

"Apollo" Valves

fire protection



catalog

aalberts-ips.us

customer service 704.841.6000

BFFPCAT



integrated
piping systems

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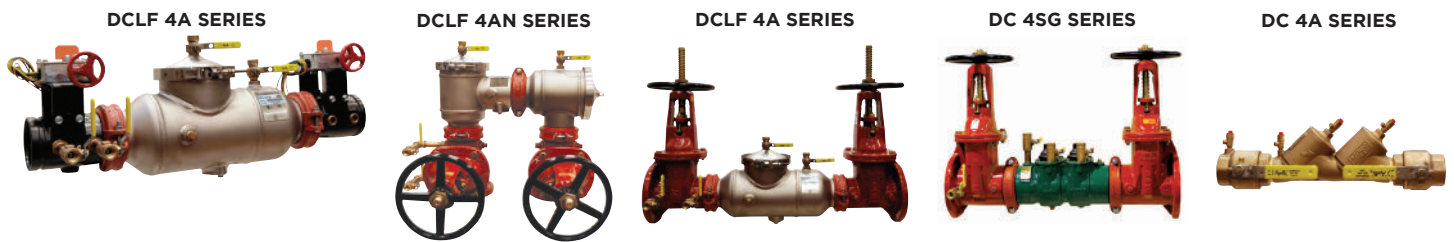
DOUBLE CHECK VALVE ASSEMBLIES

In a fire line application, many factors should be considered: installation time, pressure loss, size, weight, vertical approvals, country of origin, cost, product support, and maintainability all play a role in specifying the best unit for the application. Apollo backflow preventers offer you the best of all of these factors with the 4A and 4An Series backflow assemblies that are designed, manufactured, assembled, and individually tested in Apollo's foundry and factories in South Carolina USA.

FEATURES

- Stainless Steel Body Available 2-1/2" - 8"
- FDA Epoxy Coated Ductile Iron Body Available 2-1/2" - 12"
- Bronze Body 1/2" - 2"
- Inline Available 1/2" - 12"
- n-pattern Available 2-1/2" - 12"
- Easiest Backflow Preventer to Maintain - No Special Tools Required
- Captured Spring Design for All Checks 1/2" - 12"
- Mix & Match Shutoff Options - OS&Y, Butterfly or Post Indicator
- Consistently Low Pressure Loss Across the Entire Flow Capacity Of The Assembly
- Patented Tri-Force™ Center Stem Guided Check on 2-1/2" & Larger 4A/4An Series
- Engineered Swing Check on 2-1/2" - 10" DC 4SG
- Approved for Horizontal and Vertical Up Installations
- UL/ULc Classified, FM Approved, ASSE, CSA, and USC (Contact for Approval Details, Updates, and Sizes)

See pages 8-10 for flow curves and pages 13-14 for dimensions or go to www.apollovalves.com for more details.

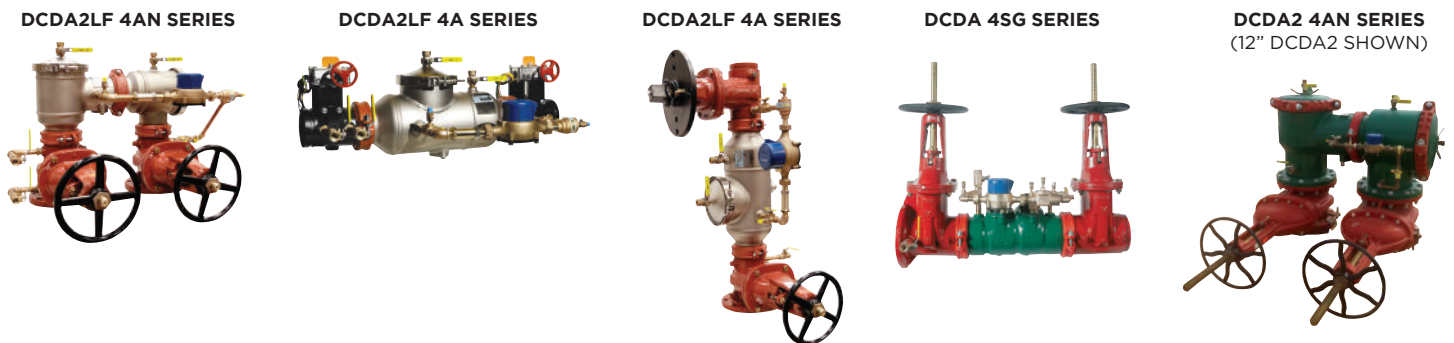


DOUBLE CHECK DETECTOR ASSEMBLIES

FEATURES

- Stainless Steel Body Available 2-1/2" - 8"
- FDA Epoxy Coated Ductile Iron Body Available 2-1/2" - 12"
- Type 1 & Type 2 Bypass Available
- Bronze Body 1", 1-1/2", & 2" (Type 2 only)
- Inline Available 1" & 1-1/2" - 12"
- n-Pattern Available 2-1/2" - 12"
- Easiest Backflow Preventer to Maintain - No Special Tools Required
- Captured Spring Design for All Checks 1/2" - 12"
- Mix & Match Shutoff Options - OS&Y, Butterfly or Post Indicator
- Consistently Low Pressure Loss Across the Entire Flow Capacity of the Assembly
- Patented Tri-Force™ Center Stem Guided Check on 2-1/2" & Larger 4A/4An Series
- Engineered Swing Check on 2-1/2" - 10" DCDA 4SG
- Approved for Horizontal and Vertical Installations
- UL/ULc Classified, FM Approved, ASSE, CSA, and USC (Contact for Approval Details, Updates, and Sizes)
- Bypass and Shutoff Handles Available on Either Side

See pages 8-10 for flow curves and pages 13-14 for dimensions or go to www.ApolloValves.com for more details.



