



Type 6213 can be combined with...



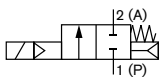
Type 2508

## Servo-assisted 2/2 way diaphragm valve

- Servo-assisted diaphragm with diameter of up to DN40
- Spring coupled diaphragm opens without differential pressure
- Vibration-proof, screwed coil system
- Damped design for quiet closing
- Compact construction with high flow rate

The 6213 EV valve is a servo-assisted solenoid valve of the S.EV series. The spring coupling of the diaphragm supports the opening process of the valve. In its standard version, the valve is suitable for use in liquids. A minimum differential pressure is required for complete opening. A special version (HP00) which opens the valve without differential pressure is available for gas and vacuum applications. Various diaphragm material combinations are available depending on the application. The standard brass housing satisfies all European drinking water requirements. Lead-free or dezincification-resistant brass types are available for other markets. The housing offering is rounded out by a stainless steel version. For reduced energy requirement, all coils can be delivered with electronic power reduction. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65 – in combination with a stainless steel housing NEMA 4X.

### Circuit function A



2/2 way servo-controlled solenoid valve, normally closed

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Technical data	
<b>Orifice</b>	Standard DN10... 40 mm HP00: DN13 ... 20
<b>Body material</b>	Brass acc. to DIN EN 50930-6, stainless steel 1.4408 (316), nickel-plated brass (5 µm), gunmetal (external thread)
<b>Inner part of valve</b>	Brass body: Brass, stainless steel and PPS Stainless steel body: Stainless steel and PPS
<b>Seal material</b>	NBR, FKM, EPDM
<b>Medium</b>	NBR: Neutral fluids, water, hydraulic oil, oil without additives FKM: Per-solutions, hot oils with additives EPDM: Oil and fat-free fluids and gases
<b>Ambient temperature</b>	Max. +55 °C
<b>Medium viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Medium temperature</b>	NBR: -10 ... +80 °C FKM: 0 ... +90 °C with polyamide coil / 0 ... 120 °C with epoxy coil EPDM: -30 ... +90 °C with polyamide coil -30 ... +100 °C with epoxy coil
<b>Voltages</b>	Standard 024/DC, 024/50, 230/50, 110/50, 120/60 HP00: 24 V (50 ... 60 Hz), 230 V (50 ... 60 Hz)
<b>Voltage tolerance</b>	±10 %
<b>Duty cycle</b>	100 % continuous rating; KD coil 50 % max. rating 6 circuit switches/minute
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175 301-803 Form A (see ordering chart for accessories, page 7)
<b>Protection class</b>	IP65 with cable plug
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times<sup>1)</sup></b>	0.1 ... 4 sec. (depending on orifice and differential pressure)

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C

Opening: pressure build-up 0 ... 90 %

Closing: Pressure drop 100 ... 10 %

## Technical data

Power consumption									
Orifice [mm]	Coil size [mm]	AC			DC		KD-Coil AC/DC <sup>2)</sup>		AC/DC Heat performance Hold [W]
		Inrush [VA]	Hold [VA]	[W]	Cooling capacity [W]	Heat performance [W]	AC Cooling capacity <sup>1)</sup> Inrush (500 ms) [VA]	DC Cooling capacity <sup>1)</sup> Hold [W]	
10	32	34	14	8	-	-	-	-	-
10	40	-	-	10	11	10	-	-	-
13	32	36	14	8	-	-	-	-	-
13	40	-	-	10	11	10	-	-	-
13	42	125	37	16	21	16	44	6.5	5.5
20	32	38	14	8	-	-	-	-	-
20	40	-	-	10	11	10	-	-	-
20	42	140	37	16	21	16	44	6.5	5.5
25	42	150	37	16	-	-	85	8.5	7
25	65	-	-	-	28	21	-	-	-
40	42	190	37	16	-	-	85	8.5	7
40	65	-	-	-	28	21	-	-	-

<sup>1)</sup> Cooling capacity at coil temperature 20 °C

<sup>2)</sup> KD coil (AC/DC)

\*Kick and Drop\* Coil (KD Coil)

Integrated electronics for short-term power increase and reduction with double coil technology

Orifice [mm]	Response times AC / DC	
	Opening [ms]	Closing [ms]
10-13	10...100	100...200
20	200...300	400...700
25-40	300...400	800...1400

