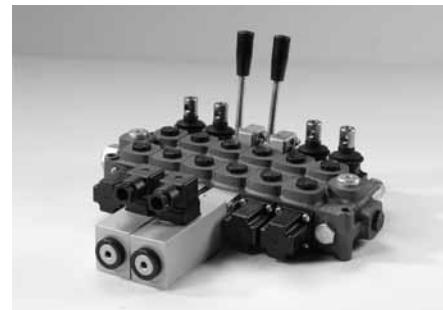
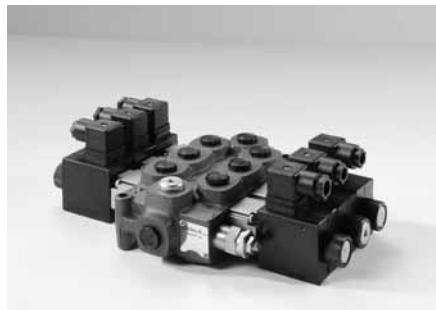
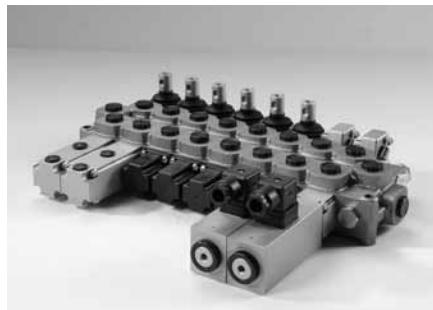


CARATTERISTICHE

- 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 ricopimenti 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

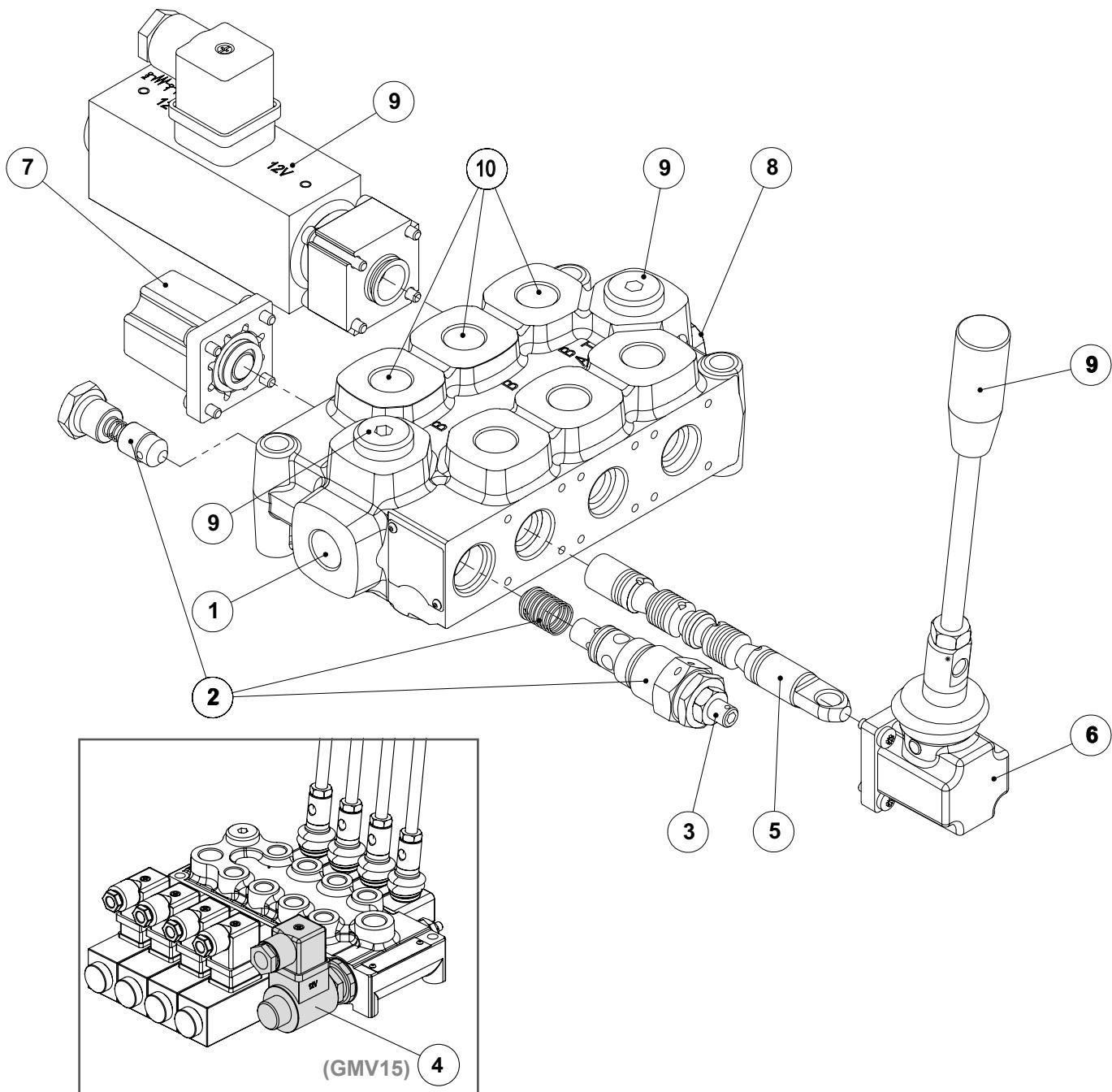
	Q35	Q15	GMV15	Q25	Q45	Q65	Q75	Q95
Numero massimo di sezioni di lavoro Working sections maximum	1	1	4	8		1	6	6
Limits temperatura olio Oil temperature range				-30 ÷ 80 °C				
Temperatura olio consigliata Recommended oil temperature				30° ÷ 60 °C				
Filtraggio consigliato Recommended filtration				26/23µm ISO DIS 4406				
Fluido Hydraulic fluid				Olio minerale Mineral oil				
Viscosità Viscosity				10 ÷ 400 mm ² /s				

Massa [Kg] Weight (lbs)	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>	—	—	2.50 (5.5)	4.50 (9.9)	—	7.60 (16.8)	7.60 (16.8)
	3 Sezioni di lavoro <i>Working sections</i>	—	—	3.15 (6.9)	5.60 (12.3)	—	10.40 (22.9)	10.40 (22.9)
	4 Sezioni di lavoro <i>Working sections</i>	—	—	3.80 (8.4)	7.30 (16.1)	—	12.40 (27.3)	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] Max working pressure (PSI)	1 o 2 sezioni di lavoro <i>from 1 up to 2 sections</i>	300 (4350)	250 (3625)	280 (4060)	350 (5075)	350 (5075)	350 (5075)	350 (5075)
	3 sezioni <i>3 sections</i>	—	—	280 (4060)	320 (4640)	—	300 (4350)	300 (4350)
	da 4 a 8 sezioni <i>from 4 up to 8 sections</i>	—	—	280 (4060)	300 (4350)	—	270 (3915)	270 (3915)
Pressione massima sullo scarico [bar] Max back pressure (PSI)	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

Tipologia Type	Fiancata d'ingresso <i>Inlet section</i>	Sezione di lavoro <i>Working section</i>			Fiancata di scarico <i>Outlet section</i>	Note aggiuntive <i>Additional notes</i>	
Q25	F7S R250 MSE	2x	103	A1	M1	F3D	12V
1	2 3 4	5	6	7	8	9	10

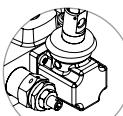
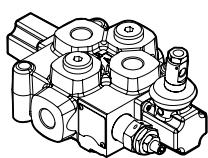


ESEMPIO DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLE

Tipo	Type
1 - Tipo Q35, Q15, GMV15, Q25, Q45, Q65, Q75, Q95	1 - Type Q35, Q15, GMV15, Q25, Q45, Q65, Q75, Q95
Indica il tipo di distributore; le caratteristiche dimensionali sono riportate da pag. A6 a pag. A21.	<i>Indicates model valve, characteristics and dimensions found on pages A6 to page A21.</i>
Fiancata d'ingresso	Inlet section
2 - Tipo fiancata d'ingresso (pag. A-22)	2 - Inlet section type (page A-22)
3 - Tipo molla e taratura valvola (pag. A-22)	3 - Type of spring and valve setting (page A-22)
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.	<i>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.</i>
4 - Valvole aggiuntive alla fiancata di ingresso (pag. A-23).	4 - Additional valves on the inlet section (page A-23)
Sezione di lavoro	Working section
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.	<i>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.</i>
N.B. Il numero massimo complessivo di sezioni di lavoro sono indicate a pag. A3.	<i>NOTE. The maximum overall number of working sections is indicated on page A3.</i>
5 - Tipo cursore (pag. A-24)	4 - Spool type (page A-24)
6 - Tipo di comando (pag. A-28, A-32)	5 - Control type (page A-28, A-32)
7 - Tipo posizionatore (pag. A-35)	6 - Positioner type (page A-35)
Fiancata di scarico	Outlet section
8 - Tipo fiancata di scarico (pag. A-62)	7 - Outlet section type (page A-62)
Note aggiuntive	Additional notes
9 - Note aggiuntive (pag. A-63)	8 - Additional notes (page A-63)
10 - Numero elementi (pag. A-63)	9 - Number of sections (page A-63)
Specificare il numero delle sezioni di lavoro (es. 2E) previste.	<i>Specify the number of working sections needed (e.g. 2E).</i>

Q25

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

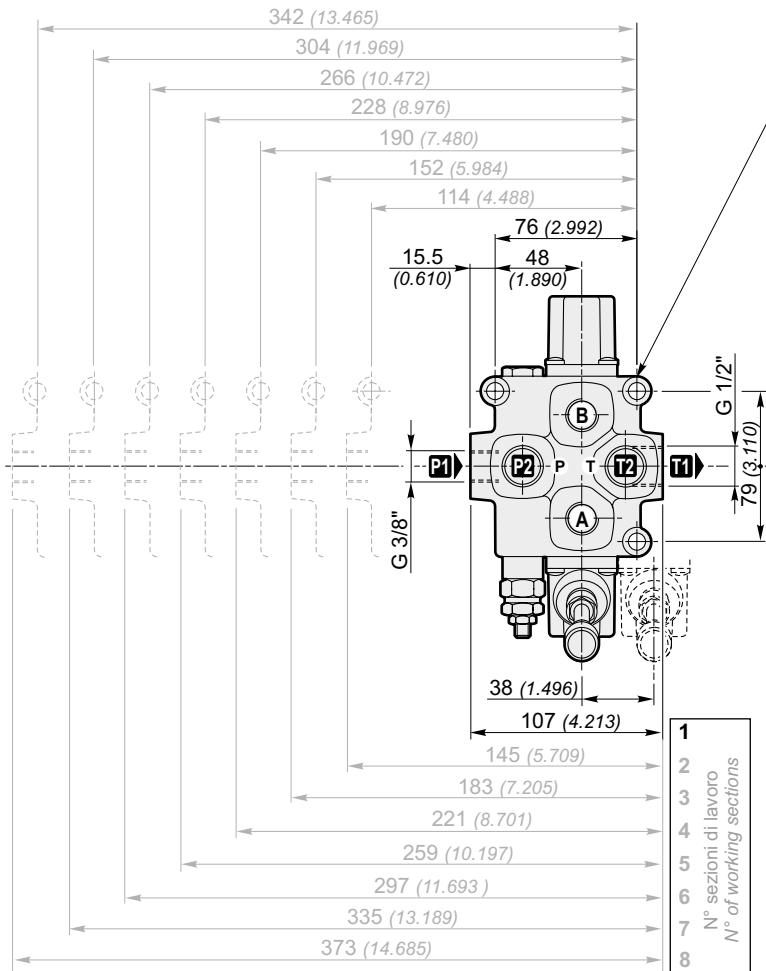


(Standard)
Comando e posizionatore in plastica
Control and positioner plastic

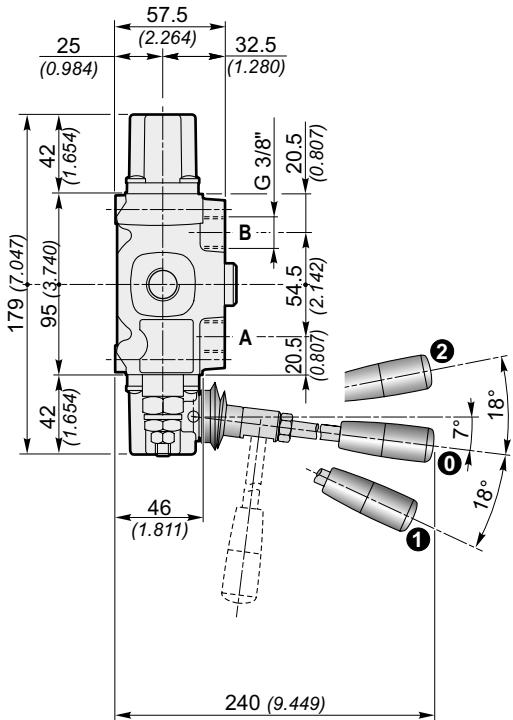


S
Comando e posizionatore in Alluminio
Control and positioner Aluminium

Q25	F7S	R250	—	2x	103	A1	M1	—	F3D	—	S	—	1E
1	2	3		4	5	6	7		8		9		10



n°3 fori di fissaggio ø 9
n°3 mounting holes ø 9



Q25	—	F7S	R250	—	2x	103	A1	M1	—	F3D	—	12V	—	2E
1	2	3		5	6	7		8		9		10		

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)

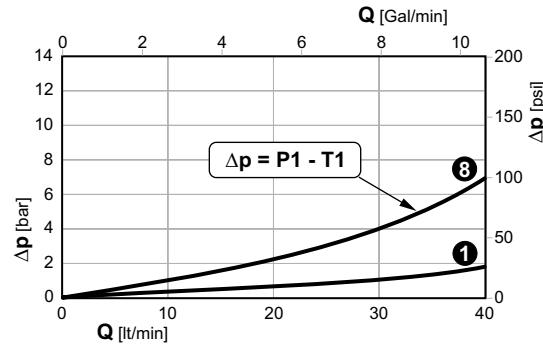
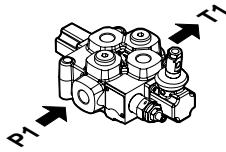
	T1		X		
	19.7 (0.776)	G 1/2"	7/8"-14UNF (SAE 10)	G 3/8" G 1/2"	3/4" - 16UNF (SAE 8)

