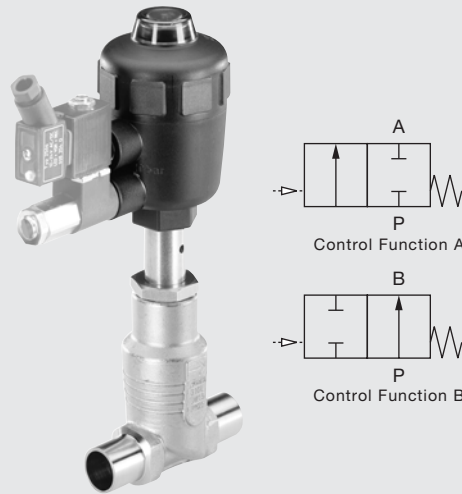


3/8" – 2"



Picture showing a complete Burkert System using the 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 leak-tightness. The valve body, with its favorable flow characteristics, enables high flow rates.

Process Specification

Materials

Body
Actuator
Sealing
Process media (for gases and liquids)

Cast Stainless Steel 316 L (conform to 1.4409)
PA or PPS
PTFE (NBR, FKM and EPDM on request)
• For neutral gases, water, alcohols, oils, fuels, hydraulic liquids, salt solutions, lyes, organic solvents, steam (150 PSI/+356°F)
• Below seat only gases & steam
• Available "cleaned for oxygen service"

Viscosity
Packing gland

Max. 600 cSt
PTFE V-rings (silicone grease) with spring compensation

Installation

As required, but preferably with Actuator upright

Nominal pressure

360 PSI (PN 25)

Temperatures

Fluid
Ambient (depending on actuator)

14°F – 356°F (PTFE seal¹⁾)
14°F – 140°F¹⁾ (PA)
40°F – 284°F (PPS <100)
40°F – 194°F (PPS ≥100)
(short +284°F)

Control media

Neutral gases, air

Max. pilot pressure

≤ Actuator size 80
Actuator size 100
Actuator size 100
Actuator size 125

150 PSI (PA and PPS)
150 PSI (PA)
100 PSI (PPS)
100 PSI (PA and PPS)

Port connections

Weld End ISO
DIN
OD
OD (ASME)
JIS

• ISO 4200
• DIN 11850 series 2
• BS 4825 part 1
• ASME
• 3459 or 3447 (on request)

Advantages/Benefits

- Interchangeable with ball valves
- Compact
- Maintenance-free
- Easy to install
- Extra high life cycle
- Modular accessories

Applications

Food & Beverage

- CIP / SIP; Steam
- Auxiliary Processes
- Oxygen Control

Water Treatment

- Air Control
- Chemical Dosing

Cosmetics

- CIP / SIP; Steam

Textile

- Steam; Water; Air; Dyeing

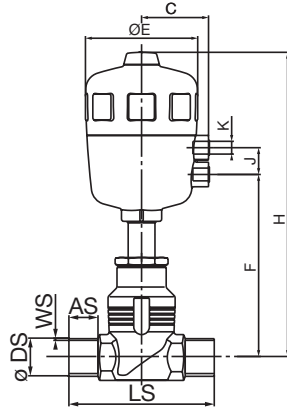
Size	Act. size	Cv-value water		Min. pilot pressure ²⁾	Max. operating pressure ³⁾ ≤ 356°F		Weight
[in]	[mm]	4	5	[PSI]	CF A [PSI]	CF B [PSI]	[lb]
–	C-40	5.53	–	58	217	232	1.76
–	D-50	5.53	–	56	232	232	1.98
1/2	C-40	5.53	5.53	58	217	232	1.76
1/2	D-50	5.53	5.53	56	232	232	1.98
–	C-40	9.53	–	58	94	232	1.98
3/4	D-50	9.53	9.53	56	159	232	2.42
3/4	E-63	9.53	9.53	60	232	–	3.3
–	D-50	14.11	–	56	232	–	3.52
–	E-63	15.29	–	60	159	232	4.4
–	F-80	15.29	–	72	232	–	6.16
1–1/4	E-63	22.93	22.93	60	100	232	6.38
1–1/4	F-80	22.93	22.93	72	232	–	8.14
1–1/2	E-63	36.46	36.46	60	232	–	7.48
1–1/2	F-80	36.46	36.46	72	145	232	9.24
1–1/2	H-125	36.46	36.46	46	232	–	21.3
–	E-63	52.93	–	60	232	–	7.7
–	F-80	52.93	–	72	232	–	9.46
–	G-100	52.93	–	63	130	232	16.94
–	H-125	52.93	–	46	159	–	21.56

