Directional Seat Valve Block

Series WSH03

Thanks to their very compact design, they represent an alternative to conven-tional systems of directional- and check valves. As an un-loading- and pressure relief valve with or without high pres sure carry-over, the WSH03M1 can be applied as a valve in its own right or it can be bolted to a WSH03M2-M5 and used as the inlet section.

1.1 Functionality

To activate any port it is only necessary to energise one solenoid. To connect the pressure source to the actuator port, energise the 3/2 spool valve. To connect the actuator port to tank, energise the 2/2 seat valve. If a WSH03M1 inlet section is fitted, the solenoid of the un-loading valve must be simultaneously energised in order to supply pressure to an actuator port.

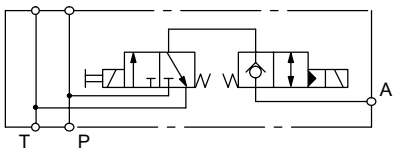
1 Description

BUCHER series WSH03M2-M5 directional seat valve blocks are supplied as aluminium monoblocks with a maximum of 5 actuator ports. Each circuit leg consists of a direct acting 3/2 spool valve followed by a two-stage 2/2 seat valve.These valve blocks are used in all situations where the actuator - either single- or double acting - must provide the highest levels of leak-tightness.

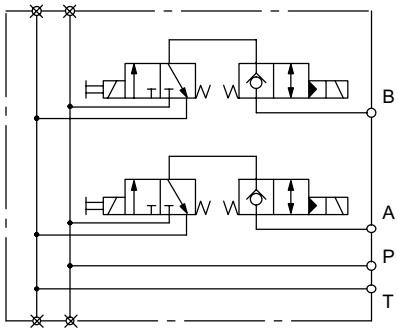
2 Directional seat valve block

2.1 Symbols

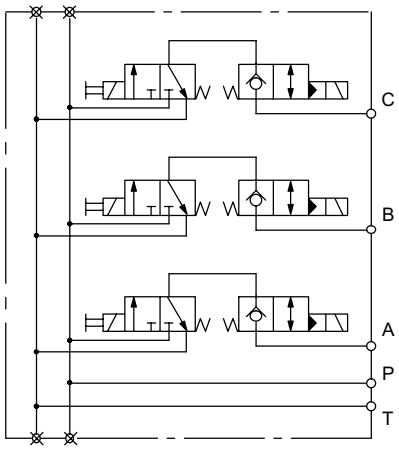
2.1.1 WSH03M1..



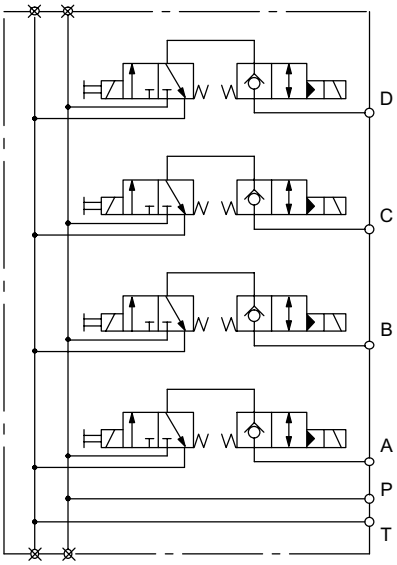
2.1.2 WSH03M2..



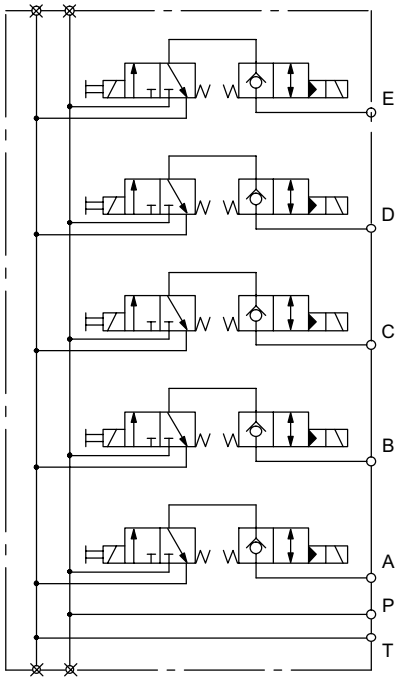
2.1.3 WSH03M3..



