



Angle Valves

Angle Seat Valves with Integral Pneumatic Actuator



The Angle Seat Valve is a 2/2-way pneumatically actuated piston valve for liquids, gases, vacuum, steam and some aggressive fluids. The superior design of the piston is unique to the market, enabling the plug to retract farther from the flow path, ensuring the highest flow capacity. The dual packing stem seal design (ss models only), and a large diameter self-aligning stem ensure the highest cycle life.

A full range of accessory items are available including limit switches, solenoid valves, manual override devices, stroke limiters.

END CONNECTIONS

NPT Threaded: 3/8" to 2"
Tri-Clamp: 1/2" to 2"
Butt Weld: *call for sizes*
Flanged: *call for sizes*

PRESSURE RANGE

29 inHg vacuum to 230 PSI
(steam to 150 PSI)

TEMPERATURE RANGE

-14°F to 358°F

MATERIALS

[see page 3 for complete material details](#)

Body, Plug, & Stem:

Bronze or 316 Stainless Steel

Seats and Seals:

PTFE

FEATURES

- High cycle-life
- NAMUR solenoid mounting pad
- Compact assembly
- Complete line of accessories
- Actuator head rotates 360°
- Visual indicator

TYPICAL APPLICATIONS

- Steam applications
- Air drying equipment, sterilizers and autoclaves
- Pollution control equipment, and process control applications
- Laundry equipment, textile dyeing and drying
- Bottling and dispensing equipment
- Ink and paint dispensing
- Industrial compressors

ACTUATORS Pneumatic

- **Spring return, NC** (normally closed) bi-directional flow
- **Spring return, NC** (normally closed) flow from above
- **Spring return, NO** (normally open) flow from below
- **Double acting**, bi-directional flow
- **Manual knob**, bi-directional flow

ACCESSORIES

- **Limit switches**
- **Solenoid valves**
- **Positioners**
- **Feedback units**
- **Push fittings**
- **1/4" poly tubing**

[see page 10](#)



