

CONBRACO/APOLLO

4A-600/ DCDA 4A/ DCDA 4AN

SERIES

SIZE

2 1/2", 3", 4", 6", 8", 10", 12"

DESCRIPTION

The 4A-600 series is a double check detector assembly. Production began in 2008. The mainline assembly is a DC similar to the 4A-100 series. There are two different types of bypass assemblies, either type I or type II. The type I bypass utilizes an assembly similar to the 4A-100 series. The type II bypass utilizes a specially constructed single check assembly only. The letter "n" in the model designation refers to the n pattern assemblies with the up and down installation orientation.

BASIC REPAIR KIT

Mainline repair kit contains discs and O'rings

<u>SIZE</u>	<u>KIT NO</u>	<u>SIZE</u>	<u>KIT NO</u>
2 1/2"-3"	4A-000-17	8"	4A-00E-17
4"	4A-00A-17	10"-12"	4A-00H-17
6"	4A-00C-17		

Type I bypass repair kit contains discs and O'rings

Type II bypass repair kit contains check module and O'ring

<u>SIZE</u>	<u>KIT NO</u>
Type I	4A-003-RT
Type II - 4S	4A-003-12
Type II - 4A	4A-003-13A

IMPORTANT FEATURES

- ~ Mainline assembly similar to 4A-100
- ~ Bypass type one assembly similar to 4A-100
- ~ Bypass type two single check valve only

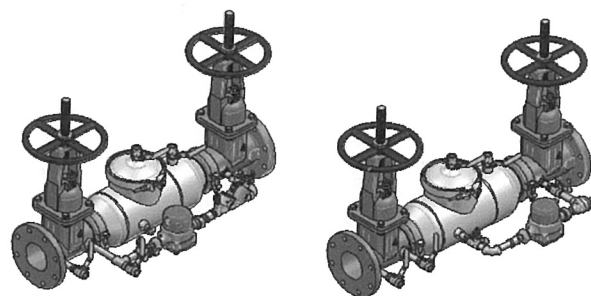


SPECIFICATIONS

The 2 1/2" - 12" Double Check Detector Assembly shall be an Apollo® Model DCDA 4A or DCDA2 4A. The assembly shall be manufactured in America and carry a **5-year** Apollo® factory warranty. The TriForce™ center-stem guided check valves shall feature reversible silicone rubber seat discs. The check valves shall be held in place by SS snap-in retainers (2 1/2" - 6") or SS studs & nuts (8" - 12"). Access to the check valves shall be by an Apollo® quick-connect SS coupling (2 1/2" - 6") or grooved couplings (8" - 12"). The bodies shall be SS in 2 1/2" - 8" sizes and FDA epoxy-coated ductile iron in 10" & 12" sizes. The assembly consists of a mainline double check valve with a Type 2 bypass consisting of a single check and meter bypassing the mainline second check to prevent backflow while accurately measuring all flows up to 2 gpm while the mainline 2nd check remains closed. Assemblies with the optional Type 1 bypass consist of a double check valve and meter which bypass both mainline checks and accurately meter all flows up to 2 gpm with the mainline checks closed. The Apollo® domestic ball valve test cocks shall have SS handles. The pressure drop across the assembly shall be documented by ASSE or USC FCCC&HR Approval curves. The assembly shall prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are non-health hazards.

FEATURES

- Stainless steel body: 2 1/2" - 8"
- FDA epoxy-coated ductile iron body: 10" & 12"
- Easy maintenance - no special tools required
 - Snap-in check retainers: 2 1/2" - 6"
 - Bolted-in checks: 8" - 12"
- Low pressure loss as documented by ASSE or USC FCCC&HR Backflow Preventer approval agencies
- Center-stem guided TriForce™ check valves
- Approved for horizontal and vertical flow up
- US Patent Nos. 6,443,184; 7,025,085; 7,533,699
- **MADE IN THE USA**



TYPE 1

TYPE 2 (Standard)

