Valve technology
for over 80 years

IMI Buschjost
valves

The constant research and continuing innovation behind the IMI Buschjost name has helped to create a market leader in process and multimedia valves, which can be found in a huge variety of applications worldwide.

In fact, in Germany, IMI Buschjost process valves are amongst only three brands which are SIL certified for use in power plants.

SOLENOID OPERATED VALVES

- Port sizes from G1/4 to G2 plus options of flange connections
- Range of body and seal materials to cover most industrial applications
- Extensive use of patented IMI Buschjost Click-on® coils
- ATEX versions available
- Diaphragm (up to 16 bar) and piston (up to 40 bar versions available)
- Range covers direct, indirect and forced lift versions

PRESSURE OPERATED VALVES

- Port sizes G1/4 to G2
- Diaphragm and piston versions available up to 16 bar depending upon size and actuator type
- Range of body and seal materials to cover most industry applications
- Suitable for fluid viscosities up to 600 centistokes and fluids with contamination
- Solenoid pilot operator available to directly mount to the valve actuator

CLICK-ON® BENEFITS

- Valve core tube completely sealed – fluid cannot escape
- Solenoid can be removed and replaced without tools
- Can be rotated through 360°
- Cannot be over tightened leading to damage to valve
- Totally IP65 protected

Engineering
GREAT Solutions

IMI BUSCHJOST

Find out more
www.imi-precision.com

IMI Herion

Specialist in solenoid valves, NAMUR valves and hydraulic solutions

For over 50 years the IMI Herion brand has specialised in solenoid valves, NAMUR valves and hydraulic solutions for mechanical and pneumatic press and press safety technology.

The IMI Herion brand offers a comprehensive range of robust pilot and control valves and pressure switches that are ideally suited to aggressive and harsh environments and are offered with a wide range of global certifications and approvals including ATEX and SIL.

Engineering
GREAT Solutions

IMI HERION

Find out more
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DIRECT SOLENOID ACTUATED POPPET VALVES

95000 1,5 … 6 mm orifice (ND) 2/2, NC/NO, G1/4

- Direct acting solenoid – operation down to zero bar pressure
- Short switching times
- Assembled oil and grease-free
- For a.c. solenoid systems with integrated rectifier (40 … 60 Hz)
- Includes solenoids for ATEX, FM, CSA and XP approvals

Technical Data

Medium:
Neutral gaseous and liquid fluids

Flow direction:
Fixed

Mounting position:
Optional, preferably with solenoid on top

Media temperature:
-25°C … +80°C NBR

Ambient temperature:
Depending on solenoid system
-25°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C
For contaminated fluids installation of an upstream filter is recommended

Materials

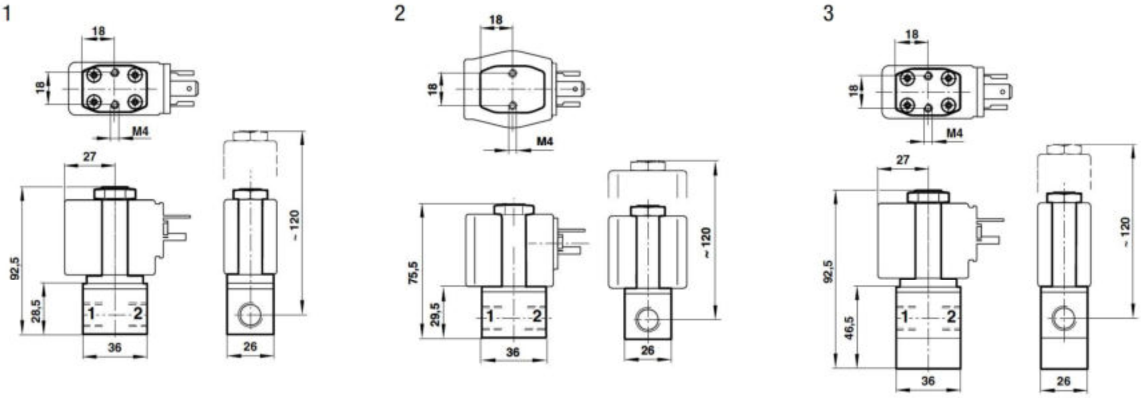
Housing:
Brass 2.0401 (Ms 58)

Seals:
NBR
Other see option selector

Inner parts:
Stainless steel 1.4104 (430F), Brass 2.0401 (Ms 58)

EXPRESS

Dimensions



Models

Model	Function	Port size	Orifice (mm)	Operating pressure (bar)	Flow (l/min)	Solenoid group	Dimension No.
							
9500100xxxx*****	2/2 NC	G1/4	1,5	0 … 40	70	13B	1
9500200xxxx*****	2/2 NC	G1/4	2	0 … 35	120	13B	1
9500300xxxx*****	2/2 NC	G1/4	3	0 … 10	200	13C	1
9500400xxxx*****	2/2 NC	G1/4	4	0 … 12	350	13D	1
9501500xxxx*****	2/2 NC	G1/4	5	0 … 5	450	16D	2
9501600xxxx*****	2/2 NC	G1/4	6	0 … 5	550	16D	2
9502210xxxx*****	2/2 NO	G1/4	2	0 … 40	70	13B	3
9502310xxxx*****	2/2 NO	G1/4	3	0 … 10	160	13B	3

**** Insert solenoid code according to solenoid group from tables on page 374.
***** Insert voltage code from table below.

Voltage codes

24 V d.c.	02400
230 V a.c.	23050

Other voltages available, please call your please contact us.

DIRECT SOLENOID ACTUATED POPPET VALVES

96000 2 … 5 mm orifice (ND) 3/2, NC/NO, G1/4

- Direct acting solenoid – operation down to zero bar pressure
- Short switching times
- Assembled oil and grease-free
- For a.c. solenoid systems with integrated rectifier (40 … 60 Hz)
- Includes solenoids for ATEX, FM, CSA and XP approvals

Technical Data

Medium:
Neutral gaseous and liquid fluids

Flow direction:
Fixed

Mounting position:
Optional, preferably with solenoid on top

Media temperature:
-25°C … +80°C NBR

Ambient temperature:
Depending on solenoid system
-25°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C
For contaminated fluids installation of an upstream filter is recommended

Materials

Housing:
Brass 2.0401 (Ms 58)

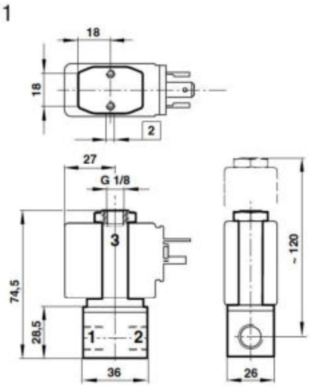
Seals:
NBR
Others see option selector

Inner parts:
Stainless steel 1.4104 (430F), Brass 2.0401 (Ms 58)

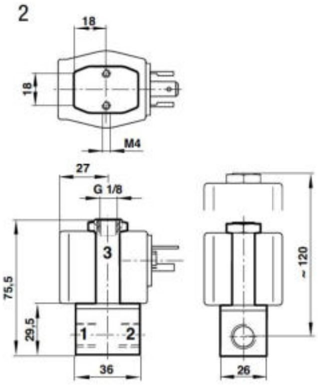
EXPRESS

Dimensions

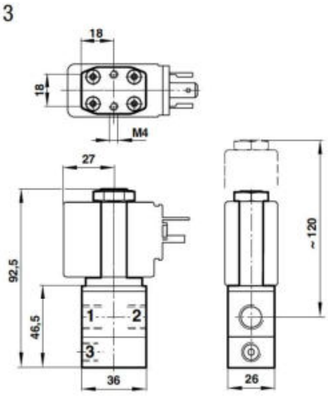
1



2



3



Models

Model	Function	Port size	Orifice (mm)	Operating pressure (bar)	Flow l/min	Solenoid group	Dimension No.
							
9600210xxxx*****	3/2 NC	G1/4	2	0 … 10	120	13B	1
9600240xxxx*****	3/2 NC	G1/4	2	0 … 18	120	13D	1
9600320xxxx*****	3/2 NC	G1/4	3	0 … 6	200	13C	1
9600340xxxx*****	3/2 NC	G1/4	3	0 … 14	200	13D	1
9601430xxxx*****	3/2 NC	G1/4	4	0 … 8	350	16C	2
9601440xxxx*****	3/2 NC	G1/4	4	0 … 10	350	16D	1
9601540xxxx*****	3/2 NC	G1/4	5	0 … 7	450	16D	2
9602210xxxx*****	3/2 NO	G1/4	2	0 … 9	100	13B	3
9602340xxxx*****	3/2 NO	G1/4	3	0 … 9	160	13D	3
9602440xxxx*****	3/2 NO	G1/4	4	0 … 6	300	16D	3

**** Insert solenoid code according to solenoid group from tables on page 375. ***** Insert voltage codes from table below.

Voltage codes

24 V d.c.	02400
230 V a.c.	23050

Other voltages available, please call your please contact us.

SOLENOID OPERATORS
95000 & 96000 Poppet Valves

Model	Power consumption 24 V d.c. (W)	Power consumption 230 V a.c. (VA)	Voltage 24 V d.c. (mA)	Voltage 230 V a.c. (mA)	Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
									
Group 13B	8,0	–	331	–	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	0246 [7]
Group 13B	–	9,2	–	40	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	3206 [7]

Model	Power consumption 24 V d.c. (W)	Power consumption 230 V a.c. (VA)	Voltage 24 V d.c. (mA)	Voltage 230 V a.c. (mA)	Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
									
Group 13C	12,1	–	504	–	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	0200 [7]
Group 13C	–	11,3	–	49	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	3204 [7]
									
Group 13C	8,9	–	369	–	II2G [2]	Ex e mb IIC T4/T5 Gb	T5: -40 … +55	M20 x 1,5 [6]	4220 [8]
Group 13C					II2D	Ex tb IIIC T 130°C Db IP66 [2] [10]	T4: -40 … +65	M20 x 1,5 [6]	4220 [8]

Model	Power consumption 24 V d.c. (W)	Power consumption 230 V a.c. (VA)	Voltage 24 V d.c. (mA)	Voltage 230 V a.c. (mA)	Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
									
Group 13D	16,9	–	703	–	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	0700 [7]
Group 13D	–	19,5	–	75	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	3703 [7]
									
Group 13D	11,4	–	475	–	II2G	Ex e mb IIC T4/T5 Gb [2] [10]	T5: -40 … +40	M20 x 1,5 [6]	4230 [8]
Group 13D					II2D	Ex tb IIIC T 130°C Db IP66	T5: -40 … +50	M20 x 1,5 [6]	4230 [8]

SOLENOID OPERATORS
95000 & 96000 Poppet Valves

Model	Power consumption		Voltage		Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)					
									
Group 16C	6,8	–	284	–	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	0827 [7]
Group 16C	–	10,6	–	46	–	IP 65 (with connector) [5]	-25 … +60 Fluid: max. 80	DIN EN 175301-803 Form A [6]	3805 [7]

Model	Power consumption		Voltage		Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)					
									
Group 16D	16,9	–	703	–	–	IP00 without plug [5] IP65 with plug [5]	-25 … +60	DIN EN 175301-803 Form A [6]	0800 [7]
Group 16D	–	17,3	–	75	–	IP00 without plug [5] IP65 with plug [5]	-25 … +60	DIN EN 175301-803 Form A [6]	3803 [7]

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request.
Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.
2) Category II 2 GD, EC-Type Examination Certificate KEMA 98 ATEX 4452 X.
5) Required connector type 0570275.
6) Connector/cable gland not supplied, see 'Accessories' table.
7) Suitable for outdoor installation only if equipped with a special protection (e.g. cubicle installation).
8) This solenoid has a fuse with an appropriate rating.
10) IEC Ex Certificate of Conformity IEC Ex KEM 09.0068.

Accessories

Cable glands Protection class EEx e, EEx d (ATEX), Ms nickel plated brass	Connectors
 	
EEx e 0588819000000000 (for solenoid 42xx /46xx M20 x 1,5)	0570275000000000

SOLENOID ACTUATED NAMUR VALVE

97300 3/2, 5/2, G1/4

- For single and double acting actuators
- 3/2 or 5/2 way function in one valve
- Manual override with detent
- Compact design
- Options are available for the protection class EEx m and EEx ia, for zones 1, 2 (gases) ATEX cat. II 2 G, EEx nA, for zones 2 (gases), 22 (dust) ATEX cat.II 3 GD ask your Express team for more details

Technical Data

Medium:
Compressed air filtered, lubricated or non-lubricated

Operating pressure:
2 … 8 bar

Flow direction:
Fixed

Mounting position:
Optional

Ambient temperature:
-15°C … +50°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

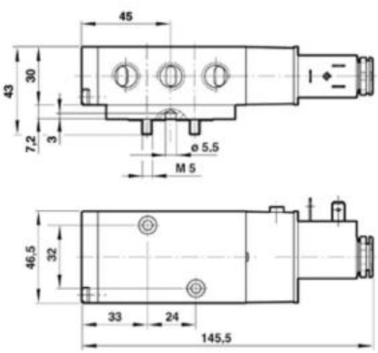
Housing:
Aluminium anodized

Pilot flange:
Plastic (PBT)

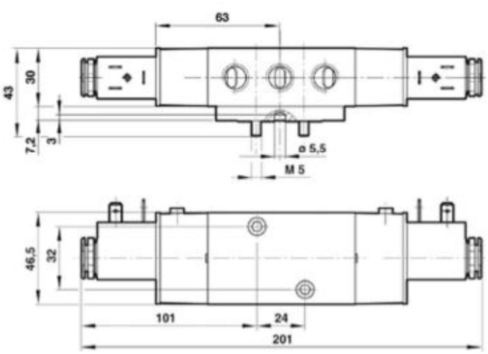
Seals:
NBR

Dimensions

1 Solenoid/Spring



2 Solenoid/Solenoid



Models

Model	Voltage	Port size 1, 3, 5	2, 4	Function	Flow (l/min)	Dimension No.	Electrical connection
							
9730000305002400	24 V d.c	G1/4	Flange	5/2, 3/2 Sol/Spring	1300	1	DIN EN 175301-803 Form B
9730000305023050	230 V a.c.						
9730000303602400	24 V d.c	G1/4	Flange	5/2, 3/2 Sol/Spring	1300	1	DIN EN 175301-803 Form A
9730000303623050	230 V a.c.						
9731000305002400	24 V d.c	G1/4	Flange	5/2, 3/2 Sol/Sol	1300	2	DIN EN 175301-803 Form B
9731000305023050	230 V a.c.						
9731000303602400	24 V d.c	G1/4	Flange	5/2, 3/2 Sol/Sol	1300	2	DIN EN 175301-803 Form A
9731000303623050	230 V a.c.						

For valves without coils, substitute the last nine digits of the part number for 000000000.

SOLENOID ACTUATED NAMUR VALVE

97300 3/2, 5/2, G1/4

Solenoid details

	Power Consumption 24 V d.c. (W)	230 V a.c. (VA)	Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
							
	1,8	4,3	–	IP 65 (with connector)	-15 … +50	DIN EN 175301-803 Form B 1)	3050
							
	1,6	3,5	–	IP 65 (with connector)	-15 … +50	DIN EN 175301-803 Form A 1)	3036

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request.
*1) Connector is not included in delivery; Required connectors 068003 form B or 0570275 form A.

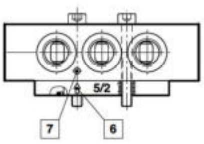
Accessories

Silencer	Connectors	Flange plate	Yoke
			
M/S2 (G1/8)*	0570275000000000 Form A	0612790000000000 Single connection plate	0540593000000000
	0663303000000000 Form A with rectifier	0612791000000000 NAMUR-slot use in combination with 0612790 (Alu)	
	0680003000000000 Form B		

* For indoor use.

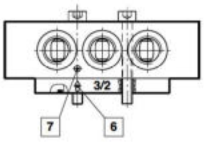
Conversion instructions

5/2 way function (original mode of supply)



3/2 resp. 5/2 way function can be achieved just by swapping enclosed adaptor plates. Make sure Marker and Arrow do match as shown on drawing at left. Original mode of supply: 5/2 function.

3/2 way function



6 Arrow
7 Marker

SOLENOID ACTUATED NAMUR VALVE

97100 6 mm orifice (ND) – 3/2, 5/2, 5/3 APB, G1/4

- 3/2 or 5/2 way function via adapter plates
- Rest position in the event of power failure (monostable design)
- Manual override with detent

Technical Data

Medium:
Compressed air filtered, lubricated or non-lubricated

Operating pressure:
2 … 8 bar

Flow direction:
Fixed

Mounting position:
Optional

Ambient temperature:
Valve: -15°C … +50°C
Solenoid: See solenoid table

With minus temperatures, use conditioned dry air. If installed in the open protect all connections against the penetration of moisture.
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

Housing:
Aluminium anodized

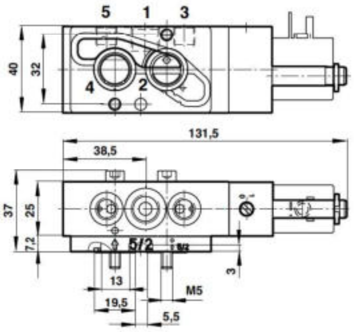
Pilot flange:
Plastic (PBT)

Flange plate:
Aluminium

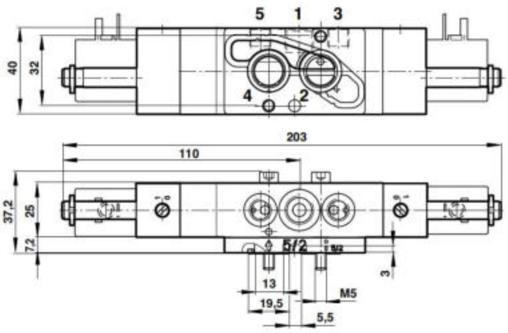
Seals:
NBR

Dimensions

1 Solenoid/Spring



2 Solenoid/Solenoid



Models – 3/2, 5/2 and 5/3 valves

Model	Voltage	Actuation	Port size 1	3 (5)	2, 4	Function	Flow (l/min)	Dimension No.
								
9710000303602400	24 V d.c.	Solenoid/Spring	G1/4	G1/8	Flange	5/2	750	1
9710000303623050	230 V a.c							
9711000303602400	24 V d.c.	Solenoid/Solenoid	G1/4	G1/8	Flange	5/2	750	2
9711000303623050	230 V a.c							
9712000303602400	24 V d.c.	Solenoid/Solenoid	G1/4	G1/8	Flange	5/3 APB	500	2
9712000303623050	230 V a.c							

APB = All Ports Blocked. Exterior free of non-ferrous metals. For models without coil, replace the last nine digits of the part number with 000000000.

Solenoid details

	3/2, 5/2 and 5/3 valves Power Consumption 24 V d.c. (W)	230 V a.c. (VA)	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
						
	1,6	3,5	IP 65 (with connector)	-15 … +50	DIN EN 175301-803 Form A 6)	3036

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.
6) Connector not supplied; required connector for d.c.: part no. 0570275 Form A, see 'Accessories' table.

SOLENOID ACTUATED NAMUR VALVE

97100 6 mm orifice (ND) – 3/2, 5/2, 5/3 APB, G1/4

Models – 3/2, 5/2 and 5/3 valves for minimal electrical power

Model 24 V d.c.	Voltage	Actuation	Port size 1	3 (5)	2, 4	Function	Flow (l/min)	Dimension No.
9710002305002400	24 V d.c.	Solenoid/Spring	G1/4	G1/8	Flange	5/2	750	1
9710002303402400	24 V d.c.							
9710002303420600	230 V a.c.							
9712002305002400	24 V d.c.	Solenoid/Solenoid	G1/4	G1/8	Flange	5/3 APB	500	2
9712002303402400	24 V d.c.							
9712002303420600	230 V a.c.							

APB = All Ports Blocked. Exterior free of non-ferrous metals. For models without coil, replace the last nine digits of the part number with 000000000.

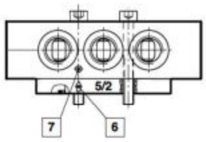
Solenoid details

	3/2, 5/2 and 5/3 valves for minimal electrical power							
	Power Consumption 24 V d.c. (W)	230 V a.c. (VA)	Rated current 24 V d.c. (mA)	230 V a.c. (mA)	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
	1,7	–	70	–	IP 65 (with connector)	-15 … +50	DIN EN 175301-803 Form B 6)	3050
	0,7	2	29	–	IP 65 (with connector) 2)	-15 … +50	DIN EN 175301-803 Form A 6)	3034

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.
2) Valves can be operated with d.c. only. For 230 V a.c. application please use 206 V d.c. coil together with rectifier plug 0663303.
6) Connector not supplied; required connector for d.c.: part no. 0680003 Form B and 0570275 Form A, see 'Accessories' table.

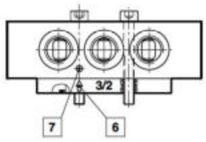
Conversion instructions

5/2 way function (original mode of supply)



3/2 resp. 5/2 way function can be achieved just by swapping enclosed adaptor plates. Make sure Marker and Arrow do match as shown on drawing at left. Original mode of supply: 5/2 function.

3/2 way function



6 Arrow
7 Marker

Electrical connection M12 x 1

Model	Pin	Cable
	1	brown
	2	white
	3	blue
	4	black

Accessories

Silencer	Connectors
	
M/S2 (G1/8)*	0570275000000000 Form A
	0663303000000000 Form A with rectifier
	0680003000000000 Form B

* For indoor use.

SOLENOID ACTUATED INLINE VALVE

97100 6 mm orifice (ND) – 3/2, 5/2, 5/3 APB, G1/4

- For single and double operated actuators
- Crossover-free switching, switch-over function guaranteed even with small cross section air supply
- Manual override with detent standard
- EX-Protection (ATEX-Category)

Technical Data

Medium:
Compressed air filtered, lubricated or non-lubricated

Operating pressure:
2 … 8 bar

Flow direction:
Fixed

Mounting position:
Optional

Ambient temperature:
Valve: -15°C … +80°C
Solenoid: See solenoid table

With minus temperatures, use conditioned dry air. If installed in the open protect all connections against the penetration of moisture.
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

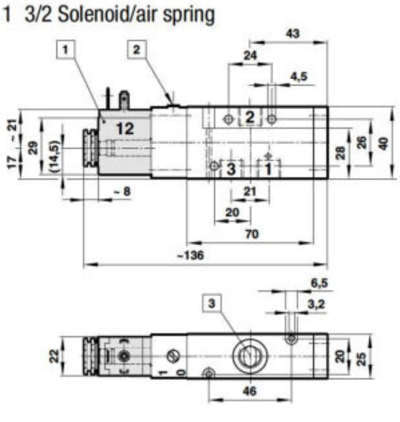
Housing:
Aluminium 3.0615 anodized

Pilot flange:
Plastic (PBT)

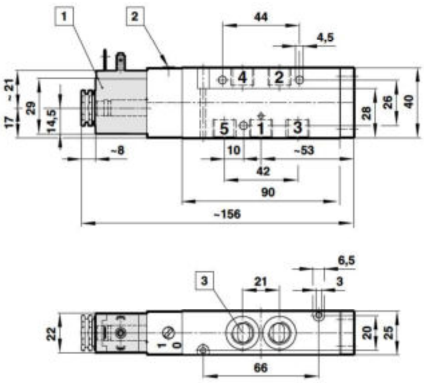
Seals:
NBR

Dimensions

1 3/2 Solenoid/air spring

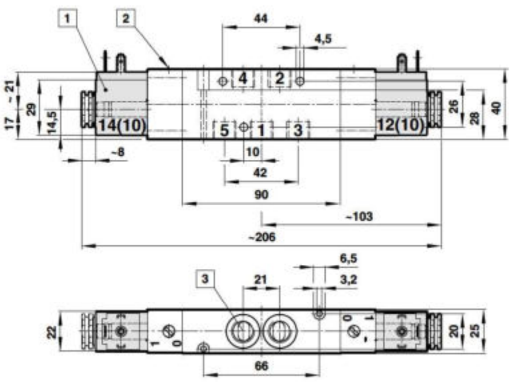


2 5/2 Solenoid/air spring

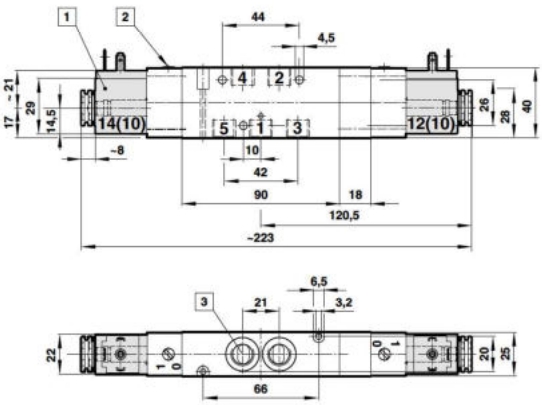


[1] Solenoid 90° turnable
[2] Manual override
[3] Port size G1/4 or 1/4 NPT

3 5/2 Solenoid/solenoid



4 5/3 APB Solenoid/solenoid



SOLENOID ACTUATED INLINE VALVE

97100 6 mm orifice (ND) – 3/2, 5/2, 5/3 APB, G1/4

Models

Model *1)	Actuation	Port size	Function	Flow (l/min)	Dimension No.
					
9713032000000000	Solenoid/Air spring	G1/4	3/2	750	1
9710032000000000	Solenoid/Air spring	G1/4	5/2	750	2
9711032000000000	Solenoid/Solenoid	G1/4	5/2	750	3
9712032000000000	Solenoid/Solenoid	G1/4	5/3 APB	500	4

*1) Models shown are without coil. When ordering, please indicate solenoid, voltage and current (frequency).
NOTE:To order one valve you need to add the following information:
- Valve body part number according to the Model column without 000000000.
- Solenoid code according to the table below.
- Voltage and frequency: 02400 for 24V d.c. and 23050 for 230V a.c.

Valve function: APB = All Ports Blocked.

Solenoid details

	Solenoid code	Power consumption 24 V d.c. (W)	Power consumption 230 V a.c. (VA)	Rated current 24 V d.c. (m A)	Rated current 230 V a.c. (m A)	Protection class IP/NEMA	Ex-Protection (ATEX-Category)	Temperature Ambient/Media (°C)	Electrical connection
	3050	1,8	–	70	–	IP65 (with connector)	–	-15 … +50	Connector DIN EN 175301-803, form B *1)
	3034	0,7	2,0 *2)	29	4	IP65 (with connector)	–	-15 … +50	Connector DIN EN 175301-803, form A *1)
	3046	2	–	85	–	IP65 (with connector)	II 3 G Ex nA IIC T5 Gc II 3 D Ex tc IIIC T95° Dc IP65	-15 … +50	Special connector DIN EN 175301-803, form A *1)
	3062	2,7	–	115	–	IP65 (with connector)	II 2 G Ex mb IIC T5 Gb II 2 D Ex mb tb T95°C Db	-20 … +50 *2)	Cable length 3 m
	3063	–	2,1	–	9	IP65 (with connector)	II 2 G Ex mb IIC T5 Gb II 2 D Ex mb tb T95°C Db	-20 … +50 *2)	Cable length 3 m
	3071	2,7	–	115	–	IP65 (with connector)	–	-10 … +50	Connector *1) M12x1, DIN IEC 61076-2-101 Solenoid with yellow LED

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*1) Connector is not scope of delivery, see table »Accessories«.
*2) For battery installation +40°C only.

Electrical connection M 12 x 1

Pin	Signal	Cable
1	+ UB	brown
2	Out 2 (PNP) / analogue 4 to 20 mA	white
3	0 Volt	blue
4	Out 1 (PNP)	black

Solenoid details

Model	Approvals ATEX	IECEx	FM
304x	PTB 06 ATEX 2055	–	–
306x	PTB 03 ATEX 2015	–	–
307x	EC-Declaration of Conformity	–	–

SOLENOID ACTUATED INLINE VALVE

97100 6 mm orifice (ND) – 3/2, 5/2, 5/3 APB, G1/4

Accessories

Connectors DIN EN 175301-803	Connectors M12 x 1	M12 x 1	Silencer
			
0570275000000000 Form A	0523055000000000 (without cable)	0523056000000000 (90°, without cable)	M/S2 (G1/4)
0663300000000003 Form A (with rectifier)	0523057000000000 (2 m cable)	0523058000000000 (90°, 2 m cable length)	
0680003000000000 Form B	0523052000000000 (5 m cable)	0523053000000000 (90°, 5 m cable length)	

Manifold plates

2 stations	3 stations	4 stations	6 stations	12 stations
				
2221102000000000	2221103000000000	2221104000000000	2221106000000000	2221112000000000

Accessories for manifold plates

Blanking plate *1)	Blanking plug for 2 station and 3 station manifolds	Pressure shut-off part *2) for 4 station up to 12 station manifolds	DIN mounting kit
			
0100563000000000	0701209000000000	0100569000000000	0101796000000000

*1) For blocking of unused valve stations.
*2) Necessary for using two different pressure.

Options

- Alternative threads
- Intrinsically safe coils

SOLENOID ACTUATED INLINE SPOOL VALVE

97105 3/2, 5/2 & 5/3, G1/4 – G1/2

- UV-approval based on type examination DIN EN 161, DIN 3394 and IEC 61 508, multichannel up to SIL 3
- Crossover-free switching
- Suited for outdoor use under critical environment conditions
- Variable valve solenoid combination
- Add-on manual override

Technical Data

Medium:
Filtered, non-lubricated and dried compressed air, instrument air, nitrogen and other non-flammable neutral, dry fluids

Operating pressure:
2,5 … 8 bar with internal air supply
0 … 8 bar with external air supply

Ambient/Media temperature:
-40°C … +65°C (SNBR)
-25°C … +80°C (HNBR)
Depending on solenoid system

Air supply must be dry enough to avoid ice formation at temperatures below +2°C
For outdoor installations must be protected all connections against the penetration of moisture and a solenoid with IP66 protection must be used!

Materials

Body:
Aluminium 3.0615 with surface treatment for rough environmantal conditions. (Stainless steel DIN 50018: Condensate test with alternating temperatures in sulphuric atmosphere, DIN 50021/ASTM B117-73: Salt spray test with different sodium chloride solutions, tested in ammonia atmosphere).
Stainless steel 1.4404 (316 L)

Seals:
SNBR (special NBR) or HNBR

The solenoid valves are used in ATEX- zones, resulting from Protection Class Atex-category of solenoids (see table of solenoids).

Models – Housing: aluminium anodized: SNBR -40°C … +65°C *3)

Model *1)	Port size	Function	Actuation/Return	Operating pressure (bar)	Flow (l/min)	Test certificate IEC 61508 *2)	Dimension No.
9713535000000000	G1/4	3/2	Solenoid/Spring	2,5 … 8	1300	x	1
9713555000000000	G1/2	3/2	Solenoid/Spring	2,5 … 8	2600		2
9710535000000000	G1/4	5/2	Solenoid/Spring	2,5 … 8	1300	x	3
9710555000000000	G1/2	5/2	Solenoid/Spring	2,5 … 8	2600		4
9711535000000000	G1/4	5/2	Solenoid/Solenoid	2,5 … 8	1300		5
9712535000000000	G1/4	5/3	Solenoid/Solenoid, APB	2,5 … 8	950		7

Models – Housing: stainless steel: SNBR -40°C … +65°C *3)

Model *1)	Port size	Function	Actuation/Return	Operating pressure (bar)	Flow (l/min)	Test certificate IEC 61508 *2)	Dimension No.
9713735000000000	G1/4	3/2	Solenoid/Spring	2,5 … 8	1300	x	1
9713755000000000	G1/2	3/2	Solenoid/Spring	2,5 … 8	2600		2
9710735000000000	G1/4	5/2	Solenoid/Spring	2,5 … 8	1300	x	3
9710755000000000	G1/2	5/2	Solenoid/Spring	2,5 … 8	2600		4
9711735000000000	G1/4	5/2	Solenoid/Solenoid	2,5 … 8	1300		5

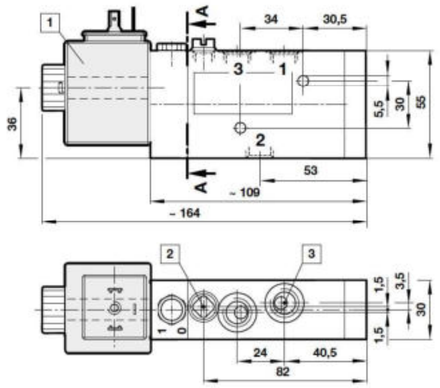
*1) Models shown are without coil. When ordering please indicate solenoid, voltage and current type (frequency).
NOTE:To order one valve you need to add the following information:
- Valve body part number according to the Model column without 000000000.
- Solenoid code according to the table below.
- Voltage and frequency: 02400 for 24V d.c. and 23050 for 230V a.c.
*2) Since May 2008, Date code A8192.
*3) For operation in plants according to IEC 61511/61508 -40°C … +40°C see test certificate (on request).

SOLENOID ACTUATED SPOOL VALVE

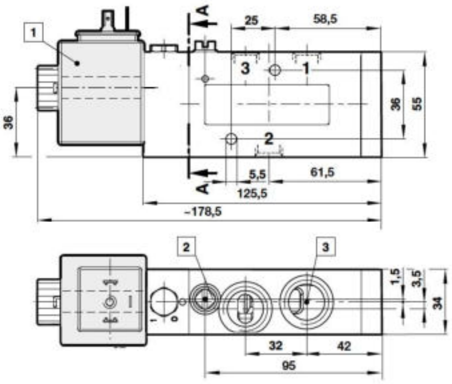
97105 3/2, 5/2 & 5/3, G1/4 – G1/2

Dimensions

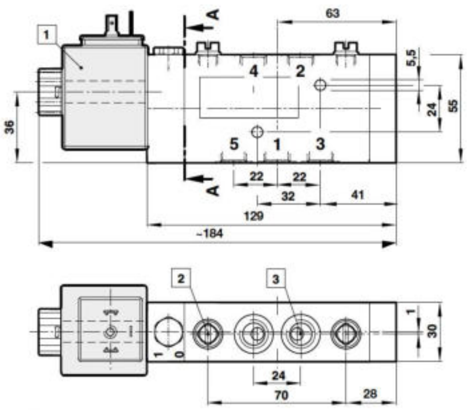
1 - 9713535, 9713735



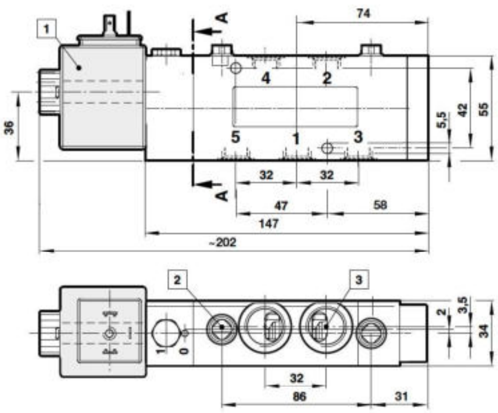
2 - 9713555, 9713755

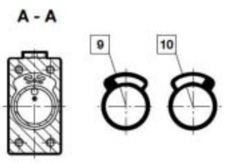


3 - 9710535, 9710735



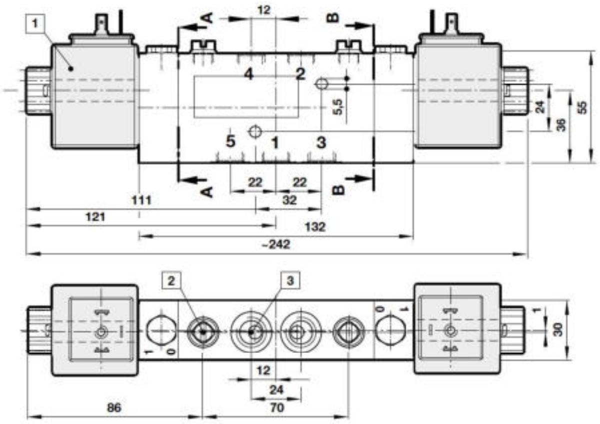
4 - 9710555, 9710755



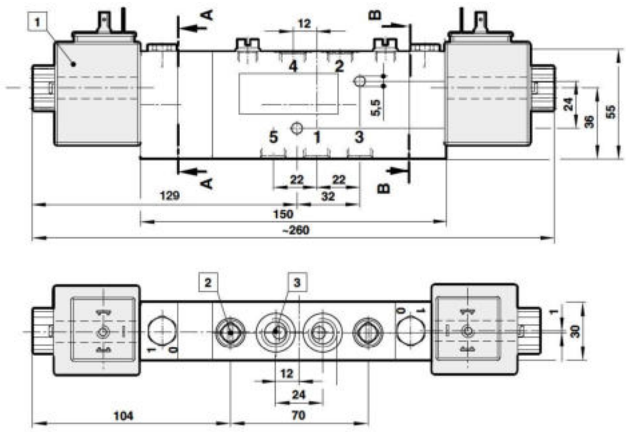


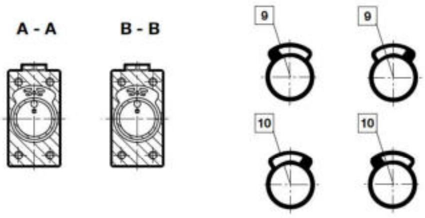
1 Solenoid
2 External control pressure connection G1/8
3 Working port G1/4, G1/2
9 Position of gasket internal pilot air
10 Position of gasket external pilot air

5 - 9711535, 9711735



7 - 9712535





1 Solenoid
2 External control pressure connection G1/8
3 Working port G1/4, G1/2
9 Position of gasket internal pilot air
10 Position of gasket external pilot air

SOLENOID ACTUATED NAMUR SPOOL VALVE

97105 3/2, 5/2 & 5/3, G1/4 – G1/2

- TUV-approval based on type examination DIN EN 161, DIN 3394 and IEC 61 508
- Valves for safety systems multi-channel up to SIL 3
- Crossover-free switching
- Add-on manual override
- International approvals: IEC Ex, FM, CSA

Technical Data

Medium:
Filtered, non-lubricated and dried compressed air, instrument air, nitrogen and other non-flammable neutral, dry fluids

Operating pressure:
2,5 … 8 bar with internal air supply
0 … 8 bar with external air supply (G1/2, 1/2 NPT or low power pilot system only)

Ambient/Media temperature:
Valve:
-40°C … +65°C (SNBR)
-25°C … +80°C (HNBR)
Depending on solenoid system.

Air supply must be dry enough to avoid ice formation at temperatures below +2°C
For outdoor installations must be protected all connections against the penetration of moisture and a solenoid with IP66 protection must be used!

Materials

Body:
Aluminium 3.0615 with surface treatment for rough environmantal conditions. Approved according to DIN 50018: Condensate test with alternating temperatures in sulphuric atmosphere, DIN 50021/ ASTM B117-73: Salt spray test with different sodium chloride solutions, tested in ammonia atmosphere).
Stainless steel 1.4404 (316 L)

Seals:
SNBR (special NBR) or HNBR

The solenoid valves are used in ATEX- zones, resulting from Protection Class Atex-category of solenoids (see table of solenoids).

Models – Housing: aluminium anodized, pilot flange: SNBR -40°C … +65°C *3)

Model *1)	Port size 1, 3, (5)	2, 4	Actuation/Return	Operating pressure (bar)	Flow *4) (l/min)	Test certificate IEC 61508 *2)
						
9710505000000000	G1/4	Flange	Solenoid/Spring	2,5 … 8	1300	x
9710595000000000	G1/2	Flange	Solenoid/Spring	2,5 … 8	2600	–
9711505000000000	G1/4	Flange	Solenoid/Solenoid	2,5 … 8	1300	–

Models – Housing: stainless steel, pilot flange: SNBR -40°C … +65°C *3)

Model *1)	Port size 1, 3, (5)	2, 4	Actuation/Return	Operating pressure (bar)	Flow *4) (l/min)	Test certificate IEC 61508 *2)
						
9710705000000000	G1/4	Flange	Solenoid/Spring	2,5 … 8	1300	x
9711705000000000	G1/4	Flange	Solenoid/Solenoid	2,5 … 8	1300	–

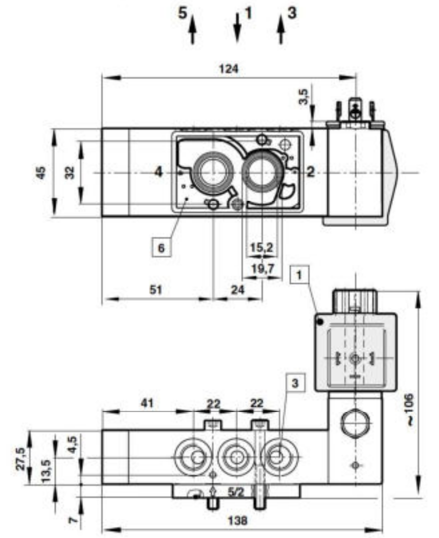
G1/4 Flange Solenoid/solenoid Aluminium 2,5 … 8 bar.
*1) Models shown are without coil. When ordering please indicate solenoid, voltage and current type (frequency).
NOTE:To order one valve you need to add the following information:
- Valve body part number according to the Model column without 000000000.
- Solenoid code according to the table below.
- Voltage and frequency: 02400 for 24V d.c. and 23050 for 230V a.c.
*2) Since May 2008, Date code A8192.
*3) For operation in plants according to IEC 61511/61508 -40°C … +40°C see test certificate (on request).
*4) Flow characteristics conforms to ISO6358 [6 » 5 bar].
Note for *4): Connecting pipe / Fitting: In order to ensure and a pressure collapse avoid the flow, the supply air cross section shouldwith 1/4: ≥ 8 mm; with 1/2: ≥≥ 10 mm. With smaller cross section the inlet (A1) should more largely, however at least equally large line at the port (A2; A1).

