / Sections

Curve di progressività Metering spool



Trafilamenti sul cursore Spool leakage



Fiancata d'ingresso

Inlet section



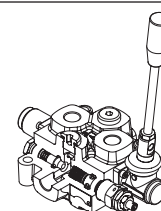
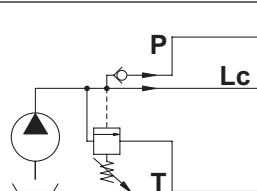
2 - Tipo fiancata d'ingresso / Inlet section type

			Q35	Q15	Q25	Q45	Q65	Q75	Q95
F1S	Collettore di entrata con valvola di ritegno VR e valvola limitatrice di pressione VLP	Inlet section with check (VR) and relief valves (VLP)			•	•		•	•
F2S	Collettore di entrata con valvola di ritegno VR	Inlet sections with check valve VR			•	•		•	•
F7S	Collettore di entrata con valvola limitatrice di pressione VLP	Inlet section with relief valve VLP	•	•	•	•	•	•	•
F8S	Collettore di entrata senza valvole VLP e VR	Inlet section without valves VLP and VR	•	•	•	•	•	•	•

F1S

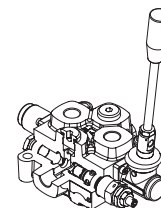
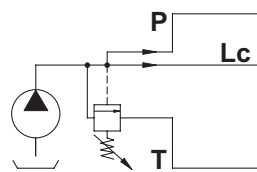
F1S/SAE

Collettore di entrata con valvola di ritegno VR e valvola limitatrice di pressione VLP
Inlet section with check (VR) and relief valves VLP



F7S

Collettore di entrata con valvola limitatrice di pressione VLP
Inlet section with relief valve VLP



3 - Tipo molla e taratura valvola

Dove è presente la valvola VLP (fiancate F1S e F7S), deve essere specificato il tipo di molla (**B**, **N** o **R**) e la sua pressione di taratura; **se quest'ultima viene omessa, verrà messa la molla N tarata a 150 bar.**

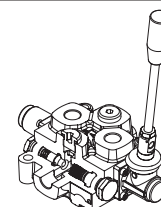
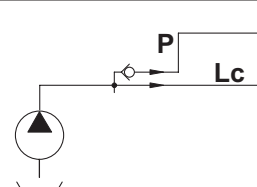
3 - Type of spring and valve setting

If valve VLP is installed (inlet section F1S and F7S), specify the type of spring (**B**, **N** or **R**) and its pressure setting. **If omitted, spring N with a 150 bar setting will be installed.**

		molla bianca white spring	molla nera black spring	molla rossa red spring
R	Tipo di molla per la VLP Type of spring for relief valve	B	N	R
Campi di taratura / Calibration fields				
		bar (psi)		
250	Taratura della VLP VLP Setting	10 ÷ 80 (145 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 380 (2915 ÷ 5510)

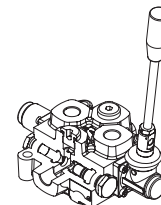
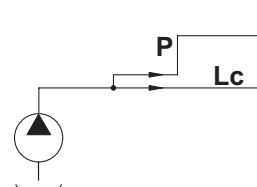
F2S

Collettore di entrata con valvola di ritegno VR
Inlet sections with check valve VR



F8S

Collettore di entrata senza valvole
Inlet section without valves



Sezione di lavoro

Working section



4 - Tipo cursore / Spool type

Cursori / Spools

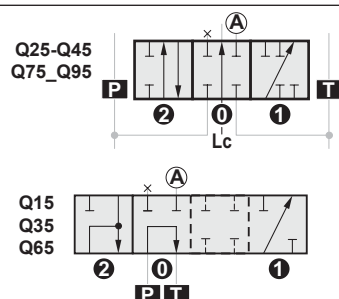
			Q35	Q15	Q25	Q45	Q65	Q75	Q95
101	Semplice effetto in A	Single acting in A port	•	•	•	•	•	•	•
102	Semplice effetto in B	Single acting in B port	•	•	•	•	•	•	•
103	Doppio effetto, A e B chiusi in posizione 0	Double acting A and B closed in 0 position	•	•	•	•	•	•	•
103RN	Doppio effetto a ricoprimento negativo	Double acting with negative overlap	•						
106	Doppio effetto, passaggi chiusi in posizione 0	Double acting, ports closed in 0 position			•	•		•	•
107	Doppio effetto, A in T e B chiuso in posizione 0	Double acting, A to T and B closed in 0 position			•	•		•	•
108	Doppio effetto, B in T e A chiuso in posizione 0	Double acting, B to T and A closed in 0 position			•	•		•	•
109	Semplice effetto in A, A in T in posizione 0	Single acting in A, A to T in 0 position			•	•		•	•
110	Semplice effetto in B, B in T in posizione 0	Single acting in B, B to T in 0 position			•	•		•	•
111	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•	•	•	•	•	•	•
114	Doppio effetto, A e B in T e Lc chiusa in posizione 0	Double acting, A and B to T and through passage closed in 0 position			•	•		•	•
116*	Doppio effetto con 4ª posizione flottante	Double acting with 4th position floating		•	•	•		•	•
126*	Doppio effetto con 4ª posizione flottante	Double acting with 4th position floating		•	•	•		•	•

* Limitazioni / Limitations

Cursore Spools	Applicabile con: / Applicable with:	
	Comando / Control	Posizionatore / Positioner
116	A1-Z1 / A2-Z1 / A4-Z1 / A6-Z1 / A8-Z1	R8
126	A1 / A2 / A4 / A5 / A6 / A8 / SL / SLA15 / A15 / A16	R10-Z1

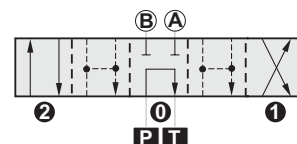
101

Semplice effetto in A
Single acting in A port



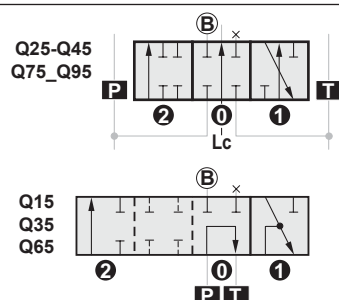
103RN

Doppio effetto a ricoprimento negativo
Double acting with negative overlap



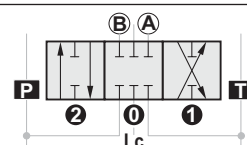
102

Semplice effetto in B
Single acting in B port



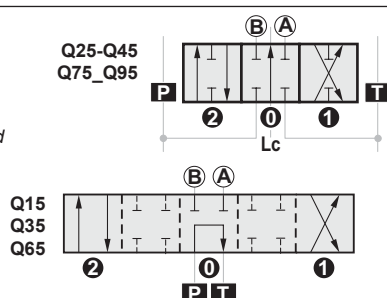
106

Doppio effetto, passaggi chiusi
in posizione 0
Double acting, ports closed
in 0 position



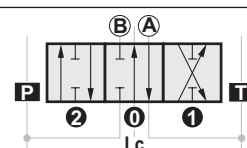
103

Doppio effetto, A e B chiusi
in posizione 0
Double acting, A and B closed
in 0 position



107

Doppio effetto, A in T e B chiuso
in posizione 0
Double acting, A to T and B closed
in 0 position



Sezione di lavoro

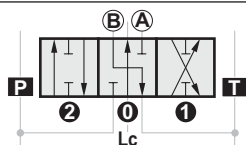
Working section



Cursori / Spools

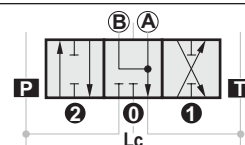
108

Doppio effetto, B in T e A chiuso
in posizione 0
Double acting, B to T and A closed
in 0 position



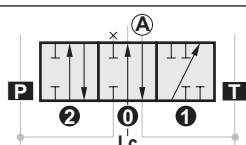
114

Doppio effetto, A e B in T e
Lc chiusa in posizione 0
Double acting, A and B to T and
through passage closed in 0 position



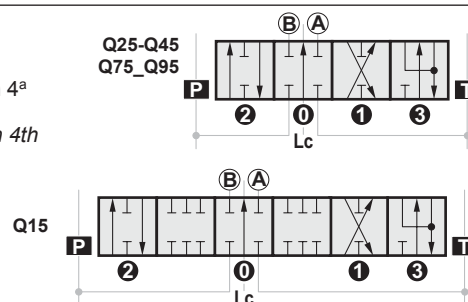
109

Semplice effetto in A, A in T
in posizione 0
Single acting in A, A to T
in 0 position



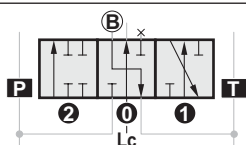
116

Doppio effetto con 4ª
posizione flottante
Double acting with 4th
position floating



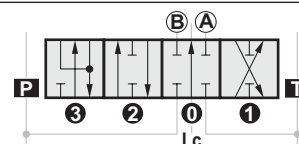
110

Semplice effetto in B, B in T
in posizione 0
Single acting in B, B to T
in 0 position



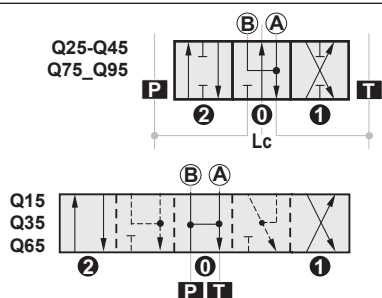
126

Doppio effetto con 4ª
posizione flottante
Double acting with 4th
position floating



111

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



Sezione di lavoro

Working section

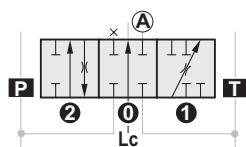
Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9

Cursori sensibilizzati / Sensitized spools

			Q35	Q25	Q45	Q75	Q95
101.20	Semplice effetto in A	Single acting in A port		•	•	•	•
102.20	Semplice effetto in B	Single acting in B port		•	•	•	•
103.05	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position		•	•	•	•
103.10	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position				•	•
103.20	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position		•	•		
103.25	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position		•	•		
103.30	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position				•	•
103.40	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position		•	•		
107.20	Doppio effetto, A in T e B chiuso in posizione 0	Double acting, A to T and B closed in 0 position		•	•		
108.20	Doppio effetto, B in T e A chiuso in posizione 0	Double acting, B to T and A closed in 0 position		•	•		
111.05	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position		•	•		
111.10	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position				•	•
111.20	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position		•	•		
111.25	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position		•	•		
111.30	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position				•	•
111.40	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position		•	•		

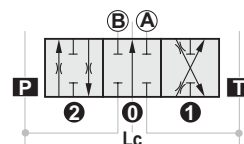
101.20

Semplice effetto in A
Single acting in A port



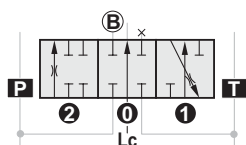
103.20

Doppio effetto, A e B chiusi
in posizione 0
Double acting, A and B closed
in 0 position



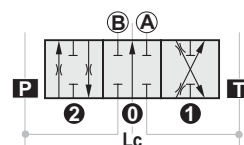
102.20

Semplice effetto in B
Single acting in B port



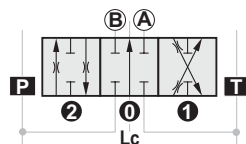
103.25

Doppio effetto, A e B chiusi
in posizione 0
Double acting, A and B closed
in 0 position



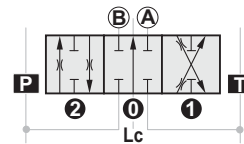
103.05

Doppio effetto, A e B chiusi
in posizione 0
Double acting, A and B closed
in 0 position



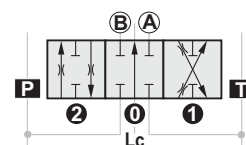
103.30

Doppio effetto, A e B chiusi
in posizione 0
Double acting, A and B closed
in 0 position



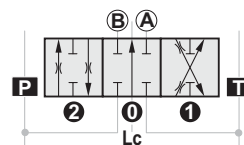
103.10

Doppio effetto, A e B chiusi
in posizione 0
Double acting, A and B closed
in 0 position



103.40

Doppio effetto, A e B chiusi
in posizione 0
Double acting, A and B closed
in 0 position



Sezione di lavoro

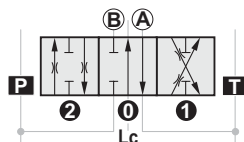
Working section



Cursori sensibilizzati / Sensitized spools

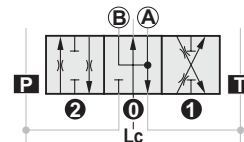
107.20

Doppio effetto, A in T e B
chiuso in posizione 0
Double acting, A to T and B
closed in 0 position



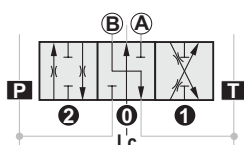
111.20

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



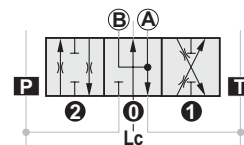
108.20

Doppio effetto, B in T e A
chiuso in posizione 0
Double acting, B to T and A
closed in 0 position



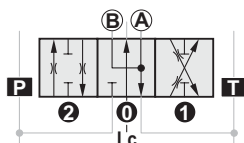
111.25

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



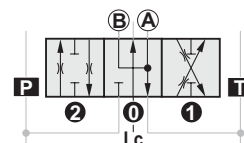
111.05

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



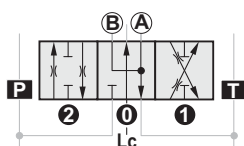
111.30

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



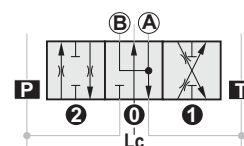
111.10

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



111.40

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



Sezione di lavoro						Working section			
Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9

5 - Tipo di comando / Control type

			Q35	Q15	Q25	Q45	Q65	Q75	Q95
A1	Comando manuale con leva standard	Hand control with standard lever	•	•	•	•	•	•	•
A1/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116		•	•	•		•	•
A2	Comando manuale con leva standard ruotata di 180°	Hand control with standard lever mounted rotated 180°		•	•	•	•	•	•
A2/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116		•	•	•		•	•
A3*	Scatola di protezione in sostituzione del comando manuale con leva	Cap replacing hand control with lever			•	•	•	•	•
A4	Attacco diretto sul cursore per rinvio a distanza rigido	Direct control connection on spool for stiff remote control			•	•	•	•	•
A4/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116			•	•		•	•
A5	Attacco diretto sul cursore con terminale sferico (da utilizzare solo con il posizionamento M4 (2-1))	Direct control connection on spool with spherical end (Control to be used for positioning M4 (2-1))	•		•	•	•	•	•
A6	Attacco diretto sul cursore con terminale ad occhio fisso	Direct control connection on spool eye end	•		•	•	•	•	•
A6/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116			•	•		•	•
A8	Attacco diretto sul cursore per cavo flessibile rinvio a distanza	Direct connection on spool for remote flexible control			•	•	•	•	•
A8/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116			•	•		•	•
C1*	Cavo flessibile	Flexible cable			•	•		•	•
SL*	Comando a distanza	Remote control			•	•		•	•
SLA15*	Comando a cloche per controllo simultaneo di due cursori a distanza	Remote dual axis control for simultaneous operation of two spools			•	•		•	•

* Limitazioni / Limitations

Comando Control	Applicabile con: / Applicable with:	
	Comando / Control	Cursore / Spool
A3	M1-U1 / M2-U1 / M3-U1 / M1-U2 / M2-U2 / M3-U2 / D2 / P1-N / P1-NP / D3	Tutti / All
C1		
SL	A8 / M1U2 - M2U2 - M3U2	
SLA15		

Comando Control	Applicabile con: / Applicable with:	
	Posizionatore / Positioner	Cursore / Spool
A1/Z1 A2/Z1 A4/Z1 A6/Z1 A8/Z1	R8	116

Sezione di lavoro

Working section

Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9

5 - Tipo di comando / Control type

		Q35	Q25	Q45	Q75	Q95
Leva a cloche per il comando singolo o simultaneo di due cursori:	Dual axis for single or simultaneous control of two spools:					
A15S - con fulcro a sinistra	- with fulcrum on the left		•	•	•	•
A15D - con fulcro a destra	- with fulcrum on the right		•	•	•	•
A16 - come a schema (pag. F-25)	- as from the scheme (page F-25)		•	•	•	•
Comando manuale con attivazione del contatto elettrico del microswitch centralizzato:	Hand control with ON-OFF centralized microswitch operation					
N1-A1 - per doppio effetto	- double acting		•	•	•	•
N1A-A1 - per semplice effetto in posizione 1	- single acting in 1 position		•	•	•	•
N1B-A1 - per semplice effetto in posizione 2	- single acting in 2 position		•	•	•	•
Comando manuale, ruotato di 180°, con attivazione del contatto elettrico del microswitch centralizzato:	180° Rotated hand control with ON-OFF centralized microswitch operation					
N1-A2 - per doppio effetto	- double acting		•	•	•	•
N1A-A2 - per semplice effetto in posizione 1	- single acting in 1 position		•	•	•	•
N1B-A2 - per semplice effetto in posizione 2	- single acting in 2 position		•	•	•	•
Comando microswitch centralizzato:	Centralized microswitch control:					
N1-A3 - per doppio effetto	- double acting		•	•	•	•
N1A-A3 - per semplice effetto in posizione 1	- single acting in 1 position		•	•	•	•
N1B-A3 - per semplice effetto in posizione 2	- single acting in 2 position		•	•	•	•

A1

A1/Z1

A1: Comando manuale con leva standard
A1: Hand control with standard lever

A1/Z1: Versione con kit distanziale per il montaggio del cursore 116
A1/Z1: Version with spacer kit for installation of spool 116

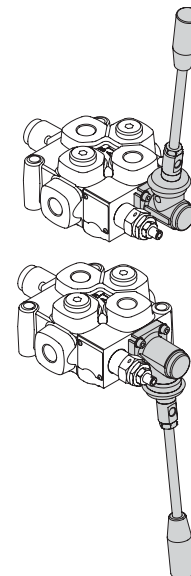
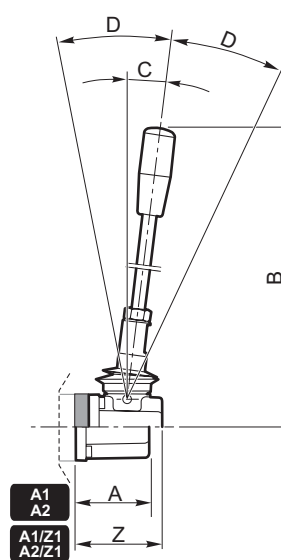
A2

A2/Z1

A2: Comando manuale con leva standard ruotata di 180°
A2: Hand control with standard lever rotated 180°

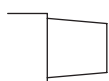
A2/Z1: Versione con kit distanziale per il montaggio del cursore 116
A2/Z1: Version with spacer kit for installation of spool 116

	A	B	C	D	Z
Q15	35 (1.378)	205 (8.071)	7°	14°	44 (1.732)
Q35 Q25 - Q45	42 (1.654)	205 (8.071)	7°	18°	50.5 (1.988)
Q65 Q75 - Q95	55 (2.165)	260 (10.236)	6°	19°	68.5 (2.697)

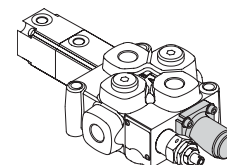


A3

Scatola di protezione in sostituzione del comando manuale con leva
Proof cap replacing hand control with lever



	A
Q25 - Q45	42 (1.654)
Q75 - Q95	55 (2.165)



Sezione di lavoro

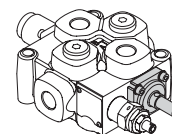
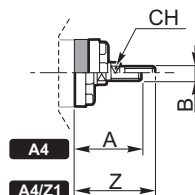
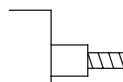
Working section



A4

A4/Z1

A4: Attacco diretto sul cursore per rinvio a distanza rigido
A4: Direct control connection on spool for stiff remote control

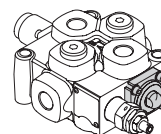
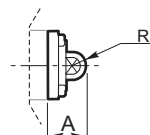
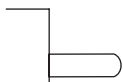


A4/Z1: Versione con kit distanziale per il montaggio del cursore 116
A4/Z1: Version with spacer kit for installation of spool 116

	A	B	CH	Corsa Stroke	Z
Q25 - Q45	39 (1.535)	M8	9 (0.354)	±5 (0.197)	47.5 (1.870)
Q65 Q75 - Q95	53 (2.087)	M10	14 (0.551)	±7 (0.276)	66.5 (2.618)

A5

Attacco diretto sul cursore con terminale sferico (da utilizzare solo con il posizionamento M4 (2-1))
Direct control connection on spool with spherical end (Control to be used for positioning M4 (2-1))

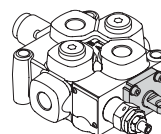
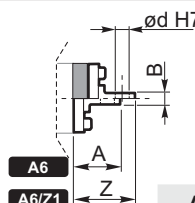
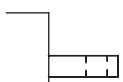


	A	R	Corsa Stroke
Q35 Q25 - Q45	22 (0.866)	6.85 (0.270)	±5 (0.197)
Q65 Q75 - Q95	33 (1.299)	8.75 (0.344)	±7 (0.276)

A6

A6/Z1

A6: Attacco diretto sul cursore con terminale ad occhio fisso
A6: Direct control connection on spool eye end



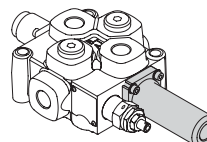
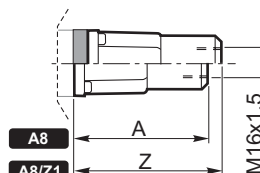
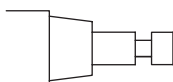
A6/Z1: Versione con kit distanziale per il montaggio del cursore 116
A6/Z1: Version with spacer kit for installation of spool 116

	A	B	d	Corsa Stroke	Z
Q35 Q25 - Q45	20 (0.787)	6 (0.236)	9 (0.354)	±5 (0.197)	28.5 (1.122)
Q65 Q75 - Q95	27 (1.063)	7 (0.276)	11 (0.433)	±7 (0.276)	40.5 (1.594)

A8

A8/Z1

A8: Attacco diretto sul cursore per cavo flessibile rinvio a distanza
A8: Direct connection on spool for remote flexible control



A8/Z1: Versione con kit distanziale per il montaggio del cursore 116
A8/Z1: Version with spacer kit for installation of spool 116

	A	Z
Q25 - Q45	73 (2.874)	81.5 (3.209)
Q65 Q75 - Q95	77 (3.031)	90.5 (3.563)

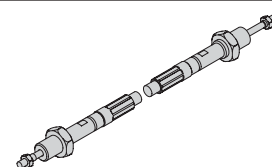
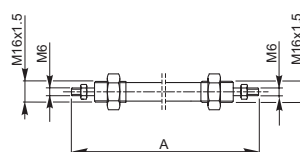
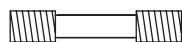
Sezione di lavoro

Working section



C1

Cavo flessibile
Flexible cable



A

Q25 - Q45
Q75 - Q95

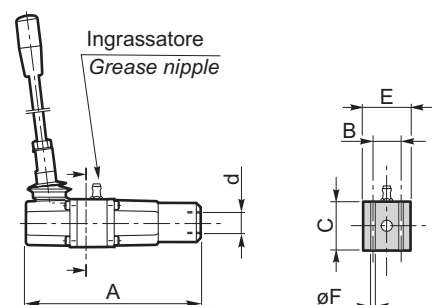
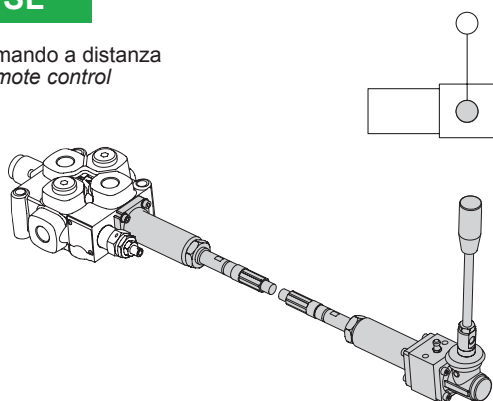
Massima lunghezza cavo consigliata 4000 mm
Raggio min. di curvatura 200mm
Max. recommended length 4000 mm
Minimum radius curve 200 mm

Dove è utilizzato il cavo flessibile C1, è necessario indicare la lunghezza del cavo espressa in mm.
Esempio per un cavo lungo 1000 mm: **A8-C1x1000-SL**

Indicate the cable length in mm when flexible cable C1 is used.
E.g.: for a cable 1000 mm in length: **A8-C1x1000-SL**

SL

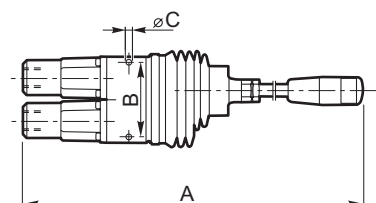
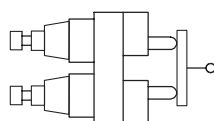
Comando a distanza
Remote control



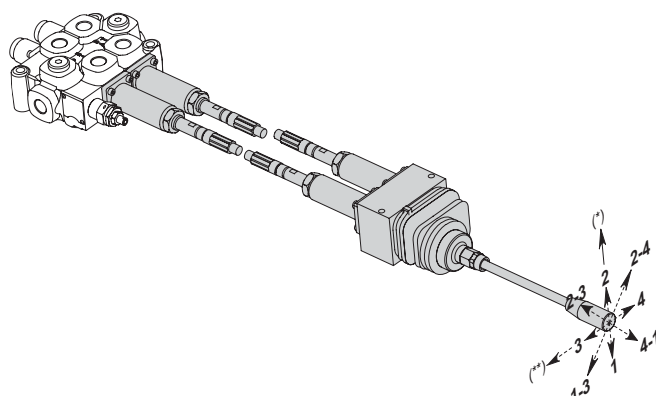
	A	B	C	d	E	F
Q25 - Q45	135 (5.315)	26 (1.024)	40 (1.575)	M16x1.5	38 (1.496)	5.5 (0.217)
Q75 - Q95	172 (6.772)	33.5 (1.319)	45 (1.772)		45 (1.772)	6.5 (0.256)

SLA15

Comando a cloche per controllo
simultaneo di due cursori a distanza
Remote dual axis control for
simultaneous operation of two spools



	A	B	Ø d
Q25 - Q45	358 (14.094)	77 (3.031)	6.5 (0.256)
Q75 - Q95			



Eventuale cassetto con 4^a pos. (solo cod.126)
Optional spool with 4th position (only code 126)
(*) su 1^a sezione / on 1st section
(**) su 2^a sezione / on 2nd section

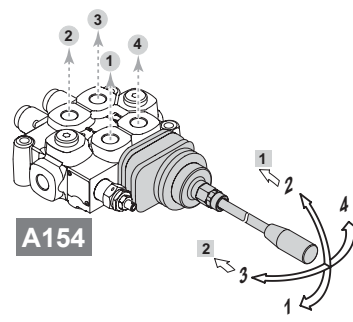
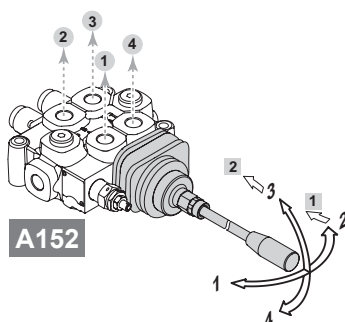
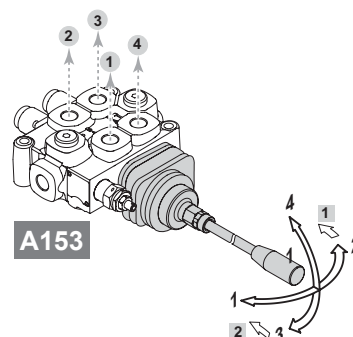
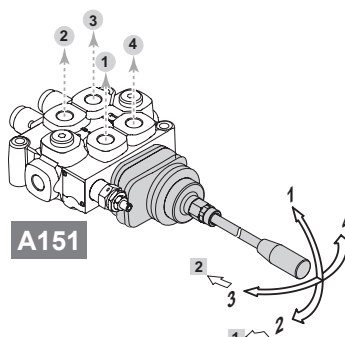
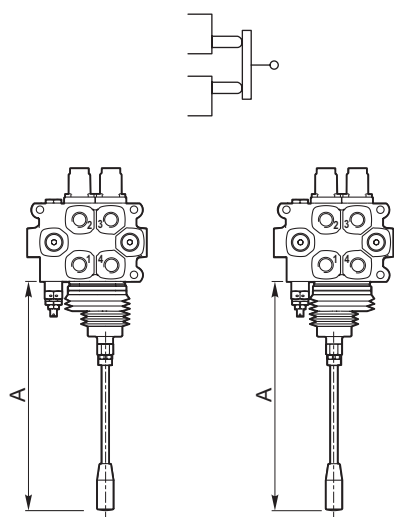
Sezione di lavoro

Working section



A15..

Leva a cloche per il comando singolo o simultaneo di due cursori, come schema a lato
Dual axis for simultaneous or single control of two spools, as from the scheme on the side

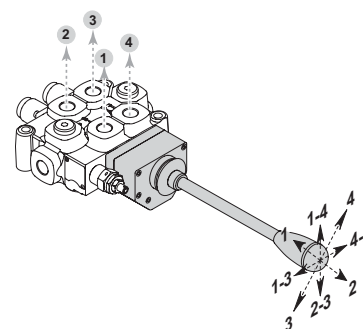
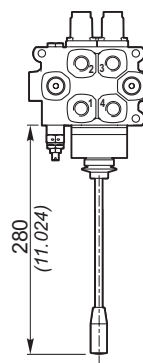
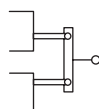


N.B. Nelle configurazioni A151 e A153, la parte inferiore del comando sporge dal piano di appoggio.
Note: A151 - A153 configurations the smallest size is lower than the bolster.

Eventuale cassetto con 4^a pos. (solo cod.126)
Optional spool with 4th position (only code 126)
1 su 1^a sezione / on 1st section
2 su 2^a sezione / on 2nd section

A16

Leva a cloche per il controllo singolo o simultaneo di due cursori come schema a lato
Dual axis for single or simultaneous control of two spools as from the scheme on the side



I comandi A15, A16 o SLA15 sono dei joystick che comandano due sezioni di lavoro; essendo un comando unico viene inserito come codice solo nella prima sezione di lavoro e viene omesso nella seconda.

Esempio

Q25 - F7SR250 - 103/A15/M1 - 103/M1 - F3D

Nella seconda sezione di lavoro è indicato solo il cursore e il posizionatore.

Controls A15, A16 or SLA15 are joysticks that control two working sections. Since it is a single control, it is only entered as a code in the first work section and is omitted from the second.

Example

Q25 - F7SR250 - 103/A15/M1 - 103/M1 - F3D

Only the spool and positioner are indicated in the second working section.

Quando è richiesto anche il cavo C1, è necessario specificarne la lunghezza in entrambe le sezioni.

Esempio

Q25 - F7SR250 - 103/A8-C1x1000-SLA15/M1 - 103/A8-C1x1000/M1 - F3D

When cable C1 is also required, its length must be specified in both sections.

Example

Q25 - F7SR250 - 103/A8-C1x1000-SLA15/M1 - 103/A8-C1x1000/M1 - F3D

Sezione di lavoro

Working section



N1-A1
N1A-A1
N1B-A1

Comando manuale con attivazione del contatto elettrico del microswitch centralizzato.

N1-A1: Per doppio effetto

N1A-A1: Per semplice effetto in pos. 1

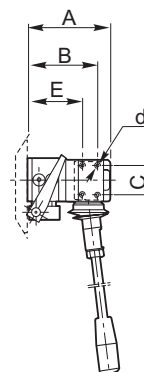
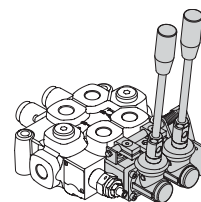
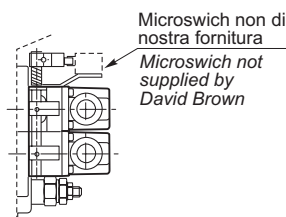
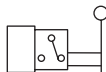
N1B-A1: Per semplice effetto in pos. 2

Hand control with ON-OFF centralized microswitch operation.

N1 -A1: Double acting

N1A-A1: Single acting in 1 position

N1B-A1: Single acting in 2 position



	A	B	C	E	d
Q25 - Q45	70 (2.756)	59	25 (0.984)	49 (1.929)	M4
Q75 - Q95	84 (3.307)	59 (2.323)	25 (0.984)	49 (1.929)	M4

N1-A2
N1A-A2
N1B-A2

Comando manuale ruotato di 180° con attivazione del contatto elettrico del microswitch centralizzato.

N1-A2: Per doppio effetto

N1A-A2: Per semplice effetto in pos. 1

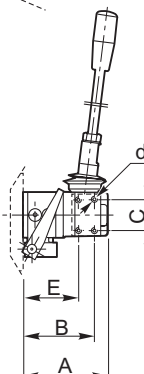
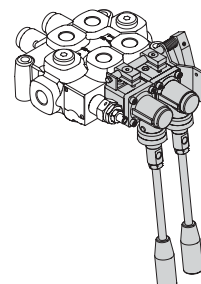
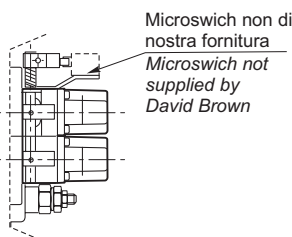
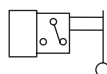
N1B-A2: Per semplice effetto in pos. 2

180° rotated hand control with ON-OFF centralized microswitch operation.

N1-A2: Double acting

N1A-A2: Single acting in 1 position

N1B-A2: Single acting in 2 position



	A	B	C	E	d
Q25 - Q45	70 (2.756)	59	25 (0.984)	49 (1.929)	M4
Q75 - Q95	84 (3.307)	59 (2.323)	25 (0.984)	49 (1.929)	M4

N1-A3
N1A-A3
N1B-A3

Comando microswitch centralizzato.

N1-A3: Per doppio effetto

N1A-A3: Per semplice effetto in pos. 1

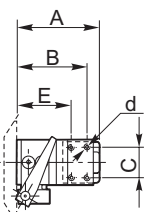
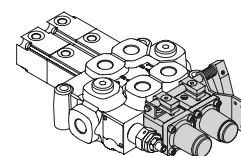
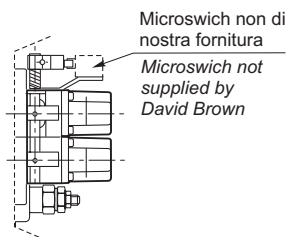
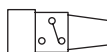
N1B-A3: Per semplice effetto in pos. 2

Centralized microswitch control.

N1-A3: Double acting

N1A-A3: Single acting in 1 position

N1B-A3: Single acting in 2 position

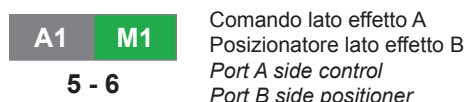


	A	B	C	E	d
Q25 - Q45	70 (2.756)	59	25 (0.984)	49 (1.929)	M4
Q75 - Q95	84 (3.307)	59 (2.323)	25 (0.984)	49 (1.929)	M4



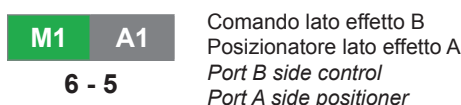
6 - Tipo posizionatore

* La posizione dei campi 5 e 6 si riferisce al comando collocato sul lato effetto A e al posizionatore lato effetto B; se le posizioni sono opposte, invertire i due campi 5 e 6 come da esempio seguente:



6 - Positioner type

* The position of fields 5 and 6 refers to the control located on the A port side and to the positioner on the B port side. If the positions are opposite, invert the two fields 5 and 6 as shown in the example below:



Posizionatori / Positioner

			Q35	Q15	Q25	Q45	Q65	Q75	Q95
M1	Tre posizioni ritorno a molla in pos.0	Three positions spring centred in 0	•	•	•	•	•	•	•
M2	Due posizioni 0-1 ritorno a molla in pos.0	Two positions spring 0-1 centred in 0			•	•	•	•	•
M3	Due posizioni 0-2 ritorno a molla in pos.0	Two positions spring 0-2 centred in 0			•	•	•	•	•
M4(1-2)	Due posizioni estreme ritorno a molla in pos.1	Two end positions spring back in 1	•		•	•	•	•	•
M4(2-1)	Due posizioni estreme ritorno a molla in pos.2	Two end positions spring back in 2	•		•	•	•	•	•
R1	Tre posizioni ritorno a molla in pos.0, detent in pos.1	Three positions spring centred in 0, detent in 1	•		•	•	•	•	•
R2	Tre posizioni ritorno a molla in pos.0, detent in pos.2	Three positions spring centred in 0, detent in 2	•		•	•	•	•	•
R3	Tre posizioni in detent	Three positions detent	•		•	•	•	•	•
R4	Due posizioni in detent 0-1	Two positions detent 0-1			•	•	•	•	•
R5	Due posizioni in detent 0-2	Two positions detent 0-2			•	•	•	•	•
R6	Due posizioni in detent 1-2	Two positions detent 1-2			•	•	•	•	•
R8*	Due posizioni (1 e 2) con ritorno a molla in pos. 0; (3) 4ª posizione flottante con detent. (Da montare con Z1 lato comando e cursore 116)	Two positions (1 and 2) with spring return centred in 0 position. (3) 4th position floating with detent. (Mounting with Z1 side control and spool 116)		•	•	•		•	•
R10/Z1*	Due posizioni (1 e 2) con ritorno a molla in pos. 0, (3) 4ª posizione flottante con detent (da montare con cursore 126)	Two positions (1 and 2) with spring return centred in 0, position (3) 4th position floating with detent (mounting with spool 126)			•	•		•	•
R1K*	Comando a 3 posizioni, detent in pos. 1 con sgancio automatico registrabile. Disponibile solo con cursore cod. 103 e 111	3 Position control, detent in J pos. with automatic adjustable release. Available with spool code 103 and 111 only			•	•		•	•
R2K*	Comando a 3 posizioni, detent in pos. 2 con sgancio automatico registrabile. Disponibile solo con cursore cod. 103 e 111	3 Position control, detent in 2 pos. with automatic adjustable release. Available with spool code 103 and 111 only			•	•		•	•
R3K*	Comando a 3 posizioni, detent in pos. 1 e 2 con sgancio automatico registrabile. Disponibile solo con cursore cod. 103 e 111	3 Position control, detent in 1 and 2 pos. with automatic adjustable release. Available with spool code 103 and 111 only			•	•		•	•
M1-B1	Tre posizioni ritorno a molla in pos.0 con comando microswitch posteriore	Three positions spring centred in 0 with back microswitch control			•	•		•	•
M2-B1	Due posizioni, 0-1, ritorno a molla in pos.0 con comando microswitch posteriore	Two positions 0-1, spring centred in 0 with back microswitch control			•	•		•	•
M3-B1	Due posizioni, 0-2, ritorno a molla in pos. 0 con comando microswitch posteriore	Two positions 0-2, spring centred in 0 with back microswitch control			•	•		•	•
M1-N1 M1-N1A M1-N1B	Tre posizioni ritorno a molla in pos. 0, con attivazione del contatto elettrico del microswitch centralizzato M1-N1: Per doppio effetto M1-N1A: Per semplice effetto in pos 1 M1-N1B: Per semplice effetto in pos 2	Three positions spring centred in 0, with ON-OFF centralized microswitch operation. N1-A1: Double acting N1A-A1: Single acting in 1 position N1B-A1: Single acting in 2 position			•	•		•	•
M2-N1	Due posizioni, 0-1, con ritorno a molla in pos.0, con attivazione del contatto elettrico del microswitch centralizzato	Two positions, 0-1, with spring centred in 0, with ON-OFF centralized microswitch operation			•	•		•	•
M3-N1	Due posizioni, 0-2, con ritorno a molla in pos.0, con attivazione del contatto elettrico del microswitch centralizzato	Two positions, 0-2, with spring centred in 0, with ON-OFF centralized microswitch operation			•	•		•	•

* Limitazioni / Limitations

Posizionatore Positioner	Applicabile con: / Applicable with:	
	Comando / Control	Cursore / Spool
R8	A1/Z1 - A2/Z1 - A4/Z1 - A6/Z1 - A8/Z1	116
R10/Z1	Tutti / All	126
R1K R2K R3K	A1 / A2 / A4 / A5 / A6 / A8 / SL / SLA15 / A15 / A16 / N1-A1 / N1-A2 / N1-A3	103 / 111

Sezione di lavoro

Working section



M1

Tre posizioni ritorno a molla in pos.0
Three positions spring centred in 0



M2

Due posizioni 0-1 ritorno a molla in pos.0
Two positions spring 0-1 centred in 0



M3

Due posizioni 0-2 ritorno a molla in pos.0
Two positions spring 0-2 centred in 0



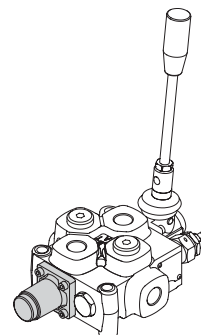
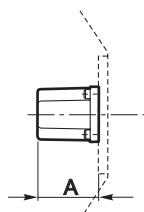
M4 (1-2)

Due posizioni estreme ritorno a molla in pos.1
Two end positions spring back in 1



M4 (2-1)

Due posizioni estreme ritorno a molla in pos.2
Two end positions spring back in 2



	A			
	M1	M2	M3	M4 2-1
Q15	22.5 (0.886)			
Q35	42 (1.654)	42 (1.654)	42 (1.654)	42 (1.654)
Q25 - Q45				
Q65	55 (2.165)	55 (2.165)	55 (2.165)	55 (2.165)
Q75 - Q95				

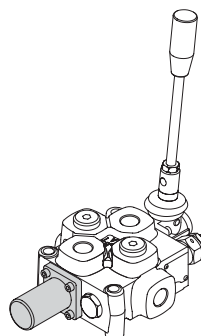
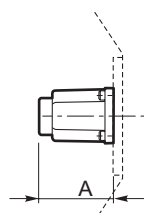
R1

Tre posizioni ritorno a molla in pos.0,
detent in pos.1
Three positions spring centred in 0,
detent in 1



R2

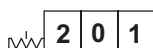
Tre posizioni ritorno a molla in pos.0,
detent in pos.2
Three positions spring centred in 0,
detent in 2



	A	
	R1	R2
Q35	52 (2.047)	54 (2.126)
Q25 - Q45		
Q65	70 (2.756)	68.5 (2.697)
Q75 - Q95		

R3

Tre posizioni in detent
Three positions detent



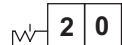
R4

Due posizioni in detent 0-1
Two positions detent 0-1



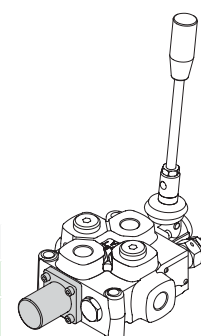
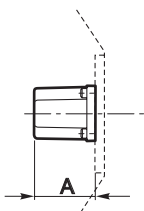
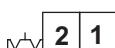
R5

Due posizioni in detent 0-2
Two positions detent 0-2



R6

Due posizioni in detent 1-2
Two positions detent 1-2



	A			
	R3	R4	R5	R6
Q35	42 (1.654)	42 (1.654)	42 (1.654)	42 (1.654)
Q25 - Q45				
Q65	55 (2.165)	55 (2.165)	55 (2.165)	55 (2.165)
Q75 - Q95				

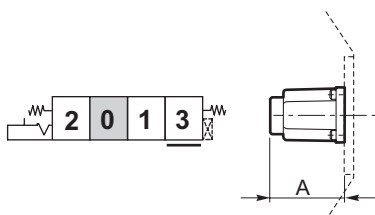
Sezione di lavoro

Working section

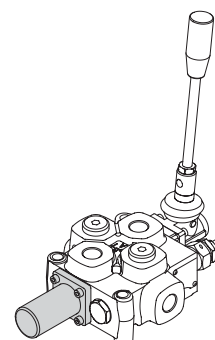
Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9

R8

Due posizioni (1 e 2) con ritorno a molla in pos. 0;
(3) 4ª posizione flottante con detent.
(Da montare con Z1 lato comando e cursore 116)
*Two positions (1 and 2) with spring return centred in 0 position.
(3) 4th position floating with detent.
(Mounting with Z1 side control and spool 116)*

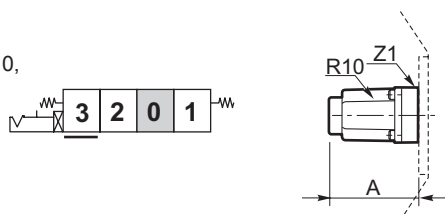


	A
Q15	43 (1.693)
Q25 - Q45	56.5 (2.224)
Q65 Q75 - Q95	75 (2.953)

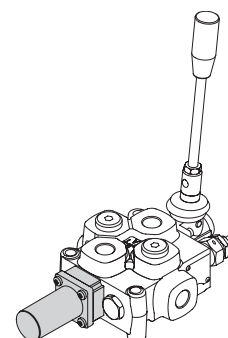


R10/Z1

Due posizioni (1 e 2) con ritorno a molla in pos. 0,
(3) 4ª posizione flottante con detent
(Da montare cursore 126)
*Two positions (1 and 2) with spring return centred in 0 position
(3) 4th position floating with detent.
(Mounting with spool 126)*

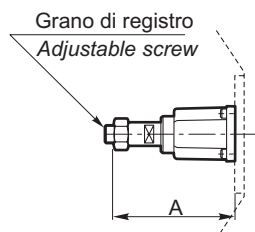
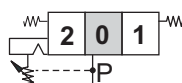


	A
Q25 - Q45	70 (2.756)
Q75 - Q95	92 (3.622)



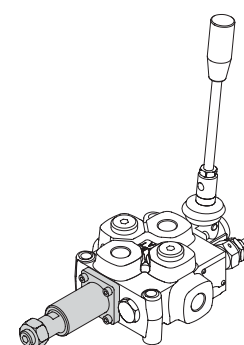
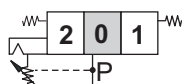
R1K

Comando a 3 posizioni, detent in pos. 1
con sgancio automatico registrabile.
Disponibile solo con cursore cod. 103 e 111
*3 Position control, detent in 1 pos.
with automatic adjustable release.
Available with spool code 103 and 111 only*



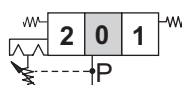
R2K

Comando a 3 posizioni, detent in pos. 2
con sgancio automatico registrabile.
Disponibile solo con cursore cod. 103 e 111
*3 Position control, detent in 2 pos.
with automatic adjustable release.
Available with spool code 103 and 111 only*



R3K

Comando a 3 posizioni, detent in pos. 1 e 2
con sgancio automatico registrabile.
Disponibile solo con cursore cod. 103 e 111
*3 Position control, detent in 1 and 2 pos.
with automatic adjustable release.
Available with spool code 103 and 111 only*



	A		
	R1K	R2K	R3K
Q25 - Q45	91.5 (3.602)	91.5 (3.602)	91.5 (3.602)
Q75 - Q95	106 (4.173)	106 (4.173)	106 (4.173)

Sezione di lavoro

Working section



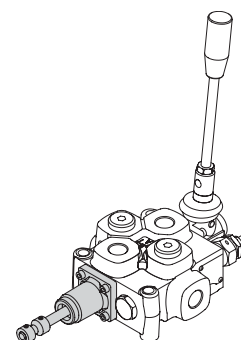
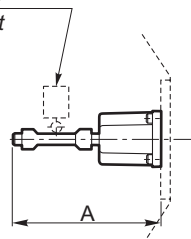
M1-B1

Tre posizioni ritorno a molla in pos.0
con comando microswitch posteriore
*Three positions spring centred in 0
with back microswitch control*



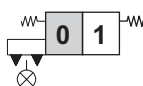
Microswitch non di
nostra fornitura

*Microswitch not
supplied by
David Brown*



M2-B1

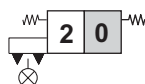
Due posizioni, 0-1, ritorno a molla in pos.0
con comando microswitch posteriore
*Two positions, 0-1, spring centred in 0
with back microswitch control*



	A		
	M1-B1	M2-B1	M3-B1
Q25 - Q45	82 (3.228)	82 (3.228)	82 (3.228)
Q75 - Q95	102 (4.016)	102 (4.016)	102 (4.016)

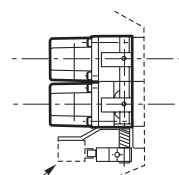
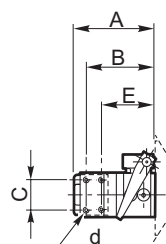
M3-B1

Due posizioni, 0-2, ritorno a molla in pos. 0
con comando microswitch posteriore
*Two positions, 0-2, spring centred in 0
with back microswitch control*

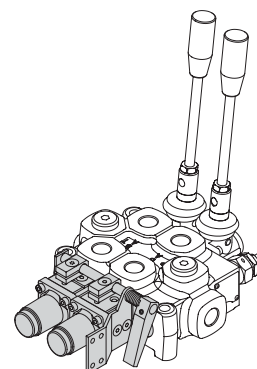


M1-N1
M1-N1A
M1-N1B

Tre posizioni ritorno a molla in pos. 0,
con attivazione del contatto elettrico
del microswitch centralizzato
M1-N1: Per doppio effetto
M1-N1A: Per semplice effetto in pos 1
M1-N1B: Per semplice effetto in pos 2
*Three positions spring centred in 0,
with ON-OFF centralized microswitch operation.*
N1-A1: Double acting
N1A-A1: Single acting in 1 position
N1B-A1: Single acting in 2 position

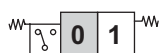


Microswitch non di
nostra fornitura
*Microswitch not
supplied by
David Brown*



M2-N1

Due posizioni, 0-1, con ritorno a molla
in pos.0, con attivazione del contatto elettrico
del microswitch centralizzato
*Two positions, 0-1, with spring centred in 0,
with ON-OFF centralized microswitch operation*



M3-N1

Due posizioni, 0-2, con ritorno a molla
in pos.0, con attivazione del contatto elettrico
del microswitch centralizzato
*Two positions, 0-2, with spring centred in 0,
with ON-OFF centralized microswitch operation*



	A	B	C	E	d
Q25 - Q45	70 (2.756)	59 (2.323)	25 (0.984)	49 (1.929)	M4
Q75 - Q95	84 (3.307)				

Sezione di lavoro						Working section			
Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9

Comandi con posizionamento / Controls with positioning

		Q35	Q25	Q45	Q75	Q95
M1-U1*	Tre posizioni con ritorno a molla in pos.0, attacco diretto sul cursore per rinvio a distanza rigido		•	•	•	•
M2-U1*	Due posizioni, 0-1, con ritorno a molla in pos.0, attacco diretto sul cursore per rinvio a distanza rigido		•	•	•	•
M3-U1*	Due posizioni, 0-2, con ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza rigido		•	•	•	•
M1-U2*	Tre posizioni con ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza con cavo flessibile		•	•	•	•
M2-U2*	Due posizioni, 0-1, ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza con cavo flessibile		•	•	•	•
M3-U2*	Due posizioni, 0-2, ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza con cavo flessibile		•	•	•	•
D2*	Comando elettroidraulico doppio con ritorno in pos. 0				•	•
P1-N*	Comando pneumatico		•	•	•	•
P1-NP*	Comando pneumatico progressivo		•	•	•	•
D3*	Comando elettropneumatico		•	•	•	•

* Limitazioni / Limitations

Posizionatore Positioner	Applicabile con: / Applicable with:	
	Comando / Control	Cursore / Spool
M1-U1 M2-U1 M3-U1 M1-U2 M2-U2 M3-U2 D2 P1-N P1-NP D3	A1 / A2 / A3 / A4 / A6 / A8	Tutti tranne 116 e 126 All except 116 and 126

Sezione di lavoro

Working section



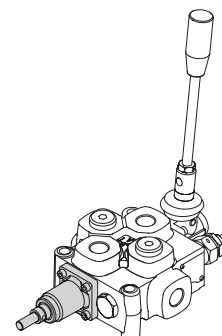
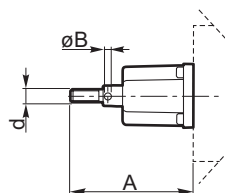
M1-U1

Tre posizioni con ritorno a molla in pos.0,
attacco diretto sul cursore
per rinvio a distanza rigido
*Three positions spring centred in 0,
with direct control connection on spool,
cap side, for stiff remote control*



M2-U1

Due posizioni, 0-1, con ritorno a molla in pos.0,
attacco diretto sul cursore
per rinvio a distanza rigido
*Two positions, 0-1, spring centred in 0,
with direct control connection on spool,
cap side, for stiff remote control*



M3-U1

Due posizioni, 0-2, con ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza rigido
*Two positions, 0-2, spring centred in 0,
with direct control connection on spool,
cap side, for stiff remote control*



	A	B	d
Q25 - Q45	73 (2.874)	4 (0.157)	M8
Q75 - Q95	96 (3.780)	5 (0.197)	M10

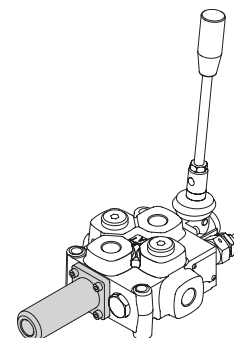
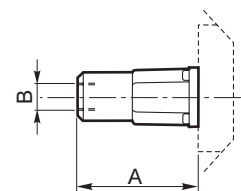
M1-U2

Tre posizioni con ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza con cavo flessibile
*Three positions spring centred in 0,
direct control connection on spool,
cap side, for flexible remote control*



M2-U2

Due posizioni, 0-1, ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza con cavo flessibile
*Two positions, 0-1, spring centred in 0,
direct control connection on spool,
cap side, for flexible remote control*



M3-U2

Due posizioni, 0-2, ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza con cavo flessibile
*Two positions, 0-2, spring centred in 0,
direct control connection on spool,
cap side, for flexible remote control*



	A	B
Q25 - Q45	73 (2.874)	M16X1.5
Q75 - Q95	77 (3.031)	

Sezione di lavoro

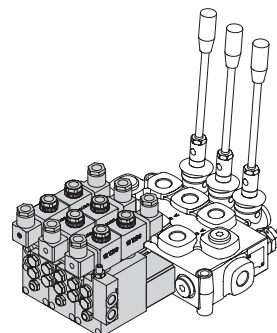
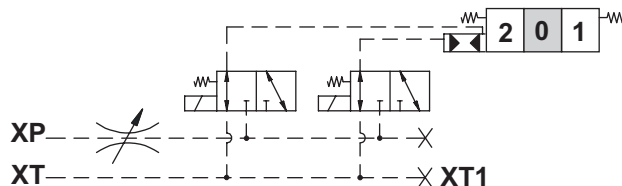
Working section



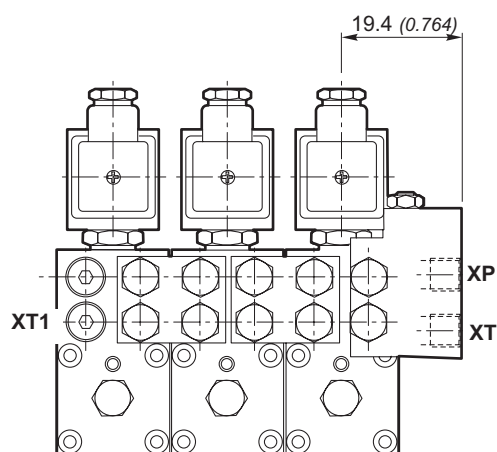
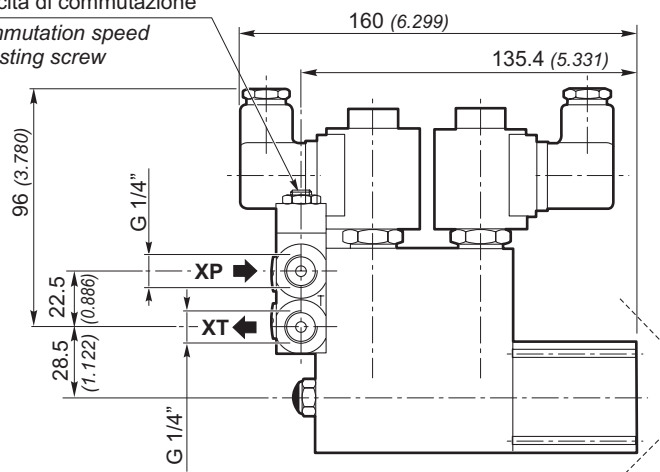
D2

Solo per Q75 e Q95
Only for Q75 and Q95

Comando elettroidraulico doppio
con ritorno in pos. 0
Double electro-hydraulic
control spring centred in 0



Vite di regolazione
velocità di commutazione
Commutation speed
adjusting screw



Codice: D2-2R per elementi successivi
Code: D2-2R for the following elements

Codice: D2-1R per il 1° elemento
Code: D2-1R for the 1° elements

Pressione di pilotaggio in XP Pilot pressure in XP		Contropressione max. su XT Maximum back pressure on XT	Portata minima per ogni elemento Minimum flow for each section	Volume di pilotaggio per elemento Piloting volume for each section
Max.	Min.	4 bar (56 PSI)	0.5 lt/min (0.132 GPM)	5.5 cm ³ (0.336 in ³)
35 bar (490 PSI)	20 bar (280 PSI)			

Caratteristiche tecniche elettromagnete tipo "H" / Electromagnet characteristics type "H"

Attacco magnete / Magnet connection	Tipo DIN 43650 (versione A) / Type DIN 43650 (A version)
Tipo di protezione / Protection type	IP 65
Classe d'isolamento / Coil insulation class	H 180 VDE 0580
Tensione di alimentazione / Supply voltage	D.C.: 12, 24V A.C. - 50 Hz: 110, 220 V
Variazione di tensione max. / Maximum voltage tolerance	± 10%
Potenza assorbita / Absorbed power supply	18 W
Rapporto di max. utilizzo / Maximum utilization ratio	100%
Temperatura max. / Max. temperature	100° C

Dimensioni in / Dimensions in: mm (inch)

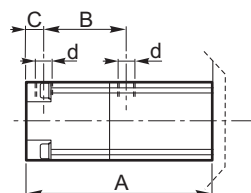
Sezione di lavoro

Working section

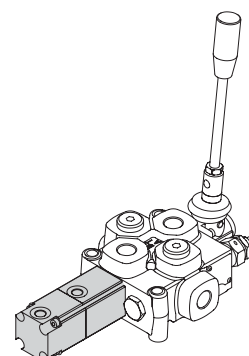


P1-N

Comando pneumatico a tre posizioni con ritorno in pos. 0
Three positions pneumatic control, spring centred in 0



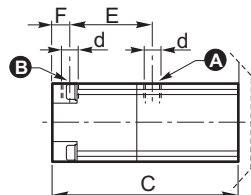
	A	B	C	d
Q25 - Q45	90.5 (3.563)	43 (1.693)	10 (0.394)	G 1/8"
Q75 - Q95	107 (4.213)	48 (1.890)	10.5 (0.413)	



Pressione di pilotaggio / Pilot pressure	Min.	5 bar (72.5 PSI)
	Max.	30 bar (435 PSI)
Volume pilotaggio / Pilot volume	Q25-Q45	4 cm ³ (0.244 in ³)
	Q75-Q95	9 cm ³ (0.549 in ³)

P1-NP

Comando pneumatico progressivo a tre posizioni con ritorno in posizione 0 per azionamento con manipolatore
Three positions progressive pneumatic control, spring centred in 0 for remote control



	C	E	F	d
Q25 - Q45	90.5 (3.563)	43 (1.693)	10 (0.394)	G 1/8"
Q75 - Q95	107 (4.213)	48 (1.890)	10.5 (0.413)	

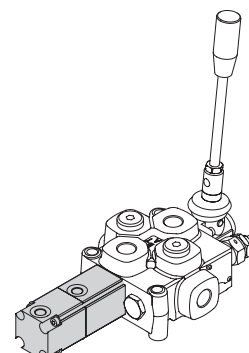
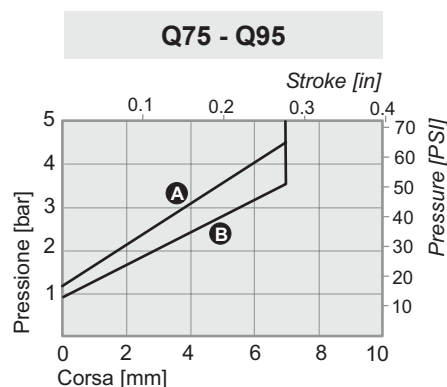
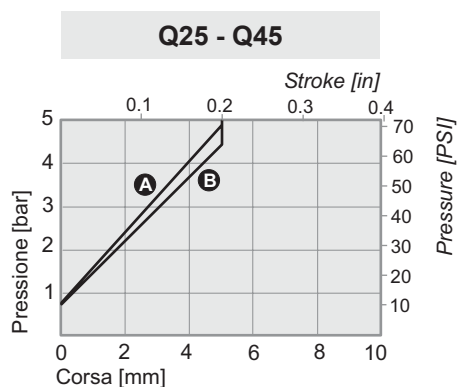


Diagramma pressione di pilotaggio - Corsa spool / Pilot pressure diagram - Spool stroke



Pressione di pilotaggio / Pilot pressure	Min.	5 bar (72.5 PSI)
	Max.	30 bar (435 PSI)
Volume pilotaggio / Pilot volume	Q25-Q45	4 cm ³ (0.244 in ³)
	Q75-Q95	9 cm ³ (0.549 in ³)

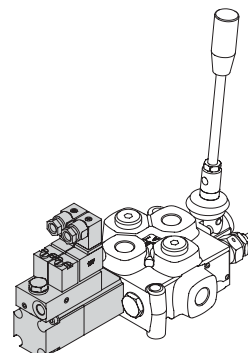
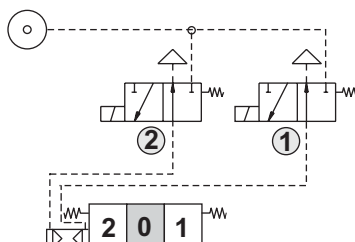
Sezione di lavoro

Working section

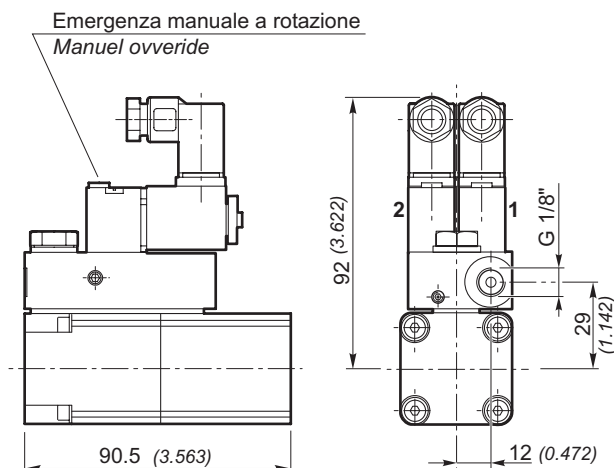


D3

Comando elettropneumatico a tre posizioni con ritorno in pos. 0
Three positions electro-pneumatic control, spring centred in 0



Q25 - Q45



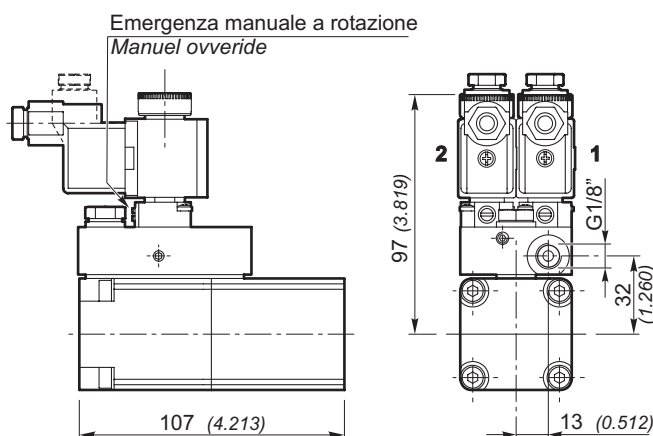
Caratteristiche di funzionamento Operation characteristics

Pressione di pilotaggio <i>Pilot pressure</i>	1 ÷ 10 bar (14.5 ÷ 145 PSI)
Volume pilotaggio <i>Pilot volume</i>	27NI/ a 6 bar Δpl (27NI/ a 87 PSI Δpl)

Caratteristiche tecniche elettromagnete Electromagnet characteristics

Tipo attacco magnete <i>Magnet connection type</i>	DIN 175301-803-C
Tipo di protezione <i>Protection type</i>	IP 65
Classe d'isolamento <i>Coil insulation class</i>	F
Tensione di alimentazione <i>Supply voltage</i>	D.C.: 12, 24V A.C.: 50 Hz 230 V
Variazione di tensione max. <i>Maximum voltage tolerance</i>	± 10%
Potenza assorbita <i>Absorbed power supply</i>	D.C.: 2.9 W A.C. 4VA
Rapporto di max. utilizzo <i>Maximum utilization ratio</i>	100%
Temperatura max. <i>Max. temperature</i>	-10 ÷ 50 °C

Q75 - Q95



Caratteristiche di funzionamento Operation characteristics

Pressione di pilotaggio <i>Pilot pressure</i>	1 ÷ 10 bar (14.5 ÷ 145 PSI)
Volume pilotaggio <i>Pilot volume</i>	53NI/ a 6 bar Δpl (53NI/ a 87 PSI Δpl)

Caratteristiche tecniche elettromagnete Electromagnet characteristics

Tipo attacco magnete <i>Magnet connection type</i>	DIN 43650
Tipo di protezione <i>Protection type</i>	IP 65
Classe d'isolamento <i>Coil insulation class</i>	F
Tensione di alimentazione <i>Supply voltage</i>	D.C.: 12, 24V
Variazione di tensione max. <i>Maximum voltage tolerance</i>	± 10%
Potenza assorbita <i>Absorbed power supply</i>	D.C.: 5 W
Rapporto di max. utilizzo <i>Maximum utilization ratio</i>	100%
Temperatura max. <i>Max. temperature</i>	-10 ÷ 50 °C

Sezione di lavoro					Working section			
Q25	F7S	R250	2x	103	H1	F3D	12V	2E
1	2	3		4	5	7	8	9

Comandi completi / Complete controls

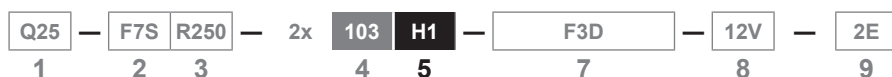
			Q35	Q25	Q45	Q75	Q95
H1*	Comando idraulico ad alta pressione ON-OFF a tre posizioni, ritorno a molla in posizione 0	Three positions with high-pressure hydraulic control, spring centered in 0 position		•	•	•	•
H5*	Comando idraulico a bassa pressione per manipolatore idraulico	Low pressure hydraulic control for hydraulic pilot valves		•	•	•	•
RTL-s*	Comando rotativo frizionato a tre posizioni: tacca in pos. 0, leva in pos. 2	3-position clutch-operated rotary control: notch mark in pos. 0, lever in pos. 2		•	•	•	•
RTL-d*	Comando rotativo frizionato a tre posizioni: tacca in pos. 0, leva in pos. 1	3-position clutch-operated rotary control: detent in pos. 0, lever in pos. 1		•	•	•	•
C2*	Comando a camme 2 posizioni estreme 1-2, ritorno a molla in pos. 1	Cam control, 2 end positions 1-2, spring centered in 1 position		•	•	•	•
C3*	Comando a camme 2 posizioni estreme 2-1, ritorno a molla in pos. 2	Cam control, 2 end positions 2-1, spring centered in 2 position		•	•	•	•
A1/D41*	Comando elettrico diretto doppio, ritorno a molla in pos. 0	Double direct electrical control with spring centred in 0		•	•	•	•
A2/D41*	Comando elettrico diretto doppio con leva ruotata, ritorno a molla in pos. 0	180° rotated double direct electrical control with spring centred in 0		•	•	•	•
A1/DP*	Comando elettrico diretto doppio, ritorno a molla in pos. 0	Double direct electrical control with spring centred in 0		•	•	•	•
A2/DP*	Comando elettrico diretto doppio, ritorno a molla in pos. 0	Double direct electrical control with spring centred in 0		•	•	•	•
D9*	Comando elettrico diretto a due magneti con ritorno a molla in pos. 0	Double direct electrical control with spring centred in 0		•	•	•	•

* Limitazioni / Limitations

Comando completo Complete control	Applicabile con: / Applicable with:
	Cursore / Spool
H1	Tutti tranne / All except 116 / 126
H5	
RTL-s	
RTL-d	
C2	
C3	
A1/D41	101 / 102 / 103 / 107 / 108 / 109 / 110 / 111
A2/D41	
A1/DP	
A2/DP	
D9	

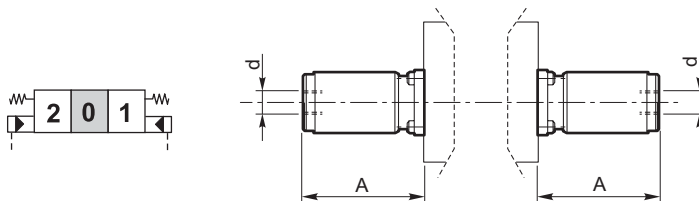
Sezione di lavoro

Working section

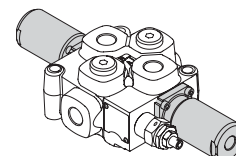


H1

Comando idraulico ad alta pressione ON-OFF a tre posizioni, ritorno a molla in posizione 0
Three positions whit high-pressure hydraulic control, spring centred in 0 position