PERFORMANCE RATING

Maximum Working Pressure 175 psi
Temperature Range 33 ° F - 140 ° F
Hydrostatic Test Pressure 350 psi

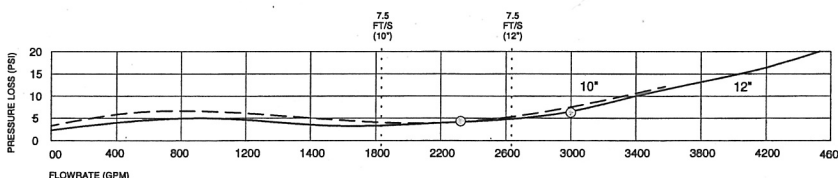
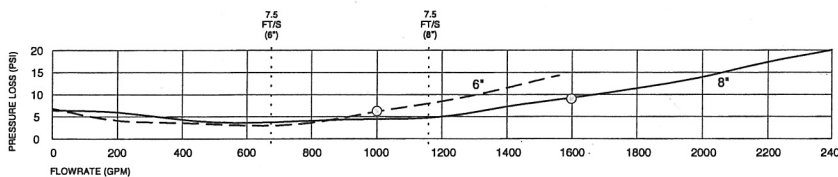
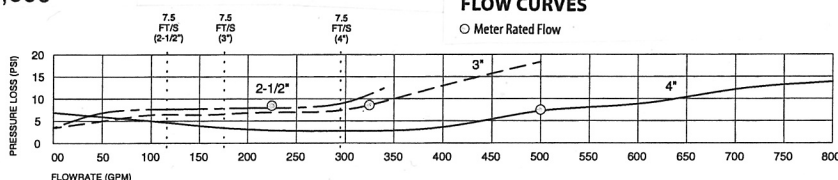
STANDARD MATERIALS LIST

Part Name	Material
Body (2 1/2" - 8")	304 Stainless Steel
Body (10" & 12")	FDA Epoxy Coated Ductile Iron
Covers (2 1/2" - 6")	Glass-filled PPO/Stainless Steel
Cover (8")	304 Stainless Steel
Covers (10" & 12")	FDA Epoxy Coated Ductile Iron
Check Valves (2 1/2" - 12")	Glass-filled PPO/Bronze (C89836 Lead-Free*)/SS
Bypass Valves	Bronze (C89836 Lead-Free*)
Springs	Stainless Steel
Seat Discs	Chloramine-resistant Silicone

— Model DCDALF 4A — Model DCDA2LF 4A Double Check Detector Assembly

FLOW CURVES

○ Meter Rated Flow



Notes:

1. Flow curves directly reflect data collected by an independent laboratory.
2. Flow curves shown were recorded with butterfly shut-off valves. Flow curves with gate valves are slightly lower. Contact factory for more information.
3. All data points are based on ASSE increasing flow data, from zero GPM to rated flow (opening curve).
4. For high flow rates/pressure loss information - contact factory.

ORDERING INFORMATION

4 A - 6 X X - X X

BYPASS TYPE
SIZE

SHUT-OFF VALVES
METER OPTION

BYPASS TYPE

- ☐ 0 - Double check on bypass line (Type 1)
☐ 2 - Single check on bypass line (Type 2 - Standard)

SIZE

- ☐ 9 - 2 1/2" ☐ C - 6" ☐ H - 12"
☐ 0 - 3" ☐ E - 8"
☐ A - 4" ☐ G - 10"

METER OPTION

- C - ft³/min ☐ E - gpm ☐ G - no meter

SHUT-OFF VALVES (Inlet x Outlet)

