

# 2/2-way valves ND 15 to 100



For neutral gaseous and liquid fluids  
Indirectly solenoid actuated  
Piston seat valves  
Flange connection PN 40  
Operating pressure 0.5 to 40 bar



Publication 7501512.06.02.95  
Catalogue index  
**A 6**  
84 340 series

## Description (standard valve)

Solenoid valve for air, water and oil

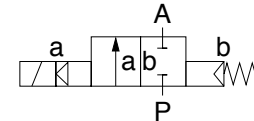
**Flow direction:** determined  
**Fluid temperature:** max. +90 °C  
**Ambient temperature:** max. +50 °C  
**Sum of fluid and ambient temperature:** max. +130 °C  
**Mounting position:** optional, preferably solenoid vertical on top, ND 65 and larger, solenoid only vertical on top  
**Material Body:** Cast steel  
**Seat seal:** NBR  
**Internal parts:** 2.0402, 1.4104, 1.4301 - up to ND 50  
2.1096, 1.4104, 1.4301 - ND 65 and larger



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

## Features

- Flat piston valve
- High flow rate
- Damped operation
- Easily interchangeable solenoid



**Switching function:**  
Normally closed

## Characteristic data

ND [mm]	Operating pressure with gaseous and liquid fluids up to 40 mm <sup>2</sup> /s (cSt) [bar]		k <sub>v</sub> -value <sup>2)</sup> (Base m <sup>3</sup> /h)	Weight [kg]	Section no	Dimension table no	Cat no			
	min. <sup>1)</sup>	max.					Valve XX XXX	Solenoid DC XX.XXXX	Valve XX XXX	Solenoid AC XX.XXXX
15	0.5	40	5.5	4.0	01	01	84 342	00.8301	84 342	00.8304
20	0.5	40	10.0	4.3	01	02	84 343	00.8301	84 343	00.8304
25	0.5	40	12.5	4.7	01	03	84 344	00.8301	84 344	00.8304
32	0.5	40	27.0	9.1	01	04	84 345	00.8301	84 345	00.8304
40	0.5	40	31.0	9.7	01	05	84 346	00.8301	84 346	00.8304
50	0.5	40	46.0	12.3	01	06	84 347	00.8301	84 347	00.8304
65	0.5	40	70.0	30.5	02	07	84 348	00.8401	84 348	00.8404
80	0.5	40	98.0	39.5	02	08	84 349	00.8401	84 349	00.8404
100	0.5	40	157.0	62.0	02	09	84 350	00.8401	84 350	00.8404

State voltage [V] and frequency [Hz]

<sup>1)</sup> Minimum pressure differential P<sub>A</sub> 0.5 bar

<sup>2)</sup> C<sub>v</sub>-value (US) ≈ k<sub>v</sub>-value x 1.2

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## Solenoids

Standard-voltages	DC	AC 40 Hz to 60 Hz
	24 V – 205 V	24 V 110 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 version with rectifier

**Attention: Restricted temperature range for explosion proof solenoids.**

For technical details and special voltages see catalog-register "Solenoids"