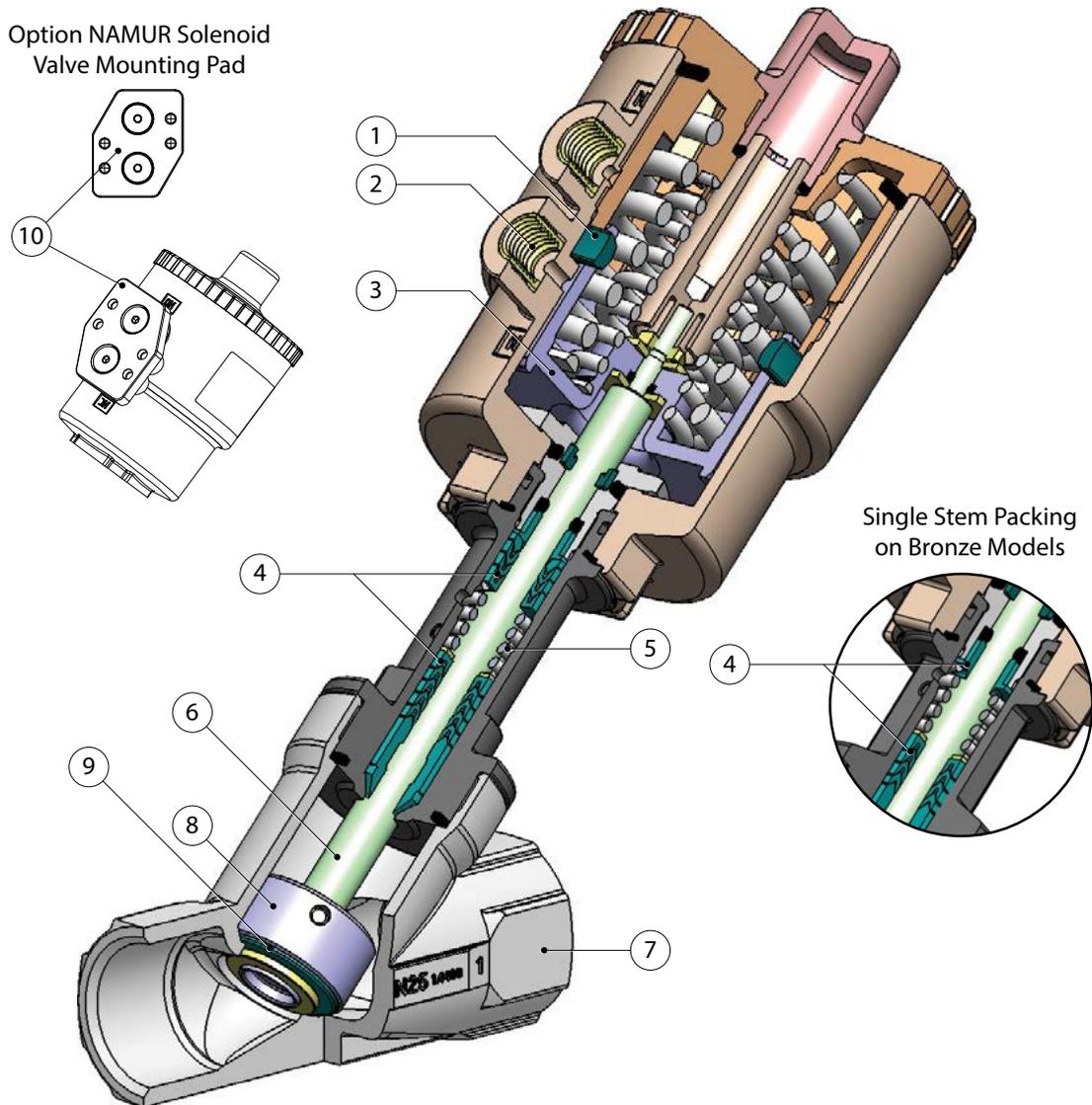


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Angle Seat Valves with Pneumatic Actuator

FEATURES AND BENEFITS



Item	Name	Benefit
1	Seal	Places on the cylinder rather than piston to reduce wear caused by actuation
2	Threaded Inserts for Air Connections	303 SS; G 1/4" (BSPP); prevents corrosion of threads from external agents
3	Piston	Nickel Coated Metal on sizes DN63 and up
4	Chevron seals	5 V-shaped seals below the preloading spring and 3 above the spring (*see single packing on bronze models)
5	Seal Preloading Spring	Energizes the seals to maintain sealing across dimensional changes caused by extreme temperature changes
6	Stem	Rolled shaft with 0.1 micron Ra facilitates sliding and reduces wear on seals
7	Body	Cast valve body with longer face to face for a better flow path with reduced turbulence
8	Plug	Self-aligning to fit and seat perfectly in valve body, ensuring maximum seal tightness
9	Plug Seal	Provides for perfect sealing between plug and valve body
10	NAMUR Mounting Adapter	Allows for the easy addition of a NAMUR solenoid valve



