

Y-Pattern and Diaphragm Valves



Advantages/Benefits

- ▶ Complete and modularly designed accessory program
- ▶ More for less: Configuration costs are only for what is required
- ▶ Easy maintenance and commissioning
- ▶ Increase system and operational safety

Design

The modular designed accessory option package is a comprehensive addition to the Burkert Y-pattern and diaphragm valve Types 2000, 2002, 2012, 2030, 2031, 2632, and 2712.

The flexible, easy-to-use concept of modular accessories has been designed to cover individual application requirements in a cost-effective way.

The design has been optimized for easy installation, retrofitting, commissioning, and operation.

- Flexible and versatile modular accessory program
- Easy to retrofit
- Increase operational safety

Applications

Electrical feedback:

- Mechanical or inductive switches
- Externally mounted magnetic/ inductive switches

Electrical feedback with optical position indication

Max. stroke limitation

Min./max. stroke limitation

Manual override

Namur-adaptor for pilot valves

INDUSTRIAL DYNAMICS CO

1-800-940-0453

bürkert
Fluid Control Systems



Advantages / Benefits

- ▶ Simple installation
- ▶ Easy to retrofit
- ▶ Self-adjusting trip cams
- ▶ Easily accessible internal components and terminals
- ▶ Can be rotated through 360°
- ▶ LEDs provide local operational status and position indication
- ▶ NEMA 4 (IP 65) enclosure

Technical Data

Mechanical Limit Switch

Electrical specification

At Voltage	Maximum Inductive Load	Maximum Load Resistance
125 VAC	8 A	8 A
250 VAC	8 A	8 A
24 VDC	5 A	5 A
30 VDC	2 A	5 A
50 VDC	0.7 A	1 A
74 VDC	0.25 A	0.6 A
125 VDC	0.03 A	0.4 A
250 VDC	0.02 A	0.25 A

All switches can be wired for opened or closed operation.

Inductive Limit Switch in 2-wire Technology

Nominal voltage range 10 to 30 VDC
 Acceptable current load ≤ 100 mA
 Current consumption ≤ 2 mA

Inductive Limit Switch in 3-wire Technology

Nominal voltage range 10 to 30 VDC
 Current load ≤ 200 mA
 Output resistance 4.7 kΩ
 Current consumption ≤ 25 mA
 Contact versions PNP, NPN

**Inductive Limit Switch in 2-wire Technology
DIN 19 234 (NAMUR) EExi**

Nominal voltage 8 VDC
 Consumption damped 1 mA
 undamped < 3 mA

Isolation Barrier Required

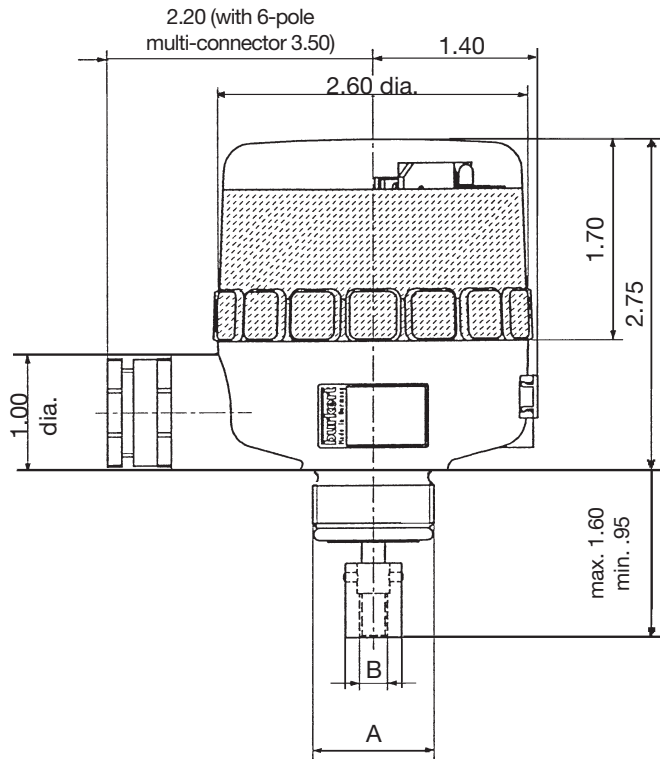
Installation / Accessories

Installation As required

Electrical connection • PG 11 cable gland,
 internal:
 • screw terminals on PCB
 • 18 AWG