Q25

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

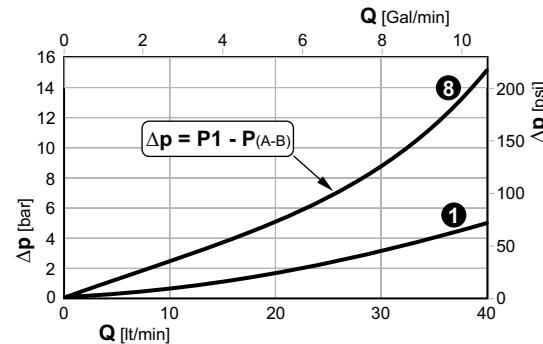
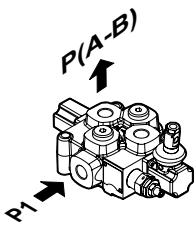
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

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



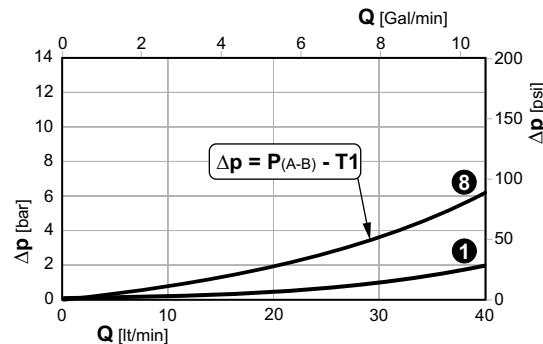
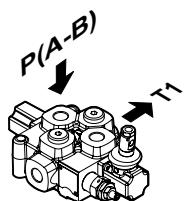
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

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



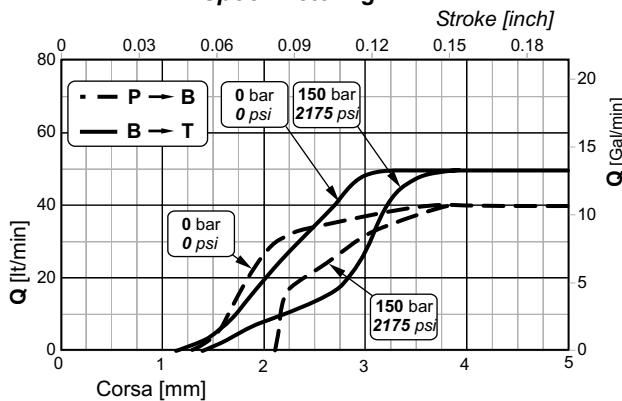
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

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

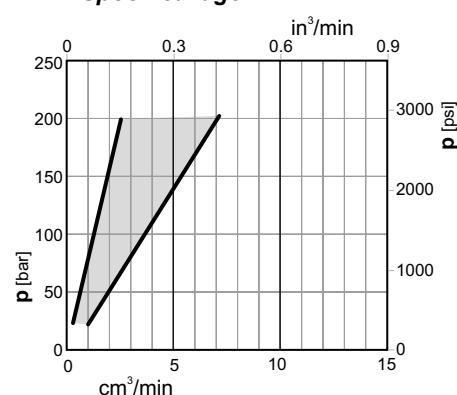


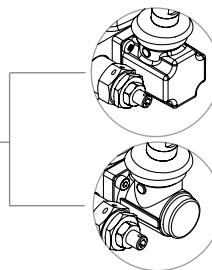
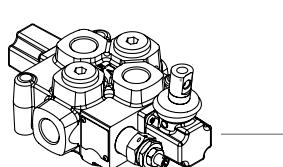
① ⑧ Sezioni / Sections

Curve di progressività Spool metering



Trafilamenti sul cursore Spool leakage

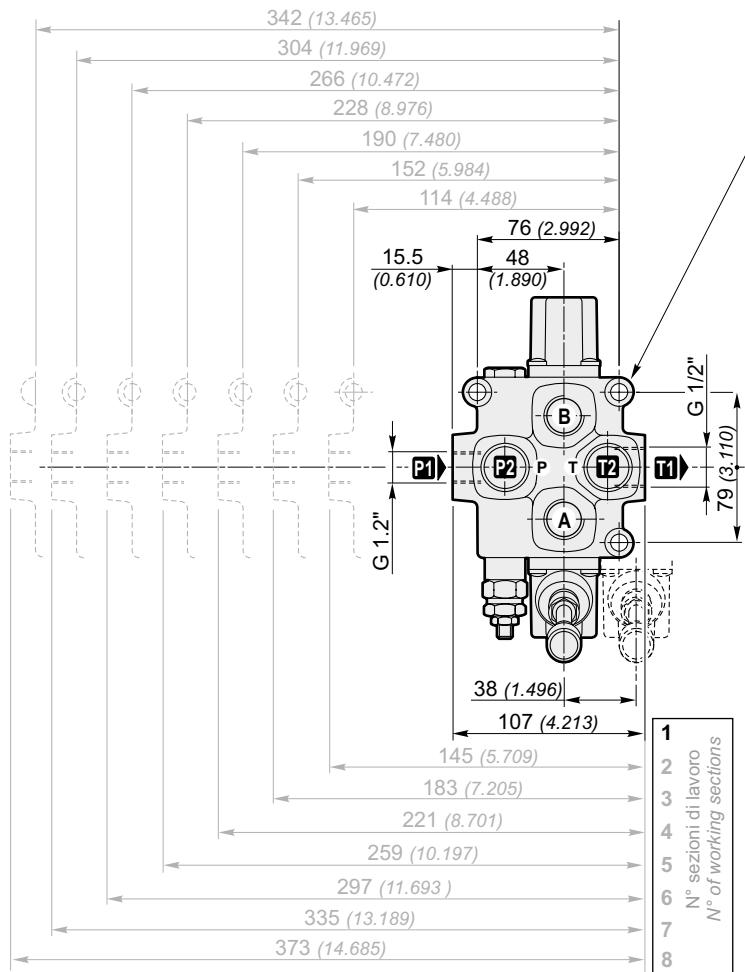


Q45
DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES


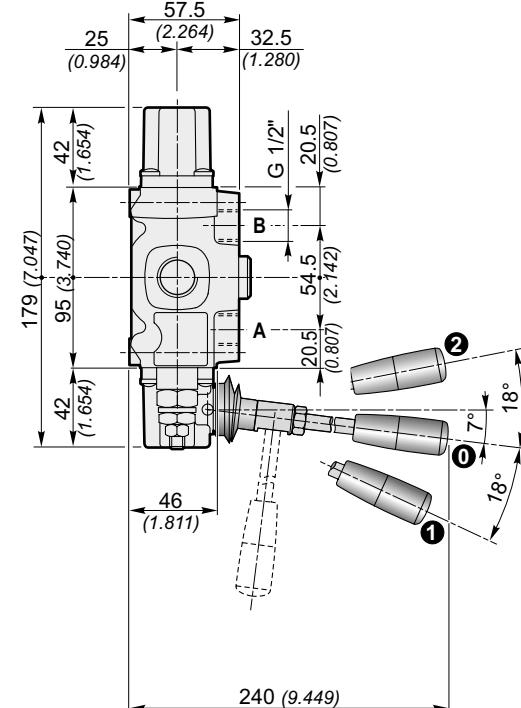
(Standard)
Comando e posizionatore in plastica
Control and positioner plastic

S
Comando e posizionatore 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 ø 9
n°3 mounting holes ø 9



Q45 — F7S | R250 — 2x 103 A1 M1 — F3D — 12V — 2E
1 2 3 5 6 7 8 9 10

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)

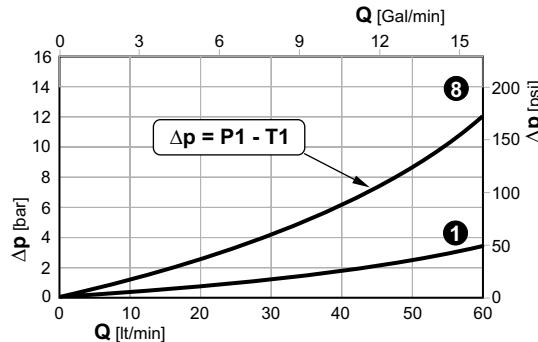
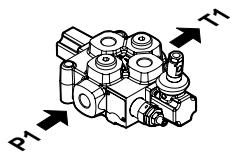
T1		X	
19.7 (0.776)	G 1/2"	7/8"-14UNF (SAE 10)	G 3/8" G 1/2" 3/4" - 16UNF (SAE 8) 7/8" - 14UNF (SAE 10)

Q45

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

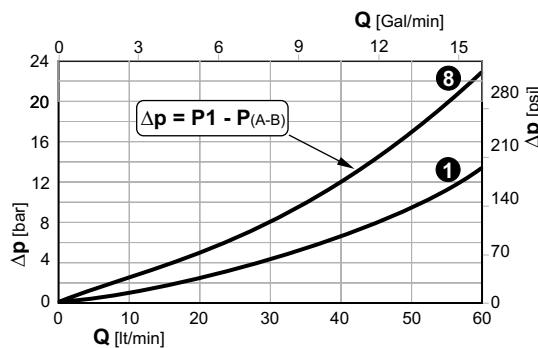
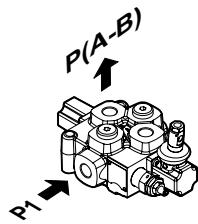
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

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



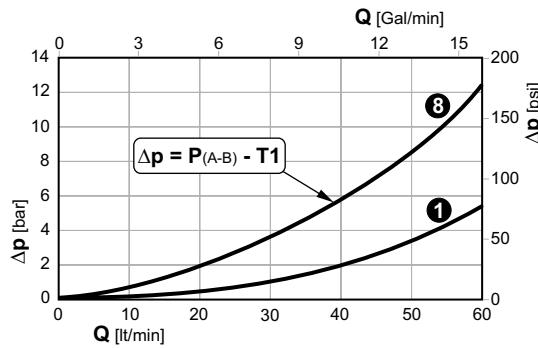
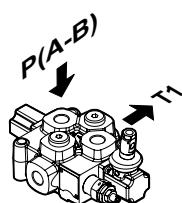
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

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



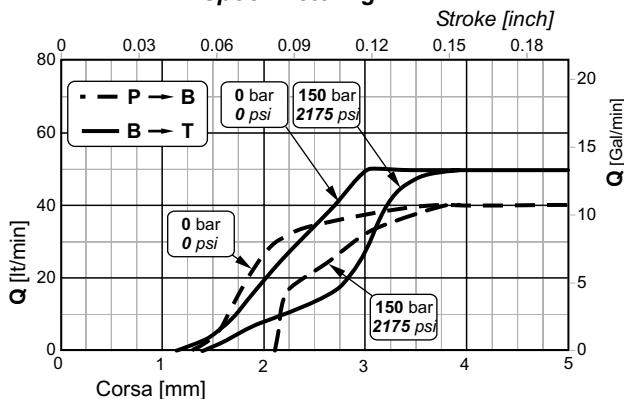
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

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

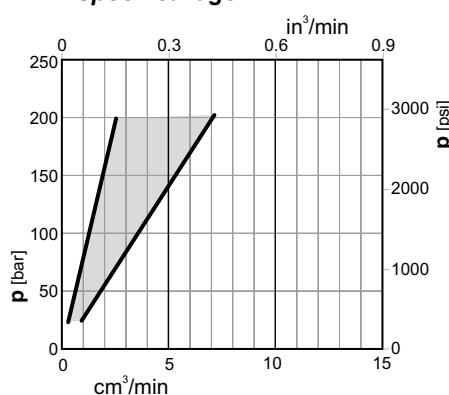


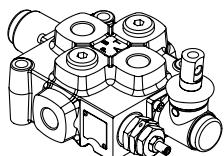
① ⑧ Sezioni / Sections

Curve di progressività Spool metering

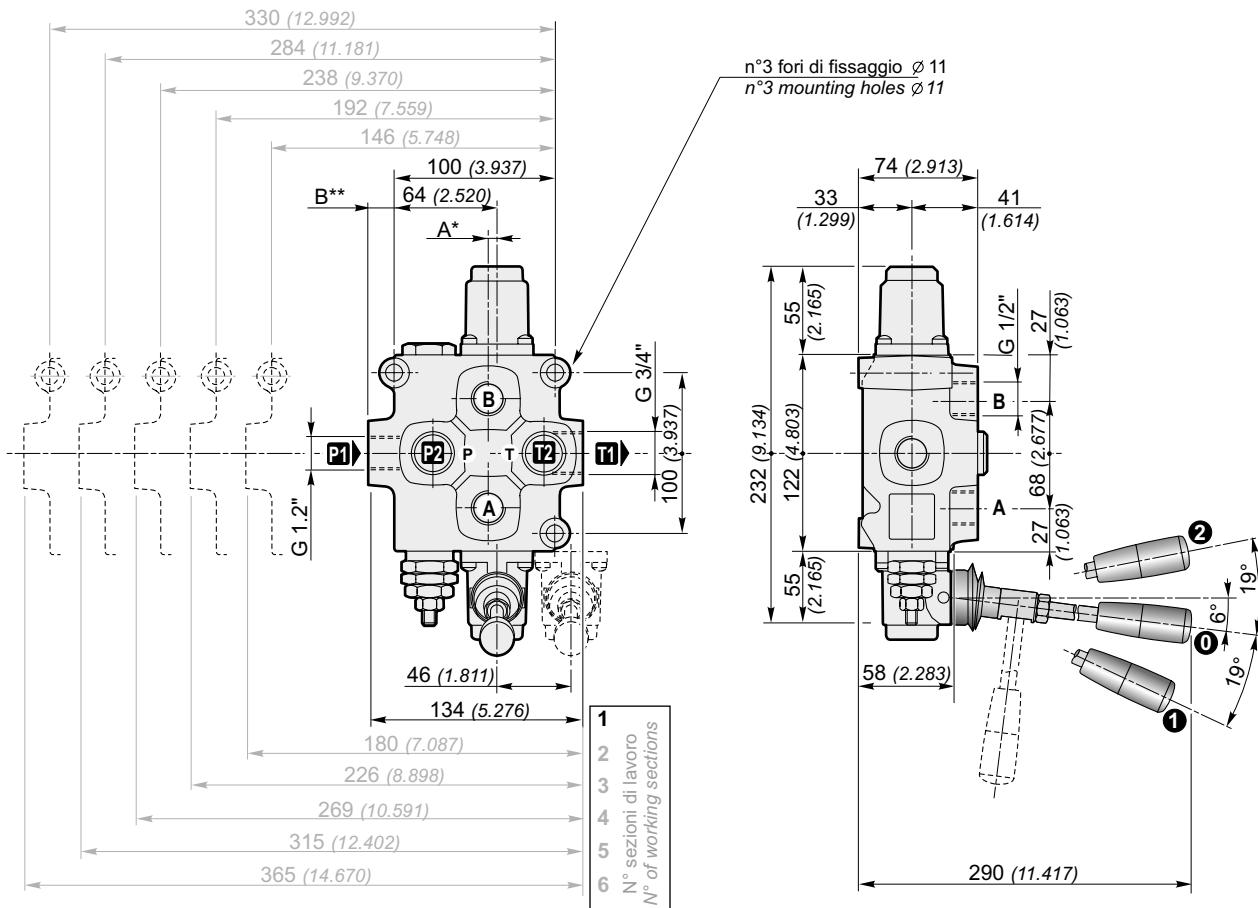


Trafilamenti sul cursore Spool leakage



Q75
DISTRIBUTORI MONOBLOCCO
MONOBLOCK DIRECTIONAL CONTROL VALVES


(Standard)
Comando e posizionatore 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 5 6 7 8 9 10

