





































Solenoid Valves without Differential Pressure - Miniature Solenoid Valves

	Series	Material	Connection	Pressure	Temperature	Function	Page
	Chipsol	Stainless steel	Cartridge	0 - 8 bar	+50 °C	2/2, 3/2	10
	Picosol	PPS	Subbase	0 - 8 bar	+30 °C	2/2, 3/2	14
	Microsol	PPS, PA, Stainless steel	Subbase	0 - 10 bar	+30 °C	2/2, 3/2	18

Solenoid Valves without Differential Pressure

	Series	Material	Connection	Pressure	Temperature	Function	Page
	Intersol	PA	Subbase	0.5 - 15 bar	+50 °C	3/2	22
	Bacosol	Brass	G 1/8 - G 1/4	0 - 23 bar	+80 °C	3/2	24
	82370	Brass	G 1/4 - G 1	0 - 8 bar	+60 °C	2/2	26
	82510	Brass	G 1/8 - G 3/8	0 - 40 bar	+90 °C	2/2	28
	82530	Brass	G 1/4 - G 1/2	0 - 10 bar	+90 °C	2/2	30
	82540	Brass	G 1/4 - G 2	0 - 16 bar	+90 °C	2/2	32
	82660 NEW	Brass	G 1/2 - G 2	0 - 1.5 bar	+90 °C	2/2	36
	84360 NEW	Brass	G 1/4 - G 1	0 - 10 bar	+150 °C	2/2	38
	85700	Brass	G 1/4 - G 2	0 - 25 bar	+90 °C	2/2	40
	85720	Brass	G 1/4 - G 2	0 - 16 bar	+200 °C	2/2	44
	95000	Brass	G 1/4	0 - 40 bar	+80 °C	2/2	48
	83340	Grey cast iron	DN 15 - DN 50	0 - 16 bar	+90 °C	2/2	54
	84100	Grey cast iron	DN 65 - DN 100	0 - 16 bar	+90 °C	2/2	56
	84120	Grey cast iron	DN 65 - DN 100	0 - 16 bar	+150 °C	2/2	60
	85100	Grey cast iron	DN 15 - DN 50	0 - 16 bar	+90 °C	2/2	56

Contents

	Series	Material	Connection	Pressure	Temperature	Function	Page
	85120	Grey cast iron	DN 15 - DN 50	0 - 16 bar	+200 °C	2/2	60
	84200	Cast steel	DN 65 - DN 100	0 - 25 bar	+90 °C	2/2	64
	84220	Cast steel	DN 65 - DN 100	0 - 16 bar	+150 °C	2/2	68
	85200	Cast steel	DN 15 - DN 50	0 - 25 bar	+90 °C	2/2	64
	85220	Cast steel	DN 15 - DN 50	0 - 16 bar	+200 °C	2/2	68
	82560	Stainless steel	G 1/4 - G 1/2	0 - 10 bar	+90 °C	2/2	72
	82590 NEW	Stainless steel	G 1/4 - G 2	0 - 10 bar	+90 °C	2/2	74
	82610 NEW	Stainless steel	G 1/8 - G 3/8	0 - 40 bar	+110 °C	2/2	76
	82670 NEW	Stainless steel	G 1/2 - G 2	0 - 1.5 bar	+90 °C	2/2	78
	84140	Stainless steel	DN 65 - DN 100	0 - 16 bar	+110 °C	2/2	82
	84240	Stainless steel	DN 65 - DN 100	0 - 25 bar	+90 °C	2/2	88
	85040	Stainless steel	G 3/8 - G 1	0 - 25 bar	+90 °C	2/2	80
	85140	Stainless steel	DN 15 - DN 50	0 - 16 bar	+110 °C	2/2	82
	85240	Stainless steel	DN 15 - DN 50	0 - 25 bar	+90 °C	2/2	88
	85640	Stainless steel	DN 15 - DN 50	0 - 25 bar	+90 °C	2/2	92
	85740 NEW	Stainless steel	G 1/4 - G 2	0 - 25 bar	+90 °C	2/2	94
	95100	Stainless steel	G 1/8 - G 1/4	0 - 50 bar	+120 °C	2/2	98
	82080	PVDF	G 1/4 - G 3/8	0 - 7 bar	+110 °C	2/2	100

Chipsol 8 mm 2/2 & 3/2-way valves

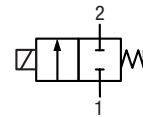
For lubricated and unlubricated compressed air and neutral gases
 Cartridge valve, directly actuated with spring return
 High cycle rate of up to 6000 cycles per minute
 Long life - in excess of 100 million cycles
 Cartridge: plug-in connection
 Response time: 5-10 ms
 Operating pressure: see technical data

Description

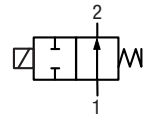
Solenoid valve for air and other neutral gases
 Switching function: normally closed, normally open
 Flow direction: determined
 Fluid temperature: -10 °C up to +50 °C
 Ambient temperature: -10 °C up to +50 °C
 Mounting position: as required

Materials

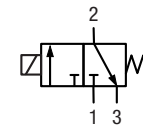
Body: Stainless steel
 Seat seal: HNBR
 Valve seat: PPS



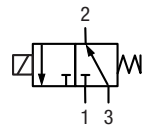
Symbol 1: 2/2 NC



Symbol 2: 2/2 NO



Symbol 3: 3/2 NC



Symbol 4: 3/2 NO

NC: Normally closed
 NO: Normally open

Technical data

Connection	DN mm	kv-Value		Part number	Operating pressure bar	Function	Manual override	Hit & Hold *	Voltage	Power consumption	Symbol / Drawing
		l/min	m³/h								
2/2 Solenoid valve											
Cartridge	0.5	0.11	0.007	14-211CA00-HH++AYJ	0 - 8	NC	-	-	24V DC	0.5W	1 / 1
Cartridge	0.8	0.20	0.012	14-211CA01-HH++AYJ	0 - 5	NC	-	-	24V DC	0.5W	1 / 1
Cartridge	1.0	0.35	0.021	14-211CA010HH++AYJ	0 - 1.5	NC	-	-	24V DC	0.5W	1 / 1
Cartridge	0.6	0.11	0.007	14-221CA060HH++AYJ	0 - 8	NO	-	-	24V DC	0.5W	2 / 2
Cartridge	0.7	0.20	0.012	14-221CA070HH++AYJ	0 - 5	NO	-	-	24V DC	0.5W	2 / 2
3/2 Solenoid valve											
Cartridge	0.5	0.11	0.007	14-311CA00-HH++AYJ	0 - 8	NC	-	-	24V DC	0.5W	3 / 3
Cartridge	0.8	0.22	0.013	14-311CA01-HH++AYJ	0 - 3	NC	-	-	24V DC	0.5W	3 / 3
Cartridge	0.6	0.12	0.007	14-321CA060HH++AYJ	0 - 4	NO	-	-	24V DC	0.5W	4 / 3

* PWM energy saving option

Electrical characteristics

Voltage range ±10%
 Electrical insulation: 500V AC
 Insulation class F (155 °C)
 Duty cycle: 100%

Drawing legend

Index	Description
1	Connection 1
2	Connection 2
3	Connection 3
4	Burr-free

Functions

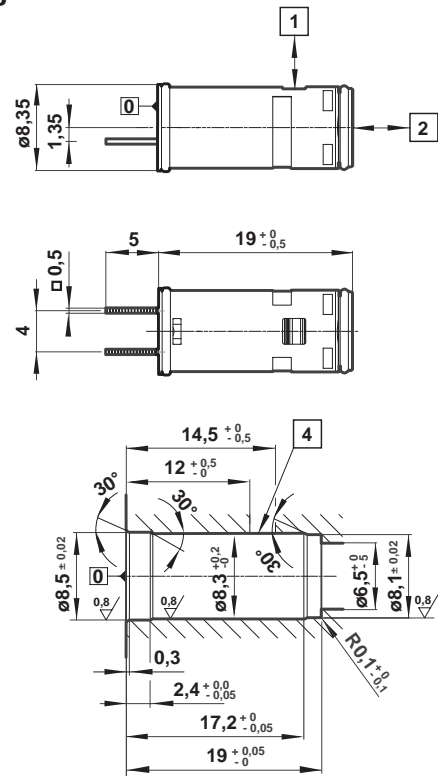
Function	2/2 NC	2/2 NO	3/2 NC	3/2 NO
Connection 1	P	P	P	R
Connection 2	A	A	A	A
Connection 3	----	----	R	P

P = Inlet port, A = Outlet port, R = Exhaust port

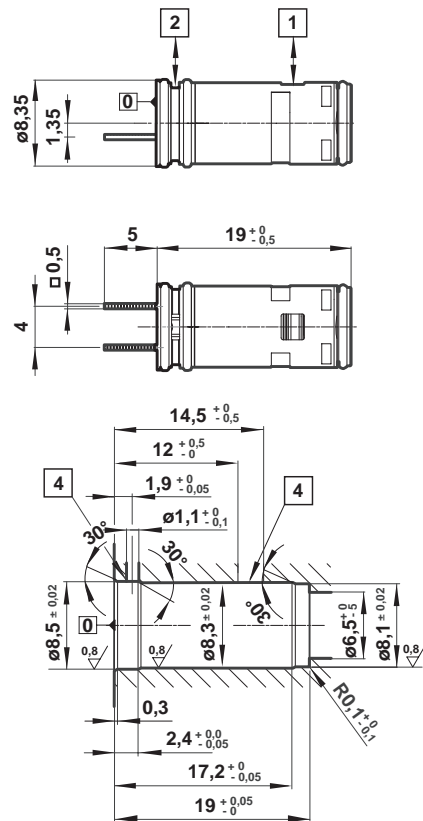
Important:

Align surfaces of cartridge when mounting.
Use compatible grease when fitting O-ring.

Drawing 1*



Drawing 2*



* Dimensions in mm

Drawing legend

Index	Description
1	Connection 1
2	Connection 2
3	Connection 3
4	Burr-free

Functions

Function	2/2 NC	2/2 NO	3/2 NC	3/2 NO
Connection 1	P	P	P	R
Connection 2	A	A	A	A
Connection 3	----	----	R	P

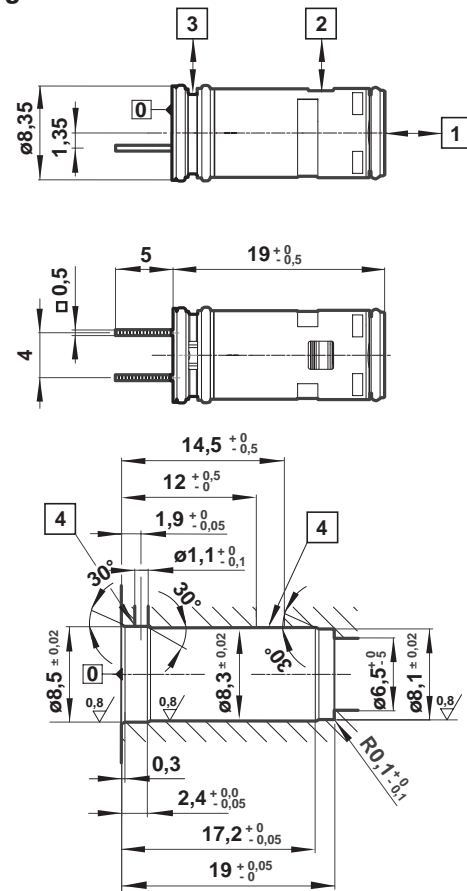
P = Inlet port, A = Outlet port, R = Exhaust port

Important:

Align surfaces of cartridge when mounting.
Use compatible grease when fitting O-ring.

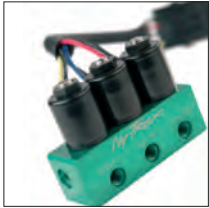
Please find the safety instructions for the FAS range on page 318.

Drawing 3'



* Dimensions in mm

ENGINEERING SMARTER SOLUTIONS

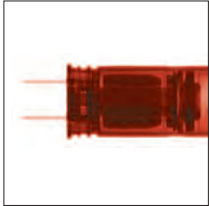


VALVE INTEGRATION

Norgren Fluid Controls provides intelligent products that can be quickly and easily integrated into customers' projects.

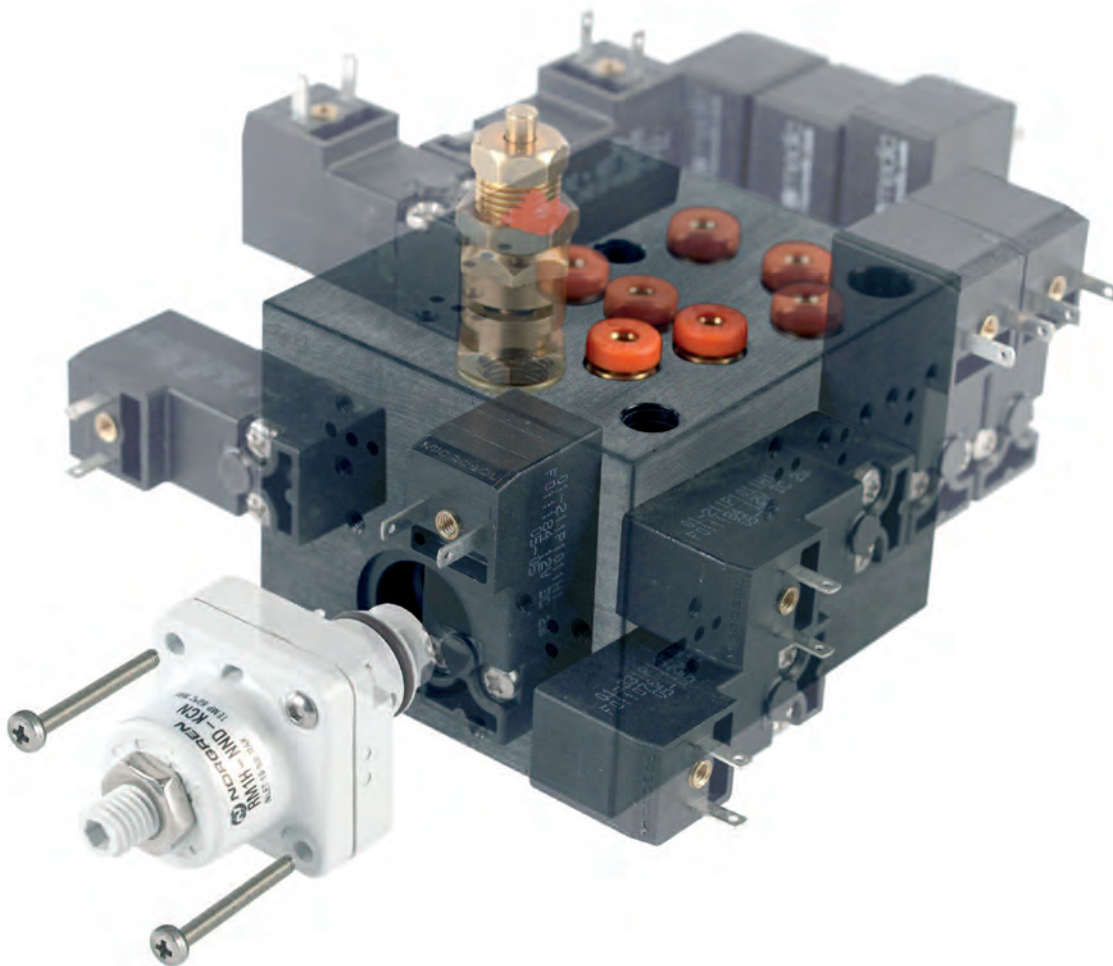
VALVE MANIFOLDS

Pre-assembled, ready-to-use valve manifolds offer outstanding flow-to-size ratio. They are suitable for a wide range of applications, wherever an extremely compact and fully assembled valve system is required for fluid control.



CUSTOMISED SOLUTIONS

Norgren Fluid Controls' strength lies in providing complete solutions tailored to customer specifications. Our custom-made manifold assemblies combine precision engineering with size and weight savings, increased performance and reliability.



» FOR THIS APPLICATION, NO LESS THAN 11 SOLENOID VALVES, 1 PRESSURE REGULATOR AND 7 FITTINGS WERE REQUIRED IN A VERY COMPACT SOLUTION WITHOUT COMPROMISING PERFORMANCE

Picosol 10 mm 2/2 & 3/2-way valves

For lubricated and unlubricated compressed air, neutral liquids or gases

Poppet valve, directly actuated with spring return

High cycle rate of up to 1800 cycles per minute

Long life - in excess of 100 million cycles*

* Hit & Hold valves:

2/2 types with 1.6 mm orifice: 25 million cycles

3/2 types with 1.1 mm or 1.3 mm orifice: 50 million cycles

Sub-base mounted

Response time: 8 - 15 ms

Operating pressure: see technical data



Description

Solenoid valve for air, and neutral liquids or gases

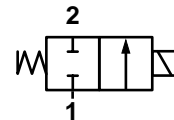
Switching function: normally closed

Flow direction: determined

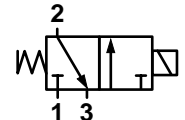
Fluid temperature: -10 °C up to +30 °C

Ambient temperature: -10 °C up to +50 °C

Mounting position: as required



Symbol 1: 2/2 NC



Symbol 2: 3/2 NC

NC: Normally closed

Materials

Body: PPS

Seat seal: NBR

Internal parts: Stainless steel, PA 6/6

Technical data

Connection	DN mm	kv-Value		Part number	Operating pressure bar	Function	Manual override	Hit & Hold *	Voltage	Power consumption	Symbol / Drawing
		l/min	m³/h								
2/2 Direct acting valves / standard models											
Flange	0.8	0.20	0.012	11-211P601-H0+1341+AYR**	0 - 8	NC	No	No	24V DC	1.2W	1 / 1
Flange	1.2	0.39	0.023	11-211P602-H0+1341+AYR**	0 - 4	NC	No	No	24V DC	1.2W	1 / 1
Flange	1.6	0.50	0.030	11-211P603-H0+6311+AZU	0 - 8	NC	No	Yes	24V DC	4W / 0.4W	1 / 1
3/2 Direct acting valves / standard models											
Flange	0.8	0.19	0.011	11-311PI01-H0+1141+AYR**	2 - 8	NC	Push only	No	24V DC	1.2W	2 / 2
Flange	1.1	0.38	0.023	11-311PI011H0+6111+AZR	2 - 8	NC	Push only	Yes	24V DC	3W / 0.3W	2 / 2
Flange	1.3	0.50	0.030	11-311PI013H0+6111+AZR	2 - 6.5	NC	Push only	Yes	24V DC	3W / 0.3W	2 / 2

* PWM energy saving option

** Optional surge suppression diode

Electrical characteristics

Voltage range +/- 10 %, duty cycle 100 %

Protection class according to EN 60529: IP51 with connector

Electrical insulation: 1000V AC

Insulation class F (155 °C)

Electrical connection: Molex®

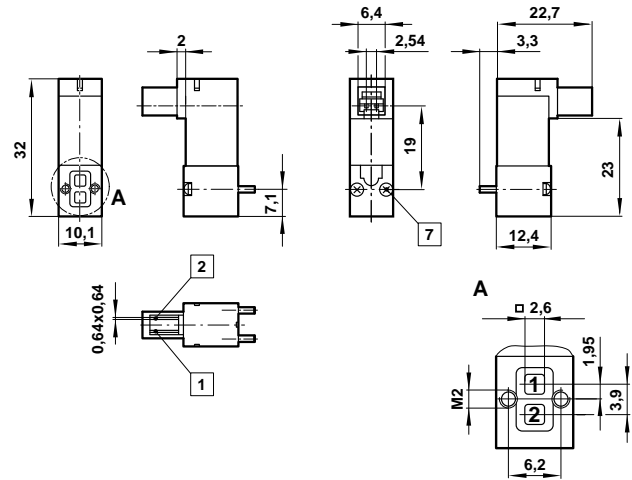
Drawing legend

Index	Description
1	Pin +
2	Pin -
3	Manual override
7	The recommended mounting screw tightening torque is 0.15 Nm.

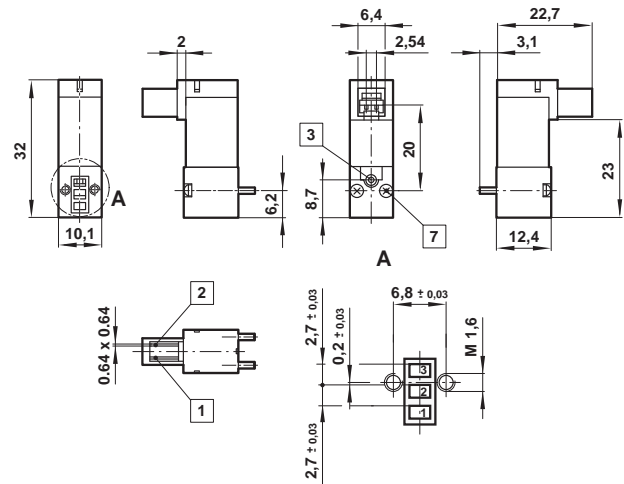
All solenoids are supplied with mounting screws and gasket.

Warning for Hit and Hold valves: damage could be caused to the valve if wired incorrectly.

Drawing 1*



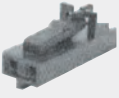

Drawing 2*



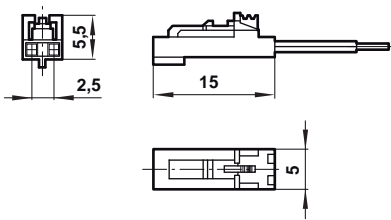
* Dimensions in mm

Solenoid Valves without
Differential Pressure

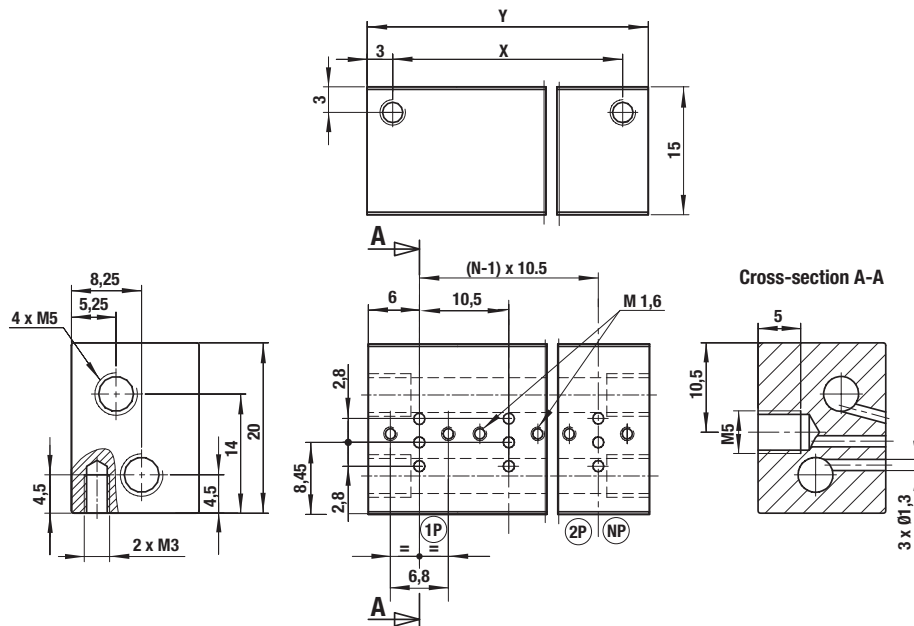
Accessories

Electrical connector		M5 ported sub-base	
			
N/C-11010	0.3 m	1 station:	N/B11001
N/C-11020	0.6 m	2 stations:	N/B11002
		3 stations:	N/B11003
		4 stations:	N/B11004
		5 stations:	N/B11005
		6 stations:	N/B11006

Electrical connector*



Subbase*



* Dimensions in mm

Further options on request

- Function (NO, Universal, Latching)
- Pressure range
- Vacuum
- Materials
- Manual override
- Voltage (DC only)
- Electrical connection
- Power consumption

Please find the safety instructions for the FAS range on page 318.

Alternative



1



2



3

- 1 Motorized valves for temperature control
- 2 Shut-off valve for reformat / hydrogen
- 3 Switching valve for biofuels

Our new valves for fuel cells, biogas applications and alternative fuels are a few examples of our forward-looking product developments. Customised versions offer the right solution to virtually any problem.

