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Commitment to Quality

Sure Flow Equipment Inc. is ISO 9001:2000 Registered and also holds an ISO 9001:2000 Certificate of Registration from the Global Certification Network.



All 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.

Sure Flow Equipment Inc. is National Board Certified and is authorized to apply the **"NB" Mark** for pressure vessels and/or pressure retaining items.

Sure Flow Equipment Inc. maintains certification from the American Society of Mechanical Engineers (ASME) to use the **"UV" Stamp** for assembling, setting and testing of Safety Relief Valves.

Sure Flow Equipment Inc. is also certified by the National Board ("NB") Pressure Relief Valve Repair **"VR" Stamp** program for repairing of Safety and Safety Relief Valves.

Sure Flow Equipment Inc., for many years, has provided industry with **CUSTOM ENGINEERED FABRICATED STRAINERS** to many design codes. All custom products are designed and manufactured to **ASME SECTION VIII, DIV 1, CURRENT EDITION. U and UM CODE STAMP** available on certain products as specified in this brochure.

Sure Flow's initial focus was to supply the marketplace with an extensive line of Y-Type Strainers, Simplex Strainers, Duplex and Fabricated Strainers. The product line provides a solution to every filtration problem in every industry and if we haven't already solved your problem, our Engineers will develop the best answer.

In addition to Pipeline Strainers, Sure Flow offers Wafer Double Door Check Valves, Silent Check Valves, Butterfly Valves 2" to 48", Knife Gate Valves and Expansion Joints, Automatic Strainers and Valve Actuators.

Sure Flow products are available in Cast Iron, Steel, Stainless, Bronze, and any exotic Alloy, in sizes from 1/4" to 60", 125 lb. to 2500 lb. Class, in NPT, Flanged, Butt Weld and Socket Weld.

Many design codes are available.

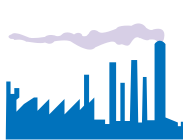
Strainer Applications

The pipeline strainers in this catalog have a wide range of industrial and marine applications. In addition to oil and water service, the strainers detailed in this catalog are suitable for removing impurities from gasoline, chemicals, paint, food process and many other process fluids. A strainer is an inexpensive "insurance" for protecting valuable pumps such as meter pumps, for example. There is often unwanted matter present which can cause serious problems. Dirt, foreign matter, or even clumps of product itself, can clog or damage critical and expensive equipment. Another factor to consider is the cost of downtime. **STRAINERS** are the solution.

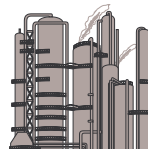
Water



Steel Mills



Chemical Plants



Petrochemical



Utilities



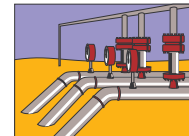
Pulp and Paper



Marine



Process Equipment

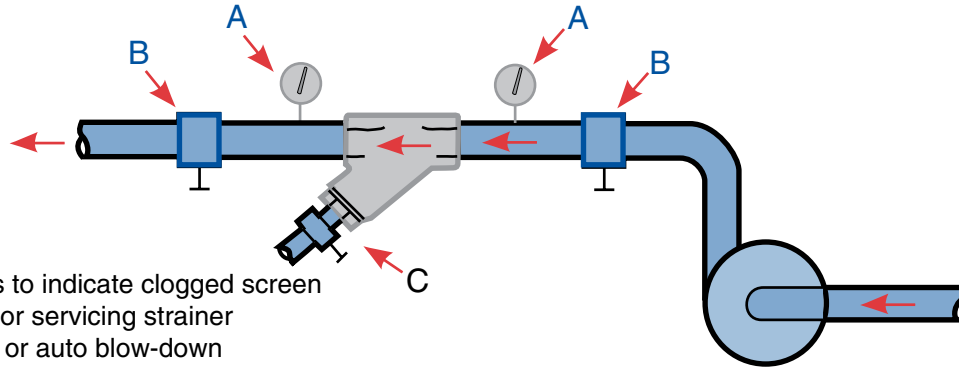


Other industrial applications include food processing, paint, cement, ink, pharmaceutical, cosmetics, tank car and trucks, ceramics and many more. ***If it flows, a strainer should be there!***

Y Strainers

Y Type Strainers

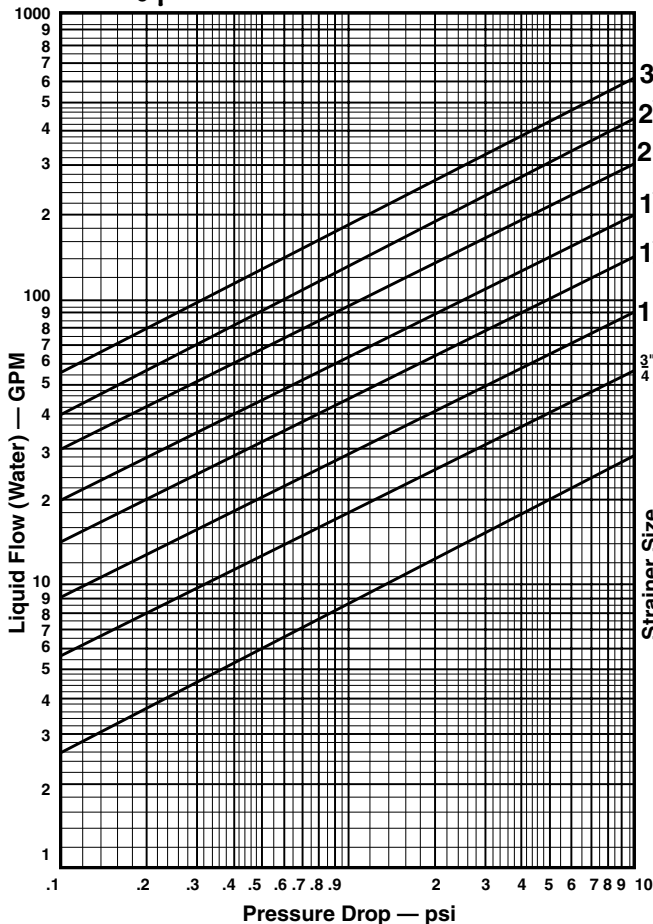
“Y” Strainers take their name from their configuration. They are most commonly used in pressurized lines, gas or liquid, but can also be used in suction or vacuum conditions. They are intended for applications where small amounts of solid particulate are expected, and where clean-out will be infrequent. If solids will flush easily from the screen, and fluid can be exhausted to atmosphere, a blow-down valve on the drain port will allow clean-out without removal of the screen, and without interrupting the process flow.



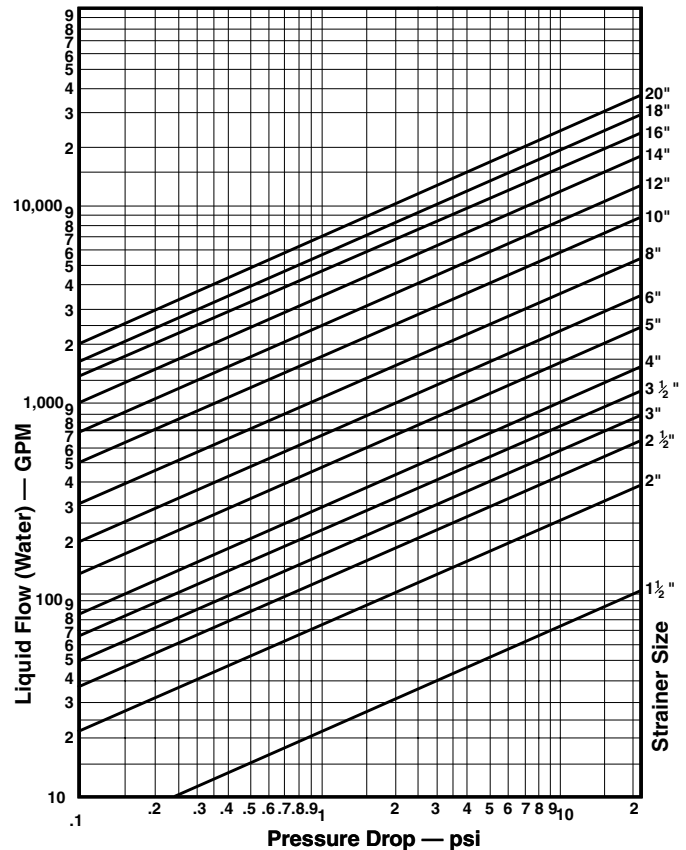
- A. Pressure gauges to indicate clogged screen
- B. Isolation valves for servicing strainer
- C. Optional manual or auto blow-down

Flow Rate vs Pressure Drop (Clean Screen)

Y-Type Strainers - Threaded



Y-Type Strainers - Flanged



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

Y Strainers

Cast Iron, NPT Threaded

Y Type
Strainers

Type T250 Cast Iron, Threaded



Features

Sure Flow threaded strainers in Cast Iron feature a machined seat which ensures a perfect fit for the removable, stainless steel screen. All sizes come complete with NPT blow-off with plug, which can be replaced with a ball valve for on-line blow-down of particulate.

Construction

Cast Iron - Body, cover, plug - High Tensile ASTM A126 Class B

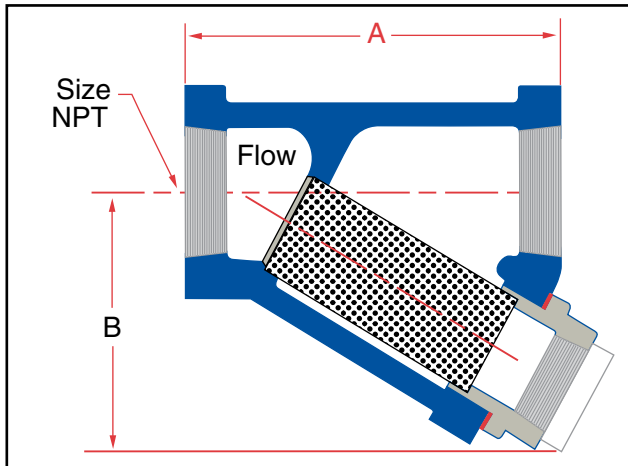
All screens are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam*	PSI @ Temp WOG
T250	1/4" - 3"	250 400° F	400 150°F

Standard Screens

Model	Size	Std.	Opening
T250	1/4" - 2"	20 mesh	0.032"
	2 1/2" - 3"	3/64" perf	0.045"



Dimensional Data

Size		A	B	Blow-Off NPT	Shipping Weight (lbs)
Inches	Prefix				
1/4	0025	3 3/16	2 1/16	3/8	4
1/2	0050	3 3/16	2 1/16	3/8	5
3/4	0075	3 3/4	2 7/16	1/2	6
1	0100	4	2 5/8	1/2	8
1 1/4	0125	5	3 3/8	3/4	13
1 1/2	0150	5 3/4	3 7/8	3/4	15
2	0200	7	4 3/4	1	24
2 1/2	0250	9 1/4	5 7/8	1 1/2	37
3	0300	10	6	1 1/2	48

Ordering Information

Example: Include full description

Size (Prefix)	Model Number	*Screen Opening
0200	T250	005

2" Threaded Y Strainer, Cast Iron, 250# Class,
20 Mesh Screen with 100 Mesh liner

Notes

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

*Must specify if for steam service.

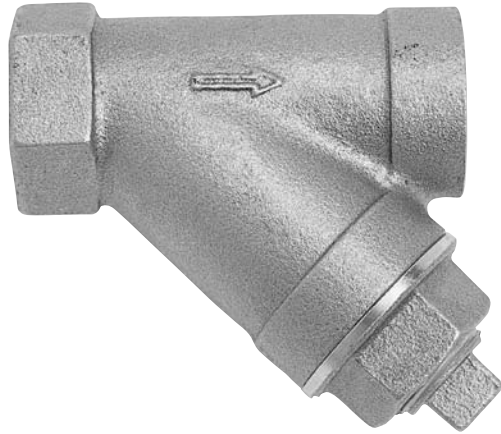


Y Strainers

Cast Bronze, NPT Threaded & Sweat End

Y Type Strainers

TB150 & TB300 Bronze, TB150SW



Features

Sure Flow threaded strainers in Cast Bronze feature a machined, tapered seat which ensures a perfect fit for the removable, stainless steel screen. All sizes come complete with NPT blow-off with plug, which can be replaced with a ball valve for on-line blow-down of particulate.

Construction

Cast Bronze - Body, cover, plug - ASTM B62

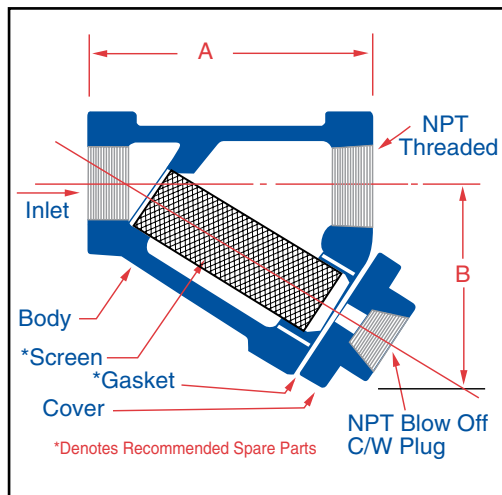
All screens are Stainless Steel

Standard Screens

Size	Std.	Opening
1/4" - 2"	20 mesh	0.032"
2 1/2" - 3"	3/64" perf	0.045"

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam*		PSI @ Temp WOG	
TB150	1/4" - 3"	150	400°F	300	150°F
TB300	1/2" - 3"	300	400°F	400	150°F



Dimensional Data

Size		A			B			Blow-Off NPT			Shipping Weight (lbs)	
Inches	Prefix	TB150	TB150SW	TB300	TB150	TB150SW	TB300	TB150	TB150SW	TB300	TB150	TB300
1/4	0025	3 7/32	3 11/12		2 5/32	2 3/8		3/8	3/8		2	
3/8	0038	3 7/32	3 11/12		2 5/32	2 3/8		3/8	3/8		2	
1/2	0050	3 7/32	3 11/12	3	2 5/32	2 3/8	2 5/16	3/8	3/8	3/8	2 1/2	2 1/2
3/4	0075	3 15/16	4 11/32	3 7/16	2 3/4	2 3/4	2 1/2	3/8	3/8	3/8	3	3
1	0100	4 17/32	5	4 1/16	2 15/16	3 3/16	3 1/8	1/2	1/2	3/4	5	6
1 1/4	0125	5 11/32	5 29/32	4 7/8	3 9/16	3 23/32	3 5/8	1/2	1/2	3/4	9	9
1 1/2	0150	6 7/32	6 29/32	5 3/4	3 27/32	4 1/8	4 1/8	1/2	1/2	3/4	10	11
2	0200	7 1/2	8 21/32	6 3/4	5 7/16	5 3/16	5	1/2	1/2	3/4	16	19
2 1/2	0250	9 1/16		7 1/2	5 29/32		5 1/4	1/2		1 1/4	29	29
3	0300	10 7/32		8 1/2	6 9/32		6 1/2	1/2		1 1/4	38	42

Ordering Information

Example: Include full description

Size (Prefix) Model Number *Screen Opening

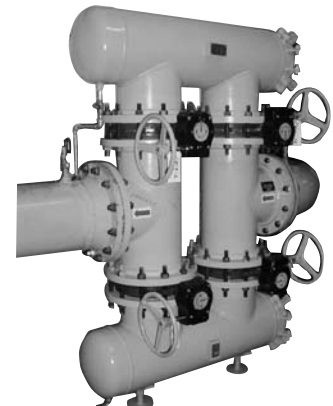
0150 - TB150 - 032

1 1/2" NPT, Y Strainer, Bronze, 150# Class
20 Mesh Screen

Notes

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

*Must specify if for steam service.

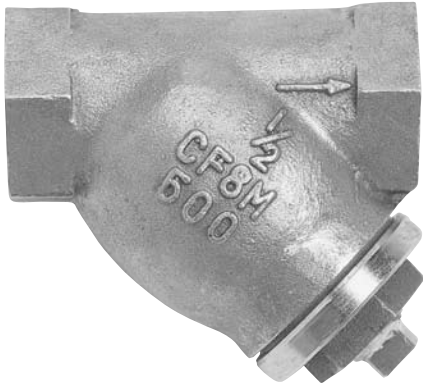


Y Strainers

Cast Steel & Cast 316SS, NPT Threaded or Bolted Cover

Types YT6 Cast Steel and YT6SS Cast 316SS (or Socket Weld Ends "SW")

Y Type Strainers



Features

Threaded strainers in Cast Steel and Cast Stainless Steel are rated for up to 1480 psi for Water, Oil or Gas. A machined, tapered seat ensures a perfect fit for the removable, stainless steel screen. All sizes come complete with blow-off and plug, which can be replaced with a ball valve for on-line blow-down of particulate.

Construction

Cast Steel - Body, cover, plug - ASTM A216 Grade WCB

Stainless Steel - Body, cover, plug - ASTM A351 Grade CF8M

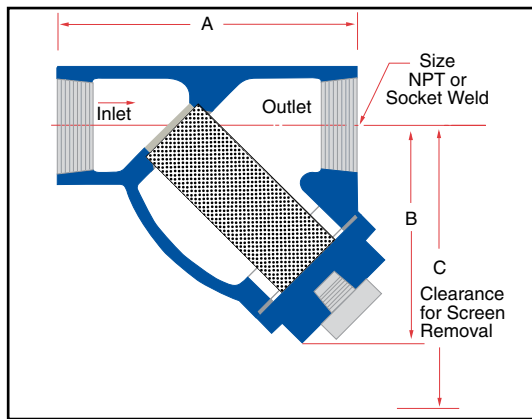
All screens are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam*	PSI @ Temp WOG
YT6 & YT6BC	1/2" - 3"	600 486°F	1480 100°F
YT6SS & YT6BCSS	1/2" - 3"	600 486°F	1440 100°F

Standard Screens

Size	Std.	Opening
1/2" - 1"	20 Mesh	0.032"
1 1/4" to 2"	1/32" perf	0.032"
2 1/2" to 3"	3/64" perf	0.045"



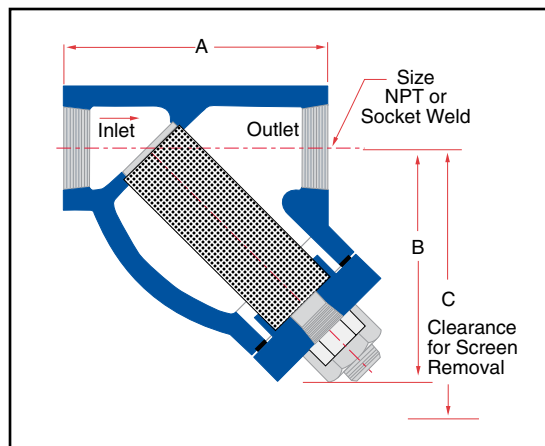
Dimensional Data

Size		A	B	C	Blow-Off NPT YT6 YT6SS	Shipping Weight lbs.
Inches	Prefix	YT6 YT6SS	YT6 YT6SS	YT6 YT6SS	YT6 YT6SS	
1/2	0050	3 1/4	2 3/16	3	1/4	4
3/4	0075	3 5/8	2 3/4	3 1/4	1/4	5
1	0100	4 1/4	3 3/16	4 1/8	1/2	6
1 1/4	0125	5 1/4	3 7/8	5	1/2	8
1 1/2	0150	6 1/4	4 3/4	5 7/8	1/2	10
2	0200	7 5/8	6	8 1/8	3/4	18
2 1/2	0250	8 3/8	7	8 3/4	1 1/4	25
3	0300	9 1/2	8 1/2	10	1 1/4	30

* Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification. Must specify if for steam service.

Types YT6BC Cast Steel and YT6BCSS Cast 316SS with Bolted Cover

Dimensional Data



Size		A	B	C	Blow-Off NPT YT6BC YT6BCSS	Shipping Weight lbs.
Inches	Prefix	YT6BC YT6BCSS	YT6BC YT6BCSS	YT6BC YT6BCSS	YT6BC YT6BCSS	
1/2	0050	3 7/8	3	5	1/4	10
3/4	0075	4 1/4	4 1/2	5 1/2	1/4	12
1	0100	4 15/16	4	7	1/2	16
1 1/4	0150	NA	NA	NA	NA	NA
1 1/2	0150	6 1/4	5 1/8	9 1/4	1/2	28
2	0200	7 1/2	6 3/4	12 1/2	3/4	52
2 1/2	0250	12	7	13 1/2	1 1/4	60
3	0300	12	8 1/4	15	1 1/4	72

* Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification. Must specify if for steam service.
 • For socket weld add suffix "SW" to model number.
 • For higher temperature service other gasket materials are available upon request.

Y Strainers

Cast Steel & Cast 316SS, High Pressure, NPT Threaded

Y Type Strainers

Type T1500 Cast Steel & Stainless Steel (or Socket Weld Ends "SW")



Operating Pressures and Temperatures

Type	Size	PSI	@ Temp WOG
T1500	1/2" - 2"	3000	450°F
T1500SS	1/2" - 2"	3000	450°F

Features

The spiral wound, welded stainless steel construction of the screen provides high strength, preventing screen collapse. Continuous slot openings reduce bridging of particles; under-sized solids pass freely through the "V" shaped slots without clogging.

Construction

The high strength, cast chrome-moly body and o-ring seal are designed for higher pressure applications. If all stainless steel construction is needed, add "SS" to the series number shown below after the screen mesh designation.

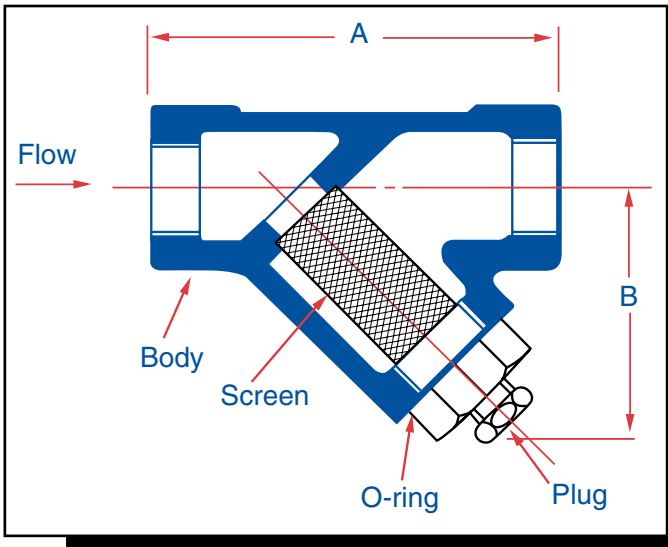
Cast Steel - Body, cover, plug - ASTM A487 4N

Stainless Steel - Body, cover, plug - ASTM A351 Grade CF8M

All screens are Stainless Steel

Standard Screens

Size	Std.	Opening
1/2" - 2"	Slotted Screen	0.032"



Dimensional Data

Size		A	B	Blow-Off NPT	Shipping Weight (lbs)
Inches	Prefix				
1/2	0050	5 1/8	4 3/4	1/4	10
3/4	0075	5 1/8	4 3/4	1/4	10
1	0100	5 1/8	4 3/4	1/4	10
1 1/2	0150	7 1/2	7	3/4	25
2	0200	9 5/8	8 3/8	3/4	40

Ordering Information

Example: Include full description

Size (Prefix) Model Number *Screen Opening
0150 - T1500SS - 032

1 1/2" NPT, High Pressure Y Strainer, Cast Stainless Steel, 0.032" Slotted Screen

Notes

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

For socket weld add suffix "SW" to model number.



Y Strainers

Cast Iron & Ductile Iron, Flanged

Y Type Strainers

Type YF125 Cast Iron & YF250 Ductile Iron with ANSI Flanges



Features

Sure Flow Cast Iron and Ductile Iron Flanged Strainers feature a machined seat which ensures a perfect fit for the removable, stainless steel screen. All sizes come complete with flanged blow-off cover, gasket & plug. May be installed in vertical or horizontal pipelines with blow-off connection at the lower end of the screen.

Construction

Cast Iron - Body, cover, plug - High Tensile ASTM A126 Class B

Ductile Iron - Body, cover, plug - High Tensile ASTM A536 Class 65-45-12

All screens are Stainless Steel

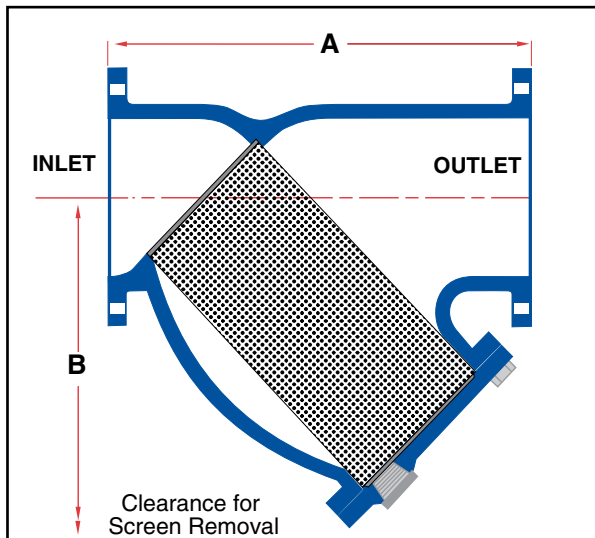
Standard Screens

Model	Size	Std.	Opening
YF125	2" - 3"	3/64" perf	0.045"
	4" - 20"	1/8" perf	0.125"
YF250	2" - 4"	1/16" perf	0.062"
	5" - 12"	1/8" perf	0.125"

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam*	PSI @ Temp WOG
YF125	2"-12"	125 344° F	200 150° F
	14"-20"	100 328° F	150 150° F
YF250	2"-12"	250 450° F	500 150° F

Dimensional Data



Size		A		B		Blow-Off NPT		Shipping Weight (lbs)	
Inches	Prefix	YF125	YF250	YF125	YF250	YF125	YF250	YF125	YF250
2	0200	7 7/8	8 5/8	7	7 1/8	1/2	1/2	21	34
2 1/2	0250	10	10 5/8	9 3/4	8 7/8	1	1	32	54
3	0300	10 1/8	12	10	9 7/8	1	1	39	72
4	0400	12 1/8	14 1/2	12	12 1/16	1 1/2	1 1/2	69	114
5	0500	15 5/8	16 3/8	17	16 1/4	2	2	110	174
6	0600	18 1/2	19 5/16	20	19 3/8	2	2	153	204
8	0800	21 5/8	23 3/8	22 3/4	22 3/16	2	2	284	432
10	1000	25 3/4	27 3/8	28	27 3/8	2	2	426	660
12	1200	29 7/8	32	30	29 1/4	2	2	667	978
14	1400	33 1/4		36 1/2		2		992	
16	1600	38 3/4		42		2		1,587	
18	1800	43 1/8		45 1/2		2		2,612	
20	2000	49 1/2		54		2		2,910	

Ordering Information

Example: Include full description

Size Model *Screen
(Prefix) Number Opening
0400 - YF125 - 125

4" FLGD, Y Strainer, Cast Iron, 125# ANSI Flanges, with 1/8" Perf Screen

Notes

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

*Must specify if for steam service.

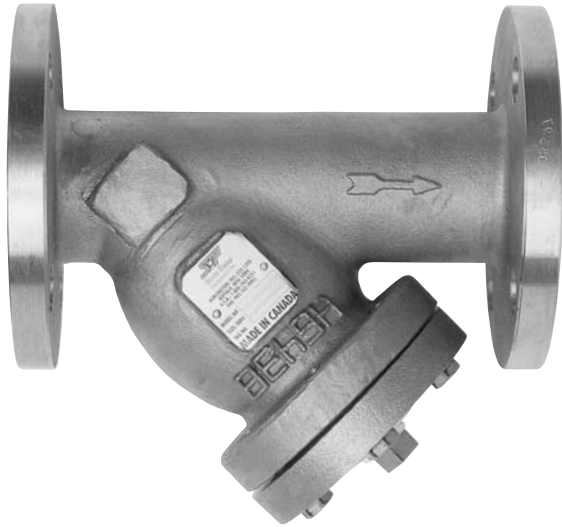


Y Strainers

Cast Bronze, Carbon Steel, Cast 316SS, 150# Flanged

Y Type Strainers

Type YF150B Cast Bronze, YF150 Cast Steel, YF150SS Cast Stainless Steel



Features

Sure Flow 150# ANSI Flanged strainers are available in Carbon Steel, Stainless Steel and Bronze. A machined, tapered seat ensures a perfect fit for the removable, stainless steel screen. 2" and larger come complete with flanged blow-off cover, gasket & plug. 1 1/2" and smaller come complete with solid threaded cover and gasket. May be installed in vertical or horizontal pipelines with blow-off connection at the lower end of the screen.

Construction

- Carbon Steel** - Body & Cover, ASTM A216, Grade WCB
- Stainless Steel** - Body & Cover, ASTM A351, Grade CF8M
- Bronze** - Body & Cover, ASTM B62

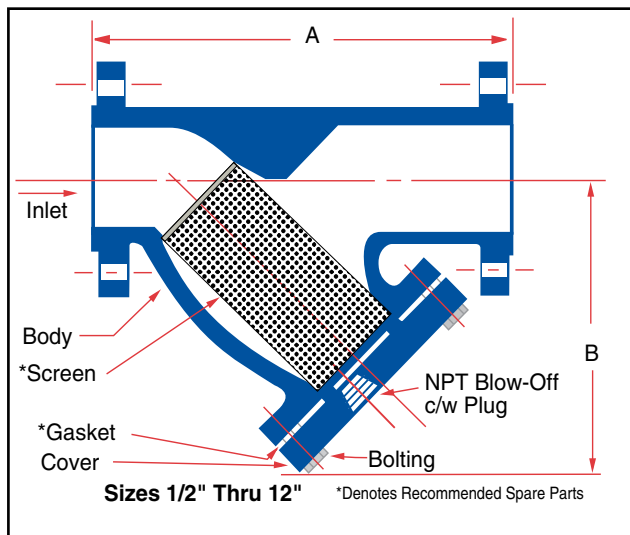
All screens are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam*	PSI @ Temp WOG
YF150B	1/2" - 12"	150 358°F	225 150°F
YF150	1/2" - 12"	150 358°F	285 100°F
YF150SS	1/2" - 12"	150 358°F	275 100°F

Standard Screens

Size	Std.	Opening
1/2" - 1 1/2"	1/32" perf	0.032"
2" - 3"	3/64" perf	0.045"
4" - 12"	1/8" perf	0.125"



Dimensional Data

Size		A	B	Blow-Off NPT	Shipping Weight (lbs)
Inches	Prefix				
1/2	0050	6	2 9/16	Opt.	9
3/4	0075	7 1/2	3	Opt.	11
1	0100	7 3/8	3 3/8	Opt.	15
1 1/2	0150	7 1/4	4 3/4	Opt.	18
2	0200	8 5/8	4 7/8	1/2	30
2 1/2	0250	10 1/4	7 1/2	3/4	44
3	0300	11 5/8	7 3/4	1	60
4	0400	14 3/8	9 1/8	1 1/2	96
5	0500	17 5/8	11	2	150
6	0600	18 5/8	13 3/8	2	174
8	0800	24 3/8	14 5/8	2	264
10	1000	26	17 1/4	2	414
12	1200	30 3/8	21	2	615

Ordering Information

Example: Include full description

Size (Prefix)	Model Number	*Screen Opening
------------------	-----------------	--------------------

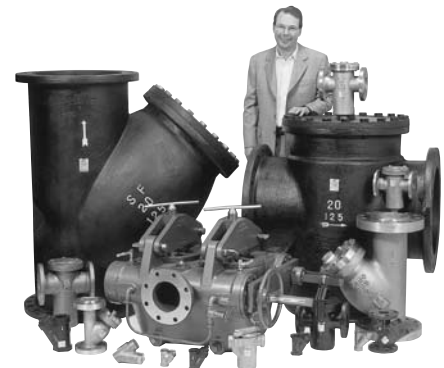
0400 - YF150SS - 125

4" FLGD, Y Strainer, Cast Stainless Steel,
150# ANSI Flanges with 1/8" Perf Screen

Notes

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

*Must specify if for steam service.

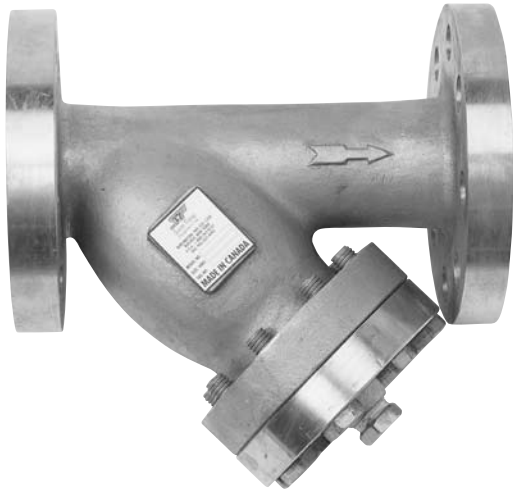


Y Strainers

Cast Steel & Cast 316SS, Flanged

Y Type Strainers

YF300 Cast Steel, YF300SS Cast Stainless Steel, with 300# ANSI Flanges



Features

Sure Flow 300# ANSI Flanged strainers are available in Carbon Steel and Stainless Steel. A machined, tapered seat ensures a perfect fit for the removable, stainless steel screen. 2" and larger come complete with flanged blow-off cover, gasket & plug. 1 1/2" and smaller come complete with solid threaded cover and gasket. May be installed in vertical or horizontal pipelines with blow-off connection at the lower end of the screen.

Construction

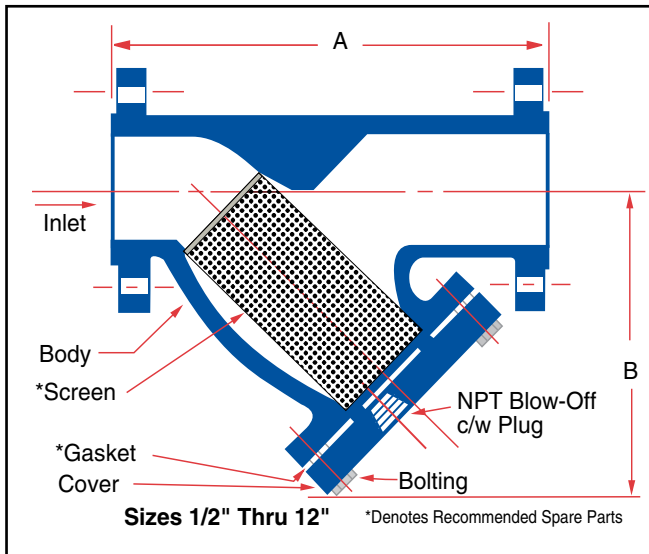
Carbon Steel - Body & Cover, ASTM A216, Grade WCB
Stainless Steel - Body & Cover, ASTM A351, Grade CF8M
 All screens are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam*	PSI @ Temp WOG
YF300	1" - 12"	300 417°F	740 100°F
YF300SS	1" - 12"	300 417°F	720 100°F

Standard Screens

Size	Std.	Opening
1" - 3"	3/64" perf	0.045"
4" - 12"	1/8" perf	0.125"



Dimensional Data

Size		A	B	Blow-Off NPT	Shipping Weight (lbs)
Inches	Prefix				
1	0100H	7 13/16	3 5/8		24
1 1/2	0150	7 9/16	4 3/8		27
2	0200	9 3/4	6 1/8	1/2	47
2	0200H	9 3/4	6 1/8	1/2	50
2 1/2	0250	10 11/16	7 7/16	1	64
3	0300	12 9/16	9	1 1/4	87
3	0300H	13 1/2	7 3/4	1 1/4	94
4	0400	14 5/8	11	1 1/2	165
4	0400H	16 5/8	10 3/4	1 1/2	170
5	0500	18 1/2	15 3/8	2	186
6	0600	19 3/4	15 1/2	2	260
8	0800	25	16 1/4	2	385
10	1000	29 1/8	19 1/4	2	610
12	1200	33 3/4	24	2	1300

Ordering Information

Example: Include full description

Size (Prefix) Model Number *Screen Opening

0400 - YF300SS - 125

4" FLGD, Y Strainer, Cast Stainless Steel, 300# ANSI Flanges with 1/8" Perf Screen

Notes

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

"H" denotes dimensions similar to Hayward.

*Must specify if for steam service.

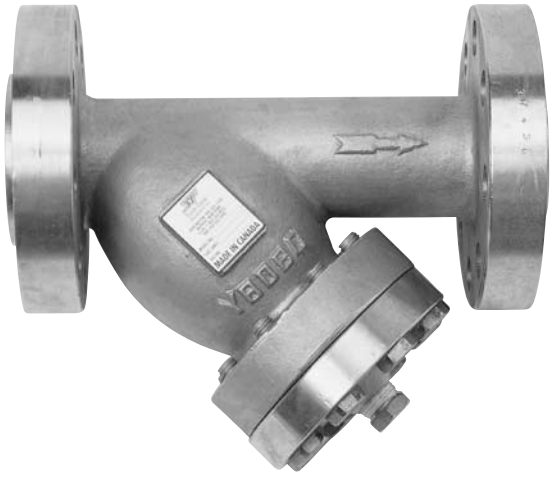


Y Strainers

Cast Steel & Cast 316SS, Flanged

Y Type Strainers

Type YF600 Cast Steel & YF600SS Cast Stainless Steel, with 600# ANSI Flanges



Features

Sure Flow 600# ANSI Flanged strainers are available in Carbon Steel and Stainless Steel. They provide very economical protection for Water, Oil or Gas service up to 1440 psig for stainless, and 1480 psig for carbon steel. A machined, tapered seat ensures a perfect fit for the removable, stainless steel screen. May be installed in vertical or horizontal pipelines with blow-off connection at the lower end of the screen.