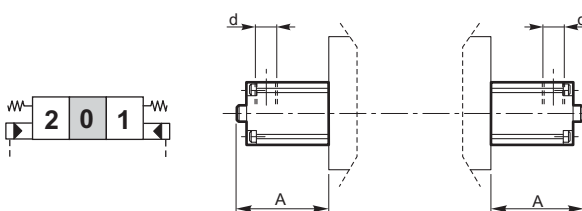
	A	d
Q25 - Q45	70 (2.756)	G 1/4
Q75 - Q95	85 (3.346)	



Pressione di pilotaggio / Pilot pressure	Min.	16 bar (232 PSI)
	Max.	350 bar (5075 PSI)
Volume pilotaggio / Pilot volume	Q25-Q45	2 cm ³ (0.122 in ³)
	Q75-Q95	3 cm ³ (0.183 in ³)

H5

Comando idraulico a bassa pressione a tre posizioni per manipolatore idraulico, ritorno a molla in posizione 0
Three positions whit low-pressure control for hydraulic remote control, spring centred in 0 position



	A	d
Q25 - Q45	50 (1.969)	G 1/4
Q75 - Q95	71.5 (2.815)	

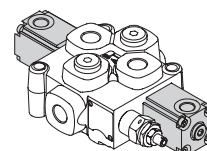
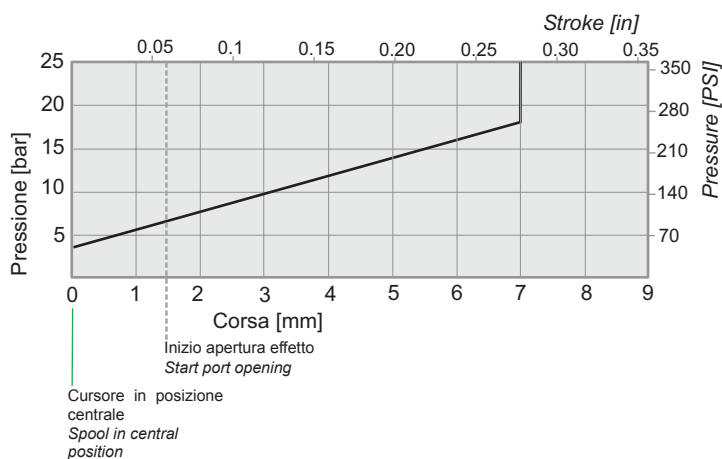
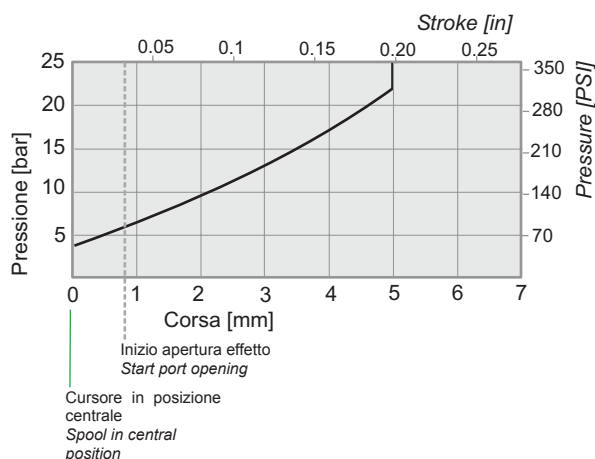


Diagramma pressione di pilotaggio - Corsa spool / Pilot pressure diagram - Spool stroke

Q25 - Q45

Q75 - Q95

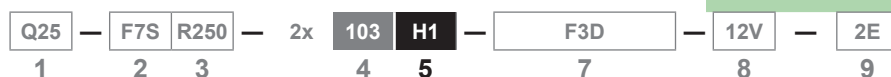


Pressione di pilotaggio / Pilot pressure	Max.	100 bar (1450 PSI)
	Q25-Q45	2 cm ³ (0.122 in ³)
Volume pilotaggio / Pilot volume	Q75-Q95	39 cm ³ (2.379 in ³)

N.B.
Le curve sono ricavate con cursore 103
NOTE: The curves are formed with spool 103 type

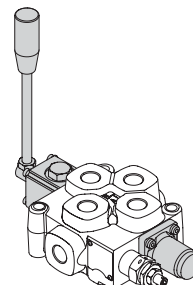
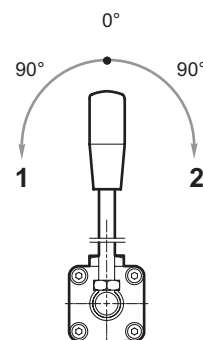
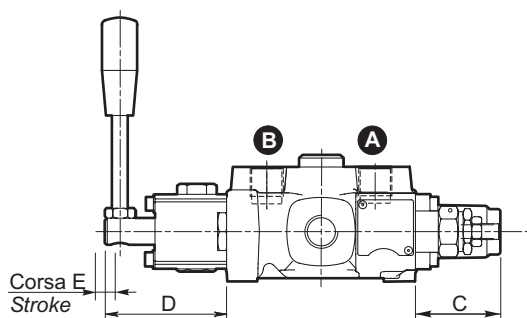
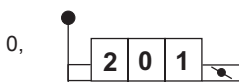
Sezione di lavoro

Working section



RTL-s

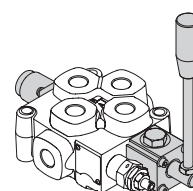
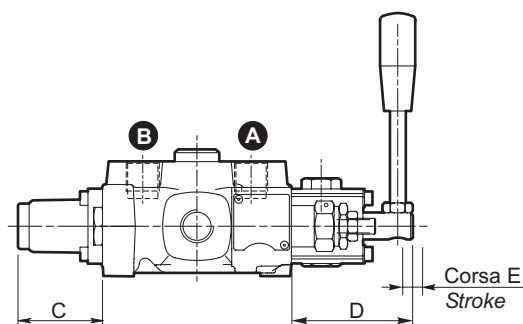
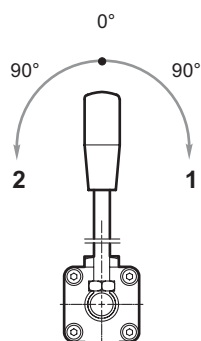
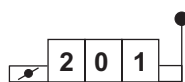
Tre posizioni con comando
rotativo frizionato, tacca in pos. 0,
leva in pos. 2
*Three positions with
rotary control, lever in 2 position*



	C	D	E
Q25 - Q45	42 (1.654)	61 (2.402)	10 (5+5) 0.394 (0.197+0.197)
Q75 - Q95	55 (2.165)	72.5 (2.854)	14 (7+7) 0.551 (0.276+ 0.276)

RTL-d

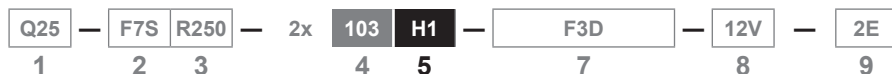
Tre posizioni con comando
rotativo frizionato, tacca in pos. 0,
leva in pos. 1
*Three positions with
rotary control, lever in 1 position*



	C	D	E
Q25 - Q45	42 (1.654)	61 (2.402)	10 (5+5) 0.394 (0.197+0.197)
Q75 - Q95	55 (2.165)	72.5 (2.854)	14 (7+7) 0.551 (0.276+ 0.276)

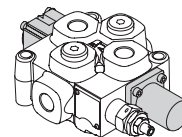
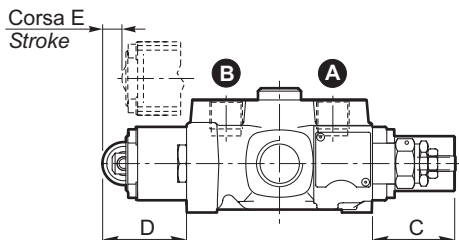
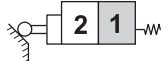
Sezione di lavoro

Working section



C2

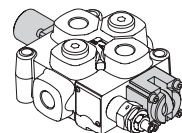
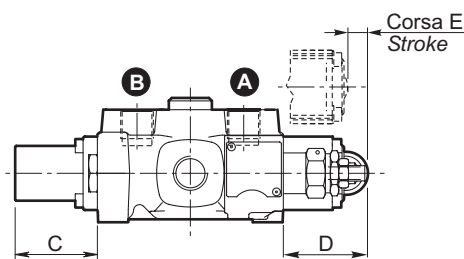
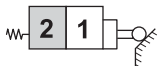
Comando a camme 2 posizioni
estreme 1-2, con ritorno
a molla in pos. 1
*Cam control, 2 end
positions 1-2, spring
centred in 1 position*



	C	D	E
Q25 - Q45	42 (1.654)	43 (1.693)	10 (0.394)
Q75 - Q95	55 (2.165)	51 (2.008)	14 (0.551)

C3

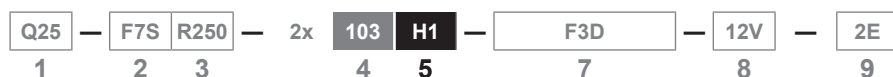
Comando a camme, 2 posizioni
estreme 2-1, con ritorno
a molla in pos. 2
*Cam control, 2 end
positions 2-1,
spring centred in 2 position*



	C	D	E
Q25 - Q45	42 (1.654)	43 (1.693)	10 (0.394)
Q75 - Q95	55 (2.165)	51 (2.008)	14 (0.551)

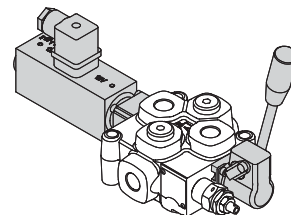
Sezione di lavoro

Working section



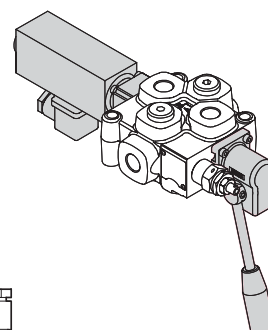
A1/D41

Comando elettrico diretto doppio ON/OFF
con ritorno a molla in posizione 0
*ON/OFF double direct electrical control
with spring centred in 0*

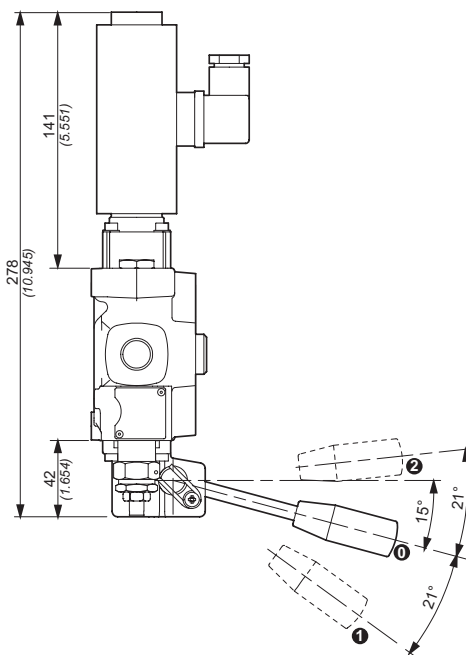
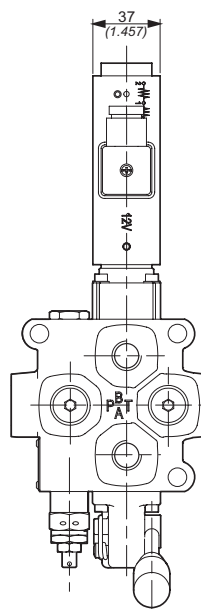


A2/D41

Comando elettrico diretto doppio ON/OFF
ruotato di 180° con ritorno a molla in posizione 0
*180° rotated ON/OFF double direct electrical
control with spring centred in 0*

Connessione
Connection

	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q25	Q45
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	12V D.C./24V D.C.	
Variazione di tensione max / Maximum voltage tolerance	±10%	
Potenza assorbita / Absorbed power supply	58W	
Rapporto di massimo utilizzo / Maximum utilization ratio	100%	

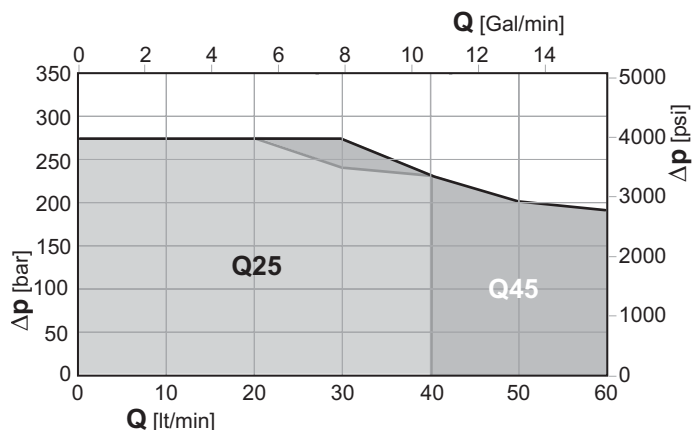
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max (lt/min) / Max. flow (Gal/min)	50 (13)	60 (16)
Pressione max di lavoro / Max. working pressure	275 bar (3988 PSI)	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar (3363 PSI)	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	Con leva / With lever	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s Max. spool leakage of A and B ports to T port at 1450 PSI with viscosity 35 mm²/s	5 cm³/min	

Sezione di lavoro

Working section

Limiti d'impiego / Use limits

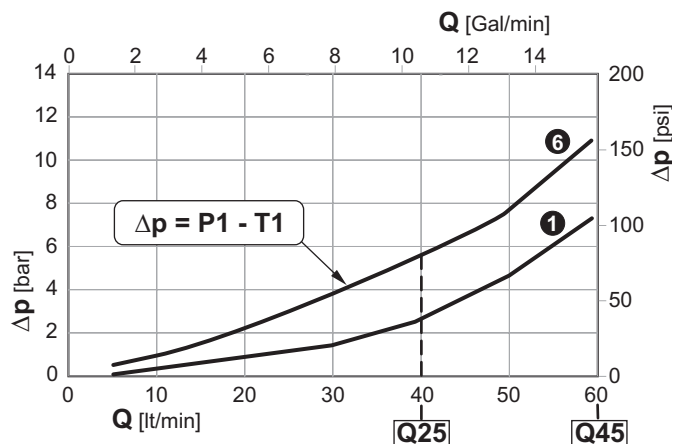
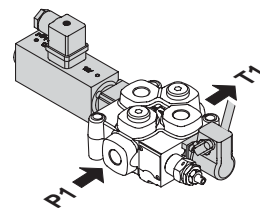


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

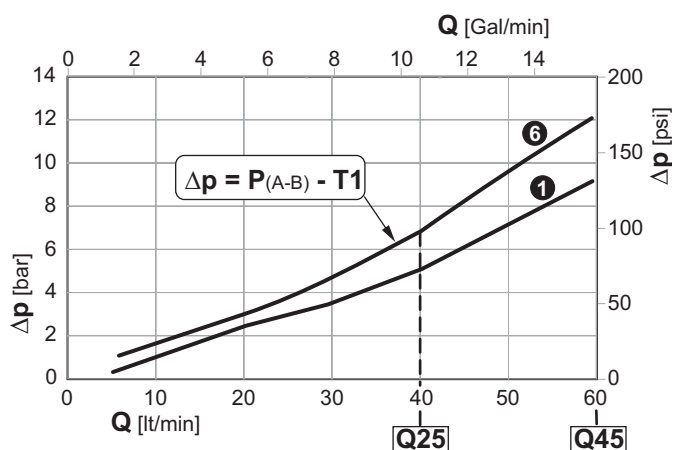
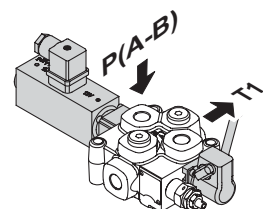
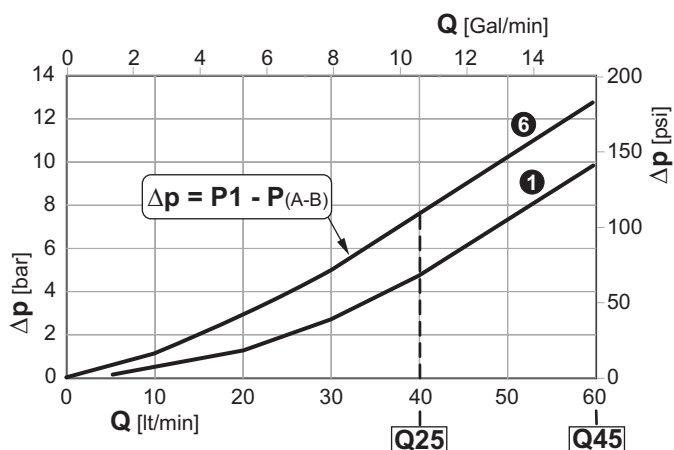
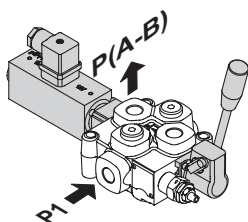


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)

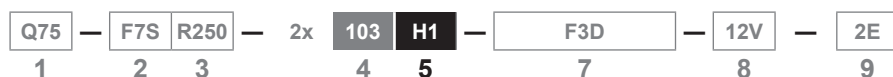


1 6 Sezioni / Sections

N.B. Le curve sono ricavate con cursore 103 / NOTE. Performance curves measured using spool 103 type.

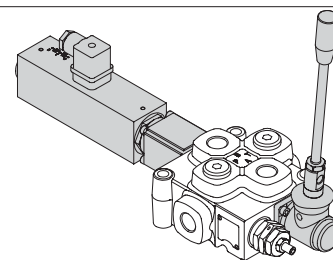
Sezione di lavoro

Working section



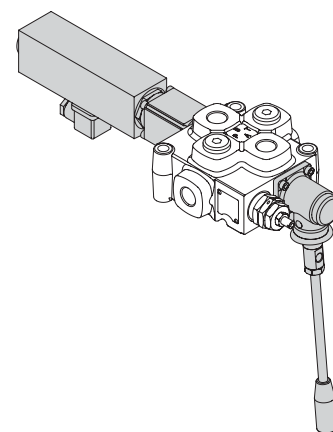
A1/D41

Comando elettrico diretto doppio ON/OFF
con ritorno a molla in posizione 0
*ON/OFF double direct electrical control
with spring centred in 0*

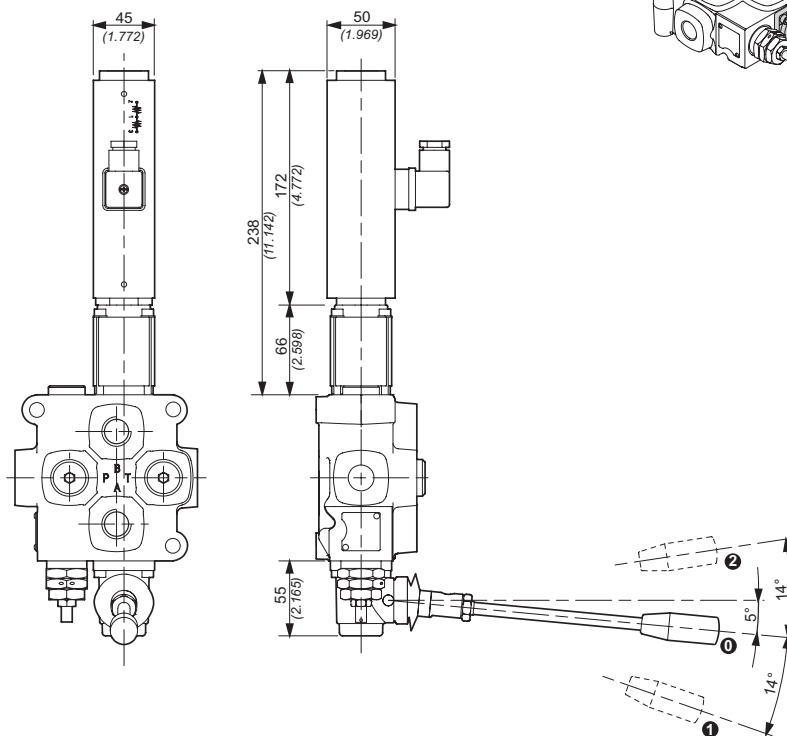


A2/D41

Comando elettrico diretto doppio ON/OFF
ruotato di 180° con ritorno a molla in posizione 0
*180° rotated ON/OFF double direct electrical
control with spring centred in 0*

Connessione
Connection

	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q75	Q95
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	12V D.C./24V D.C.	
Variazione di tensione max / Maximum voltage tolerance	±10%	
Potenza assorbita / Absorbed power supply	80W	
Rapporto di massimo utilizzo / Maximum utilization ratio	100%	

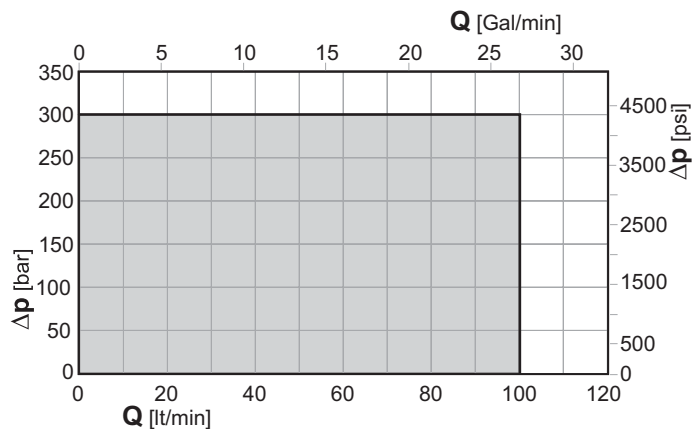
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max (lt/min) / Max. flow (Gal/min)	90 (24)	120 (32)
Pressione max di lavoro / Max. working pressure	300 bar	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	Con leva / With lever	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s Max. spool leakage of A and B ports to T port at 1450 bar with viscosity 35 mm²/s	5 cm³/min	

Sezione di lavoro

Working section

Limiti d'impiego / Use limits

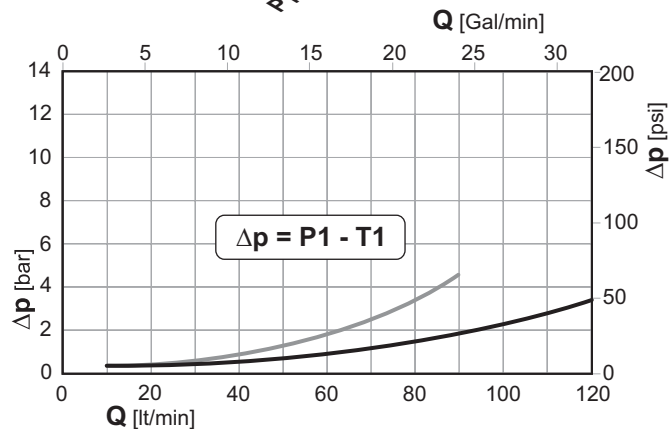
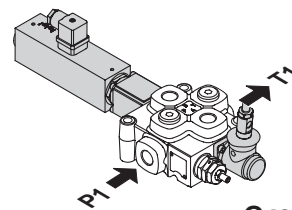


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

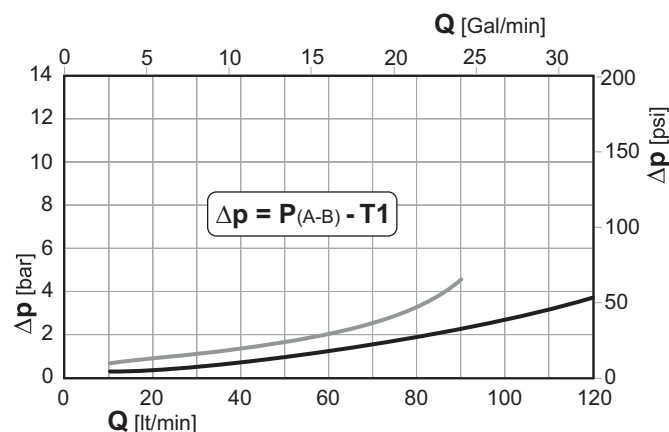
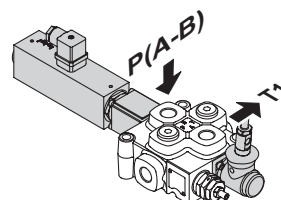
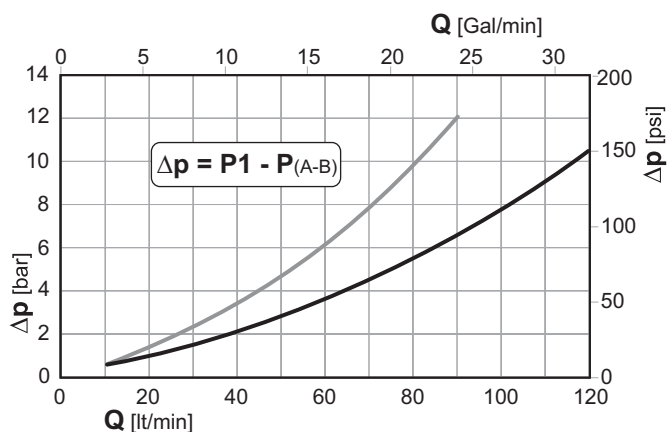
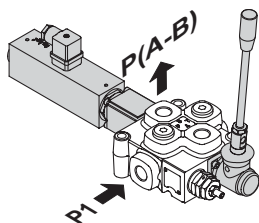


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



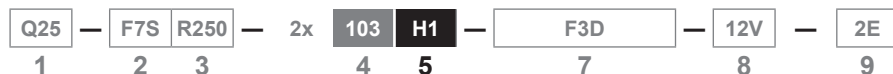
— 1 Elemento Q95 / 1 section Q95

- - - 1 Elemento Q75 / 1 section Q75

N.B. Le curve sono ricavate con cursore 103 / NOTE. Performance curves measured using spool 103 type.

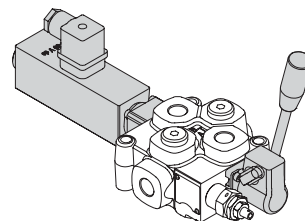
Sezione di lavoro

Working section



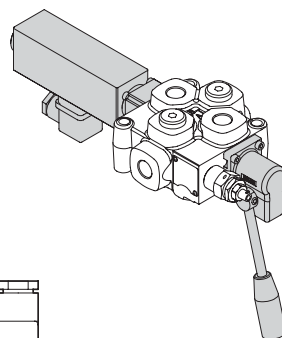
A1/DP

Comando elettrico diretto doppio con magnete
proporzionale e ritorno a molla in posizione 0
*Double direct electrical control with
proportional solenoid and spring centred in 0*

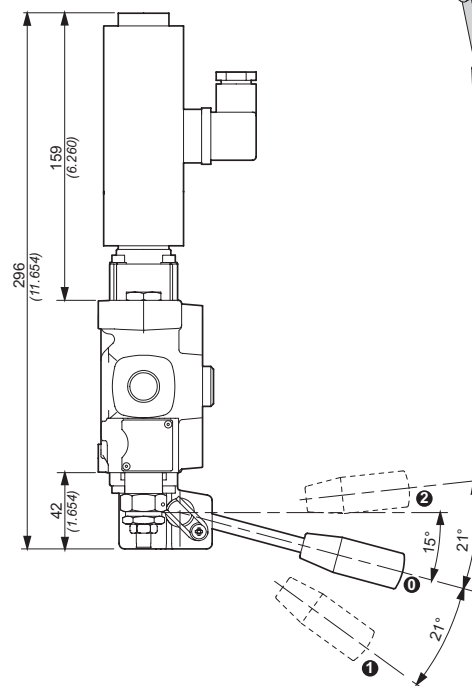
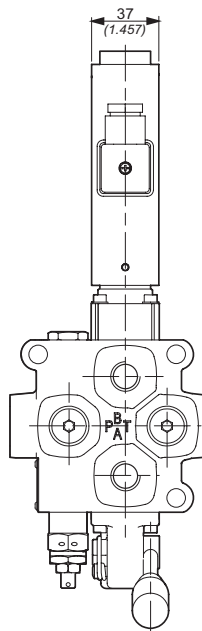


A2/DP

Comando elettrico diretto doppio con magnete
proporzionale ruotato di 180° e ritorno a
molla in posizione 0
*180° rotated double direct electrical control
with proportional solenoid and spring centred in 0*

Connessione
Connection

	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q25	Q45
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	da 10 a 30V (con controllo di corrente) / (with current control)	
Corrente di regolazione / Current range	1 ÷ 7 A	
Rapporto d'inserzione / Related of insertion	100%	

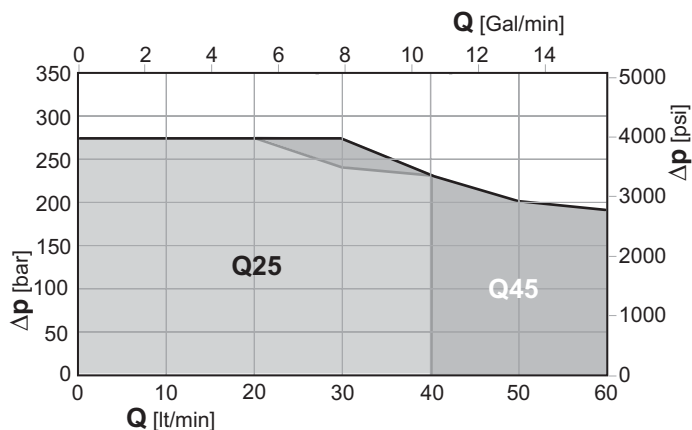
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max (lt/min) / Max. flow (Gal/min)	50 (13)	60 (16)
Pressione max di lavoro / Max. working pressure	275 bar	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	Con leva / With lever	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s Max. spool leakage of A and B ports to T port at 1450 bar with viscosity 35 mm²/s	5 cm³/min	

Sezione di lavoro

Working section

Limiti d'impiego / Use limits

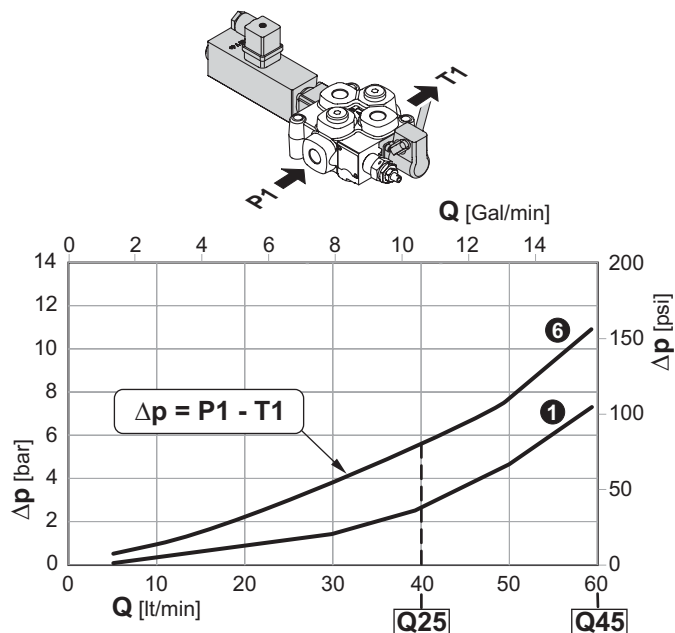


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

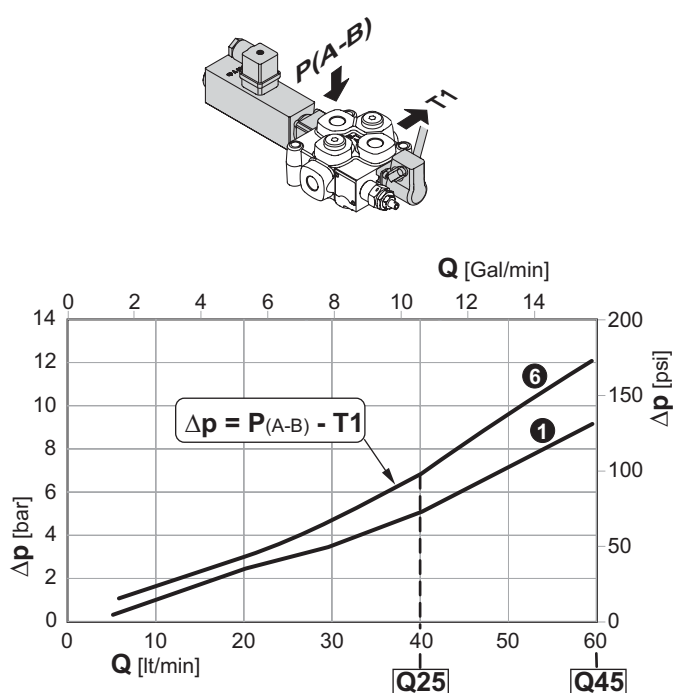
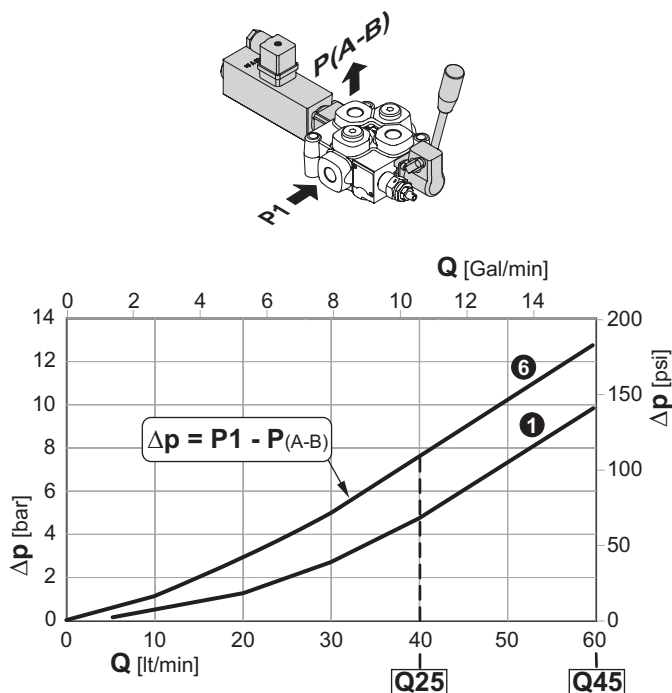


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



① ⑥ Sezioni / Sections

N.B. Le curve sono ricavate con cursore 103 / NOTE. Performance curves measured using spool 103 type.

Scheda elettronica SGM-05

Electronic board SGM-05

Descrizione

La scheda SGM-05 è equipaggiata di n° 12 uscite pilotate in corrente con regolazione PWM. Tali uscite sono da intendersi per movimenti a due a due antagonisti, più altre tre uscite per carichi ON/OFF.

È dotata altresì di 6 ingressi proporzionali con tensione di riposo di 2.5V adatti ad essere collegati ad altrettanti joysticks tipo JOYS-100. La contemporaneità massime dei comandi proporzionali è pari a tre. Sono a disposizione 4 ulteriori ingressi logici per funzioni di discriminazione di eventi e situazioni.

Applicazioni

La scheda SGM-05 è studiata per il controllo di distributore idraulico Hydreco dotato d'elettromagneti sia proporzionali che ON/OFF, gli ingressi sono direttamente collegabili ai joysticks della postazione remota.

Esempi:

- A. Elettrodistributore con valvole/elettromagneti direzionali ON-OFF-ON ed elettrovalvola proporzionale in mandata. Al primo azionamento di uno dei joysticks s'inserisce la relativa valvola direzionale e conseguentemente viene pilotata la valvola proporzionale. Viene consentita una sola manovra per volta.
- B. Distributore con comando elettromagnetico proporzionale delle spole. Si rendono disponibili 6+6 uscite proporzionali tramite le quali è possibile comandare anche tre movimenti proporzionali contemporaneamente.

Funzionamento

La disponibilità d'ulteriori ingressi ON/OFF oltre ai sei proporzionali dei joysticks, danno la possibilità alla scheda di ricevere comandi, al fine di discriminare situazioni (blocco momento, appoggio stabilizzatori, ecc.) operando di conseguenza (blocco selettivo delle funzioni, riduzione velocità, ecc.).

Per le applicazioni tipo "A" è possibile avere la versione con "risparmio di corrente" sui carichi ON/OFF.

Tarature e configurazioni

La regolazione dei valori di corrente I_{min} ed I_{max} per le varie manovre e la configurazione delle funzioni degli ingressi digitali avviene tramite un tastierino esterno, da collegarsi ad apposito connettore, che agevola tra l'altro la duplicazione delle impostazioni per produzioni di serie di macchine.

A richiesta viene fornito un software per PC e una piccola interfaccia per semplificare, archiviare e richiamare le tarature.

Description

The card SGM-05 is equipped with 12 output signals with PWM mode current regulation. These outputs are designed for two by two opposing movements, and there are other three outputs for ON/OFF type load.

It also has 6 proportional inputs with 2.5V idle position voltage, suitable for connection to an equal number of joysticks of the JOYS-100 type. Maximum four proportional controls can be used at the same time. 4 more logic inputs are available for functions that discriminate events and situations.

Applications

The SGM-05 card has been designed for controlling Hydreco proportional and ON/OFFG hydraulic directional control valves equipped with electromagnets. The inputs can be connected directly to the joysticks of the remote station.

Examples:

- A. Electro-control valve with ON-OFF-ON directional valves/electromagnets and proportional solenoid valve on the delivery side. The directional valve is activated as soon as one of the joysticks is operated and this consequently pilots the proportional valve. One single manoeuvre can be carried out at a time.
- B. Control valve with proportional electromagnetic control of the spools. 6+6 proportional outputs become available and can be used to control up to four proportional movements at the same time.

Operation

Besides the six proportional inputs of the joysticks, further ON/OFF inputs allow the board to receive controls so as to discriminate situations (blocking of the boom, stabilizer positioning, etc.) and operate as a consequence (selective blocking of the functions, slowing speed, etc.).

The version with "current saving" on ON/OFF loads is available for "A" type applications.

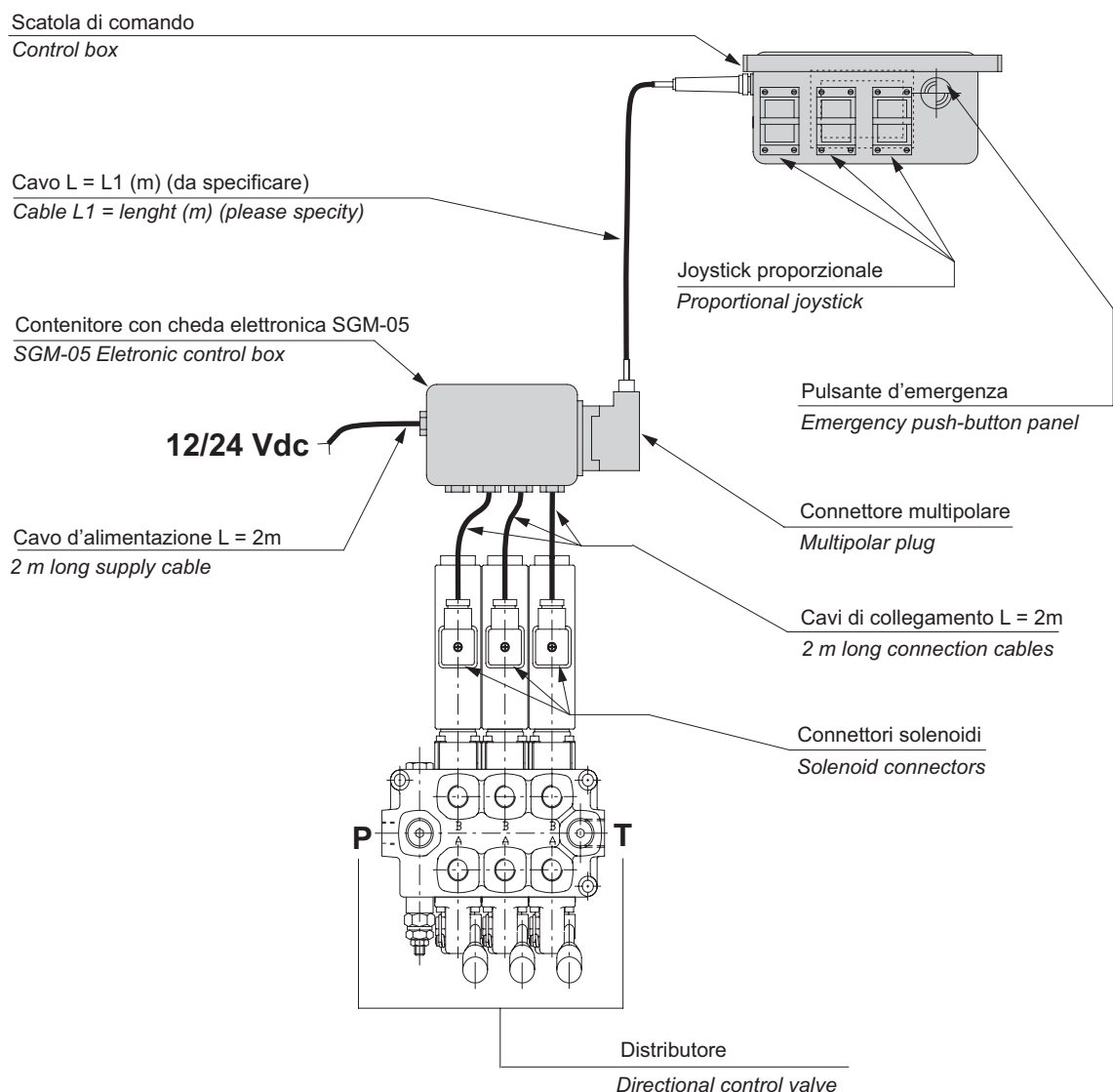
Settings and configurations

An external keypad, which must be connected to a dedicated connector, is used to regulate the I_{min} and I_{max} current values for the various different manoeuvres and to configure the functions of the digital inputs. Amongst other things, this also makes it easier to duplicate the settings for mass produced machines.

Software for PC and a small interface for simplifying, filing and recalling the settings can be supplied on request.

Scheda elettronica SGM-05

Electronic board SGM-05



Caratteristiche / Features

Alimentazione / Power supply	da 10V a 30V
Autoconsumo / Current consumption	50mA - 12V
N° di uscite proporzionali / Number of proportional outputs	6x2
N° di uscite on/off / Number of on/off outputs	3
Corrente di regolazione per elettromagneti proporzionali / Current regulation for proportional electromagnets	da 0.1A a 7.0A
Corrente massima sui carichi on/off / Maximum current on on/off loads	5A
N° di ingressi proporzionali / Number of proportional inputs	6
N° di ingressi digitali (on/off) / Number of digital inputs(on/off)	4
Segnalazioni a led per ingressi ed uscite / Led indications for inputs and outputs	a bordo / on board
Campo di temperatura / Temperature range	-25°C ÷ 85°C
Terminazioni / Terminations	connessioni per faston 6.3 mm fast-on connections (0.248 inch)
Dimensioni massime / Maximum dimensions	165x120 (6.496x4.724)
Uscite protette dal cortocircuito / Outputs protected against short-circuits	
Protezione con resina poliuretanica / Coated with polyurethane resin	
Versioni di funzionamento diverse su richiesta / Different operating versions available on request	

Joystick monoasse senza contatto JOYS-100

JOYS-100 single-axis contactless joystick

Caratteristiche

Fornisce una tensione proporzionale allo spostamento della leva dalla posizione di riposo.

- ingombro ridotto
- insensibile agli agenti atmosferici
- semplicità d'installazione

Features

Supplies a voltage proportional to lever shift from its idle position.

- small size
- unaffected by environment agents
- simple to install

Alimentazione / Power supply	5 Vcc
Angolo d'azione / Angular range	da -28° a +28° riposo centrale / central idle position
Impedenza d'uscita / Output impedance	1K
Tensione segnale d'uscita / Output signal voltage	0.5V ÷ 4.5V
Corrente max su Ud1 e Ud2 / Max current on Ud1 and Ud2	0.1 A
Temperatura di funzionamento / Operating temperature	-10°C÷70°C
Contenitore / Housing	Meccanica in NYLON66 + elettronica inglobata in resina Mechanical parts in NYLON66 + resin coated electronics
Grado di protezione / Protection degree	IP67
Collegamenti / Connections	Strip passo 2.54 mm con ritenuta meccanica 1 inch pitch strip with mechanical detent
Tipo dima installazione / Type of installation template	Da pannello / Panel mounting

Funzionamento

A componente alimentato (5 V) ed in posizione di riposo, si ha una tensione d'uscita su Up (rispetto al terminale GND) pari a 2.5V ± 0.2V.

Anche su Ud si ha una tensione di 0.5V ± 0.2V. Spostando la leva dalla posizione di riposo si ha su Up una variazione di tensione che è proporzionale allo spostamento in ragione di 71mV per grado angolare.

L'uscita Ud1, che risulta scollegata a riposo, passa a 4.5V ± 0.2V dopo 2° angolari di spostamento in una direzione.

Analogamente Ud2, anch'essa scollegata a riposo, passa a 4.5V ± 0.2V dopo 2° angolari di spostamento nella direzione opposta. Quando Ud1 è a 4.5V, Ud2 è scollegata e viceversa. Il sistema di comando ad alimentazione unica (12Vcc ÷ 24Vcc) esercita la sua azione proporzionale sulle singole spole del distributore tramite elettromagneti doppi, a loro volta alimentati in PWM mediante la scheda elettronica a microprocessore SGM-05, dove i segnali di comando sono inviati da joystick proporzionali.

Questi joystick possono essere forniti singolarmente oppure cablati in modo standard con le seguenti composizioni:

Pulsantiera in materiale plastico con installati i joystick a tenuta stagna, uno per ogni sezione del distributore, un pulsante d'emergenza a fungo, cavo antischiacciamento e connettore multipolare.

Scatola di derivazione, con alloggiata la scheda elettronica SGM-05, per alimentare in PWM fino a 6 elettromagneti doppi proporzionali, tre uscite ON/OFF per azionamenti generici e una per la valvola di sicurezza.

Oltre ai 6 ingressi dei joystick, altri 4 ingressi ON/OFF permettono combinazioni funzionali (blocco di alcune manovre, riduzione di velocità, allarmi, ..., ecc.) da definirsi al momento dell'ordine.

Functioning

There is a 2.5 V ± 0.2 V output voltage on Up (in relation to the GND terminal) when the component is powered (5 V) and in the idle position.

There is also 0.5 V ± 0.2 V voltage on Ud. When the lever is shifted from the idle position, the voltage variation on Up is proportional to the movement to the extent of 71 mV per angular degree.

Output Ud1, when unswitched and on idle position, switches to 4.5 V ± 0.2 V after a 2° angular movement in one direction.

Similarly, Ud2, when unswitched and on idle position, switches to 4.5 V ± 0.2 V after a 2° angular movement in the opposite direction. When Ud is at 4.5 V, Ud2 will be disconnected, and vice-versa.

The control system with single power supply (12 Vdc to 24 Vdc) allows proportional action on the individual spools of the control valve thanks to double electromagnets. These are powered in PWM mode by electronic microprocessor board SGM-05, where the control signals are transmitted by proportional joysticks.

These joysticks can be supplied either individually or wired in the standard way with the following compositions:

Push button panel made of plastic material fitted with watertight joysticks, one for each section of the control valve, a emergency button, crush-proof cable and multicore connector.

Switch box contains the SGM-05 electronic card for powering, in PWM, up to 6 double proportional electromagnets, three ON/OFF outputs for generic drives and one for the safety bypass valve.

Besides the joysticks 6 inputs, more 4 ON/OFF inputs allow functional combinations to be obtained (blocking of certain manoeuvres, slowing, alarms, ..., etc.). These combinations must be defined at the time of order.

Joystick monoasse senza contatto JOYS-100

La scheda SGM-05 consente un massimo di quattro manovre contemporanee e la regolazione/memorizzazione dei parametri per ogni movimento (velocità minima, velocità massima, rampe

d'accelerazione...) può avvenire tramite fornitura di:

A - un tastierino portatile di semplice utilizzo.

B - un intuitivo software di programmazione installato su personal computer.

Il sistema qui sommariamente presentato può essere modificato/adattato per soddisfare le specifiche esigenze del cliente.

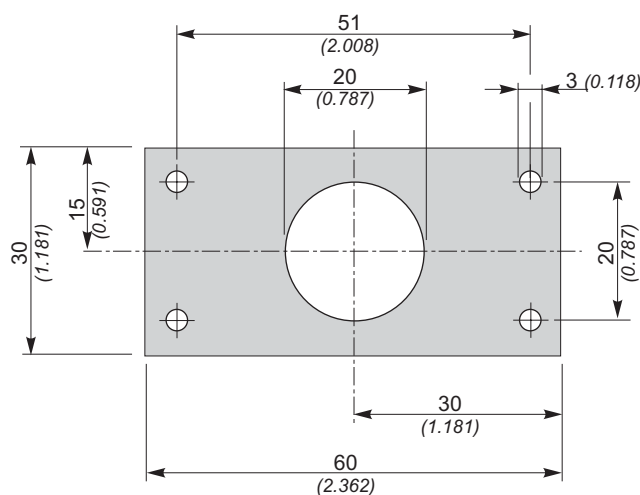
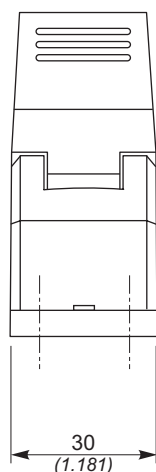
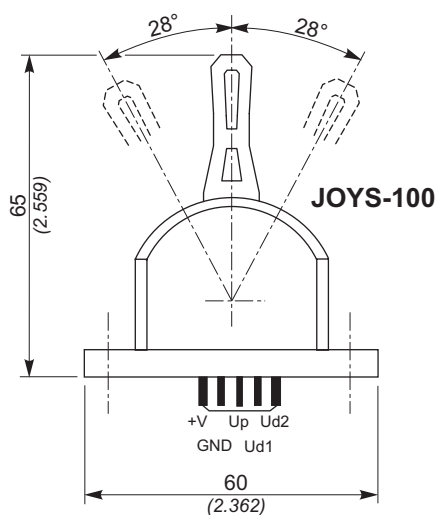
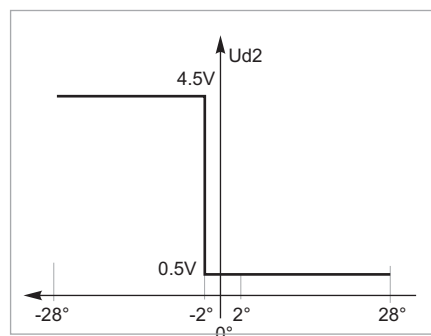
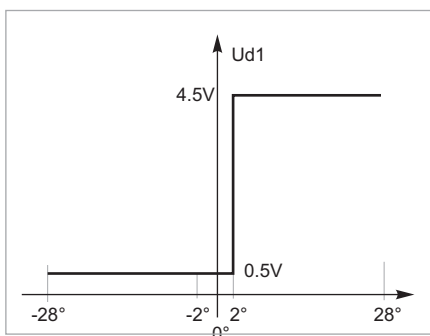
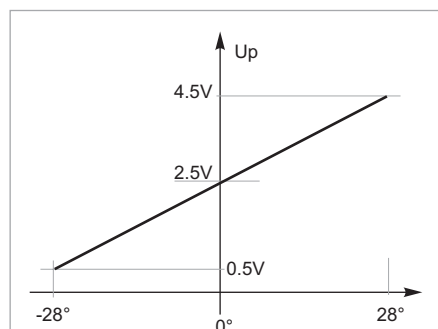
JOYS-100 single-axis contactless joystick

The SGM-05 card allows up to four manoeuvres to be made at the same time and adjustment/memorizing of the parameters for each movement (minimum speed, maximum speed, acceleration ramps...) can be achieved through the supply of:

A - a user-friendly portable keyboard.

B - an intuitive programming software installed in a personal computer.

The system briefly described in this document can be modified/adapted to suit the customer's specific requirements.



Dima di foratura / Drilling template

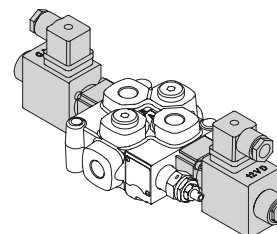
Sezione di lavoro

Working section

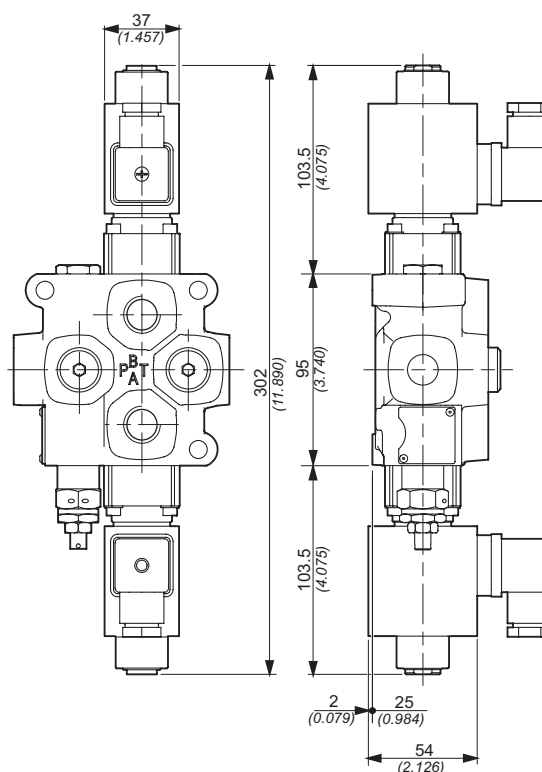
Q25	F7S	R250	2x	103	H1	F3D	12V	2E
1	2	3		4	5	7	8	9

D9

Comando elettrico diretto doppio ON/OFF
con ritorno a molla in posizione 0
ON/OFF double direct electrical control
with spring centred in 0

Connezzione
Connection

	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q25	Q45
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	12V D.C./24V D.C.	
Variazione di tensione max / Maximum voltage tolerance	±10%	
Potenza assorbita / Absorbed power supply	58W	
Rapporto di massimo utilizzo / Maximum utilization ratio	100%	

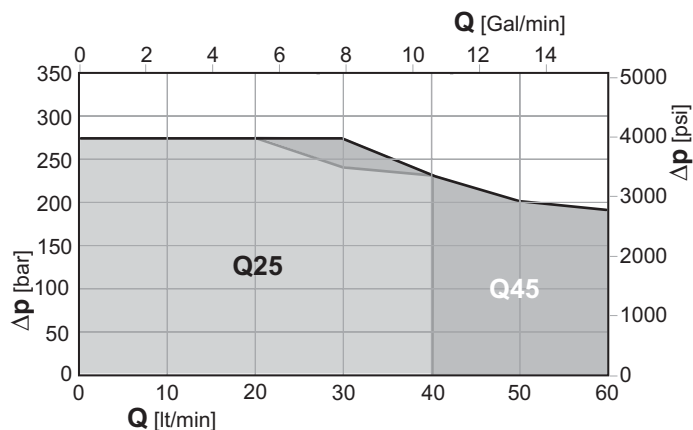
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max / Max. flow	50	60
Pressione max di lavoro / Max. working pressure	275 bar	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	A pulsante in spinta / Push type	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s / Max. spool leakage of A and B ports to T port at 100 bar with viscosity 35 mm²/s	5 cm³/min	

Sezione di lavoro

Working section

Limiti d'impiego / Use limits

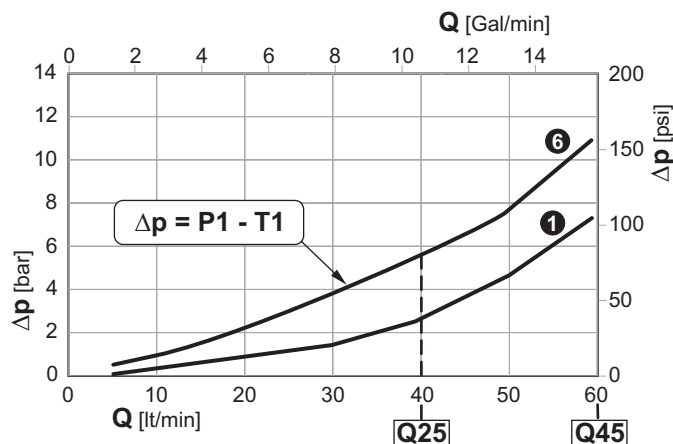
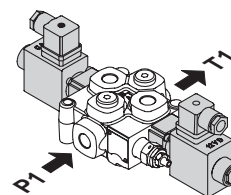


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

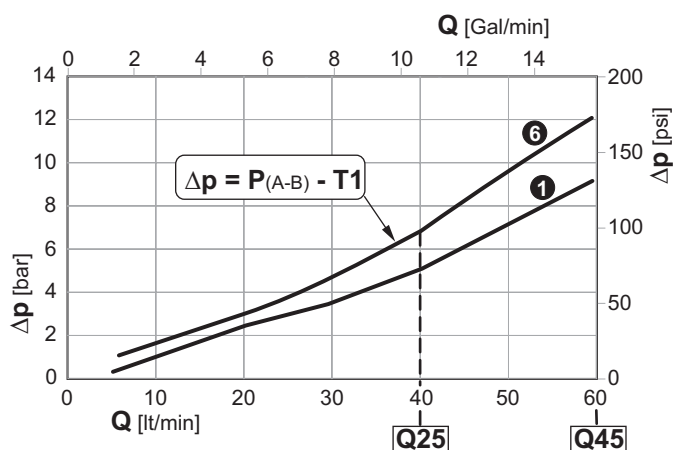
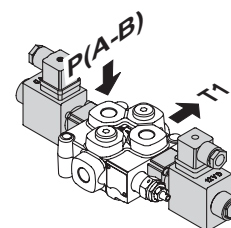
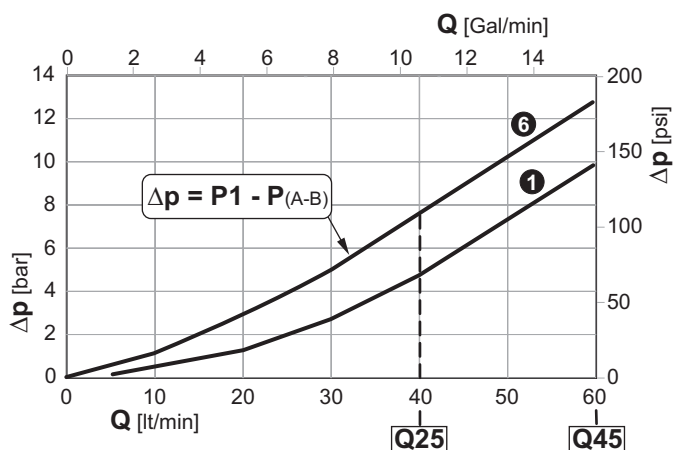
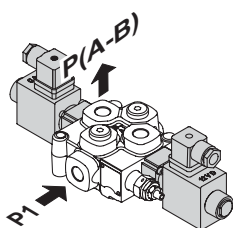


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

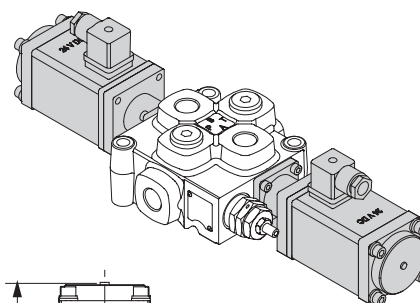
(Δp depending on the number of the crossed sections)



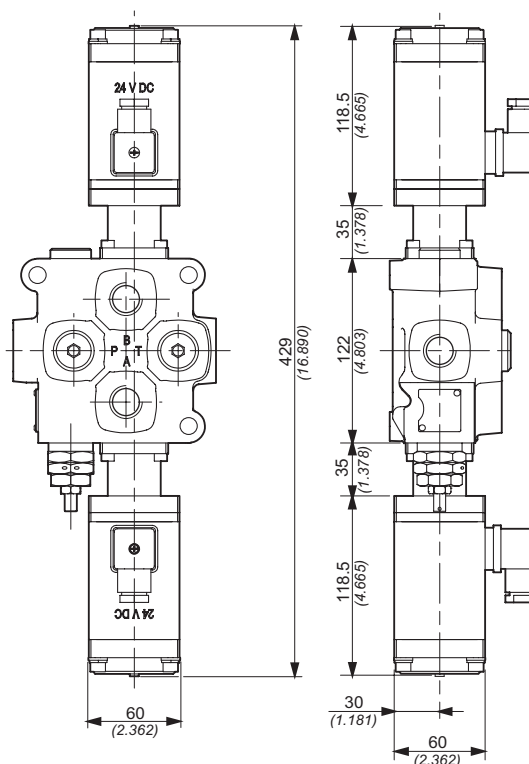
① ⑥ Sezioni / Sections



A diagram of a 3-bit shift register. It consists of three rectangular cells in a row. The leftmost cell contains the number '2', the middle cell contains '0', and the rightmost cell contains '1'. Above each cell is a horizontal line with a resistor symbol (zigzag line) at each end. Below each cell is a horizontal line with a diagonal slash at each end.



Connessione Connection		
	1 - 2	Effetto A <i>Port A</i>
	1 - 3	Effetto B <i>Port B</i>



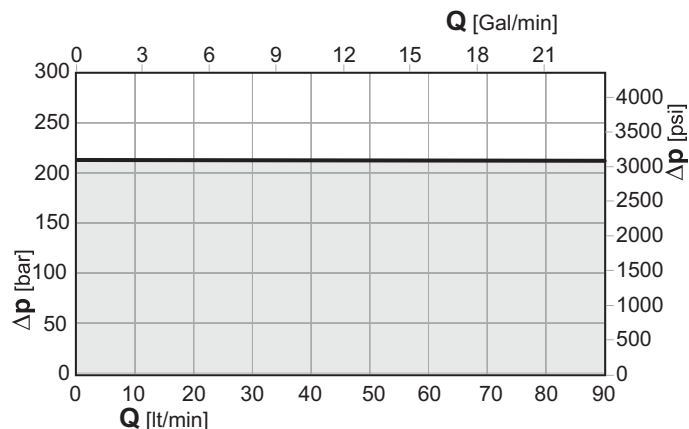
Caratteristiche tecniche elettromagnete / Electromagnet technical features

Caratteristiche tecniche elettromagnete / <i>Electromagnet technical features</i>		
Tipo distributore / <i>Valve type</i>	Q75	Q95
Attacco magnete / <i>Magnet connection</i>	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / <i>Protection type</i>	IP65	
Classe d'isolamento / <i>Coil insulation class</i>	H	
Tensione di alimentazione / <i>Supply voltage</i>	12V D.C./24V D.C.	
Variazione di tensione max / <i>Maximum voltage tolerance</i>	±10%	
Potenza assorbita / <i>Absorbed power supply</i>	80W	
Rapporto di massimo utilizzo / <i>Maximum utilization ratio</i>	100%	
Caratteristiche tecniche distributore / <i>Directional control valve characteristics</i>		
Portata max / <i>Max. flow</i>	90	120
Pressione max di lavoro / <i>Max. working pressure</i>	210 bar	
Contropressione max sullo scarico / <i>Max. back outlet pressure</i>	25 bar	
Manovra di emergenza o in assenza di corrente / <i>Emergency operation or in case of power failure</i>	A pulsante in spinta / <i>Push type</i>	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s / <i>Max. spool leakage of A and B ports to T port at 100 bar with viscosity 35 mm²/s</i>	7 cm³/min	

Sezione di lavoro

Working section

Limiti d'impiego / Use limits

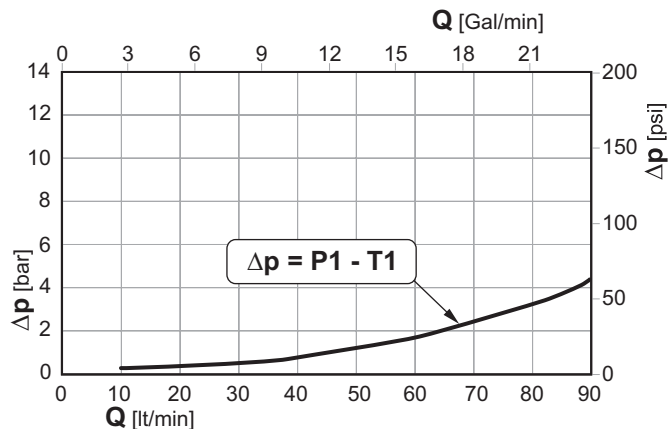
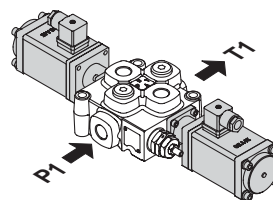


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

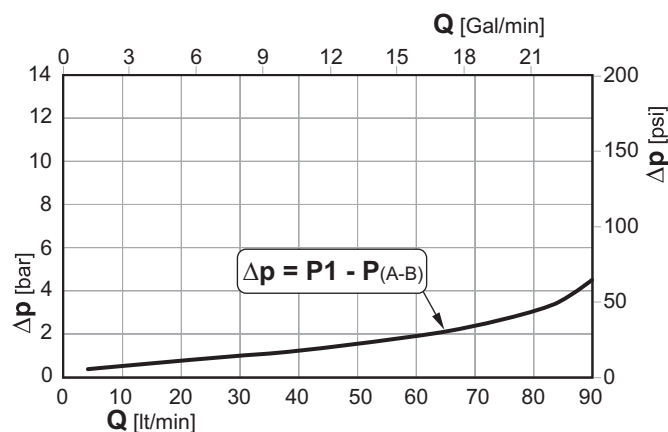
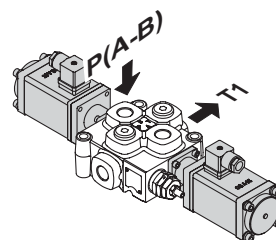
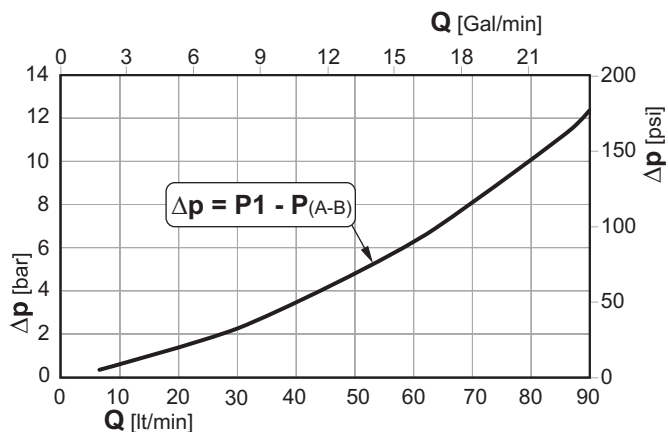
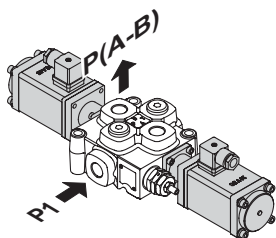


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

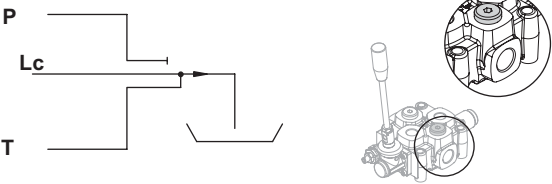
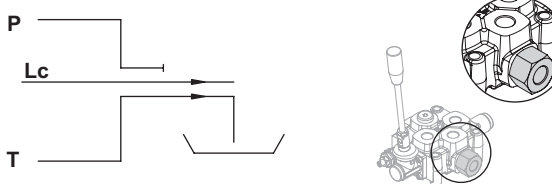
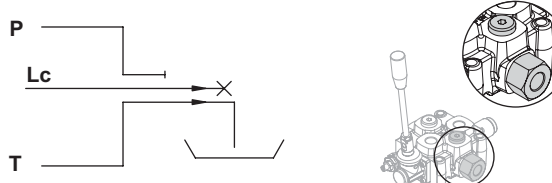
(Δp depending on the number of the crossed sections)



Fiancata di scarico						Outlet section type			
Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E+1
1	2	3		4	5	6	7	8	9

7 - Tipo fiancata di scarico / Outlet section type

		Q15 Q35 Q25 Q45 Q65 Q75 Q95						
F3D	Fiancata di scarico	Outlet section	•	•	•	•	•	•
F6D	Fiancata di scarico con alimentazione in pressione per altri componenti (carry-over)	Outlet section and high pressure (carry-over)			•	•		•
F16D	Fiancata di scarico destro per centro chiuso	Right outlet section for through passage closed			•	•		•

F3D Fiancata di scarico Outlet section	
F6D Fiancata di scarico con alimentazione in pressione per altri componenti (carry-over) Outlet section and high pressure (carry-over)	
F16D Fiancata di scarico destro per centro chiuso Right outlet section for through passage closed	

Note aggiuntive

Additional notes

Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9

8 - Note aggiuntive / Additional notes

12V, 24V

S Alluminio (pag. F-6 ... F-10)

Codice asta di comando (vedi tabella seguente)

8 - Additional notes

12V, 24V

S Aluminium (page F-6 ... F-10)

Control lever code (see next table)

Codice / Code	Versione / Version	M	L	D	A	B	Colore / Color
---------------	--------------------	---	---	---	---	---	----------------

Q35 - Q25 - Q45

Dimensioni in / Dimensions in: mm (inch)

06.029.22862	1	Standard / Standard	M8	164 (6.457)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.30335	1	Standard / Standard	M8	164 (6.457)	20 (0.787)	57 (2.244)	20 (0.787)	Rosso / Red
06.029.30528	1	Lunga tipo A / Long version type A	M8	184 (7.244)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.30492	1	Lunga tipo A / Long version type A	M8	184 (7.244)	20 (0.787)	57 (2.244)	20 (0.787)	Rosso / Red
06.029.28922	1	Lunga / Long version	M8	204 (8.031)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.30336	1	Lunga / Long version	M8	204 (8.031)	20 (0.787)	57 (2.244)	20 (0.787)	Rosso / Red
06.029.27421	1	Extra lunga / Extra-long	M8	324 (12.756)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.22876	1	Extra corta / Extra-short	M8	82 (3.228)	18 (0.709)	50 (1.969)	20 (0.787)	Nero / Black
06.029.29451	2	Standard con oblo' / Standard with lens	M8	174 (6.850)	32 (1.260)	46 (1.811)	20 (0.787)	Nero / Black
06.029.29423	2	Lunga con oblo' / Long with lens	M8	214 (8.425)	32 (1.260)	46 (1.811)	20 (0.787)	Nero / Black

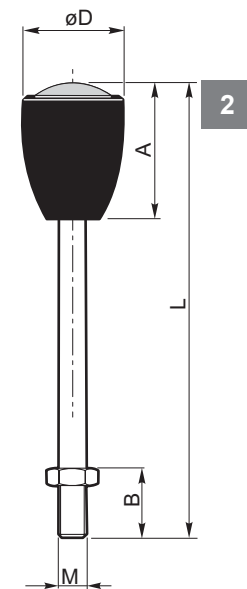
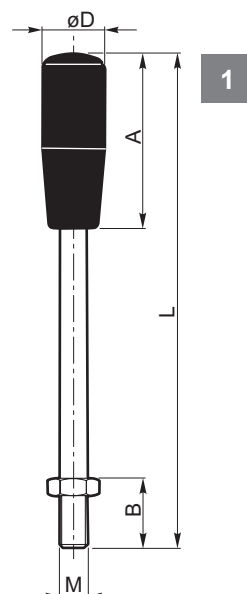
Q75 - Q95

06.029.27013	1	Standard / Standard	M10	209 (8.228)	20 (0.787)	57 (2.244)	28 (1.102)	Nero / Black
06.029.28148	1	Lunga / Long version	M10	357 (14.055)	20 (0.787)	57 (2.244)	28 (1.102)	Nero / Black
06.029.27344	1	Corta / Short version	M10	154 (6.063)	20 (0.787)	57 (2.244)	28 (1.102)	Nero / Black
06.029.27635	1	Extra corta / Extra-short	M10	66 (2.598)	26 (1.024)	42 (1.654)	22 (0.866)	Nero / Black
06.029.29866	2	Standard con oblo' / Standard with lens	M10	219 (8.622)	32 (1.260)	46 (1.811)	28 (1.102)	Nero / Black
06.029.30295	2	Lunga con oblo' / Long with lens	M10	367 (14.449)	32 (1.260)	46 (1.811)	28 (1.102)	Nero / Black

Per comando elettrico / For electric control Q25 - Q45

06.029.28945	1	Standard / Standard	Ø7	133 (5.236)	20 (0.787)	57 (2.244)	15 (0.591)	Nero / Black
06.029.29349	1	Lunga / Long version	Ø7	201 (7.913)	20 (0.787)	57 (2.244)	15 (0.591)	Nero / Black
06.029.30951	2	Standard con oblo' / Standard with lens	Ø7	143 (5.630)	32 (1.260)	46 (1.811)	15 (0.591)	Nero / Black

Dimensioni in / Dimensions in: mm (inch)



Note aggiuntive

Additional notes

Q25	F7S	R250	2x	103	A1	M1	F3D	12V	2E
1	2	3		4	5	6	7	8	9

9 - Numero elementi

Specificare il numero delle sezioni di lavoro previste (es. 2E).

