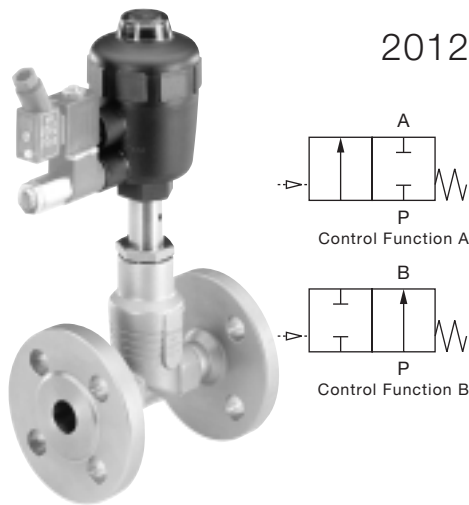


2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges



Picture showing a complete Burkert System using Type 2012 with 6012 Banjo

The externally piloted globe valve consists of a pneumatically operated piston actuator and a 2/2-way valve body. The actuator is made of PA or for special operating conditions PPS. The proven self-adjusting packing gland assures high leak-tightness. The valve body, with its favourable flow characteristics, enables high flow rates to be obtained.

Process Specification

Materials	Cast Stainless Steel 316 L (conform to 1.4409)
Body	PA or PPS
Actuator	PTFE (NBR, FPM and EPDM on request)
Sealing	• For neutral gases, water, alcohols, oils, fuels, hydraulic liquids, salt solutions, lyes, organic solvents, steam (10bar/+180°C)
Process media (for gases and liquids)	• Above seat only gases & steam Max. 600 mm ² /s
Viscosity	PTFE V-rings (silicone grease) with spring compensation
Packing gland	As required, but preferably with Actuator upright
Installation	PN 25 (body)
Nominal pressure	
Temperatures	
Fluid	-10°C... +180°C (PTFE seal ¹⁾)
Ambient (depending on actuator)	-10°C... +60°C ¹⁾ (PA) +5°C... +140°C (PPS <100) +5°C... +90°C (PPS ≥100) (short +140°C)
Control media	Neutral gases, air
Max. pilot pressure	
≤ Actuator size 80	10 bar (PA and PPS)
Actuator size 100	10 bar (PA)
Actuator size 100	7 bar (PPS)
Actuator size 125	7 bar (PA and PPS)
Actuator size 175 & 225	6 bar (PA)
Port connections	
Flange	DIN
	ANSI
	JIS
	• DIN 2634 RF ⁴⁾
	• face-to-face EN 558-1 (DIN 3202)
	• ASME B16.5 RF ⁴⁾ Class 150
	• face-to-face EN 558-2 (ISA S75.03)
	• JIS B2238 ordinary type
	JIS 10K RF ⁴⁾
	• face-to-face JIS B2002 serie 20 (ANSI B16.10) (EN 558-2)

1) In combination with max. ambient temperature of +55°C, the max. fluid temperature is +110°C for PA actuators sizes 40, 50 and 63.
2) Circuit function B below seat and circuit function A above seat, see charts on page 3.

2012

DN 15 - 100

- ✓ High operating safety
- ✓ Maintenance-free actuator with long-life piston ring
- ✓ Easy to install
- ✓ Low life cycle costs
- ✓ Comprehensive range of modular accessories



