



APPROVED

Valves and Valve Assemblies



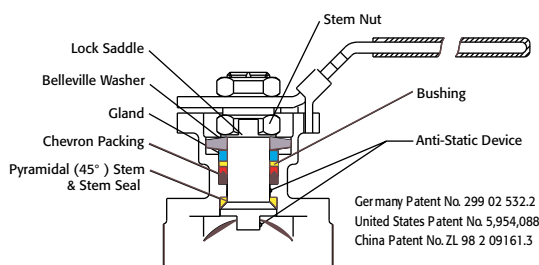
Valves and valve assemblies for liquid and gas shut-off

These assemblies are FM approved for use in applications requiring protection for fuel burning equipment per FM class 7400, 7420 and 7422. The components include a spring return automated ball valve, explosion-proof limit switch and solenoid pilot valve. Valves are available in 3-piece or flanged design. 3-piece design offers threaded, socket weld or butt weld end connections. Flanged valves are available with 150# and 300# flange rating. Available in sizes 1/2"- 6". Assemblies feature the latest in quarter-turn automation, rack and pinion actuator design; a marked improvement from the older spring-diaphragm technology. The actuator, combined with the superior valve seating and stem seal design, provides for reliable and consistent closure when needed. These assemblies provide for a compact fuel gas safety shut-off system.



Valve Assemblies for Gas and Oil Shut-off Requirements

- 316SS or WCB valves
- 3-piece and flanged valves
- Manual safety cocks and automated safety shut-off valves
- Solenoid approved for waterproof and explosion-proof environments
- Valves feature pyramidal stem seal system



Supervisory Cocks



Gas and Oil Safety Shut-off

Specifications

Maximum Operating Pressure

SIZE	SERIES	BODY MATERIAL	PSI @ 100F	PSI @ 300F
1/4"-2"	F88C	WCB	1450	1300
2-1/2" -4"	F88C	WCB	1000	700
1/4" -2"	F88	316SS	1440	1120
2-1/2" -4"	F88	316SS	1000	700
1/2" -6"	D9 (Class 150)	316SS	285	230
1/2" -6"	FD9C (Class 150)	WCB	285	230
1/2" -6"	FD9 (Class 150)	316SS	275	215
1/2" -6"	FD9C (Class 300)	WCB	740	655
1/2" -6"	FD9 (Class 300)	316SS	720	560

Flow Data (Cv)

SIZE	F88	FD9	D9	SIZE	F88	FD9	D9
1/4"	7	N/A	N/A	1-1/2"	250	275	275
3/8"	8	N/A	N/A	2"	430	460	460
1/2"	15	15	15	2-1/2"	600	700	700
3/4"	40	45	45	3"	1100	1100	1100
1"	70	85	85	4"	2000	2200	2200
1-1/4"	110	N/A	N/A	6"	N/A	5150	5150

Switch Ratings (Amps)

	EX10A2SBKN (2-SPDT)	EX10E2SBKN (2-DPDT)	EX11D2SBKN (2-SPDT Prox)
120VAC	5	5	0.25
240VAC	5	5	—
24VDC	0.5	0.08	0.832
48VDC	0.25	—	0.416

How to Order

Gas Safety Shut-off Assemblies

SS- _____ - _ - _____
 1 2 3 4 5 6 7

1 Valve Series

- 8C** F88C Series, Firesafe, NACE, 3-piece, Full Port, Direct Mount, Carbon Steel Body
- 8S** F88 Series, Firesafe, NACE, 3-piece, Full Port, Direct Mount, Stainless Steel Body
- 8O** 88 Series, 3-piece, Full Port, Direct Mount, Stainless Steel Body, Oxygen Cleaned and bagged
- 9C** FD9C Series, Firesafe, NACE, Flanged, Full Port, Direct Mount, Carbon Steel Body
- 9S** FD9 Series, Firesafe, NACE, Flanged, Full Port, Direct Mount, Stainless Steel Body
- 9O** D9 Series, Flanged, Full Port, Direct Mount, Stainless Steel Body, Oxygen Cleaned and bagged

