

3/8" – 2" Orifice



Advantages/Benefits

- ▶ Spring return closed or open, double-acting
- ▶ Materials: stainless steel
- ▶ High flow rate
- ▶ With self-adjusting packing glands, intermediate relief and wiper
- ▶ Optical position indication
- ▶ Pilot connection can be rotated through 360°
- ▶ Low control air consumption due to minimized volume in the actuator
- ▶ Electrical position indication, stroke limitation and manual override available as accessories
- ▶ All valves are cleaned for oxygen, tested and supplied in moisture free packing
- ▶ All valves are "black light" tested to check for any hydrocarbons

Design

The externally piloted angle-seat valve is operated with a single or double-acting piston actuator. The actuator is available in two different materials, depending on the ambient temperature.

High flow rates are attained with the stainless steel 2-way body.

The reliable self-adjusting packing gland provides high sealing integrity. These maintenance-free and robust valves can be retro-fitted with a comprehensive range of accessories for position indication, stroke limitation or manual override. They are also available as manually operated valves.

Applications

Cryogenic 232 PSI / -320°F

Steam up to 150 PSI / 365°F

Aggressive fluids with stainless steel body

Systems engineering

Food processing

Liquified gases

Dewars and tanks

Road tankers

Transferlines

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Fluid Control Systems

2/2-Way Angle-Seat Valve

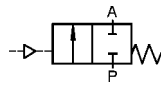
For High-Quality Cryogenic Applications and Steam

Type 2000

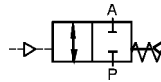
Technical Data

Control Functions

A – 2/2-way flow valve,
normally closed spring return

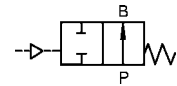


I – 2/2-way valve,
with double-acting actuator
(on request)

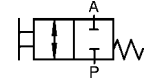


Control Functions

B – 2/2-way flow valve,
normally open spring return



Manually operated
I – 2/2-way valve



Specifications

Connections ISO 228 NPT	Orifice [inch]	Cv	Max. Operating Pressure ²⁾ Differential Pressure ¹⁾		Required Control Pressure CFA [PSI]	Weight [lbs.]	Actuator Size [mm] ø DIA
			CFA [PSI]	CFB [PSI]			
1/2	1/2	4.9	232	232	56	4.2	50
3/4	3/4	9.4	232	232	56	2.6	50
1	1	22.3	232	232	60	4.4	50
1 1/4	1-1/4	32.3	232	232	65	7.3	63
1 1/2	1-1/2	49.3	232	188	65	6.4	63
			232	130	65	8.4	63
			232	232	65	7.3	63
2	2	64.6	203	232	65	9.5	100
				87	65	11.7	80
			232	130	65	16.1	100
				87	65	13.9	63
			232	130	65	23.1	125
2 1/2	2-1/2	105.8	217	87	65	15.0	80
					65	24.9	125
					65	18.9	80

¹⁾ Higher differential pressures by other combinations of actuators on request.

²⁾ Max. operating pressure with steam -> 150 PSI (365°F).

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

Operating Data

Threaded connection	NPT, ISO	Body material	316 Stainless Steel
Weld ends	O.D. Tube	Seal material	PTFE
Nominal pressure stainless steel	232 PSI	Packing gland	Self-adjusting PTFE-stem seals, intermediate relief and wiper
Minimum control pressure		Fluids	liquid oxygen, argon and nitrogen
control function A	See chart		
control function B	See diagram		
Maximum control pressure	145 PSI		
Control fluid	Neutral gases, air		
Maximum viscosity	.93 in ² /s (600 centistroke)		
Ambient temperature			
PA-actuator	min. 14°F (-10°C) max. 140°F (60°C)		
PPS-actuator	min. 40°F (5°C) max. 266°F (130°C)		
Fluid temperature	min. -320°F (-196°C) max. 365°F (185°C)		