Construction

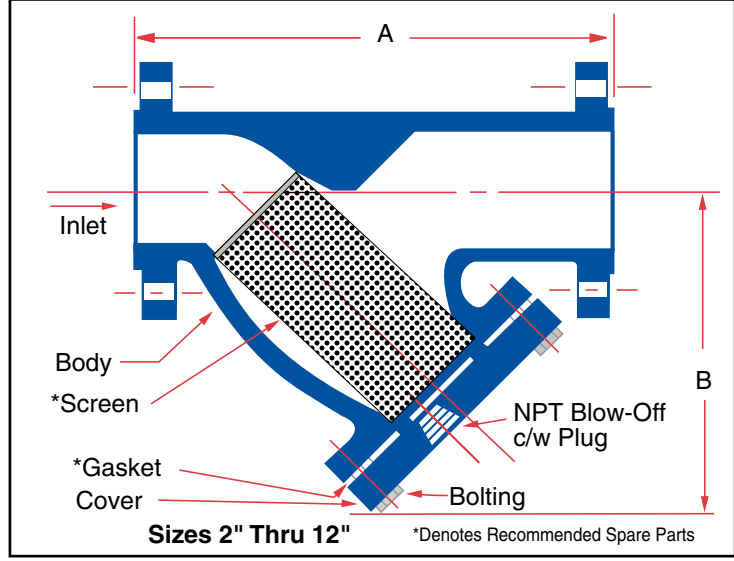
Carbon Steel - Body & Cover, ASTM A216, Grade WCB
Stainless Steel - Body & Cover, ASTM A351, Grade CF8M
 All screens are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam*	PSI @ Temp WOG
YF600	2" - 12"	600 486°F	1480 100°F
YF600SS	2" - 12"	600 486°F	1440 100°F

Standard Screens

Size	Std.	Opening
2" - 3"	3/64" perf	0.045"
4" - 12"	1/8" perf	0.125"



Dimensional Data

Size		A	B	Blow-Off NPT	Shipping Weight (lbs)
Inches	Prefix				
2	0200	11	6 1/8	1/2	53
2 1/2	0250	12	7 1/4	1	79
3	0300	13 1/2	8	1 1/4	100
4	0400	17 15/16	9 3/8	1 1/2	210
5	0500	22 1/4	12 3/8	2	330
6	0600	25 5/8	17 1/4	2	410
8	0800	31 3/4	18 1/2	2	834
10	1000	37 11/16	21 5/8	2	1200
12	1200	45 1/2	26 3/4	2	1445

Ordering Information

Example: Include full description

Size (Prefix)	Model Number	*Screen Opening
0400	YF600SS	- 125

4", Y Strainer, Cast Stainless Steel, 600# ANSI Flanges with 1/8" Perf Screen

Notes

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



Y Strainers

Cast Steel, Cast 316SS & Low Temp Carbon Steel, Flanged

Y Type
Strainers

Type YF900 Cast Steel, YF900SS Cast Stainless Steel & YF900LCC Low Temperature Carbon Steel; with 900# ANSI Flanges



Features

Sure Flow 900# ANSI Flanged strainers are available in Carbon Steel, Stainless Steel and Low Temperature Carbon Steel. They provide very economical protection for Water, Oil or Gas service up to 2160 psig for stainless, 2205 psig for carbon steel and 2250 psig for low temperature carbon steel. A machined, tapered seat ensures a perfect fit for the removable, stainless steel screen. May be installed in vertical or horizontal pipelines with blow-off connection at the lower end of the screen.

Blow-off or drain to be NPT or socket welded. Please specify.

Construction

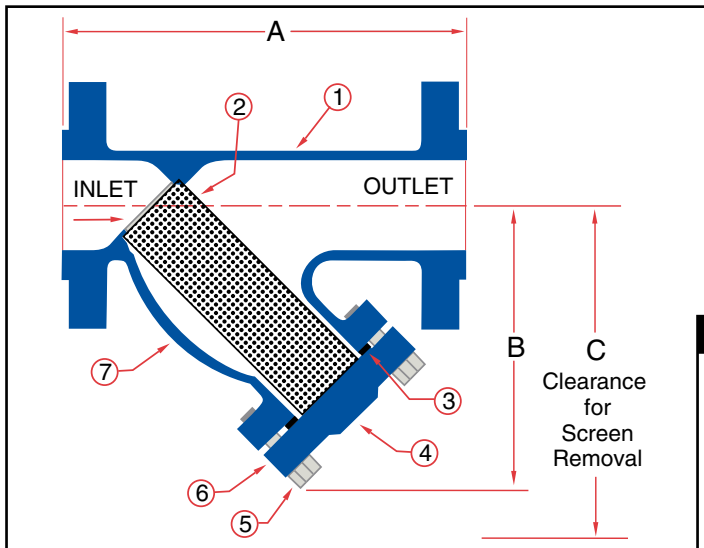
- Carbon Steel** - Body & Cover, ASTM A216 Grade WCB
 - Stainless Steel** - Body & Cover, ASTM A351 Grade CF8M
 - Low Temperature Carbon Steel** - Body & Cover, ASTM A352 Grade LCC
- All screens are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam	PSI @ Temp WOG
YF900	2" - 8"	900 532°F	2205 100°F
YF900SS	2" - 8"	900 532°F	2160 100°F
YF900LCC	2" - 8"	900 532°F	2250 100°F

Standard Screens

Size	Std.	Opening
2" - 3"	3/64" perf	0.045"
4" - 8"	1/8" perf	0.125"

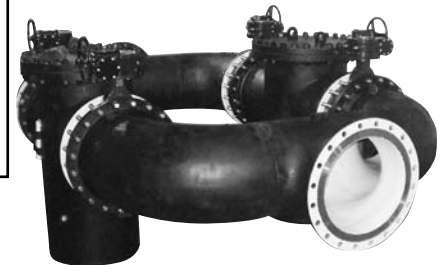


Dimensional Data

Size		A	B	C	Shipping Weight (lbs)
Inches	Prefix				
3	0300	19	13 3/8	15 3/8	196
4	0400	22 1/2	16 3/8	18 3/8	360
6	0600	28	19 15/16	21 15/16	720
8	0800	35	24 11/16	26 11/16	1,440

• For YF900 2-inch size, the YF1500 2-inch size is used (see following page)

Item	Description
1	Cast Body
2	Screen
3	Gasket
4	Drain (Drain to be NPT or Socket Weld)
5	Bolting
6	Cover
7	Name Plate



Ordering Information

Example: Include full description
 Size Model *Screen
 (Prefix) Number Opening
 0400 - YF900SS - 125

4", Y Strainer, Cast Stainless Steel,
 900# ANSI Flanges with 1/8" Perf Screen

Notes

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

Y Strainers

Cast Steel, Cast 316SS & Low Temp Carbon Steel, Flanged

Y Type Strainers

Type YF1500 Cast Steel & YF1500SS Cast Stainless Steel & YF1500LCC Low Temperature Carbon Steel with 1500# ANSI Flanges



Features

Sure Flow 1500# ANSI Flanged strainers are available in Carbon Steel, Stainless Steel and Low Temperature Carbon Steel. They provide very economical protection for Water, Oil or Gas service up to 3600 psig for stainless, 3705 psig for carbon steel and 3750 psig for low temperature carbon steel. A machined, tapered seat ensures a perfect fit for the removable, stainless steel screen. May be installed in vertical or horizontal pipelines with blow-off connection at the lower end of the screen.

Blow-off or drain to be NPT or socket welded. Please specify.

Construction

Carbon Steel - Body & Cover, ASTM A216 Grade WCB

Stainless Steel - Body & Cover, ASTM A351 Grade CF8M

Low Temperature Carbon Steel - Body & Cover, ASTM A352 Grade LCC

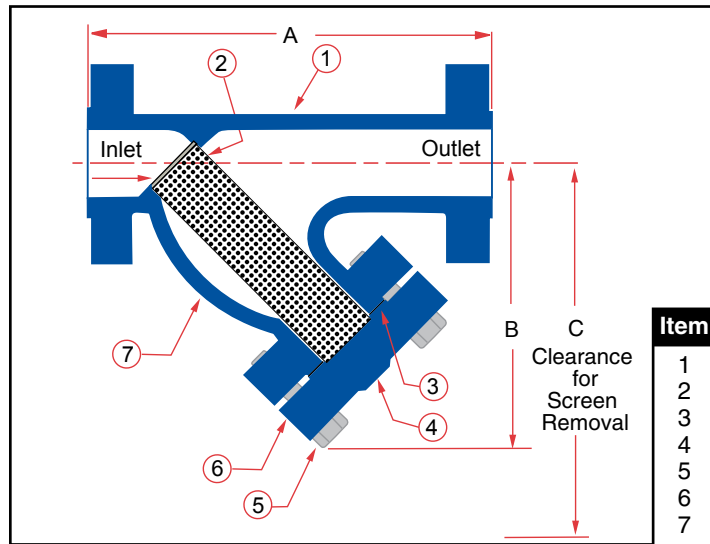
All screens are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam	PSI @ Temp WOG
YF1500	2" - 8"	1500 596°F	3705 100°F
YF1500SS	2" - 8"	1500 596°F	3600 100°F
YF1500LCC	2" - 8"	1500 596°F	3750 100°F

Standard Screens

Size	Std.	Opening
2" - 3"	3/64" perf	0.045"
4" - 8"	1/8" perf	0.125"



Dimensional Data

Size		A	B	C	Shipping Weight (lbs)
Inches	Prefix				
2	0200	15 1/4	11 11/16	15 3/4	140
3	0300	20 1/4	14 1/2	19 3/4	290
4	0400	23 1/4	18 1/8	26	480
6	0600	30 5/8	22 7/16	29 1/2	1,078
8	0800	39	27	37 1/2	1,560

Item	Description
1	Cast Body
2	Screen
3	Gasket
4	Drain (Drain to be NPT or Socket Weld)
5	Bolting
6	Cover
7	Name Plate

Ordering Information

Example: Include full description

Size Model *Screen
(Prefix) Number Opening
0400 - YF1500SS - 125

4", Y Strainer, Cast Stainless Steel,
1500# ANSI Flanges with 1/8" Perf
Screen

Notes

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



Type YB2500 Forged Steel & Stainless Steel High Pressure Strainer



Features

The wedge wire stainless steel construction of the screen provides high strength, preventing screen collapse. Continuous slot openings reduce bridging of particles while undersized solids pass freely through the wedge wire stainless steel screen without clogging.

Construction

The high strength forged carbon steel or stainless steel construction is designed for higher pressure applications. If all stainless steel construction is needed, add "SS" to the model number. Stainless steel spiral wound gasket is standard.

No	Name	Material	Qty
1	Body	SA 516 GR. 70 or stainless steel	1
2	Cover	SA 516 GR. 70 or stainless steel	1
3	Bolting	SA 193 B7 or stainless steel	4
4	Gasket	Spiral Wound	1
5	Screen	Wedge Wire S.S.	1

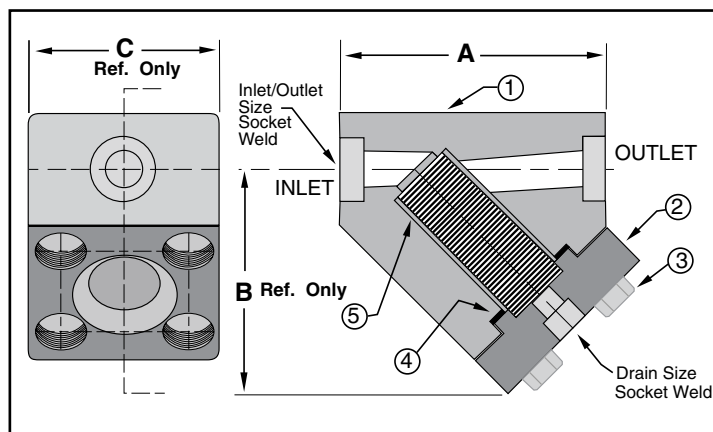
Operating Pressures and Temperatures

Max Temp 1000°F
Max Pressure 10,000 PSI

Standard Screens

Size	Std.	Opening
1/2" - 3"	Slotted Screen	0.032"

Dimensional Data



Size Inches	Model	A	B	C	Drain Size	Shipping Weight (lbs)
1/2	0050YB2500SW	6 1/4	6	3 1/2	1/2	124
3/4	0075YB2500SW	6 5/8	6 1/4	3 3/4	3/4	124
1	0100YB2500SW	7 1/4	7	4	3/4	124
1 1/4	0125YB2500SW	7 3/4	7 1/2	4 1/4	3/4	140
1 1/2	0150YB2500SW	8 1/4	7 3/4	4 1/2	3/4	140
2	0200YB2500SW	9 1/4	8 1/2	5	1	140
2 1/2	0250YB2500SW	11	9 1/2	6	1	190
3	0300YB2500SW	14	12	8	1	190

Ordering Information

Example: Include full description

Size (Prefix)	Model Number	*Screen Opening
0150	- YB2500SW	-032

1 1/2" SW, High Pressure Y Strainer,
Forged SA516 GR. 70 Steel,
0.032" Slotted Screen

Notes

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

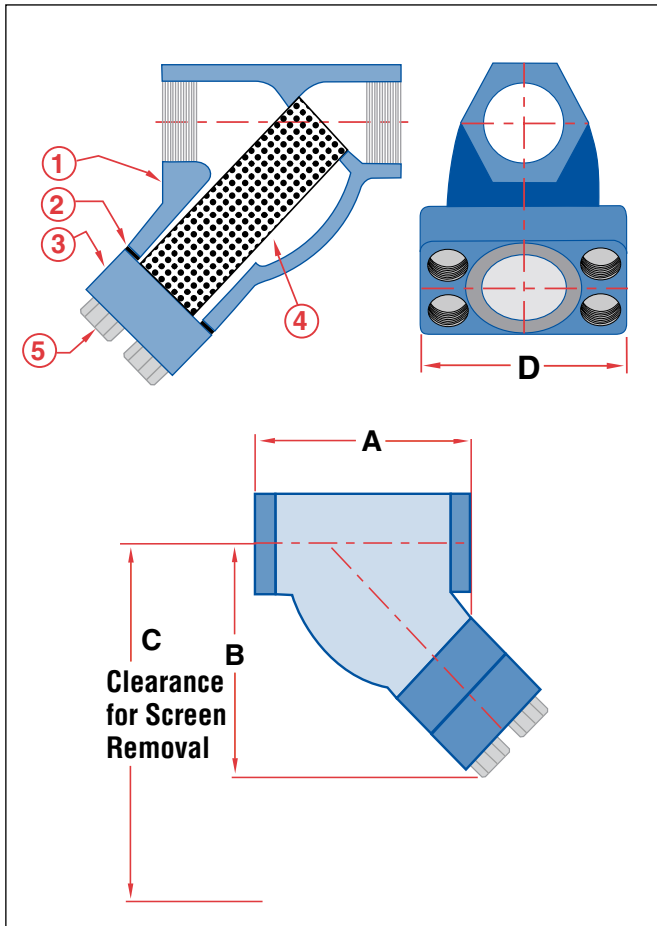


Y Strainers - High Pressure - Bolted Cover

Cast 316SS & Chrome-Moly (NPT Threaded or Socket Weld)

Y Type Strainers

Type YT1500SSBC Stainless Steel and YT1500CMBC Chrome-Moly (or Socket Weld ends - SW)



Sure Flow 1500# Strainers are available in Stainless Steel and Chrome-Moly WC6. A bolted cover allows a quick, easy screen removal process. Sure Flow Strainers provide a very economical protection of unwanted or foreign particles. A machined, tapered seat ensures a perfect fit for the removable stainless steel screen. May be installed in vertical or horizontal pipelines with blow-off connections at the lower end of screen. Blow-off drain to be NPT or socket welded. Please specify.

Construction

No	Name	Material	Qty
1	Cast Body	A351 CF8M or A217 WC6	1
2	Gasket	Spiral wound flexitallic	1
3	Cover Flange	A351 CF8M or A217 WC6	1
4	Screen	316SS Perf	1
5	Bolting	SA 193 B7 Hex Bolt	4

Standard Screens

Size	Std.	Opening
1/2 - 2"	1/32 perf	0.032
2-1/2 - 3"	3/64 perf	0.045

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam	PSI @ Temp WOG
YT1500SSBC	1/2 to 3"	1500 596°F	3600 100°F
YT1500CMBC	1/2 to 3"	1500 596°F	3750 100°F

Dimensional Data

Size Inches	Model	A	B	C	D	Shipping Weight (lbs)
1/2	0050	3 5/8	3 1/2	4 3/4	3 1/2	8
3/4	0075	4 1/4	4 3/4	5 1/2	4 1/8	14
1	0100	4 7/8	5 3/8	6 1/8	4 5/8	20
1-1/2	0150	6 3/8	6 5/8	8 1/8	6 3/8	45
2	0200	8 9/16	9	10 3/4	7 1/4	84
2-1/2	0250	9	9 1/4	11	7 3/4	92
3	0300	9 5/8	10	13	8 1/2	114

Ordering Information

Example: Include full description

Size Model *Screen
(Prefix) # Opening

0200 - YT1500SSBC - .045

2", NPT, High Pressure Y Strainer, Cast
Stainless Steel, 1500# Class with 3/64"
Perf Screen

Notes

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

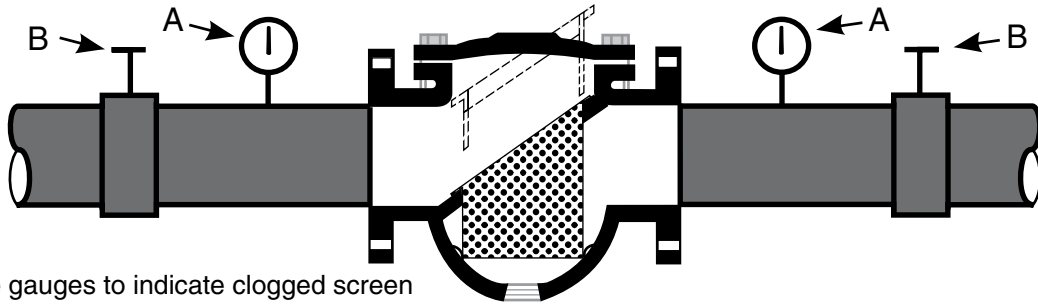


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Basket Strainers

Basket Strainers

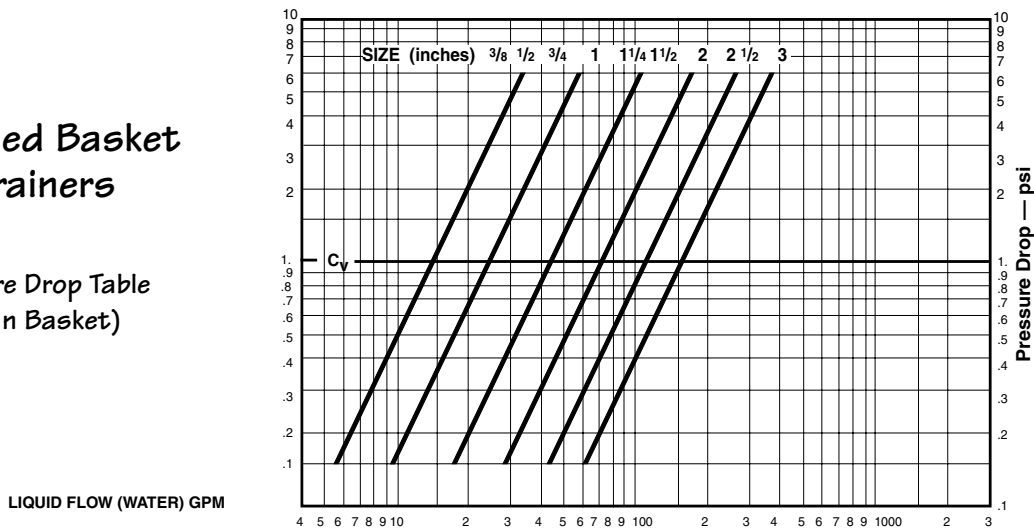
Basket Strainers feature top removal of the screen. The screen is in the form of a basket, with a lifting handle, so that all particulate captured and retained by the screen can be easily removed for disposal. They are intended for applications where larger amounts of solid particulate are expected, and where clean-out will be frequent. Most models have a standard or optional "Quick Release Cover" to allow fast and easy screen removal without the use of tools. For easily flushable solids, a modified cone-bottom basket can be fitted, with automatic or manual blow-down through the drain port. This will allow clean-out without removal of the screen, and without interrupting the process flow.



- A. Pressure gauges to indicate clogged screen
- B. Isolation valves for servicing strainer

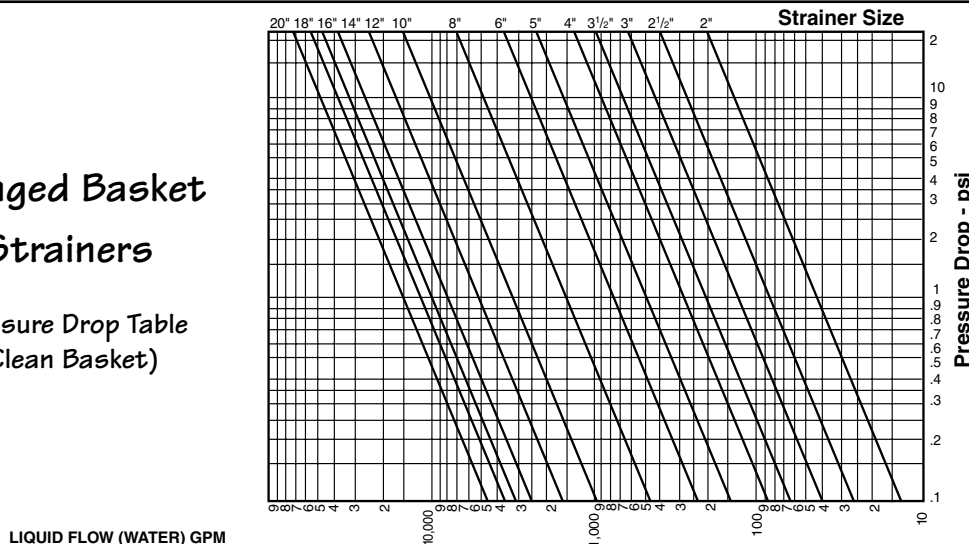
Threaded Basket Strainers

Pressure Drop Table
(Clean Basket)



Flanged Basket Strainers

Pressure Drop Table
(Clean Basket)



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

Cast Simplex Strainers

Cast Iron, NPT Threaded

**ASME Section VIII, Div 1,
Current Edition:
U and UM CODE STAMP
Available**

BTC125 Cast Iron, Swivel Clamp Cover

Basket Strainers



Features

Sure Flow Basket Strainers feature top removal of the screen. The screen is in the form of a basket, with a lifting handle, so that all particulate captured and retained by the screen can be easily removed for disposal. They are intended for applications where larger amounts of solid particulate are expected, and where clean-out will be frequent. Models are standard with "Swivel Clamp Cover" to allow fast and easy screen removal without the use of tools. Basket and cover both have BUNA-N O-ring seals eliminating the need to change gaskets each time the strainer is serviced.

Construction

No.	Name	Material	Qty
1	Cover	ASTM A126 Class B Cast Iron	1
2	Clamp	ASTM A126 Class B Cast Iron	1
3	Bolting	SAE J429 Grade 2 Zinc Plated	2
4	O-Ring	BUNA-N	1
5	Cast Body	ASTM A126 Class B Cast Iron	1
6	Basket Assembly	Stainless Steel Construction	1
7	Drain Plug	ASTM A126 Class B Cast Iron	1

Standard Screens

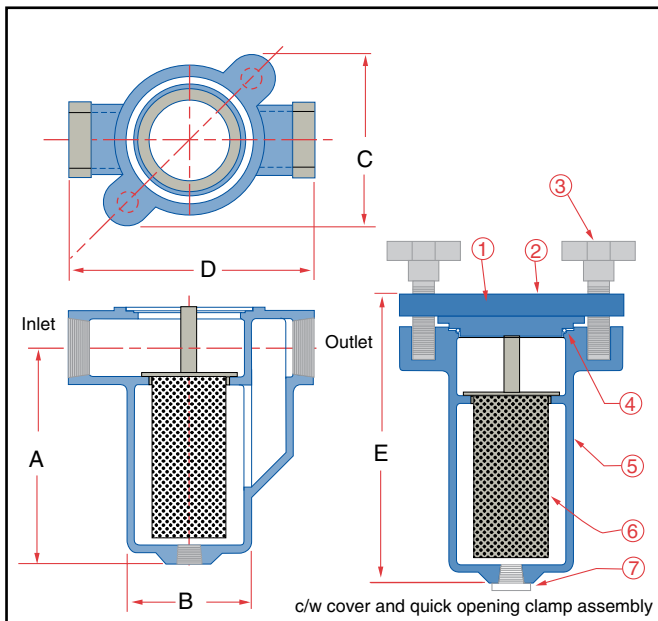
Size	Std.	Opening
1/2" - 3"	1/32" perf	0.032"

Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam	PSI @ Temp WOG
BTC125	3/8" - 3"	125 344°F	200 150°F

Dimensional Data

Size	Prefix	A	B	C	D	E	Drain	Shipping Weight (lbs)
3/8	0038	5 1/4	3 9/16	5 7/16	6 3/8	7	1/2	18
1/2	0050	5 1/4	3 9/16	5 7/16	6 3/8	7	1/2	22
3/4	0075	5 1/4	3 5/8	5 7/16	6 7/8	7 5/8	1/2	25
1	0100	5 1/4	3 5/8	5 7/16	6 7/8	7 5/8	1/2	26
1 1/4	0125	7 3/8	4 1/4	5 7/8	8 3/8	9 3/4	3/4	29
1 1/2	0150	7 3/8	4 1/4	5 7/8	8 3/8	9 3/4	3/4	32
2	0200	7 1/8	5 1/4	6 5/8	9 5/8	9 3/4	1	44
2 1/2	0250	8 5/8	6 3/4	8 3/16	12 3/4	12	1 1/2	82
3	0300	12	6 3/4	8 5/16	13 1/4	15 3/4	1 1/2	96



Ordering Information

Example: Include full description

Size (Prefix) Model Number *Screen Opening

0150 - BTC 125 - 016

1-1/2" NPT, Basket Strainer,
Cast Iron, 40 Mesh Screen

Notes

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

Optional Features

- Baskets with any chosen perforations
- Baskets are available in other materials
- Replaceable inserts available from 20 to 300 mesh.

*Must specify if for steam service.



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Cast Simplex Strainers

Cast Bronze, Cast Steel & Cast Stainless Steel, NPT Threaded

SBT150B Bronze, SBT150SS Stainless Steel & SBT150 Cast Steel



**Basket
Strainers**

Features

Sure Flow Basket Strainers feature top removal of the screen. The screen is in the form of a basket, with a lifting handle, so that all particulate captured and retained by the screen can be easily removed for disposal. They are intended for applications where larger amounts of solid particulate are expected, and where clean-out will be frequent. Models are standard with "Quick Release Cover" to allow fast and easy screen removal without the use of tools. Basket and cover both have BUNA-N O-ring seals (Viton for stainless steel), eliminating the need to change gaskets each time the strainer is serviced.

Construction

- Bronze** - Body & Cover, ASTM B62
- Carbon Steel** - Body & Cover, ASTM A216, Grade WCB
- Stainless Steel** - Body & Cover, ASTM A351, Grade CF8M

Standard Screens

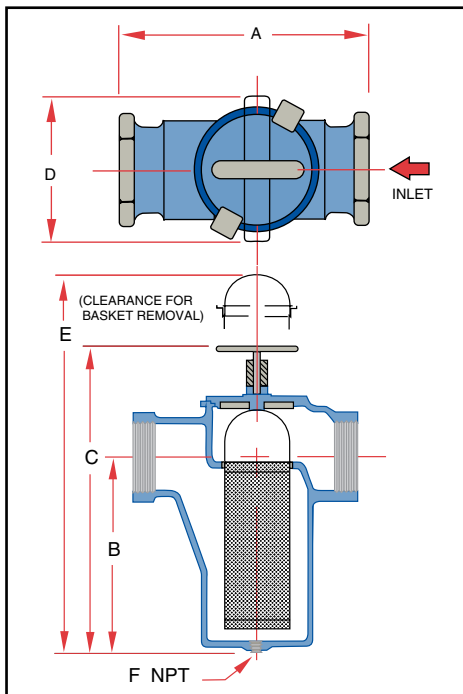
Size	Std.	Opening
3/8" - 3"	3/32" perf	0.094"

Operating Pressures and Temperatures

Type	Size	PSI @ Temp	
		Steam	WOG
SBT150B	3/8" - 3"	150 358°F	225 150°F
SBT150SS	3/8" - 3"	150 358°F	275 100°F
SBT150	3/8" - 3"	150 358°F	285 100°F

Dimensional Data

Size		A	B	C	D	E	F	Shipping Weight (lbs)
Inches	Prefix							
3/8	0038	4	4	6 5/8	2 7/8	11	3/8	10
1/2	0050	4	4	6 5/8	2 7/8	11	3/8	10
3/4	0075	5 3/8	5	8 3/8	4	13	1/2	18
1	0100	5 3/8	5	8 3/8	4	13	1/2	18
1-1/4	0125	6 3/4	5 7/8	9 7/8	4 7/8	14	1/2	30
1-1/2	0150	7	6 1/2	10 5/8	6	14 7/8	3/4	30
2	0200	8 1/2	7 1/2	11 5/8	7 1/2	17 3/8	1 1/4	50
2-1/2	0250	11 1/2	9 1/8	15 1/4	8	22 3/8	1 1/4	62
3	0300	11 1/2	9 1/8	15 1/4	8	22 3/8	1 1/4	62



Notes

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

Optional Features

- Baskets with any chosen perforations
- Baskets are available in other materials
- Gauge tappings if required
- Replaceable inserts available from 20 to 300 mesh.

*Must specify if for steam service.



Ordering Information

Example: Include full description

Size Model *Screen
(Prefix) Number Opening
0150 - SBT150SS - 016

1-1/2" NPT, Basket Strainer,
Cast Stainless Steel,
40 Mesh Screen

Basket Strainers

Cast Iron, Flanged

**ASME Section VIII, Div 1,
Current Edition:
U and UM CODE STAMP
Available**

Type BF125 Cast Iron & BFC125 with Quick Release Cover, 125# ANSI Flanges

Basket Strainers



Features

Sure Flow 125# ANSI Flanged basket strainers in Cast Iron are available with bolted or quick release clamped cover. Clamp cover units (Model BFC) are ideally suited for applications where frequent clean-out of the basket is expected. Having a spare, clean basket on hand will greatly reduce the cleaning time, and differential pressure gauges, with alarms, can be supplied to get the maximum on-stream time between cleaning cycles.

Construction

Cast Iron - Body & Cover, ASTM A126, Class B
Baskets are Stainless Steel

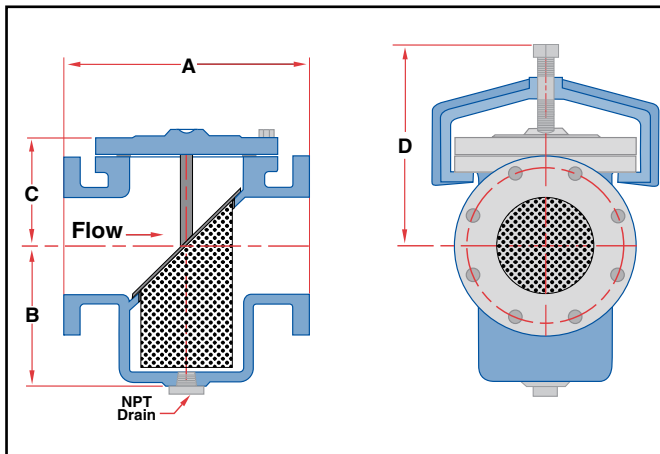
Standard Screens

Size	Std.	Opening
2" - 3"	3/64" perf	0.045"
4" - 20"	1/8" perf	0.125"

Operating Pressures and Temperatures

Type	Size	PSI @ Temp WOG	
BF125	2" - 20"	150	150°F
BFC125	2" - 20"	75	150°F

Dimensional Data



Size		A	B	C	D	Blow Off NPT	Clearance For Bskt Removal	Shipping Weight (lbs)
Inches	Prefix							
2	0200	8 1/8	5	3 3/4	7 1/2	3/4	5 3/8	34
2 1/2	0250	8 1/4	5 3/8	4 5/16	8	3/4	6 5/16	43
3	0300	9 7/8	6 1/2	4	8	3/4	8	60
4	0400	11 1/2	8	6 9/16	10 1/2	1	9 5/16	120
5	0500	13 1/8	8	7	11 1/2	1	10 1/4	140
6	0600	14 7/8	8 5/8	6 5/8	12	1	11 1/8	164
8	0800	18 11/16	11 3/4	9	15	1	15 9/16	330
10	1000	20 1/8	13 3/4	10 1/2	15	1	18	470
12	1200	26 1/4	16 3/8	13 1/8	17 1/2	1	23 1/4	820
14	1400	30 1/4	22 3/8	14 1/2	—	2	26 1/4	1300
16	1600	33 1/8	23 5/8	15 9/16	—	2	28 1/8	1600
18	1800	38 3/8	28 3/8	16	—	2	33 3/8	2260
20	2000	41 1/2	32 3/8	17 3/8	—	2	37 3/8	2980

Ordering Information

Example: Include full description

Size Model *Screen
(Prefix) Number Opening
0400 - BF125 - 125

4" FLGD, 125# ANSI Flanges,
Basket Strainer, Cast Iron,
with 1/8" Perf. Screen & Quick
Release Cover

Notes

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

*Must specify if for steam service.



Basket Strainers

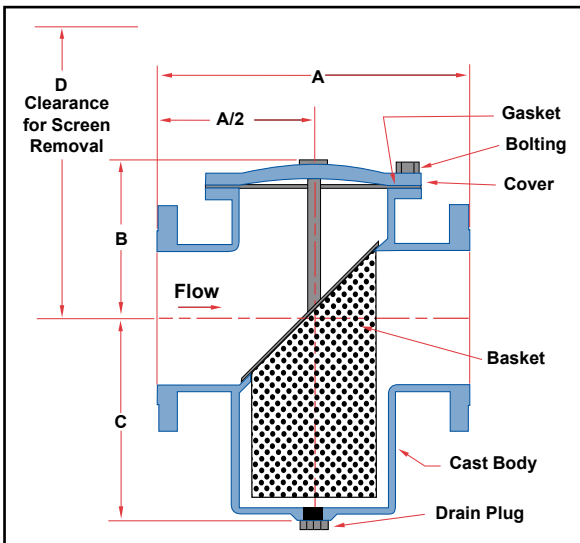
Cast Bronze, Carbon Steel, Cast 316SS, 150# Flanged

Type BF150B Cast Bronze, BF150 Cast Steel & BF150SS Cast Stainless Steel



Standard Screens

Size	Std.	Opening
2" - 3"	3/64 perf.	0.045"
4" - 12"	1/8 perf.	0.125"



Ordering Information

Example: Include full description

Size (Prefix)	Model Number	*Screen Opening
------------------	-----------------	--------------------

0400 - BF150SS - 125
4", Basket Strainer, Cast Stainless Steel, 150# ANSI Flanges, with 1/8" Perf. Screen

Features

Sure Flow 150# ANSI Flanged basket strainers are available in Cast Bronze, Cast Steel and Cast Stainless Steel. For contaminant that is easily flushable from the screen, a valve can be supplied for the blow-off port.

Construction

Bronze - Body & Cover, ASTM B62
Carbon Steel - Body & Cover, ASTM A216, Grade WCB
Stainless Steel - Body & Cover, ASTM A351, Grade CF8M

Baskets are Stainless Steel

Operating Pressures and Temperatures

Type	Size	PSI @ Temp WOG
BF150B	2" - 12"	225 150°F
BF150	2" - 12"	285 100°F
BF150SS	2" - 12"	275 100°F

Dimensional Data

Size		A	B	C	D Clearance For Bskt Removal	Blow Off NPT	Shipping Weight (lbs)
Inches	Prefix						
2	0200	8 1/8	4	5 3/8	5 3/8	1	34
2 1/2	0250	8 3/4	4 7/16	5 3/8	6 5/16	1	43
3	0300	9 7/8	5 1/4	7 1/8	8	1	60
4	0400	11 1/2	5 13/16	8 3/8	9 5/16	1	120
6	0600	14 7/8	7 1/4	9	11 1/8	1	164
8	0800	18 11/16	9 5/8	12 1/8	15 9/16	1	330
10	1000	20 1/8	11	14 1/8	18	1	470
12	1200	26 1/4	12 5/8	16 3/4	23 1/4	1	820

Larger sizes available. 1" and 1 1/2" available. Consult factory.

Notes

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

*Must specify if for steam service.



Basket Strainers

Basket Strainers

Cast Steel, Cast 316SS, 300# Flanged

**ASME Section VIII, Div 1,
Current Edition:
U and UM CODE STAMP
Available**

BF300 Cast Steel & BF300SS Cast Stainless Steel

Basket Strainers



Features

Sure Flow 300# ANSI Flanged basket strainers are available in Carbon Steel and Stainless Steel. For contaminant that is easily flushable from the screen, a valve can be supplied for the blow-off port.

Construction

Carbon Steel - Body & Cover, ASTM A216, Grade WCB
Stainless Steel - Body & Cover, ASTM A351, Grade CF8M

Baskets are Stainless Steel

Operating Pressures and Temperatures

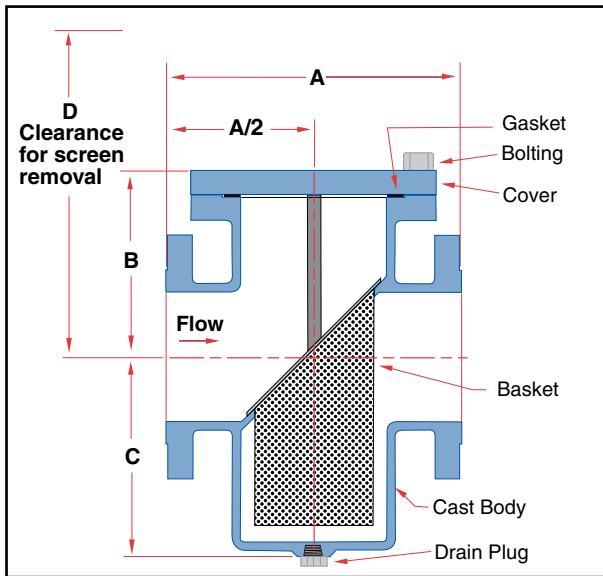
Type	Size	PSI @ Temp WOG
BF300	2" - 12"	740 100°F
BF300SS	2" - 12"	720 100°F

Standard Screens

Size	Std.	Opening
2" - 3"	3/64 perf.	0.045"
4" - 12"	1/8 perf.	0.125"

Dimensional Data

Size		A	B	C	D Clearance For Bskt Removal	Blow Off NPT	Shipping Weight (lbs)
Inches	Prefix						
2	0200	8 1/2	5 3/8	5 3/8	13 1/4	1	50
2 1/2	0250	8 11/16	6 3/8	5 3/4	15 3/8	1	72
3	0300	9 9/16	7	7 1/8	17 5/8	1	90
4	0400	11 3/4	8 3/16	8 3/8	21	1	160
6	0600	14 3/4	10	9 1/8	23 3/4	1	240
8	0800	18 1/8	11 5/8	12 1/4	29 1/8	1	350
10	1000	22 7/8	13	14 5/16	34 1/2	1	550
12	1200	25 3/8	14 3/4	17	40	1	948



Ordering Information

Example: Include full description
Size **Model** ***Screen**
(Prefix) **Number** **Opening**
 0400 - BF300SS - 125
 4", Basket Strainer, Cast Stainless Steel, 300# ANSI Flanges, with 1/8" Perf. Screen

Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.
 *Must specify if for steam service.



