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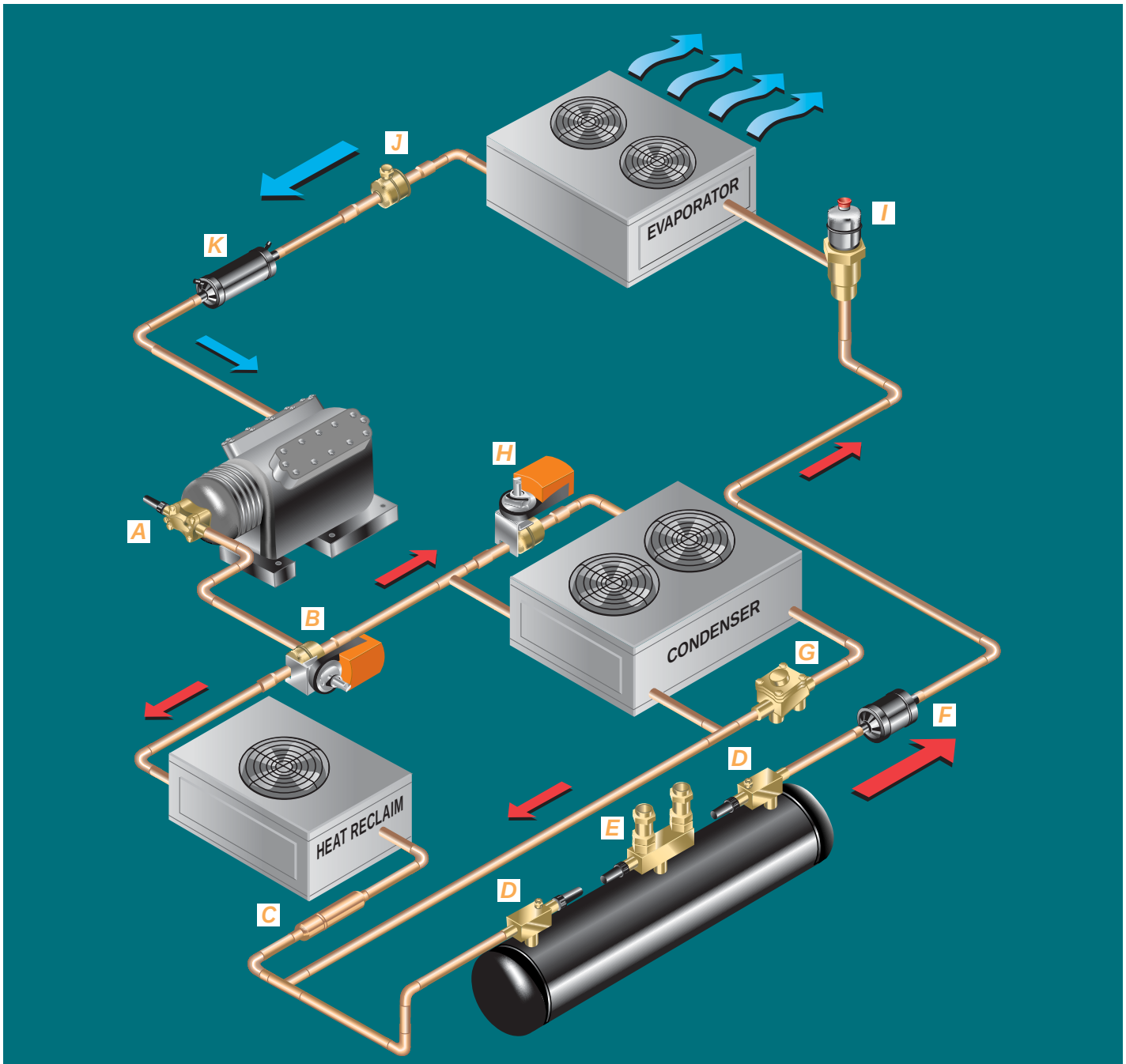
Quality Components For The Most Demanding Refrigeration Systems.



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Mueller Refrigeration Company, Inc.
A Division of Mueller Industries
P.O. Box 239 • 121 Rogers Street • Hartsville, TN 37074
800-251-8983 • Fax: 800-529-0884

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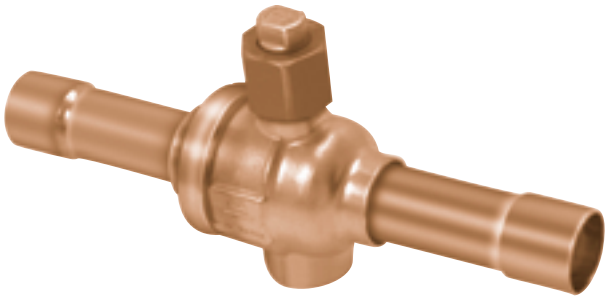
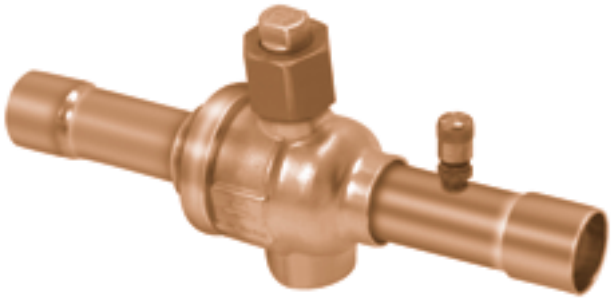
CYCLEMASTER® Ball Valves





Designed for universal applications.

The Mueller CYCLEMASTER® ball valve series has been designed to provide optimum system performance using full port construction and enhanced serviceability with a special quick-turn cap. Featuring our exclusive MCM™ seal technology, these valves exhibit immeasurably low leak rates after hundreds of thousands of cycles, and provide the flexibility for remote actuation.

Available in sizes from 1/4" to 3-1/8", all valves use a chromium plated ball that can be sized to match line size I.D., thereby eliminating system pressure drop. Using internal dual shaft seals as part of the blow-out proof stem design, and an external nut gasket with anti-friction ring incorporated into the quick-turn cap, CYCLEMASTER® valves offer the extra assurance needed to guarantee against refrigerant leaks to the environment. The quick-turn cap feature also provides visual identification of stem position, and offers the benefit of easy servicing in tight spaces.

All valves have been designed with an industry leading universal body forging that provides the ultimate design flexibility either in surface mount configurations or for standard installations. By specifying the drilled and tapped option, valves can be supplied with two body drillings in the base that will accept standard mounting screws.

Look for these Mueller advantages:

- *Full port construction from sizes 1/4" through 3 1/8" to match line size I.D.*
- *Chromium plated ball to reduce frictional wear and extend seal life.*
- *Exclusive MCM™ seals that provide industry leading longevity and immeasurably low leak rates.*
- *Blow-out proof stem design with dual shaft bearings for extended life and guaranteed safety.*
- *Quick-turn cap provides visual identification of stem position and enhances serviceability in tight spaces.*
- *Flexible body forging that allows optional surface mount configuration.*
- *Dual pin stops.*
- *Compatible with all CFC, HCFC, and HFC refrigerants and oils.*
- *Wide operating temperature range of –40ºF to 300ºF, and working pressures up to 700 psig.*
- *All valves are 100% tested and UL/cUL listed.*

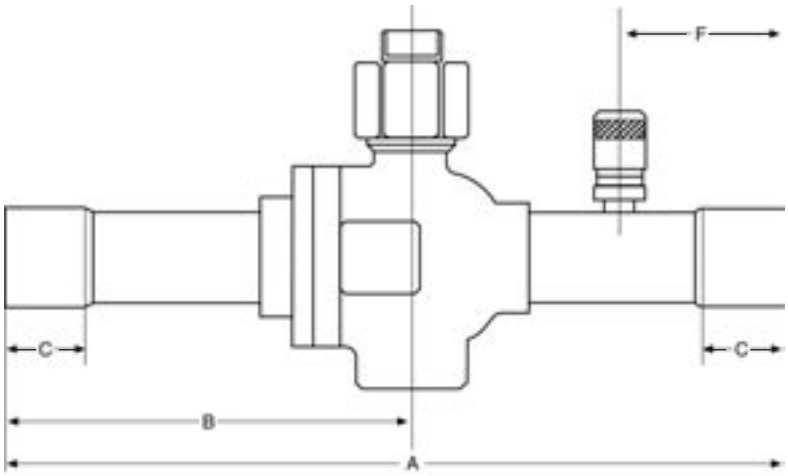
MUELLER INDUSTRIES, INC.

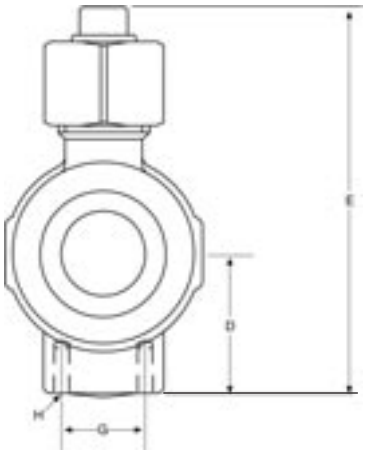
CYCLEMASTER® Ball Valves

Specifications

Technical Data

Refrigerants	HFC, CFC, HCFC
Maximum Working Pressure	700 psig
Working Temperature Range	-40˚F/ 300˚F





CYCLEMASTER® Ball Valve												
Part No.	Size	Cv	A (in)	B (in)	C (in)	D (in)	E (in)	F** (in)	G** (mm)	H**	Seal Cap Kit****	Weight
A 17859•	1/4	1.02	5 7/16	2 15/16	5/16	7/8	2 3/4	NA	14	M4 X 0.7	A 17842	.700
A 17860•	3/8	4.29	5 1/2	3	5/16	7/8	2 3/4	15/16	14	M4 X 0.7	A 17842	.630
A 17861•	1/2	6.20	6 3/8	3 7/16	3/8	7/8	2 3/4	1 3/16	14	M4 X 0.7	A 17842	.620
A 17862•	5/8	11.20	6 3/8	3 7/16	1/2	7/8	2 3/4	1 3/8	14	M4 X 0.7	A 17842	.640
A 17863	3/4	18.95	7 7/16	3 7/8	5/8	1 1/4	3 1/2	1 1/2	20	M4 X 0.7	A 17843	1.158
A 17864	7/8	29.30	7 7/16	3 7/8	3/4	1 1/4	3 1/2	1 5/8	20	M4 X 0.7	A 17843	1.532
A 17865	1 1/8	59.55	8 7/16	4 5/16	7/8	1 9/16	3 13/16	1 3/4	25	M4 X 0.7	A 17844	2.926
A 17866	1 3/8	84.58	10	5	1	1 1/2	4 3/16	2 1/16	30	M6 X 1.0	A 17844	3.487
A 17867	1 5/8	225.04	11	5 1/2	1 1/8	1 11/16	4 7/8	2 1/4	34	M6 X 1.0	A 17845	5.026
A 17868	2 1/8	291.59	12	6	1 3/8	2 1/8	5 9/16	2 7/16	34	M6 X 1.0	A 17845	8.600
A 17869	2 5/8	423.47	13 1/2	6 13/16	1 1/2	***	***	***	34	M6 X 1.0	A 17846	14.000
A 17870	3 1/8	***	16	8	1 3/8	3	7 3/8	3 1/8	34	M6 X 1.0	A 17846	23.500
A 17871*	2 5/8	184.85	12	6	1 3/8	2 1/8	5 5/8	2 3/8	34	M6 X 1.0	A 17845	9.200
A 17872*	3 1/8	127.99	12	6	1 11/16	2 1/8	5 5/8	3 1/16	34	M6 X 1.0	A 17845	4.625

Prefixed for Ball Valve Options:
A = Standard
AC = Standard with access
AP = Drilled & tapped
AQ = Drilled & tapped with access

Examples:
A 17865, 1⅛" without access
AC17865, 1⅛" with access

* Reduced port
** Where Applicable
*** Consult factory for details
**** Seal Cap Kit Includes Seal Cap, Seal Cap Gasket, Anti-Friction Ring, Cap Nut

• Sizes not available in "Standard, A" or "Standard with Access, AC" options. Substitute "AP" for "A" and "AQ" for "AC".

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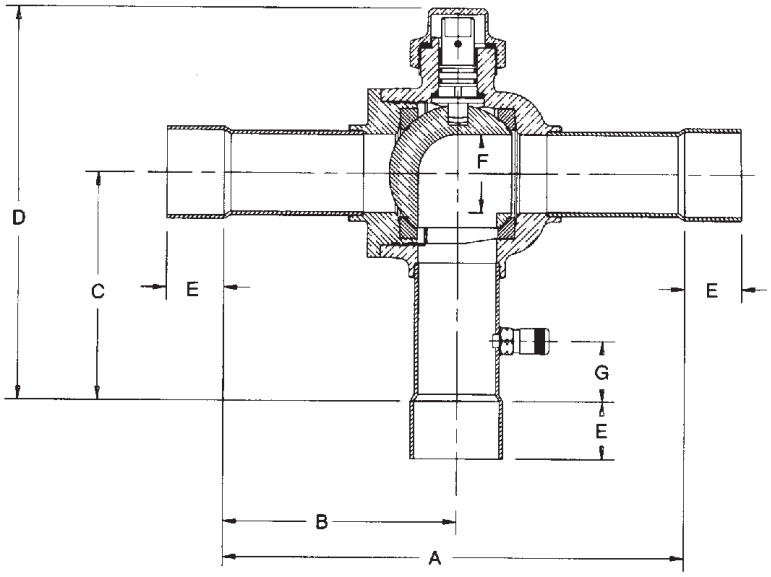
CYCLEMASTER® Ball Valves



CYCLEMASTER® 3-Way Ball Valves with Access Ports										
Part No.	Size	Cv	A	B	C	D	E	F	G	Weight
AU17860	3/8	2.23	4 7/8	2 21/32	2 19/64	3 21/32	5/16	1/2	41/64	.67
AU17861	1/2	3.94	5 3/8	3 3/64	2 43/64	4 7/32	3/8	1/2	53/64	.70
AU17862	5/8	4.63	5 3/8	2 59/64	2 35/64	4 7/64	1/2	1/2	27/32	.70
AU17863	3/4	11.90	6 1/4	3 57/64	3	5 1/4	5/8	3/4	55/64	NA
AU17864	7/8	10.89	5 31/32	3 5/32	2 29/32	4 7/8	3/4	3/4	27/32	1.44
AU17865	1 1/8	19.33	6 39/64	3 3/16	3 7/64	5 31/64	29/32	1	53/64	2.76
A 17545	1 3/8	31.06	8 1/16	4 7/64	3 61/64	6 57/64	31/32	1 1/4	1 5/64	4.97
A 17546	1 5/8	44.69	8 7/8	4 7/16	4 23/64	7 33/64	1 3/32	1 1/2	1 5/32	7.17
A 17547	2 1/8	76.32	9 5/16	4 39/64	4 23/32	8 13/32	1 11/32	2	1 5/64	13.80
A 17548	2 5/8	69.85	9 1/16	4 15/32	4 19/32	8 9/32	1 15/32	2	1 1/64	14.66
A 17549	3 1/8	58.19	8 11/16	4 9/32	4 11/32	8 3/32	1 21/32	2	1 27/64	15.48

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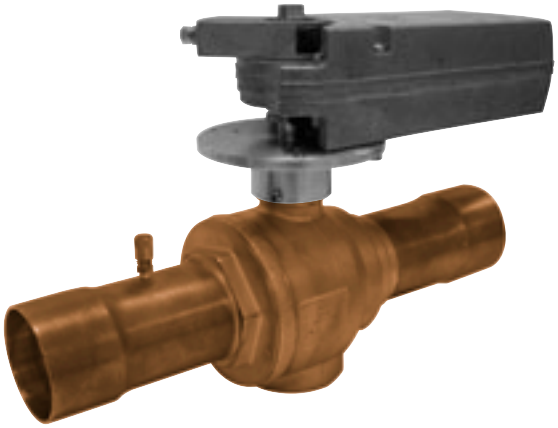
CYCLEMASTER® Actuated Ball Valves

Ideal for heat reclaim, split condenser and hot gas applications.



** New design to be implemented Summer 2003. Contact customer service for details.*

Advanced Isolation Control. Free-Flowing Efficiency.

Mueller's CYCLEMASTER® Series actuated ball valves feature exclusive MCM™ seal technology which provides virtually no leak rates, even after hundreds of thousands of cycles. Precision dual bearings and blowout-proof stems are engineered for extended life cycles that far exceeds industry standards.

CYCLEMASTER® valves feature a full-flow ball port design to match line size I.D., minimizing pressure drop and increasing flow capacity. The gradual operating characteristics of the ball valve eliminates the abrupt cycling, line hammer, and efficiency loss associated with solenoid-operated shutoff valves.

The motorized actuator provides either local or remote operation, and may be controlled by a thermostat, pressure, switch, or microprocessor. Models are available in multiple voltages and with an optional fail-safe positioning feature.

Look for these Mueller advantages:

- *Full port construction to match line size I.D.*
- *Minimizes pressure drop.*
- *Quarter turn operation, with ball position indicated by arrow.*
- *Full shutoff capability.*
- *Dual pin stops.*
- *Gradual open/close stops line hammer.*
- *Chromium plated ball.*
- *Nylon anti-friction ring.*
- *Blowout-proof stem design with dual stem bearings for extended life.*
- *Exclusive MCM™ leak-free seals.*
- *Compatible with all new refrigerants and oils.*
- *Remote operating capability.*
- *Removable actuator for quick change replacement.*
- *Manual override and valve positioning.*
- *Electronic overload protection.*
- *All valves 100% tested and UL/cUL listed.*

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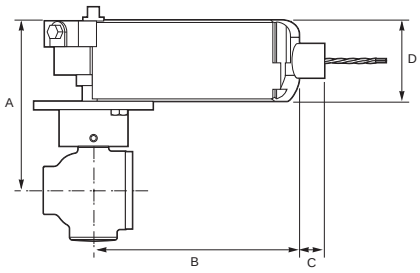
CYCLEMASTER® Actuated Ball Valves

** New design to be implemented Summer 2003. Contact customer service for details.*

Specifications			
Actuator	Series I	Series II	Series III
Size	½ - ⅞	1⅛ - 1⅝	2⅛ -3⅜
Torque (in.-lb.)	44	132	310
Power Supply (VAC/DC)	24	24	24
Power Consumption (W)	2.3	2.3	6
Running Time (sec.)	90	125	150
Ambient Temp (˚F)	-22 to 130	-22 to 130	-22 to 130

Ball Valve	
Refrigerants	All Flourinated Types
MWP	700 psig
Working Temp Range	-40˚F to 300˚F



CYCLEMASTER® Actuated Ball Valves										
	Straight					3-Way				
Size	Part No.	A	B	C	D	Part No.	A	B	C	D
½	AW17861	4.05	3.71	NA	2.69	AY17861	4.05	3.71	NA	2.69
⅝	AW17862	4.05	3.71	NA	2.69	AY17862	4.05	3.71	NA	2.69
¾	AW17863	4.36	3.71	NA	2.69	AY17863	4.36	3.71	NA	2.69
⅞	AW17864	4.36	3.71	NA	2.69	AY17864	4.36	3.71	NA	2.69
1⅛	AW17865	4.89	5.75	.65	3.18	AY17865	4.89	5.75	.65	3.18
1⅜	AW17866	5.12	5.75	.65	3.18	A 17810	5.70	5.75	.65	3.18
1⅝	AW17867	5.84	5.75	.65	3.18	A 17811	6.19	5.75	.65	3.18
2⅛	AW17868	6.50	8.25	.67	3.93	A 17812	6.50	8.25	.67	3.93
2⅝	AW17871	6.50	8.25	.67	3.93	A 17813	6.50	8.25	.67	3.93
3⅛	AW17872	6.50	8.25	.67	3.93	A 17814	6.50	8.25	.67	3.93

Straight		Nominal Liquid Capacity			Suction Vapor Capacity			Nominal Hot Gas Capacity		
Size	Cv	R 22	tons R 404a	R 134a	R 22	tons R 404a	R 134a	R 22	tons R 404a	R 134a
½	6.20	20.13	13.22	18.65	1.99	10.93	1.47	3.72	2.93	2.98
⅝	11.20	36.36	23.88	33.69	3.60	19.74	2.66	6.71	5.28	5.39
¾	18.95	61.52	40.40	57.00	6.09	33.39	4.51	11.36	8.94	9.12
⅞	29.30	95.13	62.46	88.14	9.42	51.63	6.97	17.56	13.82	14.09
1⅛	59.55	193.34	126.95	179.13	19.14	104.94	14.17	35.69	28.10	28.65
1⅜	84.58	274.60	180.30	254.43	27.19	149.05	20.12	50.69	39.90	40.69
1⅝	225.04	730.62	479.73	676.94	72.34	396.58	53.54	134.86	106.17	108.26
2⅛	291.59	946.58	621.59	877.13	93.74	513.85	69.37	174.74	137.57	140.27
2⅝*	184.85	600.14	394.05	556.05	59.42	325.75	43.98	110.78	87.21	88.92
3⅛*	127.99	415.54	272.84	385.01	41.14	225.55	30.45	76.70	60.39	61.57

Conditions:

Tonnage calculations are based on the following conditions:

Evaporator temperature = 10˚F

Vapor temperature exiting evaporator = 10˚F superheated

Liquid temperature entering evaporator = 100˚F

Hot gas temperature = 140˚F

Pressure drop across valve = 1 psi

3-Way		Nominal Liquid Capacity			Suction Vapor Capacity			Nominal Hot Gas Capacity		
Size	Cv	R 22	tons R 404a	R 134a	R 22	tons R 404a	R 134a	R 22	tons R 404a	R 134a
½	3.94	12.79	8.40	11.85	1.27	6.94	.94	2.36	1.86	1.90
⅝	4.63	15.03	9.87	13.93	1.49	8.16	1.10	2.77	2.18	2.23
¾	11.90	38.63	25.37	35.80	3.83	20.97	2.83	7.13	5.61	5.72
⅞	10.89	35.36	23.21	32.76	3.50	19.19	2.59	6.53	5.14	5.24
1⅛	19.33	62.76	41.21	58.15	6.21	34.06	4.60	11.58	9.12	9.30
1⅜	31.06	100.84	66.21	93.43	9.98	54.74	7.39	18.61	14.65	14.94
1⅝	44.69	145.09	95.27	134.43	14.37	78.75	10.63	26.78	21.08	21.50
2⅛	76.32	247.78	162.69	229.58	24.53	134.49	18.16	45.74	36.01	36.71
2⅝*	69.85	226.78	148.90	210.12	22.45	123.09	16.62	41.86	32.95	33.60
3⅛*	58.19	188.42	124.05	175.04	18.71	102.55	13.84	34.87	27.45	27.99

*Reduced Port

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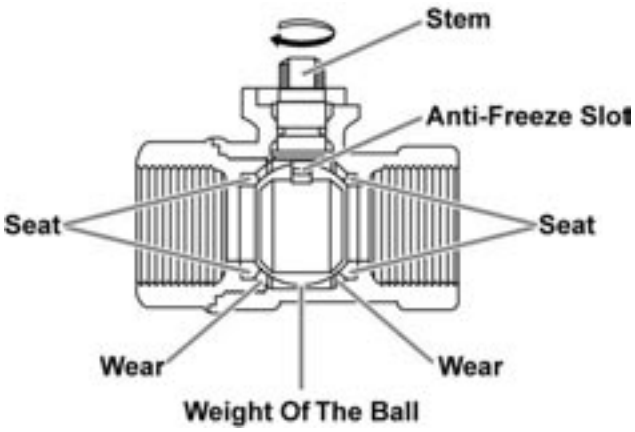
Water Ball Valves



Quality ball valves designed for a variety of applications.

