



# Technical Data Sheet

## Type 55



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 high pressure applications

Type 55

### TECHNICAL SPECIFICATIONS

Type of control:	Direct operated
Design:	Piston design
Connection:	Threaded G1/4 DIN ISO 228 (BSP) <i>Other connections like NPT on request</i>
Installation:	Actuator upright
Pressure range:	0 - 900 bar (see table on pages 2 & 3)
Medium:	Clean, neutral, liquid or gaseous
Viscosity:	22 mm <sup>2</sup> /s
Temperature range:	Medium -40 °C bis +80 °C Ambient -40 °C bis +50 °C <i>The max.ambient temperature depends on the combined operating conditions.</i>
Body material:	Brass 2.0401 Stainless steel 1.4301 Stainless steel 1.4462 Stainless steel 1.4571
Metallic inner parts:	Brass and stainless steel
Sealing:	PTFE, PEEK, PCTFE, XHPU
Supply voltage:	AC~ 24V, 110V, 230V DC= 12V, 24V, 110V <i>Other supply voltages on request</i>
Voltage tolerance:	-10% / +10%
Power consumption:	.032 = 11 Watt    .148 = 10 Watt .012 = 18 Watt .702 = 25 Watt .692 = 25 Watt .802 = 24 Watt    .808 = 24 Watt .322 = 30 Watt    .328 = 24 Watt
Protection class:	IP65 acc. to DIN EN 60529
Duty factor:	100% ED-VDE 0580
Connection type:	Plug, terminal box
Ex-proof:	acc. to 2014/34/EG (ATEX)

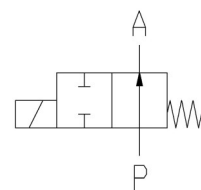
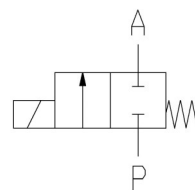
### VALVE FEATURES

- For high pressure application 900 bar
- No pressure difference required
- High life time
- Simple compact valve design
- High-quality materials
- Reliable and sturdy sealing elements

### FUNCTION

NC - non energized closed

NO - non-energized open



### CERTIFICATES



### ORDERING SYSTEM

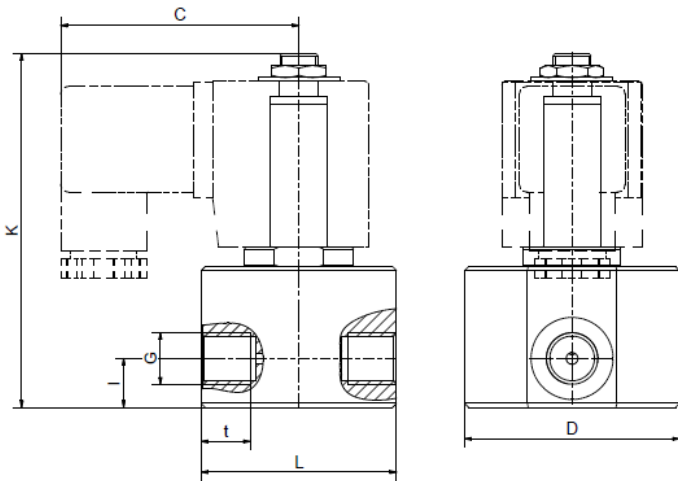
Type	Conn.	Housing	Seal	Coil	Option
. 5	5	4	G	/ 0	8
				1	5
				/ .	0
				0	1
				2	-
					N
					O
4	G 1/4	06	1.4301	2	Standard IP65
. E	0,5 mm	08	1.4462/1.4571	8	Explosion proof acc. to directive 2014/34/EU
. G	0,7 mm	10	Brass 2.0401		
. H	0,8 mm			04	PTFE
. 0	1,0 mm			15	PEEK/PTCFE
. L	1,2 mm			19	XHPU
. 1	1,5 mm				
. 2	2,0 mm				
. 3	2,5 mm				
. 4	3,0 mm				
. 5	4,0 mm				
. 6	5,0 mm				

# TECHNICAL FEATURES // DIMENSIONS

[with coils .032 // .012 // .148]

