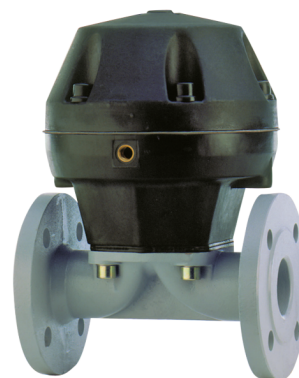


# 83380

## 2/2-way diaphragm valves

- > Port size: DN 15 ... 150, flange connection, Pressure rating PN 16 / 10
- > Any flow direction and mounting position
- > Special seal materials are required for use with oil and oleiferous media
- > International approvals



### Technical features

**Medium:**

Neutral gases and liquid fluids

**Pilot Fluid:**

Air max. +40°C (+104°F)

**Switching function:**

Normally closed; closed by spring force, opened by pilot pressure

**Operation:**

Pressure actuated by external fluid

**Mounting position:**

Optional

**Flow direction:**

Optional

**Port size:**

DN 15, DN 20, DN 25, DN 32, DN 40, DN 50, DN 65, DN 80, DN 100, DN 125, DN 150

**Pilot connection:**

G1/4

**Operating pressure:**

See table

**Pilot pressure:**

5,5 ... 7 bar (80 ... 101,5 psi)

**Fluid temperature:**

-10 ... +80°C (+14 ... +176°F)

**Ambient temperature:**

-10 ... +55°C (+14 ... +131°F)

**Material:**
Process fluid characteristics:

Body: Grey cast iron

Seat seal: EPDM

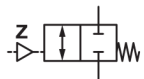
Pilot fluid characteristics:

Body: Polymer material

Seal: NBR

Internal parts: Coated steel

### Technical data – standard models

| Symbol  | Orifice (mm) | Flow kv value *1) (m <sup>3</sup> /h) | Operating pressure *2) |           | Weight *3) (kg) | Model *3)          |
|---|--------------|---------------------------------------|------------------------|-----------|-----------------|--------------------|
|   |              |                                       | (bar)                  | (psi)     |                 |                    |
|  | 15           | 7                                     | 0 ... 10               | 0 ... 145 | 3,1             | 8338200.0000.00000 |
|   | 20           | 14                                    | 0 ... 10               | 0 ... 145 | 3,7             | 8338300.0000.00000 |
|   | 25           | 20                                    | 0 ... 10               | 0 ... 145 | 4,2             | 8338400.0000.00000 |
|   | 32           | 37                                    | 0 ... 10               | 0 ... 145 | 7,7             | 8338500.0000.00000 |
|   | 40           | 40                                    | 0 ... 10               | 0 ... 145 | 8,2             | 8338600.0000.00000 |
|   | 50           | 82                                    | 0 ... 10               | 0 ... 145 | 13,7            | 8338700.0000.00000 |
|   | 65           | 102                                   | 0 ... 6                | 0 ... 145 | 26              | 8338800.0000.00000 |
|   | 80           | 165                                   | 0 ... 8                | 0 ... 145 | 30              | 8338900.0000.00000 |
|   | 100          | 241                                   | 0 ... 6                | 0 ... 145 | 48              | 8339000.0000.00000 |
|   | 125          | 378                                   | 0 ... 8                | 0 ... 145 | 91              | 8339100.0000.00000 |
|   | 150          | 496                                   | 0 ... 6                | 0 ... 145 | 104             | 8339200.0000.00000 |

\*1) Cv-value (US) = kv value x 1,2

\*2) For gases and liquid fluids up to 400 mm<sup>2</sup>/s (cSt)

\*3) Without pilot valve

**Option selector**
**833\*\*\*\*.0000.00000**

| Orifice (mm) | Substitute |
|--------------|------------|
| 15           | 82         |
| 20           | 83         |
| 25           | 84         |
| 32           | 85         |
| 40           | 86         |
| 50           | 87         |
| 65           | 88         |
| 80           | 89         |
| 100          | 90         |
| 125          | 91         |
| 150          | 92         |

| Valve options  | Substitute |
|--|------------|
| Normally open, DN 15 ... 50 (Pilot pressure 1 ... 5,5 bar (14,5 ... 80 psi)) | 01         |
| DN 65 ... 150 (Pilot pressure 6 ... 7 bar (87 ... 101,5 psi))                |            |
| Seat seal FPM  | 03         |
| Seat seal PTFE   | 06         |
| Body EN-GSJ-400-18-LT (Spheroidal cast iron), PFA lined, Seals PTFE          | 50         |
| Electrical position indicator a.c. / d.c.                                    | 57         |
| Electrical position indicator only d.c. max. 30 V                            | 58         |
| Electrical position indicator EEx de II C T6                                 | 64         |

