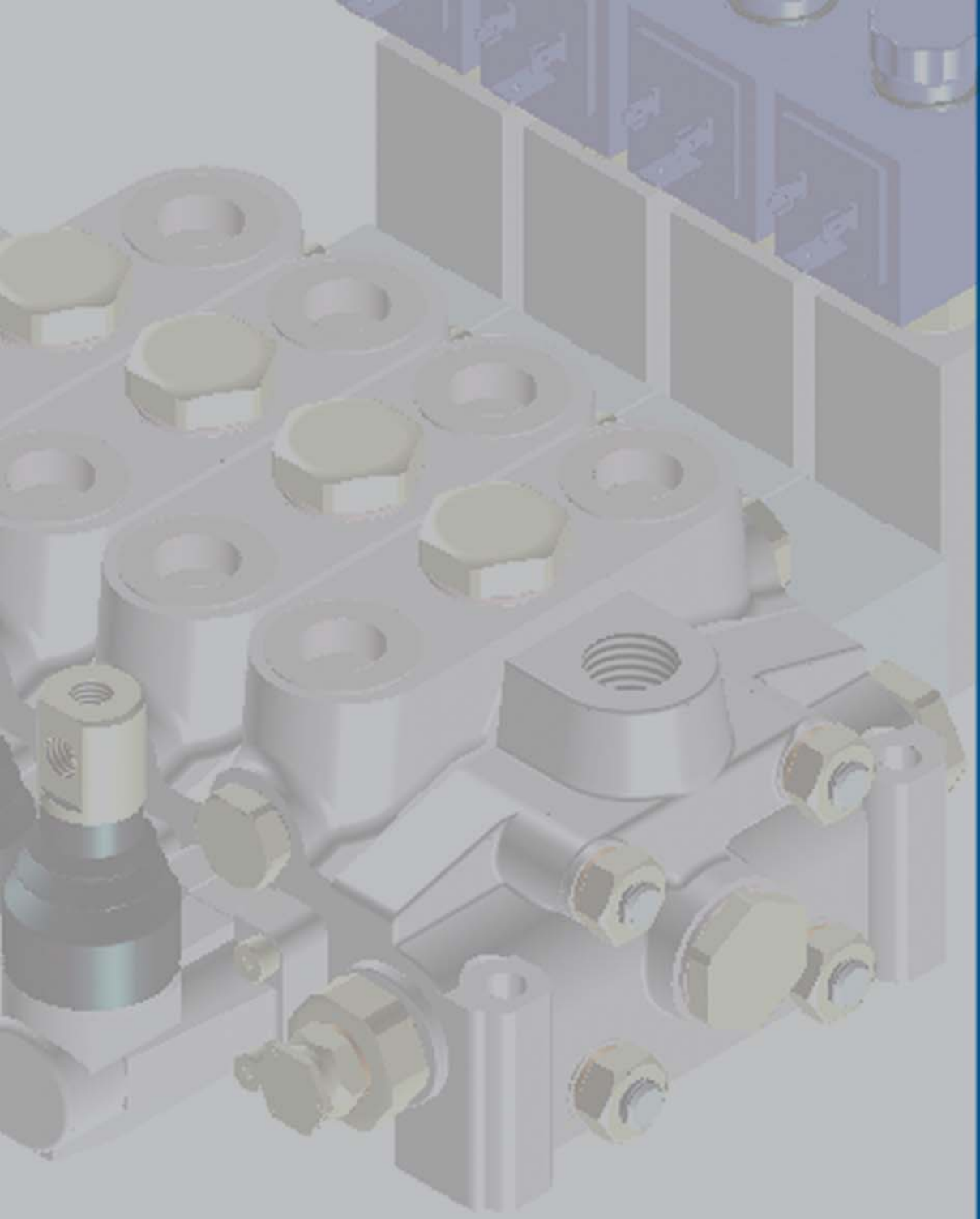


hydro control

Distributore componibile
Sectional valve

HC D4

Prodotti e soluzioni universali

Il distributore HC-D4 fa parte della vasta gamma delle valvole componibili della Hydrocontrol S.p.A. ed è idoneo a funzionare con una portata massima di 80 litri/min. a una pressione di esercizio di 350 bar.

L'elevato numero di funzioni integrate all'interno del distributore, nonché le innumerevoli configurazioni possibili, fanno di HC-D4 un prodotto altamente flessibile e facilmente adattabile ai più diversi campi applicativi.

Le sezioni sono corredate di valvole ausiliarie e di un'ampia gamma di cursori intercambiabili.

La possibilità di realizzare circuiti paralleli, circuiti tandem e circuiti serie, unitamente alle svariate combinazioni di questi, permette di rispondere a qualsiasi richiesta specifica.

Universal products and solutions

HC-D4 control valve belongs to the wide range of Hydrocontrol S.p.A. modular sectional valves and is capable of working with a maximum flow of 80 litres/min. at an operating pressure of 350 bar.

Numerous integrated valve features in addition to countless configuration options make HC-D4 highly flexible and easily adaptable to the widest applications range.

Sections are equipped with auxiliary valves and a wide variety of interchangeable spools.

The possibility to make parallel, tandem and series circuit and different conbinations between them, give an answer to every requirement.

I dati riportati all'interno del catalogo sono riferiti al prodotto standard. Sono possibili applicazioni speciali da concordarsi previamente con il n/s Ufficio Tecnico. Il presente catalogo non va interpretato e nel dubbio chiedere delucidazioni all'ufficio Tecnico Commerciale Hydrocontrol. I dati riportati non sono impegnativi e la Hydrocontrol S.p.A. si riserva di apportare modifiche e miglioramenti senza preavviso.

Il costruttore non risponde dei danni arrecati a persone o cose derivanti da un uso improprio del prodotto.

The specifications detailed in this catalogue show standard products. Special applications are available to order subject to contacting our Engineering Department for an estimate. This catalogue is not open to interpretation and in case of doubt the costumer is requested to contact the Hydrocontrol Technical Sales Office who will be pleased to supply detailed explanations. The data and specifications indicated are to be considered a guide only and Hydrocontrol S.p.A. reserved the right to introduce improvements and modifications without prior notice.

Hydrocontrol in not responsable for any damage caused by an incorrect use of the product.

CARATTERISTICHE GENERALI - *GENERAL SPECIFICATIONS*

Condizioni di lavoro standard

- PORTATA NOMINALE . . . . . .**80 l/min**
- PRESSIONE NOMINALE . . . . . .**350 bar**
- PRESSIONE MAX SULLA LINEA (T) . . . . . .**20 bar**
- TEMPERATURA OPERATIVA . . . . . .**-25°C / +80°C**
- VISCOSITA' CINEMATICA . . . . . .**da 10 a 460 mm²/s**
- GRADO DI CONTAMINAZIONE . . . . . .**19/16 ISO 4406**
- GRADO DI FILTRAGGIO . . . . . .**β 10 > 75**

Standard working conditions

- *FLOW RATE* . . . . . ***21 GPM***
- *PRESSURE RATE* . . . . . ***5000 PSI***
- *MAX PRESSURE ON (T)* . . . . . ***290 PSI***
- *OPERATING TEMPERATURE* . . . . . ***-25°C / +80°C***
- *KINEMATIC VISCOSITY* . . . . . ***da 10 a 460 mm²/s***
- *CONTAMINATION LEVEL* . . . . . ***19/16 ISO 4406***
- *FILTRATION LEVEL* . . . . . ***β 10 > 75***

Caratteristiche tecniche

- NUMERO SEZIONI DI LAVORO . . . . . **1 - 12**
- CORSA DELLA SPOLA . . . . . **6 + 6 mm**
- INTERASSE STELI . . . . . **40 mm**

Technical specifications

- *WORKING SECTION NUMBER* . . . . . ***1 - 12***
- *SPOOL STROKE* . . . . . ***0,236 + 0,236 in***
- *SPOOLS PITCH* . . . . . ***1,576 in***

Compatibilità fluidi

TIPI DI FLUIDI (Oli e Soluzioni)	TEMP. (C°) min	max	GUARNIZIONI NBR	VITON(*)
Olio minerale HPL (DIN 51524)	-25	+80	•	•
Olio in emulsione acquosa HFA(*)	+5	+55	•	•
Acqua in emulsione oleosa HFB(*)	+5	+55	•	•
Soluzione acquosa in poliglicoli HFC(*)	-25	+60	•	
Esteri di acido fosforico HCD(*)	-20	+150		•

(*) : previo accordo con il n/s Ufficio Tecnico - Commerciale
NBR : mescola nitrilica compatibile con oli a base minerale ASTIM 1
VITON : elastomero florurato per impieghi ad alta temperatura, compatibile con fluidi ASTIM 1 e ASTIM 3.

Fluid compatybility

TYPE OF FLUID (Oil and Solution)	*TEMP. (C°) min*	*max*	*GASKET NBR*	*VITON(*)*
Mineral oil HPL (DIN 51524)	*-25*	*+80*	•	•
Oil in water emulsion HFA(*)	*+5*	*+55*	•	•
Water in oil emulsion HFB(*)	*+5*	*+55*	•	•
Polyglycol-based aqueous sol. HFC(*)	*-25*	*+60*	•	
Ester of phosphoric acid HCD(*)	*-20*	*+150*		•

(*) : for this application, please contact our technical sales office.
NBR : nitrile rubber compatible with mineral-bases oils ASTIM 1
VITON : fluorinated elastomer for use at high temperature, compatible with fluids ASTIM 1 and ASTIM 3.

Unità di misura - Fattori conversione

Sistemi / Unità	METRICO	BRITANNICO
LUNGHEZZA	1 mm = 0,0394 in	1 in = 25,4 mm
MASSA	1 kg = 2,205 lb	1 lb = 0,4536 kg
FORZA	1 Nm = 0,1020 kgf	1 kgf = 9,8067 Nm
VOLUME	1 l = 0,2200 gal UK 1 l = 0,2642 gal US	1 gal UK = 4,546 l 1 gal US = 3,785 l
PRESSIONE	1 bar = 100000 Pa 1 bar = 14,5 psi	1 Pa = 0,00001 bar 1 psi = 0.0689 bar

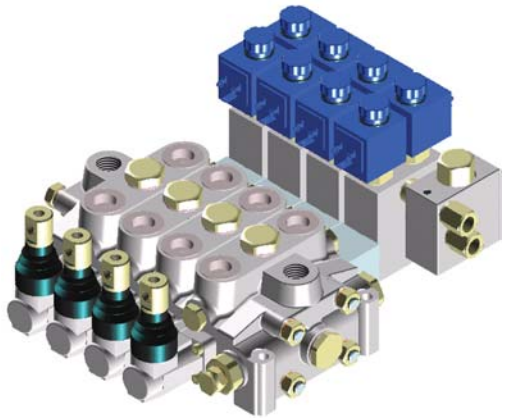
Unit of measure - Conversion factors

Systems / Unit	*METRIC*	*BSP*
LENGTH	*1 mm = 0,0394 in*	*1 in = 25,4 mm*
MASS	*1 kg = 2,205 lb*	*1 lb = 0,4536 kg*
FORCE	*1 Nm = 0,1020 kgf*	*1 kgf = 9,8067 Nm*
VOLUME	*1 l = 0,2200 gal UK* *1 i = 0,2642 gal US*	*1 gal UK = 4,546 l* *1 gal US = 3,785 l*
PRESSURE	*1 bar = 100000 Pa* *1 bar = 14,5 psi*	*1 Pa = 0,00001 bar* *1 psi = 0.0689 bar*

Indice generale

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SECTIONAL VALVE



DISTRIBUTORE COMPONIBILE

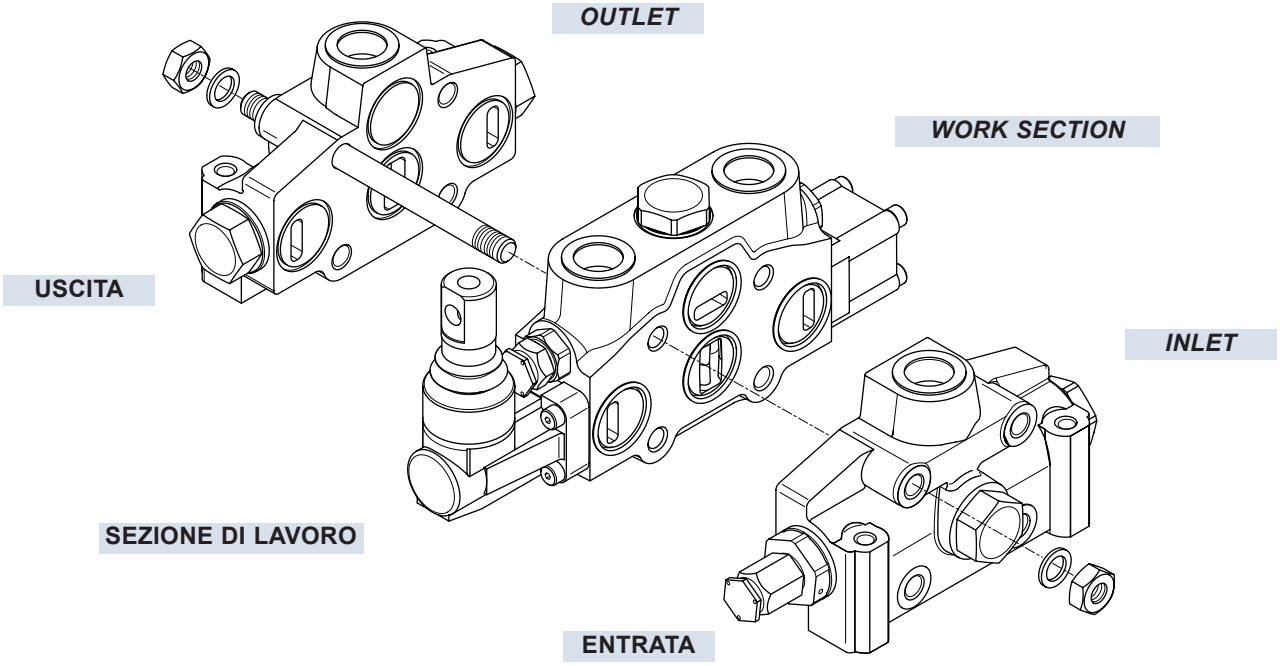
General index

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MODALITA' DI ORDINAZIONE - *ORDER MODALITY*

Esempio di ordinazione: ***Order example:***

HC-D4/1	IR 001 (150) A G04	W001A H001 F001A RP G04 01PA(120) 05PB	TJ A G04
A	B	C	D
	pag. 13	pag. 16	pag. 41



A: TIPOLOGIA DISTRIBUTORE COMPONIBILE

D4 = tipologia prodotto
/1 = numero sezioni di lavoro

B: ALLESTIMENTO ENTRATA

IR 001 = lato entrata e tipologia valvola . . . . .pag. 13
150 = taratura (bar)
A G04 = posizione ingresso e filettatura

C: ALLESTIMENTO SEZIONE DI LAVORO

W001A = cursore . . . . . .pag. 16
H001 = comando cursore . . . . . .pag. 19
F001A = richiamo cursore . . . . . .pag. 23
RP G04 = tipologia e filettatura sezione . . . . .pag. 33
01PA120 = valvola ausiliaria (utilizzo A) . . . . .pag. 34
05PB = valvola ausiliaria (utilizzo B)

NOTA: le sigle del riferimento C, devono essere ripetute tante volte, quante sono le sezioni che compongono il monoblocco.

D: TIPOLOGIA ALLESTIMENTO USCITA

TJ = tipologia uscita . . . . . .pag. 41
A G04 = posizione scarico e filettatura

A: SECTIONAL CONTROL VALVE TYPE

D4 *= product type*
/1 *= number of sections*

B: INLET ARRANGEMENT

IR 001 *= inlet side and valve type . . . . . .page 13*
150 *= setting (bar)*
A G04 *= inlet and thread position*

C: WORK SECTION ARRANGEMENT

W001A *= spool . . . . . .page 16*
H001 *= spool actuation . . . . . .page 19*
F001A *= spool return action . . . . . .page 23*
RP G04 *= type and thread section . . . . . .page 33*
01PA120 *= auxiliary valve (port A) . . . . . .page 34*
05PB *= auxiliary valve (port B)*

NOTE: ordering row C must be repeated for every work section.

D: OUTLET ARRANGEMENT

TJ *= outlet type . . . . . .page 41*
A G04 *= outlet and thread position*

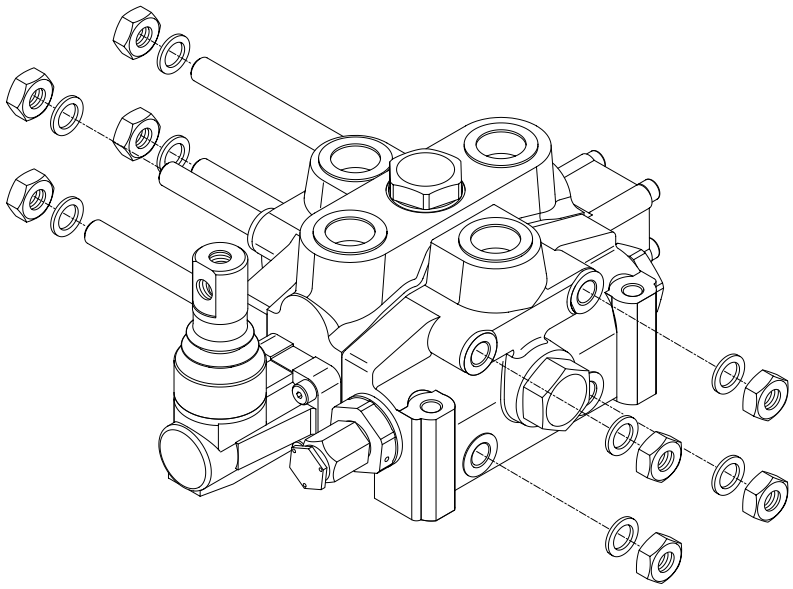
Caratteristiche di assemblaggio:

Assembly specifications

Il corretto allestimento del distributore componibile HC-D4 è garantito dal kit tirante caratterizzato dalla lunghezza variabile (**L**) a seconda del numero delle sezioni.

Tie rod kit allows the correct assembling of HC-D4. Tie rods lenght depends on number of sections.

