

Directional spool valves, direct operated,
with mechanical or manual actuation

Type WMR, WMRZ, WMU, WMM and WMD(A)



H7114

- ▶ Size 6
- ▶ Component series 5X; 6X
- ▶ Maximum operating pressure 315 [4569 psi]
- ▶ Maximum flow 60 l/min [15.8 US gpm]

Features

- ▶ 4/3, 4/2 or 3/2 directional design
- ▶ Porting pattern according to DIN 24340 form A (**without** locating hole)
- ▶ Porting pattern according to ISO 4401-03-02-0-05 and NFPA T3.5.1 R2-2002 D03 (**with** locating hole)
- ▶ Types of actuation:
 - Roller plunger
 - Hand lever
 - Rotary knob
- ▶ Inductive position switches and proximity sensors (contactless)

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Ordering code	2, 3
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Ordering code

01	02	03	04	05	06	07	08	09	10	11	12	13
		6		/			/					*

01	3 main ports	3
	4 main ports	4

Type of actuation

02	Roller plunger (see page 12)	WMR
	Roller plunger (see page 12)	WMRZ
	Roller plunger (see page 12)	WMU
	Hand lever	WMM
	Rotary knob	WMD
	Lockable rotary knob ¹⁾	WMDA
03	Size 6	6
04	Symbols e.g. C, E, EA, EB, etc; possible version see pages 4 and 5	
05	Component series 50 to 59 (50 to 59: Unchanged installation and connection dimensions)	5X
	Component series 60 to 69 (60 to 69: Unchanged installation and connection dimensions) (only version "WMRZ")	6X
06	With spring return (version "WMR", "WMRZ", "WMU", "WMM")	no code
	Without spring return with detent (version "WMM", "WMD", "WMDA")	F


Corrosion protection

07	Standard corrosion protection	no code
	Improved corrosion protection ²⁾	J

Spool position monitoring ³⁾

08	Without position switch	no code
	- Inductive position switch type QM	
	Monitored spool position "a"	QMAG24
	Monitored spool position "b"	QMBG24
	Monitored rest position	QM0G24
	For more information see data sheet 24830	

- 1) Key with material no. **R900006980** for series 50 to 52 and **R900008158** from series 53 is included in the scope of delivery.
- 2) The external parts made of metal are galvanized, treated with an anti-corrosion agent or made of stainless steel. This design is also suitable for on-wall applications.
- 3) Only for valves with 2 spool positions such as versions "WMR", "WMU" and "WMM"; not for version "J"
- 4) Use if volume flow > performance limit of the valve, effective in channel P.
- 5) Locking pin ISO 8752-3x8-St, material no. **R900005694**, separate order

 **Notice!** Preferred types and standard units are contained in the EPS (standard price list).

Ordering code

01	02	03	04	05	06	07	08	09	10	11	12	13
		6			/			/				*

09	Without throttle insert	no code
	Throttle Ø 0.8 mm [0.0315 inch]	B08 ⁴⁾
	Throttle Ø 1.0 mm [0.0394 inch]	B10 ⁴⁾
	Throttle Ø 1.2 mm [0.0472 inch]	B12 ⁴⁾