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- Steam; Water; Air; Dyeing

Orifice DN	Actuator size	Kv-value water	Min. pilot pressure ²⁾	Max. operating pressure ³⁾ ≤ 180°C		Weight (DIN) [kg]
				CF A [bar]	CF B [bar]	
[mm]	[mm]	[m ³ /h]	[bar]	[bar]	[bar]	
15 ⁵⁾	C - 40	3.0	4.0	15.0	16.0	2.3
15 ⁵⁾	D - 50	3.0	3.9	16.0	16.0	2.4
15	C - 40	4.7	4.0	15.0	16.0	2.3
15	D - 50	4.7	3.9	16.0	16.0	2.4
20	C - 40	8.1	4.0	6.5	16.0	3.1
20	D - 50	8.1	3.9	11.0	16.0	3.3
20	E - 63	8.1	4.2	16.0	-	3.7
25	D - 50	12.0	3.9	16.0	-	4.2
25	E - 63	13.0	4.2	11.0	16.0	4.6
25	F - 80	13.0	5.0	16.0	-	5.4
32	E - 63	19.5	4.2	7.0	16.0	6.6
32	F - 80	19.5	5.0	16.0	-	7.4
40	E - 63	31.0	4.2	16.0	-	7.6
40	F - 80	31.0	5.0	10.0	16.0	8.4
40	H - 125	31.0	3.2	16.0	-	13.9
50	E - 63	45.0	4.2	16.0	-	9.3
50	F - 80	45.0	5.0	16.0	-	10.1
50	G - 100	45.0	4.4	9.0	16.0	13.5
50	H - 125	45.0	3.2	11.0	-	15.6
65	H - 125	70.0	5.6	12.0	16.0	17.5
65	K - 175	70.0	4.5	16.0	-	25.9
80	H - 125	110.0	5.6	7.5	14.0	21.8
80	K - 175	110.0	4.5	10.0	16.0	30.1
80	L - 225	110.0	3.3	16.0	-	32.3
100	H - 125	170.0	5.6	5.0	9.0	29.4
100	K - 175	170.0	4.5	7.0	14.0	37.6
100	L - 225	170.0	4.8	16.0	-	39.7

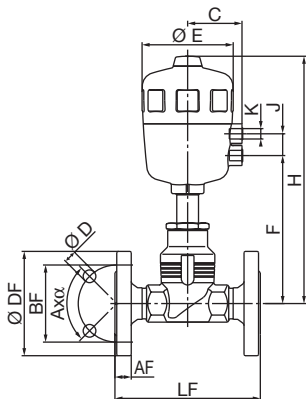
3) Steam up to 180°C / 10 bar.
4) Raised face (RF)
5) Port connection DN 10

ON/OFF Globe valve

2012

2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

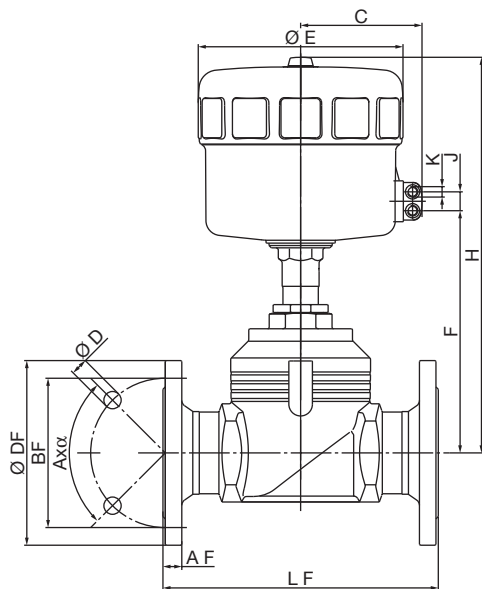
Dimensions [mm]



Angles Aα			
Port size	DIN Flange	ANSI Flange	JIS Flange
15	4x90°	4x90°	4x90°
15	4x90°	4x90°	4x90°
20	4x90°	4x90°	4x90°
25	4x90°	4x90°	4x90°
32	4x90°	4x90°	4x90°
40	4x90°	4x90°	4x90°
50	4x90°	4x90°	4x90°
65	8x45°	4x90°	4x90°
80	8x45°	4x90°	4x90°
100	8x45°	8x45°	8x45°