- ☐ 1 - Less Shut-off Valves (see notes)
☐ 2 - NRS Flg x NRS Flg
☐ 3 - OS&Y Flg x OS&Y Flg
☐ 4 - OS&Y Flg x Monitored (Mon.) Butterfly Vlv Grv
☐ 6 - OS&Y Flg x Post Indicator Flg (Not in 2 1/2" size)
☐ 7 - OS&Y Flg x OS&Y Grv
☐ 8 - OS&Y Grv x OS&Y Grv
☐ 9 - Mon. Butterfly Vlv Grv x Mon. Butterfly Vlv Grv
☐ 10 - OS&Y Flg x Post Indicator Grv (Not in 2 1/2" size)
☐ 11 - NRS Grv x NRS Grv
☐ 12 - NRS Flg x NRS Grv

'Apollo' Valves

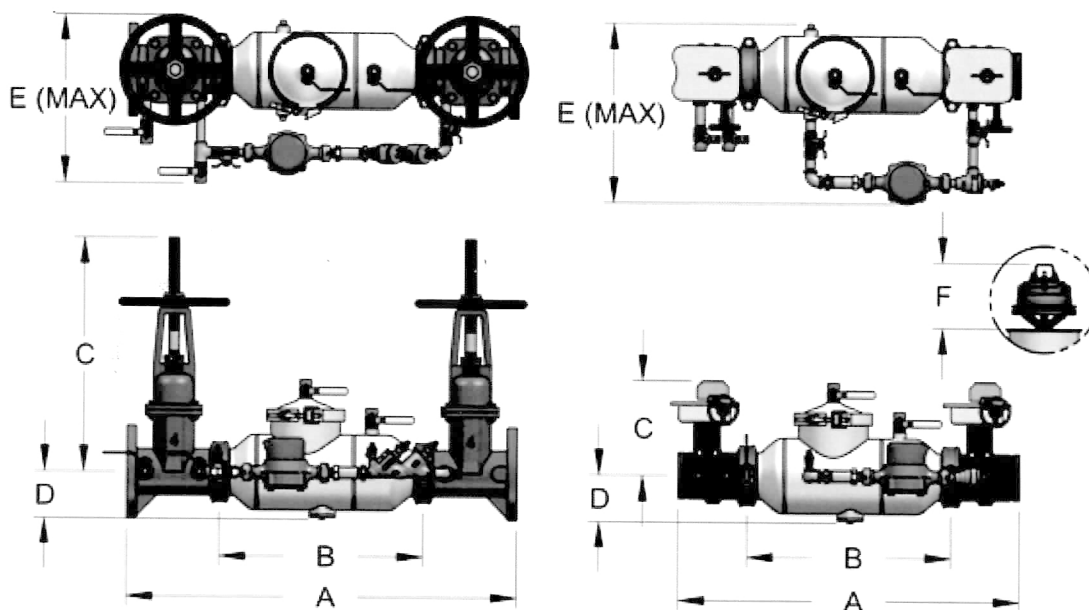
SUBMITTAL SHEET

LEAD FREE

Model DCDALF 4A

Model DCDA2LF 4A

Double Check Detector Assembly



TYPE 1 BYPASS

TYPE 2 BYPASS (STANDARD)

DIMENSIONS

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ($\pm 1/8"$ (3 mm) per joint)

