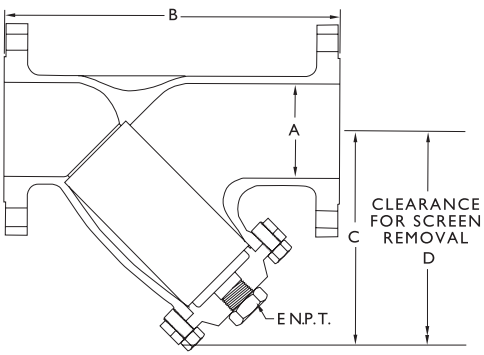
"Apollo"® Valves

FLANGED SERIES Y-STRAINERS

Y-Strainers

APOLLO® SERIES 125YF AND 250YF



IRON PIPE FLANGED Y-STRAINERS

FEATURES

- Iron strainers are complete with Flat Face (Series 125YF) or Raised Face (Series 250YF) flanges in accordance with ASME B16.1.
- Strainer body meets applicable ASME Standard.
- One piece cast body.
- Strainers equipped with bolted cover flange that utilize a flat gasket seal.
- Low pressure drop.
- Upper and lower machined seats.
- 304 SS perforated screens are standard.
- Drain/Blow-off connection furnished with plug as standard.
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings.
- Compact end to end dimension.

Upper Pressure Limits (Non-Shock)			
Apollo Model	Body Material	M.A.W.P. PSIG (Bars)	Ends
125YF (up to 12" size)	A126-B Cast iron	200 (13.79)	FF
125YF Sizes 14" and up)	A126-B Cast iron	150 (10.34)	FF
250YF (Sizes 2" - 12")	A395 Ductile iron	500 (34.47)	RF

Body Material	Lower Limit °F (°C)
A126-B, A395	-20 (-28.9)

Parts List and Standard Materials		
Part Apollo Model	Cast Iron 125YF	Ductile Iron 250YF
Body	A126-B	A395
Cover	A126-B	A395
Screen [1]	304 SS	304 SS
Plug [2]	A126-B	A126-B
Gasket [1]	Graphite	Graphite
Bolt/Stud [2]	A307-B	A307-B
Nut [2]	A563	A563

Notes:
1. Recommended Spares.
2. Materials of equivalent strength may be substituted at manufacturer's option.

Dimensional Data (Iron Classes 125, 250) *use columns from chart above												
	A		B		C		D		E		Weight	
	125YF	250YF	125YF	250YF	125YF	250YF	1250YF	250YF	125YF	250YF	Y125	Y250
2"	2.00	2.00	8.88	8.88	6.00	6.50	8.50	9.13	1/2	1/2	22	28
50	51	51	226	226	152	165	216	232	15	15	10	13
21/2"	2.50	2.50	10.75	11.25	8.00	7.00	11.25	9.88	1	1	35	38
65	64	64	273	289	203	178	286	251	25	25	16	17
3"	3.00	3.00	11.50	11.63	8.75	8.00	12.25	11.25	1	1	43	54
80	76	76	292	295	222	203	311	286	25	25	20	24
4"	4.00	4.00	13.88	14.50	9.50	10.75	13.38	15.00	11/4	1	75	110
100	102	102	353	368	241	273	340	381	32	25	34	50
5"	5.00	5.00	16.38	17.38	11.50	13.50	16.13	19.00	11/4	11/4	115	160
125	127	127	416	441	292	343	410	483	32	32	52	73
6"	6.00	6.00	18.50	18.75	12.63	16.25	17.69	22.75	11/2	11/2	154	224
150	152	152	470	476	321	413	449	578	40	40	70	102
8"	8.00	8.00	21.38	21.88	16.38	19.50	23.00	27.75	11/2	11/2	243	468
200	203	203	543	556	416	495	584	692	40	40	110	212
10"	10.00	10.00	26.00	27.25	19.00	21.25	26.70	29.75	2	2	390	590
250	254	254	660	692	483	540	678	756	50	50	177	268
12"	12.00	12.00	30.00	31.38	22.00	25.00	31.00	35.00	2	2	650	890
300	305	305	762	797	559	635	787	889	50	50	295	404
14"	14.00	-	37.38	-	29.00	-	41.00	-	2	-	815	-
350	356	-	949	-	737	-	1041	-	50	-	370	-
16"	16.00	-	42.50	-	33.00	-	46.00	-	2	-	1224	-
400	406	-	1080	-	838	-	1168	-	50	-	555	-

Engineering Data Screen Openings for Y-Strainers

FACTORS TO CONSIDER

PURPOSE

If the basket strainer is being used for protection rather than direct filtration, Apollo's standard screens will suffice in most applications.