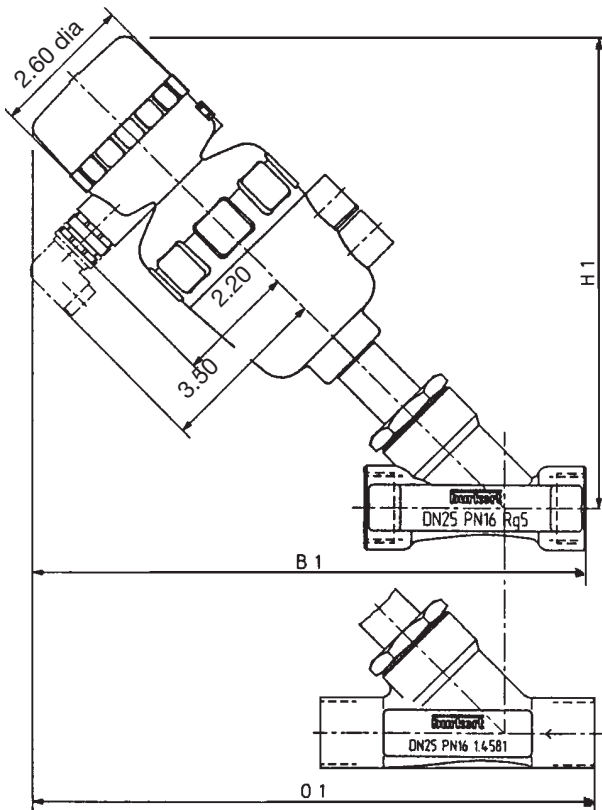
DTS 1000094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

Dimensions [inch]



Actuator Size	A	B
D, E, F	M26x1.5	M6
G, H	M36x2	M1

Dimensions for Type 2000 [inch]



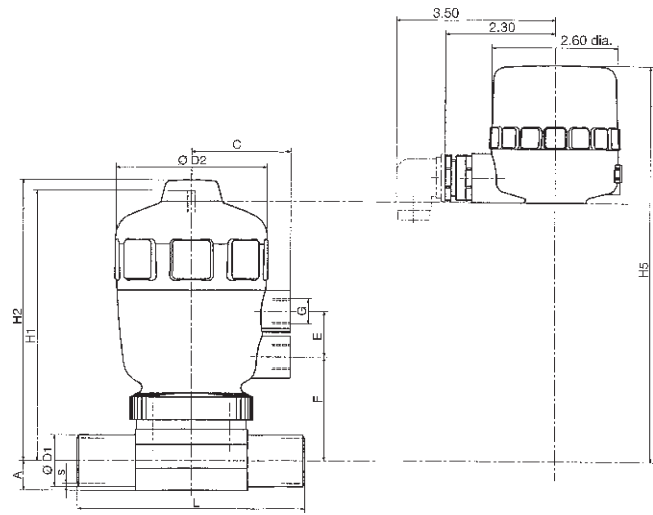
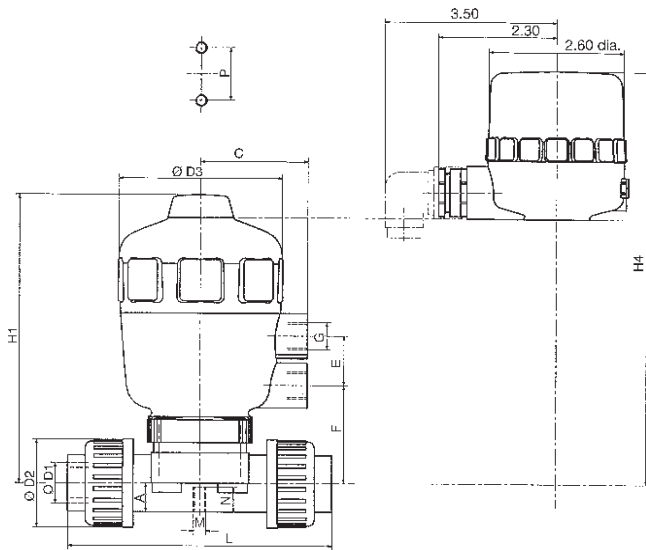
Specifications

Valve Size [inch]	Actuator Size	B1	H1	O1
1/2	D	8.8	7.4	8.6
3/4	D	9.0	7.7	9.1
1	E	10.4	8.8	10.6
1	F	11.2	9.7	11.4
1 1/4	G	10.9	9.3	11.1
1 1/4	F	12.0	10.3	12.2
1 1/4	E	13.8	12.2	14.0
1 1/2	E	11.1	9.4	11.4
1 1/2	F	11.9	10.4	12.2
1 1/2	G	14.0	12.4	14.3
1 1/2	H	15.1	13.5	15.4
2	E	11.9	10.1	12.0
2	F	12.6	10.9	12.8
2	G	14.8	14.6	15.0
2	H	15.7	14.0	15.9
2 1/2	F	13.7	11.4	?
2 1/2	G	15.7	13.4	?
2 1/2	H	16.8	14.5	?

