



HYDRAULIC REMOTE
CONTROLS

SERIE J



HYDRAULIC CONTROL
LEVERS

SERIE P

MANIPOLATORE IDRAULICO 1 ASSE

HYDRAULIC REMOTE CONTROL 1 AXIS

I manipolatori idraulici sono costituiti da due valvole riduttrici ad azione diretta.

La leva di comando in posizione centrale mantiene gli utilizzi collegati a scarico e l'alimentazione chiusa.

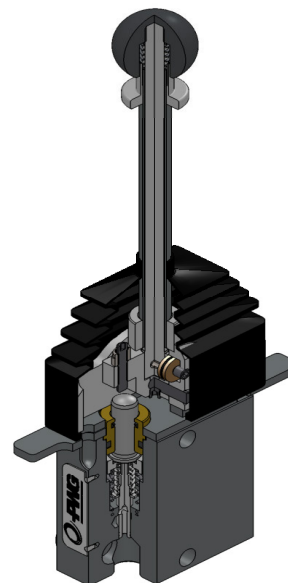
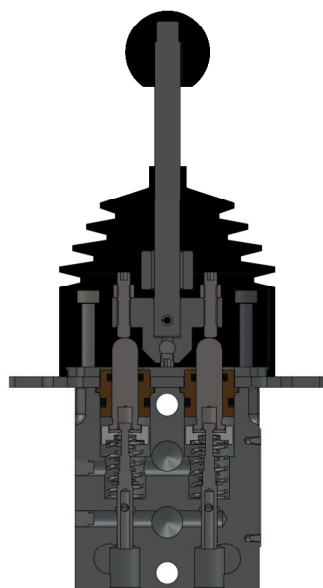
Azionando la leva in un senso, si collega l'alimentazione con l'utilizzo verso il quale la leva viene mossa, la pressione nell'utilizzo é proporzionale alla corsa della leva.

Hydraulic remote controls consist of two direct acting pressure reducing valves.

The control lever in neutral position keeps the service ports connected to tank and the pressure inlet port closed.

By acting on the control lever in one direction, the inlet pressure port will be connected to the corresponding service port; the service pressure is proportional to the control lever stroke.

Pressione massima in alimentazione Maximum input pressure	bar	100
Pressione massima in scarico Maximum back pressure (tank)	bar	3
Portata olio in alimentazione Oil input capacity	l/min	15
Campo di temperatura olio Oil temperature range	°C	-20 +80
Campo di viscosità Viscosity range	cSt	10-300
Grado di filtrazione consigliato Recommended filtration	μ ass	25
Massa appross. Approx weight	Kg	2.2



CODICE DI ORDINAZIONE

ORDERING CODE

J1A	G	1	CI	BM	35	1		
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Serie - Modello / Series - model	
J - 1A	Joystick 1 asse 1 Joystick axis
J - 2A	Joystick 2 assi 2 Joystick axis
J - 1C	Joystick 2 assi e contro rotazione 2 Joystick axis and reverse rotation

Esecuzioni speciali
Special versions

Accessori / Accessories

1 ÷ 15	Numero dei pulsanti da 1 a 15 Buttons number from 1 to 15
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Attacchi / Ports

G	Metrica (File6 BSPP) Metric (BSPP Threads)
U	SAE (Filetti UNF) SAE (UNF Threads) A richiesta (quantità minima 50 pezzi) Upon Request (minimum quantity 50 pieces)

Step finale / Final step

1	Step Finale STANDARD Final Step STANDARD
X	NO Step Finale NO Final Step

Elementi / Elements

1 ÷	... Numero degli elemen. da 1 - Element number from 1 to -
-----	--

Curve di regolazione / Metering curve

35	Pressione Partenza / Starting pressure = 6,5 Pressione corsa max / Max displaced pressure = 20
63	Pressione Partenza / Starting pressure = 6,5 Pressione corsa max / Max displaced pressure = 17
74	Pressione Partenza / Starting pressure = 5 Pressione corsa max / Max displaced pressure = 14
86	Pressione Partenza / Starting pressure = 4,5 Pressione corsa max / Max displaced pressure = 16,5
98	Pressione Partenza / Starting pressure = 4 Pressione corsa max / Max displaced pressure = 20

Nota: Tolleranza: ± 1 bar / **Note:** Tolerance: ± 1 bar

Impugnatura / Handle

CI	Impugnatura Cilindrica - Cylinder grip Solo per J1A - leva corta STANDARD Only for "1A" Joystick - short lever STANDARD
IL	Impugnatura Cilindrica - Cylinder grip Solo per J1A - leva lunga Only for "1A" Joystick - long lever
EP	Impugnatura ergonomica + presenza uomo Ergonomic grip + dead man Disponibile solo con 1 elemento Available only with 1 element
XX	Senza impugnatura Without handle

Posizionatore / Positioner

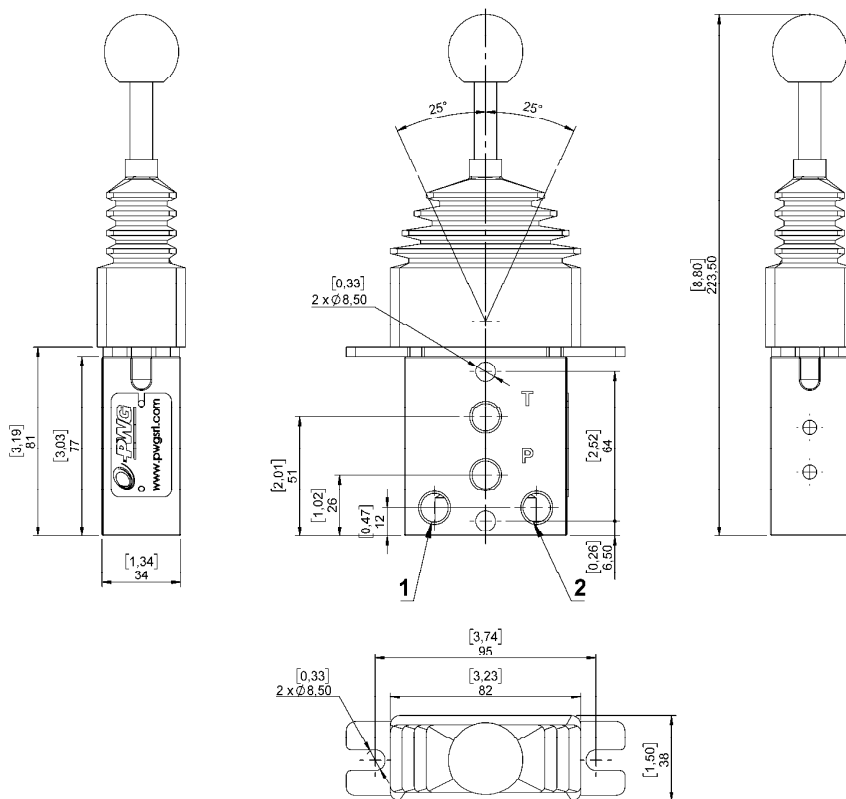
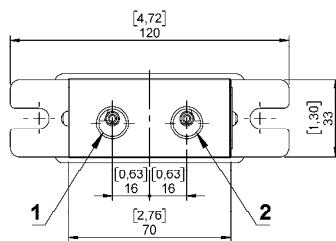
S	Standard con ritorno a molla Standard with spring back
F	Frizionato / Joystick Clutch controller
M	Micro / Joystick "1A" Micro / Disponibile solo su versione Available only on "1A" Joystick version
D	Detent
Z*	F (frizione) + B (sblocco al centro) + M (micro) F (friction) + B (security in neutral) + M (micro)
W*	B (sblocco al centro) + M (micro) B (security in neutral) + M (micro).
Y	F (frizione) + M (micro) F (friction) + M (micro)
K*	F (frizione) + B (sblocco al centro) F (friction) + B (security in neutral)
N	D(detent) + F(frizione) D(detent) + F(friction)