Microsol 15 mm 2/2 & 3/2-way valves

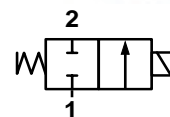
For lubricated and unlubricated compressed air, neutral liquids or gases
 Poppet valve, directly actuated with spring return
 Microsol interface: pilot operated poppet valve, servo assisted
 High cycle rate of up to 2000 cycles per minute
 Long life - in excess of 100 million cycles*
 * Hit & Hold valves: 10 million cycles
 Flange mounted
 Response time: 8 - 10 ms
 Operating pressure: see technical data

Description

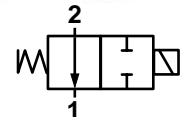
Solenoid valve for air, and neutral liquids or gases
 Switching function: normally closed and normally open
 Flow direction: determined
 Fluid temperature: -10 °C up to +30 °C
 Ambient temperature: -10 °C up to +50 °C
 Mounting position: as required

Materials

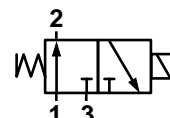
Body: for 2/2 valves PPS, for 3/2 valves PPS, PA, Stainless steel
 Seat seal: NBR
 Internal parts: Stainless steel, PA 6/6



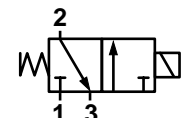
Symbol 1: 2/2 NC



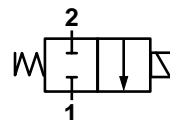
Symbol 2: 2/2 NO



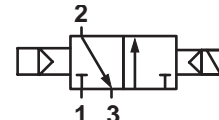
Symbol 3: 3/2 NO



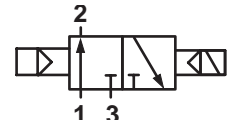
Symbol 4: 3/2 NC



Symbol 5: 2/2 NC



Symbol 6: 3/2 NC



Symbol 7: 3/2 NO

NC: Normally closed
 NO: Normally open

Technical data

Connection	DN mm	kv-Value		Part number	Operating pressure bar	Function	Manual override	Hit & Hold *	Voltage	Power consumption	Symbol / Drawing
		l/min	m³/h								
2/2 Direct acting valves / standard models											
Flange	1.2	0.75	0.045	01-211P202-H0+63111+AYZ	0 - 10	NC	No	No	24V DC	2.0W	1 / 1
Flange	1.2	0.75	0.045	01-221P202-H0+631A1+AYZ	0 - 10	NO	No	No	24V DC	2.0W	2 / 2
3/2 Direct acting valves											
Flange	1.1	0.42	0.025	01-311P1011H0+61111+AYZ	0 - 10	NC	Push only	No	24V DC	2.0W	4 / 4
Flange	1.1	0.42	0.025	01-321P1011H0+631A1+AYZ	0 - 6	NO	No	No	24V DC	2.0W	3 / 4
2/2 Direct acting valves / high flow models											
Flange	3.6	3.00	0.180	01-211P-036H0+63111+AZN	0 - 6	NC	No	Yes	24V DC	12 / 0.5W	5 / 3
3/2 Interface valves											
Flange	3.0	3.00	0.180	01-312E-06-HP+A1171+AYV	1.5 - 10	NC	Push only	No	24V DC	1.0W	6 / 6
Flange	3.0	3.00	0.180	01-322E-06-HP+C31G1+AYZ	1.5 - 10	NO	No	No	24V DC	2.0W	7 / 6
3/2 Direct acting valves / intrinsically safe (IS) models**, labeling: EEx ia IIC T6 IINERIS 00ATEX0031 X											
Flange	0.5	0.12	0.007	01-311P-00-H0+F01003+BCC	0 - 7	NC	Push only	No	12V AC/DC	0.55W	4 / 5
Flange	0.5	0.12	0.007	01-311P-00-H0+F01003+BDH	0 - 7	NC	Push only	No	24V AC/DC	0.7W	4 / 5
Flange	0.5	0.12	0.007	01-311P-00-H0+H01014+AWD	4 - 7	NC	Push only	No	12V AC/DC	0.1W	4 / 5
Flange	0.5	0.12	0.007	01-311P-00-H0+H01016+AYG	4 - 7	NC	Push only	No	24V AC/DC	0.1W	4 / 5
3/2 Direct acting valves / other options as used on M54 range**											
Flange	0.8	0.28	0.017	01-311P101-H0+61511I+AWM	0 - 10	NC	Push only	No	12V DC	1.5W	4 / 4
Flange	0.8	0.28	0.017	01-311P101-H0+61511I+AYS	0 - 10	NC	Push only	No	24V DC	1.5W	4 / 4
Flange	0.8	0.28	0.017	01-311P101-H0+11511I+AXX	0 - 10	NC	Push only	No	24V AC	1W	4 / 4
Flange	0.8	0.28	0.017	01-311P101-H0+11511I+BAU	0 - 10	NC	Push only	No	48V AC	1W	4 / 4
Flange	0.8	0.28	0.017	01-311P101-H0+11511I+BBJ	0 - 10	NC	Push only	No	110V AC	1W	4 / 4
Flange	0.8	0.28	0.017	01-311P101-H0+11511I+BCK	0 - 10	NC	Push only	No	220V AC	1W	4 / 4

* PWM energy saving option

** IP65 with connector

Electrical characteristics

Voltage range -10 % / +15 %
 Protection class according to EN 60529: IP51 with connector
 Electrical insulation: 1500V AC
 Insulation class F (155 °C)
 Electrical connection AMP +/-

Drawing legend

Index	Description
1	Wire (red) / pin +
2	Wire (black) / pin -
3	Manual override
4	For NC models
5	For NO models
6	Mounting pattern
7	The recommended mounting screw tightening torque is 0.6 Nm.

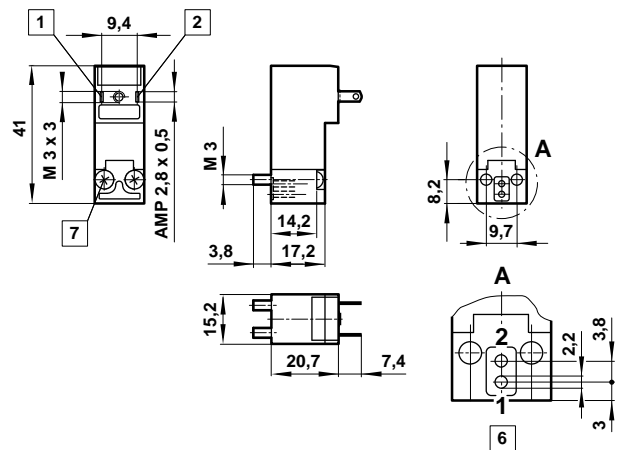
All solenoids are supplied with mounting screws and gasket.

Warning for Hit and Hold valves: damage could be caused to the valve if wired incorrectly.

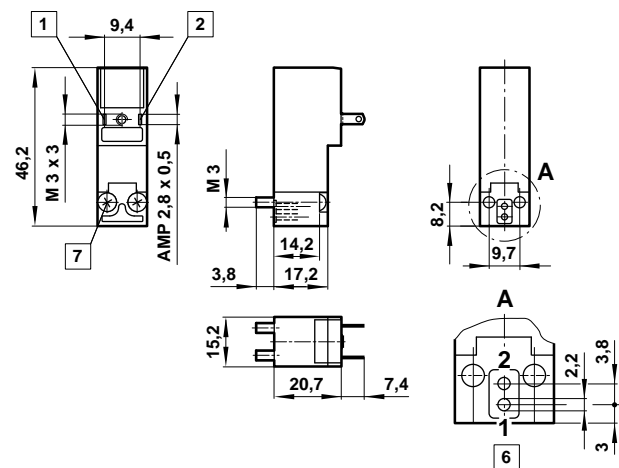
Further options on request

- Switching function (NO, Universal, Latching)
- Operating pressure
- Vacuum
- Materials
- Manual override
- Voltage
- Electrical connection
- Power consumption

Drawing 1*



Drawing 2*



* Dimensions in mm

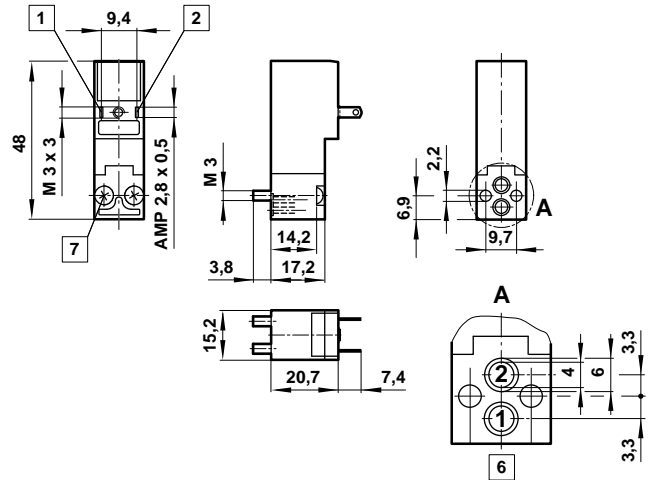
Drawing legend

Index	Description
1	Wire (red) / pin +
2	Wire (black) / pin -
3	Manual override
4	For NC models
5	For NO models
6	Mounting pattern
7	The recommended mounting screw tightening torque is 0.6 Nm.

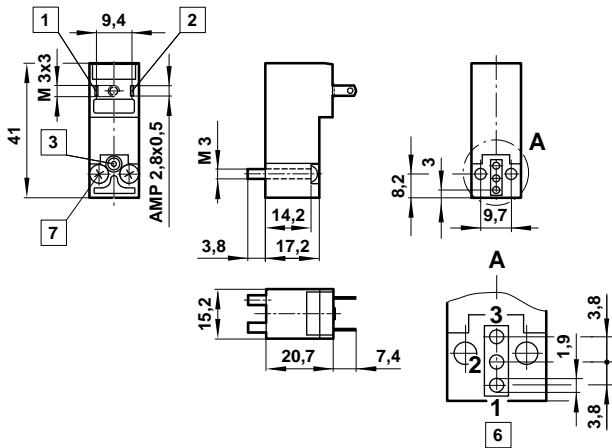
All solenoids are supplied with mounting screws and gasket.

Warning for Hit and Hold valves: damage could be caused to the valve if wired incorrectly.

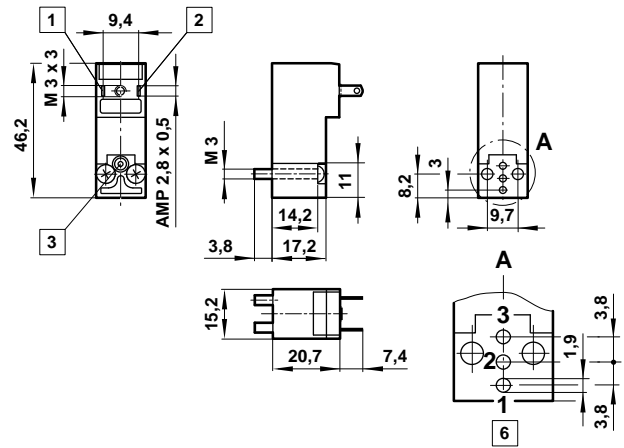
Drawing 3*



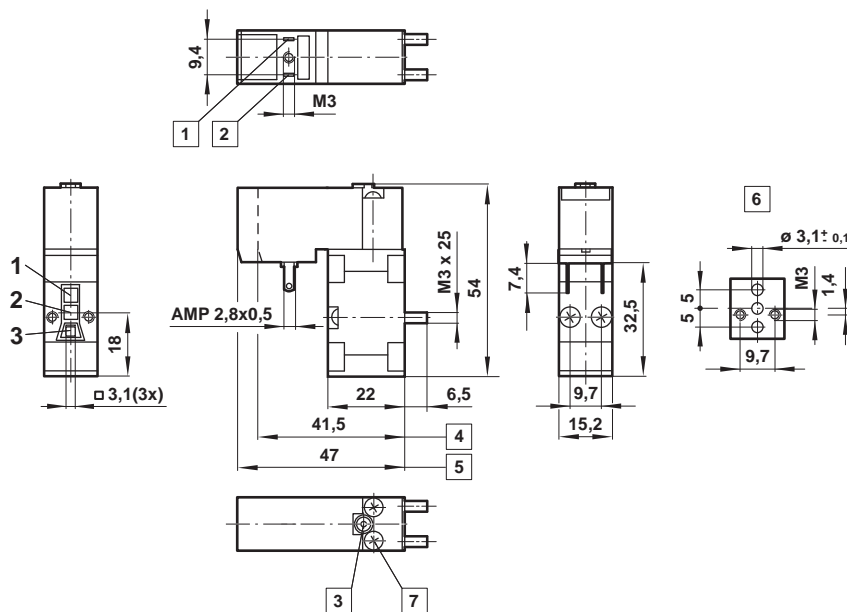
Drawing 4*



Drawing 5*





Drawing 6*

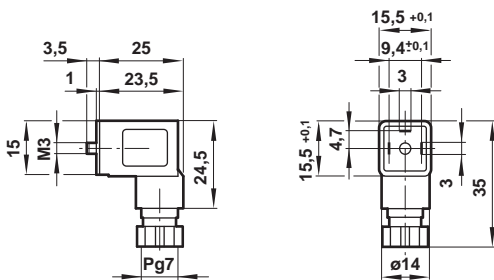


* Dimensions in mm

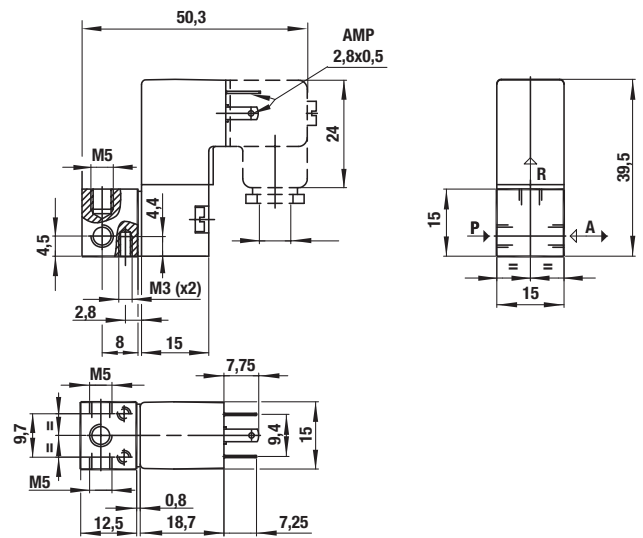
Accessories

Electrical connector	Subbase	
		
Single connector	M/P43082	1 station: N/S5001
Single connector LED+VDR 24V	M/P43086	2 stations: N/B5002
Single connector LED+VDR 110V	M/P43148	3 stations: N/B5003
Single connector LED+VDR 220V	M/P43087	4 stations: N/B5004
Single connector & 1 m flying lead	M/P43066	5 stations: N/B5005
		6 stations: N/B5006

Electrical connector*



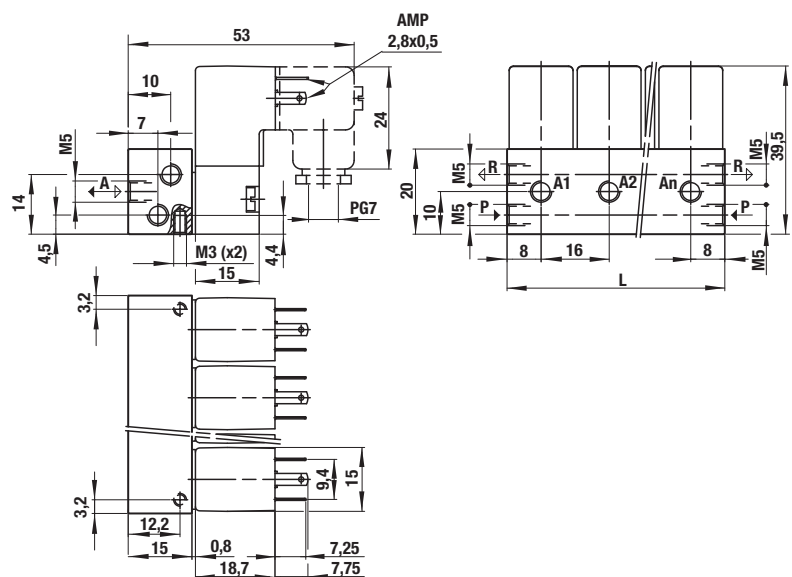
Subbase*



Drawing legend

Number of stations	Length (L)
2	32
3	48
4	64
5	80
6	96

Subbase*



* Dimensions in mm

Please find the safety instructions for the FAS range on page 318.

Solenoid Valves without Differential Pressure

Intersol 22 mm 2/2 & 3/2-way valves

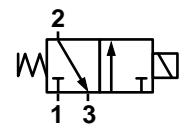
For lubricated and unlubricated compressed air, neutral liquids or gases
 Poppet valve, directly actuated with spring return
 High cycle rate of up to 2000 cycles per minute
 Long life - in excess of 25 million cycles
 Sub-base mounted
 Response time: 8 - 15 ms
 Operating pressure: see technical data

Description

Solenoid valve for air, and neutral liquids or gases
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -15 °C up to max. +50 °C
 Ambient temperature: -15 °C up to max. +50 °C
 Mounting position: as required

Materials

Body: Polyamid PA
 Seat seal: NBR
 Internal parts: Stainless steel



Symbol 1: 3/2 NC

NC: Normally closed

Technical data

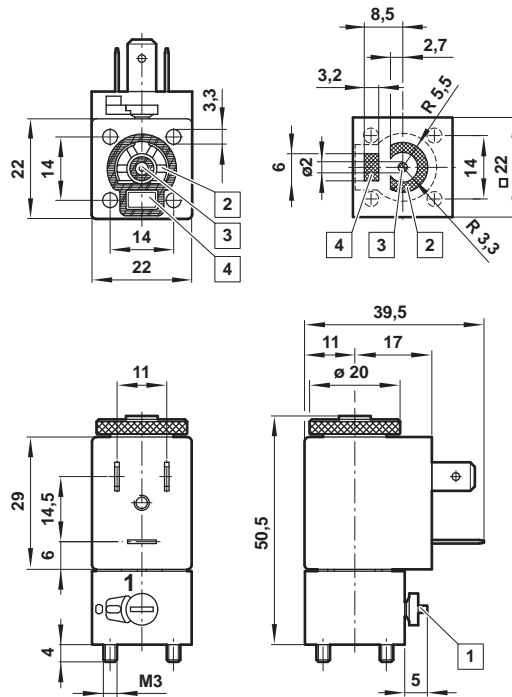
Connection	DN mm	kv-Value		Part number	Operating pressure bar	Function	Manual override	Hit & Hold *	Voltage	Power consumption	Symbol / Drawing
		l/min	m³/h								
3/2 Direct acting valves / standard models											
Flange	1.2	0.6	0.036	09-3111-02-30+EDC+AQF	0.5 - 15	NC	Locking	No	24V DC	3.8W	1 / 1
Flange	1.4	0.7	0.042	09-3111-01430+EDC+AQF	0.5 - 12	NC	Locking	No	24V DC	3.8W	1 / 1
Flange	1.6	0.8	0.048	09-3111-03-30+EDC+AQF	0.5 - 10	NC	Locking	No	24V DC	3.8W	1 / 1
Flange	1.8	1.0	0.060	09-3111-01830+EDC+AQF	0.5 - 8	NC	Locking	No	24V DC	3.8W	1 / 1

* PWM energy saving option

Electrical characteristics

Voltage range -10% up to +15%
 100% duty cycle
 Protection class according to EN 60529: IP65 with connector
 Insulation class F (155 °C)
 Electrical connection according to DIN EN 175301-803
 Coil orientation: rotatable 360°, in steps of 45°
 Coil mounting: M8 x 0.75 mm nut

Drawing 1 *



Drawing legend

Index	Description
1	3/2 NC
2	A
3	P
4	R

P = Inlet port, A = Outlet port, R = Exhaust port

* Dimensions in mm

Bacosol 32 mm 2/2 & 3/2-way valves

For lubricated and unlubricated compressed air, neutral liquids or gases
 Poppet valve, directly actuated with spring return
 High cycle rate of up to 1200 cycles per minute
 Sub-base mounted
 Response time: 15 ms
 Operating pressure: see technical data

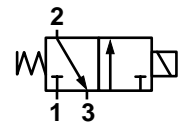


Description

Solenoid valve for air, and neutral liquids or gases
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +80 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required

Materials

Body: Brass
 Seat seal: NBR
 Internal parts: Stainless steel



Symbol 1: 3/2 NC

Technical data

NC: Normally closed

Connection size G	DN mm	kv-Value		Part number	Operating pressure bar	Function	Manual override	Hit & Hold *	Voltage	Power consumption	Symbol / Drawing
		l/min	m ³ /h								
3/2 Direct acting valves G 1/8											
1/8	0.8	0.4	0.024	04-311-101-20+EDC+ACC	0 - 23	NC	No	No	24V DC	10W	1 / 1
1/8	1.2	0.8	0.048	04-311-102-20+EDC+ACC	0 - 17	NC	No	No	24V DC	10W	1 / 1
1/8	1.6	1.4	0.084	04-311-103-20+EDC+ACC	0 - 14	NC	No	No	24V DC	10W	1 / 1
1/8	2.0	2.2	0.132	04-311-104-20+EDC+ACC	0 - 10	NC	No	No	24V DC	10W	1 / 1
1/8	2.4	2.8	0.168	04-311-105-20+EDC+ACC	0 - 8	NC	No	No	24V DC	10W	1 / 1
1/8	3.0	4.0	0.240	04-311-106-20+EDC+ACC	0 - 5.5	NC	No	No	24V DC	10W	1 / 1
3/2 Direct acting valves G 1/4											
1/4	0.8	0.4	0.024	04-311-201-20+EDC+ACC	0 - 23	NC	No	No	24V DC	10W	1 / 1
1/4	1.2	0.8	0.048	04-311-202-20+EDC+ACC	0 - 17	NC	No	No	24V DC	10W	1 / 1
1/4	1.6	1.4	0.084	04-311-203-20+EDC+ACC	0 - 14	NC	No	No	24V DC	10W	1 / 1
1/4	2.0	2.2	0.132	04-311-204-20+EDC+ACC	0 - 10	NC	No	No	24V DC	10W	1 / 1
1/4	2.4	2.8	0.168	04-311-205-20+EDC+ACC	0 - 8	NC	No	No	24V DC	10W	1 / 1
1/4	3.0	4.0	0.240	04-311-206-20+EDC+ACC	0 - 5.5	NC	No	No	24V DC	10W	1 / 1

* PWM energy saving option

Electrical characteristics

Voltage range -10 up to +15%
 100% duty cycle
 Protection class according to EN 60529: IP65 with connector
 Insulation class H (180 °C)
 Electrical connection according to DIN 43650A
 Coil orientation: rotatable 360°
 Coil mounting: with G 1/4 nut

Drawing legend

Index	Description
1	P
2	A
3	R

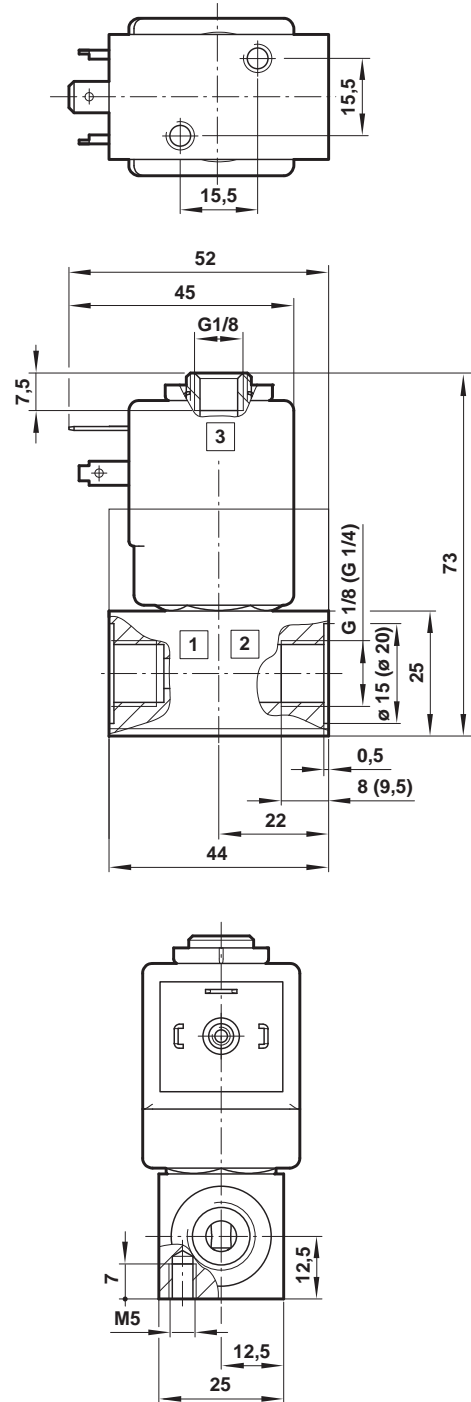
P = Inlet port, A = Outlet port, R = Exhaust port

Further options on request

- Function (NO, Universal)
- Pressure range
- Vacuum
- Materials
- Manual override
- Voltage
- Electrical connection
- Power consumption

Please find the safety instructions for the FAS range on page 318.

Drawing 1 *



* Dimensions in mm

Solenoid Valves without
Differential Pressure

2/2-way valves DN 8 to DN 25 with DVGW-approval

For neutral gaseous and liquid fuels
Solenoid actuated, with forced lifting
Diaphragm valves
Internal thread G 1/4 to G 1
Operating pressure: 0 to 4 bar / 8 bar

Description (standard valve)

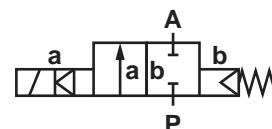
Solenoid valve for neutral gaseous and liquid fuels
Switching function: normally closed
Flow direction: determined
Fluid temperature: -10 °C up to max. +60 °C
Ambient temperature: -10 °C up to max. +50 °C
Mounting position: as required, preferably with solenoid vertical on top



Material

Body: Brass
Seat seal: FPM
Internal parts: Stainless steel, Brass, PVDF

Note: Strainer with maximum mesh size of 0.25 mm is necessary upstream of the valve



Features

- EC-Type Examination Certificate product ID-No.: CE-0085AU0323 valve class A G 1/4-G 1/2; B G 3/4 and G 1; valve group 2
- Qualification approval EN 161/3394 part 1 and EN 264
- High functional reliability
- Short response time < 1 s

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar	
				FPM 00	With compression pipe fitting (10 mm) 80
1/4	8	1.6	82370XX.9381.00000	0 - 4	0 - 8
3/8	10	2.0	82371XX.9381.00000	0 - 4	0 - 8
1/2	12	2.3	82372XX.9381.00000	0 - 4	0 - 8
3/4	20	5.8	82373XX.9381.00000	0 - 4	0 - 8
1	25	6.1	82374XX.9381.00000	0 - 4	0 - 8

* For orders please state voltage and frequency, e.g.: 8237000.9382.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8237000.9381.02400 for 24V DC

Solenoid 9381 / 9382 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
9381	18W	-	-
9382	-	20VA	20VA

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)
Approved to DVGW EN 161/3394 Part1, EN 264 cCSAus (coil only)
AC with rectifier plug only

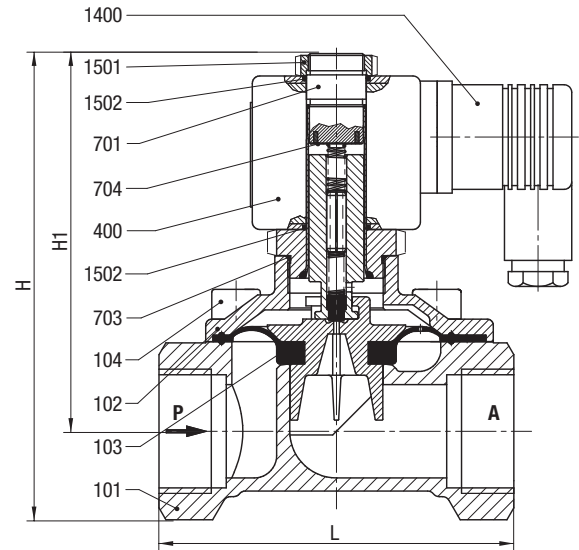
Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm assembly
104	Oval head cap screw up to G 1/2 Allen head screw from G 3/4
400	Solenoid
701	Core tube
*703	O-ring
704	Round plate
1400	Electrical connector
1501	Hexagon nut
1502	O-ring

* A service kit consists of these individual parts.

