

- > Port size: DN 20 ... 80, 3/4 ... 3 (ISO G/NPT)
- > High flow rate
- > All internal components captive
- > Clear, compact design
- > Solenoid interchangeable without tools (*Twist-on*)
- > Integrated silencer
- > One-piece diaphragm
- > Also available for solenoid version low temperature to  $-40^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$ )!
- > International approvals

*Twist-on*



### Technical features

**Medium:**

Air

**Switching function:**

Normally closed

**Flow direction:**

Determined

**Mounting position:**

Optional, preferably solenoid vertical on top

**Port size:**

G3/4, G1, G1 1/2, G2, G2 1/2, G3, 3/4 NPT, 1 NPT, 1 1/2 NPT, 2 NPT, 2 1/2 NPT

**Operating pressure:**

0,4 ... 7/8 bar (5,8 ... 101/116 psi)

**Dusty gas temperature:**

$-20 \dots +85^{\circ}\text{C}$  ( $-4 \dots +185^{\circ}\text{F}$ )

**Cleaning gas temperature:**

$-40 \dots +85^{\circ}\text{C}$  ( $-40 \dots +185^{\circ}\text{F}$ )

**Ambient temperature:**

$-20 \dots +85^{\circ}\text{C}$  ( $-4 \dots +185^{\circ}\text{F}$ )

**Material:**

Body: Aluminium

Seat seal: TPE

Internal parts: TPU

### Technical data – standard models

| Symbol | Port size | Orifice (mm) | Valve length (mm) | Flow kv value *1) (m <sup>3</sup> /h) | Operating pressure (bar) (psi) |             | Weight (kg) | Model              |
|--------|-----------|--------------|-------------------|---------------------------------------|--------------------------------|-------------|-------------|--------------------|
|        | G3/4      | 20           | 95                | 18                                    | 0,4 ... 8                      | 5,8 ... 116 | 0,5         | 8296300.8171.xxxxx |
|        | 3/4 NPT   | 20           | 95                | 18                                    | 0,4 ... 8                      | 5,8 ... 116 | 0,5         | 8297300.8171.xxxxx |
|        | G1        | 25           | 95                | 22                                    | 0,4 ... 8                      | 5,8 ... 116 | 0,47        | 8296400.8171.xxxxx |
|        | 1 NPT     | 25           | 95                | 22                                    | 0,4 ... 8                      | 5,8 ... 116 | 0,47        | 8297400.8171.xxxxx |
|        | G1 1/2    | 40           | 135               | 59                                    | 0,4 ... 8                      | 5,8 ... 116 | 1,18        | 8296600.8171.xxxxx |
|        | 1 1/2 NPT | 40           | 135               | 59                                    | 0,4 ... 8                      | 5,8 ... 116 | 1,18        | 8297600.8171.xxxxx |
|        | G2        | 50           | 169               | 80                                    | 0,4 ... 8                      | 5,8 ... 116 | 2,02        | 8296700.8171.xxxxx |
|        | 2 NPT     | 50           | 169               | 80                                    | 0,4 ... 8                      | 5,8 ... 116 | 2,02        | 8297700.8171.xxxxx |
|        | G2 1/2    | 65           | 169               | 93                                    | 0,4 ... 8                      | 5,8 ... 116 | 2,3         | 8296800.8171.xxxxx |
|        | 2 1/2 NPT | 65           | 169               | 93                                    | 0,4 ... 8                      | 5,8 ... 116 | 2,3         | 8297800.8171.xxxxx |
|        | G3        | 80           | 239,5             | 172                                   | 0,4 ... 7                      | 5,8 ... 101 | 3,93        | 8296900.8171.xxxxx |

xxxxx Please insert voltage and frequency codes

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

**Option selector**

829\*\*\*\*\*.8171.\*\*\*\*\*

| Thread form   | Substitute |
|---|------------|
| ISO G   | 6          |
| NPT   | 7          |
| Port size   | Substitute |
| 3/4   | 3          |
| 1   | 4          |
| 1 1/2   | 6          |
| 2   | 7          |
| 2 1/2   | 8          |
| 3 (only ISO G)  | 9          |
| Valve options   | Substitute |
| Flange version without valve body   | 54         |
| Dusty gas temperature version<br>-20 ... +100°C, (-4 ... +212°F)<br>Seat seal TPE,<br>Ambient temperature<br>-40 ... +85°C (-40 ... +185°F),<br>Cleaning gas temperature<br>-20 ... +85°C (-4 ... +185°F) | 62         |

| Frequency   | Substitute |
|---|------------|
| See table frequency codes   | xx         |
| Voltage   | Substitute |
| See table voltage codes   | xxx        |
| Valve options   | Substitute |
| Dusty gas temperature version<br>-20 ... +140°C (-4 ... +284°F),<br>Seat seal TPE,<br>Ambient temperature<br>-40 ... +85°C (-40 ... +185°F),<br>Cleaning gas temperature<br>-20 ... +85°C (-4 ... +185°F)                             | 63         |
| Low temperature version<br>Dusty gas temperature version<br>-40 ... +85°C (-40 ... +185°F),<br>Seat seal TPE,<br>Ambient temperature<br>-40 ... +85°C (-40 ... +185°F),<br>Cleaning gas temperature<br>-40 ... +85°C (-40 ... +185°F) | 71         |

