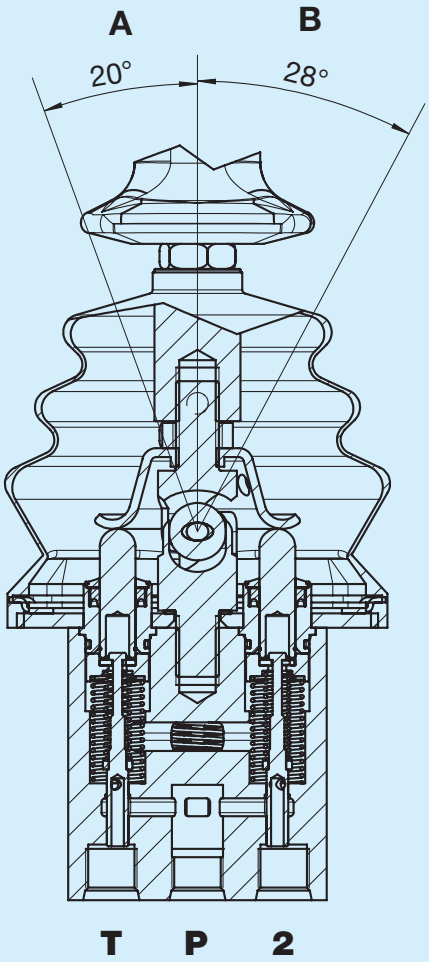
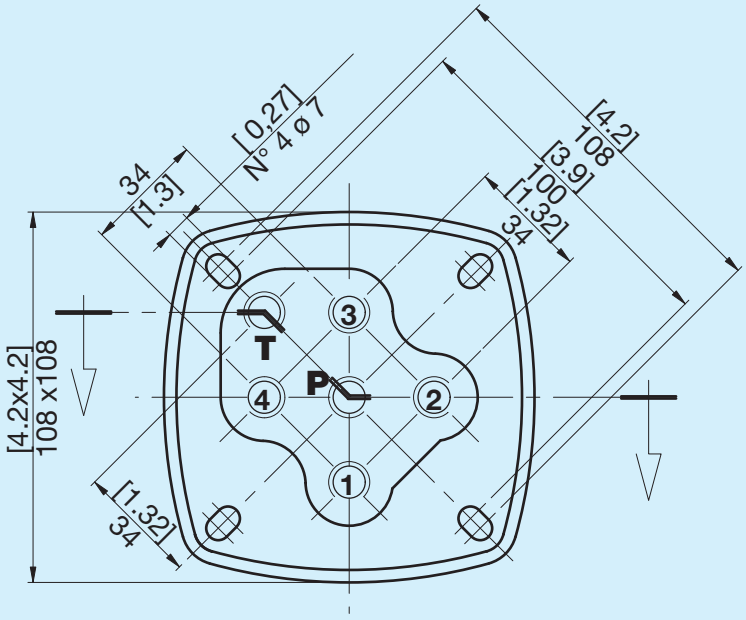
Servocomando a due assi azionamento a leva

Prima di iniziare l'utilizzo leggere attentamente il documento ISTRUZIONI GENERALI D'IMPIEGO PER SERVOCOMANDI IDRAULICI ED ELETTRONICI E UNITÀ DI ALIMENTAZIONE.

Dimensioni

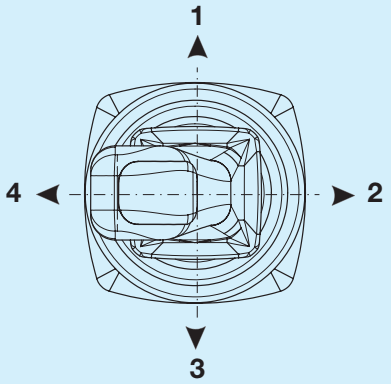




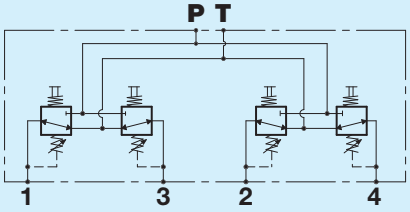
A	Angolo della leva con un solo attuatore azionato
B	Angolo della leva con due attuatori azionati simultaneamente

1, 2, 3, 4	Utilizzi
T	Serbatoio
P	Ingresso

Direzioni di azionamento



Schema idraulico



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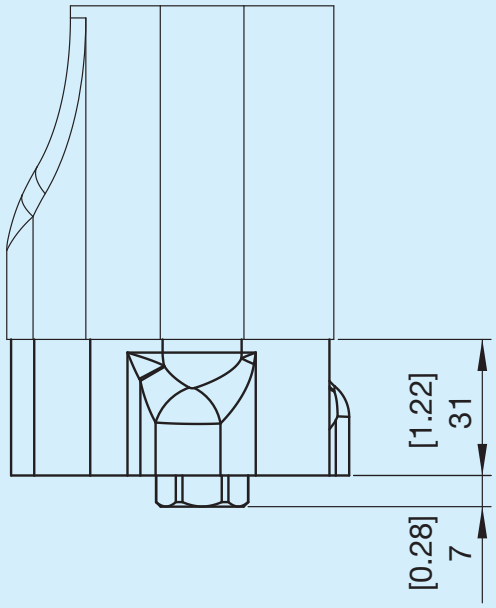
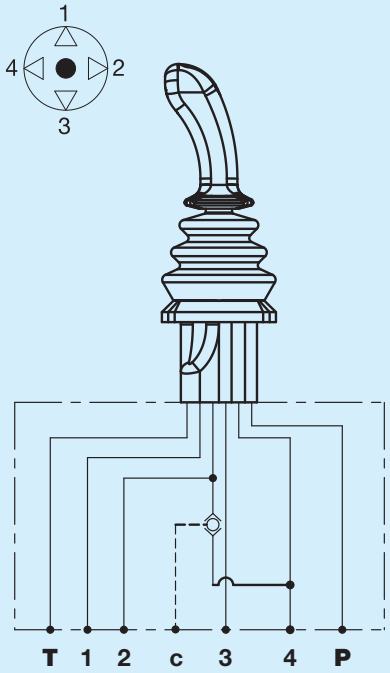
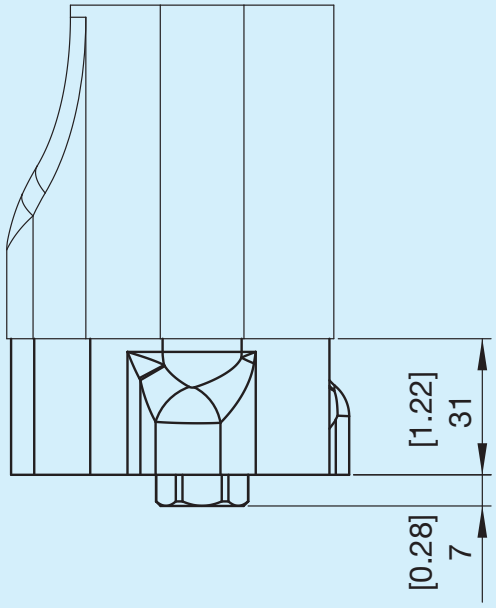
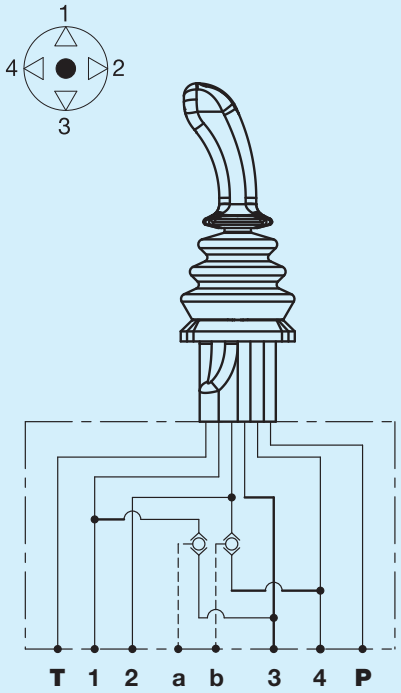
1 Un segnale di pressione dall'asse 2-4