2 Ends

- T** NPT Connection
- S** Socket Weld
- B** Butt Weld
- F** 150# Flanged
- 3** 300# Flanged

3 Seat Material

- X** Reinforced TFE

4 Valve Size

- 025** 1/4"
- 038** 3/8"
- 050** 1/2"
- 075** 3/4"
- 100** 1"
- 125** 1-1/4"

5 Actuator – Pneumatic-Fail Closed

- 6** 60 PSIG air supply available
- 8** 80 PSIG air supply available

6 Solenoid

- A** EF8321G1 120 VAC Brass Solenoid
- B** EF8321G1 24 VDC Brass Solenoid
- C** EV8316G81V 120 VAC SST Solenoid
- D** EV8316G81V 24 VDC SST Solenoid
- E** EF8321G1 220 VAC Brass Solenoid
- F** EV8316G81V 220 VAC SST Solenoid

7 Limit Switch

- A** EX10A2SBKN Nema 4, 4X, 7 and 9, 2-SPDT Mechanical, 5 amp @ 125 VAC
- E** EX10E2SBKN Nema 4, 4X, 7 and 9, 2-DPDT Mechanical, 5 amp @ 120 VAC
- D** EX11D2SBKN Nema 4, 4X, 7 and 9, 2-SPDT Proximity, 1 amp @ 120 VAC
- T** EX11TA2SBKN Nema 4, 4X, 7 and 9, 2-SPDT Mechanical, 5 amp @ 125 VAC, 4-20 mA position transmitter

Manual Safety Cocks Assemblies

SC- _____ - _ - _____
 1 2 3 4 5

1 Valve Series

- 8C** F88C Series, Firesafe, NACE, 3-piece, Full Port, Direct Mount, Carbon Steel Body
- 8S** F88 Series, Firesafe, NACE, 3-piece, Full Port, Direct Mount, Stainless Steel Body
- 8O** 88 Series, 3-piece, Full Port, Direct Mount, Stainless Steel Body, Oxygen Cleaned and bagged
- 9C** FD9C Series, Firesafe, NACE, Flanged, Full Port, Direct Mount, Carbon Steel Body
- 9S** FD9 Series, Firesafe, NACE, Flanged, Full Port, Direct Mount, Stainless Steel Body
- 9O** D9 Series, Flanged, Full Port, Direct Mount, Stainless Steel Body, Oxygen Cleaned and bagged

2 Ends

- T** NPT Connection
- S** Socket Weld
- B** Butt Weld
- F** 150# Flanged
- 3** 300# Flanged

3 Seat Material

- X** Reinforced TFE

4 Valve Size

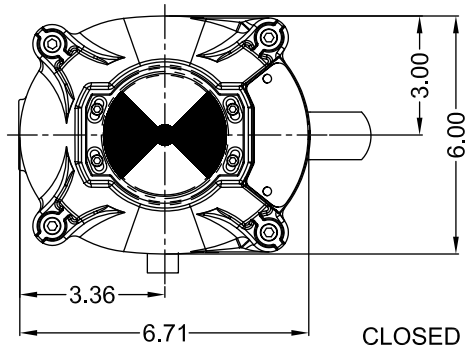
- 025** 1/4"
- 038** 3/8"
- 050** 1/2"
- 075** 3/4"
- 100** 1"
- 125** 1-1/4"