Size	2 1/2"	65 mm	3"	80mm	4"	100mm	6"	150mm	8"	200mm	10"	250mm	12"	300MM
A (Butterfly Valves)	28	711	28.5	724	33.3	846	38.9	988	46.4	1179	52.3	1328	N/A	N/A
A (Gate Valves)	31	787	32	813	38	965	45.9	1166	53.4	1356	62.3	1582	65.5	1664
B (less Shut-off Valves)	15.9	404	15.9	404	19.6	498	24.5	622	30	762	36	914	37	940
C (Butterfly Valves)	8	203	8.4	213	9.1	231	10.1	257	12	305	13.4	340	N/A	N/A
C (NRS/PI Gate Valves)	11.8	300	13	330	14	356	17.8	452	21	533	24.5	622	30	762
C (OS&Y Open)	18.8	478	20.3	515	22.1	562	29.4	747	36.8	934	45.2	1147	52.2	1326
D (Centerline to Bottom)	3.9	99	3.9	99	4.6	117	6	152	8.1	206	11.8	300	12	305
E (Width Max)	17	432	17	432	17	432	20	508	21.5	546	26.5	673	26.5	673
F (Check Removal Clearance)	4.8	122	4.8	122	6.5	165	7.5	191	7.5	191	10	254	10	254
Test Cocks (NPT)	1/2"	13	1/2"	13	1/2"	13	3/4"	20	3/4"	20	3/4"	20	3/4"	20
WEIGHTS	lb.	kg	lb.	kg	lb.	kg	lb.	kg	lb.	kg	lb.	kg	lb.	kg
Net Wt. (W/ Butterfly Valves)	64	29	68	31	98	45	158	72	354	161	940	427	N/A	N/A
Ship Wt. (W/ Butterfly Valves)	88	40	92	42	183	83	248	113	502	228	1130	514	N/A	N/A
Net Wt. (W/ Post Ind. Valves)	94	43	109	50	149	68	273	124	540	245	1229	559	1685	766
Ship Wt. (W/ Post Ind. Valves)	178	81	193	88	234	106	361	164	688	313	1419	645	1875	852
Net Wt. (W/ OS&Y Valves)	109	50	125	57	180	82	333	151	615	280	1343	610	1800	818
Ship Wt. (W/ OS&Y Valves)	193	88	209	95	265	120	421	191	763	347	1533	697	1990	905

1. Internal body connections are grooved on 2-1/2" to 10" sizes.
2. Internal body connections are flanged on 12" size.

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SPECIFICATIONS

The 2 1/2" - 12" Double Check Detector Assembly shall be an Apollo® Model DCDA 4AN or DCDA2 4AN. The assembly shall be manufactured in America and carry a **5-year Apollo®** factory warranty. The TriForce™ center-stem guided check valves shall feature reversible silicone rubber seat discs. The check valves shall be held in place by drop-in retainers (2 1/2" - 6") or SS studs & nuts (8" - 12"). Access to the check valves shall be by an Apollo® quick-connect SS coupling (2 1/2" - 6") or grooved couplings (8" - 12"). The bodies shall be SS in 2 1/2" - 8" sizes and FDA epoxy-coated ductile iron in 10" & 12" sizes. The assembly is a mainline double check valve with a Type 2 bypass consisting of a single check and meter bypassing the mainline second check to prevent backflow while accurately measuring all flows up to 2 gpm with the mainline 2nd check remaining closed. Assemblies with the optional Type 1 bypass consist of a double check valve and meter which bypasses both mainline checks and accurately meters all flows up to 2 gpm with both mainline checks closed. The Apollo® domestic ball valve test cocks shall have SS handles. The assembly shall prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are non-health hazards. The pressure drop across the assembly shall be documented by ASSE or USC FCCC&HR Approval curves.

FEATURES

- Stainless steel body: 2 1/2" - 8"
- FDA epoxy-coated ductile iron body: 10" & 12"
- Easy maintenance - no special tools required
 - Drop-in check retainers: 2 1/2" - 6"
 - Bolted-in checks: 8" - 12"
- Low pressure loss as documented by ASSE or USC FCCC&HR Backflow Preventer approval agencies
- Center-stem guided TriForce™ check valves
- Small installation space required - small footprint
- Approved for n-flow
- US Patent Nos. 6,443,184; 7,025,085; 7,533,699
- MADE IN THE USA

ORDERING INFORMATION

4AN - 6 X X - X X

BYPASS TYPE ☐ SHUT-OFF VALVES
SIZE ☐ METER OPTION

BYPASS TYPE

- ☐ 0 - Double check on bypass line (Type 1)
☐ 2 - Single check on bypass line (Type 2 -Standard)

SIZE

- ☐ 9 - 2 1/2" ☐ C - 6" ☐ H - 12"
☐ 0 - 3" ☐ E - 8"
☐ A - 4" ☐ G - 10"

