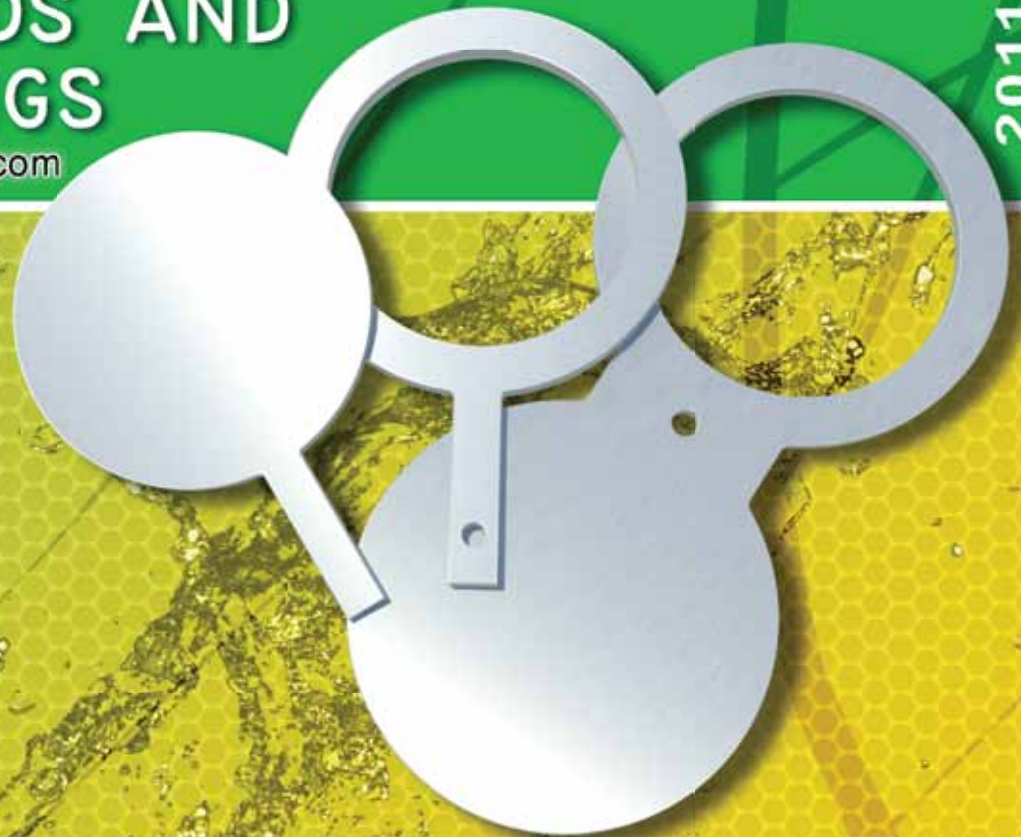




**Sure Flow
Equipment Inc.**

**LINE BLINDS AND
BLEED RINGS**

www.sureflowequipment.com



2011

CONTENTS COMMITMENT TO QUALITY

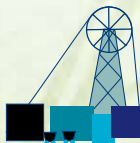
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Service Applications



