

## 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



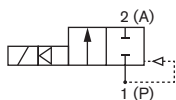
**Type 2513**

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	
<b>Port connections</b>	G 1/4, G 3/8, G 1/2
<b>Orifice</b>	DN6.0, DN12.0
<b>Body material</b>	Brass, Stainless steel
<b>Coil material</b>	Epoxy
<b>Coil insulation class</b>	Class H
<b>Seal material</b>	FKM, PTFE/FKM and PTFE/PEEK for high temperature and high pressure versions (EPDM on request)
<b>Medium</b>	Neutral gases and liquids, such as e.g. compressed air, water, hydraulic oil Steam and hot medium
High temperature version	
<b>Viscosity</b>	max. 21 mm <sup>2</sup> /sec
<b>Medium temperature</b>	
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)
<b>Ambient temperature</b>	max. 55 °C
<b>Operating voltage</b>	24 V DC, 24 V/50Hz, 230/50Hz (others on request)
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	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
<b>Protection class</b>	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)
<b>Weight</b>	AC 8W, DC 10W (300g); AC 18W, DC 16W (800g)
<b>Installation</b>	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

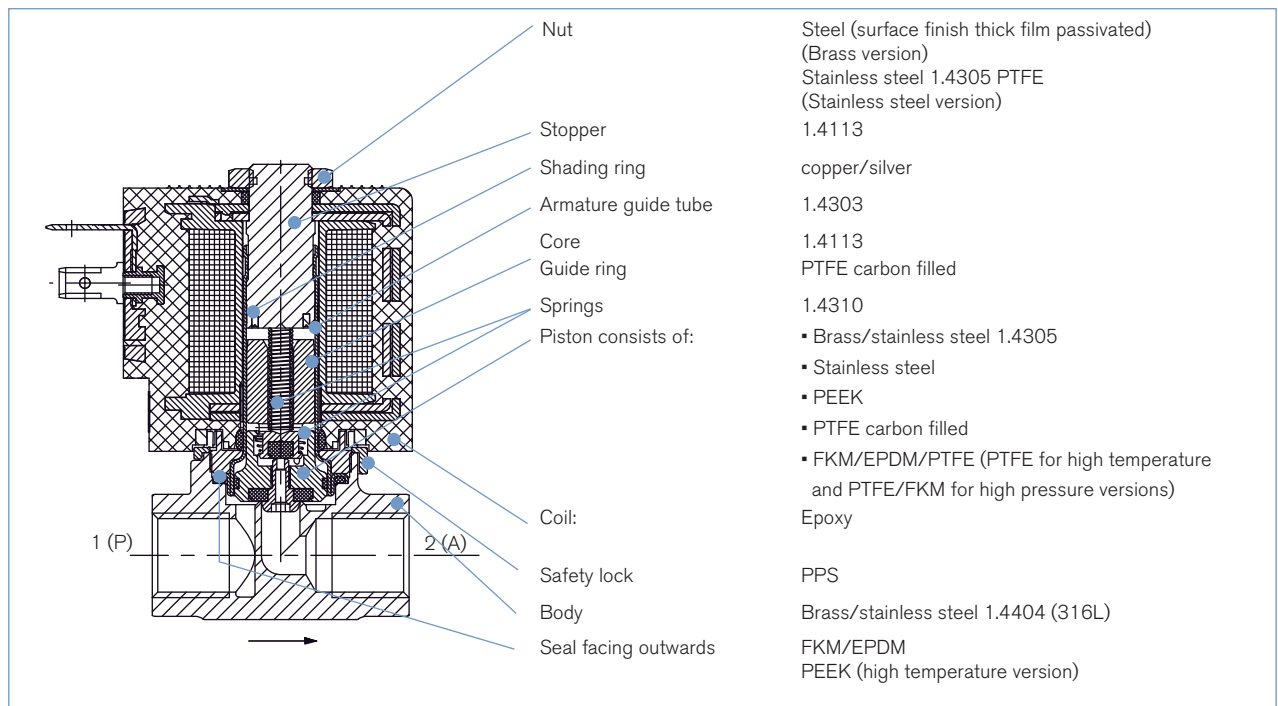
### Response times [ms]:

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

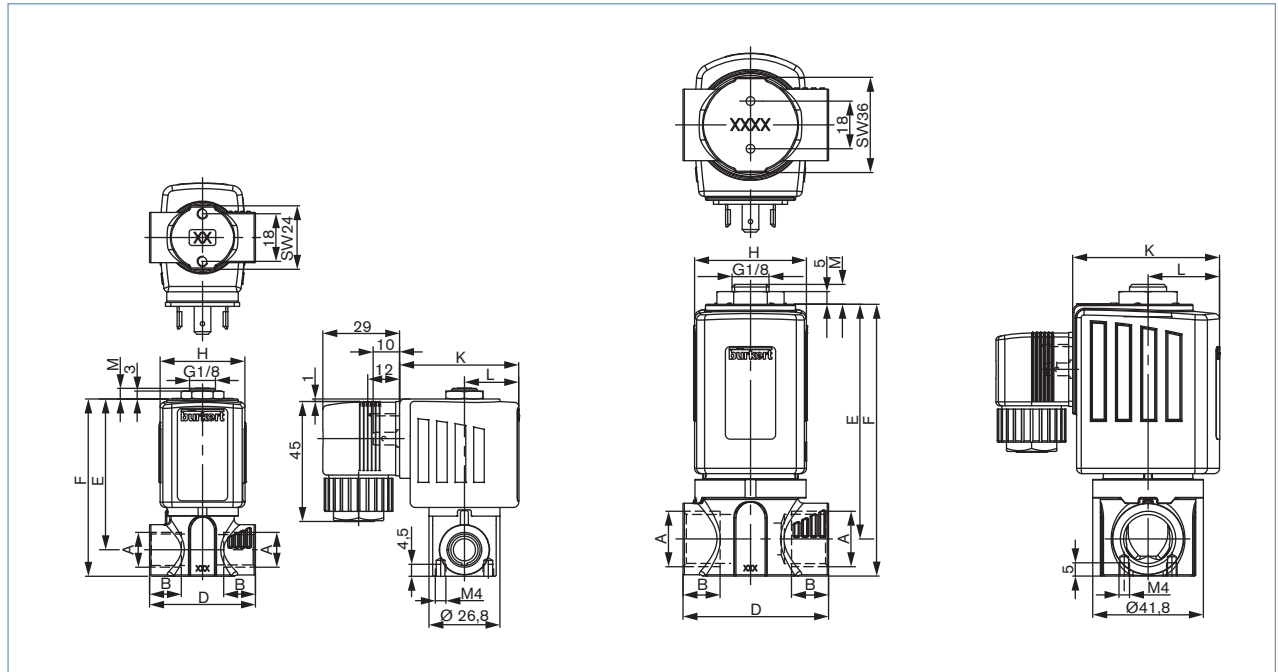
Opening: Pressure build-up 0 to 90%

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]
<b>Threaded port</b>										
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 <sup>3</sup> /h]	Pressure range <sup>1)</sup> [bar]	Coil size [mm]	Item no. per voltage/frequency [V/Hz]			
						024/DC	024/50	230/50	
<b>A</b> 2/2 way valve NC 	<b>Brass body</b>								
	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	
	<b>Stainless steel body</b>								
	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 <sup>3</sup> /h]	Pressure range <sup>1)</sup> [bar]	Coil size [mm]	Item no. per voltage/frequency [V/Hz]			
						024/DC	024/50	230/50	
<b>A</b> 2/2 way valve NC 	<b>Medium temperature -40 to +180 °C</b>								
	G 1/4	6.0	0.6	0-16	32	184 739	184 740	184 741	
	<b>Medium temperature -40 to +140 °C</b>								
	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 <sup>3</sup> /h]	Pressure range <sup>1)</sup> [bar]		Coil size [mm]	Item no. per voltage/frequency [V/Hz]		
				liquid medium	gaseous medium		024/DC	024/50	230/50
<b>A</b> 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

<sup>1)</sup> 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)

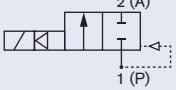
Dimensions for ATEX/IECEX m [mm]

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 <sup>3</sup> /h]	Pressure range <sup>1)</sup> [bar]	Coil size [mm]	Item no. per voltage/frequency [V/Hz]	
						024/UC	230/UC
<b>A 2/2-Wege-Ventil NC</b> 	<b>Brass body</b>						
	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
	<b>Stainless steel body</b>						
	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

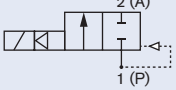
1 (P) 2 (A)

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 <sup>3</sup> /h]	Pressure range <sup>1)</sup> [bar]	Coil size [mm]	Item no. Voltage/Frequency [V/Hz]		
						024/UC	230/UC	
<b>A</b> 2/2 way valve NC 	<b>Brass body</b>							
	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	
	<b>Stainless steel body</b>							
	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


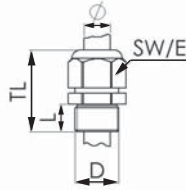

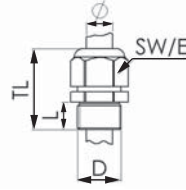
Ex eb mb IIC T4 Gb

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




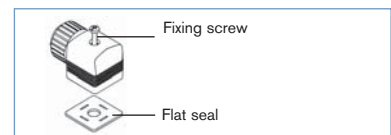
**Approvals**  
Gas transportation DIN EN 3394-1

## Ordering chart for accessories

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


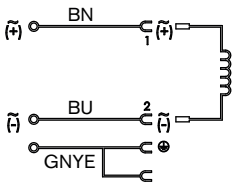
The delivery of a cable plug includes the flat seal and the fixing screw. For other versions of cable plugs see data sheet Type 2508

	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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In case of special application conditions,  
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