Measurement with water at valve outlet 6 bar and +20 °C

Opening: Pressure build-up 0 to 90 %, Closing: Pressure drop 100 to 10

## Materials

	<b>Locknut:</b>	
	Brass version:	Steel (surface thick-film passivated acc. to RoHS)
	Stainless steel version:	1.4305 PTFE coated
	<b>Coil:</b>	Polyamide or Epoxy
	<b>Stopper:</b>	
	DN10... 40 mm:	1.4113
	<b>Shading ring (only AC version):</b>	
	with Brass body:	Copper (Cu)
	with Stainless steel body:	Silver (Ag)
	<b>Magnetic core:</b>	
	DN10... 40 mm:	1.4113
	<b>O-Ring:</b>	FKM
	<b>Bonnet:</b>	PA6
	<b>Plunger seal:</b>	NBR, FKM, EPDM
<b>Cover:</b>		
DN10... 25 mm	1.4301	
DN40	Brass, nickel-plated brass (5 µm), stainless steel 1.4408	
<b>Spring:</b>	1.4310	
<b>Diaphragm</b>	NBR, FKM, EPDM	
<b>Diaphragm support:</b>	PPSGF40 in combination with brass and accordingly stainless steel parts	
<b>Valve body:</b>	Brass, nickel-plated brass(5 µm), stainless steel 1.4408, Lead-free brass; cast iron with external thread	

Dimensions [mm]

Coil size	H	J	K	O	M
5	32	20.5	45	41	3.4
6	40	23.5	51	41	3.4
K	42	27	55.5	64	7
L	65	37.5	72	64	7

① The dimensions F1 and G 1 apply to G-threads  
 The dimensions F2 and G 2 apply to NPT-threads  
 The dimensions F3 and G 3 apply to Rc-threads

② only as brass - thread port version

③ only as stainless steel - thread port version

DN	A	B	C	D	E (MS/VA)	* G		* NPT		* Rc		L (MS/VA)	SW	Coil size
						F1 ①	G 1 ①	F2 ①	G 2 ①	F3 ①	G 3 ①			
10	71.1	82.1	36	46	22	12	G ¼	10.0	NPT ¼	-	-	50	22	5 and 6
10 ②	73.1	86.6				12	G ⅝	10.3	NPT ⅝	10.1	Rc ⅝			
10 ③			24.5	14	G ½	13.7	NPT ½	13.2	Rc ½					
13 ②	82.6	95.9	44.5	56.7	27.25	14	G ½	13.7	NPT ½	13.2	Rc ½	58	27	5 and 6
13 ③					32.5							65		
13	84.6	100.6	65	76.6	32.5	16	G ¾	14	NPT ¾	14.5	Rc ¾	65	32	
20	97.1	113.1			37	16	G ¾	14	NPT ¾	14.5	Rc ¾	80	32	
20	99.6	120.1	37.5	18	G 1	16.8	NPT 1	16.8	Rc 1	80	41			
13 ②	109.3	122.8	44.5	56	27.25	14	G ½	13.7	NPT ½	13.2	Rc ½	58	27	K and L
13 ③					32.5							65		
13	111.3	127.3	65	76.6	32.5	16	G ¾	14	NPT ¾	14.5	Rc ¾	65	32	
20	123.9	139.9			37	16	G ¾	14	NPT ¾	14.5	Rc ¾	80	32	
20	126.4	146.9	37.5	18	G 1	16.8	NPT 1	16.8	Rc 1	80	41	K and L		
25	143.4	163.4	77	88	46	18	G 1	16.8	NPT 1	16.8	Rc 1	95	41	K and L
25	148.3	173.3			46	20	G 1¼	17.3	NPT 1¼	19.1	Rc 1¼	95	50	
40 ②	153.9	178.9	104.5	117	61	20	G 1¼	17.3	NPT 1¼	19.1	Rc 1¼	126	50	
40	159.4	189.4			61	22	G 1½	17.3	NPT 1½	19.1	Rc 1½	126	60	K and L
40	165.4	200.4			64	24	G 2	17.6	NPT 2	23.4	Rc 2	132	70	

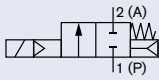
## Dimensions [mm] (cont.) cast iron version

HP00 Version  
Dimensions (coil, 42 mm)

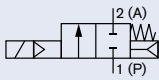
DN	A	B	C	D	2E	* G		* NPT		* Rc		H	J	K	L		M
					(MS/VA)	F1	G 1	F2	G 2	F3	G 3				(MS/VA)	SW	
20	119.3	139.8	65	76.6	37.5	18	G 1	16.8	NPT 1	16.8	Rc 1				80	41	7
	116.8	132.8			37	16	G ¾	14	NPT ¾	14.5	Rc ¾					32	
13	104.3	120.3	44.5	56	32.5	16	G ¾	14	NPT ¾	14.5	Rc ¾	42	27	55.5	65	32	
	102.6	115.6			27.2/32.5	14	G ½	13.7	NPT ½	13.2	Rc ½				58/65	27	
					27.2/32.5										58/65	27	