REDUCED PRESSURE VALVE ASSEMBLIES

FEATURES

- Stainless Steel Body: 2-1/2" – 8"
- FDA Epoxy Coated Ductile Iron Body 10" & 12"
- Bronze Body 1/2" – 2"
- Inline Available 1/2" – 12"
- n-Pattern Available 2-1/2" – 12"
- Easiest Backflow Preventer to Maintain - No Special Tools Required
- Captured Spring Design for All Checks 1/2" – 12"
- Consistently Low Pressure Loss Across the Entire Flow Capacity of the Assembly

- Tri-Force™ Center Stem Guided Check on 2-1/2" – 12"
- Mix & Match Shutoff Options - OS&Y, Butterfly or Post Indicator
- Approved for Horizontal 1/2" – 12"
- Approved for Vertical up 2-1/2" – 12" - 4An Only (Check Factory for Details)
- UL/ULc Classified, FM Approved, ASSE, CSA, and USC (Contact for Approval Details, Updates, and Sizes)

See pages 11-12 for flow curves and pages 12-14 for dimensions or go to www.apollovalves.com for more details.

RPLF 4AN SERIES



RPLF 4AN SERIES



RPLF 4A SERIES



RP 4A SERIES



REDUCED PRESSURE DETECTOR ASSEMBLIES

FEATURES

- Stainless Steel Body: 2-1/2" – 8"
- FDA Epoxy Coated Ductile Iron Body 10" & 12"
- Type 1 & Type 2 Bypass Available
- Bronze Body 1", 1-1/2", & 2" (Type 2 Only)
- Inline Available 1" & 1-1/2" – 12"
- n-Pattern Available 2-1/2" – 12"
- Easiest Backflow Preventer to Maintain - No Special Tools Required
- Captured Spring Design for all Checks 1/2" – 12"
- Consistently Low Pressure Loss Across the Entire Flow Capacity of the Assembly

- Tri-Force™ Center Stem Guided Check on 2-1/2" – 12"
- Mix & Match Shutoff Options - OS&Y, Butterfly or Post Indicator
- Approved for Horizontal 1", 1-1/2" – 12"
- Approved Vertical up 2-1/2" – 12" - 4An Only (Check Factory for Details)
- UL/ULc Classified, FM Approved, ASSE, CSA, and USC (Contact for Approval Details, Updates, and Sizes)
- Bypass and Shutoff Handles Available on Either Side

See pages 11-12 for flow curves and pages 13-14 for dimensions or go to www.apollovalves.com for more details.

RPDA2LF 4A SERIES



RPDA2LF 4AN SERIES



RPDA2LF 4AN SERIES



RPDA2 4A SERIES
(LEFT HAND BYPASS OPTION SHOWN)



DUC 4FP SERIES DUAL CHECK VALVE BACKFLOW PREVENTER



The Apollo® DUC 4FP Series Dual Check Backflow Preventer for Residential Fire Sprinkler Systems prevents backflow by either backpressure or backsiphonage from a cross-connection between potable water lines and substances that are objectionable, but not health-hazards.

FEATURES

- Low Pressure Loss
 - Replaceable Check Modules
 - Pressure drop at 30 gpm is less than 6 psi
 - Complies with NFPA Standard 13D
 - 5 year, domestic warranty
 - Maximum Supply Pressure 175 psi
 - Temperature Range 33°F - 180°F
 - ASSE 1024
 - UL/ULC Classified
 - CSA B64.6
 - Made in the USA
- See page 12 for flow curves

STANDARD MATERIALS LIST

BODY	Bronze (C84400)	SPACER	Glass-Filled Noryl®
UNION NUT & TAILPIECES	Brass	O-RING	Stainless Steel
CHECK MODULES	Acetal/Nitrile/Stainless Steel		

Contact local water authorities for installation/service requirements.

PART NUMBER MATRIX

4FP [XX]	3 X	X	X	X
	INLET CONNECTION ¹	INLET SIZE	OUTLET SIZE	OUTLET CONNECTION ¹
4FP - STANDARD	A - FNPT	5 - 1"	5 - 1"	A - FNPT
	C - FEMALE METER THREAD	6 - 1-1/4"	6 - 1-1/4"	B - MNPT
		(METER THREAD SIZING FOR 1" METER)	(METER THREAD SIZING FOR 1" METER)	E - MALE METER THREAD

¹ Not all inlet and outlet combinations are available. Please contact Customer Service for availability.

77C-UL SERIES BRONZE FULL PORT BALL VALVE FOR FIRE PROTECTION TRIM & DRAIN SERVICE

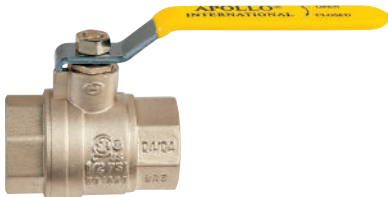


The Apollo® 77CUL series ball valve is a UL listed shutoff valve for trim and drain purposes for fire protection services. Cast, machined, assembled and tested in Apollo's South Carolina manufacturing plants, these valves feature a durable bronze body, premium "multi-fill" MPTFE seats and stem packing, and a "Solid Ball" design that delivers true full port flow performance.

FEATURES

- Multi-Fill PTFE Seats & Seals
- Blowout-Proof Stem Design
- Adjustable Stem Packing
- UL Listed for Fire Protection Service
- 77C-ULA - UL 258 Fire Protection Trim & Drain, Guide VQGU) - NPT & Solder to 2"

94-A SERIES FULL PORT BRASS BALL VALVE



The Apollo International™ 94A forged brass ball valves combine reliable operation with maximum economy. Ideal for plumbing, HVAC and gas service applications. Valves include most pertinent agency approvals.