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)

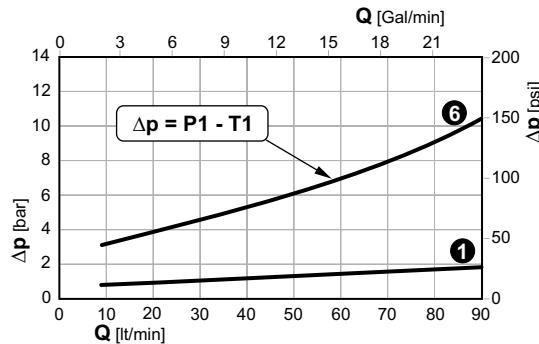
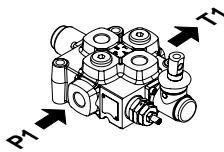
	T1	X
26.8 (1.055) G 3/4"	1" 1/16" - 12 UN (SAE 12)	G 1/2" G 3/4" 7/8" - 14 UNF (SAE 10)

Q75

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

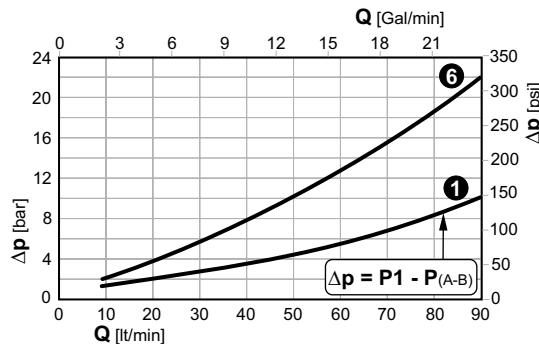
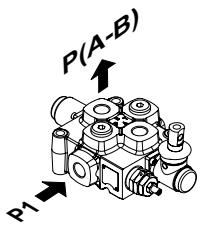
Perdite di carico con il cursore in posizione neutra
(Δp in funzione del numero di sezioni attraversate)

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



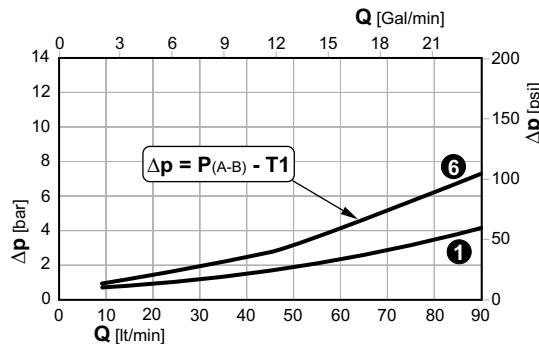
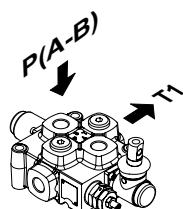
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

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



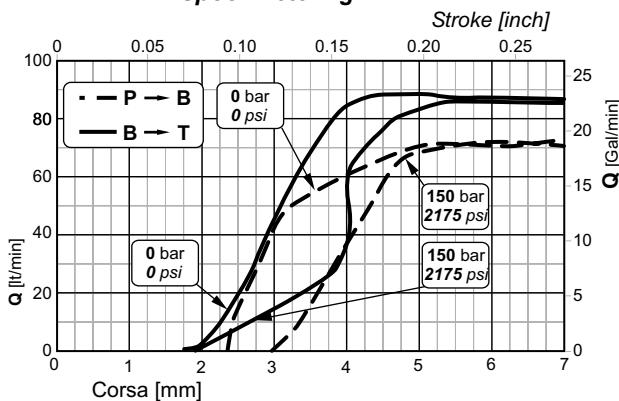
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

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

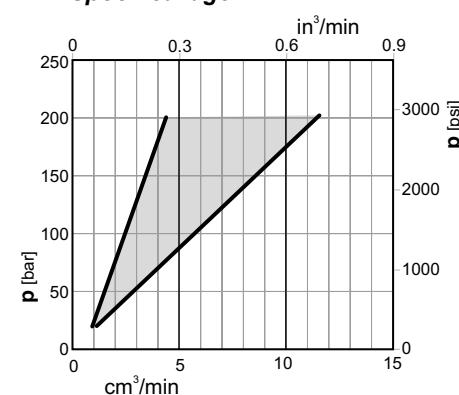


① ⑥ Sezioni / Sections

Curve di progressività Spool metering

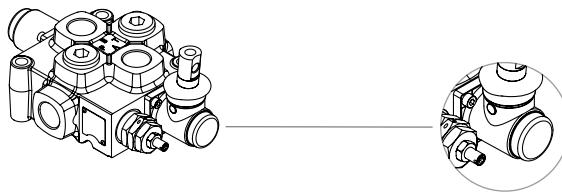


Trafilamenti sul cursore Spool leakage

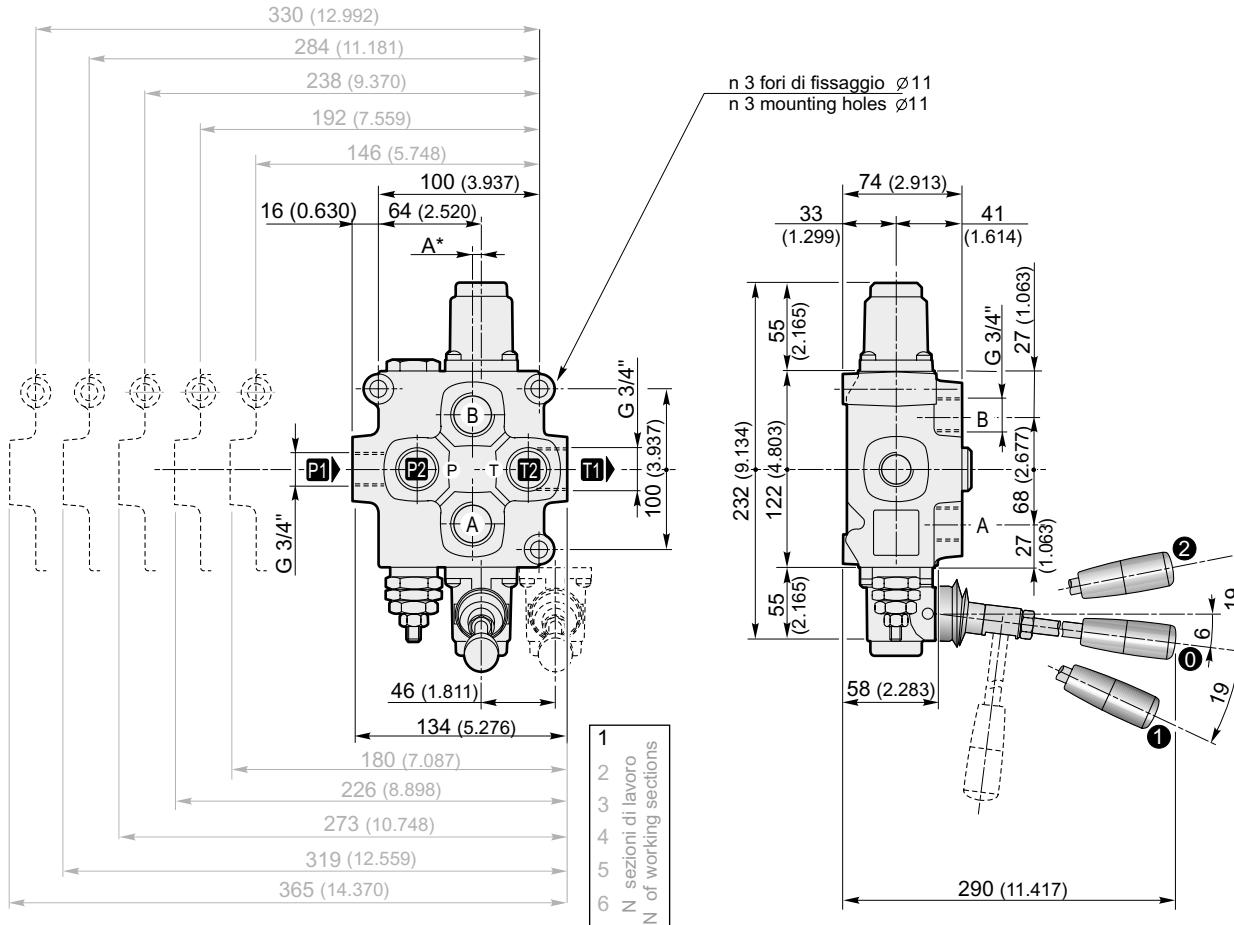


Q95

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES



(Standard)
Comando e posizionatore 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 5 6 7 8 9 10

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)

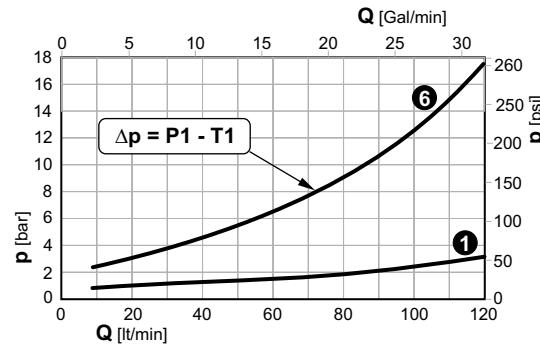
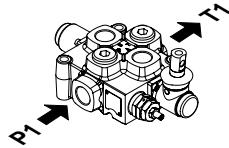
	T1	X
 29.8 (1.173)	G 3/4"	1" 1/16" - 12 UN (SAE 12)

Q95

DISTRIBUTORI MONOBLOCCO MONOBLOCK DIRECTIONAL CONTROL VALVES

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

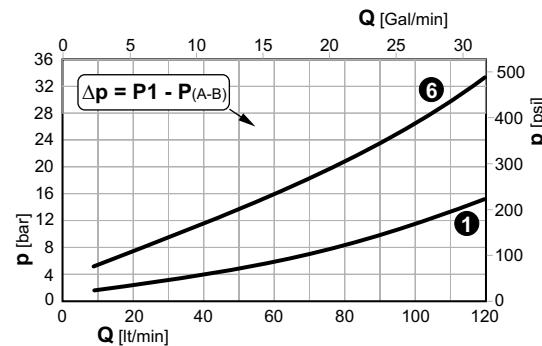
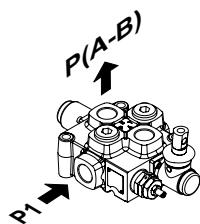
Pressure drop with spool in neutral position
(Δp depending on the number of the crossed sections)



Perdite di carico con il cursore in posizione di lavoro

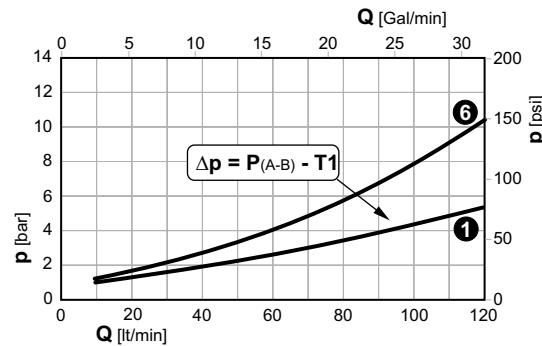
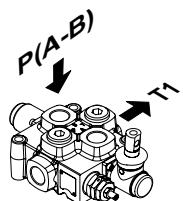
(Δp in funzione del numero di sezioni attraversate)

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



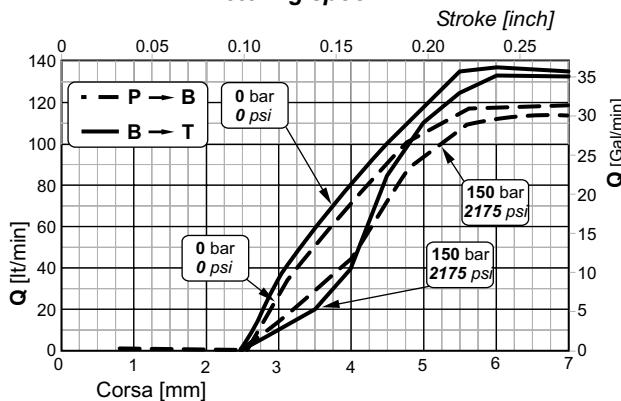
Perdite di carico con il cursore in posizione di lavoro
(Δp in funzione del numero di sezioni attraversate)