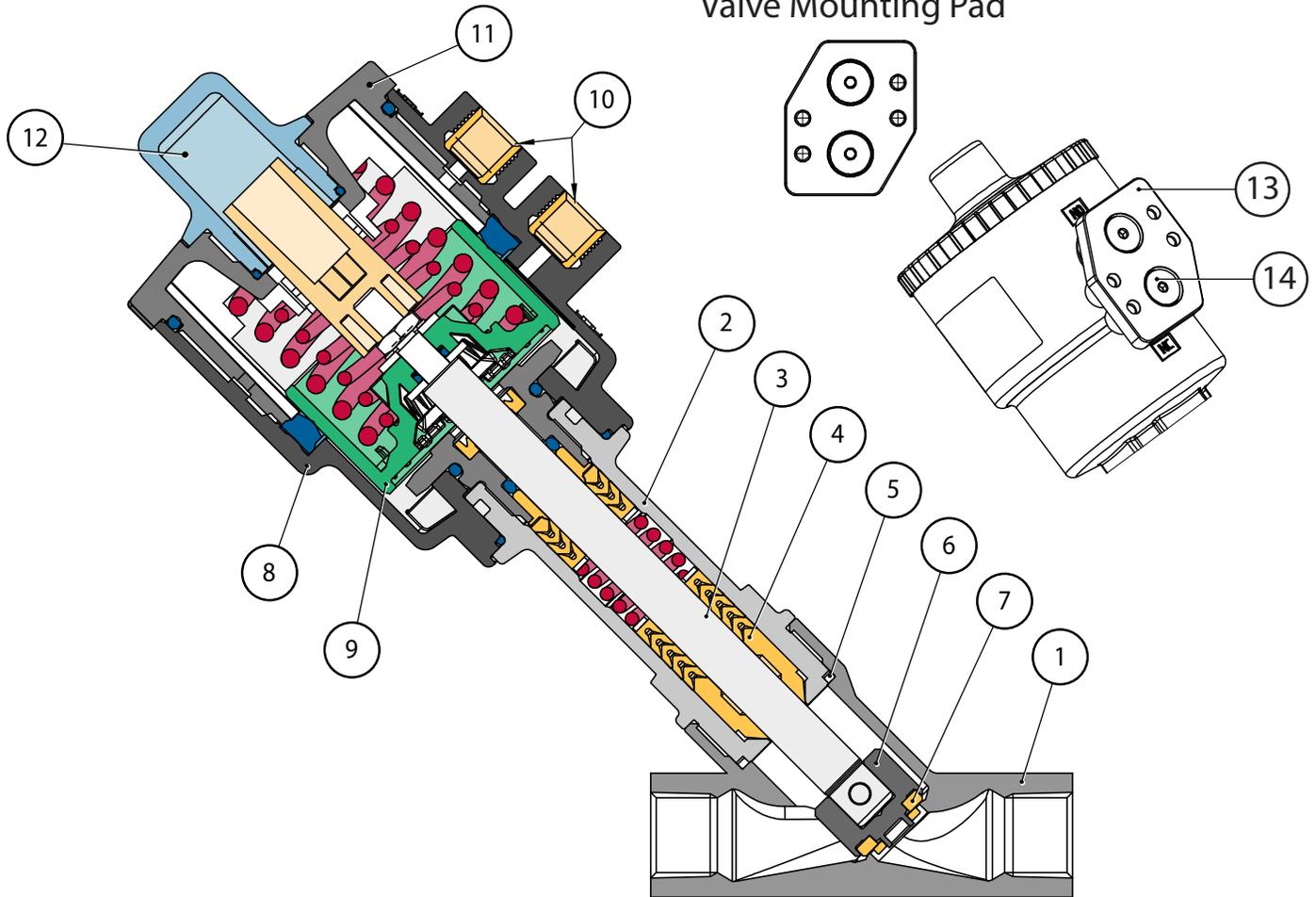
Angle Valves



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MATERIALS OF CONSTRUCTION

Option NAMUR Solenoid Valve Mounting Pad



Item	Name	Material
1	Valve Body	316 Stainless Steel (A351-CF8M)
2	Stem Sleeve Shaft	316 Stainless Steel (A351-CF8M)
3	Stem	316L Stainless Steel
4	Stem Seals	PTFE-CF
5	Body Seal	Graphite
6	Plug	316L Stainless Steel
7	Plug Seal	PTFE
8	Actuator Cylinder	Polyamide PA 66 + 30% Glass Fiber
9	Piston	Head size 40 - 50: PBT + 20% Glass Fiber; Head Size 63 and up: Nickel plated brass
10	Threaded Inserts for Air Connections	303 Stainless Steel
11	Actuator Cylinder Cap	Polyamide PA 66 + 30% Glass Fiber
12	Clear Visual Indicator Dome	Clear plastic
13	NAMUR Mounting Pad	Polyamide PA 66 + 30% Glass Fiber (with Viton o-rings between pad and actuator ports)
14	Mounting Pad Fasteners	303 Stainless Steel



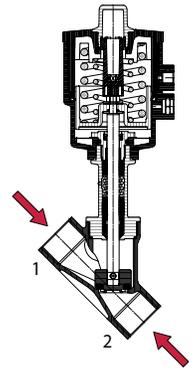
Angle Valves



Angle Seat Valves with Pneumatic Actuator

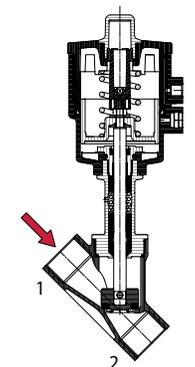
QUICK SIZING CHARTS NPT Models Spring Return, Fail Closed, Bi-Directional Flow

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number	
				80 psi Supply Air		Stainless Steel	Bronze
3/8"	5.68	DN 50	2.42	232		J4SPG1643	J9SPG1643
1/2"	6.61	DN 50	2.20	232		J4SPG1644	J9SPG1644
3/4"	12.18	DN 50	2.64	145		J4SPG1645	J9SPG1645
3/4"	12.53	DN 63	2.64	232		J4SPG1845	J9SPG1845
1"	23.30	DN 63	3.52	160		J4SPG1846	J9SPG1846
1"	23.30	DN 90	3.74	232		J4SPG2146	J9SPG2146
1 1/4"	33.64	DN 90	6.60	203		J4SPG2147	J9SPG2147
1 1/2"	53.36	DN 90	7.48	145		J4SPG2148	J9SPG2148
1 1/2"	53.94	DN 110	8.80	232		J4SPG2348	J9SPG2348
2"	77.72	DN 110	11.66	145		J4SPG2349	J9SPG2349



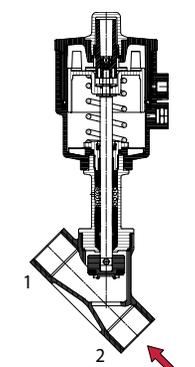
Spring Return, Fail Closed, Flow from Above the Plug

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number	
				60 psi Supply Air	80 psi Supply Air	Stainless Steel	Bronze
3/8"	5.68	DN 50	2.42	232	232	J4CPG1643	J9CPG1643
1/2"	6.61	DN 50	2.20	232	232	J4CPG1644	J9CPG1644
3/4"	12.18	DN 50	2.64	232	232	J4CPG1645	J9CPG1645
1"	23.30	DN 63	2.64	232	232	J4CPG1846	J9CPG1846
1 1/4"	33.64	DN 90	3.52	232	232	J4CPG2147	J9CPG2147
1 1/2"	53.36	DN 90	6.60	232	232	J4CPG2148	J9CPG2148
1 1/2"	53.94	DN 110	7.48	232	232	J4CPG2348	J9CPG2348
2"	68.44	DN 00	8.80	143	232	J4CPG2149	J9CPG2149
2"	77.72	DN 110	11.66	232	232	J4CPG2349	J9CPG2349