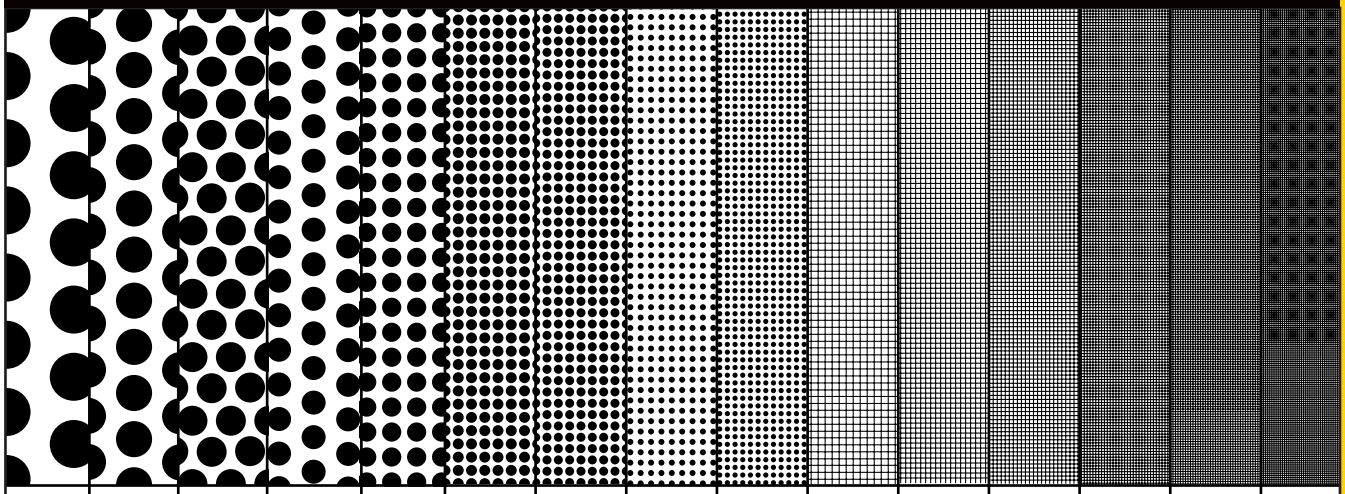
SERVICE

With services that require extremely sturdy screens, such as high pressure/ temperature applications or services with high viscosities, Apollo® recommends that perforated screens without mesh liners be used. If mesh is required to obtain a certain level of filtration, then Apollo recommends a trapped perf./mesh/perf. combination.

FILTRATION LEVEL

When choosing a perf. or a mesh/perf. combination attention should be given to ensure overstraining does not occur. As a general rule the specified level of filtration should be no smaller than half the size of the particle to be removed. If too fine a filtration is specified the pressure drop through the strainer will increase very rapidly, possibly causing damage to the basket.

