

# Air & Electric Actuated Valves



Precision Engineered

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## Contents

Air Actuated Ball Valve Numbering System.....	D2
Air Actuated Ball Valve List Price.....	D3
Air Actuated Ball Valve Specifications .....	D4
Rotary Air Actuator Dimensions & Specifications.....	D5
Electric Actuator List Price & Specifications .....	D6
Air Actuated Angle Seat Valve List Price & Specifications.....	D7
Actuated Angle Seat Valve Technical Data & Dimensions.....	D8

Ordering Part No. =  
(e.g., **KS 2-S-2-D-P**)



Proximity Switch/Indicator


Electrical Connection




Namur Style Solenoid Valve






Fitting Name		Port Size (in)	Connection		Valve Type		Valve Material		Options		
Single Acting (Spring Return)	KS	1/4	NPT	(leave blank)	2 Way, Normally Closed	(leave blank)	316 Stainless Steel	(leave blank)	Namur Solenoid Valve		
Double Acting (Air Return)	KD	3/8	Tri-Clamp	C	2 Way, Normally Open	O	Brass	B	Coil Voltage	12VDC	1
		1/2	Flange	F	3 Way (L Port)	L				24VDC	2
		3/4	BSPP	G	3 Way (T Port)	T				24VAC	2A
		1	BSPT	R						110VAC 50/60HZ	3
		1 1/4	Socket Weld	S						220VAC 50/60HZ	4
		1 1/2	Butt Weld	W							
		2							Coil Electrical	DIN	D
		2 1/2								2 Lead Wires	G
		3								1/2NPT for Conduit	N
		4								Explosion Proof Coil	E
		6							Proximity Switch, 2 SPDT (APL-210N)		P
									Proximity Switch, 2 SPDT, Exp. Proof (APL-410)		X