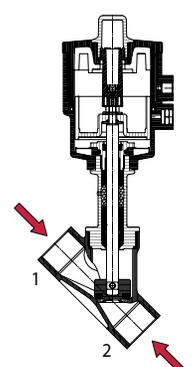
Spring Return, Fail Open, Flow from Below the Plug

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number	
				60 psi Supply Air	80 psi Supply Air	Stainless Steel	Bronze
3/8"	5.68	DN 50	2.20	232	232	J4APG1643	J9APG1643
1/2"	6.61	DN 50	2.20	232	232	J4APG1644	J9APG1644
3/4"	12.18	DN 50	2.64	170	232	J4APG1645	J9APG1645
1"	23.20	DN 63	3.52	170	232	J4APG1846	J9APG1846
1 1/4"	33.06	DN 63	4.40	120	200	J4APG1847	J9APG1847
1 1/4"	33.30	DN 90	4.40	131	232	J4APG2147	J9APG2147
1 1/2"	53.36	DN 90	8.14	150	232	J4APG2148	J9APG2148
2"	77.45	DN 110	16.72	150	232	J4APG2349	J9APG2349



Double Acting, Fail in Place, Bi-directional Flow

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number	
				60 psi Supply Air	80 psi Supply Air	Stainless Steel	Bronze
3/8"	5.68	DN 50	2.20	232	232	J4DPG1643	J9DPG1643
1/2"	6.61	DN 50	2.20	232	232	J4DPG1644	J9DPG1644
3/4"	12.18	DN 50	2.64	232	232	J4DPG1645	J9DPG1645
1"	23.30	DN 63	3.52	232	232	J4DPG1846	J9DPG1846
1 1/4"	33.64	DN 63	4.40	232	232	J4DPG1847	J9DPG1847
1 1/2"	40.46	DN 63	4.40	232	232	J4DPG1848	J9DPG1848
1 1/2"	53.94	DN 90	8.14	232	232	J4DPG2148	J9DPG2148
2"	68.44	DN 90	8.80	143	232	J4DPG2149	J9DPG2149