SCREEN TYPES/DIMENSIONS



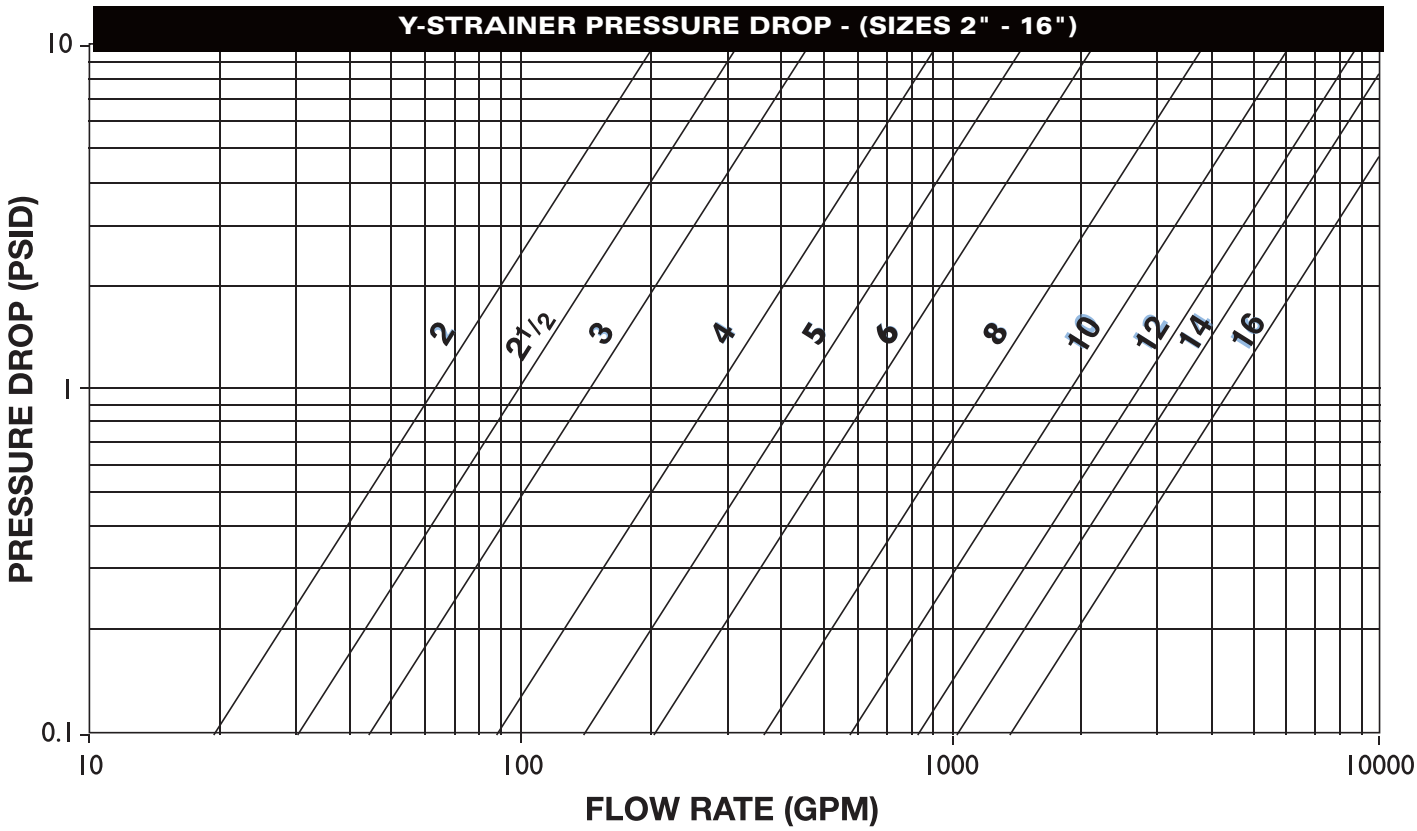
Notes:

1. Screen openings other than those shown above are available.
2. Screens are available in a wide range of materials, CS, SST, Alloy 20, Monel 400, Hastalloy C and Titanium GR2.
3. Custom manufactured screens are available upon request. Please consult factory.
4. All mesh screens include liner;
   .045 Perf 3" and smaller
   .125 Perf 4" and larger.

Standard Screens	
Size Range	Opening
2" - 3"	0.045 in.
50mm - 80mm	1.2mm
4" and larger	0.125 in.
100mm and larger	3.2mm

Engineering Data
Y-Strainer Pressure Drop – Liquids

Figure 1



Notes:
1. Pressure drop curves are based on water flow with standard screens.
2. See next page for correction factors to be used with other fluids and/or screen openings.

The following optional features are available for most Apollo Y-Strainers.
Please consult factory if required feature not shown.

FEATURES & AVAILABILITY	
Feature	**Description of Availability**
Screen openings	Range 5 micron to 1/2" perf.
Screen materials	Carbon steel, stainless steel (304/316 and L grades), alloy 20, monel 400, hastalloy C, Titanium, etc.
Screen construction	Perforated plate, mesh and wedge wire.
Gaskets	Any material commercially available.
Special body materials	Consult factory.
Special coatings	FDA Epoxy Coating
Silicon free contamination	Specially cleaned and packed - performed on request.
Canadian Registration (CRN)	Available on most models in province of installation.

Note:
1.Strainer size may effect the ability to apply certain coatings and linings.

Engineering Data Screen Correction Factor Chart

FOR NON-STANDARD AND MESH LINED SCREENS

**Multiply values obtained from figure 1 thru 4 by the appropriate values shown below* *Chart #1*

Size Range	SCREEN OPENINGS							
	Perforated Plate % Screen Material Open Area					Mesh lined standard screens % Screen Material Open Area		
	60%	50%	40%	30%	20%	50%	40%	30%
2" - 16"	0.65	0.8	1	1.4	2.15	1.05	1.05	1.2

Notes:
1. See page 3 for % Open Area's of Apollo inventoried perforated plate.
2. Standard screens for sizes 2" and larger is approximately a 40% open area screen media.
3. All mesh screens include liner;
   .045 Perf 3" and smaller
   .125 Perf 4" and larger.