# Air Actuated Ball Valves List Price

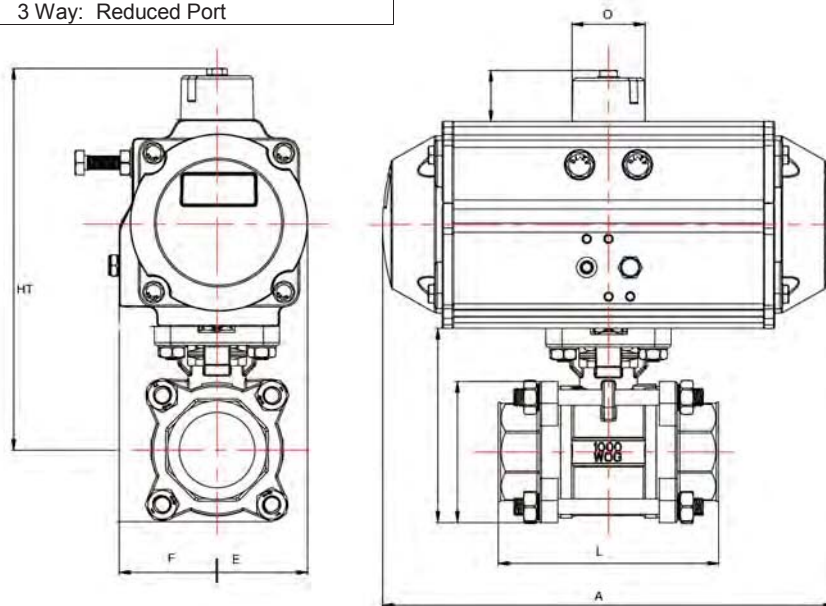
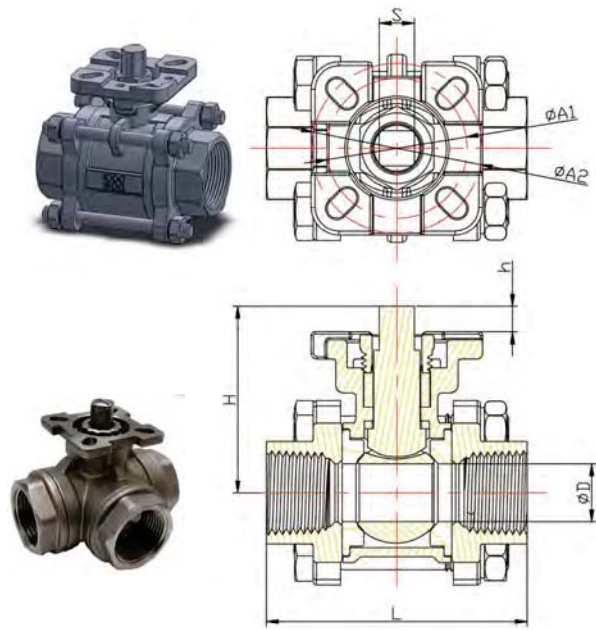
Rotary Pneumatic Ball Valve		Air Actuated Ball Valve List Price					Specifications
		Port Size NPT	Air Actuated Single Acting		Air Actuated Double Acting		
			Model No.	Price	Model No.	Price	
	2/2 3 Piece Full Port Ball Valve 316 SS	1/4"	KS 1/4	\$216.60	KD 1/4	\$187.80	Fluid Temperature with PTFE seal: -10°C to 180°C  Pressure: Vacuum to 1000 PSI  Service: Air, Gas, Liquid, Steam, Vacuum
		3/8"	KS 3/8	\$216.60	KD 3/8	\$187.80	
		1/2"	KS 1/2	\$216.60	KD 1/2	\$187.80	
		3/4"	KS 3/4	\$228.12	KD 3/4	\$193.55	
		1"	KS 1	\$262.68	KD 1	\$239.64	
		1 1/4"	KS 1 1/4	\$353.21	KD 1 1/4	\$274.21	
		1 1/2"	KS 1 1/2	\$458.55	KD 1 1/2	\$354.85	
		2"	KS 2	\$607.17	KD 2	\$423.98	
		3"	KS 3	\$1,149.81	KD 3	\$1,034.60	
		4"	KS 4	\$2,637.18	KD 4	\$2,442.37	
	6"	KS 6					

Model	Namur Solenoid Valves for Controlling Air Actuated Valves					
	Part No. = Model — Voltage Option — Electrical Options					
	Model		Voltage Options	Electrical Options	Non-Exp. Proof List Price	Exp. Proof List Price
 Non-Exp. Proof	3 Way Namur Single Solenoid Valve	3V310-1/4B	1 = 12 VDC 2 = 24VDC  2A=24VAC 3 = 110VAC 4 = 220VAC (50/60Hz)	D = DIN G = Grommet (12" Lead Wire) E = Explosion Proof	\$43.35	\$196.17
	3 Way Namur Double Solenoid Valve	3V320-1/4B			\$64.00	\$289.43
 Exp. Proof	4 Way Namur Single Solenoid Valve	4V310-1/4B			\$43.35	\$196.17
	4 Way Namur Double Solenoid Valve	4V320-1/4B			\$64.00	\$289.43
	Flow Control for Namur Valve	ASC N1/4B			\$15.47	

Model	STC Proximity Switches/Position Indicators					
	Part No.	List Price	Voltage	Current	Cable Entry	Specifications
	APL-210N	\$81.00	Max. 250VAC or DC	5A @ 8 to 14VDC 4A @ 30VDC 0.4A @ 125VDC 0.2A @ 250VDC  5A @ 125VAC, 3A @ 250VAC	2-1/2 NPT	Position Indicator for Rotary Actuator, IP 67 ENCLOSURE, 2 SPDT Mechanical Limit Switches, Visual OPEN/CLOSED Indicator
	APL-310N	\$141.71	Max. 250VAC or DC	0.6A 125VDC, 0.3A 250V DC  16A 125 to 250VAC	2-1/2 NPT	Position Indicator for Rotary Actuator, 2 SPDT Mechanical Limit Switches, Visual OPEN/CLOSED Indicator
	APL-410	\$283.42	Max. 250VAC or DC	0.6A 125VDC, 0.3A 250VDC  15A 125 to 250 VAC	2-3/4 NPT	<b>Explosion Proof</b> Position Indicator for Rotary Actuator, Exd II BT6, IP 67 ENCLOSURE, 2 SPDT Mechanical Limit Switches, Visual OPEN/CLOSED Indicator