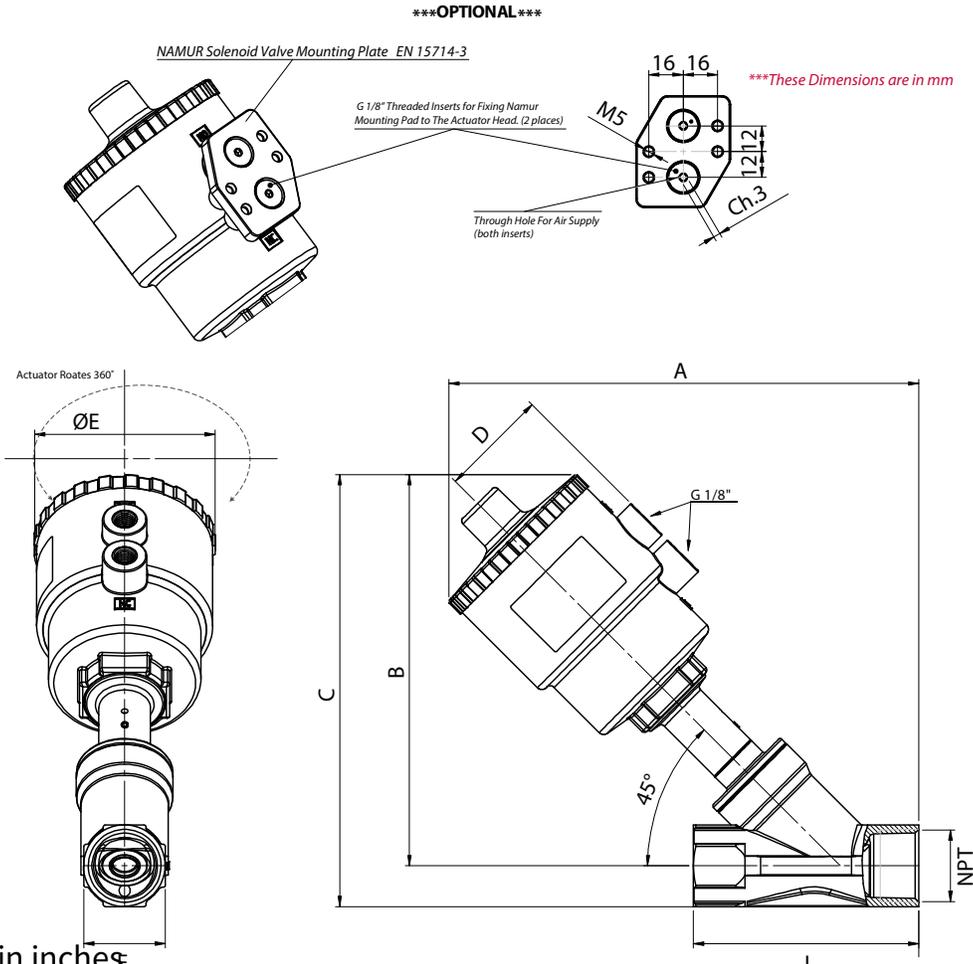


Angle Valves



Angle Seat Valves with Pneumatic Actuator

DIMENSIONS Stainless Steel Valve Bodies with NPT Connections



Dimensions in inches

NPT Size	Actuator Size	A	B	C	D	ØE	L (Valve Length)	F (Wrench Flats)	Model*
3/8"	50	7.48	6.16	6.65	1.73	2.76	3.35	0.98	J4_PG1643
1/2"	50	7.48	6.16	6.65	1.73	2.76	3.35	0.98	J4_PG1644
3/4"	50	7.68	6.32	6.93	1.73	2.76	3.74	1.22	J4_PG1645
3/4"	63	8.39	7.03	7.65	1.99	3.32	3.74	1.22	J4_PG1845
1"	50	7.87	6.46	7.20	1.73	2.76	4.13	1.50	J4_PG1646
1"	63	8.62	7.20	7.95	1.99	3.32	4.13	1.50	J4_PG1846
1"	90	10.20	8.78	9.53	2.61	4.58	4.13	1.50	J4_PG2146
1 1/4"	50	8.19	6.59	7.52	1.73	2.76	4.72	1.85	J4_PG1647
1 1/4"	63	8.90	7.30	9.80	1.99	3.32	4.72	1.85	J4_PG1847
1 1/4"	90	10.47	8.88	11.22	2.61	4.58	4.72	1.85	J4_PG2147
1 1/2"	63	9.09	10.30	8.58	1.99	3.32	5.12	2.13	J4_PG1848
1 1/2"	90	10.67	7.52	10.16	2.61	4.58	5.12	2.13	J4_PG2148
1 1/2"	110	12.09	9.09	11.57	3.05	5.54	5.12	2.13	J4_PG2348
2"	63	9.65	7.87	9.17	1.99	3.32	5.91	2.60	J4_PG1849
2"	90	11.22	9.49	10.79	2.61	4.58	5.91	2.60	J4_PG2149
2"	110	12.64	10.87	12.20	3.05	5.54	5.91	2.60	J4_PG2349

* For a complete model number, replace the underscore (_) with the letter to represent the actuator type.

C = Fail Closed (1 spring) Flow from above; **S** = Fail Closed (2 springs) bidirectional; **A** = Fail Open (1 spring) Flow from below; **D** = Double Acting

Note: NOT ALL COMBINATIONS AVAILABLE! [See the Quick Sizing Chart on Page 4](#)

