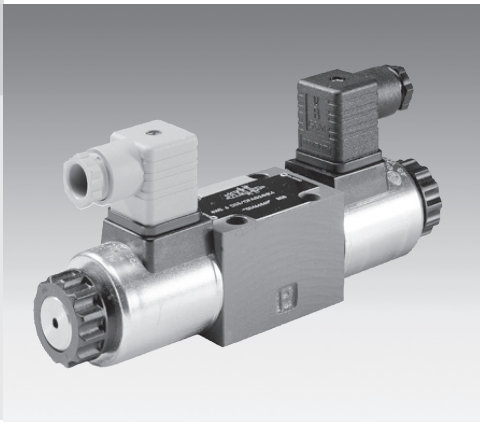
4/3, 4/2 and 3/2 directional valves with wet pin DC or AC solenoids

RA 23178/04.04 **1**/12
Replaces 08.99

Model WE 6 ../.E



Nominal size 6
Series 6X
Maximum operating pressure 350 bar (5100 PSI)
Maximum flow 80 L/min (21 GPM) – DC
Maximum flow 60 L/min (16 GPM) – AC

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Features

- Direct solenoid operated directional spool valve, high performance version
- Porting pattern to DIN 24340 form A, **without** locating pin hole (standard); NFPA T3.5.1 MR1 and ANSI B93.7 D03
- Porting pattern to ISO 4401, **with** locating pin hole, (ordering code .../**60** at the end of the valve type code); NFPA T3.5.1 MR1 and ANSI B93.7 D03
- For subplates see catalogue sheet RE 45052 (separate order)
- Wet pin DC or AC solenoids with removable coil
- Solenoid coil can be rotated through 90°
- It is not necessary to open the pressure tight chamber when changing the coil
- Electrical connections either as individual or central connections
- Hand override, optional
- Soft switching version, see RE 23183
- Inductive limit switch (contact or inductive), see RE 24830

Technical data (for applications outside these parameters, please consult us!)

General			
Installation			Optional
Ambient temperature		°C (°F)	–30 to +50 (–22 to +122) – NBR seals –20 to +50 (–4 to +122) – FKM seals
Weight	Valve with 1 solenoid	kg (lbs.)	1.45 (3.2)
	Valve with 2 solenoids	kg (lbs.)	1.95 (4.3)
Hydraulic			
Max. operating pressure	Ports A, B, P	bar (PSI)	350 (5100)
	Ports T	bar (PSI)	210 (3050) – DC; 160 (2320) – AC With symbols A and B, port T must be used as a drain port if the operating pressure is above the permitted tank pressure.
Max. flow		L/min (GPM)	80 (21) – DC; 60 (15.8) – AC
Flow cross-section (switched position 0)	For symbol Q	mm^2 (in^2)	Approx. 6% of the nominal cross-section
	For symbol W	mm^2 (in^2)	Approx. 3% of the nominal cross-section
Pressure fluid			Mineral oil (HL, HLP) to DIN 51524 [1]; Fast bio-degradable pressure fluids to VDMA 24568 (also see RE 90221); HETG (rape seed oil) [1]; HEPG (polyglycols) [2]; HEES (synthetic ester) [2]; Other pressure fluids on request
Pressure fluid temperature range		°C °F)	–30 to +80 (–22 to +176) – NBR seals –20 to +80 (–4 to +176) – FKM seals
iscosity range		mm^2/s (SUS)	2.8 to 500 (35 to 2320)
ISO code cleanliness class			Maximum permissible degree of contamination of fluid to ISO 4406 (c) class 20/18/15 [3]

Electrical				
Voltage type			DC	AC 50/60 Hz
Available voltages [4] (for ordering details of AC solenoids see below)		V	12, 24, 96, 205	110, 230
Voltage tolerance (nominal voltage)		%	± 10	± 10
Power consumption		W	30	–
Holding power		VA	–	50
Switch-on power		VA	–	220
Duty			Continuous	Continuous
Switching time to ISO 6403	ON	ms	25 to 45	10 to 20
	OFF	ms	10 to 2	15 to 40
Switching frequencies		Cycles/h	UP to 15000	UP to 7200
Protection to DIN EN 60529 [5]			IP 65	IP 65
Max. coil temperature [6]		°C (°F)	150 (302)	180 (356)

[1] Suitable for NBR and FKM seals

[2] Only suitable for FKM seals

[3] Adhered to in hydraulic systems. Effective filtration prevents malfunction and, at the same time, increases the service life of components.
For the selection of filters, see data sheets: RE 50070, RE 50076 and RE 50081.

