

# 2/2-way valves DN 15 to DN 50

for neutral gases and liquids

pressure actuated by external fluid

Seat valves

Internal threads G 1/2 to G 2 or 1/2" NPT to 2" NPT

Operating pressure see table page 2

84 500

84 510

## Description (standard valve)

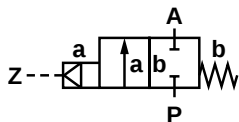
|                          |                                                           |
|--------------------------|-----------------------------------------------------------|
| Flow direction:          | fixed                                                     |
| Mounting position:       | optional                                                  |
| <b>Flow fluid range</b>  |                                                           |
| Fluid temperature:       | −10 °C up to max. +180 °C                                 |
| Ambient temperature:     | −10 °C up to max. +60 °C                                  |
| Material body:           | Gunmetal Rg5 (2.1096)<br>nickel-plated brass              |
| Seat seal:               | PTFE                                                      |
| Internal parts:          | Brass (2.0402), Sandvik 1802,<br>Stainless Steel (1.4571) |
| Seal packing:            | PTFE<br>FPM self-adjustable                               |
| <b>Pilot fluid range</b> |                                                           |
| Pilot fluid:             | neutral gaseous fluids                                    |
| Fluid temperature:       | max. +60 °C                                               |
| Material body:           | Polyamid 66 with glass fibre 30%                          |
| Seat seals:              | NBR                                                       |
| Internal parts:          | Brass (2.0402), Sandvik 1802, 1.4310, 1.8159, 1.1200      |



## Features

- Easy rebuilding into »normally open« or »double-acting« without tools
- Optical position indicator is standard
- Damped closing (Valves closes against flow direction)
- Suitable for contaminated flow fluid
- Suitable for vacuum up to max. 90%
- Reversed flow direction optional
- High flow rate
- With or without mounted pilot valve
- Option pressure actuated by external liquid fluid

## Symbol



## Ordering information

To order, quote model number from table overleaf, e.g. 84 502 00.0000 for a G 1/2 valve without pilot valve.

Characteristic data See page 2 valve and solenoid informations.

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## Characteristic data

### Valves

| Part Number ◇                    | Nominal Diameter<br>(mm) | Port size             | Pilot pressure |            | Operating pressure * |           | kv-value †<br>(Base m <sup>3</sup> /h) | Weight **<br>(kg) |
|----------------------------------|--------------------------|-----------------------|----------------|------------|----------------------|-----------|----------------------------------------|-------------------|
|                                  |                          |                       | min.           | max. (bar) | min                  | max (bar) |                                        |                   |
| 84 502 00.0000<br>84 512 00.0000 | 15                       | G 1/2<br>1/2" NPT     | 3,5            | 10         | 0                    | 16,0 (25) | 4,80                                   | 1,4               |
| 84 503 00.0000<br>84 513 00.0000 | 20                       | G 3/4<br>3/4" NPT     | 3,5            | 10         | 0                    | 10,0 (16) | 10,00                                  | 1,5               |
| 84 504 00.0000<br>84 514 00.0000 | 25                       | G 1<br>1" NPT         | 3,5            | 10         | 0                    | 10,0      | 14,00                                  | 1,8               |
| 84 505 00.0000<br>84 515 00.0000 | 32                       | G 1 1/4<br>1 1/4" NPT | 3,5            | 10         | 0                    | 7,0       | 23,00                                  | 2,4               |
| 84 506 00.0000<br>84 516 00.0000 | 40                       | G 1 1/2<br>1 1/2" NPT | 3,5            | 10         | 0                    | 4,5       | 30,00                                  | 2,7               |
| 84 507 00.0000<br>84 517 00.0000 | 50                       | G 2<br>2" NPT         | 3,5            | 10         | 0                    | 3,0       | 37,00                                  | 3,9               |

◇ note: 0000 without pilot valve  
0164 with pilot valve for DC  
0165 with pilot valve for AC

