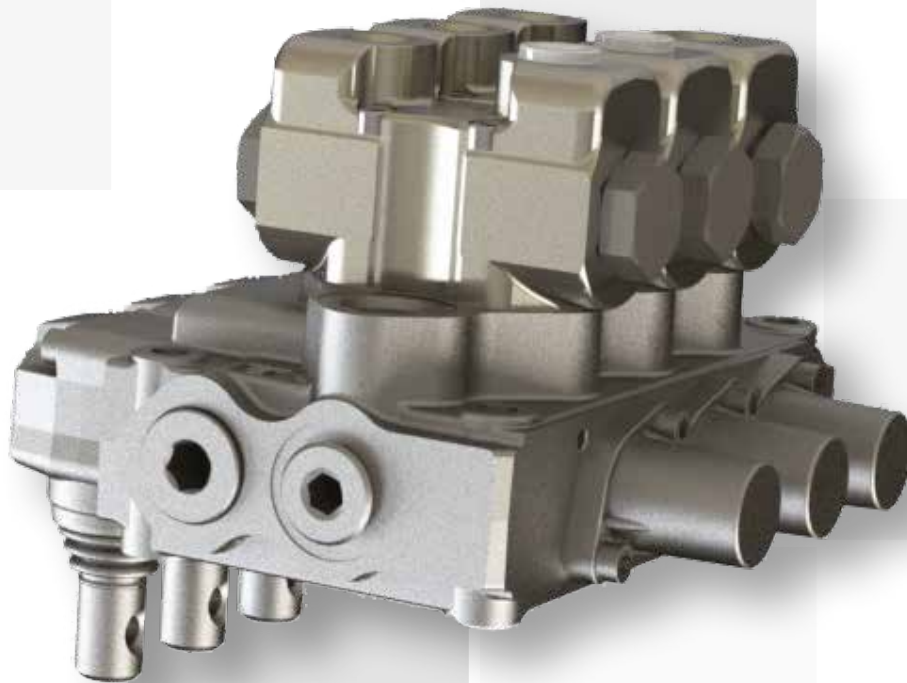


**MONOBLOCK DIRECTIONAL
CONTROL VALVE
AD45**



we create for you



MONOBLOCK DIRECTIONAL CONTROL VALVE

AD45

45 l/min - 315 bar

1 DESCRIPTION

Simple, compact, and heavy duty designed monoblock valves from 1 to 7 sections for open and closed centers hydraulic system.

Monoblock valves of the AD45 model are characterized by a single body having the following features:

- Low production cost, tough construction, compact size
- Fitted with a main pressure relief valve and load check valve.
- Available with parallel circuit.
- Optional carry-over port.
- Diameter 16 mm (0,63 in) interchangeable spools, compatible with main monoblock valves producers.
- A wide variety of service port valve options.
- Actuation is manual, pneumatic, hydraulic, electro-hydraulic.

2 TECHNICAL DATA

Technical specifications and diagrams measured with mineral oil of 46 cSt viscosity at 40 °C

Nominal flow rating		45 l/m	12 US gpm
Operating pressure (max)	<i>parallel and tandem circuits</i>	315 bar	4600 psi
	<i>series circuit</i>	250 bar	3600 psi
Back pressure (max)	<i>outlet port T</i>	25 bar	360 psi
Internal leakage (max)	<i>ΔP=100 bar (1450 psi) fluid and valve at 40°C (104° F)</i>		0.18 in ³ /min
A (B) to T Fluid			Mineral based oil
Fluid temperature	<i>with NBR</i>	from -20°C to 80°C	from -4° F to 176° F
	<i>with FPM</i>	from -20°C to 100°C	from -4° F to 212° F
Viscosity	<i>operating range</i>	from -15°C to 75°C	from 15 to 75 cSt
	<i>min</i>	12 mm ² /s	12 cSt
	<i>max</i>	400 mm ² /s	400 cSt
Max contamination level		19/16-ISO 4406	NAS 1683 - class 10
Ambient temperature	<i>with mechanical, pneumatic and hydraulic devices</i>	from -40°C to 60°C	from -40°F to 140° F
	<i>with electric devices</i>	from -20°C to 60°C	from -4°F to 140° F

