



Sure Flow Equipment Inc.

CUSTOM ENGINEERED PRODUCTS

www.sureflowequipment.com

Featuring
Custom Fabricated Strainers,
Line Blinds and Bleed Rings,
Barred Tees, Launchers and
Receivers, and Fiberglass
Reinforced Plastic Strainers

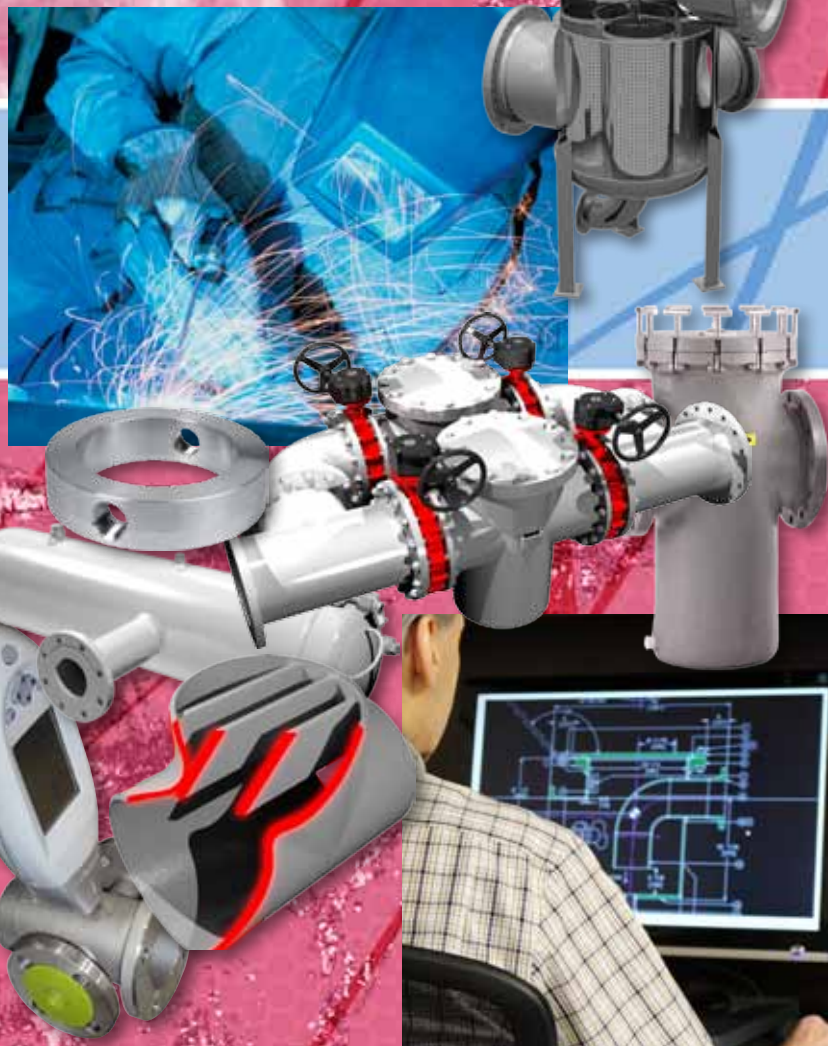


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**Sure Flow
Equipment Inc.**

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Corporate Profile

Sure Flow Equipment Inc. was founded three decades ago and is both a U.S. and Canadian Corporation. Privately owned by John L. Wordsworth, and passionately encouraged by his team, Sure Flow Equipment continues to be the leader in the production of industrial valves and strainers. Technology redefines all aspects of this business and Sure Flow remains the industry leader with our success founded on continuous improvement and commitment to industry leading quality control.

Our goal is to exceed our customers' expectations in Competitiveness, Quality, and Service. We maintain a large inventory of quality approved products on our shelves at all times. With our strong commitment to quality control we are certified in ISO 9001:2015, ASME "U", NB Mark, and TSSA. We are also recognized by PIP (Partners In Protection) for our C-TPAT status.

At Sure Flow Equipment we believe in being 'Hands On'. We answer our phone calls live and have no auto attendant. "Service," is simply our mandate.

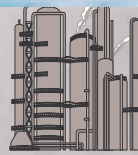
Service Applications



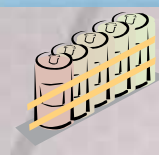
Pulp and Paper



Sewage Treatment Industry



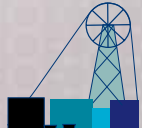
Chemical Plants



Food Processing Facilities



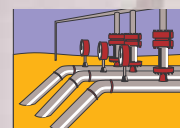
Steel Mills



Mining Operations



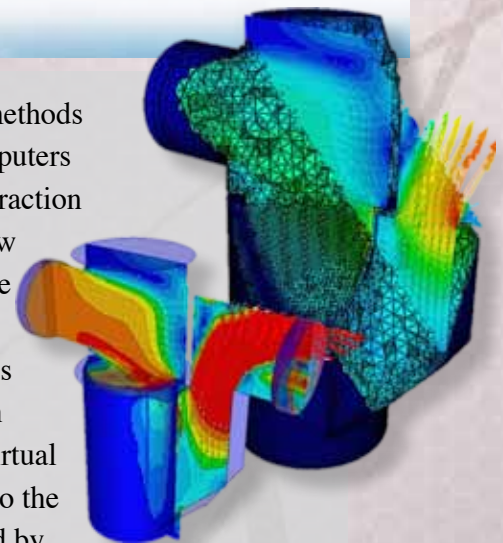
Cement Manufacturing



Petrochemical

Computational Fluid Dynamics

Computational Fluid Dynamics (CFD) is a sophisticated use of numerical methods and algorithms to solve and analyze problems that involve fluid flows. Computers are used to perform the millions of calculations required to simulate the interaction of liquids and gases with surfaces defined by boundary conditions. Sure Flow Equipment uses CFD to build and test strainer assembly models based on the service conditions provided by the end user. This allows for multi-scenario design studies that can help in finding the optimal product design. CFD helps Sure Flow Equipment test the applicable flow and thermal simulations when designing a custom engineered strainer. Sure Flow Equipment can build a virtual prototype of a strainer in order to generate a drawing that can be submitted to the end user for review. CFD aids in assuring that all custom products fabricated by Sure Flow Equipment will succeed in performing as desired and surpassing expectations.



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	Jessica Wordsworth	jess@sureflowequipment.com

Quality Control and Certifications

Sure Flow Equipment Inc. features complete custom engineered design and fabrication expertise within a quality focused state-of-the-art manufacturing facility. Commitment to quality, customer satisfaction and continual improvement is integral to our manufacturing processes and ensures custom engineered strainers meet your design specifications and stringent quality requirements. We've made it easy for you to place your order with confidence.

ISO 9001:2015 Certificate of Registration

ASME "U" Code Stamp Certificate of Authorization for the manufacture of pressure vessels.

ASME "UM" Code Stamp Certificate of Authorization for the manufacture of miniature pressure vessels.

TSSA (Technical Standards & Safety Authority) Certificate of Authorization for the manufacture, repair and alteration of pressure vessels.

National Board Certified and authorized to apply the **"NB" Mark** for pressure vessels and/or pressure retaining items

CE Mark is Available.

All audits take place at regular quarterly or annual intervals to meet or exceed requirements. Our Quality Control Manual has been approved by ASME (American Society of Mechanical Engineers) as well as the TSSA (Technical Standards & Safety Authority).

All certificates are available for viewing on our website under 'Certifications'. Please visit us at www.sureflowequipment.com or contact us for a personal copy.



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Production Facilities and Capabilities

Head Office and Production Facility

- 100,000 Square Foot Facility
- Central Distribution Centre
- All Finished Products
- Complete Machine Shop, lathe, vertical & horizontal boring
- 12 Welding Stations with Jib cranes
- Fully equipped with overhead cranes
- 40' drive-in dock, dock height door and service door
- 20' Paint Booth



Welding Capabilities



- MIG (GMAW)
- TIG (GTAW)
- Submerged Arc Welding (SAW)
- Flux-Core (FCAW)
- Stick Electrode (SMAW)
- Titanium
- Inconel
- Clean Welding Room



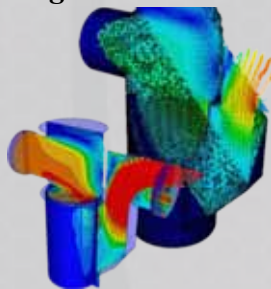
Engineering Capabilities



- Full in-house design, Engineering Department
- CAD services to design and build specialty products
- 'CFD' Computational Fluid Dynamics software program
- 3D Product Models

3D Computerized Product Models. This capability enables our Sure Flow Engineering Department to provide a better illustration of the installation, flow and positioning of our custom engineered products.

Flow Analysis Diagram



'CFD' Computational Fluid Dynamics Software.

This program enables us to model flow throughout our strainers and valves to accurately determine the pressure drop for any fluid travelling through stainless perforation or mesh, to any design condition.



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Testing Services
by fully accredited
laboratories.



PMI Analyzer

- RT, UT, MT, LP
- Film Thickness Testing
- Adhesion Testing
- Holiday Testing
- Hydrostatic, Pneumatic
- Hardness Testing
- PMI Positive Material Identification
- Non-Destructive Testing
- Automated Marking System



To provide you with the most elite Strainer, Check valve, Butterfly valve, and a variety of other industrial valves, Sure Flow uses an in-house handheld PMI (Positive Material Identification) Analyzer. Within 5 seconds we can provide a full traceability of any alloy; plus download the analysis to provide an in-house M.T.R. (Material Test Report). We can even provide M.T.R. 's for welding rod, wire, pipe plugs and other raw materials.

Additional Services

- Heat Tracing and Treatment
- Full Material Traceability
- Stress Relieving
- Oxygen Service Cleaning and Degreasing
- Machining
- Rubber Lining, Epoxy and related coatings
- All commercially applied protective coatings available
- Sand Blasting
- Plasma Cutting
- Water Jet Cutting (Carbon Steel, Stainless Steel and Aluminum - thickness of up to 1")
- Contour Beveling



Standards

- | | |
|--------|-------------------------------------------------------------------------------------|
| • ASME | <i>American Society of Mechanical Engineers</i> |
| • ANSI | <i>American National Standards Institute</i> |
| • API | <i>American Petroleum Institute</i> |
| • NACE | <i>National Association of Corrosion Engineers</i> |
| • ASTM | <i>American Society for Testing and Materials</i> |
| • MSS | <i>Manufacturers Standardization Society</i> |
| • AWWA | <i>American Water Works Association</i> |
| • DIN | <i>Deutsches Institut für Normung e.V.
German Institute for Standardization</i> |
| • JIS | <i>Japanese Industrial Standards</i> |
| • CSA | <i>Canadian Standards Association</i> |



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Product Availability

- Complete Line of Strainers •
- Y-Type Strainers
 - Simplex Basket Strainers
 - Duplex Strainers
 - Automatic Backwash Strainers
 - Temporary Cone Strainers
 - Tee Type Strainers
 - Sanitary Strainers
 - Fabricated Strainers
 - Replacement Screens and Baskets



- Complementary Products •
- Retainerless Double Door Check Valves
 - Silent and Swing Check Valves
 - Rubber Flapper Check Valves
 - Foot Valves
 - Ductile Iron Butterfly Valves
 - Flanged Ball Valves
 - Stainless Steel Knife Gate Valves
 - Rubber Expansion Joints
 - Line Blinds and Bleed Rings
 - Barred Tees, Launchers and Receivers
 - Application Custom Designs
 - High Performance Butterfly Valves – Double and Triple Offset



- Automated Products •
- Electric Actuators
 - Pneumatic Actuators



- Materials •
- Cast Iron
 - Carbon Steels
 - High Alloy Steels
 - Non-Ferrous Alloys (Inconel, Monel)
 - Ductile Iron
 - Stainless Steels
 - Low Alloy Steels



Training • Health and Safety

- Training •
- Self Contained Conference Room
 - Full Audio and Video Equipment
 - Product Demonstrations available for team members and customers
 - Executive Board Room



- Health and Safety •
- Safety Equipment used on site
 - St. John Ambulance First Aid Trained Staff
 - Automated External Defibrillator on site



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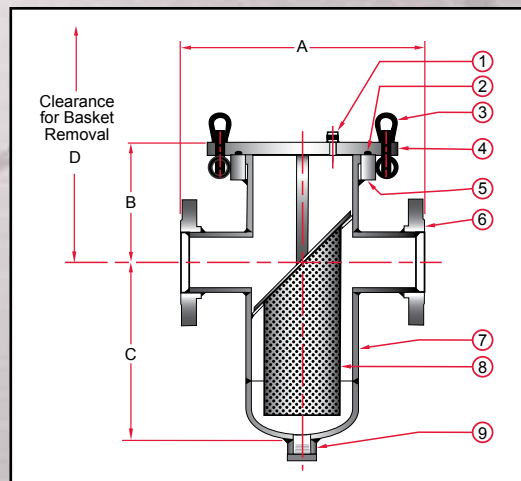
Fabricated Basket Strainers

BWEB150 - Carbon Steel
BWEB150SS - Stainless Steel

With Quick Opening Eye Bolts



Sure Flow Fabricated Flanged Basket Strainers were initially developed for the petrochemical market. With continuous success they have now become a standard product available off the shelf in most sizes. The unique quick-opening closure and venting allows the field operator, in a timely and safe fashion, to remove the basket for cleaning. An o-ring seal provides positive sealing of the cover.



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction								
Item	1	2	3	4	5	6	7	8
Description	Vent Assembly	O-Ring	Quick Open Eye Bolts	Cover Plate	Ring Flange	Outlet Nozzle	Body Assembly	Basket
								Drain Assembly

Dimensions (Inches)						
Size			A	B	C	D
Inches	Prefix	Body				
2	0200	6	12	7	11	22
2 1/2	0250	6	12	7 1/2	11	25
3	0300	6	12	7 7/8	13	26
4	0400	8	14 7/8	8 5/8	13	27
5	0500	8	14 7/8	9 3/8	17	31 1/2
6	0600	10	18 3/4	10 5/16	20	36
8	0800	12	20 1/8	11 7/8	23	40 3/4
10	1000	14	25 3/8	13 1/4	26	46
12	1200	16	27 5/8	16 5/16	29	55
14	1400	18	29 1/8	17 3/8	32	60
16	1600	20	33 5/8	19	34	64
18	1800	24	38 5/8	20 3/4	39	70
20	2000	24	38 5/8	21 5/8	39	72
24	2400	30	46	24 5/8	45	83

Ordering Information

Example: Include full description

Size	Model	Screen
(Prefix)	Number	Opening
0200	BWEB150SS	045

2" Basket Strainer, Stainless Steel, Class 150 ASME
 Flanges, 3/64" Perf. Screen

Operating Pressures and Temperatures		
Type	Size	psi @ Temp WOG
BWEB150	2" - 24"	100 @ 150 °F
BWEB150SS	2" - 24"	100 @ 150 °F



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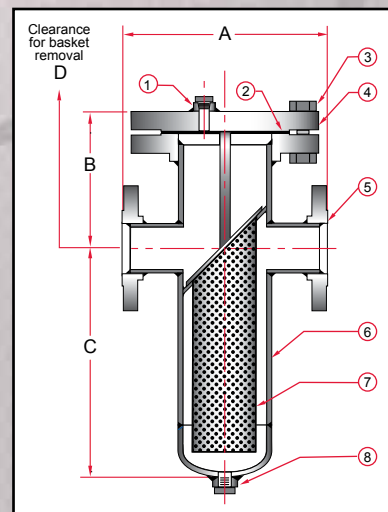


Fabricated Basket Strainers

BW150 / BW300 - Carbon Steel
BW150SS / BW300SS - Stainless Steel



Sure Flow Fabricated Flanged Basket Strainers can be designed to your specific application. Strainers are available in Carbon Steel and Stainless Steel. 2" to 24" pipe sizes in Class 150 and Class 300 are available. ASME flanges are standard, with the capability to supply larger pipe sizes and/or higher ASME pressure ratings. Basket size can be tailored to hold sufficient solids for the required time between clean-outs. Flange sizes can be selected to fit existing piping, or to achieve the required clean pressure drop. Maintenance reducing features include Automatic Flush and Hinged Cover, with or without Davit Assembly.



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction								
Item	1	2	3	4	5	6	7	8
Description	Vent Assembly	Gasket	Bolting	Cover	Inlet / Outlet Flange	Body Assembly	Basket	Drain Assembly

Dimensions (Inches)										
Size			A		B		C		D	
Inches	Prefix	Body	150	300	150	300	150	300	150	300
2	0200	6	14	14	7	9	12	12	23	26
2 1/2	0250	6	15	15	8	9	12 1/2	12 1/2	24	26
3	0300	6	15	15	8	9	12 1/2	12 1/2	24	26
4	0400	8	16	16	8 1/4	9 1/2	14	14	28	28
5	0500	10	16	17 1/2	9 1/2	11	15	15	32	33 1/2
6	0600	10	20	21	9 1/2	11	17	17	34	33 1/2
8	0800	12	22	23	11	14	21	21	41	42 1/2
10	1000	16	32	33	14	14 1/2	25	25	47 1/2	49
12	1200	18	35	36	14 1/2	18	28	28	53	54 1/2
14	1400	20	37	38	15 3/4	19	33	33	61	62 3/4
16	1600	24	42	43	18 1/4	22	36	36	63	69 3/4
18	1800	24	42	43	18 1/4	22	39	36	70	71 3/4
20	2000	30	43	50	23 1/4	28	44	44	82	84 1/2
24	2400	36	52	53	27 1/4	31	60	60	98	106 1/2

Ordering Information

Example: Include full description

Size Model Screen
 (Prefix) Number Opening
0800 BW150SS 125

8" Basket Strainer, Stainless Steel, Class 150 ASME Flanges, 1/8" Perf. Screen

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
BW150	2" - 24"	150 @ 366 °F	285 @ 100 °F
BW150SS	2" - 24"	150 @ 366 °F	275 @ 100 °F
BW300	2" - 24"	300 @ 422 °F	740 @ 100 °F
BW300SS	2" - 24"	300 @ 422 °F	720 @ 100 °F



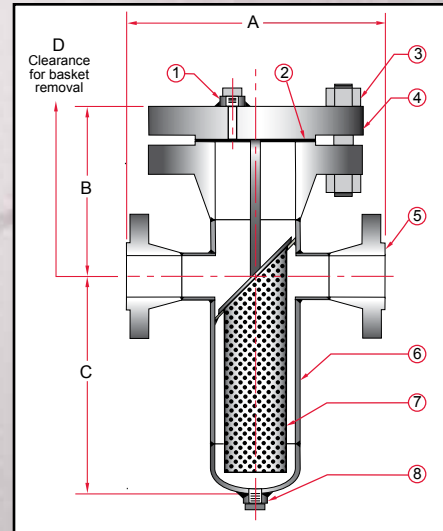
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Fabricated Basket Strainers

BW600 - Carbon Steel
BW600SS - Stainless Steel



Notes:

- Higher ASME pressure ratings available
- Sizes 8" and up come standard with flat bottom
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction								
Item	1	2	3	4	5	6	7	8
Description	Vent Assembly	Gasket	Bolting	Cover	Inlet / Outlet Flange	Body Assembly	Basket	Drain Assembly

Dimensions (Inches)						
Size			A	B	C	D
Inches	Prefix	Body				
2	0200	6	18 3/8	10 7/16	12	28
2 1/2	0250	6	18 3/8	10 1/2	12	28
3	0300	6	23 7/8	10 3/4	15 3/4	31 1/2
4	0400	8	23 7/8	12 3/16	17 3/8	38
5	0500	8	28	14	17 3/8	40
6	0600	10	29 7/8	14 7/8	21 3/8	42 1/2
8	0800	12	37	15 7/8	23 3/8	50 1/4
10	1000	16	42 1/2	20	27 1/4	57 1/2
12	1200	18	44	22 7/8	30 3/8	66
14	1400	20	46	25	35	72
16	1600	24	54	27 3/4	42 1/4	85
18	1800	24	57	30	47	90 1/2
20	2000	30	60	34	50	98
24	2400	36	68	38	54	112

Ordering Information

Example: Include full description

Size	Model	Screen
(Prefix)	Number	Opening
0400	BW600SS	125

4" Basket Strainer, Stainless Steel, Class 600 ASME Flanges, 1/8" Perf. Screen.