The Mueller water ball valve has been designed to provide optimum system performace using steam, water, oil or gas in a variety of residential, commercial and industrial applications.

Forged brass bodies have a tensile strength that is over 30% higher than bronze and brass casting alloys.

All valves have been designed using patented Teflon seats, reducing friction during opening and closing, resulting in less torque required for operation.

Mueller's hollow ball valve construction lowers the ball's weight, thereby reducing wear on the seats during operation. The ball also features an anti-freeze slot which keeps a valve that was not cycled after draining from breaking in freezing conditions.

Dacromet plated handles are rust-resistant. In salt spray testing, the handles remain without corrosion after 1,000 hours.

Look for these Mueller advantages:

- *Forged brass construction.*
- *Chromium plated and hollow ball for lower seat wear and longer life.*
- *Teflon seals that provide industry leading longevity and immeasurable low leak rates.*
- *Blow-out proof stem design.*
- *Wide operating temperature range of -40° to 350° F.*
- *Anti-freeze protection.*
- *150 psi WSP steam.*
- *600 psi non-shock WOG (1/8" - 3").*
- *Dacromet corrosion protection on handle, vinyl handle grip and vibration-proof handle nut.*
- *Threaded ends comply with ANSI B1.20.1.*
- *Solder ends comply with ANSI B16.18.*
- *Tee handle option is available.*

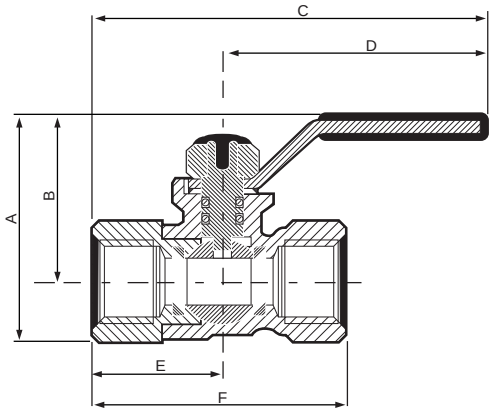
MUELLER®
INDUSTRIES, INC.

Water Ball Valves

Forged Brass, Chrome Plated Full Port Water Ball Valve

Features:

- *150 PSI WSP steam*
- *600 PSI non-shock WOG (1/2" through 2" IPS)*
- *Suitable for use with flammable liquid (1/2" through 2" IPS)*
- *Threaded ends comply with ANSI B1.20.1*
- *-40° F to 350° F temperature range*
- *Meets Federal Specification WW-V-35B, Type II, Style III*
- *Meets ANSI/NSF61-1999a (1/2" through 2")*
- *CSA B 163.33 (125 PSIG) certified (1/2" through 1")*
- *CSA 3-88 (5 PSIG) certified (1/2" through 2")*



Materials & Specifications		
Body	Brass	ASTM B-124 Alloy C 37700
Stem	Brass	ASTM B-124 Alloy C 37700
Anti-thrust Washer	Teflon® (PTFE)	
O-Ring	Viton® (Rubber)	
Washer	Teflon® (PTFE)	
Ball	Brass	ASTM B-124 Alloy C 37700
Disc	Teflon® (PTFE)	
Handle	Steel & Vinyl	
Retaining Nut	Steel & Plastic	
Body End	Brass	ASTM B-124 Alloy C 37700

Forged Brass/Chrome Plated, Full Port Water Ball Valve

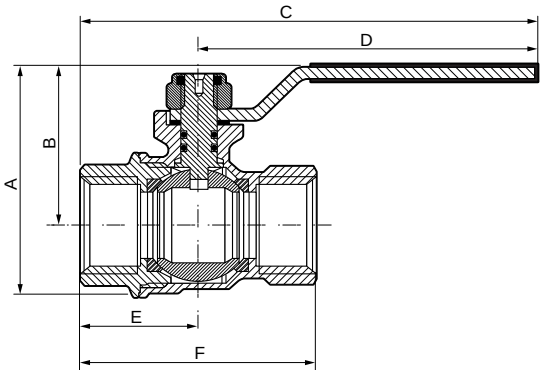
Part No.	Valve Size	Port Size	Configuration	Cv	Box Qty	Wt.	PSIG	A	B	C	D	E	F
B 35050	1/8	0.315		7.2	20	36		1.437	1.059	2.455	1.685	0.770	1.539
B 35051	1/4	0.315		7.7	20	25		1.415	1.039	2.504	1.665	0.839	1.608
B 35052	3/8	0.394		7.8	10	29		1.725	1.283	3.909	3.102	0.837	1.791
B 35053	1/2	0.590		14.2	10	46		2.045	1.404	4.120	3.012	1.109	2.216
B 35054	3/4	0.787		28.6	10	72		2.669	1.862	4.933	3.701	1.230	2.460
B 35055	1	0.984	Threaded	56.4	10	56	600	2.982	2.020	5.201	3.701	1.500	3.077
B 35056	1 1/4	1.260		114.0	10	31		3.376	2.205	5.395	3.701	1.694	3.389
B 35057	1 1/2	1.575		162.9	4	48		4.187	2.721	7.234	5.374	1.900	3.799
B 35058	2	1.968		245.6	4	80		4.822	3.030	7.512	5.374	2.179	4.358
B 35059	2 1/2	2.283		279.3	2	43		6.062	4.034	9.750	6.875	2787	5.638
B 35060	3	2.677		313.1	2	37		6.400	4.330	10.050	6.819	3.268	6.375
B 35061*	4	3.543		536.6	1	30		8.147	5.135	11.425	7.346	4.000	8.000

*400 PSI Rated

Forged Brass, Full Port Water Ball Valve

Features:

- *150 PSI WSP steam*
- *600 PSI Non-Shock WOG*
- *-20° F to 300° F temperature range*
- *Anti-freeze slot prevents valve from breaking in freezing conditions if valve is not cycled after draining*
- *Dacromet plated handle with vinyl grip*
- *Vibration proof handle nut*
- *Meets Federal Specification WW-V-35B, Type II, Style III*
- *Meets ANSI/NSF61-1999a*
- *Threaded ends comply with ANSI B1.20.1*
- *Solder ends comply with ANSI B16.18*



Materials & Specifications		
Body	Forged Brass	ASTM B-124 Alloy C 37700
Stem	Forged Brass	ASTM B-124 Alloy C 37700
Anti-thrust Washer	Teflon® (PTFE)	
O-Ring	Viton® (Rubber)	
Washer	Teflon® (PTFE)	
Ball	Forged Brass	ASTM B-124 Alloy C 37700
Disc	Teflon® (PTFE)	
Handle	Dacromet Plated Steel	
Nut	Plastic/Steel	
Nipple	Forged Brass	ASTM B-124 Alloy C 37700

Torque Rating*	
Size	In.-Lbs.
1/2	61
3/4	61
1	61
1 1/4	121
1 1/2	121
2	121

*Max. operating torque LS x inch. The torque required for preliminary cycle shall not be greater than three times the maximum ambient temperature given for the size of the valve.

MUELLER®
INDUSTRIES, INC.

Water Ball Valves

Forged Brass, Full Port Water Ball Valve													
Part No.	Valve Size	Port Size	Configuration	Cv	Box Qty	Wt.	PSIG	A	B	C	D	E	F
B 35062•	1/2	.571		14.0	20	10		2.0236	1.4035	4.0559	1.0441	1.0443	2.0886
B 35063•	3/4	.748		27.0	15	12		2.6400	1.8620	4.8780	1.1770	1.1770	2.3560
B 35064•	1	.945		39.0	10	13		2.9770	2.0200	5.1620	1.4610	1.4610	2.9220
B 35065•	1 1/4	1.240		70.0	5	12		3.3560	2.2040	5.3480	1.6480	1.6480	3.2870
B 35066•	1 1/2	1.496	Threaded	100.0	5	17	600	4.1090	2.7210	7.2030	1.8680	1.8680	3.7280
B 35067•	2	1.850		198.0	4	22		4.7130	3.0300	7.4710	2.1360	2.1360	4.2760
B 35068*	2 1/2	2.285		280.0	4	25		6.0630	4.0350	9.6970	6.8189	2.8780	5.7559
B 35069*	3	2.978		348.0	3	27		6.6102	4.2677	9.9822	6.8189	3.1653	6.3070
B 35070*	4	3.944		597.0	2	29		8.1465	5.1347	11.4252	7.3465	4.0787	8.1575
B 35071•	1/2	.571		14.0	20	15		2.0240	1.4040	4.1580	3.0120	1.1465	1.1465
B 35072•	3/4	.748		27.0	15	12		2.6400	1.8620	5.2770	3.7010	1.5765	1.5765
B 35073•	1	.945	Solder	39.0	10	12	600	2.9740	2.0190	5.6150	3.7000	1.9155	1.9155
B 35074•	1 1/4	1.240		70.0	5	11		3.3560	2.2040	5.8600	3.7000	2.1555	2.1555
B 35075•	1 1/2	1.496		100.0	5	17		4.1090	2.7210	7.8370	5.3350	2.4940	2.5020
B 35076•	2	1.850		198.0	4	22		4.7130	3.0300	8.3880	5.3340	3.0440	3.0540

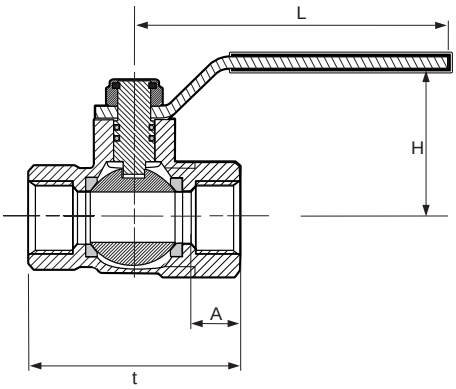
Working Pressure Non-Shock (PSI)		Test Pressure (PSI)			
Saturated Steam	Cold Water, Oil, Gas	Shell (Air)	Seat (Air)	Shell (Water)	Seat (Water)
150	600	100	100	1200	900

*Cast Brass / 400 PSI Rated
•Available in bin box packaging only. Box quantities are required as minimum order.

Brass Conventional Port Water Ball Valve

Features:

- *600 PSI Non-Shock WOG*
- *150 PSI WSP Steam*
- *-20° F to 300° F temperature range*
- *Galvanized handle with vinyl grip*



Materials, Specifications & Quantity		
Nut	Steel	1
Handle	Steel	1
Cover	PVC	1
O-Ring	NBR	2
Stem	Brass	1
Body	Brass	1
Seat	Teflon	2
Ball	Brass	1
End Plug	Brass	1

Brass Conventional Port Water Ball Valves													
Part No.	Valve Size	Port Size	Configuration	Cv	Box Qty	Mst. Qty.	Weight	PSIG	t	H	D	L	A
B 35077	1/4	.354		2.8	20	200	54		1.594	1.504	0.354	3.366	0.394
B 35078	3/8	.354		2.8	20	100	29		1.594	1.504	0.354	3.366	0.394
B 35079•	1/2	.500		6.0	40	N/A	16		1.890	1.579	0.500	3.366	0.472
B 35080•	3/4	.591	Threaded	10.7	30	N/A	16	600	2.165	1.626	0.591	3.366	0.512
B 35081•	1	.787		21.1	20	N/A	17		2.638	2.087	00.787	0.630	0.669
B 35082•	1 1/4	.984		42.8	15	N/A	18		3.051	2.283	0.984	4.173	0.689
B 35083•	1 1/2	1.260		57.0	8	N/A	17		3.307	2.756	1.260	5.157	0.709
B 35084•	2	1.496		66.4	6	N/A	19		3.819	2.992	1.496	5.157	0.787
B 35085	1/2	.394		6.0	50	NA	14		2.065	1.281	.394	3.472	.524
B 35086	3/4	.591		10.7	30	NA	17		2.604	1.506	.591	3.394	.755
B 35087	1	.787	Solder	21.1	20	NA	17	600	3.323	1.874	.787	4.233	.988
B 35088	1 1/4	.984		42.8	10	50	62		3.698	1.983	.984	4.261	.983
B 35089	1 1/2	1.260		57.0	4	20	42		4.182	2.579	1.260	5.209	1.109
B 35090	2	1.496		66.4	4	20	50		4.995	2.687	1.496	5.247	1.340

•Available in bin box packaging only. Box quantities are required as minimum order.

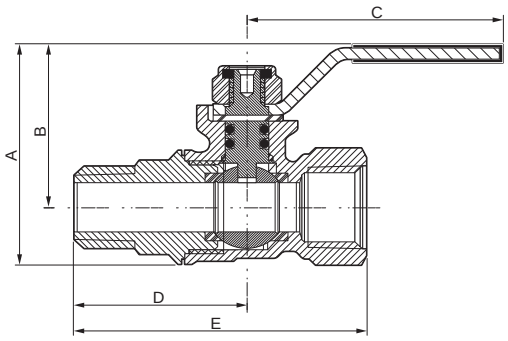
MUELLER®
INDUSTRIES, INC.

Water Ball Valves

Forged Brass, Male x Female Water Ball Valve

Features:

- *Manufactured in an ISO 9001 facility*
- *500 PSI water, oil, or air*
- *-20° F to 350° F temperature range*
- *Suitable for vacuum use up to 7 PSI*
- *Meets ANSI/NSF61-1999a*



Materials & Specifications		
Body	Forged Brass	ASTM B-124 Alloy C 37700
Stem	Forged Brass	ASTM B-124 Alloy C 37700
Anti-thrust Washer	Teflon® (PTFE)	
O-Ring	Viton® (Rubber)	
Washer	Teflon® (PTFE)	
Ball	Forged Brass	ASTM B-124 Alloy C 37700
Disc	Teflon® (PTFE)	
Handle	Dacromet Plated Steel	
Nut	Plastic/Steel	
Nipple	Forged Brass	ASTM B-124 Alloy C 37700

Forged Brass, Male x Female Water Ball Valve

Part No.	Valve Size	Port Size	Configuration	Cv	Box Qty	M. Q.	Wt.	PSIG	A	B	C	D	E
B 35091	1/4	.315		7.7	20	200	34		1.403	1.039	1.665	1.124	1.894
B 35092	3/8	.394		7.8	10	100	35		1.815	1.283	3.012	1.268	2.150
B 35093	1/2	.500	Threaded	11.9	10	100	43	500	1.909	1.330	3.012	1.445	2.500
B 35094	3/4	.689		21.4	10	60	45		2.512	1.793	3.700	1.672	2.881
B 35095	1	.886		42.2	6	36	41		2.870	1.957	3.700	1.898	3.374

Prefixed for Ball Valve Option
BT = Shipped with Tee Handle

Examples
B 35091, 1/4 Male x Female
BT 35091, 1/4 Male x Female, with tee handle

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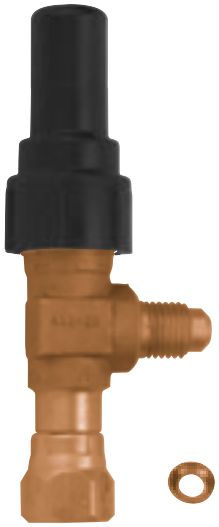
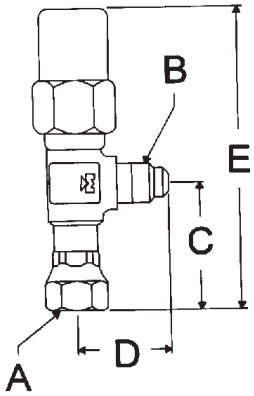
Packed Line Valves



2-Way Packed Line Valves

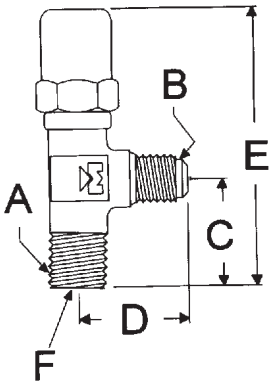
Technical Data

- *Non-backseating service valves.*
- *Forged brass body with integral mounting bracket.*
- *Plated steel stem suitable for refrigerants and other industrial fluids non-corrosive to brass and steel.*
- *Asbestos-free stem packing material.*
- *Maximum working pressure is 500 psig.*
- *Maximum temperature rating at +300˚F.*



Angle Non-Backseating - Internal Swivel Flare to Flare
One Soft Copper Gasket Included With Each Assembly

Part No.	Internal Flare A	Flare B	C	D	E	Wt./Ea.
A 17429	¼	¼	1 15/32	1 1/16	3 29/32	.33
A 17474	⅜	⅜	1 ½	1 ⅛	3 9/16	.27



Angle Non-Backseating-NPTFE Inlet to Flare

Angle Non-Backseating - NPTFE Inlet to Flare†

Part No.	Size MPT A	Size Flare B	FPT B	C	D	Counterbore Dimensions (F*) E	Counterbore Dimensions (F*) Dia.	Depth	Wt./Ea.
A 11031	¼	¼	—	1	15/16	3 3/64	.254	5/16	.26
A 11030	¼	⅜	—	1 1/16	1 ⅛	3 3/32	.317	⅜	.31
A 13613	⅜	¼	—	1 ⅛	1 1/16	3 3/16	.379	⅜	.31
A 13503	⅜	⅜	—	1 ⅛	1 ⅛	3 5/32	.379	5/16	.33
A 11042	⅜	½	—	1 ⅜	1 ⅜	3 ¾	.379	⅜	.51
A 13502	¼	—	¼	1 ⅜	1 1/16	3 13/16	.317	5/16	.48

* Machined to accept O.D. size tube as indicated.

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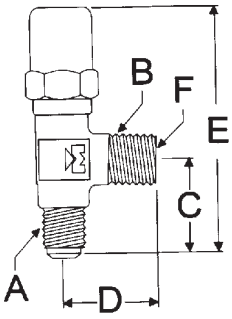
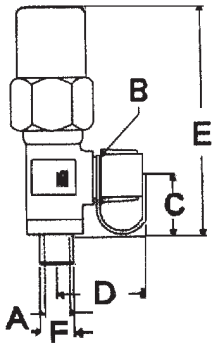
Packed Line Valves



Angle Non-Backseating-Flare to NPTFE

Angle Non-Backseating - Flare to NPTFE								
	Size					Counterbore Dimensions (F*)		
	Flare	MPT						
Part No.	A	B	C	D	E	Dia.	Depth	Wt./Ea.
A 15073	¼	1/4	15/16	1	3	.254	⅜	.27

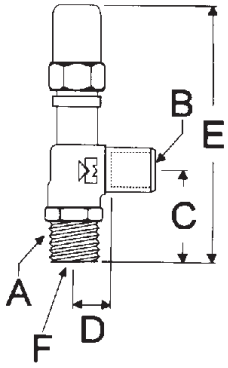
* Machined to accept O.D. size tube as indicated.



Angle Non-Backseating-Solder to Flare with Seal Cap

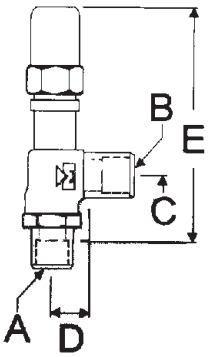
Angle Non-Backseating - Solder to Flare with Seal Cap							
	Solder	**Flare**					
Part No.	A	B	C	D	E	F	Wt./Ea.
A 17502	¼*	1/4	23/32	1 1/32	2 ¾	⅜	.58
A 17503	⅜**	3/8	11/16	1 ½	2 23/32	½	.49

* Also ⅜ FTG. **Also ½ FTG.



Angle Backseating-NPTFE Inlet to Solder

Angle Backseating - NPTFE Inlet to Solder								
	Size					Counterbore Dimensions (F*)		
	NPTFE	Solder						
Part No.	A	B	C	D	E	Dia.	Depth	Wt./Ea.
A 13977	½	1/2	1 13/16	1	4 3/32	.504	⅜	.51
A 13978	½	⅝	1 13/16	1	4 11/16	.504	⅜	.61
A 13979	¾	⅞	2 3/32	1	6	.754	⅝	1.27

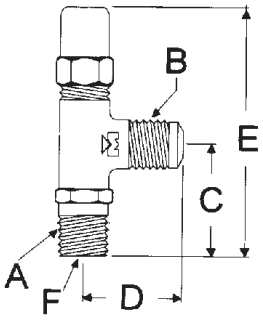


Angle Backseating-Solder to Solder

Angle Backseating - Solder to Solder						
Part No.	A	B	C	D	E	Wt./Ea.
A 17506	⅝	5/8	29/32	1	3 ¾	.66

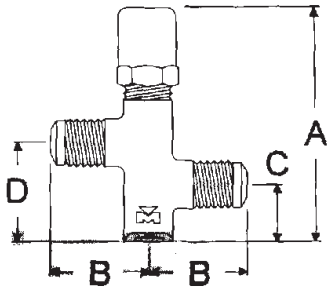
MUELLER INDUSTRIES, INC.

Packed Line Valves



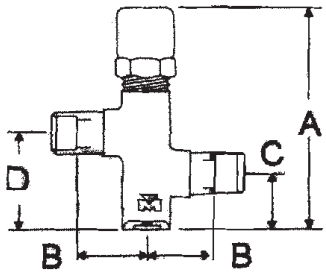
Angle Backseating-NPTFE Inlet to Flare

Angle Backseating - NPTFE Inlet to Flare								
	Size					Counterbore Dimensions (F*)		
	NPTFE	Flare						
Part No.	A	B	C	D	E	Dia.	Depth	Wt./Ea.
A 13220	½	½	1 13/16	1 5/16	4 1/8	.504	3/8	.53
A 13183	½	5/8	1 13/16	1 ½	4 11/16	.504	3/8	.64



Two Way Flare to Flare

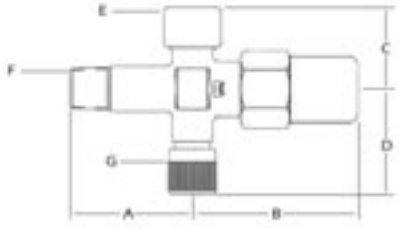
Two Way - Flare to Flare						
Part No.	Size	A	B	C	D	Wt./Ea.
A 13591	¼	3 13/32	1	29/32	1 13/32	.50
A 13595	3/8	3 13/32	1 1/8	29/32	1 13/32	.55
A 13592	½	3 13/32	1 ¼	15/16	1 7/16	.56



Two Way Solder to Solder

Two Way - Solder to Solder						
Part No.	Size	A	B	C	D	Wt./Ea.
A 15580	¼	3 13/32	¾	15/16	1 7/16	.49
A 15581	3/8	3 13/32	15/16	29/32	1 13/32	.51
A 15582	½	3 13/32	7/8	29/32	1 13/32	.52

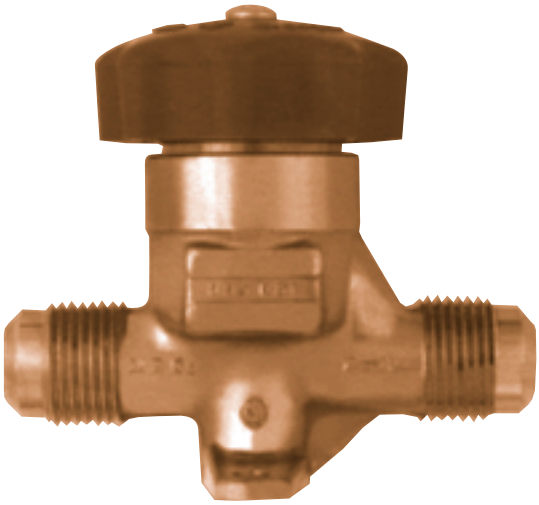
* Recognized under the component program of Underwriters Laboratories for use in USA & Canada.

