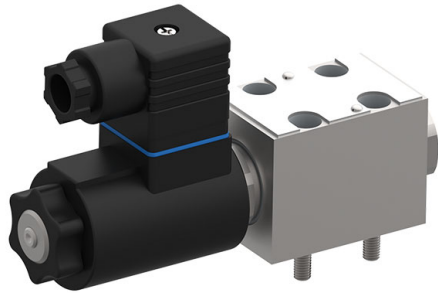


4/3 and 4/2 Directional Spool Valves, ISO Size 02

$Q_{max} = 25 \text{ l/min}$, $p_{max} = 250 \text{ bar}$
Direct acting, solenoid operated
Series WEDC...



- For controlling the starting, stopping, and direction of a flow
- Manifold-mounting design, interface to ISO 4401-02-01
- Operated by DC or AC solenoids
- Very reliable functions and extremely stable
- With manual override
- All exposed parts with zinc-nickel plating
- High pressure wet-armature solenoids
- The slip-on coil can be rotated, and it can be replaced without opening the hydraulic envelope

1 Description

The WEDC-...-4... series of directional spool valves are solenoid operated, direct acting, manifold-mounting valves with a size 02 interface to ISO 4401-02-01. The main components of the valves are a steel body, either one or two solenoids, the control spool, and either one or two return springs. In the non-operated state, the return springs hold the control spool in the middle position or initial position. The control spool is operated by the DC or AC solenoids, which are of the oil-immersed type. The integral manual override

can be used to move the spool without energizing the coil, for example during a power failure. These 4/3 and 4/2 directional valves are used in plant and machines to control the direction of a flow, and to stop the flow. All external parts of the valve are zinc-nickel plated to DIN 50 979 and are thus suitable for use in the harshest operating environments. The slip-on coils can be replaced without opening the hydraulic envelope and can be positioned at any angle through 360°.

2 Symbols / Spool types

4/2 functions	4/2 functions with 4/3 spool types	4/2 functions with 4/3 spool types	4/3 functions
<p>WEDC-42-A...</p>	<p>WEDC-42-AD...</p>	<p>WEDC-42-BD...</p>	<p>WEDC-43-D...</p>
<p>WEDC-42-B...</p>	<p>WEDC-42-AG...</p>	<p>WEDC-42-BG...</p>	<p>WEDC-43-G...</p>
<p>WEDC-42-C...</p>	<p>WEDC-42-AH...</p>	<p>WEDC-42-BH...</p>	<p>WEDC-43-H...</p>
<p>Crossover positions</p>			

NOTE! Other spool types on request.

3 Technical data

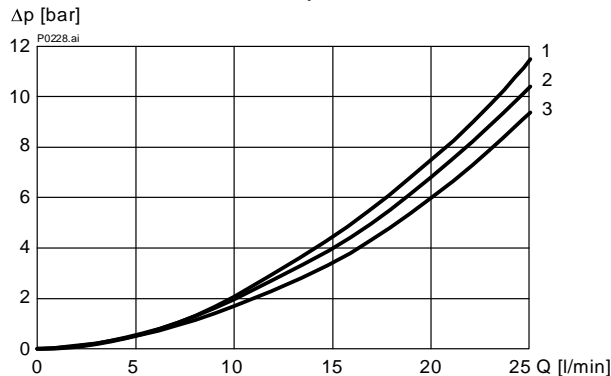
General characteristics	Description, value, unit
Designation	4/3 and 4/2 directional spool valves
Design	manifold mounting, direct acting, electrically operated
Mounting method	4 mounting holes for M5x40 mounting bolts (valve mounting bolts supplied with the valve)
Tightening torque	5.2 Nm \pm 5 %
Size	size 02 interface to ISO 4401-02-01
Weight	- valve with one solenoid - valve with two solenoids 0.90 kg 1.30 kg
Mounting attitude	unrestricted
Ambient temperature range	-30 °C ... +80 °C

Hydraulic characteristics	Description, value, unit
Maximum operating pressure	- ports A, B, P - port T 250 bar 160 bar (static 250 bar)
Maximum flow rate	25 l/min
Flow direction	see table "Symbols / Spool types"
Hydraulic fluid	HL and HLP mineral oil to DIN 51 524; HEES biodegradable fluids; for other fluids, please consult BUCHER
Hydraulic fluid temperature range	-30 °C ... +80 °C
Viscosity range	10...500 mm ² /s (cSt), recommended 15...250 mm ² /s (cSt)
Minimum fluid cleanliness Cleanliness class to ISO 4406 : 1999	class 20/18/15