Kit tirante / *Tie-rod kit*



LUNGHEZZA TIRANTE (mm) - *TIE ROD LENGHT (in)*

Tipo-*Type*	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
mm	140	180	220	260	300	340	380	420	460	500	540	580
in	*5,5*	*7,1*	*8,7*	*10,3*	*11,9*	*13,5*	*14,1*	*16,7*	*18,3*	*19,9*	*21,5*	*23,1*

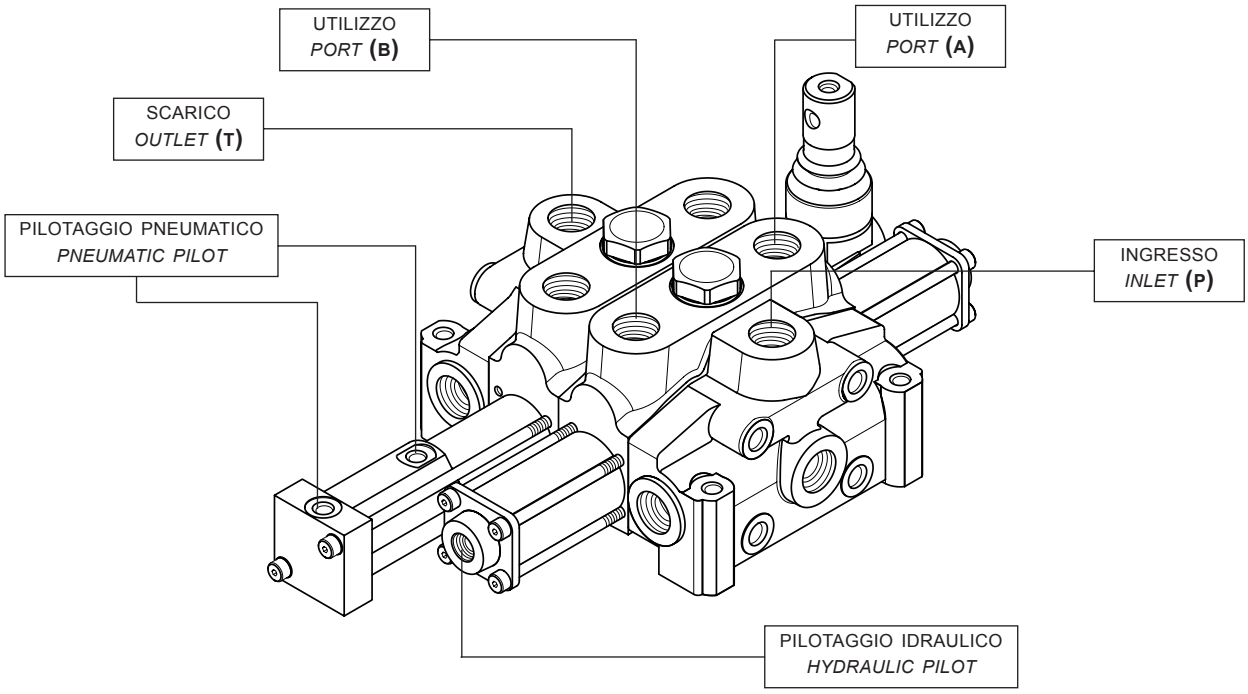
Coppia serraggio tirante	35 Nm
Tie-rod clamping torque	*3,6 Kgf*

NOTA: ogni distributore è allestito con N° 4 kit tiranti i quali, a loro volta, sono costituiti da un tirante due dadi e due rondelle.

***NOTE**: each valve is assembled with N° 4 tie rod kits including a tie rod, two nuts and two washers.*

DIMENSIONI - *DIMENSIONS*

Filettature standard — *Standard thread*



UTILIZZI PORTS	filettature / thread (BSP) ISO-228	filettature / thread (SAE UN-UNF) ISO-725	filettature / thread (METRICA) ISO-262
Ingresso / *Inlet P*	G 1/2	3/4”-16 UNF / 7/8”-14 UNF	M18 x 1,5
Utilizzi / *Ports A - B*	G 1/2	3/4”-16 UNF / 7/8”-14 UNF	M18 x 1,5
Scarico / *Outlet T*	G 1/2	3/4”-16 UNF / 7/8”-14 UNF	M22 x 1,5
Carry-over HPCO	G 1/2	3/4”-16 UNF / 7/8”-14 UNF	M22 x 1,5

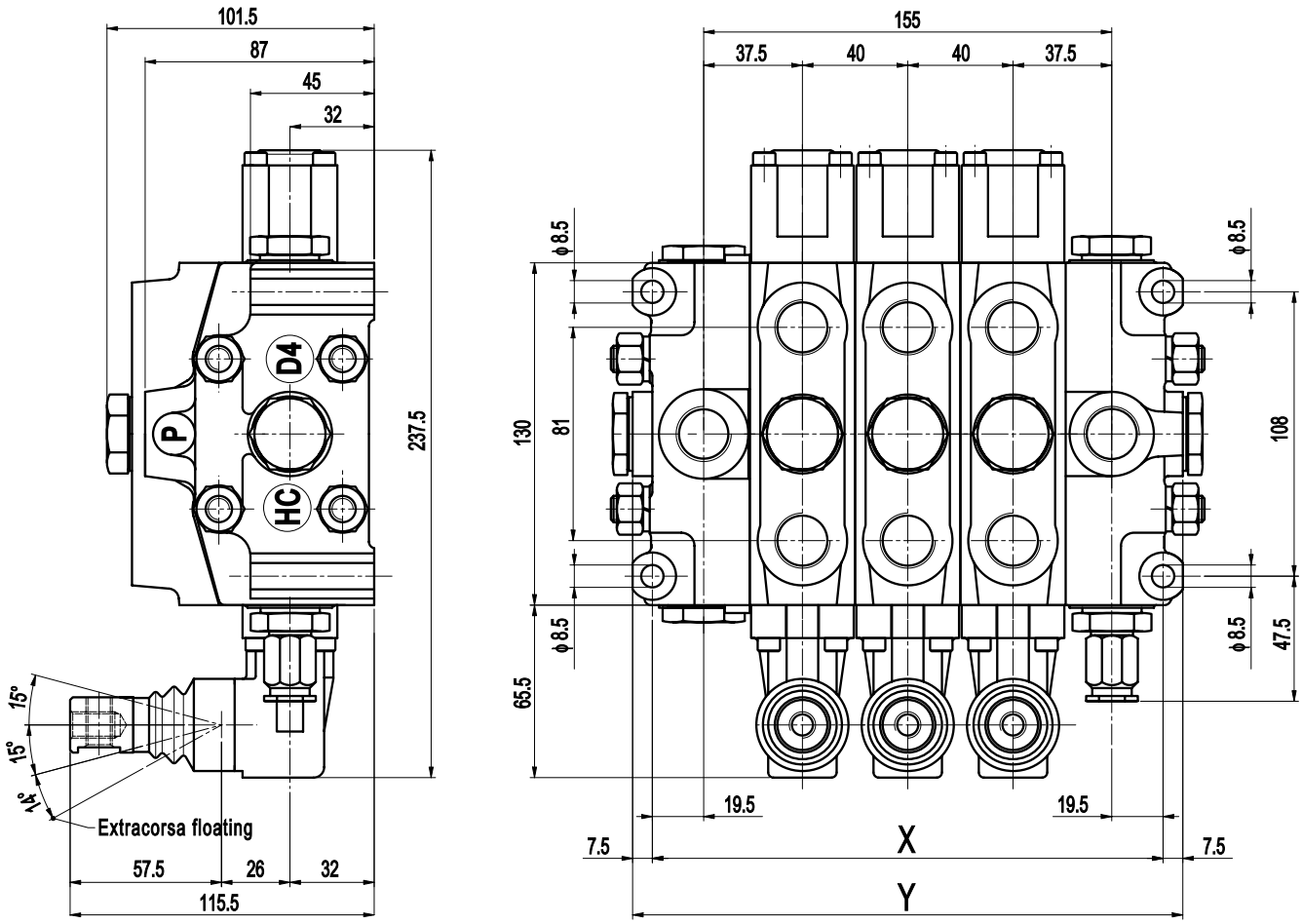
UTILIZZI PORTS	filettature / thread (BSP) ISO-228
Pilotaggio idraulico ***Hydraulic pilot***	G 1/4 *G 1/4*
Pilotaggio pneumatico ***Pneumatic pilot***	G 1/8 *G 1/8*

Sigle di ordinazione — *Ordering codes*

1/2” BSP	3/4”-16 UNF	7/8”-14 UNF	M18 x 1,5	M22 x 1,5
G04	**U03**	**U04**	**M01**	**M02**

Disegno d'ingombro:

Dimensional drawing:



QUOTE VARIABILI - *VARIABLE DIMENSIONS*

Tipo-*Type*	/1	/2	/3	/4	/5	/6	/7	/8	/9	/10	/11	/12
X (mm)	114	154	194	234	274	314	354	394	434	474	514	554
X (in)	*4,5*	*6,1*	*7,6*	*9,2*	*10,8*	*12,4*	*14*	*15,5*	*17,1*	*18,7*	*20,2*	*21,8*
Y (mm)	129	169	209	249	289	329	369	409	449	489	529	569
Y (in)	*5,1*	*6,7*	*8,2*	*9,8*	*11,4*	*13*	*14,6*	*16,1*	*17,7*	*19,3*	*20,8*	*22,4*

PESI - *WEIGHTS*

Tipo-*Type*	D4/1	D4/2	D4/3	D4/4	D4/5	D4/6	D4/7	D4/8	D4/9	D4/10	D4/11	D4/12
Kg	8	10,8	13,7	16,5	19,4	22,3	25,2	28	30,8	33,7	36,6	39,5
lb	*17,6*	*23,8*	*30,2*	*36.4*	*42,8*	*49,2*	*55,6*	*61,8*	*67,9*	*74,3*	*80,7*	*87,1*

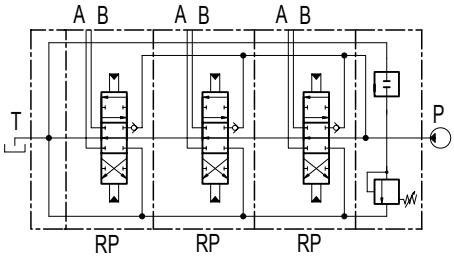
SPECIFICHE IDRAULICHE - *HYDRAULIC SPECIFICATIONS*

Circuito Parallelo — *Parallel circuit*

Il cursore quando viene azionato, intercetta il canale di libera circolazione deviando il flusso d'olio agli utilizzi A e B.
Se due o più cursori vengono azionati contemporaneamente, l'olio alimenterà l'utenza con il carico inferiore prediligendo la via con il minimo sforzo; parzializzando i cursori il flusso d'olio può essere ripartito fra due o più utilizzi.

When the spool is operated it intercepts the switch gallery by diverting the flow of oil to service ports A or B. If two or more spools are actuated at the same time, the oil will power the service port that has the lower load by selecting the path with the least resistance; by throtting the spools, the flow of oil can be divided between two or more service ports.

SCHEMA IDRAULICO - HYDRAULIC SCHEMA

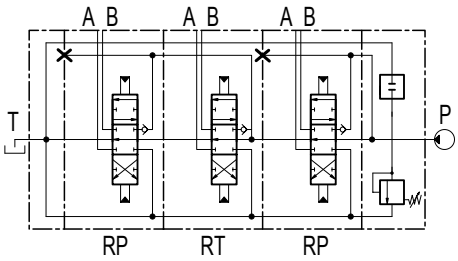


Circuito Parallelo-Tandem — *Parallel-Tandem circuit*

Il cursore quando viene azionato, intercetta il canale di libera circolazione deviando il flusso d'olio agli utilizzi A e B.
Il circuito tandem si alimenta dal canale di libera circolazione, permettendo l'utilizzo di una sola sezione di lavoro alla volta. L'elemento a valle della sezione tandem azionata, non funziona mentre la sezione a monte ha la priorità.

When the spool is operated it intercepts the switch gallery by diverting the flow of oil to service ports A or B.
The tandem circuit is powered by the switch gallery thus permitting the use of just one work section at a time. The section downstream from the tandem section that has been actuated does not operate, the upstream section has priority.

SCHEMA IDRAULICO - HYDRAULIC SCHEMA

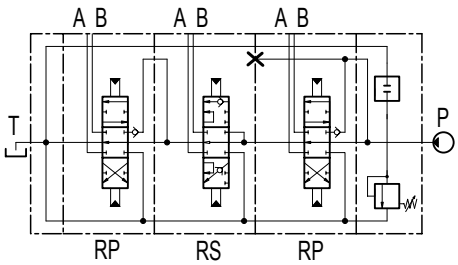


Circuito Serie — *Serie circuit*

Il cursore quando viene azionato, intercetta il canale di libera circolazione deviando il flusso d'olio agli utilizzi A e B.
L'olio che rientra dall'attuatore, viene convogliato nel circuito di libera circolazione rendendolo disponibile per le utenze a valle dell'elemento serie. Le pressioni a valle si sommano con la pressione dell'elemento stesso.

When the spool is operated it intercepts the switch gallery by diverting the flow of oil to service ports A or B. The oil that flows back from the actuator is carried to the switch gallery thus making it available to the service ports downstream from the series section. The pressure drop downstream is added to the pressure drop of the section itself.

SCHEMA IDRAULICO - HYDRAULIC SCHEMA



Collegamento carry-over (HPCO)

Carry-over connection (HPCO)

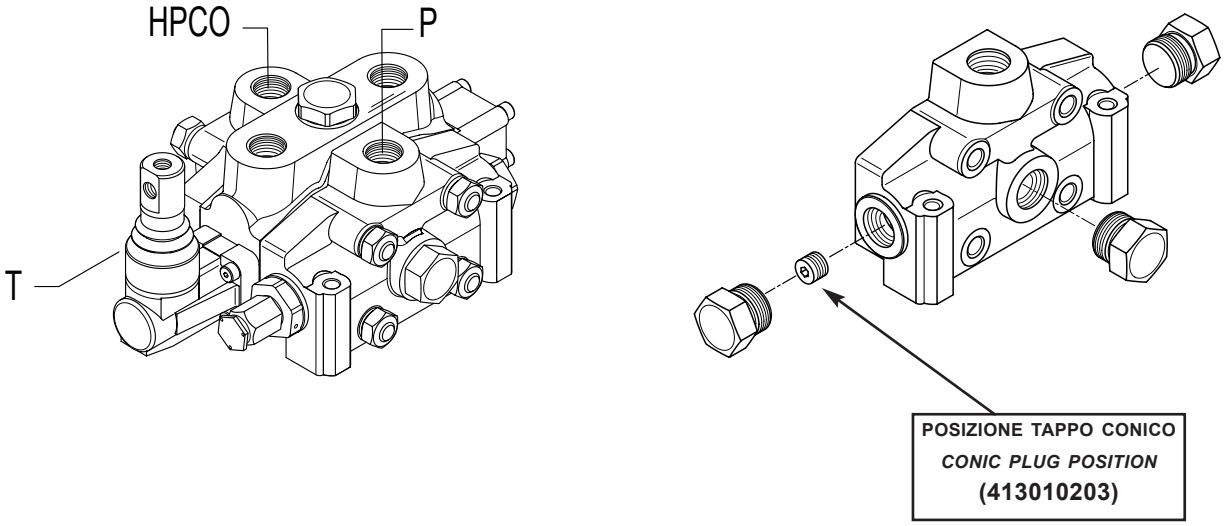
Questa opzione, di serie sul distributore HC-D4, permette il prolungamento del canale di libera circolazione all'esterno, alimentando così un secondo distributore.
Il distributore così configurato necessita di uno scarico per le utenze.

This option, available on all HC-D4, allows the monoblock to feed a second valve, by extending the free flow channel.
In this configuration, the valve needs a separated port for the connection to tank.

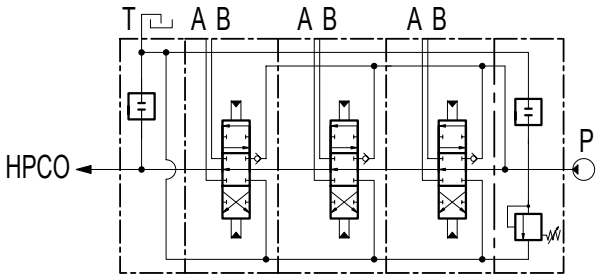
LA TRASFORMAZIONE DA VERSIONE STANDARD A VERSIONE CON COLLEGAMENTO CARRY-OVER HPCO, È POSSIBILE ORDINANDO UN TAPPO CONICO 1/4" x 13 (CODICE 413010203)

IT IS POSSIBLE TO TRANSFORM SECTIONAL VALVE FROM STANDARD TO HPCO VERSION JUST BY ORDERING THE APPROPRIATE CONIC PLUG 1/4" x 13 (CODE 413010203)

COLLETTORE DI CARICO PREDISPOSTO PER LA DOPPIA USCITA HPCO
INLET SECTION WITH HPCO VERSION



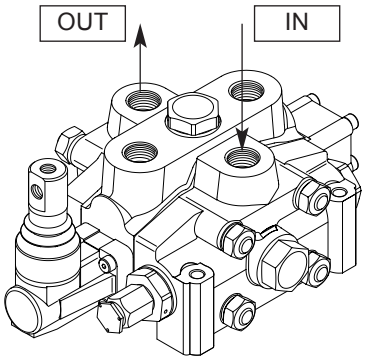
SCHEMA IDRAULICO (VERSIONE HPCO) - *HYDRAULIC SCHEMA (HPCO VERSION)*

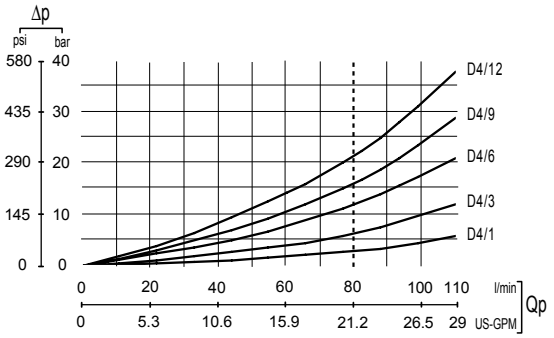


CURVE CARATTERISTICHE - *TYPICAL CURVES*

Perdite di carico (P in T)

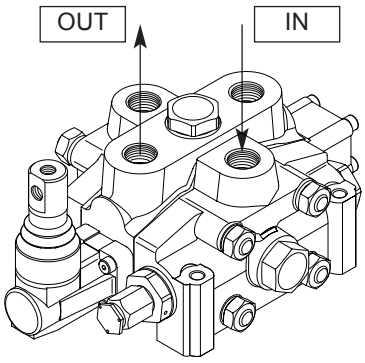
Pressure drop (P - T)

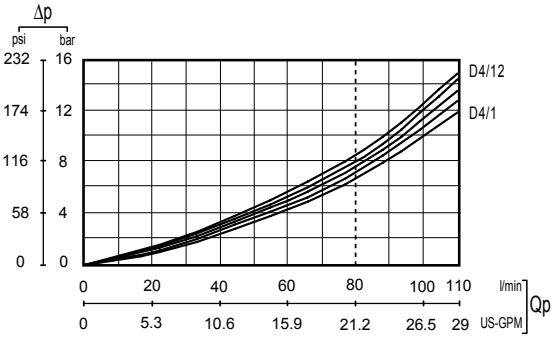




Perdite di carico (P in A/B)

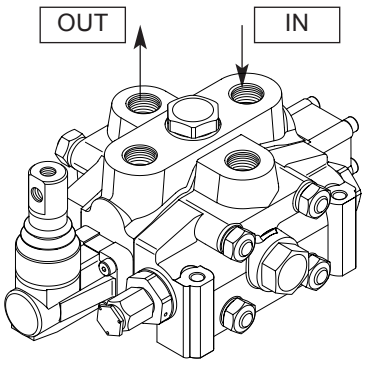
Pressure drop (P - A/B)

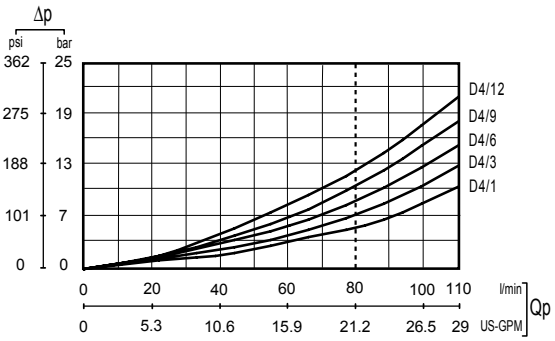




Perdite di carico (A/B in T)

Pressure drop (A/B - T)



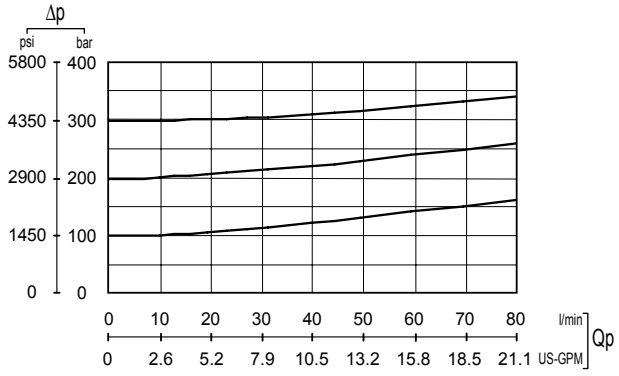


NOTA: i valori indicati sono stati rilevati con un distributore in configurazione standard e cursori W001A.