Nota*: Non disponibile con impugnatura ergonomica (EP)
Note*: Not available with ergonomic grip (EP)

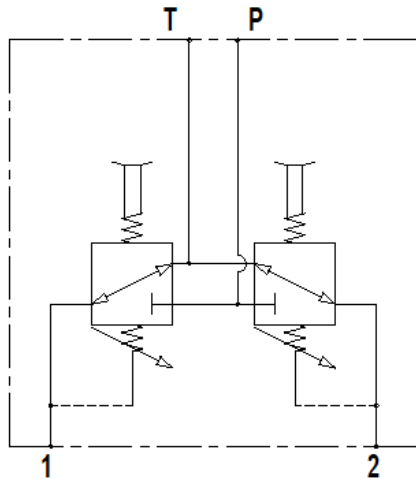
MANIPOLATORE IDRAULICO 1 ASSE

HYDRAULIC REMOTE CONTROL 1 AXIS

Leva corta



SCHEMA IDRAULICO HYDRAULIC DIAGRAM



CONNESSIONI
CONNECTIONS
P, T, 1, 2 1/4 GAS

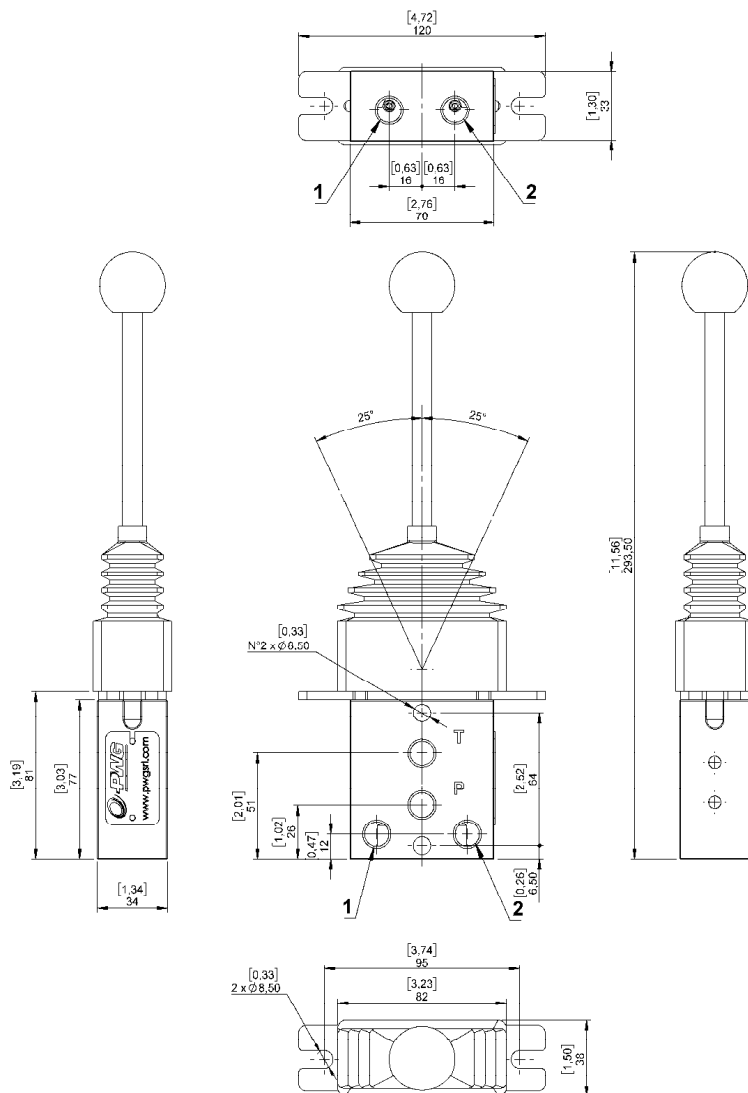
OPZIONI / OPTIONS

- **Frizione / Friction**
- **Sblocco centrale / Security in neutral**
- **Microswitch posizione neutra / Sensor in neutral position**
- **Detent**