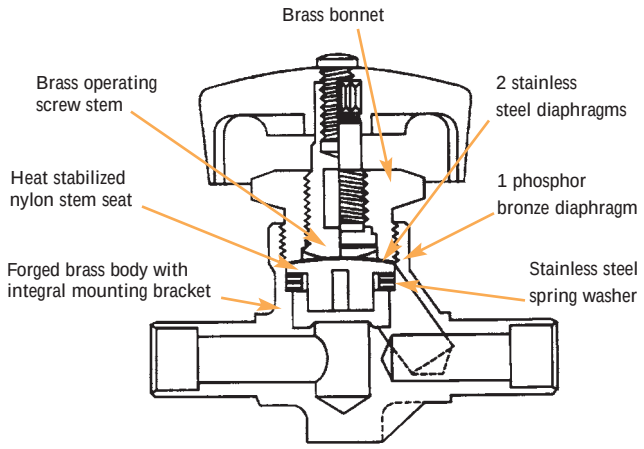


Transducer Valve								
Part No.	A	B	C	D	E	F	G	Stem Cap Material
B 33837	1 ½	2	1	1 ¼	1/8" NPTF	1/4" NPTF	1/4" Flare Access	Steel
B 34254	1 ½	2	1	1 ¼	1/8" NPTF	1/4" NPTF	1/4" Flare Access	Brass

MUELLER®
INDUSTRIES, INC.

Packless Diaphragm Valves





Engineered for positive isolation and extended service life.

Mueller packless diaphragm valves are the ideal choice for long-term use in positive isolation applications. Three oversized diaphragms (one bronze between two stainless steel) produce a perfect combination of long wear and precise sealing. Lifecycle testing has shown performance up to five times greater than current industry standards.

Mueller valves feature a forged brass body with full size openings and a heat stabilized nylon stem seat, allowing maximum flow with minimum pressure drop across a wide temperature range. The extensive product offering is available with extended ends and 90° configurations to suit virtually all applications. All valves are 100% tested and UL/cUL listed.

Look for these Mueller advantages:

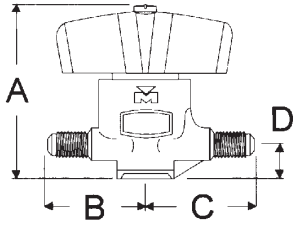
- *Longevity: up to 5 times greater than current industry designs.*
- *Oversized diaphragms provide accurate sealing and extended wear.*
- *Heat stabilized nylon stem seat for use across a wide temperature range.*
- *Stem seat is guided in alignment, providing even wear and extended service life.*
- *Compatible with all new refrigerants and oils.*
- *Forged brass body with full size openings for maximum flow and minimum pressure drop.*
- *Integral mounting bracket for ease of installation.*
- *Available in flare, sweat, angled, and extended tubing configurations.*
- *All valves are 100% tested and UL/cUL listed.*

MUELLER INDUSTRIES, INC.

Packless Diaphragm Valves

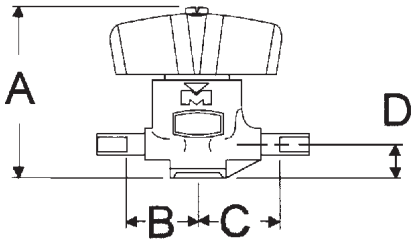
Specifications

Technical Data	
Refrigerants	All fluorinated types
Working Temperature Range	-40˚F/ +300˚F
Maximum Working Pressure	500 psig with flow in the direction of the arrow on the body
	350 psig with flow against the direction of the arrow
Burst Pressure	2500 psig



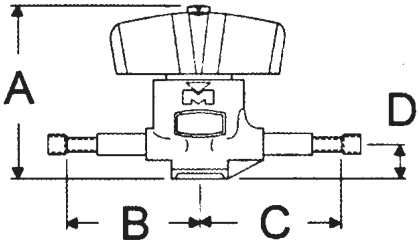
Straight Thru - Flare to Flare - Type 1 - Class IV

Part No.	Size	A Open	B	C	D	Wt./Ea.
A 14833	1/4	2 11/16	1 5/16	1 3/8	5/8	.75
A 14835	3/8	2 11/16	1 3/8	1 27/64	5/8	.76
A 14836	1/2	3 15/32	1 5/8	1 27/32	27/32	1.25
A 14837	5/8	3 15/32	1 11/16	1 15/16	27/32	1.27



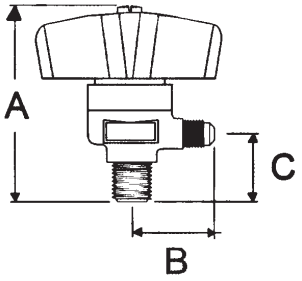
Straight Thru - Solder to Solder - Type 1 - Class II

Part No.	Size	A Open	B	C	D	Wt./Ea.
A 14838	1/4	2 11/16	1 1/32	1 3/32	5/8	0.72
A 14840	3/8	2 11/16	1 1/32	1 3/32	5/8	0.71
A 14841	1/2	3 1/2	1 5/16	1 9/16	27/32	1.22
A 14842	5/8	3 1/2	1 13/64	1 7/16	27/32	1.22



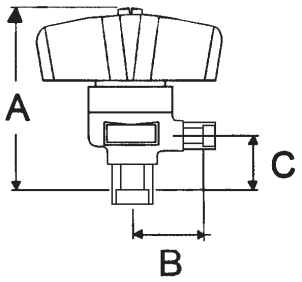
Extended End - Solder to Solder - Type 1 - Class II

Part No.	Size	A Open	B	C	D	Wt./Ea.
A 14848	1/4	2 11/16	2 21/32	2 23/32	5/8	0.75
A 14850	3/8	2 11/16	2 13/16	2 7/8	5/8	0.76
A 14851	1/2	3 1/2	3 1/32	3 11/32	27/32	1.28
A 14852	5/8	3 1/2	3 7/64	3 11/32	27/32	1.34



Angle - NPTFE to Flare - Type I

Part No.	Size MPT	Size Flare	A Open	B	C	Wt./Ea.
A 15525	1/4	1/4	2 13/16	1 19/64	1 3/64	0.61
A 15526	1/4	3/8	2 13/16	1 27/64	1 3/64	0.63
A 15527	3/8	1/4	2 7/8	1 19/64	1 5/64	0.62
A 15528	3/8	3/8	2 7/8	1 27/64	1 5/64	0.64
A 15529	3/8	1/2	3 5/16	1 27/32	1 19/64	1.06
A 15530	1/2	1/2	3 11/16	1 27/32	1 7/16	1.06
A 15531	1/2	5/8	3 11/16	1 15/16	1 7/16	1.08



Angle - Solder to Solder - Type I - Class I

Part No.	Size O.D.	Size O.D.	A Open	B	C	Wt./Ea.
A 15539	1/4	1/4	2 17/32	1 3/32	3/4	0.69
A 15540	3/8	3/8	2 17/32	1 3/32	3/4	0.71
A 15541	1/2	1/2	3 5/16	1 3/16	1 1/16	1.14
A 15542	5/8	5/8	3 13/64	5/16	15/16	1.14

MUELLER INDUSTRIES, INC.

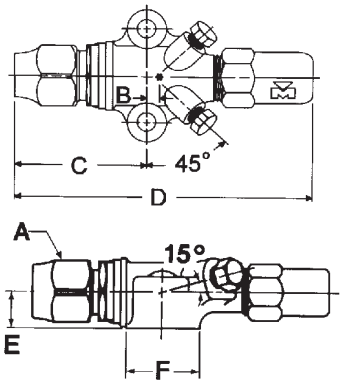
Compressor Valves

Open type and semi-hermetic compressors are usually fitted with compressor service valves, one each at the suction and discharge ports. The service valve is indispensable when service is to be performed on any part of the refrigeration system.

Technical Data

- ***Back-seating.*** *Mueller compressor valves are of the back-seating type, constructed so that the stem forms a seal against a seat whether the stem is full-forward or full-backward. The valve packing is depended upon only when the stem is in the intermediate position. When the valve is fully open "backseated" (normal position when the unit is running) the gauge and charging port cap or plug may be removed without loss of refrigerant. A charging line or pressure gauge may be attached to this side port. The back-seating feature also allows the valve stem to be repacked without interruption of service.*
- ***Standard valve sizes.*** *Mueller furnishes compressor valves machined to fit standard dimensions and the many special flange dimensions used by several compressor manufacturers. The valves illustrated are standard and generally available from stock. Nevertheless, it is advisable to consult for availability before ordering. For valves with other tube connections or modifications, contact your local Mueller representative.*
- *All valves are fabricated of forged brass or cast iron.*
- *Valve packing is of asbestos-free material.*
- *Valve openings are designed for minimum flow restriction.*
- *Recognized under the component program of Underwriters Laboratories for use in the USA and Canada.*
- *Maxiumum working pressure is 500 psig.*

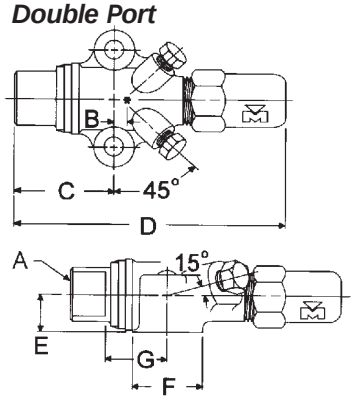
Double Port - 45˚ Flare Solder



Double Port - 45˚ Flare Type - Forged Brass Body											
Part No.	Flare Size A	B	C	D	E	F	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Wt./Ea.
*A 16302	3/8	9/32	1 3/4	4 9/16	5/8	1 1/4	1 5/8	11/32	1/8	7/8	1.00
*A 16303	1/2	9/32	1 7/8	4 11/16	5/8	1 1/4	1 5/8	11/32	1/8	7/8	1.10
*A 16304	5/8	9/32	2	4 13/16	5/8	1 1/4	1 5/8	11/32	1/8	7/8	1.15

* Supplied with flare nut and seal bonnet

Double Port

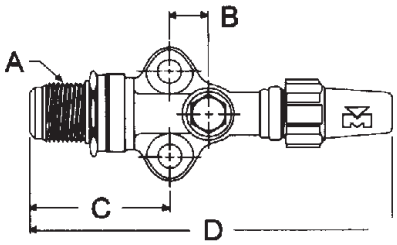


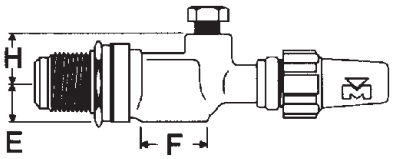
Double Port - Solder Type - Forged Brass Body												
Part No.	Tube Size A	B	C	D	E	F	G	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Wt./Ea.
A 16307	3/8	9/32	1 9/32	4 3/32	5/8	1 1/4	31/32	1 5/8	11/32	1/8	7/8	0.89
A 16308	1/2	9/32	1 13/32	4 3/32	5/8	1 1/4	1 1/32	1 5/8	11/32	1/8	7/8	0.93
A 16309	5/8	9/32	1 17/32	4 11/32	5/8	1 1/4	1 1/32	1 5/8	11/32	1/8	7/8	0.96

MUELLER INDUSTRIES, INC.

Compressor Valves

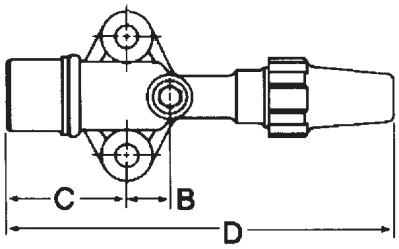
Straight Port - 45˚ Flare Type

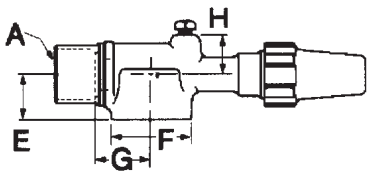




Straight Port - 45˚ Flare Type - Forged Brass Body													
Part No.	Flare Size A	B	C	D	E	F	G	H	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Wt./Ea.
A 13166	¾	¾	2 13/32	7	⅞	1 ½	—	1	1 ⅝	11/32	⅛	1 21/64	1.75

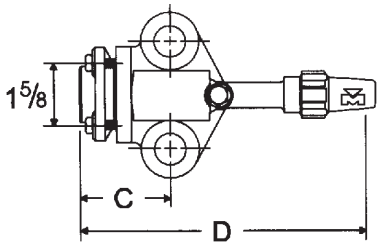
Straight Port

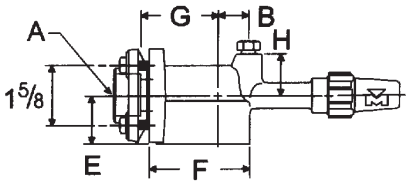




Straight Port - Solder Type - Forged Brass Body													
Part No.	Tube Size A	B	C	D	E	F	G	H	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Wt./Ea.
A 15500	1 ⅛	¾	2 1/16	6 11/16	⅞	1 ½	1 5/32	1	1 ⅝	11/32	⅛	1 21/64	1.66
A 16310	¾	¾	1 29/32	6 ½	⅞	1 ½	1 9/32	1	1 ⅝	11/32	⅛	1 21/64	1.60
A 16317	⅞	¾	1 31/32	6 ½	⅞	1 ½	1 7/32	1	1 ⅝	11/32	⅛	1 21/64	1.63
B 32197	⅞	¾	1 31/32	6 9/16	⅞	1 ½	1 7/32	1	1 ¾	11/32	⅛	1 21/64	1.63
B 33367	1 ⅛	¾	2 17/64	6 55/64	⅞	1 ½	1 23/64	1	1 ¾	11/32	¼	1 21/64	1.57

Flanged Union Style



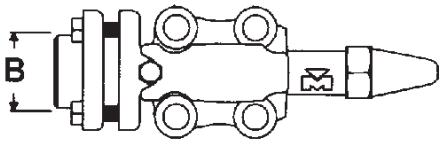


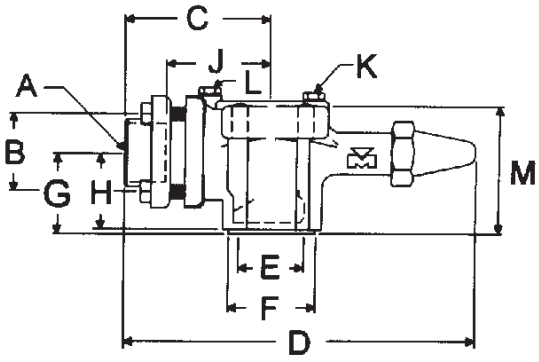
Flanged Union Style - Solder Type - Forged Brass Body													
Part No.	Tube Size A	B	C	D	E	F	G	H	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Wt./Ea.
A 16313	¾	1	2 5/16	7 11/32	1 ¼	2 ¼	1 11/16	1 ⅛	2 ¾	17/32	⅛	1	4.03
A 16314	⅞	1	2 5/16	7 11/32	1 ¼	2 ¼	1 9/16	1 ⅛	2 ¾	17/32	⅛	1	4.03
A 16315	1 ⅛	1	2 15/32	7 ½	1 ¼	2 ¼	1 9/16	1 ⅛	2 ¾	17/32	⅛	1	3.94
A 16316	1 ⅜	1	2 15/32	7 ½	1 ¼	2 ¼	1 ½	1 ⅛	2 ¾	17/32	⅛	1	3.96

MUELLER INDUSTRIES, INC.

Compressor Valves

Flanged Union Style

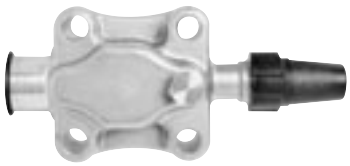


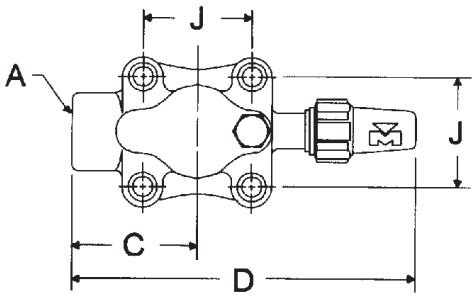


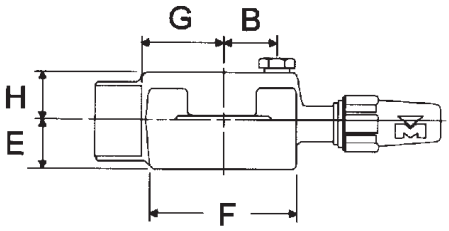
Flanged Union Style - Solder Type - Cast Iron Valve Body															
Part No.	Tube Size A	B	C	D	E	F	G	H	J	K	L	M	Bolt Centers	Dia. Bolt Holes	Wt./Ea.
A 16321	1 5/8	2 1/8	4 17/32	10 1/16	2 1/8	2 3/4	1 13/16	1 17/32	3 3/16	1/4	1/4	2 11/16	2 1/2	17/32	9.37
A 16367	1 5/8	3 1/16	5 1/4	12 1/8	2 17/32	3 7/32	2 3/8	2 3/16	4 5/32	1/4	1/4	3 7/16	3 1/16	11/16	18.20
A 15586	2 1/8	3 1/16	5 1/16	11 15/16	2 17/32	3 7/32	2 3/8	2 3/16	3 3/4	1/4	1/4	3 7/16	3 1/16	11/16	18.25
A 15587	2 5/8	3 1/16	5 1/32	11 29/32	2 17/32	3 7/32	2 3/8	2 3/16	3 3/4	1/4	1/4	3 7/16	3 1/16	11/16	17.38
A 16366	2 5/8	3 7/8	5 15/16	15	3 11/32	4 5/32	3	2 47/64	4 3/16	1/4	1/4	4 5/8	3 7/8	11/16	32.25
A 15588	3 1/8	3 7/8	5 15/16	14 23/64	3 11/32	4 5/32	3	2 3/4	4 23/32	1/4	1/4	4 21/32	3 7/8	11/16	30.75
A 15589	4 1/8	4 13/16	7 7/32	17 1/2	4 3/8	5 1/8	3 5/8	3 5/16	5 1/4	1/4	1/4	5 15/32	4 13/16	13/16	49.75

Seat disc material is heat stabilized nylon. Teflon also available. Valve packings are asbestos-free material.

Four Bolt Mounting Style







Four Bolt Mounting Style - Solder Type - Forged Brass Body With Gasket Surface													
Part No.	Tube Size A	B	C	D	E	F	G	H	J Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Wt./Ea.
B 32807	1 1/8	1 5/32	2 23/32	7 5/8	1	3 13/32	1 13/16	1	2 1/2	17/32	1/4	1 11/16	4.30
B 32808	1 3/8	1 5/32	2 23/32	7 5/8	1	3 13/32	1 3/4	1	2 1/2	17/32	1/4	1 11/16	4.50
B 32930	1 5/8	1 9/32	2 7/8	7 5/8	1	3 13/32	1 25/32	1 3/16	2 1/2	17/32	1/4	1 11/16	4.50

MUELLER INDUSTRIES, INC.

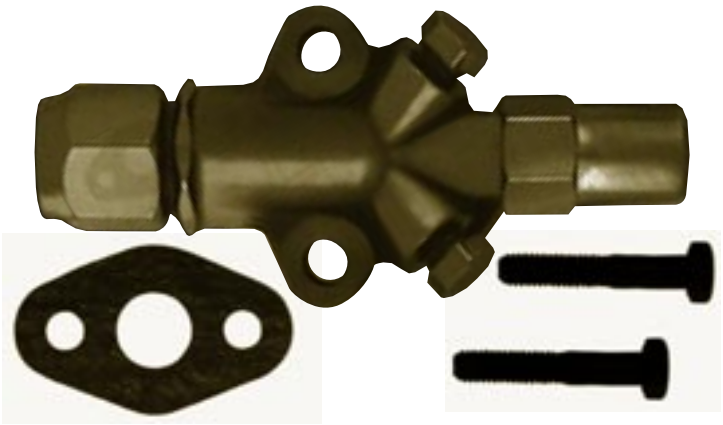
Compressor Valves

For Cast Iron Compressor Valves - Replacement Part Kits				
Kits Contain Components To Pack Stem (Pack Gland, Packing & Pack Washer)				
Assembly No.	Description	Components Are Used In		
A 17421	4 Bolt Cast Iron	A 15246	B 33770	
		A 16321	B 33732	
		A 16496	B 33813	
		B 32337		
A 17422		A 15586	A 16493	B 33649
		A 15587	A 16499	B 33771
		A 16324	B 33568	B 33793
		A 16367	B 33572	B 33794
A 17423		A 15588	B 33176	B 33788
		A 16365	B 33189	
		A 16366	B 33172	
		A 17496	B 33569	
A 17424		A 15589	B 33356	B 33795
		B 33173	B 33648	

For Forged Brass Compressor Valves - Replacement Part Kits				
Kits Contain Components To Pack Stem (Pack Gland, Packing & Pack Washer)				
Assembly No.	Description	Components Are Used In		
A 17418	4 Bolt Straight Port	B 32807	B 33492	B 33791
		B 32808	B 33789	B 33718
		B 32930	B 33790	B 33719
A 17419	2 Bolt Single Port	A 13166	B 32011	B 33613
		A 15085	B 32197	B 33641
		A 15500	B 32617	B 33647
		A 16310	B 33292	B 33650
		A 16311	B 33335	B 33735
		A 16312	B 33367	B 33749
		A 16313	B 33458	B 33765
		A 16314	B 33493	B 33769
		A 16315	B 33494	B 33772
		A 16316	B 33495	B 33776
		A 16317	B 33591	B 33785
		B 10946		B 33786
A 17420	2 Bolt Double Port	A 16302	B 32224	B 33777
		A 16303	B 33496	B 33778
		A 16304	B 33714	B 33779
		A 16307	B 33715	B 33780
		A 16308	B 33716	B 33781
		A 16309	B 33717	B 33782

MUELLER®
INDUSTRIES, INC.

Compressor Valve Kits



Box includes valve, gasket and bolts.

The Industry Standard

Mueller original equipment compressor valve kits provide everything you need to install or replace compressor service valves. The back-seating design allows complete isolation for service when the valve is either fully open or fully closed. In the intermediate position, specialized packing allows gauge and charging port caps and plugs to be accessed without refrigerant loss.