Type 55

Seat mm	Kv-value m <sup>3</sup> /h	Standard type	max. pressure for coils					
			.032-S		.012-S		.148-S (ATEX)	
			NC	NO	NC	NO	NC	NO
0,5	0,015	.554E/0615/	0-300	0-300	-	-	0-250	0-250
0,7	0,02	.554G/0615/	0-210	0-210	0-500	0-500	0-170	0-170
0,8	0,025	.554H/1004(0615)/	0-170	-	0-250	0-250	0-170	0-170
1,0	0,06	.5540/1004(0604)/	-	-	0-200	0-200	-	-



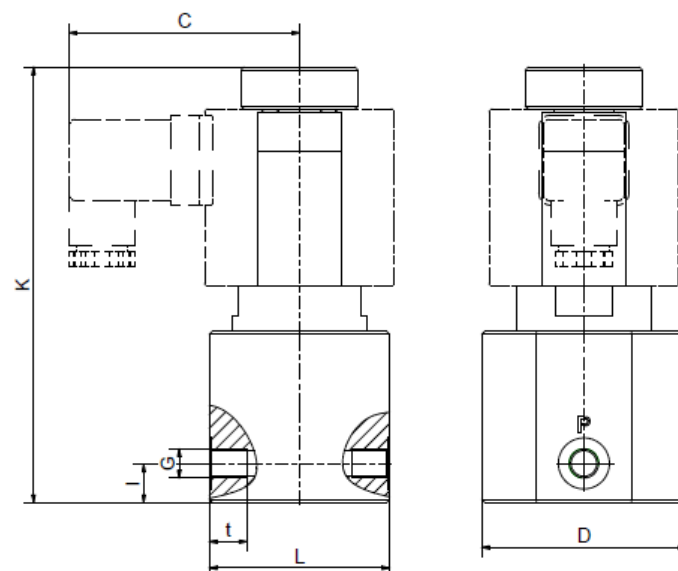
Coil	.032-S	.012-S / .148-S*
G	1/4	1/4
C	59	61
D	55	55
K	90,5	90,5
I	12,5	12,5
L	50	50
t	12,5	12,5
kg	0,9	0,9

\* Different dimension „C“ for ATEX coils

# TECHNICAL FEATURES // DIMENSIONS

[with coils .802 // .808]

Seat mm	Kv-value m <sup>3</sup> /h	Standard type	max. pressure for coils	
			.802	.808 (ATEX)
			NC	NC
0,5	0,015	.554E/0815/	0-900	0-900
0,7	0,02	.554G/0815/	0-600	0-500
0,8	0,025	.554H/0815/	0-450	0-350



Coil	.802 / .808*
G	1/4
C	70
D	68
K	122
I	12,5
L	60
t	12,5
kg	1,9

\* Different dimension „C“ for ATEX coils

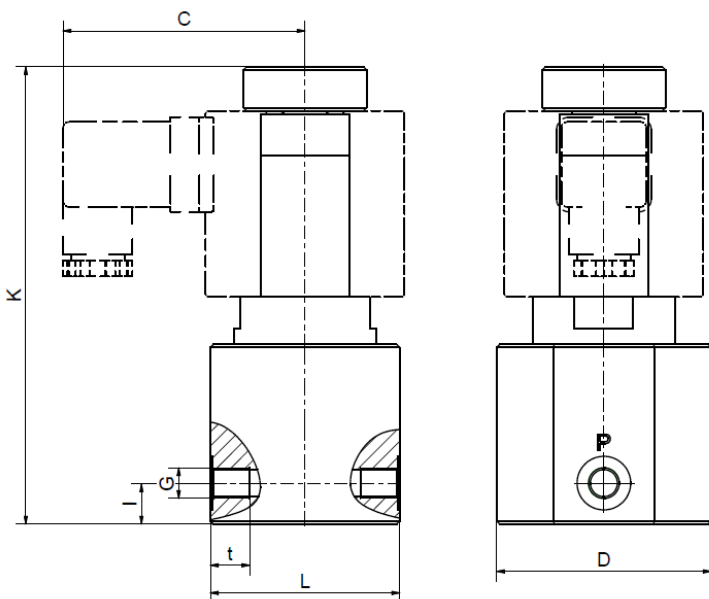
# TECHNICAL FEATURES // DIMENSIONS

[with coils .702 // .692-NO // .802 // .322 // .242]  
 [with coils acc. to ATEX // .808 // .328 // .248]

