

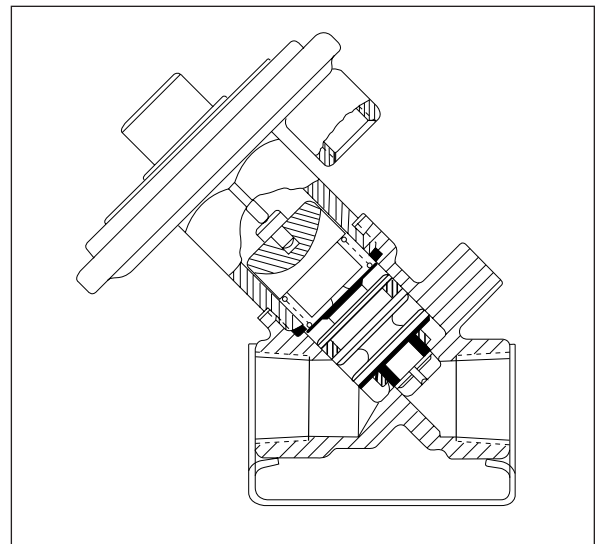
### Features

- Unique sealing member isolates pilot air pressure from mainline fluid.
- Variations in pilot air pressure do not affect valve operation.
- Design provides long life handling of lubricated air.
- Handle fluids up to 200°F (92°C).
- Some constructions handle steam up to 353°F (177°C).
- Mountable in any position.



### Construction

Valve Parts in Contact with Fluids		
<b>Body</b>	Brass	Stainless Steel
<b>Seat</b>	NBR or PTFE (for steam service)	



### Air Operators

**Connection Size** - 1/8" NPT.

**Actuated Displacement Volume** -

0.60 cu. ins. for 3-30 psi operators; 0.25 cu. ins. for 30-125 psi operator.

**Media** - Air

*(For vacuum or other media, consult your local ASCO sales office for details. Refer to Optional Features Section for other available manual operators.)*

### Important:

On 3 way and 4 way valves, except for those with zero minimum operating pressure, a Minimum Operating Pressure Differential must be maintained between the pressure and exhaust ports. Supply and exhaust piping must be full area, unrestricted. ASCO flow controls and similar components must be installed in the cylinder lines only.

### Nominal Ambient Temperature Ranges:

32°F to 125°F (0°C to 52°C)

*Refer to Engineering Section for details.*

### Ordering Information:

We must have catalog number, operating pressure, and fluid to be handled. Use strainers with air operated valves.

*Refer to Engineering Section for details.*

Specifications (English units)

Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor	Main Line Operating Pressure (psi)					Max. Fluid Temp. °F	Instrument Air Operator 3-30 psi Range ①		Pneumatic Operator 30-125 psi Range ①	
			Min.	Maximum					Catalog Number	Constr. Ref. No.	Catalog Number	Constr. Ref. No.
				Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Steam					
<b>2/2 VALVES</b>												
<b>NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seating</b>												
1/4	5/32	.50	0	125	125	125	--	200	F262B202K	1	P262B202	1
1/4	9/32	.96	0	40	40	40	--	200	F262C90K	1	P262C90 ②	1
3/8	5/8	2.8	0	125	125	125	--	180	F210C93K	6	P210C93	6
3/8	3/8	1.5	1⑥	125	125	125	--	200	F210C73K	3	P210C73	3
1/2	7/16	2.2	1⑥	125	125	125	--	200	F210A15K	4	P210A15	4
1/2	5/8	3.6	0	125	125	125	--	180	F210C94K	6	P210C94	6
3/4	3/4	5.5	0	125	125	125	--	180	F210D95K	7	P210D95	7
3/4	3/4	5.5	5	125	125	125	--	180	F210D9K	8	P210D9	8
1	1	13	5	125	125	125	--	180	F210D4K	10	P210D4	10
1 1/4	1 1/8	15	5	125	125	125	--	180	F210D8K	12	P210D8	12
1 1/2	1 1/4	22.5	5	125	125	125	--	180	F210D22K	14	P210D22	14
2	1 3/4	43	5	125	125	125	--	180	F210100K	15	P210100	15
<b>NORMALLY OPEN (Open when operator exhausted), Brass Body with NBR Seating</b>												
1/4	5/32	.50	0	125	125	125	--	200	F262B106K	2	P262B106	2
3/8	5/8	2.8	0	125	125	125	--	180	F210C33K	16	P210C33	16
1/2	5/8	3.5	0	125	125	125	--	180	F210C34K	16	P210C34	16
3/4	3/4	5.5	0	125	125	125	--	180	F210C35K	17	P210C35	17
1	1	13	5	125	125	125	--	180	F210D14K	18	P210D14	18
<b>NORMALLY CLOSED (Closed when operator exhausted), Stainless Steel Body with NBR Seating</b>												
1/4	5/32	.50	0	125	125	125	--	200	F262B220K	22	--	--
<b>NORMALLY CLOSED (Closed when operator exhausted), Brass Body with PTFE Seating</b>												
1/4	3/8	1.2	1	--	--	--	125	353	F222A70K	4	P222A70	4
3/8	3/8	2.5	1	--	--	--	125	353	F222A74K	4	P222A74	4
1/2	3/8	2.5	1	--	--	--	125	353	F222A76K	4	P222A76	4
<b>3/2 VALVES</b>												
<b>NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seats</b>												
1/4	9/32	③	10	125	125	125	--	200	F321A1K	5	P321A1	5
3/8	9/32	③	10	125	125	125	--	200	F321A2K	5	P321A2	5
3/8	5/8	3	10	125	125	--	--	200	F316D14K	2	P316D14	2
1/2	5/8	4	10	125	125	--	--	200	F316D24K	2	P316D24	2
3/4	11/16	5.5	10	125	125	--	--	200	F316E44K	3	P316E44	3
1	1	13	10	125	125	--	--	200	F316E34K	4	P316E34	4
<b>UNIVERSAL (Pressure at any port), Brass Body with NBR Seats</b>												
1/4	1/8	.31	0	125	125	125	--	200	F320A9K	1	P320A9	1
<b>4/2 VALVES</b>												
Pipe Size (ins.)	Orifice Size (ins.)	Cv Flow Factor		Main Line Operating Pressure (psi)				Max. Fluid Temp. °F	Instrument Air Operator 3-30 psi Range		Pneumatic Operator 30-125 psi Range	
		Press. to Cyl.	Exh. to Cyl.	Min.	Maximum				Catalog Number	Constr. Ref. No.	Catalog Number	Constr. Ref. No.
					Air-Inert Gas	Water	Lt. Oil @ 300 SSU					
<b>2-Position Brass Body with Soft Seating ④</b>												
1/4	3/16	.70	.70	0	125	125	125	160	--	--	P442C1	1
1/4	1/4	.80	1	10 ⑤	125	125	125	200	F444B0K	2	P444B0	2
3/8	3/16	.70	.70	0	125	125	125	160	--	--	P442C3	1
3/8	3/8	1.4	2.2	10 ⑤	125	125	125	200	F444C25K	3	P444C25	3
<b>Notes:</b> ① 3-40 psi (2 - 2.8 bar) and 50-125 psi (3.4 - 8.6 bar) range for steam valves only. ② Refers to operator minimum pressure: Catalog Number P262C90 requires 50 psi (3.4 bar) minimum pressure. ③ Cv pressure to cylinder = 0.8 (.7 Kv); Cv cylinder to exhaust = 1.2 (1.0 Kv). ④ Constr. Ref. 1 has soft seating; Constr. Refs. 2 and 3 have soft to metal seating. ⑤ 25 psi (1.7 bar) required on light oil service. ⑥ 5 psi (0.35 bar) required for air service.												

Specifications (Metric units)