FEATURES

- Full-Port
- Blowout-Proof Stem Design
- Adjustable Stem Packing
- UL Listed for Fire Protection Service

129FC SERIES PRESSURE REDUCING VALVE



FEATURES

- Automatically Reduces High Pressure in the System
- Eliminates Pressure Fall Off
- Approvals - UL 300 psi
- Sizes 1-1/2" - 8" (Check Specification Sheet for Connections)
- Pressure Set Range 50 - 165 psi
- Globe/Flanged/Grooved/Screwed Connections
- Made in the USA

108FC SERIES FIRE PUMP RELIEF VALVE



FEATURES

- Automatically relieves excess fire pump discharge pressure
- Approvals - UL/FM
- Sizes 3" - 8"
- Pressure Relief Setting Range:
UL: 60 - 175 psi (3" - 8") or 100 - 300 psi (3" - 6")
FM: 60 - 180 psi (3" - 8")
- Globe/Angle and Flanged
- Made in the USA

16500 SERIES CALIBRATED RELIEF VALVE



FEATURES

- Choice of 1/2" or 3/4" Inlet by 1/2" Outlet
- Pressure Range 50 - 175 psi, Calibrated in 25 psi Increments
- Cast Bronze Body, Stainless Steel Spring
- Acceptable for Thermal Expansion
- Made in the USA

40XT SERIES THERMAL EXPANSION TANK



FEATURES

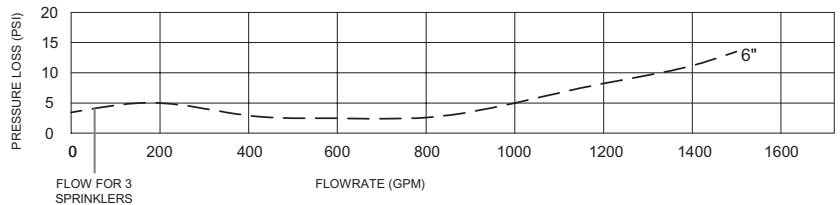
- Drawn Steel Construction
- Powder Coat Finish
- Field Adjustable (Max Pressure 150 psi)
- Corrosion Resistant Liner Connection
- Made in the USA

PRESSURE DROP

WHAT IT MEANS AND WHEN IT'S CRITICAL

Pressure drop is the amount of pressure loss through the backflow prevention assembly during different flowing conditions. There is no such measurement as a single pressure loss throughout the entire flow of each assembly; it is a varying measurement depending on flow amount. When lives are in danger and pressure is at a premium, make sure that you receive information on pressure loss that is truly what the valve is doing during the flowing conditions that are critical.

Apollo Valves publishes and will make available the FCCCHR@USC flow curves. If pressure is truly at a minimum in a life-threatening situation, make sure that your design and performance information is accurate.



PRESSURE DROP CALCULATOR

Apollo Backflow Preventers are designed to provide positive protection against backflow while also producing the lowest possible pressure drop at all flow rates.

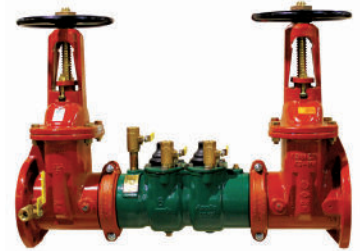
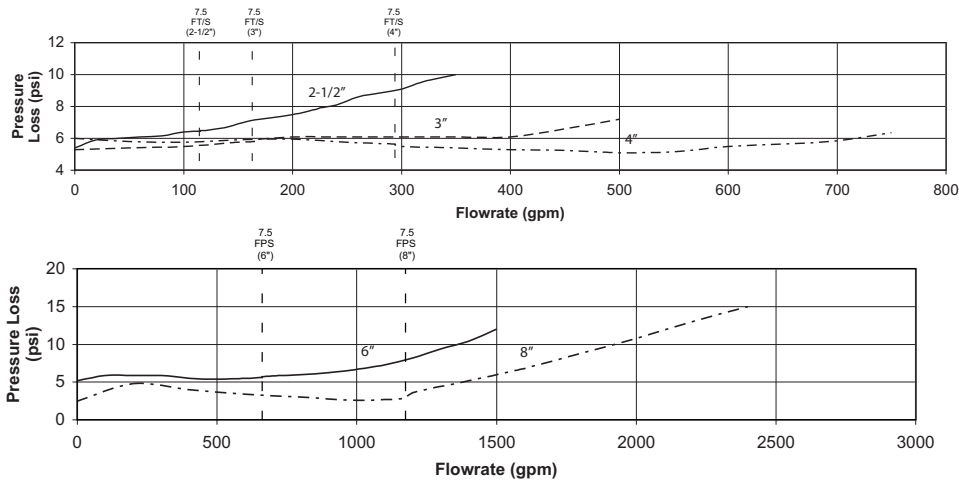
Find accurate, 3rd party verified, pressure loss quickly & easily using the Apollo Backflow Pressure Drop Calculator.

PDC.APOLLOVALVES.COM

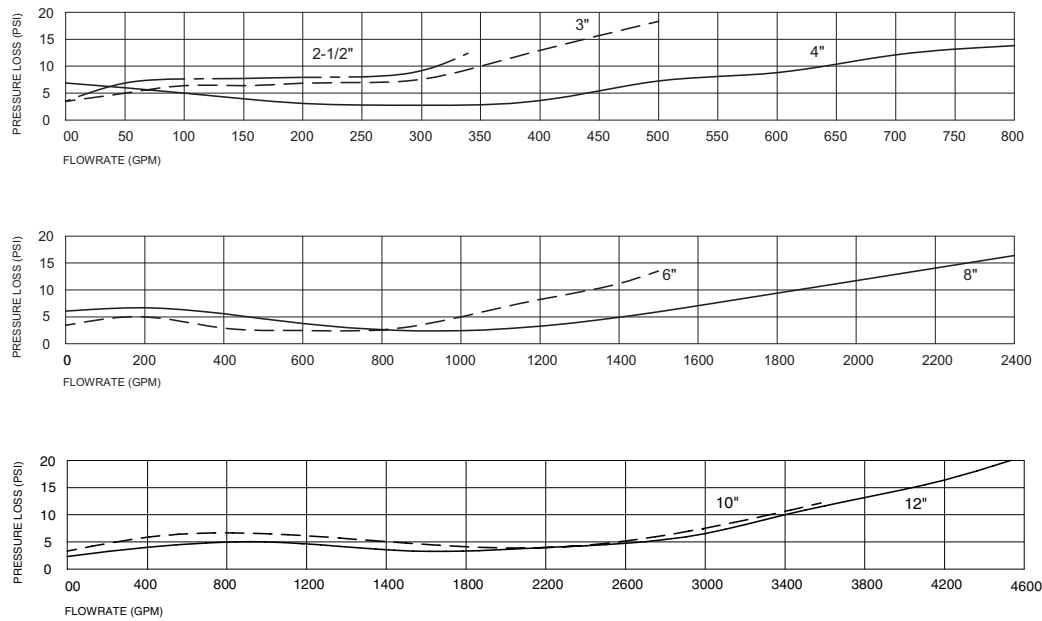
PRESSURE LOSS CURVE NOTES:

*Flow curves directly reflect data collected by independent approval laboratories.
All data points are based on increasing flow data, from zero GPM to rated flow (opening curve).
For higher flow rates/pressure loss information - contact factory.*

DC 4SG & DCDA 4SG FLOW CURVES

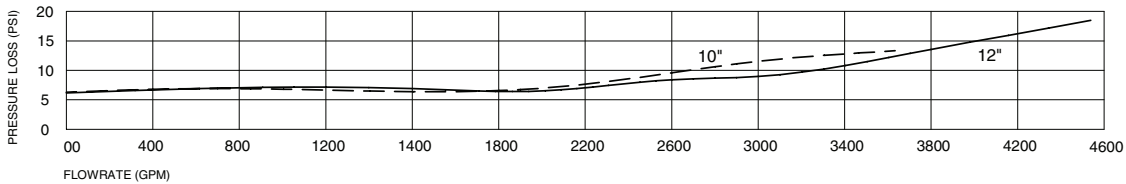
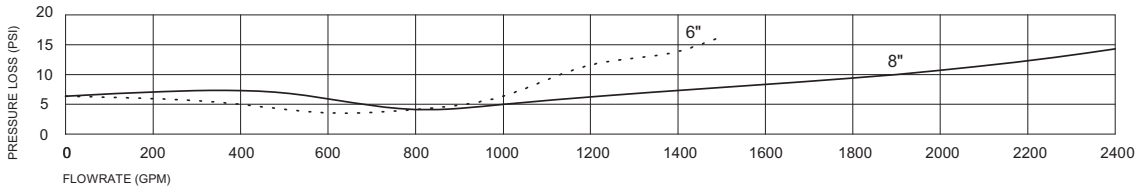
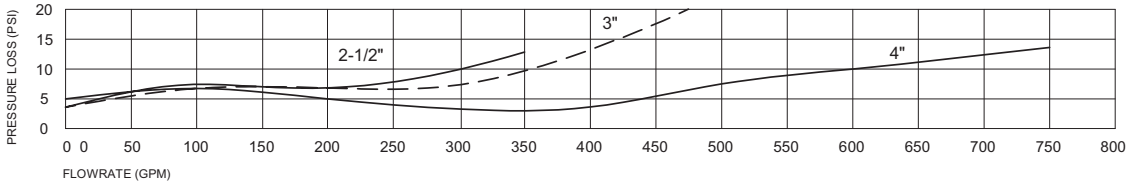


DC 4A (LBF) & DCDA 4A FLOW CURVES



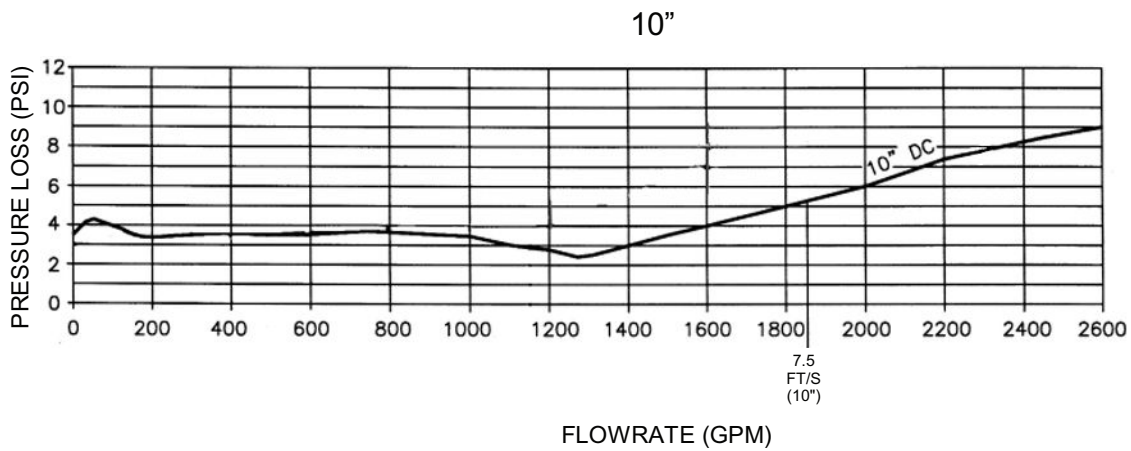
Pressure loss versus flow data as determined by independent approval agencies.