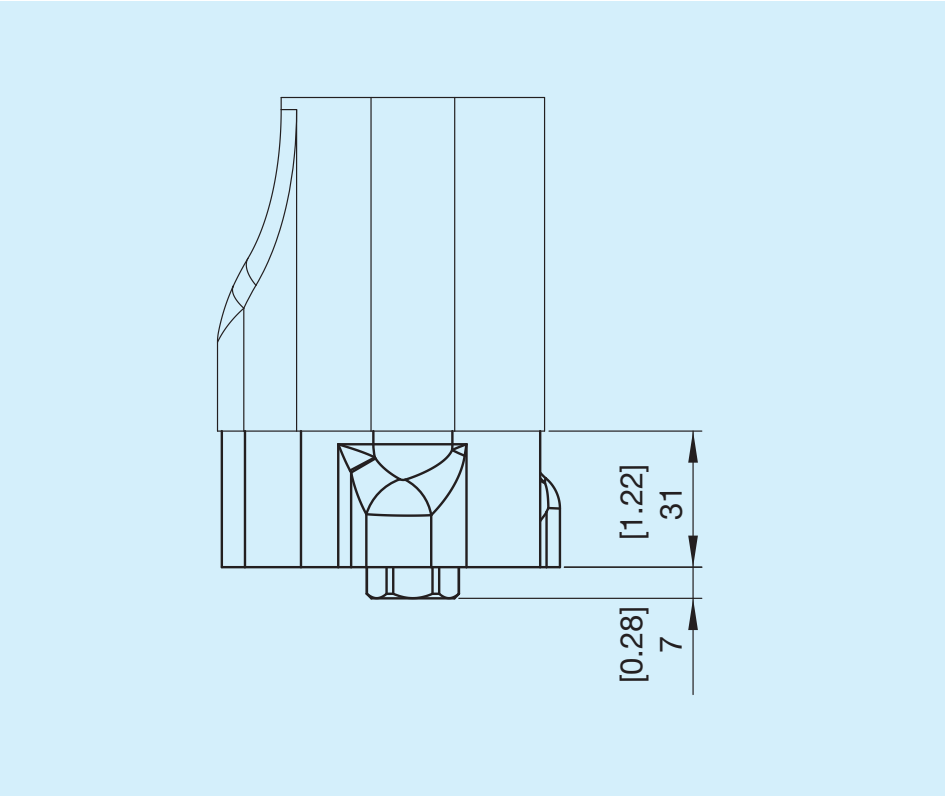


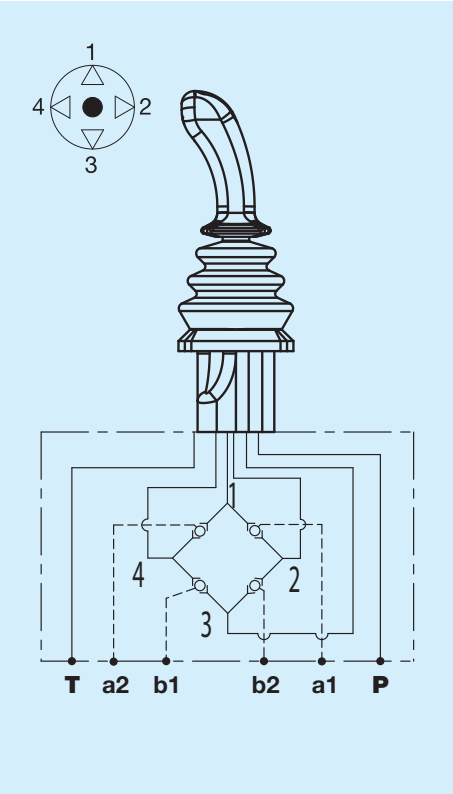
2 Due segnali di pressione dall'asse 1-3 e 2-4





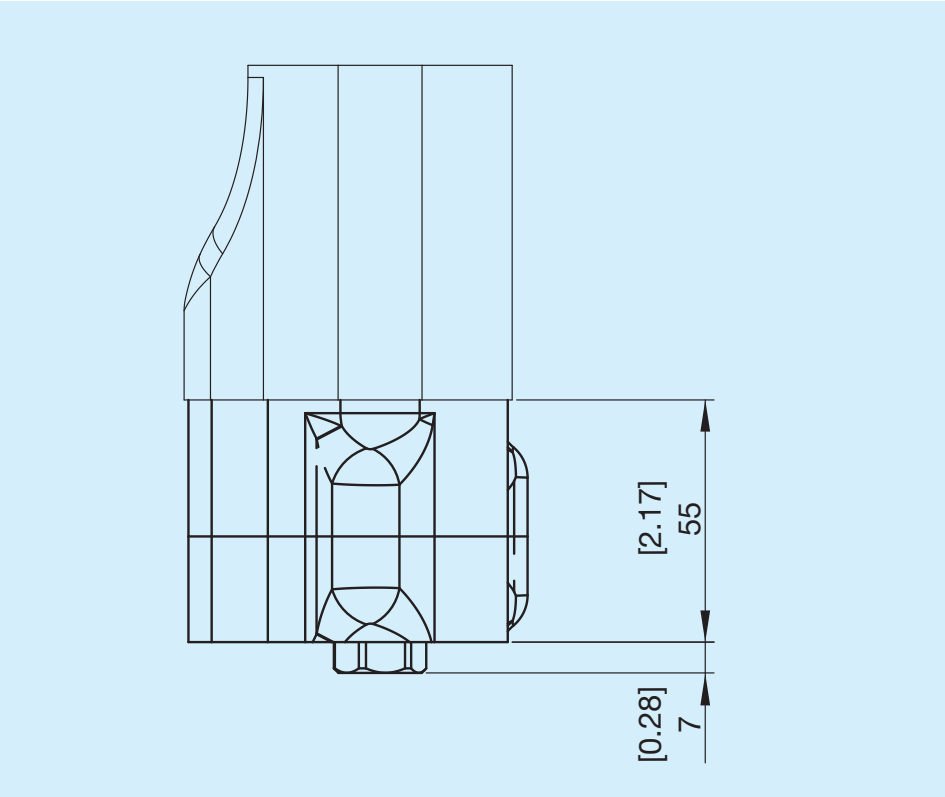
3 Controrotazione opposta

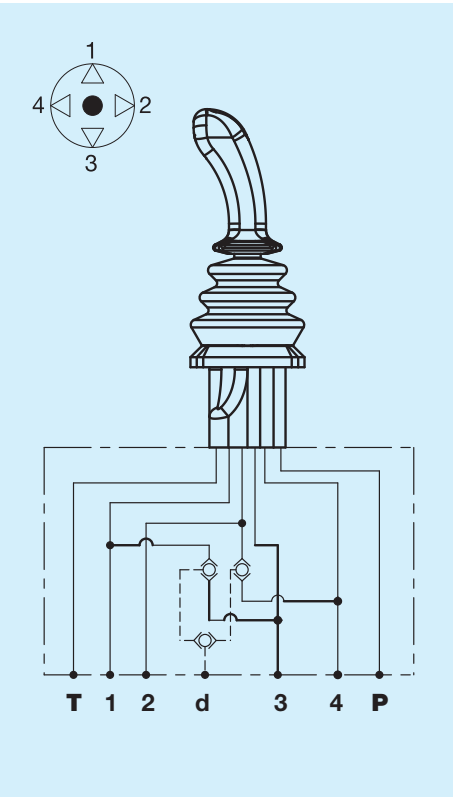




In condizioni di retromarcia la svolta a destra e sinistra è opposta all'inclinazione della leva.

4 Un segnale di pressione per ogni posizione





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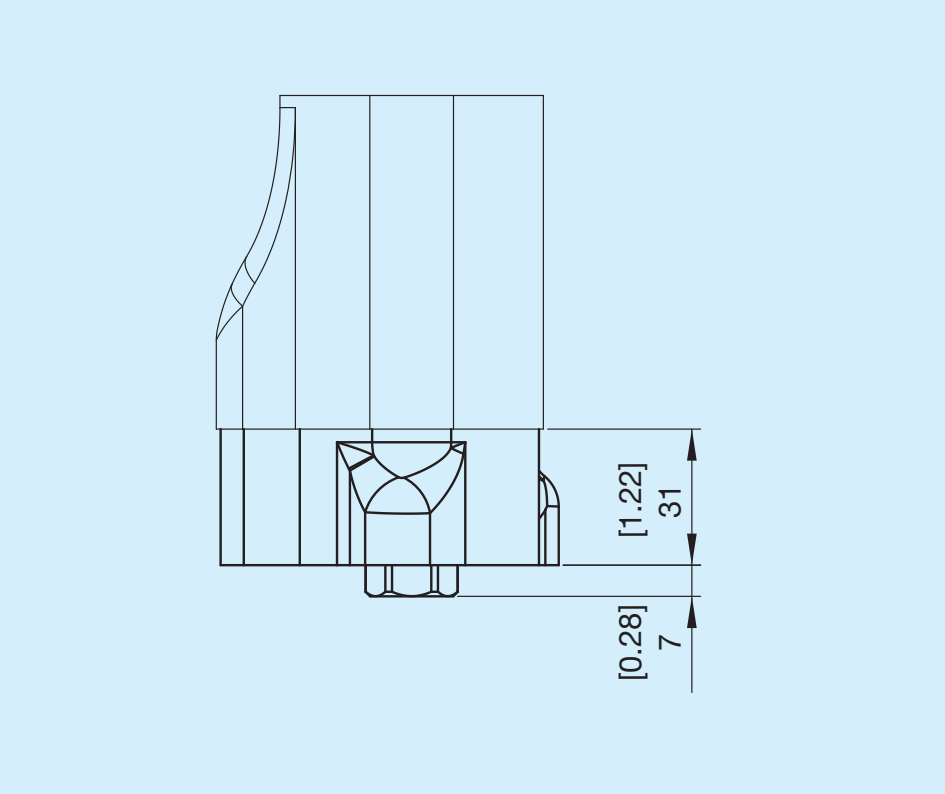
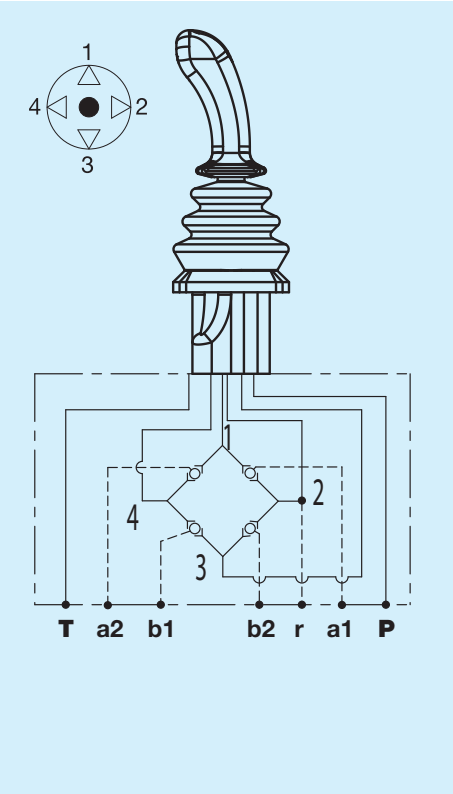
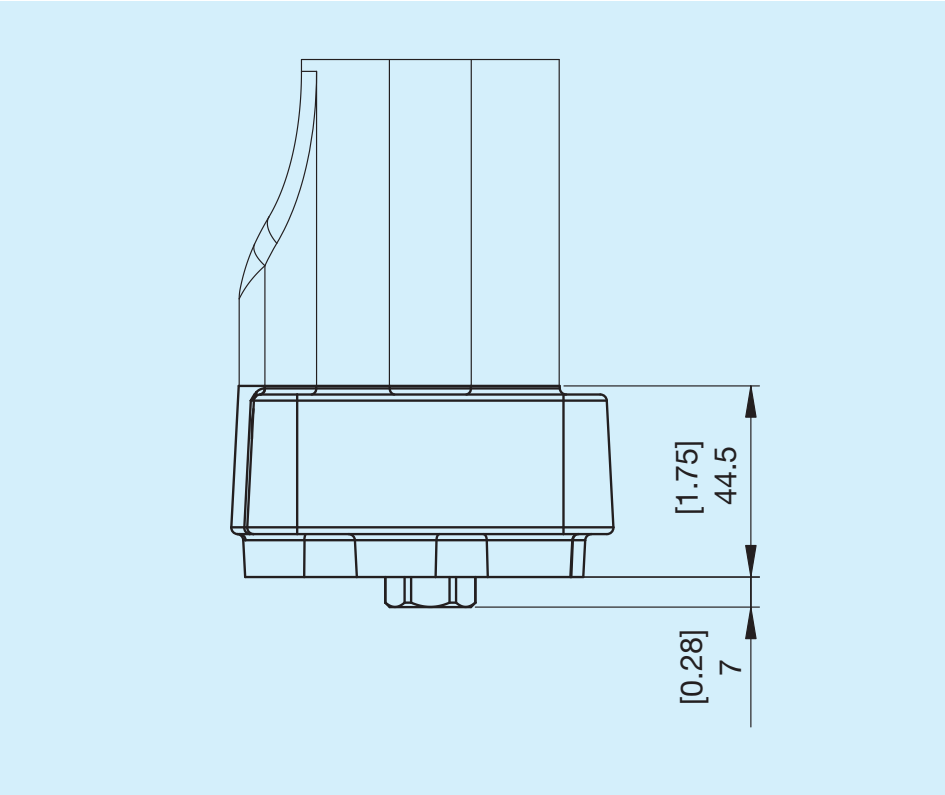
5 Controrotazione opposta con segnale di retromarcia