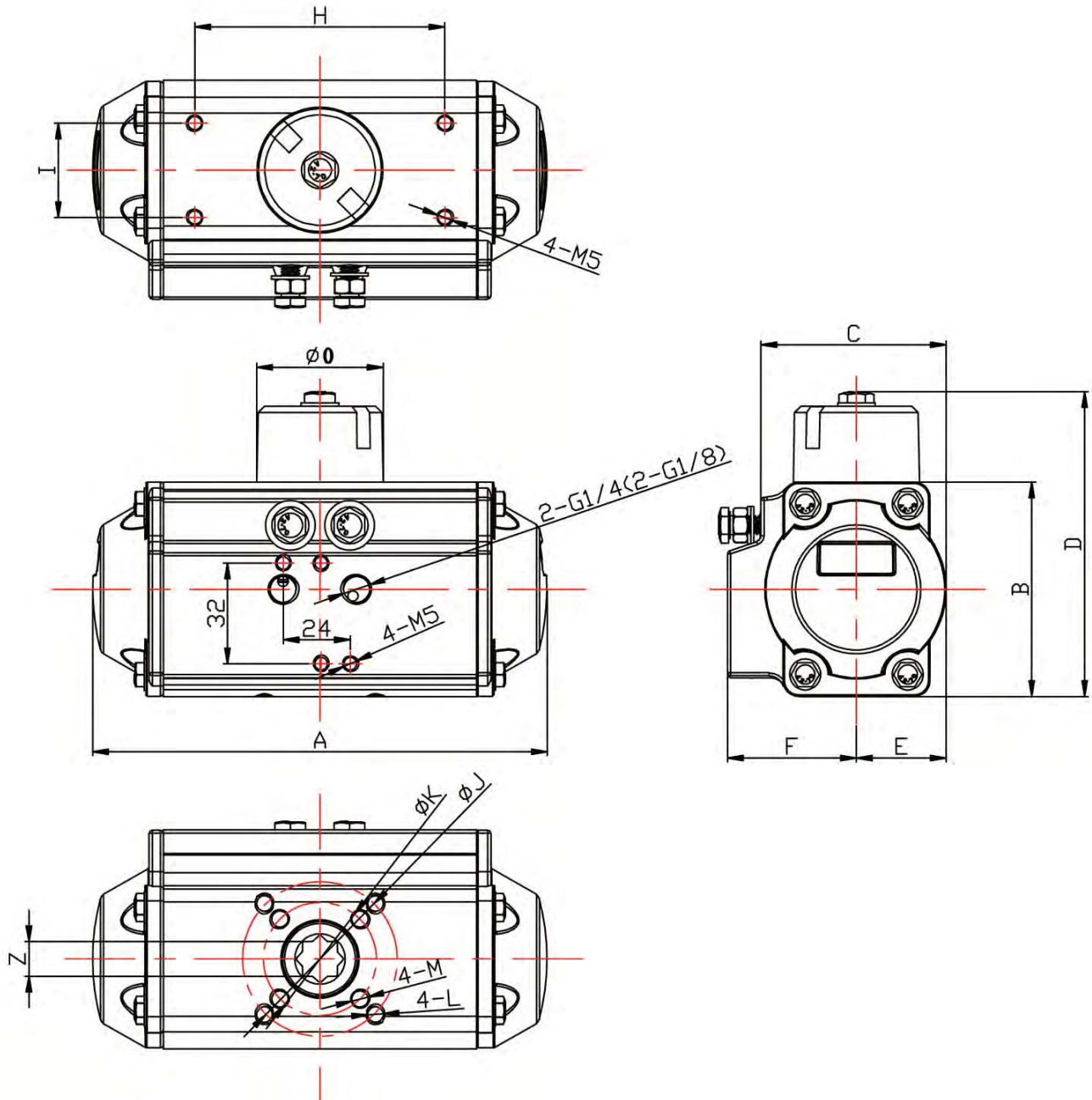
# Air Actuated Ball Valve Size & Specifications