Dimensions [inch]

Type 2030

Type 2031



Specifications Type 2030

Specifications Type 2031

Valve Size [inch]	Actuator Size	H1	H4	D3
1/2	D	4.8	7.2	2.5
1/2	E	5.5	7.8	3.2
3/4	E	5.8	8.1	3.2
3/4	F	6.8	9.1	4.0
1	E	6.2	8.5	3.2
1	F	6.9	9.3	4.0
1 1/4	G	9.1	11.3	5.0
1 1/2	G	9.4	11.6	5.0
1 1/2	H	10.9	13.1	6.0
2	G	9.8	12.0	5.0
2	H	11.2	13.4	6.0

Valve Size	Actuator Size	H2	H5	D2
1/2	D	4.6	7.0	2.50
1/2	E	5.3	7.6	3.15
3/4	E	5.7	8.1	3.15
3/4	F	6.8	9.1	4.00
1	E	6.1	8.4	3.15
1	F	6.9	9.2	4.00
1 1/4	G	9.0	11.2	5.00
1 1/2	G	9.1	11.3	5.00
1 1/2	H	10.7	12.9	6.00
2	G	9.6	11.8	5.00
2	H	10.9	13.1	6.00
2 1/2	H	11.4	13.6	6.00

DTS 1000094795 EN Version: - Status: RL (released | freigegeben | valide) printed: 16.07.2008



Advantages / Benefits

- ▶ Permits the use of stroke adjustment and manual override options
- ▶ Reliable switching function
- ▶ Space-saving design, simple installation
- ▶ LED-display
- ▶ Reverse polarity protection
- ▶ Short circuit-proof
- ▶ Pulsed PNP
- ▶ Protected against inductive spikes

Design

The magnetic-inductive sensors react to the approach of the magnetic piston of the series 2000-2031 piston-operated Y-pattern diaphragm valve. Thus, the piston position can be optically and electrically displayed with LED display.

- For actuator versions equipped with magnetic piston only.
- Permits the use of additional accessories: stroke limiters or manual override

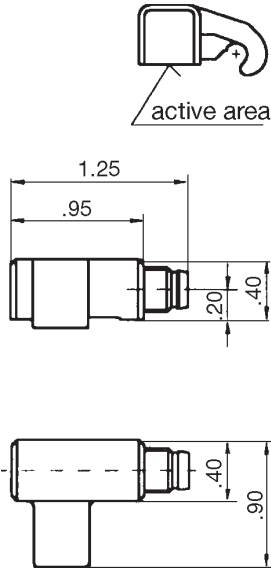
Technical Data

Nominal field strength I_{H_n}	1.2 kA/m
Working field strength I_{H_a}	≥ 2 kA/m
Hysteresis	$\leq 45\%$ of H_n
Ambient temperature	-4°C to $+158^\circ\text{C}$
Temp.drift of switch-on point	$\leq 0.3\%/^\circ\text{C}$
Operating voltage U_B	10 to 30 V DC
Residual ripple	$\leq 15\%$
Max. power rating I_a	200 mA
Capacitive load	$\leq 1 \mu\text{F}$
Voltage drop U_d	≤ 2.5 V
Raise time	≤ 0.5 ms
Switch-off time	20 to 50 ms
Power consumption*)	$\leq 12/\leq 10$ mA
Housing material	PBTP (GF-reinforced)
Rating (DIN 40 050)	IP 67
Weight	2 oz.

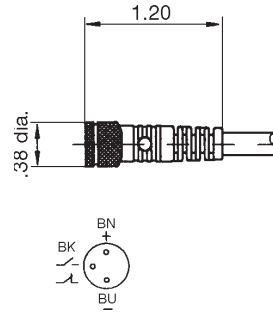
*)damped/undamped

Consisting of Solenoid Piston, Sensor Fixation, Elbow Joint, Proximity Sensor – Dimensions [inch]

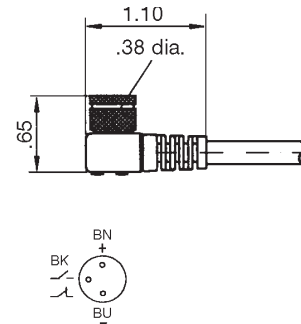
Sensor Type 1071 with plug connector, IP 67



Plug connector, straight, without LED, cable 9.8 feet

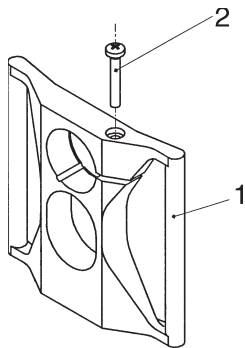


Elbow plug connector, with LED, cable 9.8 feet

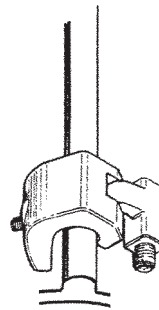


Installation

Sensor bracket, consisting of mounting bracket 1 and EJOT-PT-screw 2

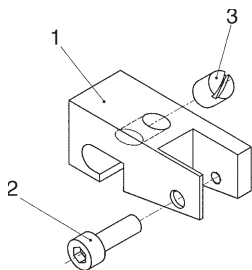


Mount sensor to elbow joint and sensor bracket



Elbow joint:

- 1 elbow joint
- 2 Cheesehead screw DIN 912-M4x12-A2
- 3 Pin DIN 913-M6x10-A2



For ordering specifications of individual parts, please refer to spare parts list.