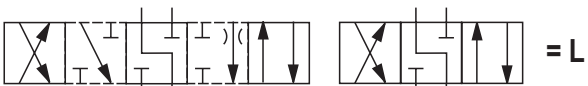
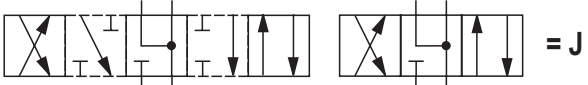
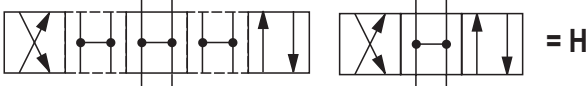
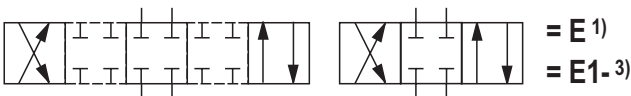
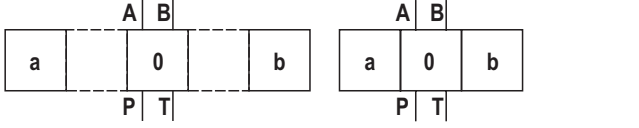
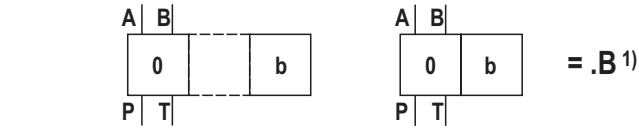
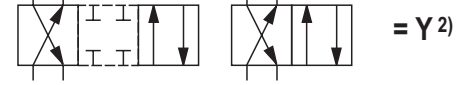
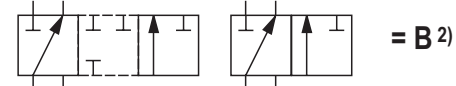
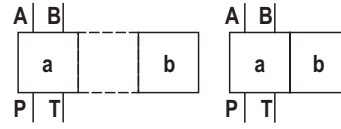
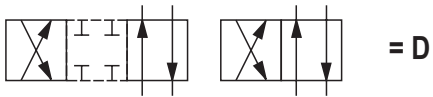
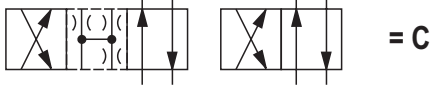
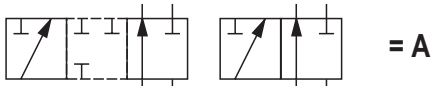
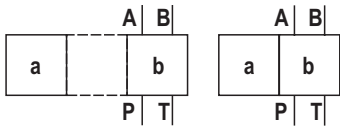
Clamping length

10	42 mm [1.65 inch] (standard)	no code
	22 mm [0.87 inch] (only version "WMRZ")	Z

Seal material

11	NBR seals	no code
	FKM seals	V
	Attention: Observe compatibility of seals with hydraulic fluid used! (Other seals upon request)	
12	Without locating hole	no code
	With locating hole	/60 ⁵⁾
	With locating hole and locking pin ISO 8752-3x8-St	/62
13	Further details in the plain text	

Symbols



1) Example:

Symbol E with spool position "a" → ordering code **.EA..**

Symbol E with spool position "a" → ordering code **.EB..**

2) Only version "WMR", "WMU" and "WMM"

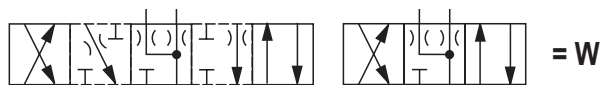
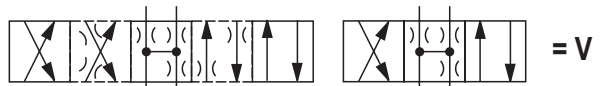
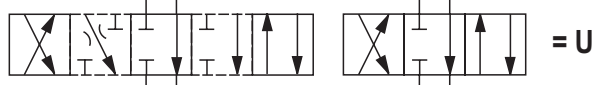
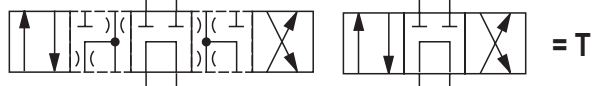
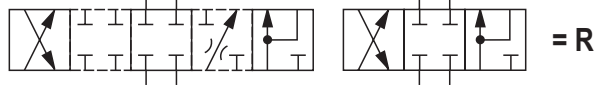
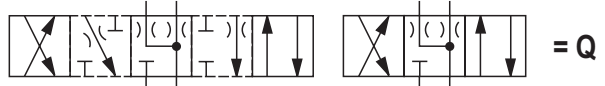
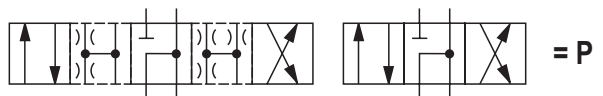
3) **Symbol E1**: P → A/B pre-opening

Caution in conjunction with differential cylinders due to pressure intensification!

Notice!

