

Servo-assisted 2/2 way piston valve



Type 6407 can be combined with...



Type 2508

- Servo-assisted piston valve up to diameter DN25
- Safe opening with hard-coupled piston system
- Vibration-resistant, push-over coil
- Explosion-proof versions
- Energy-saving double coil technology with Kick and Drop electronics

Type 6407 is a servo-assisted piston valve. The fix coupling between pilot valve and piston provides an opening of the valve without differential pressure.

As a piston valve 6407 is particular applicable for media like gas and steam. As well as liquids with low temperature under 0 °C. 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 coils are moulded with chemically resistant epoxy.

To reduce power consumption in operation coils with "Kick and Drop" (KD) electronics (double coil technology) are available. In combination with a plug in accordance to DIN EN 175301 - 803 Form A, the valves satisfy protection class IP65.

Technical data	
Orifice	DN13 - DN25 (DN32 - DN40 in preparation)
Body material	Brass
Coil material	Epoxy
Coil insulation class	H
Seal material	PTFE/graphite
Media	Vacuum, neutral gases and liquid media (e.g. compressed air, water, hydraulic oil) hot water and steam
Media temperature	-40 to 150 °C
Ambient temperature	-40 to 45 °C
Viscosity	Max. 21 mm ² /s
Voltage tolerance	± 10 %
Duty cycle	100 % continuous rating ED; KD coil 50 % ED max. 6 switching cycles/minute
Electrical connection	Cable plug for cable Ø 7 mm, acc. to DIN EN 175301 - 803 Form A (not included in delivery)
Protection class	IP65 with cable plug
Installation	As required, preferably with actuator upright

Power consumption

Orifice [mm]	Coil size [mm]	AC			DC		ATEX AC/DC Rated power [W]	KD-Spule AC/DC		
		Inrush power [VA]	Holding power		Cold performance [W]	Warm performance [W]		Cold performance Inrush power [W] 500 ms	Cold performance Holding power [W]	Warm performance Holding power [W]
			[VA]	[VA]						
13	42	140	41	16	21	16	12	85	8.5	7
20	42	150	41	16	21	16	-	85	8.5	7
25	42	160	41	16	21	16	-	85	8.5	7
20-25	65	-	-	-	28	21	20	-	-	-

KD coil AC/DC

"Kick and Drop" coil (KD coil)

Integrated electronics for short-term power increase and reduction in dual coil technology

Response times

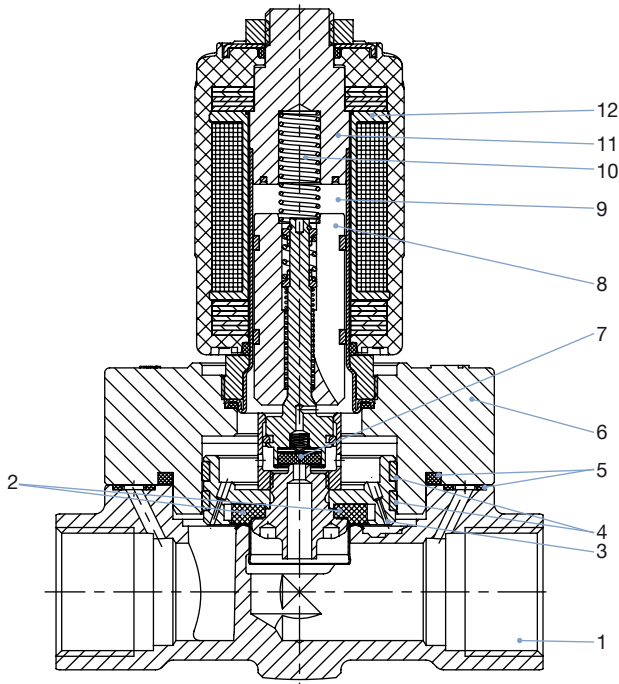
Orifice [mm]	Response times	
	Opening [ms]	Closing [ms]
13	30	250
20	30	250
25	70	900

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

Opening: pressure build-up 0...90%, closing: pressure relief 100...10%
(depending on the application conditions, deviations are possible)

