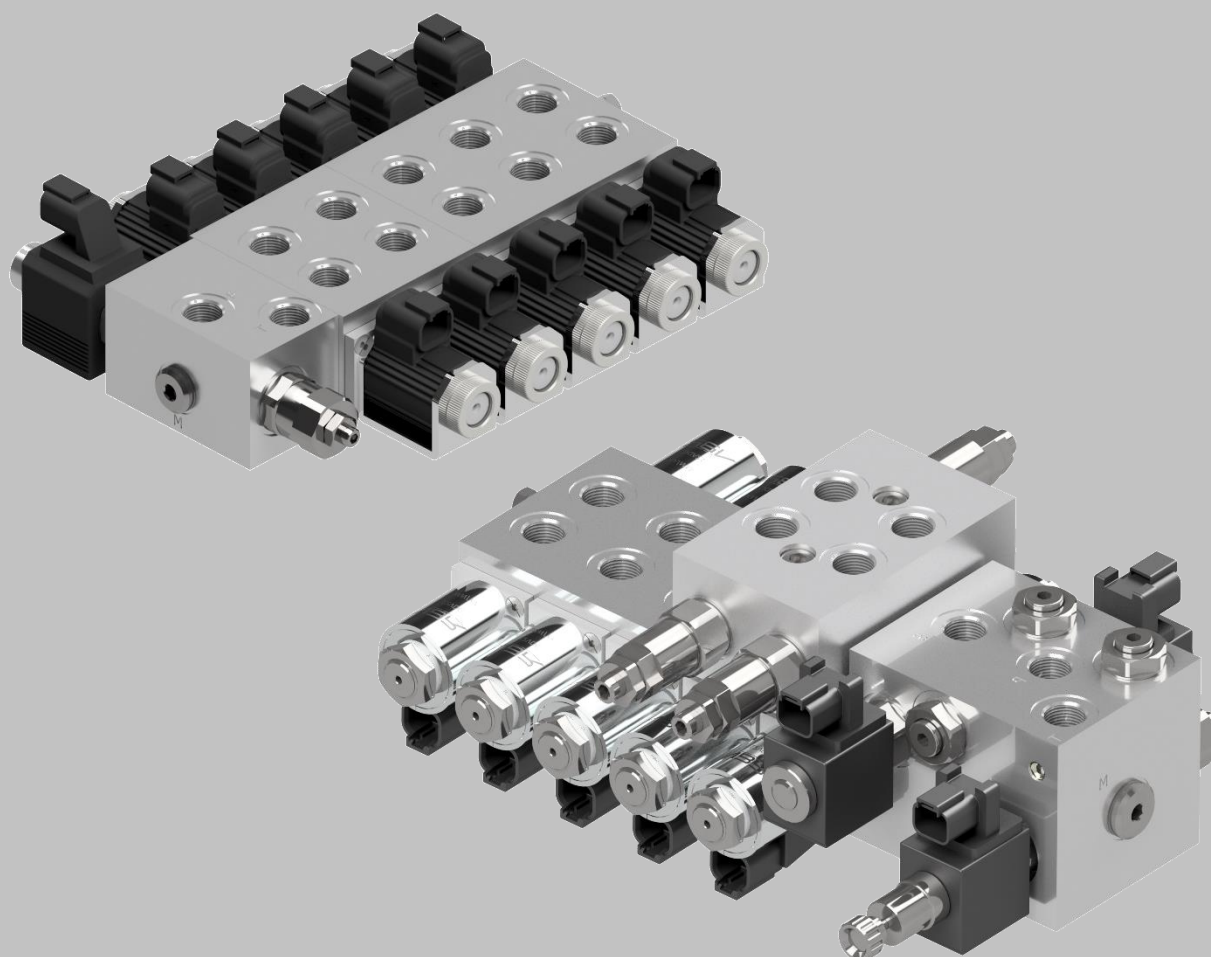




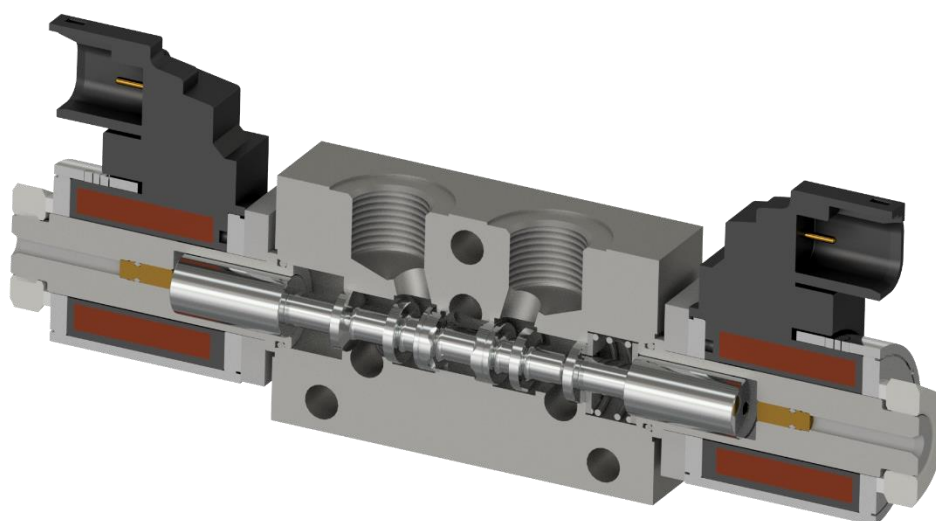
VD12

DIRECTIONAL CONTROL VALVE



VBR
HYDRAULICS

- Direct acting with pull-type ON/OFF solenoid
- Compact design
- Product with wide customization options
- Designed with parallel connection
- Push pin manual override
- Wide range of spool types
- Wide range of auxiliary function for each working section
- Special ports dimensions available on request