METER OPTION

- C - ft³/min ☐ E - gpm ☐ G - no meter

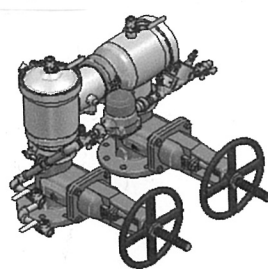
SHUT-OFF VALVES (Inlet x Outlet)

- ☐ 1 - Less Shut-off Valves (see notes)
☐ 2 - NRS Flg x NRS Flg
☐ 3 - OS&Y Flg x OS&Y Flg
☐ 4 - OS&Y Flg x Monitored (Mon.) Butterfly Vlv Grv
☐ 6 - OS&Y Flg x Post Indicator Flg (Not in 2 1/2" size)
☐ 7 - OS&Y Flg x OS&Y Grv
☐ 8 - OS&Y Grv x OS&Y Grv
☐ 9 - Mon. Butterfly Vlv Grv x Mon. Butterfly Vlv Grv
☐ 10 - OS&Y Flg x Post Indicator Grv (Not in 2 1/2" size)
☐ 11 - NRS Grv x NRS Grv
☐ 12 - NRS Flg x NRS Grv

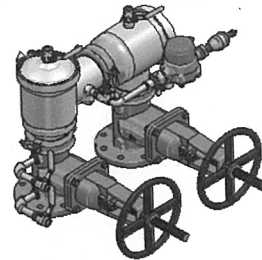
VALVE SETTER (Optional - See SS1174 for details)

- ☐ FS - Flange x Flange Setter
☐ MJFS - Mech. Joint x Flange Setter
☐ MJS - Mech. Joint x Mech. Joint Setter

2 1/2" - 12" Model DCDA 4AN Model DCDA2 4AN DOUBLE CHECK DETECTOR ASSEMBLY



TYPE 1



TYPE 2 (Standard)

PERFORMANCE RATING

Maximum Working Pressure 175 psi
Temperature Range 33 ° F - 140 ° F
Hydrostatic Test Pressure 350 psi

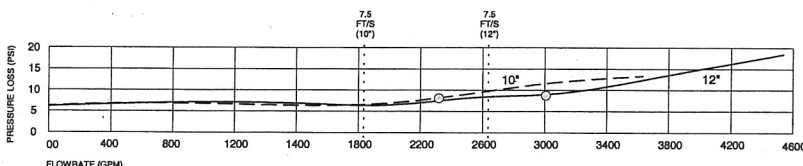
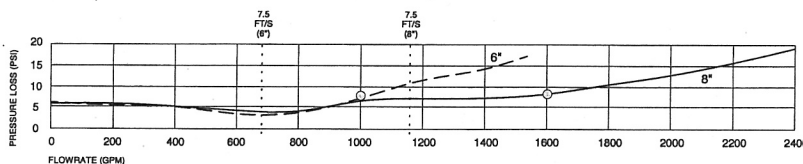
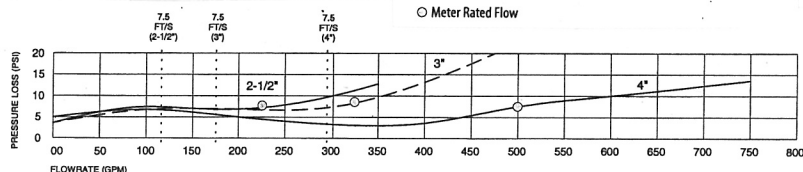
STANDARD MATERIALS LIST

Part Name	Material
Mainline Body (2 1/2" - 8")	Domestic Stainless Steel
Mainline Body (10" & 12")	FDA Epoxy Coated Ductile Iron
Bypass DC	Bronze (C89836 Lead Free*)
Covers (2 1/2" - 6")	Glass-filled PPO/Stainless steel
Cover (8")	Domestic Stainless Steel
Covers (10" & 12")	FDA Epoxy Coated Ductile Iron
Check Valves (2 1/2" - 12")	Glass-filled PPO/Bronze (C89836 Lead Free*)/SS
Springs	Stainless Steel
Seat Discs	Chloramine-resistant Silicone