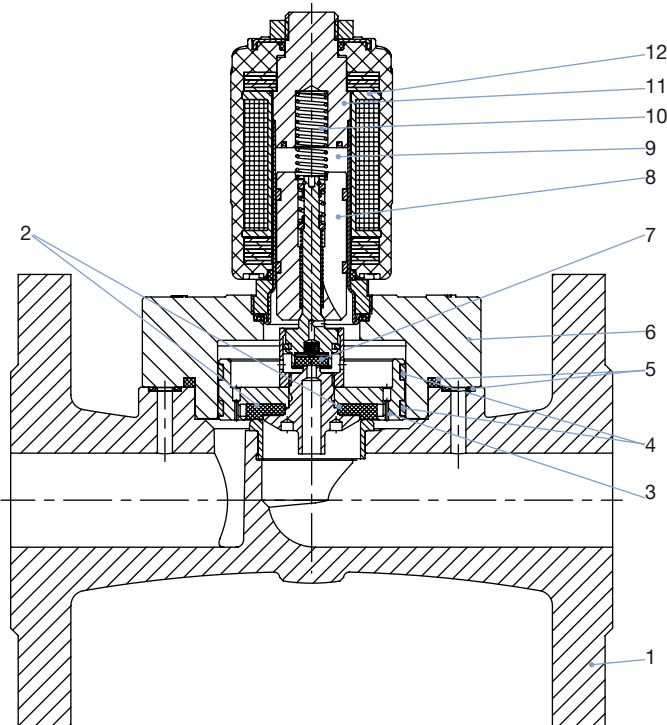
Materials

DN20, Circuit function A



1 Housing	Brass
2 Piston seal	PTFE
3 Plunger	Brass
4 Piston rings	PTFE
5 Sealing rings	Graphite
6 Cover	Brass
7 Plunger seal	PTFE
8 Core	1.4113 Stainless steel
9 Core guide tube	1.4303 Stainless steel
10 Spring	1.4310 Stainless steel
11 Stopper	1.4113 Stainless steel
12 Coil	Epoxy

DN25, Circuit function A, flange body



1 Housing	Grey cast iron
2 Piston seal	PTFE
3 Plunger	Brass
4 Piston rings	PTFE
5 Sealing rings	Graphite
6 Cover	Brass
7 Plunger seal	PTFE
8 Core	1.4113 Stainless steel
9 Core guide tube	1.4303 Stainless steel
10 Spring	1.4310 Stainless steel
11 Stopper	1.4113 Stainless steel
12 Coil	Epoxy

Ordering chart for valves (other versions on request)

Standard version

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h] ¹⁾	Pressure range [bar] ²⁾	Max. media temperature [°C]	Coil size [mm]	Article no. per voltage/frequency [V/Hz]		
							024/DC	024/50	230/50
Brass body, seal PTFE+Graphite									
A NC, normally closed	G ½	13	3.7	0-10	150	42	320877	320859	320856
		20	5.6	0-10	150	42	-	320861	320857
	G 1	25	10.0	0-10	150	42	-	320862	320858
		-	-	-	-	65	320878	-	-
-	-	-	-	-	65	320879	-	-	

Valves with KD-coil cURus (UL-recognized) coil approval

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h] ¹⁾	Pressure range [bar] ²⁾	Max. media temperature [°C]	Coil size [mm]	Article no. with KD-coil [V/Hz]		
							24 V AC/DC	110-120 V AC/DC	230-240 V AC/DC
Brass body, seal combination PTFE/Graphite									
A NC, normally closed	NPT ½	13	3.7	0-10	150	42	320874	320863	320866
		20	5.6	0-10	150	42	320875	320864	320867
	NPT 1	25	10.0	0-10	150	42	320876	320865	320868

Valves with DC-coil cURus (UL-recognized) coil approval

Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h] ¹⁾	Pressure range [bar] ²⁾	Max. media temperature [°C]	Coil size [mm]	Article no. per voltage/frequency [V/Hz]
							024/DC
Brass body, seal combination PTFE/Graphite							
A NC, normally closed	NPT ½	13	3.7	0-10	140	42	324978
		20	5.6	0-10	140	65	324979
	NPT 1	25	10.0	0-10	140	65	324980