All Actuators		DIN Flange					ANSI Flange					JIS Flange											
Orifice DN	Actuator size ø	C	E	F	H	K	J	DF	LF	BF	AF	D	DF	LF	BF	AF	D	DF	LF	BF	AF	D	
15 ⁵⁾	C - 40	33	53	116	168	G 1/8	16.5	90	130	60	16	14	-	-	-	-	-	-	-	-	-	-	-
15 ⁵⁾	D - 50	44	64	131	211	G 1/4	24.0	90	130	60	16	14	-	-	-	-	-	-	-	-	-	-	-
15	C - 40	33	53	116	168	G 1/8	16.5	95	130	65	16	14	89.0	184	60.5	11.2	15.7	95	108	70	12	15	
15	D - 50	44	64	131	211	G 1/4	24.0	95	130	65	16	14	89.0	184	60.5	11.2	15.7	95	108	70	12	15	
20	C - 40	33	53	118	170	G 1/8	16.5	105	150	75	18	14	99.0	184	69.9	12.7	15.7	100	117	75	14	15	
20	D - 50	44	64	135	213	G 1/4	24.0	105	150	75	18	14	99.0	184	69.9	12.7	15.7	100	117	75	14	15	
20	E - 63	52	80	155	247	G 1/4	24.0	105	150	75	18	14	99.0	184	69.9	12.7	15.7	100	117	75	14	15	
25	D - 50	44	64	140	220	G 1/4	24.0	115	160	85	18	14	108.0	184	79.2	14.2	15.7	125	127	90	14	19	
25	E - 63	52	80	159	251	G 1/4	24.0	115	160	85	18	14	108.0	184	79.2	14.2	15.7	125	127	90	14	19	
25	F - 80	60	101	164	273	G 1/4	24.0	115	160	85	18	14	108.0	184	79.2	14.2	15.7	125	127	90	14	19	
32	E - 63	52	80	179	271	G 1/4	24.0	140	180	100	18	18	-	-	-	-	-	135	140	100	16	19	
32	F - 80	60	101	184	294	G 1/4	24.0	140	180	100	18	18	-	-	-	-	-	135	140	100	16	19	
40	E - 63	52	80	184	276	G 1/4	24.0	150	200	110	18	18	127.0	222	98.6	17.5	15.7	140	165	105	16	19	
40	F - 80	60	101	189	299	G 1/4	24.0	150	200	110	18	18	127.0	222	98.6	17.5	15.7	140	165	105	16	19	
40	H - 125	86	153	220	397	G 1/4	30.0	150	200	110	18	18	127.0	222	98.6	17.5	15.7	140	165	105	16	19	
50	E - 63	52	80	195	287	G 1/4	24.0	165	230	125	20	18	152.4	254	120.7	19.1	19.1	155	203	120	16	19	
50	F - 80	60	101	199	309	G 1/4	24.0	165	230	125	20	18	152.4	254	120.7	19.1	19.1	155	203	120	16	19	
50	G - 100	73	127	218	370	G 1/4	30.0	165	230	125	20	18	152.4	254	120.7	19.1	19.1	155	203	120	16	19	
50	H - 125	86	153	225	402	G 1/4	30.0	165	230	125	20	18	152.4	254	120.7	19.1	19.1	155	203	120	16	19	
65	H - 125	86	153	254	430	G 1/4	30.0	185	290	145	22	18	178.0	276	139.7	22.3	19.1	175	216	140	18	19	
80	H - 125	86	153	264	440	G 1/4	30.0	200	310	160	24	18	190.0	298	152.4	23.9	19.1	185	241	150	18	19	
100	H - 125	86	153	274	450	G 1/4	30.0	235	350	190	24	22	229.0	352	190.5	23.9	19.1	210	292	175	18	19	

5) Port connection DN 10



Angles Aα			
Port size	DIN Flange	ANSI Flange	JIS Flange
65	8x45°	4x90°	4x90°
80	8x45°	4x90°	4x90°
100	8x45°	8x45°	8x45°

