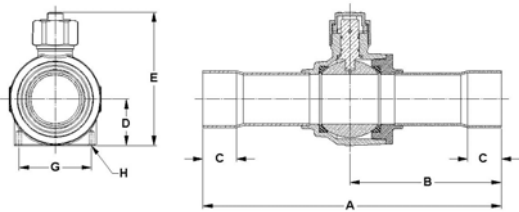
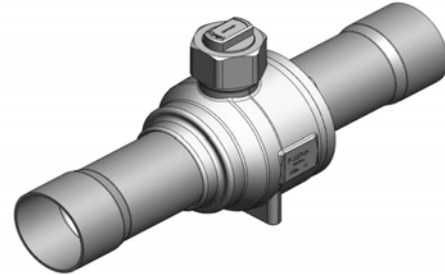


CYCLEMASTER® Ball Valves

Standard

Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Working temperature range (TS): -40°F/300°F, -40°C/149°C
- Compatible with all CFC, HCFC and HFC refrigerants and oils
- Full port construction to match line size ID
- Internally equalized ball design
- Rupture-proof encapsulated stem
- MCM™ Seal Technology
- UL/cUL Listed, CE Certified



References

- * Reduced Port
- ** Where Applicable
- *** Consult Factory
- ‡ Standard product offering includes drilled/ tapped feature
- Prefix AP Drilled/ tapped

Dimensions

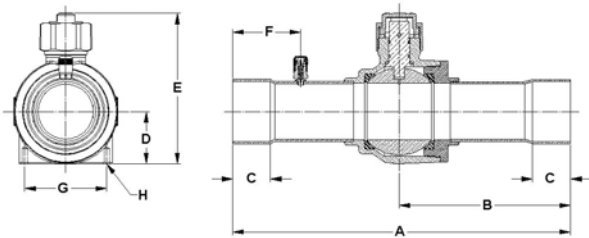
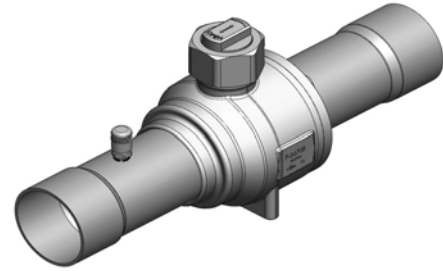
Part Number	Size	Cv	A (in)	B (in)	C (in) Min	D (in)	E (in)	G (in) **	H **	Port (in)	Wt(lb)	Seal Cap Kit
API7859 ‡	1/4	1.0	5.47	2.97	0.31	0.65	2.53	0.87	M4 X 0.7	0.50	0.67	A 17842
API7860C ‡	3/8	4.3	5.50	3.00	0.31	0.65	2.53	0.87	M4 X 0.7	0.50	0.66	A 17842
API7861C ‡	1/2	6.2	6.35	3.41	0.38	0.65	2.53	0.87	M4 X 0.7	0.50	0.68	A 17842
API7862C ‡	5/8	12.1	6.35	3.41	0.5	0.65	2.53	0.87	M4 X 0.7	0.50	0.68	A 17842
API7863 ‡	3/4	19.0	7.45	3.89	0.62	0.88	3.08	1.18	M4 X 0.7	0.75	1.42	A 17843
API7864C ‡	7/8	27.5	7.45	3.89	0.75	0.88	3.08	1.18	M4 X 0.7	0.75	1.43	A 17843
API7865A ‡	1 1/8	54.0	8.42	4.21	0.91	1.00	3.28	1.50	M4 X 0.7	1.00	1.58	A 17843
A 17866	1 3/8	89.1	10.00	5.00	0.97	1.28	3.94	1.89	M6 X 1.0	1.25	3.26	A 17844
A 17867	1 5/8	114.0	11.00	5.50	1.09	1.42	4.58	2.17	M6 X 1.0	1.50	4.70	A 17845
A 17868	2 1/8	244.0	12.00	6.08	1.34	1.86	5.34	2.91	M6 X 1.0	2.00	8.02	A 17845
A 17869	2 5/8	401.0	13.50	6.80	1.47	2.22	6.25			2.45	13.40	A 17846
A 17870	3 1/8	553.0	16.00	8.00	1.66	2.69	7.07			3.00	21.31	A 17846
A 17871 *	2 5/8	230.0	12.00	6.08	1.47	1.86	5.34	2.91	M6 X 1.0	2.00	8.46	A 17845
A 17872 *	3 1/8	143.0	12.00	6.08	1.66	1.86	5.34	2.91	M6 X 1.0	2.00	9.12	A 17845
B 34909 ***	3 5/8		13.10	6.50	1.91	2.69	7.07			3.00	22.80	A 17846
B 34910 ***	4 1/8		14.50	7.20	2.16	2.69	7.07			3.00	21.00	A 17846