**Notes for 3/2-way pilot valve 84660 / 84680**

|                                |                                  |
|--------------------------------|----------------------------------|
| <b>Material</b>                | Body Aluminium                   |
| <b>Pilot fluid temperature</b> | max. +60°C (+140°F)              |
| <b>Pilot pressure</b>          | 1 ... 10 bar (14,5 ... 145 psi)  |
| <b>Standard voltages</b>       | 24 V d.c., 24 V a.c., 230 V a.c. |

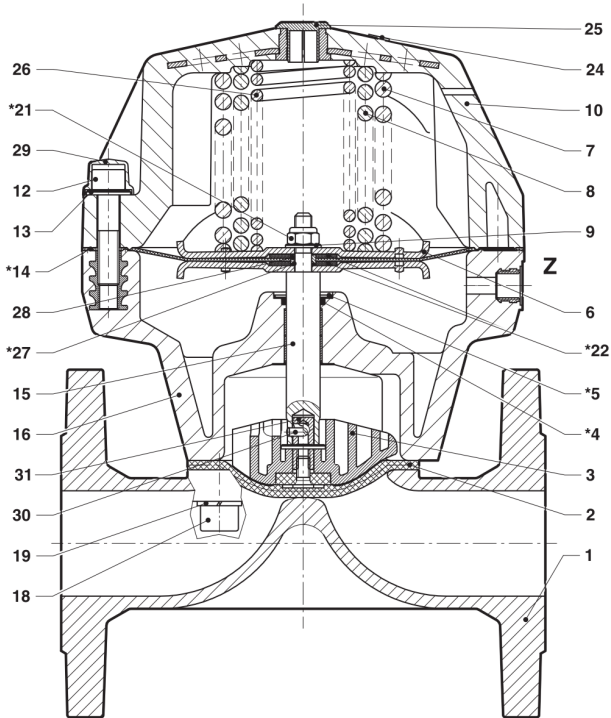
**Electrical Data for 3/2-way pilot valve 84660 / 84680**

|                         |   |
|-------------------------|---|
| <b>Design acc. to</b>   | DIN VDE 0580                                |
| <b>Voltage range</b>    | ±10%  |
| <b>Duty cycle</b>       | 100% ED                                     |
| <b>Protection class</b> | EN 60529 IP65 with mounted socket           |
| <b>Socket</b>           | Form A acc. to DIN EN 175301-803 (included) |
| <b>Technical data</b>   | See publication en 5.8.640                  |

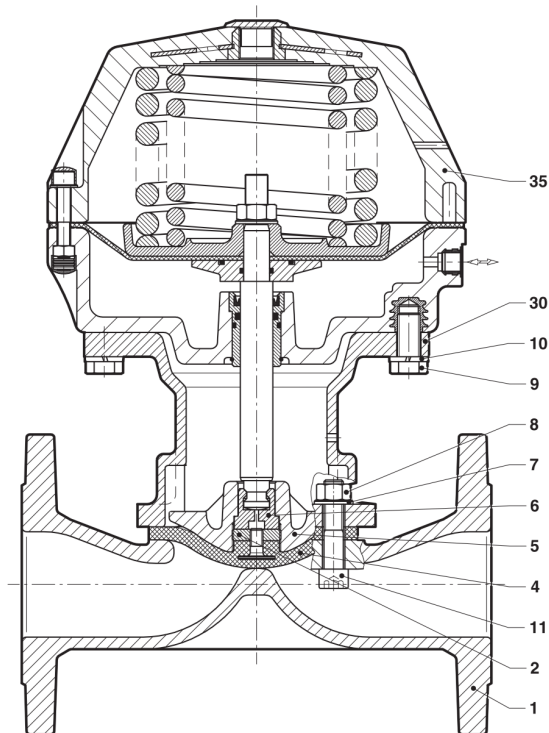
**Further versions on request!**
**An electrical solenoid valve can be attach at the pilot connection Z.**

| Required Parts DN 15 ... 50   | Model   |
|-------------------------------|---|
| 1 pcs. 3/2-way solenoid valve | 8466000.9101.xxxxx<br>Please insert voltage and frequency codes |

| Required Parts DN 65 ... 100                    | Model   |
|---|---|
| 1 pcs. 3/2-way solenoid valve for gases fluids  | 8020750.0246.xxxxx<br>Please insert voltage and frequency codes |
| 1 pcs. 3/2-way solenoid valve for liquid fluids | 2401103.0801.xxxxx<br>Please insert voltage and frequency codes |