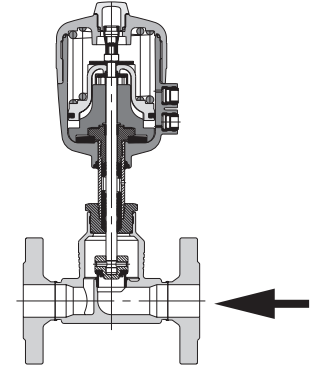
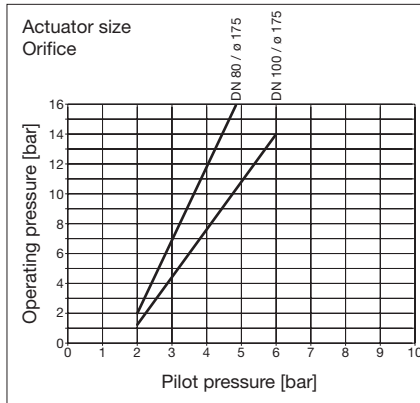
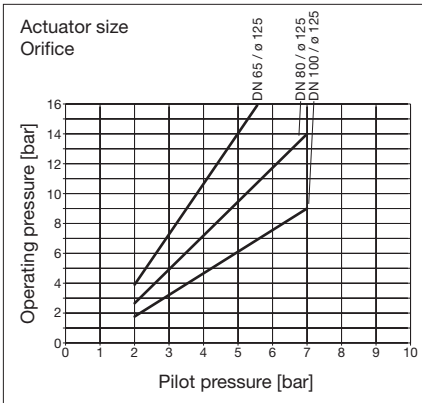
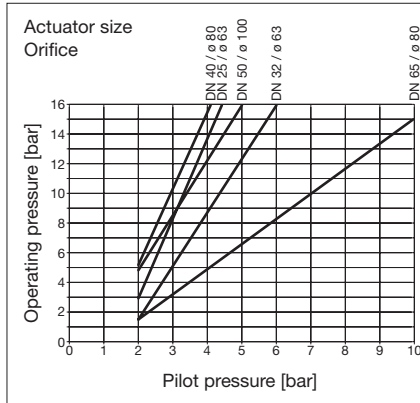
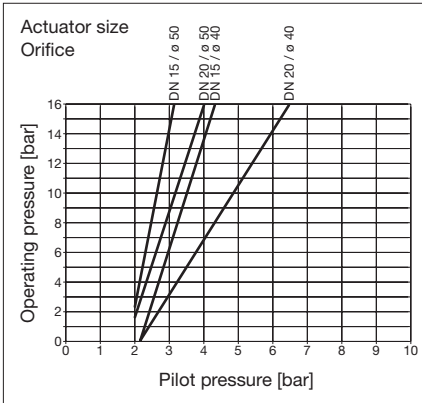
All Actuators		DIN Flange					ANSI Flange					JIS Flange										
Orifice DN	Actuator size ø	C	E	F	H	K	J	DF	LF	BF	AF	D	DF	LF	BF	AF	D	DF	LF	BF	AF	D
65	K - 175	130	211	289	491	G 1/4	24.0	185	290	145	22	18	178.0	276	139.7	22.3	19.1	175	216	140	18	19
80	K - 175	130	211	296	498	G 1/4	24.0	200	310	160	24	18	190.0	298	152.4	23.9	19.1	185	241	150	18	19
80	L - 225	155	261	299	494	G 1/4	24.0	200	310	160	24	18	190.0	298	152.4	23.9	19.1	185	241	150	18	19
100	K - 175	130	211	306	508	G 1/4	24.0	235	350	190	24	22	229.0	352	190.5	23.9	19.1	210	292	175	18	19
100	L - 225	155	261	309	504	G 1/4	24.0	235	350	190	24	22	229.0	352	190.5	23.9	19.1	210	292	175	18	19