5 Limit Switch

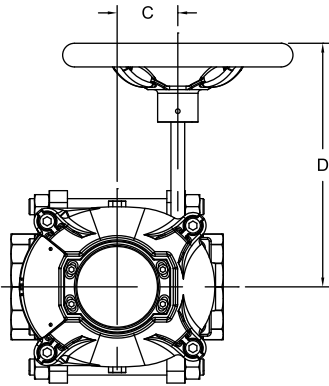
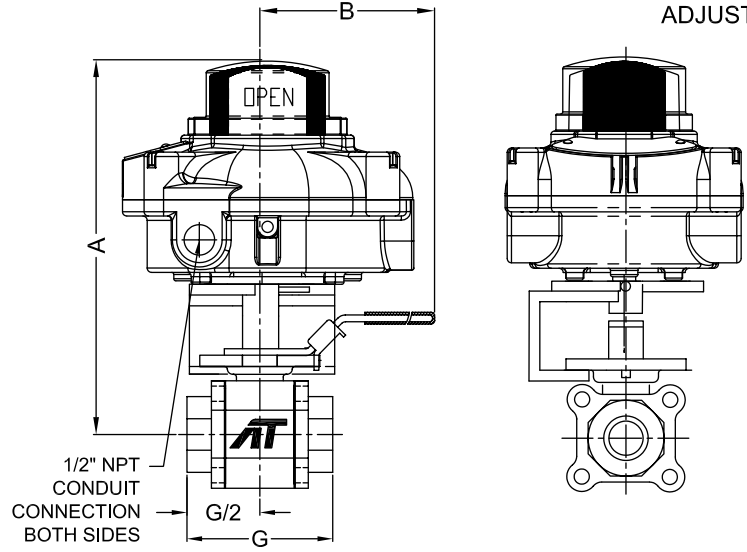
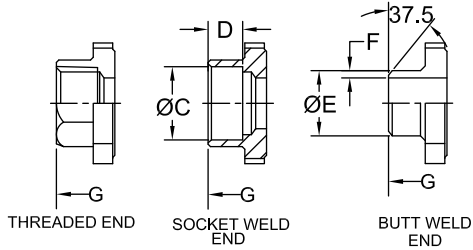
- A** EX10A2SBKN Nema 4, 4X, 7 and 9, 2-SPDT Mechanical, 5 amp @ 125 VAC
- E** EX10E2SBKN Nema 4, 4X, 7 and 9, 2-DPDT Mechanical, 5 amp @ 120 VAC
- D** EX11D2SBKN Nema 4, 4X, 7 and 9, 2-SPDT Proximity, 1 amp @ 120 VAC
- T** EX11TA2SBKN Nema 4, 4X, 7 and 9, 2-SPDT Mechanical, 5 amp @ 125 VAC, 4-20 mA position transmitter

Manual Safety Cocks 3-Piece

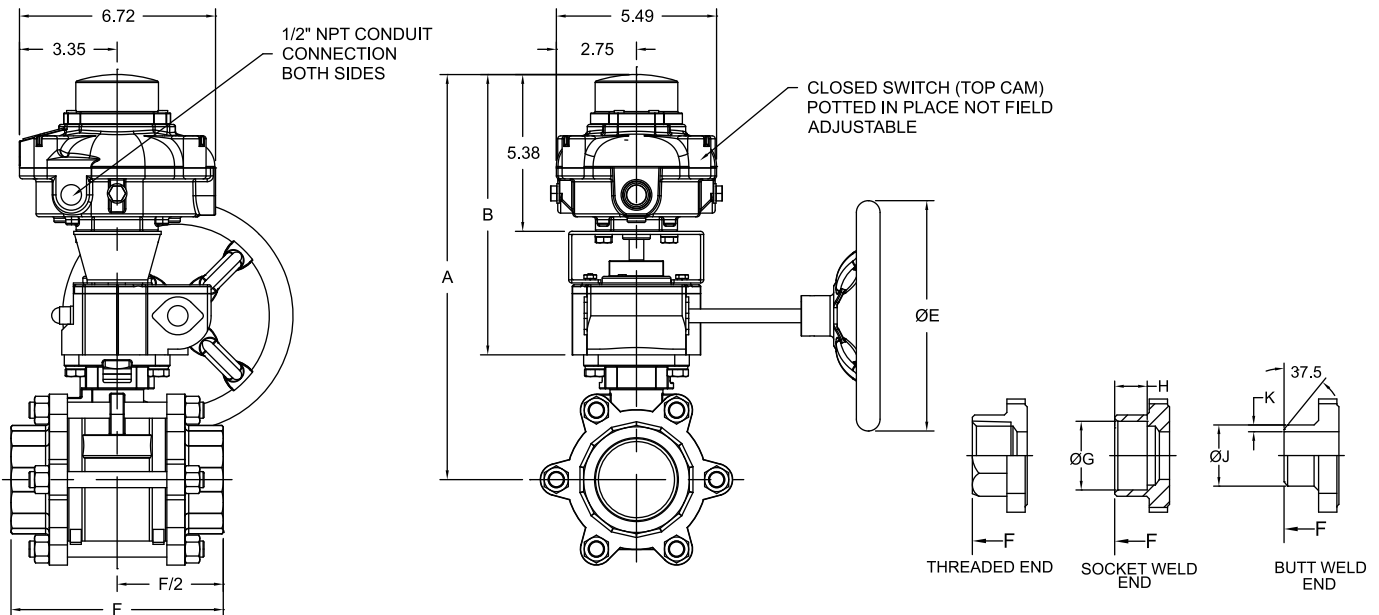
	A	B	C	D	E	F	G
1/4"	9.67	5.47	0.55	0.39	0.85	0.13	2.95
3/8"	9.67	5.47	0.69	0.39	0.85	0.13	2.95
1/2"	9.67	5.47	0.85	0.39	0.85	0.06	2.85
3/4"	9.84	5.47	1.07	0.51	1.07	0.06	3.36
1"	10.25	6.50	1.34	0.51	1.34	0.06	4.15
1-1/4"	10.38	6.50	1.69	0.51	1.68	0.06	4.37
1-1/2"	10.95	8.46	1.92	0.51	1.91	0.06	5.01
2"	11.26	8.46	2.40	0.63	2.38	0.06	5.62