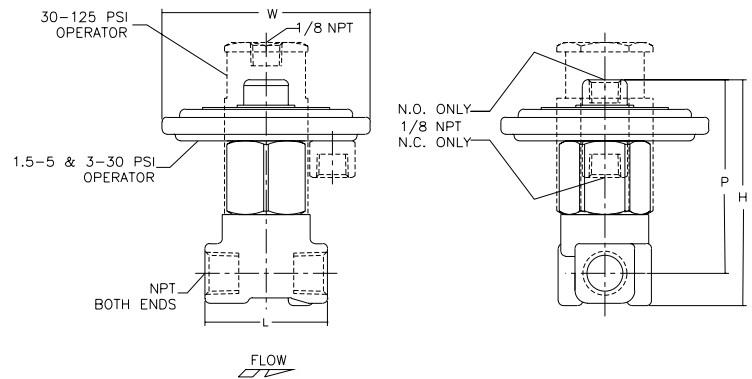
Pipe Size (ins.)	Orifice Size (mm)	Kv Flow Factor (m3/h)	Main Line Operating Pressure (bar)					Max. Fluid Temp. °C	Instrument Air Operator 0.2-2 bar Range ①		Pneumatic Operator 2-8.6 bar Range ①	
			Min.	Maximum					Catalog Number	Constr. Ref. No.	Catalog Number	Constr. Ref. No.
				Air-Inert Gas	Water	Lt. Oil @ 300 SSU	Steam					
<b>2/2 VALVES</b>												
<b>NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seating</b>												
1/4	4	.43	0.0	9	9	9	--	92	F262B202K	1	P262B202	1
1/4	7	.82	0.0	3	3	3	--	92	F262C90K	1	P262C90 ②	1
3/8	16	2.40	0.0	9	9	9	--	81	F210C93K	6	P210C93	6
3/8	10	1.29	0.07 ⑥	9	9	9	--	92	F210C73K	3	P210C73	3
1/2	11	1.89	0.07 ⑥	9	9	9	--	92	F210A15K	4	P210A15	4
1/2	16	3.09	0.0	9	9	9	--	81	F210C94K	6	P210C94	6
3/4	19	4.71	0.0	9	9	9	--	81	F210D95K	7	P210D95	7
3/4	19	4.71	0.3	9	9	9	--	81	F210D9K	8	P210D9	8
1	25	11.14	0.3	9	9	9	--	81	F210D4K	10	P210D4	10
1 1/4	29	12.86	0.3	9	9	9	--	81	F210D8K	12	P210D8	12
1 1/2	32	19.29	0.3	9	9	9	--	81	F210D22K	14	P210D22	14
2	1	36.86	0.3	9	9	9	--	81	F210100K	15	P210100	15
<b>NORMALLY OPEN (Open when operator exhausted), Brass Body with NBR Seating</b>												
1/4	4	.43	0.0	9	9	9	--	92	F262B106K	2	P262B106	2
3/8	16	2.40	0.0	9	9	9	--	81	F210C33K	16	P210C33	16
1/2	16	3.00	0.0	9	9	9	--	81	F210C34K	16	P210C34	16
3/4	19	4.71	0.0	9	9	9	--	81	F210C35K	17	P210C35	17
1	25	11.14	0.3	9	9	9	--	81	F210D14K	18	P210D14	18
<b>NORMALLY CLOSED (Closed when operator exhausted), Stainless Steel Body with NBR Seating</b>												
1/4	4	.43	0.0	9	9	9	--	92	F262B220K	22	--	--
<b>NORMALLY CLOSED (Closed when operator exhausted), Brass Body with PTFE Seating</b>												
1/4	10	1.03	0.1	-	--	--	24	177	F222A70K	4	P222A70	4
3/8	10	2.14	0.1	-	--	--	24	177	F222A74K	4	P222A74	4
1/2	10	2.14	0.1	-	--	--	24	177	F222A76K	4	P222A76	4
<b>3/2 VALVES</b>												
<b>NORMALLY CLOSED (Closed when operator exhausted), Brass Body with NBR Seats</b>												
1/4	7	③	0.6895	9	9	9	--	92	F321A1K	5	P321A1	5
3/8	7	③	0.6895	9	9	9	--	92	F321A2K	5	P321A2	5
3/8	16	2.57	0.6895	9	9	--	--	92	F316D14K	2	P316D14	2
1/2	16	3.43	0.6895	9	9	--	--	92	F316D24K	2	P316D24	2
3/4	17	4.71	0.6895	9	9	--	--	92	F316E44K	3	P316E44	3
1	25	11.14	0.6895	9	9	--	--	92	F316E34K	4	P316E34	4
<b>UNIVERSAL (Pressure at any port), Brass Body with NBR Seats</b>												
1/4	3	.27	0	9	9	9	--	92	F320A9K	1	P320A9	1
<b>4/2 VALVES</b>												
Pipe Size (ins.)	Orifice Size (mm)	Kv Flow Factor (m3/h)		Main Line Operating Pressure (bar)				Max. Fluid Temp. °C	Instrument Air Operator 0.2-2 bar Range		Pneumatic Operator 2-8.6 bar Range	
		Press. to Cyl.	Exh. to Cyl.	Min.	Maximum				Catalog Number	Constr. Ref. No.	Catalog Number	Constr. Ref. No.
					Air-Inert Gas	Water	Lt. Oil @ 300 SSU					
<b>2-Position Brass Body with Soft Seating ④</b>												
1/4	5	.60	.60	0	9	9	9	70	--	--	P442C1	1
1/4	6	.69	.86	0.7 ⑤	9	9	9	92	F444B0K	2	P444B0	2
3/8	5	.60	.60	0	9	9	9	70	--	--	P442C3	1
3/8	10	1.20	1.89	0.7 ⑤	9	9	9	92	F444C25K	3	P444C25	3