**Standard solenoid systems**

| Voltage and Frequency Solenoid 8171 *2) |                |            |           |                   |         |
|---|----------------|------------|-----------|-------------------|---------|
| Code Voltage                            | Code Frequency | Voltage    | Frequency | Power consumption |         |
|   |                |            |           | Inrush            | Holding |
| 024                                     | 00             | 24 V d.c.  | -         | 12 W              | 12 W    |
| 024                                     | 50             | 24 V a.c.  | 50 Hz     | 23 VA             | 16 VA   |
| 110                                     | 50             | 110 V a.c. | 50 Hz     | 23 VA             | 16 VA   |
| 120                                     | 60             | 120 V a.c. | 60 Hz     | 23 VA             | 16 VA   |
| 230                                     | 50             | 230 V a.c. | 50 Hz     | 23 VA             | 16 VA   |

\*2)  coil only

**Electrical details for all solenoid systems**

|                         |   |
|-------------------------|---|
| <b>Design</b>           | DIN VDE 0580                                |
| <b>Voltage range</b>    | ±10%  |
| <b>Duty cycle</b>       | 100% ED                                     |
| <b>Protection class</b> | EN 60529 IP65                               |
| <b>Socket</b>           | Form A acc. to DIN EN 175301-803 (included) |

According to DIN VDE 0580 at a solenoid temperature of +20°C.  
At operating state temperature the input power of a coil decreases by up to ca. 30% due to physical reasons.

**Additional solenoid systems for hazardous areas**

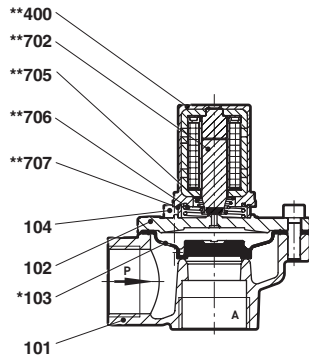
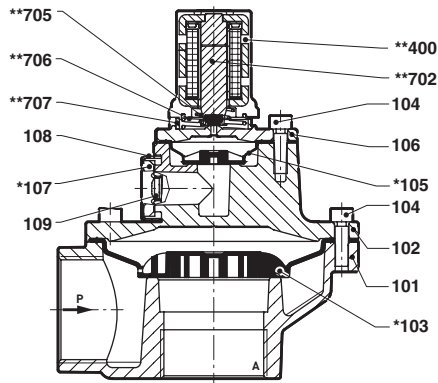
| ATEX category  | ATEX protection class   | IP protection class | So-lenoid | Standard voltages                    |
|----------------|---|---------------------|-----------|--------------------------------------|
| II 2G<br>II 2D | Ex d mb IIC T4/T5 Gb<br>Ex tb IIIC T130°C/T95°C<br>Db<br>to DN 25:<br>operating pressure<br>0,5 ... 16 bar<br>(7,25 ... 232 psi)<br>from DN 32:<br>operating pressure<br>0,5 ... 10 bar<br>(7,25 ... 145 psi) | IP66                | 468x      | 24 V d.c., 110 V a.c.,<br>230 V a.c. |
| II 3G<br>II 3D | Ex ec IIC T4 Gc<br>Ex tc IIIC T130°C DC   | IP65                | 8176      | 24 V d.c., 110 V a.c.,<br>230 V a.c. |
| II 2G<br>II 2D | Ex eb mb IIC T4 Gb<br>Ex mb tb IIIB T135°C Db   | IP66                | 6176      | 24 V d.c., 110 V a.c.,<br>230 V a.c. |

**Attention!**

The conditions imposed on the Ex approvals lead to reduction of the permissible standard temperature ranges in the cases of explosion protected solenoids.