State voltage [V] and frequency [Hz]

\* with gaseous and liquid fluids up to 600 mm<sup>2</sup>/s (cSt)

\*\* without pilot valve

† C<sub>V</sub>-value (US) ≈ k<sub>V</sub>-value x 1,2

### Notes for 3/2-way pilot valve

Material body brass 2.0402  
Pilot fluid temperature max. +60 °C  
Pilot pressure: p<sub>max</sub> = 8 bar  
Standard voltages: 24 V  $\overline{\sim}$ , 24 V  $\sim$ ; 230 V  $\sim$

### Data for 3/2-way pilot valve

Technical data see publication D107901  
Design acc. to VDE 0580  
Voltage range  $\pm 10\%$   
Duty cycle (ED) 100%  
Protection class to EN 60529 IP 65 (formerly DIN 40050)  
Socket acc. to DIN 43650

### Notes for 3/2-way pilot valve hole pattern NAMUR

Material body aluminium elox  
Pilot fluid temperature -10 °C bis +60 °C  
Pilot pressure p<sub>max</sub> = 10 bar  
Standard voltages 24 V  $\overline{\sim}$ , 24 V  $\sim$ , 230 V  $\sim$   
Design acc. to VDE 0580  
Voltage range  $\pm 10\%$   
Duty cycle (ED) 100%  
Protection class to EN 60529 IP 65 (formerly DIN 40050)  
Socket acc. to DIN 43650

### Data for 3/2-way pilot valve hole pattern NAMUR

Technical data see publication 7503035.XX.XX.XXXX  
Design acc. to VDE 0580  
Voltage range  $\pm 10\%$   
Duty cycle (ED) 100%  
Protection class to EN 60529 IP 65 (formerly DIN 40050)  
Socket acc. to DIN 43650

### Options

available at extra cost

|                |                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------|
| XX XXX 01.XXXX | Normally open, closes with pilot pressure and opens with spring force (pilot pressure 1 – 10 bar) |
| XX XXX 08.XXXX | Double acting; 4/2 or 5/2-way-pilot valve required                                                |
| XX XXX 22.XXXX | Higher operating pressure                                                                         |
| XX XXX 23.XXXX | Double electrical position indicator                                                              |
| XX XXX 50.XXXX | NAMUR interface plate                                                                             |

|            |                                                                                                                    |
|------------|--------------------------------------------------------------------------------------------------------------------|
| On Request | several seals: NBR, FKM, EPDM<br>stroke limiter<br>silencer<br>electrical position indicator with proximity switch |
|------------|--------------------------------------------------------------------------------------------------------------------|