CYCLEMASTER® Ball Valves

**Standard With
Access Port**

Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Working temperature range (TS): -40°F/300°F, -40°C/149°C
- Compatible with all CFC, HCFC and HFC refrigerants and oils
- Full port construction to match line size ID
- Internally equalized ball design
- Rupture-proof encapsulated stem
- MCM™ Seal Technology
- UL/cUL Listed, CE Certified



References

- * Reduced Port
- ** Where Applicable
- *** Consult Factory
- ‡ Standard product offering includes drilled/ tapped feature
- Prefix AQ Drilled/ tapped

Dimensions

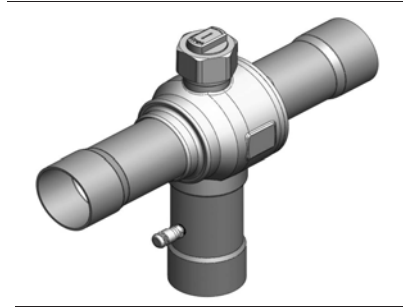
Part Number	Size	Cv	A (in)	B (in)	C (in) Min	D (in)	E (in)	F (in)	G (in)**	H **	Port (in)	Wt(lb)	Seal Cap Kit
AQ17859	‡ 1/4	1.00	5.47	2.97	0.31	0.65	2.53	1.16	0.87	M4 X 0.7	0.50	0.72	A 17842
AQ17860C	‡ 3/8	4.30	5.50	3.00	0.31	0.65	2.53	1.16	0.87	M4 X 0.7	0.50	0.69	A 17842
AQ17861C	‡ 1/2	6.20	6.35	3.41	0.38	0.65	2.53	1.21	0.87	M4 X 0.7	0.50	0.71	A 17842
AQ17862C	‡ 5/8	12.10	6.35	3.41	0.50	0.65	2.53	1.35	0.87	M4 X 0.7	0.50	0.72	A 17842
AQ17863	‡ 3/4	19.00	7.45	3.89	0.62	0.88	3.08	1.47	1.18	M4 X 0.7	0.75	1.43	A 17843
AQ17864C	‡ 7/8	27.50	7.45	3.89	0.75	0.88	3.08	1.60	1.18	M4 X 0.7	0.75	1.46	A 17843
AQ17865A	‡ 1 1/8	54.00	8.42	4.21	0.91	1.00	3.28	1.74	1.50	M4 X 0.7	1.00	1.56	A 17843
AC17866	1 3/8	89.10	10.00	5.00	0.97	1.28	3.94	2.04	1.89	M6 X 1.0	1.25	3.27	A 17844
AC17867	1 5/8	114.00	11.00	5.50	1.09	1.42	4.58	2.25	2.17	M6 X 1.0	1.50	4.78	A 17845
AC17868	2 1/8	244.00	12.00	6.08	1.34	1.86	5.34	2.41	2.91	M6 X 1.0	2.00	8.09	A 17845
AC17869	2 5/8	401.00	13.50	6.80	1.47	2.22	6.25	2.85			2.45	13.81	A 17846
AC17870	3 1/8	553.00	16.00	8.00	1.66	2.69	7.07	3.41			3.00	21.42	A 17846
AC17871	* 2 5/8	230.00	12.00	6.08	1.47	1.86	5.34	2.48	2.91	M6 X 1.0	2.00	8.71	A 17845
AC17872	* 3 1/8	143.00	12.00	6.08	1.66	1.86	5.34	2.66	2.91	M6 X 1.0	2.00	9.23	A 17845