NOTE: *indicated values have been tested with standard sectional valve and W001A spools.*

Curva valvola di massima diretta

Direct relief valve curve

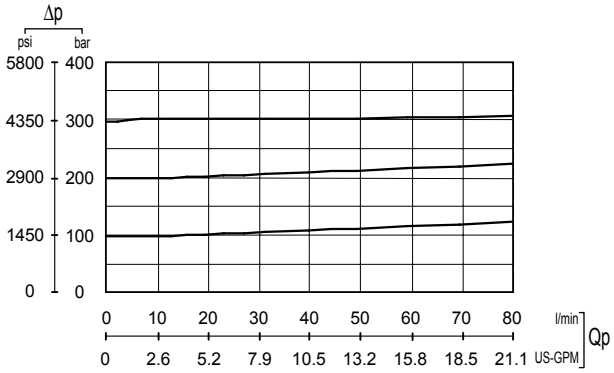


Campi di taratura - ***Setting ranges***

(A) = 120/150 bar
(B) = 151/200 bar
(C) = 201/250 bar
(D) = 251/350 bar

Curva valvola di massima pilotata

Pilot operated relief valve curve

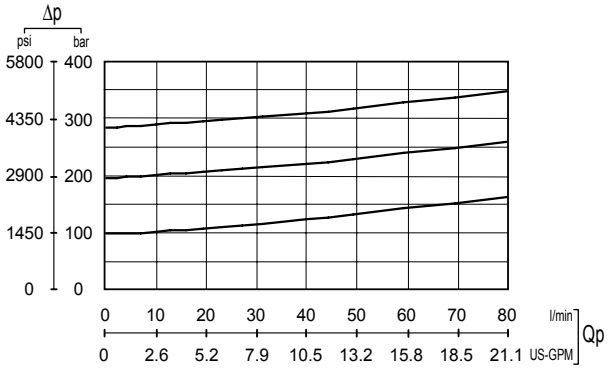


Campi di taratura - ***Setting ranges***

(A) = 30/350 bar

Curva valvola antiurto

Antishock valve curve



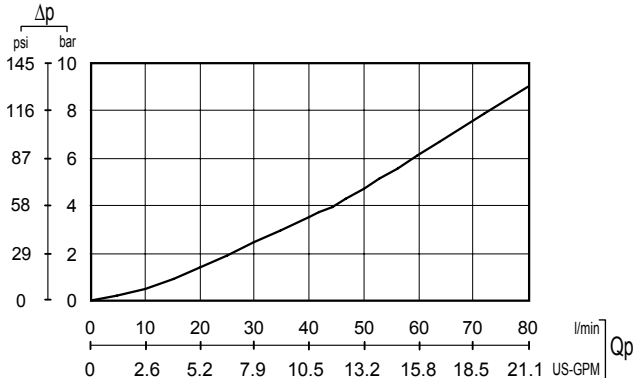
Campi di taratura - ***Setting ranges***

(A) = 40/120 (passaggio - *at full flow*)

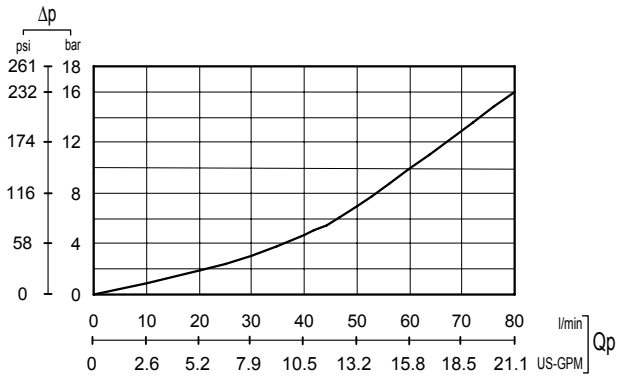
(B) = 121/150 (passaggio - *at full flow*)
25-A / 95-A (apertura - *at min. flow*)
(C) = 151/250 (passaggio - *at full flow*)
96-A / 220-A (apertura - *at min. flow*)
(D) = 251/350 (passaggio - *at full flow*)
221-A / 280-A (apertura - *at min. flow*)

CURVE CARATTERISTICHE - *TYPICAL CURVES*

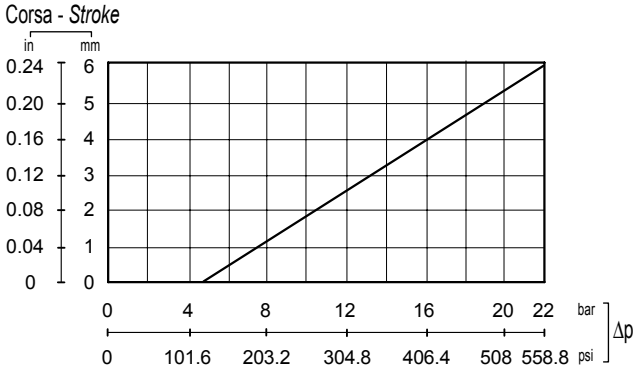
Curva valvola anticavitazione generale — *Main anticavitation valve curve*



Curva valvola anticavitazione al servizio — *Anticavitation check valve curve*



Curva comando idraulico — *Hydraulic pilot control curve*



NOTA: il grafico presenta lo spostamento del cursore in funzione della pressione di comando.

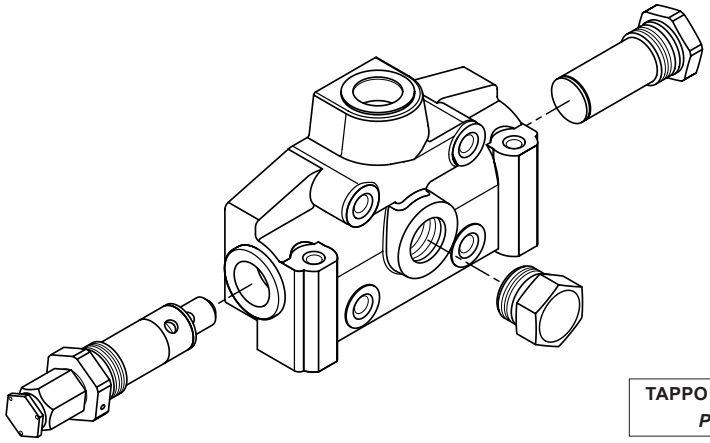
NOTE: *the graphif show the spool stroke as a function of the pressure operating.*

HC-D4

COLLETTORE ENTRATA - *INLET SECTION*

Esempio di ordinazione: *Order example:*

SEDE VALVOLA CON TAPPO
RELIEF VALVE PLUGGED

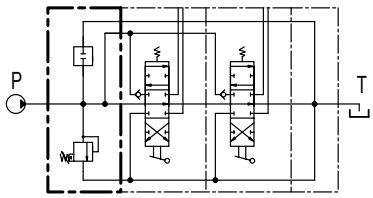
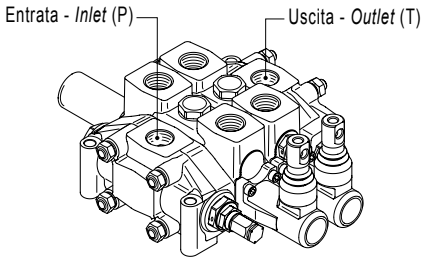
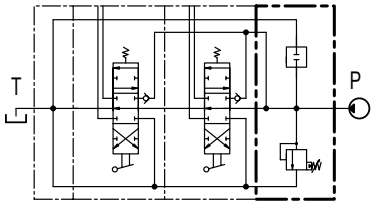
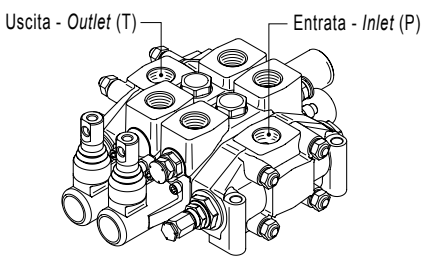


VALVOLA DI MASSIMA
DIRECT ACTING PRESSURE

TAPPO DI CHIUSURA
PLUG KIT

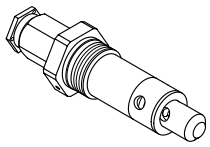
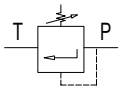
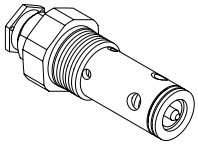
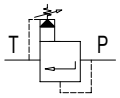
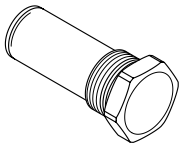
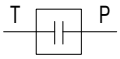
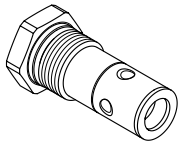
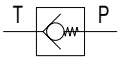
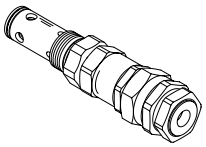
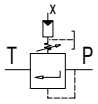
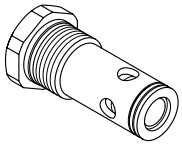
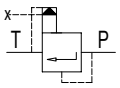
IR	lato alimentazione collettore entrata . . .pag. 13	*IR*	*inlet side . . . . . .page 13*
001	allestimento valvole . . . . . .pag. 14	*001*	*valve arrangement . . . . . .page 14*
(150)	taratura valvola di massima	*(150)*	*setting direct acting pressure valve*
A G04	posizione ingresso e filettatura . . . . . .pag. 15	*A G04*	*inlet and thread position . . . . . .page 15*

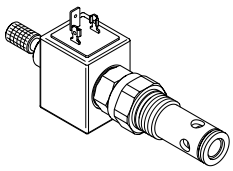
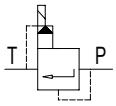
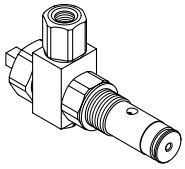
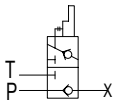
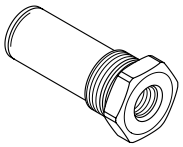
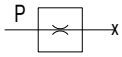
Definizione lato di alimentazione *Inlet side*

SCHEMA IDRAULICO *HYDRAULIC DIAGRAM*	CONFIGURAZIONE *LAYOUT*	DESCRIZIONE + SIGLA *DESCRIPTION + CODE*
		COLLETTORE ENTRATA SINISTRA *LEFT INLET SECTION* **IL**
		COLLETTORE ENTRATA DESTRA *RIGHT INLET SECTION* **IR**

ALLESTIMENTO ENTRATA - *INLET ARRANGEMENT*

Classificazione valvole — *Valves identification*

TIPO *TYPE*	DISEGNO *DESIGN*	SCHEMA *DIAGRAM*	DESCRIZIONE *DESCRIPTION*
1			Valvola di massima pressione diretta *Direct acting pressure relief valve*
2			Valvola di massima pressione pilotata *Pilot operated pressure relief valve*
3			Sede valvola con tappo *Relief valve plugged*
4			Valvola anticavitazione generale *Main anticavitation check valve*
5			Valvola di massima doppio stadio di pressione *2 stage pilot operated relief valve*
6			Valvola con pilotaggio esterno *Externally piloted valve*

TIPO *TYPE*	DISEGNO *DESIGN*	SCHEMA *DIAGRAM*	DESCRIZIONE *DESCRIPTION*
7			Valvola di pilotaggio esterno elettrica (12 Vdc) *Solenoid dump valve (12 Vdc)*
8			Valvola di pilotaggio esterno elettrica (24 Vdc) *Solenoid dump valve (24 Vdc)*
9			Valvola di pilotaggio esterno elettrica (26 Vdc) *Solenoid dump valve (26 Vdc)*
10			Valvola blocco traversa *hydraulic lock or brake valve*
11			Sede valvola con tappo attacco manometro *Plug with pressure gauge connection*

Allestimento valvole su collettore entrata — *Valve arrangement on inlet section*

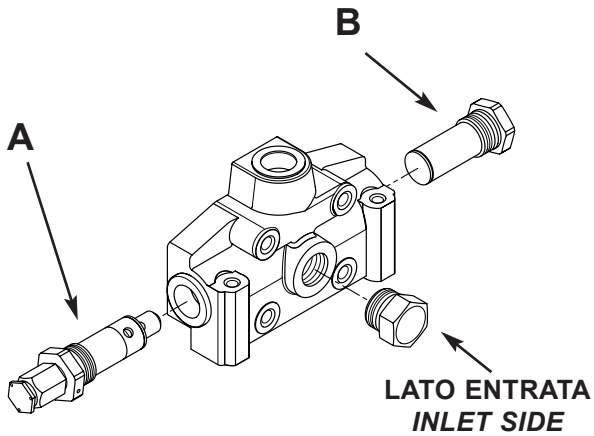
Esempio: **009 = 2A-3B**

Valvola di max in utilizzo A
Pressure relief valve in port A side

Tappo sostituisce v. max in utilizzo B
Plug replaces pressure relief valve in port B side

La sigla identifica: con un numero il tipo di valvola con la lettera la sua posizione sul collettore di entrata.
(A) = lato comando cursore
(B) = lato richiamo cursore

The code identifies: with a number, the type of valve; with a letter, its position on the inlet section.
(A) = spool action side
(B) = spool return action side



HC-D4

ALLESTIMENTO ENTRATA - *INLET ARRANGEMENT*

Combinazione valvole — *Valves combination*

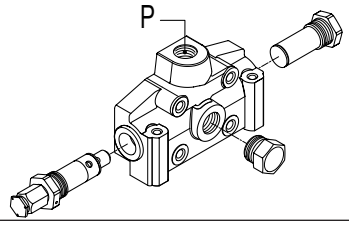
001	**002**	**003**	**004**	**005**	**006**	**007**	**008**	**009**	**010**	**011**	**012**	**013**	**014**
1A-3B	1A-4B	1A-6B	1A-7B	1A-8B	1A-9B	1A-10B	1A-11B	2A-3B	2A-4B	2A-6B	2A-7B	2A-8B	2A-9B
015	**016**	**017**	**018**	**019**	**020**	**021**	**022**	**023**	**024**	**025**	**026**	**027**	**028**
2A-10B	2A-11B	3A-1B	3A-2B	3A-3B	3A-4B	3A-5B	3A-6B	3A-7B	3A-8B	3A-9B	3A-10B	3A-11B	4A-1B
029	**030**	**031**	**032**	**033**	**034**	**035**	**036**	**037**	**038**	**039**	**040**	**041**	**042**
4A-2B	4A-3B	4A-5B	4A-6B	4A-7B	4A-8B	4A-9B	4A-10B	4A-11B	5A-3B	5A-4B	5A-6B	5A-7B	5A-8B
043	**044**	**045**	**046**	**047**	**048**	**049**	**050**	**051**	**052**	**053**	**054**	**055**	**056**
5A-3B	5A-10B	5A-11B	6A-1B	6A-2B	6A-3B	6A-4B	6A-5B	6A-10B	6A-11B	7A-1B	7A-2B	7A-3B	7A-4B
057	**058**	**059**	**060**	**061**	**062**	**063**	**064**	**065**	**066**	**067**	**068**	**069**	**070**
7A-5B	7A-10B	7A-11B	8A-1B	8A-2B	8A-3B	8A-4B	8A-5B	8A-10B	8A-11B	9A-1B	9A-2B	9A-3B	9A-4B
071	**072**	**073**	**074**	**075**	**076**	**077**	**078**	**079**	**080**	**081**	**082**	**083**	**084**
9A-5B	9A-10B	9A-11B	10A-1B	10A-2B	10A-3B	10A-4B	10A-5B	10A-6B	10A-7B	10A-8B	10A-9B	10A-11B	11A-1B
085	**086**	**087**	**088**	**089**	**090**	**091**	**092**	**093**					
11A-2B	11A-3B	11A-4B	11A-5B	11A-6B	11A-7B	11A-8B	11A-9B	11A-10B					

Tipologia ingresso e filettatura — *Inlet and thread available*

A

Ingresso superiore
Upper inlet

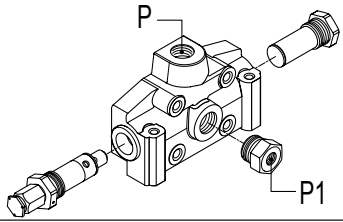
M01 **G04** **U03** **U04**



B

Ingresso superiore - P1 con riduzione attacco manometro 1/4”
Upper inlet - P1 with pressure-gauge connection 1/4” BSP

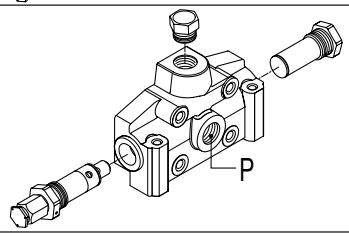
M01 **G04** **U03** **U04**



C

Ingresso laterale centrale
Central side inlet

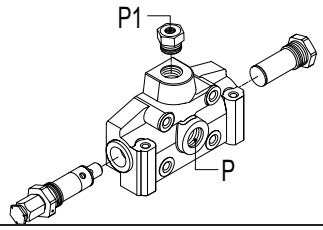
M01 **G04** **U03** **U04**



D

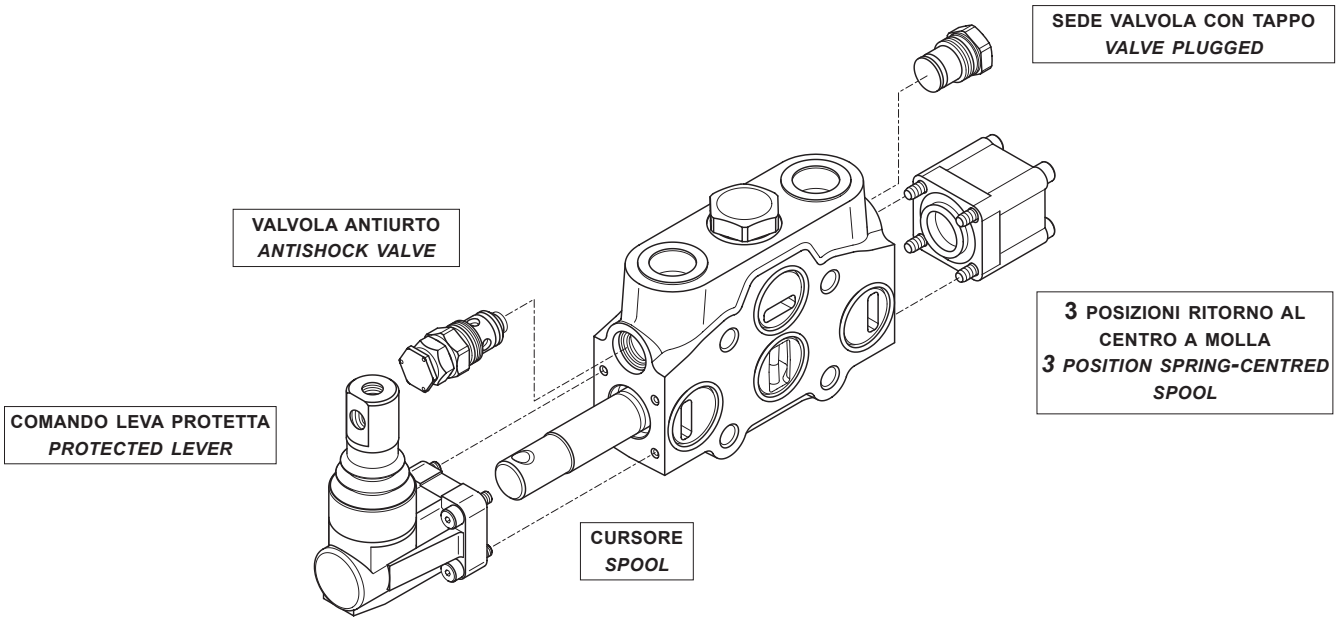
Ingresso laterale centrale - P1 con riduzione attacco manometro 1/4”
Central side inlet - P1 with pressure-gauge connection 1/4” BSP

