



# Technical Data Sheet Type 48



2/2-way solenoid valve  
 NC - Valve normally closed (as standard)  
 NO - Valve normally open (as option)

Direct operated piston design. No differential pressure is necessary for operation. When energized, the valve seat is opened directly. In standard (NC) the valve closes with spring power.

■ Solenoid valve for gaseous and liquid media

Type 48

## TECHNICAL SPECIFICATIONS

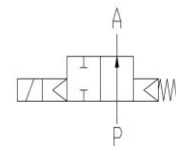
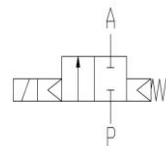
Type of control:	Direct operated, no pressure difference required
Design:	Poppet design
Connection:	Threaded Rp3/8 - Rp3 DIN 2999 (BSP) Other connections like NPT on request
Installation:	Actuator in upright position Lying position of actuator on request
Pressure:	0-5 bar (see table page 2)
Medium:	Clean, neutral, gaseous and liquid medium
Viscosity:	22 mm <sup>2</sup> /s
Temperature range:	Medium: -40 °C bis +80 °C Ambient: -40 °C bis +50 °C <small>In consideration of the restrictions described on page 4</small>
Body material:	Brass 2.0402 Stainless steel 1.4581
Metallic inner parts:	Brass and stainless steel
Sealing:	NBR, FKM, PTFE, EPDM
Supply voltage:	AC~ 24V, 110V, 230V DC= 12V, 24V <small>Other supply voltages on request</small>
Voltage tolerance:	-10% / +10%
Power consumption:	.012 = 18 W    .148 = 10 W ☹ .802 = 24 W    .808 = 24 W ☹ .322 = 30 W    .328 = 24 W ☹ .242 = 46 W    .248 = 30 W ☹ .272 = 100 W    .278 = 47 W ☹ .352 = 150 W    .358 = 75 W ☹
Protection class:	IP65 according to DIN EN 60529
Duty factor:	100% ED-VDE 0580
Connection type:	Plug / Terminal box
Ex-proof:	acc. to 2014/34/EU (ATEX) <small>Further Ex-proof on request</small>

## VALVE FEATURES

- No pressure difference required
- High life time
- Simple compact valve design
- High-quality materials
- Reliable and sturdy sealing elements
- Long-term availability of spare parts

## FUNCTION

NC – non energized closed      NO – non-energized open



## CERTIFICATES



## ORDERING SYSTEM

Valve type		Coil system	Valve options
. 4 8 2 3 / 1 0 0 1 /		. 8 0 2 -	H A
<b>Connection</b>	<b>Body material</b>	<b>2 Standard IP65</b>	
58 G 3/8	10 Brass 2.0402	8 Explosion proof acc. to directive 2014/34/EU (ATEX)	
59 G 3/8	08 St. steel 1.4581		
68 G 1/2			
69 G 1/2	<b>Seal material</b>		
21 G 1/4	01 NBR		
22 G 3/8	02 FKM		
23 G 1/2	04 PTFE		
24 G 3/4	06 EPDM		
25 G 1			
26 G 1 1/4			
27 G 1 1/2			
28 G 2			
29 G 2 1/2			
30 G 3			