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

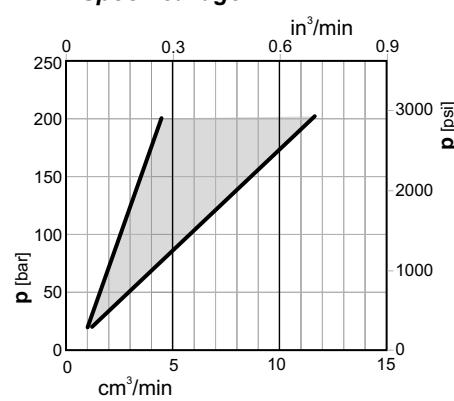


① ⑥ Sezioni / Sections

Curve di progressività Metering spool



Trafilamenti sul cursore Spool leakage



Fiancata d'ingresso

Inlet section



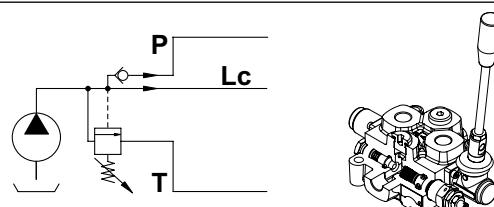
2 - Tipo fiancata d'ingresso / Inlet section type

Q35	Q15	GMV 15	Q25	Q45	Q65	Q75	Q95
-----	-----	-----------	-----	-----	-----	-----	-----

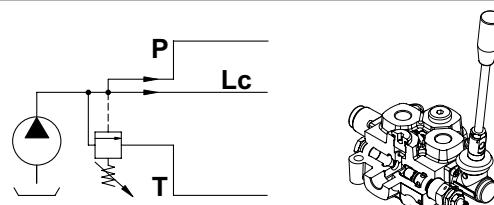
F1S	Collettore di entrata con valvola di ritegno VR e valvola limitatrice di pressione VLP	<i>Inlet section with check (VR) and relief valves (VLP)</i>			•	•	•	•	•
F2S	Collettore di entrata con valvola di ritegno VR	<i>Inlet sections with check valve VR</i>			•	•	•	•	•
F7S	Collettore di entrata con valvola limitatrice di pressione VLP	<i>Inlet section with relief valve VLP</i>	•	•	•	•	•	•	•
F8S	Collettore di entrata senza valvole VLP e VR	<i>Inlet section without valves VLP and VR</i>	•	•	•	•	•	•	•

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

3 - Type of spring and valve setting

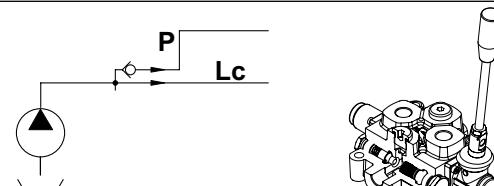
Dove è presente la valvola VLP (fiancate F1S e F7S), deve essere specificato il tipo di molla (B, N o R) e la sua pressione di taratura; se quest'ultima viene omessa, verrà messa la molla N tarata a 150 bar.

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.

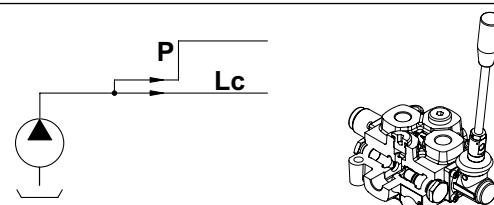
R	Tipo di molla per la VLP Type of spring for relief valve	Campi di taratura / Calibration fields bar (psi)		
		B	N	R
Calibration fields bar (psi)				
250	Taratura della VLP VLP Setting	35S / 65S / 105S	10 ÷ 80 (145 ÷ 1160)	81 ÷ 200 (1175 ÷ 2900)
		15S	0 ÷ 120 (0 ÷ 1740)	201 ÷ 380 (2915 ÷ 5510)

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



Fiancata d'ingresso

Inlet section



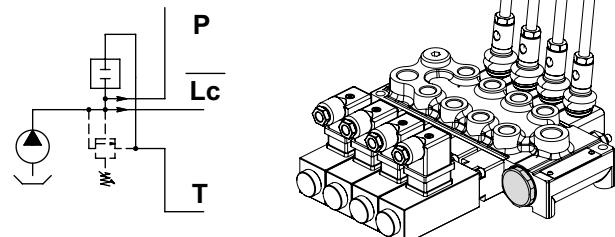
4 - Valvole aggiuntive alla fiancata (facoltativo) / Additional valves to the inlet section (optional)

	Q35	Q15	GMV 15	Q25	Q45	Q65	Q75	Q95
--	-----	-----	-----------	-----	-----	-----	-----	-----

PMS	Collettore di entrata con predisposizione per valvola di messa a scarico elettrica (diretta)	Inlet section presets for electrical outlet release valve (direct)	•					
MSE	Collettore di entrata con valvola di messa a scarico elettrica (diretta)	Inlet section with electrical outlet release valve (direct)	•					

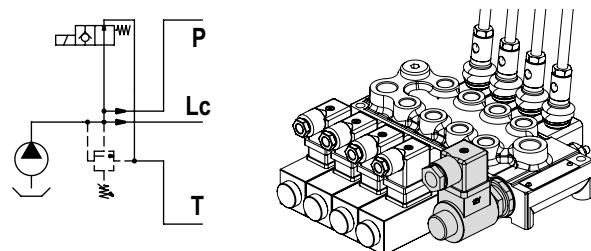
PMS

Collettore di entrata con predisposizione per valvola di messa a scarico elettrica (diretta)
Inlet section presets for electrical outlet release valve (direct)



MSE

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



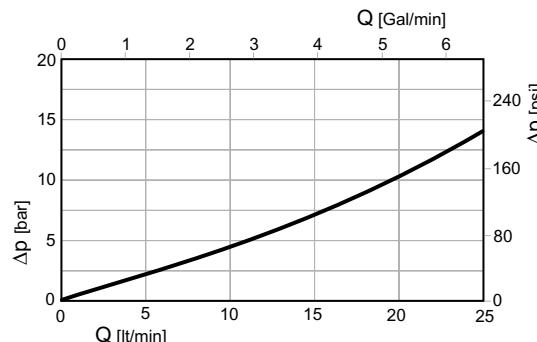
N.B.

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>

Perdite di carico del distributore con valvola di messa a scarico elettrica aperta.

Directional control valve pressure drop with electrical outlet release valve open.



Sezione di lavoro

Working section



5 - Tipo cursore / Spool type

Cursori / Spools

Q35	Q15	GMV 15	Q25	Q45	Q65	Q75	Q95
-----	-----	-----------	-----	-----	-----	-----	-----

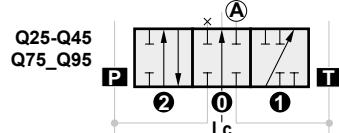
101	Semplice effetto in A	Single acting in A port	●	●	●	●	●
102	Semplice effetto in B	Single acting in B port	●	●	●	●	●
103	Doppio effetto, A e B chiusi in posizione 0	Double acting A and B closed in 0 position	●	●	●	●	●
103RN	Doppio effetto a ricoprimento negativo	Double acting with negative overlap	●	●			●
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 4 ^a posizione flottante	Double acting with 4 th position floating		●	●	●	●
126*	Doppio effetto con 4 ^a posizione flottante	Double acting with 4 th position floating			●	●	●

* Limitazioni / Limitations

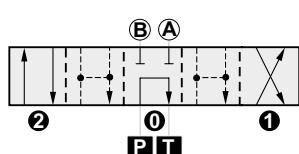
Cursore Spools	Applicabile con: / Applicable with:	
	Comando / Control	Posizionatore / Positioner
116	A1-Z1 / A2-Z1 / A4-Z1 / A6-Z1 / A8-Z1	R8
126	A1 / A2 / A4 / A5 / A6 / A8 / SL / SLA15 / A15 / A16	R10-Z1

101

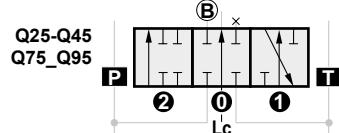
Semplice effetto in A
Single acting in A port

**103RN**

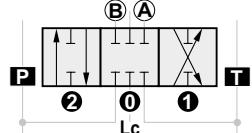
Doppio effetto a ricoprimento negativo
Double acting with negative overlap

**102**

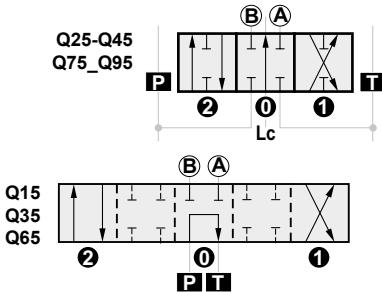
Semplice effetto in B
Single acting in B port

**106**

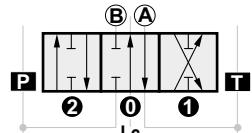
Doppio effetto, passaggi chiusi in posizione 0
Double acting, ports closed in 0 position

**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

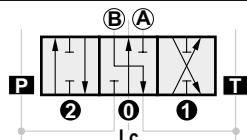
Working section



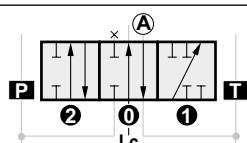
Cursori / Spools

108

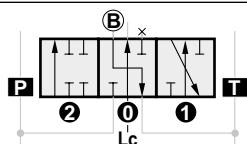
Doppio effetto, B in T e A chiuso
in posizione 0
*Double acting, B to T and A closed
in 0 position*

**109**

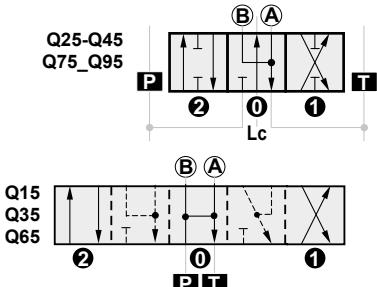
Semplice effetto in A, A in T
in posizione 0
*Single acting in A, A to T
in 0 position*

**110**

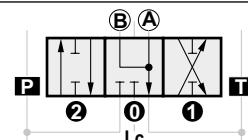
Semplice effetto in B, B in T
in posizione 0
*Single acting in B, B to T
in 0 position*

**111**

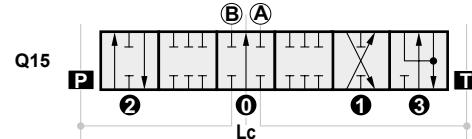
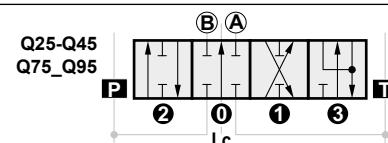
Doppio effetto, A e B in T
in posizione 0
*Double acting, A and B to T
in 0 position*

**114**

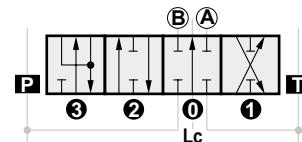
Doppio effetto, A e B in T e
Lc chiusa in posizione 0
*Double acting, A and B to T and
through passage closed in 0 position*

**116**

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

**126**

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



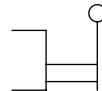
Sezione di lavoro

Working section

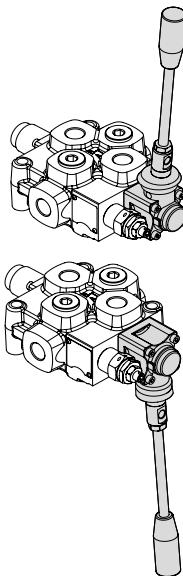
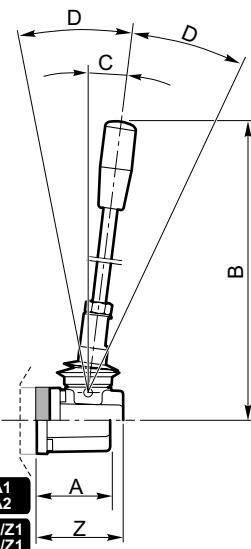


A1 | A1/Z1

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

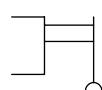


A1/Z1: Versione con kit distanziale per il montaggio del cursore 116
A1/Z1: Version with spacer kit for installation of spool 116



A2 | A2/Z1

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

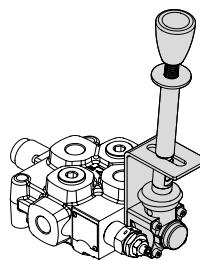
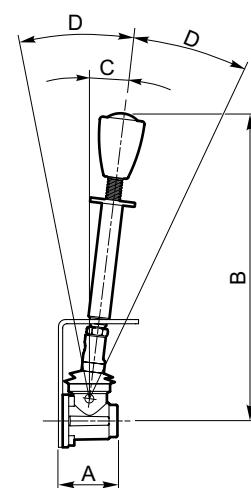
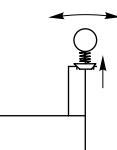


A2/Z1: Versione con kit distanziale per il montaggio del cursore 116
A2/Z1: Version with spacer kit for installation of spool 116

	A	B	C	D	Z
Q15 GMV15	35 (1.378)	211 (8.307)	7°	14°	44 (1.732)
Q35 Q25 - Q45	42 (1.654)	211 (8.307)	5°	13°	50.5 (1.988)
Q65 Q75 - Q95	55 (2.165)	260 (10.236)	6°	19°	68.5 (2.697)

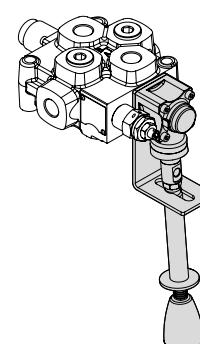
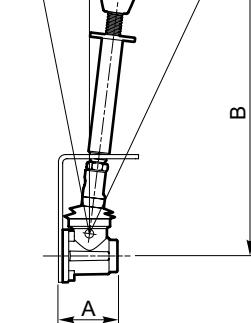
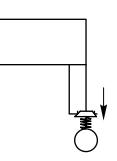
A1S

A1S: Comando manuale con leva di sicurezza
A1S: Hand control with safety lever



A2S

A2S: Comando manuale con leva di sicurezza ruotata di 180°
A2S: Hand control with safety lever rotated 180°

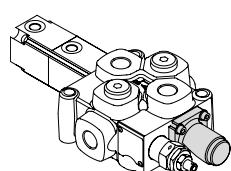


A3

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)