DTS 1000094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

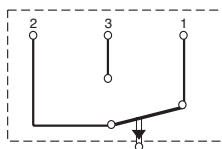


Advantages / Benefits

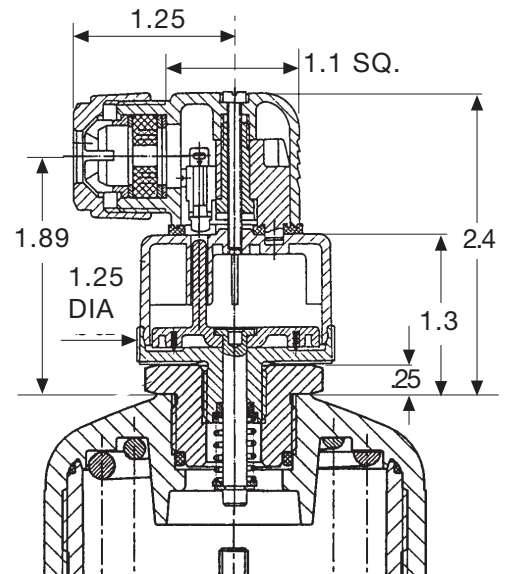
- ▶ For alarm and emergency devices, safety disconnect and sequencing
- ▶ Additional visual position indicator
- ▶ Simple installation
- ▶ Easy to retrofit
- ▶ Easily accessible internal components and terminals
- ▶ Compact NEMA 4 (IP65) enclosure

Technical Data

Microswitch	Normally opened or closed
Switching load	250 VDC Non-inductive or induct. load max. 5A, incandescent filament load 0.5A
	250 VDC Non-inductive load 0.25A inductive load 0.02A incandescent filament load 0.02A
Rating	NEMA 4 (IP 65)
Connection	Solder connections, cable entry sealed by gland with cable grip for 1/4-inch cable
Wiring diagram	1 Common terminal 2 Normally closed terminal 3 Normally open terminal



Dimensions [inch]



DTS 1000094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

Max. Stroke Limiter*

Without Visual Position Indication

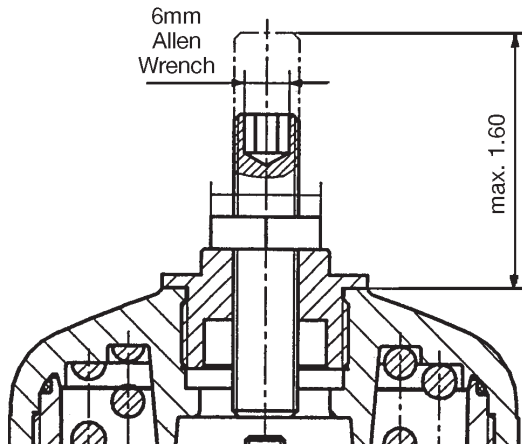


Advantages / Benefits

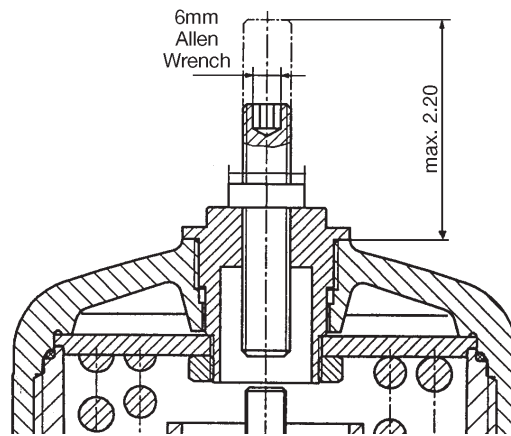
- ▶ Maximum stroke limiter
- ▶ Easy adjustment with Allen wrench
- ▶ Can be combined with external inductive position indication Type 1071

Dimensions [inch]

Actuator size D, E, F



Actuator size G, H



DTS 1000094795 EN Version: - Status: RL (released | freigegeben | valide) printed: 16.07.2008

* Upper stroke limitation only
* Control function A only (normally closed)