DC 4AN & DCDA 4AN FLOW CURVES



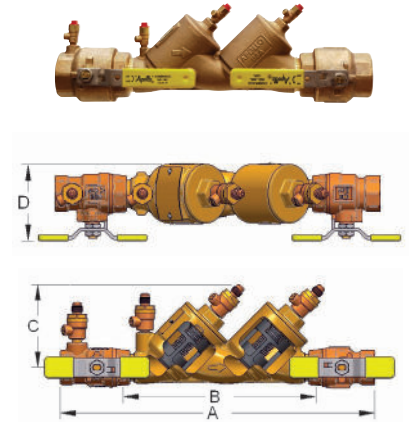
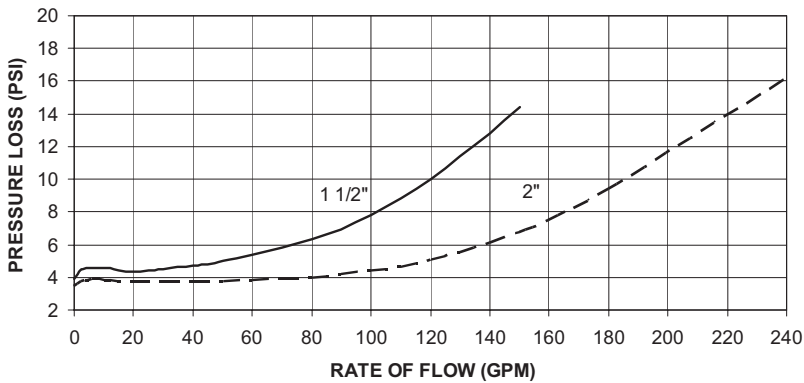
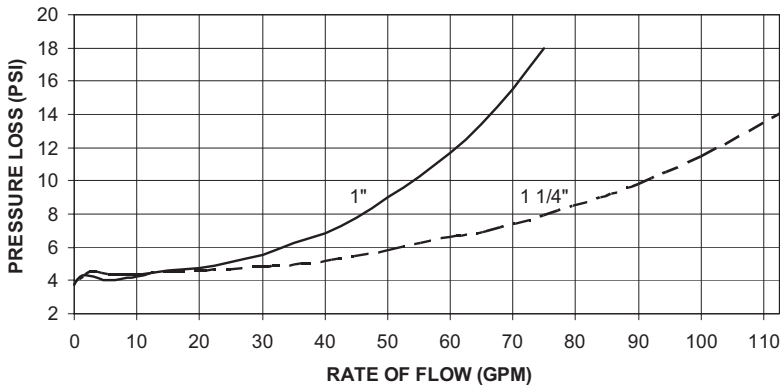
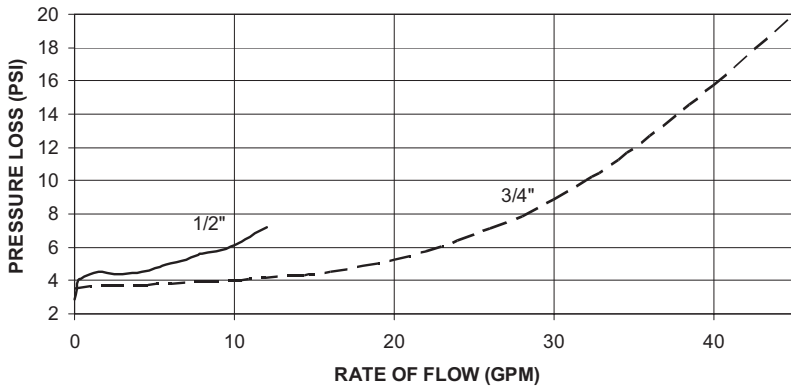
DC 4S & DCDA 4S FLOW CURVES

(DC 4S 10"- Flanged Internal Connections Only)



Pressure loss versus flow data as determined by independent approval agencies.

DC4A FLOW CURVES

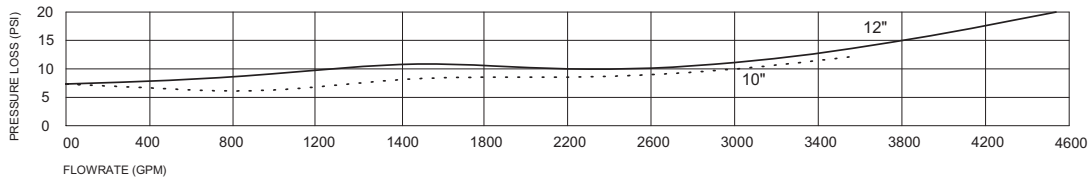
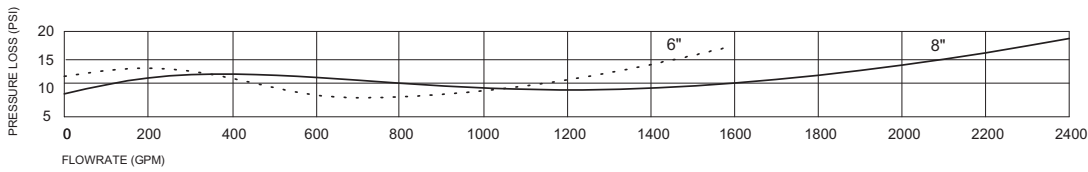
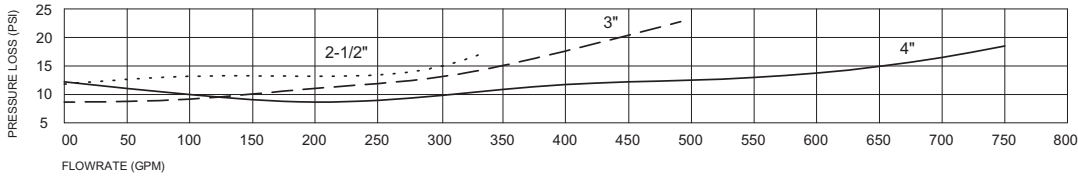