Connection size G	L mm	B* mm	H mm	H1 mm
1/4	67	54	105	90
3/8	67	54	105	90
1/2	67	54	105	90
3/4	95	70	130	105
1	95	70	130	105

* B = maximum width



Solenoid Valves without Differential Pressure

Service kits

For valves with solenoid 9381(2) and seal FPM	Part number
8237000	1261721
8237100	1261721
8237200	1261721
8237300	1266952
8237400	1266952

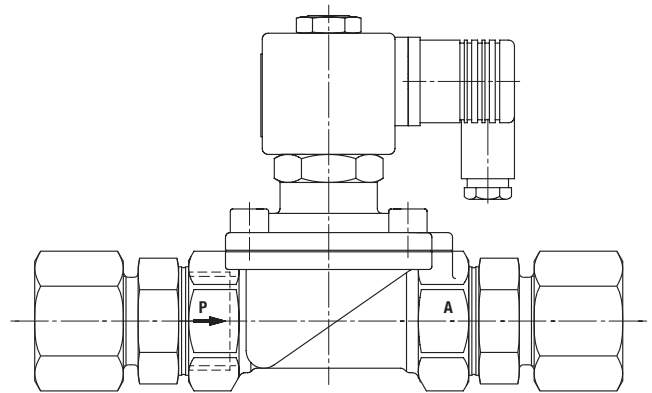
Further options (solenoids)

XXXXXX.9356 Solenoid in protection class $\text{Ex II 2 GD EEx me II T3 T 140 }^{\circ}\text{C}$

Further options on request

Please turn to page 276 for technical information on our valves.

Valve with compression fitting



Note:

Pressure-tight screw joints (e.g. NPT) are not approved for use with gaseous fuels and pressures exceeding 4 bar.

2/2-way valves DN 1.5 to DN 5.0

For neutral gases and liquids
 Directly solenoid actuated
 Seat valves
 Internal thread G 1/8 to G 3/8
 Operating pressure: 0 to 40 bar (see technical data)

Click-on®
 Solenoid interchangeable without tools



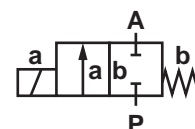
Description (standard valve)

Solenoid valve for neutral gases and liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top

Material

Body: Brass
 Seat seal: NBR
 Internal parts: Stainless steel, Brass

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Suitable for vacuum
- High flow rate
- Functional compact design
- Body with M5 fastening thread as standard
- Solenoid interchangeable without tools (Click-on®)
- Valve operates without pressure differential

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number*	Operating pressure bar				
				NBR	Normally open	FPM 110 °C	PTFE ** 110 °C	EPDM 110 °C
				00/20/40/60/80	01/21/41/61	03/23/43/63/83	06/26/46/66/86	04/24/44/64/84
1/8	1.5	0.07	825180X.9101.00000	0 - 25	0 - 16	0 - 25	-	0 - 25
1/4	1.5	0.07	825100X.9101.00000	0 - 25	0 - 16	0 - 25	-	0 - 25
3/8	1.5	0.07	825110X.9101.00000	0 - 25	0 - 16	0 - 25	-	0 - 25
1/8	2.5	0.15	825182X.9101.00000	0 - 10	0 - 6	0 - 10	-	0 - 10
1/4	2.5	0.15	825102X.9101.00000	0 - 10	0 - 6	0 - 10	-	0 - 10
3/8	2.5	0.15	825112X.9101.00000	0 - 10	0 - 6	0 - 10	-	0 - 10
1/8	2.5	0.15	825182X.9151.00000	0 - 40	0 - 25	0 - 40	0 - 40	0 - 40
1/4	2.5	0.15	825102X.9151.00000	0 - 40	0 - 25	0 - 40	0 - 40	0 - 40
3/8	2.5	0.15	825112X.9151.00000	0 - 40	0 - 25	0 - 40	0 - 40	0 - 40
1/8	3.0	0.21	825184X.9101.00000	0 - 4	0 - 3	0 - 4	-	0 - 4
1/4	3.0	0.21	825104X.9101.00000	0 - 4	0 - 3	0 - 4	-	0 - 4
3/8	3.0	0.21	825114X.9101.00000	0 - 4	0 - 3	0 - 4	-	0 - 4
1/8	3.0	0.21	825184X.9151.00000	0 - 20	0 - 16	0 - 20	0 - 20	0 - 20
1/4	3.0	0.21	825104X.9151.00000	0 - 20	0 - 16	0 - 20	0 - 20	0 - 20
3/8	3.0	0.21	825114X.9151.00000	0 - 20	0 - 16	0 - 20	0 - 20	0 - 20
1/8	4.0	0.35	825186X.9151.00000	0 - 12	0 - 8	0 - 12	0 - 12	0 - 12
1/4	4.0	0.35	825106X.9151.00000	0 - 12	0 - 8	0 - 12	0 - 12	0 - 12
3/8	4.0	0.35	825116X.9151.00000	0 - 12	0 - 8	0 - 12	0 - 12	0 - 12
1/8	5.0	0.50	825188X.9151.00000	0 - 6	-	0 - 6	0 - 6	0 - 6
1/4	5.0	0.50	825108X.9151.00000	0 - 6	-	0 - 6	0 - 6	0 - 6
3/8	5.0	0.50	825118X.9151.00000	0 - 6	-	0 - 6	0 - 6	0 - 6

* For orders please state voltage and frequency, e.g.: 8251000.9101.23050 for 230V 50Hz or 8251000.9101.02400 for 24V DC

** Leak rate E according to EN 12266-1

Solenoid 9101 / 9151 (standard voltages)

DC	AC	
	50Hz	60Hz
24V	24V	-
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 The solenoids are UL listed and CSA approved

Drawing legend

Index	Description
400	Solenoid
701	Core tube
*702	O-ring
703	Screw piece
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector
9900	Valve body

* A service kit consists of these individual parts.

Service kits

For valves with solenoid 9101	Part number
8251800	1261629
8251000	1261629
8251100	1261629
8251820	1261629
8251020	1261629
8251120	1261629
8251840	1261629
8251040	1261629
8251140	1261629
For valves with solenoid 9151	Part number
8251820	1262353
8251020	1262353
8251120	1262353
8251840	1262353
8251040	1262353
8251140	1262353
8251860	1262353
8251060	1262353
8251160	1262353
8251880	1262353
8251080	1262353
8251180	1262353

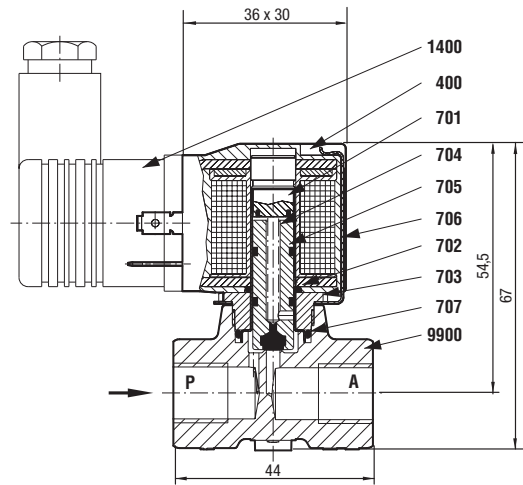
Further options (solenoids)

XXXXXX.**9136** Solenoid in protection class $\text{Ex II 2 GD EEx m II T4 T 130 }^{\circ}\text{C}$,
 with 3 m connection cable
 XXXXXX.**9186** $\text{Ex II 2 GD EEx me II T4 T 130 }^{\circ}\text{C}$

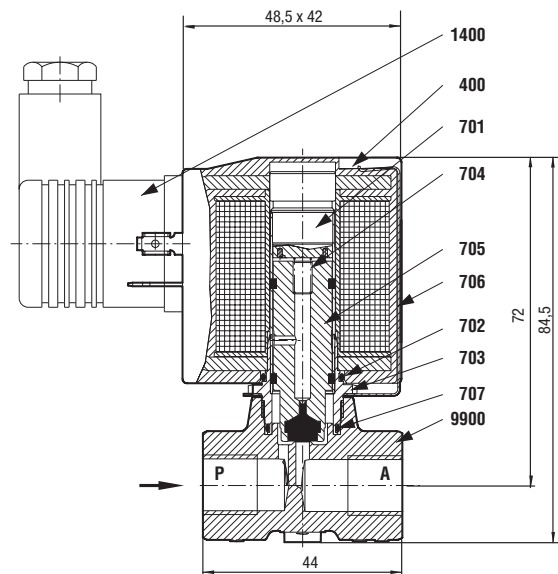
Power consumption

Solenoid	DC	AC	
		Inrush	Holding
9101	8W	15VA	12VA
9151	18W	45VA	35VA

With solenoid 9101



With solenoid 9151



Please turn to page 276 for technical information on our valves.

Solenoid Valves without Differential Pressure

2/2-way valves DN 10

For neutral gases and liquids
 Solenoid actuated, with forced lifting
 Diaphragm valves
 Internal thread G 1/4 to G 1/2 or 1/4" NPT to 1/2" NPT
 Operating pressure: 0 to 10 bar

Description (standard valve)

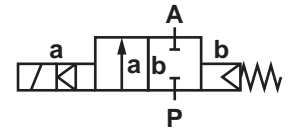
Solenoid valve for air, water, oil and other neutral fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top



Material

Body: Brass, PA 66
 Seat seal: NBR
 Internal parts: Stainless steel, PVDF

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Suitable for vacuum
- Functional design
- Compact solenoid with integrated core tube
- Valve operates without differential pressure
- Operating pressure: 0 - 20 bar with alternating current and NBR sealing

Technical data

Connection size G	DN mm	Valve length mm	kv-Value m³/h	Part number*	Operating pressure bar			
					NBR	FPM 110 °C	EPDM 110 °C	HNBR +150 °C
					00	03	14	51
1/4	10	44	1.5	82530XX.8001.00000	0 - 10	0 - 10	0 - 10	0 - 6
3/8	10	44	1.7	82531XX.8001.00000	0 - 10	0 - 10	0 - 10	0 - 6
1/2	10	60	1.7	82532XX.8001.00000	0 - 10	0 - 10	0 - 10	0 - 6

* For orders please state voltage and frequency, e.g.: 8253000.8001.23050 for 230V 50Hz or 8253000.8001.02400 for 24V DC

Solenoid 8001 (standard voltages)

DC	AC	
	50Hz	60Hz
24V	24V	-
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8001	12W	-	-
8001	-	20VA	16VA

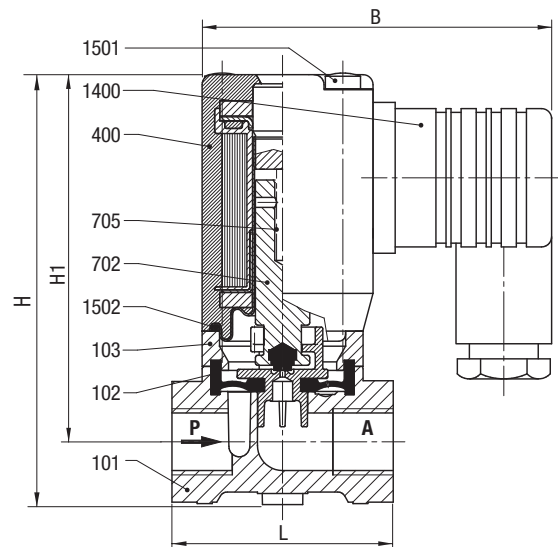
Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)

Drawing legend

Index	Description
101	Valve body
*102	Diaphragm
103	Spacer
400	Solenoid
*702	Plunger
*705	Pressure spring
1400	Electrical connector
1501	Oval head cap screw
*1502	O-ring

* A service kit consists of these individual parts.

Connection size G	L mm	B mm	H mm	H1 mm
1/4	44	70	85.5	73.0
3/8	44	70	85.5	73.0
1/2	60	70	88.5	74.5



Solenoid Valves without Differential Pressure

Service kits

For valves with solenoid 8001 and seal NBR	Part number
8253000	1256202
8253100	1256202
8253200	1256202
For valves with solenoid 8001 and seal FPM	Part number
8253003	1257116
8253103	1257116
8253203	1257116
For valves with solenoid 8001 and seal EPDM	Part number
8253014	1256745
8253114	1256745
8253214	1256745
For valves with solenoid 8001 and seal HNBR	Part number
8253051	1256761
8253151	1256761
8253251	1256761

Further options (valves)

XXXXX18.XXXX Degreased version, seat seal: FPM

XXXXX22.XXXX Operating pressure 0 to 20 bar; only for NBR and AC solenoid (not available with Ex solenoids)

Further options (solenoids)

XXXXXX.8041 Solenoid in protection class $\text{Ex II 2 GD EEx me II T3 T 140 }^{\circ}\text{C}$

Further options on request

Body with 2x M5 fastening thread

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 8 to DN 50

For neutral gases and liquids
 Solenoid actuated, with forced lifting
 Diaphragm valves
 Internal thread G 1/4 to G 2 or 1/4" NPT to 2" NPT
 Operating pressure: 0 to 16 bar (see technical data)

Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top

Material

Body: Brass
 Seat seal: NBR
 Internal parts: Stainless steel, PVDF, Brass

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- High flow rate
- For robust industry applications
- Damped operation
- Suitable for vacuum
- For systems with low or fluctuating pressure
- Valve operates without differential pressure (Zero Delta P)
- Solenoid interchangeable without tools (Click-on®)

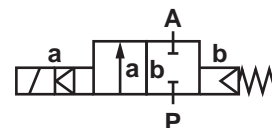
Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar			
				NBR	Normally open	FPM 110 °C	EPDM 110 °C
				00	01	03	14
1/4	8	1.9	82540XX.8301.00000	0 - 16	0 - 16	0 - 16	0 - 16
1/4	8	1.9	82540XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
3/8	10	3.0	82541XX.8301.00000	0 - 16	0 - 16	0 - 16	0 - 16
3/8	10	3.0	82541XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
1/2	12	3.4	82542XX.8301.00000	0 - 16	0 - 16	0 - 16	0 - 16
1/2	12	3.4	82542XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
3/4	20	5.8	82543XX.8301.00000	0 - 16	0 - 16	0 - 16	0 - 16
3/4	20	5.8	82543XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
1	25	8.0	82544XX.8301.00000	0 - 16	0 - 16	0 - 16	0 - 16
1	25	8.0	82544XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
1 1/4	32	23.0	82545XX.9401.00000	0 - 16	0 - 16**	0 - 16	0 - 16
1 1/2	40	25.0	82546XX.9401.00000	0 - 16	0 - 16**	0 - 16	0 - 16
2	50	41.0	82547XX.9401.00000	0 - 16	0 - 16**	0 - 16	0 - 16

* For orders please state voltage and frequency, e.g.: 8254000.9151.4.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8254000.9151.02400 for 24V DC

** With solenoid DC 8401 / AC 8404

Click-on®
 Solenoid interchangeable without tools



Solenoid 9151 / 9154; 9401 / 9404; 8301 / 8304; 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Mounting bracket*

Content: 1 stainless steel mounting bracket and 2 screws

Connection size G	Part number
1/4, 3/8, 1/2	1258986
3/4	1258991
1	1258996
1 1/4, 1 1/2	1259005
2	1259007

* For image of valve with mounting bracket, see 82400 series (page 105)

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Allen head screw
*105	Pressure spring
400	Solenoid
701	Core tube
*702	O-ring
703	Round plate
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.

Connection size G	L mm	B* mm	H mm	H1 mm
1/4	60	44	104.0	92.5
3/8	60	44	104.0	92.5
1/2	67	44	108.0	94.5
3/4	80	50	115.0	99.0
1	95	62	124.0	103.5
1 1/4	132	92	186.0	157.0
1 1/2	132	92	186.0	157.0
2	160	109	201.5	167.0

* B = maximum width

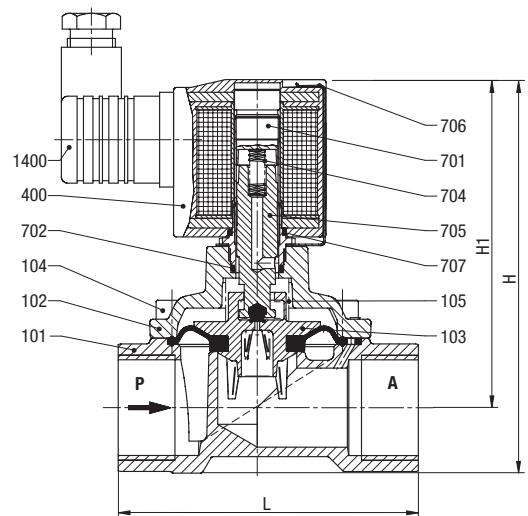
Power consumption

Solenoid	DC	AC	
		Inrush	Holding
915X	18W	20VA	20VA
940X	38W	42VA	42VA
840X	40W	45VA	45VA
830X	22W	25VA	25VA

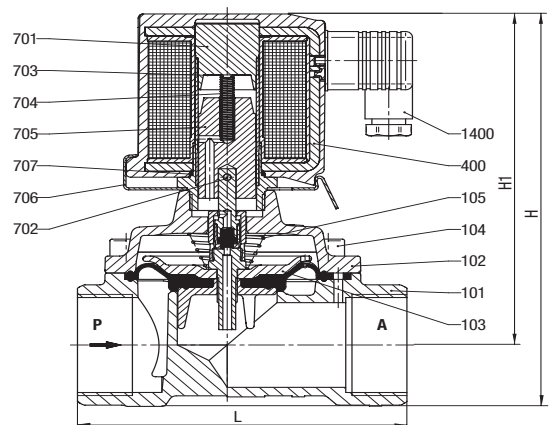
The solenoids 915X and 940X are UL listed and CSA approved

Solenoid Valves without Differential Pressure

G 1/4 - G 1 with solenoid 915X



G 1 1/4 - G 2 with solenoid 940X



Drawing legend

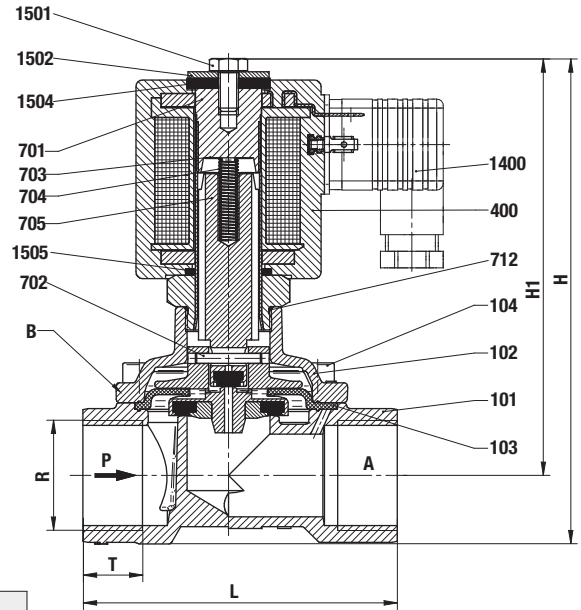
Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm assembly
104	Allen head screw
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
705	Plunger
*712	O-ring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size G	L mm	H mm	H1 mm	B* mm	T mm
1/4	60	117	128.5	44	12.0
3/8	60	117	128.5	44	12.0
1/2	67	117	131	44	14.0
3/4	80	121	136	50	12.5
1	95	126	147	62	14.0

* B = maximum width

G 1/4 - G 1 with solenoid 830X



Service kits

For valves with solenoid 915X and seal NBR	Part number
8254000	1260177
8254100	1260177
8254200	1260177
8254300	1260178
8254400	1260179
For valves with solenoid 940X and seal NBR	Part number
8254500	1263099
8254600	1263099
8254700	1263100

Further options (valves)

XXXX02.XXXX Manual override only from G 1 1/4 (NPT 1 1/4)
 XXXX17.XXXX Normally open, seat seal: FPM, maximum fluid temperature +110 °C, from G 1 1/4 (NPT 1 1/4) with solenoid 8400 only

Further options (solenoids)

*XXXXXX.8426 Solenoid in protection class ☉ II 3 GD EEx nA II T4 T 135 °C
 *XXXXXX.8441 Solenoid in protection class ☉ II 2 GD EEx me II T3 T 140 °C
 *XXXXXX.9176 Solenoid in protection class ☉ II 3 GD EEx nA II T4 T 135 °C
 *XXXXXX.9191 Solenoid in protection class ☉ II 2 GD EEx me II T3 T 140 °C
 *XXXXXX.9426 Solenoid in protection class ☉ II 3 GD EEx nA II T4 T 135 °C

* DC only, for AC solenoids with design inspection certificate according to category 2, e.g. XXXXXX.8441

Further options on request

Accessories: - Manual override conversion kit
 - Mounting bracket conversion kit

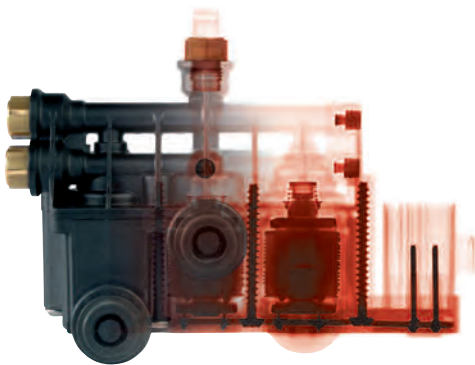
Please turn to page 276 for technical information on our valves.



RELIABLE, DURABLE & PROVEN

From the simplest piloting application through to the most arduous and demanding liquid and gas control requirement, Norgren's fluid control expertise can make a difference.

Drawing on a wide and established range of platform technologies, as well as proven expertise in creating custom valve solutions, Norgren's experienced design engineers study customers' individual requirements closely in order to deliver the best possible results.



ENGINEERING INNOVATION

INTEGRATED VALVE MANIFOLD TO CONTROL THE AIR SUSPENSION ON THE PRESTIGIOUS LAND ROVER DISCOVERY AND RANGE ROVER VEHICLES. HIGH PERFORMANCE, QUALITY AND RELIABILITY IN A SMALL, LIGHTWEIGHT SOLUTION.

Norgren's fluid control solutions are used in many different fields, including:

- » Agriculture
- » Analytical
- » Automotive
- » Chemical
- » Commercial Vehicles
- » Dairy
- » Energy
- » Environment Technology
- » Food & Beverage
- » Fuel Cells
- » Heating and Air Conditioning
- » Injection Moulding Machines
- » Ink-Jet
- » Life Sciences
- » Marine
- » Mechanical Engineering
- » Optical Sorting
- » Packaging
- » Power Plants
- » Printing
- » Process Valves
- » Railway
- » Sanitary Automation
- » Textiles
- » Water Management

2/2-way valves DN 15 to DN 50

For neutral and aggressive gases and liquids
 Directly solenoid actuated
 Seat valves
 Internal thread G 1/2 to G 2

Description (standard valve)

Solenoid valve for town gas, natural gas, and other neutral and aggressive fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: valve standing or lying, solenoid at 45° angle

Material

Body: Brass
 Seat seal: NBR
 Internal parts: Stainless steel

Features

- Functional compact design
- High flow rate
- Solenoid interchangeable without tools (Click-on®)

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar
				NBR 00
1/2	15	3.0	82662XX.8301.00000	0 - 0.6
1/2	15	3.0	82662XX.9401.00000	0 - 1.5
3/4	20	5.5	82663XX.9401.00000	0 - 1.0
1	25	6.1	82664XX.9401.00000	0 - 0.4
1 1/4	32	8.7	82665XX.9401.00000	0 - 0.25
1 1/2	40	16.3	82666XX.8401.00000	0 - 0.2
2	50	27.6	82667XX.8401.00000	0 - 0.15

* For orders please state voltage and frequency, e.g.: 8266200.9404.23049 for 230V 40-60Hz (AC with rectifier plug only; included) or 8266200.9401.02400 for 24V DC

Solenoid 8301 / 8304; 9401 / 9404; 8401 / 8404 (standard voltages)

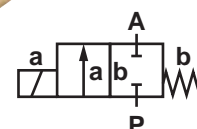
DC	AC 40-60Hz	
	24V	-
-	110V	120V
	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
830X	22W	25VA	25VA
940X	38W	42VA	42VA
840X	40W	45VA	45VA

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only
 The solenoids 94XX are UL listed and CSA approved
 (With the exception of solenoid 94XX up to 41V AC)

Click-on®
 Solenoid interchangeable without tools

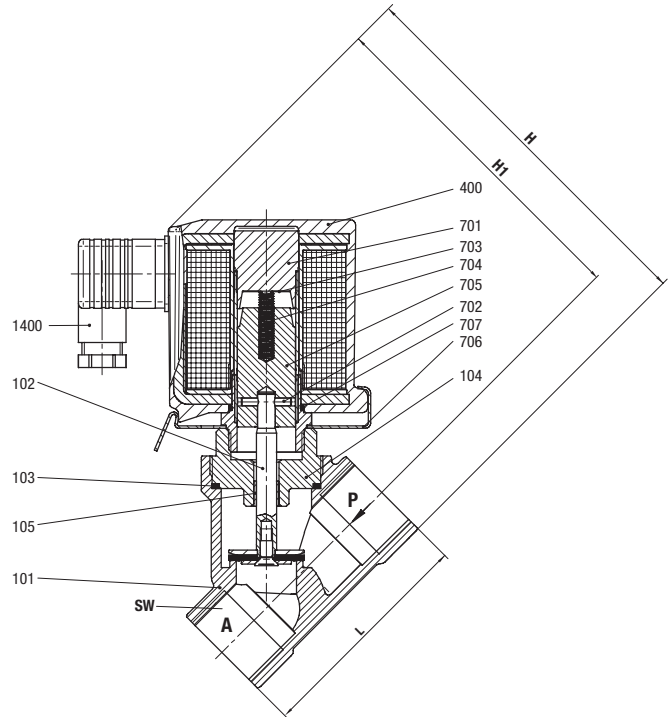


Drawing legend

Index	Description
101	Valve body
102	Valve spindle
*103	Gasket
104	Screw piece
*105	Sleeve bearing
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
706	Spring clip
707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.