Operating Pressures and Temperatures			
Type	Size	psi @ Temp Steam	psi @ Temp WOG
BW600	2" - 24"	600 @ 489 °F	1480 @ 100 °F
BW600SS	2" - 24"	600 @ 489 °F	1440 @ 100 °F



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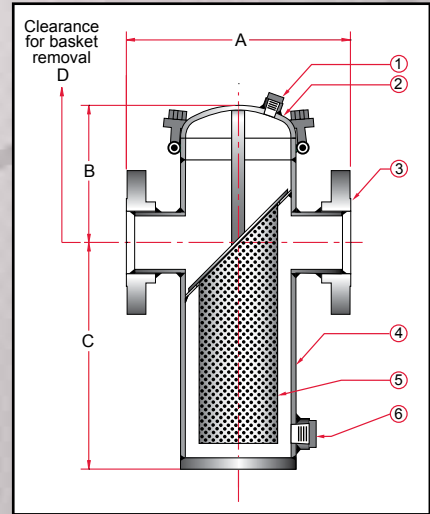
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Fabricated Basket Strainers

BWH150 / BWH300 - Carbon Steel
BWH150SS / BWH300SS - Stainless Steel

With Quick Opening Hinged Cover



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction						
Item	1	2	3	4	5	6
Description	Vent Assembly	Quick Open Cover	Inlet/Outlet Flange	Body Assembly	Basket	Drain Assembly

Dimensions (Inches)						
Size			A	B	C	D
Inches	Prefix	Body	150 and 300	150 and 300	150 and 300	150 and 300
2	0200	6	14	8 5/8	12 1/4	26
2 1/2	0250	6	15	8 5/8	12 3/4	26
3	0300	6	15	8 5/8	12 3/4	26
4	0400	8	16	9 1/2	14 5/16	28
5	0500	10	16	11 1/4	15 5/8	32
6	0600	10	20	11 1/4	17 3/8	34
8	0800	12	22	13	21 5/8	42
10	1000	16	32	15 3/4	25 7/8	50
12	1200	18	35	17 3/4	28	56
14	1400	20	37	19 3/4	34 1/8	65
16	1600	24	42	23 1/4	36	67
18	1800	24	42	23 1/4	40 1/4	76
20	2000	30	43	27 3/4	45 1/8	82
24	2400	36	52	27 3/4	61 1/2	102

Ordering Information

Example: Include full description

Size	Model	Screen
(Prefix)	Number	Opening
1200	BWH300SS	125

12" Basket Strainer, Stainless Steel, Class 300 ASME
 Flanges, 1/8" Perf. Screen, Hinged Cover

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
BWH150	2" - 24"	150 @ 366 °F	285 @ 100 °F
BWH150SS	2" - 24"	150 @ 366 °F	275 @ 100 °F
BWH300	2" - 24"	300 @ 422 °F	740 @ 100 °F
BWH300SS	2" - 24"	300 @ 422 °F	720 @ 100 °F



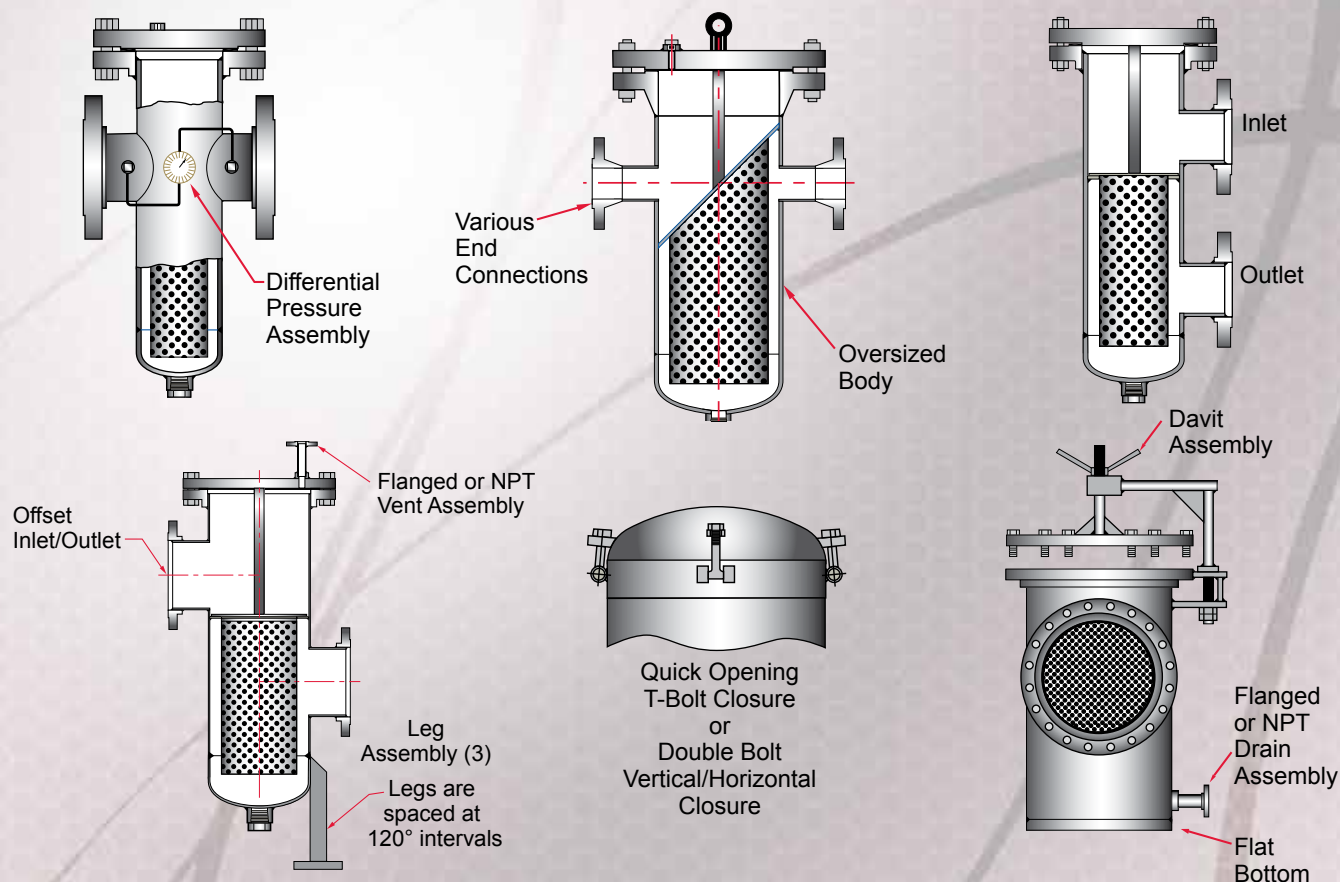
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Fabricated Basket Strainers

Custom Strainer Options



Optional Features

- Quick opening covers
- Body materials of Stainless Steel or special alloys
- Custom Baskets of 316SS, Monel, and special alloys
- Davit Assembly
- Various end connections available including Weld Neck Flanges, Socket Weld and Ring Type Joint connections
- Larger sizes available
- Single or multiple baskets
- Oversized body design to reduce pressure drop
- Automatic air vent
- Pressure gauges or differential pressure switches
- Special internal and external coatings
- Many codes and designs are available

Special Construction

- Backwash connections
- High pressure Class 600, Class 900, Class 1500 and Class 2500
- Special perf or mesh as low as 5 microns



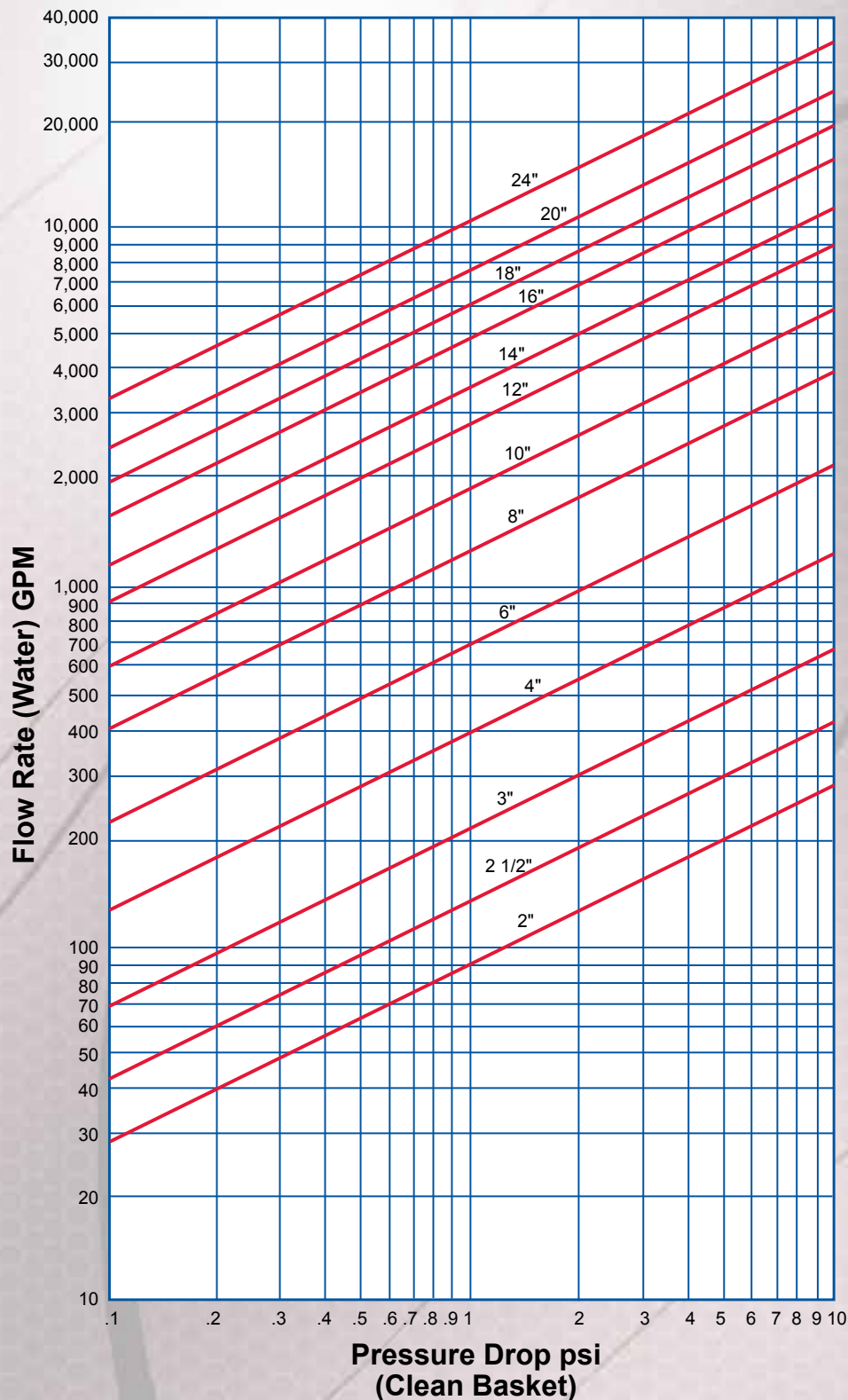
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Fabricated Basket Strainers

Pressure Drop Chart



Note: These charts are for theoretical calculations ONLY.

Please contact our office with your exact specifications and you will be provided with factory calculations.



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Fabricated Dual Basket Strainers

Cast Iron, Carbon Steel, Stainless Steel

Sure Flow Dual Basket Strainers are an innovative and economical alternative to conventional Duplex Strainers. Dual Basket Strainers are designed for applications where flow cannot be interrupted to service the strainer basket. Rather than stopping the line to clean and replace the basket, the Dual Basket Strainer allows for flow to be redirected through a second basket while the initial basket is serviced. The changeover is accomplished by use of a handwheel (or lever) operator on a Buna lined (standard) butterfly valve. This arrangement provides a bubble-tight shut off between basket chambers, essential for use in gas or negative head pump suction systems. Standard units are available in Cast Iron with Class 125 ASME flanged connections as well as in Carbon or Stainless Steel with Class 150 ASME flanged connections. Selecting a Sure Flow Fabricated Dual Basket Strainer allows for pressure ratings, basket sizes and flange sizes to be customized in order to meet specific design requirements. Additions are available for Dual

Basket Strainers such as automatic air vents, quick opening covers, special internal coatings, back wash connections and more. Our staff will help select the best Sure Flow Dual Basket Strainer for each unique application



Sure Flow Model BDB Dual Basket Strainers are a bolted design. The standard version comes in Cast Iron material with Class 125 flanged connections and is available in sizes 2" through 18". Baskets can be supplied with bolted or quick release clamp covers.

Sure Flow Model DB Dual Basket Strainers are a welded design. They are a very economical alternative to standard uni-casting Duplex Strainers. They are available in Carbon and Stainless Steel materials. These strainers are custom fabricated allowing for many options. The strainers are available in up to Class 2500 ASME pressure ratings. The included valves can be selected to suit the application for which the strainer is required.



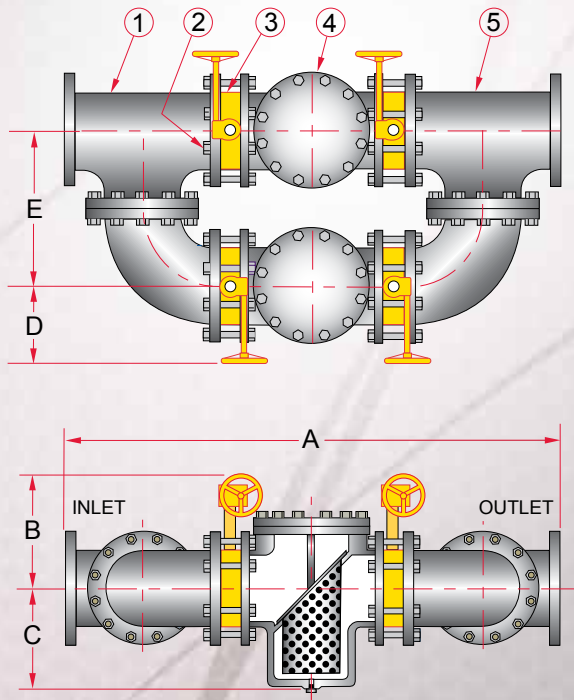
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Fabricated Dual Basket Strainers

Type BDB - Bolted Dual Basket Strainer Cast Iron



Dimensions (Inches)						
Size		A	B	C	D	E
Inches	Prefix					
2	0200	29 1/2	11	5	6	9 1/8
2 1/2	0250	31 7/8	11	5 3/8	6	10 1/8
3	0300	35 1/2	11	6 1/2	6	11 1/8
4	0400	41 5/8	11 7/8	8	6	13 1/8
5	0500	47 1/2	11 7/8	8	6 1/8	15 1/8
6	0600	52	11 11/16	8 5/8	6 1/8	16 1/8
8	0800	61	17 1/16	11 3/4	9	18 1/8
10	1000	70 3/4	10 1/2	13 3/4	11	22 1/8
12	1200	83	13 1/16	16 3/8	11	24 1/8
14	1400	96 1/2	15 11/16	22 3/8	11	28 1/8
16	1600	104 3/4	16 11/16	23 5/8	11	30 1/8
18	1800	123 3/4	27 7/16	28	11	33 1/8
20	2000	124	29 11/16	32	11	36 1/8
24	2400	141 3/4	32 7/8	32 3/8	11	44 1/8

Larger sizes are available.

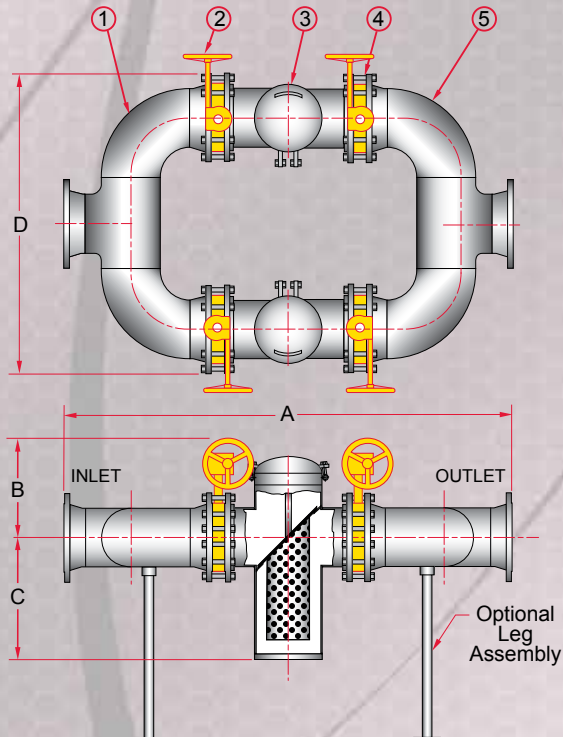
Construction	
Item	Description
1	Inlet Manifold
2	Bolting
3	Butterfly Valves
4	Strainers
5	Outlet Manifold

Notes:

Also available is our model BDBC125 with clamp covers. Consult factory for details.

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Type DBH150 / DBH150SS - Fabricated Dual Basket Strainer Carbon Steel, Stainless Steel



Dimensions (Inches)					
Size		A	B	C	D
Inches	Prefix				
2	0200	36 3/8	10 7/8	12 1/4	15
2 1/2	0250	40 5/8	11 3/8	12 3/4	18
3	0300	42 1/2	11 5/8	12 3/4	20 1/4
4	0400	48 3/8	12 3/8	14 5/16	25 1/4
6	0600	61 5/8	13 1/2	17 3/8	34 1/4
8	0800	72 3/4	17 3/4	21 5/8	43 1/2
10	1000	90 1/2	18 7/8	25 7/8	53
12	1200	103 1/8	20 1/2	28	63
14	1400	111 5/8	23 1/2	34 1/8	71
16	1600	126	29	36	79 1/2
18	1800	135 1/2	30	40 1/4	88
20	2000	145 3/4	32	45 1/8	97 1/2
24	2400	171 7/8	36	61 1/2	114

Larger sizes are available.

Construction	
Item	Description
1	Inlet Manifold
2	Butterfly Valves
3	Strainers
4	Check Valves
5	Outlet Manifold

Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.



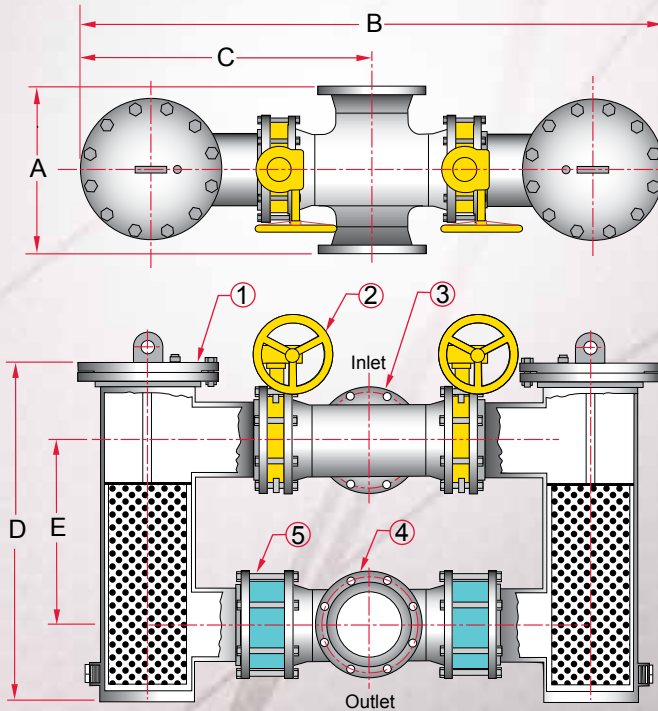
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Fabricated Dual Basket Strainers

DB150 - Short Face to Face Dual Basket Assembly



		Dimensions (Inches)				
Size		A	B	C	D	E
Inches	Prefix					
2	0200	10	35 3/8	17 11/16	21	10
2 1/2	0250	11 1/2	37 1/8	18 9/16	22 1/2	10
3	0300	12 1/4	38 1/4	19 1/8	23	10
4	0400	14 1/4	45 1/8	22 9/16	27 1/2	11
5	0500	16 3/4	52 7/8	26 7/16	30	12
6	0600	18 1/4	54 7/8	27 7/16	32	13
8	0800	22	64 3/8	32 3/16	37	15
10	1000	25	74	37	42	18
12	1200	29	83 1/2	41 3/4	47 1/2	21
14	1400	32	91 5/8	45 13/16	52	23
16	1600	34	97 7/8	48 15/16	54	25
18	1800	38	108 7/8	54 7/16	60	27
20	2000	41 3/8	123 5/8	61 13/16	65	29
24	2400	46	144	77	74	34

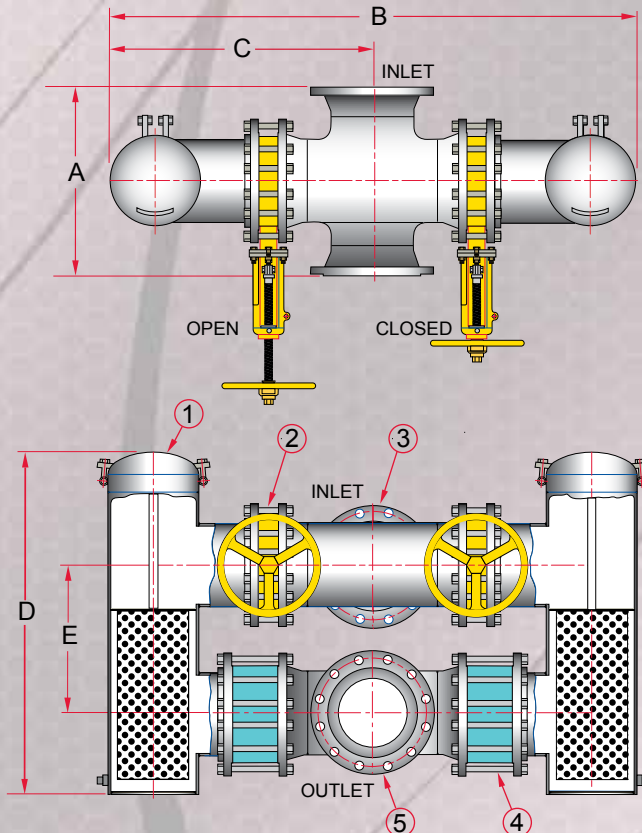
Larger sizes are available.

Construction	
Item	Description
1	Strainer Assemblies
2	Butterfly Valves
3	Inlet Manifold
4	Outlet Manifold
5	Check Valves

Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

DBH150 - Knife Gate Operated Dual Basket Assembly



		Dimensions (Inches)				
Size		A	B	C	D	E
Inches	Prefix					
2	0200	10	33 1/2	16 3/4	23 5/8	10
2 1/2	0250	11 1/2	35	17 1/2	24 5/8	10
3	0300	12 1/4	37 1/8	18 9/16	24 7/8	10
4	0400	14 1/4	39 1/2	19 3/4	27 5/8	11
5	0500	16 3/4	47	23 1/2	30	12
6	0600	18 1/4	50 3/8	25 3/16	32	13
8	0800	22	61	30 1/2	37 3/8	15
10	1000	25	70	35	43 5/8	18
12	1200	29	79 1/4	39 5/8	50	21
14	1400	32	87	43 1/2	54 5/8	23
16	1600	34	94	47	60 5/8	25
18	1800	38	102	51	65	27
20	2000	41 3/8	117 3/4	58 7/8	71	29
24	2400	46	134 1/2	67 1/4	80 5/8	34

Larger sizes are available.

Construction	
Item	Description
1	Quick Open Strainer Assembly
2	Knife Gate Valves
3	Inlet Manifold
4	Check Valves
5	Outlet Manifold

Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.



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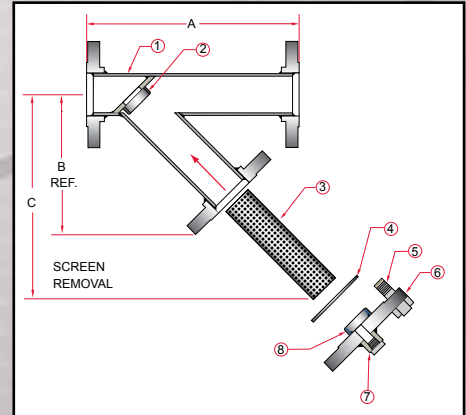


Fabricated Y Strainers

FW150 / FW300 - Carbon Steel
FW150SS / FW300SS - Stainless Steel



Sure Flow Fabricated "Y" Strainers can be designed to your specific application in Carbon Steel or Stainless Steel, along with other materials such as exotic alloys. Pipe sizes 2" to 24" in Class 150 and Class 300 ASME flanges are standard with the capability to supply larger pipe sizes and/or



higher ASME pressure ratings. Screen sizes can be tailored to hold sufficient solids for the required time between clean-outs. Flange sizes can be chosen to fit existing piping, or to achieve the required clean pressure drop. Hinge covers are also available for quick opening. Please contact factory for details.

Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction								
Item	1	2	3	4	5	6	7	8
Description	Body Assembly	Screen Guide	Screen	Gasket	Bolting	Blind Flange	Drain Assembly	Screen Guide

Dimensions (Inches)				
Size		A	B	C
Inches	Prefix	150 and 300	150 and 300	150 and 300
2	0200	12	8 1/2	12
2 1/2	0250	13	10	14
3	0300	15	11	16 1/2
4	0400	18	13	18
5	0500	18	14 1/2	21
6	0600	24	16	23
8	0800	30	21	30
10	1000	34	23	33
12	1200	36	24	38
14	1400	36	30 1/2	43
16	1600	41 9/16	32	51
18	1800	46	35	57
20	2000	49 1/2	39	61
24	2400	58 3/8	44	70

Ordering Information

Example: Include full description

Size	Model	Screen
(Prefix)	Number	Opening
1400	FW300	125

14" "Y" Strainer, Carbon Steel, Class 300 ASME Flanges,
 1/8" Perf. Screen, Bolted Cover

Operating Pressures and Temperatures			
Type	Size	psi @ Temp Steam	psi @ Temp WOG
FW150	2" - 24"	150 @ 366 °F	285 @ 100 °F
FW150SS	2" - 24"	150 @ 366 °F	275 @ 100 °F
FW300	2" - 24"	300 @ 422 °F	740 @ 100 °F
FW300SS	2" - 24"	300 @ 422 °F	720 @ 100 °F



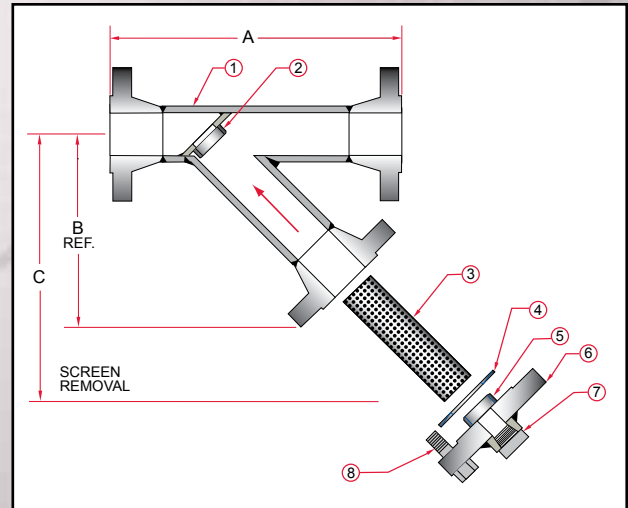
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Fabricated Y Strainers

FW600 - Carbon Steel
FW600SS - Stainless Steel



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction								
Item	1	2	3	4	5	6	7	8
Description	Body Assembly	Screen Guide	Screen	Gasket	Screen Guide	Blind Flange	Drain Assembly	Bolting

Dimensions (Inches)				
Size		A	B	C
Inches	Prefix			
2	0200	16	14	19
2 1/2	0250	17	15	21
3	0300	19	17	24
4	0400	22	20	28
5	0500	26	24	34
6	0600	28	26	37
8	0800	34	32	45
10	1000	40	34	48
12	1200	44	36	50
14	1400	50	38	53
16	1600	55	41	58
18	1800	60	45	63
20	2000	65	50	70
24	2400	75	55	77

Ordering Information

Example: Include full description

Size	Model	Screen
(Prefix)	Number	Opening
0800	FW600	125

8" Y Strainer, Carbon Steel, Class 600 ASME Flanges,
 1/8" Perf. Screen.

Operating Pressures and Temperatures			
Type	Size	psi @ Temp Steam	psi @ Temp WOG
FW600	2" - 24"	600 @ 489 °F	1480 @ 100 °F
FW600SS	2" - 24"	600 @ 489 °F	1440 @ 100 °F



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Fabricated Y Strainers

FWT150 / FWT300 - Carbon Steel
FWT150SS / FWT300SS - Stainless Steel

With Standard Butt Welded Fittings



The Sure Flow Fabricated "FWT" Y strainer differs from the "FW" Y strainer by incorporating standard butt welded components into its construction. Fabricated in Carbon or Stainless Steel, pipe sizes 2" through 24" and in Class 150 and Class 300 ASME flanges, the standard strainer is suited for many applications.

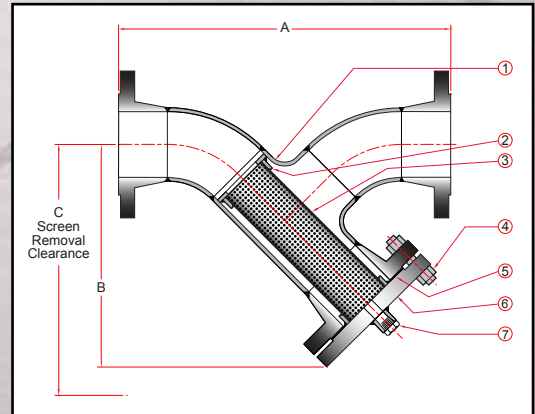
Sure Flow also has the capability to

supply larger pipe sizes and/or higher ASME pressure ratings where needed. Screen sizes can be tailored to hold sufficient solids for the required time between clean-outs. Flange sizes can be chosen to fit existing piping, or to achieve the required clean pressure drop. Hinge covers are also available for quick opening. Alternate materials of construction are available. Please contact factory for details.

Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.



Construction							
Item	1	2	3	4	5	6	7
Description	Body Assembly	Screen Guide	Screen	Bolting	Gasket	Blind Flange	Drain Assembly

Dimensions (Inches)							
Size		A		B		C	
Inches	Prefix	150	300	150	300	150	300
2	0200	13 1/4	13 3/4	9	9 7/16	12	12 1/4
2 1/2	0250	15 11/16	16 1/4	10 5/8	10 15/16	14 1/8	14 1/4
3	0300	17 1/8	17 7/8	11 9/16	12 3/16	15 5/8	16
4	0400	20 3/8	21 1/8	13 5/8	14 1/2	18 1/2	19
5	0500	24 9/16	25 5/16	15 7/8	16 13/16	22 1/2	22 1/2
6	0600	27 3/4	28 1/2	17 3/4	18 15/16	25 1/2	25 1/2
8	0800	35	35 3/4	22	23 1/16	31	31 1/2
10	1000	41 3/8	42 1/2	25 7/8	27 5/16	36 3/4	37 1/8
12	1200	48 3/4	49 15/16	30 5/16	31 13/16	42 7/8	43 3/4
14	1400	55 7/16	56 11/16	33 11/16	35 7/16	47 3/8	48 3/4
16	1600	61 3/16	62 5/8	36 15/16	38 7/8	52 7/8	53 7/8
18	1800	68 1/2	70	40 15/16	43 1/8	59 1/2	60
20	2000	78 1/4	76 5/8	45 1/16	47 3/16	65 1/2	66 1/4
24	2400	87 1/4	88 1/2	51 5/8	54 1/16	73 1/4	75 1/8

Ordering Information

Example: Include full description

Size Model Screen
 (Prefix) Number Opening
0400 FWT150 125

4" Y Strainer, Carbon Steel, Class 150 ASME Flanges,
 1/8" Perf. Screen.

Operating Pressures and Temperatures			
Type	Size	psi @ Temp Steam	psi @ Temp WOG
FWT150	2" - 24"	150 @ 366 °F	285 @ 100 °F
FWT150SS	2" - 24"	150 @ 366 °F	275 @ 100 °F
FWT300	2" - 24"	300 @ 422 °F	740 @ 100 °F
FWT300SS	2" - 24"	300 @ 422 °F	720 @ 100 °F



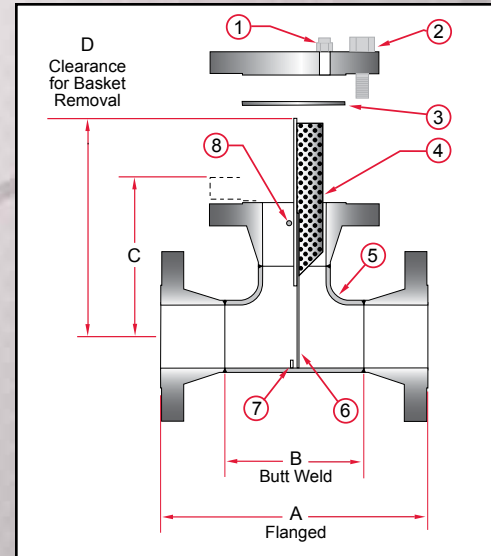
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Fabricated Tee Strainers

TW150 / TW300 - Carbon Steel
TW150SS / TW300SS - Stainless Steel



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction								
Item	1	2	3	4	5	6	7	8
Description	Vent Assembly	Bolting	Gasket	Basket Assembly	Body Assembly	Body Ring	Screen Guide	Cross Bar

Dimensions (Inches)									
Size		A		B		C		D	
Inches	Prefix	150	300	150	300	150	300	150	300
2	0200	10	10 1/2	5	5	5 7/8	6 1/4	13	13
2 1/2	0250	11 1/2	12	6	6	6 3/4	7 1/8	13	13
3	0300	12 1/4	13	6 3/4	6 3/4	7 3/16	7 3/4	14	14
4	0400	14 1/4	15	8 1/4	8 1/4	8 3/16	8 7/8	16	16
5	0500	16 3/4	17 1/2	9 3/4	9 3/4	9 7/16	10 1/4	19	19
6	0600	18 1/4	19	11 1/4	11 1/4	10 1/4	11 1/16	22	22
8	0800	22	22 3/4	14	14	12 1/4	13 1/8	25	25
10	1000	25	26 1/4	17	17	13 13/16	15 1/8	29	29
12	1200	29	30 1/4	20	20	15 7/8	17 1/4	31	31
14	1400	32	33 1/4	22	22	17 1/2	18 7/8	38	38
16	1600	34	35 1/2	24	24	18 9/16	20 1/8	41	41
18	1800	38	39 1/2	27	27	20 11/16	22 1/4	46	46
20	2000	41 3/8	42 3/4	30	30	22 9/16	24	51	51
24	2400	46	47 1/4	34	34	25	26 1/2	56	56

Ordering Information

Example: Include full description

Size	Model	Screen
(Prefix)	Number	Opening
2400	TW300	125

24" Tee Strainer, Carbon Steel, Class 300 ASME Flanges, 1/8" Perf. Screen.

Operating Pressures and Temperatures			
Type	Size	psi @ Temp Steam	psi @ Temp WOG
TW150	2" - 24"	150 @ 366 °F	285 @ 100 °F
TW150SS	2" - 24"	150 @ 366 °F	275 @ 100 °F
TW300	2" - 24"	300 @ 422 °F	740 @ 100 °F
TW300SS	2" - 24"	300 @ 422 °F	720 @ 100 °F



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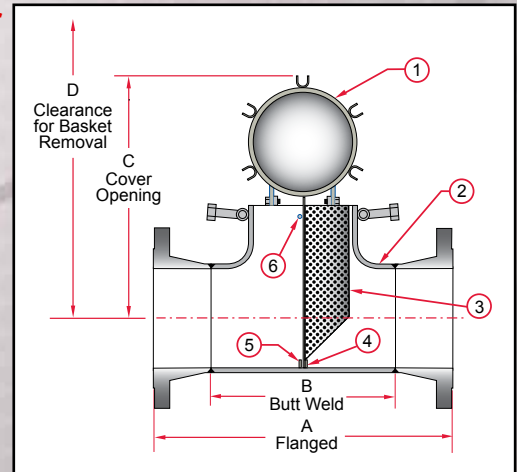
Fabricated Tee Strainers

TWH150 / TWH300 - Carbon Steel
TWH150SS / TWH300SS - Stainless Steel

With Quick Opening Hinged Cover



The Sure Flow Tee Strainer is a custom fabricated compact strainer. It is designed to remove foreign particles from pipelines. Sure Flow Tee Strainers provide the ultimate protection for pumps, valves, and other related equipment. The Sure Flow Tee Strainer can be fabricated to meet your specifications.



The standard Sure Flow Tee Strainer is constructed of Carbon or Stainless Steel material. Sure Flow also has vast experience in fabricating these strainers from Chrome-Moly material. Other materials, end connections and accessories are available.

Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction						
Item	1	2	3	4	5	6
Description	Quick Open Hinge Cover	Body Assembly	Basket	Body Ring	Screen Guide	Cross Bar

Dimensions (Inches)							
Size		A		B		C	D
Inches	Prefix	150	300	150	300		
6	0600	18 1/4	19	11 1/4	11 1/4	15 1/2	22
8	0800	22	22 3/4	14	14	19 1/4	25
10	1000	25	26 1/4	17	17	23 1/4	29
12	1200	29	30 1/4	20	20	26 7/8	31
14	1400	32	33 1/4	22	22	29 3/8	38
16	1600	34	35 1/2	24	24	32 3/8	41
18	1800	38	39 1/2	27	27	36 15/16	46
20	2000	41 3/8	42 3/4	30	30	40 5/8	51
24	2400	46	47 1/4	34	34	47 1/8	56

Ordering Information

Example: Include full description

Size Model Screen
 (Prefix) Number Opening
2000 TWH150 125

20" Tee Strainer, Carbon Steel, Class 150 ASME
 Flanges, 1/8" Perf. Screen, Hinged Cover

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
TWH150	6" - 24"	150 @ 366 °F	285 @ 100 °F
TWH150SS	6" - 24"	150 @ 366 °F	275 @ 100 °F
TWH300	6" - 24"	300 @ 422 °F	740 @ 100 °F
TWH300SS	6" - 24"	300 @ 422 °F	720 @ 100 °F



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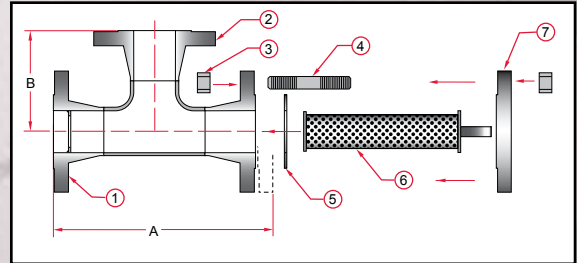
Fabricated Tee Strainers

TWA150 / TWA300 - Carbon Steel
TWA150SS / TWA300SS - Stainless Steel

Angled Flow Design



The Sure Flow TWA Strainer is similar to the standard Tee strainer except that it is designed for angled flow. The Strainer can



be fabricated with a standard bolted cover or a quick opening hinged cover (TWAH). The Sure Flow TWA Strainer can be fabricated to meet your specifications. The standard Strainer is constructed of Carbon or Stainless Steel material. Sure Flow also has vast experience in fabricating these strainers from Chrome-Moly material. Other materials, end connections and accessories are available.

Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Construction							
Item	1	2	3	4	5	6	7
Description	Inlet Flange	Outlet Flange	Hex Nuts	Studs	Gasket	Basket Assembly	Cover

Dimensions (Inches)					
Size		A		B	
Inches	Prefix	150	300	150	300
2	0200	10 7/8	11 1/2	5	5 1/4
2 1/2	0250	12 1/2	13 1/8	5 3/4	6
3	0300	13 5/16	14 1/4	6 1/8	6 1/2
4	0400	15 5/16	16 3/8	7 1/8	7 1/2
5	0500	17 13/16	19	8 3/8	8 3/4
6	0600	19 3/8	20 9/16	9 1/8	9 1/2
8	0800	23 1/4	24 1/2	11	11 3/8
10	1000	26 5/16	28 1/4	12 1/2	13 1/8
12	1200	30 3/8	32 3/8	14 1/2	15 1/8
14	1400	33 1/2	35 1/2	16	16 5/8
16	1600	35 9/16	37 7/8	17	17 3/4
18	1800	39 11/16	42	19	19 3/4
20	2000	43 3/16	45 3/8	20 3/4	21 3/8
24	2400	48	50 1/8	23	23 5/8

Ordering Information

Example: Include full description

Size	Model	Screen
(Prefix)	Number	Opening
1000	TWA150	125

10" Tee Strainer, Carbon Steel, Class 150 ASME Flanges, 1/8" Perf. Screen.

Operating Pressures and Temperatures			
Type	Size	psi @ Temp Steam	psi @ Temp WOG
TWA150	2" - 24"	150 @ 366 °F	285 @ 100 °F
TWA150SS	2" - 24"	150 @ 366 °F	275 @ 100 °F
TWA300	2" - 24"	300 @ 422 °F	740 @ 100 °F
TWA300SS	2" - 24"	300 @ 422 °F	720 @ 100 °F



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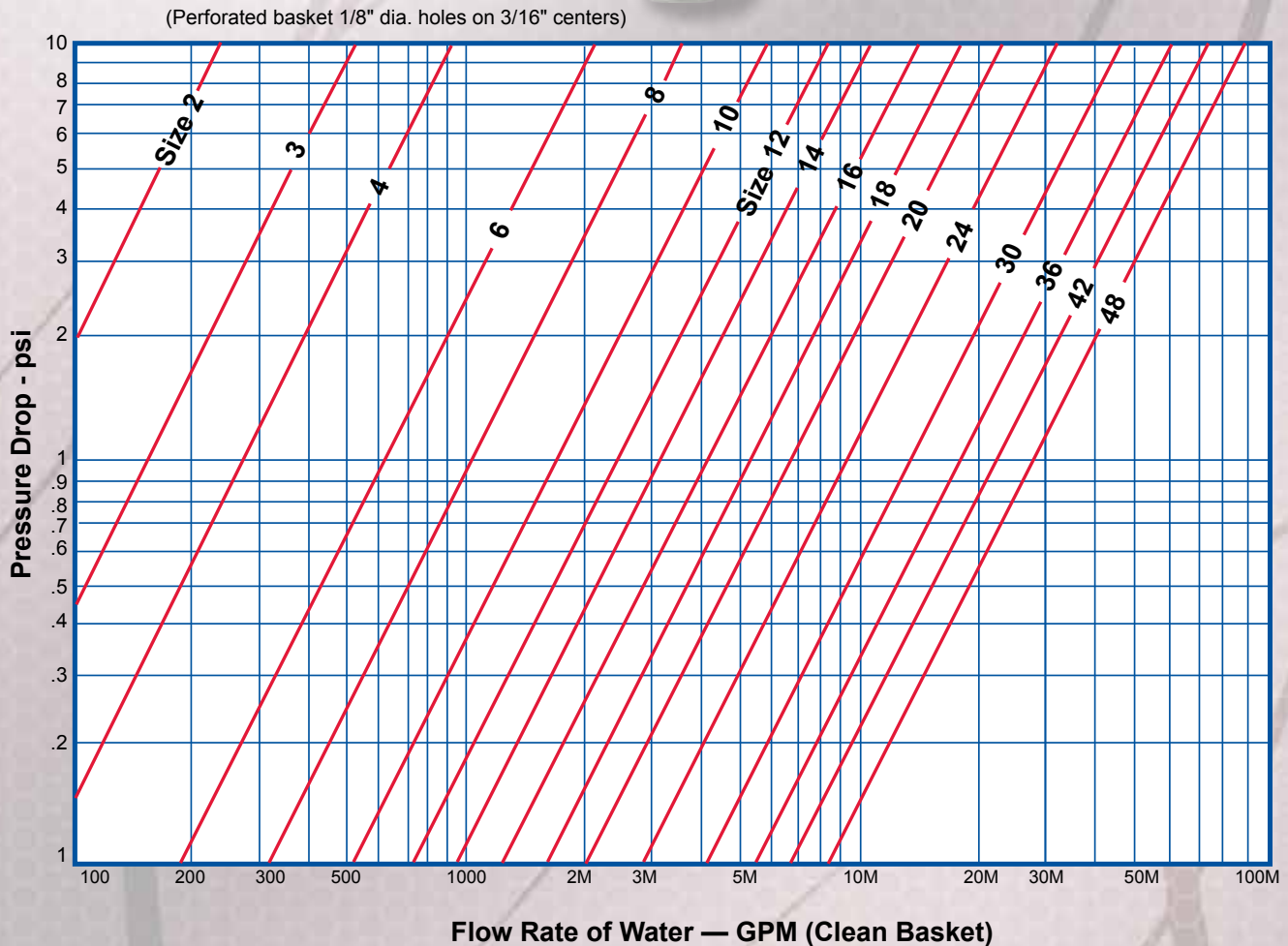


Fabricated Tee Type Strainers

Pressure Drop for Liquids

For Liquids more viscous than water or where wire cloth liner is added, multiply the pressure drop in charts by:

Correction Factors				
Viscosity (SSU)	Perforated (1/8" Holes)	Perforated with Wire Cloth		
		40 Mesh	60 Mesh	80 Mesh
30	1.00	1.32	1.53	1.62
270	1.30	1.61	1.83	2.00
385	1.44	1.76	2.00	2.20
500	1.58	1.92	2.13	2.41
1,000	1.66	2.22	2.41	2.63
2,000	1.86	2.41	2.72	2.91



Note: These charts are for theoretical calculations ONLY.

Please contact our office with your exact specifications and you will be provided with factory calculations.



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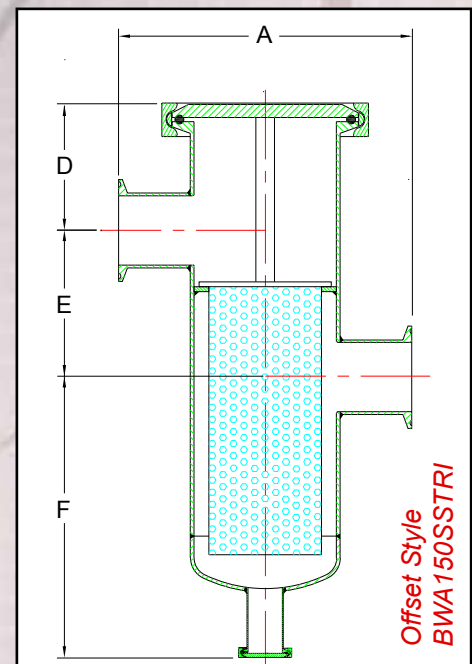
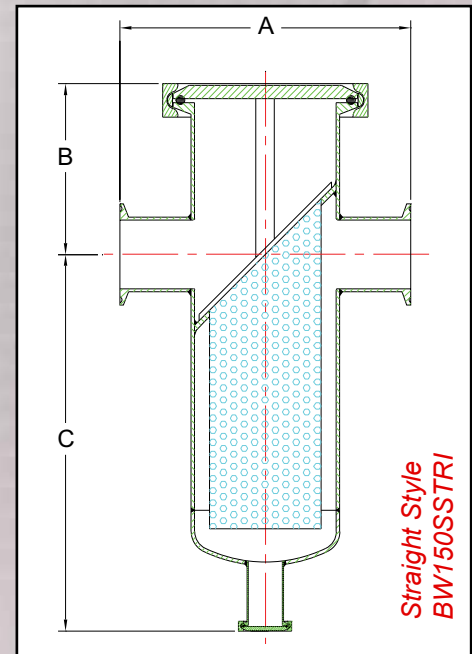
Fabricated Sanitary Basket Strainers



Model - BW150SSTRI / BWA150SSTRI

Manufactured from 316 Stainless Steel and polished to 25 Ra with Teflon cover gaskets. Sure Flow Try Clamp Basket Strainers are intended for applications where frequent, thorough cleaning is required between every batch of product. Screening elements include perforation, mesh or wedge wire. Sanitary pressure gauge ports are available for mounting diaphragm seals.

Note: Other cover gasket material available upon request.



Dimensions (Inches)								
Size			A	B	C	D	E	F
Inches	Prefix	Body						
1/2	0050	4	7	3 1/2	6	3 1/2	2 1/2	3 1/2
3/4	0075	4	7	3 1/2	6	3 1/2	2 1/2	3 1/2
1	0100	4	7	3 1/2	6	3 1/2	2 1/2	3 3/4
1 1/2	0150	4	7	3 1/2	6	3 1/2	2 1/2	3 3/4
2	0200	4	7	3 1/2	6	3 1/2	3	4
2 1/2	0250	4	7	3 1/2	6	3 1/2	3 1/2	4 1/2
3	0300	6	10	5	11	5	5	6
4	0400	6	10	5	11	5	5	6

Larger sizes available.

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

Ordering Information

Example: Include full description

Size
(Prefix)

0200

Model
Number

BW150SSTRI

Screen
Opening

125

Basket Strainer, Stainless Steel, 2" Sanitary Try Clamp with 1/8" Perforated basket.



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Fabricated Sanitary Duplex Strainers

Model - DB150SSTRI

The Sure Flow Equipment Try Clamp Duplex Strainer performs the same function as an industrial Duplex Strainer. The configuration can be changed to meet the specific application requirements.



Dimensions (Inches)			
Size		A	B
Inches	Prefix		
1/2	0050	24	6
3/4	0075	25	6
1	0100	27	6
1 1/2	0150	29	6
2	0200	32	6
2 1/2	0250	34	6
3	0300	38	11

Larger sizes available.