Min./Max. Stroke Limiter

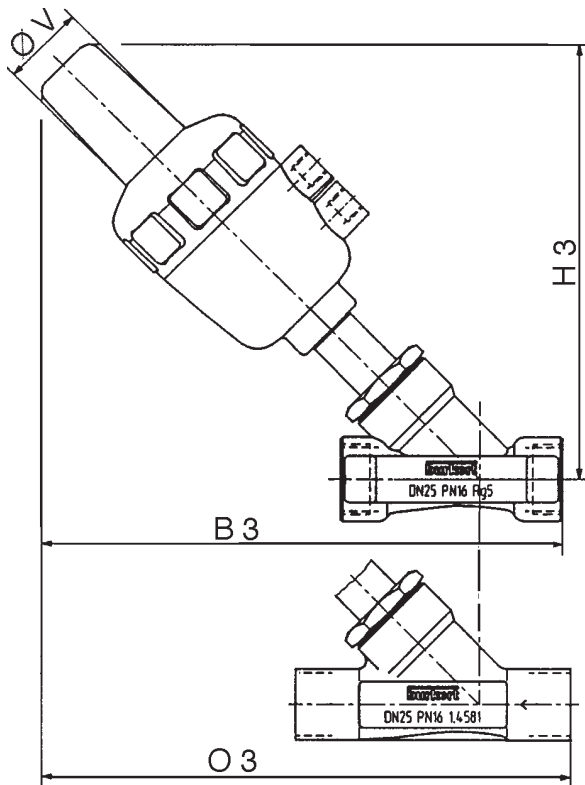
Without Visual Position Indication



Advantages / Benefits

- ▶ Maximum and minimum flow setting
- ▶ Integrated, clear visual position indication
- ▶ Easy to retrofit
- ▶ Upper and lower stops adjustable with standard screw driver
- ▶ May be used as manual override
- ▶ Can be combined with external inductive position indicator Type 1071
- ▶ Two versions available; (Actuator size D, E, F and Actuator size G, H)

Dimensions for Type 2000 [inch]



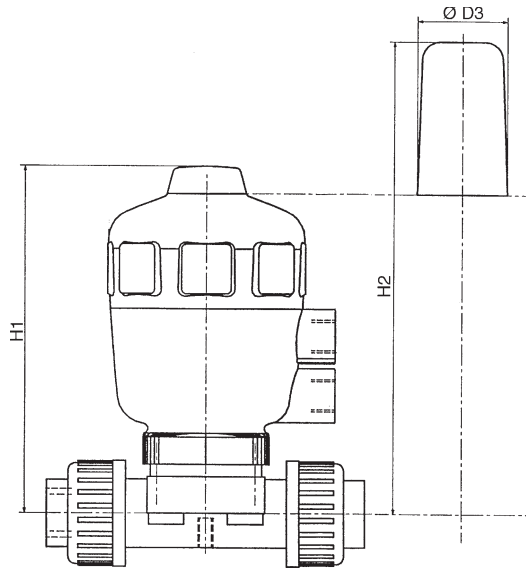
Specification

Valve Size	Actuator Size	B3	H3	O3	øV
1/2	D	8.3	6.9	8.3	1.5
3/4	D	8.5	7.2	8.6	1.5
1	E	9.7	8.1	9.9	1.5
1	F	10.3	8.8	10.5	1.5
1 1/4	E	10.2	8.7	10.4	1.5
1 1/4	F	11.1	9.4	11.3	1.5
1 1/4	G	13.6	12.0	13.7	2.1
1 1/2	E	10.4	8.8	10.7	1.5
1 1/2	F	10.9	9.5	11.3	1.5
1 1/2	G	13.7	12.1	14.1	2.1
1 1/2	H	14.6	13.0	14.9	2.1
2	E	11.2	9.4	11.4	1.5
2	F	11.7	10.0	11.9	1.5
2	G	14.6	13.6	14.8	2.1
2	H	15.2	13.5	15.4	2.1
2 1/2	F	12.8	10.5	-	1.5
2 1/2	G	15.4	14.0	-	1.5
2 1/2	H	16.3	14.0	-	2.1

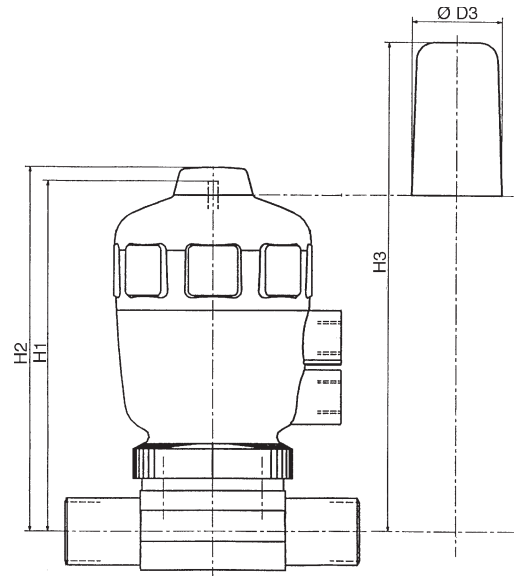
Min./Max. Stroke Limiter With Visual Position Indication