Model DCDALF4 AN Model DCDA2LF4 AN Double Check Detector Assembly

FLOW CURVES

○ Meter Rated Flow



Notes:

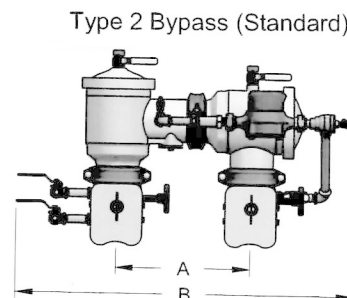
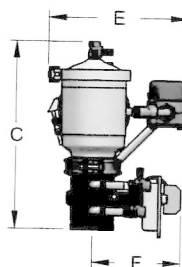
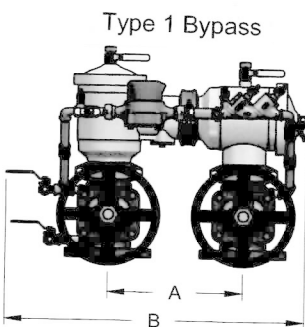
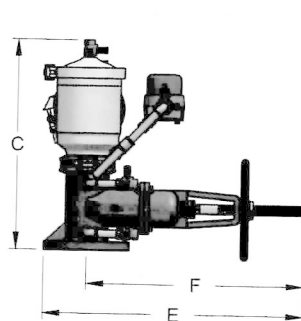
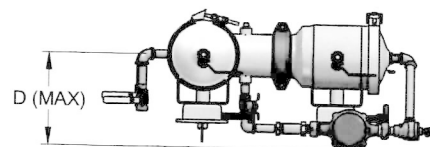
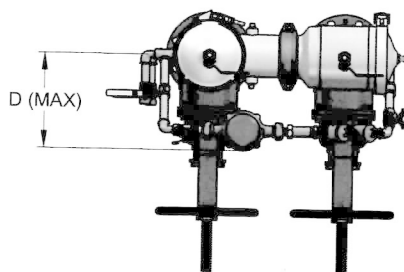
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4. For high flow rates/pressure loss information - contact factory.

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—Model DCDALF4 AN— Model DCDA2LF4 AN

Double Check Detector Assembly

2 1/2" - 12"



DIMENSIONS

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ($\pm 1/8"$ (3 mm) per joint)