9 - Number of sections

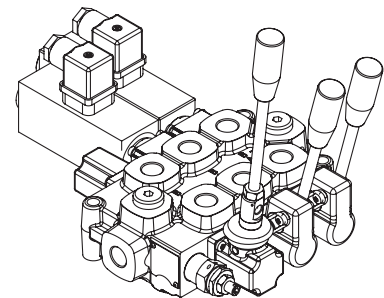
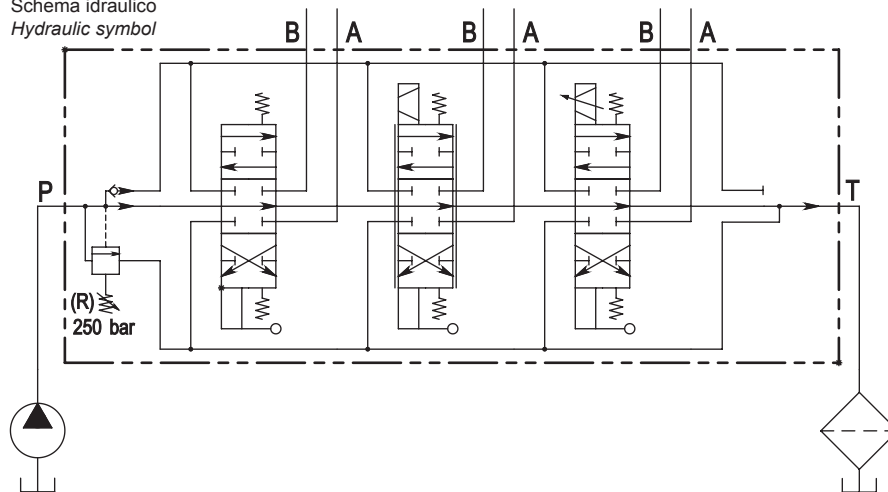
Specify the number of working sections used (e.g. 2E).

ESEMPI DI ORDINAZIONE IN CODICE
ORDERING CODE EXAMPLES

Q25 - F1S R(250) - 103/A1/M1 - 103/A1/D41 - 103/A1/DP - F3D - 12V - 3E

A	B	C	D	E
1	2 3	4 - 5 - 6	7	8 - 9
Q25	F1S R250	103/A1/M1 103/A1/D41 103/A1/DP	F3D	12V - 3E

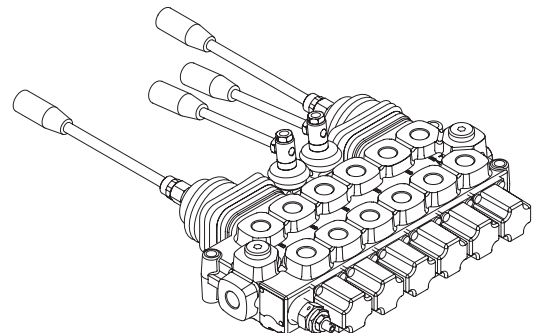
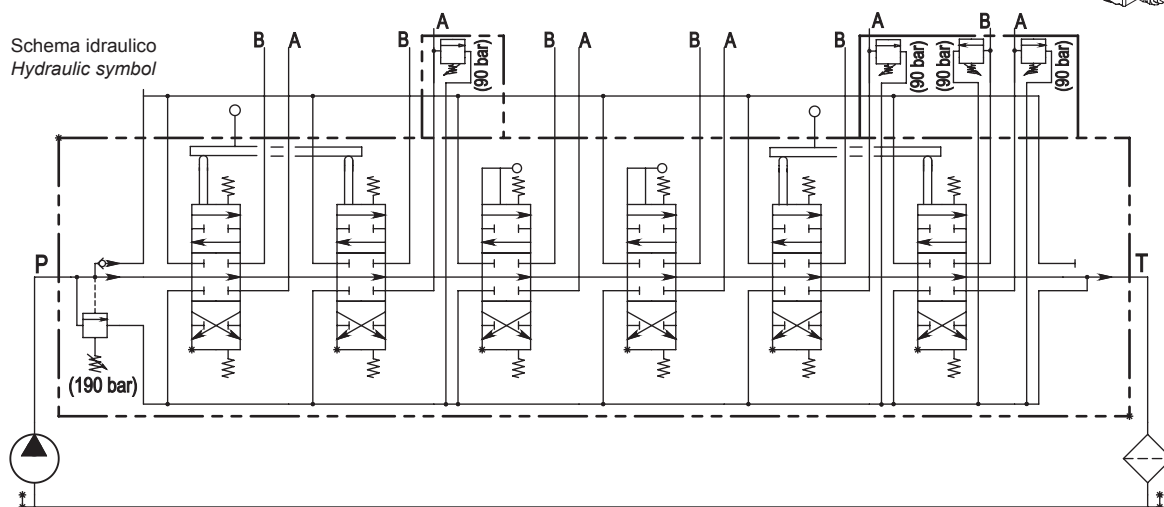
Schema idraulico
Hydraulic symbol



Q25 - F1S(N) - 103/M1/A15-S - 103/M1/V30(N) - 2x103/M1/A1 - 103/M1/A15-D/V30(N) - 103/M1/V32(N) - F3D - 6E

A	B	C	D	E
1	2 3	4 - 5 - 6	7	8 - 9
Q25	F1S N190	103/M1/A15-S 103/M1/V30(N) 2x 103/M1/A1 103/M1/A15-D/V30(N) 103/M1/V32(N)	F3D	6E

Schema idraulico
Hydraulic symbol

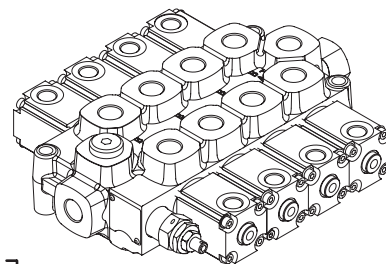


- A - Tipo / Type
B - Fiancata d'ingresso / Inlet section
C - Sezione di lavoro / Working section
D - Fiancata di scarico / Outlet section
E - Note aggiuntive / Additional notes

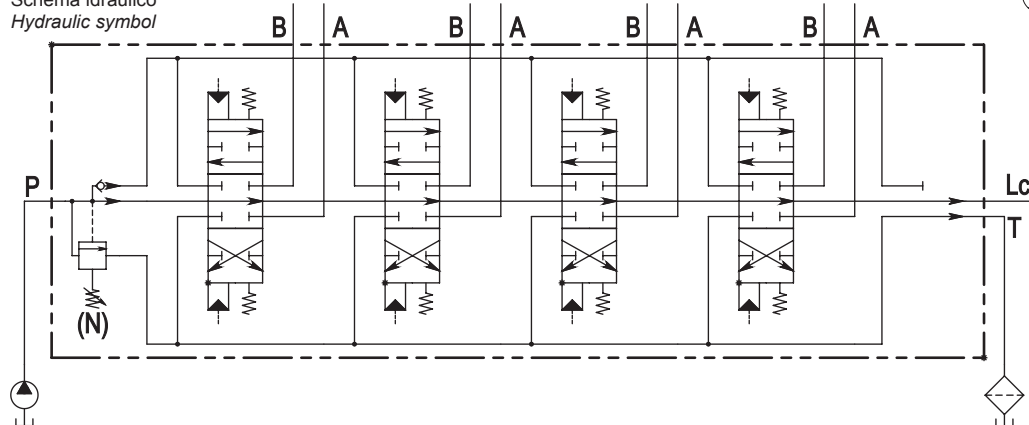
ESEMPI DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLES

Q25 - F1S(N) - 4x103/H5 - F6D - 4E

A	B	C	D	E
1	2 3	4 - 5 - 6	7	8 - 9
Q25	F1S N180 4x	103/H5	F6D	4E

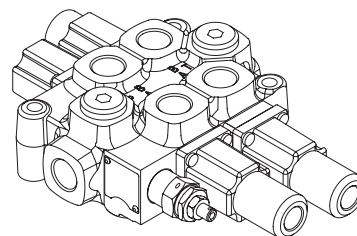


Schema idraulico
Hydraulic symbol

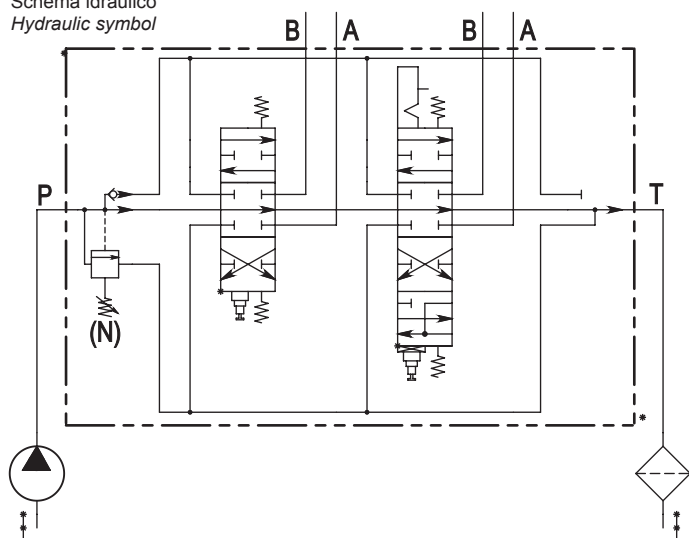


Q45 - F1S(N) - 103/A8/M1 - 116/A8-Z1/R8 - F3D - 2E

A	B	C	D	E
1	2 3	4 - 5 - 6	7	8 - 9
Q45	F1S R250	103/A8/M1 116/A8-Z1/R8	F3D	2E



Schema idraulico
Hydraulic symbol

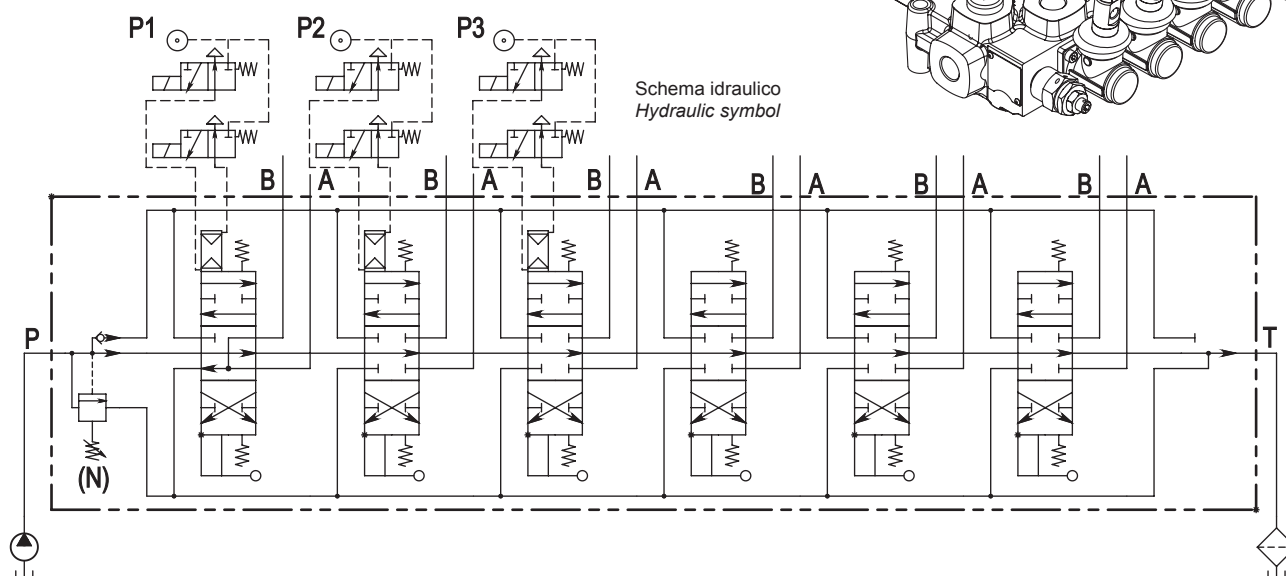
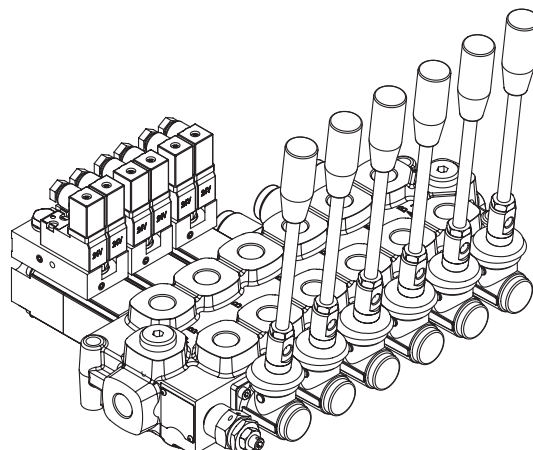


- A - Tipo / Type
- B - Fiancata d'ingresso / Inlet section
- C - Sezione di lavoro / Working section
- D - Fiancata di scarico / Outlet section
- E - Note aggiuntive / Additional notes

ESEMPI DI ORDINAZIONE IN CODICE
ORDERING CODE EXAMPLES

Q25 - F1S (N) - 111/A1/D3 - 2x103/A1/D3 - 3x103/A1/M1 - F3D - S 24V - 6E

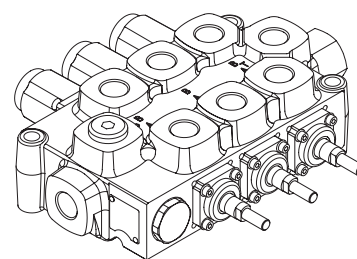
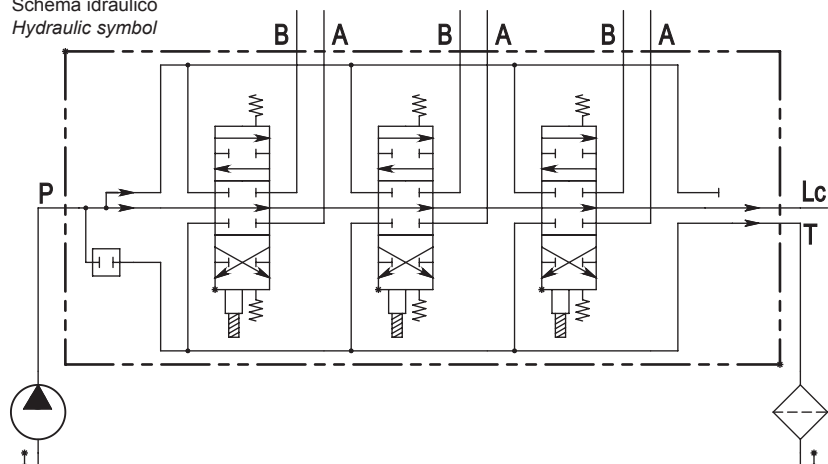
A	B	C	D	E
1	2 3	4 - 5 - 6	7	8 - 9
Q25	F1S N180	111/A1/D3 2x 103/A1/D3 3x 103/A1/M1	F3D	S 24V - 6E



Q75 - F8S(N) - 3x103/A4/M1 - F6D - 3E

A	B	C	D	E
1	2 3	4 - 5 - 6	7	8 - 9
Q75	F8S N180 3x	103/A4/M1	F6D	3E

Schema idraulico
Hydraulic symbol



- A - Tipo / Type
- B - Fiancata d'ingresso / Inlet section
- C - Sezione di lavoro / Working section
- D - Fiancata di scarico / Outlet section
- E - Note aggiuntive / Additional notes

DISTRIBUTORI COMPONIBILI SECTIONAL DIRECTIONAL CONTROL VALVES



Pag.
Page

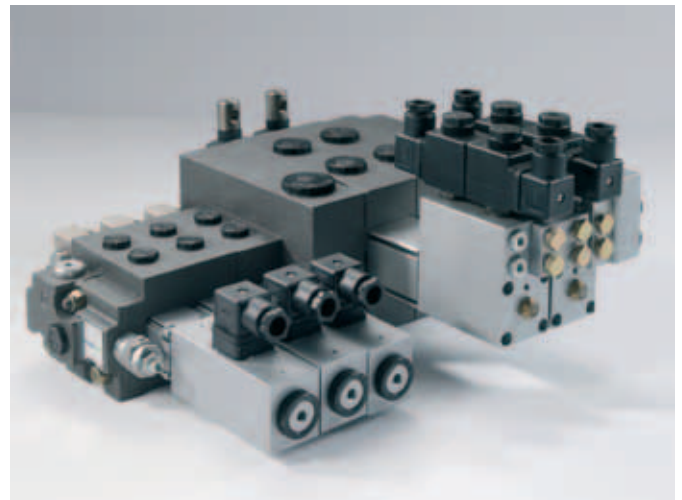
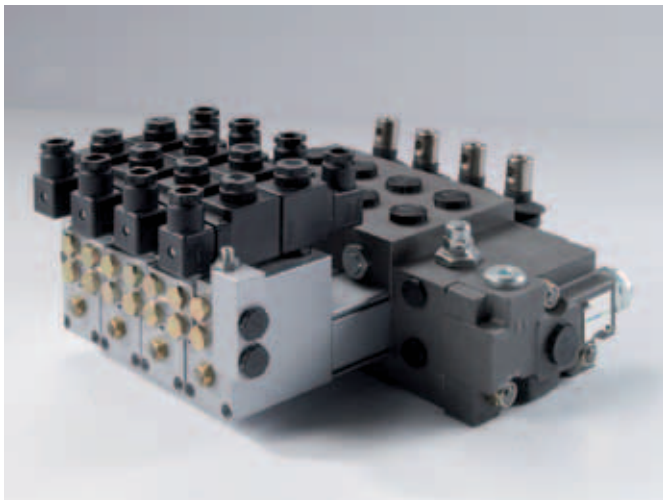
CARATTERISTICHE FEATURES	G-2
CARATTERISTICHE TECNICHE TECHNICAL CHARACTERISTICS	G-3
ESEMPIO DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLE	G-4
Q30	G-6
GSV50	G-8
Q50	G-10
Q80	G-12
Q130	G-14

CARATTERISTICHE

- Elevate prestazioni tecniche che consentono una vasta applicazione.
- Corpo in ghisa speciale ad alta resistenza per essere adatto alle alte pressioni di lavoro.
- Cursori nichelati ad alto scorrimento che permettono di poter lavorare ad alte pressioni con lunga durata di vita.
- Trafilamenti di valore ridottissimo.
- Possibilità di inversione del lato di comando ruotando il cursore di 180°, consentendo così unificazione, versatilità, bassi valori di particolari a magazzino.
- Il tipo di libera circolazione a "Y" permette alte portate con basse perdite di carico, in rapporto alle ridotte dimensioni del distributore.
- Maggior versatilità rispetto ai distributori monoblocco e prestazioni superiori.
- Esecuzione standard con valvole di ritegno su ogni effetto.
- Protezione dei singoli effetti con valvole ausiliarie antiurto, anticavitazione e combinate.
- Possibilità di diversi tipi di circuito: PARALLELO, SERIE, SINGOLO.
- Entrate e scarichi laterali ed intermedi.
- Possibilità di inserimento di elementi intermedi con vari tipi di valvole nel medesimo distributore.

CHARACTERISTICS

- *High technical performances granting larger application range.*
- *Special high resistance cast-iron body, suitable for high working pressures.*
- *Nickel-plated offering granting long working life under high pressure conditions (see attached scheme).*
- *Minimal internal leakages.*
- *Possibility to reverse the control side, turning the spool of 180° permits unification, versatility and low value of some parts in stock.*
- *Free movement version "Y shape" allows high oil flow with low pressure drops, in relation with the small dimensions of the control valves.*
- *Better versatility compared to monoblock control valves and higher performances.*
- *Standard check valves on each element.*
- *Protection on single elements with auxiliary antishock, anti-cavitation and combined valves.*
- *Possibility of different types of circuit: PARALLEL, SERIES and SINGLE.*
- *Side and intermediate inlets and outlets.*
- *Possibility to connect intermediate elements with different type of valves in the same control valves.*



AVVERTENZA PER L'INSTALLAZIONE DEI DISTRIBUTORI

- I distributori devono sempre appoggiare su una superficie perfettamente piana
- Non manomettere i dadi dei tiranti in quanto comprometterebbero il normale funzionamento del distributore.
- Non utilizzare raccordi conici su filetti cilindrici.
- Per pulire il distributore, prima della verniciatura, non utilizzare diluenti/solventi o qualsiasi prodotto che possa intaccare le parti in gomma.

NOTES FOR DIRECTIONAL CONTROL VALVES ASSEMBLY

- *The valve must always and perfectly rest on a 180° degree flat surface.*
- *Do not tamper the tie rod nuts so they might impair the standard working of the valve.*
- *No conical nipples with JIC thread must be used.*
- *Before painting the control valve, do not use diluent or any products that could damage rubber parts.*

CARATTERISTICHE TECNICHE TECHNICAL CHARACTERISTICS

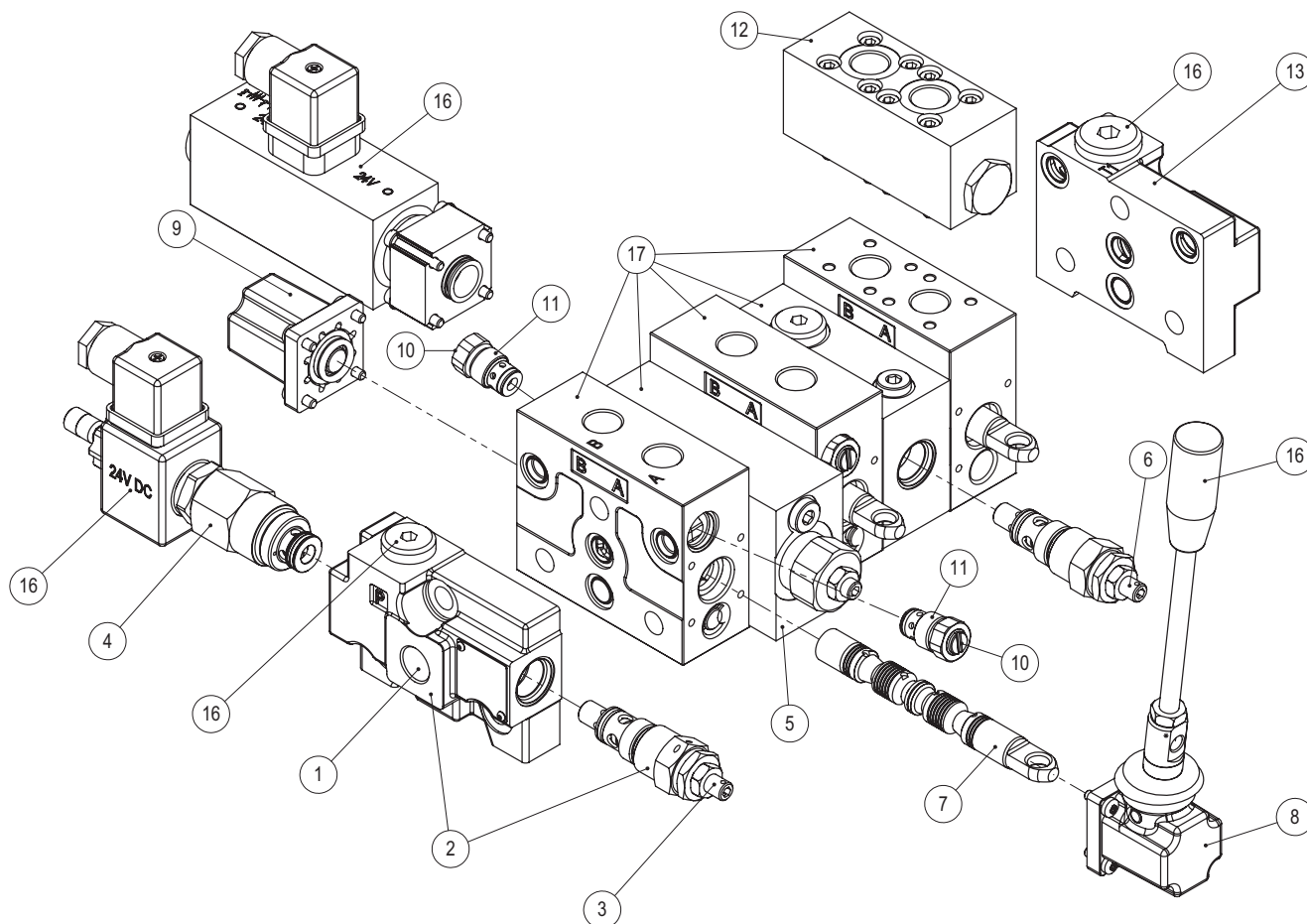
	Q30	GVS50 (Q50)	Q80	Q130
Numero massimo di elementi <i>Working sections maximum</i>	10	10	10	10
Limiti temperatura olio <i>Oil temperature range</i>	-30 ÷ 80 °C			
Temperatura olio consigliata <i>Recommended oil temperature</i>	30° ÷ 60 °C			
Filtraggio consigliato <i>Recommended filtration</i>	26/23µm ISO DIS 4406			
Fluido <i>Hdraulic fluid</i>	Olio minerale <i>Mineral oil</i>			
Viscosità <i>Viscosity</i>	10 ÷ 400 mm²/s			

Massa [Kg] Weight (lbs)	1	Elemento + fiancata d'ingresso + fiancata di scarico <i>Working section + inlet + outlet section</i>	4.2 (9.3)	4.2 (9.3)	8.1 (17.9)	16.6 (36.6)
	2	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	6.2 (13.7)	6.1 (13.5)	11.9 (26.2)	22.4 (49.4)
	3	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	8.1 (17.9)	8.0 (17.6)	15.8 (34.8)	28.2 (62.2)
	4	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	10.1 (22.3)	9.9 (21.8)	19.7 (43.4)	34.1 (75.2)
	5	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	12 (26.5)	11.8 (26.0)	23.5 (51.8)	39.9 (88.0)
	6	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	14 (30.9)	13.7 (30.2)	27.4 (60.4)	45.7 (100.8)
	7	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	15.9 (35.1)	15.6 (34.4)	31.2 (68.8)	51.6 (113.8)
	8	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	17.9 (39.5)	17.5 (38.6)	35 (77.2)	57.4 (126.6)
	9	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	19.8 (43.7)	19.4 (42.8)	38.9 (85.8)	63.2 (139.4)
	10	Elementi + fiancata d'ingresso + fiancata di scarico <i>Working sections + inlet + outlet section</i>	21.8 (48.1)	21.3 (47.0)	42.7 (94.2)	69 (152.1)
		Elemento aggiuntivo <i>Additional section</i>	2.0 (4.4)	1.9 (4.2)	3.9 (8.6)	5.9 (13.6)

Pressioni massime di lavoro [bar] Max working pressure (PSI)	da 1 a 3 elementi <i>from 1 up to 3 working sections</i>	375 (5438)	375 (5438)	350 (5075)	375 (5438)
	da 4 a 6 elementi <i>from 4 up to 6 working sections</i>	350 (5075)	350 (5075)	320 (4640)	350 (5075)
	da 7 a 10 elementi <i>from 7 up to 10 working sections</i>	325 (4713)	325 (4713)	300 (4350)	325 (4713)
Pressione massima sullo scarico [bar] Max back pressure (PSI)		25 (363)			

ESEMPIO DI ORDINAZIONE IN CODICE
ORDERING CODE EXAMPLE

Tipo Type	Fiancata d'ingresso <i>Inlet section</i>				Sezione di lavoro e/o elemento intermedio <i>Working section and/or intermediate section</i>								Fiancata di scarico o ingresso suppl. <i>Outlet section or additional inlet section</i>	Note aggiuntive <i>Additional notes</i>	
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17



Tipo

1 - Tipo

Q30, Q50 (ad esaurimento), **GSV50, Q80, Q130**

Indica il tipo di distributore; le caratteristiche dimensionali sono riportate da pag. G-6 a pag. G15

Type

1 - Type

Q30, Q50 (phasing out), **GSV50, Q80, Q130**

Indicates model valve, characteristics and dimensions found on page G6 to page G15.

Fiancata d'ingresso

2 - Tipo fiancata d'ingresso (pag. G-16)

3 - Tipo molla e taratura valvola (pag. G-16)

Dove è presente la valvola VLP (fiancate F7S), deve essere specificato il tipo di molla (**B**, **N** o **R**) e la sua pressione di taratura; se quest'ultima viene omessa la valvola verrà montata la molla N tarata a **150 bar**.

4 - Valvole aggiuntive alla fiancata di ingresso (pag. G-17).

Inlet section

2 - Inlet section type (page G-16)

3 - Type of spring and valve setting (page G-16)

If valve VLP is installed (inlet section F7S), specify the type of spring (**B**, **N** or **R**) and its pressure setting. If omitted spring N with a **150 bar** setting will be installed.

4 - Additional valves on the inlet section (page G-17)

ESEMPIO DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLE

Sezione di lavoro e/o elemento intermedio

5 - Elemento intermedio (pag. G-18)

6 - Tipo molla e taratura valvola (pag. G-18)

Dove è presente la valvola VLP (elementi intermedi E50, E53), deve essere specificato il tipo di molla (**B, N o R**) e la sua pressione di taratura; se quest'ultima viene omessa verrà messa la molla N tarata a **150 bar**.

N.B. I campi da 7 a 13 sono da ripetere per ogni sezione. Nel caso in cui due sezioni contigue siano identiche, è sufficiente descriverne solo una anteponendo 2x al campo 7. Il numero massimo complessivo di sezioni di lavoro è indicato a pag. G3.

7 - Tipo cursore (pag. G-20)

8 - Tipo di comando (pag. G-25)

9 - Tipo posizionario (pag. G-31)

10 - Tipo valvole a cartuccia (pag. G-58)

11 - Tipo molla e taratura valvola (pag. G-59)

Specificare il tipo di molla e la sua pressione di taratura; se quest'ultima viene omessa, verrà messa la molla N a 120 bar.

12 - Tipo valvole a pannello (pag. G-60)

Fiancata di scarico o ingresso supplementare

13 - Tipo fiancata di scarico (pag. G-62)

13 - Ingresso supplementare (pag. G-63)

Gli ingressi supplementari, dotati di due ingressi laterali e uno scarico centrale, possono essere utilizzati in sostituzione della fiancata di scarico utilizzando come scarico l'elemento intermedio **E51** (vedi par. 5, pag. G-18).

14 - Tipo molla e taratura valvola (pag. G-63)

Dove è presente la valvola VLP, deve essere specificato il tipo di molla (**B, N o R**) e la sua pressione di taratura; se quest'ultima viene omessa verrà messa la molla N tarata a **150 bar**.

15 - Valvole aggiuntive alla fiancata (pag. G-64)

Note aggiuntive

16 - Note aggiuntive (pag. G-65)

17 - Note aggiuntive

Specificare il numero delle sezioni di lavoro (es. 2E) e il numero degli elementi intermedi (es. +1) utilizzati tenendo sempre in considerazione che la somma dei due non potrà superare il limite massimo di 10.

Working section and/or Intermediate section

5 - Intermediate section (page G-18)

6 - Type of spring and valve setting (page G-18)

If VLP valve is installed (intermediate section E50 and E53), specify the type of spring (**B, N or R**) and its pressure setting. If omitted spring N with a **150 bar** setting will be installed.

N.B. Fields 7 to 13 must be repeated for each section. If two adjacent sections are identical, just describe one and put 2x before field 4. The maximum overall number of working sections is indicated on page G3.

7 - Spool type (page G-20)

8 - Control type (page G-25)

9 - Positioner type (page G-31)

10 - Type of built-in cartridge valves (page G-58)

11 - Type of spring and valve setting (page G-59)

Specify the type of spring and its pressure setting. If omitted, spring N with a 120 bar setting will be installed.

12 - Type of panel valves (page G-60)

Outlet section or additional inlet section

13 - Outlet section type (page G-62)

13 - Additional inlet (page G-63)

The additional inlet sections, fitted with two lateral inlets and with a central outlet can be used as a replacement of the outlet section by using the intermediate element E51 (see par. 5, page G-18) as relief.

14 - Type of spring and valve setting (page G-63)

If VLP valve is installed, specify the type of spring (**B, N or R**) and its pressure setting. If omitted, spring N with a **150 bar** setting will be installed.

15 - Valvole aggiuntive alla fiancata (page G-64)

Additional notes

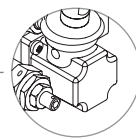
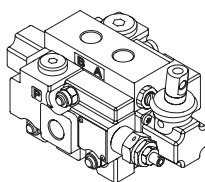
16 - Additional notes (page G-65)

17 - Additional notes

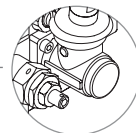
Specify the number of working sections (for ex. 2E) and the number of intermediate elements (for ex. +1) used, always taking into account that the sum of the two will not have to exceed the maximum limit of 10.

Q30

**DISTRIBUTORI COMPONIBILI
SECTIONAL DIRECTIONAL CONTROL VALVES**

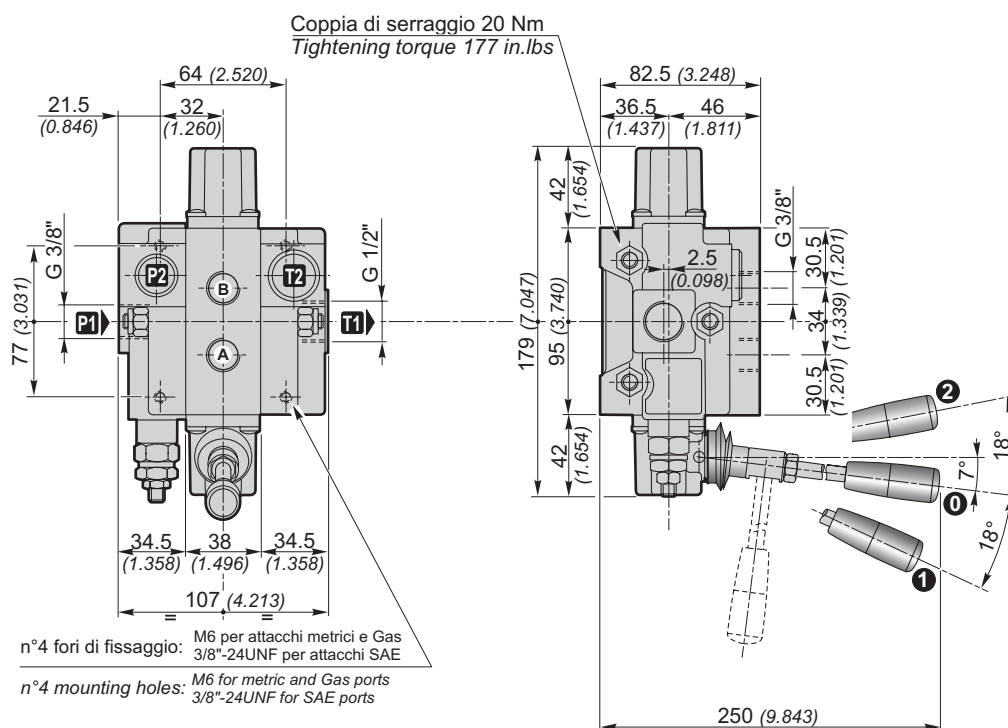


(Standard)
Comando e posizionario in plastica
Control and positioner plastic



S
Comando e posizionario in Alluminio
Control and positioner Aluminium

— **F3D** — **S** — **17**
13 16 17



Q30 — **F7S** **R250** **MSE** — **E50** **R250** — 2x **103** **A1** **M1** **V30** **R250** **V01** — **F3D** — **12V** — **2E+1**
1 2 3 4 5 6 7 8 9 10 11 12 13 16 17

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 3/8"	3/4" - 16UNF (SAE 8)
P2	G 3/8"	3/4" - 16UNF (SAE 8)
A-B	G 3/8"	9/16" - 18UNF (SAE 6)
T1	G 1/2"	7/8" - 14UNF (SAE 10)
T2	G 1/2"	3/4" - 16UNF (SAE 8)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

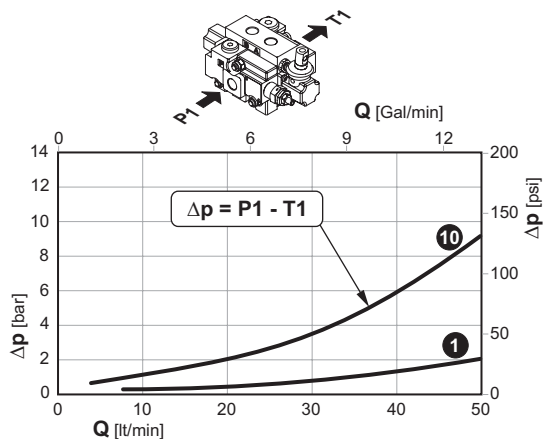
	T1	G 1/2"
	X	G 3/8" - G 1/2"
	T1	7/8"-14UNF (SAE 10)
	X	3/4" - 16UNF (SAE 8)

Q30

DISTRIBUTORI COMPONIBILI SECTIONAL DIRECTIONAL CONTROL VALVES

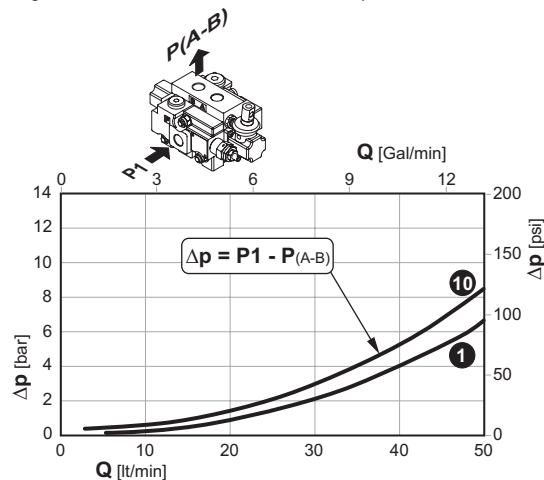
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



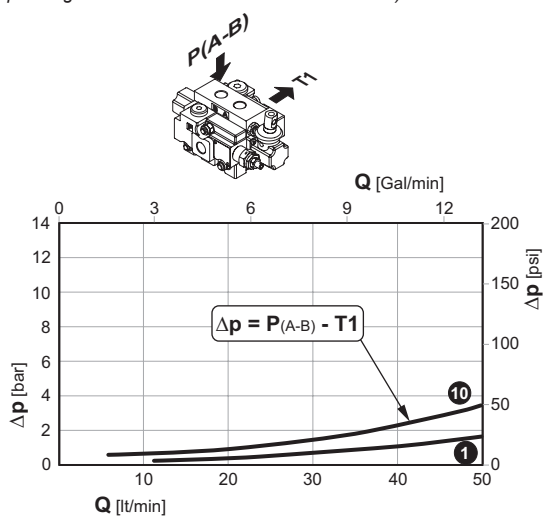
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



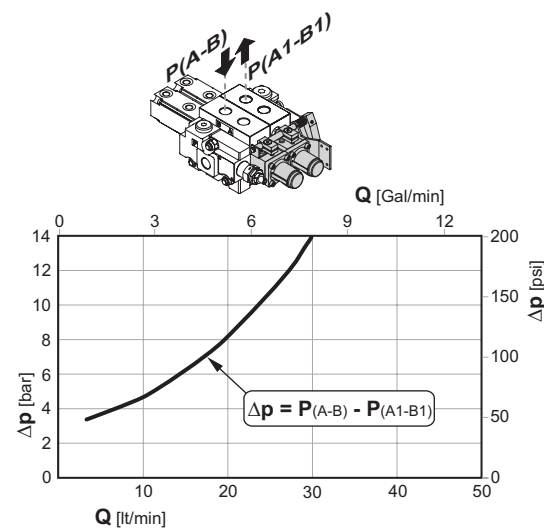
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



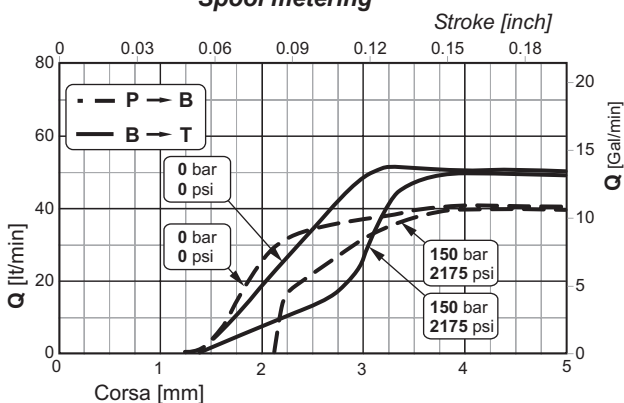
Perdite di carico tra due elementi in serie

Pressure drop through two sections connected in series

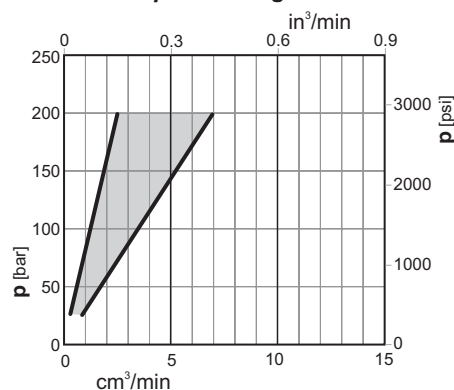


1 10 Sezioni / Sections

Curve di progressività
Spool metering

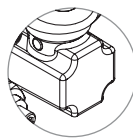
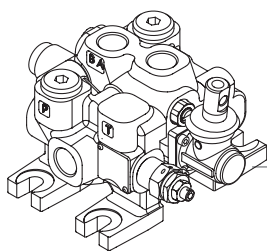


Trafilamenti sul cursore
Spool leakage

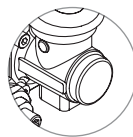


GSV50

**DISTRIBUTORI COMPONIBILI
SECTIONAL DIRECTIONAL CONTROL VALVES**

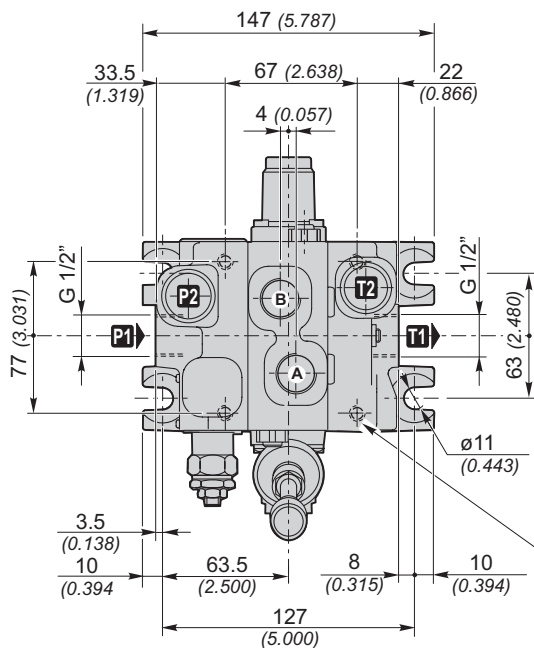


(Standard)
Comando e posizionate in plastica
Control and positionner plastic

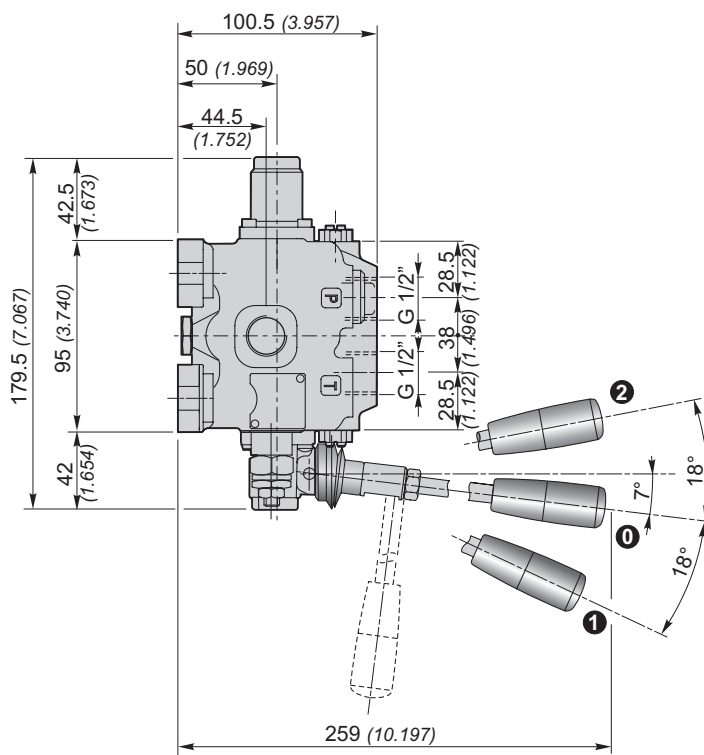


S
Comando e posizionate in Alluminio
Control and positionner Aluminium

— **F3D** — **S** —
13 16 17



n°4 fori di fissaggio: M8 per attacchi metrici e Gas
3/8"-24UNF per attacchi SAE
n°4 mounting holes: M8 for metric and Gas ports
3/8"-24UNF for SAE ports

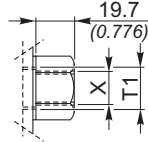


GSV50 — **F7S** **R250** **MSE** — **E50** **R250** — 2x **103** **A1** **M1** **V30** **R250** **V01** — **F3D** — **12V** — **2E+1**
1 2 3 4 5 6 7 8 9 10 11 12 13 16 17

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 1/2"	3/4" - 16UNF (SAE 8)
P2	G 1/2"	3/4" - 16UNF (SAE 8)
A-B	G 1/2"	3/4" - 16UNF (SAE 8)
T1	G 1/2"	7/8" - 14UNF (SAE 10)
T2	G 1/2"	3/4" - 16UNF (SAE 8)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

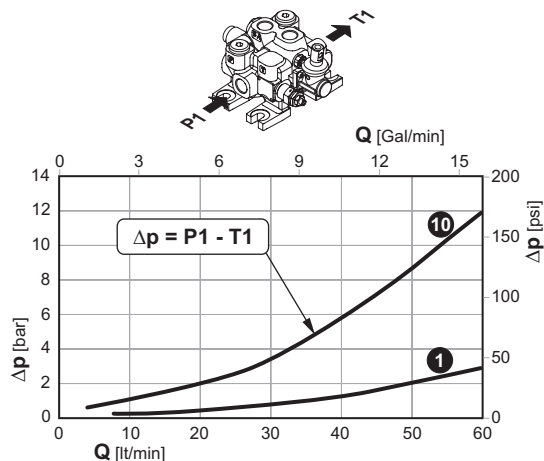
	T1	G 1/2"
	X	G 3/8" - G 1/2"
	T1	7/8"-14UNF (SAE 10)
	X	3/4" - 16UNF (SAE 8) 7/8"-14UNF (SAE 10)

GSV50

DISTRIBUTORI COMPONIBILI SECTIONAL DIRECTIONAL CONTROL VALVES

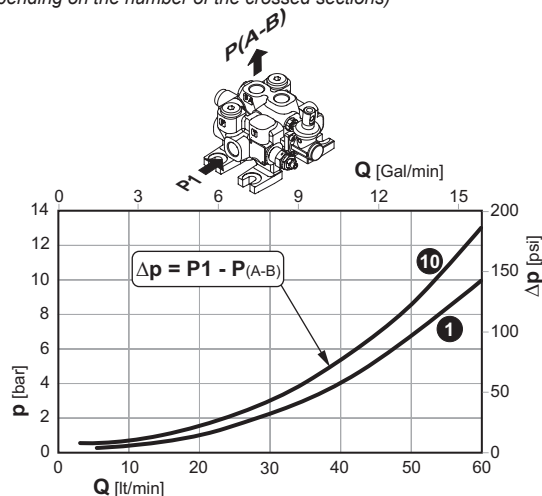
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



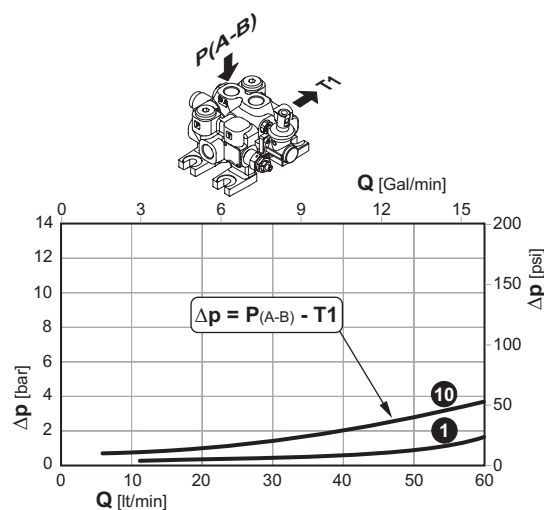
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



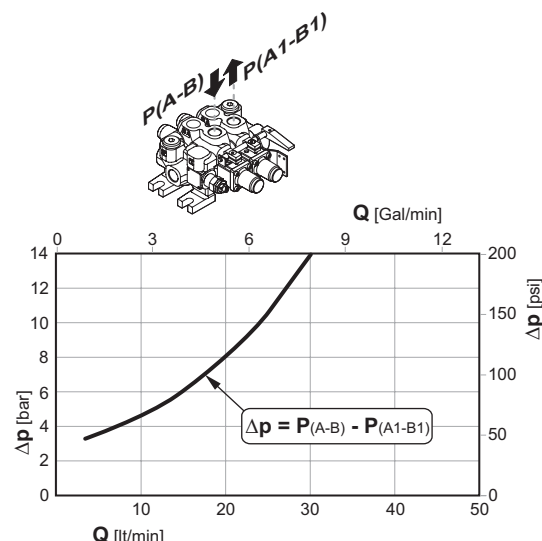
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



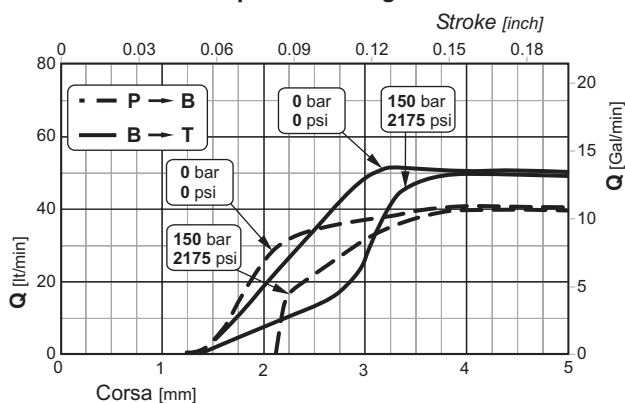
Perdite di carico tra due elementi in serie

Pressure drop through two sections connected in series

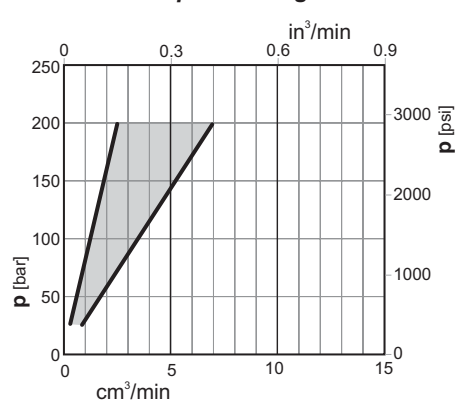


1 10 Sezioni / Sections

Curve di progressività
Spool metering

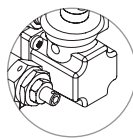
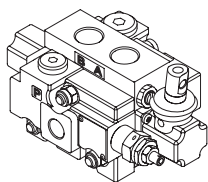


Trafilamenti sul cursore
Spool leakage

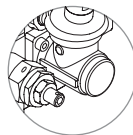


Q50

DISTRIBUTORI COMPONIBILI
SECTIONAL DIRECTIONAL CONTROL VALVES

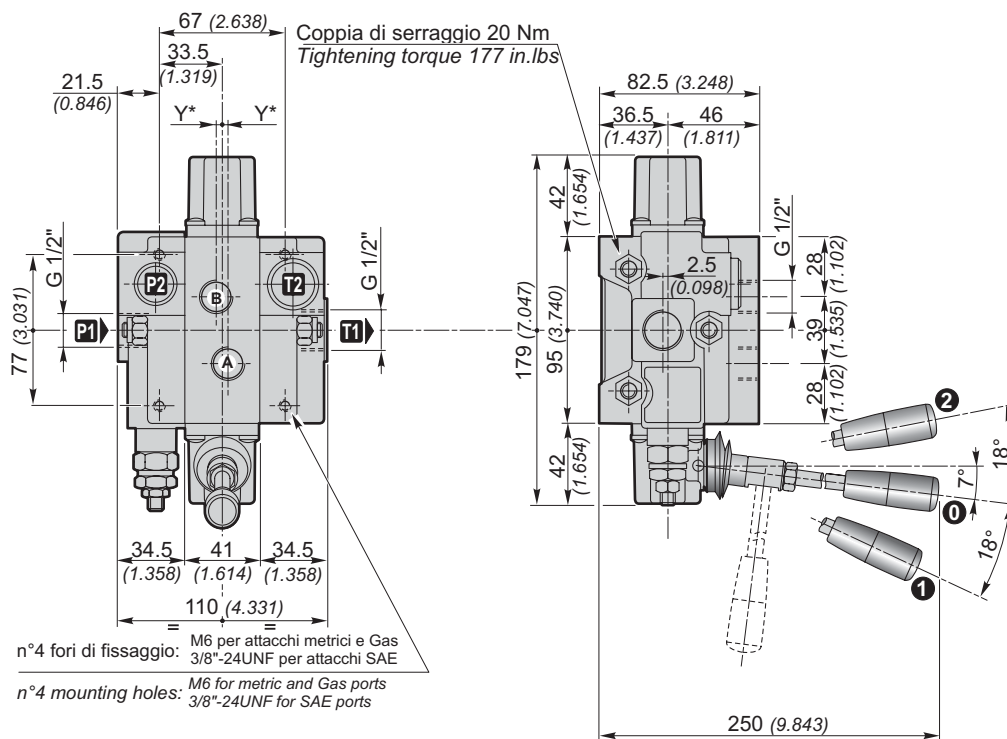


(Standard)
Comando e posizionario in plastica
Control and positioner plastic



S
Comando e posizionario in Alluminio
Control and positioner Aluminium

— F3D — **S** —
13 16 17



Ad esaurimento / Phasing-out

Q50 — F7S R250 MSE — E50 R250 — 2x 103 A1 M1 V30 R250 V01 — F3D — 12V — 2E+1
1 2 3 4 5 6 7 8 9 10 11 12 13 16 17

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 1/2"	3/4" - 16UNF (SAE 8)
P2	G 1/2"	3/4" - 16UNF (SAE 8)
A-B	G 1/2"	3/4" - 16UNF (SAE 8)
T1	G 1/2"	7/8" - 14UNF (SAE 10)
T2	G 1/2"	3/4" - 16UNF (SAE 8)
Y* [mm]	2.5	1.5

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

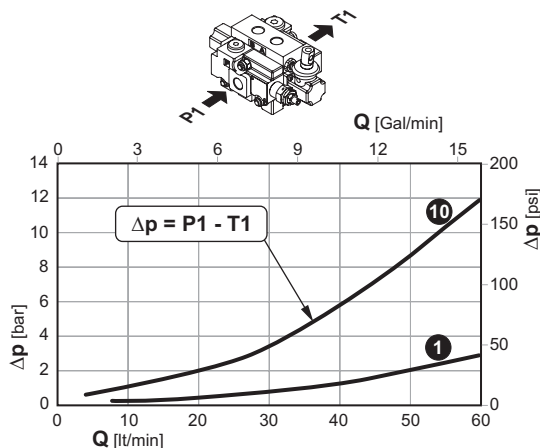
19.7 (0.776)	T1	G 1/2"
X	X	G 3/8" - G 1/2"
T1	T1	7/8"-14UNF (SAE 10)
X	X	3/4" - 16UNF (SAE 8) 7/8"-14UNF (SAE 10)

Q50

DISTRIBUTORI COMPONIBILI SECTIONAL DIRECTIONAL CONTROL VALVES

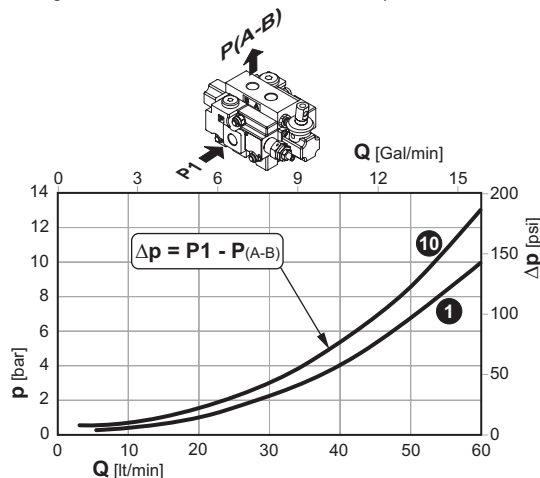
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



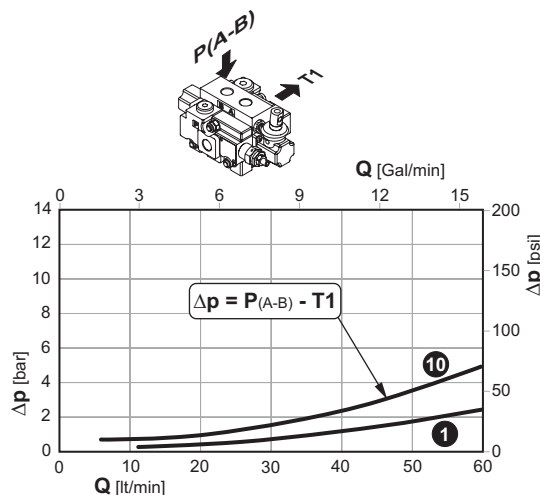
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



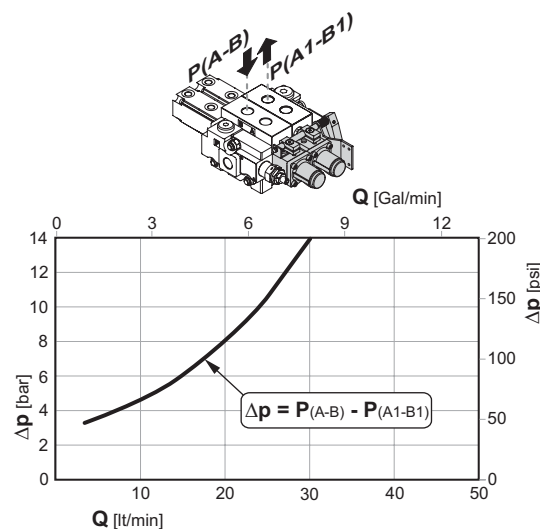
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



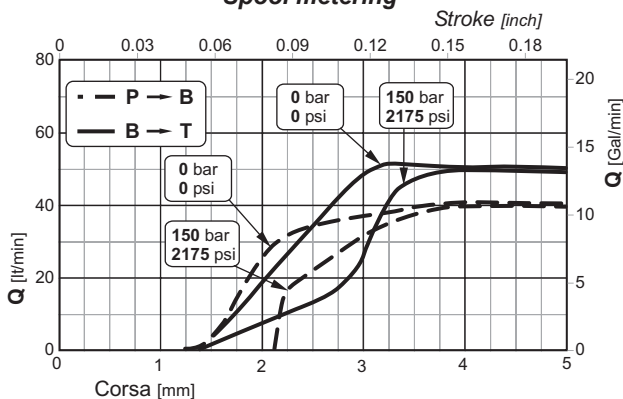
Perdite di carico tra due elementi in serie

Pressure drop through two sections connected in series

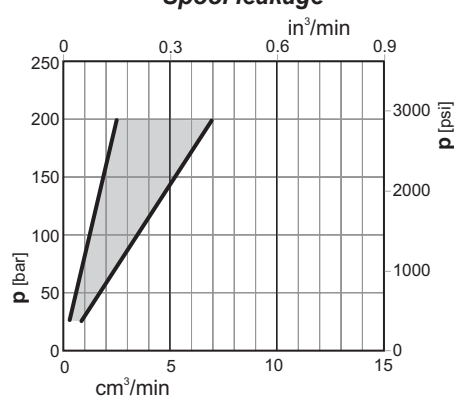


1 10 Sezioni / Sections

Curve di progressività
Spool metering

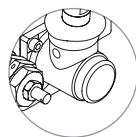
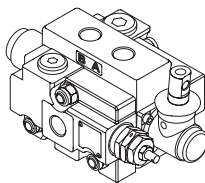


Trafilamenti sul cursore
Spool leakage

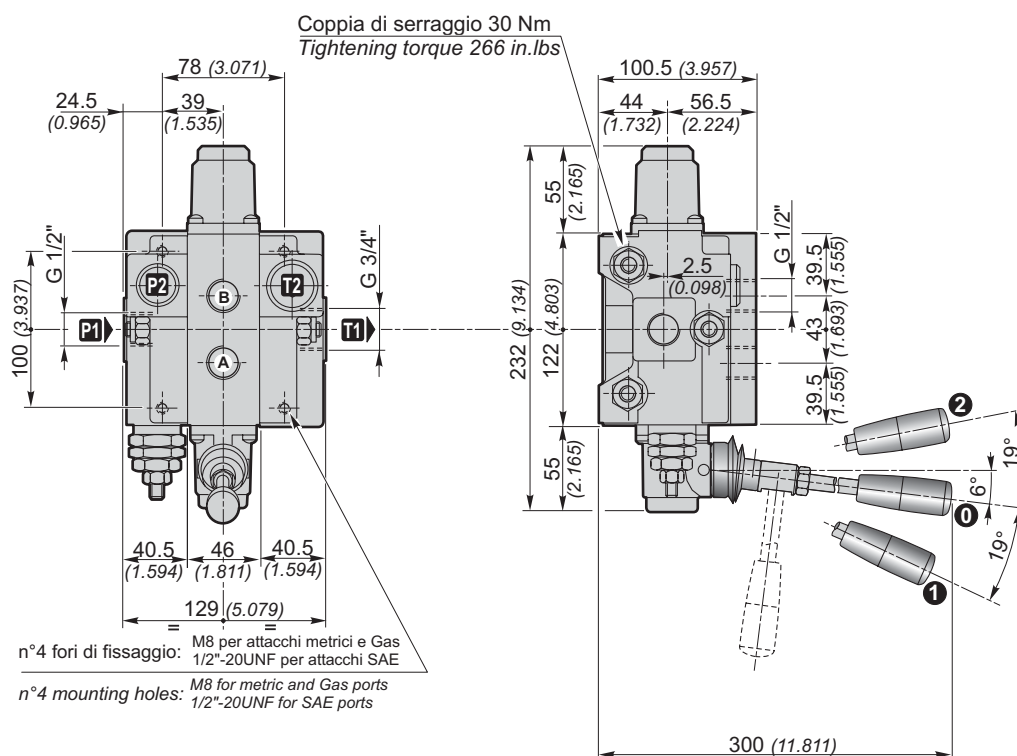


Q80

**DISTRIBUTORI COMPONIBILI
SECTIONAL DIRECTIONAL CONTROL VALVES**



(Standard)
Comando e posizionario in Alluminio
Control and positioner Aluminium



Q80 — **F7S** **R250** **MSE** — **E50** **R250** — 2x **103** **A1** **M1** **V30** **R250** **V01** — **F3D** — **12V** — **2E+1**
 1 2 3 4 5 6 7 8 9 10 11 12 13 16 17

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	BSP G 3/4"	SAE
P1	G 1/2"	G 3/4"	7/8" - 14UNF (SAE 10)
P2	G 1/2"	G 3/4"	7/8" - 14UNF (SAE 10)
A-B	G 1/2"	G 3/4"	3/4" - 16UNF (SAE 8)
T1	G 3/4"	G 3/4"	1" 1/16" - 12UN (SAE 12)
T2	G 3/4"	G 3/4"	7/8" - 14UNF (SAE 10)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

	T1	G 3/4"
	X	G 1/2" - G 3/4"
	T1	1" 1/16"-12UN (SAE 12)
	X	7/8" - 14UNF (SAE 10)
	T1	G 3/4"
	X	G 3/4"

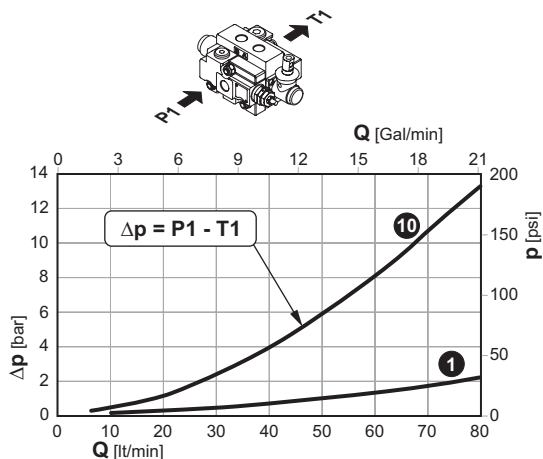
Dimensioni in / Dimensions in: mm (inch)

Q80

DISTRIBUTORI COMPONIBILI SECTIONAL DIRECTIONAL CONTROL VALVES

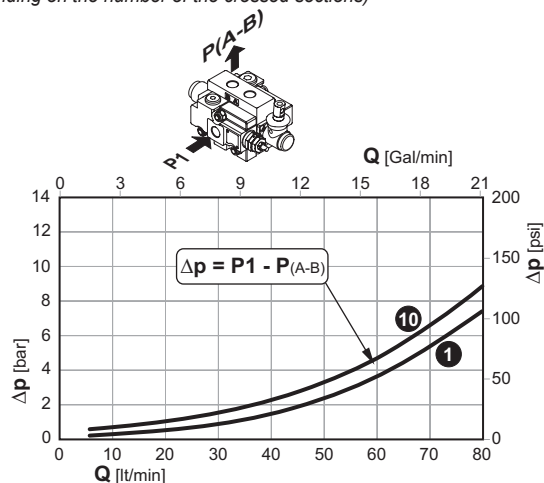
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



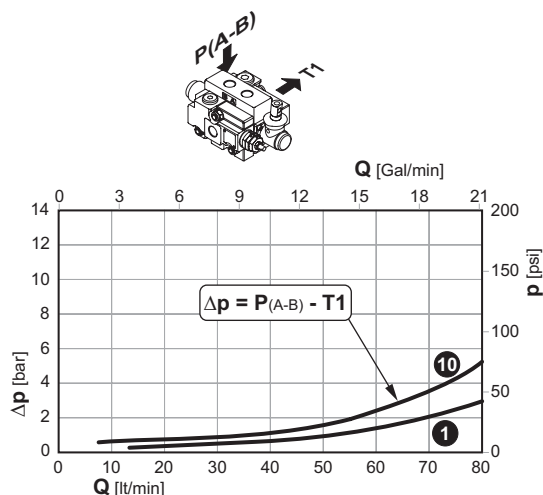
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