2.1.4 WSH03M4..



2.1.5 WSH03M5..

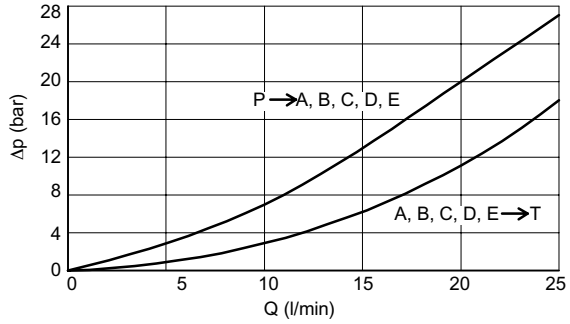


2.2 Technical data

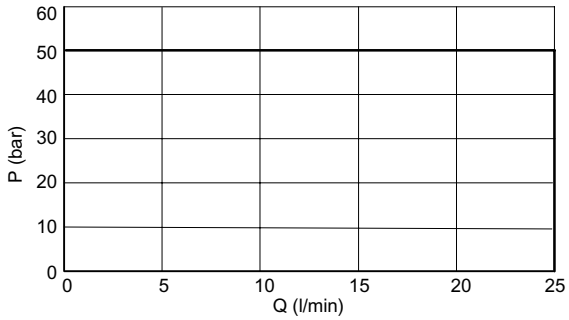
General characteristics		Description, value, unit
Flow rate		max. 25 l/min
operating pressure		max. 250 bar
Oil temperature		-20 °C ... +80 °C
Viscosity range		10 mm^2/s ... 300 mm^2/s
leakage at 100 bar and 35 mm^2/s		max. 4 mm^3/min
Recommended filtration		NAS 1638 class 9, ISO/DIN4406
Coil voltages GS		12 or 24 Volt DC
Nom. power consumption	2/2 seat valves 3/2 spool valves 3/2 spool valves	17 Watt 27 Watt (Standard) 17 Watt
Type of Current		DC
Duty cycle		100 %
Enclosure protection		IP65
Electrical connection		Connector plug to DIN 43650
Connector plug		GDM 309 (Ordering no. 100064970)

2.3 Performance graphs

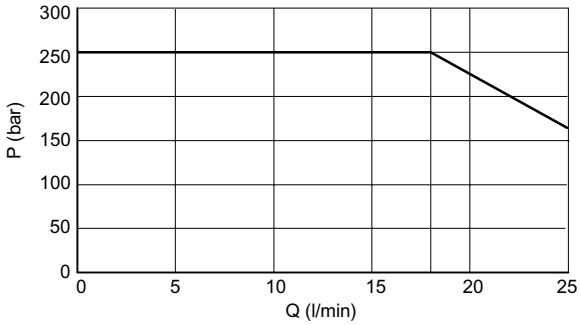
Pressure losses Directional seat valve block