CYCLEMASTER® Ball Valves

3-Way

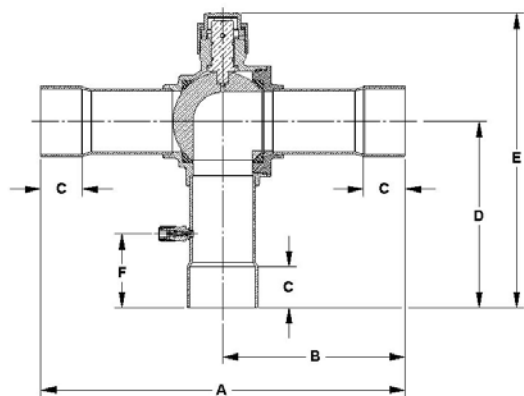
Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Working temperature range (TS): -40°F/300°F, -40°C/149°C
- Compatible with all CFC, HCFC and HFC refrigerants and oils
- Full port construction to match line size ID
- Internally equalized ball design
- Rupture-proof encapsulated stem
- MCM™ Seal Technology
- UL/cUL Listed, CE Certified



References

* Reduced Port



Dimensions

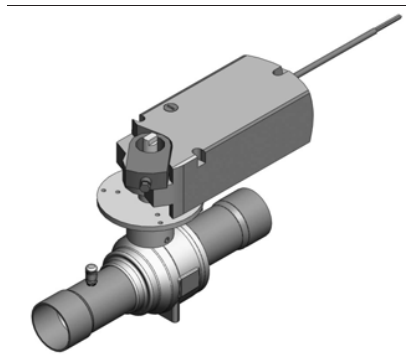
Part Number	Size	Cv	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	Port (in)	Wt(lb)	Seal Cap Kit
AU17860	3/8	2.2	5.50	2.97	0.31	2.61	4.16	1.16	0.50	0.73	A 17842
AU17861	1/2	3.9	6.38	3.42	0.38	3.05	4.60	1.21	0.50	0.74	A 17842
AU17862	5/8	4.6	6.38	3.42	0.50	3.05	4.60	1.35	0.50	0.74	A 17842
AU17863	3/4	11.9	7.47	3.91	0.62	3.65	5.86	1.47	0.75	1.40	A 17843
AU17864	7/8	10.9	7.47	3.91	0.75	3.65	5.86	1.60	0.75	1.52	A 17843
AU17865	1 1/8	19.3	8.41	4.33	0.91	4.01	6.39	1.74	1.00	2.82	A 17844
A 17545	1 3/8	31.1	10.00	5.07	0.97	4.92	7.89	2.04	1.25	4.97	A 17845
A 17546	1 5/8	44.7	11.00	5.53	1.09	5.46	8.61	2.25	1.50	7.17	A 17845
AU17868	2 1/8	76.3	11.86	5.95	1.34	6.06	9.58	2.41	1.93	8.27	A 17845
AU17871 *	2 5/8	69.9	11.90	5.97	1.47	6.08	9.60	2.48	1.93	8.80	A 17845
AU17872 *	3 1/8	58.2	11.86	5.95	1.66	6.06	9.58	2.66	1.93	11.10	A 17845

CYCLEMASTER® Ball Valves

Actuated Standard

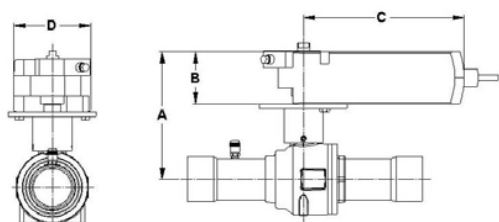
Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Power Supply: 24 VAC
- Ambient Temperature: -22°F to 130°F, -30°C to 54°C
- Compatible with all CFC, HCFC and HFC refrigerants and oils
- Full shutoff capability
- Gradual open/close stops line hammer
- Remote operating capability
- Removable actuator for quick change replacement
- Manual override and valve positioning
- Electronic overload protection
- UL/cUL Listed, CE Certified