M01 **G04** **U03** **U04**



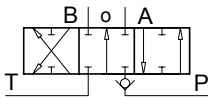
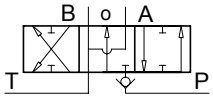
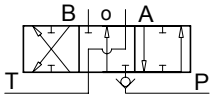
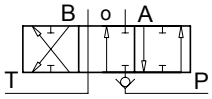
SEZIONE DI LAVORO - *WORK SECTION*

Esempio di ordinazione: *Order example:*

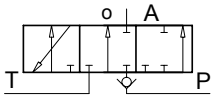
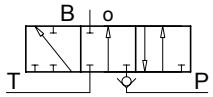
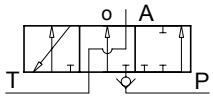
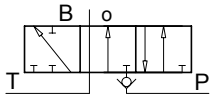
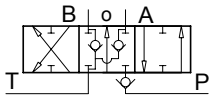
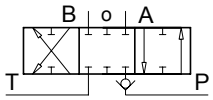
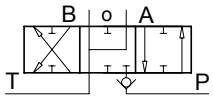
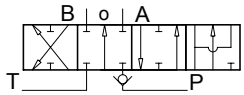
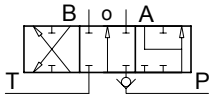
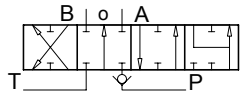
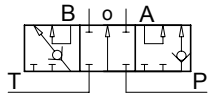
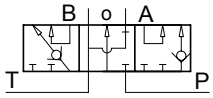
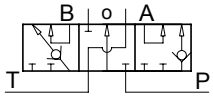
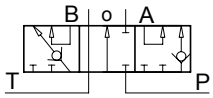


W001A	tipologia cursore . . . . . .pag. 16	***W001A***	*spool type* . . . . . *.page 16*
H001	tipologia comando cursore . . . . . .pag. 19	***H001***	*spool actuation type* . . . . . *.page 19*
F001A	tipologia richiamo cursore . . . . . .pag. 23	***F001A***	*spool return action type* . . . . . *.page 23*
RP G04	tipologia sezione e filettatura . . . . . .pag. 33	***RP G04***	*type and thread section* . . . . . *.page 33*
01PA	valvola ausiliaria (utilizzo A) . . . . . .pag. 34	***01PA***	*auxiliary valve (port A)* . . . . . *.page 34*
(120)	taratura (utilizzo A)	***(120)***	*setting (port A)*
05PB	valvola ausialiaria (utilizzo B)	***05PB***	*auxiliary valve (port B)*

Classificazione dei cursori *Spools identification*

SCHEMA IDRAULICO *HYDRAULIC SCHEMA*	DESCRIZIONE CIRCUITO *CIRCUIT DESCRIPTION*	SIGLA *CODE*
	3 posizioni doppio effetto *3 positions double-acting*	**W001**
	3 posizioni doppio effetto A e B a scarico *3 positions double-acting A and B to tank*	**W002**
	3 posizioni doppio effetto A scarico B bloccato *3 positions double-acting A to tank B blocked*	**W003**
	3 posizioni doppio effetto A bloccato B scarico *3 positions double-acting A blocked B to tank*	**W004**

Classificazione cursori — *Spools identification*

	3 posizioni semplice effetto in A *3 positions single-acting on A*	**W005**
	3 posizioni semplice effetto in B *3 positions single-acting on B*	**W006**
	3 posizioni semplice effetto in A (A a scarico) *3 positions single-acting on A (A to tank)*	**W007**
	3 posizioni semplice effetto in B (B a scarico) *3 positions single-acting on B (B to tank)*	**W008**
	3 posizioni doppio effetto con valvole anticavitazione *3 positions double-acting with anticavitation valves*	**W009**
	3 posizioni doppio effetto senza passaggio in O (A e B bloccati) *3 positions double-acting switch port closed (A and B blocked)*	**W010**
	3 posizioni doppio effetto senza passaggio in O (A e B scarico) *3 positions double-acting switch port closed (A and B to tank)*	**W011**
	4 posizioni doppio effetto (4° posizione flottante) *4 positions double-acting with float in the 4th position*	**W012**
	3 posizioni doppio effetto rigenerativo *3 positions double-acting regenerative*	**W013**
	4 posizioni doppio effetto rigenerativo in 4a posizione *4 position double-acting regenerative in 4th position*	**W014**
	3 posizioni doppio effetto serie *3 positions double-acting series*	**W015**
	3 posizioni doppio effetto serie A e B a scarico *3 positions double-acting series A and B to tank*	**W016**
	3 posizioni doppio effetto serie A a scarico B bloccato *3 positions double-acting series A to tank B blocked*	**W017**
	3 posizioni doppio effetto serie A bloccato B a scarico *3 positions double-acting series B to tank A blocked*	**W018**

NOTA: l'impiego dei cursori W012, W013 e W014 richiede l'utilizzo di un corpo con lavorazione speciale.

NOTE: *W012, W013 and W014 spools need a special machining on the valve body.*

TIPOLOGIA CURSORE - *SPOOL TYPE*

Definizione cursore — *Spool type*

*STANDARD - **STANDARD*** **A**

*PARZIALIZZATO - **METERED*** **B**

Esempio di classificazione di un cursore: — *Spool identification example:*

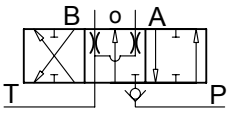
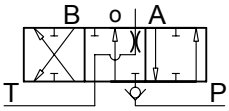
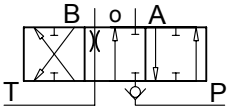
W001A

Cursore 3 posizioni doppio effetto STANDARD — *Spool 3 positions double-acting STANDARD*

W001B

Cursore 3 posizioni doppio effetto PARZIALIZZATO — *Spool 3 positions double-acting METERED*

Cursori con utilizzi a scarico controllato — *Spools with restricted service ports*

SCHEMA IDRAULICO *HYDRAULIC SCHEMA*	CIRCUITO *CIRCUIT*	ALLEGGERIMENTO SUL DIAMETRO (mm) *RESTRICTION ON DIAMETER (MM)*	SIGLA *CODE*	SEZIONE (mm²) *SECTION (MM²)*
	A-B IN T	0,10	**J10**	2,82
		0,15	**J15**	4,22
		0,20	**J20**	5,62
	A IN T	0,10	**K10**	2,82
		0,15	**K15**	4,22
		0,20	**K20**	5,62
	B IN T	0,10	**Y10**	2,82
		0,15	**Y15**	4,22
		0,20	**Y20**	5,62

Esempio di ordinazione — *Order example*

W002A J10

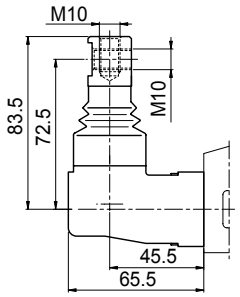
Alleggerimento sul diametro (0,10 mm in A e B)
Restriction on diameter (0,10 mm in A and B)

Cursore 3 posizioni doppio effetto A e B a scarico STANDARD
Spool 3 positions double-acting A and B to tank STANDARD

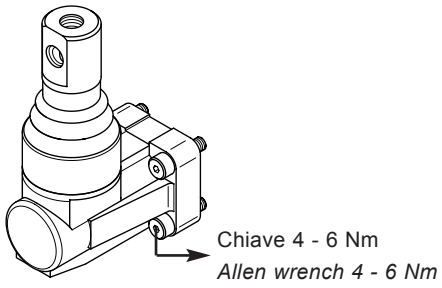
Classificazione comandi cursore

Spool actuation identification

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



DESCRIZIONE - *DESCRIPTION*

Comando leva protetta
Protected lever

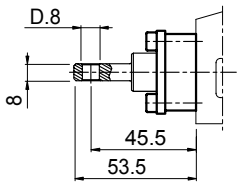
SIGLA DI ORDINAZIONE - *ORDERING CODE*

H001

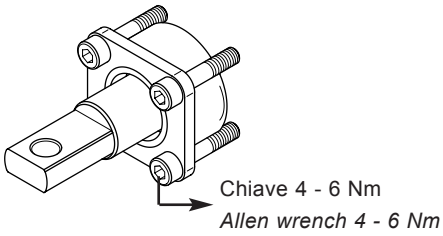
Comando leva protetta ruotato di 180°
Protected lever rotated 180°

H002

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



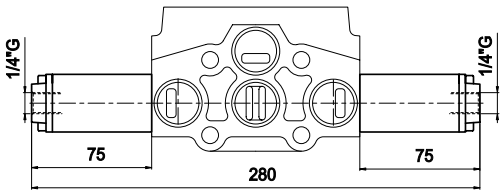
DESCRIZIONE - *DESCRIPTION*

Comando senza leva
Control without lever

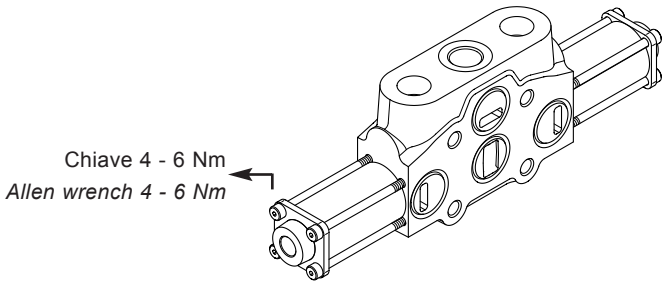
SIGLA DI ORDINAZIONE - *ORDERING CODE*

H004

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



DESCRIZIONE - *DESCRIPTION*

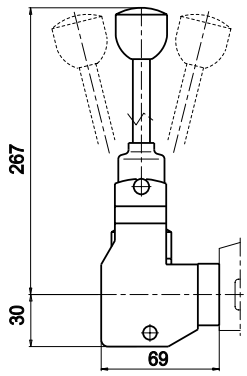
Comando idraulico
Hydraulic actuation

SIGLA DI ORDINAZIONE - *ORDERING CODE*

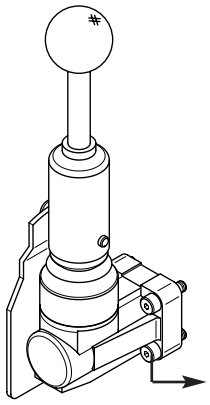
H005

COMANDO CURSORE - *SPOOL ACTUATION*

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*

SIGLA DI ORDINAZIONE - *ORDERING CODE*

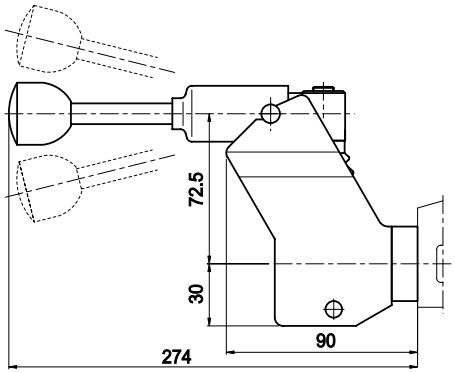
Leva di sicurezza verticale protetta
Protected vertical safety lever

H015

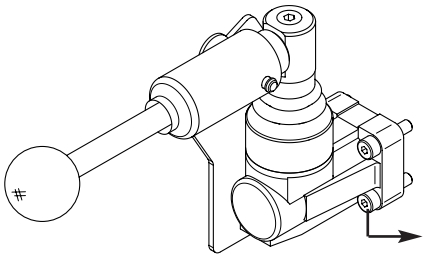
Leva di sicurezza verticale protetta ruotato di 180°
Protected vertical safety lever rotated 180°

H016

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*

SIGLA DI ORDINAZIONE - *ORDERING CODE*

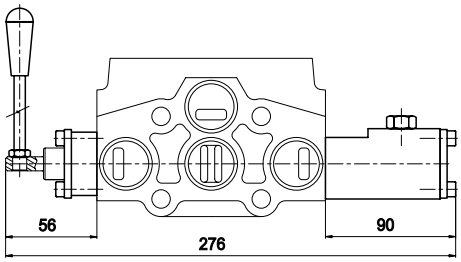
Leva di sicurezza orrizontale protetta
Protected horizontal safety lever

H017

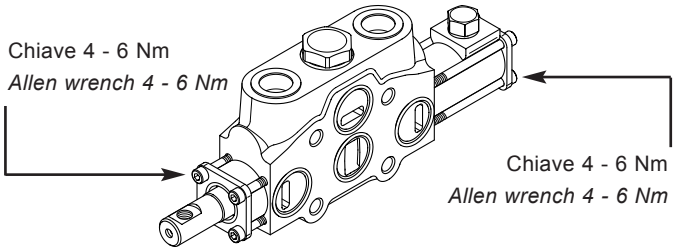
Leva di sicurezza orrizontale protetta ruotato di 180°
Protected horizontal safety lever rotated 180°

H018

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



DESCRIZIONE - *DESCRIPTION*

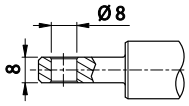
Comando rotativo a 180°
180° rotary control

SIGLA DI ORDINAZIONE - *ORDERING CODE*

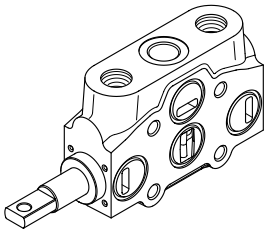
H114

Classificazione comandi cursore — *Spool actuation identification*

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



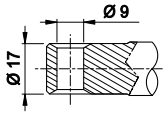
DESCRIZIONE - *DESCRIPTION*

Predisposizione comando cavo stelo fresato
Male clevis end

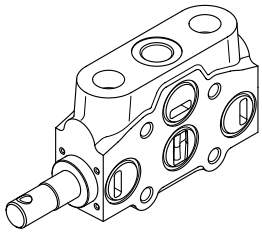
SIGLA DI ORDINAZIONE - *ORDERING CODE*

H117

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



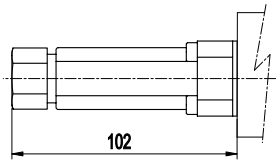
DESCRIZIONE - *DESCRIPTION*

Predisposizione comando cavo stelo tondo
Pin hole end

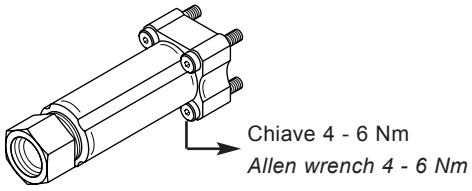
SIGLA DI ORDINAZIONE - *ORDERING CODE*

H118

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



DESCRIZIONE - *DESCRIPTION*

Predisposizione comando cavo (aggancio rapido)
Prearrangement actuation cable (fast connection)

SIGLA DI ORDINAZIONE - *ORDERING CODE*

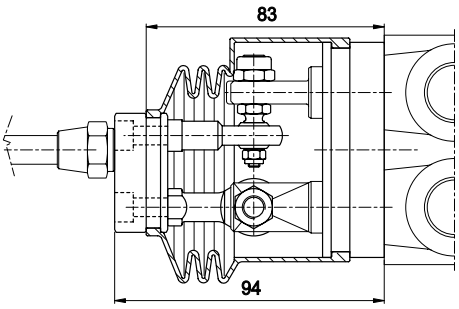
H128

COMANDO CURSORE - *SPOOL ACTUATION*

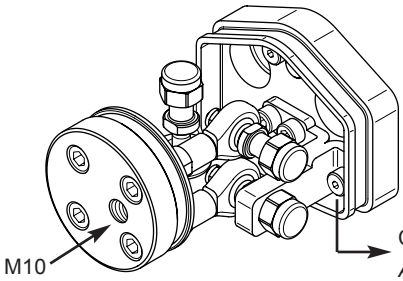
Classificazione comando cloche

Joystick control identification

DIMENSIONI - DIMENSIONS



COPPIE DI SERRAGGIO - *CLAMPING TORQUE*



NOTA: il kit asta leva deve essere ordinato separatamente

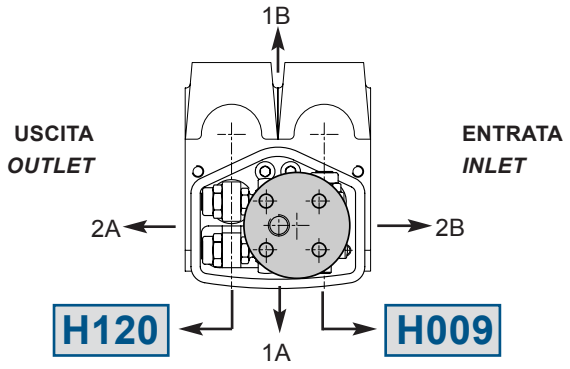
***NOTE:** lever has to be ordered separately*

Definizione lato fulcro - *Fulcrum side*

ENTRATA DESTRA FULCRO SULLA 1° SEZIONE
(sigla obbligatoria per seconda sezione: H120)

RIGHT SIDE INLET, FULCRUM ON 1st SECTION
(compulsory code for second section: H120)

SIGLA DI ORDINAZIONE - *ORDERING CODE*



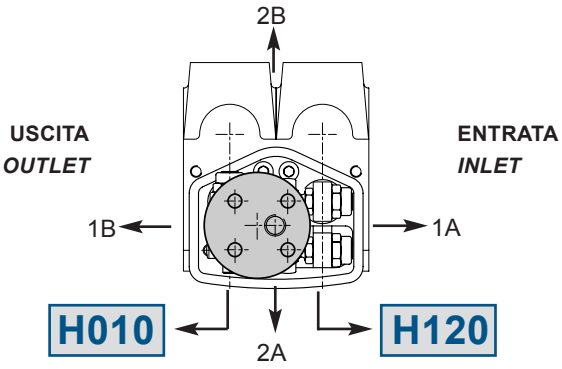
seconda sezione
second section

prima sezione
first section

ENTRATA DESTRA FULCRO SULLA 2° SEZIONE
(sigla obbligatoria per prima sezione: H120)

RIGHT SIDE INLET, FULCRUM ON 2nd SECTION
(compulsory code for first section: H120)

SIGLA DI ORDINAZIONE - *ORDERING CODE*



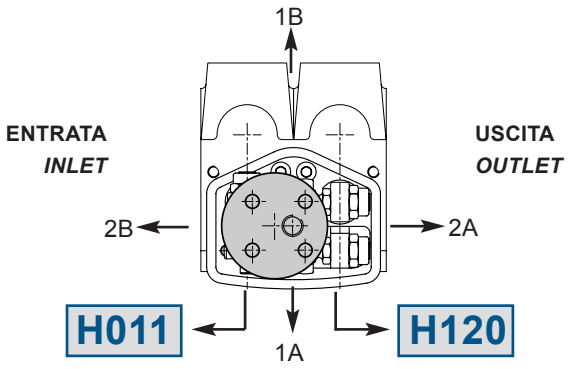
seconda sezione
second section

prima sezione
first section

ENTRATA SINISTRA FULCRO SULLA 1° SEZIONE
(sigla obbligatoria per seconda sezione: H120)

LEFT SIDE INLET, FULCRUM ON 1st SECTION
(compulsory code for second section: H120)

