NORGREN

Buschjost

83040
2/2-way diaphragm valves
DN 15 ... 50

High flow rate

For robust industry solutions

Damped operation

Suitable for vacuum

Valve operates without differential pressure

Solenoid interchangeable without tools (*Click-on*®)

Fluids of Group 2
acc. Pressure Equipment Directive 97/23/EC

Technical features

Medium:
Neutral gases and liquid fluids
Switching function:
Normally closed
Operation:
Solenoid actuated,
with forced lifting
Mounting position:
Optional,
preferably solenoid
vertical on top

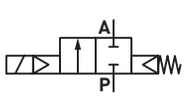
Flow direction:
Determined
Port size:
DN 15, DN 20, DN 25,
DN 32, DN 40, DN 50
Operating pressure:
0 ... 10/16 bar

Fluid temperature:
–10 ... +90°C
Ambient temperature:
–10 ... +50°C

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

For contaminated fluids insertion
of a strainer is recommended.

Technical data - standard models

Symbol	Orifice (mm)	Flow kv value *1) (m^3/h)	Operating pressure *2) (bar)	Weight (kg)	Model Solenoid in V d.c.	Model Solenoid in V a.c.
	15	3,4	0 ... 10	1,9	8304200.9151.xxxxx	8304200.9154.xxxxx
	15	3,4	0 ... 16	2,4	8304200.8301.xxxxx	8304200.8304.xxxxx
	20	5,8	0 ... 10	2,5	8304300.9151.xxxxx	8304300.9154.xxxxx
	20	5,8	0 ... 16	3	8304300.8301.xxxxx	8304300.8304.xxxxx
	25	8	0 ... 10	3	8304400.9151.xxxxx	8304400.9154.xxxxx
	25	8	0 ... 16	3,5	8304400.8301.xxxxx	8304400.8304.xxxxx
	32	23	0 ... 16	6,7	8304500.9401.xxxxx	8304500.9404.xxxxx
	40	25	0 ... 16	7,4	8304600.9401.xxxxx	8304600.9404.xxxxx
	50	41	0 ... 16	10	8304700.9401.xxxxx	8304700.9404.xxxxx

xxxxx Please insert voltage and frequency codes

*1) Cv-value (US) ≈ kv value x 1,2

*2) For gases and liquid fluids up to 25 mm^2/s (cSt)

Option selector

8304★★★.★★★★.★★★★★

Port size	Substitute
15	2
20	3
25	4
32	5
40	6
50	7

Valve options	Substitute
Normally open (NO), from DN 32 only with solenoid 8400	01
Manual override, only from DN 32	02
Seat seal FPM, Fluid temperature –5 ... +110°C	03
Seat seal EPDM, for hot water, Fluid temperature –10 ... +110°C	14
Normally open (NO), Seat seal FPM, Fluid temperatur –5 ... +110°C, from DN 32 only with solenoid 8400	17
Flanges acc.to ASME B 16.5 150 lb/sq.In.	47

Frequency	Substitute
See table frequency codes	xx

Voltage	Substitute
See Voltage codes	xxx

Solenoid options	Substitute
DN 15 ... 32 Operating pressure 0,1 ... 10 bar Solenoid in V d.c.	9151
DN 15 ... 32 Operating pressure 0,1 ... 10 bar Solenoid in V a.c.	9154
DN 15 ... 32 Operating pressure 0,1 ... 16 bar Solenoid in V a.c.	8301
DN 15 ... 32 Operating pressure 0,1 ... 16 bar Solenoid in V a.c.	8304
DN 32 ... 50 Operating pressure 0,1 ... 16 bar Solenoid in V d.c.	9401
DN 32 ... 50 Operating pressure 0,1 ... 16 bar Solenoid in V a.c.	9404