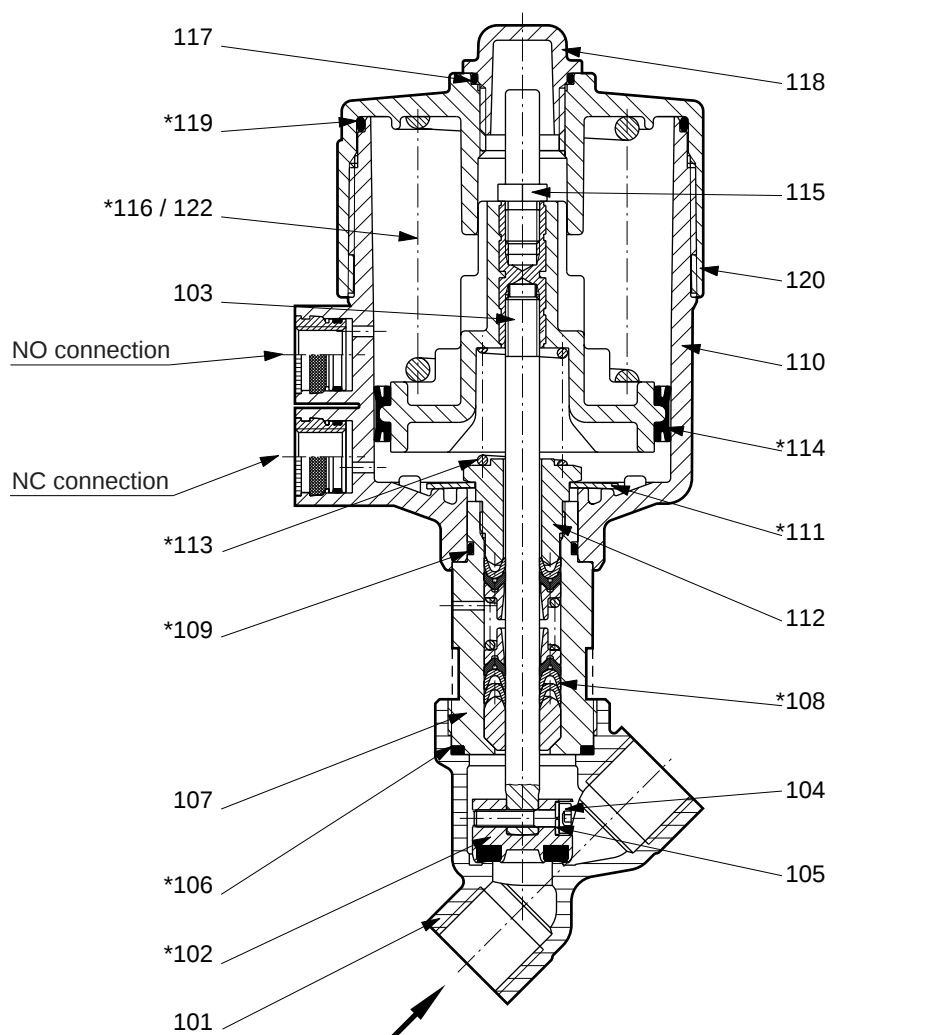
### Mounting accessories

#### NAMUR

Interface plate NAMUR hole pattern for retrofit,  
(part number 12 565 66) consist of:

- 1x NAMUR interface plate
- 2x Adapter screw
- 2x O-ring

## Section view



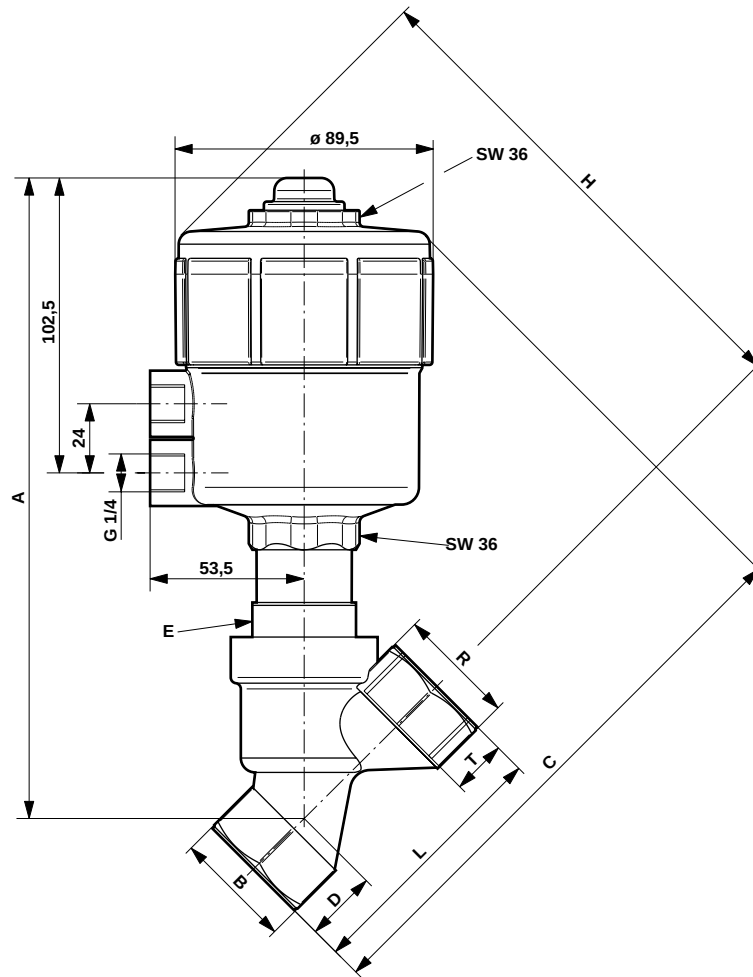
- 101 Valve body
- \* 102 Valve plate
- 103 Valve spindele, complete
- 104 Cheese head cap screw
- 105 Spring washer
- \* 106 Seal ring
- 107 Screw piece
- \* 108 Seal packing
- \* 109 O-ring
- 110 Control head housing cover, bottom part
- \* 111 Cup spring
- 112 Screw piece
- \* 113 Pressure spring