SIGLA DI ORDINAZIONE - *ORDERING CODE*



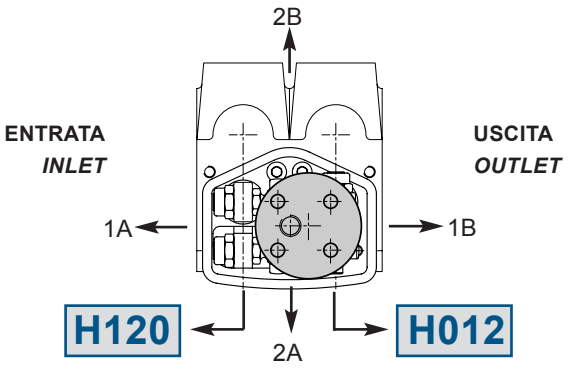
prima sezione
first section

seconda sezione
second section

ENTRATA SINISTRA FULCRO SULLA 2° SEZIONE
(sigla obbligatoria per prima sezione: H120)

LEFT SIDE INLET, FULCRUM ON 2nd SECTION
(compulsory code for first section: H120)

SIGLA DI ORDINAZIONE - *ORDERING CODE*



prima sezione
first section

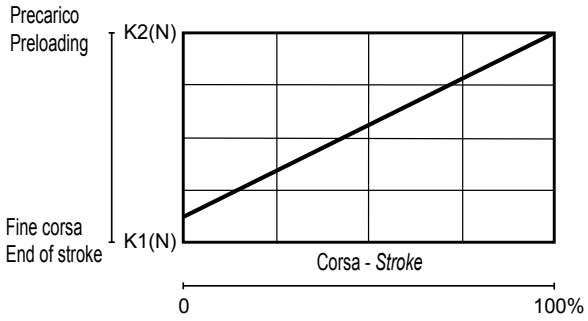
seconda sezione
second section

Definizione valori carico molle

Springs load values

I kit richiamo cursore si differenziano in tre tipologie di molle, a seconda del valore di carico:

Spool return kits have three different spring types; following the codes depending on spring loads:



MOLLA STANDARD *STANDARD SPRING*	MOLLA TENERA *SOFT SPRING*	MOLLA DURA *HEAVY SPRING*
A	**B**	**C**
Precarico - *Preloading*	Precarico - *Preloading*	Precarico - *Preloading*
117,7 N	**101 N**	**172,6 N**
Fine corsa - *End of stroke*	Fine corsa - *End of stroke*	Fine corsa - *End of stroke*
145,2 N	**117,7 N**	**246,2 N**

Esempio di classificazione di un richiamo cursore:

Spool return kit identification example

F001A

3 posizioni ritorno al centro a molla (**molla standard**) — *3 positions spring-centred spool (**standard spring**)*

F001B

3 posizioni ritorno al centro a molla (**molla tenera**) — *3 positions spring-centred spool (**soft spring**)*

F001C

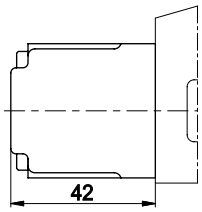
3 posizioni ritorno al centro a molla (**molla dura**) — *3 positions spring-centred spool (**heavy spring**)*

RICHIAMO CURSORE - *SPOOL RETURN ACTION*

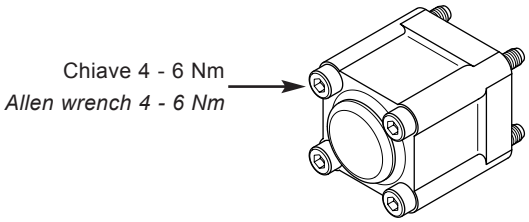
Classificazione richiami cursore

Spools return identification

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



DESCRIZIONE - *DESCRIPTION*

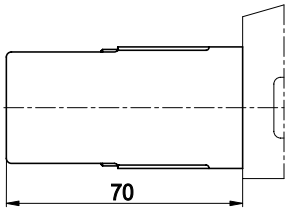
3 posizioni ritorno al centro a molla
3 positions spring-centred spool



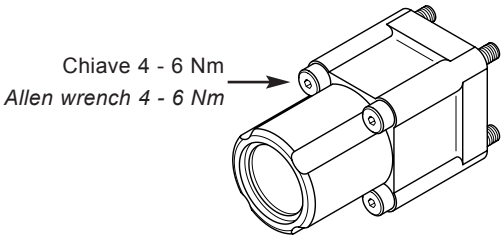
SIGLE DI ORDINAZIONE - *ORDERING CODES*

F001A **F001B** **F001C**

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*



DESCRIZIONE - *DESCRIPTION*

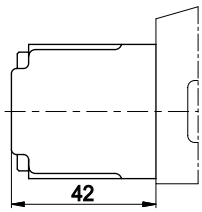
SIGLE DI ORDINAZIONE - *ORDERING CODES*

3 posizioni ritorno al centro a molla ritenuta in A e B ***3 positions spring-centred spool detent in A and B***		**F002A**
3 posizioni ritorno al centro a molla ritenuta in A ***3 positions spring-centred spool detent in A***		**F003A**
3 posizioni ritorno al centro a molla ritenuta in B ***3 positions spring-centred spool detent in B***		**F004A**
4 posizioni ritorno al centro a molla ritenuta in 4° posizione ***4 positions spring-centred spool detent in 4th position***		**F005A** **(solo per W012 - *only for W012*)**
4 posizioni ritorno al centro a molla ritenuta in 4° posizione ***4 positions spring-centred spool detent in 4th position***		**F006A** **(solo per W014 - *only for W014*)**

HC-D4

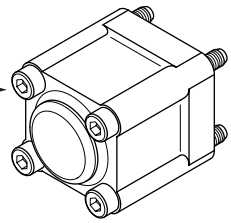
RICHIAMO CURSORE - *SPOOL RETURN ACTION*

DIMENSIONI - *DIMENSIONS*



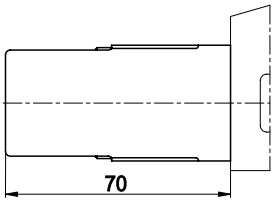
COPPIE SERRAGGIO - *CLAMPING TORQUE*

Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm



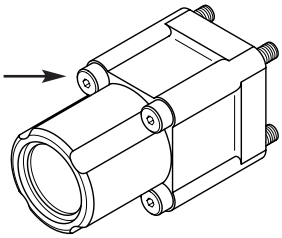
DESCRIZIONE - *DESCRIPTION*		SIGLE DI ORDINAZIONE - *ORDERING CODES*		
2 posizioni in A ritorno al centro a molla ***2 positions in A spring-centred spool***		**F009A**	**F009B**	**F009C**
2 posizioni in B ritorno al centro a molla ***2 positions in B spring-centred spool***		**F010A**	**F010B**	**F010C**

DIMENSIONI - *DIMENSIONS*



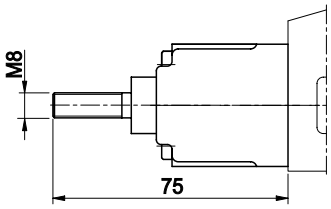
COPPIE SERRAGGIO - *CLAMPING TORQUE*

Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm



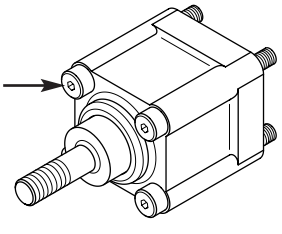
DESCRIZIONE - *DESCRIPTION*		SIGLE DI ORDINAZIONE - *ORDERING CODES*		
2 posizioni ritenuta in A ritorno al centro a molla ***2 positions detent in A spring-centred spool***		**F011A**	**F011B**	**F011C**
2 posizioni ritenuta in B ritorno al centro a molla ***2 positions detent in B spring-centred spool***		**F012A**	**F012B**	**F012C**

DIMENSIONI - *DIMENSIONS*



COPPIE SERRAGGIO - *CLAMPING TORQUE*

Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

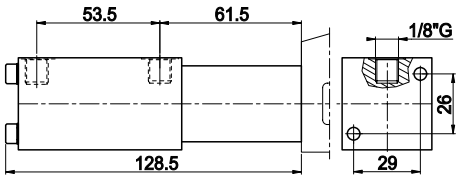


DESCRIZIONE - *DESCRIPTION*		SIGLE DI ORDINAZIONE - *ORDERING CODES*		
3 posizioni ritorno al centro a molla predisposizione doppio comando ***3 positions spring-centred spool prearrangement dual command***		**F013A**	**F013B**	**F013C**

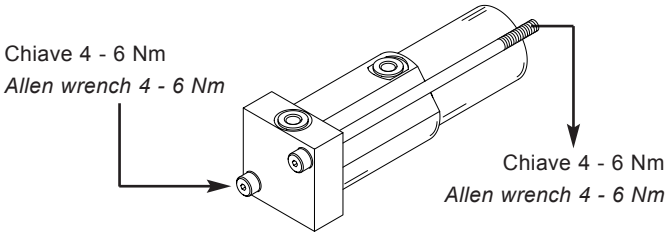
RICHIAMO CURSORE - *SPOOL RETURN ACTION*

Classificazione comando pneumatico — *Pneumatic control classification*

DIMENSIONI - *DIMENSIONS*

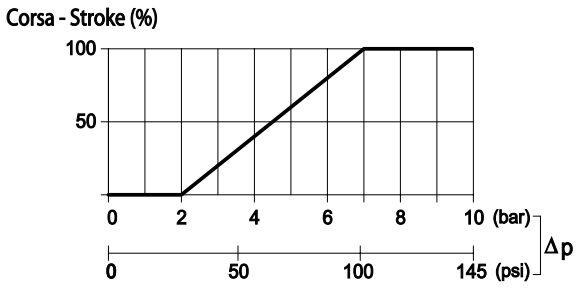


COPPIE SERRAGGIO - *CLAMPING TORQUE*



DESCRIZIONE - *DESCRIPTION*		SIGLE DI ORDINAZIONE - *ORDERING CODES*
Comando pneumatico ON - OFF ***Pneumatic control ON - OFF***		**F020A**
Comando pneumatico ON - OFF ruotato di 180° ***Pneumatic control ON - OFF rotated 180°***		**F021A**
Comando pneumatico Proporzionale ***Proportional pneumatic control***		**F022A**
Comando pneumatico Proporzionale ruotato di 180° ***Proportional pneumatic control rotated 180°***		**F023A**

CARATTERISTICHE COMANDO PNEUMATICO PROPORZIONALE
PROPORTIONAL PNEUMATIC CONTROL SPECIFICATIONS



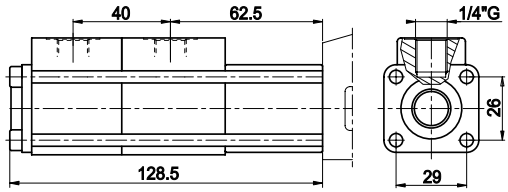
Il grafico presenta lo spostamento del cursore in funzione della pressione pneumatica di comando.

The graphic shows the spool stroke as a function of the pneumatic pressure operating.

HC-D4

RICHIAMO CURSORE - *SPOOL RETURN ACTION*

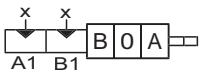
DIMENSIONI - *DIMENSIONS*



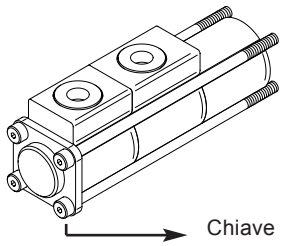
CARATTERISTICHE - *SPECIFICATIONS*

X in A1: inibisce mandata sulla bocca A
X in B1: inibisce mandata sulla bocca B
X in A1: it inhibits flow on port A
X in B1: it inhibits flow on port B

P max. = 350 bar



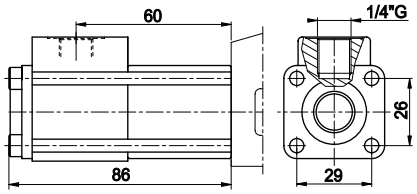
COPPIE SERRAGGIO - *CLAMPING TORQUE*



Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*	
Blocco idraulico in A e B ***Load limit in A and B***	**F024A**	**F024C**
Blocco idraulico in A e B ruotato di 180° ***Load limit in A and B rotated 180°***	**F025A**	**F025C**

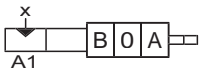
DIMENSIONI - *DIMENSIONS*



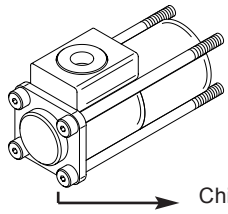
CARATTERISTICHE - *SPECIFICATIONS*

X in A1: inibisce mandata sulla bocca A
X in A1: it inhibits flow on port A

P max. = 350 bar



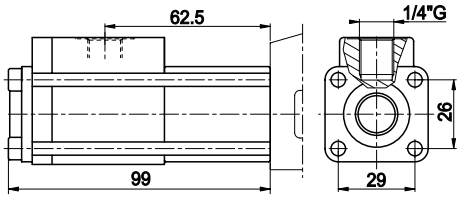
COPPIE SERRAGGIO - *CLAMPING TORQUE*



Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*	
Blocco idraulico in A ***Load limit in A***	**F026A**	**F026C**
Blocco idraulico in A ruotato di 180° ***Load limit in A rotated 180°***	**F027A**	**F027C**

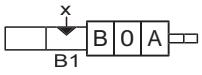
DIMENSIONI - *DIMENSIONS*



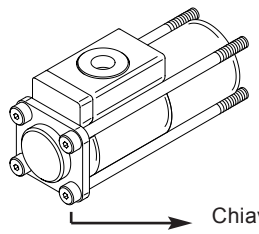
CARATTERISTICHE - *SPECIFICATIONS*

X in B1: inibisce mandata sulla bocca B
X in B1: it inhibits flow on port B

P max. = 350 bar



COPPIE SERRAGGIO - *CLAMPING TORQUE*

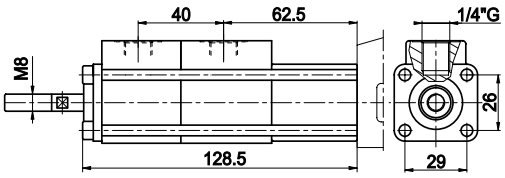


Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*	
Blocco idraulico in B ***Load limit in B***	**F028A**	**F028C**
Blocco idraulico in B ruotato di 180° ***Load limit in B rotated 180°***	**F029A**	**F029C**

RICHIAMO CURSORE - *SPOOL RETURN ACTION*

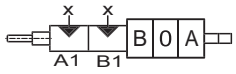
DIMENSIONI - *DIMENSIONS*



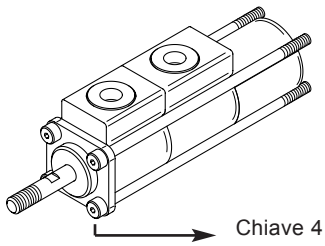
CARATTERISTICHE - *SPECIFICATIONS*

X in A1: inibisce la mandata sulla bocca A
X in B1: inibisce la mandata sulla bocca B
X in A1: it inhibits flow on port A
X in B1: it inhibits flow on port B

P max. = 350 bar



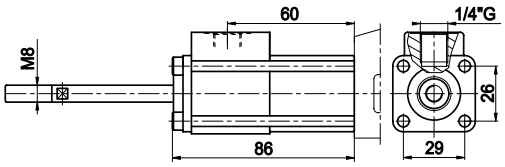
COPPIE SERRAGGIO - *CLAMPING TORQUE*



Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*	
Blocco idraulico in A e B doppio comando ***Load limit in A and B dual control***	**F030A**	**F030C**
Blocco idraulico in A e B ruotato di 180° doppio comando ***Load limit in A and Brotated 180° dual control***	**F031A**	**F031C**

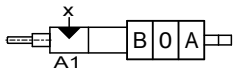
DIMENSIONI - *DIMENSIONS*



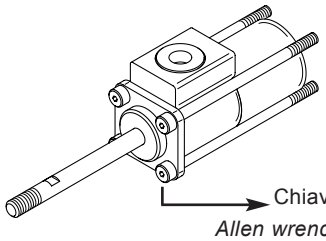
CARATTERISTICHE - *SPECIFICATIONS*

X in A1: inibisce la mandata sulla bocca A
X in A1: it inhibits flow on port A

P max. = 350 bar



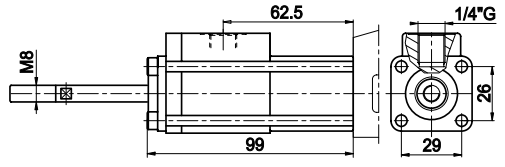
COPPIE SERRAGGIO - *CLAMPING TORQUE*



Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*	
Blocco idraulico in A doppio comando ***Load limit in A dual control***	**F032A**	**F032C**
Blocco idraulico in A ruotato di 180° doppio comando ***Load limit in A rotated 180°dual control***	**F033A**	**F033C**

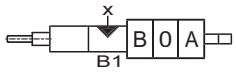
DIMENSIONI - *DIMENSIONS*



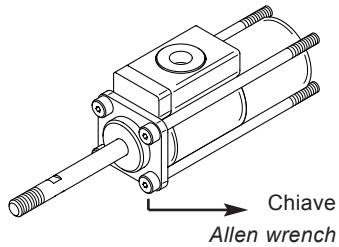
CARATTERISTICHE - *SPECIFICATIONS*

X in B1: inibisce la mandata sulla bocca B
X in B1: it inhibits flow on port B

P max. = 350 bar



COPPIE SERRAGGIO - *CLAMPING TORQUE*



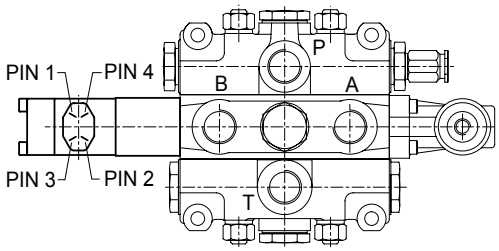
Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*	
Blocco idraulico in B doppio comando ***Load limit in B dual control***	**F034A**	**F034C**
Blocco idraulico in B ruotato di 180° doppio comando ***Load limit in B rotated 180°dual control***	**F035A**	**F035C**

Caratteristiche kit controllo elettrico posizione cursore
Electrical load limit kit specifications

ALIMENTAZIONE *POWER SUPPLY*	PORTATA CONTATTI *CONTACTS CAPACITY*	GRADO DI PROTEZIONE *PROTECTION DEGREE*	CAMPO DI TEMPERATURA *TEMPERATURE RANGE*
12 VDC 24 VDC	3 A 1,5 A	IP 65	da -25°C a +90°C

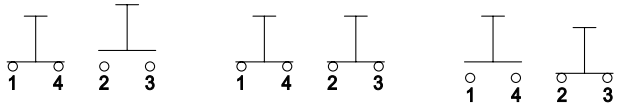
Schema funzionale - *Operational diagram*



CONTROLLO in A e B = collegare PIN 1-4 e 2-3
CONTROLLO in A = collegare PIN 2-3
CONTROLLO in B = collegare PIN 1-4
CONTROL in A e B = connect PIN 1-4 and 2-3
CONTROL in A = connect PIN 2-3
CONTROL in B = connect PIN 1-4

Schema elettrico - *Wiring diagram*

(CONTATTI NORMALMENTE CHIUSI - *NORMALLY CLOSED CONTACTS*)

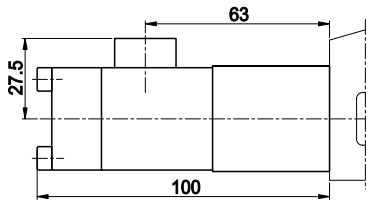


CONTROLLO UTILIZZO A *CONTROL PORT A* | NEUTRO IN 0 *NEUTRAL IN 0* | CONTROLLO UTILIZZO B *CONTROL PORT B*

Si consiglia in caso di carichi induttivi di collegare al solenoide un diodo da 200 VDC - 3A.
In case of inductive loads it is advisable to connect the terminals of the work port (solenoid) to a 200 VDC - 3A diode.