TECHNICAL SPECIFICATION

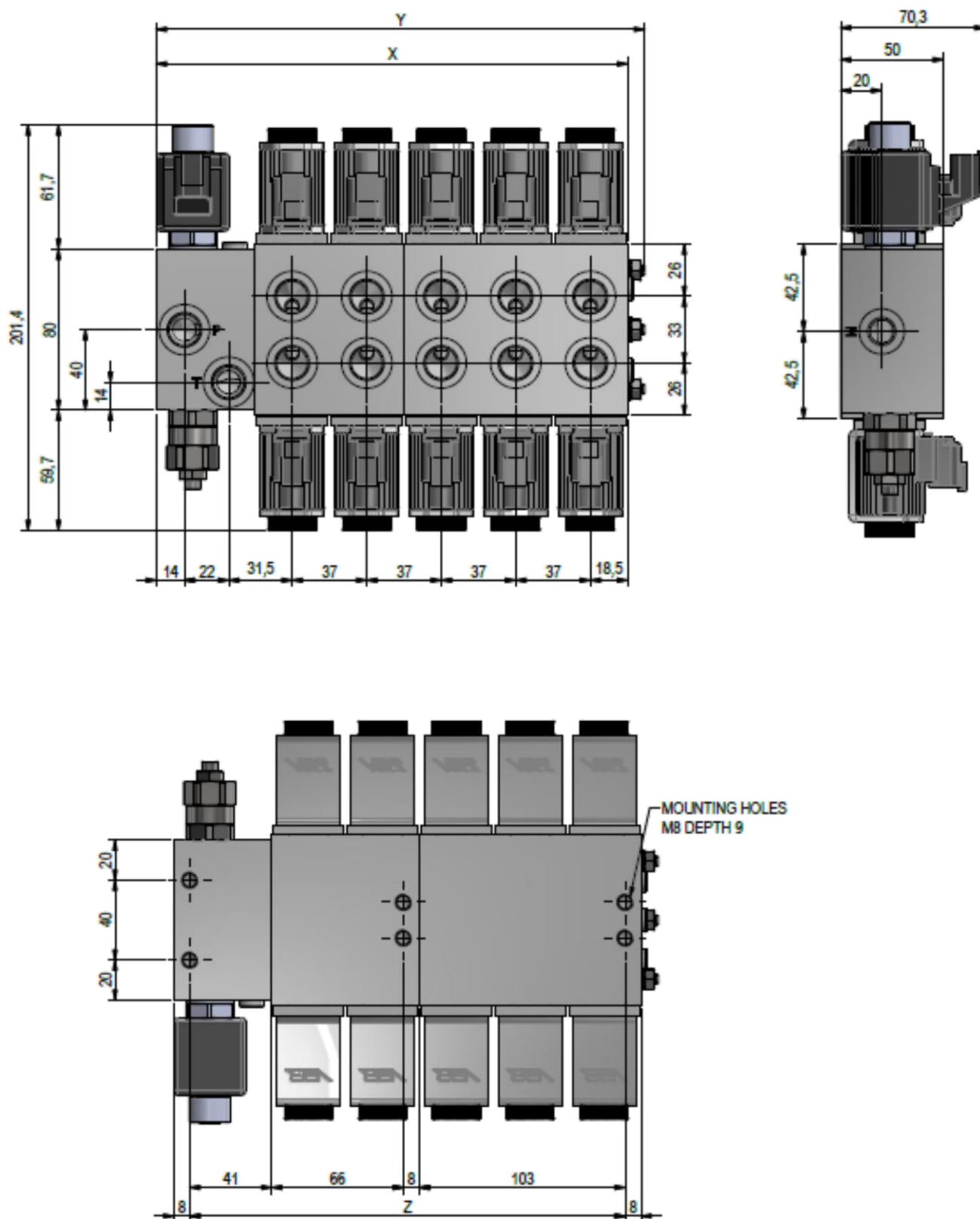
Max flowrate on working ports	Up to 35	l/min
Max working pressure	250	bar
Max back pressure on T line	30	bar
Ambient temperature range	-20 / +50	°C
Fluid temperature range	-20 / +90	°C
Fluid viscosity range	10 ÷ 200	cSt
Fluid contamination degree	18/16/13	ISO4406

Materials

Inlet: Alluminum or Steel Zinc plated
Working section: Cast Iron Zinc plated

Port dimensions	G1/4 - G3/8 - SAE6 – RRM...	
Nominal voltage	12 / 24	VDC
Coil power	20,5	W
Connector type	DT04-2P, AMP-JPT, DIN	

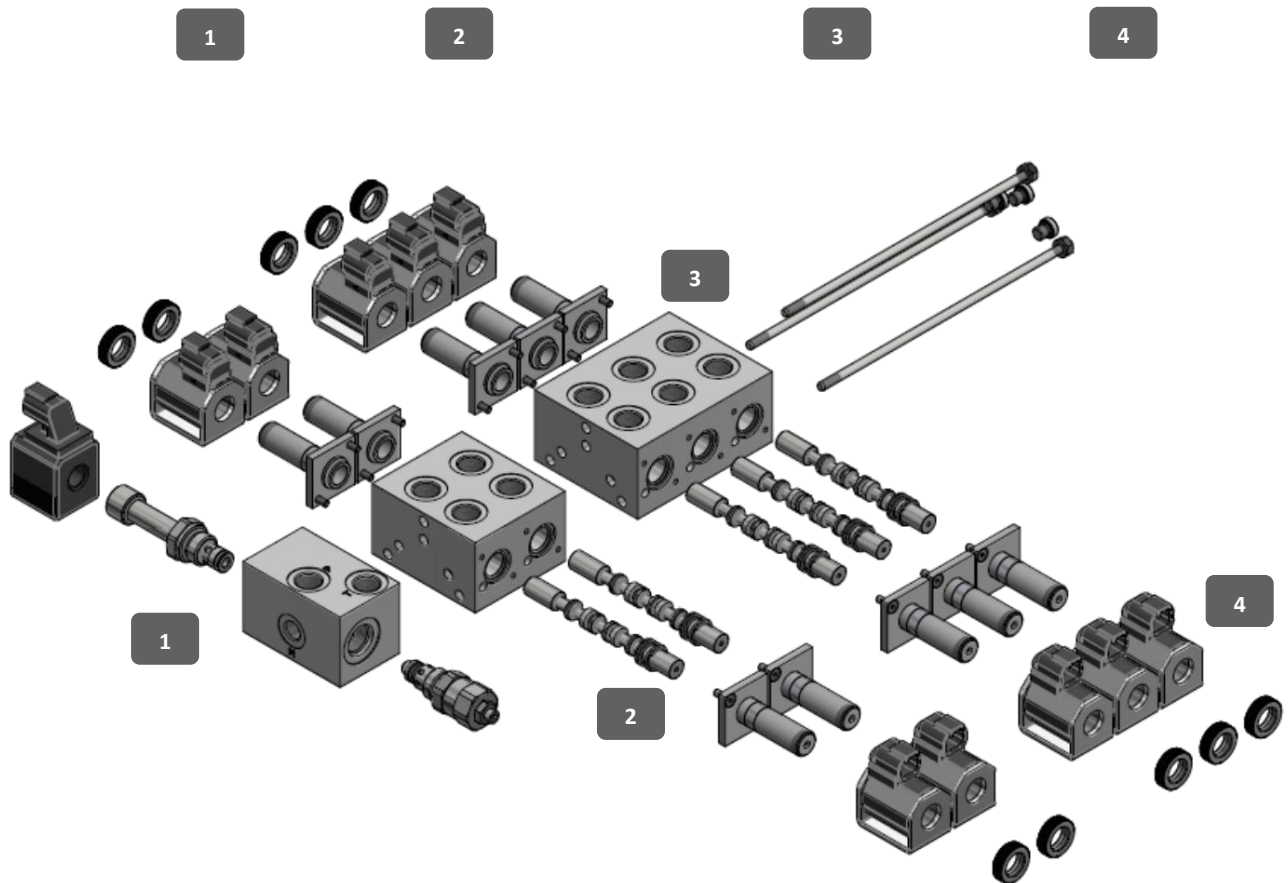
Note: technical specification measured with mineral oil 46cSt @ 40°C



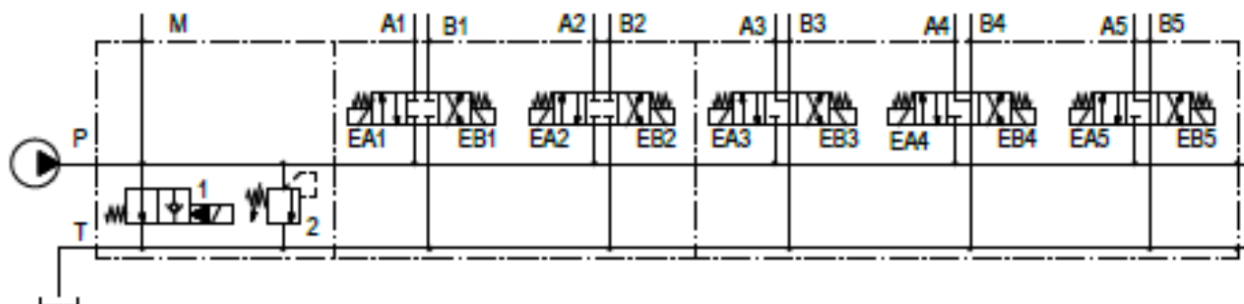
WORKING SECTION	A TYPE			A1 TYPE			B TYPE			C TYPE		
	INLET SECTION			INLET SECTION			INLET SECTION			INLET SECTION		
	X [mm]	Y [mm]	Z [mm]	X [mm]	Y [mm]	Z [mm]	X [mm]	Y [mm]	Z [mm]	X [mm]	Y [mm]	Z [mm]
\2	123	130,6	107	98	105,6	84	153	160,6	74	174	181,6	101
\3	160	167,6	144	135	142,6	121	190	197,6	111	211	218,6	138
\4	197	204,6	181	172	179,6	158	227	234,6	148	248	255,6	175
\5	234	241,6	218	209	216,6	195	264	271,6	185	285	292,6	212
\6	271	278,6	255	246	253,6	232	301	308,6	222	322	329,6	249
\7	308	315,6	292	283	290,6	269	338	345,6	259	359	366,6	286
\8	345	352,6	329	320	327,6	306	375	382,6	296	396	403,6	323