Installation

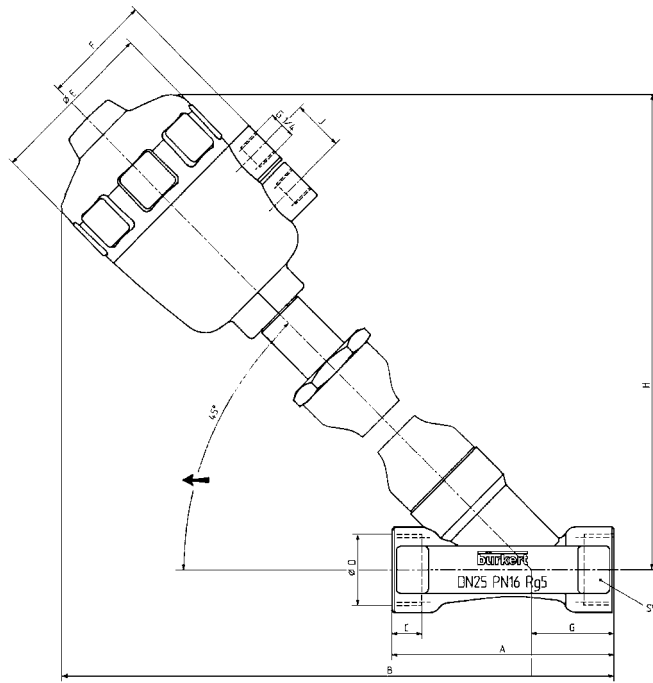
Installation As required

2/2-Way Angle-Seat Valve

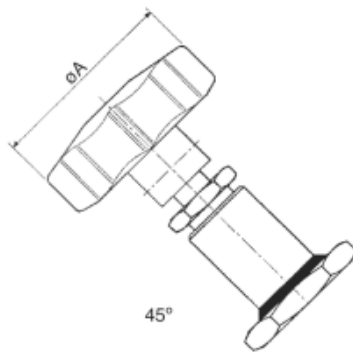
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Type 2000

Dimensions in inches

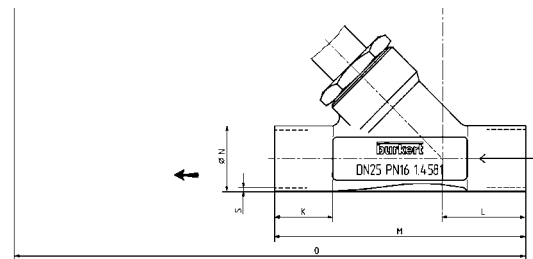
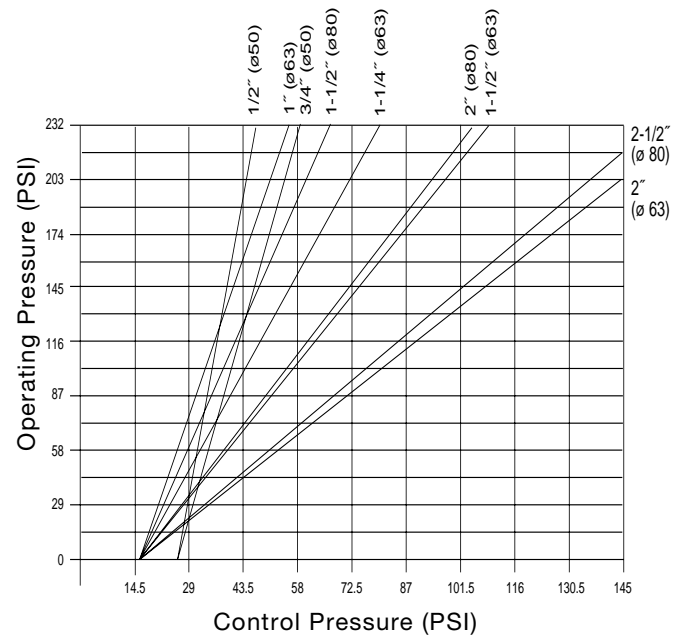


Threaded port connection (standard)



Pressure chart

Control Function B Actuator 50 - 80 mm



Weld end port connection (optional)