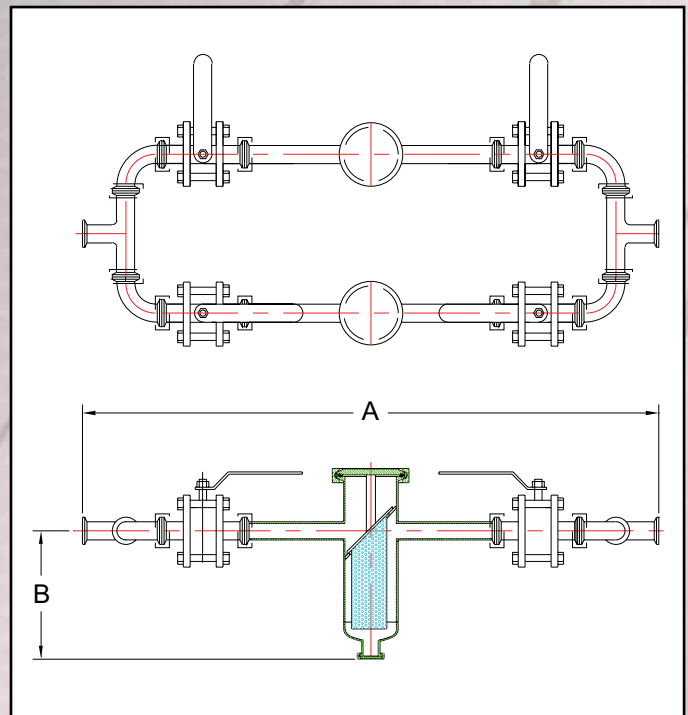
Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

Ordering Information

Example: Include full description

Size (Prefix)	Model Number	Screen Opening
0250	DB150SSTRI	125

Dual Basket Strainer, Stainless Steel,
2 1/2" Sanitary Try Clamp with 1/8" Perforated basket.



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Custom Strainer Screens

Overview



Sure Flow Equipment offers a wide assortment of screen types to meet all your filtration or screening needs. Over the course of the last two decades we have manufactured Cone/Conical Strainers, Basket/Hat Strainers, Reverse/Straight Flow Strainers, Plate Strainers, Media Retention Nozzles, Resin Traps, Submerged Intake Screens, Foot Valve Screens, Wedge Wire Screens, Multiple Layer Screens and many more custom styles.

The woven screen can be supplied in a perforated material, or for finer filtration, in a mesh material. These choices include Stainless Steel, Alloy 20, Titanium, Hastelloy, Monel or any other exotic material.

Not all applications are suitable for off the shelf items. At Sure Flow Equipment we are well equipped to design a strainer that will meet your specific needs and can offer countless options for your custom filter, custom screen or custom strainer. Just give us a drawing or your working conditions and we will produce a design and manufacture to your requirements.



Quad Reverse Cone Strainer

This Custom Engineered Strainer accomplishes fine mesh filtration by compressing the effective flow area of a 20 foot long Cone Strainer into a compact 4 foot Strainer. The Quad Reverse Cone Strainer is simple to clean, conserves space and with an open area of 300% this Stainless Steel Strainer provides exceptional flow filtration design and functionality.



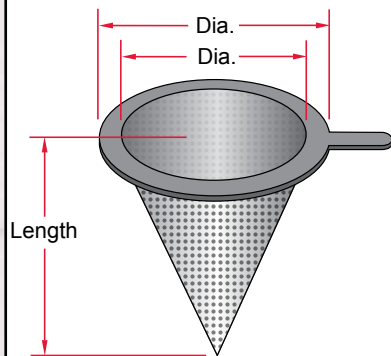
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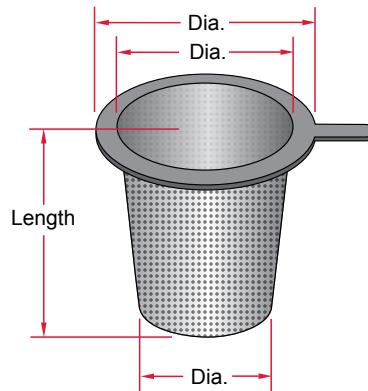


Custom Strainer Screens

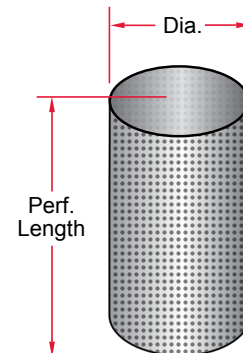
Style "B"
Cone Type Strainer



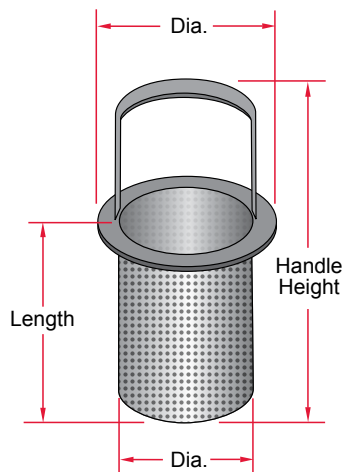
Style "C"
Cone Type Basket Strainer



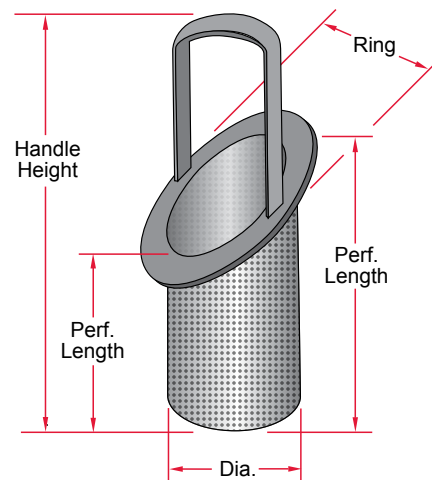
Style "D"
Cylindrical Screen



Style "E"
Basket Strainer



Style "F"
Basket Strainer



When ordering specify:

- Pipe Size
- Pressure Rating/Flange Rating
- Perforation or Mesh size
- Material
- Style - Cone, Basket, etc.
- Direction of flow - Straight or Reverse
- Percentage of open area or length

We manufacture Strainer Baskets, Screens, Tubes, Cones and Tee Strainers in Stainless Steel, Monel, Titanium and other exotic metals. Sure Flow Equipment Inc. can customize baskets to fit your unique requirements.

Please send us your prints, samples or simply give us your requirements and specifications and let us design the strainer for you.

Custom product not subject to return, credit or refund



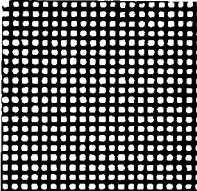
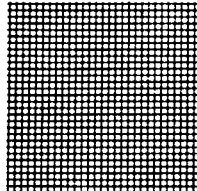
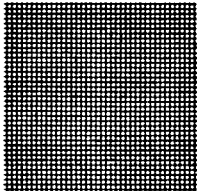
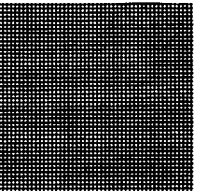
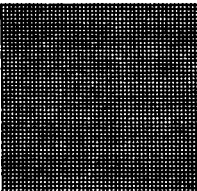

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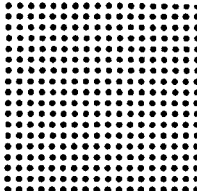
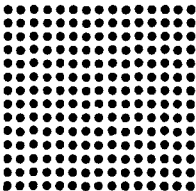
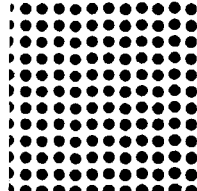
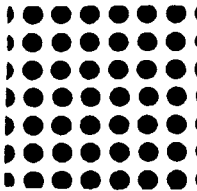
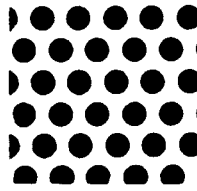
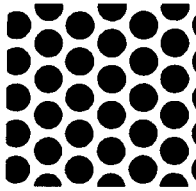
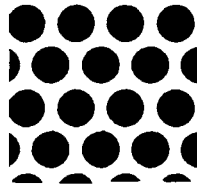
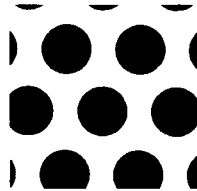
Perforated Material and Mesh

Mesh (Available In All Materials)

1/32" Openings	1/50" Openings	1/64" Openings	0.009" Openings	0.007" Openings	0.005" Openings
					
20 Mesh (46% Open Area)	30 Mesh (41% Open Area)	40 Mesh (36% Open Area)	60 Mesh (31% Open Area)	80 Mesh (31% Open Area)	100 Mesh (30% Open Area)

Mesh sizes other than shown - available on request

Perforated Plate (Available In All Materials)

1/32" Dia. (0.032)	3/64" Dia. (0.045)	1/16" Dia. (0.062)	3/32" Dia. (0.094)
			
324 Holes/Sq. In. (28% Open Area)	225 Holes/Sq. In. (36% Open Area)	144 Holes/Sq. In. (41% Open Area)	47 Holes/Sq. In. (33% Open Area)
1/8" Dia. (0.125)	5/32" Dia. (0.156)	3/16" Dia. (0.188)	1/4" Dia. (0.25)
			
32 Holes/Sq. In. (41% Open Area)	33 Holes/Sq. In. (63% Open Area)	18 Holes/Sq. In. (51% Open Area)	8 Holes/Sq. In. (42% Open Area)

Mesh to Inch to Micron Conversion Chart

Meshes/Lineal Inch US and ASTM	Actual Opening	
Std. Sieve No.	Inches	Microns
10	.075	1905
12	.060	1524
14	.051	1295
16	.045	1143
18	.039	991
20	.034	864
24	.028	711
30	.020	508
35	.018	457
40	.015	381
50	.011	279

Meshes/Lineal Inch US and ASTM	Actual Opening	
Std. Sieve No.	Inches	Microns
60	.009	229
70	.008	203
80	.007	178
100	.006	152
120	.0046	117
130	.0043	109
140	.0042	107
150	.0041	104
160	.0038	97
170	.0035	89
180	.0033	84

Meshes/Lineal Inch US and ASTM	Actual Opening	
Std. Sieve No.	Inches	Microns
200	.0029	74
250	.0024	61
300	.0018	46
400	.0015	38
120 x 400	.0016	40
80 x 700	.0012	30
200 x 600	.0010	25
165 x 1400	.0007	17
200 x 1400	.0004	10
325 x 2300	.0002	5



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Tri Ball Duplex Strainer

Cast Iron, Ductile Iron, Cast Steel and Cast 316SS, Cast Bronze
Threaded (T) and Flanged (F) • Sizes 3/4" to 4"

Type **D125TCIC & D125FCIC** Cast Iron; **D150TDIC & D150FDIC** Ductile Iron; **D150TCSC & D150FCSC** Cast Steel; **D150TSSC & D150FSSC** Cast 316SS; **D150TBZC & D150FBZC** Cast Bronze



The duplex strainer has two separate strainer basket chambers. These chambers are put into service independently. When operating basket chamber shows a high pressure drop the flow is switched to the other one. The clogged basket chamber is then cleaned or replaced, ready for use again. Thus the duplex strainer can provide uninterrupted operation.

Sure Flow Tri Ball Duplex Strainers serve to remove dirt and debris from pipelines and protect sensitive system components. The Tri Ball Duplex keeps the out of service chamber empty during operation. Thus you have enough time to clean or replace the strainer basket without ever having to worry about leakage and overflow.

A unique flow diverter ball valve system isolates the two strainer basket chambers. One is operating when the other is idle or its basket is being replaced. An easy-to-turn handle diverts the system flow from one chamber to the other so the flow in the pipeline is never shut off.

When a strainer basket needs to be cleaned, the lever handle is turned to take it out of service and to divert the flow through the other chamber. The position of the handle clearly indicates at all times which chamber is in operation.

No special tools are needed to access the strainer basket for cleaning. The chamber is first drained, then the castle nuts loosened, then the cover is lifted and swung clear of the chamber opening.

The diverter system consists of high quality stainless steel balls and teflon seats to ensure exceptionally long seat life and positive sealing.

For basket servicing there is a drain plug for each strainer chamber and a vent valve on top of each strainer chamber.

Should service of diverter components become necessary, it's easy to accomplish. There is no need to remove it from the line.

All kinds of strainer baskets are available for every application. They include perf with 1/32" - 1/2" hole size and 10 to 400 mesh liners.



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Tri Ball Duplex Strainer

Tri Ball Duplex Selection Table

Body and Cartridge Material	Connections	Sizes		Rating	Seat/Seals	Diverter Balls
		Inches	Prefix			
Cast Iron (CI)	Threaded (T)	3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	0075, 0100, 0125, 0150, 0200, 0250	ASME CL.125 200 psig @ 150 °F	Teflon/ Buna N*	Stainless Steel
	Flanged (F)	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	0100, 0125, 0150, 0200, 0250, 0300, 0400			
Ductile Iron (DI) Bronze (BZ) Carbon Steel (CS) Stainless Steel (SS)	Threaded (T)	3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	0075, 0100, 0125, 0150, 0200, 0250	ASME CL.150 200 psig @ 150 °F		
	Flanged (F)	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	0100, 0125, 0150, 0200, 0250, 0300, 0400			

* Viton® standard for stainless steel.

Ordering Information

Example : Include full description

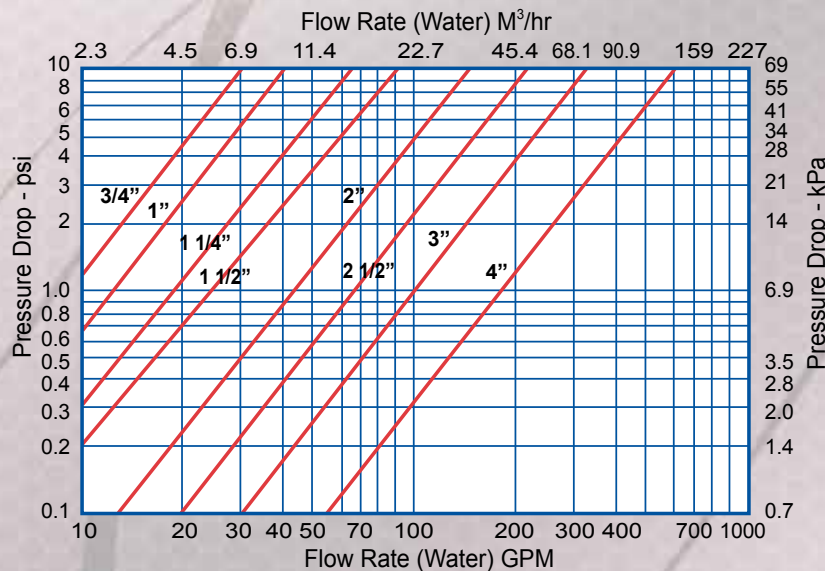
Size	Model	Screen
(Prefix)	Number	Opening
0400	D125FCIC	156

4" Flanged Duplex Strainer, Cast Iron,
ASME CL.125 Flanges, with 5/32" perf. basket

Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Please contact Sure Flow Equipment Inc. for certifications.

Pressure Drop



Notes:

Pressure drop curves are based on water flow with standard screens. For other fluids and/or screen openings, the figure shall be multiplied by the following correction factors.

These charts are for theoretical calculations **ONLY**.

Please contact our office with your exact specifications and you will be provided with factory calculations.

Correction Factors for Mesh-Lined Baskets

Viscosity (SSU)	Unlined Perforated Basket	40 Mesh Lined Basket	60 Mesh Lined Basket	80 Mesh Lined Basket	100 Mesh Lined Basket	200 Mesh Lined Basket	325 Mesh Lined Basket
30 (Water)	0	1.2	1.4	1.6	1.7	2.0	2.5
500	1.6	1.9	2.1	2.4	2.6	3.1	3.6
1000	1.7	2.2	2.4	2.6	2.8	3.3	3.8
2000	1.9	2.4	2.7	2.9	3.2	3.8	4.0
3000	2.0	2.6	2.9	3.2	3.5	4.1	4.3
5000	2.2	3.0	3.5	4.0	4.5	5.3	6.3
10000	2.5	3.5	4.2	5.0	6.0	7.1	8.5



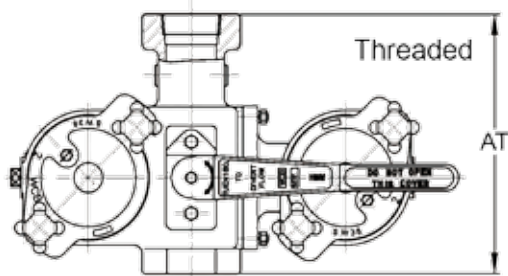
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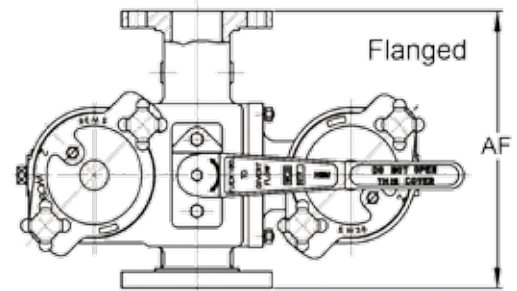


Tri Ball Duplex Strainer

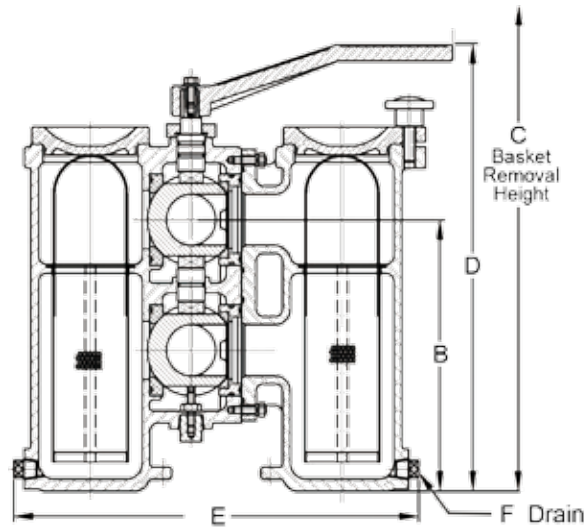
Top View: Threaded Model



Top View: Flanged Model



Front View: Flanged and Threaded Models



Dimensional Data (Inches)

Size		AF	AT	B	C Basket Removal Height	D	E	F Drain	Shipping Weight (lbs.)					
									Cast Iron		Bronze		Carbon & SS	
Inches	Prefix								Flanged	Threaded	Flanged	Threaded	Flanged	Threaded
3/4	0075	-	5 1/2	5 7/8	15 3/8	11	11 1/8	1/4	-	16	-	17	-	17
1	0100	6 7/8	5 1/2	5 7/8	15 3/8	11	11 1/8	1/4	17	16	18	17	18	17
1 1/4	0125	9 3/8	7 1/2	8 1/8	21 3/8	13 3/4	13 5/8	1/4	30	28	32	30	32	30
1 1/2	0150	9 3/8	7 1/2	8 1/8	21 3/8	13 3/4	13 5/8	1/4	30	28	32	30	32	30
2	0200	10 5/8	10	10 3/4	26 3/8	17 3/4	16 1/2	1/2	51	49	56	54	56	54
2 1/2	0250	13 1/2	11 1/2	13 3/4	35	22	20 7/8	1/2	103	98	106	100	106	100
3	0300	13 1/2	-	13 3/4	35	22	20 7/8	1/2	103	-	106	-	106	-
4	0400	16	-	15 7/8	41	25 1/4	24 3/8	1/2	165	-	170	-	170	-

1/8" NPT cover vent taps are standard on all strainers.

Dimensions and weights are for reference only. Please contact Sure Flow Equipment Inc. for certified drawings.



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Plug Duplex Strainer

**Cast Iron, Cast Steel and Cast 316SS, Cast Bronze
Flanged (F) • Sizes 5", 6", 8"**

Type **DF125CI** Cast Iron; **DF150CS** Cast Steel; **DF150SS** Cast 316SS; **DF150BZ** Cast Bronze

The Plug Type Duplex Strainer is a simple, economical, and trouble free design that has been time tested in applications around the world over many years. This type of strainer is actually a high quality, pressure rated plug valve with integral straining baskets.

Switching the flow from one basket to the other is accomplished by moving the operating handle through a 90 degree arc. The design is such that it is impossible for this operation to stop the flow because of the unique port design in the diverter plug. The entire switching operation takes less than 30 seconds. No tools are needed. The plug is automatically positioned each time in exactly the right spot by integral stops.



Before operating the handle a manual, integral lifting jack, built into the strainer is used to lift the diverter plug off of its seat. After the switching operation the lifting jack is used to reseat the plug. The lifting jack is specially designed to lift and seat the plug easily, even under high pressures. A built-in stop limits the distance the diverter plug can be raised. This minimizes the possibility of material bypassing the plug while it is rotated. It also prevents debris from building up under the plug and making it difficult to reseat.

Other important features of the plug type Duplex Basket Strainers include quick opening, swing away yoke design covers. No tools are required to remove the covers for quick and easy access to the strainer baskets, and they go back on just as fast as they came off.

Draining of the basket chambers is simplified with the standard NPT drain taps. All sizes are provided with mounting legs to bolt the strainer to the floor for a rock solid installation.

The Plug Type Duplex Basket Strainer is your best choice for most applications. Its rugged design and ease of operation have made it the duplex strainer of choice around the world in hundreds of different industries.

Plug Duplex Selection Table

Body Material	Connections	Sizes		Plug Material	Seals	Rating
		Inches	Prefix			
Iron (CI) Bronze (BZ)	Flanged CL.125	5, 6, 8	0500, 0600, 0800	Iron (CI) or Bronze (BZ)	Buna N	200 psig @ 100 °F 5" and 6" sizes
	Flanged CL.150	5, 6, 8	0500, 0600, 0800			
Carbon Steel (CS)	Flanged CL.150	6, 8	0600, 0800	Bronze (BZ) or Stainless Steel (SS)	Viton®	150 psig @ 100 °F 8" size
Stainless Steel (SS)	Flanged CL.150	6, 8	0600, 0800	Stainless Steel (SS)		

Cv Factors*

Size	Value
5"	300
6"	420
8"	900

* For water with clean perforated basket.

• **For Liquid Service** •
5/32" SS perf basket
standard for all sizes.

Ordering Information

Example: Include full description

Size
(Prefix)
0600

Model
Number
DF125CI

Screen
Opening
156

Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Please contact Sure Flow Equipment Inc. for certifications.

