

# 2/2-way valves ND 20 to 50



For neutral gaseous and liquid fluids  
Solenoid actuated, with forced lifting  
Diaphragm valves  
Flange connection PN 16  
Operating pressure 0 to 16 bar

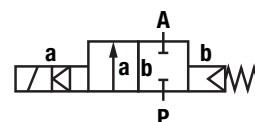


Publication 7500974.06.10.94  
Catalogue index  
**A 5**  
83 340 series

## Description (standard valve)

Solenoid valve for air, water and oil

Flow direction: determined  
Fluid temperature: max. +90 °C  
Ambient temperature: max. +50 °C  
Sum of fluid and ambient temperature: max. +130 °C  
Mounting position: optional, solenoid preferably vertical on top  
Material Body: Grey cast iron  
Seat seal: NBR (Perbunan)  
Internal parts: Brass, 1.4104, 1.4301



Switching function:  
Normally closed

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

## Features

- Valve operates without minimum pressure differential ( $\Delta p$ )
- High flow rate
- Easily interchangeable solenoid
- Suitabel for vacuum

## Characteristic data

ND	Operating pressure with gaseous and liquid fluids up to 25 mm <sup>2</sup> /s (cSt) [bar]		k <sub>v</sub> -value <sup>1)</sup> (Base m <sup>3</sup> /h)	Weight [kg]	Section no	Dimension table no	Cat no			
	min.	max.					Valve	Solenoid DC	Valve	Solenoid AC
[mm]							XX XXX XX.XXXX	XX XXX XX.XXXX	XX XXX XX.XXXX	XX XXX XX.XXXX
20	0	16	9.5	3.7	01	01	<b>83 343 00.8301</b>	<b>83 343 00.8304</b>	<b>83 344 00.8301</b>	<b>83 344 00.8304</b>
25	0	16	11.0	4.1	01	02	<b>83 345 00.8401</b>	<b>83 345 00.8404</b>	<b>83 346 00.8401</b>	<b>83 346 00.8404</b>
32	0	16	27.0	8.2	02	03	<b>83 347 00.8401</b>	<b>83 347 00.8404</b>		
40	0	16	30.0	9.0	02	04				
50	0	10	43.0	11.3	02	05				

<sup>1)</sup> C<sub>v</sub>-value (US) ≈ k<sub>v</sub>-value x 1.2

State voltage [V] and frequency [Hz]

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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 40050)  
 Socket acc. to DIN 43 650  
 AC solenoid with rectifier

### Attention! Restricted temperature range for explosion proof solenoids

For technical details see catalog-register "Solenoids"

### Further versions

at extra charge

- XX XXX 03.XXXX Seat seal FKM (Viton), fluid temperature max.  $+110\text{ }^{\circ}\text{C}$ <sup>2)</sup>
- XX XXX 14.XXXX Seat seal EPDM, fluid temperature max  $+130\text{ }^{\circ}\text{C}$ <sup>2)</sup>
- On request Further versions

<sup>2)</sup> max. operating pressure 10 bar, max. differential pressure for liquid fluids 1 bar at open valve

<sup>3)</sup> max. operating pressure 10 bar

### Power consumption<sup>1)</sup>

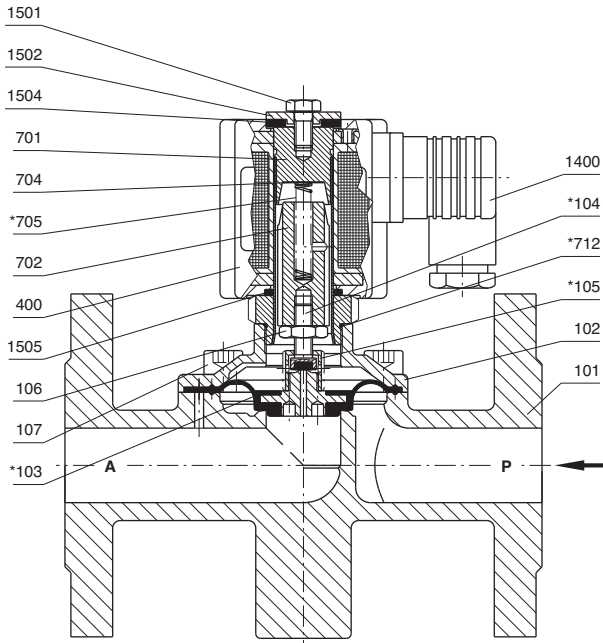
Solenoid	DC	AC	
		Inrush	Holding
8301	22 W	–	–
8304	–	25 VA	25 VA
8401	40 W	–	–
8404	–	45 VA	45 VA

<sup>1)</sup> According to VDE 0580 at coil temperature  $+20\text{ }^{\circ}\text{C}$ . In operating the solenoid coil decrease the power consumption appr. 30 %.