SOLENOID ACTUATED NAMUR SPOOL VALVE

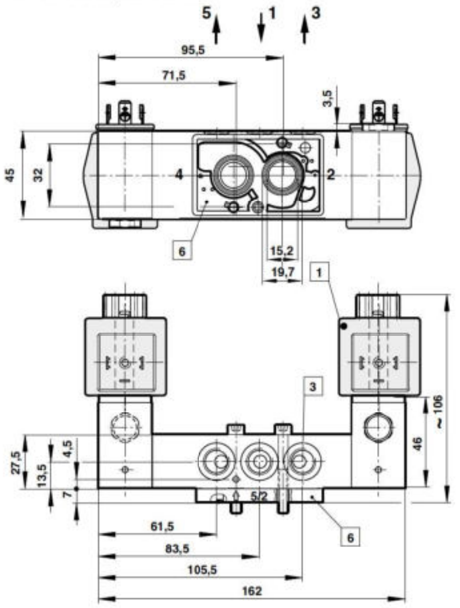
97105 3/2, 5/2 & 5/3, G1/4 – G1/2

Dimensions

1 - 9710505, 9710705

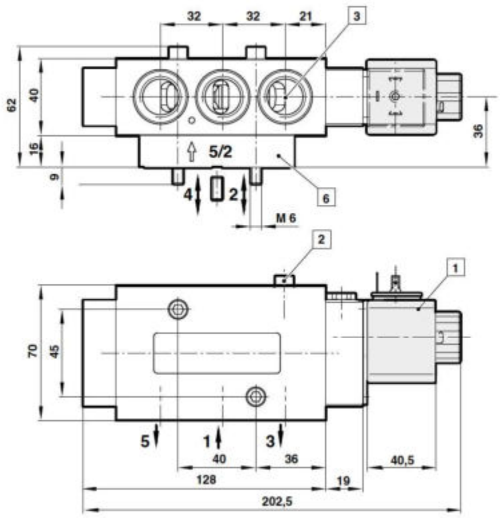


2 - 9711505, 9711705



1 Solenoid
3 Port G1/4
6 NAMUR connection plate 3/2 or 5/2 way function

3 - 9710595



1 Solenoid
2 External control pressure connection G1/8
3 Port G1/2
6 NAMUR connection plate 3/2 or 5/2 way function

SOLENOID OPERATORS & ACCESSORIES

97105 Inline/Namur

Solenoid operators

	Model	Power consumption		Rated current		Ex-Protection	Protection Class (ATEX-Category) Nominal resistance (according to EN60529)	Temperature Ambient/Medium (°C)	Electrical connection
		24 V DC (W)	230 V AC (VA)	24 V DC (m A)	230 V AC (m A)				
	0763	1,9	2,1 *5)	78	11	–	IP00 without Connector IP65 (with Connector)	-25 … +60	DIN EN 175 301-803 Form A *5) *6)
	4200	0,8	–	38	–	II2G II2D	Ex e mb IIC T5/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 … +80 T5 -40 … +70 T6 -40 … +80	M20 X 1,5 *6)
	4201	–	1,3	–	6	II2G II2D	Ex e mb IIC T5/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 … +80 T5 -40 … +70 T6 -40 … +80	M20 X 1,5 *6)
	4602	0,8	–	33	–	II2G II2D	Ex d mb IIC T5/T6 Gb Ex e mb IIC T5/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 … +80 T5 -40 … +70 T6 -40 … +80	M20 X 1,5 *6)
	4603	–	1,3	–	6	II2G II2D	Ex d mb IIC T5/T6 Gb Ex e mb IIC T5/T6 Gb Ex tb IIIC T130°C Db IP 66 (with cable gland)	-40 … +80 T5 -40 … +70 T6 -40 … +80	M20 X 1,5 *6)
Stainless Steel 	4802	0,8	–	33	–	II2G	Ex mb d IIC T4/T6 Gb Ex mb e II T4/T6 Gb IP 66 (with cable gland)	-40 … +50 T4 -40 … +40 T6	M20 X 1,5 *6)
	4803		1,3	–	6	II2G	Ex mb d IIC T4/T6 Gb Ex mb e II T4/T6 Gb IP 66 (with cable gland)	-40 … +50 T4 -40 … +40 T6	M20 X 1,5 *6)

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.

*5) Required connector: model 0570275 for V DC; model 0663303 for V AC, to be ordered Solenoid Voltage 200V DC!

*6) Connector cable gland not supplied, see table »Accessories«.

Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland. Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

Accessories

Cable gland Protection Ex e, Ex d (ATEX), Nickel plated brass/stainless steel	Model	Thread	Cable Ø	Material	Protection class (ATEX)
	0588819000000000	M 20x1,5	5,0 … 8,0 mm	Nickel plated brass	II2GD Ex e
	0588851000000000	M 20x1,5	10 … 14 mm	Nickel plated brass	II2GD Ex d
	0588925000000000	1/2-14-NPT	7,5 … 11,9 mm	Nickel plated brass	II2GD Ex d
	0589385000000000	M 20x1,5	9,0 … 13 mm	Model Approvals 1.4571 (316 Ti)	II2GD Ex e
	0589395000000000	M 20x1,5	7,0 … 12 mm	Model Approvals 1.4571 (316 Ti)	II2GD Ex d
	0589387000000000	M 20x1,5	10 … 14 mm	Model Approvals 1.4571 (316 Ti)	II2GD Ex d

Connector	Inlet filter	Add-on manual override	Add-on manual override (for start-up only)
			
0570275000000000	0681173000000000 (1/4")	0553886000000000 (without detent)	0613379000000000 (without detent)
0663303 000000000 (with rectifier)		0553887000000000 (with detent)	

*1) For indoors use only.

*2) For outdoors use ~ 0,2 (bar).

Approvals

Model	Approvals	
	ATEX	IECEx
42xx	KEMA 98 ATEX 4452 X	IECEx KEM 09.0068X
46xx	PTB 02 ATEX 2085 X	IECEx PTB 11.0094X
48xx	PTB 06 ATEX 2054 X	IECEx PTB 07.0039X

ELECTROMAGNETIC ACTUATED, MANUAL OVERRIDE

6316 Inline, G1/4, 1/4 NPT

- Port size: 1/4" (ISO G/NPT)
- For single acting actuators
- NO, NC, Universal valve
- Turn and lock type manual override (optional)
- Valve switches at power failure into starting position (Mechanical return spring)
- Suited for outdoor use under critical environment conditions
- Variable valve coil combination (see coil list)

Technical Data

Medium:
Compressed air

Operation:
Electromagnetic actuated, Manual Override

Operating pressure:
0 … 8 bar (0 … 116 psi)

Orifice:
3 mm

Port size:
G1/4, 1/4 NPT

Mounting position:
Optional, preferably vertical

Flow direction:
Fixed

Electrical connection:
See solenoid table

Ambient temperature:
Ambient:
-20°C … +65°C (-4 … +149°F)
Media:
-20°C … +80°C (-4 … +176°F)
Depending on solenoid system
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Materials

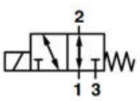
Body: Aluminium (Anodized), Brass and SS 316L for critical environment conditions.

Seals: FKM

Note:

For Outdoor installations Coil must be protected from moisture by using cable gland of IP Classification or above.

3/2 Way Universal Valves with temperature -20°C … +80°C, Housing: Aluminum, Brass and SS316L

Symbol	Model *1)	Port size	Material	Actuation/return	Operating pressure (bar)	Flow (l/min)	Weight (kg)
	631605316001***	G1/4	Aluminium	Solenoid/ air spring	0 … 8	340	0,33
	631605416001***	1/4 NPT	Aluminium	Solenoid/ air spring	0 … 8	340	0,33
	631615316001***	G1/4	Brass	Solenoid/ air spring	0 … 8	340	0,67
	631615416001***	1/4 NPT	Brass	Solenoid/ air spring	0 … 8	340	0,67
	631625316001***	G1/4	SS 316L	Solenoid/ air spring	0 … 8	340	0,65
	631625416001***	1/4 NPT	SS 316L	Solenoid/ air spring	0 … 8	340	0,65

*1) When ordering, please indicate solenoid, voltage and current (frequency).
Flow 1 bar differential pressure ~ 160 lpm.

Option selector

6316★★★★.★★★★.★★★★★

Material - Valve body	Substitute
Aluminium	0
Brass	1
Stainless Steel	2
Seal	**Substitute**
FKM (-20°C … +80°C)	5
Port size	**Substitute**
G1/4	3
1/4 NPT	4
Version	**Substitute**
Without Manual Override	0
With Manual Override	1

Voltage	Substitute
24 V d.c.	02400
110 V a.c.	11050
230 V a.c.	23050
Coil protection	**Substitute *1)**
IP65 - M20	6001
IP65 - NPT	6002
ATEX - NPT d.c.	4670
ATEX - NPT a.c.	4671
ATEX - M20 d.c.	4672
ATEX - M20 a.c.	4673

*1) Application using lower power rated coils is possible, please consult your local IMI Technical / Sales person for details.

ELECTROMAGNETIC ACTUATED, MANUAL OVERRIDE

6316 Inline, G1/4, 1/4 NPT

Solenoids, standard voltages

Model	Power consumption			Rated current			Protection class IP/NEMA	Temperature Ambient/Media (°C)	Electrical connection	Weight	Drawing	Circuit diagram
	24 V d.c. (W)	110 V a.c. (VA)	230 V a.c. (VA)	24 V d.c. (A)	110 V a.c. (A)	230 V a.c. (A)				(kg)	No.	No.
6316****.6001.*****	~18	~18	~18	~0.7	~0.19	~0.08	IP65 (with connector) *6)	Ambient: -20 … +65 Media: -20 … +80	M20 x 1.5	0,35	1 & 2	1&2
6316****.6002.*****	~18	~18	~18	~0.7	~0.19	~0.08	IP65 (with connector) *6)	Ambient: -20 … +65 Media: -20 … +80	1/2 NPT *7)	0,36	1 & 2	1&2
6316****.4670.*****	~8.9	–	–	–	–		ATEX : II2G & II2D EEx md IIC T4/T6 EEx me IIC TT4/T6 IP66 T130°C *8)	Ambient: -20 … +65 Media: -20 … +55	1/2 NPT *7)	0,8	3 & 4	3
6316****.4671.*****	–	~10	~10	–	~0.043	~0.043	ATEX : II2G & II2D EEx md IIC T4/T6 EEx me IIC TT4/T6 IP66 T130°C *8)	Ambient: -20 … +65 Media: -20 … +55	1/2 NPT *7)	0,8	3 & 4	4
6316****.4672.*****	~8.9	–	–	~0.369	~0.043	–	ATEX : II2G & II2D EEx md IIC T4/T6 EEx me IIC TT4/T6 IP66 T130°C *8)	Ambient: -20 … +65 Media: -20 … +55	M20 x1,5 *7)	0,8	3 & 4	3
6316****.4673.*****	–	~10	~10	–	~0.043	~0.043	ATEX : II2G & II2D EEx md IIC T4/T6 EEx me IIC TT4/T6 IP66 T130°C *8)	Ambient: -20 … +65 Media: -20 … +55	M20 x1,5 *7)	0,8	3 & 4	4

*1) Coil Insulation Class – H.
*2) Degree of protection applies to complete assembly composed of valve and coil, with electrical wiring according to IP Classification.
*3) Temperatures mentioned refer to coils only.
*4) This coil has a fuse with an appropriate rating.
*5) Standard voltages (±10%) 24 V d.c., 110 V a.c., 230 V a.c., other voltages on request. 100% duty cycle.
*6) Electrical connector – terminal type (with metal cable entry).
*9) For other power coils please contact Engineering Team.
*7) Connector/cable gland is not in the scope of delivery. See table accessories.
*8) Approvals for model 46xx: ATEX(PTB 02 ATEX 2085X) and IECEx (PTB 11.0094X).
*10) Note: For Outdoor installations Coil must be protected from moisture by using cable gland of IP Classification or above.

Accessories

Inlet filter	Silencer (plastic) *3)	Silencer (stainless steel) *3)	Silencer (brass) *1)	Exhaust guard *4)
				
0681173 (G1/4, 1/4 NPT)	C/S2 (1/4 NPT)	0613678 (1/4 NPT)	MS002A (1/4 NPT)	0613422 (G1/4, 1/4 NPT)

*3) For indoors use only.
*4) For outdoors use, opening pressure 0,2 bar.

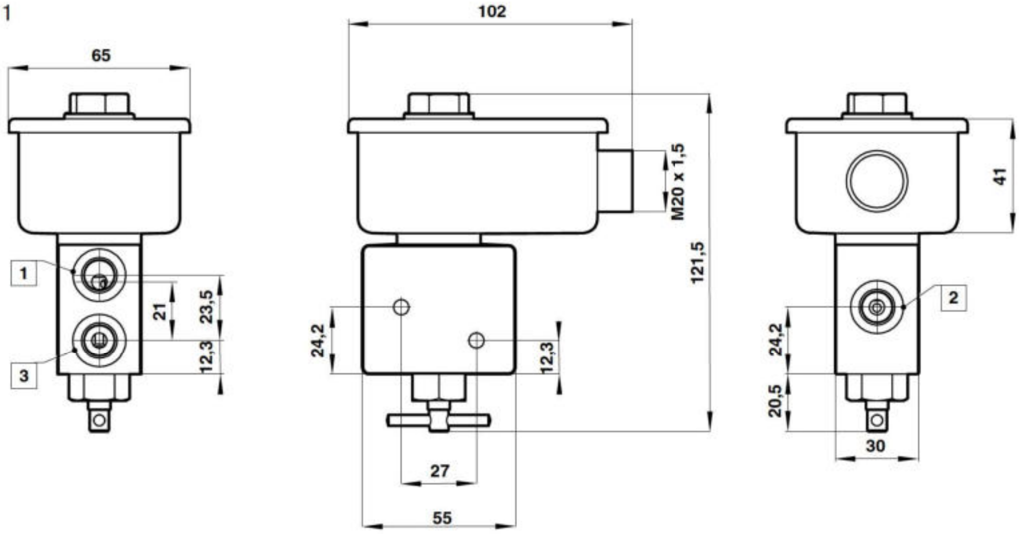
ELECTROMAGNETIC ACTUATED, MANUAL OVERRIDE
6316 Inline, G1/4, 1/4 NPT

Dimensions

Valves 3/2 way Inline - with Override
(Turn and Lock Type)

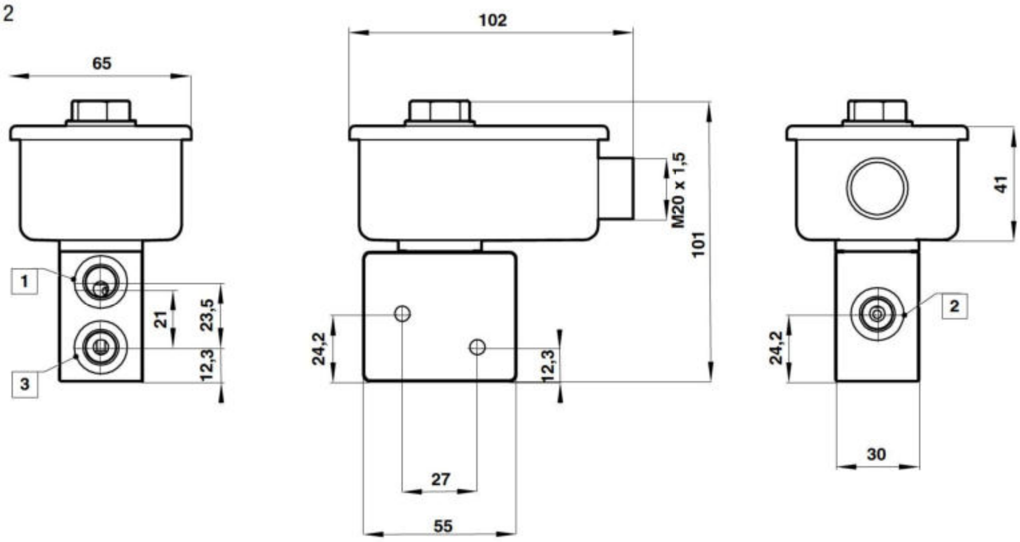
V4155*3D-C3***
5/2 Single solenoid pilot valve
Air spring return

1



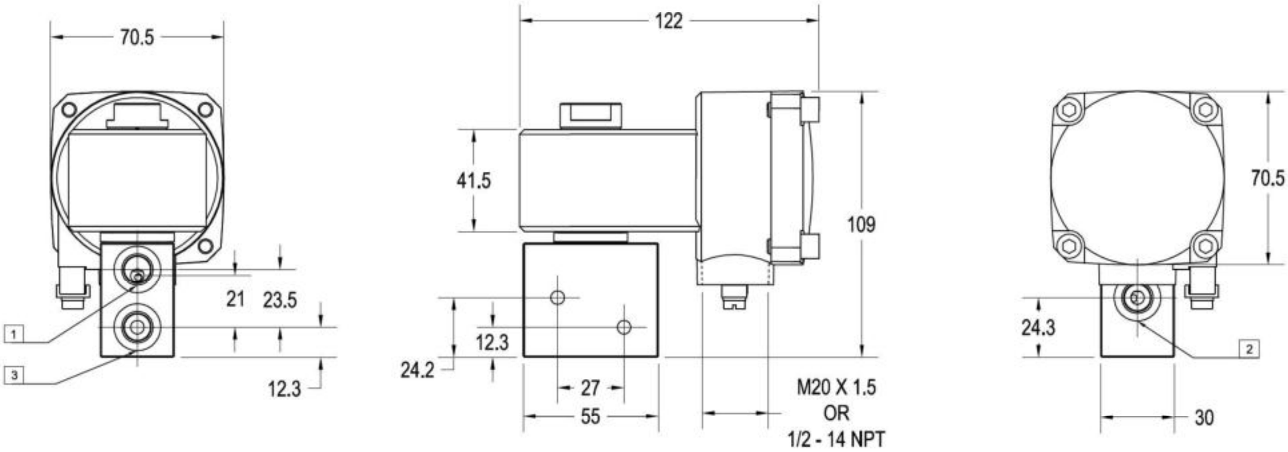
3/2 way Inline - without Override

2



3/2 way Inline - without Override

3



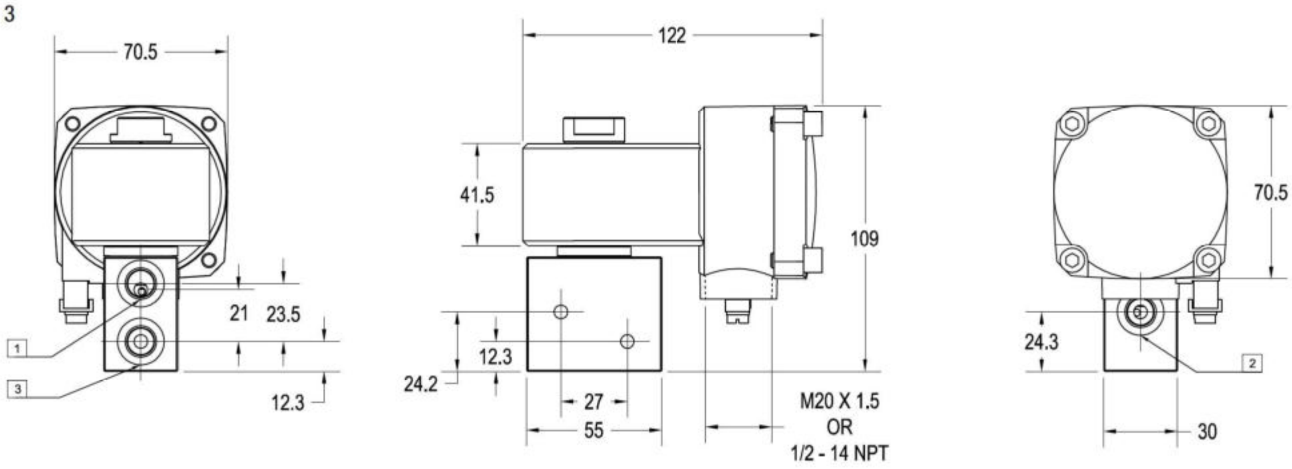
ELECTROMAGNETIC ACTUATED, MANUAL OVERRIDE

6316 Inline, G1/4, 1/4 NPT

Valves

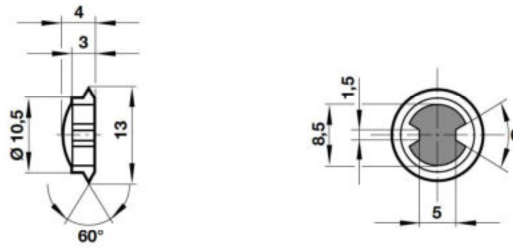
3/2 way Inline - with Override

3



Inlet filter

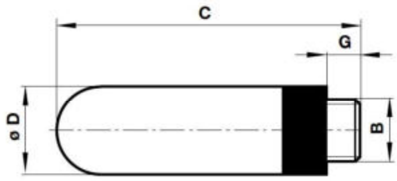
Model: 0681173



Thread pitch diameter max. 11,85 mm

Silencer (plastic)

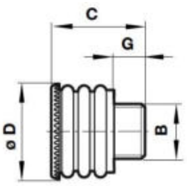
Model: C/S2



Model	B	G	C	Ø D	Weight (g)
M/S2	G1/4	7	35,5	15,5	2,9
C/S2	1/4 NPT	7	35,5	15,5	2,9

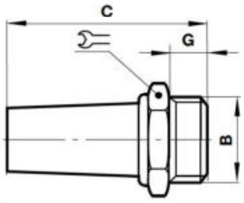
Exhaust guard

Model: 0613422



Model	B	Suitable for	G	C	Ø D	Weight (g)
0613422	1/4"	G1/4, 1/4 NPT	10	26,5	21	5

Silencer (brass or stainless steel)

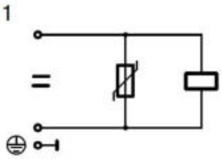


Model	B	C	G	(wrench)	Weight (g)
MS002A	1/4 NPT	35	8	9/16	18
0613678 *5)	1/4 NPT	36	8	16	67

*5) Stainless steel

Circuit diagrams

1



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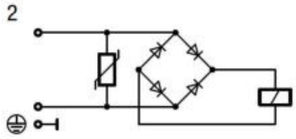

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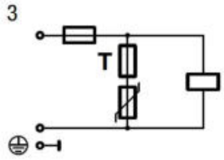

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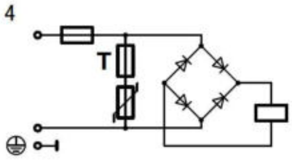


DIRECT SOLENOID ACTUATED POPPET VALVES

24011 5 mm orifice (ND) 3/2, Universal, G1/4, 1/4 NPT, flange with NAMUR interface

- Main application: single operated process actuators
- TÜV-approval based on IEC 61 508, DIN V 19 251. Approvals: DIN EN 161/3394 DVGW, group Rm and EN 13611
- Standard NAMUR type manifold system for easy assembly
- Rest position in the event of power failure provided by mechanical return spring
- Solenoids include ATEX versions
- Suitable for outdoor use under critical environment conditions (see solenoid list)

Technical Data

Medium:
Neutral or aggressive gaseous or liquid fluids. Fluid viscosity up to 40 centistokes.
Compressed air, filtered, non-lubricated and dry.

Flow:
340 l/min

Flow direction:
Optional

Mounting position:
Optional, preferably vertical

Media temperature:
-25°C … +80°C NBR,
-10°C … +120°C FPM
water up to +95°C,
-40°C … +60°C VMQ

For temperatures below 0°C use conditioned dry air.
If installed outdoors protect all connections against the penetration of moisture.
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

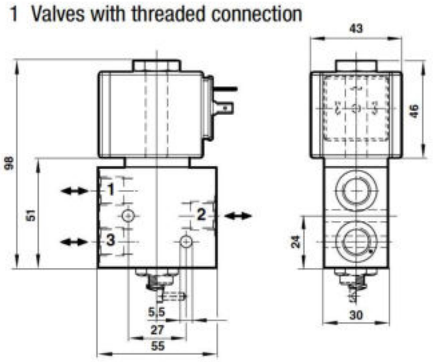
Valve body, trim, coil housing and top cover:
Stainless steel 1.4404 (316 L)

O-rings seats & seals:
High NBR

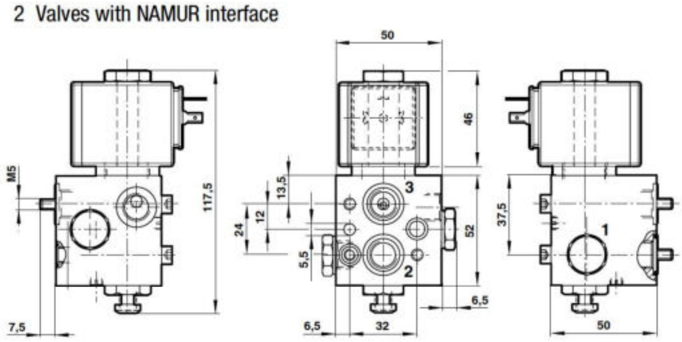
Body:
Aluminium anodized
(suitable for high humidity, sulphuric, sodium chloride or ammonia environments), brass 2.0401 (Ms 58) or stainless steel 1.4404 (316 L)

Dimensions

1 Valves with threaded connection



2 Valves with NAMUR interface



Models – Valves with threaded connection – Brass valves

Model	Voltage	Port size	Operating pressure (bar)	Materials seat seal	Manual override	Solenoid group	Dimension No.	Test certificate IEC 61 508
								
2401103080002400	24 V d.c.	G1/4	0 … 10	NBR	–	A	1	•
2401103380323050	230 V a.c.							
2401103426002400	24 V d.c.	G1/4	0 … 10	NBR	–	B	1	•
2401103426123050	230 V a.c.							
2401103466002400	24 V d.c.	G1/4	0 … 10	NBR	–	B	1	•
2401126080002400	24 V d.c.	G1/4	0 … 10	FPM	–	A	1	•
2401126380323050	230 V a.c.							
2401126426002400	24 V d.c.	G1/4	0 … 10	FPM	–	B	1	•

Models – Valves with threaded connection – Stainless steel valves (1,4404/316l) for aggressive environment

Model	Voltage	Port size	Operating pressure (bar)	Materials seat seal	Manual override	Solenoid group	Dimension No.	Test certificate IEC 61 508
2401147080002400	24 V d.c.	1/4 NPT	0 … 10	FKM	–	A	1	
2401147380323050	230 V a.c.							

DIRECT SOLENOID ACTUATED POPPET VALVES

24011 5 mm orifice (ND) 3/2, Universal, G1/4, 1/4 NPT, flange with NAMUR interface

Models – Valves with namur interface – Aluminium valves anodized

Model	Voltage	Port size	Operating pressure (bar)	Materials seat seal	Manual override	Solenoid group	Dimension No.	Test certificate IEC 61 508**
2401109080002400	24 V d.c.	G1/4	0 … 10	NBR	Add-on	A	2	•
2401109380323050	230 V a.c.							
2401109426002400	24 V d.c.	G1/4	0 … 10	NBR	Add-on	B	2	•
2401109426123050	230 V a.c.							

** Certificate not included with valve and should be ordered separately- part number 0695241000000000
Approval S 137/01, SIL 4 for low demand mode, SIL 3 for high demand mode, Approval S 83/96, AK 7 (request from manufacturer)
Particulary for valves with TÜV approval and installation in plants, based on safety standards DIN V 19250, IEC 61511, taking into account Maintenance instruction document 7503444.
The responsibility for the maintenance and repair of the solenoid valves lies with the users or the supervisory authority for these process systems.

Group A solenoid details

	Power Consumption 24 V d.c. (W)	Power Consumption 230 V a.c. (VA)	Voltage 24 V d.c. (mA)	Voltage 230 V a.c. (mA)	Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
									
	16,9	–	703	–	–	IP00 without plug [5] IP65 with plug [5]	-25 … +60	DIN EN175301-803 Form A [6]	0800 [7]
	–	19,5	–	75	–	IP00 without plug [5] IP65 with plug [5]	-25 … +60	DIN EN175301-803 Form A [6]	3803 [7]

Group B solenoid details

	Power Consumption 24 V d.c. (W)	Power Consumption 230 V a.c. (VA)	Voltage 24 V d.c. (mA)	Voltage 230 V a.c. (mA)	Protection category	Protection class	Temperatures °C ambient/fluid	Electrical connection	Solenoid code
									
	3,9	–	162	–	II2G II2D	Ex e mb IIC T4/T6 Gb Ex tb IIIC T 130°C Db IP66 [*2), *10)]	T4: -40 … +80 T6: -40 … +55	M20 x 1,5 [6]	4260 [8]
	–	5,3	–	23	II2G II2D	Ex e mb IIC T4/T6 Gb Ex tb IIIC T 130°C Db IP66 [*2), *10)]	T4: -40 … +80 T6: -40 … +55	M20 x 1,5 [6]	4261 [8]
	3,9	–	162	–	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db [*3)]	T4: -40 … +80 T6: -40 … +55	1/2 NPT [6]	4660 [8]

Standard voltages 24 V d.c., 230 V a.c. Other voltages on request. Design acc. to VDE 0580, EN 50014/50028. 100% duty cycle.
2) Category II 2 GD, EC-Type Examination Certificate KEMA 98 ATEX 4452 X.
3) Category II 2 GD, EC-Type Examination Certificate PTB 02 ATEX 2085 X.
5) Required connector for d.c. type 0570275. Connector with rectifier for a.c. or universal current: type 0663303.
6) Connector/cable gland not supplied, see 'Accessories' table.
7) Suitable for outdoor installation only if equipped with a special protection (e.g. cubicle installation).
8) This solenoid has a fuse with an appropriate rating.
10) IEC Ex Certificate of Conformity IEC Ex KEM 09.0068.

Accessories

Cable glands Protection class EEx e, EEx d (ATEX), Ms nickel plated brass	Connectors d.c.	Connectors a.c.	Silencer
			
EEx e 0588819000000000 (for solenoid 42xx /46xx M20 x 1,5)	0570275000000000	0663303000000000 with rectifier	M/S2 (G1/8)*
EEx e 0588925000000000 (for solenoid 42xx / 46xx 1/2" NPT)			

* For indoor use.

Options

- Push only manual override
- Semi automatic manual override
- Turm & lock maual override
- Additional ATEX coils
- IECEx approved coils

6215M INLINE & NAMUR

3/2, 5/2 – 1/4 NPT

- G1/4, 1/4 NPT or NAMUR Interface
- Indirect solenoid actuated spool valve
- 3/2 & 5/2
- Suited for outdoor use under critical environment conditions
- Variable valve solenoid combition

Technical Data

Medium:
Filtered, non-lubricated or lubricated and dried compressed air

Operating pressure:
2,5 … 8 bar (36 … 116 psi)
with internal air supply

Ambient/Media temperature:
-40°C … +60°C (-40°F … +140°F)
Depending on solenoid system
Air supply must be dry enough to avoid ice formation attemperatures below +2°C
For outdoor installations must be protected all connections against the penetration of moisture and a solenoid with IP65 protection must be used!

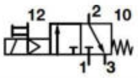
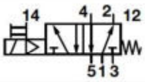
Materials

Body:
Aluminum with surface treatment for critical environmental conditions

Seal:
Special NBR

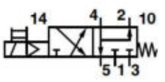
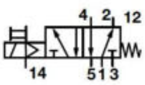
Technical data

3/2 and 5/2 way valve Inline
Housing: Aluminum anodised, Seals: -40°C … +60°C (-40 … +140°F)

Symbol	Port size	Orifice (mm)	Function	Actuation/return	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Model
	G1/4	6	3/2	Solenoid/spring	1200	2,5 … 8	0,392	6215M3530
	1/4 NPT	6	3/2	Solenoid/spring	1200	2,5 … 8	0,392	6215M3540
	G1/4	6	3/2	Solenoid/spring	1200	2,5 … 8	0,442	6215M0530
	1/4 NPT	6	3/2	Solenoid/spring	1200	2,5 … 8	0,442	6215M0540

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

3/2 and 5/2 way valves NAMUR
Housing: Aluminium anodized, Seals: NBR -40°C … +60°C (-40 … +140°F)

Symbol	Ports 1, 3, 5	2, 4	Orifice (mm)	Actuation/return	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Model
 	G1/4	Flange	6	Solenoid/spring	1200	2,5 … 8	0,48	6215M0500
	1/4 NPT	Flange	6	Solenoid/spring	1200	2,5 … 8	0,48	6215M0510

*1) When ordering please indicate solenoid, voltage and current type (frequency)
Valve function: 3/2 or 5/2 way function

Solenoids group 13B, standard voltages

	Power consumption		Rated current		Protection class	Ex-protection (ATEX-Category)	Temperature Ambient/Media	Electrical connector	Weight	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)	IP/NEMA		(°C)		(kg)	
	3,9	–	162	–	IP66 (with cable gland)	II 2 G Ex e mb IIC T4/ T6 Gb II 2 D Ex tb IIIC T130°C Db IP66	T4: -40 …+80 T6: -40 … +55 -40 … +80	M20 x 1,5 *1)	0,5	4210
	–	5,3	–	23	IP66 (with cable gland)	II 2 G Ex e mb IIC T4/ T6 Gb II 2 D Ex tb IIIC T130°C Db IP66	T4: -40 … +80 T6: -40 … +55 -40 … +80	M20 x 1,5 *1)	0,5	4211
	3,9	–	162	–	IP66 (with cable gland)	II 2 G Ex d mb IIC T4/ T6 Gb II 2 G Ex e mb IIC T4/ T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 … +80 T6: -40 … +55 -40 … +80	1/2 NPT *1)	0,8	4610
	–	5,3	–	23	IP66 (with cable gland)	II 2 G Ex d mb IIC T4/ T6 Gb II 2 G Ex e mb IIC T4/ T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 … +80 T6: -40 … +55 -40 … +80	1/2 NPT *1)	0,8	4611
	3,9	–	162	–	IP66 (with cable gland)	II 2 G Ex d mb IIC T4/ T6 Gb II 2 G Ex e mb IIC T4/ T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 … +80 T6: -40 … +55 -40 … +80	M20 x 1,5 *1)	0,8	4612
	–	5,3	–	23	IP66 (with cable gland)	II 2 G Ex d mb IIC T4/ T6 Gb II 2 G Ex e mb IIC T4/ T6 Gb II 2 D Ex tb IIIC T130°C Db	T4: -40 … +80 T6: -40 … +55 -40 … +80	M20 x 1,5 *1)	0,8	4613
	5,5	–	228	–	NEMA 4, 4X, 6, 6P, 7, 9	XP/DIP, Div. 1 & 2 Cl. I, Gr. A-D Cl. II/III, Gr. E-G T3 (160°C)	-20 … +60	Flying leads 450 mm	0,5	3722
	–	5,9	–	26	NEMA 4, 4X, 6, 6P, 7, 9	XP/DIP, Div. 1 & 2 Cl. I, Gr. A-D Cl. II/III, Gr. E-G T3 (160°C)	-20 … +60	Flying leads 450 mm	0,5	3723

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*1) Connector/cable gland is not scope of delivery, see table »Accessories«
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland.
Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

6215M INLINE & NAMUR
3/2, 5/2 – 1/4 NPT

Accessories Electrical connection

Cable gland Protection class Ex e, Ex d	Thread	Cable Ø (mm)	Materials	Protection class (ATEX)	Model
	M20 x 1,5	5 … 8	Nickel plated brass	II 2 GD Ex e	588819
	M20 x 1,5	10 … 14	Nickel plated brass	II 2 GD Ex d	588851
	1/2 NPT	7,5 … 11,9	Nickel plated brass	II 2 GD Ex d	588925
	M20 x 1,5	9 … 13	Stainless steel 1.4571 (316 Ti)	II 2 GD Ex e	589385
	M20 x 1,5	7 … 12	Stainless steel 1.4404 (316 L)	II 2 GD Ex d	589395
	M20 x 1,5	10 … 14	Stainless steel 1.4404 (316 L)	II 2 GD Ex d	589387

Approvals

Model	Approvals ATEX	IECEx	FM
372x, 382x	–	–	CSA-LR 57643-6
42xx	KEMA 98 ATEX 4452 X	IECEx KEM 09.0068X	–
46xx	PTB 02 ATEX 2085 X	IECEx PTB 11.0094X	–

Accessories

Adaptor complete (Adaptor, inlet filter and seal ring)	Inlet filter	Silencer (plastic) *8)	Silencer (stainless steel) *1)	Silencer (brass) *8)	Exhaust guard *9)	Conversion plate
						
0613487 (G1/4)	0681173 (G1/4, 1/4 NPT)	M/S2 (G1/4)	0014613 (G1/4)	T40C2800 (G1/4)	0613422 (G1/4, 1/4 NPT)	A1502-Z11

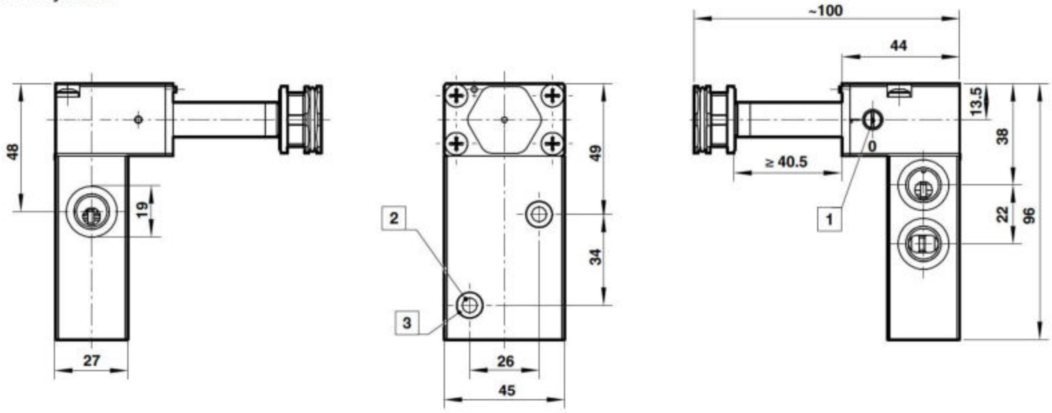
6215M INLINE & NAMUR

3/2, 5/2 – 1/4 NPT

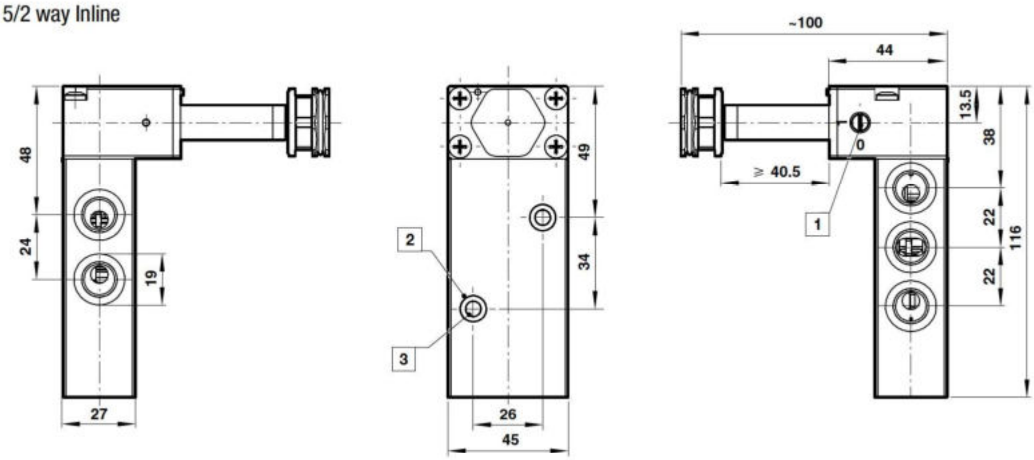
Dimensions

Valves

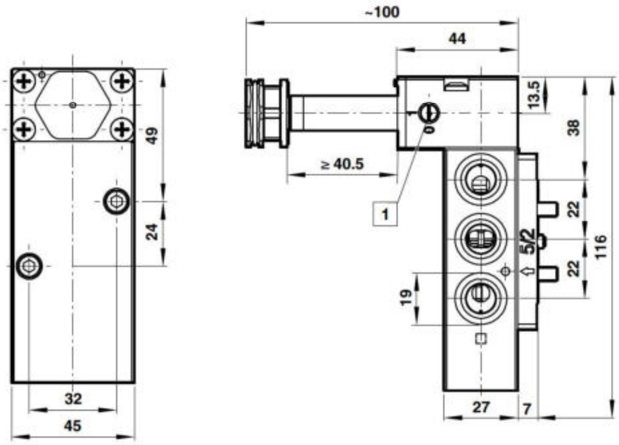
3/2 way Inline



5/2 way Inline



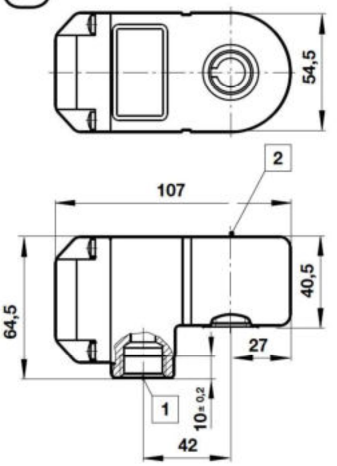
5/2 way NAMUR



1 Manual override
2 Hole Ø 5.5
3 Hole Ø 9.5 x 5,5 deep

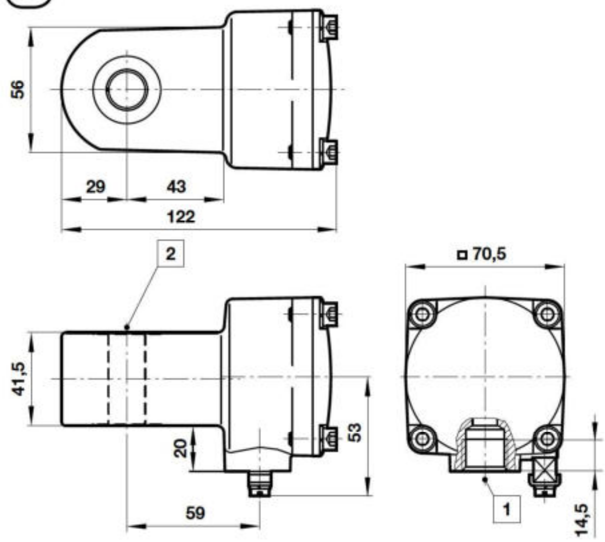
Dimensions

6



2 Ø 16 or 13 (with spacer tube)
3 M20 x 1,5 or 1/2 NPT

7



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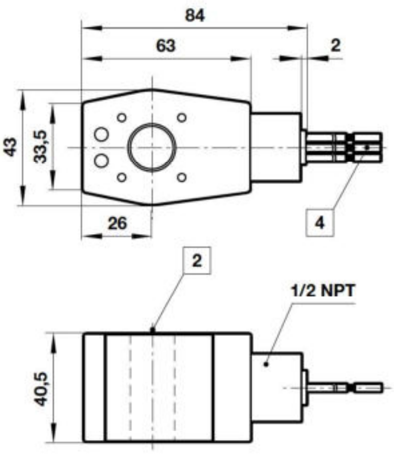
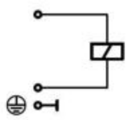


2 Ø 16 or 13 (with spacer tube)
3 M20 x 1,5 or 1/2 NPT
4 Flying leads AWG 18 (450 mm long)

Circuit diagrams

1



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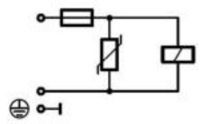

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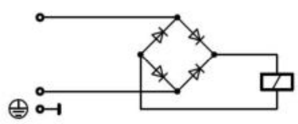

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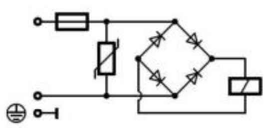

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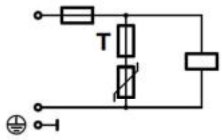
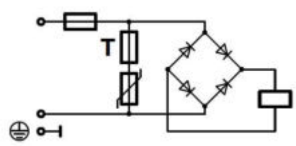
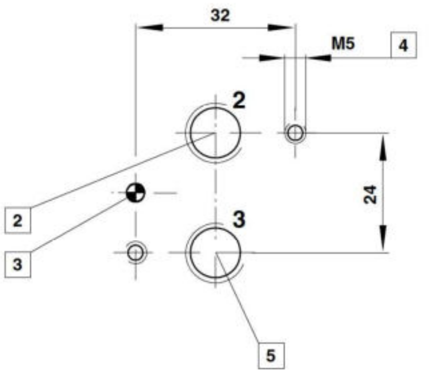


21



6215M INLINE & NAMUR
3/2, 5/2 – 1/4 NPT

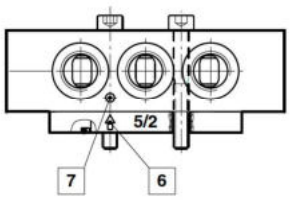
NAMUR hole pattern (driving side)
Port size G1/4



2 Port 2 (A)
2 Hole for coding stud
3 M5 & M6 (10 deep)
5 Port 3 (R)

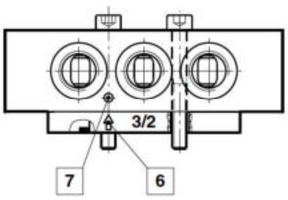
Conversion instructions of 5/2 into 3/2 way function

5/2 way function (original mode of supply)



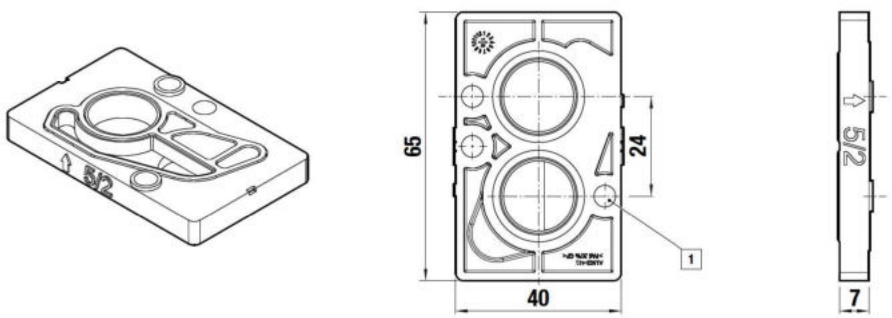
3/2 resp. 5/2 way function according to version by swapping or turning enclosed adaptor plates. Make sure Marker and Arrow do match as shown on above drawing.