Motor Specifications

Motor Series	Torque (in-lb)	Power Consumption	Running Time (seconds)
1	44	2.5	90
2	132	3.0	125
3	310	7	125
4 **	620	16	125



References

- * Reduced Port
- ** Consists of two stacked motors operating in tandem
- Prefix AWS Actuator includes auxiliary switch
- Warning Heater assembly required for low temperature applications
- Warning Motors not for use in wet or applications where moisture will condense on motor

Dimensions

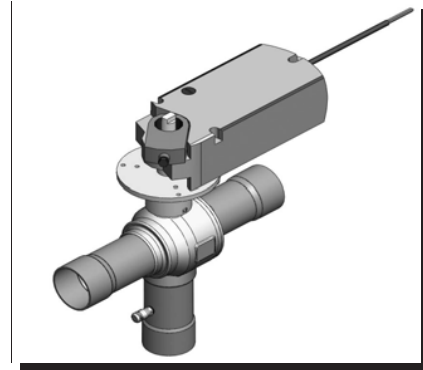
Part Number	Size		Cv	Kv	A		B		C		D		Wt		Motor	Hub	Act. Kit	Heater
	(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)				
AWI7861	1/2	13	6.2	5.4	4.18	106	2.36	60	3.70	94	2.76	70	2.21	1.00	1	A 18389	A 18390	
AWI7862	5/8	16	12.1	10.5	4.18	106	2.36	60	3.70	94	2.76	70	2.38	1.08	1	A 18389	A 18390	
AWI7863	3/4	19	19.0	16.4	4.50	114	2.36	60	3.70	94	2.76	70	2.84	1.29	1	A 18391	A 18392	
AWI7864	7/8	22	27.5	23.8	4.50	114	2.36	60	3.70	94	2.76	70	2.97	1.34	1	A 18391	A 18392	
AWI7865A	1 1/8	29	54.0	46.7	4.58	116	2.36	60	3.70	94	2.76	70	3.07	1.39	1	A 18391	A 18392	
AWI7866	1 3/8	35	89.1	77.1	5.19	132	2.36	60	5.91	150	3.19	81	6.14	2.79	2	A 18393	A 18394	A 18366
AWI7867	1 5/8	41	114.0	98.6	5.92	150	2.36	60	5.91	150	3.19	81	7.74	3.51	2	A 18368	A 18396	A 18366
AWI7868	2 1/8	54	244.0	211.0	6.54	166	2.66	68	8.94	227	3.94	100	13.14	5.96	3	A 18368	A 18395	A 18367
AWI7869	** 2 5/8	67	401.0	346.8	9.64	245	5.32	135	8.94	227	3.94	100	23.40	10.61	4	A 18400	A 18401	A 18367 (2)
AWI7870	** 3 1/8	79	553.0	478.3	9.99	254	5.32	135	8.94	227	3.94	100	31.40	14.24	4	A 18400	A 18401	A 18367 (2)
AWI7871	* 2 5/8	67	230.0	198.9	6.54	166	2.66	68	8.94	227	3.94	100	13.56	6.15	3	A 18368	A 18395	A 18367
AWI7872	* 3 1/8	79	143.0	123.7	6.54	166	2.66	68	8.94	227	3.94	100	14.24	6.46	3	A 18368	A 18395	A 18367

CYCLEMASTER® Ball Valves

Actuated 3-Way

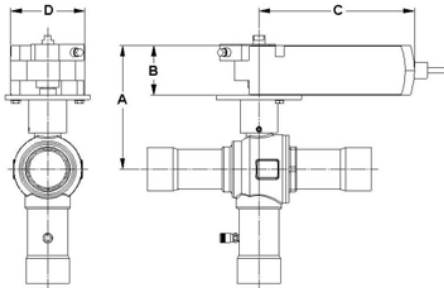
Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Power Supply: 24 VAC
- Ambient Temperature: -22°F to 130°F, -30°C to 54°C
- Compatible with all CFC, HCFC and HFC refrigerants and oils
- Full shutoff capability
- Gradual open/close stops line hammer
- Remote operating capability
- Removable actuator for quick change replacement
- Manual override and valve positioning
- Electronic overload protection
- UL/cUL Listed, CE Certified