Fabricated Basket Strainers

Carbon Steel & Stainless Steel, 150# Flanged

Type BWEB150 Carbon Steel, BWEB150SS Stainless Steel



Basket Strainers

Sure Flow Fabricated Flange Basket Strainers were initially developed for the petrochemical market. With continuous success it has now become a standard product off shelf on most sizes. Its unique quick-opening closure and venting allow 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.

Operating Pressures and Temperatures

Type	Size	PSI @Temp WOG
BWEB150	2" - 24"	100 @ 150 °F
BWEB150SS	2" - 24"	100 @ 150 °F

Construction

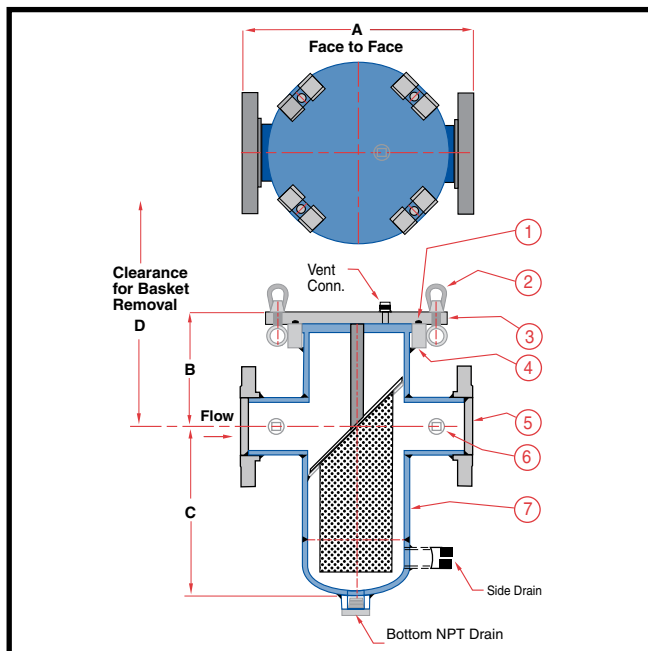
No	Description
1	O-Ring Gasket, BUNA-N standard (Viton, EPDM optional)
2	Quick Open Eye Bolts
3	Cover Plate
4	Ring Flange
5	Outlet Nozzle
6	Differential Conn.
7	Body
8	Inlet Nozzle

Standard Screens

Size	Std.	Opening
2" - 3"	3/64 perf	0.045"
4" - 24"	1/8 perf	0.125"

Dimensional Data

Size Inches	Model	Body Size	A	B	C	D
2	0200	4	10	7	11	22
2 1/2	0250	4	11	7 1/2	11	25
3	0300	6	12	7 7/8	13	26
4	0400	6	12	8 5/8	13	27
5	0500	8	14 7/8	9 3/8	17	31 1/2
6	0600	8	14 7/8	10	17	32 1/2
6	0600	10	18 3/4	10 5/16	20	36
8	0800	10	18 3/4	11 3/8	20	38
8	0800	12	20 1/8	11 7/8	23	40 3/4
10	1000	12	21 1/8	13 1/8	23	44
10	1000	14	25 3/8	13 1/4	26	46
12	1200	14	25 3/8	15 3/8	26	51
12	1200	16	27 5/8	16 5/16	29	55
14	1400	16	27 5/8	16 5/16	29	55
14	1400	18	29 1/8	17 3/8	32	60
16	1600	18	29 1/8	17 3/8	32	60
16	1600	20	33 5/8	19	34	64
18	1800	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 3/8	45	83



Ordering Information

Example: Include full description

Size (Prefix) Model # *Screen Opening

0200 - BWEB150SS - .045

2", Basket Strainer, Stainless Steel, 150#
ANSI Flanges with 3/64" Perf Screen, Side
Drain

Notes

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

Fabricated Basket Strainers

**ASME Section VIII, Div 1,
Current Edition:
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Available**

Fabricated Strainers



Type BW Carbon Steel & BWSS Stainless Steel with ANSI Flanges

Features & Construction

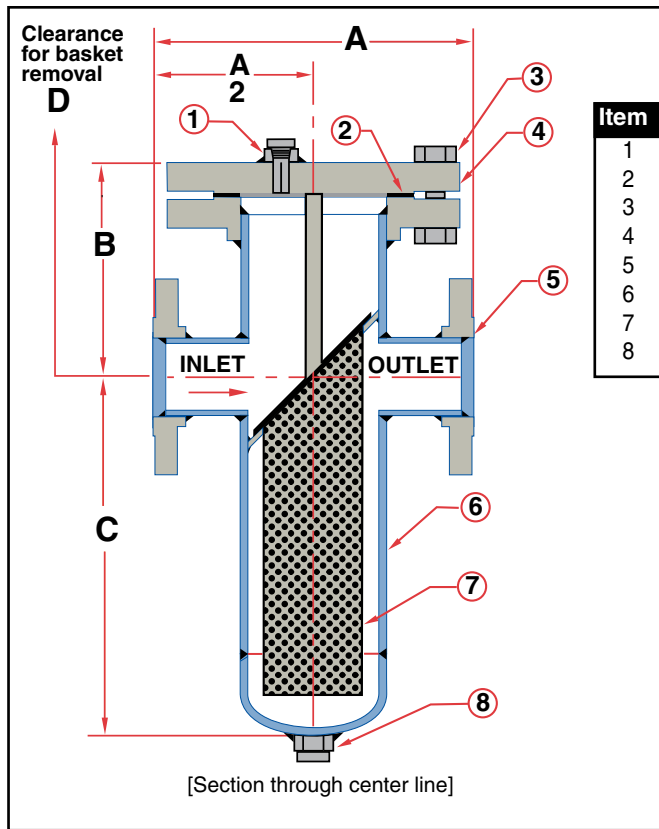
Sure Flow Fabricated Flanged Basket Strainers can be designed to your specific application in Carbon Steel or Stainless Steel. 1 1/2" to 24" pipe sizes in 150# and 300#. ANSI flanges are standard, with the capability to supply larger pipe sizes, or 600#, 900#, 1500# and 2500# ANSI ratings. Basket size 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. Maintenance reducing features include Automatic Flush and Hinged Cover, with or without Davit Assembly.

Dimensional Data

Size Inches	Prefix	A	B	C	D
		1 1/2	0150	8	7
2	0200	8	7	8	19
2 1/2	0250	8 3/4	7	9	21
3	0300	9 7/8	7	11	23
4	0400	11 1/2	8	13	27
5	0500	13 1/8	9	15	30
6	0600	14 7/8	9	17	33
8	0800	18 11/16	9	20	39
10	1000	20 1/8	13	23	42
12	1200	26 1/4	14	26	50
14	1400	34	17	29	55
16	1600	36	18	32	59
18	1800	42	20	34	63
20	2000	44	21	39	69
24	2400	48	26	45	87

*Larger sizes available. Consult factory.

Model BW150/BW150SS and BW300/ BW300SS



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

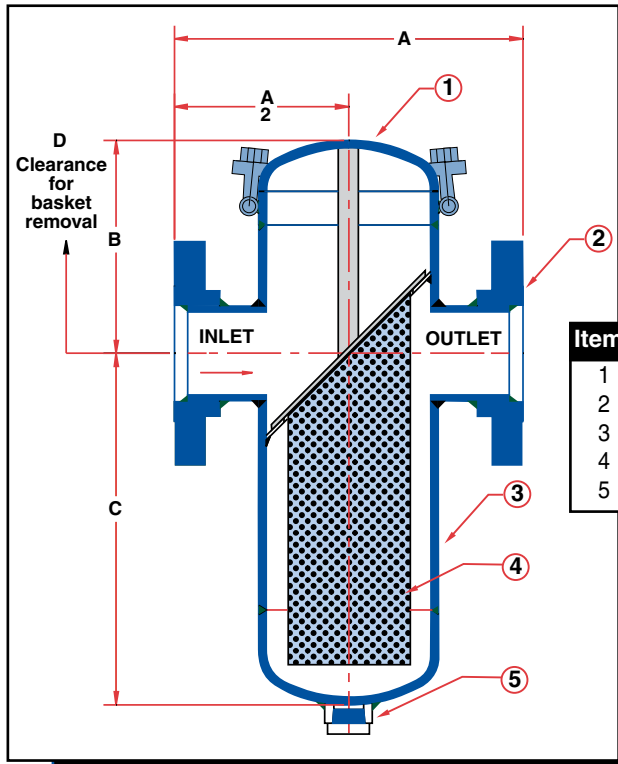
Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam	PSI @ Temp WOG
BW150	1 1/2" - 24"	150 366°F	285 100°F
BW150SS	1 1/2" - 24"	150 366°F	275 100°F
BW300	1 1/2" - 24"	300 422°F	740 100°F
BW300SS	1 1/2" - 24"	300 422°F	720 100°F

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

Fabricated Basket Strainers

Type BWH150 & BWH300 with Quick Opening Hinged Cover



Item	Description
1	Quick Opening Cover
2	Inlet/Outlet Flange
3	Body Assembly
4	Basket
5	Drain Assembly

Dimensional Data

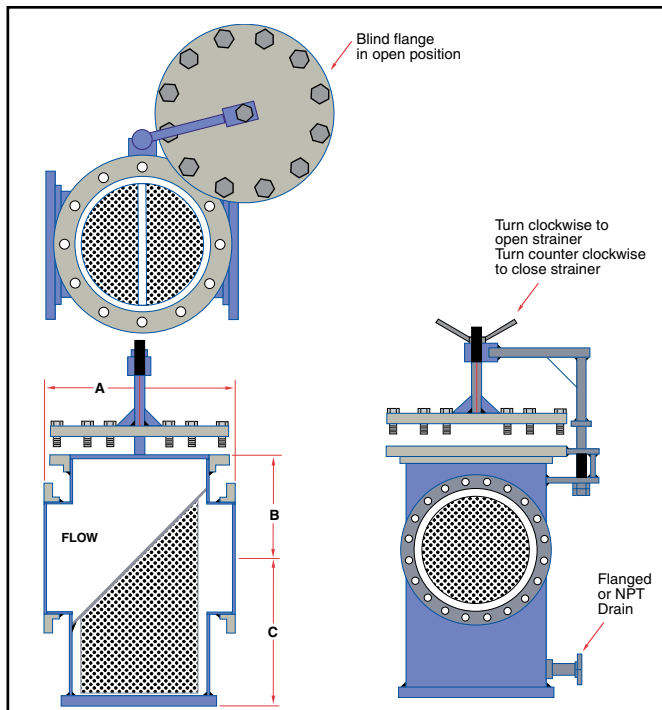
Size		A	B	C	D
Inches	Prefix				
1 1/2	0150	12	6 1/8	8	17
2	0200	12	6 5/8	8	19
2 1/2	0250	12	7 1/8	9	21
3	0300	12 1/2	7 3/8	11	23
4	0400	12 3/4	8 1/8	13	27
5	0500	15 3/8	9 1/8	15	30
6	0600	15 3/4	9 5/8	17	33
8	0800	18 1/4	11 3/8	20	39
10	1000	20 3/4	13 5/8	23	42
12	1200	22	15 5/8	26	50
14	1400	27	17 1/8	29	55
16	1600	28	19 1/8	32	59
18	1800	35	21 1/8	34	63
20	2000	41	23 7/8	39	69
24	2400	44	26 5/8	45	87

*Larger sizes available. Consult factory.

Fabricated Strainers

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

Quick Opening Davit



Numerous quick-opening covers, which conform to the ASME Boiler and Pressure Vessel Code, are available from Sure Flow.

To the left is the "Davit Assembly" which is usually used on larger, custom products in order to facilitate screen removal. The cover simply lifts and swings, a function easily performed by a technician.

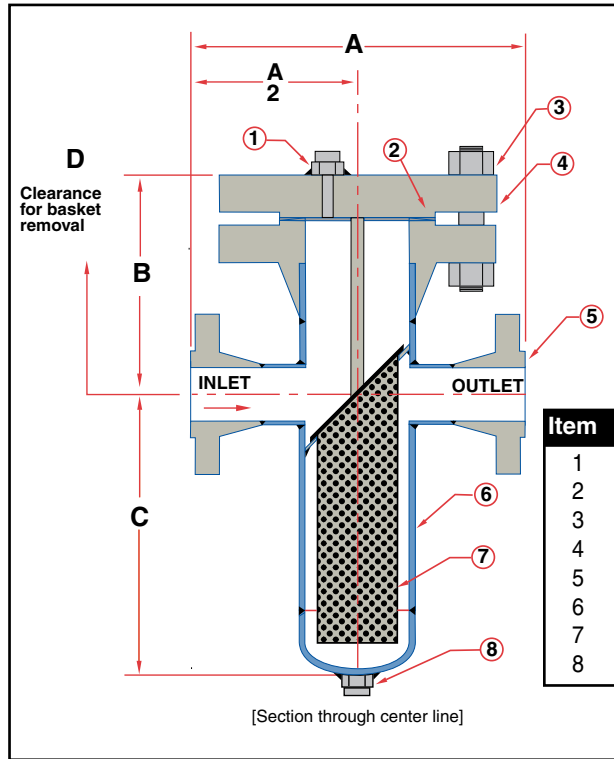
Refer to page 25 for other Strainer options.



Fabricated Basket Strainers

ASME Section VIII, Div 1,
Current Edition:
U and UM CODE STAMP
Available

Type Class 600 Model BW600/BW600SS Strainers



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

Dimensional Data

Size		A	B	C	D
Inches	Prefix				
2	0200	10	7 3/4	8	22
2 1/2	0250	12	9 1/4	9	25
3	0300	12	9 5/8	11	28
4	0400	15	11 7/8	13	32
5	0500	18	13	15	38
6	0600	18	14 1/2	17	45
8	0800	21	16 3/4	20	50
10	1000	23	18 3/4	23	58
12	1200	25	20	26	63
14	1400	31	21 3/4	29	70
16	1600	33	24	32	78
18	1800	39	25 1/2	34	80
20	2000	46	28	39	90
24	2400	58	42	45	120

*Larger sizes available. Consult factory.

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

Standard Screens

To be specified - sizes available in stainless steel material:

Perforated Sheet: 1/32, 3/64, 1/16, 3/32, 1/8, 3/16, 1/4, 1/2

Mesh Lined: 20, 30, 40, 60, 80, 100, 120, 160,
200 - and down to 5 microns



Ordering Information

Example: Include full description

Size (Prefix) Model Number *Screen Opening

0400 - BWH150SS - 125

Basket Strainer, Stainless Steel, 4", 150# ANSI

Flanges, with 1/8" Perf. Screen & Hinged Cover

BW = Bolted Cover
BWH = Hinged Cover

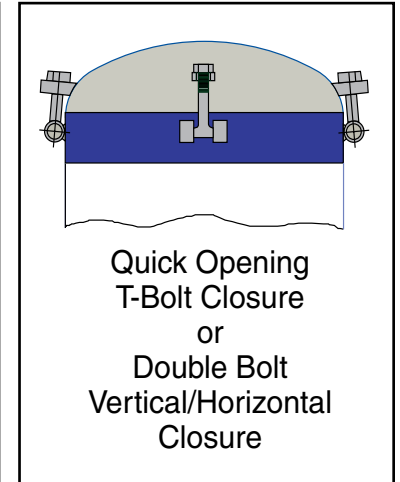
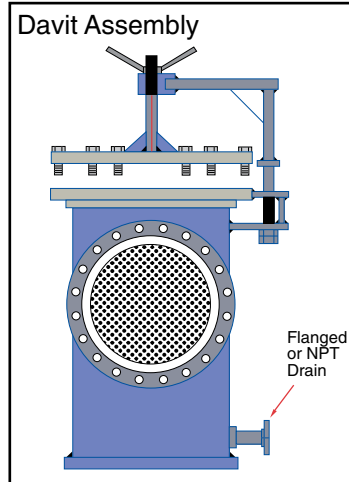
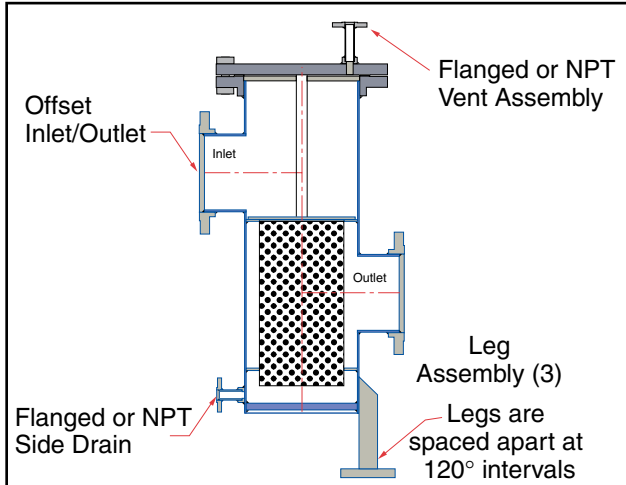
Notes

- Higher ANSI pressure ratings available
- Auto or manual blow-down feature available

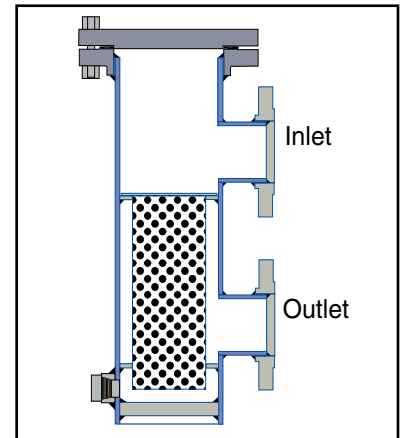
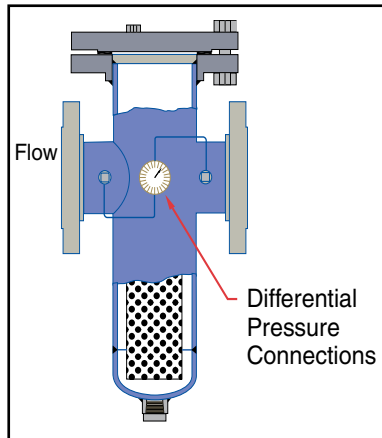
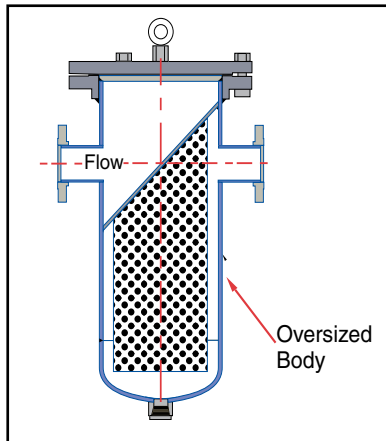
Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

Fabricated Basket Strainers

Strainer Options



Fabricated Strainers



Optional Features

- Quick opening covers
- Body materials of stainless steel or special alloys
- Custom Baskets: of 316 SS steel, monel, and special alloys
- Davit Assembly
- Larger sizes available
- Single or multiple baskets
- Oversized body design to reduce pressure drop
- Automatic air vent
- Pressure gauges or differential pressure switch
- Special internal and external coatings
- Many codes & designs are available

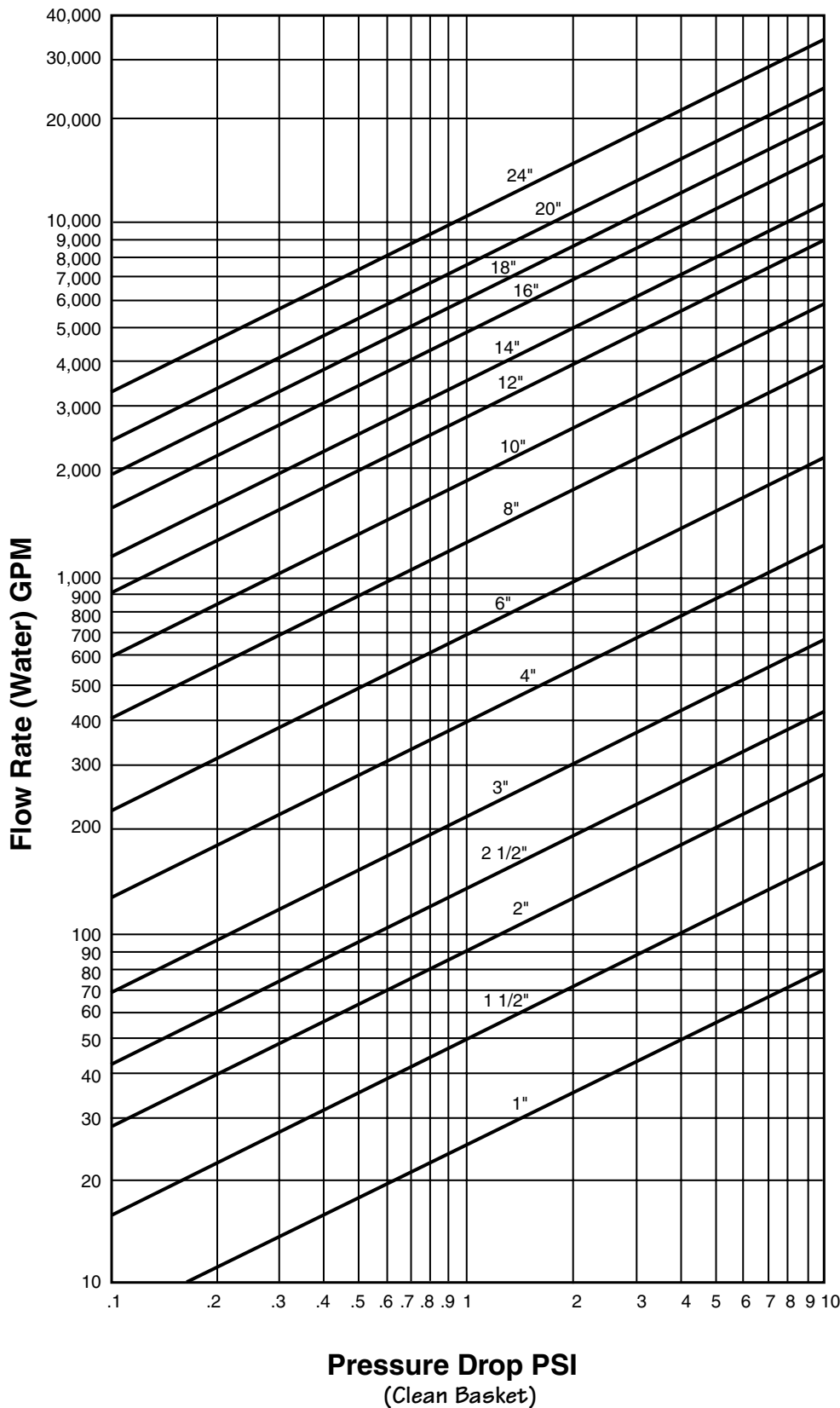
Special Construction

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



Fabricated Basket Strainers, Flanged

Fabricated Strainers



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



Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
 International 1-905-335-1350 International Fax: 1-905-332-4993
 Email: info@sureflowequipment.com www.sureflowequipment.com

Fabricated Y Strainers

Type FW150/FW300 Carbon Steel & FW150SS/FW300SS Stainless Steel Y Strainer with ANSI Flanges



Features & Construction

Sure Flow Fabricated Flanged 'Y' Strainers can be designed to your specific application in Carbon Steel or Stainless Steel. 1 1/2" to 24" pipe sizes in 150# and 300# ANSI flanges are standard, with the capability to supply larger pipe sizes, 600#, 900#, 1500# and 2500# ANSI 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. Available in any material. Please contact factory for details.

Fabricated Strainers

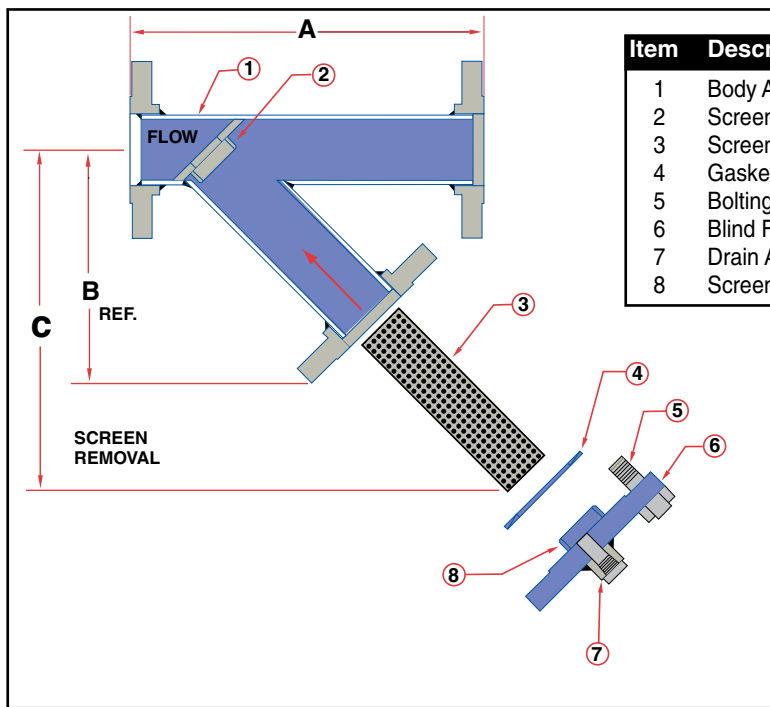
Operating Pressures and Temperatures

Type	Size	PSI @ Temp Steam	PSI @ Temp WOG
FW150	1 1/2" - 24"	150 366°F	285 100°F
FW150SS	1 1/2" - 24"	150 366°F	275 100°F
FW300	1 1/2" - 24"	300 422°F	740 100°F
FW300SS	1 1/2" - 24"	300 422°F	720 100°F

Standard Screens

To be specified: sizes available in stainless steel material:
Perforated Sheet: 1/32, 3/64, 1/16, 3/32, 1/8, 3/16, 1/4, 1/2
Mesh Lined: 20, 30, 40, 60, 80, 100, 120, 160, 200 - and down to 5 microns

Type FW150/FW300 and FW150SS/FW300SS



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

Dimensional Data

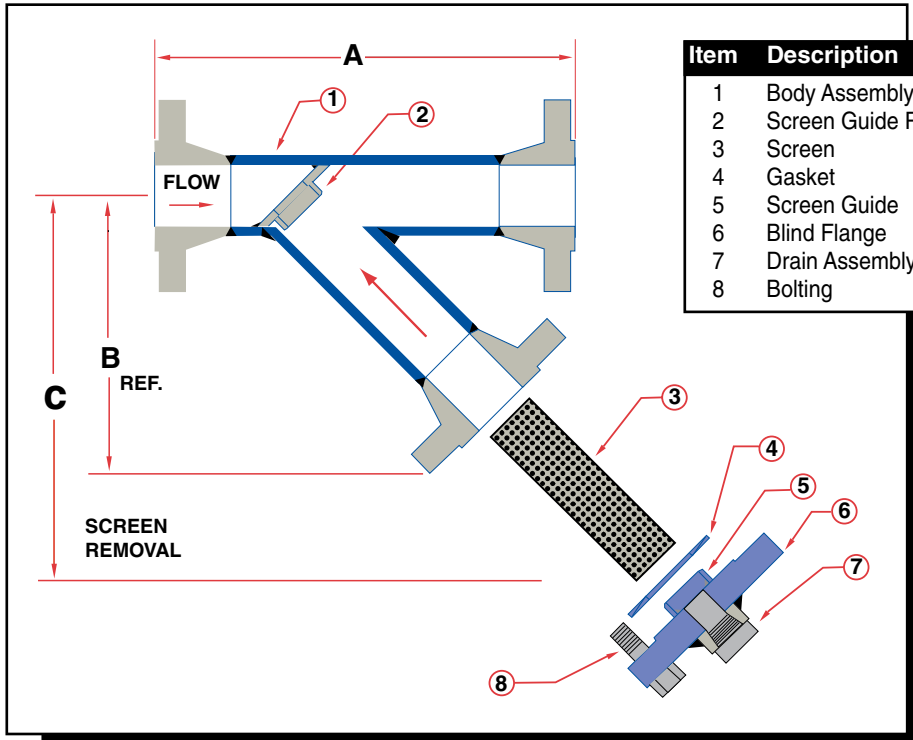
Size		A	B	C
Inches	Prefix			
2	0200	12	6	11
2 1/2	0250	13	6 1/2	12
3	0300	15	10	14
4	0400	18	12	17
5	0500	22	13	21
6	0600	24	16	23
8	0800	30	19	29
10	1000	34	23	33
12	1200	37	25	36
14	1400	42	28	41
16	1600	45	30	44
18	1800	50	35	49
20	2000	53	40	52
24	2400	63	44	62

*Larger sizes available. Consult factory.

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

Fabricated Y Strainers

Type FW600 Class 600 Model FW Strainers



Dimensional Data

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

*Larger sizes available. Consult factory.

Class 900 and Class 1500 also available.

Flanged

or

Butt Weld



Ordering Information

Example: Include full description

Size Model *Screen
(Prefix) Number Opening

0400 - FW600SS - 125

Y Strainer, Stainless Steel, 4", 600# ANSI
Flanges, with 1/8" Perf. Screen

Notes

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

Fabricated Tee Strainers



Type TWH150/TWH300 Carbon Steel & TWH150SS/ TWH300SS Stainless Steel with ANSI Flanges

Construction

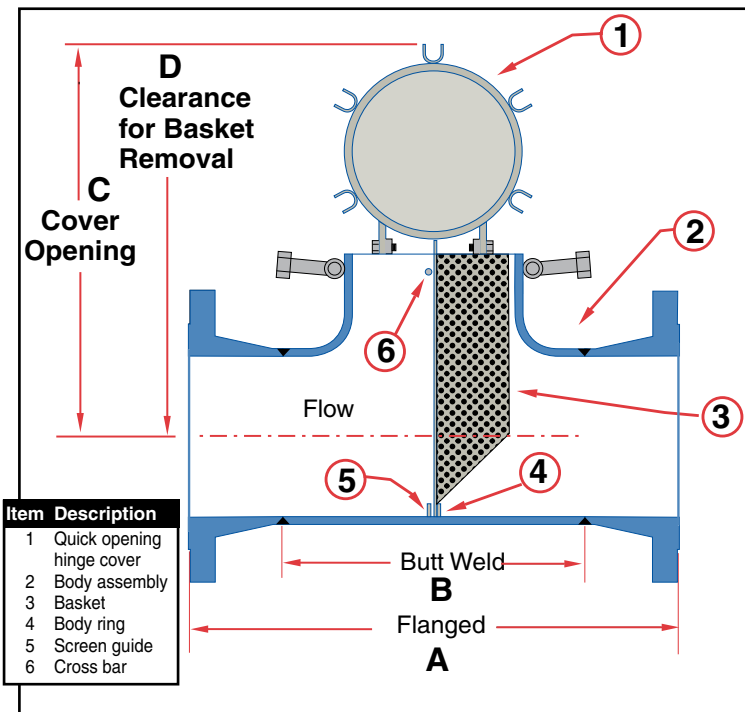
The Sure Flow Tee Strainer is a custom fabricated compact strainer. Designed to remove foreign pipeline particles from pipelines. This provides the ultimate protection for pumps, valves, and other related equipment. The Sure Flow Tee Strainer is fabricated to your specifications.

The standard Sure Flow Tee Strainer is constructed of carbon or stainless steel material. We have fabricated numerous assemblies of chrome-moly. Optional materials, end connections and accessories are available.

Fabricated
Strainers

Standard Features

Size:	6" - 24" (larger on request)
End Connections:	Flanged, butt weld
Body material:	Carbon steel, stainless steel
Pressure rating:	150 psig, 300 psig, 600 psig
Closure:	Bolted
Basket:	304 Stainless steel



Dimensional Data

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

*Larger sizes available. Consult factory.

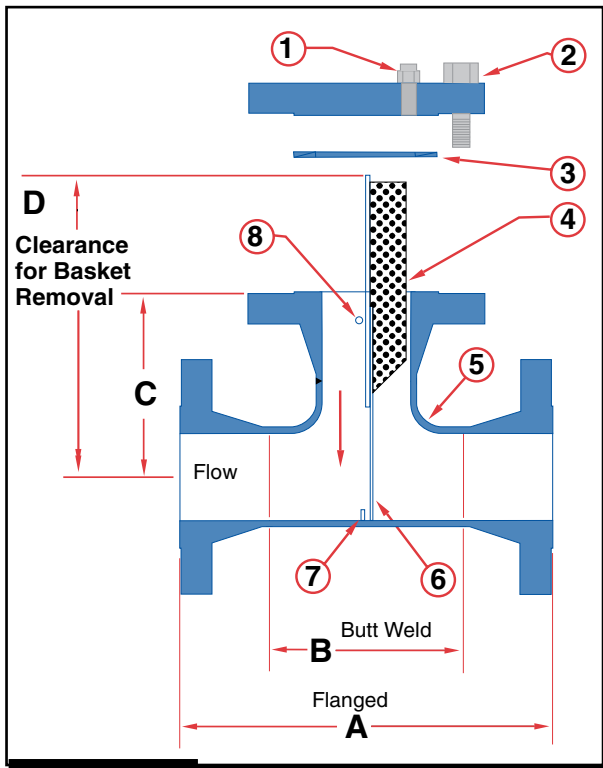
Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

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

Fabricated Tee Strainers

Fabricated Strainers



TW150

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

Type TW150/TW150SS and TW300/TW300SS Fabricated Tee Type Strainer

Dimensional Data

Size		A		B		C		D	
Inches	Prefix	TW150	TW300	TW150	TW300	TW150	TW300	TW150	TW300
2	0200	10	10 1/2	5	5	5	5 1/4	13	13
2 1/2	0250	11 1/2	12	6	6	5 3/4	6	13	13
3	0300	12 1/4	13	6 3/4	6 3/4	6 1/8	6 1/2	14	14
4	0400	14 1/4	15	8 1/4	8 1/4	7 1/8	7 1/2	16	16
5	0500	16 3/4	17 1/2	9 3/4	9 3/4	8 3/8	8 3/4	19	19
6	0600	18 1/4	19	11 1/4	11 1/4	9 1/8	9 1/2	22	22
8	0800	22	22 3/4	14	14	11	11 3/8	25	25
10	1000	25	26 1/4	17	17	12 1/2	13 1/8	29	29
12	1200	29	30 1/4	20	20	14 1/2	15 1/8	31	31
14	1400	32	33 1/4	22	22	16	16 5/8	38	38
16	1600	34	35 1/2	24	24	17	17 3/4	41	41
18	1800	38	39 1/2	27	27	19	19 3/4	46	46
20	2000	41 3/8	42 3/4	30	30	20 3/4	21 3/8	51	51
24	2400	46	47 1/4	34	34	23	23 5/8	56	56

*Larger sizes available. Consult factory.