3/2 way function



6 Arrow
7 Marker

Conversion plate
Model: A1502-Z11



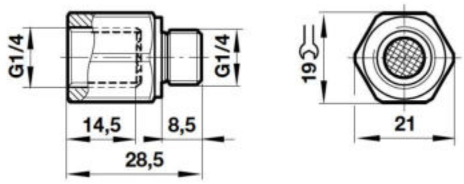
1 3x Ø5,5 mm

6215M INLINE & NAMUR

3/2, 5/2 – 1/4 NPT

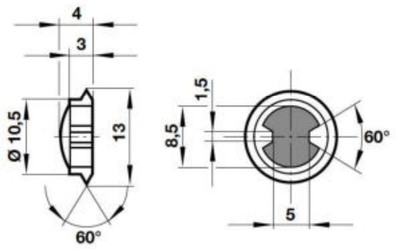
Adaptor complete

Model: 0613487



Inlet filter

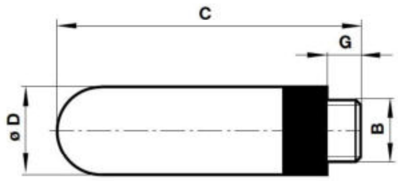
Model: 0681173



Thread pitch diameter max. 11,85 mm

Silencer (plastic)

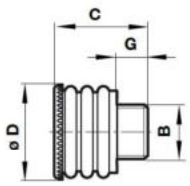
Model: M/S2, M/S4, C/S2



B	G	C	Ø D	Weight (g)	Model
G1/4	7	35,5	15,5	2,9	M/S2
1/4 NPT	7	35,5	15,5	2,9	C/S2

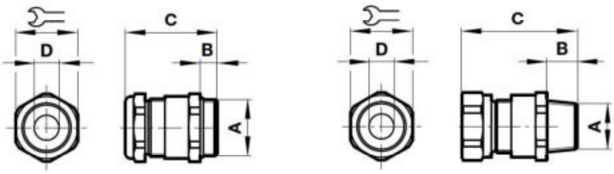
Exhaust guard

Model: 0613422



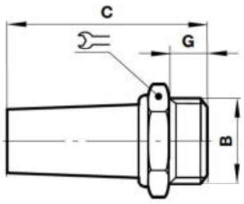
B	Suitable for	G	C	Ø D	Weight (g)	Model
1/4"	G1/4, 1/4 NPT	10	26,5	21	5	613422

Cable gland



A	B	C	Ø D		Model
M20 x 1,5	9	36	5 … 8	22	588819
M20 x 1,5	6,5	27,5	9 … 13	22	589385
M20 x 1,5	14	39	10 … 14	24	588851
1/2 NPT	15	58	7,5 … 11,9	24	588925
M20 x 1,5	14	39	7 … 12	24	589395
M20 x 1,5	10	34	10 … 14	24	589387
M20 x 1,5	10	34	10 … 14	24	589387

Silencer (brass or stainless steel)



0588925 only

B	C	G		Weight (g)	Model
G1/4	33	8	17	18	T40C2800
1/4 NPT	35	8	9/16	18	MS002A
G1/4	36	8	16	23	0014613 *1)
1/4 NPT	36	8	16	67	0613678 *1)

*1) Stainless steel

6215L INLINE & NAMUR

3/2, 5/2 – 1/4 NPT

- G1/4, 1/4 NPT or NAMUR Interface
- Indirect solenoid actuated spool valve
- 3/2 & 5/2
- Suited for outdoor use under critical environment conditions
- Variable valve solenoid combition

Technical Data

Medium:
Filtered, non-lubricated or lubricated and dried compressed air

Operating pressure:
2,5 … 8 bar (36 … 116 psi)
with internal air supply

Ambient/Media temperature:
-40°C … +60°C (-40°F … +140°F)
Depending on solenoid system
Air supply must be dry enough to avoid ice formation attemperatures below +2°C
For outdoor installations must be protected all connections against the penetration of moisture and a solenoid with IP65 protection must be used!

Materials

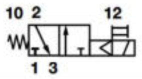
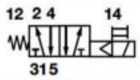
Body:
Aluminum with surface treatment for critical environmental conditions

Seal:
Special NBR

Technical data

3/2 and 5/2 way valve Inline

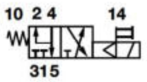
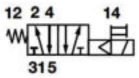
Housing: Aluminum anodised, Seals: -40°C … +60°C (-40 … +140°F)

Symbol	Model *1)	Port size	Function	Actuation/return	Flow (l/min)	Operating pressure (bar)	Weight (kg)
	6215L3530	G1/4	3/2	Solenoid/spring	1200	2,5 … 8	0,392
	6215L3540	1/4 NPT	3/2	Solenoid/spring	1200	2,5 … 8	0,392
	6215L0530	G1/4	3/2	Solenoid/spring	1200	2,5 … 8	0,442
	6215L0540	1/4 NPT	3/2	Solenoid/spring	1200	2,5 … 8	0,442

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

3/2 and 5/2 way valves NAMUR

Housing: Aluminium anodized, Seals: NBR -40°C … +60°C (-40 … +140°F)

Symbol	Model	Ports 1, 3, 5	2, 4	Actuation/return	Flow (l/min)	Operating pressure (bar)	Weight (kg)
 	6215M0500	G1/4	Flange	Solenoid/spring	1200	2,5 … 8	0,48
	6215M0510	1/4 NPT	Flange	Solenoid/spring	1200	2,5 … 8	0,48

*1) When ordering please indicate solenoid, voltage and current type (frequency)
Valve function: 3/2 or 5/2 way function

Solenoids group 13B, standard voltages

	Model	Power consumption		Rated current		Protection class	Ex-protection (ATEX-Category)	Temperature Ambient/Media	Electrical connector	Weight
		24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)	IP/NEMA		(°C)		(kg)
	4200	0,8	–	33	–	IP 66	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	T5: -40 … +80 T6: -40 … +70 -40 …+80	M20 x 1,5 *1)	0,6
	4201	–	1,3	–	6	IP 65	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	T5: -40 … +80 T6: -40 … +70 -40 … +80	M20 x 1,5 *1)	0,6
	4600	0,8	–	33	–	IP 66	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	T5: -40 … +80 T6: -40 … +70 -40 … +80	1/2 NPT *1)	0,8
	4602	0,8	–	33	–	IP 66	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	T5: -40 … +80 T6: -40 … +70 -40 … +80	M20 x 1,5 *1)	0,8
	4601	–	1,3	–	6	IP 66	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	T5: -40 … +80 T6: -40 … +70 -40 … +80	1/2 NPT *1)	0,8
	4603	–	1,3	–	6	IP 66	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	T5: -40 … +80 T6: -40 … +70 -40 … +80	M20 x 1,5 *1)	0,8
	3720	1,4	–	59	–	4, 4X, 6, 6P, 7, 9	II2G Ex mb d IIC T4/T6 II2G EX mb e II T4/T6 II 2 D Ex td a21	-20 … +60	Flying leads 450 mm	0,4

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*1) Connector/cable gland is not scope of delivery, see table »Accessories«
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland.
Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

6215L NAMUR & INLINE

3/2, 5/2 – 1/4 NPT

Accessories Electrical connection

Cable gland Protection class Ex e, Ex d	Model	Thread	Cable Ø (mm)	Materials	Protection class (ATEX)
	588819	M20 x 1,5	5 … 8	Nickel plated brass	II 2 GD Ex e
	588851	M20 x 1,5	10 … 14	Nickel plated brass	II 2 GD Ex d
	588925	1/2 NPT	7,5 … 11,9	Nickel plated brass	II 2 GD Ex d
	589385	M20 x 1,5	9 … 13	Stainless steel 1.4571 (316 Ti)	II 2 GD Ex e
	589395	M20 x 1,5	7 … 12	Stainless steel 1.4404 (316 L)	II 2 GD Ex d
	589387	M20 x 1,5	10 … 14	Stainless steel 1.4404 (316 L)	II 2 GD Ex d

Approvals

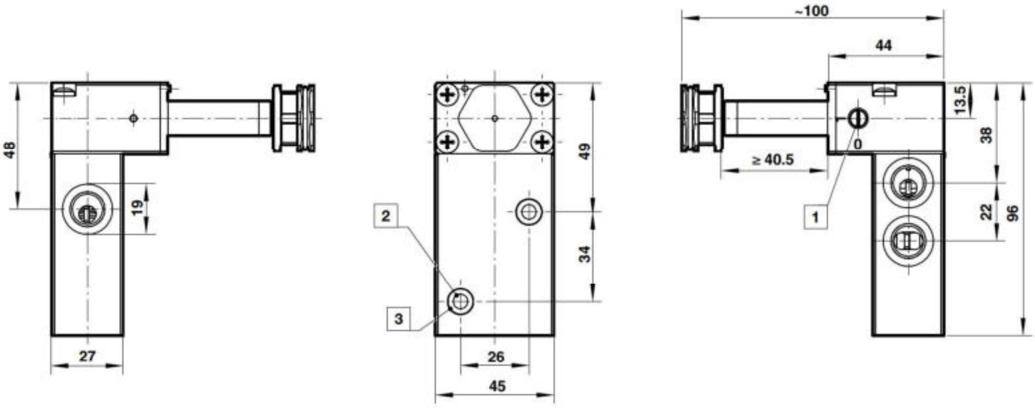
Model	Approvals ATEX	IECEx	FM
372x, 382x	–	–	CSA-LR 57643-6
42xx	KEMA 98 ATEX 4452 X	IECEx KEM 09.0068X	–
46xx	PTB 02 ATEX 2085 X	IECEx PTB 11.0094X	–

Accessories

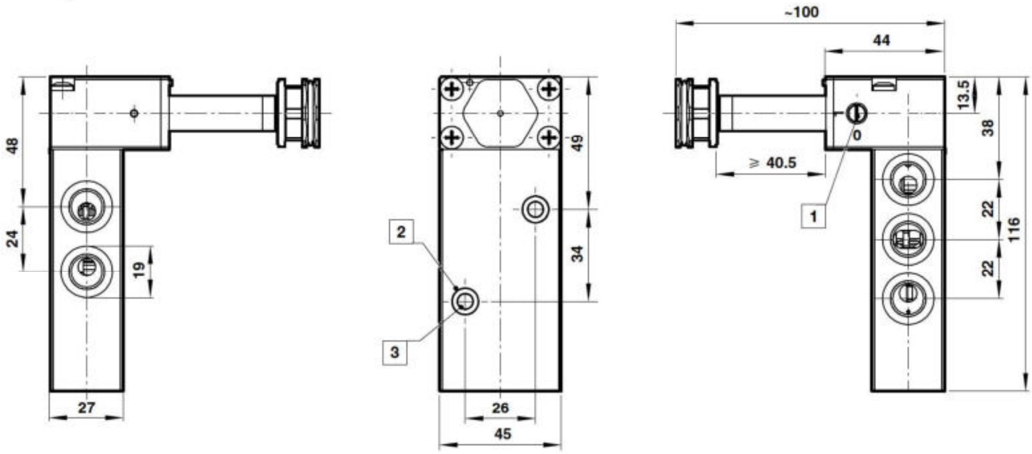
Adaptor complete (Adaptor, inlet filter and seal ring)	Inlet filter	Silencer (plastic) *8)	Silencer (stainless steel) *1)	Silencer (brass) *8)	Exhaust guard *9)	Conversion plate
						
0613487 (G1/4)	0681173 (G1/4, 1/4 NPT)	M/S2 (G1/4)	0014613 (G1/4)	T40C2800 (G1/4)	0613422 (G1/4, 1/4 NPT)	A1502-Z11
		C/S2 (1/4 NPT)	0613678 (1/4 NPT)	MS002A (1/4 NPT)		

Dimensions

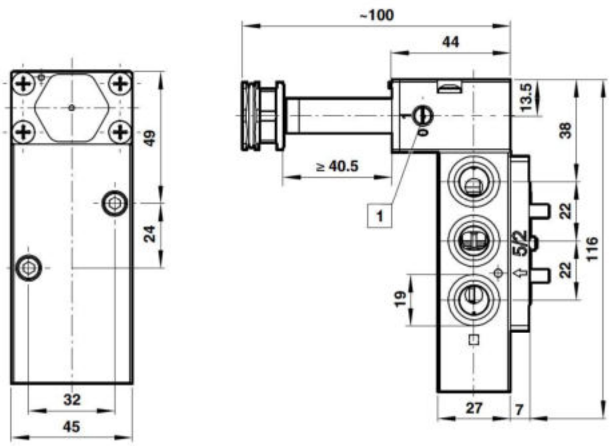
Valves
3/2 way Inline



5/2 way Inline



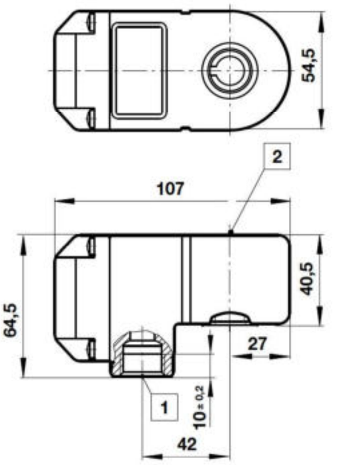
5/2 way NAMUR



1 Manual override
2 Hole Ø 5.5
3 Hole Ø 9.5 x 5,5 deep

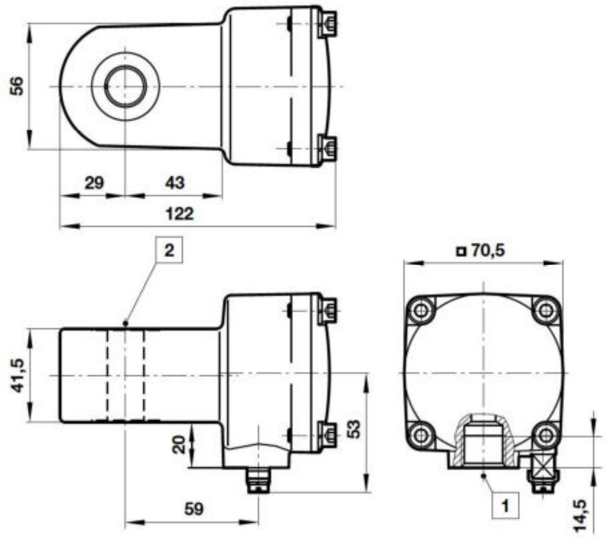
6215L NAMUR & INLINE
3/2, 5/2 – 1/4 NPT

6

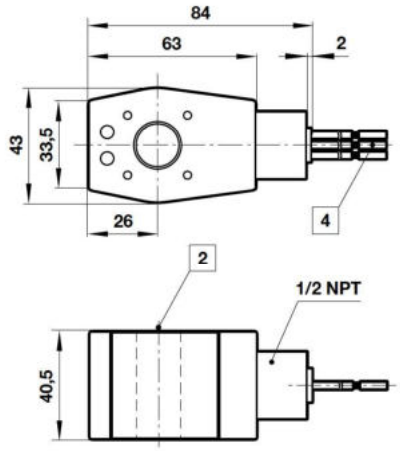


2 Ø 16 or 13 (with spacer tube)
3 M20 x 1,5 or 1/2 NPT

7



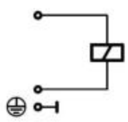
8



2 Ø 16 or 13 (with spacer tube)
3 M20 x 1,5 or 1/2 NPT
4 Flying leads AWG18 (450 mm long)

Circuit diagrams

1



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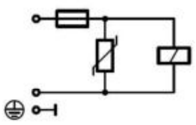

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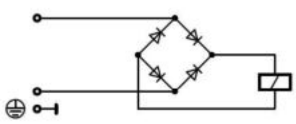
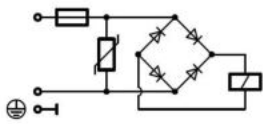


7



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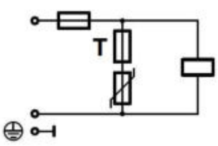
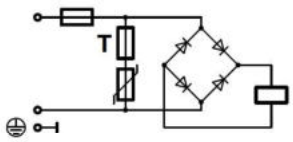
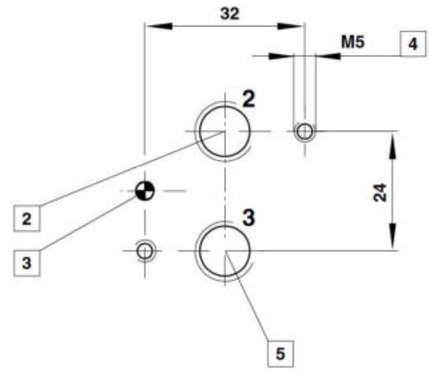


21



6215L NAMUR & INLINE
3/2, 5/2 – 1/4 NPT

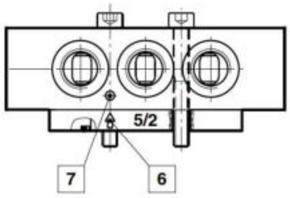
NAMUR hole pattern (driving side)
Port size G1/4



2 Port 2 (A)
3 Hole for coding stud
4 M5 & M6 (10 deep)
5 Port 3 (R)

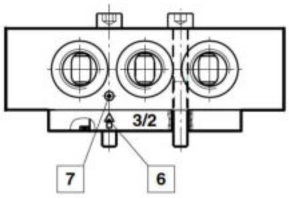
Conversion instructions of 5/2 into 3/2 way function

5/2 way function (original mode of supply)



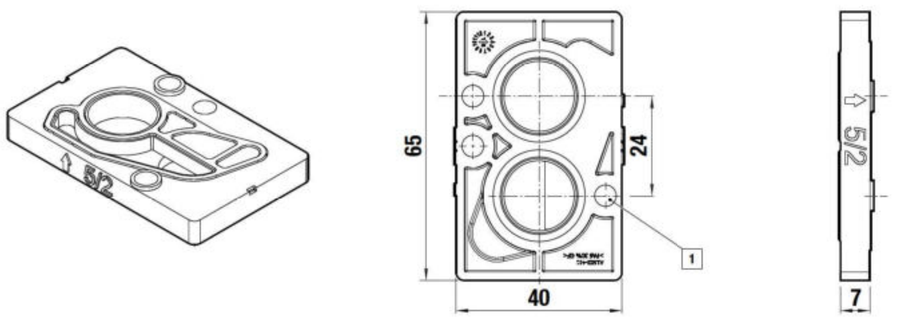
3/2 resp. 5/2 way function according to version by swapping or turning enclosed adaptor plates.
Make sure Marker and Arrow do match as shown on above drawing.

3/2 way function



6 Arrow
7 Marker

Conversion plate
Model: A1502-Z11



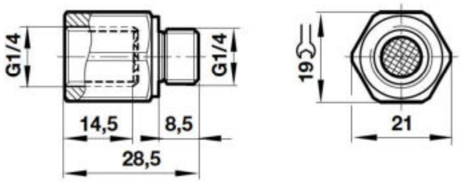
1 3x Ø 5,5 mm

6215L NAMUR & INLINE

3/2, 5/2 – 1/4 NPT

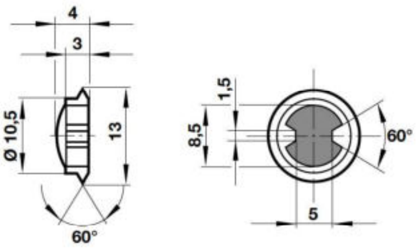
Adaptor complete

Model: 0613487



Inlet filter

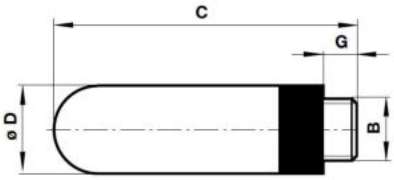
Model: 0681173



Thread pitch diameter max. 11,85 mm

Silencer (plastic)

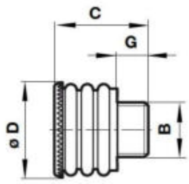
Model: M/S2, M/S4, C/S2



B	G	C	Ø D	Weight (g)	Model
G1/4	7	35,5	15,5	2,9	M/S2
1/4 NPT	7	35,5	15,5	2,9	C/S2

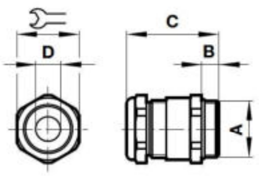
Exhaust guard

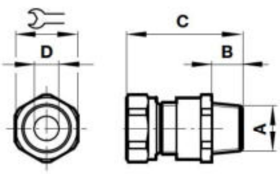
Model: 0613422



B	Suitable for	G	C	Ø D	Weight (g)	Model
1/4"	G1/4, 1/4 NPT	10	26,5	21	5	613422

Cable gland

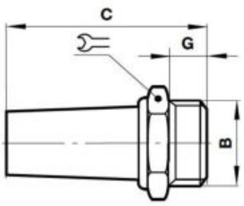




0588925 only

A	B	C	Ø D	(wrench size)	Model
M20 x 1,5	9	36	5 … 8	22	588819
M20 x 1,5	6,5	27,5	9 … 13	22	589385
M20 x 1,5	14	39	10 … 14	24	588851
1/2 NPT	15	58	7,5 … 11,9	24	588925
M20 x 1,5	14	39	7 … 12	24	589395
M20 x 1,5	10	34	10 … 14	24	589387
M20 x 1,5	10	34	10 … 14	24	589387

Silencer (brass or stainless steel)



B	C	G	(wrench size)	Weight (g)	Model
G1/4	33	8	17	18	T40C2800
1/4 NPT	35	8	9/16	18	MS002A
G1/4	36	8	16	23	0014613 *1)
1/4 NPT	36	8	16	67	0613678 *1)

*1) Stainless steel

6215SS NAMUR & INLINE

3/2, 5/2 – 1/4 NPT

- G1/4, 1/4 NPT or NAMUR Interface
- Indirect solenoid actuated spool valve
- 3/2 & 5/2
- Suited for outdoor use under critical environment conditions

Technical Data

Medium:
6215M: Filtered, non-lubricated or lubricated and dried compressed air
6215L: Filtered, non-lubricated and dried compressed air

Operating pressure:
2,5 … 8 bar (36 … 116 psi)
with internal air supply

Ambient/Media temperature:
-40°C … +60°C (-40°F … +140°F)
Depending on solenoid system
Air supply must be dry enough to avoid ice formation attemperatures below +2°C
For outdoor installations must be protected all connections against the penetration of moisture and a solenoid with IP65 protection must be used!

Materials

Body:
Aluminium or Stainless Steel

Seal:
Special NBR

Solenoids group, standard voltages

Power consumption		Rated current		Protection class	Ex-protection (ATEX-Category)	Temperature Ambient/Media	Electrical connector	Weight	Model
24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)	IP/NEMA		(°C)		(kg)	
3.9	–	162	–	IP66 (with cable gland)	II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db IP66	-40 … +80 T4 -40 … +55 T6 -40 … +80	M20 x 1,5 *4)	0,5	4210
–	5,3	–	23	IP66 (with cable gland)	II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db IP66	-40 … +80 T4 -40 … +55 T6 -40 … +80	M20 x 1,5 *4)	0,5	4211
0,8	–	33	–	IP66	II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db IP66	-40 … +80 T4 -40 … +55 T6 -40 … +80	M20 x 1,5 *4)	0,6	4200
–	1,3	–	6	IP65	II2G Ex e mb IIC T5/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T5 -40 … +70 T6 -40 … +80	M20 x 1,5 *4)	0,6	4201

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*4) Connector/cable gland is not scope of delivery, see table »Accessories«.
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland. Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

Solenoids group, standard voltages

	Power consumption		Rated current		Protection class	Ex-protection (ATEX-Category)	Temperature Ambient/Media	Electrical connector	Weight	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)	IP/NEMA		(°C)		(kg)	
	3,9	–	162	–	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	1/2 NPT *4)	0,8	4610
	–	5,3	–	23	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	1/2 NPT *4)	0,8	4611
	3,9	–	162	–	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	M20 x 1,5 *4)	0,8	4612
	–	5,3	–	23	IP66 (with cable gland)	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	M20 x 1,5 *4)	0,8	4613
	0,8	–	33	–	IP66	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	1/2 NPT *4)	0,8	4600
	–	1,3	–	6	IP66	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	1/2 NPT *4)	0,8	4601
	0,8	–	33	–	IP66	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	M20 x 1,5 *4)	0,8	4602
	–	1,3	–	6	IP66	II2G Ex d mb IIC T4/ T6 Gb II2G Ex e mb IIC T4/ T6 Gb II2D Ex tb IIICT130°C Db	-40 … +80 T4 -40 … +55 T6 -40 … +80	M20 x 1,5 *4)	0,8	4603
	0,8	–	33	–	IP66	Ex mb d IIC T4/T6 or Ex mb e II T5/T6 Ex mbD 21 tDA21 IP66 T100°C	Cat. II 2G (gas) -40 … +80 T4" -40 … +70 T6 Cat. II 2D (dust) T100°C	M20 x 1,5 *4)	1,2	4802
	–	1,3	–	6	IP66	Ex mb d IIC T4/T6 or Ex mb e II T5/T6 Ex mbD 21 tDA21 IP66 T100°C	Cat. II 2G (gas) -40 … +80 T4" -40 … +70 T6 Cat. II 2D (dust) T100°C	M20 x 1,5 *4)	1,2	4803

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*4) Connector/cable gland is not scope of delivery, see table »Accessories«.
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland. Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

Solenoids group, standard voltages

	Power consumption		Rated current		Protection class	Ex-protection (ATEX-Category)	Temperature Ambient/Media	Electrical connector	Weight	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)	IP/NEMA		(°C)		(kg)	
	5,5	–	228	–	NEMA 4, 4X, 6, 6P, 7, 9	XP/DIP, Div. 1&2 Cl. I, Gr. A-D Cl. II/III, Gr. E-G T3 (160°C)	-20 … +60	Flying leads 450 mm	0,5	3722
	–	5,9	–	26	NEMA 4, 4X, 6, 6P, 7, 9	XP/DIP, Div. 1&2 Cl. I, Gr. A-D Cl. II/III, Gr. E-G T3 (160°C)	-20 … +60	Flying leads 450 mm	0,5	3723
	1,4	–	59	–	4, 4X, 6, 6P, 7, 9	II2G Ex mb d IIC T4/T6 II2G EX mb e II T4/T6 II 2 D Ex td a21	-20 … +60	Flying leads 450 mm	0,4	3720
	3	–	125	–	IP00 without connector	–	-25 … +60	DIN EN 175301-803 Form A	0,15	0242
	1,9	2,1 *5)	78	10	IP00 without connector IP65 with connector *7)	–	-25 … +60	DIN EN 175301-803 Form A *5) *4)	0,3	0763

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
*4) Connector/cable gland is not scope of delivery, see table »Accessories«.
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland. Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

Solenoids actuators for instrinsically safe circuits

	Nominal-resistance RN coil	Min. required switching current	Resistance RW 60 Coil	Required voltage at terminal Rw 60	Protection class 6*) (ATEX-Category) IP-Protection 6*)	Temperature Ambient/Media	Weight	Cole code
	(Ω)	(mA)	(Ω)	(V)	(class according to EN60529)	(°C)	(kg)	
	200	33	240	8	II2G Ex ia IIC T6 Gb	-40 … +60	0,85	2050

Standard voltages (±10%) 24 V d.c., 230 V a.c., other voltages on request. Design according to VDE 0580, EN 50014/50028. 100% duty cycle.
Attention: The protection class for coil series 46xx and 48xx is determined by the choice of cable gland.
Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex d mb; if a cable gland with Ex e type of proteciton is used, the solenoid will have protection class Ex e mb.

5*) Required connector: model 0570275 for V DC; model 0663303 for V AC, to be ordered Solenoid Voltage 200V DC!
6*) IP-Protection class (to EN60529) T. Ex protection classes and temperature values are valid for all solenoid
7*) Required Connector: type 0570275

6215SS NAMUR & INLINE

3/2, 5/2 – 1/4 NPT

Approvals

Model	Approvals ATEX	IECEx	FM
372x, 382x	–	–	CSA-LR 57643-6
42xx	KEMA 98 ATEX 4452 X	IECEx KEM 09.0068X	–
46xx	PTB 02 ATEX 2085 X	IECEx PTB 11.0094X	–
48xx	PTB 06 ATEX 2054 X	IECEx PTB 07.0039X	–
205x	PTB 07 ATEX 2019 X	IECEx PTB 07.0017X	–

Accessories
Electrical connection

Cable gland Protection class Ex e, Ex d Model	Thread	Cable Ø (mm)	Materials	Protection class (ATEX)
				
588819	M20 x 1,5	5 … 8	Nickel plated brass	II 2 GD Ex e
588851	M20 x 1,5	10 … 14	Nickel plated brass	II 2 GD Ex d
588925	1/2 NPT	7,5 … 11,9	Nickel plated brass	II 2 GD Ex d
589385	M20 x 1,5	9 … 13	Stainless steel 1.4571 (316 Ti)	II 2 GD Ex e
589395	M20 x 1,5	7 … 12	Stainless steel 1.4404 (316 L)	II 2 GD Ex d
589387	M20 x 1,5	10 … 14	Stainless steel 1.4404 (316 L)	II 2 GD Ex d

Valve

Adaptor complete (Adaptor, inlet filter and seal ring)	Inlet filter	Silencer (plastic) *8)	Silencer (stainless steel) *1)	Silencer (brass) *8)	Exhaust guard *9)
					
0613487 (G1/4)	0681173 (G1/4, 1/4 NPT)	M/S2 (G1/4)	0014613 (G1/4)	T40C2800 (G1/4)	0613422 (G1/4, 1/4 NPT)
		C/S2 (1/4 NPT)	0613678 (1/4 NPT)	MS002A (1/4 NPT)	

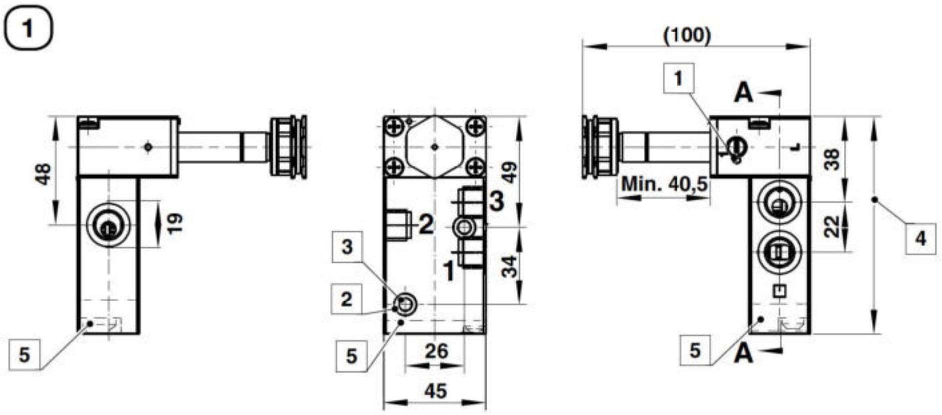
Conversion plate

A1502-Z11

Dimensions

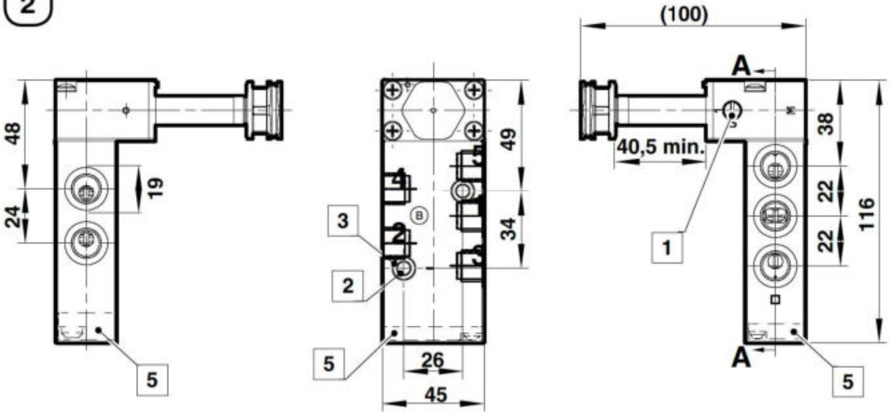
Valves
3/2 way Inline

1



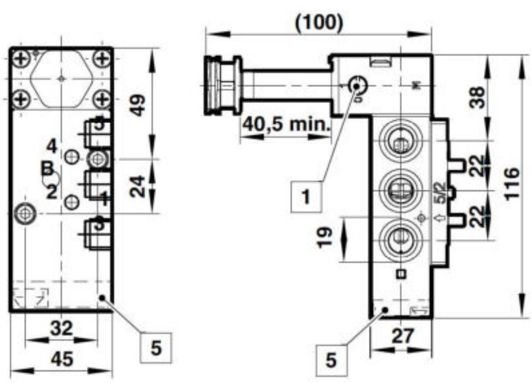
5/2 way Inline

2



5/2 way NAMUR

3



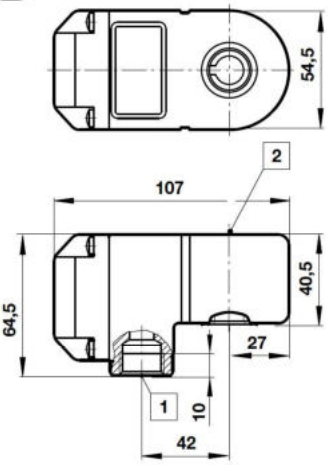
1 Manual override
2 Hole Ø 5,5
3 Hole Ø 9,5 x 5,5 deep
4 Aluminium valve: 96 mm
Stainless steel valve: 98,5 mm
5 dash line shows end plug of stainless steel valve

6215SS NAMUR & INLINE

3/2, 5/2 – 1/4 NPT

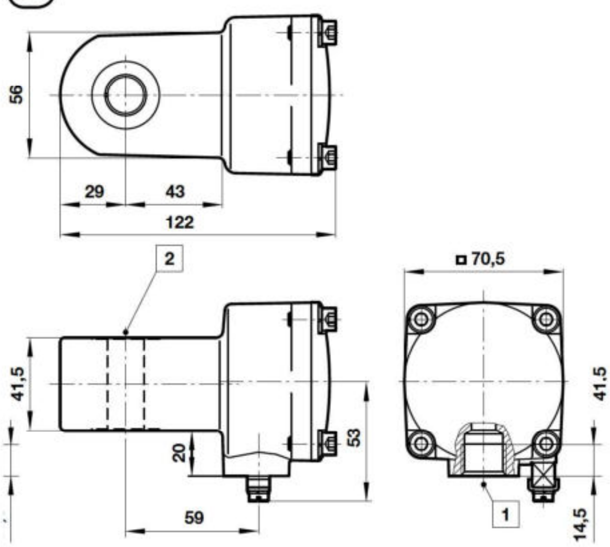
Dimensions

5



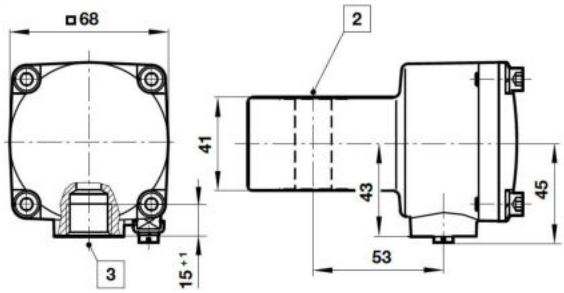
1 M20 x 1,5 or 1/2 NPT
2 Ø 16 or 13 (with spacer tube)

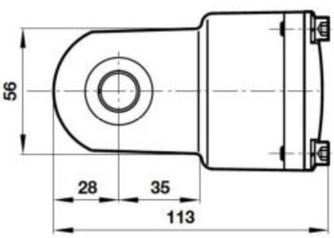
6



1 M20 x 1,5 or 1/2 NPT
2 Ø 16 or 13 (with spacer tube)

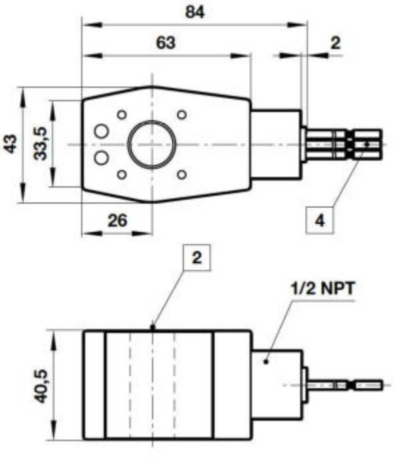
7





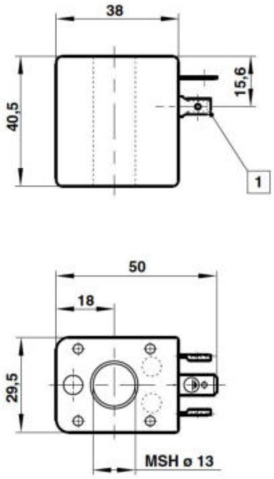
2 Ø 16 or 13 (with spacer tube)
3 M20 x 1,5 or 1/2 NPT

8

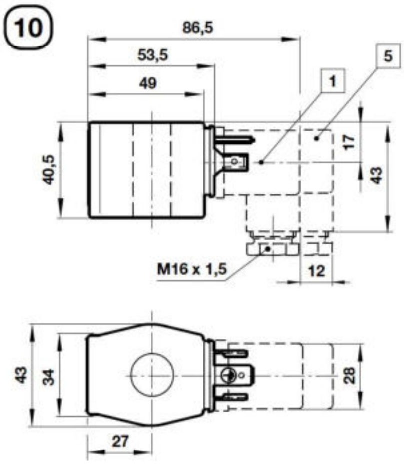


2 Ø 16 or 13 (with spacer tube)
4 Flying leads AWG18 (450 mm long)

9

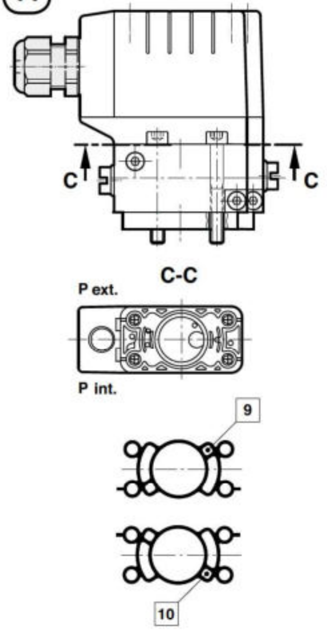


(10)



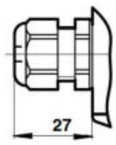
[1] Connector 4 x 90° turnable
[5] Connector with rectifier(0663303)

(11)



Electrical connection

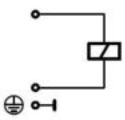
005



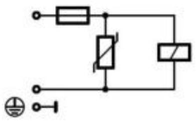
[9] Position of gasket internal pilot air
[10] Position of gasket external pilot air

Circuit diagrams

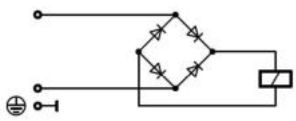
(1)



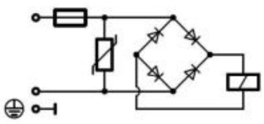
(4)



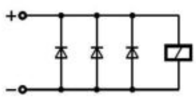
(5)



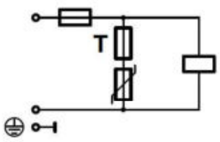
(7)



(10)



(20)



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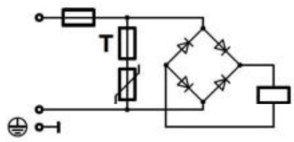
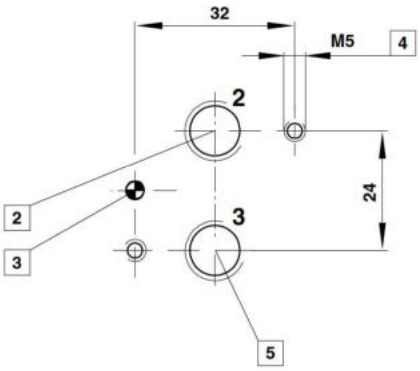


6215SS NAMUR & INLINE
3/2, 5/2 – 1/4 NPT

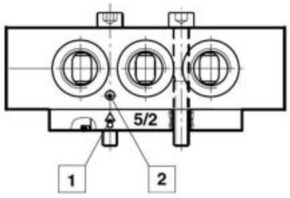
NAMUR hole pattern (driving side)
Port size G1/4



2 Port 2 (A)
3 Hole for coding stud
4 M5 & M6 (10 deep)
5 Port 3 (R)

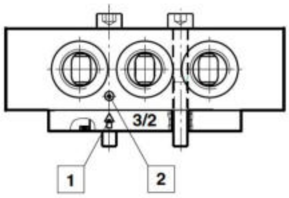
Conversion instructions of 5/2 into 3/2 way function

5/2 way function (original mode of supply)



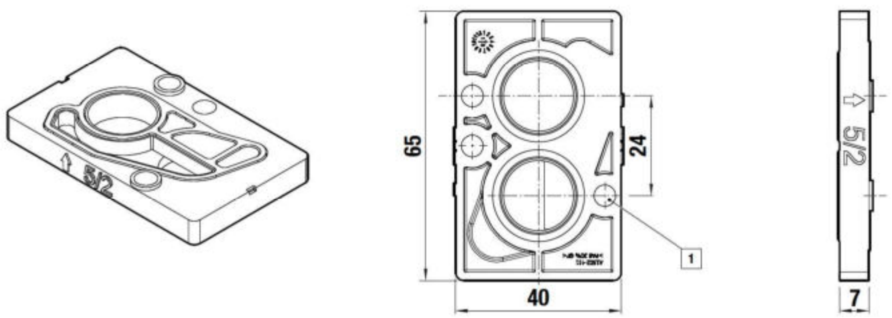
3/2 resp. 5/2 way function according to version by swapping or turning enclosed adaptor plates. Make sure Marker and Arrow do match as shown on above drawing.

