



2/2-way solenoid valve

NC - Valve normally closed (as standard)

NO - Valve normally open (as option)

Direct operated piston design valve. 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**

## TECHNICAL SPECIFICATIONS

Type of control	Direct operated, no differential pressure necessary
Design	Piston design
Connection	Threaded G1/8 - G1/2 DIN ISO 228/1 (BSP) Further connections like NPT on request
Installation	Preferable with actuator upright
Pressure	0 - 90 bar (see table on page 2)
Medium	Clean, neutral, gaseous and liquid media
max. Viscosity	22 mm <sup>2</sup> /s
Temperature range	Medium: -10 °C up to +80 °C Ambient: -10 °C up to +50 °C In consideration of the restrictions described on page 4
Body material	Brass 2.0401 / 2.0402 Stainless steel 1.4305 Stainless steel 1.4571
Metallic inner parts	Brass and Stainless steel
Sealing	FKM, EPDM, PTFE
Supply voltage	AC~ 24V, 110V, 230V DC= 12V, 24V Other supply voltages on request
Voltage tolerance	-10% / +10%
Power consumption	.182 = 6,8 Watt    .178 = 5,2 Watt ⚠ .032 = 11 Watt    .148 = 10 Watt ⚠ .012 = 18,5 Watt
Protection class	IP65 acc. to DIN 60529
Duty factor	100% ED-VDE 0580
Connection type	Plug
Ex-proof	acc. to 2014/34/EU (ATEX) Further Ex-proof on request

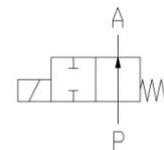
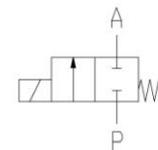
## VALVE FEATURES

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

## FUNCTION

NC – non energized closed

NO – non-energized open



## CERTIFICATES



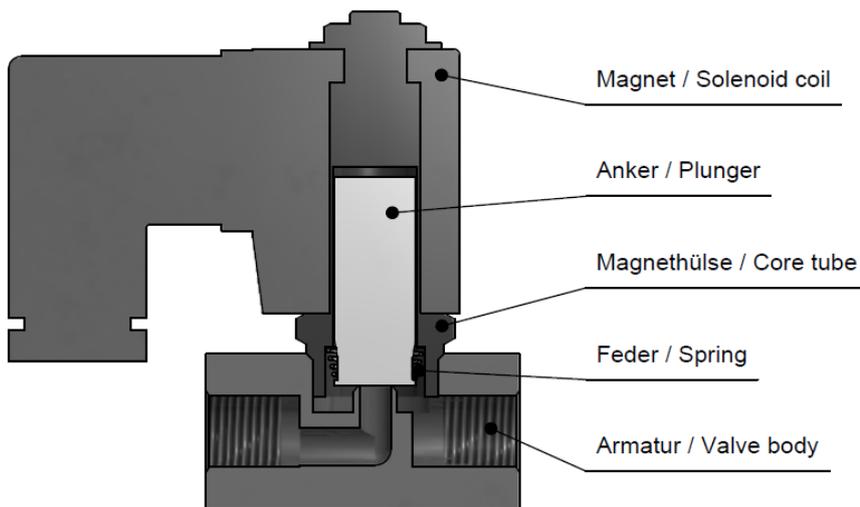
## ORDERING SYSTEM

Type	Conn.	Housing	Seal	Coil	Option
. 5 2	4 1	/ 1 0 0 2	/	. 1 8 2	- H A
3 . G 1/8		10 Brass 2.0402		2 Standard IP65	
4 . G 1/4		06 St.st. 1.4305		8 Explosion proof	
5 . G 3/8		08 St.st. 1.4571		acc. to directive	
6 . G 1/2				2014/34/EU (ATEX)	
.0 1.0 mm			02 FKM		
.1 1.5 mm			04 PTFE		
.2 2.0 mm			06 EPDM		
.3 2.5 mm					
.4 3.0 mm					
.5 4.0 mm					
.6 5.0 mm					
.7 6.0 mm					

## TECHNICAL FEATURES

Seat Ø mm	Kv-value m <sup>3</sup> /h	Standard type	max. pressure for coils NC			ATEX NC	
			.182	.032	.012	.178	.148
1,0	0,06	.5240/..02/	0-50	0-90	0-90	0-20	0-90
1,5	0,09	.5241/..02/	0-30	0-85	0-90	0-16	0-90
2,0	0,13	.5242/..02/	0-15	0-40	0-90	0-10	0-55
2,5	0,16	.5243/..02/	0-8	0-22	0-45	0-6	0-28
3,0	0,20	.5244/..02/	-	0-15	0-30	-	0-20
4,0	0,35	.5245/..02/	-	0-8	0-16	-	0-10
5,0	0,50	.5246/..02/	-	0-5	0-10	-	0-6
6,0	0,75	.5247/..02/	-	0-4	0-8	-	0-5