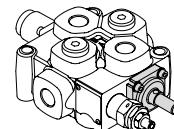
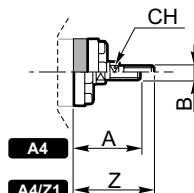
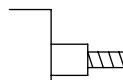


Sezione di lavoro

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

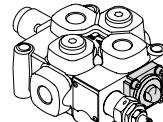
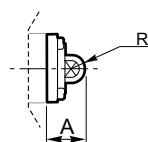
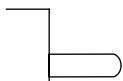


A4/Z1: Versione con kit distanziante per il montaggio del cursore 116
 A4/Z1: Version with spacer kit for installation of spool 116

	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

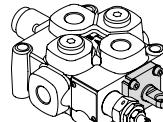
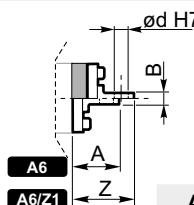
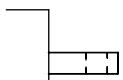
Attacco diretto sul cursore con terminale sferico (da utilizzare solo con il posizionamento M4 (2-1))
Direct control connection on spool with spherical end (Control to be used for positioning M4 (2-1))



	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

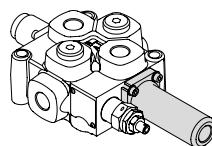
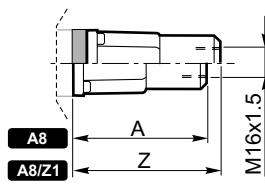
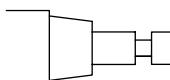


A6/Z1: Versione con kit distanziante per il montaggio del cursore 116
 A6/Z1: Version with spacer kit for installation of spool 116

	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 distanziante 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)

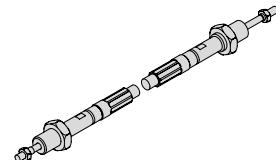
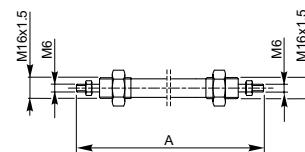
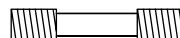
Sezione di lavoro

Working section



C1

Cavo flessibile
Flexible cable



A

Q25 - Q45
Q75 - Q95

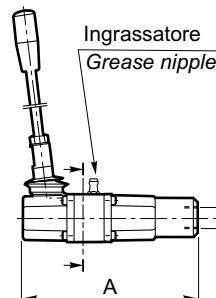
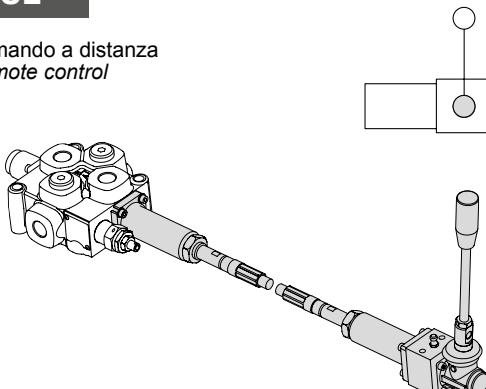
Massima lunghezza cavo consigliata 4000 mm
Raggio min. di curvatura 200mm
Max. recommended lenght 4000 mm
Minimun radium curve 200 mm

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

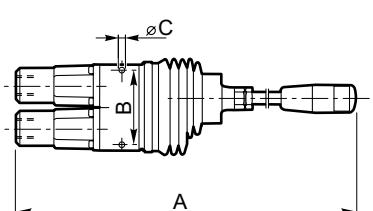
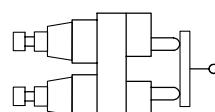
Comando a distanza
Remote control



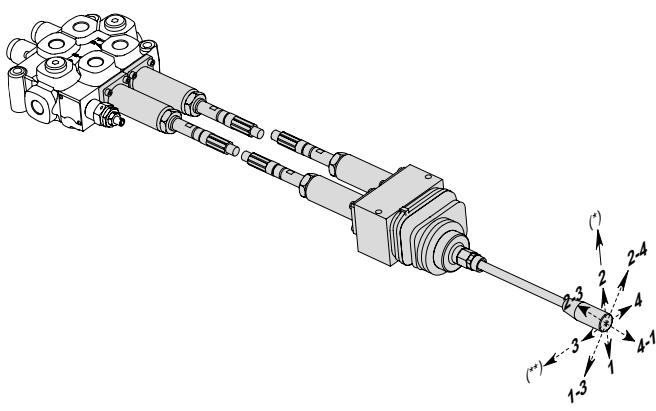
	A	B	C	d	E	F
Q25 - Q45	135 (5.315)	26 (1.024)	40 (1.575)	M16x1.5	38 (1.496)	5.5 (0.217)
Q75 - Q95	172 (6.772)	33.5 (1.319)	45 (1.772)		45 (1.772)	6.5 (0.256)

SLA15

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



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



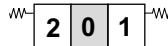
Eventuale cassetto con 4^a pos. (solo cod.126)
Optional spool with 4th position (only code 126)
(*) su 1^a sezione / on 1st section
(**) su 2^a sezione / on 2nd section

Sezione di lavoro

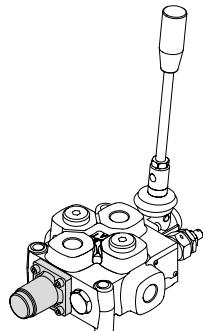
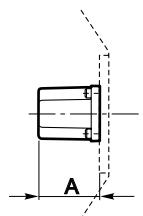
Working section

**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



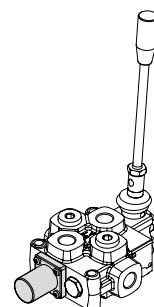
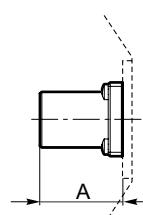
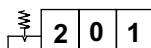
	A			
	M1	M2	M3	M4 2-1
Q15 GMV15	22.5 (0.886)	22.5 (0.886)	22.5 (0.886)	
Q35 Q25 - Q45	42 (1.654)	42 (1.654)	42 (1.654)	42 (1.654)
Q65 Q75 - Q95	55 (2.165)	55 (2.165)	55 (2.165)	55 (2.165)

M4 (2-1)

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

**R0**

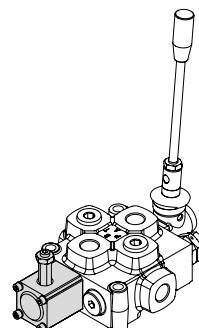
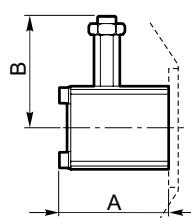
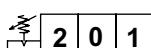
Posizionamento frizione
Friction positioner



Q35 - Q25 - Q45

Frizione non registrabile
Not adjustable friction

	A	
	Q25 - Q35 - Q45	42 (1.654)



Q65 - Q75 - Q95

Frizione registrabile
Adjustable friction

	A	B
Q65 - Q75 - Q95	59 (2.323)	60 (2.362)

Sezione di lavoro

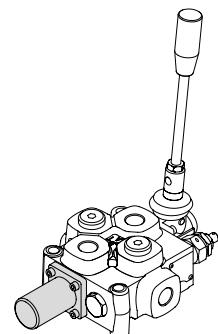
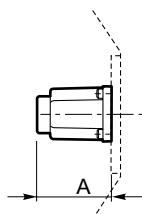
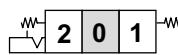
Working section



R1

Tre posizioni ritorno a molla in pos.0,
detent in pos.1

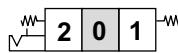
*Three positions spring centred in 0,
detent in 1*



R2

Tre posizioni ritorno a molla in pos.0,
detent in pos.2

*Three positions spring centred in 0,
detent in 2*

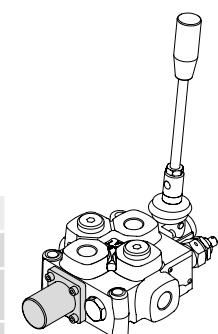
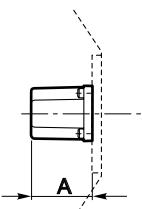
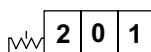


A

	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



A

	R3	R4	R5	R6
Q15 GMV15	22 (0.866)	22 (0.866)	22 (0.866)	
Q35 Q25 - Q45	42 (1.654)	42 (1.654)	42 (1.654)	42 (1.654)
Q65 Q75 - Q95	55 (2.165)	55 (2.165)	55 (2.165)	55 (2.165)

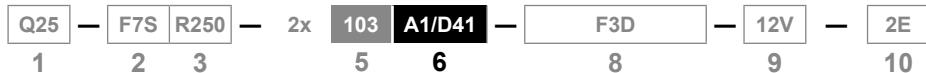
R6

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



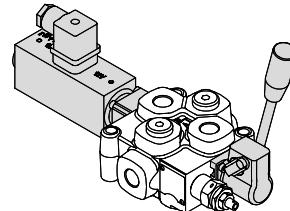
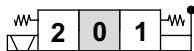
Sezione di lavoro

Working section



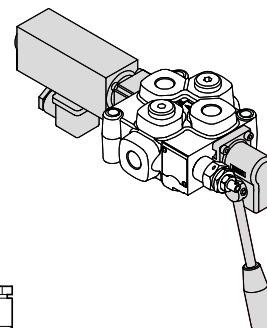
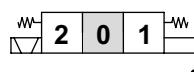
A1/D41

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

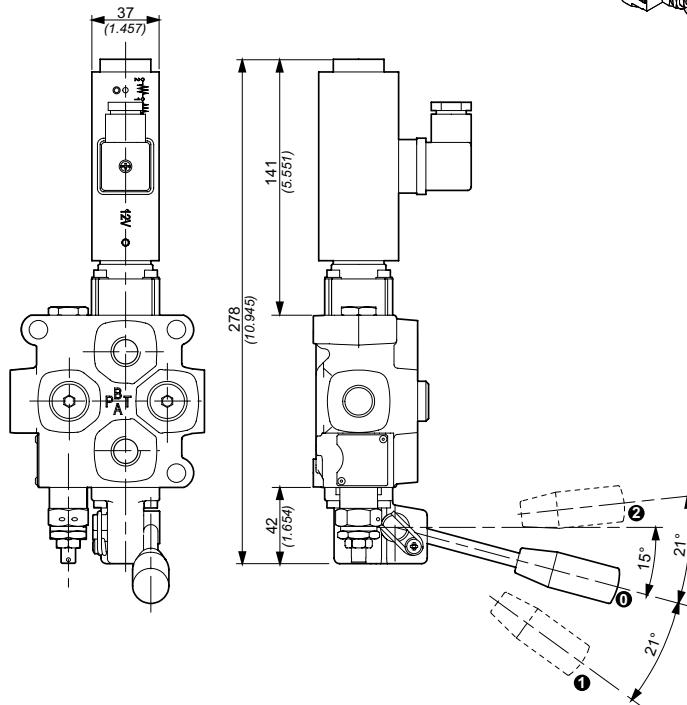


A2/D41

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	Tipi/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	H
Classe d'isolamento / Coil insulation class		
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%	

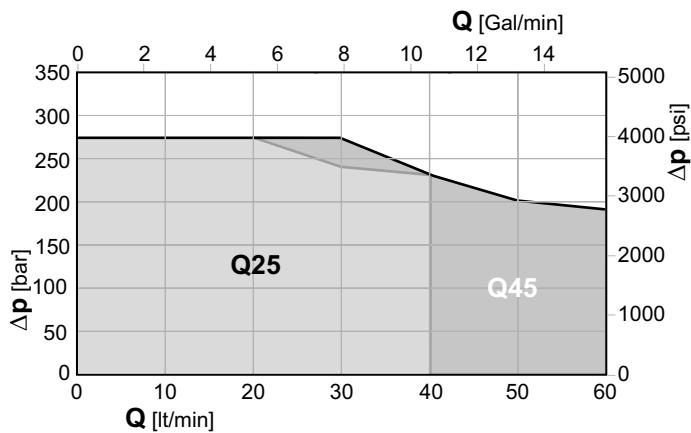
Caratteristiche tecniche distributore / Directional control valve characteristics

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 mm ² /s Max. spool leakage of A and B ports to T port at 1450 PSI with viscosity 35 mm ² /s	5 cm ³ /min	

Sezione di lavoro

Working section

Limiti d'impiego / Use limits

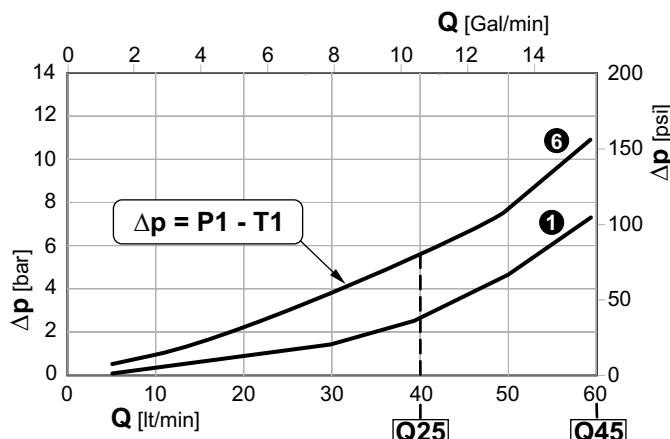
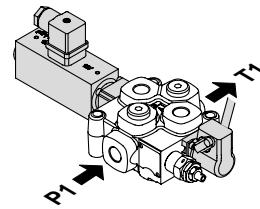


Perdite di carico con il cursore in posizione neutra

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in neutral position

(Δp depending on the number of the crossed sections)

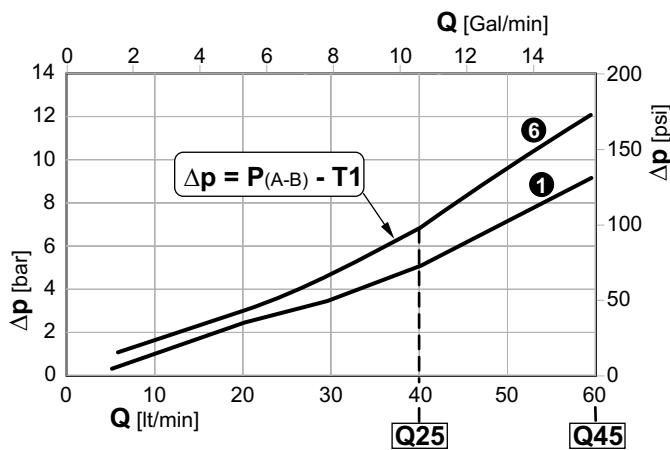
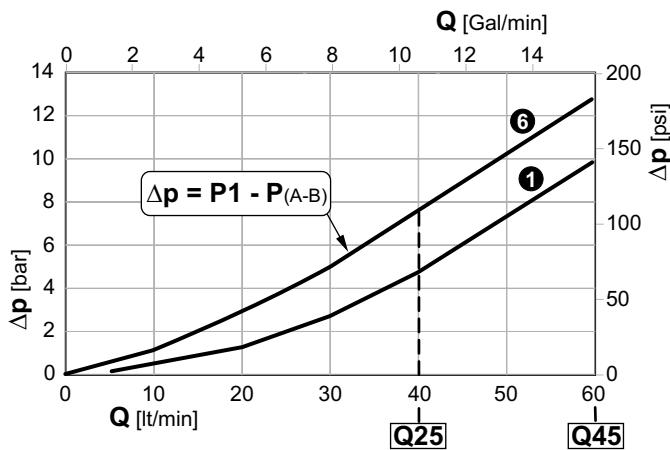
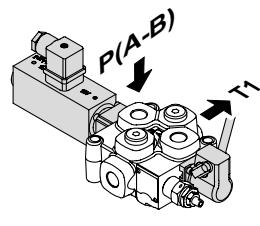
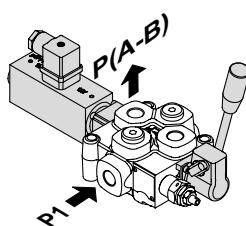


Perdite di carico con il cursore in posizione di lavoro

(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.