3/2 way function



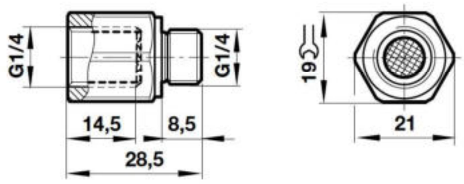
1 Arrow
2 Marker

Conversion plate
Model: A1502-Z11

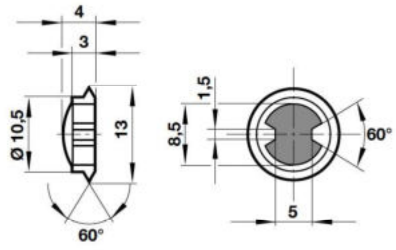


1 3 x Ø 5,5 mm

Adaptor complete
Model: 0613487

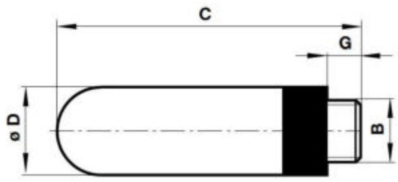


Inlet filter
Model: 0681173



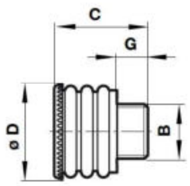
Thread pitch diameter max. 11,85 mm

Silencer (plastic)
Model: M/S2, M/S4, C/S2



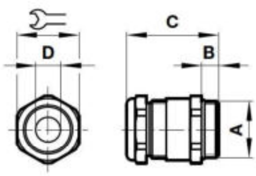
z	G	C	Ø D	Weight (g)	Model
G1/4	7	35,5	15,5	2,9	M/S2
1/4 NPT	7	35,5	15,5	2,9	C/S2

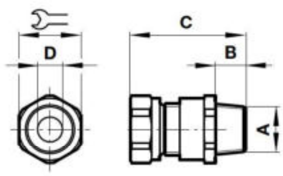
Exhaust guard
Model: 0613422



B	Suitable for	G	C	Ø D	Weight (g)	Model
1/4"	G1/4, 1/4 NPT	10	26,5	21	5	613422

Cable gland

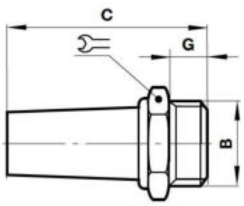




0588925 only

A	B	C	Ø D	⊐	Model
M20 x 1,5	9	36	5 … 8	22	588819
M20 x 1,5	6,5	27,5	9 … 13	22	589385
M20 x 1,5	14	39	10 … 14	24	588851
1/2 NPT	15	58	7,5 … 11,9	24	588925
M20 x 1,5	14	39	7 … 12	24	589395
M20 x 1,5	10	34	10 … 14	24	589387
M20 x 1,5	10	34	10 … 14	24	589387

Silencer (brass or stainless steel)



B	C	G	⊐	Weight (g)	Model
G1/4	33	8	17	18	T40C2800
1/4 NPT	35	8	9/16	18	MS002A
G1/4	36	8	16	23	0014613 *10)
1/4 NPT	36	8	16	67	0613678 *10)

*10) Stainless steel

2/2-WAY DIRECTLY OPERATED VALVES

Series 82510, 82610

- 2/2-way seat valves
- G1/8 … 3/8
- 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 (Zero delta P)

Technical Data

EXPRESS

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	82510 (82520)	82610 (84620)
Medium	Neutral gases and liquids	Neutral and slightly aggressive gases and liquid fluids
Port size	G1/8 … 3/8 (1/8 … 3/8 NPT)	G1/8 … 3/8 (1/8 … 3/8 NPT)
Operating pressure	0 … 10/25/40/70 bar	0 … 10/25/40/70 bar
Temperature		
Media temperature	-10°C … +90°C	-10°C … +110°C
Ambient temperature	-10°C … +50°C	-10°C … +50°C
Material		
Body	Brass (CW617N)	Stainless steel (1.4408)
Seat seal	NBR	FPM
Internal parts	Stainless steel, brass	Stainless steel

Models - Valves normally closed

Port size	Orifice (mm)	Series 82510 Model	Operating pressure (bar)	Series 82610 Model	Operating pressure (bar)
G1/8	1,5	8251800.910x.xxxxx	0 … 25	8261803.910x.xxxxx	0 … 25
G1/4	1,5	8251000.910x.xxxxx	0 … 25	8261003.910x.xxxxx	0 … 25
G3/8	1,5	8251100.910x.xxxxx	0 … 25	8261103.910x.xxxxx	0 … 25
G1/8	1,5	8251807.915x.xxxxx	0 … 70	8261807.915x.xxxxx	0 … 70
G1/4	1,5	8251007.915x.xxxxx	0 … 70	8261007.915x.xxxxx	0 … 70
G3/8	1,5	8251107.915x.xxxxx	0 … 70	8261107.915x.xxxxx	0 … 70
G1/8	2,5	8251820.910x.xxxxx	0 … 10	8261823.910x.xxxxx	0 … 10
G1/4	2,5	8251020.910x.xxxxx	0 … 10	8261023.910x.xxxxx	0 … 10
G3/8	2,5	8251120.910x.xxxxx	0 … 10	8261123.910x.xxxxx	0 … 10
G1/8	2,5	8251820.915x.xxxxx	0 … 40	8261823.915x.xxxxx	0 … 40
G1/4	2,5	8251020.915x.xxxxx	0 … 40	8261023.915x.xxxxx	0 … 40
G3/8	2,5	8251120.915x.xxxxx	0 … 40	8261123.915x.xxxxx	0 … 40
G1/8	3	8251840.910x.xxxxx	0 … 4	8261843.910x.xxxxx	0 … 4
G1/4	3	8251040.910x.xxxxx	0 … 4	8261043.910x.xxxxx	0 … 4
G3/8	3	8251140.910x.xxxxx	0 … 4	8261143.910x.xxxxx	0 … 4
G1/8	3	8251840.915x.xxxxx	0 … 20	8261843.915x.xxxxx	0 … 20
G1/4	3	8251040.915x.xxxxx	0 … 20	8261043.915x.xxxxx	0 … 20
G3/8	3	8251140.915x.xxxxx	0 … 20	8261143.915x.xxxxx	0 … 20
G1/8	4	8251860.915x.xxxxx	0 … 12	8261863.915x.xxxxx	0 … 12
G1/4	4	8251060.915x.xxxxx	0 … 12	8261063.915x.xxxxx	0 … 12
G3/8	4	8251160.915x.xxxxx	0 … 12	8261163.915x.xxxxx	0 … 12
G1/8	5	8251880.915x.xxxxx	0 … 6	8261883.915x.xxxxx	0 … 6
G1/4	5	8251080.915x.xxxxx	0 … 6	8261083.915x.xxxxx	0 … 6
G3/8	5	8251180.915x.xxxxx	0 … 6	8261183.915x.xxxxx	0 … 6

Models - Valves normally open

Port size	Orifice (mm)	Series 82510 Model	Operating pressure (bar)	Series 82610 Model	Operating pressure (bar)
G1/4	1,5	8251001.910x.xxxxx	0 … 16	8261001.910x.xxxxx	0 … 16
G1/4	2,5	8251021.910x.xxxxx	0 … 6	8261021.910x.xxxxx	0 … 6
G1/4	2,5	8251021.915x.xxxxx	0 … 25	8261021.915x.xxxxx	0 … 25
G1/4	3	8251041.910x.xxxxx	0 … 3	8261041.915x.xxxxx	0 … 3
G1/4	3	8251041.915x.xxxxx	0 … 16	8261041.915x.xxxxx	0 … 16
G1/4	4	8251061.915x.xxxxx	0 … 8	8261061.915x.xxxxx	0 … 8

Options

- Seat seal EPDM
- Seat seal FPM
- Seat seal PTFE
- Manual override
- Normally open

2/2-WAY DIRECTLY OPERATED VALVES
Series 82510, 82610

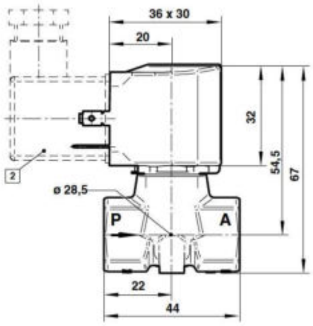
Voltage codes and spare coils

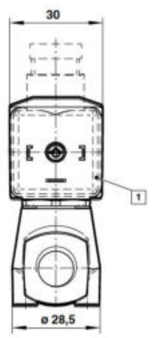
Voltage and frequency solenoid							
Code Voltage	Code Frequency	Voltage	Frequency	Power consumption			
				Inrush	Holding	Inrush	Holding
				9101 *1)		9151 *1)	
024	00	24 V d.c.	–	8 W	8 W	18 W	18 W
024	50	24 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA
110	50	110 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA
120	60	120 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA
230	50	230 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA

*1) Note: CSA coil only / up to +55°C ambient temperature.
Further versions on request!

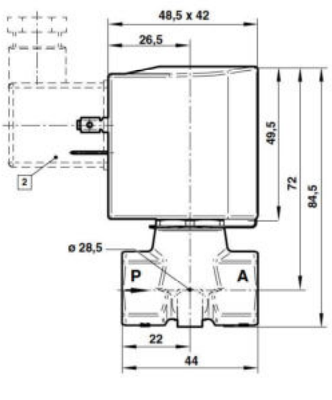
Dimensions

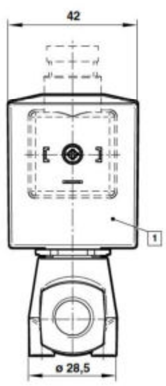
82510/82610 with solenoid 9101





82510/82610 with solenoid 9151





1 Solenoid rotatable 360°
2 Socket turnable 4 x 90° (Socket included)

2/2-WAY FORCE LIFTED VALVES

Series 82530, 82560

- 2/2-way diaphragm valves
- DN 10, G1/4 … 1/2
- Functional design
- Compact solenoid with integrated core tube
- Valve operates without differential pressure (Zero delta P)
- Series 82530: Operating pressure 0 … 20 bar with alternating current and NBR sealing
- Series 82560: Suitable for vacuum

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	82530 (82630)	82560 (82570)
Medium	Neutral gases and liquids	Slightly aggressive gases and liquids
Port size	G1/4 … 1/2 (1/4 … 1/2 NPT)	G1/4 … 1/2 (1/4 … 1/2 NPT)
Operating pressure	0 … 10 bar	0 … 10 bar
Temperature		
Media temperature	-10°C … +90°C	-10°C … +90°C
Ambient temperature	-10°C … +50°C	-10°C … +50°C
Material		
Body	Brass (CW617N), PA66	Stainless steel (1.4408), PA66
Seat seal	NBR	NBR
Internal parts	Stainless steel, PVDF	Stainless steel, PVDF, Sandvik 1802

Models - Valves normally closed

Port size	Orifice (mm)	Series 82530 Model	Operating pressure (bar)	Series 82560 Model	Operating pressure (bar)
G1/4	10	8253000.8001.xxxxx	0 … 10	8256000.8001.xxxxx	0 … 10
G3/8	10	8253100.8001.xxxxx	0 … 10	8256100.8001.xxxxx	0 … 10
G1/2	10	8253200.8001.xxxxx	0 … 10	8256200.8001.xxxxx	0 … 10

Voltage codes and spare coils

Voltage and frequency solenoid					
Code Voltage	**Code Frequency**	**Voltage**	**Frequency**	**Power consumption**	
				Inrush	**Holding**
				8001	
024	00	24 V d.c.	–	12 W	12 W
024	50	24 V a.c.	50 Hz	20 VA	16 VA
110	50	110 V a.c.	50 Hz	20 VA	16 VA
120	60	120 V a.c.	60 Hz	20 VA	16 VA
230	50	230 V a.c.	50 Hz	20 VA	16 VA

Further versions on request!

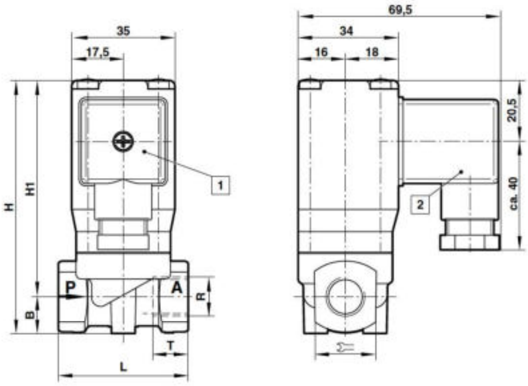
Options

- Seat seal EPDM
- Seat seal FPM
- Media temperature up to +150°C with HNBR seat seal

2/2-WAY FORCE LIFTED VALVES
Series 82530, 82560

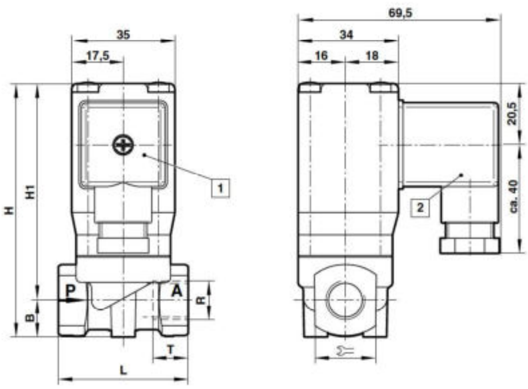
Dimensions

82530



Model	Port size	B	H	H1	L		T
8253000.8001.xxxxx	G1/4	14	87	73	44	21	12
8253100.8001.xxxxx	G3/8	14	87	73	44	21	12
8253200.8001.xxxxx	G1/2	14	90	74,5	60	27	15

82560



Model	Port size	B	H	H1	L		T
8256000.8001.xxxxx	G1/4	12,5	85,5	73	44	21	12
8256100.8001.xxxxx	G3/8	12,5	85,5	73	44	21	12
8256200.8001.xxxxx	G1/2	14	88,5	74,5	60	27	15

1 Solenoid rotatable 360°
2 Socket turnable 4 x 90° (Socket included)

2/2-WAY FORCE LIFTED VALVES

Series 82540, 82590, 82090, 83040

- 2/2-way diaphragm valves
- DN 8 … 50, G1/4 … 2
- Series 82540, 82590, 83040
  - High flow rate
  - Damped operation
  - For robust industry
  - Suitable for vacuum
  - Valve operates without differential pressure (Zero delta P)
  - Solenoid interchangeable without tools (Click-on®) only solenoid 915x and 940x
- For systems with low or fluctuating pressure solutions
- Series 82090: Functional compact design

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

Options

- Seat seal EPDM
- Seat seal FPM
- Manual override
- Normally open

EXPRESS




	82540 (82640)	82590 (84490)	82090 with DVGW approval	83040
Medium	Neutral gases and liquids	Slightly aggressive gases and liquids	Neutral gases and liquid fuels	Neutral gases and liquid fuels
Port size	G1/4 … 2 (1/4 … 2 NPT)	G1/4 … 2 (1/4 … 2 NPT)	G1/4 … 1	DN 15 … DN 50
Operating pressure	0 … 10/16 bar	0 … 10/16 bar	0 … 8 bar	0 … 10/16 bar
Temperature				
Media temperature	-10°C … +90°C	-10°C … +90°C	0°C … +60°C	-10°C … +90°C
Ambient temperature	-10°C … +50°C	-10°C … +50°C	0°C … +60°C	-10°C … +50°C
Material				
Body	Brass (CW617N)	Stainless steel (1.4408)	Brass (CW617N)	Cast steel, brass
Seat seal	NBR-K	NBR-K	NBR-G	NBR
Internal parts	Stainless steel, PVDF, brass	Stainless steel, PVDF	Stainless steel, brass	Stainless steel, PVDF, brass

Standard models

Port size	Orifice (mm)	Series 82540 Model	Operating pressure (bar)	Series 82590 Model	Operating pressure (bar)	Series 82090 Model	Operating pressure (bar)	Series 83040 Model (Flange)	Operating pressure (bar)
G1/4	8	8254000.915x.xxxxx	0 … 10	8259000.915x.xxxxx	0 … 10	8209000.917x.xxxxx	0 … 8	–	–
G1/4	8	8254000.930x.xxxxx	0 … 16 *1)	8259000.930x.xxxxx	0 … 16	–	–	–	–
G3/8	10	8254100.915x.xxxxx	0 … 10	8259100.915x.xxxxx	0 … 10	8209100.917x.xxxxx	0 … 8	–	–
G3/8	10	8254100.930x.xxxxx	0 … 16 *1)	8259100.930x.xxxxx	0 … 16	–	–	–	–
G1/2	12	8254200.915x.xxxxx	0 … 10	8259200.915x.xxxxx	0 … 10	8209200.917x.xxxxx	0 … 8	–	–
G1/2	12	8254200.930x.xxxxx	0 … 16 *1)	8259100.930x.xxxxx	0 … 16	–	–	–	–
–	15	–	–	–	–	–	–	8304200.915x.xxxxx	0 … 10
–	15	–	–	–	–	–	–	8304200.830x.xxxxx	0 … 16
G3/4	20	8254300.915x.xxxxx	0 … 10	8259300.915x.xxxxx	0 … 10	8209300.917x.xxxxx	0 … 8	8304300.915x.xxxxx	0 … 10
G3/4	20	8254300.930x.xxxxx	0 … 16 *1)	8259300.930x.xxxxx	0 … 16	–		8304300.830x.xxxxx	0 … 16
G1	25	8254400.915x.xxxxx	0 … 10	8259400.915x.xxxxx	0 … 10	8209400.917x.xxxxx	0 … 8	8304400.915x.xxxxx	0 … 10
G1	25	8254400.930x.xxxxx	0 … 16 *1)	8259400.930x.xxxxx	0 … 16	–	–	8304400.830x.xxxxx	0 … 16
G1 1/4	32	8254500.940x.xxxxx	0 … 16	8259500.940x.xxxxx	0 … 16	–	–	8304500.940x.xxxxx	0 … 16
G1 1/2	40	8254600.940x.xxxxx	0 … 16	8259600.940x.xxxxx	0 … 16	–	–	8304600.940x.xxxxx	0 … 16
G2	50	8254700.940x.xxxxx	0 … 16	8259700.940x.xxxxx	0 … 16	–	–	8304700.940x.xxxxx	0 … 16

*1) Note: For liquid mediums and an operating pressure > 10 bar is the maximum allowed differential pressure limited to 2 bar.

Voltage codes and spare coils

Voltage and frequency solenoid									
Code Voltage	Code Frequency	Voltage	Frequency	Inrush	Holding	Inrush	Holding	Inrush	Holding
				9151/9154 *2)		9301/9304 *2)		9401/9404 *2) *3)	
024	00	24 V d.c.	–	18 W	18 W	18 W	18 W	38 W	38 W
024	50	24 V a.c.	50 Hz	45 VA	35 VA	106 VA	35 VA	42 VA	42 VA
110	50	110 V a.c.	50 Hz	45 VA	35 VA	106 VA	35 VA	42 VA	42 VA
120	60	120 V a.c.	60 Hz	45 VA	35 VA	106 VA	35 VA	42 VA	42 VA
230	50	230 V a.c.	50 Hz	45 VA	35 VA	106 VA	35 VA	42 VA	42 VA

*2) Note: CSA coil only / up to +55°C ambient temperature (with the exeption of solenoid 94xx up to 41 V a.c.). *3) A.c. only with rectifier plug. Further versions on request!

2/2-WAY FORCE LIFTED VALVES
Series 82540, 82590, 82090, 83040

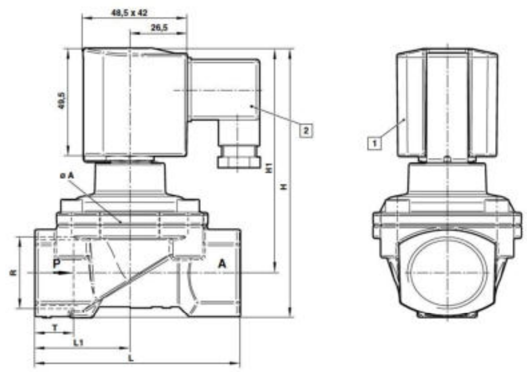
Voltage codes and spare coils

Voltage and frequency solenoid														
Code Voltage	**Code Frequency**	**Voltage**	**Frequency**	**Inrush**	**Holding**	**Inrush**	**Holding**	**Inrush**	**Holding**	**Inrush**	**Holding**	**Inrush**	**Holding**
				9151/9154 *2) *3)		**8401/8404 *3)**		**9401/9404 *2) *3)**		**8301/8304 *3)**		**9178/9179 *2)**	
024	00	24 V d.c.	–	18 W	18 W	40 W	40 W	38 W	38 W	22 W	22 W	18 W	–
024	49	24 V a.c.	40 … 60 Hz	20 VA	20 VA	45 VA	45 VA	42 VA	42 VA	25 VA	25 VA	20 VA	20 VA
110	49	110 V a.c.	40 … 60 Hz	20 VA	20 VA	45 VA	45 VA	42 VA	42 VA	25 VA	25 VA	20 VA	20 VA
120	49	120 V a.c.	40 … 60 Hz	20 VA	20 VA	45 VA	45 VA	42 VA	42 VA	25 VA	25 VA	–	–
230	49	230 V a.c.	40 … 60 Hz	20 VA	20 VA	45 VA	45 VA	42 VA	42 VA	25 VA	25 VA	20 VA *4)	20 VA *4)

*2) Note: CSA coil only / up to +55°C ambient temperature (with the exeption of solenoid 94xx up to 41 V a.c.). *3) Note: A.c. only with rectifier plug. *4) Solenoid 9179. Further versions on request!

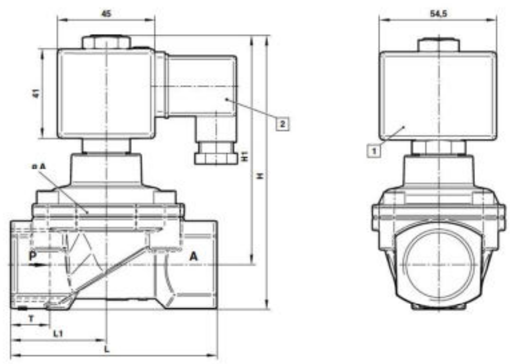
Dimensions

82540/82590 with solenoid 915x (10 bar)



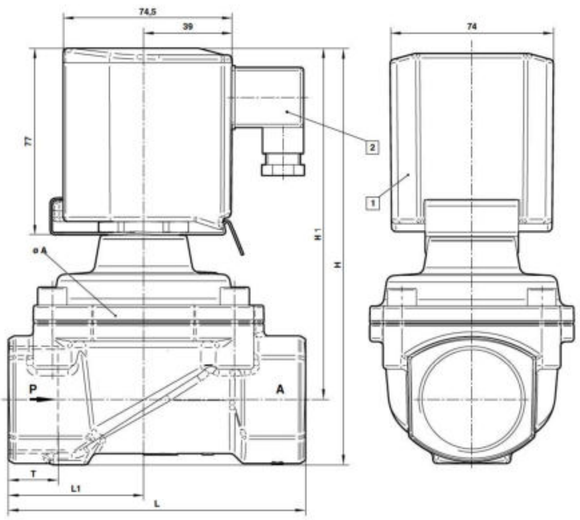
Model	Port size	Ø A	H	H1	L	L1	T
8254000.915x.xxxxx	G1/4	44	104	92,5	60	27,5	12
8254100.915x.xxxxx	G3/8	44	104	92,5	60	27,5	12
8254200.915x.xxxxx	G1/2	44	108	94,5	67	31	14
8254300.915x.xxxxx	G3/4	50	115	99	80	36,5	16
8254400.915x.xxxxx	G1	62	124	103,5	95	44	18

82540/82590 with solenoid 930x (16 bar)



Model	Port size	Ø A	H	H1	L	L1	T
8254000.930x.xxxxx	G1/4	44	104	92,5	60	27,5	12
8254100.930x.xxxxx	G3/8	44	104	92,5	60	27,5	12
8254200.930x.xxxxx	G1/2	44	108	94,5	67	31	14
8254300.930x.xxxxx	G3/4	50	115	99	80	36,5	16
8254400.930x.xxxxx	G1	62	124	103,5	95	44	18

82540/82590 with solenoid 940x (16 bar)

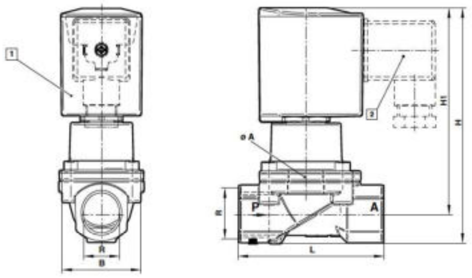


1 Solenoid rotatable 360°
2 Socket turnable 4 x 90° (Socket included)

Model	Port size	A	H	H1	L	L1	T
8254500.940x.xxxxx	G1 1/4	92	186	157	132	60	20
8254600.940x.xxxxx	G1 1/2	92	186	157	132	60	22
8254700.940x.xxxxx	G2	109	201,5	167	160	74	24

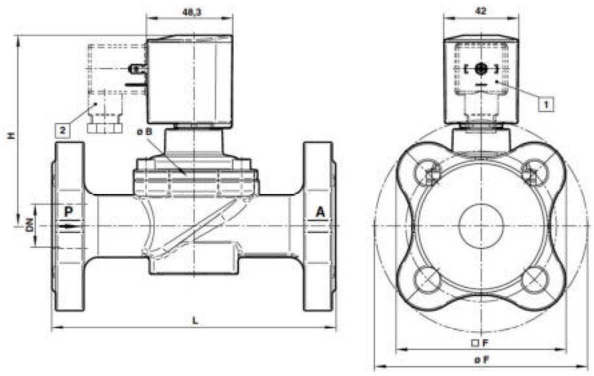
2/2-WAY FORCE LIFTED VALVES
Series 82540, 82590, 82090, 83040

82090



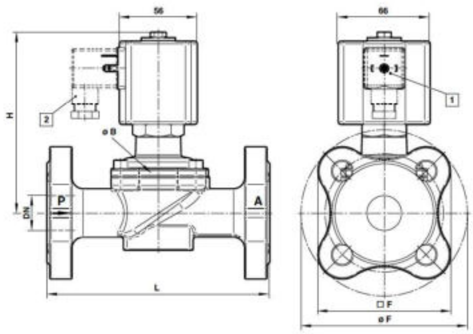
Model	Port size	Ø A	H	H1	L
8209000.917x.xxxxx	G1/4	44	104	92,5	60
8209100.917x.xxxxx	G3/8	44	104	92,5	60
8209200.917x.xxxxx	G1/2	44	108	94,5	67
8209300.917x.xxxxx	G3/4	50	115	99	80
8209400.917x.xxxxx	G1	62	124	103,5	95

83040 wih Solenoid 915x (10 bar)



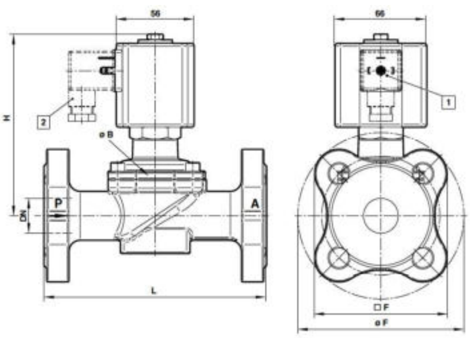
Model	Orifice	Ø B	Ø F	F	H	L
8304200.915x.xxxxx	15	44	96	77	97	130
8304300.915x.xxxxx	20	50	110	86,6	105	150
8304400.915x.xxxxx	25	62	120	95,1	108	160

83040 wih Solenoid 830x (16 bar)



Model	Orifice	Ø B	Ø F	F	H	L
8304200.830x.xxxxx	15	44	96	77	157,5	130
8304300.830x.xxxxx	20	50	110	86,6	170	150
8304400.830x.xxxxx	25	62	120	95,1	175	160

83040 wih Solenoid 940x (16 bar)



Model	Orifice	Ø B	Ø F	F	H	L
8304500.940x.xxxxx	32	92	140	110,7	158	180
8304600.940x.xxxxx	40	92	150	117,8	162	200
8304700.940x.xxxxx	50	109	165	128,4	171	230

1 Solenoid rotatable 360°

2 Socket turnable 4 x 90° (Socket included)

2/2-WAY FORCE LIFTED VALVES

Series 86700, 86720, 86740

- 2/2-way piston valves
- DN 8 … 50, G1/4 … 2
- Valve operates without differential pressure (Zero delta P)
- Series 86700:
  - Valve with PTFE piston guide rings
  - Suitable for vacuum
- Series 86720:
  - High flow rate
  - For steam and hot water
  - Damped operation
- Series 86740:
  - Valve piston with PTFE guide-ring
  - Suitable for vacuum

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	86700 (86710)	86720 (86730)	86740 (86750)
Medium	Air, water and oil	Neutral steam and liquids	Slightly aggressive gases and liquid fluids
Port size	G1/4 … 2 (1/4 … 2 NPT)	G1/4 … 2 (1/4 … 2 NPT)	G1/4 … 2 (1/4 … 2 NPT)
Operating pressure	0 … 25/40 bar	0 … 16 bar	0 … 25/40 bar
Temperature			
Media temperature	-20°C … +90°C	0°C … +200°C	-20°C … +90°C
Ambient temperature	-20°C … +50°C	0°C … +60°C	-20°C … +50°C
Material			
Body	Brass (CW617N)	Brass (CW617N)	Stainless steel (1.4408)
Seat seal	NBR	PTFE	NBR
Internal parts	Stainless steel, PTFE/carbon, brass	Stainless steel, PTFE/carbon, brass	Stainless steel, PTFE/carbon

Standard models

Port size	Orifice (mm)	Series 86700 Model	Operating pressure (bar)	Series 86720 Model	Operating pressure (bar)	Model	Operating pressure (bar)
G1/4	8	8670000.830x.xxxxx	0 … 25	8672000.840x.xxxxx	0 … 16	8674000.830x.xxxxx	0 … 25
G3/8	10	8670100.830x.xxxxx	0 … 25	8672100.840x.xxxxx	0 … 16	8674100.830x.xxxxx	0 … 25
G1/2	12	8670200.830x.xxxxx	0 … 25	8672200.840x.xxxxx	0 … 16	8674200.830x.xxxxx	0 … 25
G3/4	20	8670300.830x.xxxxx	0 … 25	8672300.840x.xxxxx	0 … 16	8674300.830x.xxxxx	0 … 25
G1	25	8670400.830x.xxxxx	0 … 25	8672400.840x.xxxxx	0 … 16	8674400.830x.xxxxx	0 … 25
G1 1/4	32	8670500.840x.xxxxx	0 … 25	8672500.840x.xxxxx	0 … 16	8674500.840x.xxxxx	0 … 25
G1 1/2	40	8670600.840x.xxxxx	0 … 25	8672600.840x.xxxxx	0 … 16	8674600.840x.xxxxx	0 … 25
G2	50	8670700.840x.xxxxx	0 … 25	8672700.840x.xxxxx	0 … 16	8674700.840x.xxxxx	0 … 25

Voltage codes and spare coils

Voltage and frequency solenoid						
Code Voltage	**Code Frequency**	**Voltage**	**Frequency**	**Power consumption**		
				Inrush / Holding 8301/8304 *1)	**Inrush / Holding 8401/8404 *1)**	**Inrush / Holding 8402/8406 *1)**
024	00	24 V d.c.	–	22 W	40 W	29 W
024	49	24 V a.c.	40 … 60 Hz	25 VA	45 VA	33 VA
110	49	110 V a.c.	40 … 60 Hz	25 VA	45 VA	33 VA
120	49	120 V a.c.	40 … 60 Hz	25 VA	45 VA	33 VA
230	49	230 V a.c.	40 … 60 Hz	25 VA	45 VA	33 VA

*1) Note: A.c. with rectifier plug.
Further versions on request!

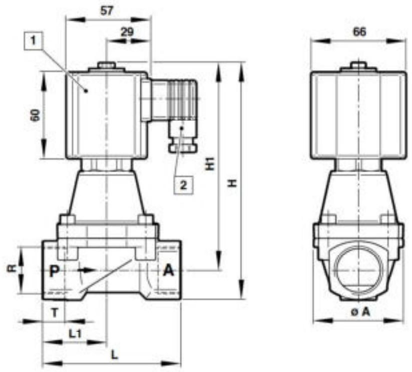
Options

- Seat seal CR for ammonia
- Manual override
- Version for viscosity up to 80 cst
- Operating pressure up to 40 bar
- Normally open
- Explosion approved coils

2/2-WAY FORCE LIFTED VALVES
Series 86700, 86720, 86740

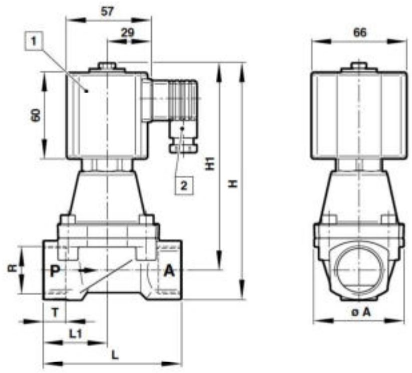
Dimensions

86700 with solenoid 830x



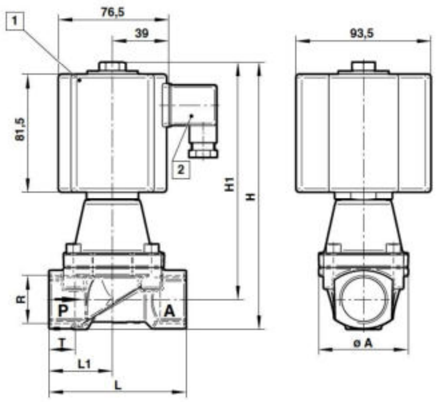
Model	Port size	A	H	H1	L	L1	T
8670000.830x.xxxxx	G1/4	44	143	132	60	27,5	12
8670100.830x.xxxxx	G3/8	44	143	132	60	27,5	12
8670200.830x.xxxxx	G1/2	44	145	132	67	31	14
8670300.830x.xxxxx	G3/4	50	154	137	80	35,5	16
8670400.830x.xxxxx	G1	62	164	143,5	95	44	18

86700 with solenoid 840x



Model	Port size	A	H	H1	L	L1	T
8670500.840x.xxxxx	G1 1/4	92	212,5	183,5	132	60	20
8670600.840x.xxxxx	G1 1/2	92	212,5	183,5	132	60	22
8670700.840x.xxxxx	G2	109	212,5	183,5	160	74	24

86720 with solenoid 840x

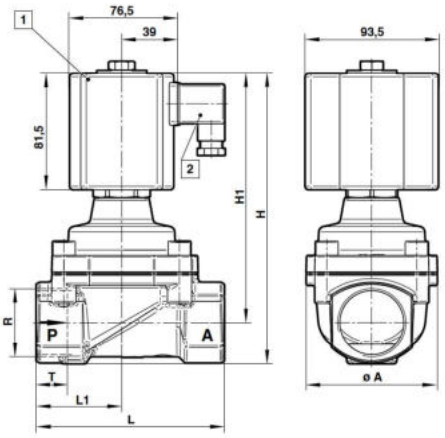


Model	Port size	A	H	H1	L	L1	T
8672000.840x.xxxxx	G1/4	44	143	132	60	27,5	12
8672100.840x.xxxxx	G3/8	44	143	132	60	27,5	12
8672200.840x.xxxxx	G1/2	44	145	132	67	31	14
8672300.840x.xxxxx	G3/4	50	154	137	80	35,5	16
8672400.840x.xxxxx	G1	62	164	143,5	95	44	18

1 Solenoid rotatable 360°
2 Socket turnable 4 x 90° (Socket included)

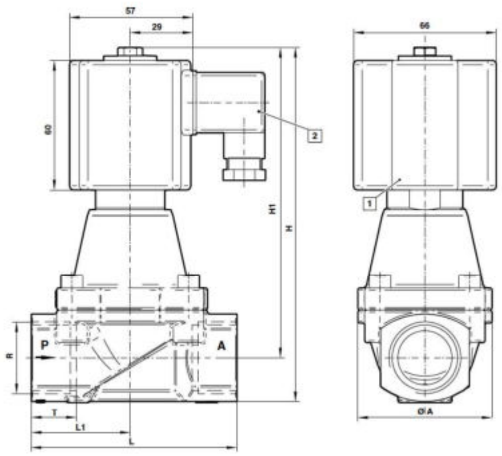
2/2-WAY FORCE LIFTED VALVES
Series 86700, 86720, 86740

86720 with solenoid 840x



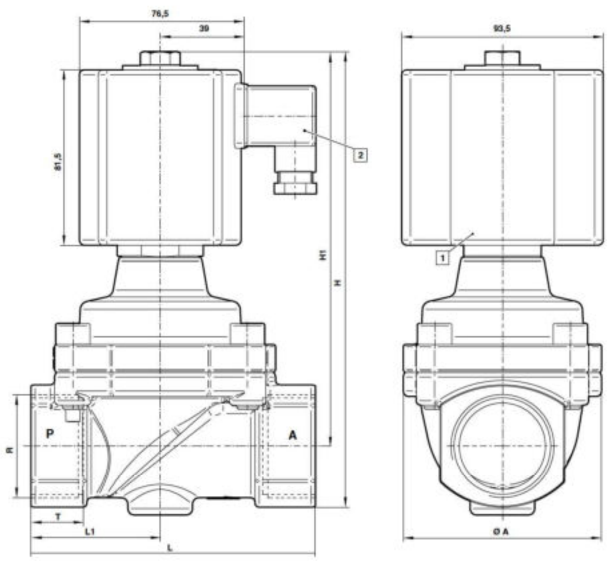
Model	Port size	A	H	H1	L	L1	T
8672500.840x.xxxxx	G1 1/4	92	212	183	132	60	20
8672600.840x.xxxxx	G1 1/2	92	212	183	132	60	22
8672700.840x.xxxxx	G2	109	226	192	160	74	24

86740 with solenoid 830x



Model	Port size	A	H	H1	L	L1	T
8674000.830x.xxxxx	G1/4	44	143	132	60	60	12
8674100.830x.xxxxx	G3/8	44	143	132	60	60	12
8674200.830x.xxxxx	G1/2	44	145	132	67	67	14
8674300.830x.xxxxx	G3/4	50	154	137	80	80	16
8674400.830x.xxxxx	G1	62	164	143,5	95	95	18

86740 with solenoid 840x



Model	Port size	A	H	H1	L	L1	T
8674500.840x.xxxxx	G1 1/4	92	212,5	183,5	132	132	20
8674600.840x.xxxxx	G1 1/2	92	212,5	183,5	132	132	22
8674700.840x.xxxxx	G2	109	226,5	192	160	160	24

1 Solenoid rotatable 360°

2 Socket turnable 4 x 90° (Socket included)

2/2-WAY INDIRECLY OPERATED SOLENOID VALVES

Series 82400, 82470, 82730, 83030

- 2/2-way seat valves
- DN 8 … 50, G1/4 … 2
- High flow rate
- Damped operation
- Functional compact design
- Solenoid interchangeable without tools (Click-on®)
- Fluids of Group 2 acc. Pressure Equipment Directive 97/23/EC (Series 83030)

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

Differential pressure:
0,1 bar required

EXPRESS




	82400 (82410)	82470 (82680)	82730 (82740)	83030
Medium	Neutral gases and liquids	Hot water, steam	Slightly aggressive gases and liquid fluids	Neutral gases and liquids
Port size	G1/4 … 2 (1/4 … 2 NPT)	G1/4 … 1 (1/4 … 1 NPT)	G1/4 … 2 (1/4 … 2 NPT)	DN 15 … DN 50
Operating pressure	0,1 … 10/16 bar	0,1 … 10 bar	0,1 … 10/16 bar	0,1 … 10/16 bar
Temperature				
Media temperature	-10°C … +90°C	0°C … +150°C	-10°C … +90°C	-10°C … +90°C
Ambient temperature	-10°C … +50°C	-10°C … +60°C	-10°C … +50°C	-10°C … +50°C
Material				
Body	Brass (CW617N)	Brass (CW617N)	Stainless steel (1.4408)	Cast steel, brass
Seat seal	NBR	HNBR	NBR	NBR
Internal parts	Stainless steel, PVDF, brass from DN 25	Stainless steel, brass	Stainless steel, PVDF	Stainless steel, PVDF resp. Brass from DN 32

Standard models

Port size	Orifice (mm)	Series 82400 Model	Operating pressure (bar)	Series 82470 Model	Operating pressure (bar)	Series 82730 Model	Operating pressure (bar)	Series 83030 Model (Flange)	Operating pressure (bar)
G1/4	8	8240000.9101.xxxxx	0,1 … 16	8247000.9101.xxxxx	0,1 … 10	8273000.9101.xxxxx	0,1 … 16	–	–
G3/8	10	8240100.9101.xxxxx	0,1 … 16	8247100.9101.xxxxx	0,1 … 10	8273100.9101.xxxxx	0,1 … 16	–	–
G1/2	12	8240200.9101.xxxxx	0,1 … 16	8247200.9101.xxxxx	0,1 … 10	8273200.9101.xxxxx	0,1 … 16	–	–
–	15	–	–	–	–	–	–	8303200.9101.xxxxx	0,1 … 16
G3/4	20	8240300.9101.xxxxx	0,1 … 16	8247300.9101.xxxxx	0,1 … 10	8273300.9101.xxxxx	0,1 … 16	8303300.9101.xxxxx	0,1 … 16
G1	25	8240400.9101.xxxxx	0,1 … 16	8247400.9101.xxxxx	0,1 … 10	8273400.9101.xxxxx	0,1 … 16	8303400.9101.xxxxx	0,1 … 16
G1 1/4	32	8240500.9101.xxxxx	0,1 … 10 *1)	–	–	8273500.9101.xxxxx	0,1 … 10 *1)	8303500.9101.xxxxx	0,1 … 10 *1)
G1 1/2	40	8240600.9101.xxxxx	0,1 … 10 *1)	–	–	8273600.9101.xxxxx	0,1 … 10 *1)	8303600.9101.xxxxx	0,1 … 10 *1)
G2	50	8240700.9101.xxxxx	0,1 … 10 *1)	–	–	8273700.9101.xxxxx	0,1 … 10 *1)	8303700.9101.xxxxx	0,1 … 10 *1)

*1) Note: Operating pressure 0,1 … 16 bar with solenoid 9151.