Valves with ATEX/IECEx with 3 meter cable

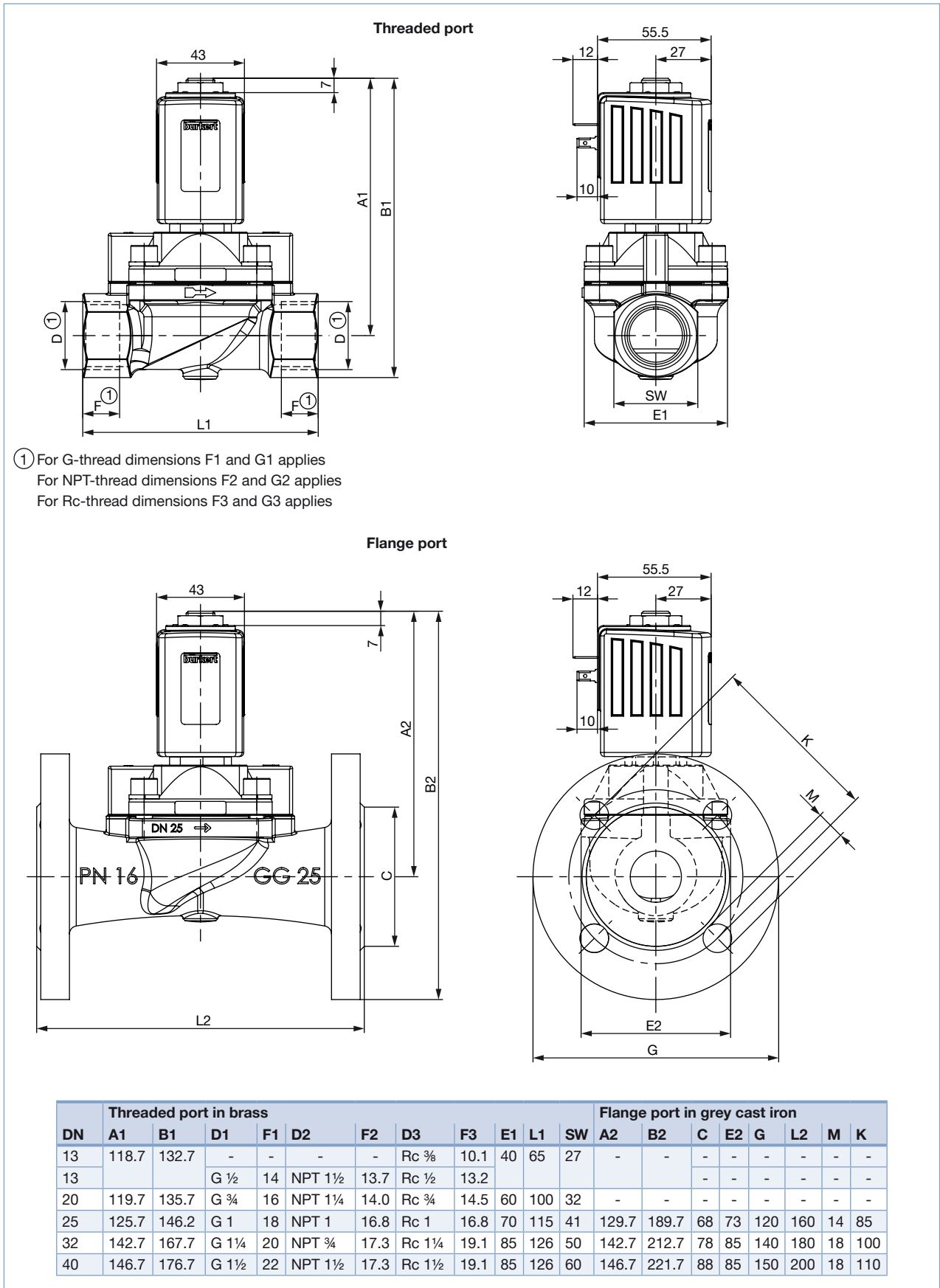
Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h] ¹⁾	Pressure range [bar] ²⁾	Max. media temperature [°C]	Coil size [mm]	Article no. with KD-coil	
							024/UC	230/UC
Brass body, seal combination PTFE/FKM								
A NC, normally closed	G ½	13	3.7	0-10	90	42	326054	320872