ORDERING DESCRIPTION

VD12 / 5 / A - G38 - 210 - E / S - G38 - 1 / S - G38 - 1 / S - G38 - 2 / S - G38 - 2 / S - G38 - 2 / 12 - DT



Hydraulic diagram



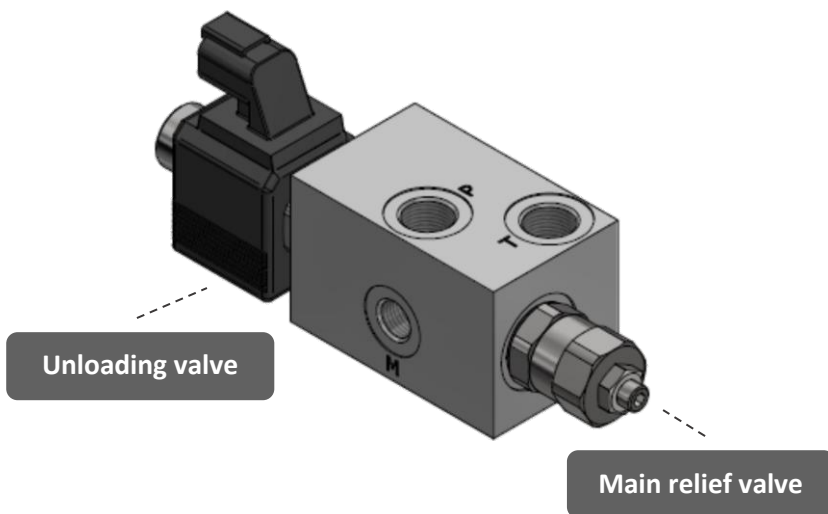
ORDERING EXAMPLE DESCRIPTION

INLET SECTION	FIRST WORKING SECTION	OTHER WORKING SECTION
VD12 / 5 / B - G38 - 210 - E / S - G38 - 1 - V . A . 150 - S / ... / 12 - DT		
Directional Control Valve Nr of working sections <u>Inlet section type:</u> A: standard A1: compact B: with proportional flow control valve C: with simple effect control D: double proportional control valves Z: custom <u>Port dimensions:</u> G14: BSP G1/4 G38: BSP G3/8 S06: UN-UNF SAE6 Main relief valve pressure setting E: with Solenoid Unloader valve EP: with Solenoid Unloader valve with push pin override ES: with Solenoid Unloader valve with screw override <u>Port type:</u> L: side port S: upper port <u>Port dimensions:</u> G14: BSP G1/4 G38: BSP G3/8 S06: UN-UNF SAE6 <u>Spool type:</u> 1: A and B closed in central position (CC) 2: A and B to Tank in central position (OC) 3A: A closed and B to Tank in central position 3B: B closed and A to Tank in central position 6A: A and B to Tank in central position + Regenerative to A 6B: A and B to Tank in central position + Regenerative to B (Other spool type on request)		Coil connection: DT: Deutsch DT04-2P DI: DIN 43650 AJ: AMP Junior Timer Coil Type: 12: 12 VDC 24: 24 VDC Manual Override Type: S: standard P: push button L: manual lever Auxiliary function valve pressure setting Port of Auxiliary function: 2: A and B A: on port A B: on port B Auxiliary function: A: Anticavitation valve B: Pilot operated check valve L: Relief valve V: Relief and anticavitation valve U: Unloading valve O: Overcenter valve (Other function on request)

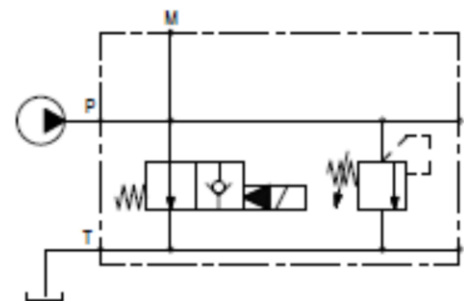
A Type Inlet Section

Inlet section with pressure relief valve and unloading valve

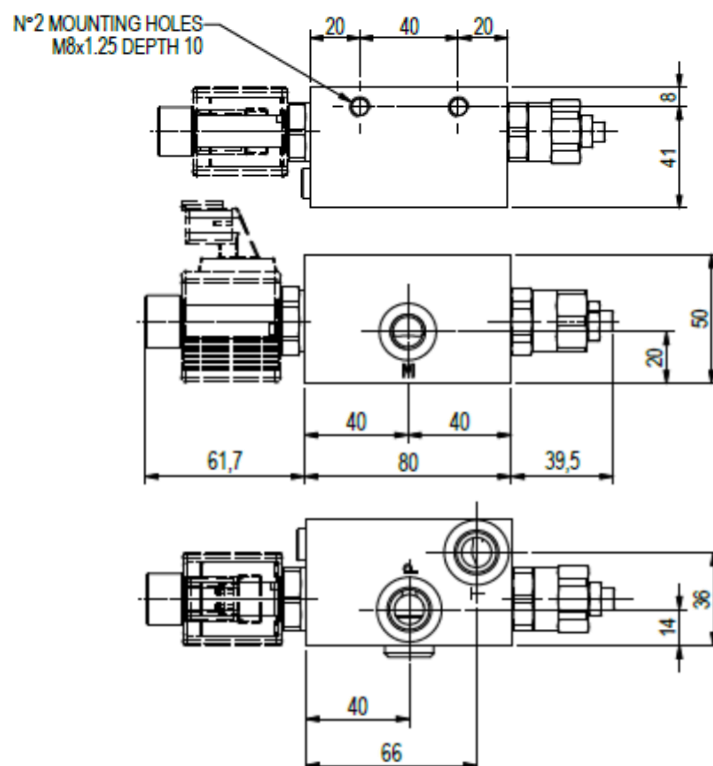
- P and T ports BSP G3/8"
- M Pressure gauge BSP G1/4"
- Aluminum body
- Manual adjustment pressure relief valve
- Unloading valve