1) In combination with max. ambient temperature of 131°F, the max. fluid temperature is 230°F for PA actuators sizes 40, 50 and 63.
2) Circuit function B below seat and circuit function A above seat, please see charts on page 2.
3) Steam up to 356°F / 150 PSI.
4) C_v-value water ISO/DIN.
5) C_v-value water BS/ASME BPE.

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

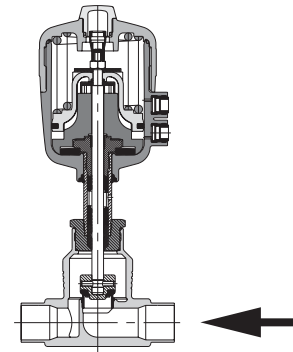
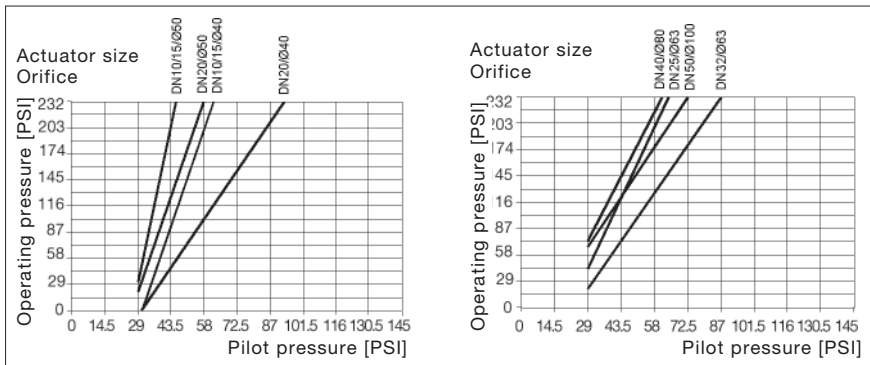
Type 2012
ON/OFF Globe Valve

Dimensions [mm]

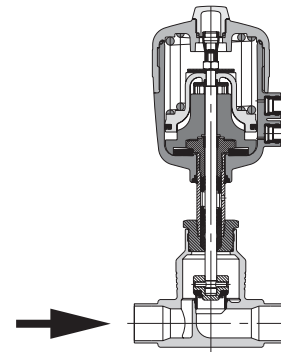
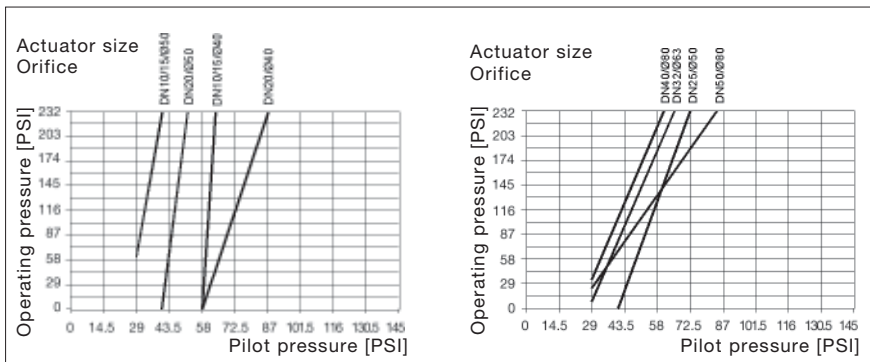