3 REFERENCE STANDARDS

Standard		BSP	UN-UNF	METRIC	NPTF
Thread according to		ISO 228/1 BS 2779	ISO ANST B1.1 unified	ISO 262	ANSI B1.20.3
Cavity dimension according to	ISO	1179	11926	9947-1	
	SAE		J1926	J2244	J476a
	DIN	3852-2		3852-1	

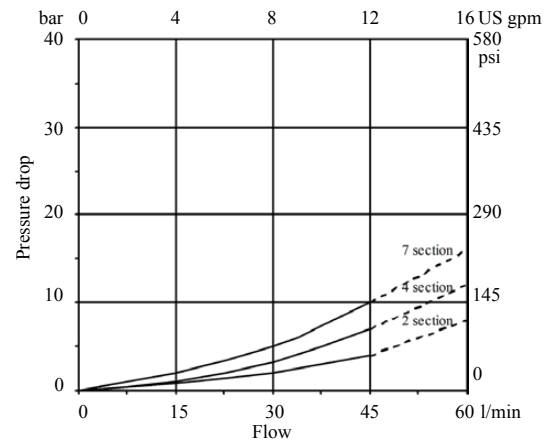
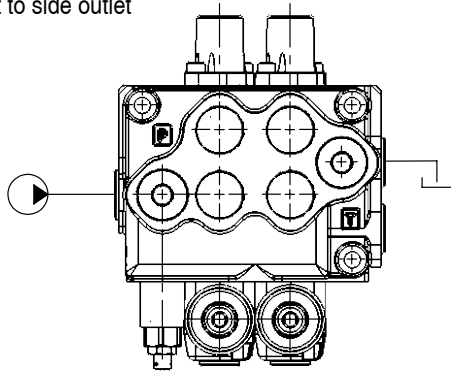
4 PORT THREADS

Order code	BSP			UN-UNF	Metric
	G	G38	G12	S	M
Inlet P and N	G1/2	G3/8	G1/2	3/4-16 (SAE8)	M18x1,5
Port A and B	G3/8	G3/8	G1/2	9/16-18 (SAE6)	M18x1,5
Outlet T	G1/2	G3/8	G1/2	3/4-16 (SAE8)	M18x1,5
Hydraulic pilots	G1/4			9/16-18 (SAE6)	G 1/4
Pneumatic pilots	NPTF 1/8-27				

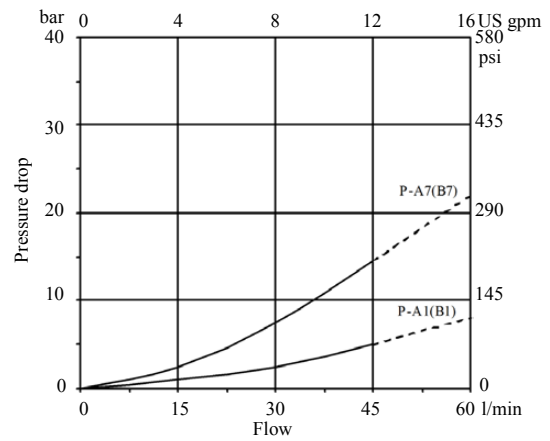
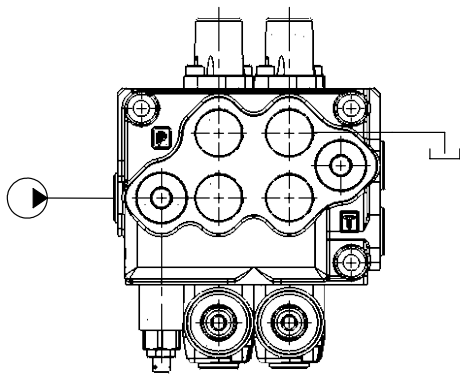
Note: standard port threads: BSP G