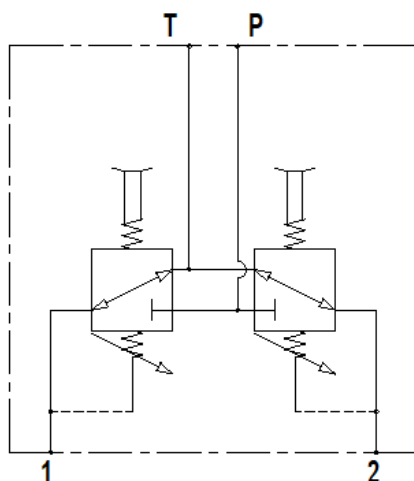
MANIPOLATORE IDRAULICO 1 ASSE

HYDRAULIC REMOTE CONTROL 1 AXIS

Leva lunga
Long lever



SCHEMA IDRAULICO
HYDRAULIC DIAGRAM

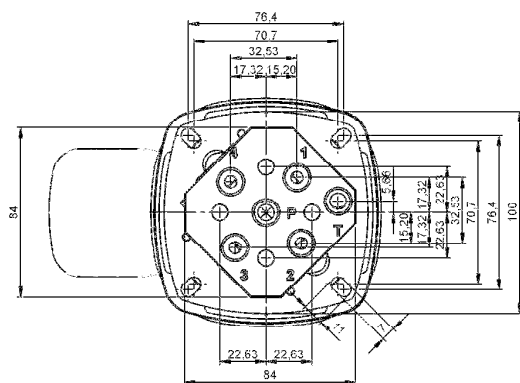


CONNESSIONI
CONNECTIONS
P, T, 1, 2 1/4 GAS

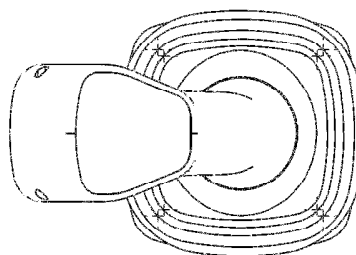
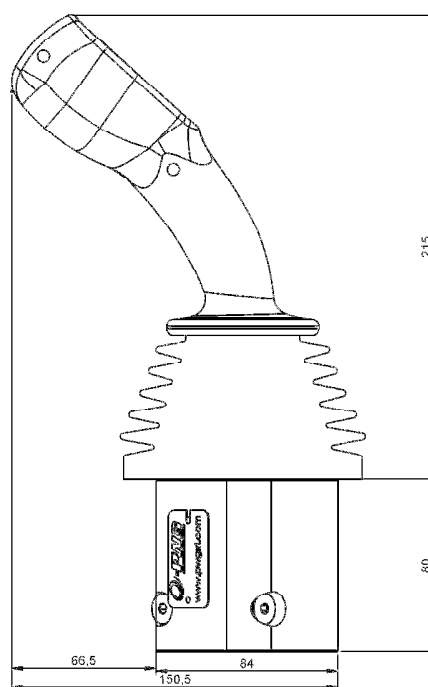
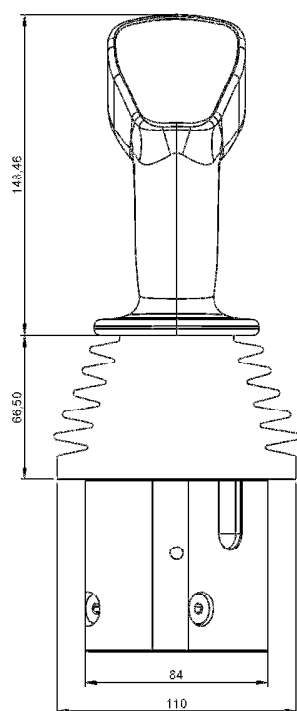
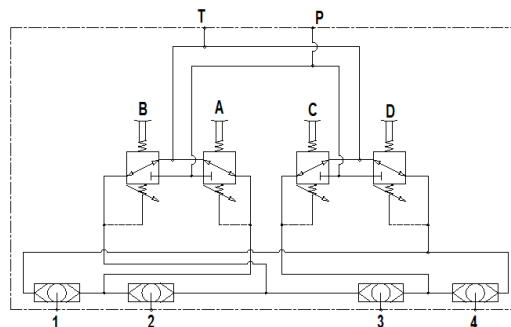
OPZIONI / OPTIONS

- Frizione / Friction
- Sblocco centrale / Security in neutral
- Microswitch posizione neutra / Sensor in neutral position
- Detent

DIMENSIONI DIMENSIONS



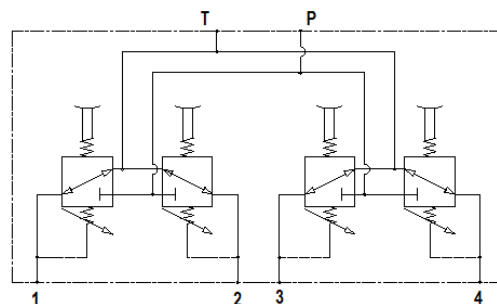
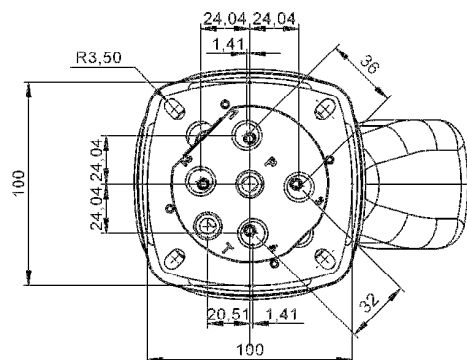
SCHEMA IDRAULICO
HYDRAULIC DIAGRAM



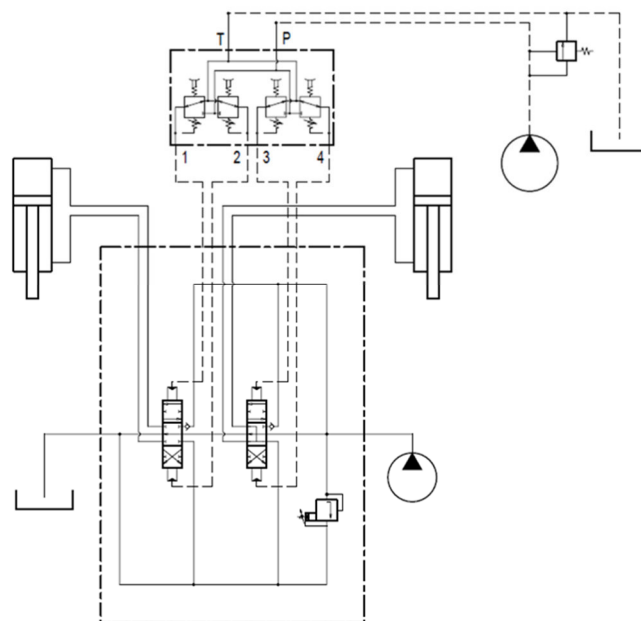
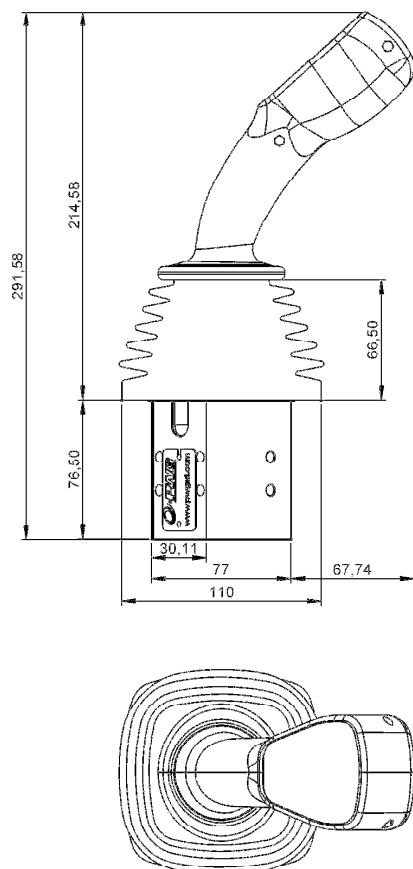
ALLESTIMENTO CORPO - JOYSTICK 2 ASSI

BODY ARRANGEMENT - 2 AXES JOYSTICK

SCHEMA IDRAULICO
HYDRAULIC DIAGRAM



ALIMENTAZIONI TELECOMANDI
CON POMPA AUSILIARIA
HYDRAULIC REMOTE CONTROL INPUT
WITH AUXILIARY PUMP

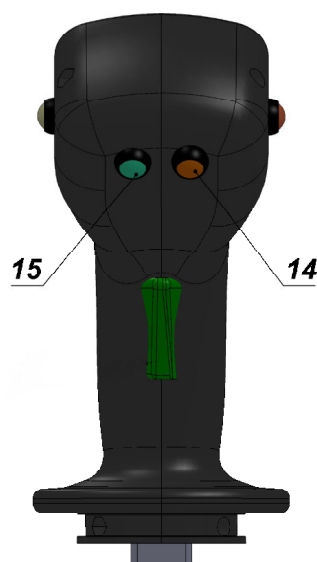


JOYSTICK—IMPUGNATURA ERGONOMICA

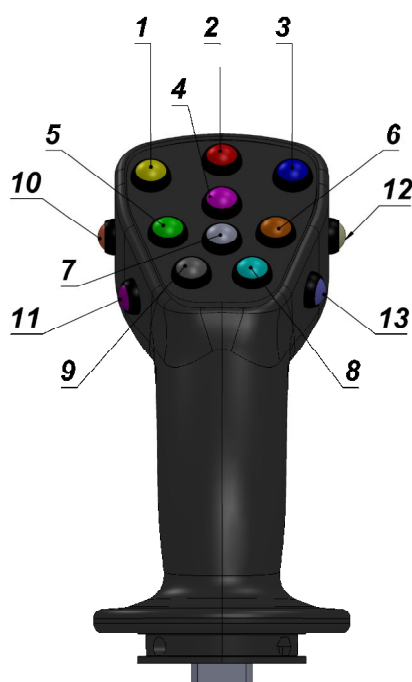
JOYSTICK—ERGONOMIC HANDLE

COME ORDINARE L'IMPUGNATURA?
HOW TO ORDER THE ERGONOMIC HANDLE?