CLOSED SWITCH (TOP CAM)
POTTED IN PLACE NOT FIELD
ADJUSTABLE



VALVE	GEAR	A	B	C	D	E	F	G	H	J	K
2-1/2"	Q400-4	13.83	9.55	2.07	7.12	3.94	7.28	2.89	0.63	3.00	0.06
3"	Q400-4	14.18	9.55	2.07	7.12	3.94	8.07	3.54	0.63	3.54	0.06
4"	Q400-6	14.81	9.55	2.07	7.28	6.30	9.45	4.54	0.79	4.57	0.06



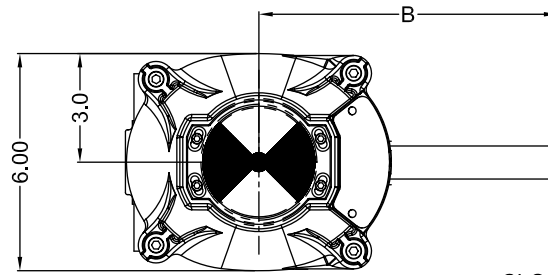
Manual Safety Cocks ANSI 150# & 300# Flanged

ANSI 150#

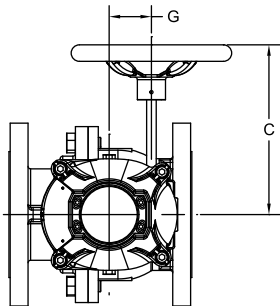
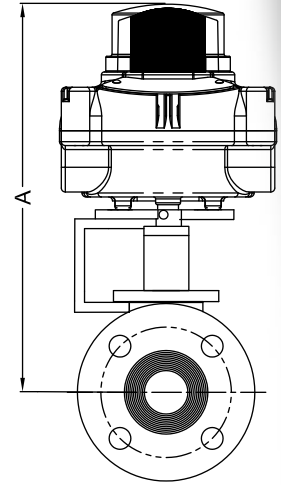
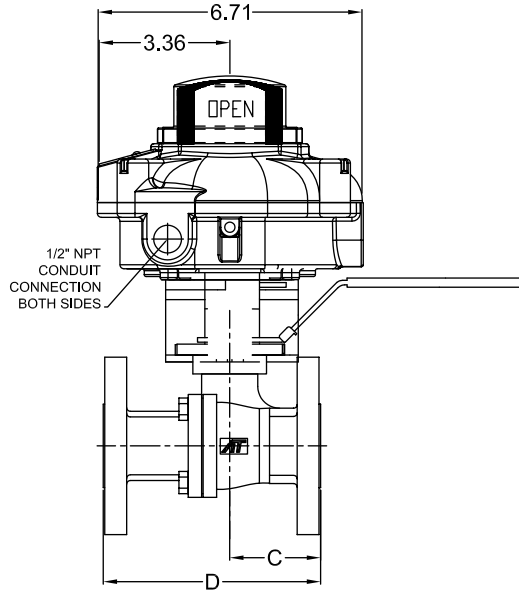
	A	B	C	D
1/2"	11.23	6.90	1.84	4.26
3/4"	11.41	6.90	2.18	4.62
1"	11.63	6.90	2.21	5.00
1-1/2"	13.80	10.50	2.83	6.50
2"	14.12	10.50	3.38	7.02