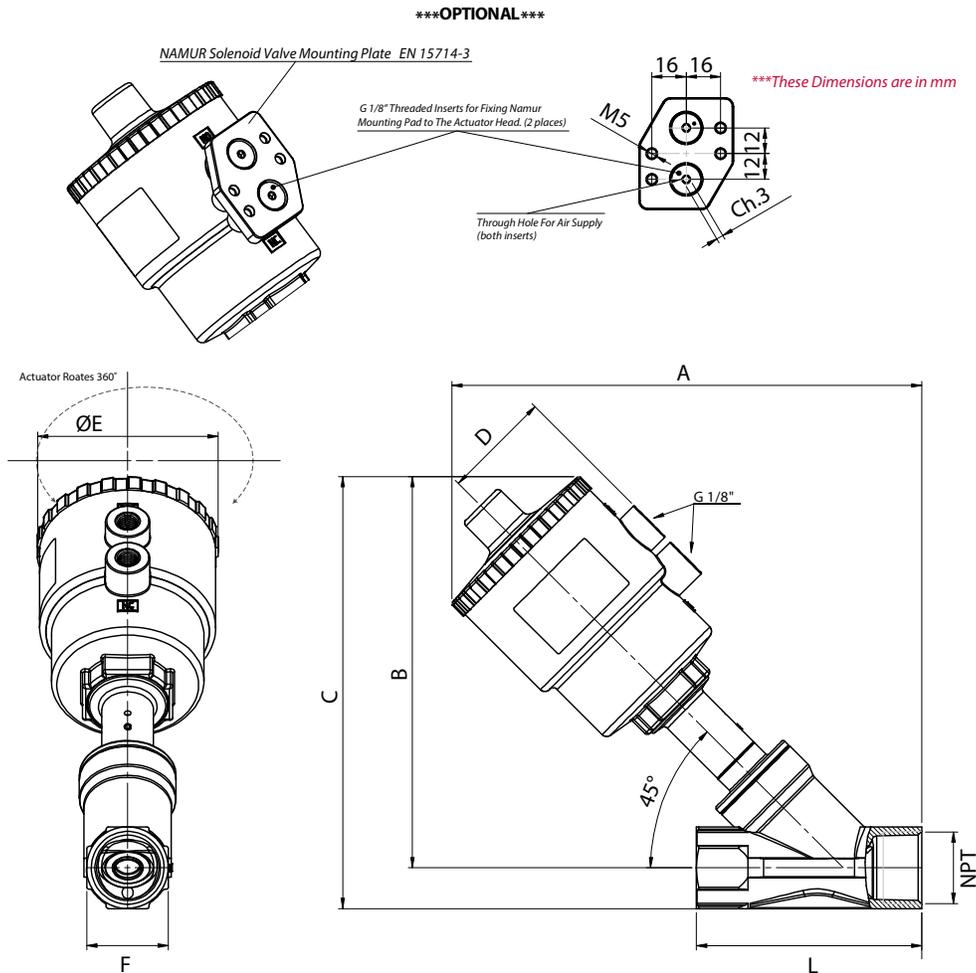


Angle Valves



Angle Seat Valves with Pneumatic Actuator

DIMENSIONS Bronze Valve Bodies with NPT Connections



Dimensions in inches

NPT Size	Actuator Size	A	B	C	D	ØE	L (Valve Length)	F (Wrench Flats)	Model*
3/8"	50	6.54	5.63	6.16	1.73	2.76	2.56	1.06	J9_PG1643
1/2"	50	6.54	5.63	6.16	1.73	2.76	2.56	1.06	J9_PG1644
3/4"	50	6.85	5.85	6.50	1.73	2.76	2.95	1.30	J9_PG1645
3/4"	63	7.58	6.57	7.22	1.99	3.32	2.95	1.30	J9_PG1845
1"	63	8.11	8.86	7.72	1.99	3.32	3.54	1.61	J9_PG1846
1"	90	10.02	7.09	9.67	2.61	4.58	3.54	1.61	J9_PG2146
1 1/4"	63	8.46	9.25	8.07	1.99	3.32	4.33	1.97	J9_PG1847
1 1/4"	90	10.51	10.67	10.08	2.61	4.58	4.33	1.97	J9_PG2147
1 1/2"	90	10.63	9.25	10.39	2.61	4.58	4.72	2.28	J9_PG2148
1 1/2"	110	12.05	10.67	11.81	3.05	5.54	4.72	2.28	J9_PG2348
2"	90	11.02	9.45	10.83	2.61	4.58	5.91	2.76	J9_PG2149
2"	110	12.44	10.87	12.24	3.05	5.54	5.91	2.76	J9_PG2349

* For a complete model number, replace the underscore (_) with the letter to represent the actuator type.

C = Fail Closed (1 spring) Flow from above; **S** = Fail Closed (2 springs) bidirectional; **A** = Fail Open (1 spring) Flow from below; **D** = Double Acting

Note: NOT ALL COMBINATIONS AVAILABLE! [See the Quick Sizing Chart on Page 4](#)



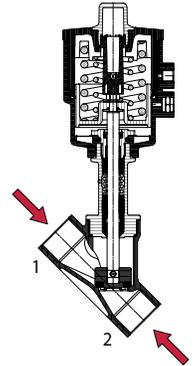
Angle Valves



Angle Seat Valves with Pneumatic Actuator

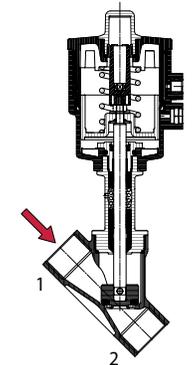
QUICK SIZING CHARTS Tri-Clamp Models Spring Return, Fail Closed, Bi-Directional Flow

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number
				60 psi Supply Air	80 psi Supply Air	
1/2"	3.93	50	2.20	140	232	J4SPG16U4
3/4"	6.58	50	2.43	140	232	J4SPG16U5
1"	12.13	50	2.65	150	232	J4SPG16U6
1 1/2"	33.52	90	3.09	175	160	J4SPG21U8
2"	53.75	110	11.66	95	232	J4SPG23U9



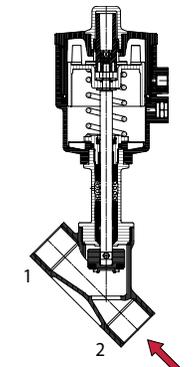
Spring Return, Fail Closed, Flow from Above the Plug

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number
				60 psi Supply Air	80 psi Supply Air	
1 1/2"	33.52	90	2.64	232	232	J4CPG21U8
2"	53.17	90	3.52	232	232	J4CPG21U9



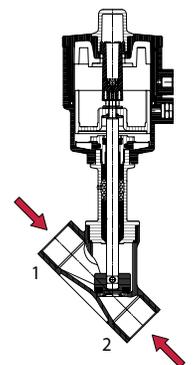
Spring Return, Fail Open, Flow from Below the Plug