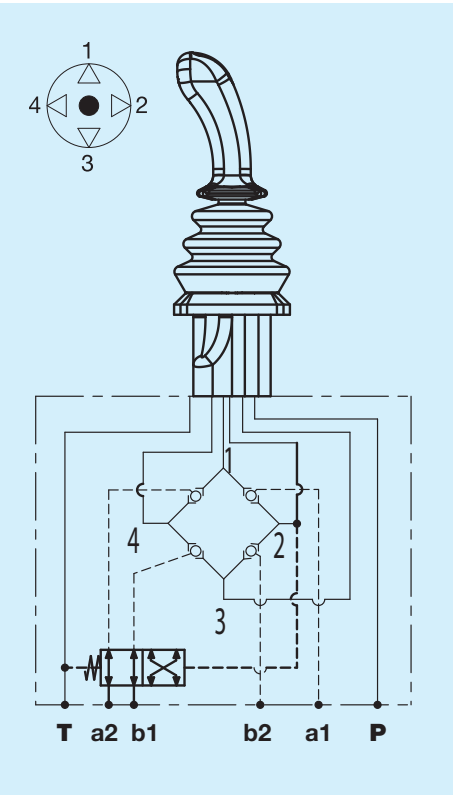




In condizioni di retromarcia la svolta a destra e sinistra è opposta all'inclinazione della leva.

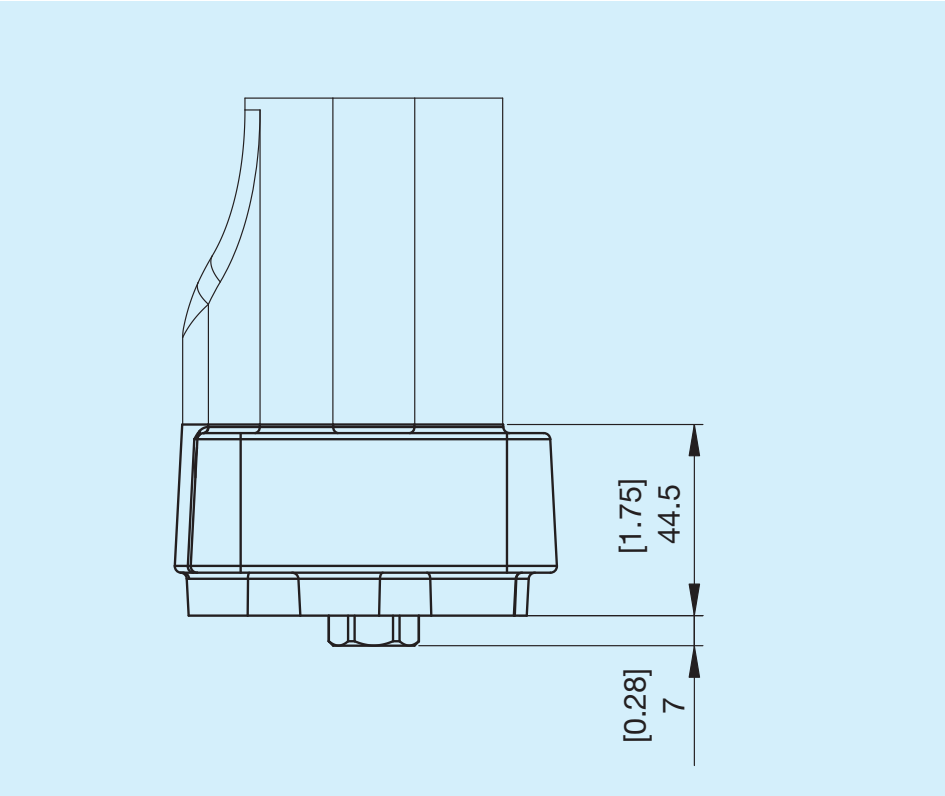
6 Controrotazione concorde

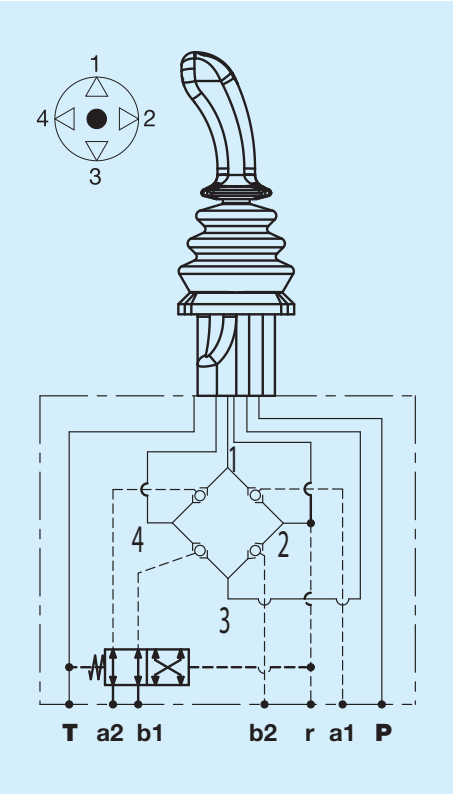




In condizioni di retromarcia la svolta a destra e sinistra è concorde all'inclinazione della leva.

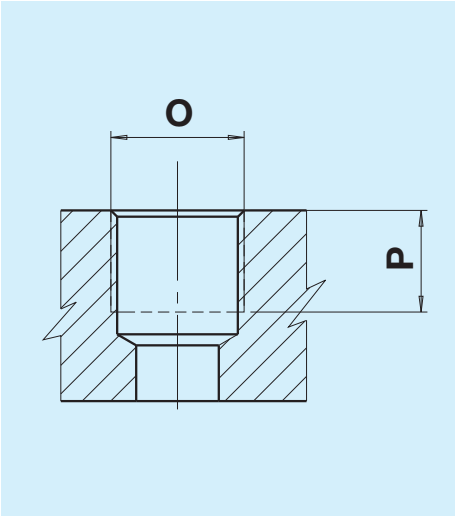
7 Controrotazione conocorde e segnale retromarcia





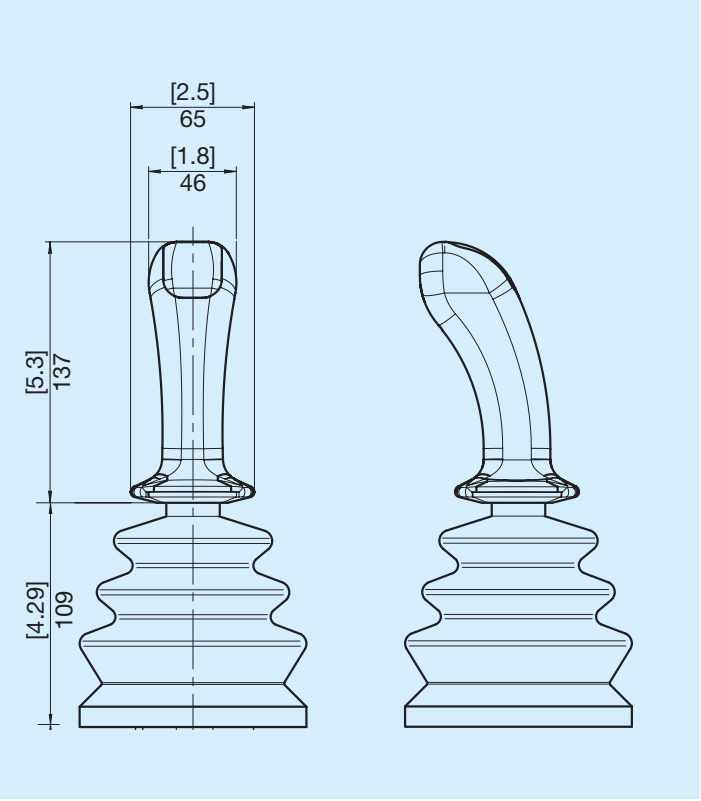
In condizioni di retromarcia la svolta a destra e sinistra è concorde all'inclinazione della leva.

