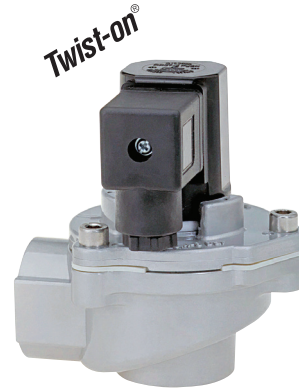


# 82960/82970

## 2/2-way diaphragm valves

- > Port size: DN 20 ... 80, G3/4 ... 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°C (-40°F)
- > International approvals



### 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:**

-40 ... +85°C (-40 ... +185°F)

**Cleaning gas temperature:**

-20 ... +85°C (-4 ... +185°F)

**Ambient temperature:**

-40 ... +85°C (-40 ... +185°F)

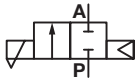
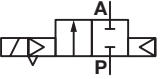
**Material:**

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 Solenoid in V d.c./a.c.
	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	172	0,4 ... 7	5,8 ... 101	3,93	8296900.8171.xxxxx

xxxxx Please insert voltage and frequency codes

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

**Option selector**
**829\*\*\*\*.8171.\*\*\*\*\***

Thread form	Substitute
ISO G	0
NPT	1
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 -40 ... +100°C (-40 ... +212°F), Seat seal TPE, Ambient temperature -20 ... +85°C (-4 ... +185°F), Cleaning gas temperature -40 ... +85°C (-40... +185°F)	62

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

**Standard solenoid systems**

Voltage and Frequency Solenoid 8171					
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

**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**

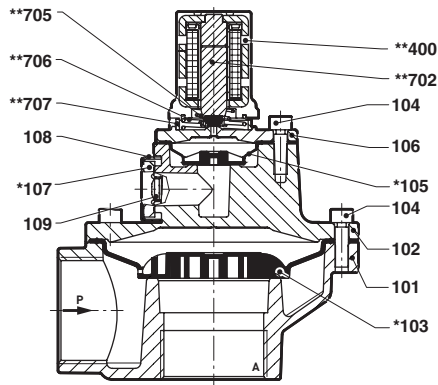
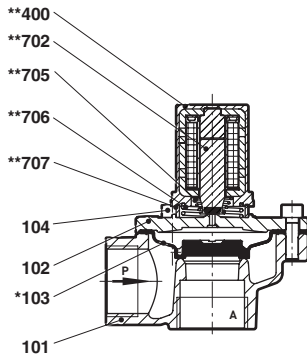
ATEX category	ATEX protection class	IP protection class	Solenoid	Standard voltages
II 2G II 2D	Ex d mb IIC T4/T5 Gb Ex tb IIIC T130°C/ T95°C Db	IP66	468x	24 V d.c., 110 V a.c., 230 V a.c.
II 3G II 3D	Ex ec IIC T4 Gc Ex tc IIIC T130°C DC	IP65	8176	24 V d.c., 110 V a.c., 230 V a.c.
II 2G II 2D	Ex eb mb IIC T4 Gb Ex mb tb IIIB T135°C Db	IP66	6176	24 V d.c., 110 V a.c., 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**

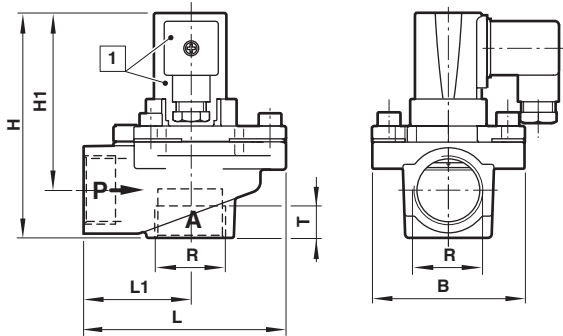
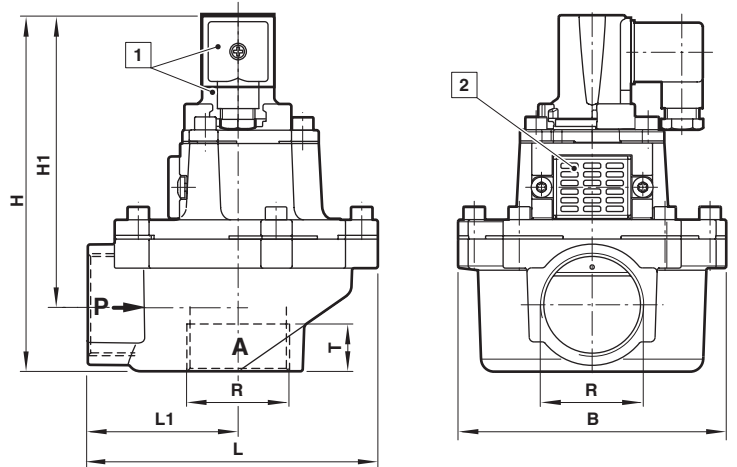
Option	Solenoid	Standard voltages
Solenoid version for low temperature -40°C	9151	24 V d.c., 110 V a.c., 230 V a.c.
Pulse Solenoid	8821	24 V d.c., 110 V a.c., 230 V a.c.
Solenoid version for low temperature -40°C	8001	24 V d.c., 110 V a.c., 230 V a.c.

**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) satisfield.

**Note to EAC marking:**

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