Each kit includes a valve body, cap, gaskets, and bolts to perfectly match the compressor. Cross-reference information is provided to assist in the selection process.

Mueller supplies compressor valves to all major compressor manufacturers in the industry, thereby assuring the product selected will perfectly match required specifications and dimensions.

Look for these Mueller advantages:

- *Valve cross-reference available for all compressor manufacturers.*
- *Asbestos-free valve packing material.*
- *Models available in forged brass and cast iron.*
- *Complete service kit including valve body, bolts, cap, and gaskets.*
- *Direct original equipment replacement parts for all industry manufactured compressors.*
- *Manufactured to the strictest quality standards in the industry.*
- *Valve openings designed for maximum flow and minimum pressure drop.*
- *Compatible with all new refrigerants and oils.*
- *500 psig maximum working pressure.*
- *Special flanges and adapters available upon request.*
- *All valves 100% tested.*
- *Recognized under component program of Underwriters Laboratories for use in the USA and Canada.*

MUELLER INDUSTRIES, INC.

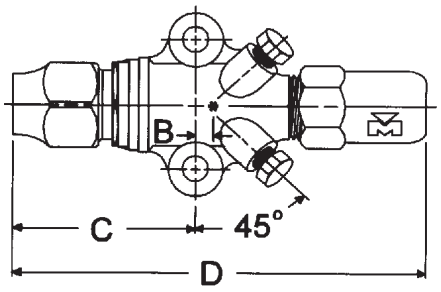
Compressor Valve Kits

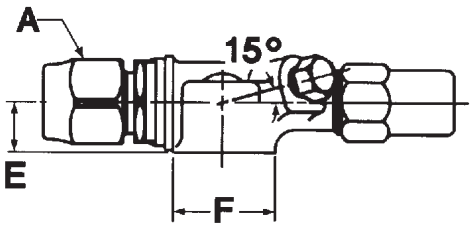
Specifications

Technical Data

Kit Number	A 17518	A 17519	A 17520	A 17510	A 17511	A 17512	A 17531
Maximum Working Pressure (psig)	500	500	500	500	500	500	500
Burst Pressure (psig)	2500	2500	2500	2500	2500	2500	2500
Working Temperature Range (˚F)	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300
Fluid Compatibility	All Fluorinated Types						
Torques To Seal							
Front Seat (ft. - lbs.)	14 - 18	14 - 18	14 - 18	14 - 18	14 - 18	14 - 18	14 - 18
Back Seat (ft. - lbs.)	14 - 18	14 - 18	14 - 18	14 - 18	14 - 18	14 - 18	14 - 18
Pack Gland (ft. - lbs.)	8 - 12	8 - 12	8 - 12	8 - 12	8 - 12	8 - 12	8 - 12
Pipe Plug (ft. - lbs.)	2 - 3 Threads Exposed						
Seal Cap (ft. - lbs.)							
Plastic	NA						
Brass	20 - 30	20 - 30	20 - 30	20 - 30	20 - 30	20 - 30	20 - 30
Steel	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5	3 - 5

Double Port - 45˚ Flare Type



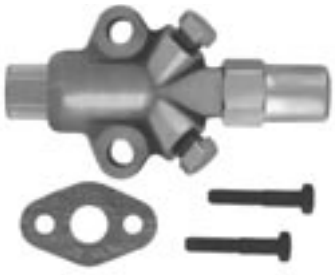


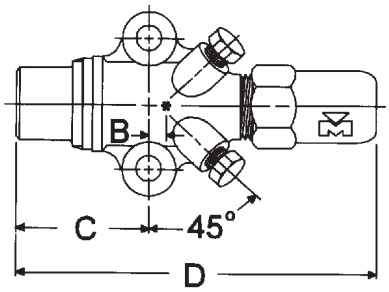
Double Port - 45˚ Flare Type - Forged Brass Body

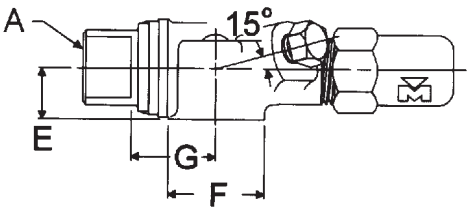
Kit No.	Flare Size A	B	C	D	E	F	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Copeland No.	Mueller Valve	Carrier No.
A 17518	3/8	9/32	1 3/4	4 9/16	5/8	1 1/4	1 5/8	11/32	1/8	7/8	998-0510-15	*A 16302	-------
A 17519	1/2	9/32	1 7/8	4 11/16	5/8	1 1/4	1 5/8	11/32	1/8	7/8	998-0510-16	*A 16303	-------
A 17520	5/8	9/32	2	4 13/16	5/8	1 1/4	1 5/8	11/32	1/8	7/8	998-0510-17	*A 16304	-------

* Supplied with flare nut and seal bonnet

Double Port







Double Port - Solder Type - Forged Brass Body

Kit No.	Flare Size A	B	C	D	E	F	G	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Copeland No.	Mueller Valve	Carrier No.
A 17510	3/8	9/32	1 9/32	4 3/32	5/8	1 1/4	31/32	1 5/8	11/32	1/8	7/8	998-0510-04	A 16307	----------
A 17511	1/2	9/32	1 13/32	4 3/32	5/8	1 1/4	1 1/32	1 5/8	11/32	1/8	7/8	998-0510-05	A 16308	----------
A 17512	5/8	9/32	1 17/32	4 11/32	5/8	1 1/4	1 1/32	1 5/8	11/32	1/8	7/8	998-0510-06	A 16309	----------
A 17531	5/8	9/32	1 17/32	4 11/32	5/8	1 1/4	1 1/32	1 5/8	11/32	1/8	7/8	----------	A 16309	06DA660-060

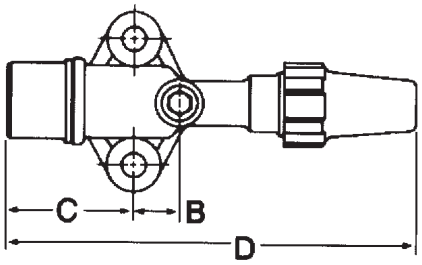
MUELLER®
INDUSTRIES, INC.

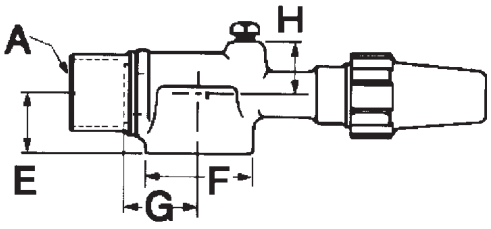
Compressor Valve Kits

Specifications

Technical Data									
Kit Number	A 17515	A 17516	A 17517	A 17528	A 17529	A 17530	A 17525	A 17526	A 17527
Maximum Working Pressure (psig)	500	500	500	500	500	500	500	500	500
Burst Pressure (psig)	2500	2500	2500	2500	2500	2500	2500	2500	2500
Working Temperature Range (˚F)	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300
Fluid Compatibility	All Fluorinated Types								
Torques To Seal									
Front Seat (ft. - lbs.)	22 - 40	22 - 40	22 - 40	22 - 40	22 - 40	22 - 40	30 - 40	30 - 40	30 - 40
Back Seat (ft. - lbs.)	25 - 45	25 - 45	25 - 45	25 - 45	25 - 45	25 - 45	22 - 45	22 - 45	22 - 45
Pack Gland (ft. - lbs.)	15 - 25	15 - 25	15 - 25	15 - 25	15 - 25	15 - 25	15 - 25	15 - 25	15 - 25
Pipe Plug (ft. - lbs.)	2 - 3 Threads Exposed								
Seal Cap (ft. - lbs.)									
Plastic	Hand Tight								
Brass	NA	NA	NA	NA	40 - 50	NA	40 - 50	40 - 50	40 - 50
Steel	NA								

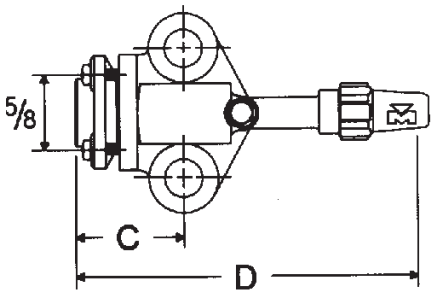
Straight Port

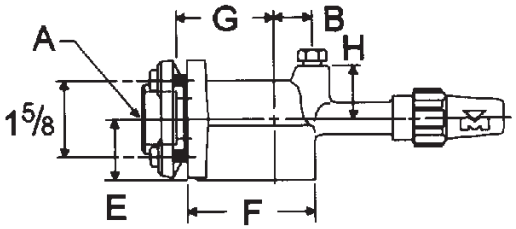




Straight Port - Solder Type - Forged Brass Body															
Kit No.	Tube Size A	B	C	D	E	F	G	H	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Copeland No.	Mueller Valve	Carrier No.
A 17515	7/8	3/4	1 31/32	6 9/16	7/8	1 1/2	1 7/32	1	1 5/8	11/32	1/8	1 21/64	998-0510-12	A 16311	----------
A 17516	1 1/8	3/4	2 1/16	6 11/16	7/8	1 1/2	1 5/32	1	1 5/8	11/32	1/8	1 21/64	998-0510-13	A 16312	----------
A 17517	3/4	3/4	1 29/32	6 1/2	7/8	1 1/2	1 9/32	1	1 5/8	11/32	1/8	1 21/64	998-0510-14	A 16310	----------
A 17528	7/8	3/4	1 31/32	6 1/2	7/8	1 1/2	1 7/32	1	1 5/8	11/32	1/8	1 21/64	----------	A 16317	06DA660-061
A 17529	7/8	3/4	1 31/32	6 9/16	7/8	1 1/2	1 7/32	1	1 3/4	11/32	1/8	1 21/64	----------	B 32197	06DA660-062
A 17530	1 1/8	3/4	1 17/64	6 55/64	7/8	1 1/2	1 23/64	1	1 3/4	11/32	1/4	1 21/64	----------	B 33367	06DA660-064

Flanged Union Style





Flanged Union Style - Solder Type - Forged Brass Body														
Kit No.	Tube Size A	B	C	D	E	G	H	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Copeland No.	Mueller Valve	Carrier No.
A 17525	1 1/8	1	2 15/32	7 1/2	1 1/4	1 9/16	1 1/8	2 3/4	17/32	1/8	1	998-0510-09	A 16315	---------
A 17526	1 3/8	1	2 15/32	7 1/2	1 1/4	1 1/2	1 1/8	2 3/4	17/32	1/8	1	998-0510-11	A 16316	---------
A 17527	7/8	1	2 5/16	7 11/32	1 1/4	1 9/16	1 1/8	2 3/4	17/32	1/8	1	998-0510-10	A 16314	---------

MUELLER®
INDUSTRIES, INC.

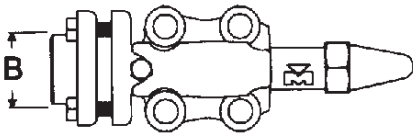
Compressor Valve Kits

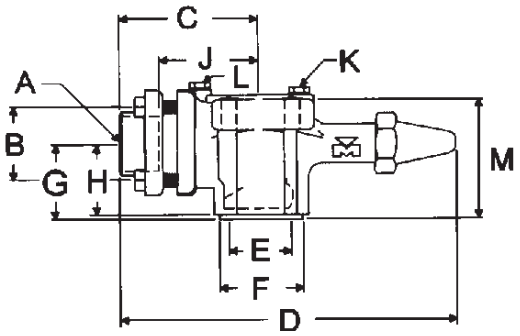
Specifications

Technical Data

Kit Number	A 17513	A 17514	A 17521	A 17522	A 17523	A 17524	A 17535	A 17532	A 17555	A 17534
Maximum Working Pressure (psig)	500	500	500	500	500	500	500	500	500	500
Burst Pressure (psig)	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Working Temperature Range (˚F)	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300
Fluid Compatibility	All Fluorinated Types									
Torques To Seal (ft. - lbs.)										
Front Seat	45 - 65	45 - 65	45 - 70	45 - 70	45 - 65	45 - 65	45 - 65	22 - 40	22 - 40	22 - 40
Back Seat	45 - 65	45 - 65	45 - 65	45 - 65	45 - 65	45 - 65	45 - 65	25 - 45	25 - 45	25 - 45
Pack Gland	25 - 35	25 - 35	55 - 70	55 - 70	35 - 45	35 - 45	35 - 45	10 - 15	10 - 15	10 - 15
Pipe Plug	2 - 3 Threads Exposed									
Seal Cap										
Plastic	Hand Tight									
Cast Iron	Hand Tight									

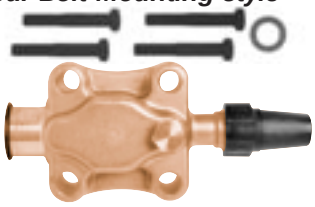
Flanged Union Style

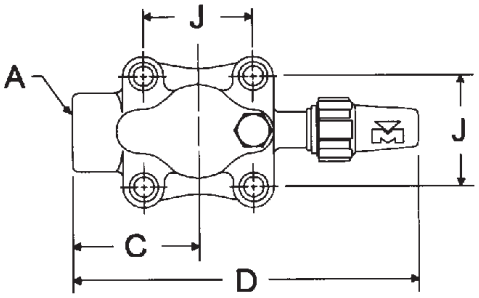


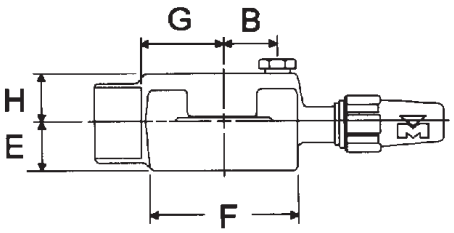


Flanged Union Style - Solder Type - Cast Iron Valve Body																	
Kit No.	Tube Size A	B	C	D	E	F	G	H	J	K	L	M	Bolt Centers	Dia. Bolt Holes	Copeland No.	Mueller Valve	Carrier No.
A 17513	1 5/8	2 1/8	4 17/32	10 1/16	2 1/8	2 3/4	1 13/16	1 17/32	3 3/16	1/4	1/4	2 11/16	2 1/2	17/32	998-0510-07	A 16321	----------
A 17521	3 1/8	3 7/8	6 1/2	14 13/32	3 11/32	4 5/32	2 1/4	2	4 27/32	1/4	1/4	4 21/32	2 5/8	11/16	998-0510-18	A 16365	----------
A 17522	2 5/8	3 7/8	6 1/2	15	3 11/32	4 5/32	2 1/4	2	4 3/16	1/4	1/4	4 5/8	3 7/8	11/16	998-0510-19	A 16366	----------
A 17523	2 1/8	3 1/16	5 1/16	11 15/16	2 17/32	3 7/32	2 3/8	2 3/16	3 3/4	1/4	1/4	3 7/16	3 1/16	11/16	998-0510-20	A 16324	----------
A 17524	1 5/8	3 1/16	5 1/4	12 1/8	2 17/32	3 7/32	2 3/8	2 3/16	4 5/32	1/4	1/4	3 7/16	3 1/16	11/16	998-0510-21	A 16367	----------
A 17535	2 1/8	3 1/16	5 1/16	11 15/16	2 17/32	3 7/32	2 3/8	2 3/16	3 3/4	1/4	1/4	3 7/16	3 1/16	11/16	----------	A 15586	06DA660-091

Four Bolt Mounting Style







Four Bolt Mounting Style - Solder Type - Forged Brass Body With Flat Gasket Surface															
Kit No.	Tube Size A	B	C	D	E	F	G	H	Bolt Centers	Dia. Bolt Holes	Pipe Plug Size	Flange Thickness	Copeland No.	Mueller Valve	Carrier No.
A 17532	1 1/8	1 5/32	2 23/32	7 5/8	1	3 13/32	1 13/16	1	2 1/2	17/32	1/4	1 11/16	----------	B 32807	06DA660-063
A 17533	1 3/8	1 5/32	2 23/32	7 5/8	1	3 13/32	1 3/4	1	2 1/2	17/32	1/4	1 11/16	----------	B 32808	06DA660-065
A 17534	1 5/8	1 9/32	2 7/8	7 7/8	1	3 13/32	1 25/32	1 3/16	2 1/2	17/32	1/4	1 11/16	----------	B 32930	06DA660-090

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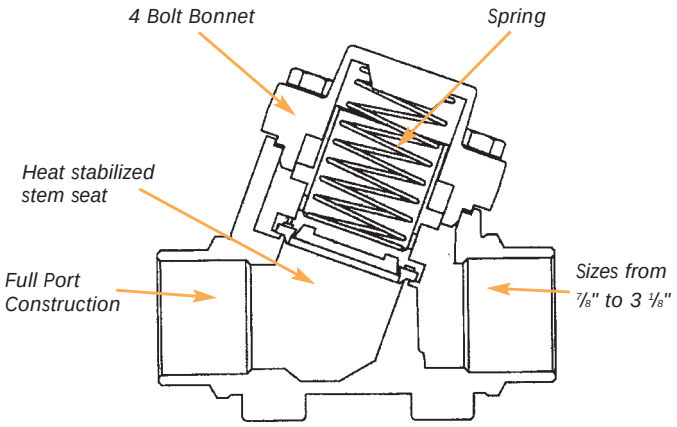
Four-Bolt Check Valves



Engineered For Positive Flow Control.

Mueller's four-bolt check valves offer multiple installation positions and can easily be assembled and disassembled. The four-bolt check valve can be installed vertically or horizontally depending on the application.

The four-bolt flange type bonnet is designed to offer the flexibility of easy component change out and quick reassembly. The special "Y" type design allows for minimal pressure drop and increased flow capacity. A durable non-asbestos gasket assures positive sealing upon reassembly.

Mueller, unique in the industry, manufactures both rod and forgings, thereby assuring the most stringent quality levels from first draw to final assembly.

Look for these Mueller advantages:

- *4-bolt flange allows easy disassembly and assembly for brazing or internal component changes.*
- *Forged brass body, manufactured by Mueller, ensures the product exceeds the most stringent quality standards in the industry.*
- *Horizontal or vertical installation.*
- *"Y" type design provides minimal pressure drop and increased flow capacity.*
- *Non-asbestos gasket material and O-Ring seal ensures seal integrity and is compatible with new refrigerants and oils.*
- *Heat-stabilized Teflon seat provides positive seal across wide temperature ranges.*
- *Working temperature range from -40˚F to 300˚F.*
- *Back-pressure shutoff at low pressure differentials.*
- *Sizes from 7/8" to 3 1/8".*
- *Special springs available for various differential applications.*
- *All valves 100% tested.*
- *Recognized under the component program of Underwriters Laboratories for use in the USA and Canada.*

MUELLER INDUSTRIES, INC.

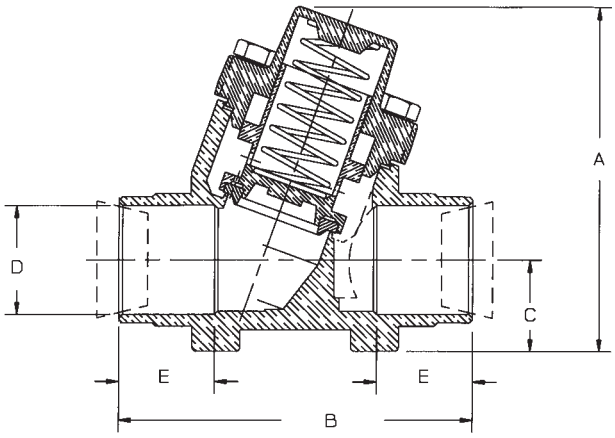
Four-Bolt Check Valves

Specifications

Technical Data

Refrigerants		All fluorinated types
Maximum Working Pressure		500 psig
Burst Pressure		2500 psig
Working Temperature Range		-40˚F/ 300˚F
Pressure Required to Open	B 34235	<1 psi
	B 34236	<1 psi
	B 34237	2 psi
	B 34238	2 psi
	B 34239	2 psi
	B 34240	2 psi
	B 34241	2 psi
Recommended Bolt Torques	B 34235	8 - 15 ft.-lb.
	B 34236	8 - 15 ft.-lb.
	B 34237	10 - 20 ft.-lb.
	B 34238	10 - 20 ft.-lb.
	B 34239	10 - 20 ft.-lb.
	B 34240	15 - 25 ft.-lb.
	B 34241	15 - 25 ft.-lb.

Not to be installed with the bonnet facing down.



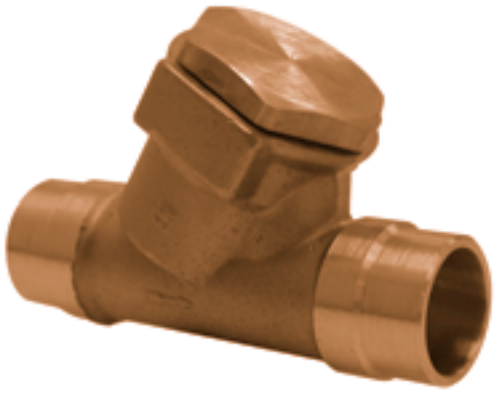
Four-Bolt Check Valves

Part No.	Size	A	B	C	D	E	C_v	Weight
B 34235	7/8	3 19/32	3 11/16	31/32	7/8	15/16	5.05	2.46
B 34236	1 1/8	3 19/32	3 11/16	31/32	1 1/8	1	6.70	2.31
B 34237	1 3/8	4 9/16	4 3/4	1 5/16	1 3/8	1 1/16	8.71	5.42
B 34238	1 5/8	4 9/16	4 3/4	1 5/16	1 5/8	1 1/16	10.06	5.04
B 34239	2 1/8	5 7/8	6 3/8	1 11/16	2 1/8	1 1/2	36	12.6
B 34240	2 5/8	8	8 7/8	2	2 5/8	1 7/8	70	*
B 34241	3 1/8	8	8 7/8	2	3 1/8	1 7/8	*	*

*Consult Factory

MUELLER®
INDUSTRIES, INC.

Screw Bonnet Check Valve



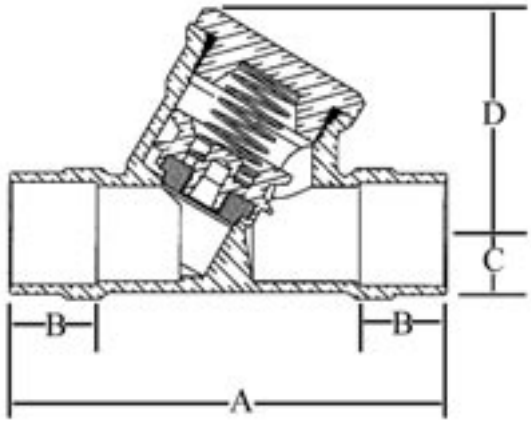
Look for these Mueller advantages:

- *Forged brass body, manufactured by Mueller, ensures the product exceeds industry standards.*
- *Design features easy removal and reassembly of internal components.*
- *Designed to provide minimal pressure drop and increased flow capacity.*
- *Bonnet gasket is made from neoprene o-ring, offering a reusable seal.*
- *Heat-stabilized Teflon seat provides positive seal across wide temperature ranges.*
- *Maximum working pressure is 700 psig.*
- *Lightweight spring requires minimum opening force.*
- *Available with copper tube extensions.*
- *All valves 100% tested.*
- *Recognized under the component program of Underwriters Laboratories for use in the USA and Canada.*

Specifications

Technical Data

Refrigerants	CFC, HFC, HCFC	
Maximum Working Pressure	700 psig	
Burst Pressure	3500 psig	
Working Temperature Range	-40˚ F / 300˚ F	
Pressure Required to Open	A/AT17953	<1 PSI
	A/AT17954	<1 PSI
	A/AT17955	<1 PSI
	A/AT17956	<1 PSI
	B 34873	<1 PSI
Recommended Bonnet Torques	A/AT17953	14-16 (ft. - lb.)
	A/AT17954	14-16 (ft. - lb.)
	A/AT17955	14-16 (ft. - lb.)
	A/AT17956	14-16 (ft. - lb.)
	B 34873	14-16 (ft. - lb.)