All Actuators										ISO 4200		DIN 11850 S2		BS 4825		ASME BIG.	
Size (in)	Act. size ø	C	E	F	H	K	J	AS	LS	DS	WS	DS	WS	DS	WS	DS	WS
3/8	C-40	33	53	116	168	G 1/8	16.5	20	90	17.2	1.6	13.0	1.5	-	-	-	-
3/8	D-50	44	64	131	211	G 1/4	24.0	20	90	17.2	1.6	13.0	1.5	-	-	-	-
1/2	C-40	33	53	116	168	G 1/8	16.5	20	90	21.3	1.6	19.0	1.5	12.7	1.2	12.7	1.6
1/2	D-50	44	64	131	211	G 1/4	24.0	20	90	21.3	1.6	19.0	1.5	12.7	1.2	12.7	1.6
3/4	C-40	33	53	118	170	G 1/8	16.5	20	100	26.9	1.6	23.0	1.5	19.0	1.2	19.0	1.6
3/4	D-50	44	64	135	213	G 1/4	24.0	20	100	26.9	1.6	23.0	1.5	19.0	1.2	19.0	1.6
1	E-63	52	80	155	247	G 1/4	24.0	20	100	26.9	1.6	23.0	1.5	19.0	1.2	19.0	1.6
1	D-50	44	64	140	220	G 1/4	24.0	26	130	33.7	2.0	29.0	1.5	25.4	1.6	25.4	1.6
1	E-63	52	80	159	251	G 1/4	24.0	26	130	33.7	2.0	29.0	1.5	25.4	1.6	25.4	1.6
1	F-80	60	101	164	273	G 1/4	24.0	26	130	33.7	2.0	29.0	1.5	25.4	1.6	25.4	1.6
1-1/4	E-63	52	80	179	271	G 1/4	24.0	26	140	42.4	2.0	35.0	1.5	-	-	-	-
1-1/4	F-80	60	101	184	294	G 1/4	24.0	26	140	42.4	2.0	35.0	1.5	-	-	-	-
1-1/2	E-63	52	80	184	276	G 1/4	24.0	26	150	48.3	2.0	41.0	1.5	38.1	1.6	38.1	1.6
1-1/2	F-80	60	101	189	299	G 1/4	24.0	26	150	48.3	2.0	41.0	1.5	38.1	1.6	38.1	1.6
1-1/2	H-125	86	153	220	397	G 1/4	30.0	26	150	48.3	2.0	41.0	1.5	38.1	1.6	38.1	1.6
2	E-63	52	80	195	287	G 1/4	24.0	26	175	60.3	2.0	53.0	1.5	50.8	1.6	50.8	1.6
2	F-80	60	101	199	309	G 1/4	24.0	26	175	60.3	2.0	53.0	1.5	50.8	1.6	50.8	1.6
2	G-100	73	127	218	370	G 1/4	30.0	26	175	60.3	2.0	53.0	1.5	50.8	1.6	50.8	1.6
2	H-125	86	153	225	402	G 1/4	30.0	26	175	60.3	2.0	53.0	1.5	50.8	1.6	50.8	1.6

Pressure rating flow direction below seat, Normally Open



Pressure rating flow direction above seat, Normally Closed



2/2-Way Globe Valve, Pneumatically Operated

Cast Stainless Steel Body with Weld Ends

Type 2012
ON/OFF Globe Valve

Ordering chart

Weld End • BS 4825 part 1					Flow below seat		Flow above seat	
Circuit Function	Port size [inch]	Orifice [mm]	Connection [inch]	Actuator size ø [mm]	Max. Operat. pressure ³⁾ [PSI]	Item-No. PA-Actuator	Max. Operat. pressure ³⁾ [PSI]	Item-No. PA-Actuator
A Normally Closed	1/2	15	1/2 x 3/64	C-40	217	146 251 F	232	146 441 W
	1/2	15	1/2 x 3/64	D-50	232	146 263 B	232	146 573 S
	3/4	15	3/4 x 3/64	C-40	217	146 275 F	232	146 452 Z
	3/4	15	3/4 x 3/64	D-50	232	146 287 U	232	146 458 F
	3/4	15	3/4 x 3/64	E-63	232	—	232	—
	1	20	1 x 1/16	D-50	159	—	232	146 464 V
	1	20	1 x 1/16	E-63	232	146 303 C	232	—
	1	20	1 x 1/16	F-80	232	—	232	—
	1-1/2	32	1-1/2 x 1/16	E-63	87	—	232	146 474 X
	1-1/2	32	1-1/2 x 1/16	F-80	217	146 343 B	232	—
	1-1/2	32	1-1/2 x 1/16	H-125	—	—	—	—
	2	40	2 x 1/16	E-63	58	—	232	146 485 K
	2	40	2 x 1/16	F-80	145	—	232	146 491 R
	2	40	2 x 1/16	G-100	181	—	232	—
	2	40	2 x 1/16	H-125	232	146 361 D	232	—
B Normally Open	1/2	15	1/2 x 3/64	C-40	232	146 257 D	—	—
	1/2	15	1/2 x 3/64	D-50	232	146 269 R	—	—
	3/4	15	3/4 x 3/64	C-40	232	146 281 W	—	—
	3/4	15	3/4 x 3/64	D-50	232	146 293 S	—	—
	3/4	15	3/4 x 3/64	E-63	232	—	—	—
	1	20	1 x 1/16	D-50	232	—	—	—
	1	20	1 x 1/16	E-63	232	146 309 J	—	—
	1	20	1 x 1/16	F-80	232	—	—	—
	1-1/2	32	1-1/2 x 1/16	E-63	232	146 337 V	—	—
	1-1/2	32	1-1/2 x 1/16	F-80	232	—	—	—
	1-1/2	32	1-1/2 x 1/16	H-125	—	—	—	—
	2	40	2 x 1/16	E-63	232	—	—	—
	2	40	2 x 1/16	F-80	232	146 355 F	—	—
	2	40	2 x 1/16	G-100	232	—	—	—
	2	40	2 x 1/16	H-125	232	—	—	—