Voltage codes and spare coils

Voltage and frequency solenoid							
Code Voltage	Code Frequency	Voltage	Frequency	Power consumption			
				Inrush	Holding	Inrush	Holding
				9101 *2)		9151*2)	
024	00	24 V d.c.	–	8 W	8 W	18 W	18 W
024	50	24 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA
110	50	110 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA
120	60	120 V a.c.	60 Hz	15 VA	12 VA	45 VA	35 VA
230	50	230 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA

*2) Note: c UL us coil only / up to +55°C ambient temperature.
Further versions on request!

Options

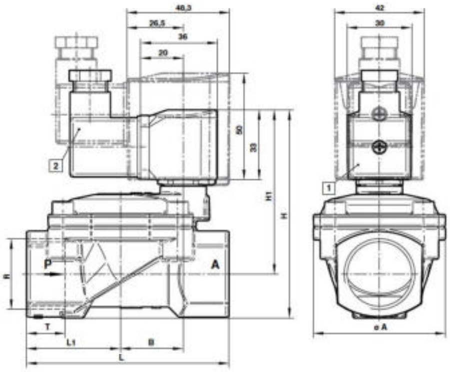
- Normally open (NO)
- Manual override
- Seat seal FPM
- Seat seal EPDM
- Bi-stabil version
- Latching-coil system
- Version for drinking water with diaphragm according to KTW
- Flanges acc.to ASME B 16.5 150 lb/sq.In. (Series 83030)
- FM/NEMA approved coil Modele 382x for USA + Canada
- With sealed core tube
- With Drain plug (Gardening version)
- ATEX approved coils

2/2-WAY INDIRECLY OPERATED SOLENOID VALVES
Series 82400, 82470, 82730, 83030

Dimensions

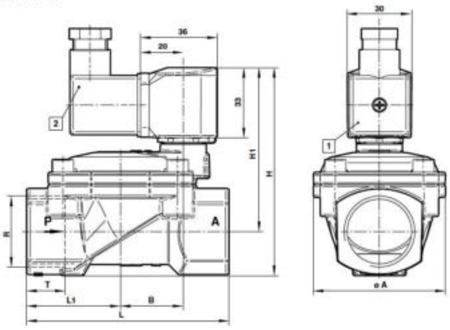
1 Solenoid rotatable 360°
2 Socket turnable 4 x 90° (Socket included)

82400



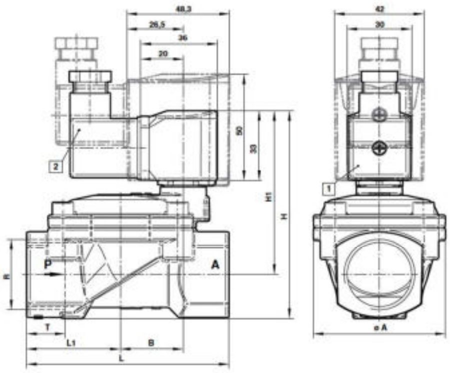
Model	Port size	A	B	H	H1	L	L1	T
8240000.9101.xxxxx	G1/4	44	19,5	78,5	67	60	27,5	12
8240100.9101.xxxxx	G3/8	44	19,5	78,5	67	60	27,5	12
8240200.9101.xxxxx	G1/2	44	19,5	81	67	67	31	14
8240300.9101.xxxxx	G3/4	50	24	88	71,5	80	36,5	16
8240400.9101.xxxxx	G1	62	29,5	97,5	77	95	44	18
8240500.9101.xxxxx	G1 1/4	92	44,5	124,5	95,5	132	60	20
8240600.9101.xxxxx	G1 1/2	92	44,5	124,5	95,5	132	60	22
8240700.9101.xxxxx	G2	109	54,5	142,5	108	160	74	24

82470



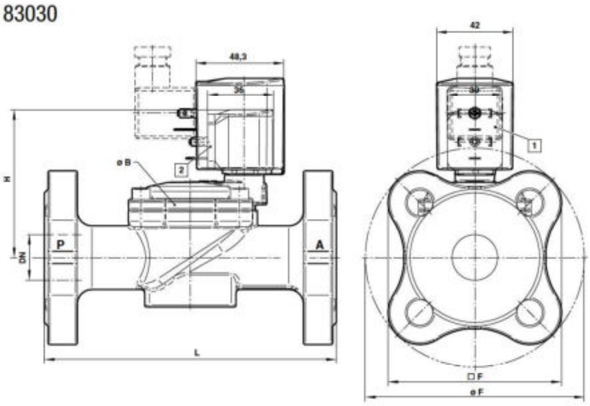
Model	Port size	A	B	H	H1	L	L1	T
8247000.9101.xxxxx	G1/4	44	19,5	78,5	67	60	27,5	12
8247100.9101.xxxxx	G3/8	44	19,5	78,5	67	60	27,5	12
8247200.9101.xxxxx	G1/2	44	19,5	81	67	67	31	14
8247300.9101.xxxxx	G3/4	50	24	88	71,5	80	36,5	16
8247400.9101.xxxxx	G1	62	29,5	97,5	77	95	44	18

82730



Model	Port size	A	B	H	H1	L	L1	T
8273000.9101.xxxxx	G1/4	44	19,5	78,5	67	60	27,5	12
8273100.9101.xxxxx	G3/8	44	19,5	78,5	67	60	27,5	12
8273200.9101.xxxxx	G1/2	44	19,5	81	67	67	31	14
8273300.9101.xxxxx	G3/4	50	24	88	71,5	80	36,5	16
8273400.9101.xxxxx	G1	62	29,5	97,5	77	95	44	18
8273500.9101.xxxxx	G1 1/4	92	44,5	124,5	95,5	132	60	20
8273600.9101.xxxxx	G1 1/2	92	44,5	124,5	95,5	132	60	22
8273700.9101.xxxxx	G2	109	54,5	142,5	108	160	74	24

83030



Model	Orifice	Ø B	Ø F	F	H	L
8303000.9101.xxxxx	15	44	96	77	69	130
8303100.9101.xxxxx	20	50	110	86,6	77	150
8303200.9101.xxxxx	25	62	120	95,1	81	160
8303300.9101.xxxxx	32	92	140	110,7	97	180
8303400.9101.xxxxx	32	92	140	110,7	114	180
8303500.9101.xxxxx	40	92	150	117,8	102	200
8303600.9101.xxxxx	40	92	150	117,8	119	200
8303700.9101.xxxxx	50	109	165	128,4	113	230
8303700.9151.xxxxx	50	109	165	128,4	131	230

Contact face acc. to DIN EN 1092-1/B.

2/2-WAY INDIRECTLY OPERATED VALVES

Series 85360, 85380, 85660

- 2/2-way piston valves
- DN 8 … 50, G1/4 … 2, Flange connection, Pressure rating PN 40
- Compact build piston valve
- Functional design
- High flow rate
- Piston guided in PTFE rings
- Solenoid interchangeable without tools (Click-on®)
- Series 85360:
  - Damped operation via cone
- Series 85380:
  -Leakrate E acc. to DIN EN 12266-1

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

Differential pressure:
0,5/1 bar required



	85360 (85370)	85380 (85390)	85660
Medium	Neutral gases and liquids	Neutral steam and liquids	Neutral gases and liquid fluids
Port size	G1/4 … 2 (1/4 … 2 NPT)	G1/4 … 1 (1/4 … 1 NPT)	DN 15 … 50
Operating pressure	0,5 … 40 bar	1 … 25 bar	0,5 … 40 bar
Temperature			
Media temperature	-20°C … +90°C	0°C … +200°C	-20°C … +90°C
Ambient temperature	-20°C … +50°C	0°C … +50°C with solenoid mounted vertical underneath max. +60°C *4)	-20°C … +50°C
Material			
Body	Brass (CW617N)	Brass (CW617N)	Cast steel (1.0619), brass (CW617N)
Seat seal	NBR	PTFE	NBR
Internal parts	Stainless steel, brass, PTFE/carbon	Stainless steel, FPM, PTFE	Stainless steel, brass, PTFE

Standard models

Port size	Orifice (mm)	Series 85360 Model	Operating pressure (bar)	Series 85380 Model	Operating pressure (bar)	Series 85660 Model (Flange)	Operating pressure (bar)
G1/4	8	8536000.915x.xxxxx	0,5 … 40	8538000.915x.xxxxx	1 … 25	–	–
G3/8	10	8536100.915x.xxxxx	0,5 … 40	8538100.915x.xxxxx	1 … 25	–	–
G1/2	12	8536200.915x.xxxxx	0,5 … 40	8538200.915x.xxxxx	1 … 25	–	–
–	15	–	–	–	–	8566200.915x.xxxxx	0,5 … 40
G3/4	20	8536300.915x.xxxxx	0,5 … 40	8538300.915x.xxxxx	1 … 25	8566300.915x.xxxxx	0,5 … 40
G1	25	8536400.915x.xxxxx	0,5 … 40	8538400.915x.xxxxx	1 … 25	8566400.915x.xxxxx	0,5 … 40
G1 1/4	32	8536500.915x.xxxxx	0,5 … 40	–	–	8566500.915x.xxxxx	0,5 … 40
G1 1/2	40	8536600.915x.xxxxx	0,5 … 40	–	–	8566600.915x.xxxxx	0,5 … 40
G2	50	8536700.915x.xxxxx	0,5 … 40	–	–	8566700.915x.xxxxx	0,5 … 40

Voltage codes and spare coils

Voltage and frequency solenoid							
Code Voltage	**Code Frequency**	**Voltage**	**Frequency**	**Power consumption**			
				Inrush	**Holding**	**Inrush**	**Holding**
				9151 *1)		**9152 *2)**	
024	00	24 V d.c.	–	18 W	18 W	10 W	10 W
024	50	24 V a.c.	50 Hz	45 VA	35 VA	45 VA	15 VA
110	50	110 V a.c.	50 Hz	45 VA	35 VA	45 VA	15 VA
120	60	120 V a.c.	60 Hz	45 VA	35 VA	45 VA	15 VA
230	50	230 V a.c.	50 Hz	45 VA	35 VA	45 VA	15 VA

*1) Note: coil only.
*2) Note: coil only / up to +55°C ambient temperature.
Further versions on request!

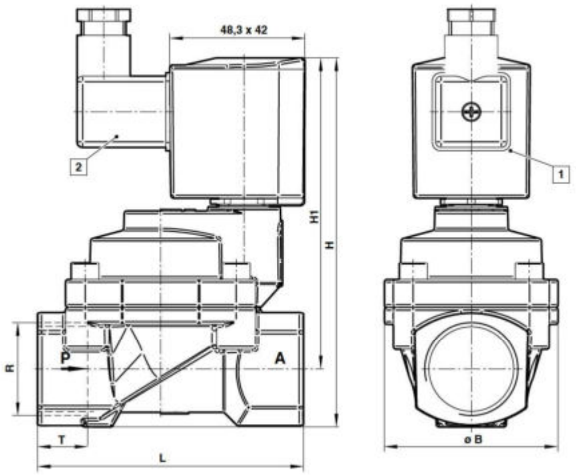
Options

- Normally open
- Manual override
- Version for drinking water
- Special version for PET-bottling systems

2/2-WAY INDIRECTLY OPERATED VALVES
Series 85360, 85380, 85660

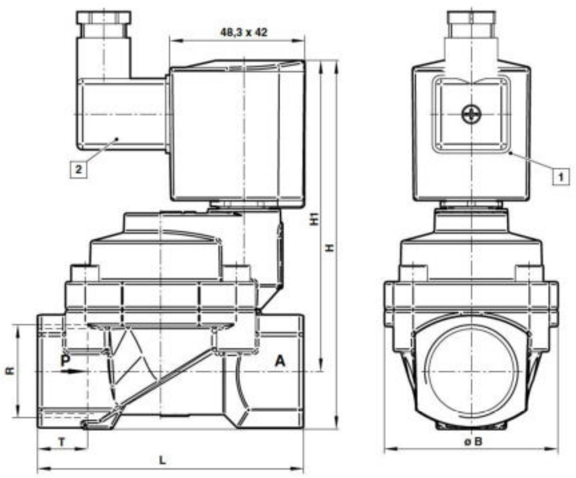
Dimensions

85360



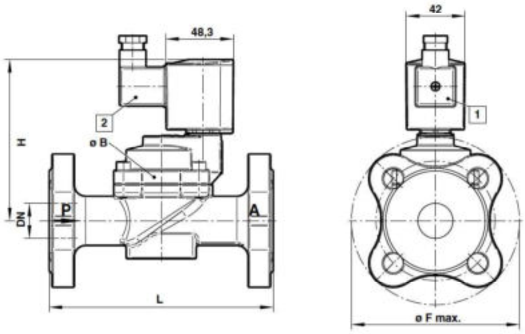
Model	Port size	Ø B	H	H1	L	T
8536000.9151.xxxxx	G1/4	44	105	93,5	60	12
8536100.9151.xxxxx	G3/8	44	105	93,5	60	12
8536200.9151.xxxxx	G1/2	44	107,5	102,5	67	14
8536300.9151.xxxxx	G3/4	50	119	102,5	80	16
8536400.9151.xxxxx	G1	62	131,5	110,5	95	18
8536500.9151.xxxxx	G1 1/4	92	166	137	132	20
8536600.9151.xxxxx	G1 1/2	92	166	137	132	22
8536700.9151.xxxxx	G2	109	186	151,5	160	24

85380



Model	Port size	Ø B	H	H1	L	T
8538000.9152.xxxxx	G1/4	44	105	93,5	60	12
8538100.9152.xxxxx	G3/8	44	105	93,5	60	12
8538200.9152.xxxxx	G1/2	44	107,5	102,5	67	14
8538300.9152.xxxxx	G3/4	50	119	102,5	80	16
8538400.9152.xxxxx	G1	62	131,5	110,5	95	18

85660



Model	Orifice	Ø B	Ø F max.	H	H1
8566200.9151.xxxxx	15	44	96	96	130
8566300.9151.xxxxx	20	50	110	108,5	150
8566400.9151.xxxxx	25	62	115	115	160
8566500.9151.xxxxx	32	92	140	138,5	180
8566600.9151.xxxxx	40	92	150	143,5	200
8566700.9151.xxxxx	50	109	165	156,5	230

1 Solenoid rotatable 360°

2 Socket turnable 4 x 90° (Socket included)

SOLENOID OPERATING VALVE

VID Series G1, G1 1/2, G2, G2 1/2, G3

- Port size:
- 1 … 3" (ISO G)2/2-way valves
- Pulse Valve used for controlling the compressed air of Dust removal systems and many other applications
- High flow rate
- Functional Compact Design
- The key components adopts advance material
- Pnuematic Control Type and Solenoid control type available

Technical Data

Medium:
Compressed air

Switching function:
Normally Closed

Operating pressure:
1 … 8 bar (0 … 116 psi)

Relative Humidity:
<85%

Orifice:
See table

Port size:
G1, G1 1/2, G2, G2 1/2, G3

Mounting position:
Optional, preferably with solenoid vertical on top

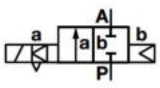
Flow direction:
Determined

Ambient temperature:
Ambient:
-20°C … +65°C (-4 … +149°F)
Media:
-20°C … +80°C (-4 … +176°F)
Depending on solenoid system
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Materials

Body: Aluminium
Diaphragm: TPU, NBR and FKM

Models - 2/2 Way Valves with temperature -20°C … +80°C, Housing: Aluminum



Model	Function	Port size	Oriffice (mm)	Operating pressure (bar)	Seal material
VID*2500.6201.****	2/2 NC	G1	25	1 … 8	TPU
VID*4000.6201.****	2/2 NC	G1 1/2	40	1 … 8	NBR
VID*5000.6201.****	2/2 NC	G2	50	1 … 8	NBR
VID*6200.6201.****	2/2 NC	G2 1/2	62	1 … 8	NBR
VID*7600.6201.****	2/2 NC	G3	76	1 … 8	NBR

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

Option selector

VID★★★★★.★★★★.★★★★★

Material - Valve body	Substitute
Tank mount valve (G1 1/2 … 3)	**A**
Right angle, indirectly solenoid actuated (G1 … 2 1/2)	**B**

Port size	Substitute
G1	**25**
G1 1/2	**40**
G2	**50**
G2 1/2	**62**
G3	**76**

Version	Substitute
TPU (G1)	**00**
NBR (G1 1/2 … 3)	**00**
FKM (G1 1/2 … 3)	**60**

Voltage	Substitute
24 V d.c.	**02400**
110 V a.c., 50 Hz	**11050**
220 V a.c., 50 Hz	**22050**

Coil protection	Substitute
Standard (G1", B Type)	**6201**
Standard (G1 1/2" … G2 1/2", B Type)	**6202**
Standard (G1 1/2"… G3", A Type)	**6204**

*2) A Valve Type please contact Engineering Department

SOLENOID OPERATING VALVE

VID Series G1, G1 1/2, G2, G2 1/2, G3

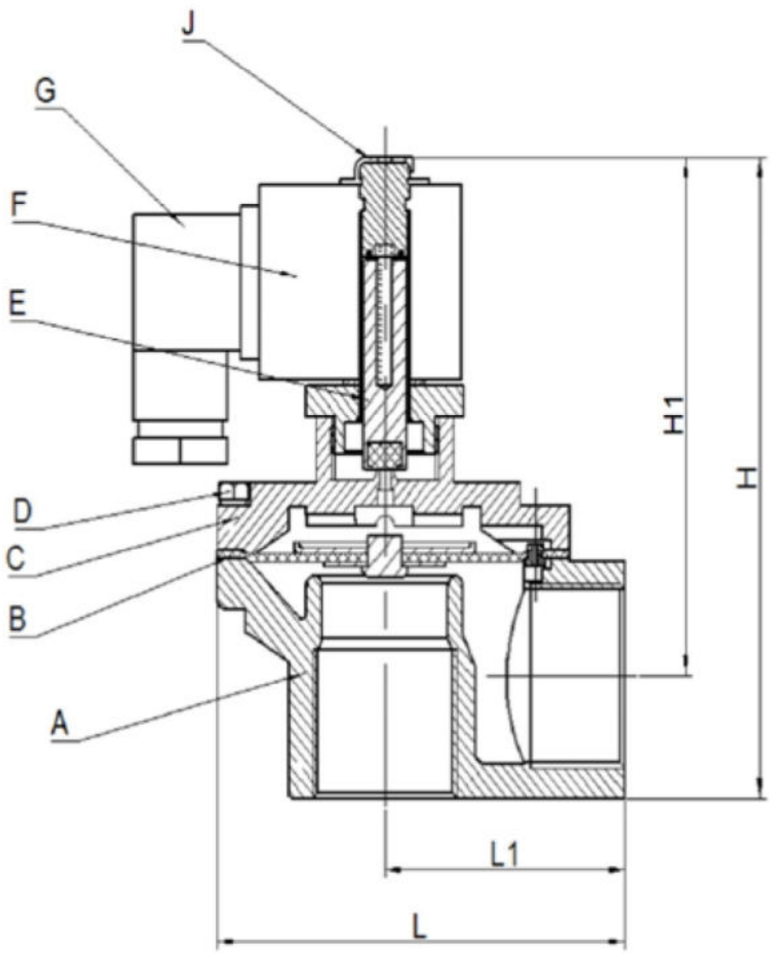
Solenoid, standard voltages

Power consumption 24 V d.c. (W)	Power consumption 110 V a.c. (VA)	Power consumption 220 V a.c. (VA)	Coil protection class IP	Temperature Ambient/ Media (°C)	Solenoid Electrical connection	Weight (kg)
21	24	24	IP 65 (with connector)	Ambient: -20 … +60 Fluid: -20 … +80	DIN43650A	VIDB25**.6201.*****
18	28	28	IP 65 (with connector)	Ambient: -20 … +60 Fluid: -20 … +80	DIN43650A	VIDB40**.6202.***** VIDB50**.6202.***** VIDB62**.6202.*****
20	25	25	IP 65 (with connector)	Ambient: -20 … +60 Fluid: -20 … +80	DIN43650A	VIDA40**.6204.***** VIDA50**.6204.***** VIDA62**.6204.***** VIDA76**.6204.*****

Standard voltages (± 10%) 24 V d.c., 110V a.c., other voltages on request. Connector DIN43650A TYPE. 100% duty cycle.
Coil insulation Class - H for 6201 & 6202 type & F for 6204 type.
Temperatures mentioned refer to coils only.
Pneumatically operated valves are available on request.
For other power coils please contact Engineering Team.

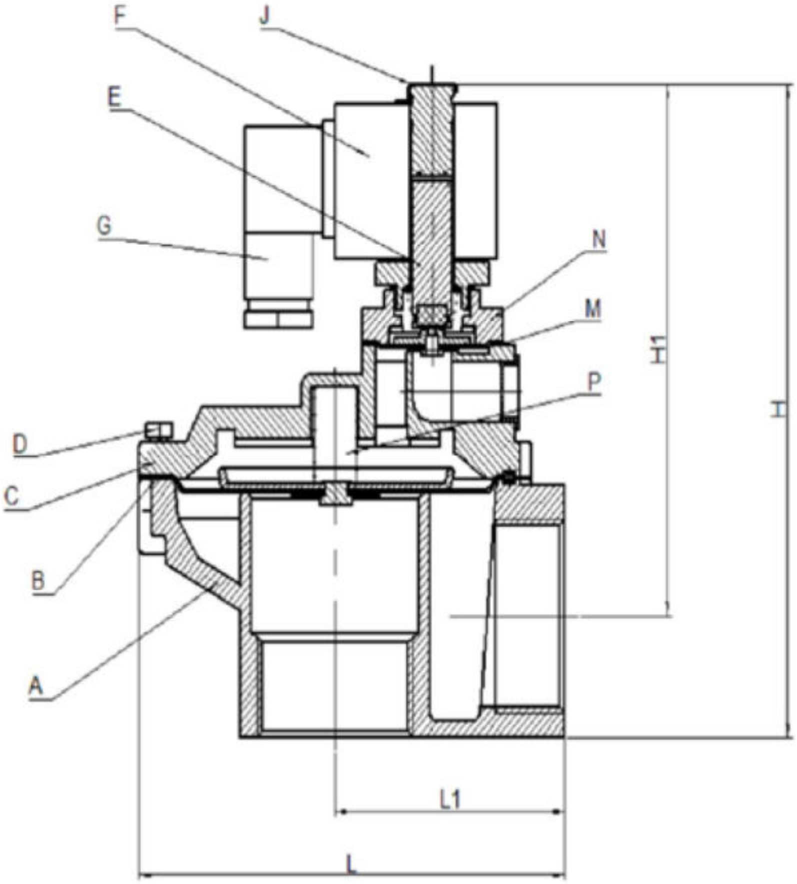
Dimensions

Valves for VIDB★★★★.★★★★.★★★★★ version only G1



No.	Description
A	Valve body
*B	Diaphragm
C	Valve cover
D	Allen head screw
E	Armature set
*F	coil
*G	Electrical connector
*P	Pressure spring

Valves for VIDB★★★★.★★★★.★★★★★ version only G1 1/2 … 2 1/2



No.	Description
A	Valve body
*B	Diaphragm
C	Valve cover
D	Allen head screw
E	Armature set
*F	coil
*G	Electrical connector
*M	Diaphragm
N	Valve cover
*P	Pressure spring

*) These are spare parts available, please contact IMI Norgren for more details.

Port size	H	H1	L	L1	Model
G1	112	91	88	53	VIDB2500.6201.****
G1 1/2	162	132	131,5	71	VIDB4000.6201.****
G2	208	165	167,5	95	VIDB5000.6201.****
G2 1/2	208	165	167,5	95	VIDB6200.6201.****

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 84500, 84520

- 2/2-way seat valves
- DN 15 … 50, G1/2 … 2
- Easy rebuilding into »normally open« or »double-acting« without tools
- Optical position indicator is standard
- Damped closing (Valve closes against flow direction)
- Suitable for contaminated flow fluid
- Suitable for vacuum up to max. 90%
- Reversed flow direction optional

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

EXPRESS

	84500 (84510)	84520 (84530)
Medium	Neutral gases and liquids	Aggressive gases and liquids
Pilot fluid	Neutral gases max. +60°C	Neutral gases max. +60°C
Port size	G1/2 … 2 (1/2 … 2 NPT)	G1/2 … 2 (1/2 … 2 NPT)
Operating pressure	0 … 25 bar (depends on port size)	0 … 25 bar (depends on port size)
Pilot pressure	3,5 … 10 bar	3,5 … 10 bar
Temperature		
Media temperature	-10°C … +180°C	-10°C … +180°C
Ambient temperature	-10°C … +60°C	-10°C … +60°C
Material Process fluid		
Body	Brass (CW617N)	Stainless steel (1.4581)
Seat seal	PTFE	PTFE
Internal parts	Brass, stainless steel	Stainless steel
Material Pilot fluid		
Body	Polyamid 66 with glass fibre 30%	Polyamid 66 with glass fibre 30%
Seals	NBR	NBR
Internal parts	Brass, stainless steel	Brass, stainless steel, 1.8159, 1.1200

Standard models

Port size	Series 84500 Model	Operating pressure (bar)	Series 84520 Model	Operating pressure (bar)
G1/2	8450200.0000.00000	0 … 16 (25)	8452200.0000.00000	0 … 16 (25)
G3/4	8450300.0000.00000	0 … 10 (16)	8452300.0000.00000	0 … 10 (16)
G1	8450400.0000.00000	0 … 10	8452400.0000.00000	0 … 10
G1 1/4	8450500.0000.00000	0 … 7	8452500.0000.00000	0 … 7
G1 1/2	8450600.0000.00000	0 … 4,5	8452600.0000.00000	0 … 4,5
G2	8450700.0000.00000	0 … 3	8452700.0000.00000	0 … 3

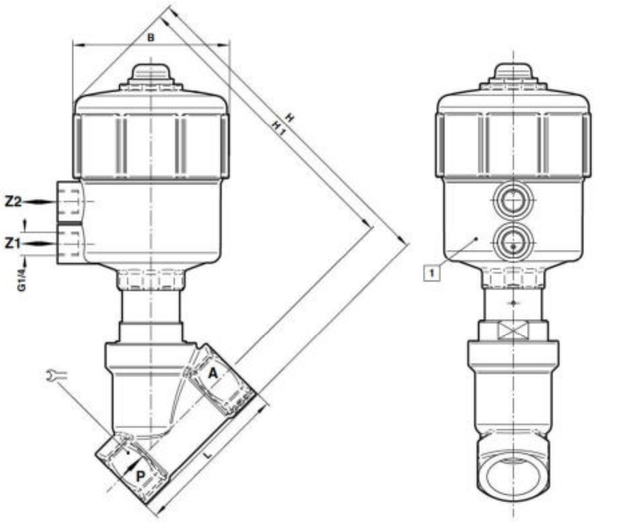
Options

- Namur interface plate for namur pilot valve
- Electrical position indicator
- Linear cone positioner with integrated sensor

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID
Series 84500, 84520

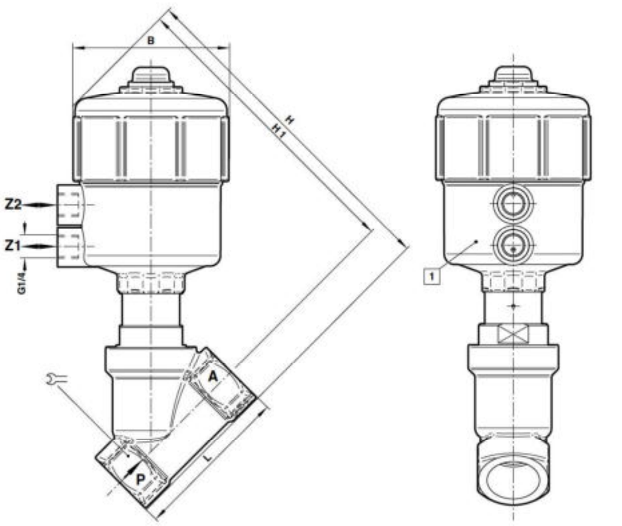
Dimensions

84500



Model	Port size	B	H	H1	L	
8450200.0000.00000	G1/2	89,5	177,5	164	65	27
8450300.0000.00000	G3/4	89,5	184	168	75	32
8450400.0000.00000	G1	89,5	194,5	174	90	41
8450500.0000.00000	G1 1/4	89,5	209,5	184,5	110	50
8450600.0000.00000	G1 1/2	89,5	208,5	186	120	55
8450700.0000.00000	G2	89,5	229,5	194,5	150	70

84520



Model	Port size	B	H	H1	L	
8452200.0000.00000	G1/2	89,5	177,5	164	65	27
8452300.0000.00000	G3/4	89,5	184	168	75	32
8452400.0000.00000	G1	89,5	194,5	174	90	41
8452500.0000.00000	G1 1/4	89,5	209,5	184,5	110	50
8452600.0000.00000	G1 1/2	89,5	208,5	186	120	55
8452700.0000.00000	G2	89,5	229,5	194,5	150	70

1 Actuator may be rotated 360°

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 84720, 84740

- 2/2-way seat valves
- DN 15 … 25, G1/2 … 1
- Optical position indicator is standard
- Damped closing (Valve closes against flow direction)
- Suitable for contaminated flow fluid
- Suitable for vacuum up to max. 90%
- Reversed flow direction optional
- High flow rate
- Option pressure actuated by external liquid fluid

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional

EXPRESS

	84720 (84730)	84740 (84750)
Medium	Neutral gases and liquids	Aggressive gases and liquids
Pilot fluid	Neutral gases max. +60°C	Neutral gases max. +60°C
Port size	G1/2 … 1 (1/2 … 1 NPT)	G1/2 … 1 (1/2 … 1 NPT)
Operating pressure	0 … 16 bar (depends on port size)	0 … 16 bar (depends on port size)
Pilot pressure	3,5 … 10 bar	3,5 … 10 bar
Temperature		
Media temperature	-10°C … +180°C	-10°C … +180°C
Ambient temperature	-10°C … +60°C	-10°C … +60°C
Material Process fluid		
Body	Brass (CW617N)	Stainless steel
Seat seal	PTFE	PTFE
Internal parts	Brass, stainless steel	Stainless steel
Material Pilot fluid		
Body	Polyamid 66 with glass fibre 30%	Polyamid 66 with glass fibre 30%
Seals	NBR	NBR
Internal parts	Brass, stainless steel	Brass, stainless steel

Standard models

Port size	Series 84720 Model	Operating pressure (bar)	Series 84740 Model	Operating pressure (bar)
G1/2	8472200.0000.00000	0 … 16	8474200.0000.00000	0 … 16
G3/4	8472300.0000.00000	0 … 8	8474300.0000.00000	0 … 8
G1	8472400.0000.00000	0 … 5	8474400.0000.00000	0 … 5

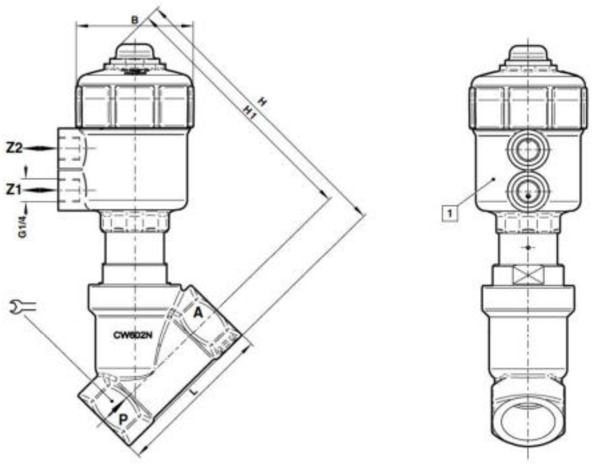
Options

- Namur interface plate for Namur pilot valve
- Electrical position indicator
- Normally open
- Double acting

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID
Series 84720, 84740

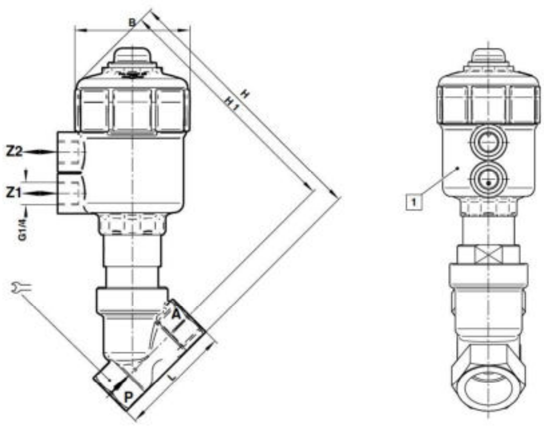
Dimensions

84720



Model	Port size	B	H	H1	L	⚿
8472200.0000.00000	G1/2	66	154	140,5	65	27
8472300.0000.00000	G3/4	66	160	144,5	75	32
8472400.0000.00000	G1	66	171	150,5	90	41

84740



Model	Port size	B	H	H1	L	⚿
8474200.0000.00000	G1/2	66	154	140,5	65	27
8474300.0000.00000	G3/4	66	160	144,5	75	32
8474400.0000.00000	G1	66	171	150,5	90	41

1 Actuator may be rotated 360°

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 82180, 82280, 82580

- 2/2-way seat valves
- DN 15 … 50
- For robust industry applications
- Series 82180, 82280:
  - High flow rate
  - Suitable for contaminated process fluid
  - Damped operation (Valves closes against flow direction)
  - Suitable for vacuum up to max. 90%
  - Option pressure actuated by external liquid fluid
- Series 82580:
  - EC Modele examination certificate Product ID-No.: CE-0085 AT0091 Valve class A Valve group 2
  - High function reliability
  - Short response time < 1 s
  - Qualification approval acc. to EN 161/3394 Part 1

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top



	82180 (82190)	82280 (82290)	82580 with DVGW-approval
Medium	Neutral gases and liquids	Neutral gases and liquids	Neutral burnable gases and other neutral gases
Pilot fluid	Neutral gases max. +80°C	Neutral gases max. +80°C	Neutral gases max. +80°C
Port size	G1/2 … 2 (1/2 … 2 NPT)	G1/2 … 2 (1/2 … 2 NPT)	G1/2 … 2 (1/2 … 2 NPT)
Operating pressure	0 … 16 bar (depends on port size)	0 … 10/16 bar	0 … 10 bar
Pilot pressure	3,8 … 8 bar	3,8 … 8 bar	5 … 8 bar
Temperature			
Media temperature	-10°C … +180°C	-10°C … +180°C	-10°C … +60°C
Ambient temperature	-10°C … +60°C	-10°C … +60°C	-10°C … +60°C
Material Process fluid			
Body	Brass (CW617N)	Brass (CW617N)	Brass (CW617N)
Seat seal	PTFE	PTFE	FPM
Internal parts	Brass, stainless steel	Brass, stainless steel	Brass, stainless steel
Material Pilot fluid			
Body	Stainless steel, aluminium	Stainless steel, aluminium	Stainless steel (1.4408)
Seals	NBR	NBR	NBR
Internal parts	Coated steel	Coated steel	Coated steel

Standard models

Port size	Orifice (mm)	Series 82180 Model	Operating pressure (bar)	Series 82280 Model	Operating pressure (bar)	Series 82580 Model	Operating pressure (bar)
G1/2	15	8218200.0000.00000	0 … 16	–	–	8258200.0000.xxxxx	0 … 10
G3/4	20	8218300.0000.00000	0 … 10	–	–	8258300.0000.xxxxx	0 … 10
G1	25	8218400.0000.00000	0 … 10	–	–	8258400.0000.xxxxx	0 … 10
G1 1/4	32	8218500.0000.00000	0 … 7	8228500.0000.00000	0 … 16	8258500.0000.xxxxx	0 … 10
G1 1/2	40	8218600.0000.00000	0 … 4,5	8228600.0000.00000	0 … 10	8258600.0000.xxxxx	0 … 10
G2	50	8218700.0000.00000	0 … 3	8228700.0000.00000	0 … 10	8258700.0000.xxxxx	0 … 10

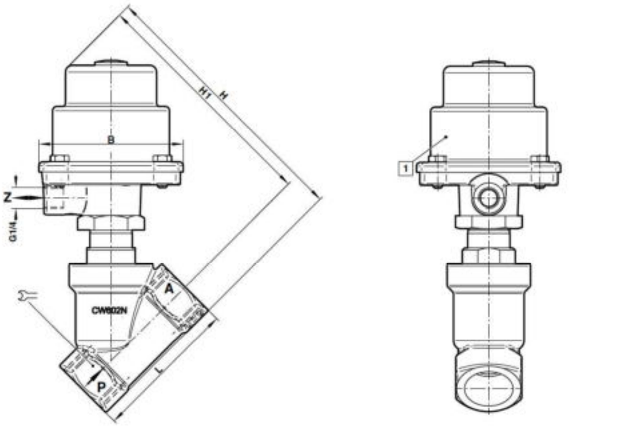
Options

- Normally open
- Operating pressure up to 25 bar

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID
Series 82180, 82280, 82580