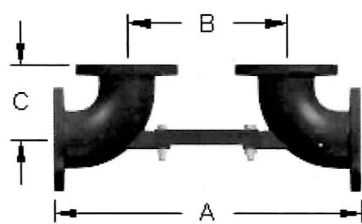
DIMENSIONS	2-1/2"	65mm	3"	80mm	4"	100mm	6"	150mm	8"	200mm	10"	250mm	12"	300mm
A (Centerline to Centerline)	12-1/2"	318	12-1/2"	318	14"	356	16"	406	18-1/2"	470	21"	533	26-3/4"	679
B (Butterfly Valves)	32-3/4"	832	32-3/4"	832	35-1/4"	895	40"	1016	44"	1118	54"	1372	N/A	N/A
B (Gate Valves)	31"	787	31"	787	31-3/4"	806	36-1/4"	921	41-1/2"	1054	49"	1245	55-3/4"	1416
C (Butterfly Valves)	18-1/4"	464	18-1/2"	470	20"	508	24-3/4"	629	28-1/2"	724	37"	940	N/A	N/A
C (Gate Valves)	19-5/8"	498	20"	508	22-1/2"	572	27-3/4"	705	32-1/8"	816	40"	1016	44"	1118
D (Centerline to max bypass)	10"	254	10"	254	10-1/8"	257	11-1/4"	286	12-1/2"	318	14-3/8"	365	15-1/4"	387
E (Butterfly Valves)	11-1/2"	292	12-1/8"	308	12-7/8"	327	15-7/8"	403	22-1/4"	565	23-1/8"	591	N/A	N/A
E (OS&Y Open)	21-7/8"	556	23-7/8"	606	25-5/8"	652	35-1/2"	902	45-1/8"	1146	56-3/4"	1441	62-3/4"	1594
E (NRS/PI)	15-5/8"	398	16-7/8"	429	18-5/8"	474	23-3/4"	603	29-1/8"	739	36-1/4"	921	40"	1016
F (OS&Y Open)	18"	457	20"	508	21"	533	29-1/2"	749	37"	940	45"	1143	53-1/8"	1349
F (Butterfly Valves)	8"	203	8-3/8"	213	9"	229	10-7/8"	276	12-7/8"	327	13-1/2"	343	N/A	N/A
F (NRS/PI)	11-3/4"	298	13"	330	14"	356	17-3/4"	451	21"	573	24-1/2"	622	30"	762
G (Check Removal Clearance)	6"	152	6"	152	6"	152	8"	203	8-1/2"	206	12"	305	12"	305
Test Cocks (NPT)	1/2"	13	1/2"	13	1/2"	13	3/4"	20	3/4"	20	3/4"	20	3/4"	20
WEIGHTS	lb.	kg	lb.	kg	lb.	kg	lb.	kg	lb.	kg	lb.	kg	lb.	kg
Net Wt. (Less Shut-offs)	45	20	45	20	54	25	89	40	320	145	805	365	930	422
Net Wt. (w/ Butterfly Valves)	72	33	75	34	99	45	157	71	451	205	983	446	N/A	N/A
Net Wt. (w/ OS&Y Gate Valves)	141	64	166	75	209	95	338	153	797	362	1473	668	2121	962

Notes:

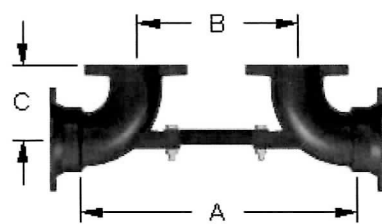
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- Internal body connections are grooved on 2 1/2" - 10" sizes.
- Internal body connections are flanged on 12" size.

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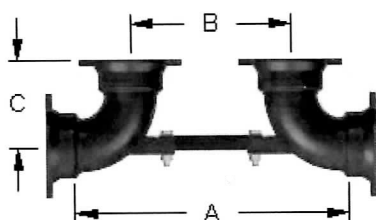
Apollo Valves, Manufactured by **Conbraco Industries, Inc.**
701 Matthews Mint-Hill Road, Matthews, NC 28105 USA
www.apollovalves.com | (704) 841-6000



Flange X Flange
(FS)



Mechanical Joint X Flange
(MJFS)



Mechanical Joint X Mechanical Joint
(MJS)

Valve Setters Models FS, MJFS, and MJS

DIMENSIONS (in) - WEIGHTS (lbs)

Size	Model	A	B	C	Wt.
2 1/2"	FS	23 1/2	12 1/2	5 1/2	43.7
	FS	23 1/2	12 1/2	5 1/2	50.4
3"	MJFS	21 1/2	12 1/2	5 1/2	50.4
	MJS	21 1/2	12 1/2	7	50.7
4"	FS	27	14	6 1/2	87.1
	MJFS	24	14	6 1/2	71.1
	MJS	24	14	7 1/2	65.1
6"	FS	32	16	8	147.5
	MJFS	29	16	8	115.3
	MJS	29	16	9	107.1
8"	FS	36 1/2	18 1/2	9	236.3
	MJFS	33 1/2	18 1/2	9	216.4
	MJS	33 1/2	18 1/2	10	193.2
10"	FS	43	21	11	387.9
12"	FS	50 3/4	26 3/4	12	546.1

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances.

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