# TECHNICAL FEATURES

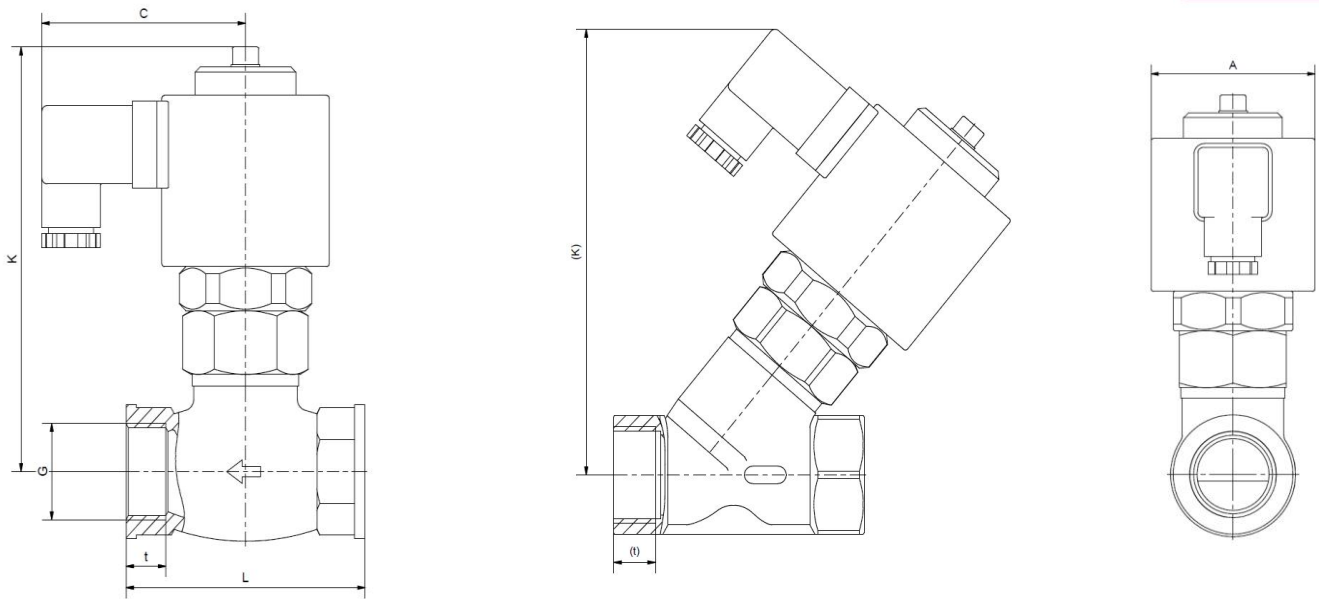
Rp	Seat mm	Kv-value m <sup>3</sup> /h	Standard type	max. pressure for coils					
				.012	.802	.322	.242	.272	.352
3/8	8	1,2	.4858/..01/...	0-3	0-5	-	-	-	-
3/8	10	2,1	.4859/..01/...	0-2	0-3	-	-	-	-
1/2	8	1,2	.4868/..01/...	0-3	0-5	-	-	-	-
1/2	10	2,1	.4869/..01/...	0-2	0-3	-	-	-	-
1/2	13	3,2	.4823/..01/...	-	0-1	0-2	0-5	-	-
3/4	18	4,9	.4824/..01/...	-	0-0,5	0-1	0,2,5	0-5	-
1	24	8,5	.4825/..01/...	-	0-0,3	0-0,5	0-1	0-1,6	-
1 1/4	29	15,0	.4826/..01/...	-	-	0-0,3	0-0,6	0-1	-
1 1/2	35	20,0	.4827/..01/...	-	-	0-0,1	0-0,3	0-0,5	0-0,8
2	45	30,0	.4828/..01/...	-	-	-	0-0,15	0-0,4	0-1
2 1/2	62	58,0	.4829/1001/...	-	-	-	-	0-0,15	0-0,4
3	75	60,0	.4830/1001/...	-	-	-	-	0-0,1	0-0,3

The flow rate mentioned in the table applies to the strongest coil.

Rp	Seat mm	Kv-value m <sup>3</sup> /h	Standard type	max. pressure for ATEX-coils					
				.148	.808	.328	.248	.278	.358
3/8	8	1,2	.4858/..01/...	0-1	0-5	-	-	-	-
3/8	10	2,1	.4859/..01/...	0-0,5	0-3	-	-	-	-
1/2	8	1,2	.4868/..01/...	0-1	0-5	-	-	-	-
1/2	10	2,1	.4869/..01/...	0-0,5	0-3	-	-	-	-
1/2	13	3,2	.4823/..01/...	-	0-1	-	-	-	-
3/4	18	4,9	.4824/..01/...	-	0-0,5	0-0,8	-	-	-
1	24	8,5	.4825/..01/...	-	0-0,3	0-0,5	0-0,7	0-1	-
1 1/4	29	15,0	.4826/..01/...	-	-	0-0,1	0-0,3	0-0,8	-
1 1/2	35	20,0	.4827/..01/...	-	-	-	0-0,2	0-0,3	-
2	45	30,0	.4828/..01/...	-	-	-	-	0-0,2	0-0,35
2 1/2	62	58,0	.4829/1001/...	-	-	-	-	-	0-0,15
3	75	60,0	.4830/1001/...	-	-	-	-	-	0-0,1

The flow rate mentioned in the table applies to the strongest coil.