Dimensions: inches (mm)

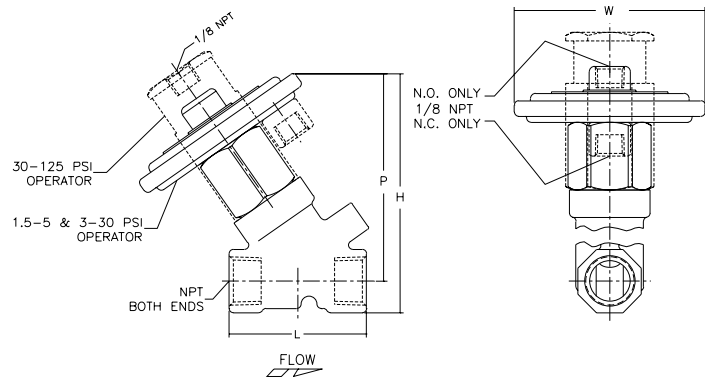
Constr. Ref. No.		Instrument Air Operator 2/2 Valves with 3-30 PSI Operator ①				Pneumatic Operator 2/2 Valves with 30-125 PSI Operator ①			
		H	L	P	W	H	L	P	W ②
1	ins.	2.88	1.57	2.47	Ø 2.66	3.34	1.56	2.94	1.18
	mm	73	40	63	Ø 67	85	40	75	30
2	ins.	2.97	1.56	2.56	Ø 2.66	2.78	1.56	2.38	1.18
	mm	75	40	65	Ø 67	71	40	60	30
3	ins.	3.34	1.91	2.91	Ø 2.66	3.69	1.91	3.25	1.12
	mm	85	49	74	Ø 67	94	49	83	28
4	ins.	3.62	2.28	3.09	Ø 2.66	4.22	2.28	3.66	1.12
	mm	92	58	79	Ø 67	107	58	93	28
6	ins.	3.59	2.75	3.03	Ø 2.66	4.00	2.75	3.44	2.28
	mm	91	70	77	Ø 67	102	70	87	58
7	ins.	3.81	2.81	3.19	Ø 2.66	4.22	2.81	3.59	2.28
	mm	97	71	81	Ø 67	107	71	91	58
8	ins.	3.88	2.81	3.22	Ø 2.66	4.28	2.81	3.62	2.31
	mm	99	71	82	Ø 67	109	71	92	59
10	ins.	5.53	3.75	3.91	Ø 2.66	6.00	3.75	4.38	2.94
	mm	141	95	99	Ø 67	152	95	111	75
12	ins.	5.53	2.66	3.91	Ø 2.66	6.00	3.66	4.38	3.38
	mm	141	68	99	Ø 67	152	93	111	86
14	ins.	6.00	4.38	4.06	4.38	6.50	4.38	4.53	3.75
	mm	152	111	103	111	165	111	115	95
15	ins.	7.22	5.06	4.47	4.68	7.69	5.06	4.94	4.68
	mm	183	129	114	119	195	129	126	119
16	ins.	3.69	2.75	3.12	Ø 2.66	3.44	2.75	2.88	2.28
	mm	94	70	79	Ø 67	87	70	73	58
17	ins.	3.91	2.81	3.28	Ø 2.66	3.69	2.81	3.03	2.28
	mm	99	71	83	Ø 67	94	71	77	58
18	ins.	5.63	3.75	4.00	2.94	5.43	3.75	3.81	2.94
	mm	143	95	102	75	138	95	97	75
22	ins.	2.84	Ø 1.62	2.47	Ø 2.66	X	X	X	X
	mm	72	Ø 41	63	Ø 67	X	X	X	X

Notes: ① When barbed tubing adapter is used, add 1.19 (30 mm) to "H" and/or "P" (or overall) dimensions.  
② Represents overall width of valve.