Hydraulic diagram



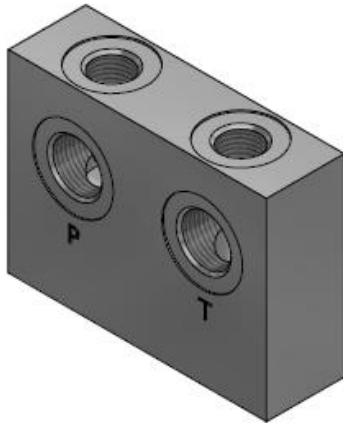
Dimensions



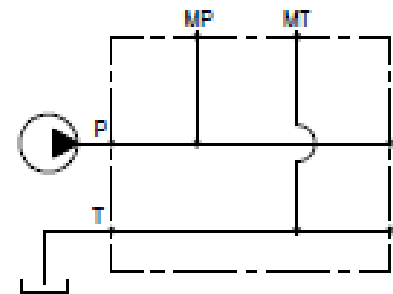
A1 Type Inlet Section

Inlet section with compact design

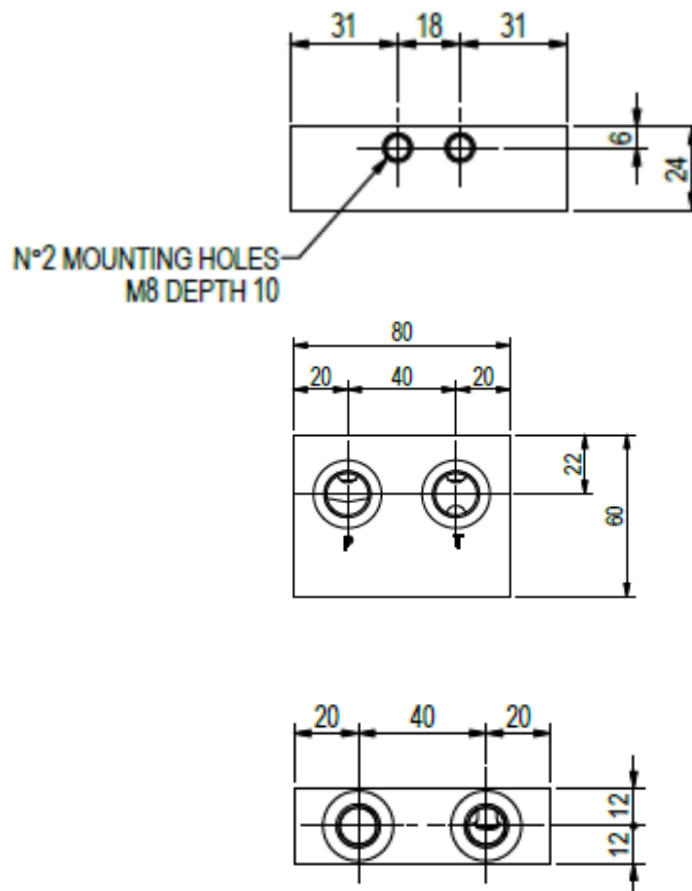
- P and T ports BSP G3/8"
- M Pressure gauge BSP G1/4"
- Aluminum body



Hydraulic diagram



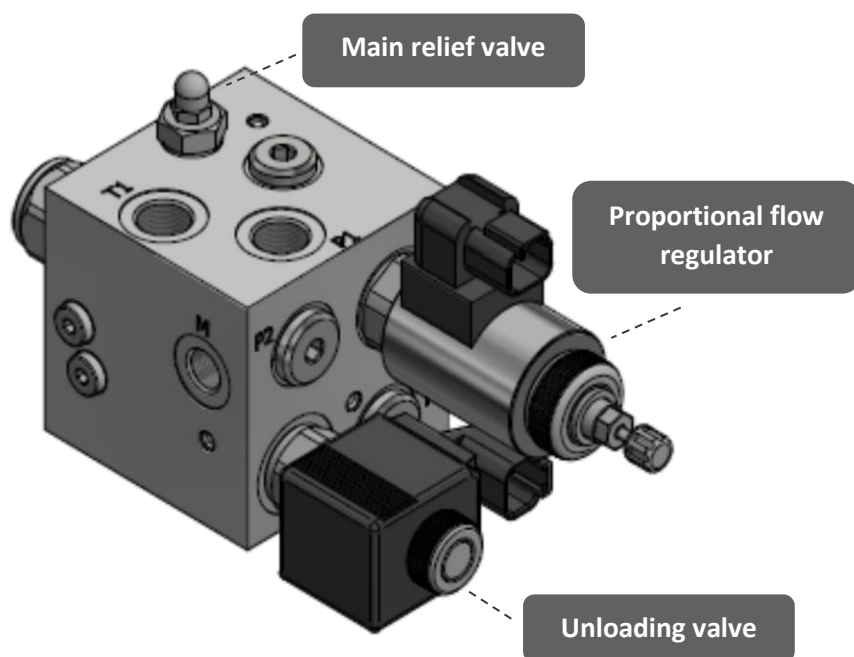
Dimensions



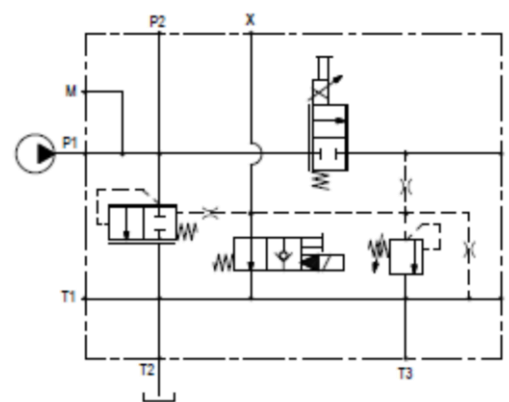
B Type Inlet Section

Inlet section with LS line and proportional pressure compensated flow regulator

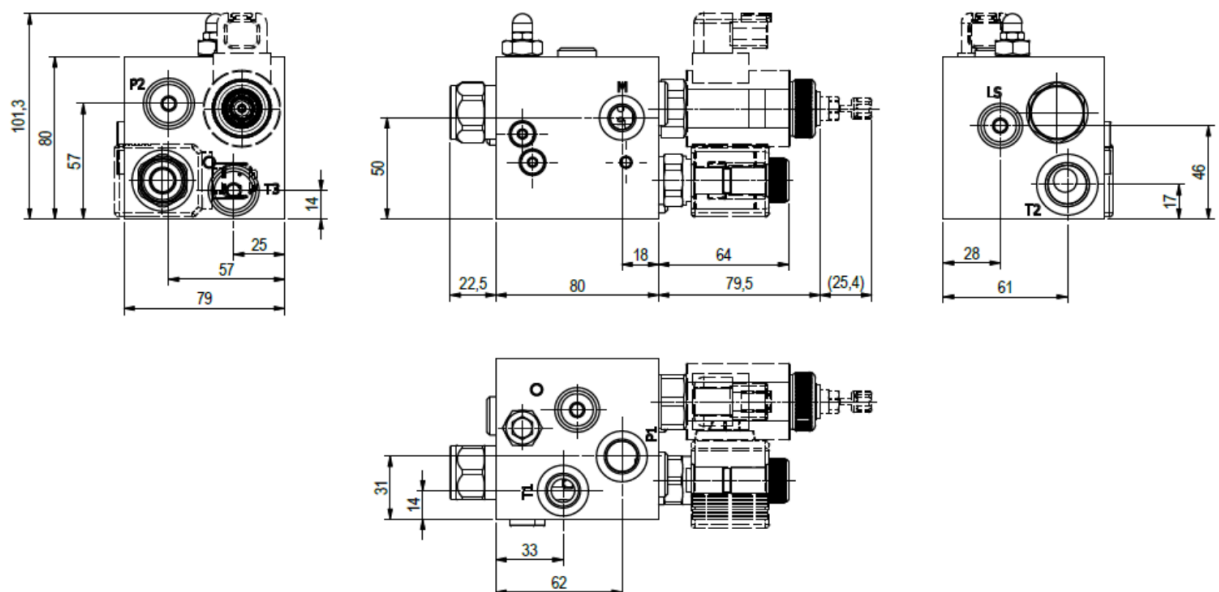
- T2 port BSP G1/2"
- P1, P2, T1, T3 ports BSP G3/8"
- M and LS ports BSP G1/4"
- Aluminum body
- Pressure compensator stand-by 11 bar
- Manual adjustment pressure relief valve
- Orifice LS bleeding
- Unloading valve