Actuated Valve Body Specifications	
Valve Body & Ball	316 Stainless Steel / CF8M
Seat Seals & Packing	PTFE
Service Medium	Air, Gas, Liquid, Steam, Water
Operating Pressure	1/4" to 2": 1000 PSI @ 100°F WOG 2 1/2" to 4": 800 PSI @ 100°F WOG
Media Temperature	-60 to 450 °F
Ambient Temperature	-4 to 176 °F (-20 TO 80 °C)
Maximum Viscosity	600 mm <sup>2</sup> /s
Installation Orientation	Any Orientation
Controlling Medium	Air, Inert Gas
Controlling Pressure Range	45-120 PSI
Mounting standard	DIN 3203-M3, ISO 5211 MOUNTING PAD, ISO5211 PLATFORM
Port	2 Way: Full Port 3 Way: Reduced Port



Actuated Valve Body Dimensions (mm)																	
2 WAY	3 WAY	SIZE	D	L	H	h	S	Actuator Mounting: ISO05211		Actuator Bore Size (MM)							
								A1/(MM)	A2/(MM)	Single Acting	A	F+E	HT	Double Acting	A	F+E	HT
V3-1/2-A	V-1/2-L-A	1/2"	15	75	38	9	9	F03/36	F04/42	63	190	80	103	32	110	45.5	103
V3-3/4-A	V-3/4-L-A	3/4"	20	80	47	9	9	F03/36	F04/42	63	190	80	112	50	143	71	139
V3-1-A	V-1-L-A	1"	25	90	57.2	11	11	F04/42	F05/50	63	190	80	122.2	50	143	71	149.2
V3-1 1/4-A	V-1 1/4-L-A	1 1/4"	32	110	62.5	11	11	F04/42	F05/50	75	207	91	182	63	190	80	170.5
V3-1 1/2-A	V-1 1/2-L-A	1 1/2"	38	120	77.5	14	14	F05/50	F07/70	88	213	98.5	206.5	63	190	80	185.5
V3-2-A	V-2-L-A	2"	50	140	86.5	14	14	F05/50	F07/70	88	213	98.5	215.5	75	207	91	206
V3-2 1/2-A	V-2 1/2-L-A	2 1/2"	65	162	108	17	17	F07/70	F10/102	100	267	121	261	88	213	98.5	237
V3- 3-A	V- 3-L-A	3"	80	184	115	17	17	F07/70	F10/102	125	340	137.5	290	100	267	121	268
V3-4-A	V-4-L-A	4"	100	228	141	22	22	F07/70	F10/102	145	414	151	332.5	125	340	137.5	316