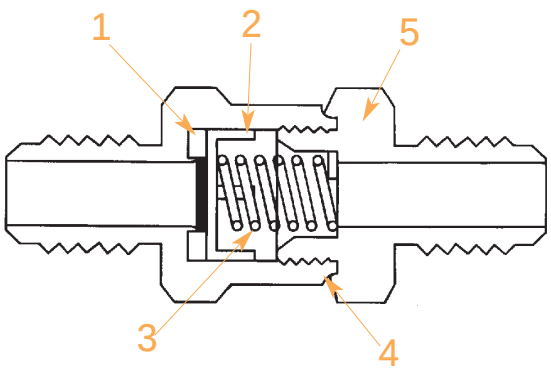


Screw Bonnet Check Valves

Part No.	Size	A	B	C	D	Cv
ODS X ODS						
A 17953	¼	3	5/16	7/16	1 5/8	**
A 17954	3/8	3	7/16	7/16	1 5/8	**
A 17955	½	3	9/16	7/16	1 5/8	**
A 17956	5/8	3 5/16	11/16	7/16	1 5/8	**
A 17957	¾	3 ¾	¾	5/8	2	**
A 17958	7/8	3 ¾	¾	5/8	2	**
B 34873	5/8	3 ¾	¾	5/8	2	**
Extended Ends						
AT17953	¼	6 ¼	5/16	7/16	1 5/8	**
AT17954	3/8	6 ⅛	3/8	7/16	1 5/8	**
AT17955	½	5 15/16	3/8	7/16	1 5/8	**
AT17956	5/8	6 13/16	½	7/16	1 5/8	**
AT17958	7/8	7 ¾	¾	5/8	2	**

MUELLER INDUSTRIES, INC.

Check Valves

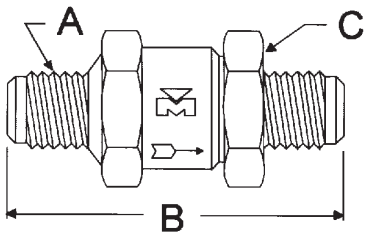


Design Features

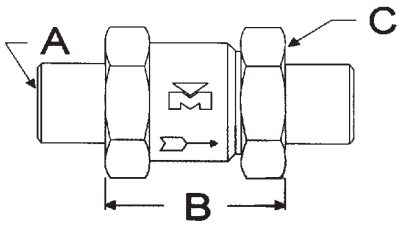
1. Soft Neoprene seat provides positive seal against reverse flow.
2. Four spacer tabs maintain washer/ seat alignment and guide the seat disc for smooth operation.
3. Stainless steel spring allows valve to operate (close) in any position.
4. Gasket provides permanent seal.
5. Brass body machined from drawn brass rod is designed to offer minimum restriction to flow.

Technical Data

- *Available in 1/4" thru 5/8" flare sizes and 1/4" thru 7/8" solder sizes.*
- *Recognized under the component program of Underwriters Laboratories for use in the USA and Canada.*
- *Maximum working pressure is 500 psig.*
- *Maximum temperature rating at +200°F.*

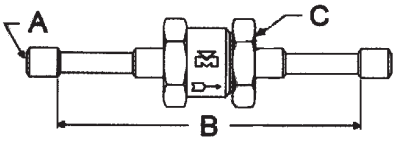


Flare to Flare				
Part No.	Size Flare A	B	C	Wt./Ea.
A 15620	1/4	2 3/16	13/16 Hex	.14
A 15621	3/8	2 13/32	13/16 Hex	.18
A 15622	1/2	3	1 1/4 Oct	.44
A 15623	5/8	3 5/16	1 1/4 Oct	.52



Solder to Solder Shipped Loosely Assembled				
Part No.	Size O.D. A	B	C	Wt./Ea.
A 15628	1/4	1 3/16	13/16 Hex	.13
A 15629	3/8	1 5/32	13/16 Hex	.13
A 15630	1/2	1 7/16	1 1/4 Oct	.36
A 15631	5/8	1 7/16	1 1/4 Oct	.37

* Teflon Seat Disc

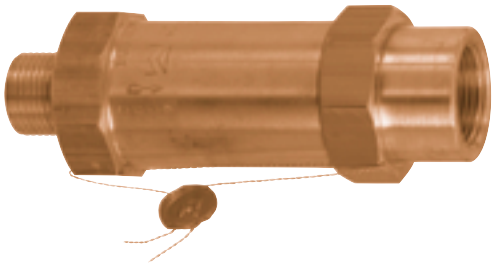


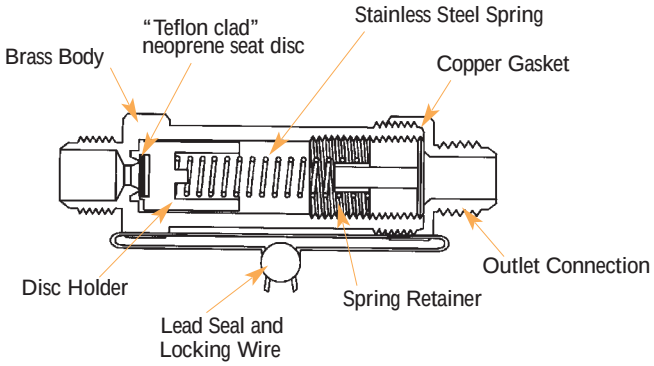
Solder to Solder - Extended Ends				
Part No.	Size Flare A	B	C	Wt./Ea.
A 15632	1/4	4 7/16	13/16 Hex	.17
A 15633	3/8	4 9/16	13/16 Hex	.17
A 15634	1/2	4 29/32	1 1/4 Oct	.42
A 15635	5/8	5 13/64	1 1/4 Oct	.48

MUELLER INDUSTRIES, INC.

System Protection Devices

Pressure Relief Valves





SAFETYMASTER® pressure relief valves have been designed and engineered to provide high volume discharge. Mueller's Pressure Relief Valves fully satisfy ASHRAE Standard 15 code requirements for a refrigerant vessel safety device. They comply with the ASME code for unfired pressure vessels and the discharge rates are certified by the National Board of Boiler and Pressure Vessel Inspectors.

How to select a relief valve:

(a) Determine the minimum discharge capacity required.

(b) Determine pressure setting. This relief setting cannot exceed the design pressure of the liquid receiver. However, the relief valve setting should be at least 25% higher than the maximum system operating pressure.

(c) Determine the size connection required.

(d) Select valve from chart below.

Mueller pressure relief valves are designed primarily for use on liquid receiver applications, above the liquid refrigerant level, and it is recommended that the factory be consulted before the valves are used on other applications.

As these valves are designed to operate according to ASHRAE Standard 15, they should be applied according to this safety code. Application information can also be found in the ASHRAE Guide and Data Book.

Discharge Capacity

The minimum required discharge capacity of the pressure relief device or fusible plug for each pressure vessel is determined by the following formula, specified by the ASHRAE Standard 15, Safety Code for Mechanical Refrigeration:

C = kfDL where:

C = minimum required discharge capacity of the relief device, lb. air/min (kg air/min)

D = outside diameter of vessel, ft (m)

L = length of the vessel, ft (m)

k = factor dependent on units used (k = 1 for I-P units, k = 4.88 for SI units)

f = factor dependent on the kind of refrigerant from the chart below

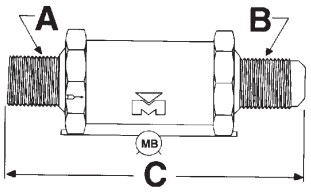
Discharge Capacity

		A		B		C		D		E		F	
PSIG	Prefix	lb air/ min	kg air/ min	lb air/ min	kg air/ min	lb air/ min	kg air/ min	lb air/ min	kg air/ min	lb air/ min	kg air/ min	lb air/ min	kg air/ min
235	AD	4.3	2.0	9.1	4.1	20.1	9.1	33.7	15.3	55.9	25.4	91.8	41.6
300	AE	5.4	2.4	11.5	5.2	25.4	11.5	42.5	19.3	70.5	32.0	115.8	52.5
350	AG	6.3	2.9	13.3	6.0	29.5	13.4	49.3	22.4	81.8	37.1	134.3	60.9
400	AH	7.1	3.2	15.2	6.9	33.5	15.2	56.1	25.4	93.0	42.2	152.7	69.3
425	AI	7.6	3.4	16.1	7.3	35.6	16.1	59.5	27.0	98.6	44.7	162.0	73.5
450	AJ	8.0	3.6	17.0	7.7	37.6	17.1	62.9	28.5	104.3	47.3	171.2	77.7

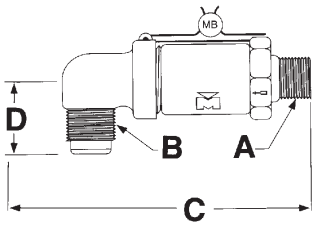
Type of Refrigerant

Refrigerant	Value of f
R-11, R-113, R-123	1
R-12, R-22, R-134a, R-407c, R-500	1.6
R-13, R-13b1	2.0
R-404a, R-502, R-507a	2.5

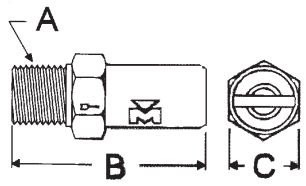
Pressure Relief Valves



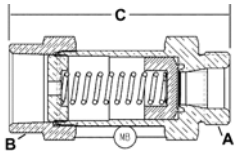
Straight Thru - NPTFE Inlet to Flare								
ASME Valve	CE Valve	Inlet (A) (in)	Outlet (B) (in)	(C) (in)	(C) (cm)	Wt. Ea. (lb)	Wt. Ea. (kg)	Discharge Table
A 15501	B 35096	1/4	3/8	2 21/32	6.75	0.19	0.09	A
A 15502	B 35097	3/8	3/8	2 13/16	7.14	0.33	0.15	B
A 15503	B 35098	3/8	1/2	3	7.62	0.36	0.16	B
A 15504	B 35099	1/2	5/8	4 3/16	10.64	0.84	0.38	C
A 15506	B 35102	3/4	3/4	5	12.70	1.49	0.68	D
B 33752	B 35100	1/4	3/8	2 13/16	7.14	0.32	0.14	B
B 33753	B 35101	1/4	1/2	3	7.62	NA	NA	B



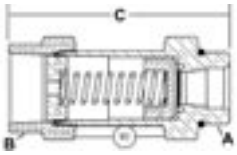
Angle - NPTFE to Flare										
ASME Valve	CE Valve	Inlet (A) (in)	Outlet (B) (in)	(C) (in)	(C) (cm)	(D) (in)	(D) (cm)	Wt. Ea. (lb)	Wt. Ea. (kg)	Discharge Table
B 33746	B 35116	1/4	3/8	2 3/8	6.03	1 1/8	2.86	0.30	0.14	B
B 33754	B 35115	1/4	1/2	2 7/16	6.19	1 5/16	3.33	NA	NA	B
A 15512	B 35112	3/8	3/8	2 3/8	6.03	1 3/8	3.49	0.36	0.16	B
A 15513	B 35113	3/8	1/2	2 3/8	6.03	1 11/32	3.41	0.38	0.17	B
A 15514	B 35114	1/2	5/8	4 3/32	10.40	1 9/16	3.97	0.98	0.45	C



Atmospheric - NPTFE Inlet								
ASME Valve	CE Valve	Inlet (A) (in)	Outlet (B) (in)	(C) (in)	(C) (cm)	Wt. Ea. (lb)	Wt. Ea. (kg)	Discharge Table
A 15508	B 35104	1/8	1 7/8	3/4	1.91	0.12	0.05	A
A 15509	B 35105	1/4	2	3/4	1.91	0.13	0.06	A
A 17430	B 35106	3/8	2 1/8	1	2.54	0.24	0.11	B
B 33755	B 35107	1/4	2 1/8	1	2.54	NA	NA	B



Straight Thru - NPTFE Inlet to NPTFI Outlet								
ASME Valve	CE Valve	Inlet (A) (in)	Outlet (B) (in)	(C) (in)	(C) (cm)	Wt. Ea. (lb)	Wt. Ea. (kg)	Discharge Table
A 17840	B 35117	1	1	4 9/16	11.59	1.95	0.88	E
A 17834	B 35118	1 1/4	1 1/4	5	12.70	2.00	0.91	F



Straight Thru-Straight Thread Inlet to NPTFI Outlet								
ASME Valve	CE Valve	Inlet (A) (in)	Outlet (B) (in)	(C) (in)	(C) (cm)	Wt. Ea. (lb)	Wt. Ea. (kg)	Discharge Table
B 34444	B 35119	7/8-14 UNF 2A	3/4	7/8	2.22	1.53	0.69	D
B 34519	B 35120	1 5/16-14UNF2A	1	4 3/8	11.11	1.37	0.62	E
B 34580	B 35121	1 5/8-14UNF-2A	1 1/4	5	12.70	2.00	0.91	F

Prefixes for standard settings are:

AD/BD = 235 psig. AH/BH = 400 psig.
AE/BE = 300 psig. AI/BI = 425 psig.
AG/BG = 350 psig. AJ/BJ = 450 psig.

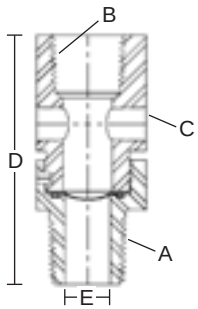
For valves furnished at non-standard settings, use "A" prefix with the exact pressure setting.

Rupture Disc

Rupture Disc assemblies are designed to burst open and relieve an over pressure or vacuum condition at a predetermined differential pressure, and specific temperature. Applied between Mueller's RELIEFMASTER® Change-Over Manifold and SAFETYMASTER® Pressure Relief Valves, a rupture disc indicates which pressure relief valve has discharged. A rupture disc remains open after bursting, but when combined with a pressure gauge or high pressure switch, a visual or electronic indication of the burst is revealed.

Look for these Mueller advantages:

- *Constructed of Brass*
- *Non-fragmenting Rupture Disc*
- *Dual Access Ports*
- *Certified to meet ASME Code*
- *Certified Category 4 product for CE (PED) Requirements*



ASME Code

Guidelines for the application of Rupture Disc Devices in combination with pressure relief valves is provided by ASME Code. The following is an excerpt from the ASME Code, Section VIII, Division I, UG-127.

A rupture disc device may be installed between a pressure relief valve and the vessel provided:

- The marked capacity of a pressure relief valve, when installed with a rupture disc device between the inlet of the valve and the vessel, shall be multiplied by a factor of 0.90 of the rated relieving capacity of the valve alone.
- The space between a rupture disc device and a pressure relief valve shall be provided with a pressure gage, or suitable telltale indicator. This arrangement permits detection of disc rupture or leakage.

Users are warned that a rupture disc will not burst at its design pressure if back pressure build up in the space between the disc and the pressure relief valve which will occur should leakage develop in the rupture disc due to corrosion or other cause.

Compliance to ASME Code is the responsibility of the User.

Upcoming Releases

- *Pressure Gauges*
- *Pressure Control Switches*

Rupture Discs							
ASME/CE Valve	A NPTE	B NPTI	C NPT	C (in)	D (cm)	D (in)	E (cm)
A 17971	1/2	1/2	1/8	2.81	7.14	.50	1.27

Prefixes for standard settings are:

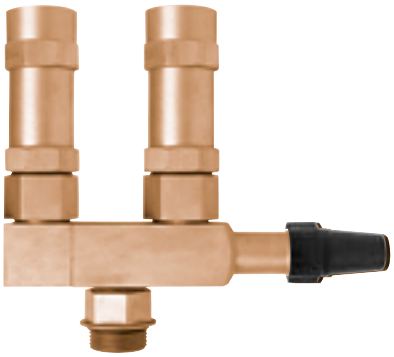
AD = 235 psig. AG = 350 psig. AI = 425 psig.
AE = 300 psig. AH = 400 psig. AJ = 450 psig.

For valves furnished at non-standard settings, use "A" or "B" prefix with the exact pressure setting.

MUELLER INDUSTRIES, INC.

System Protection Devices

RELIEFMASTER™ Change-Over Manifold



The RELIEFMASTER™ change-over manifold valve has been designed to provide continuous system protection in the event of relief valve rupture. Using a common body chamber that serves as the base for two independent relief valves, a system can remain fully operational when valves need to be serviced and replaced.

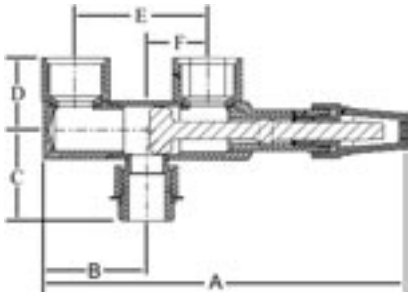
Each manifold has been engineered with a wide internal chamber to maximize flow and assure high relief valve discharge capacities. Internally, a metal to metal seat guarantees positive isolation independent of position, while providing exceptional durability. The elimination of seals or bearings assures compatibility with all new refrigerants and oils.

Using advanced manufacturing techniques, the valves feature an efficient low profile design, and offer unique connection flexibility. Rotolock, flare, O-Ring seal, and solder connections are available on any size manifold from 1⁄2" to 1-5/8", based on specific requirements. Each valve is 100% tested and is recognized under the component program of Underwriters Laboratories for use in the USA and Canada.

Look for these Mueller advantages:

- *Optimized body chamber provides maximum flow to assure high relief discharge capacities.*
- *Internal metal to metal seat with no seals or bearings to assure compatibility with all new refrigerants and oils.*
- *Custom connections available including rotolock, flare, solder, and O-Ring seal.*
- *Sizes 1/2" to 15/8".*
- *Efficient space-saving low profile design.*
- *Meets ASHRAE 15, ASME Codes, National Board certified.*
- *All valves are 100% tested.*
- *Recognized under the component program of Underwriters Laboratories for use in the USA and Canada.*

Specifications		
Technical Data		
Manifold	A 17921 B 34550	A 17923 B 34559
Torque To Seal:	A 17922	A 17924 B 34654
Front Seat (ft-lbs)	16-18	22-40
Back Seat (ft-lbs)	16-18	25-45
Pack Gland (ft-lbs)	8-12	15-25
Seal Cap	Finger Tight	
Maximum Working Pressure	500 psig	
Burst Pressure	2500 psig	
Working Temperature Range	-40/+300°F	
Refrigerants	All Fluorinated Types	



RELEFMASTER® Change Over Manifold								
Part No.	Inlet	Outlets	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)
A 17921	1/2 NPTFE	1/2 NPTFI	6	1 3/4	1 3/4	1 3/8	2 1/16	3/4
A 17922	3/4 NPTFE	3/4 NPTFI	6	1 3/4	1 7/8	1 3/8	2 1/16	3/4
A 17923	1 NPTFE	1 NPTFI	8 11/16	2 7/16	2 3/8	1 7/8	3 1/8	1 7/16
A 17924	1 1/4 NPTFE	1 1/4 NPTFE	8 7/8	2 7/16	2 7/16	2 1/8	3 1/8	1 7/16
B 34550	7/8-14 UNF 2A	7/8-14 UNF 2B	6	1 3/4	1 5/8	1 3/8	2 1/16	3/4
B 34559	1 5/16-12 UNF 2A	1 5/16-12 UNF 2B	8 9/16	2 7/16	2 1/8	1 3/4	3 1/8	1 7/16
B 34654	1 5/8-12 UNF 2A	1 5/8-12 UNF 2B	8 9/16	2 7/16	2 1/8	1 13/16	3 1/8	1 7/16

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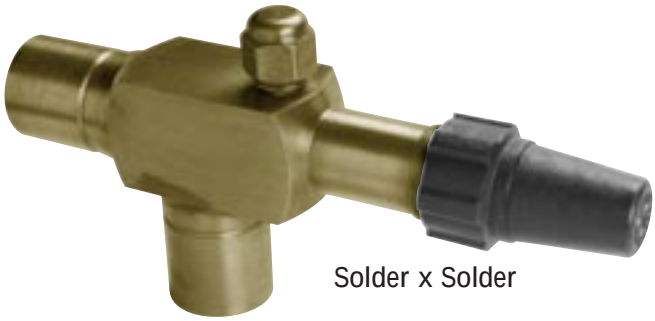
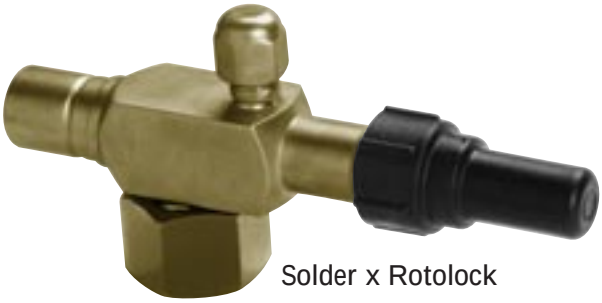
Mueller Angle Isolation Valves



Solder x Solder



Solder x Rotolock

Designed For Custom Isolation Applications

Mueller angle isolation valves offer optimum flow characteristics and positive shut-off for guaranteed isolation and enhanced system performance. All valves have been specially engineered to maximize the body chamber, providing optimized flow, while minimizing the intrusion of the seat and stem mechanism in the backseated position, thereby reducing pressure drop.

The valves have been designed with a special internal metal to metal seat, which in the frontseated configuration assures positive system isolation while maintaining exceptional durability and long term performance. Custom tube lengths, rotolock configurations and flexible access port positioning allow maximum design flexibility for use in various applications. Body construction is made of corrosion resistant brass and is available in sizes 5⁄8" - 2 1⁄8" to meet your specific requirements.