DIMENSIONS

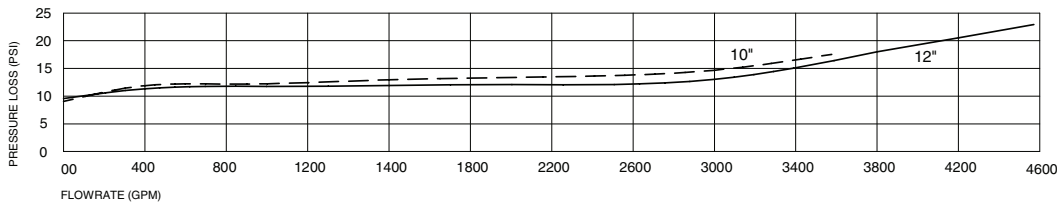
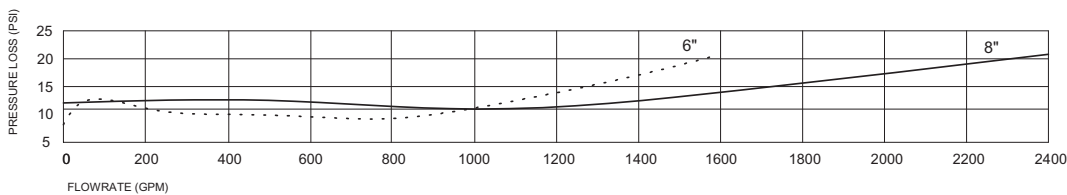
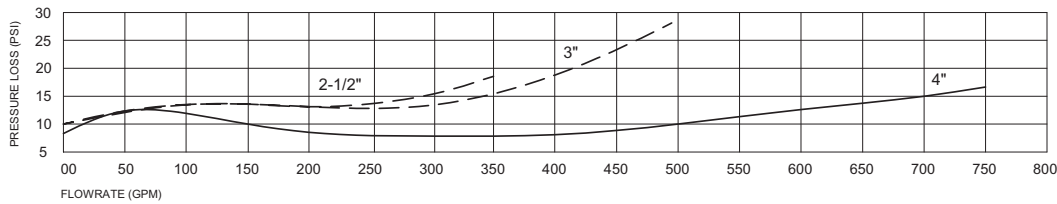
FACTORY NO.	SIZE	DIMENSIONS (IN.)				NET WT. (LB.)
		A	B	C	D	
4A 103 T2	1/2"	11-1/8	7-3/8	3-1/4	2-1/2	4.4
4A 104 T2	3/4"	12-3/4	8-1/2	3-1/2	3	6.0
4A 105 T2	1"	14-5/8	9-1/2	4	3-1/4	10
4A 106 T2	1-1/4"	18-5/8	11-3/4	4-1/2	4-3/4	14
4A 107 T2	1-1/2"	18-3/4	11-5/8	4-1/2	4-3/4	17
4A 108 T2	2"	21-1/8	12-3/4	5	5-3/8	25.4

Pressure loss versus flow data as determined by independent approval agencies.

RP 4A (LBF) & RPDA 4A FLOW CURVES

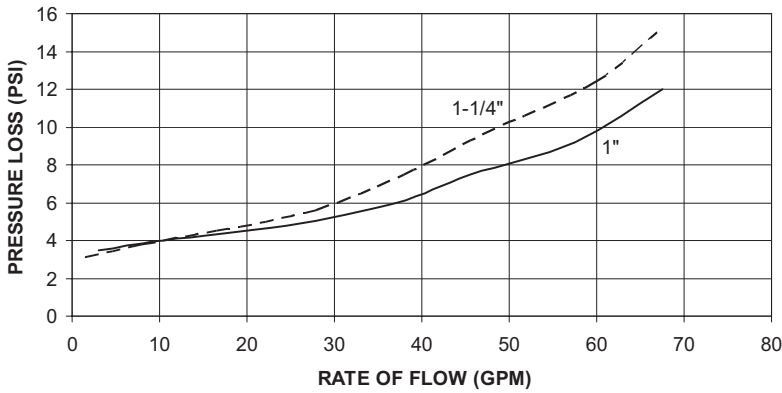


RP 4AN (LBF) & RPDA 4AN FLOW CURVES

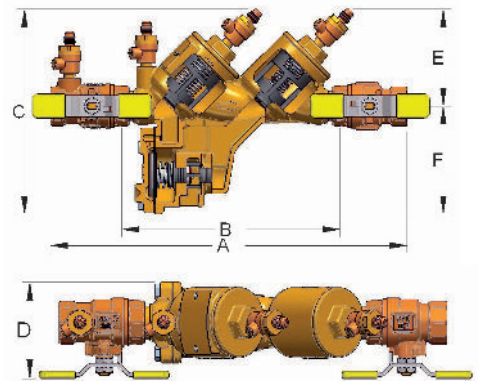
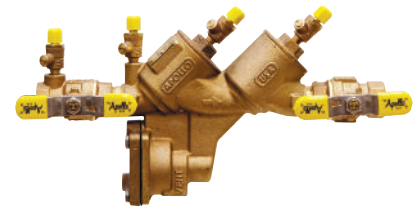
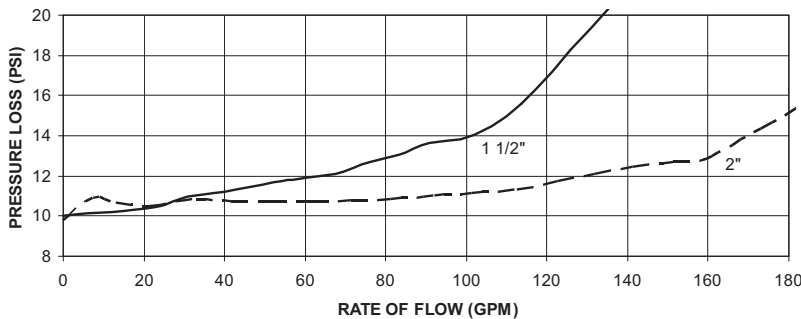
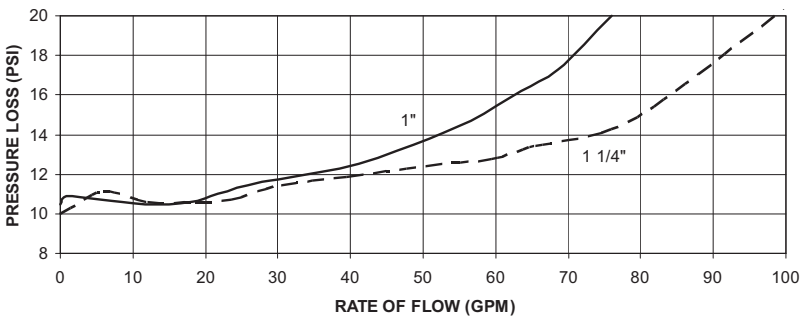
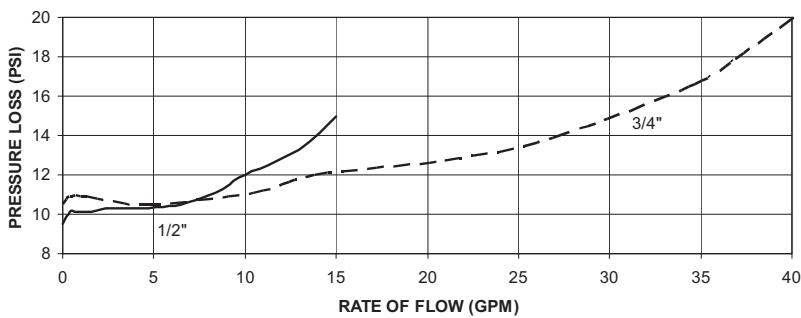


Pressure loss versus flow data as determined by independent approval agencies.