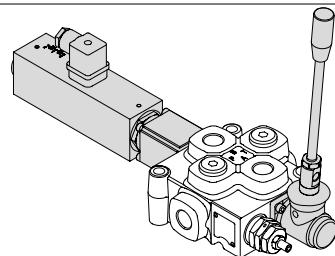
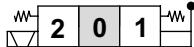
Sezione di lavoro

Working section



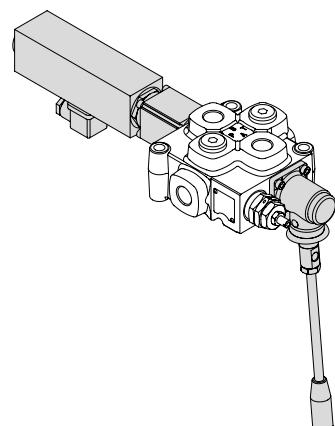
A1/D41

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

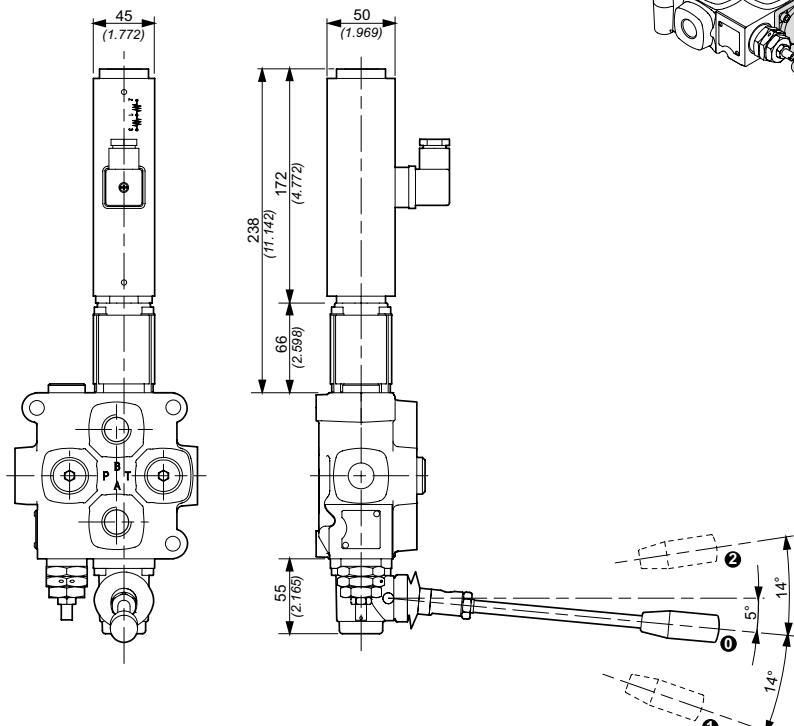


A2/D41

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)

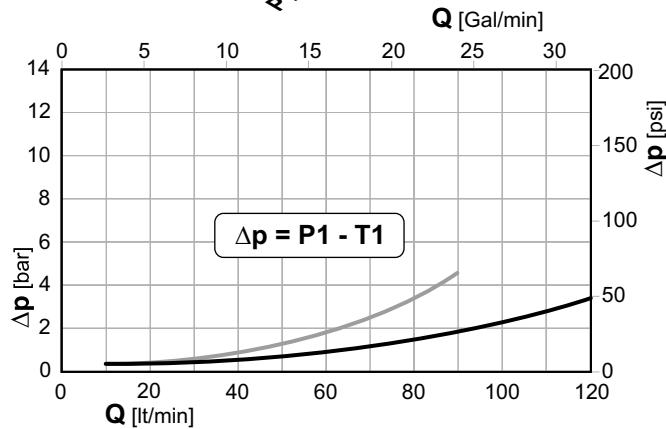
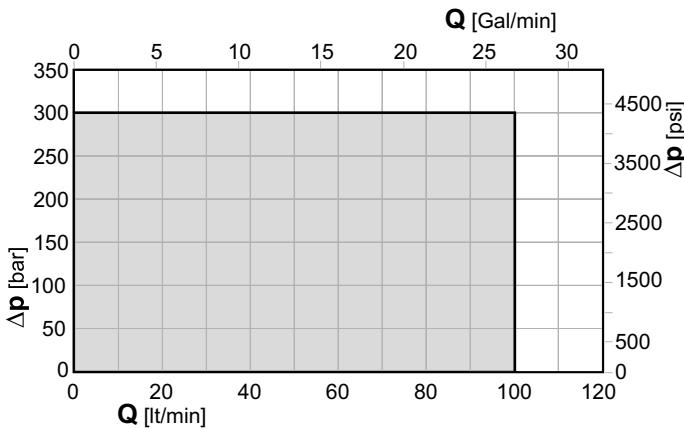
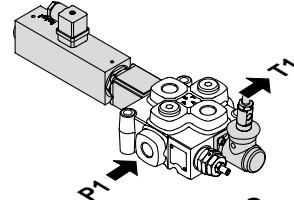
Caratteristiche tecniche elettromagnete / Electromagnet technical features		
Tipo distributore / Valve type	Q75	Q95
Attacco magnete / Magnet connection	Tipo/Type DIN 43650 (vers. A)	
Tipo protezione / Protection type	IP65	
Classe d'isolamento / Coil insulation class	H	
Tensione di alimentazione / Supply 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 mm ² /s Max. spool leakage of A and B ports to T port at 1450 bar with viscosity 35 mm ² /s	5 cm ³ /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

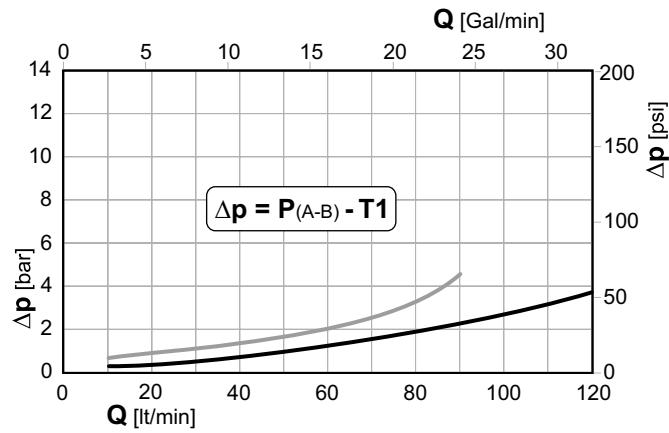
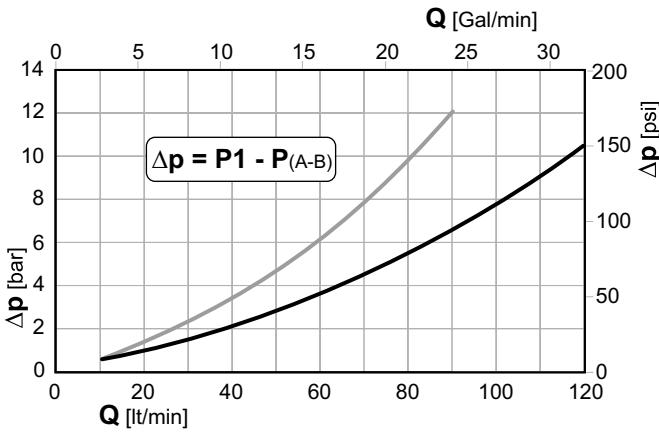
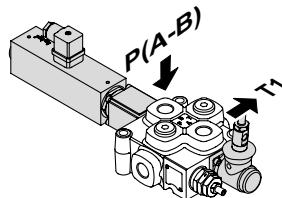
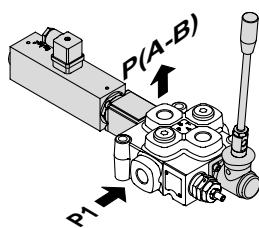
(Δp depending on the number of the crossed sections)

**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**

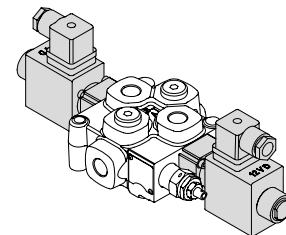
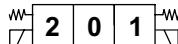
N.B. Le curve sono ricavate con cursore 103 / NOTE. Performance curves measured using spool 103 type.

Sezione di lavoro

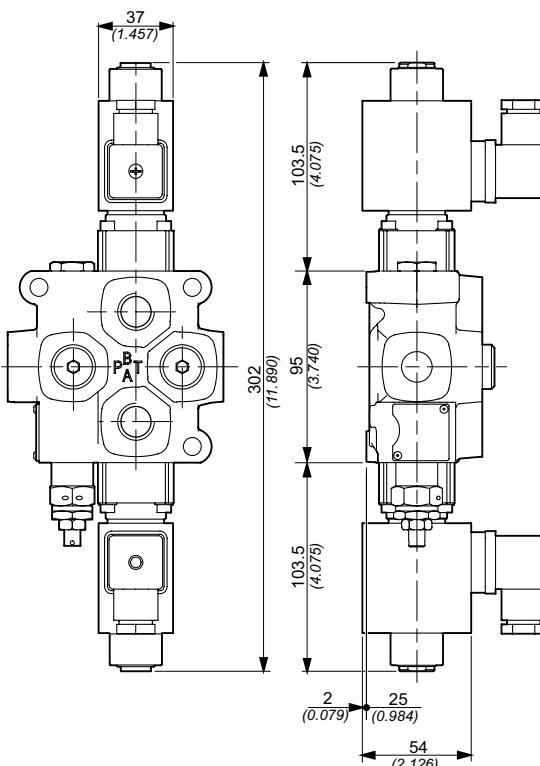
Working section

**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	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

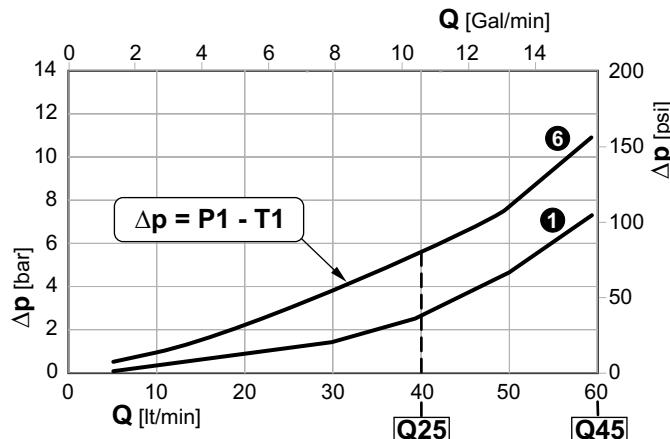
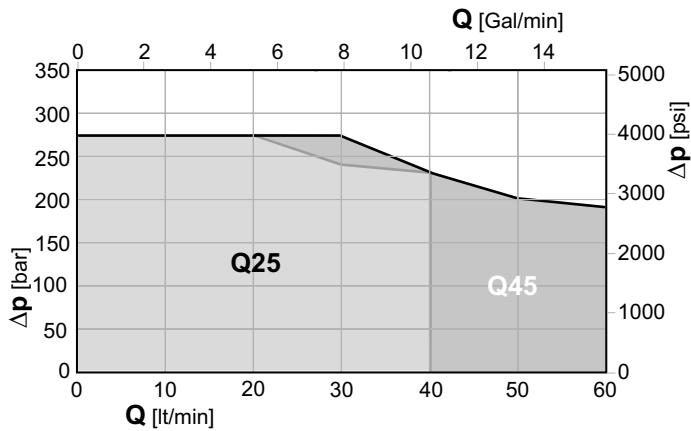
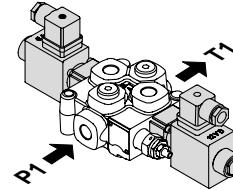
Limiti d'impiego / Use limits

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)