Hydraulic diagram



Dimensions

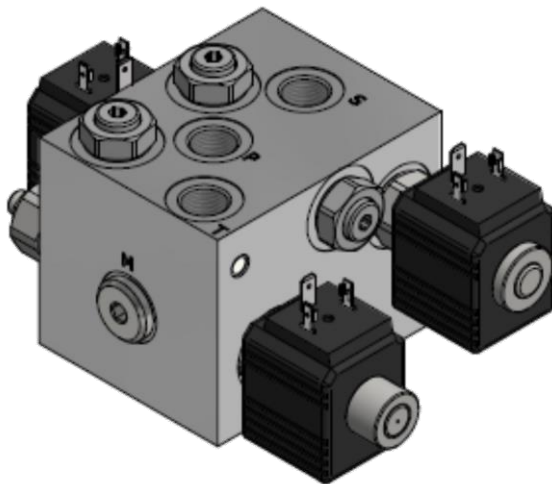


Customized Inlet Sections

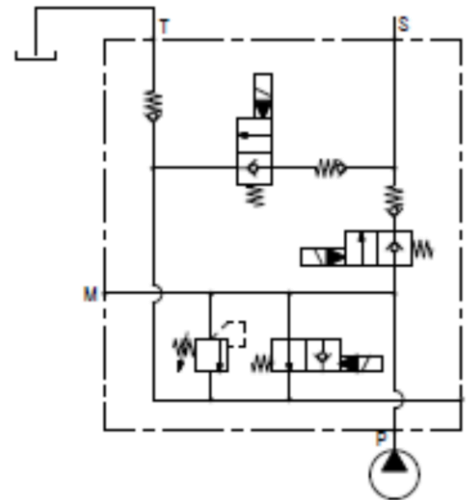
C type

Inlet section with control for single effect actuator

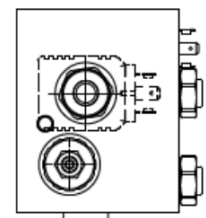
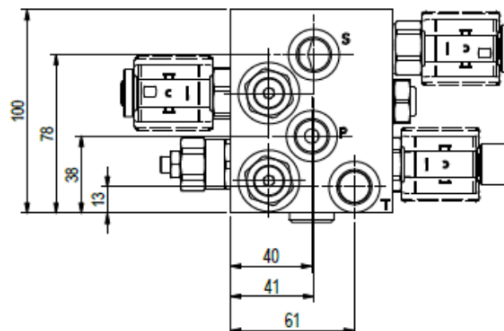
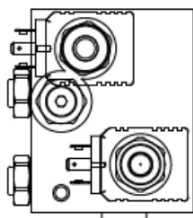
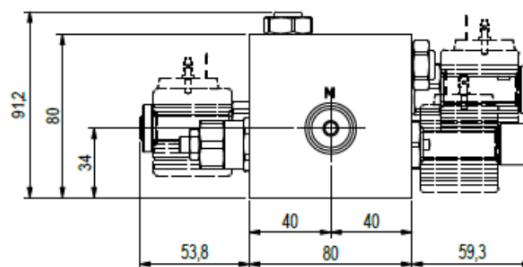
- P, S and T ports BSP G3/8"
- M Pressure gauge BSP G1/4"
- Aluminum body
- Manual adjustment pressure relief valve
- Unloading valve



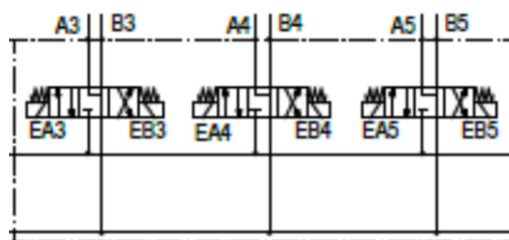
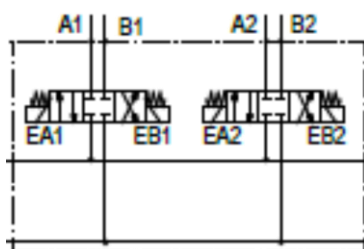
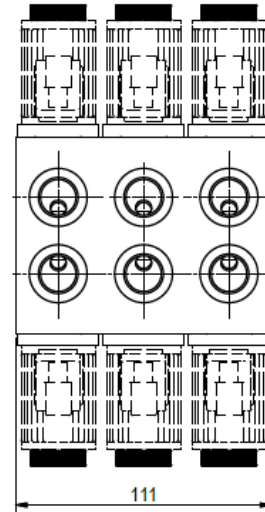
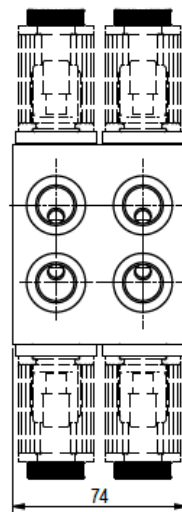
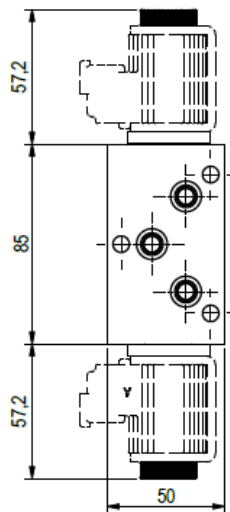
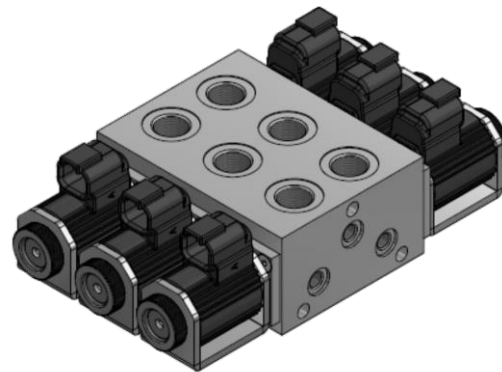
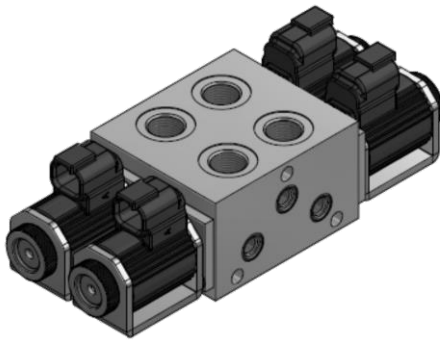
Hydraulic diagram



Dimensions



- A and B ports BSP G3/8" or G1/4"
- Direct acting with PULL type on/off solenoid
- Cast iron body
- Available with 2 or 3 working sections
- Available with different manual override



Type 1 A&B closed in central position

Type 2 A & B to tank in central position

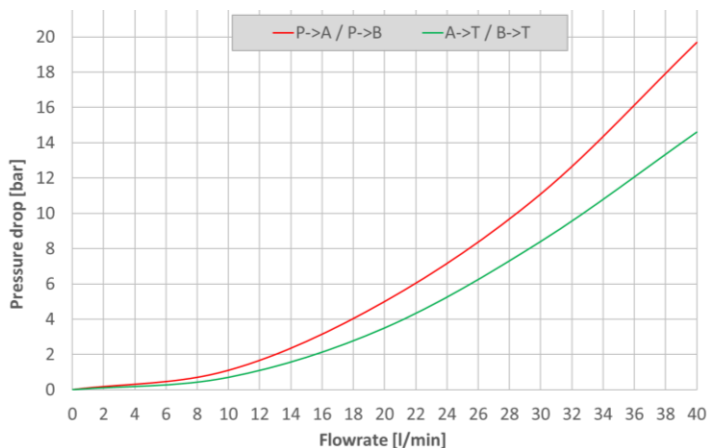
Type 3A/3B A closed and B to Tank or B closed and A to tank in central position

