85440
2/2-way piston valves

- Port size: DN 12 ... 50, G1/2 ... 2
- Valve works without minimum pressure differential
- Up to 16 bar backpressure tight with leak rate E according to DIN EN 12266-1
- International approvals

Technical features

Medium:
For slightly aggressive fluids

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

Operation:
Solenoid actuated, with forced lifting

Mounting:
Solenoid vertical on top

Flow direction:
Determined

Port size:
G1/2, G3/4, G1, G1 1/4, G1 1/2, G2

Operating pressure:
P > A: 0 ... 25 bar (0 ... 362 psi)
A > P: 0 ... 16 bar (0 ... 232 psi)
backpressure tight

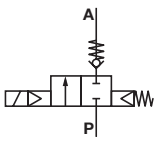
Fluid temperature:
–10 ... +90°C (+32 ... +194°F)

Ambient temperature:
–10 ... +50°C (+32 ... +122°F)

Material:
Body: Stainless Steel (1.4408)
Seat seal: NBR
Internal parts:
Stainless steel, PTFE/Carbon

For contaminated fluids insertion of a strainer is recommended.

Technical data – standard models

Symbol	Port size	Orifice	Flow kv value *1)	Operating pressure *2)		Weight	Model	Model
		(mm)	(m^3/h)	(bar)	(psi)	(kg)	Solenoid in V d.c.	Solenoid in V a.c.
	G1/2	12	4.4	0 ... 25	0 ... 362	2,5	8544200.8401.xxxxx *3)	8544200.8404.xxxxx *3)
	G3/4	20	7,0	0 ... 25	0 ... 362	2,7	8544300.8401.xxxxx	8544300.8404.xxxxx
	G1	25	10,5	0 ... 25	0 ... 362	3,1	8544400.8401.xxxxx	8544400.8404.xxxxx
	G1 1/4	32	25,0	0 ... 25	0 ... 362	5,6	8544500.9501.xxxxx	8544500.9504.xxxxx
	G1 1/2	40	27,0	0 ... 25	0 ... 362	5,4	8544600.9501.xxxxx	8544600.9504.xxxxx
	G2	50	43,0	0 ... 25	0 ... 362	6,8	8544700.9501.xxxxx	8544700.9504.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), up to 80 mm^2/s (cSt) on request
*3) manifold of Stainless steel (1.4305)

Option selector

8544★★★.★★★★.★★★★★

Port size	Substitute
1/2	2
3/4	3
1	4
1 1/4	5
1 1/2	6
2	7

Valve options	Substitute
Manual override, only with solenoid 8400	02
Seat seal FPM, Fluid temperature 0 ... +110°C (+32 ... +230°F)	03
Seat seal EPDM, Fluid temperature 0 ... +110°C (+32 ... +230°F)	14
Position indicator with two solenoid sensors	23

Frequency	Substitute
See table frequency codes	xx

Voltage	Substitute
See voltage codes	xxx

Solenoid options	Substitute
G1/2 ... 1 Solenoid in V d.c.	8401
G1 1/4 ... 2 Solenoid in V d.c.	9501
G1/2 ... 1 Solenoid in V a.c.	8404
G1 1/4 ... 2 Solenoid in V a.c.	9504

Standard solenoid systems

Code Voltage	Code Frequency	Voltage	Frequency	Power consumption Inrush	Power consumption Holding
Voltage and Frequency Solenoid 8401/8404					
024	00	24 V d.c.	-	40 W	40 W
024	49	24 V a.c.	40 ... 60 Hz	45 VA	45 VA
110	49	110 V a.c.	40 ... 60 Hz	45 VA	45 VA
120	49	120 V a.c.	40 ... 60 Hz	45 VA	45 VA
220	49	220 V a.c.	40 ... 60 Hz	45 VA	45 VA
230	49	230 V a.c.	40 ... 60 Hz	45 VA	45 VA
Voltage and Frequency Solenoid 9501/9504					
024	00	24 V d.c.	-	80 W	80 W
024	49	24 V a.c.	40 ... 60 Hz	89 VA	89 VA
110	49	110 V a.c.	40 ... 60 Hz	89 VA	89 VA
120	49	120 V a.c.	40 ... 60 Hz	89 VA	89 VA
220	49	220 V a.c.	40 ... 60 Hz	89 VA	89 VA
230	49	230 V a.c.	40 ... 60 Hz	89 VA	89 VA

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 (+68°F).
At operating state temperature the input power of a coil decreases by up to ca. 30% due to physical reasons.