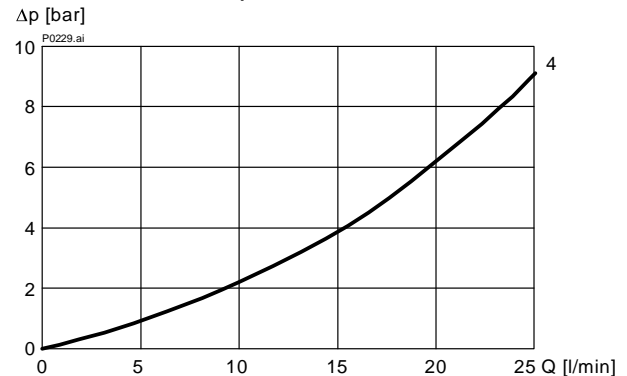
Electrical characteristics	Description, value, unit
Supply voltage	12 V DC, 24 V DC / 115 V AC, 230 V AC (50 ... 60 Hz)
Supply voltage tolerance	\pm 10 %
Nominal power consumption	V DC = 27 W / V AC = 25 W
Switching time	15 ... 80 ms (energizing) 10 ... 40 ms (de-energizing) Depending on pressure, flow rate, pressure drop and viscosity as well as dwell time under pressure, the switching times may vary from the the stated values.
Relative duty cycle	100 %
Protection class to ISO 20 653 / EN 60 529	IP 65 / IP 67 / IP 69K, see "Ordering code" (with appropriate mating connector and proper fitting and sealing)
Electrical connection	DIN EN 175301-803, 3-pin 2 P+E (standard) for other connectors, see "Ordering code"

4 Performance graphs

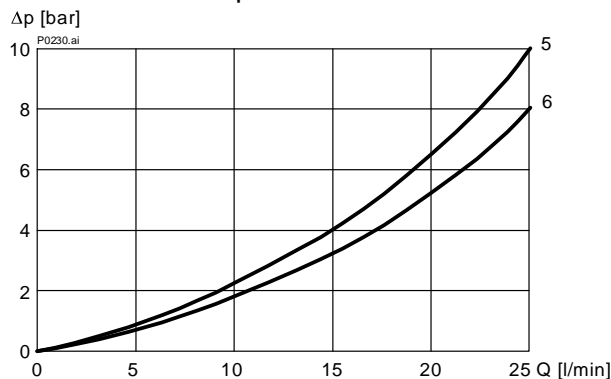
$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic
A / B / C spool



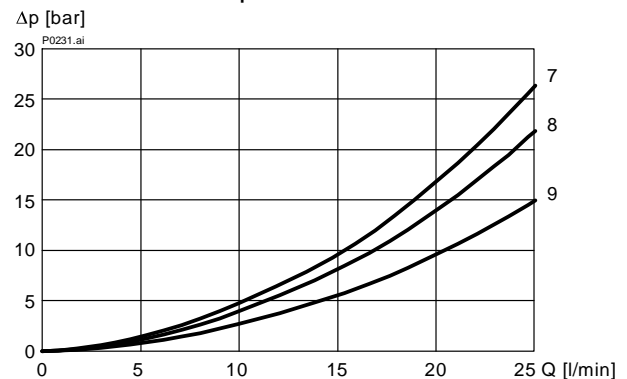
$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic
D spool



$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic
G spool



$\Delta p = f(Q)$ Pressure drop - Flow rate characteristic
H spool



Operated position

Spool type	Flow direction			
	P - A	P - B	A - T	B - T
A / C	3	2	1	2
B	2	3	2	1
D / AD / BD	4	4	4	4
G / AG / BG	5	5	6	6
H / AH / BH	8	8	7	7

Mid-position (de-energized position)

Spool type	Flow direction				
	P - A	P - B	B - T	A - T	P - T
H / AH / BH	-	-	8	8	9

5 Installation information



ATTENTION!

Only qualified personnel with mechanical skills may carry out any maintenance work. Generally, the only work that should ever be undertaken is to check, and possibly replace, the seals. When changing seals, oil or grease the new seals thoroughly before fitting them.