Connection size G	L mm	H mm	H1 mm
1/2	65 mm	123.40 mm	109.90 mm
1/2	65 mm	137.68 mm	125.18 mm
3/4	75 mm	145.42 mm	129.92 mm
1	90 mm	154.70 mm	134.20 mm
1 1/4	110 mm	175.99 mm	151.49 mm
1 1/2	120 mm	184.86 mm	136.86 mm
2	150 mm	195.58 mm	163.58 mm



Solenoid Valves without Differential Pressure

Further options (valves)

NPT-thread

Further options (solenoids)

XXXXXX.8441 Solenoid in protection class $\text{Ex II 2 GD EEx me II T3 T 140 }^{\circ}\text{C}$

Further options on request

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 8 to DN 25

For neutral steam and liquids
 Solenoid actuated, with forced lifting
 Diaphragm valves
 Internal thread G 1/4 to G 1 or 1/4" NPT to 1" NPT
 Operating pressure: 0 to 10 bar

Description (standard valve)

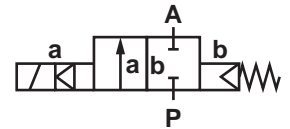
Solenoid valve for steam, hot water, and other neutral liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: 0 °C up to max. +150 °C
 Ambient temperature: 0 °C up to max. +60 °C
 Mounting position: as required, preferably with solenoid vertical on top



Material

Body: Brass
 Seat seal: HNBR
 Internal parts: Brass, Stainless steel

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Valve operates without differential pressure
- High flow rate
- Easily interchangeable solenoid

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar**
				HNBR 00
1/4	8	1.9	84360XX.8302.00000	0 - 10
3/8	10	3.0	84361XX.8302.00000	0 - 10
1/2	12	3.8	84362XX.8302.00000	0 - 10
3/4	20	6.1	84363XX.8302.00000	0 - 10
1	25	9.5	84364XX.8302.00000	0 - 10

* For orders please state voltage and frequency, e.g.: 8436000.8306.23049 for 230V 40-60Hz (AC with rectifier plug only; included) or 8436000.8302.02400 for 24V DC

** With gases or liquids up to 25 mm²/s (cSt)

Solenoid 8302 / 8306 (standard voltages)

DC	AC 40-60Hz	
	24V	-
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8302	14W	-	-
8306	-	16VA	16VA

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Mounting bracket*

Content: 1 stainless steel mounting bracket and 2 screws

Connection size G	Part number
1/4, 3/8, 1/2	1258986
3/4	1258991
1	1258996
1 1/4, 1 1/2	1259005
2	1259007

* For image of valve with mounting bracket, see 82400 series (page 105)

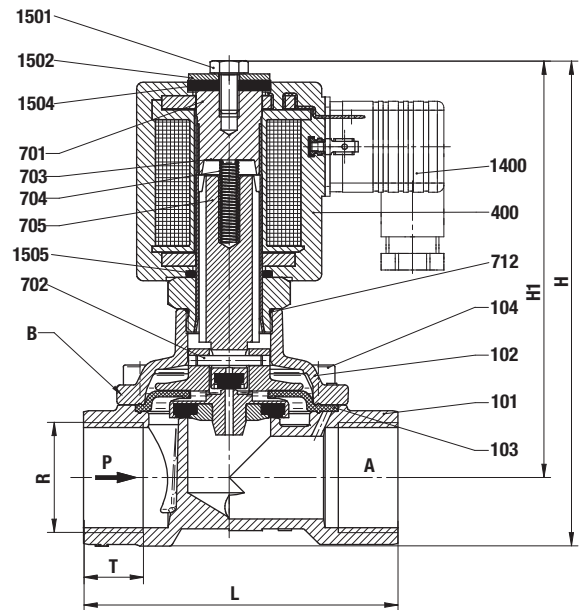
Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm assembly
104	Allen head screw
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
705	Plunger
*712	O-ring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size G	L mm	H mm	H1 mm	B* mm	T mm
1/4	60	117	128.5	44	12.0
3/8	60	117	128.5	44	12.0
1/2	67	117	131	44	14.0
3/4	80	121	136	50	12.5
1	95	126	147	62	14.0

* B = maximum width



Further options on request

Please turn to page 276 for technical information on our valves.

Solenoid Valves without Differential Pressure

2/2-way valves DN 8 to DN 50

For neutral gases and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Internal thread G 1/4 to G 2 or 1/4" NPT to 2" NPT
 Operating pressure: 0 to 25 bar (0 - 40 bar)

Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -20 °C up to max. +90 °C
 Ambient temperature: -20 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top

Material

Body: Brass
 Seat seal: NBR
 Internal parts: Stainless steel, PTFE/carbon

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- High flow rate
- For robust industry applications
- Damped operation
- Suitable for vacuum
- For systems with low or fluctuating pressure
- Valve operates without differential pressure
- Stainless steel piston
- Solenoid interchangeable without tools (Click-on®) up to G 1 thread

Technical data

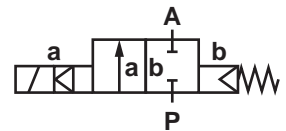
Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar							
				NBR	Normally open	Manual override	FPM 110 °C	PTFE** 110 °C	EPDM 110 °C	Position indicator 2 switches	
				00	01	02	03	06	14	23	
1/4	8	2.2	85700XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25***	
3/8	10	3.4	85701XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25***	
1/2	12	4.4	85702XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25***	
3/4	20	7.0	85703XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25***	
1	25	10.5	85704XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25***	
1 1/4	32	25.0	85705XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	
1 1/2	40	27.0	85706XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	
2	50	43.0	85707XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	

* For orders please state voltage and frequency, e.g.: 8570200.9404.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8570200.9401.02400 for 24V DC

** Leak rate E according to EN 12266-1

*** With solenoid DC 8401 / AC 8404

Click-on®
 Solenoid interchangeable without tools



Solenoid 9401 / 9404 / 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only
 The solenoids 94XX are UL listed and CSA approved
 (With the exception of solenoid 94XX up to 41V AC)

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
9401	38W		
9404		42VA	42VA
8401	40W		
8404		45VA	45VA

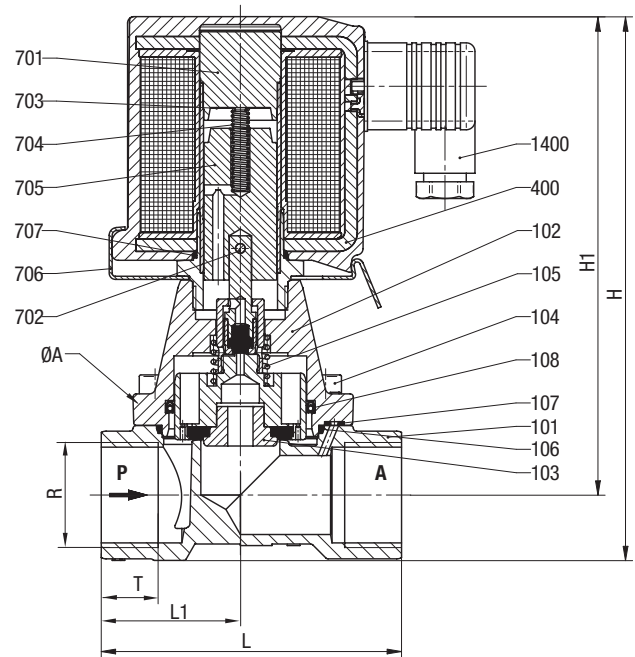
Solenoid Valves without
Differential Pressure

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring
*106	Gasket
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.

G 1/4 - G 1



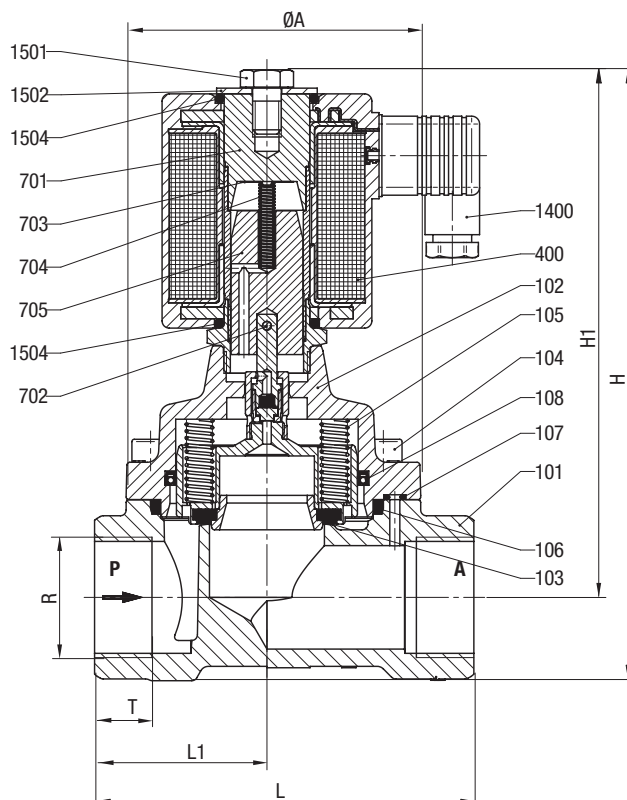
Connection size G	ØA mm	H mm	H1 mm	L mm	L1 mm	T mm
1/4	44.0	152.0	140.5	60.0	27.5	12.0
3/8	44.0	152.0	140.5	60.0	27.5	12.0
1/2	44.0	154.5	140.5	67.0	31.0	14.0
3/4	50.0	162.0	146.5	80.0	36.5	16.0
1	62.0	183.0	162.0	95.0	44.0	18.0

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring (2x)
*106	Gasket
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	O-ring (2x)

* A service kit consists of these individual parts.

G 1 1/4 - G 2



Connection size G	ØA mm	H mm	H1 mm	L mm	L1 mm	T mm
1 1/4	92.0	212.5	183.5	132.0	60.0	20.0
1 1/2	92.0	212.5	183.5	132.0	60.0	22.0
2	109.0	226.5	192.0	160.0	74.0	24.0

Service kits

For valves with solenoid 9401	Part number
8570000	1263105
8570100	1263105
8570200	1263105
8570300	1263108
8570400	1263111
For valves with solenoid 8401	Part number
8570500	1263114
8570600	1263114
8570700	1263117

Further options (valves)

- XXXXX**17**.XXXX Normally open, seat seal: FPM, fluid temperature -10 °C up to +110 °C*, mounting position: with solenoid vertical on top, only with solenoid 8400
- XXXXX**22**.XXXX Maximum operating pressure: 40 bar
- XXXXX**25**.XXXX Seat seal: FPM, with larger bleed orifices in the piston, for fluids such as fuel and oil, viscosity: 80 mm²/s (cSt) fluid temperature -10 °C up to +110 °C*
- XXXXX**28**.XXXX Low temperature design: down to -20 °C

Accessories: - Manual override conversion kit
- Mounting bracket kit

Further options (solenoids)

- **XXXXXXX.**8426** Solenoid in protection class Ⓢ II 3 GD EEx nA II T4 T 135 °C
- XXXXXXX.**8441** Solenoid in protection class Ⓢ II 2 GD EEx me II T3 T 140 °C
- **XXXXXXX.**9426** Solenoid in protection class Ⓢ II 3 GD EEx nA II T4 T 135 °C

Further options on request

- * Up to max. +200 °C fluid temperature with solenoid for higher temperature
- ** DC only, for AC solenoids with EC type examination, category 2, use XXXXXXX.8441

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 8 to DN 50

For neutral steam and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Internal thread G 1/4 to G 2 or 1/4" NPT to 2" NPT
 Operating pressure: 0 to 16 bar

Description (standard valve)

Solenoid valve for steam, hot water, and other neutral liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: 0 °C up to max. +200 °C
 Ambient temperature: 0 °C up to max. +60 °C
 Mounting position: solenoid mounted underneath
 (up to max. +150 °C preferably
 solenoid vertical on top)

Material

Body: Brass
 Seat seal: PTFE
 Internal parts: Stainless steel, PTFE/carbon/FPM

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- High flow rate
- For robust industry applications
- Damped operation
- Valve operates without differential pressure
- Solenoid interchangeable without tools (Click-on®) up to G 1 thread

Technical data

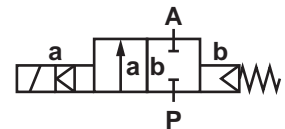
Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar			
				PTFE 00**	Normally open 01	Manual override 02	EPDM 130 °C 14
1/4	8	1.9	85720XX.9402.00000	0 - 16	0 - 16***	0 - 16	0 - 16
3/8	10	3.0	85721XX.9402.00000	0 - 16	0 - 16***	0 - 16	0 - 16
1/2	12	3.8	85722XX.9402.00000	0 - 16	0 - 16***	0 - 16	0 - 16
3/4	20	6.0	85723XX.9402.00000	0 - 16	0 - 16***	0 - 16	0 - 16
1	25	9.5	85724XX.9402.00000	0 - 16	0 - 16***	0 - 16	0 - 16
1 1/4	32	23.0	85725XX.8402.00000	0 - 16	0 - 16	0 - 16	0 - 16
1 1/2	40	25.0	85726XX.8402.00000	0 - 16	0 - 16	0 - 16	0 - 16
2	50	41.0	85727XX.8402.00000	0 - 16	0 - 16	0 - 16	0 - 16

* For orders please state voltage and frequency, e.g.: 8572200.9406.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8572200.9402.02400 for 24V DC

** Leak rate E according to EN 12266-1

*** With solenoid DC 8402 / AC 8406

Click-on®
 Solenoid interchangeable without tools



Solenoid 9402 / 9406 / 8402 / 8406 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only
 The solenoids 94XX are UL listed and CSA approved
 (With the exception of solenoid 94XX up to 41V AC)

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
9402	29W		
9406		33VA	33VA
8402	29W		
8406		33VA	33VA

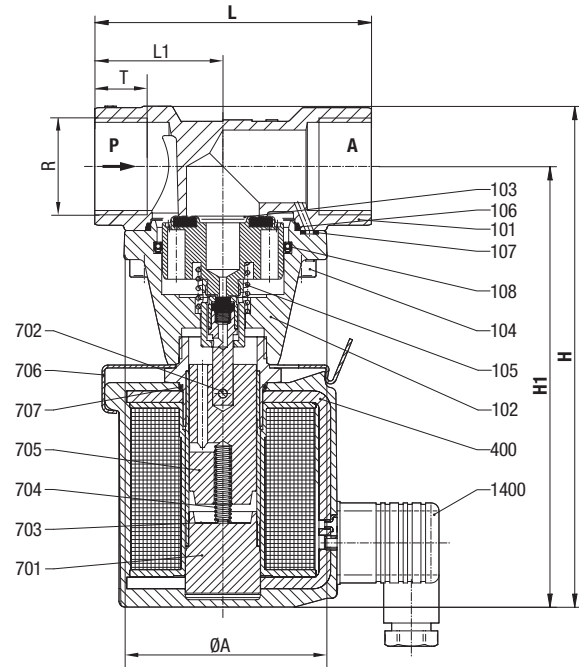
Solenoid Valves without
Differential Pressure

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring
*106	O-ring
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.

Up to G 1 thread



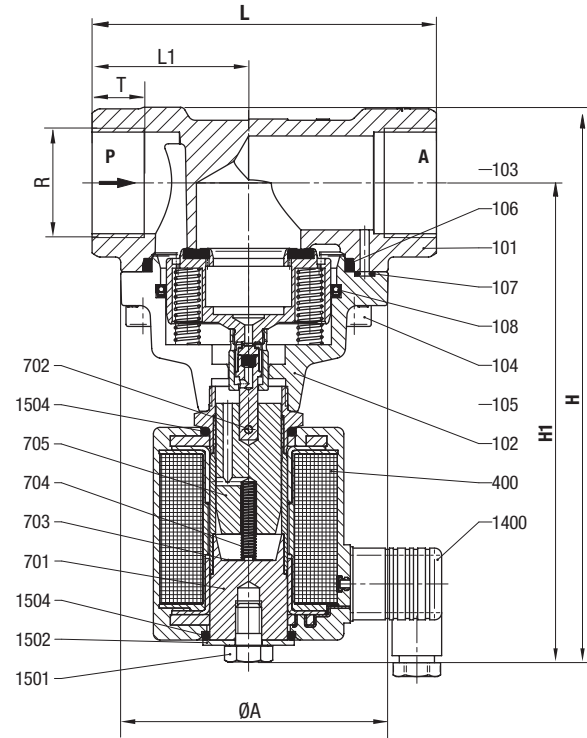
Connection size G	ØA mm	H mm	H1 mm	L mm	L1 mm	T mm
1/4	44.0	152.0	140.5	60.0	27.5	12.0
3/8	44.0	152.0	140.5	60.0	27.5	12.0
1/2	44.0	154.5	140.5	67.0	31.0	14.0
3/4	50.0	162.0	146.5	80.0	36.5	16.0
1	62.0	183.0	162.0	95.0	44.0	18.0

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring (2x)
*106	O-ring
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
*1504	O-ring (2x)

* A service kit consists of these individual parts.

From G 1 1/4 thread



Connection size G	ØA mm	H mm	H1 mm	L mm	L1 mm	T mm
1 1/4	92.0	212.5	183.5	132.0	60.0	20.0
1 1/2	92.0	212.5	183.5	132.0	60.0	22.0
2	109.0	226.5	192.0	160.0	74.0	24.0

Service kits

For valves with solenoid 9402	Part number
8572000	1263978
8572100	1263978
8572200	1263978
8572300	1263979
8572400	1263980
For valves with solenoid 8402	Part number
8572500	1263981
8572600	1263981
8572700	1263982

Further options (valves)

XXXXX22.XXXX Maximum operating pressure: 25 bar
 XXXXX41.XXXX Position indicator with two magnetic field sensors;
 only with solenoid 84XX

Accessories: - Manual override conversion kit
 - Mounting bracket kit

Please turn to page 276 for technical information on our valves.

Buschjost

Automatic Systems for Machines

Users are increasingly demanding
compact assemblies and systems



2/2-way-valves DN 1.5 to DN 6

Direct operated poppet valves
Solenoid actuated
Connection G 1/4
Operating pressure: 0 to 40 bar (see technical data)

Description

Solenoid valve for neutral gases and fluids*
Fluid temperature: -25 °C to +80 °C
Ambient temperature: -25 °C to +80 °C, depending on solenoid system
Mounting position: as required, preferably with solenoid on top

* With contaminated fluids, upstream installation of a dirt trap is recommended.

Material

Body: Brass
Seat seal: NBR
Internal parts: Steel 1.4104 (AISI 430F), Brass

Features

- No differential pressure required, works from 0 bar
- Short switching times
- Maximum leak rate 1.33·10⁻³ mbar-l/s
- For AC solenoid systems with integrated rectifier (40 to 60Hz)
- Valves and solenoids (see solenoid table) with Ex approval according to ATEX



Technical data

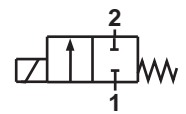
Connection size G	DN mm	kv-Value m ³ /h	Part number* valve	Solenoid group**	Operating pressure bar	Drawing no.
Switching function: normally closed						
1/4	1.5	4.2	9500100	13B	0 - 40	1
1/4	2	7.2	9500200	13B	0 - 35	1
1/4	3	12.0	9500300	13C	0 - 10	1
1/4	4	21.0	9500400	13D	0 - 12	1
1/4	6	33.0	9501600	16D	0 - 5	2
Switching function: normally open						
1/4	2	6.0	9502210	13B	0 - 20	3
1/4	3	9.6	9502310	13B	0 - 10	3

* When ordering please indicate solenoid, voltage and current type (frequency).

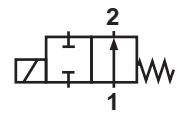
** Please see following pages for technical data and ordering information.

Accessories

<p>Cable gland protection class EEx e, EEx d (ATEX), Nickel plated brass</p> 	<p>Connectors</p> 
EEx e 0588819 (for solenoids 42xx / 46xx M20 x 1.5)	0570275




Symbol 1: 2/2 NC





Symbol 2: 2/2 NO



Solenoid actuators group 13B

	Type	Power consumption		Rated current		Ex-protection category	Protection class	Temperature ambient fluid °C	Electrical connector size	Dimensions no.	Circuit diagram no.
		24V DC W	230V AC VA	24V DC mA	230V AC VA						
	0246 ****	8.0	-	331	-	-	IP 65 (with connector)**	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	4	1
	3206 *****	-	9.2	-	40	-	IP 65 (with connector)**	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	5	4


Solenoid actuators group 13C

	Type	Power consumption		Rated current		Ex-protection category	Protection class	Temperature ambient fluid °C	Electrical connector size	Dimensions no.	Circuit diagram no.
		24V DC W	230V AC VA	24V DC mA	230V AC VA						
	0200 ****	12.1	-	504	-	-	IP 65 (with connector)**	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	4	1
	3204 ****	-	11.3	-	49	-	IP 65 (with connector)**	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	5	3
	4220 *****	8.9	-	369	-	II2G II2D	EEx me II T5/T4 IP 66 T 130 °C *	T5: -40 ... +55 T4: -40 ... +65	M20 x 1.5 ***	8	2
	4221 *****	-	10.0	-	43	II2G II2D	EEx me II T5/T4 IP 66 T 130 °C *	T5: -40 ... +55 T4: -40 ... +65	M20 x 1.5 ***	8	2

Solenoid actuators group 13D

	Type	Power consumption		Rated current		Ex-protection category	Protection class	Temperature ambient fluid °C	Electrical connector size	Dimensions no.	Circuit diagram no.
		24V DC W	230V AC VA	24V DC mA	230V AC VA						
	0700 ****	16.9	-	703	-	-	IP 65 (with connector)**	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	6	1
	3703 ****	-	17.3	-	75	-	IP 65 (with connector)**	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	7	3
	4230 *****	11.4	-	475	-	II2G II2D	EEx me II T5/T4 IP66 T 130 °C *	T5: -40 ... +40 T4: -40 ... +50	M20 x 1.5 ***	8	2
	4231 *****	-	15.2	-	66	II2G II2D	EEx me II T5/T4 IP66 T 130 °C *	T5: -40 ... +40 T4: -40 ... +50	M20 x 1.5 ***	8	4

Solenoid actuators group 16D

	Type	Power consumption		Rated current		Ex-protection category	Protection class	Temperature ambient fluid °C	Electrical connector size	Dimensions no.	Circuit diagram no.
		24V DC W	230V AC VA	24V DC mA	230V AC VA						
	0800 ****	16.9	-	703	-	-	IP 65 (with connector)***	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	6	1
	3803 ****	-	17.3	-	75	-	IP 65 (with connector)***	-25 ... +60 fluid: max. 80	Connector DIN EN 175301-803 form A ***	7	3

Standard voltages 24V DC, 230V AC. Other voltages on request. Design according to VDE 0580, EN50014/50028. 100% duty cycle.

* EC-Type Examination Certificate KEMA 98 ATEX 4452 X

** Required connector: type 0570275

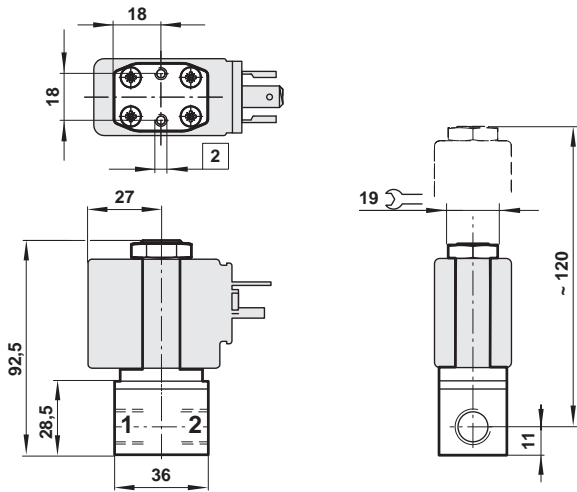
*** Connector/Cable gland is not indicated in delivery

**** IP65 according to DIN 40050/IEC 529 and DIN EN 600068-2-38

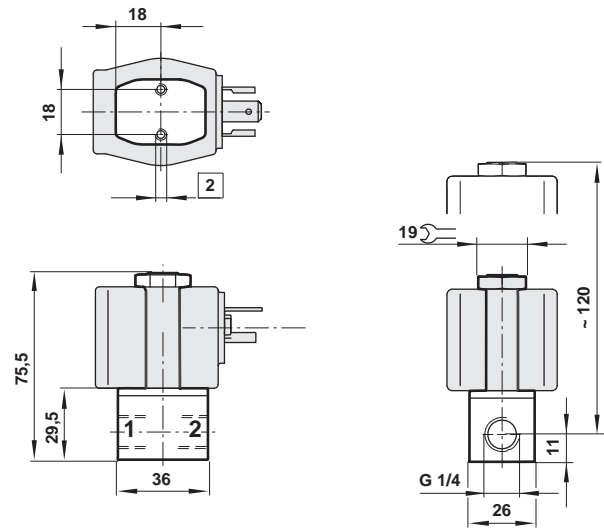
***** This solenoid has a fuse with an appropriate rating.