2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

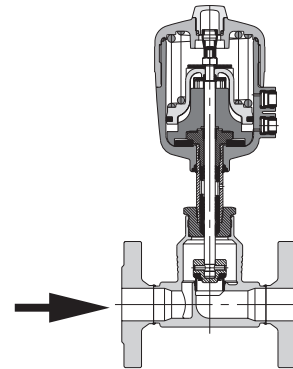
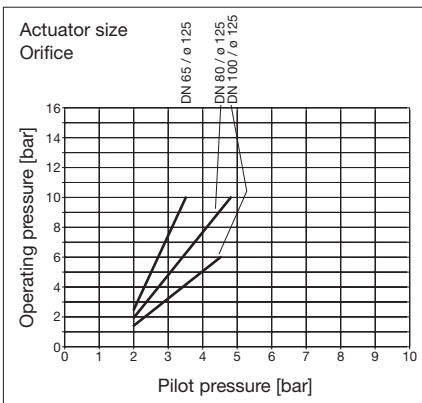
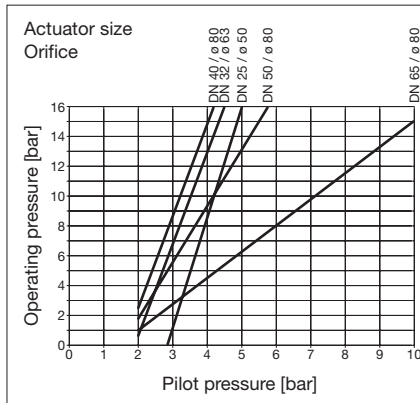
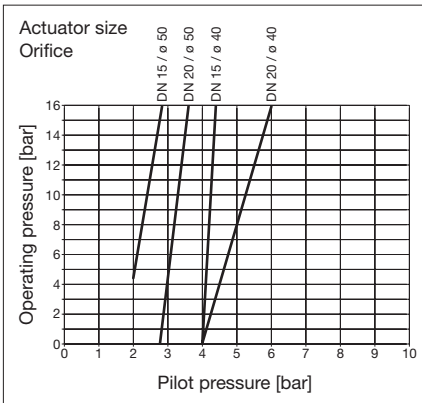
ON/OFF Globe valve

2012

Pressure rating circuit function B, flow direction below seat



Pressure rating circuit function A, flow direction above seat



2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

ON/OFF Globe valve

Ordering chart

Flange • DIN 2634 • face-to-face EN 558-1 (DIN 3202)			Flow below seat		Flow above seat		
Circuit Function	Orifice DN [mm]	Actuator size ø [mm]	Item-No.	Item-No.	Item-No.	Item-No.	
			PA-Actuator	PPS-Actuator	PA-Actuator	PPS-Actuator	
A	15 ⁵⁾	C- 40	146 227 X	146 362 E	146 427 Q	-	
	15 ⁵⁾	D- 50	146 237 Z	146 370 J	146 432 M	146 492 J	
	15	C- 40	146 247 B	-	146 437 J	-	
	15	D- 50	146 259 P	146 378 N	146 443 Y	146 496 N	
	20	C- 40	146 271 B	-	146 448 D	-	
	20	D- 50	146 283 Y	-	146 454 T	146 500 E	
	20	E- 63	146 295 U	146 390 F	-	-	
	25	D- 50	-	-	146 460 D	146 504 W	
	25	E- 63	146 299 G	-	-	-	
	25	F- 80	146 310 E	146 398 B	-	-	
	32	E- 63	146 314 W	-	146 465 W	146 508 A	
	32	F- 80	146 322 W	146 406 U	-	-	
	40	E- 63	-	-	146 470 F	-	
	40	F- 80	146 327 T	-	146 476 Z	146 512 M	
	40	H- 125	146 339 F	146 414 K	-	-	
	50	E- 63	-	-	146 481 P	-	
	50	F- 80	-	-	146 487 M	146 516 R	
	50	G- 100	146 345 D	-	-	-	
	50	H- 125	146 357 H	146 422 K	-	-	
	65	H- 125	152 743 A	156 476 T	152 842 W	-	
	65	K- 175	152 761 C	-	-	-	
	80	H- 125	155 527 M	156 484 L	152 851 X	-	
	80	K- 175	152 779 N	-	-	-	
	80	L- 225	152 797 Z	-	-	-	
	100	H- 125	155 546 Y	156 492 L	152 860 C	-	
	100	K- 175	152 815 K	-	-	-	
	100	L- 225	152 833 M	-	-	-	
	B	15 ⁵⁾	C- 40	146 232 U	146 366 A	-	-
		15 ⁵⁾	D- 50	146 242 E	146 374 A	-	-
		15	C- 40	146 253 H	-	-	-
15		D- 50	146 265 D	146 382 T	-	-	
20		C- 40	146 277 H	-	-	-	
20		D- 50	146 289 E	146 386 X	-	-	
25		E- 63	146 305 E	146 394 X	-	-	
32		E- 63	146 318 A	146 402 Y	-	-	
40		F- 80	146 333 Z	146 410 T	-	-	
50		G- 100	146 351 B	146 418 X	-	-	
65		H- 125	152 752 B	156 480 U	-	-	
80		H- 125	152 770 R	156 488 Y	-	-	
80		K- 175	152 788 G	-	-	-	
100		H- 125	152 806 T	156 496 Q	-	-	
100		K- 175	152 824 L	-	-	-	