Standard solenoid systems

Code Voltage	Code Frequency	Voltage	Frequency	Power consumption Inrush	Holding
Voltage and Frequency Solenoid 9151/9154 *1)					
024	00	24 V d.c.	-	18 W	18 W
024	49	24 V a.c. *2)	40 ... 60 Hz	20 VA	20 VA
110	49	110 V a.c.*2)	40 ... 60 Hz	20 VA	20 VA
120	49	120 V a.c.*2)	40 ... 60 Hz	20 VA	20 VA
230	49	230 V a.c. *2)	40 ... 60 Hz	20 VA	20 VA
Voltage and Frequency Solenoid 9401/9404 *1)					
024	00	24 V d.c.	-	38 W	38 W
024	49	24 V a.c. *2)	40 ... 60 Hz	42 VA	42 VA
110	49	110 V a.c. *2)	40 ... 60 Hz	42 VA	42 VA
120	49	120 V a.c. *2)	40 ... 60 Hz	42 VA	42 VA
230	49	230 V a.c. *2)	40 ... 60 Hz	42 VA	42 VA
Voltage and Frequency Solenoid 8301/8304					
024	00	24 V d.c.	-	22 W	22 W
024	49	24 V a.c. *2)	40 ... 60 Hz	25 VA	25 VA
110	49	110 V a.c. *2)	40 ... 60 Hz	25 VA	25 VA
120	49	120 V a.c. *2)	40 ... 60 Hz	25 VA	25 VA
230	49	230 V a.c. *2)	40 ... 60 Hz	25 VA	25 VA
Voltage and Frequency Solenoid 8401/8404					
024	49	24 V d.c.	-	40 W	40 W
024	49	24 V a.c. *2)	40 ... 60 Hz	45 VA	45 VA
110	49	110 V a.c. *2)	40 ... 60 Hz	45 VA	45 VA
120	49	120 V a.c. *2)	40 ... 60 Hz	45 VA	45 VA
230	49	230 V a.c. *2)	40 ... 60 Hz	45 VA	45 VA

*1) $_{C}$ $_{US}$ coil only (with the exeption of solenoid 94xx up to 41 V a.c.)

*2) A.c. only with rectifier plug

Further versions on request!

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	Protection class	Solenoid	Standard Voltages
II2GD	EEx me II T3 T 140°C	9191	24 V d.c., 110 V a.c., 230 V a.c.
II2GD	EEx me II T3 T 140°C	8441	24 V d.c., 110 V a.c., 230 V a.c.
II3GD	EEx nA II T4 T 135°C	9176 *3)	24 V d.c., 110 V a.c., 230 V a.c.
II3GD	EEx nA II T4 T 135°C	9426 *3)	24 V d.c., 110 V a.c., 230 V a.c.
II3GD	EEx nA II T4 T 135°C	8426 *3)	24 V d.c., 110 V a.c., 230 V a.c.

Attention!

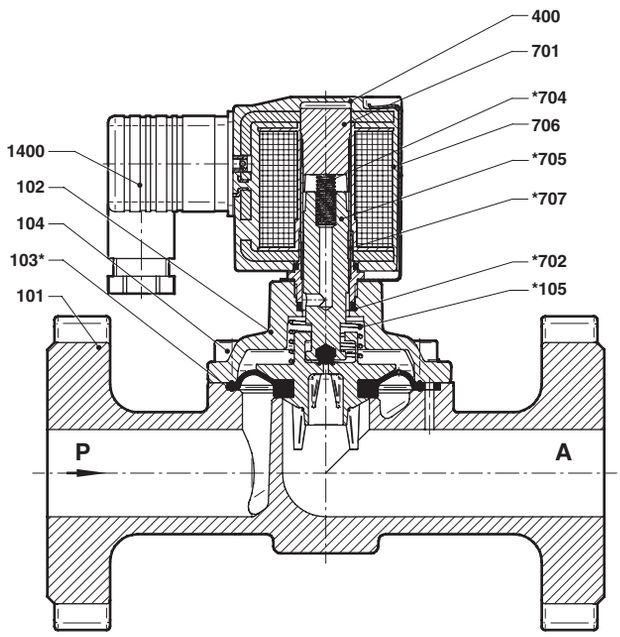
The conditions imposed on the Ex approvals lead to reduction of the permissible standard temperature ranges in the cases of explosion protected solenoids.