[4] Other voltages on request

[5] With fitted and locked plug-in connector

[6] Due to the occuring surface temperatures of the solenoid coils, the European standards EN563 and EN982 must be taken into account!

Note:

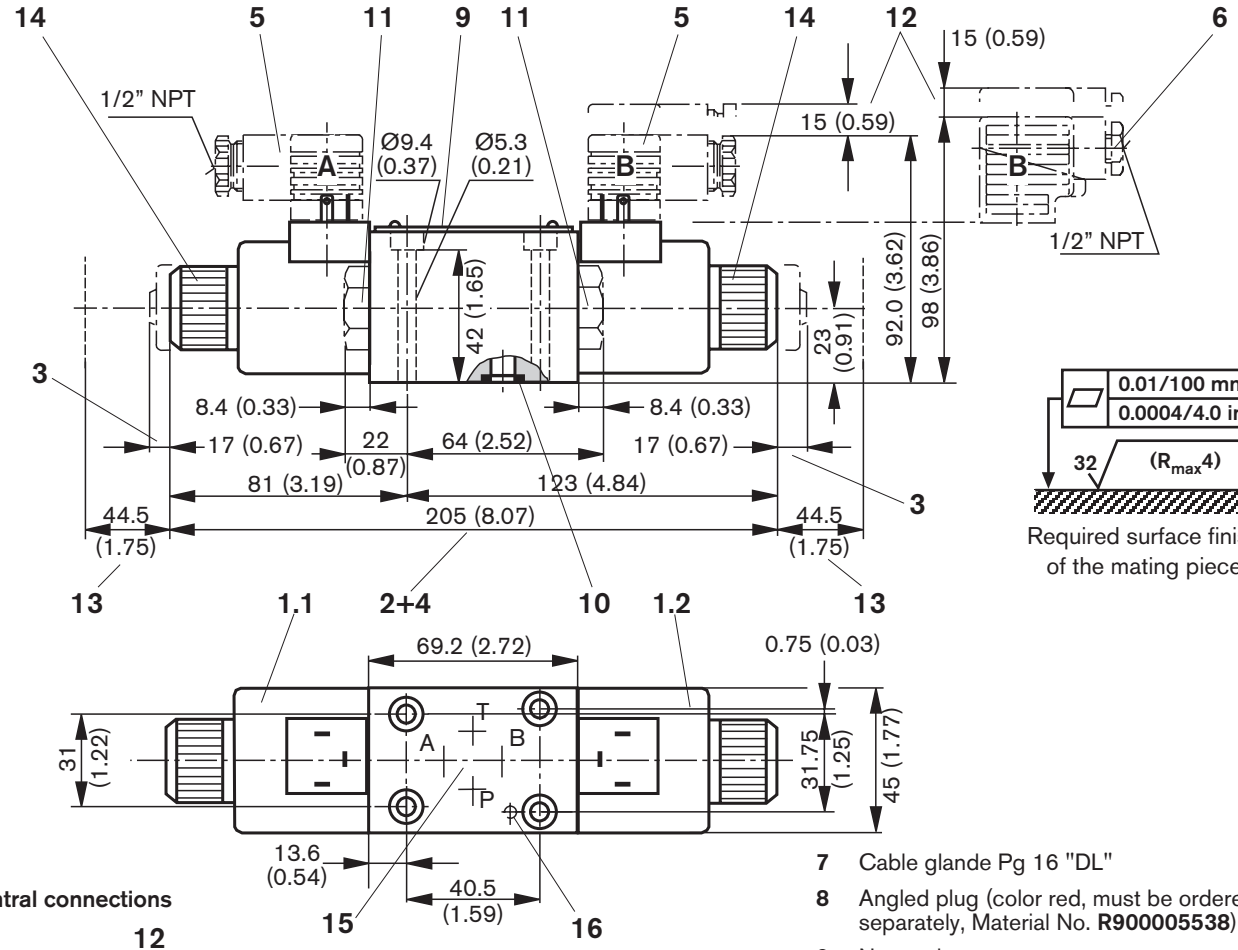
AC solenoids may be used for 2 or 3 types of supply; e.g. solenoid type **W110** for: 110 V, 50 Hz; 110 V, 60 Hz; 120 V, 60 Hz

Ordering details	
W110	110 V, 50 Hz 110 V, 60 Hz 120 V, 60 Hz
W230	230 V, 50 Hz 230 V, 60 Hz

With electrical connections the protective conductor (PE ⏚) must be connected according to the relevant regulations.