Additional solenoid systems for hazardous areas

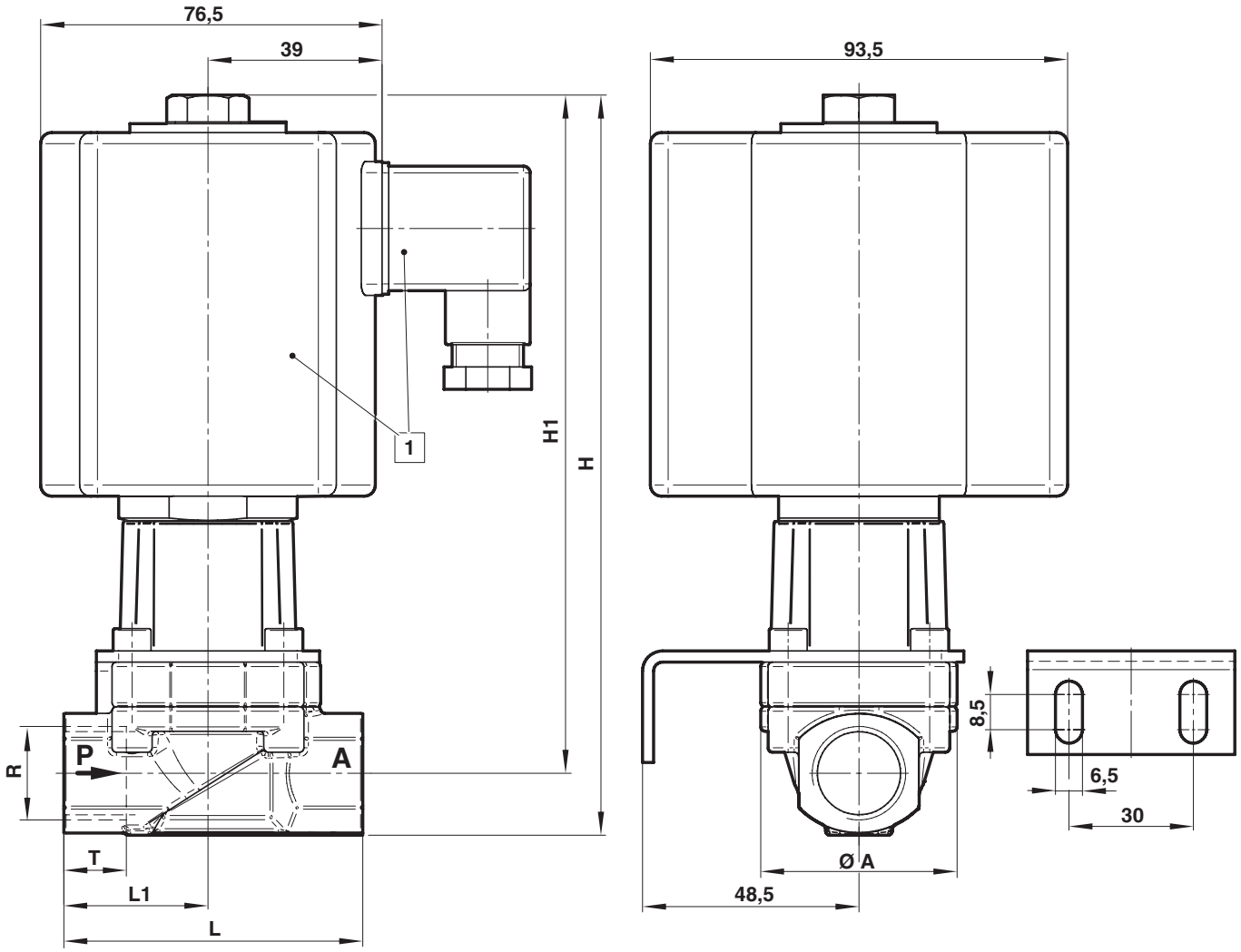
ATEX-category	ATEX-protection class	IP-protection class	Solenoid	Standard voltages
II 3G II 3D	Ex ec IIC T4 Gc Ex tc IIIC T130°C Dc *4)	IP65	8426	24 V d.c., 110 V a.c., 230 V a.c.
II 2G II 2D	Ex db IIC T4/T5 Gb Ex tb IIIC T130°C/ T95°C Db	IP65	8920	24 V d.c., 110 V a.c., 230 V a.c.
II 2G II 2D	Ex eb mb IIC T3/T4 Gb Ex tb IIIC T140°C/ T130°C Db	IP65	9540	24 V d.c., 110 V a.c., 230 V a.c.
II 2G II 2D	Ex eb mb IIC T3 Gb Ex mb tb IIIB T140°C Db up to G1	IP66	6240	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.
*4) D.c. only, for a.c. solenoids with design inspection certificate acc. to category 2, e.g. xxxxxxx.6240