Dimensions [inch]

Type 2030



Type 2031



Specifications Type 2030

Valve Size	Actuator Size	H1	H2	D3
1/2	D	4.8	6.8	1.5
1/2	E	5.5	7.4	1.5
3/4	E	5.8	7.8	1.5
3/4	F	6.8	8.8	1.5
1	E	6.2	8.1	1.5
1	F	6.9	8.9	1.5
1 1/4	G	9.1	12.0	2.1
1 1/2	G	9.4	12.3	2.1
1 1/2	H	10.9	13.8	2.1
2	G	9.8	12.7	2.1
2	H	11.2	14.1	2.1

Specifications Type 2031

Valve Size	Actuator Size	H2	H3	D3
1/2	D	4.6	7.0	1.5
1/2	E	5.3	7.6	1.5
3/4	E	5.7	8.1	1.5
3/4	F	6.8	9.1	1.5
1	E	6.1	8.4	1.5
1	F	6.9	9.2	1.5
1 1/4	G	9.0	11.2	2.1
1 1/2	G	9.1	11.3	2.1
1 1/2	H	10.7	12.9	2.1
2	G	9.6	11.8	2.1
2	H	10.9	13.1	2.1
2 1/2	H	11.4	13.6	2.1

DTS 1000094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

Manual Override

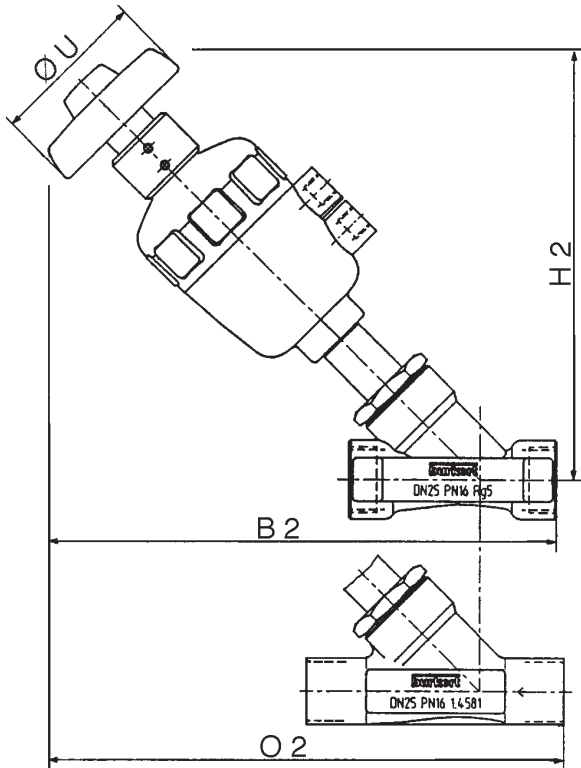
With Visual Position Indication



Advantages / Benefits

- ▶ For normally closed valves only
- ▶ Integrated visual position indicator
- ▶ Easy to retrofit
- ▶ May be combined with external inductive position indication Type 1071

Dimensions for Type 2000 [inch]



Specifications

Valve Size	Actuator Size	B2	H2	O2	øU
1/2	D	8.7	7.3	8.7	3.2
3/4	D	8.0	7.6	9.0	3.2
1	E	10.1	8.6	10.2	3.2
1	F	10.8	9.3	10.9	3.2
1 1/4	E	10.7	9.1	10.8	3.2
1 1/4	F	11.6	9.8	11.8	3.2
1 1/4	G	14.3	12.7	14.4	5.9
1 1/2	E	10.8	9.2	11.1	3.2
1 1/2	F	11.4	10.0	11.7	3.2
1 1/2	G	14.4	12.8	14.8	5.9
1 1/2	H	15.3	13.7	15.6	5.9
2	E	11.6	9.8	11.8	3.2
2	F	12.2	10.4	12.4	3.2
2	G	15.3	15.0	15.5	5.9
2	H	15.9	14.2	16.1	5.9
2 1/2	F	13.2	11.0	-	3.2
2 1/2	G	16.1	13.9	-	5.9
2 1/2	H	17.0	14.7	-	5.9

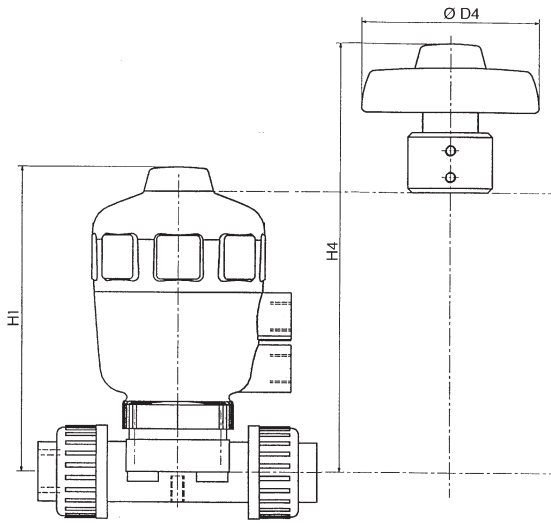
DTS 1000094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