Motor Specifications

Motor Series	Torque (in-lb)	Power Consumption	Running Time (seconds)
1	44	2.5	90
2	132	3.0	125
3	310	7	125
4 **	620	16	125



References

- * Reduced Port
- ** Consists of two stacked motors operating in tandem
- Prefix AYS Actuator includes auxillary switch
- Warning Heater assembly required for low temperature applications
- Warning Motors not for use in wet or applications where moisture will condense on motor

Dimensions

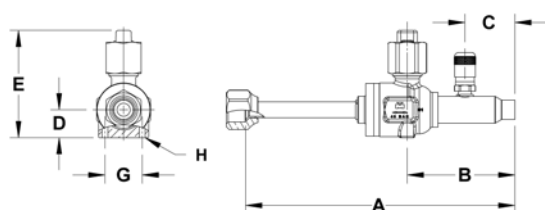
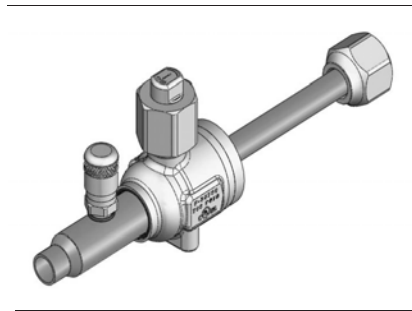
Part Number	Size		Cv	Kv	A		B		C		D		Wt		Motor	Hub	Act. Kit	Heater
	(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)				
AY17861	1/2	13	3.9	3.4	4.18	106	2.36	60	3.70	94	2.76	70	0.00	0.00	1	A 18389	A 18390	
AY17862	5/8	16	4.6	4.0	4.18	106	2.36	60	3.70	94	2.76	70	2.39	1.08	1	A 18389	A 18390	
AY17863	3/4	19	11.9	10.3	4.50	114	2.36	60	3.70	94	2.76	70	3.50	1.59	1	A 18391	A 18392	
AY17864	7/8	22	10.9	9.4	4.50	114	2.36	60	3.70	94	2.76	70	3.25	1.47	1	A 18391	A 18392	
AY17865	1 1/8	29	19.3	16.7	5.02	128	2.36	60	5.91	150	3.19	81	5.73	2.60	2	A 18393	A 18394	A 18366
A 17810	1 3/8	35	31.1	26.9	5.44	138	2.36	60	5.91	150	3.19	81	8.13	3.69	2	A 18368	A 18396	A 18366
A 17811	1 5/8	41	44.7	38.7	6.22	158	2.66	68	8.94	227	3.94	100	12.00	5.44	3	A 18368	A 18395	A 18367
AY17868	2 1/8	54	76.3	66.0	6.54	166	2.66	68	8.94	227	3.94	100	13.23	6.00	3	A 18368	A 18395	A 18367
AY17871	* 2 5/8	67	69.9	60.5	6.54	166	2.66	68	8.94	227	3.94	100	14.09	6.39	3	A 18368	A 18395	A 18367
AY17872	* 3 1/8	79	58.2	50.3	6.54	166	2.66	68	8.94	227	3.94	100	14.64	6.64	3	A 18368	A 18395	A 18367

Multi Split Ball Valves

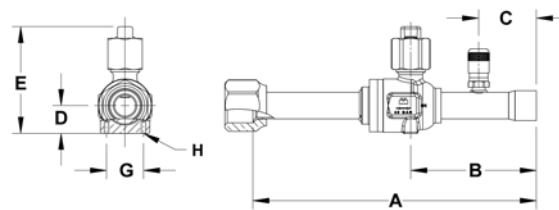
Flare x ODS

Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Working temperature range (TS): -40°F/300°F, -40°C/149°C
- Compatible with all CFC, HCFC and HFC refrigerants and oils, including R410a
- Full port construction to match line size ID
- Internally equalized ball design
- Rupture-proof encapsulated stem
- MCM™ Seal Technology
- UL/cUL Listed, CE Certified