Type 6A/6B A and B closed in central position and regenerative function in pos. 1 or 2

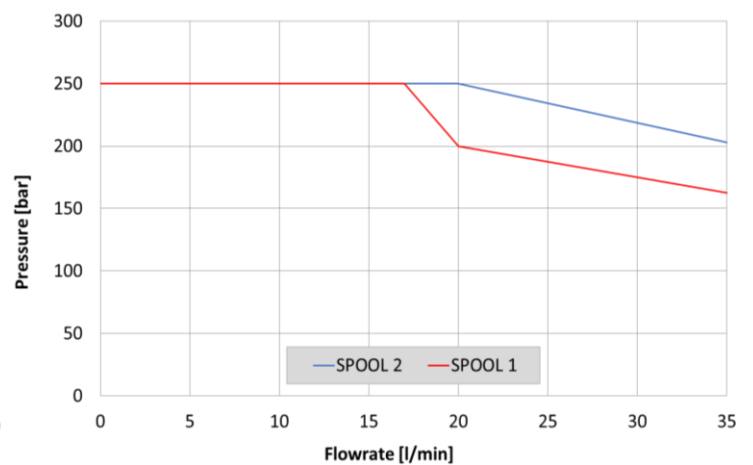


Other special spool types available on request

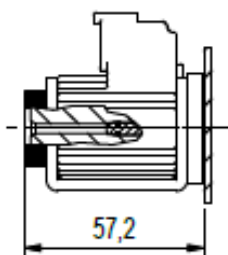
Spool pressure drop



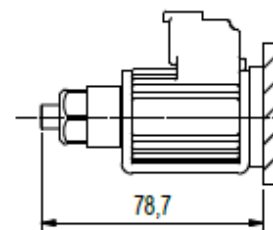
Operating limits



OVERRIDE



S standard type: push pin override

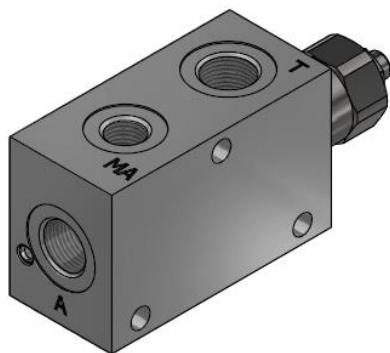


P type: push button override

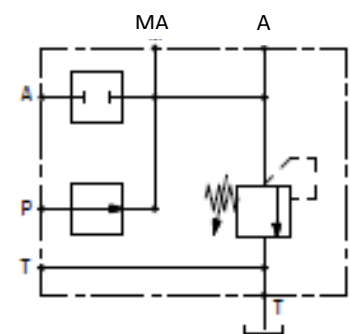
SA outlet cover with pressure relief valve

- Manual adjustment pressure relief valve
- A and T ports BSP G 3/8"
- MA port BSP G1/4"
- Aluminum body

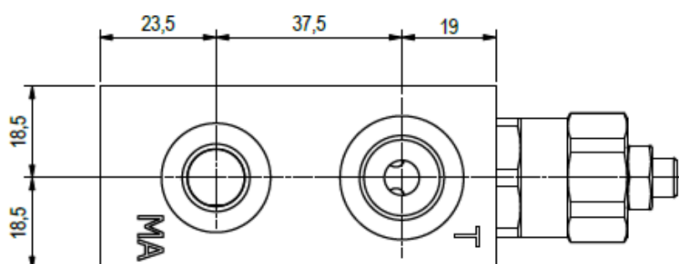
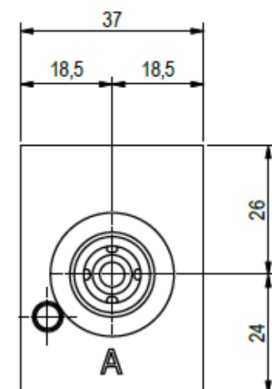
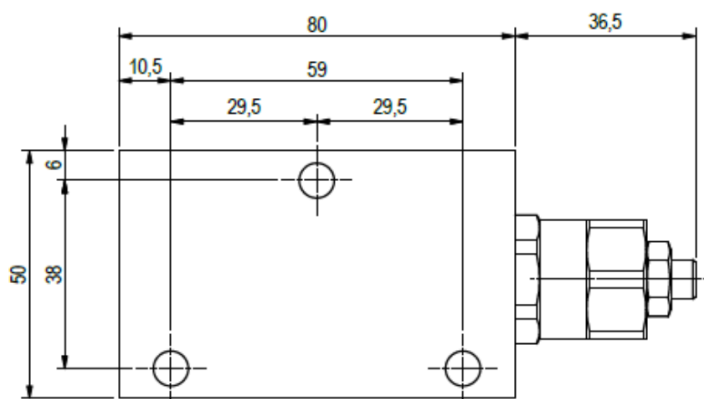
Other options available on request



Hydraulic diagram

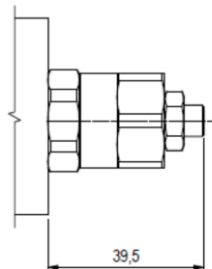


Dimensions

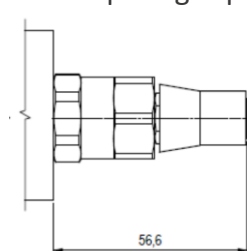


Valves for A, C and SA covers

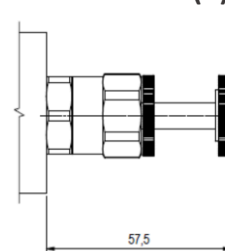
Standard main relief valve



Anti tampering cap (A)

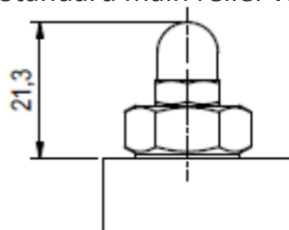


Handknob (K)

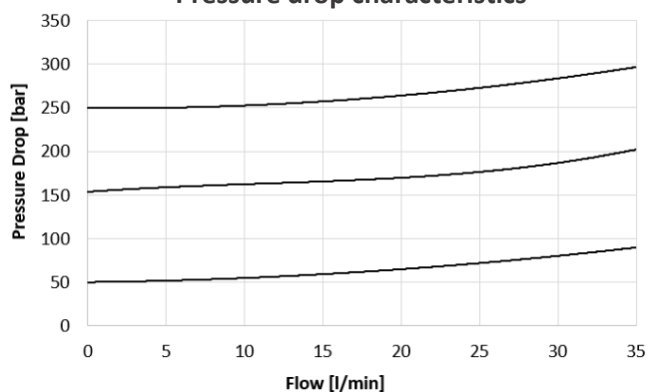


Valves for B and D covers

Standard main relief valve

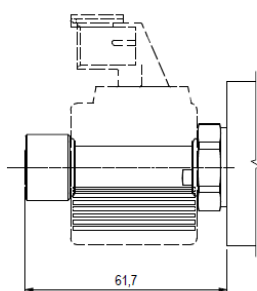


Pressure drop characteristics

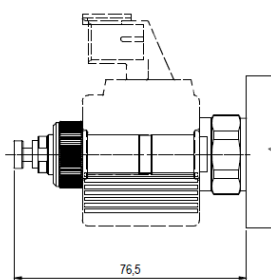


UNLOADING VALVES

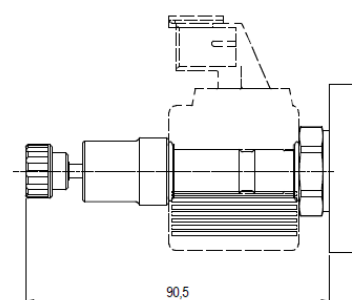
Standard unloading valve (E)