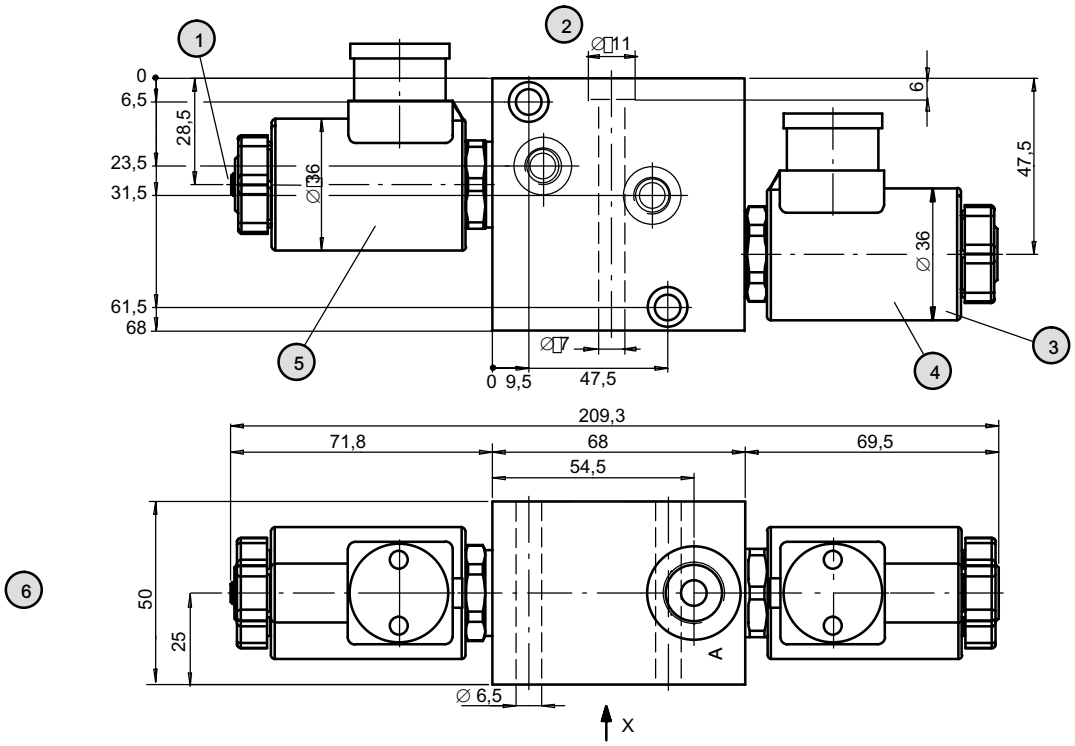
Limitation of use 3/2 spool valves with 17 Watts