5) Port connection DN 10



Flange • ASME B16.5 Class 150 • face-to-face EN 558-2 (ISA S75.03)			Flow below seat		Flow above seat		
Circuit Function	Orifice DN [mm] [inch]	Actuator size ø [mm]	Item-No.	Item-No.	Item-No.	Item-No.	
			PA-Actuator	PPS-Actuator	PA-Actuator	PPS-Actuator	
A	15	1/2"	C- 40	146 246 A	146 436 R	-	
	15	1/2"	D- 50	146 258 N	on request	146 442 X	on request
	20	3/4"	C- 40	146 270 N	-	146 447 U	-
	20	3/4"	D- 50	146 282 X	-	146 453 S	on request
	20	3/4"	E- 63	146 294 T	on request	-	-
	25	1"	D- 50	-	-	146 459 G	on request
	25	1"	E- 63	146 571 Y	-	-	-
	25	1 1/2"	F- 80	146 572 Z	on request	-	-
	40	1 1/2"	E- 63	-	-	146 469 A	-
	40	1 1/2"	F- 80	146 326 S	-	146 475 Y	on request
	40	1 1/2"	H- 125	146 338 E	on request	-	-
	50	2"	E- 63	-	-	146 480 S	-
	50	2"	F- 80	-	-	146 486 L	on request
	50	2"	G- 100	146 344 C	-	-	-
	50	2"	H- 125	146 356 G	on request	-	-
	65	2 1/2"	H- 125	152 742 H	on request	152 841 V	-
	65	2 1/2"	K- 175	152 760 P	-	-	-
	80	3"	H- 125	155 526 L	on request	152 850 A	-
	80	3"	K- 175	152 778 M	-	-	-
	80	3"	L- 225	152 796 Y	-	-	-
	100	4"	H- 125	155 545 X	on request	152 859 F	-
	100	4"	K- 175	152 814 J	-	-	-
	100	4"	L- 225	152 832 L	-	-	-
	B	15	1/2"	C- 40	146 252 G	-	-
		15	1/2"	D- 50	146 264 C	on request	-
		20	3/4"	C- 40	146 276 G	-	-
20		3/4"	D- 50	146 288 D	on request	-	
25		1"	E- 63	146 304 D	on request	-	
40		1 1/2"	F- 80	146 332 Y	on request	-	
50		2"	G- 100	146 350 N	on request	-	
65		2 1/2"	H- 125	152 751 A	-	-	
80		3"	H- 125	152 769 L	-	-	
80		3"	K- 175	152 787 X	-	-	
100	4"	H- 125	152 805 S	-	-		
100	4"	K- 175	152 823 K	-	-		