Manual Override

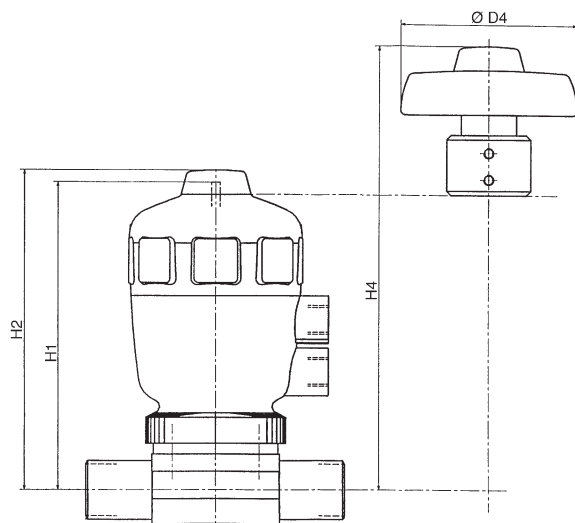
With Visual Position Indication

Dimensions [inch]

Type 2030



Type 2031



Specifications Type 2030

Valve Size	Actuator Size	H1	H4	D4
1/2	D	4.8	7.2	3.2
1/2	E	5.5	7.8	3.2
3/4	E	5.8	8.1	3.2
3/4	F	6.8	9.1	3.2
1	E	6.2	8.5	3.2
1	F	6.9	9.3	3.2
1 1/4	G	9.1	11.3	5.9
1 1/2	G	9.4	11.6	5.9
1 1/2	H	10.9	13.1	5.9
2	G	9.8	12.0	5.9
2	H	11.2	13.4	5.9

Specifications Type 2031

Valve Size	Actuator Size	H2	H4	D4
1/2	D	4.6	6.9	3.2
1/2	E	5.3	7.5	3.2
3/4	E	5.7	8.0	3.2
3/4	F	6.8	9.0	3.2
1	E	6.1	8.3	3.2
1	F	6.9	9.1	3.2
1 1/4	G	9.0	11.8	5.9
1 1/2	G	9.1	11.9	5.9
1 1/2	H	10.7	13.4	5.9
2	G	9.6	12.3	5.9
2	H	10.9	13.7	5.9
2 1/2	H	11.4	14.2	5.9

DTS 100094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

Namur-Adapter for Pilot Valves



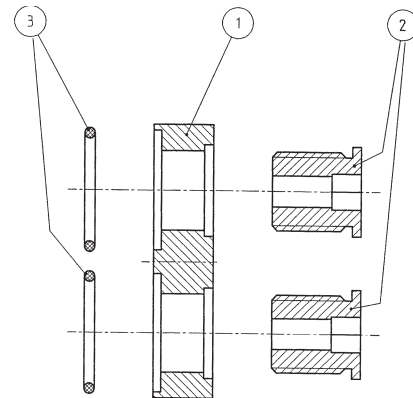
Advantages / Benefits

- ▶ **Namur interface allows easy installation of pilot valve to actuator**
- ▶ **Increased operational reliability when using the Burkert pilot valves Types 6519 and 5470.**

Technical Data

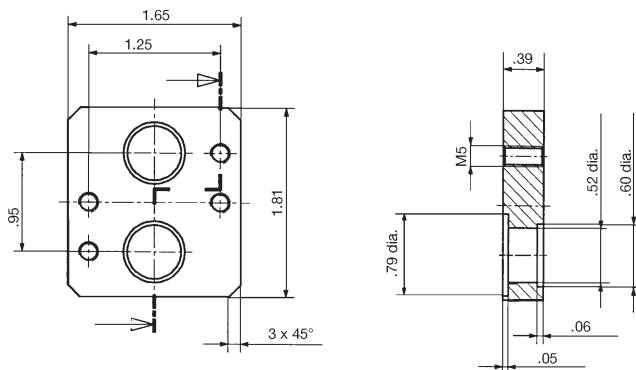
Materials

- ① Plate and ② hollow screw Steel 1.4021 or CuZn39 Pb3 F44
- ③ O-rings DIN3771
16x2-N-NBR75

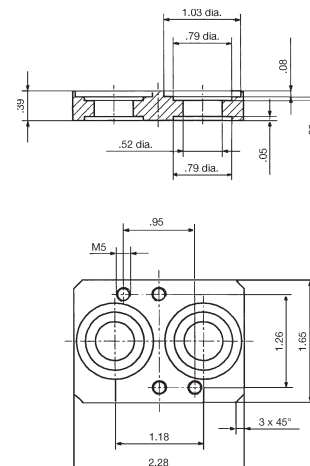


Dimensions [inch]

