

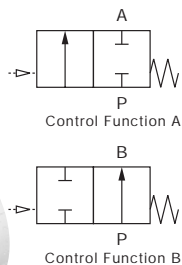
# 2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

**PRELIMINARY**  
**Index 55**  
**17.04.2001**



2012

DN 10 – 50



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	
Actuator	PA or PPS
Sealing	PTFE (NBR, FPM and EPDM on request)
Process media (for gases and liquids)	<ul style="list-style-type: none"> <li>For neutral gases, water, alcohols, oils, fuels, hydraulic liquids, salt solutions, lyes, organic solvents, steam (10bar/+180°C)</li> <li>Below seat only gases &amp; steam</li> </ul>
Viscosity	Max. 600 mm <sup>2</sup> /s
Packing gland	PTFE V-rings (silicone grease) with spring compensation
Installation	As required, but preferably with Actuator upright
Nominal pressure	PN 25 (body)
Temperatures	
Fluid	-10°C... +180°C (PTFE seal <sup>1)</sup> )
Ambient (depending on actuator)	-10°C... +60°C <sup>1)</sup> (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)
Port connections	
Flange	DIN
	<ul style="list-style-type: none"> <li>DIN 2634 RF<sup>4)</sup></li> <li>face-to-face EN 558-1 (DIN 3202)</li> </ul>
	ANSI
	<ul style="list-style-type: none"> <li>ASME B16.5 RF<sup>4)</sup> Class 150</li> <li>face-to-face EN 558-2 (ISA S75.03)</li> </ul>
	JIS
	<ul style="list-style-type: none"> <li>JIS B2238 ordinary type JIS 10K RF<sup>4)</sup></li> <li>face-to-face JIS B2002 serie 20 (ANSI B16.10) (EN 558-2)</li> </ul>

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.  
4) Raised face (RF)

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

ON/OFF Globe valve

2012

## Applications: Food & Beverage

- CIP / SIP; Steam
- Auxiliary Processes

## Water Treatment

- Air Control
- Chemical Dosing

## Cosmetics

- CIP / SIP; Steam

## Textile

- Steam; Water; Air; Dyeing

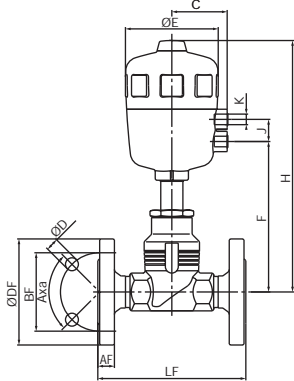


Orifice DN	Actuator size	Kv-value water	Min. pilot pressure <sup>2)</sup>	Max. operating pressure <sup>3)</sup> ≤ 180°C		Weight (DIN) [kg]
				CF A [bar]	CF B [bar]	
10	C-40	3.0	4.0	15.0	16.0	2.3
10	D-50	3.0	3.9	16.0	16.0	2.4
15	C-40	4.7	4.0	15.0	16.0	2.3
15	D-50	4.7	3.9	16.0	16.0	2.4
20	C-40	8.1	4.0	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

2) Circuit function B below seat and circuit function A above seat, please see charts on page 2.  
3) Steam up to 180°C / 10 bar.

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

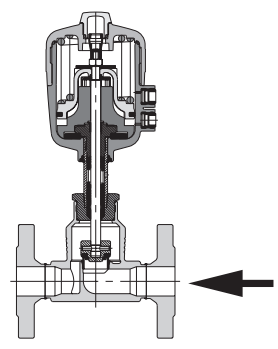
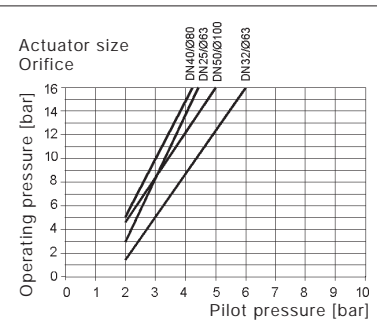
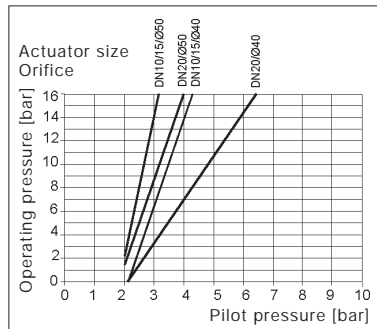
## Dimensions [mm]



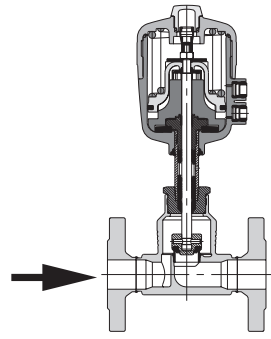
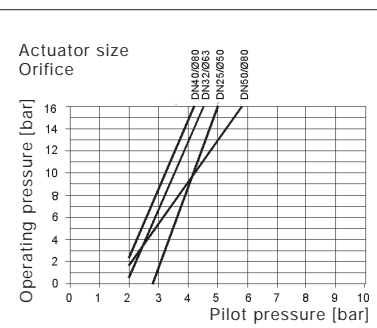
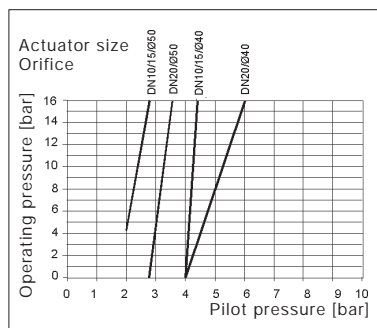
2012