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

TWH150*

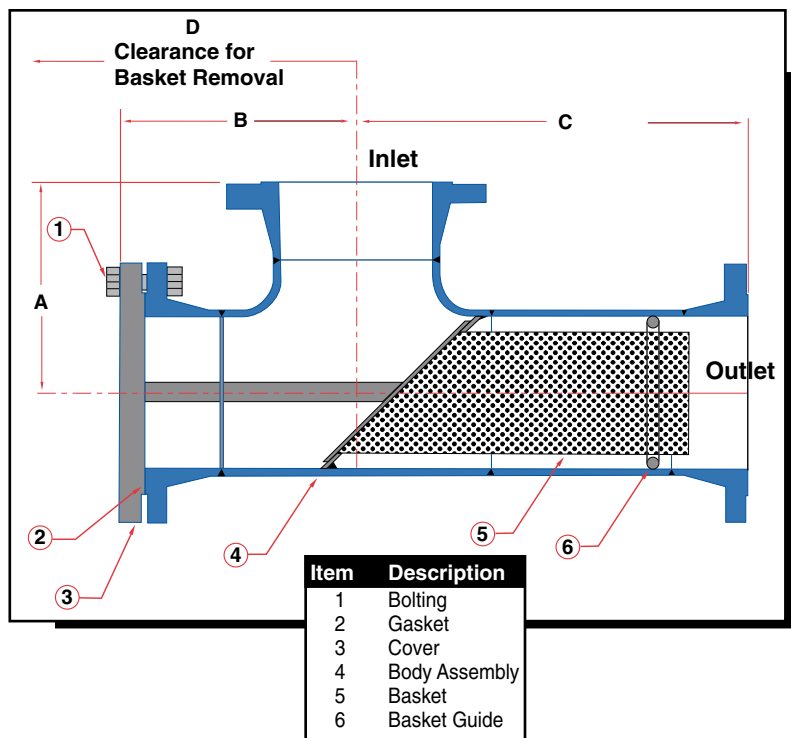


**"H" denotes hinged cover

Optional Features

- Quick opening cover
- 600, 900 and 1500 lb. pressure ratings
- Variety of basket materials
- Special perf & mesh (min. 5 micron)
- Mounting legs
- Special linings
- Exotic materials ie. Titanium & Zirconium
- Pressure gauge taps
- Drain taps and vents

Fabricated Tee Strainers



Type TW150/TW150SS and TW300/TW300SS Fabricated Tee Type Strainer - 90° Angle Flow Dimensional Data

Size		A	B	C	D
Inches	Prefix				
2	0200	5	5 3/4	11	22
2 1/2	0250	5 3/4	6 5/8	12	25
3	0300	6 1/8	7 1/8	12	26
4	0400	7 1/8	8 1/8	15	31
5	0500	8 3/8	9 3/8	16	34
6	0600	9 1/8	10 1/8	18	38
8	0800	11	12 1/8	22	46
10	1000	12 1/2	13 3/4	25	53
12	1200	14 1/2	15 3/4	29	60
14	1400	16	17 3/8	32	66
16	1600	17	18 3/8	36	72
18	1800	19	20 5/8	38	79
20	2000	20 3/4	22 1/2	40	84
24	2400	23	24 7/8	45	94

Fabricated Strainers

Operating Pressures and Temperatures

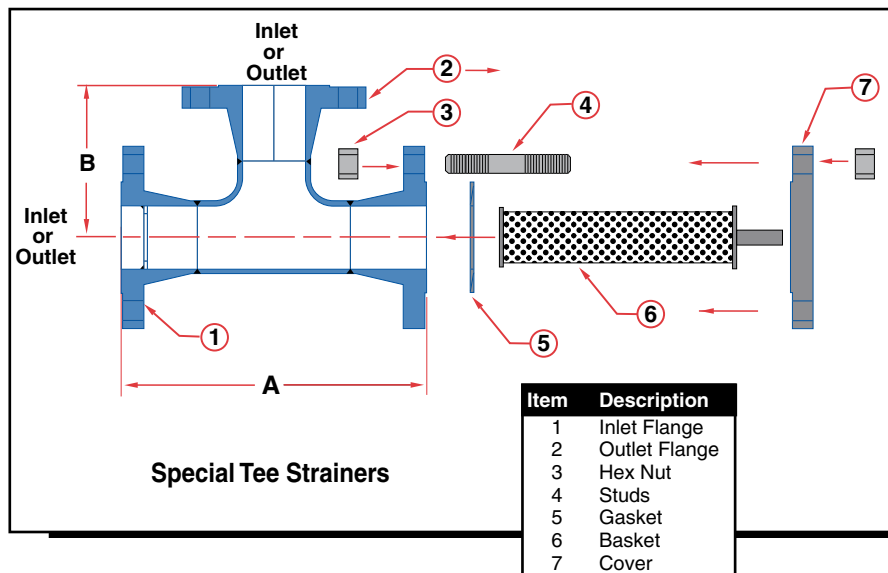
Type	Size	PSI @ Temp Steam	PSI @ Temp WOG
TW150	2" - 24"	150 366°F	285 100°F
TW150SS	2" - 24"	150 366°F	275 100°F
TW300	2" - 24"	300 422°F	740 100°F
TW300SS	2" - 24"	300 422°F	720 100°F

*Larger sizes available. Consult factory.

Standard Screens

To be specified: sizes available in stainless steel material:
Perforated Sheet: 1/32, 3/64, 1/16, 3/32, 1/8, 3/16, 1/4, 1/2
Mesh Lined: 20, 30, 40, 60, 80, 100, 120, 160,
 200 - and down to 5 microns

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



Dimensional Data

Size		A		B	
Inches	Prefix	150	300	150	300
2	0200	10	10 1/2	5	5 1/4
2 1/2	0250	11 1/2	12	5 3/4	6
3	0300	12 1/4	13	6 1/8	6 1/2
4	0400	14 1/4	15	7 1/8	7 1/2
5	0500	16 3/4	17 1/2	8 3/8	8 3/4
6	0600	18 1/4	19	9 1/8	9 1/2
8	0800	22	22 3/4	11	11 3/8
10	1000	25	26 1/4	12 1/2	13 1/8
12	1200	29	30 1/4	14 1/2	15 1/8
14	1400	32	33 1/4	16	16 5/8
16	1600	34	35 1/2	17	17 3/4
18	1800	38	39 1/2	19	19 3/4
20	2000	41 3/8	42 3/4	20 11/16	21 3/8
24	2400	46	47 1/4	23	23 5/8

*Larger sizes available. Consult factory.

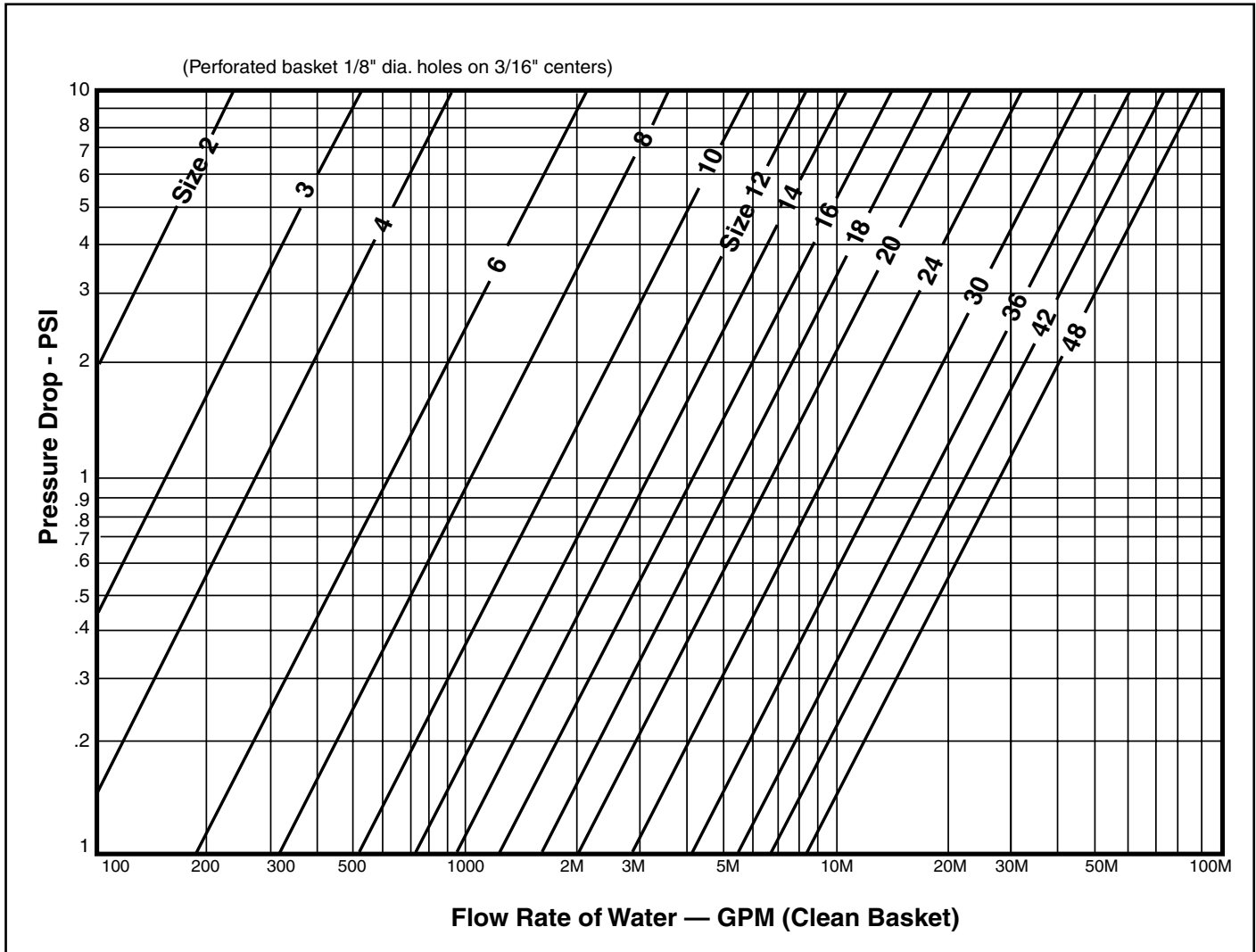
Tee Type Strainers

Pressure Drop for Liquids

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

Viscosity (SSU)	Perforated (1/8" Holes)	Perforated w/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

Fabricated Strainers



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



Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
International 1-905-335-1350 International Fax: 1-905-332-4993
Email: info@sureflowequipment.com www.sureflowequipment.com

Fabricated Sanitary Strainers



Type BW150SSTRI Sanitary Basket Strainer

Features & Construction

Manufactured from polished Type 316 stainless steel with Teflon gaskets, Sure Flow Sanitary Basket Strainers or Y-Strainers are intended for applications where frequent, thorough cleaning is required between every batch of product. Sanitary pressure gauge diaphragm seals are available to determine change out time if process is continuous.

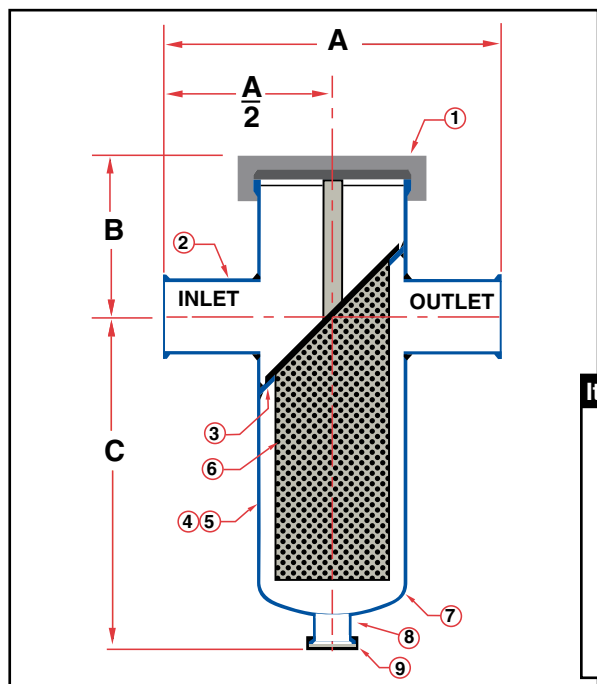
Fabricated Strainers

Dimensional Data

Size		A	B	C
Inches	Prefix			
1/2	0050	5	2 1/2	5 1/2
3/4	0075	5	2 1/2	5 1/2
1	0100	5	2 1/2	6
1 1/2	0150	7	3	6
2	0200	8	3 1/2	7
2 1/2	0250	8	4	9
3	0300	9	4	11
4	0400	10	5	11
6	0600	13	5	13
8	0800	15	7	13

*Larger sizes available. Consult factory.

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



Item	Description
1	Clamp Cover
2	Branch Ferrule
3	Body Ring
4	Body Ferrule
5	Nameplate
6	Basket Assembly
7	Weld Cap
8	Drain Ferrule
9	Clamp Cover

Ordering Information

Example: Include full description

Size (Prefix) Model Number *Screen Opening

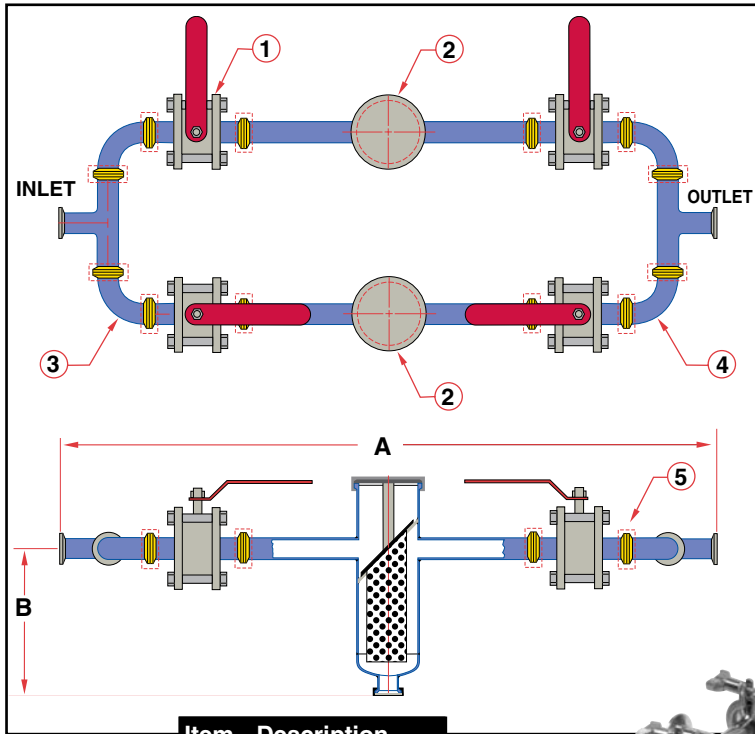
0200 - BW150SSTRI - 005

Basket Strainer, Stainless Steel, 2" Sanitary Flange with 100 Mesh Screen

Sanitary Strainer can be supplied with oversized basket for heavier contaminant loading or to reduce pressure loss with finer screens or high viscosity fluids.

Fabricated Sanitary Strainers

Fabricated Strainers



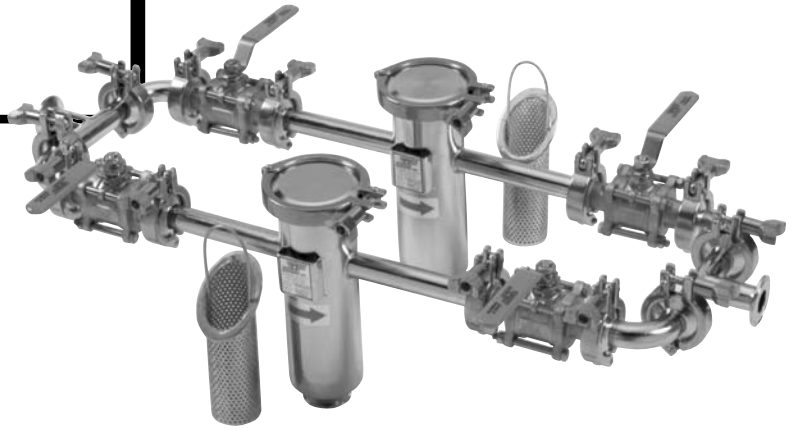
Item	Description
1	Sanitary Ball Valves
2	Sanitary Strainers
3	Inlet Manifold
4	Outlet Manifold
5	Tri-clamps

Type DB150SSTR1 Sanitary Duplex Strainer

Dimensional Data

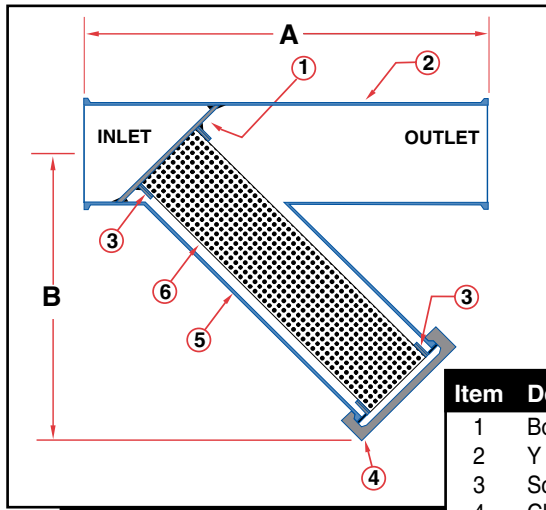
Size		A	B
Inches	Prefix		
1/2	0050	24	5 1/2
3/4	0075	25	5 1/2
1	0100	27	6
1 1/2	0150	29	6
2	0200	32	7
2 1/2	0250	34	9
3	0300	38	11

*Larger sizes available. Consult factory.



Type FW150SSTR1 Sanitary Y Strainer

Dimensional Data



Item	Description
1	Body Ring
2	Y Branch
3	Screen Guide
4	Clamp Cover
5	Nameplate
6	Screen

Size		A	B
Inches	Prefix		
1	0100	7	5
1 1/2	0150	8 3/8	6 1/2
2	0200	9 3/4	7
2 1/2	0250	11	8
3	0300	11 3/4	9
4	0400	14	10 1/2
6	0600	17	12
8	0800	20	14

*Larger sizes available. Consult factory.

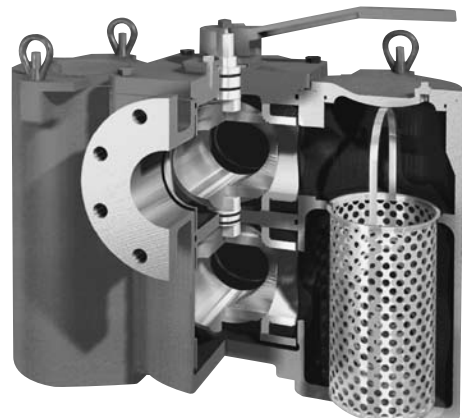
Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.



Tri Ball Duplex Strainer

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

Type D125CIT & D125CIF Cast Iron; D150TCS & D150FCS Cast Steel; D150TSS & D150FSS Cast 316SS; D150TBZ & D150FBZ Cast Bronze



Tri Ball Duplex Strainers remove dirt and debris from pipelines and protects sensitive system components. The duplex features a design that makes strainer basket servicing a no-hassle operation. The duplex keeps the chamber from overflowing during service. This gives you time to clean or replace the strainer basket without ever having to worry about leakage and overflow. And ... without overflow, there's no need to clean up after servicing the strainer basket.

A unique flow diverter valve cartridge in the Tri Ball isolates the two strainer basket chambers and prevents fluid bypass. An easy-to-turn handle operates the cartridge and diverts the system flow from one chamber to the other — 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 service.

No special tools are needed to access the strainer basket for cleaning. The chamber is first drained and then the cover is lifted and swung clear of the chamber opening. The dynamic diverter cartridge seals prevent fluid bypass into the out-of-service chamber — making for easy, hassle-free strainer basket servicing.

Duplex
Strainers

Tri Ball Duplex Selection Table

Body and Cartridge Material	Connections	Sizes		Rating	Seat/Seals	Diverter Balls
		Inches	Prefix			
Iron (CI)	Threaded (T)	3/4, 1, 1 1/4 1 1/2, 2, 2 1/2	0075, 0100, 0125 0150, 0200, 0250	125# ANSI 200 PSIG @ 150°F	Teflon/ Buna N*	Stainless Steel**
	Flanged (F)	1, 1 1/2, 2 2 1/2, 3, 4	0100, 0150, 0200 0250, 0300, 0400			
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	150# ANSI 200 PSIG @ 150°F	Teflon/ Buna N*	Stainless Steel**
	Flanged (F)	1, 1 1/2, 2 2 1/2, 3, 4	0100, 0150, 0200 0250, 0300, 0400			

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

Ordering Information

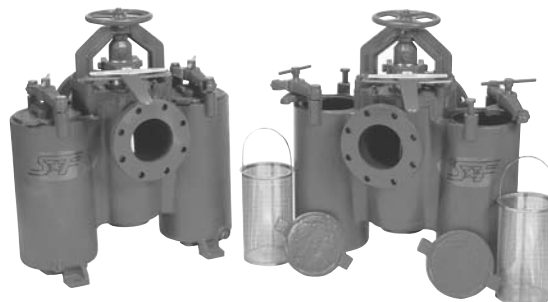
Example: Include full description

Size	Model	*Screen
(Prefix)	Number	Opening
0400	- D125CIF	- 156

4" Flgd. duplex strainer, cast iron,
125# ANSI flanges, with 5/32" perf. basket

Notes:

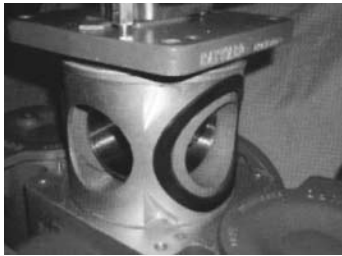
Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.



Tri Ball Duplex Strainer



Standard body vent on top of strainer makes venting quick and easy.



Should the diverter valve require service, it slides right out the top of the strainer body.



A minimum of parts, easily replaced, makes service a snap. Exploded view shows simplicity of design.

The heart of the **Tri Ball** is the unique flow diverter cartridge that features a patent pending, highly dynamic sealing system on the diverter balls that ensures exceptionally long seat life and positive sealing. The **Tri Ball** design works so well that there is no need for manual internal or external ball support adjustments — and the low operating torque means the strainer can be operated with an easy-turn lever handle. A gear box is not needed.

A double sealing system on both the upper and lower stems guards against any possible leakage. Special reinforced polymer seats are used for extended service life.

Should cartridge service become necessary, it's easy to accomplish. Just remove four bolts and the cartridge comes right out through the top of the strainer. There's no need to take the strainer completely apart or to remove it from the line.

The compact, low profile Tri Ball fits into spaces ordinary strainers might not, yet it still uses full-size strainer baskets with a low pressure drop performance.

And, there's a strainer basket for every application. The standard basket is made of Type 316 Stainless Steel; however, if required, Monel is available. Baskets with openings from 3/4" down to 45 microns are offered: choose the best size for your application — with no compromises.

For easy basket servicing there is a 1/4" drain plug on each strainer basket chamber. Additionally, there is an easy-to-access vent valve on top of the strainer body.

Finally, standard foot mounting pads insure a rock solid installation no matter where the strainer is installed.

Available options for the Tri Ball include differential pressure gauges, with or without switches, and magnetic separators installed in the strainer basket for removing fine ferrous particulate matter from the process media.

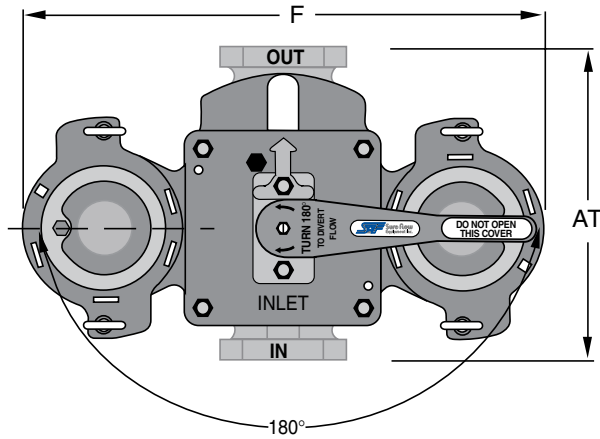
*Gauges are not available for NPT threaded strainers.

Notes:

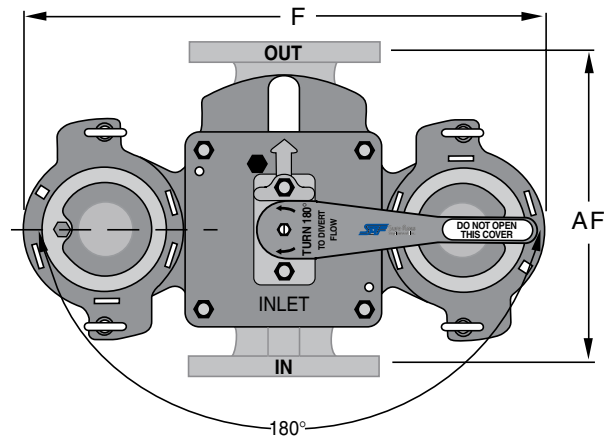
- Seats are TFE for all materials of construction.
- Iron, bronze and carbon steel have buna seals and o-rings.
- Stainless steel has viton seals and o-rings.
- ONLY the flanged design can be tapped 1/4" NPT at the inlet/outlet for gauge connections
- ALL strainers have feet for mounting.
- 4" strainer comes standard with a pressure equalizer assembly - not installed.
- 1/4" NPT cover vent taps are standard.



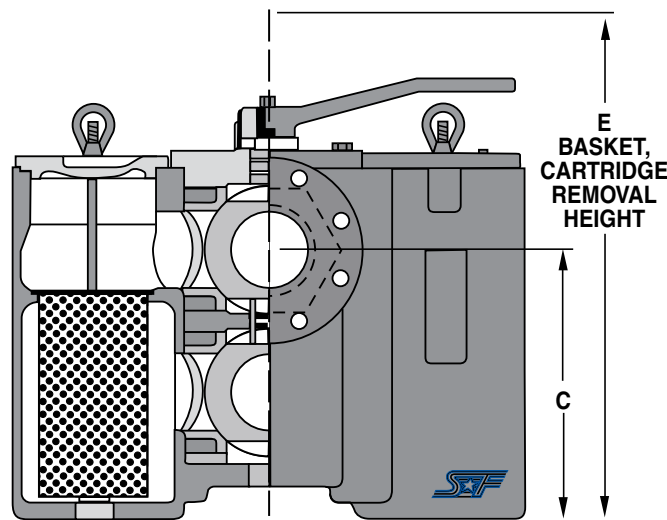
Tri Ball Duplex Strainer



Top View: **Threaded Model**



Top View: **Flanged Model**



Front View: **Flanged and Threaded Models**

Dimensions and weights are for reference only. Contact Sure Flow for certified drawings.

Dimensional Data

Size		AF	AT	C	E	F	Shipping Weight (lbs.)					
							Cast Iron		Bronze		Carbon & SS	
Inches	Prefix						Flanged	Threaded	Flanged	Threaded	Flanged	Threaded
3/4	0075	–	5 1/2	5	13 3/8	10 1/2	–	45	–	56	–	52
1	0100	6 7/8	5 1/2	5	13 3/8	10 1/2	52	45	65	56	65	52
1-1/4	0125	6 7/8	7 1/2	6 13/16	17	13 1/4	–	90	–	115	–	110
1-1/2	0150	9 3/8	7 1/2	6 13/16	17	13 1/4	109	90	130	115	120	110
2	0200	10 5/8	10	8 3/8	21 3/4	17 3/8	190	180	230	220	210	195
2-1/2	0250	10 3/4	10	8 3/8	21 3/4	17 3/8	210	180	260	220	235	195
3	0300	13 1/2	–	8 7/8	26 1/2	22 3/4	340	–	380	–	460	–
4	0400	16	–	13 1/4	33	24 3/4	430	–	535	–	460	–

1/4" NPT cover vent taps are standard on all strainers.

1/4" NPT basket well drain connectors are standard on all strainer sizes.

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



Duplex Strainers

The Plug Type Duplex Strainer is a simple, economical, and trouble free design ... 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 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 - and all sizes are provided with mounting legs for bolting 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)	Flanged 125#	5, 6, 8	0500, 0600, 0800	Iron (CI) or Bronze (BZ)	Buna N	200 PSIG @ 100°F. 5" and 6" sizes
Bronze (BZ)	Flanged 150#	5, 6, 8	0500, 0600, 0800			
Carbon Steel (CS)	Flanged 150#	6, 8	0600, 0800	Bronze (BZ) or Stainless Steel (SS)	Viton	150 PSIG @ 100°F. 8" size.
Stainless Steel (SS)	Flanged 150#	6, 8	0600, 0800	Stainless Steel (SS)		

C_v 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 **Model** ***Screen**
(Prefix) **Number** **Opening**
0600 - DF125CI - 156

6" Flgd. duplex strainer, cast iron, 125# ANSI flanges, with 5/32" perf. basket

Notes:

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

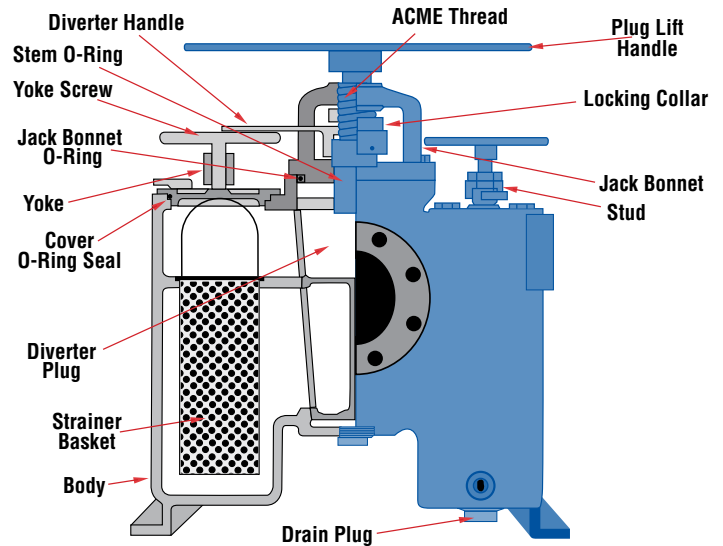
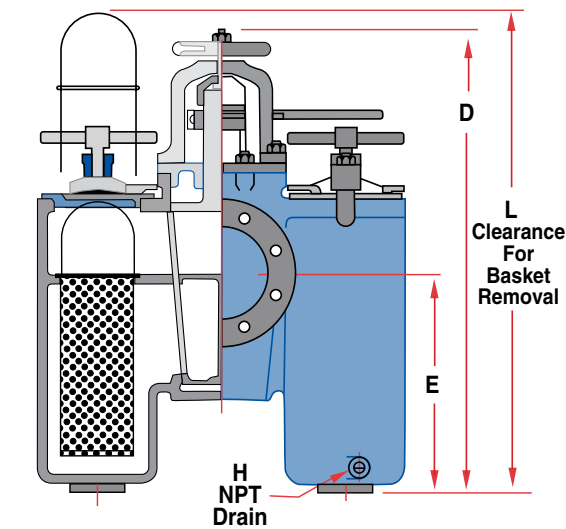
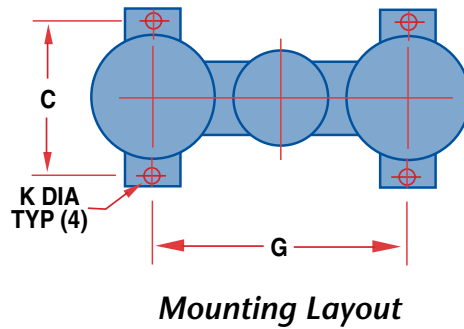
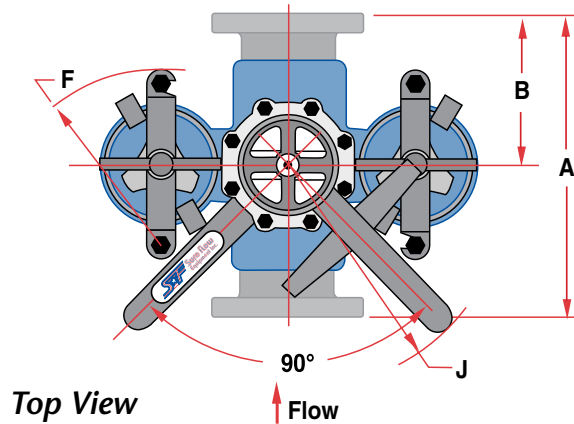


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 Email: info@sureflowequipment.com www.sureflowequipment.com

Plug Duplex Strainer

Options

- ◆ Ductile iron construction
- ◆ Basket perforations from 1/32" to 1/2"
- ◆ Basket mesh from 20 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



Dimensions and weights are for reference only. Contact Sure Flow for certified drawings.

Dimensional Data

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

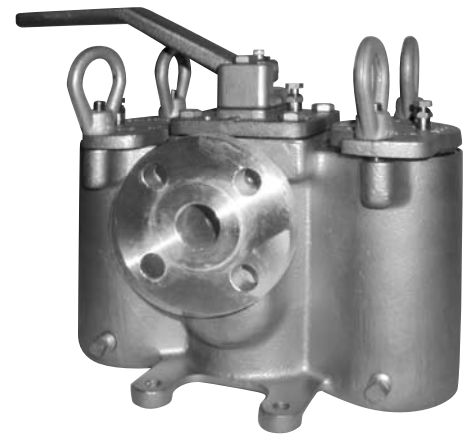
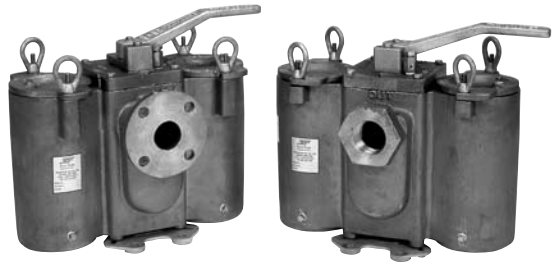
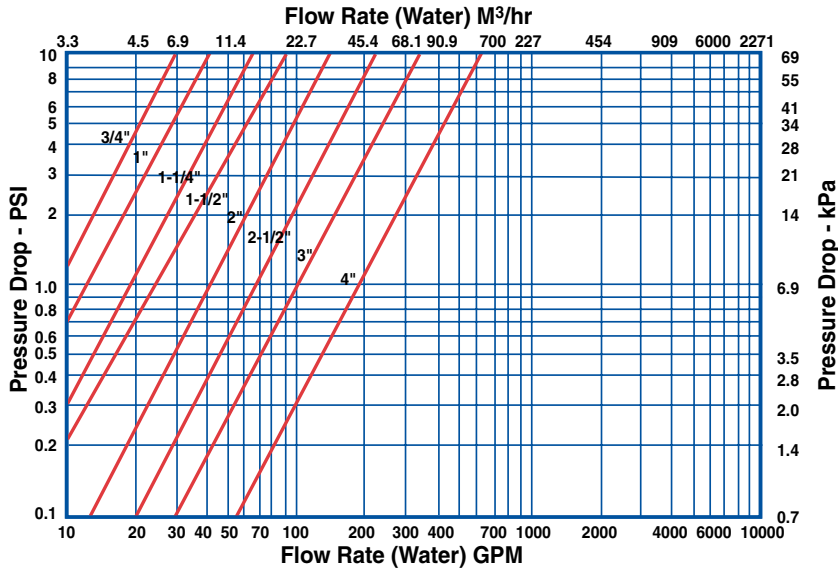
Pressure Drop Curves

Pressure Drop vs. Flow Rate

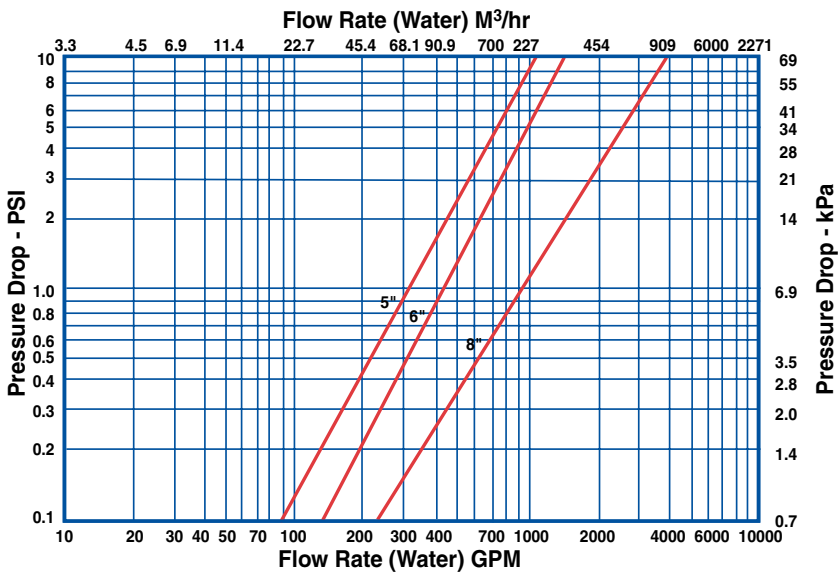
These curves are for clean baskets, without mesh liners - and with WATER flowing through the strainer. For mesh-lined baskets and/or other fluids, you must first compute a correction factor.

Model D125 and D150 Duplex - 3/4" Through 4"

Duplex Strainers



Model DF125 and DF150 Duplex - 5" Through 8"



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

Fabricated Dual Basket Strainers

Dual Basket Strainers

Cast Iron, Carbon Steel, Stainless Steel

Sure Flow Dual Basket Strainers are an innovative and economical alternative to conventional Duplex Strainers. They are designed for applications where flow cannot be shut down to service the strainer screen. Changeover is accomplished by use of a handwheel 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. Basket and flange sizes can be designed to specific requirements by incorporating Sure Flow Fabricated Strainers. Standard units are in Cast Iron with 125# ANSI flanged connections, and Carbon or Stainless Steel with 150# ANSI flanged connections. Many other options are available including higher pressure ratings, automatic air vents, quick opening covers, special internal coatings, backwash connections and more. We will help you select the best Sure Flow Dual Basket Strainer for your specific application.

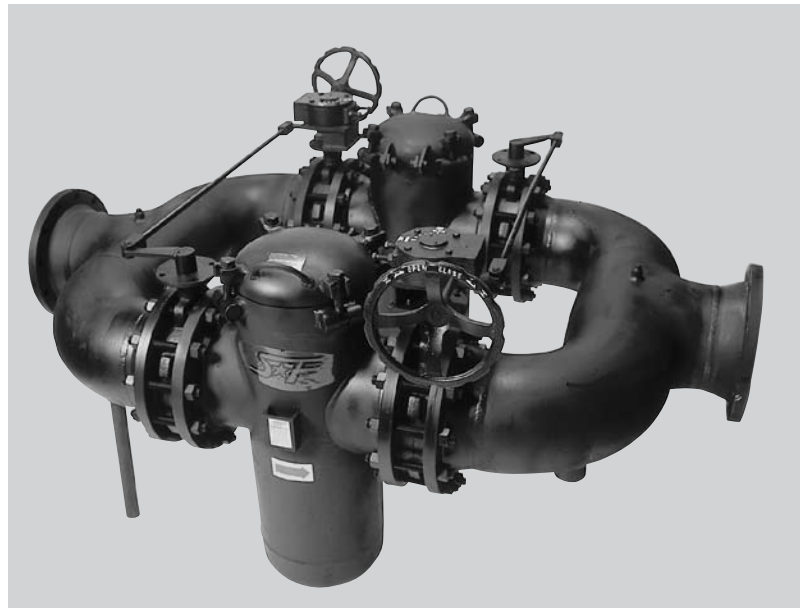
Duplex
Strainers



Sure Flow Model BDB bolted design Dual Basket Strainer is standard in Cast Iron with 125# ANSI flanged connections in sizes 2" through 18". Baskets can be supplied with bolted or quick release clamped covers.