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number
				60 psi Supply Air	80 psi Supply Air	
1/2"	3.93	50	2.20	232	232	J4APG16U4
3/4"	6.58	50	2.20	170	232	J4APG16U5
1"	12.13	50	2.64	170	232	J4APG16U6
1 1/2"	33.52	90	3.52	150	232	J4APG21U8
2"	53.17	90	4.40	150	232	J4APG21U9



Double Acting, Fail in Place, Bi-directional Flow

Line Size	Cv (gpm)	Actuator Size	Weight (lbs.)	Maximum Line Pressure (psi)		Model Number
				60 psi Supply Air	80 psi Supply Air	
1/2"	3.93	50	2.20	232	232	J4DPG16U4
3/4"	6.58	50	2.43	232	232	J4DPG16U5
1"	12.13	50	2.65	232	232	J4DPG16U6
1 1/2"	33.52	90	4.41	232	232	J4DPG21U8
2"	53.17	90	5.07	232	232	J4DPG21U9



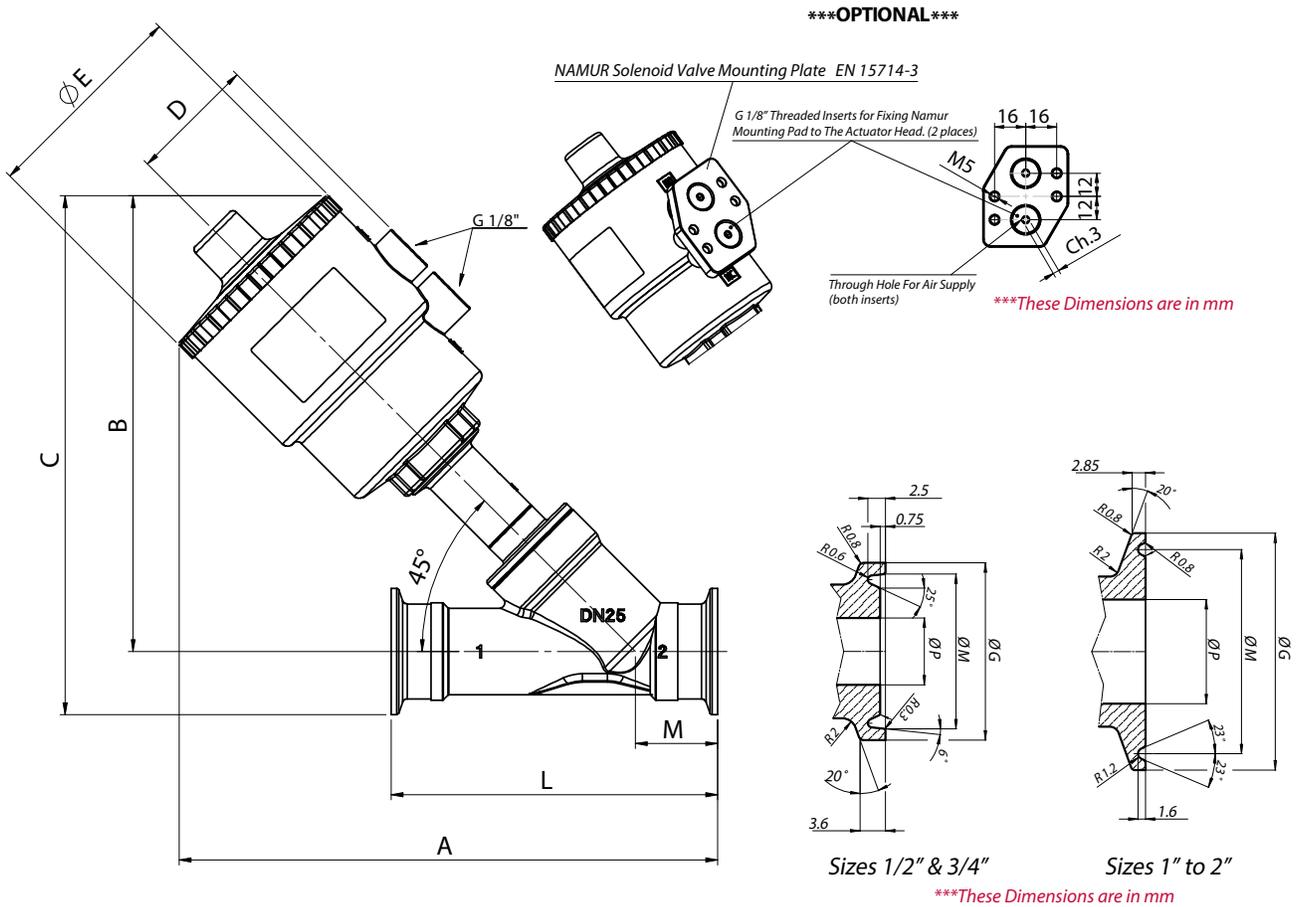


Angle Valves



Angle Seat Valves with Pneumatic Actuator

DIMENSIONS Stainless Steel Valve Bodies with Tri-Clamp Connections



Dimensions in inches (except where noted)