## Ordering chart for valves (other versions on request)

## Valves with brass body, DN10...40 mm

Circuit function	Port connection	Orifice [mm]	K <sub>v</sub> value water [m <sup>3</sup> /h] <sup>1) 4)</sup>	Pressure range [bar] <sup>2)</sup>	Weight [kg] (DC) <sup>3)</sup>	Article no. per voltage/frequency [V/Hz]			
						024/DC	024/50	230/50	
<b>A</b> 2/2 way servo-controlled solenoid valve, normally closed 	<b>Brass body, NBR Diaphragm, polyamide coil, medium temperature -10...+80 °C</b>								
	G ¼	10	1.3	0...10	0.3 (0.5)	221674	221675	221677	
	G ¾	10	1.9	0...10	0.3 (0.5)	221598	221599	221601	
	G ½	10	1.9	0...10	0.4 (0.5)	221606	221607	221609	
	G ½	13	3.6	0...10	0.4 (0.5)	221602	221603	221605	
	G ¾	13	3.6	0...10	0.5 (0.6)	221618	221619	221621	
	G ¾	20	8.3	0...10	0.7 (0.8)	221630	221631	221633	
	G 1	20	8.3	0...10	0.9 (1.0)	221634	221635	221637	
	<b>Brass body, NBR Diaphragm, epoxy coil, medium temperature -10...+80 °C</b>								
	G 1	25	11	0...10	1.6 (2.2)	227533	221725	221728	
	G 1¼	25	11	0...10	1.7 (2.3)	227534	221729	221732	
	G 1¼	40	23	0...10	2.9 (3.4)	270903	270895	270899	
	G 1½	40	30	0...10	3.2 (3.7)	227539	221750	221753	
	G 2	40	30	0...10	3.4 (3.9)	227541	221754	221757	
	<b>Brass body, FKM Diaphragm, epoxy coil, medium temperature 0...120 °C</b>								
	G ¼	10	1.3	0...10	0.3 (0.5)	221678	221679	221681	
	G ¾	10	1.9	0...10	0.3 (0.5)	221610	221611	221613	
	G ½	10	1.9	0...10	0.4 (0.5)	221614	221615	221617	
	G ½	13	3.6	0...10	0.4 (0.5)	221622	221623	221625	
	G ¾	13	3.6	0...10	0.5 (0.6)	221626	221627	221629	
	G ¾	20	8.3	0...10	0.7 (0.8)	221638	221639	221641	
	G 1	20	8.3	0...10	0.9 (1.0)	221642	221643	221645	
	G 1	25	11	0...10	1.6 (2.2)	227537	221733	221736	
	G 1¼	25	11	0...10	1.7 (2.3)	227538	221737	221740	
	G 1¼	40	23	0...10	2.9 (3.4)	270905	270906	270908	
	G 1½	40	30	0...10	3.2 (3.7)	227544	227724	227726	
	G 2	40	30	0...10	3.4 (3.9)	227545	227728	227730	
<b>Brass body, EPDM Diaphragm, polyamide coil, medium temperature -30...+90 °C</b>									
G ¼	10	1.3	0...10	0.3 (0.4)	221670	221671	221673		
G ¾	10	1.9	0...10	0.3 (0.4)	221646	221647	221649		
G ½	10	1.9	0...10	0.4 (0.5)	221650	221651	221653		
G ½	13	3.6	0...10	0.4 (0.5)	221654	221655	221657		
G ¾	13	3.6	0...10	0.5 (0.6)	221658	221659	221661		
G ¾	20	8.3	0...10	0.7 (0.8)	221662	221663	221665		
G 1	20	8.3	0...10	0.9 (1.0)	221666	221667	221669		
<b>Brass body, EPDM Diaphragm, epoxy coil, medium temperature -30...+100 °C</b>									
G 1	25	11	0...10	1.6 (2.2)	227535	221717	221720		
G 1¼	25	11	0...10	1.7 (2.3)	227536	221721	221724		
G 1¼	40	23	0...10	2.9 (3.4)	270904	270890	270894		
G 1½	40	30	0...10	3.2 (3.7)	227542	221741	221745		
G 2	40	30	0...10	3.4 (3.9)	227543	221746	221749		
<b>Gunmetal housing with external thread, EPDM Diaphragm, epoxy coil, medium temperature -30...+100 °C<sup>5)</sup></b>									
G ½	10	1.9	0...10	0.4	311670	311674	311679		
G ¾	13	3.6	0...10	0.6	311681	311684	311688		
G 1	20	8.3	0...10	1.1	311691	311693	311696		

