

## Spool valve

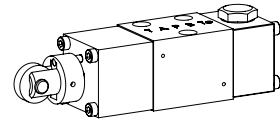
### Flange construction

- ◆ roller operated
- ◆ 4/2-way with spring reset
- ◆  $Q_{max} = 8 \text{ l/min}$
- ◆  $p_{max} = 350 \text{ bar}$

## DESCRIPTION

Direct operated valve, roller operated with 4 connections in 5 chamber design. Without actuation, the spool is switched back to the offset position. Precise spool fit, low leakage, long service life time. Spool made from hardened steel, body from high quality hydraulic cast steel.

## NG3-Mini



## APPLICATION

Spool valves are mainly used for controlling direction of movement and stopping of hydraulic cylinders and motors. The direction of movement is determined by the position of the spool and its symbol. Manually or mechanically operated valves are particularly suitable for use in installations where no electric current is available or for applications in explosion hazard areas. Miniature valves are used where both, reduced dimensions and weight are important.

## TYPE CODE

Spool valve, direct operated		WD	T	F	A03	-	<input type="text"/>	-	<input type="text"/>	#	<input type="text"/>
Roller with spring reset											
Flange construction											
Mounting interface acc. to Wandfluh standard, NG3-Mini											
Designation of symbols acc. to table	Operation a-side			<input type="text" value="...1"/>							
	Operation b-side			<input type="text" value="...2"/>							
Sealing material	NBR			<input type="text"/>							
	FKM (Viton)			<input type="text" value="D1"/>							
Design index (subject to change)											

1.5-15

## GENERAL SPECIFICATIONS

Designation	4/2-spool valve
Construction	Direct operated
Mounting	Flange construction
Nominal size	NG3-Mini according to Wandfluh standard
Actuation	Roller actuated
Ambient temperature	-25...+70 °C
Weight	0,62 kg
MTTFd	150 years

## HYDRAULIC SPECIFICATIONS

Working pressure	$p_{max} = 350 \text{ bar}$ ( $p_T < 20 \text{ bar}$ )
	$p_{max} = 315 \text{ bar}$ ( $p_T > 20 \text{ bar}$ )
Tank pressure	$p_{Tmax} = 100 \text{ bar}$
Maximum volume flow	$Q_{max} = 8 \text{ l/min}$ , see characteristics
Leakage oil	See characteristics
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm <sup>2</sup> /s...320 mm <sup>2</sup> /s
Temperature range fluid	-25...+70 °C (NBR)
	-20...+70 °C (FKM)
Contamination efficiency	Class 20 / 18 / 14
Filtration	Required filtration grade $\beta_{10...16} \geq 75$ , see data sheet 1.0-50

## ACTUATION

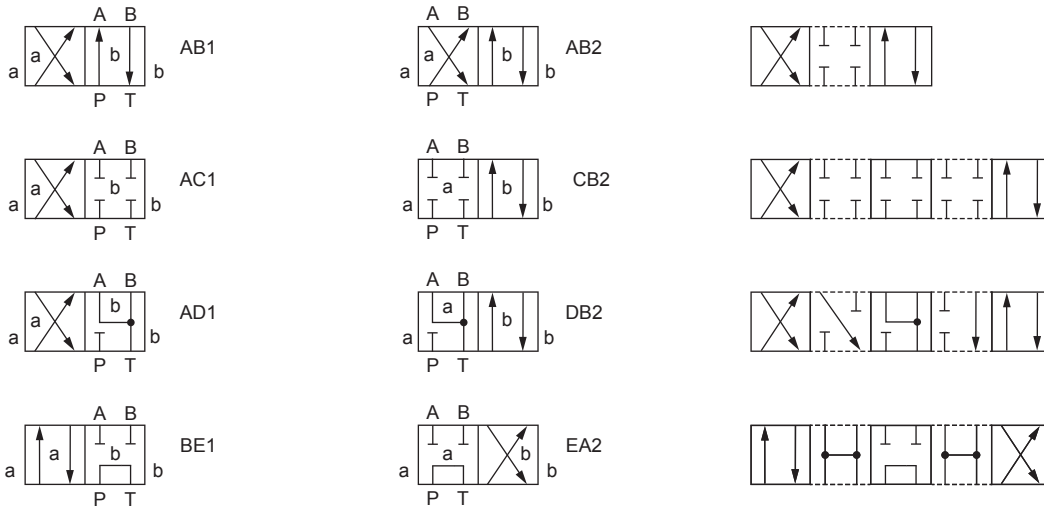
Actuation	Roller
Actuation stroke	$s = 1,7 \text{ mm}$
Actuation force	$F_b = 90 - 120 \text{ N}$