Dimensional drawings for valves

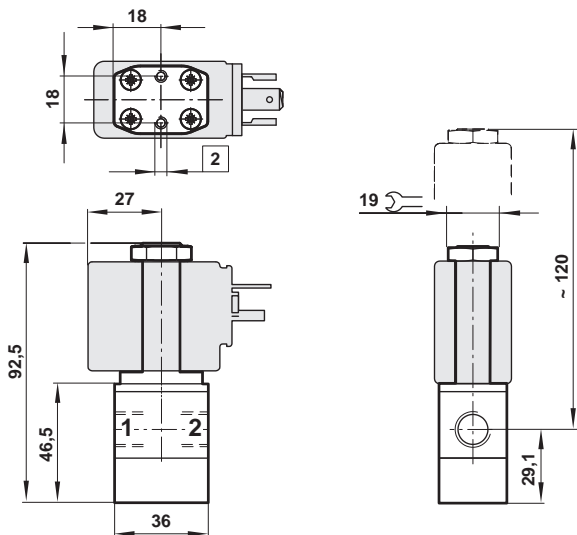
Drawing 1 *



Drawing 2 *



Drawing 3 *



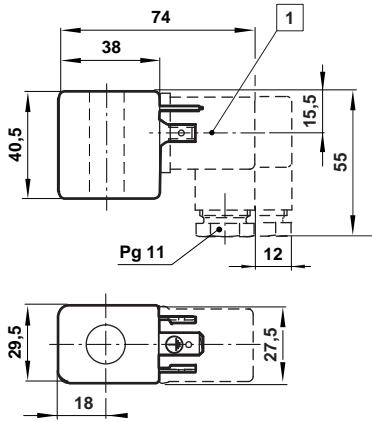
* Dimensions in mm

Drawing legend

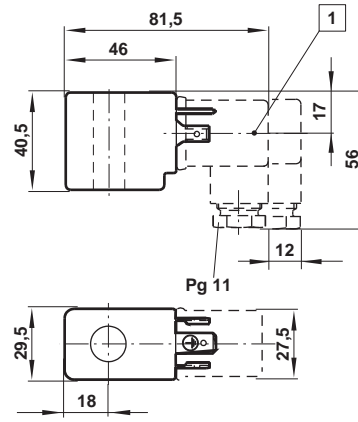
Index	Description
2	M4 x 6

Dimensional drawings for solenoid operators

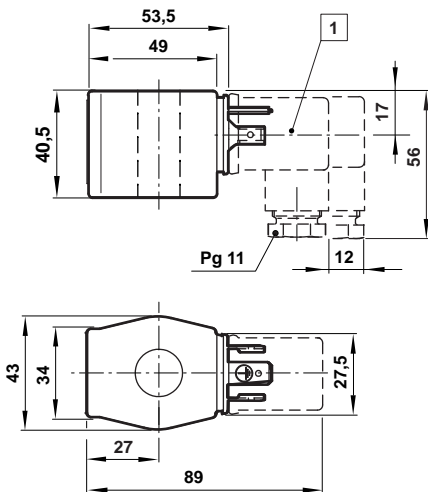
Drawing 4 *



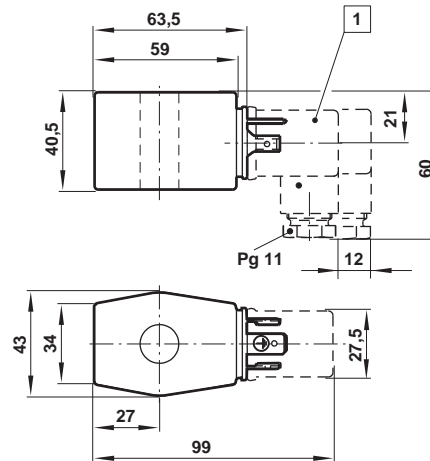
Drawing 5 *



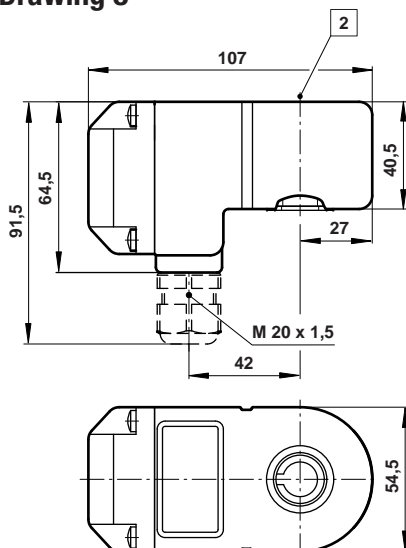
Drawing 6 *



Drawing 7 *



Drawing 8 *



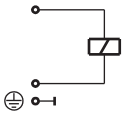
Drawing legend

Index	Description
1	Connector rotatable 4 x 90°
2	Ø 13 (with adaptor sleeve)

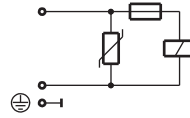
* Dimensions in mm

Circuit diagrams

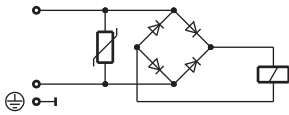
Circuit diagram 1



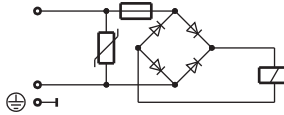
Circuit diagram 2



Circuit diagram 3



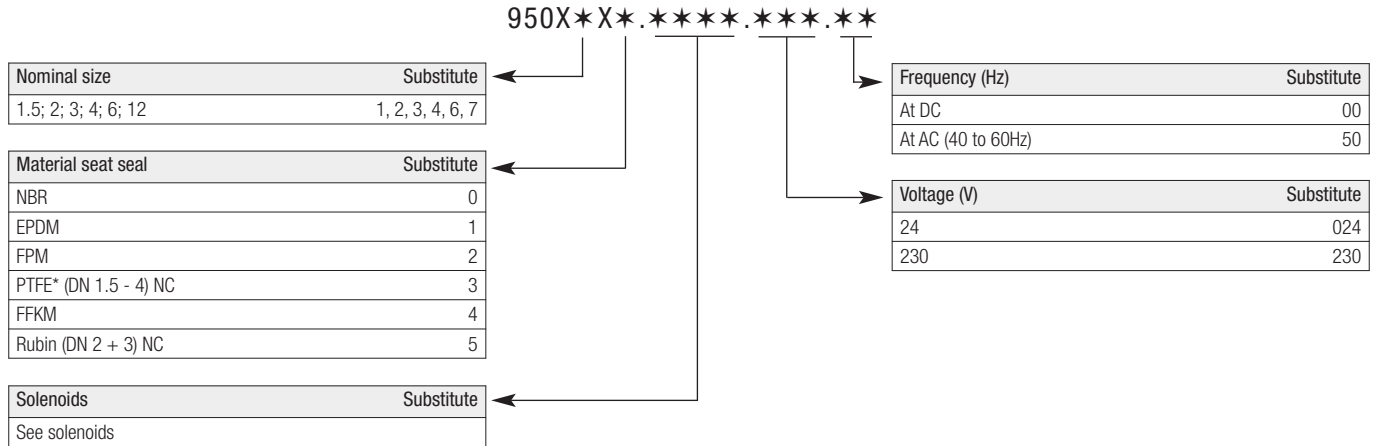
Circuit diagram 4



Further options on request

Please find the safety instructions for the Norgren range on page 318.

Options selector (applicable for the Norgren range)



* Possible only with series 9500XXX

Ordering example

2/2 directional control valve,
 DN (nominal diameter) 2, normally closed,
 Port size: G 1/4,
 Current draw: 8W, voltage: 24V DC
 Type: 9500200.0246.024.00
 Connector: 0570275

2/2-way valves DN 15 to 50

For neutral gases and liquids
 Solenoid actuated, with forced lifting
 Diaphragm valves
 Flange connection: PN 16
 Operating pressure: 0 to 16 bar (see technical data)

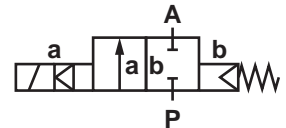
Description (standard valve)

Solenoid valve for air, water, oil, and other neutral fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: max. +90 °C
 Ambient temperature: max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top



Material

Body: Grey cast iron
 Seat seal: NBR
 Internal parts: Brass, Stainless steel



For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Valve operates without differential pressure
- High flow rate
- Easily interchangeable solenoid
- Suitable for vacuum

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar			
			NBR 00	Normally open 01	FPM 110 °C 03***	EPDM 110 °C 14***
15	5.5	83342XX.8301.00000	0 - 16	0 - 16	0 - 10	0 - 10
20	9.5	83343XX.8301.00000	0 - 16	0 - 16**	0 - 10	0 - 10
25	11.0	83344XX.8301.00000	0 - 16	0 - 16**	0 - 10	0 - 10
32	27.0	83345XX.8401.00000	0 - 16	0 - 16	0 - 10	0 - 10
40	30.0	83346XX.8401.00000	0 - 16	0 - 16	0 - 10	0 - 10
50	43.0	83347XX.8401.00000	0 - 10	0 - 10	0 - 10	0 - 10

* For orders please state voltage and frequency, e.g.: 8334200.8304.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8334200.8301.02400 for 24V DC

** With solenoid DC 8401 / AC 8404

*** Differential pressure for liquids maximum 1 bar in energized position

Solenoid 8301 / 8401 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8301	22W	-	-
8304	-	25VA	25VA
8401	40W	-	-
8404	-	45VA	45VA

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

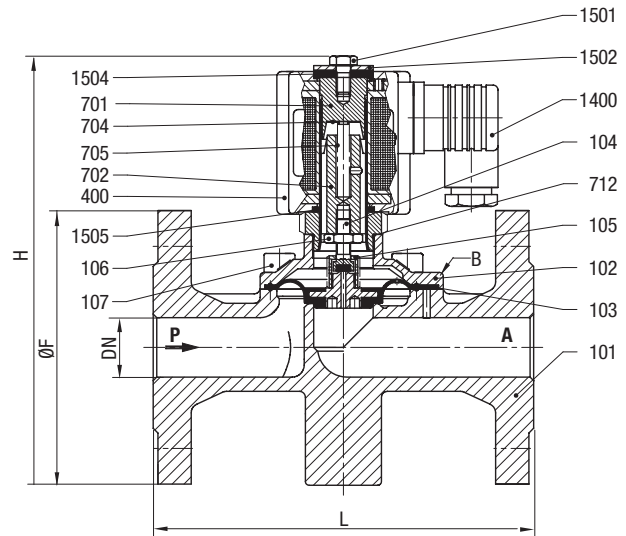
Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
*104	Valve spindle
*105	Screw piece
106	Hexagon nut
107	Hexagon screw
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring, only DN 20 and DN 25
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	H mm	øF mm	B* mm
20	150	126	105	105
25	160	126	115	115
32	180	171	140	140
40	200	175	150	150
50	230	182	165	165

* B = maximum width



Solenoid Valves without Differential Pressure

Service kits

For valves with solenoid 8301 and seal NBR	Part number
8334200	1230164
8334300	1230170
8234400	1230170
For valves with solenoid 8401 and seal NBR	Part number
8334500	1221710
8334600	1221710
8334700	1218534

Further options (solenoids)

- XXXXXX.**8341** Solenoid in protection class ☞ II 2 GD EEx me II T3 T 140 °C
- XXXXXX.**8441** Solenoid in protection class ☞ II 2 GD EEx me II T3 T 140 °C
- XXXXXX.**8900** Solenoid in protection class ☞ II 2 GD EEx de II T4 and T5 T 130 °C / T 95 °C**
- XXXXXX.**8920** Solenoid in protection class ☞ II 2 GD EEx d II C T4 and T5 T 130 °C / T 95 °C**

** solenoid belongs to 84XX scale

Further options on request

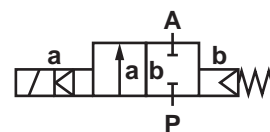
Please turn to page 276 for technical information on our valves.

2/2-way valves DN 15 to DN 100

For neutral gases and liquids
Solenoid actuated, with forced lifting
Piston seat valves
Flange connection: PN 16
Operating pressure: 0 to 16 bar

Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids
Switching function: normally closed
Flow direction: determined
Fluid temperature: -10 °C up to max. +90 °C
Ambient temperature: -10 °C up to max. +50 °C
Mounting position: DN 15 to DN 50:
as required, preferably with solenoid vertical on top
DN 65 to DN 100:
with solenoid vertical on top only



Material

Body: Grey cast iron
Seat seal: NBR
Cover: DN 15 to DN 50: Brass
DN 65 to DN 100: Grey cast iron
Internal parts: Stainless steel, Brass, Gun metal

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Flat-piston valve
- Valve operates without differential pressure
- High flow rate
- Damped operation
- Option: ANSI flange

Technical data

Connection size DN mm	kv-Value m ³ /h	Part number for DC voltage*	Operating pressure bar						
			NBR	Normally open	FPM 110 °C	PTFE*** 110 °C	FPM for higher viscosity 110 °C	Position indicator: 2 switches, Ex-protected	Position indicator: 2 switches, IP 65
			00	01	03	06	25	40**	41
15	5.5	85102XX.8301.00000	0 - 16	0 - 16****	0 - 16	0 - 16	0 - 16****	0 - 16****	0 - 16****
20	10.0	85103XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16
25	12.5	85104XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16
32	27.0	85105XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16
40	31.0	85106XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16
50	43.0	85107XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16	0 - 16
65	67.0	84108XX.9501.00000	0 - 16	0 - 16	0 - 16	0 - 16	-	0 - 16	0 - 16
80	94.0	84109XX.9501.00000	0 - 16	0 - 16	0 - 16	0 - 16	-	0 - 16	0 - 16
100	144.0	84110XX.9501.00000	0 - 16	0 - 16	0 - 16	0 - 16	-	0 - 16	0 - 16

* For orders please state voltage and frequency, e.g.: 8510300.8401.4.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8510300.8401.02400 for 24V DC

** Only in combination with explosion proof solenoids

*** Leak rate E according to EN 12266-1

**** With solenoid DC 8401 / AC 8404

Solenoid 8301 / 8304, 8401 / 8404, 9501 / 9504 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8301	22W		
8304		25VA	25VA
8401	40W		
8404		45VA	45VA
9501	80W		
9504		89VA	89VA

Drawing legend

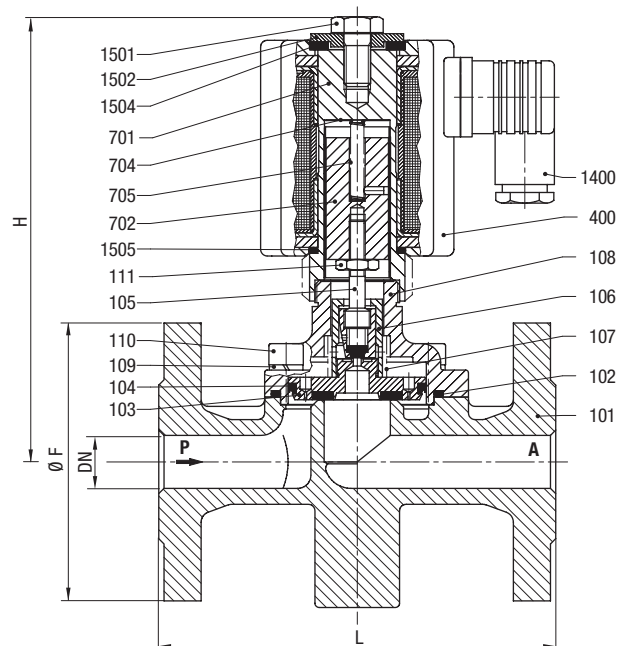
Index	Description
101	Valve body
*102	O-ring
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring - not for DN 15
108	Valve cover
109	Spring washer
110	Allen head screw
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring - DN 15 only
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	145	95
20	150	105	172	105
25	160	115	172	115
32	180	140	187	140
40	200	150	191	150
50	230	165	200	165

* B = maximum width

DN 15 - DN 50



Solenoid Valves without Differential Pressure

Drawing legend

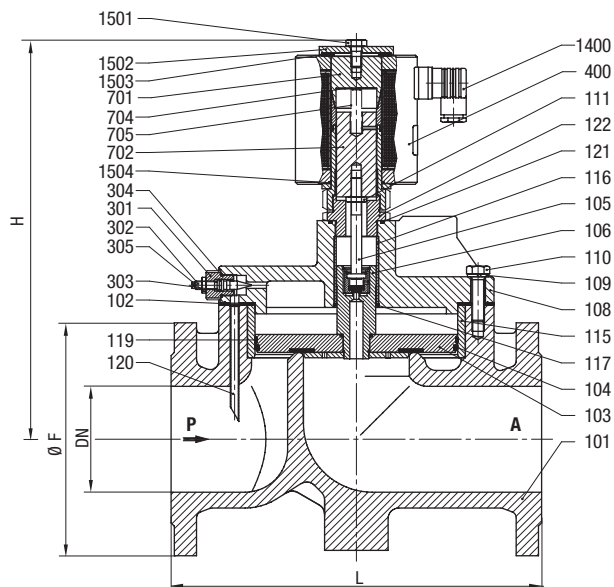
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Locking ring
108	Valve cover
109	Spring washer
110	Hexagon screw
111	Hexagon nut
115	Bushing
116	Bushing
117	Snap ring
*119	Guide foil
120	Tube
*121	O-ring
122	Screw piece
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1503	Gasket
1504	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	330	185
80	310	220	350	200
100	350	260	378	220

* B = maximum width

DN 65 - DN 100



Service kits

For valves with solenoid 8301	Part number
8510200	1250479
For valves with solenoid 8401	Part number
8510300	1246595
8510400	1246595
8510500	1247223
8510600	1247223
8510700	1247223
For valves with solenoid 9501	Part number
8410800	1231358
8410900	1232082
8411000	1232069

Further options (valves)

- XXXXXX**02**.XXXX Manual override
- XXXXXX**14**.XXXX Seal: EPDM, maximum temperature +110 °C
- XXXXXX**17**.XXXX Normally open, seal: FPM, maximum temperature +110 °C,
mounting position: with solenoid vertical on top only

Further options (solenoids)

- XXXXXX**.8341** DN 15: Solenoid protection class
⊗ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8436** DN 20 – DN 50: Solenoid protection class
⊗ II 2 GD EEx me II T4 T 140 °C
- XXXXXX**.8441** DN 20 – DN 50: Solenoid protection class
⊗ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8900** DN 15 – DN 50: Solenoid protection class
⊗ II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.8920** DN 15 – DN 50: Solenoid protection class
⊗ II 2 GD EEx d II T4 and T5 T 130 °C / 95 °C
- XXXXXX**.9540** DN 65 – DN 100: Solenoid protection class
⊗ II 2 GD EEx me II T3 and T4 T 140 °C

Further options on request

Special connections

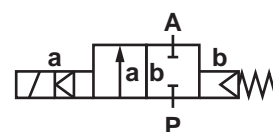
Please turn to page 276 for technical information on our valves.

2/2-way valves DN 15 to DN 100

For neutral steam and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Flange connection: PN 16
 Operating pressure: 0 to 16 bar

Description (standard valve)

Solenoid valve for steam, hot water, and other neutral liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: DN 15 to DN 50: -10 °C up to max. +200 °C
 DN 65 to DN 100: -10 °C up to max. +150 °C
 Ambient temperature: -10 °C up to max. +60 °C
 Mounting position: DN 15 to DN 50: 200 °C, solenoid mounted underneath
 up to max. 150 °C: preferably with solenoid vertical on top
 DN 65 to DN 100: 150 °C, with solenoid vertical on top



Material

Body: Grey cast iron
 Seat seal: PTFE, leak rate E according to EN 12266-1
 Cover: DN 15 to DN 50: Brass
 DN 65 to DN 100: Grey cast iron
 Valve seat: Gun metal
 Internal parts: Stainless steel, Gun metal

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Designed for hot water and steam
- For closed systems without differential pressure
- High flow rate
- Damped operation

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar		
			PTFE	Normally open	Position indicator: 2 switches, IP 65
			01	41	00
15	5.0	85122 XX.8302.00000	0 - 16	0 - 16***	0 - 16***
20	8.0	85123 XX.8402.00000	0 - 16	0 - 16	0 - 16
25	10.0	85124 XX.8402.00000	0 - 16	0 - 16	0 - 16
32	27.0	85125 XX.8402.00000	0 - 16	0 - 16	0 - 16
40	30.0	85126 XX.8402.00000	0 - 16	0 - 16	0 - 16
50	41.0	85127 XX.8402.00000	0 - 16	0 - 16	0 - 16
65	67.0	84128 XX.9502.00000**	0 - 16	0 - 16	0 - 16
80	94.0	84129 XX.9502.00000**	0 - 16	0 - 16	0 - 16
100	144.0	84130 XX.9502.00000**	0 - 16	0 - 16	0 - 16

* For orders please state voltage and frequency, e.g.: 8512300.840**6.23049** for 230V 40-60Hz (AC with rectifier plug only; included) or 8512300.840**2.02400** for 24V DC

** Fluid temperature: maximum +150 °C

*** With solenoid DC 8402 / AC 8406

Solenoid 8302 / 8306; 8402 / 8406; 9502 / 9506 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8302	14W	-	-
8306	-	16VA	16VA
8402	29W	-	-
8406	-	33VA	33VA
9502	55W	-	-
9506	-	61VA	61VA

Drawing legend

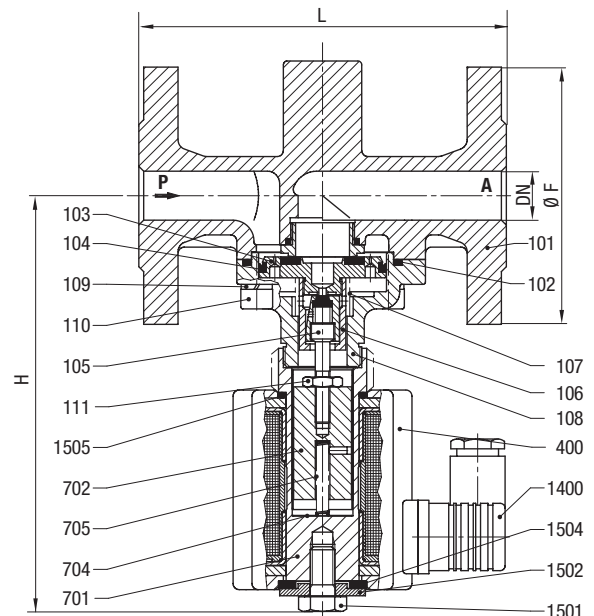
Index	Description
101	Valve body
*102	O-ring
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring
108	Valve cover
109	Spring washer
110	Allen head screw
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring - DN 15 only
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	145	95
20	150	105	172	105
25	160	115	172	115
32	180	140	187	140
40	200	150	191	150
50	230	165	200	165

* B = maximum width

DN 15 - DN 50



Solenoid Valves without Differential Pressure

Drawing legend

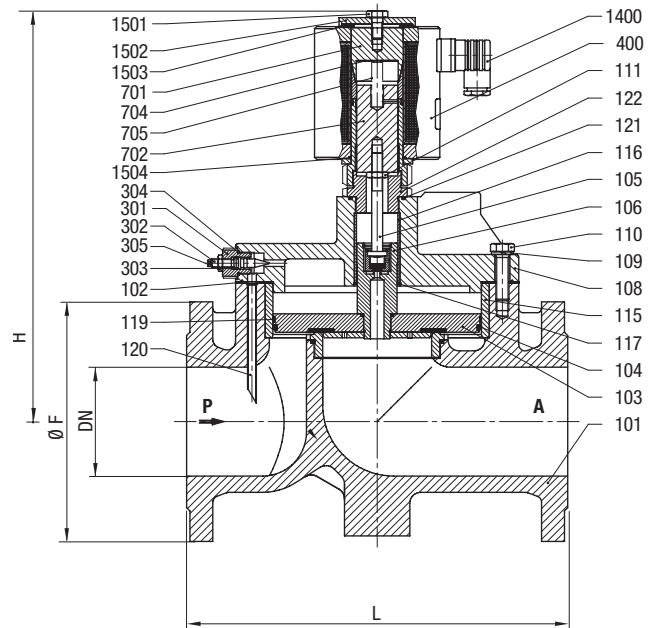
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Locking ring
108	Valve cover
109	Spring washer
110	Hexagon screw
111	Hexagon nut
115	Bushing
116	Bushing
117	Snap ring
*119	Guide foil
120	Tube
121	Gasket
122	Screw piece
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1503	Gasket
1504	O-ring
1505	Round plate

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	330	185
80	310	220	350	200
100	350	260	378	220

* B = maximum width

DN 65 - DN 100



Further options (valves)

- XXXXXX**02**.XXXX Manual override
- XXXXXX**14**.XXXX Seal: EPDM, maximum temperature +130 °C
- XXXXXX**33**.XXXX Surfaces in contact with fluid are free from substances that inhibit paint smoothness

Further options (solenoids)

- XXXXXX**.8406** DN 15 to DN 50: solenoid AC, maximum temperature +200 °C
solenoid mounting position: vertical underneath only
- XXXXXX**.8602** DN 65 – DN 100: maximum temperature +200 °C
solenoid mounting position: vertical underneath only

Further options on request

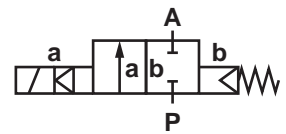
Please turn to page 276 for technical information on our valves.