5 TECHNICAL DATA (pressure drop vs. flow)

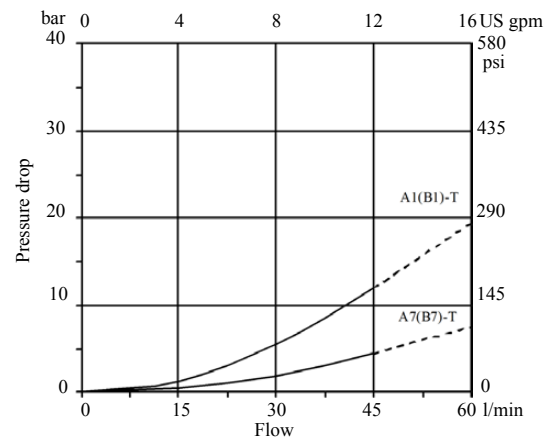
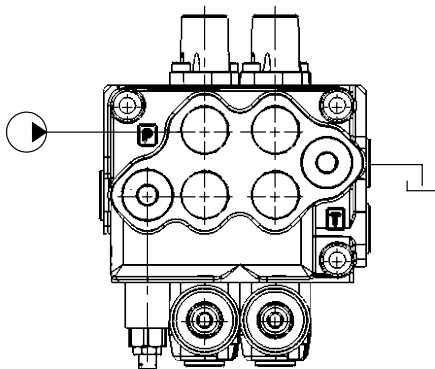
Open center
From side inlet to side outlet



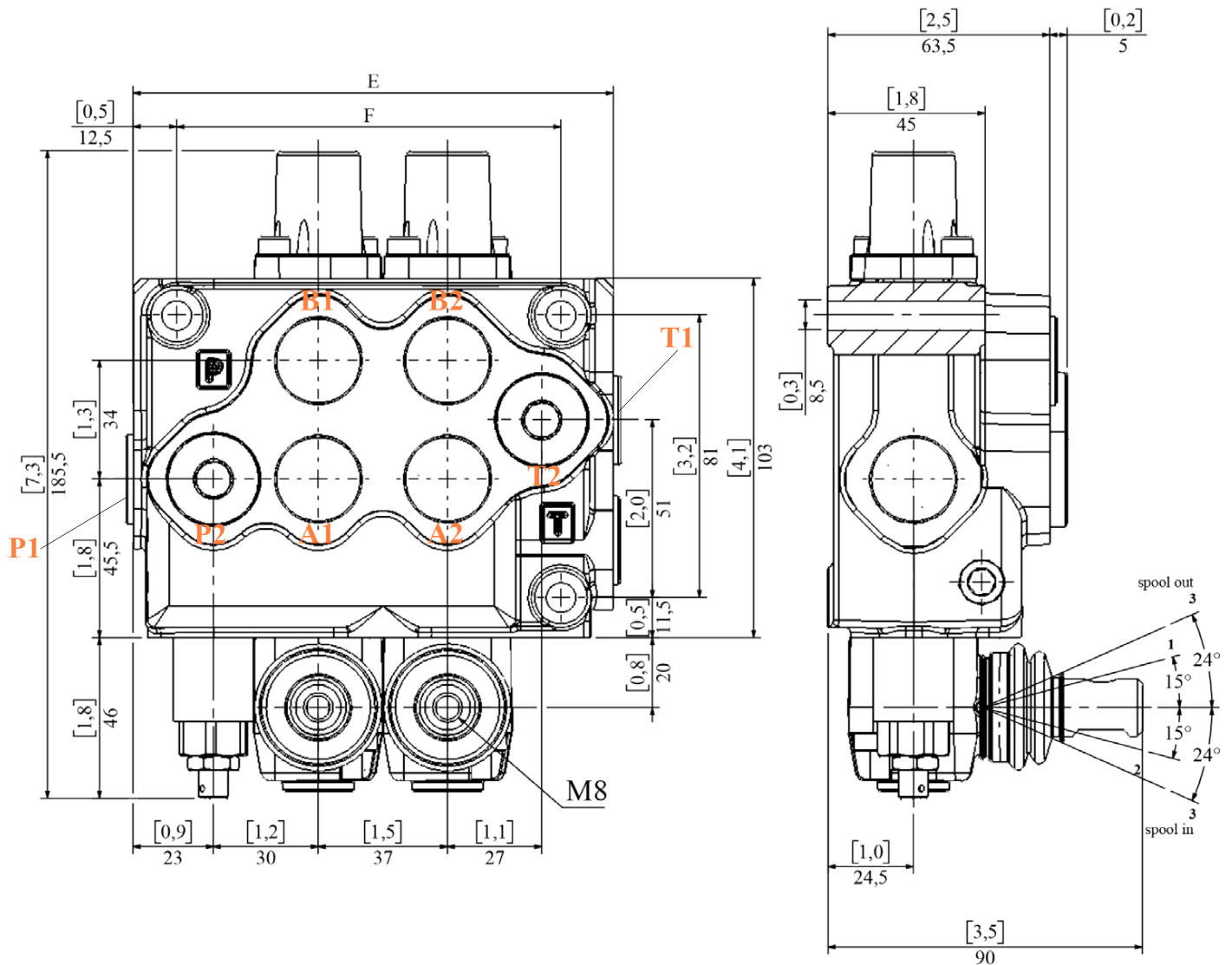
Inlet to work port
From side inlet to A port (spool in pos 2) or B port (spool in pos 1)



