

Servo-assisted 2/2 way piston valve



Type 6240 can be combined with...



Type 2508

Cable plug



Type 1078

Timer control



Type 2511

Cable plug



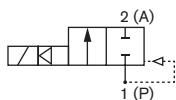
Type 2513

Cable plug
(ATEX Cat. 3 GD)

- Servo-assisted and compact piston valve with diameter of up to DN12
- Vibration-resistant, screwed coil system
- Increased leak-tightness with welded plunger guiding tube
- Safe opening with hard-coupled piston system
- Explosion proof versions

The 6240 valve is a servo-assisted plunger valve. The stopper and plunger guiding tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. The housing design and surface quality enable maximum flow rates. The coils are moulded with chemically resistant epoxy. An optional sliding ring bearings increases the life cycle with dry gases. 'Kick and Drop' electronics are available for over-excitation (plug 2511) and reduced electrical power consumption in operation. In combination with a plug in accordance with DIN EN 17301-803 Form A, the valves satisfy protection class IP65. Stainless steel valves satisfy NEMA 4X.

Circuit function A



2/2 way valve, NC

Technical data	
Port connections	G 1/4, G 3/8, G 1/2
Orifice	DN6.0, DN12.0
Body material	Brass, Stainless steel
Coil material	Epoxy
Coil insulation class	Class H
Seal material	FKM, PTFE/FKM and PTFE/PEEK for high temperature and high pressure versions (EPDM on request)
Medium	Neutral gases and liquids, such as e.g. compressed air, water, hydraulic oil Steam and hot medium
High temperature version	
Viscosity	max. 21 mm ² /sec
Medium temperature	
FKM	-10 °C to +140 °C
PTFE/PEEK DN6	-40 °C to +180 °C
PTFE/PEEK DN12	-40 °C to +140 °C
EPDM	-30 °C to +120 °C (on request)
Ambient temperature	max. 55 °C
Operating voltage	24 V DC, 24 V/50Hz, 230/50Hz (others on request)
Voltage tolerance	±10%
Duty cycle	100% continuous rating
Electrical connection	Tag connector acc. DIN EN 175 301-803 Form A for cable plug Type 2508 (see ordering chart for accessories) ATEX/IECEx version with 3 m moulded cable
Protection class	IP65 with cable plug, ATEX/IECEx junction box version and cable connection version NEMA 4x with cable plug 2508 or 2509 only for stainless steel versions (other versions on request)
Weight	AC 8W, DC 10W (300g); AC 18W, DC 16W (800g)
Installation	As required, preferably with actuator upright

Technical data, cont.

Orifice	Coil size	Power consumption				Response times	
		Inrush AC	Hold AC	DC (hot /cold coil)		Opening	Closing
[mm]	[mm]	[VA]	[VA/W]	[W]	[W]	[ms]	[ms]
6	32	32	18	8	10/12	10-20	40-50
6	40	40	23	10	12/14	10-20	40-50
12	42	105	37	18	16/21	20-40	80-100