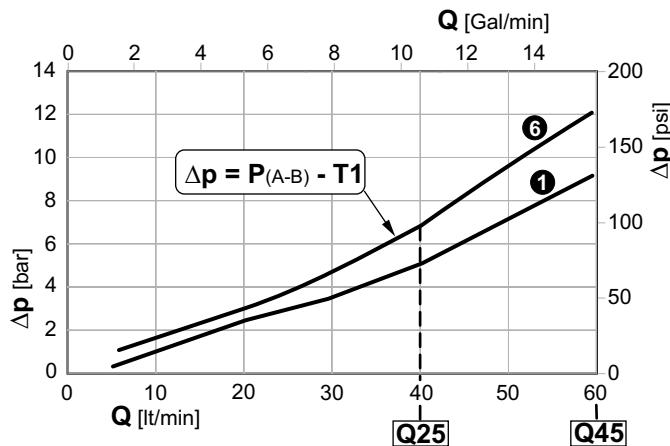
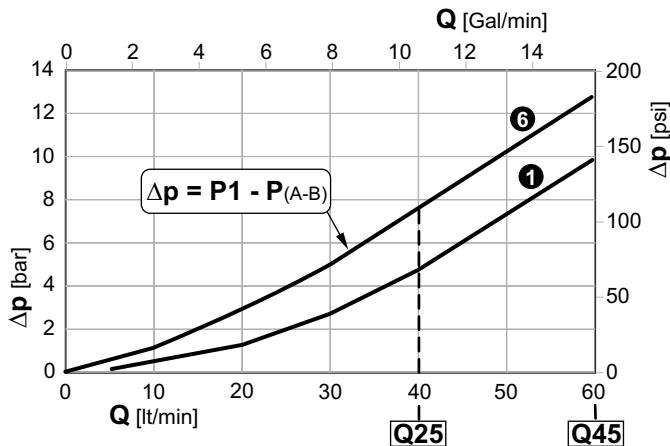
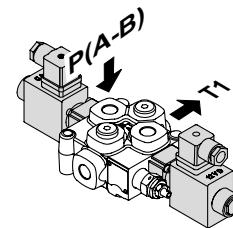
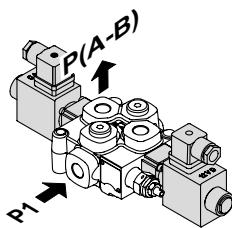


Perdite di carico con il cursore in posizione di lavoro

(Δp in funzione del numero di sezioni attraversate)

Pressure drop with spool in working position

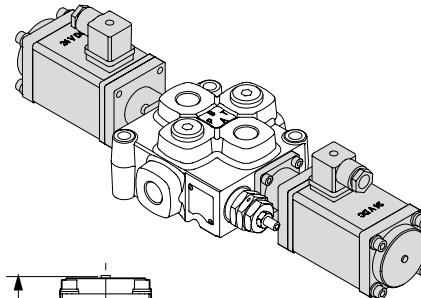
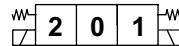
(Δp depending on the number of the crossed sections)

**1** **6** Sezioni / Sections

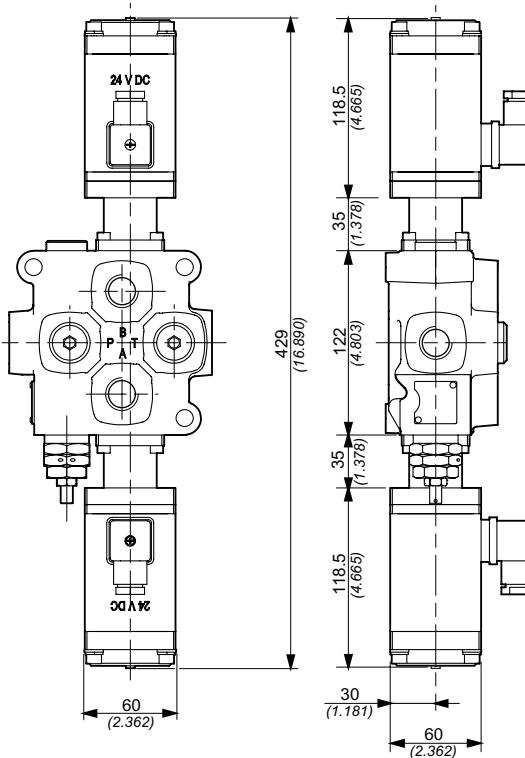
Q75 — F7S R250 — 2x 103 H1 — F3D — 12V — 2E
 1 2 3 5 6 8 9 10

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

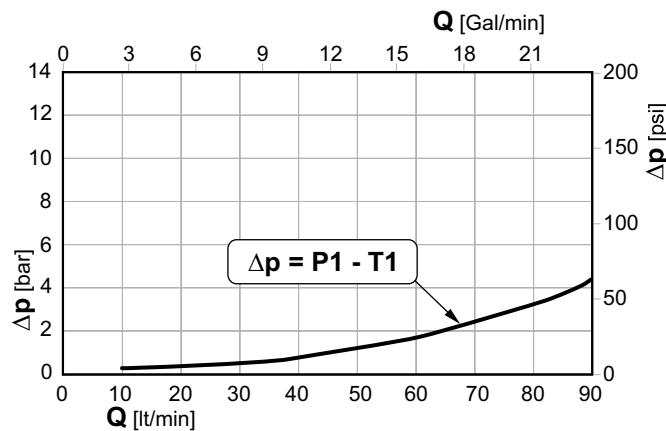
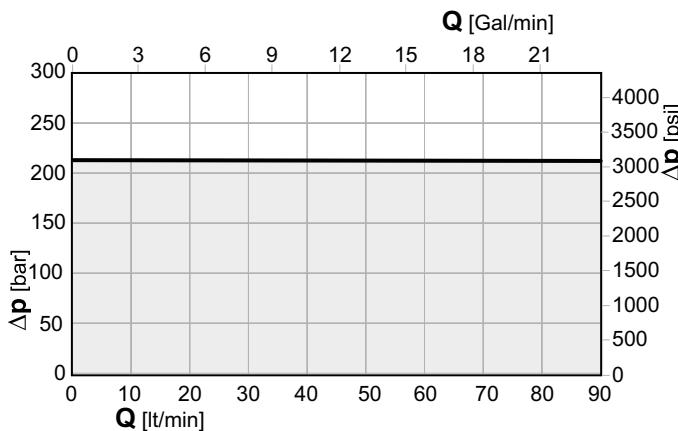
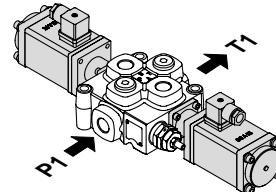


Dimensioni in / Dimensions in: mm (inch)

Caratteristiche tecniche elettromagnete / Electromagnet technical features		
Tipo distributore / Valve type	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 / 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 mm ² /s / Max. spool leakage of A and B ports to T port at 100 bar with viscosity 35 mm ² /s	7 cm ³ /min	

Sezione di lavoro**Working section****Limiti d'impiego / Use limits****Perdite di carico con il cursore in posizione neutra**

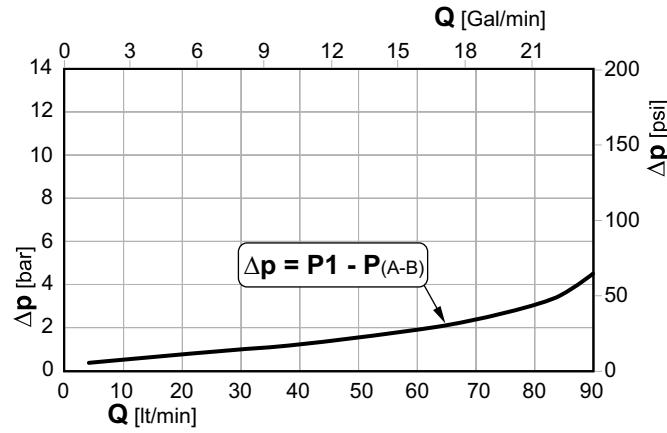
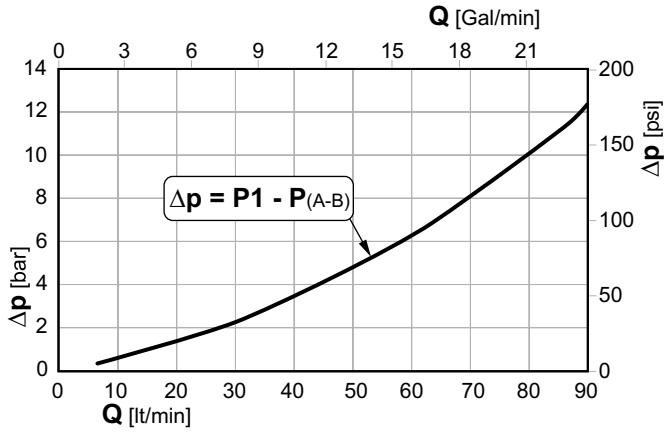
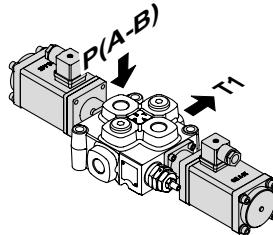
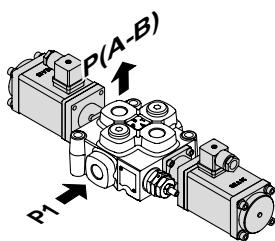
(Δp in funzione del numero di sezioni attraversate)

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

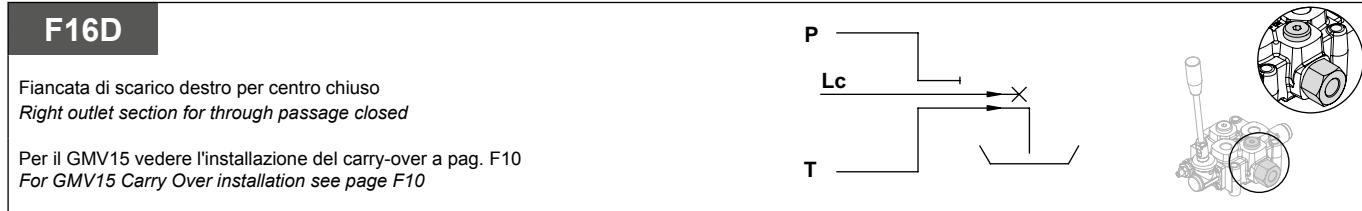
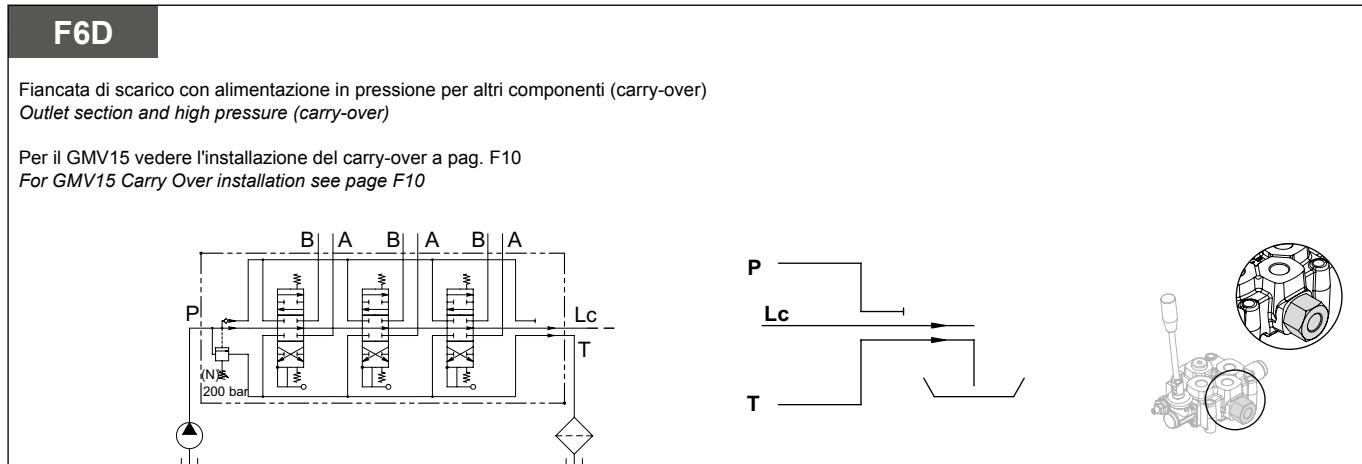
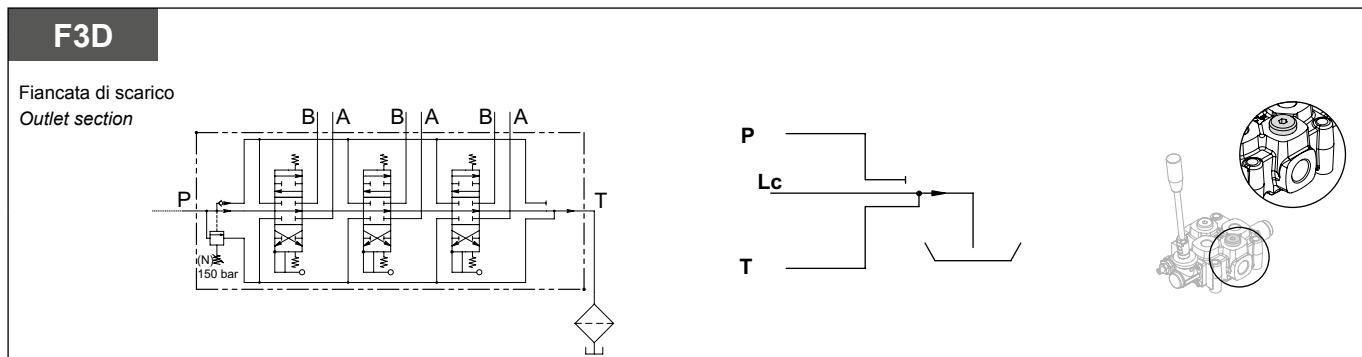
(Δp depending on the number of the crossed sections)



Fiancata di scarico**Outlet section type****8 - Tipo fiancata di scarico / Outlet section type**