Drawing A



Drawing B

Dimensions

Part Number	Size	A (in)	B (in)	C (in)	D (in)	E (in)	G (in)	H	Wt(lb)	Drawing
A 18448	1/4	6.38	2.50	1.16	0.65	2.53	0.87	M4 X 0.7	0.74	A
A 18405	3/8	6.26	2.50	1.16	0.65	2.53	0.87	M4 X 0.7	0.67	A
A 18449	1/2	6.71	2.94	1.21	0.65	2.53	0.87	M4 X 0.7	0.78	A
A 18406	5/8	6.64	2.94	1.35	0.65	2.53	0.87	M4 X 0.7	0.73	B

Metric Dimensions

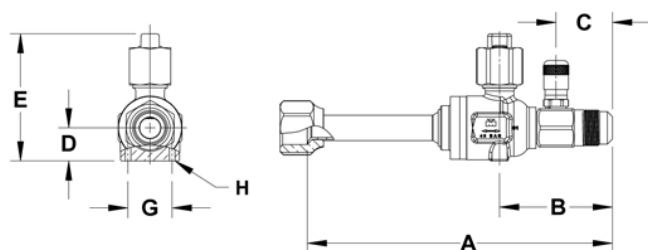
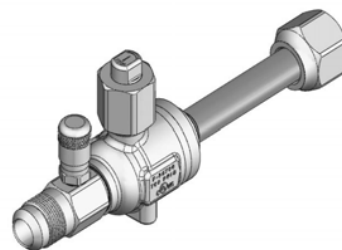
Part Number	Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	G (mm)	H	Wt(kg)	Drawing
A 18448	6	162	64	29	17	64	22	M4 X 0.7	0.34	A
A 18405	10	159	64	29	17	64	22	M4 X 0.7	0.30	A
A 18449	13	170	75	31	17	64	22	M4 X 0.7	0.35	A
A 18406	16	169	75	34	17	64	22	M4 X 0.7	0.33	B

Multi Split Ball Valves

Male x Female Flare

Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Working temperature range (TS): -40°F/300°F, -40°C/149°C
- Compatible with all CFC, HCFC and HFC refrigerants and oils, including R410a
- Full port construction to match line size ID
- Internally equalized ball design
- Rupture-proof encapsulated stem
- MCM™ Seal Technology
- UL/cUL Listed, CE Certified



Dimensions

Part Number	Size	A (in)	B (in)	C (in)	D (in)	E (in)	G (in)	H	Wt(lb)
A 18450	1/4	5.86	1.98	0.88	0.65	2.53	0.87	M4 X 0.7	0.75
A 18429	3/8	5.86	2.10	1.00	0.65	2.53	0.87	M4 X 0.7	0.82
A 18451	1/2	5.98	2.21	1.11	0.65	2.53	0.87	M4 X 0.7	0.78
A 18430	5/8	5.98	2.28	1.15	0.65	2.53	0.87	M4 X 0.7	0.86
A 18452	3/8 X 1/4	5.74	1.98	0.88	0.65	2.53	0.87	M4 X 0.7	0.79
A 18453	5/8 X 1/2	5.91	2.21	1.11	0.65	2.53	0.87	M4 X 0.7	0.81

Metric Dimensions

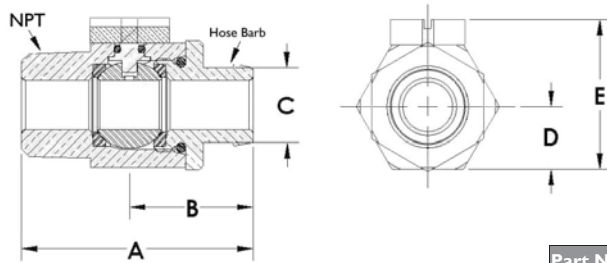
Part Number	Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	G (mm)	H	Wt(kg)
A 18450	1/4	149	50	22	17	64	22	M4 X 0.7	0.34
A 18429	3/8	149	53	25	17	64	22	M4 X 0.7	0.37
A 18451	1/2	152	56	28	17	64	22	M4 X 0.7	0.36
A 18430	5/8	152	58	29	17	64	22	M4 X 0.7	0.39
A 18452	3/8 X 1/4	146	50	22	17	64	22	M4 X 0.7	0.36
A 18453	5/8 X 1/2	150	56	28	17	64	22	M4 X 0.7	0.37

