

Technical Features

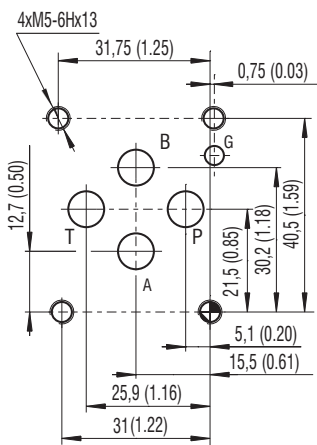
- › Direct acting manually operated directional control valve with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03)
- › High transmitted hydraulic power up to 350 bar, optimized design for minimized pressure drop
- › Three chamber housing design for production cost saving
- › Manual lever and actuation element can be rotated in 90° increments for flexible installation
- › Wide range of interchangeable spools available
- › Springless, detented valves available, valve holds last selected position, available for all spools
- › In the standard version, the valve housing is phosphated for basic surface corrosion protection and as preparation for painting. Steel parts are zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available for the valve housing and steel parts (ISO 9227, 520 h salt spray)

Model Code	Z11	R11	J15
Symbol			

Technical Data

Valve size	06 (D03)	
Max. flow	l/min (GPM)	80 (21.1)
Max. operating pressure at ports P, A, B	bar (PSI)	350 (5080)
Max. operating pressure at port T	bar (PSI)	100 (1450)
Operating force	N (lbf)	< 50 (11.2)
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... +212)
Fluid temperature range (FPM)	°C (°F)	-20 ... +120 (-4 ... +248)
Service life	cycles	10 ⁶
Weight	kg (lbs)	1.6 (3.53)
	Datasheet	Type
General information	GI_0060	Products and operating conditions
Mounting interface	SMT_0019	Size 06
Spare parts	SP_8010	

ISO 4401-03-02-0-05

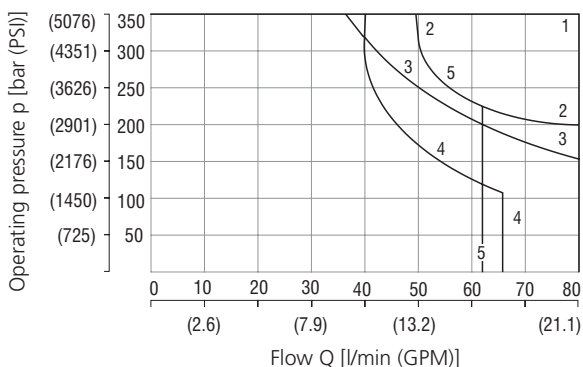


Ports P, A, B, T - max Ø7.5 mm (0.29 in)

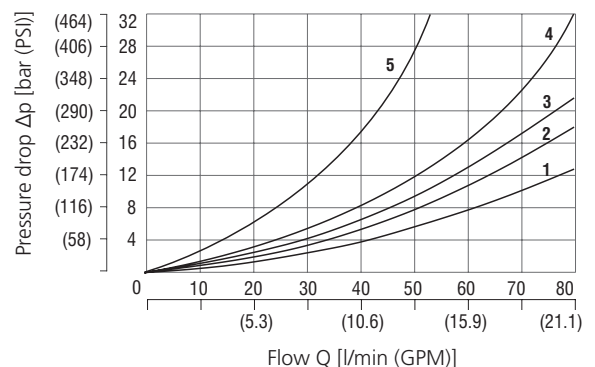
Characteristics measured at v = 32 mm²/s (156 SUS)

Operating limits

Operating limits for maximum hydraulic power and rated lever force.