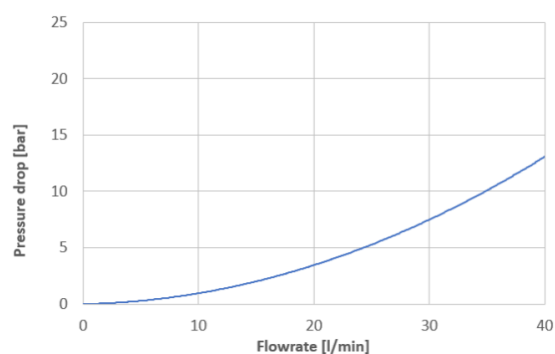
With push pin override (EP)

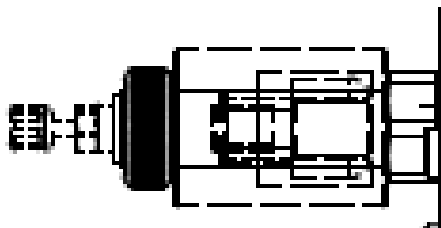


With screw override (ES)

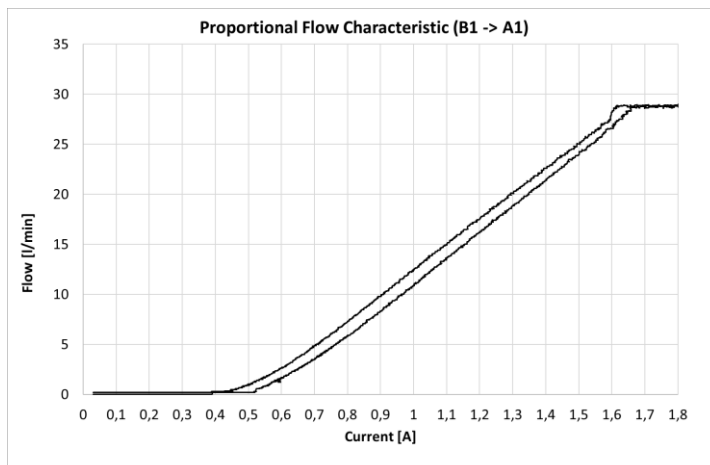


Pressure range characteristics



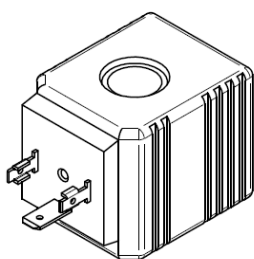


- Available with or without screw override
- Other flow characteristics on request

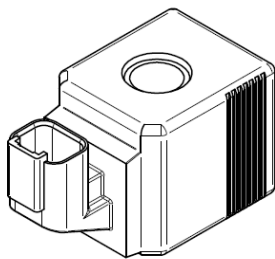


COILS

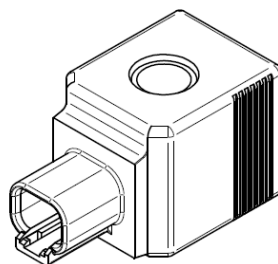
For unloading valve



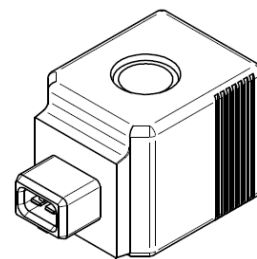
DIN 43650/ISO4400



DEUTSCH DT04-2P-PL



DEUTSCH DT04-2P-PP



AMP JPT

Voltage: 12 VDC and 24 VDC

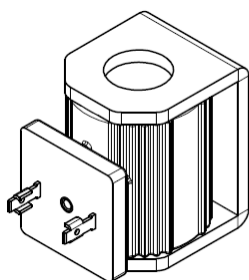
Nominal power: 19 W

Duty cycle: ED100%

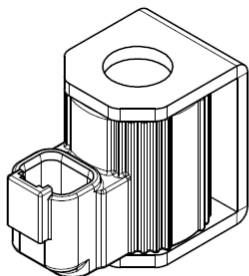
Ambient temperature range: -30 / +80°C

Coil Thermal Class: H (180°C)

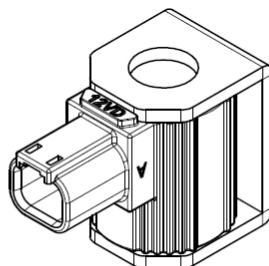
For working section



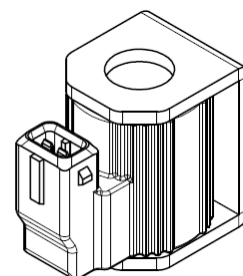
DIN 43650/ISO4400



DEUTSCH DT04-2P-PL



DEUTSCH DT04-2P-PP



AMP JPT

Voltage: 12 VDC and 24 VDC

Nominal power: 20.5 W

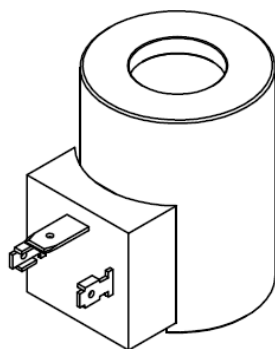
Duty cycle: ED100%

Ambient temperature range: -40 / +105°C

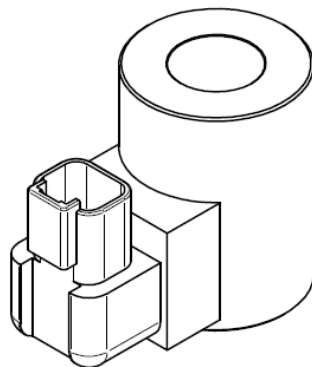
Coil Thermal Class: H (180°C)

Transient voltage suppressor: P6KE33CA

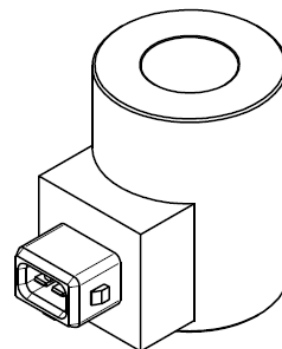
For proportional flow regulator



DIN 43650/ISO4400



DEUTSCH DT04-2P-PL



AMP JPT

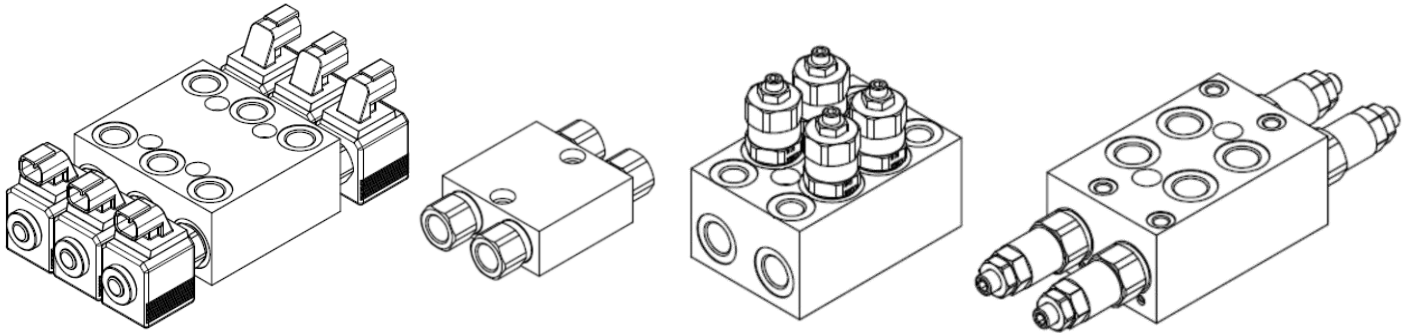
Voltage: 12 VDC and 24 VDC

Nominal power: 21.6 W

Max control current: 1.8A for 12VDC - 0.9A for 24VDC

Ambient temperature range: -20 / +80°C

Coil Thermal Class: H (180°C)