All Actuators								DIN Flange					ANSI Flange					JIS Flange							
Orifice DN	Act. size $\phi$	C	E	F	H	K	J	A x a	DF	LF	BF	AF	D	DF	LF	BF	AF	D	DF	LF	BF	AF	D		
10	C-40	33	53	116	168	G 1/8	16.5		90	130	60	16	14	-	-	-	-	-	-	-	-	-	-	-	
10	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	4 x 90°	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		

### 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

## 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	10	C-40	146 227 X	146 362 E	146 427 Q	-
	10	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	-	-
	B	10	C-40	146 232 U	146 366 A	-
10		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	-	-



ON/OFF Globe valve

2012

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	-	-
	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	-	-	

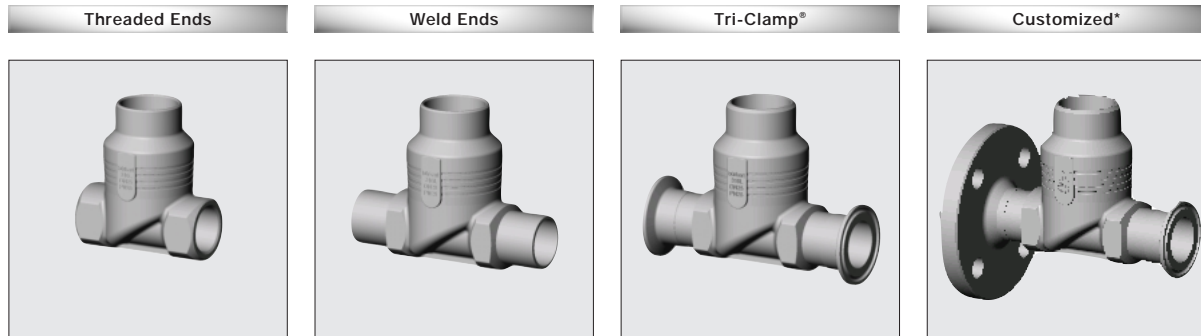


## 2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

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	-	-	146 481 P	-
	50	F-80	-	-	148 404 C	on request
	50	G-100	148 394 H	-	-	-
	50	H-125	148 396 B	on request	-	-
	B	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		



**Further Process Connections are:**



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

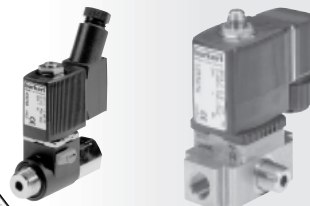
# 2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

**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

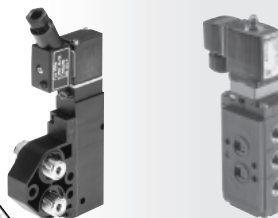


**Valve Actuation System: NAMUR valve**

**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 125 mm.

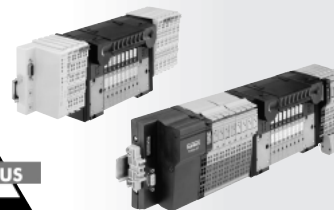


**Valve Actuation System: AirLINE**

**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



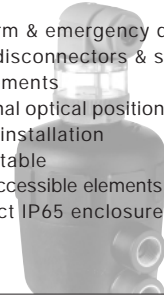
# 2/2-Way Globe Valve, Pneumatically Operated Cast Stainless Steel Body with Flanges

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

**Position Feedback (1060, 1062 or 1071)**

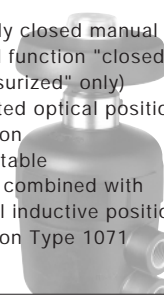
**1060**

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



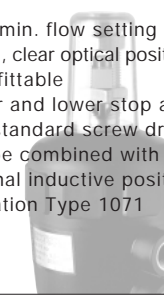
**Manual Override**

- 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



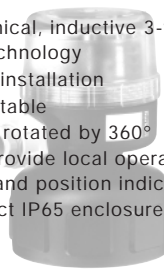
**Stroke Limitation**

- 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

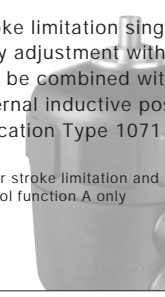


**1062**

- 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



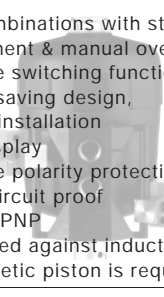
- Stroke limitation single version\*
- Easy adjustment with Allen key
- Can be combined with external inductive position indication Type 1071



\* 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



## 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.  
908-GB/ 1-0192