# Rotary Air Actuator Dimensions & Specifications



Rotary Air Actuator Dimensions																				
Model Double Acting	Model Single Acting	Size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	A120	A180	Air Connection
AT032D	AT032S	32	110	45	45	65	22.5	23	12	50	25		F03/36		M5X5	9				G1/8
AT050D	AT050S	50-52	143	72	55	92	30	41	14	80	30	F05/50	F03/36	M6X8	M5X8	11	40	158	200	G1/4
AT063D	AT063S	63	190	88	69	108	35	45	18	90	30	F07/70	F05/50	M8X13	M6X10	14	40	184	233	G1/4
AT075D	AT075S	75	207	99.5	100.5	119.5	38.5	52.5	20.5	80	30	F07/70	F05/50	M8X10	M6X8	14	40	203	243	G1/4
AT088D	AT088S	85-88	213	109	88	129	46	52.5	21	80	30	F07/70	F05/50	M8X13	M6X10	17	40	221	280	G1/4
AT092D	AT092S	92	258	117	98.5	137	50	61	21	80	30	F07/70	F05/50	M8X12	M6X10	17	40	280	374	G1/4
AT0100D	AT0100S	100-105	267	133	109	153	57	64	26	80	30	F10/102	F07/70	M10X13	M8X10	22	40	304	388	G1/4
AT125D	AT125S	125	340	155	120.5	175	67.5	70	27.5	80	30	F10/102	F07/70	M10X16	M8X13	22	65	365	470	G1/4
AT145D	AT145S	140-145	414	171.5	132	191.5	75	76	32	80	30	F12/125	F10/102	M12X20	M10X15	27	65	442	568	G1/4

NOTE: A120 and A180 represent the acting length of the 120° rotation travel and 180° rotation travel, respectively.



# Electric Actuator List Price & Specifications

Ordering Part No. =  
(e.g., E 1/2-3-S)



Indicator / Control



Fitting Name		Port Size (in)	Connection		Valve Type		Valve Material		Options				
Electric Actuated Valves	E	1/2	NPT	(leave blank)	2 Way, Normally Closed	(leave blank)	316 Stainless Steel	(leave blank)	Coil Voltage	24VDC	2		
		3/4	Tri-Clamp	C	2 Way, Normally Open	O				24VAC	2A		
		1	Flange	F						110VAC 50/60HZ	3		
		1 1/4	BSPP	G						220VAC 50/60HZ	4		
		1 1/2	BSPT	R					Control Signal	1K, 5K Potentiometer	4-20 mA (for Proportional Control)	(leave blank)	(leave blank)
		2	Socket Weld	S	Contact Signal	S							
		2 1/2	Butt Weld	W	3 Way (L Port)	L						1K, 5K Potentiometer	R
		3			3 Way (T Port)	T							
4													

Valve Body	2 Way Valve with Actuator with ON/OFF Indicator		2 Way Valve with Actuator with Contact Signal		2 Way Valve with Actuator with Proportional Control		3 Way (L Ball) with Actuator with ON/OFF Indicator		3 Way (T Ball) with Actuator with ON/OFF Indicator	
	Port Size (NPT)	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price	Part No.
1/4	E 1/4-V	\$527.01	E 1/4-V-S	\$574.03	E 1/4-V-T	\$1,090.89	E 1/4-L-V	\$541.55	E 1/4-T-V	\$541.55
3/8	E 3/8-V	\$527.01	E 3/8-V-S	\$574.03	E 3/8-V-T	\$1,090.89	E 3/8-L-V	\$541.55	E 3/8-T-V	\$541.55
1/2	E 1/2-V	\$527.01	E 1/2-V-S	\$574.03	E 1/2-V-T	\$1,090.89	E 1/2-L-V	\$541.55	E 1/2-T-V	\$541.55
3/4	E 3/4-V	\$537.65	E 3/4-V-S	\$584.67	E 3/4-V-T	\$1,101.53	E 3/4-L-V	\$561.84	E 3/4-T-V	\$561.84
1	E 1-V	\$566.73	E 1-V-S	\$613.75	E 1-V-T	\$1,130.61	E 1-L-V	\$599.21	E 1-T-V	\$599.21
1 1/4	E 1 1/4-V	\$600.20	E 1 1/4-V-S	\$647.21	E 1 1/4-V-T	\$1,164.08	E 1 1/4-L-V	\$684.25	E 1 1/4-T-V	\$684.25
1 1/2	E 1 1/2-V	\$688.91	E 1 1/2-V-S	\$735.93	E 1 1/2-V-T	\$1,252.79	E 1 1/2-L-V	\$827.71	E 1 1/2-T-V	\$827.71
2	E 2-V	\$924.16	E 2-V-S	\$971.18	E 2-V-T	\$1,488.04	E 2-L-V	\$1,079.04	E 2-T-V	\$1,079.04
2 1/2	E 2 1/2-V	\$1,163.52	E 2 1/2-V-S	\$1,210.54	E 2 1/2-V-T	\$1,727.41				
3	E 3-V	\$1,692.13	E 3-V-S	\$1,739.09	E 3-V-T	\$2,256.00				
4	E 4-V	\$2,259.95	E 4-V-S	\$2,306.97	E 4-V-T	\$2,823.83				