6" Flanged Duplex Strainer, Cast Iron,
ASME CL.125 Flanges, with 5/32" perf. basket



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Plug Duplex Strainer

Options

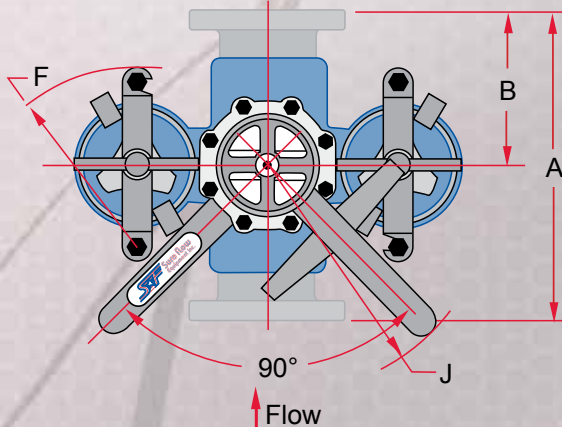
- ▲ Ductile iron construction
- ▲ Basket perforations from 1/32" to 1/2"
- ▲ Basket mesh from 10 to 400
- ▲ Monel baskets
- ▲ Viton®, PTFE, or EPDM seals
- ▲ Vent valves
- ▲ Drain valves
- ▲ 1/4" NPT taps
- ▲ Magnetic basket inserts
- ▲ Pressure differential gauge and switch connections
- ▲ Steam jacket

Dimensional Data (Inches)

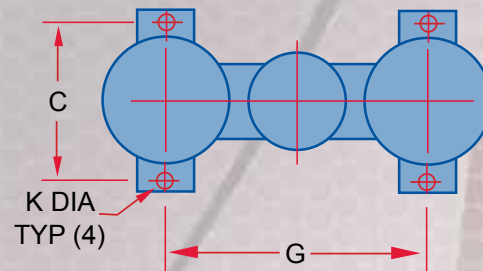
Size		A	B	C	D	E	F	G	H	J	K	L	Shipping Weight (lbs.)			
Inches	Prefix												Cast Iron	Bronze	Carbon Steel	Stainless Steel
5	0500	18 3/8	9	9 3/4	33 1/4	14 3/4	10 1/4	17 3/16	3/8	19 3/4	9/16	41	463	473	-	-
6	0600	22	12 7/8	12 1/2	36 1/4	19 1/2	11 3/4	20 3/4	3/8	19 3/4	5/8	42	575	699	690	738
8	0800	25	14	17	50 5/8	23 1/16	-	30 3/4	1/2	28	15/16	56	1725	2070	1851	1920

Dimensions and weights are for reference only. Please contact Sure Flow Equipment Inc. for certified drawings.

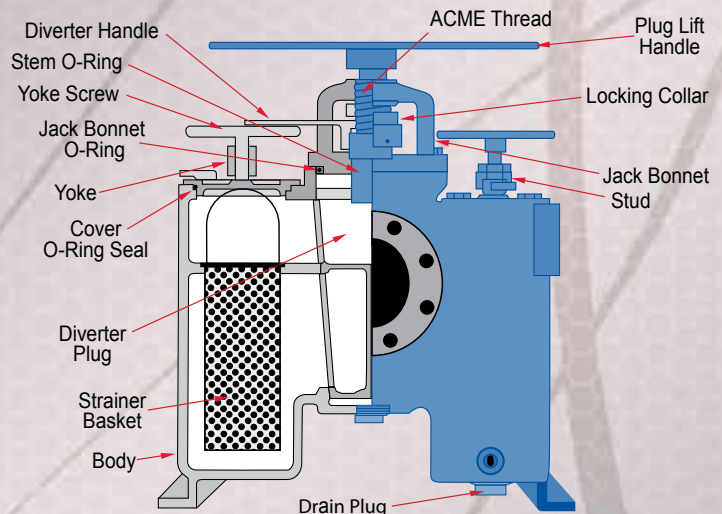
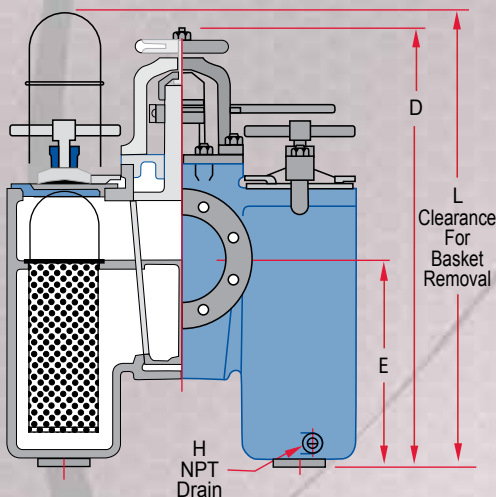
Top View



Mounting Layout



Front View: Flanged - 5" to 8"



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The Web Automatic Self-Cleaning Strainers

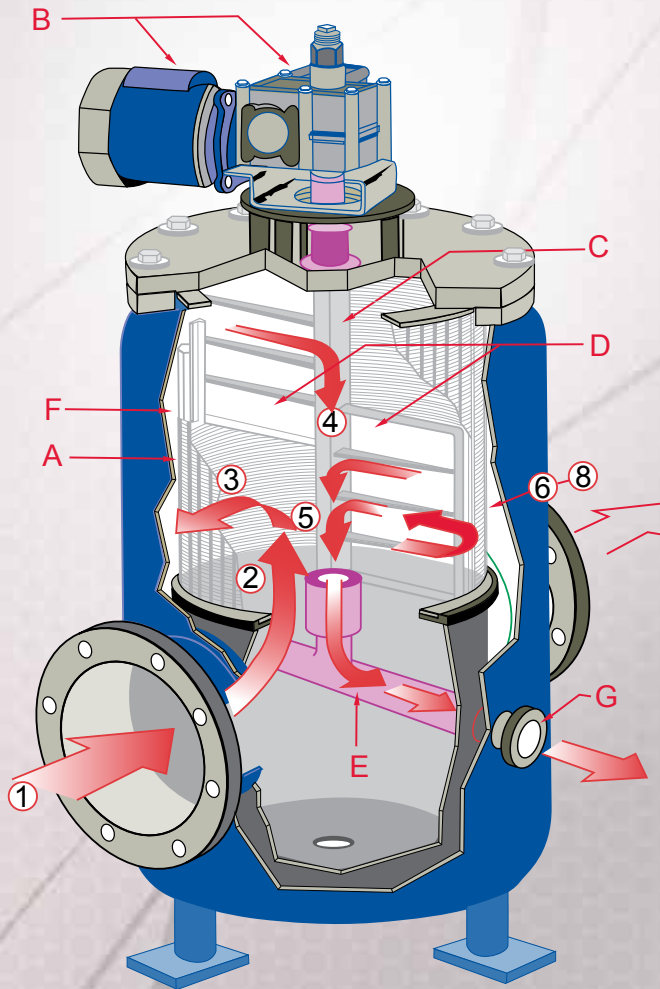
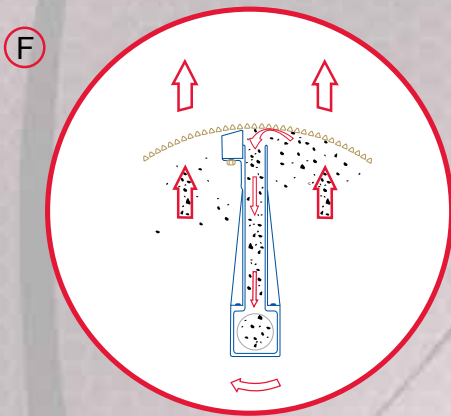


Figure 1 - Cut-away of Web showing fluid flow during operation



Port/straining element interface during backwashing cycle.

The Web

The Web, Motorized, Automatic, Self-Cleaning Strainer, provides continuous debris removal from fluid piping systems that demand full time uninterrupted flow.

The Web is particularly effective in fluid applications where unattended service, high solids loading and/or uninterrupted flow requirements deem a basket strainer and its attendant maintenance problems impractical.

Any of the Model SFA Strainers, applied correctly, will prove efficient and cost effective compared to simplex/duplex strainers or other automatic straining systems.

Sequence of Operation

1. Debris laden fluid enters through inlet to inner chamber. (Fig. 1)
2. Dirty fluid flows upward and outward through the strainer element (A).
3. Debris is retained on the flat face of the strainer element, while strained fluid continues to outer chamber and exits through strainer outlet. (See inset)
4. During backwash or cleaning cycle, the motor/gear reducer (B) is engaged and drives the hollow drive shaft (C) and hollow port (D) around the inner circumference of the strainer element.
5. The backwash assembly C, D, and E are opened to atmospheric pressure by opening the backwash control valve (not shown).
6. Flow reversal occurs at the port/straining element (F) interface because of the pressure differential described in 5. (See Inset)
7. Debris is effectively vacuumed from the full length of the straining element by a vigorous reverse fluid flow and into the hollow port; down the hollow drive shaft and out the backwash outlet (G).
8. The hollow port continues to sweep the full length of the strainer element until the cleaning cycle has ended.
9. The strainer will provide continuous uninterrupted fluid flow during the cleaning operation.
10. The cleaning cycle can be set for continuous or intermittent backwash.



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The Web Automatic Self-Cleaning Strainers

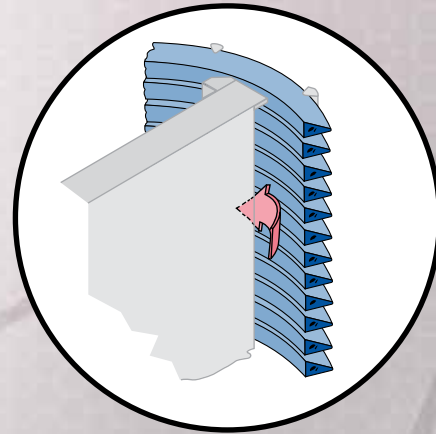


Figure 2 - Wedge Wire Straining Element Cross-Section

Application

The Web is part of a line of Motorized, Automatic Self-Cleaning Strainers. The Web allows for continuous uninterrupted and unattended debris removal.

The Web's unique strainer element design permits installation in virtually any piping system operating at a positive pressure.

The Web can operate through a wide range of operating pressures (5 psig minimum) and solids loading with effective debris removal and backwashing across the entire pressure range. Additionally, only one drain/backwash connection is required for installation, effectively eliminating the expense of a separate backwash pressure connection.

Strainers are used to protect equipment such as valves, pumps, meters, heat exchangers or spray nozzles, as well as in-feed water and process water applications or virtually any similar application.

The Web Model SFA Automatic Self-Cleaning Strainers are fabricated in pipe sizes ranging from 1" to 48" to suit most application requirements.

Proven Features Include:

- Patented rugged screen and mechanical assist backwash mechanism extends useful service life.
- Unique clog-resistant straining element reduces maintenance downtime.
- Unique adjustable accelerator plate aids cleaning in difficult applications.
- All internal replacement parts supplied in corrosion resistant material.
- Efficient new design reduces maintenance requirements; requires fewer parts.
- Flats for manual operation in case of power failure.
- Low rpm backwash mechanism provides more efficient cleaning, less wear of internals.

Straining Element

The Webs feature a revolutionary reverse rolled wedge-wire straining element (Fig. 2) that is extremely rugged and more clog-resistant than conventional strainer elements that use perforated plate or wire mesh screens.

This proven state-of-the-art straining media is fabricated by wrapping vertical rods with wedge shaped profile wire. Each intersection of rod and wire is welded to produce an extremely rugged one-piece element. This forms a continuous slot that allows only two point contact with debris particles to reduce clogging.

The wedge shaped profile wire reduces the possibility of retaining debris smaller than the screen opening which historically has been the cause of premature clogging or failure of competitive screen designs.

Advantages of Wedge Wire Straining Element

- Maximum effective flow area and maximum operating efficiency are maintained throughout service life.
- Maintenance costs are reduced drastically due to reduced clogging and stapling of fibrous material.
- Long-lived straining element provides reduced operating costs over entire service life.
- Rigid element prevents flexing which can cause premature element failure.
- Efficient, effective debris collection at media/screen interface.



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Straining Element Selection/Model Information



Figure 3 - Wedge-Wire Straining Elements

Straining Element Selection

The Model SFA Straining Element (Fig. 3) is an extremely rugged, single-piece unit available in a variety of standard and custom openings and materials.

Screen opening should be selected based on the amount of protection necessary, and not on the smallest opening available. By specifying a smaller opening than needed, more debris will be retained and subsequently result in longer cleaning durations and increased backwash fluid loss. Also, smaller than necessary screen openings will reduce open screen area and increase pressure loss.

The screen opening should be approximately one-third (1/3) to one half (1/2) the largest size particle that can safely pass downstream. Example: A strainer protecting spray nozzles with a 1/16" orifice would be supplied with a 1/32" screen opening.

Straining Element Selection Guide

Standard				
Slot Opening (inches)	Fraction Equivalent inches (mm)	Mesh Equivalent	Micron Equivalent	% Open Area
0.003	(0.08)	200	75	9
0.006	(0.15)	100	149	16.5
0.010	(0.25)	50	250	17.5
0.015	1/64 (0.4)	40	385	24
0.020	(0.5)	35	500	30
0.032	1/32 (0.8)	20	795	40
0.062	1/16 (1.6)	10	1590	51
0.125	1/8 (3.2)	6	3205	67
0.187	3/16 (4.8)	4	4795	72
0.250	1/4 (6.4)	3	6410	78

Other slot openings are available upon request.

Standard screen material is 304 Stainless Steel. 316 Stainless Steel, 316L Stainless Steel, Monel and other materials are available upon request.

Model Information

The WEB Base Unit		
Model	Body Material	Size Range
SFA10	Cast Iron	2" - 10"
SFA20	Carbon Steel	1" - 10"
SFA30	Carbon Steel	10" - 36"

The WEB With Spyder-Clean		
Model	Body Material	Size Range
SFA11	Cast Iron	2" - 10"
SFA31	Carbon Steel	1 1/2" - 36"



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The Spyder-Clean Advantage

The Spyder-Clean

The Spyder-Clean is part of a line of Motorized, Automatic Self-Cleaning Strainers. The Spyder-Clean provides continuous uninterrupted and unattended debris removal making it ideal for fluid piping systems which demand added cleaning abilities. It is very effective in system applications where operating pressure is low (under 5 psig) or where the debris is difficult to remove. Like all our Automatic Strainers, the Model SFA11 and SFA31 Strainers provide unattended service. The addition of external backwash on the Model SFA11 and SFA31 results in superior self-cleaning attributes compared to other automatic strainers.

Application

The Spyder-Clean's unique backwash system permits installation in a broad range of applications. It is well suited for applications with a relatively low pressure as well as those with a very high pressure and from coarse, easily removed debris to fine, sticky debris.

In a low pressure mode (such as on the suction side of a pumping system), the Spyder-Clean system is mounted on the leading edge of the strainer backwash arm. External fluid is directed at an incident angle over the inside surface of the straining element through the high pressure nozzle assembly. The high velocity of this spray assists in cleaning of the wedge-wire straining element. **External source backwash pressure must be a minimum of 30 psi over operating pressure.**

Spyder-Clean Strainers are used to protect equipment such as pumps, motors, heat exchangers or spray nozzles. They are also useful in process applications such as cooling towers or virtually any similar application.

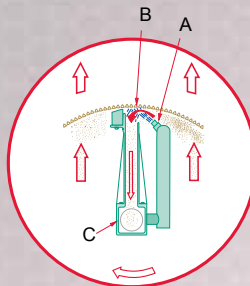
The Model SFA31 Spyder-Clean Self-Cleaning Strainer is fabricated in pipe sizes ranging from 1" through 36" enabling it to suit the requirements of many applications. The Spyder-Clean system is an economical choice that can be easily retrofitted to any Sure Flow Equipment Self-Cleaning Strainer (size 6" and larger) currently in service.

The Unique Spyder-Clean Advantage

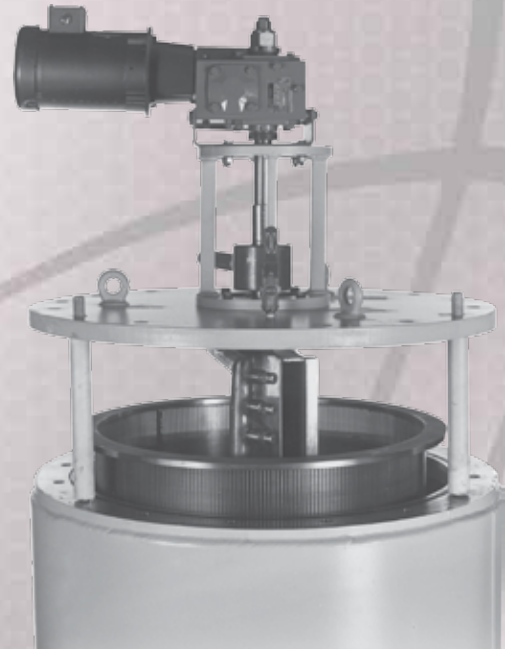
The external source of backwash fluid is introduced by opening the control valve (not shown) connecting the spray nozzles (A) at the leading edge (B) of the backwash assembly.

A "Jet" spray action occurs at the straining element inside surface (see insert) in addition to the flow reversal at the port/straining element interface.

Debris is effectively removed from the full-length of the straining element by a vigorous "Spyder-Clean" fluid flow into the hollow port, down the hollow drive shaft and out the backwash outlet.



Cross-Sectional View of Port/Straining Element During Backwash Cycle



The innovative internals of the Spyder-Clean showing ease of maintenance.

Proven Features Include

- A unique patented spray assisted/mechanical backwash mechanism for extended service life.
- A clog-resistant straining element (wedge-wire configuration) to reduce maintenance downtime and operator assisted attention.
- All internal replacement parts supplied in corrosion resistant materials (special material available on request).
- An efficient, effective cleaning mechanism which reduces annual maintenance, requiring fewer parts.
- A low rpm backwash cycle provides more efficient cleaning, less wear (no contact between rotating parts) and longer duty cycle on motors and speed reducers.
- Any existing Sure Flow Equipment Self-Cleaning Strainer (6" and up) can be converted to Spyder-Clean.

The WEB c/w The Spyder-Clean Model SFA31 Automatic Self-Cleaning Strainer Typical Backwash Flow and External Source Requirement

Strainer Size	1", 1-1/2" 2" or 3"	4"	6"	8"	10/12"	14/16"	18/20"	24"	30"	36"
Backwash Line Size	1"	1"	1-1/2"	1-1/2"	2"	3"	3"	4"	4"	6"
Backwash Flow in GPM	8-12	15-20	30-40	60-75	110-150	170-210	250-310	400-490	550-700	750-900
External Backwash Source GPM	10-15	10-15	10-15	10-15	25-35	40-50	50-60	60-70	85-95	115-125
External Line Size	3/4"	3/4"	3/4"	1"	1"	1"	1-1/4"	1-1/2"	1-1/2"	2"



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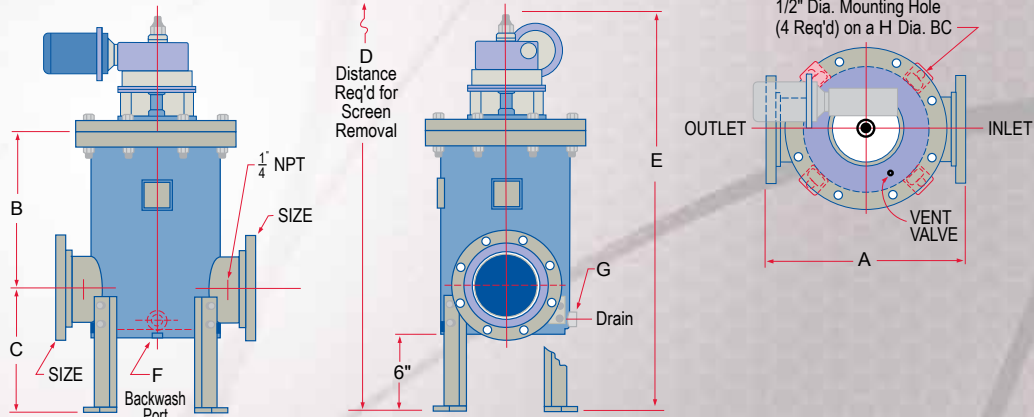


Specifications / Dimensions / Weights

Model SFA20 & SFA31

1" - 10"

Carbon Steel



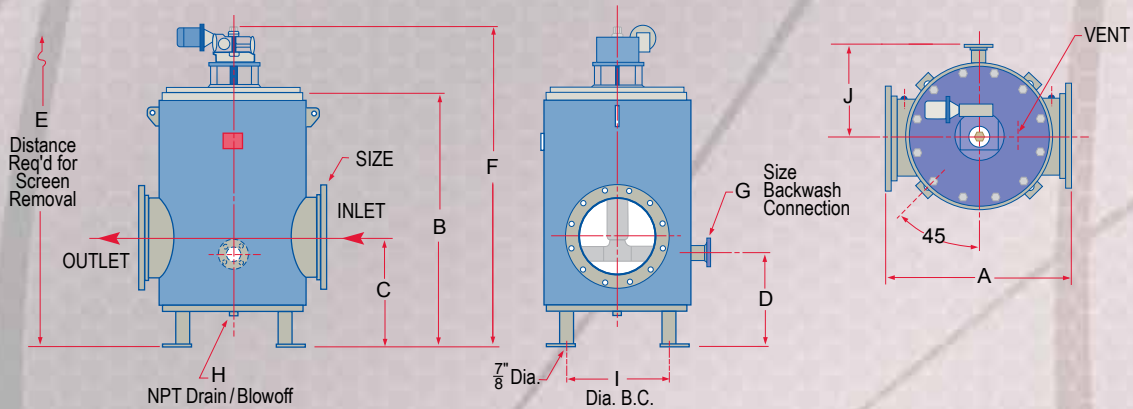
Model No.	Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	Approx. Wts. (Lbs.)			Motor H.P.
										Dry	Wet	Cov.	
0100-SFA20	1-150	16 1/2	14 1/4	10	59	36 1/2	1 NPT	1 NPT	11 7/8	295	440	130	1/4
0150-SFA20	1 1/2-150	16 1/2	14 1/4	10	59	36 1/2	1 NPT	1 NPT	11 7/8	300	445	130	1/4
0200-SFA20	2-150	16 1/2	14 1/4	10	59	36 1/2	1 NPT	1 NPT	11 7/8	305	450	130	1/4
0250-SFA20	2 1/2-150	16 1/2	14 1/4	10	59	36 1/2	1 NPT	1 NPT	11 7/8	310	455	130	1/4
0300-SFA20	3-150	16 1/2	14 1/4	10	59	36 1/2	1 NPT	1 NPT	11 7/8	315	460	130	1/4
0400-SFA20	4-150	16 1/2	14 1/4	10	59	36 1/2	1 NPT	1 NPT	11 7/8	325	470	130	1/4
0600-SFA20/31	6-150	20	15 5/8	11	65	38	1 1/2 NPT	1 NPT	16	560	750	170	1/4
0800-SFA20/31	8-150	28	18	16	74	46 1/2	1 1/2 NPT	1 NPT	21 1/4	825	1065	180	1/4
1000-SFA20/31	10-150	28	18	16	74	46 1/2	1 1/2 NPT	1 NPT	21 1/4	840	1080	180	1/4

Threaded (NPT) Inlet/Outlet connections available.

Model SFA30 & SFA31

10" - 20"

Carbon Steel



Model No.	Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)	J (in)	Approx. Wts. (Lbs.)			Motor H.P.
												Dry	Wet	Cov.	
1000-SFA30/31	10-150	36	43	17 1/2	14 1/2	75	55 1/2	2 NPT	1 1/2 NPT	26	14 3/4	1595	2245	285	1/4
1200-SFA30/31	12-150	36	43	17 1/2	14 1/2	75	55 1/2	2 NPT	1 1/2 NPT	26	14 3/4	1650	2305	285	1/4
1400-SFA30/31	14-150	44	51 1/2	19 1/2	15 1/2	94	69	3-150	1 1/2 NPT	32	21 3/4	2525	3800	510	1/4
1600-SFA30/31	16-150	44	51 1/2	19 1/2	15 1/2	94	69	3-150	1 1/2 NPT	32	21 3/4	2620	3895	510	1/4
1800-SFA30/31	18-150	48	66	24	20 7/8	113	87	3-150	2 NPT	38	25 1/4	3225	5470	700	1/4
2000-SFA30/31	20-150	48	66	24	20 7/8	113	87	3-150	2 NPT	38	25 1/4	3295	5545	700	1/4

Dimensions subject to change without notice. Contact factory for certified drawings.