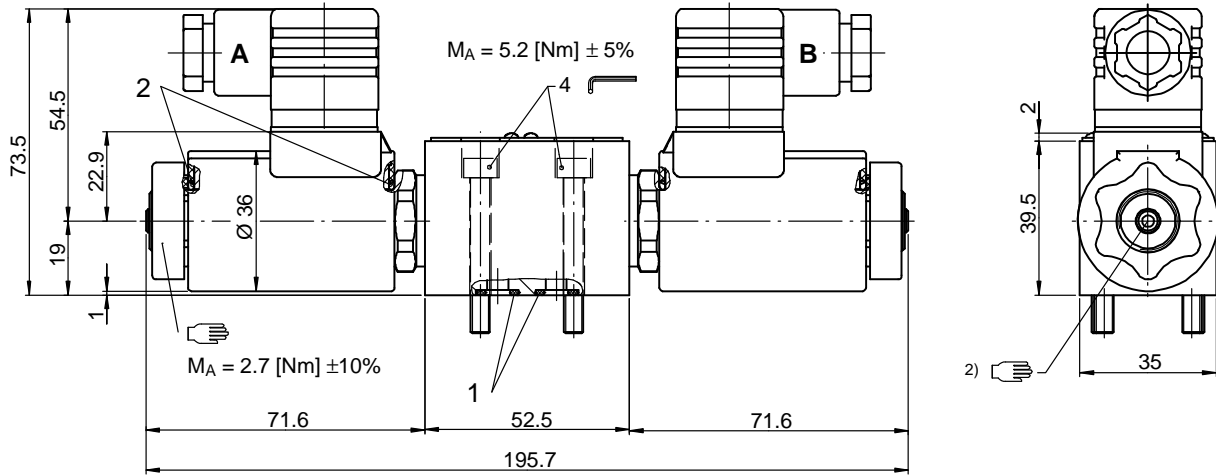
IMPORTANT!

When fitting the valves, use the specified tightening torque for the mounting bolts. No adjustments are necessary, since the cartridges are set in the factory.

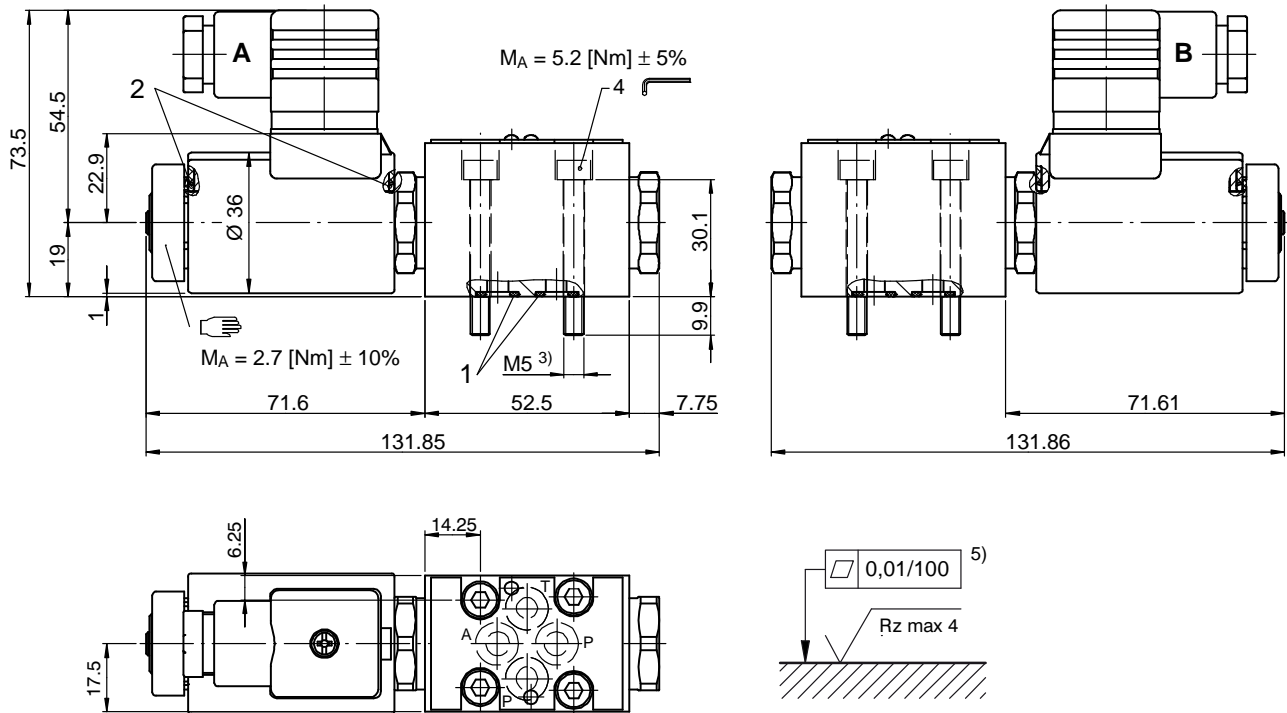
6 Dimensions & sectional view

4/3 spool valve (spring centred)