EXAMPLE

Strainer Size: 2"
Filtration: 100 Mesh lined

Flow rate: 65 GPM
Service: Water

A) Using Figure 1 the pressure drop is determined to be 1.0 psid with Apollo's standard screen.
B) Looking at page 3 we find that the % open area of 100 mesh is 30%.
C) Using Chart #1 we read the correction factor to be 1.2 for 100 mesh lined .045" perf.
D) Total pressure drop equals 1.0 x 1.2 = 1.2 psid clean.

VISCOSITY AND DENSITY CORRECTION FACTOR CHART

Chart #2

Size Range	Component Factor (CF)
2" - 16"	0.35

Chart #3

Viscosity Cp	Body Loss Factor (BF)	Screen Loss Factor			
		Perf alone (PF)	20 Mesh Lined (MF)	30, 40, Mesh Lined (MF)	60 to 300 Mesh Lined (MF)
10	1	1.15	1.3	1.4	1.5
25	1.2	1.25	2	2.2	2.5
100	1.6	1.4	3	4	6.5
200	2.2	1.5	4.5	7	11.5
500	4.4	1.6	10	15	25
1000	8	1.7	15	30	50
2000	15.2	1.9	30	60	100

HOW TO USE

1. Using Figure 1 see page 4 determine the pressure drop (P1) through the strainer with water flow and standard screens.
2. If non-standard screens (i.e. 40 mesh, etc.) are being used apply factors in Chart #1 to determine corrected pressure drop (P2).
3. Multiply P1 or P2 (is used) by the specific gravity of the fluid actually flowing through the strainer to get P3.
4. Using Chart #2 multiply P3 by the appropriate Component Factor (CF) to get P4.
5. Let P5 = P3 - P4.
6. Multiply P4 by the appropriate Body Loss Factor (BF) in Chart #3 to get P6.
7. Multiply P5 by the appropriate Screen Loss factor (PF or MF) in Chart #3 to get P7.
8. Total pressure drop P8 = P6 + P7.

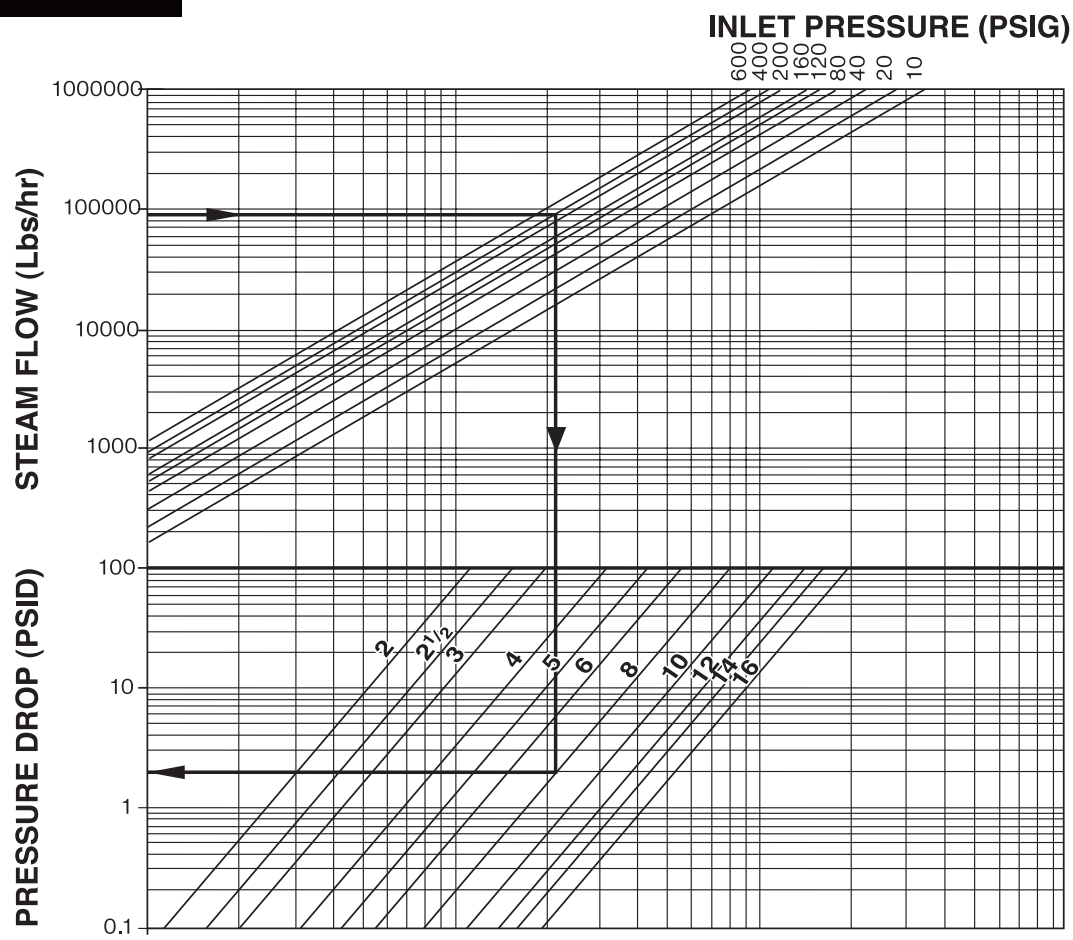
EXAMPLE

Strainer Size: 2"
Filtration: 100 Mesh lined
Flow rate: 65 GPM
Specific Gravity: 1
Viscosity: 25 cP