DUC-4FP FLOW CURVES



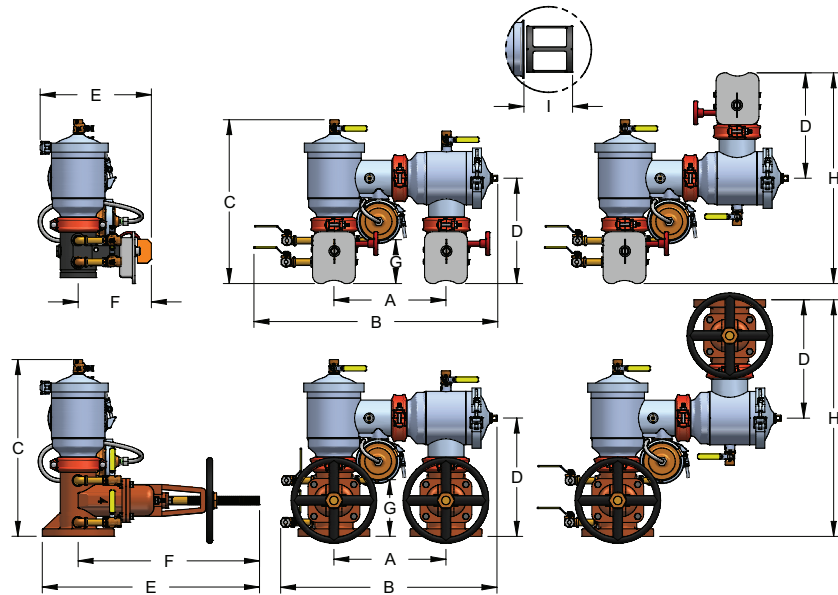
RP4A FLOW CURVES



DIMENSIONS

FACTORY NO.	SIZE	DIMENSIONS (IN.)						NET WT. (LB.)
		A	B	C	D	E	F	
4A 203 T2	1/2"	11-1/8	7-3/8	7-1/8	2-7/8	3-1/4	3-7/8	7.2
4A 204 T2	3/4"	12-3/4	8-1/2	7-3/8	3-1/8	3-1/2	3-7/8	8.8
4A 205 T2	1"	14-5/8	9-1/2	8	3-1/4	4	4	12.6
4A 206 T2	1-1/4"	18-5/8	11-3/4	9-7/8	5-1/8	4-1/2	5-3/8	18.5
4A 207 T2	1-1/2"	18-3/4	11-5/8	9-7/8	5-1/8	4-1/2	5-3/8	21.5
4A 208 T2	2"	21-1/8	12-3/4	11	5-7/8	5	6	33.4