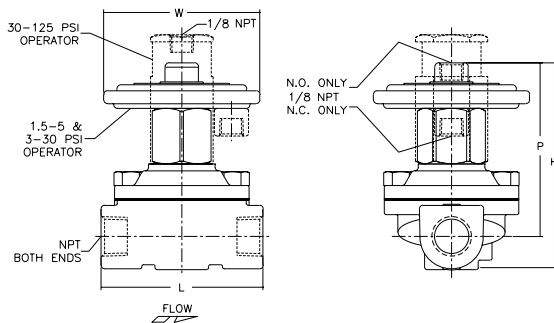
2/2 Valves - Constr. Ref. 1, 2



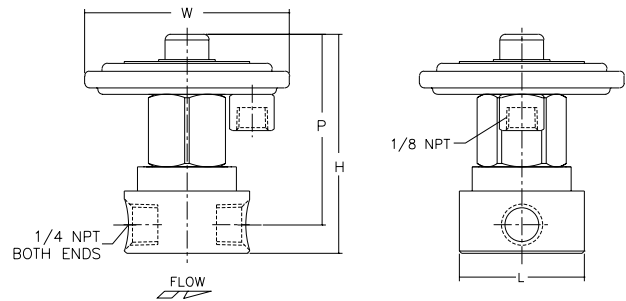
2/2 Valves - Constr. Ref. 3, 4



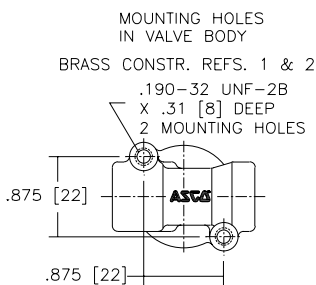
2/2 Valves - Constr. Ref. 6 - 18



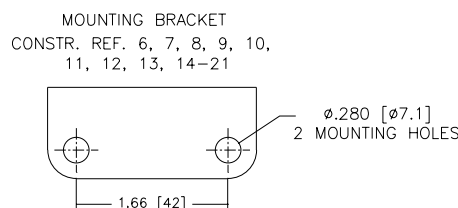
2/2 Valves - Constr. Ref. 22



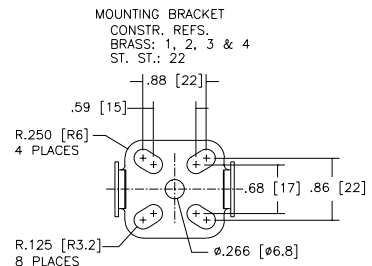
Mounting Bracket Constr. Ref. 1, 2



Mounting Bracket Constr. Ref. 6 - 18



Mounting Bracket Constr. Ref. 1, 2, 3, 4, 22

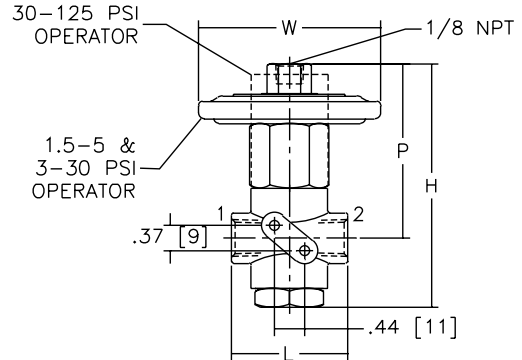


Dimensions: inches (mm)