Electric Actuator	Part No.	List Price	Torque	Cycle Time	Weight	Special function	Control Signal	Ball Valve Size, NPT Diameter (DN)	Butterfly Valve Size Diameter (DN)	Rotation
	E-05	\$469.89	50N * M	20S	2.6Kg	On-off Light	Light Indicator	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10	\$657.86	100N * M	30/60S	3.7Kg			2" to 2 1/2" (50-65)	2" to 4" (50-125)	
	E-20	\$892.84	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40	\$939.80	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	
	E-60	\$1,174.77	600N * M	45S	7.3Kg			4" (100-125)	10" to 12" (250-300)	
	E-100	\$1,503.67	1000N * M	50S	7.3Kg			6" (125-150)	12" to 16" (300-400)	
	E-200	\$1,691.69	2000N * M	100S	11.2Kg			6" to 12" (150-300)	18" to 28" (450-700)	
	E-05S	\$516.92	50N * M	20S	2.6Kg	Passive Contact	S = Contact Signal	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10S	\$704.87	100N * M	30/60S	3.7Kg			2" to 2 1/2" (50-65)	2" to 4" (50-125)	
	E-20S	\$939.80	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40S	\$986.81	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	
	E-05R	\$610.90	50N * M	20S	2.6Kg	Opening Signal	R = Potentiometer (1-5K)	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10R	\$798.85	100N * M	30/60S	3.7Kg			2" to 2 1/2" (50-65)	2" to 4" (50-125)	
	E-20R	\$1,033.78	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40R	\$1,080.79	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	
	E-05T	\$1,033.78	50N * M	20S	2.6Kg	Proportional Control	T=4-20mA	1/2" to 1 1/2" (15-40)	1" to 2 1/2" (32-65)	90°
	E-10T	\$1,221.73	100N * M	30/60S	3.7Kg			2" to 2 1/2" (50-65)	2" to 4" (50-125)	
	E-20T	\$1,456.71	200N * M	30/60S	6.7Kg			2 1/2" to 3" (65-80)	6" to 8" (150-200)	
	E-40T	\$1,503.67	400N * M	30/60S	7.2Kg			3" to 4" (80-100)	8" to 10" (200-250)	

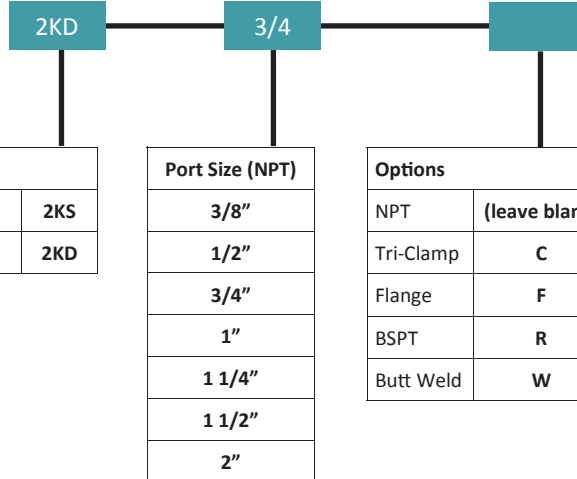
# Air Actuated Angle Seat Valve List Price & Specifications