Limitation of use 3/2 spool valves with 27 Watts

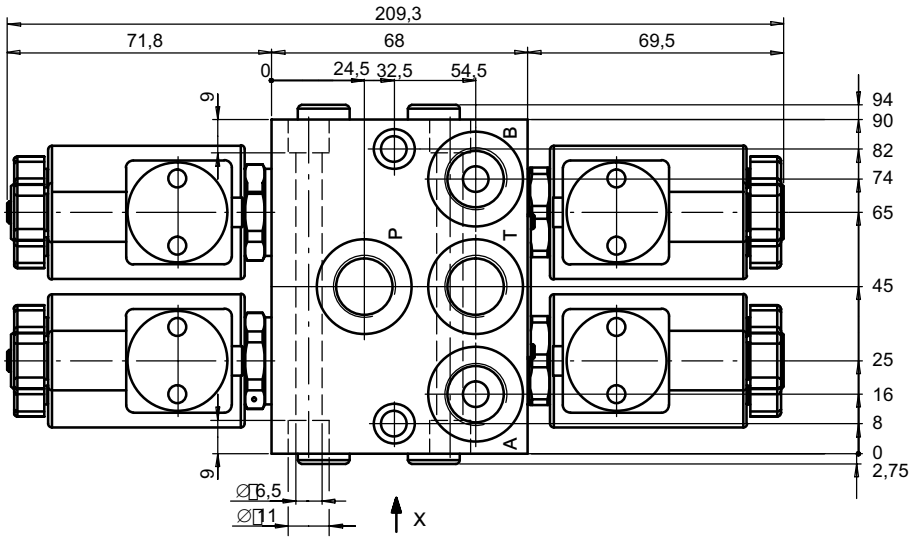


2.4 Dimensions

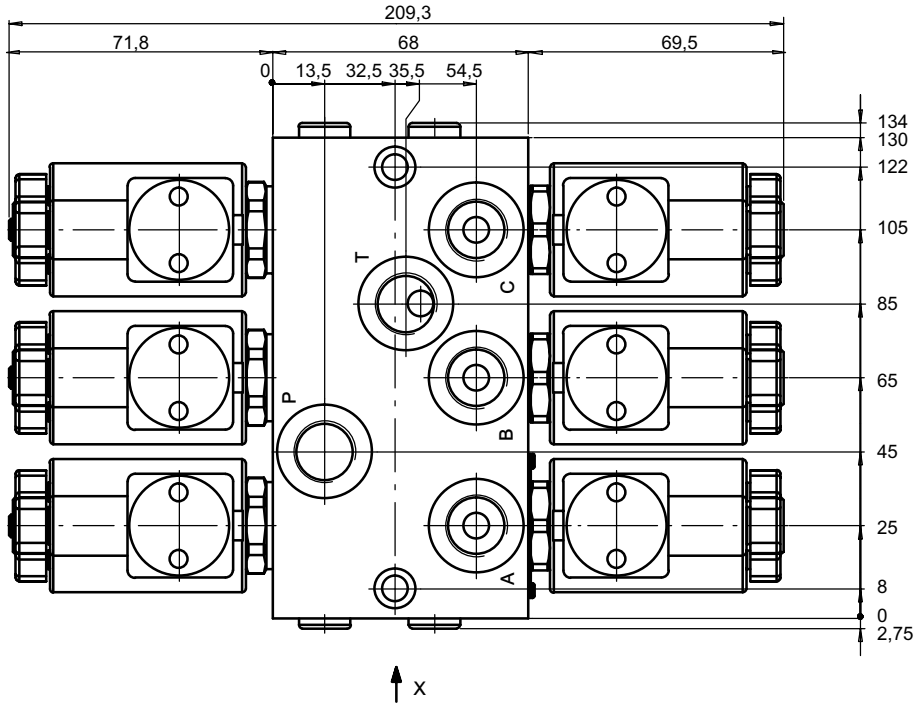


1	Manual override	4	2/2 seat valve
2	Viewe X	5	3/2 spool valve
3	all coils can be turned through 360°	6	Directional seat valve block Type: WSH03M1

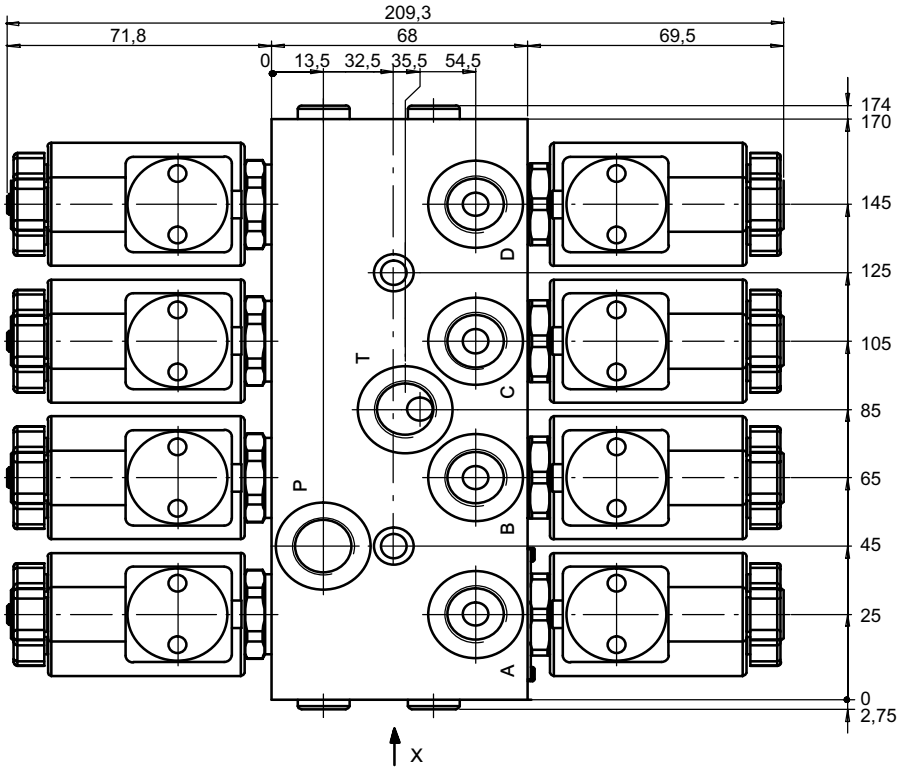
Directional seat valve block
Type: WSH03M2..