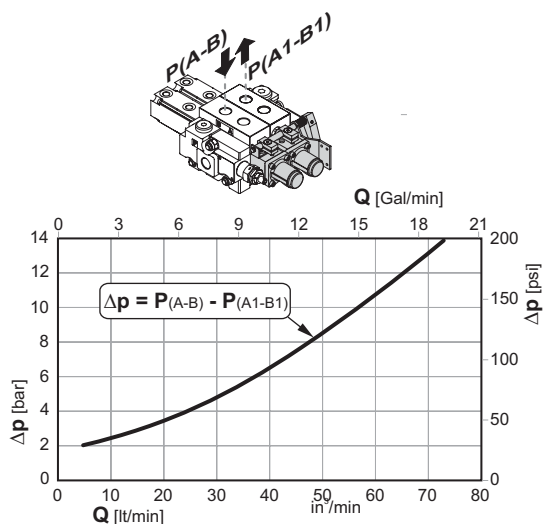
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



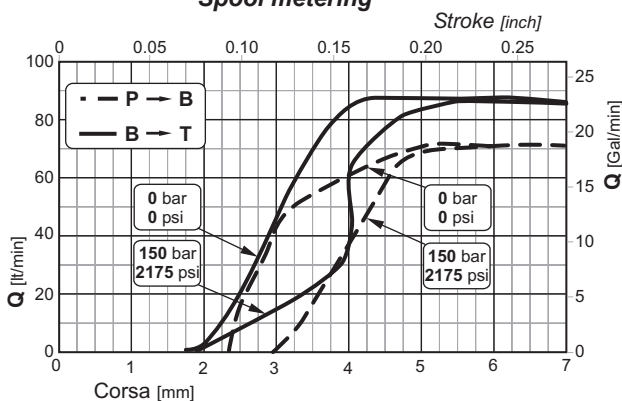
Perdite di carico tra due elementi in serie

Pressure drop through two sections connected in series

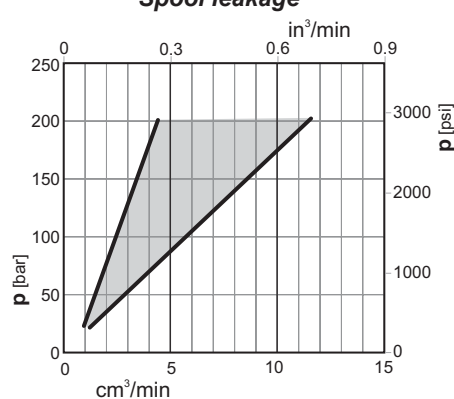


1 10 Sezioni / Sections

Curve di progressività
Spool metering

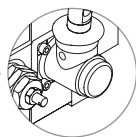
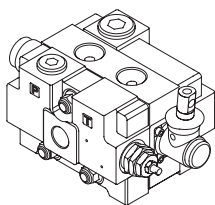


Trafilamenti sul cursore
Spool leakage

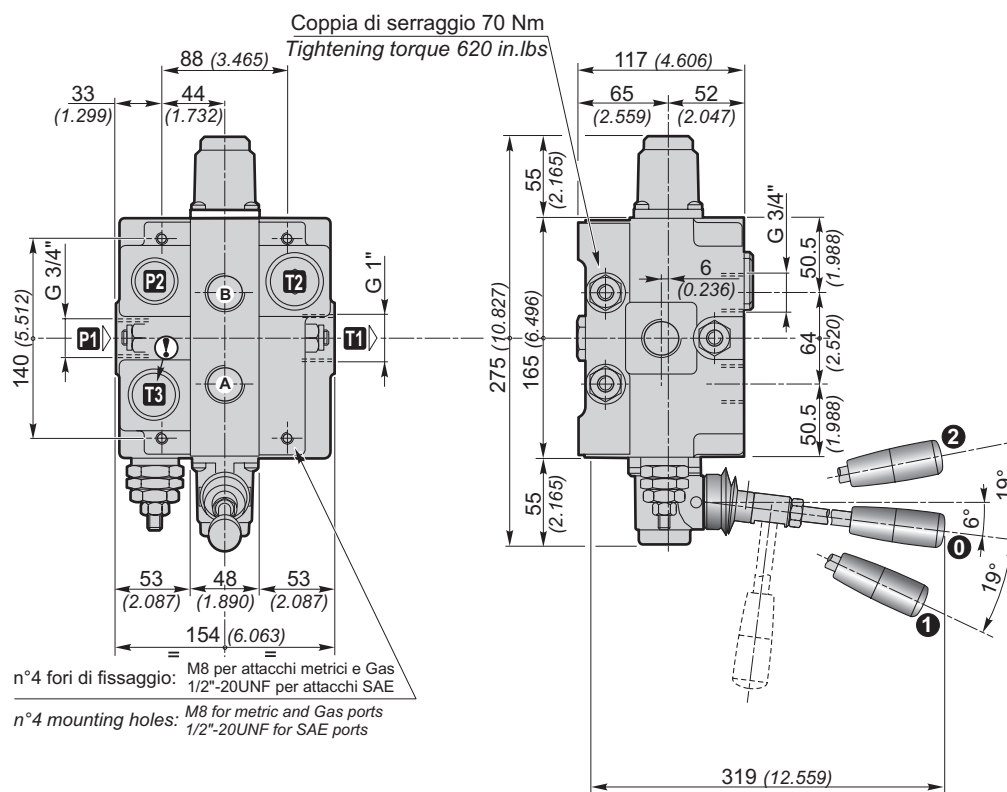


Q130

**DISTRIBUTORI COMPONIBILI
SECTIONAL DIRECTIONAL CONTROL VALVES**



(Standard)
Comando e posizionate in Alluminio
Control and positioner Aluminium



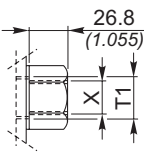
Q130 — **F7S** **R250** **MSE** — **E50** **R250** — 2x **103** **A1** **M1** **V30** **R250** **V01** — **F3D** — **12V** — **2E+1**

1 2 3 4 5 6 7 8 9 10 11 12 13 16 17

Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	BSP G 1"	SAE
P1	G 3/4"	G 1"	1" 5/16 - 12UN (SAE 16)
P2	G 3/4"	G 1"	1" 5/16 - 12UN (SAE 16)
A-B	G 3/4"	G 1"	1" 5/16 - 12UN (SAE 16)
T1	G 1"	G 1"	1" 5/16 - 12UN (SAE 16)
T2	G 1"	G 1"	1" 5/16 - 12UN (SAE 16)

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

	T1	G 1"
	X	G 3/4" - G 1"
	T1	G 1"
	X	G 1"
	T1	1" 5/16-12 UN (SAE 16)
	X	1" 1/16-12 UN (SAE 12)

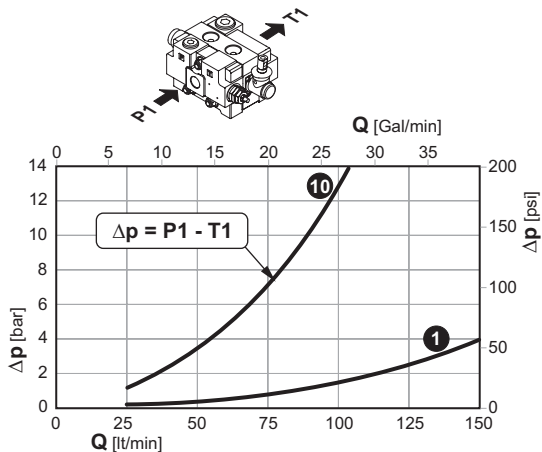
Dimensioni in / Dimensions in: mm (inch)

Q130

DISTRIBUTORI COMPONIBILI SECTIONAL DIRECTIONAL CONTROL VALVES

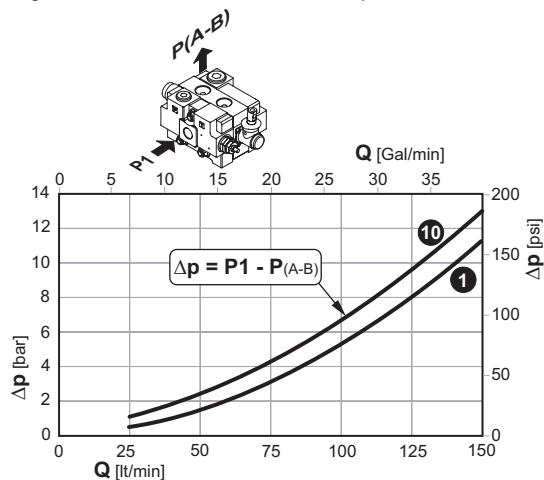
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



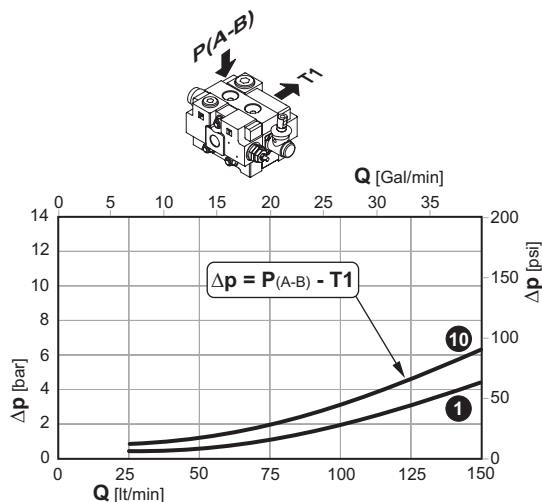
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



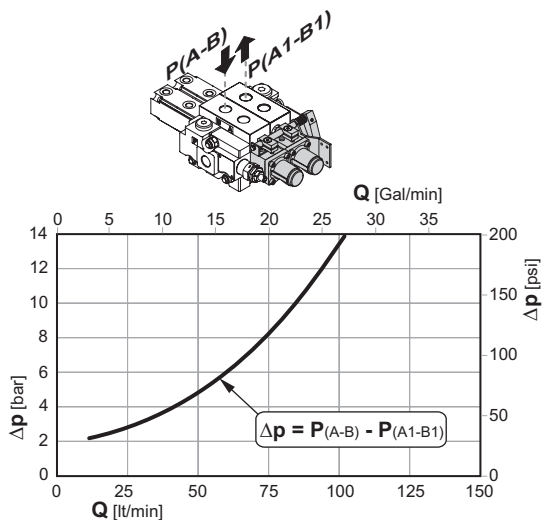
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position
(Δp depending on the number of the crossed sections)



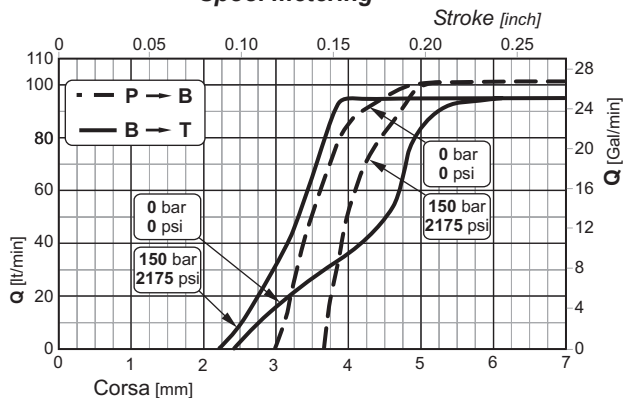
Perdite di carico tra due elementi in serie

Pressure drop through two sections connected in series

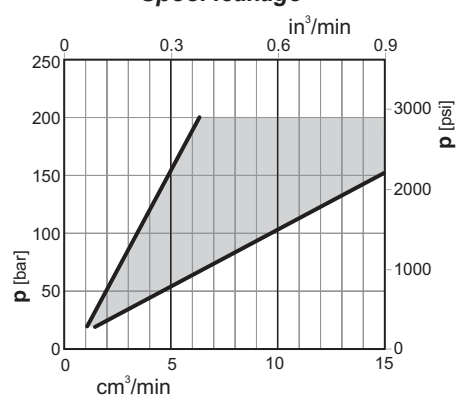


1 10 Sezioni / Sections

Curve di progressività
Spool metering



Trafilamenti sul cursore
Spool leakage



Fiancata d'ingresso

Inlet section

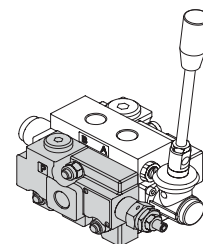
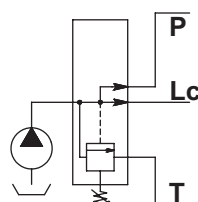
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

2 - Tipo fiancata d'ingresso / Inlet section type

		Q30	GSV50 (Q50)	Q80	Q130
F7S	Collettore di entrata sinistro con valvola limitatrice di pressione VLP	•	•	•	•
F7SP	Collettore di entrata sinistro con valvola limitatrice di pressione pilotata				•
F8S	Collettore di entrata sinistro senza valvole	•	•	•	•

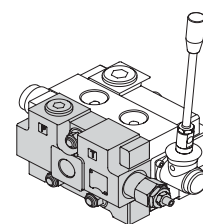
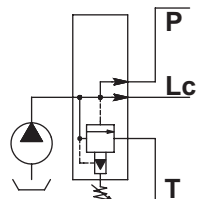
F7S

Collettore di entrata con valvola limitatrice di pressione VLP
Inlet section with relief valve VLP



F7SP

Collettore di entrata con valvola limitatrice di pressione pilotata
Inlet sections with check valve VR



3 - Tipo molla e taratura valvola

Dove è presente la valvola VLP (fiancate F7S e F7SP), deve essere specificato il tipo di molla (**B**, **N** o **R**) e la sua pressione di taratura; **se quest'ultima viene omessa, verrà messa la molla N tarata a 150 bar.**

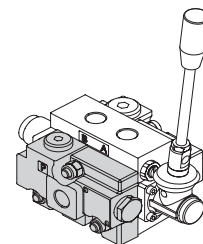
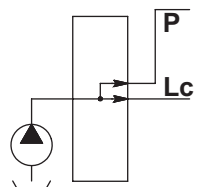
3 - Type of spring and valve setting

If valve VLP is installed (inlet section F7S and F7SP), specify the type of spring (**B**, **N** or **R**) and its pressure setting. **If omitted, spring N with a 150 bar setting will be installed.**

		molla bianca white spring	molla nera black spring	molla rossa red spring
R	Tipo di molla per la VLP Type of spring for relief valve	B	N	R
Campi di taratura / Calibration fields bar (psi)				
250	Taratura della VLP VLP Setting	10 ÷ 80 (145 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 380 (2915 ÷ 5510)

F8S

Collettore di entrata senza valvole
Inlet section without valves



Fiancata d'ingresso

Inlet section

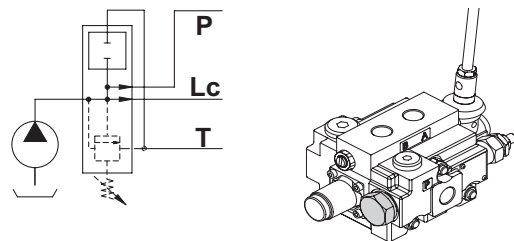
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

4 - Valvole aggiuntive alla fiancata / Additional valves to the inlet section

			Q30	GSV50 (Q50)	Q80	Q130
PMS	Collettore di entrata con predisposizione per valvola di messa a scarico elettrica (indiretta) o idraulica <i>Inlet section presets for electrical outlet release valve (indirect) or hydraulic</i>		•	•	•	•
MSI	Collettore di entrata con valvola di messa a scarico idraulica <i>Inlet section with hydraulic outlet release valve</i>		•	•	•	•
MSE	Collettore di entrata con valvola di messa a scarico elettrica (indiretta) <i>Inlet section with electrical outlet release valve (indirect)</i>		•	•	•	•
VRF	Collettore di entrata con valvola regolatrice di flusso <i>Inlet section flow regulator valve</i>		•	•		•

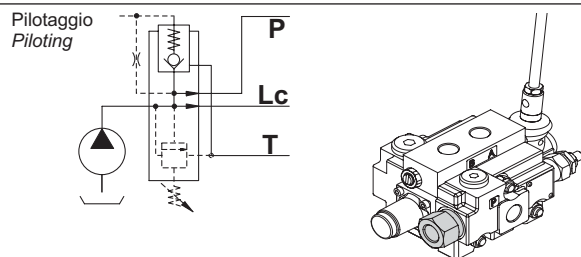
PMS

Collettore di entrata con predisposizione per valvola di messa a scarico elettrica (indiretta) o idraulica
Inlet section presets for electrical outlet release valve (indirect) or hydraulic



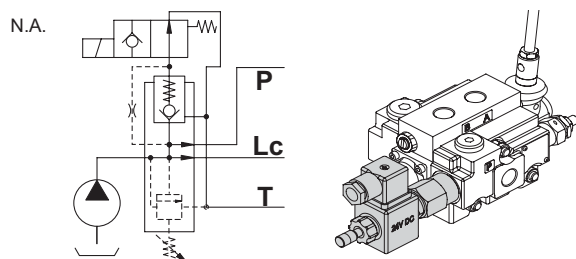
MSI

Collettore di entrata con valvola di messa a scarico idraulica
Inlet section with hydraulic outlet release valve



MSE

Collettore di entrata con valvola di messa a scarico elettrica (indiretta)
Inlet section with electrical outlet release valve (indirect)

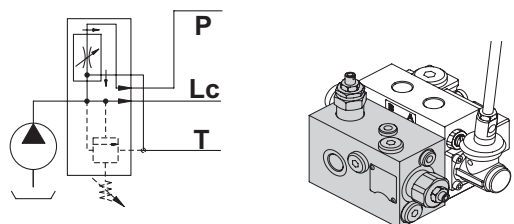


N.B.
Specificare tensione e schema dell'elettrovalvola
Specify voltage and type of the solenoid operated valve

Tensione Voltage	Schema Scheme	
12 V.DC	N.C.	Normalmente chiusa <i>Usually closed</i>
24 V.DC	N.A.	Normalmente aperta <i>Usually open</i>

VRF

Collettore di entrata con valvola regolatrice di flusso
Inlet section flow regulator valve



Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

I campi da 7 a 13 sono da ripetere per ogni sezione. Nel caso in cui due sezioni contigue siano identiche, è sufficiente descriverne solo una anteponendo **2x** al campo 7.

Fields 7 to 13 must be repeated for each section. If two adjacent sections are identical, just describe one and put 2x before field 7.

5 - Elemento intermedio

Questo campo viene omesso se viene utilizzata una sezione di lavoro.

Il numero massimo complessivo di sezioni di lavoro e/o elementi intermedi è 10.

5 - Intermediate section

This field is omitted if a working section is used.

The maximum overall number of working sections and/or intermediate elements is 10.

			Q30	GSV50 (Q50)	Q80	Q130
E50	Elemento intermedio con VLP	Intermediate section with relief valve	•	•	•	•
E51	Collettore di uscita intermedio	Intermediate outlet section	•	•	•	•
E53	Elemento intermedio per entrata 2ª pompa con VLP	Intermediate inlet section for 2nd pump with relief valve	•	•	•	•
E58	Elemento intermedio con divisore di portata 3 vie compensato registrabile con cacciavite (tipo "C") o con volantino (tipo "V")	Intermediate section with 3 way flow divider adjustable and compensated whit screwdriver (type "C") or handw eel (type "V")	•	•	•	
E68	Elemento intermedio con divisore di portata 3 vie compensato registrabile con cacciavite (tipo "C") o con volantino (tipo "V")	Intermediate section with 3 way flow divider adjustable and compensated whit screwdriver (type "C") or handw eel (type "V")	•	•	•	•
E62	Elemento intermedio con valvola riduttrice di pressione per pilotaggio comando elettroidraulico	Intermediate section with pressure reducing valve for piloting electro-hydraulic control			•	•
E61	Elemento intermedio di spessoramento	Intermediate spacer element	•	•	•	•

* Limitazioni / Limitations

Elemento intermedio <i>Intermediate section</i>	Applicabile con: / <i>Applicable with:</i>			
	Valvole / <i>Valves</i>	Cursore <i>Spool</i>	Comando <i>Control</i>	Posizionatore <i>Positioner</i>
E50	Indicare la molla (B - N - R) e taratura della valvola limitatrice VLP <i>Indicate the spring (B-N_R) and setting of the pressure relief valve VLP</i>	Non serve <i>It is of no use</i>	Non serve <i>It is of no use</i>	Non serve <i>It is of no use</i>
E51	Non serve <i>It is of no use</i>			
E53	Indicare la molla (B - N - R) e taratura della valvola limitatrice VLP <i>Indicate the spring (B-N_R) and setting of the pressure relief valve VLP</i>			
E58	Non serve <i>It is of no use</i>			
E68				
E62				
E61				

6 - Tipo molla e taratura valvola

Dove è presente la valvola VLP (fiancate E50 e E53), deve essere specificato il tipo di molla (**B**, **N** o **R**) e la sua pressione di taratura; **se quest'ultima viene omessa, verrà messa la molla N tarata a 150 bar.**

6 - Type of spring and valve setting

If valve VLP is installed (inlet section E50 and E53), specify the type of spring (B, N or R) and its pressure setting. If omitted, spring N with a 150 bar setting will be installed.

		molla bianca white spring	molla nera black spring	molla rossa red spring
R	Tipo di molla per la VLP Type of spring for relief valve	B	N	R
Campi di taratura / Calibration fields bar (psi)				
250	Taratura della VLP VLP Setting	10 ÷ 80 (145 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 380 (2915 ÷ 5510)

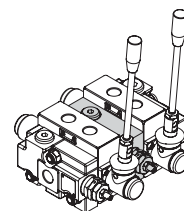
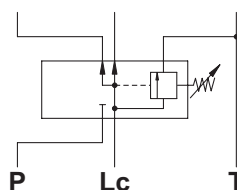
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

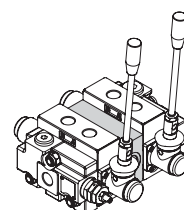
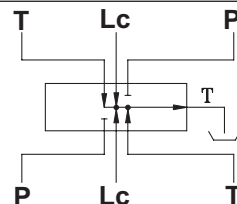
E50

Elemento intermedio con VLP
Intermediate section with relief valve



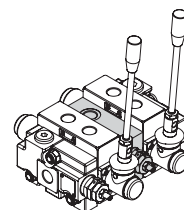
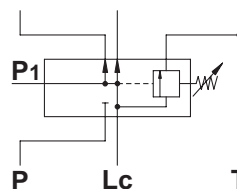
E51

Collettore di uscita intermedio
Intermediate outlet section



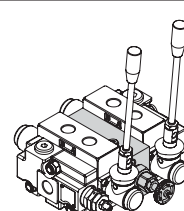
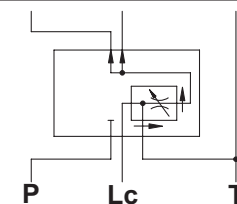
E53

Elemento intermedio per
entrata 2ª pompa con VLP
*Intermediate inlet section for
2nd pump with relief valve*



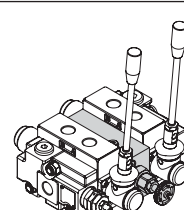
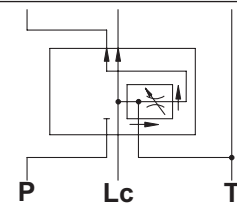
E58

Elemento intermedio con divisore di portata 3 vie compensato registrabile
con cacciavite (tipo "C") o con volantino (tipo "V"), centro aperto
*Intermediate section with 3 way flow divider adjustable and compensated
whit screw (type "C") or handwheel (type "V"), through passage opened*



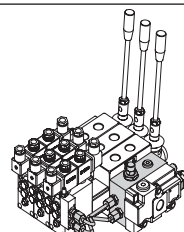
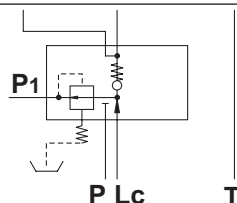
E68

Elemento intermedio con divisore di portata 3 vie compensato registrabile
con cacciavite (tipo "C") o con volantino (tipo "V"), centro aperto
*Intermediate section with 3 way flow divider adjustable and compensated
whit screw (type "C") or handwheel (type "V"), through passage opened*



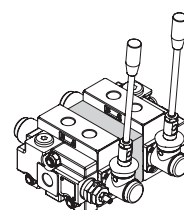
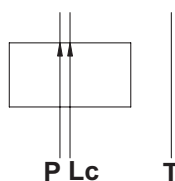
E62

Elemento intermedio con valvola riduttrice
di pressione per pilotaggio comando elettroidraulico
*Intermediate section with pressure reducing
valve for piloting electro-hydraulic control*



E61

Elemento intermedio di spessoramento
Intermediate spacer element



Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

I campi da 7 a 13 sono da ripetere per ogni sezione. Nel caso in cui due sezioni contigue siano identiche, è sufficiente descriverne solo una antepoendo **2x** al campo 7.

Fields 7 to 13 must be repeated for each section. If two adjacent sections are identical, just describe one and put **2x** before field 7.

7 - Tipo cursore / Spool type

Cursori

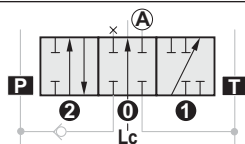
			Q30	GSV50 (Q50)	Q80	Q130
101	Semplice effetto in A	Single acting in A port	•	•	•	•
102	Semplice effetto in B	Single acting in B port	•	•	•	•
103	Doppio effetto, A e B chiusi in posizione 0	Double acting A and B closed in 0 position	•	•	•	•
106	Doppio effetto, passaggi chiusi in posizione 0	Double acting, ports closed in 0 position	•	•	•	•
107	Doppio effetto, A in T e B chiuso in posizione 0	Double acting, A to T and B closed in 0 position	•	•	•	•
108	Doppio effetto, B in T e A chiuso in posizione 0	Double acting, B to T and A closed in 0 position	•	•	•	•
109	Semplice effetto in A, A in T in posizione 0	Single acting in A, A to T in 0 position	•	•	•	•
110	Semplice effetto in B, B in T in posizione 0	Single acting in B, B to T in 0 position	•	•	•	•
111	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•	•	•	•
114	Doppio effetto, A e B in T e Lc chiusa in posizione 0	Double acting, A and B to T and through passage closed in 0 position	•	•	•	•
116*	Doppio effetto con 4ª posizione flottante	Double acting with 4th position floating	•	•	•	•
126*	Doppio effetto con 4ª posizione flottante	Double acting with 4th position floating	•	•	•	•

* Limitazioni / Limitations

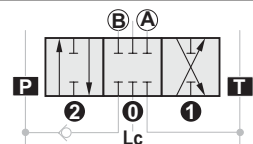
Cursore Spools	Applicabile con: / Applicable with:		
	Comando / Control	Posizionatore / Positioner	Valvole / Valves
116	A1-Z1 / A2-Z1 / A4-Z1 / A6-Z1 / A8-Z1	R8	Tutte le valvole a cartuccia e tutte le valvole a pannello All of the cartridge valves and all of the panel valves
126	A1 / A2 / A4 / A5 / A6 / A8 / SL / SLA15 / A15 / A16	R10-Z1	

101

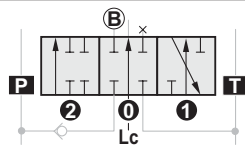
Semplice effetto in A
Single acting in A port

**106**

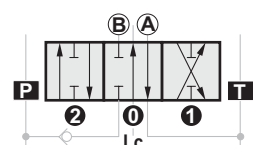
Doppio effetto, passaggi chiusi in posizione 0
Double acting, ports closed in 0 position

**102**

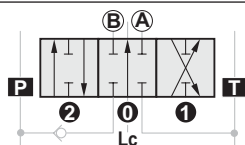
Semplice effetto in B
Single acting in B port

**107**

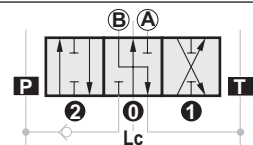
Doppio effetto, A in T e B chiuso in posizione 0
Double acting, A to T and B closed in 0 position

**103**

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position

**108**

Doppio effetto, B in T e A chiuso in posizione 0
Double acting, B to T and A closed in 0 position



Sezione di lavoro e/o elemento intermedio

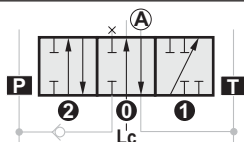
Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

Cursori

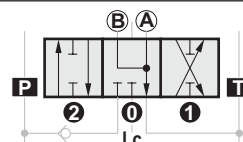
109

Semplice effetto in A, A in T
in posizione 0
Single acting in A, A to T
in 0 position



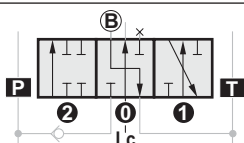
114

Doppio effetto, A e B in T e
Lc chiusa
in posizione 0
Double acting, A and B to T and
through passage closed in 0 position



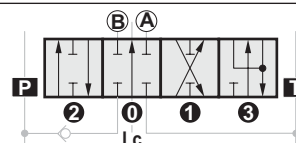
110

Semplice effetto in B, B in T
in posizione 0
Single acting in B, B to T
in 0 position



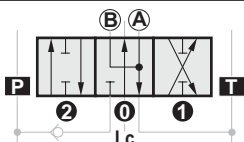
116

Doppio effetto con 4ª
posizione flottante
Double acting with 4th
position floating



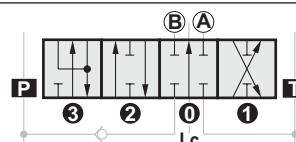
111

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



126

Doppio effetto con 4ª
posizione flottante
Double acting with 4th
position floating

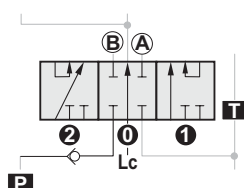


Cursori serie / Serie spools

			Q30	GSV50 (Q50)	Q80	Q130
403	Doppio effetto SERIE	Double acting SERIE	•	•	•	•
411	Doppio effetto SERIE, A e B in T in pos. 0	Double acting SERIE, A and B to T in 0 position	•	•	•	•

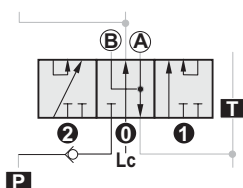
403

Doppio effetto SERIE
Double acting SERIE



411

Doppio effetto SERIE,
A e B in T in pos. 0
Double acting SERIE,
A and B to T in 0 position



Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

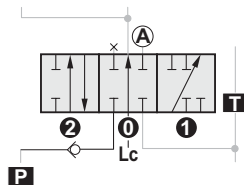
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

Cursori singoli / Single spools

			Q30	GSV50 (Q50)	Q80	Q130
201	Semplice effetto in A	Single acting in A port	•	•	•	•
202	Semplice effetto in B	Single acting in B port	•	•	•	•
203	Doppio effetto	Double acting	•	•	•	•
207	Doppio effetto, A in T e B chiuso in posizione 0	Double acting, A to T and B closed in 0 position	•	•	•	•
208	Doppio effetto, B in T e A chiuso in posizione 0	Double acting, B to T and A closed in 0 position	•	•	•	•
209	Semplice effetto in A, A in T in posizione 0	Single acting in A, A to T in 0 position	•	•	•	•
210	Semplice effetto in B, B in T in posizione 0	Single acting in B, B to T in 0 position	•	•	•	•
211	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•	•	•	•
216*	Doppio effetto con 4ª posizione flottante	Double acting with 4th position floating	•	•	•	•
226*	Doppio effetto con 4ª posizione flottante	Double acting with 4th position floating	•	•	•	•

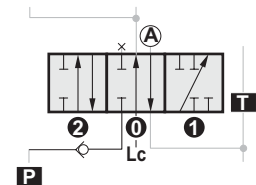
201

Semplice effetto in A
Single acting in A port



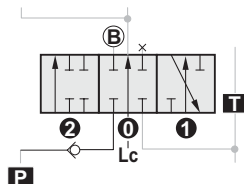
209

Semplice effetto in A, A in T
in posizione 0
Single acting in A, A to T
in 0 position



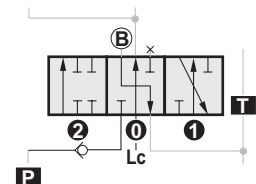
202

Semplice effetto in B
Single acting in B port



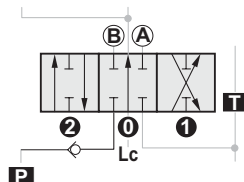
210

Semplice effetto in B, B in T
in posizione 0
Single acting in B, B to T
in 0 position



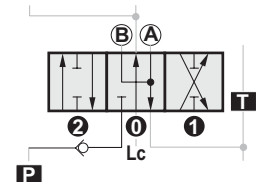
203

Doppio effetto
Double acting



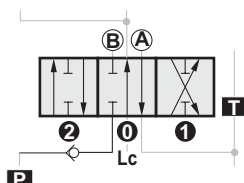
211

Doppio effetto, A e B in T
in posizione 0
Double acting, A and B to T
in 0 position



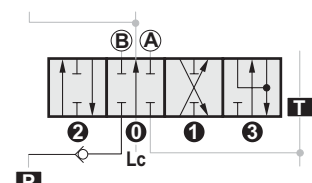
207

Doppio effetto, A in T e B
chiuso in posizione 0
Double acting, A to T and B
closed in 0 position



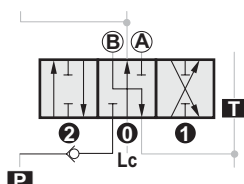
216

Doppio effetto con
4ª posizione flottante
Double acting with
4th position floating



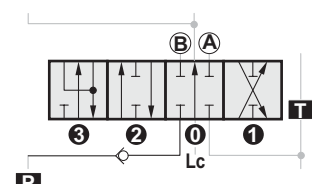
208

Doppio effetto, B in T e A
chiuso in posizione 0
Double acting, B to T and A
closed in 0 position



226

Doppio effetto con
4ª posizione flottante
Double acting with
4th position floating



Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

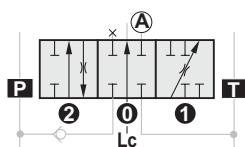
Cursori sensibilizzati / Sensitized spools

Q30	GSV50	Q50	Q80	Q130
-----	-------	-----	-----	------

101.20	Semplice effetto in A	Single acting in A port	•		•		
102.20	Semplice effetto in B	Single acting in B port	•		•		
103.05	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position	•	•	•		
103.10	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position				•	
103.20	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position	•		•		
103.25	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position	•		•		
103.30	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position				•	
103.40	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position	•		•		
103.50	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position					•
103.60	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position					•
103.80	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position					•
107.20	Doppio effetto, A in T e B chiuso in posizione 0	Double acting, A to T and B closed in 0 position	•		•		
108.20	Doppio effetto, B in T e A chiuso in posizione 0	Double acting, B to T and A closed in 0 position	•		•		
111.05	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•	•	•		
111.10	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•		•	•	
111.20	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•		•		
111.25	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•		•		
111.30	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position				•	
111.40	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•		•		

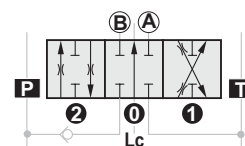
101.20

Semplice effetto in A
Single acting in A port



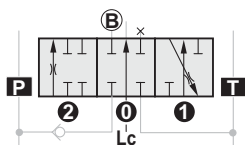
103.20

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



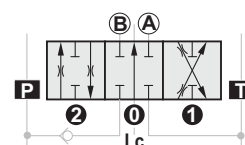
102.20

Semplice effetto in B
Single acting in B port



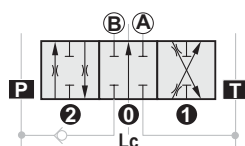
103.25

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



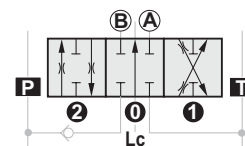
103.05

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



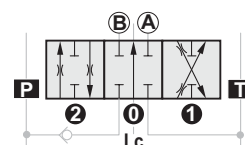
103.30

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



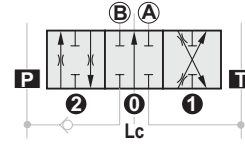
103.10

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



103.40

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



Sezione di lavoro e/o elemento intermedio

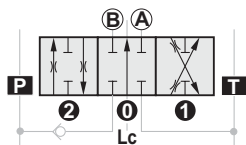
Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

Cursori sensibilizzati

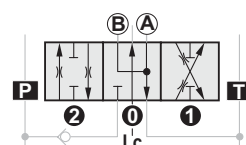
103.50

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



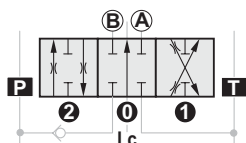
111.10

Doppio effetto, A e B in T in posizione 0
Double acting, A and B to T in 0 position



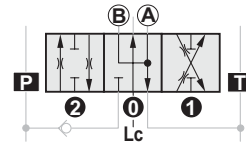
103.60

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



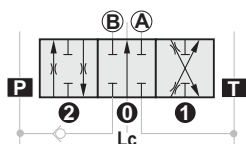
111.20

Doppio effetto, A e B in T in posizione 0
Double acting, A and B to T in 0 position



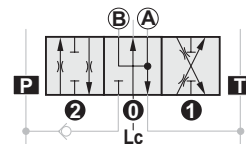
103.80

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



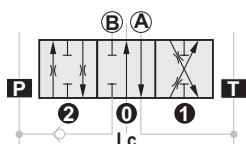
111.25

Doppio effetto, A e B in T in posizione 0
Double acting, A and B to T in 0 position



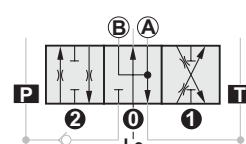
107.20

Doppio effetto, A in T e B chiuso in posizione 0
Double acting, A to T and B closed in 0 position



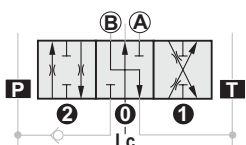
111.30

Doppio effetto, A e B in T in posizione 0
Double acting, A and B to T in 0 position



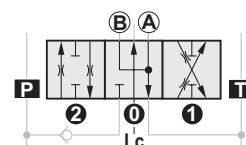
108.20

Doppio effetto, B in T e A chiuso in posizione 0
Double acting, B to T and A closed in 0 position



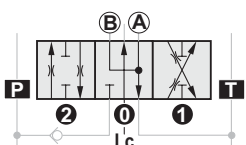
111.40

Doppio effetto, A e B in T in posizione 0
Double acting, A and B to T in 0 position



111.05

Doppio effetto, A e B in T in posizione 0
Double acting, A and B to T in 0 position



Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

8 - Tipo di comando / Control type

			Q30	GSV50 (Q50)	Q80	Q130
A1	Comando manuale con leva standard	Hand control with standard lever	•	•	•	•
A1/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116	•	•	•	•
A2	Comando manuale con leva standard ruotata di 180°	Hand control with standard lever mounted rotated 180°	•	•	•	•
A2/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116	•	•	•	•
A3*	Scatola di protezione in sostituzione del comando manuale con leva	Cap replacing hand control with lever	•	•	•	•
A4	Attacco diretto sul cursore per rinvio a distanza rigido	Direct control connection on spool for stiff remote control	•	•	•	•
A4/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116	•	•	•	•
A5	Attacco diretto sul cursore con terminale sferico (da utilizzare solo con il posizionamento M4 (2-1))	Direct control connection on spool with spherical end (Control to be used for positioning M4 (2-1))	•	•	•	•
A6	Attacco diretto sul cursore con terminale ad occhio fisso	Direct control connection on spool eye end	•	•	•	•
A6/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116	•	•	•	•
A8	Attacco diretto sul cursore per cavo flessibile rinvio a distanza	Direct connection on spool for remote flexible control	•	•	•	•
A8/Z1*	Versione con kit distanziale per il montaggio del cursore 116	Version with spacer kit for installation of spool 116	•	•	•	•
C1*	Cavo flessibile	Flexible cable	•	•	•	•
SL*	Comando a distanza	Remote control	•	•	•	•
SLA15*	Comando a cloche per controllo simultaneo di due cursori a distanza	Remote dual axis control for simultaneous operation of two spools	•	•	•	•

* Limitazioni / Limitations

Comando Control	Applicabile con: / <i>Applicable with:</i>	
	Comando / <i>Control</i>	Cursore / <i>Spool</i>
A3	M1-U1 / M2-U1 / M3-U1 / M1-U2 / M2-U2 / M3-U2 / D2 / P1-N / P1-NP / D3	Tutti / <i>All</i>
C1	A8 / M1U2 - M2U2 - M3U2	
SL		
SLA15		

Comando Control	Applicabile con: / <i>Applicable with:</i>	
	Posizionatore / <i>Positioner</i>	Cursore / <i>Spool</i>
A1/Z1 A2/Z1 A4/Z1 A6/Z1 A8/Z1	R8	116

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

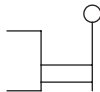
8 - Tipo di comando / Control type

		Q30	GSV50 (Q50)	Q80	Q130
	Leva a cloche per il comando singolo o simultaneo di due cursori:				
	<i>Dual axis for single or simultaneous control of two spools:</i>				
A15S	- con fulcro a sinistra	•	•	•	•
A15D	- con fulcro a destra	•	•	•	•
A16	- come a schema (pag. G-29)	•	•	•	•
	Comando manuale con attivazione del contatto elettrico del microswitch centralizzato:				
	<i>Hand control with ON-OFF centralized microswitch operation</i>				
N1-A1	- per doppio effetto	•	•	•	•
N1A-A1	- per semplice effetto in posizione 1	•	•	•	•
N1B-A1	- per semplice effetto in posizione 2	•	•	•	•
	Comando manuale, ruotato di 180°, con attivazione del contatto elettrico del microswitch centralizzato:				
	<i>180° Rotated hand control with ON-OFF centralized microswitch operation</i>				
N1-A2	- per doppio effetto	•	•	•	•
N1A-A2	- per semplice effetto in posizione 1	•	•	•	•
N1B-A2	- per semplice effetto in posizione 2	•	•	•	•
	Comando microswitch centralizzato:				
	<i>Centralized microswitch control:</i>				
N1-A3	- per doppio effetto	•	•	•	•
N1A-A3	- per semplice effetto in posizione 1	•	•	•	•
N1B-A3	- per semplice effetto in posizione 2	•	•	•	•

A1

A1/Z1

A1: Comando manuale con leva standard
A1: Hand control with standard lever

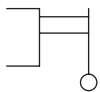


A1/Z1: Versione con kit distanziale per il montaggio del cursore 116
A1/Z1: Version with spacer kit for installation of spool 116

A2

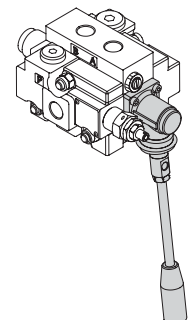
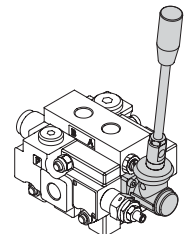
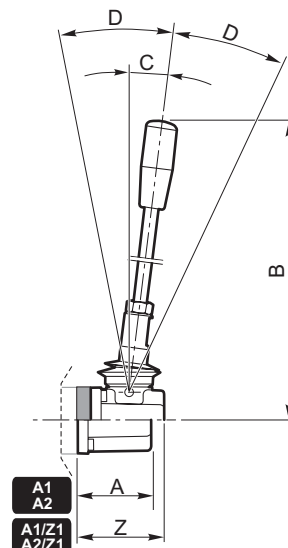
A2/Z1

A2: Comando manuale con leva standard ruotata di 180°
A2: Hand control with standard lever rotated 180°



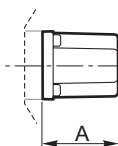
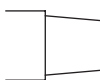
A2/Z1: Versione con kit distanziale per il montaggio del cursore 116
A2/Z1: Version with spacer kit for installation of spool 116

	A	B	C	D	Z
Q30 - GSV50 (Q50)	42 (1.654)	205 (8.071)	7°	18°	50.5 (1.988)
Q80 - Q130	55 (2.165)	260 (10.236)	6°	19°	68.5 (2.697)

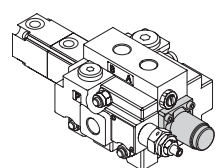


A3

Scatola di protezione in sostituzione del comando manuale con leva
Cap replacing hand control with lever



	A
Q30 - GSV50 (Q50)	42 (1.654)
Q80 - Q130	55 (2.165)



Sezione di lavoro e/o elemento intermedio

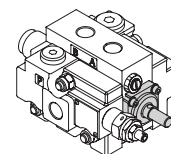
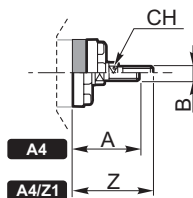
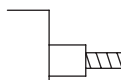
Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

A4

A4/Z1

A4: Attacco diretto sul cursore per rinvio a distanza rigido
A4: Direct control connection on spool for stiff remote control

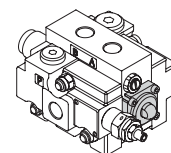
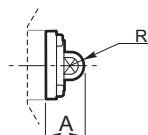
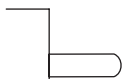


A4/Z1: Versione con kit distanziale per il montaggio del cursore 116
A4/Z1: Version with spacer kit for installation of spool 116

	A	B	CH	Corsa Stroke	Z
Q30 - GSV50 (Q50)	39 (1.535)	M8	9 (0.354)	±5 (0.197)	47.5 (1.870)
Q80 - Q130	53 (2.087)	M10	14 (0.551)	±7 (0.276)	66.5 (2.618)

A5

Attacco diretto sul cursore con terminale sferico (da utilizzare solo con il posizionamento M4 (2-1))
Direct control connection on spool with spherical end (Control to be used for positioning M4 (2-1))0

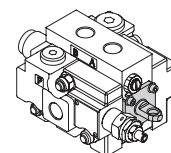
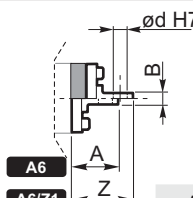
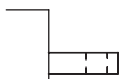


	A	R	Corsa Stroke
Q30 - GSV50 (Q50)	22 (0.866)	6.85 (0.270)	±5 (0.197)
Q80 - Q130	33 (1.299)	8.75 (0.344)	±7 (0.276)

A6

A6/Z1

A6: Attacco diretto sul cursore con terminale ad occhio fisso
A6: Direct control connection on spool eye end



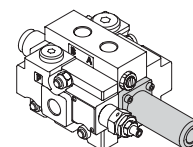
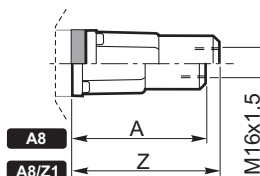
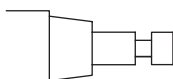
A6/Z1: Versione con kit distanziale per il montaggio del cursore 116
A6/Z1: Version with spacer kit for installation of spool 116

	A	B	d	Corsa Stroke	Z
Q30 - GSV50 (Q50)	20 (0.787)	6 (0.236)	9 (0.354)	±5 (0.197)	28.5 (1.122)
Q80 - Q130	27 (1.063)	7 (0.276)	11 (0.433)	±7 (0.276)	40.5 (1.594)

A8

A8/Z1

A8: Attacco diretto sul cursore per cavo flessibile rinvio a distanza
A8: Direct connection on spool for remote flexible control



A8/Z1: Versione con kit distanziale per il montaggio del cursore 116
A8/Z1: Version with spacer kit for installation of spool 116

	A	Z
Q30 - GSV50 (Q50)	73 (2.874)	81.5 (3.209)
Q80 - Q130	77 (3.031)	90.5 (3.563)

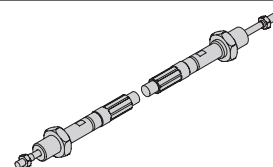
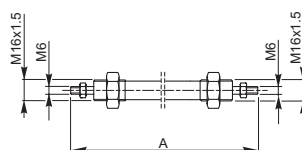
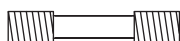
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

C1

Cavo flessibile
Flexible cable



A

Q30 - GSV50
(Q50)
Q80 - Q130

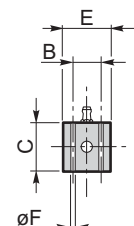
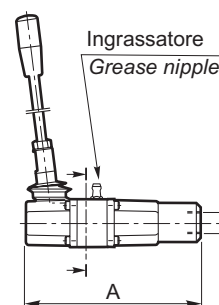
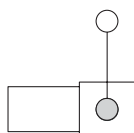
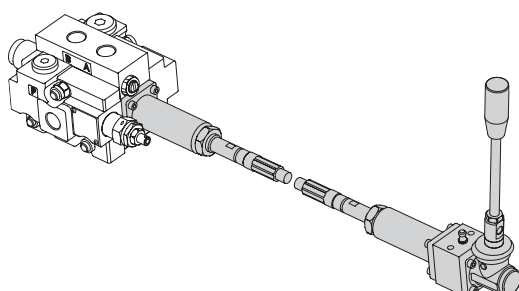
Massima lunghezza cavo consigliata 4000 mm
Raggio min. di curvatura 200mm
Max. recommended length 4000 mm
Minimum radius curve 200 mm

Dove è utilizzato il cavo flessibile C1, è necessario indicare la lunghezza del cavo espressa in mm.
Esempio per un cavo lungo 1000 mm: **A8-C1x1000-SL**

Indicate the cable length in mm when flexible cable C1 is used.
E.g.: for a cable 1000 mm in length: **A8-C1x1000-SL**

SL

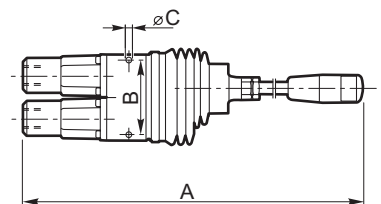
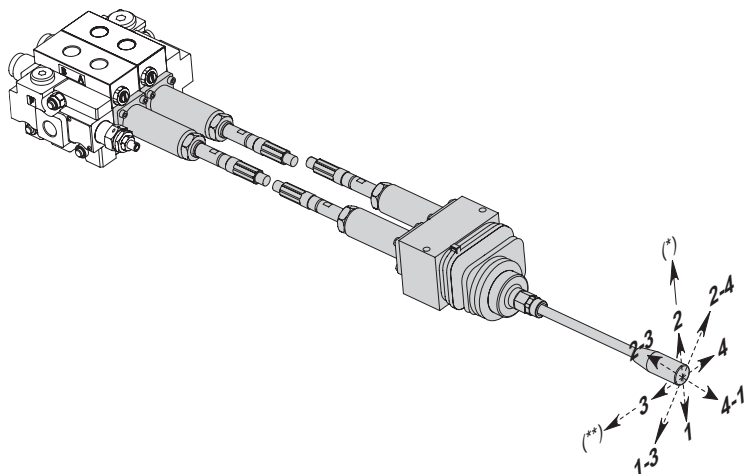
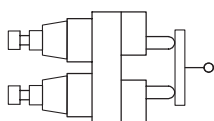
Comando a distanza
Remote control



	A	B	C	d	E	F
Q30 - GSV50 (Q50)	135 (5.315)	26 (1.024)	40 (1.575)	M16x1.5	38 (1.496)	5.5 (0.217)
Q80 - Q130	172 (6.772)	33.5 (1.319)	45 (1.772)		45 (1.772)	6.5 (0.256)

SLA15

Comando a cloche per controllo
simultaneo di due cursori a distanza
Remote dual axis control for
simultaneous operation of two spools



	A	B	Ø d
Q30 - GSV50 (Q50)	358 (14.094)	77 (3.301)	6.5 (0.256)
Q80 - Q130			

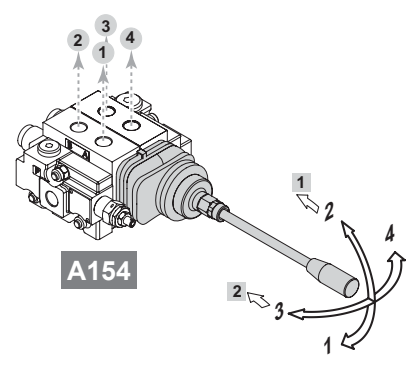
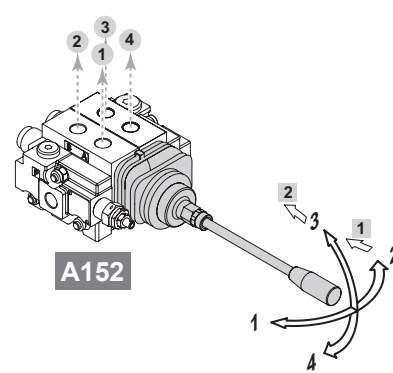
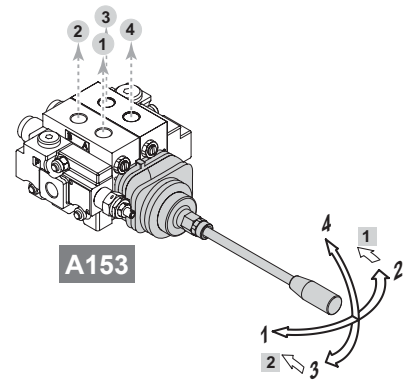
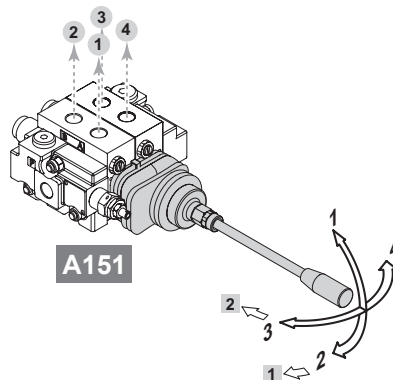
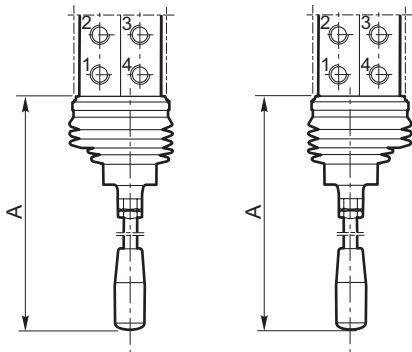
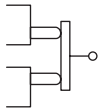
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

A15_

Leva a cloche per il comando singolo o simultaneo di due cursori, come schema a lato
Dual axis for simultaneous or single control of two spools, as from the scheme on the side



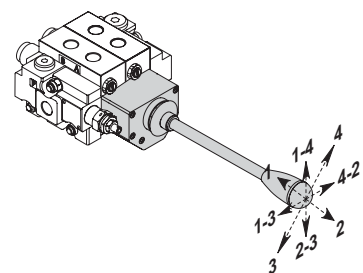
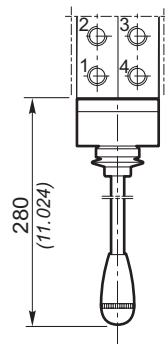
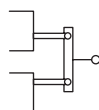
N.B. Nelle configurazioni A152 e A154, non è possibile montare le valvole antiurto.
Note: A152 - A154 configurations not permitted to mount cartridge valves.

Eventuale cassetto con 4^a pos. (solo cod.126)
Optional spool with 4th position (only code 126)

- 1 su 1^a sezione / on 1st section
- 2 su 2^a sezione / on 2nd section

A16

Leva a cloche per il controllo singolo o simultaneo di due cursori come a schema sottoindicato
Dual axis for single or simultaneous control of two spools as from the scheme here below



I comandi **A15**, **A16** o **SLA15** sono dei joistiks che comandano due sezioni di lavoro; essendo un comando unico viene inserito come codice solo nella prima sezione di lavoro e viene omesso nella seconda.

Esempio

Q30 – F7SR250 – 103/**A15**/M1 – 103/M1 – F3D

Nella seconda sezione di lavoro è indicato solo il cursore e il posizionatore.

Controls **A15**, **A16** or **SLA15** are joistiks that control two working sections. Since it is a single control, it is only entered as a code in the first work section and is omitted from the second.

Example

Q30 – F7SR250 – 103/**A15**/M1 – 103/M1 – F3D

Only the spool and positioner are indicated in the second working section.

Quando è richiesto anche il cavo C1, è necessario specificarne la lunghezza in entrambe le sezioni.

Esempio

Q30 – F7SR250 – 103/**A8-C1x1000**-SLA15/M1 – 103/**A8-C1x1000**/M1 – F3D

When cable C1 is also required, its length must be specified in both sections.

Example

Q30 – F7SR250 – 103/**A8-C1x1000**-SLA15/M1 – 103/**A8-C1x1000**/M1 – F3D

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

N1-A1
N1A-A1
N1B-A1

Comando manuale con attivazione del contatto elettrico del microswitch centralizzato.

N1-A1: Per doppio effetto

N1A-A1: Per semplice effetto in pos. 1

N1B-A1: Per semplice effetto in pos. 2

Hand control with ON-OFF centralized microswitch operation.

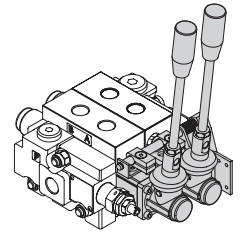
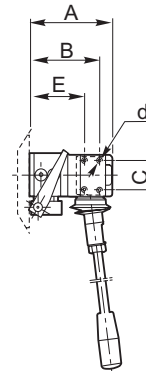
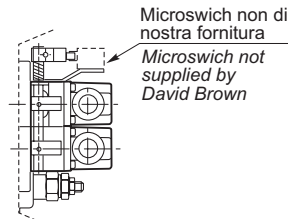
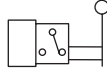
N1 -A1: Double acting

N1A-A1: Single acting in 1 position

N1B-A1: Single acting in 2 position

Con le valvole a cartuccia occorre montare il comando ruotato di 180° oppure inserire il distanziale cod. Z1

With cartridge valves it is necessary to mount the 180° rotated control or to insert a spacer code Z1



	A	B	C	E	d
Q30 - GSV50 (Q50)	70 (2.756)	59 (2.323)	25 (0.984)	49 (1.929)	M4
Q80 - Q130	84 (3.307)				

N1-A2
N1A-A2
N1B-A2

Comando manuale ruotato di 180° con attivazione del contatto elettrico del microswitch centralizzato.

N1-A2: Per doppio effetto

N1A-A2: Per semplice effetto in pos. 1

N1B-A2: Per semplice effetto in pos. 2

180° rotated hand control with ON-OFF centralized microswitch operation.

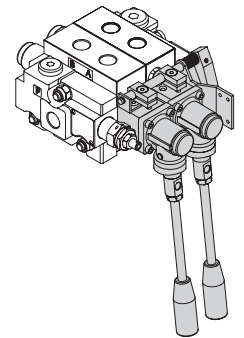
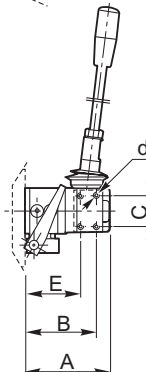
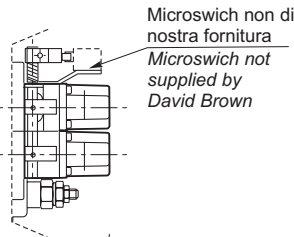
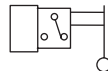
N1-A2: Double acting

N1A-A2: Single acting in 1 position

N1B-A2: Single acting in 2 position

Con le valvole a cartuccia occorre montare il comando ruotato di 180° oppure inserire il distanziale cod. Z1

With cartridge valves it is necessary to mount the 180° rotated control or to insert a spacer code Z1



	A	B	C	E	d
Q30 - GSV50 (Q50)	70 (2.756)	59 (2.323)	25 (0.984)	49 (1.929)	M4
Q80 - Q130	84 (3.307)				

N1-A3
N1A-A3
N1B-A3

Comando microswitch centralizzato.

N1-A3: Per doppio effetto

N1A-A3: Per semplice effetto in pos. 1

N1B-A3: Per semplice effetto in pos. 2

Centralized microswitch control.