Work port to outlet
From A port (spool in pos 2) or B port (spool in pos 1) to side outlet



6 INSTALLATION DIMENSIONS FOR P VERSION (parallel circuit)

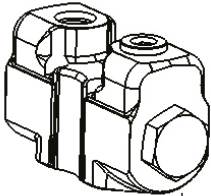


Type	E		F		Weight	
	mm	in	mm	in	kg	lb
AD45/1	100,5	3,96	73	2,87	3,5	7,7
AD45/2	137,5	5,41	110	4,33	5,2	11,5
AD45/3	174,5	6,87	147	5,79	6,9	15,2
AD45/4	211,5	8,33	184	7,24	8,1	17,9

Type	E		F		Weight	
	mm	in	mm	in	kg	lb
AD45/5	248,5	9,78	221	2,87	3,5	7,7
AD45/6	285,5	11,24	4,33	5,2	11,5	
AD45/7	322,5	12,70	147	5,79	6,9	15,2

7 SERVICE AND AUXILIARY VALVES

All service and auxiliary valves need special body: contact sales department.



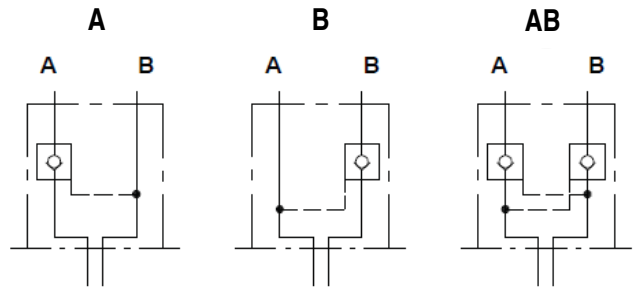
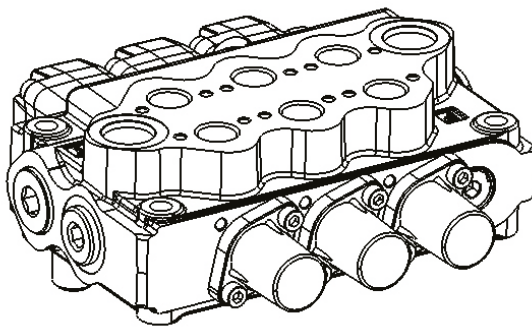
1. Pilot check valves

1. Pilot check valve

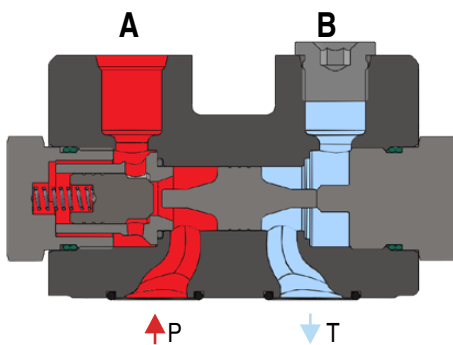
Supplied with mounting block

Type	Description
CP-AM-A	Check valve on port A
CP-AM-B	Check valve on port B
CP-AM-AB	Check valve on port A and B