Ordering Part No. =  
(e.g., 2KD-3/4)



Air Actuated Valve	
Single Acting (Spring Return)	<b>2KS</b>
Double Acting (Fail Closed)	<b>2KD</b>



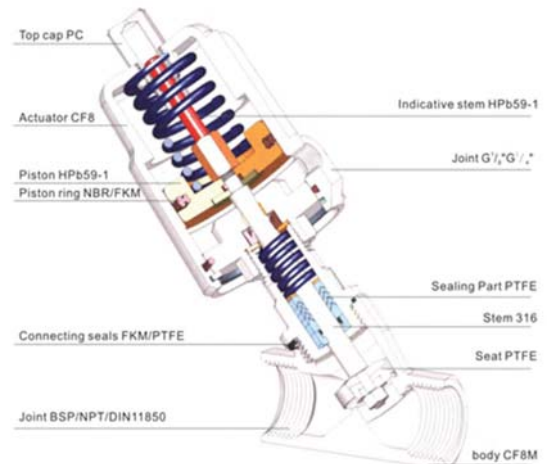
Port Size (NPT)
3/8"
1/2"
3/4"
1"
1 1/4"
1 1/2"
2"

Options	
NPT	(leave blank)
Tri-Clamp	<b>C</b>
Flange	<b>F</b>
BSPT	<b>R</b>
Butt Weld	<b>W</b>

Model	316 Stainless Steel Air Actuated Angle Seat Valve List Price				
	Port Size NPT	Single Acting (Normally Closed)		Double Acting (Fail Closed)	
		Model	Price	Model	Price
	3/8	2KS-3/8	\$177.37	2KD-3/8	\$177.37
	1/2	2KS-1/2	\$192.18	2KD-1/2	\$192.18
	3/4	2KS-3/4	\$197.07	2KD-3/4	\$197.07
	1	2KS-1	\$242.41	2KD-1	\$242.41
	1 1/4	2KS-1 1/4	\$344.89	2KD-1 1/4	\$344.89
	1 1/2	2KS-1 1/2	\$364.53	2KD-1 1/2	\$364.53
	2	2KS-2	\$502.55	2KD-2	\$502.55
	2 1/2	2KS-2 1/2	\$607.17	2KD-2 1/2	\$607.17

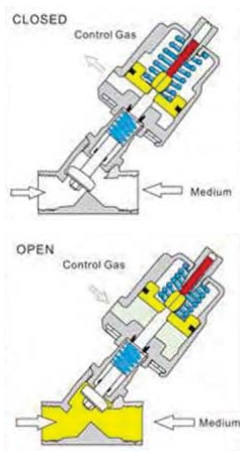
2KS & 2KD Specifications & Features	
Operating Pressure	29" Hg Vacuum to 240 PSI (0-1.6MPa)
Temperature Range	-5 to 356°F (-20 to 180°C)
Ambient Temperature	-5 to 40°F (-20 to 60°C)
Maximum Viscosity	600 mm <sup>2</sup> /s (600 centistokes)
Installation Orientation	Any orientation
Pilot Controlling Medium	Air, Inert Gas
Pilot Pressure Range	65-120 PSI
Wetted Surfaces	300 Series Stainless Steel and PTFE
Service Medium	Air, Gas, Liquid, Oil, Steam, Water, Vacuum

Materials of Construction	
Valve Body	316 Stainless Steel
Valve Stem	316 Stainless Steel
Seat Seals	PTFE
Stem Seals	PTFE (Spring loaded self-adjusting for long service life)
Actuator Body	Stainless Steel CF8 (Designed for harsh applications)
Piston	HPb59-1
Piston Ring V-Seals	NBR / FKM (Viton)
Spring	Stainless Steel
Indicative Stem	HPb59-1
Top Cap	Polycarbonate