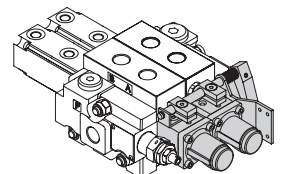
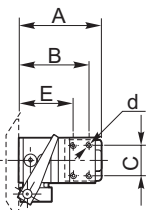
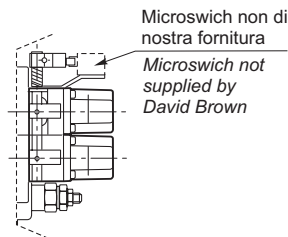
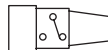
N1-A3: Double acting

N1A-A3: Single acting in 1 position

N1B-A3: Single acting in 2 position

Con le valvole a cartuccia occorre montare il comando ruotato di 180° oppure inserire il distanziale cod. Z1

With cartridge valves it is necessary to mount the 180° rotated control or to insert a spacer code Z1



Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

9 - Tipo posizionatore

* La posizione dei campi 8 e 9 si riferisce al comando collocato sul lato effetto A e al posizionatore lato effetto B; se le posizioni sono opposte, invertire i due campi 5 e 6 come da esempio seguente:

A1	M1
8 - 9	Comando lato effetto A Posizionatore lato effetto B Port A side control Port B side positioner

6 - Positioner type

* The position of fields 8 and 9 refers to the control located on the A port side and to the positioner on the B port side. If the positions are opposite, invert the two fields 5 and 6 as shown in the example below:

M1	A1
9 - 8	Comando lato effetto B Posizionatore lato effetto A Port B side control Port A side positioner

Posizionatori

			Q30	GSV50 (Q50)	Q80	Q130
M1	Tre posizioni ritorno a molla in pos.0	Three positions spring centred in 0	•	•	•	•
M2	Due posizioni 0-1 ritorno a molla in pos.0	Two positions spring 0-1 centred in 0	•	•	•	•
M3	Due posizioni 0-2 ritorno a molla in pos.0	Two positions spring 0-2 centred in 0	•	•	•	•
M4(1-2)	Due posizioni estreme ritorno a molla in pos.1	Two end positions spring back in 1	•	•	•	•
M4(2-1)	Due posizioni estreme ritorno a molla in pos.2	Two end positions spring back in 2	•	•	•	•
R1	Tre posizioni ritorno a molla in pos.0, detent in pos.1	Three positions spring centred in 0, detent in 1	•	•	•	•
R2	Tre posizioni ritorno a molla in pos.0, detent in pos.2	Three positions spring centred in 0, detent in 2	•	•	•	•
R3	Tre posizioni in detent	Three positions detent	•	•	•	•
R4	Due posizioni in detent 0-1	Two positions detent 0-1	•	•	•	•
R5	Due posizioni in detent 0-2	Two positions detent 0-2	•	•	•	•
R6	Due posizioni in detent 1-2	Two positions detent 1-2	•	•	•	•
R8*	Due posizioni (1 e 2) con ritorno a molla in pos. 0; (3) 4ª posizione flottante con detent. (Da montare con Z1 lato comando e cursore 116)	Two positions (1 and 2) with spring return centred in 0 position. (3) 4th position floating with detent. (Mounting with Z1 side control and spool 116)	•	•	•	•
R10/Z1	Due posizioni (1 e 2) con ritorno a molla in pos. 0; (3) 4ª posizione flottante con detent (da montare con cursore 126)	Two positions (1 and 2) with spring return centred in 0, position (3) 4th position floating with detent (mounting with spool 126)	•	•	•	•
R1K*	Comando a 3 posizioni, detent in pos. 1 con sgancio automatico registrabile. Disponibile solo con cursore cod. 103 e 111	3 Position control, detent in J pos. with automatic adjustable release. Available with spool code 103 and 111 only	•	•	•	•
R2K*	Comando a 3 posizioni, detent in pos. 2 con sgancio automatico registrabile. Disponibile solo con cursore cod. 103 e 111	3 Position control, detent in 2 pos. with automatic adjustable release. Available with spool code 103 and 111 only	•	•	•	•
R3K*	Comando a 3 posizioni, detent in pos. 1 e 2 con sgancio automatico registrabile. Disponibile solo con cursore cod. 103 e 111	3 Position control, detent in 1 and 2 pos. with automatic adjustable release. Available with spool code 103 and 111 only	•	•	•	•
M1-B1	Tre posizioni ritorno a molla in pos.0 con comando microswitch posteriore	Three positions spring centred in 0 with back microswitch control	•	•	•	•
M2-B1	Due posizioni, 0-1, ritorno a molla in pos.0 con comando microswitch posteriore	Two positions, 0-1, spring centred in 0 with back microswitch control	•	•	•	•
M3-B1	Due posizioni, 0-2, ritorno a molla in pos. 0 con comando microswitch posteriore	Two positions, 0-2, spring centred in 0 with back microswitch control	•	•	•	•
M1-N1	Tre posizioni ritorno a molla in pos. 0, con attivazione del contatto elettrico del microswitch centralizzato	Three positions spring centred in 0, with ON-OFF centralized microswitch operation.	•	•	•	•
M1-N1A	M1-N1: Per doppio effetto	N1-A1: Double acting	•	•	•	•
M1-N1B	M1-N1A: Per semplice effetto in pos 1 M1-N1B: Per semplice effetto in pos 2	N1A-A1: Single acting in 1 position N1B-A1: Single acting in 2 position	•	•	•	•
M2-N1	Due posizioni, 0-1, con ritorno a molla in pos.0, con attivazione del contatto elettrico del microswitch centralizzato	Two positions, 0-1, with spring centred in 0, with ON-OFF centralized microswitch operation	•	•	•	•
M3-N1	Due posizioni, 0-2, con ritorno a molla in pos.0, con attivazione del contatto elettrico del microswitch centralizzato	Two positions, 0-2, with spring centred in 0, with ON-OFF centralized microswitch operation	•	•	•	•

* Limitazioni / Limitations

Posizionatore Positioner	Comando / Control	Cursore / Spool	Valvole / Valves
R8	A1/Z1 - A2/Z1 - A4/Z1 - A6/Z1 - A8/Z1	116	Tutte le valvole a cartuccia e tutte le valvole a pannello All cartridge and panel valves
R10/Z1	Tutti / All	126	
R1K R2K R3K	A1 / A2 / A4 / A5 / A6 / A8 / SL / SLA15 / A15 / A16 / N1-A1 / N1-A2 / N1-A3	103 / 111	

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

M1

Tre posizioni ritorno a molla in pos.0
Three positions spring centred in 0



M2

Due posizioni 0-1 ritorno a molla in pos.0
Two positions spring 0-1 centred in 0



M3

Due posizioni 0-2 ritorno a molla in pos.0
Two positions spring 0-2 centred in 0



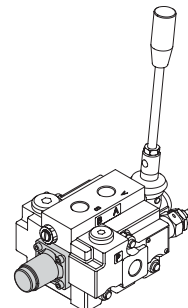
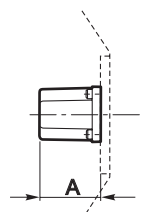
M4 (1-2)

Due posizioni estreme ritorno a molla in pos.1
Two end positions spring back in 1



M4 (2-1)

Due posizioni estreme ritorno a molla in pos.2
Two end positions spring back in 2



	A			
	M1	M2	M3	M4 2-1
Q30 - GSV50 (Q50)	42 (1.654)	42 (1.654)	42 (1.654)	42 (1.654)
Q80 - Q130	55 (2.165)	55 (2.165)	55 (2.165)	55 (2.165)

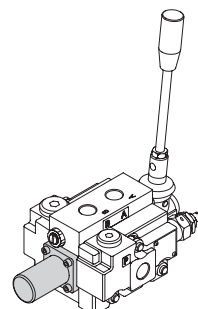
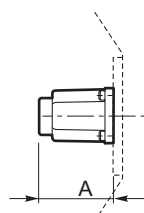
R1

Tre posizioni ritorno a molla in pos.0,
detent in pos.1
Three positions spring centred in 0,
detent in 1



R2

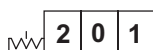
Tre posizioni ritorno a molla in pos.0,
detent in pos.2
Three positions spring centred in 0,
detent in 2



	A	
	R1	R2
Q30 - GSV50 (Q50)	52 (2.047)	54 (2.126)
Q80 - Q130	70 (2.756)	68.5 (2.697)

R3

Tre posizioni in detent
Three positions detent



R4

Due posizioni in detent 0-1
Two positions detent 0-1



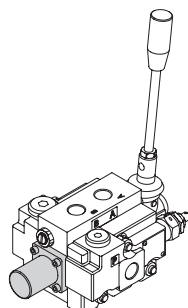
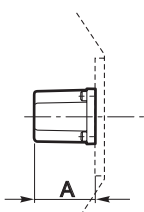
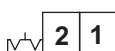
R5

Due posizioni in detent 0-2
Two positions detent 0-2



R6

Due posizioni in detent 1-2
Two positions detent 1-2



	A			
	R3	R4	R5	R6
Q30 - GSV50 (Q50)	42 (1.654)	42 (1.654)	42 (1.654)	42 (1.654)
Q80 - Q130	55 (2.165)	55 (2.165)	55 (2.165)	55 (2.165)

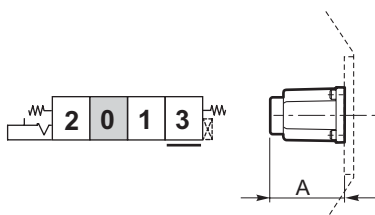
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

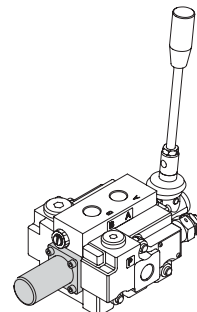
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

R8

Due posizioni (1 e 2) con ritorno a molla in pos. 0;
(3) 4ª posizione flottante con detent.
(Da montare con Z1 lato comando e cursore 116)
*Two positions (1 and 2) with spring return centred in 0 position.
(3) 4th position floating with detent.
(Mounting with Z1 side control and spool 116)*

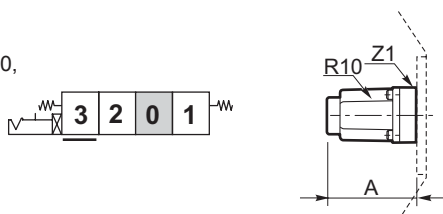


	A
Q30 - GSV50 (Q50)	56.5 (2.224)
Q80	75 (2.953)
Q130	80 (3.150)

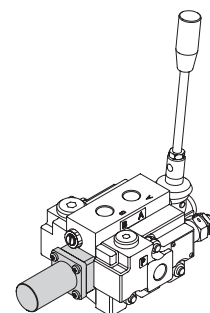


R10/Z1

Due posizioni (1 e 2) con ritorno a molla in pos. 0,
(3) 4ª posizione flottante con detent
(Da montare cursore 126)
*Two positions (1 and 2) with spring return centred in 0 position
(3) 4th position floating with detent.
(Mounting with spool 126)*

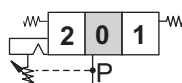


	A
Q30 - GSV50 (Q50)	70 (2.756)
Q80	92 (3.622)

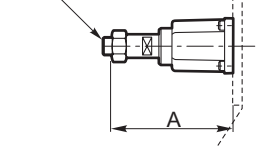


R1K

Comando a 3 posizioni, detent in pos. 1
con sgancio automatico registrabile.
Disponibile solo con cursore cod. 103 e 111
*3 Position control, detent in 1 pos.
with automatic adjustable release.
Available with spool code 103 and 111 only*

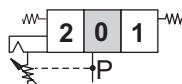


Grano di registro
Adjustable screw



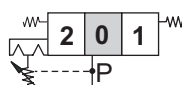
R2K

Comando a 3 posizioni, detent in pos. 2
con sgancio automatico registrabile.
Disponibile solo con cursore cod. 103 e 111
*3 Position control, detent in 2 pos.
with automatic adjustable release.
Available with spool code 103 and 111 only*

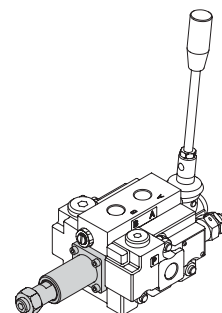


R3K

Comando a 3 posizioni, detent in pos. 1 e 2
con sgancio automatico registrabile.
Disponibile solo con cursore cod. 103 e 111
*3 Position control, detent in 1 and 2 pos.
with automatic adjustable release.
Available with spool code 103 and 111 only*



	A		
	R1K	R2K	R3K
Q30 - GSV50 (Q50)	91.5 (3.602)	91.5 (3.602)	91.5 (3.602)
Q80 - Q130	106 (4.173)	106 (4.173)	106 (4.173)



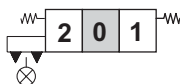
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

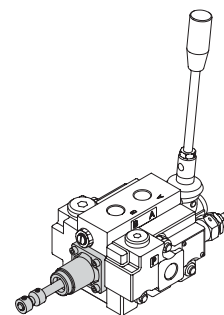
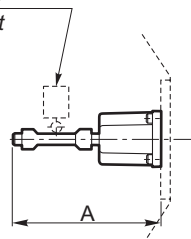
M1-B1

Tre posizioni ritorno a molla in pos.0
con comando microswitch posteriore
*Three positions spring centred in 0
with back microswitch control*



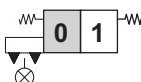
Microswitch non di
nostra fornitura

*Microswitch not
supplied by
David Brown*



M2-B1

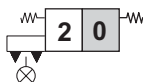
Due posizioni, 0-1, ritorno a molla in pos.0
con comando microswitch posteriore
*Two positions, 0-1, spring centred in 0
with back microswitch control*



	A		
	M1-B1	M2-B1	M3-B1
Q30 - GSV50 (Q50)	82 (3.228)	82 (3.228)	82 (3.228)
Q80 - Q130	102 (4.016)	102 (4.016)	102 (4.016)

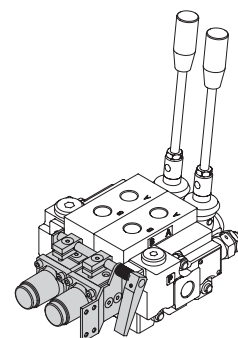
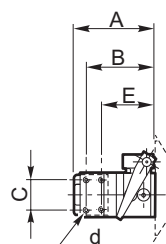
M3-B1

Due posizioni, 0-2, ritorno a molla in pos. 0
con comando microswitch posteriore
*Two positions, 0-2, spring centred in 0
with back microswitch control*



**M1-N1
M1-N1A
M1-N1B**

Tre posizioni ritorno a molla in pos. 0,
con attivazione del contatto elettrico
del microswitch centralizzato
M1-N1: Per doppio effetto
M1-N1A: Per semplice effetto in pos 1
M1-N1B: Per semplice effetto in pos 2
*Three positions spring centred in 0,
with ON-OFF centralized microswitch operation.*
N1-A1: Double acting
N1A-A1: Single acting in 1 position
N1B-A1: Single acting in 2 position



M2-N1

Due posizioni, 0-1, con ritorno a molla
in pos.0, con attivazione del contatto elettrico
del microswitch centralizzato
*Two positions, 0-1, with spring centred in 0,
with ON-OFF centralized microswitch operation*



Microswitch non di
nostra fornitura
*Microswitch not
supplied by
David Brown*

M3-N1

Due posizioni, 0-2, con ritorno a molla
in pos.0, con attivazione del contatto elettrico
del microswitch centralizzato
*Two positions, 0-2, with spring centred in 0,
with ON-OFF centralized microswitch operation*



	A	B	C	E	d
Q30 - GSV50 (Q50)	70 (2.756)	59 (2.323)	25 (0.984)	49 (1.929)	M4
Q80 - Q130	84 (3.307)				

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

Comandi con posizionamento / Controls with positioning (pag. XXX)

		Q30	GSV50 (Q50)	Q80	Q130
M1-U1*	Tre posizioni con ritorno a molla in pos.0, attacco diretto sul cursore per rinvio a distanza rigido	•	•	•	•
M2-U1*	Due posizioni, 0-1, con ritorno a molla in pos.0, attacco diretto sul cursore per rinvio a distanza rigido	•	•	•	•
M3-U1*	Due posizioni, 0-2, con ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza rigido	•	•	•	•
M1-U2*	Tre posizioni con ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza con cavo flessibile	•	•	•	•
M2-U2*	Due posizioni, 0-1, ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza con cavo flessibile	•	•	•	•
M3-U2*	Due posizioni, 0-2, ritorno a molla in pos. 0, attacco diretto sul cursore per rinvio a distanza con cavo flessibile	•	•	•	•
D2*	Comando elettroidraulico doppio con ritorno in pos. 0			•	•
P1-N*	Comando pneumatico	•	•	•	•
P1-NP*	Comando pneumatico progressivo	•	•	•	•
D3*	Comando elettropneumatico	•	•	•	•

* Limitazioni / Limitations

Posizionatore Positioner	Applicabile con: / Applicable with:	
	Comando / Control	Cursore / Spool
M1-U1 M2-U1 M3-U1 M1-U2 M2-U2 M3-U2 D2 P1-N P1-NP D3	A1 / A2 / A3 / A4 / A6 / A8	Tutti tranne 116 e 126 All except 116 and 126

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

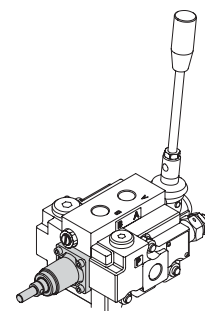
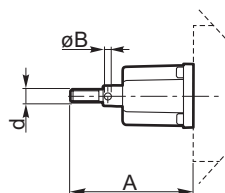
M1-U1

Tre posizioni con ritorno a molla in pos.0,
attacco diretto sul cursore
per rinvio a distanza rigido
*Three positions spring centred in 0,
with direct control connection on spool,
cap side, for stiff remote control*



M2-U1

Due posizioni, 0-1, con ritorno a molla in pos.0,
attacco diretto sul cursore
per rinvio a distanza rigido
*Two positions, 0-1, spring centred in 0,
with direct control connection on spool,
cap side, for stiff remote control*



M3-U1

Due posizioni, 0-2, con ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza rigido
*Two positions, 0-2, spring centred in 0,
with direct control connection on spool,
cap side, for stiff remote control*



	A	B	d
Q30 - GSV50 (Q50)	73 (2.874)	4 (0.157)	M8
Q80 - Q130	96 (3.780)	5 (0.197)	M10

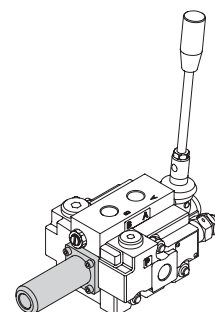
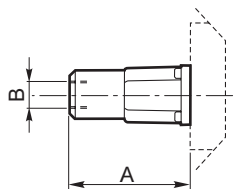
M1-U2

Tre posizioni con ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza con cavo flessibile
*Three positions spring centred in 0,
direct control connection on spool,
cap side, for flexible remote control*



M2-U2

Due posizioni, 0-1, ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza con cavo flessibile
*Two positions, 0-1, spring centred in 0,
direct control connection on spool,
cap side, for flexible remote control*



M3-U2

Due posizioni, 0-2, ritorno a molla in pos. 0,
attacco diretto sul cursore
per rinvio a distanza con cavo flessibile
*Two positions, 0-2, spring centred in 0,
direct control connection on spool,
cap side, for flexible remote control*



	A	B
Q30 - GSV50 (Q50)	73 (2.874)	M16X1.5
Q80 - Q130	77 (3.031)	

Sezione di lavoro e/o elemento intermedio

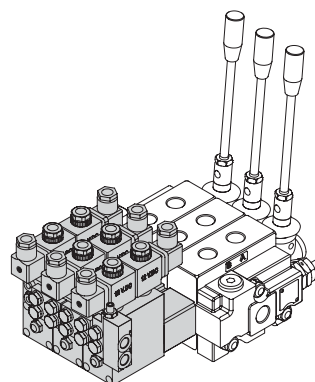
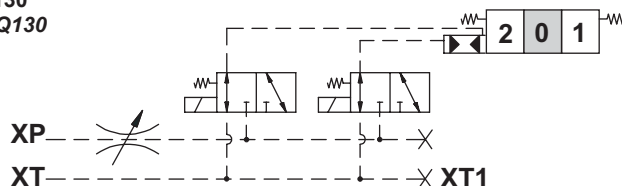
Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

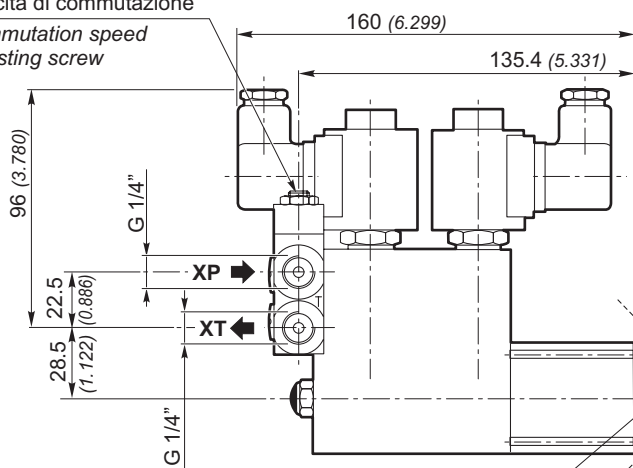
D2

Solo per Q80 e Q130
Only for Q80 and Q130

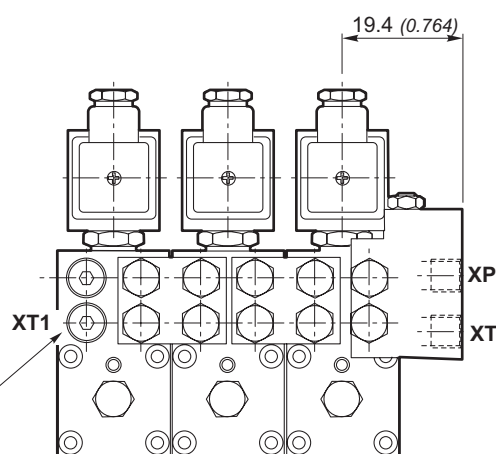
Comando elettroidraulico doppio
con ritorno in pos. 0
Double electro-hydraulic
control spring centred in 0



Vite di regolazione
velocità di commutazione
Commutation speed
adjusting screw



Porta G1/8" da collegare a
serbatoio in caso di utilizzo di
elemento intermedio cod. E62
If use the intermediate element E62,
connect the port G1/8" to the tank



Codice: D2-2R per elementi successivi
Code: D2-2R for the following elements

Codice: D2-1R per il 1° elemento
Code: D2-1R for the 1° elements

Pressione di pilotaggio in XP Pilot pressure in XP		Contropressione max. su XT Maximum back pressure on XT	Portata minima per ogni elemento Minimum flow for each section	Volume di pilotaggio per elemento Piloting volume for each section
Max.	Min.	4 bar (56 PSI)	0.5 lt/min (0.132 GPM)	5.5 cm ³ (0.336 in ³)
35 bar (490 PSI)	20 bar (280 PSI)			

Caratteristiche tecniche elettromagnete tipo "H" / Electromagnet characteristics type "H"

Attacco magnete / Magnet connection	Tipo DIN 43650 (versione A) / Type DIN 43650 (A version)
Tipo di protezione / Protection type	IP 65
Classe d'isolamento / Coil insulation class	H 180 VDE 0580
Tensione di alimentazione / Supply voltage	D.C.: 12, 24V A.C. - 50 Hz: 110, 220 V
Variazione di tensione max. / Maximum voltage tolerance	± 10%
Potenza assorbita / Absorbed power supply	18 W
Rapporto di max. utilizzo / Maximum utilization ratio	100%
Temperatura max. / Max. temperature	100° C

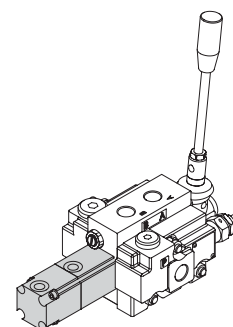
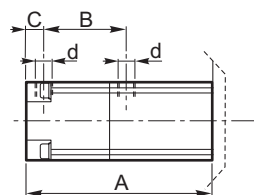
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

P1-N

Comando pneumatico a tre posizioni con ritorno in pos. 0
Three positions pneumatic control spring centred in 0

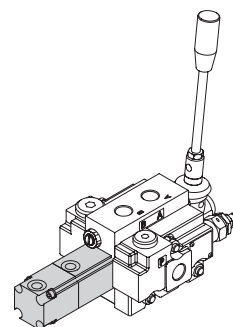
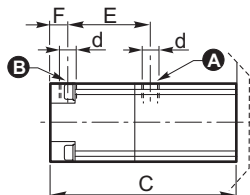


	A	B	C	d
Q30 - GSV50 (Q50)	90.5 (3.563)	43 (1.693)	10 (0.394)	G 1/8"
Q80 - Q130	107 (4.213)	48 (1.890)	10.5 (0.413)	

Pressione di pilotaggio / Pilot pressure	Min.	5 bar (72.5 PSI)
	Max.	30 bar (435 PSI)
Volume pilotaggio / Pilot volume	Q30 - GSV50 (Q50)	4 cm ³ (0.244 in ³)
	Q80 - Q130	9 cm ³ (0.549 in ³)

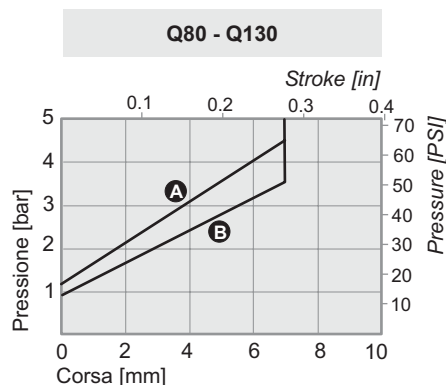
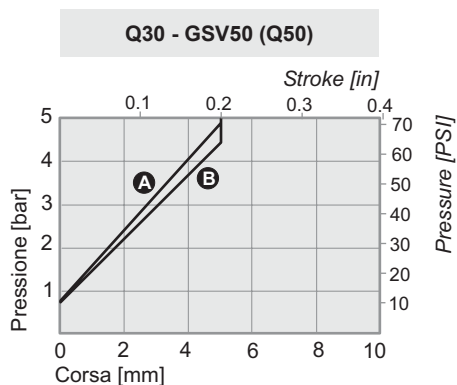
P1-NP

Comando pneumatico progressivo a tre posizioni con ritorno in posizione 0 per azionamento con manipolatore
Three positions progressive pneumatic control, spring centred in 0 for remote control



	C	E	F	d
Q30 - GSV50 (Q50)	90.5 (3.563)	43 (1.693)	10 (0.394)	G 1/8"
Q80 - Q130	107 (4.213)	48 (1.890)	10.5 (0.413)	

Diagramma pressione di pilotaggio - Corsa spool / Pilot pressure diagram - Spool stroke



Pressione di pilotaggio / Pilot pressure	Min.	5 bar (72.5 PSI)
	Max.	30 bar (435 PSI)
Volume pilotaggio / Pilot volume	Q30 - GSV50 (Q50)	4 cm ³ (0.244 in ³)
	Q80 - Q130	9 cm ³ (0.549 in ³)

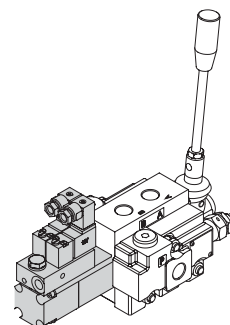
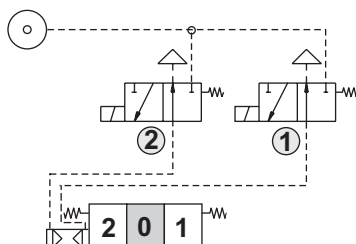
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

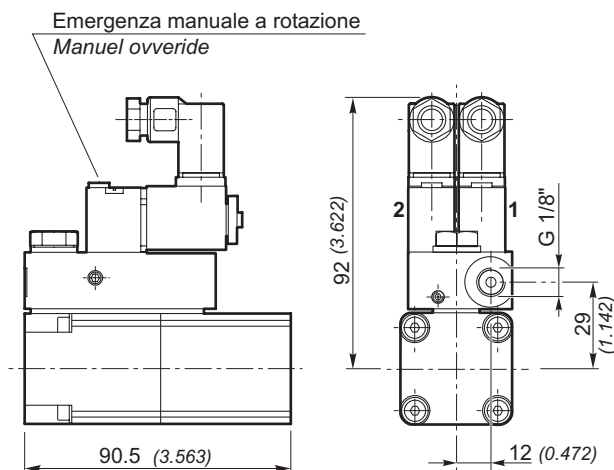
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

D3

Comando elettropneumatico a tre posizioni con ritorno in pos. 0
Three positions electro-pneumatic control spring centred in 0



Q30 - GSV50 (Q50)

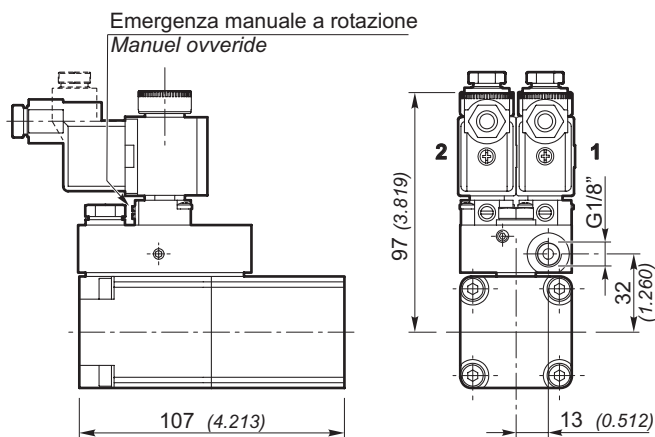

Caratteristiche di funzionamento
Operation characteristics

Pressione di pilotaggio Pilot pressure	1 ÷ 10 bar (14.5 ÷ 145 PSI)
Volume pilotaggio Pilot volume	27NI/ a 6 bar Δpl (27NI/ a 87 PSI Δpl)

Caratteristiche tecniche elettromagnete
Electromagnet characteristics

Tipo attacco magnete Magnet connection type	DIN 175301-803-C
Tipo di protezione Protection type	IP 65
Classe d'isolamento Coil insulation class	F
Tensione di alimentazione Supply voltage	D.C.: 12, 24V A.C.: 50 Hz 230 V
Variazione di tensione max. Maximum voltage tolerance	± 10%
Potenza assorbita Absorbed power supply	D.C.: 2.9 W A.C. 4VA
Rapporto di max. utilizzo Maximum utilization ratio	100%
Temperatura max. Max. temperature	-10 ÷ 50 °C

Q80 - Q130


Caratteristiche di funzionamento
Operation characteristics

Pressione di pilotaggio Pilot pressure	1 ÷ 10 bar (14.5 ÷ 145 PSI)
Volume pilotaggio Pilot volume	53NI/ a 6 bar Δpl (53NI/ a 87 PSI Δpl)

Caratteristiche tecniche elettromagnete
Electromagnet characteristics

Tipo attacco magnete Magnet connection type	DIN 43650
Tipo di protezione Protection type	IP 65
Classe d'isolamento Coil insulation class	F
Tensione di alimentazione Supply voltage	D.C.: 12, 24V
Variazione di tensione max. Maximum voltage tolerance	± 10%
Potenza assorbita Absorbed power supply	D.C.: 5 W
Rapporto di max. utilizzo Maximum utilization ratio	100%
Temperatura max. Max. temperature	-10 ÷ 50 °C

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	—	F7S	R250	MSE	—	E50	R250	—	2x	103	H1	V30	R250	V01	—	F3D	—	12V	—	2E+1
1		2	3	4		5	6			7	8	10	11	12		13		16		17

Comandi completi / Complete controls

		Q30	GSV50 (Q50)	Q80	Q130
H1*	Comando idraulico ad alta pressione ON-OFF a tre posizioni, ritorno a molla in posizione 0	•	•	•	•
H5*	Comando idraulico a bassa pressione per manipolatore idraulico	•	•	•	•
RTL-s*	Comando rotativo frizionato a tre posizioni: tacca in pos. 0, leva in pos. 2	•	•	•	•
RTL-d*	Comando rotativo frizionato a tre posizioni: tacca in pos. 0, leva in pos. 1	•	•	•	•
C2*	Comando a camme 2 posizioni estreme 1-2, ritorno a molla in pos. 1	•	•	•	•
C3*	Comando a camme 2 posizioni estreme 2-1, ritorno a molla in pos. 2	•	•	•	•
A1/D41*	Comando elettrico diretto doppio, ritorno a molla in pos. 0	•	•	•	
A2/D41*	Comando elettrico diretto doppio con leva ruotata, ritorno a molla in pos. 0	•	•	•	
A1/DP*	Comando elettrico diretto doppio, ritorno a molla in pos. 0	•	•	•	
A2/DP*	Comando elettrico diretto doppio, ritorno a molla in pos. 0	•	•	•	
D9*	Comando elettrico diretto a due magneti con ritorno a molla in pos. 0	•	•	•	

*** Limitazioni / Limitations**

Comando completo Complete control	Applicabile con: / <i>Applicable with:</i>	
	Cursore / <i>Spool</i>	Valvole / <i>Valves</i>
H1	Tutti tranne / <i>All except</i> 116 / 126	Tutte le valvole a cartuccia e tutte le valvole a pannello <i>All cartridges and panel valves</i>
H5		
RTL-s		
RTL-d		
C2		
C3		
A1/D41	101 / 102 / 103 / 107 / 108 / 109 / 110 / 111	
A2/D41		
A1/DP		
A2/DP		
D9		

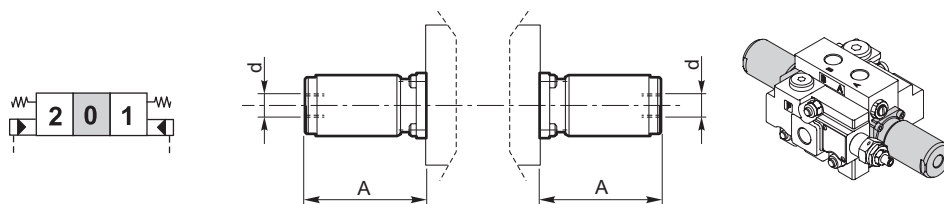
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	H1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	10	11	12	13	16	17

H1

Comando idraulico ad alta pressione ON-OFF a tre posizioni, ritorno a molla in posizione 0
Three positions whit high-pressure hydraulic control, spring centred in 0 position

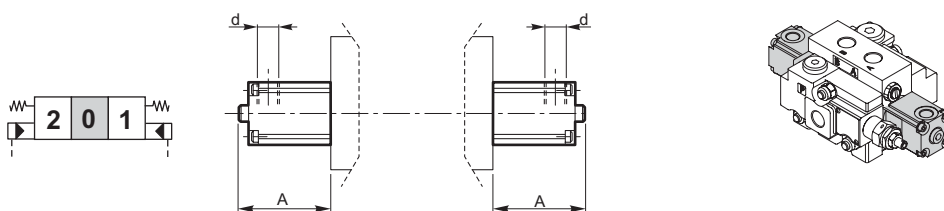


	A	d
Q30 - GSV50 (Q50)	70 (2.756)	G 1/4
Q80 - Q130	85 (3.346)	

Pressione di pilotaggio / Pilot pressure	Min.	16 bar (232 PSI)
	Max.	350 bar (5075 PSI)
Volume pilotaggio / Pilot volume	Q30- GSV50 (Q50)	2 cm ³ (0.122 in ³)
	Q80-Q130	3 cm ³ (0.183 in ³)

H5

Comando idraulico a bassa pressione a tre posizioni per manipolatore idraulico, ritorno a molla in posizione 0
Three positions whit low-pressure control for hydraulic remote control, spring centred in 0 position

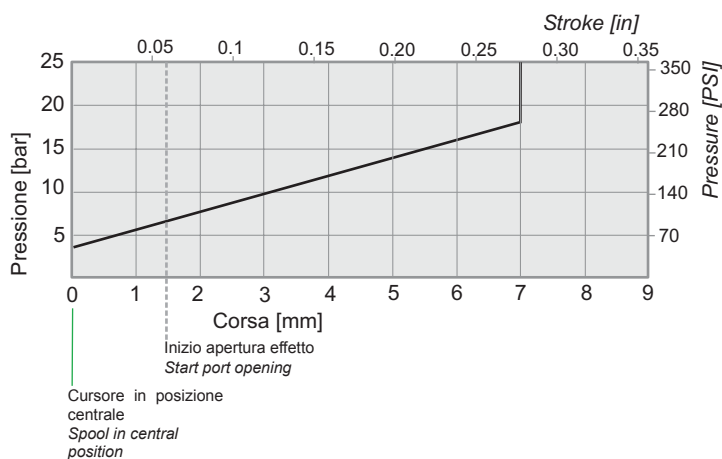
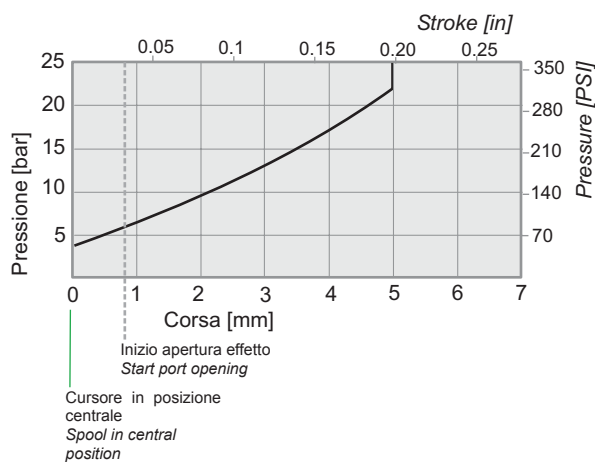


	A	d
Q30 - GSV50 (Q50)	50 (1.969)	G 1/4
Q80 - Q130	71.5 (2.815)	

Diagramma pressione di pilotaggio - Corsa spool / Pilot pressure diagram - Spool stroke

Q30 - GSV50 (Q50)

Q80 - Q130



Pressione di pilotaggio / Pilot pressure	Max.	100 bar (1450 PSI)
Volume pilotaggio / Pilot volume	Q30-GSV50-(Q50)	2 cm ³ (0.122 in ³)
	Q80-Q130	39 cm ³ (2.379 in ³)

N.B. Le curve sono ricavate con cursore 103
NOTE: Performance curves measured using spool 103 type.

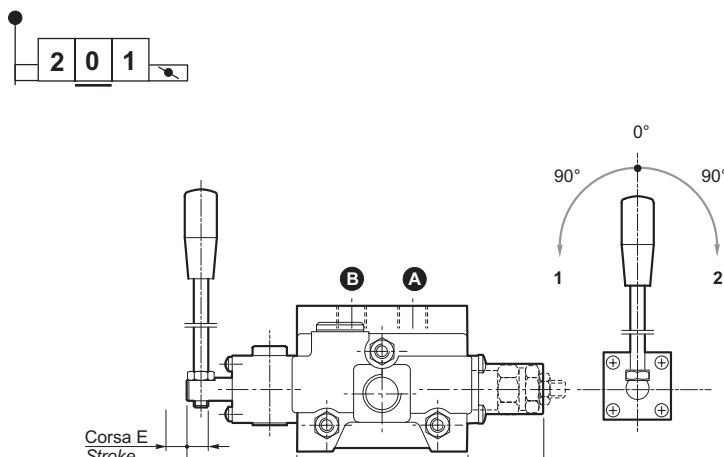
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	H1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	10	11	12	13	16	17

RTL-s

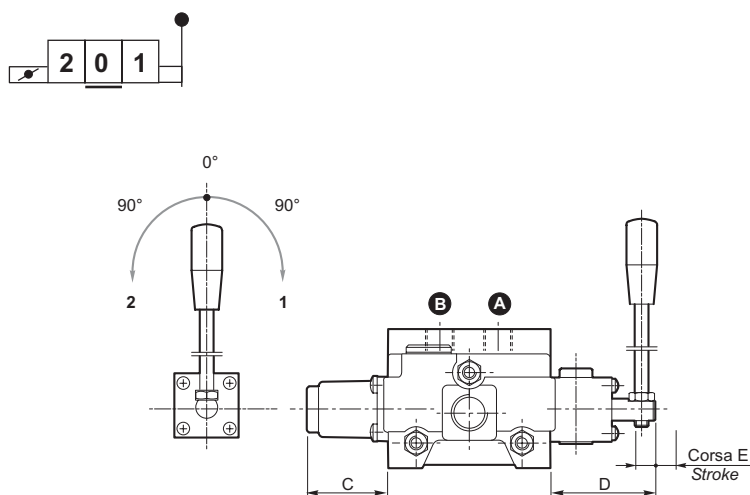
Tre posizioni con comando
rotativo frizionato, tacca in pos. 0,
leva in pos. 2
*Three positions with
rotary control, lever in 2 position*



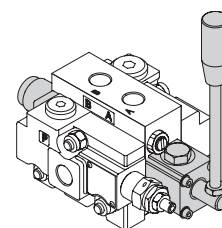
	C	D	E
Q30 - GSV50 (Q50)	42 (1.654)	61 (2.402)	10 (5+5) 0.394 (0.197+0.197)
Q80 - Q130	55 (2.165)	72.5 (2.854)	14 (7+7) 0.551 (0.276+ 0.276)

RTL-d

Tre posizioni con comando
rotativo frizionato, tacca in pos. 0,
leva in pos. 1
*Three positions with duced
rotary control, lever in 1 position*



	C	D	E
Q30 - GSV50 (Q50)	42 (1.654)	61 (2.402)	10 (5+5) 0.394 (0.197+0.197)
Q80 - Q130	55 (2.165)	72.5 (2.854)	14 (7+7) 0.551 (0.276+ 0.276)



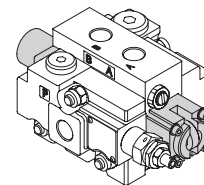
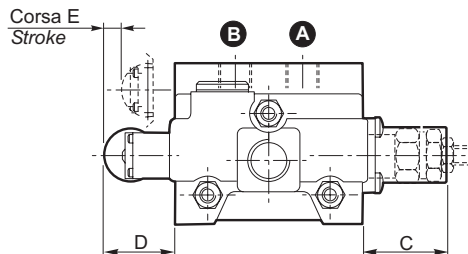
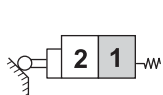
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	H1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	10	11	12	13	16	17

C2

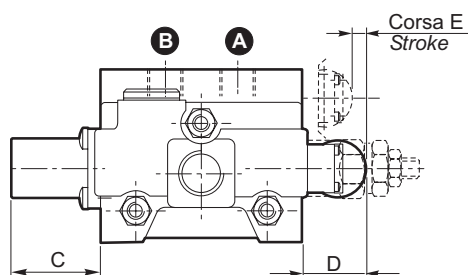
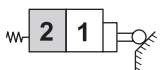
Comando a camme 2 posizioni
estreme 1-2, con ritorno
a molla in pos. 1
*Cam control, 2 end
positions 1-2, spring
centred in 1 position*



	C	D	E
Q30 - GSV50 (Q50)	42 (1.654)	43 (1.693)	10 (0.394)
Q80 - Q130	55 (2.165)	51 (2.008)	14 (0.551)

C3

Comando a camme, 2 posizioni
estreme 2-1, con ritorno
a molla in pos. 2
*Cam control, 2 end
positions 2-1,
spring centred in 2 position*



	C	D	E
Q30 - GSV50 (Q50)	42 (1.654)	43 (1.693)	10 (0.394)
Q80 - Q130	55 (2.165)	51 (2.008)	14 (0.551)

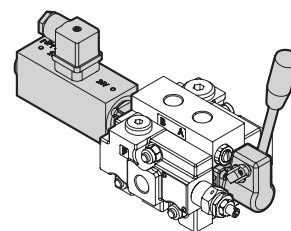
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	H1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	10	11	12	13	16	17

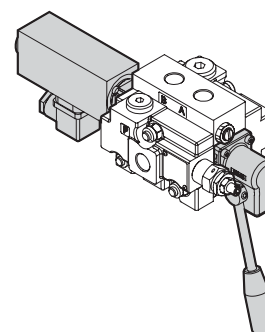
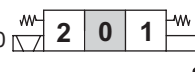
A1/D41

Comando elettrico diretto doppio ON/OFF
con ritorno a molla in posizione 0
*ON/OFF double direct electrical control
with spring centred in 0*

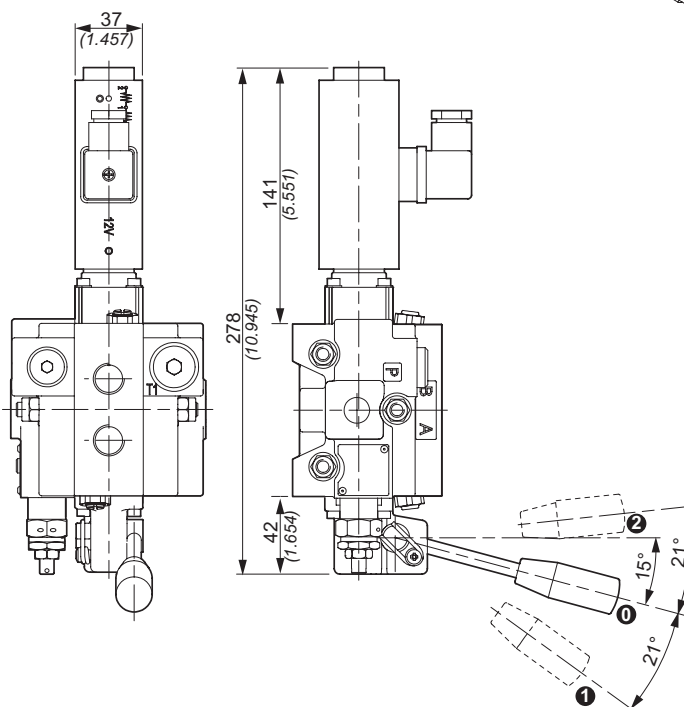


A2/D41

Comando elettrico diretto doppio ON/OFF
ruotato di 180° con ritorno a molla in posizione 0
*180° rotated ON/OFF double direct electrical
control with spring centred in 0*



Connessione Connection		
	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q30	GSV50 (Q50)
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	12V D.C./24V D.C.	
Variazione di tensione max / Maximum voltage tolerance	±10%	
Potenza assorbita / Absorbed power supply	58W	
Rapporto di massimo utilizzo / Maximum utilization ratio	100%	

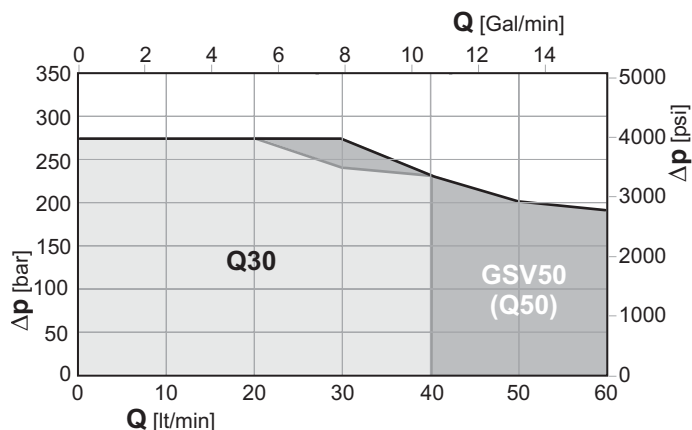
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max (lt/min) / Max. flow (Gal/min)	50 (13)	60 (16)
Pressione max di lavoro / Max. working pressure	275 bar (3988 PSI)	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar (3363 PSI)	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	Con leva / With lever	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s Max. spool leakage of A and B ports to T port at 1450 PSI with viscosity 35 mm²/s	5 cm³/min	

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Limiti d'impiego / Use limits

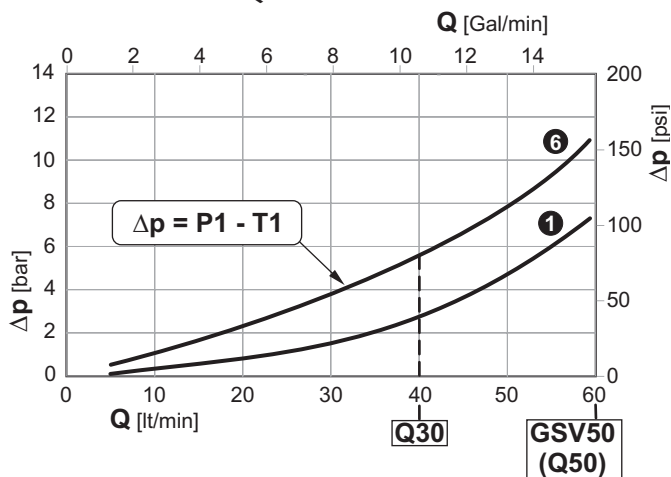
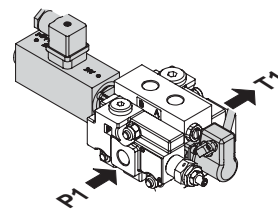


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

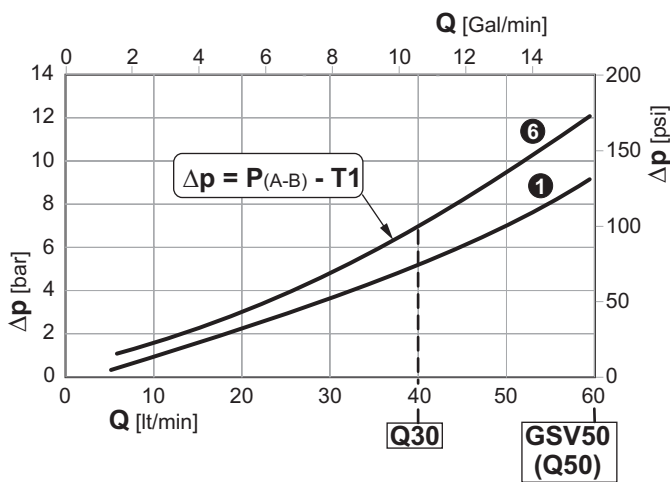
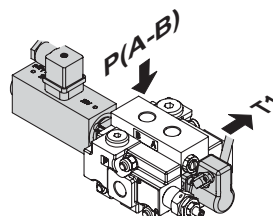
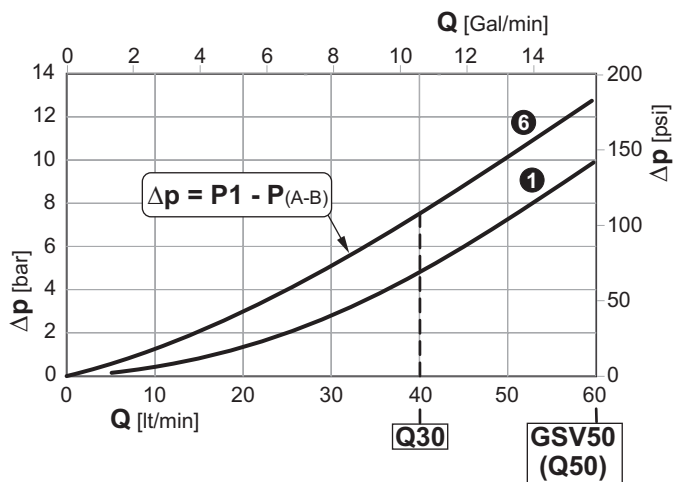
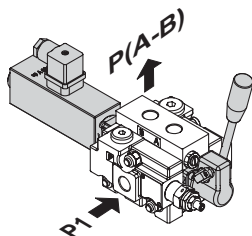


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



1 6 Sezioni / Sections

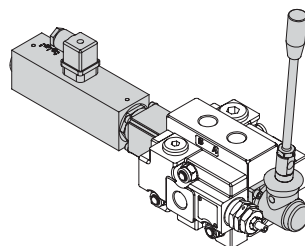
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q80	F7S	R250	MSE	E50	R250	2x	103	H1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	10	11	12	13	16	17

A1/D41

Comando elettrico diretto doppio
e ritorno a molla in posizione 0
*Double direct electrical control
with spring centred in 0*

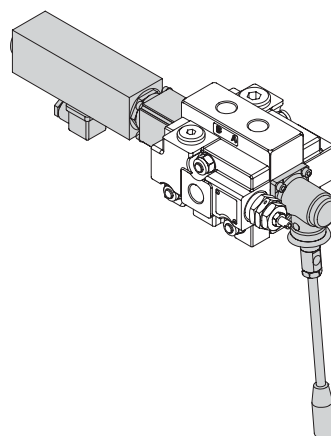
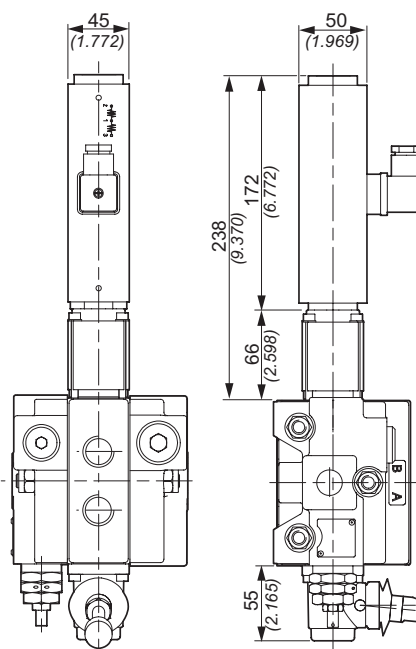


A2/D41

Comando elettrico diretto doppio ON/OFF
ruotato di 180° e ritorno a molla in posizione 0
*180° rotated ON/OFF double direct electrical
control with spring centred in 0*



Connessione Connection		
	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



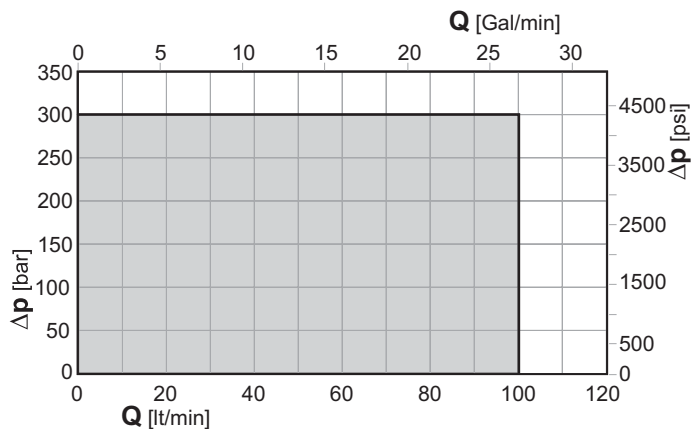
Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features	
Tipo distributore / Valve type	Q80
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)
Tipo protezione / Protection type	IP65
Classe d'isolamento / Coil insulation class	H
Tensione di alimentazione / Supply voltage	12V D.C./24V D.C.
Variazione di tensione max / Maximum voltage tolerance	±10%
Potenza assorbita / Absorbed power supply	80W
Rapporto di massimo utilizzo / Maximum utilization ratio	100%
Caratteristiche tecniche distributore / Directional control valve characteristics	
Portata max (lt/min) / Max. flow (Gal/min)	90 (24)
Pressione max di lavoro / Max. working pressure	300 bar
Contropressione max sullo scarico / Max. back outlet pressure	25 bar
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	Con leva / With lever
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s Max. spool leakage of A and B ports to T port at 1450 bar with viscosity 35 mm²/s	5 cm³/min

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Limiti d'impiego / Use limits

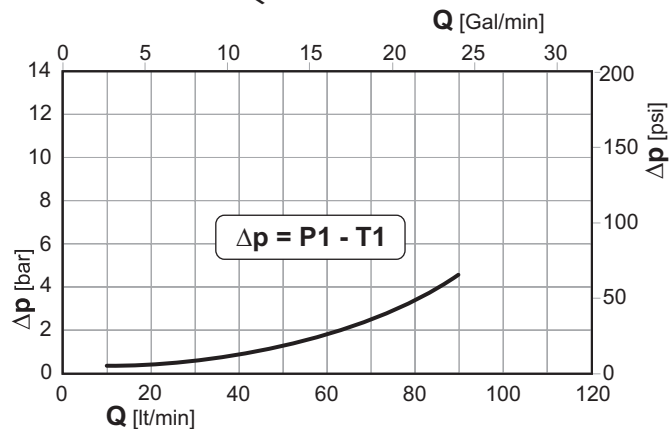
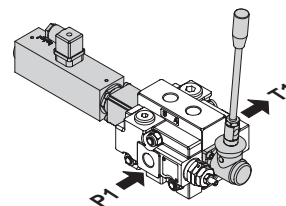


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

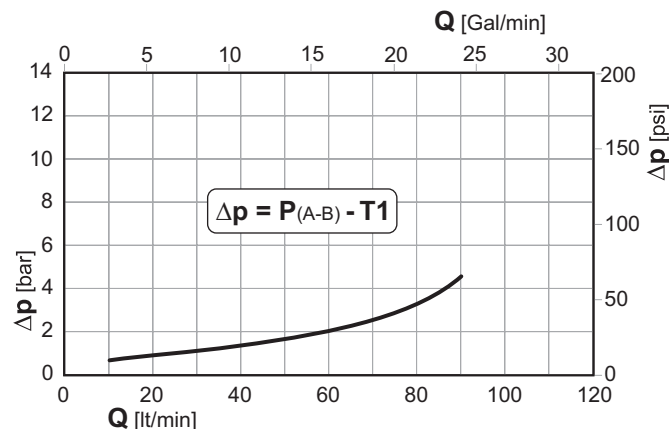
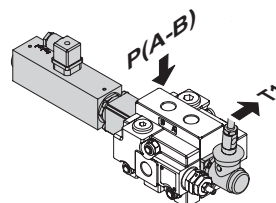
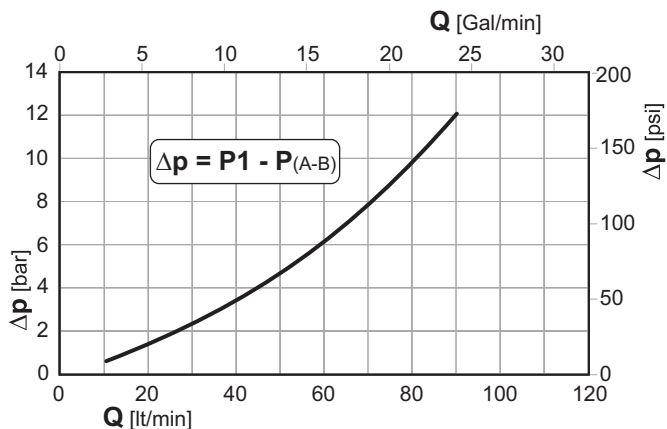
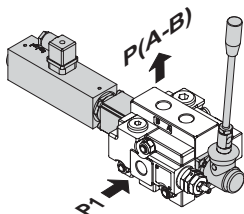


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



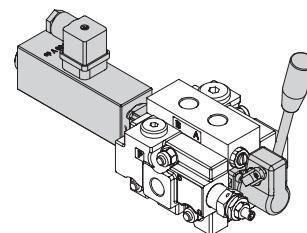
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7S	R250	MSE	E50	R250	2x	103	H1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	10	11	12	13	16	17

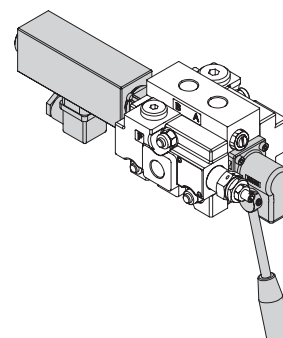
A1/DP

Comando elettrico diretto doppio con magnete
proporzionale e ritorno a molla in posizione 0
*Double direct electrical control with
proportional solenoid and spring centred in 0*

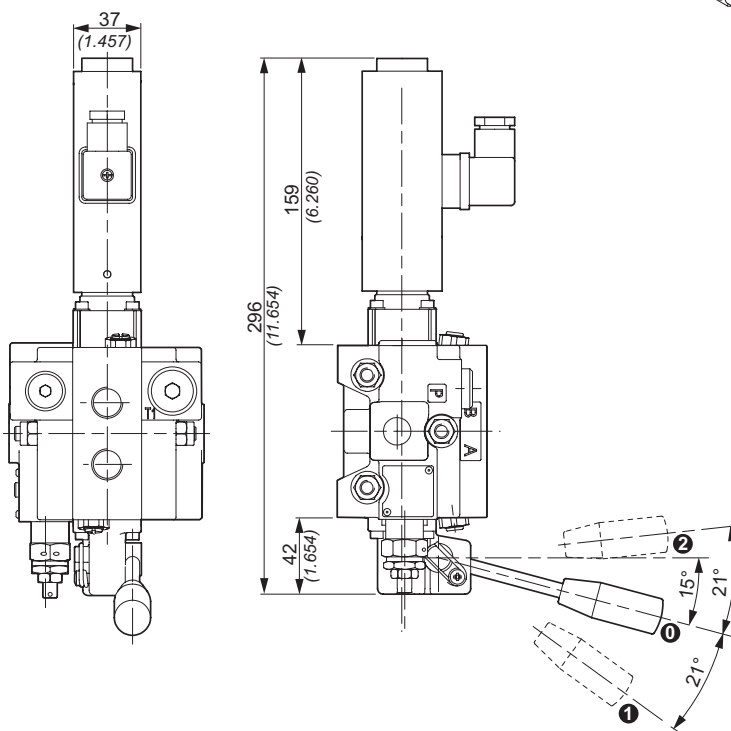


A2/DP

Comando elettrico diretto doppio con magnete
proporzionale ruotato di 180° e ritorno a
molla in posizione 0
*180° rotated double direct electrical control
with proportional solenoid and spring centred in 0*



Connessione Connection		
	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q30	GSV50 (Q50)
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	da 10 a 30V (con controllo di corrente) / (with current control)	
Corrente di regolazione / Current range	1 ÷ 7 A	
Rapporto d'inserzione / Related of insertion	100%	

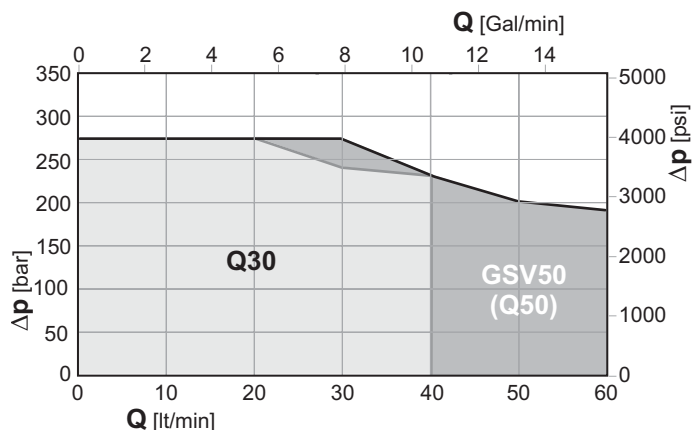
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max (lt/min) / Max. flow (Gal/min)	50 (13)	60 (16)
Pressione max di lavoro / Max. working pressure	275 bar	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	Con leva / With lever	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s Max. spool leakage of A and B ports to T port at 1450 bar with viscosity 35 mm²/s	5 cm³/min	

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Limiti d'impiego / Use limits

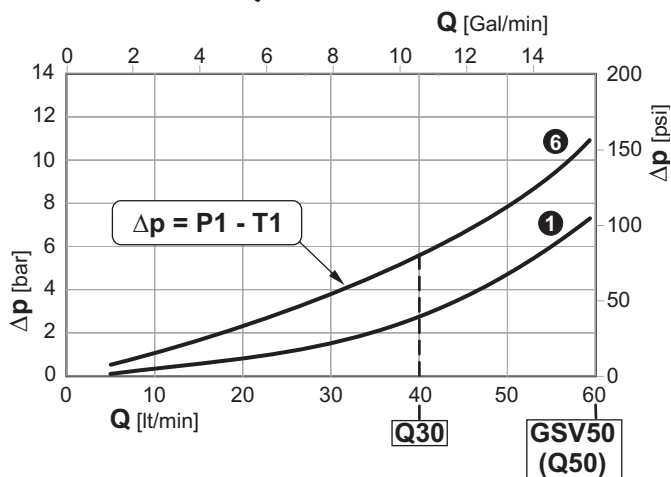
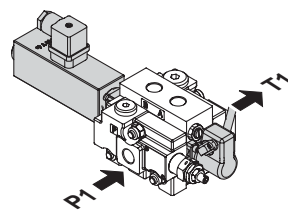


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

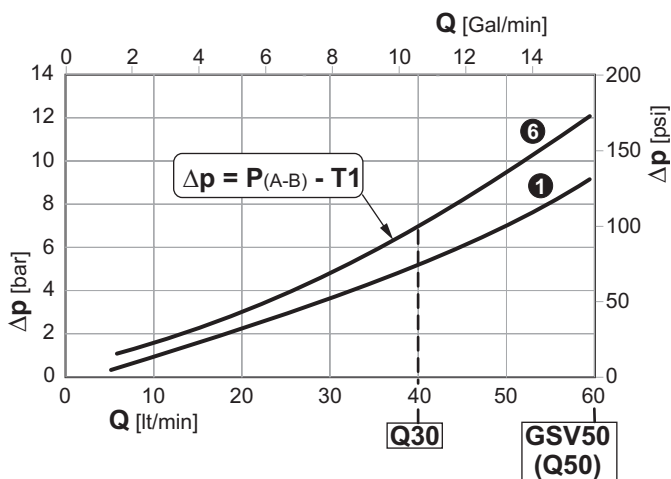
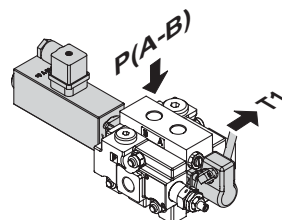
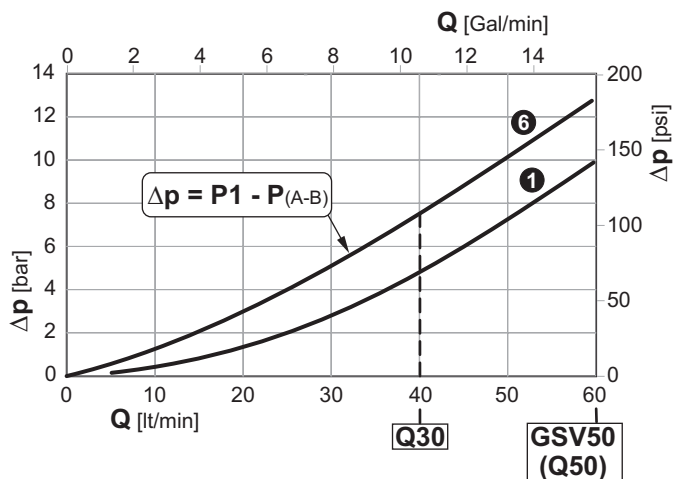
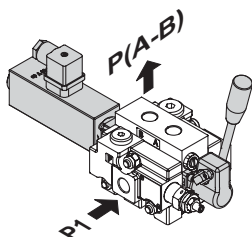


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



① ⑥ Sezioni / Sections

Scheda elettronica SGM-05

Electronic board SGM-05

Descrizione

La scheda SGM-05 è equipaggiata di n° 12 uscite pilotate in corrente con regolazione PWM. Tali uscite sono da intendersi per movimenti a due a due antagonisti, più altre tre uscite per carichi ON/OFF.

È dotata altresì di 6 ingressi proporzionali con tensione di riposo di 2.5V adatti ad essere collegati ad altrettanti joysticks tipo JOYS-100. La contemporaneità massime dei comandi proporzionali è pari a tre. Sono a disposizione 4 ulteriori ingressi logici per funzioni di discriminazione di eventi e situazioni.

Applicazioni

La scheda SGM-05 è studiata per il controllo di distributore idraulico Hydreco dotato d'elettromagneti sia proporzionali che ON/OFF, gli ingressi sono direttamente collegabili ai joysticks della postazione remota.

Esempi:

- A. Elettrodistributore con valvole/elettromagneti direzionali ON-OFF-ON ed elettrovalvola proporzionale in mandata. Al primo azionamento di uno dei joysticks s'inserisce la relativa valvola direzionale e conseguentemente viene pilotata la valvola proporzionale. Viene consentita una sola manovra per volta.
- B. Distributore con comando elettromagnetico proporzionale delle spole. Si rendono disponibili 6+6 uscite proporzionali tramite le quali è possibile comandare anche tre movimenti proporzionali contemporaneamente.

Funzionamento

La disponibilità d'ulteriori ingressi ON/OFF oltre ai sei proporzionali dei joysticks, danno la possibilità alla scheda di ricevere comandi, al fine di discriminare situazioni (blocco momento, appoggio stabilizzatori, ecc.) operando di conseguenza (blocco selettivo delle funzioni, riduzione velocità, ecc.).

Per le applicazioni tipo "A" è possibile avere la versione con "risparmio di corrente" sui carichi ON/OFF.

Tarature e configurazioni

La regolazione dei valori di corrente Imin ed Imax per le varie manovre e la configurazione delle funzioni degli ingressi digitali avviene tramite un tastierino esterno, da collegarsi ad apposito connettore, che agevola tra l'altro la duplicazione delle impostazioni per produzioni di serie di macchine.

A richiesta viene fornito un software per PC e una piccola interfaccia per semplificare, archiviare e richiamare le tarature.

Description

The card SGM-05 is equipped with 12 output signals with PWM mode current regulation. These outputs are designed for two by two opposing movements, and there are other three outputs for ON/OFF type load.

It also has 6 proportional inputs with 2.5V idle position voltage, suitable for connection to an equal number of joysticks of the JOYS-100 type. Four maximum proportional controls can be used at the same time. 4 more logic inputs are available for functions that discriminate events and situations.

Applications

The SGM-05 card has been designed for controlling Hydreco proportional and ON/OFFG hydraulic directional control valves equipped with electromagnets. The inputs can be connected directly to the joysticks of the remote station.

Examples:

- A. Electro-control valve with ON-OFF-ON directional valves/electromagnets and proportional solenoid valve on the delivery side. The directional valve is activated as soon as one of the joysticks is operated and this consequently pilots the proportional valve. One single manoeuvre can be carried out at a time.
- B. Control valve with proportional electromagnetic control of the spools. 6+6 proportional outputs become available and can be used to control up to four proportional movements at the same time.

Operation

Besides the six proportional inputs of the joysticks, further ON/OFF inputs allow the board to receive controls so as to discriminate situations (blocking of the boom, stabilizer positioning, etc.) and operate as a consequence (selective blocking of the functions, slowing speed, etc.).

The version with "current saving" on ON/OFF loads is available for "A" type applications.

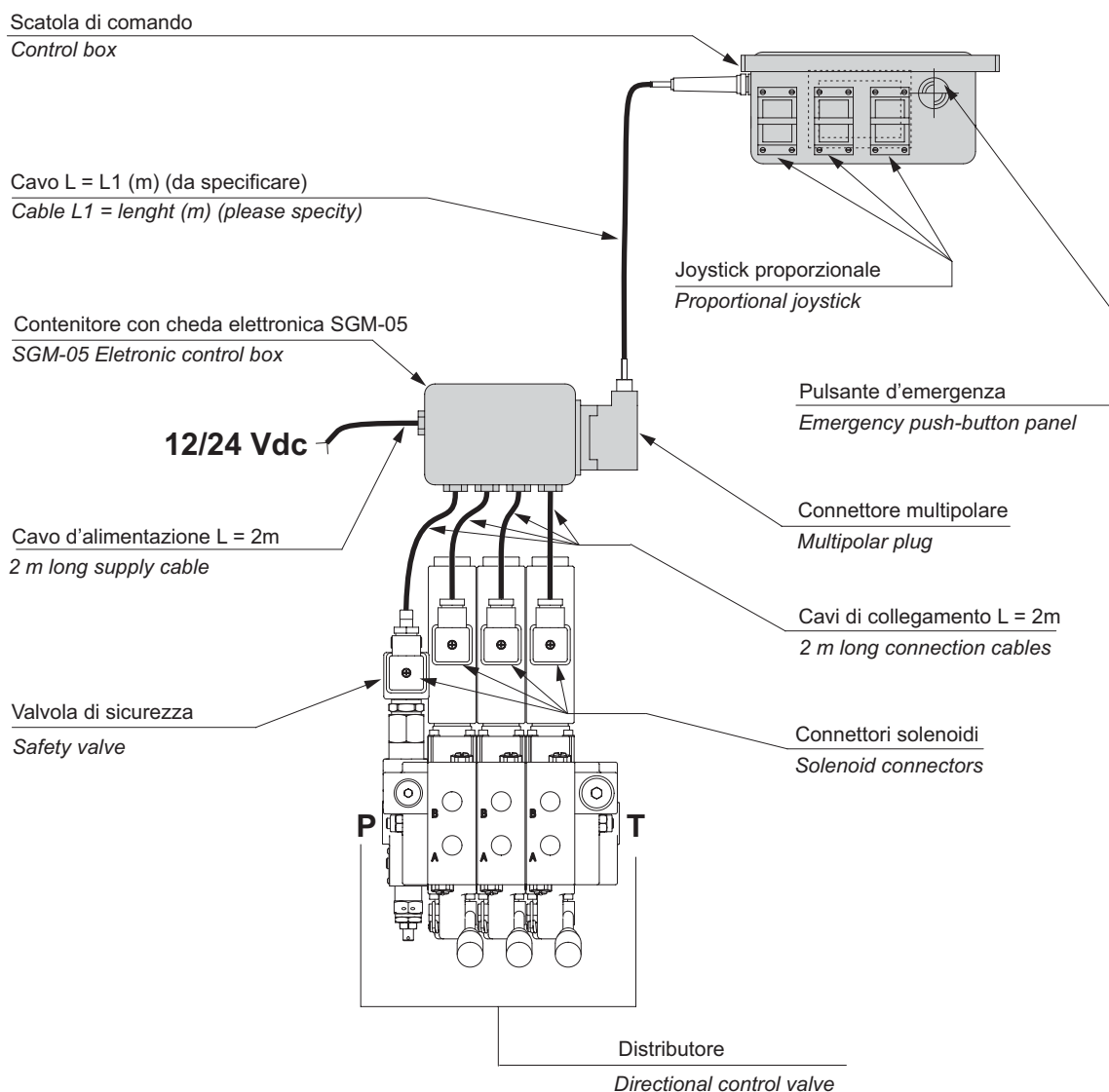
Settings and configurations

An external keypad, which must be connected to a dedicated connector, is used to regulate the Imin and Imax current values for the various different manoeuvres and to configure the functions of the digital inputs. Amongst other things, this also makes it easier to duplicate the settings for mass produced machines.

Software for PC and a small interface for simplifying, filing and recalling the settings can be supplied on request.

Scheda elettronica SGM-05

Electronic board SGM-05



Caratteristiche / Features

Alimentazione / Power supply	da 10V a 30V
Autoconsumo / Current consumption	50mA - 12V
N° di uscite proporzionali / Number of proportional outputs	6x2
N° di uscite on/off / Number of on/off outputs	3
Corrente di regolazione per elettromagneti proporzionali / Current regulation for proportional electromagnets	da 0.1A a 7.0A
Corrente massima sui carichi on/off / Maximum current on on/off loads	5A
N° di ingressi proporzionali / Number of proportional inputs	6
N° di ingressi digitali (on/off) / Number of digital inputs(on/off)	4
Segnalazioni a led per ingressi ed uscite / Led indications for inputs and outputs	a bordo / on board
Campo di temperatura / Temperature range	-25°C ÷ 85°C
Terminazioni / Terminations	connessioni per faston 6.3 mm fast-on connections (0.248 inch)
Dimensioni massime / Maximum dimensions	165x120 (6.496x4.724)
Uscite protette dal cortocircuito / Outputs protected against short-circuits	
Protezione con resina poliuretanica / Coated with polyurethane resin	
Versioni di funzionamento diverse su richiesta / Different operating versions available on request	

Joystick monoasse senza contatto JOYS-100

JOYS-100 single-axis contactless joystick

Caratteristiche

Fornisce una tensione proporzionale allo spostamento della leva dalla posizione di riposo.

- ingombro ridotto
- insensibile agli agenti atmosferici
- semplicità d'installazione

Features

Supplies a voltage proportional to lever shift from its idle position.

- small size
- unaffected by environment agents
- simple to install

Alimentazione / Power supply	5 Vcc
Angolo d'azione / Angular range	da -28° a +28° riposo centrale / central idle position
Impedenza d'uscita / Output impedance	1K
Tensione segnale d'uscita / Output signal voltage	0.5V ÷ 4.5V
Corrente max su Ud1 e Ud2 / Max current on Ud1 and Ud2	0.1 A
Temperatura di funzionamento / Operating temperature	-10°C÷70°C
Contenitore / Housing	Meccanica in NYLON66 + elettronica inglobata in resina Mechanical parts in NYLON66 + resin coated electronics
Grado di protezione / Protection degree	IP67
Collegamenti / Connections	Strip passo 2.54 mm con ritenuta meccanica 1 inch pitch strip with mechanical detent
Tipo dima installazione / Type of installation template	Da pannello / Panel mounting

Funzionamento

A componente alimentato (5 V) ed in posizione di riposo, si ha una tensione d'uscita su Up (rispetto al terminale GND) pari a 2.5V ± 0.2V.

Anche su Ud si ha una tensione di 0.5V ± 0.2V. Spostando la leva dalla posizione di riposo si ha su Up una variazione di tensione che è proporzionale allo spostamento in ragione di 71mV per grado angolare.

L'uscita Ud1, che risulta scollegata a riposo, passa a 4.5 V ± 0.2V dopo 2° angolari di spostamento in una direzione.

Analogamente Ud2, anch'essa scollegata a riposo, passa a 4.5V ± 0.2V dopo 2° angolari di spostamento nella direzione opposta. Quando Ud1 è a 4.5 V, Ud2 è scollegata e viceversa. Il sistema di comando ad alimentazione unica (12Vcc ÷ 24Vcc) esercita la sua azione proporzionale sulle singole spole del distributore tramite elettromagneti doppi, a loro volta alimentati in PWM mediante la scheda elettronica a microprocessore SGM-05, dove i segnali di comando sono inviati da joystick proporzionali.

Questi joystick possono essere forniti singolarmente oppure cablati in modo standard con le seguenti composizioni:

Pulsantiera in materiale plastico con installati i joystick a tenuta stagna, uno per ogni sezione del distributore, un pulsante d'emergenza a fungo, cavo antischiacciamento e connettore multipolare.

Scatola di derivazione, con alloggiata la scheda elettronica SGM-05, per alimentare in PWM fino a 6 elettromagneti doppi proporzionali, tre uscite ON/OFF per azionamenti generici e una per la valvola di sicurezza.

Oltre ai 6 ingressi dei joystick, altri 4 ingressi ON/OFF permettono combinazioni funzionali (blocco di alcune manovre, riduzione di velocità, allarmi, ..., ecc.) da definirsi al momento dell'ordine.

Functioning

There is a 2.5 V ± 0.2 V output voltage on Up (in relation to the GND terminal) when the component is powered (5 V) and in the idle position.

There is also 0.5 V ± 0.2 V voltage on Ud. When the lever is shifted from the idle position, the voltage variation on Up is proportional to the movement to the extent of 71 mV per angular degree.

Output Ud1, when unswitched and on idle position, switches to 4.5 V ± 0.2 V after a 2° angular movement in one direction.

Similarly, Ud2, when unswitched and on idle position, switches to 4.5 V ± 0.2 V after a 2° angular movement in the opposite direction. When Ud is at 4.5 V, Ud2 will be disconnected, and vice-versa.

The control system with single power supply (12 Vdc to 24 Vdc) allows proportional action on the individual spools of the control valve thanks to double electromagnets. These are powered in PWM mode by electronic microprocessor board SGM-05, where the control signals are transmitted by proportional joysticks.

These joysticks can be supplied either individually or wired in the standard way with the following compositions:

Push button panel made of plastic material fitted with watertight joysticks, one for each section of the control valve, a emergency button, crush-proof cable and multicore connector.