Look for these Mueller advantages:

- *Optimized body chamber provides maximum flow characteristics.*
- *Design incorporates a fully backseated stem and seat for minimal valve pressure drop.*
- *Brass construction eliminates corrosion.*
- *Internal metal to metal seat provides exceptional durability and positive isolation.*
- *"Quick-Change" packing gland allows easy replacement without refrigerant loss.*
- *Rotolock or sweat configurations customized to specific applications.*
- *Sizes from 5⁄8" to 2 1⁄8".*
- *Asbestos-free packing material.*
- *All valves are 100% tested.*
- *Recognized under the component program of Underwriters Laboratories for use in the USA and Canada.*

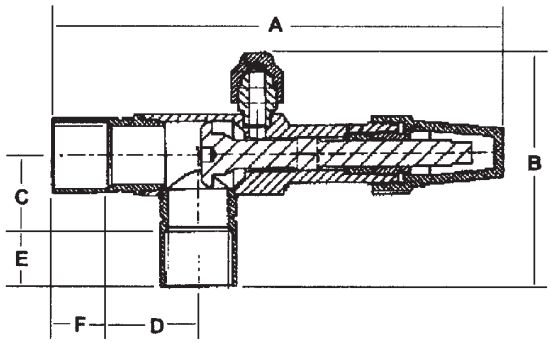
MUELLER INDUSTRIES, INC.

Mueller Angle Isolation Valves

Specifications

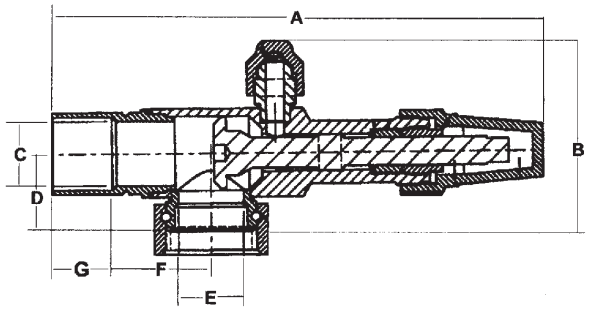
Technical Data

Part Number	B 34413	B 34412	B 34411	B 34594	B 34595	B 34418	B 34417	B 34416	B 34415	B 34414
Torques to Seal (ft. - lbs.)										
Front Seat	16 - 18	22 - 40	22 - 40	22 - 40	22 - 40	16 - 18	22 - 40	22 - 40	22 - 40	22 - 40
Back Seat	16 - 18	25 - 45	25 - 45	25 - 45	25 - 45	16 - 18	25 - 45	25 - 45	25 - 45	25 - 45
Pack Gland	8 - 12	15 - 25	15 - 25	15 - 25	15 - 25	8 - 12	15 - 25	15 - 25	15 - 25	15 - 25
Flare Seal Cap	8 - 10	8 - 10	15 - 25	15 - 25	15 - 25	8 - 10	8 - 10	15 - 25	15 - 25	15 - 25
Rotolock Nut	NA	NA	NA	NA	NA	40 - 50	60 - 80	60 - 80	60 - 80	80 - 100
Seal Cap	Finger Tight			40 -50	40 - 50	Finger Tight			40 - 50	40 - 50
Maximum Working Pressure (psig)	500	500	500	500	500	500	500	500	500	500
Burst Pressure (psig)	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Working Temperature Range (˚F)	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300	-40/300
Refrigerants	All Fluorinated Types									



Solder X Solder Angle Isolation Valve

Part No.	Size	Type	Cv	A	B	C	D	E	F
B 34413	5/8	5/8 ODS X 5/8 ODS	6	5 27/64	2 21/32	27/32	1 11/64	1/2	1/2
B 34412	7/8	7/8 ODS X 7/8 ODS	15	6 9/16	3 3/32	29/32	1 17/64	3/4	3/4
B 34411	1 1/8	1 1/8 ODS X 1 1/8 ODS	25	7 19/32	3 63/64	1 5/16	1 1/2	15/16	15/16
B 34594	1 3/8	1 3/8 ODS X 1 3/8 ODS	38	9 31/64	4 3/16	1 1/2	1 29/32	1	1
B 34595	1 5/8	1 5/8 ODS X 1 5/8 ODS	53	10 3/64	4 11/16	1 3/4	2 3/16	1 3/32	1 3/32



Solder X Rotolock Angle Isolation Valve

Part No.	Size	Type	Cv	A	B	C	D	E	F	G
B 34418	5/8	5/8 ODS X 1 THD	6	5 27/64	2 1/4	35/64	15/16	35/64	11/64	1/2
B 34417	7/8	7/8 ODS X 1 1/4 THD	15	6 9/16	2 31/64	3/4	1 3/64	3/4	1 17/64	3/4
B 34416	1 1/8	1 1/8 ODS X 1 1/2 THD	25	7 19/32	3	1	1 1/4	1	1 33/64	15/16
B 34415	1 3/8	1 3/8 ODS X 1 3/4 THD	38	9 33/64	3 17/64	1 1/4	1 13/32	1 1/4	1 29/32	1
B 34414	1 5/8	1 5/8 ODS X 2 1/4 THD	53	10 3/64	3 35/64	1 1/2	1 9/16	1 1/2	2 3/16	1 3/32

Note: Consult engineering for screw compressor applications.

MUELLER®
INDUSTRIES, INC.

DRYMASTER® Plus Filter Drier

Total System Protection

Mueller's DRYMASTER® Plus filter driers have been designed to provide optimum protection in refrigeration and air-conditioning systems from moisture, acids, and solid contaminants. The removal of these harmful elements minimizes the potential for chemical reactions that jeopardize proper system operation and create premature failure.

The solid core, which is composed of 80% molecular sieves/20% activated alumina on liquid line models, and 70% activated alumina/30% molecular sieves on suction line (burnout) models, provides a flow pattern with no restriction thereby minimizing pressure drop. The core has been uniquely formulated with minimal binder, assuring the maximum blend of active components to remove system impurities. A high retention filter complements the core providing dirt retention of particulate as small as 25 micron.

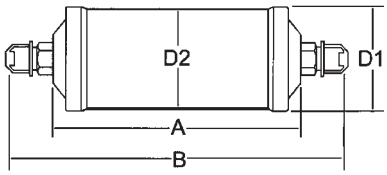
The drier shell and copper connections have been tested to meet the demands of all new high pressure refrigerants, and have been UL/cUL approved for maximum working pressures up to 610 psig. A corrosion resistant powder-painted finish suitable for marine refrigeration guarantees durability in the most aggressive environmental applications.

Look for these Mueller advantages:

- *Solid core design, composed of 80% molecular sieves / 20% activated alumina on liquid line models, and 70% activated alumina / 30% molecular sieves on suction line (burnout) models, for exceptional moisture and acid removal.*
- *High retention filter for dirt retention of particulate as small as 25 micron.*
- *High-pressure shell and connections designed for MWP up to 610 psig.*
- *Powder-paint finish, designed for marine applications.*
- *Tested for all CFC/HCFC/HFC refrigerants (including R 410A) with POE and PAG oils.*
- *All driers are 100% tested and UL/cUL listed.*

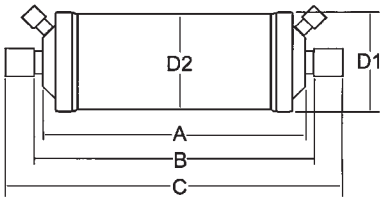
MUELLER®
INDUSTRIES, INC.

DRYMASTER® PLUS
Liquid Line Filter Driers



Flare
Connection

DRYMASTER® Plus Liquid Line Filter Driers with Flare Connection					
Part No.	Model Number	Cubic Inches	Connection Size	Connection Type	Max. Working Pressure
A 16600	FL-032	3	1/4	Flare	610
A 16601	FL-033	3	3/8	Flare	610
A 16606	FL-052	5	1/4	Flare	610
A 16607	FL-053	5	3/8	Flare	610
A 16608	FL-082	8	1/4	Flare	610
A 16609	FL-083	8	3/8	Flare	610
A 16610	FL-084	8	1/2	Flare	610
A 16612	FL-162	16	1/4	Flare	610
A 16613	FL-163	16	3/8	Flare	610
A 16614	FL-164	16	1/2	Flare	610
A 16615	FL-165	16	5/8	Flare	610
A 16618	FL-303	30	3/8	Flare	610
A 16619	FL-304	30	1/2	Flare	610
A 16620	FL-305	30	5/8	Flare	610
A 16623	FL-413	41	3/8	Flare	610
A 16624	FL-414	41	1/2	Flare	610
A 16625	FL-415	41	5/8	Flare	610



Solder
Connection

DRYMASTER® Plus Liquid Line Filter Driers with Solder Connection					
Part No.	Model Number	Cubic Inches	Connection Size	Connection Type	Max. Working Pressure
A 16640	SD-032	3	1/4	Solder	610
A 16641	SD-033	3	3/8	Solder	610
A 16646	SD-052	5	1/4	Solder	610
A 16647	SD-053	5	3/8	Solder	610
A 16648	SD-082	8	1/4	Solder	610
A 16649	SD-083	8	3/8	Solder	610
A 16650	SD-084	8	1/2	Solder	610
A 16653	SD-163	16	3/8	Solder	610
A 16654	SD-164	16	1/2	Solder	610
A 16655	SD-165	16	5/8	Solder	610
A 16657	SD-166	16	3/4	Solder	500
A 16656	SD-167	16	7/8	Solder	500
A 16658	SD-303	30	3/8	Solder	610
A 16659	SD-304	30	1/2	Solder	610
A 16660	SD-305	30	5/8	Solder	610
A 16662	SD-307	30	7/8	Solder	500
A 16661	SD-309	30	1 1/8	Solder	500
A 16663	SD-413	41	3/8	Solder	610
A 16664	SD-414	41	1/2	Solder	610
A 16665	SD-415	41	5/8	Solder	610
A 16667	SD-417	41	7/8	Solder	500
A 16668	SD-419	41	1 1/8	Solder	500

MUELLER®
INDUSTRIES, INC.

DRYMASTER® PLUS
Liquid Line Filter Driers

DRYMASTER® PLUS Liquid Line Filter Driers, Flare Connection

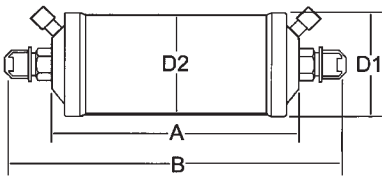
Part No.	Model Number	Cubic Inches	Connection Size	Connection Type	Max Working Pressure	Liquid Capacity (tons) R 134a	Liquid Capacity (tons) R 404A R 507	Liquid Capacity (tons) R 22 R 407C R 410A	Water Capacity (drops) R 134a R 507 75 F	Water Capacity (drops) R 134a R 507 125 F	Water Capacity (drops) R 404A 75 F	Water Capacity (drops) R 404A 125 F	Water Capacity (drops) R 22 R 407C R 410A 75 F	Water Capacity (drops) R 22 R 407C R 410A 125 F	Desiccant Cubic In.
A 16600	FL-032	3	1/4	Flare	610	2.00	1.50	2.00	108	99	171	90	99	90	3
A 16601	FL-033	3	3/8	Flare	610	5.00	3.50	5.50	108	99	171	90	99	90	3
A 16606	FL-052	5	1/4	Flare	610	2.00	1.50	2.00	130	117	207	108	117	108	5
A 16607	FL-053	5	3/8	Flare	610	5.00	4.00	5.50	130	117	207	108	117	108	5
A 16608	FL-082	8	1/4	Flare	610	2.00	1.50	2.00	198	189	319	166	189	180	8
A 16609	FL-083	8	3/8	Flare	610	5.50	4.00	6.00	198	189	319	166	189	180	8
A 16610	FL-084	8	1/2	Flare	610	7.50	5.50	8.00	198	189	319	166	189	180	8
A 16612	FL-162	16	1/4	Flare	610	2.00	1.50	2.00	467	436	724	396	427	396	16
A 16613	FL-163	16	3/8	Flare	610	6.00	4.50	6.50	467	436	724	396	427	396	16
A 16614	FL-164	16	1/2	Flare	610	8.50	6.00	9.00	467	436	724	396	427	396	16
A 16615	FL-165	16	5/8	Flare	610	12.00	8.50	13.50	467	436	724	396	427	396	16
A 16618	FL-303	30	3/8	Flare	610	6.00	4.50	6.50	935	872	1519	809	872	809	30
A 16619	FL-304	30	1/2	Flare	610	8.50	6.00	9.50	935	872	1519	809	872	809	30
A 16620	FL-305	30	5/8	Flare	610	12.50	9.00	14.00	935	872	1519	809	872	809	30
A 16623	FL-413	41	3/8	Flare	610	7.00	5.00	7.50	1294	1214	2103	1124	1205	1106	41
A 16624	FL-414	41	1/2	Flare	610	9.00	6.50	10.00	1294	1214	2103	1124	1205	1106	41
A 16625	FL-415	41	5/8	Flare	610	15.00	10.50	16.50	1294	1214	2103	1124	1205	1106	41

DRYMASTER® PLUS Liquid Line Filter Driers, Solder Connection

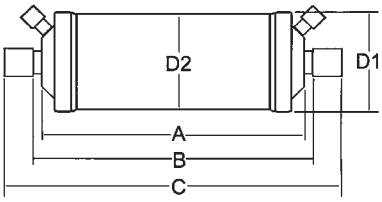
Part No.	Model Number	Cubic Inches	Connection Size	Connection Type	Max Working Pressure	Liquid Capacity (tons) R 134a	Liquid Capacity (tons) R 404A R 507	Liquid Capacity (tons) R 22 R 407C R 410A	Water Capacity (drops) R 134a R 507 75 F	Water Capacity (drops) R 134a R 507 125 F	Water Capacity (drops) R 404A 75 F	Water Capacity (drops) R 404A 125 F	Water Capacity (drops) R 22 R 407C R 410A 75 F	Water Capacity (drops) R 22 R 407C R 410A 125 F	Desiccant Cubic In.
A 16640	SD-032	3	1/4	Solder	610	2.00	1.50	2.00	108	99	171	90	99	90	3
A 16641	SD-033	3	3/8	Solder	610	5.00	3.50	5.50	108	99	171	90	99	90	3
A 16646	SD-052	5	1/4	Solder	610	2.00	1.50	2.00	130	117	207	108	117	108	5
A 16647	SD-053	5	3/8	Solder	610	5.00	4.00	5.50	130	117	207	108	117	108	5
A 16648	SD-082	8	1/4	Solder	610	2.00	1.50	2.00	198	189	319	166	189	180	8
A 16649	SD-083	8	3/8	Solder	610	5.50	4.00	6.00	198	189	319	166	189	180	8
A 16650	SD-084	8	1/2	Solder	610	7.50	5.50	8.00	198	189	319	166	189	180	8
A 16653	SD-163	16	3/8	Solder	610	6.00	4.50	6.50	467	436	724	396	427	396	16
A 16654	SD-164	16	1/2	Solder	610	8.50	6.00	9.00	467	436	724	396	427	396	16
A 16655	SD-165	16	5/8	Solder	610	12.00	8.50	13.50	467	436	724	396	427	396	16
A 16657	SD-166	16	3/4	Solder	500	12.00	8.50	13.50	467	436	724	396	427	396	16
A 16656	SD-167	16	7/8	Solder	500	12.00	8.50	13.50	467	436	724	396	427	396	16
A 16658	SD-303	30	3/8	Solder	610	6.00	4.50	6.50	935	872	1519	809	872	809	30
A 16659	SD-304	30	1/2	Solder	610	8.50	6.00	9.50	935	872	1519	809	872	809	30
A 16660	SD-305	30	5/8	Solder	610	12.50	9.00	14.00	935	872	1519	809	872	809	30
A 16662	SD-307	30	7/8	Solder	500	16.50	12.00	18.50	935	872	1519	809	872	809	30
A 16661	SD-309	30	1-1/8	Solder	500	16.50	12.00	18.50	935	872	1519	809	872	809	30
A 16663	SD-413	41	3/8	Solder	610	7.00	5.00	7.50	1294	1214	2103	1124	1205	1106	41
A 16664	SD-414	41	1/2	Solder	610	9.00	6.50	10.00	1294	1214	2103	1124	1205	1106	41
A 16665	SD-415	41	5/8	Solder	610	15.00	10.50	16.50	1294	1214	2103	1124	1205	1106	41
A 16667	SD-417	41	7/8	Solder	500	26.00	18.50	28.50	1294	1214	2103	1124	1205	1106	41
A 16668	SD-419	41	1-1/8	Solder	500	26.00	1850	28.50	1294	1214	2103	1124	1205	1106	41

MUELLER® INDUSTRIES, INC.

DRYMASTER® PLUS
Suction Line Filter Driers



DRYMASTER® PLUS Suction Line Filter Driers, Flare Connection												
						Nominal capacity (tons) Evaporator temperature 40˚ F						
Part No.	Model Number	Cubic Inches	Connection Size	Connection Type	Max Working Pressure	R 134a	R 404A R 507	R 22 R 407C R 410A	A	B	D1	D2
A 17225	FDF-164-TT	16	1/2	Flare	610	1.70	2.40	3.00	4.3	6.9	3.1	3
A 17226	FDF-165-TT	16	5/8	Flare	610	2.70	3.70	4.30	4.3	7.2	3.1	3



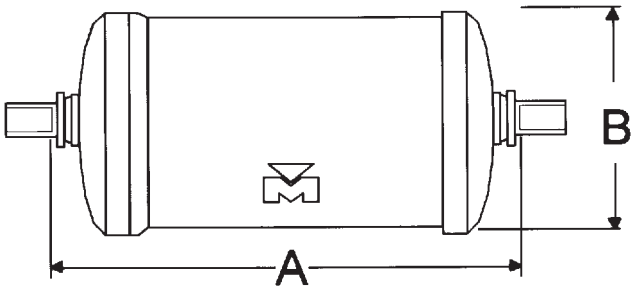
DRYMASTER® PLUS Suction Line Filter Driers, Solder Connection													
						Nominal capacity (tons) Evaporator temperature 40˚ F							
Part No.	Model Number	Cubic Inches	Connection Size	Connection Type	Max Working Pressure	R 134a	R 404A R 507	R 22 R 407C R 410A	A	B	C	D1	D2
A 17224	FDS-164-TT	16	1/2	Solder	610	1.70	2.40	3.00	4.3	4.6	6.0	3.1	3
A 17227	FDS-165-TT	16	5/8	Solder	610	2.70	3.70	4.30	4.3	4.6	6.2	3.1	3
A 17228	FDS-166-TT	16	3/4	Solder	510	3.40	4.90	5.70	4.3	4.6	6.7	3.1	3
A 17229	FDS-167-TT	16	7/8	Solder	510	3.90	5.40	6.30	4.3	4.7	6.8	3.1	3
A 17230	FDS-169-TT	16	1-1/8	Solder	510	4.60	6.50	7.50	4.3	4.7	6.8	3.1	3
A 17231	FDS-309-TT	30	1-1/8	Solder	510	5.70	7.70	8.90	7.3	7.7	9.8	3.1	3
A 17300	FDS-305-TT	30	5/8	Solder	610	3.10	4.30	5.10	7.3	7.6	9.2	3.1	3
A 17301	FDS-306-TT	30	3/4	Solder	510	4.00	5.40	6.30	7.3	7.6	9.7	3.1	3
A 17302	FDS-307-TT	30	7/8	Solder	510	4.60	6.30	7.40	7.3	7.7	9.8	3.1	3
A 17232	FDS-3011-TT	30	1-5/8	Solder	360	5.70	7.70	8.90	7.3	8.6	10.5	3.1	3
A 17233	FDS-3013-TT	30	1-3/8	Solder	360	5.70	7.70	8.90	7.3	8.7	11.3	3.1	3

MUELLER INDUSTRIES, INC.

Heat Pump Driers

Solder Type

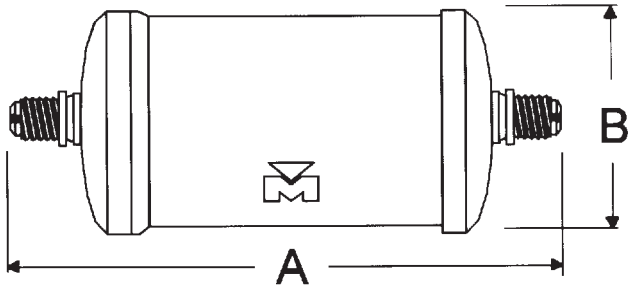
Solder Type



Design Features:

- *May be mounted in any position.*
- *Provides in-depth filtration.*
- *Internal construction allows reversible refrigerant flow.*
- *No external check valves required.*
- *Reduces cost by eliminating system complexity.*
- *UL listed for use in the USA and Canada.*

Flare Type



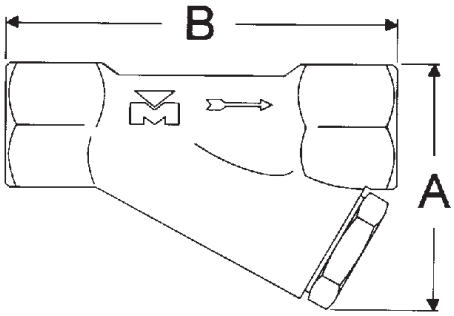
Part No.	Model No.	Fitting Size	Cu. In. Vol.	A	Diameter B
A 17388	HPF-083	⅜ Flare	8	6	2 ½
A 17389	HPS-083	⅜ Solder	8	5 ⅜	2 ½
A 17390	HPF-163	⅜ Flare	16	6 ¾	2 ½
A 17391	HPS-163	⅜ Solder	16	6 ⅛	2 ½
A 17392	HPS-164	½ Solder	16	6 ¼	2 ½

R-22 Flow And Moisture Capacities				
Model No.	Flow Capacity (Tons) At 2 PSI Pressure Drop	Liquid Refrigerant Capacity (Oz.) (At 100˚)	Drying Capacity Drops of H_2O 75˚F	125˚F
HPF&S-083	5.0	8.4	106	75
HPF&S-163	5.4	9.8	185	130
HPF&S-164	9.2	9.8	185	130

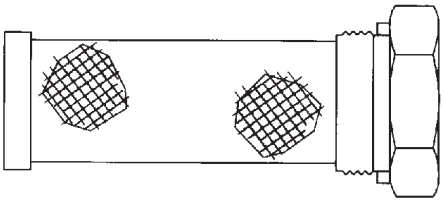
MUELLER INDUSTRIES, INC.

Water Strainer

Y-Type



Replacement Screen for Y-Type Strainers



Technical Data

Heavy cast bronze 'Y' construction–designed for efficient, economical, in-line installation. Clean-out cap is sealed with a Buna N O-ring and requires only finger pressure to tighten is sufficiently to hold against normal city water pressures. 200˚F Max. temperature.

Y-Type - Threaded						
Part No.	Size NPTI x NPTI	Dim A	Dim B	Screen Mesh	Sq. In. Screen Area	Wt./Ea.
A 15176	⅜	2 3/16	3 5/16	50	3 ½	.68
A 15184	⅜	2 3/16	3 ⅜	100	3 ½	.68
A 15177	½	2 3/16	3 5/16	50	3 ½	.66
A 15159	½	2 3/16	3 ⅜	100	3 ½	.66
A 15178	¾	3	4 7/16	50	6 ½	1.42

Y-Type - Solder to Solder						
Part No.	Size	Dim A	Dim B	Screen Mesh	Sq. In. Screen Area	Wt./Ea.
A 15192	⅜	2 3/16	3 9/32	50	3 ½	.78
A 15196	⅜	2 3/16	3 9/32	100	3 ½	.78
A 15193	½	2 3/16	3 9/32	50	3 ½	.72
A 15197	½	2 3/16	3 9/32	100	3 ½	.72
A 15194	¾	3	4 7/16	50	6 ½	1.47

Replacement Screen Sub-Assemblies For Y-Type Strainers		
Part No.	Screen Mesh	For Use With Assembly Numbers
A 15122	100	A 15159, A 15184, A 15196, and A 15197,
A 15123	50	A 15176, A 15177, A 15192, and A 15193,
A 15124	50	A 15178 and A 15194

These sub-assemblies consist of a screen, a plug and an o-ring.
Recommended for the protection of condensing water regulators, water coolers, dispensing equipment and similar applications.

