

I - E

oleodinamica

ELETTROVALVOLE CETOP
SOLENOID CETOP VALVES

DATI TECNICI D'USO

COLLAUDO FUNZIONALE
Tutte le curve di funzionamento riportate a catalogo sono state rilevate utilizzando olio minerale con grado di viscosità ISO-VG32 alla temperatura di 40°C.. Tutte le valvole vengono collaudate a queste condizioni su banchi prova che assicurano un grado di filtrazione assoluta di 15 micron (NAS 9).

VALORI LIMITE DI TEMPERATURA
Temperatura ambiente da –20°C a +50°C
Temperatura olio da –20°C a +80°C

A**TTACCHI DELLE VALVOLE CON COLLETTORE**
Gli attacchi filettati sono normalmente del tipo "G", gas cilindrico (BSPP) nelle dimensioni da G ¼" a G 1".
Sono disponibili altri tipi di attacchi filettati.

GUARNIZIONI
O-RING: Acrilo – Nitrite Butadiene NBR (BUNA-N) standard per temperature comprese tra –20°C e +100°C. A richiesta sono disponibili in FLUOROCARBONIO FPM (Viton) ed in altre mescole.
ANELLI ANTIESTRUSIONE: LUBRIFLON – PTFE – PBK.

CONSERVAZIONE A MAGAZZINO DELLE VALVOLE NUOVE
Le valvole vanno conservate protette nel loro involucro termoretraibile, in luogo asciutto, lontane dall'irraggiamento solare o da sorgenti di calore e di ozono (evitare la vicinanza con motori elettrici funzionanti) in un ambiente con temperatura tra –20°C e +50°C.

INSTALLAZIONE DELLE VALVOLE
Si raccomanda di seguire scrupolosamente la seguente procedura:
· Assicurarsi che la base di fissaggio non sia sporca o in cattive condizioni (vd. Catalogo)
· Assicurarsi che gli O-ring siano integri e correttamente montati
· Non serrare viti o raccordi con momento di serraggio superiore al valore massimo indicato sul catalogo

TENSIONE DI ALIMENTAZIONE
Per ottenere un corretto funzionamento ed una lunga durata di esercizio delle bobine è necessario che le variazioni della tensione di alimentazione non siano superiori al +5% -10% della tensione nominale.

INTERMITTENZA DI FUNZIONAMENTO DIN VDE 0580
L'intermittenza di funzionamento ED di un elettromagnete è il valore percentuale del tempo di inserzione $\mathbf{t_i}$ rispetto al tempo completo di funzionamento $\mathbf{t_c}$, dove $\mathbf{t_c}=\mathbf{t_i}+\mathbf{t_r}$ con $\mathbf{t_r}$ = tempo di riposo.
$ED = (\mathbf{t_i} / \mathbf{t_c}) \cdot 100$ %
Tutte le bobine funzionano con ED=100% purchè non venga superato il valore limite di temperatura per la loro classe di isolamento.

PROTEZIONE EN 60529
Sono disponibili bobine con protezione IP65/IP69K.

FLUIDO IDRAULICO
Si raccomanda l'impiego di OLI A BASE MINERALE con caratteristiche fisico-chimiche idonee all'utilizzo in apparati oleodinamici.
OLI A BASE MINERALE tipo HL (DIN 51524 parte 1)
OLI A BASE MINERALE tipo HLP (DIN 51524 parte 2)
Si prega di consultare LC Oleodinamica prima dell'eventuale utilizzo di fluidi "ecologici" (generalmente a base vegetale o poliglycolica).
Classe di viscosità: secondo gli standard ISO DIN, viene espressa con il n. ISO-VG, che indica la viscosità media a 40°C (mm^2/s o centiStokes – cSt-).
- Vd. Tab. A -

CONTAMINAZIONE – FILTRAZIONE
CONSIDERAZIONI GENERALI: i maggiori costruttori ed utilizzatori di componenti e sistemi oleodinamici riconoscono che la eccessiva contaminazione del fluido è la principale causa di guasti e disfunzioni negli impianti oleodinamici. Le particelle abrasive che circolano nel fluido provocano l'erosione delle parti in movimento, che porta all'usura dei componenti e al conseguente malfunzionameno dell'impianto.
Si raccomanda di mantenere il livello di contaminazione per lo meno ai valori nominali indicati in tabella, adottando i sistemi di filtrazione più idonei allo scopo.

RAPPORTO DI FILTRAZIONE BETAx: è il rapporto tra il numero di particelle all'ingresso e all'uscita del filtro che hanno diametro maggiore di x micron.

GRADO DI FILTRAZIONE ASSOLUTA ISO 4572: è il diametro x della particella più grande, con BETAx≥75.

CLASSE DI CONTAMINAZIONE ISO 4406: è espressa da 3 numeri che indicano rispettivamente: il numero di particelle di diametro maggiore o pari a 4 micron (c); il numero di particelle di diametro maggiore o pari a 6 micron(c); il numero di particelle di diametro maggiore o pari a 14 micron(c), contenute in 1 ml di fluido.

CLASSE DI CONTAMINAZIONE NAS 1638: è espressa da un numero che indica il numero di particelle contenute in 100 ml di fluido suddivise per classi dimensionali.
- Vd. Tab. B -

TECHNICAL DATA

FUNCTIONAL TESTING
All performance curves in this catalogue are obtained using mineral based hydraulic oil with 32 cSt viscosity at 40°C (ISO VG 32 viscosity class). All valves go through functional testing at these conditions before shipment.
Our test stands ensure 15 micron Absolute Filtration (NAS 9).

TEMPERATURE RANGES
Ambient Temperature from –20°C to +50°C
Oil Temperature from –20°C to +80°C

PORTS
G sizes (BSPP) from G 1/4" to G 1" are standard; other threads can be manufactured upon request.

SEALS
O-RINGS: Acryl – Nitrile Butadiene Rubber NBR (BUNA-N) standard for temperature between –20°C and +100°C. Fluorocarbo FPM (Viton) and other compounds are available on request.
BACKUP RINGS: Lubriflon – PTFE – PBK.

STOCKING OF NEW VALVES
encapsulated by a protective wrapping, the valves shall not be exposed to direct sun light nor to source of heat or ozone (like electric motors running) and kept in a dry place at a temperature between –20°C and +50°C.

VALVES INSTALLATION
It is recommended to follow these steps:
- *inspect the sub-plate to ensure that it is in good conditions and no external contaminant is present.*
- *Check that O-Rings are intact and correctly positioned.*
- *Don't tighten screws or connectors more than the maximum torque specified in the catalogue.*

INLET VOLTAGE
To obtain correct operation and long life of coils it is necessary that the operating voltage fluctuations do not exceed +5% -10% of nominal voltage.

WORKING DUTY
The working duty ED of a coil is the ratio between energized time t_i *and full cycle time* t_c *where* $t_c = t_i + t_r$ *and* t_r *= de-energized time.*
$ED = (t_i/t_c) \cdot 100\ \%$
All coils are rated for ED = 100 % provided that temperature limit of their insulation class is not exceeded.

PROTECTION EN 60529
On request coils with IP65/IP69K protection.

HYDRAULIC FLUID
It must have physical lubricating and chemical properties suitable for use in hydraulic systems such as, for example:
MINERAL OIL FLUIDS HL (DIN 51524 part1)
MINERAL OIL FLUIDS HLP (DIN 51524 part2)
For use of environmentally acceptable fluids (vegetable or polyglycol base) please consult LC Oleodinamica.
Viscosity class: with ISO-DIN, the viscosity class is expressed by ISO-VG (no.); the no. Indicates the average kinematic viscosity at 40°C in mm^2/s *or centiStoks (cSt).*
- See Tab. A -

CONTAMINATION – FILTRATION
GENERAL INFORMATION: Manufacturers and users of hydraulic equipment admit that contamination is the most likely cause of malfunction or failure in hydraulic systems and reduces security and reliability of components and systems. Metal particles flowing throughout the circuit scratch moving surfaces so that contamination level, if not controlled, increases very rapidly.
It is strongly recomended to mantain contamination level at least at nominal values shown below, choosing adequate filtration products.

FILTRATION RATIO BETAx: It's the ratio between the number of particles before and after the filter with diameter larger than X micron.

ABSOLUTE FILTRATION RATIO ISO 4572: It's the diameter X of the largest particle with $BETAx \geq 75$.

CONTAMINATION CLASS ISO 4406: it's expressed by 3 scale numbers representing respectively: the number of particles equal to or larger than 4 micron (c); the number of particles equal to or larger than 6 micron (c); the number of particles equal to or larger than 14 micron(c), contained in 1 ml of fluid.

CONTAMINATION CLASS NAS 1638: It's expressed by one scale numbers representing the number of particles of different size ranges contained in 100 ml of fluid.
- See Tab. B -

TABELLE VISCOSITA' E CONTAMINAZIONE

VISCOSITY CLASS AND FILTRATION DATA

- Tabella A

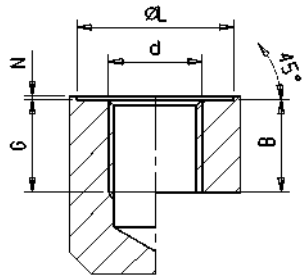
- **Calsse di viscosità** *Viscosity class*	**Viscosità cinematica** *Kinematic viscosity*		
	MASSIMA A 0°C MAXIMUM AT 0°C	**MEDIA A 40°C MEDIUM AT 40°C**	**MINIMA A 100°C MINIMUM AT 100°C**
ISO VG 10	90	10	2.4
ISO VG 22	300	22	4.1
ISO VG 32	420	32	5.0
ISO VG 46	780	46	6.1
ISO VG 68	1400	68	7.8
ISO VG 100	2560	100	9.9

- Tabella B

- **TIPO DI IMPIANTO TIPO DI VALVOLA** *TYPE OF SYSTEM TYPE OF VALVE*	**SPECIFICHE L.C. SUL GRADO DI CONTAMINAZIONE DELL'OLIO** *L.C. FILTRATION RECCOMENDATIONS*			
	CAPACITA' DI FILTRAZIONE NOMINALE *NOMINAL FILTRATION* **(micron)**	**FILTRAZIONE ASSOLUTA SECONDO ISO 4572** *ABSOLUTE FILTRATION RATING ISO 4572* **($BETA_x \geq 75$)**	**CLASSE DI CONTAMINAZIONE SECONDO:** *CONTAMINATION CLASS ACCORDING TO:*	
			ISO 4406	**NAS 1638**
Apparati o componenti funzionanti ad ALTA PRESSIONE >250 bar APPLICAZIONI GRAVOSE Valvole e componenti poco tolleranti alla contaminazione dell'olio. ***System/components operating at HIGH PRESSURE >250 bar HIGH DUTY CYCLE APPLICATIONS Systems/components with LOW dirt tolerance***	10	X = 10...12	19 / 17 / 14	8
Apparati o componenti funzionanti a MEDIA PRESSIONE APPLICAZIONI GRAVOSE Valvole e componenti mediamente tolleranti alla contaminazione dell'olio. ***System/components operating at MEDIUM HIGH PRESSURE HIGH DUTY CYCLE APPLICATIONS Systems/components with moderately dirt tolerance***	15	X = 12... 15	20 / 18 / 15	9
Apparati o componenti funzionanti a BASSA PRESSIONE <100 bar APPLICAZIONI POCO GRAVOSE Valvole e componenti ben tolleranti alla contaminazione dell'olio. ***System/components operating at LOW PRESSURE <100 bar LOW DUTY CYCLE APPLICATIONS Systems/components with GOOD dirt tolerance***	25	X = 15... 25	21 / 19 / 16	10

SPECIFICHE DEGLI ATTACCHI - *PORT DETAILS*

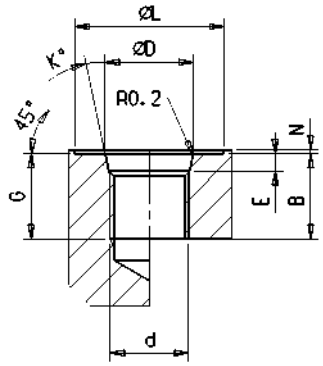
ATTACCHI - *PORTS*



DIN 3852/2

Filettature *Thtreads* UNI-ISO 228 d	G - B	Ø - L*	N max
G 1/4	13	19	1
G 3/8	13	25	1
G 1/2	15	29	1,5
G 3/4	17	36	1,5
G 1"	19	45	2
-	-	-	-

*** Non conforme alla norma DIN 3852/2** - *Different from DIN 3582/2 standard*



ISO 11926-1 / SAE J514

Filettature *Thtreads* ASA-B1-1 d		G - B	Ø - L	Ø - D	E	K	N max
7/16-20 UNF-2B	SAE 4	12	19	12,5	2,4	12°	1
9/16-18 UNF-2B	SAE 6	13	26	15,6	2,5	12°	1
3/4-16 UNF-2B	SAE 8	15	30	20,6	2,6	15°	1,5
7/8-14 UNF-2B	SAE 10	17	34	23,9	2,6	15°	1,5
1 1/16-12 UN-2B	SAE 12	20	41	29,2	3,3	15°	1,5
1 5/16-12 UN-2B	SAE 16	20	50	35,5	3,3	15°	2
-	-	-	-	-	-	-	-

UNI-ISO 6149-1

Filettature *Thtreads* ISO 261 d	G - B	Ø - L	Ø - D	E	K	N max
M18x1,5	15,5	29	19,8	2,4	15°	1,5

JIS B 2351

Filettature *Thtreads* UNI-ISO 228 d	G - B	Ø - L	Ø - D	E	K	N max
G 1/4	13	24	15,6	2,5	15°	1

CAPITOLO 2 - LC1

Grandezza / *size*: NG6 ISO 4401-03 CETOP RP121 H-03 (CETOP 3)

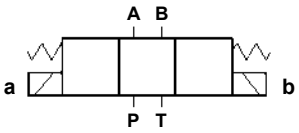
LC1 Z	**Elettrovalvole dirette controllo direzione** *Solenoid operated directional valves*	2.10.
LC1AZ - LC1DZ	**Elettrovalvole dirette controllo direzione** *Solenoid operated directional valves*	2.20.
LC1MCAZ-LC1MCTAZ LC1MCDZ-LC1MCTDZ	**Elettrovalvole modulari dirette controllo direzione** *Modular solenoid operated directional valves*	2.30.
LC1S	**Elettrovalvole dirette controllo direzione con reg. del tempo d'intervento** *Solenoid operated directional valves with operating time adjustment*	2.50.
LC1 PRO	**Elettrovalvole dirette controllo direzione con sensore induttivo di prossimità** *Solenoid operated directional valves with proximity inductive sensor*	2.60.
LC1 KX	**Elettrovalvole dirette controllo direzione a tenuta** *Solenoid operated poppet directional valves*	2.70.
LC1 CM	**Valvole controllo direzione con comando a camma** *Cam-operated directional valves*	2.80.
LC1 OP	**Valvole controllo direzione a comando oleodinamico o pneumatico** *Oil/air operated directional valves*	2.90.
LC1 LV	**Valvole controllo direzione con comando a leva** *Lever operated directional valves*	2.100.
LC1 IA6	**Valvole di commutazione automatica (in pressione)** *Automatic inversion valves (pressure)*	2.110.
LC1 IA8	**Valvole di commutazione automatica (in portata)** *Automatic inversion valves (flow)*	2.120.
LC1M VR	**Valvole modulari di ritegno semplici e pilotate** *Modular direct and pilot operated check valves*	2.130.
LC1M VM	**Valvole modulari limitatrici di pressione** *Modular pressure relief valves*	2.140.
LC1M VBSO	**Valvole modulari di bilanciamento** *Modular overcentre valves*	2.150.
LC1M VF	**Valvole modulari di controllo portata** *Modular flow regulator valves*	2.160.
LC1M VFCU	**Valvole modulari compensate di controllo portata** *Modular pressure compensated flow regulator valves*	2.170.
LC1M VRPM	**Valvole modulari riduttrici di pressione** *Modular pressure reducing valves*	2.180.
LC1M VSPY	**Valvole modulari di sequenza** *Modular sequence valves*	2.190.
LC1 P	**Elettrovalvola diretta controllo direzione proporzionale** *Proportional Solenoid operated directopnal valves*	2.250.

LC1 Z

Elettrovalvole dirette controllo direzione

Solenoid operated directional valves





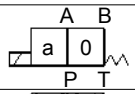
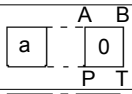
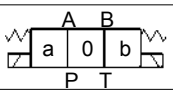
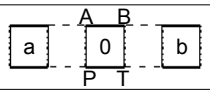
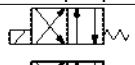
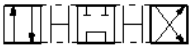
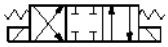
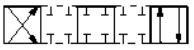
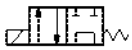
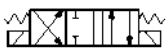
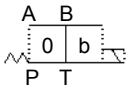
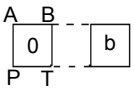
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima : 30 l/min
Pressione massima d'esercizio su A-B-P : 250 bar
Pressione massima in T: dinamica=180 bar - statica=210 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow : 30 l/min
Max operating pressure on A-B-P: 250 bar
Max pressure in T: dynamic=180 bar - static=210 bar

TIPI DI CIRCUITI • *SPOOL TYPES*

Nuovo codice *New code*	Vecchia sigla *Old code*	Simbolo *Circuit*	Direzione del flusso durante il passaggio al centro *Oil direction during shift*	Nuovo codice *New code*	Vecchia sigla *Old code*	Simbolo *Circuit*	Direzione del flusso durante il passaggio al centro *Oil direction during shift*
W				W			
X301	A11A			**A201**	A2		
Y301	A11C			**B201**	B2		
A301	A11S			**C201**	C2		
B301	B11C			**D201**	D2		
C301	C11A			**E201**	E2		
D301	D11C			**K201**	K2		
E301	E11C			**K209**	R2		
N301	N11C						
W				W			
X401	A12A						
Y401	A12C						
A401	A12S						
B401	B13C						
C401	C13A						
D401	D13C						
E401	E12C						
N401	N12C						

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*				
	P>T	P>A	P>B	A>T	B>T
A2 - A11S - A12S	3	2	2	1	1
A11A - A12A		4	4	5	5
A11C - A12C	4	4	4	5	5
B2 - B11C - B13C		4	4	4	4
C2 - C11A - C13A	5	4	4	6	6
D2 - D11C - D13C		5	5	4	4
E2 - E11C - E12C		3	3	6	6
N11C - N12C		4	4		
K2 - R2		4	4	4	4

Cadute di pressione
Pressure drop

Tempi di commutazione
(rilevati con 25 l/min e 150 bar)
Shifting time
(taken with 25 l/min and 150 bar)

Eccitazione
Energised
50÷90ms

Diseccitazione
De-energised
40÷60ms

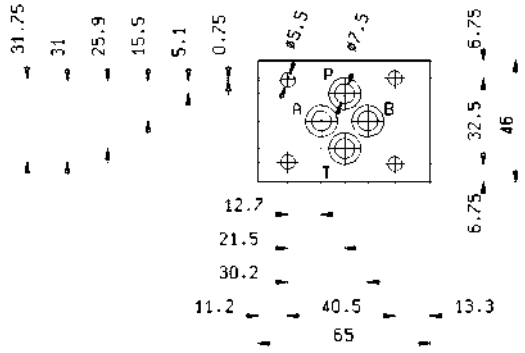
Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*
A2 - A11S - A12S - A12C A12A - A11A -A11C - C2 C11A - C13A - D2 - D11C D13C	**1**
B2 - B11C - B13C - K2 - R2	**2**
E2 - E11C - E12C - N11C N12C	**3**

Portate massime in funzione della pressione
Maximum flows depending on pressure

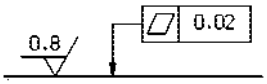
I valori indicati nel grafico non sono validi se l'elettrovalvola è utilizzata in applicazioni con collegamenti 2 o 3 vie.

The values indicated in the graph are not valid if the solenoid valve is used in applications with 2 or 3 way connections.

GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121H- 03 (CETOP 3)

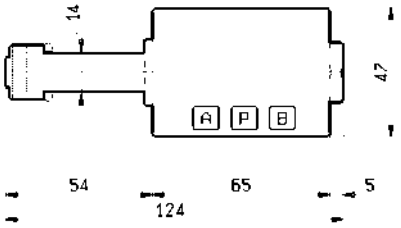


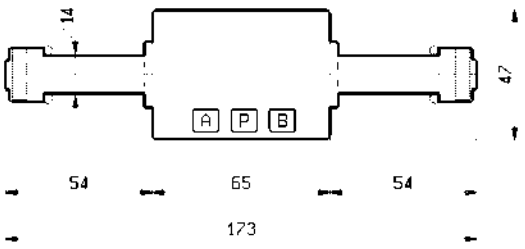
Qualità superficie di attacco
Mounting plane quality



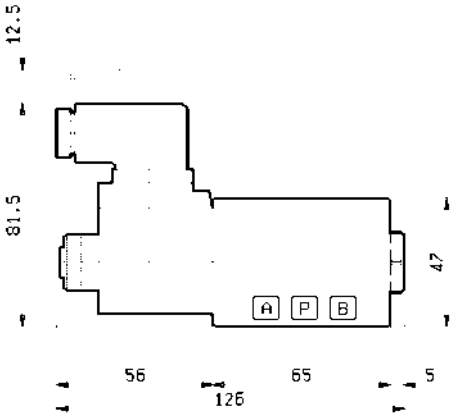
DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

Elettrovalvola 4 vie 2/3 posizioni. (Fornitura standard)
Solenoid valve 4 way 2/3 positions. (standard)



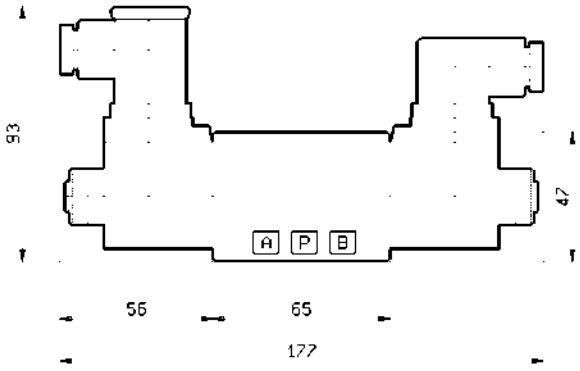


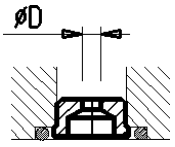
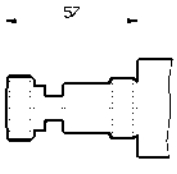
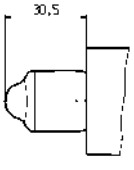
Elettrovalvola 4 vie 2/3 posizioni. (Fornitura su richiesta)
Solenoid valve 4 way 2/3 positions. (Supply on request)



Connettore con raddrizzatore
Connector with rectifier

Connettore standard
Standard connector



Strozzatore per utilizzi P,T,A,B *Flow restrictor for P,T,A,B ports*	**ø D mm**	**Codice** *Designation code*	**Comando manuale di emergenza a vite** *Screwed manual override* **EF Cod.: LC04Z EF**	**Comando manuale di emergenza a pulsante** *Push-button manual override* **EP Cod.: 271-05098**
	0.8 1.0 1.2 1.5 2.0	50-0500 50-0501 50-0502 50-0503 50-0504		

MOMENTI MASSIMI DI SERRAGGIO • *MAXIMUM BLOCKING TORQUE*

Serraggio cannotto *Tube mounting*	**Serraggio ghiera blocco bobina** *Retainer nut blocking torque*	**Viti di fissaggio** *Fixing screws*
ch. 24mm: 22÷24Nm	**M13x1 Øe 20.5: 5÷6Nm**	**N°4 DIN 912-8.8 M5x30: 5÷6Nm**

Pesi *Weights*	**Elettrovalvola con 1 solenoide:** *With 1 solenoid :* **1.20 kg**	**Elettrovalvola con 2 solenoidi:** *With 2 solenoids :* **1.45 kg**

SOLENOIDI • *SOLENOIDS*: GM 3060

Le elettrovalvole LC1 Z montano i solenoidi GM 3060, costruiti per alimentazione in corrente continua.
Per il funzionamento in corrente alternata, con frequenze di 50 o 60Hz, è indispensabile utilizzare un connettore con raddrizzatore (RAC).
Frequenza di inserzione: 3Hz.
Sui solenoidi GM 3060 sono montate le bobine C36... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.06.

The valves LC1 Z use the solenoids GM 3060 which function in direct current (DC).
Use in alternate current (AC) with frequencies of 50 and 60Hz is necessary to use a connector with rectrifier (RAC).
Switching frequency: 3Hz
The solenoids GM 3060 use C36... coils in different verions; for more technical information go to page 2.50.06.

CODICE DI ORDINAZIONE • *ORDERING CODE*

L	5	1	1	0	_	W	_	X	Y	Z

W	**CIRQUITO** *CIRCUIT*
– – – –	**VEDI PAGINA 2.10.02** *SEE PAGE 2.10.02*

Y	**CONNESSIONE** *CONNECTION*
00	**SENZA BOBINA, SENZA CONNETTORE** *WITHOUT COIL AND CONNECTOR*
01	**CON BOBINA, SENZA CONNETTORE** *WITH COIL, WITHOUT CONNECTOR*
02	**CON CONNETTORE DIN 43650** *WITH CONNECTOR DIN 43650*
03	**AMP JUNIOR** *AMP JUNIOR*
07	**DT04-2P DEUTSCH** *DT04-2P DEUTSCH*
31	**CAVO 350mm** *CABLE 350 mm*
34	**CAVO 350mm + DT04-2P DEUTSCH** *CABLE 350 mm + DT04-2P DEUTSCH*

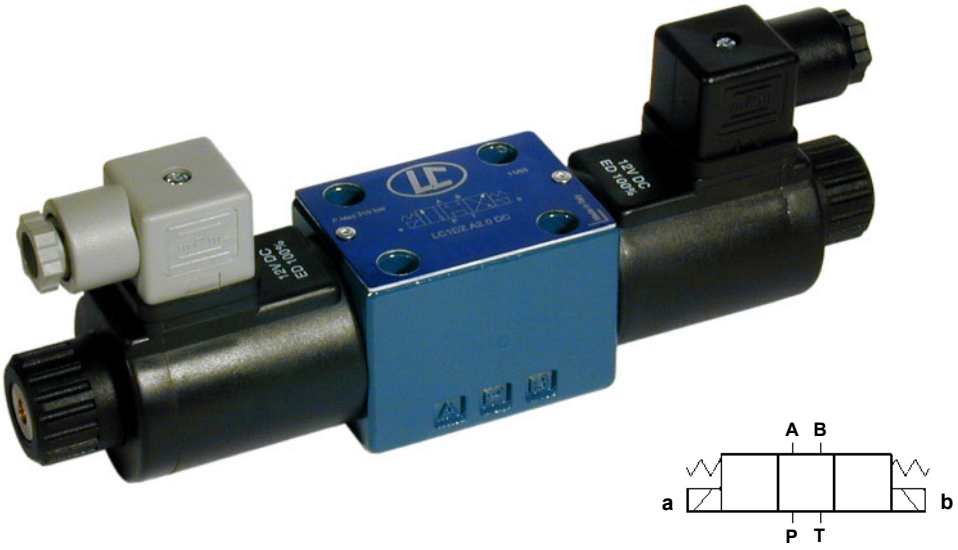
X	**TENSIONE** *VOLTAGE*	**Connessioni disponibili** *Available connections*					
		00	**01**	**03**	**07**	**31**	**34**
00	**SENZA BOBINA** *WITHOUT COIL*						
OB	12V DC	X	X	X	X	X	X
AD	13V DC	X	X				
OC	24V DC	X	X	X	X	X	X
AC	27V DC	X	X				
OD	48V DC	X	X				
OE	110V DC	X	X				
OV	24 RAC (21.5 DC)	X	X				
OW	110 RAC (98 DC)	X	X				
OZ	230 RAC (207 DC)	X	X				

Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1AZ - LC1DZ

Elettrovalvole dirette controllo direzione

Solenoid operated directional valves



CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

LC1AZ - CORRENTE ALTERNATA: Portata massima : 60 l/min
Pressione massima d'esercizio su A-B-P: 310bar
Pressione massima in T: dinamica=160 bar - statica=180 bar

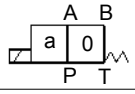
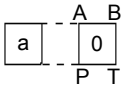
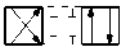
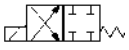
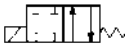
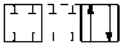
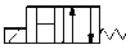
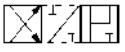
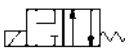
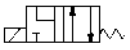
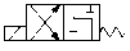
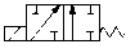
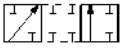
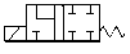
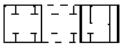
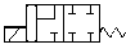
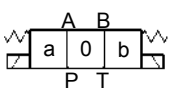
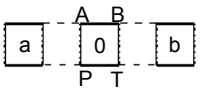
LC1DZ - CORRENTE CONTINUA: Portata massima : 70 l/min
Pressione massima d'esercizio su A-B-P: 310bar
Pressione massima in T: dinamica=250 bar - statica=310 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

LC1AZ - A.C. VERSION: Max flow : 60 l/min
Max operating pressure on A-B-P: 310bar
Max pressure in T: dynamic=160 bar - static=180 bar

LC1DZ - D.C. VERSION: Max flow : 70 l/min
Max operating pressure on A-B-P: 310bar
Max pressure in T: dynamic=250 bar - static=310 bar

TIPI DI CIRCUITI • *SPOOL TYPES*

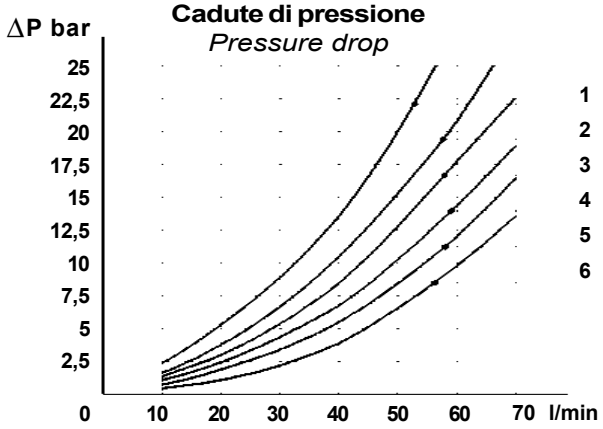
Nuovo codice *New code*	**Vecchia sigla** *Old code*	**Simbolo** *Circuit*	**Direzione del flusso durante il passaggio al centro** *Oil direction during shift*
W			
X301	A11A		
Y301	A11C		
A301	A11S		
A361	A14S		
B301	B11C		
B361	B14C		
C301	C11A		
C361	C14A		
D301	D11C		
D361	D14C		
E301	E11C		
E361	E14C		
K301	K11C		
N301	N11C		
T301	T11C		
T361	T13C		
U369	U11C		
W			
A201	A2		
B201	B2		
C201	C2		
D201	D2		
E201	E2		
E2R1	ER		
F201	F2		
G201	G2		
G209	H2		
K201	K2		
K209	R2		
U201	U2		

Nuovo codice *New code*	**Vecchia sigla** *Old code*	**Simbolo** *Circuit*	**Direzione del flusso durante il passaggio al centro** *Oil direction during shift*
W			
X401	A12A		
Y401	A12C		
A401	A12S		
A471	A13S		
B471	B12C		
B401	B13C		
C471	C12A		
C401	C13A		
D471	D12C		
D401	D13C		
E401	E12C		
E471	E13C		
K401	K12C		
N401	N12C		
T409	T12C		
T479	T14C		
W			
L201	M2A		
M201	M2C		
N201	N2		
W			
L501	M2A/D		
M501	M2C/D		
N501	N2/D		

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*				
	P>T	P>A	P>B	A>T	B>T
A2 - A11S - A12S - A13S - A14S G2 - H2	2	1	1	1	1
B2 - B11C - B12C - B13C - B14C M2A - M2C - U2		4	4	4	4
C2 - C11A - C12A - C13A - C14A	6	5	5	6	6
D2 - D11C - D12C - D13C - D14C		6	6	5	5
E2 - E11C - E12C - E13C - E14C T11C - T12C		5	5	6	6
K2 - R2		5	5	3	3
A11A - A12A - A11C - A12C		4	4	4	4
N11C - N12C - N2		4	4		

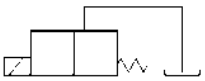
Cadute di pressione
Pressure drop



Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*
B2 - B11C - B12C - B13C B14C - C2 - C11A - C12A C13A - C14A - T12C - D2 D11C - D12C - D13C D14C - E2 - E11C - E12C E13C - E14C - T11C	1
A2 - A11S - A12S - A13S A14S - G2 - H2 - K2 - R2	2
A11A - A12A - A11C A12C - M2C - M2A - U2	3
N11C - N12C - N2	4

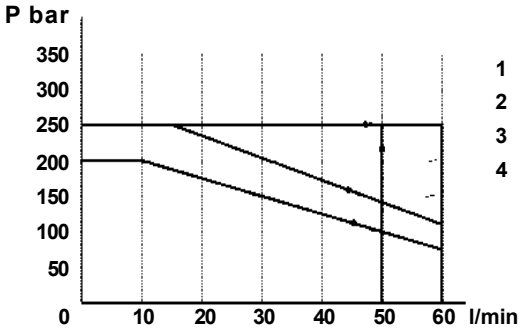
I valori indicati nel grafico non sono validi se l'elettrovalvola è utilizzata in applicazioni con collegamenti 2 o 3 vie.