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

Solenoid	DC	AC Inrush and Holding
	8301 8304 8401 8404	22 W – 40 W –

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

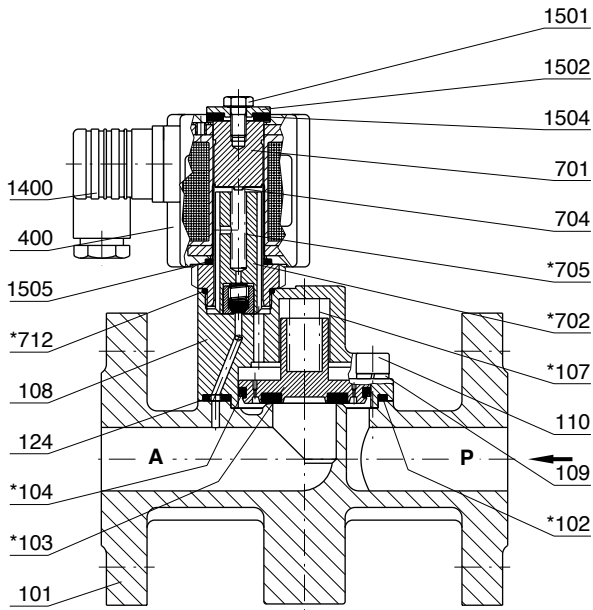
## Further models

available at extra cost

- XX XXX **01.XXXX** Normally open, operating pressure max. 35 bar up to ND 50 (Ex-design only with solenoid 8341). Operating pressure max. 25 bar, ND 65 and larger
- XX XXX **02.84XX** Manual override, only ND 65 and larger
- XX XXX **03.XXXX** Seat seal FPM, fluid temperature max. +110 °C
- XX XXX **06.XXXX** Seat seal PTFE, up to ND 50, max. operating pressure 16 bar, fluid temp. max. +110 °C
- **On request** Further versions
- XX XXX XX.**8336** Solenoid in protection class EEx me II T4
- XX XXX XX.**8436** Solenoid in protection class EEx me II T4
- XX XXX XX.**8900** Solenoid in protection class EEx de II C T4 and T5
- XX XXX XX.**8920** Solenoid in protection class EEx d II C T4 and T5
- **On request** Further versions

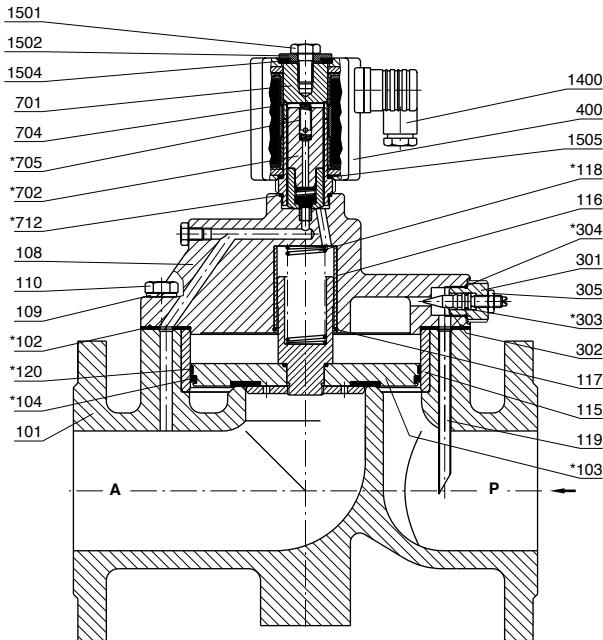
# Sections

## 01



- |                           |                          |
|---------------------------|--------------------------|
| 101 Valve body            | *702 Core                |
| *102 Sealing              | 704 Anti magnetic spacer |
| *103 Valve piston         | *705 Pressure spring     |
| *104 Grooved ring         | *712 O-ring              |
| *107 Pressure spring      | 1400 Socket              |
| 108 Body cover            | 1501 Hexagon screw       |
| 109 Spring washer         | 1502 Round plate         |
| 110 Cheese head cap screw | 1504 Gasket              |
| 124 Bushing               | 1505 O-ring              |
| 400 Solenoid              |                          |
| 701 Core tube             |                          |

## 02



- |                      |                          |
|----------------------|--------------------------|
| 101 Valve body       | *304 O-ring              |
| *102 Flat seal       | 305 Hexagon nut          |
| *103 Valve piston    | 400 Solenoid             |
| *104 Grooved ring    | 701 Core tube            |
| 108 Body cover       | *702 Core                |
| 109 Spring washer    | 704 Anti magnetic spacer |
| 110 Hexagon screw    | *705 Pressure spring     |
| 115 Bushing          | *712 O-ring              |
| 116 Bushing          | 1400 Socket              |
| 117 Circlip          | 1501 Hexagon screw       |
| *118 Pressure spring | 1502 Round plate         |
| 119 Tube             | 1504 Gasket              |
| *120 Guide foil      | 1505 O-ring              |
| 301 Screw piece      |                          |
| 302 Valve spindle    |                          |
| *303 O-ring          |                          |