## DN13...20 mm HPOO version

Circuit function	Port connection	Orifice [mm]	K <sub>v</sub> value water [m <sup>3</sup> /h] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Weight [kg] (DC)	Article no. per voltage/frequency [V/Hz]			
						024/DC	024/50-60	230/50-60	
<b>A</b> 2/2 way servo-controlled solenoid valve, normally closed 	<b>Brass body, FKM Diaphragm, epoxy coil, medium temperature 0...+120 °C</b>								
	G ½	13	3.6	0...10	0.8	221706	221705	231574	
	G ¾	20	8.3	0...10	1.3	221712	221711	221713	
	G 1	20	8.3	0...10	1.4	221715	221714	221716	
	<b>Brass body, EPDM Diaphragm, epoxy coil, medium temperature -30...+100 °C</b>								
	G ½	13	3.6	0...10	0.8	221694	221693	221695	
	G ¾	20	8.3	0...10	1.3	208422	221699	189592	
	G 1	20	8.3	0...10	1.4	221703	221702	221704	
	<b>Gunmetal housing with external thread, EPDM Diaphragm, epoxy coil, medium temperature -30...+100 °C<sup>5)</sup></b>								
	G ¾	13	3.6	0...10	0.6	312248	312249	312250	
	G 1	20	8.3	0...10	1.3	312247	312244	312246	

<sup>1)</sup> Measured at +20 °C, 1 bar<sup>2)</sup> pressure at valve inlet and free outlet

<sup>2)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure

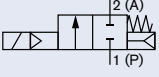
<sup>3)</sup> The values in brackets regarding the weight apply to the DC version

<sup>4)</sup> A minimum differential pressure of 0.5 bar is required for full (100%) opening

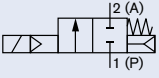
<sup>5)</sup> Approved for drinking water according to KTW and W270

## Ordering chart for valves (other versions on request)

Valves with Stainless steel body;  
DN10...40 mm

Circuit function	Port connection	Orifice [mm]	K <sub>v</sub> value water [m <sup>3</sup> /h] <sup>1) 4)</sup>	Pressure range [bar] <sup>2)</sup>	Weight [kg] (DC) <sup>3)</sup>	Article no. per voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
<b>A</b> 2/2 way servo-controlled solenoid valve, normally closed 	<b>Stainless steel body, NBR Diaphragm, polyamide coil, medium temperature -10...80 °C</b>							
	G 3/8	10	1.9	0...10	0.3 (0.4)	222150	222151	222152
	G 1/2	13	3.6	0...10	0.4 (0.5)	222156	222157	222158
	G 3/4	20	8.3	0...10	0.7 (0.8)	222168	222169	222170
	G 1	20	8.3	0...10	0.9 (1.0)	222171	222172	222173
	<b>Stainless steel body, NBR Diaphragm, epoxy coil, medium temperature -10...+80 °C</b>							
	G 1	25	11	0...10	1.6 (2.2)	227546	228429	222193
	G 1 1/4	25	11	0...10	1.7 (2.3)	227547	228432	222197
	G 1 1/2	40	30	0...10	3.2 (3.7)	227552	228435	222201
	G 2	40	30	0...10	3.4 (3.9)	227554	228438	222205
	<b>Stainless steel body, FKM Diaphragm, epoxy coil, medium temperature 0...120 °C</b>							
	G 3/8	10	1.9	0...10	0.3 (0.4)	221758	221759	221761
	G 1/2	13	3.6	0...10	0.4 (0.5)	221762	221763	221765
	G 3/4	20	8.3	0...10	0.7 (0.8)	222122	222123	222125
	G 1	20	8.3	0...10	0.9 (1.0)	222126	222127	222129
	G 1	25	11	0...10	1.6 (2.2)	227550	228430	222143
	G 1 1/4	25	11	0...10	1.7 (2.3)	227551	228433	222145
	G 1 1/2	40	30	0...10	3.2 (3.7)	227557	228436	222147
	G 2	40	30	0...10	3.4 (3.9)	227558	228439	222149
	<b>Stainless steel body, EPDM Diaphragm, polyamide coil, medium temperature -30...90 °C</b>							
G 3/8	10	1.9	0...10	0.3 (0.4)	222153	222154	222155	
G 1/2	13	3.6	0...10	0.4 (0.5)	222159	222160	222161	
G 3/4	20	8.3	0...10	0.7 (0.8)	222174	222175	222176	
G 1	20	8.3	0...10	0.9 (1.0)	222177	222178	222179	
<b>Stainless steel body, EPDM Diaphragm, epoxy coil, medium temperature -30...+100 °C</b>								
G 1	25	11	0...10	1.6 (2.2)	227548	228431	222195	
G 1 1/4	25	11	0...10	1.7 (2.3)	227549	228434	222199	
G 1 1/2	40	30	0...10	3.2 (3.7)	227555	228437	222203	
G 2	40	30	0...10	3.4 (3.9)	227556	228440	222207	