The values indicated in the graph are not valid if the solenoid valve is used in applications with 2 or 3 way connections.

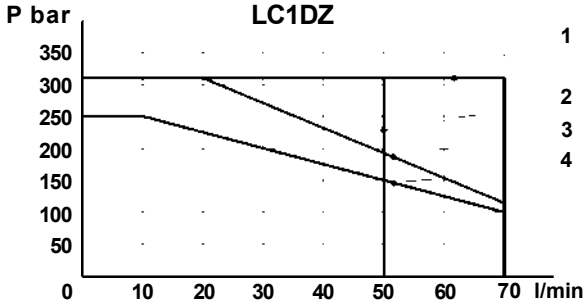


Portate massime in funzione della pressione
Maximum flows depending on pressure

LC1AZ



LC1DZ

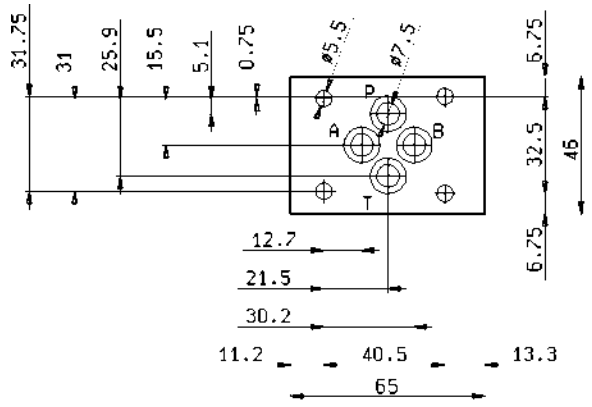


Tempi di commutazione
(rilevati con 40 l/min e 150 bar)

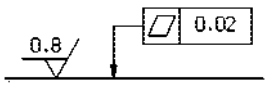
Shifting time
(taken with 40 l/min and 150 bar)

c.c. - *DC*	c.a. - *AC*
Eccitazione *Energised* 30÷50ms	**Eccitazione** *Energised* 10÷30ms
Diseccitazione *De-energised* 40÷60ms	**Diseccitazione** *De-energised* 20÷50ms

GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121H- 03 (CETOP 3)



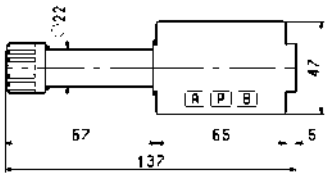
Qualità superficie di attacco
Mounting plane quality



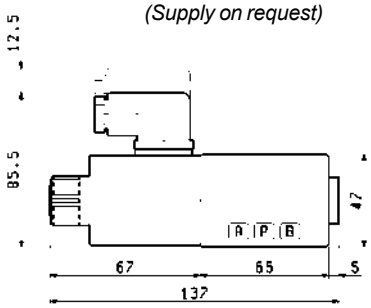
DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

TIPO
TYPE:
LC1-AZ

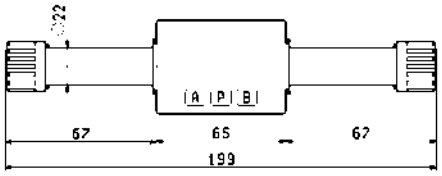
Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura standard)
Solenoid valve 4 way 2/3 positions.
(Standard supply)

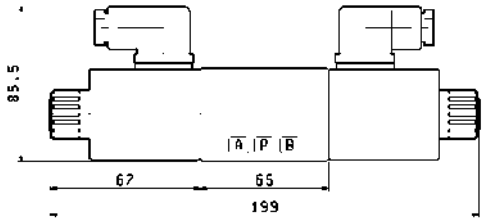


Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura su richiesta)
Solenoid valve 4 way 2/3 positions.
(Supply on request)



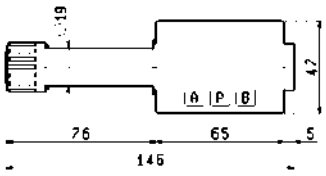
Pesi *Weights*	
Elettrovalvola con 1 solenoide: *With 1 solenoid :*	1.25 kg
Elettrovalvola con 2 solenoidi: *With 2 solenoids :*	1.66 kg



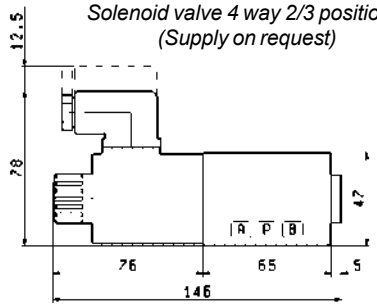


TIPO
TYPE:
LC1-DZ

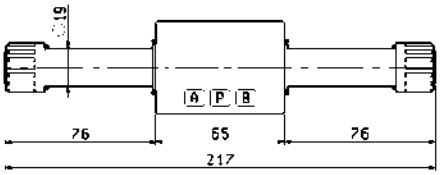
Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura standard)
Solenoid valve 4 way 2/3 positions.
(Standard supply)



Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura su richiesta)
Solenoid valve 4 way 2/3 positions.
(Supply on request)

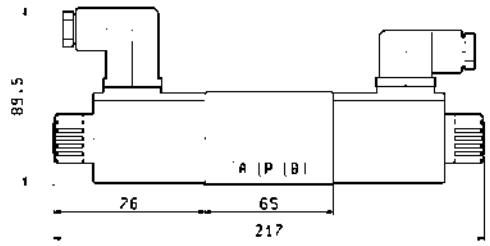


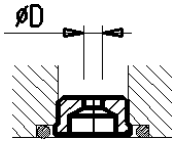
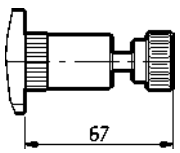
Pesi *Weights*	
Elettrovalvola con 1 solenoide: *With 1 solenoid :*	1.33 kg
Elettrovalvola con 2 solenoidi: *With 2 solenoids :*	1.82 kg



Connettore con raddrizzatore
Connector with rectifier

Connettore standard
Standard connector



Strozzatore per utilizzi P,T,A,B *Flow restrictor for P,T,A,B ports*	**ø D mm**	**Codice** *Designation code*	**Comando manuale di emergenza a vite** *Screwed manual override* **EF Cod.: LC1DZ EF**	**Comando manuale di emergenza a pulsante** *Push-button manual override* **EP Cod.: 271-05099**
	0.8 1.0 1.2 1.5 2.0	50-0500 50-0501 50-0502 50-0503 50-0504		

MOMENTI MASSIMI DI SERRAGGIO • *MAXIMUM BLOCKING TORQUE*

Serraggio cannotto *Tube mounting*	**Serraggio ghiera blocco bobina** *Retainer nut blocking torque*	**Viti di fissaggio** *Fixing screws*
LC1AZ ch. 13mm: 22÷24Nm **LC1DZ ch. 16mm: 22÷24Nm**	**5÷6Nm**	**N°4 DIN 912-8.8 M5x30: 5÷6Nm**

LC1AZ

Le elettrovalvole LC1AZ montano i solenoidi K14 costruiti per alimentazione in corrente alternata, con frequenze di 50 o 60Hz.
Frequenza di inserzione: 4Hz.
Sui solenoidi K14 sono montate le bobine K14-2053... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.07.

The valves LC1AZ use the solenoids K14 which function in alternate current (AC) with frequencies of 50 and 60Hz.
Switching frequency: 4Hz
The solenoids K14 use K 14-2053... coils in different verions; for more technical information go to page 2.50.07.

LC1DZ

Le elettrovalvole LC1DZ montano i solenoidi GM 5043, costruiti per alimentazione in corrente continua.
Per il funzionamento in corrente alternata, con frequenze di 50 o 60Hz, è indispensabile utilizzando un connettore con raddrizzatore (RAC).
Frequenza di inserzione: 3Hz.
Sui solenoidi GM 5043 sono montate le bobine C45... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.08.

The valves LC1DZ use the solenoids GM 5043 which function in direct current (DC).
To use in alternate current (AC) with frequencies of 50 and 60Hz is necessary use a connector with rectrifier (RAC).
Switching frequency: 3Hz
The solenoids GM 5043 use C45... coils in different verions; for more technical information go to page 2.50.08.

L	5	1	V	_	W	_	X	Y	Z

V	**MODELLO** *MODEL*
11	**LC1 - DZ** *LC1 - DZ*
12	**LC1 - AZ** *LC1 - AZ*

Y	**CONNESSIONE** *CONNECTION*
00	**SENZA BOBINA, SENZA CONNETTORE** *WITHOUT COIL AND CONNECTOR*
01	**CON BOBINA, SENZA CONNETTORE** *WITH COIL, WITHOUT CONNECTOR*
02	**CON CONNETTORE DIN 43650** *WITH CONNECTOR DIN 43650*
03	**AMP JUNIOR** *AMP JUNIOR*

Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

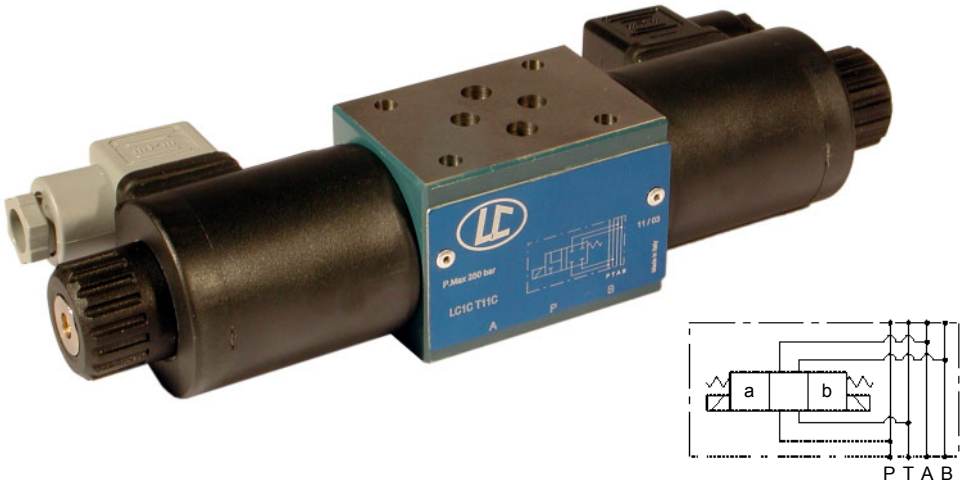
W	**CIRQUITO** *CIRCUIT*
_ _ _ _	**VEDI PAGINA 2.20.02** *SEE PAGE 2.20.02*

modello *model*	X	**TENSIONE** *VOLTAGE*	**Connessioni disponibili** *Available connections*					
			00	**01**	**03**			
	00	**SENZA BOBINA** *WITHOUT COIL*						
LC1 DZ	**OB**	12V DC	X	X				
	AD	13V DC	X	X	X			
	OC	24V DC	X	X				
	AC	27V DC	X	X	X			
	OD	48V DC	X	X				
	OE	110V DC	X	X				
	OV	24 RAC (21.5 DC)	X	X				
	OW	110 RAC (98 DC)	X	X				
	OZ	230 RAC (207 DC)	X	X				
LC1 AZ	**OH**	24V AC 50/60Hz	X	X				
	OL	48V AC 50/60Hz	X	X				
	OM	110V AC 50/60Hz	X	X				
	ON	230V AC 50/60Hz	X	X				
	OK	240V AC 50Hz	X	X				

LC1MC AZ - LC1MCT AZ
LC1MC DZ - LC1MCT DZ

Elettrovalvole modulari dirette controllo direzione

Modular solenoid operated directional valves



CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

LC1MC AZ / LC1MCT AZ CORRENTE ALTERNATA: Portata massima : 50 l/min
Pressione massima d'esercizio su A-B-P: 250bar
Pressione massima in T: dinamica=160 bar - statica=180 bar

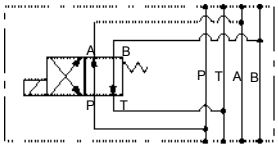
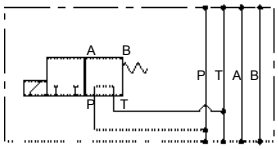
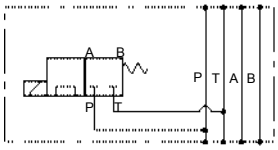
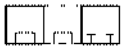
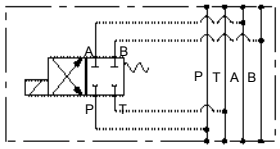
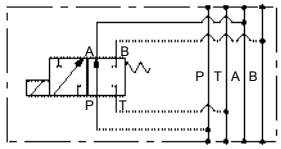
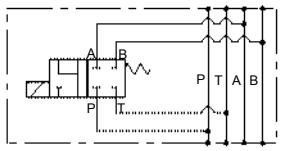
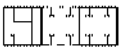
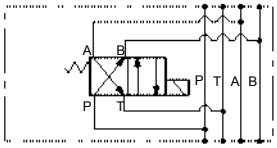
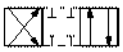
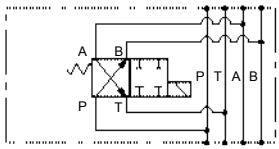
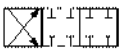
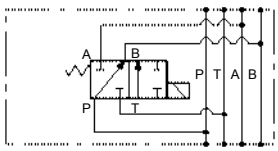
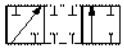
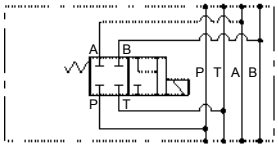
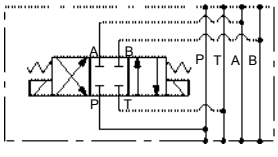
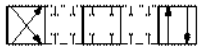
LC1MC DZ / LC1MCT DZ CORRENTE CONTINUA: Portata massima : 50 l/min
Pressione massima d'esercizio su A-B-P: 310bar
Pressione massima in T: dinamica=250 bar - statica=310 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

LC1MC AZ / LC1MCT AZ AC VERSION: Max flow : 50 l/min
Max operating pressure on A-B-P: 250bar
Max pressure in T: dynamic=160 bar - static=180 bar

LC1MC DZ / LC1MCT DZ DC VERSION: Max flow : 50 l/min
Max operating pressure on A-B-P: 310bar
Max pressure in T: dynamic=250 bar - static=310 bar

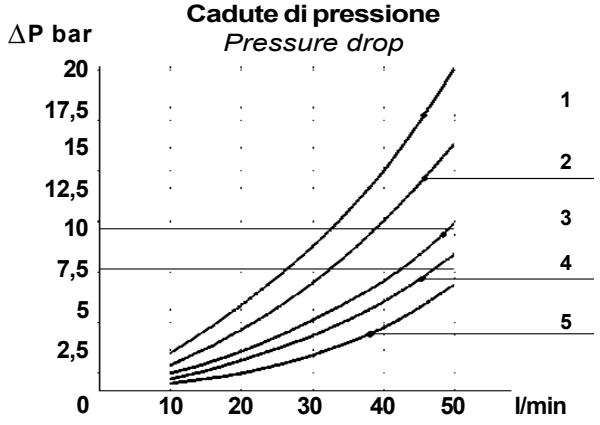
TIPI DI CIRCUITI • *SPOOL TYPES*

Nuovo codice *New code*	Vecchio codice *Old code*	Simbolo *Circuit*	Direzione del flusso durante il passaggio al centro *Oil direction during shift*	Portata Max *Max flow* l/min				Pressione Max *Max pressure* bar			
				MCAZ	MCTAZ	MCDZ	MCTDZ	MCAZ	MCTAZ	MCDZ	MCTDZ
Y301	A11C			**50**		**50**		**250**		**310**	
A301	A11S				**50**		**50**		**250**		**310**
A361	A14S				**50**		**50**		**250**		**310**
B301	B11C			**50**		**50**		**250**		**310**	
N301	N11C			**50**		**50**		**250**		**310**	
T301	T11C			**50**		**50**		**250**		**310**	
Y104	A12C			**50**		**50**		**250**		**310**	
B471	B12C			**50**		**50**		**250**		**310**	
N401	N12C			**50**		**50**		**250**		**310**	
T409	T12C			**50**		**50**		**250**		**310**	
B201	B2			**50**		**50**		**250**		**310**	

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*				
	P>T	P>A	P>B	A>T	B>T
A11S - A14S	2	1	1	1	1
B2 - B11C - B12C		3	3	3	3
T11C - T12C		4	4	5	5
A11C - A12C		3	3	3	3
N11C - N12C		3	3	3	3

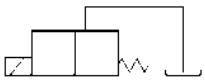
Cadute di pressione
Pressure drop



Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*
A11S - A14S - B2 - B11C B12C - T11C - T12C	1
A11C - A12C	2
N11C - N12C	3

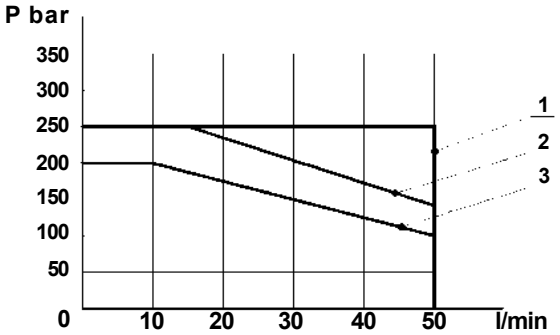
I valori indicati nel grafico non sono validi se l'elettrovalvola è utilizzata in applicazioni con collegamenti 2 o 3 vie.

The values indicated in the graph are not valid if the solenoid valve is used in applications with 2 or 3 way connections.

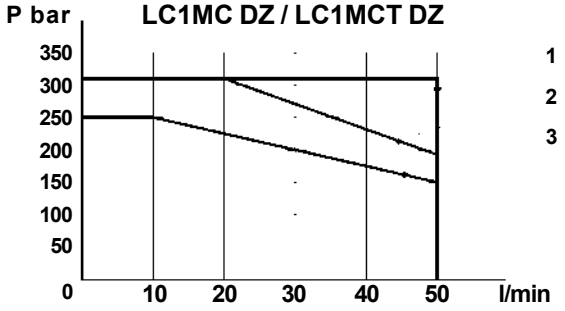


Portate massime in funzione della pressione
Maximum flows depending on pressure

LC1MC AZ / LC1MCT AZ



LC1MC DZ / LC1MCT DZ

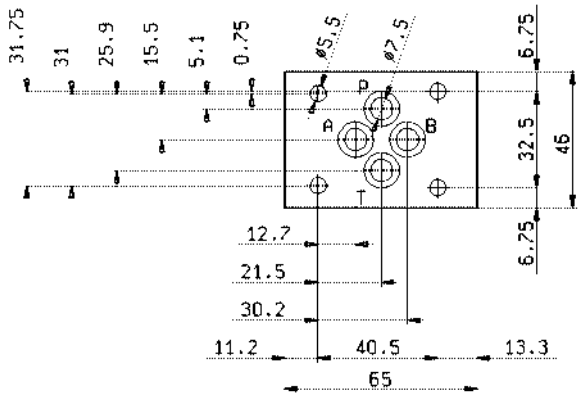


Tempi di commutazione
(rilevati con 40 l/min e 150 bar)

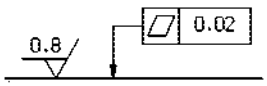
Shifting time
(taken with 40 l/min and 150 bar)

c.c. - *DC*	c.a. - *AC*
Eccitazione *Energised* 30÷50ms	**Eccitazione** *Energised* 10÷30ms
Diseccitazione *De-energised* 40÷60ms	**Diseccitazione** *De-energised* 20÷50ms

GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121H- 03 (CETOP 3)



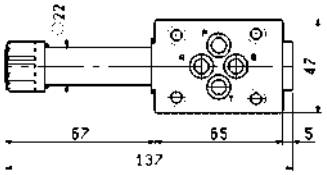
Qualità superficie di attacco
Mounting plane quality

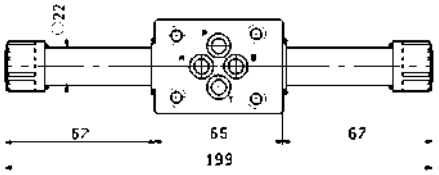


DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

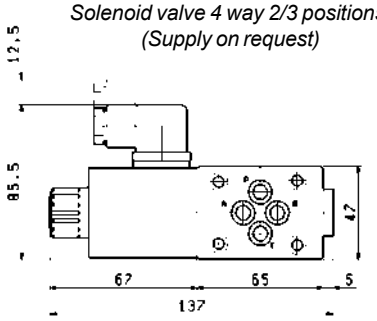
TIPO
TYPE:
LC1MC AZ
LC1MCT AZ

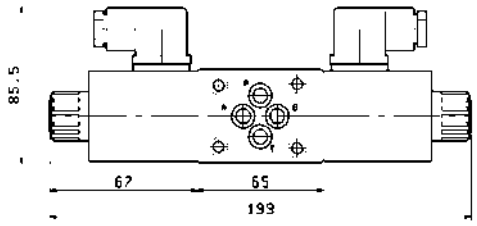
Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura standard)
Solenoid valve 4 way 2/3 positions.
(Standard supply)





Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura su richiesta)
Solenoid valve 4 way 2/3 positions.
(Supply on request)

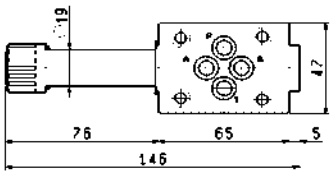


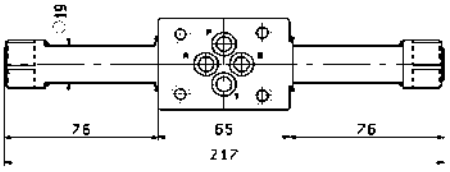


Pesi *Weights*	
Elettrovalvola con 1 solenoide: *With 1 solenoid :*	1.25 kg
Elettrovalvola con 2 solenoidi: *With 2 solenoids :*	1.66 kg

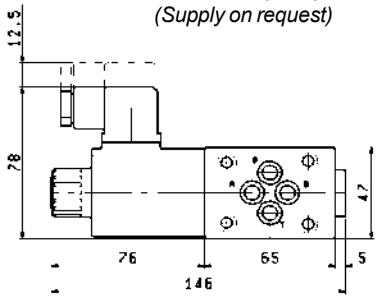
TIPO
TYPE:
LC1MC DZ
LC1MCT DZ

Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura standard)
Solenoid valve 4 way 2/3 positions.
(Standard supply)



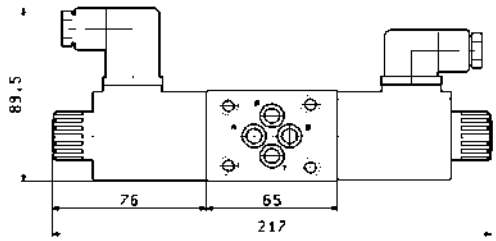


Elettrovalvola 4 vie 2/3 posizioni.
(Fornitura su richiesta)
Solenoid valve 4 way 2/3 positions.
(Supply on request)

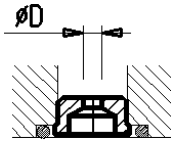
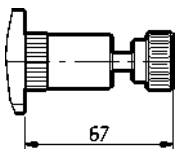


Connettore con raddrizzatore
Connector with rectifier

Connettore standard
Standard connector



Pesi *Weights*	
Elettrovalvola con 1 solenoide: *With 1 solenoid :*	1.33 kg
Elettrovalvola con 2 solenoidi: *With 2 solenoids :*	1.82 kg

Strozzatore per utilizzi P,T,A,B *Flow restrictor for P,T,A,B ports*	**ø D mm**	**Codice** *Designation code*	**Comando manuale di emergenza a vite** *Screwed manual override* **EF Cod.: LC1DZ EF**	**Comando manuale di emergenza a pulsante** *Push-button manual override* **EP Cod.: 271-05099**
	0.8 1.0 1.2 1.5 2.0	50-0500 50-0501 50-0502 50-0503 50-0504		

MOMENTI MASSIMI DI SERRAGGIO • *MAXIMUM BLOCKING TORQUE*

Serraggio cannotto *Tube mounting*	**Serraggio ghiera blocco bobina** *Retainer nut blocking torque*
LC1MC AZ - LC1MCT AZ ch. 13mm: 22÷24Nm **LC1MC DZ - LC1MCT DZ ch. 16mm: 22÷24Nm**	**5÷6Nm**

LC1MC AZ - LC1MCT AZ

Le elettrovalvole LC1MC AZ e LC1MCT AZ montano i solenoidi K14 costruiti per alimentazione in corrente alternata, con frequenze di 50 o 60Hz.
Frequenza di inserzione: 4Hz.
Sui solenoidi K14 sono montate le bobine K14-2053... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.07.

The valves LC1MC AZ e LC1MCT AZ use the solenoids K14 which function in alternate current (AC) with frequencies of 50 and 60Hz.
Switching frequency: 4Hz
The solenoids K14 use K 14-2053... coils in different verions; for more technical information go to page 2.50.07.

LC1MC DZ - LC1MCT DZ

Le elettrovalvole LC1MC DZ - LC1MCT DZ montano i solenoidi GM 5043, costruiti per alimentazione in corrente continua.
Per il funzionamento in corrente alternata, con frequenze di 50 o 60Hz, è indispensabile utilizzare un connettore con raddrizzatore (RAC).
Frequenza di inserzione: 3Hz.
Sui solenoidi GM 5043 sono montate le bobine C45... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.08.

The valves LC1MC DZ - LC1MCT DZ use the solenoids GM 5043 which function in direct current (DC).
To use in alternate current (AC) with frequencies of 50 and 60Hz is necessary use a connector with rectrifier (RAC).
Switching frequency: 3Hz
The solenoids GM 5043 use C45... coils in different verions; for more technical information go to page 2.50.08.

CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	V	_	W	_	X	Y	Z

V	**MODELLO** *MODEL*
01	**LC1MC DZ** *LC1MC DZ*
02	**LC1MC AZ** *LC1MC AZ*
11	**LC1MCT DZ** *LC1MCT DZ*
12	**LC1MCT AZ** *LC1MCT AZ*

W	**CIRQUITO** *CIRCUIT*
_ _ _ _	**VEDI PAGINA 2.30.02** *SEE PAGE 2.30.02*

Y	**CONNESSIONE** *CONNECTION*
00	**SENZA BOBINA, SENZA CONNETTORE** *WITHOUT COIL AND CONNECTOR*
01	**CON BOBINA, SENZA CONNETTORE** *WITH COIL, WITHOUT CONNECTOR*
02	**CON CONNETTORE DIN 43650** *WITH CONNECTOR DIN 43650*
03	**AMP JUNIOR** *AMP JUNIOR*

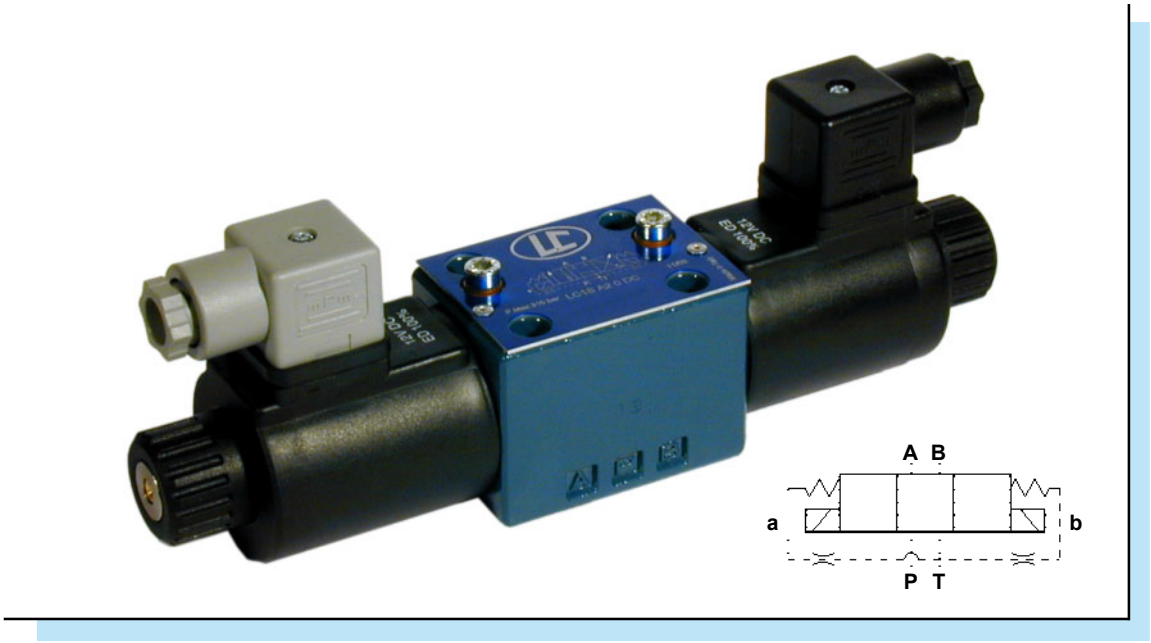
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

modello *model*	X	**TENSIONE** *VOLTAGE*	**Connessioni disponibili** *Available connections*					
			00	**01**	**03**			
	00	**SENZA BOBINA** *WITHOUT COIL*						
LC1M DZ	**OB**	12V DC	X	X				
	AD	13V DC	X	X	X			
	OC	24V DC	X	X				
	AC	27V DC	X	X	X			
	OD	48V DC	X	X				
	OE	110V DC	X	X				
	OV	24 RAC (21.5 DC)	X	X				
	OW	110 RAC (98 DC)	X	X				
	OZ	230 RAC (207 DC)	X	X				
LC1M AZ	**OH**	24V AC 50/60Hz	X	X				
	OL	48V AC 50/60Hz	X	X				
	OM	110V AC 50/60Hz	X	X				
	ON	230V AC 50/60Hz	X	X				
	OK	240V AC 50Hz	X	X				

LC1S

Elettrovalvole dirette controllo direzione con regolazione del tempo d'intervento

Solenoid operated directional valves with adjustment of the operating time



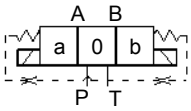
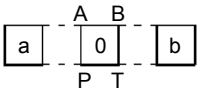
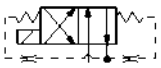
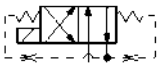
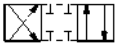
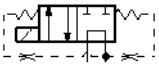
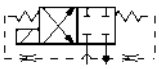
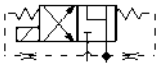
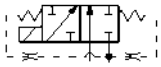
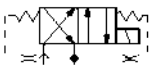
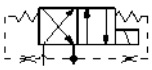
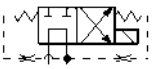
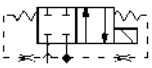
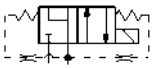
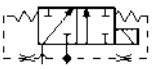
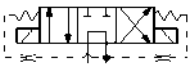
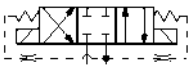
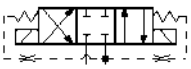
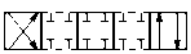
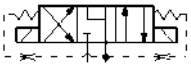
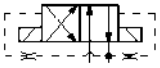
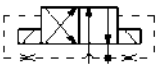
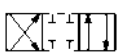
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima : 50 l/min
Pressione massima d'esercizio su A-B-P: 310 bar
Pressione massima in T: dinamica = 250 bar - statica = 310 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow : 50 l/min
Max operating pressure on A-B-P: 310 bar
Max pressure in T: dynamic = 250 bar - static = 310 bar

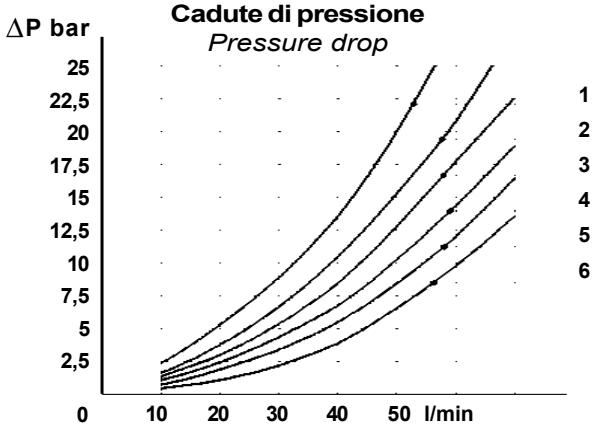
TIPI DI CIRCUITI • *SPOOL TYPES*

Nuovo codice *New code*	Vecchio codice *Old code*	Simbolo *Circuit*	Direzione del flusso durante il passaggio al centro *Oil direction during shift*	Portata Max *Max flow* l/min	Pressione Max *Max pressure* bar
					
X301	A11A			**50**	**310**
Y301	A11C			**50**	**310**
A301	A11S			**50**	**310**
B301	B11C			**50**	**310**
C301	C11A			**50**	**310**
E301	E11C			**50**	**310**
N301	N11C			**50**	**250**
X401	A12A			**50**	**310**
Y401	A12C			**50**	**310**
A401	A12S			**50**	**310**
B401	B13C			**50**	**310**
E401	E12C			**50**	**310**
N401	N12C			**50**	**250**
A201	A2			**50**	**310**
B201	B2			**50**	**310**
C201	C2			**50**	**310**
E201	E2			**50**	**310**
L201	M2A			**50**	**310**
M201	M2C			**50**	**310**
N201	N2			**50**	**250**

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*				
	P>T	P>A	P>B	A>T	B>T
A2 - A11S - A12S - G2	2	1	1	1	1
B2 - B11C - B13C - M2A		4	4	4	4
C2 - C11A	6	5	5	6	6
E2 - E11C - E12C		5	5	6	6
A11A - A12A - A11C - A12C		4	4	4	4
N11C - N12C - N2		4	4		

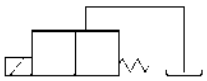
Cadute di pressione
Pressure drop



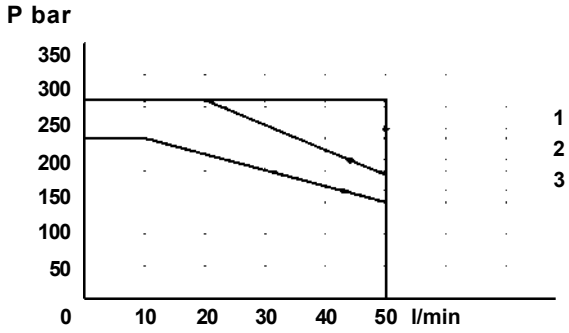
Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*
A2 - A11S - A12S - B2 B11C - B13C - C2 - C11A E2 - E11C - E12C	1
A11A - A12A - A11C A12C - M2C - M2A	2
N11C - N12C - N2	3

I valori indicati nel grafico non sono validi se l'elettrovalvola è utilizzata in applicazioni con collegamenti 2 o 3 vie.

The values indicated in the graph are not valid if the solenoid valve is used in applications with 2 or 3 way connections.



Portate massime in funzione della pressione
Maximum flows depending on pressure



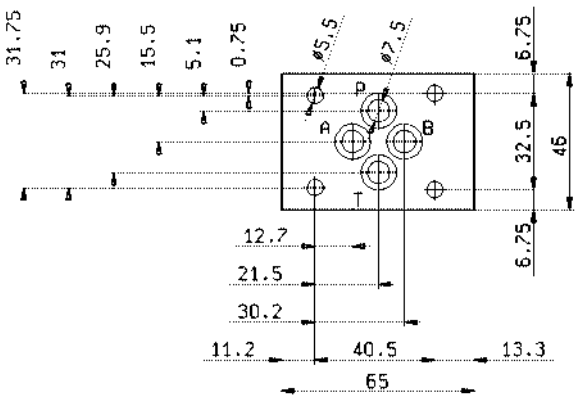
GRANI DI STROZZAMENTO • *FLOW RESTRICTOR SCREWS*

Codice *Code*	Ø D mm	Disegno *Draw*
A	0,15	18 - 0091
C	0,3	18 - 0092
E	0,4	18 - 0093
G	0,5	18 - 0094
I	0,6	18 - 0095
0	SENZA GRANI, FORI TAPPATI *WITHOUT RESTRICTORS, PLUGGED*	

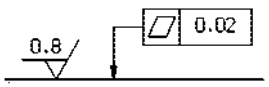
Norme d'impiego
Le elettrovalvole LC1S (temporizzate), sono provviste di due grani di strozzamento con diverse forature come da tabella, permettono di controllare il tempo d'intervento dell'elettrovalvola (da 0,1÷3 sec. circa), ottenendo uno scambio ammortizzato.
Per un corretto funzionamento si richiede di montare sullo scarico della elettrovalvola LC1S una valvola di non ritorno, onde evitare lo svuotamento della stessa.
Nella fase iniziale: eccitare l'elettrovalvola a varie riprese, per avere un corretto riempimento delle camere di regolazione.

Operating instructions
The solenoid valves LC1S (slow action) come with two flow restrictor screws which can have different holes (see table), enabling to control the operating time of the solenoid (approx. 0,1 to 3 seconds), in order to obtain a cushioned effect on the operated equipment.
For a correct operation an in order to prevent the valve from emptying, we recommend fitting a non-return valve on the return line of the solenoid valve LC1S.
In the initial phase: energize the solenoid valve several times in order to fill the regulating chambers.

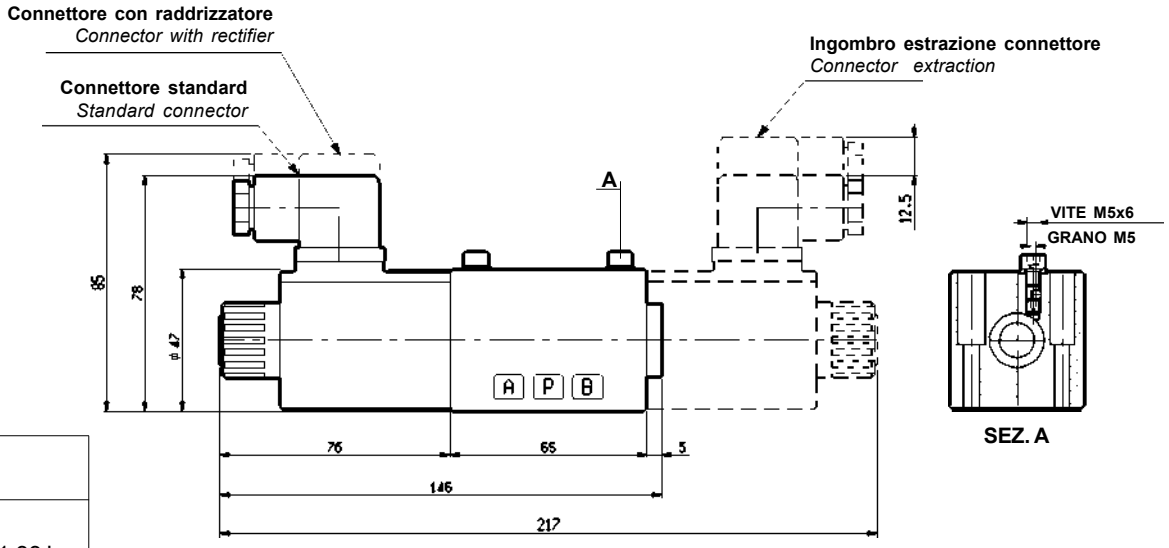
GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121H- 03 (CETOP 3)



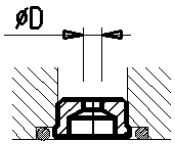
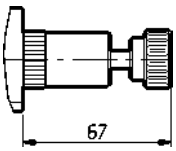
Qualità superficie di attacco
Mounting plane quality



DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*



Pesi *Weights*	
Elettrovalvola con 1 solenoide: *With 1 solenoid :*	1.33 kg
Elettrovalvola con 2 solenoidi: *With 2 solenoids :*	1.82 kg

Strozzatore per utilizzi P,T,A,B *Flow restrictor for P,T,A,B ports*	**ø D mm**	**Codice** *Code*	**Comando manuale di emergenza a vite** *Screwed manual override* **EF Cod.: LC1DZ EF**	**Comando manuale di emergenza a pulsante** *Push-button manual override* **EP Cod.: 271-05099**
	0.8 1.0 1.2 1.5 2.0	50-0500 50-0501 50-0502 50-0503 50-0504		

MOMENTI MASSIMI DI SERRAGGIO • *MAXIMUM BLOCKING TORQUE*

Serraggio cannotto *Tube mounting*	**Serraggio ghiera blocco bobina** *Retainer nut blocking torque*	**Viti di fissaggio** *Fixing screws*	**Viti** *Screws*	**Grano strozzatore** *Flow restrictor*
ch. 16mm: 22÷24Nm	**6÷7Nm**	**N°4 DIN 912-8.8 M5x30: 5÷6Nm**	**N°2 DIN 912-8.8 M5x6: 5÷6Nm**	**N°2 DIN 913 M5x5: 2÷3Nm**

SOLENOIDI • *SOLENOIDS*: GM 5043

Le elettrovalvole LC1S montano i solenoidi GM 5043, costruiti per alimentazione in corrente continua.
Per il funzionamento in corrente alternata, con frequenze di 50 o 60Hz, è indispensabile utilizzare un connettore con raddrizzatore (RAC).
Frequenza di inserzione: 1Hz max.
Sui solenoidi GM 5043 sono montate le bobine C45... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.08.

The valves LC1S use the solenoids GM 5043 which function in direct current (DC).
To use in alternate current (AC) with frequencies of 50 and 60Hz is necessary use a connector with rectifier (RAC).
Switching frequency: 1Hz max.
The solenoids GM 5043 use C45... coils in different verions; for more technical information go to page 2.50.08.

L	4	1	1	1	_	W	_	X	_	Y	_	V	Z

W	**CIRQUITO** *CIRCUIT*
– – – –	**VEDI PAGINA 2.50.02** *SEE PAGE 2.50.02*

Y	**CONNESSIONE** *CONNECTION*
00	**SENZA BOBINA, SENZA CONNETTORE** *WITHOUT COIL AND CONNECTOR*
01	**CON BOBINA, SENZA CONNETTORE** *WITH COIL, WITHOUT CONNECTOR*
02	**CON CONNETTORE DIN 43650** *WITH CONNECTOR DIN 43650*
03	**AMP JUNIOR** *AMP JUNIOR*

X	**TENSIONE** *VOLTAGE*	**Connessioni disponibili** *Available connections*					
		00	**01**	**03**	**07**	**31**	**34**
00	**SENZA BOBINA** *WITHOUT COIL*						
OB	12V DC	X	X				
AD	13V DC	X	X	X			
OC	24V DC	X	X				
AC	27V DC	X	X	X			
OD	48V DC	X	X				
OE	110V DC	X	X				
OV	24 RAC (21.5 DC)	X	X				
OW	110 RAC (98 DC)	X	X				
OZ	230 RAC (207 DC)	X	X				

Z	**VERSIONE** *VERSION*
0	**STANDARD** *STANDARD*
V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

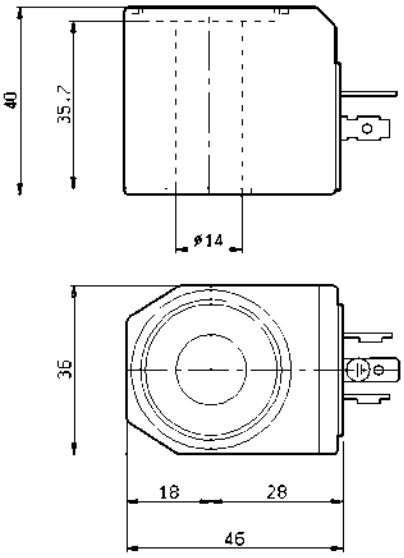
V	**DIAMETRO GRANI STROZZATORI** *RESTRICTORS DIAMETER*
0	**VEDI PAGINA 2.50.03** *SEE PAGE 2.50.03*
A	**VEDI PAGINA 2.50.03** *SEE PAGE 2.50.03*
C	**VEDI PAGINA 2.50.03** *SEE PAGE 2.50.03*
E	**VEDI PAGINA 2.50.03** *SEE PAGE 2.50.03*
G	**VEDI PAGINA 2.50.03** *SEE PAGE 2.50.03*
I	**VEDI PAGINA 2.50.03** *SEE PAGE 2.50.03*

BOBINE • *COILS* LC1Z

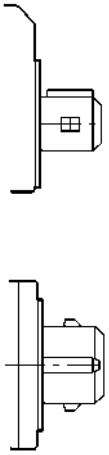
Peso : 0.210 kg - Classe di isolamento: H
Intermittenza di funzionamento: ED = 100% solo se la temperatura ambiente non supera i 40°C.
Tensione di alimentazione: non deve superare +5% / -10% del valore nominale.
Tensioni disponibili: vedi tabella. Su richiesta possono essere fornite versioni speciali.
Connessioni standard: DIN 43650-ISO 4400.
Bassa tensione: conforme alle direttive 73/23/CEE e 89/336/CEE.
Le versioni con cavi+guaina e quelle con connettore Deutsch e AMP JUNIOR sono tutte dotate di diodo bidirezionale.
Grado di protezione secondo DIN 40050, valido solo nel caso in cui la bobina sia montata correttamente con O-Ring e ghiera di fermo:
- IP65 con connettore DIN 43650 e AMP JUNIOR, solo se montati con guarnizioni in gomma e vite di fissaggio opportunamente bloccata.
- IP69k per versioni con connettore Deutsch.

Weight: 0,210 kg - Insulation Class: H
Working Duty: ED 100% only if the room temperature does not exceed 40°C.
Inlet voltage: should not exceed +5% / -10% of the nominal value.
Available voltages: Look at table. On request different voltages can be supplied.
Standard Connections: DIN 43650, ISO 4400.
Low voltage: conforms to the 73/23/CEE and 89/336/CEE directives.
Versions with sheated cables and the ones with Deutsch and AMP JUNIOR connector are equipped with bi-directional diode.
Protection Class according to DIN 40050: only if the coil is assembled correctly with O'ring and retainer:
- IP65 with AMP JUNIOR and DIN 43650 connector, only if they are assembled with rubber sealings and the fixing screw is properly tightened.
- IP69k for versions with Deutsch connector.

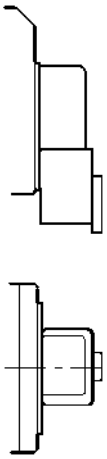
DIN 43650 - ISO 4400 — **C36 01**



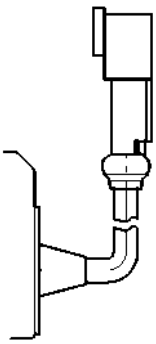
AMP JUNIOR — **C36 03**



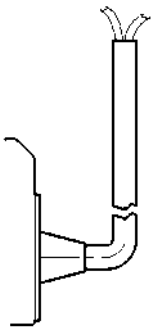
CONNETTORE DEUTSCH *DEUTSCH CONNECTOR* **DT 04 - 2P** — **C36 07**



C36 34



CAVI IN GOMMA SILICONE *CABLES IN SILICON RUBBER* — **C36 31**



La lunghezza del cavo è di 350mm
Cable length is 350 mm

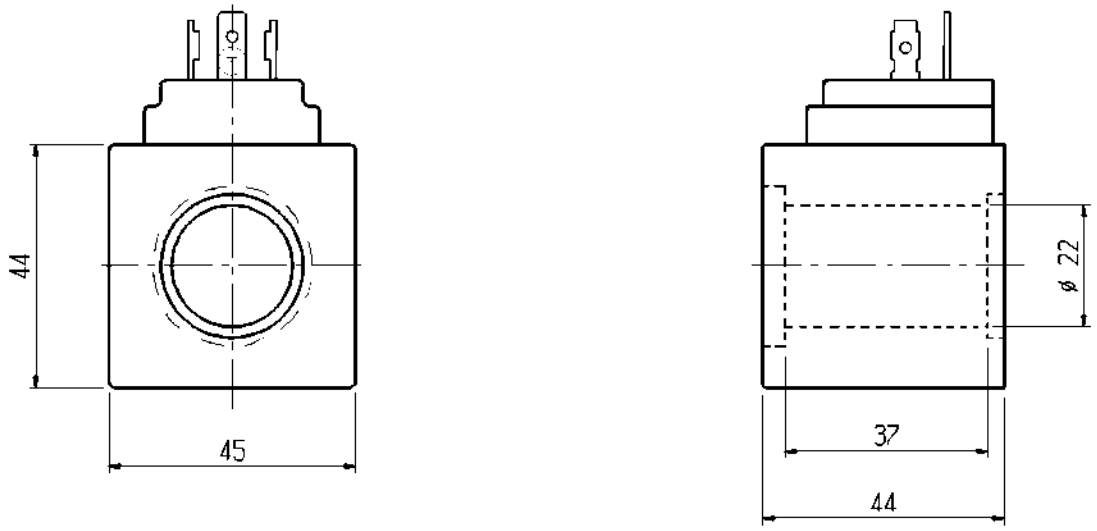
Codice *Code*	**Tipo** *Type*	**Connessione** *Connection*	**Tensione nominale** *Nominal voltage* **Volt**	**Marcatura** *Marking*	**Potenza** *Power* **watt**	**Corrente nominale** Nominal current **ampere**	**Resistenza** Resistance **Ω** ± 7%	T=20°C
271-0510	**C3601 12DC**	**DIN 43650 - ISO 4400**	**12 DC**	**12 VDC**	**26**	**2.15**	**5.5**	
271-0510002	**C3631 12DC**	**CABLES**	**12 DC**	**12 VDC**	**26**	**2.15**	**5.5**	
271-05102	**C3603 12DC**	**AMP JUNIOR**	**12 DC**	**12 VDC**	**26**	**2.15**	**5.5**	
271-0510004	**C3634 12DC**	**CABLE + DEUTSCH**	**12 DC**	**12 VDC**	**26**	**2.15**	**5.5**	
271-0510207	**C3607 12DC**	**DEUTSCH**	**12 DC**	**12 VDC**	**26**	**2.15**	**5.5**	
271-05104	**C3601 13DC**	**DIN 43650 - ISO 4400**	**13 DC**	**13 VDC**	**26**	**2.00**	**6.5**	
271-0511	**C3601 24DC**	**DIN 43650 - ISO 4400**	**24 DC**	**24 VDC**	**26**	**1.10**	**22**	
271-0511002	**C3631 24DC**	**CABLES**	**24 DC**	**24 VDC**	**26**	**1.10**	**22**	
271-05112	**C3603 24DC**	**AMP JUNIOR**	**24 DC**	**24 VDC**	**26**	**1.10**	**22**	
271-0511004	**C3634 34DC**	**CABLE + DEUTSCH**	**24 DC**	**24 VDC**	**26**	**1.10**	**22**	
271-0511207	**C3607 24DC**	**DEUTSCH**	**24 DC**	**24 VDC**	**26**	**1.10**	**22**	
271-051101	**C3601 27DC**	**DIN 43650 - ISO 4400**	**27 DC**	**27 VDC**	**26**	**1.00**	**28**	
271-0512	**C3601 48DC**	**DIN 43650 - ISO 4400**	**48 DC**	**V 48 DC**	**26**	**0.54**	**89**	
271-05110	**C3601 24-50/60Hz**	**DIN 43650 - ISO 4400**	**21.5 DC**	**V 21.5 DC**	**26**	**1.20**	**18**	
271-0513	**C3601 110-50/60Hz**	**DIN 43650 - ISO 4400**	**98 DC**	**V 98 DC**	**29**	**0.29**	**338**	
271-0515	**C3601 230-50/60Hz**	**DIN 43650 - ISO 4400**	**207 DC**	**V 207 DC**	**29**	**0.14**	**1430**	

BOBINE • *COILS* LC1AZ

Peso : 0.238 kg - Classe di isolamento: H
Intermittenza di funzionamento: ED = 100% solo se la temperatura ambiente non supera i 40°C.
Tensione di alimentazione: non deve superare +5% / -10% del valore nominale.
Tensioni disponibili: vedi tabella. Su richiesta possono essere fornite versioni speciali.
Connessioni standard: DIN 43650-ISO 4400.
Grado di protezione secondo DIN 40050, valido solo nel caso in cui la bobina sia montata correttamente con O-Ring e ghiera di fermo:
- IP65 con connettore DIN 43650, solo se montati con guarnizioni in gomma e vite di fissaggio opportunamente bloccata.

Weight: 0,238 kg - Insulation Class: H
Working Duty: ED 100% only if the room temperature does not exceed 40°C.
Inlet voltage: should not exceed +5% / -10% of the nominal value.
Available voltages: Look at table. On request different voltages can be supplied.
Standard Connections: DIN 43650, ISO 4400.
Protection Class according to DIN 40050: only if the coil is assembled correctly with O'ring and retainer:
- IP65 with DIN 43650 connector, only if they are assembled with rubber sealings and the fixing screw is properly tightened.

DIN 43650 - ISO 4400

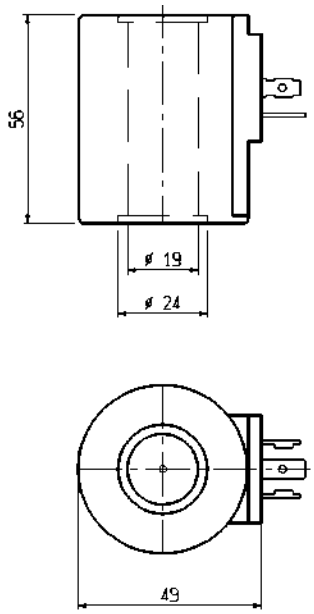


Codice *Code*	**Tipo** *Type*	**Connessione** *Connection*	**Tensione nominale** *Nominal voltage* **Volt**	**Frequenza** *Frequency* **Hz**	**Potenza** *Power* **watt**	**Corrente a regime** *Holding current* **ampere** (± 10%)	**Resistenza** Resistance **Ω** ± 10%	T=20°C
271 - 0550	**K14 - 2053 - 164**	**DIN 43650 - ISO 4400**	**24 AC**	**60**	**19**	**1.50**	**1.37**	
			24 AC	**50**	**23**	**2.00**	**1.37**	
271 - 0555	**K14 - 2053 - 179**	**DIN 43650 - ISO 4400**	**48 AC**	**60**	**19**	**0.95**	**5.75**	
			48 AC	**50**	**23**	**1.00**	**5.75**	
271 - 0560	**K14 - 2053 - 175**	**DIN 43650 - ISO 4400**	**110 AC**	**50**	**23**	**0.52**	**34.3**	
			120 AC	**60**	**24**	**0.45**	**34.3**	
271 - 0570	**K14 - 2053 - 210**	**DIN 43650 - ISO 4400**	**230 AC**	**60**	**19**	**0.17**	**141**	
			230 AC	**50**	**23**	**0.23**	**141**	
271 - 0580	**K14 - 2053 - 181**	**DIN 43650 - ISO 4400**	**240 AC**	**50**	**23**	**0.23**	**145**	

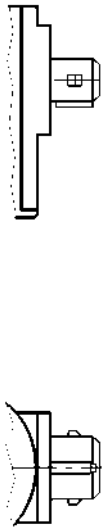
Peso : 0.335 kg - Classe di isolamento: H
Intermittenza di funzionamento: ED = 100% solo se la temperatura ambiente non supera i 40°C.
Tensione di alimentazione: non deve superare +5% / -10% del valore nominale.
Tensioni disponibili: vedi tabella. Su richiesta possono essere fornite versioni speciali.
Connessioni standard: DIN 43650-ISO 4400.
Le versioni con connettore AMP JUNIOR sono tutte dotate di diodo bidirezionale.
Bassa tensione: conforme alle direttive 73/23/CEE e 89/336/CEE.
Grado di protezione secondo DIN 40050, valido solo nel caso in cui la bobina sia montata correttamente con O-Ring e ghiera di fermo:
- IP65 con connettore DIN 43650 e AMP JUNIOR, solo se montati con guarnizioni in gomma e vite di fissaggio opportunamente bloccata.

Weight: 0,335 kg - Insulation Class: H
Working Duty: ED 100% only if the room temperature does not exceed 40°C.
Inlet voltage: should not exceed +5% / -10% of the nominal value.
Available voltages: Look at table. On request different voltages can be supplied.
Standard Connections: DIN 43650, ISO 4400.
Versions with AMP JUNIOR connector are equipped with bi-directional diode.
Low voltage: conforms to the 73/23/CEE and 89/336/CEE directives.
Protection Class according to DIN 40050: only if the coil is assembled correctly with O'ring and retainer:
- IP65 with AMP JUNIOR and DIN 43650 connector, only if they are assembled with rubber sealings and the fixing screw is properly tightened.

DIN 43650 - ISO 4400
C45 01



AMP JUNIOR
C45 03

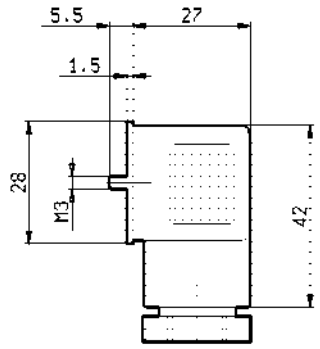


Codice *Code*	Tipo *Type*	Connessione *Connection*	Tensione nominale *Nominal voltage* Volt	Marcatura *Marking*	Potenza *Power* watt	Corrente nominale Nominal current ampere	Resistenza Resistance Ω ± 7%	 T=20°C
271-0417	C4501 12DC	DIN 43650 - ISO 4400	12 DC	12 VDC	33	2.8	4.24	
271-041711	C4501 13DC	DIN 43650 - ISO 4400	13 DC	13 VDC	31	2.3	5.42	
271-041712	C4503 13DC	AMP JUNIOR	13 DC	13 VDC	31	2.3	5.42	
271-0418	C4501 24DC	DIN 43650 - ISO 4400	24 DC	24 VDC	33	1.4	17	
271-04181	C4501 27DC	DIN 43650 - ISO 4400	27 DC	27 VDC	33	1.2	21.77	
271-041812	C4503 27DC	AMP JUNIOR	27 DC	27 VDC	33	1.2	21.77	
271-0419	C4501 48DC	DIN 43650 - ISO 4400	48 DC	48 VDC	33	0.7	69.8	
271-041921	C4501 110DC	DIN 43650 - ISO 4400	110 DC	110 VDC	35	0.32	341.8	
271-04191	C4501 24-50/60 RAC	DIN 43650 - ISO 4400	21.5 DC	21.5 VDC	33	1.6	13.6	
271-04192	C4501 110-50/60 RAC	DIN 43650 - ISO 4400	98 DC	98 VDC	33	0.34	285	
271-04193	C4501 230-50/60 RAC	DIN 43650 - ISO 4400	207 DC	207 VDC	35	0.16	1229	

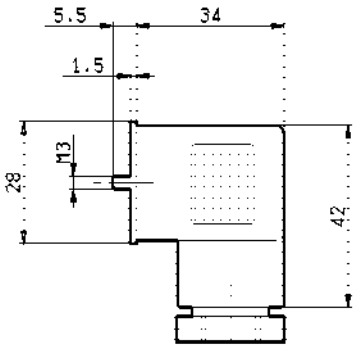
Questi connettori sono normalizzati DIN 43650 - ISO 4400. Sono disponibili in quattro versioni:
- versione standard MPM 182-09
- versione con raddrizzatore MPM 532-09 RAC
- versione con LED luminoso (indica la presenza di tensione) MPM 182-LED-T-A1
- versione con VDR (dispositivo che taglia le sovratensioni in ingresso) MPM 182-09-G-DO-2-1
Per un corretto funzionamento e per garantire il grado di protezione IP65 è indispensabile montare i connettori con guarnizioni in gomma e vite di fissaggio opportunamente bloccata.

These connectors are standardised DIN 43650 – ISO 4400. Four versions are available:
- standard version MPM 182-09
- version with rectifier MPM 532-09 RAC
- version with LED (which indicates presence of voltage) MPM 182-LED-T-A1
- version with VDR (device which cuts over-voltage in input) MPM 182-09-G-DO-2-1
For a correct functioning and to guarantee the level of protection IP 65, it is essential to assemble the connectors with rubber seals and have the mounting screw fully screwed in.