**Additional solenoid systems**

| Option                                     | Solenoid | Standard voltages                 |
|--|----------|-----------------------------------|
| Solenoid version for low temperature -40°C | 9151     | 24 V d.c., 110 V a.c., 230 V a.c. |
| Pulse Solenoid                             | 8821     | 24 V d.c., 110 V a.c., 230 V a.c. |
| Solenoid version for low temperature -40°C | 8001     | 24 V d.c., 110 V a.c., 230 V a.c. |

**Section View**
**G3/4 ... 1**  
**3/4 ... 1 NPT**

**G1 1/2 ... 3**  
**1 1/2 ... 2 1/2 NPT**


| No.   | Description           |
|-------|-----------------------|
| 101   | Valve body            |
| 102   | Valve cover           |
| *103  | Diaphragm             |
| 104   | Socket head cap screw |
| *105  | Diaphragm             |
| 106   | Valve cover           |
| *107  | Silencer              |
| 108   | Silencer housing      |
| 109   | Socket head cap screw |
| **400 | Solenoid              |
| **702 | Core                  |
| **705 | Pressure spring       |
| **706 | Pressure spring       |
| **707 | Silencer              |

\*/\*\*These individual parts form a complete wearing unit.

When ordering spare parts please state Cat. No. and Series No.

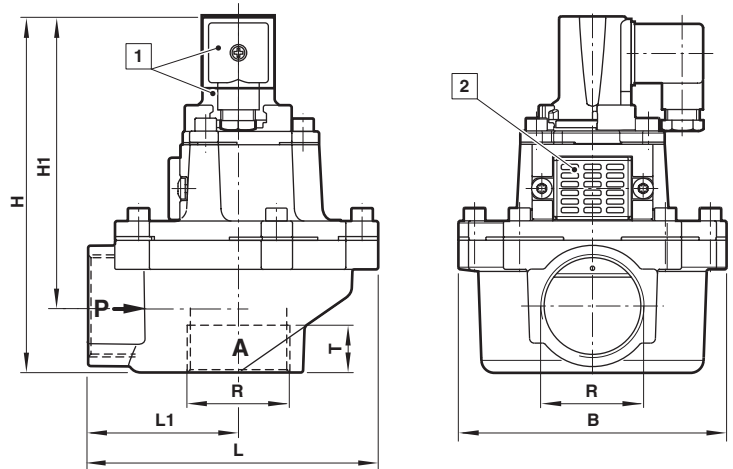
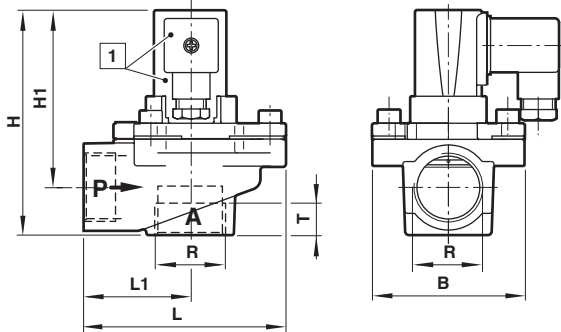
\*\* Solenoid complete wearing unit, e. g. 8298000.8170.XXXXX for a solenoid 8170

**Dimensions**

**G3/4 ... 1**  
**3/4 ... 1 NPT**

**G1 1/2 ... 3**  
**1 1/2 ... 2 1/2 NPT**

Dimensions in mm  
Projection/First angle



- 1 Solenoid rotatable 360°  
Socket turnable 4 x 90°  
(Socket included)
- 2 Silencer

| Port size R | B     | H     | H1  | L     | L1   | T  | Model              |
|-------------|-------|-------|-----|-------|------|----|--------------------|
| G3/4        | 80    | 105,5 | 83  | 95    | 50   | 16 | 8296300.8171.xxxxx |
| 3/4 NPT     | 80    | 105,5 | 83  | 95    | 50   | 14 | 8297300.8171.xxxxx |
| G1          | 80    | 105,5 | 83  | 95    | 50   | 18 | 8296400.8171.xxxxx |
| 1 NPT       | 80    | 105,5 | 83  | 95    | 50   | 17 | 8297400.8171.xxxxx |
| G1 1/2      | 124,5 | 166   | 136 | 135   | 70   | 22 | 8296600.8171.xxxxx |
| 1 1/2 NPT   | 124,5 | 166   | 136 | 135   | 70   | 18 | 8297600.8171.xxxxx |
| G2          | 140   | 190,5 | 149 | 170   | 96,5 | 25 | 8296700.8171.xxxxx |
| 2 NPT       | 140   | 190,5 | 149 | 170   | 96,5 | 18 | 8297700.8171.xxxxx |
| G2 1/2      | 140   | 205,5 | 160 | 170   | 96,5 | 25 | 8296800.8171.xxxxx |
| 2 1/2 NPT   | 140   | 205,5 | 160 | 170   | 96,5 | 24 | 8297800.8171.xxxxx |
| G3          | 196   | 221   | 169 | 239,5 | 143  | 33 | 8296900.8171.xxxxx |

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

The valves of this series 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.

**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) satisfied.

**Note to EAC marking:**

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