Tri-clamp Size	Actuator Size	A	B	C	D	ØE	L (Valve Length)	ØG (in mm)	ØM (in mm)	ØP (in mm)	Model*
1/2"	50	7.05	6.14	6.64	1.73	2.76	3.50	25.2	22	9.5	J4_PG16U4
3/4"	50	7.15	6.14	6.64	1.73	2.76	4.00	25.2	22	15.8	J4_PG16U5
1"	50	7.45	6.30	7.30	1.73	2.76	4.50	50.5	43.5	22.2	J4_PG16U6
1"	63	8.16	7.01	8.01	1.99	3.32	4.50	50.5	43.5	22.2	J4_PG18U6
1 1/2"	63	8.45	7.32	8.32	1.99	3.32	5.50	50.5	43.5	34.9	J4_PG18U8
1 1/2"	90	10.02	8.90	9.89	2.61	4.58	5.50	50.5	43.5	34.9	J4_PG21U8
1 1/2"	110	11.44	10.28	11.27	3.05	5.54	5.50	50.5	43.5	34.9	J4_PG23U8
2"	63	8.85	7.48	8.74	1.99	3.32	6.25	64	56.5	47.6	J4_PG18U9
2"	90	10.42	9.06	10.31	2.61	4.58	6.25	64	56.5	47.6	J4_PG21U9
2"	110	11.84	10.47	11.73	3.05	5.54	6.25	64	56.5	47.6	J4_PG23U9

* For a complete model number, replace the underscore (_) with the letter to represent the actuator type.

C = Fail Closed (1 spring) Flow from above; **S** = Fail Closed (2 springs) bidirectional; **A** = Fail Open (1 spring) Flow from below; **D** = Double Acting

Note: NOT ALL COMBINATIONS AVAILABLE! [See the Quick Sizing Chart on Page 7](#)



Angle Valves



Angle Seat Valves with Pneumatic Actuator

ORDERING INFORMATION

J	4	A	PG	14	43	NP
Body Material	Actuator Type		Actuator Size	End Connections	Air Conn.	

Body Material: _____

4 = 316 SS

9 = Bronze

Actuator Type: _____

C = Spring Return, Fail Closed with 1 spring
(for flow from above the plug) - *NPT sizes 1 1/4" and up ONLY*

S = Spring Return, Fail Closed with 2 springs
(for bi-directional flow)

A = Spring Return, Fail Open with 1 spring
(for flow from below the plug)

D = Double Acting, Fail in Place
(for bi-directional flow)

Actuator Size: _____

14 = 40

16 = 50

18 = 63

21 = 90

23 = 110

End Connections: _____

NPT

43 = 3/8"

44 = 1/2"

45 = 3/4"

46 = 1"

47 = 1 1/4"

48 = 1 1/2"

49 = 2"

Tri-Clamp

U4 = 1/2"

U5 = 3/4"

U6 = 1"

U8 = 1 1/2"

U9 = 2"

Air Connections: _____

(omit) = SS threaded inserts, 1/8" NPT

NP = NAMUR Adapter plate

Note: NOT ALL COMBINATIONS ARE AVAILABLE!

Make it Easy!

Use the **Quick Sizing Charts** on
page 4 for NPT or page 7 for Tri-clamp
to verify your selection.

OR

Try Our **Online Configurator** at:
assuredautomation.com

With **Instant Pricing** and you can **Buy Now**



Angle Valves



Angle Seat Valves with Pneumatic Actuator

ACCESSORIES Call for Details

Solenoid Valves

NAMUR solenoid valves for direct mount to angle valve (optional NP mounting plate required). Various coil and connector options are available including weatherproof, explosion proof, corded, NPT conduit, and cable gland.

3-way

for spring return models



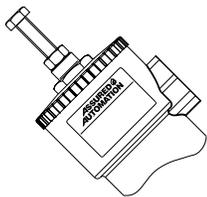
3/4-way for

for double acting models



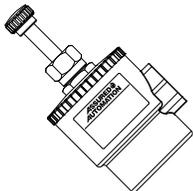
SPECIAL ORDER MODELS Call for Details

Flanged End Connections



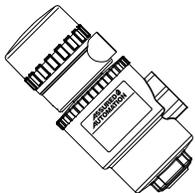
Stroke Limiter

Used to limit the retraction of the plug in the open position to regulate flow. Can also be used as an emergency shut-off for fail open valves.



Manual Override

Allows for manual opening of angle valves in emergency situations.



Limit Switches

Used to confirm valve position. Mechanical, Solid State, Proximity, and Inductive types.



Modulating Positioners

Control the angle valve to precise degree of plug retraction with a 4-20 mA signal. Models with a 4-20 mA feedback signal are also available.

Weld End Connections



Manual Actuators