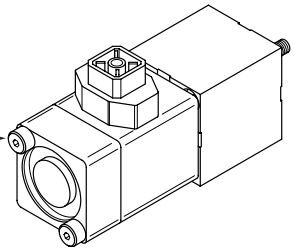
Classificazione kit controllo elettrico
Electrical load limit kit identification

DIMENSIONI - *DIMENSIONS*



COPPIE DI SERRAGGIO - *CLAMPING TORQUE*

Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm



DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*
Controllo elettrico posizione cursore (contatti normalmente chiusi) ***Electrical load limit (normally closed contacts)***	**F0360**
Controllo elettrico posizione cursore ruotato di 180° (contatti normalmente chiusi) ***Electrical load limit rotated 180° (normally closed contacts)***	**F0370**
Controllo elettrico posizione cursore (contatti normalmente aperti) ***Electrical load limit (normally open contacts)***	**F0450**
Controllo elettrico posizione cursore ruotato di 180° (contatti normalmente aperti) ***Electrical load limit rotated 180° (normally open contacts)***	**F0460**

NOTA: per il collegamento all'impianto esterno, è fornibile il connettore femmina HIRSCHMANN tipo G4 W1F (cod.413000045, ordinabile separatamente).

NOTE: *a HIRSCHMANN female connector, type G4 W1F, is available on request.*
(code 413000045, to be ordered separately).

RICHIAMO CURSORE - *SPOOL RETURN ACTION*

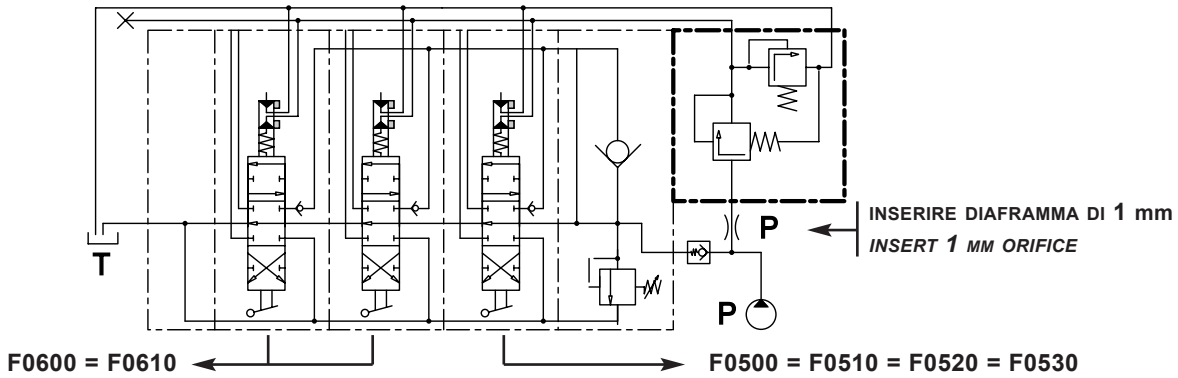
Caratteristiche comando elettroidraulico
Electrohydraulic control specifications

PRESSIONE MAX IN INGRESSO *MAX INLET PRESSURE*	PRESSIONE RIDOTTA *REDUCED PRESSURE*	CONTROPRESSIONE SU T *BACK PRESSURE ON T*
350 bar	16 bar	3 bar
CONTROPRESSIONE SU P *BACK PRESSURE ON P*	**PRESSIONE MIN SU P1 *MIN. PRESSURE ON P1***	**PRESSIONE MAX SU P1 *MAX. PRESSURE ON P1***
10 bar	10 bar	350bar
GRADO DI FILTRAZIONE *FILTERING DEGREE*	**TUBAZIONI DI PILOTAGGIO CONSIGLIATE *RACOMMENDED PILOT PIPE SIZE***	**CAMPO DI TEMPERATURA *TEMPERATURE RANGE***
25 µ assoluti	Ø 6 mm - 1/4"BSP	-20° +80°

Circuito idraulico con valvola riduttrice - Hydraulic circuit with fixed pressure relief valve

Garantire una resistenza di almeno 8 bar sul canale di neutro per il corretto funzionamento del sistema.

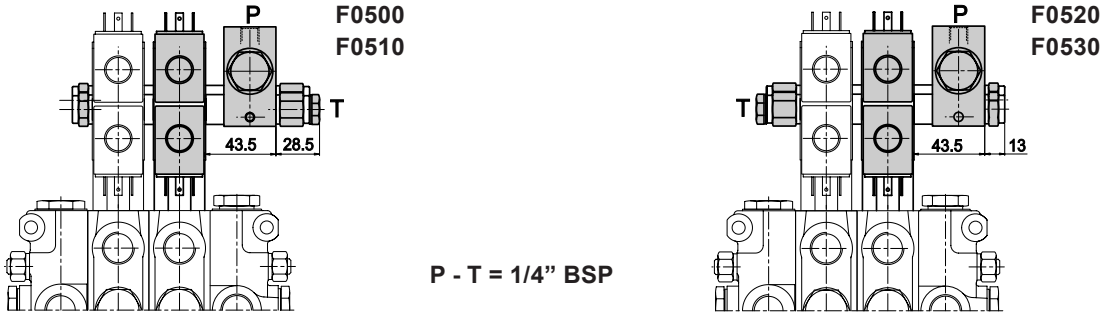
It is suitable to have an 8 bar backpressure on the free flow channel to make the system working.



Classificazione comandi elettroidraulici con valvola riduttrice

Electrohydraulic control with fixed pressure reducing valve identification

DIMENSIONI - *DIMENSIONS*

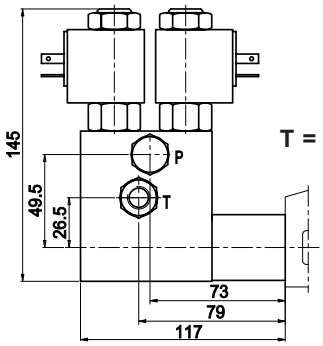


DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*	
	(12 VDC)	(24 VDC)
Comando elettroidraulico ON - OFF (valvola riduttrice pressione fissa) P-T lato entrata *Electrohydraulic control ON - OFF (fixed pressure reducing valve) P-T inlet inside*	**F0500** 19 W - 1,58 A	**F0510** 19 W - 0,81 A
Comando elettroidraulico ON - OFF (valvola riduttrice pressione fissa) P entrata T scarico *Electrohydraulic control ON - OFF (fixed pressure reducing valve) P inlet T outlet*	**F0520** 19 W - 1,58 A	**F0530** 19 W - 0,81 A

Classificazione comandi elettroidraulici

Electrohydraulic control identification

DIMENSIONI - *DIMENSIONS*

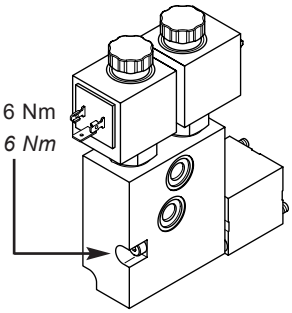


T = 1/4" BSP

COPPIE DI SERRAGGIO - *CLAMPING TORQUE*

Pressione massima funzionale: 16 bar
Maximum working pressure: 16 bar

Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm





DESCRIZIONE - *DESCRIPTION*

3 posizioni
comando elettroidraulico ON - OFF
3 positions
electrohydraulic control ON - OFF

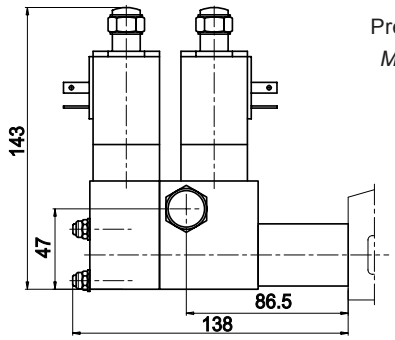
SIGLE DI ORDINAZIONE - *ORDERING CODES*

(12 VDC)	(24 VDC)
F0600	**F0610**
19 W - 1,58 A	19 W - 0,81 A

Classificazione comandi elettropneumatici

Electropneumatic control identification

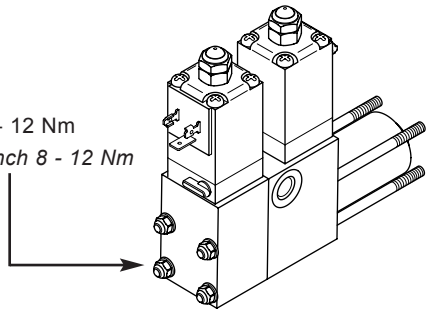
DIMENSIONI - *DIMENSIONS*



COPPIE DI SERRAGGIO - *CLAMPING TORQUE*

Pressione minima funzionale: 5 bar
Minimum working pressure: 5 bar

Chiave 8 - 12 Nm
Allen wrench 8 - 12 Nm





DESCRIZIONE - *DESCRIPTION*

3 posizioni
comando elettropneumatico ON - OFF
3 positions
electropneumatic control ON - OFF

SIGLE DI ORDINAZIONE - *ORDERING CODES*

(12 VDC)	(24 VDC)
F0620	**F0630**
7 W - 0,58 A	7 W - 0,29 A

RICHIAMO CURSORE - *SPOOL RETURN ACTION*

Caratteristiche comando kick-out

- Richiede un cursore speciale
- Specificare pressione di lavoro (50-350) bar

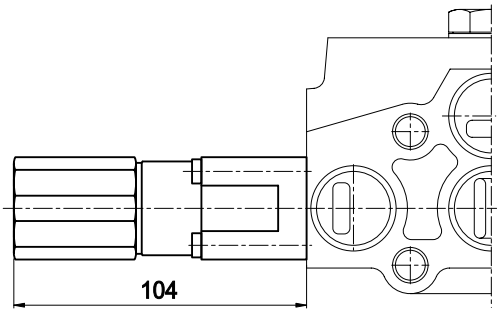
Kick-out control specifications

- *Special spool request*
- *Specify working pressure (50-350) bar*

Classificazione comando kick-out

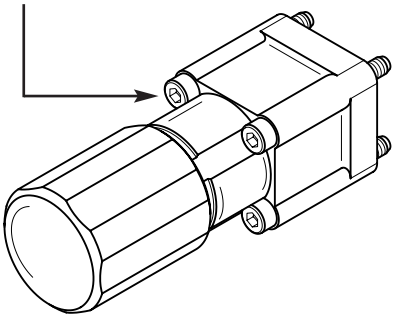
Kick-out control classification

DIMENSIONI - *DIMENSIONS*



COPPIE DI SERRAGGIO - *CLAMPING TORQUE*

Chiave 4 - 6 Nm
Allen wrench 4 - 6 Nm

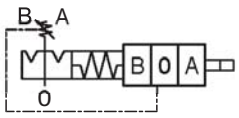


DESCRIZIONE - *DESCRIPTION*

SIGLE DI ORDINAZIONE - *ORDERING CODES*

Ritenuta in A-B
kick-out per ritorno in centro

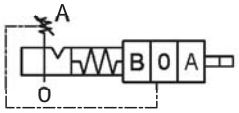
Detent in A-B
kick-out for centre return



F0170

Ritenuta in A
kick-out per ritorno in centro

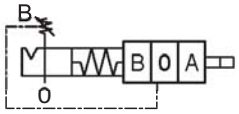
Detent in A
kick-out for centre return



F0180

Ritenuta in B
kick-out per ritorno in centro

Detent in B
kick-out for centre return



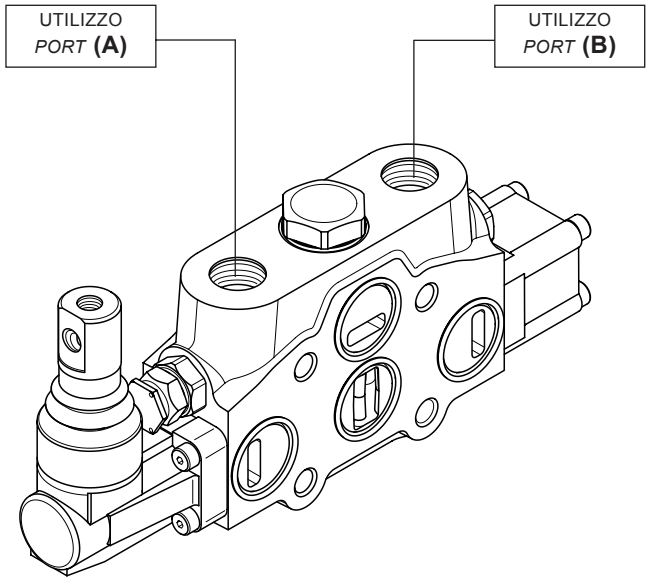
F0190

TIPOLOGIA SEZIONE DI LAVORO - *WORK SECTION TYPE*

Classificazione sezione di lavoro — *Section work identification*

DESCRIZIONE - *DESCRIPTION*	SIGLE DI ORDINAZIONE - *ORDERING CODES*
Elemento circuito parallelo ***Parallel circuit section***	**RP**
Elemento circuito tandem ***Tandem (conventional) circuit section***	**RT**
Elemento circuito serie ***Series circuit section***	**RS**

Tipologia Filettatura — *Thread type*

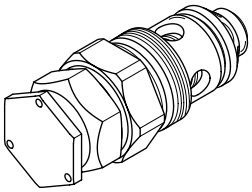


UTILIZZI (A - B) - *SERVICE PORTS (A - B)*

G04 **U03** **U04** **M01**

Classificazione valvole ausiliarie — *Auxiliary valves identification*

VALVOLA ANTIURTO - *ANTISHOCK VALVE (ARV)*



SCHEMA IDRAULICO
HYDRAULIC SCHEMA



SIGLE DI ORDINAZIONE
ORDERING CODES

01 PA utilizzo - *port* (A)

01 PB utilizzo - *port* (B)

CAMPI DI TARATURA (BAR) - *SETTING RANGES (BAR)*

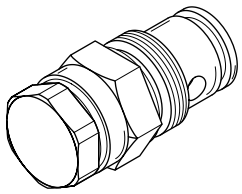
Campo - *Range* (**A**)
40 / 120 (passaggio - *at full flow*)

Campo - *Range* (**B**)
121 / 150 (passaggio - *at full flow*)
25 / 95 (apertura - *at min. flow*)

Campo - *Range* (**C**)
151 / 250 (passaggio - *at full flow*)
96 / 220 (apertura - *at min. flow*)

Campo - *Range* (**D**)
251 / 350 (passaggio - *at full flow*)
221 / 280 (apertura - *at min. flow*)

VALVOLA ANTICAVITAZIONE - *ANTICAVITATION VALVE*



SCHEMA IDRAULICO
HYDRAULIC SCHEMA

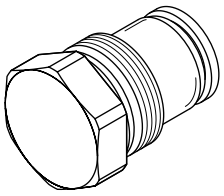


SIGLE DI ORDINAZIONE
ORDERING CODES

02 PA utilizzo - *port* (A)

02 PB utilizzo - *port* (B)

SEDE VALVOLA CON TAPPO - *VALVE PLUGGED*



SCHEMA IDRAULICO
HYDRAULIC SCHEMA



SIGLE DI ORDINAZIONE
ORDERING CODES

05 PA utilizzo - *port* (A)

05 PB utilizzo - *port* (B)

NOTA: le sezioni predisposte per le valvole ausiliarie obbligano la doppia scelta sugli utilizzi A e B.

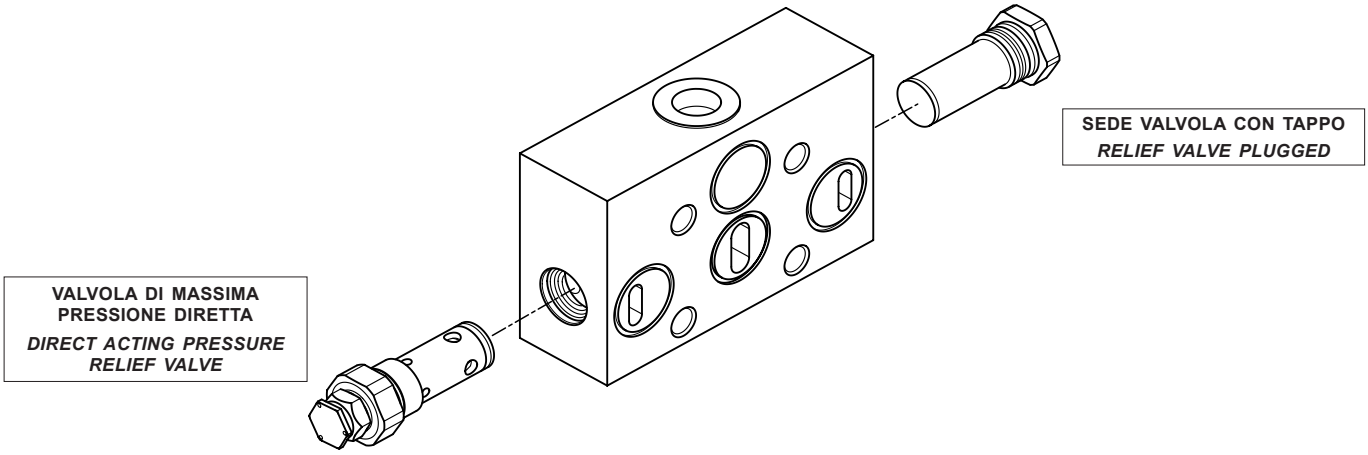
Indicare sempre il valore di taratura, nel caso di scelta della valvola antiurto e della valvola combinata:
TARATURA PASSAGGIO = 01 PA **120**
TARATURA APERTURA = 01 PA **120-A**

NOTE: *sections designed to house auxiliary valve option require double choice on work ports A and B.*

Always indicate setting value when using antishock auxiliary valves and cambinated valves:
*SETTING AT FULL FLOW = 01 PA **120***
*SETTING AT MIN. FLOW = 01 PA **120-A***

Esempio di ordinazione: COLLETTORE INTERMEDIO ENTRATA

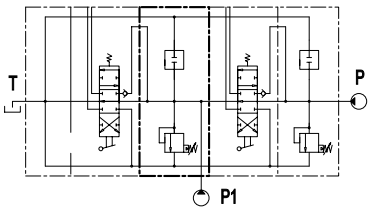
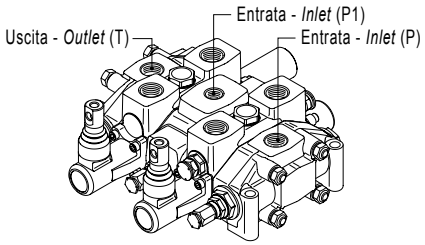
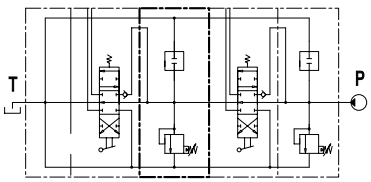
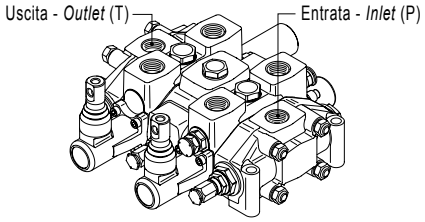
Order example: INTERMEDIATE INLET SECTION



BE	tipologia collettore intermedio entrata . .pag. 35	***BE***	*intermediate inlet section type . . . . . .page 35*
009	allestimento valvole . . . . . .pag. 36	***009***	*valve arrangement . . . . . .page 36*
(150)	taratura valvola di massima	***(150)***	*setting direct acting pressure valve*
A G04	posizione ingresso e filettatura . . . . . .pag. 37	***A G04***	*inlet and thread position . . . . . .page 37*

Definizione lato di alimentazione

Inlet side

SCHEMA IDRAULICO *HYDRAULIC DIAGRAM*	CONFIGURAZIONE *LAYOUT*	DESCRIZIONE + SIGLA *DESCRIPTION + CODE*
		COLLETTORE INTERMEDIO DI ENTRATA *INTERMEDIATE INLET SECTION* **BE**
		COLLETTORE INTERMEDIO CON VALVOLA DI MASSIMA *INTERMEDIATE SECTION WITH PRESSURE RELIEF VALVE* **BV***

(*) Omettere la sigla del posizionamento ingresso e tipo di filettatura
(*) Omit the code for inlet positioning and type of thread

COLLETTORI INTERMEDI - *INTERMEDIATE SECTIONS*

Funzionamento collettore intermedio di entrata

Operation of intermediate inlet section

TIPO E

L'intermedio di entrata è alimentato da due pompe (P+P1). Gli elementi a valle possono essere tarati ad una pressione inferiore di quelli a monte, agendo sulla valvola di massima del collettore intermedio in oggetto.