Const. Ref. No.	Instrument Air Operator 3/2 Valves with 3-30 PSI Operator ①			Pneumatic Operator 3/2 Valves with 30-125 PSI Operator ①							
	H	P	W ②	H	P	W ②	L	N	M	R	
1	ins.	3.56	2.56	Ø 2.66	3.38	2.38	1.12	1.69	X	X	X
	mm	90	65	Ø 67	86	61	28	43	X	X	X
2	ins.	5.07	3.93	4.30	4.89	3.75	4.30	2.76	X	X	X
	mm	129	100	109	124	95	109	70	X	X	X
3	ins.	6.00	4.31	3.31	5.82	4.13	3.31	3.38	.53	2.16	.50
	mm	152	109	84	148	105	84	86	13	55	13
4	ins.	6.62	4.56	5.34	6.44	4.38	5.34	4.44	.88	2.68	.88
	mm	168	116	136	164	111	136	113	22	68	22
5	ins.	3.84	2.81	3.39	3.66	2.62	2.62	3.12	X	X	X
	mm	98	71	86	93	67	67	79	X	X	X

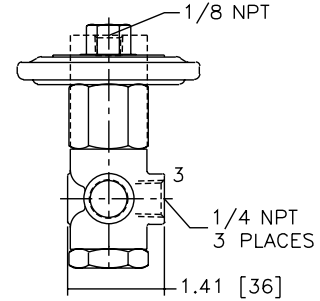
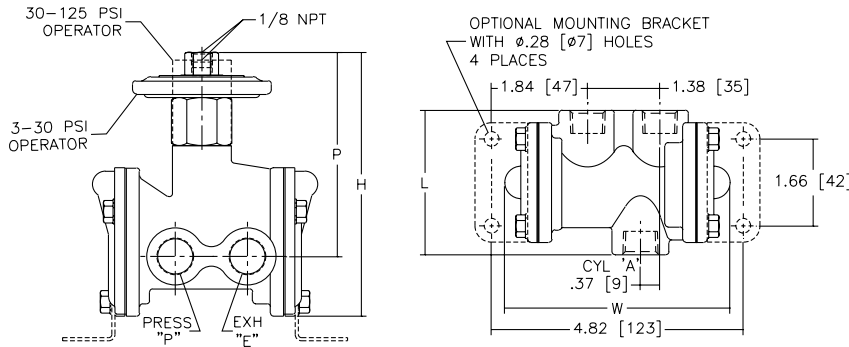
**Notes:** ① When barbed tubing adapter is used, add 1.19 ins. (30 mm) to "H" and/or "P" (or overall) dimensions.  
② Represents overall width of valve.