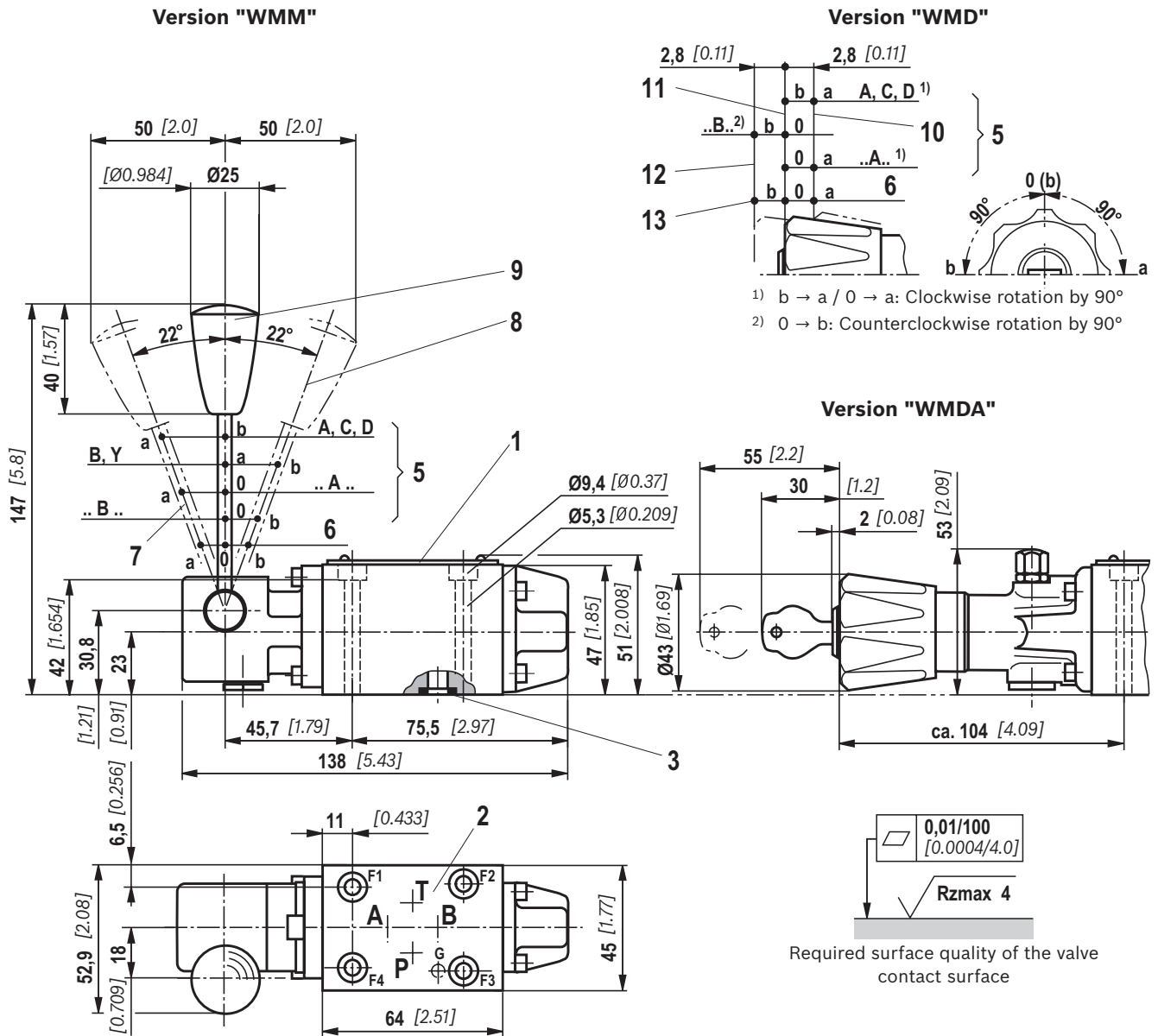
Representation according to DIN ISO 1219-1.

Hydraulic interim positions are shown by dashes.