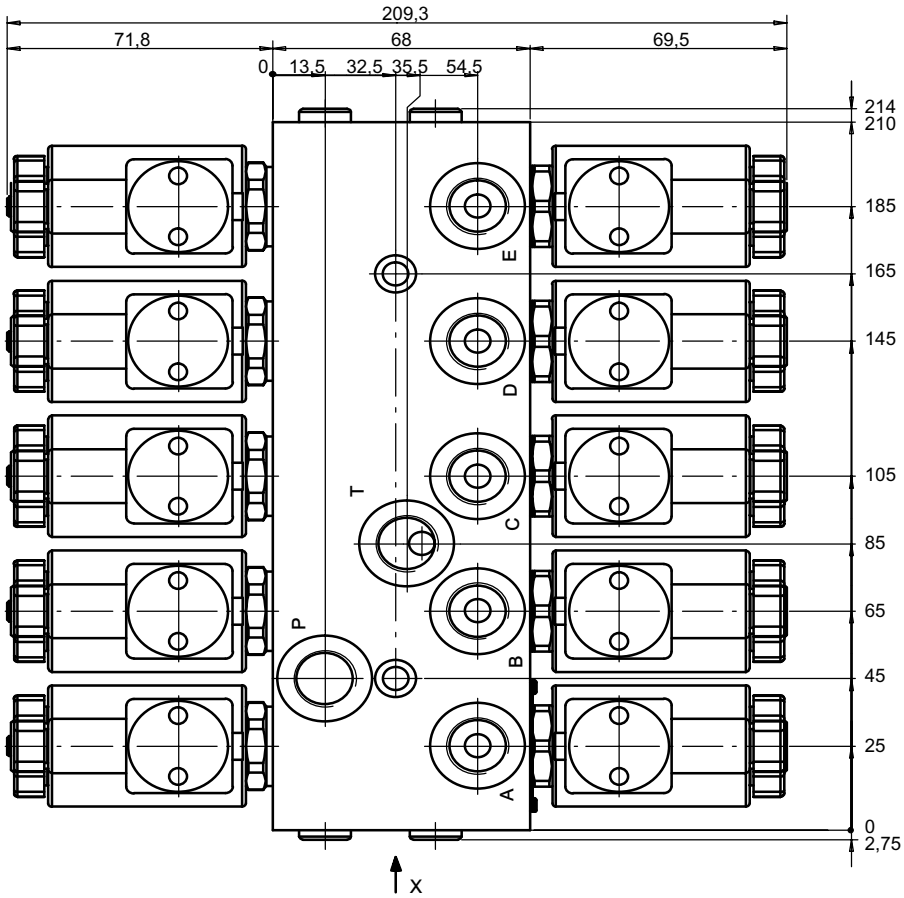
Directional seat valve block
Type: WSH03M3..



Directional seat valve block
Type: WSH03M4..



Directional seat valve block
Type: WSH03M5..



2.5 Ordering code

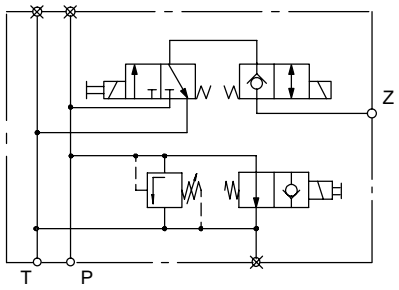
W	S	H	0	3	M	2	F	-	0	R	0	5	G	1	2	/	

No. of actuator ports		=	1, 2, 3, 4 or 5
Flange execution (single, two-way) Basic execution (triple, quadruple, 5-fold)		= =	F G
Design no.			(inserted by the factory)
Port threads	G 3/8”	=	R05
Coil voltage	12 V DC 12 V DC	= =	G12 G24
special features 3/2 spool valves	17 Watt	=	01