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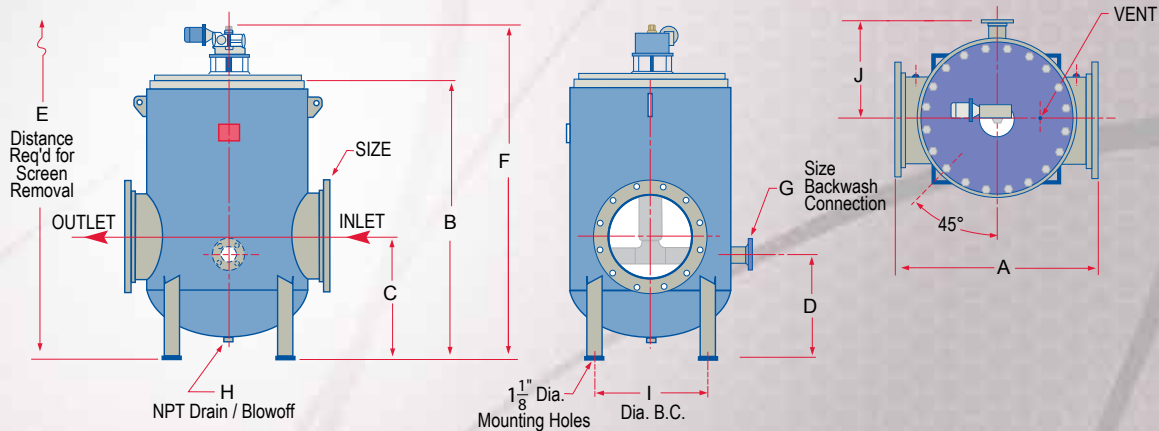


Specifications / Dimensions / Weights

Model SFA30 & SFA31

24" - 36"

Carbon Steel



Model No.	Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)	J (in)	Approx. Wts. (Lbs.)			Motor H.P.
												Dry	Wet	Cov.	
2400-SFA30/31	24-150	56	77	33	28	122	98	4-150	2 NPT	44	28	4,500	8,475	610	1/3
3000-SFA30/31	30-150	66	94	39	34 1/4	150	115	4-150	2 NPT	54	33	6,525	13,625	1,275	1/3
3600-SFA30/31	36-150	86	120	48	40 1/2	210	132	6-150	2 NPT	72	43	12,050	26,975	1,650	1/2

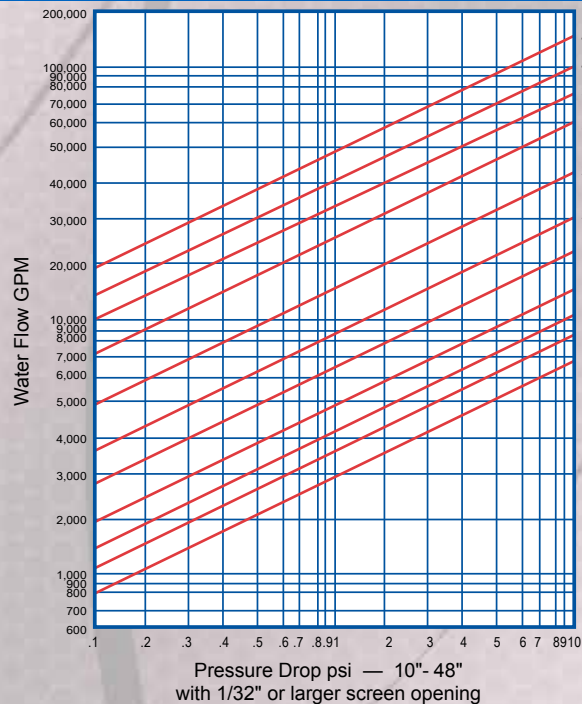
Larger sizes available upon request. Dimensions subject to change without notice. Contact factory for certified drawings.

Typical Backwash Flow Requirement

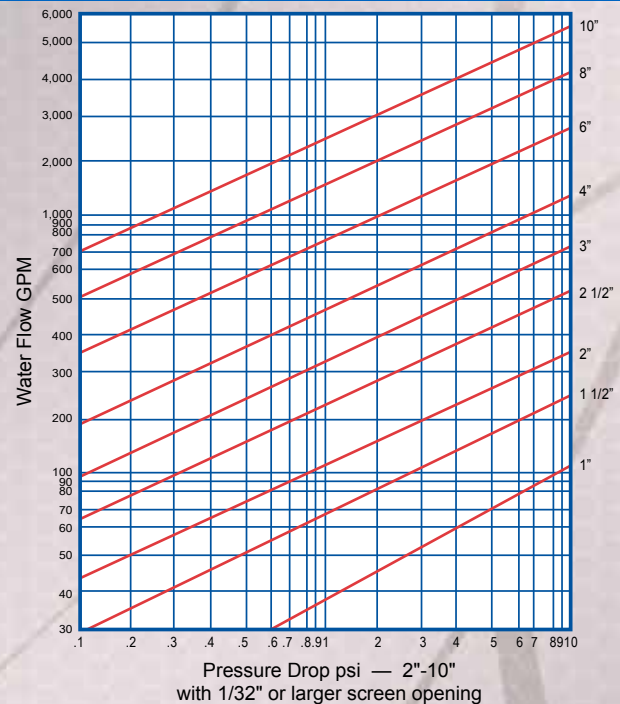
	Model SFA10 / SFA20 (1" - 8")				Model SFA30 (10" - 36")					
Strainer Size	1", 1-1/2" 2" or 3"	4"	6"	8"	10/12"	14/16"	18/20"	24"	30"	36"
Backwash Line Size	1"	1"	1-1/2"	1-1/2"	2"	3"	3"	4"	4"	6"
Backwash Flow in GPM	8-12	15-20	30-40	60-75	110-150	170-210	250-310	400-490	550-700	750-900

Specifications - Pressure Drop Charts

Model SFA30 & SFA31



Model SFA20



NOTE: These charts are for theoretical calculations ONLY. Please contact our office with your exact specifications and you will be provided with factory calculations.



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Specifications and Options

Typical Strainer Specifications

The strainer shall be Model SFA20/SFA30/SFA31 Self-Cleaning, Motorized Type. (Fig. 4)

The body and cover shall be fabricated (carbon steel), designed, manufactured and tested generally to ASME Section VIII Standards, using qualified ASME Section IX welders.

Housing to be suitable for a design pressure of 150 psig. Inlet and outlet connections shall be flanged and conform to ASME B16.5 standards. The strainer shall have a single backwash connection and drain connections. Unit to be complete with factory supplied steel support legs for bolting to concrete or steel base.

Strainer shall be _____ size capable of handling _____ gpm of fluid at a _____ psig pressure loss with clean straining elements.

The straining element will be manufactured from corrosion resistant (304 Stainless Steel) reverse rolled slotted wedge wire screen designed with _____ inch openings. The wide or flat cross section of the wedge wire shall face the direction of flow providing for a continuous smooth flat surface to trap debris. The straining media shall be free of pockets, tubes, collector bars, etc. that accumulate and trap debris permanently.

All internal parts will be of corrosion resistant (304 Stainless Steel). The strainer shall be provided with drive shaft and hollow port assembly fitted with all necessary bearings and seals.

The drive arm and hollow port assembly including the adjustable accelerator plate will be free running at a maximum speed of two (2) rpm and not contact with screen surface. Port assembly shall be factory and field adjustable for positive effective cleaning and shear capability.

Note: Sizes 1" through 16" have (1) backwash hollow port. Sizes 18" and up will have (2) backwash hollow ports.

Drive shaft will be supported at the top with roller bearings located in a double reduction gear reducer and at the bottom with a water lubricated guide bearing.

The gear reducer shall be driven by a _____ hp, _____ v, _____ Ph, 50/60 Hz, TEFC motor.



Fig. 4

Strainer Options Available

Cover Lift Assemblies -	Recommended for remote locations.
ASME -	ASME Section VIII, Division 1. 10 CFR 50 Appendix B. ASME Section II, Class 3.
Materials of Construction -	Consult factory for stainless steel, copper, nickel, monel, or other requirements.
Control Package -	Control Panel with Nema 4 Enclosure, Backwash Valve with Electric Operator, Single Element Differential Pressure Switch.
Design -	High Pressure applications - Consult factory.
Spyder-Clean	Low Pressure and Special Application.
Skid Packages -	All equipment desired, including strainers, valves, controls, wiring, piping and skids may be combined as a complete, custom package. Size of the project has no limitation.



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The Web Automatic Cast Self-Cleaning Strainers



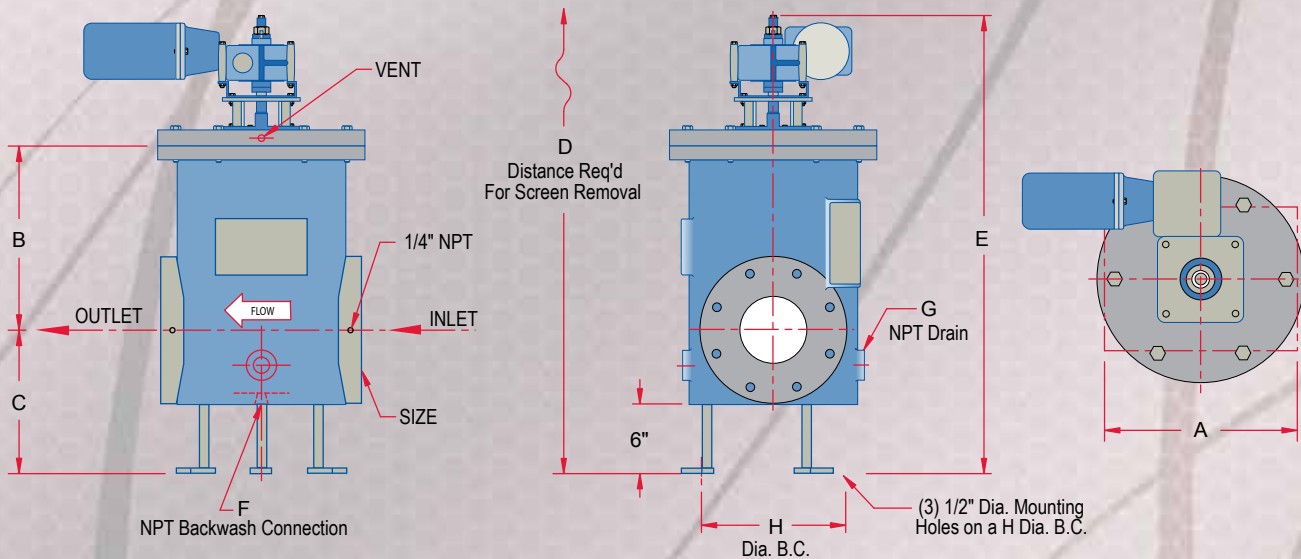
Engineered for Excellence

Sure Flow Equipment places priority on designing products that are both high in quality and that serve to be an economical choice. These principles were kept in mind when creating the Model SFA10 Automatic Cast Self-Cleaning Strainer. This model is an example of Sure Flow Equipment's commitment to meet our customers' constantly evolving requirements.

Quality

Automatic Self-Cleaning Strainers continue to be meticulously manufactured in order to meet the highest level of quality possible. The Model SFA10 Automatic Self-Cleaning Strainer coheres with Sure Flow Equipment's objective of providing consistent and trouble free service. This strainer model is designed and constructed in compliance with ANSI and ASME Section VIII, Division 1. The ASME Code "U" Stamp is also available on these models.

Model SFA10 & SFA11 2" - 10" Cast Iron



Model No.	Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	Approximate Wts. (Lbs.)			Motor H.P.
										Dry	Wet	Cover	
0200-SFA10/11	2-125/150FF	23 7/8	14	10 1/2	60	37	1 NPT	1 NPT	13 1/4	370	520	130	1/4
0250-SFA10/11	2 1/2-125/150FF	23 7/8	14	10 1/2	60	37	1 NPT	1 NPT	13 1/4	375	530	130	1/4
0300-SFA10/11	3-125/150FF	23 7/8	14	10 1/2	60	37	1 NPT	1 NPT	13 1/4	380	540	130	1/4
0400-SFA10/11	4-125/150FF	11 7/8	14	10 1/2	60	37	1 NPT	1 NPT	13 1/4	300	425	130	1/4
0600-SFA10/11	6-125/150FF	15 7/8	15 7/8	11 1/2	62	39	1 1/2 NPT	1 NPT	16 1/4	590	690	170	1/4
0800-SFA10/11	8-125/150FF	32 5/8	20 3/4	14	75	47 1/2	1 1/2 NPT	1 NPT	21 1/4	1160	1435	180	1/4
1000-SFA10/11	10-125/150FF	20 5/8	20 3/4	14	75	47 1/2	1 1/2 NPT	1 NPT	21 1/4	875	1120	180	1/4

Dimensions subject to change without notice. Contact factory for certified drawings.



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Sequence Controller

Design and Construction

The Sequence Controller has been designed with the customers' specific requirements in mind. The Sequence Controller provides an effective automatic backwashing cycle with minimal water loss.

The Sequence Controller has been constructed with state-of-the-art industrial components. This allows for the replacement of individual components without having to replace an entire circuit board. The components are more durable and reliable and adjustments can be made with ease.



Standard Features

- Enclosure - Nema 4
- Adjustable Cycle Timer
- Off-delay Timer
- Motor Starters with Auxiliary Contact and Overload Relay
- Selector Switch
- Indicating Lights
- Fuses
- Terminal Block

Modes of Operation

The Sequence Controller provides two modes of operation; intermittent and continuous. By turning the selector switch, the mode of operation can be selected.

Automatic Intermittent Position

With the selector in the "Auto" position, the drive motor will start and the backwash valve opens as determined by the adjustable cycle timer or by the differential pressure switch.

The differential pressure switch is normally factory set at 1 - 1-1/2 psig over the anticipated clean pressure drop. Should a high differential pressure occur during the timed off period, the differential pressure switch will override the cycle timer and start or continue the backwash until the differential pressure is satisfied.

After the differential pressure has been satisfied, the strainer will continue to backwash for an additional 60 seconds (time delay relay).

The automatic self-cleaning strainer would start a backwash cycle based on the timed sequence selected on the adjustable cycle timer. The timed sequence should be determined by each installation and the conditions experienced. The adjustable cycle timer can be programmed from 15 minutes to a 10-hour cycle (off) and for 1 to 10 minutes duration (on). Adjustments can be made as conditions warrant. The default factory settings for timers are 2 hours OFF and 2 minutes ON.

Continuous Operation

Continuous mode can be achieved by moving the selector switch to the "Manual" position. In continuous mode the backwash valve will be open and the drive motor will be running resulting in continuous backwash. This mode of operation may be necessary if the installation experiences high solid loadings.

In either intermittent or continuous mode of operation the backwash assembly is specifically designed to rotate at 2 rpm to allow for effective backwashing in less time. This decreases the amount of backwash water that is lost.

Standard Control Package

The Sequence Controller Control Package consists of:

- Control Panel with Nema 4 Enclosure
- Backwash Valve with Electric Operator
- Single Element Differential Pressure Switch

Options

- 230V, 380V, 460V, 575V
- 50 or 60 hertz
- Dual Element Differential Pressure Switch
- Nema 4X (Fibreglass or Stainless Steel), Nema 7 or 9 (Explosion Proof), Nema 12, Nema 3 Enclosures
- Circuit Breakers, Disconnect Switch, Transformer
- Reset Buttons
- Alarms
- PLC Interface and/or Pump Interlock
- Extra Contact and Relays
- Backwash Valve can be supplied with Pneumatic Operator
- Backwash Valve available in numerous materials
- Differential Pressure Switches available with Mercury, Snap Action, Diaphragm or Piston Contacts.

Codes / Standards

The Sequence Controller can be manufactured to UL Listings, CSA, JIC, NEMA Standards.



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FRP Strainers - Series and Materials

FRP : Fiberglass Reinforced Plastic

P-Series FRP Strainer

P-Series Strainers are made from a highly corrosion resistant pipe system with reinforced chemical resistant barrier.

Strainers are fabricated with premium resins-Derakane 411 or Hetron 922.

P-Series Strainers are recommended for use in a wide range of moderate to aggressive corrosion environments.

H-Series FRP Strainer

H-Series Strainers have enhanced corrosion resistance for high temp. environments up to 200 deg. F. It has improved resistance to strong acids, solvents, and oxidizing agents.

Strainers are fabricated with premium resins- Derakane 470 or Hetron 970.

H-Series Strainers are recommended for hot concentrated HCl and has been used extensively in mineral process industry applications.

A-Series FRP Strainer

A-Series Strainers have enhanced resistance to erosive slurries and is the standard material used in Flue Gas Desulphurization (FGD) projects worldwide for over 35 years.

The material of construction of these strainers out-perform Standard FRP, Rubber Lined Carbon Steel, and Alloy piping in fine particle slurries including limestone, gypsum, & lime). Strainers are fabricated with premium resins-Derakane 411 or 470, Hetron 922 or 970. Strainers shall have a nominal 110 mil abrasion/corrosion barrier comprised glass in a specially formulated abrasion resistant resin matrix.

Material Features

- Integral corrosion resistant liner
- Bisphenol A vinyl ester resin throughout corrosion liner and structure
- 50 to 150 psi rating
- Joining with Tapered Adhesive, Butt & Wrap, or O-Ring joints
- U.V. protected
- Optional fire retardant resins
- Temperature limitation of 180 deg. F (82 deg. C)

Material Features

- Custom designed corrosion barriers
- Elevated temperature performance
- Enhanced solvent resistance
- Bisphenol A vinyl ester or epoxy Novolac vinyl ester resin
- 50 to 150 psi rating
- Joining with Tapered Adhesive or Butt & Wrap joints
- U.V. protected
- Optional fire retardant resins
- Temperature limitation of 220 deg. F (104 deg. C)

Material Features

- Integral abrasion resistant liner
- Resistant to chlorides and fluorides
- 50 to 150 psi rating
- Joining with Tapered Adhesive and Butt & Wrap joints
- U.V. protected
- Optional fire retardant resins
- Temperature limitation of 180 deg. F (82 deg. C)



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FRP Basket Strainers

FRP (Fiberglass Reinforced Plastic) Basket Strainers

All Strainers are manufactured from premium resins and feature 5 part construction:

- **Two Chemical Barriers:** Nominal thickness 10 mils of Nexus veil, 90% resin to 10% reinforcement. (Layers 1 & 4)
- **Anti-wicking barrier:** 100 mil of chopped strand glass, 75% resin to 25% reinforcement. (Layer 2)
- **Structural Layer:** Filament wound continuous roving, wind angle 55 deg: 30% resin to 70% reinforcement. (Layer 3)
- **Exterior Protection:** Polyester resin gel coating: 10 mil thickness. (Layer 5)



This construction offers the finest in chemical and impact resistance. Various resins and matrices are used to achieve different strainer criteria. Please see comparison of P, H and A-Series FRP Strainers for details.

Standard baskets are manufactured of heavy gauge PVDF with 1/4" or 1/8" perforations. Stainless, titanium, monel or hastalloy baskets are also available. Mesh liners are available of PP, PVDF, ETFE, Polyester as well as metallic screens.



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FRP Strainers - P-Series

Specification for Fiberglass Reinforced Plastic P-Series Strainers

1.) SCOPE

THIS SPECIFICATION COVERS REQUIREMENTS FOR FRP STRAINERS. Y TYPE, BASKET TYPE AND DUPLEX TYPES ARE INTENDED FOR USE IN CHEMICAL PIPING SYSTEMS WHERE MAXIMUM RESISTANCE TO CORROSION, PRESSURE AND TEMPERATURE IS REQUIRED.

2.) STRAINER DESIGN

- 2.1 Strainer shall be flanged basket (or Y) type.
- 2.2 Body configuration shall be 1. in-line, 2. offset, 3. angled offset, 4. boot. (select one)
- 2.3 Basket shall be PVDF, Perforations 1/8" on 3/16" centers (or as required)
- 2.4 Minimum area ratio of pipe to basket shall be 10 to 1.
- 2.5 All strainers shall be furnished with minimum 1/2" flanged drain.
- 2.6 Cover shall be FRP with optional 1/2" vent tap.
- 2.7 Flanges shall be contact molded.
- 2.8 Strainer shall be rated for 150 psi at 180 deg. F
- 2.8 Strainer design shall conform to ASME code for non-metallic pressure vessels.
- 2.8 Vendor shall supply min 5 years service history of applications in similar service.

3.) CONSTRUCTION

- 3.1 Strainer body shall be of filament wound construction, for sizes 12" and lower. Larger sizes may be hand lay up construction in accordance with PS-15-669.
- 3.2 Resin shall be Vinyl Ester. Derakane 411 or Hetron 922, or equal.
- 3.3 Body shall contain a chemical barrier, 10 mils nexus, 90 % resin, 10% reinforcement
- 3.4 Anti-wicking barrier, 100 mils chopped strand glass, 70% resin to 30% glass shall be provided.
- 3.5 Structural layer shall be filament wound continuous roving, 30% resin to 70% glass.
- 3.4 Exterior protection is unsaturated polyester resin based high quality gel coat- 10 mils min.

4.) STANDARDS

- 4.1 All products shall conform to or exceed the specifications as set forth in the following standards.

RTP-1/Sec X

ASTM B31.3/Sec 15

BS1 BS 6464

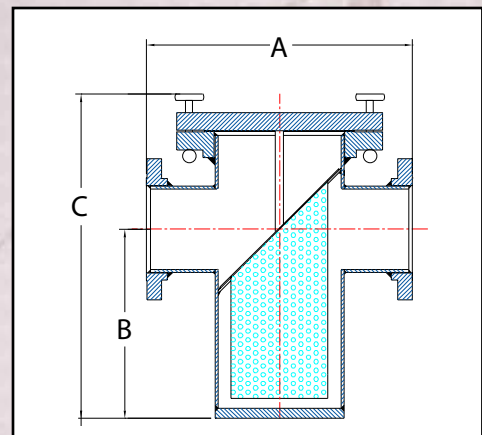
GSB 41-GP-22

Notes:

- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

FRP Strainer Dimensions (Inch) For Inline Configuration			
Strainer Size	A	B	C
2"	11"	10 1/2"	18 1/2"
3"	11"	10 1/2"	18 1/2"
4"	13 3/4"	11 5/8"	21 1/4"
6"	18"	16"	26 1/2"
8"	20"	21 1/2"	34 1/2"
10"	22"	23"	37 1/2"
12"	27 1/2"	31 5/8"	46 3/4"
14"	35"	32 1/2"	49"



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FRP Y Strainers

FRP (Fiberglass Reinforced Plastic) Y Strainers

Sure Flow FRP Y type strainers are available in sizes 2 " and up. The design of the FRP Y Strainer allows for in-line piping in either a vertical or a horizontal orientation. All Y strainers feature a cleanout valve. This eliminates the need for removing the screen when performing routine cleaning.

Sure Flow manufactures FRP Y Strainers to standards that exceed industry standards. These strainers are made for critical applications where high flow rates and high loading potential exists, while low pressure drops are desired.



The lamination construction of FRP Strainers combines the chemical resistance of the particular liner material (thermoplastic) and the structural strength of fiberglass. Sure Flow Y Strainers are also offered in all-FRP construction. Resins can be used for high temperature and abrasive applications

- EPDM lid gasket is standard, but Viton and Teflon are also options.
- Flanged lid with stainless bolts, nuts and washers are standard. T-Handle Design for easy lid removal is an option.
- Screens are 1/4" perforated- made from same material as the strainer (FRP Ys have PVDF Screens). Other perms/materials are available.
- Pipe connections are Flanges. Threaded, socket, groove latch and couplings are also available.
- Flanged or threaded blowdown ports are provided.
- Custom dimensions and designs are readily available.