Dimensions

(dimensions in mm [inch])



- 1 Name plate
- 2 Porting pattern according to DIN 24340 form A (**without** locating hole), ISO 4401-03-02-0-05 and NFPA T3.5.1 R2-2002 D03 (**with** locating hole for locking pin ISO 8752-3x8-St, material no. **R900005694**, separate order)
- 3 Identical seal rings for ports A, B, P and T
- 5 Valve with 2 spool positions
- 6 Valve with 3 spool positions

Version "WMM"

- 7 Spool position "a"
- 8 Spool position "b"
- 9 Spool position "0", "a" and "b" (a and b for valves with 2 spool positions)

Version "WMD", "WMDA"

- 10 Spool position "a"
- 11 Spool position "0" and "b" (b for valves with 2 spool positions)
- 12 Spool position "b"
- 13 Switching angle 90° right and 90° left (for valves with 3 spool positions)

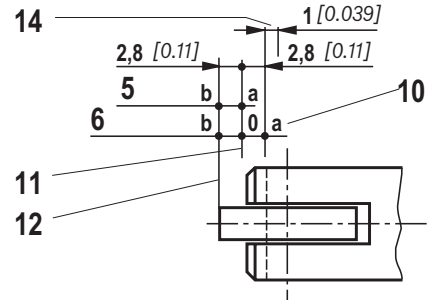
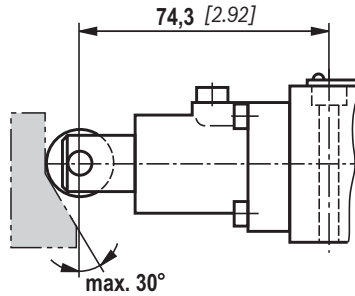
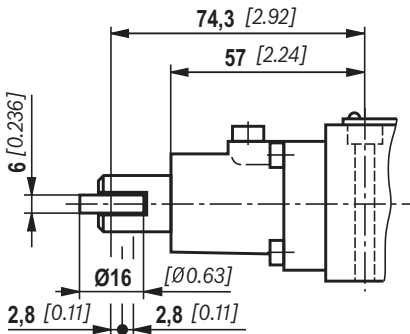
Dimensions

(dimensions in mm [inch])

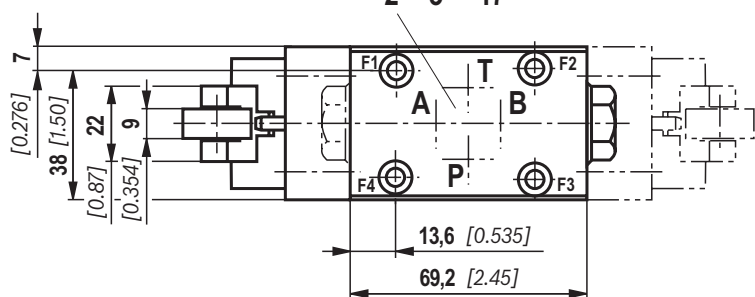
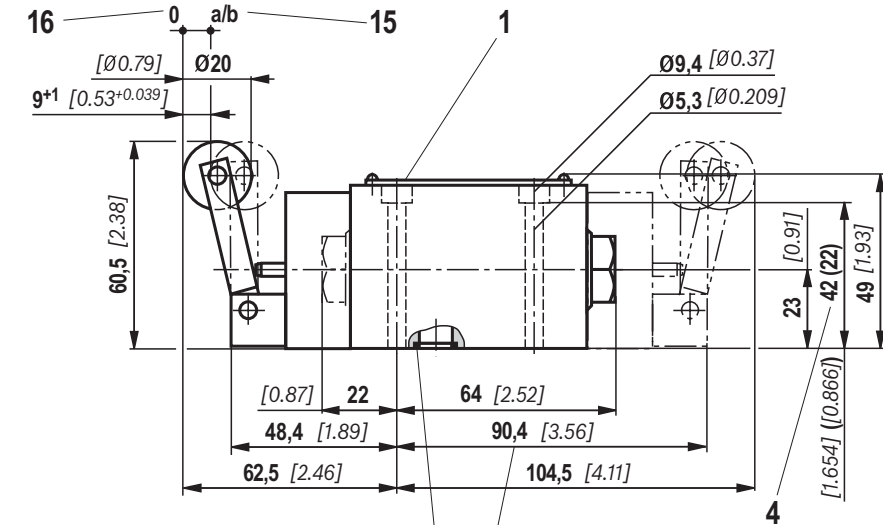
Version "WMR"