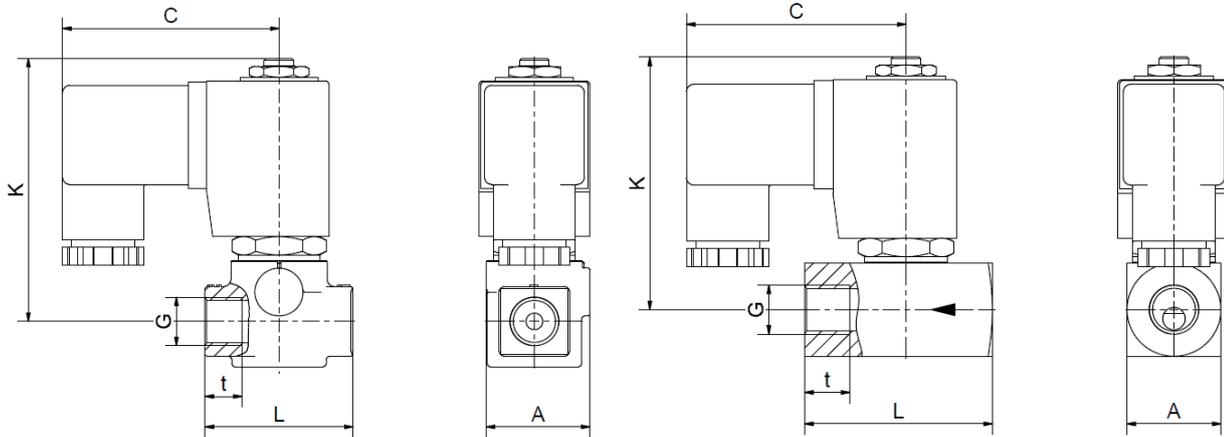
Seat Ø mm	Kv-value m <sup>3</sup> /h	Standard type	max. pressure for coils NO		ATEX NO
			.032	.012	.148
1,0	0,06	.5240/..02/....-NO	0-25	0-90	0-40
1,5	0,09	.5241/..02/....-NO	0-12	0-40	0-20
2,0	0,13	.5242/..02/....-NO	0-12	0-22	0-12
2,5	0,16	.5243/..02/....-NO	0-9	0-14	0-5
3,0	0,20	.5244/..02/....-NO	0-7	0-10	0-2,5
4,0	0,35	.5245/..02/....-NO	-	0-5	0-2



## DIMENSIONS

Type .5230-35 / .5240-45 / Forged brass

Type .5230-37 / .5240-47 / Stainless steel



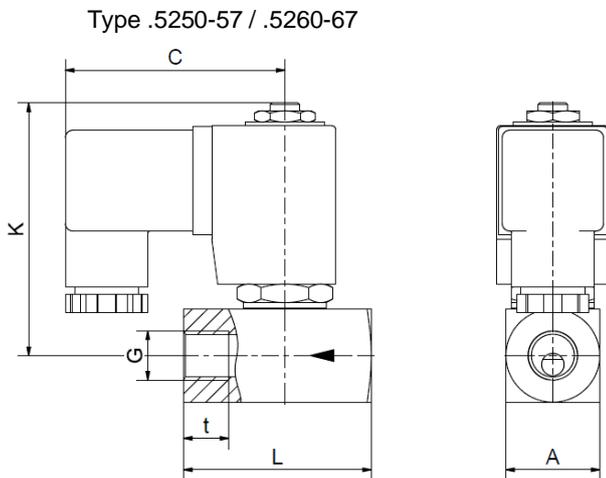
Coil	.182 / .178*	.032			.012 / .148*		
Type	.5230-33/	.5230-35/		.5236-37	.5230-35/		.5236-37
		2.0402	St. steel		2.0402	St. steel	
G	1/8	1/8	1/8	1/8	1/8	1/8	1/8
A	15	28	25	25	28	25	25
C	55	59	59	59	61	61	61
K	44	72	68	68	72	68	68
L	32	40	40	40	40	50	40
t	15	10	7	7	10	7	7
kg	0,2	0,4	0,45	0,5	0,4	0,45	0,6

\*Differing dimension "C" for ATEX-coils

Coil	.182 / .178*	.032			.012 / .148*		
Type	.5240-43/	.5240-45/		.5246-37	.5240-45/		.5246-47
		2.0402	St. steel		2.0402	St. steel	
G	1/4	1/4	1/4	1/4	1/4	1/4	1/4
A	20	28	25	25	28	25	25
C	55	59	59	59	61	61	61
K	47	72	68	68	72	68	68
L	40	40	50	50	40	50	50
t	9	10	12	12	10	12	12
kg	0,25	0,4	0,5	0,55	0,5	0,6	0,65

\*Differing dimension "C" for ATEX-coils

## DIMENSIONS



Coil	.182 / .178*	.032	.012 / .148*	.182 / .178*	.032	.012 / .148*
Type	.5250-53	.5250-57	.5250-57	.5260-63/	.5260-67	.5260-67
G	3/8	3/8	3/8	1/2	1/2	1/2
A	25	25	25	30	30	30
C	55	59	61	55	59	61
K	49	68	68	52	71	71
L	50	50	50	60	60	60
t	12	12	12	14	14	14
kg	0,35	0,45	0,55	0,35	0,6	0,7

\*Differing dimension "C" for ATEX-coils

## 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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