ANSI 300#

	A	B	C	D
1/2"	10.36	6.80	2.32	5.50
3/4"	10.94	6.80	2.59	6.00
1"	10.94	6.80	2.78	6.50
1-1/2"	12.95	10.31	3.13	7.50
2"	13.24	10.31	3.81	8.50



CLOSED SWITCH (TOP CAM)
POTTED IN PLACE NOT FIELD
ADJUSTABLE

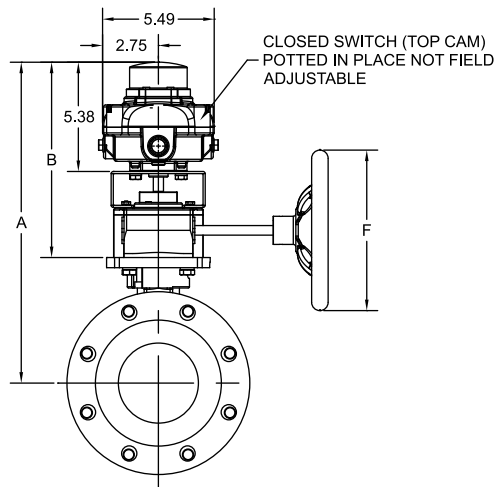
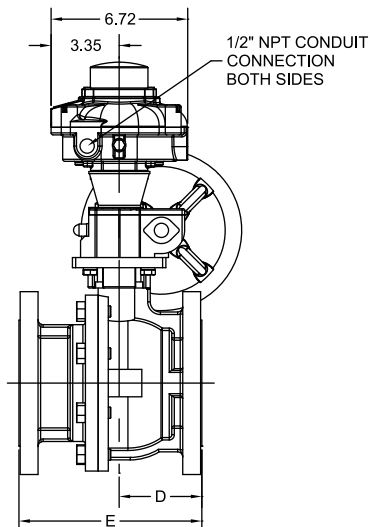


ANSI 150#

VALVE	GEAR	A	B	C	D	E	F	G
2-1/2"	Q400-4	14.12	9.55	7.12	3.06	7.48	3.94	2.07
3"	Q400-4	14.77	9.55	7.12	4.01	8.01	3.94	2.07
4"	Q400-6	15.73	9.55	7.28	4.07	9.00	6.30	2.07
6"	Q800-12	18.38	10.10	10.73	7.00	15.50	11.81	2.71

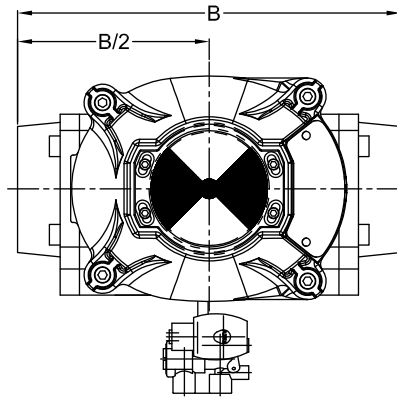
ANSI 300#

VALVE	GEAR	A	B	C	D	E	F	G
2-1/2"	Q400-4	14.12	9.55	7.12	4.20	9.50	3.94	2.07
3"	Q400-4	14.77	9.55	7.12	5.10	11.12	3.94	2.07
4"	Q400-6	15.73	9.55	7.28	5.50	12.00	6.30	2.07
6"	Q800-12	18.38	10.10	10.73	7.30	15.87	11.81	2.71