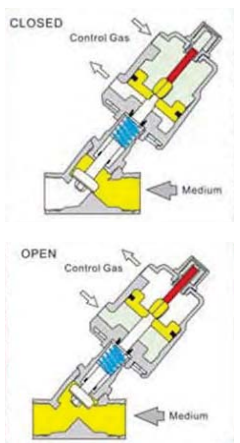
# Actuated Angle Seat Valve Technical Data & Dimensions

## 2KS Series Single Acting Stainless Steel Air Actuated Angle Seat Valve Specifications



Part No.	Port (NPT)	Standard	Orifice (mm)	Actuator (mm)	Cv	Bi-directional Flow		Temperature	Pilot Control Pressure
						Inlet Above Seat Pressure @ 180 °C	Inlet Below Seat Pressure @ 180 °C		
2KS-3/8	3/8"	DN10	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KS-1/2	1/2"	DN15	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KS-3/4	3/4"	DN20	18	50	9.5	0-240 PSI (0-1.6MPa)	0-180 PSI (0-1.2MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KS-1	1"	DN25	24	63	18.1	0-240 PSI (0-1.6MPa)	0-150 PSI (0-1.0MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KS-1 1/4	1 1/4"	DN32	31	63	23.1	0-240 PSI (0-1.6MPa)	0-90 PSI (0-0.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KS-1 1/2	1 1/2"	DN40	35	80	32.9	0-240 PSI (0-1.6MPa)	0-150 PSI (0-1.0MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KS-2	2"	DN50	45	80	52.8	0-240 PSI (0-1.6MPa)	0-90 PSI (0-0.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KS-2 1/2	2 1/2"	DN65	65	125	76	0-240 PSI (0-1.6MPa)	0-90 PSI (0-0.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI

## 2KD Series Double Acting Stainless Steel Air Actuated Angle Seat Valve Specifications



Part No.	Port (NPT)	Standard	Orifice (mm)	Actuator Diameter (mm)	Cv	Bi-directional Flow		Media Temperature	Pilot Control Pressure
						Inlet Above Seat Pressure @ 180 °C	Inlet Below Seat Pressure @ 180 °C		
2KD-3/8	3/8"	DN10	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KD-1/2	1/2"	DN15	13	50	4.7	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KD-3/4	3/4"	DN20	18	50	9.5	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KDS-1	1"	DN25	24	63	18.1	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KD-1 1/4	1 1/4"	DN32	31	63	23.1	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KD-1 1/2	1 1/2"	DN40	35	80	32.9	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KD-2	2"	DN50	45	80	52.8	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI
2KD-2 1/2	2 1/2"	DN65	65	125	76	0-240 PSI (0-1.6MPa)	0-240 PSI (0-1.6MPa)	-5 to 356°F (-20 to 180°C)	65-120 PSI

## 2KS/KD Series Stainless Steel Air Actuated Angle Plunger Valve Dimensions

### ★ Overall Dimension



Single Acting Part No.	Double Acting Part No.	Port (NPT)	Standard	Orifice (mm)	Actuator	Cv	A	R	P	K1	A1	L	T	SW
2KS-3/8	2KD-3/8	3/8"	DN10	13	50	4.7	60	35	1/8	126	133	68	12	26.6
2KS-1/2	2KD-1/2	1/2"	DN15	13	50	4.7	60	35	1/8	126	133	68	15	26.6
2KS-3/4	2KD-3/4	3/4"	DN20	18	50	9.5	60	35	1/8	131	137	75	16	32
2KS-1	2KD-1	1"	DN25	24	63	18.1	77	43	1/8	165	174	90	17	39.5
2KS-1 1/4	2KD-1 1/4	1 1/4"	DN32	31	63	23.1	77	43	1/8	175	188	116	21	50
2KS-1 1/2	2KD-1 1/2	1 1/2"	DN40	35	80	32.9	98	52	1/4	187	204	116	21	55.3
2KS-2	2KD-2	2"	DN50	45	80	52.8	98	52	1/4	195	218	138	22	70

Units in mm