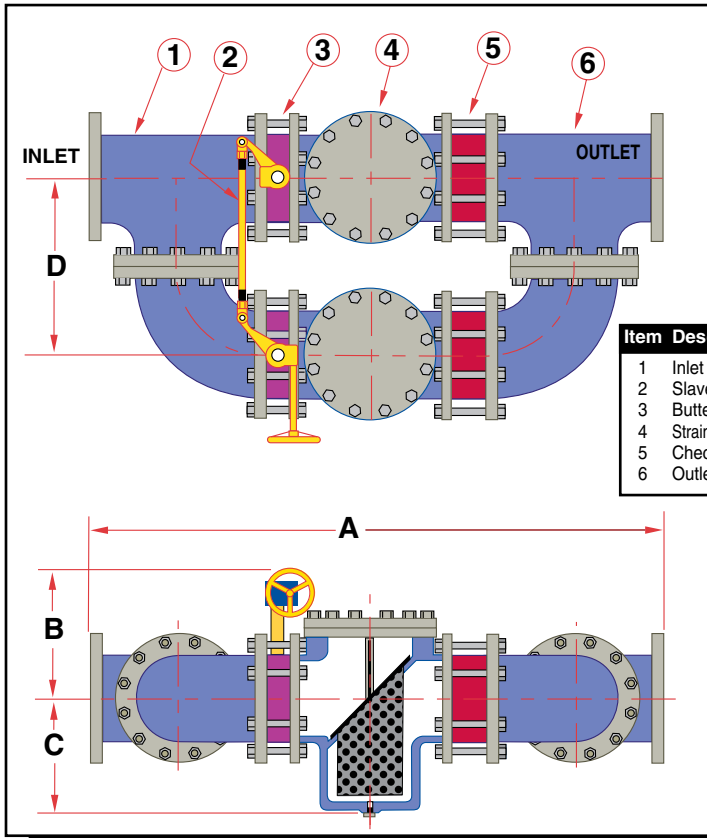
Consult factory for dimensional data and other specifications.

Sure Flow Model DB welded design Dual Basket Strainers are a very economical alternative to standard uni-casting duplex strainers in cast steel and stainless steel materials. Because they are fabricated to your specific requirements, they are available in up to 2500 lb ANSI ratings, and with your choice of valves.



Fabricated Dual Basket Strainers

Duplex Strainers



- | Item | Description |
|------|---------------------|
| 1 | Inlet Manifold |
| 2 | Slave Linkage |
| 3 | Butterfly Valves |
| 4 | Strainer Assemblies |
| 5 | Check Valves |
| 6 | Outlet Manifold |

Type BDB125 Bolted Dual Basket Strainer - Cast Iron

Slave Linked Butterfly Valves

Dimensional Data

Size		A	B	C	D
Inches	Prefix				
2	0200	30	10 1/2	5	9
2 1/2	0250	32 3/4	11	5 3/8	10
3	0300	36	11 1/2	6 1/2	11
4	0400	42	12	8	13
5	0500	48	12 1/2	8	15
6	0600	52	13	8 5/8	16
8	0800	61	14 1/2	11 3/4	18
10	1000	70 3/4	17	13 3/4	22
12	1200	83	19	16 3/8	24
14	1400	96 1/2	20	22 1/4	28
16	1600	104 3/4	21	23 1/4	30
18	1800	123 3/4	23	24	33
20	2000	126 7/8	32	32 3/8	36

*Larger sizes available. Consult factory.

Standards: ASME B16.5

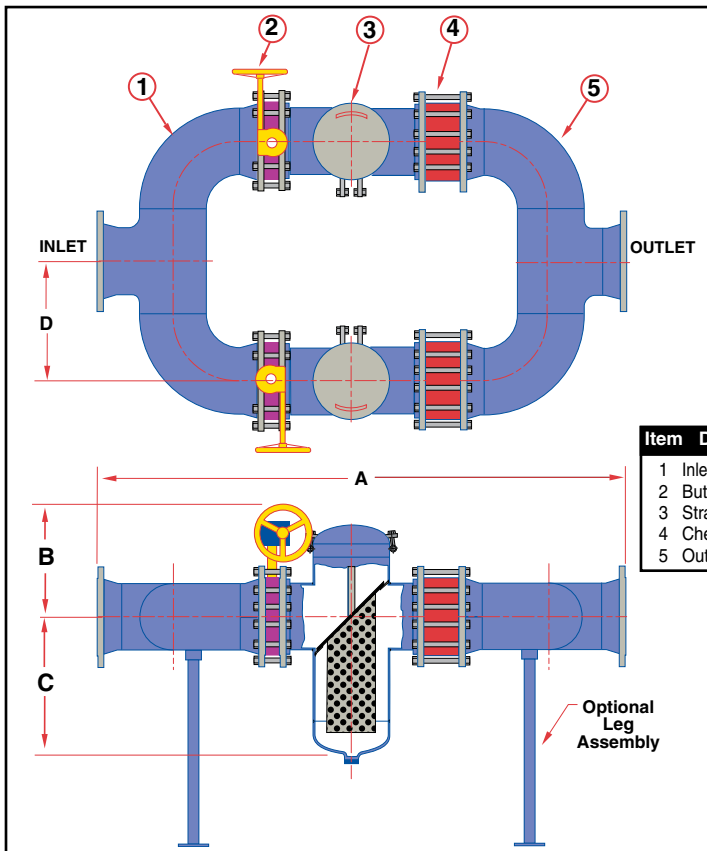
Design Code: ASME B31.1

Max. Working Pressure: 200 psig - up to 12",
150 psig - 14" to 18"

Max. Working Temperature: 200°F

Service: WOG

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



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

Type DBH150/DBH150SS Dual Basket Strainer - Carbon or Stainless Steel

Hinged Covers, Slave Linked Butterfly Valves and Optional Leg Assemblies

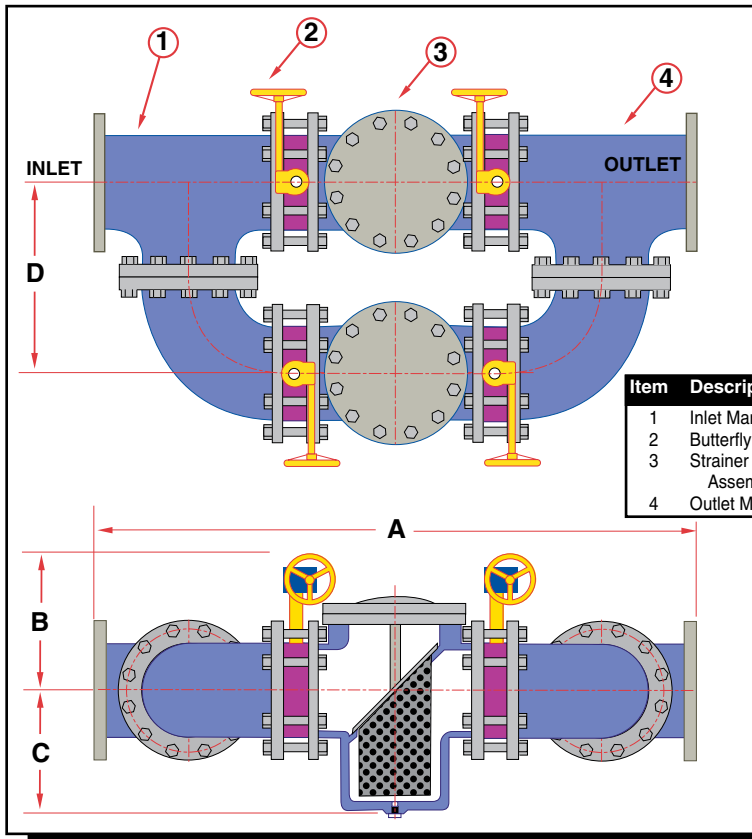
Dimensional Data

Size		A	B	C	D
Inches	Prefix				
2	0200	36 5/8	10 1/2	8	4 1/2
2 1/2	0250	39	11	8	5 1/2
3	0300	41 3/4	11 1/2	9	6 3/8
4	0400	46 3/4	12	11	8 1/8
6	0600	59 7/8	13	15	11 5/8
8	0800	72 3/8	14 1/2	17	15
10	1000	82 7/8	17	20	18 1/2
12	1200	94 7/8	19	26	22
14	1400	106	20	29	25
16	1600	114 5/8	21	32	28
18	1800	125 7/8	23	34	31 1/2
20	2000	142	26	39	35
24	2400	162 1/2	30	45	41

*Larger sizes available. Consult factory.

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

Fabricated Dual Basket Strainers



Type BDB125 Bolted Dual Basket Strainer - Cast Iron Manual Butterfly Valves

Dimensional Data

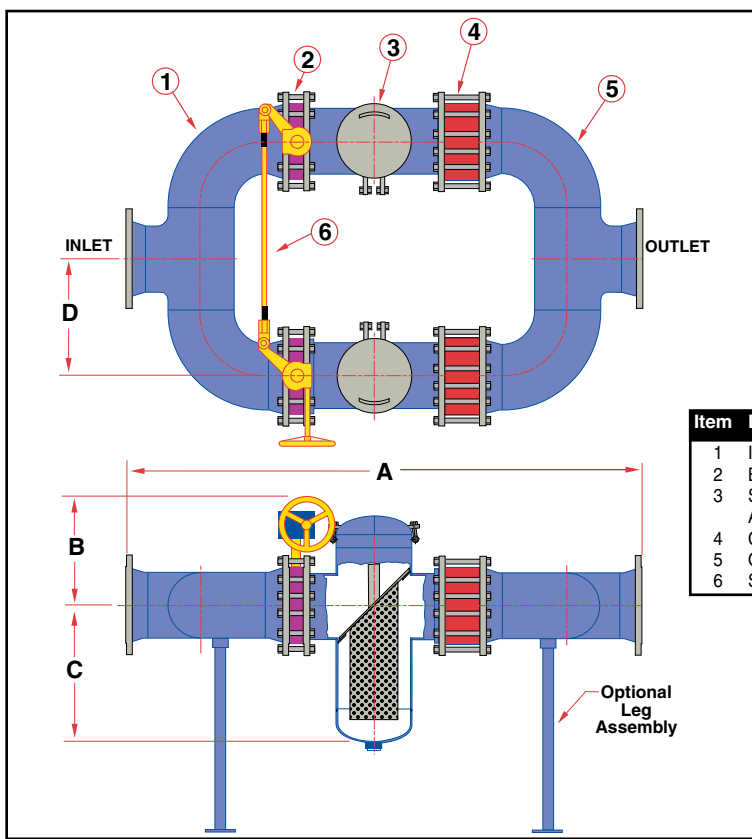
Size		A	B	C	D
Inches	Prefix				
2	0200	29 5/8	10 1/2	5	9
2 1/2	0250	32	11	5 3/8	10
3	0300	35 5/8	11 1/2	6 1/2	11
4	0400	41 3/4	12	8	13
5	0500	47 5/8	12 1/2	8	15
6	0600	51 3/8	13	8 5/8	16
8	0800	59 9/16	14 1/2	11 3/4	18
10	1000	69 5/8	17	13 3/4	22
12	1200	80 1/2	19	16 3/8	24
14	1400	92 3/8	20	22 1/4	28
16	1600	101 1/4	21	23 1/4	30
18	1800	113 3/8	23	24	33
20	2000	123 1/2	32	32 3/8	36

*Larger sizes available. Consult factory.

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

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

Duplex Strainers



Type DBH150/DBH150SS Dual Basket Strainer - Carbon or Stainless Steel Hinged Covers and Slave Linked Butterfly Valves

Dimensional Data

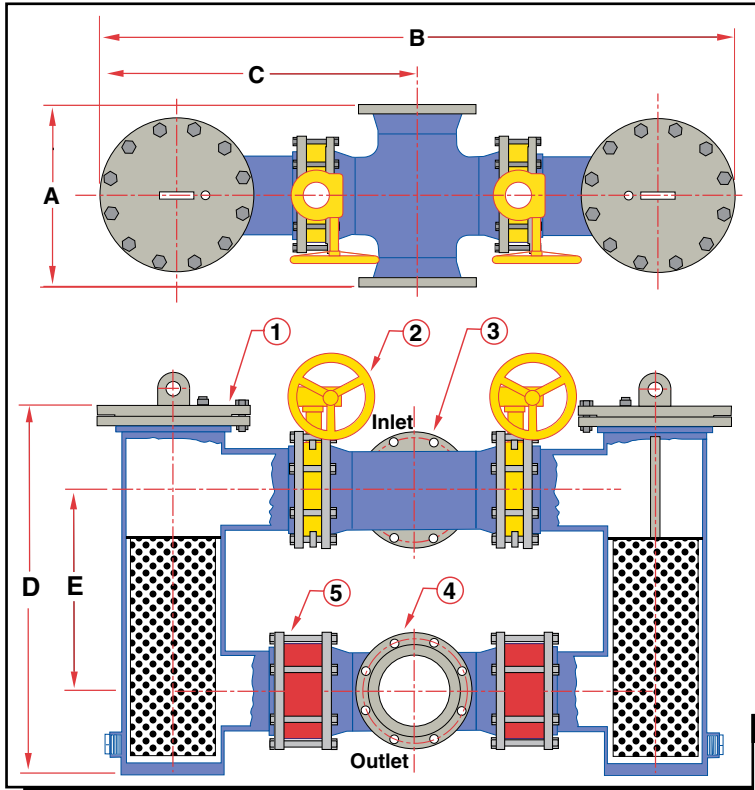
Size		A	B	C	D
Inches	Prefix				
2	0200	36 5/8	10 1/2	8	4 1/2
2 1/2	0250	39	11	8	5 1/2
3	0300	41 3/4	11 1/2	9	6 3/8
4	0400	46 3/4	12	11	8 1/8
6	0600	59 7/8	13	15	11 5/8
8	0800	72 3/8	14 1/2	17	15
10	1000	82 7/8	17	20	18 1/2
12	1200	94 7/8	19	26	22
14	1400	106	20	29	25
16	1600	114 5/8	21	32	28
18	1800	125 7/8	23	34	31 1/2
20	2000	142	26	39	35
24	2400	162 1/2	30	45	41

*Larger sizes available. Consult factory.

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

Fabricated Dual Basket Strainers

Duplex Strainers



Type DB150 Short Face to Face Dual Basket Assembly

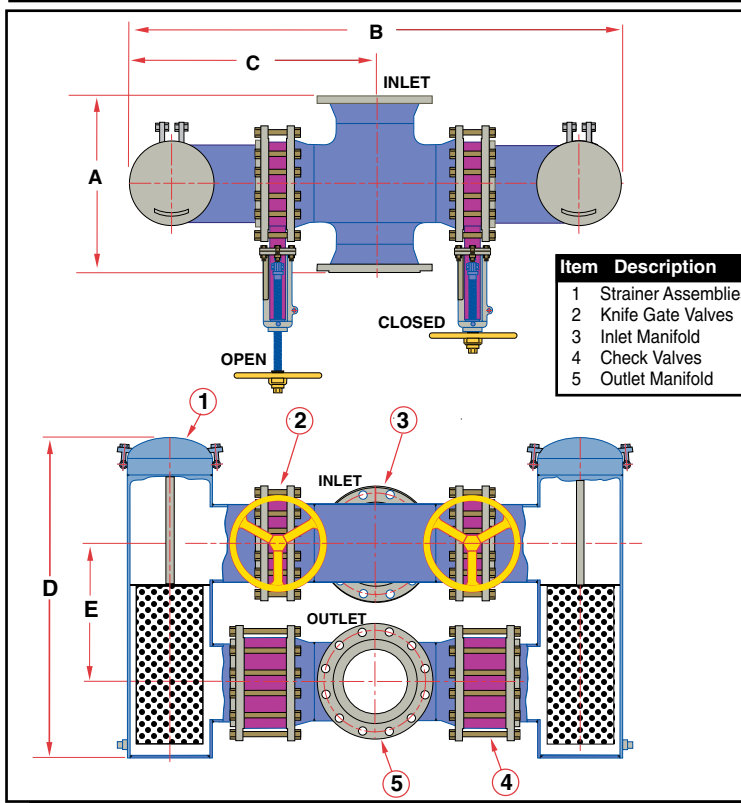
Dimensional Data

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

*Larger sizes available. Consult factory.

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

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



Type DB150 Knife Gate operated Dual Basket Assembly Class 150

Dimensional Data

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

*Larger sizes available. Consult factory.



Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
 International 1-905-335-1350 International Fax: 1-905-332-4993
 Email: info@sureflowequipment.com www.sureflowequipment.com

Automatic Strainers

The Eliminators

The Eliminator, motorized, automatic, self-cleaning strainer, provides continuous debris removal from fluid piping systems that demand full time uninterrupted flow.

The Eliminator 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 700 Series Strainers, applied correctly, will prove efficient and cost effective compared to simplex/duplex strainers or other automatic straining systems.

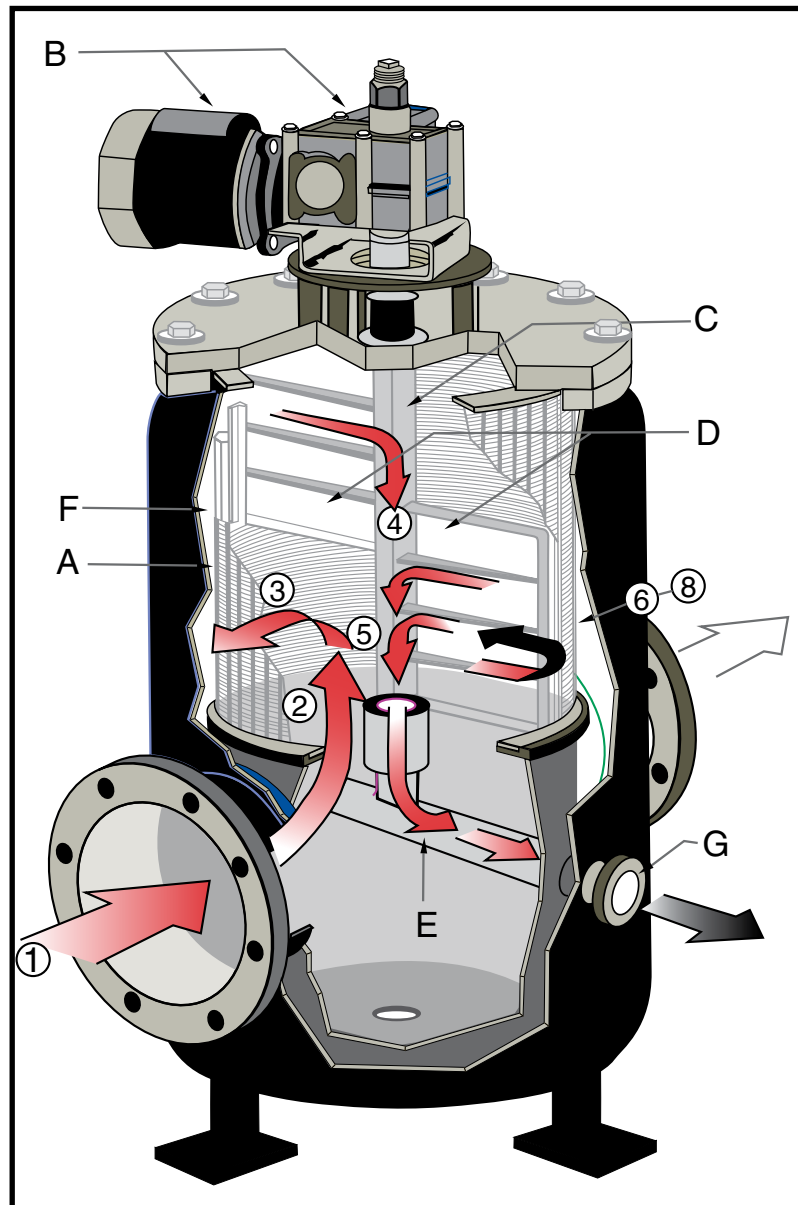
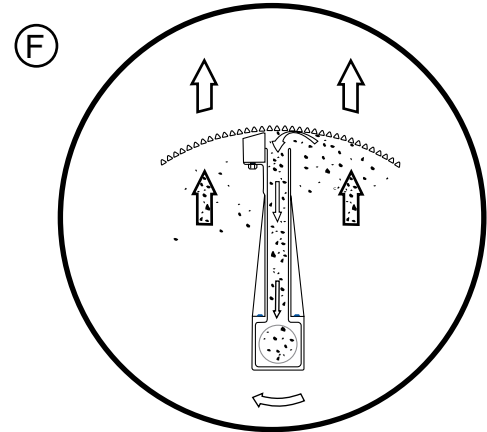


Figure 1 - Cut-away of Eliminator showing fluid flow during operation



Port/straining element interface during backwashing cycle.

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 (E) is 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.
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.

Automatic Strainers

Automatic Self-Cleaning Strainers

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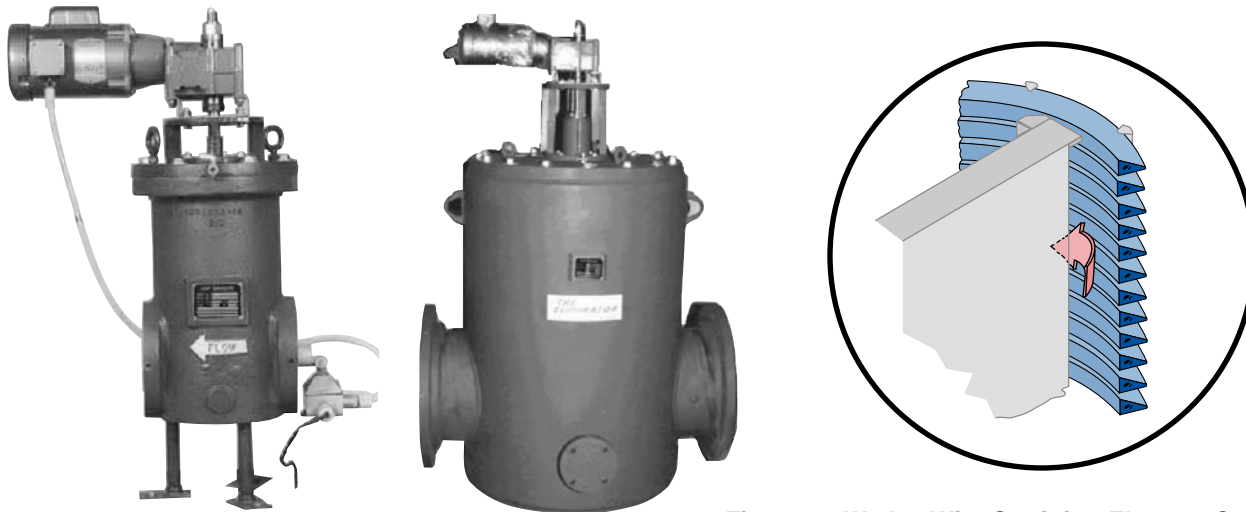


Figure 2 - Wedge Wire Straining Element Cross-Section

Automatic
Strainers

Application

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

The Eliminators 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 Eliminator 700 Series 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.
- All internal replacement parts supplied in corrosion resistant material.
- Efficient new design reduces maintenance requirements; requires fewer parts.
- Low rpm backwash mechanism provides more efficient cleaning, less wear of internals.

Straining Element

The Eliminators 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 stappling 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.

Strainer Element Selection



Figure 3 - Wedge-Wire Straining Elements

Automatic
Strainers

Straining Element Selection

The 700 Series 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

Slot Opening (inches)	Fraction Equivalent inches (mm.)	Mesh Equivalent	Micron Equivalent	% Open Area	Slot Opening (inches)	Fraction Equivalent inches (mm.)	Mesh Equivalent	Micron Equivalent	% Open Area
Standard					Custom				
0.015	1/64 (0.4)	40	385	24	0.003	- (0.08)	200	75	9
0.031*	1/32 (0.8)	20	795	40	0.006	- (0.15)	100	149	16.5
0.062*	1/16 (1.6)	10	1590	51	0.010	- (0.25)	50	250	17.5
0.125*	1/8 (3.2)	6	3205	67	0.020	- (0.5)	35	500	30
0.187	3/16 (4.8)	4	4795	72	0.040	- (1.0)	18	1000	46
					0.156	5/32 (4.0)	5	4000	69
					0.250	1/4 (6.4)	3	6410	78

* Available from stock

Standard screen material is 304 Stainless Steel.

316 Stainless Steel, 316L Stainless Steel, Monel and other materials are available upon request.

The Hyper-Jet[®] Advantage

The Hyper-Jet[™]

The Hyper-Jet[™] is the line of motorized, automatic self-cleaning strainers. It is very effective in system applications where operating pressure is low (under 5 psig) or where the debris is difficult to remove. The 721 Series strainer provides unattended service with the addition of external backwash to enhance the self-cleaning attribute over other automatic strainers.

Application:

The Hyper-Jet[™]'s unique patented backwash system permits installation in a broader range of applications. This range includes from relatively low pressure to 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 Hyper-Jet[™] 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 the cleaning of the straining element. **External source backwash pressure must be a minimum of 30 psi over operating pressure.**

Hyper-Jet[™] strainers are used to protect equipment such as pumps, motors, heat exchangers or spray nozzles, as well as process applications such as cooling towers or virtually any similar application.

The Series 721 Hyper-Jet[™] Self-Cleaning Strainers are fabricated in pipe sizes ranging from 1" to 36" to suit most applications' requirements. The Hyper-Jet[™] System can also easily and economically be field installed in any Fluid Engineering Self-Cleaning Strainer (6" size and larger) in service as a retro-fit installation.

The Unique Hyper-Jet[™] Advantage

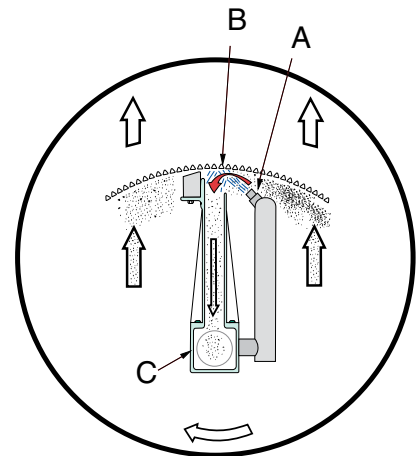
The external source of backwash fluid is introduced by opening the control valve (not shown) connecting the spray nozzles (A) at the leading edge (B) of the backwash assembly.

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 "Hyper-Jet" fluid flow into the hollow port; down the hollow drive shaft and out the backwash outlet.



Figure 2 - The innovative internals of the Hyper-Jet[™] showing ease of maintenance.



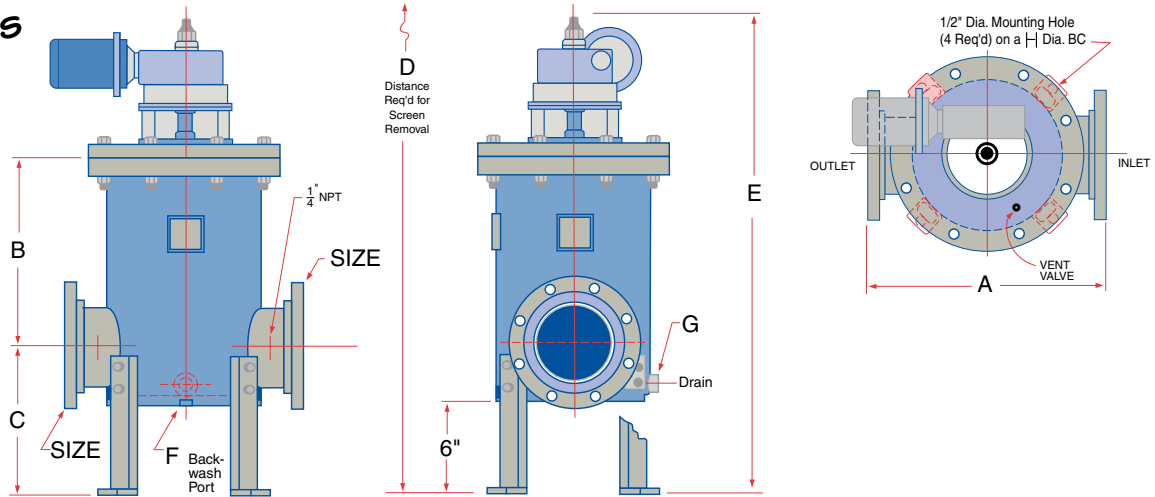
Cross-Sectional View of Port/Straining Element During Backwash Cycle

Series 721 Self-Cleaning Strainer Typical Backwash Flow 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	1-1/2"	1-1/2"	1-1/2"	1-1/2"	2"	3"	3"	4"	4"	6"
Backwash Flow in GPM (Gal. Per Minute)	8-12	15-20	30-40	60-75	110-150	170-210	250-310	400-490	550-700	750-900
External Backwash Source GPM	3-5	3-5	5-10	10-15	15-25	25-35	35-45	55-65	80-90	115-130
External Line Size	3/4"	3/4"	3/4"	1"	1"	1"	1-1/4"	1-1/2"	1-1/2"	2"

Automatic
Strainers

Specifications - Dimensions/Weight

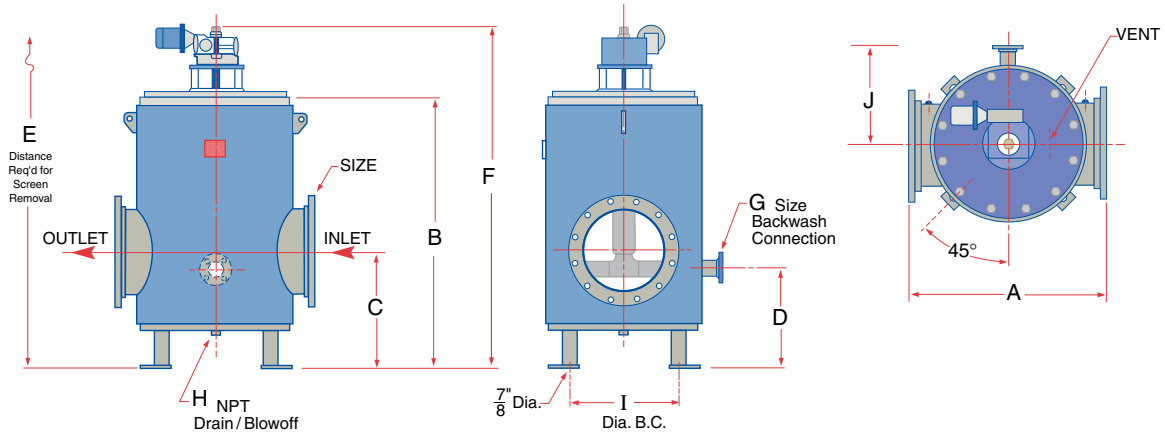
793 Series 1" -10"



Model No.	Size (In.)	A (In.)	B (In.)	C (In.)	D (In.)	E (In.)	F (In.)	G (In.)	H (In.)	Approx. Dry	Wts. Wet	Lbs. Cov.	Motor H.P.
010-793	1-150	16-1/2	14-1/4	10	53	30-1/2	1 NPT	1 NPT	11-1/4	320	466	142	1/4
015-793	1 1/2-150	16-1/2	14-1/4	10	53	30-1/2	1 NPT	1 NPT	11-1/4	323	469	142	1/4
020-793	2-150	16-1/2	14-1/4	10	53	30-1/2	1 NPT	1 NPT	11-1/4	327	473	142	1/4
025-793	2 1/2-150	16-1/2	14-1/4	10	53	30-1/2	1 NPT	1 NPT	11-1/4	336	482	142	1/4
030-793	3-150	16-1/2	14-1/4	10	53	30-1/2	1 NPT	1 NPT	11-1/4	338	484	142	1/4
040-793	4-150	16-1/2	14-1/4	10	53	30-1/2	1 NPT	1 NPT	11-1/4	348	494	142	1/4
060-793	6-150	20	15-5/8	11	58-5/8	32	1-1/2 NPT	1 NPT	15-1/2	511	700	176	1/4
080-793	8-150	28	18	16	74	41	1-1/2 NPT	1 NPT	20-3/4	797	1030	200	1/4
100-793	10-150	28	18	16	74	41	1-1/2 NPT	1 NPT	20-3/4	830	1060	200	1/4

THREADED (NPT) INLET/OUTLET CONNECTIONS AVAILABLE

723 Series 10" -20"



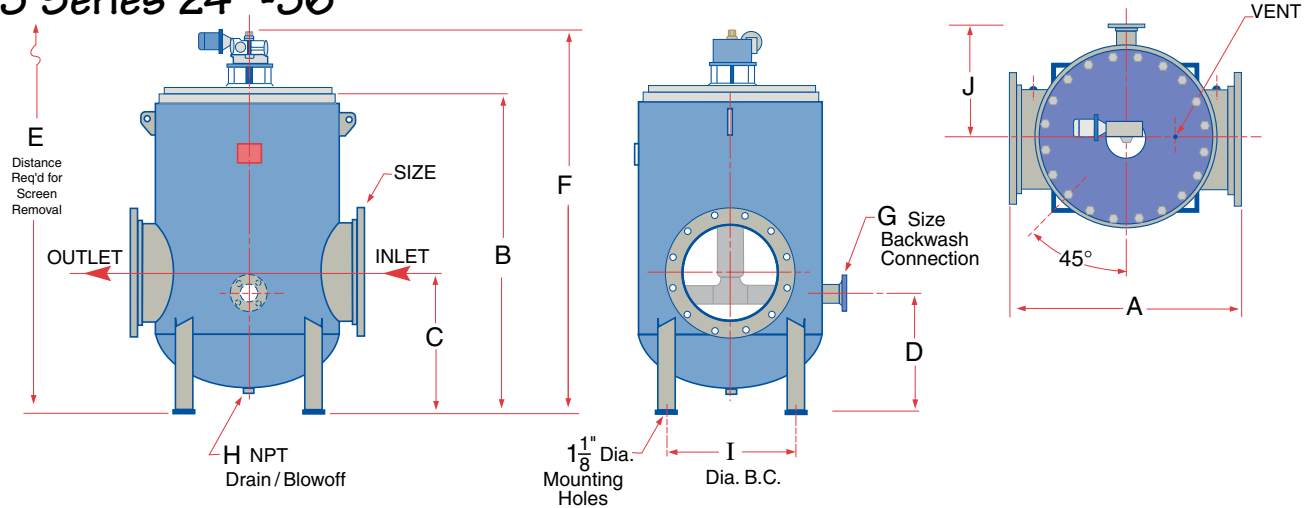
Model No.	Size (In.)	A (In.)	B (In.)	C (In.)	D (In.)	E (In.)	F (In.)	G (In.)	H (In.)	I (In.)	J (In.)	Approx. Dry	Wts. Wet	Lbs. Cov.	Motor H.P.
100-723	10-150	36	43	17 1/2	14 1/2	75	58 1/2	2 NPT	1 1/2 NPT	26	14 3/4	1450	2100	290	1/4
120-723	12-150	36	43	17 1/2	14 1/2	75	58 1/2	2 NPT	1 1/2 NPT	26	14 3/4	1520	2175	290	1/4
140-723	14-150	44	51 1/2	19 1/2	15 1/2	94	69	3-150	1 1/2 NPT	32	21 3/4	2375	3650	460	1/4
160-723	16-150	44	51 1/2	19 1/2	15 1/2	94	69	3-150	1 1/2 NPT	32	21 3/4	2450	3725	460	1/4
180-723	18-150	48	66	24	21	113	87	3-150	2 NPT	38	25 1/4	3290	5535	580	1/4
200-723	20-150	48	66	24	21	113	87	3-150	2 NPT	38	25 1/4	3375	5625	580	1/4

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE. APPLY FOR CERTIFIED DRAWINGS

Specifications - Dimensions/Weight

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723 Series 24" -36"

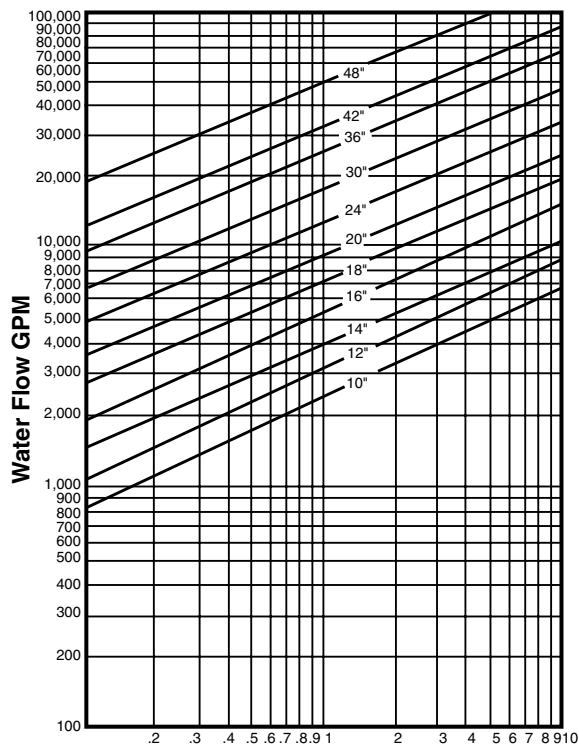


Model No.	Size (In.)	A (In.)	B (In.)	C (In.)	D (In.)	E (In.)	F (In.)	G (In.)	H (In.)	I (In.)	J (In.)	Approx. Dry	Wts. Wet	Lbs. Cov.	Motor H.P.
240-723	24-150	56	77	33	28	122	98	4-150	2 NPT	44	28	4,375	8,350	610	1/3
300-723	30-150	66	94	39	34	150	115	4-150	2 NPT	54	33	6,525	13,625	1,125	1/3
360-723	36-150	86	158-5/8	47-5/8	40-5/8	210	130	6-150	2 NPT	72	43	12,050	26,975	1,490	1/2

LARGER SIZES AVAILABLE UPON REQUEST
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE. APPLY FOR CERTIFIED DRAWINGS

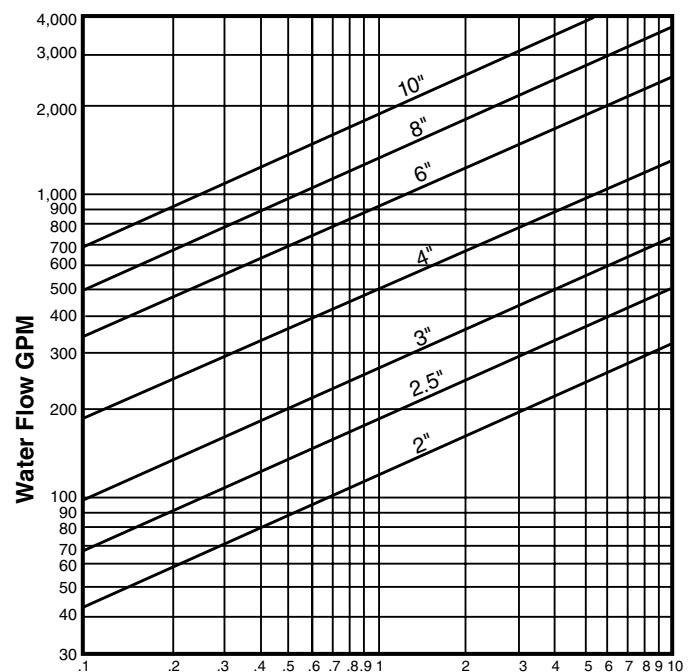
Specifications - Pressure Drop Charts

721-723 Series



Pressure Drop PSI — 10" - 48"
with 1/32" or larger screen opening

793 Series



Pressure Drop PSI — 2" - 10"
with 1/32" or larger screen opening

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

Specifications and Options

Typical Strainer Specifications

The strainer shall be Series 723/793 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 ANSI B16.5 standards. The strainer shall have a single backwash connection and large drain connections located in vessel bottom. 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 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" thru 20" have (1) backwash hollow port. Sizes 24" 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.