Dimensions

up to G1

Dimensions in mm
Projection/first angle



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

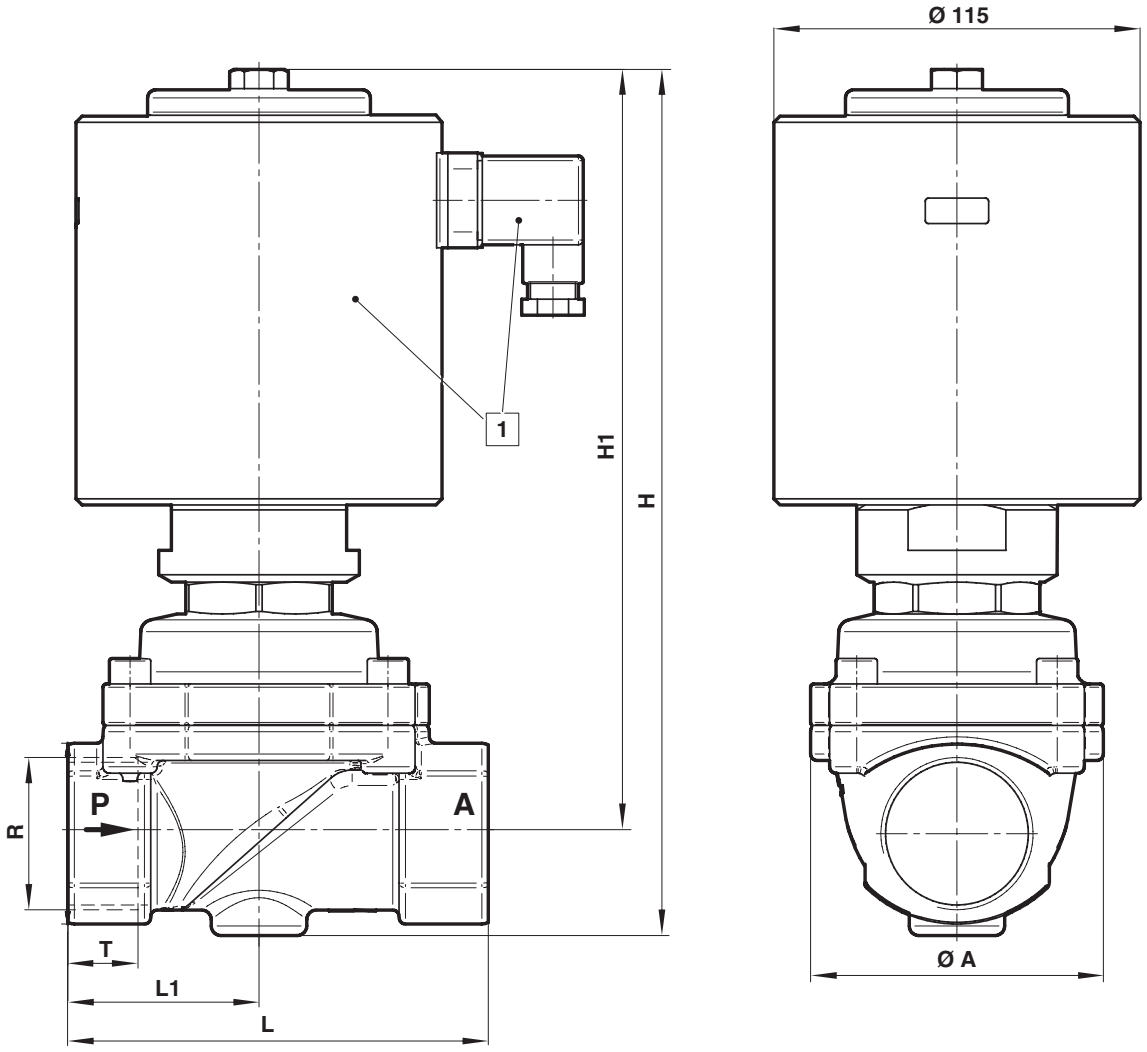
Port size R	ø A	H	H1	L	L1	T	Model
G1/2	44	166,5	150	80	40,0	14	8544200.840x.xxxxx *5)
G3/4	50	166,5	150	80	38,6	16	8544300.840x.xxxxx
G1	62	184,0	164	95	45,6	18	8544400.840x.xxxxx

*5) Manifold of Stainless steel (1.4305)

Dimensions

from G1 1/4

Dimensions in mm
Projection/first angle



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

Port size R	ø A	H	H1	L	L1	T	Model
G1 1/4	92	186,0	253	132	60	20	8544500.950x.xxxxx
G1 1/2	92	286,0	253	132	60	22	8544600.950x.xxxxx
G2	109	N.D.	N.D.	160	74	24	8544700.950x.xxxxx

Note to Pressure Equipment Directive (PED):

The valves of this series up to and including DN 25 (G1) are according to Art. 4 § 3 of the Pressure Equipment Directive (PED) 2014/68/EU.
This means interpretation and production are in accordance to engineers practice wellknown in the member countries.
The CE-sign at the valve does not refer to the PED. Thus the declaration of conformity is not longer applicable for this directive.

For valves > DN 25 (G1) Art. 4 § (1) Letter d) 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 (2014/30/EU) satisfield.