Tipo G2- U3

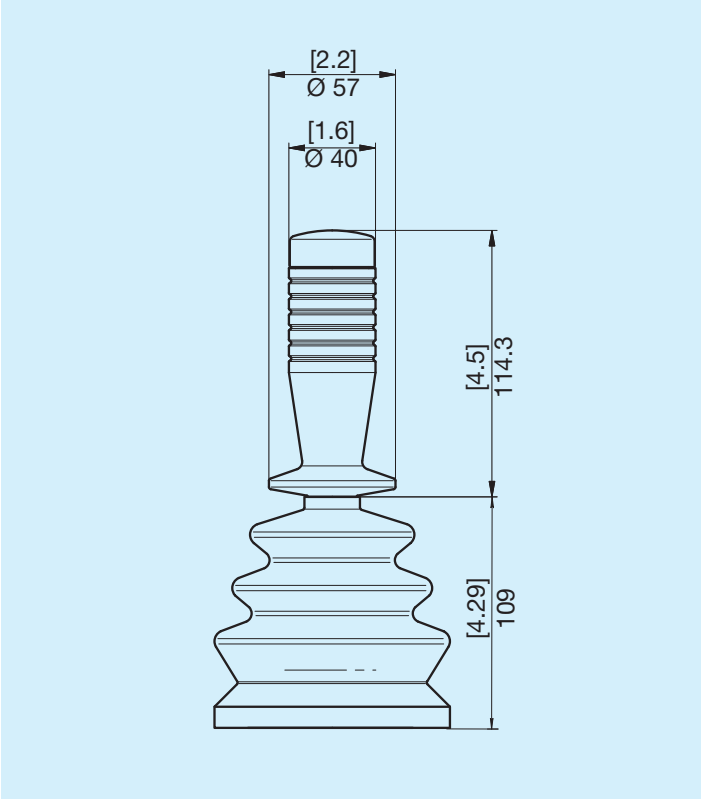


Tipo	O		P	
		Nm	**mm**	**in**
G2	1/4"	17	12	0,47
U3	9/16-18 UNF	25	13	0,47

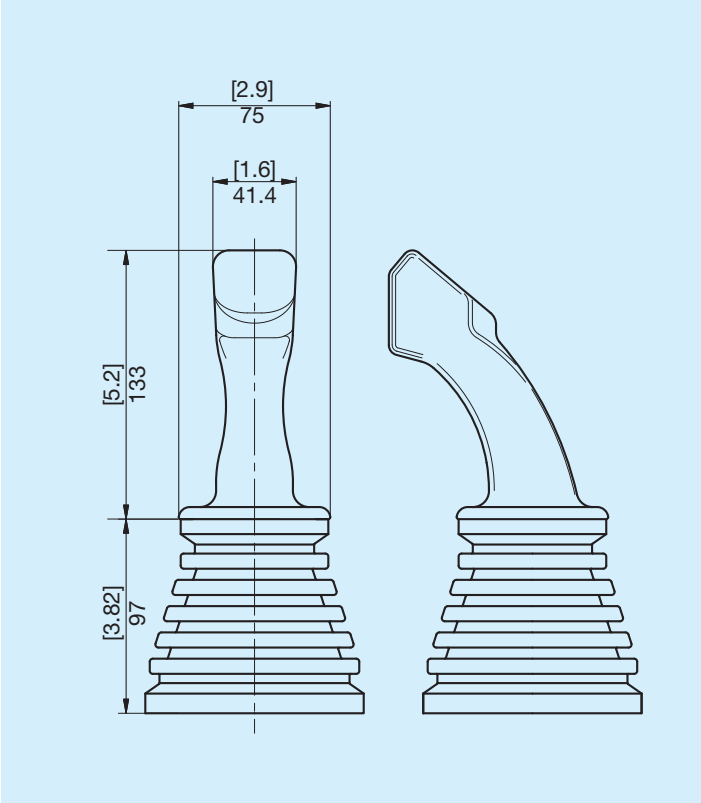
S Anatomica



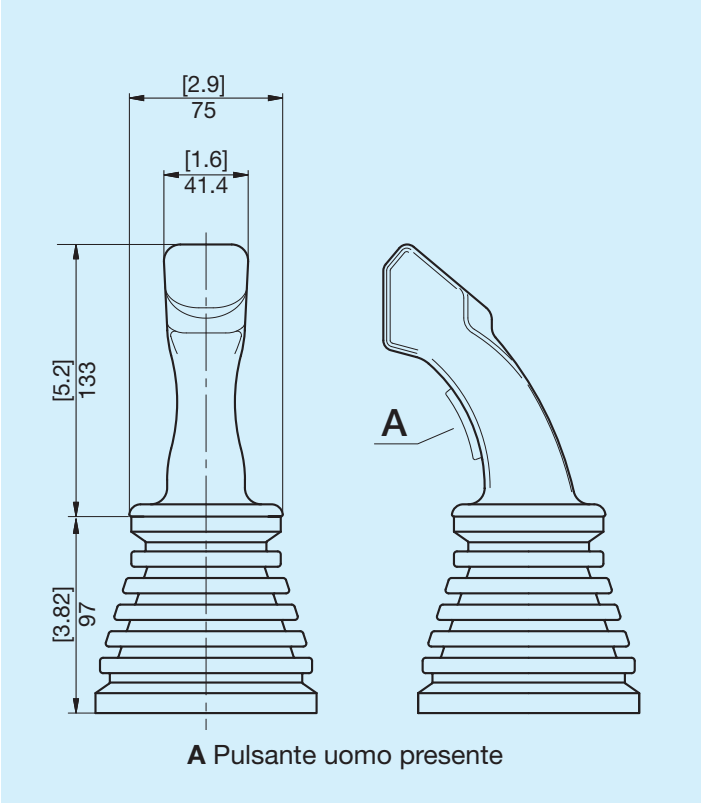
K Cilindrica



E Ergonomica



F Ergonomica uomo presente



A Pulsante uomo presente

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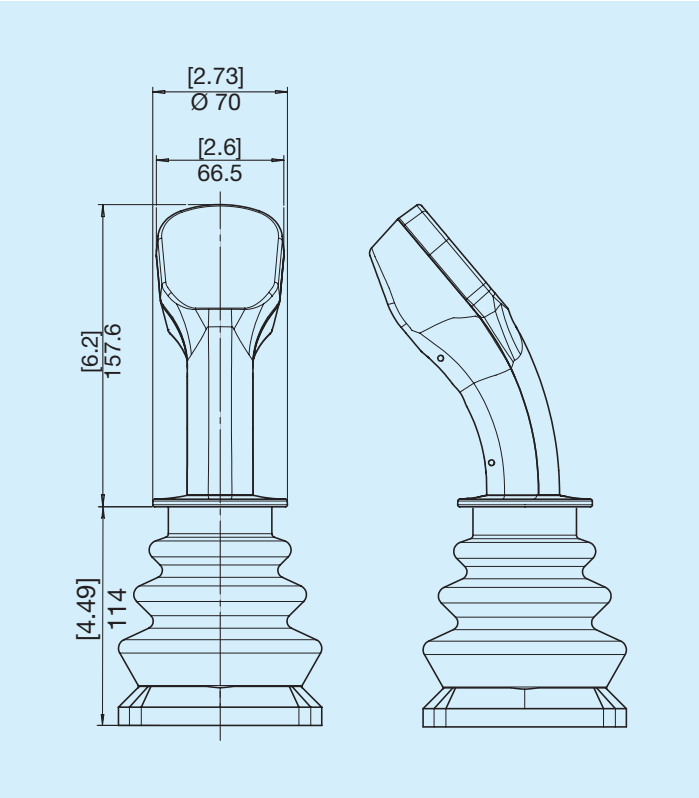
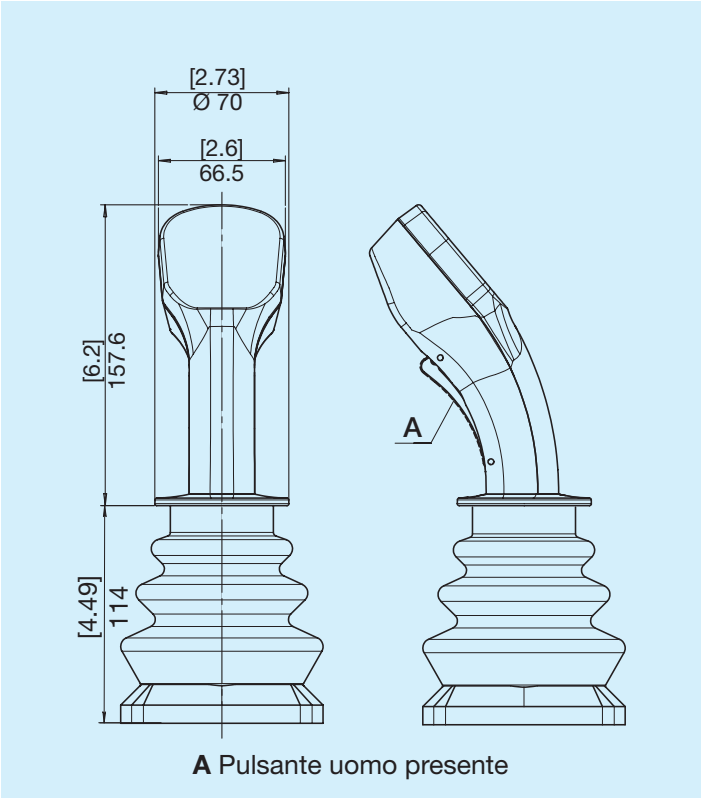
T Multifunzione