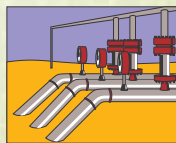
Pulp and Paper



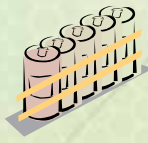
Mining Operations



Cement Manufacturing



Petrochemical



Food Processing Facilities



Steel Mills



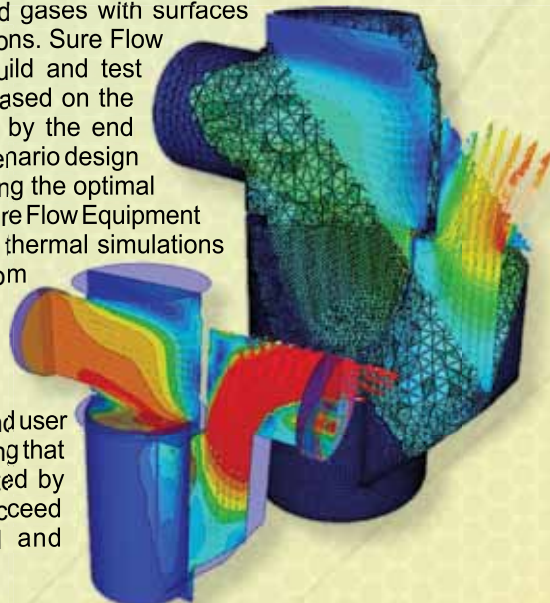
Chemical Plants



Sewage Treatment Industry

Computational Fluid Dynamics (CFD)

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.



Commitment to Quality

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.

Sure Flow Equipment Inc. provides industry with Custom Engineered Fabricated Strainers to many design codes. Custom products are designed and manufactured to ASME SECTION VIII, DIV 1, Current Edition. ASME "U" Code Stamp and ASME "UM" Code Stamp are available on certain products as specified.

The Sure Flow Equipment Inc. list of Certifications includes:

ISO 9001:2008 Certificate of Registration

ASME "U" Code Stamp Certificate of Authorization and ASME "UM" Code Stamp Certificate of Authorization (ASME Boiler and Pressure Vessel Code; ASME Section VIII, Div 1, Current Edition);

National Board Certified and authorized to apply the "NB" Mark for pressure vessels and/or pressure retaining items manufactured in accordance with ASME "U" Code Stamp and ASME "UM" Code Stamp;

TSSA Certificate of Authorization (Technical Standards & Safety Authority) for the manufacture of pressure vessels in accordance with ASME Boiler and Pressure Vessel Code, Section VIII, Division 1 and CSA Standard B51, Boiler, Pressure Vessel and Pressure Piping Code.

CE Mark is available

C-TPAT Certified (Customs-Trade Partnership Against Terrorism)

Recognized by PIP (Partners In Protection) for our C-TPAT status



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LINE BLINDS - FEATURES & TECHNICAL SPECIFICATIONS

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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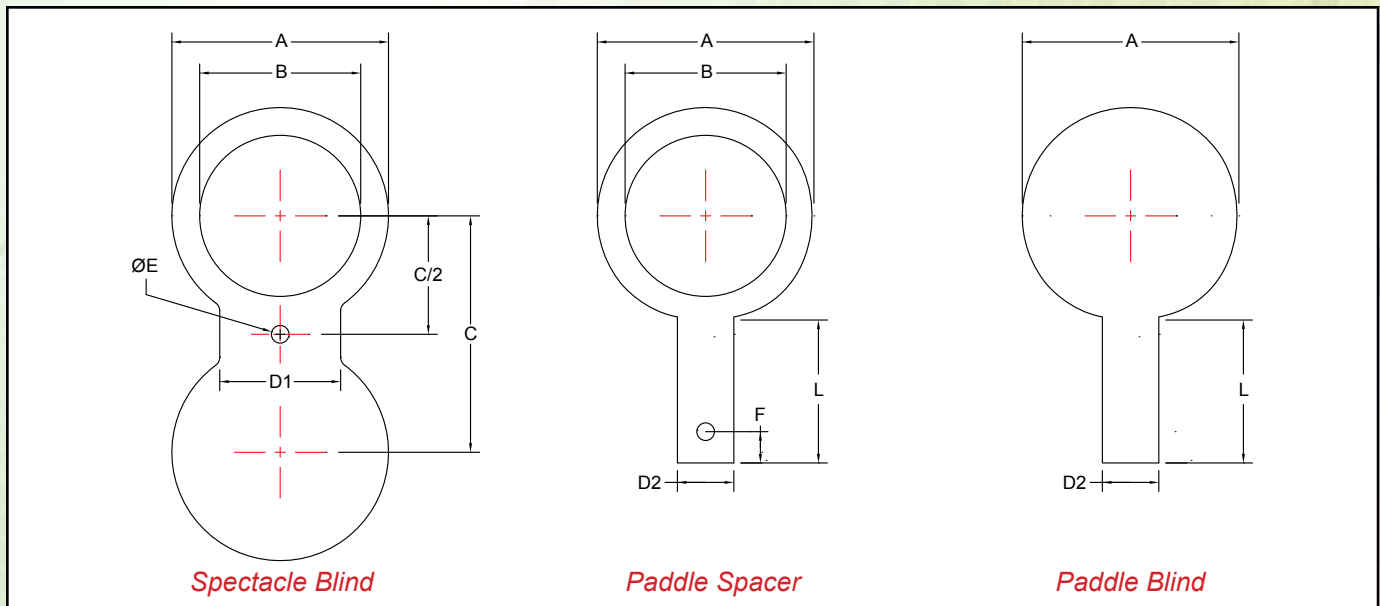
LINE BLINDS - DIMENSIONAL DATA