MPM 182-09
MPM 182-LED-T-A1
MPM 182-09-G-DO-2-1



MPM 532-09 RAC



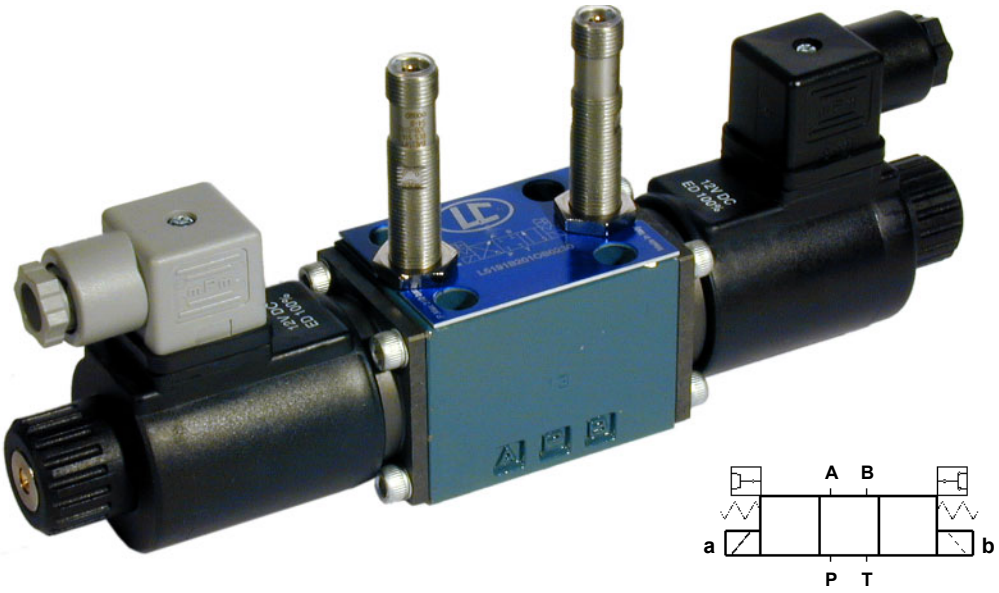
Codice *Code*	Tipo *Type*
29-0001	MPM 182-09 GRIGIO
29-0002	MPM 182-09 NERO
29-0003/A	MPM 532-09 RAC GRIGIO
29-0003	MPM 532-09 RAC NERO
29-0004	MPM 182-LED-T-A1 12DC/AC
29-0005	MPM 182-LED-T-A1 24DC/AC
29-0006	MPM 182-LED-T-A1 48DC/AC
29-0007	MPM 182-LED-T-A1 110DC/AC
29-0008	MPM 182-LED-T-A1 230DC/AC
29-00010	MPM 182-09-G-DO-2-1 12DC CON VDR
29-00011	MPM 182-09-G-DO-2-1 24DC CON VDR

Nº poli	**2 + terra**
Portata nominale sui contatti	**10 A**
Portata max sui contatti	**16 A**
Resistenza sui contatti	**4 mΩ**
Sezione max conduttori	**1.5 mm²**
Filettatura serracavo	**Pg 9 Din 40430**
Grado di protezione	**IP65 DIN 40050**
Isolamento elettrico	**VDE 0110**
Coppia di serraggio	**3 ÷ 4 Nm**
Number of poles	*2 + earth*
Rated current capacity	*10 A*
Max current capacity	*16 A*
Contact resistance	*4 mΩ*
Max wire section area	*1.5 mm²*
Cable gland thread	*Pg 9 Din 40430*
Protection class	*IP65 DIN 40050*
Electrical insulation	*VDE 0110*
Tightening torque	*3 ÷ 4 Nm*

LC1 PRO

Elettrovalvole dirette controllo direzione con sensore induttivo di prossimità

Solenoid operated directional valves with proximity inductive sensor



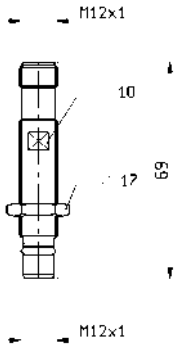
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 70 l/min
Pressione massima d'esercizio su A-B-P: 310bar
Pressione massima in T: 50 bar
(Solo per elettrovalvole con ritorno a molla)

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow: 70 l/min
Max operating pressure un A-B-P: 310bar
Max pressure in T: 50 bar
(Only for valves with spring return)

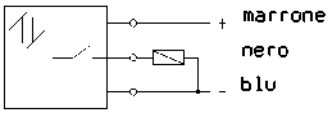
CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*



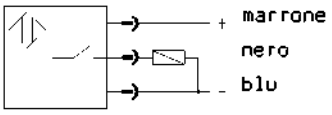
SENSORE INDUTTIVO	*INDUCTIVE SENSOR*
PNP - NA	*PNP - NA*
Filetto: M12x1	*M12 x 1 thread*
Distanza di lavoro nominale:1,5mm	*Rated operating distance: 1,5mm*
Pressione max di resistenza: 500bar	*Pressure rated to : 500 Bar*
Tensione di misura: 24V DC	*Rated operational voltage: 24 VDC*
Tensione di lavoro: 10 ... 30V DC	*Supply voltage: 10 ... 30 VDC*
Temperatura ambiente: -25°C ... +80°C	*Ambient temperature range: -25°C … +80°C*
Frequenza di lavoro: 1000 Hz	*Max. switching frequency: 1000 Hz*
Tipo di protezione: IP68	*Degree of protection: IP 68*
Tipo di collegamento: connettore S4	*Connection: connector S4*

Schema elettrico
Electrical wiring diagram

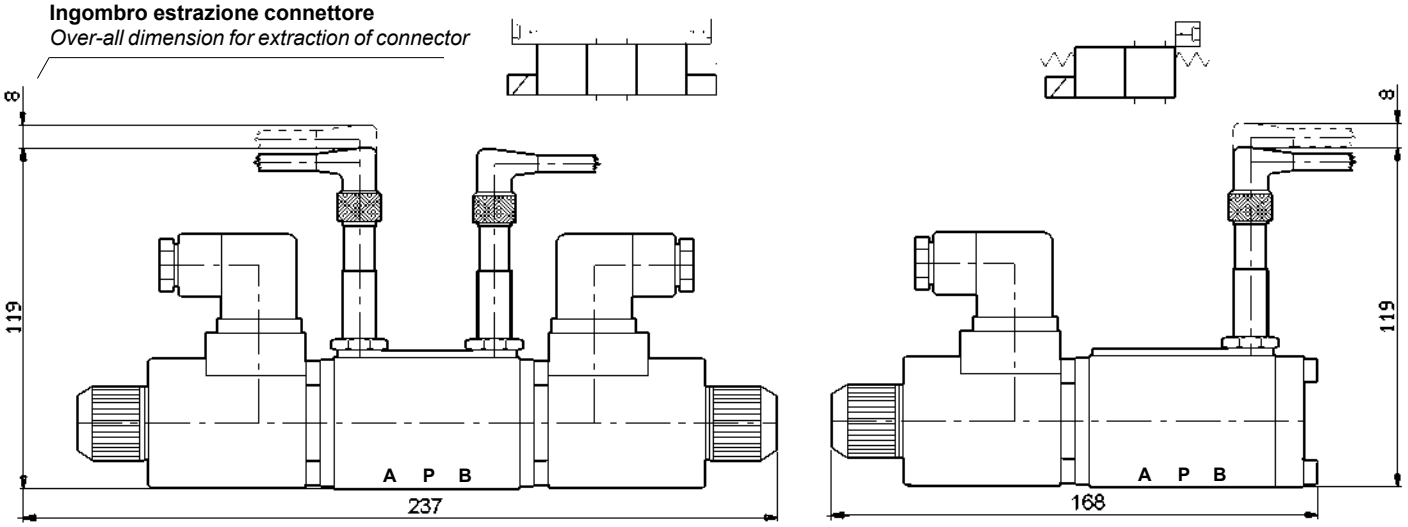
Cavo/Morsetti
Cables



Connettore
Connector



Ingombro estrazione connettore
Over-all dimension for extraction of connector



Pesi *Weights*	
Elettrovalvola con 1 solenoide: *With 1 solenoid :*	1.38 kg
Elettrovalvola con 2 solenoidi: *With 2 solenoids :*	1.92 kg

Sono disponibili tutti i circuiti 2 e 3 posizioni presenti nelle elettrovalvole a comando diretto con ritorno a molla, con le stesse cadute di pressione.

Available on all 2 and 3 position circuits of solenoid operated directional valves with spring return, with the same pressure drops.

SOLENOIDI • *SOLENOIDS*: GM 2096

Le elettrovalvole LC1 PRO montano i solenoidi GM 2096, costruiti per alimentazione in corrente continua.
Per il funzionamento in corrente alternata, con frequenze di 50 o 60Hz, è indispensabile utilizzare un connettore con raddrizzatore (RAC).
Frequenza di inserzione: 3Hz max.
Sui solenoidi GM 2096 sono montate le bobine C45... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.08.

The valves LC1 PRO use the solenoids GM 2096 which function in direct current (DC).
To use in alternate current (AC) with frequencies of 50 and 60Hz is necessary using a connector with rectrifier (RAC).
Switching frequency: 3Hz max.
The solenoids GM 2096 use C45... coils in different verions; for more technical information go to page 2.50.08.

L 5 1 9 1 _ W _ X Y V Z

W	**CIRQUITO** *CIRCUIT*
– – – –	**VEDI PAGINA 2.10.02** *SEE PAGE 2.10.02*

Y	**CONNESSIONE** *CONNECTION*
00	**SENZA BOBINA, SENZA CONNETTORE** *WITHOUT COIL AND CONNECTOR*
01	**CON BOBINA, SENZA CONNETTORE** *WITH COIL, WITHOUT CONNECTOR*
02	**CON CONNETTORE DIN 43650** *WITH CONNECTOR DIN 43650*
03	**AMP JUNIOR** *AMP JUNIOR*

Z	**VERSIONE** *VERSION*
0	**STANDARD** *STANDARD*
V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

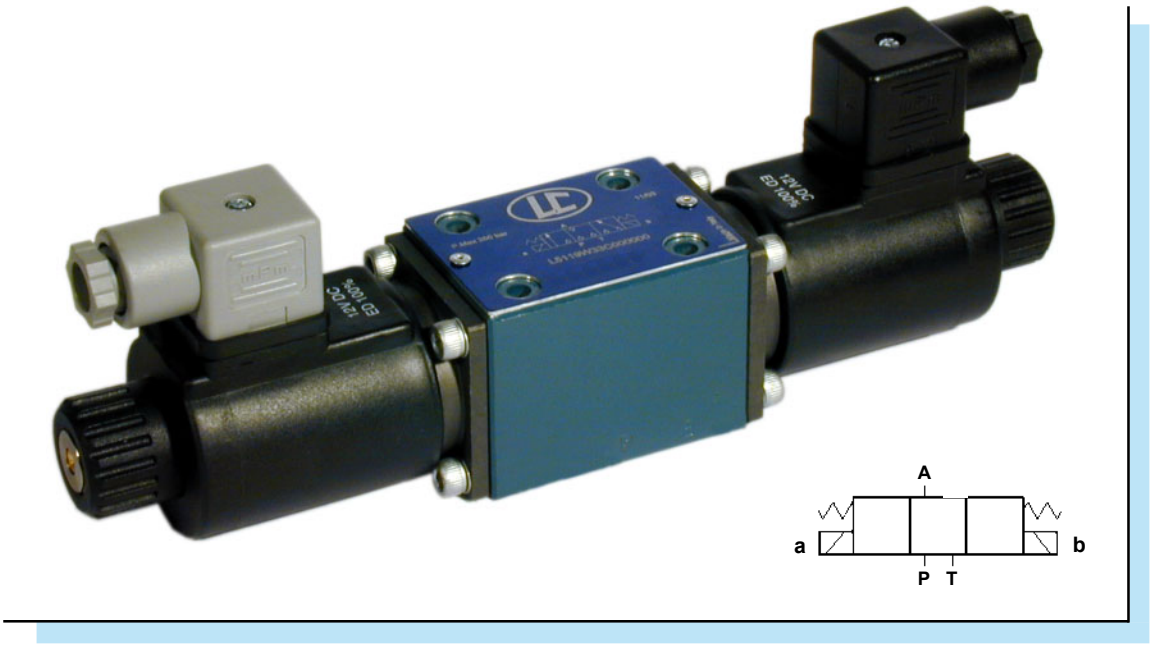
X	**TENSIONE** *VOLTAGE*	**Connessioni disponibili** *Available connections*					
		00	**01**	**03**			
00	**SENZA BOBINA** *WITHOUT COIL*						
OB	12V DC	X	X				
AD	13V DC	X	X	X			
OC	24V DC	X	X				
AC	27V DC	X	X	X			
OD	48V DC	X	X				
OE	110V DC	X	X				
OV	24 RAC (21.5 DC)	X	X				
OW	110 RAC (98 DC)	X	X				
OZ	230 RAC (207 DC)	X	X				

V	**MONTAGGIO SENSORE DI PROSSIMITA'** *SENSOR SWITCH MOUNTING*
0	**Predisposizione su A e B** *Prepared for A and B port*
A	**Predisposizione su A** *Prepared for A port*
B	**Predisposizione su B** *Prepared for B port*
1	**Montato su A** *Mounted on A*
2	**Montato su B** *Mounted on B*
3	**Montato su AB** *Mounted on AB*

LC1 KX

Elettrovalvole dirette controllo direzione a tenuta

Solenoid operated poppet directional valves



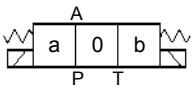
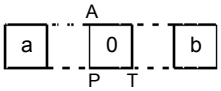
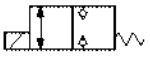
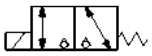
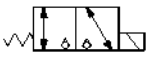
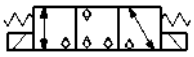
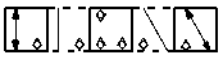
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 20 l/min
Pressione massima d'esercizio su A-P-T: 250 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow: 20 l/min.
Max operating pressure on A-P-T: 250 bar

TIPI DI CIRCUITI • *SPOOL TYPES*

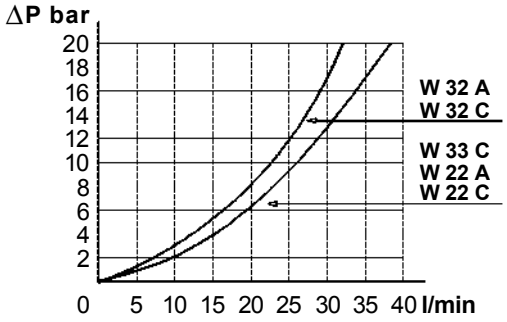
Codice *Code*	Simbolo *Circuit*	Direzione del flusso durante il passaggio al centro *Oil direction during shift*
		
W 22 C		
W 32 C		
W 22 A		
W 32 A		
W 33 C		

I circuiti W 32 A e W 32 C non possono funzionare contemporaneamente con portata e pressione massima. Si consiglia di ridurre del 20% uno dei due valori.

W 32 A and W 32 C circuits cannot operate with the maximum flow and pressure at the same time. We advise reducing one of these two values by 20%.

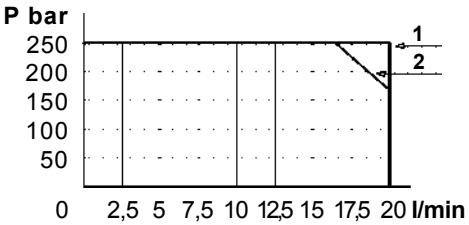
CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Cadute di pressione
Pressure drop

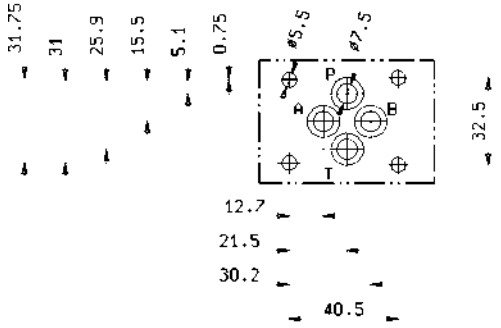


Tipo di circuito *Spool type*	Nr. di riferimento *Reference number*
W 22 C - W 22 A - W 33 C	**1**
W 32 C - W 32 A	**2**

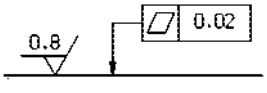
Portate massime in funzione della pressione
Maximum flows depending on pressure



GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121H- 03 (CETOP 3)

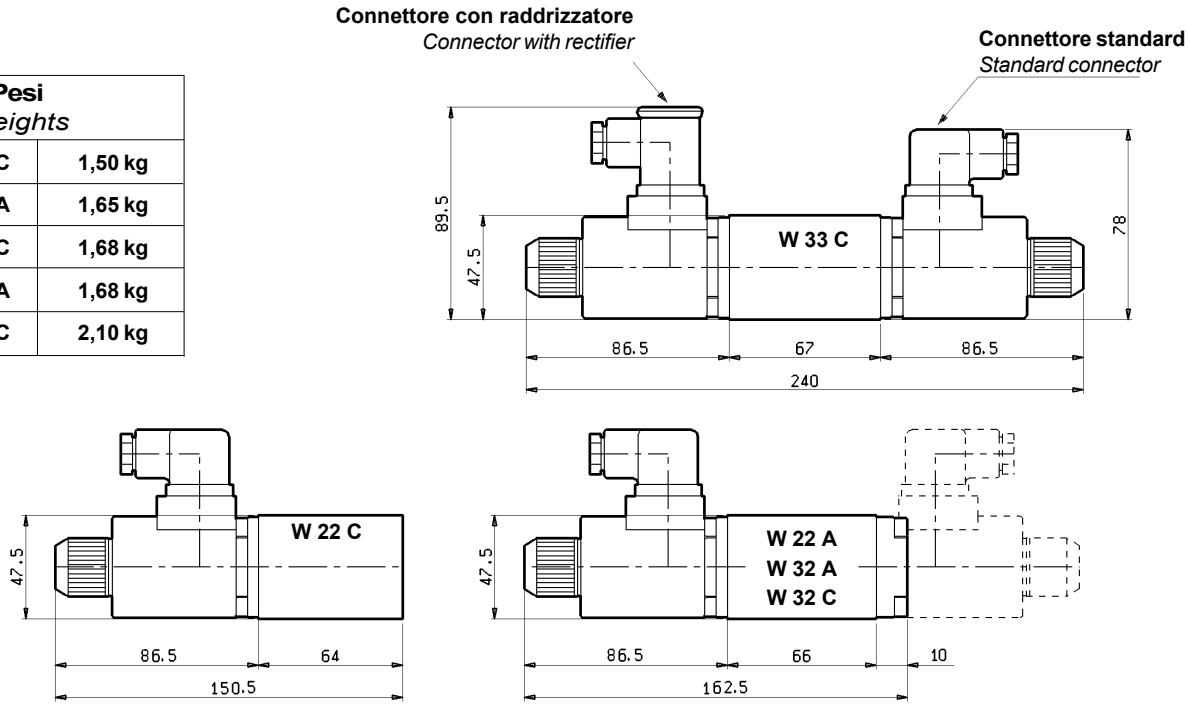


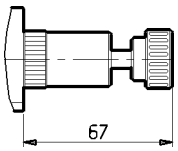
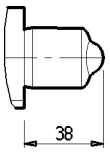
Qualità superficie di attacco
Mounting plane quality



DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

Pesi *Weights*	
LC1 KX - W22C	**1,50 kg**
LC1 KX - W22A	**1,65 kg**
LC1 KX - W32C	**1,68 kg**
LC1 KX - W32A	**1,68 kg**
LC1 KX - W33C	**2,10 kg**



Comando manuale di emergenza a vite *Screwed manual override* **EF Cod.: LC1DZ EF**	**Comando manuale di emergenza a pulsante** *Push-button manual override* **EP Cod.: 271-05099**
	

MOMENTI MASSIMI DI SERRAGGIO • *MAXIMUM BLOCKING TORQUE*

Serraggio cannotto *Tube mounting* **ch. 16mm: 22÷24Nm**	**Serraggio ghiera blocco bobina** *Retainer nut blocking torque* **Øe 26,5mm: 6÷7Nm**	**Viti di fissaggio** *Fixing screws* **N°4 DIN 912-8.8 M5x55: 5÷6Nm**
Viti di fissaggio coperchio *Cover fixing screws* **N°4 DIN 912-8.8 M5x12: 5÷6Nm**		

SOLENOIDI • *SOLENOIDS*: GM 2096

Le elettrovalvole LC1 KX montano i solenoidi GM 2096, costruiti per alimentazione in corrente continua.
Per il funzionamento in corrente alternata, con frequenze di 50 o 60Hz, è indispensabile utilizzare un connettore con raddrizzatore (RAC).
Frequenza di inserzione: 1Hz max.
Sui solenoidi GM 2096 sono montate le bobine C45... nelle diverse versioni, per ulteriori informazioni tecniche vedere a pagina 2.50.08.
Sono disponibili su richiesta azionamenti antidefllagranti GMA 6039, per ulteriori informazioni tecniche vedere a pagina 2.40.04.

The valves LC1 KX use the solenoids GM 2096 which function in direct current (DC).
To use in alternate current (AC) with frequencies of 50 and 60Hz is necessary using a connector with rectifier (RAC).
Switching frequency: 1Hz max.
The solenoids GM 2096 use C45... coils in different verions; for more technical information go to page 2.50.08.
Available on request operated with explosion proof coil GMA 6039, for more technical information go to page 2.40.04.

L	5	1	1	9	_	W	_	X	Y	Z

W	**CIRQUITO** *CIRCUIT*
– – – –	**VEDI PAGINA 2.70.02** *SEE PAGE 2.70.02*

Y	**CONNESSIONE** *CONNECTION*
00	**SENZA BOBINA, SENZA CONNETTORE** *WITHOUT COIL AND CONNECTOR*
01	**CON BOBINA, SENZA CONNETTORE** *WITH COIL, WITHOUT CONNECTOR*
02	**CON CONNETTORE DIN 43650** *WITH CONNECTOR DIN 43650*
03	**AMP JUNIOR** *AMP JUNIOR*

Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

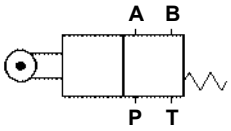
X	**TENSIONE** *VOLTAGE*	**Connessioni disponibili** *Available connections*					
		00	**01**	**03**			
00	**SENZA BOBINA** *WITHOUT COIL*						
OB	12V DC	X	X				
AD	13V DC	X	X	X			
OC	24V DC	X	X				
AC	27V DC	X	X	X			
OD	48V DC	X	X				
OE	110V DC	X	X				
OV	24 RAC (21.5 DC)	X	X				
OW	110 RAC (98 DC)	X	X				
OZ	230 RAC (207 DC)	X	X				

LC1 CM

Valvole controllo direzione con comando a camma

Cam-operated directional valves





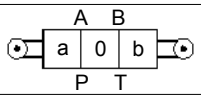
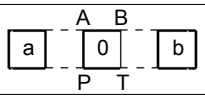
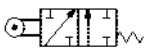
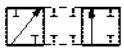
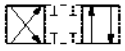
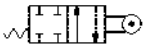
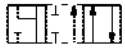
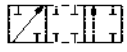
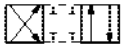
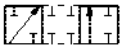
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 70 l/min
Pressione massima d'esercizio su A-B-P: 310 bar
Pressione massima in T: 70 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

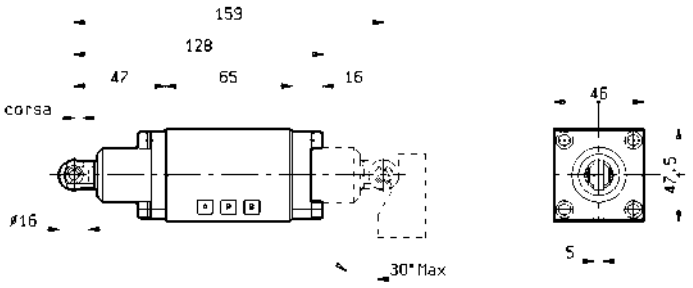
Max flow: 70 l/min
Max operating pressure on A-B-P: 310 bar
Max pressure in T: 70 bar

TIPI DI CIRCUITI • *SPOOL TYPES*

Nuovo codice *New code*	Vecchio codice *Old code*	Simbolo *Circuit*	Direzione del flusso durante il passaggio al centro *Oil direction during shift*	Pressione Max *Max pressure* bar	Portata Max *Max flow* l/min	Corsa camma *Cam drive stroke* mm
						
X301	A11A			310	70	5
Y301	A11C			310	70	5
B301	B11C			310	70	2,5
C301	C11A			310	70	5
E301	E11C			310	70	2,5
N301	N11C			310	70	5
X401	A12A			310	70	2,5
Y401	A12C			310	70	2,5
B401	B13C			310	70	2,5
C401	C13A			310	70	5
E401	E12C			310	70	2,5
N401	N12C			310	70	5
L201	M2A			310	70	2,5
M201	M2C			310	70	2,5
N201	N2			310	70	5

DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

Pesi *Weights*		**Forza azionamento camma** *Cam operating force*	
con 1 comando: *With 1 control:*	1.18 kg	**Senza contropressione sullo scarico:** *Without tank line back pressure:*	7 kg
con 2 comando: *With 2 control:*	2.26 kg	**Contropressione sullo scarico 70bar:** *Tank line back pressure 70bar:*	30 kg
Viti di fissaggio: *Fixing screw:*		**N°4 DIN 912-8.8 M5x30: 5÷6Nm**	



CODICE DI ORDINAZIONE • *ORDERING CODE*

L	5	1	C	0	_	W	_	0	0	0	0	Z	_	_

W	**CIRQUITO** *CIRCUIT*
– – – –	**VEDI SOPRA** *SEE ABOVE*

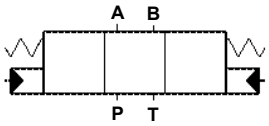
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1 OP

Valvole controllo direzione a comando oleodinamico o pneumatico

Oil/air operated directional valves





CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 70 l/min
Pressione massima d'esercizio su A-B-P: 310 bar
Pressione massima in T: 200 bar
Pressione minima di pilotaggio: 4 bar
Pressione massima di pilotaggio: 200 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

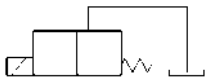
Max flow: 70 l/min
Max operating pressure on A-B-P: 310 bar
Max pressure in T: 200 bar
Min pilot pressure: 4 bar
Max pilot pressure: 200 bar

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

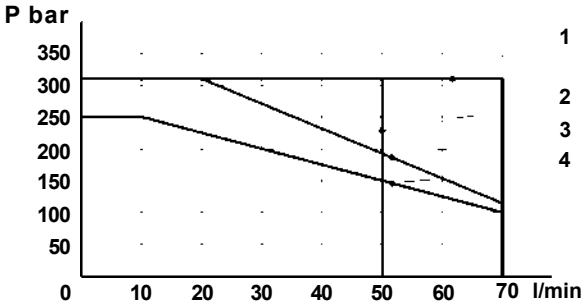
Tipo di circuito *Spool type*	**Nr. di riferimento** *Reference number*
B2 - B11C - B12C - B13C B14C - E2 - E11C - E12C E13C - E14C - M2A - M2C N2	**1**
A2 - A11S - A12S - A13S A14S - A11A - A12A - U2 U11C - K2 - R2	**2**
D2 - D11C - D12C - D13C D14C - A11C - A12C T11C - T12C - G2 - H2	**3**
C2 - C11A - C12A - C13A C14A - N11C - N12C	**4**

I valori indicati nel grafico non sono validi se l'elettrovalvola è utilizzata in applicazioni con collegamenti 2 o 3 vie.

The values indicated in the graph are not valid if the solenoid valve is used in applications with 2 or 3 way connections.



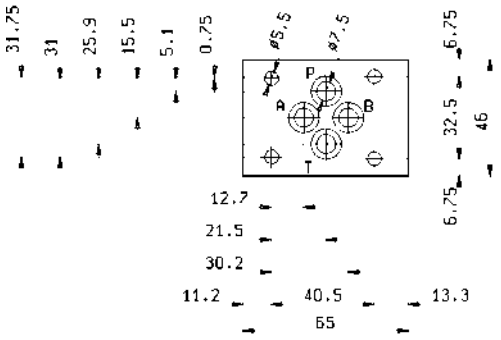
Portate massime in funzione della pressione
Maximum flows depending on pressure



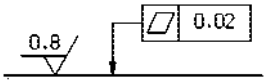
Sono disponibili tutti i circuiti a 2 e 3 posizioni come nelle elettrovalvole LC1DZ a comando diretto, con le stesse cadute di pressione.
Nelle applicazioni con lo scarico (T) della valvola in pressione, considerare un rapporto di pilotaggio 6,5:1.
Esempio: valvola con pressione in T di 100 bar, pressione minima di pilotaggio 100:6,5 = 15,4 bar.

All 2 and 3 position spools are available as for the LC1DZ direct acting solenoid valves with the same pressure drops. In the applications with pressure on the valve discharge line (T) is in pressure, allow for pilot ratio 6,5:1.
Example: valve with a 100 bar pressure in T will need a minimum pilot pressure of 100:6,5 = 15,4 bar.

GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



Qualità superficie di attacco
Mounting plane quality



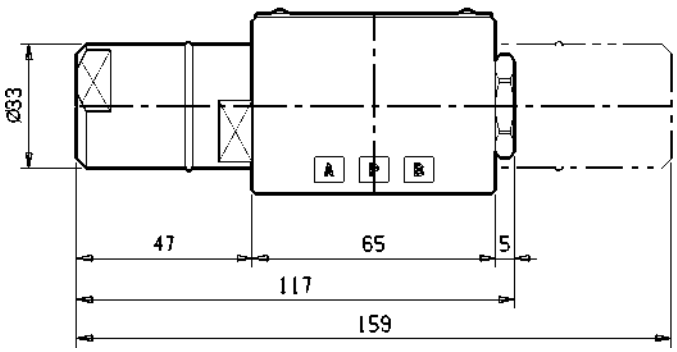
DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

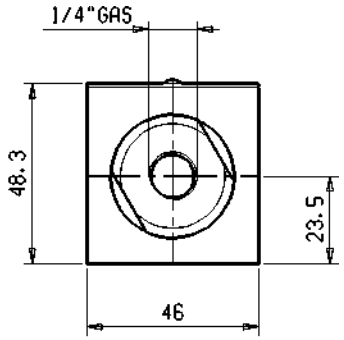
Pesi
Weights

con 1 comando: *With 1 control:*	1.3 kg
con 2 comando: *With 2 control:*	1.7 kg

Viti di fissaggio
Fixing screws
Nº4 DIN 912-8.8 M5 x 30

Momento massimo di serraggio:
Maximum blocking torque:
5÷6Nm





CODICE DI ORDINAZIONE • *ORDERING CODE*

L	5	1	P1	_	W	_	_	_	0	0	0	0	_	Z

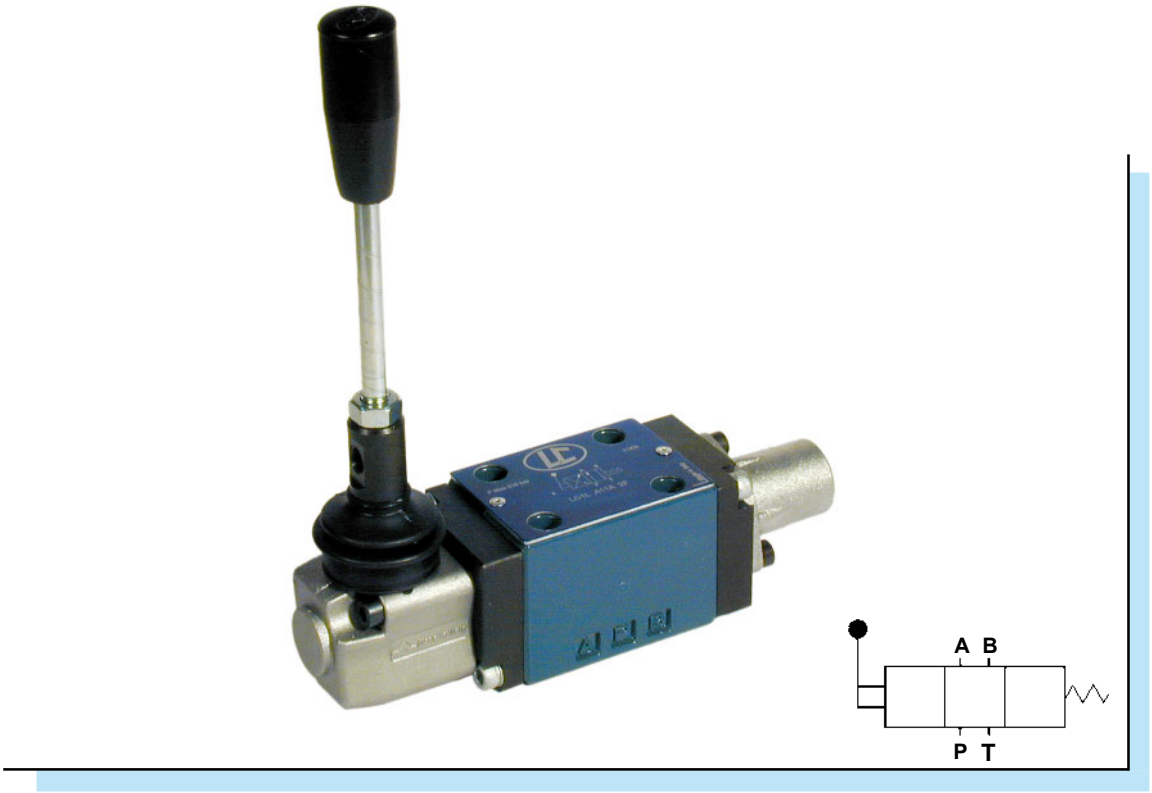
W	**CIRQUITO** *CIRCUIT*
_ _ _ _	**VEDI PAGINA 2.20.02** *SEE PAGE 2.20.02*

Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1 LV

Valvole controllo direzione con comando a leva

Lever operated directional valves



CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 70 l/min
Pressione massima d'esercizio su A-B-P: 310 bar
Pressione massima in T: 100 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow: 70 l/min
Max operating pressure on A-B-P: 310 bar
Max pressure in T: 100 bar

W — TIPI DI CIRCUITI • *SPOOL TYPES*

Vecchio *Old*	Nuovo *New*	Vecchio *Old*	Nuovo *New*	Vecchio *Old*	Nuovo *New*	Vecchio *Old*	Nuovo *New*	Vecchio *Old*	Nuovo *New*
A11A	**X301**	B11C	**B301**	C13A	**C401**	D2	**D201**	N12C	**N401**
A11C	**Y301**	B12C	**B471**	C14A	**C361**	E11C	**E301**		
A11S	**A301**	B13C	**B401**	C2	**C201**	E12C	**E401**		
A12S	**A401**	B14C	**B361**	D11C	**D301**	E13C	**E471**		
A13S	**A471**	B2	**B201**	D12C	**D471**	E14C	**E361**		
A14S	**A361**	C11A	**C301**	D13C	**D401**	E2	**E201**		
A2	**A201**	C12A	**C471**	D14C	**D361**	N11C	**N301**		

X — DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

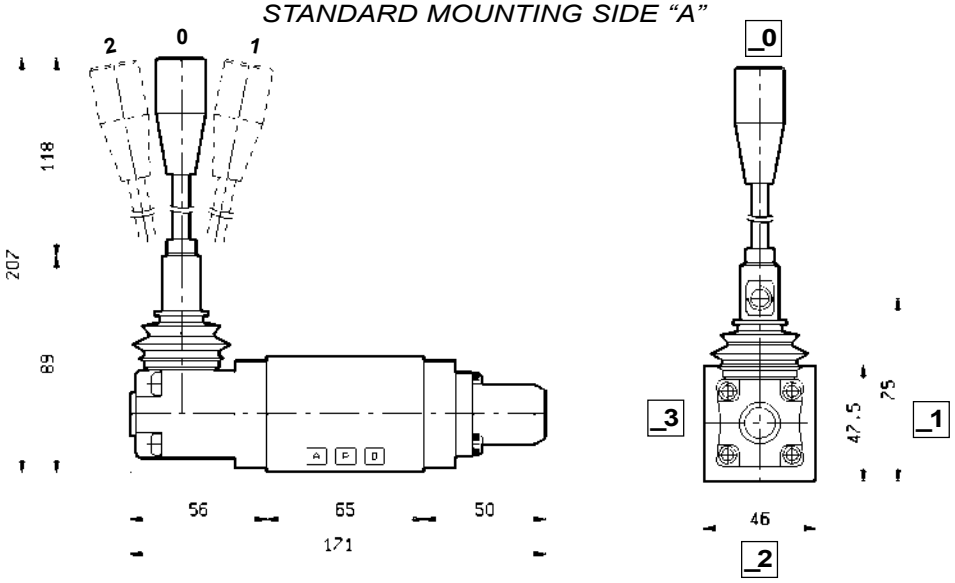
Viti di fissaggio
Fixing screws
N°4 DIN 912-8.8 M5 x 30
Momento massimo di serraggio:
Maximum blocking torque:
5÷6Nm

Peso *Weight*	**1,35 kg**

Versione con comando microinterruttore a richiesta

By request version with microswitch control

MONTAGGIO STANDARD LATO "A"
STANDARD MOUNTING SIDE "A"



Y — TIPO DI CONTROLLO DEL CURSORE • *TYPE OF SPOOL CONTROL*

Schema *Diagram*	Codice *Code*
1 0 2	**M1**
1 2	**M2**
1 0	**M3**
0 2	**M4**

Schema *Diagram*	Codice *Code*
1 0 2	**F1**
1 2	**F2**
1 0	**F3**
0 2	**F4**

CODICE DI ORDINAZIONE • *ORDERING CODE*

L	5	1	L	0	_	W	_	X	_	Y	_	Z

W	**TIPI DI CIRCUITI** *SPOOL TYPES*
_ _ _ _	**VEDI SOPRA** *SEE ABOVE*

X	**MONTAGGIO LEVA** *LEVER MOUNTING*				
A_	**MONTAGGIO LEVA LATO "A"** *LEVER MOUNTING SIDE "A"*	_0	_1	_2	_3
B_	**MONTAGGIO LEVA LATO "B"** *LEVER MOUNTING SIDE "B"*	_0	_1	_2	_3

Y	**TIPO DI CONTROLLO DEL CURSORE** *TYPE OF SPOOL CONTROL*
_ _	**VEDI SOPRA** *SEE ABOVE*

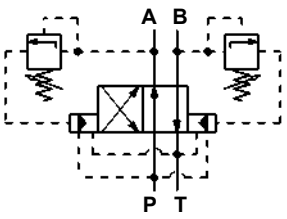
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1 IA6

Valvole di commutazione automatica (in pressione)

Automatic inversion valves (pressure)





CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata minima: 3 l/min
Portata massima: 35 l/min
Pressione minima d'esercizio: 10 bar
Pressione massima d'esercizio: 310 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Min flow: 3 l/min
Max flow: 35 l/min
Min operating pressure: 10 bar
Max operating pressure: 310 bar

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Sono valvole a doppio effetto in grado di commutare automaticamente la direzione del flusso dell'olio. Il movimento è completamente idraulico e avviene normalmente a fine corsa del cilindro. L'inversione può anche verificarsi in qualsiasi posizione, a condizione che si crei una resistenza esterna operante sul sistema, tale da aumentare la pressione di lavoro, fino al raggiungimento del valore di taratura della valvola pilota.Il ciclo di inversione inizia al 90% della pressione di taratura delle valvole pilota. La differenza di taratura fra le valvole degli utilizzi A e B non deve essere superiore a 30 bar.

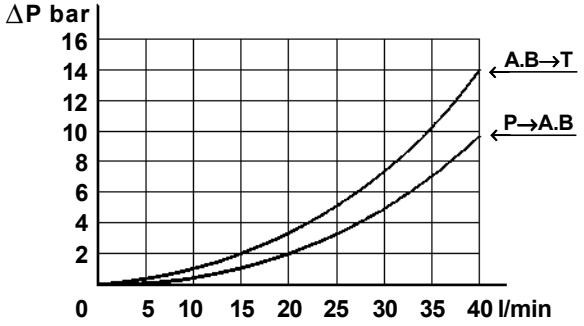
These are double-acting valves which automatically change-over the oil flow direction. The motion is completely automatic and normally takes place when the cylinder reaches its end of stroke. Inversion can also occur in any position whatsoever, as long as an external resistance acting on the system is created in order to increase the working pressure to reach the setting pressure of the pilot valve. Inversion cycle starts at 90% of the setting pressure of the pilot valves. Setting difference between the valves on A and B ports should not be higher than 30 bar.

W	**Campo di taratura** *Pressure range*
1S	10 ÷ 150 bar
2S	20 ÷ 310 bar

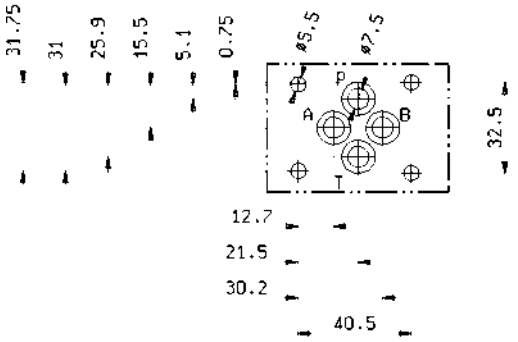
INSTALLARE IN POSIZIONE ORIZZONTALE

ALWAYS INSTALL HORIZONTALLY

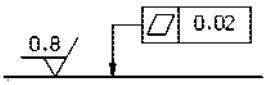
Cadute di pressione
Pressure drop diagrams



GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



Qualità superficie di attacco
Mounting plane quality



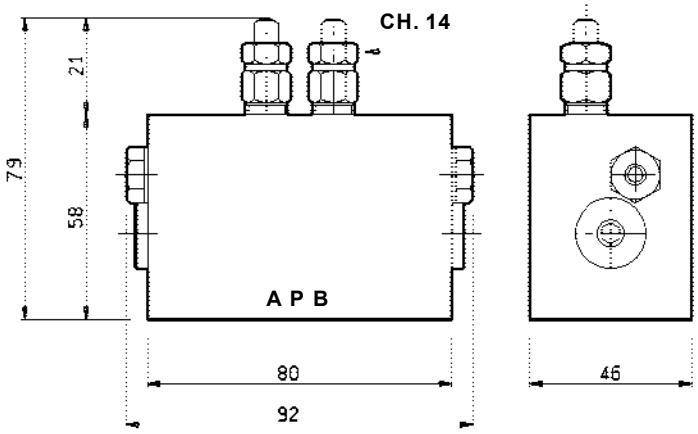
DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

Viti di fissaggio
Fixing screws

Nº4 DIN 912-8.8 M5 x 60

Momento massimo di serraggio:
Maximum blocking torque:
5÷6Nm

Peso *Weight*	**1,75 kg**



CODICE DI ORDINAZIONE • *ORDERING CODE*

L	5	1	3	0	_W_	0	0	0	0	0	0	0	0

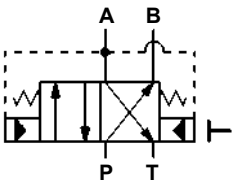
W	**CAMPO DI TARATURA** *PRESSURE RANGE*
– –	**VEDI SOPRA** *SEE ABOVE*

LC1 IA8

Valvole di commutazione automatica (in portata)

Automatic inversion valves (flow)





CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata minima: 3 l/min
Portata massima: 30 l/min
Pressione minima d'esercizio: 45 bar
Pressione massima d'esercizio: 250 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Min flow: 3 l/min
Max flow: 30 l/min
Min operating pressure: 45 bar
Max operating pressure: 250 bar

CARATTERISTICHE • *FEATURES*

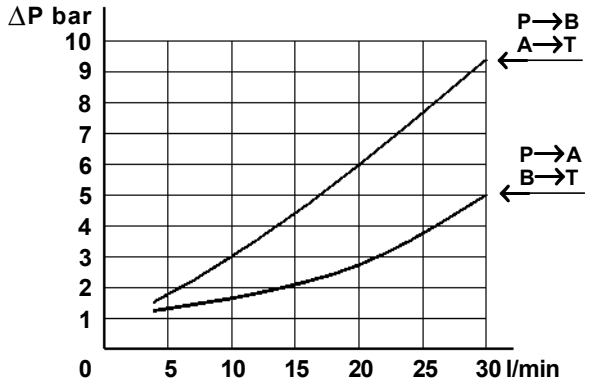
Sono valvole a doppio effetto in grado di commutare automaticamente la direzione del flusso dell'olio. Il movimento è completamente idraulico e avviene normalmente a fine corsa del cilindro. In caso di arresto della manovra si ripristina automaticamente la posizione P>B.

These are double-acting valves which automatically change-over the oil flow direction. The motion is completely automatic and normally takes place when the cylinder reaches its end of stroke. In case the movement is stopped the valve resets automatically back to P>B.

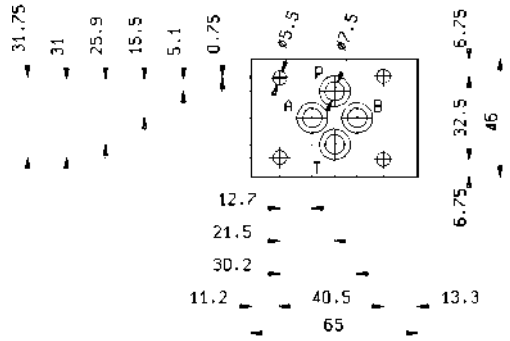
NOTA: Nel caso di utilizzo, in versione standard, con valvola di ritegno pilotata, è possibile impiegare solamente la versione LC1M VR/A.
Trafilamento max. interno: 0,5 l/min.

NOTE: In case of use in standard version with pilot operated check valve, it is allowed to use only LC1M VR/A.
Max internal leakage: 0,5 l/min.

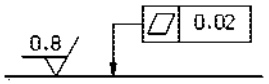
Cadute di pressione
Pressure drop diagrams



GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



Qualità superficie di attacco
Mounting plane quality



DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

Viti di fissaggio
Fixing screws

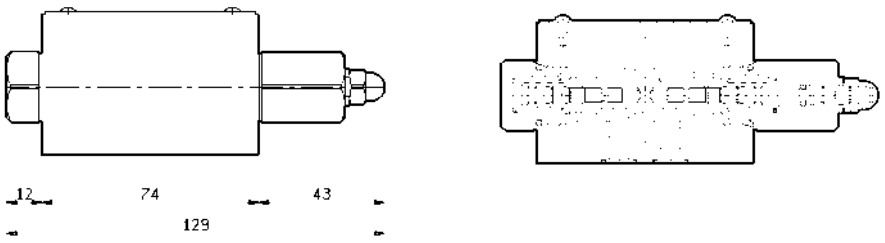
Nº4 DIN 912-8.8 M5 x 30

Momento massimo di serraggio:
Maximum blocking torque:
5÷6Nm

Peso
Weight

IA8 - R	1,150 kg

LC1 IA8 - R



CODICE DI ORDINAZIONE • *ORDERING CODE*

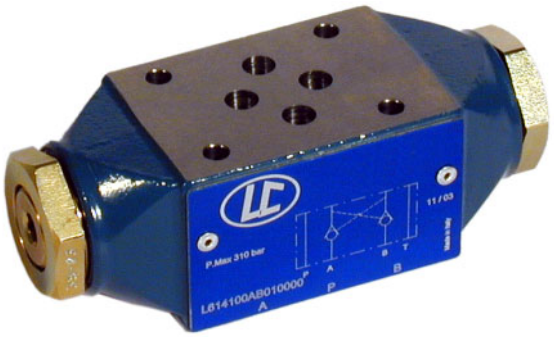
L	5	1	3	5	_	VV	_	0	0	0	0	0	0

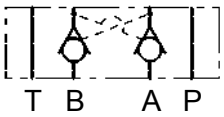
VV	**MODELLO** *MODEL*
0 R 0 0	**CON DISPOSITIVO PER REGOLAZIONE VALVOLA DI MASSIMA (IA8-R)** *WITH REGULATION VALVE DEVICE (IA8-R)*

LC1M VR

Valvole modulari di ritegno semplici e pilotate

Modular direct and pilot operated check valves





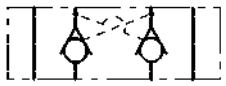
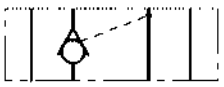
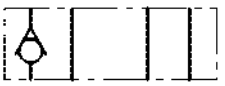
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 60 l/min
Pressione massima d'esercizio: 310 bar
Rapporto di pilotaggio: 4:1

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

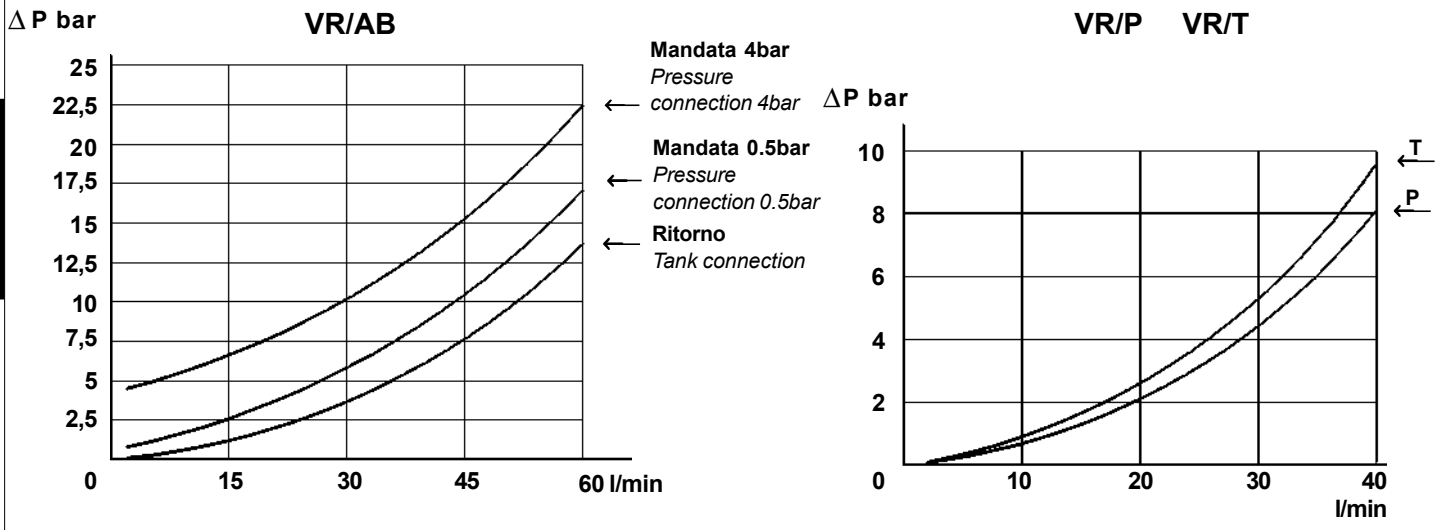
Max flow: 60 l/min
Max operating pressure: 310 bar
Pilot ratio: 4:1

TIPI DI VALVOLE • *VALVES TYPES*

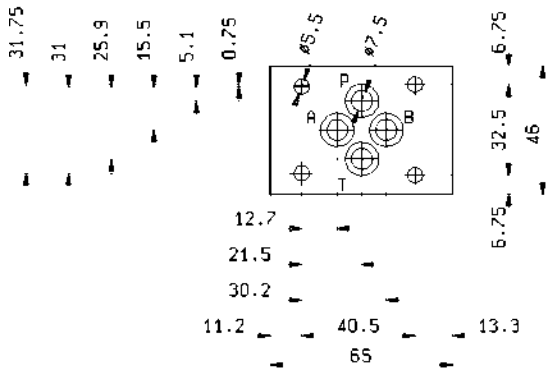
CIRCUITI *CIRQUITS*					
					
VW	**AB**	**0A**	**0B**	**0P**	**0T**

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

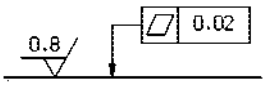
Cadute di pressione
Pressure drop diagrams



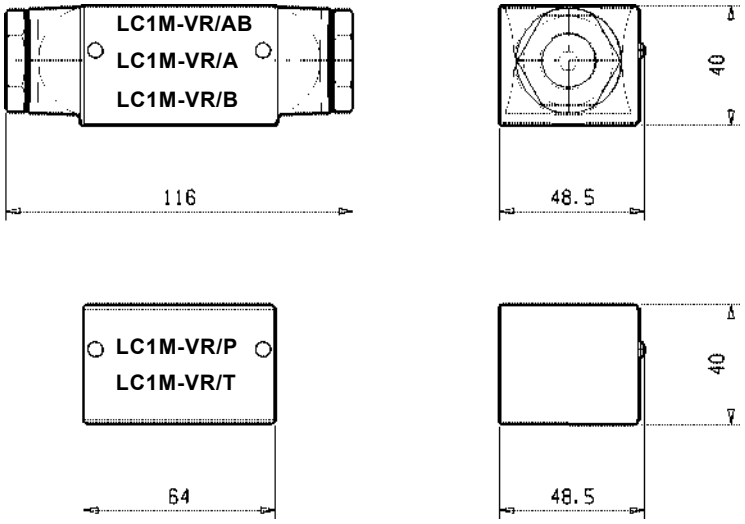
GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



Qualità superficie di attacco
Mounting plane quality

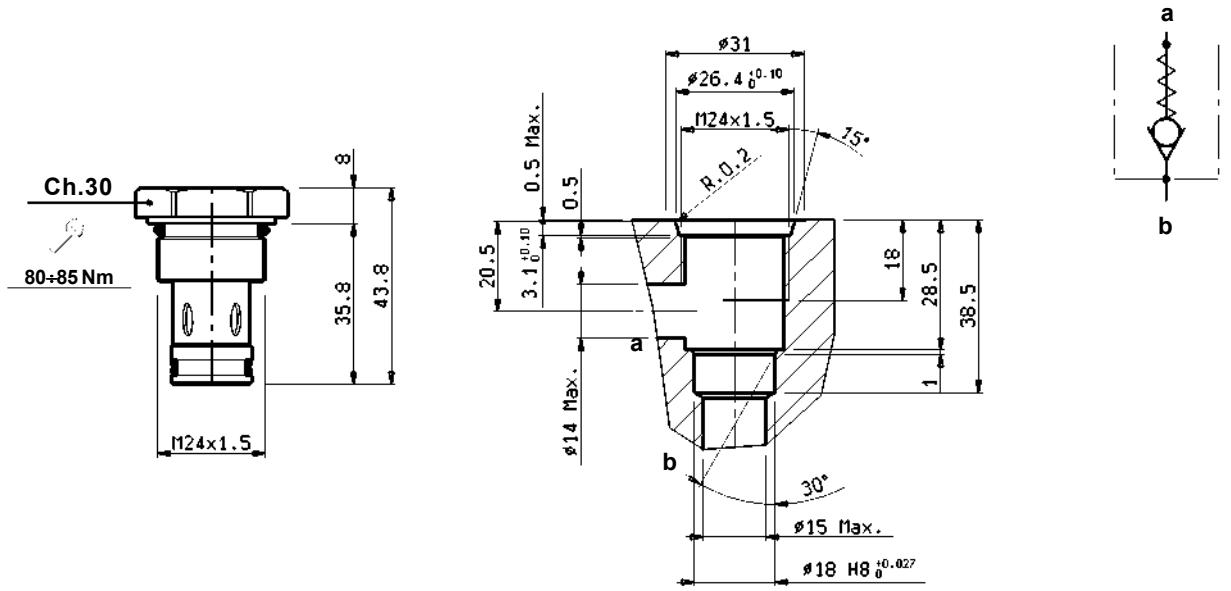


DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*



Peso *Weight*	
LC1M-VR/AB	1.07 kg
LC1M-VR/A	1.06 kg
LC1M-VR/B	1.06 kg
LC1M-VR/P	0.75 kg
LC1M-VR/T	0.75 kg

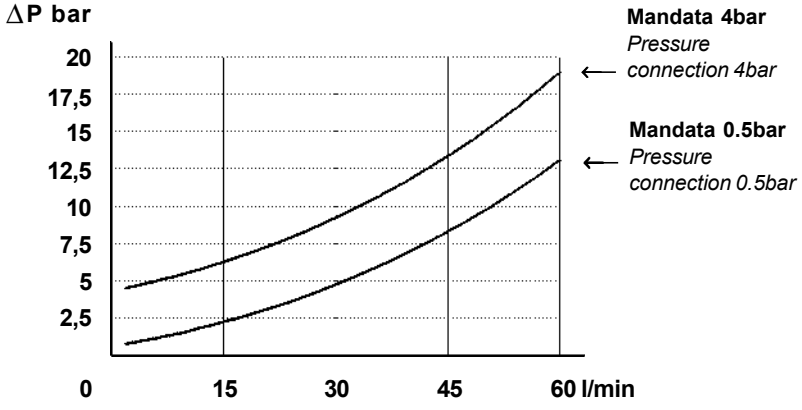
VALVOLA UNIDIREZIONALE A CARTUCCIA • *UNI-DIRECTIONAL CARTRIDGE VALVE*



Tipo *Type*	**Diam. nominale di passaggio** *Ø Size* **mm**	**Portata Max.** *Max. flow* **l/min**	**Pressione Max.** *Max. pressure* **bar**	**Pressione di apertura** *Cracking pressure* **bar**	**Cavità** *Cavity* **n°**	**Peso** *Weight* **kg**
VU 6	8	60	350	0,5	15	0,110
VU 6/4	8	60	350	4	15	0,110

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Diagramma caduta di pressione della cartuccia
Cartridge pressure drop diagram



CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	4	1	0	0	W	_	X	_	0	0	Z	_

W	**TIPI DI VALVOLE** *VALVES TYPE*
AB	LC1M-VR/AB
0A	LC1M-VR/A
0B	LC1M-VR/B
0P	LC1M-VR/P
0T	LC1M-VR/T

X	**PRESSIONE DI APERTURA** *CRACK PRESSURE*
01	**0,5 bar** *0,5 bar*
04*	**4 bar** *4 bar*
*** Solo per versioni 0A, 0B, AB** *Only for 0A, 0B, AB versions*	

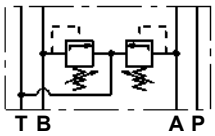
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1M VM

Valvole modulari limitatrici di pressione

Modular pressure relief valves





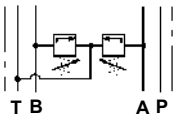
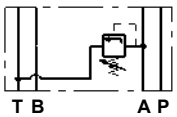
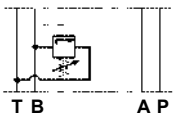
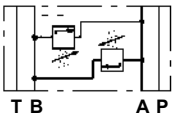
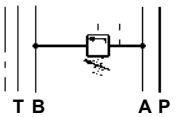
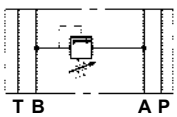
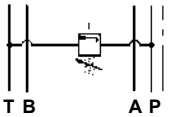
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 50 l/min
Pressione massima d'esercizio: 310 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

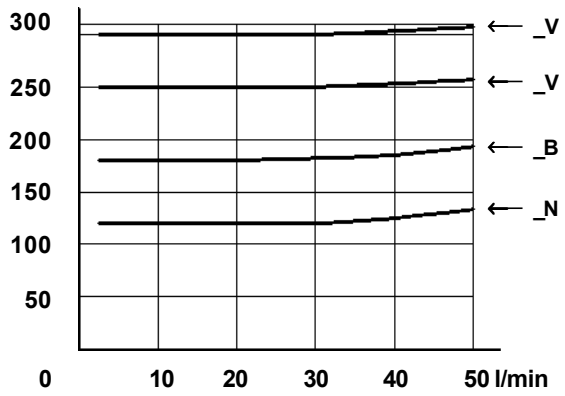
Max flow: 50 l/min
Max operating pressure: 310 bar

TIPI DI VALVOLE • *VALVES TYPES*

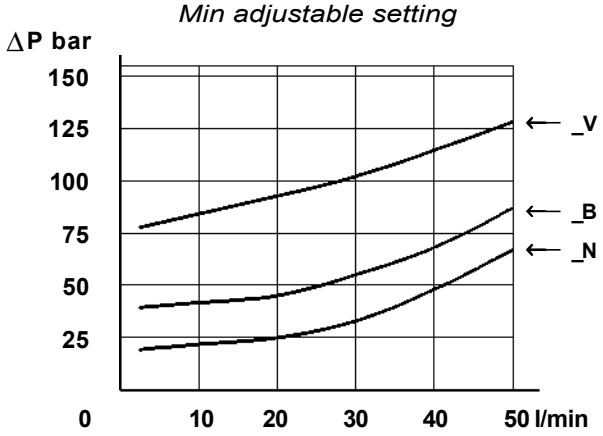
01AB	010A	010B	02AB	020A	020B	010P
						

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

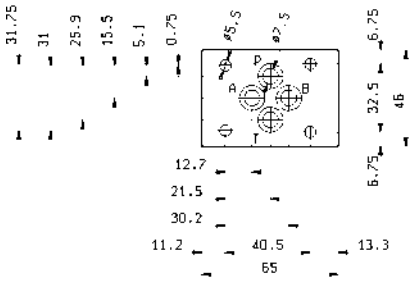
Curve di apertura
Opening curves



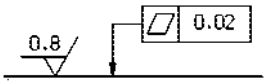
Valore minimo di taratura
Min adjustable setting



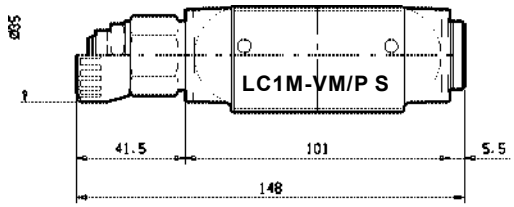
GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)

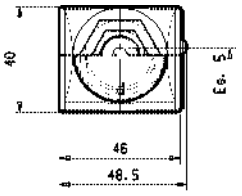


Qualità superficie di attacco
Mounting plane quality



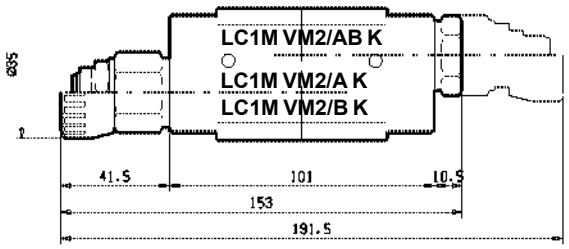
DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

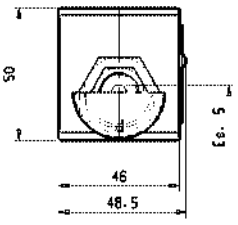


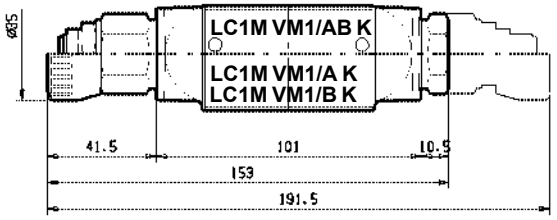


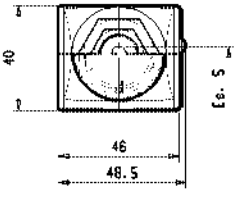
K = **Valvola con taratura a volantino**
Knob adjustment

S = **Valvola con taratura a chiave**
Screw adjustment



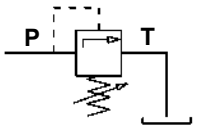






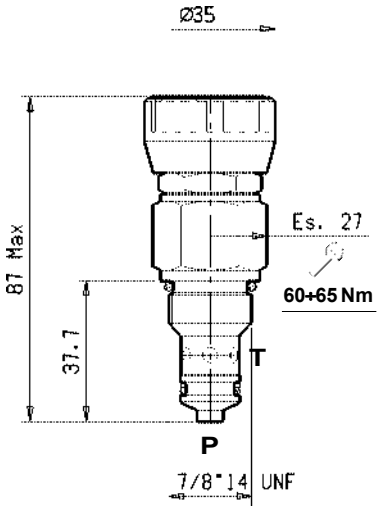
Peso *Weight*	
LC1M VM1/AB	1.28 kg
LC1M VM1/A	1.20 kg
LC1M VM1/B	1.20 kg
LC1M VM2/AB	1.67 kg
LC1M VM2/A	1.59 kg
LC1M VM2/B	1.59 kg
LC1M VM/P	1.25 kg

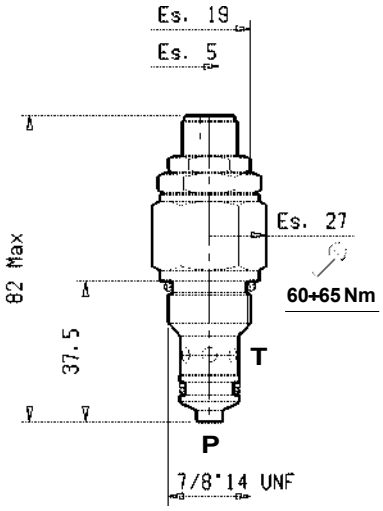
X VALVOLA LIMITATRICE DI PRESSIONE A CARTUCCIA • *RELIEF VALVE CARTRIDGE*



Tipo Type **K =** Valvola con regolazione a volantino *Knob adjustment*

Tipo Type **S =** Valvola con regolazione a chiave *Screw adjustment*





Con limitatore di corsa antischiacciamento molla.
With stroke limitator to avoid spring exclusion.