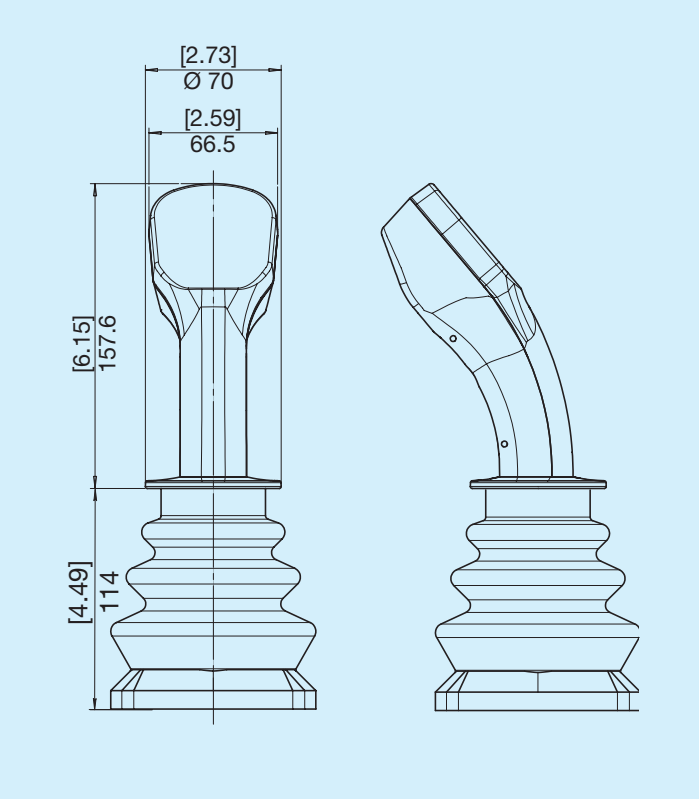


H Multifunzione uomo presente



A Pulsante uomo presente

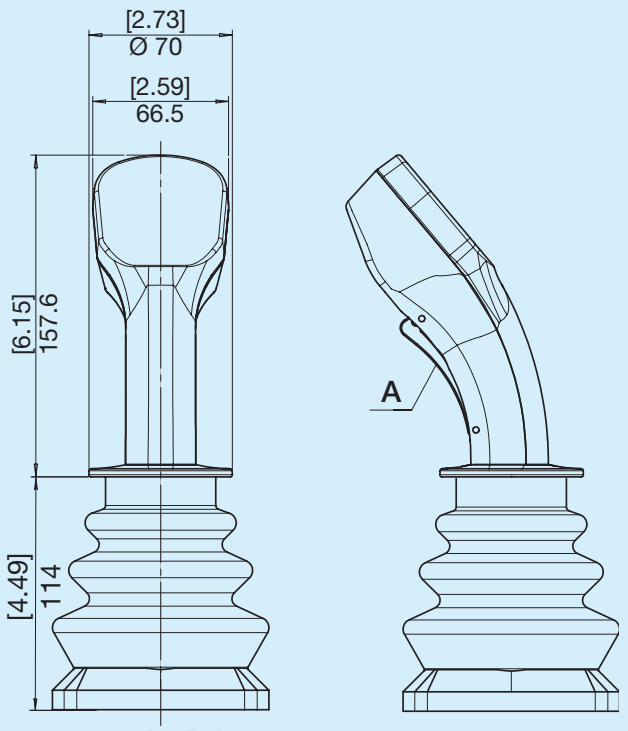
V Multifunzione PWM



Tensione di alimentazione 12 V	**9-16 Vdc effettivi**
Tensione di alimentazione 24 V	**18-30 Vdc effettivi**
Corrente massima uscita 1 canale	**3 A (@ 12 Vdc)** **2 A (@ 24 Vdc)**
Corrente massima uscita Totale	**6.5 A (@ 12 Vdc)** **4.5 A (@ 24 Vdc)**
Frequenza PWM	**100 - 400 Hz**
Configurazioni standard	**12 Vdc** **I max=1.5 A** **PWM = 200 Hz**
Grado di protezione impugnatura	**IP67**

* Rampe di corrente soft, sia in incremento che in decremento e diverse curve di uscita (corrente erogata in funzione della posizione del roller

Z Multifunzione PWM uomo presente

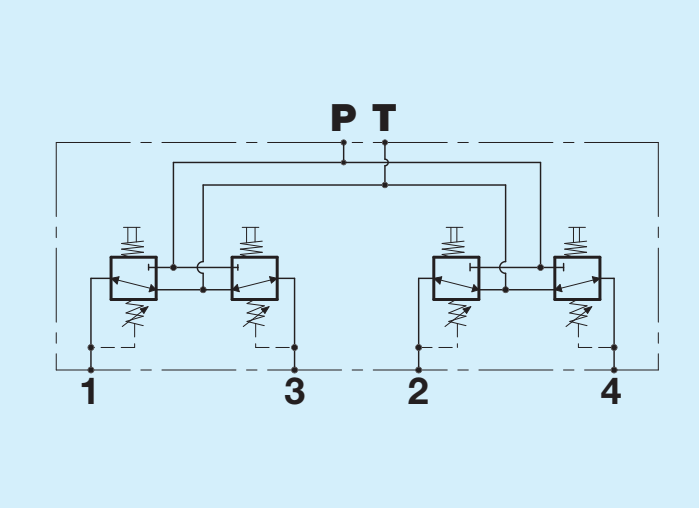


A - Pulsante uomo presente

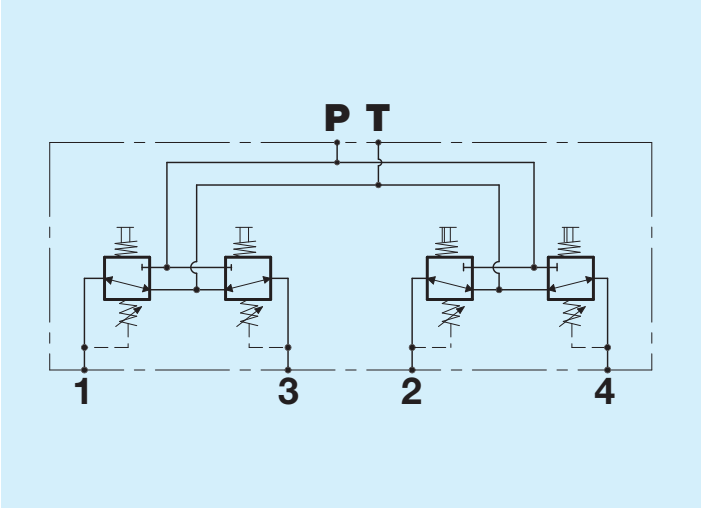
Tensione di alimentazione 12 V	**9-16 Vdc effettivi**
Tensione di alimentazione 24 V	**18-30 Vdc effettivi**
Corrente massima uscita 1 canale	**3 A (@ 12 Vdc)** **2 A (@ 24 Vdc)**
Corrente massima uscita Totale	**6.5 A (@ 12 Vdc)** **4.5 A (@ 24 Vdc)**
Frequenza PWM	**100 - 400 Hz**
Configurazioni standard	**12 Vdc** **I max=1.5 A** **PWM = 200 Hz**
Grado di protezione impugnatura	**IP67**

* Rampe di corrente soft, sia in incremento che in decremento e diverse curve di uscita (corrente erogata in funzione della posizione del roller