A) As shown in the above example, the corrected pressure drop (P2) = 1.2 psid
B) Since S.G. = 1, P3 = P2 = 1.2 psid
C) Using Chart #2 P4 = 0.35 x P3 = 0.42 psid
D) P5 = 1.2 - 0.4 = 0.8 psid
E) Using Chart #3 P6 = 0.4 x 1.2 = 0.48 psid
F) Again using Chart #3 P7 = 0.8 x 2.5 = 2.0 psid
G) Total pressure drop P8 = 0.48 + 2.0 = 2.48 psid

Engineering Data Y-Strainer Pressure Drop – Saturated Steam

SIZES 2" - 16"



Notes:

1. Pressure drop curve is based on saturated steam flow with standard screens. See page 5 for correction factors to be used with other screen openings.
2. Chart can be used for air and gas by using the following formula:

$$Qs = 0.138\ Qg\ \sqrt{\frac{(460+t)}{s.g.}} \quad \left\{ \frac{DP}{P2} < 1.0 \right\}$$

FOR NON-CRITICAL FLOW

WHERE

Qs	=	Equivalent Steam Flow, lbs./hr.
Qg	=	Air or gas flow, SCFM.
t	=	Temperature, °F.
s.g.	=	Specific gravity (s.g. = 1 for air.)
DP	=	Pressure Drop, psid
P2	=	Outlet Pressure

EXAMPLE

Service: Saturated Steam Flow
Pressure: 400 psig
Steam Flow: 90,000 Lbs/hr
Size: 8"

- Locate steam flow.
- Follow horizontal line to required pressure.
- Follow vertical line downwards to required strainer size.
- Follow horizontal line to read pressure drop.
- Pressure drop equals 2.0 psid.

Check List and Suggested Specifications

STRAINER CHECK LIST

When selecting a strainer, please take the factors listed below into account. This will assist us when recommending a strainer to suit your specific requirements. Please photocopy this page and fill out the pertinent information.

1. Fluid to be strained _____
2. Flow rate _____
3. Density of fluid _____
4. Viscosity of fluid _____
5. Fluid working pressure _____
   Maximum pressure _____
6. Fluid working temp. _____
   Maximum temp. _____
7. Preferred material of strainer construction _____
   _____
8. Present pipeline size & material _____
9. Nature of solids to be strained out _____
10. Size of solids to be strained out _____
    Size of mesh or perf. req. _____
11. Clearance Limitation Above _____ Below _____
    Left side facing inlet _____ Right side facing inlet _____
12. Maximum pressure drop with clean screen _____
13. Expected cleaning frequency _____
14. Any other information deemed relevant _____

_____

_____

_____

_____

SUGGESTED SPECIFICATIONS

The strainer shall be a Y-Type and have _____ (size) inlet/outlet connections. The end connections shall be flanged and the body shall be complete with a bolted cover assembly. The strainer shall be suitable for _____ PSIG operating pressure at _____ °F operating temperature. The body shall be constructed of _____ (body material) while the screen shall be constructed of _____ _____ (screen material). A mesh lining of _____ (size of mesh) is required, allowing a maximum pressure drop of _____ psig. The strainer shall be equipped with a _____ (gasket material) gasket and the strainer screen shall be able to withstand _____ psig differential pressure without any deformation.

Strainers shall be Apollo Model # _____ or approved equivalent.

Name _____

Company _____

Address _____

City/Town _____

State _____ Zip Code _____

Telephone (_____) _____

Fax (_____) _____

Installation and Maintenance Instructions

1.0 STRAINER INSTALLATION INSTRUCTIONS

A. Ensure all machined surfaces are free of defects and that the inside of the strainer is free of foreign objects.

B. For horizontal pipelines, the strainer should be installed so that the drain connection is pointed downwards.

C. For flanged end strainers, the flange bolting should be tightened gradually in a back and forth clockwise motion.

D. Once installed, increase line pressure gradually and check for leakage around joints.

E. If the strainer is supplied with a start-up screen, monitor pressure drop carefully.

NOTE: Flat face mating flanges and full face gaskets must be used with 125YF series strainers to avoid damage to the cast iron body.