Version "WMU"

Version "WMR", "WMU"



Version "WMRZ"



- 1 Name plate
- 2 Porting pattern according to DIN 24340 form A (**without** locating hole), ISO 4401-03-02-0-05 and NFPA T3.5.1 R2-2002 D03 (**with** locating hole for locking pin ISO 8752-3x8-St, material no. **R900005694**, separate order)
- 3 Identical seal rings for ports A, B, P and T
- 4 Alternative clamping length (): 22 mm (only version "WMRZ")

Version "WMR", "WMRZ", "WMU"

- 5 Valve with 2 spool positions
- 6 Valve with 3 spool positions
- 10 Spool position "a"
- 11 Spool position "0" and "b" (b for valves with 2 spool positions)
- 12 Spool position "b"
- 14 Excessive stroke, cannot be used as working stroke
- 15 Spool position "a" or "b"
- 16 Spool position "0"
- 17 Actuation on side B (depending on the piston)

Dimensions

Subplates according to data sheet 45052 (separate order)
(without locating hole)

G 341/01 (G1/4)
G 342/01 (G3/8)
G 502/01 (G1/2)

(with locating hole)

G 341/60 (G1/4)
G 342/60 (G3/8)
G 502/60 (G1/2)
G 341/12 (SAE-6)¹⁾
G 342/12 (SAE-8)¹⁾
G 502/12 (SAE-10)¹⁾

¹⁾ Upon request

Valve mounting screws (separate order)

► Clamping length 42 mm:

4 metric hexagon socket head cap screws

ISO 4762 - M5 x 50 - 10.9-fIZn-240h-L

(friction coefficient $\mu_{ges} = 0.09$ to 0.14);
tightening torque $M_A = 7 \text{ Nm}$ [5.2 ft-lbs] $\pm 10\%$,
material no. **R913000064**

or

4 hexagon socket head cap screws

ISO 4762 - M5 x 50 - 10.9 (not part of fiNOSOL delivery range)

(friction coefficient $\mu_{total} = 0.12$ to 0.17);
tightening torque $M_A = 8.1 \text{ Nm}$ [6 ft-lbs] $\pm 10\%$

4 hexagon socket head cap screws UNC

10-24 UNC x 2" ASTM-A574

(friction coefficient $\mu_{total} = 0.19$ to 0.24);
tightening torque $M_A = 11 \text{ Nm}$ [8.2 ft-lbs] $\pm 15\%$,
(friction coefficient $\mu_{total} = 0.12$ to 0.17);
tightening torque $M_A = 8 \text{ Nm}$ [5.9 ft-lbs] $\pm 10\%$,
material no. **R978800693**

► Clamping length 22 mm:

4 metric hexagon socket head cap screws

ISO 4762 - M5 x 30 - 10.9-fIZn-240h-L

(friction coefficient $\mu_{total} = 0.09$ to 0.14);
tightening torque $M_A = 7 \text{ Nm}$ [5.2 ft-lbs] $\pm 10\%$,
material no. **R913000316**

or

4 hexagon socket head cap screws

ISO 4762 - M5 x 30 - 10.9 (not part of fiNOSOL delivery range)

(friction coefficient $\mu_{total} = 0.12$ to 0.17);
tightening torque $M_A = 8.1 \text{ Nm}$ [6 ft-lbs] $\pm 10\%$

4 hexagon socket head cap screws UNC

10-24 UNC x 1 1/4"

(friction coefficient $\mu_{total} = 0.19$ to 0.24);
tightening torque $M_A = 11 \text{ Nm}$ [8.2 ft-lbs] $\pm 15\%$,
(friction coefficient $\mu_{total} = 0.12$ to 0.17);
tightening torque $M_A = 8 \text{ Nm}$ [5.9 ft-lbs] $\pm 10\%$,
material no. **R978802879**