DIETRO
BACK



DAVANTI
FRONT



LATO
SIDE



CODICE DI ORDINAZIONE

ORDERING CODE

P 2 P	G	S	35	1	X
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Serie - Modello / Series - model	
P 1P+	Pedipolatore positivo 1 pedale 1 pedal positive
P 1P-	Pedipolatore negativo 1 pedale 1 pedal negative
P 1P-MM	Pedipolatore inching 1 pedale 1 pedal inching
P 1B	Pedipolatore idraulico basculante Hydraulic control lever foot
P 1PR	Pedipolatore proporzionale 1 pedale
P 2P	Pedipolatore 2 pedali 2 pedals

Esecuzioni speciali
Special versions

Step finale / Final step	
1	Step Finale STANDARD Final Step STANDARD
X	NO Step Finale NO Final Step

Attacchi / Ports	
G	Metrica (File6 BSPP) Metric (BSPP Threads)
U	SAE (Filetti UNF) SAE (UNF Threads) A richiesta (quantità minima 50 pezzi) Upon Request (minimum quantity 50 pieces)

Posizionatore / Positioner	
S	Standard con ritorno a molla Standard with spring back

Curve di regolazione / Metering curve	
35	Pressione Partenza / Starting pressure = 6,5 Pressione corsa max / Max displaced pressure = 20
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98	Pressione Partenza / Starting pressure = 4 Pressione corsa max / Max displaced pressure = 20
Nota: Tolleranza: ± 1 Bar / Notes: Tollerance: ± 1 Bar	

PEDIPOLATORE IDRAULICO A 1 UTILIZZO CON ATTACCHI INFERIORI

HYDRAULIC CONTROL LEVER FOOT WITH 1 PEDAL AND SERVICE PORTS

FUNZIONAMENTO

I pedipolatori idraulici funzionano secondo il principio delle valvole riduttrici di pressione ad azione diretta. In condizione di riposo il pedale di comando viene mantenuto in posizione neutra dalla molla di richiamo; l'alimentazione P è chiusa e gli utilizzi sono comunicanti con lo scarico T.

Azionando il pedale, lo spintore comprime la molla di richiamo e quella di reazione, generando una corsa della spola di regolazione la quale apre il passaggio che collega l'attacco P e l'utilizzo, determinando un incremento di pressione proporzionale alla corsa del pedale e al tipo di molla di reazione.

Applicazioni

Pilotaggio e regolazione a distanza di:

- distributori oleodinamici
- pompe e motori a portata variabile
- valvole ausiliarie
- frizioni e freni idraulici

Operating principle

Hydraulic remote control works according to the principle of direct-acting pressure reducing valves.

In rest position, the foot pedal is held in neutral by return spring; inlet port P is closed and service ports are connected to tank port T.

By selecting (operating) the foot pedal, the plunger compresses the return spring and reaction spring; consequently it shifts the spool and opens connection holes between inlet port P and service ports.

This causes a pressure increase on service ports that is proportional to the foot pedal stroke and the reaction spring.

Applications

Piloting remote of:

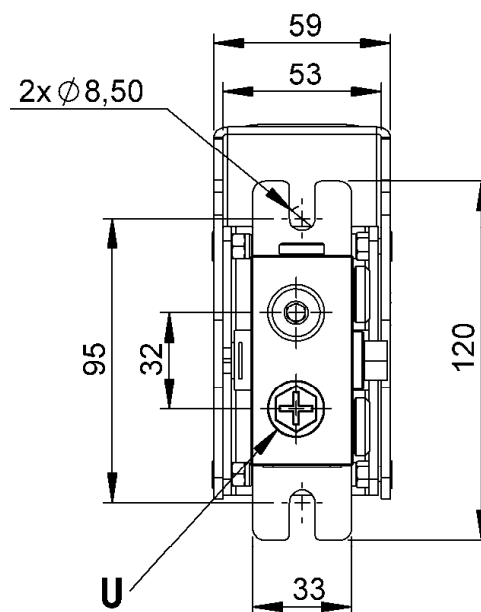
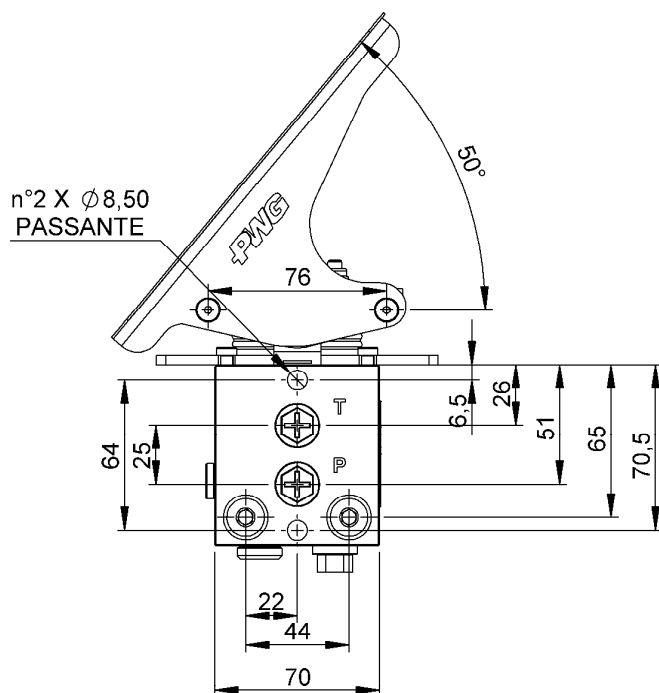
- directional control valves
- variable displacement pumps and motors
- auxiliary valves
- frictions and hydraulic brakes

Pressione massima / Maximum pressure	bar / psi	100 / 1450
Pressione massima in scarico / Maximum back pressure on tank line	bar / psi	3 / 44
Peso / Weight	kg	2,5 /
Isteresi / Hysteresis		
Portata olio in alimentazione / Oil input capacity	l/min / GPM	16 / 4,2
Fluido idraulico / Hydraulic fluid	Olio minerale / Mineral oil	
Campo di temperatura del fluido / Fluid temperature range	°C	-20 +80
Campo di viscosità del fluido / Fluid Viscosity range	Cst	10÷300
Grado di filtrazione consigliato / Recommended filtration	μ	25
Tubazioni di pilotaggio consigliate / Recommended operating pipes	mm rigid 1/4" BSP flexible	Ø8
Trafilamento / Leakage	cc/min (50 bar)	3