Adapter for actuators: D, E, F



Adapter for actuators: G, H



Hollow screw with hexagonal socket SW 6

Combination Options of Accessories

	Electrical position feedback Type 1062	External magnet inductive position feedback Type 1071	Electrical feedback signaller with optical position indication Type 1060	Max. stroke limitation	Min./max. stroke limitation	Manual override with opt. position indication	Namur-adapter for pilot valves
Electrical position feedback Type 1062		and	or	or	or	or	and
External magnet inductive position feedback Type 1071	and		and	and	and	and	and
Electrical feedback signaller with optical position indication Type 1060	or	and		or	or	or	and
Max. stroke limitation	or	and	or		or	or	and
Min./max. stroke limitation	or	and	or	or		or	and
Manual override with opt. position indication	or	and	or	or	or		and
Namur-adapter for pilot valves	and	and	and	and	and	and	

DTS 1000094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

Electrical Position Feedback Type 1062 - Ordering Chart

With Mechanical Limit Switches

Actuator Size	Indicated Valve Position	Item No.			
		110V to 250V AC/DC	12V to 48V AC/DC	48V to 110V AC/DC	12V to 30V AC/DC
		Silver Contacts			Gold Contacts
D (50), E (63), F (80)	OPEN	005 415 K	007 462U	420 770 J	420 776 C
	CLOSED	005 409 E	007 461 T	420 771 F	420 777 D
	OPEN/CLOSED	005 416 L	007 463 V	420 772 G	420 778 N
G (100), H (125)	OPEN	007 459 H	007 465 X	420 773 H	420 779 P
	CLOSED	007 458 G	007 464 W	420 774 A	420 780 D
	OPEN/CLOSED	007 460 E	007 466 Y	420 775 B	420 781 S

With Inductive Limit Switches:

Actuator Size	Indicated Valve Position	Item No.			
		10 to 30 VDC 2-wire	10 to 30 VDC 3-wire PNP	10 to 30 VDC 3-wire NPN	NAMUR Exi 8 VDC
D (50), E (63), F (80)	OPEN	420 788 H	005 434 N	420 782 T	007 471 V
	CLOSED	420 789 A	005 422 J	420 783 U	007 470 G
	OPEN/CLOSED	420 790 F	005 461 Z	420 784 V	007 472 W
G (100), H (125)	OPEN	420 791 U	007 468 A	420 785 W	007 473 X
	CLOSED	420 792 V	007 467 Z	420 786 X	007 474 Y
	OPEN/CLOSED	420 793 W	007 469 B	420 787 Y	007 475 Z

Specification Tag	Item No.	633 529 W
-------------------	----------	-----------

External Magnet Inductive Position Feedback Type 1071 - Ordering Chart

Magnetic piston

Actuator Size	Item No.
D	630063F ¹⁾
E	630064G
F	630065H
G	630066A
H	630067B

¹⁾ For Types 2000/2002/2012 only

Sensor

Type	Style	Item No.
1071	Plug Connector	780110E
1071	With Cable (No LED)	780111T

Sensor mounting bracket

Actuator Size	Item No.
D	636239E ¹⁾
E-H	636239E

¹⁾ For Types 2000/2002/2012 only

Plug Connector

Style	Item No.
Elbow Plug, Cable 10 ft.	780112U
Straight Plug Connector, No LED	780113V

Elbow joint

Material	Item No.
Diecast	780558K
Stainless Steel	636241G

DTS 1000094795 EN Version: - Status: RL (released | freigegeben | validé) printed: 16.07.2008

Ordering Chart - Accessories

Min./max. stroke limitation with visual position indication

Actuator Size	Item No.
D	636820Z
E	636820Z
F	636820Z
G	636821N
H	640703Y

Electrical feedback switch Type 1060 with installation nipple

Actuator Size	Item No.
D	701515V
E	701515V
F	701515V
G	701516W
H	701516W

Max. stroke limitation without visual position indication

Actuator Size	Item No.
D	637866U
E	637866U
F	637866U
G	637867V
H	637868E

Manual override with visual position indicator (Normally closed function only)

Actuator Size	Item No.
D	636822P
E	636822P
F	636822P
G	636823Q
H	636823Q

Namur-adapter, all brass

Actuator Size	Item No.
D	637113R ¹⁾
E	637113R
F	637113R
G	637114J
H	637114J

Namur-adapter, all stainless steel

Actuator Size	Item No.
D	632974T ¹⁾
E	632974T
F	632974T
G	634275G
H	634275G

1) For Valve Types 2000/2002/2012 only.

INDUSTRIAL DYNAMICS CO

1-800-940-0453

In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.

0702/2_US-en