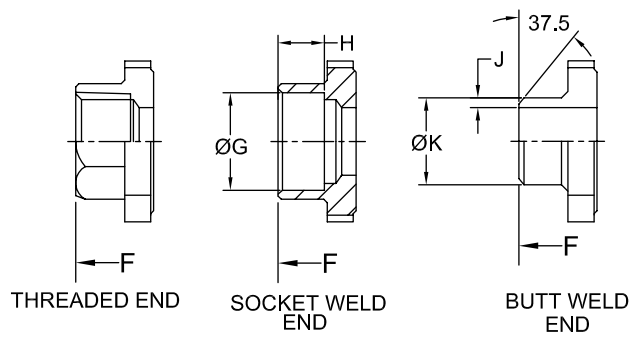
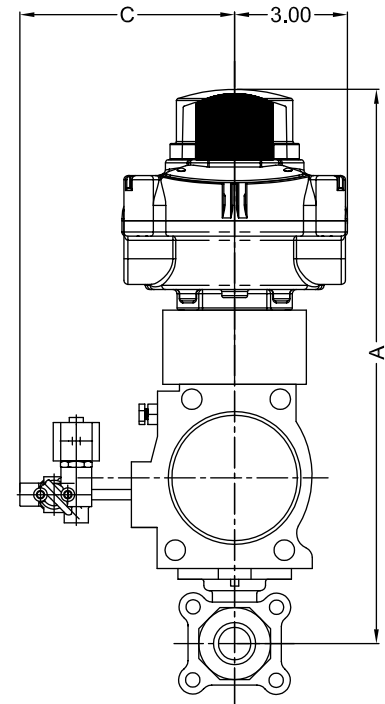
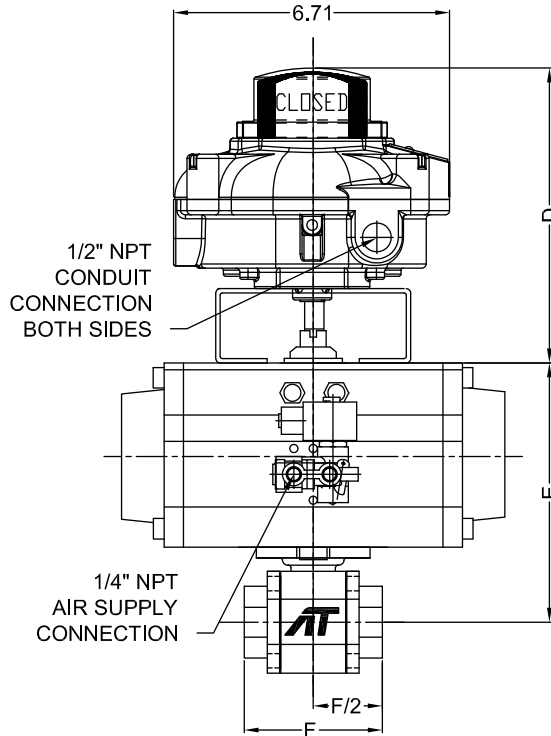