Type 55

Brass			max. pressure for coils													
Seat mm	Kv-value m <sup>3</sup> /h	Standard type	.702 / .692		.802		.808 (ATEX)		.322		.328 (ATEX)		.242		.248 (ATEX)	
			NC	NO	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
1,0	0,06	.5540/1004/	-	-	0-200	0-100	0-200	0-100	0-200	0-200	-	-	-	-	-	-
1,5	0,09	.5541/1004/	0-100	0-80	0-140	0-80	0-140	0-80	0-200	0-180	0-120	0-80	-	-	-	-
2,0	0,13	.5542/1004/	0-80	0-40	0-100	0-50	0-100	0-50	0-180	0-160	0-90	0-70	0-200	0-200	0-200	0-200
2,5	0,16	.5543/1004/	0-50	0-28	0-50	0-40	0-50	0-40	0-110	0-110	0-60	0-60	0-200	0-180	0-200	0-100
3,0	0,2	.5544/1004/	0-35	0-20	0-40	0-25	0-40	0-25	0-80	0-100	0-40	0-40	0-150	0-120	0-150	0-70
4,0	0,35	.5545/1004/	0-16	0-12	0-25	0-15	0-25	0-15	0-40	0-35	0-25	0-25	0-100	0-60	0-80	0-60
5,0	0,5	.5546/1004/	0-12	0-6	0-16	0-9	0-16	0-9	0-28	0-20	0-12	0-12	0-60	0-40	0-40	0-30
6,0	0,75	.5547/1004/	0-10	0-4	0-12	0-6	0-10	0-6	0-20	0-14	0-10	0-10	0-45	0-30	0-25	0-20

Stainless steel			max. pressure for coils													
Seat mm	Kv-value m <sup>3</sup> /h	Standard type	.702 / .692		.802		.808 (ATEX)		.322		.328 (ATEX)		.242		.248 (ATEX)	
			NC	NO	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
1,0	0,06	.5540/06../	-	-	0-350	0-100	0-200	0-100	0-350	0-350	0-300	0-200	0-450	0-400	0-450	0-350
1,5	0,09	.5541/06../	0-100	0-80	0-140	0-80	0-140	0-80	0-330	0-180	0-120	0-80	0-410	0-300	0-320	0-250
2,0	0,13	.5542/06../	0-80	0-40	0-100	0-50	0-100	0-50	0-180	0-160	0-90	0-70	0-300	0-200	0-250	0-200
2,5	0,16	.5543/0604/	0-50	0-28	0-50	0-40	0-50	0-40	0-110	0-110	0-60	0-60	0-200	0-180	0-200	0-100
3,0	0,2	.5544/0604/	0-35	0-20	0-40	0-25	0-40	0-25	0-80	0-100	0-40	0-40	0-150	0-120	0-150	0-70
4,0	0,35	.5545/0604/	0-16	0-12	0-25	0-15	0-25	0-15	0-40	0-35	0-25	0-25	0-100	0-60	0-80	0-60
5,0	0,5	.5546/0604/	0-12	0-6	0-16	0-9	0-16	0-9	0-28	0-20	0-12	0-12	0-60	0-40	0-40	0-30
6,0	0,75	.5547/0604/	0-10	0-4	0-12	0-6	0-10	0-6	0-20	0-14	0-10	0-10	0-45	0-30	0-25	0-20



Coil	.702 / .692	.802 / .808*	.322 / .328	.242 / .248
G	1/4	1/4	1/4	1/4
C	67	70	77	92,5
D	68	68	68	68
K	109	113	145	166
I	12,5	12,5	13	13
L	60	60	60	60
t	12,5	12,5	12,5	12,5
kg	1,9	2,0	3,0	4,4

\* Different dimension „C“ for ATEX coils

- 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.