*3) D.c. only, for a.c. solenoids with design inspection certificate acc. to category 2, e. g. xxxxxxx.8441

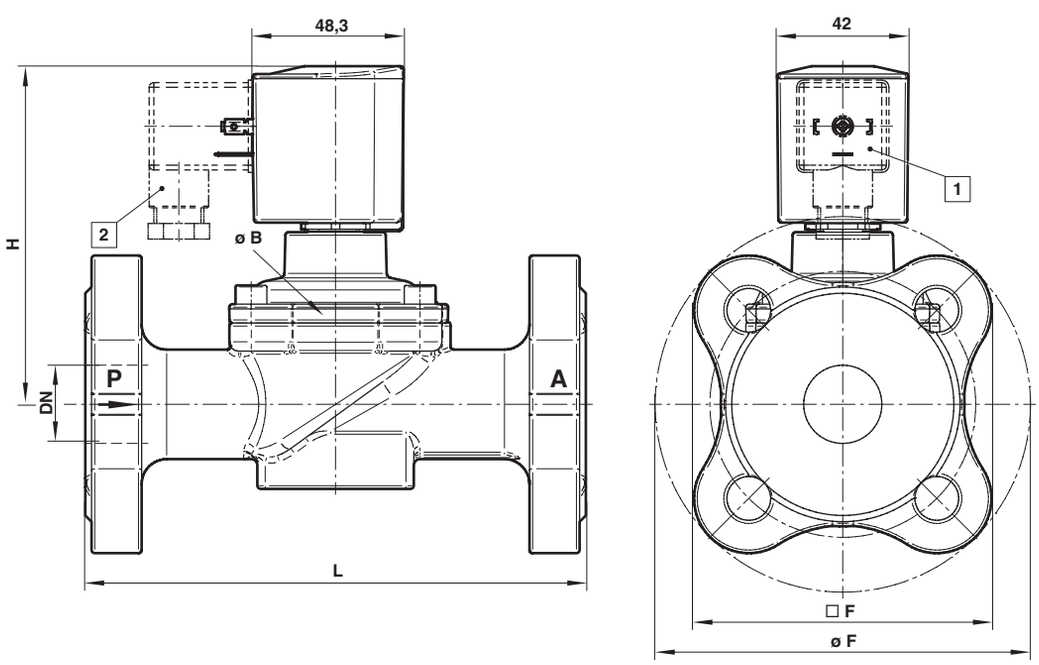
Section View and Dimensions

DN 15 ... 25 with solenoid 915x (10 bar)

No.	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Straight pin
*105	Pressure spring
400	Solenoid
701	Core tube
*702	O-ring
*704	Pressure spring
*705	Core
706	Spring clip
*707	O-ring
1400	Socket (included)



* These individual parts form a complete wearing unit.
When ordering spare parts please state Cat. No. and Series No.



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

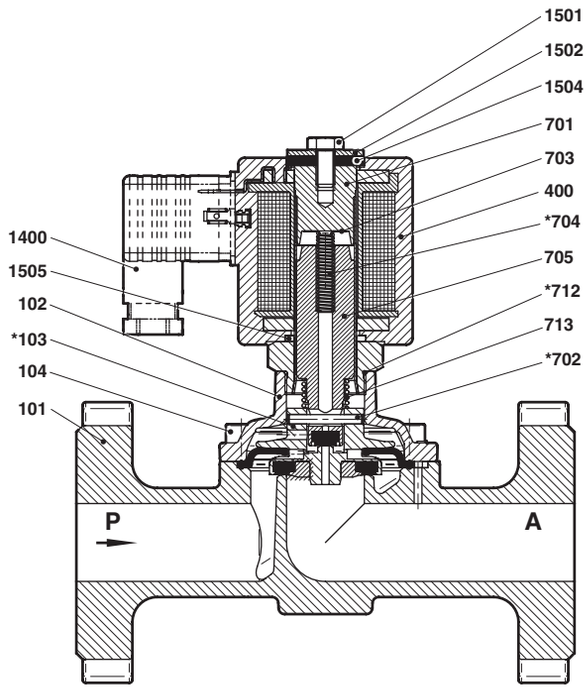
Orifice (mm)	ø B	ø F	□ F	H	L	Model
15	44	96	77	97	130	8304200.915x.xxxxx
20	50	110	86,6	105	150	8304300.915x.xxxxx
25	62	120	95,1	108	160	8304400.915x.xxxxx