Tipo *Type*	X		**Portata Max.** *Max. flow* **l/min**	**Pressione Max.** *Max. pressure* **bar**	**Campo di taratura** *Pressure range* **bar**	**Cavità** *Cavity* **n°**	**Peso** *Weight* **kg**
	Regolazione a volantino *Knob adjustment*	**Regolazione a vite** *Screw adjustment*					
VMD1 040	**KN**	**SN**	50	350	20÷130	C10A2N	0,20
	KB	**SB**			40÷180		
	KV	**SV**			80÷350		
	00		**Senza valvola limitatrice -** *Without pressure relief valve*				

CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	6	1	V	W	X	0	0	Z

V	**MODELLO** *MODEL*
01	**MODELLO 01 (scarico in T)** *MODEL 01 (T outlet)*
02	**MODELLO 02 (scarico incrociato)** *MODEL 02 (cross-over outlet)*

W	**TIPI DI VALVOLE** *VALVES TYPE*
AB	LC1M-VM_/AB
0A	LC1M-VM_/A
0B	LC1M-VM_/B
0P	LC1M-VM_/P

X	**CAMPO DI TARATURA** *PRESSURE RANGE*
– –	**VEDI SOPRA** *SEE ABOVE*

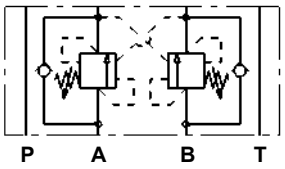
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1M VBSO

Valvole modulari di bilanciamento

Modular overcentre valves





CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 50 l/min
Pressione massima d'esercizio: 310 bar
Rapporto di pilotaggio: 4,2:1

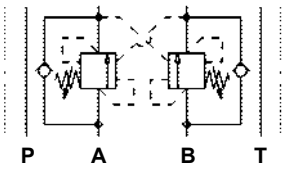
TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow: 50 l/min
Max operating pressure: 310 bar
Pilot ratio: 4,2:1

W — TIPI DI VALVOLE • *VALVES TYPES*

AB

LC1M VBSO/DE



0A

LC1M VBSO/SE

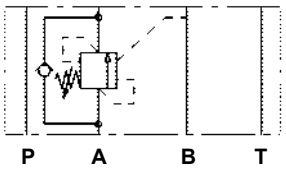
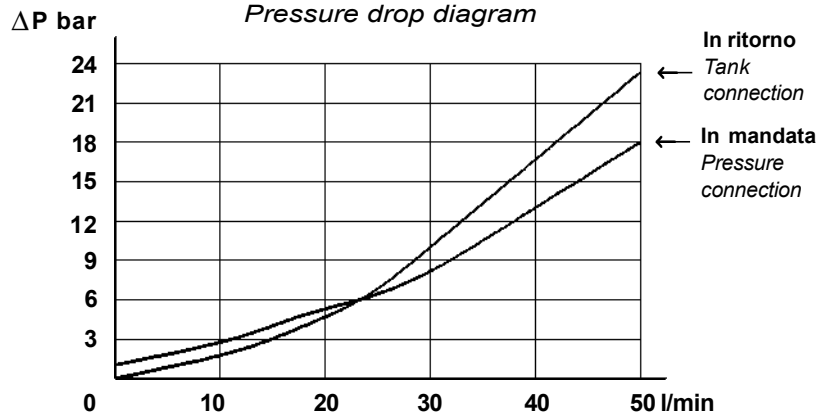
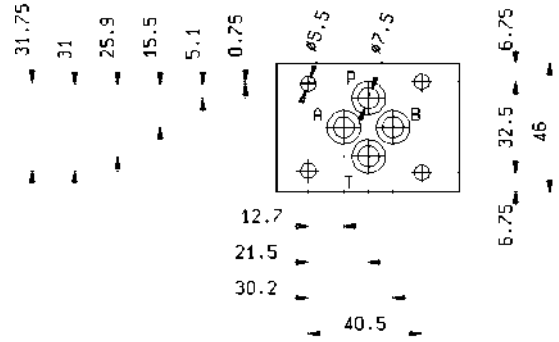


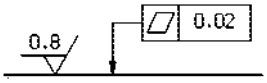
Diagramma caduta di pressione
Pressure drop diagram



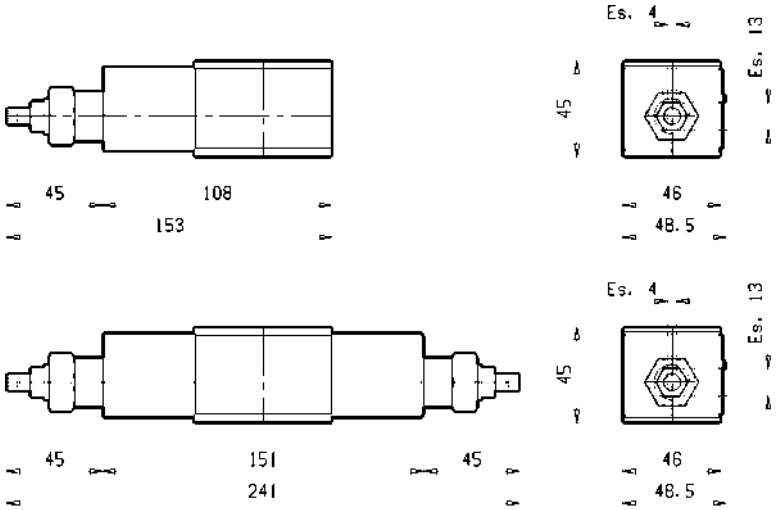
GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



Qualità superficie di attacco
Mounting plane quality



X — DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*



Peso *Weight*	
LC1M VBSO/AB	2.1 kg
LC1M VBSO/A	1.6 kg
Campo di taratura *Pressure range*	
20	60 ÷ 210 bar
35	100 ÷ 350 bar

CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	3	6	0	0	W	X	0	0	Z
							_ _	_ _			_ _

W	**MODELLO** *MODEL*
AB	**LC1M-VBSO/AB**
0A	**LC1M-VBSO/A**

X	**CAMPO DI TARATURA** *PRESSURE RANGE*
_ _	**VEDI SOPRA** *SEE ABOVE*

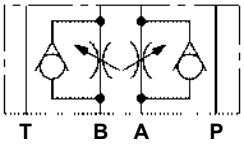
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1M VF

Valvole modulari di controllo portata

Modular flow regulator valves





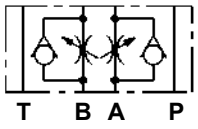
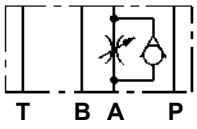
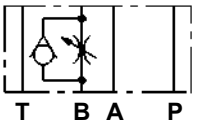
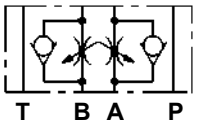
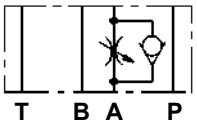
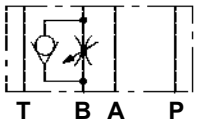
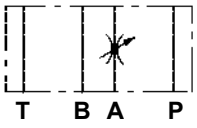
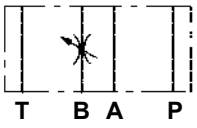
CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 50 l/min
Pressione massima d'esercizio: 310 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow: 50 l/min
Max operating pressure: 310 bar

TIPI DI VALVOLE • *VALVES TYPES*

01AB	010A	010B	02AB	020A
				
020B	**0B0A**	**0B0B**	**0B0P**	
				

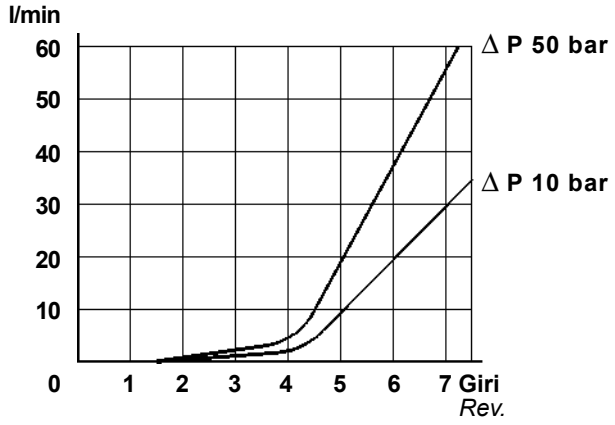
V = 01
Regolazione in ritorno
Meter-Out flow

V = 02
Regolazione in mandata
Meter-In flow

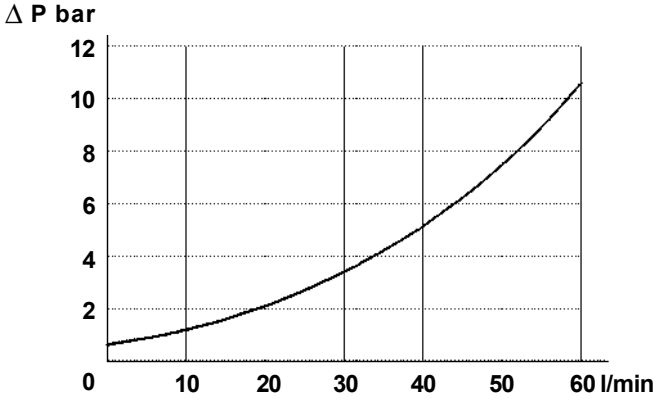
V = 0B
Bidirezionale
Bidirectional

CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

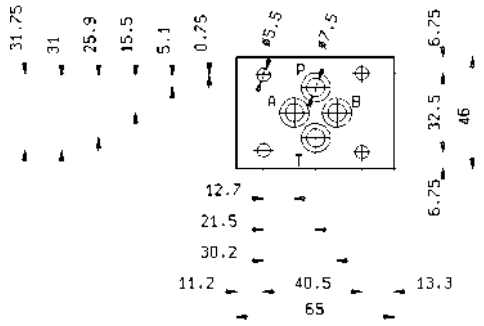
Variazione di portata in funzione dei giri del volantino e della pressione
Pressure drop depending on knob revolutions and on pressure



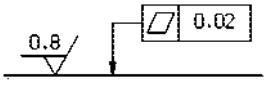
Caduta di pressione nel senso del flusso libero
Pressure drop in the free flow direction



GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



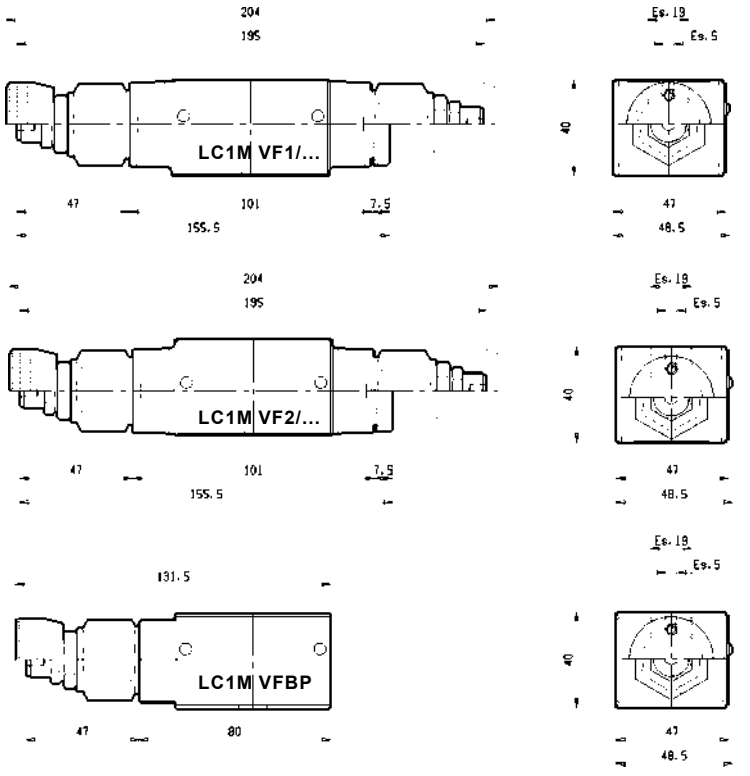
Qualità superficie di attacco
Mounting plane quality



DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

K = **Valvola con regolazione a volantino**
Knob adjustment

S = **Valvola con regolazione a chiave**
Screw adjustment



Peso *Weight*	
LC1M VF1/AB	1,35 kg
LC1M VF2/AB	1,35 kg
LC1M VF1/A-B	1,22 kg
LC1M VF2/A-B	1,22 kg
LC1M VFB/P	1,22 kg

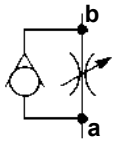
X VALVOLA A CARTUCCIA • *CARTRIDGE VALVE*

S = **Valvola con regolazione a chiave**
Screw adjustment

K = **Valvola con regolazione a volantino**
Knob adjustment

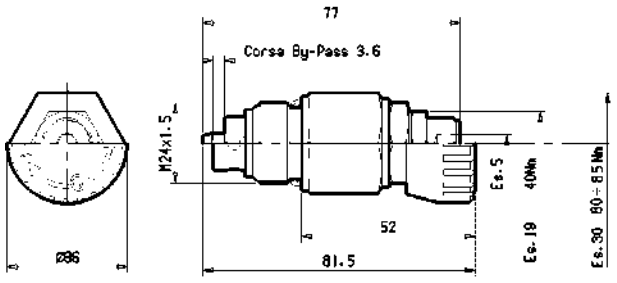
CVF6

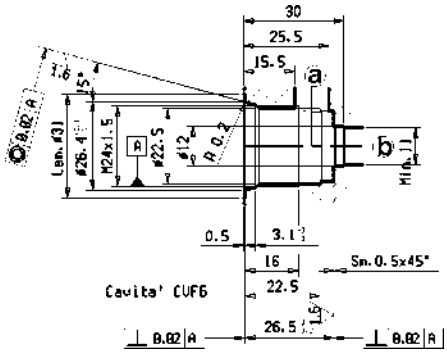
Valvola unidirezionale
Uni-directional valve



Valvola bidirezionale
Bi-directional valve







Tipo *Type*	Regolazione a volantino *Knob adjustment*	Regolazione a vite *Screw adjustment*	Portata Max. *Max. flow* l/min	Diametro nominale di passaggio *Ø Size* mm	Numero di giri del volantino *Knob revolutions number* n°	Cavità *Cavity* n°	Peso *Weight* kg
CVF6	**2K**	**2S**	50	6.5	7,5	14	0,130

CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	51	V	W	X	0	0	Z

V	MODELLO *MODEL*
01	**MODELLO 01** *MODEL 01*
02	**MODELLO 02** *MODEL 02*
0B	**MODELLO 0B** *MODEL 0B*

W	TIPI DI VALVOLE *VALVES TYPE*
AB	LC1M-VF_/AB
0A	LC1M-VF_/A
0B	LC1M-VF_/B
0P	LC1M-VF_/P

X	REGOLAZIONE *ADJUSTMENT*
--	**VEDI SOPRA** *SEE ABOVE*

Z	VERSIONE *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1M VFCU

Valvole modulari compensate di controllo portata

Modular pressure compensated flow regulator valves



CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

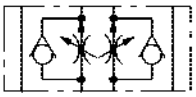
Portata massima: 45 l/min
Pressione massima d'esercizio: 310 bar

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

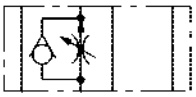
Max flow: 45 l/min
Max operating pressure: 310 bar

TIPI DI VALVOLE • *VALVES TYPES*

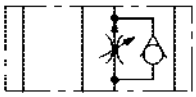
AB



0A



0B



0P

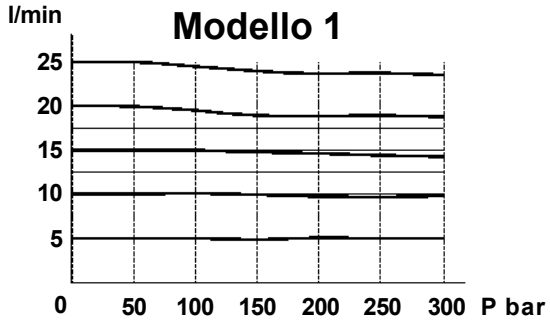


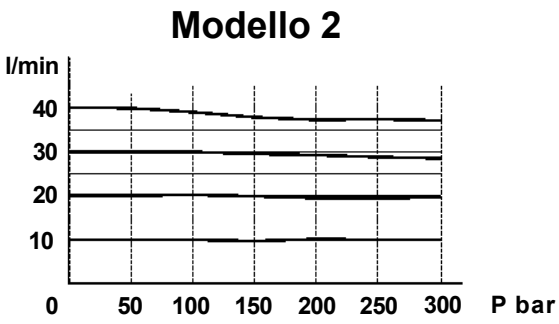
0T



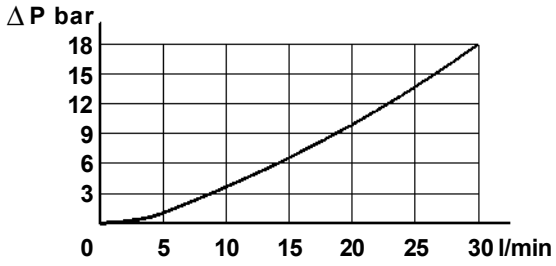
CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

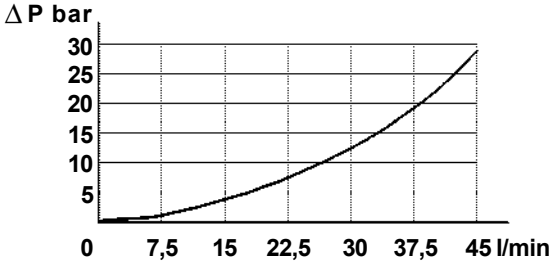
Variazione di portata in funzione della pressione
Flow change depending on pressure



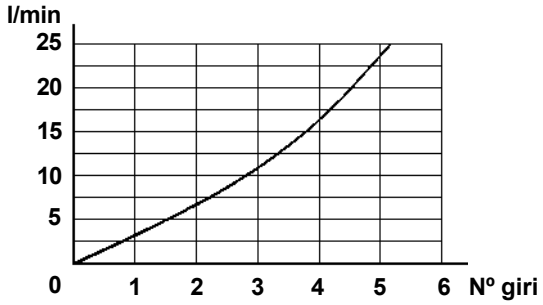


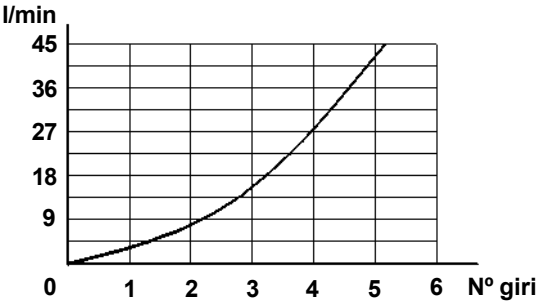
Caduta di pressione nel senso del flusso libero
Pressure drop in the free flow direction





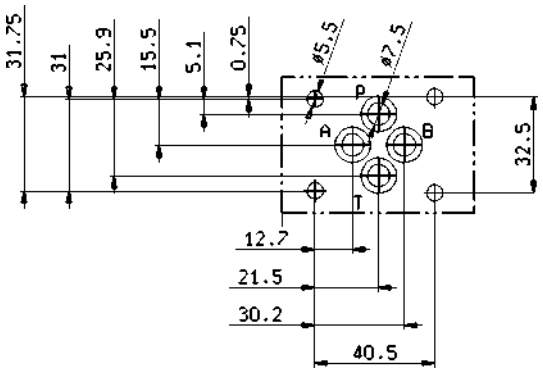
Regolazione portata in funzione dei giri del volantino (da inizio apertura)
Flow adjustment depending on knob rev. (aperture start)



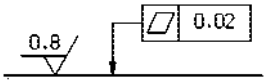


Regolazione a volantino *Knob adjustment*	Regolazione a vite *Screw adjustment*	Portata Max. *Max. flow* l/min	Numero di giri del volantino *Knob revolutions number* n°
1K	**1S**	25	6
2K	**2S**	45	6

GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



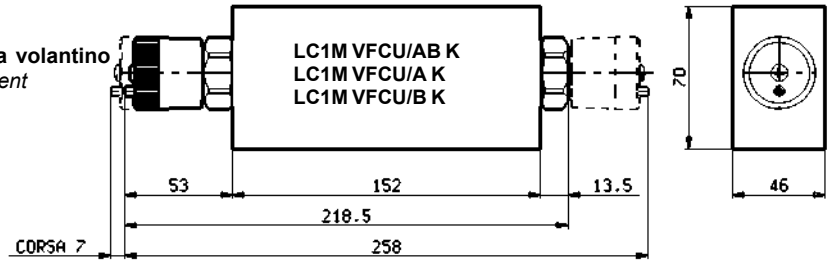
Qualità superficie di attacco
Mounting plane quality



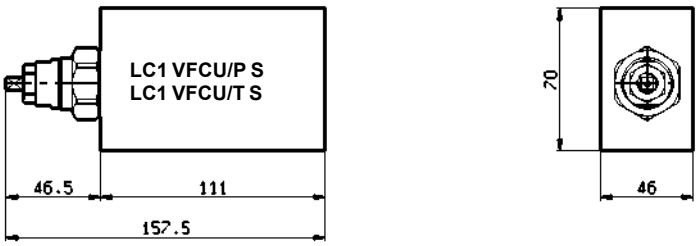
DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

Peso *Weight*	
LC1M VFCU/AB	1.80 kg
LC1M VFCU/A	1.50 kg
LC1M VFCU/B	1.50 kg
LC1M VFCU/P	1.20 kg
LC1M VFCU/T	1.20 kg

K = **Valvola con regolazione a volantino**
Knob adjustment



S = **Valvola con regolazione a chiave**
Screw adjustment



CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	4	5	0	0	W	X	0	0	Z

W	**TIPI DI VALVOLE** *VALVES TYPE*
AB	LC1M-VFCU/AB
0A	LC1M-VFCU/A
0B	LC1M-VFCU/B
0P	LC1M-VFCU/P
0T	LC1M-VFCU/T

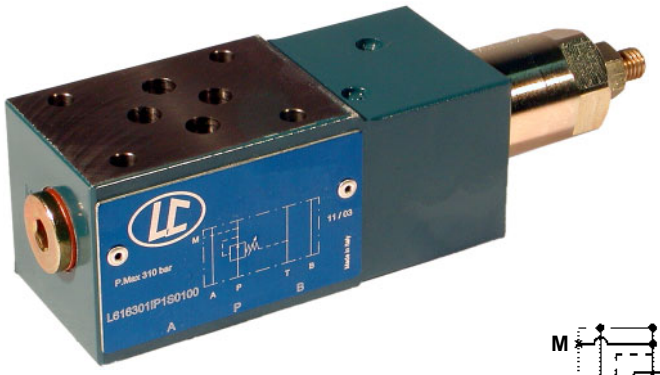
X	**REGOLAZIONE** *ADJUSTMENT*
– –	**VEDI PAGINA 2.170.02** *SEE PAGE 2.170.02*

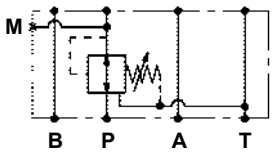
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1M VRPM

Valvole modulari riduttrici di pressione

Modular pressure reducing valves





CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Portata massima: 50 l/min
Pressione massima in entrata: 310 bar
Pressione controllata in uscita: 2 ÷ 280 bar
Valvole riduttrici di pressione dirette e pilotate agenti su P e A

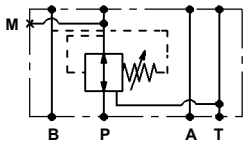
TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow: 50 l/min
Inlet max pressure: 310 bar
Controlled pressure at outlet port: 2 to 280 bar
Pilot and direct operated pressure reducing valves acting on P and A

TIPI DI VALVOLE • *VALVES TYPES*

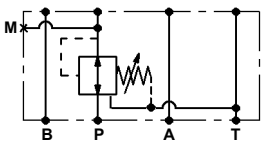
IA

Riduttrice in A con relieving, drenaggio in B
Pressure reducing in A with relieving, draning in B

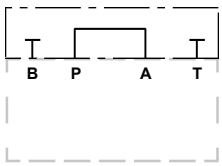


IP

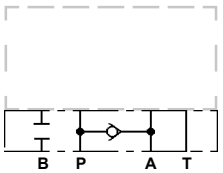
Riduttrice in P con relieving, drenaggio in T
Pressure reducing in P with relieving, draning in T



LC11PR1



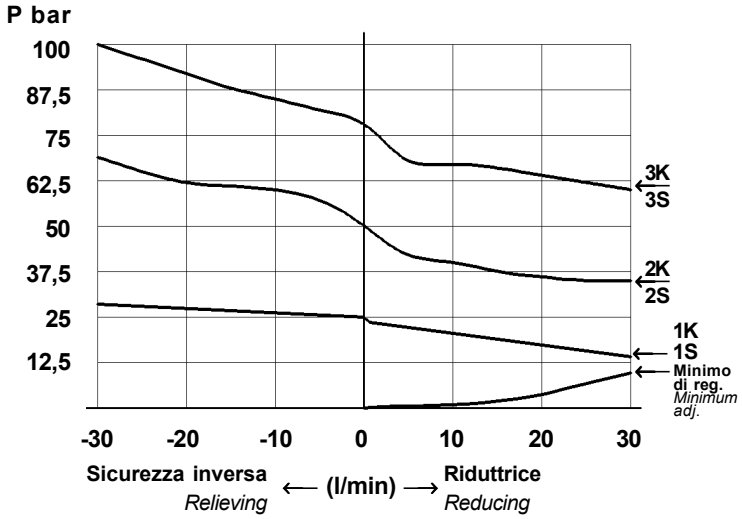
LC11PR2



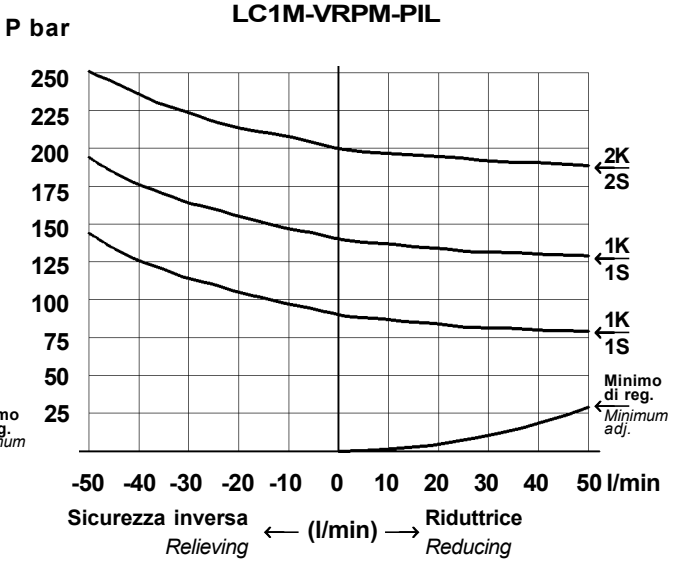
CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Curve di apertura
Opening curves

LC1M-VRPM-DIR

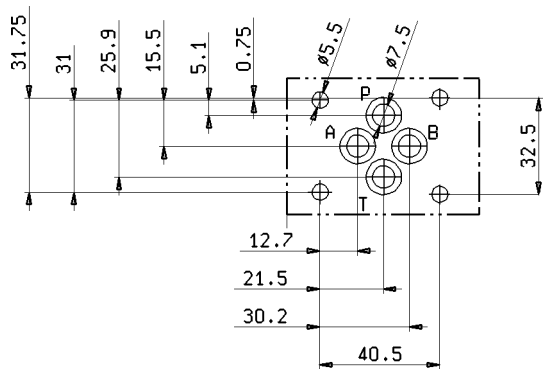


LC1M-VRPM-PIL

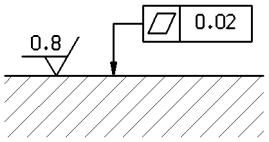


V	X		Trafilamento interno *Internal leakage*	Portata Max. *Max. flow*	Pressione Max. *Max. pressure*	Campo di taratura *Regolation range*	Cavità *Cavity*
Tipo *Type*	**Regolazione a volantino** *Knob adjustment*	**Regolazione a vite** *Screw adjustment*	**cm³/min**	**l/min**	**bar**	**bar**	**n°**
01 (DIR)	**1K**	**1S**	50±10	30	310	2÷25	CA-10A-3N
	2K	**2S**				10÷50	
	3K	**3S**				28÷80	
02 (PIL)	**1K**	**1S**	250±50	50	310	35÷140	
	2K	**2S**				70÷280	

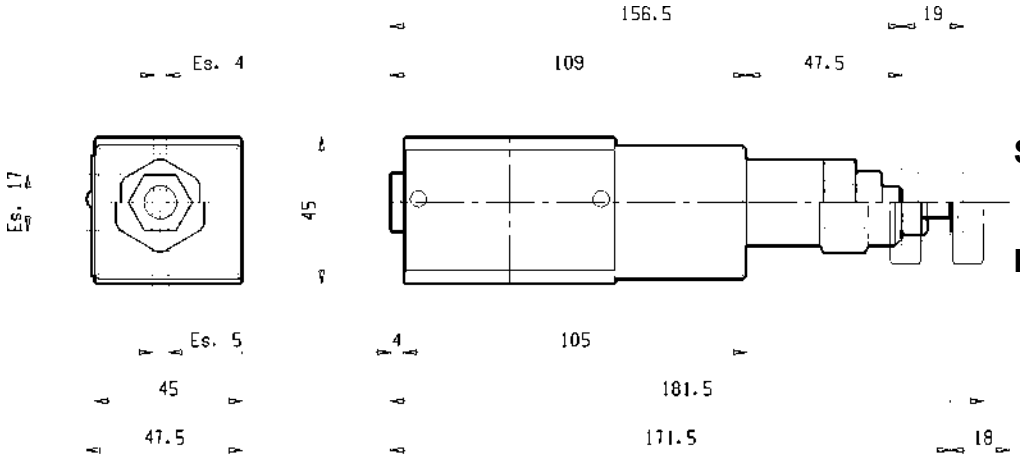
GRANDEZZA • *SIZE* : NG6 ISO 4401-03 CETOP RP 121 H03 (CETOP 3)



Qualità superficie di attacco
Mounting plane quality



DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*



S = **Valvola con taratura a chiave**
Screw adjustment

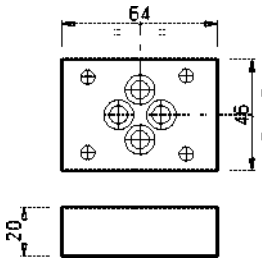
K = **Valvola con taratura a volantino**
Knob adjustment

Pesi *Weights*	
LC1M-VRPM-DIR	1,50 kg
LC1M-VRPM-PIL	1,40 kg

LC1PR1

Piastra di collegamento
Connection plate

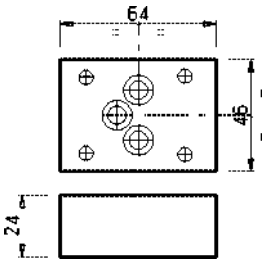
P → A



LC1PR2

Piastra con ritegno da
Plate with check valve from

A → P



Pesi *Weights*	
LC11PR1	0,38 kg
LC11PR2	0,45 kg

CARATTERISTICHE DI FUNZIONAMENTO • *SPECIFICATIONS*

Le valvole LC1M-VRPM, sono valvole riduttrici di pressione a tre vie con relieving da impiegare quando in un circuito si vuole ottenere una riduzione costante di pressione su uno o più utilizzi.
Eventuali aumenti di pressione sull'entrata "P" non hanno influenza sulla pressione ridotta.
Sono disponibili in due versioni con drenaggio interno:
LC1M-VRPM-...-IA pressione ridotta in A con drenaggio in B.
LC1M-VRPM-...-IP pressione ridotta in P con drenaggio in T.
Le valvole montano due tipi di cartucce con funzionamento diretto o pilotato, con diversi campi di regolazione:
tipo LC1M-VRPM-01 monta la cartuccia ad azione diretta VRPR-10A;
tipo LC1M-VRPM-02 monta la cartuccia ad azione pilotata VRPX-10A.