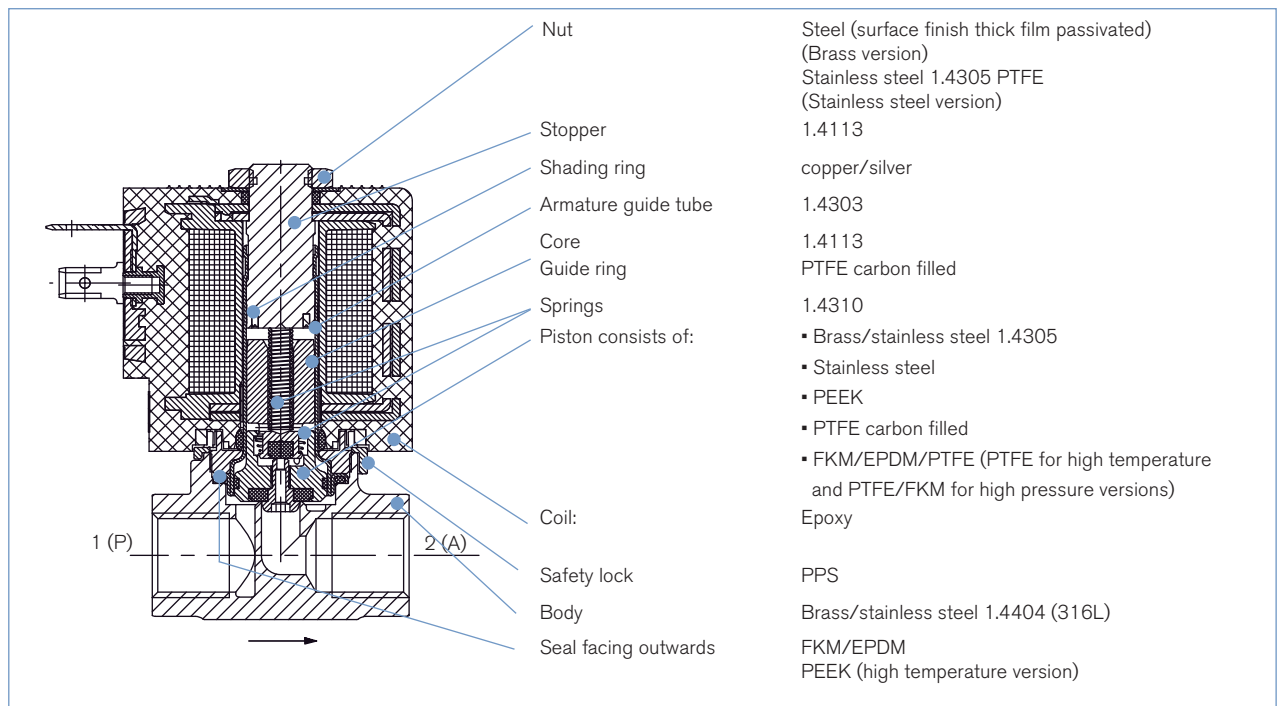
Response times [ms]:

Measured at the outlet with 6 bar inlet pressure at 20 °C

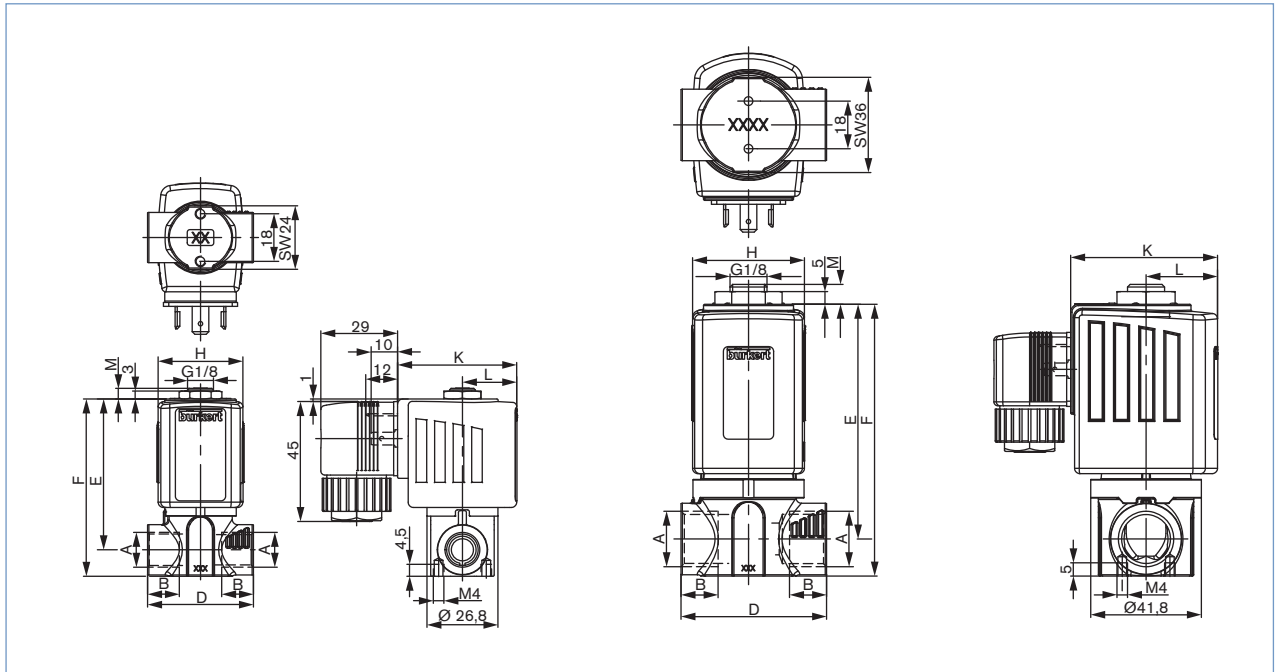
Opening: Pressure build-up 0 to 90%

Closing: Pressure decrease 100 to 10%

Material



Dimensions [mm]



A	DN	B	D	E	F	M	H	K	L	Weight
Body connection	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[g]
Threaded port										
G 1/4	6	12	40	57.3	67.3	3.7	32	45.0	20.5	304
G 1/4	6	12	40	57.3	67.3	3.7	40	51.0	23.5	382
G 3/8	6	12	50	58.3	70.3	3.7	32	45.0	20.5	346
G 3/8	6	12	50	58.3	70.3	3.7	40	51.0	23.5	424
G 1/2	12	12	55	89.0	103.0	7.5	42	55.5	27.0	800

Ordering chart for valves (other versions on request)

6240 valve with FKM seal material

Circuit function	Port connection	Orifice [mm]	Kv value water [m ³ /h]	Pressure range ¹⁾ [bar]	Coil size [mm]	Item no. per voltage/frequency [V/Hz]			
						024/DC	024/50	230/50	
A 2/2 way valve NC 	Brass body								
	G 1/4	6.0	0.6	0-16	32	177 800	177 801	177 802	
	G 3/8	6.0	0.6	0-16	32	177 803	177 804	177 805	
	Stainless steel body								
	G 1/4	6.0	0.6	0-16	32	177 806	177 807	177 808	
	G 1/2	12.0	2.2	0-16	42	238 632	238 633	238 634	

High temperature version, all valves with PTFE/PEEK seal, stainless steel body, without cable plug

Circuit function	Port connection	Orifice [mm]	Kv value water [m ³ /h]	Pressure range ¹⁾ [bar]	Coil size [mm]	Item no. per voltage/frequency [V/Hz]			
						024/DC	024/50	230/50	
A 2/2 way valve NC 	Medium temperature -40 to +180 °C								
	G 1/4	6.0	0.6	0-16	32	184 739	184 740	184 741	
	Medium temperature -40 to +140 °C								
	G 1/2	12.0	2.2	0-25	42	238 638	238 639	238 640	

High pressure version, all valves with PTFE/FKM seal, brass body, without cable plug

Circuit function	Port connection	Orifice [mm]	Kv value water [m ³ /h]	Pressure range ¹⁾ [bar]		Coil size [mm]	Item no. per voltage/frequency [V/Hz]		
				liquid medium	gaseous medium		024/DC	024/50	230/50
A 2/2 way valve NC 	G 1/4	6.0	0.6	0-25	0-40	40	184 742	184 743	184 744
	G 3/8	6.0	0.6	0-25	0-40	40	184 745	184 746	184 747

¹⁾ Overpressure to the atmospheric pressure

Please note: The cable plug must be ordered separately (see page 3 or the datasheet for Type 2508)

Materials for ATEX/IECEX m

Nut
 Stopper
 Shading ring
 Armature guide tube
 Core
 Guide ring
 Springs
 Piston consists of
 Body
 Seal facig outwards
 1 (P)
 2(A)

Cable: Polyolefin Copolymer crosslinked electron beam
 Coil: Epoxy
 Safety lock: PPS