Valves with ATEX/IECEx terminal connection box

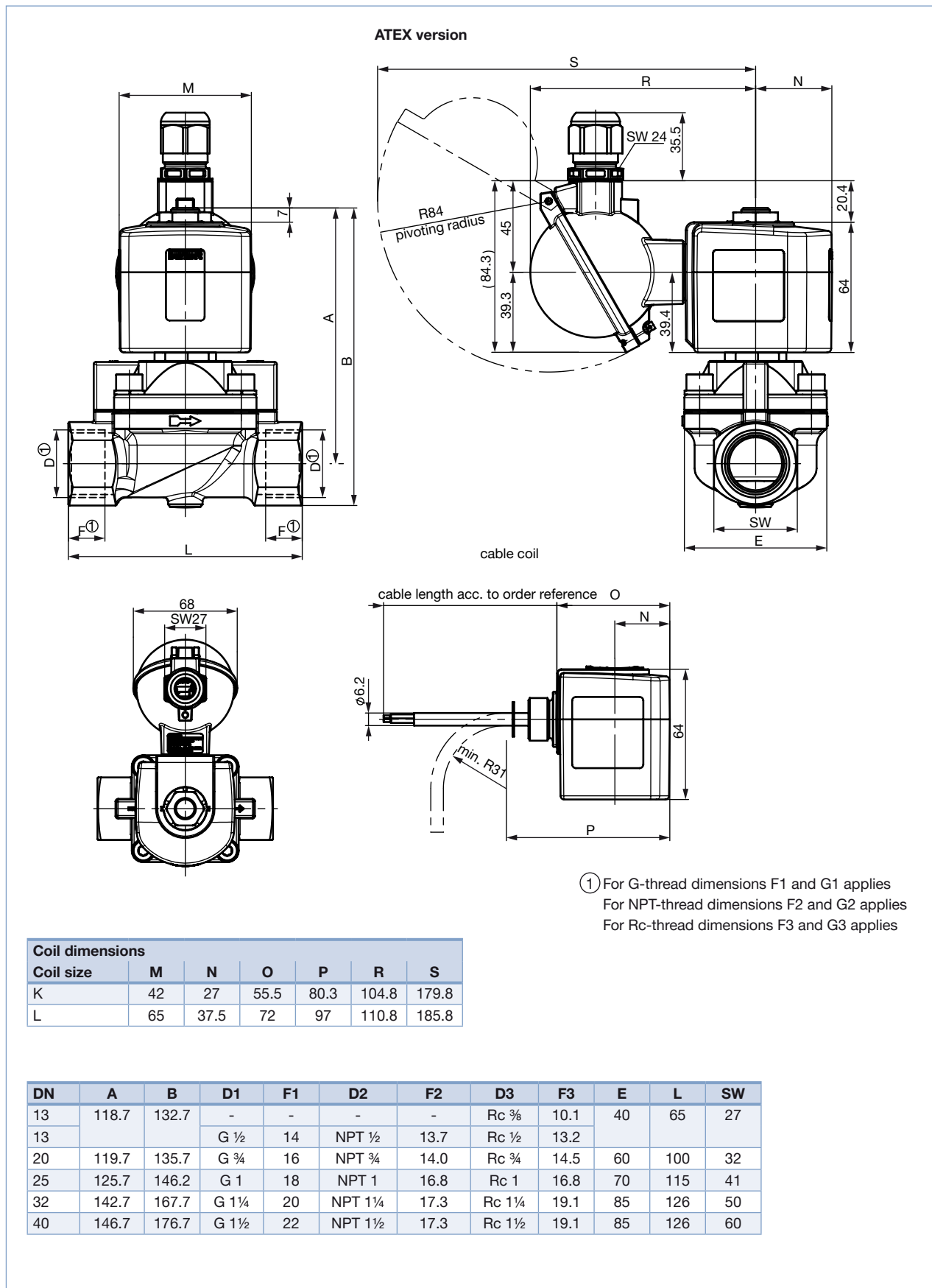
Circuit function	Port connection	Orifice [mm]	K _v value water [m ³ /h] ¹⁾	Pressure range [bar] ²⁾	Max. media temperature [°C]	Coil size [mm]	Article no. with KD-coil	
							024/UC	230/UC
Brass body, seal combination PTFE/FKM								
A NC, normally closed	G ½	13	3.7	0-10	90	42	326055	326057

¹⁾ Measured at +20 °C, 1 bar²⁾ pressure at valve inlet and free outlet.²⁾ Pressure data [bar]: Overpressure with respect to atmospheric pressure

Dimensions [mm]










Dimensions [mm]

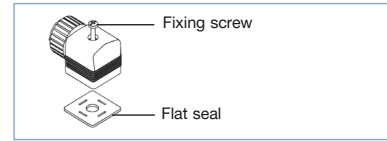


Ordering chart accessories

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

	Circuitry	Voltage/ Frequency	Article no.
	Without (Standard)	0 ... 250 V AC/DC	008376 
	With LED	12 ... 24 V AC/DC	008360 
	With LED and varistor	12 ... 24 V AC/DC	008367 
	With rectifier, LED and Varistor	12 ... 24 V AC/DC	008363 
	With LED	200 ... 240 V	008362 
	With LED and varistor	200 ... 240 V	008369 

Further versions see data sheet Type 2508.






The delivery of a cable plug includes the flat seal and the fixing screw. For other cable plug versions according to DIN EN 175 301-803 (previously DIN 43650) Form A, see separate datasheet for Type 2508. When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

**More
info.**

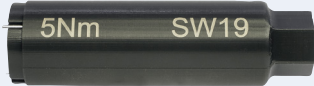

Cable glands for ATEX/IECEX terminal box

Polyamid version part of delivery / brass nickel-plated orderable for an additional charge

	Certificate	Ex certification		Article no.
		Labelling		
Brass nickel-plated, 6 ... 13 mm	PTB 04 ATEX 1112 X, IECEx PTB 13.0027X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68		773278 
Polyamide, 7 ... 13 mm	PTB 13 ATEX 1015 X, IECEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68		773277 

Special tool for turning the terminal box

Not included in the valve delivery

	Article no.
5Nm SW19	Set SC02-AC10 Special key Service manual 293488 

i Further versions on request



Voltage
110/50 and further voltages on request



Port connection
NPT-thread, flange body acc. to DIN EN 1902-1

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

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