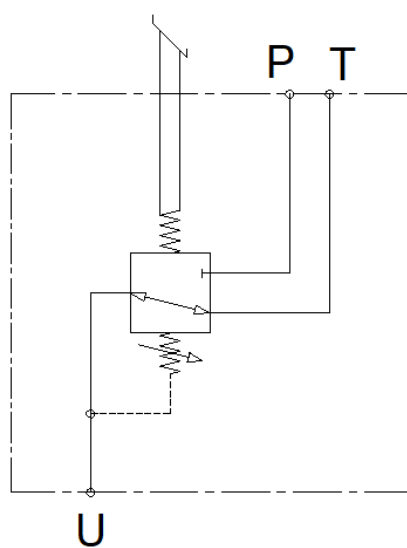
DIMENSIONI

DIMENSIONS

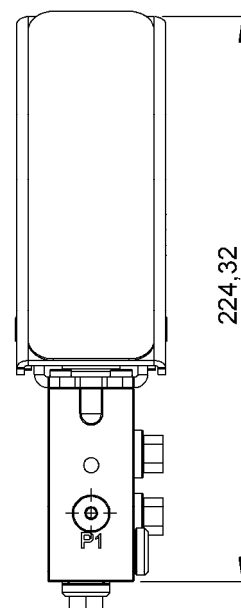
Disegno di ingombro dimensionale
Dimensional drawing



SCHEMA IDRAULICO
HYDRAULIC DIAGRAM



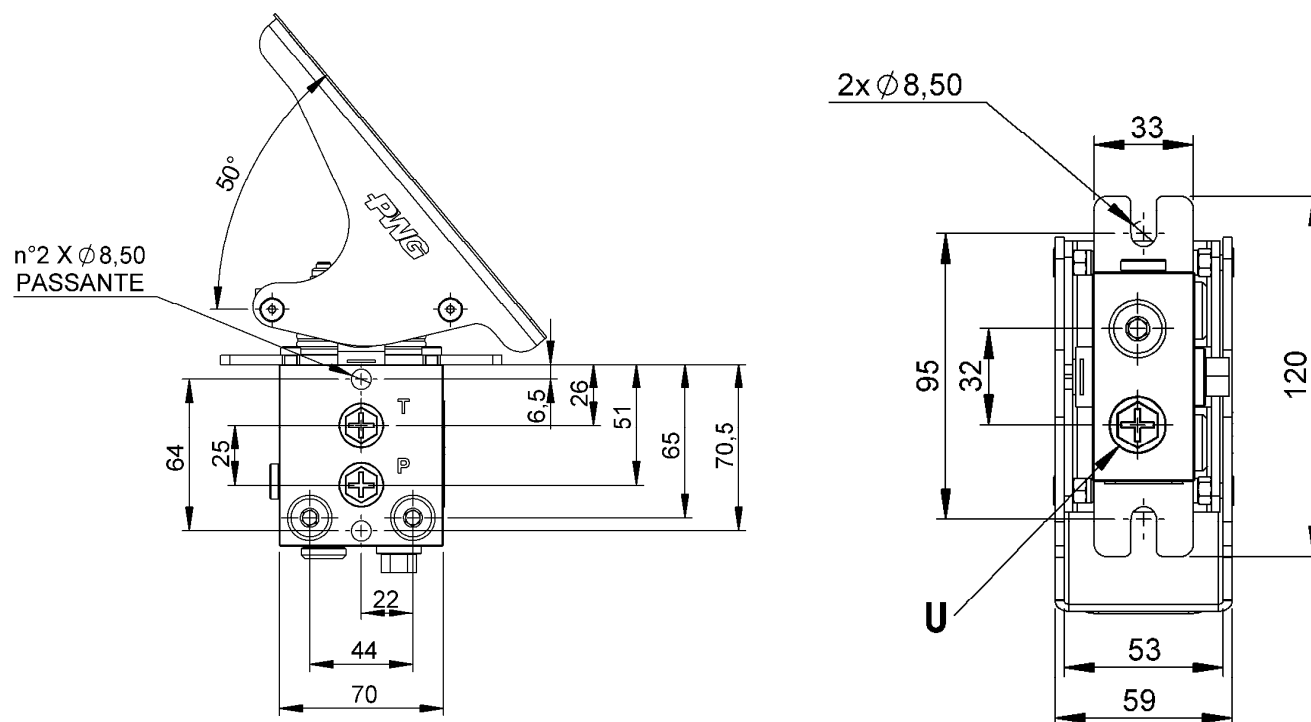
P, T e U: 1/4 G



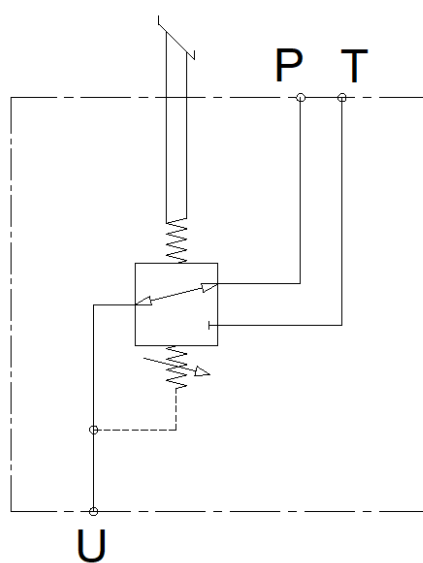
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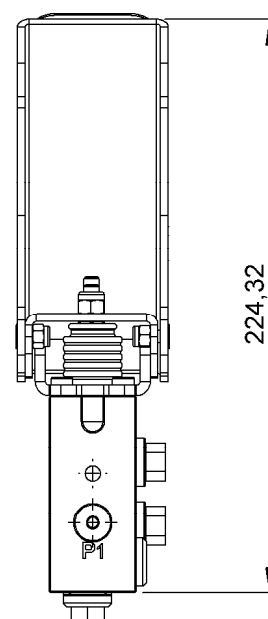
Disegno di ingombro dimensionale
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SCHEMA IDRAULICO
HYDRAULIC DIAGRAM

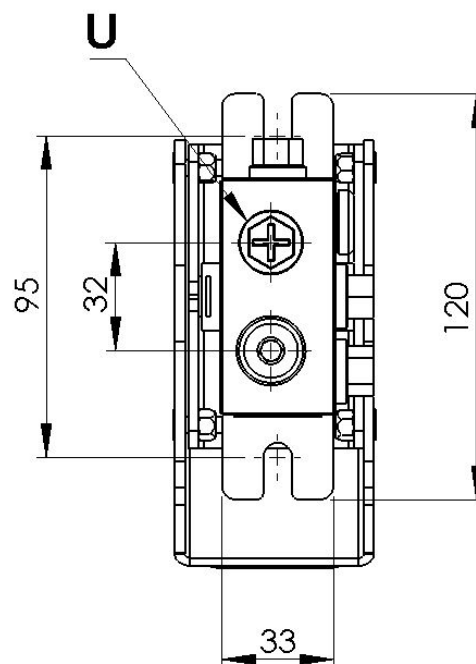
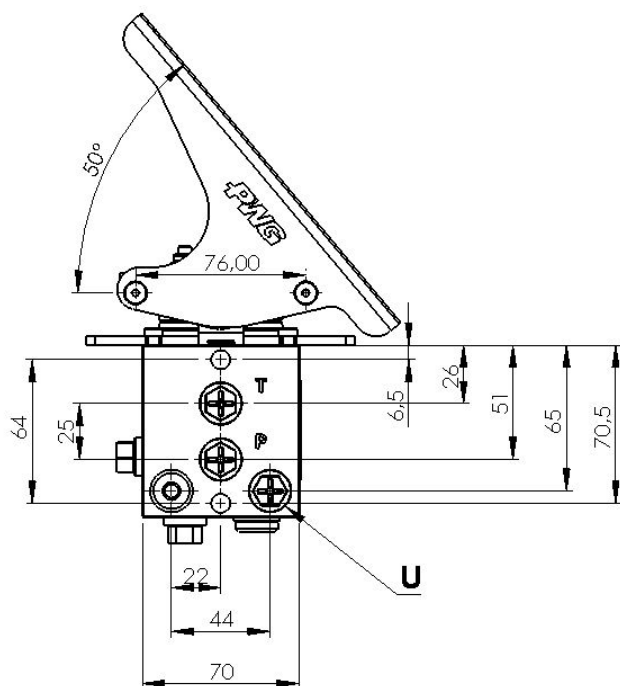