IMPORTANT

Ultimate responsibility for strainer and material selection rests with the customer, as only the customer knows the particular use to which the strainer will be put and the exact operating parameters to which it will be subjected.

2.0 STRAINER REMOVAL INSTRUCTIONS

A. Drain piping.

B. Vent line to relieve pressure.

C. Secure necessary lifting equipment to strainer assembly.

D. Loosen flange bolts (Pipe flanges only).

E. Remove inlet/outlet flange bolts and carefully remove strainer.

CAUTION SHOULD BE TAKEN DUE TO POSSIBLE EMISSION OF PROCESS MATERIAL FROM PIPING. ALWAYS ENSURE NO LINE PRESSURE EXISTS WHEN OPENING COVER.

3.0 MAINTENANCE INSTRUCTIONS

For maximum efficiency, determine the length of time it takes for the pressure drop to double that in the clean condition. Once the pressure drop reaches an unacceptable value, shut down line and follow the “Screen Replacement Instructions”. A pressure gauge installed before and after the strainer in-line will indicate pressure loss due to clogging and may be used to determine when cleaning is required.

4.0 SCREEN REPLACEMENT

It is recommend that the system and strainer be depressurized before attempting any repair work. After removing all pressure, the system should be drained, any connections to the blow-off plug should be removed, and the following procedure should be used to replace the screen.

A. Attach cable or chain to strainer cover (1) and apply sufficient tension to prevent cover from dropping.

B. Remove bolts from cover.

C. Remove cover, clean and inspect gasket surface of cover.

D. Remove and discard old gasket.

E. Remove and clean or discard old screen.

Installation and Maintenance Instructions (continued)

F. Clean and inspect gasket surface of body. If gasket surface of cover or body is damaged, the damaged component must be replaced.

G. Push clean screen into position in body.

H. Position new gasket in place on body.

I. Line up screen and put cover in place on body.

J. Be sure gasket, bolt holes, and screen are properly aligned.

K. Put in bolts and nuts as required

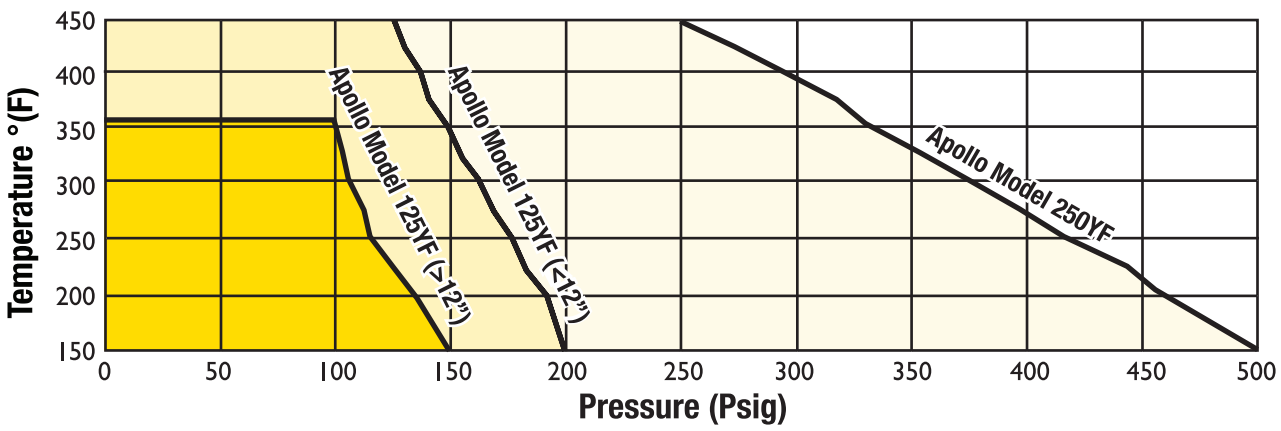
L. Tighten bolts, using “star” pattern to prevent damaging parts. Alternate tightening 180° apart. Tighten bolts sufficiently to stop leakage under test and service conditions.