TYPE E

The intermediate inlet section is driven by two pumps (P+P1).
The downstream elements can be set to a lower pressure than those the upstream one by adjusting the pressure relief valve of the intermediate section in question.

TIPO V

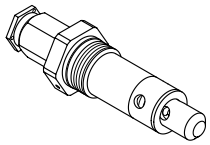
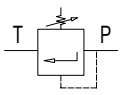
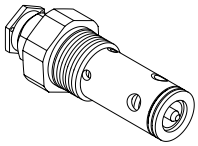
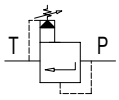
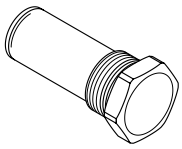
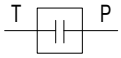
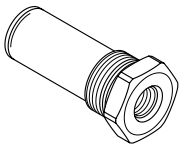
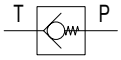
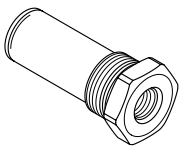
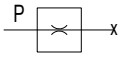
L'intermedio di entrata e gli elementi sono alimentati da un'unica pompa (P).
Gli elementi a valle del collettore intermedio, possono essere tarati ad una pressione inferiore degli elementi a monte agendo sulla valvola di massima del collettore intermedio in oggetto.

TYPE V

The intermediate inlet section and the elements are driven by a single pump (P).
The downstream elements can be set to a lower pressure than those the upstream one by adjusting the pressure relief valve of the intermediate section in question.

Classificazione valvole

Valves identification

TIPO *TYPE*	DISEGNO *DESIGN*	SCHEMA *DIAGRAM*	DESCRIZIONE *DESCRIPTION*
1			Valvola di massima pressione diretta *Direct acting pressure relief valve*
2			Valvola di massima pressione pilotata *Pilot operated pressure relief valve*
3			Sede valvola con tappo *Relief valve plugged*
4			Valvola anticavitazione generale *Main anticavitation check valve*
11			Sede valvola con tappo attacco manometro *Plug with pressure gauge connection*

Allestimento valvole

Valve arrangement

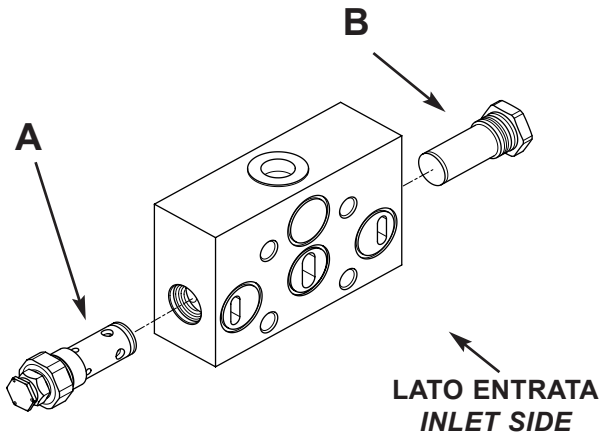
Esempio: **009 = 2A-3B**

Valvola di max in utilizzo A
Pressure relief valve in port A side

Tappo sostituisce v. max in utilizzo B
Plug replaces pressure relief valve in port B side

La sigla identifica: con un numero il tipo di valvola con la lettera la sua posizione sul collettore di entrata.
(A) = lato comando cursore
(B) = lato richiamo cursore

The code identifies: with a number, the type of valve; with a letter, its position on the inlet section.
(A) = spool action side
(B) = spool return action side



HC-D4

COLLETTORI INTERMEDI - *INTERMEDIATE SECTIONS*

Combinazione valvole — *Valves combination*

001	002	008	009	010	016	017	018	019	020	027	028	029	030
1A-3B	1A-4B	1A-11B	2A-3B	2A-4B	2A-11B	3A-1B	3A-2B	3A-3B	3A-4B	3A-11B	4A-1B	4A-2B	4A-3B

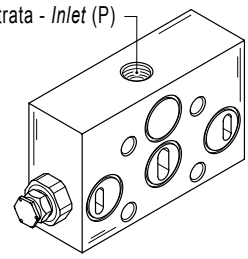
037	084	085	086	087
4A-11B	11A-1B	11A-2B	11A-3B	11A-4B

Tipologia ingresso e filettatura — *Inlet and thread avalaible*

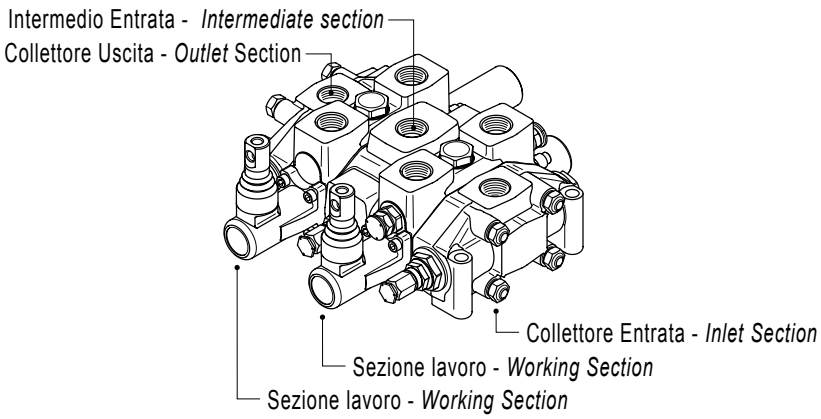
A

Ingresso superiore
Upper inlet

M01 **G04** **U03** **U04**



Esempio di configurazione completa di un distributore HC-D4 con intermedio di entrata (BE)
Complete configuration samples for HC-D4 with intermediate inlet section (BE)

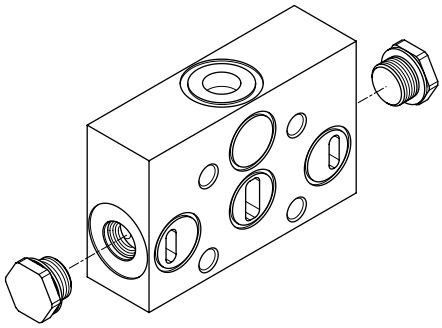


HC-D4/2

Collettore entrata destra ..... **IR 001 150 A G04** ..... *Right inlet section*
Sezione di lavoro ..... **W001A H001 F001A RP GO4** ..... *Working section*
Collettore intermedio di entrata ..... **BE 009 120 A G04** ..... *Intermediate inlet section*
Sezione di lavoro ..... **W001A H001 F001A RP GO4** ..... *Working section*
Collettore di scarico ..... **TJ A GO4** ..... *Outlet section*

Esempio di ordinazione: COLLETTORE INTERMEDIO USCITA

Order example: INTERMEDIATE OUTLET SECTION



BF tipologia collettore intermedio uscita . . .pag. 38

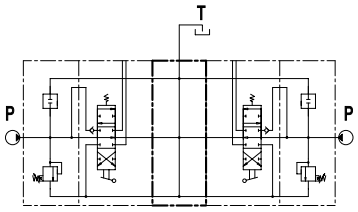
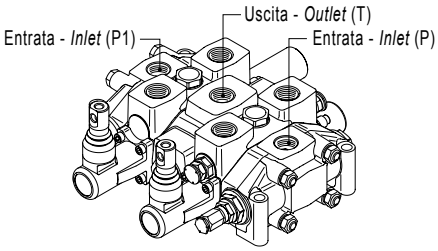
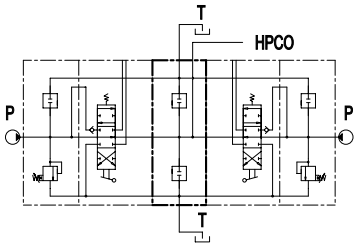
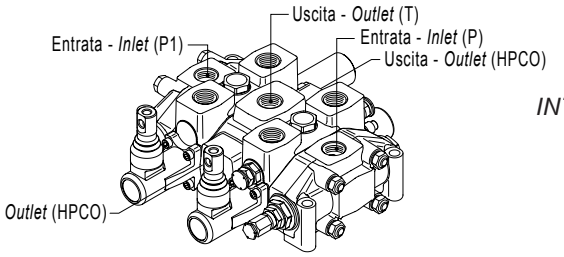
A G04 posizione ingresso e filettatura . . . . . .pag. 39

BF *intermediate outlet section type . . . . . .page 38*

A G04 *outlet and thread position . . . . . .page 39*

Definizione lato di alimentazione

Inlet side

SCHEMA IDRAULICO *HYDRAULIC DIAGRAM*	CONFIGURAZIONE *LAYOUT*	DESCRIZIONE + SIGLA *DESCRIPTION + CODE*
		COLLETTORE INTERMEDIO DI SCARICO AD 1 USCITA (T) *INTERMEDIATE OUTLET SECTION WITH SINGLE TANK RETURN* **BF**
		COLLETTORE INTERMEDIO DI SCARICO A 2 USCITE CON HPCO *INTERMEDIATE OUTLET SECTION WITH TWO TANK RETURNS* **BG**

Funzionamento collettore intermedio di scarico

Operation of intermediate outlet section

TIPO F

Il sopracitato collettore permette di convogliare il flusso dell'olio delle due pompe e delle utenze, in un'unica uscita T.

TYPE F

The above outlet section allows the flow of oil of the two pumps and the tank ports to be piped to a single outlet T.

TIPO G

Il collettore in oggetto permette di convogliare il flusso d'olio delle due pompe in due uscite:
- HPCO per l'alimentazione di un altro distributore
- T per lo scarico delle utenze

Per ottenere ciò è necessario collegare le due T.

TYPE G

The section in question allows the flow of oil of the two pumps to be piped in two outlets:
- HPCO for powering another directionale control valve
- T for discharge of the work ports
In order to obtain this, the two T need to be linked.

HC-D4

COLLETTORI INTERMEDI - *INTERMEDIATE SECTIONS*

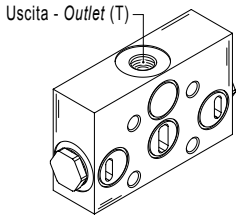
Tipologia scarico e filettatura — ***Outlet and thread avalaible***

BF

A

Ingresso superiore
Upper inlet

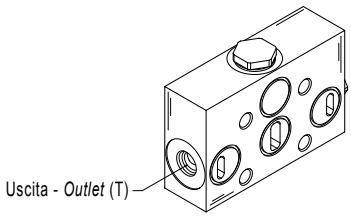
M02 **G04** **G05** **U03** **U04**



G

Uscita anteriore lato A
Front outlet side A

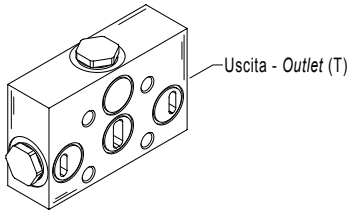
M02 **G04** **U03** **U04**



H

Uscita posteriore lato B
Rear uotlet side B

M02 **G04** **U03** **U04**

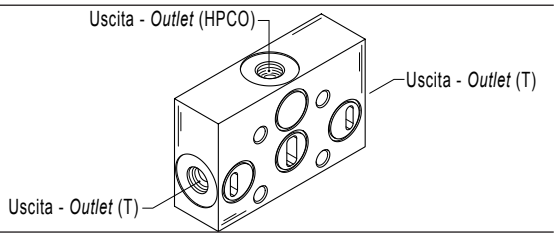


BG

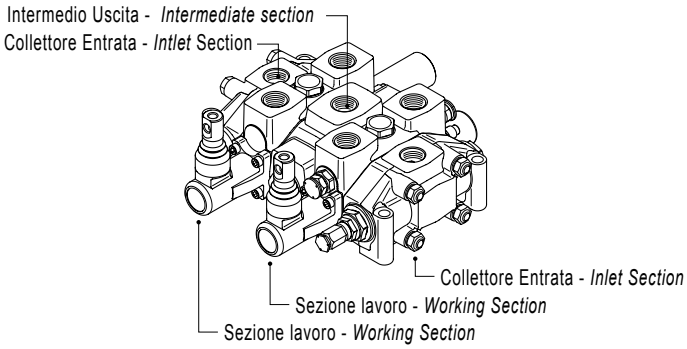
J

Uscita superiore HPCO - anteriore lato A e posteriore lato B in T
Upper outlet HPCO - front side A and rear side B to T

M02 **G04** **U03** **U04**



Esempio di configurazione completa di un distributore HC-D4 con intermedio di uscita (BF)
Complete configuration samples for HC-D4 with intermediate outlet section (BF)



HC-D4/2

Collettore entrata destra ..... **IR 009 150 A G04** ..... *Right inlet section*

Sezione di lavoro ..... **W001A H001 F001A RP GO4** ..... *Working section*

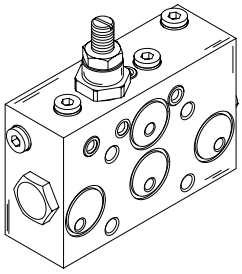
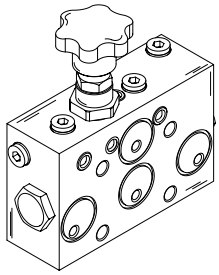
Collettore intermedio di entrata ..... **BF A G05** ..... *Intermediate inlet section*

Sezione di lavoro ..... **W001A H001 F001A RP GO4** ..... *Working section*

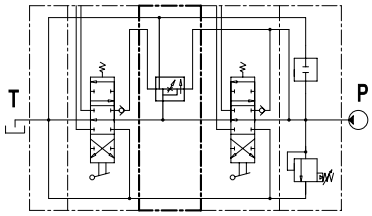
Collettore entrata sinistra ..... **IL 009 150 A G04** ..... *Left inlet section*

DIVISORI DI FLUSSO INTERMEDI - *INTERMEDIATE FLOW DIVIDERS*

Esempio di ordinazione: *Order example:*

CONFIGURAZIONE *LAYOUT*	DESCRIZIONE + SIGLA *DESCRIPTION + CODE*	CONFIGURAZIONE *LAYOUT*	DESCRIZIONE + SIGLA *DESCRIPTION + CODE*
	DIVISORE INTERMEDIO DI FLUSSO REGISTRABILE A VITE *INTERMEDIATE WITH SCREW-ADJUSTABLE FLOW DIVIDER* **C001**		DIVISORE INTERMEDIO DI FLUSSO REGISTRABILE A VOLANTINO *INTERMEDIATE WITHHAND WHEEL-ADJUSTABLE FLOW DIVIDER* **C002**

SCHEMA IDRAULICO - *HYDRAULIC DIAGRAM*



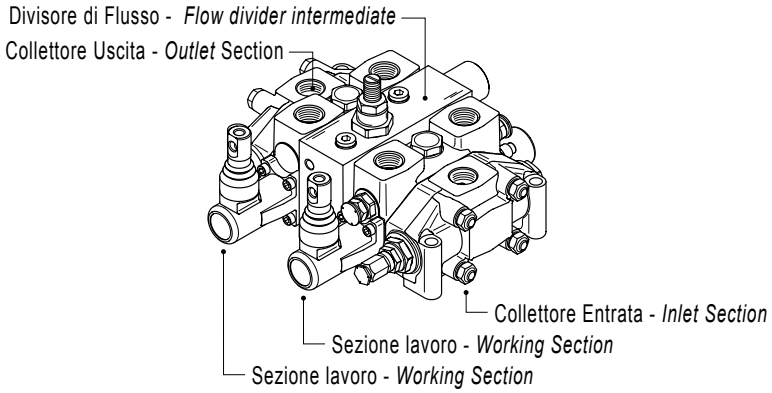
Funzionamento

La sezione intermedia divisore di flusso, permette di alimentare sezioni a valle del divisore stesso, con una portata definita dall'utilizzatore, indipendente dal carico.
La portata eccedente, può alimentare un altro distributore o essere mandata a scarico dallo stesso.
Il campo di regolazione portata (Q=l/min) varia da:
• Q minima = 3 l/min
• Q massima = 40 l/min

Operating principle

The intermediate section of the flow divider allows sections of the divider itself to be powered, with a flow rate set by the user and indipendent of the downstream load.
The excess flow may power another directional control valve be returned direct to tank.
The flow adjustment range (Q=l/min) change between:
• *Minimum Q = 3 l/min*
• *Maximum Q = 40 l/min*

Esempio di configurazione completa di un distributore HC-D4 con divisore intermedio di flusso
Complete configuration samples for HC-D4 with intermediate flow divider

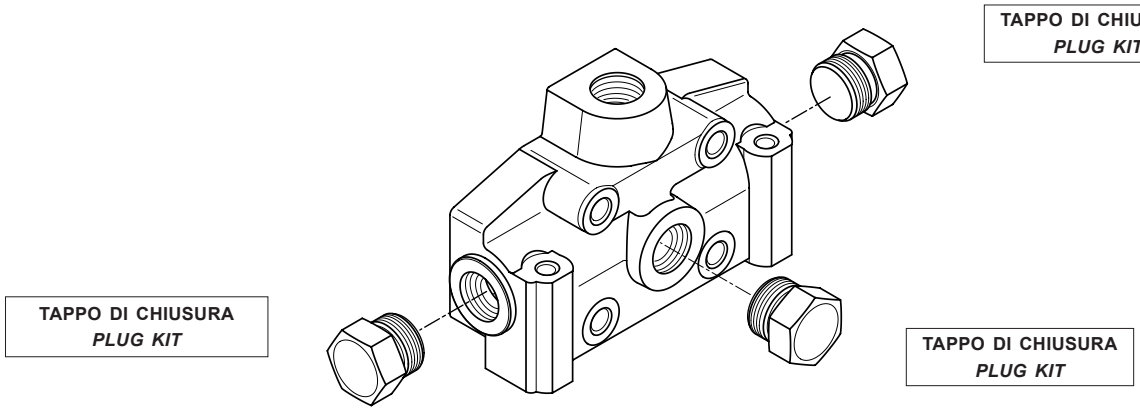


HC-D4/2

Collettore entrata destra .....**IR 001 150 A G04**..... *Right inlet section*
Sezione di lavoro.....**W001A H001 F001A RP GO4**..... *Working section*
Divisore intermedio di flusso .....**C 001**..... *Intermediate inlet flow divider*
Sezione di lavoro.....**W001A H001 F001A RP GO4**..... *Working section*
Collettore di scarico .....**TJ A GO4**..... *Outlet section*