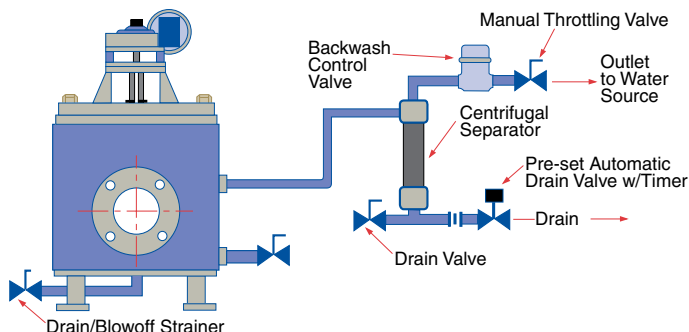


Fig. 5 - Series 723 - Water Saver Package

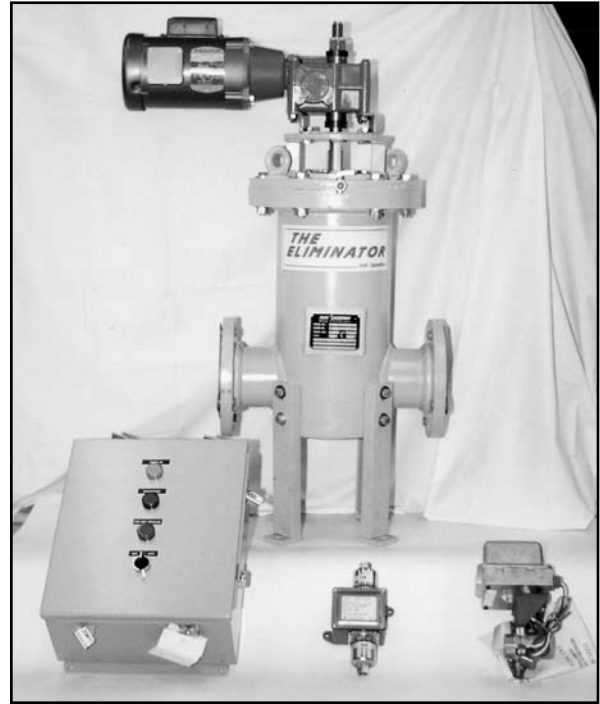


Fig. 4

Automatic Strainers

Strainer Options Available

Cover Lift Recommended for remote locations.

Assemblies -

ASME - ASME Section VIII and Code stamped.

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.

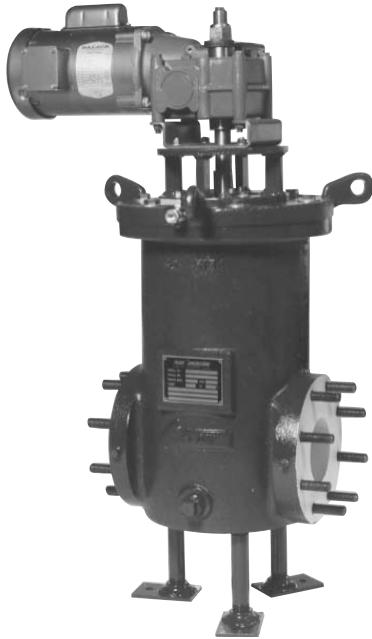
Hyper-Jet - Low Pressure and Special Application.

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.

Water Saver Package - The Water Saver Package (Fig. 5) can be used on most applications where the strained liquid is scarce or valuable. The strainer backwash fluid is directed to a centrifugal separator where only a fraction of the strainer backwash is discharged to waste. The separator backwash can be manually operated and/or automated with a pre-set timer controlled valve.

Automatic Cast Self-Cleaning Strainers

**ASME Section VIII, Div 1,
Current Edition:
U and UM CODE STAMP
Available**



Engineered For Excellence

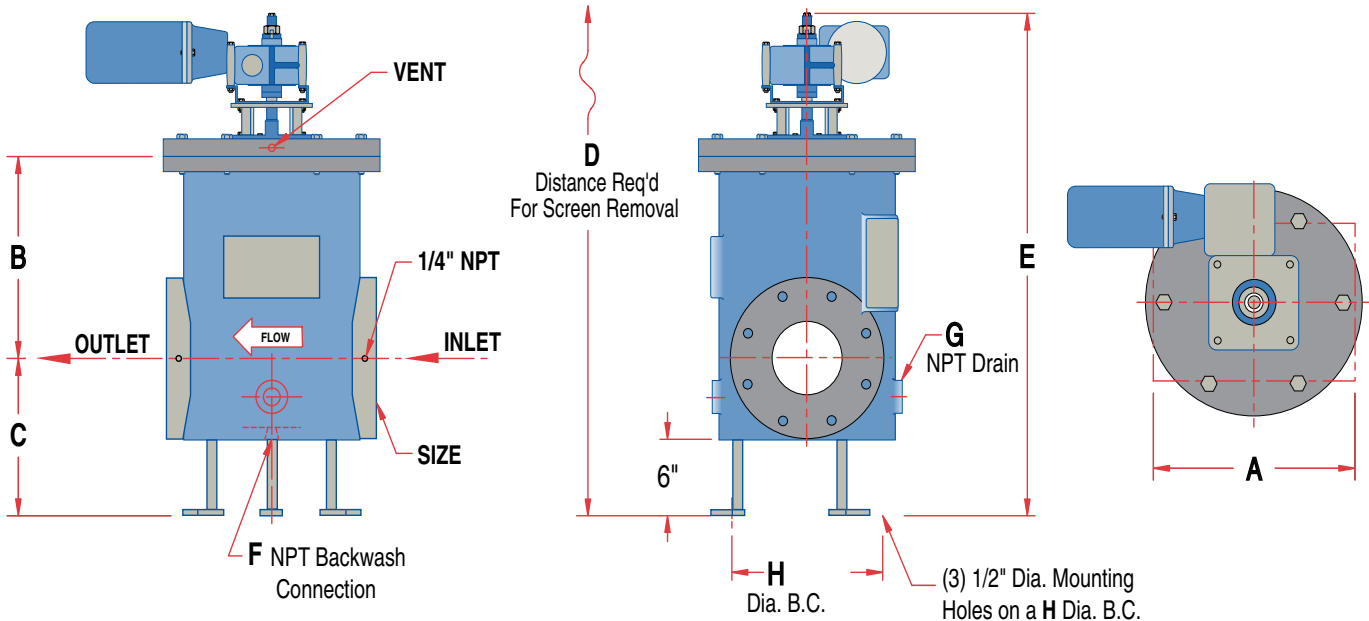
When Automatic Cast Self-Cleaning Strainers were designed, the priority to make quality and economy inherent in the Series 750/753 cast self-cleaning strainers was our obligation to meet our customers' growing needs.

Quality

The Automatic Self-Cleaning Strainers have always been meticulously manufactured with quality in mind. The Automatic Series 750/753 Self-Cleaning Strainers will continue that important tradition of providing consistent and trouble-free service. They are designed and constructed to be in compliance with ANSI and ASME Section VIII, Division 1. The ASME Code "U" Stamp is also available.

Automatic Strainers

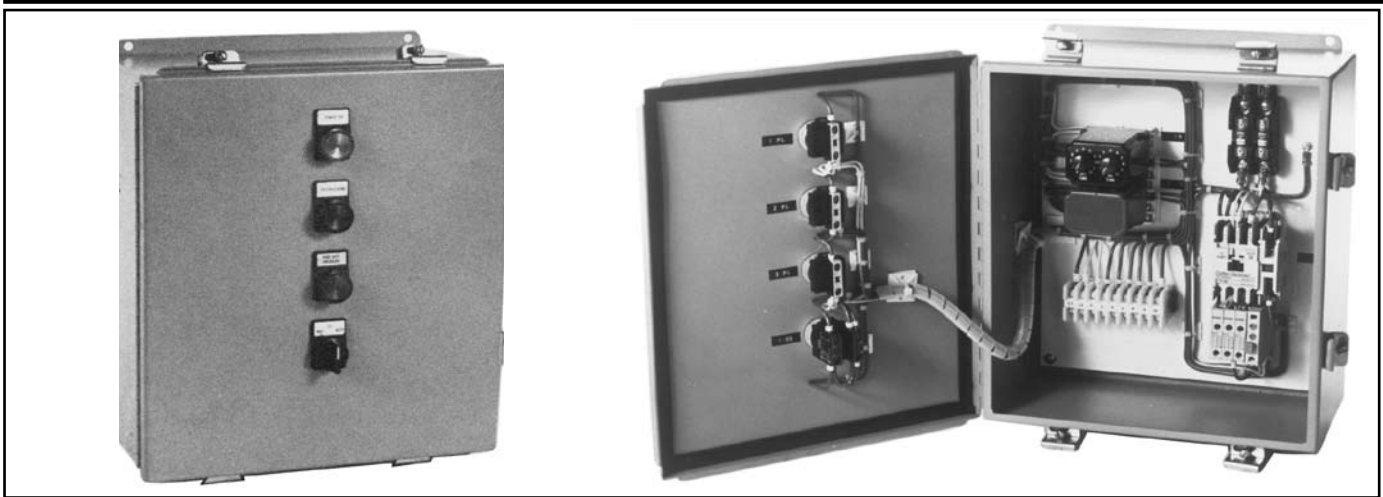
Specifications - 750/753 Cast Series 1" - 8"



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.	
010-750	1 NPT	13 ⁷ / ₈	14	10	53	30 ¹ / ₄	1 NPT	1 NPT	11 ¹ / ₄	380	425	135	1/4
015-750	1 ¹ / ₂ NPT	13 ⁷ / ₈	14	10	53	30 ¹ / ₄	1 NPT	1 NPT	11 ¹ / ₄	380	425	135	1/4
020-753	2-150	11 ⁷ / ₈	14	10	53	30 ¹ / ₄	1 NPT	1 NPT	11 ¹ / ₄	380	400	135	1/4
025-753	2 ¹ / ₂ -150	11 ⁷ / ₈	14	10	53	30 ¹ / ₄	1 NPT	1 NPT	11 ¹ / ₄	355	400	135	1/4
030-753	3-150	11 ⁷ / ₈	14	10	53	30 ¹ / ₄	1 NPT	1 NPT	11 ¹ / ₄	355	400	135	1/4
040-753	4-150	11 ⁷ / ₈	14	10	53	30 ¹ / ₄	1 NPT	1 NPT	11 ¹ / ₄	355	400	135	1/4

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE. APPLY FOR CERTIFIED DRAWINGS

Sequence Controller



Design and Construction

The Sequence Controller is designed with the Customers' specific requirements in mind. The Sequence Controller provides an automatic, effective backwashing cycle with a minimum loss of water.

The Sequence Controllers are constructed with state-of-the-art industrial type components which permits replacing individual components without having to replace an entire circuit board. The industrial type 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

There are basically 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 them.

Continuous Operation

The selector switch is adjusted to "Manual" thus permitting the continuous mode. In the continuous mode, the Automatic Self-Cleaning Strainer will be backwashing continuously with the backwash valve open and the drive motor running. This mode of operation may be necessary if the installation experiences high solid loadings.

In either Mode of Operation, the backwash assembly is specifically designed to rotate at 2 RPM to allow for effective backwashing in less time, thus decreasing the amount of backwash water 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 (Fiberglass 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 Approval, JIC, NEMA Standards.

Check Valves

The **Sure Flow Check** wafer check valve is a precision engineered, fully developed product at the forefront of pipe system technology. **Sure Flow Check** can be installed with confidence into offshore or onshore pipeline systems on product or service lines, wherever non-return protection is required.

Manufactured to meet API specifications, **Sure Flow Check** meets all the key criteria and in the vitally important area of comparative weights is actually lighter than other wafer check valves.

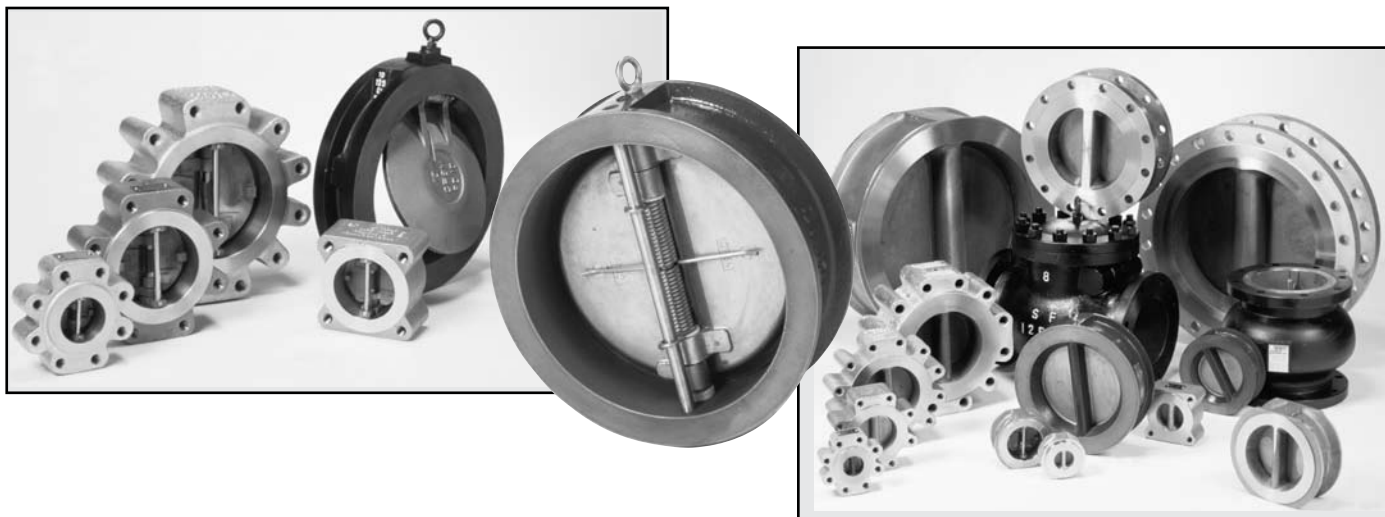
Sure Flow Check offers other operational benefits. **It is light, tight, strong, compact and cost effective.**

Sure Flow Check is a precision engineered dual plate wafer check valve. It has been designed specifically for its environment and its duty. Every component has been carefully chosen only after matching its performance requirements with value analysis criteria.

The **Sure Flow Check** Valve meets API 594 wafer check valve standard (except face to face dimensions of ANSI 125 cast iron valves from 2-1/2" to 12" in which case they meet the Industry Standard).

- ANSI B16.5 flange dimension
- ANSI B16.47 above 24", flange dimension
- API 594 – materials, design & face to face
- API 605 (B16.47), flange dimension
- API 6A – flange dimension & face to face
- API 6D – materials
- API 598 – testing
- ANSI B16.34 – materials, wall thickness

Double Door or Dual Disc Available Wafer • Flanged • Hub • Lug



Range of Valves

- | | | | |
|----------------------|--|-------------------|---|
| Sizes: | • 2" to 72" | Materials: | • Cast or Forged |
| Pressures: | • ANSI Class 125 & 250
• ANSI Class 150 to 2,500
• API 2,000# to 10,000# | | • Cast Iron, Cast Steel
• Stainless Steel & Bronze |
| Temperatures: | • Minus 400°F. to 1,200°F. | Types: | • Flanged
• Flangeless (Wafer Style)
• Lug (Drilled or Threaded)
• Butt Weld
• Hub End (for Clamp Joints) |
| Seating: | • Resilient or Metal to Metal | | |

Check Valves

Lighter

Wafer check valves are recognized as being substantially lighter in weight than conventional swing check valves of the same size and pressure class.

For example:

6" class 150 swing check weighs 175 lbs.

6" 150 **Sure Flow Check** weighs only 30 lbs.

This weight advantage means that the whole pipework system is lighter, consequently the pipework support structure can also be lighter and installation costs reduced.



Stronger

Lighter weight does not mean, however, that strength has been sacrificed. In fact a **Sure Flow Check** is actually stronger than the equivalent length of pipe. Ribs around the side wall support the flange faces.

The **Sure Flow Check Valve** provides the following important features:

- ◆ Twin plate, flat seat design for efficient sealing.
- ◆ Long leg spring(s) allows the plates to open and close without seat scrubbing.
- ◆ Valves 14" and larger are fitted with patented independent spring(s) as a standard feature.
- ◆ Lower head loss than swing checks above 6".
- ◆ Valves with soft seats have bubble tight closure to API 6D.
- ◆ Valves with metal/hardfaced seats have low leakage in accordance with API 598.
- ◆ Simplicity of installation is a key feature.
- ◆ A wide range of seat options is available.

The strong central rib gives rigidity to the body, protects the mechanism from damage by foreign objects in the flow and also provides a broad seating area for the plate heels.

The pins which support the plates and anchor the spring are substantial in order to withstand the pressures imposed on them by the flow.



Check
Valves



Check Valves

If the rib profile and size are reduced or the pins are slimmed down, the valve might not provide the safety margin in operation which is one of the main reasons for having a wafer check valve in the first place.



Compact

Sure Flow Check meets the internationally accepted API 594 standard for steel valves. A 6" class 150 valve has a face to face measurement of just 3" compared with a swing check valve's 14" face to face dimension. A **Sure Flow Check** fits completely inside the flange bolt PCD and therefore external installation is straightforward.

Non-Slam

Sure Flow Check is a non-slam check valve because it operates on flow cessation, not flow reversal. The normal position of the plates is closed, held against the seat by the unique spring design. As flow begins, the heels of the two plates are lifted off the seat face on the central rib.

This cracking pressure is less than 2 psi across most of the range. As flow increases, the plates then pivot against the spring pressure. Since the heels have already lifted off the rib seat there is no scrub or wear, either on the rib, body or plate seating surfaces. A pressure of only 4 psi is required to keep the plates fully open.

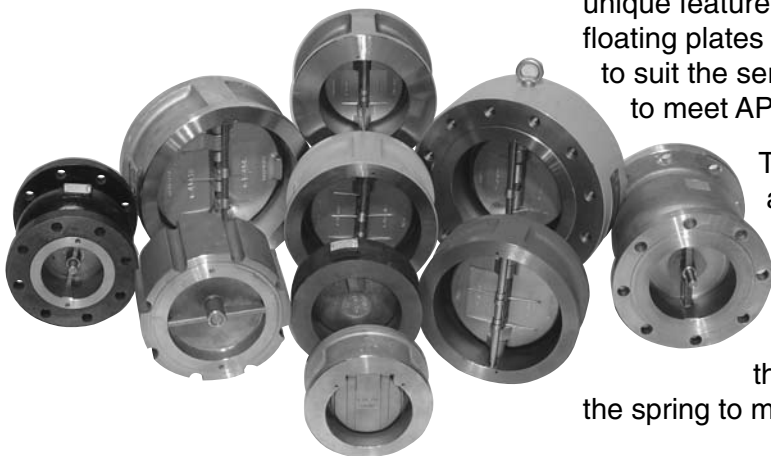
When flow stops and that pressure is removed the spring closes the plates. Flow reversal is then stopped by the closed **Sure Flow Check** valve and in fact any back pressure only serves to make the valve seal more tightly.

Tight

The long leg spring design - with a single anchor point - is a unique feature of the **Sure Flow Check** design. Coupled with floating plates for minimum seat wear and the right choice of seat to suit the service requirements, this gives the best combination to meet API 598 requirements.

The long spring leg ensures closing tension is applied to the right part of the plate whilst allowing the plate heels to float on opening. For valves 14" and larger, the spring is anchored to the stop pin to ensure that both plates open and close independently. If the spring is not anchored, then the opening of one plate transfers pressure through the spring to make it more difficult for the other plate to open.

Check
Valves

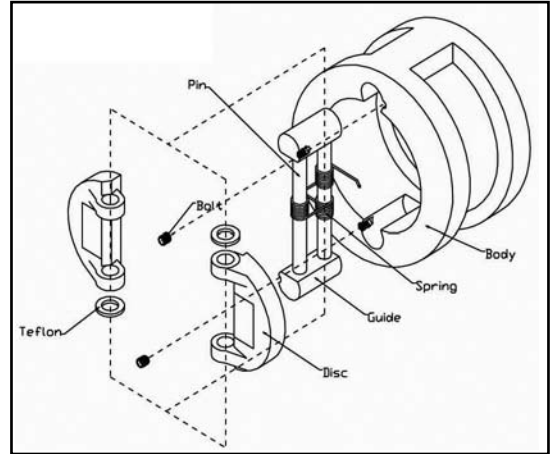


Check Valves

Sure Flow Retainerless body design

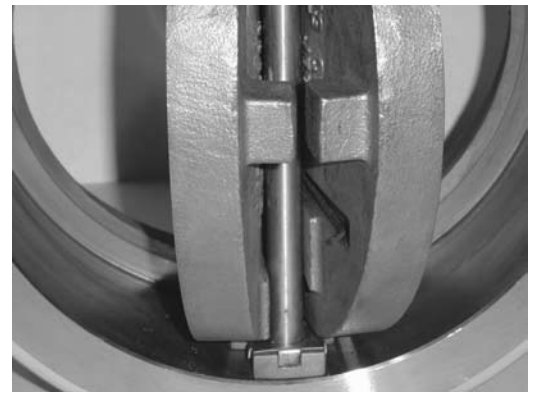
In standard or competitive designs, some manufacturers drill four holes through the body of the check valve to facilitate the installation of a hinge pin and stop pin. The valves are then sealed by four pipe plugs. These holes are potential leak paths from the body of the valve.

Sure Flow Equipment Inc. utilizes an internal stop pin and hinge pin which are machined into the cavity of the body wall. This design eliminates a potential shell or body leak path.



Lapped body / disc seal

All valves meet or exceed API 598. When it comes to the Sure Flow metal to metal valve, an additional special machining cure is performed to provide a maximum flatness and a fine, lapped finish. The Sure Flow disc provides an almost zero leakage on metal seated valves with no additional cost.



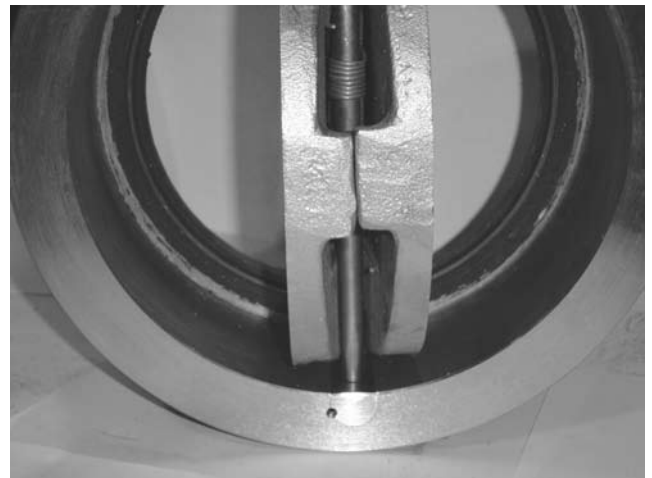
Check
Valves



Shock bumpers

Sure Flow Equipment Inc. has cast "Shock Bumpers" into the reverse side of each of the discs (flappers). Both sides of the disc meet or touch in the fully open position, thus preventing them from contact with the internal pins. This reduces the force on the hinges to a minimum.

In some competitive designs the disc (flapper) strikes the stop pin in the fully open position, creating a lever force which could cause the hinge pin to break. The Shock Bumpers eliminate this potential problem.



Seat life

Increased seat life is obtained by eliminating the problem of dragging on the seat when opening. The soft seated valve has a seat molded to the body by use of a heating temperature suitable to the materials.

Check Valves

Standard Materials of Construction

ANSI 150 through 2500 Series Body & Plate Castings

ASTM A216 Grade WCB
Carbon Steel (0.22% Carbon Max.)

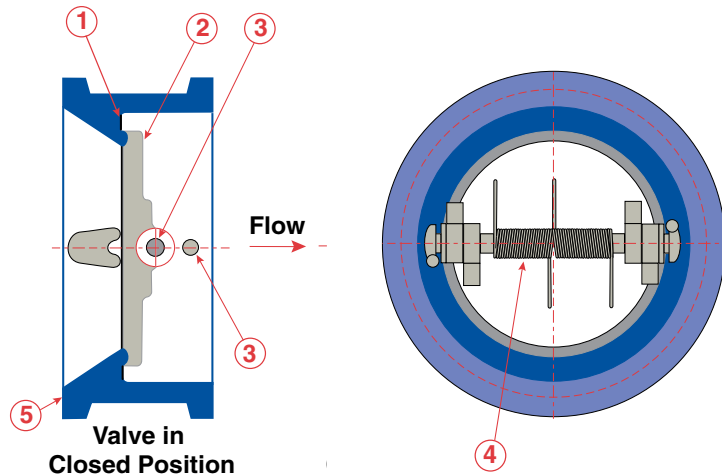
ASTM A217 Grade CA15
Stainless Steel (410)

ASTM A351 Grade CF8M
Stainless Steel (316)

BS 1400 Grade AB2 Aluminum Bronze
(ANSI 150 & 300 Series)

Other materials available on request.

Valve Parts Explosion



No	Description
1	Seat/Seal
2	Disc
3	Shaft
4	Torsion Spring
5	Cast Body

Check Valves

Springs

Max. Operating Temperature

316 SS	120°C (248°F)
Inconel 600	315°C (600°F)
Inconel X 750	537°C (1000°F)

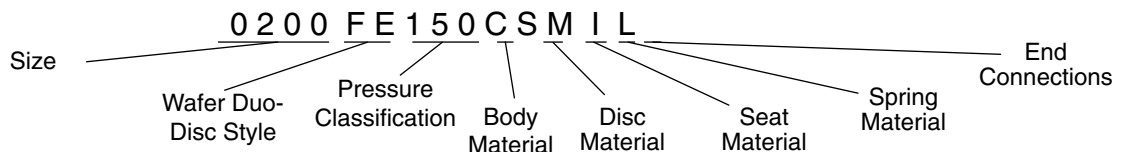
Spring Selection

For temperatures up to 315°C (600°F), Inconel springs will be furnished as standard on all valves that are ordered with metal and Viton seats. For service conditions above 315°C (600°F), Inconel X springs should be specified.

For Seal Selection Refer to Ordering Information

Identification Code/Figure Number

EXAMPLE



Pressure Classification						
Code	150	300	600	900	1500	2500
ANSI	150	300	600	900	1500	2500

Body and Flapper Materials		
Code	Material	Specification
C	Carbon Steel	ASTM A216 Grade WCB
S	Stainless Steel	ASTM A351 Grade CF8M

Seat Material	
Code	Material
M	Metal
V	Viton

Spring Material		
Code	Material	Max. Temp. F.
I	Inconel	600°F

End Connectors	
Code	Connection
R	Serrated Gasket Finish
L	Lug 2" - 10"
F	Flanged 12" - 24"

Check Valves

Installation Dimensions for Wafer Body ANSI Check Valves

Class 150 Model FE 150 Wafer

Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/8	4 1/8	2 3/8	6
2 1/2	2 3/8	4 7/8	2 5/16	8
3	2 7/8	5 3/8	3 3/4	10
4	2 7/8	6 7/8	4 1/2	17
5	3 1/4	7 11/16	5 11/16	23
6	3 7/8	8 3/4	6 5/8	33
8	5	11 11/16	8 5/8	58
10	5 3/4	13 3/8	10 3/4	109
12	7 1/8	16 1/8	12 5/8	180
14	7 1/4	17 3/4	13 11/16	206
16	7 1/2	20 1/4	16 11/16	263
18	8	21 5/8	18	334
20	8 5/8	23 7/8	20 1/4	430
24	8 3/4	28 1/4	23 3/4	582
26	11 1/4	30 1/2	24 3/4	1,151
28	12 5/8	32 3/4	27 5/8	1,293
30	12	34 13/16	30 1/8	1,356
32	14	37	30 11/16	1,746
36	14 1/2	41 1/4	34	2,125
40	17	45 3/4	38 13/16	3,011
42	17	48	41 13/16	3,795
48	20 5/8	54 1/2	47	5,566
54	21 1/4	60 7/8	50 1/2	6,831

Class 300 Model FE 300 Wafer

Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/8	4 3/8	2 3/8	6
2 1/2	2 3/8	5 1/8	2 5/16	8
3	2 7/8	5 7/8	3 3/4	13
4	2 7/8	7 1/8	4 1/2	20
5	3 1/4	8 1/2	5 3/4	23
6	3 7/8	9 7/8	6 5/8	38
8	5	12 1/8	8 5/8	71
10	5 3/4	14 1/4	10 3/4	124
12	7 1/8	16 5/8	12 5/8	195
14	8 3/4	19 1/8	13 3/4	339
16	9 1/8	21 1/4	16 11/16	428
18	10 3/8	23 1/2	18	595
20	11 1/2	25 1/2	20 1/4	774
24	12 1/2	30 1/2	23 3/4	1,207
26	14	32 7/8	24 3/4	1,569
28	15	35 3/8	27 5/8	1,946
30	14 1/2	37 1/2	30 1/8	2,113
32	16	39 5/8	30 13/16	2,598

Class 600 Model FE 600 Wafer

Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/8	4 3/8	2 3/8	6
3	2 7/8	5 7/8	3 3/4	13
4	3 1/8	7 5/8	4 1/2	25
6	5 3/8	10 1/2	6 5/8	68
8	6 1/2	12 5/8	8 5/8	127
10	8 3/8	15 3/4	10 3/4	261
12	9	18	12 5/8	324
14	10 3/4	19 3/8	13 3/4	359
16	12	22 1/4	16 11/16	683
18	14 1/4	24 1/8	18	794
20	14 1/2	26 7/8	20 1/4	1,159
24	17 1/4	31 1/8	23 3/4	1,842
26	18	34 1/8	24 3/4	2,474
28	19	36	27 5/8	2,715
30	19 7/8	38 1/4	30 1/8	3,211
32	21	40 1/4	30 13/16	3,747

Check Valves

Class 900 Model FE 900 Wafer

Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/4	5 5/8	2 3/8	16
3	3 1/4	6 5/8	3 3/4	19
4	4	8 1/8	4 1/2	38
6	6 1/4	11 3/8	6 5/8	101
8	8 1/8	14 1/8	8 5/8	213
10	9 1/2	17 1/8	10 3/4	433
12	11 1/2	19 5/8	12 5/8	640
14	14	20 1/2	13 3/4	855
16	15 1/8	22 5/8	16 11/16	1,123
18	17 3/4	25 1/8	18	1,624
20	17 3/4	27 1/2	20 1/4	1,951
24	19 1/2	33	23 3/4	3,079

Class 1500 Model FE 1500 Wafer

Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/4	5 5/8	2 3/8	16
3	3 1/4	6 7/8	3 3/4	21
4	4	8 1/4	4 1/2	40
6	6 1/4	11 1/8	6 5/8	101
8	8 1/8	13 7/8	8 5/8	213
10	9 3/4	17 1/8	10 3/4	463
12	12	20 1/2	12 5/8	678
14	14	22 3/4	13 3/4	1,045
16	15 1/8	25 1/4	16 11/16	1,240
18	18 7/16	27 3/4	18	2,102
20	21	29 3/4	20 1/4	4,643

Class 2500 Model FE 2500 Wafer

Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/4	5 3/4	2 3/8	30
3	3 3/8	7 3/4	3 3/4	46
4	4 1/8	9 1/4	4 1/2	92
6	6 1/4	12 1/2	6 5/8	190
8	8 1/8	15 1/4	8 5/8	285
10	10	18 3/4	10 3/4	555
12	12	21 5/8	12 5/8	814
14	14	22 3/4	13 3/4	1,254
16	15 1/8	25 1/4	16 11/16	1,488
18	18 7/16	27 3/4	18	2,522
20	21	29 3/4	20 1/4	5,571

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

Check Valves

Installation Dimensions for Lug Body ANSI Check Valves

Class 150 Model FE 150 Lug				
Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/8	6	2 3/8	18
3	2 7/8	7 1/2	3 3/4	30
4	2 7/8	9	4 1/2	48
6	3 7/8	11	6 5/8	81
8	5	13 1/2	8 5/8	159
10	5 3/4	16	10 3/4	235

Class 300 Model FE 300 Lug				
Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
2	2 3/8	6 1/2	2 3/8	20
3	2 7/8	8 1/4	3 3/4	35
4	2 7/8	10	4 1/2	58
6	3 7/8	12 1/2	6 5/8	114
8	5	15	8 5/8	197
10	5 3/4	17 1/2	10 3/4	291

Check Valves

Installation Dimensions for Flanged Body ANSI Check Valves

Class 150 Model FE 150 Flanged				
Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
12	7 1/8	19	12 5/8	230
14	7 1/4	21	13 11/16	283
16	7 1/2	23 1/2	16 11/16	364
18	8	25	18	438
20	8 5/8	27 1/2	20 1/4	569
24	8 3/4	32	23 3/4	784
26	11 1/4	34 1/4	24 3/4	1,316
28	12 5/8	36 1/2	27 5/8	1,472
30	12	38 3/4	30 1/8	1,576
32	14	41 3/4	30 11/16	2,135
36	14 1/2	46	34	2,682
40	17	50 3/4	38 13/16	3,600
42	17	53	41 13/16	4,177
48	20 5/8	59 1/2	47	6,386
54	21 1/4	66 5/8	50 1/2	8,164

Class 300 Model FE 300 Flanged				
Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
12	7 1/8	20 1/2	12 5/8	261
14	8 3/4	23	13 3/4	405
16	9 1/8	25 1/2	16 11/16	519
18	10 3/8	28	18	711
20	11 1/2	30 1/2	20 1/4	936
24	12 1/2	36	23 3/4	1,417
26	14	38 1/4	24 3/4	1,796
28	15	40 3/4	27 5/8	2,181
30	14 1/2	43	30 1/8	2,343
32	16	45 1/4	30 13/16	2,861

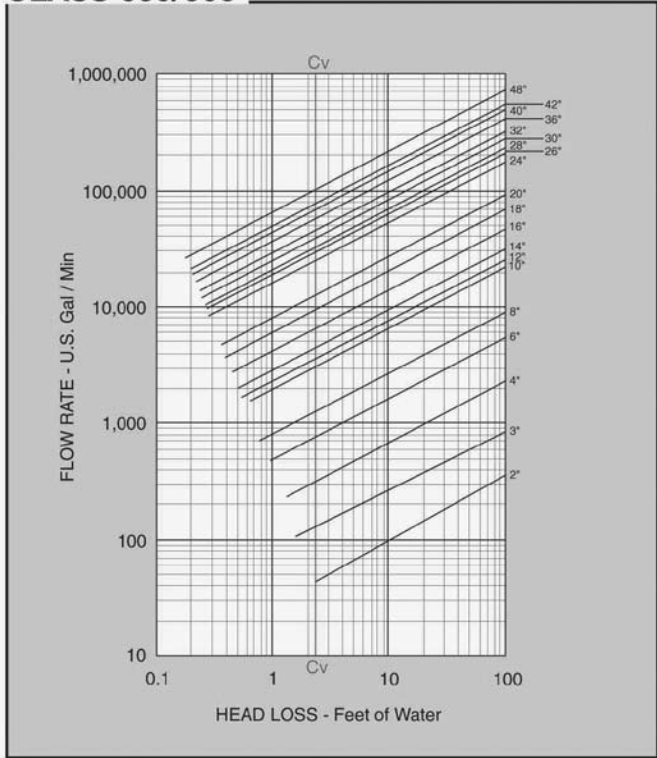
Class 600 Model FE 600 Flanged				
Size Inches	Face to Face	Outside Dia.	Min. Flange Bore	Shipping Weight (lbs)
12	9	22	12 5/8	415
14	10 3/4	23 3/4	13 3/4	577
16	12	27	16 11/16	835
18	14 1/4	29 1/4	18	1,164
20	14 1/2	32	20 1/4	1,417
24	17 1/4	37	23 3/4	2,249
26	18	40	24 3/4	2,745
28	19	42 1/4	27 5/8	3,236
30	19 7/8	44 1/2	30 1/8	3,752
32	21	47	30 13/16	4,420