LC1M-VRPM valves are 3-ways pressure reducing valves with relieving to be applied in a circuit to get a constant pressure reduction an one or more ports.
Evenctual pressure increases on "P" don't have any influence on the reduced pressure.
2 versions with internal drain are available:
LC1M-VRPM-...-IA reduced pressure in A with drain in B.
LC1M-VRPM-...-IP reduced pressure in P with drain in T.
The valves can be fitted with 2 different models of cartridges with direct operation or pilot operation with different regulation ranges:
type VRPR-10A direct operated

CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	6	3	_V_	_W_	_X_	0	0	_Z_

X	**REGOLAZIONE** *ADJUSTMENT*
– –	**VEDI PAGINA 2.180.02** *SEE PAGE 2.180.02*

V	**MODELLO** *MODEL*
01	LC1M-VRPM-DIR
02	LC1M-VRPM-PIL

W	**CIRQUITO** *CIRCUIT*
IA	LC1M-VRPM-...-IA
IP	LC1M-VRPM-...-IP

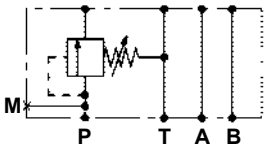
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

LC1M VSPY

Valvole modulari di sequenza

Modular sequence valves





CARATTERISTICHE TECNICHE
Grandezza: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

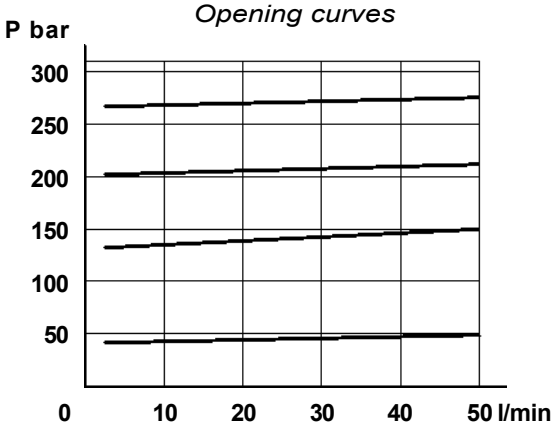
Portata massima: 50 l/min
Pressione massima in entrata: 310 bar
Pressione minima controllata: 35 bar
Valvole di sequenza pilotate agenti su P

TECHNICAL CHARACTERISTICS
Size: NG6 ISO 4401 - 03 CETOP RP121 H-03 (CETOP 3)

Max flow: 50 l/min
Inlet max pressure: 310 bar
Min pressure setting: 35 bar
Pilot operated sequence valves acting on P

X CARATTERISTICHE TECNICHE • *TECHNICAL FEATURES*

Curve di apertura
Opening curves

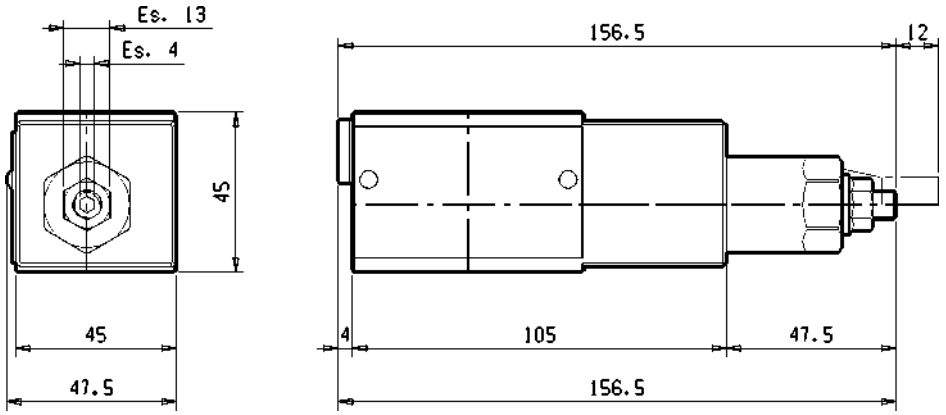


Tipo *Type*	X Regolazione a vite *Screw adjustment*	Trafilamento interno *Internal leakage* cm³/min	Portata Max. *Max. flow* l/min	Pressione Max. *Max. pressure* bar	Campo di taratura *Regolation range* bar	Cavità *Cavity* n°
02 (PIL)	**SN**	200±50	50	310	35÷140	CA-10A-3N
	SB				70÷280	CA-10A-3N

DIMENSIONI DI INGOMBRO • *OVER-ALL DIMENSIONS*

S = **Valvola con taratura a chiave**
Screw adjustment

K = **Valvola con taratura a volantino**
Knob adjustment



Pesi *Weights*	
LC1M-VSPY	1,4 kg

CARATTERISTICHE DI FUNZIONAMENTO • *SPECIFICATIONS*

Le valvole LC1M-VSPY, sono valvole di sequenza pilotate agenti sulla linea P con drenaggio in T.
Sono disponibili con due campi di taratura.

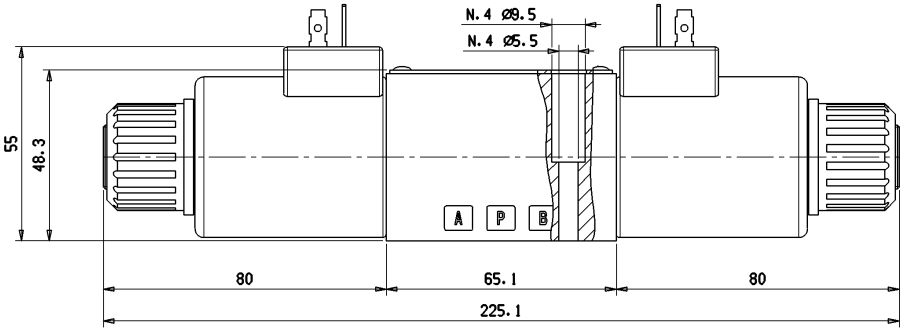
LC1M-VSPY are pilot sequence valves operating on P line with chain in T.
They are available with 2 pressure ranges.

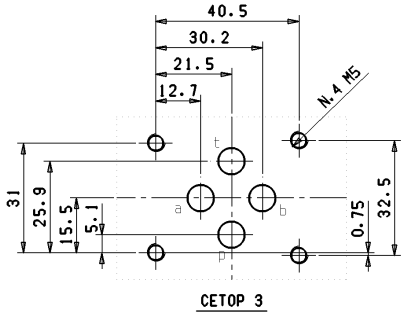
CODICE DI ORDINAZIONE • *ORDERING CODE*

L	6	1	3	1	0	2	D	I	X	0	0	Z
									_			_

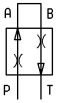
X	**REGOLAZIONE** *ADJUSTMENT*
_ _	**VEDI SOPRA** *SEE ABOVE*

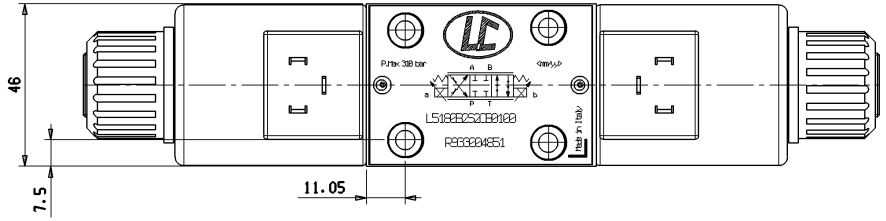
Z	**VERSIONE** *VERSION*
00	**STANDARD** *STANDARD*
0V	**GUARNIZIONI IN VITON** *SEALS IN VITON*

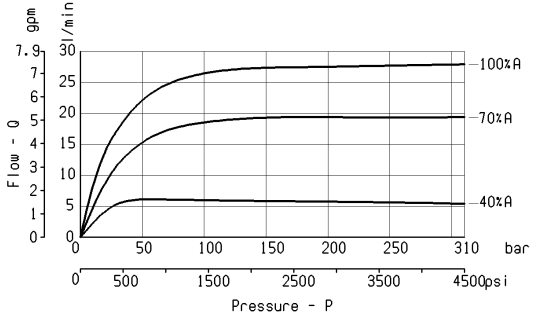


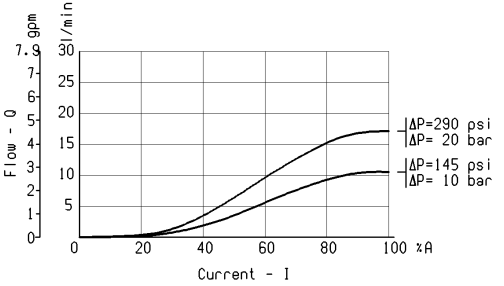


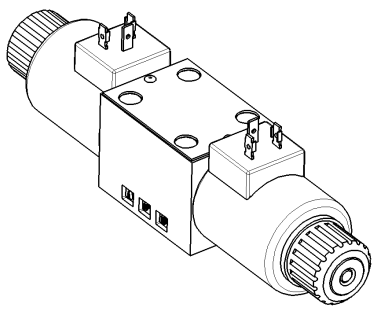
CETOP 3











DATI TECNICI	
Portata controllata con ΔP 10 bar	0-10 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 12V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-B2S2-12DC-SC-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004851	873310603

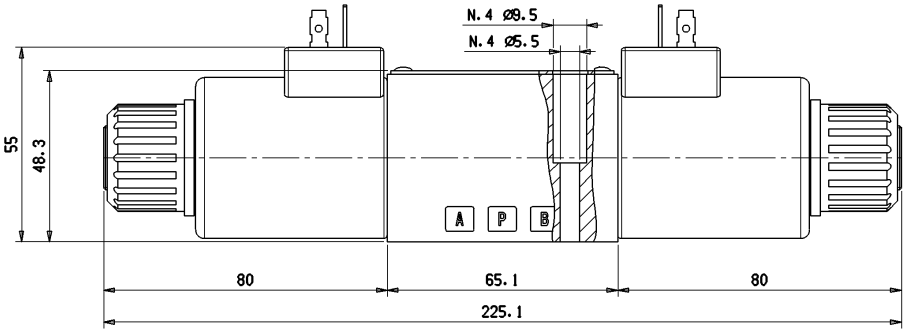
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L518B2S2DB0100	00

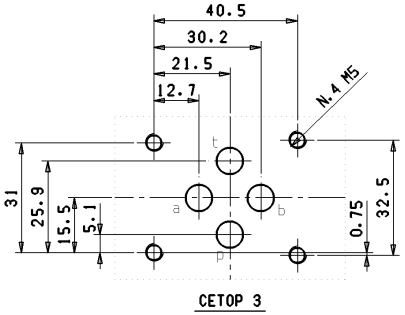
Disegno di proprieta' Bosch Rexroth Oil Control S.p.A., tutelato a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata.

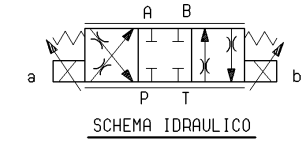
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamico LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

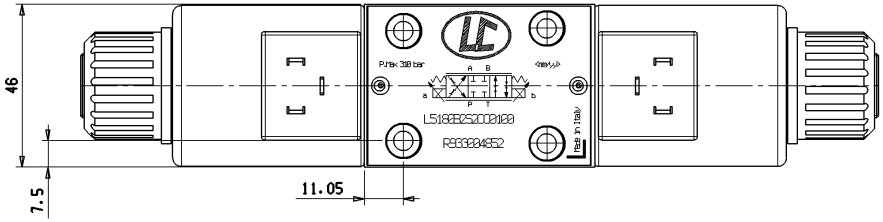
Nr. \DISEGNI \Complessivi \L518DB2S2DB0100_00_I.e2

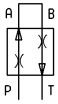
Sono valide solo correzioni a CAD

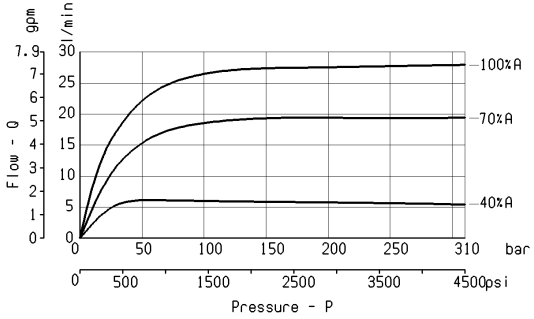


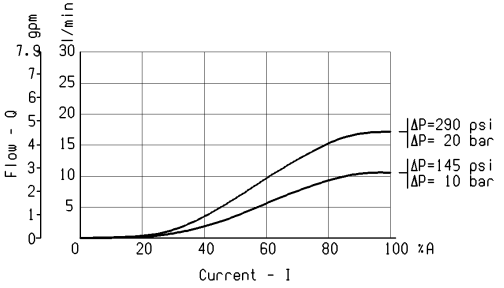


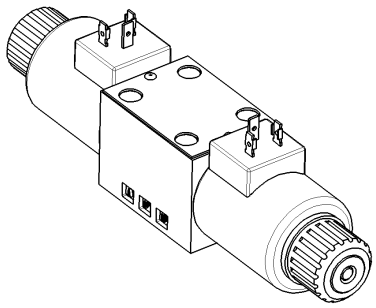












DATI TECNICI	
Portata controllata con ΔP 10 bar	0-10 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 24V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-B2S2-24DC-SC-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

Bisogno di proprietà' Bosch Rexroth Oil Control S.p.A., tutelata a termini di legge, e vietata la riproduzione e la diffusione non autorizzata

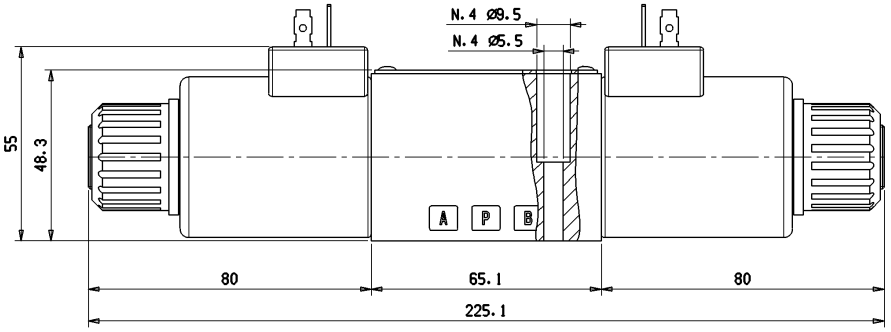
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamica LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

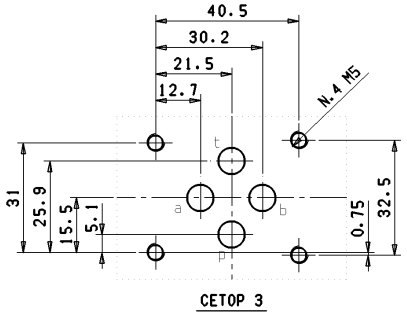
FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004852	873310603

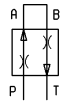
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5180B2S2OC0100	_00

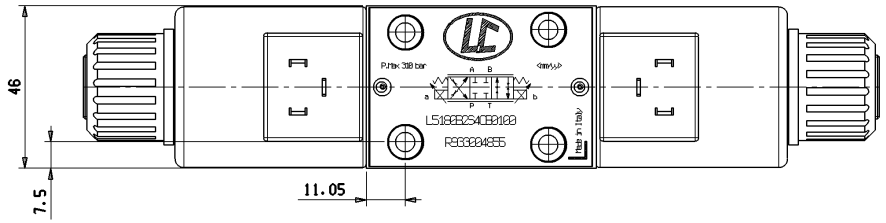
Sono valide solo correzioni a CAD

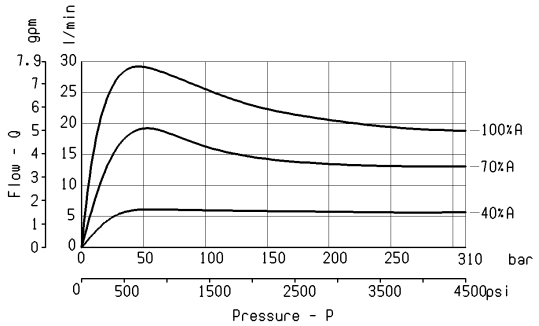


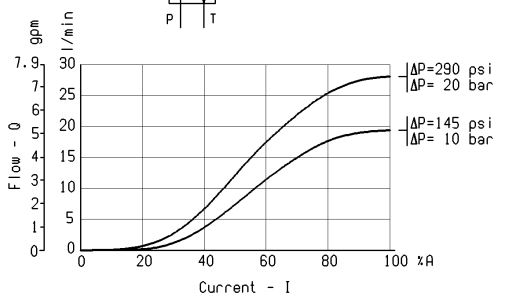


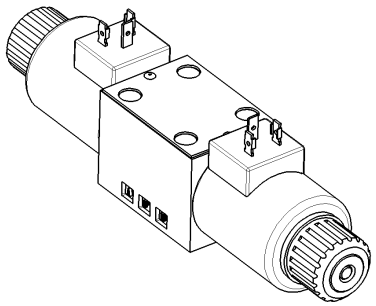
CETOP 3











DATI TECNICI	
Portata controllata con ΔP 10 bar	0-20 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 12V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-B2S4-12DC-SC-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004855	873310603

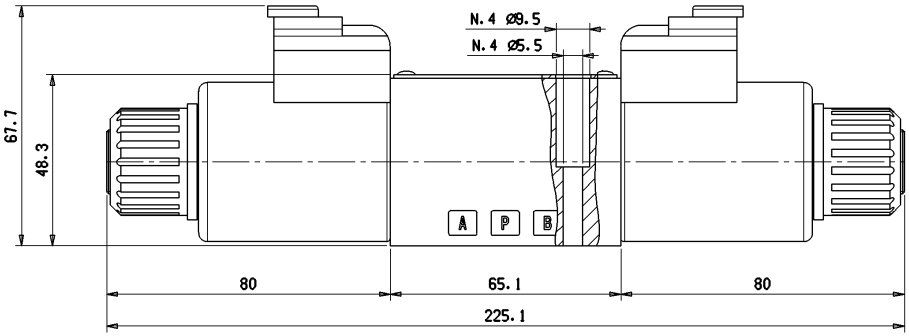
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L518B2S4DB100	00

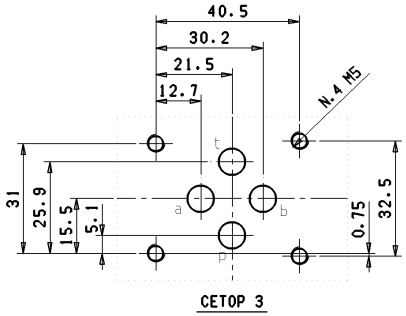
Disegno di proprieta' Bosch Rexroth Oil Control S.p.A., tutelato a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata.

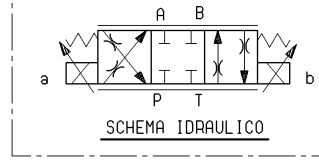
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamico LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

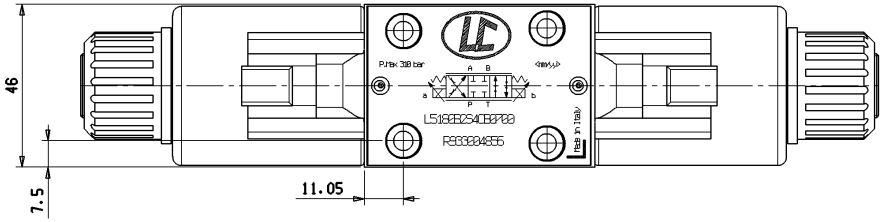
N: \DISEGNI \Complessivi \L518DB2S4DB0700_00_I.e2

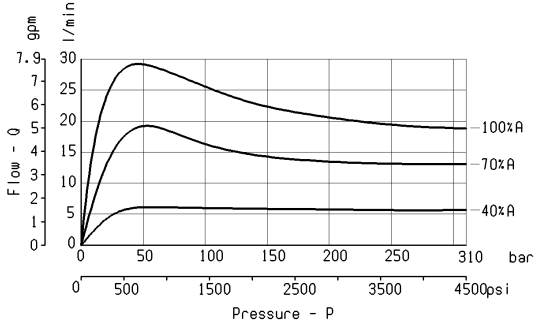
Sono valide solo correzioni a CAD

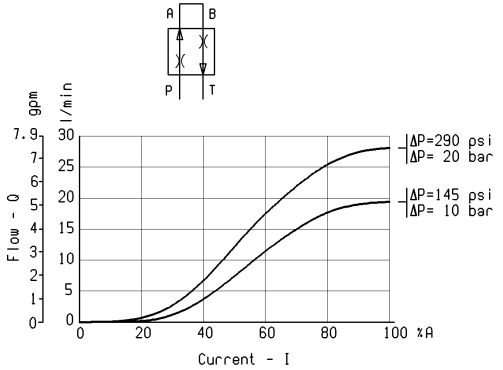


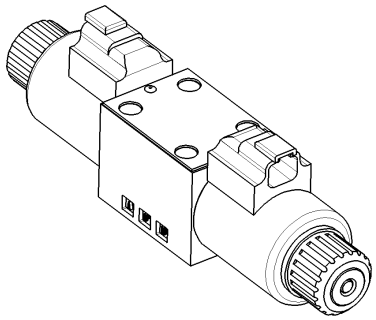












DATI TECNICI	
Portata controllata	0-20 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 12V	Corrente max 1.76 amp
Connessione	DEUTSCH

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-B2S4-12DC-DTM-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

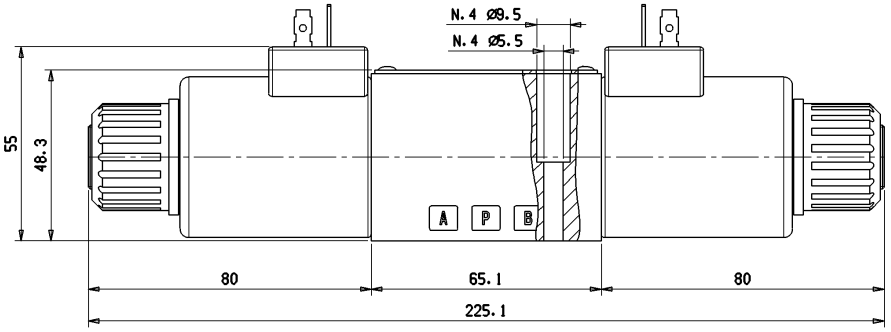
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamica LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

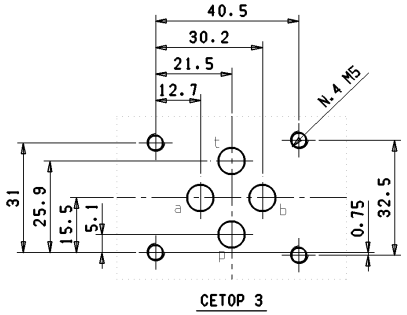
Bisogno di proprieta' Bosch Rexroth Oil Control S.p.A., tutelata a termini di legge, e vietata la riproduzione e la diffusione non autorizzata

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

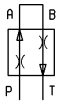
DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004856	873310603

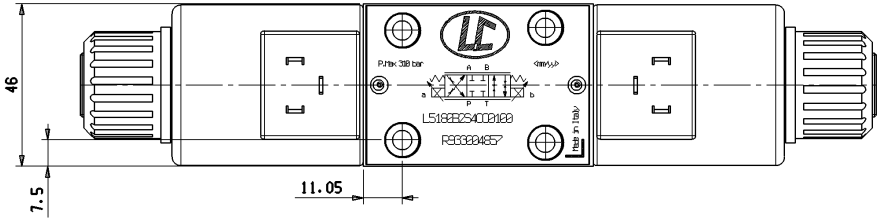
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		LS1B0B2S4CB0700	_00

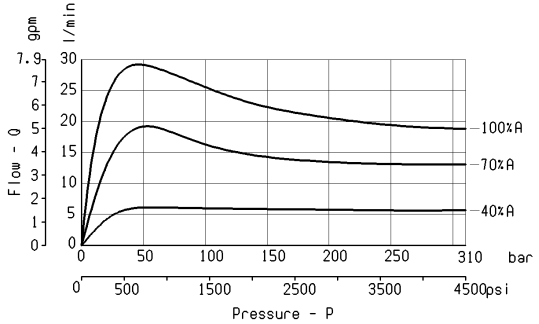


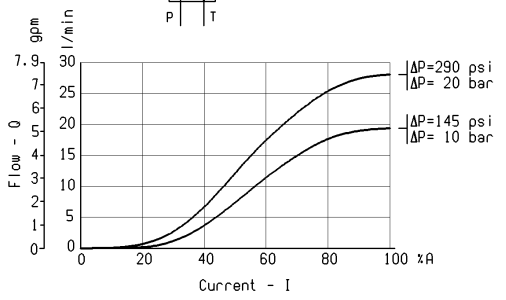


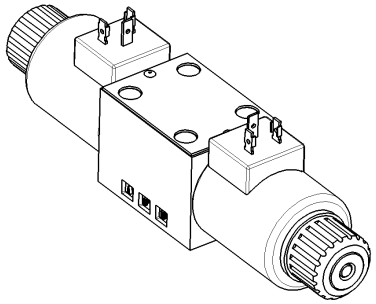
CETOP 3











DATI TECNICI	
Portata controllata con ΔP 10 bar	0-20 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 24V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-B2S4-24DC-SC-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004857	873310603

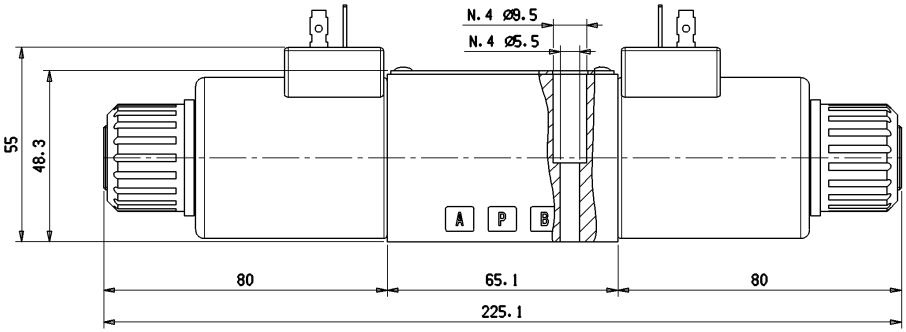
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		LS18B2S4CC0100	00

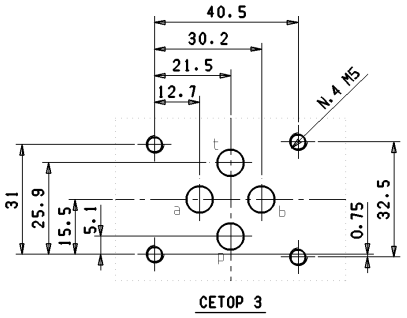
Disegno di proprieta' Bosch Rexroth Oil Control S.p.A., tutelato a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata.