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

Section View and Dimensions

DN 15 ... 25 with solenoid 830x (16 bar)

No.	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Socket head cap screw
*105	Pressure spring
400	Solenoid
701	Core tube
*702	Straight pin
703	Round plate
*704	Pressure spring
*705	Core
*712	O-ring
*713	Pressure spring
1400	Socket (included)
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring



* These individual parts form a complete wearing unit.
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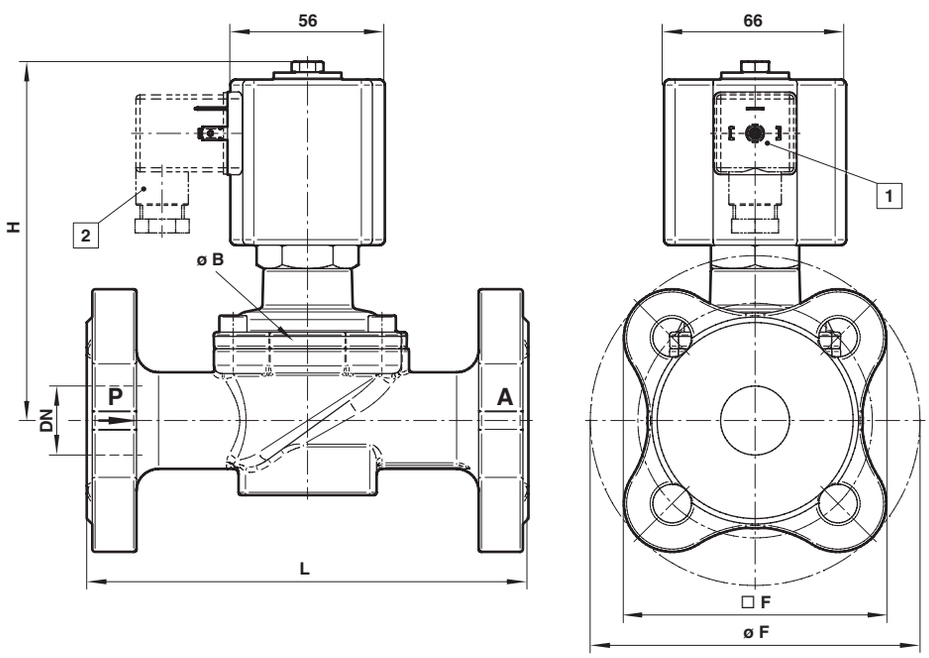


1 Solenoid rotatable 360°
2 Socket turnable 4 x 90° (Socket included)

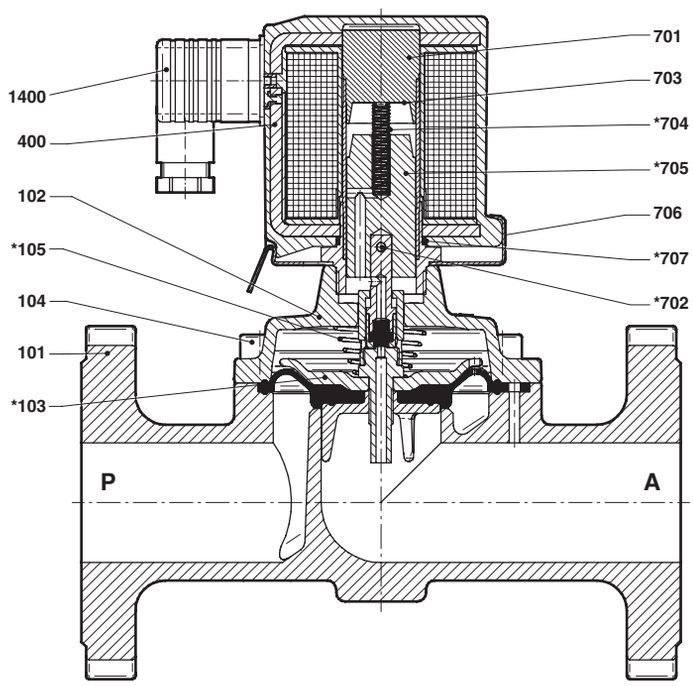
Orifice (mm)	ø B	ø F	□ F	H	L	Model
15	44	96	77	157,5	130	8304200.830x.xxxxx
20	50	110	86,6	170	150	8304300.830x.xxxxx
25	62	120	95,1	175	160	8304400.830x.xxxxx