Switch box contains the SGM-05 electronic card for powering, in PWM, up to 6 double proportional electromagnets, three ON/OFF outputs for generic drives and one for the safety bypass valve.

Besides the joysticks 6 inputs, more 4 ON/OFF inputs allow functional combinations to be obtained (blocking of certain manoeuvres, slowing, alarms, ..., etc.). These combinations must be defined at the time of order.

Joystick monoasse senza contatto JOYS-100

La scheda SGM-05 consente un massimo di quattro manovre contemporanee e la regolazione/memorizzazione dei parametri per ogni movimento (velocità minima, velocità massima, rampe d'accelerazione...) può avvenire tramite fornitura di:

A - un tastierino portatile di semplice utilizzo.

B - un intuitivo software di programmazione installato su personal computer.

Il sistema qui sommariamente presentato può essere modificato/adattato per soddisfare le specifiche esigenze del cliente.

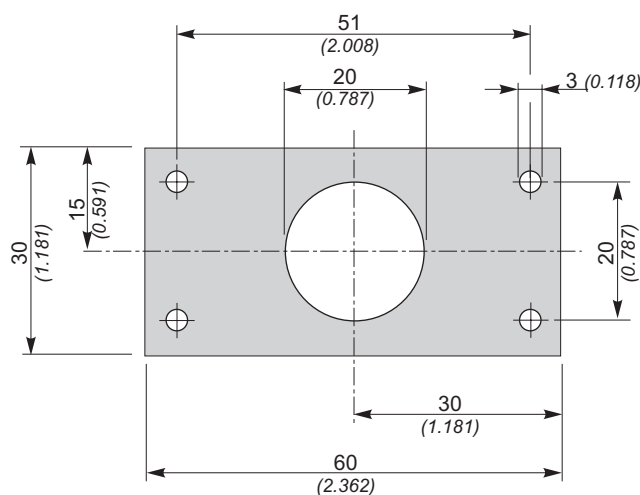
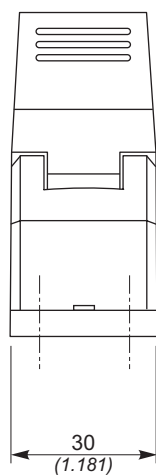
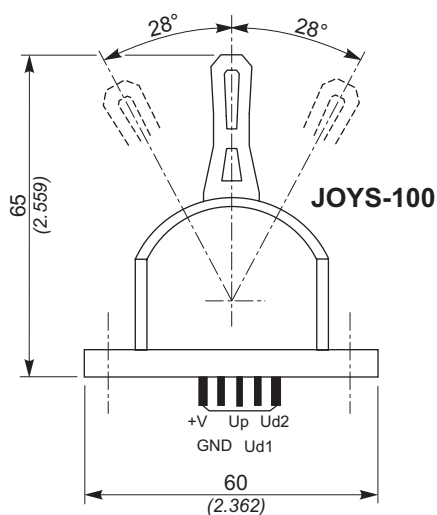
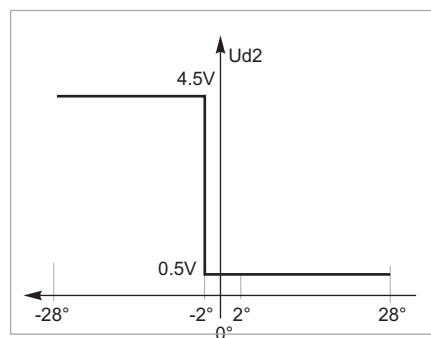
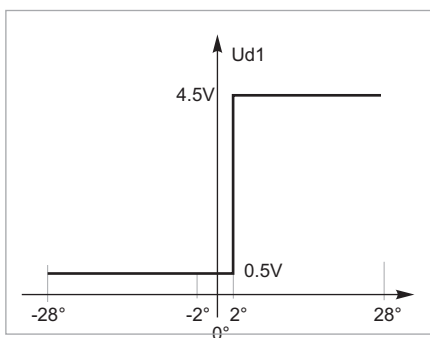
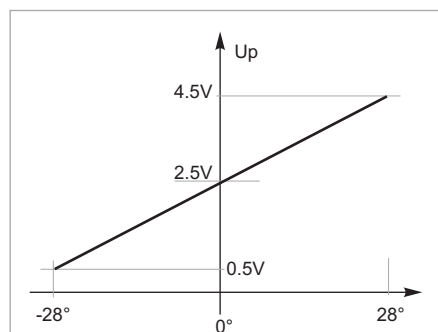
JOYS-100 single-axis contactless joystick

The SGM-05 card allows up to four manoeuvres to be made at the same time and adjustment/memorizing of the parameters for each movement (minimum speed, maximum speed, acceleration ramps...) can be achieved through the supply of:

A - a user-friendly portable keyboard.

B - an intuitive programming software installed in a personal computer.

The system briefly described in this document can be modified/adapted to suit the customer's specific requirements.



Dima di foratura / Drilling template

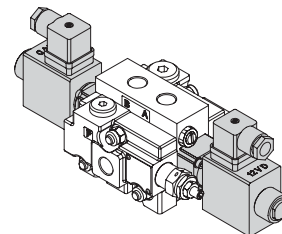
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

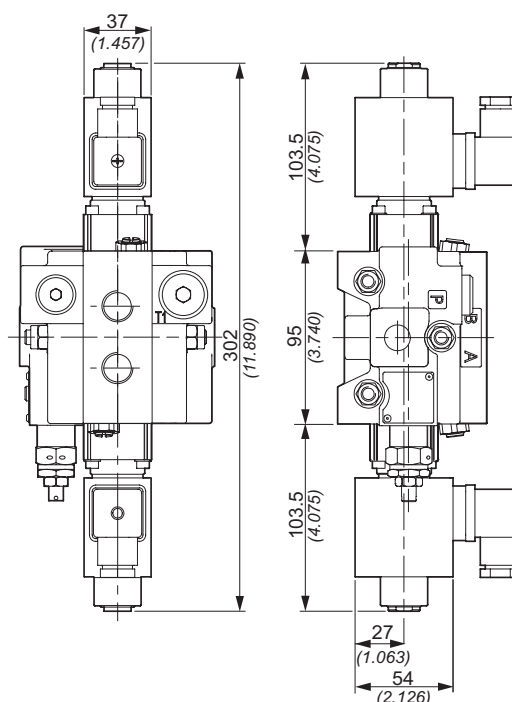
Q30	F7S	R250	MSE	E50	R250	2x	103	H1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	10	11	12	13	16	17

D9

Comando elettrico diretto doppio ON/OFF
con ritorno a molla in posizione 0
ON/OFF double direct electrical control
with spring centred in 0

Connessione
Connection

	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q30	GSV50 (Q50)
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	12V D.C./24V D.C.	
Variazione di tensione max / Maximum voltage tolerance	±10%	
Potenza assorbita / Absorbed power supply	58W	
Rapporto di massimo utilizzo / Maximum utilization ratio	100%	

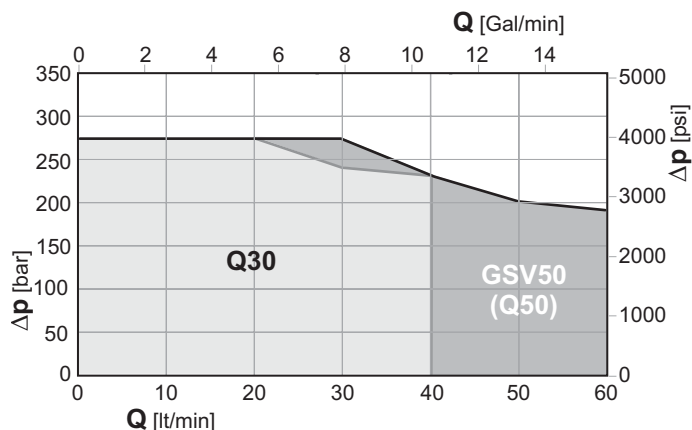
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max / Max. flow	50	60
Pressione max di lavoro / Max. working pressure	275 bar	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	A pulsante in spinta / Push type	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s / Max. spool leakage of A and B ports to T port at 100 bar with viscosity 35 mm²/s	5 cm³/min	

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Limiti d'impiego / Use limits

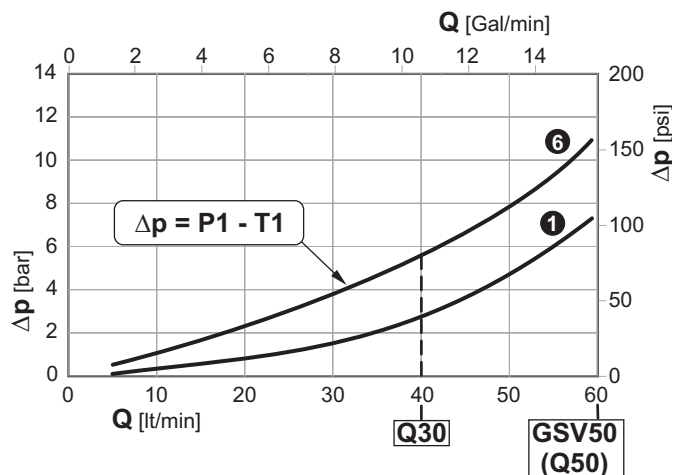
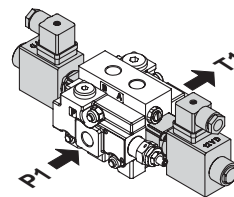


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

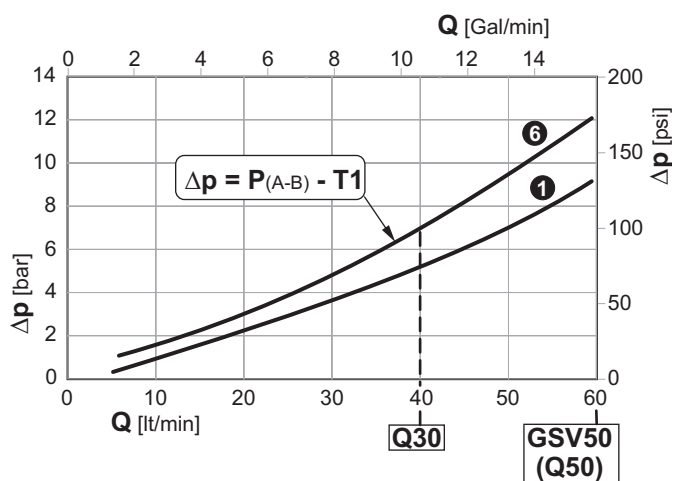
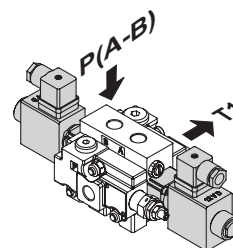
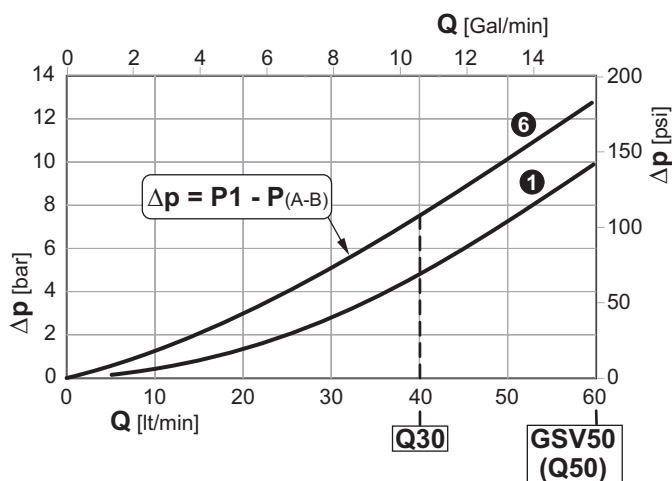
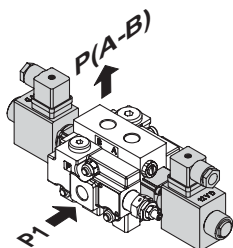


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



① ⑥ Sezioni / Sections

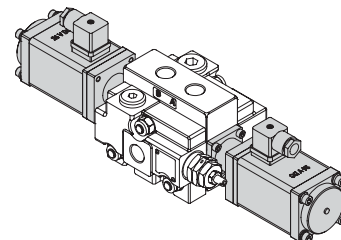
Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q80	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

D9

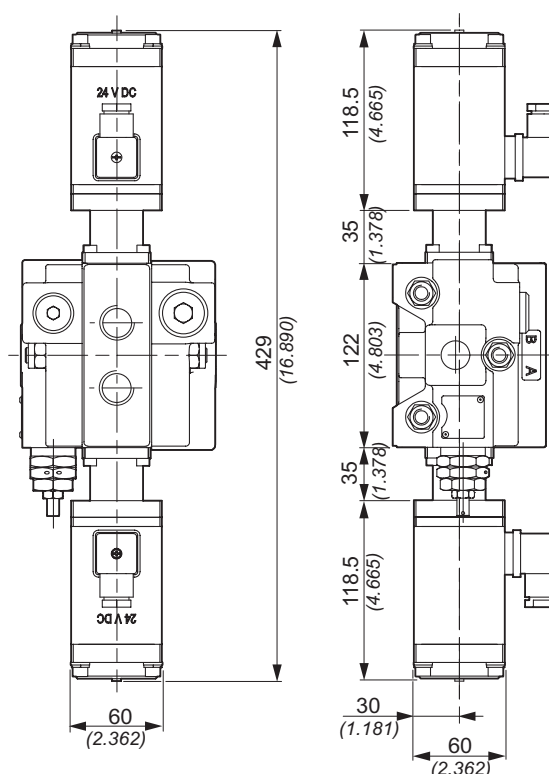
Comando elettrico diretto doppio ON/OFF
con ritorno a molla in posizione 0
ON/OFF double direct electrical control
with spring centred in 0



Connessione Connection		
	1 - 2	Effetto A Port A
	1 - 3	Effetto B Port B

Nota:
Per 2 o più sezioni di lavoro, aggiungere elemen-
to intermedio cod E61 (spessore)
tra due sezioni contigue.

Note:
For 2 or more sections, should add the interme-
diate element code E61 (thickness 46)
between the
2 sections.



Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features

Tipo distributore / Valve type	Q80	
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply voltage	12V D.C./24V D.C.	
Variazione di tensione max / Maximum voltage tolerance	±10%	
Potenza assorbita / Absorbed power supply	80W	
Rapporto di massimo utilizzo / Maximum utilization ratio	100%	

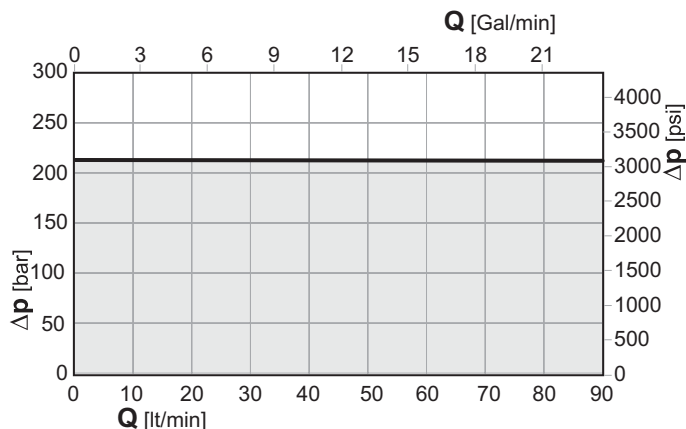
Caratteristiche tecniche distributore / Directional control valve characteristics

Portata max / Max. flow	90	120
Pressione max di lavoro / Max. working pressure	210 bar	
Contropressione max sullo scarico / Max. back outlet pressure	25 bar	
Manovra di emergenza o in assenza di corrente / Emergency operation or in case of power failure	A pulsante in spinta / Push type	
Trafilamento max di A e B in T a 100 bar con viscosità 35 mm²/s / Max. spool leakage of A and B ports to T port at 100 bar with viscosity 35 mm²/s	7 cm³/min	

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Limiti d'impiego / Use limits

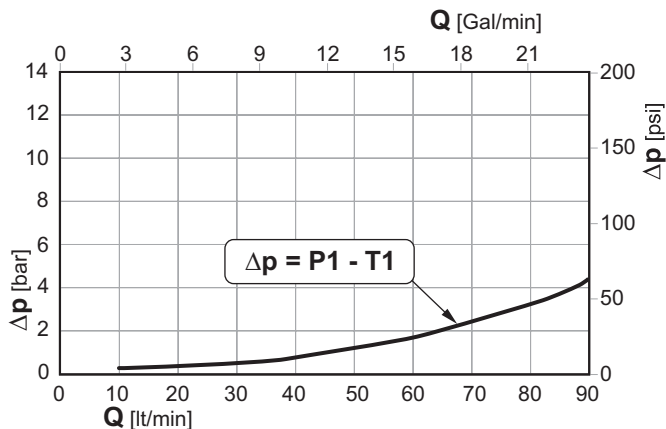
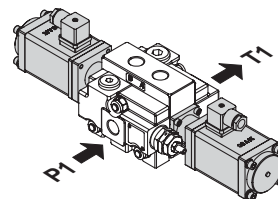


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

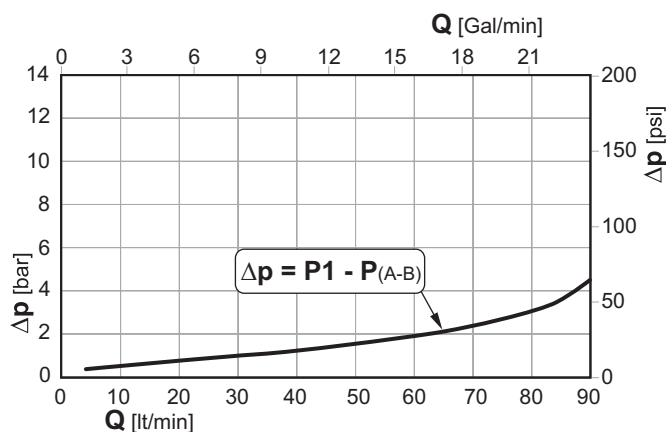
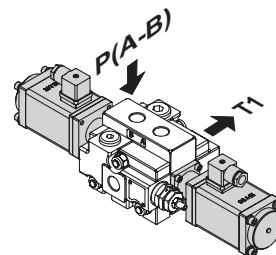
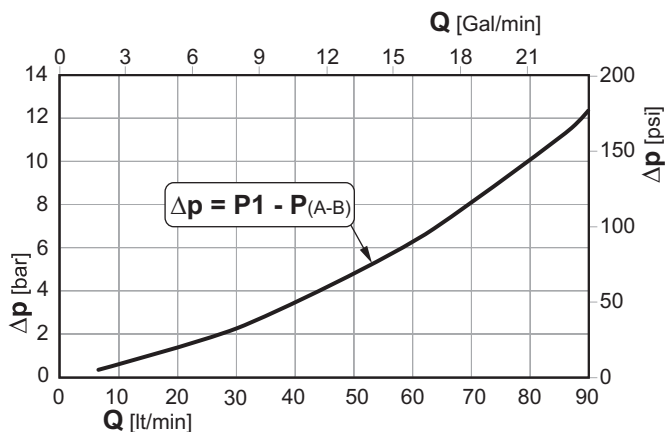
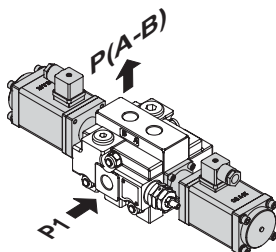


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

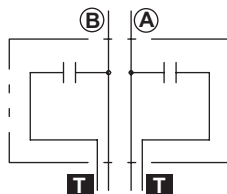
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

10 - Tipo valvole a cartuccia / Type of built-in cartridge valves

			Q30	GSV50 (Q50)	Q80	Q130
VC	Tappo di chiusura per corpo distributore predisposto per valvole antiurto e/o anticavitazione	Closing plug for directional control valve body preset for shock and/or anticavitation valves	•	•	•	•
V30	Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, on A port (for the setting see par. 11)	•	•	•	•
V31	Valvola limitatrice di pressione (o antiurto), registrabile, su effetto B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, on B port (for the setting see par. 11)	•	•	•	•
V32	Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A e B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, on A and B port (for the setting see par. 11)	•	•	•	•
V33	Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, with anticavitation, on A port (for the setting see par. 11)	•	•	•	•
V34	Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, with anticavitation, on B port (for the setting see par. 11)	•	•	•	•
V35	Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A e B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, with anticavitation, on A and B port (for the setting see par. 11)	•	•	•	•
V40	Valvola limitatrice di pressione (o antiurto), registrabile su effetto A e anticavitazione su effetto B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable on A port and anticavitation on B port (for the setting see par. 11)	•	•	•	•
V41	Valvola anticavitazione su effetto A e valvola limitatrice di pressione (o antiurto), registrabile su effetto B (per le tarature vedere par. 11)	Anticavitation valve on A port and pressure limiting valve (or antishock), adjustable on B port (for the setting see the par. 11)	•	•	•	•
V04	Valvola anticavitazione su effetto A	Anticavitation valve on A port	•	•	•	•
V05	Valvola anticavitazione su effetto B	Anticavitation valve on B port	•	•	•	•
V06	Valvola anticavitazione doppia su effetti A e B	Anticavitation valve, double-acting on A and B ports	•	•	•	•

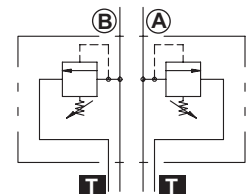
VC

Tappo di chiusura per corpo distributore predisposto per valvole antiurto e/o anticavitazione.
Closing plug for directional control valve body preset for shock and/or anticavitation valves.



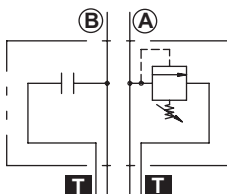
V32

Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A e B (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, on A and B port (for the setting see next page).



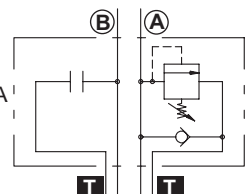
V30

Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, on A port (for the setting see next page).



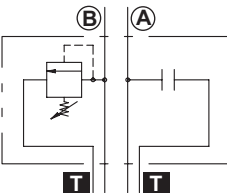
V33

Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, with anticavitation, on A port (for the setting see next page).



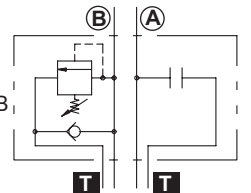
V31

Valvola limitatrice di pressione (o antiurto), registrabile, su effetto B (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, on B port (for the setting see next page).



V34

Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto B (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, with anticavitation, on B port (for the setting see next page).

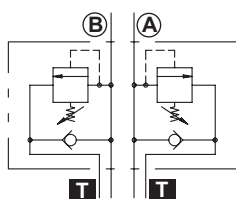


Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

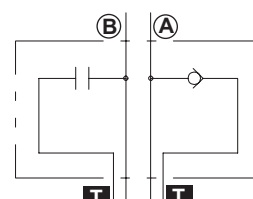
V35

Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A e B (per le tarature vedere par. 11).
Pressure limiting valve (or antishock), adjustable, with anticavitation, on A and B port (for the setting see par. 11).



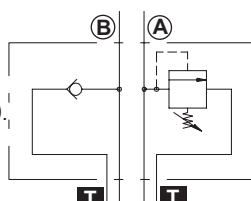
V04

Valvola anticavitazione su effetto A.
Anticavitation valve on A port.



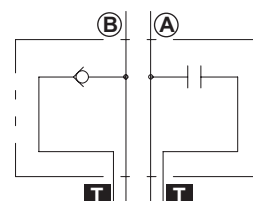
V40

Valvola limitatrice di pressione (o antiurto), registrabile su effetto A e anticavitazione su effetto B (per le tarature vedere par. 11).
Pressure limiting valve (or antishock), adjustable on A port and anticavitation on B port (for the setting see par. 11).



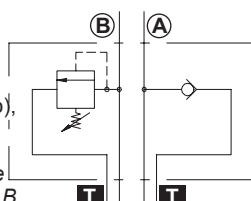
V05

Valvola anticavitazione su effetto B.
Anticavitation valve on B port.



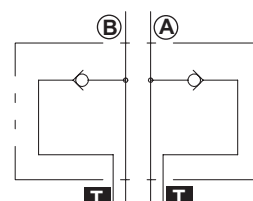
V41

Valvola anticavitazione su effetto A e valvola limitatrice di pressione (o antiurto), registrabile su effetto B (per le tarature vedere par. 11).
Anticavitation valve on A port and pressure limiting valve (or antishock), adjustable on B port (for the setting see par. 11).



V06

Valvola anticavitazione doppia su effetti A e B.
Anticavitation valve, double-acting on A and B ports.



11 - Tipo molla e taratura valvola

Dove è presente la valvola VLP (V30 - V31 - V32 - V33 - V34 - V35 - V40 - V41), deve essere specificato il tipo di molla (**B**, **N**, **G** o **R**) e la sua pressione di taratura; **se quest'ultima viene omessa, verrà messa la molla N tarata a 120 bar.**

11 - Type of spring and valve setting

If valve VLP is installed (V30 - V31 - V32 - V33 - V34 - V35 - V40 - V41), specify the type of spring (**B**, **N**, **G** or **R**) and its pressure setting. If omitted, **spring N with a 120 bar setting will be installed.**

			molla bianca white spring	molla nera black spring	molla gialla yellow spring	molla rossa red spring
R	Tipo di molla per la VLP Type of spring for relief valve		B	N	G	R
Campi di taratura / Calibration fields bar (psi)						
250	Taratura della VLP VLP Setting	Q30 - GSV50 (Q50)	30 ÷ 80 (435 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 300 (2915 ÷ 4350)	301 ÷ 400 (4365 ÷ 5800)
		Q80	30 ÷ 80 (435 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	—	201 ÷ 370 (2915 ÷ 5365)
		Q130	30 ÷ 80 (435 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	—	201 ÷ 350 (2915 ÷ 5075)
Il range completo si ottiene mediante l'aggiunta di spessori The complete range can be obtained with additional thickness						

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

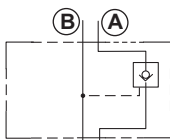
Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

12 - Tipo valvole a pannello / Panel valves type

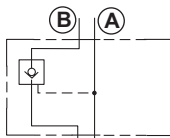
		Q30	GSV50 (Q50)	Q80	Q130
V01	Valvola di ritegno pilotata singola su effetto A (*) <i>Single piloted check valve on A port (*)</i>	•		•	•
V02	Valvola di ritegno pilotata singola su effetto B (*) <i>Single piloted check valve on B port (*)</i>	•		•	•
V03	Valvola di ritegno pilotata singola su effetti A e B (*) <i>Single piloted check valve on A and B ports (*)</i>	•		•	•
VP	Corpo distributore predisposto per valvola a pannello <i>Control valve body preset for panel-mounted valve</i>	•		•	•
VPC	Corpo distributore predisposto per valvola antiurto o anticavitazione e per valvola a pannello <i>Control valve body preset for antishock valve or anticavitation and for panel-mounted valve</i>	•		•	•
VPFE	Corpo distributore predisposto per valvola di flottante elettrico a pannello <i>Control valve body preset for electric floating valve, panel mounted</i>	•			
VFE	Valvola per flottante elettrico. Da utilizzare su cursori con utilizzi A e/o B chiusi in pos. 0 per creare elettricamente la posizione di flottante. Specificare al tensione: 12 V.DC. - 24 V.DC. <i>Valve for electric floating. To use on spool with A and/or B ports closed in 0 position and for generating electrically the floating position. Specify the voltage: 12 V.DC. - 24 V.DC.</i>	•			

V01

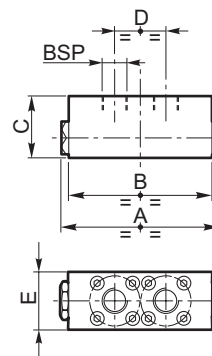
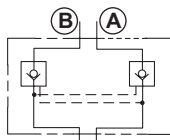
Valvola di ritegno pilotata singola su effetto A (*).
Single piloted check valve on A port ()*

**V02**

Valvola di ritegno pilotata singola su effetto B (*).
Single piloted check valve on B port ()*

**V03**

Valvola di ritegno pilotata singola su effetti A e B (*).
Single piloted check valve on A and B ports ()*



	A	B	C	D	E	BSP
Q30	105 (4.134)	95 (3.740)	41 (1.614)	34 (1.339)	37.5 (1.476)	3/8"
Q80	130 (5.118)	122 (4.803)	50 (1.969)	43 (1.693)	45 (1.772)	1/2"
Q130	173 (6.811)	165 (6.496)	65 (2.559)	64 (2.520)	47 (1.850)	3/4"

	* Rapporto di pilotaggio <i>Piloting ratio</i>	Coppia di serraggio delle viti di fissaggio <i>Fastening screw tightening</i>
Q30	1 : 2.42	8 Nm 2 Nm - solo per viti VFE / only for VFE screws
Q80	1 : 3.25	10 Nm
Q130	1 : 2.80	10 Nm

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

VP

Corpo distributore predisposto per valvola a pannello.
Control valve body preset for panel-mounted valve.

VPC

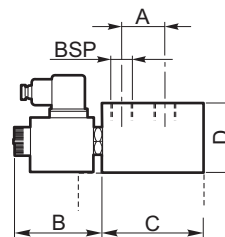
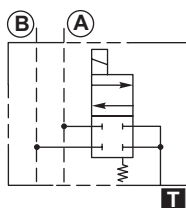
Corpo distributore predisposto per valvola antiurto o anticavitazione e per valvola a pannello.
Control valve body preset for antishock valve or anticavitation and for panel-mounted valve.

VPFE

Corpo distributore predisposto per valvola di flottante elettrico a pannello.
Control valve body preset for electric floating valve, panel mounted.

VFE

Valvola per flottante elettrico.
Da utilizzare su cursori con utilizzi A e/o B chiusi in pos. 0 per creare elettricamente la posizione di flottante.
Specificare al tensione: **12 V.DC. - 24 V.DC.**
Valve for electric floating.
To use on spool with A and/or B ports closed in 0 position and for generating electrically the floating position.
Specify the voltage: 12 V.DC. - 24 V.DC.



	A	B	C	D	BSP
Q30	34 (1.339)	69 (2.717)	80 (3.150)	80 (3.150)	3/8"

13 - Tipo fiancata di scarico / *Outlet section type*

F16D

Fiancata di scarico destro per centro chiuso

Right outlet section for through passage closed

Fiancata di ingresso supplementare

13 - Ingresso supplementare

I seguenti ingressi supplementari, dotati di due ingressi laterali e uno scarico centrale, possono essere utilizzati in sostituzione della fiancata di scarico utilizzando come scarico l'elemento intermedio **E51** (vedi par. 5, pag. G-18).

La designazione verrà modificata come segue:

Q30	—	F7S	R250	MSE	—	103	A1	M1	—	E51	—	103	A1	M1	V30	R250	—	F7D	R250	MSE	—	12V	—	2E+1
1		2	3	4		7	8	9		5		7	8	9	10	11		13	14	15		16		17

13 - Additional inlet section

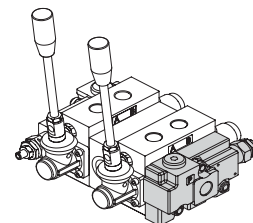
The following additional inlet sections, fitted with two lateral inlets and with a central outlet can be used as a replacement of the outlet section by using the intermediate element **E51** (see par. 5, page G-18) as relief.

The designation will be modified as follows:

			Q30	GSV50 (Q50)	Q80	Q130
F7D	Collettore di entrata destro con valvola limitatrice di pressione VLP	Right inlet section with relief valve	•	•	•	•
F7DP	Collettore di entrata sinistro con valvola limitatrice di pressione pilotata	Inlet sections with check valve VR				•
F8D	Collettore di entrata destro senza valvole	Right inlet section without valves	•	•	•	•

F7D

Collettore di entrata destro con valvola limitatrice di pressione VLP
Right inlet section with relief valve VLP



14 - Tipo molla e taratura valvola

Dove è presente la valvola VLP (fiancate F7D e F7DP), deve essere specificato il tipo di molla (**B**, **N** o **R**) e la sua pressione di taratura; se quest'ultima viene omessa la valvola verrà tarata a **150** bar.

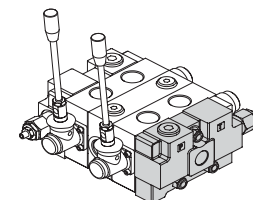
14 - Outlet section type

If valve VLP is installed (inlet section F7D and F7DP), specify the type of spring (**B**, **N** or **R**) and its pressure setting. If this latter is omitted, spring N with a **150** bar setting will be installed..

		molla bianca white spring	molla nera black spring	molla rossa red spring
R	Tipo di molla per la VLP Type of spring for relief valve	B	N	R
Campi di taratura / Calibration fields				
		bar (psi)		
250	Taratura della VLP VLP Setting	10 ÷ 80 (145 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 380 (2915 ÷ 5510)

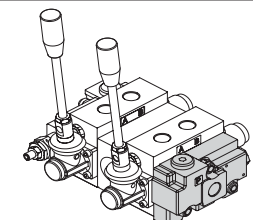
F7DP

Collettore di entrata sinistro con valvola limitatrice di pressione pilotata
Inlet sections with check valve VR



F8D

Collettore di entrata destro senza valvole
Right inlet section without valves



Fiancata di scarico e/o ingresso supplementare

Outlet section or additional inlet section

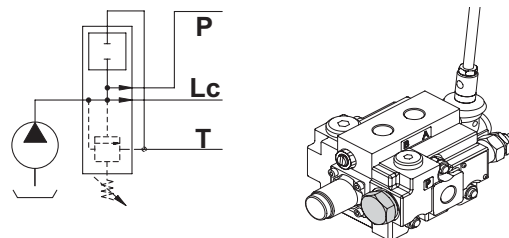
Q30	F7S	R250	MSE	103	A1	M1	E51	103	A1	M1	V30	R250	F7D	R250	MSE	12V	2E+1
1	2	3	4	7	8	9	5	7	8	9	10	11	13	14	15	16	17

15 - Valvole aggiuntive alla fiancata / Additional valves on the inlet section

			Q30	GSV50 (Q50)	Q80	Q130
PMS	Collettore di entrata con predisposizione per valvola di messa a scarico elettrica (indiretta) o idraulica <i>Inlet section presets for electrical outlet release valve (indirect) or hydraulic</i>		•	•	•	•
MSI	Collettore di entrata con valvola di messa a scarico idraulica <i>Inlet section with hydraulic outlet release valve</i>		•	•	•	•
MSE	Collettore di entrata con valvola di messa a scarico elettrica (indiretta) <i>Inlet section with electrical outlet release valve (indirect)</i>		•	•	•	•

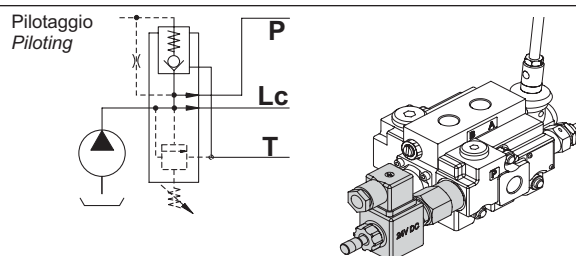
PMS

Collettore di entrata con predisposizione per valvola di messa a scarico elettrica (indiretta) o idraulica
Inlet section presets for electrical outlet release valve (indirect) or hydraulic



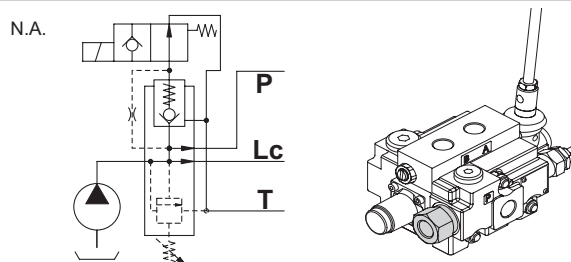
MSI

Collettore di entrata con valvola di messa a scarico idraulica
Inlet section with hydraulic outlet release valve



MSE

Collettore di entrata con valvola di messa a scarico elettrica (indiretta)
Inlet section with electrical outlet release valve (indirect)



N.B.
Specificare tensione e schema dell'elettrovalvola
Specify voltage and scheme of the solenoid operated valve

Tensione Voltage
12 V.DC
24 V.DC

Schema Scheme	
N.C.	Normalmente chiusa Usually closed
N.A.	Normalmente aperta Usually open

Note aggiuntive

Additional notes

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

16 - Note aggiuntive / Additional notes

12V, 24V

S Alluminio (pag. G-6 ... G-10)

Codice asta di comando (vedi tabella seguente)

16 - Additional notes

12V, 24V

S Aluminium (page G-6 ... G-10)

Control lever code (see next table)

Codice / Code	Versione / Version	M	L	D	A	B	Colore / Color
---------------	--------------------	---	---	---	---	---	----------------

Q30 - GSV50 - (Q50)

Dimensioni in / Dimensions in: mm (inch)

06.029.22862	1	Standard / Standard	M8	164 (6.457)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.30335	1	Standard / Standard	M8	164 (6.457)	20 (0.787)	57 (2.244)	20 (0.787)	Rosso / Red
06.029.30528	1	Lunga tipo A / Long version type A	M8	184 (7.244)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.30492	1	Lunga tipo A / Long version type A	M8	184 (7.244)	20 (0.787)	57 (2.244)	20 (0.787)	Rosso / Red
06.029.28922	1	Lunga / Long version	M8	204 (8.031)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.30336	1	Lunga / Long version	M8	204 (8.031)	20 (0.787)	57 (2.244)	20 (0.787)	Rosso / Red
06.029.27421	1	Extra lunga / Extra-long	M8	324 (12.756)	20 (0.787)	57 (2.244)	20 (0.787)	Nero / Black
06.029.22876	1	Extra corta / Extra-short	M8	82 (3.228)	18 (0.709)	50 (1.969)	20 (0.787)	Nero / Black
06.029.29451	2	Standard con oblo' / Standard with lens	M8	174 (6.850)	32 (1.260)	46 (1.811)	20 (0.787)	Nero / Black
06.029.29423	2	Lunga con oblo' / Long with lens	M8	214 (8.425)	32 (1.260)	46 (1.811)	20 (0.787)	Nero / Black

Q80 - Q130

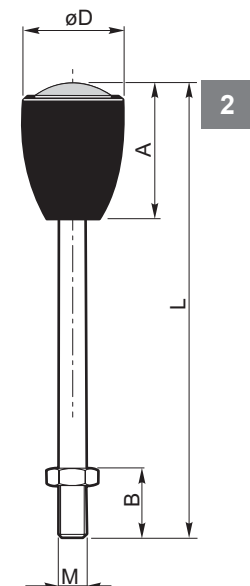
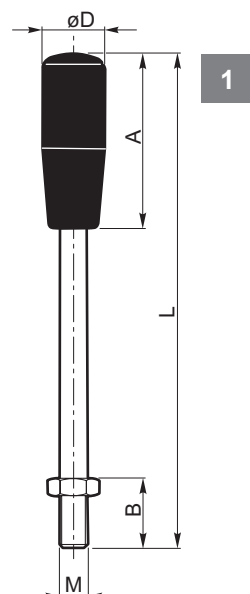
06.029.27013	1	Standard / Standard	M10	209 (8.228)	20 (0.787)	57 (2.244)	28 (1.102)	Nero / Black
06.029.28148	1	Lunga / Long version	M10	357 (14.055)	20 (0.787)	57 (2.244)	28 (1.102)	Nero / Black
06.029.27344	1	Corta / Short version	M10	154 (6.063)	20 (0.787)	57 (2.244)	28 (1.102)	Nero / Black
06.029.27635	1	Extra corta / Extra-short	M10	66 (2.598)	26 (1.024)	42 (1.654)	22 (0.866)	Nero / Black
06.029.29866	2	Standard con oblo' / Standard with lens	M10	219 (8.622)	32 (1.260)	46 (1.811)	28 (1.102)	Nero / Black
06.029.30295	2	Lunga con oblo' / Long with lens	M10	367 (14.449)	32 (1.260)	46 (1.811)	28 (1.102)	Nero / Black

Per comando elettrico / For electric control

Q30 - GSV50 - (Q50)

06.029.28945	1	Standard / Standard	Ø7	133 (5.236)	20 (0.787)	57 (2.244)	15 (0.591)	Nero / Black
06.029.29349	1	Lunga / Long version	Ø7	201 (7.913)	20 (0.787)	57 (2.244)	15 (0.591)	Nero / Black
06.029.30951	2	Standard con oblo' / Standard with lens	Ø7	143 (5.630)	32 (1.260)	46 (1.811)	15 (0.591)	Nero / Black

Dimensioni in / Dimensions in: mm (inch)



Note aggiuntive

Additional notes

Q30	F7S	R250	MSE	E50	R250	2x	103	A1	M1	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5	6		7	8	9	10	11	12	13	16	17

17 - Numero sezioni di lavoro

Specificare il numero delle sezioni di lavoro (es. 2E) e il numero degli elementi intermedi (es. +1) utilizzati tenendo sempre in considerazione che la somma dei due non potrà superare il limite massimo di 10.

17 - Number of working sections

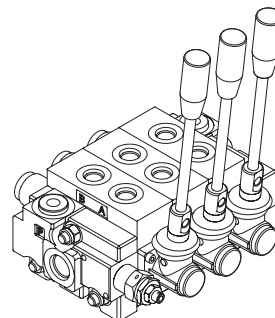
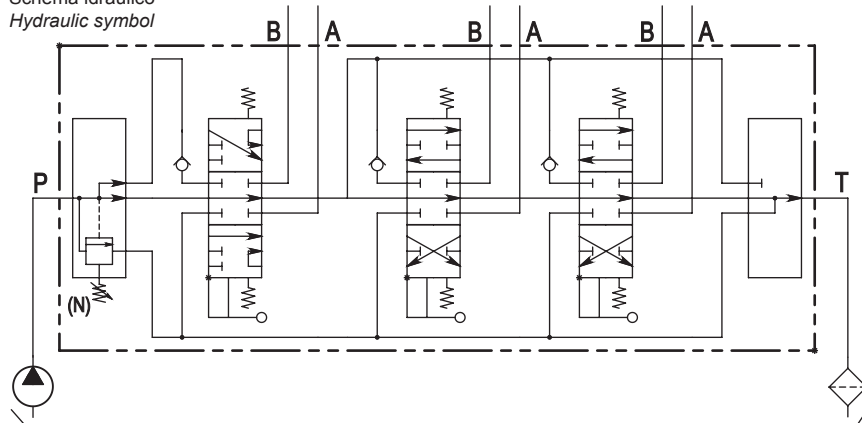
Specify the number of working sections (for ex. 2E) and the number of intermediate elements (for ex. +1) used, always taking into account that the sum of the two will not have to exceed the maximum limit of 10.

ESEMPI DI ORDINAZIONE IN CODICE
ORDERING CODE EXAMPLES

Q30 - F7SN - 403/A1/M1 - 2x103/A1/M1 - F3D - S - SAE - 3E

F	G				H								I	L	
1	2	3	4		5	6	7	8	9	10	11	12	13	16	17
Q30	F7S	N200			403/A1/M1								F3D	S	SAE - 3E
					2x 103/A1/M1										

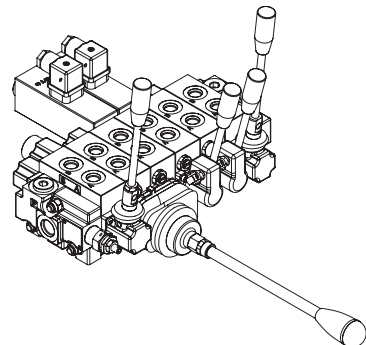
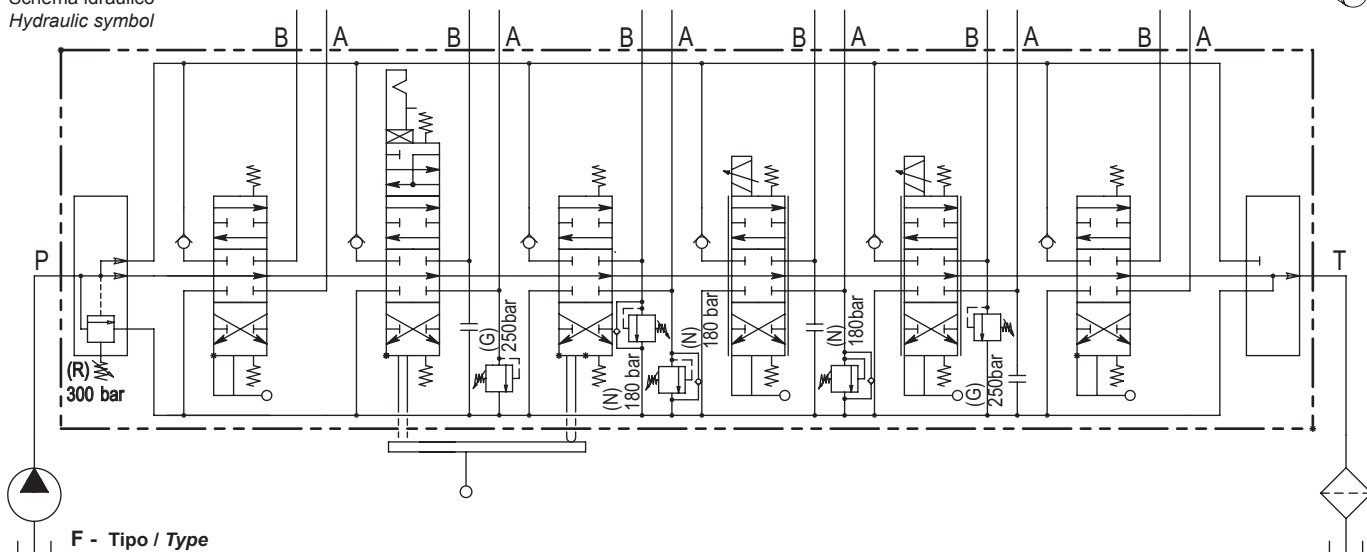
Schema idraulico
Hydraulic symbol



Q30 - F7S R(300) - 103/A1/M1 - 126/A15D/R10-Z1/V30 G(250) - 103/M1/V35 N(180) - 103/A1/DP/V33 N(180) - 103/A1/DP/V31 G(250) - 103/A1/M1 - F3D - 12V - 6E

F	G				H								I	L	
1	2	3	4		5	6	7	8	9	10	11	12	13	16	17
Q30	F7S	R300			103/A1/M1								F3D	12V	6E
					126/A15D/R10-Z1/V30 G(250)										
					103/M1/V35 N(180)										
					103/A1/DP/V33 N(180)										
					103/A1/DP/V31 G(250)										
					103/A1/M1										

Schema idraulico
Hydraulic symbol



F - Tipo / Type

G - Fiancata d'ingresso / Inlet section

H - Sezione di lavoro e/o elemento intermedio / Working section and/or intermediate section

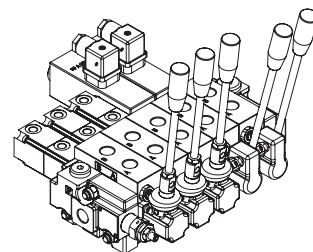
I - Fiancata di scarico o ingresso supplementare / Outlet section or additional inlet section

L - Note aggiuntive / Additional notes

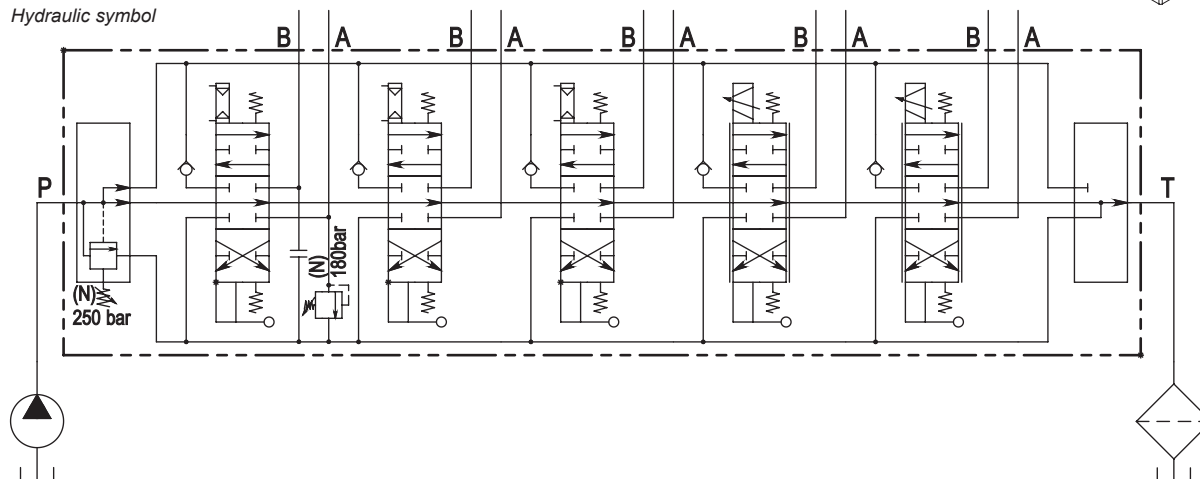
ESEMPI DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLES

Q30 - F7S N(250) - 103/A1/P1-N/V30 N(180) - 2x103/A1/P1-N - 2x103/A1/DP - F3D - 5E

F	G				H								I	L	
1	2	3	4		5 - 6 - 7 - 8 - 9 - 10 - 11 - 12								13	16 - 17	
Q30	F7S	N250			103/A1/P1-N/V30 N(180)								F3D	5E	
					2x 103/A1/P1-N										
					2x 103/A1/DP										

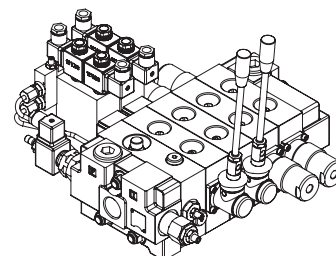


Schema idraulico
Hydraulic symbol

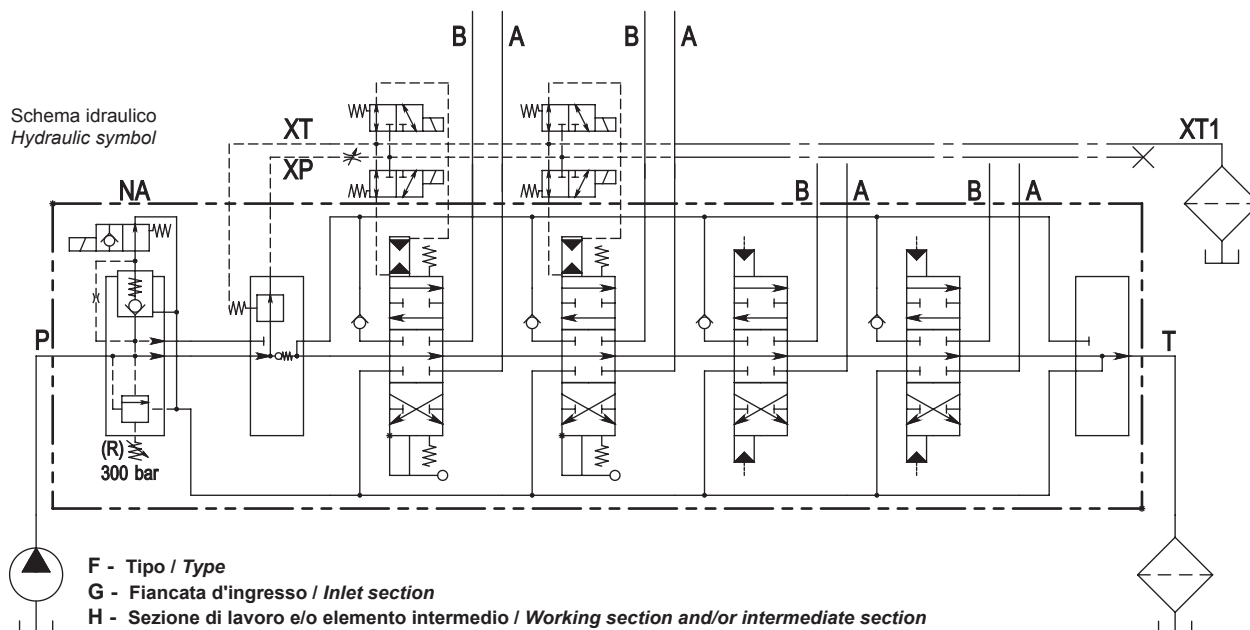


Q130 F7S R(300) MSE (NA) - E62 - 103/A1/D2-1R - 103/A1/D2-2R - 2x103/H1 - F3D - 12V - 4E+1

F	G				H								I	L	
1	2	3	4		5 - 6 - 7 - 8 - 9 - 10 - 11 - 12								13	16 - 17	
Q130	F7S	R300	MSE(NA)		E62								F3D	12V - 4E+1	
					103/A1/D2-1R										
					103/A1/D2-2R										
					2x 103/H1										



Schema idraulico
Hydraulic symbol



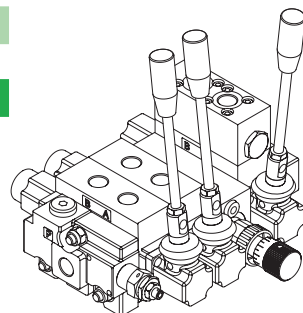
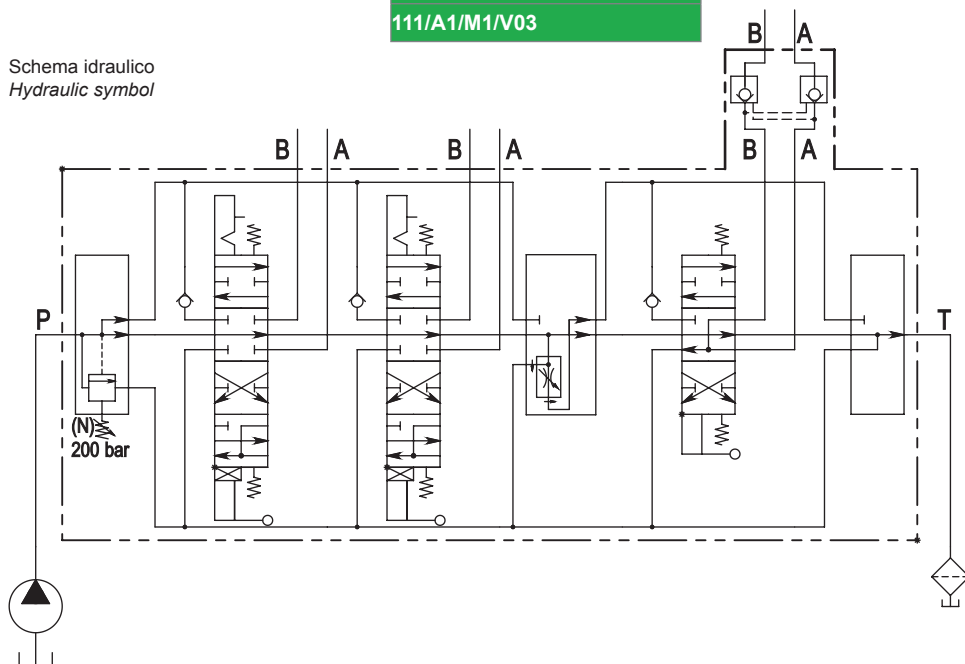
- F - Tipo / Type
G - Fiancata d'ingresso / Inlet section
H - Sezione di lavoro e/o elemento intermedio / Working section and/or intermediate section
I - Fiancata di scarico o ingresso supplementare / Outlet section or additional inlet section
L - Note aggiuntive / Additional notes

ESEMPI DI ORDINAZIONE IN CODICE
ORDERING CODE EXAMPLES

Q30 - F7S(N) - 2x116/A1-Z1/R8 - E68 - 111/A1/M1/V03 - F3D - 4E

F	G				H								I	L	
1	2	3	4		5 - 6 - 7 - 8 - 9 - 10 - 11 - 12								13	16 - 17	
Q30	F7S	N200		2x	116/A1-Z1/R8								F3D	4E	
					E68										
					111/A1/M1/V03										

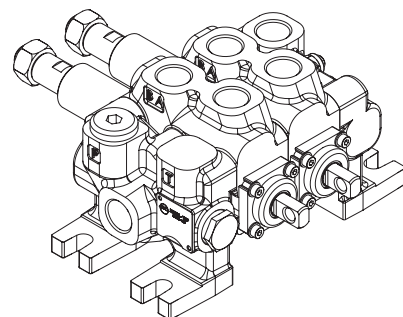
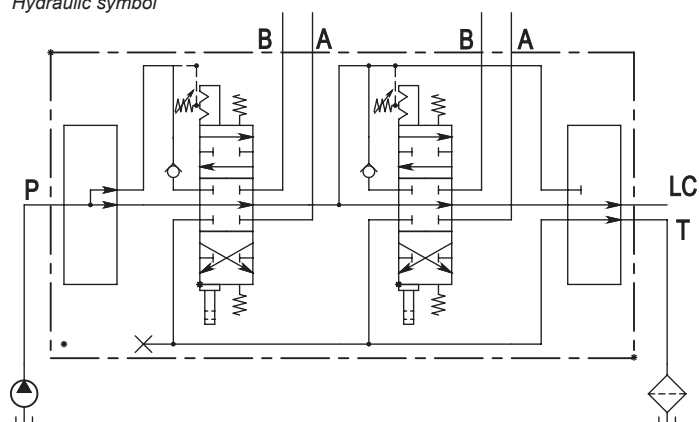
Schema idraulico
Hydraulic symbol



GSV50 - F8S - 203/A6H/R3K - 103/A6H/R3K - F6D - 2E

F	G				H								I	L	
1	2	3	4		5 - 6 - 7 - 8 - 9 - 10 - 11 - 12								13	16 - 17	
GSV50	F8S				203/A6H/R3K								F6D	2E	
					103/A6H/R3K										

Schema idraulico
Hydraulic symbol



F - Tipo / Type

G - Fiancata d'ingresso / Inlet section

H - Sezione di lavoro e/o elemento intermedio / Working section and/or intermediate section

I - Fiancata di scarico o ingresso supplementare / Outlet section or additional inlet section

L - Note aggiuntive / Additional notes

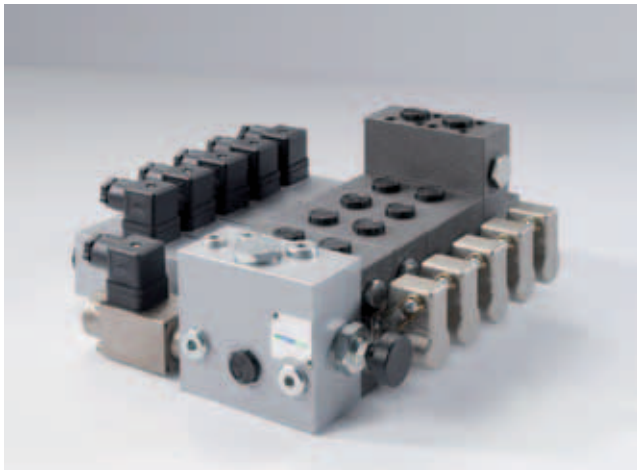
DISTRIBUTORI A COMANDO ELETTRICO DIRETTO CON FIANCATA PROPORZIONALE DIRECTIONAL CONTROL VALVE WITH DIRECT ELECTRICAL CONTROL AND PROPORTIONAL SECTION


Pag.
Page

CARATTERISTICHE FEATURES	H-2
CARATTERISTICHE TECNICHE TECHNICAL CHARACTERISTICS	H-3
ESEMPIO DI ORDINAZIONE IN CODICE EXAMPLE OF ORDERING CODE	H-4
Q30	H-12
GSV50	H-14
Q50	H-16
ELP 30	H-19
EJS 30	H-21

DISTRIBUTORI A COMANDO ELETTRICO DIRETTO CON FIANCATA PROPORZIONALE F7SPR

- Sono un'ulteriore estensione dei distributori a comando elettrico ON-OFF, con applicazione su Q30 e GSV50 (Q50).
- Operano con una sezione per volta con proporzionalità ottenuta elettronicamente.
- Ogni sezione mantiene, inoltre, il comando manuale.
- I distributori proporzionali sono composti da: una fiancata di entrata, da elementi in quantità variabile da 1 a 10 a comando elettrico ON-OFF e da una fiancata di scarico.
- Nella fiancata di entrata, sono alloggiati: la valvola proporzionale, la quale permette di modulare la portata agli elementi ON-OFF; il compensatore a tre vie, la valvola di massima pressione e la valvola di sicurezza (manuale o elettrica) che permette di operare anche in mancanza di tensione.
- Sono particolarmente adatti nelle applicazioni in cui si effettuano manovre non contemporanee e in cui è fondamentale la sicurezza e la sensibilità dei movimenti, come, ad es. piattaforme sollevabili con operatori a bordo.



DIRECTIONAL CONTROL VALVE WITH DIRECT ELECTRICAL CONTROL AND PROPORTIONAL SECTION F7SPR

- Proportional control valves are a further step in the field of control valves with ON-OFF electrical control, with application on Q30 and Q50 control valves.
- These control valves operate with only one section at a time and its proportionality is obtained by an electronic drive.
- Each section keeps hand control.
- Proportional control valves consist of: inlet section, working sections (consisting of a variable number of 1-10 electrical ON-OFF elements) and outlet section.
- The inlet section is carrying a proportional valve tuning flow to the ON-OFF elements a three-way compensator, a maximum relief valve, a safety valve (either manual or electrical) allows operation also during blackout.
- Proportional control valves are particularly suited for applications with not contemporary operations, where security and sensitivity of movements becomes of basic importance, such as on lifting platforms with operator on board.



AVVERTENZA PER L'INSTALLAZIONE DEI DISTRIBUTORI

- I quattro piedini dei distributori devono sempre appoggiare su una superficie perfettamente piana.
- Non manomettere i dadi dei tiranti in quanto comprometterebbero il normale funzionamento del distributore.
- Non utilizzare raccordi conici su filetti cilindrici.
- Per pulire il distributore, prima della verniciatura, non utilizzare diluenti/solventi o qualsiasi prodotto che possa intaccare le parti in gomma.

NOTES FOR DIRECTIONAL CONTROL VALVES ASSEMBLY

- The valve must always and perfectly rest on a 180° flat surface.
- Do not tamper the tie rod nuts so they might impair the standard working of the valve.
- No conical nipples with JIC thread must be used.
- Before painting the control valve, do not use diluent or any products that could damage rubber parts.

Caratteristiche tecniche elettrovalvola proporzionale

Characteristics proportional solenoid valve

	Q30	GVS50 (Q50)
Attacco magnete <i>Magnet connection</i>	Tipo DIN 43650 (versione A) <i>Type DIN 43650 (version A)</i>	
Tipo di protezione <i>Protection type</i>	IP 65	
Classe d'isolamento <i>Coil insulation class</i>	F	
Tensione di alimentazione <i>Supply voltage</i>	12 V D.C. 24 V D.C.	
Variazione di tensione max. <i>Maximum voltage tolerance</i>	÷ 10%	
Isteresi <i>Hysteresis</i>	÷ 5%	
Tempo di risposta valvola proporzionale <i>Response time proportional valve</i>	10% ÷ 90% = 40ms	
Tempo di risposta valvola proporzionale <i>Response time proportional valve</i>	90% ÷ 10% = 50ms	
Corrente valvola proporz. alimentazione 12V D.C. <i>Current proportional valve 12V D.C. supply</i>	0 ÷ 1 A	
Corrente valvola proporz. alimentazione 24V D.C. <i>Current proportional valve 24V D.C. supply</i>	0 ÷ 1 .4A	

Caratteristiche tecniche distributore

Directional control valve characteristics

	Q30	GVS50 (Q50)
Portata max. (lt/min) <i>Max. flow</i>	15 - 30 - 40 lt/min	
Pressione max. di lavoro <i>Max. working pressure</i>	250 bar	
Contropressione max. sullo scarico <i>Max. back outlet pressure</i>	25 bar	
Limiti temperatura olio <i>Oil range temperature</i>	-30 °C ÷ 80 °C	
Temperatura olio consigliata <i>Recommended oil temperature</i>	30 °C ÷ 60 °C	
Filtraggio consigliato <i>Recommended filtering</i>	19/16 ISO DIS 4406	
Fluido consigliato <i>Recommended fluid</i>	olio minerale <i>mineral oil</i>	
Viscosità <i>Viscosity</i>	10 ÷ 400 mm ² /s	
Manovra di emergenza o manovra in assenza di corrente <i>Emergency operation or in case of power break</i>	Con leva e valvola di sicurezza manuale o elettrica <i>By hand lever and manual or electrical safety valve</i>	
Trafilamento max. di A e B tu T a 100 bar con viscosità 35 mm ² /s <i>Max. spool leakage of A and B ports to T port at 100 bar with viscosity 35 mm²/s</i>	5 cm ³ /min	

ESEMPIO DI ORDINAZIONE IN CODICE
ORDERING CODE EXAMPLE

Tipo Type	Fiancata d'ingresso Inlet section				Sezione di lavoro e/o elemento intermedio Working section and/or intermediate section						Fiancata di scarico Outlet section	Note aggiuntive Additional notes
Q30	F7SPR	N120	30	M	2x	103	A1/D41	V30	R250	V01	F3D	12V — 2E
1	2	3	4	5		7	8	10	11	12	13	16 — 17

1 - Tipo

Q30, GSV50, Q50 (ad esaurimento).

Indica il tipo di distributore; le caratteristiche dimensionali sono riportate da pag. xx a pag. xx

1 - Type

Q30, GSV50, Q50 (phasing out).

Indicates the type of directional control valve. The dimensional specifications are given from page F6 to page F15.

Fiancata di ingresso proporzionale

Proportional inlet section

2 - Tipo fiancata d'ingresso proporzionale

2 - Type of proportional inlet section

F7SPR

Fiancata di ingresso proporzionale
Proportional inlet section

3 - Taratura valvola VLP

Per la valvola VLP, deve essere specificato il tipo di molla (**B**, **N**, **G** o **R**) e la sua pressione di taratura; **se quest'ultima viene omessa, verrà messa la molla N tarata a 120 bar.**

3 - VLP Valve setting

For VLP valve specify the type of spring (**B**, **N**, **G** or **R**) and its pressure setting. If omitted, **spring N with a 120 bar setting will be installed.**

			molla bianca white spring	molla nera black spring	molla gialla yellow spring	molla rossa red spring
N	Tipo di molla per la VLP Type of spring for relief valve		B	N	G	R
Campi di taratura / Calibration fields bar (psi)						
120	Taratura della VLP VLP Setting	Q30 - GSV50 (Q50)	30 ÷ 80 (435 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 300 (2915 ÷ 4350)	301 ÷ 400 (4365 ÷ 5800)
			Il range completo si ottiene mediante l'aggiunta di spessori The complete range can be obtained with additional thickness			

Fiancata di ingresso proporzionale

Proportional inlet section

4 - Portata valvola proporzionale

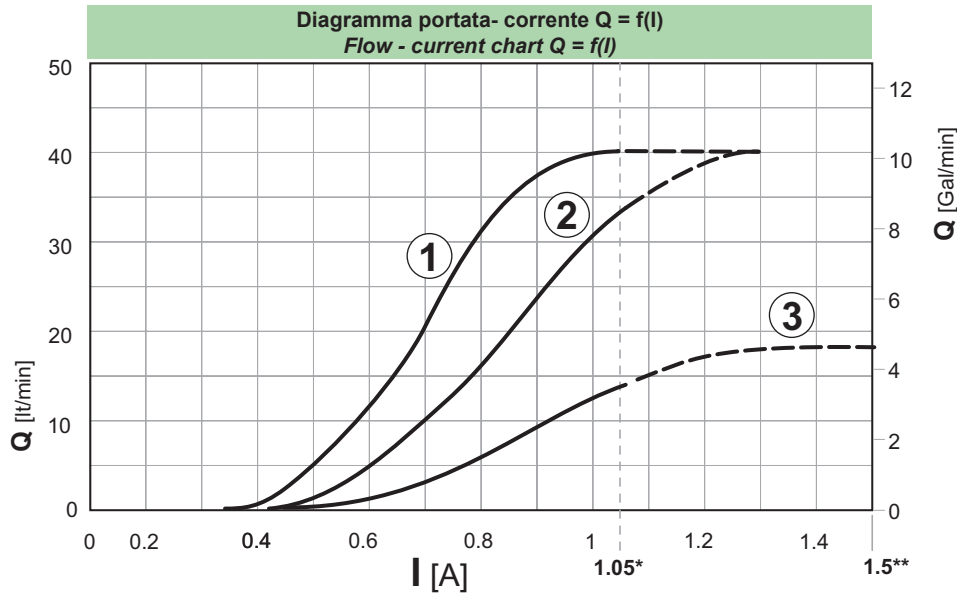
Portate disponibili: **15, 30 e 40 l/min.**

I 40 l/min (10.56 gal/min) si possono avere solo con tensioni di 12 V D.C.

4 - Proportional control valve flow

Available flow: **15, 30 e 40 l/min.**

40 l/min (10.56 gal/min) are only possible with 12 V D.C. supply.



① **40 l/min**
(10.56 gal/min)
valve type

② **30 l/min**
(7.92 gal/min)
valve type

③ **15 l/min**
(3.96 gal/min)
valve type

* Nel funzionamento a 12 V DC il valore max. di corrente per funzionamento continuo è di 1.05 A.

** Nel funzionamento a 24 V DC il valore max. di corrente per funzionamento continuo è di 1.5 A.

Prove eseguite con olio minerale avente viscosità 35 mm²/s alla temperatura di 80 °C. Tolleranza sulla portata ± 5 %.

* The maximum current for continuous operation with 12 V DC is 1.05 A.

** The maximum current for continuous operation with 24 V DC is 1.5 A.

All tests were performed with mineral oil, viscosity 35 mm²/sec., at a temperature of 80 °C. Flow tolerance ± 5 %.