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

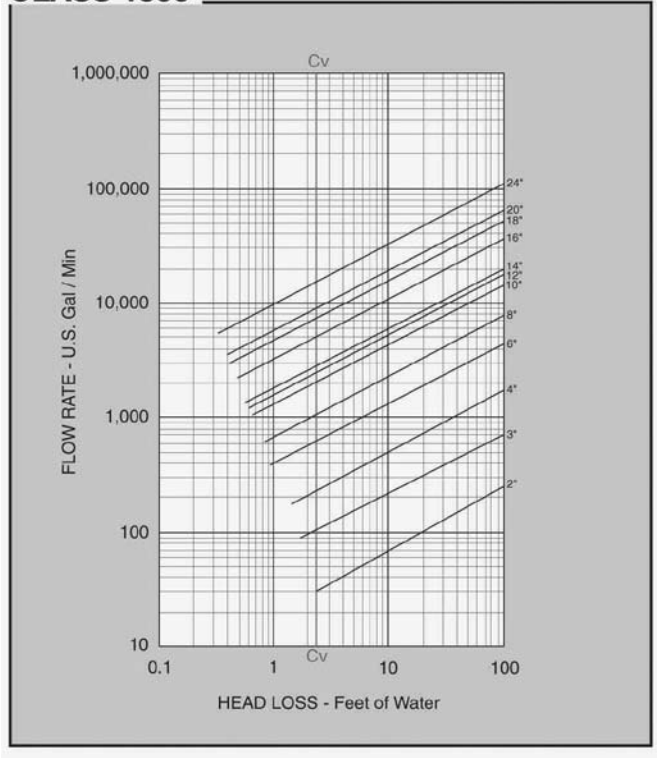
Check Valves

Head Loss - For Water at 60°F

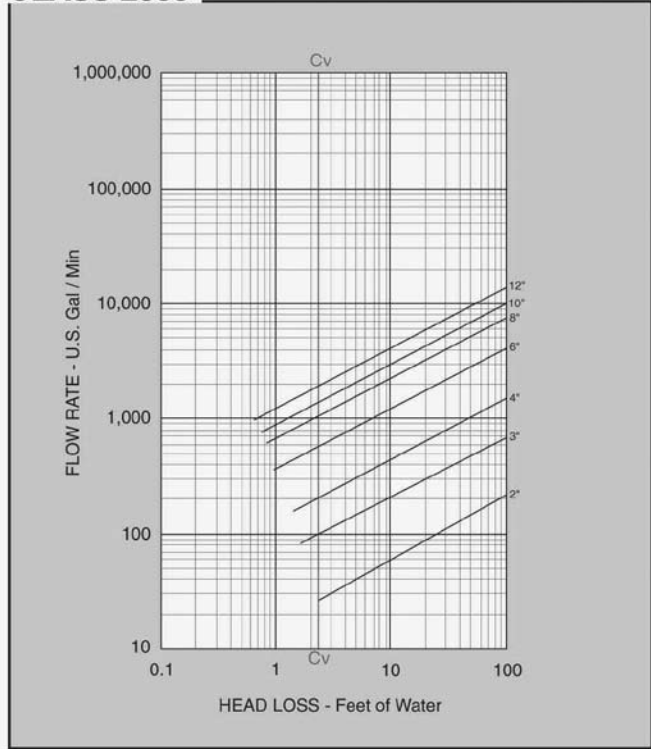
CLASS 600/900



CLASS 1500



CLASS 2500



Check Valves

*Valves fitted to larger bore pipes will have lower pressure drops
 **Note: For Class 150 refer to page 63

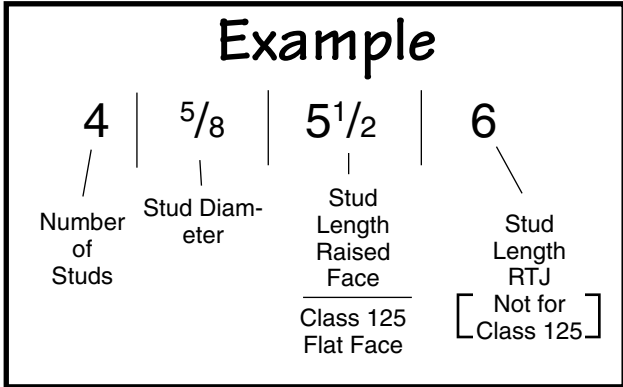
NOTE: Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

Check Valves

ANSI Stud Bolting

Valve Size	Class 125			Class 150			Class 300			Class 600			Class 900			Class 1500			Class 2500									
2	4	5/8	5 1/4	4	5/8	5 1/2	6	8	5/8	5 3/4	6 3/4	8	5/8	6 1/2	7	8	7/8	8 1/2	8 3/4	8	7/8	8 1/2	8 3/4	8	1	9 3/4	10	
3	4	5/8	5 3/4	4	5/8	6 1/2	7	8	3/4	7	8	8	3/4	7 3/4	8 1/4	8	7/8	9	9 1/4	8	1 1/8	10 1/4	10 1/2	8	1 1/4	12	12 1/4	
4	8	5/8	6 1/4	8	5/8	6 1/2	7	8	3/4	7 1/4	8 1/4	8	7/8	9 1/4	9 1/2	8	1 1/8	10 3/4	11	8	1 1/4	11 3/4	12	8	1 1/2	14	14 1/2	
6	8	3/4	7	8	3/4	7 3/4	8 1/4	12	3/4	8 3/4	9 3/4	12	1	12	12 1/2	12	1 1/8	14	14	12	1 3/8	16 1/2	16 3/4	8	2	20	20 1/2	
8	8	3/4	8	8	3/4	9 1/4	9 3/4	12	7/8	10 1/2	11 1/4	12	1 1/8	14 1/4	14 1/2	12	1 3/8	16 3/4	17 1/4	12	1 5/8	19 1/2	20	12	2	23 1/4	24	
10	12	7/8	9	12	7/8	10 1/2	11	16	1	12	12 3/4	16	1 1/4	16 3/4	17 1/4	16	1 3/8	18 3/4	19	12	1 7/8	23 1/4	23 1/2	12	2 1/2	29 1/2	30 1/4	
12	12	7/8	10 1/2	12	7/8	11 3/4	12 1/4	16	1 1/8	13 3/4	14 3/4	20	1 1/4	17 3/4	18	20	1 3/8	21 1/2	21 3/4	16	2	27	27 1/2	12	2 3/4	33 1/2	34 1/2	
14	12	1	12	12	1	12 1/4	13 1/4	20	1 1/8	16 1/4	16 1/4	20	1 3/8	20	20	-	-	-	-	-	-	-	-	-	-	-	-	-
16	16	1	13 1/4	16	1	13 1/4	14 1/2	20	1 1/4	16 3/4	16 3/4	20	1 1/2	22 1/2	22 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-
18	16	1 1/8	14	16	1 1/8	14	15 1/4	24	1 1/4	19	19	20	1 5/8	24 1/2	24 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-
20	20	1 1/8	14 1/4	20	1 1/8	14 1/2	15 1/2	24	1 1/4	20 1/4	21 1/4	24	1 5/8	26	27	-	-	-	-	-	-	-	-	-	-	-	-	-
24	20	1 1/4	16 1/2	20	1 1/4	16 3/4	16 3/4	24	1 1/2	22 1/2	22 1/2	24	1 7/8	30 1/2	30 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-

Check Valves



Installation Data

The **Sure Flow Check** valve is designed so that it is centralized between the flanges when the stud bolts are in position. The outside diameter of the body is equal to the bolt circle PCD minus the diameter of one bolt.

It is suitable for use in a variety of orientations. In horizontal lines the valve is installed with the pins vertical (i.e. with the pin retainers at the top). For sizes 6" and upwards the valve is tapped to take an eyebolt for lifting.

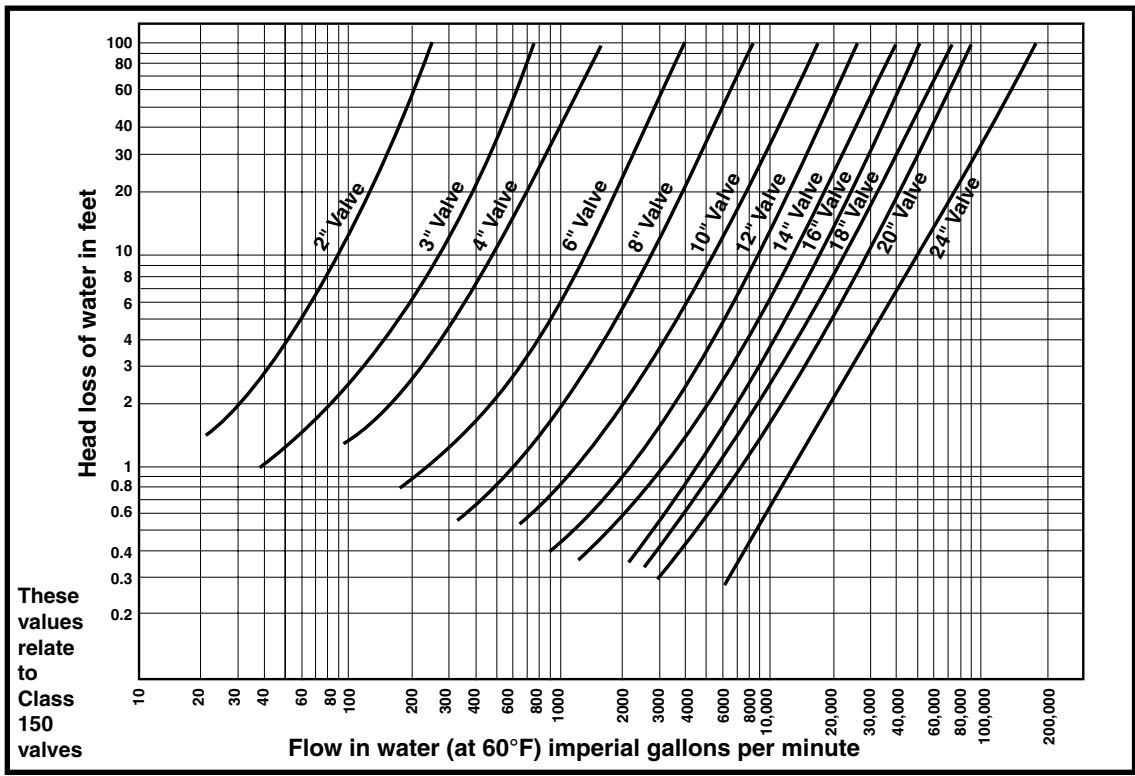
Arrows cast into the body indicate the normal direction of flow.

Before initial installation it is advisable to open the plates by hand since, if the valve is held in store for a period of time, the corrosion inhibitor may have caused the plates to stick to the body and line pressure may not be sufficient to break this seal.

If the bottom half of the studs are installed first they will serve as a platform to support the valve whilst the gaskets and other studs are put in. Similarly, if the valve is to be removed from the line, the top half of the studs should be removed and the bottom half slackened.

Check Valves

Pressure Loss Through Valves



Check Valves

- ◆ We will provide valves to match your performance requirements
- ◆ The curves shown above relate to valves provided with standard rated springs
- ◆ Higher value springs may be required to ensure faster reaction if very large changes in velocity occur
- ◆ It should be borne in mind that a media (liquid) velocity in the pipeline of 10 ft per second is considered to be desirable for normal applications

Percent of Flow Area Sure Flow Check vs Standard Steel Pipe						
Size	Pressure Class					
	150	300	600	900	1500	2500
2"	36.7	36.7	44.0	54.4	54.4	36.1
3"	39.1	39.1	43.8	46.6	46.6	32.8
4"	41.4	41.4	45.8	47.7	47.7	29.5
6"	54.0	54.0	58.5	52.9	52.9	33.4
8"	56.7	56.7	57.8	58.6	58.6	32.7
10"	56.0	56.0	67.9	70.5	52.6	30.9
12"	61.8	61.8	63.0	71.8	62.0	31.2
14"	66.7	72.5	62.9	75.4	75.4	—
16"	64.3	55.2	67.9	71.8	71.8	—
18"	74.5	69.9	64.8	76.4	74.0	—
20"	70.8	65.1	67.4	84.0	81.0	—
24"	66.0	63.4	68.3	71.4	71.0	—

Approximate performance data for Sure Flow Check valves when used with water at 60° F with a nominal 10 ft/sec velocity				
Valve Size	Flow (imperial gals/min)	Pressure drop psi	Head loss in feet	Approx. equiv. length of pipe in feet
2"	86	4.49	10.32	30
3"	192	2.97	6.83	34
4"	368	2.30	5.29	35
6"	750	1.47	3.38	37
8"	1292	1.20	2.76	40
10"	2116	0.93	2.14	41
12"	2920	0.81	1.87	44
14"	3570	0.74	1.70	45
16"	4750	0.60	1.38	47
18"	6600	0.55	1.27	47
20"	7500	0.51	1.18	50
24"	12500	0.42	0.97	52



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Check Valves

Seat Options

The right seat is critical for the correct functioning of the valve in its designated service. **Sure Flow Check** offers a wide range of seat options.

Metal to metal seats can be either the body/plate parent material or a hardfacing of other material, overlaid by deposition.

For soft seated valves standard elastomers are vulcanized for maximum security.

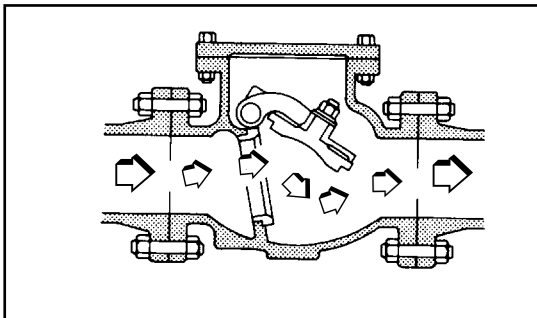
On high pressure class valves it is set into a groove for further safety.



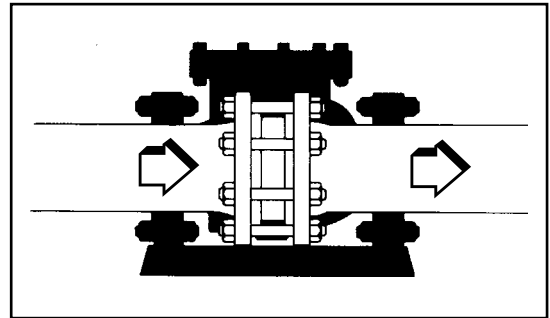
Simple Installation

Simplicity and speed of installation are of paramount importance for the process or pipeline engineer.

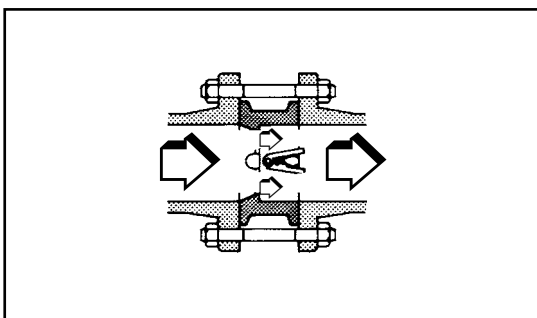
Sure Flow Check is simply installed between the flanges. A raised face (serrated or smooth finish), a RTJ, profile hub and butt weld ends can be provided. Only one set of studs is required as **Sure Flow Check** fits inside the bolt circle PCD. If the valve needs to be taken out of the line, only half the bolts need to be removed, reducing the amount of work to be done and providing a retained link for the two pipe flanges.



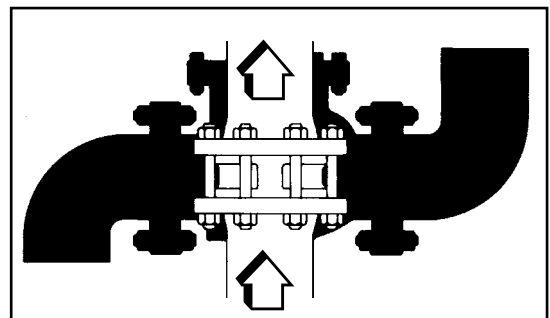
Conventional swing check valve



Horizontal Flow - rib vertical



Sure Flow Check dual plate wafer check valve



Vertical Flow

Quality From Start To Finish

Quality Counts

Our quality starts with design and engineering, continues through development and testing, to manufacture and certification. Our technical and sales support services are vital ingredients in maintaining the overall quality of our products. The stringent quality control, inspection and testing procedures we apply are contained within the Documented Quality System.

*Manufactured to API 594
and tested to API 598*

Quality is manufactured not inspected

Our operatives are responsible for the quality and accuracy of their work and for ensuring that it is in accordance with the appropriate working drawings and specifications. Our Q.A. Department checks initial compliance throughout all aspects of manufacture from the receipt of materials to the end of the machining process.

Our Quality Assurance Department remains the ultimate authority in guaranteeing that materials, engineering and methods are in full accordance with agreed specifications and established procedures. Through a combination of these procedures we can confidently fulfil all requirements for material conformity and traceability and for full certification.

When you specify **Sure Flow Check** valves, you can be confident that not only are you making an investment in quality and reliability, but equally important, you know the service starts with the sale.

*All requirements for
material conformity,
traceability and
certification met in full*

Check
Valves



Check Valves

Cast Iron

Type CD125IS Wafer - Double Door - Dual Disc-Check Valve



The **Eco (Economical) Dual Plate Check Valve** features ease of maintenance and exceptional flow characteristics.

- Body gives compact, one-piece wafer design
- Dual plate valves give maximum strength with minimum opening time
- Full contact seats maintain positive shut-off at minimum working pressure
- Torsion springs assist valve closure, preventing flow reversal
- Shaft is of extra heavy duty, corrosion resistant construction
- Shaft supports with large bearings act as stops to prevent over travel of plates
- Thrust washers reduce friction and wear of valve plate hinges.
- Model CD125IS with 316SS Discs

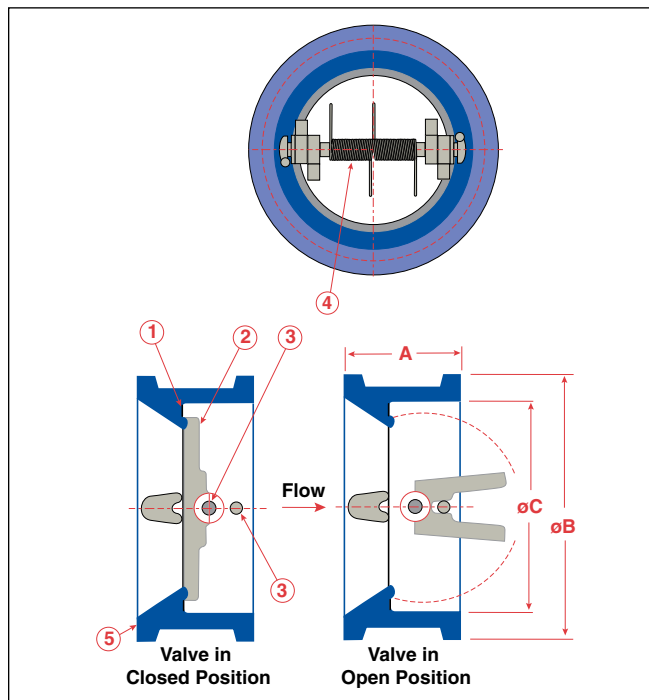
Construction

No	Name	Material
1	Seat/Seal	Buna-N
2	Discs	A351 Gr. CF8M Stainless Steel
3	Shaft	A351 Gr. CF8M Stainless Steel
4	Torsion Spring	A351 Gr. CF8M Stainless Steel
5	Cast Body	A126 Class B Cast Iron

Operating Pressures and Temperatures

Service	Size	psi	Temp
WOG	2" - 12"	200	200°F
WOG	14" - 54"	150	200°F

Check Valves



Dimensional Data

Size Inches	Model	A	B	C	Shipping Weight (lbs)
2	0200	2 1/8	4 1/8	2 3/8	6
2 1/2	0250	2 1/8	4 7/8	2 5/16	7
3	0300	2 1/4	5 3/8	3 3/4	10
4	0400	2 1/2	6 3/8	4 1/2	14
5	0500	2 3/4	7 11/16	5 11/16	19
6	0600	3	8 3/4	6 5/8	25
8	0800	3 3/4	11	8 5/8	42
10	1000	4 1/4	13 3/8	10 3/4	72
12	1200	5 5/8	16	12 5/8	116
14	1400	7 1/4	16 5/8	13 11/16	182
16	1600	7 1/2	20 1/2	16 11/16	243
18	1800	8	21 5/8	18	334
20	2000	8 3/8	23 7/8	20 1/4	430
24	2400	8 3/4	28 1/4	23 3/4	582
26	2600	11 1/4	30 1/2	24 3/4	1,128
28	2800	12 5/8	32 3/4	27 5/8	1,293
30	3000	12	34 13/16	30 1/8	1,356
32	3200	14 1/2	37	30 11/16	1,746
36	3600	14 1/2	41 1/4	34	2,125
40	4000	16	45 3/4	38 13/16	3,011
42	4200	17	48	41 13/16	3,795
48	4800	20 5/8	54 1/2	47	5,566
54	5400	21 1/4	60 7/8	50 1/2	6,831

Ordering Information

Example: Include full description

Size Model
(Prefix) #

0400 - CD125IS

4", Cast Iron Wafer Check Valve,
BUNA-N Seat, 316SS Discs.

Notes

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification. Valves are designed to operate on vertical and horizontal flow, see note 1.

NOTE 1

Horizontal Flow: Valve must be installed with disc hinge pin in the vertical position, to insure proper operation.



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Elastic Swing Check Valves

Ductile Iron - Flanged

Type CXF125IV Flanged Elastic Swing Check Valve



The **Elastic Swing Check Valve** is suitable for municipal and industrial applications.

It is standard with a ductile iron body with flanges which comply with ANSI B16.1; Class 125. The internal body is epoxy coated. Special coatings are available upon request. The one-piece molded disc has a steel reinforced insert to insure closure. Plus, while in the open position, it will allow 100% uninterrupted flow. The one-piece disc hinge and disc can be repaired without removal of the valve from the line.

The elastic check can be installed in a vertical or horizontal pipeline.

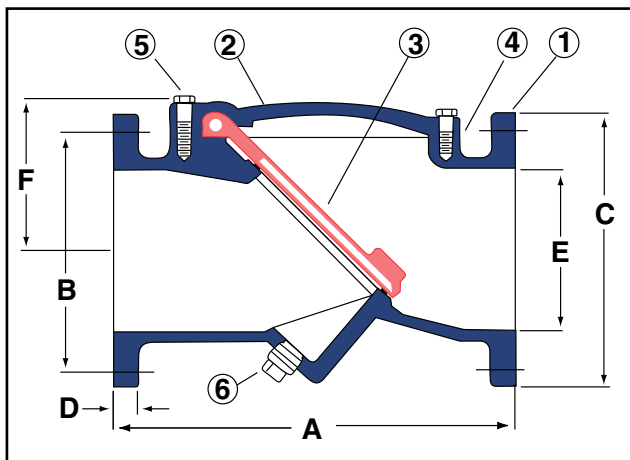
Construction

No	Name	Material
1	Cast Body	A536 60-45-12
2	Cover	A536 60-45-12
3	Disc	BUNA w/steel & fabric reinforcement
4	Gasket	Lexide NK-511 (non asbestos)
5	Cover Bolts	Alloy steel SAE Grade S
6	Drain	A536 60-45-12

*Face to face: ANSI B16.10 Class 125

Operating Pressures and Temperatures

Service	Size	psi	Temp
WOG	2" - 12"	285	150°F
WOG	14" - 24"	150	150°F



Dimensional Data

Size Inches	Model	A	B	C	D	E	F	Drain Size	Shipping Weight (lbs)
2	0200CXF125IV	8	4 3/4	6	5/8	2	3 3/8	3/4	30
2 1/2	0250CXF125IV	8 1/2	5 1/2	7	11/16	2 1/2	3 3/8	3/4	38
3	0300CXF125IV	9 1/2	6	7 1/2	3/4	3	3 7/8	3/4	46
4	0400CXF125IV	11 1/2	7 1/2	9	15/16	4	4 5/8	1	70
5	0500CXF125IV	13 3/4	8 1/2	10	15/16	5	5 1/8	1	100
6	0600CXF125IV	15	9 1/2	11	1	6	5 7/8	1 1/4	115
8	0800CXF125IV	19 1/2	11 3/4	13 1/2	1 1/8	8	7 5/8	1 1/2	250
10	1000CXF125IV	24 1/2	14 1/4	16	1 3/16	10	9 7/8	2 1/2	525
12	1200CXF125IV	27 1/2	17	19	1 1/4	12	11 1/2	2 1/2	710
14	1400CXF125IV	31	18 3/4	21	1 3/8	14	13 1/2	2 1/2	860
16	1600CXF125IV	31 15/16	21 1/4	23 1/2	1 7/16	16	15 1/4	2 1/2	1090
18	1800CXF125IV	35 15/16	22 3/4	25	1 9/16	18	17 1/4	3	1450
20	2000CXF125IV	39 15/16	25	27 1/2	1 11/16	20	19 1/4	3	1575
24	2400CXF125IV	47 15/16	29 1/2	32	1 7/8	24	22 3/4	3	2600

Ordering Information

Example: Include full description

Size Model
(Prefix) #
0400 - CXF125IV

4", Ductile Iron Flanged Check Valve,
BUNA-N w/steel & fabric reinforcement



Notes

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

Check Valves

Cast Iron - Horizontal Swing

Type CSF125IB Flanged Horizontal Swing Check Valve



The **Sure Flow Horizontal Swing Check Valve** has a cast iron body, cover and disc. The valve is provided with a bronze seat ring and bronze disc ring.

Bronze being softer than a cast iron facing, it offers a more positive sealing effect than competitors' standard iron facing. At the same time, a bronze seat ring and disc ring is very versatile in its stability to temperature and various commonly handled materials.

Conforming to MSS SP-71
End Flange Dimensions: ANSI B16.1
Face to Face Dimensions: ANSI B16.10.

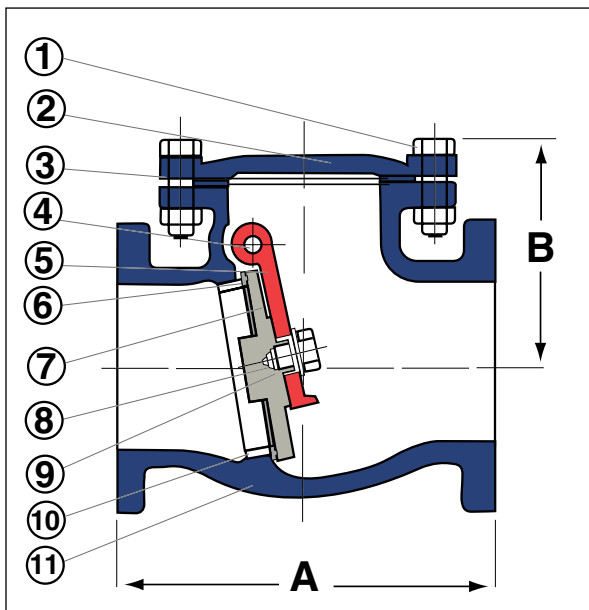
Construction

No	Name	Material
1	Cover Bolt & Nut	Steel
2	Cover	A126 Class B
3	Gasket	Graphite
4	Hanger Pin	Stainless Steel
5	Hanger	A126 Class B
6	Disc Ring	B62
7	Disc	A126 Class B
8	Disc Washer	Steel
9	Disc Bolt	Steel
10	Seat Ring	B62
11	Cast Body	A126 Class B

Operating Pressures and Temperatures

Service	Size	psi	Temp
WOG	2" - 12"	200	200°F
WOG	14" - 20"	150	200°F

Check Valves



Dimensional Data

Size Inches	Model	A	B	Shipping Weight (lbs)
2	0200CSF125IB	8	5 1/8	20
2 1/2	0250CSF125IB	8 1/2	5 5/8	25
3	0300CSF125IB	9 1/2	6 1/8	30
4	0400CSF125IB	11 1/2	7 1/8	70
5	0500CSF125IB	13	9	88
6	0600CSF125IB	14	9 1/4	98
8	0800CSF125IB	19 1/2	10 7/8	130
10	1000CSF125IB	24 1/2	12 1/4	300
12	1200CSF125IB	27 1/2	13 3/4	410
14	1400CSF125IB	31	18 1/4	496
16	1600CSF125IB	30 1/4	19 1/2	660
18	1800CSF125IB	33	21	825
20	2000CSF125IB	36	23 1/2	981

Ordering Information

Example: Include full description

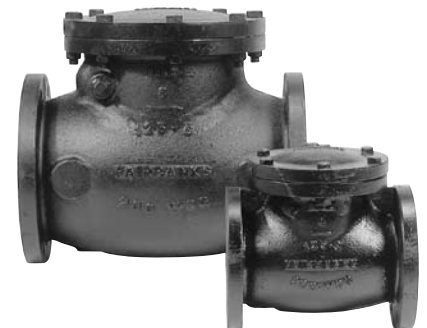
Size Model
(Prefix) #

0400 - CSF125IB

4", Cast Iron Flanged Horizontal Swing
Check Valve, Bronze Seat Ring

Notes

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



Check Valves

Cast Iron - Swing Disc

Type CSW125IS Wafer Swing Check Valve ANSI 125/150 Class



The **Wafer Swing Check Valve** incorporates several features distinguishing it from conventional check valves for silent, fast, non slam operation. The most prominent of these is the accurately machined disc and its special quick closing action. Spring loading of the 316SS disc assures instantaneous closure to reversing flow, preventing build-up of momentum, the cause of damaging water hammer. The hinge pin design assures free movement of the disc and eliminates seizure under extreme conditions. Soft seat inserts are standard for positive sealing of hard-to-hold solvents and fluids. Lifting eye hook on 8" to 12" valves.

Construction

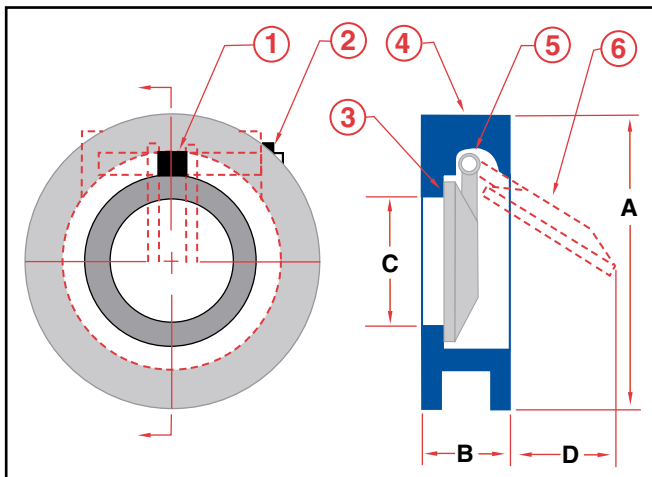
No	Name	Material
1	Torsion Spring	316 Stainless Steel
2	Plug	ASTM A126 Class B
3	O-Ring Seal	BUNA-N
4	Cast Body	ASTM A126 Class B
5	Shaft	316 Stainless Steel
6	Disc	316 Stainless Steel

Operating Pressures and Temperatures

Service	Size	psi	Temp
WOG	2" - 12"	200	100°F

Dimensional Data

Size Inches	Model	A	B	C	D	Shipping Weight (lbs)
2	0200CSW125IS	4 1/8	2 1/4	1 1/2	7/8	10
2 1/2	0250CSW125IS	4 7/8	2 3/8	1 3/4	1	12
3	0300CSW125IS	5 3/8	2 5/8	2 1/8	1 1/2	17
4	0400CSW125IS	6 7/8	2 1/4	3 1/8	2 1/4	26
5	0500CSW125IS	7 3/4	2 1/2	3 7/8	2 1/2	36
6	0600CSW125IS	8 3/4	2 3/4	4 3/4	2 3/4	53
8	0800CSW125IS	11	2 7/8	6 1/2	4	72
10	1000CSW125IS	13 3/8	3 1/8	7 3/4	7 3/16	115
12	1200CSW125IS	16 1/8	3 3/8	9 1/2	9	168



Notes

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

Valves are designed to operate on vertical and horizontal flow, see note 1.

NOTE 1

The wafer check valve is designed for installation between two pipe flanges in horizontal or vertical pipelines (in the latter case upward flow is preferred).



Ordering Information

Example: Include full description

Size Model
(Prefix) #

0400 - CSW125IS

4", Cast Iron Wafer Swing Check Valve,
BUNA-N Seat, 316SS Disc

Check Valves

Stainless Steel - Swing Disc

Type CSW150SSMIR Wafer Swing Check Valve ANSI 150 Class



The **Wafer Swing Check Valve** incorporates several features distinguishing it from conventional check valves for silent, fast, non slam operation. The most prominent of these is the accurately machined disc and its special quick closing action. Spring loading of the 316SS disc assures instantaneous closure to reversing flow, preventing build-up of momentum, the cause of damaging water hammer. The hinge pin design assures free movement of the disc and eliminates seizure under extreme conditions. Metal seat is standard for sealing. Lifting eye hook on 8" to 12" valves.

Construction

No	Name	Material
1	Torsion Spring	316 SS
2	Bolt	316 SS
3	Seat	CF8M
4	Cast Body	CF8M
5	Shaft	316 SS
6	Disc	CF8M
7	Eye Bolt	Carbon Steel Zinc Plated

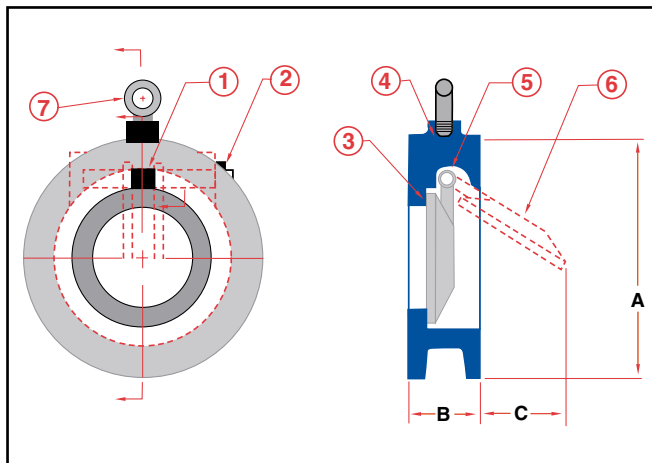
Operating Pressures and Temperatures

Service	Size	psi	Temp
WOG	2" - 12"	275	100°F

Check Valves

Dimensional Data

Size Inches	Model	A	B	C	Shipping Weight (lbs)
2	0200CSW150SS	4 1/8	2 3/8	1 1/8	8
3	0300CSW150SS	5 3/8	2 7/8	1 1/2	16
4	0400CSW150SS	6 7/8	2 7/8	2 3/8	26
6	0600CSW150SS	8 3/4	3 7/8	3 3/4	55
8	0800CSW150SS	11	5	4	103
10	1000CSW150SS	13 3/8	5 3/4	5 7/16	143
12	1200CSW150SS	16 1/8	7 1/8	5 7/8	252



Notes

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

Valves are designed to operate on vertical and horizontal flow, see note 1.

NOTE 1

The wafer check valve is designed for installation between two pipe flanges in horizontal or vertical pipelines (in the latter case upward flow is preferred).

*Please specify metal or viton seal.



Ordering Information

Example: Include full description

Size	Model
(Prefix)	#

0400 - CSW150SSMIR

4", 316SS Wafer Swing Check Valve,
Metal Seat, 316SS Disc

Silent Check Valves

Cast Iron - Wafer

Type CW125ISC - Cast Iron Flat Face



Sure Flow Wafer Check Valves are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 12"

Service Applications

- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

Operating Pressures and Temperatures

Service	Size	psi	Temp.
Liquid	2" - 12"	200	180°F

Construction

No	Name	Material
1	Cast Body	A126 Class B
2	Plug	A351 Gr. CF8M
3	Spring	Stainless Steel
4	Seat	A351 Gr. CF8M
5	Bushing	Stainless Steel
6	Screw	Stainless Steel

Dimensional Data

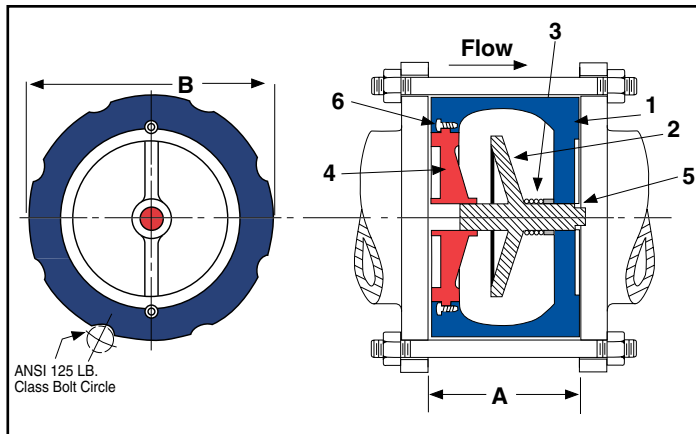
Size	Model	A	B	CV	Shipping Weight (lbs)
2	0200CW125ISC	2 5/8	4	40	7
2 1/2	0250CW125ISC	2 7/8	4 3/4	60	9
3	0300CW125ISC	3 1/8	5 1/4	85	15
4	0400CW125ISC	4	6 3/4	150	25
5	0500CW125ISC	4 5/8	7 5/8	230	32
6	0600CW125ISC	5 1/2	8 5/8	340	56
8	0800CW125ISC	6 1/2	10 3/4	600	100
10	1000CW125ISC	8 1/4	13 1/8	900	140
12	1200CW125ISC*	11 1/4	19	1850	370*

*Special full lug pattern

Notes

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

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



Ordering Information

Example: Include full description

Model # Type & Material

0400 - CW125ISC

4", Flat Face Wafer Check Valve Silent, Stainless Steel Plug

Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" size and larger.

We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.



Check Valves

Silent Check Valves

Cast Steel & Cast Stainless Steel Wafer

Type CW150C - Cast Steel & CW150SS Cast Stainless Steel



Sure Flow Wafer Check Valves are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 24"

Service Applications

- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

Construction - Cast Steel

No	Name	Material
1	Cast Body	A216 Gr. WCB
2	Plug	A351 Gr. CF8M
3	Spring	Stainless Steel
4	Seat	A351 Gr. CF8M
5	Bushing	Stainless Steel
6	Screw	Stainless Steel

Construction - Cast Stainless Steel

All ASTM Spec A351 Grade CF8M Stainless Steel.

Dimensional Data

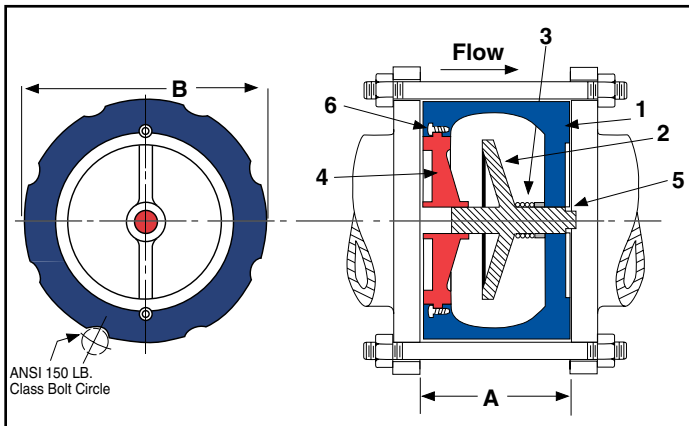
Size	Model	A	B	CV	Shipping Weight (lbs)
2	0200CW150	2 5/8	4 1/4	50	7
2 1/2	0250CW150	2 7/8	5	72	9
3	0300CW150	3 1/8	5 3/4	92	15
4	0400CW150	4	7	180	25
5	0500CW150	4 5/8	8 3/8	276	32
6	0600CW150	5 1/2	9 3/4	408	56
8	0800CW150	6 1/2	13 1/2	720	100
10	1000CW150	8 1/4	16	1000	140

* Also Available in size 12", 14", 16", 18", 20" and 24".