3/2 Valves - Constr. Ref. 1

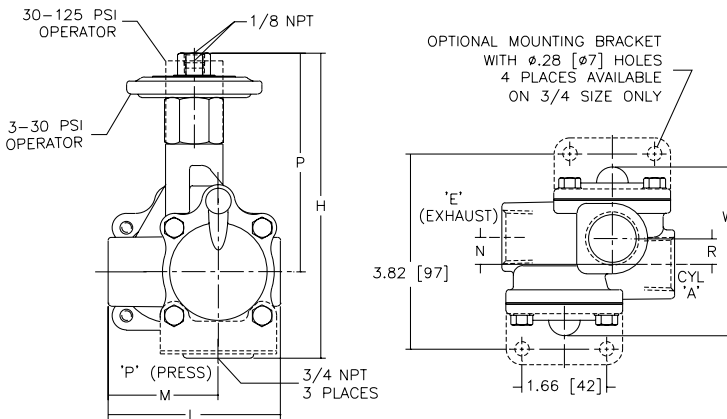


2 Mounting holes 0.28 (0.07 mm) deep for No. 8 thread cutting screw

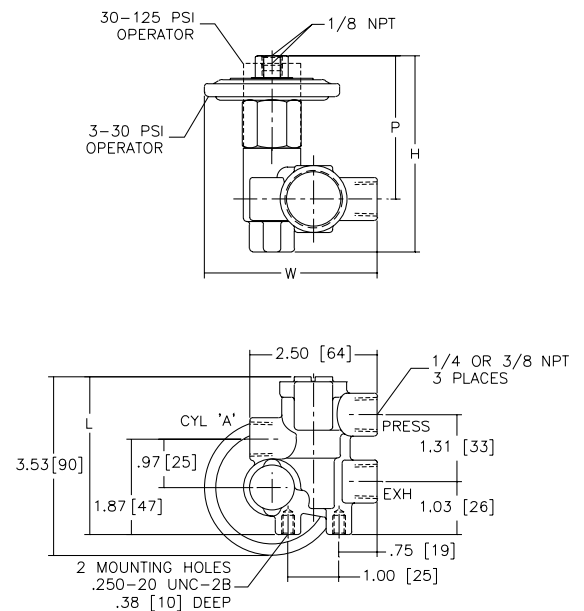
3/2 Valves - Constr. Ref. 2



3/2 Valves - Constr. Ref. 3, 4



3/2 Valves - Constr. Ref. 5



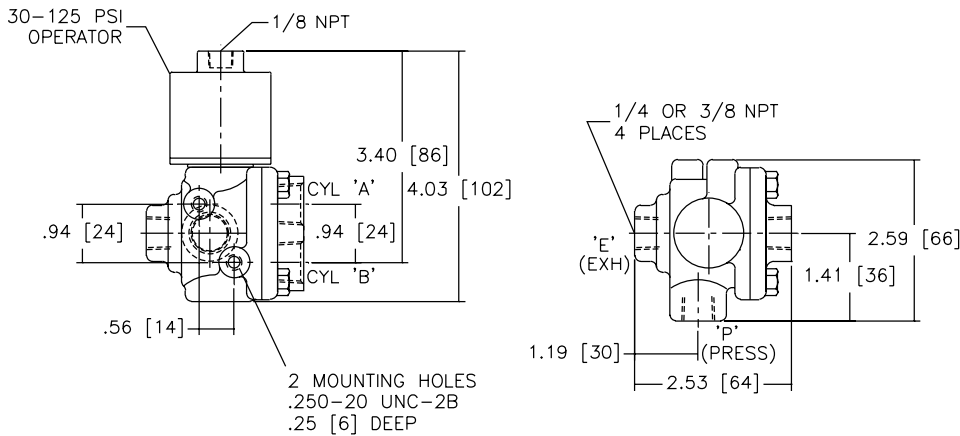
Dimensions: inches (mm)

Constr. Ref. No.	Instrument Air Operator 4/2 Valves with 3-30 PSI Operator ①			Pneumatic Operator 4/2 Valves with 30-125 PSI Operator ①											DIA D	
	H	P	W	H	P	W	E	F	J	L	N	X	Y	Z		
2	ins.	3.91	2.94	4.75	3.72	2.75	4.75	.56	2.41	1.03	3.12	.72	1.41	1.56	.81	Ø .28
	mm	99	75	121	94	70	121	14	61	26	79	18	36	40	21	Ø 7
3	ins.	3.88	2.75	6.06	3.69	2.56	6.06	.75	3.12	1.50	3.19	.84	1.88	1.90	.84	Ø .34
	mm	98	70	154	94	65	154	19	79	38	81	21	48	48	21	Ø 9

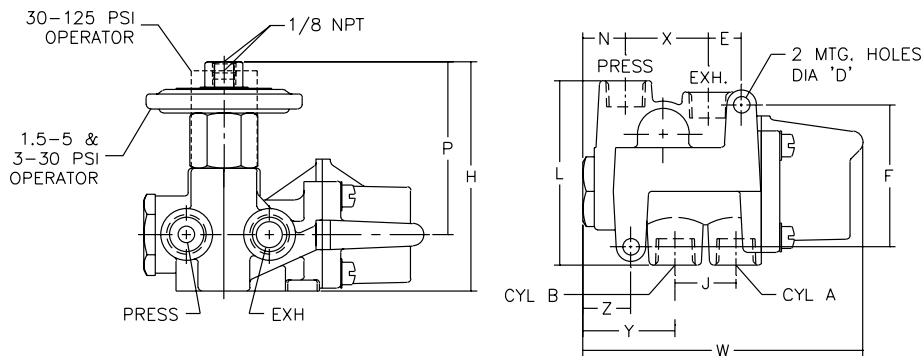
Notes: ① When barbed tubing adapter is used, add 1.19 ins. (30 mm) to "H" and/or "P" (or overall) dimensions.

IMPORTANT: Valves can be mounted in any position.

4/2 Valves - Constr. Ref. 1



4/2 Valves - Constr. Ref. 2, 3



FLOW DIAGRAMS