Engineering Data Y-Strainer Effective Screen Area

Series	Pipe Size (In.)	Std. Opening (in.)	Nominal Area of Pipe Fitting (Sq. In.)	Gross Screen Area (Sq. In.)	Free Area (Sq. In.)	Ratio Free Area to Pipe Area
125YF	2	0.045	3.14	30.07	10.82	3.45
125YF	21/2	0.045	4.91	44.33	15.96	3.25
125YF	3	0.045	7.07	56.45	20.32	2.88
125YF	4	0.125	12.57	98.91	39.56	3.15
125YF	5	0.125	19.63	147.11	58.85	3.00
125YF	6	0.125	28.27	179.19	71.68	2.54
125YF	8	0.125	50.27	334.38	133.75	2.66
125YF	10	0.125	78.54	505.21	202.08	2.57
125YF	12	0.125	113.10	665.77	266.31	2.35
125YF	14	0.125	137.89	1186.34	474.54	3.44
125YF	16	0.125	182.65	1446.85	578.74	3.17
250YF	2	0.045	3.14	35.64	12.83	4.08
250YF	21/2	0.045	4.91	44.33	15.96	3.25
250YF	3	0.045	7.07	56.45	20.32	2.88
250YF	4	0.125	12.57	98.91	39.56	3.15
250YF	5	0.125	19.63	147.11	58.85	3.00
250YF	6	0.125	28.27	197.92	79.17	2.80
250YF	8	0.125	50.27	420.97	168.39	3.35
250YF	10	0.125	78.54	645.99	258.40	3.29
250YF	12	0.125	113.10	876.70	350.68	3.10
250YF	14	0.125	137.89	1186.34	474.54	3.44

Notes:
1. Values shown are for strainers with standard screens.
2. Ratio Free Area to Pipe Area may be increased by changing perf. stagger or by using mesh.
3. In many cases the specified screen burst pressure limits the maximum value for the Ratio Free Area to Pipe Area.

Pressure Temperature Chart (in accordance with ASMEB16.1 and ASMEB16.34)



Apollo Flanged Y-Strainer Order Schematic

XXX Y - XXX - XXXX - X

MODEL	VALVE TYPE CONNECTION/ SIZE	SCREEN TYPE	COATING
125Y (Flat Face)	Flanged 2" = F02	20 Mesh = M20	Blank Standard No Coating
250Y (Raised Face)	Flanged 2.5" = F25	40 Mesh = M40	E Epoxy Coating, FDA Approved
	Flanged 3" = F03	60 Mesh = M60	
	Flanged 4" = F04	80 Mesh = M80	
	Flanged 5" = F05	100 Mesh = M100	
	Flanged 6" = F06	.045 Perf = P045	
	Flanged 8" = F08	.062 Perf = P062	
	Flanged 10" = F10	.125 Perf = P125	
	Flanged 12" = F12	.250 Perf = P250	
	Flanged 14" = F14		
	Flanged 16" = F16		

Notes:
*All mesh screens are reinforced with a perforated liner.
2" - 3": .045 Perf
4" - Larger: .125 Perf

Terms and Condition of Sale

Payment: 2% 10th prox. Net 30 days. All prices F.O.B. Matthews, N.C., or Pageland, S.C., with freight allowed on shipments of 750 pounds or $4,000 net and over 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.Other 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. Goods returned to us will not be accepted unless a full explanation has been made and our written authorized permission obtained. 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.

Warranty and Limitations of Liability

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 one year from the date of delivery to you, our initial purchaser.

Should any failure to conform to this warranty appear within one year 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.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY, WHETHER EXPRESS 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 express 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, DAMAGE 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 CONBRACO GOODS UPON WHICH SUCH LIABILITY IS BASED.

"Apollo®" Valves

Manufactured by Conbraco Industries, Inc.