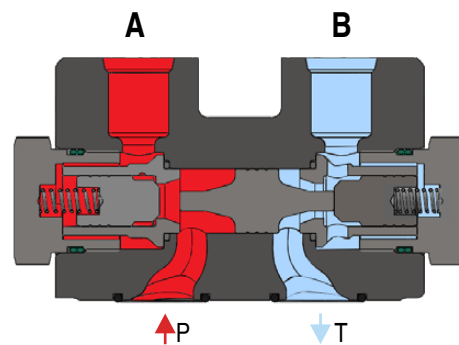
Mounting on the side of working ports



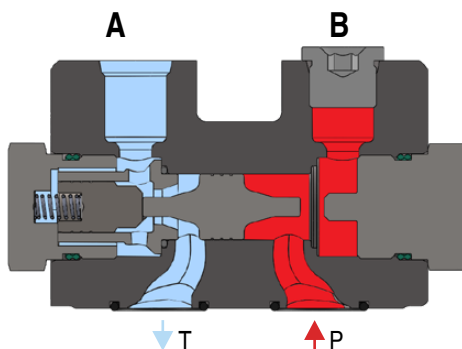
CP-AM-A example
pressure on port A and port B to tank



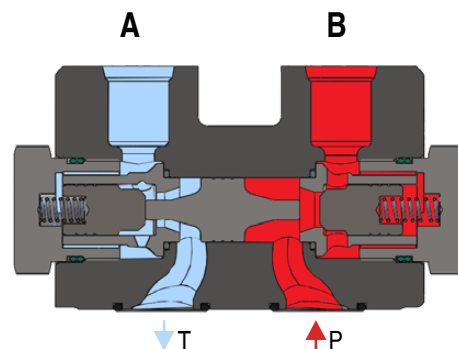
CP-AM-AB example
pressure on port A and port B to tank



pressure on port B and port A to tank



pressure on port B and port A to tank

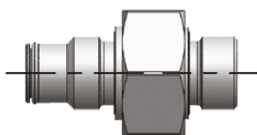


8 CARRY-OVER CONNECTION

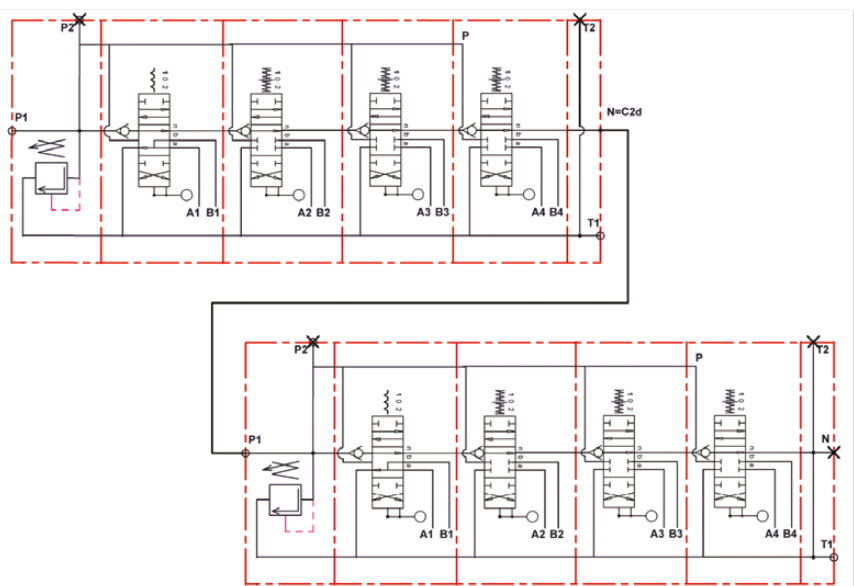


With this new high-pressure carry over connection you do not need any pipes and fittings, saves space and can now combine two AD45/4 valves into single AD45/8 which was not possible before.