Steel (surface finish thick film passivated)
 (Brass version)
 Stainless steel, 1.4305 PTFE
 (Stainless steel version)
 1.4113
 copper/silver
 1.4303
 1.4113
 PTFE carbon filled
 1.4310
 • Brass/stainless steel 1.4305
 • Stainless steel
 • PEEK
 • PTFE carbon filled
 • FKM/EPDM/PTFE (PTFE for high temps.
 and PTFE/FKM for high pressure version)
 Brass/stainless steel 1.4404 (316L)
 FKM/EPDM/
 PEEK (high temperature version)

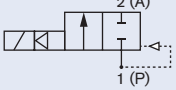
Dimensions for ATEX/IECEX m [mm]

G1/8
 3.5
 41.3
 M4x4.5 tief
 18
 24
 SW14
 40
 74.8
 12
 D
 E
 F

A	DN	D	E	F
Body connection	[mm]	[mm]	[mm]	[mm]
Threaded				
G 1/4	6	40	57.3	67.3
G 1/4	6	40	57.3	67.3
G 3/8	6	50	58.3	70.3
G 3/8	6	50	58.3	70.3

Ordering chart for ATEX/IECEX

6240 Ex m T4 with FKM seal and moulded cable (3 m) for single mounting

Circuit function	Port connection	Orifice [mm]	Kv-value water [m ³ /h]	Pressure range ¹⁾ [bar]	Coil size [mm]	Item no. per voltage/frequency [V/Hz]	
						024/UC	230/UC
A 2/2-Wege-Ventil NC 	Brass body						
	G 1/4	6.0	0.6	0-16	40	278 716	278 717
	G 3/8	6.0	0.6	0-16	40	on request	278 720
	Stainless steel body						
	G 1/4	6.0	0.6	0-16	40	278 718	278 719
	G 3/8	6.0	0.6	0-16	40	278 721	on request

The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K.

ATEX and IECEX approval for coils with fixed cable outlet

ATEX: PTB 14 ATEX 2023 X

IECEX: IECEX PTB 14.0049 X

II 2G Ex mb IIC T4 Gb

Ex mb IIC T4 Gb

II 2D Ex mb IIIC T135 °C Db

Ex mb IIIC T135 °C Db

Materials for ATEX/IECEX m junction box version

Nut
Steel (surface finished thick film passivated)
(Brass version)
Stainless steel 1.4305 PTFE
(Stainless steel version)

Stopper
1.4113

Shading ring
Copper/Silver

Armature guide tube
1.4303

Core
1.4113

Guiding ring
PTFE kohlegefüllt

Spring 1.4310

Safety lock:
PPS

Complete piston includes:

- Brass/stainless steel 1.4305
- Stainless steel
- PEEK
- PTFE oil-filled
- FKM/EPDM/PTFE (PTFE for high temperatures and PTFE/FKM for high pressure versions)

Body
Brass/stainless steel 1.4404 (316L)

External seal
FKM/EPDM/
PEEK (high temperature version)

Junction box: Aluminium
Coil: Epoxy

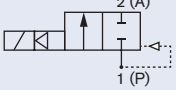
1(P) 2(A)

Dimensions for ATEX/IECEX m junction box version

Version	A	D	B	E [mm]	F [mm]
Threaded	G 1/4	40	12	57.3	67.3
	NPT 1/4		10	57.3	67.3
	RC 1/4		10	57.3	67.3
	G 3/8	50	12	58.3	70.3
	NPT 3/8		10	58.3	70.3
	RC 3/8		10	58.3	70.3

Ordering chart for ATEX/IECEEx junction box version

6240 Ex m T4 with FKM seal and junction box for single mounting

Circuit function	Port connection	Orifice [mm]	Kv-value water [m ³ /h]	Pressure range ¹⁾ [bar]	Coil size [mm]	Item no. Voltage/Frequency [V/Hz]		
						024/UC	230/UC	
A 2/2 way valve NC 	Brass body							
	G 1/4	6.0	0.6	0-16	40	288 608	288 610	
	G 3/8	6.0	0.6	0-16	40	on request	288 610	
	Stainless steel body							
	G 1/4	6.0	0.6	0-16	40	on request	on request	
	G 3/8	6.0	0.6	0-16	40	288 612	288 611	

The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K.