SALES AND SERVICE DEPARTMENT
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			E-Mail Address	Phone	Fax
Southeast Region	B. Lynch & Associates	Florida	sales@blynchandassociates.com	813-792-5060	813-792-5213
	Spotswood Associates	Georgia/Alabama	dlewis@spotswoodassociates.com	770-447-1227	770-263-6899
	Pro Marketing, Inc.	North Carolina/South Carolina/Tennessee-East	sales@promarketinginc.net	864-578-4334	864-578-4889
	Mid South Marketing, Inc.	Virginia/Maryland/Washington, D.C./WV-East	sales@midsouthmktg.com	804-213-3801	804-213-3802
Southern Region	Southern Marketing Group	MS/TN-West/AR/Bowie Cty.-TX	SMG49@bellsouth.net	901-547-0042	901-547-0035
	AVC Mechanical Sales, Inc.	Oklahoma/Texas-North	valvesales@avalve.com	214-201-0100	214-201-0104
	Armstrong/Weatherly Associates	Texas-South/Louisiana	sales@armstrong-knox.com	713-692-5566	713-692-6021
Midwestern Region	HEBCO, Inc.	Kansas/Missouri-West	kcwinelvr@aol.com	913-491-0797	913-491-5126
	New Tech Marketing	IL/WI-East/IN-North/MI-Upper Peninsula/IA-/River Counties	ntm012@mcleodusa.net	630-378-4300	630-378-0343
	New Tech Marketing	Eastern Missouri/Southern Illinois	ntm112@aol.com	618-394-0329	618-394-0427
	L.J. Whitfill & Associates, Inc.	Kentucky/Indiana-South/Ohio-South	whitfill@win.net	502-459-4545	502-459-9944
	V.E. Sales Co., Inc.	Michigan (Except Upper Peninsula)	tomv@vesalesinc.com	586-774-7760	586-774-1490
	Northstar Valve & Fitting, Inc.	Minnesota/North & South Dakota/Wisconisn-West	northstarvalve@qwest.net	952-937-0108	952-937-0803
	Willco, Inc.	Nebraska/Iowa (Except River Counties)	bill@willcoinc.com	402-573-7000	402-573-7371
	Midwest Spec	Ohio-North/Pennsylvania-West/West Virginia-West	glsales@mwspec.com	330-538-0406	330-538-0410
Western Region	Specified Process Equipment	California-North	jd@specifiedprocess.com	707-553-1077	707-553-1194
	Cisco Speciality Products, Inc.	California-South	ciscoemail@aol.com	714-921-9228	714-921-0442
	SPEC Management	Hawaii (S. California; Irrigation only)	msmarch4@cox.net	949-481-4225	949-487-0990
	Marshall-Rodeno Associated	CO/WY/MT/ID-SE/UT/NV-NE/NM/El Paso-TX	trodeno@marshallrodeno.com	303-575-6701	303-575-6706
	Braley-Gray & Associates	Oregon/SW Washington/Western Idaho	sales@braleygray.com	503-249-6972	503-288-4464
	Commercial Application Sales	Alaska/Washington	sales@commappsales.com	206-405-4370	206-405-4390
	Southwestern Industrial Sales Co.	Arizona/Nevada-SW	eduardop@sw-ind.com	480-458-5838	480-458-5843
Northeast Region	Urell, Inc.	Massachusetts/New England States	conbraco@urell.com	617-923-9500	617-926-9414
	McMahon Marketing, Inc.	New York-Upstate/New York-West	sales@mcmahonmarketing.com	518-792-3350	518-792-3351
	Continuous Sales Corporation	New York-East/New Jersey-North	csc07@aol.com	516-575-6800	516-349-8411
	Cope-Wardell-Ammon Associates	Pennsylvania-East/Delaware/New Jersey-South	joejr@cwaassociates.com	610-485-2828	610-485-7171
	Keith Engle & Associates	OEM accounts	keith.engle@verizon.net	610-827-9560	610-827-9561
Canada	Conbraco Industries, Canada	160 Pennsylvania Ave., Unit 3, Concord, Ontario L4K 4A9	conbraco.canada@conbraco.com	905-761-6161	905-761-6666
	Barclay Sales Ltd.	British Columbia	bbarclay@barclaysales.com	604-945-1010	604-945-3030
	Dynamic Agencies, Ltd.	Saskatchewan	doug.dynamicage@sasktel.net	306-343-1901	306-343-1901
	Tom Beggs Agencies Ltd.	Manitoba/NW Ontario	TBA@MB.SYMPATICO.CA	204-953-1900	204-774-6915
	Task Controls, Inc.	Ontario	infotoronto@taskcontrols.com	416-291-3004	416-754-3481
	Agences J. Pierre Sylvain, Inc.	Quebec	agencespsylvain@golden.net	450-655-9588	450-641-2737
	Kern Industries, Ltd.	Alberta-North	kernind@telusplanet.net	780-451-2056	780-454-6687
	Kern Industries Calgary, Ltd.	Alberta-South	kerncalgary@telus.net	403-730-7791	403-239-8179
	J. Levandier Sales, Inc.	Nova Scotia, New Brunswick, Prince Edward Island	jlssales@istar.ca	506-858-1615	506-858-1084
	Smith Agencies	Newfoundland	smithagencies@nl.rogers.com	709-364-8856	709-747-9414
	Key to the North Sales Agency, Inc.	Ontario-North	hmehes@keytothenorth.ca	705-524-6714	705-566-0148
	Steam and Industrial Equipment	Ottawa	sie@sie.ca	1-800-363-8482	514-457-7111
Int'l./ Puerto Rico	Rafael Rodriguez Barril, Inc.	Puerto Rico	rauli@rrbarril.com	787-982-1550	787-982-1570
	Conbraco International Limited	Manchester, England	sales@conbraco.co.uk	44-161-212-3745	+44-161-212-3747

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