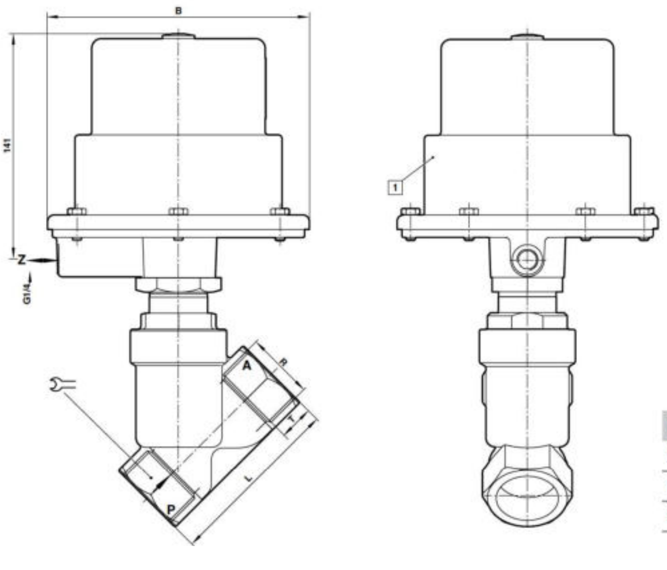
Dimensions

82180 actuator Ø 70 mm



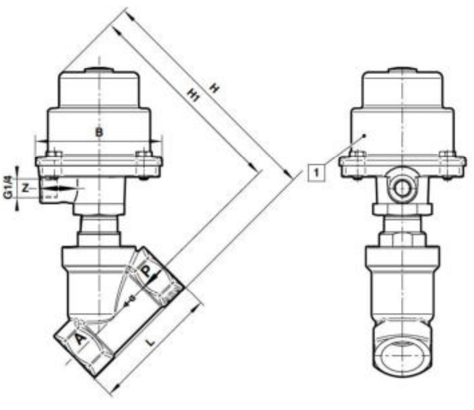
Model	Port size	B	H	H1	L	
8218200.0000.00000	G1/2	89,5	154	140,5	65	27
8218300.0000.00000	G3/4	89,5	160	144	75	32
8218400.0000.00000	G1	89,5	171	150,5	90	41
8218500.0000.00000	G1 1/4	89,5	186	161	110	50
8218600.0000.00000	G1 1/2	89,5	190	162,5	120	55
8218700.0000.00000	G2	89,5	206	171	150	70

82280 actuator Ø 125 mm



Model	Port size	B	H	H1	L	
8228500.0000.00000	G1 1/4	163	250	225	110	50
8228600.0000.00000	G1 1/2	163	255	227,5	120	55
8228700.0000.00000	G2	163	270	235	150	70

82580



Model	Port size	B	H	H1	L
8258200.0000.00000	G1/2	89,5	154	140,5	65
8258300.0000.00000	G3/4	89,5	160	144	75
8258400.0000.00000	G1	89,5	171	150,5	90
8258500.0000.00000	G1 1/4	89,5	186	161	110
8258600.0000.00000	G1 1/2	89,5	190	162,5	120
8258700.0000.00000	G2	89,5	206	171	150

1 Actuator may be rotated 360°

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 83240, 83250

- 2/2-way seat valves
- DN 15 … 100, G1/2 … 2
- Suitable for steam
- Can be used as Y-pattern/selector valve (pressure connected to A)
- High flow rate
- Series 83240:
  - Damped closing
  - For robust industry applications

Technical Data

Switching function:
Normally closed from P to A, closed by spring force, opened from P to A by pilot pressure

Flow direction:
Determined

Mounting position:
Optional

	83240	83250
Medium	Neutral gases and liquids	Neutral gases and liquids
Pilot fluid	Air max. +80°C	Neutral gases max. +60°C
Port size	DN 15 … 100	DN 15 … 50, G1/2 … 2 (1/2 … 2 NPT)
Operating pressure	0 … 16 bar (depends on port size)	0 … 16 bar (depends on port size)
Pilot pressure	4,5 … 7 bar	5,5 … 7 bar
Temperature		
Media temperature	-10°C … +180°C	-10°C … +180°C
Ambient temperature	-10°C … +80°C	-10°C … +80°C
Material Process fluid		
Body	Grey cast iron	Gun metal
Seat seal	PTFE	PTFE
Internal parts	Brass, stainless steel	Stainless steel, brass
Material Pilot fluid		
Body	–	Aluminium
Seal	–	NBR
Internal parts	–	Brass, stainless steel

Standard models

Port size	Orifice (mm)	Series 83240 Model (Flange)	Operating pressure (bar)	Series 83250 Model	Operating pressure (bar)
G1/2	15	8324200.0000.00000	0 … 16	8325200.0000.00000	0 … 16
G3/4	20	8324300.0000.00000	0 … 16	8325300.0000.00000	0 … 16
G1	25	8324400.0000.00000	0 … 10	8325400.0000.00000	0 … 10
G1 1/4	32	8324500.0000.00000	0 … 16	8325500.0000.00000	0 … 16
G1 1/2	40	8324600.0000.00000	0 … 14	8325600.0000.00000	0 … 14
G2	50	8324700.0000.00000	0 … 10	8325700.0000.00000	0 … 10
–	65	8324800.0000.00000	0 … 7	–	–
–	80	8324900.0000.00000	0 … 4	–	–
–	100	w5000.0000.00000	0 … 2	–	–

Options

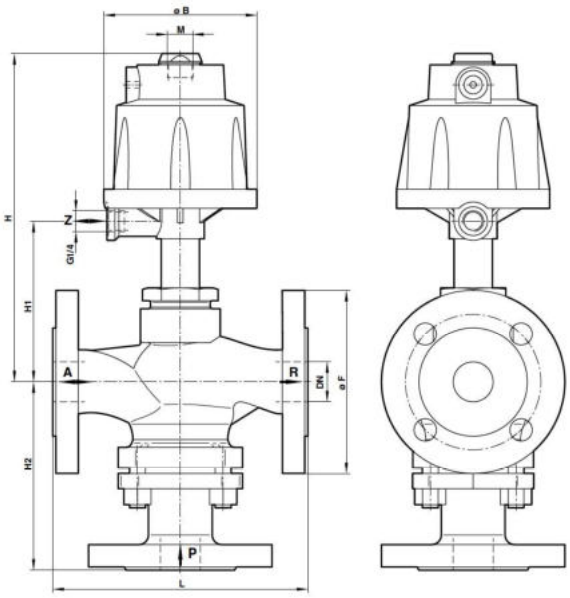
- Normally open (NO) P→A
- Water as a pilot fluid
- Electrical position indicator

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 83240, 83250

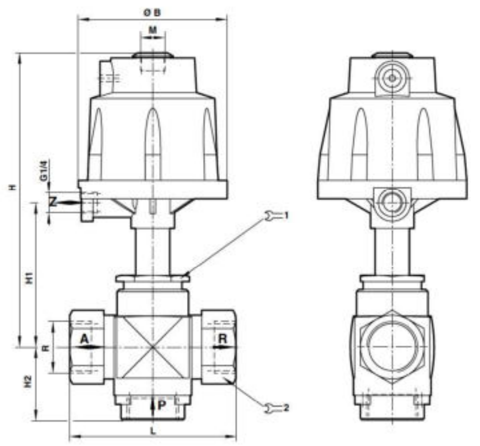
Dimensions

83240



Model	Orifice	Ø B	Ø F	H	H1	H2	L	M
83242xx.0000.00000	15	96	95	193	95	97	130	M16 x 1
83243xx.0000.00000	20	96	105	198	100	112	150	M16 x 1
83244xx.0000.00000	25	96	115	199	101	118	160	M16 x 1
83245xx.0000.00000	32	164	140	285	141	142	180	M22 x 1,5
83246xx.0000.00000	40	164	150	293	149	148	200	M22 x 1,5
83247xx.0000.00000	50	164	165	300	156	158	230	M22 x 1,5
83248xx.0000.00000	65	164	185	314	170	183	290	M22 x 1,5
83249xx.0000.00000	80	164	200	326	182	204	310	M22 x 1,5
83250xx.0000.00000	100	164	220	339	195	236	350	M22 x 1,5

83250



Model	Port size	Ø B	H	H1	H2	L	M	🔧1	🔧2
8325200.0000.00000	G1/2	96	186	88	41	75	M16 x 1	36	27
8325300.0000.00000	G3/4	96	190	92	46	87	M16 x 1	36	32
8325400.0000.00000	G1	96	190	92	47	107	M16 x 1	41	41
8325500.0000.00000	G1 1/4	164	269	125	66	123	M22 x 1,5	55	50
8325600.0000.00000	G1 1/2	164	269	125	68	147	M22 x 1,5	55	58
8325700.0000.00000	G2	164	273	129	74	171	M22 x 1,5	55	70

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 83350, 83380

- 2/2-way seat valves
- DN 15 … 100, G1/2 … 2
- Any flow direction and mounting position
- Special seal materials are required for use with oil and oleiferous media

Technical Data

Switching function:
Normally closed; closed by spring force, opened by pilot pressure

Flow direction:
Optional

Mounting position:
Optional

	83350	83380
Medium	Neutral gases and liquids	Neutral gases and liquids
Pilot fluid	Air max. +40°C	Air max. +40°C
Port size	G1/2 … 2	DN 15 … 150
Operating pressure	0 … 10 bar	0 … 6/8/10 bar
Pilot pressure	5,5 … 7 bar	5,5 … 7 bar
Temperature		
Media temperature	-10°C … +80°C	-10°C … +80°C
Ambient temperature	-10°C … +55°C	-10°C … +55°C
Material Process fluid		
Body	Grey cast iron	Grey cast iron
Seat seal	EPDM	EPDM
Material Pilot fluid		
Body	Polymer material	Polymer material
Seal	NBR	NBR
Internal parts	Coated steel	Coated steel

Standard models

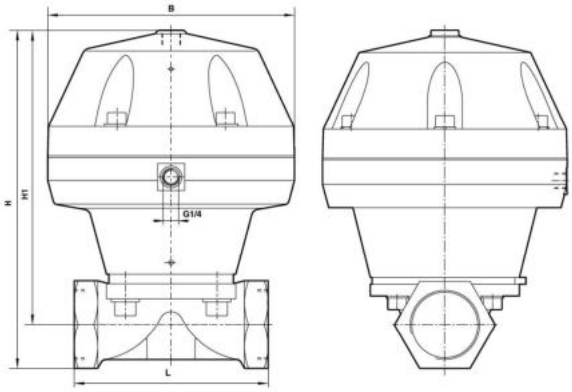
Port size	Orifice (mm)	Series 83350 Model	Operating pressure (bar)	Series 83380 Model (Flange)	Operating pressure (bar)
G1/2	15	8335200.0000.00000	0 … 10	8338200.0000.00000	0 … 10
G3/4	20	8335300.0000.00000	0 … 10	8338300.0000.00000	0 … 10
G1	25	8335400.0000.00000	0 … 10	8338400.0000.00000	0 … 10
G1 1/4	32	8335500.0000.00000	0 … 10	8338500.0000.00000	0 … 10
G1 1/2	40	8335600.0000.00000	0 … 10	8338600.0000.00000	0 … 10
G2	50	8335700.0000.00000	0 … 10	8338700.0000.00000	0 … 10
–	65	–	–	8338800.0000.00000	0 … 6
–	80	–	–	8338900.0000.00000	0 … 8
–	100	–	–	8339000.0000.00000	0 … 6
–	125	–	–	8339100.0000.00000	0 … 8
–	150	–	–	8339200.0000.00000	0 … 6

Options

- Normally open
- Seat seal FPM
- Seat seal PTFE
- Valve body material stainless steel
- Electrical position indicator

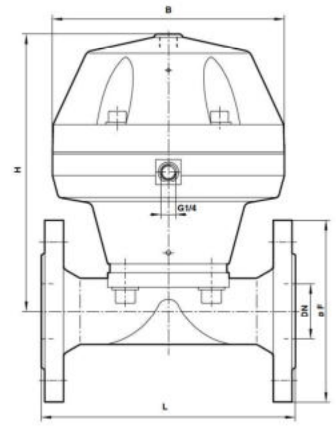
Dimensions

83350



Model	Port size	B	H	H1	L
8335200.0000.00000	G1/2	125	164	148	5
8335300.0000.00000	G3/4	125	168,5	148	85
8335400.0000.00000	G1	125	171	148	110
8335500.0000.00000	G1 1/4	155	230,5	203	120
8335600.0000.00000	G1 1/2	155	235,5	203	140
8335700.0000.00000	G2	210	285,5	248	165

83380



Model	Orifice	B *1)	Ø F	H	L
8338200.0000.00000	15	130	95	148	130
8338300.0000.00000	20	150	105	148	150
8338400.0000.00000	25	160	115	148	160
8338500.0000.00000	32	180	140	203	180
8338600.0000.00000	40	200	150	203	200
8338700.0000.00000	50	230	165	248	230
8338800.0000.00000	65	290	185	329	290
8338900.0000.00000	80	310	200	339	310
8339000.0000.00000	100	350	220	354	350
8339100.0000.00000	125	400	250	519	400
8339200.0000.00000	150	480	285	514	480

*1) B = max. depth.

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 82210

- 2/2-way piston seat valves
- DN 15 … 100
- High flow rate
- Damped closing
- Suitable for contaminated process fluids

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	82210
Medium	For neutral gaseous and liquid fluids
Port size	DN 15 … 100
Operating pressure	0 … 16 bar (depends on port size)
Temperature	
Media temperature	-10°C … +180°C
Ambient temperature	-10°C … +60°C
Material	
Body	Spheroidal cast iron (EN-GJS-400-18-LT)
Seat seal	PTFE
Internal parts	1.4571, 1.4568, 1.4305, brass

Standard models

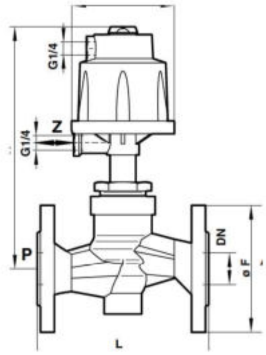
Orifice (mm)	Series 82210 Model	Operating pressure (bar)	Pilot pressure (bar)
15	8221200.0000.00000	0 … 16	5,5 … 10 bar
20	8221300.0000.00000	0 … 16	5,5 … 10 bar
25	8221400.0000.00000	0 … 10	5,5 … 10 bar
32	8221500.0000.00000	0 … 16	4 … 8 bar
40	8221600.0000.00000	0 … 12	4 … 8 bar
50	8221700.0000.00000	0 … 10	5,5 … 8 bar
65	8221800.0000.00000	0 … 7	5,5 … 8 bar
80	8221900.0000.00000	0 … 5	5,5 … 8 bar
100	8222000.0000.00000	0 … 2,5	5,5 … 8 bar

Options

- Normally open
- Electrical position indicator
- Stainless steel body
- Higher operating pressure

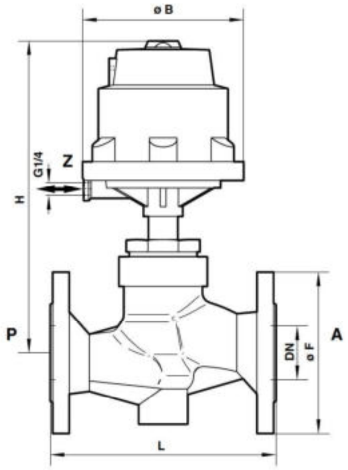
Dimensions

82210



Model	Orifice	Ø B	Ø F	H	L
82212xx.0000.00000	15	96	95	201	130
82213xx.0000.00000	20	96	105	208	150
82214xx.0000.00000	25	96	115	219	160

82210



Model	Orifice	Ø B	Ø F	H	L
82215xx.0000.00000	32	164	140	299	180
82216xx.0000.00000	40	164	150	310	200
82217xx.0000.00000	50	164	165	318	230
82218xx.0000.00000	65	164	185	346	290
82219xx.0000.00000	80	164	200	361	310
82220xx.0000.00000	100	164	220	382	350

3/2-WAY DIRECTLY OPERATED VALVES

Series 84660, 84680

- 3/2-way seat valves
- G1/4, DN 1,6 and 3
- Compact design
- Complete with connector and gasket
- Solenoid interchangeable without tools (Click-on®)
- Noiseless exhaust
- Low power consumption

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	84660 (84670)	84680 (84690)
Medium	Filtered, lubricated resp. non-lubricated air or neutral liquid fluids	Filtered, lubricated resp. non-lubricated air or neutral liquid fluids
Port size	DN 1,6	DN 3
Operating pressure	1 … 10 bar	1 … 10 bar
Temperature		
Media temperature	-10°C … +60°C	-10°C … +60°C
Ambient temperature	-10°C … +60°C	-10°C … +60°C
Material		
Body	Aluminium	Aluminium
Seat seal	TPU	TPU
Internal parts	Stainless steel, PPS	Stainless steel, PPS

Standard models

Orifice (mm)	Port size Internal	External R	A	Series 84660 Model	Operating pressure (bar)	Flow *2) (l/min)	Series 84680 Model	Operating pressure (bar)	Flow *2) (l/min)
1,6	G1/4	*1)	G1/4	8466000.910x.xxxxx	1 … 10	1,2	–	–	–
3	G1/4	*1)	G1/4	–	–	–	8468000.915x.xxxxx	1 … 10	3,3

*1) Note: Noiseless exhaust.

Voltage codes and spare coils

Voltage and frequency solenoid 9101/9151 *2)							
Code Voltage	Code Frequency	Voltage	Frequency	Power consumption Inrush 9101 *2)	Holding 9101 *2)	Inrush 9151 *2)	Holding 9151 *2)
024	00	24 V d.c.	–	8 W	8 W	18 W	18 W
024	50	24 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA
110	50	110 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA
120	60	120 V a.c.	60 Hz	15 VA	12 VA	45 VA	35 VA
230	50	230 V a.c.	50 Hz	15 VA	12 VA	45 VA	35 VA

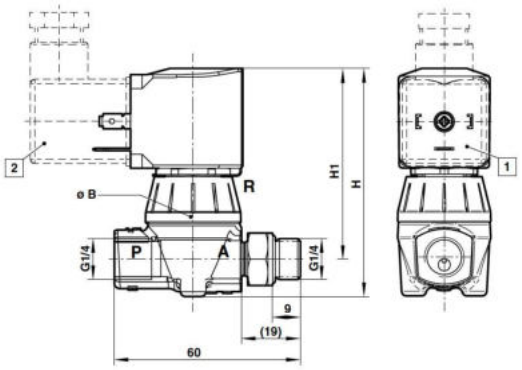
*2) Note: CSA coil only / up to +55°C ambient temperature.
Further versions on request!

Options

- Manual override
- Connection Port P and A female G1/8
- Explosion proofed coils

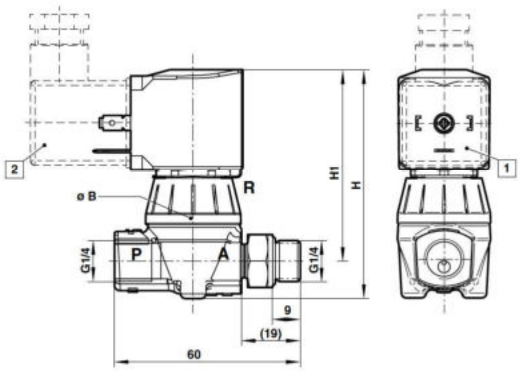
Dimensions

84660



Model	Orifice	Ø B	H	H1
8466000.9101.xxxxx	1,6	31	73,6	61,5

84680



Model	Orifice	Ø B	H	H1
8468000.9151.xxxxx	3	31	91	79

1 Solenoid rotatable 360°
2 Socket turnable 4 x 90° (Socket included)

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 82160, 82710

- 2/2-way seat valves
- DN 8 … 50, G1/4 … 2
- Series 82160:
  - Damped closing
  - For fluids with high particle contamination
  - Fluid isolated from valve actuator
  - Optimised dimensions and weight
  - Vacuum version as an option
  - Compact valve for industrial applications
- Series 82710:
  - Spindle seal with diaphragm
  - Suitable for contaminated process fluids
  - Optical position indicator is standard

Technical Data

Switching function:
Normally closed with pilot pressure

Flow direction:
Determined

Mounting position:
Optional

	82160 (82260)	82710 (82750)
Medium	Neutral fluids with high particle contamination	Neutral gases and liquids
Pilot fluid	Air max. +60°C	Air, water, hydraulic oil max. +90°C
Port size	G1/4 … 2	G1/4 … 1/2
Pilot connection	G1/4	G1/8
Operating pressure	0,2 … 16 bar	-0,9 … 6 bar
Pilot pressure	G1/4 … 1/2 max. 6 bar higher than operating pressure G3/4 … 2 max. 1 bar higher than operating pressure	3 … 8 bar
Temperature		
Media temperature	-10°C … +90°C	-10°C … +90°C
Ambient temperature	-10°C … +60°C	-10°C … +50°C
Material Process fluid		
Body	Brass (CW617N)	Brass (CW617N)
Seat seal	NBR	Fabric reinforced NBR diaphragm
Internal parts	Brass, stainless steel	–
Material Pilot fluid		
Body	–	Brass, PPO (cover)
Seat seal	–	Fabric reinforced NBR diaphragm

Standard models

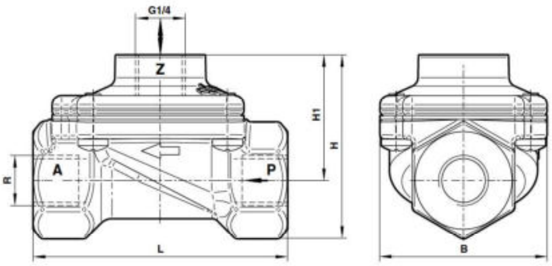
Port size	Orifice (mm)	Series 82160 Model (Flange)	Operating pressure (bar)	Series 82710 Model	Operating pressure (bar)
G1/4	8	8216000.0000.00000	0,2 … 16	8271000.0000.00000	-0,9 … 6
G3/8	10	8216100.0000.00000	0,2 … 16	8271100.0000.00000	-0,9 … 6
G1/2	12	8216200.0000.00000	0,2 … 16	8271200.0000.00000	-0,9 … 6
G3/4	20	8216300.0000.00000	0,2 … 16	–	–
G1	25	8216400.0000.00000	0,2 … 16	–	–
G1 1/4	32	8216500.0000.00000	0,2 … 16	–	–
G1 1/2	40	8216600.0000.00000	0,2 … 16	–	–
G2	50	8216700.0000.00000	0,2 … 16	–	–

Options

- Fabric diaphragm FPM (Series 82160)
- Fabric diaphragm NBR (Series 82160)
- Suitable for vacuum (Series 82160)
- Seat seal FPM (Series 82710)
- Seat seal EPDM (Series 82710)
- Seat seal FPM, Body stainless steel 1.4581 (Series 82710)

Dimensions

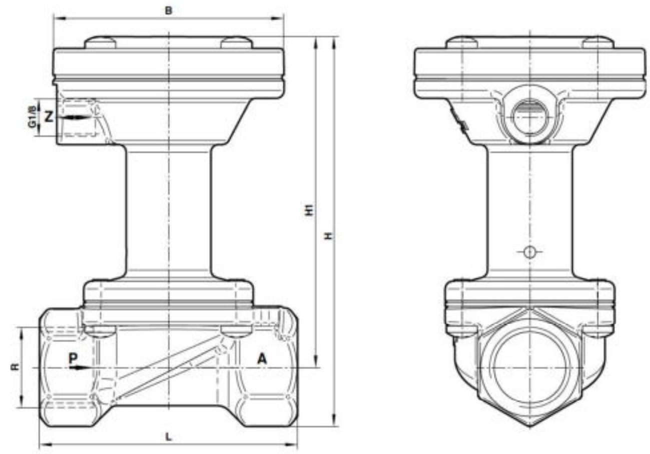
82160



Model	Port size	B *1)	H	H1	L
8216000.0000.00000	G1/4	44	48	33	67
8216100.0000.00000	G3/8	44	48	33	67
8216200.0000.00000	G1/2	44	48	33	67
8216300.0000.00000	G3/4	70	81	57	95
8216400.0000.00000	G1	70	81	57	95
8216500.0000.00000	G1 1/4	96	103	70	132
8216600.0000.00000	G1 1/2	96	103	70	132
8216700.0000.00000	G2	112	121	81	160

*1) B = max. depth.

82710



Model	Port size	B	H	H1	L
8271000.0000.00000	G1/4	96	186	88	75
8271100.0000.00000	G3/8	96	190	92	87
8271200.0000.00000	G1/2	96	190	92	107

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 82380, 82480

- 2/2-way seat valves
- DN 15 … 50, G1/2 … 2 (1/2 … 2 NPT)
- Suitable for contaminated process fluids
- High flow rate
- High media compatibility due to optimal material combinations
- For robust industry applications
- Damped closing (valve closes against flow direction)
- Suitable for vacuum up to max. 90%

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional

	82380 (82390)	82480 (82490)
Medium	Aggressive gases and liquids	Aggressive gases and liquids
Pilot fluid	Neutral gases max. +80°C	Neutral gases max. +80°C
Port size	G1/2 … 2 (1/2 … 2 NPT)	G1/2 … 2 (1/2 … 2 NPT)
Operating pressure	0 … 16 bar (depends on port size)	0 … 16 bar (depends on port size)
Pilot pressure	3,5 … 8 bar	3,8 … 8 bar
Temperature		
Media temperature	-10°C … +180°C	-10°C … +180°C
Ambient temperature	-10°C … +60°C	-10°C … +60°C
Material Process fluid		
Body	Stainless steel (1.4408)	Stainless steel (1.4408)
Seat seal	PTFE	PTFE
Internal parts	Stainless steel	Stainless steel
Material Pilot fluid		
Body	Stainless steel, aluminium	Stainless steel, aluminium
Seals:	NBR	NBR
Internal parts	Coated steel	Coated steel

Standard models

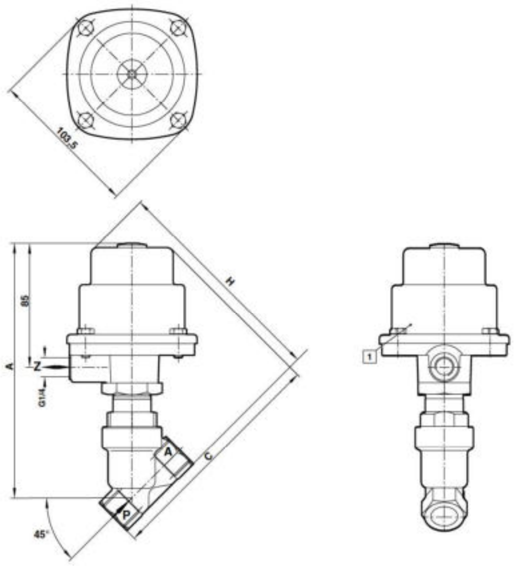
Port size	Orifice (mm)	Series 82380 Model	Operating pressure (bar)	Series 82480 Model	Operating pressure (bar)
G1/2	15	8238200.0000.00000	0 … 16	–	–
G3/4	20	8238300.0000.00000	0 … 10	–	–
G1	25	8238400.0000.00000	0 … 10	–	–
G1 1/4	32	8238500.0000.00000	0 … 7	8248500.0000.00000	0 … 16
G1 1/2	40	8238600.0000.00000	0 … 4,5	8248600.0000.00000	0 … 10
G2	50	8238700.0000.00000	0 … 3	8248700.0000.00000	0 … 10

Options

- Normally open (NO)
- Seat seal FPM
- Electrical position indicator
- Optical position indicator
- Media temperature max. +200°C
- Stainless steel actuator
- Spindle seal 80 with stainless steel bellows

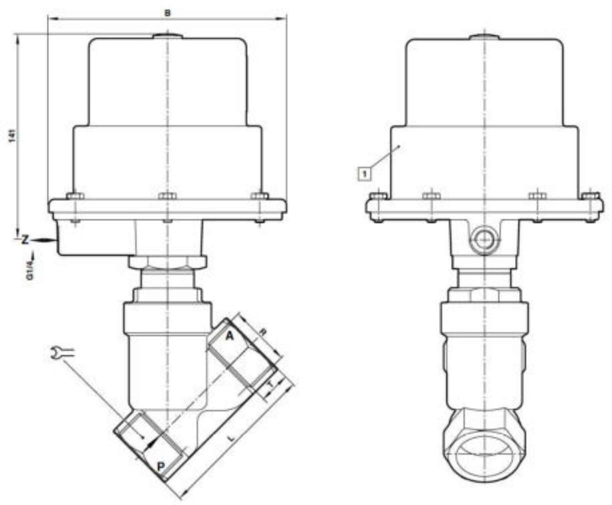
Dimensions

82380 actuator Ø 70 mm (A)



Model	Port size	B	C	H	L	T	(wrench)
8238200.0000.00000	G1/2	89,5	159	154	65	15	27
8238300.0000.00000	G3/4	89,5	165	160	75	16,5	32
8238400.0000.00000	G1	89,5	175	171	90	19	41
8238500.0000.00000	G1 1/4	89,5	189	186	110	21,5	50
8238600.0000.00000	G1 1/2	89,5	193	190	120	21,5	55
8238700.0000.00000	G2	89,5	211	206	150	26	70

82480 actuator Ø 125 mm (A)



Model	Port size	B	C	H	L	T	(wrench)
8248500.0000.00000	G1 1/4	163	253	250	110	21,5	50
8248600.0000.00000	G1 1/2	163	257	255	120	21,5	55
8248700.0000.00000	G2	163	275	270	150	26	70

1 Actuator may be rotated 360°

2/2-WAY PRESSURE ACTUATED VALVES BY EXTERNAL FLUID

Series 84180, 84190

- 2/2-way piston seat valves
- DN 2 … 10
- Compact miniature actuator Ø 30 mm
- Actuator may be rotated 360°
- Suitable for contaminated process fluid
- Suitable for vacuum up to max. 90%
- Reversed flow direction optional
- High flow rate
- Valve operates without pressure differential (Zero delta P)
- Clip angle M5 standard

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional

	84180 (84380)	84190 (84390)
Medium	Neutral, aggressive gases and liquids up to 600 mm²/s	Neutral, aggressive gases and liquids up to 600 mm²/s
Pilot fluid	Neutral gases max. +60°C	Neutral gases max. +80°C
Port size	DN 2 … 10, G1/8 … 1/2	DN 2 … 10, G1/8 … 1/2
Operating pressure	0 … 25 bar (depends on port size)	0 … 25 bar (depends on port size)
Pilot pressure	4 … 10 bar	4 … 10 bar
Temperature		
Media temperature	-10°C … +90°C	-10°C … +90°C
Ambient temperature	-10°C … +60°C	-10°C … +60°C
Material Process fluid		
Body	Brass (CW617N)	Stainless steel (1.4408)
Seat seal	NBR	NBR
Internal parts	PTFE	Stainless steel
Material Pilot fluid		
Body	Brass (CW617N)	Stainless steel (1.4404)
Seals	NBR	NBR
Internal parts	Stainless steel, brass	Stainless steel, brass

Standard models

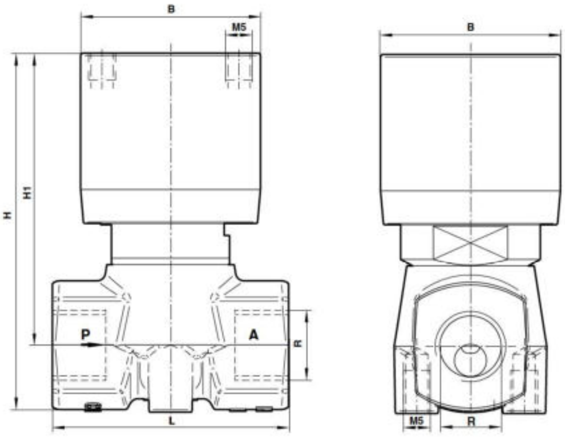
Port size	Orifice (mm)	Series 84180 Model	Operating pressure (bar)	Series 84190 Model	Operating pressure (bar)
G1/8	2	8418800.0000.00000	0 … 25	8419800.0000.00000	0 … 25
G1/4	4	8418020.0000.00000	0 … 25	8419020.0000.00000	0 … 25
G3/8	6	8418140.0000.00000	0 … 20	8419140.0000.00000	0 … 20
G1/2	10	8418260.0000.00000	0 … 8	8419260.0000.00000	0 … 8

Options

- Normally open (NO)
- Seat seal FPM
- Seat seal EPDM
- Double acting
- Higher operating pressure

Dimensions

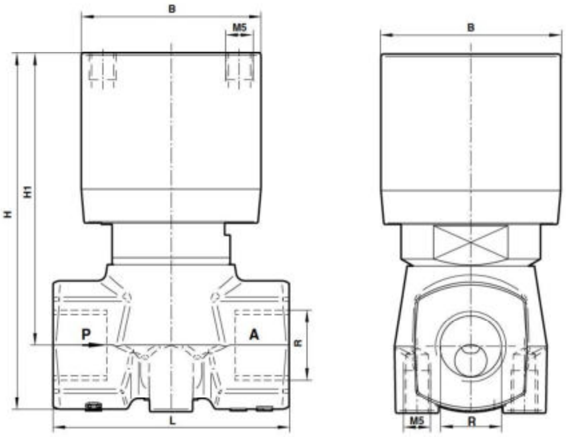
84180



Model	Port size	B *1)	H	H1	L
8418800.0000.00000	G1/8	44	65	53	44
8418020.0000.00000	G1/4	44	65	53	44
8418140.0000.00000	G3/8	44	65	53	44
8418260.0000.00000	G1/2	60	81	67	60

*1) B = max. depth.

84190



Model	Port size	B *1)	H	H1	L
8419800.0000.00000	G1/8	44	65	53	44
8419020.0000.00000	G1/4	44	65	53	44
8419140.0000.00000	G3/8	44	65	53	44
8419260.0000.00000	G1/2	60	81	67	60

*1) B = max. depth.

Efficient and inexpensive dust filter cleaning

Filter valves for air-blasting have been developed to allow efficient and inexpensive cleaning. Top priorities in the developers' requirements specification were to optimise the filter cleaning, reduce air consumption and prolong the valves' service life. To achieve optimum cleaning with the compressed air pulse, the pressure in the filter has to reach the set point very quickly. This means that the valves must open fully within a few milliseconds.

Compared with the previous models, the IMI Buschjost filter valve series has extremely fast opening times, which are essential for effective, intensive cleaning. The closing mechanism is just as fast as the opening mechanism. This determines the economical operation of a valve. The air pulse must return to zero as quickly as possible, as any minor delay will only consume air and cost money.

Product highlight:

- High grade materials
- Solenoid exchangeable without tools (TWIST-ON®)
- CE-mark
- Optimized strength
- Designed with newest CAD-technologies
- High flow rate
- One-piece diaphragm
- Usable from -40°C … +140°C
- High corrosion resistance (optional)
- Explosion proof up to hazardous area 1/21 and temperature class T4/ T5
- Usable for low pressure- and vacuum applications
- Integrated silencer
- Frost proof solenoid system
- International registrations like GOST-R or CRN available

Engineering GREAT Solutions

Find out more
www.imi-precision.com

IMI BUSCHJOST

2/2-WAY DIAPHRAGM VALVES

Series 82960, 82970

- DN 20 … 80, 3/4 … 3 (ISO G/NPT)
- High flow rate
- All internal components captive
- Clear, compact design
- Solenoid interchangeable without tools
- Integrated silencers
- One-piece diaphragm
- Also available for solenoid version low temperature -40°C (-40°F)

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	82960	82970
Medium	Air	Air
Port size	G3/4 … 1 NPT	G1 1/2 … G3
Operating pressure	0,4 … 8	0,4 … 7/8
Temperature		
Dusty gas temperature	-20°C … +85°C (-4 … +185°F)	-20°C … +85°C (-4 … +185°F)
Cleaning gas temperature	-40°C … +85°C (-40 … +185°F)	-40°C … +85°C (-40 … +185°F)
Ambient temperature	-20°C … +85°C (-4 … +185°F)	-20°C … +85°C (-4 … +185°F)
Material		
Body	Aluminium	Aluminium
Seat seal	TPE	TPE
Internal parts	TPU	TPU

Standard models

Voltage and Frequency Solenoid 8171 *1)					
Code Voltage	**Code Frequency**	**Voltage**	**Frequency**	**Power consumption**	
				Inrush	**Holding**
24	0	24 V d.c.	-	12 W	12 W
24	50	24 V a.c.	50 Hz	23 VA	16 VA
110	50	110 V a.c.	50 Hz	23 VA	16 VA
120	60	120 V a.c.	60 Hz	23 VA	16 VA
230	50	230 V a.c.	50 Hz	23 VA	16 VA

Electrical details for all solenoid systems

Design	DIN VDE 0580
Voltage range	±10%
Duty cycle	100% ED
Protection class	EN 60529 IP65
Socket	Form A acc. to DIN EN 175301-803 (included)

According to DIN VDE 0580 at a solenoid temperature of +20°C.
At operating state temperature the input power of a coil decreases by up to ca. 30% due to physical reasons.

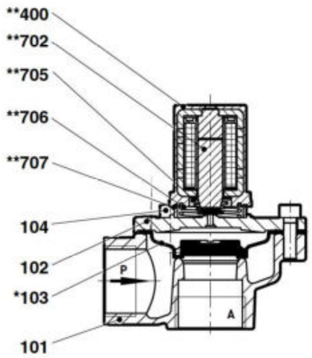
Additional solenoid systems

ATEX category	**ATEX protection class**	**IP protection class**	**Solenoid**	**Standard voltages**	**Old variant**
II 2G II 2D	Ex eb mb IIC T6 … T4 Gb Ex tb IIIC T130°C Db	IP66	42xx	24 V d.c., 110 V a.c., 230 V a.c.	/
II 2G II 2G II 2D	Ex d mb IIC T6/T5/T4 Gb Ex e mb IIC T6/T5/T4 Gb Ex tb IIIC T130°C/T95°C/T80°C Db	IP66	46xx	24 V d.c., 110 V a.c., 230 V a.c.	/
II 3G II 3D	Ex nA IIB T4 Gc Ex tc IIIB T130°C Dc	IP65	8176	24 V d.c., 110 V a.c., 230 V a.c	/
II 2G II 2D	Ex eb mb IIC T4 Gb Ex mb tb IIIB T135°C Db	IP66	6176	24 V d.c., 110 V a.c., 230 V a.c.	8186

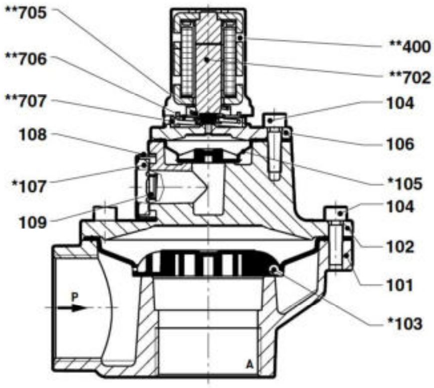
2/2-WAY DIAPHRAGM VALVES
Series 82960, 82970

Dimensions

G3/4 … 1
3/4 … 1 NPT



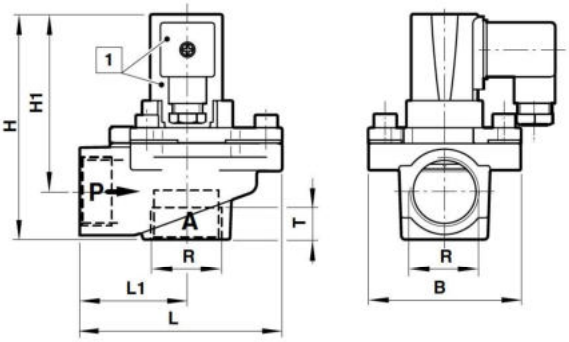
G1 1/2 … 3
1 1/2 … 2 1/2 NPT



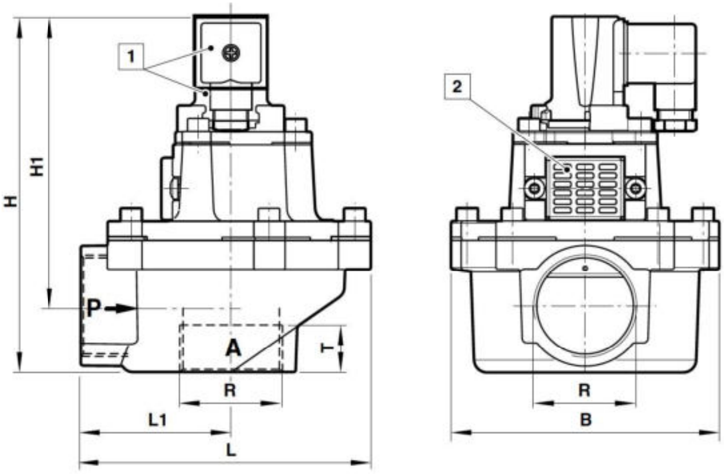
No.	Description
No.	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Socket head cap screw
*105	Diaphragm
106	Valve cover
*107	Silencer
108	Silencer housing
109	Socket head cap screw
**400	Solenoid
**702	Core
**705	Pressure spring
**706	Pressure spring
**707	Silencer

*/**These individual parts form a complete wearing unit.
When ordering spare parts please state Cat. No. and Series No.
** Solenoid complete wearing unit, e. g. 8298000.8170.XXXXX for a solenoid 8170

G3/4 … 1
3/4 … 1 NPT



G1 1/2 … 3
1 1/2 … 2 1/2 NPT



Model	Port size R	B	H	H1	L	L1	T
8296300.8171.xxxxx	G3/4	80	105,5	83	95	50	16
8297300.8171.xxxxx	3/4 NPT	80	105,5	83	95	50	14
8296400.8171.xxxxx	G1	80	105,5	83	95	50	18
8297400.8171.xxxxx	1 NPT	80	105,5	83	95	50	17
8296600.8171.xxxxx	G1 1/2	124,5	166	136	135	70	22
8297600.8171.xxxxx	1 1/2 NPT	124,5	166	136	135	70	18
8296700.8171.xxxxx	G2	140	190,5	149	170	96,5	25
8297700.8171.xxxxx	2 NPT	140	190,5	149	170	96,5	18
8296800.8171.xxxxx	G2 1/2	140	205,5	160	170	96,5	25
8297800.8171.xxxxx	2 1/2 NPT	140	205,5	160	170	96,5	24
8296900.8171.xxxxx	G3	196	221	169	239,5	143	33

2/2-WAY DIAPHRAGM VALVES

Series 82900, 82910

- DN 20 … 80, 3/4 … 3 (ISO G/NPT)
- High flow rate
- Clear, compact design
- One-piece diaphragm
- Easy to maintain

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

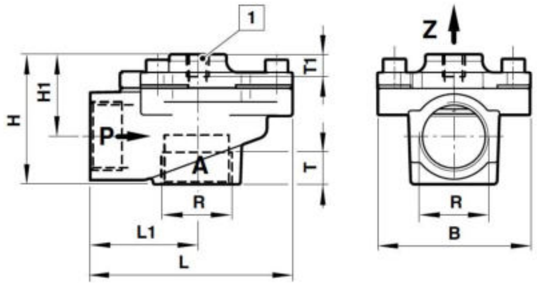
Mounting position:
Optional

	82900	82910
Medium	Air	Air
Port size	G3/4 … 1 NPT	G1 1/2 … G3
Operating pressure	0,4 … 8	0,4 … 7/8
Temperature		
Dusty gas temperature	-20°C … +85°C (-4 ... +185°F)	-20°C ... +85°C (-4 … +185°F)
Cleaning gas temperature	-40°C … +85°C (-40 … +185°F)	-40°C … +85°C (-40 … +185°F)
Ambient temperature	-20°C … +85°C (-4 … +185°F)	-20°C … +85°C (-4 … +185°F)
Material		
Body	Aluminium	Aluminium
Seat seal	TPE	TPE

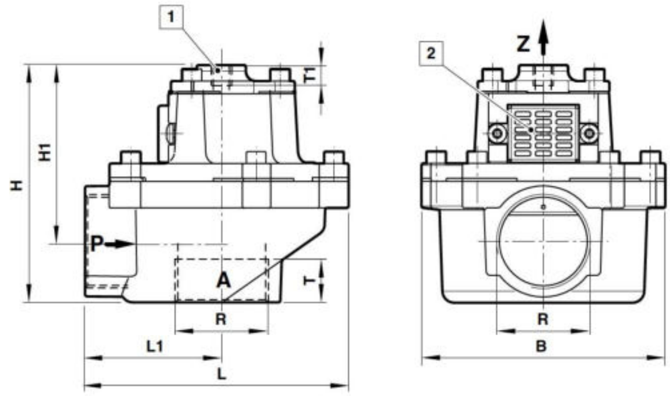
2/2-WAY DIAPHRAGM VALVES
Series 82900, 82910

Dimensions

G3/4 … 1
3/4 … 1 NPT



G1 1/2 … 3
1 1/2 … 2 1/2 NPT



1 Pilot connection G1/8 resp. 1/8 NPT
2 Silencer

Model	Port size R	B	H	H1	L	L1	T	T1
8290300.0000.00000	G3/4	80	61,5	39	95	50	16	10
8291300.0000.00000	3/4 NPT	80	61,5	39	95	50	14	10
8290400.0000.00000	G1	80	61,5	39	95	50	18	10
8291400.0000.00000	1 NPT	80	61,5	39	95	50	17	10
8290600.0000.00000	G1 1/2	124,5	122	91	135	70	22	10
8291600.0000.00000	1 1/2 NPT	124,5	122	91	135	70	18	10
8290700.0000.00000	G2	140	145	104	170	95	25	10
8291700.0000.00000	2 NPT	140	145	104	170	95	18	10
8290800.0000.00000	G2 1/2	140	160	115	170	95	25	10
8291800.0000.00000	2 1/2 NPT	140	160	115	170	95	24	10
8290900.0000.00000	G3	196	176	123,5	239,5	143	33	10

2/2-WAY DIRECTLY OPERATED VALVES

Series 82080

- 2/2-way seat valves
- DN 3 … 8, G1/4 … 3/8
- Functional design
- Suitable for aggressive fluids
- Compact solenoid with integrated core tube
- Core tube protected with PTFE-bellow
- Unsusceptible to calcification and magnetization of foreign particles

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	82080
Medium	Aggressive gases and fluids
Port size	G1/4 … 3/8
Operating pressure	0 … 7 bar (depends on port size)
Temperature	
Media temperature	-10°C … +110°C
Ambient temperature	-10°C … +50°C
Material	
Body	PVDF
Seat seal	EPDM
Internal parts	PTFE-bellows

Standard models

Port size	Orifice (mm)	Series 82080 Model	Operating pressure (bar)
G1/4	3	8208000.805x.xxxxx	0 … 7
G3/8	3	8208100.805x.xxxxx	0 … 7
G1/4	4,5	8208060.805x.xxxxx	0 … 5
G3/8	4,5	8208160.805x.xxxxx	0 … 5
G1/4	6	8208070.805x.xxxxx	0 … 2
G3/8	6	8208170.805x.xxxxx	0 … 2
G1/4	8	8208080.805x.xxxxx	0 … 1
G3/8	8	8208180.805x.xxxxx	0 … 1

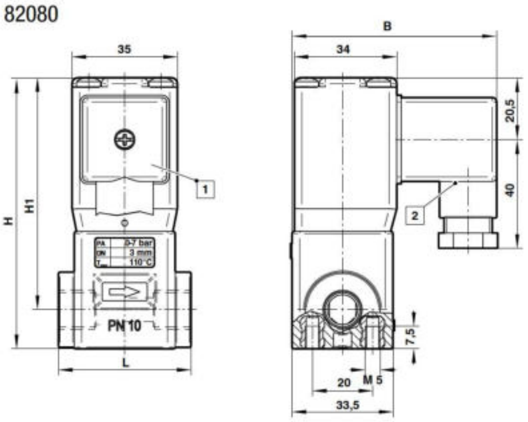
Voltage codes and spare coils

Voltage and frequency solenoid							
Code Voltage	Code Frequency	Voltage	Frequency	Power consumption			
				Inrush	Holding	Inrush	Holding
				8050		8051*1)	
024	00	24 V d.c.	–	12 W	12 W	–	–
110	49	110 V a.c.	40 … 60 Hz	–	–	13 VA	13 VA
120	49	120 V a.c.	40 … 60 Hz	–	–	13 VA	13 VA
230	49	230 V a.c.	40 … 60 Hz	–	–	13 VA	13 VA

*1) Note: A.c. with rectifier plug.