# DIMENSIONS



Magnet	.012/.148*			.802/.808*			.322/.328*				
Type	4858-59	4868-69	4858-69	4823	4824	4825	4823	4824	4825	4826	4827
G	3/8	1/2	3/8-1/2	1/2	3/4	1	1/2	3/4	1	1 1/4	1 1/2
A	36	36	50	50	50	50	63	63	63	63	63
C	61	61	70	70	70	70	77	77	77	77	77
K	75	75	92	107 (125)	113 (129)	117 (133)	137 (145)	139 (152)	147 (154)	149 (160)	144 (164)
L	54	54	54	65	75	90	65	75	90	110	120
t	10	10	10	11 (12)	12 (13)	14 (15)	11 (12)	12 (13)	14 (15)	16 (17)	18 (19)
kg	0,6	0,6	1	1,1	1,2	1,5	2	2	2,3	2,6	3

Values in brackets apply to the stainless steel angle seat version

\*Differing dimension "C" for ATEX-coils

Magnet	.242/.248					.272/.278					
Type	4824	4825	4826	4827	4828	4825	4826	4827	4828	4829	4830
G	3/4	1	1 1/4	1 1/2	2	1	1 1/4	1 1/2	2	2 1/2	3
A	77	77	77	77	77	105	105	105	105	105	105
C	93	93	93	93	93	107	107	107	107	107	107
K	166 (179)	165 (184)	170 (192)	180 (190)	178 (203)	197 (207)	200 (210)	203 (231)	211 (225)	217	223
L	75	90	110	120	150	90	110	120	150	175	200
t	12 (13)	14 (15)	16 (17)	18 (19)	20 (21)	14 (15)	16 (17)	18 (19)	20 (21)	19	22
kg	3,4 (3,5)	4,0 (3,7)	4,2 (4,3)	4,6 (4,5)	5,3 (5,7)	7,7 (7,8)	7,8 (8,2)	8,3 (8,8)	9,1 (9,8)	10,6	12,9

Values in brackets apply to the stainless steel angle seat version

## INFORMATION

- It is imperative to observe the installation and safety instructions in our operating and service manuals.
- For information on our GSR ordering code, please refer to our catalogs. If you have any questions, we will be glad to assist you.
- Required ordering information: valve type, function NC/NO, pressure range, connection, nominal width, medium, flow rate, medium and ambient temperatures, connection voltage.
- **Detailed production-specific drawings and other technical information will be made available when an order is placed**

## PLEASE NOTE

Each individual application decides which valve type is required, the main factor being the resistance of the materials to the operating medium. The correct selection of materials requires knowledge of the concentration, temperature and degree of contamination of the medium. Other criteria include the operating pressure and max. volumetric flow, since, in addition to high temperatures, high pressures and high flow rates must also be taken into account when selecting the materials.

**All materials used for our valves, be it housing, seals or magnets, will be carefully selected in view of the different application areas. Any information given is non-binding and serves for orientation only. No claims under warranty can be derived therefrom.**

## Heating and power of solenoid coils

The GSR default solenoid valves are designed for continuous operation (100% ED = power-on time) under normal operating conditions. The pulling force of a solenoid coil is basically influenced by three elements:

- The self-heating of the magnetic coil
- The medium temperature
- The ambient temperature

GSR solenoid coils are by default designed for a maximum ambient temperature of +35 °C. This specification applies for the maximum allowable operating pressure specified in the data sheet of the corresponding valve, 100% duty cycle and a medium temperature of +80 °C.

A higher ambient temperature is possible, when lower values are applied for the other influencing parameters. When the max. operation pressure and max. ambient temperature of +50 °C is given the medium temperature is not allowed to be higher than max. +50 °C. In addition to that, deviations from the default design temperature range are possible, e.g. when temperature coils or other constructive measures are used. Please contact the GSR headquarters to discuss the specific application.

More precise specifications and technical data with regard to the operating conditions can be found in the data sheets of the solenoid coils and the solenoid valve regarded. Please observe that the surface temperature of a permanently loaded coil can amount up to +120 °C, solely by the self-heating of the coil. The power consumption of our default solenoid valves was calculated to DIN VDE 05820 for a coil temperature of +20 °C.

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