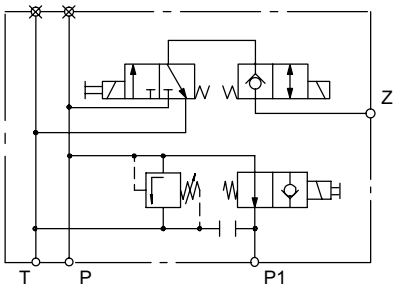
3 Directional seat valve block with unloading valve or continuation of printing and pressure relief valve

3.1 Symbols

3.1.1 WSH03M1O-WROE-....



3.1.2 WSH03M1D-WROE-....



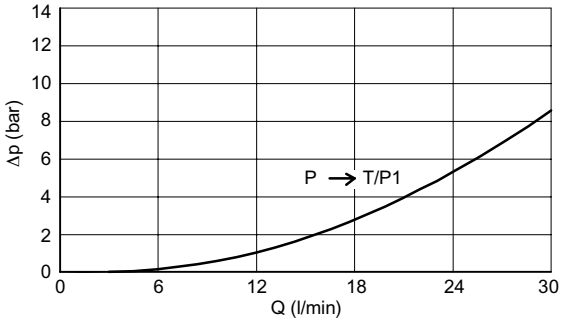
3.2 Technical data

General characteristics	Description, value, unit
Flow rate	max. 25 l/min
operating pressure	max. 250 bar
Pressure relief adjustment range	25 bar ... 250 bar
Oil temperature	-20 °C ... +80 °C
Viscosity range	10 mm^2/s ... 300 mm^2/s
leakage at 100 bar and 35 mm^2/s	max. 4 mm^3/min
Recommended filtration	NAS 1638 class 9, ISO/DIN4406
Coil voltages GS	12 or 24 Volt DC
Type of Current	DC

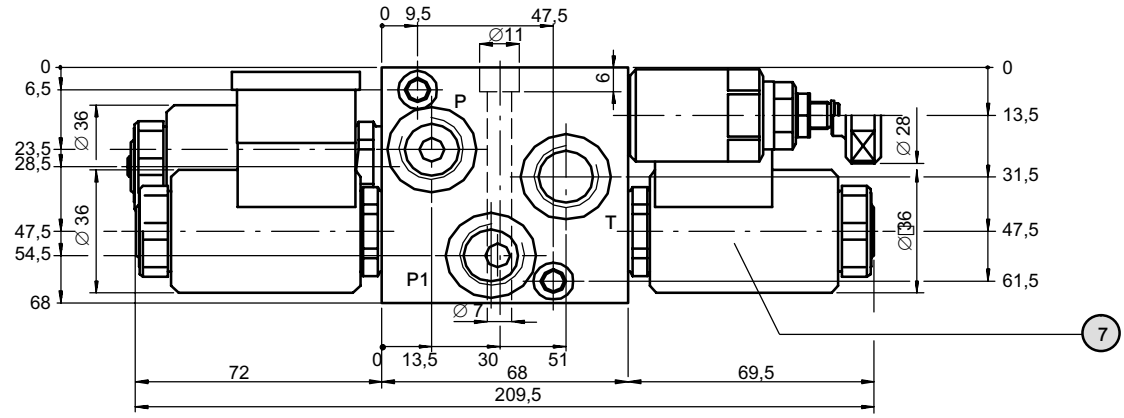
General characteristics		Description, value, unit
Nom. power consumption	2/2 seat valves 3/2 spool valves 3/2 spool valves 2/2 unloading valve	17 Watt 27 Watt (Standard) 17 Watt 17 Watt
Duty cycle		100 %
Enclosure protection		IP65
Electrical connection		Connector plug to DIN 43650
Connector plug		GDM 309 (Ordering no. 100064970)