Specialty WOG Ball Valves

Oil Drain

Features:

- Maximum working pressure (PS): 700 psig, 48 bar
- Working temperature range (TS): -40°F/300°F, -40°C/149°C
- Brass and stainless steel construction
- Compatible with most fluids
- Quarter turn operation for positive shutoff
- Designed for maximum flow and minimum pressure drop



Dimensions

Part Number	Size NPT	A (in)	B (in)	C (in) Min	D (in)	E (in)	Wt(lb)
AA18060C	3/4	2.34	1.25	0.75	0.63	1.50	0.54

Metric Dimensions

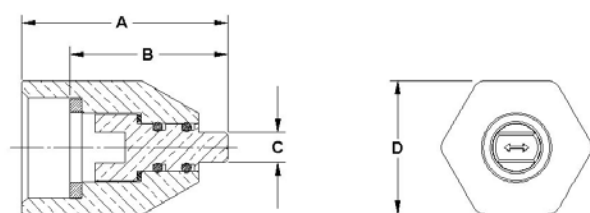
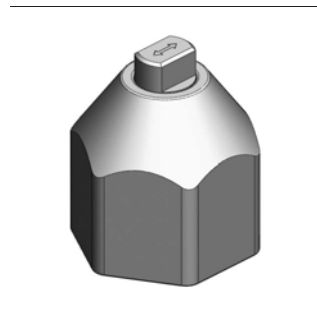
Part Number	Size NPT	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Wt(kg)
AA18060C	19	59	32	19	16	38	0.24

Component Parts

Retrofit Cap

Features:

- Designed to replace existing caps on installed valves for the full range of CYCLEMASTER® Ball Valve sizes 1/4" to 3 1/8"
- Large nut secures cap assembly to valve neck allowing center post to easily turn for on/off operation and clear visual identification
- Uses dual o-ring stem seals and base seal to assure positive isolation



References

- * For use with 3-Way Ball Valve manufactured prior to Nov. 2006
- ** For use with 1 1/8 Straight valves manufactured after Jun 2010

Dimensions

Part Number	Straight Ball Valve Sizes (in)	3-Way Ball Valve Sizes (in)	A (in)	B (in)	C (in)	D (in)	Sealing Torque (ft-lb)	Thread Size	Wt(lb)
A 18351	1/4 - 5/8	1/4 - 5/8	1.31	1.02	0.16	0.88	5 - 6	11/16" - 16UN	0.14
A 18352 **	3/4 - 1 1/8	3/4 - 7/8	1.54	1.12	0.22	1.00	5 - 6	13/16" - 16UN	0.22
A 18353	1 1/8 - 1 3/8	1 1/8	1.95	1.59	0.31	1.13	13 - 15	1" - 16UN	0.35
A 18354	1 5/8 - 2 1/8, 2 5/8 & 3 1/8" Red Port	1 3/8 - 2 1/8, 2 5/8 & 3 1/8" Red Port	2.57	1.97	0.38	1.63	16 - 18	1 1/2" - 16 UN	0.92
A 18355 *	2 5/8 & 3 1/8 Full Port	2 1/8 - 3 1/8	2.66	2.10	0.38	1.88	30 - 35	1 3/4" - 16 UN	1.35

Metric Dimensions

Part Number	Straight Ball Valve Sizes (mm)	3-Way Ball Valve Sizes (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Sealing Torque (N-m)	Thread Size	Wt(kg)
A 18351	6 - 16	6 - 16	33	26	4	22	7 - 8	11/16" - 16UN	0.06
A 18352 **	19 - 29	19 - 22	39	28	6	25	7 - 8	13/16" - 16UN	0.10
A 18353	29 - 35	29	50	40	8	29	18 - 20	1" - 16UN	0.16
A 18354	41 - 54, 67 & 79 Red Port	32 - 54, 67 & 79 Red Port	65	50	10	41	22 - 24	1 1/2" - 16 UN	0.42
A 18355 *	67 & 79 Full Port	54 - 79	68	53	10	48	41 - 48	1 3/4" - 16 UN	0.61