5 - Dispositivo di emergenza

5 - Safety device

M	Emergenza manuale Manual safety device		
E-NA	Emergenza elettrica Electrical safety device		
E-NC	Sicurezza elettrica normalmente chiusa Electrical safety device - normally closed		

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

Q30	F7SPR	N120	30	M	2x	103	A1/D41	V30	R250	V01	F3D	12V	2E
1	2	3	4	5		7	8	10	11	12	13	16	17

I campi da 7 a 12 sono da ripetere per ogni sezione. Nel caso in cui due sezioni contigue siano identiche, è sufficiente descriverne solo una antepoendo **2x** al campo 7.

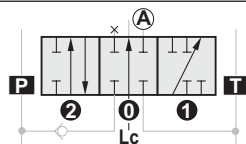
Fields 7 to 12 must be repeated for each section. If two adjacent sections are identical, just describe one and put **2x** before field 7.

7 - Tipo cursore / Spool type

			Q30	GSV50 (Q50)
101	Semplice effetto in A	Single acting in A port	•	•
102	Semplice effetto in B	Single acting in B port	•	•
103	Doppio effetto, A e B chiusi in posizione 0	Double acting, A and B closed in 0 position	•	•
107	Doppio effetto, A in T e B chiuso in posizione 0	Double acting, A to T and B closed in 0 position	•	•
108	Doppio effetto, B in T e A chiuso in posizione 0	Double acting, B to T and A closed in 0 position	•	•
109	Semplice effetto in A, A in T in posizione 0	Single acting in A, A to T in 0 position	•	•
110	Semplice effetto in B, B in T in posizione 0	Single acting in B, B to T in 0 position	•	•
111	Doppio effetto, A e B in T in posizione 0	Double acting, A and B to T in 0 position	•	•

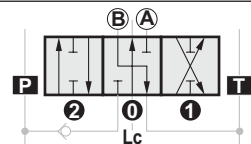
101

Semplice effetto in A
Single acting in A port



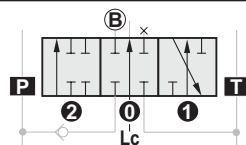
108

Doppio effetto, B in T e A chiuso in posizione 0
Double acting, B to T and A closed in 0 position



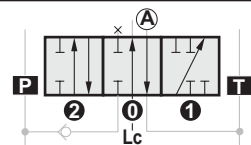
102

Semplice effetto in B
Single acting in B port



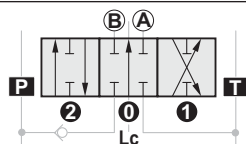
109

Semplice effetto in A, A in T in posizione 0
Single acting in A, A to T in 0 position



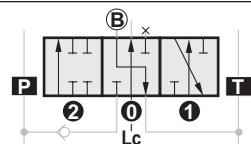
103

Doppio effetto, A e B chiusi in posizione 0
Double acting, A and B closed in 0 position



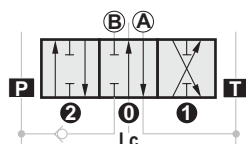
110

Semplice effetto in B, B in T in posizione 0
Single acting in B, B to T in 0 position



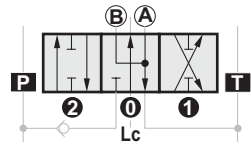
107

Doppio effetto, A in T e B chiuso in posizione 0
Double acting, A to T and B closed in 0 position



111

Doppio effetto, A e B in T in posizione 0
Double acting, A and B to T in 0 position



Q30	F7SPR	N120	30	M	2x	103	A1/D41	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5		7	8	10	11	12	13	16	17

8 - Comando completo A1/D41

Vedere pag. G-44.

8 - Complete controls A1/D41

See page G-44.

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

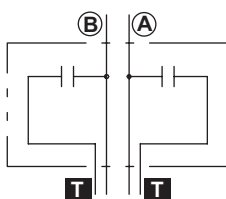
Q30	F7SPR	N120	30	M	2x	103	A1/D41	V30	R250	V01	F3D	12V	2E
1	2	3	4	5		7	8	10	11	12	13	16	17

10 - Tipo valvole a cartuccia / Type of built-in cartridge valves

			Q30	GSV50 (Q50)
VC	Tappo di chiusura per corpo distributore predisposto per valvole antiurto e/o anticavitazione	Closing plug for directional control valve body preset for shock and/or anticavitation valves	•	•
V30	Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, on A port (for the setting see par. 11)	•	•
V31	Valvola limitatrice di pressione (o antiurto), registrabile, su effetto B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, on B port (for the setting see par. 11)	•	•
V32	Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A e B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, on A and B port (for the setting see par. 11)	•	•
V33	Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, with anticavitation, on A port (for the setting see par. 11)	•	•
V34	Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, with anticavitation, on B port (for the setting see par. 11)	•	•
V35	Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A e B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable, with anticavitation, on A and B port (for the setting see par. 11)	•	•
V40	Valvola limitatrice di pressione (o antiurto), registrabile su effetto A e anticavitazione su effetto B (per le tarature vedere par. 11)	Pressure limiting valve (or antishock), adjustable on A port and anticavitation on B port (for the setting see par. 11)	•	•
V41	Valvola anticavitazione su effetto A e valvola limitatrice di pressione (o antiurto), registrabile su effetto B (per le tarature vedere par. 11)	Anticavitation valve on A port and pressure limiting valve (or antishock), adjustable on B port (for the setting see the par. 11)	•	•
V04	Valvola anticavitazione su effetto A	Anticavitation valve on A port	•	•
V05	Valvola anticavitazione su effetto B	Anticavitation valve on B port	•	•
V06	Valvola anticavitazione doppia su effetti A e B	Anticavitation valve, double-acting on A and B ports	•	•

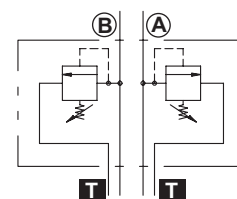
VC

Tappo di chiusura per corpo distributore predisposto per valvole antiurto e/o anticavitazione.
Closing plug for directional control valve body preset for shock and/or anticavitation valves.



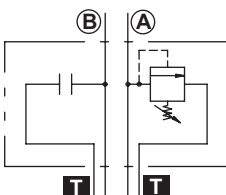
V32

Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A e B (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, on A and B port (for the setting see next page).



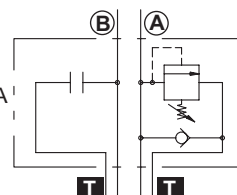
V30

Valvola limitatrice di pressione (o antiurto), registrabile, su effetto A (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, on A port (for the setting see next page).



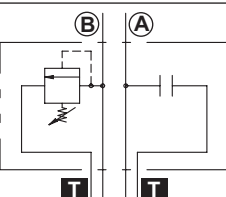
V33

Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, with anticavitation, on A port (for the setting see next page).



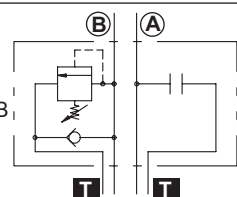
V31

Valvola limitatrice di pressione (o antiurto), registrabile, su effetto B (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, on B port (for the setting see next page).



V34

Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto B (per le tarature vedere pagina seguente).
Pressure limiting valve (or antishock), adjustable, with anticavitation, on B port (for the setting see next page).

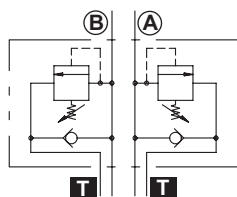


Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

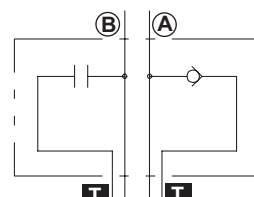
V35

Valvola limitatrice di pressione (o antiurto), registrabile, con anticavitazione, su effetto A e B (per le tarature vedere par. 11).
Pressure limiting valve (or antishock), adjustable, with anticavitation, on A and B port (for the setting see par. 11).



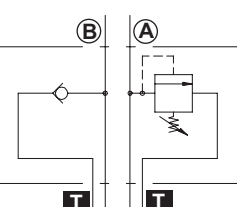
V04

Valvola anticavitazione su effetto A.
Anticavitation valve on A port.



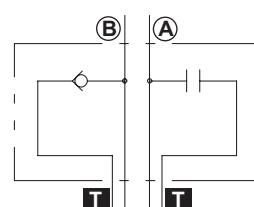
V40

Valvola limitatrice di pressione (o antiurto), registrabile su effetto A e anticavitazione su effetto B (per le tarature vedere par. 11).
Pressure limiting valve (or antishock), adjustable on A port and anticavitation on B port (for the setting see par. 11).



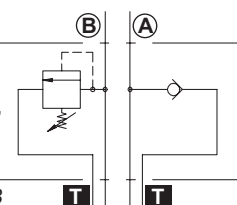
V05

Valvola anticavitazione su effetto B.
Anticavitation valve on B port.



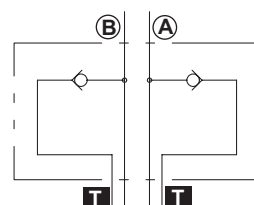
V41

Valvola anticavitazione su effetto A e valvola limitatrice di pressione (o antiurto), registrabile su effetto B (per le tarature vedere par. 11).
Anticavitation valve on A port and pressure limiting valve (or antishock), adjustable on B port (for the setting see par. 11).



V06

Valvola anticavitazione doppia su effetti A e B.
Anticavitation valve, double-acting on A and B ports.



11 - Tipo molla e taratura valvola

Dove è presente la valvola VLP (V30 - V31 - V32 - V33 - V34 - V35 - V40 - V41), deve essere specificato il tipo di molla (B, N, G o R) e la sua pressione di taratura; se quest'ultima viene omessa, verrà messa la molla N tarata a 120 bar.

11 - Type of spring and valve setting

If valve VLP is installed (V30 - V31 - V32 - V33 - V34 - V35 - V40 - V41), specify the type of spring (B, N, G or R) and its pressure setting. If omitted, spring N with a 120 bar setting will be installed.

			molla bianca white spring	molla nera black spring	molla gialla yellow spring	molla rossa red spring
R	Tipo di molla per la VLP Type of spring for relief valve		B	N	G	R
Campi di taratura / Calibration fields bar (psi)						
250	Taratura della VLP VLP Setting	Q30 - GSV50 (Q50)	30 ÷ 80 (435 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)	201 ÷ 300 (2915 ÷ 4350)	301 ÷ 400 (4365 ÷ 5800)
Il range completo si ottiene mediante l'aggiunta di spessori The complete range can be obtained with additional thickness						

Q30	F7SPR	N120	30	M	2x	103	A1/D41	V30	R250	V01	F3D	12V	2E+1
1	2	3	4	5		7	8	10	11	12	13	16	17

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

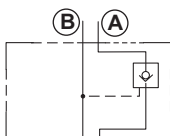
Q30	F7SPR	N120	30	M	2x	103	A1/D41	V30	R250	V01	F3D	12V	2E
1	2	3	4	5		7	8	10	11	12	13	16	17

12 - Tipo valvole a pannello / Panel valves type

			Q30	GSV50 (Q50)
V01	Valvola di ritegno pilotata singola su effetto A (*)	Single piloted check valve on A port (*)	•	
V02	Valvola di ritegno pilotata singola su effetto B (*)	Single piloted check valve on B port (*)	•	
V03	Valvola di ritegno pilotata singola su effetti A e B (*)	Single piloted check valve on A and B ports (*)	•	
VP	Corpo distributore predisposto per valvola a pannello	Control valve body preset for panel-mounted valve	•	
VPC	Corpo distributore predisposto per valvola antiurto o anticavitazione e per valvola a pannello	Control valve body preset for antishock valve or anticavitation and for panel-mounted valve	•	
VPFE	Corpo distributore predisposto per valvola di flottante elettrico a pannello	Control valve body preset for electric floating valve, panel mounted	•	
VFE	Valvola per flottante elettrico. Da utilizzare su cursori con utilizzi A e/o B chiusi in pos. 0 per creare elettricamente la posizione di flottante. Specificare al tensione: 12 V.DC. - 24 V.DC.	Valve for electric floating. To use on spool with A and/or B ports closed in 0 position and for generating electrically the floating position. Specify the voltage: 12 V.DC. - 24 V.DC.	•	

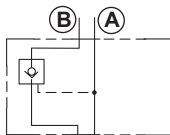
V01

Valvola di ritegno pilotata singola su effetto A (*).
Single piloted check valve on A port (*).



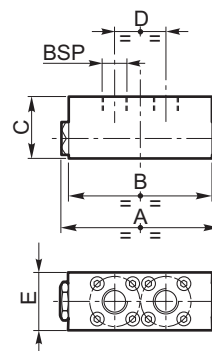
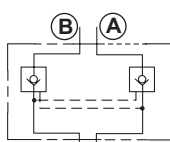
V02

Valvola di ritegno pilotata singola su effetto B (*).
Single piloted check valve on B port (*).



V03

Valvola di ritegno pilotata singola su effetti A e B (*).
Single piloted check valve on A and B ports (*).



	A	B	C	D	E	BSP
Q30	105 (4.134)	95 (3.740)	41 (1.614)	34 (1.339)	37.5 (1.476)	3/8"

	* Rapporto di pilotaggio Piloting ratio	Coppia di serraggio delle viti di fissaggio Fastening screw tightening
Q30	1 : 2.42	8 Nm 2 Nm - solo per viti VFE / only for VFE screws

Sezione di lavoro e/o elemento intermedio

Working section and/or intermediate section

VP

Corpo distributore predisposto per valvola a pannello.
Control valve body preset for panel-mounted valve.

VPFE

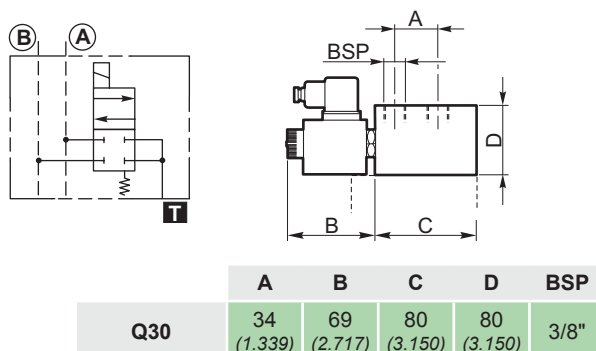
Corpo distributore predisposto per valvola di flottante elettrico a pannello.
Control valve body preset for electric floating valve, panel mounted.

VPC

Corpo distributore predisposto per valvola antiurto o anticavitazione e per valvola a pannello.
Control valve body preset for antishock valve or anticavitation and for panel-mounted valve.

VFE

Valvola per flottante elettrico.
Da utilizzare su cursori con utilizzi A e/o B chiusi in pos. 0 per creare elettricamente la posizione di flottante.
Specificare al tensione: **12 V.DC. - 24 V.DC.**
Valve for electric floating.
To use on spool with A and/or B ports closed in 0 position and for generating electrically the floating position.
Specify the voltage: 12 V.DC. - 24 V.DC.



Fiancata di scarico

Outlet section

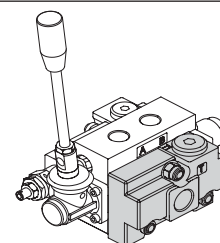
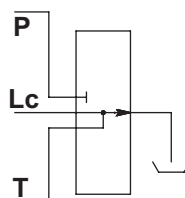


13 - Tipo fiancata di scarico / Outlet section type

			Q30	GSV50 (Q50)
F3D	Fiancata di scarico	Outlet section	•	•
F6D	Fiancata di scarico con alimentazione in pressione per altri componenti (carry-over)	Outlet section and high pressure (carry-over)	•	•

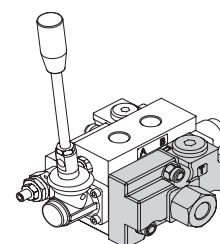
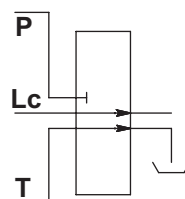
F3D

Fiancata di scarico
Outlet section



F6D

Fiancata di scarico con alimentazione in pressione per altri componenti (carry-over)
Outlet section and high pressure (carry-over)



Note aggiuntive										Additional notes								
Q30	—	F7SPR	N120	30	M	—	2x	103	A1/D41	V30	R250	V01	—	F3D	—	12V	—	2E
1		2	3	4	5			7	8	10	11	12		13		16		17

16 - Note aggiuntive / Additional notes

12V, 24V

S Alluminio (pag. G-6 ... G-10)

Codice asta di comando (vedi tabella seguente)

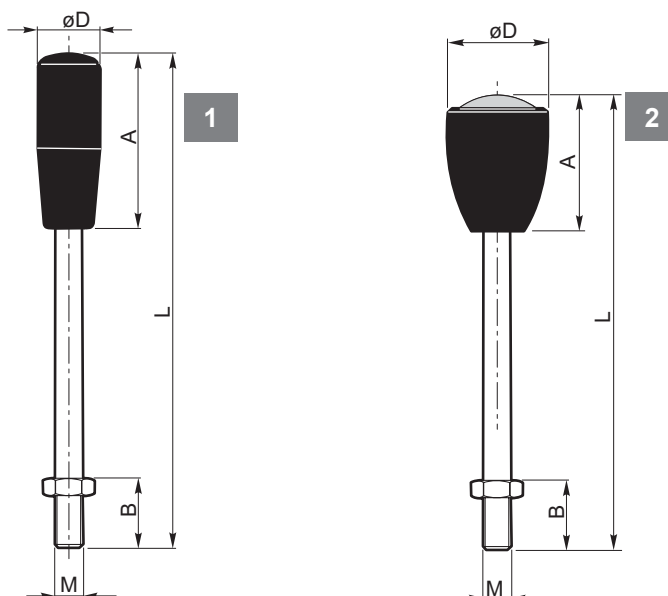
16 - Additional notes

12V, 24V

S Aluminium (page G-6 ... G-10)

Control lever code (see next table)

Codice / Code	Versione / Version	M	L	D	A	B	Colore / Color
Per comando elettrico / For electric control Q30 - GSV50 - (Q50)							
06.029.28945	1 Standard / Standard	Ø7	133 (5.236)	20 (0.787)	57 (2.244)	15 (0.591)	Nero / Black
06.029.29349	1 Lunga / Long version	Ø7	201 (7.913)	20 (0.787)	57 (2.244)	15 (0.591)	Nero / Black
06.029.30951	2 Standard con oblo' / Standard with lens	Ø7	143 (5.630)	32 (1.260)	46 (1.811)	15 (0.591)	Nero / Black



Note aggiuntive										Additional notes								
Q30	—	F7SPR	N120	30	M	—	2x	103	A1/D41	V30	R250	V01	—	F3D	—	12V	—	2E
1		2	3	4	5			7	8	10	11	12		13		16		17

17 - Numero sezioni di lavoro

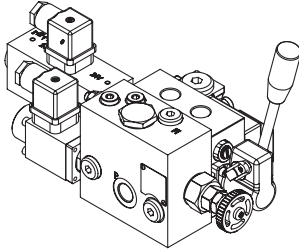
Specificare il numero delle sezioni di lavoro (es. 2E) utilizzate tenendo sempre in considerazione che il limite massimo è 10.

17 - Number of working sections

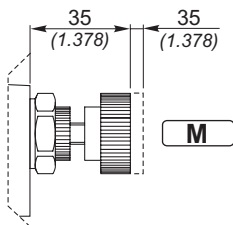
Specify the number of working sections (for ex. 2E) used, always taking into account the maximum limit of 10.

Q30

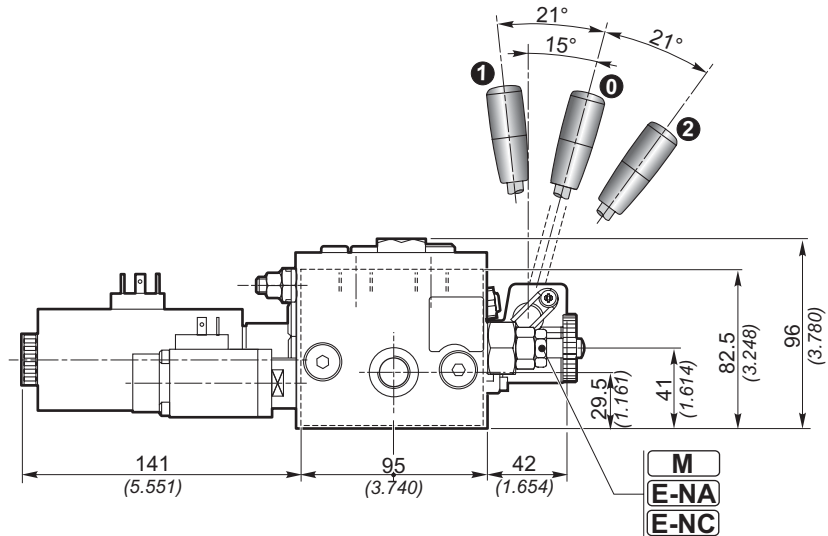
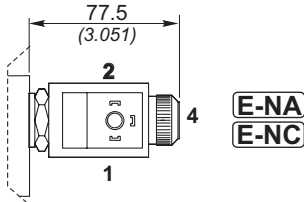
**DISTRIBUTORI A COMANDO ELETTRICO DIRETTO
CON FIANCATA PROPORZIONALE F7SPR
DIRECTIONAL CONTROL VALVE WITH DIRECT ELECTRICAL
CONTROL AND PROPORTIONAL SECTION F7SPR**



**Sicurezza manuale
Manual safety device**



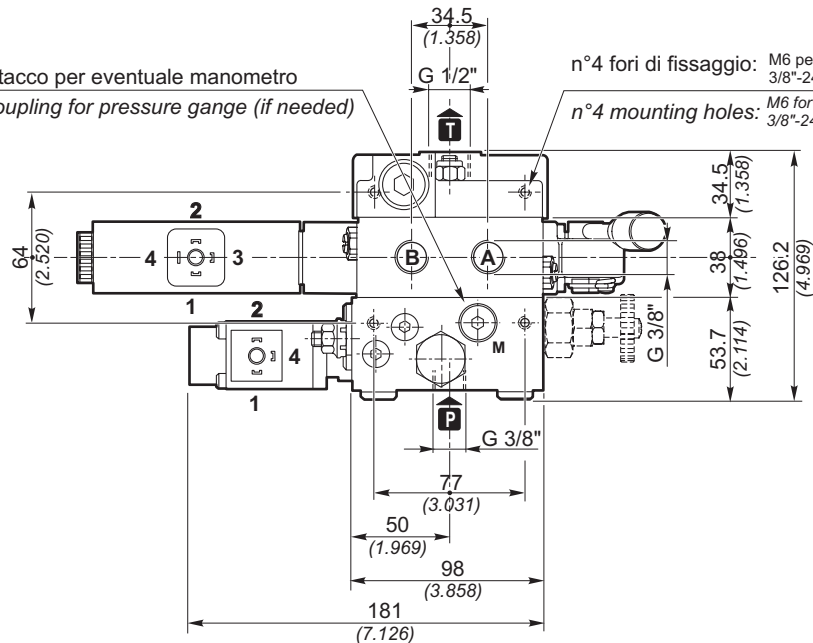
**Sicurezza elettrica
Electrical safety device**



G 1/4" Attacco per eventuale manometro

G 1/4" Coupling for pressure gange (if needed)

n°4 fori di fissaggio: M6 per attacchi metrici e Gas
3/8"-24UNF per attacchi SAE
n°4 mounting holes: M6 for metric and Gas ports
3/8"-24UNF for SAE ports

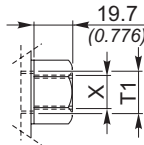


Q30 — **F7SPR** **N120** **30** **M** — 2x **103** **A1/D41** **V30** **R250** **V01** — **F3D** — **12V** — **2E**
1 2 3 4 5 7 8 10 11 12 13 16 17

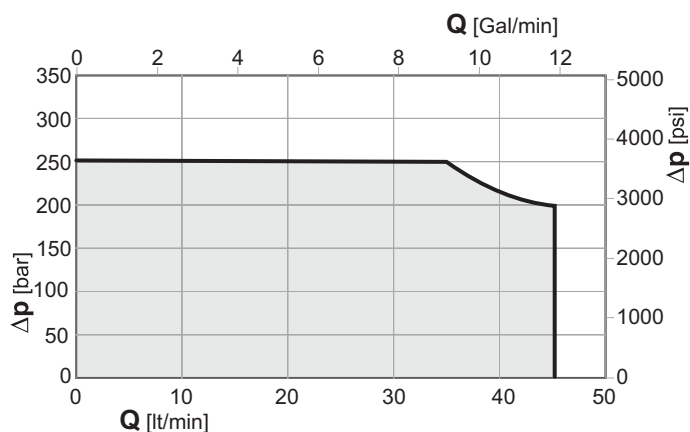
Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 3/8"	3/4" - 16UNF (SAE 8)
P2	G 3/8"	3/4" - 16UNF (SAE 8)
A-B	G 3/8"	9/16" - 18UNF (SAE 6)
T1	G 1/2"	7/8" - 14UNF (SAE 10)
T2	G 1/2"	3/4" - 16UNF (SAE 8)

**Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)**

	T1	G 1/2"
	X	G 3/8" - G 1/2"
	T1	7/8"-14UNF (SAE 10)
	X	3/4" - 16UNF (SAE 8)

Limiti d'impiego / Use limits

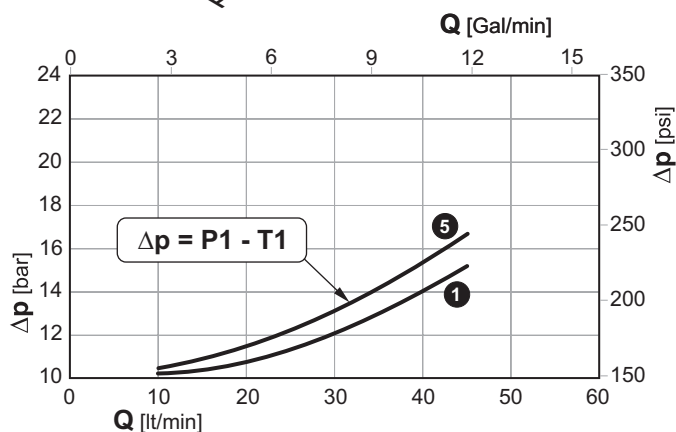
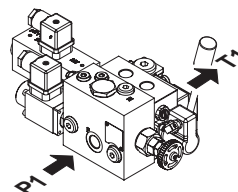


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

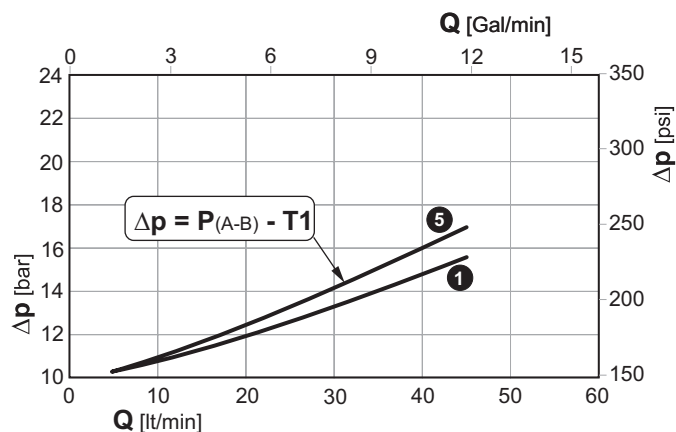
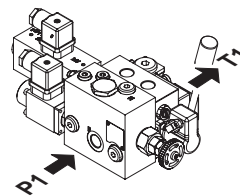
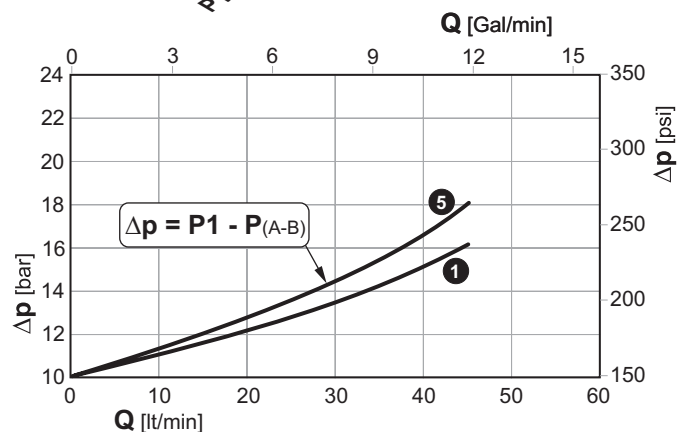
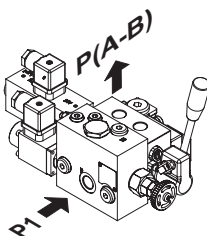


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

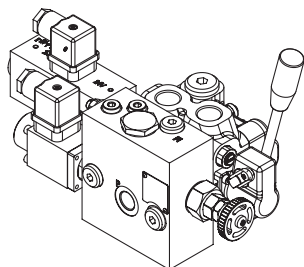
(Δp depending on the number of the crossed sections)



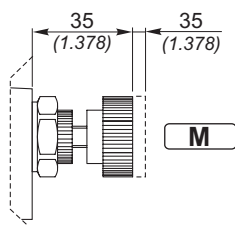
1 5 Sezioni / Sections

GSV50

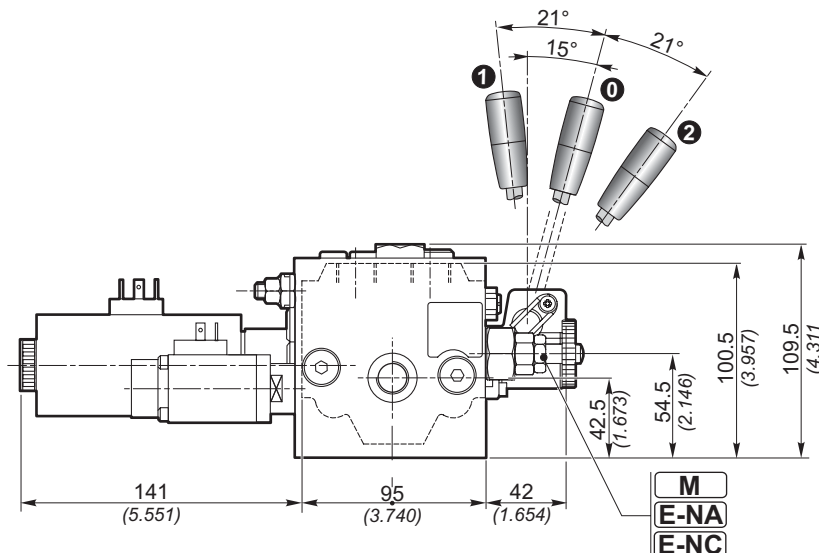
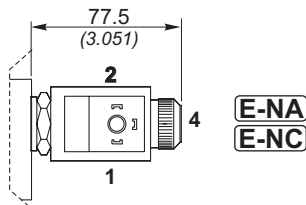
**DISTRIBUTORI A COMANDO ELETTRICO DIRETTO
CON FIANCATA PROPORZIONALE F7SPR
DIRECTIONAL CONTROL VALVE WITH DIRECT ELECTRICAL
CONTROL AND PROPORTIONAL SECTION F7SPR**



**Sicurezza manuale
Manual safety device**

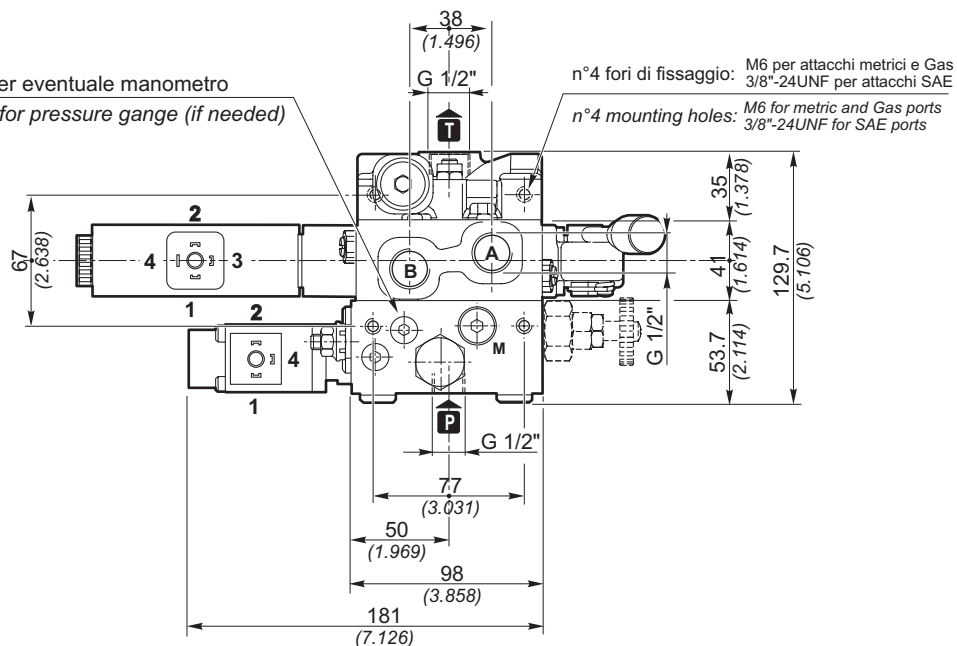


**Sicurezza elettrica
Electrical safety device**



G 1/4" Attacco per eventuale manometro

G 1/4" Coupling for pressure gauge (if needed)

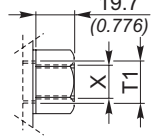


GSV50 — **F7SPR** **N120** **30** **M** — 2x **103** **A1/D41** **V30** **R250** **V01** — **F3D** — **12V** — **2E**
1 2 3 4 5 7 8 10 11 12 13 16 17

Filettature disponibili / Available ports

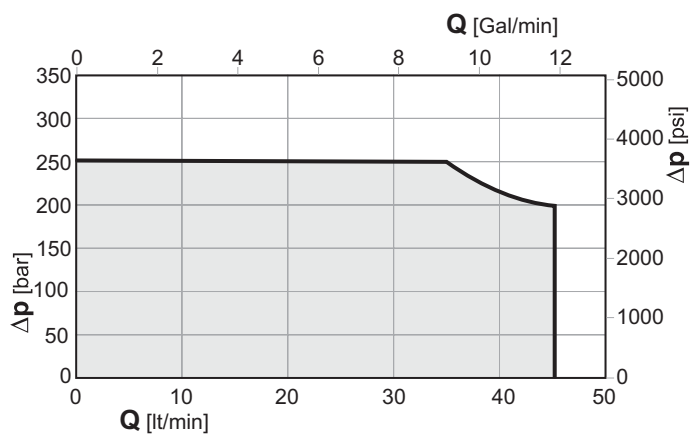
Bocche Ports	BSP (standard)	SAE
P1	G 1/2"	3/4" - 16UNF (SAE 8)
P2	G 1/2"	3/4" - 16UNF (SAE 8)
A-B	G 1/2"	3/4" - 16UNF (SAE 8)
T1	G 1/2"	7/8" - 14UNF (SAE 10)
T2	G 1/2"	3/4" - 16UNF (SAE 8)

**Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)**

	T1	G 1/2"
X	X	G 3/8" - G 1/2"
T1	T1	7/8"-14UNF (SAE 10)
X	X	3/4" - 16UNF (SAE 8) 7/8"-14UNF (SAE 10)

Dimensioni in / Dimensions in: mm (inch)

Limiti d'impiego / Use limits

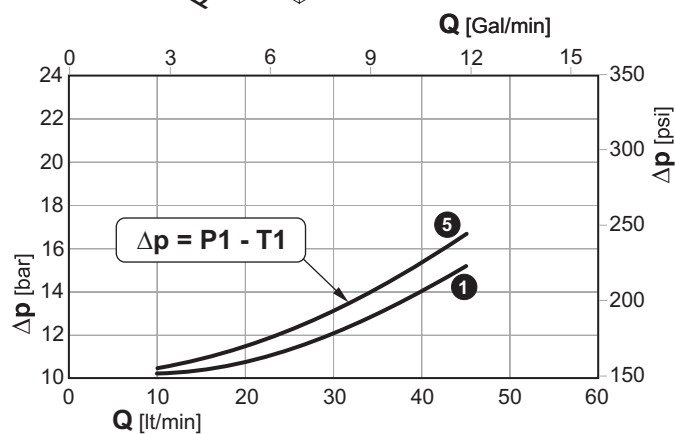
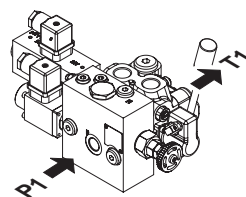


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

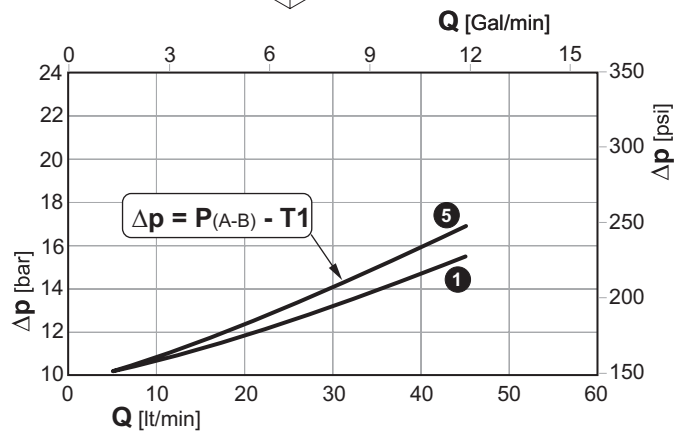
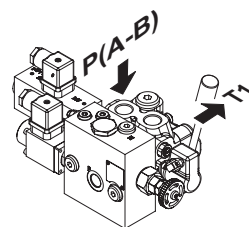
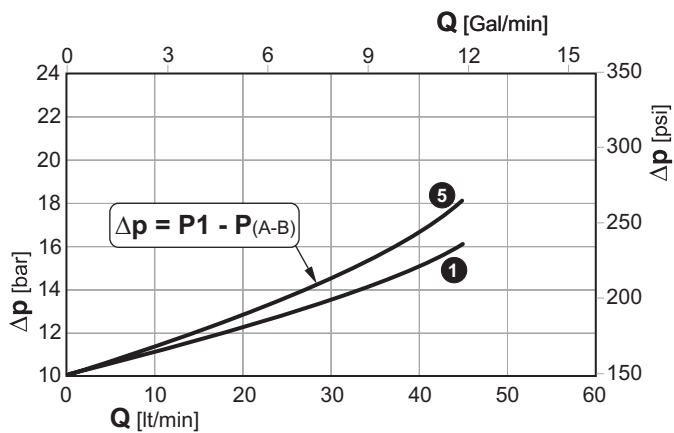
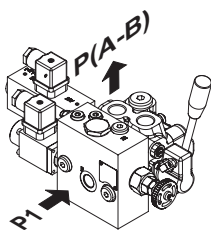


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)

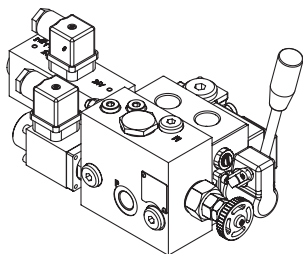


1 5 Sezioni / Sections

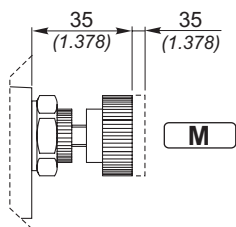
Q50

**DISTRIBUTORI A COMANDO ELETTRICO DIRETTO
CON FIANCATA PROPORZIONALE F7SPR
DIRECTIONAL CONTROL VALVE WITH DIRECT ELECTRICAL
CONTROL AND PROPORTIONAL SECTION F7SPR**

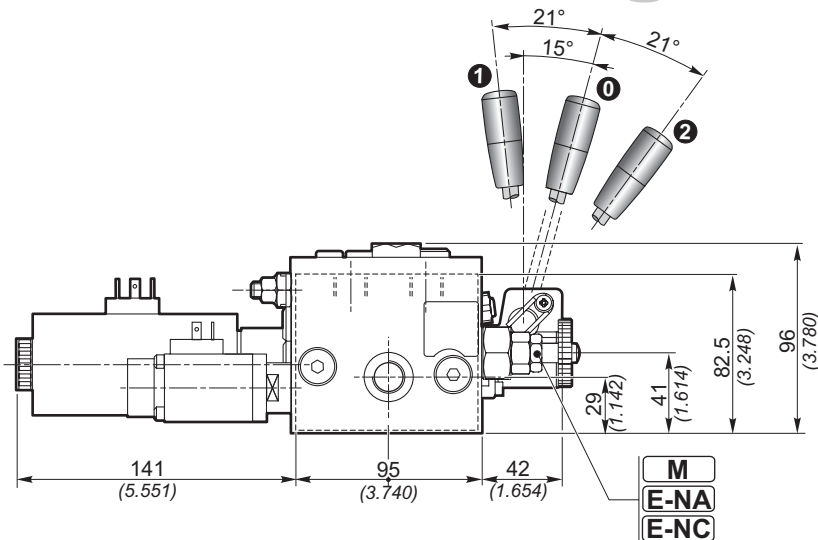
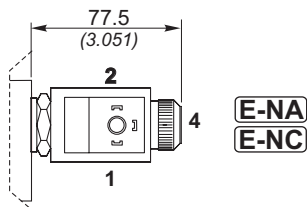
Ad esaurimento / Phasing-out



**Sicurezza manuale
Manual safety device**

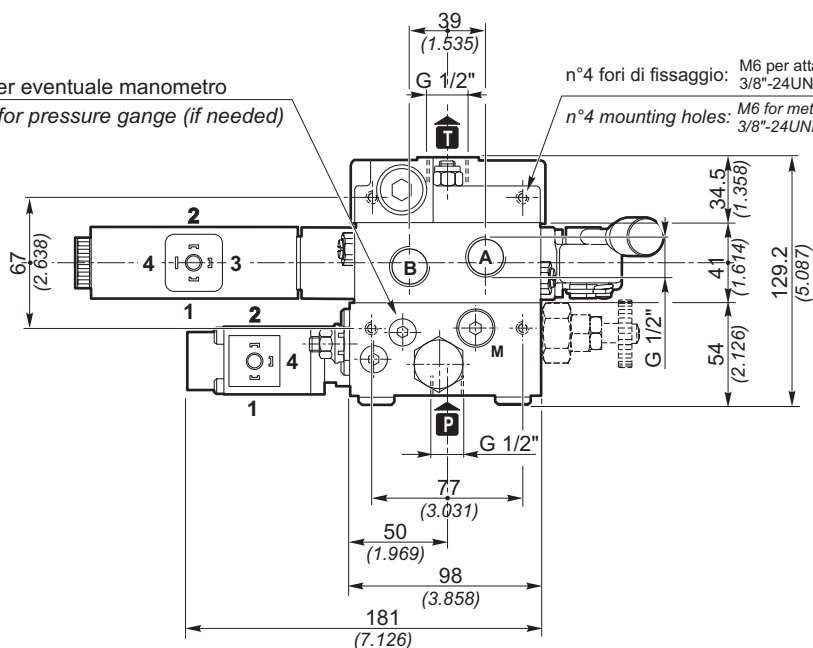


**Sicurezza elettrica
Electrical safety device**



G 1/4" Attacco per eventuale manometro
G 1/4" Coupling for pressure gauge (if needed)

n°4 fori di fissaggio: M6 per attacchi metrici e Gas
3/8"-24UNF per attacchi SAE
n°4 mounting holes: M6 for metric and Gas ports
3/8"-24UNF for SAE ports

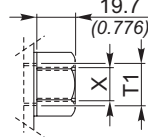


Q50 — **F7SPR** **N120** **30** **M** — 2x **103** **A1/D41** **V30** **R250** **V01** — **F3D** — **12V** — **2E**
1 2 3 4 5 7 8 10 11 12 13 16 17

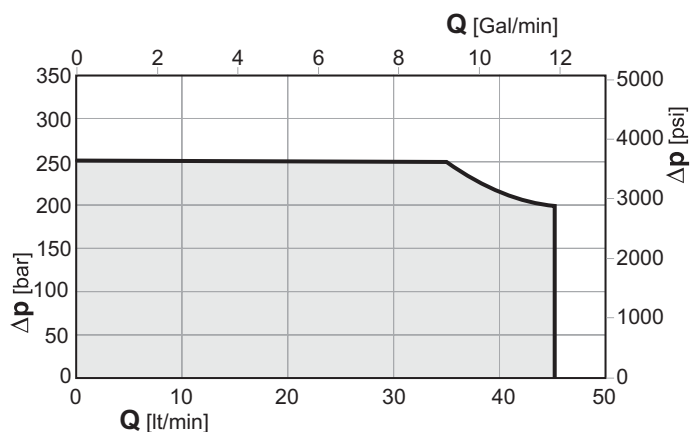
Filettature disponibili / Available ports

Bocche Ports	BSP (standard)	SAE
P1	G 1/2"	3/4" - 16UNF (SAE 8)
P2	G 1/2"	3/4" - 16UNF (SAE 8)
A-B	G 1/2"	3/4" - 16UNF (SAE 8)
T1	G 1/2"	7/8" - 14UNF (SAE 10)
T2	G 1/2"	3/4" - 16UNF (SAE 8)
Y* [mm]	2.5	1.5

Tappo per carry-over (su uscita T1)
Carry-over plug (on T1 port)

	T1	G 1/2"
X	X	G 3/8" - G 1/2"
T1	T1	7/8"-14UNF (SAE 10)
X	X	3/4" - 16UNF (SAE 8) 7/8"-14UNF (SAE 10)

Limiti d'impiego / Use limits

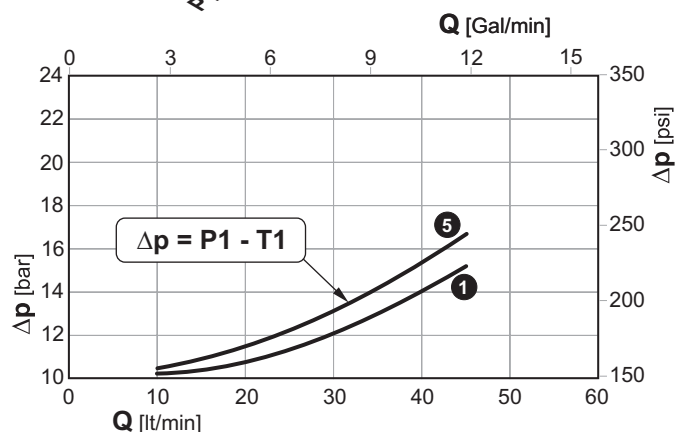
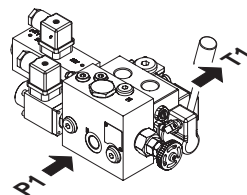


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

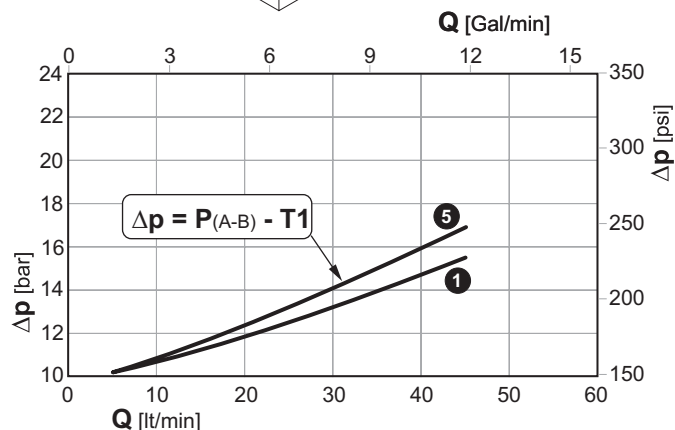
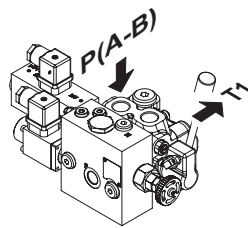
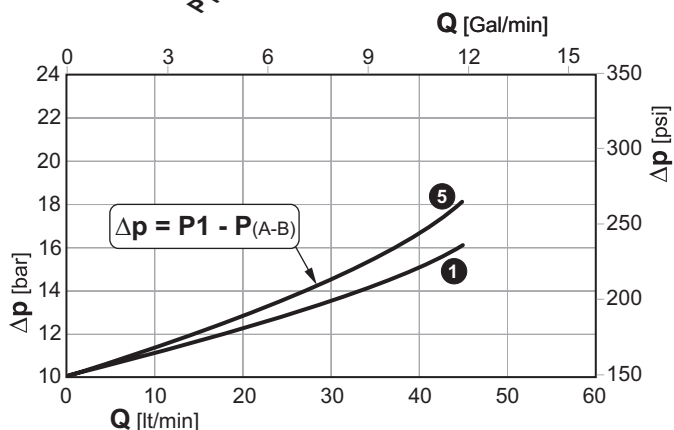
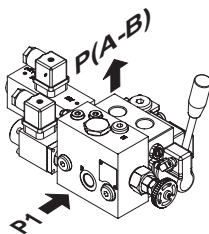


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

(Δp depending on the number of the crossed sections)



1 5 Sezioni / Sections

ELETTRONICA DI COMANDO ELP 30

- L'elettronica di comando ELP 30 è composta da una scatola di comando con assemblati: il joystick potenziometrico unico per tutte le sezioni, il pulsante di emergenza collegato in modo tale da togliere l'alimentazione elettrica ai solenoidi ON-OFF, con conseguente arresto delle funzioni, i joysticks ON-OFF per le corrispondenti sezioni di lavoro e la scheda elettronica di comando.
- Viene inoltre fornita una scatola di derivazione per l'alimentazione elettrica (tensione 12 o 24 V B.C.) completa dei cavi e dei connettori.
- Tutti i valori della portata sono programmabili al valore desiderate e in ogni singolo effetto con apparecchiature già installate. È così possibile verificare direttamente sulla macchina già funzionante le velocità delle singole manovre ed effettuare aggiustamenti successivi fino alla scelta dei valori ottimali (per esempio, se una sezione di lavoro effettua la manovra di "salita-discesa", la portata sull'effetto "salita" può essere fissata ad un valore diverse dalla portata sull'effetto "discesa").
- La programmazione dei valori di portata si effettua tramite operazioni semplici mediante la scheda elettronica. I valori scelti e fissati restano memorizzati anche in assenza di alimentazione elettrica e fino ad un'eventuale futura riprogrammazione.

CONTROL ELECTRONICS ELP 30

- ELP 30 is provided with control box an electronic equipped with: the only potentiometric joystick for all working sections, safety button (with due connections to cut power off the ON-OFF solenoids to grant immediate functional stop), ON-OFF joysticks, for corresponding working sections and electronic card.
- A branching box is also provided with all cables and connections (power supply 12-24 V D.C. cable included).
- All oil flow values can be programmed on desirer value on each single port with already installed equipment. In this way, it is possible to check directly on working machine single drivings speeds and making further settlements up to final choice of optimum values. For example, if a working section makes "up-down" operations, oil flow on "up" port can be fixed to a different value of oil flow on "down" port.
- Oil flow value programming is made by means of simple operations through the electronic card.
- All choosed and fixed values remain stored even with lack of electrical supply and up to a future reprogramming.

Esempio di ordinazione in codice / Example of ordering code

ELP 30	12	4	10
ELP 30	Tipo elettronica di comando Type of control		
12	Tensione di alimentazione Power supply voltage		
4	n° elementi nr. of working sections		
10	Lunghezza cavo Cable length		
			L1 (m)

AVVERTENZA PER L'INSTALLAZIONE DEI DISTRIBUTORI

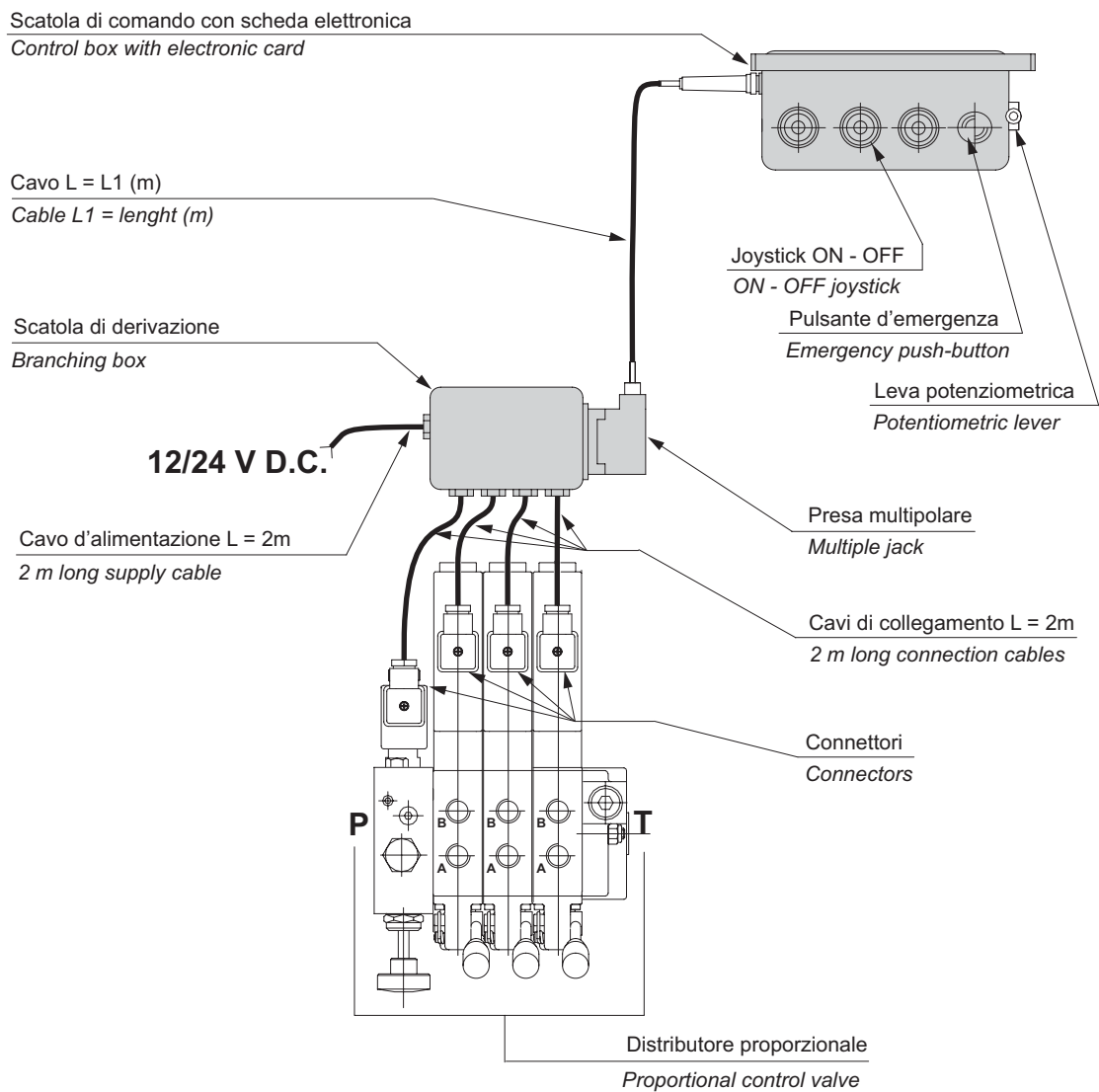
- I quattro e/o tre piedini dei distributori devono sempre appoggiare su una superficie perfettamente piana
- Non manomettere i dadi dei tiranti (distributori componibili) in quanto comprometterebbero il normale funzionamento del distributore.
- Non utilizzare raccordi conici su filetti cilindrici.
- Per pulire il distributore, prima della verniciatura, non utilizzare diluenti/solventi o qualsiasi prodotto che possa intaccare le parti in gomma.

NOTES FOR DIRECTIONAL CONTROL VALVES ASSEMBLY

- The four feet e/o three feet of the valve must always and perfectly rest on a plane surface.
- Do not tamper the tie rod nuts (sectional directional control valves) so they might impair the standard working of the valve.
- No conical nipples with cylindrical thread must be used.
- For cleaning a directional control valve, do not use of diluent or any product able to etch rubber parts before the painting.

ELP 30

ELETTRONICA DI COMANDO CONTROL ELECTRONICS



ELETTRONICA DI COMANDO EJS 30

- L'elettronica di comando EJS 30 è composta da una scatola di comando con assemblati: i joystick potenziometrici (corrispondenti alle proprie sezioni di lavoro), il pulsante di emergenza collegato in modo tale da togliere l'alimentazione elettrica ai solenoidi ON-OFF, con conseguente arresto delle funzioni, la scheda elettronica di comando ed il joystick di "uomo presente".
- Viene inoltre fornita una scatola di derivazione per l'alimentazione elettrica (tensione 12 o 24 V B.C.) completa dei cavi e del contenitore.
- Tutti i valori della portata sono programmabili al valore desiderate e in ogni singolo effetto con apparecchiature già installate. È così possibile verificare direttamente sulla macchina già funzionante le velocità delle singole manovre ed effettuare aggiustamenti successivi fino alla scelta dei valori ottimali (per esempio, se una sezione di lavoro effettua la manovra di "salita-discesa", la portata sull'effetto "salita" può essere fissata ad un valore diverse dalla portata sull'effetto "discesa").
- La programmazione dei valori di portata si effettua tramite operazioni semplici mediante la scheda elettronica.
- I valori scelti e fissati restano memorizzati anche in assenza di alimentazione elettrica e fino ad un'eventuale futura riprogrammazione.

CONTROL ELECTRONICS EJS 30

- EJS 30 control electronic is provided with a control box equipped with potentiometric joy stick for corresponding working sections, a safety push-button duely connected to cut power off the ON-OFF solenoids stopping all functions, an electronic card and a "dead man" safety joystick.
- Each electronic is also equipped with branching box duely allowing for power supply inlet hole (12 or 24 V D.C.). Connection of the valve to the main socked is performed by means of waterproof multiple jack.
- A branching box is also provided with all cables and connections (power supply 12-24 V D.C. cable included).
- All oil flow values can be programmed on desider value on each single port with already installed equipment. In this way, it is possible to check directly on working machine single drivings speeds and making further settlements up to final choice of optimum values. For example, if a working section makes "up-down" operations, oil flow on "up" port can be fixed to a different value of oil flow on "down" port.
- Oil flow value programming is made by means of simple operations through the electronic card.
- All choosed and fixed values remain stored even with lack of electrical supply and up to a future reprogramming.

Esempio di ordinazione in codice / Example of ordering code

EJS 30		12	4	10
EJS 30	Tipo elettronica di comando Type of control	EJS30		
12	Tensione di alimentazione Power supply voltage	12 V D.C. 24 V D.C.		
4	n° elementi nr. of working sections	4		
10	Lunghezza cavo Cable length	L1 (m)		

EJS 30

ELETRONICA DI COMANDO CONTROL ELECTRONICS

Scatola di comando con scheda elettronica
Control box with electronic card

Cavo L = L1 (m)
Cable L1 = lenght (m)

Scatola di derivazione
Branching box

12/24 V D.C.

Cavo d'alimentazione L = 2m
2 m long supply cable

Joystick potenziometrico
Potentiometric joystick

Joystick "uomo presente"
"Dead man" joystick

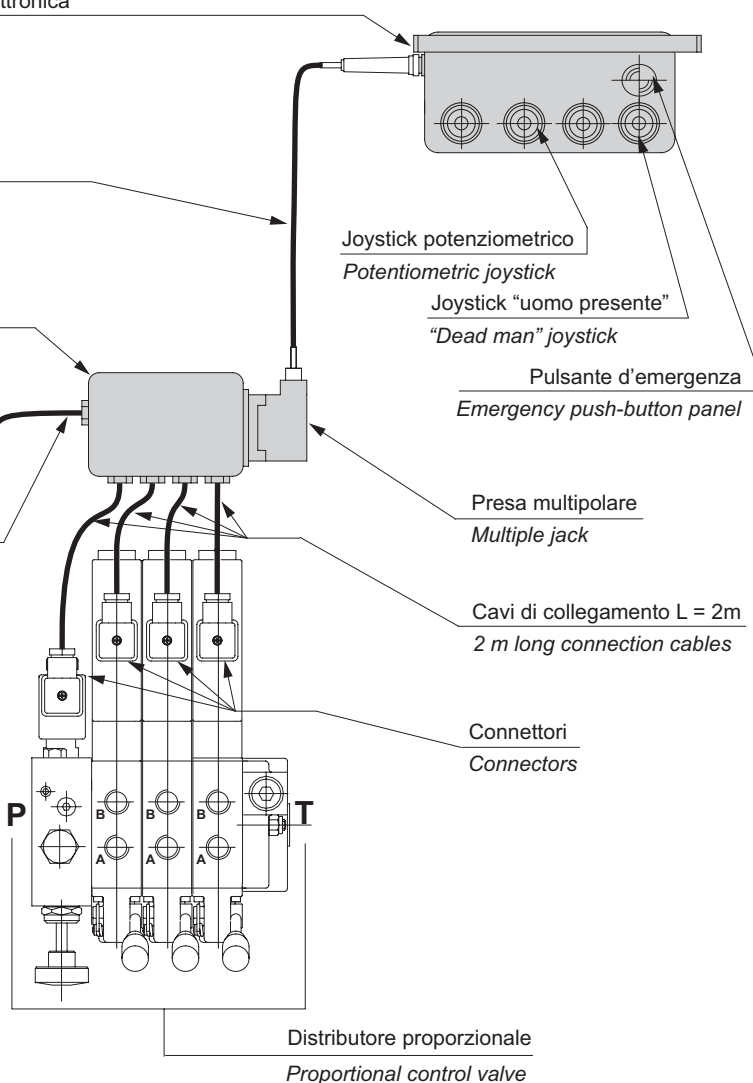
Pulsante d'emergenza
Emergency push-button panel

Presse multipolare
Multiple jack

Cavi di collegamento L = 2m
2 m long connection cables

Connettori
Connectors

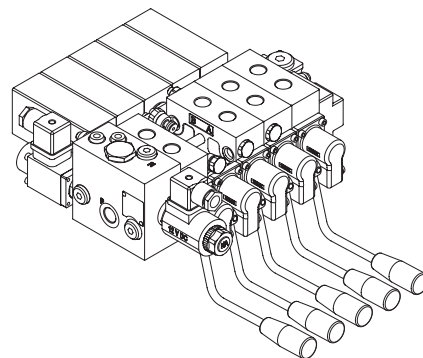
Distributore proporzionale
Proportional control valve



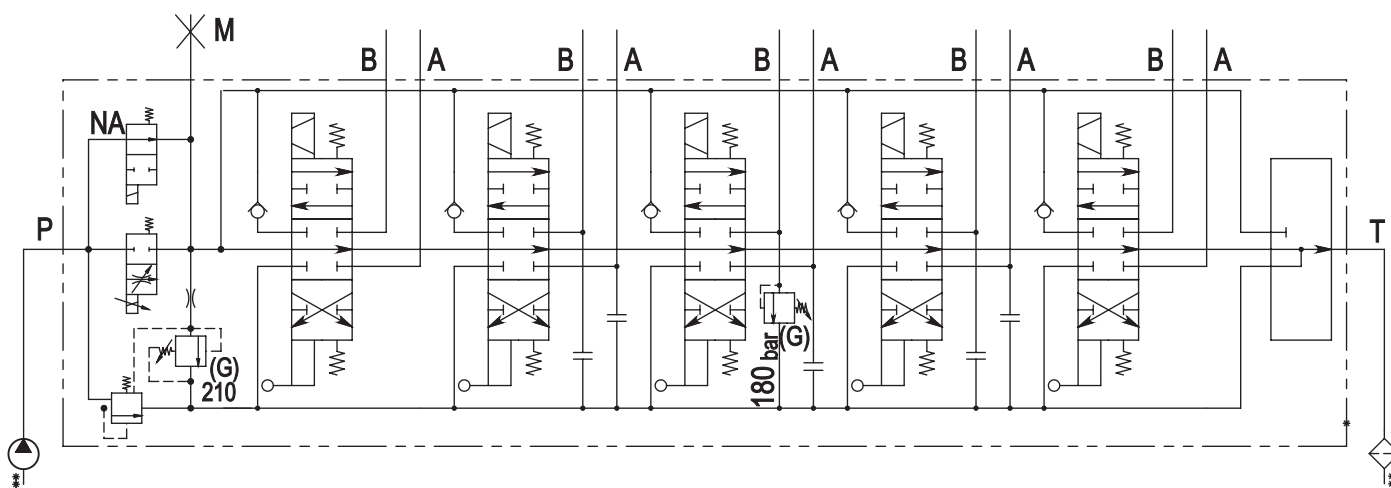
ESEMPI DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLES

Q30 - F7S - PR(G)/15/E(NA) - 10315/A2/D4 - 10315/A2/D4/VC - 10315/A2/D4/V31PM(G) - 10315/A2/D4/VC - 10315/A2/D4 - F3D - 5E

F	G	H	I	L
1	2 - 3 - 4	5 - 6 - 7 - 8 - 9 - 10 - 11 - 12	13	16 - 17
Q30	F7S-PR(G)/15/E(NA)	10315/A2/D4 10315/A2/D4/VC 10315/A2/D4/V31PM(G) 10315/A2/D4/VC 10315/A2/D4	F3D	5E



Schema idraulico
Hydraulic symbol



- F - Tipo / Type
G - Fiancata d'ingresso / Inlet section
H - Sezione di lavoro e/o elemento intermedio / Working section and/or intermediate section
I - Fiancata di scarico o ingresso supplementare / Outlet section or additional inlet section
L - Note aggiuntive / Additional notes

DEVIATORI DI FLUSSO FLOW DIVERTERS

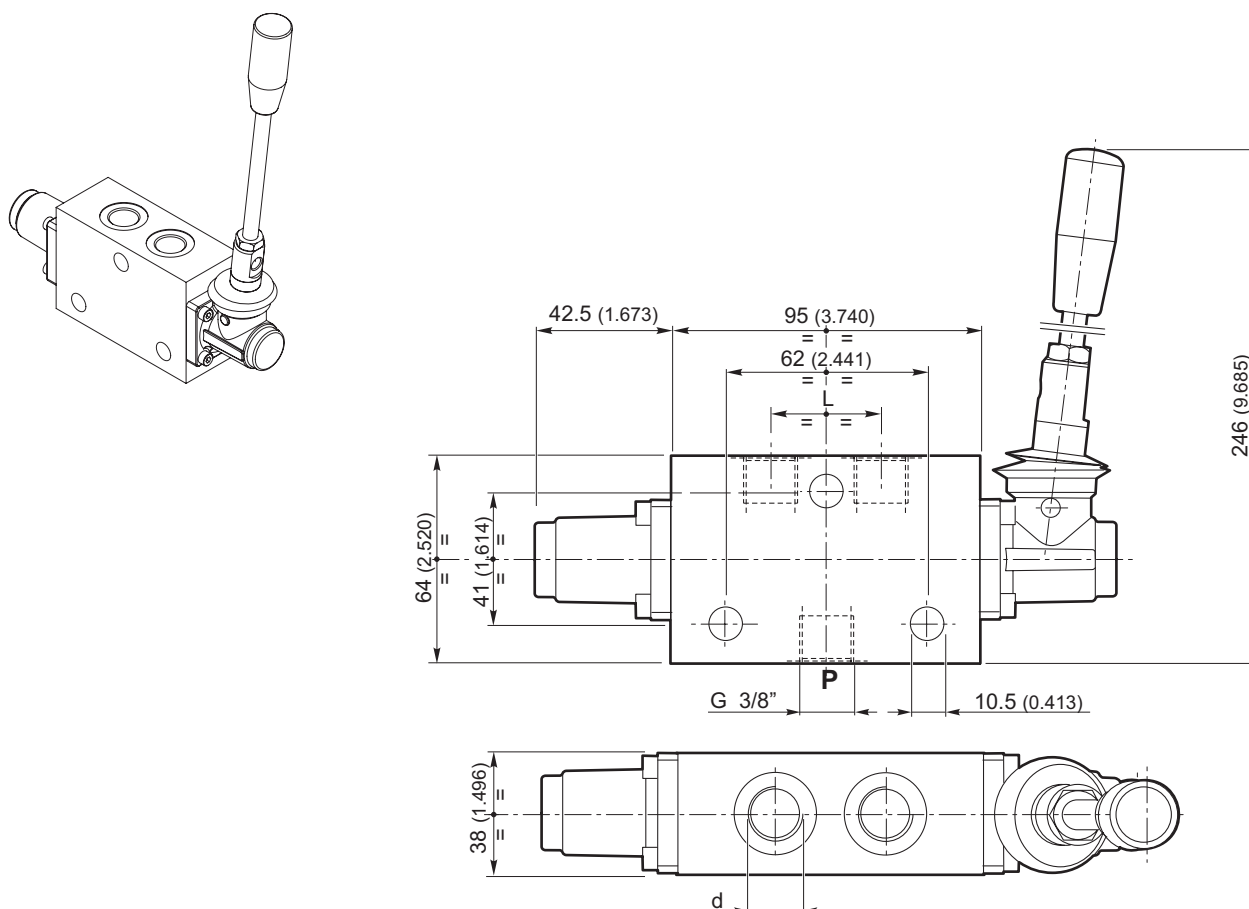


Pag.
Page

IF	I-2
D3V	I-6
D6V	I-7
D4V	I-8

IF

DEVIATORI DI FLUSSO / FLOW DIVERTERS



Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	L	d
IF 3/8"	35 (9.25)	300 (4350)	34	G 3/8"
IF 9/16" - 18UNF				SAE 9/16" - 18UNF