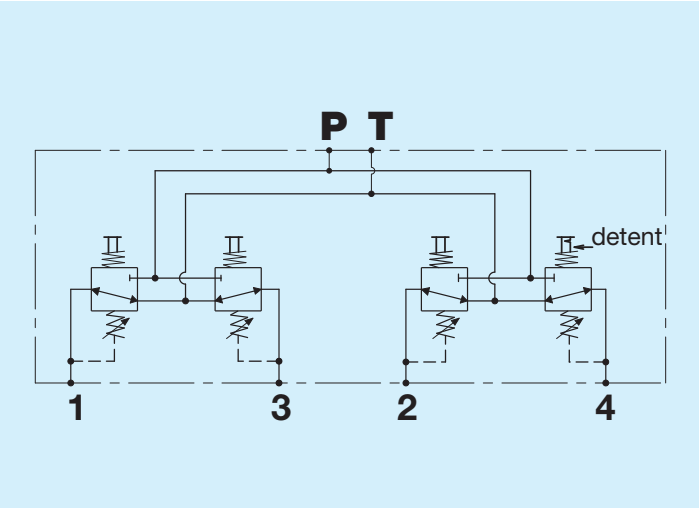
S Con ritorno molla al centro



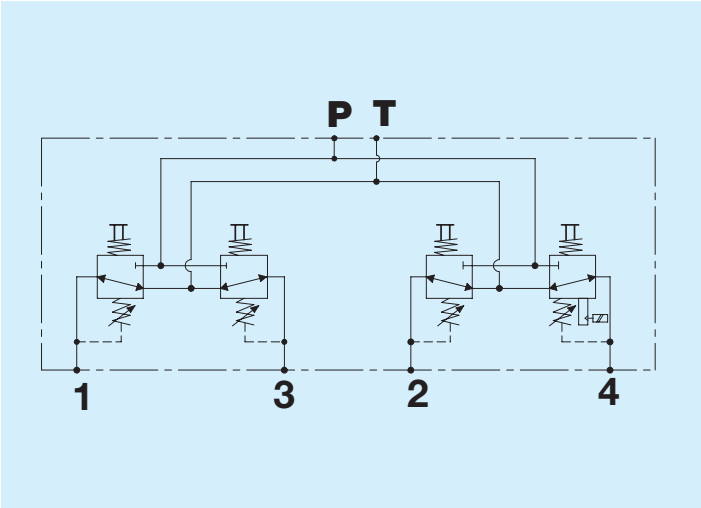
A Frizionato avanti/indietro 2-4



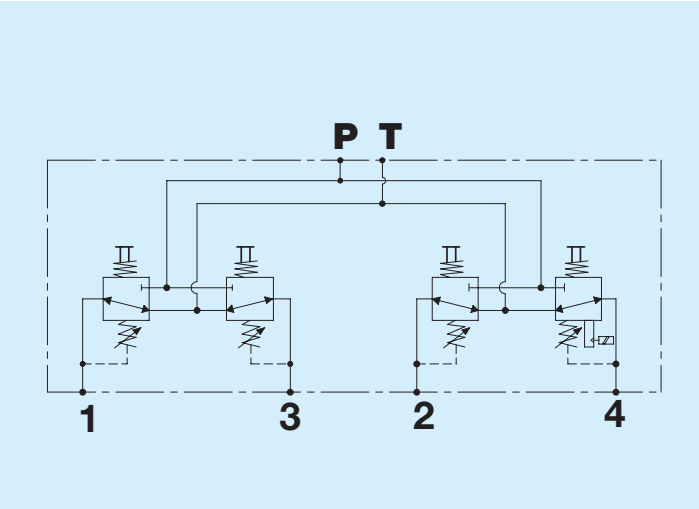
M Meccanico posizione 4



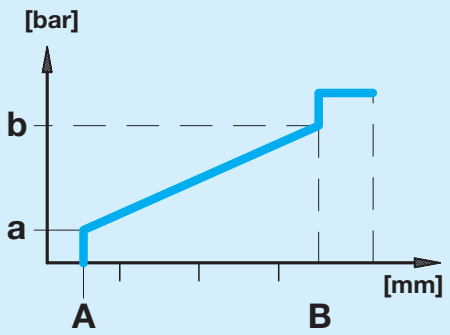
E Elettromagnetico posizione 4 12 V



F Elettromagnetico posizione 4 24 V



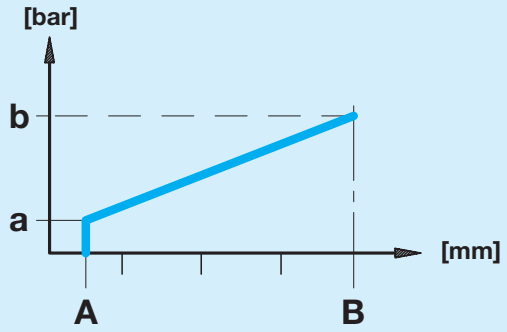
S.. Rampa singola con step



Corsa

Tipo	Pressione a		Pressione b	
	bar	psi	bar	psi
S00	2	29	16	232
S01	5	73	20	290
S02	6,5	94	24,5	355
S04	3	46	17	249
S08	5	73	16	232
S11	4	58	15	218
S12	1,5	22	7	102
S13	5	73	28	406

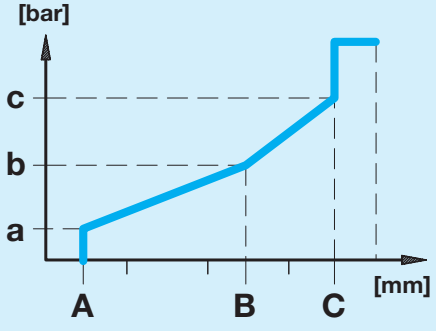
L.. Rampa singola senza step



Corsa

Tipo	Pressione a		Pressione b	
	bar	psi	bar	psi
L00	2	29	18	261
L01	5	73	22	319
L02	6,5	94	26,5	384
L04	3	46	19	276
L08	5	73	18	261
L11	4	58	16	218
L12	1,5	22	9	131
L13	5	73	30	435

M60 Rampa doppia con step



Corsa

Tipo	Pressione a		Pressione b		Pressione c		Corsa A	Corsa B	Corsa C
	bar	psi	bar	psi	bar	psi	mm	mm	mm
M60	5	73	12	174	21	306	1,2	5,4	7,8

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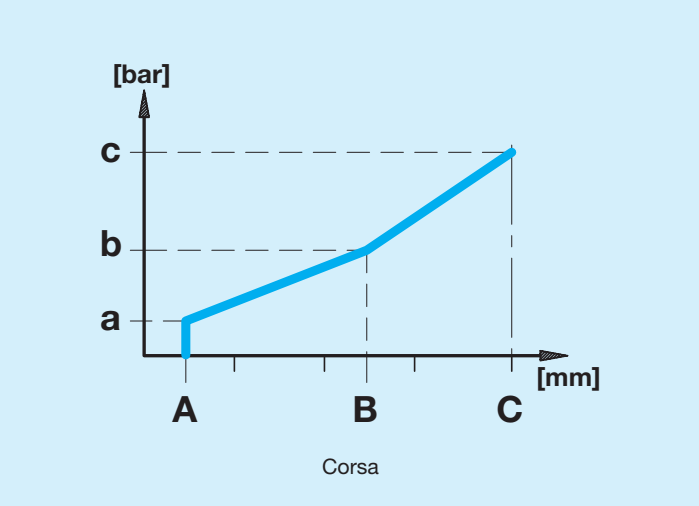
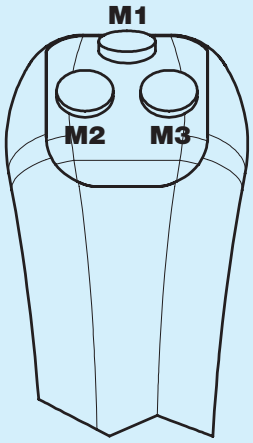
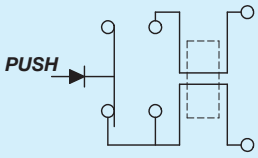
G60 Rampa doppia senza step



Tipo	Pressione a		Pressione b		Pressione c		Corsa		
	bar	psi	bar	psi	bar	psi	A mm	B mm	C mm
G60	5	73	12	174	23	334	1,2	5,4	8,3

Comandi elettrici Superiori



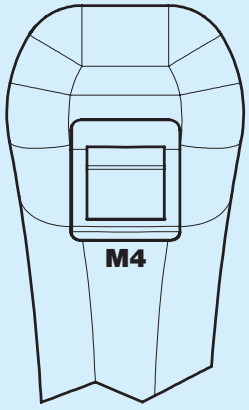


DC 12V x 2A

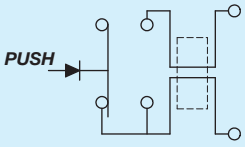
Configurazioni

Codice	Descrizione
00	Nessun pulsante
01	M1
02	M2+M3
03	M1+M2+M3

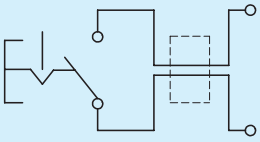
Comandi elettrici Frontali



Interrutore a bilanciere



Interrutore ON/OFF



DC 12V x 2A

Configurazioni

Codice	Descrizione
0	Nessun interrutore
1	M4 a bilanciere con ritorno a molla
2	M4 interrutore ON/OFF

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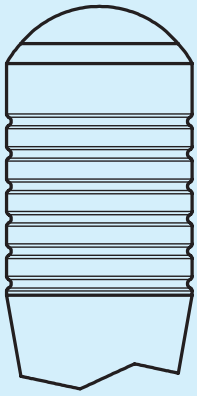
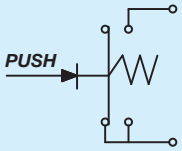
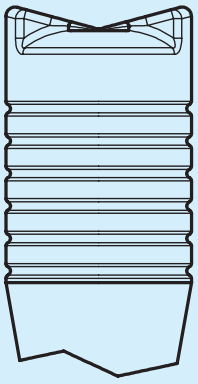
0B Pulsante Superiore singolo con ritorno