Gas Safety Shut-off Assemblies

3-piece



CLOSED SWITCH (TOP CAM)
POTTED IN PLACE NOT FIELD
ADJUSTABLE

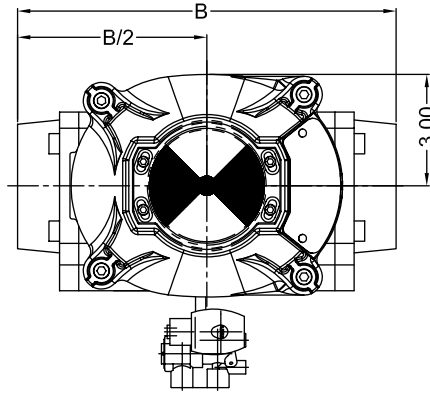


80 PSI Air Supply

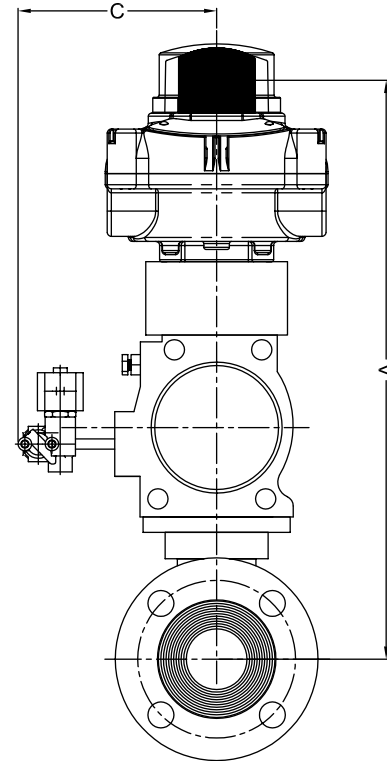
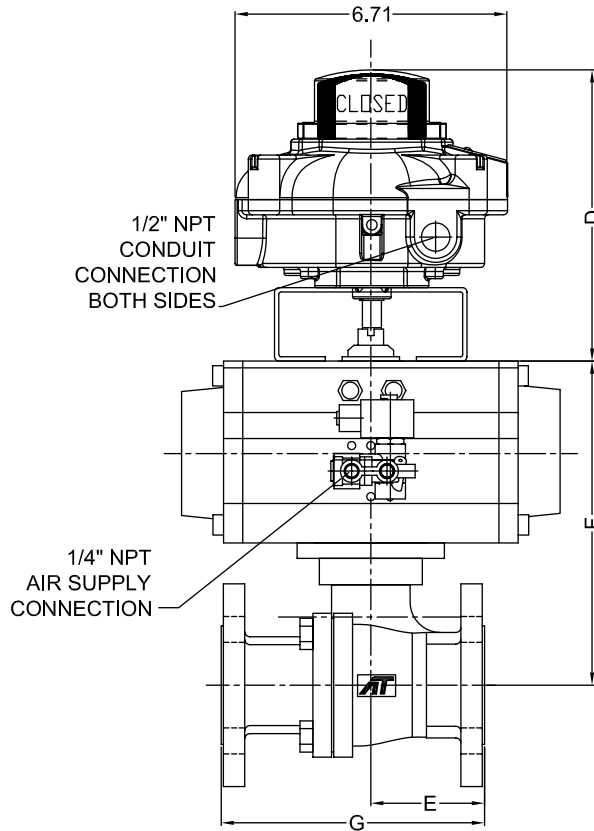
Valve	Actuator SR	NPT Air supply	A	B	C	D	E	F	G	H	J	K
1/4"	2R40	1/8"	12.14	8.00	6.60	7.05	5.09	2.95	0.55	0.39	0.13	0.85
3/8"	2R40	1/8"	12.14	8.00	6.60	7.05	5.09	2.95	0.69	0.39	0.13	0.85
1/2"	2R40	1/8"	12.14	8.00	6.60	7.05	5.09	2.85	0.85	0.39	0.06	0.85
3/4"	2R80	1/4"	13.37	9.34	5.98	7.05	6.32	3.36	1.07	0.51	0.06	1.07
1"	2R80	1/4"	13.85	9.34	5.98	7.05	6.80	4.15	1.34	0.51	0.06	1.34
1 1/4"	2R80	1/4"	14.00	9.34	5.98	7.05	6.95	4.37	1.69	0.51	0.06	1.68
1 1/2"	2R130	1/4"	15.04	10.92	6.22	7.05	7.99	5.01	1.92	0.51	0.06	1.91
2"	2R200	1/4"	15.75	11.51	6.39	7.05	8.70	5.62	2.40	0.63	0.06	2.38
2 1/2"	2R300	1/4"	17.51	13.92	6.85	7.05	10.46	7.28	2.89	0.63	0.06	3.00
3"	2R300	1/4"	17.51	13.92	6.85	7.05	10.81	8.07	3.54	0.63	0.06	3.54
4"	2R500	1/4"	19.67	15.20	7.20	7.48	12.19	9.45	4.54	0.79	0.06	4.57