Q15	GMV 15	Q35	Q25	Q45	Q65	Q75	Q95
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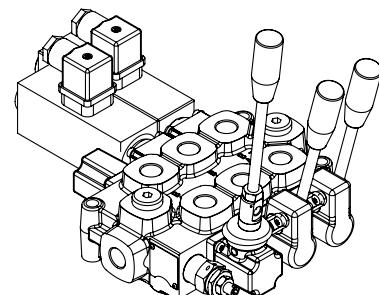
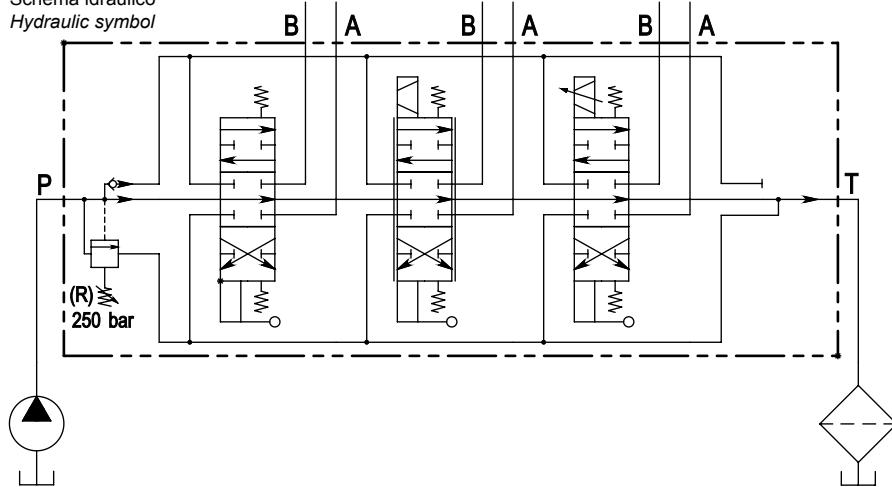
F3D	Fiancata di scarico	Outlet section	•	•	•	•	•	•
F6D	Fiancata di scarico con alimentazione in pressione per altri componenti (carry-over)	Outlet section and high pressure (carry-over)		•	•	•	•	•
F16D	Fiancata di scarico destro per centro chiuso	Right outlet section for through passage closed		•	•	•	•	•



ESEMPI DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLES

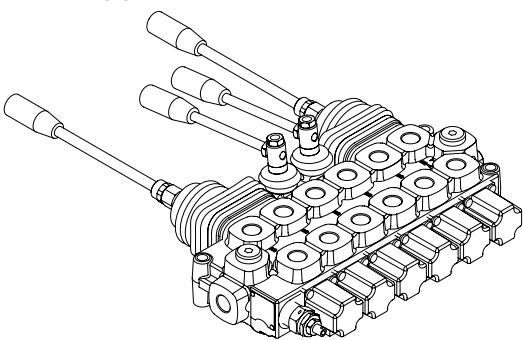
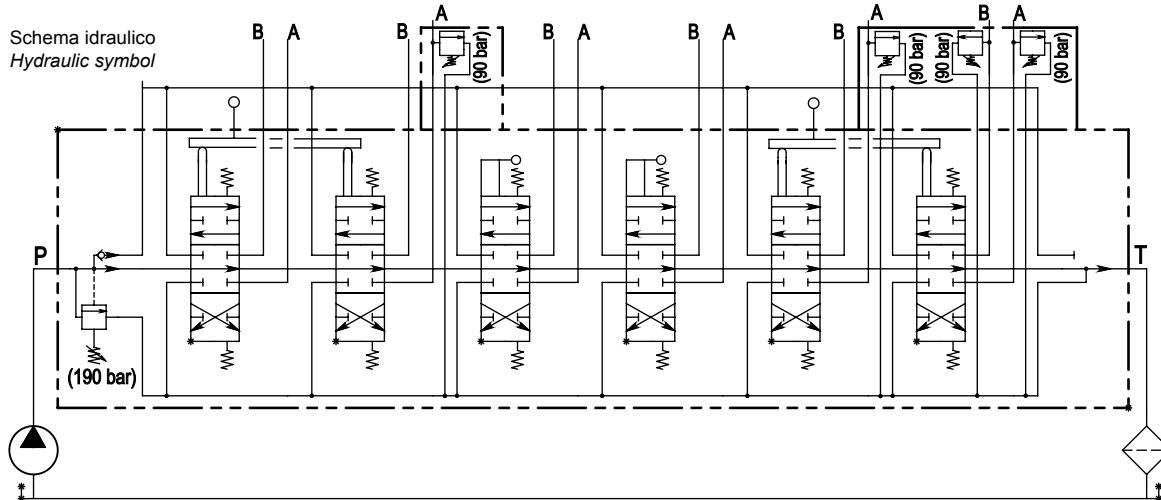
Q25 - F1S R(250) - 103/A1/M1 - 103/A1/D41 - 103/A1/DP - F3D - 12V - 3E

A	B	C	D	E
1 Q25	2 F1S	3 R250 5 - 6 - 7 103/A1/M1 103/A1/D41 103/A1/DP	8 F3D	9 - 10 12V - 3E

Schema idraulico
Hydraulic symbol

Q25 - F1S(N) - 103/M1/A352 - 103/M1/V30(N) - 2x103/M1/A1 - 103/M1/A354/V30(N) - 103/M1/V32(N) - F3D - 6E

A	B	C	D	E
1 Q25	2 F1S	3 N190 5 - 6 - 7 103/M1/A352 103/M1/V30(N) 2x 103/M1/A1 103/M1/A354/V30(N) 103/M1/V32(N)	8 F3D	9 - 10 6E

Schema idraulico
Hydraulic symbol

A - Tipo / Type

B - Fiancata d'ingresso / Inlet section

C - Sezione di lavoro / Working section

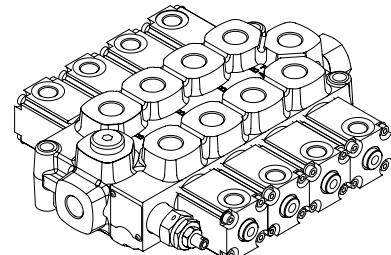
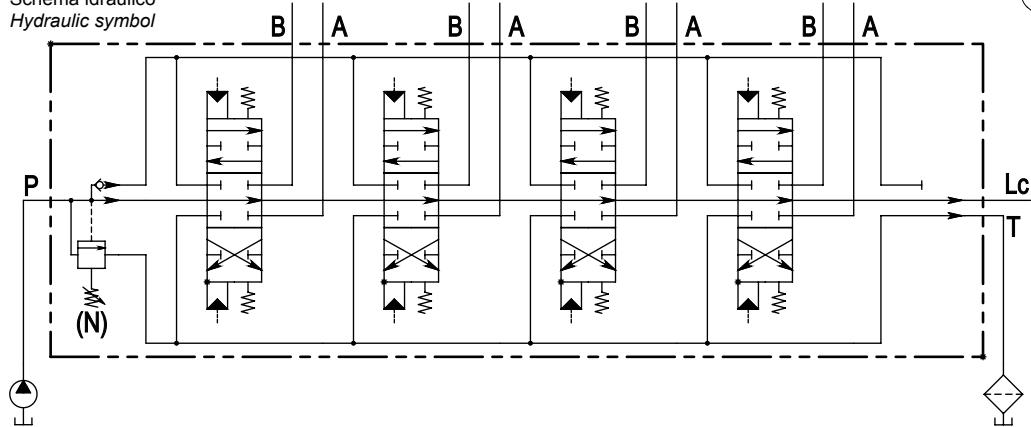
D - Fiancata di scarico / Outlet section

E - Note aggiuntive / Additional notes

ESEMPI DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLES

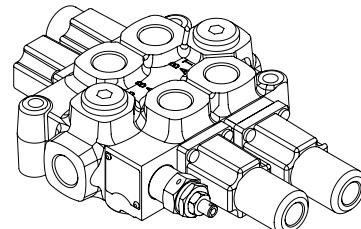
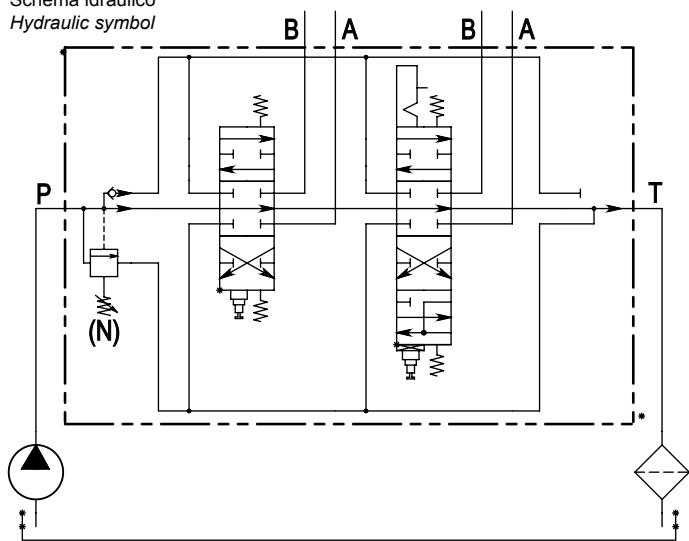
Q25 - F1S(N) - 4x103/H5 - F6D - 4E

A	B	C	D	E	
1	2	3	5 - 6 - 7	8	9 - 10
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	5 - 6 - 7	8	9 - 10
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

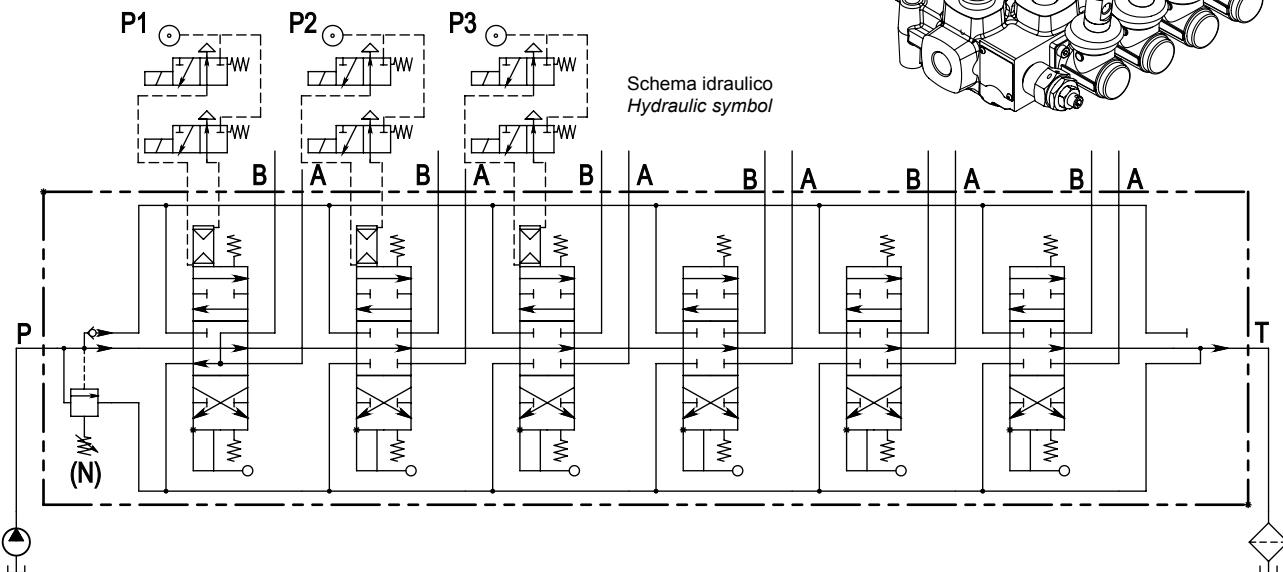
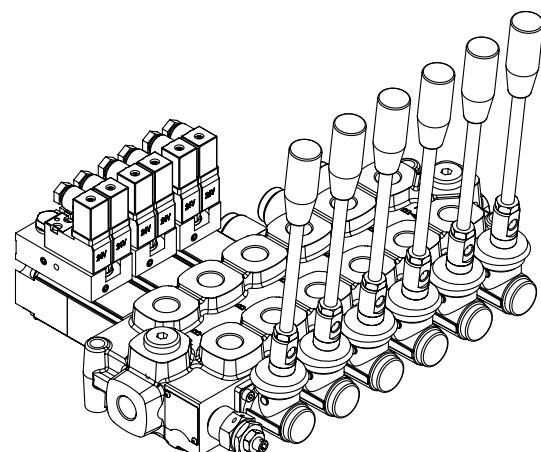
D - Fiancata di scarico / Outlet section

E - Note aggiuntive / Additional notes

ESEMPI DI ORDINAZIONE IN CODICE ORDERING CODE EXAMPLES

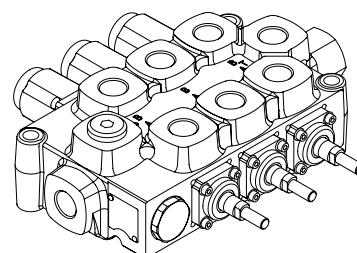
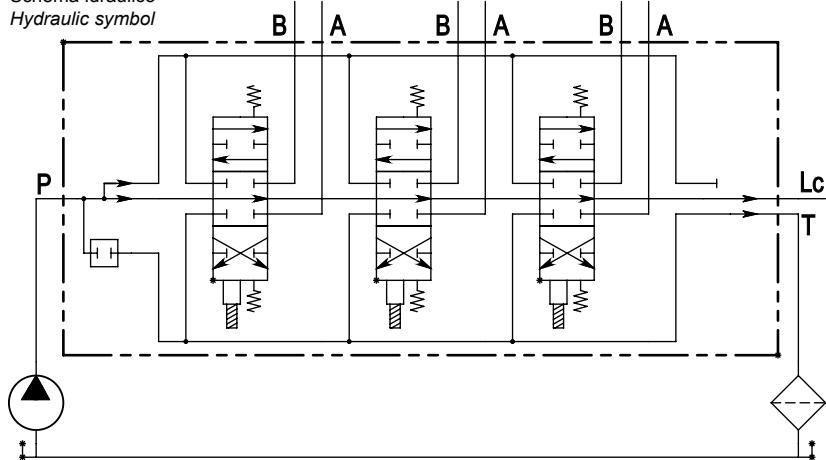
Q25 - F1S (N) - 111/A1/D3 - 2x103/A1/D3 - 3x103/A1/M1 - F3D - S 24V - 6E

A	B	C	D	E	
1	2	3	5 - 6 - 7	8	9 - 10
Q25	-	F1S N180	-	111/A1/D3	-
			2x	103/A1/D3	
			3x	103/A1/M1	



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

A	B	C	D	E	
1	2	3	5 - 6 - 7	8	9 - 10
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