

2/2-Way, G 1/2 - G 1 1/2, Flange (DN25)



### Advantages/Benefits

- ▶ High reliability
- ▶ Erosion resistance
- ▶ Body materials:  
Brass (threaded),  
Grey cast iron (flange)
- ▶ Long service life of seal

### Design/Function

The Type 406 is a servo-assisted on-off solenoid valve with servo piston operated in circuit function A, normally closed. When the pilot valve is closed, the pressure builds up above the piston via a bleed hole.

The piston closure is assisted by spring action. When the pilot valve opens, the pressure above the piston is relieved via a pilot channel.

Assisted by the pressure of the fluid, the piston moves upwards and opens the valve. A minimal differential pressure of 1 bar is required for complete opening.

### Applications

- Fluids at high temperatures, such as hot air and steam
- Autoclaves (steam side)
- Ironing machines
- Steam cleaning systems
- Steam heating systems
- Large kitchens
- Plastic processing
- Injection moulding machines (thermal oil)

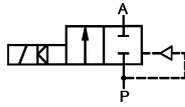
# Solenoid Valve for steam and media at high temperatures up to 180 °C

# Type 406

## Technical Data

### Circuit Function

A 2/2-way valve, normally closed, servo piston valve with 2-way pilot control



### Body Material

- Threaded body of brass, seat 1.4303
- Flanged body of grey cast iron
- Internal parts of solenoid 1.4105
- Servo piston of brass

### Specifications

Orifice DN [mm]	Kv-Value Water [m³/h]	QNm-Value Air [l/min]	Pressure Range [bar]		Weight [kg]	
			AC	DC	Threaded	Flanged body
13	3,7	4000	1-12	1-4	0,8	-
20	5,0	5400	1-12	1-4	1,2	-
25	10,0	10800	1-12	1-4	1,7	4,4
32	18,0	19400	1-12	-	2,9	-
40	18,0	19400	1-12	-	3,3	-

A min. differential pressure of 1 bar is required for complete opening.  
All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

### Operating Data (Valve)

#### Seal Materials/Fluids Handled/Temp.- Range

PTFE Neutral fluids, e.g. steam  
0 to +180 °C

For more detailed information please refer to resistance chart (Leaflet-No. 1896009).

Max. ambient temperature +55 °C

Max. viscosity 21 mm²/s

Response times closing	DN	opening	
		[ms]	[ms]
	13-25	0,1 - 0,4	0,3 - 0,5
	32-40	0,2 - 1,2	1,0 - 3,0

Times measured at nominal pressure or at max. 6 bar operating pressure with water. They depend upon the orifice of the valve, as well as upon the pressure and viscosity of the handled fluid.

### Operating Data (Actuator)

Operating voltages 240, 230, 110, 24 V/ 50 Hz  
24 V/=

Voltage tolerance ±10 %

Power consumption AC DN 13-25 21 VA (inrush),  
12 VA/8 W (hold)  
DN 32-40 35-40 VA

(inrush) DC 16/VA 10 W (hold)  
8 W

Duty cycle 100 % continuously rated

Cycling rate 10-60 c.p.m.

Rating with cable plug IP 65

### Installation /Accessories

Installation as required, but preferably upright with solenoid system

Electrical connection

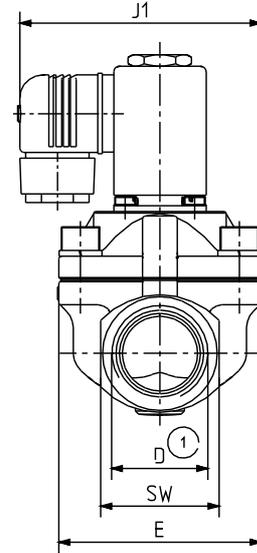
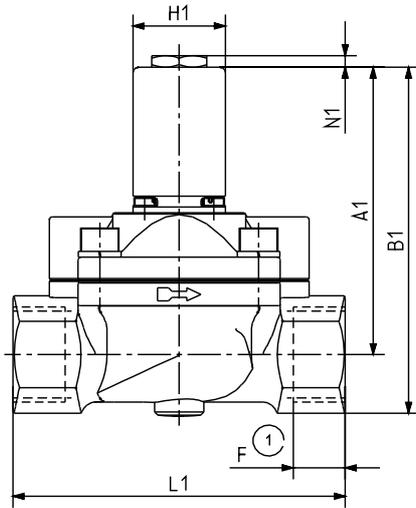
- cable plug for 7mm ø cable (supplied as standard)
- Silicone cable on request

