

2/2-way valves ND 12 to 50



for neutral steamy and liquid fluids
Solenoid actuated, with forced lifting
Piston seat valves
Internal threads G ½ to G 2
Operating pressure 0 to 16 bar

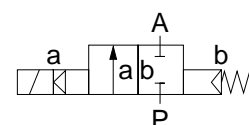
Publication 7500975.06.05.97
Catalogue index
A 5
85 020 series

Description (standard valve)

Solenoid valve for hot water and steam

Flow direction: determined
Fluid temperature: max. +200 °C
Ambient temperature: max. +60 °C
Sum of fluid- and ambient temperature: max. +260 °C
Mounting position: solenoid underneath ¹⁾
Material Body: Brass
Seat seal: PTFE
Internal parts: 1.4104, 1.4301, Gun metal

For contaminated fluids insertion of a strainer is recommended (see accessories).



Switching function:
Normally closed

Features

- Flat piston valve
- Valve operates without pressure differential (Δp)
- High flow rate
- Damped operation

Characteristic data

ND [mm]	Conne- ction (Thread acc. to DIN ISO 228/1)	Operating pressure with gaseous and liquid fluids up to 80 mm ² /s(cSt) [bar]		kv-value ²⁾ (Base m ³ /h)	Weight [kg]	Section no	Dimen- sion table no	Cat no			
		min.	max.					Valve	Solenoid DC	Valve	Solenoid AC
12	G ½	0	16	3	1.45	01	01	85 022 00.8302 ³⁾		85 022 00.8306 ³⁾	
20	G ¾	0	16	9	3.65	02	02	85 023 00.8402		85 023 00.8406	
25	G 1	0	16	11	3.50	02	03	85 024 00.8402		85 024 00.8406	
32	G 1¼	0	16	28	5.30	02	04	85 025 00.8402		85 025 00.8406	
40	G 1½	0	16	31	5.10	02	05	85 026 00.8402		85 026 00.8406	
50	G 2	0	16	43	6.60	02	06	85 027 00.8402		85 027 00.8406	

State voltage [V] and frequency [Hz]

¹⁾ Mounting position up to max. +150 °C fluid temperature: solenoid preferably vertical on top

²⁾ C_V-value (US) ≈ k_V-value x 1.2

³⁾ Max. 40 mm²/s (cSt)

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Solenoids

Standard voltages	DC	AC 40 Hz to 60 Hz
	24 V	24 V
	–	110 V
	205 V	230 V

Design acc. to VDE 0580
 Voltage range $\pm 10\%$
 100 % duty cycle
 Protection class acc. to EN 60529 IP 65
 (previous DIN 40 050)
 Socket acc. to DIN 43650,
 AC solenoid with rectifier

For technical details see catalog register "Solenoids"

Power consumption ¹⁾

Solenoid	DC	AC Inrush and Holding
8302	14 W	–
8306	–	16 VA
8402	29 W	–
8406	–	33 VA

¹⁾ According to VDE 0580 at coil temperature +20 °C.
 In operating the solenoid coil decrease the power consumption appr. 30%.

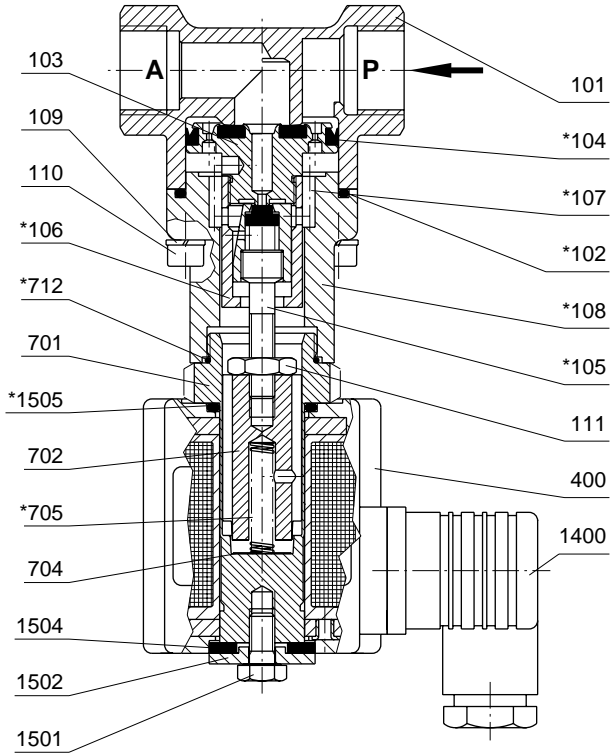
Further models

available at extra cost

- XX XXX **01.XXXX** Normally open.
 G $\frac{1}{2}$ with solenoid 8402/8406.
 Mounting position at fluid temperature: max. +150°C solenoid vertical on top, max. +200 °C solenoid vertical underneath;
 G 1 $\frac{1}{4}$ up to G 2 only with solenoids 9502/9506
- XX XXX **02.XXXX** Manual override, from G $\frac{3}{4}$
- XX XXX **10.XXXX** Material body 2.1096 (Gun metal), from G $\frac{3}{4}$
- XX XXX **14.XXXX** Seal seat EPDM, up to max. +130 °C fluid temperature
- XX XXX **22.XXXX** max. operating pressure 25 bar, up to G 2
- XX XXX **23.XXXX** Position indicator with two solenoid switches, from G $\frac{3}{4}$
- XX XXX **34.XXXX** Enlarged closing force, advisable at low flow rate and low switching cycles (k_v -value reduced appr. –20%)
- **On request** Further versions