2/2-way valves DN 15 to DN 100

For neutral gases and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Flange connection: PN 40
 Operating pressure: 0 to 25 bar

Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: DN 15 to DN 50: as required, preferably with solenoid vertical on top
 DN 65 to DN 100: with solenoid vertical on top only



Material

Body: Cast Steel
 Seat seal: NBR
 Cover: DN 15 to DN 50: Brass
 DN 65 to DN 100: Cast Steel
 Internal parts: Stainless steel, Brass, Gun metal

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Continuously adjustable closing time from DN 65
- Valve operates without differential pressure
- High flow rate
- Damped operation
- Option: ANSI flange

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar						
			NBR	Normally open	FPM 110 °C	PTFE*** 110 °C	FPM for higher viscosity	Position indicator: 2 switches, Ex-protected	Position indicator: 2 switches, IP 65
			00	01	03	06	25	40**	41
15	5.5	85202XX.8301.00000	0 - 25	0 - 25****	0 - 25	0 - 16	0 - 25****	0 - 25****	0 - 25****
20	10.0	85203XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	0 - 25
25	12.5	85204XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	0 - 25
32	27.0	85205XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	0 - 25
40	31.0	85206XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	0 - 25
50	43.0	85207XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25	0 - 25
65	67.0	84208XX.9501.00000	0 - 25	0 - 25	0 - 25	-	0 - 25	0 - 25	0 - 25
80	94.0	84209XX.9501.00000	0 - 25	0 - 25	0 - 25	-	0 - 25	0 - 25	0 - 25
100	144.0	84210XX.9501.00000	0 - 25	0 - 25	0 - 25	-	0 - 25	0 - 25	0 - 25

* For orders please state voltage and frequency, e.g.: 8520300.8401.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8520300.8401.02400 for 24V DC

** Only in combination with explosion proof solenoids

*** Leak rate E according to EN 12266-1

**** With solenoid DC 8401 / AC 8404

Solenoid 8301 / 8304, 8401 / 8404, 9501 / 9504 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580

Voltage range +/-10%, duty cycle 100%

Protection class according to EN 60529: IP65

Electrical connector according to DIN EN 175301-803 (included)

AC with rectifier plug only

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8301	22W		
8304		25VA	25VA
8401	40W		
8404		45VA	45VA
9501	80W		
9504		89VA	89VA

Drawing legend

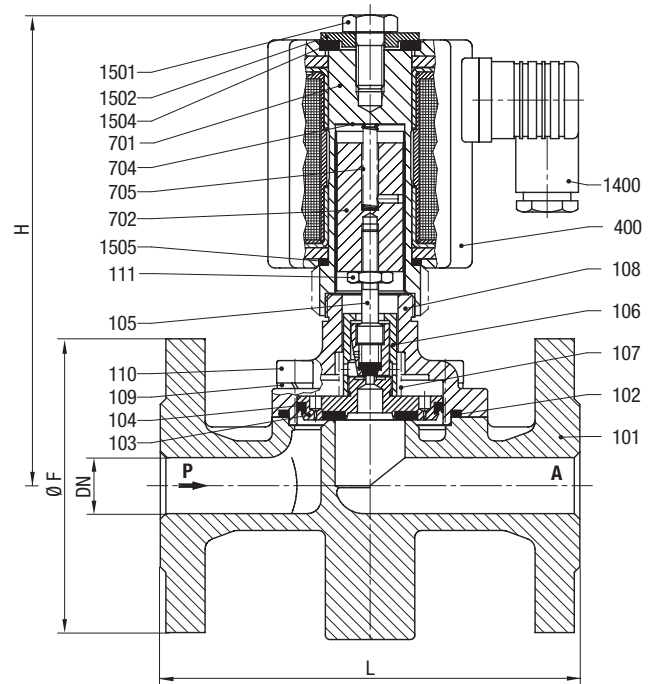
Index	Description
101	Valve body
*102	O-ring
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring - not for DN 15
108	Valve cover
109	Spring washer
110	Allen head screw
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring - DN 15 only
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	145	95
20	150	105	172	105
25	160	115	172	115
32	180	140	187	140
40	200	150	191	150
50	230	165	200	165

* B = maximum width

DN 15 - DN 50



Solenoid Valves without Differential Pressure

Drawing legend

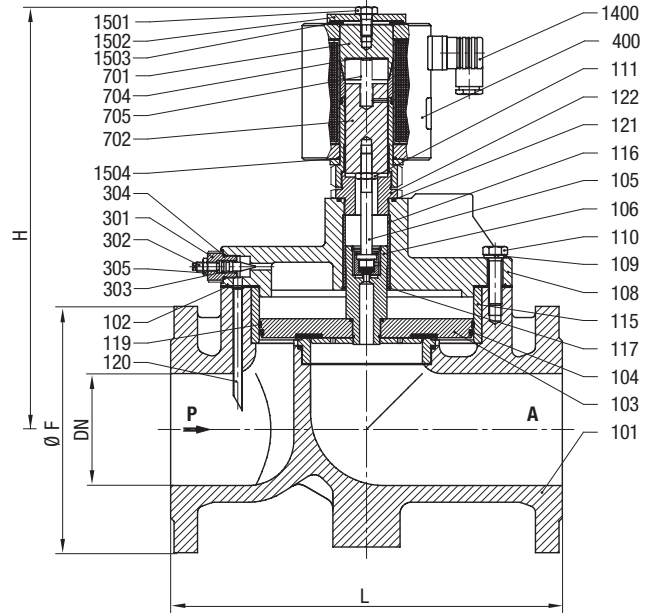
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Locking ring
108	Valve cover
109	Spring washer
110	Hexagon screw
111	Hexagon nut
*112	Gasket
115	Bushing
116	Bushing
117	Snap ring
*119	Guide foil
120	Tube
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1503	Gasket
1504	O-ring
1505	Round plate

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	327	185
80	310	220	347	200
100	350	260	376	235

* B = maximum width

DN 65 - DN 100



Service kits

For valves with solenoid 8301	Part number
8520200	1250479
For valves with solenoid 8401	Part number
8520300	1246595
8520400	1246595
8520500	1247223
8520600	1247223
8520700	1247224
For valves with solenoid 9501	Part number
8420800	1244013
8420900	1238279
8421000	1236593

Further options (valves)

- XXXXXX**02**.XXXX Manual override
- XXXXXX**14**.XXXX Seal: EPDM, maximum temperature +110 °C
- XXXXXX**17**.XXXX Normally open, seal: FPM, maximum temperature +110 °C,
mounting position: with solenoid vertical on top only
- XXXXXX**22**.XXXX P_{max}. 40 bar, DN 15 – DN 50
DN 15 Solenoid DC 8401 / AC 8404

Further options (solenoids)

- XXXXXX**.8341** DN 15: Solenoid protection class
☞ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8436** DN 20 – DN 50: Solenoid protection class
☞ II 2 GD EEx me II T4 T 140 °C
- XXXXXX**.8441** DN 20 – DN 50: Solenoid protection class
☞ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8900** DN 15 – DN 50: Solenoid protection class
☞ II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.8920** DN 15 – DN 50: Solenoid protection class
☞ II 2 GD EEx d II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.9540** DN 65 – DN 100: Solenoid protection class
☞ II 2 GD EEx me II T3/T4 T 140 °C

Further options on request

- Solenoids
- Special connections

Please turn to page 276 for technical information on our valves.

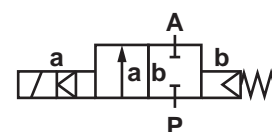
Solenoid Valves without
Differential Pressure

2/2-way valves DN 15 to DN 100

For neutral steam and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Flange connection: PN 25
 Operating pressure: 0 to 16 bar

Description (standard valve)

Solenoid valve for steam, hot water, and other neutral liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: DN 15 to DN 50: -10 °C up to max. +200 °C
 DN 65 to DN 100: -10 °C up to max. +150 °C
 Ambient temperature: -10 °C up to max. +60 °C
 Mounting position: DN 15 to DN 50: 200 °C, solenoid mounted underneath
 150 °C, with solenoid vertical on top
 DN 65 to DN 100: 150 °C, with solenoid vertical on top



Material

Body: Cast Steel
 Seat seal: PTFE, leak rate E according to EN 12266-1
 Cover: DN 15 to DN 50: Brass
 DN 65 to DN 100: Grey cast iron
 Valve seat: Gun metal
 Internal parts: Stainless steel, Gun metal

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Designed for hot water and steam
- For closed systems without differential pressure
- High flow rate
- Damped operation

Technical data

Connection size DN mm	kv-Value m³/h	Part number voltage for DC*	Operating pressure bar			
			PTFE	Normally open	Operating pressure max. 25 bar	Position indicator: 2 switches, IP 65
			00	01	22	41
15	5.0	85222XX.8302.00000	0 - 16	0 - 16**	0 - 25**	0 - 16**
20	8.0	85223XX.8402.00000	0 - 16	0 - 16	0 - 25	0 - 16
25	10.0	85224XX.8402.00000	0 - 16	0 - 16	0 - 25	0 - 16
32	27.0	85225XX.8402.00000	0 - 16	0 - 16	0 - 25	0 - 16
40	30.0	85226XX.8402.00000	0 - 16	0 - 16	0 - 25	0 - 16
50	41.0	85227XX.8402.00000	0 - 16	0 - 16	0 - 25	0 - 16
65	67.0	84228XX.9502.00000***	0 - 16	0 - 16	-	0 - 16
80	94.0	84229XX.9502.00000***	0 - 16	0 - 16	-	0 - 16
100	144.0	84230XX.9502.00000***	0 - 16	0 - 16	-	0 - 16

* For orders please state voltage and frequency, e.g.: 8522300.8406.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8522300.8402.02400 for 24V DC

** With solenoid DC 8402 / AC 8406

*** Maximum fluid temperature +150 °C

Solenoid 8302 / 8306; 8402 / 8406; 9502 / 9506 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8302	14W	-	-
8306	-	16VA	16VA
8402	29W	-	-
8406	-	33VA	33VA
9502	55W	-	-
9506	-	61VA	61VA

Drawing legend

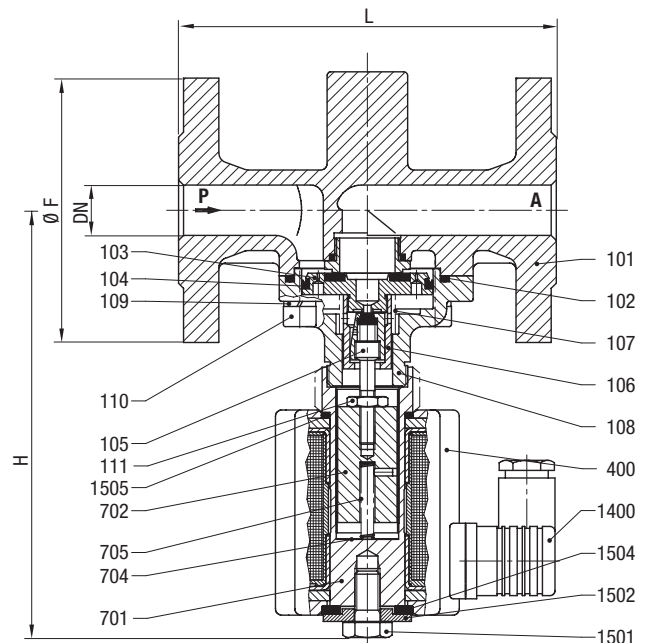
Index	Description
101	Valve body
*102	O-ring
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring
108	Valve cover
109	Spring washer
110	Allen head screw
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring - DN 15 only
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	145	95
20	150	105	172	105
25	160	115	172	115
32	180	140	187	140
40	200	150	191	150
50	230	165	200	165

* B = maximum width

DN 15 - DN 50



Solenoid Valves without Differential Pressure

Drawing legend

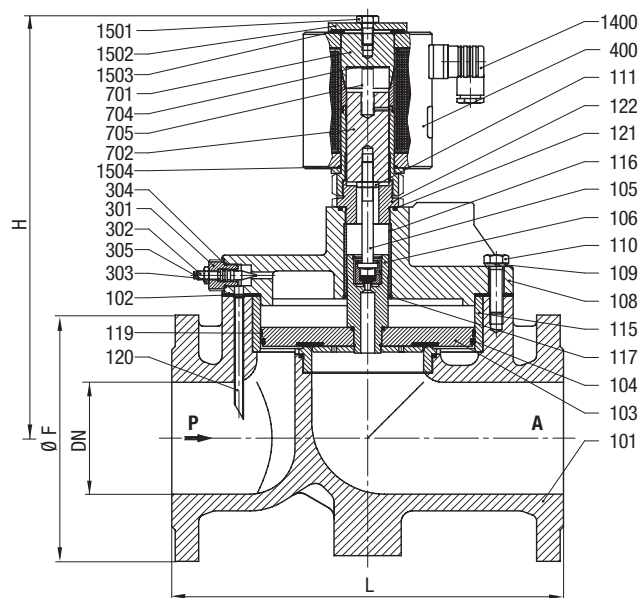
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Locking ring
108	Valve cover
109	Spring washer
110	Hexagon screw
111	Hexagon nut
115	Bushing
116	Bushing
117	Snap ring
*119	Guide foil
120	Tube
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
*306	Lip seal
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1503	Gasket
1504	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	327	185
80	310	220	347	200
100	350	260	376	235

* B = maximum width

DN 65 - DN 100



Further options (valves)

XXXXXX02.XXXX Manual override

XXXXXX14.XXXX Seal: EPDM, maximum temperature +130 °C

XXXXXX33.XXXX Surfaces in contact with fluid are free from substances that inhibit paint smoothness

Further options (solenoids)

XXXXXX.8602 DN 65 – DN 100: maximum temperature +200 °C
solenoid mounting position: vertical underneath only

Further options on request

Please turn to page 276 for technical information on our valves.



Compact piston valve:
**Innovation with
Click-on® technology**

2/2-way valves DN 10

For slightly aggressive gases and liquids
 Solenoid actuated, with forced lifting
 Diaphragm valves
 Internal thread G 1/4 to G 1/2 or 1/4" NPT to 1/2" NPT
 Operating pressure: 0 to 10 bar

Description (standard valve)

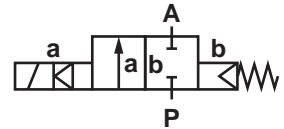
Solenoid valve for slightly aggressive gases and liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top



Material

Body: Stainless steel, PA 66
 Seat seal: NBR
 Internal parts: Stainless steel, PVDF, Sandvik 1802

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Suitable for vacuum
- Functional design
- Compact solenoid with integrated core tube
- Valve operates without differential pressure

Technical data

Connection size G	DN mm	Valve length mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar			
					NBR	FPM 110 °C	EPDM 110 °C	HNBR +150 °C
1/4	10	44	1.5	82560XX.8001.00000	00	03	14	51
3/8	10	44	1.7	82561XX.8001.00000	0 - 10	0 - 10	0 - 10	0 - 6
1/2	10	60	1.7	82562XX.8001.00000	0 - 10	0 - 10	0 - 10	0 - 6

* For orders please state voltage and frequency, e.g.: 8256000.8004.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8256000.8001.02400 for 24V DC

Solenoid 8001 (standard voltages)

DC	AC 40-60Hz	
	24V	-
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8001	12W	-	-
8004	-	13VA	13VA

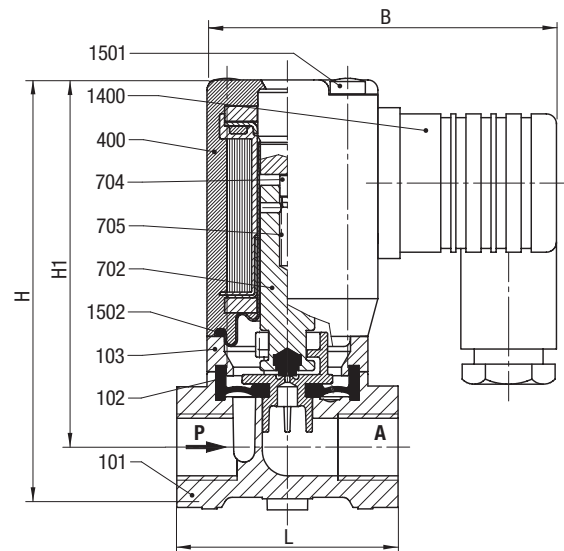
Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Drawing legend

Index	Description
101	Valve body
*102	Diaphragm
103	Spacer
400	Solenoid
*702	Plunger
*704	Guiding pin
*705	Pressure spring
1400	Electrical connector
1501	Oval head cap screw
*1502	O-ring

* A service kit consists of these individual parts.

Connection size G	L mm	B mm	H mm	H1 mm
1/4	44	69.5	85.5	73.0
3/8	44	69.5	85.5	73.0
1/2	60	69.5	88.5	74.5



Solenoid Valves without
Differential Pressure

Further options (solenoids)

XXXXXX.8041 Solenoid in protection class $\text{Ex II 2 GD EEx me II T3 T 140 }^{\circ}\text{C}$

Further options on request

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 8 to DN 50

For slightly aggressive gases and liquids
 Solenoid actuated, with forced lifting
 Diaphragm valves
 Internal thread G 1/4 to G 2
 Operating pressure: 0 to 16 bar (see technical data)

Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top

Material

Body: Stainless steel
 Seat seal: NBR-K (flexible at low temperatures)
 Internal parts: Stainless steel, PVDF

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- High flow rate
- For robust industry applications
- Damped operation
- Suitable for vacuum
- For systems with low or fluctuating pressure
- Solenoid interchangeable without tools (Click-on®)
- Valve operates without differential pressure

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar			
				NBR-K 00	Normally open 01	FPM 110 °C 03	EPDM 110 °C 14
1/4	8	1.9	82590XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
3/8	10	3.0	82591XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
1/2	12	3.4	82592XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
3/4	20	5.8	82593XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
1	25	8.0	82594XX.9151.00000	0 - 10	0 - 10	0 - 10	0 - 10
1 1/4	32	23.0	82595XX.9401.00000	0 - 16	0 - 16**	0 - 16	0 - 16
1 1/2	40	25.0	82596XX.9401.00000	0 - 16	0 - 16**	0 - 16	0 - 16
2	50	41.0	82597XX.9401.00000	0 - 16	0 - 16**	0 - 16	0 - 16

* For orders please state voltage and frequency, e.g.: 8259000.9151.4.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8259000.9151.02400 for 24V DC

** With solenoid DC 8401 / AC 8404

Solenoid 9151/9154; 9401/9404; 8401/8404 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

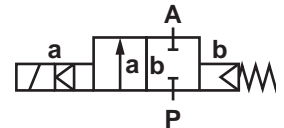
Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
915X	18W	20VA	20VA
940X	38W	42VA	42VA
840X	40W	45VA	45VA

The solenoids 94XX are UL listed and CSA approved
 (With the exception of solenoid 94XX up to 41V AC).
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Click-on®
 Solenoid interchangeable without tools



Mounting bracket*

Content: 1 stainless steel mounting bracket and 2 screws

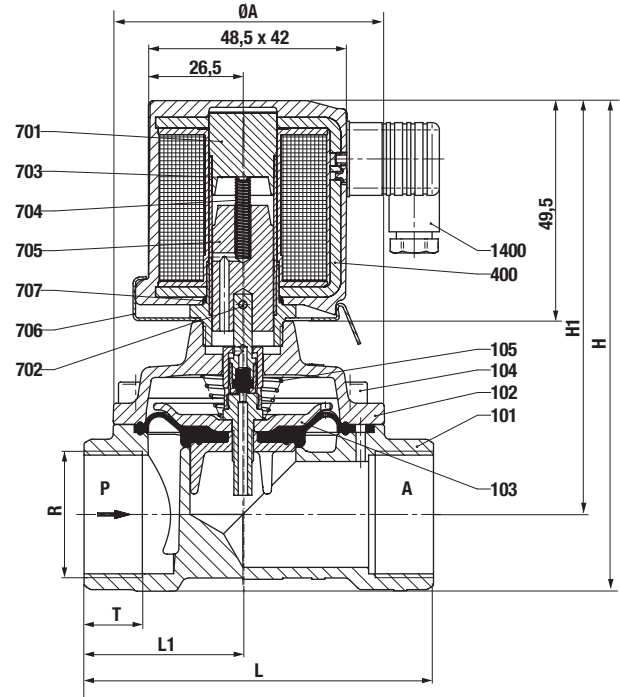
Connection size G	Part number
1/4, 3/8, 1/2	1258986
3/4	1258991
1	1258996
1 1/4, 1 1/2	1259005
2	1259007

* For image of valve with mounting bracket, see 82400 series (page 105)

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Allen head screw
*105	Pressure spring
400	Solenoid
701	Core tube
702	O-ring
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.



Connection size G	øA mm	H mm	H1 mm	L mm	L1 mm	T mm
1/4	44	104.0	92.5	60	27.5	12.0
3/8	44	104.0	92.5	60	27.5	12.0
1/2	44	108.0	94.5	67	31.0	14.0
3/4	50	115.0	99.0	80	36.5	16.0
1	62	124.0	103.5	95	44.0	18.0
1 1/4	92	186.0	157.0	132	60.0	20.0
1 1/2	92	186.0	157.0	132	60.0	22.0
2	109	201.5	167.0	160	74.0	24.0

Further options (solenoids)

XXXXXX.9191 Solenoid in protection class $\text{Ex II 2 GD EEx me II T3 T 140 }^{\circ}\text{C}$

Further options on request

Please turn to page 276 for technical information on our valves.

Solenoid Valves without Differential Pressure

2/2-way valves DN 1.5 to DN 5.0

For neutral and slightly aggressive gases and liquids
 Directly solenoid actuated
 Seat valves
 Internal thread G 1/8 to G 3/8
 Operating pressure: 0 to 40 bar (see technical data)

Click-on®
 Solenoid interchangeable without tools



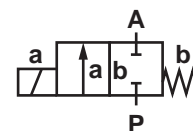
Description (standard valve)

Solenoid valve for neutral and slightly aggressive gases and liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +110 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top

Material

Body: Stainless steel
 Seat seal: FPM
 Internal parts: Stainless steel

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Suitable for vacuum
- High flow rate
- Functional compact design
- Body with M5 fastening thread as standard
- Solenoid interchangeable without tools (Click-on®)
- Valve operates without pressure differential

Technical data

Connection size G	DN mm	kv-Value m³/h	Part Number for DC voltage*	Operating pressure bar			
				FPM 03/23/43/63/83	Normally open 01/21/41/61	PTFE ** 06/26/46/66/86	EPDM 04/24/44/64/84
1/8	1.5	0.07	826180X.9101.00000	0 - 25	0 - 16	-	0 - 25
1/4	1.5	0.07	826100X.9101.00000	0 - 25	0 - 16	-	0 - 25
3/8	1.5	0.07	826110X.9101.00000	0 - 25	0 - 16	-	0 - 25
1/8	2.5	0.15	826182X.9101.00000	0 - 10	0 - 6	-	0 - 10
1/4	2.5	0.15	826102X.9101.00000	0 - 10	0 - 6	-	0 - 10
3/8	2.5	0.15	826112X.9101.00000	0 - 10	0 - 6	-	0 - 10
1/8	2.5	0.15	826182X.9151.00000	0 - 40	0 - 25	0 - 40	0 - 40
1/4	2.5	0.15	826102X.9151.00000	0 - 40	0 - 25	0 - 40	0 - 40
3/8	2.5	0.15	826112X.9151.00000	0 - 40	0 - 25	0 - 40	0 - 40
1/8	3.0	0.21	826184X.9101.00000	0 - 4	0 - 3	-	0 - 4
1/4	3.0	0.21	826104X.9101.00000	0 - 4	0 - 3	-	0 - 4
3/8	3.0	0.21	826114X.9101.00000	0 - 4	0 - 3	-	0 - 4
1/8	3.0	0.21	826184X.9151.00000	0 - 20	0 - 16	0 - 20	0 - 20
1/4	3.0	0.21	826104X.9151.00000	0 - 20	0 - 16	0 - 20	0 - 20
3/8	3.0	0.21	826114X.9151.00000	0 - 20	0 - 16	0 - 20	0 - 20
1/8	4.0	0.35	826186X.9151.00000	0 - 12	0 - 8	0 - 12	0 - 12
1/4	4.0	0.35	826106X.9151.00000	0 - 12	0 - 8	0 - 12	0 - 12
3/8	4.0	0.35	826116X.9151.00000	0 - 12	0 - 8	0 - 12	0 - 12
1/8	5.0	0.50	826188X.9151.00000	0 - 6	-	0 - 6	0 - 6
1/4	5.0	0.50	826108X.9151.00000	0 - 6	-	0 - 6	0 - 6
3/8	5.0	0.50	826118X.9151.00000	0 - 6	-	0 - 6	0 - 6

* For orders please state voltage and frequency, e.g.: 8261000.9104.23049 for 230V 40-60Hz or 8261000.9101.02400 for 24V DC (AC with rectifier plug only, included)

** Leak rate E according to EN 12266-1

Solenoid 9101 / 9151 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 The solenoids are UL listed and CSA approved
 AC with rectifier plug only

Drawing legend

Index	Description
400	Solenoid
701	Core tube
*702	O-ring
703	Screw piece
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector
9900	Valve body

* A service kit consists of these individual parts.

Service kits

For valves with solenoid 9101	Part number
8261800	1261629
8261000	1261629
8261100	1261629
8261820	1261629
8261020	1261629
8261120	1261629
8261840	1261629
8261040	1261629
8261140	1261629
For valves with solenoid 9151	Part number
8261820	1262353
8261020	1262353
8261120	1262353
8261840	1262353
8261040	1262353
8261140	1262353
8261860	1262353
8261060	1262353
8261160	1262353
8261880	1262353
8261080	1262353
8261180	1262353

Further options (solenoids)

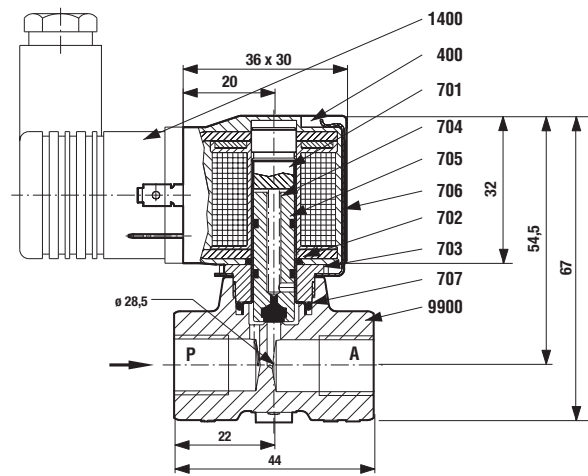
XXXXXX.**9136** Solenoid in protection class $\text{Ex II 2 GD EEx m II T4 T 130 }^{\circ}\text{C}$,
 with 3 m connection cable
 XXXXXX.**9186** $\text{Ex II 2 GD EEx me II T4 T 140 }^{\circ}\text{C}$

Power consumption

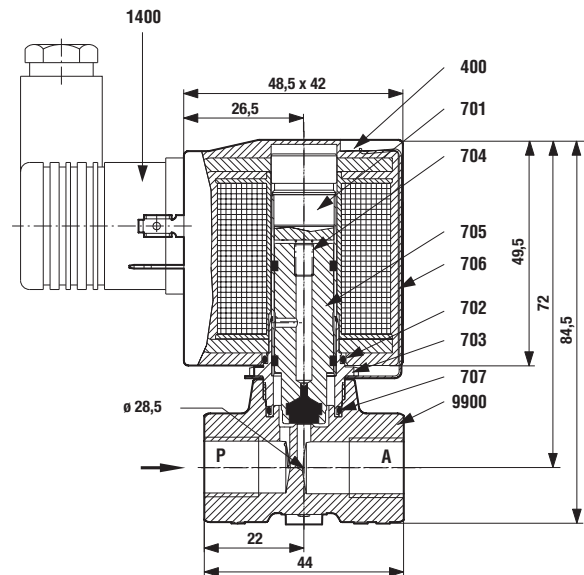
Solenoid	DC	AC	
		Inrush	Holding
9101	8W	15VA	12VA
9151	18W	45VA	35VA
9104	8W	15VA	20VA
9154	18W	20VA	20VA

Solenoid Valves without Differential Pressure

With solenoid 9101



With solenoid 9151



Please turn to page 276 for technical information on our valves.