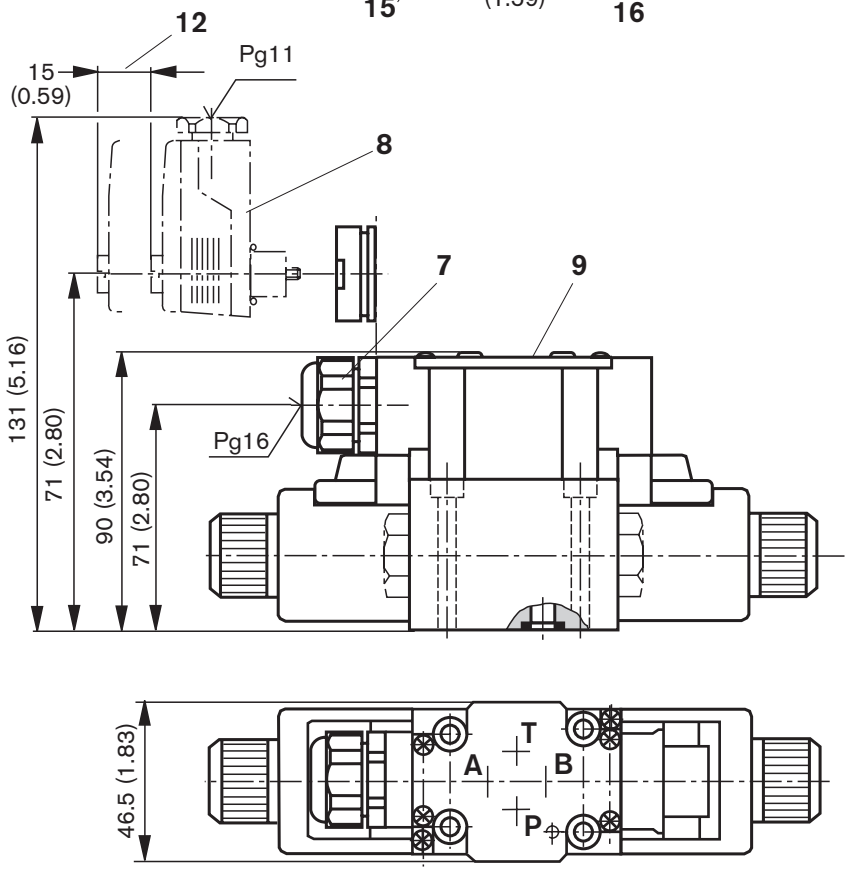
Unit dimensions: valve with a AC solenoid – dimension in millimeters (inches)

Individual connections



Required surface finish of the mating piece

Central connections



7 Cable glande Pg 16 "DL"

8 Angled plug (color red, must be ordered separately, Material No. **R900005538**)

9 Name plate

10 Same sealing rings for ports A, B, P. T

11 Plug for valves with one solenoid

12 Space required to remove the plug-in connector

13 Space required to remove the coil

14 Securing nut, tightening torque $M_A = 4$ Nm (2.95 lb-ft)

15 Porting pattern to DIN 24340 form A, **without** locating pin hole

16 Porting pattern to ISO 4401 **with** locating pin hole

Subplates

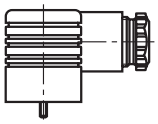
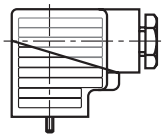
(**without** locating pin hole)	G 341/01(/12), G 1/4 (SAE-4; 7/16-20) G 342/01(/12), G 3/8 (SAE-6; 9/16-18) G 502/01(/12), G 1/2 (SAE-8; 3/4-16)
(**with** locating pin hole)	G 341/60, G 1/4 G 342/60, G 3/8 G 502/60, G 1/2

to catalog sheet RE 45052 and

Valve fixing screws

4 screws DIN EN ISO 4762 – M5 x 50 - 10.9
(10 -24 UNC x 2");
Surface coating to DIN EN ISO 10683 aflZn - 240h - L
(friction value 0.09–0.14 to VDA 235-102)
must be ordered separately.
$M_A = 7$ Nm (5.16 lb-ft), tighten using a torque wrench with an accuracy of ± 10 %.
Note: The tightening torque relates to the maximum operating pressure.

Plug-in connectors to DIN EN 175 301-803 for component plug "K4"

For further plug-in connectors see RE 08006					
		Material No.			
Valve side	Color	Without circuitry	With indicator light 12 … 240 V	With rectifier 12 … 240 V	With indicator light and Z-diode protective circuit 24 V
a	grey	**R901017010**	–	–	–
b	black	**R901017011**	–	–	–
a/b	black	–	**R901017022**	**R901017025**	**R901017026**

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