3) Steam up to 356°F / 150 PSI.



Weld End • ASME BPE					Flow below seat		Flow above seat	
Circuit Function	Port size [inch]	Orifice [inch]	Connection [mm]	Actuator size ø [mm]	Max. Operat. pressure ³⁾ [PSI]	Item-No. PA-Actuator	Max. Operat. pressure ³⁾ [PSI]	Item-No. PA-Actuator
A Normally Closed	1/2	15	1/2 x .065	C-40	217	151 831 J	232	151 839 S
	1/2	15	1/2 x .065	D-50	232	151 832 K	232	151 840 F
	3/4	15	3/4 x .065	C-40	217	151 833 L	232	151 851 W
	3/4	15	3/4 x .065	D-50	232	151 834 M	232	151 852 X
	3/4	15	3/4 x .065	E-63	232	—	232	—
	1	20	1 x 1/16	D-50	159	—	232	146 464 V
	1	20	1 x 1/16	E-63	232	146 303 C	232	—
	1	20	1 x 1/16	F-80	232	—	232	—
	1-1/2	32	1-1/2 x 1/16	E-63	87	—	232	146 474 X
	1-1/2	32	1-1/2 x 1/16	F-80	217	146 343 B	232	—
	1-1/2	32	1-1/2 x 1/16	H-125	—	—	—	—
	2	40	2 x 1/16	E-63	58	—	232	146 485 K
	2	40	2 x 1/16	F-80	145	—	232	146 491 R
	2	40	2 x 1/16	G-100	181	—	232	—
	2	40	2 x 1/16	H-125	232	146 361 D	232	—
B Normally Open	1/2	15	1/2 x .065	C-40	232	151 835 N	—	—
	1/2	15	1/2 x .065	D-50	232	151 836 P	—	—
	3/4	15	3/4 x .065	C-40	232	151 837 Q	—	—
	3/4	15	3/4 x .065	D-50	232	151 838 Z	—	—
	3/4	15	3/4 x .065	E-63	232	—	—	—
	1	20	1 x 1/16	D-50	232	—	—	—
	1	20	1 x 1/16	E-63	232	146 309 J	—	—
	1	20	1 x 1/16	F-80	232	—	—	—
	1-1/2	32	1-1/2 x 1/16	E-63	232	146 337 V	—	—
	1-1/2	32	1-1/2 x 1/16	F-80	232	—	—	—
	1-1/2	32	1-1/2 x 1/16	H-125	—	—	—	—
	2	40	2 x 1/16	E-63	232	—	—	—
	2	40	2 x 1/16	F-80	232	146 355 F	—	—
	2	40	2 x 1/16	G-100	232	—	—	—
	2	40	2 x 1/16	H-125	232	—	—	—

3) Steam up to 356°F / 150 PSI.