2/2-way valves DN 15 to DN 50

For neutral and aggressive gases and liquids
 Directly solenoid actuated
 Seat valves
 Internal thread G 1/2 to G 2

Description (standard valve)

Solenoid valve for town gas, natural gas, and other neutral and aggressive fluids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +110 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: valve standing or lying, solenoid at 45° angle

Material

Body: Stainless steel
 Seat seal: FPM
 Internal parts: Stainless steel

Features

- Functional compact design
- High flow rate
- Solenoid interchangeable without tools (Click-on®)

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar
				FPM 03
1/2	15	3.0	82672XX.8301.00000	0 - 0.6
1/2	15	3.0	82672XX.9401.00000	0 - 1.5
3/4	20	5.5	82673XX.9401.00000	0 - 1.0
1	25	6.1	82674XX.9401.00000	0 - 0.4
1 1/4	32	8.7	82675XX.9401.00000	0 - 0.25
1 1/2	40	16.3	82676XX.8401.00000	0 - 0.2
2	50	27.6	82677XX.8401.00000	0 - 0.15

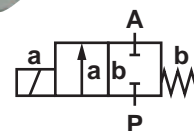
* For orders please state voltage and frequency, e.g.: 8267200.9404.23049 for 230V 40-60Hz (AC with rectifier plug only; included)
 or 8267200.9401.02400 for 24V DC

Solenoid 8301 / 8304; 9401 / 9404; 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
	24V	-
-	110V	120V
	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only
 The solenoids 94XX are UL listed and CSA approved
 (With the exception of solenoid 94XX up to 41V AC)

Click-on®
 Solenoid interchangeable without tools



Power consumption

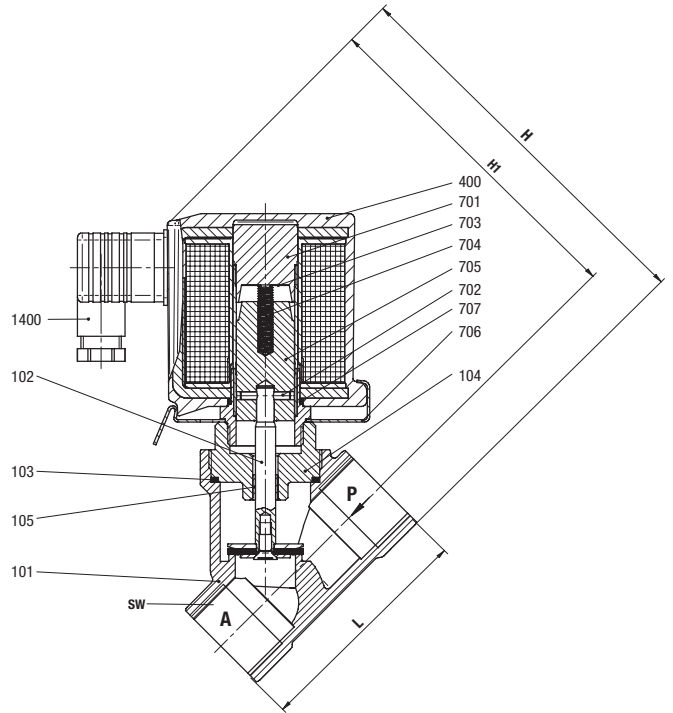
Solenoid	DC	AC	
		Inrush	Holding
830X	22W	25VA	25VA
940X	38W	42VA	42VA
840X	40W	45VA	45VA

Drawing legend

Index	Description
101	Valve body
102	Valve spindle
*103	Gasket
104	Screw piece
*105	Sleeve bearing
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
706	Spring clip
707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.

Connection size G	L mm	H mm	H1 mm
1/2	65	123.4	109.9
1/2	65	137.68	125.18
3/4	75	145.42	129.92
1	90	154.7	134.2
1 1/4	110	175.99	151.49
1 1/2	120	184.86	136.86
2	150	195.58	163.58



Solenoid Valves without Differential Pressure

Further options (valves)

NPT-connection

Further options (solenoids)

XXXXXX.8441 Solenoid in protection class $\text{Ex II 2 GD EEx me II T3 T 140 }^{\circ}\text{C}$

Further options on request

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 10 to DN 25

For slightly aggressive gases and liquids
Solenoid actuated, with forced lifting
Piston seat valves
Internal thread G 3/8 to G 1 or 3/8" NPT to 1" NPT
Operating pressure: 0 to 25 bar (see technical data)

Description (standard valve)

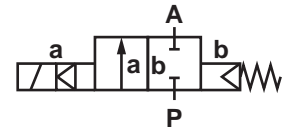
Solenoid valve for slightly aggressive gases and liquids
Switching function: normally closed
Flow direction: determined
Fluid temperature: -20 °C up to max. +90 °C
Ambient temperature: -20 °C up to max. +50 °C
Mounting position: as required, preferably with solenoid vertical on top



Material

Body: Stainless steel
Seat seal: NBR-K (flexible at low temperatures)
Internal parts: Stainless steel, Sandvik 1802

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Flat-piston valve
- Valve operates without differential pressure
- High flow rate
- Damped operation
- Suitable for vacuum

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar							Position indicator with 2 magnetic field sensors 41
				NBR-K	Normally open	FPM 110 °C	PTFE 110 °C	EPDM 110 °C	40 bar		
3/8	10	3.4	85041 XX .8301. 00000	00	01	03	06**	14	22	0 - 40***	0 - 25
1/2	12	3.8	85042 XX .8301. 00000	00	01	03	06**	14	22	0 - 40***	0 - 25
3/4	20	11.0	85043 XX .8401. 00000	00	01	03	06**	14	22	0 - 40	0 - 25
1	25	13.0	85044 XX .8401. 00000	00	01	03	06**	14	22	0 - 40	0 - 25

* For orders please state voltage and frequency, e.g.: 8504200.8304**23049** for 230V 40-60Hz (AC with rectifier plug only, included) or 8504200.8301**02400** for 24V DC

** Leak rate E according to EN 12266-1

*** With solenoid DC 8401 / AC 8404

Solenoid 8301 / 8304, 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8301	22W		
8304		25VA	25VA
8401	40W		
8404		45VA	45VA

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)
AC with rectifier plug only

Drawing legend

Index	Description
101	Valve body
*102	O-ring
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring - from G 3/4
108	Valve cover
109	Spring washer - G 3/8 and G 1/2 only
110	Oval head cap screw - G 3/8 and G 1/2 Hexagon screw - G 3/4 and G 1
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring - G 3/8 and G 1/2 only
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size G	L mm	B* mm	H mm	H1 mm
3/8	67	65	165	150
1/2	67	65	165	150
3/4	95	92	196	172
1	95	92	196 </td <td>172</td>	172

* B = maximum width

Service kits

For valves with solenoid 8301	Part number
8504100	1247733
8504200	1247733
For valves with solenoid 8401	Part number
8504300	1247248
8504400	1247248

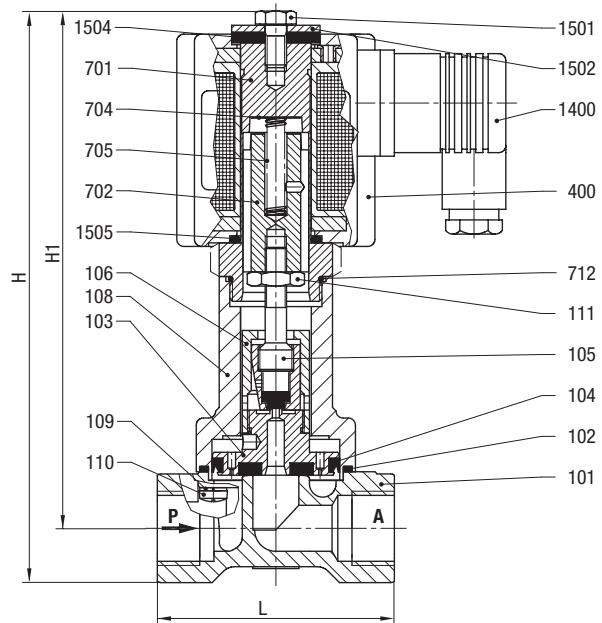
Further options (valves)

- XXXXX**34**.XXXX Increased closing force with 20% reduction in Kv-value advisable at low flow rates or with infrequent operation
- XXXXX**40**.XXXX Electrical position indicator EEx

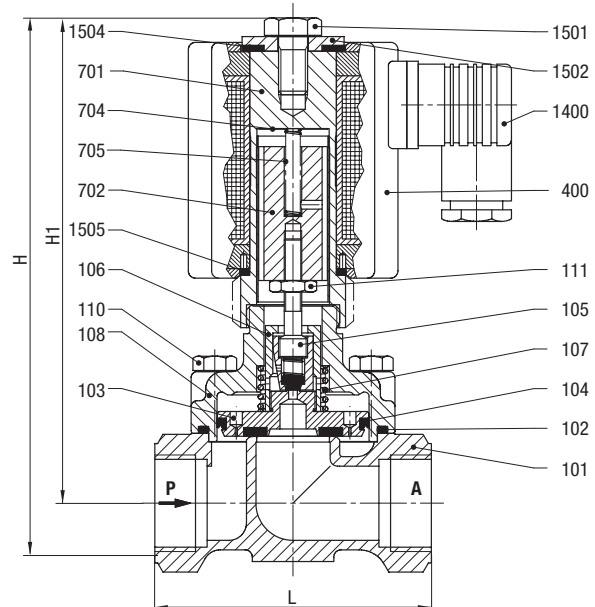
Further options (solenoids)

- XXXXXX**.8341** DN 10 and DN 15: Solenoid protection class
⊗ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8402** Solenoid for high temperature:
maximum fluid temperature +200 °C,
mounting position: vertical underneath only,
for direct current and option 03 (FPM seals)
- XXXXXX**.8406** As 8402, but for alternating current
- XXXXXX**.8436** Solenoid protection class
⊗ II 2 GD EEx me II T4 T 140 °C

G 3/8 - G 1/2



G 3/4 - G 1



- XXXXXX**.8441** Solenoid protection class
⊗ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8900** Solenoid protection class
⊗ II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.8920** Solenoid protection class
⊗ II 2 GD EEx d II C T4 and T5 T 130 °C / 95 °C

Further options on request

Special connections

Please turn to page 276 for technical information on our valves.

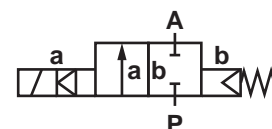
2/2-way valves DN 15 to DN 100

For slightly aggressive gases and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Flange connection: PN 16
 Operating pressure: 0 to 16 bar

Description (standard valve)

Valve for slightly aggressive gases and liquids

Switching function:		normally closed
Flow direction:		determined
Fluid temperature:	DN 15 to DN 50:	-20 °C up to max. +110 °C
	DN 65 to DN 100:	-10 °C up to max. +110 °C
Ambient temperature:		-10 °C up to max. +50 °C
Mounting position:	DN 15 to DN 50:	as required, preferably with solenoid vertical on top
	DN 65 to DN 100:	with solenoid vertical on top only



Material

Body:		Stainless steel
Seat seal:	PTFE, leak rate E according to EN 12266-1	
Internal parts:		Stainless steel

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- High flow rate
- For closed systems without differential pressure
- High media compatibility due to optimal material combinations
- Damped operation

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar			
			PTFE 00***	Normally open 01	Position indicator: 2 switches, Ex-protected 40**	Position indicator: 2 switches, IP 65 41
15	5.5	85142XX.8301.00000	0 - 16	0 - 16****	0 - 16****	0 - 16****
20	10.0	85143XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16
25	12.5	85144XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16
32	27.0	85145XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16
40	31.0	85146XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16
50	43.0	85147XX.8401.00000	0 - 16	0 - 16	0 - 16	0 - 16
65	67.0	84148XX.9501.00000	0 - 16	0 - 16	0 - 16	0 - 16
80	94.0	84149XX.9501.00000	0 - 16	0 - 16	0 - 16	0 - 16
100	144.0	84150XX.9501.00000	0 - 16	0 - 16	0 - 16	0 - 16

* For orders please state voltage and frequency, e.g.: 8514300.8404.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8514300.8401.02400 for 24V DC

** Only in connection with explosion proof solenoids

*** Leak rate E according to EN 12266-1

**** With solenoid DC 8401 / AC 8404

Solenoid 8301 / 8304, 8401 / 8404, 9501 / 9504 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Power consumption

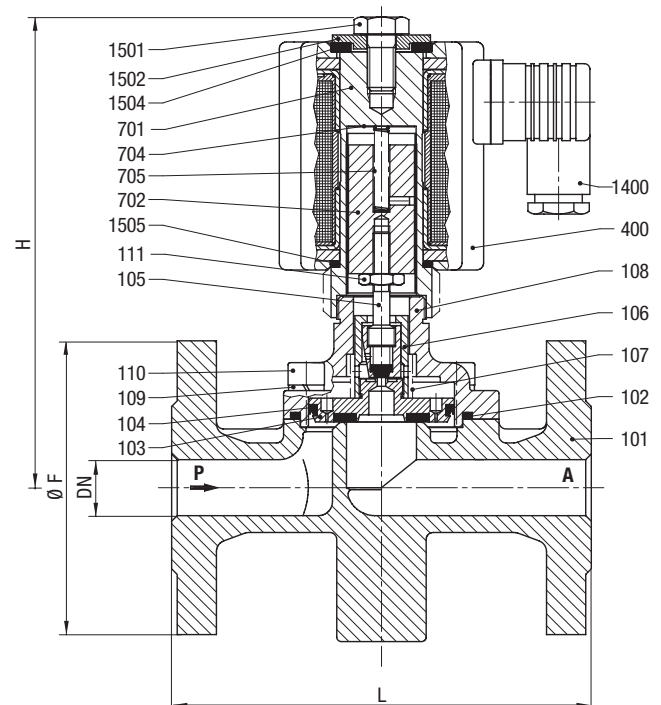
Solenoid	DC	AC	
		Inrush	Holding
8301	22W		
8304		25VA	25VA
8401	40W		
8404		45VA	45VA
9501	80W		
9504		89VA	89VA

Drawing legend

Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring - not for DN 15
108	Valve cover
109	Spring washer - DN 15 only
110	Hexagon screw
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring - DN 15 only
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

DN 15 - DN 50



Connection size DN	L mm	B* mm	H mm	ØF mm
15	130	95	145	95
20	150	105	172	105
25	160	115	172	115
32	180	140	187	140
40	200	150	191	150
50	230	165	200	165

* B = maximum width

Solenoid Valves without Differential Pressure

Drawing legend

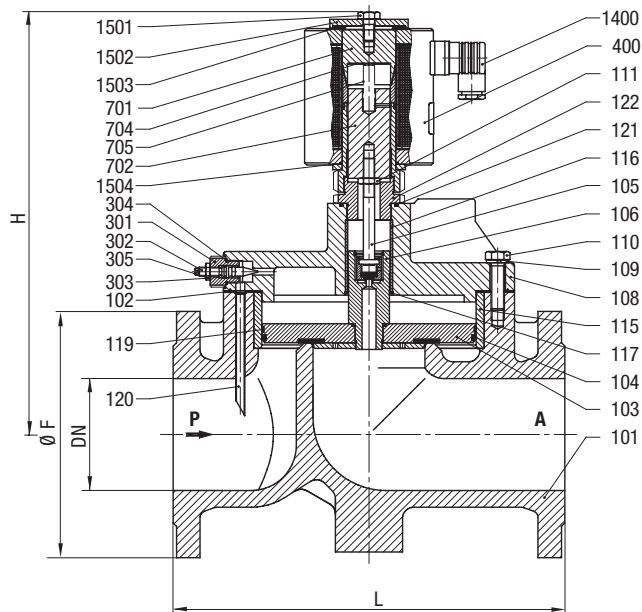
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
108	Valve cover
109	Spring washer
110	Hexagon screw
111	Hexagon nut
*112	Gasket
115	Bushing
*119	Guide foil
120	Tube
148	Screw piece
149	Screw piece
150	Gasket
151	Round plate
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
*306	Lip seal
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1503	Gasket
1504	O-ring
1505	Round plate

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	330	185
80	310	220	350	200
100	350	260	378	220

* B = maximum width

DN 65 - DN 100



Service kits

For valves with solenoid 8301	Part number
8514200	1254199
For valves with solenoid 8401	Part number
8514300	1248517
8514400	1248517
8514500	1248282
8514600	1248282
8514700	1248281
For valves with solenoid 9501	Part number
8414800	1239210
8414900	1233280
8415000	1249332

Further options (valves)

XXXXXX**02**.XXXX Manual override

Version for aggressive fluids, liquids up to 80 mm²/s,
special connections e.g. ANSI flange

Further options (solenoids)

- XXXXXX**.8341** DN 15: Solenoid protection class
 ☞ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8402** DN 15 to DN 50: Solenoid DC,
 maximum temperature +200 °C
 solenoid mounting position vertical underneath only
- XXXXXX**.8406** DN 15 to DN 50: Solenoid AC,
 maximum temperature +200 °C
 solenoid mounting position vertical underneath only
- XXXXXX**.8436** DN 20 to DN 50: Solenoid protection class
 ☞ II 2 GD EEx me II T4 T 140 °C
- XXXXXX**.8441** DN 20 to DN 50: Solenoid protection class
 ☞ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8900** DN 15 to DN 50: Solenoid protection class
 ☞ II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.8920** DN 15 to DN 50: Solenoid protection class
 ☞ II 2 GD EEx d II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.9540** DN 65 to DN 100: Solenoid protection class
 ☞ II 2 GD EEx me II T3/T4 T 140 °C

Further options on request

Please turn to page 276 for technical information on our valves.

KIP Solenoid Valves

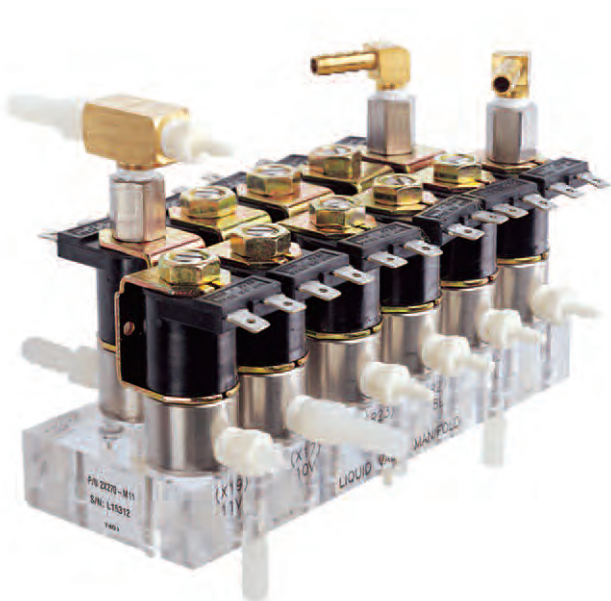
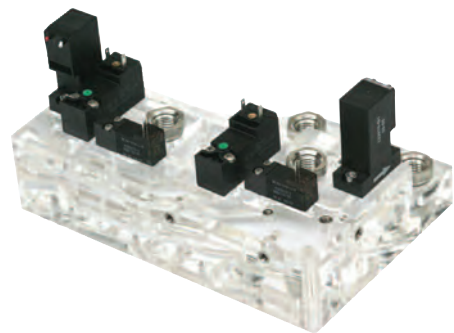
KIP – Customised solutions and solenoid valves for demanding applications

KIP engineers have a wealth of experience in designing and manufacturing customised solutions for OEMs with demanding industrial and life science applications. KIP also features an established range of machined solenoid valves. KIP's facility in Connecticut, USA is well equipped for quick turnaround of these solutions:

- » In house machining capabilities
- » In house model shop and test facilities
- » Rapid prototyping capabilities

A specialised engineering and production team designs and manufactures custom manifolds from acrylic and other high-grade polymers. This is achieved through the use of a variety of hi-tech manufacturing techniques. Multi-layered acrylic manifolds as well as machined manifolds offer several benefits, including:

- » Reduced size of fluidic system
- » Reduced total cost of ownership
- » Reduced number of fittings, tubing and connectors – fewer leak points



KIP Solenoid Valves

KIP Solenoid Valves



Solenoid Valves without
Differential Pressure

Solenoid Valves for demanding applications

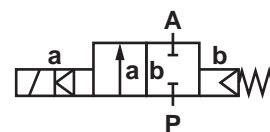
Features	Series 1	Series 2	Series 3	Series 6	KIP Jr.
Size - Diameter	26 mm	26 mm	30 mm	42 mm	20 mm
Maximum MOPD (bar)	55	69	69	83	7
Vacuum Service	✓	✓	✓	✓	✓
Max. Kv (m ³ /h) - Body	0.260	0.260	0.420	0.775	0.043
Min. Kv (m ³ /h) - Body	0.025	0.025	0.025	0.030	0.030
Max. Kv (m ³ /h) - 3/2 Version	0.110	0.120	0.120	0.230	0.021
Min. Kv (m ³ /h) - 3/2 Version	0.020	0.020	0.020	0.020	0.013
Power Rating	6 watts	7 watts	7 watts	10 watts	.65 watts
Low Wattage Operators to 1.5 Watt	Available	Available	Available	N/A	Available
UL Recognized	✓	✓	✓	✓	
CSA Approved	✓	✓	✓	✓	
Grommet Style Housing	✓	✓	✓	✓	✓
Side Metering			✓	✓	
Bottom Metering	✓	✓			
Extended Flow Capabilities	✓	✓	✓	✓	✓
Operator Mount Manifolds	✓	✓		✓	✓
Valve Mount Manifolds	✓	✓		✓	✓
Media Separated Version	✓	✓		✓	✓

2/2-way valves DN 15 to DN 100

For slightly aggressive gases and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Flange connection: PN 25 / PN 40
 Operating pressure: 0 to 40 bar (see technical data)

Description (standard valve)

Solenoid valve for slightly aggressive gases and liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: DN 15 to DN 50: -20 °C up to max. +90 °C
 DN 65 to DN 100: -10 °C up to max. +90 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: DN 15 to DN 50: as required, preferably with solenoid vertical on top
 DN 65 to DN 100: with solenoid vertical on top only



Material

Body: Stainless steel
 Seat seal: NBR-K (flexible at low temperatures)
 Internal parts: Stainless steel

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Valve operates without differential pressure
- High flow rate
- Damped operation
- Suitable for vacuum

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar						
			NBR-K	Normally open	FPM 110 °C	EPDM 110 °C	Operating pressure max. 40 bar	Position indicator: 2 switches, Ex-protected	Position indicator: 2 switches, IP 65
			00	01***	03	14	22	40**	41
15	5.5	85242XX.8301.00000	0 - 25	0 - 25****	0 - 25	0 - 25	0 - 40	0 - 25****	0 - 25****
20	10.0	85243XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 40	0 - 25	0 - 25
25	12.5	85244XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 40	0 - 25	0 - 25
32	27.0	85245XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 40	0 - 25	0 - 25
40	31.0	85246XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 40	0 - 25	0 - 25
50	43.0	85247XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 40	0 - 25	0 - 25
65	67.0	84248XX.9501.00000	0 - 25	0 - 25	0 - 25	0 - 25	-	0 - 25	0 - 25
80	94.0	84249XX.9501.00000	0 - 25	0 - 25	0 - 25	0 - 25	-	0 - 25	0 - 25
100	144.0	84250XX.9501.00000	0 - 25	0 - 25	0 - 25	0 - 25	-	0 - 25	0 - 25

* For orders please state voltage and frequency, e.g.: 8524300.8404.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8524300.8401.02400 for 24V DC

** Only in connection with explosion proof solenoids

*** DN 15 - DN 50 Solenoid DC 8401 / AC 8404 DN 65 - DN 100 Solenoid DC 9501 / AC 9504 mounting position: with solenoid vertical on top only

**** With solenoid DC 8401 / AC 8404

Solenoid 8301 / 8304, 8401 / 8404, 9501 / 9504 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8301	22W		
8304		25VA	25VA
8401	40W		
8404		45VA	45VA
9501	80W		
9504		89VA	89VA

Drawing legend

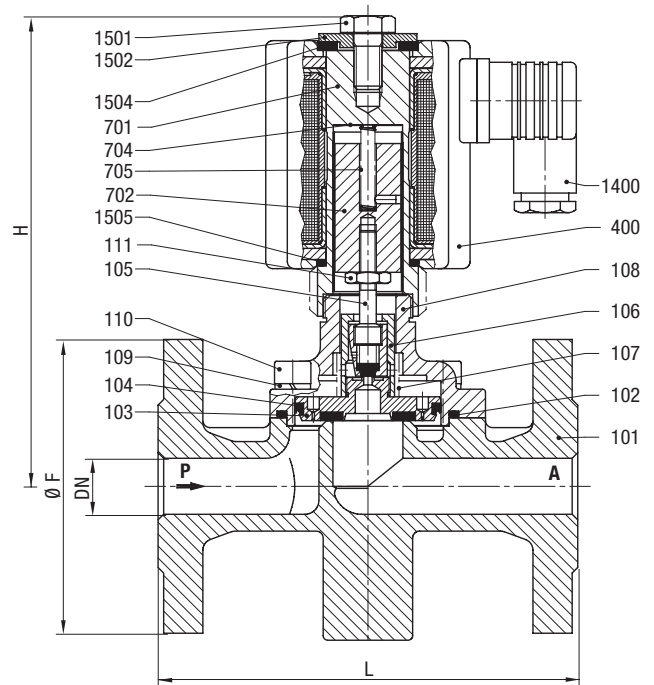
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring - not for DN 15
108	Valve cover
109	Spring washer - DN 15 only
110	Hexagon screw
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
*712	Gasket - DN 15 only
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	145	95
20	150	105	172	105
25	160	115	172	115
32	180	140	187	140
40	200	150	191	150
50	230	165	200	165

* B = maximum width

DN 15 - DN 50



Solenoid Valves without Differential Pressure

Drawing legend

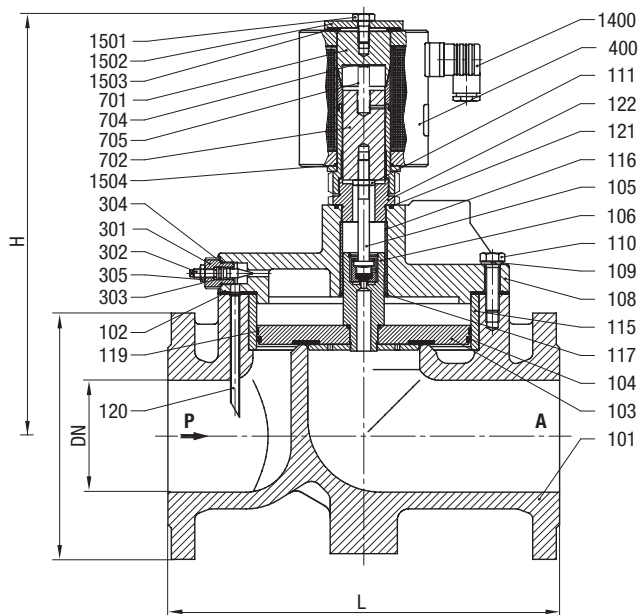
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
108	Valve cover
109	Spring washer
110	Hexagon screw
111	Hexagon nut
*112	Gasket
115	Bushing
*119	Guide foil
120	Tube
148	Screw piece
149	Screw piece
150	Gasket
151	Round plate
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
*306	Lip seal
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1503	Gasket
1504	O-ring
1505	Round plate

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	327	185
80	310	220	347	200
100	350	265	376	235

* B = maximum width

DN 65 - DN 100



Service kits

For valves with solenoid 8301	Part number
8524200	-
For valves with solenoid 8401	Part number
8524300	-
8524400	-
8524500	-
8524600	1258239
8524700	1253401
For valves with solenoid 9501	Part number
8424800	-
8424900	1242184
8425000	-

Further options (valves)

XXXXXX**02**.XXXX Manual override
Special connections

Further options (solenoids)

- XXXXXX**.8341** DN 15: Solenoid protection class
⊗ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8436** DN 20 – DN 50: Solenoid protection class
⊗ II 2 GD EEx me II T4 T 140 °C
- XXXXXX**.8441** DN 20 – DN 50: Solenoid protection class
⊗ II 2 GD EEx me II T3 T 140 °C
- XXXXXX**.8900** DN 15 – DN 50: Solenoid protection class
⊗ II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.8920** DN 15 – DN 50: Solenoid protection class
⊗ II 2 GD EEx d II C T4 and T5 T 130 °C / 95 °C
- XXXXXX**.9540** DN 65 – DN 100: Solenoid protection class
⊗ II 2 GD EEx me II T3/T4 T 140 °C

Further options on request

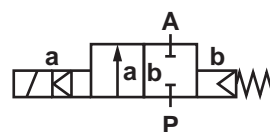
Please turn to page 276 for technical information on our valves.