Pressure drop related to flow rate

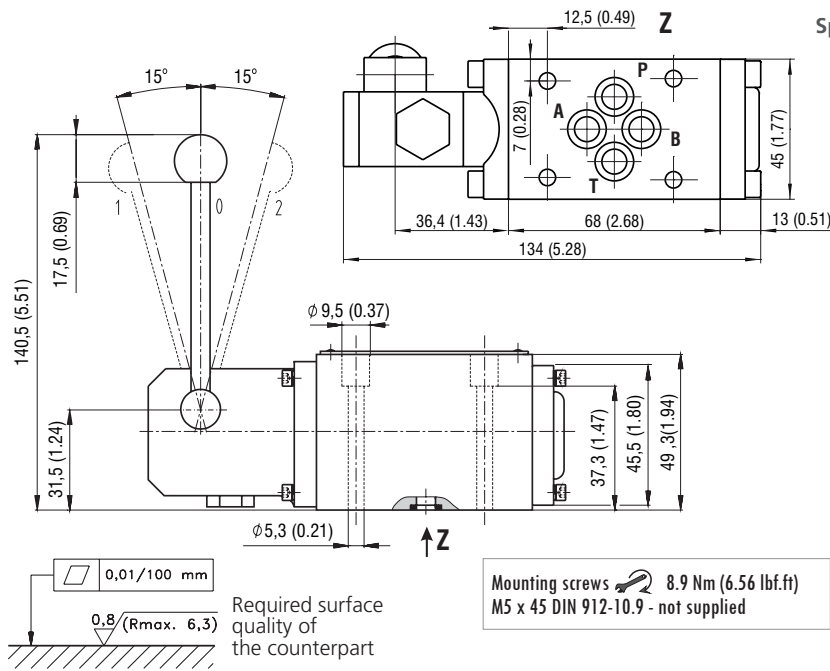


A51	3	H15	1	R11	1
B11	5	J15	1	Y11	2
B15	1	J75	1	Y15	1
C11	4	P11	1	Z11	1
C15	1	P15	1	Z15	1
H11	3				

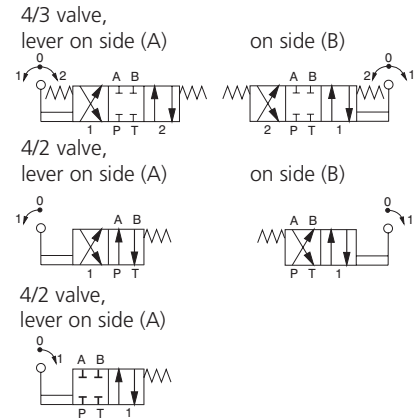
	P-A	P-B	A-T	B-T	P-T
Z11, Z15, B11, B15R11, J15	2	2	3	3	
C11, C15	3	3	4	3	5
H11, H15	2	2	2	2	3
P11, P15	1	1	3	3	
Y11, Y15	2	2	2	2	
A51, J75	2	2			

For operating limits under conditions and flow directions other than shown contact our technical support. Admissible operating limits may be considerably lower with only one direction of flow (A or B plugged, or without flow.)

Dimension in millimeters (inches)



Spool position according to the position of hand lever



Manual lever and actuating section are shown in the most frequently used standard position. Both elements can be rotated in 90° increments. For other positions of lever and actuating section contact our technical support.

Spool Symbols

Type	Symbol	Interposition	Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			B15			X11		
C11			Y14			X21		
H11			Z21			C55		
P11			P11			Z15		
Y11			H11			Z55		
B11			C51			Y55		
L21			Z11			J15		
Z15			H51			J75		
C15			Y11			P55		
H15			R11			R25		
P15			A51			X15		
Y15			R21					

Ordering Code

4/2 and 4/3 directional control valve, manually operated

Valve size

Number of valve positions

two positions
three positions

Spool symbols

see the table "Spool Symbols"



No designation

A zinc-coated (ZnCr-3), ISO 9227 (240 h)
B zinc-coated (ZnNi), ISO 9227 (520 h)

No designation

V NBR
FPM (Viton)

A1
B1

Manual lever and actuating section position

standard, lever on side A, upward
standard, lever on side B, upward

The port restrictor plugs can be ordered separately from the spare parts data sheet HA 8010. The table of spool connections is an overview of preferred and commonly produced types. Contact our technical support for their identification, feasibility and operating limits.