P, T e U: 1/4 G

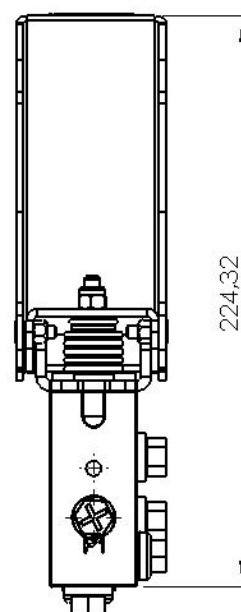
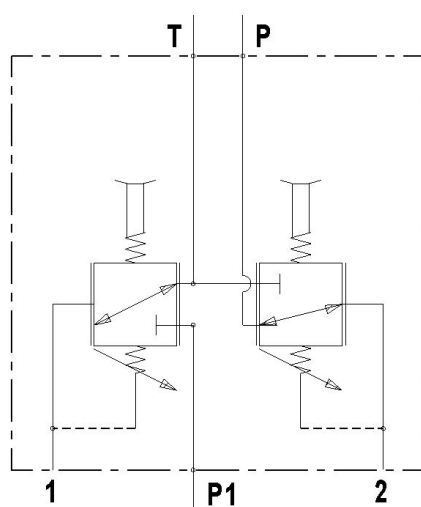


DIMENSIONI DIMENSIONS

Disegno di ingombro dimensionale
Dimensional drawing



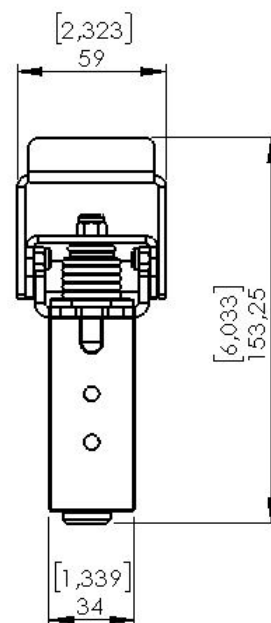
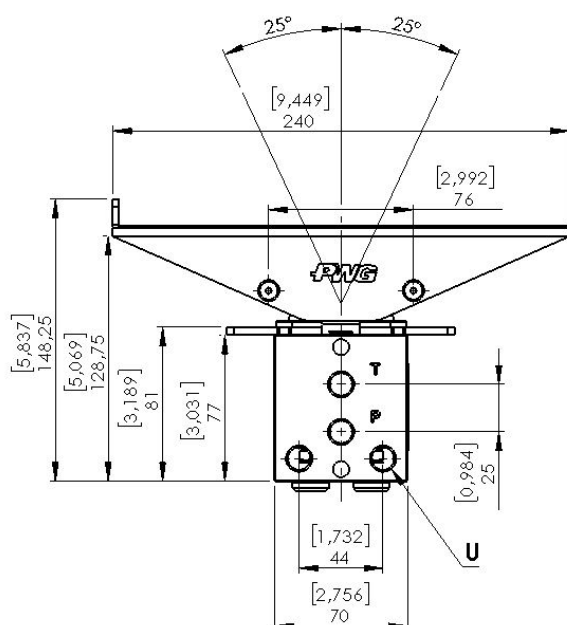
SCHEMA IDRAULICO
HYDRAULIC DIAGRAM



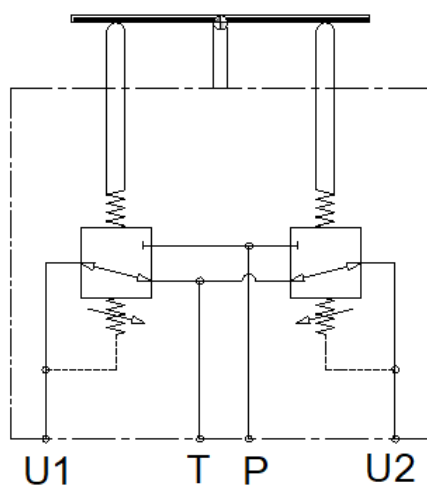
P, T e U: 1/4 GAS

DIMENSIONI DIMENSIONS

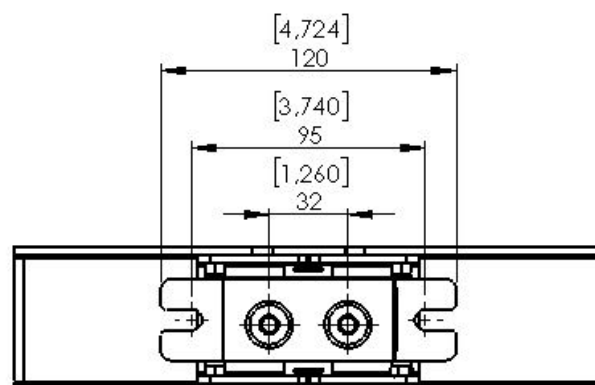
Disegno di ingombro dimensionale
Dimensional drawing