RP 4AN / RPDA 4AN & DC 4AN / DCDA 4AN

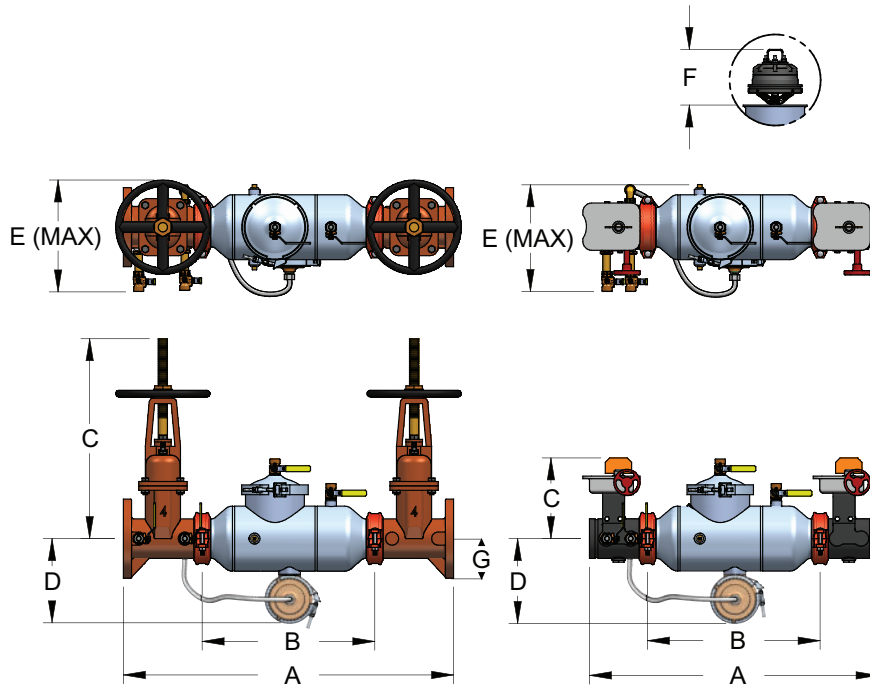


DIMENSIONS

SIZE	2 1/2"	65 MM	3"	80MM	4"	100MM	6"	150MM	8"	200MM	10"	250MM	12"	300MM
A (Centerline to Centerline)	12.5	318	12.5	318	14	356	16	406	18.5	470	21	533	26.8	681
B (Lay Length Space - Butterfly Valves)	27.5	699	27.5	699	30.8	782	36	914	37.4	950	43	1092	N/A	N/A
B (Lay Length Space - Gate Valves)	24.5	622	24.5	622	27	686	32	813	40.8	1036	49	1245	55.8	1417
C (Butterfly Valves - Flange to Top)	18.3	465	18.5	470	20	508	24.8	630	28.5	724	37	940	N/A	N/A
C (Gate Valves - Flange to Top)	19.6	498	20	508	22.5	572	27.8	706	32.1	815	40	1016	44	1118
D (Centerline to bottom Butterfly Valves)	11.5	292	11.8	300	13.3	338	15.4	391	17.9	455	19.8	503	N/A	N/A
D (Centerline to bottom Gate Valves)	13	330	13.5	343	14.9	378	18	457	21.4	544	24.8	630	28.8	732
E (Maximum Width - Butterfly Valves)	11.5	292	12.1	307	12.9	328	15.9	404	22.3	566	23.1	587	N/A	N/A
E (Maximum Width - NRS/PI Gate Valves)	15.6	396	16.9	429	18.6	472	23.8	605	29.1	739	36.3	922	40	1016
E (Maximum Width - OS&Y Valves Open)	22.3	575	24.2	614	26.6	679	34.4	875	44.9	1140	57.0	1447	61.9	1572
F (Centerline to Width - Butterfly Valves)	8	203	8.4	213	9	229	10.9	277	12.9	328	13.5	343	N/A	N/A
F (Centerline to Width - NRS/PI Gate Valves)	11.8	300	13	330	14	356	17.8	452	21	533	24.5	622	30	762
F (Centerline to Width - OS&Y Valves Open)	18.8	478	20.3	515	22.1	562	29.4	747	36.8	934	45.2	1147	52.2	1326
G (Check Removal Clearance)	6	152	6	152	6	152	8	203	8.5	216	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 Shutoff Valves)	30	14	30	14	39	18	74	34	305	139	785	357	910	413
Ship Wt. (Less Shutoff Valves)	60	27	60	27	79	36	134	61	405	184	975	443	1100	413
Net Wt. (w/ Butterfly Valves)	57	26	60	27	84	38	142	65	436	198	963	438	N/A	N/A
Ship Wt. (w/ Butterfly Valves)	118	54	121	55	145	66	222	101	571	260	1153	524	N/A	N/A
Net Wt. (w/ NRS/Post Indicator Valves)	84	38	101	46	134	61	257	117	757	344	1292	587	1770	805
Ship Wt. (w/ NRS/Post Indicator Valves)	145	66	162	74	192	87	337	153	892	405	1482	674	1960	891
Net Wt. (w/ OS&Y Valves)	102	46	117	53	165	75	316	144	697	317	1407	640	1885	857
Ship Wt. (w/ OS&Y Valves)	163	74	178	81	226	103	396	180	832	378	1597	726	2075	943

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ($\pm 1/8"$ (3 mm) per joint)
 Internal body connections are grooved on 2-1/2" to 10" sizes.
 Internal body connections are flanged on 12" size.

RP 4A & RPDA 4A - DC 4A & DCDA 4A



DIMENSIONS

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	56.3	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 Indicator Valves)	94	43	109	50	149	68	273	124	540	245	1229	559	1685	766
Ship Wt. (w/ Post Indicator 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

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ($\pm 1/8"$ (3 mm) per joint)
 Internal body connections are grooved on 2-1/2" to 10" sizes.
 Internal body connections are flanged on 12" size.



WARRANTY & TERMS AND CONDITIONS OF SALE



Conbraco Industries, Inc. warrants, to its initial purchaser only, that its products which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of FIVE years from the date of delivery to you, our initial purchaser. This warranty applies to Apollo brand product with “Made in the USA” markings only.

Should any failure to conform to this warranty appear within FIVE years after the date of the initial delivery to our initial purchaser, Conbraco will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Conbraco’s recommendations and standard industry practice, correct such defects by suitable repair or replacement at Conbraco’s own expense.

APOLLO INTERNATIONAL PRODUCTS: Conbraco Industries, Inc. warrants its International products, to its initial purchaser only, that its international products which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of TWO years from the date of delivery to you, our initial purchaser.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, WHETHER EXPRESSED OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Correction of non-conformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of Conbraco to our initial purchaser, with respect to the goods, whether based on contract, negligence, strict tort or otherwise. It is the intention of Conbraco Industries, Inc. that no warranty of any kind, whether expressed or implied shall pass through our initial purchaser to any other person or corporation.

LIMITATION OF LIABILITY: Conbraco Industries, inc. SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, DAMAGES OR TO LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, COST OF PURCHASED OR REPLACEMENT GOODS, OR CLAIMS OF CUSTOMERS OF OUR INITIAL PURCHASER. THE REMEDIES OF OUR INITIAL PURCHASER, AND ALL OTHERS, SET FORTH HEREIN, ARE EXCLUSIVE, AND THE LIABILITY OF CONBRACO WITH RESPECT TO SAME SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE GOODS UPON WHICH SUCH LIABILITY IS BASED.

* It is the end user’s responsibility to confirm that items intended for use satisfy local codes and standards.

TERMS AND CONDITIONS OF SALE

- Payment: 2% 10th prox. Net 30 days.
- All prices F.O.B. shipping point with freight allowed on shipments of 750 pounds and/or \$5,000 net minimum to all shipping points within the United States excluding Alaska and Hawaii. No freight allowed on Air Freight or Parcel Post shipments. Claims for shortages must be made within 10 days of receipt of material. Our responsibility ends when a receipt is furnished us by the carrier.
- No Invoice Rendered For Less Than \$50.00.
- No freight will be allowed on Air Freight, Air Express, Parcel Post or U.P.S. shipments.
- All Conbraco products may be combined to make sufficient weight for full freight allowance.
- Phone order quoted prices are subject to correction. Prices and designs are subject to change without notice.
- Orders for material or special design or specification are made to customer’s order and are not subject to cancellation or return.
- All goods returned to us will not be accepted unless a full explanation has been made and our written authorized permission obtained in advance. All goods returned – if accepted – will be credited at invoice price, less 30% for service and rehandling charges, plus shipping expenses.
- We reserve the right to adjust orders to box quantities.