2/2-Way Globe Valve, Pneumatically Operated

Cast Stainless Steel Body with Weld Ends

Type 2012

ON/OFF Globe Valve

Weld End • ISO 4200				Flow below seat		Flow above seat	
Circuit Function	Orifice [in]	Connection [mm]	Actuator [mm] size ø	Item-No. PA-Actuator	Item-No. PPS-Actuator	Item-No. PA-Actuator	Item-No. PPS-Actuator
A Normally Closed	3/8	17.2 x 1.6	C-40	146 229 H	146 364 G	146 429 S	–
	3/8	17.2 x 1.6	D-50	146 239 B	146 372 G	146 434 P	146 494 L
	1/2	21.3 x 1.6	C-40	146 249 M	–	146 439 U	–
	1/2	21.3 x 1.6	D-50	146 261 H	146 380 D	146 445 S	146 498 Y
	3/4	26.9 x 1.6	C-40	146 273 D	–	146 450 B	–
	3/4	26.9 x 1.6	D-50	146 285 S	–	146 456 V	146 502 U
	3/4	26.9 x 1.6	E-63	146 297 W	146 392 V	–	–
	1	33.7 x 2.0	D-50	–	–	146 462 T	146 506 Y
	1	33.7 x 2.0	E-63	146 301 A	–	–	–
	1	33.7 x 2.0	F-80	146 312 U	146 400 A	–	–
	1-1/4	42.4 x 2.0	E-63	146 316 Y	–	146 467 Y	146 510 X
	1-1/4	42.4 x 2.0	F-80	146 324 Y	146 408 E	–	–
	1-1/2	48.3 x 2.0	E-63	–	–	146 472 V	–
	1-1/2	48.3 x 2.0	F-80	146 329 D	–	146 478 B	146 514 P
	1-1/2	48.3 x 2.0	H-125	146 341 H	146 416 M	–	–
	2	60.3 x 2.0	E-63	–	–	146 483 R	–
	2	60.3 x 2.0	F-80	–	–	146 489 X	146 518 T
	2	60.3 x 2.0	G-100	146 347 F	–	–	–
	2	60.3 x 2.0	H-125	146 359 K	146 424 M	–	–
B Normally Open	3/8	17.2 x 1.6	C-40	146 234 W	146 368 L	–	–
	3/8	17.2 x 1.6	D-50	146 244 G	146 376 C	–	–
	1/2	21.3 x 1.6	C-40	146 255 B	–	–	–
	1/2	21.3 x 1.6	D-50	146 267 F	146 384 V	–	–
	3/4	26.9 x 1.6	C-40	146 279 K	–	–	–
	3/4	26.9 x 1.6	D-50	146 291 Y	146 388 H	–	–
	1	33.7 x 2.0	E-63	146 307 G	146 396 Z	–	–
	1-1/4	42.4 x 2.0	E-63	146 320 G	146 404 S	–	–
	1-1/2	48.3 x 2.0	F-80	146 335 T	146 412 R	–	–
	2	60.3 x 2.0	G-100	146 353 D	146 420 V	–	–



Weld End • DIN 11850 series 2				Flow below seat		Flow above seat	
Circuit Function	Orifice [in]	Connection [mm]	Actuator [mm] size ø	Item-No. PA-Actuator	Item-No. PPS-Actuator	Item-No. PA-Actuator	Item-No. PPS-Actuator
A Normally Closed	3/8	13 x 1.5	C-40	146 230 E	146 365 H	146 430 X	–
	3/8	13 x 1.5	D-50	146 240 Q	146 373 H	146 435 Q	146 495 M
	1/2	19 x 1.5	C-40	146 250 J	–	146 440 H	–
	1/2	19 x 1.5	D-50	146 262 A	146 381 S	146 446 T	146 499 Z
	3/4	23 x 1.5	C-40	146 274 E	–	146 451 Y	–
	3/4	23 x 1.5	D-50	146 286 T	–	146 457 W	146 503 V
	3/4	23 x 1.5	E-63	146 298 F	146 393 W	–	–
	1	29 x 1.5	D-50	–	–	146 463 U	146 507 Z
	1	29 x 1.5	E-63	146 302 B	–	–	–
	1	29 x 1.5	F-80	146 313 V	146 401 X	–	–
	1-1/4	35 x 1.5	E-63	146 317 Z	–	146 468 H	146 511 L
	1-1/4	35 x 1.5	F-80	146 325 Z	146 409 F	–	–
	1-1/2	41 x 1.5	E-63	–	–	146 473 W	–
	1-1/2	41 x 1.5	F-80	146 330 A	–	146 479 C	146 515 Q
	1-1/2	41 x 1.5	H-125	146 342 A	146 417 N	–	–
	2	53 x 1.5	E-63	–	–	146 484 J	–
	2	53 x 1.5	F-80	–	–	146 490 U	146 519 U
	2	53 x 1.5	G-100	146 348 Q	–	–	–
	2	53 x 1.5	H-125	146 360 Q	146 425 N	–	–
B Normally Open	3/8	13 x 1.5	C-40	146 235 X	146 369 M	–	–
	3/8	13 x 1.5	D-50	146 245 H	146 377 D	–	–
	1/2	19 x 1.5	C-40	146 256 C	–	–	–
	1/2	19 x 1.5	D-50	146 268 Q	146 385 W	–	–
	3/4	23 x 1.5	C-40	146 280 H	–	–	–
	3/4	23 x 1.5	D-50	146 292 Z	146 389 A	–	–
	1	29 x 1.5	E-63	146 308 R	146 397 S	–	–
	1-1/4	35 x 1.5	E-63	146 321 V	146 405 T	–	–
	1-1/2	41 x 1.5	F-80	146 336 U	146 413 J	–	–
	2	53 x 1.5	G-100	146 354 E	146 421 J	–	–