ATEX and IECEEx approval for the assembly of the coil and the junction box

ATEX: EPS 16 ATEX 1046 X

IECEEx: IECEEx EPS 16.0021 X

II 2G Ex eb mb IIC T4 Gb


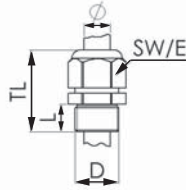

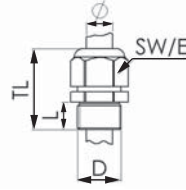
Ex eb mb IIC T4 Gb

II 2D Ex mb tb IIIC T130 °C Db


Ex mb tb IIIC T130 °C Db

Ex-Cable glands

(polyamide version included in delivery / surcharge applied for brass nickel plated version)

Photo	Description	Ex Approvals		Item no	Drawing										
		Certification	Identifica-tion												
	Brass, nickel-plated, 6-13 mm	PTB 04 ATEX 1112 X, IECEEx PTB 13.0027X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68,	773 278	 <table border="1"> <tr><td>TL</td><td>29-37 mm</td></tr> <tr><td>L</td><td>6 mm</td></tr> <tr><td>D</td><td>20</td></tr> <tr><td>SW</td><td>24 mm</td></tr> <tr><td>E</td><td>27 mm</td></tr> </table>	TL	29-37 mm	L	6 mm	D	20	SW	24 mm	E	27 mm
TL	29-37 mm														
L	6 mm														
D	20														
SW	24 mm														
E	27 mm														
	Polyamide, 7-13 mm	PTB 13 ATEX 1015 X, IECEEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	773 277	 <table border="1"> <tr><td>TL</td><td>36-45 mm</td></tr> <tr><td>L</td><td>10 mm</td></tr> <tr><td>D</td><td>20</td></tr> <tr><td>SW</td><td>24 mm</td></tr> <tr><td>E</td><td>28 mm</td></tr> </table>	TL	36-45 mm	L	10 mm	D	20	SW	24 mm	E	28 mm
TL	36-45 mm														
L	10 mm														
D	20														
SW	24 mm														
E	28 mm														

Special tool to turn the junction box (not included in delivery)

Photo	Description	Item no.
	Set SC02-AC10 Special wrench Service Manual	293 488

i Further versions on request



Materials
Seal: EPDM



Port Connection
NPT, Stainless steel version with G 3/8 connection



Voltage
Other operating voltages




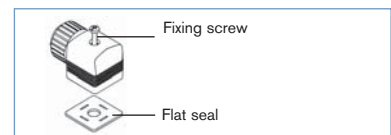
Approvals
Gas transportation DIN EN 3394-1

Ordering chart for accessories

Cable plug Type 2508 according to DIN EN 175301-803 Form A


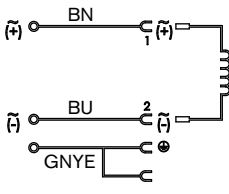
The delivery of a cable plug includes the flat seal and the fixing screw. For other versions of cable plugs see data sheet Type 2508

	Circuitry	Voltage / frequency	Item no.
	None (standard)	0 - 250 V AC/DC	008 376
	with LED	12 - 24 V AC/DC	008 360
	with LED and varistor	12 - 24 V AC/DC	008 367
	with rectifier, LED and varistor	12 - 24 V AC/DC	008 363
	with LED	200 - 240 V	008 362
	with LED and varistor	200 - 240 V	008 369
further versions see datasheet Type 2508			



Cable plug Type 2513 acc. to DIN EN 175301-803, Form A

Meets the requirements of ATEX category 3 GD

		Cable length [mm]	Item no. [in mm]
		12000	260 893
5000	260 892		
3000	260 891		
300	260 890		

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please consult for advice.

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