Specifications

Function	CFA & B			CFA						CFB					
Actuator →	ø 50 mm		ø 63 mm	ø 80 mm		ø 100 mm		ø 125 mm		ø 63 mm			ø 80 mm		
DN →	DN 13	DN 20	DN 25	DN 32	DN 40	DN40	DN50	DN50	DN65	DN32	DN40	DN50	DN 40	DN 50	DN65
Size →	1/2"	3/4"	1"	1-1/4"	1-1/2"	1-1/2"	2"	2"	2-1/2"	1-1/4"	1-1/2"	2"	1-1/2"	2"	2-1/2"
A	3.3	3.7	4.1	4.7	5.1	5.1	5.9	5.9	7.2	4.7	5.1	5.9	5.1	5.9	7.2
B	6.8	7.0	8.3	10.0	9.8	11.8	12.6	13.6	14.6	8.9	9.0	9.8	9.8	10.6	11.6
C	.47	.47	.55	.63	.70	.70	.78	.78	.82	.63	.70	.78	.70	.78	.86
E	2.5	2.5	3.1	3.9	3.9	5.0	5.0	6.0	6.0	3.1	3.1	3.1	3.9	3.9	3.9
F	1.7	1.7	2.0	2.3	2.3	2.8	2.8	3.3	3.3	2.0	2.0	2.0	2.3	2.3	2.3
G	1.3	1.4	1.5	1.6	1.6	1.6	1.7	1.7	2.2	1.6	1.6	1.7	1.6	1.7	2.2
H	5.4	5.7	6.8	8.2	8.3	10.2	12.4	11.8	12.4	7.3	7.4	8.0	8.3	8.8	9.4
J	.94	.94	.94	.94	.94	1.18	1.18	1.18	1.18	.94	.94	.94	.94	.94	.94
K	.78	.98	1.1	1.1	1.1	1.1	1.1	1.1	-	1.1	1.1	1.1	1.1	1.1	-
L	1.3	1.5	1.7	1.7	1.9	1.9	1.9	1.9	-	1.7	1.9	1.9	1.9	1.9	-
M	3.9	4.5	5.1	5.7	6.3	6.3	6.8	6.8	-	5.7	6.3	6.8	6.3	6.8	-
N	.83	1.0	1.3	1.6	1.9	1.9	2.3	2.3	-	1.6	1.9	2.3	1.9	2.3	-
O	6.8	7.1	8.5	10.2	10.1	12.1	12.8	13.8	-	9.0	9.3	10.0	10.1	10.8	-
S	.06	.06	.07	.07	.07	.07	.10	.10	-	.07	.07	.10	.07	.10	-

2/2-Way Angle-Seat Valve

For High-Quality Cryogenic Applications and Steam

Type 2000

Ordering Chart (other versions on request)

Standard-Program

Type 2000 with Stainless Steel Body, PA-Actuator, Pilot Port with Stainless Steel

Control Function	Orifice [inch]	Port Connection	Actuator Size [mm]	Flow Direction	Operating Pressure ^{1) 2)} [PSI]	Order No.
A	1/2"	NPT 1/2	ø 50	below seat	232	
	3/4"	NPT 3/4	ø 50	below seat	160	
	1"	NPT 1	ø 63	below seat	160	
	1 1/4"	NPT 1 1/4	ø 80	below seat	203	
	1 1/2"	NPT 1 1/2	ø 80	below seat	116	
	1 1/2"	NPT 1 1/2	ø 100	below seat	188	
	2"	NPT 2	ø 100	below seat	116	
	2"	NPT 2	ø 125	below seat	174	
B	2 1/2"	NPT 2 1/2	ø 125	below seat	101	
	1/2"	NPT 1/2	ø 50	below seat	232	
	3/4"	NPT 3/4	ø 50	below seat	232	
	1"	NPT 1	ø 63	below seat	232	
	1 1/4"	NPT 1 1/4	ø 63	below seat	188	
	1 1/2"	NPT 1 1/2	ø 63	below seat	130	
	1 1/2"	NPT 1 1/2	ø 80	below seat	232	
	2"	NPT 2	ø 63	below seat	87	
	2"	NPT 2	ø 80	below seat	130	
	2 1/2"	NPT 2 1/2	ø 80	below seat	87	

Type 2000 with Stainless Steel Body, Manually Operated

Control Function	Orifice [inch]	Threaded Ports	Weight [lb.]	Max. Operating Pressure [PSI]	Order No.
Manual	1/2"	NPT 1/2	2.0	232	
	3/4"	NPT 3/4	2.2	232	
	1"	NPT 1	2.6	232	
	1 1/4"	NPT 1 1/4	3.1	232	
	1 1/2"	NPT 1 1/2	3.5	232	
	2"	NPT 2	4.4	232	

On request:

- Double-acting actuator
- PPS-actuator for ambient temperatures up to 266°F
- Vacuum-version
- Control function B for pressures up to 232 PSI

Options:

- Stroke limitation (min./max flow)
- Position indication Type 1062 or position indication with external inductive switches.
- Manual override
- Namur adapter for pilot valve

In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.

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