MUELLER INDUSTRIES, INC.

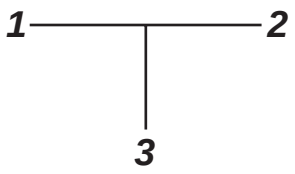
45° Flare Fittings

Technical Data – Fitting Designations

TEES are described by first sizing the run (1 to 2) and then the branch (3).

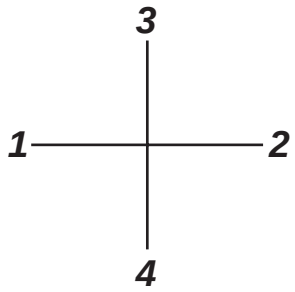
CROSSES are described by sizing the runs (1 to 2 and 3 to 4).

1. The first letter in the catalog number is derived form the name of the fitting, thus U for union, E for elbow, N for nut, etc.
2. The numeral following the letter symbol designates the combination of threads on the fitting: “1” denotes external pipe to flare fitting–U1, E1, T1; “2 denotes a flare to flare fitting–U2, E2, T2 and the letter “R” preceding the figure “3” denotes internal pipe to flare fitting except in the Tee where 3 denotes pipe thread to flare on the run.
3. The last two characters in the catalog number designate the size. Flare sizes are designated by numerals and pipe size by letters.
4. Flare nuts are NS4 for short forged nut, and N4 for long forged flare nut. R following the N denotes a reducing flare nut.
5. Pipe threads for refrigeration flare type fittings are in conformance with SAE J513.



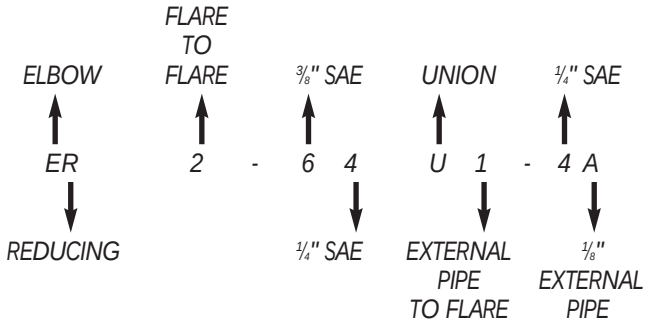
flare sizes

3 – 3/16"	6 – 3/8"	10 – 5/8"
4 – 1/4"	8 – 1/2"	12 – 3/4"
5 – 5/16"		



pipe sizes

A – 1/8"	C – 3/8"	E – 3/4"
B – 1/4"	D – 1/2"	F – 1"



Flared Tube Fittings

Refrigeration Ful-Flo 45° Flared Tube Fittings are fabricated from brass forgings or drawn brass rod, eliminating the possibility of seepage by porosity.

Conform to Refrigeration Tube Fittings Standards SAE J513, Military Standards

MS-35867 through MS-35873 inclusive,

MS-35919, MS-35926, and MS-16993.

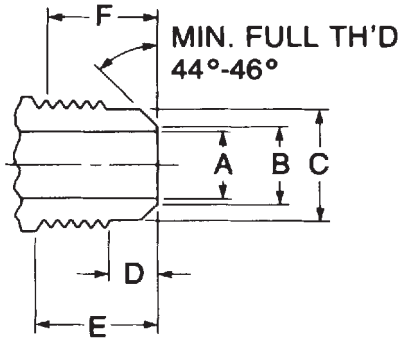
Fittings are accurately machined and fully protected against damage during handling, shipping and storage to assure tight leakproof joints.

Smooth interior finish provides unrestricted flow and reduced pressure drop.

MUELLER INDUSTRIES, INC.

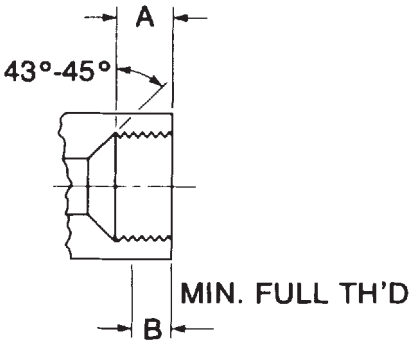
45° Flare Fittings

External Flare



External Flare							
Size Flare	A	B	C	D	E	Min. Full Thread F	Size Thread
3/16	1/8	5/32	19/64	1/8	7/16	3/8	3/8-24
1/4	3/16	7/32	11/32	5/32	1/2	13/32	7/16-20
5/16	7/32	1/4	13/32	3/16	9/16	15/32	1/2-20
3/8	9/32	5/16	17/32	7/32	5/8	17/32	5/8-18
1/2	13/32	7/16	41/64	1/4	3/4	21/32	3/4-16
5/8	1/2	17/32	3/4	9/32	7/8	3/4	7/8-14
3/4	5/8	23/32	15/16	9/32	1	29/32	1 1/16-14

Internal Flare



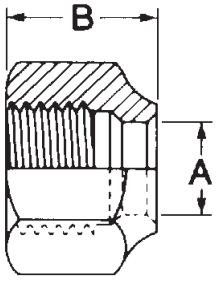
Internal Flare			
Size Flare	A	Min. Full Thread B	Size Thread
3/16	9/32	7/32	3/8-24
1/4	11/32	17/64	7/16-20
5/16	3/8	19/64	1/2-20
3/8	7/16	11/32	5/8-18
1/2	17/32	7/16	3/4-16
5/8	21/32	35/64	7/8-14
3/4	25/32	43/64	1 1/16-14

Recommended maximum working pressure 500 PSIG

MUELLER®
INDUSTRIES, INC.

45° Flare Fittings

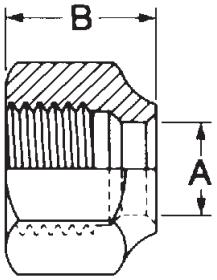
Short Forged Nuts



Short Forged Nuts*									
Cat. No.	Part No.	F Flare	Size Tube	Hex	A Min.	A Max.	B	Pcs. Per Ctn.	Wt./Ea.
NS4-3	A 05238	3/16	3/16	1/2	.192	.197	17/32	50	.02
NS4-4	A 05051	1/4	1/4	5/8	.255	.260	19/32	50	.04
NS4-5	A 05239	5/16	5/16	11/16	.317	.320	5/8	25	.04
NS4-6	A 05052	3/8	3/8	13/16	.380	.385	11/16	25	.06
NS4-8	A 05053	1/2	1/2	15/16	.505	.510	13/16	15	.08
NS4-10	A 05157	5/8	5/8	1 1/16	.630	.635	15/16	10	.12
NS4-12	A 05222	3/4	3/4	1 5/16	.755	.760	1 1/8	10	.24
NS4-14	A 05227	7/8	7/8	1 5/8	.880	.885	1 3/16	10	.25

*Recognized under the component program of Underwriters Laboratories.

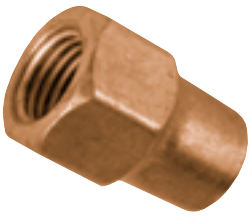
Short Forged Reducing Nuts

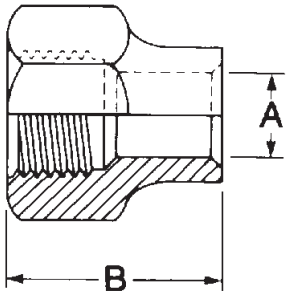


Short Forged Reducing Nuts*									
Cat. No.	Part No.	F Flare	Size Tube	Hex	A Min.	A Max.	B	Pcs. Per Ctn.	Wt./Ea.
NRS4-43	A 05132	1/4	3/16	5/8	.192	.197	19/32	10	.04
NRS4-54	A 05247	5/16	1/4	11/16	.255	.260	5/8	10	.04
NRS4-64	A 05140	3/8	1/4	13/16	.255	.260	11/16	25	.06
NRS4-65	A 05282	3/8	5/16	13/16	.320	.325	11/16	10	.06
NRS4-86	A 05141	1/2	3/8	15/16	.380	.385	13/16	15	.10
NRS4-108	A 05228	5/8	1/2	1 1/16	.505	.510	15/16	15	.13

*Recognized under the component program of Underwriters Laboratories.

Long Forged Nuts

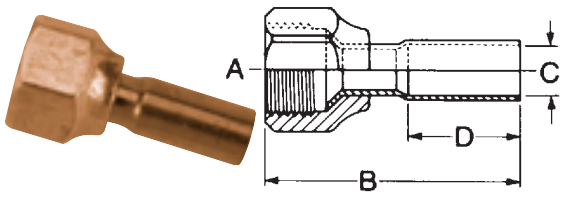




Long Forged Nuts*									
Cat. No.	Part No.	F Flare	Size Tube	Hex	A Min.	A Max.	B	Pcs. Per Ctn.	Wt./Ea.
N4-4	A 00440	1/4	1/4	5/8	.255	.260	15/16	25	.06
N4-5	A 01110	5/16	5/16	11/16	.317	.322	15/16	25	.05
N4-6	A 00441	3/8	3/8	13/16	.380	.385	1 1/16	25	.08
N4-8	A 00442	1/2	1/2	15/16	.505	.510	1 3/16	10	.13
N4-10	A 01112	5/8	5/8	1 1/16	.630	.635	1 7/16	5	.19
N4-12	A 04731	3/4	3/4	1 5/16	.755	.760	1 3/4	5	.36

*Recognized under the component program of Underwriters Laboratories.

Internal Flare to Extension Solder

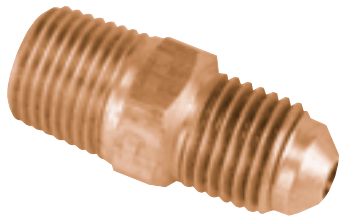


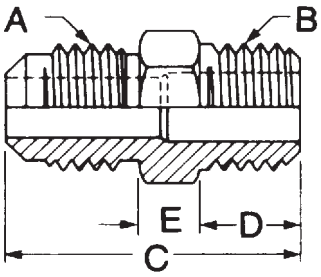
Internal Flare to Extension Solder							
Cat. No.	Part No.	A	B	C	D	Pcs. Per Ctn.	Wt./Ea.
US5-44	A 15725	1/4	1 5/8	1/4	13/16	25	.042
US5-66	A 15726	3/8	1 11/16	3/8	13/16	25	.061
US5-88	A 15727	1/2	1 15/16	1/2	7/8	20	.104
US5-1010	A 15728	5/8	2 5/16	5/8	1	10	.161
US5-1212	A 15729	3/4	2 7/8	3/4	1 1/4	10	.218

MUELLER INDUSTRIES, INC.

45° Flare Fittings

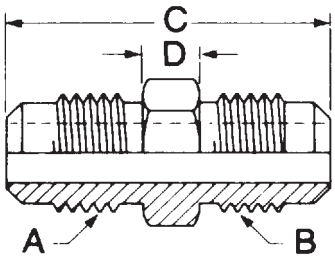
Half Union - Flare to NPTFE





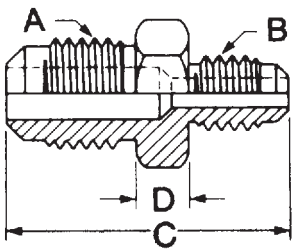
Connectors, Half Union - Flare to NPTFE									
		Size							
Cat. No.	Part No.	Flare A	NPTFE B	C	D	E	Size Hex	Pcs. Per Ctn.	Wt./Ea.
U1-3A	A 01117	3/16	1/8	1	3/8	3/16	7/16	15	.03
U1-4A	A 00330	1/4	1/8	1 1/16	3/8	3/16	7/16	25	.03
U1-4B	A 04585	1/4	1/4	1 1/4	9/16	3/16	9/16	25	.05
U1-4C	A 01197	1/4	3/8	1 5/16	9/16	1/4	11/16	25	.07
U1-4D	A 04628	1/4	1/2	1 9/16	3/4	5/16	7/8	25	.11
U1-5B	A 05036	5/16	1/4	1 11/32	9/16	7/32	9/16	25	.06
U1-5C	A 01198	5/16	3/8	1 3/8	9/16	1/4	11/16	25	.08
U1-6A	A 05003	3/8	1/8	1 1/4	3/8	1/4	5/8	25	.07
U1-6B	A 00332	3/8	1/4	1 7/16	9/16	1/4	5/8	25	.08
U1-6C	A 01199	3/8	3/8	1 7/16	9/16	1/4	11/16	25	.09
U1-6D	A 04993	3/8	1/2	1 11/16	3/4	5/16	7/8	25	.14
U1-8A	A 05034	1/2	1/8	1 7/16	3/8	5/16	3/4	10	.10
U1-8B	A 04439	1/2	1/4	1 5/8	9/16	5/16	3/4	10	.11
U1-8C	A 00334	1/2	3/8	1 5/8	9/16	5/16	3/4	10	.11
U1-8D	A 04780	1/2	1/2	1 13/16	3/4	5/16	7/8	10	.15
U1-8E	A 05066	1/2	3/4	1 15/16	3/4	7/16	1 1/16	10	.21
U1-10B	A 05035	5/8	1/4	1 13/16	9/16	3/8	7/8	10	.16
U1-10C	A 01195	5/8	3/8	1 13/16	9/16	3/8	7/8	10	.17
U1-10D	A 04540	5/8	1/2	2	3/4	3/8	7/8	10	.18
U1-10E	A 04827	5/8	3/4	2 1/16	3/4	7/16	1 1/16	5	.24
U1-12C	A 05005	3/4	3/8	2	9/16	7/16	1 1/16	25	.27
U1-12D	A 04739	3/4	1/2	2 3/16	3/4	7/16	1 1/16	5	.25
U1-12E	A 04740	3/4	3/4	2 3/16	3/4	7/16	1 1/16	5	.33

Unions - Flare to Flare



Unions - Flare to Flare								
		Size						
Cat. No.	Part No.	Flare A	Flare B	C	D	Size Hex	Pcs. Per Ctn.	Wt./Ea.
U2-3	A 04621	3/16	3/16	1 1/16	3/16	3/8	25	.03
U2-4	A 00325	1/4	1/4	1 3/16	3/16	7/16	25	.04
U2-5	A 00326	5/16	5/16	1 11/32	7/32	1/2	25	.06
U2-6	A 00327	3/8	3/8	1 1/2	1/4	5/8	25	.09
U2-8	A 00329	1/2	1/2	1 13/16	5/16	3/4	15	.15
U2-10	A 04845	5/8	5/8	2 1/8	3/8	7/8	10	.22
U2-12	A 04733	3/4	3/4	2 7/16	7/16	1 1/16	10	.37

Reducing Unions - Flare to Flare

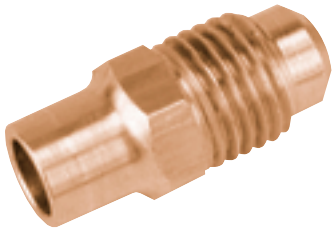


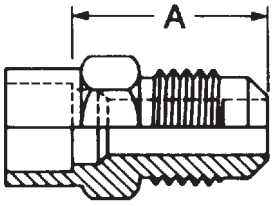
Reducing Unions - Flare to Flare								
		Size						
Cat. No.	Part No.	Flare A	Flare B	C	D	Size Hex	Pcs. Per Ctn.	Wt./Ea.
UR2-43	A 05270	1/4	3/16	1 1/8	3/16	7/16	15	.03
UR2-54	A 08730	5/16	1/4	1 9/32	7/32	1/2	10	.05
UR2-64	A 01171	3/8	1/4	1 3/8	1/4	5/8	15	.07
UR2-65	A 04981	3/8	5/16	1 7/16	1/4	5/8	10	.08
UR2-84	A 00356	1/2	1/4	1 9/16	5/16	3/4	15	.12
UR2-86	A 00149	1/2	3/8	1 11/16	5/16	3/4	25	.14
UR2-106	A 05334	5/8	3/8	1 7/8	3/8	7/8	10	.18
UR2-108	A 04846	5/8	1/2	2	3/8	7/8	12	.19
UR2-128	A 04734	3/4	1/2	2 3/16	7/16	1 1/16	10	.31
UR2-1210	A 04784	3/4	5/8	2 5/16	7/16	1 1/16	10	.33

MUELLER INDUSTRIES, INC.

45° Flare Fittings

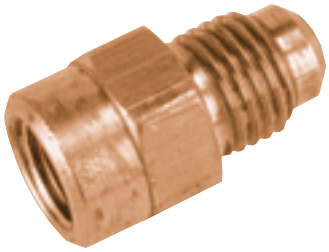
Half Union - External Flare to Solder

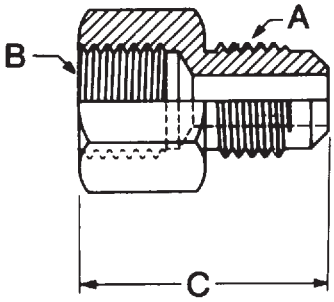




External Flare Connectors, Half Union - External Flare to Solder							
Cat. No.	Part No.	Size Flare	Size OD Solder	A	Size Hex	Pcs. Per Ctn.	Wt./Ea.
US3-44	A 03431	1/4	1/4	11/16	7/16	25	.03
US3-45	A 03466	1/4	5/16	11/16	7/16	25	.04
US3-46	A 03494	1/4	3/8	11/16	1/2	25	.03
US3-64	A 03443	3/8	1/4	7/8	5/8	25	.08
US3-65	A 03464	3/8	5/16	7/8	5/8	25	.07
US3-66	A 03492	3/8	3/8	7/8	5/8	25	.06
US3-68	A 03547	3/8	1/2	7/8	5/8	10	.08
US3-610	A 06601	3/8	5/8	7/8	3/4	10	.08
US3-86	A 03504	1/2	3/8	1 1/16	3/4	25	.11
US3-88	A 03546	1/2	1/2	1 1/16	3/4	15	.11
US3-810	A 02259	1/2	5/8	1 1/16	3/4	10	.10
US3-108	A 03519	5/8	1/2	1 1/4	7/8	10	.16
US3-1010	A 02258	5/8	5/8	1 1/4	7/8	10	.15
US3-1012	A 02272	5/8	3/4	1 1/4	7/8	10	.15
US3-1014	A 02378	5/8	7/8	1 1/4	1	10	.17
US3-1212	A 05307	3/4	3/4	1 7/16	1 1/16	5	.25
US3-1214	A 05425	3/4	7/8	1 5/16	1 1/16	5	.28

Half Union - Flare to NPTFI



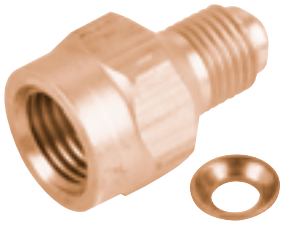


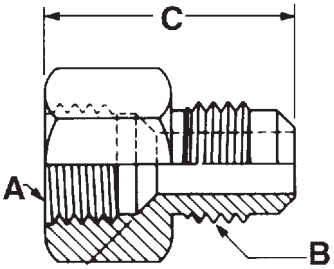
Connectors, Half Union - Flare to NPTFI							
Cat. No.	Part No.	Size Flare A	Size NPTFI B	C	Size Hex	Pcs. Per Ctn.	Wt./Ea.
U3-4A	A 04622	1/4	1/8	1 1/32	9/16	25	.04
U3-4B	A 04625	1/4	1/4	1 1/4	11/16	25	.07
U3-4C	A 04961	1/4	3/8	1 9/32	13/16	15	.08
U3-6A	A 04927	3/8	1/8	1 1/8	5/8	10	.06
U3-6B	A 04624	3/8	1/4	1 5/16	11/16	25	.09
U3-6C	A 04627	3/8	3/8	1 3/8	13/16	15	.10
U3-6D	A 08104	3/8	1/2	1 5/8	1	15	.16
U3-8B	A 04928	1/2	1/4	1 13/32	3/4	15	.11
U3-8C	A 04727	1/2	3/8	1 1/2	13/16	15	.12
U3-8D	A 04728	1/2	1/2	1 3/4	1	15	.18
U3-10C	A 04929	5/8	3/8	1 19/32	7/8	10	.15
U3-10D	A 04819	5/8	1/2	1 13/16	1	10	.20
U3-10E	A 04977	5/8	3/4	1 29/32	1 1/4	10	.36

MUELLER INDUSTRIES, INC.

45° Flare Fittings

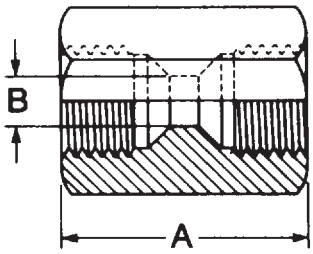
Internal Flare to External Flare Unions





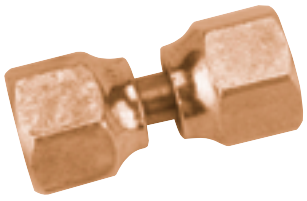
Internal Flare to External Flare Unions 1 Soft Copper Gasket Furnished With Each Part							
		Size					
Cat. No.	Part No.	Flare A	Flare B	C	Size Hex	Pcs. Per Ctn.	Wt./Ea.
UR3-43	A 05147	1/4	3/16	1 1/32	5/8	10	.05
UR3-46	A 05041	1/4	3/8	1 1/8	5/8	15	.04
UR3-48	A 08127	1/4	1/2	1 1/4	3/4	10	.11
UR3-64	A 00479	3/8	1/4	1 7/32	13/16	15	.09
UR3-68	A 04888	3/8	1/2	1 13/32	13/16	15	.12
UR3-84	A 00480	1/2	1/4	1 3/8	15/16	15	.11
UR3-86	A 00481	1/2	3/8	1 7/16	15/16	15	.13
UR3-810	A 04879	1/2	5/8	1 5/8	15/16	10	.19
UR3-108	A 04770	5/8	1/2	1 11/16	1 1/16	10	.18
UR3-1012	A 04878	5/8	3/4	1 29/32	1 1/16	10	.29
UR3-1210	A 04826	3/4	5/8	1 31/32	1 5/16	10	.30

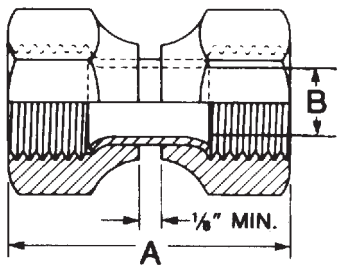
Internal Flare Unions



Internal Flare Unions 2 Soft Copper Gasket Furnished With Each Part							
		Size				Pcs.	
Cat. No.	Part No.	Flare	Hex	A	B	Per Ctn.	Wt./Ea.
U4-4	A 00385	1/4	5/8	1	1/4	10	.08
U4-6	A 00386	3/8	13/16	1 1/4	3/8	10	.12
U4-8	A 00387	1/2	15/16	1 7/16	1/2	10	.19

Internal Flare Swivel Unions



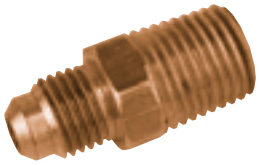


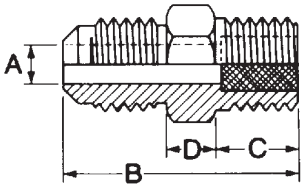
Internal Flare Swivel Unions							
		Size				Pcs.	
Cat. No.	Part No.	Flare	Hex	A	B	Per Ctn.	Wt./Ea.
US4-4	A 13563	1/4	5/8	1 3/8	3/16	15	.12
US4-5	A 13564	5/16	11/16	1 7/16	1/4	15	.10
US4-6	A 13565	3/8	13/16	1 9/16	5/16	15	.16
US4-8	A 13567	1/2	15/16	1 13/16	7/16	15	.24
US4-10	A 13568	5/8	1 1/16	2 1/16	9/16	15	.35

MUELLER INDUSTRIES, INC.