Pressure Drop

As with all Sure Flow strainers, the FRP Y Strainer is engineered to offer the lowest practical pressure drop. Pressure drop through the strainers is determined by several factors. These are line size, flow rate, specific gravity, viscosity and percent of open area of the screen. To minimize the pressure drop, the screen open area is at least 4 times the cross sectional area of the inlet pipe. (Through clean screens only).

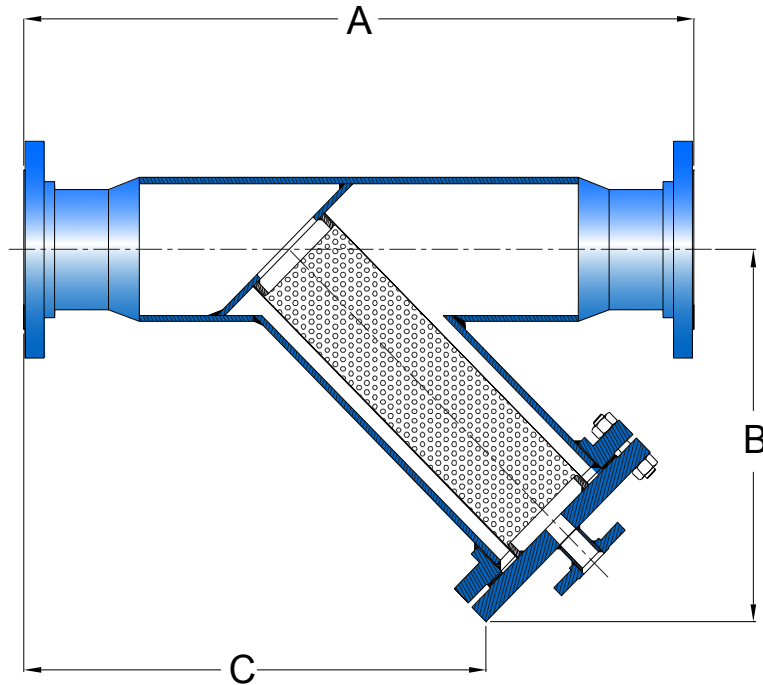


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FRP Y Strainers - Dimensions & Performance



Notes:

- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

FRP Strainer Dimensions (Inch) For Inline Configuration				Performance Criteria		
Flange Size	A	B	C	Basket Surface Area (in ²)	Ratio Basket Surface : Pipe	Flow Rate = 1 psid (Clean Basket)
2"	23	12	15 5/8	72.2	23	140 GPM
3"	24	12 1/4	15 1/4	72.2	102	140 GPM
4"	32	16 1/4	21 3/8	207.2	16.5	400 GPM
6"	39	20 7/8	28 1/4	384.3	13.6	790 GPM
8"	48	24 1/4	31 3/4	594.6	11.8	1150 GPM
10"	50	27 5/8	34 7/8	826.6	10.5	1600 GPM
12"	56	32 7/8	41 7/8	1130.4	10	2230 GPM
14"	60	39 1/2	47	1519.8	9.9	3000 GPM



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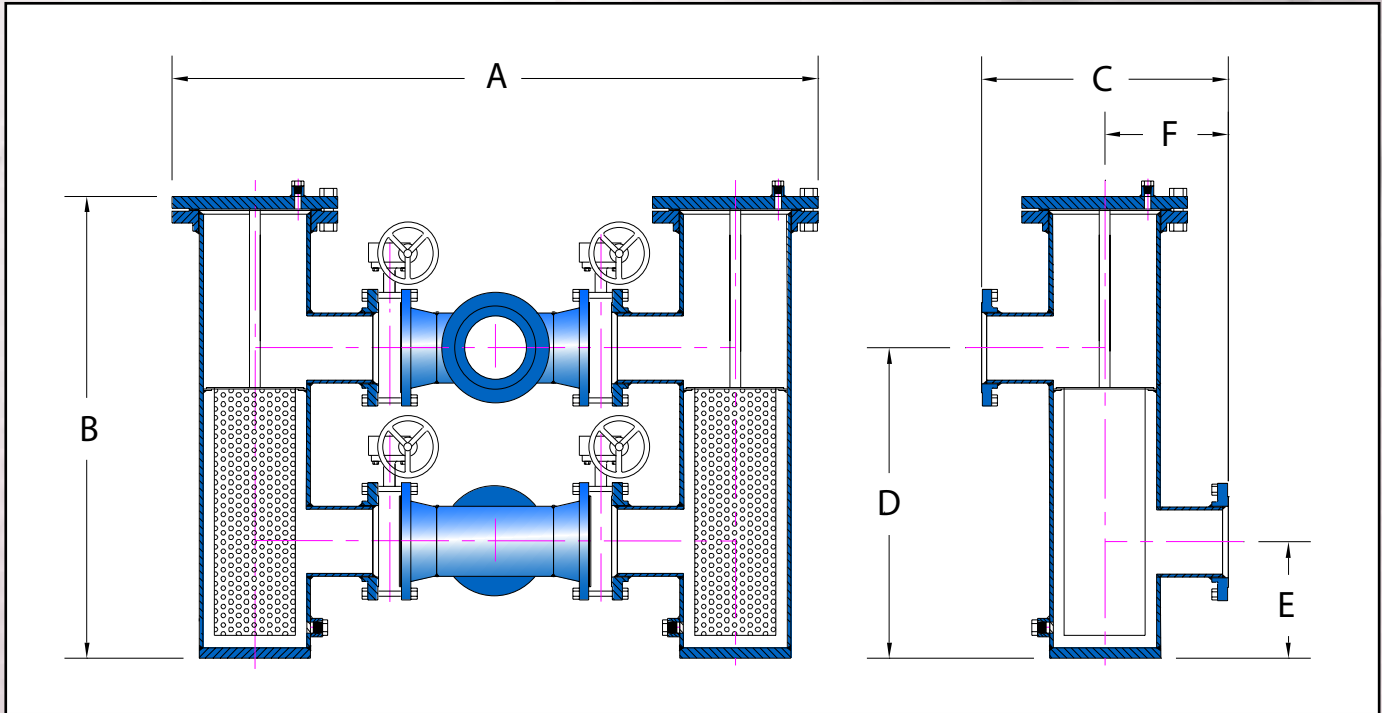
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FRP Duplex Strainers

FRP (Fiberglass Reinforced Plastic) Duplex Strainers

Sure Flow FRP Duplex Basket Strainers are ideal for applications in water environments, water parks, commercial swimming pools and aquariums. They are also an ideal choice for industrial and chemical resistant applications.



Notes:

- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Dimensions (Inch)						
Size	A	B	C	D	E	F
2" & 3"	36	20	10 7/8	26	6	6
4"	38	26	14 1/2	30	10	7 1/4
5"	51 1/2	38	25 1/4	30	10	13
6"	51 1/2	38	25 1/4	30	10	13
8"	60	48	26 1/4	37 1/2	12	14
10"	70 3/4	56	30	42	12	15
12"	75	64	32	48	12	16
14"	89	66	36	50	14	18
16"	107 1/2	68	40	50	14	20



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FRP Strainers - Specification & Identification

Strainer Specification Tables

Getting as much information available during the initial stages of a strainer design is critical. We do understand how design criteria changes as projects develop and we are very reactive to these variations.

The information in the tables to the right will most likely not be completely available at the onset of a project, but should be filled out as well as possible for optimal strainer design.

Strainer Identification

All strainers are given a serial number for future reference and this is affixed to each strainer that leaves the factory. Substantial records are kept at the factory for future reference. Therefore, in the event the end user needs assistance, parts or replacement, Sure Flow is able to identify the exact strainer in question by referencing this, including special circumstances of each individual unit.



Ordering Selection Guide

Fluid Characteristics		
Composition		
Operating Temperature		F
Operating Pressure		PSI
Viscosity		Centipoise
Specific Gravity		SG
Minimum Size to Filter		Mesh, Micron, Inch or MM
Allowable Pressure Drop		PSI - Clean Basket
Flow Rate		GPM
Strainer Characteristics		
Type of Strainer		
Size		
Designed Flow Rate		
Design Pressure		
Maximum Temperature		
Maximum Pressure		
Housing Material		
Gasket Material		
Liner Material		
Drain Size/Type		
End Connections		
Vent Size/Type		
Pressure Taps		
Model Number		
Date of Manufacture		
Serial Number		



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Barred Tees

BARTEE150 / BARTEE300 / BARTEE600
SA234 - Carbon Steel / 304 - Stainless Steel / 316 - Stainless Steel

Buttweld End Connections



Sure Flow Barred Tees are manufactured to specific customer project specifications in a full range of sizes from ASME Class 150 to 2500 and higher. They are fabricated to the highest industry standards and pipeline vessel design codes in Carbon Steel, Stainless Steel or Alloy materials.

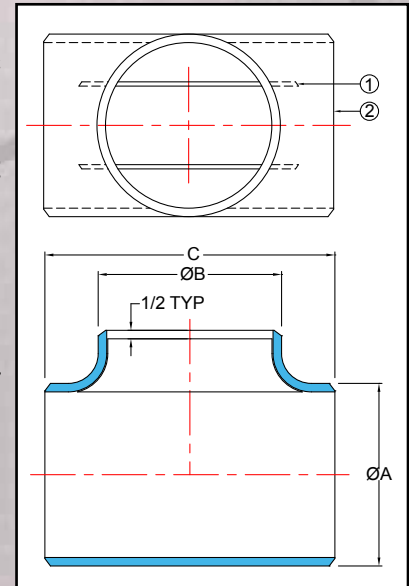
Custom fitted bar sections are welded to the branch of the buttweld Tee. The bars are added to ensure the Pig passes by the branch opening. Bar spacing is designed to prevent damage to the functional elements of the Pig.

Buttweld End Connections are standard. Optional Flanged Connections in raised face or RTJ, as well as extended pup-pieces, are available. Barred Tees are used in a pipeline Launcher/Receiver system and at any branch in the pipeline to ensure safe passage of the Pig.

Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.



Construction		
Item	1	2
Description	Bar	Buttweld Tee

Dimensions (Inches)														
A Run Size	Prefix	B Branch Size												C
		2	3	4	6	8	10	12	14	16	18	20	24	
2	0200	1/4												5
3	0300	1/4	1/4											6 3/4
4	0400	1/4	1/4	1/4										8 1/4
6	0600	1/4	1/4	1/4	1/4									11 1/4
8	0800	1/4	1/4	1/4	1/4	1/4								14
10	1000	1/4	1/4	1/4	1/4	1/4	1/4							17
12	1200	1/2	1/2	1/2	1/2	1/2	1/2	1/2						20
14	1400	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2					22
16	1600	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2				24
18	1800	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2			27
20	2000	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2		30
24	2400	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	34
		1 Bar					2 Bars				3 Bars			
		Bar Quantity and Thickness												

Ordering Information

Example: Include full description

Size Model
(Prefix) Number

0200 BARTEE150/234

2" Barred Tee, ASME Class 150, Carbon Steel

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
BARTEE150234	2" - 24"	150 @ 366 °F	285 @ 100 °F
BARTEE150304/316			275 @ 100 °F
BARTEE300234	2" - 24"	300 @ 422 °F	740 @ 100 °F
BARTEE300304/316			720 @ 100 °F
BARTEE600234	2" - 24"	600 @ 489 °F	1480 @ 100 °F
BARTEE600304/316			1440 @ 100 °F



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Launchers and Receivers

General Overview

Sure Flow Launchers and Receivers are custom designed to your specific application in a full range of sizes from ASME Class 150 to 2500 and higher. They are fabricated to the highest industry standards and pipeline vessel design codes in Carbon Steel, Stainless Steel or Alloy materials.



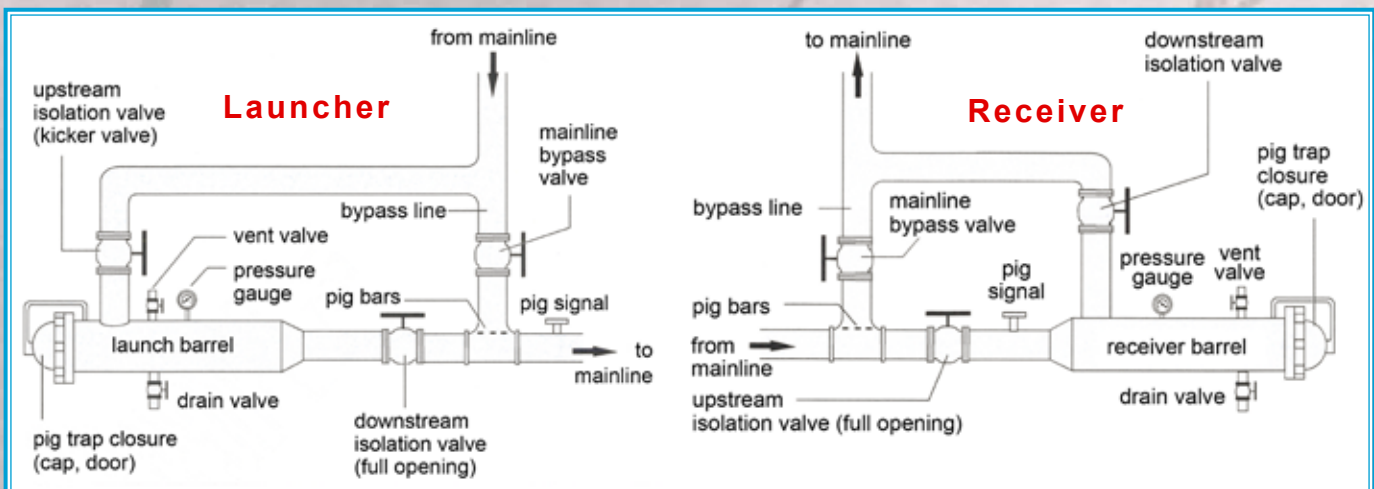
Launchers and Receivers are used in process pipelines to facilitate the activity of Pigging the pipeline.

Pipeline Inspection Gauges or Pigs are tools that are inserted into and move through the pipeline, propelled by the flow of the fluid. Pigs perform many tasks including cleaning, inspection, coating the pipeline interior and separating batches of different fluids.

A Launcher is located at the upstream end of the pipeline to launch the Pig into the pipeline. A Receiver is located at the downstream end of the pipeline to remove the Pig from the pipeline.

The design of the Launcher and Receiver will depend on the Pig and pipeline design conditions. Launchers and Receivers can have many options. Sure Flow will custom design your Launcher or Receiver to work with your conditions and requirements.

Typical Launcher and Receiver Piping Configuration



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Launchers and Receivers

Standard and Optional Features

Sure Flow offers simple barrel Launchers and Receivers through to complete skid mounted units that include Actuated Valves, Instrumentation, Pig Signalers and Control Systems.



Sure Flow Launchers and Receivers are manufactured to customer specifications with standard features and options including:

Standard Features

- Carbon Steel Body
- NPT Vent, Drain, Pressure Gauge, Pig Signal Connections
- Quick Open T-Bolt Closure with Hinge
- Designed to ASME Section VIII Div 1
- Designed for Operating Pressure of 285 psi at 100 °F

Optional Features

- Stainless Steel or Alloy Materials
- Design Codes available: ASME B31.3 or ASME B31.4 or CSA Z662
- ASME "U" Code Stamp and National Board "NB" Mark Available
- Cam Lock Handles or Breakover Wrench Style Bolts
- Cover Davit
- Pressure Gauge / Switch
- Pig Signaler
- Support Legs or Skirt
- Weld Neck Flanged Connections
- Alternate Elastomer Seals to suit various applications
- Lifting Lugs for Installation
- Additional Ancillary Connections
- Special Coatings



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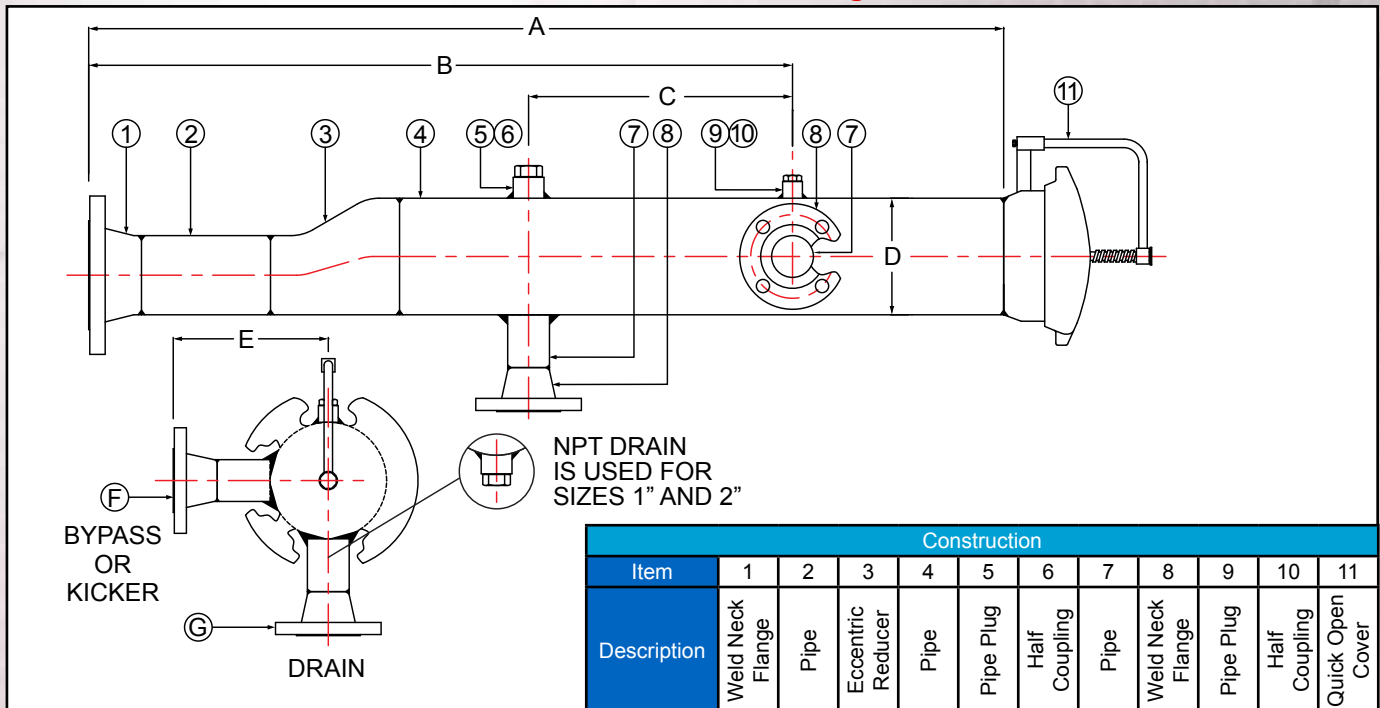
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Dimensions - Launchers

LCR150 / LCR300 / LCR600 - Carbon Steel
LCR150SS / LCR300SS / LCR600SS - Stainless Steel

ASME Class 150 / 300 / 600 - Flanged Connections



Notes:

- Higher ASME pressure ratings available
 - Larger sizes available
- Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Dimensions (Inches)								
Run Size	Prefix	A	B	C	D	E	F	G
4	0400	52	40	15	6 5/8	11	2	1
6	0600	56	42	16	8 5/8	12	3	2
8	0800	58	44	18	10 3/4	13	4	2
10	1000	64	47	18	12 3/4	14	4	2
12	1200	68	49	18	16	16	6	4
14	1400	76	54	18	16	16	6	4
16	1600	90	64	20	18	17	8	4
18	1800	96	66	20	20	20	10	6
20	2000	98	66	22	24	21	10	6
24	2400	104	70	26	26	23	10	6
26	2600	108	72	26	28	24	10	6
28	2800	110	74	28	30	26	12	6
30	3000	114	76	28	36	28	12	8
36	3600	122	82	32	40	32	14	8

Ordering Information

Example: Include full description

Size Model
(Prefix) Number

3000 LCR150SS

30" Launcher, ASME Class 150, Stainless Steel

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
LCR150	4" - 36"	150 @ 366 °F	285 @ 100 °F
LCR150SS			275 @ 100 °F
LCR300	4" - 36"	300 @ 422 °F	740 @ 100 °F
LCR300SS			720 @ 100 °F
LCR600	4" - 36"	600 @ 489 °F	1480 @ 100 °F
LCR600SS			1440 @ 100 °F



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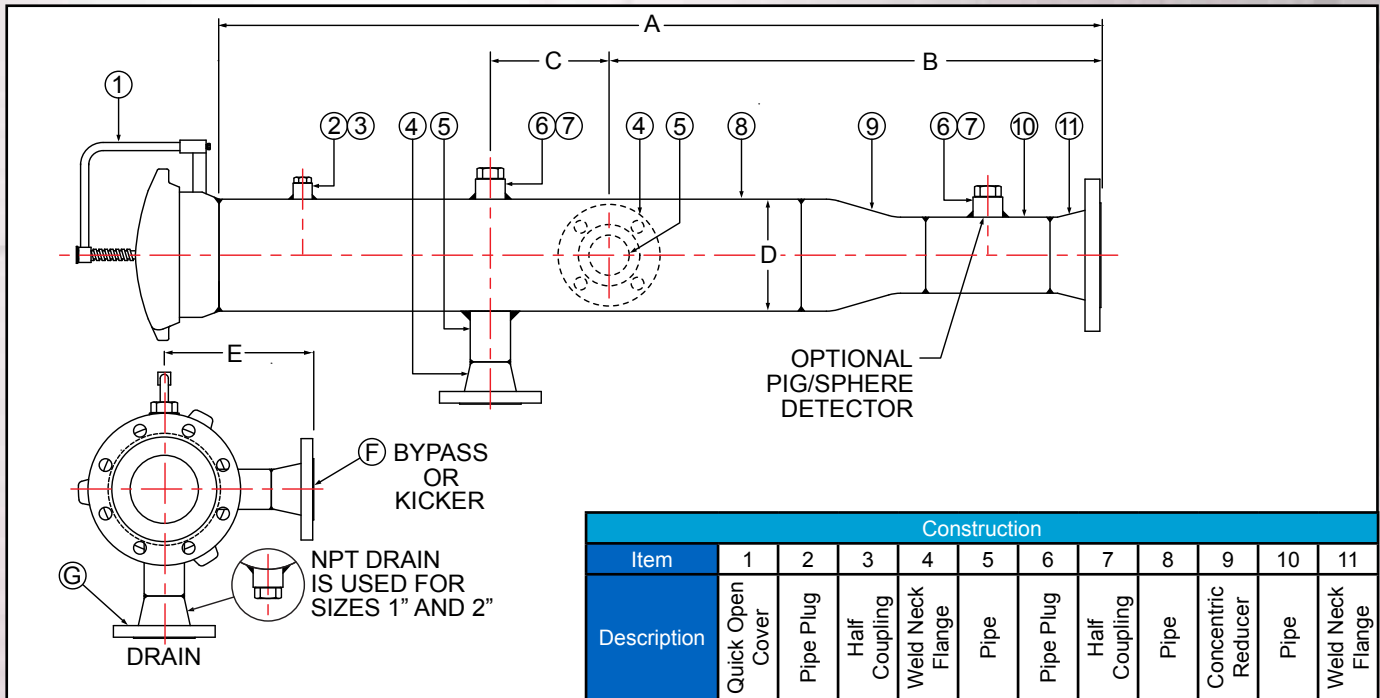
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Dimensions - Receivers

RCR150 / RCR300 / RCR600 - Carbon Steel
RCR150SS / RCR300SS / RCR600SS - Stainless Steel

ASME Class 150 / 300 / 600 - Flanged Connections



Notes:

- Higher ASME pressure ratings available
 - Larger sizes available
- Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Dimensions (Inches)								
Run Size	Prefix	A	B	C	D	E	F	G
4	0400	62	29	7	6 5/8	11	2	1
6	0600	66	31	8	8 5/8	12	3	2
8	0800	74	34	9	10 3/4	13	4	2
10	1000	82	36	10	12 3/4	14	4	2
12	1200	90	38	11	16	16	6	4
14	1400	112	45	12	16	16	6	4
16	1600	114	50	14	18	17	8	4
18	1800	120	55	16	20	20	10	6
20	2000	124	58	18	24	21	10	6
24	2400	130	60	18	26	23	10	6
26	2600	138	64	18	28	24	10	6
28	2800	148	68	20	30	26	12	6
30	3000	160	74	22	36	28	12	8
36	3600	172	80	24	40	32	14	8

Ordering Information

Example: Include full description

Size Model
(Prefix) Number
1200 RCR300SS

12" Receiver, ASME Class 300, Stainless Steel

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
RCR150	4" - 36"	150 @ 366 °F	285 @ 100 °F
RCR150SS			275 @ 100 °F
RCR300	4" - 36"	300 @ 422 °F	740 @ 100 °F
RCR300SS			720 @ 100 °F
RCR600	4" - 36"	600 @ 489 °F	1480 @ 100 °F
RCR600SS			1440 @ 100 °F



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Line Blinds - Features & Technical Specs

Spectacle Blinds, Paddle Blinds and Paddle Spacers

Spectacle Blinds

The Spectacle Blind is a simple safety device that installs between two pipe flanges. During normal operation the open end is installed as a spacer to allow uninterrupted flow. To stop the flow in the pipeline, the blind end is rotated into place between the flanges. This positively isolates the downstream piping and equipment.