**SYMBOL**

**Overview valves**

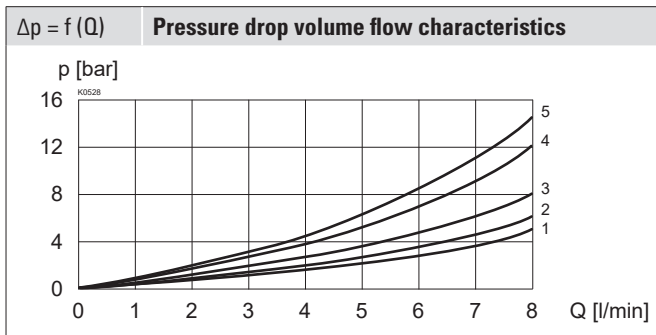
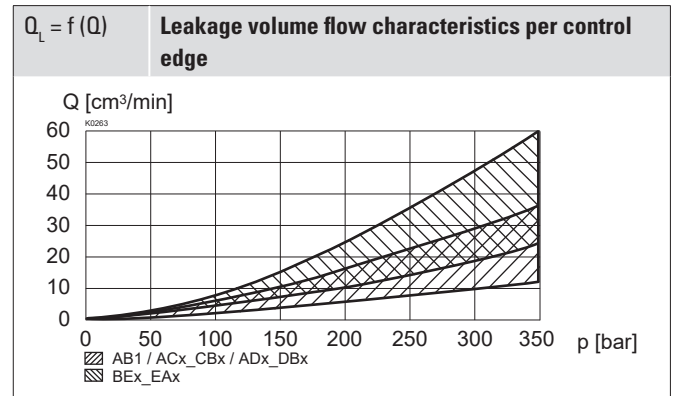
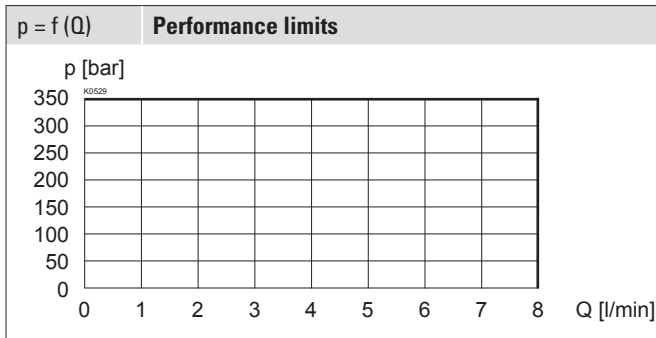


**Overview spool types**



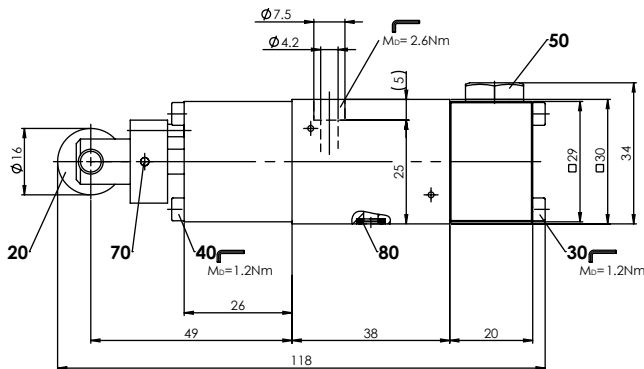
**PERFORMANCE SPECIFICATIONS**

Oil viscosity  $\nu = 30 \text{ mm}^2/\text{s}$



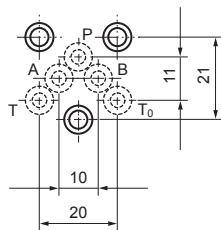
Symbol	Volume flow direction				
	P - A	P - B	P - T	A - T	B - T
AB1 / AB2	3	3	-	2	2
AC1 / CB2	3	3	-	1	1
AD1 / DB2	2	2	-	1	1
BE1 / EA2	5	5	3	4	4

## DIMENSIONS



Width of the roller = 4.8 mm

## HYDRAULIC CONNECTION



## STANDARDS

Mounting interface	Wandfluh standard
Contamination efficiency	ISO 4406

## SURFACE TREATMENT

- ◆ The valve body, the roller housing and the cover are zinc-nickel coated

## PARTS LIST

Position	Article	Description
20	253.1100	Mechanical control head BT III
30	246.0126	Socket head screw M3 x 25 DIN 912
40	246.0131	Socket head screw M3 x 30 DIN 912
50	238.1100	Screw plug M10 x 1 DIN 7604A
70	221.1166	Spring tension split pin ø 2 x 16 DIN 6325
80	160.2045	O-ring ID 4,50 x 1,50 (NBR)

## ACCESSORIES

Fixing screws	Data sheet 1.0-60
Threaded subplates	Data sheet 2.9-05
Multi-station subplates	Data sheet 2.9-45
Horizontal mounting blocks	Data sheet 2.9-85
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50

## SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

## INSTALLATION NOTES

Mounting type	Flange mounting 3 fixing holes for socket head screws M4 x 30
Mounting position	Any, preferably horizontal
Tightening torque	$M_D = 2,6 \text{ Nm}$ (quality 8.8, zinc coated) Fixing screws

### Note!



The length of the fixing screw depends on the base material of the connection element.