SCHEMA IDRAULICO
HYDRAULIC DIAGRAM



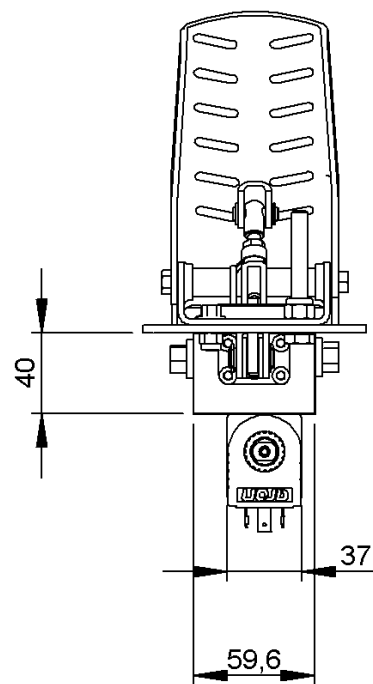
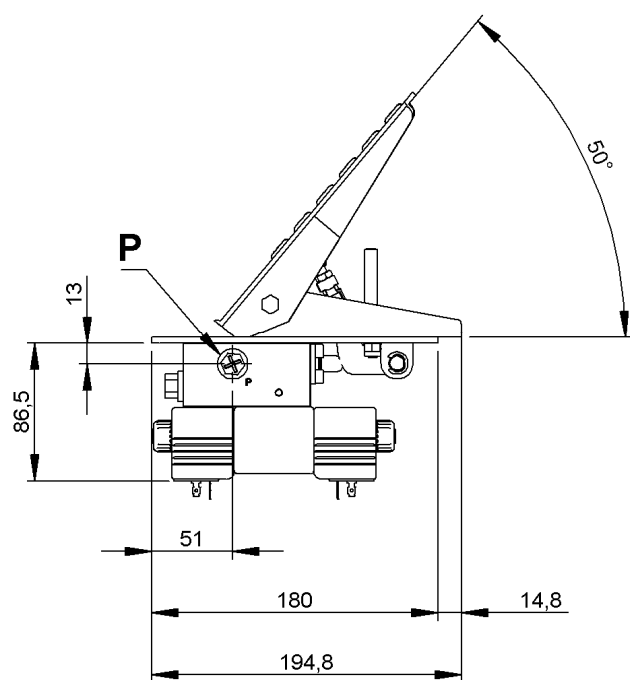
P, T e U: 1/4 G



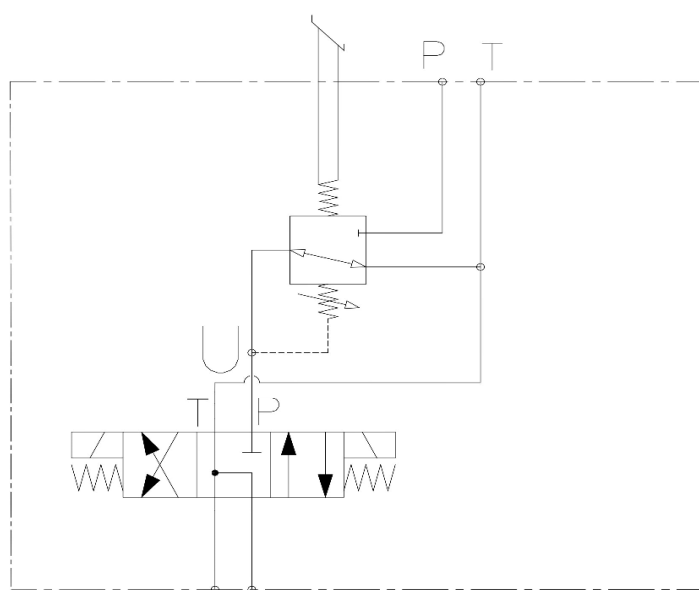
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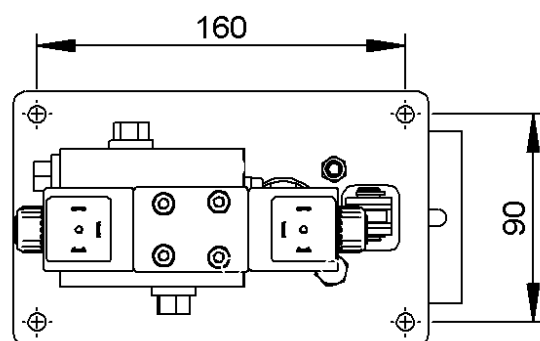
Disegno di ingombro dimensionale
Dimensional drawing



SCHEMA IDRAULICO
HYDRAULIC DIAGRAM



P, T e U: 1/4 GAS



PEDIPOLATORE IDRAULICO A 2 UTILIZZI CON ATTACCHI INFERIORI

HYDRAULIC CONTROL LEVER FOOT WITH 2 PEDALS AND SERVICE PORTS

FUNZIONAMENTO

I pedipolatori idraulici funzionano secondo il principio delle valvole riduttrici di pressione ad azione diretta.

In condizione di riposo il pedale di comando, viene mantenuto in posizione neutra dalla molla di richiamo; l'alimentazione P è chiusa e gli utilizzi sono comunicanti con lo scarico T.

Azionando il pedale, lo spintore comprime la molla di richiamo e quella di reazione, generando una corsa della spola di regolazione la quale apre il passaggio che collega l'attacco P e l'utilizzo determinando un incremento di pressione proporzionale alla corsa del pedale e del tipo di molla di reazione.

Applicazioni

Pilotaggio e regolazione a distanza di:

- distributori oleodinamici
- pompe e motori a portata variabile
- valvole ausiliarie
- frizioni e freni idraulici

OPERATING PRINCIPLE

Hydraulic remote control works according to the principle of directacting pressure reducing valves.

In rest position, the foot pedal is held in neutral by return spring; inlet port P is closed and ports are connected to tank port T.

By selecting foot pedal, plunger compresses return spring and reaction spring; consequently it shifts spool and opens connection holes between inlet port P and service ports.

This causes a pressure increase on service ports that is proportional to the foot pedal stroke and the reaction spring.

Applications:

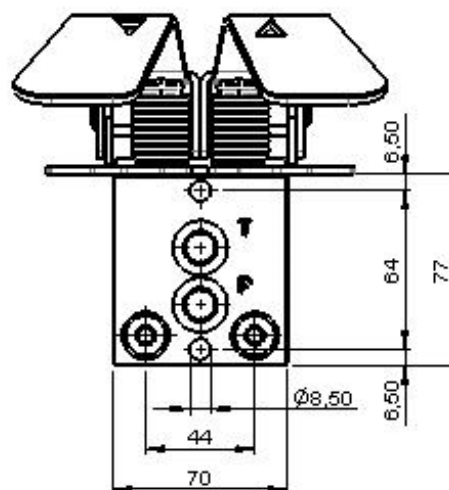
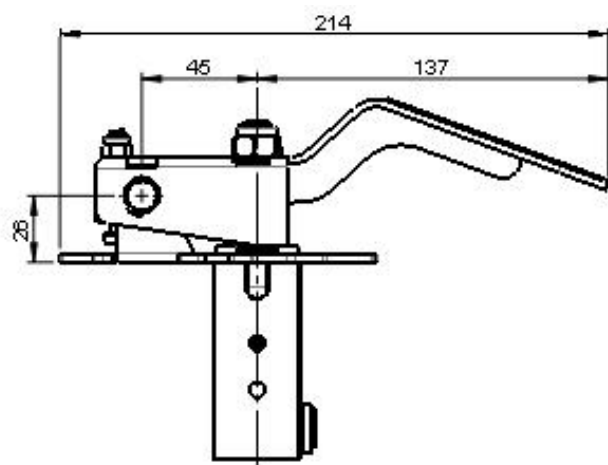
Piloting remote of:

- directional control valve
- variable displacements pumps and motors
- auxiliary valves
- frictions and hydraulic brakes