Dimensions

82080



1 Solenoid rotatable 4 x 90°
2 Socket turnable 4 x 90° (Socket included)

Model	Port size	Orifice	B *2)	H	H1	L
8208000.805x.xxxxx	G1/4	3	70	90	77	44
8208100.805x.xxxxx	G3/8	3	70	90	77	44
8208060.805x.xxxxx	G1/4	4,5	70	90	77	44
8208160.805x.xxxxx	G3/8	4,5	70	90	77	44
8208070.805x.xxxxx	G1/4	6	70	90	77	44
8208170.805x.xxxxx	G3/8	6	70	90	77	44
8208080.805x.xxxxx	G1/4	8	70	90	77	44
8208180.805x.xxxxx	G3/8	8	70	90	77	44

*2) B = max. depth

2/2-WAY DIRECTLY OPERATED VALVES

Series 83150, 83153

- 2/2-way seat valves
- DN 1,5 … 8, G1/4 … 3/8
- Functional design
- Series 83150
  - Solenoid interchangeable without tools (Click-on®)
  - Good corrosion resistance

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

Differential pressure:
0,1 bar required


	83150	83153
Medium	Neutral gases and liquids	Neutral gases and liquids
Port size	DN 2,5 … 4,5	DN 1,5 … 4,5
Operating pressure	0 … 3/4/12 bar	0 … 3/4/5/12/16 bar
Temperature		
Media temperature	0°C … +125°C	0°C … +125°C
Ambient temperature	0°C … +50°C	0°C … +50°C
Material		
Body	PPSU (Polyphenylsulfon)	PPSU (Polyphenylsulfon)
Seat seal	EPDM	EPDM
Internal parts	Stainless steel	Stainless steel

Standard models

Port size	Orifice (mm)	Series 83150 Model	Operating pressure (bar)				Series 83153 Model Inlet	Series 83153 Model Middle	Series 83153 Model End	Operating pressure (bar)	
			9846	9830	9837	9897				9846	9837
6/4	1,5	–	–	–	–	–	8315300.98xx.xxxxx	8315310.98xx.xxxxx	8315320.98xx.xxxxx	16	12
6/4	2,5	8315000.98xx.xxxxx	12	12	4	4	–	–	–	–	–
6/4	2,5	8315003.98xx.xxxxx	4	4	–	–	–	–	–	–	–
6/4	2,5	–	–	–	–	–	8315301.98xx.xxxxx	8315311.98xx.xxxxx	8315321.98xx.xxxxx	12	5
6/4	3,5	8315001.98xx.xxxxx	4	4	–	–	–	–	–	–	–
6/4	3,5	–	–	–	–	–	8315302.98xx.xxxxx	8315312.98xx.xxxxx	8315322.98xx.xxxxx	4	–
8/6	4,5	8315002.98xx.xxxxx	3	3	–	–	–	–	–	–	–
8/6	4,5	–	–	–	–	–	8315303.98xx.xxxxx	8315313.98xx.xxxxx	8315323.98xx.xxxxx	3	–
4 PIF *1)	1,5	–	–	–	–	–	8315305.98xx.xxxxx	8315315.98xx.xxxxx	8315325.98xx.xxxxx	16	12
4 PIF *1)	2,5	8315020.98xx.xxxxx	12	12	4	4	–	–	–	–	–
4 PIF *1)	2,5	8315023.98xx.xxxxx	4	4	–	–	–	–	–	–	–
4 PIF *1)	3,5	8315021.98xx.xxxxx	4	4	–	–	–	–	–	–	–
6 PIF *1)	2,5	–	–	–	–	–	8315306.98xx.xxxxx	8315316.98xx.xxxxx	8315326.98xx.xxxxx	12	5
6 PIF *1)	3,5	–	–	–	–	–	8315307.98xx.xxxxx	8315317.98xx.xxxxx	8315327.98xx.xxxxx	4	–
6 PIF *1)	4,5	–	–	–	–	–	8315308.98xx.xxxxx	8315318.98xx.xxxxx	8315328.98xx.xxxxx	3	–

*1) Note: Push-in fitting.

Series 83150: Valve design No. 00, 01, 03 compression fitting Ø 6 mm. Valve design No. 02 compression fitting Ø 8 mm. Valve design No. 20 … 23 Push-in fitting Ø 4 mm.

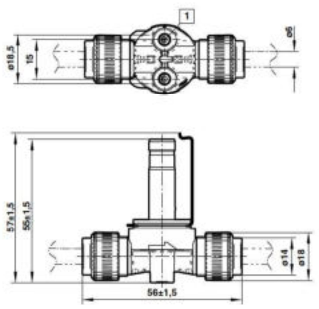
Solenoids

Options			
9846	**9830**	**9837**	**9897**
Voltage 24 V d.c. d.c. 9,5 W Voltage range ± 10% Duty cycle 40% ED 3 min SD Terminals 6,3 x 0,8 Protection class IP 00	Voltage 24 V d.c. d.c. 9,5 W Voltage range ± 10% Duty cycle 100% ED Terminals 6,3 x 0,8 Protection class IP 00	Voltage 24 V d.c. d.c. 11 W Voltage range +0% / -5% Duty cycle 50% ED 1 min SD Terminals 6,3 x 0,8 Protection class IP 00	Voltage 24 V 40 … 60 Hz a.c. 9 VA Voltage range ±10% Duty cycle 40% ED 3 min SD Plug with rectifier EN175301-803A Protection class IP 00

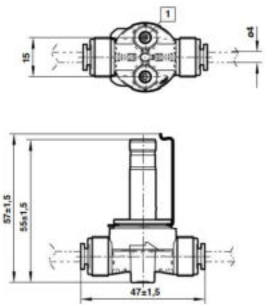
Dimensions

83150

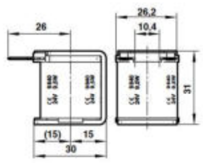
831500x



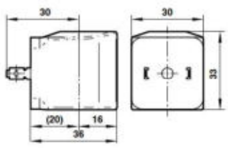
831502x



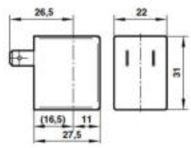
9846.02400



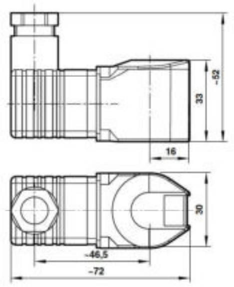
9830.02400



9837.02400

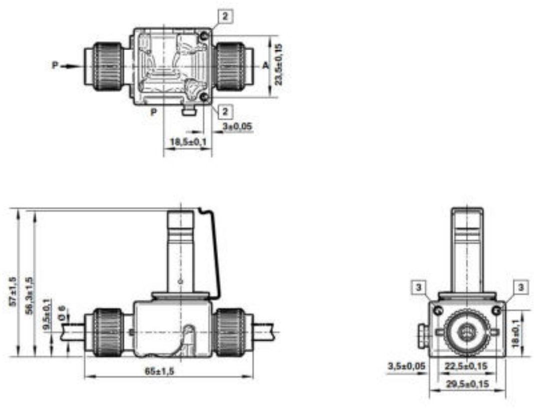


9897.23049

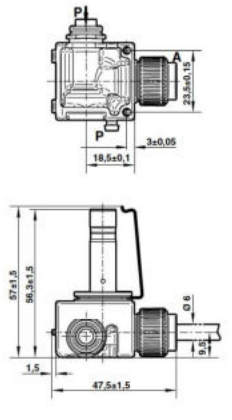


83153

Inlet

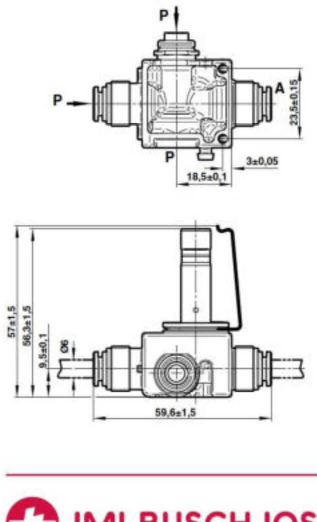


Middle



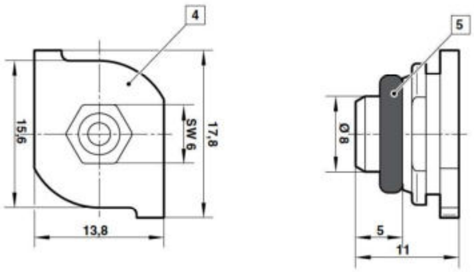
1 Mounting holes Ø 3,8 x 9 mm deep
2 Mounting holes Ø 2,5 x 11,5 mm deep
3 Mounting holes Ø 3,8 x 9 mm deep
4 Tubing plug 1702467
5 O-ring 1702427

End



Tubing plug an O-ring

Please order O-ring No. 1702427 separately.



Recommendation:
- Interlink a maximum of 7 valves
- Fix the interlinked manifold with a bolting at inlet and outlet

2/2-WAY FORCE LIFTED VALVES, BACK PRESSURE TIGHT

Series 85340, 85440

- 2/2-way piston valves
- DN 12 … 50, G1/2 … 2 Flange connection
- Valve works without minimum pressure differential
- Up to 16 bar backpressure tight with leak rate E according to DIN EN 12266-1

Technical Data

Switching function:
Normally closed; no switching function at back pressure

Flow direction:
Determined

Mounting position:
Solenoid vertical on top

	85340	85440
Medium	Slightly aggressive fluids	Slightly aggressive fluids
Port size	DN 15 … 50	DN 12 … 50, G1/2 … 2
Operating pressure	P > A: 0 … 25 bar A > P: 0 … 16 bar, backpressure tight	P > A: 0 … 25 bar A > P: 0 … 16 bar, backpressure tight
Temperature		
Media temperature	0°C … +90°C	0°C … +90°C
Ambient temperature	0°C … +50°C	0°C … +50°C
Material		
Body	Stainless steel (1.4408)	G1/2: manifold of stainless steel (1.4305) G3/4 … 2: stainless steel (1.4408)
Seat seal	NBR	NBR
Internal parts	Stainless steel	Stainless steel, PTFE/carbon

Standard models

Port size	Series 85340 Model (Flange)	Operating pressure (bar)	Back pressure tight (bar)	Series 85440 Model	Operating pressure (bar)	Back pressure tight (bar)
15	8534200.840x.xxxxx	0 … 25	0 … 16	8544200.840x.xxxxx	0 … 25	0 … 16
20	8534300.840x.xxxxx	0 … 25	0 … 16	8544300.840x.xxxxx	0 … 25	0 … 16
25	8534400.840x.xxxxx	0 … 25	0 … 16	8544400.840x.xxxxx	0 … 25	0 … 16
32	8534500.950x.xxxxx	0 … 25	0 … 16	8544500.950x.xxxxx	0 … 25	0 … 16
40	8534600.950x.xxxxx	0 … 25	0 … 16	8544600.950x.xxxxx	0 … 25	0 … 16
50	8534700.950x.xxxxx	0 … 25	0 … 16	8544700.950x.xxxxx	0 … 25	0 … 16

Voltage codes and spare coils

Voltage and frequency solenoid							
Code Voltage	**Code Frequency**	**Voltage**	**Frequency**	**Power consumption**			
				Inrush	**Holding**	**Inrush**	**Holding**
				8401/8404 *1)		**9501/9504 *1)**	
024	00	24 V d.c.	–	40 W	40 W	80 W	80 W
024	49	24 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA
110	49	110 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA
120	49	120 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA
230	49	230 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA

*1) Note: A.c. only with rectifier plug.
Further versions on request!

Options

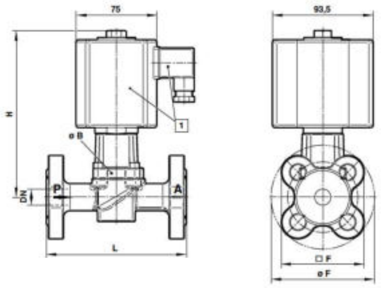
- Manual override
- Seat seal FPM
- Seat seal PTFE
- Seat seal EPDM
- Electrcal position indicator
- Flanges acc. to ASME B 16.5 150 lb/sq.In.
- Flanges 48 acc. to ASME B 16.5 300 lb/sq.In.

2/2-WAY FORCE LIFTED VALVES, BACK PRESSURE TIGHT
Series 85340, 85440

Dimensions

1 Solenoid rotatable 360°
Socket turnable 4 x 90°
(Socket included)

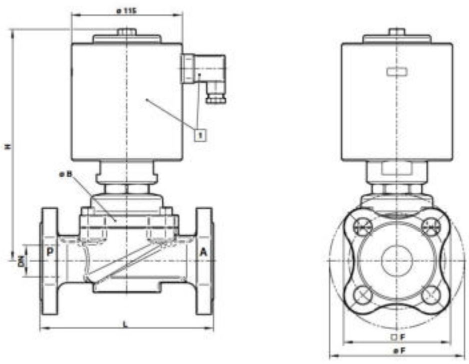
85340 with solenoid 840x



Model	Orifice	Ø B	Ø F max.	F	H	L
8534200.840x.xxxxx *2)	15	44	96	77	154	130
8534300.840x.xxxxx	20	50	110	86,6	162	150
8534400.840x.xxxxx	25	62	120	95,1	167,5	160

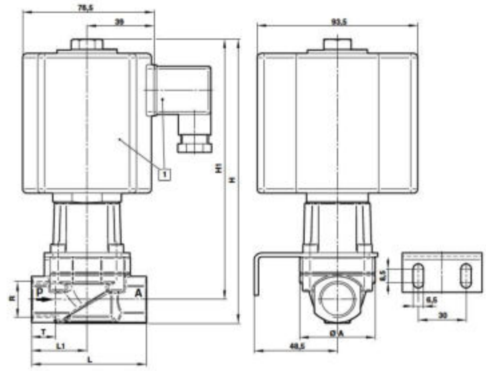
*2) Manifold of stainless steel (1.4408).

85340 with solenoid 950x



Model	Orifice	Ø B	Ø F max.	F	H	L
8534500.950x.xxxxx	32	92	140	110,7	260	180
8534600.950x.xxxxx	40	92	150	117,8	260	200
8534700.950x.xxxxx	50	109	165	128,4	248	230

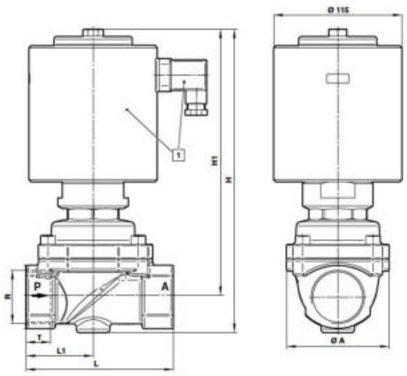
85440 with solenoid 840x



Model	Port size	Ø A	H	H1	L	L1	T
8544200.840x.xxxxx *3)	G1/2	44	166,5	150	80	40	14
8544300.840x.xxxxx	G3/4	50	166,5	150	80	38,6	16
8544400.840x.xxxxx	G1	62	184	164	95	45,6	18

*3) Manifold of stainless steel (1.4408).

85440 with solenoid 950x



Model	Port size	Ø A	H	H1	L	L1	T
8544500.950x.xxxxx	G1 1/4	92	186	253	132	60	20
8544600.950x.xxxxx	G1 1/2	92	286	253	132	60	22
8544700.950x.xxxxx	G2	109	N.D.	N.D.	160	74	24

2/2-WAY FORCE LIFTED VALVES

Series 86540, 86580

- 2/2-way piston valves
- DN 15 … 50 (86580), DN 15 … 100 (86540), Flange connection, Pressure rating PN 40
- Valve operates without differential pressure (Zero delta P)
- Valve piston with PTFE guide-ring
- Suitable for vacuum

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	86540	86580
Medium	Slightly aggressive gases and liquid fluids	Slightly aggressive gases and liquid fluids
Port size	DN 15 … 100	DN 15 … 50
Operating pressure	0 … 25 bar	0 … 25 bar
Temperature		
Media temperature	-20°C … +90°C	-20°C … +90°C
Ambient temperature	-20°C … +50°C	-20°C … +50°C
Material		
Body	Stainless steel (1.4408)	Stainless steel (1.4408)
Seat seal	NBR	NBR
Internal parts	Stainless steel, PTFE/carbon	Stainless steel

Standard models

Orifice (mm)	Series 86540 Model	Operating pressure (bar)	Series 86580 Model	Operating pressure (bar)
15	8654200.830x.xxxxx	0 … 25	8658200.840x.xxxxx	0 … 25
20	8654300.830x.xxxxx	0 … 25	8658300.840x.xxxxx	0 … 25
25	8654400.830x.xxxxx	0 … 25	8658400.840x.xxxxx	0 … 25
32	8654500.840x.xxxxx	0 … 25	8658500.840x.xxxxx	0 … 25
40	8654600.840x.xxxxx	0 … 25	8658600.840x.xxxxx	0 … 25
50	8654700.840x.xxxxx	0 … 25	8658700.840x.xxxxx	0 … 25
65	8654800.9501.xxxxx	0 … 25	–	–
80	8654900.9501.xxxxx	0 … 25	–	–
100	8655000.9501.xxxxx	0 … 25	–	–

Voltage codes and spare coils

Voltage and frequency solenoid							
Code Voltage	Code Frequency	Voltage	Frequency	Power consumption			
				Inrush	Holding	Inrush	Holding
				8401/8404 *1)		8301/8304 *1)	
024	00	24 V d.c.	–	40 W	40 W	22 W	22 W
024	49	24 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA
110	49	110 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA
120	49	120 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA
230	49	230 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA

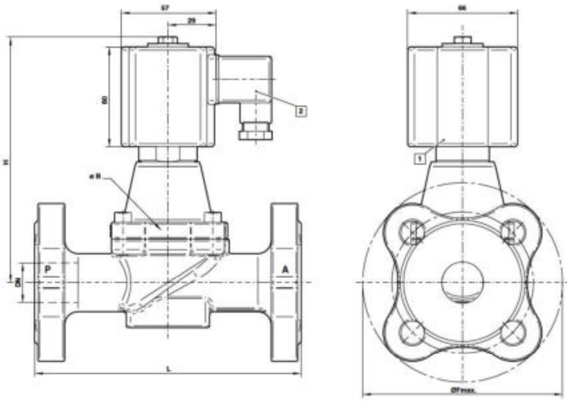
*1) Note: A.c. only with rectifier plug.
Further versions on request!

Options

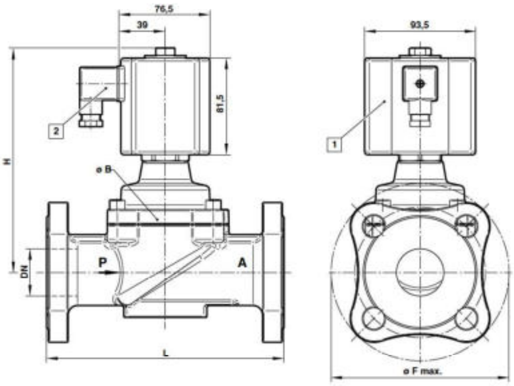
- Inspection certificate DIN EN 10204 - 3.1

Dimensions

86540 with solenoid 830x, DN 15 … 25



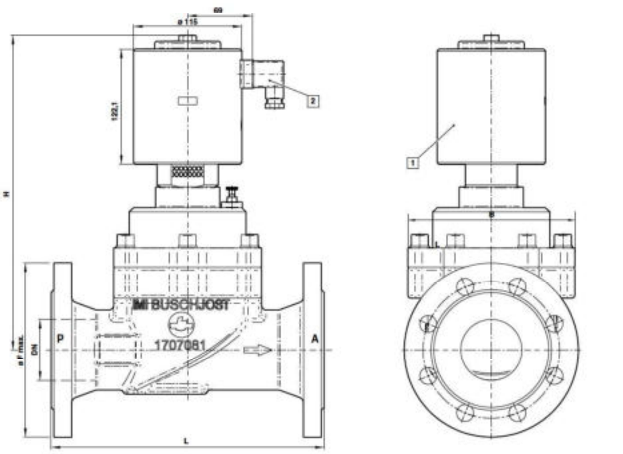
86540 with solenoid 840x, DN 32 … 50



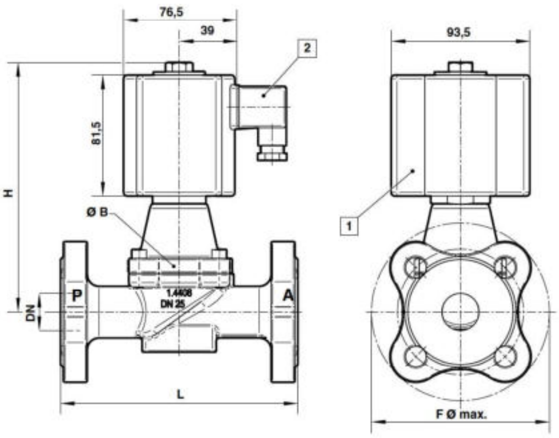
Model	Orifice	Ø B	Ø F max.	H	L
8654200.830x.xxxxx	15	44	96	142	130
8654300.830x.xxxxx	20	50	110	150	150
8654400.830x.xxxxx	25	62	115	155	160

Model	Orifice	Ø B	Ø F max.	H	L
8654500.840x.xxxxx	32	92	140	184	180
8654600.840x.xxxxx	40	92	150	189	200
8654700.840x.xxxxx	50	109	165	197	230

86540, DN 65 … 100



86580



Model	Orifice	Ø B	Ø F max.	H	L
8654800.950x.xxxxx	65	177	185	334	290
8654900.950x.xxxxx	80	209	200	347	310
8655000.950x.xxxxx	100	235	235	363	350

Model	Orifice	Ø B	Ø F max.	H	L
8658200.840x.xxxxx	15	44	96	142	130
8658300.840x.xxxxx	20	50	110	150	150
8658400.840x.xxxxx	25	62	115	155	160
8658500.840x.xxxxx	32	92	140	184	180
8658600.840x.xxxxx	40	92	150	189	200
8658700.840x.xxxxx	50	109	165	197	230

1 Solenoid rotatable 360°
2 Socket turnable 4 x 90°
(Socket included)

2/2-WAY FORCE LIFTED VALVES

Series 85780, 85840

- 2/2-way piston valves
- DN 15 … 100, Flange connection, Pressure rating PN 40 (PN 25)
- Suitable for use in single-channel safety-related systems in 85780/85840 accordance with DIN EN 61508 / 61511 up to and including SIL 2 and up to and including SIL 3 in multi-channel systems
- High flow rate
- For robust industry applications
- Damped operation
- For systems with low or fluctuating pressure
- Valve operates without differential pressure

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	85780	85840
Medium	Neutral gases and liquid fluids (air, water, gases according to DVGW datasheet G 260 with seat seal FPM – oils and other fluids on request)	Air, water, gases according to DVGW data sheet G 260 with seat seal FPM, oils and other fluids on request
Port size	DN 15 … 100	DN 8 … 50, G1/4 … 2
Operating pressure	0 … 25 bar	0 … 25 bar
Temperature		
Media temperature	-10°C … +60°C	-10°C … +60°C
Ambient temperature	-10°C … +50°C	-10°C … +50°C
Material		
Body	Up to DN 50: stainless steel (1.4408) From DN 65: stainless steel (1.4581)	Stainless steel (1.4408)
Seat seal	NBR	NBR
Internal parts	Stainless steel, PTFE/carbon	Stainless steel, PTFE/carbon

Standard models

Orifice (mm)	Series 85780 Model (Flange)	Operating pressure (bar)	Series 85580 Model	Operating pressure (bar)
8	–	–	8584000.840x.xxxxx	0 … 25
10	–	–	8584100.840x.xxxxx	0 … 25
12	–	–	8584200.840x.xxxxx	0 … 25
15	8578200.840x.xxxxx	0 … 25	8584300.840x.xxxxx	0 … 25
20	8578300.840x.xxxxx	0 … 25	8584400.840x.xxxxx	0 … 25
25	8578400.840x.xxxxx	0 … 25	8584500.840x.xxxxx	0 … 25
32	8578500.840x.xxxxx	0 … 25	8584600.840x.xxxxx	0 … 25
40	8578600.840x.xxxxx	0 … 25	8584700.840x.xxxxx	0 … 25
50	8578700.840x.xxxxx	0 … 25	–	–
65	8578800.950x.xxxxx	0 … 25	–	–
80	8578900.950x.xxxxx	0 … 25	–	–
100	8579000.950x.xxxxx	0 … 25	–	–

Voltage codes and spare coils

Voltage and frequency solenoid							
Code Voltage	**Code Frequency**	**Voltage**	**Frequency**	**Power consumption**			
				Inrush	**Holding**	**Inrush**	**Holding**
				8401/8404 *1)		**9501/9504 *1)**	
024	00	24 V d.c.	–	40 W	40 W	80 W	80 W
024	49	24 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA
110	49	110 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA
120	49	120 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA
230	49	230 V a.c.	40 … 60 Hz	45 VA	45 VA	89 VA	89 VA

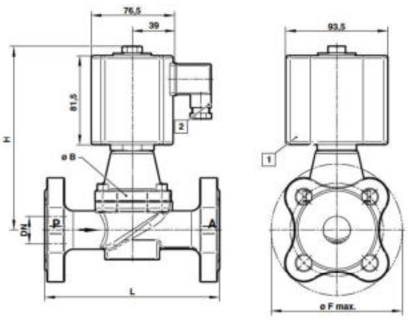
*1) Note: A.c. only with rectifier plug.
Further versions on request!

Options

- Inspection certificate DIN EN 10204 - 3.1 (DN 15 … 50)
- Inspection certificate DIN EN 10204 - 3.1 (DN 65 … 100)

Dimensions

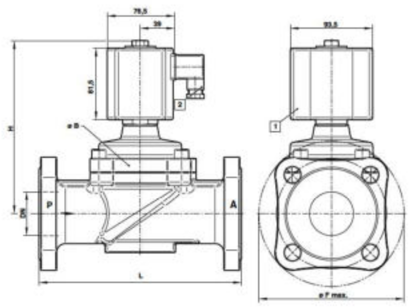
85780 with solenoid 840x



1 Solenoid rotatable 360°
2 Socket turnable 4 x 90°
(Socket included)

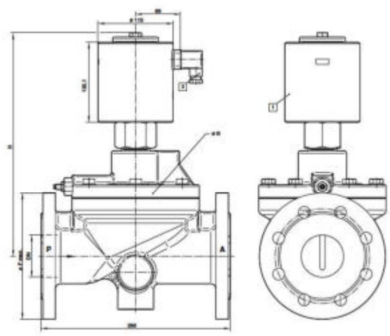
Model	Orifice	Ø B	Ø F max.	H	L
8578200.840x.xxxxx	15	44	96	154	130
8578300.840x.xxxxx	20	50	110	163	150
8578400.840x.xxxxx	25	62	115	168	160

85780 with solenoid 840x



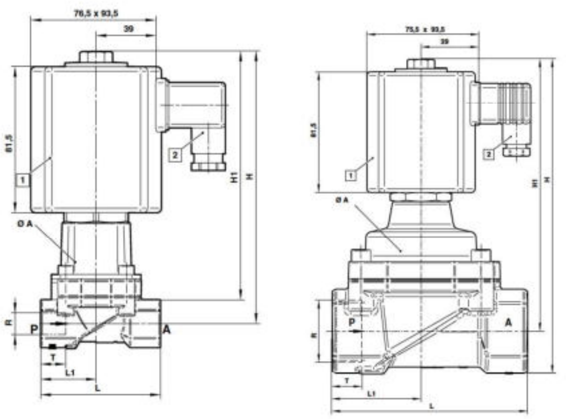
Model	Orifice	Ø B	Ø F max.	H	L
8578500.840x.xxxxx	32	92	140	184	180
8578600.840x.xxxxx	40	92	150	190	200
8578700.840x.xxxxx	50	109	165	197	230

85780 with solenoid 950x



Model	Orifice	Ø B	Ø F max.	H	L
8578800.950x.xxxxx	65	195	185	327	290
8578900.950x.xxxxx	80	220	200	347	310
8579000.950x.xxxxx	100	265	235	376	350

85840



Model	Port size	A	H	H1	L	L1	T
8584000.840x.xxxxx	G1/4	44	163,5	152,5	60	27	12
8584100.840x.xxxxx	G3/8	44	163,5	152,5	60	27	12
8584200.840x.xxxxx	G1/2	44	166	152	67	31	14
8584300.840x.xxxxx	G3/4	50	174	157,5	80	35,5	16
8584400.840x.xxxxx	G1	62	184,5	164	95	44	18
8584500.840x.xxxxx	G1 1/4	92	212,5	183,5	132	60	20
8584600.840x.xxxxx	G1 1/2	92	212,5	183,5	132	60	22
8584700.840x.xxxxx	G2	109	226,5	192	160	74	24

2/2-WAY FORCE LIFTED VALVES

Series 86500, 86520

- 2/2-way piston valves
- DN 15 … 50 (86520), DN 15 … DN 100 (86500), Flange connection, Pressure rating PN 40
- Valve operates without differential pressure (Zero delta P)
- Valve piston with PTFE guide-ring
- Series 86500:
  - Suitable for vacuum

Technical Data

Switching function:
Normally closed

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	86500	86520
Medium	Neutral gases and liquid fluids	Neutral steam and liquid fluids
Port size	DN 15 … 100	DN 15 … 50
Operating pressure	0 … 25 bar	0 … 16 bar
Temperature		
Media temperature	-20°C … +90°C	0°C … +200°C
Ambient temperature	-20°C … +50°C	0°C … +60°C
Material		
Body	DN 15 … 50: Cast steel, brass, DN 65 … 100: spheroidal graphite iron, brass	Stainless steel (1.4408), brass
Seat seal	NBR	PTFE
Internal parts	Stainless steel, PTFE/carbon, brass	Stainless steel, PTFE/carbon, FPM

Standard models

Orifice (mm)	Series 86500 Model (Flange)	Operating pressure (bar)	Series 86520 Model (Flange)	Operating pressure (bar)
15	8650200.830x.xxxxx	0 … 25	8652200.840x.xxxxx	0 … 16
20	8650300.830x.xxxxx	0 … 25	8652300.840x.xxxxx	0 … 16
25	8650400.830x.xxxxx	0 … 25	8652400.840x.xxxxx	0 … 16
32	8650500.840x.xxxxx	0 … 25	8652500.840x.xxxxx	0 … 16
40	8650600.840x.xxxxx	0 … 25	8652600.840x.xxxxx	0 … 16
50	8650700.840x.xxxxx	0 … 25	8652700.840x.xxxxx	0 … 16
65	8650800.9501.xxxxx	0 … 25	–	–
80	8650900.9501.xxxxx	0 … 25	–	–
100	8651000.9501.xxxxx	0 … 25	–	–

Voltage codes and spare coils

Voltage and frequency solenoid							
Code Voltage	Code Frequency	Voltage	Frequency	Power consumption			
				Inrush	Holding	Inrush	Holding
				8401/8404 *1)		8301/8304 *1)	
024	00	24 V d.c.	–	40 W	40 W	22 W	22 W
024	49	24 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA
110	49	110 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA
120	49	120 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA
230	49	230 V a.c.	40 … 60 Hz	45 VA	45 VA	25 VA	25 VA

*1) Note: A.c. only with rectifier plug.
Further versions on request!

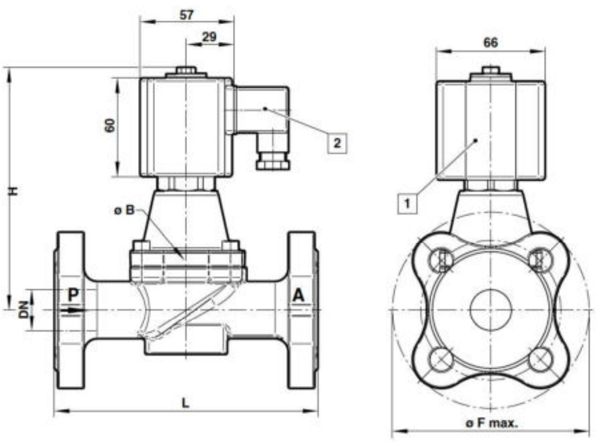
Options

- Normally open (NO)
- Manual override
- Seat seal FPM
- Seat seal PTFE
- Seat seal EPDM
- Max. operating pressure 40 bar
- Position indicator

2/2-WAY FORCE LIFTED VALVES
Series 86500, 86520

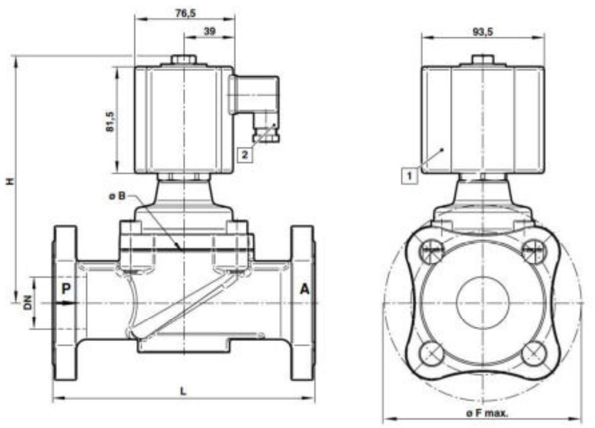
Dimensions

86500 with solenoid 830x, Dimensions DN 15 … DN 25



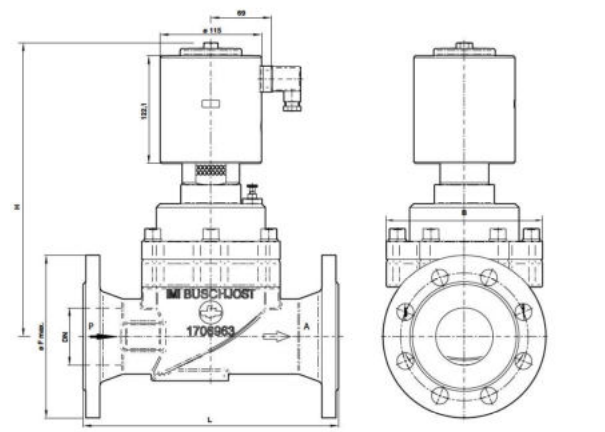
Model	Orifice	Ø B	Ø F max.	H	L
8650200.830x.xxxxx	15	44	96	134	130
8650300.830x.xxxxx	20	50	110	142	150
8650400.830x.xxxxx	25	62	115	148	160

86500 with solenoid 840x, Dimensions DN 32 … DN 50



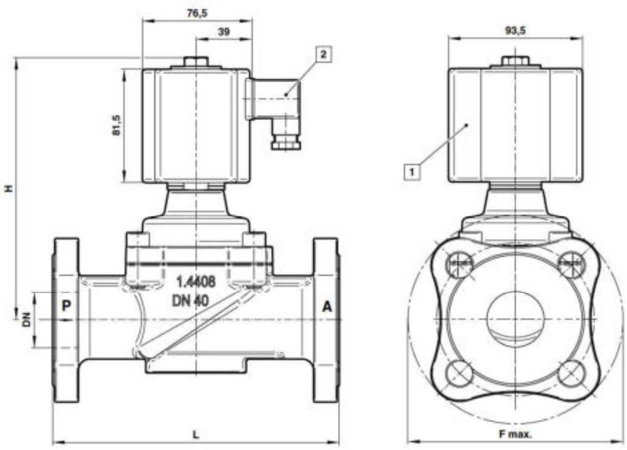
Model	Orifice	Ø B	Ø F max.	H	L
8650500.840x.xxxxx	32	92	140	184	180
8650600.840x.xxxxx	40	92	150	189	200
8650700.840x.xxxxx	50	109	165	197	230

86500 - Dimensions DN 65 … DN 100



Model	Orifice	Ø B	Ø F max.	H	L
8650500.940x.xxxxx	32	92	140	184	180
8650600.940x.xxxxx	40	92	150	189	200
8650700.940x.xxxxx	50	109	165	197	230

86520



Model	Orifice	Ø F max.	H	L
8652200.840x.xxxxx	15	96	142	130
8652300.840x.xxxxx	20	110	150	150
8652400.840x.xxxxx	25	115	155	160
8652500.840x.xxxxx	32	140	184	180
8652600.840x.xxxxx	40	150	189	200
8652700.840x.xxxxx	50	165	197	230

1 Solenoid rotatable 360°
2 Socket turnable 4 x 90°
(Socket included)

2/2-WAY MOTOR OPERATED VALVES

Series 82880

- 2/2-way valves
- G1/2 … 1
- Low power consumption
- Wear-resistant ceramic rotary action sliding plate
- Valve remains on last setting if power is lost
- Will handle contaminated fluids

Technical Data

Flow direction:
Determined

Mounting position:
Optional, preferably solenoid vertical on top

	82880
Medium	Neutral gases and liquids
Port size	DN 15, DN 20
Operating pressure	-0,9 … 6/10 bar
Temperature	
Media temperature	-10°C … +90°C
Ambient temperature	-10°C … +40°C
Material	
Body	Brass (CW617N)
Seat seal	NBR
Internal parts	Oxyd-ceramic

Standard models

Port size	Orifice (mm)	Series 82880 *1) Model	Operating pressure (bar)
Cartridge	15	8288500.96xx.xxxxx	-0,9 … 10
G1/2	15	8288200.96xx.xxxxx	-0,9 … 10
G3/4	20	8288300.96xx.xxxxx	-0,9 … 6
G1	20	8288400.96xx.xxxxx	-0,9 … 6

*1) Note: See motor drives for motor cat no and power supply.