Spectacle Blinds are generally installed as a permanent device. The geometry gives a quick visual indication to its orientation and whether or not it is safe to begin downstream work.



Paddle Blinds

A Paddle Blind is basically the solid half of a Spectacle Blind. A Paddle Blind is often made from one solid metal disc and will usually have a thin length of metal attached to one end to be used as a handle. A finished assembly will resemble the shape of a paddle, hence the name. Generally, these types of blinds are applied in piping systems that do not require constant maintenance. The Paddle Blind is used more as a temporary blocking device to stop flow in a process piping system.

Paddle Spacers

A Paddle Spacer is the open half of a Spectacle Blind. It is often made from one solid metal disc and will usually have a thin length of metal attached to one end to be used as a handle. A finished assembly will resemble the shape of a paddle with an opening through its centre. The Paddle Spacer is used in place of a Paddle Blind when the piping system is to be put back into operation.

Technical Specifications

- Sure Flow Equipment Line Blind thicknesses are based on ASME B16.48 specifications and are designed to withstand any pressure - temperature combination that an ASME flange will withstand.
- For Paddle Spacers, the hole diameter in the handle is 1/2" for 1" wide handles, and 3/4" for 1 1/2" wide handles. ASME B16.48 prohibits the use of indicator or bolt holes in the handles of Paddle Blinds. However, this option is available if required by purchaser.
- One coat of standard shop primer will be applied to all carbon steel Line Blinds unless specified differently.
- Mill finish is standard. Other surface finishes are available. Contact factory for options.
- Standard materials are: SA516 Gr.70
304 Stainless Steel
316 Stainless Steel
Other alloys can be furnished upon request
- Sure Flow Equipment Line Blinds are produced in strict accordance with the following codes of practice: ASME B16.48 • ASME B16.5 • ASME B16.20 • ASME B16.47 (For larger diameter flanges)



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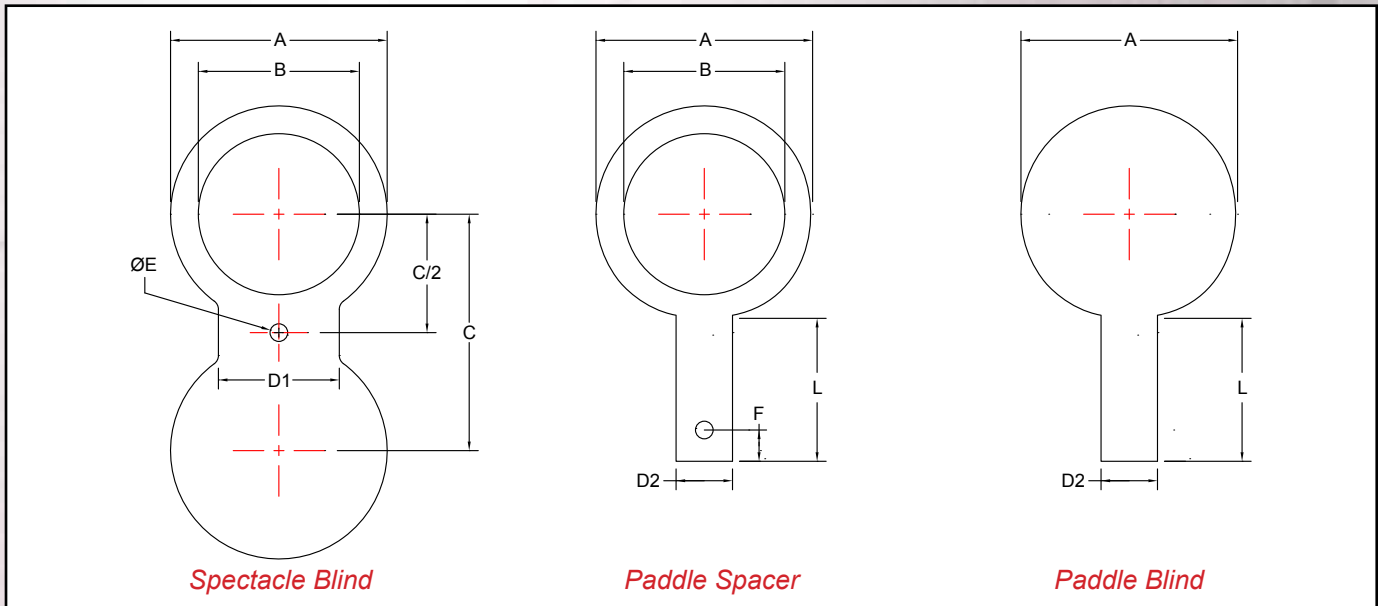
Line Blinds - Dimensional Data

Spectacle Blind
SBL150 & SBL150SS

Paddle Spacer
PS150 & PS150SS

Paddle Blind
PB150 & PB150SS

ASME Class 150 - Carbon Steel & ASME Class 150 - Stainless Steel



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Dimensions (Inches)										
Size		A	B	C	D1	D2	Ø E	F	L	Thickness
Inches	Prefix									
1	0100	2 1/2	1 1/16	3 1/8	1 1/2	1	5/8	1	4	1/8
1 1/2	0150	3 1/4	1 7/8	3 7/8	1 1/2	1	5/8	1	4	1/4
2	0200	4	2 3/8	4 3/4	2	1	3/4	1	4	1/4
3	0300	5 1/4	3 1/2	6	2 1/2	1	3/4	1	4	1/4
4	0400	6 3/4	4 1/2	7 1/2	2 1/2	1	3/4	1	4	3/8
6	0600	8 5/8	6 5/8	9 1/2	3	1	7/8	1	4	1/2
8	0800	10 7/8	8 5/8	11 3/4	3	1	7/8	1	4	1/2
10	1000	13 1/4	10 3/4	14 1/4	4	1	1	1	5	5/8
12	1200	16	12 3/4	17	4	1 1/2	1	1	5	3/4
14	1400	17 5/8	14	18 3/4	4 1/4	1 1/2	1 1/8	1	5	3/4
16	1600	20 1/8	16	21 1/4	4 1/4	1 1/2	1 1/8	1	5	7/8
18	1800	21 1/2	18	22 3/4	4 1/2	1 1/2	1 1/4	1	5	1
20	2000	23 3/4	20	25	4 3/4	1 1/2	1 1/4	1	5	1 1/8
24	2400	28 1/8	24	29 1/2	5 1/2	1 1/2	1 3/8	1	5	1 1/4

Ordering Information

Example: Include full description

Size Model
(Prefix) Number
0200 SBL150

2" Spectacle Blind, ASME Class 150, Carbon Steel

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
SBL150 / PS150 / PB150	1" - 24"	150 @ 366 °F	285 @ 100 °F
SBL150SS / PS150SS / PB150SS	1" - 24"	150 @ 366 °F	275 @ 100 °F



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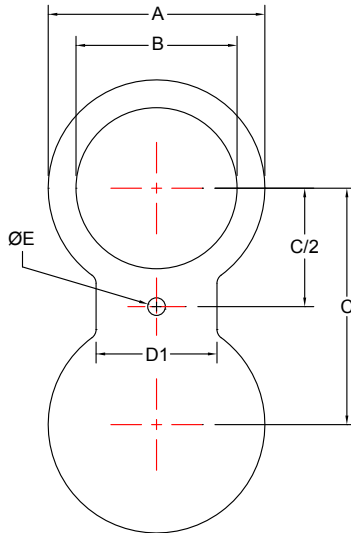
Line Blinds - Dimensional Data

**Spectacle Blind
SBL300 & SBL300SS**

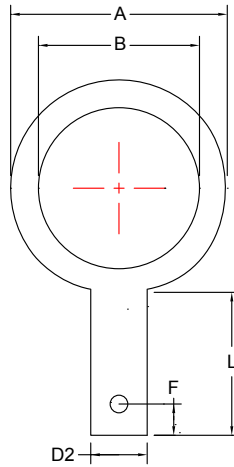
**Paddle Spacer
PS300 & PS300SS**

**Paddle Blind
PB300 & PB300SS**

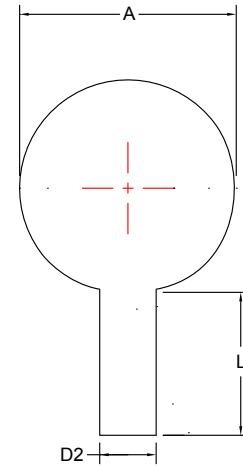
ASME Class 300 - Carbon Steel & ASME Class 300 - Stainless Steel



Spectacle Blind



Paddle Spacer



Paddle Blind

Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Dimensions (Inches)										
Size		A	B	C	D1	D2	Ø E	F	L	Thickness
Inches	Prefix									
1	0100	2 3/4	1 1/16	3 1/2	1 1/2	1	3/4	1	4	1/4
1 1/2	0150	3 5/8	1 7/8	4 1/2	1 1/2	1	3/4	1	4	1/4
2	0200	4 1/4	2 3/8	5	2	1	3/4	1	4	3/8
3	0300	5 3/4	3 1/2	6 5/8	2 1/2	1	7/8	1	4	3/8
4	0400	7	4 1/2	7 7/8	2 1/2	1	7/8	1	4	1/2
6	0600	9 3/4	6 5/8	10 5/8	3	1	7/8	1	4	5/8
8	0800	12	8 5/8	13	3	1	1	1	4	7/8
10	1000	14 1/8	10 3/4	15 1/4	4	1	1 1/8	1	5	1
12	1200	16 1/2	12 3/4	17 3/4	4	1 1/2	1 1/4	1	5	1 1/8
14	1400	19	14	20 1/4	4 1/4	1 1/2	1 1/4	1	5	1 1/4
16	1600	21 1/8	16	22 1/2	4 1/4	1 1/2	1 3/8	1	5	1 1/2
18	1800	23 3/8	18	24 3/4	4 1/2	1 1/2	1 3/8	1	5	1 5/8
20	2000	25 5/8	20	27	4 3/4	1 1/2	1 3/8	1	6	1 3/4
24	2400	30 3/8	24	32	5 1/2	1 1/2	1 5/8	1	6	2

Ordering Information

Example: Include full description

Size Model
(Prefix) Number
1800 PS300SS

18" Paddle Spacer, ASME Class 300, Stainless Steel

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
SBL300 / PS300 / PB300	1" - 24"	300 @ 422 °F	740 @ 100 °F
SBL300SS / PS300SS / PB300SS	1" - 24"	300 @ 422 °F	720 @ 100 °F



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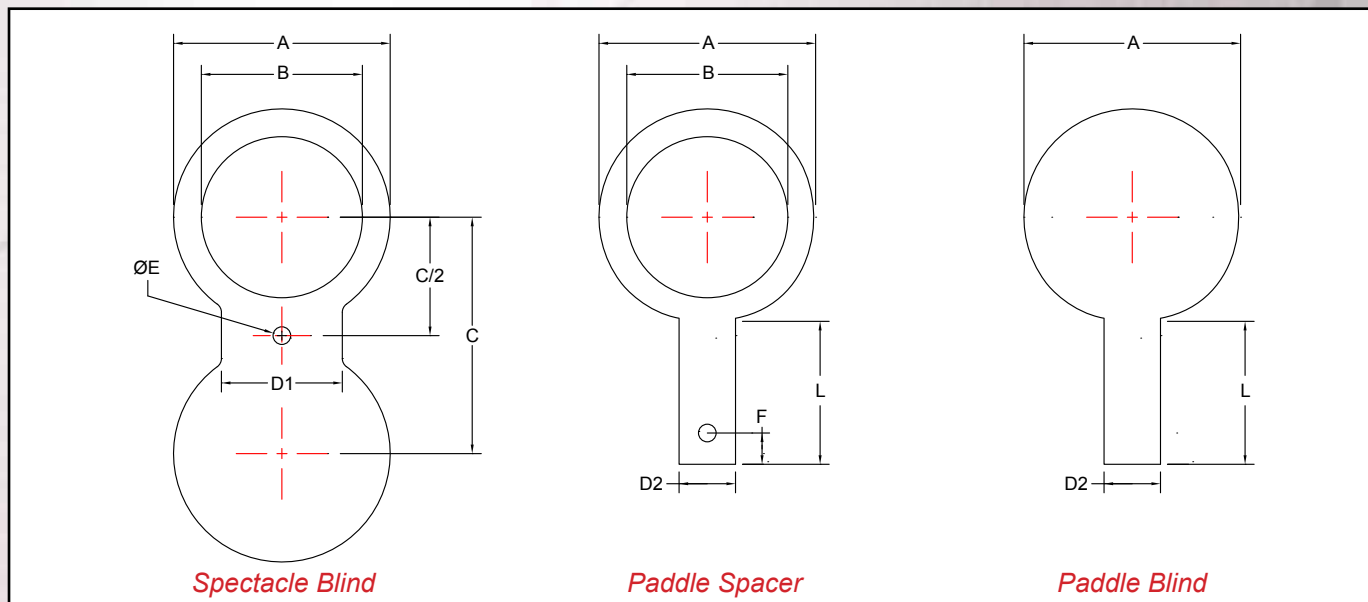
Line Blinds - Dimensional Data

Spectacle Blind
SBL600 & SBL600SS

Paddle Spacer
PS600 & PS600SS

Paddle Blind
PB600 & PB600SS

ASME Class 600 - Carbon Steel & ASME Class 600 - Stainless Steel



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Dimensions (Inches)										
Size		A	B	C	D1	D2	Ø E	F	L	Thickness
Inches	Prefix									
1	0100	2 3/4	1 1/16	3 1/2	2 1/4	1	3/4	1	4	1/4
1 1/2	0150	3 5/8	1 11/16	4 1/2	2 5/8	1	7/8	1	4	3/8
2	0200	4 1/4	2 3/16	5	2 1/4	1	3/4	1	4	3/8
3	0300	5 3/4	3 1/4	6 5/8	2 5/8	1	7/8	1	4	1/2
4	0400	7 1/2	4 1/4	8 1/2	3	1	1	1	4	5/8
6	0600	10 3/8	6 3/8	11 1/2	3 3/8	1	1 1/8	1	5	7/8
8	0800	12 1/2	8 5/16	13 3/4	3 3/4	1	1 1/4	1	5	1 1/8
10	1000	15 5/8	10 7/16	17	4 1/8	1	1 3/8	1	5	1 3/8
12	1200	17 7/8	12 3/8	19 1/4	4 1/8	1 1/2	1 3/8	1	5	1 5/8
14	1400	19 1/4	13 5/8	20 3/4	4 1/2	1 1/2	1 1/2	1	5	1 3/4
16	1600	22 1/8	15 5/8	23 3/4	4 7/8	1 1/2	1 5/8	1	6	2
18	1800	24	17 5/8	25 3/4	5 1/4	1 1/2	1 3/4	1	6	2 1/8
20	2000	26 3/4	19 9/16	28 1/2	5 1/4	1 1/2	1 3/4	1	6	2 1/2
24	2400	31	23 1/2	33	6	1 1/2	2	1	6	2 7/8

Ordering Information

Example: Include full description

Size Model
(Prefix) Number
1200 PB600

12" Paddle Blind, ASME Class 600, Carbon Steel

Operating Pressures and Temperatures

Type	Size	psi @ Temp Steam	psi @ Temp WOG
SBL600 / PS600 / PB600	1" - 24"	600 @ 489 °F	1480 @ 100 °F
SBL600SS / PS600SS / PB600SS	1" - 24"	600 @ 489 °F	1440 @ 100 °F



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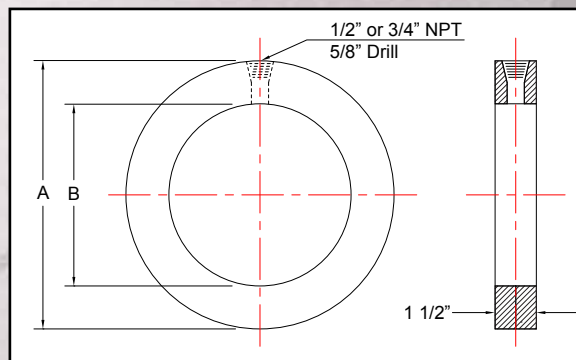
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Bleed Rings / Flushing Rings

BLEED150 / BLEED150SS • BLEED300 / BLEED300SS • BLEED600/BLEED600SS

ASME Class 150 / 300 / 600 - Carbon Steel & Stainless Steel



- Sure Flow Equipment Bleed Rings and Flushing Rings are designed to withstand any pressure - temperature combination that an ASME flange will withstand.
- 1/2" or 3/4", threaded or socket-weld taps are standard. Multiple taps can be provided but must be orientated by customer. Thickness of ring may be affected if larger taps are required.
- One coat of standard shop primer will be applied to all carbon steel rings unless specified differently.
- Standard materials are: SA516 Gr.70 • 304 Stainless Steel • 316 Stainless Steel
Other alloys can be furnished upon request
- Sure Flow Equipment Bleed Rings and Flushing Rings are produced in strict accordance with the following codes of practice: ASME B16.5 • ASME B16.20 • ASME B16.47 (For larger diameter flanges)

Notes:

- Standard with 125-250 AARH Serrated Finish
- Higher ASME pressure ratings available
- Larger sizes available
- Manufacturer reserves the right to modify dimensions, materials, or design. Consult factory for certification.

Dimensions (Inches)					
Size		B	"A" Dimension		
Inches	Prefix		Class 150	Class 300	Class 600
1	0100	1 5/16	2 1/2	2 3/4	2 3/4
1 1/2	0150	1 7/8	3 1/4	3 5/8	3 5/8
2	0200	2 3/8	4	4 1/4	4 1/4
3	0300	3 1/2	5 1/4	5 3/4	5 3/4
4	0400	4 1/2	6 3/4	7	7 1/2
6	0600	6 5/8	8 5/8	9 3/4	10 3/8
8	0800	8 5/8	10 7/8	12	12 1/2
10	1000	10 3/4	13 1/4	14 1/8	15 5/8
12	1200	12 3/4	16	16 1/2	17 3/4
14	1400	14	17 5/8	19	19 1/8
16	1600	16	20 1/8	21 1/8	22
18	1800	18	21 1/2	23 3/8	23 7/8
20	2000	20	23 3/4	25 5/8	26 5/8
24	2400	24	28 1/8	30 3/8	30 7/8

Ordering Information

Example: Include full description

Size Model
(Prefix) Number

2400 BLEED150SS

24" Bleed Ring, ASME Class 150, Stainless Steel

Operating Pressures and Temperatures			
Type	Size	psi @ Temp Steam	psi @ Temp WOG
BLEED150	1" - 24"	150 @ 366 °F	285 @ 100 °F
BLEED150SS	1" - 24"	150 @ 366 °F	275 @ 100 °F
BLEED300	1" - 24"	300 @ 422 °F	740 @ 100 °F
BLEED300SS	1" - 24"	300 @ 422 °F	720 @ 100 °F
BLEED600	1" - 24"	600 @ 489 °F	1480 @ 100 °F
BLEED600SS	1" - 24"	600 @ 489 °F	1440 @ 100 °F



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Sure Flow Equipment Inc. – Limited Warranty

All products are warranted to be free of defects in material and workmanship for a period of one year from the date of shipment, subject to below. **All custom products are not subject to return, credit or refund.**

If the purchaser believes a product to be defective, the purchaser shall:

- Notify the manufacturer **within ten(10) days after receipt of merchandise**, state the alleged defect and request permission to return the product. Merchandise will not be accepted for return without a "Return Code" clearly marked on the outside of the package. Contact the office to obtain a return code. **Merchandise will not be accepted for return or credit later than six (6) months after invoicing.**
- If permission is given, return the product with the transportation prepaid. Collect shipments will not be accepted. Goods must be returned **prepaid**.

If a shipment is received in a damaged or deficient condition, a claim must be filed with the delivering carrier and noted on the freight bill before you accept the merchandise. All other claims must be made in writing and received by Sure Flow Equipment Inc. within ten (10) days after receipt of merchandise.

If the product is accepted for return and found to be defective, the manufacturer will, at its discretion, either repair or replace the product, F.O.B. factory, within 60 days of receipt, or issue credit for the purchase price.

Sure Flow Equipment Inc. shall not be liable for failure to deliver or delays in delivering occasioned by acts of God, war, labor difficulties, inability to obtain materials or any other causes whatsoever beyond our control.

Other than to repair, replace or credit as described above, purchaser agrees that manufacturer shall not be liable for any loss, costs, expenses, or damages of any kind arising out of the product, its use, installation or replacements, labeling, instructions, information or technical data of any kind, description of product use, sample or model, warnings or lack of any of the foregoing.

NO OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, ARE MADE OR AUTHORIZED. NO AFFIRMATION OF ACT, PROMISE, DESCRIPTION OF PRODUCT OR USE OR SAMPLE OR MODEL SHALL CREATE ANY WARRANTY FROM MANUFACTURER, UNLESS SIGNED BY THE PRESIDENT OF MANUFACTURER.

CANCELLATIONS:

Cancelled orders will be subject to a charge of at least 35%.

Cancelled custom orders will be subject to a charge of 100% of quoted price.

SPECIAL DOCUMENTATION: A charge will apply for non-standard, special documentation requests such as Material Test Reports (MTR's) and Certificates of Conformance (COC's).

MINIMUM BILLING: \$100.00 NET

Product shipping weights are approximate and subject to variances depending on packaging methods/requirements.



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