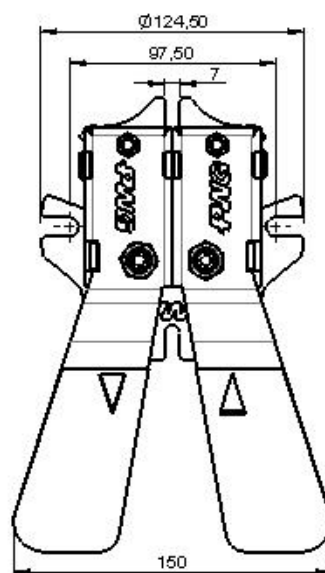
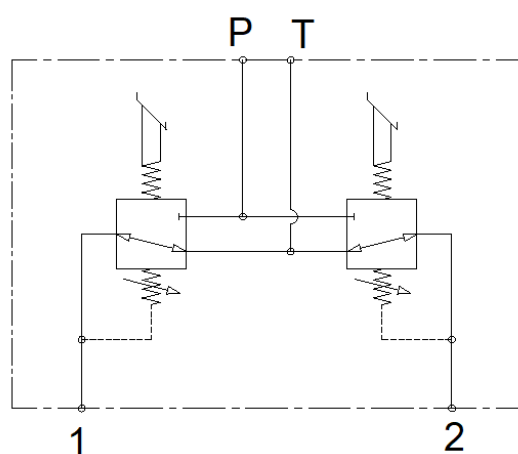
SERIE		P - 2P
Pressione massima Maximum pressure	bar (psi)	100 1450
Pressione massima in scarico Maximum back pressure on tank line	bar (psi)	3 44
Peso Weight	kg	3,2
Isteresi Hysteresis	bar (psi)	0,5 7,25
Portata olio in alimentazione Oil input capacity	l/min GPM	16 4,2
Fluido idraulico Hydraulic fluid	Olio minerale Mineral oil	
Campo di temperatura del fluido Fluid temperature range	°C	-20 +80
Campo di viscosità del fluido Fluid viscosity range	Cst	10÷300
Grado di filtrazione consigliato Recommended filtration	μ	25
Tubazioni di pilotaggio consigliate Recommended operating pipes	mm rigid 1/4" BSP flexible	Ø8
Trafilamento Leakage	cc/min (50 bar)	3

DIMENSIONI DIMENSIONS

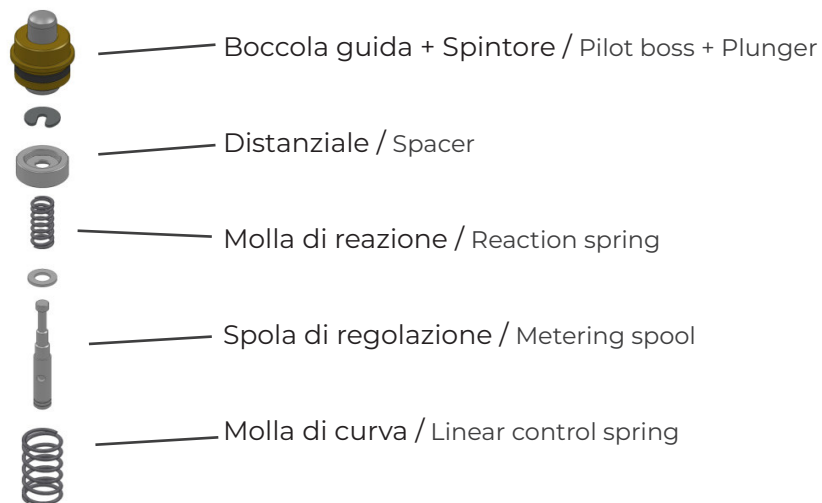
Disegno di ingombro dimensionale
Dimensional drawing



SCHEMA IDRAULICO
HYDRAULIC DIAGRAM

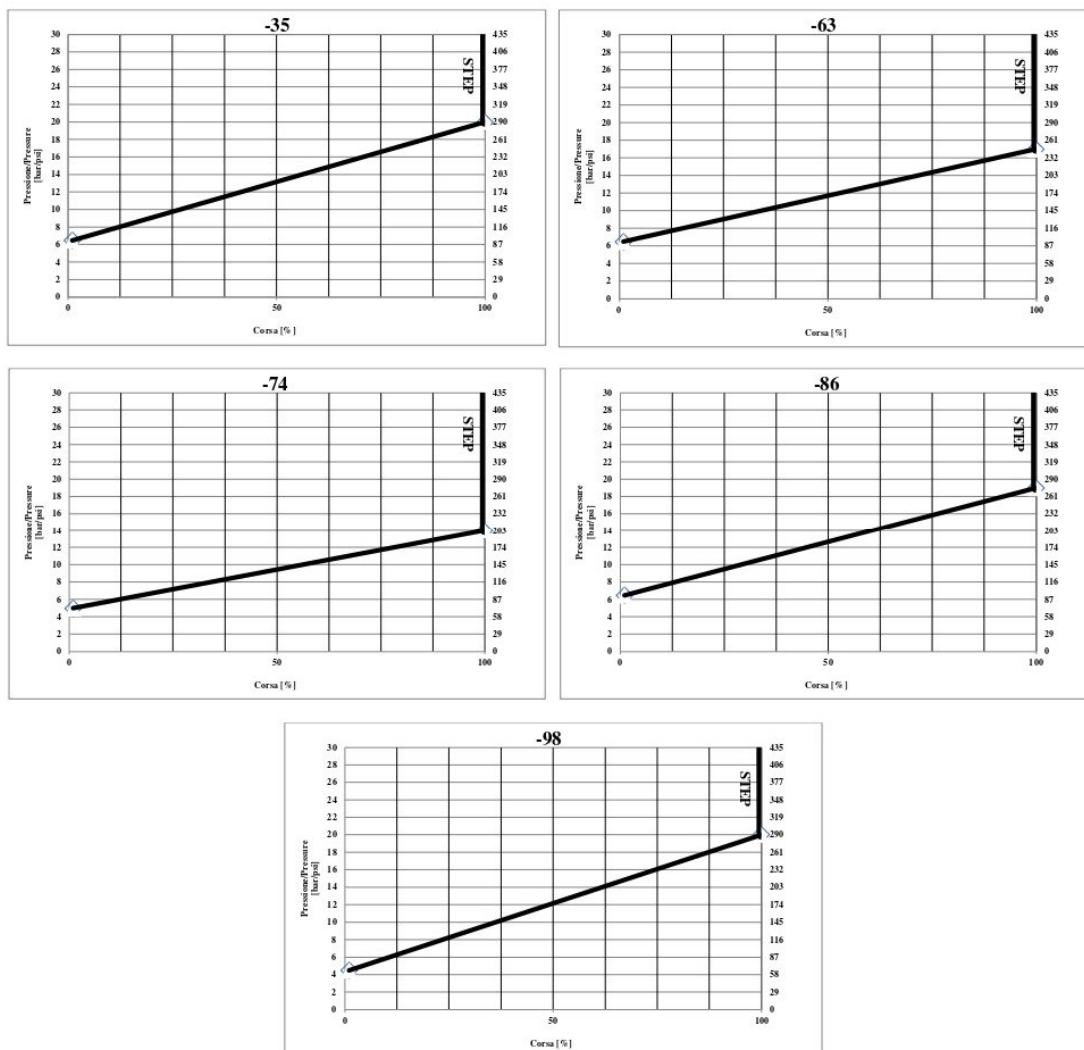


METERING CURVES



GRAFICI - DIAGRAMS

Curve di regolazione con caratteristica lineare con step
Linear metering curve with step



PWG S.r.l.

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