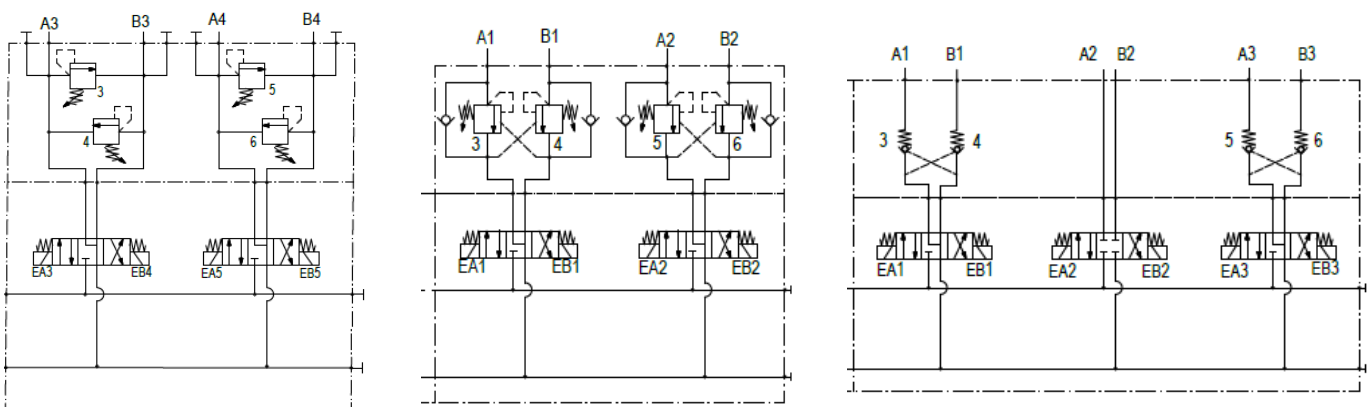


Available a wide range of auxiliary functions to flange on the working section.

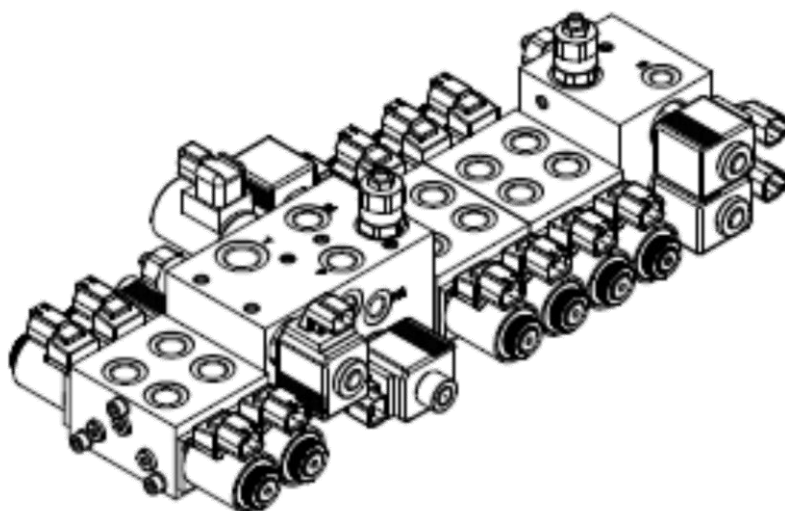
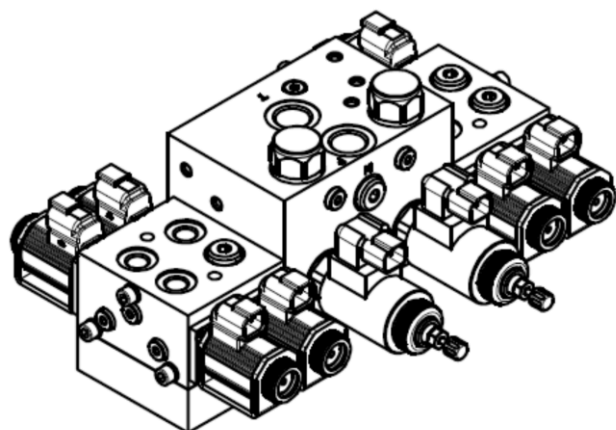
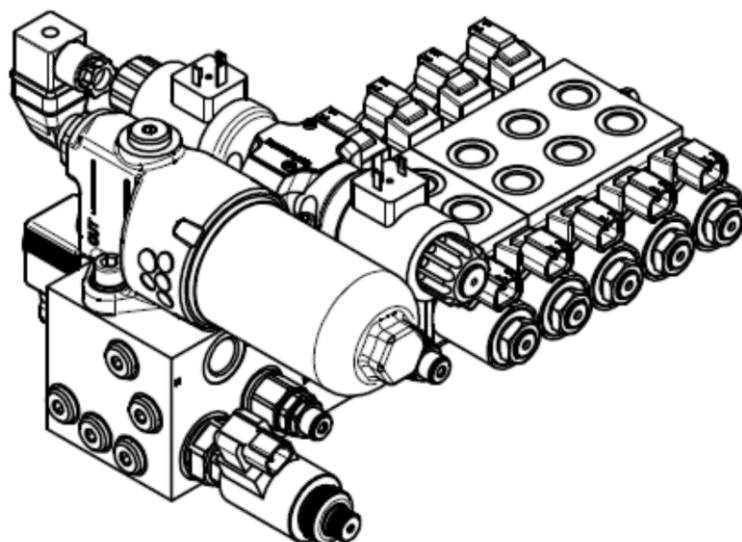
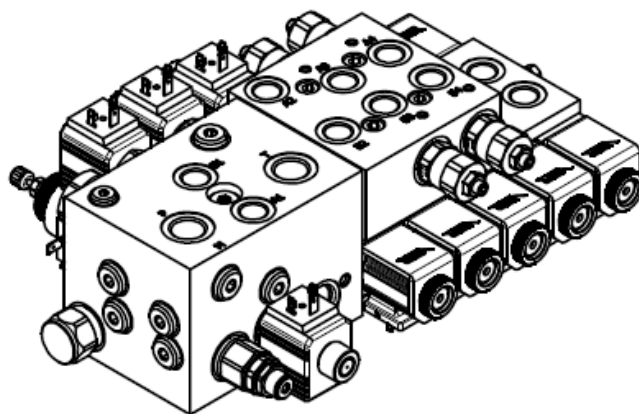
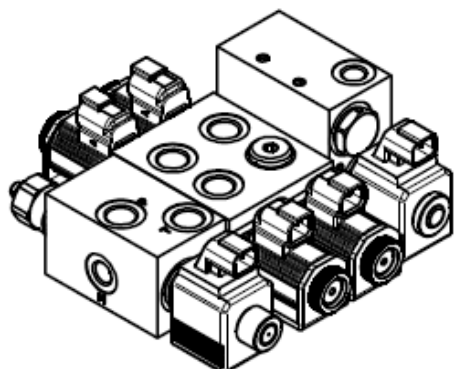
- Anticavitation valves
- Pilot operated check valves
- Relief valves
- Relief and anticavitation valves
- Unloading valves
- Overcenter valves

Other options available on request

Some examples of auxiliary functions



VD12 CUSTOMIZATIONS EXAMPLES





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HYDRAULIC COMPONENTS