Gas Safety Shut-off Assemblies

ANSI 150# & 300# Flanged



CLOSED SWITCH (TOP CAM)
POTTED IN PLACE NOT FIELD
ADJUSTABLE



ANSI 150#

80 PSI Air Supply

Valve	Actuator SR	NPT Air supply	A	B	C	D	E	F	G
1/2"	2R40	1/8"	12.32	8.00	6.60	7.05	1.84	5.27	4.26
3/4"	2R80	1/4"	13.56	9.34	5.98	7.05	2.18	6.51	4.62
1"	2R80	1/4"	13.85	9.34	5.98	7.05	2.21	6.80	5.00
1 1/2"	2R200	1/4"	15.84	11.51	6.39	7.05	2.83	8.79	6.50
2"	2R200	1/4"	16.13	11.51	6.39	7.05	3.38	9.08	7.02
2 1/2"	2R300	1/4"	17.80	13.92	6.85	7.05	3.06	10.75	7.48
3"	2R300	1/4"	18.45	13.92	6.85	7.05	4.01	11.40	8.01
4"	2R500	1/4"	20.59	15.20	7.20	7.48	4.07	13.11	9.00
6"	2R1750	1/4"	25.88	24.37	8.22	7.48	7.00	18.40	15.50

ANSI 300#

60 & 80 PSI Air Supply

Valve	Actuator SR	NPT Air supply	A	B	C	D	E	F	G
1/2"	2R80	1/4"	13.46	9.34	5.98	7.05	2.32	6.41	5.50
3/4"	2R80	1/4"	14.04	9.34	5.98	7.05	2.59	6.99	6.00
1"	2R80	1/4"	14.04	9.34	5.98	7.05	2.78	6.99	6.50
1 1/2"	2R200	1/4"	15.84	11.51	6.39	7.05	3.13	8.79	7.50
2"	2R300	1/4"	16.13	13.92	6.85	7.05	3.81	9.98	8.50
2 1/2"	2R300	1/4"	17.80	13.92	6.85	7.05	4.20	10.75	9.50
3"	2R500	1/4"	19.63	15.20	7.20	7.48	5.10	12.15	11.12
4"	2R850	1/4"	21.57	21.01	7.40	7.48	5.50	14.09	12.00
6"	2R1750	1/4"	25.88	24.37	8.22	7.48	7.30	18.40	15.87

Specials and Applied Solutions

Fusible Link Assemblies



Lockout Mounting Kits



Special Seats *Balls and Seal Designs*



Various handle and operator options

Floor Mounted Damper Drives



Special Multi-Port Valves



Stem Extensions



Dual Valve Assemblies



180° Actuators



Limit Switches *Mounted on Manual Valves*



FM Approved Valves and Assemblies



Manual and automated valve assemblies for gas burner management applications and safety shutoff

While you have come to know A-T Controls for superior service in automated valves and day-to-day automation and controls, we specialize in offering solutions to your more unique and difficult applications. Listed below are some of the specials and solutions oriented products and services we offer.

Special End Connections

Virtually any Control Accessories

Filter Regulators

Speed Controls

Solenoids

Pneumatic Positioners

Electro-pneumatic Positioners

Dribble and "Batch" Controls

Complete Mounting and Assembly

Lockup Valves

Dec clutchable Gear Operators

Dump Valves

Flow Controls

Mounting Kits

Various Metallurgy

Special Coatings and Treatments

Special Tubing and Fittings

Alloy Trim



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