2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

ON/OFF Globe valve

2012

Flange • JIS B2238 ord. type; JIS 10K • face-to-face JIS B2002 S20 (ANSI B16.10) (EN 558-2)			Flow below seat		Flow above seat	
Circuit Function	Orifice DN [mm]	Actuator size ø [mm]	Item-No.		Item-No.	
			PA-Actuator	PPS-Actuator	PA-Actuator	PPS-Actuator
A	15	C- 40	148 377 P	-	151 386 U	-
	15	D- 50	148 379 Z	on request	148 397 C	on request
	20	C- 40	148 382 D	-	148 398 M	-
	20	D- 50	148 384 F	-	148 399 N	on request
	20	E- 63	148 387 A	on request	-	-
	25	D- 50	-	-	148 400 L	on request
	25	E- 63	148 388 K	-	-	-
	25	F- 80	148 390 R	on request	-	-
	40	E- 63	-	-	148 401 H	-
	40	F- 80	148 391 E	-	148 402 A	on request
	40	H- 125	148 393 G	on request	-	-
	50	E- 63	-	-	148 403 B	-
	50	F- 80	-	-	148 404 C	on request
	50	G- 100	148 394 H	-	-	-
	50	H- 125	148 396 B	on request	-	-
	65	H- 125	152 744 B	on request	152 843 X	-
	65	K- 175	152 762 D	-	-	-
	80	H- 125	155 528 W	on request	152 852 Y	-
	80	K- 175	152 780 C	-	-	-
	B	80	L- 225	152 798 A	-	-
100		H- 125	155 547 Z	on request	152 861 Z	-
100		K- 175	152 816 L	-	-	-
100		L- 225	152 834 N	-	-	-
15		C- 40	148 378 Y	-	-	-
15		D- 50	148 381 C	on request	-	-
20		C- 40	148 383 E	-	-	-
20		D- 50	148 386 H	on request	-	-
25		E- 63	148 389 L	on request	-	-
40		F- 80	148 392 F	on request	-	-
50	G- 100	148 395 A	on request	-	-	
65	H- 125	152 753 C	-	-	-	
80	H- 125	152 771 E	-	-	-	
80	K- 175	152 789 H	-	-	-	
100	H- 125	152 807 U	-	-	-	
100	K- 175	152 825 M	-	-	-	



Further Process Connections are:

Threaded Ends



- G
- NPT
- Rc

Weld Ends



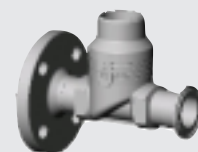
- ISO 4200 - ASME BPE
- DIN 11850 S2 - SMS 3008
- BS 4825

Tri-Clamp®



- ISO 2852 - BS 4825
- SMS 3017
- DIN 32676

Customized*



* e.g. one side with flange, other side Tri-Clamp®

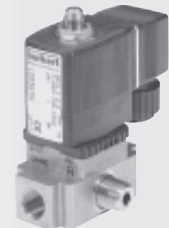
2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

Valve Actuation System: banjo valve

Type: 6012, 6014

The banjo valve types are pneumatic single pilot valves designed for quick mounting onto pneumatic actuators. Simply screwed into the pressure port of the actuator the banjo valve can take up any position as the valve body as well as the pressure inlet are rotatable. In addition the banjo valve types 6012 and 6014, based on a modular concept, have a push-over coil, which can be locked in any position. Also available with cable plug for AS-i.

➔ see datasheet type 6012, 6014 banjo



Valve Actuation System: NAMUR valve

Type: 5470, 6519

A Burkert NAMUR valve is an extremely reliably switching, diaphragm-driven, seat valve. The valve, which is manufactured from high quality plastic, can be operated in its 5/2 or 3/2 way function. The 3/2 way function works with exhaust feedback into the spring space. In this way, the penetration of aggressive external air into the interior of the drive is prevented. Also available with cable plug for AS-i.

➔ see datasheet type 5470, 6519 NAMUR



Valve Actuation System: Mini TOP

Type: 8633

The Mini TOP combines pilot valves and position feedback in an extremely compact design. Due to its modular design, the Mini TOP can be easily plugged onto a globe valve. Both single and double acting actuators are possible. Position feedback can be either be delivered by using mechanical or inductive limit switches. The unique design reduces installation and commissioning costs to a minimum. It offers standard connections to valve actuators, intelligent sensors and process network interfaces like ASi. For actuator size 50 to 80 mm.

➔ see datasheet type 8633



Valve Actuation System: TOP Control ON/OFF

Type: 8631

The TOP Control ON/OFF combines pilot valves and position feedback in one device. TOP Control ON/OFF and pneumatic actuator are mechanically connected and form a mechanical and functional unit. The modular construction enables one to realize units of different complexity and different electrical connection concepts. Both single and double acting actuators are possible, adjustable position feedback can be either using mechanical or inductive sensors. On failure of the supply voltage or the pneumatic energy, causes the valve to move to a safety position. For actuator size 50 to 225 mm.