- XX XXX XX.8900 Solenoid in protection class EEx de II C T 4 and T 5
- XX XXX XX.8920 Solenoid in protection class EEx d II C T 4 and T 5
- On request Further versions

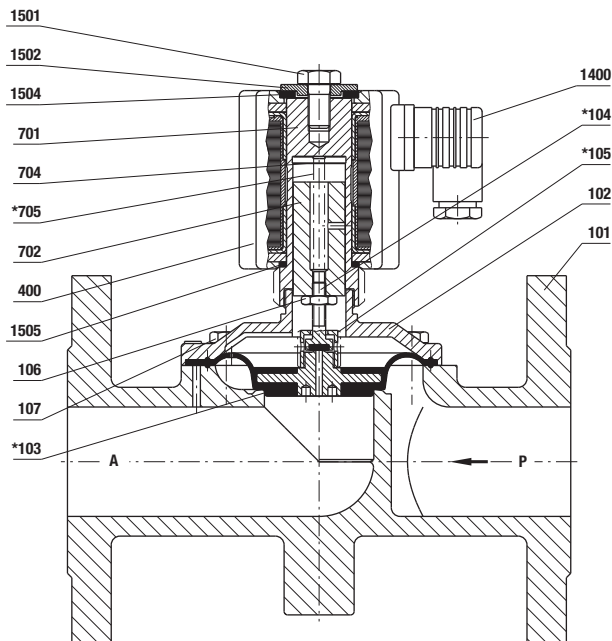
## Sections

### 01



- 101 Valve body
- 102 Body cover
- \*103 Diaphragm
- \*104 Valve spindle
- \*105 Screw piece
- 106 Hexagon nut
- \*107 Hexagon screw
- 400 Solenoid
- 701 Core tube
- 702 Core
- 704 Anti magnetic spacer
- \*705 Pressure spring
- \*712 O-ring
- 1400 Socket
- 1501 Hexagon screw
- 1502 Round plate
- 1504 Gasket
- 1505 O-ring

### 02

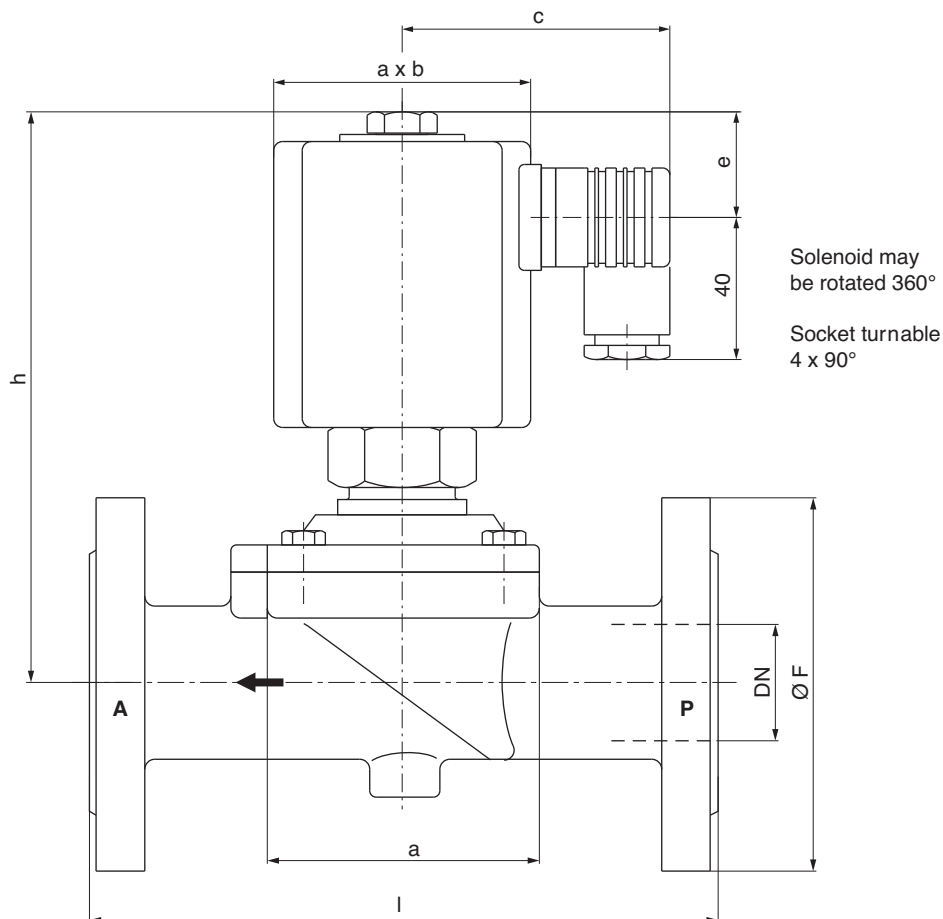


- 101 Valve body
- 102 Body cover
- \*103 Diaphragm
- \*104 Valve spindle
- \*105 Screw piece
- 106 Hexagon nut
- 107 Hexagon screw
- 400 Solenoid
- 701 Core tube
- 702 Core
- 704 Anti magnetic spacer
- \*705 Pressure spring
- 1400 Socket
- 1501 Hexagon screw
- 1502 Round plate
- 1504 Gasket
- 1505 O-ring

\*These individual parts form a complete wearing unit.

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

# Dimensions



Flange connection PN 16 acc. to DIN 2533  
 Contact face acc. DIN 2526 Type C

Dimension table no	ND	$\varnothing F$	$c$	$a \times b$	$e$	$h$	$\square d$	$l$
01	20	105	65	52 x 65	26	126	70	150
02	25	115	65	52 x 65	26	126	70	160
03	32	140	75	72 x 91	31	171	96	180
04	40	150	75	72 x 91	31	175	96	200
05	50	165	75	72 x 91	31	182	112	230