- \* 114 Cylinder packing
- 115 Signal pin
- \* 116 Pressure spring
- 117 O-ring
- 118 Cover cap
- \* 119 O-ring
- 120 Control head housing cover
- \* 122 Pressure spring

\* These individual parts form a complete wearing unit.  
When ordering spare parts please state Cat no and series no.

## General Dimensions

Actuator may be rotated 360°



| Part Number    | A     | B     | C     | D    | E     | H     | L   | R          | T    |
|----------------|-------|-------|-------|------|-------|-------|-----|------------|------|
| 84 502 00.0000 | 204,5 | SW 27 | 183,0 | 18,5 | SW 30 | 164,0 | 65  | G 1/2      | 15,0 |
| 84 512 00.0000 |       |       |       |      |       |       |     | 1 1/2" NPT | 13,0 |
| 84 503 00.0000 | 213,5 | SW 32 | 189,0 | 21,0 | SW 36 | 168,0 | 75  | G 3/4      | 16,5 |
| 84 513 00.0000 |       |       |       |      |       |       |     | 3/4" NPT   | 14,0 |
| 84 504 00.0000 | 221,5 | SW 41 | 199,0 | 25,0 | SW 36 | 174,0 | 90  | G 1        | 19,0 |
| 84 514 00.0000 |       |       |       |      |       |       |     | 1" NPT     | 16,5 |
| 84 505 00.0000 | 236,5 | SW 50 | 212,5 | 28,5 | SW 41 | 184,5 | 110 | G 1 1/4    | 21,5 |
| 84 515 00.0000 |       |       |       |      |       |       |     | 1 1/4" NPT | 17,0 |
| 84 506 00.0000 | 238,5 | SW 55 | 217,0 | 31,0 | SW 41 | 186,0 | 120 | G 1 1/2    | 21,5 |
| 84 516 00.0000 |       |       |       |      |       |       |     | 1 1/2" NPT | 17,0 |
| 84 507 00.0000 | 250,5 | SW 70 | 234,5 | 40,0 | SW 41 | 194,5 | 150 | G 2        | 26,0 |
| 84 517 00.0000 |       |       |       |      |       |       |     | 2" NPT     | 17,5 |

### EU Manufacturer's Declaration

as defined in EU Machinery Guideline 89/392/EEC, Appendix II B  
We hereby declare that the pressure actuated valves were developed and designed using the following harmonised standards:

|            |                                    |
|------------|------------------------------------|
| EN 292     | Machine Safety                     |
| EN 983     | Pneumatic Systems                  |
| EN 60204-1 | Electrical Equipment for Machinery |

### Note

These pressure actuated valves are intended for fitting in a machine. They must not be commissioned until it has been established that the machine as a whole conforms to the EU guideline.

### Note on EU guideline

The valves shall be provided with an electrical circuit which ensures the limits of the harmonised standards EN 50081-1 and EN 50082-1 are observed, and hence the requirements of the Electromagnetic Compatibility Guideline (89/336/EEC) satisfied.