Models - Stepping motor 9668 / D.c. motor 9651

Port size	Orifice (mm)	Series 82880 *1) Model	Operating pressure *2) (bar)	Flow kv value *2) (m^3/h)
Cartridge	15	8288500.9668.02400	-0,9 … 10	1,1
G1/2	15	8288200.9668.02400	-0,9 … 16	1,1
G3/4	20	8288300.9668.02400	0 … 6	4,4
G1	20	8288400.9668.02400	0 … 6	4,4

*2) Note: If operating pressure > 10 bar longer duration possible, avoid long downtimes.

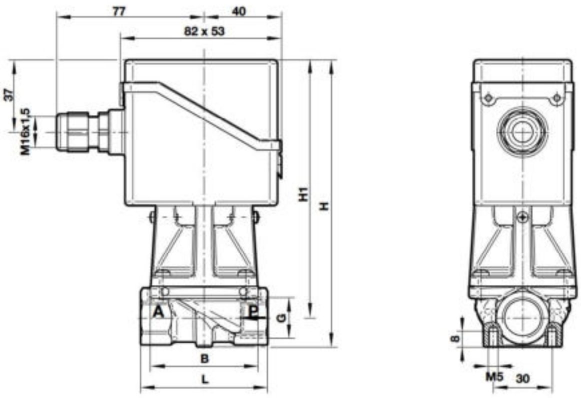
Motor

Port size	Standard voltage Tolerance ± 10% (V)	Frequency (Hz)	Power consumption (VA/W)	Protection class	Torque (Ncm)	Operating time through *4) 90° ∢	Model *1)
D.c. motor	24 V	–	1,5	IP54	120	10 … 14	9615.02400
Synchronousmotor	24 V	50	3	IP54	120	10	9636.02450
Stepping motor	24 V	*3)	5	IP54	120	10	9638.02400
D.c. motor	24 V	–	2,5	IP54	200	13 … 16	9651.02400
Stepping motor	24 V	0	3,3 max. 9,1	IP54	120 *5)	5	9668.02400

*3) Nominal stepping frequency 200 Hz. *4) Operating time depends on operating pressure. *5) Short duration max. 300 Ncm.

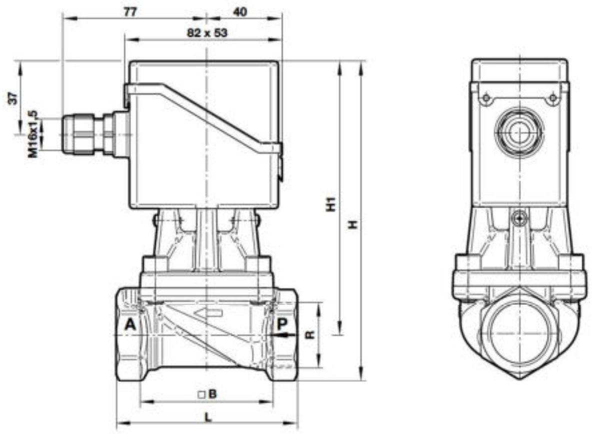
Dimensions

82880 up to G1/2



Model	Port size	B	H	H1	L
8288200.96xx.xxxxx	G1/2	55	147	134	65

82880 G3/4 … 1



Model	Port size	B	H	H1	L
8288300.96xx.xxxxx	G3/4	70	164	140	95
8288400.96xx.xxxxx	G1	70	164	140	95

IN-LINE FLOW REGULATORS (BLOCK FORM)

C00GE and C00GP Uni-directional – Ø 4 … 12

- High flow performance
- In-line or panel mounting
- Adjustment can be locked
- Captive regulator needle will not blow out when unscrewed
- Nickel plated brass components provide corrosion and contamination resistance and an extended life

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operating pressure:
10 bar max.

Ambient temperature:
0°C … +60°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Tube sizes:
4 … 12 mm

Tubing types:
Nylon 11 or 12, Polyurethane 85, 95 or 98 durometer

Materials

Body:
PBT

Seals:
NBR (silicone free) u-packing and O-rings

Threaded bodies:
Nickel plated brass

Release sleeve and backing ring:
POM

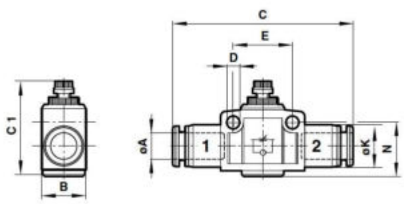
Grab-ring:
Stainless steel

Collar:
Nickel plated brass

EXPRESS

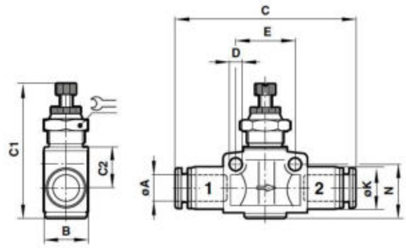
Models – In-line flow control

Model	Ø A	B	C	C1 min.	max.	D	E	Ø K	N
C00GE0400	4	12	45	30	33	3,3	15	11	13,5
C00GE0600	6	16	50	35	39,5	4,4	20,5	13	17,5
C00GE0800	8	19	55,5	37,5	42	4,4	23	15	20
C00GE1000	10	23	61	44	49	4,4	28	17,5	23
C00GE1200	12	26,5	70	47,5	53,5	4,4	32	20,5	25,5



Models – In-line and panel mounting flow control

Model	Ø A	B	C	C1 min.	max.	C2	D	E	Ø K	N	(wrench)	Panel hole	Panel thickness
C00GP0400	4	12	42	35,5	38	5,5	3,2	15,5	11	13,5	12	11	5
C00GP0600	6	16	49,5	43	48,5	8	4,3	20,5	13	17,5	17	16	6
C00GP0800	8	19	56,5	47,5	53	8,5	4,3	23	15	20	19	17	6
C00GP1000	10	23	63	53,5	61,5	10,5	4,3	27,5	17,5	23	22	17	7
C00GP1200	12	26,5	73,5	57,5	64,5	12	4,4	32,5	20,5	25,5	24	21	7



BLOCK FORM FLOW REGULATORS

T1000 and T1100 Uni-directional (T1000) – M5, G1/8 … G1/2 Bi-directional (T1100) – G1/8 … G1/2

- Compact size/low weight/ in-line units
- High flow performance
- Suitable for panel and wall mounting
- Two way flow control (T1100 series)
- Adjustment can be locked
- Captive regulator needle will not blow out when unscrewed
- Adjusting knob position line

Technical Data

Medium:
Compressed air, filtered, lubricated or non-lubricated, inert gases

Operating pressure:
1 … 10 bar (T1000 series G1/8 … G1/2)
0,3 … 10 bar (T1000 series M5)
0 … 10 bar (T1100 series)

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

Body:
Aluminium alloy

Seals:
Nitrile

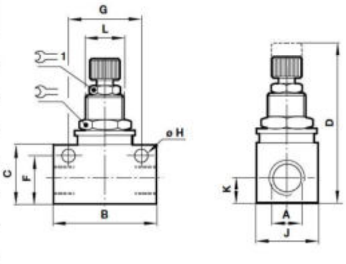
Needle and internal parts:
Brass

External parts:
Aluminium alloy

EXPRESS

Dimensions

Model	A	B	C	D	F	G	Ø H	J	K	L	(wrench)
T1000M0500	M5	25	15	45	12	18	4,5	12	5,5	M10 x 0,75	12
T1000C1800	G1/8	34	20	51	16,5	24	4,5	16	8	M12 x 1	14
T1000C2800	G1/4	45	25,5	61,5	21	32	4,5	19	9,5	M14 x 1	17
T1000C3800	G3/8	58	32,5	78,5	27	43	4,5	28	13	M20 x 1	24
T1000C4800	G1/2	65	36	82	30,5	50	4,5	30	15	M20 x 1	24
T1100C1800	G1/8	34	20	51	16,5	24	4,5	16	8	M12 x 1	14
T1100C2800	G1/4	45	25,4	61,5	20,8	32	4,5	19	9,5	M12 x 1	17
T1100C4800	G1/2	65	36	82	30,5	50	6,5	30	15	M20 x 1	24



Models

Model	Port size	Max. regulated flow factor		Free flow factor		Opening pressure (bar)	Minimum operating pressure (bar)
		C*	CV	C*	CV		
T1000M0500	M5	0,28	0,07	0,28	0,07	0,3	0,3
T1000C1800	G1/8	0,57	0,14	1,50	0,37	<0,1	1
T1000C2800	G1/4	1,30	0,32	2,80	0,69	<0,1	1
T1000C3800	G3/8	4,80	1,17	6,70	1,64	<0,1	1
T1000C4800	G1/2	7,50	1,84	8,30	2,00	<0,1	1
T1100C1800	G1/8	0,57	0,14	–	–	–	0
T1100C2800	G1/4	1,30	0,32	–	–	–	0
T1100C4800	G1/2	7,50	1,84	–	–	–	0

* C: measured in $dm^3/(s.bar)$.

HEAVY DUTY FLOW REGULATORS

M/800 In-line Uni-directional – G1/8 … G1

- **Line mounted general purpose regulators**
- **Captive regulating needle will not blow out when unscrewed**
- **Calibrated adjusting knob, can be locked**
- **Suitable for wall mounting**
- **High operating pressure**

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operating pressure:
0,3 … 16 bar

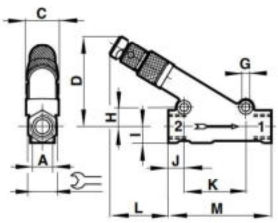
Ambient temperature:
-20°C … +80°C
(Alternative models to 150°C)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

S/836, M/837, M/839
Body, adjusting knob and locking ring: brass

M/840, M/855
Body, adjusting knob and locking ring: aluminium
Seals: nitrile rubber.

Dimensions



Model	A	D max.	Ø G	H	I	J	K	L	M	
S/836	G1/8	38	5,1	8,5	8	5	24,5	27,5 max.	46	13
M/837	G1/4	37,5	5,2	11	9,5	6	41	25 max.	60	17
M/839	G1/2	80	8,3	17	16	13	57	53 max.	95	28
M/840	G3/4	104	8,3	21,5	17,5	20,5	76	66 max.	118	32
M/855	G1	147	13	26	24	23	90	107 max.	150	48w

Models

BSPP Model	Port size	Max. regulated flow factor		Free flow factor		Spare kit
		C**	CV	C**	CV	
						
S/836	G1/8	0,7	0,17	2,1	0,6	QS/520/00
S/837	G1/4	2	0,49	4,3	1	QS/521/00
S/839	G1/2	12	2,9	17	4,1	QS/522/00
M/840	G3/4	18	4,4	38	9,3	QS/523/00
M/855	G1	36	8,8	45	11	QS/524/00

** C measured in dm³/(s.bar).

Options

- **High temperature version**
- **Alternative threads**

EXHAUST FLOW REGULATOR/SILENCERS

T20 M5, G1/8 … G1/2

- Compact, integral flow regulator and silencer units
- Captive regulating needle will not blow out when unscrewed
- Reduced dimensions

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated, inert gases

Operating pressure:
1 … 10 bar

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

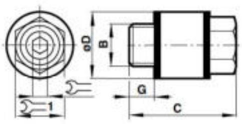
Materials

Body and washer:
Nylon

Silencer:
Porous polyethylene

Adjusting screw:
High tensile zinc electroplated steel

Dimensions



Model	B	C	G	Ø D		1
T20M0500	M5	16	5	–	1,5	8
T20C1800	G1/8	20,5	6	15	2,5	13
T20C2800	G1/4	29	7	18	4	15
T20C3800	G3/8	38	8	24	6	20
T20C4800	G1/2	50	10	30	8	25

Models

Model	Thread	Port size	Max. regulated flow factor	
			C**	CV
				
T20M0500	Metric	M5	0,3	0,07
T20C1800	BSPP	1/8	1,6	0,4
T20C2800	BSPP	1/4	3,2	0,8
T20C3800	BSPP	3/8	6,9	1,7
T20C4800	BSPP	1/2	10	2,4

** C measured in dm³/(s.bar).

IMI Maxseal
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IMI Maxseal is an extremely high quality brand of stainless steel solenoid valves, designed and manufactured with reliability and integrity in mind.

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QUICK EXHAUST VALVES

T70, S/511, S/513, S/514 G1/8 … G1/2

- Enables air to be exhausted quickly from air reservoirs and cylinders
- Allows higher cylinder speeds to be achieved
- Simple, compact design and construction
- Very reliable in operation

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operating pressure:
0,5 … 10 bar (T70)
0,7 … 10 bar (S/511)
0,7 … 7 bar (S/513, S/514)

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

Body & cover:
Zinc alloy (T70*1800 & T70*2800, S/513), aluminium alloy (T70*3800 & T70*4800, S/511, S/514)

Seals:
Nitrile (T70), polyurethane (S/51*)

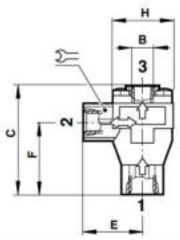
O-ring:
Nitrile

Element:
Porous plastic (S/513, S/514)

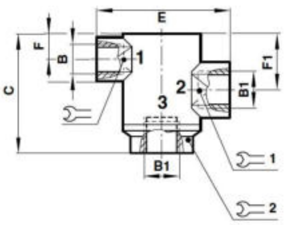
EXPRESS

Dimensions

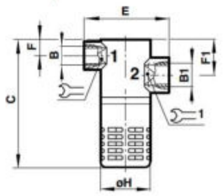
T70



S/511



S/513, S/514



Model - T70	B	C	E	F	⊃=
T70C1800	G1/8	53	28	35,5	19
T70C2800	G1/4	53	28	35,5	19
T70C3800	G3/8	73,5	40	48	30
T70C4800	G1/2	73,5	40	48	30

Model - S/511	B	B1	C	E	F	F1	⊃=	⊃= 1	⊃= 2
S/511	G1/2	G3/4	86	100	17	48	30	36	32

Model - S/513, S/514	B	B1	C	E	F	F1	Ø H	⊃= 1
S/513	G1/4	G3/8	86,5	58	10	23	34	21 / 23
S/514	G1/2	G3/4	134	100	17	48	47,5	30 / 36

Models

Model	Port size BSPP	Flow (1 … 2)** C*	Cv	Flow (2 … 3)** C*	Cv	Service kit
						
T70C1800	G1/8	3,8	0,93	7	1,72	T70C1800K00
T70C2800	G1/4	7,4	1,8	9,7	2,38	T70C2800K00
T70C3800	G3/8	14,5	3,55	20,5	5	T70C3800K00
T70C4800	G1/2	19,7	4,83	25	6,13	T70C4800K00
S/511	G1/2	21,6	5,3	39	9,56	QS/511/00
S/513	G1/4	7,6	1,86	13,5	3,3	QS/510/00
S/514	G1/2	21,6	5,3	39	9,56	QS/511/00

* C = dm³/(s.bar). ** Flow factor measured at 6 bar inlet pressure.

NON-RETURN VALVES

T55 In-line G1/8 … G1/2

- Permit free flow of air in one direction only
- Simple, reliable design
- Silicone free
- Low cracking pressure

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operating pressure:
0,1 … 10 bar

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

Body:
Aluminium

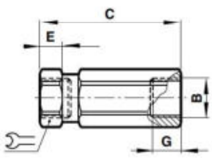
O-ring:
Nitrile rubber

Valve:
POM

Spring:
Stainless steel

EXPRESS

Dimensions



Model	B	C	E	G	Wrench size
T55C1800	G1/8	42,5	7	7	14
T55C2800	G1/4	54	8	10	17
T55C3800	G3/8	63	9	13,5	24
T55C4800	G1/2	77	12	13,5	27

Models

BSPP	Port size	Flow factor C*	CV
T55C1800	1/8	2,4	0,59
T55C2800	1/4	5,5	1,35
T55C3800	3/8	9,0	2,20
T55C4800	1/2	15,0	3,70

* C: measured in $dm^3/(s.bar)$.

NON-RETURN VALVE

C00GL, C01G2, C02G2, C01G3, C02G3 Ø 4 … 12, M5, G1/8 … G1/2, R1/8 … R1/4

- High flow performance
- Nickel plated brass components provide corrosion and contamination resistance and an extended life (C01G2, C02G2, C01G3, C02G3)
- Pre applied thread sealant on all taper threads and recessed captive O-ring on parallel threads provides optimum rapid sealing (C01G2, C02G2, C01G3, C02G3)

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operating pressure:
10 bar max.

Ambient temperature:
0°C … +60°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Tube sizes:
4 … 12 mm

Thread options (C01G2, C02G2, C01G3, C02G3):
M5, 1/8, 1/4, 3/8 and 1/2
ISO G and ISO R

Tubing types:
Nylon 11 or 12
Polyurethane 85, 95 or 98 durometer

Materials

Tube to tube bodies:
Ø 4 … Ø 8: PBT
Ø 10 … Ø 12: Aluminium

Threaded bodies:
Nickel plated brass

Seals:
NBR (silicone free) u-packing and O-rings

Release sleeve and backing ring:
POM

Grab-ring:
Stainless steel

Collar:
Nickel plated brass

Thread sealant:
Threebond 2350BI

EXPRESS

Models - taper thread

Model Non-return (in)	Model Non-return (out)	O/D Tube	Thread
			
C01G20418	C01G30418	4	R1/8
C01G20618	C01G30618	6	R1/8
C01G20828	C01G30828	8	R1/4

Models - tube to tube

Model	Model	O/D Tube
		
C00GL0400	–	4
C00GL0600	–	6
C00GL0800	–	8
–	C00GL1000	10
–	C00GL1200	12

Models - parallel thread

Model Non-return (in)	Model Non-return (out)	O/D Tube	Thread
			
C02G20405	C02G30405	4	M5
C02G20418	C02G30418	4	G1/8
C02G20618	C02G30618	6	G1/8
C02G20828	C02G30828	8	G1/4
C02G21038	C02G31038	10	G3/8
C02G21248	C02G31248	12	G1/2

NON-RETURN VALVES

T50P Ø 4 … 12 mm PIF

- Allow free flow in one direction only
- Simple reliable design
- Low weight
- Low cracking pressure
- High operating pressure

Technical Data

Medium:
Compressed air, filtered, lubricated or non-lubricated, vacuum

Operation:
Non-return valve

Operating pressure:
-0,9 … 16 bar (-13 … 232 psi)

Cracking pressure:
0,03 … 0,05 bar (0,4 … 0,7 psi)

O/D tube:
Ø 4, 6, 8, 10, 12 mm

Ambient temperature:
-20°C … +80°C max.
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Tubing types:
PA 11 or 12, PUR and other plasticised or unplasticised tubing which conforms to the tolerances specified in BS 5409, Part 1, 1976, light and normal duty, DIN 73378, DIN 74234, NFE 49-100

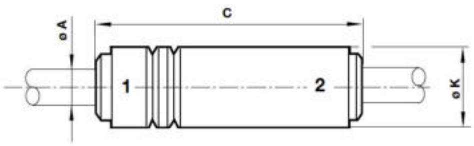
Materials

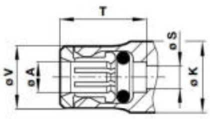
Body:
Aluminium

Grab ring:
Nickel plated brass

'O'-ring:
NBR

Dimensions





T50P

Model	Ø A	C	Ø K
T50P0004	4	49	11
T50P0006	6	56,5	13
T50P0008	8	61	15
T50P0010	10	77,5	20
T50P0012	12	88,5	22

*1) Dimensions here and in the individual tables refer to the collet being in the 'IN' position.

Collet

Ø A O/D tube	Ø S	Ø T *1)	V	Ø K
4	2,8	14	7,5	10
5	3,4	15	10	11
6	4,4	15,5	11	12
8	6	16,5	13	14
10	7,6	21	14,5	17
12	9,6	24,5	18	20,5

Models

Model	Ø Tube (mm)	Flow factor C *1)	b *2)	Cv	Flow at 6 » 5 bar (dm³/min)
T50P0004	4	0,4	0,23	0,1	96
T50P0006	6	1,45	0,36	0,36	349
T50P0008	8	2,9	0,3	0,7	699
T50P0010	10	5,1	0,35	1,25	1229
T50P0012	12	8,4	0,42	2,1	2024

*1) Measured in dm³/(s.bar).
*2) b = critical pressure ratio.

HEAVY DUTY NON-RETURN VALVE

S/520 G1/8 … G1

- Allows free flow in one direction only
- Simple reliable design
- High operating pressure and temperature
- Spares kit available

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operation:
Heavy duty non-return valves

Operating pressure:
0,3 … 16 bar

Cracking pressure:
< 0,1 bar (1 psi)

Port sizes:
G1/8 … G1

Mounting:
Line mounted

Ambient temperature:
Standard
-20°C … +80°C max.
For high temperature applictions +150°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

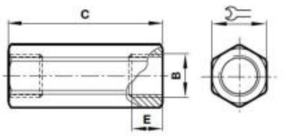
Materials

Body:
Brass

Valve:
Aluminium

Seals:
NBR
Note: FPM Seals for high temperature version

Dimensions



Model	B	C	B	E	⊐
S/520	G1/8	43	1/8	10	14
S/521	G1/4	48	1/4	11	19
S/532	G3/8	62	3/8	13	22
S/522	G1/2	76	1/2	17	27
S/523	G3/4	92	3/4	18	36
S/524	G1	124	1	25	49

Models

Model	Port size	Flow factor C *1)	CV	Service kit
S/520	G1/8	2,4	0,6	QS/520/00
S/521	G1/4	4,3	1	QS/521/00
S/532	G3/8	10,5	2,6	QS/532/00
S/522	G1/2	17	4,2	QS/522/00
S/523	G3/4	42	10,3	QS/523/00
S/524	G1	55,5	13,6	QS/524/00

**1) Measured in $dm^3/(s.bar)$ *2) Measured in m^3/h.

Options

- Alternative threads
- High temperature versions

SHUTTLE VALVE

T65 G1/8 & G1/4

- Allow two independent signal sources to be connected to a common pilot line
- Can be used to perform an 'OR' logic function
- Can be combined to operate from three or more sources
- Valves can be ganged together

Technical Data

Medium:
Compressed air, filtered, lubricated or non-lubricated, inert gas

Operation:
Shuttle valve ('OR' logic function)

Operating pressure:
0,7 … 10 bar

Port size:
G1/8, G1/4

Mounting:
Line mounted

Ambient temperature:
-20°C … +80°C max.
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

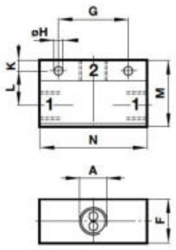
Body:
Zinc alloy

Ball:
NBR

Valve seat:
Brass

EXPRESS

Dimensions



Model	Port size	Flow factor C *1)	Cv	Flow at 6 - 1 bar (dm³/min)
T65C1800	G1/8	1,7	0,42	412
T65C2800	G1/4	2,6	0,64	631

*1) Measured in dm³/(s.bar).

Models

Model	A	F	Ø H	K	L	M	N
T65C1800	G1/8	15	5,25	6	10	25	36
T65C2800	G1/4	20	5,25	8	12	30	50

BLOCKING VALVE

102GA, 102GH 4 … 10 mm, G1/8 … G1/2

- Very compact units
- Positive tube anchorage
- Safer pneumatic systems

Technical Data

Medium:
Compressed air

Operating pressure:
1 … 10 bar

Tube size:
4, 6, 8, 10 mm

Tube types:
PA 11 or 12, PU and other plasticised or unplasticised tubing

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Materials

Body and banjo bolt:
Nickel plated brass

Washer:
NBR and PUR

Models – Push-in and thread ports

Model	Port size 1 (mm)	Port size 2	Pilot port	Pilot pressure (bar)
102GA0418	4	G1/8	M5	2,5
102GA0618	6	G1/8	M5	2,5
102GA0628	6	G1/4	M5	2,5
102GA0828	8	G1/4	M5	2,5
102GA0838	8	G3/8	M5	3
102GA1038	10	G3/8	M5	3
102GA1248	12	G1/2	M5	2,5

Models – Thread ports only

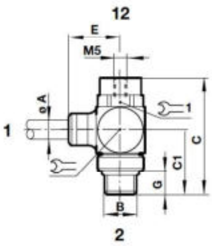
Model	Port size 1	Port size 2	Pilot port	Pilot pressure (bar)
102GA1818	G1/8	G1/8	M5	2,5
102GA2828	G1/4	G1/4	M5	2,5
102GA3838	G3/8	G3/8	M5	3
102GA4848	G1/2	G1/2	M5	2,5
102GH2828X2	G1/4	G1/4	G1/8	2,5
102GH3838X2	G3/8	G3/8	G1/8	3
102GH4848X2	G1/2	G1/2	G1/8	2,5

BLOCKING VALVE

102GA, 102GH 4 … 10 mm, G1/8 … G1/2

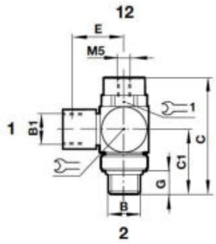
● Dimensions

Push-in fitting x BSPP thread



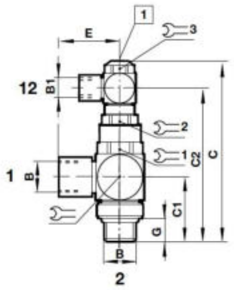
Model	Ø A	B	C	C1	E	G	🔧	🔧1
102GA0418	4	G1/8	41	20	22	6	13	16
102GA0618	6	G1/8	41	20	23	6	13	16
102GA0628	6	G1/4	48	26	25	10,5	17	20
102GA0828	8	G1/4	48	26	26	10,5	17	20
102GA0838	8	G3/8	55	29	28	10,8	22	24
102GA1038	10	G3/8	55	29	32,5	10,8	22	24
102GA1248	12	G1/2	65,5	36	39,5	12,8	27	30

BSPP thread x BSPP thread



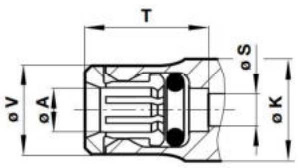
Model	Ø A	B / B1	C	C1	E	G	🔧	🔧1
102GA0418	4	G1/8	41	20	22	6	13	16
102GA0618	6	G1/8	41	20	23	6	13	16
102GA0628	6	G1/4	48	26	25	10,5	17	20
102GA0828	8	G1/4	48	26	26	10,5	17	20
102GA0838	8	G3/8	55	29	28	10,8	22	24
102GA1038	10	G3/8	55	29	32,5	10,8	22	24
102GA1248	12	G1/2	65,5	36	39,5	12,8	27	30

BSPP thread x BSPP thread and manual override



Model	B	B1	C	C1	C2	E	G	🔧+1	🔧2+3
102GH2828X2	G1/4	G1/8	80	26	64,5	24,5	10,5	20 / 17	13 / 13
102GH3838X2	G3/8	G1/8	87	29	74,5	27	10,5	24 / 22	17 / 13
102GH4848X2	G1/2	G1/8	97	36	84,5	34	12,5	30 / 27	17 / 13

Collet



Ø A O/D tube	Ø S	Ø T *1)	V	Ø K
4	2,8	14	7,5	10
6	4,4	15,5	11	12
8	6	16,5	13	14
10	7,6	21	14,5	17
12	9,6	24,5	18	20,5

*1) Dimensions here and in the individual tables refer to the collet being in the 'IN' position.

PRESSURE REDUCING VALVE

102GB 4 … 10 mm, G1/8 … G1/2

- Compact units
- System running cost savings by optimising cylinder pressure
- Designed for mounting on valves
- Push-in or threaded ports available
- Relief feature to protect against over pressure

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operating pressure:
Primary pressure 1 … 10 bar max.
Secondary pressure 1 … 8 bar max.

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

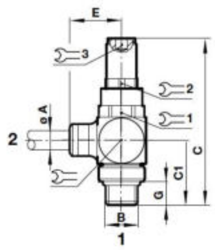
Materials

Body and banjo bolt:
Nickel plated brass

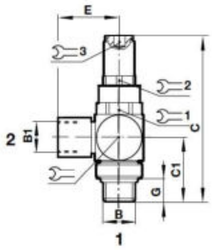
Washer:
NBR and PU

Dimensions

Push-in fitting x BSPP thread



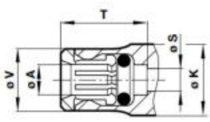
BSPP thread x BSPP thread



Model	Ø A	B	C	C1	E	G	+1	2+3
102GB0418	4	G1/8	73	20	22	6	13 / 16	11 / 5
102GB0628	6	G1/4	81	26	25	10,5	17 / 20	13 / 5
102GB0828	8	G1/4	81	26	26	10,5	17 / 20	13 / 5
102GB0838	8	G3/8	86	29	28	10,8	22 / 24	17 / 6
102GB1038	10	G3/8	86	29	32,5	10,8	22 / 24	17 / 6

Model	B	B1	C	C1	E	G	+1	2+3
102GB1818	G1/8	G1/8	73	20	17,5	6	13 / 16	11 / 5
102GB2828	G1/4	G1/4	81	26	24,5	10,5	17 / 20	13 / 5
102GB4848	G1/2	G1/2	89	36	34	12,5	22 / 24	17 / 6

Collet



Ø A O/D tube	Ø S	Ø T *1)	V	Ø K
4	2,8	14	7,5	10
6	4,4	15,5	11	12
8	6	16,5	13	14
10	7,6	21	14,5	17

Models – Push-in fitting on port 1

Model	O/D tube 1 (mm)	Port size 2
102GB0418	4	G1/8
102GB0628	6	G1/4
102GB0828	8	G1/4
102GB0838	8	G3/8
102GB1038	10	G3/8

Models – Thread on port 1

Model	Port size 1	Port size 2
102GB1818	G1/8	G1/8
102GB2828	G1/4	G1/4
102GB4848	G1/2	G1/2

PRESSURE SENSOR VALVE

102GD Ø 4 mm, G1/8 & G1/4

- Very compact units
- Easy tube insertion for rapid assembly of pneumatic circuits
- Positive tube anchorage
- Simpler pneumatic systems
- Eliminates need for electrical reed switches

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated

Operating pressure:
10 bar max.(cylinder pressure)
3 … 10 bar (sensor supply pressure)

Tube types:
Nylon 11 or 12, polyurethane and other plasticised or unplasticised tubing

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

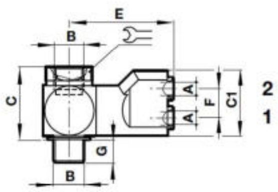
Materials

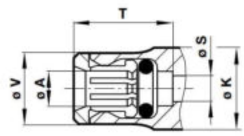
Body:
PA

Banjo bolt:
Nickel plated brass

Washer:
NBR and PU

Dimensions





102GD

Model	Ø A	B	C	C1	E	F	G	(spanner)
102GD0418	4	G1/8	25	21	45,2	9,5	5,5	15
102GD0428	4	G1/4	29	21	47,2	9,5	6,5	19

Collet

Ø A O/D tube	Ø S	Ø T *1)	V	Ø K
4	2,8	14	7,5	10

*1) Dimensions here and in the individual tables refer to the collet being in the 'IN' position.

Models

Model	O/D tube 1 (mm)	Port size 2
102GD0418	4	G1/8
102GD0428	4	G1/4

IN-LINE EXCESS FLOW SHUT-OFF VALVES

T60 Air fuses G1/4 … G1 1/2

- Assists in complying with safety regulations
- Tamper proof
- Compact and safe design
- Low pressure drop
- Automatically resets after failure correction
- High corrosion resistance
- High air pressure rating

Technical Data

Medium:
Compressed air, filtered, lubricated and non-lubricated and inert gases

Operating pressure:
Maximum 16 bar, minimum according to hose length

Ambient temperature:
-20°C … +80°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

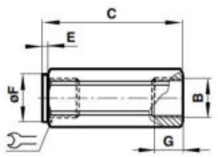
Materials

Body:
Aluminium

Internal parts:
Brass

Spring:
Stainless steell

Dimensions



Model	B	C	E	Ø F	G	
T60C2890	G1/4	51	3	21	11	21
T60C2891	G1/4	51	3	21	11	21
T60C3890	G3/8	62	5	24	14	24
T60C3891	G3/8	62	5	24	14	24
T60C4890	G1/2	78	5	32	15	32
T60C4891	G1/2	78	5	32	15	32
T60C6890	G3/4	90	5	32	19	32
T60C6891	G3/4	90	5	32	19	32
T60C8890	G1	118	5	51	25,5	51
T60C8891	G1	118	5	51	25,5	51
T60CB890	G1 1/2	145	5	64	25,5	64
T60CB891	G1 1/2	145	5	64	25,5	64

Models

Model	Port size BSPP	Drop pressure at shut off flow (bar)	Shut off flow rate at 7 bar (dm³/s) ±10%	Flow at 7 bar Δ P 0,07 bar (dm³/s)
T60C2890	1/4	0,14	8,3	6,5
T60C2891	1/4	0,3	14	6,5
T60C3890	3/8	0,14	19,4	13,5
T60C3891	3/8	0,3	32,2	13,5
T60C4890	1/2	0,14	32,2	23,2
T60C4891	1/2	0,3	48,3	23,2
T60C6890	3/4	0,14	48,3	43
T60C6891	3/4	0,3	80	43
T60C8890	1	0,14	92	68
T60C8891	1	0,3	128	68
T60CB890	1 1/2	0,14	186	145
T60CB891	1 1/2	0,3	268	145

Flow and pressure test conducted according to ISO 6358 test circuit. Mean measured flow values are provided at standard reference conditions.

SOLENOID PLUGS AND CABLES

15 mm, 22 mm & 30 mm

EXPRESS

15 mm plugs according to DIN EN175301-803 form C

Connector	Model	Connector type	Cable length	Voltage a.c.	Voltage d.c.	Features	Suppression	Protection class	Gland size	Power consumption
Plug with moulded cable	V10013-D01	DIN EN175301-803	1000 mm	–	–	–	–	IP 65	Pg 7	–
	V10013-D03	DIN EN175301-803	3000 mm	–	–	–	–	IP 65	Pg 7	–
Plug with cable gland	V10027-D00	DIN EN175301-803	–	–	–	–	–	IP 65	Pg 7	–
	0588666000000000	DIN EN175301-803	–	–	–	–	–	IP 65	Pg 7	–
Indicator plug	V10012-D13	DIN EN175301-803	–	12 … 24 V	12 … 24 V	LED,VDR	•	IP 65	Pg 7	0,25W
	V10012-D18	DIN EN175301-803	–	110 V	110 V	LED,VDR	•	IP 65	Pg 7	0,25W
	V10012-D19	DIN EN175301-803	–	220 V	220 V	LED,VDR	•	IP 65	Pg 7	0,25W
Indicator plug with moulded cable	V10014-D01	DIN EN175301-803	1000 mm	24 V	24 V	LED,VDR	•	IP 65	Pg 7	0,25W
	V10014-D03	DIN EN175301-803	3000 mm	24 V	24 V	LED,VDR	•	IP 65	Pg 7	0,25W
	V10015-D01	DIN EN175301-803	1000 mm	110 V	110 V	LED,VDR	•	IP 65	Pg 7	0,25W
	V10015-D03	DIN EN175301-803	3000 mm	110 V	110 V	LED,VDR	•	IP 65	Pg 7	0,25W
	V10016-D01	DIN EN175301-803	1000 mm	220 V	220 V	LED,VDR	•	IP 65	Pg 7	0,25W
	V10016-D03	DIN EN175301-803	3000 mm	220 V	220 V	LED,VDR	•	IP 65	Pg 7	0,25W
Light emitting gasket	V10037-E13	DIN EN175301-803	–	12 … 24 V	12 … 24 V	Green LED	•	IP 65	Pg 7	0,25W
	V10037-E18	DIN EN175301-803	–	110 … 120 V	110 … 120 V	Green LED	•	IP 65	Pg 7	1W
	V10037-E19	DIN EN175301-803	–	220 … 240 V	220 … 240 V	Green LED	•	IP 65	Pg 7	1W

22 mm plugs according to Industrial standard or DIN EN175301-803 form B

Connector	Model	Connector type	Cable length	Voltage a.c.	Voltage d.c.	Features	Suppression	Protection class	Gland size	Power consumption
Plug with moulded cable	M/P43313/1	22 mm Industrial std.	1000 mm	–	–	–	–	IP 65	Pg 9	–
	M/P43313/3	22 mm Industrial std.	3000 mm	–	–	–	–	IP 65	Pg 9	–
Plug with cable gland	M/P19063	22 mm Industrial std.	–	–	–	–	–	IP 65	Pg 9	–
	0657868000000000	22 mm Industrial std.	–	12 … 250 V	12 … 250 V	–	•	IP 65	Pg 9	0,25W
	0680000000000000	22 mm Industrial std.	–	–	15 … 30V	Green LED	•	IP 65	Pg 9	1W
	M/P24121/3	22 mm Industrial std.	–	250 V	–	Green LED	•	IP 65	Pg 9	1W
Indicator plug	M/P24121/1	22 mm Industrial std.	–	12 … 24 V	12 … 24 V	LED,VDR	•	IP 65	Pg 9	0,25W
	M/P24121/2	22 mm Industrial std.	–	110 V	110 V	LED,VDR	•	IP 65	Pg 9	0,25W
	M/P24121/3	22 mm Industrial std.	–	220 V	220 V	LED,VDR	•	IP 65	Pg 9	0,25W
Indicator plug with moulded cable	M/P43314/11	22 mm Industrial std.	1000 mm	24 V	24 V	LED,VDR	•	IP 65	Pg 9	0,25W
	M/P43314/13	22 mm Industrial std.	3000 mm	24 V	24 V	LED,VDR	•	IP 65	Pg 9	0,25W
	M/P43314/21	22 mm Industrial std.	1000 mm	110 V	110 V	LED,VDR	•	IP 65	Pg 9	0,25W
	M/P43314/23	22 mm Industrial std.	3000 mm	110 V	110 V	LED,VDR	•	IP 65	Pg 9	0,25W
	M/P43314/31	22 mm Industrial std.	1000 mm	220 V	220 V	LED,VDR	•	IP 65	Pg 9	0,25W
	M/P43314/33	22 mm Industrial std.	3000 mm	220 V	220 V	LED,VDR	•	IP 65	Pg 9	0,25W
Light emitting gasket	M/P40859	22 mm Industrial std.	–	12 … 24 V	12 … 24 V	Green LED	•	IP 65	–	0,25W
	M/P40886	22 mm Industrial std.	–	110 … 120 V	110 … 120 V	Green LED	•	IP 65	–	1W
	M/P40860	22 mm Industrial std.	–	220 … 240 V	220 … 240 V	Green LED	•	IP 65	–	1W

EXPRESS

30 mm plugs according to DIN EN175301-803 form A

Connector	Model	Connector type	Cable length	Voltage a.c.	d.c.	Features	Suppression	Protection class	Gland size	Power consumption
Plug with moulded cable 	M/P43315/1	DIN EN175301-803	1000 mm	–	–	–	–	IP 65	Pg 11	–
	M/P43315/3	DIN EN175301-803	3000 mm	–	–	–	–	IP 65	Pg 11	–
Plug with cable gland 	M/P15737	DIN EN175301-803	–	250 V	300 V	–	–	IP 65	Pg 11	–
	M/P19117	DIN EN175301-803	–	–	240 V	–	–	IP 65	Pg 11	–
	0570275000000000	DIN EN175301-803	–	250 V	300 V	–	–	IP 65	Pg 11	–
	0663303000000000	DIN EN175301-803	–	12 … 250 V	12 … 250 V	–	–	IP 65	Pg 11	–
	0570110000000000	DIN EN175301-803	–	12 … 240 V	12 … 240 V	–	–	IP 65	Pg 11	–
Indicator plug 	M/P24120/1	DIN EN175301-803	–	10 … 50 V	10 … 50 V	LED,VDR	•	IP 65	Pg 11	0,25W
	M/P24120/2	DIN EN175301-803	–	70 … 115 V	70 … 115 V	LED,VDR	•	IP 65	Pg 11	0,25W
	M/P24120/3	DIN EN175301-803	–	150 … 240 V	150 … 240 V	LED,VDR	•	IP 65	Pg 11	0,25W
Indicator plug with moulded cable 	M/P43316/11	DIN EN175301-803	1000 mm	24 V	24 V	LED,VDR	•	IP 65	Pg 11	0,25W
	M/P43316/13	DIN EN175301-803	3000 mm	24 V	24 V	LED,VDR	•	IP 65	Pg 11	0,25W
	M/P43316/23	DIN EN175301-803	3000 mm	110 V	110 V	LED,VDR	•	IP 65	Pg 11	0,25W
	M/P43316/31	DIN EN175301-803	1000 mm	220 V	220 V	LED,VDR	•	IP 65	Pg 11	0,25W
	M/P43316/33	DIN EN175301-803	3000 mm	220 V	220 V	LED,VDR	•	IP 65	Pg 11	0,25W
Light emitting gasket 	M/P40861	DIN EN175301-803	–	12 … 24 V	12 … 24 V	Green LED	•	IP 65	Pg 11	0,25W
	M/P40880	DIN EN175301-803	–	110 … 120 V	110 … 120 V	Green LED	•	IP 65	Pg 11	0,25W
	M/P40862	DIN EN175301-803	–	220 … 240 V	220 … 240 V	Green LED	•	IP 65	Pg 11	0,25W