Further Process Connections are:

Threaded Ends	Flanges	U.S. Tri-Clamp®	Customized*
			*e.g. one side with flange, other side Tri-Clamp®

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

Type 2012
ON/OFF Globe Valve

Valve Actuation System: Banjo Valve

Type 6012, 6014

Banjo Valves are pneumatic single pilot valves designed for easy 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

Burkert NAMUR valves are extremely reliably switching, diaphragm-driven, seat valves. 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 AS-i. For actuator size C, D, E, and F.

➡ 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 C, D, E, F, G, and H.



Valve Actuation System: AirLINE

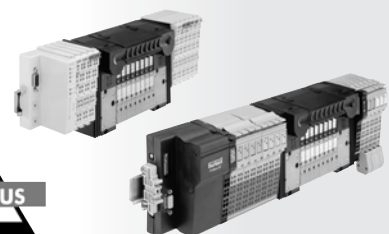
Type 8644

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



DeviceNet™



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

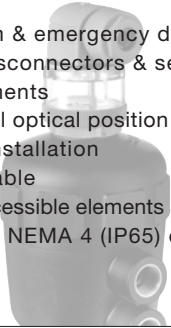
Type 2012
ON/OFF Globe Valve

Further Modular Options (→ see datasheet Type 2000 - 2031 accessories)

Position Feedback

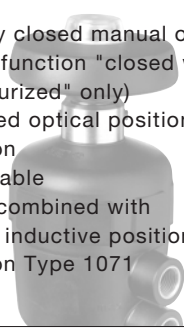
1060

- For alarm & emergency devices, safety disconnectors & sequence arrangements
- Additional optical position indication
- Simple installation
- Retrofittable
- Easily accessible elements & terminals
- Compact NEMA 4 (IP65) enclosure



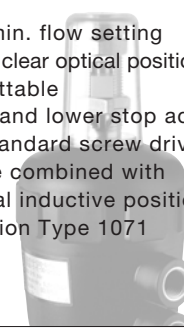
Manual Override

- 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



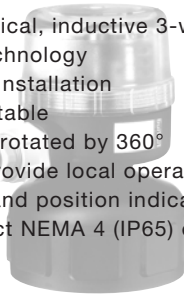
Stroke Limitation

- 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



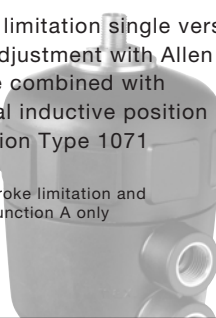
1062

- Mechanical, inductive 3-wire and EExi technology
- Simple installation
- Retrofittable
- Can be rotated by 360°
- LEDs provide local operational status and position indication
- Compact NEMA 4 (IP65) enclosure



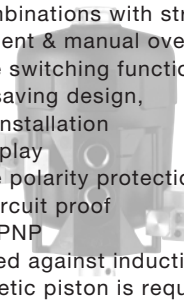
- Stroke limitation single version*
- Easy adjustment with Allen key
- Can be combined with external inductive position indication Type 1071

* 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 requirements
please consult for advice.

We reserve the right to make technical
changes without notice.

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