**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.

Size		Dimensions (Inches)								
Inches	Prefix	A	B	C	D1	D2	Ø E	F	L	Thickness
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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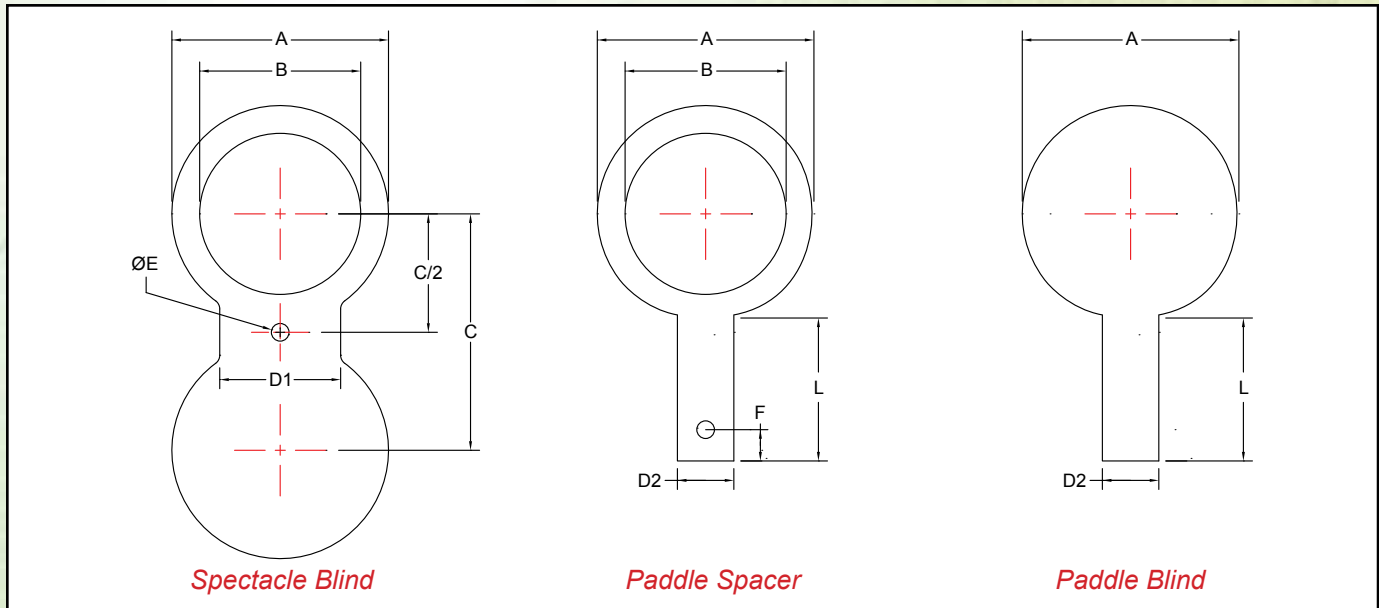
LINE BLINDS - DIMENSIONAL DATA

Spectacle Blind
SBL300 & SBL300SS

Paddle Spacer
PS300 & PS300SS

Paddle Blind
PB300 & PB300SS

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



Notes:

- Higher ASME pressure ratings available
- Larger sizes available

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

Size		Dimensions (Inches)								
Inches	Prefix	A	B	C	D1	D2	Ø E	F	L	Thickness
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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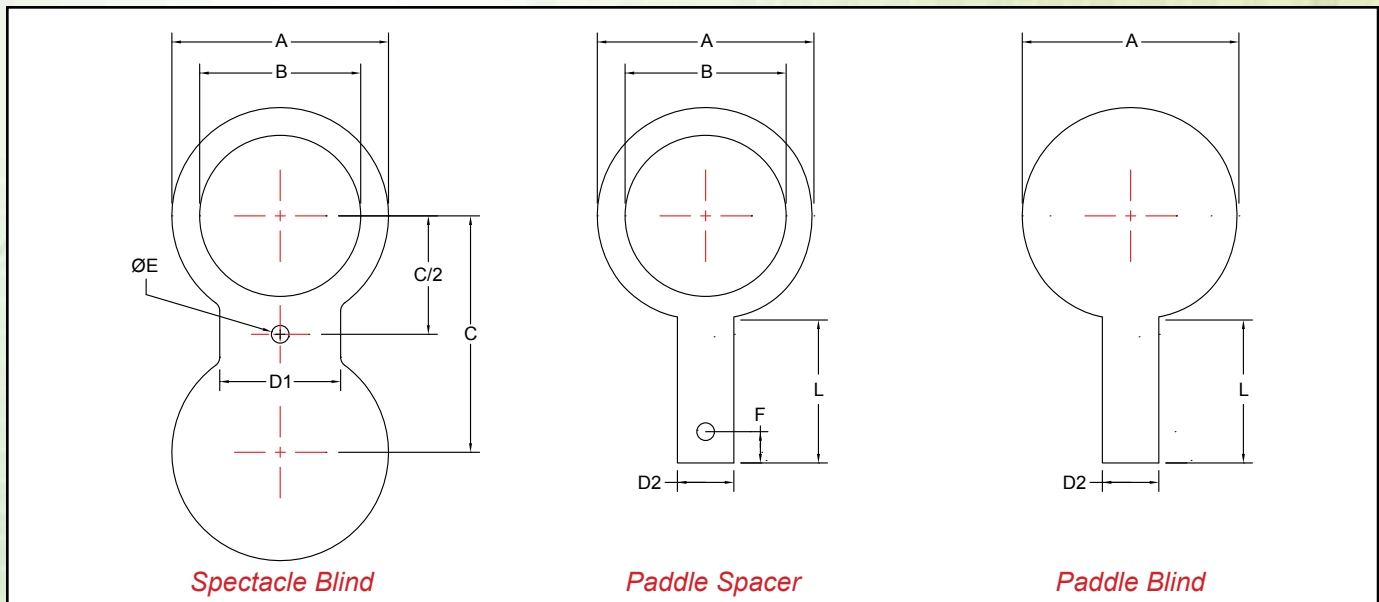
LINE BLINDS - DIMENSIONAL DATA

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.

Size		Dimensions (Inches)								
Inches	Prefix	A	B	C	D1	D2	Ø E	F	L	Thickness
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

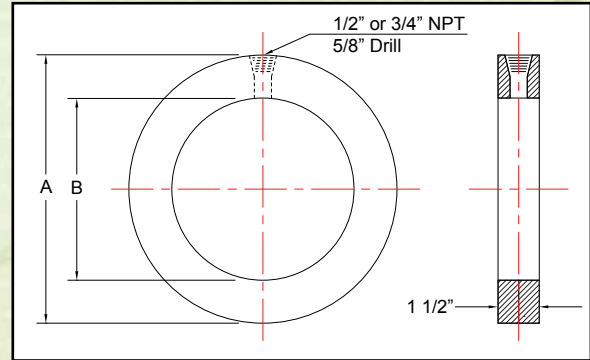


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BLEED RINGS / FLUSHING RINGS

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:

(a) 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.**

(b) 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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