Esempio di ordinazione:
Collettore 1 uscita

Order example:
1 outlet

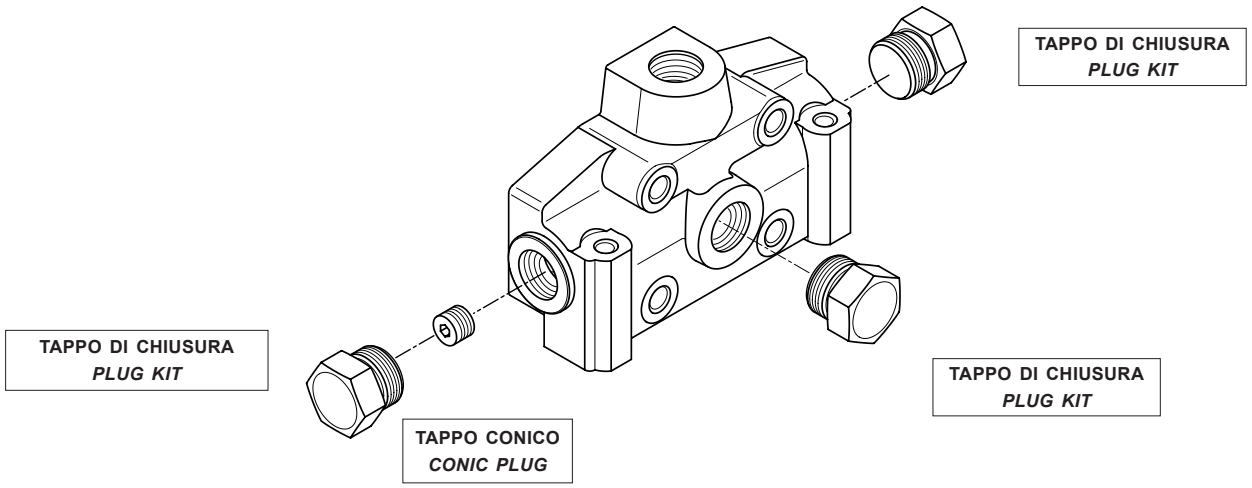


TJ tipologia collettore di scarico . . . . . .pag. 42
A G04 posizione scarico e filettatura . . . . . .pag. 42

TJ *outlet side type* . . . . . *.page 42*
A G04 *uotlet and thread available* . . . . . *.page 42*

Esempio di ordinazione:
Collettore 2 uscite

Order example:
HPCO version outlet

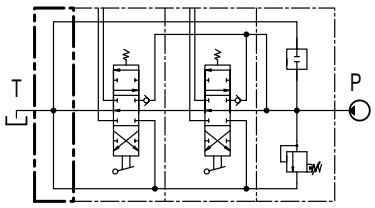
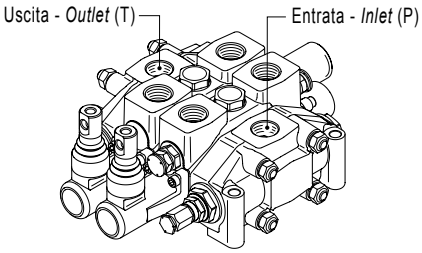
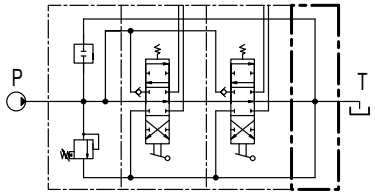
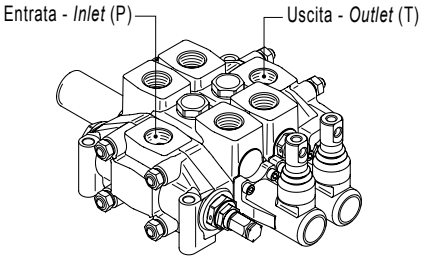


TM tipologia collettore di scarico . . . . . .pag. 43
M G04 posizione scarico e filettatura . . . . . .pag. 43

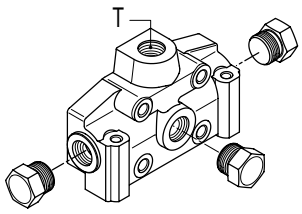
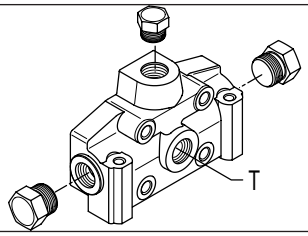
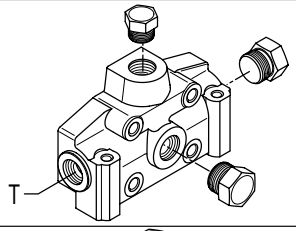
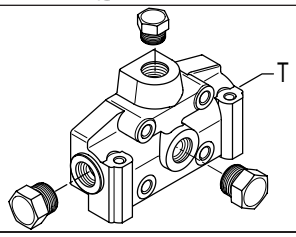
TM *outlet side type* . . . . . *.page 43*
M G04 *uotlet and thread available* . . . . . *.page 43*

COLLETTORE DI SCARICO - *OUTLET SECTION*

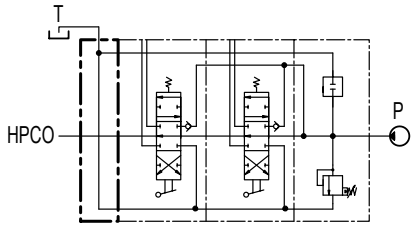
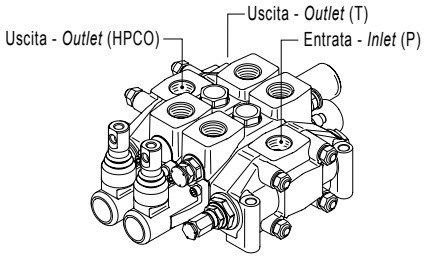
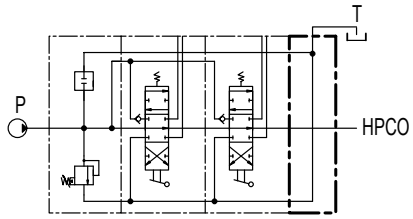
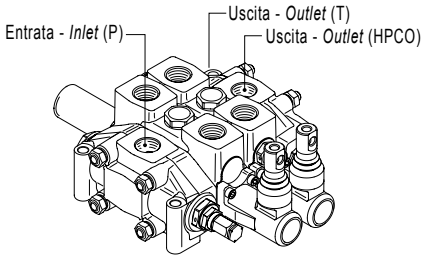
Classificazione scarico a una uscita — *Outlet with single tank classification*

SCHEMA IDRAULICO *HYDRAULIC DIAGRAM*	CONFIGURAZIONE *LAYOUT*	DESCRIZIONE + SIGLA *DESCRIPTION + CODE*
		COLLETTORE DI SCARICO AD 1 USCITA (T) ENTRATA DESTRA (P) *OUTLET SECTION* *WITH SINGLE RETURN (T)* *RIGHT-SIDE INLET (P)* **TJ**
		COLLETTORE DI SCARICO AD 1 USCITA (T) ENTRATA SINISTRA (P) *OUTLET SECTION* *WITH SINGLE RETURN (T)* *LEFT-SIDE INLET (P)* **TK**

Tipologia uscita e filettatura — *Outlet and thread avalaible*

A	Uscita superiore *Upper outlet*	**M02**	**G04**	**U03**	**U04**	
C	Uscita centrale *Central outlet*	**M02**	**G04**	**U03**	**U04**	
G	Uscita anteriore lato A *Front outlet side A*	**M02**	**G04**	**U03**	**U04**	
H	Uscita posteriore lato B *Rear outlet side B*	**M02**	**G04**	**U03**	**U04**	

Classificazione scarico a due uscite — *Outlet with two tanks classification*

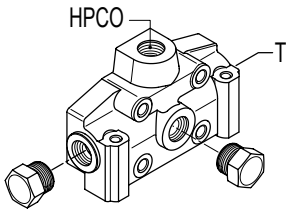
SCHEMA IDRAULICO *HYDRAULIC DIAGRAM*	CONFIGURAZIONE *LAYOUT*	DESCRIZIONE + SIGLA *DESCRIPTION + CODE*
		COLLETTORE DI SCARICO AD 2 USCITE CON HCPO ENTRATA DESTRA (P) *OUTLET SECTION WITH TWO RETURN RIGHT-SIDED INLET (P)* **TM**
		COLLETTORE DI SCARICO AD 2 USCITE CON HPCO ENTRATA SINISTRA P) *OUTLET SECTION WITH TWO RETURNS LEFT-SIDED INLET (P)* **TN**

Tipologia uscita e filettatura — *Outlet and thread avalaible*

M

HPCO uscita superiore T (TANK) uscita posteriore lato B
HPCO upper outlet T (TANK) side outlet B

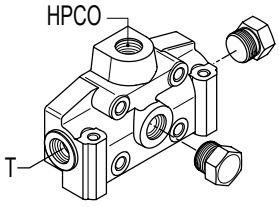
M02 **G04** **U03** **U04**



N

HPCO uscita superiore T (TANK) uscita anteriore lato A
HPCO upper outlet T (TANK) front outlet side A

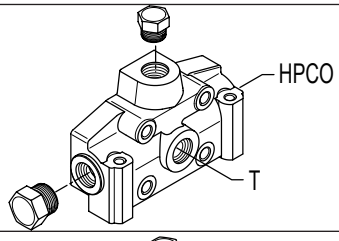
M02 **G04** **U03** **U04**



P

HPCO uscita centrale T (TANK) uscita posteriore lato B
HPCO central outlet T (TANK) side outlet B

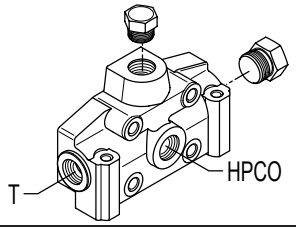
M02 **G04** **U03** **U04**



Q

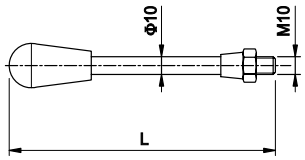
HPCO uscita centrale T (TANK) uscita anteriore lato A
HPCO central outlet T (TANK) front outlet side A

M02 **G04** **U03** **U04**



Classificazione kit aste leva — *Lever identification*

DIMENSIONI - *DIMENSIONS*



LUNGHEZZE DISPONIBILI (mm) - *AVAILABLE LENGTH (in)*

L (mm) = 140 - 190 - 240 - 415
L (in) = 5,5 - 7,5 - 9,5 - 16,3

DESCRIZIONE - *DESCRIPTION*

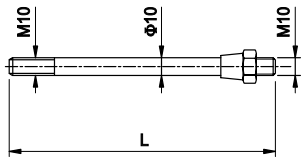
Asta leva con pomello

Lever with knob

SIGLE DI ORDINAZIONE - *ORDERING CODES*

ZA

DIMENSIONI - *DIMENSIONS*



LUNGHEZZE DISPONIBILI (mm) - *AVAILABLE LENGTH (in)*

L (mm) = 180 - 230
L (in) = 7,1 - 9,1

DESCRIZIONE - *DESCRIPTION*

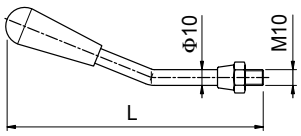
Asta leva con pomello

Lever with knob

SIGLE DI ORDINAZIONE - *ORDERING CODES*

ZB

DIMENSIONI - *DIMENSIONS*



LUNGHEZZE DISPONIBILI (mm) - *AVAILABLE LENGTH (mm)*

L (mm) = 250
L (in) = 9,8

DESCRIZIONE - *DESCRIPTION*

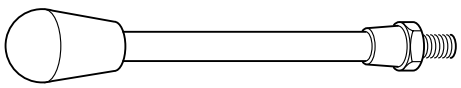
Asta leva con pomello per comando cloche

Lever with knob for joystick control

SIGLE DI ORDINAZIONE - *ORDERING CODES*

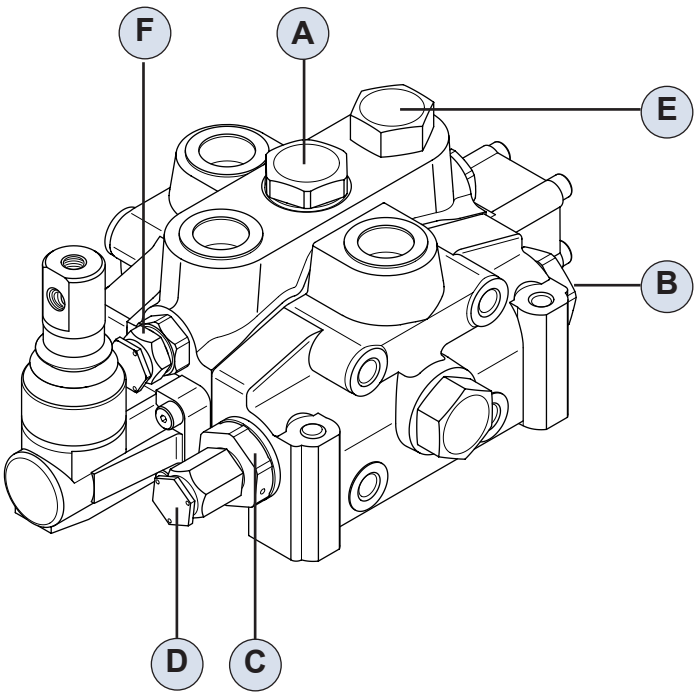
ZC

Esempio di ordinazione — *Order example*



ZA **M10** **190**

- 190 — Lunghezza asta leva in mm / *Lever lenght mm*
- M10 — Filettatura asta leva / *Lever thread*
- ZA — Tipologia asta leva / *Lever type*



Coppie di serraggio generali — *General clamping torque*

POSIZIONE *POSITION*	DESCRIZIONE *DESCRIPTION*	COPPIA SERRAGGIO (Nm) *CLAMPING TORQUE (Nm)*
A	tappo valvola di ritegno *load check valve plug*	**80**
B	tappo sostituisce valvola di massima *plug to replace pressure relief valve*	**85**
C	corpo valvola di massima *pressure relief valve body*	**85**
D	tappo registro valvola di massima *pressure relief valve cap*	**20**
E	tappo chisura utilizzi A-B-P-T *fittings in service ports A-B-P-T*	**G04 = 85 / U03 = 65 / U04 = 95** **M01 = 55 / M02 = 85**
F	coppia serraggio valvola ausiliaria *clamping torque auxiliary valve*	**vedi tabella (X)** ***see table (X)***

TABELLA - *TABLE* (X)

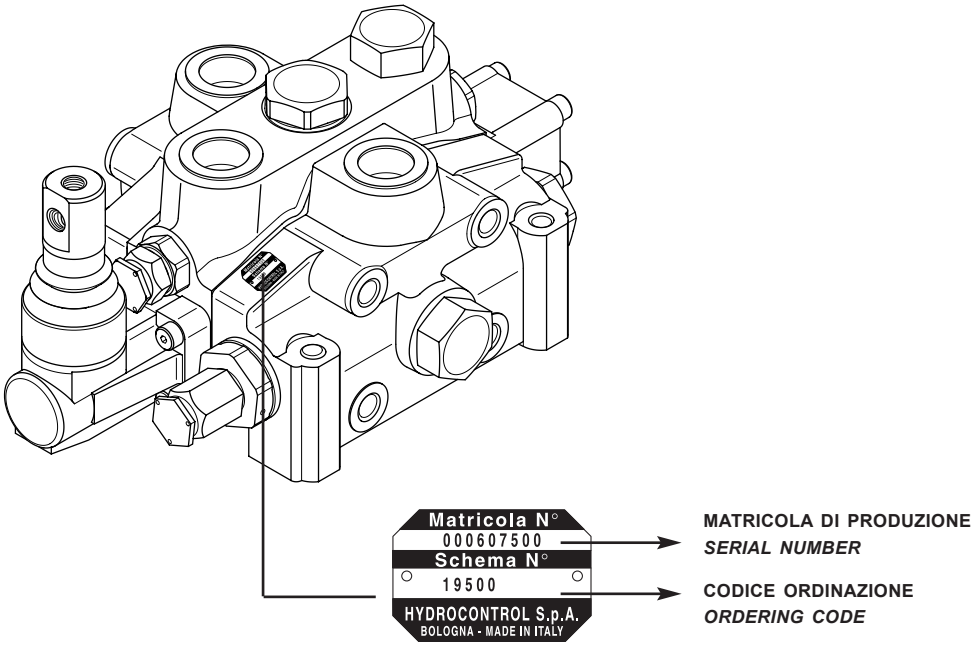
TAPPO VALVOLA ANTIURTO *ANTISHOCK VALVE PLUG* **22 Nm**	TAPPO VALVOLA ANTICAVITAZIONE *ANTICAVITATION VALVE PLUG* **22 Nm**	TAPPO SOSTITUISCE VALVOLA *PLUG REPLACES VALVE* **55 Nm**
CORPO VALVOLA ANTIURTO *ANTISHOCK VALVE CAP* **55 Nm**	CORPO VALVOLA ANTICAVITAZIONE *ANTICAVITATION VALVE CAP* **55 Nm**	

Identificazione prodotto

Product identification

In tutti i monoblocchi HC-D4 forniti da Hydrocontrol S.p.A. è applicata una targhetta di riconoscimento.

An identification plate is put on every HC-D4 sectional valve.



Istruzioni di montaggio

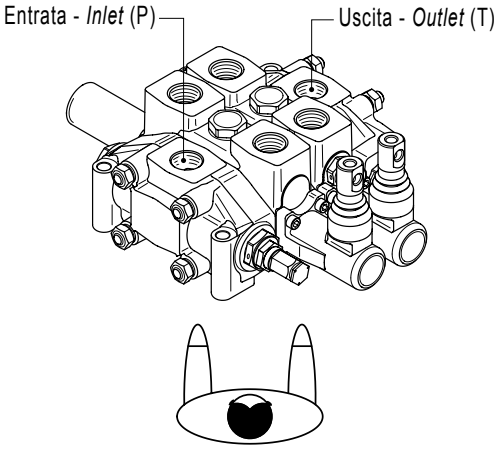
Assembly instructions

Poiché i corpi hanno gole simmetriche, in nostri distributori possono essere trasformati da entrata destra (IR) ad entrata sinistra (IL), ruotando i cursori ed i relativi comandi di 180°.
Quanto sopra descritto, non è possibile in presenza dei cursori tipo: 012 - 013 - 014.

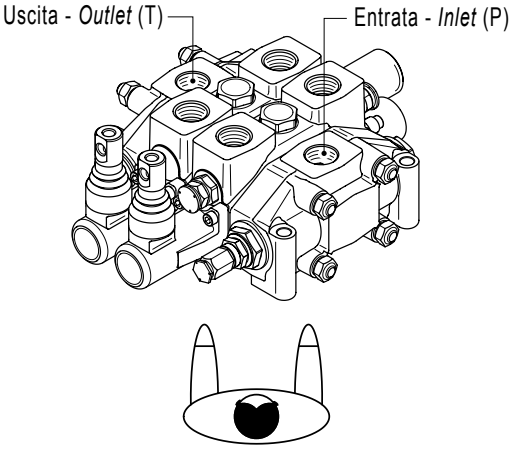
Since our directional control valve casings have symmetrical galleries, they can be converted from right-side inlet (IR) to left-side inlet (IL) simply by turning the spool and relative controls through 180°.
This opertation is not possible when using spool types: 012 - 013 - 014.

Curva consigliata per i nostri distributori standard **A01** (vedi catalogo manipolatori).

Recommended curve for our standard directional control valves **A01** *(see remote controls catalogue).*



Distributore con entrata sinistra (IL)
Directional control valve with left inlet (IL)



Distributore con entra destra (IR)
Directional control valve with right inlet (IR)

HCD4-01

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