**Section View  
up to DN 50**


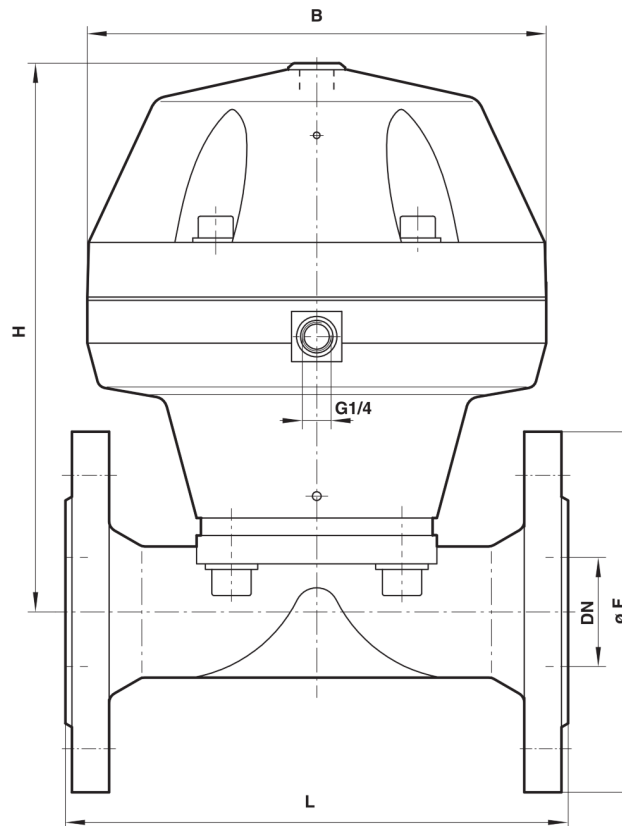
| No. | Description     |
|-----|-----------------|
| 1   | Valve body      |
| 2   | Shut diaphragm  |
| 3   | Thrust collar   |
| *4  | Quad-seal-ring  |
| *5  | Lock washer     |
| 6   | Diaphragm disk  |
| 7   | Pressure spring |
| 8   | Pressure spring |
| 9   | Washer          |
| 10  | Upper part      |
| 12  | Screw           |
| 13  | Washer          |
| *14 | Diaphragm       |
| 15  | Spindle         |
| 16  | Base, complete  |
| 18  | Screw           |
| 19  | Spring washer   |
| *21 | Uni-Stop-nut    |
| *22 | Gasket          |
| 24  | Material plate  |
| 25  | Sealing cap     |
| 26  | Pressure spring |
| *27 | O-ring          |
| 28  | Distance ring   |
| 29  | Cover           |
| 30  | Straight pin    |
| 31  | Tappet          |

**from DN 65**


| No. | Description                   |
|-----|-------------------------------|
| 1   | Valve body                    |
| 2   | Clamping nut                  |
| 4   | Diaphragm                     |
| 5   | Compression piece             |
| 6   | Half-shell                    |
| 7   | Spring washer                 |
| 8   | Nut                           |
| 9   | Hexagon screw                 |
| 10  | Spring washer                 |
| 11  | Allen head screw              |
| 30  | Adapter                       |
| 35  | Valve head assembly, complete |

\* These individual parts form a complete wearing unit.  
When ordering spare parts please state Model No. and Series No.

**Dimensions**  
**DN 15 ... 150**

 Dimensions in mm  
 Projection/First angle


| Orifice (mm) | B *4) | ø F | H   | L   | Model              |
|--------------|-------|-----|-----|-----|--------------------|
| 15           | 130   | 95  | 148 | 130 | 8338200.0000.00000 |
| 20           | 150   | 105 | 148 | 150 | 8338300.0000.00000 |
| 25           | 160   | 115 | 148 | 160 | 8338400.0000.00000 |
| 32           | 180   | 140 | 203 | 180 | 8338500.0000.00000 |
| 40           | 200   | 150 | 203 | 200 | 8338600.0000.00000 |
| 50           | 230   | 165 | 248 | 230 | 8338700.0000.00000 |
| 65           | 290   | 185 | 329 | 290 | 8338800.0000.00000 |
| 80           | 310   | 200 | 339 | 310 | 8338900.0000.00000 |
| 100          | 350   | 220 | 354 | 350 | 8339000.0000.00000 |
| 125          | 400   | 250 | 519 | 400 | 8339100.0000.00000 |
| 150          | 480   | 285 | 514 | 480 | 8339200.0000.00000 |

\*4) B = max. depth

**Note to Pressure Equipment Directive (PED):**

The valves of this series up to and including DN 25 (G1) are according to Art. 4 § 3 of the Pressure Equipment Directive (PED) 2014/68/EU. This means interpretation and production are in accordance to engineers practice wellknown in the member countries. The CE-sign at the valve does not refer to the PED. Thus the declaration of conformity is not longer applicable for this directive.

**For valves > DN 25 (G1) Art. 4 § (1) Letter d) applies:**

The basic requirements of the Enclosure I of the PED must be fulfilled. The CE-sign at the valve includes the PED. A certificate of conformity of this directive will be available on request.

**Note to Electromagnetic Compatibility Guideline (EEC):**

The valves shall be provided with an electrical circuit which ensures the limits of the harmonised standards EN 61000-6-3 and EN 61000-6-1 are observed, and hence the requirements of the Electromagnetic Compatibility Guideline (2014/30/EU) satisfield.

**Note to EAC marking:**

The EAC-marked products comply with the applicable requirements stated in the technical regulations of the Eurasian Economic Union.