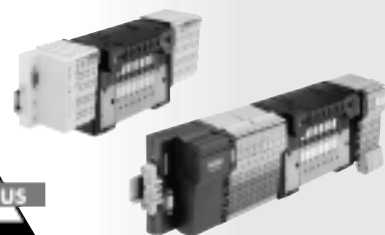


Valve Actuation System: AirLINE

Type: 8644

The AirLINE System integrates solenoid pilot valves, remote electrical I/Os with WAGO or PHOENIX and Fieldbus communication to a very compact and flexible Process Actuation Control System. Its modular design allows fully customized, pre-wired and tested solutions to exactly meet any application needs.

➔ see datasheet type 8644



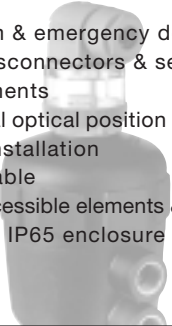
2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

Further Modular Options (→ see data sheet type 2000 - 2031 accessories)

Position Feedback (1060, 1062 or 1071)

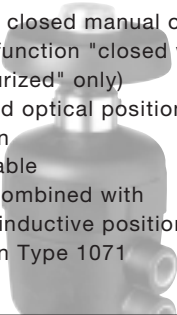
1060

- For alarm & emergency devices, safety disconnectors & sequence arrangements
- Additional optical position indication
- Simple installation
- Retrofittable
- Easily accessible elements & terminals
- Compact IP65 enclosure



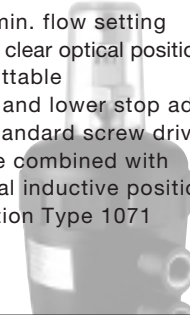
Manual Override

- Normally closed manual override (control function "closed when depressurized" only)
- Integrated optical position indication
- Retrofittable
- Can be combined with external inductive position indication Type 1071



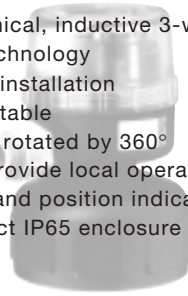
Stroke Limitation

- Max./min. flow setting
- Integr., clear optical position indication
- Retrofittable
- Upper and lower stop adjustable with standard screw driver
- Can be combined with external inductive position indication Type 1071

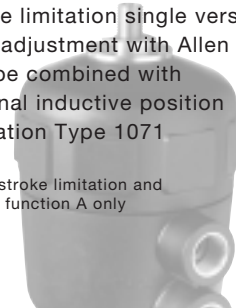


1062

- Mechanical, inductive 3-wire and EExi technology
- Simple installation
- Retrofittable
- Can be rotated by 360°
- LEDs provide local operational status and position indication
- Compact IP65 enclosure



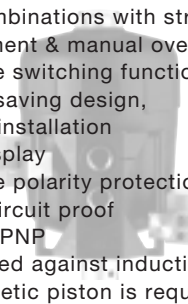
- Stroke limitation single version*
- Easy adjustment with Allen key
- Can be combined with external inductive position indication Type 1071



* Upper stroke limitation and control function A only

1071

- For combinations with stroke adjustment & manual override
- Reliable switching function
- Space saving design, simple installation
- LED display
- Reverse polarity protection
- Short circuit proof
- Pulsed PNP
- Protected against inductive spikes
- A magnetic piston is required



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Globe Valve Systems

A globe valve system consists of a globe valve and a valve actuation. Burkert offers a wide range of valve actuation systems suitable for the new globe valve, including banjo valves type 6012/6014, NAMUR valves type 5470/6519, Mini TOP 8633, TOP Control 8633 and AirLINE 8644.

Example for Variations of globe valve ON/OFF Systems



Globe Valve



Valve Actuation



Complete Globe Valve Systems

2012
Globe Valve
with required
process
connection

Valve Actuation
with all its
needs

2012 + 6012
Globe Valve
banjo system

2012 + 6519
Globe Valve
NAMUR
system

2012 + 8633
Globe Valve
Mini TOP
system

2012 + 8631
Globe Valve
TOP Control
system

2012 + 8644
Globe Valve
AirLINE
system

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

We reserve the right to make technical changes without notice.
105-GB/ 2-0240

2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

2012