2/2-way valves DN 15 to 50

With EN 10204 - 3.1 inspection certificate
 For slightly aggressive gases and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Flange connection: PN 25/40
 Operating pressure: 0 to 25 bar

Description (standard valve)

Stainless steel solenoid valve for slightly aggressive gases and liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: - 20 °C to +90 °C
 Ambient temperature: max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top



Material

Body and cover: 1.4581
 Seat seal: NBR-K (flexible at low temperatures)
 Internal parts: Stainless steel

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Valve operates without differential pressure
- High flow rate
- Damped operation
- Suitable for vacuum

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage*	NBR-K	Normally open	Operating pressure bar			
					FPM 110 °C	EPDM 110 °C	Position indicator: 2 switches, Ex-protected	Position indicator: 2 switches, IP 65
			00	01***	03	14	40**	41
15	5.5	85642 XX .8401. 00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25
20	10.0	85643 XX .8401. 00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25
25	12.5	85644 XX .8401. 00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25
32	27.0	85645 XX .8401. 00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25
40	31.0	85646 XX .8401. 00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25
50	43.0	85647 XX .8401. 00000	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25	0 - 25

* For orders please state voltage and frequency, e.g.: 8564200.8401.**23049** for 230V 40-60Hz (AC with rectifier plug only, included) or 8564200.8401.**02400** for 24V DC

** Only in connection with explosion proof solenoids

*** Mounting position: with solenoid vertical on top only.

Solenoid 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8401	40W		
8404		45VA	45VA

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65

Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only

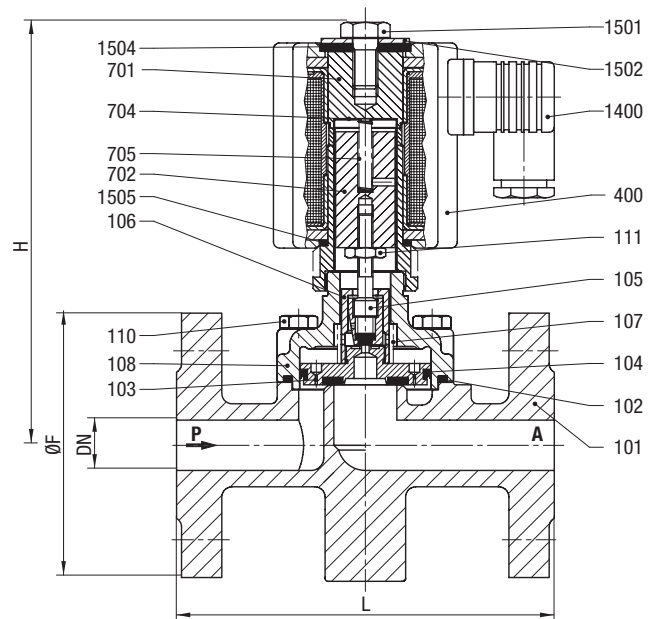
Drawing legend

Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*105	Valve spindle
*106	Screw piece
*107	Pressure spring - not for DN 15
108	Valve cover
109	Spring washer - DN 15 only
110	Hexagon screw
111	Hexagon nut
400	Solenoid
701	Core tube
702	Plunger
704	Round plate
*705	Pressure spring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	170	95
20	150	105	172	105
25	160	115	172	115
32	180	140	187	140
40	200	150	191	150
50	230	165	200	165

* B = maximum width



Solenoid Valves without Differential Pressure

Service kits

For valves with solenoid 8401	Part number
8564200	1258751
8564300	-
8564400	-
8564500	1249342
8564600	-
8564700	-

Further options (valves)

- XXXX02.XXXX Manual override
- XXXX06.XXXX Material of seat and soft seal: PTFE, maximum fluid temperature: +110 °C, maximum operating pressure: 16 bar, pressure rating: PN 16 / leak rate E according to EN 12266-1
- XXXX22.XXXX Maximum operating pressure: 40 bar
- XXXX34.XXXX Increased closing force with 20% reduction in Kv-value advisable at low flow rates or with infrequent operation

Further options on request

Special connections

Further options (solenoids)

- XXXXXX.8436 Solenoid protection class
⊗ II 2 GD EEx me II T4 T 140 °C
- XXXXXX.8441 Solenoid protection class
⊗ II 2 GD EEx me II T3 T 140 °C
- XXXXXX.8900 Solenoid protection class
⊗ II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C
- XXXXXX.8920 Solenoid protection class
⊗ II 2 GD EEx d II C T4 and T5 T 130 °C / 95 °C

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 8 to DN 50

For slightly aggressive gases and liquids
 Solenoid actuated, with forced lifting
 Piston seat valves
 Internal thread G 1/4 to G 2 or 1/4" NPT to 2" NPT
 Operating pressure: 0 to 25 bar (40 bar)

Click-on®
 Solenoid interchangeable without tools

Description (standard valve)

Solenoid valve for slightly aggressive gases and liquids
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -20 °C up to max. +90 °C
 Ambient temperature: -20 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top

Material

Body: Stainless steel
 Seat seal: NBR-K (flexible at low temperatures)
 Internal parts: Stainless steel, PTFE/carbon

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- High flow rate
- For robust industry applications
- Damped operation
- Suitable for vacuum
- For systems with low or fluctuating pressure
- Valve operates without differential pressure
- Solenoid interchangeable without tools (Click-on®) up to G 1 thread

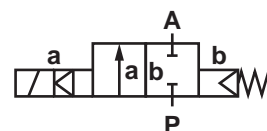
Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar					
				NBR-K	Normally open	FPM 110 °C	PTFE 110 °C	EPDM 110 °C	Position indicator: 2 switches
				00	01	03	06**	14	23
1/4	8	1.9	85740XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 16	0 - 25	0 - 25***
3/8	10	3.4	85741XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 16	0 - 25	0 - 25***
1/2	12	3.8	85742XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 16	0 - 25	0 - 25***
3/4	20	11.0	85743XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 16	0 - 25	0 - 25***
1	25	13.0	85744XX.9401.00000	0 - 25	0 - 25***	0 - 25	0 - 16	0 - 25	0 - 25***
1 1/4	32	23.0	85745XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25
1 1/2	40	25.0	85746XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25
2	50	41.0	85747XX.8401.00000	0 - 25	0 - 25	0 - 25	0 - 16	0 - 25	0 - 25

* For orders please state voltage and frequency, e.g.: 8574200.9404.23049 for 230V 40-60Hz (AC with rectifier plug only, included) or 8574200.9401.02400 for 24V DC

** Leak rate E according to EN 12266-1

*** With solenoid DC 8401 / AC 8404



Solenoid 9401 / 9404 / 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Design according to DIN VDE 0580
 Voltage range +/-10%, duty cycle 100%
 Protection class according to EN 60529: IP65
 Electrical connector according to DIN EN 175301-803 (included)
 AC with rectifier plug only
 The solenoids 94XX are UL listed and CSA approved
 (With the exception of solenoid 94XX up to 41V AC)

Power consumption

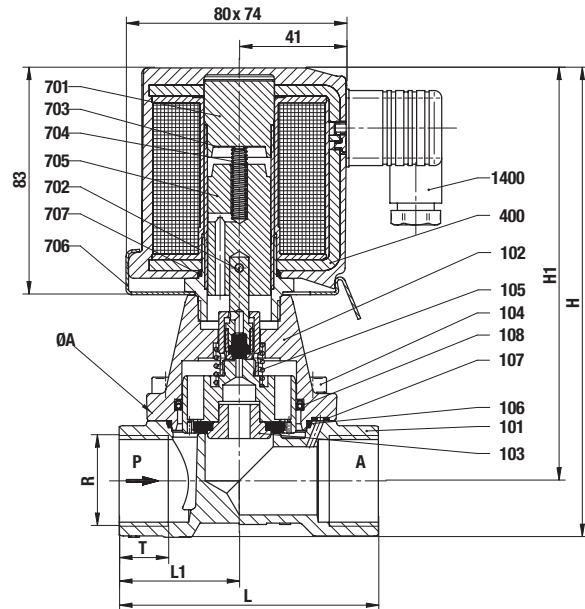
Solenoid	DC	AC	
		Inrush	Holding
9401	38W		
9404		42VA	42VA
8401	40W		
8404		45VA	45VA

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring
*106	Gasket
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.

Up to G 1 thread



Connection size G	øA mm	H mm	H1 mm	L mm	L1 mm	T mm
1/4	44.0	152.0	140.5	60.0	27.5	12.0
3/8	44.0	152.0	140.5	60.0	27.5	12.0
1/2	44.0	154.5	140.5	67.0	31.0	14.0
3/4	50.0	162.0	146.5	80.0	36.5	16.0
1	62.0	183.0	162.0	95.0	44.0	18.0

Solenoid Valves without Differential Pressure

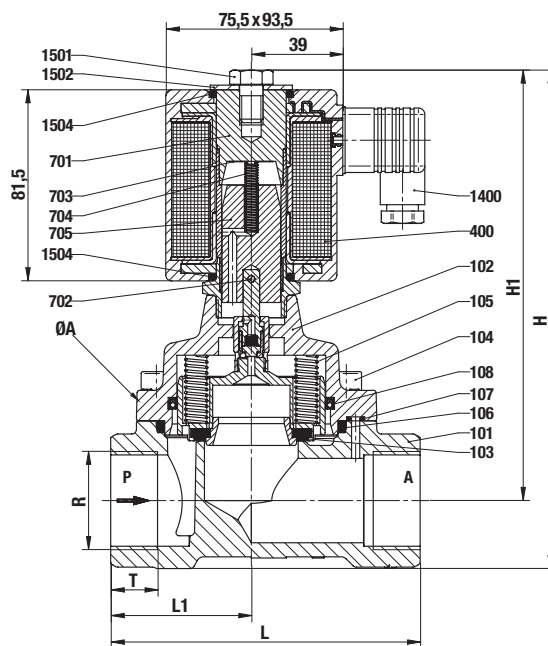
Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring (2x)
*106	Gasket
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	Dowel pin
703	Round plate
*704	Pressure spring
*705	Plunger
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
*1504	O-ring (2x)

* A service kit consists of these individual parts.

Connection size G	øA mm	H mm	H1 mm	L mm	L1 mm	T mm
1 1/4	92.0	212.5	183.5	132.0	60.0	20.0
1 1/2	92.0	212.5	183.5	132.0	60.0	22.0
2	109.0	226.5	192.0	160.0	74.0	24.0

From G 1 1/4



Service kits

For valves with solenoid 9401	Part number
8574000	1269067
8574100	1269067
8574200	1269067
8574300	1269068
8574400	1269069
For valves with solenoid 8401	Part number
8574500	1269070
8574600	1269070
8574700	1269071

Further options (valves)

- XXXX02.XXXX Manual override
 XXXX17.XXXX Normally open, seat seal: FPM, fluid temperature -10 °C up to +110 °C*, mounting position: with solenoid vertical on top, only with solenoid 8400
 XXXX22.XXXX Maximum operating pressure: 40 bar
 XXXX25.XXXX Seat seal: FPM, with larger bleed orifices in the piston, for fluids such as fuel and oil, viscosity: 80 mm²/s (cSt), fluid temperature: -10 °C up to +110 °C*

- Accessories: - Manual override conversion kit
 - Mounting bracket kit

Further options (solenoids)

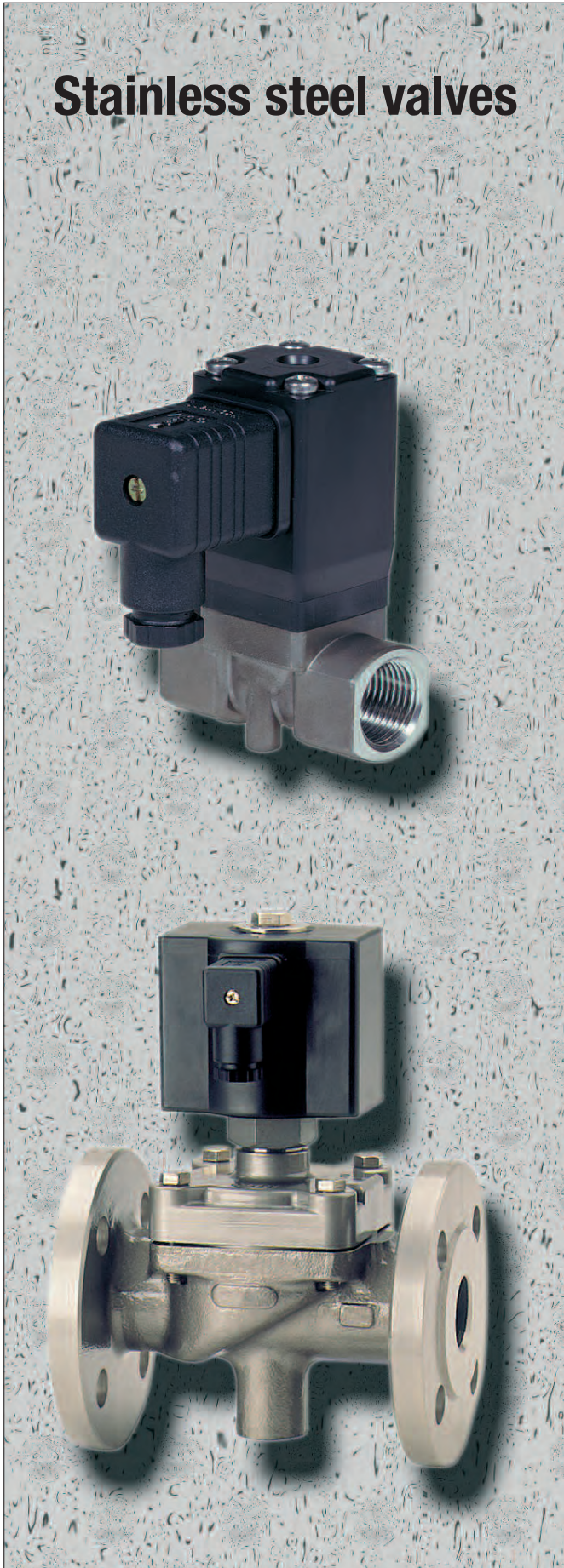
- **XXXXXX.8426 Solenoid in protection class Ⓢ II 3 GD EEx nA II T4 T 135 °C
 XXXXXX.8441 Solenoid in protection class Ⓢ II 2 GD EEx me II T3 T 140 °C
 **XXXXXX.9426 Solenoid in protection class Ⓢ II 3 GD EEx nA II T4 T 135 °C

- * Up to maximum +200 °C fluid temperature with solenoid for higher temperature
 ** DC only, for AC solenoids with design inspection certificate according to category 2, e.g. XXXXXX.8441

Further options on request

Please turn to page 276 for technical information on our valves.

Stainless steel valves



Solenoid Valves without
Differential Pressure

2/2 directional control valves DN 2 to DN 6

Direct operated poppet valves
 Solenoid actuated
 Connection G 1/8, G 1/4
 Operating pressure: 0 to 50 bar (see technical data)

Description

Solenoid Valve for aggressive gases and liquids*
 Flow direction: determined
 Fluid temperature: -10 °C to +120 °C
 Ambient temperature: -25 °C to + 80 °C, depending on solenoid system
 Mounting position: as required, preferably with solenoid on top

* With contaminated fluids, upstream installation of a dirt trap is recommended.

Material

Body: Stainless steel 1.4404 (AISI 316)
 Seat seal: FPM
 Internal parts: Stainless steel

Features

- No differential pressure required, works from 0 bar
- Maximum leak rate $1.33 \cdot 10^{-3}$ mbar-l/s
- Assembled free of oil and grease
- Valves and solenoids (see solenoid table) with Ex approval according to ATEX



Technical data

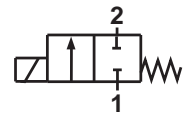
Connection size G	DN mm	kv-Value m ³ /h	Part number* valve	Solenoid group**	Operating pressure bar	Drawing no.
Switching function: normally closed						
1/8	2	0.1	9510202	13D	0 - 50	1
1/8	2	0.1	9510202	13B	0 - 20	1
1/4	4	0.34	9511402	16D	0 - 12	2
1/4	6	0.52	9511602	16D	0 - 5	2

* When ordering please indicate solenoid, voltage and current type (frequency).

** Please see pages 49 and 50 for technical data and ordering information.

Accessories

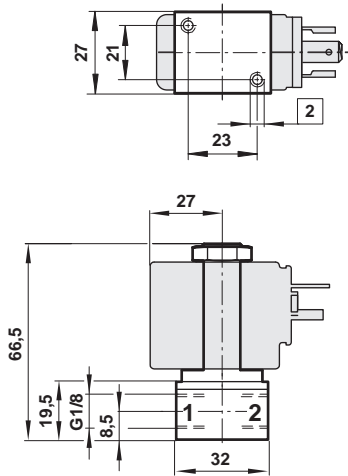
Cable gland protection class EEx e, EEx d (ATEX), Nickel plated brass	Connectors
	
EEx e 0588819 (for solenoids 42xx / 46xx M20 x 1.5)	0570275



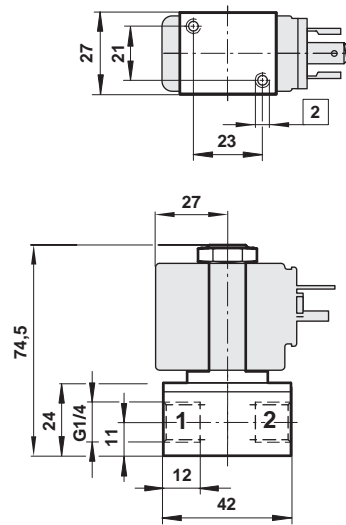
Symbol 1: 2/2 NC

Dimensional drawings for valves

Drawing 1 *



Drawing 2 *



* Dimensions in mm

Drawing legend

Index	Description
2	M4 x 6

The actuating solenoids correspond to those of the 95000 series. You will find them on page 49, the associated dimensions are on page 50.

The electric circuit diagrams are shown on page 52.

Further options on request

Please find the safety instructions for the Norgren range on page 318.

Please find an example of the part numbering system applicable to the Norgren range on page 53.

2/2-way valves G 1/4 to G 3/8

For aggressive gases and liquids
 Directly solenoid actuated
 Seat valves with sealed core tube / medium separated
 Internal thread G 1/4 to G 3/8
 Operating pressure: 0 to 7 bar (see technical data)

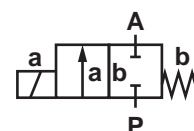
Description (standard valve)

Type: seat valve operating without differential pressure
 Switching function: normally closed
 Flow direction: determined
 Fluid temperature: -10 °C up to max. +110 °C
 Ambient temperature: -10 °C up to max. +50 °C
 Mounting position: as required, preferably with solenoid vertical on top



Material

Body: PVDF
 Seat seal: EPDM
 Internal parts: PTFE bellows



Features

- Suitable for aggressive fluids
- Functional design
- Compact solenoid with integrated core tube
- Sealed core tube with PTFE-bellows
- Unsusceptible to calcification and magnetization of foreign particles

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar		
				EPDM	FPM	PTFE**
				00/60/70/80	03/63/73/83	06/66/76/86
1/4	3	0.23	82080 XX .8050. 00000	0 - 7	0 - 7	0 - 7
3/8	3	0.23	82081 XX .8050. 00000	0 - 7	0 - 7	0 - 7
1/4	4.5	0.42	82080 6X .8050. 00000	0 - 5	0 - 5	0 - 5
3/8	4.5	0.42	82081 6X .8050. 00000	0 - 5	0 - 5	0 - 5
1/4	6	0.62	82080 7X .8050. 00000	0 - 2	0 - 2	0 - 2
3/8	6	0.62	82081 7X .8050. 00000	0 - 2	0 - 2	0 - 2
1/4	8	0.83	82080 8X .8050. 00000	0 - 1	0 - 1	0 - 1
3/8	8	0.83	82081 8X .8050. 00000	0 - 1	0 - 1	0 - 1

* For orders please state voltage and frequency, e.g.: 8208000.8051.**23049** for 230V 40-60Hz (AC with rectifier plug only, included)
 or 8208000.8050.**02400** for 24V DC

** Leak rate E according to EN 12266-1

Solenoid 8050 / 8051 (standard voltages)

DC	AC 40-60Hz	
	24V	24V
-	110V	120V
-	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8050	12W	-	-
8051	-	13VA	13VA

Design according to DIN VDE 0580

Voltage range +/-10%, duty cycle 100%

Protection class according to EN 60529: IP65

Electrical connector according to DIN EN 175301-803 (included)

AC with rectifier plug only

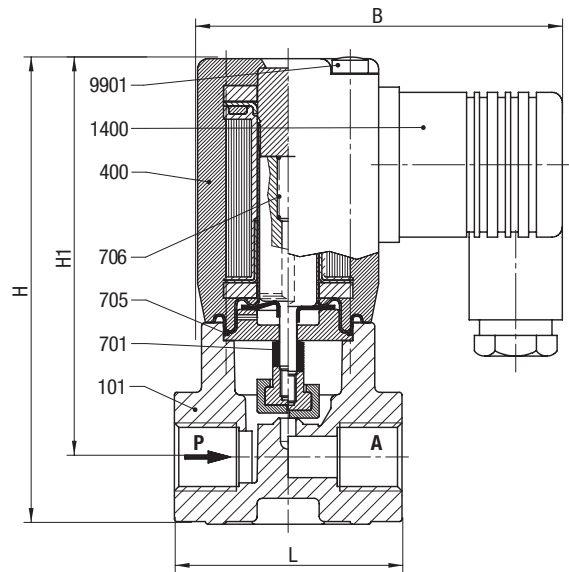
Drawing legend

Index	Description
101	Valve body
400	Solenoid
*701	Bellow assembly
*705	O-ring
*706	Pressure spring
1400	Electrical connector
9901	Oval head cap screw

* A service kit consists of these individual parts.

Connection size G	L mm	B* mm	H mm	H1 mm
1/4	44	70	90	77
3/8	44	70	90	77

* B = maximum depth



Service kits

For valves with solenoid 8050 and seal EPDM	Part number
8208000	1249676
8208060	1257145
8208070	1254932
8208080	1253798
For valves with solenoid 8051 and seal EPDM	Part number
8208100	1249676
8208160	1257145
8208170	1254932
8208180	1253798

Further options (solenoids)

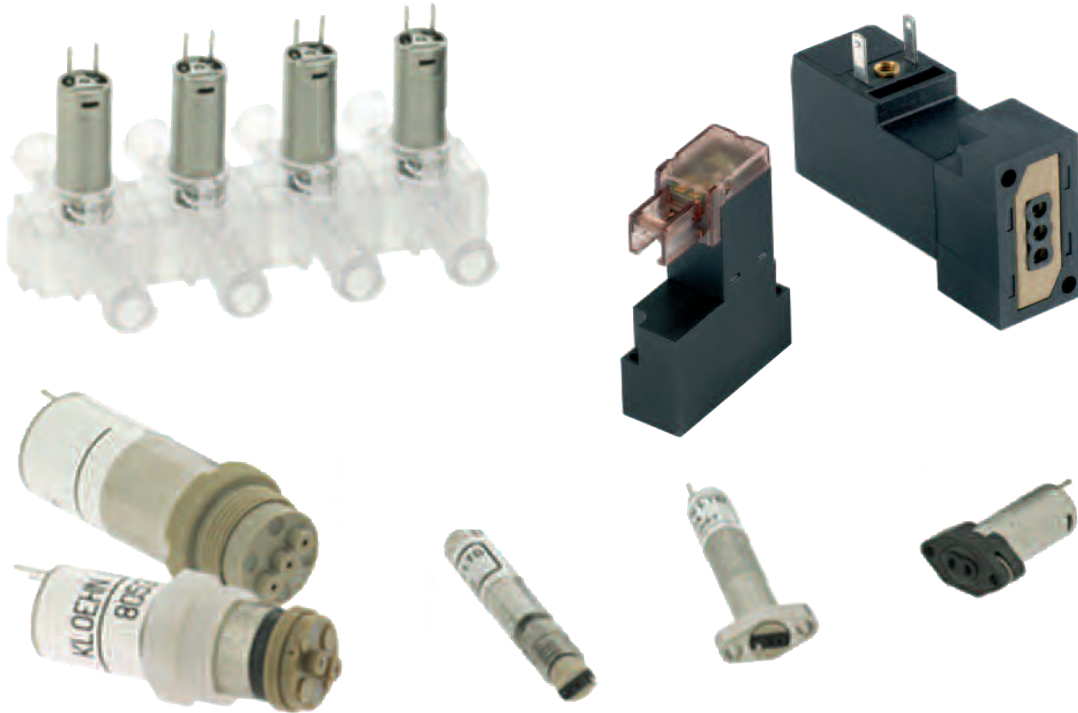
XXXXXX.8042 Solenoid protection class ☞ II 2 GD EEx me II T3 T 140 °C

Further options on request

Please turn to page 276 for technical information on our valves.

Media Separated Valves

A BROAD RANGE OF MEDIA SEPARATED VALVE TECHNOLOGIES



The Norgren range of 2/2 and 3/2 media separated valves feature:

- » Miniature valves with virtually no unswept volumes
- » Compatibility with aggressive media
- » Comprehensive range of wetted materials
- » Low power consumption from 0.35W to 4W
- » Installation versatility
- » Footprints as small as 6 mm