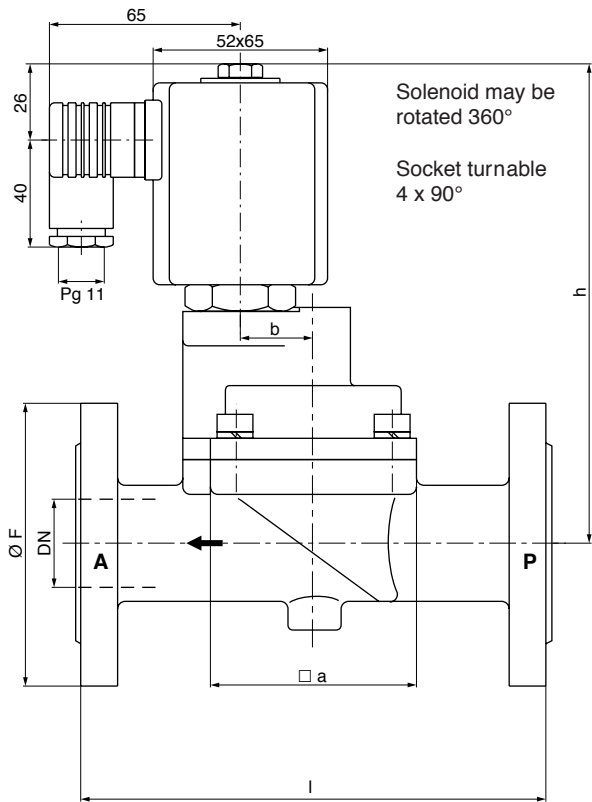
\* These individual parts form a complete wearing unit.

When ordering spare parts please state Cat. No. and series-No.

To avoid high shock pressure, you can control the closing time with the adjusting stem pos. 302. Turning clockwise increases restriction and slows down closing speed. A totally closed restriction would result in a malfunction.

# Dimensions

01



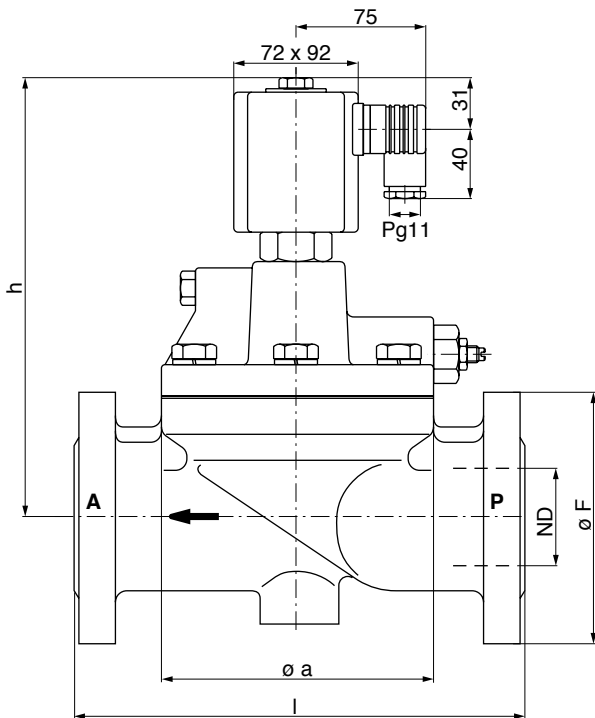
Flange connection PN 40 acc. to DIN 2545  
Contact face DIN 2526 type C

Dimension table no	□ a	b	h
01	70	18	135
02	70	26	146
03	70	26	146
04	96	48	146
05	96	48	150
06	112	56	155

Dimension table no	l	ND	Ø F
01	130	15	95
02	150	20	105
03	160	25	115
04	180	32	140
05	200	40	150
06	230	50	165

02



Flange connection PN 40 acc. to DIN 2545  
Contact face DIN 2526 type C

Dimension table no	Ø a	h	l
07	195	280	290
08	220	300	310
09	260	330	350

Dimension table no	ND	Ø F
07	65	185
08	80	200
09	100	235