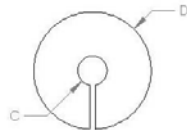
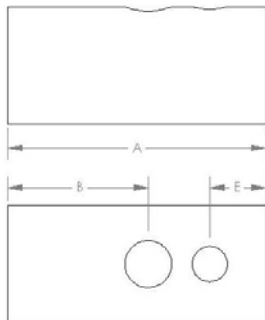
CYCLEMASTER® Ball Valves

Accessories

Caps and Actuator Components

Stem Neck Thread Size	Connection Size	Straight Through Valve Body Numbers	3 Way Valve Body Numbers	Motor Series	ABV Hub Kit	ABV Hub Motor Kit	Heater	One Piece Plastic Cap	One Piece Brass Cap	Two Piece Brass Cap	Retrofit Brass Cap	
11/16"-16 UN	1/4"	N 2351		1	A 18389	A 18390		P 36723	A 17965	A 17842	A 18351	
	3/8"	F 35222	F 35222									
	1/2"	F 36700										
	5/8"	F 36700A										
13/16"-16 UN	3/4"	N 2352	F 35223	1	A 18391	A 18392		P 36762	A 17966	A 17843	A 18352	
	7/8"	F 35223										
	1-1/8"	F 36702A										
1"-16 UN	1-1/8"	N 2353	F 35224	2	A 18393	A 18394	A 18366	P 36763	A 17967	A 17844	A 18353	
		F 35224										
	1-3/8"	F 35949										F 36703
		F 36703A										
	1-5/8"	F 36704A										
1-1/2"-16 UN	1-3/8"	N 2354	F 35162	2	A 18368	A 18396	A 18366	P 36764	A 17968	A 17845	A 18354	
	1-5/8"	N 2355	F 35950									F 36704
	2-1/8" 2-5/8" & 3-1/8" Reduced Port	F 35951	F 36595	3	A 18368	A 18395	A 18367					
		F 36705										
		F 36705A										
	2-5/8" Full Port	F 36706A		4		A 18367						
3-1/8" Full Port 3-5/8" & 4-1/8" Reduced Port	F 36707A											
1-3/4"-16 UN	2-1/8" 2-5/8" & 3-1/8" Reduced Port	N 2356	F 35161	3	A 18402		A 18367	P 36765	A 18399	A 17846	A 18355	
	2-5/8" Full Port	F 35755 F 36706	4	A 18400	A 18401	(2) A 18367						
	3-1/8" Full Port 3-5/8" & 4-1/8" Reduced Port	F 35952 F 36707										

Insulation Cover



Part Number	Valve Size	A (in)	B (in)	C (in)	D (in)	E (in)	Wt(lb)
38RBVINS	3/8	5.50	3.00	0.63	2.50	1.19	0.10
12RBVINS	1/2	6.38	3.44	0.63	2.50	1.19	0.10
58RBVINS	5/8	6.38	3.44	0.63	2.50	1.38	0.10
34RBVINS	3/4	7.44	3.88	0.88	3.06	1.63	0.10
78RBVINS	7/8	7.44	3.88	0.88	3.06	1.63	0.10
118RBVINS	1 1/8	8.44	4.31	1.13	3.63	1.75	0.10
138RBVINS	1 3/8	10.00	5.00	1.25	3.94	2.06	0.10
158RBVINS	1 5/8	11.00	5.50	1.44	4.56	2.25	0.10
218RBVINS	2 1/8	12.00	6.06	1.88	5.38	2.44	0.10
258RBVINS	2 5/8	13.50	6.81	2.25	6.25	2.88	0.10
MSBVINS	Multi Split Valves	8.56	6.00	1.13	2.63	1.47	0.10