45° Flare Fittings

Fusible Connectors - Half Union - Flare to NPTFE





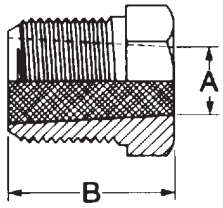
Fusible Connectors, Half Union - Flare to NPTFE

Listed by Underwriters Laboratories, Inc., for use in the USA and Canada.
CE Compliant for European market.

Cat. No.	UL Part No.	CE Part No.	Size Flare	Size NPTFE	Size Hex	A in.	A cm	B in	B cm	C in	C cm	D in	D cm	Melting Temp.*	Per Ctn.	Wt./ Ea.
FU-4B	A 14062	B 35136	¼	¼	9/16	3/16	.48	1¼	3.18	9/16	1.43	3/16	.48	283˚F	10	.07
FU-4C	A 14063	B 35137	¼	⅜	11/16	3/16	.48	1 5/16	3.33	9/16	1.43	¼	.64	283˚F	10	.09
FU-6C	A 14064	B 35138	⅜	⅜	11/16	9/32	.71	1 7/16	3.65	9/16	1.43	¼	.64	283˚F	10	.12
FU-4B	A 14023	B 35127	¼	¼	9/16	3/16	.48	1¼	3.18	9/16	1.43	3/16	.48	210˚F	10	.06
FU-4C	A 14025	B 35129	¼	⅜	11/16	3/16	.48	1 5/16	3.33	9/16	1.43	¼	.64	210˚F	10	.09
FU-6C	A 14026	B 35130	⅜	⅜	11/16	9/32	.71	1 7/16	3.65	9/16	1.43	¼	.64	210˚F	10	.12
FU-4B	A 14024	B 35128	¼	¼	9/16	3/16	.48	1¼	3.18	9/16	1.43	3/16	.48	168˚F	10	.06
FU-4C	A 14050	B 35132	¼	⅜	11/16	3/16	.48	1 5/16	3.33	9/16	1.43	¼	.64	168˚F	10	.09
FU-6C	A 14027	B 35131	⅜	⅜	11/16	9/32	.71	1 7/16	3.65	9/16	1.43	¼	.64	168˚F	10	.13

*Melting Temperature Equivalents – 283˚F (139˚C), 210˚F (99˚C), 168˚F (76˚C).

Fusible Pipe Plugs



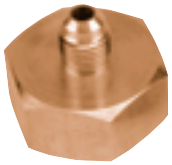
Fusible Pipe Plugs

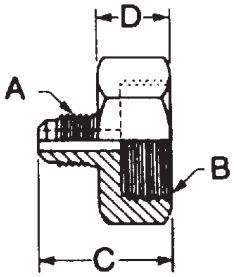
Listed by Underwriters Laboratories, Inc., for use in the USA and Canada.
CE Compliant for European market.

Cat. No.	UL Part No.	CE Part No.	Size NPTFE	Size Hex	A in	A cm	B in	B cm	Melting Temp.*	Per Ctn.	Wt./ Ea.
FP-A	A 14058	B 35133	⅛	7/16	7/32	.56	19/32	1.51	283˚F	10	.02
FP-B	A 14059	B 35134	¼	9/16	¼	.64	25/32	1.98	283˚F	15	.05
FP-C	A 14060	B 35135	⅜	11/16	⅜	.95	27/32	2.14	283˚F	15	.08
FP-A	A 14017	B 35122	⅛	7/16	7/32	.56	19/32	1.51	210˚F	10	.03
FP-B	A 14018	B 35123	¼	9/16	¼	.64	25/32	1.98	210˚F	15	.05
FP-C	A 14021	B 35125	⅜	11/16	⅜	.95	27/32	2.14	210˚F	15	.06
FP-A	A 15214	B 35139	⅛	7/16	7/32	.56	19/32	1.51	168˚F	10	.02
FP-B	A 14019	B 35124	¼	9/16	¼	.64	25/32	1.98	168˚F	15	.04
FP-C	A 14022	B 35126	⅜	11/16	⅜	.95	27/32	2.14	168˚F	15	.06

*Melting Temperature Equivalents – 283˚F (139˚C), 210˚F (99˚C), 168˚F (76˚C).

Refrigerant Drum Adapters





Refrigerant Drum Adapters

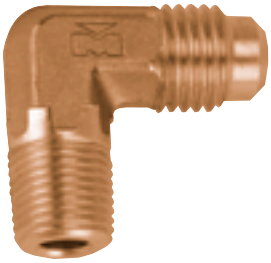
Flare to Internal Straight Pipe (NPSM) Furnished with Gasket

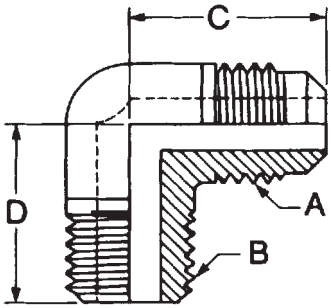
Cat. No.	Part No.	Size Flare A	Size NPSM B	C	D	Hex	Pcs. Per Ctn.	Wt./Ea.	Replacement Gasket
K1-1	A 08073	¼	¾	1⅛	7/16	1¼	10	.16	
K1-3	A 08274	⅜	¾	1¼	7/16	1¼	10	.19	A 08167
K1-5	A 08276	½	¾	1⅜	7/16	1¼	10	.19	
K1-8	A 08166	¼	½	1⅛	7/16	1⅛	10	.15	A 08074

MUELLER INDUSTRIES, INC.

45° Flare Fittings

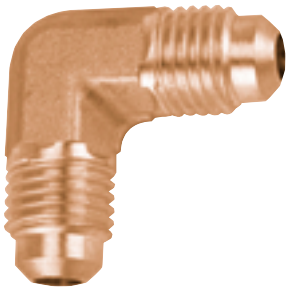
90° Half Union - Flare to NPTFE

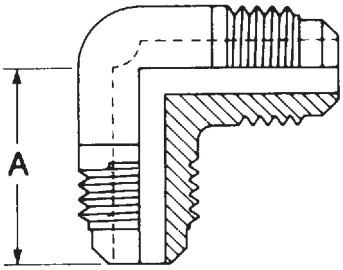




90° Elbows, Half Union - Flare to NPTFE							
		Size					
		Flare	NPTFE				
Cat. No.	Part No.	A	B	C	D	Pcs. Per Ctn.	Wt./Ea.
E1-4A	A 00335	1/4	1/8	15/16	25/32	25	.04
E1-4B	A 04890	1/4	1/4	29/32	15/16	25	.08
E1-4C	A 04812	1/4	3/8	15/16	1 1/32	25	.09
E1-6A	A 04937	3/8	1/8	1 1/32	29/32	25	.08
E1-6B	A 00337	3/8	1/4	1 1/16	1 1/16	25	.09
E1-6C	A 04889	3/8	3/8	1 1/16	1 3/32	25	.11
E1-6D	A 04886	3/8	1/2	1 1/8	1 11/32	25	.16
E1-8B	A 05044	1/2	1/4	1 7/32	1 3/16	10	.13
E1-8C	A 00339	1/2	3/8	1 7/32	1 1/8	15	.17
E1-8D	A 04887	1/2	1/2	1 9/32	1 3/8	15	.17
E1-8E	A 05072	1/2	3/4	1 11/32	1 3/8	10	.24
E1-10C	A 04856	5/8	3/8	1 15/32	1 1/4	10	.17
E1-10D	A 04538	5/8	1/2	1 15/32	1 7/16	10	.20
E1-10E	A 05054	5/8	3/4	1 15/32	1 1/2	10	.26
E1-12D	A 04776	3/4	1/2	1 21/32	1 1/2	10	.32
E1-12E	A 04746	3/4	3/4	1 21/32	1 5/8	10	.35

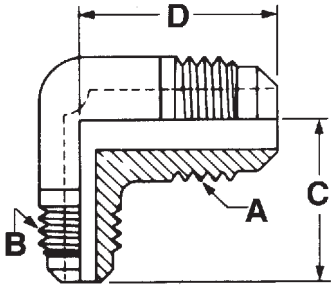
90° Union - Flare to Flare





90° Elbows, Union - Flare to Flare					
Cat. No.	Part No.	Size Flare	A	Pcs. Per Ctn.	Wt./Ea.
E2-4	A 00147	1/4	29/32	25	.07
E2-6	A 00146	3/8	1 1/16	25	.10
E2-8	A 00145	1/2	1 7/32	15	.14
E2-10	A 04539	5/8	1 15/32	10	.21
E2-12	A 04745	3/4	1 21/32	5	.39

90° Reducing Union - Flare to Flare

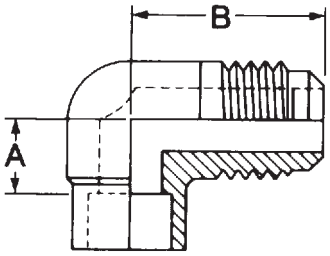


90° Elbows, Reducing Union - Flare to Flare							
		Size Flare					
Cat. No.	Part No.	A	B	C	D	Pcs. Per Ctn.	Wt./Ea.
ER2-84	A 04885	1/2	1/4	1 7/32	31/32	25	.13
ER2-86	A 05042	1/2	3/8	1 7/32	1 1/8	25	.17

MUELLER INDUSTRIES, INC.

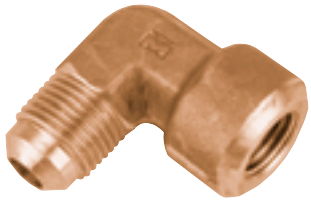
45° Flare Fittings

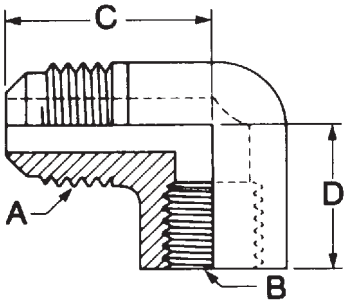
90° Half Union - Flare to Solder



90° Solder Elbows, Half Union - Flare to Solder							
Cat. No.	Part No.	Size Flare	Size OD Solder	A	B	Pcs. Per Ctn.	Wt./Ea.
ES2-44	A 03449	1/4	1/4	23/64	29/32	25	.04
ES2-66	A 03511	3/8	3/8	15/32	1 5/64	20	.08
ES2-68	A 07852	3/8	1/2	13/32	1 3/64	10	.11
ES2-88	A 07851	1/2	1/2	15/32	1 7/32	—	.12
ES2-1010	A 06611	5/8	5/8	35/64	1 13/32	—	.19

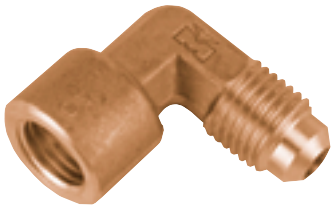
90° External Flare to NPTFE

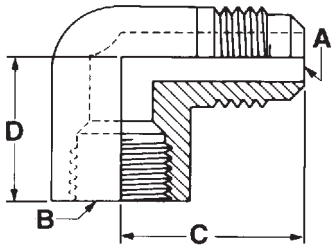




90° Elbows - External Flare to NPTFI							
Cat. No.	Part No.	Size Flare A	Size NPTFI B	C	D	Pcs. Per Ctn.	Wt./Ea.
E3-4A	A 04630	1/4	1/8	29/32	29/32	25	.06
E3-4B	A 05007	1/4	1/4	1 1/16	21/32	25	.13
E3-6B	A 04632	3/8	1/4	1 1/8	1 1/8	25	.15
E3-6C	A 04914	3/8	3/8	1 5/64	3/4	25	.19
E3-8D	A 05056	1/2	1/4	1 3/8	15/16	15	.33

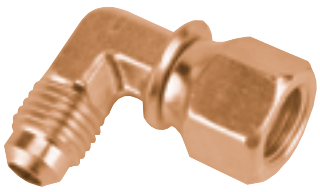
90° External Flare to Internal Flare

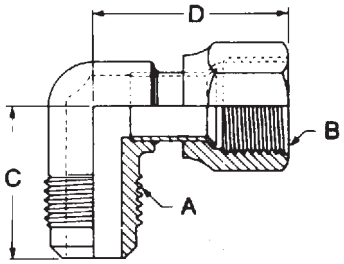




90° Elbows - External Flare to Internal Flare 1 Soft Copper Gasket Furnished With Each Part							
Cat. No.	Part No.	Size Flare A	Size F Flare B	C	D	Pcs. Per Ctn.	Wt./Ea.
E4-44	A 04898	1/4	1/4	15/16	7/8	25	.13
E4-66	A 08082	3/8	3/8	1 7/32	1 1/16	25	.24
E4-88	A 04897	1/2	1/2	1 11/32	1 1/8	15	.22

90° Swivel - External Flare to Internal Flare



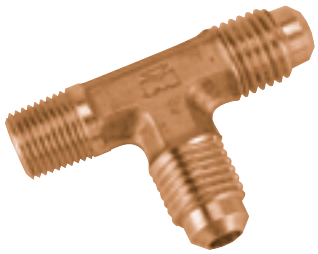


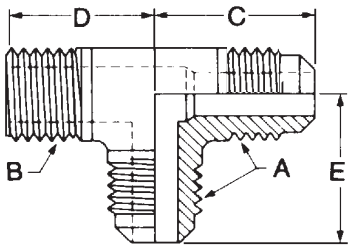
90° Swivel Elbows - External Flare to Internal Flare							
Cat. No.	Part No.	Size Flare A	Size F Flare B	C	D	Pcs. Per Ctn.	Wt./Ea.
ES4-44	A 15940	1/4	1/4	29/32	1 1/4	4	.13
ES4-66	A 15941	3/8	3/8	1 5/64	1 27/64	4	.19
ES4-88	A 15943	1/2	1/2	1 7/32	1 17/32	4	.22
ES4-1010	A 15944	5/8	5/8	1 13/32	1 3/4	4	.31
ES4-1212	A 15945	3/4	3/4	1 21/32	2 1/32	4	.58

MUELLER®
INDUSTRIES, INC.

45° Flare Fittings

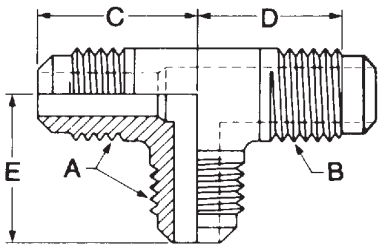
Right Angle Two-Way Tees





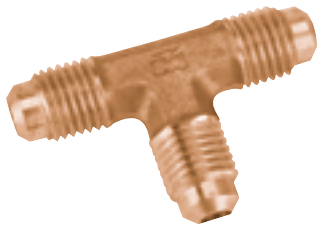
Right Angle Two-Way Tees								
		Size						
Cat. No.	Part No.	Flare A	NPTFE B	C	D	E	Pcs. Per Ctn.	Wt./Ea.
T3-4A	A 00127	1/4	1/8	15/16	51/64	15/16	25	.08
T3-4B	A 04998	1/4	1/4	15/16	1 1/16	15/16	25	.11
T3-6B	A 00133	3/8	1/4	1 1/16	1 1/16	1 1/16	25	.14
T3-6C	A 04941	3/8	3/8	1 1/16	1 3/32	1 1/16	25	.15
T3-8C	A 04778	1/2	3/8	1 7/32	1 1/8	1 7/32	15	.18
T3-8D	A 04944	1/2	1/2	1 11/32	1 3/8	1 11/32	10	.26
T3-10D	A 04779	5/8	1/2	1 13/32	1 3/8	1 13/32	10	.28

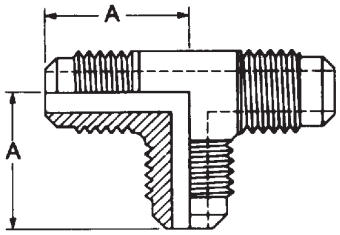
Two-Way Tees



Two-Way Tees							
		Size					
Cat. No.	Part No.	Flare A	NPTFE B	C	D	Pcs. Per Ctn.	Wt./Ea.
T1-4A	A 00345	1/4	1/8	15/16	13/16	25	.07
T1-4B	A 04859	1/4	1/4	29/32	1 1/32	25	.09
T1-4C	A 04771	1/4	3/8	15/16	1 1/32	15	.12
T1-6B	A 00347	3/8	1/4	1 1/16	1 1/16	25	.11
T1-6C	A 04922	3/8	3/8	1 1/16	1 1/16	15	.14
T1-8B	A 05246	1/2	1/4	1 7/32	1 3/16	12	.18
T1-8C	A 00349	1/2	3/8	1 7/32	1 1/8	15	.19
T1-8D	A 04924	1/2	1/2	1 11/32	1 3/8	10	.26
T1-10D	A 04754	5/8	1/2	1 13/32	1 3/8	10	.28

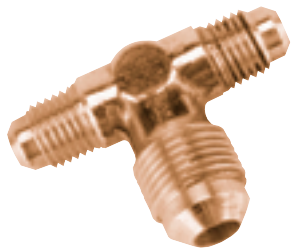
Three-Way Tees

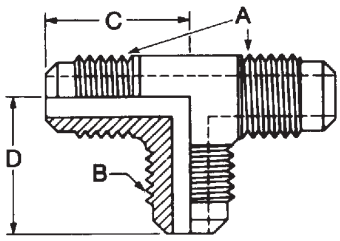




Three-Way Tees					
Cat. No.	Part No.	Size Flare	A	Pcs. Per Ctn.	Wt./Ea.
T2-4	A 00340	1/4	15/16	25	.07
T2-6	A 00342	3/8	1 1/16	15	.17
T2-8	A 00344	1/2	1 7/32	15	.20
T2-10	A 04541	5/8	1 13/32	10	.30
T2-12	A 04749	3/4	1 21/32	5	.68

Three-Way Reducing Tees



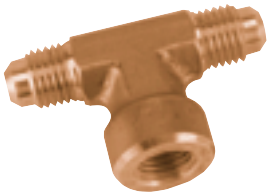


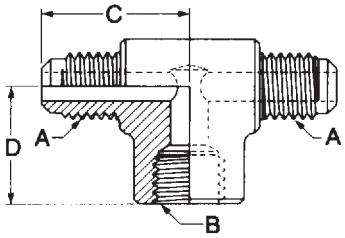
Three-Way Reducing Tees							
		Size					
Cat. No.	Part No.	Flare A	Flare B	C	D	Pcs. Per Ctn.	Wt./Ea.
TR2-46	A 04994	1/4	3/8	29/32	1 1/16	25	.11
TR2-64	A 04574	3/8	1/4	1 1/16	29/32	25	.12
TR2-68	A 04547	3/8	1/2	1 1/8	1 7/32	15	.19
TR2-84	A 04558	1/2	1/4	1 7/32	31/32	10	.21
TR2-86	A 04559	1/2	3/8	1 7/32	1 1/8	15	.22
TR2-810	A 04991	1/2	5/8	1 11/32	1 13/32	10	.28

MUELLER INDUSTRIES, INC.

45° Flare Fittings

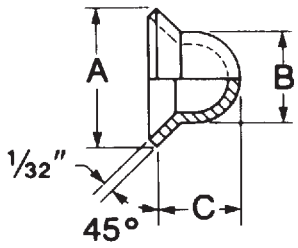
Three-Way Tees, Internal Branch





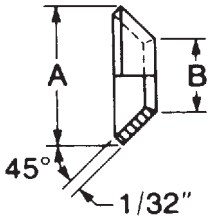
Three-Way Tees, Internal Branch 1 Soft Copper Gasket Furnished With Each Part							
		Size					
Cat. No.	Part No.	Flare A	F Flare B	C	D	Pcs. Per Ctn.	Wt./Ea.
T6-4	A 06330	1/4	1/4	15/16	29/32	25	.14

Copper Flare Seal Bonnets



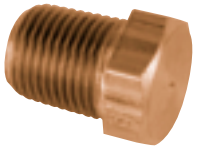
Copper Flare Seal Bonnets							
Cat. No.	Part No.	Size Flare	A Max.	B +/– 1/64	C Min.	Pcs. Per Ctn.	Wt./Ea.
B1-3	A 04737	3/16	5/16	5/32	5/32	25	.001
B1-4	A 00414	1/4	23/64	7/32	7/32	100	.001
B1-5	A 04935	5/16	27/64	9/32	9/32	50	.004
B1-6	A 00415	3/8	35/64	23/64	11/32	25	.004
B1-8	A 00416	1/2	21/32	15/32	13/32	100	.008
B1-10	A 00485	5/8	49/64	39/64	7/16	20	.009
B1-12	A 04738	3/4	61/64	23/32	9/16	25	.015

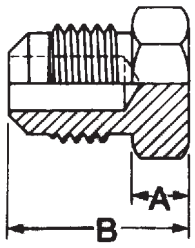
Copper Flare Gaskets



Copper Flare Gaskets						
Cat. No.	Part No.	Size Flare	A Max.	B +/– 1/32	Pcs. Per Ctn.	Wt./Ea.
B2-3	A 05156	3/16	5/16	1/8	50	.001
B2-4	A 00401	1/4	23/64	3/16	100	.001
B2-5	A 04811	5/16	27/64	7/32	50	.001
B2-6	A 00402	3/8	35/64	9/32	100	.002
B2-8	A 00403	1/2	21/32	13/32	100	.002
B2-10	A 05186	5/8	49/64	1/2	50	.003
B2-12	A 04822	3/4	61/64	5/8	25	.004

Flare Plugs





Flare Plugs							
Cat. No.	Part No.	Size Flare	A	B	Size Hex	Pcs. Per Ctn.	Wt./Ea.
P2-3	A 05045	3/16	5/32	19/32	3/8	15	.01
P2-4	A 00121	1/4	3/16	11/16	7/16	25	.02
P2-5	A 00124	5/16	7/32	25/32	1/2	15	.03
P2-6	A 00122	3/8	1/4	7/8	5/8	25	.06
P2-8	A 00123	1/2	5/16	1 1/16	3/4	25	.09
P2-10	A 04536	5/8	5/16	1 3/16	7/8	15	.14
P2-12	A 04757	3/4	5/16	1 5/16	1 1/16	10	.23