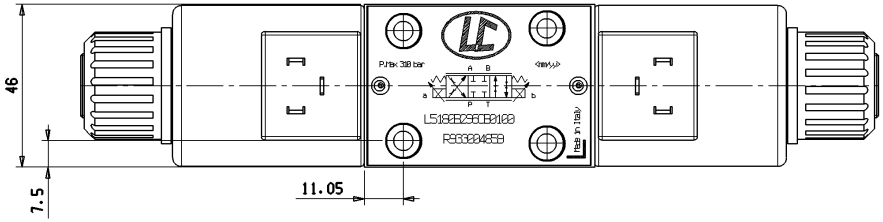
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamico LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

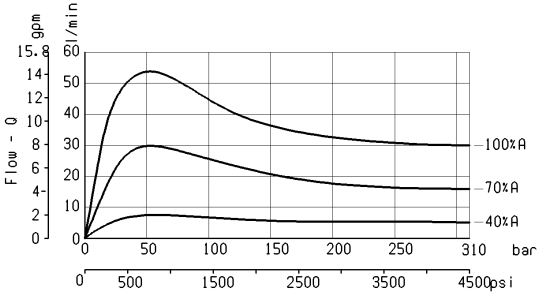
N: \DISEGNI \Complessivi \LS18B2S4CC0100_00_I.e2

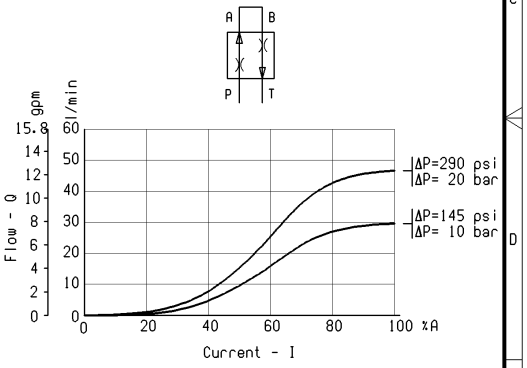
Sono valide solo correzioni a CAD

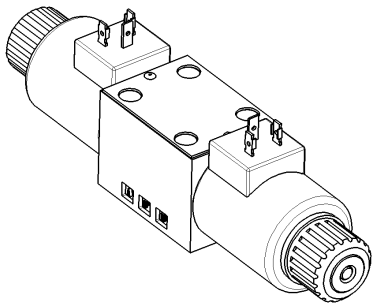


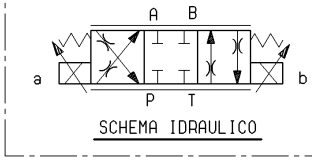












DATI TECNICI	
Portata controllata con ΔP 10 bar	0-30 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 12V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-B2S6-12DC-SC-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

Bisogno di proprietà' Bosch Rexroth Oil Control S.p.A., tutelata a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata

Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamica LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Spadacini Marco	R933004859	873310603

CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		LS180B2S60B0100	00

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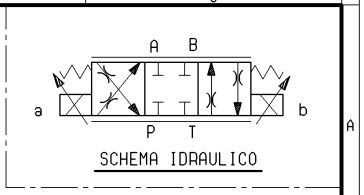
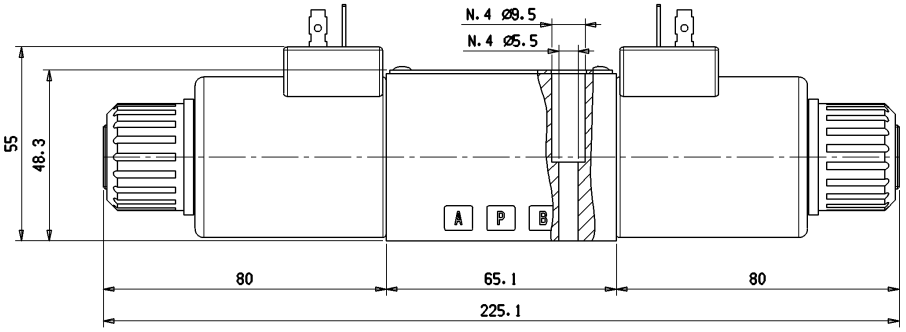
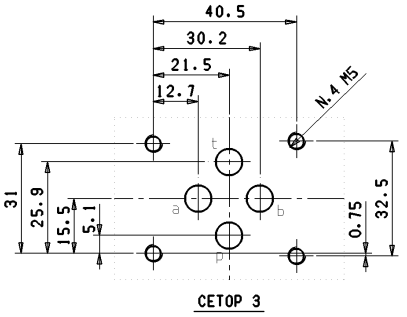
Sono valide solo correzioni a CAD

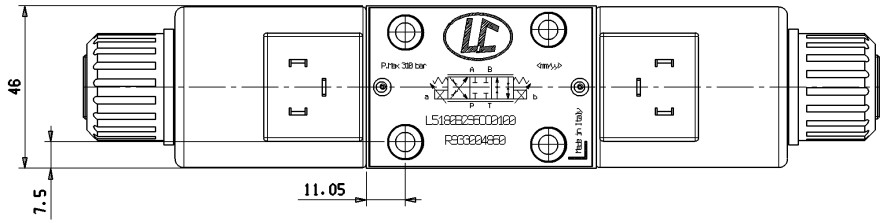


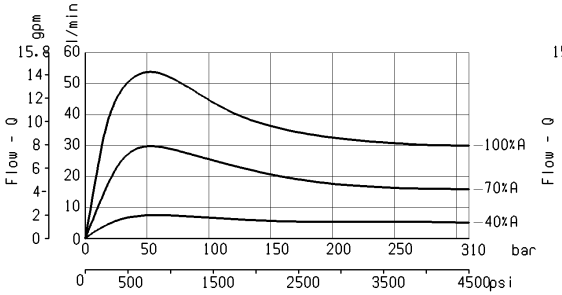
SCHEMA IDRAULICO

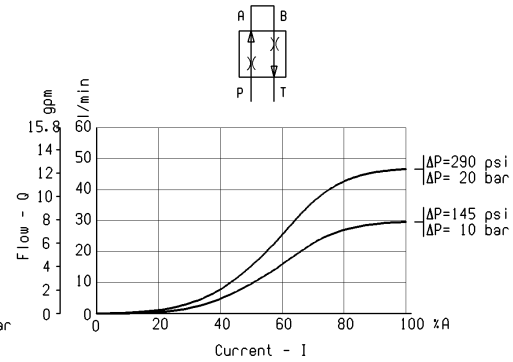


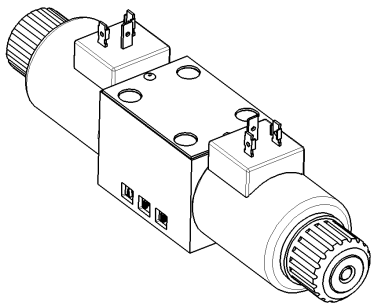


CETOP 3









DATI TECNICI	
Portata controllata con ΔP 10 bar	0-30 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 24V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE: E.LC1-P-B2S6-24DC-SC-N

MATERIAL DESCRIPTION:

Rexroth Bosch Group

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Spadacini Marco	R933004860	873310603

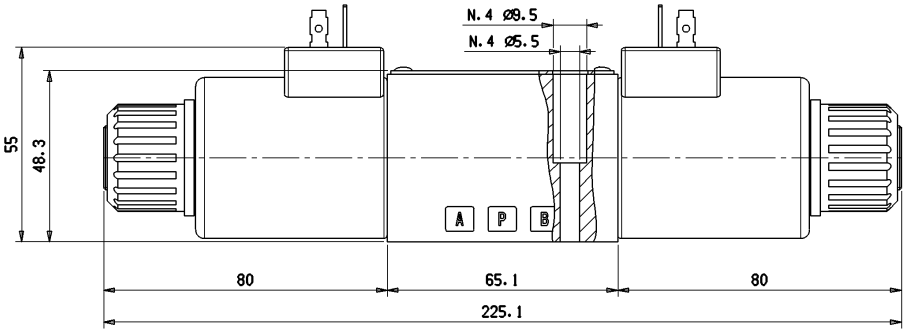
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5188B2S60C0100	00

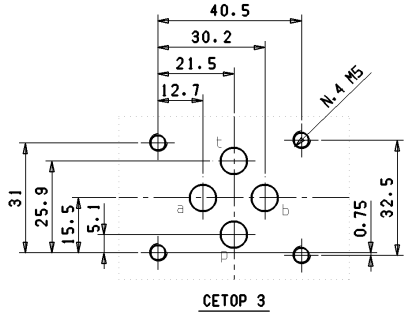
Disegno di proprieta' Bosch Rexroth Oil Control S.p.A., tutelato a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata.

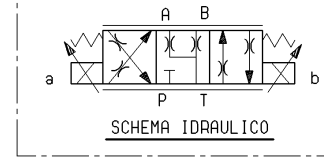
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamico LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

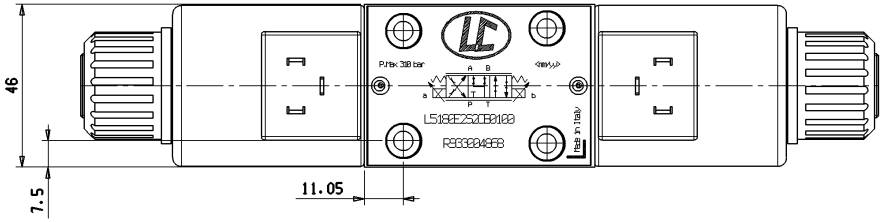
Nr. \DISEGNI \Complessivi \L5188B2S60C0100_00_I.e2

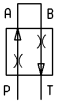
Sono valide solo correzioni a CAD

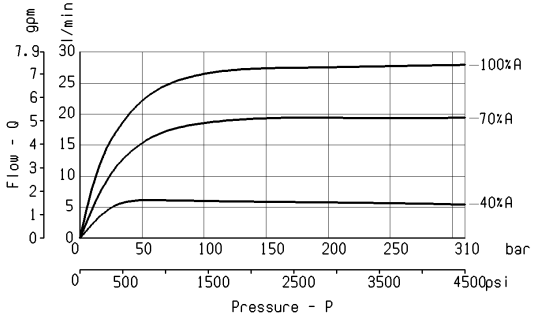


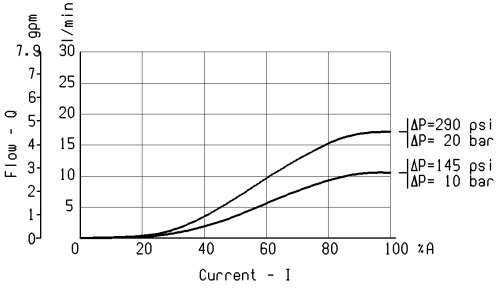


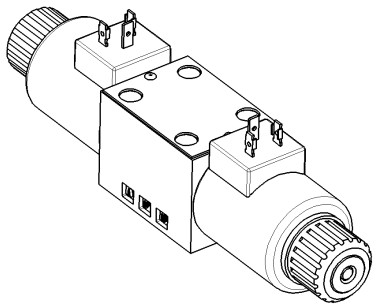












DATI TECNICI	
Portata controllata con ΔP 10 bar	0-10 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 12V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-E2S2-12DC-SC-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

Bisogno di proprietà' Bosch Rexroth Oil Control S.p.A., tutelata a termini di legge, e vietata la riproduzione e la diffusione non autorizzata

Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamica LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004868	873310603

CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5180E2S2CB0100	00

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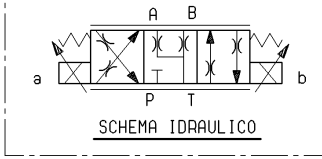
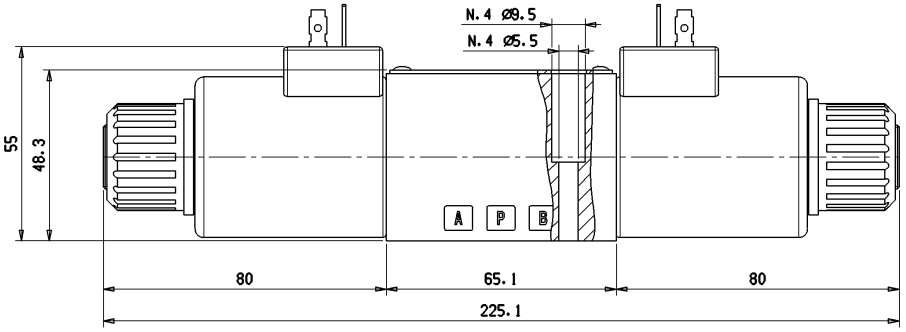
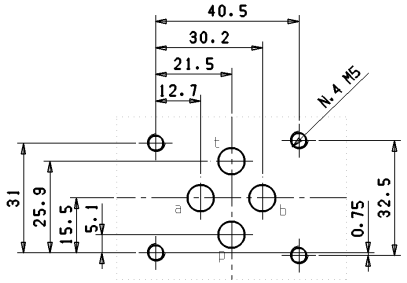
Sono valide solo correzioni a CAD

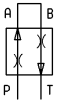


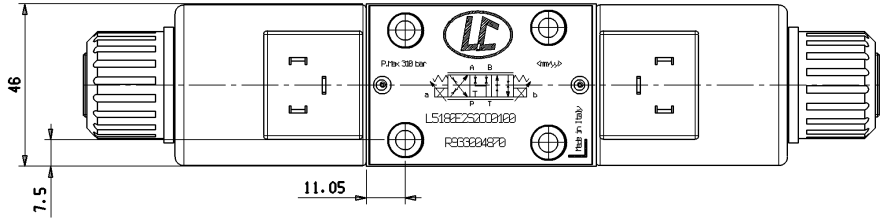
SCHEMA IDRAULICO

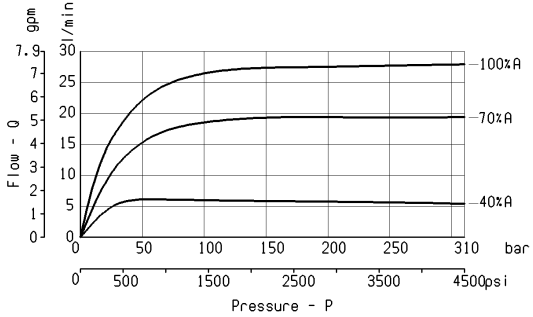


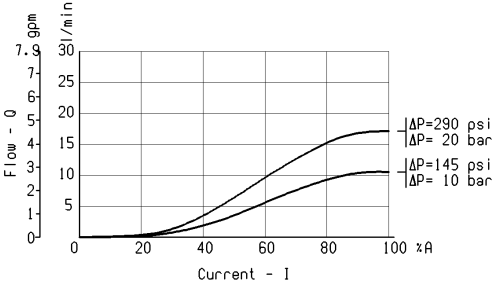


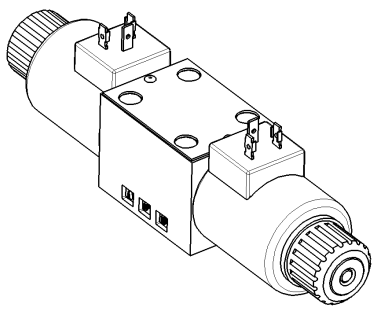
CETOP 3











DATI TECNICI	
Portata controllata con ΔP 10 bar	0-10 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 24V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-E2S2-24DC-SC-N

MATERIAL DESCRIPTION:

Rexroth
Bosch Group

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

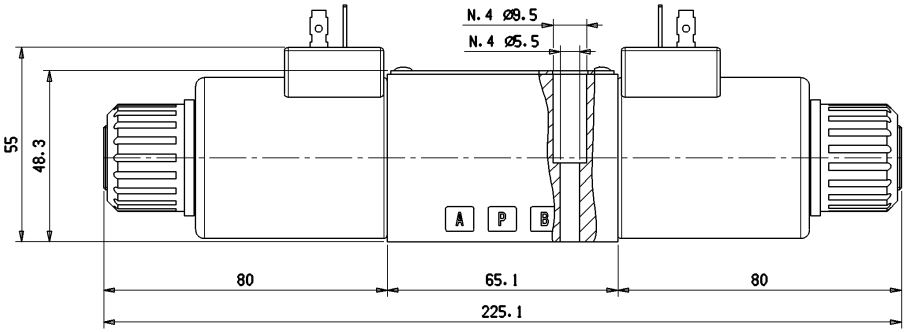
DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004870	873310603

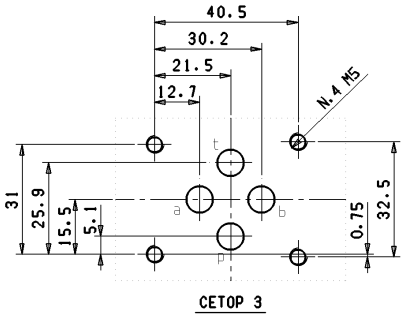
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5188E2S2OC0100	00

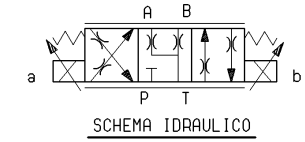
Disegno di proprieta' Bosch Rexroth Oil Control S.p.A., tutelato a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata.

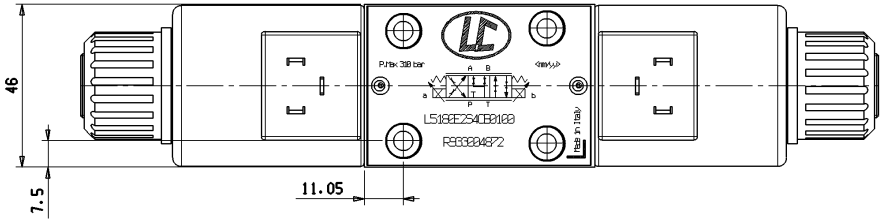
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamico LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

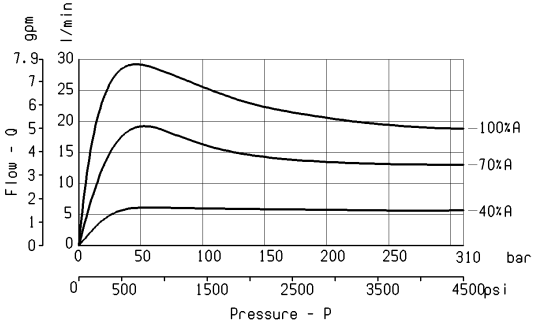
Sono valide solo correzioni a CAD

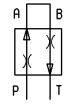


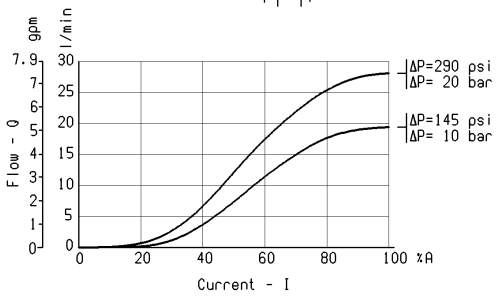


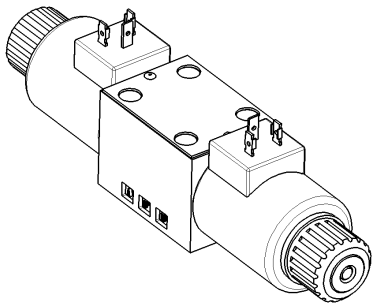












DATI TECNICI	
Portata controllata con ΔP 10 bar	0-20 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 12V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE: E.LC1-P-E2S4-12DC-SC-N

MATERIAL DESCRIPTION:

Rexroth Bosch Group

Bisogno di proprietà' Bosch Rexroth Oil Control S.p.A., tutelata a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata

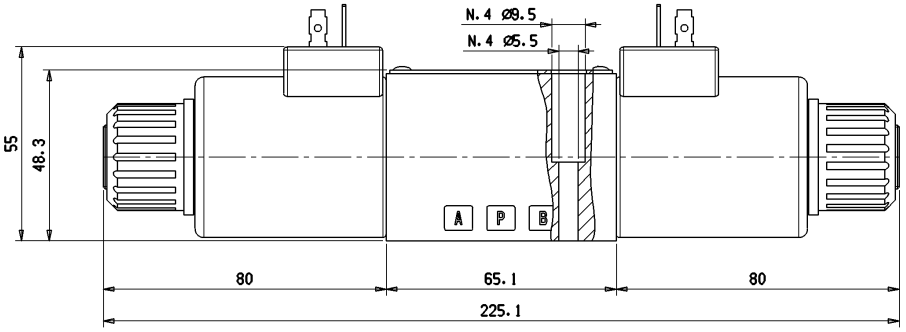
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamica LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

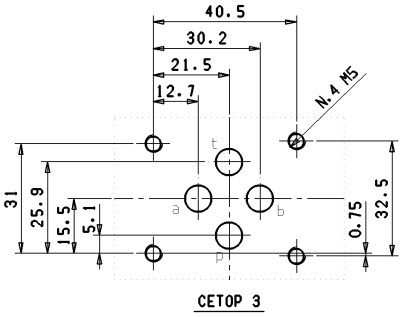
FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

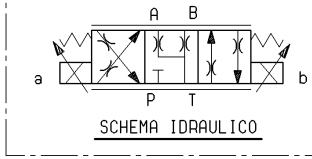
DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004872	873310603

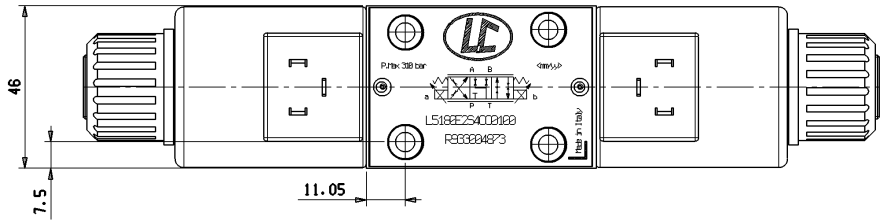
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5180E2S4CB0100	00

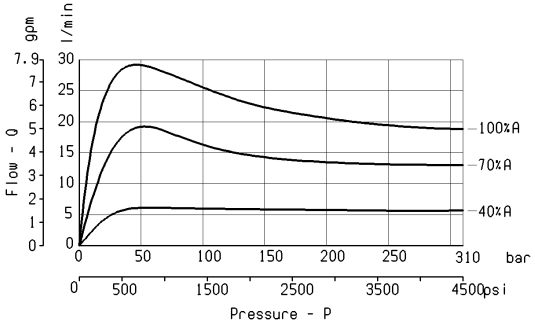
N: \DISEGNI\Complessivi\L5180E2S4CB0100_00_1.e2
Sono valide solo correzioni a CAD

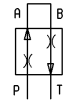


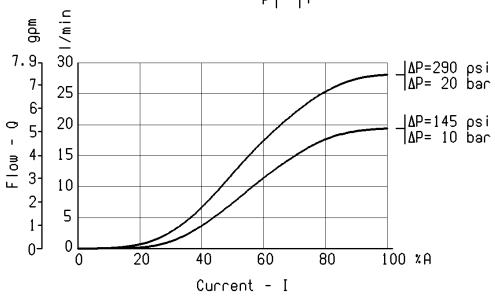


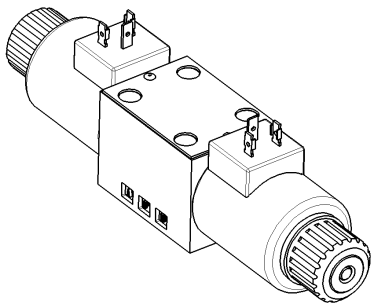












DATI TECNICI	
Portata controllata con ΔP 10 bar	0-20 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 24V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE: E.LC1-P-E2S4-24DC-SC-N

MATERIAL DESCRIPTION:

Rexroth Bosch Group

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

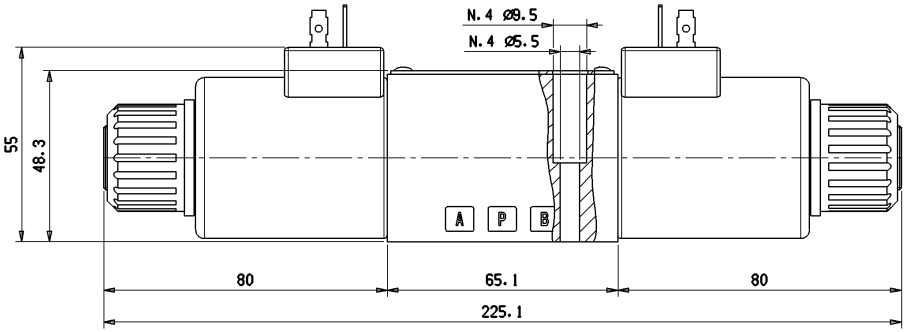
DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Marco Spadacini	R933004873	873310603

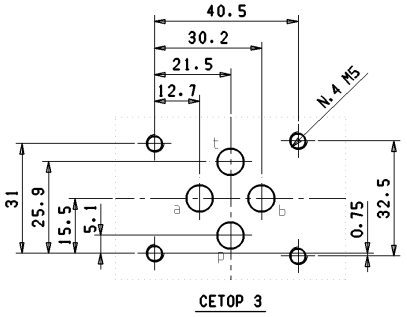
CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5188E2S4OC0100	00

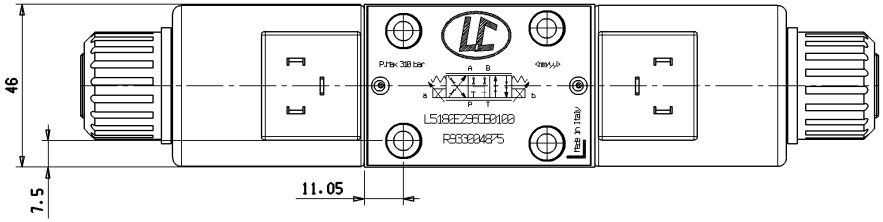
Disegno di proprieta' Bosch Rexroth Oil Control S.p.A., tutelato a termini di legge, e' vietata la riproduzione e la diffusione non autorizzate.

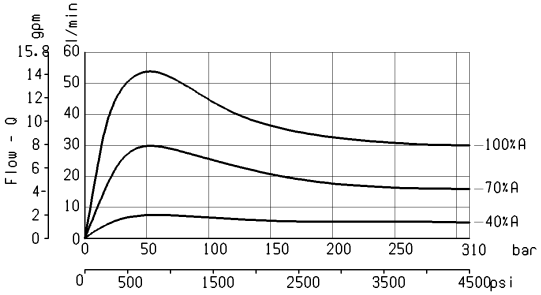
Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamica LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

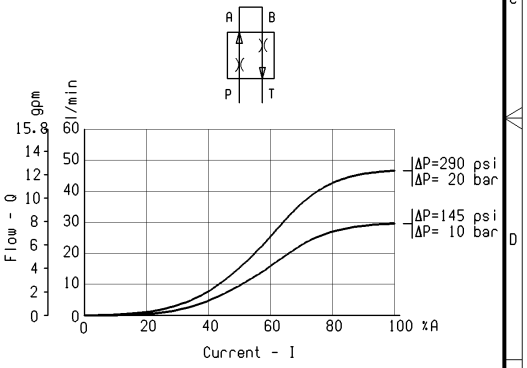
Sono valide solo correzioni a CAD

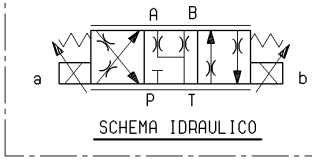




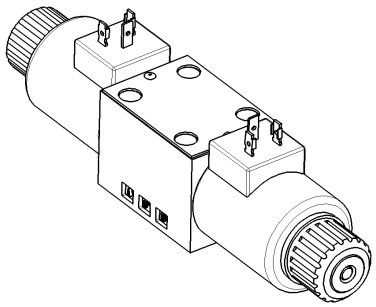








SCHEMA IDRAULICO



DATI TECNICI	
Portata controllata con ΔP 10 bar	0-30 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 12V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE: E.LC1-P-E2S6-12DC-SC-N

MATERIAL DESCRIPTION:

Rexroth Bosch Group

Bisogno di proprietà' Bosch Rexroth Oil Control S.p.A., tutelata a termini di legge, e' vietata la riproduzione e la diffusione non autorizzata

Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamica LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Spadacini Marco	R933004875	873310603

CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5180E2560B0100	00

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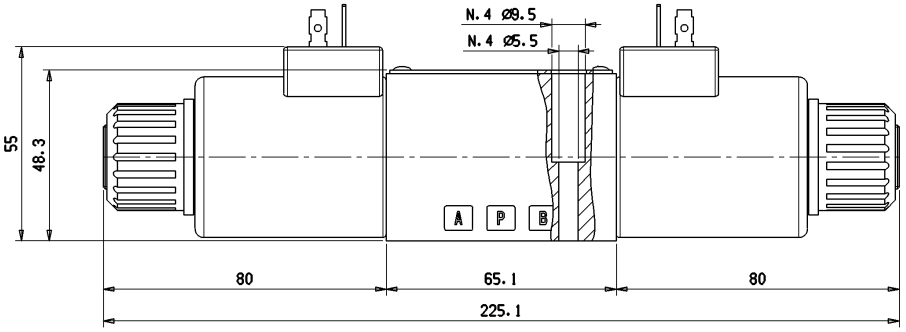
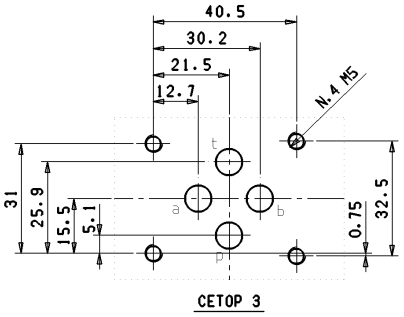
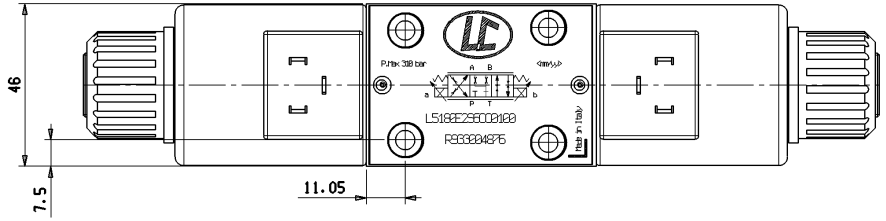
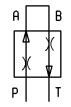
Sono valide solo correzioni a CAD

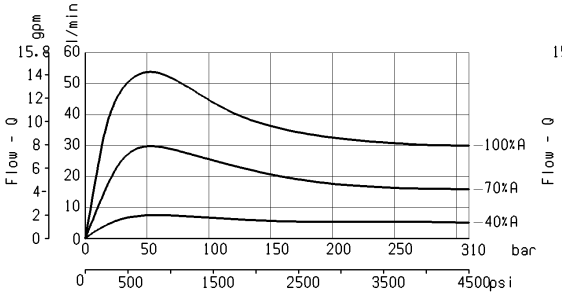


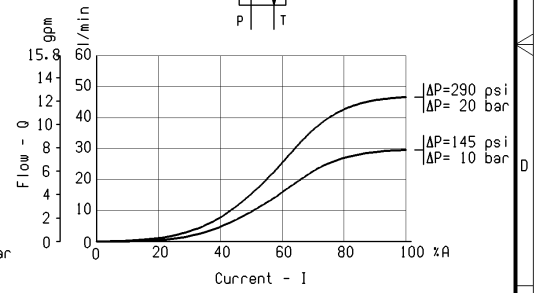


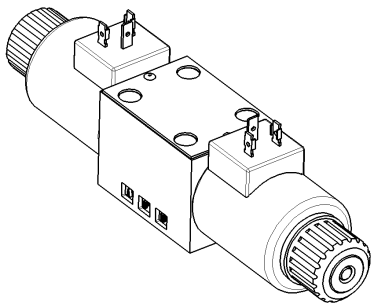
CETOP 3

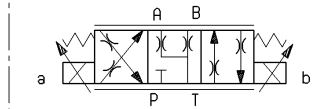












SCHEMA IDRAULICO

DATI TECNICI	
Portata controllata con ΔP 10 bar	0-30 l/min
Pressione massima P-A-B	310 bar
Pressione massima T	210 bar
Tensione 24V	Corrente max 1.76 amp
Connessione	EN 175301-803

REVISIONE	DATA	MODIFICA	NOME

DENOMINAZIONE
E.LC1-P-E2S6-24DC-SC-N

MATERIAL DESCRIPTION

Rexroth
Bosch Group

FORMATO	PESO KG.	DATA	SCALA
A2		18/11/2004	1:1

DISEGNATO	MATERIAL NUMBER	PRODUCT HIERARCHY
Spadacini Marco	R933004876	873310603

CONTROLLATO	PROGETTO	CODICE	REV.
Dallaglio Mauro		L5188E2560C0100	00

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Bosch Rexroth Oil Control S.p.A.
Divisione Oleodinamico LC
BROC/CDV-Vzz, Vezzano s/C.(RE)ITALY

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Sono valide solo correzioni a CAD



Ed. 04/06.1

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42030 Vezzano sul Crostolo (Reggio E.) - ITALIA
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E-mail: marketing@oleodinamica-lc.com