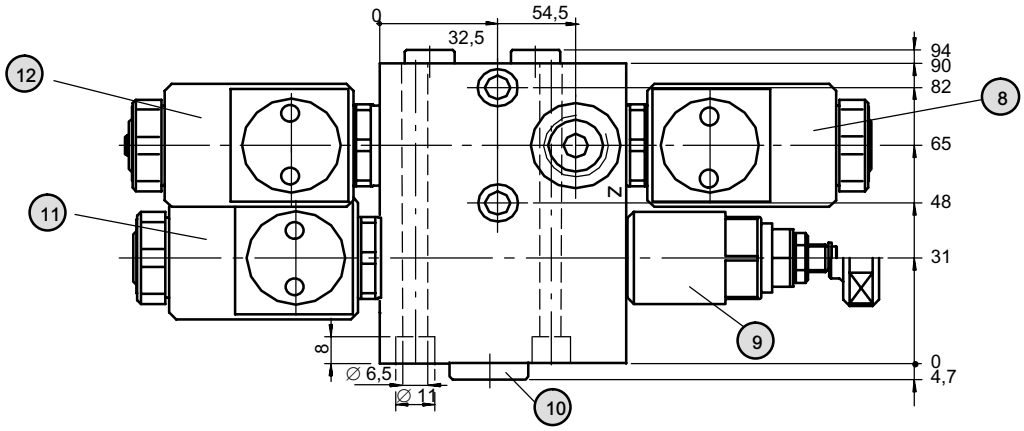
3.3 Performance graphs

Rotating pressure losses



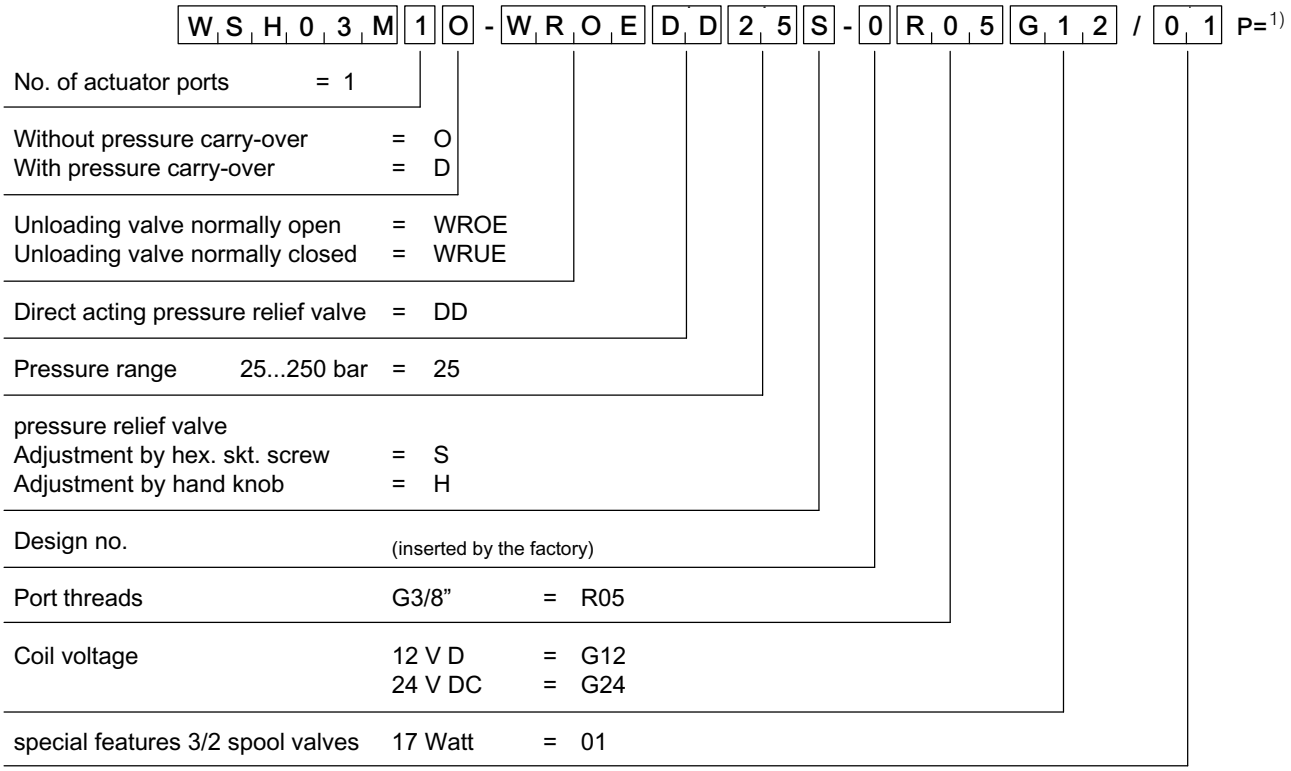
3.4 Dimensions





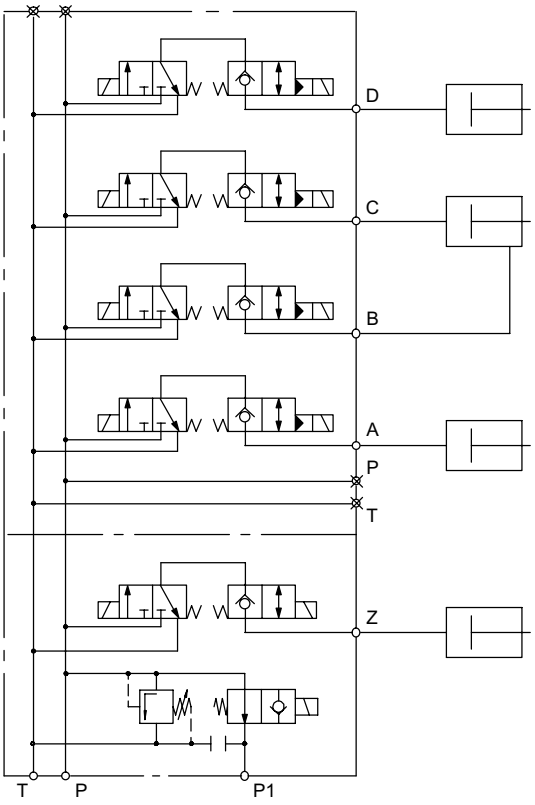
7	all coils can be turned through 360°	10	Plugged when high pressure carry-over not used
8	2/2 seat valve	11	Unloading valve