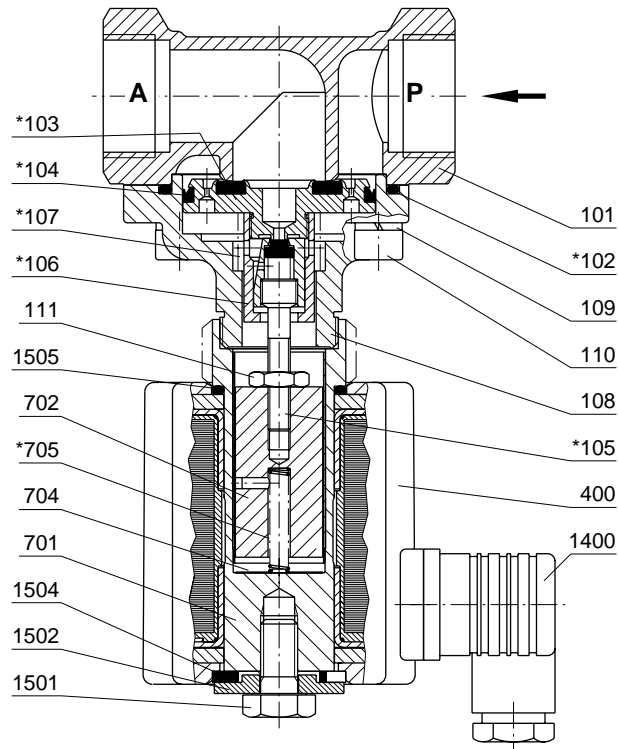
Sections

01



- | | | | |
|------|-----------------------|------|----------------------|
| 101 | Valve body | 400 | Solenoid |
| *102 | O-ring | 701 | Core tube |
| *103 | Valve plate | 702 | Core |
| *104 | Grooved ring | 704 | Anti magnetic spacer |
| *105 | Valve spindle | *705 | Pressure spring |
| *106 | Screw piece | *712 | Gasket |
| *107 | Pressure spring | 1400 | Socket |
| 108 | Body cover | 1501 | Hexagon screw |
| 109 | Spring washer | 1502 | Round plate |
| 110 | Cheese head cap screw | 1504 | Gasket |
| 111 | Hexagon nut | 1505 | O-ring |

02

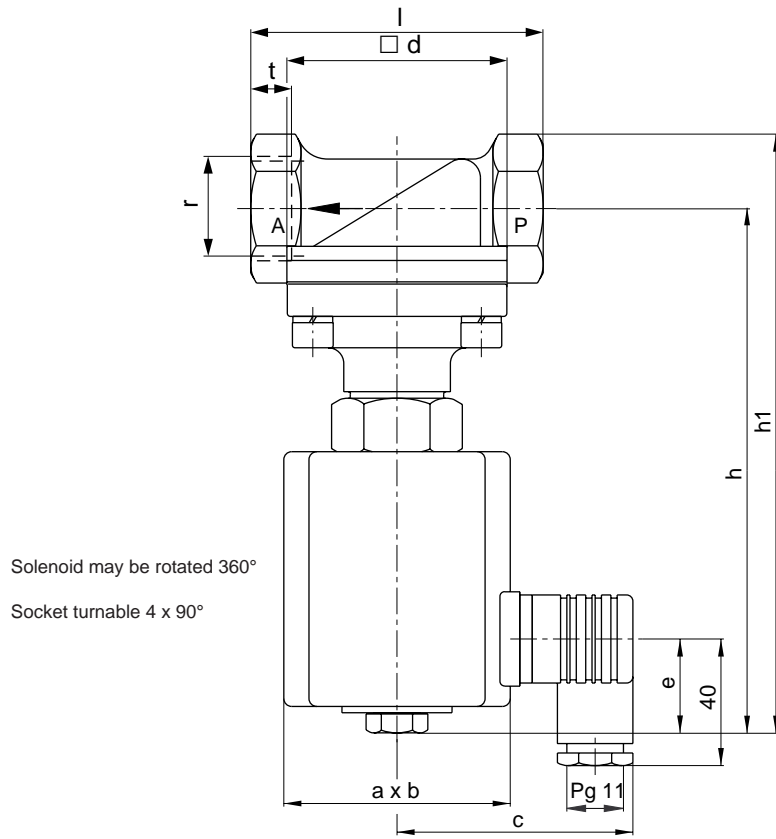


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* These individual parts form a complete wearing unit

When ordering spare parts please state Cat no and series no.

Dimensions



Dimension table no	$a \times b$	c	$\square d$	e	h	h_1	l	r	t
01	52 x 65	65	45	26	145	160	67	G ½	14.0
02	72 x 92	75	70	31	172	196	95	G ¾	12.5
03	72 x 92	75	70	31	172	196	95	G 1	14.0
04	72 x 92	75	96	31	187	220	132	G 1 ¼	18.0
05	72 x 92	75	96	31	187	220	132	G 1 ½	18.0
06	72 x 92	75	112	31	198	238	160	G 2	20.0