# Solenoid Valve for steam and media at high temperatures up to 180 °C

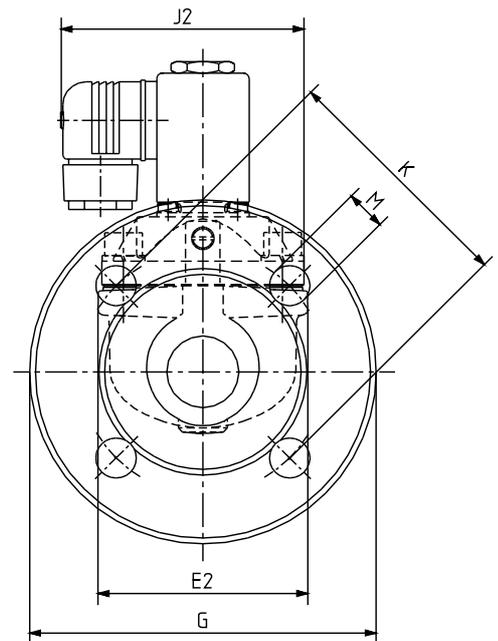
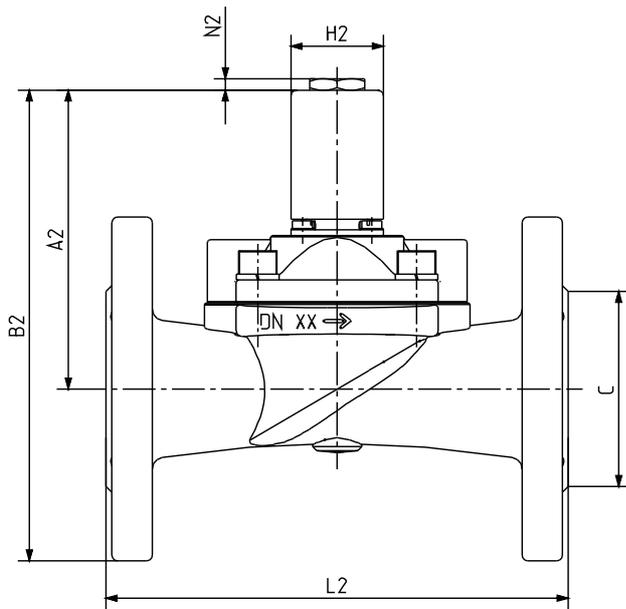
## Type 406

### Dimensions in mm

#### Ported Version



#### Flanged Version



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Orifice	Ported Version										Flanged Version										
DN	A1	B1	D1	F1	E1	L1	SW	J1	H1	N1	A2	B2	C	E2	G	L2	M	K	J2	H2	N2
13	95	109	G 1/2	14	40	65	27	69	32	4	-	-	-	-	-	-	-	-	-	-	-
20	95	111	G 3/4	16	60	100	32	79	32	4	-	-	-	-	-	-	-	-	-	-	-
25	100,5	121	G 1	18	70	115	41	84	32	4	105	165	68	73	120	160	14	85	86	32	4
32	141	166	G 1 1/4	20	85	126	50	96	40	9	-	-	-	-	-	-	-	-	-	-	-
40	145	175	G 1 1/2	22	85	126	60	96	40	9	-	-	-	-	-	-	-	-	-	-	-

# Solenoid Valve for steam and media at high temperatures up to 180 °C

## Type 406

### Ordering Chart (Other Version on Request)

Circuit Function	Orifice DN [mm]	Flow Rate		Port Connection	Pressure Range [bar]	Body Material	Seal Material	Weight [kg]	Voltage/Frequency [V/Hz]	Order-No.
		Water Kv-Value [m³/h]	Air Q/Nn [l/min]							
A	13,0	3,7	4 000	G 1/2	1-12	Brass	PTFE	0,8	024/50	020 541 T
					1- 4	Brass	PTFE	0,8	024/=	019 310 A
					1-12	Brass	PTFE	0,8	110/50	023 200 H
									230/50	061 305 C
									240/50	021 690 S
	20,0	5,0	5 400	G 3/4	1-12	Brass	PTFE	1,2	024/50	019 818 U
					1- 4	Brass	PTFE	1,2	024/=	021 004 J
					1-12	Brass	PTFE	1,2	110/50	021 838 J
									230/50	061 303 A
									240/50	021 691 P
25,0	10,0	10 800	Flanged	1- 4	Cast iron	PTFE	4,4	024/=	078 255 J <sup>1)</sup>	
				1-12	Cast iron	PTFE	4,4	230/50	022 126 H	
			G 1	1-12	Brass	PTFE	1,7	024/50	021 440 X	
				1- 4	Brass	PTFE	1,7	024/=	019 983 J	
				1-12	Brass	PTFE	1,7	110/50	023 896 F	
								230/50	061 304 B	
				240/50	018 643 B					
32,0	18,0	19 400	G 1 1/4	1-12	Brass	PTFE	2,9	230/50	058 142 D	
40,0	18,0	19 400	G 1 1/2	1-12	Brass	PTFE	3,3	230/50	085 367 S	

<sup>1)</sup> Without cable plug

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