4/2 spool valve (pulse signal, detented)



4/2 spool valve (1-solenoid model, A or B side)



Seal kit NBR no. DS-322-N ⁴⁾

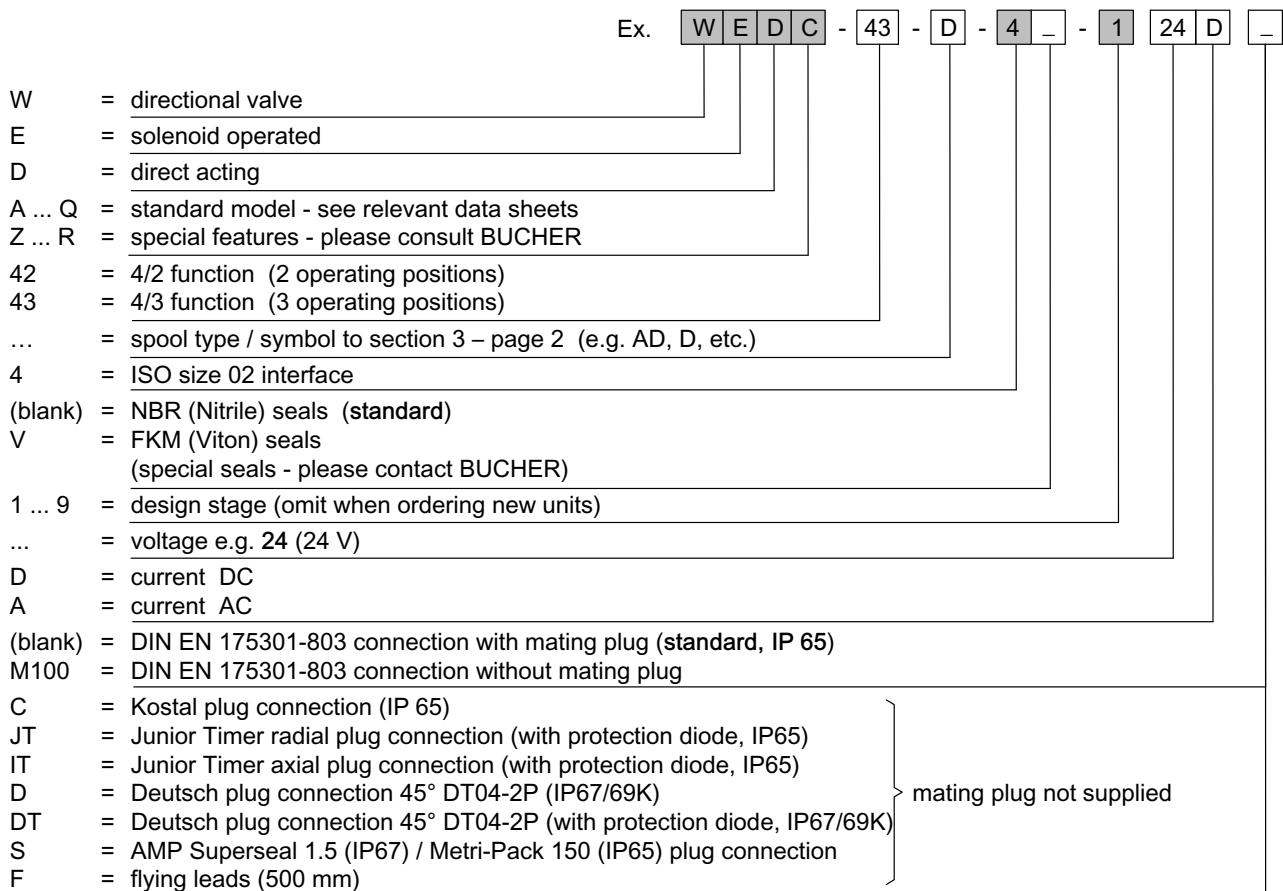
Item	Qty.	Description
1	4	O-ring no. 011 Ø 7,65 x 1,78 N90
2	4	O-ring Ø 16,00 x 2,00 FKM



IMPORTANT!

- 2) With manual override
- 3) Valve mounting bolts M5x40 (included in the delivery)
- 4) Seal kit with FKM (Viton) seals no. DS-322-V
- 5) Required surface finish on the mounting face (valve pad)

7 Ordering code



8 Related data sheets

Reference	(Old no.)	Description
400-P-030101	(i-30)	Size 02 interface to ISO 4401-02-01
400-P-120110	(W-2.141)	Coils for screw-in cartridge valves

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