Sample order code and hydraulic scheme for 2 pcs AD5/4:
AD45/4 (MO2-220)/D8/A1/A1/A1/KZ1 11 G/C2d + AD45/4 (MO2-250)/D8/A1/A1/A1/KZ1 11 G



C2d connection plug





REMOTE CONTROL SYSTEM FOR DIRECTIONAL CONTROL VALVE AD45 ACCESSORIES

1 ACC5

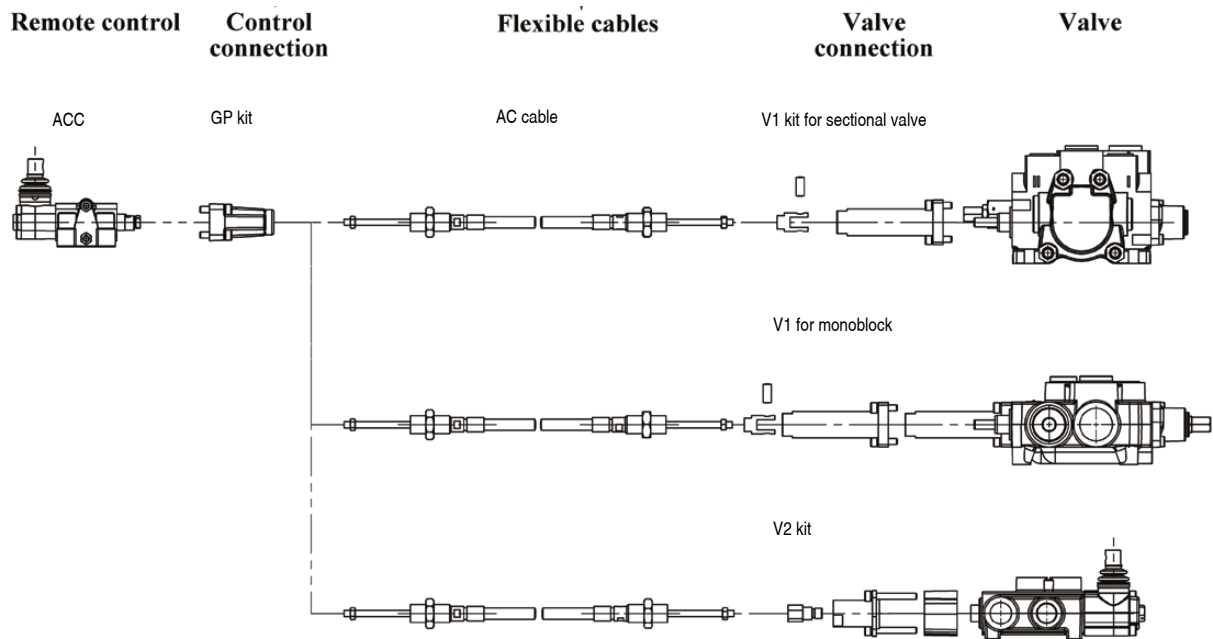
The remote control systems for directional control valves, with flexible cables, allows the operator to act on the directional control valve in a safer or more ergonomic place when the valve itself is installed in a place difficult to operate directly.

Due to the improved design the system has a low actioning effort and is easy to install.

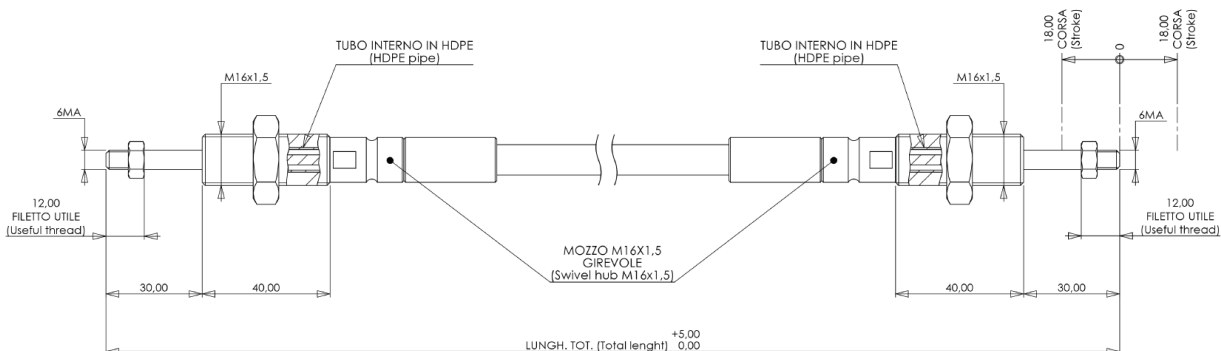
Bodies are aluminum die casted, stackable, available with several type of knobs and options.



Remote control with Flexible cables



2 FLEXIBLE CABLES



aidro

hydraulics & 3D printing

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