## DN13...20 mm HPOO version

Circuit function	Port connection	Orifice [mm]	K <sub>v</sub> value water [m <sup>3</sup> /h] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Weight [kg] (DC)	Article no. per voltage/frequency [V/Hz]		
						024/DC	024/50-60	230/50-60
<b>A</b> 2/2 way servo-controlled solenoid valve, normally closed 	<b>Stainless steel body, FKM Diaphragm, epoxy coil, medium temperature 0...120 °C</b>							
	G 1/2	13	3.6	0...10	0.8	208694	220585	205351
	G 3/4	20	8.3	0...10	1.3	222137	222136	222138
	G 1	20	8.3	0...10	1.4	222140	222139	222141
	<b>Stainless steel body, EPDM Diaphragm, epoxy coil, medium temperature -30...100 °C</b>							
	G 1/2	13	3.6	0...10	0.8	213132	222166	220584
	G 3/4	20	8.3	0...10	1.3	222186	222187	222188
G 1	20	8.3	0...10	1.4	222189	222190	222191	

<sup>1)</sup> Measured at +20 °C, 1 bar<sup>3)</sup> pressure at valve inlet and free outlet.<sup>2)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure.<sup>3)</sup> The values in brackets regarding the weight apply to the DC version.<sup>4)</sup> A minimum differential pressure of 0.5 bar is required for full (100%) opening.

Please note that the cable plug has to be ordered separately, see Ordering chart for accessory and separate datasheet, Type 2508

### i Further versions on request



**Port connection**  
NPT, Rc, GS



**Temperature**  
Special temperature ranges



**Voltages**  
further Voltages available



**Body material**  
Brass dezincification resistant  
Nickel-plated brass (5 µm)  
Gunmetal  
Unleaded brass  
DN10 - DN20(¼")



#### Approvals

Safety shut-off valve for firing systems acc. to DIN EN ISO 23553-1  
drinking water approval acc. to KTW/W270  
VDE Approval acc. to DIN EN 60730 (VDE0631)  
Watermark Licence  
UL(UL-listed) approval (MH10753)  
UR(UL-recognized) approval  
NEMA 250 Type 4X



#### Orifice DN10 in brass and stainless steel is also available in explosion proof version Explosion protected approvals

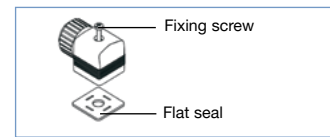
ATEX: PTB 14 ATEX 2023 X  
II 2G Ex mb IIC T4 Gb  
II 2D Ex mb IIIC T135 °C Db

IECEX: IECEX PTB 14.0049 X  
Ex mb IIC T4 Gb  
Ex mb IIIC T135 °C Db

## Ordering chart for accessories

### Cable plug Type 2508 according to DIN EN 175 301-803 Form A


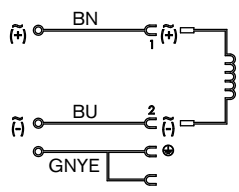




	Circuitry	Voltage / frequency	Article no.
	None (standard)	0 ... 250 V AC/DC	008376 
	further versions see datasheet Type 2508		



The delivery of a cable plug includes the flat seal and the fixing screw.  
For further versions see datasheet Type 2508

### Cable plug Type 2513 acc. to DIN EN 175 301-803, Form A

Meets the requirements of ATEX category 3 GD

		Cable length [mm]	Article no. [in mm]
		12000	260893 
		5000	260892 
		3000	260891 
		300	260890 

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In case of special application conditions,  
please consult for advice.

Subject to alteration.  
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