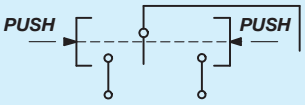




DC 12V x 8A

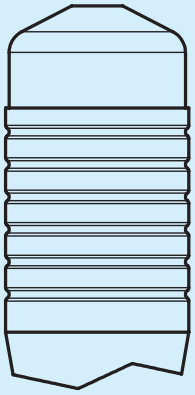
0C Pulsante Superiore basculante

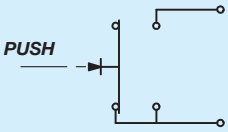




DC 12V x 8A

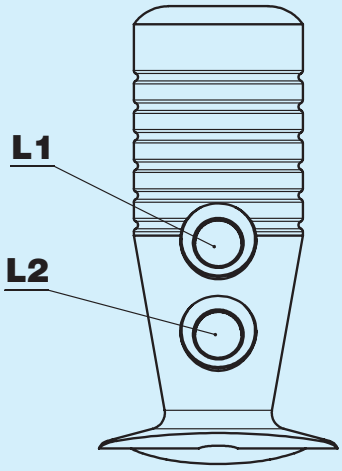
0D Pulsante Superiore stabile

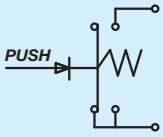




DC 28V x 10A Resistiva
DC 28V x 5A Induttiva

Comandi elettrici Frontali



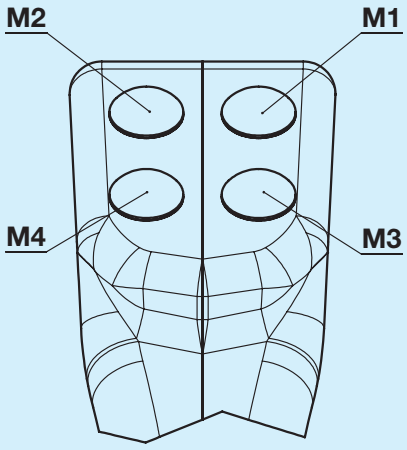


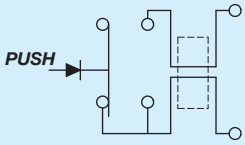
DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

Configurazioni

Codice	Descrizione
0	Nessun pulsante
F	L1
G	L2
H	L1+L2

Comandi elettrici Superiori



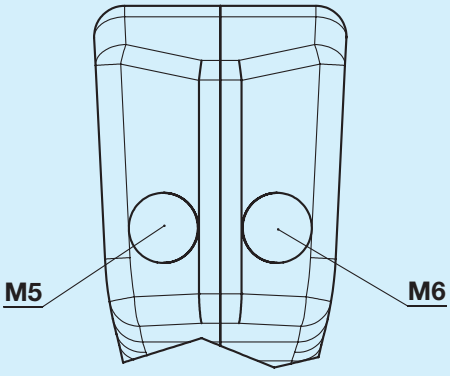


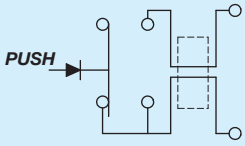
DC 12V x 4A Resistiva
DC 12V x 2A Induttiva

Configurazioni

Codice	Descrizione
00	Nessun pulsante
01	M1
02	M1+M2
03	M1+M2+M3
04	M1+M2+M3+M4
05	M2
06	M3+M4

Comandi elettrici Frontali





DC 12V x 4A Resistiva
DC 12V x 2A Induttiva

Configurazioni

Codice	Descrizione
0	Nessun pulsante
1	M5
2	M5+M6
3	M6

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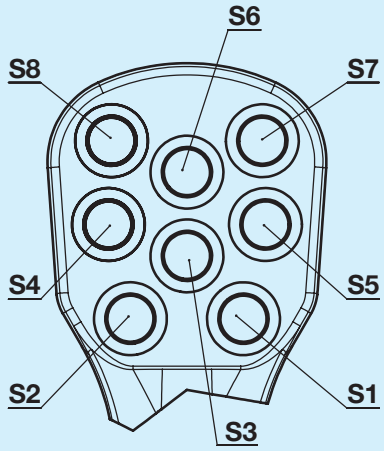
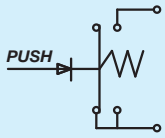
HP Hydraulic

Comandi elettrici Superiori



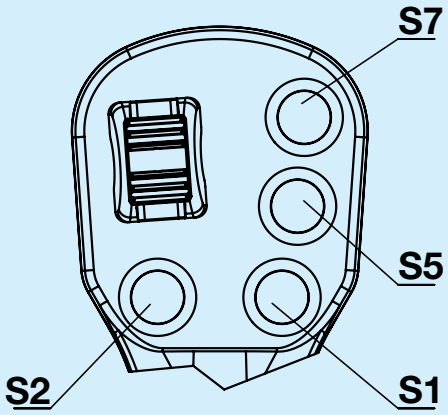


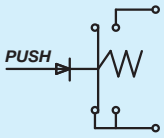
DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

Configurazioni

Codice	Descrizione	Codice	Descrizione	Codice	Descrizione
00	Nessun pulsante	0C	S1+S2+S4+S5+S7+S8	0P	S1+S5+S7
01	S1	0D	S4+S8	0Q	S1+S2+S7+S8
02	S3	0E	S5	0R	S2+S4
03	S1+S2	0F	S4	0S	S3+S4+S5+S7+S8
04	S4+S5	0G	S5+S7	0T	S1+S7
05	S1+S2+S5	0H	S3+S4+S5+S6	0U	S3+S6
06	S1+S2+S4+S5	0I	S4+S5+S6	0V	S8
07	S1+S2+S3+S4+S5	0J	S1+S2+S3	0W	S2+S8
08	S1+S2+S3+S4+S5+S6	0K	S4+S5+S7+S8	0Y	S7+S8
09	S1+S2+S3+S4+S5+S7+S8	0L	S6	0Z	S1+S2+S6
0A	S1+S2+S3+S4+ S5+S6+S7+S8	0M	S1+S2+S4+S5+S6	1A	S2+S4+S8
0B	S3+S7+S8	0N	S3+S7		

Comandi elettrici Superiori e Roller Sinistro



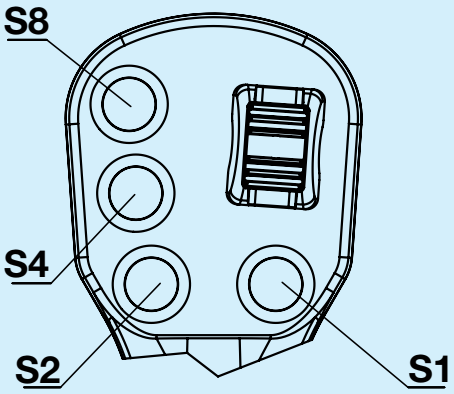


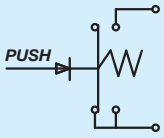
DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

Configurazioni

Codice	Descrizione
RA	Roller Sinistro
RB	Roller Sinistro+S7
RC	Roller Sinistro+S5+S7
RD	Roller Sinistro+S1+S5+S7
RE	Roller Sinistro+ S1+S2+S5+S7

Comandi elettrici Superiori e Roller Destro



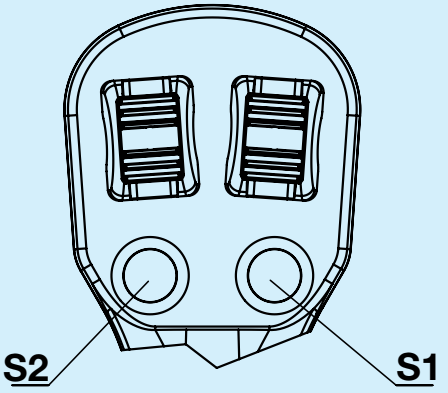


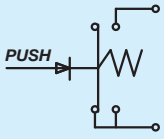
DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

Configurazioni

Codice	Descrizione
RF	Roller Destro
RG	Roller Destro+S8
RH	Roller Destro+S4+S8
RJ	Roller Destro+S2+S4+S8
RK	Roller Destro+S1+S2+S4+S8

Comandi elettrici Superiori, Roller Destro e Roller Sinistro



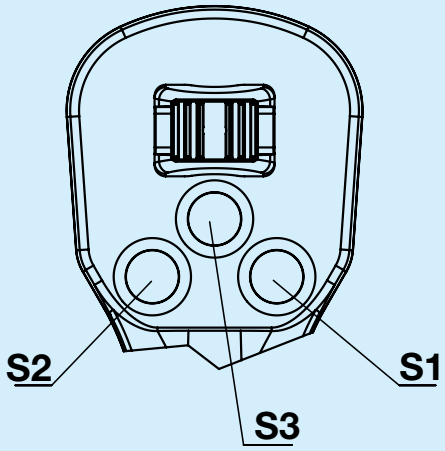


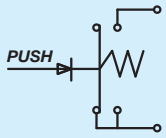
DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

Configurazioni

Codice	Descrizione
RL	Roller Destro+Roller Sinistro
RM	Roller Destro+ Roller Sinistro+S2
RN	Roller Destro+ Roller Sinistro+S2+S1

Comandi elettrici Superiori e Roller Up



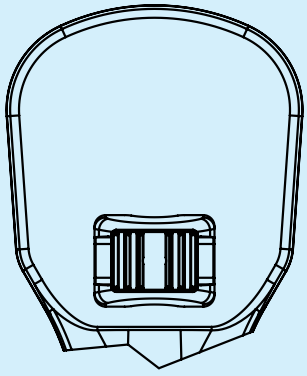


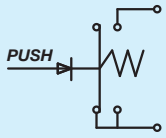
DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