9	Pressure limiting	12	3/2 spool valve

3.5 Ordering Code

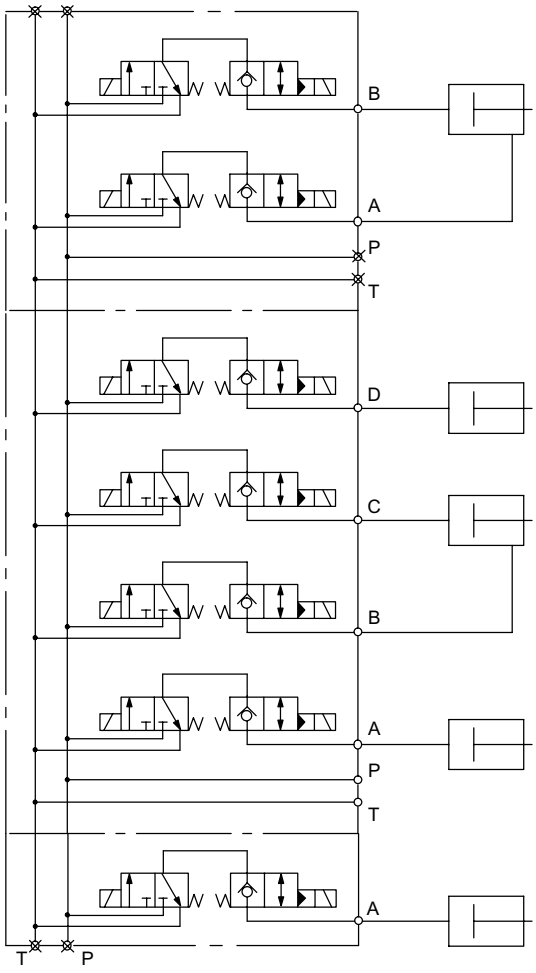


1) Pressure adjustment in the plain text indicate

4 Application example



WSH03M4G-0R05G12
WSH03M1D-WROE-DD25S-0R05G12
P= 200 bar



WSH03M2F-0R05G12
WSH03M4G-0R05G12
WSH03M1F-0R05G12

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