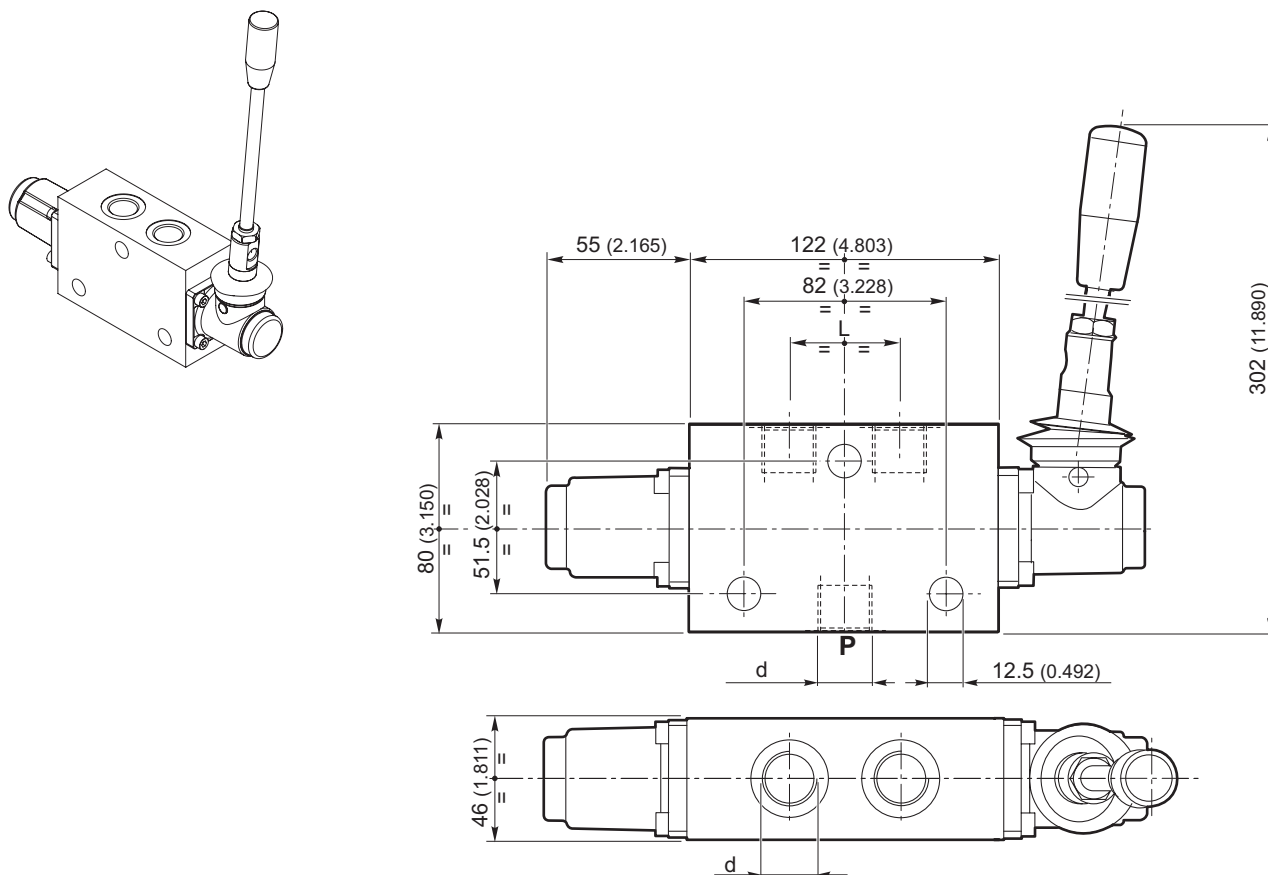
Esempio di ordinazione in codice / Ordering code example

IF 3/8" 1 A5 M4 (2-1)

IF 3/8"	Tipo / Type
1	Tipo cursore / Spool type
A5	Tipo di comando / Control type
M4 (2-1)	Posizionatore / Positioner

IF

DEVIATORI DI FLUSSO / FLOW DIVERTERS



Tipo Type	Portata max. Max flow rate [lit/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	L [mm] (inch)	d
IF 1/2"	70 (18.49)	300 (4350)	43 (1.693)	G 1/2"
IF 7/8" - 14UNF				SAE 7/8" - 14UNF
IF 3/4"	120 (31.68)	300 (4350)	54 (2.126)	G 3/4"
IF 1" 1/16" - 12UNF				SAE 1" 1/16" - 12UNF

Esempio di ordinazione in codice / Ordering code example

IF 1/2" 1 A5 M4 (2-1)

IF 3/8"	Tipo / Type
1	Tipo cursore / Spool type
A5	Tipo di comando / Control type
M4 (2-1)	Posizionatore / Positioner

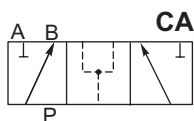
IF

DEVIATORI DI FLUSSO / FLOW DIVERTERS

Tipo cursore / Spool type

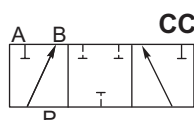
1

Cursore tipo 1 (a centro aperto)
Spool type 1



2

Cursore tipo 2 (a centro chiuso)
Spool type 2

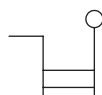


Tipo di comando / Control type

			IF3/8"	IF1/2"	IF3/4"
A1	Comando manuale con leva standard	Hand control with standard lever	•	•	•
A2	Comando manuale con leva standard ruotata di 180°	Hand control with standard lever mounted rotated 180°	•	•	•
A4	Attacco diretto sul cursore per rinvio a distanza rigido	Direct control connection on spool for stiff remote control	•	•	•
A5	Attacco diretto sul cursore con terminale sferico (da utilizzare solo con il posizionamento M4 (2-1))	Direct control connection on spool with spherical end (Control to be used for positioning M4 (2-1))	•	•	•
C3	Cavo flessibile	Flexible cable	•	•	•

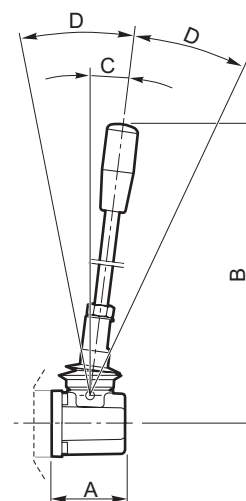
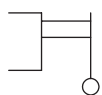
A1

A1: Comando manuale con leva standard
A1: Hand control with standard lever



A2

A2: Comando manuale con leva standard ruotata di 180°
A2: Hand control with standard lever rotated 180°



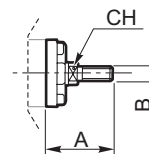
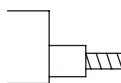
	A	B	C	D
IF3/8"	42 (1.654)	205 (8.071)	7°	18°
IF1/2" - IF3/4"	55 (2.165)	260 (10.236)	6°	19°

IF

DEVIATORI DI FLUSSO / FLOW DIVERTERS

A4

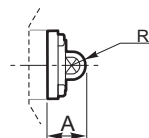
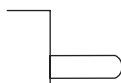
A4: Attacco diretto sul cursore per rinvio a distanza rigido
A4: Direct control connection on spool for stiff remote control



	A	B	CH	Corsa Stroke
IF3/8"	39 (1.535)	M8	9 (0.354)	±5 (0.197)
IF1/2" - IF3/4"	53 (2.087)	M10	14 (0.551)	±7 (0.276)

A5

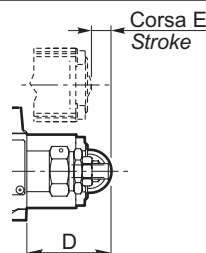
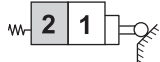
Attacco diretto sul cursore con terminale sferico (da utilizzare solo con il posizionamento M4 (2-1))
Direct control connection on spool with spherical end (Control to be used for positioning M4 (2-1))



	A	R	Corsa Stroke
IF3/8"	22 (0.866)	6.85 (0.270)	±5 (0.197)
IF1/2" - IF3/4"	33 (1.299)	8.75 (0.344)	±7 (0.276)

C3*

Comando a camme, 2 posizioni estreme 2-1, con ritorno a molla in pos. 2
Cam control, 2 end positions 2-1, spring centred in 2 position



	D	E
IF3/8"	43 (1.693)	10 (0.394)
IF1/2" - IF3/4"	51 (2.008)	14 (0.551)

* Comando a camme da utilizzare solo con il posizionamento M4 2-1

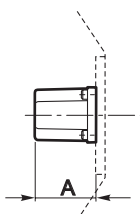
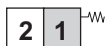
* Controls to be used for positioning M4 2-1 only

Posizionatori / Positioner

			IF3/8"	IF1/2"	IF3/4"
M4(1-2)	Due posizioni estreme ritorno a molla in pos.1	Two end positions spring back in 1	•	•	•
M4(2-1)	Due posizioni estreme ritorno a molla in pos.2	Two end positions spring back in 2	•	•	•
R6	Due posizioni in detent 1-2	Two positions detent 1-2		•	•

M4 (1-2)

Due posizioni estreme ritorno a molla in pos.1
Two end positions spring back in 1



	A
IF3/8"	42 (1.654)
IF1/2" - IF3/4"	55 (2.165)

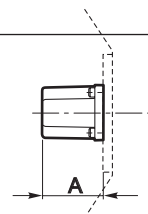
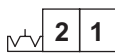
M4 (2-1)

Due posizioni estreme ritorno a molla in pos.2
Two end positions spring back in 2



R6

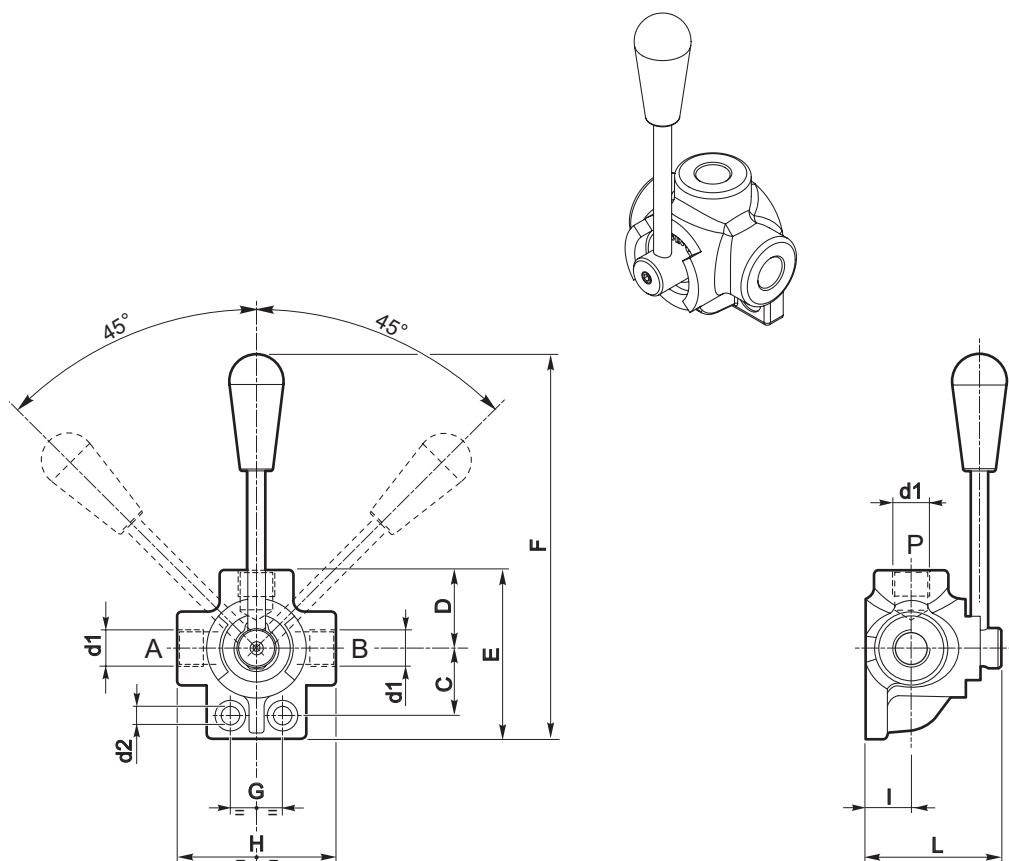
Due posizioni in detent 1-2
Two positions detent 1-2

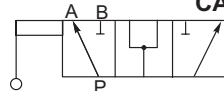


	A
IF3/8"	42 (1.654)
IF1/2" - IF3/4"	55 (2.165)

D3V

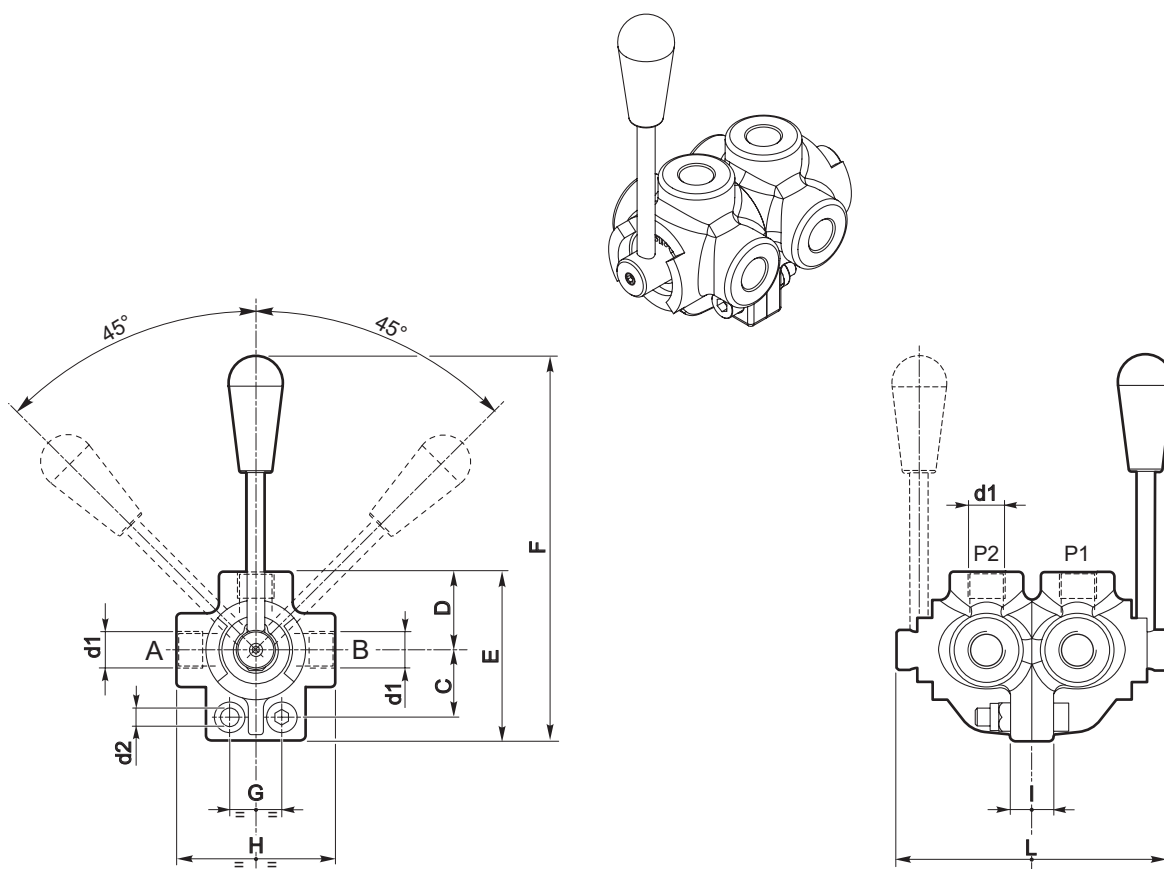
**DEVIATORI DI FLUSSO ROTATIVI / ROTARY FLOW DIVERTERS
A 3 VIE / 3 WAYS VALVES**



Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Dimensioni [mm] Dimensions (inch)										Schema idraulico Hydraulic symbol
			d1	d2	C	D	E	F	G	H	I	L	
D3V 3/8"	60 (15.84)	315 (4568)	G 3/8"	8.5 (0.335)	31 (1.220)	36 (1.417)	78 (3.071)	167 (6.575)	24 (0.945)	73 (2.874)	21 (0.827)	62 (2.441)	
D3V 1/2"	90 (23.76)	280 (4060)	G 1/2"	11 (0.433)	36 (1.417)	43 (1.693)	96 (3.780)	178 (7.008)	30 (1.181)	85 (3.346)	24 (0.945)	70 (2.756)	
D3V 3/4"	120 (31.68)	250 (3625)	G 3/4"	11 (0.433)	41 (1.614)	47 (1.850)	105 (4.134)	183 (7.205)	32 (1.260)	91 (3.583)	28 (1.102)	80 (3.150)	
D3V 1"	180 (47.52)	250 (3625)	G 1"	11 (0.433)	50 (1.969)	51 (2.008)	115 (4.528)	224 (8.819)	32 (1.260)	98 (3.858)	31.5 (1.240)	90 (3.543)	

D6V

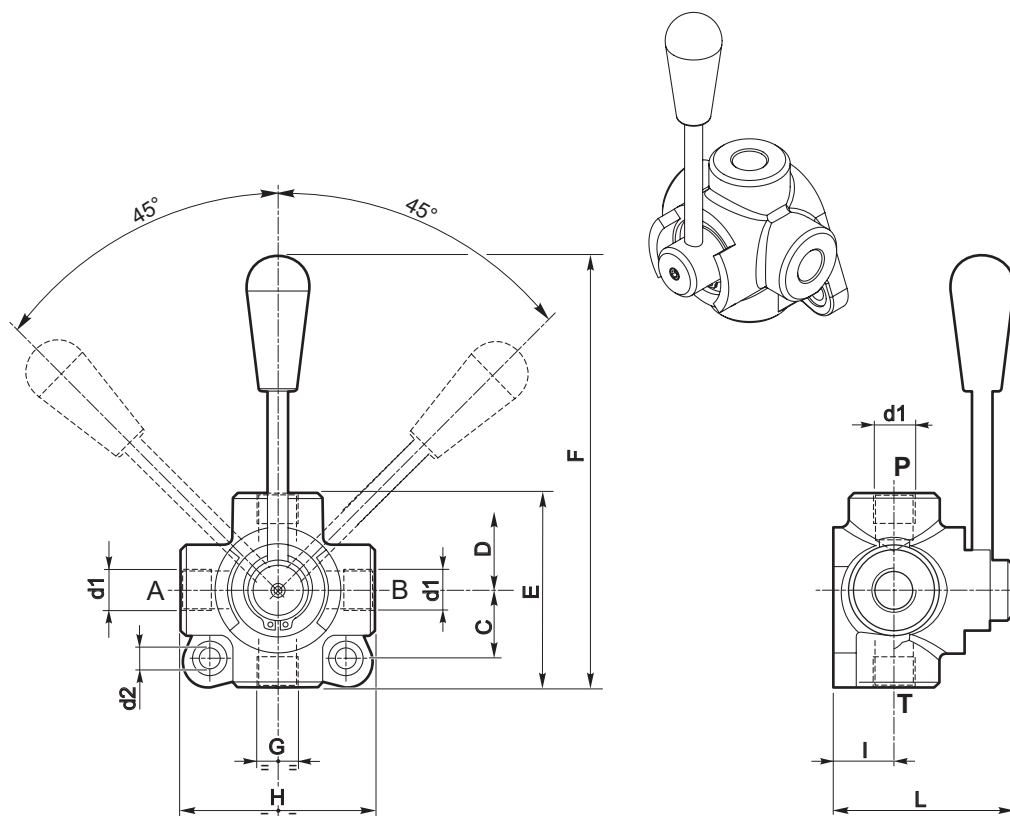
DEVIATORI DI FLUSSO ROTATIVI / ROTARY FLOW DIVERTERS A 6 VIE / 6 WAYS VALVES



Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Dimensioni [mm] Dimensions (inch)										Schema idraulico Hydraulic symbol
			d1	d2	C	D	E	F	G	H	I	L	
D6V 3/8"	60 (15.84)	315 (4568)	G 3/8"	8.5 (0.335)	31 (1.220)	36 (1.417)	78 (3.071)	167 (6.575)	24 (0.945)	73 (2.874)	42 (1.654)	124 (4.882)	
D6V 1/2"	90 (23.76)	280 (4060)	G 1/2"	11 (0.433)	36 (1.417)	43 (1.693)	96 (3.780)	178 (7.008)	30 (1.181)	85 (3.346)	48 (1.890)	140 (5.512)	

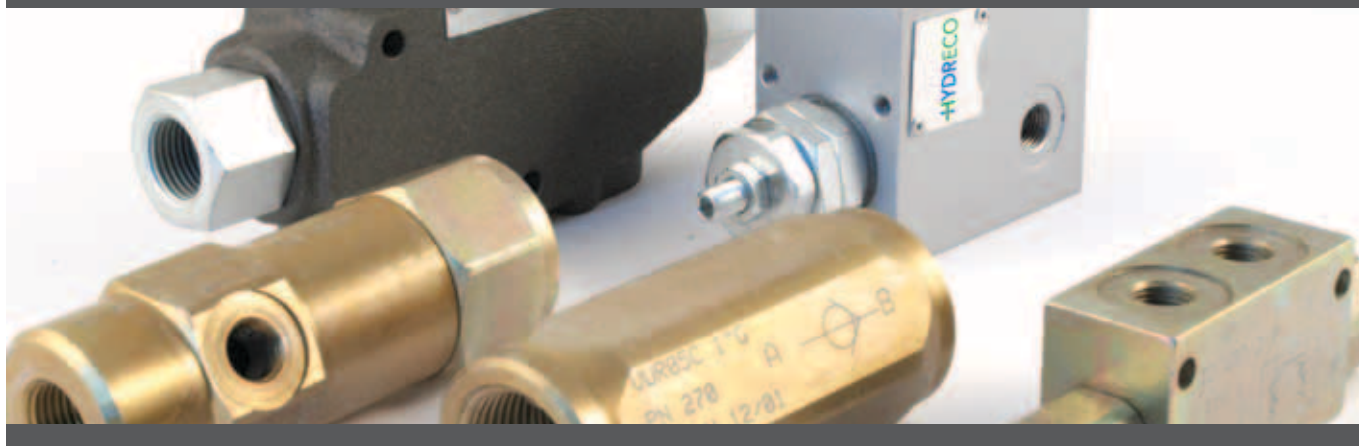
D4V

DEVIATORI DI FLUSSO ROTATIVI / ROTARY FLOW DIVERTERS A 4 VIE / 4 WAYS VALVES



Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Dimensioni [mm] Dimensions (inch)										Schema idraulico Hydraulic symbol
			d1	d2	C	D	E	F	G	H	I	L	
D4V 3/8"	35 (9.25)	250 (3625)	G 3/8"	8.5 (0.335)	27 (1.063)	38.5 (1.516)	77 (3.031)	163.5 (6.437)	54 (2.126)	77 (3.031)	24 (0.945)	71 (2.795)	
D4V 1/2"	50 (13.21)	250 (3625)	G 1/2"	8.5 (0.335)	32 (1.260)	45 (1.772)	90 (3.543)	170 (6.693)	68 (2.677)	90 (3.543)	28 (1.102)	80 (3.150)	
D4V 3/4"	90 (23.78)	220 (3190)	G 3/4"	8.5 (0.335)	38 (1.496)	45.5 (1.791)	93 (3.661)	172.5 (6.791)	74 (2.913)	95 (3.740)	32 (1.260)	93 (3.661)	

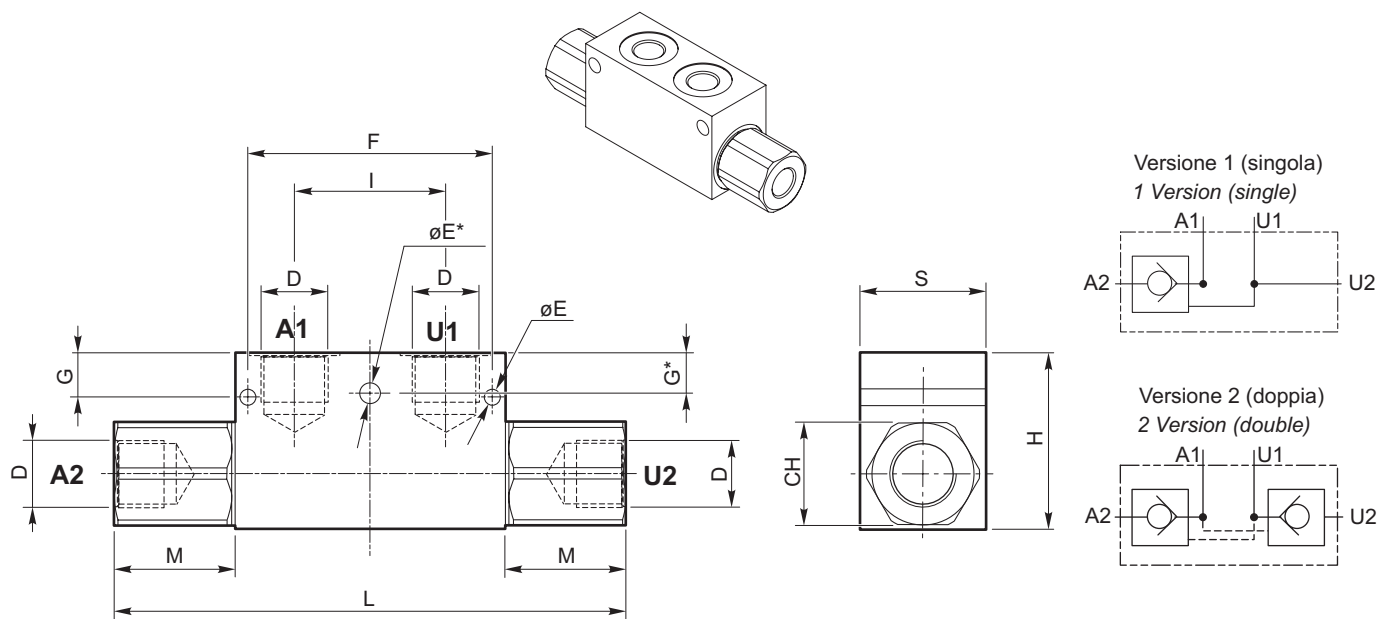
**VALVOLE AUSILIARIE
AUXILIARIES VALVES**



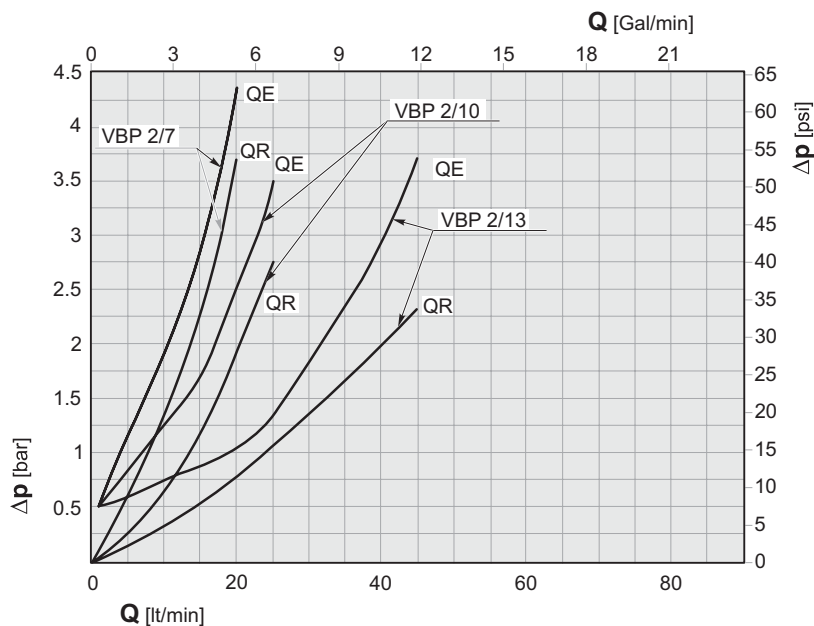
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Page

IS VBP	L-2
VRP	L-3
IS VBPS	L-4
IS SB	L-5
IS SR	L-6
IS RU	L-7
IS SU	L-8
VLP	L-9
B-VLP	L-10

IS VBP

VALVOLE DI BLOCCO PILOTATE DOPPIE
DOUBLE PILOT-OPERATED CHECK

Perdite di carico / Pressure drops



QE
A1 → A2
U1 → U2

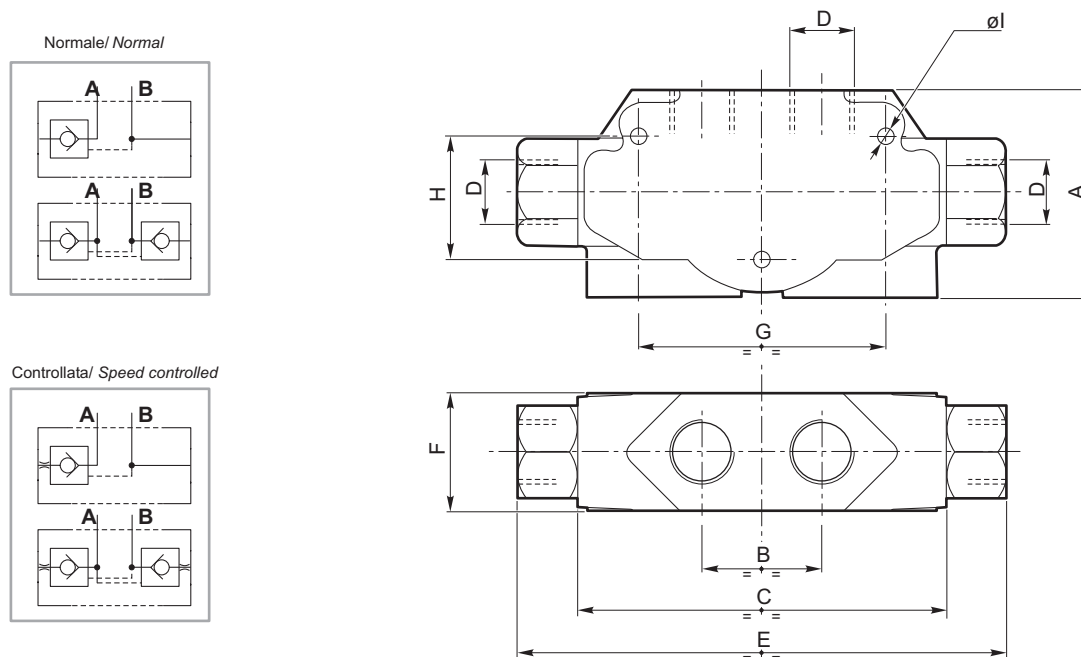
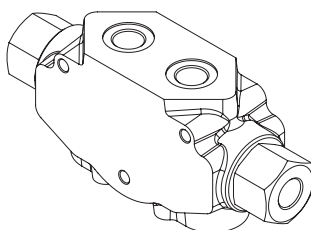
QR
A2 → A1
U2 → U1

Tipo Type		Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Press. di apertura Opening pressure [bar] (PSI)	Rapporto di pilotaggio Piloting ratio	Peso Mass [Kg] (lbs)
IS VBP 1/7	IS VBP 2/7	20 (5.28)	350 (5075)	4 (58) (standard)	1 : 4.5	0.75 (1.7)
IS VBP 1/10	IS VBP 2/10	20 (5.28)	350 (5075)		1 : 4.5	0.71 (1.6)
IS VBP 1/13	IS VBP 2/13	80 (21.12)	300 (4350)		1 : 4	1.9 (4.2)
IS VBP 1/19	IS VBP 2/19	120 (31.68)	300 (4350)		1 : 4	3.5 (7.7)

Tipo Type	D	E [mm] (inch)	E* [mm] (inch)	F [mm] (inch)	G [mm] (inch)	G* [mm] (inch)	H [mm] (inch)	I [mm] (inch)	L [mm] (inch)	M [mm] (inch)	S [mm] (inch)	CH [mm] (inch)
IS VBP .../7	G 1/4"	6.5 (0.256)	—	60 (2.362)	8 (0.315)	—	40 (1.575)	30 (1.181)	120 (4.724)	25 (0.984)	30 (1.181)	24 (0.945)
IS VBP .../10	G 3/8"	6.5 (0.256)	—	60 (2.362)	8 (0.315)	—	40 (1.575)	30 (1.181)	120 (4.724)	25 (0.984)	30 (1.181)	24 (0.945)
IS VBP .../13	G 1/2"	8 (0.315)	—	75 (2.953)	17 (0.669)	—	60 (2.362)	40 (1.575)	170 (6.693)	40 (1.575)	40 (1.575)	30 (1.181)
IS VBP .../19	G 3/4"	6.5 (0.256)	8.5 (0.335)	97 (3.819)	17 (0.669)	16 (0.630)	70 (2.756)	60 (2.362)	203 (7.992)	48 (1.890)	50 (1.969)	41 (1.614)

VRP

VALVOLE DI BLOCCO PILOTATE CON PREVALVOLA PILOT-OPERATED CHECK VALVES WITH PRE-VALVE



Tipo Type	A [mm] (inch)	B [mm] (inch)	C [mm] (inch)	D	E [mm] (inch)	F [mm] (inch)	G [mm] (inch)	H [mm] (inch)	I [mm] (inch)	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Rapporto di pilotaggio Piloting ratio
VRP... G 3/8"	74 (2.913)	43 (1.693)	132 (5.197)	G 3/8"	177 (6.969)	49 (1.929)	83 (3.268)	45 (1.772)	6.5 (0.256)	40 (10.57)	350 (5075)	1 : 16
VRP... G 1/2"	74 (2.913)	43 (1.693)	132 (5.197)	G 1/2"	177 (6.969)	49 (1.929)	83 (3.268)	45 (1.772)	6.5 (0.256)	70 (18.49)		1 : 16
VRP... G 3/4"	78 (3.071)	51 (2.008)	154 (6.063)	G 3/4"	214 (8.425)	56 (2.205)	108 (4.252)	48 (1.890)	8.5 (0.335)	100 (26.42)		1 : 12
VRP... G 1"	98 (3.858)	61 (2.402)	191 (7.520)	G 1"	254 (10.000)	59 (2.323)	124 (4.882)	64 (2.520)	8.5 (0.335)	170 (44.91)		1 : 8

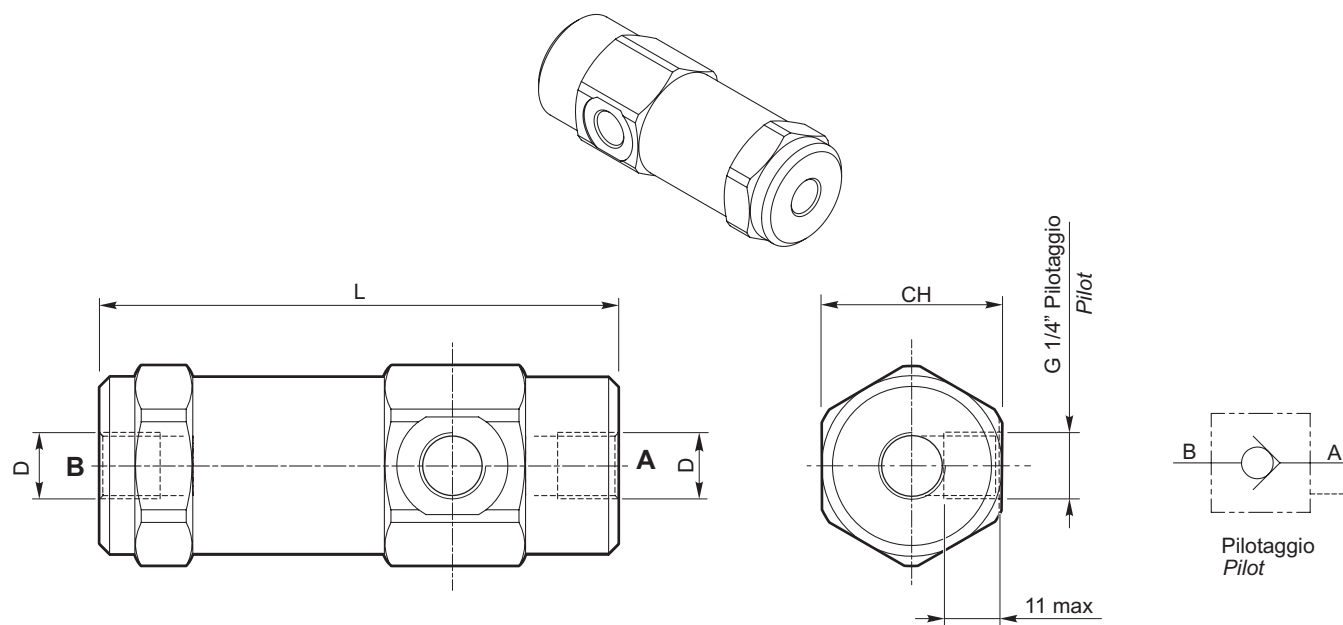
Esempio di ordinazione in codice (solo per VRP) / Ordering code example (VRP only)

VRPD | G1/2" | NL

VRPD	D= Versione con doppio ritegno / Double check version S= Versione con unico ritegno / Single check version
G 1/2"	Tipo di valvola / Valve type
NL	NL= Versione normale / Normal version CL= Versione controllata (Disponibile solo nella versione G 1/2") / Speed controlled version (Available only G 1/2" version)

IS VBPS

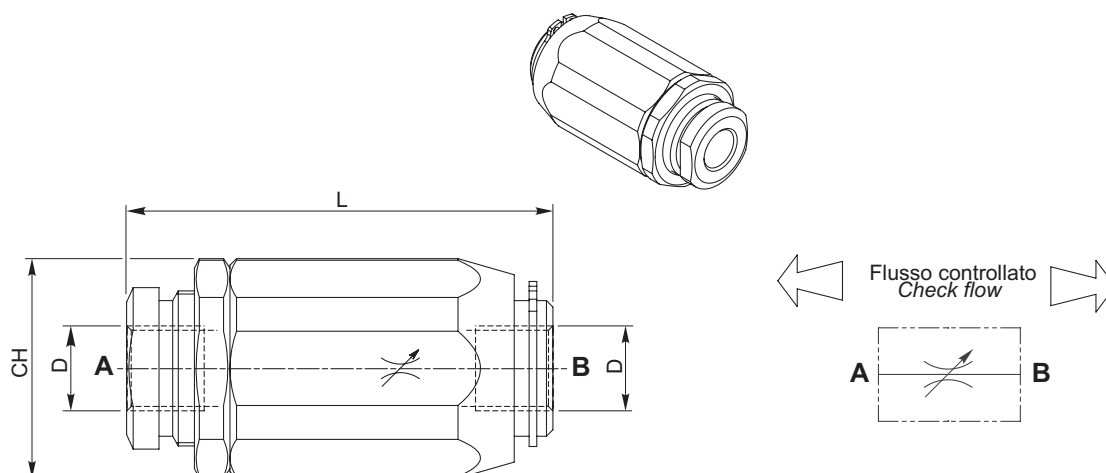
VALVOLE DI BLOCCO PILOTATE SEMPLICI SINGLE PILOT-OPERATED CHECK VALVES



Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Rapporto di pilotaggio Piloting ratio	L [mm] (inch)	D BSP	CH [mm] (inch)	Peso Mass [Kg] (lbs)
IS VBPS 7	15 (3.96)	320 (4640)	1 : 9.5	103 (4.055)	G 1/4"	36 (1.417)	0.70 (1.5)
IS VBPS 10	35 (9.24)	320 (4640)	1 : 6	111 (4.370)	G 3/8"	40 (1.575)	0.90 (2.1)
IS VBPS 13	45 (11.88)	300 (4350)	1 : 4.3	120 (4.724)	G 1/2"	42 (1.654)	1.1 (2.4)
IS VBPS 19	80 (21.12)	250 (3625)	1 : 4.4	135 (5.315)	G 3/4"	55 (2.165)	2.4 (5.2)

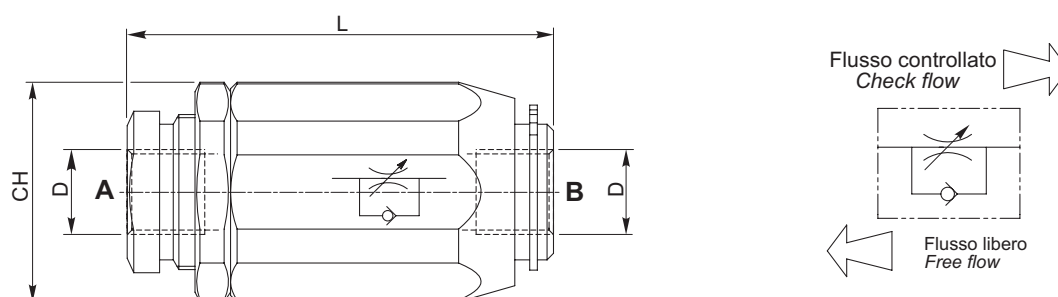
IS SB

VALVOLE REGOLATRICI DI FLUSSO FLOW CONTROL VALVES



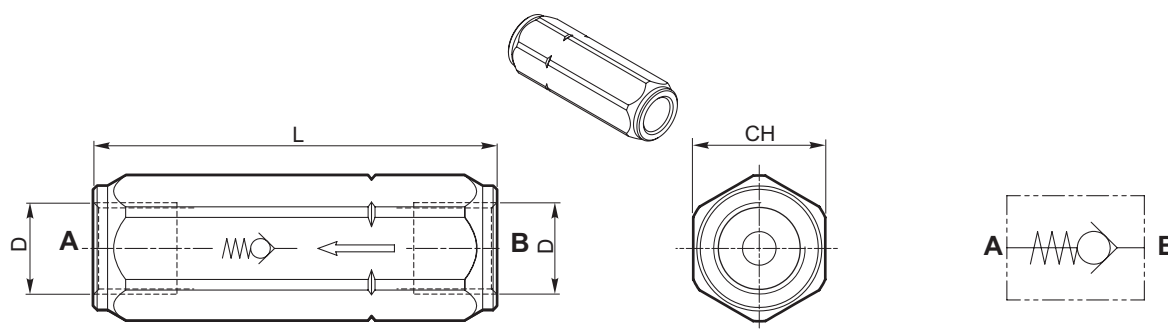
Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	D BSP	L [mm] (inch)	CH [mm] (inch)	Peso Mass [Kg] (lbs)
IS SB 7	15 (3.96)	350 (5075)	G 1/4"	66 (2.598)	32 (1.260)	0.30 (0.7)
IS SB 10	30 (7.93)	350 (5075)	G 3/8"	77.5 (3.051)	38 (1.496)	0.48 (1.1)
IS SB 13	45 (11.89)	350 (5075)	G 1/2"	83 (3.268)	41 (1.614)	0.59 (1.3)
IS SB 19	80 (21.14)	300 (4350)	G 3/4"	103.5 (4.075)	55 (2.165)	1.3 (2.9)
IS SB 25	150 (39.63)	230 (3335)	G 1"	118 (4.646)	65 (2.559)	2.2 (4.9)

IS SR



Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Pressione di apertura Opening pressure [bar] (PSI)	F BSP	L [mm] (inch)	CH [mm] (inch)	Peso Mass [Kg] (lbs)
IS SR 7	15 (3.96)	350 (5075)	0.5 (7)	G 1/4"	66 (2.598)	32 (1.260)	0.30 (0.7)
IS SR 10	30 (7.93)	350 (5075)		G 3/8"	77.5 (3.051)	38 (1.496)	0.48 (1.1)
IS SR 13	45 (11.89)	350 (5075)		G 1/2"	83 (3.268)	41 (1.614)	0.59 (1.3)
IS SR 19	80 (21.14)	300 (4350)		G 3/4"	103.5 (4.075)	55 (2.165)	1.3 (2.9)
IS SR 25	110 (29.04)	250 (3625)		G 1"	118 (4.646)	65 (2.559)	2.2 (4.9)

IS RU

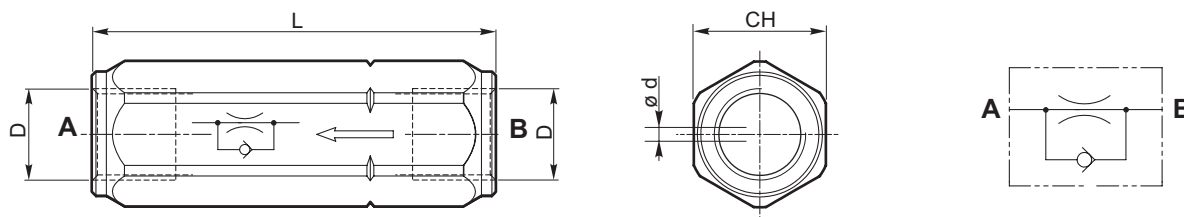
VALVOLE UNIDIREZIONALI
UNIDIRECTIONAL CHECK VALVES

Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	Pressione di apertura Opening pressure [bar] (PSI)	D**	L [mm] (inch)	CH [mm] (inch)	Peso Mass [Kg] (lbs)
IS RU 7	25 (6.60)	400 (5800)	0.5 (7) (standard)*	G 1/4"	58 (2.283)	19 (0.748)	0.10 (0.22)
IS RU 10	40 (10.56)	400 (5800)		G 3/8"	62 (2.441)	24 (0.945)	0.18 (0.40)
IS RU 13	80 (21.12)	350 (5075)		G 1/2"	71 (2.795)	30 (1.181)	0.31 (0.68)
IS RU 19	110 (29.04)	300 (4350)		G 3/4"	83 (3.268)	36 (1.417)	0.56 (1.2)
IS RU 25	140 (36.99)	270 (3915)		G 1"	106 (4.173)	45 (1.772)	0.91 (2.0)
IS RU 32	200 (52.84)	250 (3625)		G 1 1/4"	127 (5.000)	55 (2.165)	1.5 (3.3)
IS RU 38	300 (79.26)	200 (2900)		G 1 1/2"	138 (5.433)	65 (2.559)	2.4 (5.2)

* Specificare il valore di apertura se diverso dallo standard. Consultare la nostra società per la disponibilità di tarature diverse da quelle indicate.
For different valves specify them. Contact Hydreco for the available calibrations (not standard).

** Disponibili anche con filettature SAE e NP / Available also with SAE and NPT threads

IS SU

VALVOLE REGOLATRICI DI FLUSSO CON STROZZAMENTO FISSO
FLOW CONTROL VALVES WITH FIXED THROTTLE

Tipo Type	Portata max. Max flow rate [lt/min] (Gal/min)	Pressione max. Max. pressure [bar] (PSI)	D*	L [mm] (inch)	CH [mm] (inch)	Peso Mass [Kg] (lbs)
IS SU 7/d	25 (6.60)	400 (5800)	G 1/4"	58 (2.283)	19 (0.748)	0.10 (0.22)
IS SU 10/d	40 (10.56)	400 (5800)	G 3/8"	62 (2.441)	24 (0.945)	0.18 (0.40)
IS SU 13/d	80 (21.12)	350 (5075)	G 1/2"	71 (2.795)	30 (1.181)	0.31 (0.68)
IS SU 19/d	110 (29.04)	300 (4350)	G 3/4"	94 (3.701)	36 (1.417)	0.56 (1.2)
IS SU 25/d	140 (36.99)	270 (3915)	G 1"	106 (4.173)	45 (1.772)	0.91 (2.0)
IS SU 32/d	200 (52.84)	250 (3625)	G 1 1/4"	127 (5.000)	55 (2.165)	1.5 (3.3)
IS SU 38/d	300 (79.26)	200 (2900)	G 1 1/2"	138 (5.433)	65 (2.559)	2.4 (5.2)

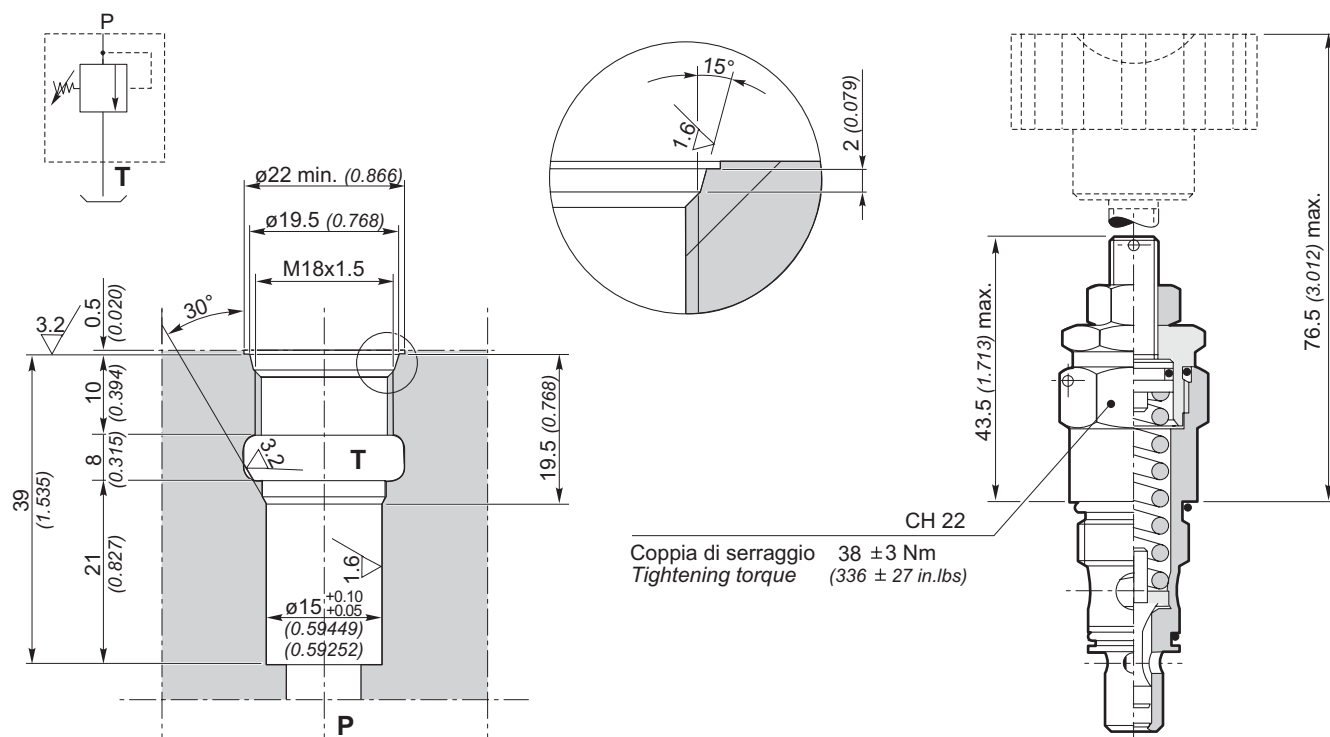
La "d" che compare nel codice indica il diametro del foro di strozzamento che va da un minimo di 0.5 a un massimo di 4 mm, di 0.5 in 0.5.

The "d" showed in the code means "diam. of throttle hole" which goes from a minimum of 0.02 to a max. of 0.157 inch, and increases of 0.02 on.

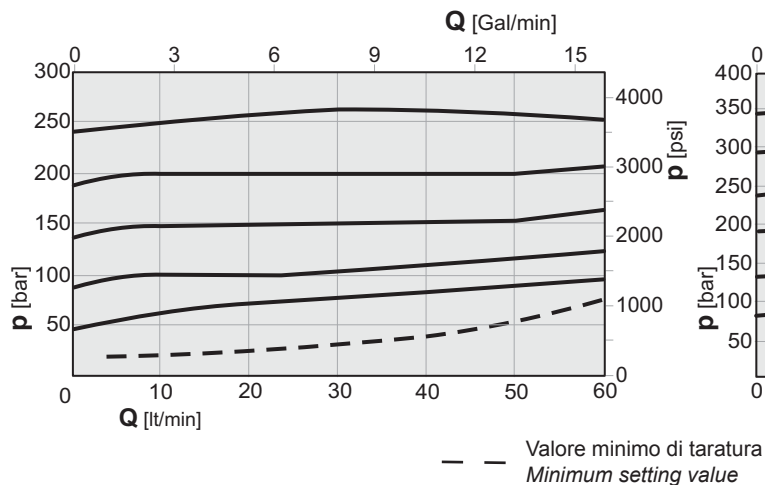
L-6 * Disponibili anche con filettature SAE e NPT / Available also with SAE and NPT threads

VLP 35S

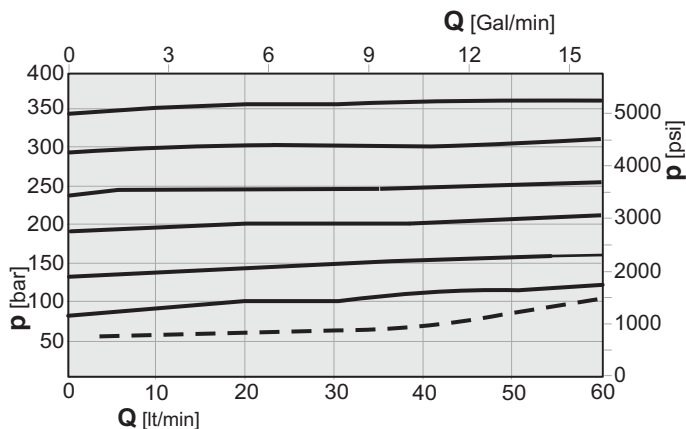
VALVOLA LIMITATRICE DI PRESSIONE / PRESSURE RELIEF VALVE (Q25 - Q30 - Q35 - Q45 - Q50)



Curve caratteristiche VLP 35S (molla nera)
Performances curves VLP 35S (black spring)



Curve caratteristiche VLP 35S (molla rossa)
Performances curves VLP 35S (red spring)

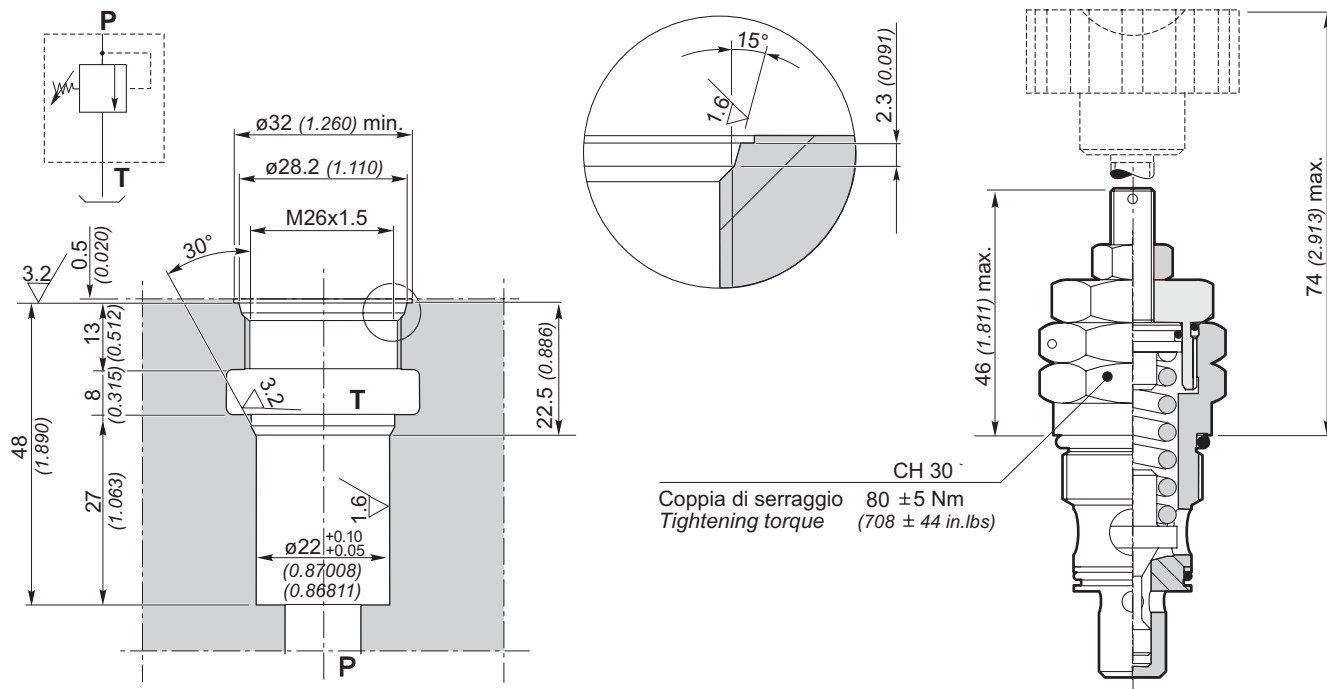


Esempio di ordinazione in codice / Ordering code example

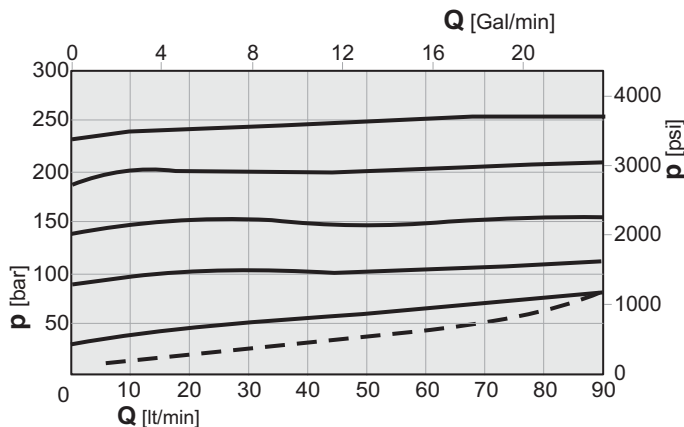
VLP	-	V	35S	-	N120
VLP	Valvola limitatrice di pressione / Pressure relief valve				
V	Regolazione a volantino (a richiesta) / Adjusting with handwheel (optional)				
35S	Tipo di valvola / Valve type				
		molla bianca white spring	molla nera black spring	molla rossa red spring	
N	Tipo di molla / Spring type	B	N	R	
Campi di taratura / Calibration fields bar (psi)					
120	Taratura / Setting	15 ÷ 100 (218 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)	

VLP 65S

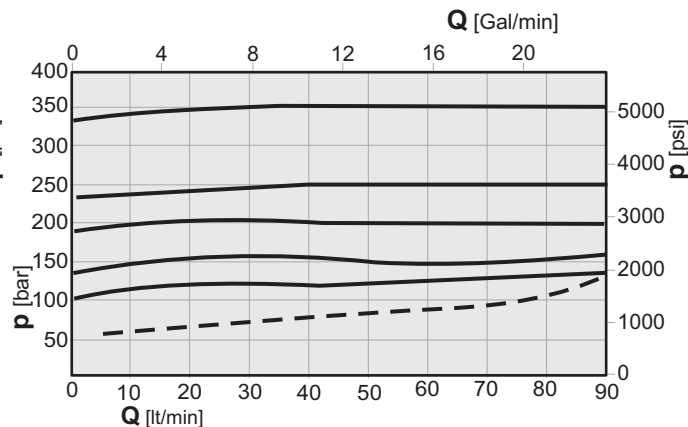
VALVOLA LIMITATRICE DI PRESSIONE / PRESSURE RELIEF VALVE (Q75 - Q80 - Q95)



Curve caratteristiche VLP 65S (molla nera)
Performances curves VLP 65S (black spring)



Curve caratteristiche VLP 65S (molla rossa)
Performances curves VLP 65S (red spring)



— — Valore minimo di taratura
Minimum setting value

Esempio di ordinazione in codice / Ordering code example

VLP - V 65S - N120

VLP	Valvola limitatrice di pressione / Pressure relief valve
V	Regolazione a volantino (a richiesta) / Adjusting with handwheel (optional)
65S	Tipo di valvola / Valve type

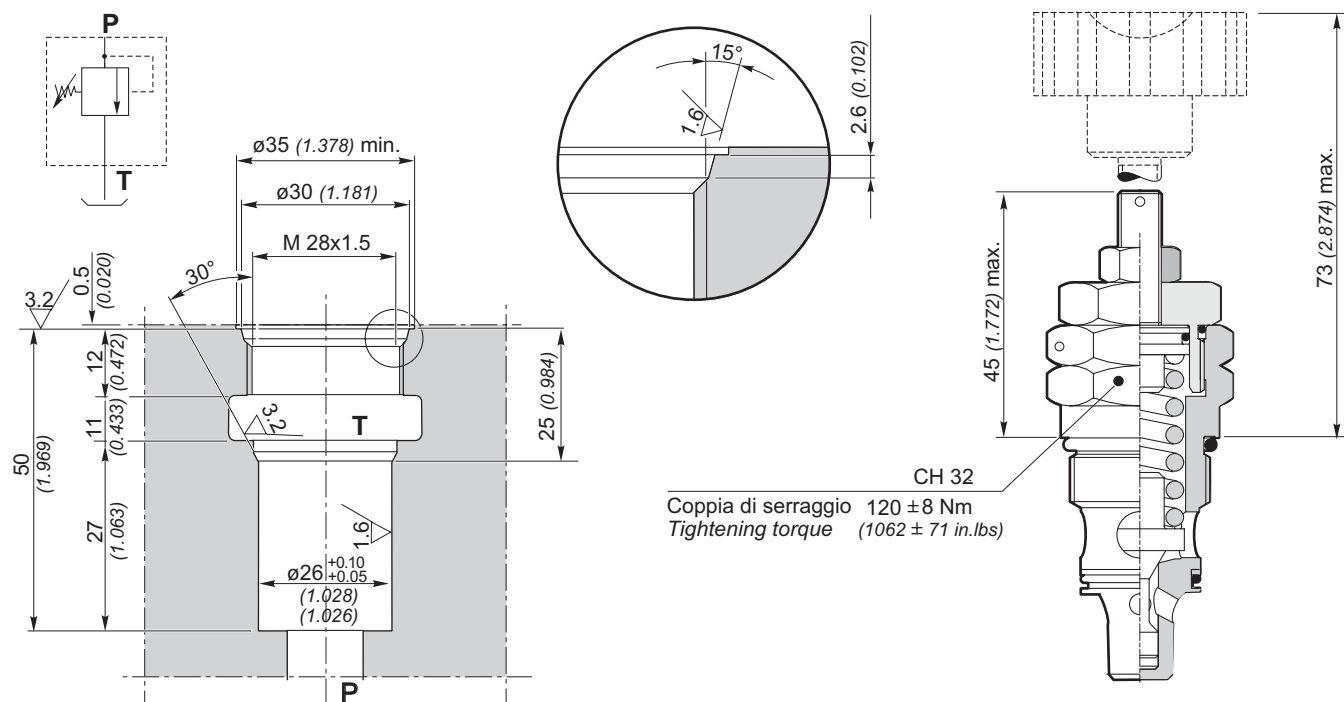
		molla bianca white spring	molla nera black spring	molla rossa red spring
N	Tipo di molla / Spring type	B	N	R

Campi di taratura / Calibration fields
bar (psi)

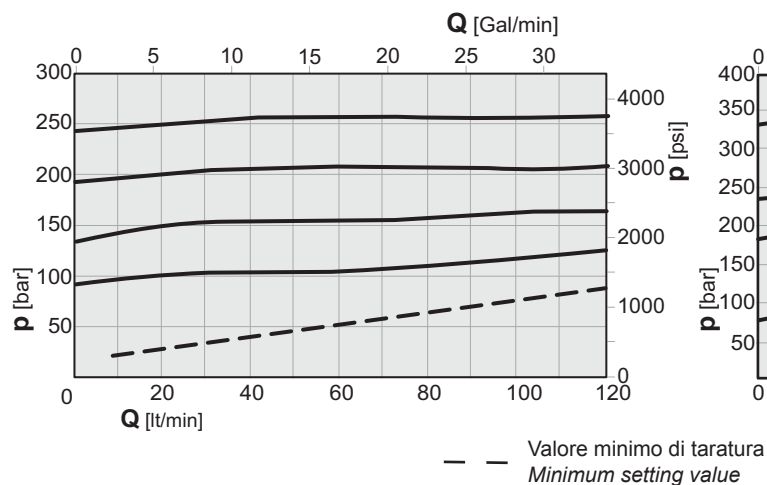
120	Taratura / Setting	15 ÷ 100 (218 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)
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VLP 105S

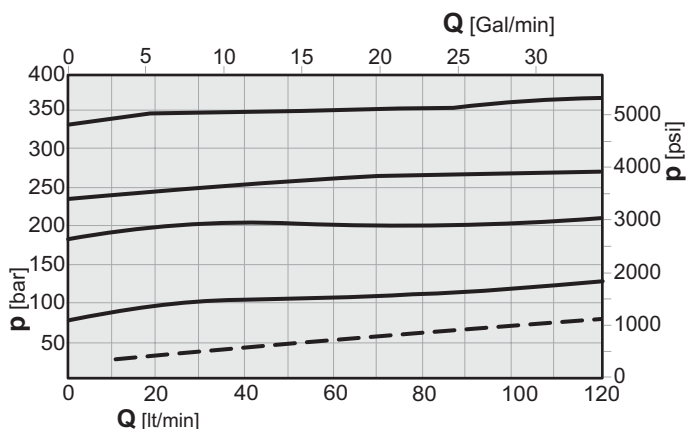
VALVOLA LIMITATRICE DI PRESSIONE / PRESSURE RELIEF VALVE (Q130)



Curve caratteristiche VLP 105S (molla nera)
Performances curves VLP 105S (black spring)



Curve caratteristiche VLP 105S (molla rossa)
Performances curves VLP 105S (red spring)



Esempio di ordinazione in codice / Ordering code example

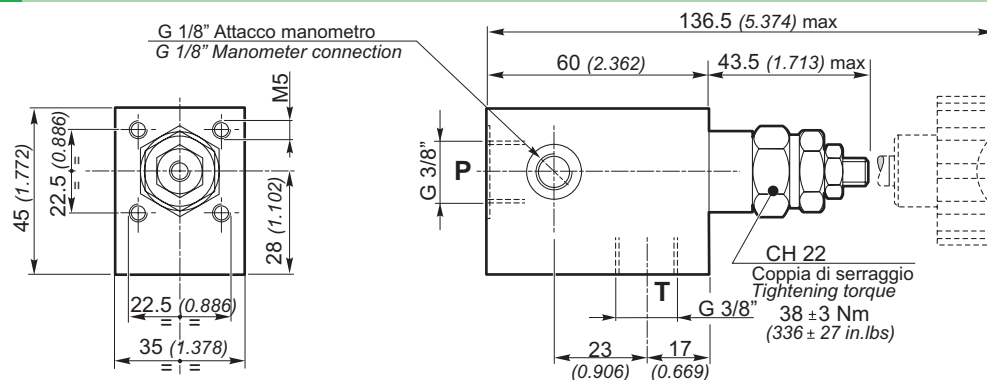
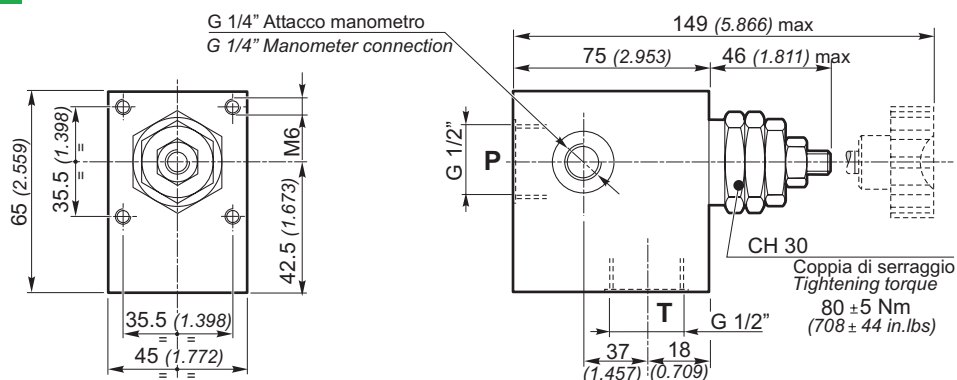
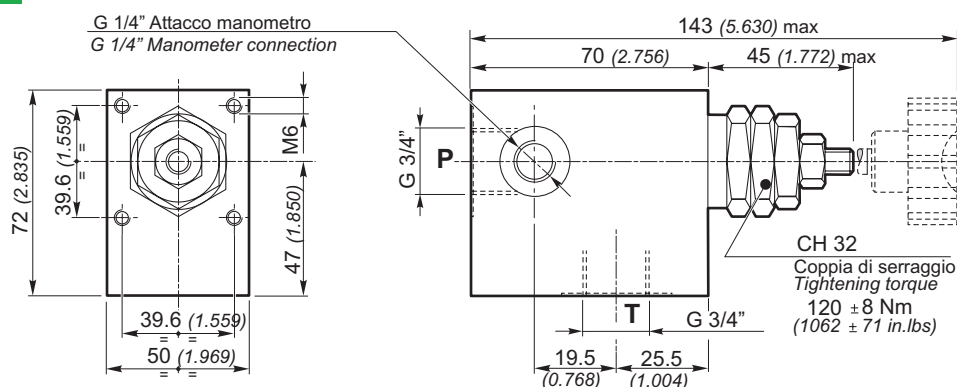
VLP - **V** **105S** - **N120**

VLP	Valvola limitatrice di pressione / Pressure relief valve
V	Regolazione a volantino (a richiesta) / Adjusting with handwheel (optional)
105S	Tipo di valvola / Valve type

		molla bianca white spring	molla nera black spring	molla rossa red spring
N	Tipo di molla / Spring type	B	N	R

Campi di taratura / Calibration fields
bar (psi)

120	Taratura / Setting	15 ÷ 100 (218 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)
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B-VLP 35S**VALVOLA LIMITATRICE DI PRESSIONE IN BILLETTA**
BILLET PRESSURE RELIEF VALVE**B-VLP 65S****B-VLP 105S****Esempio di ordinazione in codice / Ordering code example****B-VLP - V 105S - N120**

B-VLP	Valvola limitatrice di pressione in billetta / Billet pressure relief valve
V	Regolazione a volantino (a richiesta) / Adjusting with handwheel (optional)
65S	Tipo di valvola / Valve type

		molla bianca white spring	molla nera black spring	molla rossa red spring
N	Tipo di molla / Spring type	B	N	R

Campi di taratura / Calibration fields
bar (psi)

		15 ÷ 100 (218 ÷ 1450)	30 ÷ 280 (435 ÷ 4060)	80 ÷ 380 (1160 ÷ 5510)
120	Taratura / Setting			