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

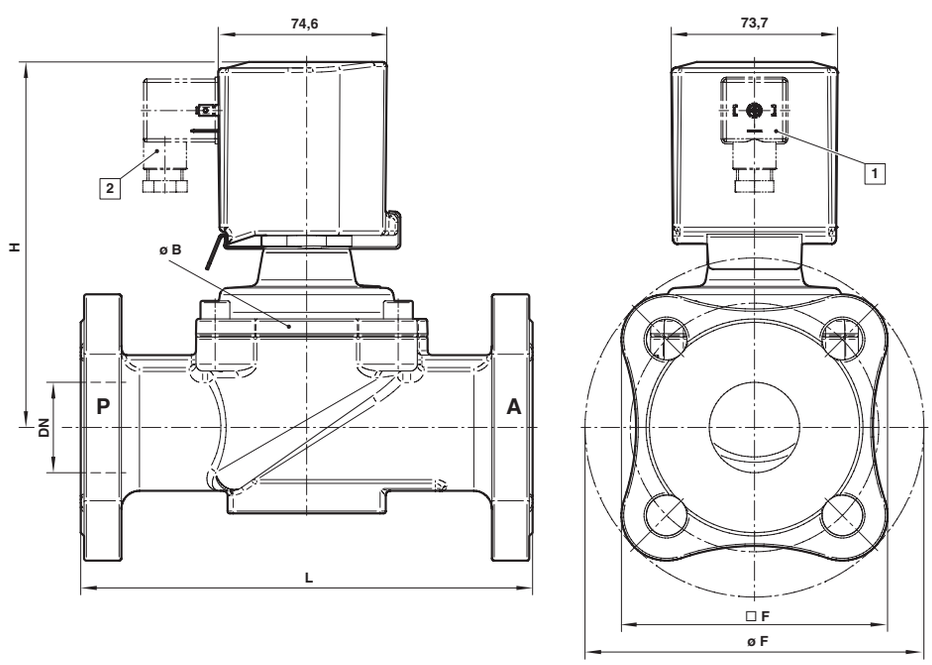
Section View and Dimensions

DN 32 ... 50 with solenoid 940x (16 bar)

No.	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Straight pin
*105	Pressure spring
400	Solenoid
701	Core tube
*702	Straight pin
703	Round plate
*704	Pressure spring
*705	Core
706	Spring clip
*707	O-ring
1400	Socket (included)



* These individual parts form a complete wearing unit.
When ordering spare parts please state Cat. No. and Series No.



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

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

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

Note to Pressure Equipment Directive (PED):
The valves of this series, including the connection size DN 25 (G 1), are according to Art. 3 § 3 of the Pressure Equipment Directive (PED) 97/23/EG. This means interpretation and production are in accordance to engineers practice wellknown in the member countries.

The CE-sign at the valve refers not to the PED. Thus the declaration of conformity is not longer applicable for this directive.

For valves > DN 25 (G 1) Art. 3 § (1) No.1.4 applies.
The basic requirements of the Enclosure I of the PED must be fulfilled. The CE-sign at the valve includes the PED. A certificate of conformity of this directive will be available on request.

Note to Electromagnetic Compatibility Guideline (EEC):
The valves shall be provided with an electrical circuit which ensures the limits of the harmonised standards EN 61000-6-3 and EN 61000-6-1 are observed, and hence the requirements of the Electromagnetic Compatibility Guideline (2004/108/EG) satisfield.