Configurazioni

Codice	Descrizione
RO	Roller Up+S1+S2
RP	Roller Up+S3
RR	Roller Up+S1+S2+S3

Roller Down



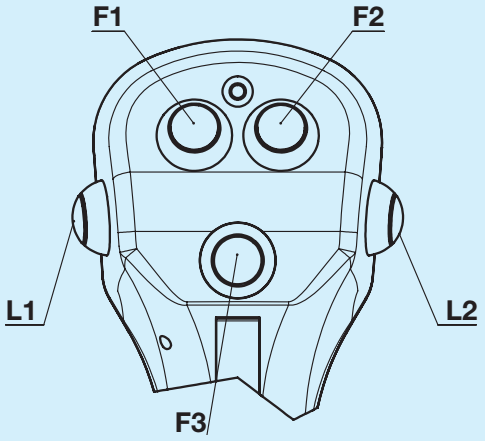


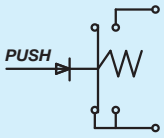
DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

Configurazioni

Codice	Descrizione
RQ	Roller Down

Comandi elettrici Frontali





DC 28V x 5A Resistiva
DC 28V x 3A Induttiva

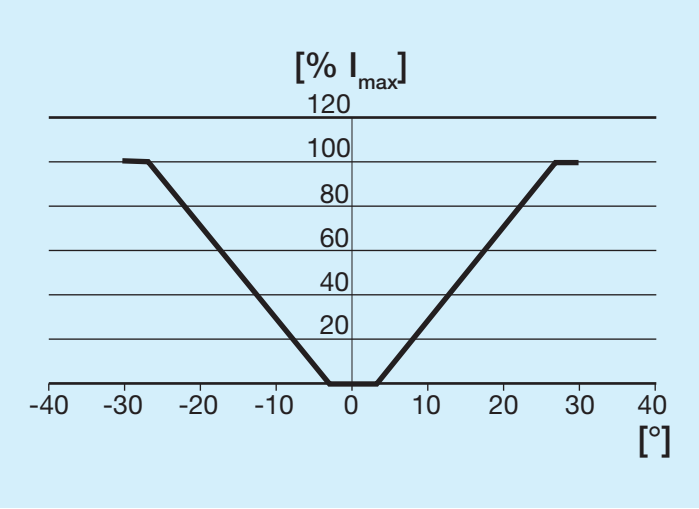
Configurazioni

Codice	Descrizione	Codice	Descrizione	Codice	Descrizione
0	Nessun pulsante	5	F2	A	F1+F2+L1+L2
1	L1	6	F3	B	F3+L1+L2
2	L2	7	F1+F2	C	F1+L1
3	L1+L2	8	F1+F2+F3	D	F1+F3
4	F1	9	F1+F2+F3+L1+L2	E	F1+F3+L1+L2

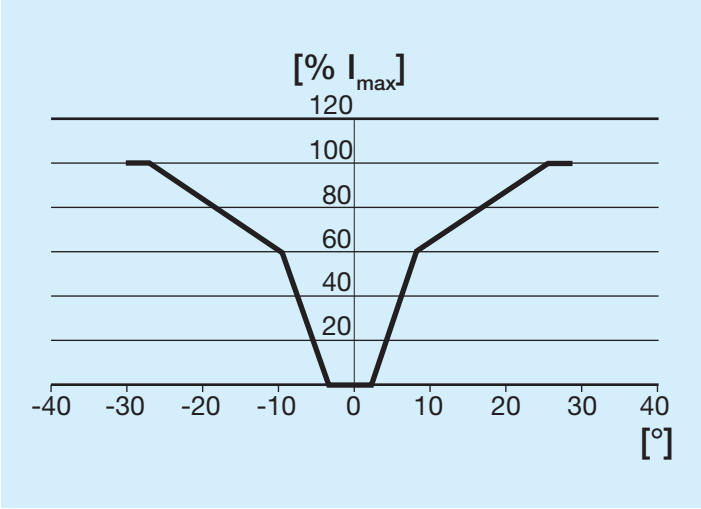
Per le versioni “V”e “Z” non sono previsti pulsanti Frontali.

Programmazione profilo uscita PWM (A)

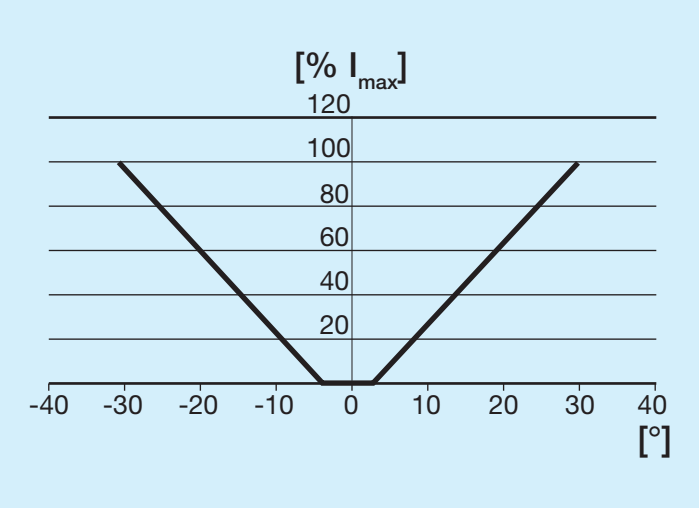
500 Profilo uscita PWM



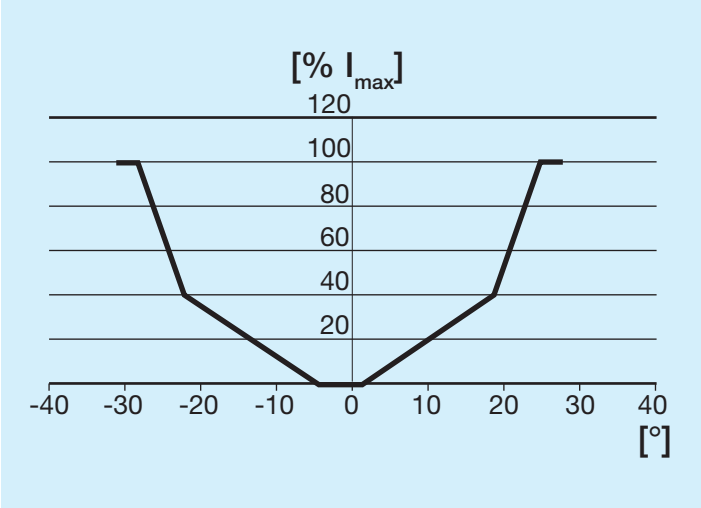
501 Profilo uscita PWM



502 Profilo uscita PWM



503 Profilo uscita PWM



La programmazione della scheda elettronica, integrata nella impugnatura H/T, è specifica per ogni applicazione in quanto la rampa è progettata per assolvere al meglio le diverse condizioni di lavoro. Si dovrà quindi richiedere ad HP Hydraulic l'assegnazione del codice a 3 cifre una volta concordata l'applicazione e la corretta rampa (corrente erogata, % I_{max}, in funzione della posizione del roller, gradi). A seguire esempi di rampe disponibili alla configurazione standard dei parametri di tensione, corrente e frequenza di PWM della scheda elettronica.

Istruzioni per l'ordinazione

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
HPCJ	**0**	**G**	**2**	**1**	**K**	**S**	**S**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

1 Modelli

1	1 segnale pressione da asse 2-4	**3**	Controrotazione opposta	**5**	Controrotazione opposta con segnale di retromarcia	**7**	Controrotazione concorde con segnale di retromarcia
2	2 segnali pressione da asse 1-3 e 2-4	**4**	1 segnale di pressione da ogni posizione	**6**	Controrotazione concorde		

2 3 Bocche

G2	1/4" gas-BSPP	**U3**	SAE 9/16"-18UNF

4 Guarnizioni

1	NBR	**2**	Viton

5 Impugnature

0	Senza impugnatura	**E**	Ergonomica	**H**	Multifunzione uomo presente
S	Anatomica	**F**	Ergonomica uomo presente	**V**	Multifunzione uscita PWM
K	Cilindrica	**T**	Multifunzione	**Z**	Multifunzione uscita PWM uomo presente

6 Posizionatore

S	Con ritorno molla al centro	**M**	Meccanico posizione 4	**F**	Elettromagnetico posizione 4 24 V
A	Frizionato avanti/indietro 2-4	**E**	Elettromagnetico posizione 4 12 V		

7 8 9 Curve di regolazione

S	Rampa singola con step	**M**	Rampa doppia con step
L	Rampa singola senza step	**G**	Rampa doppia senza step

10 11 Comandi elettrici superiori

00	Nessun pulsante	**...**	Vedere sezioni comandi superiori

12 Comandi elettrici frontali

0	Nessun interruttore	**...**	Vedere sezioni comandi frontali

13 14 15 Versioni speciali

000	Nessuna esecuzione speciale	**001**	Leva inclinata a destra di 15°	**002**	Leva inclinata a sinistra di 15°

16 17 18 Programmazione profilo uscita PWM (A)

000	Nessun segnale PWM	**501**	Profilo uscita PWM	**503**	Profilo uscita PWM
500	Profilo uscita PWM	**502**	Profilo uscita PWM		

BONDIOLI & PAVESI HP Hydraulic