Operating Pressures and Temperatures

Material	Service	Size	psi	Temp.
Cast Steel	Liquid	2" - 10"	285	100°F
Stainless Steel	Liquid	2" - 10"	275	100°F

Check Valves



Ordering Information

Example: Include full description

Model # Type & Material

0400 - CW150SS150

4", Raised Face Wafer Silent Check Valve,
All 316SS Construction

Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" size and larger.

We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.

Notes

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

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
International 1-905-335-1350 International Fax: 1-905-332-4993
Email: info@sureflowequipment.com www.sureflowequipment.com

Globe or Silent Check Valves

Cast Iron - Flanged

Type CF125ISC Cast Iron



Operating Pressures and Temperatures

Service	Size	psi	Temp.
Liquid	2" - 16"	200	150°F
Liquid	14" - 24"	150	150°F

Sure Flow Globe Style Check Valves are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 24"

Service Applications

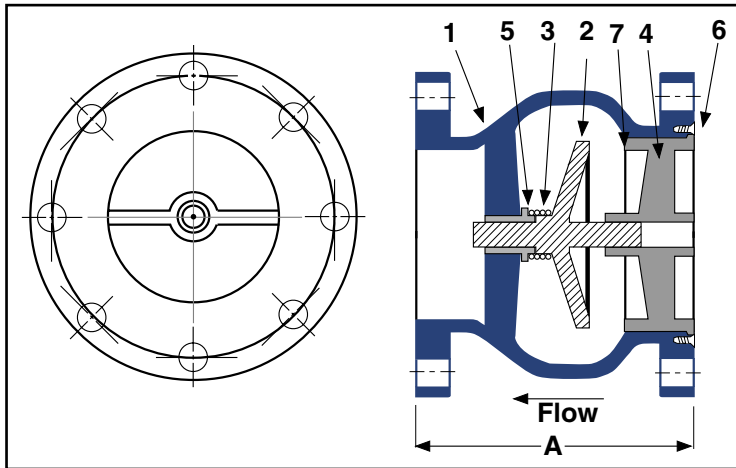
- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

Construction

No	Name	Material
1	Body	A126 Class B
2	Plug	Stainless Steel
3	Spring	Stainless Steel
4	Seat	Stainless Steel
5	Bushing	Stainless Steel
6	Screw	Stainless Steel
7	Quad Ring	BUNA-N (Optional)

Dimensional Data

Size	Model	A 316SS Plug CF125ISC	CV	Shipping Weight (lbs)
2	0200CF125ISC	6 1/4	40	30
2 1/2	0250CF125ISC	7	100	34
3	0300CF125ISC	7 1/2	130	50
4	0400CF125ISC	8 1/2	225	75
5	0500CF125ISC	9 1/2	340	100
6	0600CF125ISC	10 1/2	540	130
8	0800CF125ISC	13 1/2	830	240
10	1000CF125ISC	16 1/4	1370	360
12	1200CF125ISC	20 1/4	1980	600
14	1400CF125ISC	22 3/4	2300	710
16	1600CF125ISC	24 3/4	3200	810
18	1800CF125ISC	22 1/2	6200	910
20	2000CF125ISC	24	6800	1140
24	2400CF125ISC	24	9800	2600



Ordering Information

Example: Include full description

Size Model
(Prefix) #

0400 - CF125ISC

4", Flat Face Flanged Cast Iron Silent
Check Valve with 316SS Disc

Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" sizes and larger.

*We recommend that the valves be installed
7 to 10 pipe lengths away from the turbulence.*

Notes

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

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



Check Valves

Silent Check Valves

Cast Steel, Cast Stainless Steel - Flanged

Type CF150C Cast Steel, Type CF150SSC Stainless Steel



Sure Flow Globe Style Check Valves are designed to close before the pump stops completely. This prevents flow reversal which eliminates water hammer and system surges associated with valve closure.

- Quiet Operation
- Guided Discs
- Vertical or Horizontal Installation
- Sizes 2" thru 12"

Service Applications

- Municipal Water Systems
- Industrial Class HVAC - Liquid Service
- Industrial Piping Systems
- Irrigation Systems

Construction - Cast Steel

No	Name	Material
1	Body	SA216 Gr. WCB
2	Plug	Stainless Steel
3	Spring	Stainless Steel
4	Seat	Stainless Steel
5	Bushing	Stainless Steel
6	Screw	Stainless Steel

Operating Pressures and Temperatures

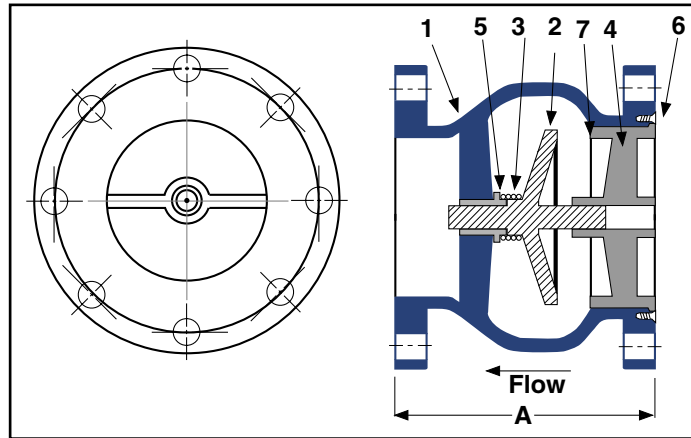
Material	Service	Size	psi	Temp.
Cast Steel	Liquid	2" - 12"	285	100°F
Stainless Steel	Liquid	2" - 12"	275	100°F

Construction - Cast Stainless Steel

All ASTM Spec A351 Grade CF8M Stainless Steel.

Dimensional Data

Size	Model	A	CV	Shipping Weight (lbs)
2	0200CF150	6 1/4	55	30
2 1/2	0250CF150	7	90	41
3	0300CF150	7 5/8	140	56
4	0400CF150	8 1/2	265	90
6	0600CF150	10 1/2	610	150
8	0800CF150	12	1000	260
10	1000CF150	14	1700	410
12	1200CF150	18	2400	720



Ordering Information

Example: Include full description

Size Model
(Prefix) #
0400 - CF150C

4", 150# Raised Face Cast Steel - Silent Check Valve

Consult factory for optional construction materials and installation instructions. Resilient seating of BUNA-N or VITON available for 4" size and larger.

We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.

Notes

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

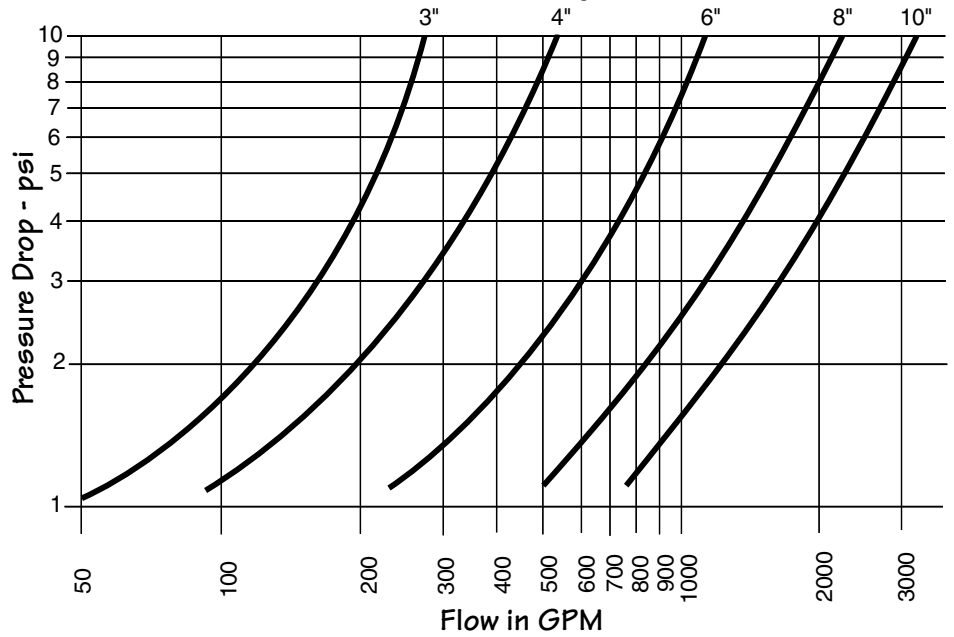
The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi. To obtain the Cv factor for a given size check valve refer to table above.



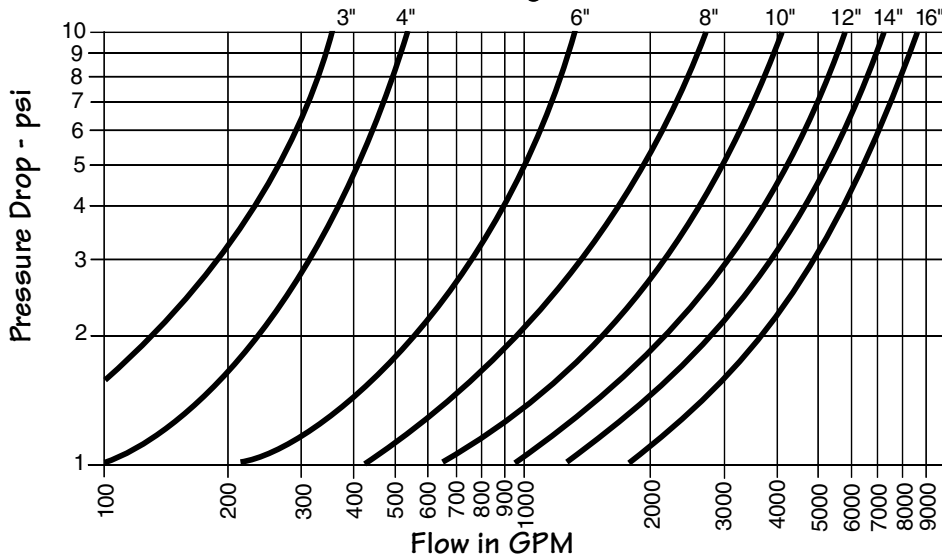
Silent Check Valves

Pressure Drop in Water

Silent Check Valves Wafer Style



Globe Style



- The above curves are based on the flow of clean water at ambient temperature.
- Preferred piping standards recommend placing check valves 7 to 10 pipe diameters from any turbulence producing device, i.e. pumps, elbows, etc.
- Maximum recommended flow velocity of 10 ft./sec.

We recommend that the valves be installed 7 to 10 pipe lengths away from the turbulence.

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

Elastic Swing Foot Valves

Ductile Iron - Flanged

Type FVCEXF-125 Flanged Elastic Swing Foot Valve



The Elastic Swing Foot Valve is suitable for municipal and industrial applications.

It is standard with a ductile iron body with flanges which comply with ANSI B16.1; Class 125 or 250. The internal body is epoxy coated. Special coatings are available upon request. The one-piece molded disc has a steel reinforced insert to insure closure. Plus, while in the open position, it will allow 100% uninterrupted flow. The one-piece disc hinge and flapper can be repaired without removal of the valve from the line. The Elastic Swing Foot Valve is designed for continuous flow applications and is not recommended for reciprocating pumps.

The elastic swing foot valve can be installed in a vertical or horizontal pipeline.

The Elastic Swing Foot Valve body material is Ductile Iron ASTM SA536 60-45-12 with a screen of 1/8" perforated Stainless Steel.

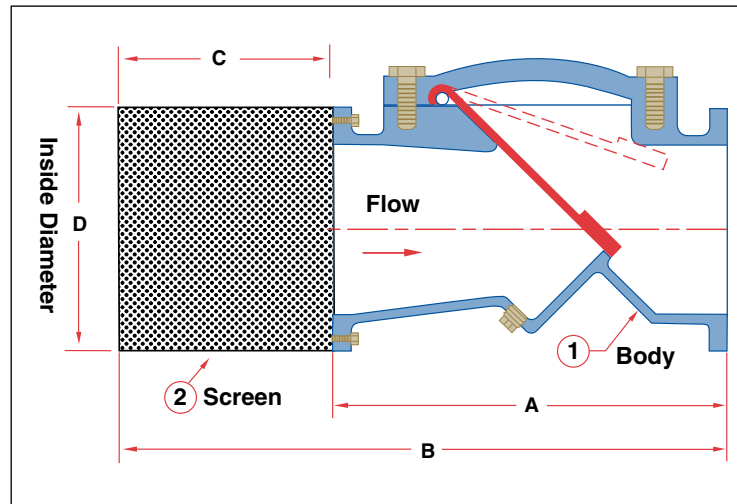
Operating Pressures and Temperatures

Service	Size	psi	Temp
WOG	2" - 12"	200	150°F
WOG	14" - 24"	150	150°F

Dimensional Data

Size		A	B	C	D	CV	Shipping Weight lbs
Inches	Prefix						
2	0200	8	10 1/2	3	6 1/8	150	36
2 1/2	0250	8 1/2	11	3	7 1/8	305	46
3	0300	9 1/2	12	3	7 5/8	600	55
4	0400	11 1/2	14	3	9 1/8	955	84
5	0500	13 3/4	16 3/4	4	10 1/8	1400	120
6	0600	15	19 1/2	5	11 1/8	2800	138
8	0800	19 1/2	25	6	13 5/8	5000	300
10	1000	24 1/2	31	7	16 1/8	8000	630
12	1200	27 1/2	35	8	19 1/8	9000	852
14	1400	31	39 1/2	9	21 1/8	10,000	1,032
16	1600	31 15/16	41 7/16	10	23 5/8	15,000	1,308
18	1800	35 15/16	47 7/16	12	25 1/8	18,000	1,740
20	2000	39 15/16	55 7/16	16	27 5/8	28,000	1,890
24	2400	47 15/16	65 7/16	18	32 1/8	40,000	3,120

Foot Valves



Ordering Information

Example: Include full description

Size Model
(Prefix) #

0400 - FVCEXF-125

4" Ductile Iron Flanged Elastic
Swing Foot Valve, Buna-N
w/Steel Disc

Notes

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

The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi.

NOTE 1

Horizontal Flow: Valve must be installed with cover on top, to insure proper operation.



Silent Seat Foot Valves

Cast Iron - Cast Steel - Stainless Steel - Flanged

Type FV 125 Cast Iron, Type FV150 Cast Steel,
Type FV150SS Stainless Steel Foot Valves



Construction

Design of the **Sure Flow Silent Seat Foot Valve**, available in sizes 2 inches to 30 inches, evolved through a need for a valve that could provide positive sealing actions at various pressure ranges without seat damages, along with silent operation.

The **Sure Flow Silent Seat Foot Valve**, satisfies these requirements plus low head loss through its full ported area and heavy duty stainless steel basket screening.

The Buna-N O-ring, provides a drop-tight seal. As the pressure increases, the Buna-N O-ring is compressed slightly and the disc makes contact with the metal portion of the valve seat, preventing any further compression of the Buna-N O-ring. The Buna-N O-ring will continue to provide the "drop-tight seating" during the higher pressure ranges without damage from the increased pressure loading.

Standard Features:

- The seating design provides positive shut-off at all pressure ranges without additional loading on the seal.
- Heavy duty stainless steel screening, with flow area 3 to 4 times that of pipe area.
- Silent operation, by design of disc, stroke and linear closing characteristics.
- Cast iron, 125 lb ANSI Standard.

Optional Features:

- Available in carbon steel & stainless steel

Ordering Information

Example: Include full description

Size (Prefix)	Model #
1200 -	FV150

12" Carbon Steel Silent Seat Flanged
Foot Valve, Buna-N Seat



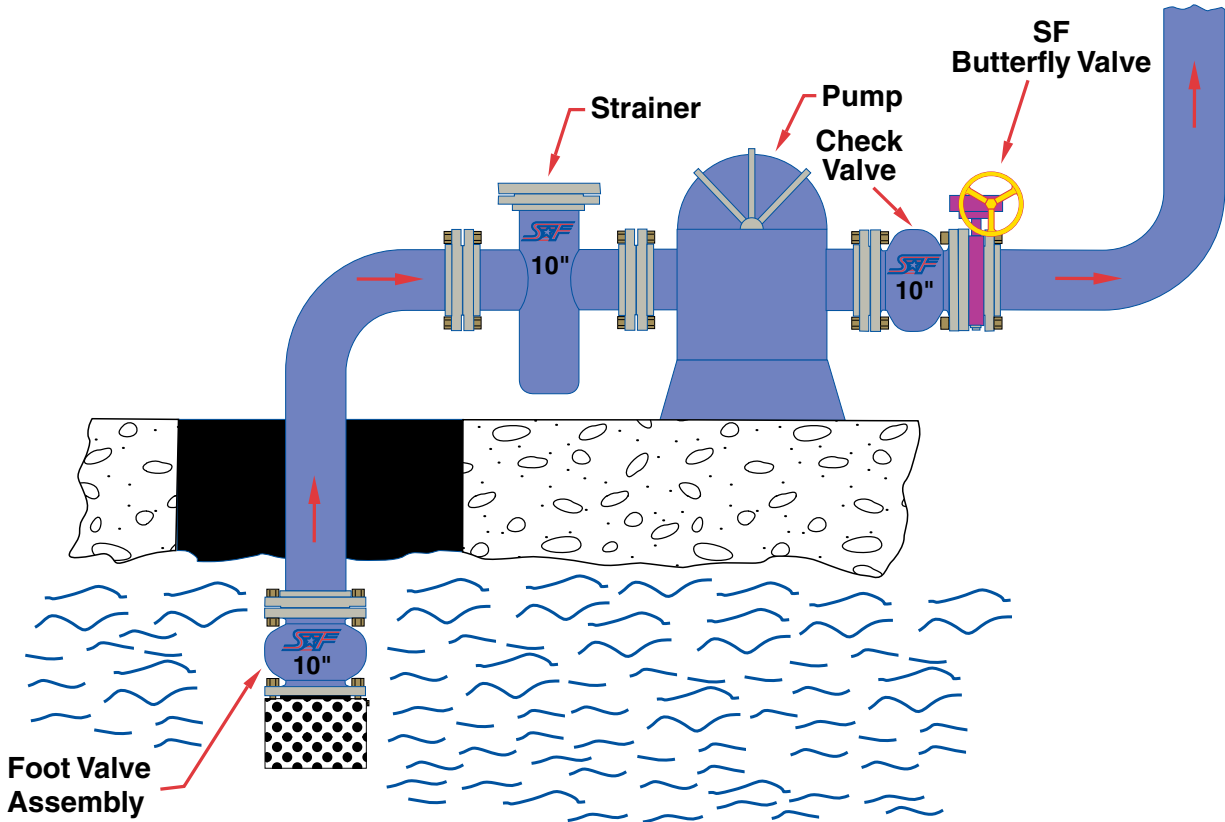
Foot
Valves

*A foot valve should be used with
basket strainers and check valves.*

Notes

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

Foot Valve Assembly



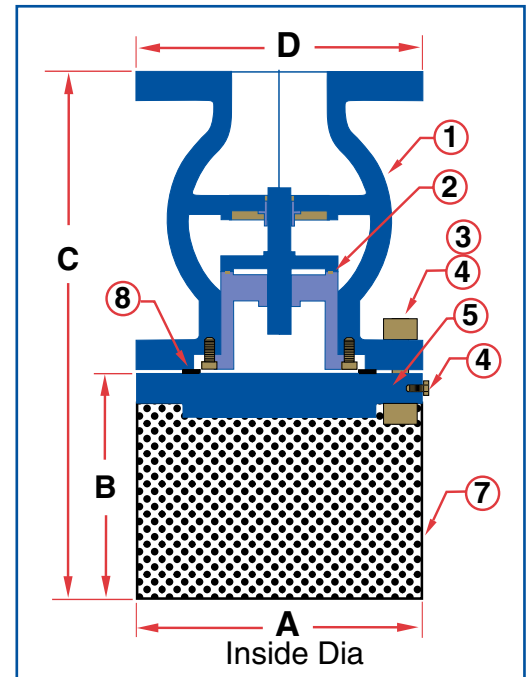
Foot Valves

Construction - Cast Steel

No	Name	Material
1	Body Ass'y	A126 Class B
2	Quad Ring	Buna-N o-ring
3	Studs	SA 194 B7 Steel
4	Hex Nuts	SA 194 Steel
5	Slip-on Flng	Flat Face ASTM A105
6	Cap Screw	Stainless Steel
7	Screen	Stainless Steel
8	Gasket Ring	Red Rubber

Dimensional Data

Size		A	B	C	D	Shipping Wgt (lbs.)
Inches	Prefix					
2	0200	6	3	9 7/16	6	25
2 1/2	0250	7	3	10 3/16	7	35
3	0300	7 1/2	3	10 11/16	7 1/2	45
4	0400	9	3	11 11/16	9	70
5	0500	10	4	13 11/16	10	90
6	0600	11	5	15 11/16	11	110
8	0800	13 1/2	6	19 11/16	13 1/2	180
10	1000	16	7	23 7/16	16	250
12	1200	19	8	28 7/16	19	400



Notes:

Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.
The Flow Coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one psi.

Butterfly Valves

Specifications and Applications

Butterfly Valves make an excellent choice by combining the balance of an economical valve with the performance you expect in a Commercial, HVAC and an industrial butterfly valve.

Specifications:

All valves shall meet API-609 MSS-SP-67 ISO 5272 face-to-face dimensions. Valve sizes from 2" to 12" are rated at 200 psig WOG service and valve sizes from 14" to 30" are rated at 150 psig WOG service. All valves are full rated on dead-end service. All bodies shall be ductile iron 65-45-12 and bi-directional tested in both directions and be bubble tight with zero leakage. Lug bodies shall be full lug rated and all bodies shall be suitable for ANSI 125/150 lb, JIS, DIN or B.S. Flanges. Secondary seals shall be self-adjusting. All elastomers, all internal bearings shall be non-corrosive and non-metallic. All seats shall be suitable for 250°F sustained high temperature and capable of 2000 PPM on chlorinated applications.



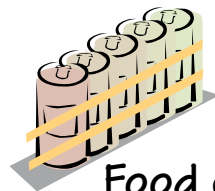
Testing:

All valves are factory tested on both sides for bi-directional installations to zero leakage and bubble tight.

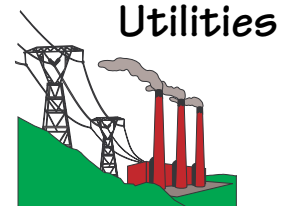
FEATURES	BENEFITS
Extended neck	Allows for 2" insulation
Ductile iron body	High strength body when in tension (lug body)
Non-corrosive bushings	Elimination of shaft to body seizure
AWWA C504 latest revision proof of design	High cyclic capabilities while maintaining a bubble tight seal
Cartridge seat	Excellent on full vacuum distortion proof primary shaft seal, minimal seat movement and consistent displacement on closing
One-piece shaft	High torsional capabilities with zero disc deflection

Typical Applications:

- On/off isolation
- Dead-end service/removal of downstream piping
- Heating, ventilation and air conditioning systems
- Industrial process piping
- Municipal raw water intake
- Municipal chlorinated water systems (2000 ppm)
- Municipal feed water and reservoir
- Throttling and process control
- Full vac
- Aeration and blower installations



Food & Beverage



Utilities



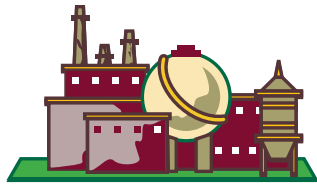
Water HVAC



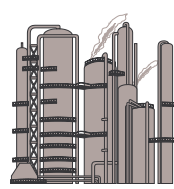
Steel Mills



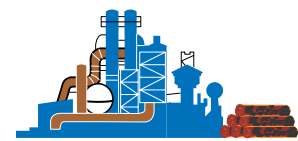
Marine



Municipal



Chemical Plants



Pulp and Paper

Butterfly Valves

Sure Flow Butterfly Valves

Features

- Extended neck design for ample application of insulation.
- One-piece / uni-body construction of ductile cast iron designed to accommodate ANSI 125/150 flanges.
- Integral ISO 5211 mounting flange will accept all styles of hand lever, multi-turn manual gear and power operators/actuators. Stem Double D.
- Teflon impregnated bronze stem bushings to assure long life even during extended periods of inactivity. Lowers operating torque to ease operation manually or when power assisted.
- One-piece resilient seat with molded-in (integral) o-ring seal eliminates the need for additional flange gaskets. Valve body designed to limit seat compression to optimum dimensions.

Types BFV 125/150 Lug



Type BFV 125/150 Wafer



Butterfly
Valves

- One-piece resilient phenolic back seat has molded-in (integral) o-ring seal for upper and lower valve shafts. Works with disc edge hub seals to provide a double stem seal.
- Valves DN 50 to 500 (2" to 20") meet the intent of and have passed AWWA C504-87 Section 5 proof of design tests.
- Phenolic backed seat premium features:
 - Dimensionally stable seat sealing surface
 - Minimal seat wear, extending seat life
 - Blow-out proof seat
 - Easily field replaceable
 - Non-distorting shaft hole with molded-in (integral) o-ring seal
- Suitable for open left or open right operation.
- One-piece shaft design
- Butterfly standard with a hard back seat. No movement of the seat which results in a constant torque.
- **Butterfly valves available up to 48 inches.**

Installation

Butterfly Valves are manufactured in accordance with the specifications from ISO 5272, MSS SP-67, Manufacturers Standardization Society and API-609, American Petroleum Institute. Latest revisions. Both Lug and Wafer series valves are designed for ANSI 125/150 lb. class flanges. Valve sizes from 2" to 12" are rated at 200 psig WOG service and valve sizes from 14" to 30" are rated at 150 psig WOG service. All valves are full rated on dead-end service.

Sure Flow Butterfly Valves

- Available 2" to 48"
- ISO 5211 mounting flange
- Drop on actuation
- Wafer or lug style body
- Ideal for on-off or throttling
- Full flanged style 36" to 48"
- Bi-directional dead-end capability
- Stem Double "D" positive drop on handle or gear operator



Ordering Information

QUANTITY _____
 SIZE _____
 BODY STYLE & MATERIAL _____
 DISC MATERIAL _____
 SEAT MATERIAL _____
 OPERATOR _____

XXXX - XXXX - XXXX - X - X - XXX

EXAMPLE: INCLUDE FULL DESCRIPTION
1000 BFVLIB GHW
 10" Lug Style Butterfly Valve
 Ductile Iron Body, Ductile Iron Disc,
 Buna Seat C/W gear operator

Butterfly Option Selection

SIZE	0200 - 2" 1200 - 12" 4200 - 42"	0250 - 2 1/2" 1400 - 14" 4800 - 48"	0300 - 3" 1600 - 16"	0400 - 4" 1800 - 18"	0500 - 5" 2000 - 20"	0600 - 6" 2400 - 24"	0800 - 8" 3000 - 30"	1000 - 10" 3600 - 36"	
BODY STYLE & MATERIAL	BFVW - WAFER, ASTM A-536 - Ductile Iron				BFVL - LUG, ASTM A-536 - Ductile Iron				
DISC MATERIAL	I - Ni / DUCTILE B - BRONZE	A536	S - 316 SS						
SEAT MATERIAL	B - BUNA E - EPDM								
OPERATOR	BST - BARE STEM		GHW - GEAR OPERATOR						LVP - 10 POSITION LEVER

Butterfly Valves

Shipping Weights

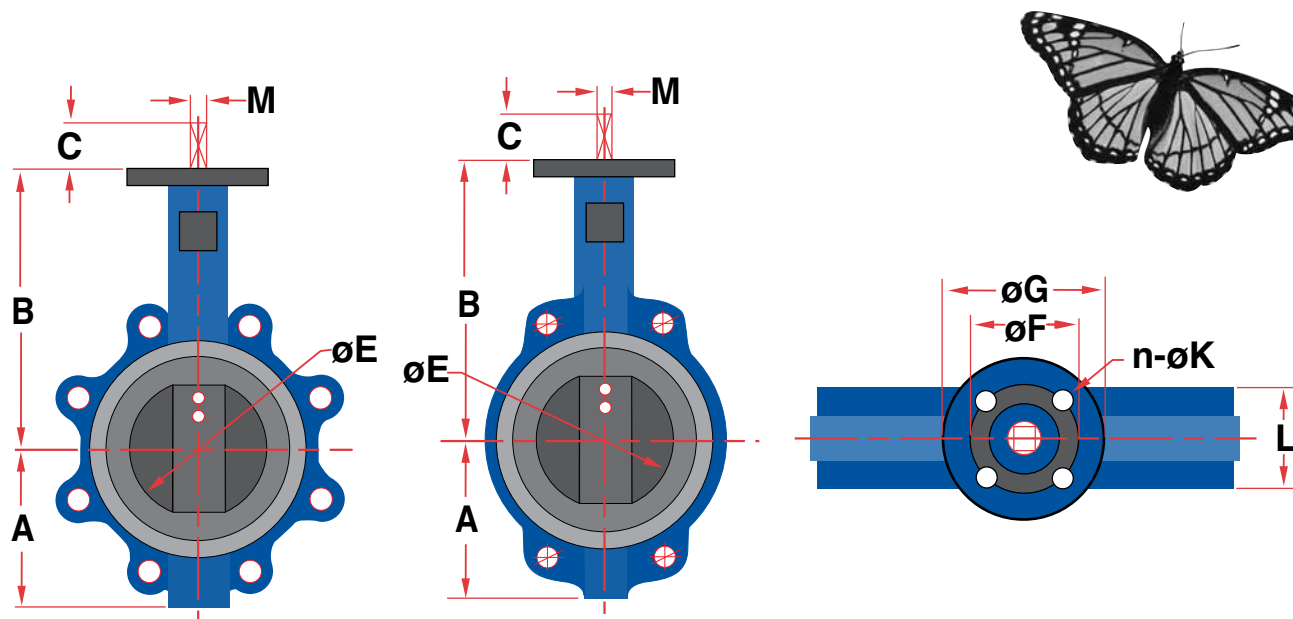
SIZE	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
WAFER / BST	8	9	10	14	18	20	33	49	82	110	155	300	330	400
LUG / BST	10	12	14	23	27	36	47	69	102	143	243	310	512	686
LEVER	3	3	3	3	3	3	7	7	7	15	17	29	60	90
GEAR	4	4	4	4	4	8	20	24	25	26	28	36	71	132

*Above weights measured in pounds.

Notes

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

Dimensional Data - Wafer & Lug



Dimensional Data

Size	A	B	C	E	F	G	nXøK	L	M
2"	3 1/8	5 9/16	1 1/4	2	1 15/16	2 9/16	4 Xø1/4	1 11/16	3/8
2-1/2"	3 1/2	6 1/8	1 1/4	2 1/2	1 15/16	2 9/16	4 Xø1/4	1 13/16	3/8
3"	3 3/4	6 5/16	1 1/4	3 1/16	1 15/16	2 9/16	4 Xø1/4	1 13/16	3/8
4"	4 1/2	7 1/16	1 1/4	4 1/16	2 3/4	3 9/16	4 Xø3/8	2 1/16	7/16
5"	5	7 5/8	1 1/4	4 13/16	2 3/4	3 9/16	4 Xø3/8	2 3/16	9/16
6"	5 1/2	8 1/16	1 1/4	6 1/16	2 3/4	3 9/16	4 Xø3/8	2 3/16	9/16
8"	6 7/8	9 13/16	1 9/16	7 15/16	4	4 15/16	4 Xø1/2	2 3/8	11/16
10"	8 1/8	11 1/8	1 9/16	9 13/16	4	4 15/16	4 Xø1/2	2 11/16	7/8
12"	9 1/2	12 13/16	1 9/16	11 13/16	4	4 15/16	4 Xø1/2	3 1/16	7/8
14"	10 1/2	14 1/8	1 9/16	13 1/16	4	4 15/16	4 Xø1/2	3 1/16	7/8
16"	12 3/16	15 3/4	2 1/16	15 1/4	5 1/2	6 7/8	4 Xø7/8	4	7/8
18"	12 15/16	16 5/8	2 1/16	17 1/4	6 1/2	8 1/4	4 Xø7/8	4 1/2	1 1/16
20"	14 3/16	18 7/8	2 1/2	19 1/4	6 1/2	8 1/4	4 Xø7/8	5	1 1/16
24"	18 1/16	22 1/8	2 3/4	23 1/4	6 1/2	8 1/4	4 Xø7/8	6 1/16	1 7/16
30"	23 1/4	25 1/2	3 1/4	29 1/2	10	11 13/16	8 Xø1 1/16	6 1/2	1 7/16
36"	25 13/16	28 7/16	5 1/8	33 7/8	10	11 13/16	8 Xø1 1/16	7 7/8	2 3/16
48"	33 1/4	37 1/16	5 7/8	45 11/16	11 3/4	13 3/4	8 Xø7/8	10 7/8	2 15/16

*Above dimensions are in inches.

Notes

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



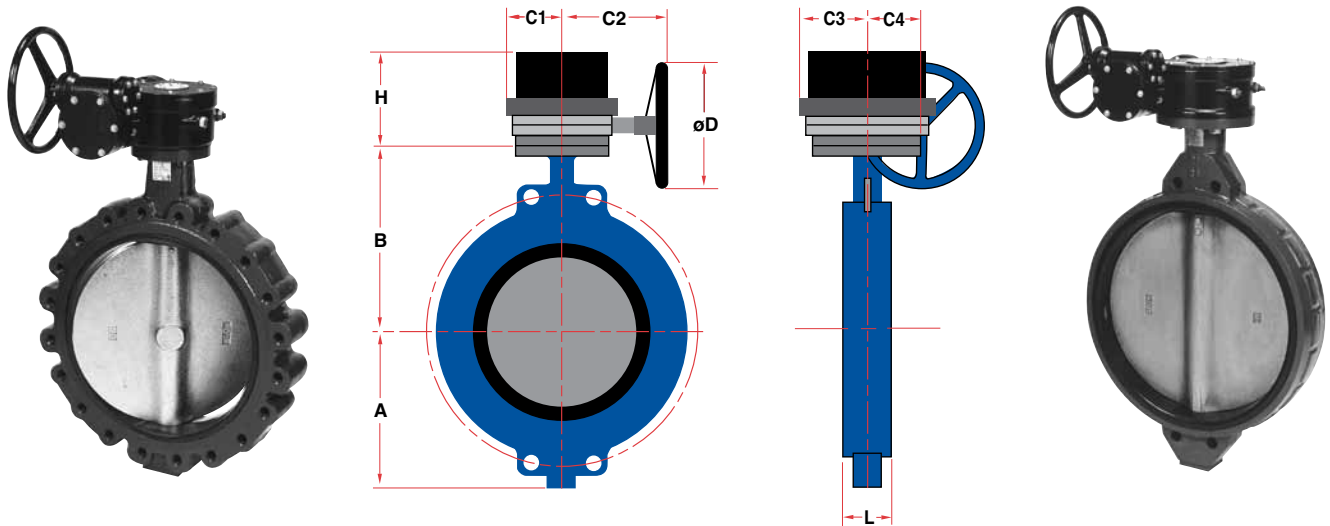
Gear operator with indicator standard.



Lever with standard lock out.

Butterfly Valves

Dimensional Data - Gear Operator



Dimensional Data

Size	A	B	C1	C2	C3	C4	D	H	L
2"	3 1/8	5 9/16	2 1/16	6 1/16	2 1/16	1 3/4	5 7/8	2 13/16	1 11/16
2-1/2"	3 1/2	6 1/8	2 1/16	6 1/16	2 1/16	1 3/4	5 7/8	2 13/16	1 13/16
3"	3 3/4	6 5/16	2 1/16	6 1/16	2 1/16	1 3/4	5 7/8	2 13/16	1 13/16
4"	4 1/2	7 1/16	2 1/16	6 1/16	2 1/16	1 3/4	5 7/8	2 13/16	2 1/16
5"	5	7 5/8	2 1/16	6 1/16	2 1/16	1 3/4	5 7/8	2 13/16	2 3/16
6"	5 1/2	8 1/16	2 1/16	6 1/16	2 1/16	1 3/4	5 7/8	2 13/16	2 3/16
8"	6 7/8	9 13/16	3	9 1/4	3	2 1/2	11 13/16	3 1/4	2 3/8
10"	8 1/8	11 1/8	3	9 1/4	3	2 1/2	11 13/16	3 1/4	2 11/16
12"	9 1/2	12 13/16	3 3/16	9 1/4	3 3/16	3 1/8	11 13/16	3 1/4	3 1/16
14"	10 1/2	14 1/8	3 3/16	9 1/4	3 3/16	3 1/8	11 13/16	3 1/4	3 1/16
16"	12 3/16	15 3/4	4 1/16	10 15/16	4 1/16	7 1/8	11 13/16	5 5/16	4
18"	12 15/16	16 5/8	4 1/16	10 15/16	4 1/16	7 1/8	11 13/16	5 5/16	4 1/2
20"	14 3/16	18 7/8	4 1/16	10 15/16	4 1/16	7 1/8	11 13/16	5 5/16	5
24"	18 1/16	22 1/8	5 7/16	11 15/16	5 7/16	7 7/8	11 13/16	5 3/8	6 1/16
30"	23 1/4	25 1/2	6 13/16	14 1/16	6 13/16	9 9/16	17 1/8	6 7/16	6 1/2
36"	25 13/16	28 7/16	7 15/16	16 1/8	7 15/16	10 15/16	17 1/8	10 3/16	7 7/8
48"	33 1/4	37 1/16	12 3/16	20 1/16	12 3/16	18 1/16	17 1/8	12 3/16	10 7/8

*Above dimensions are in inches.

Butterfly
Valves

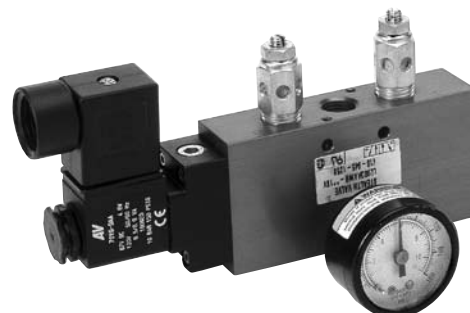


Notes

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



Product Options - Technical Information



Electric or Pneumatic Actuator Option

Cv Values - Valve Sizing Coefficients (US-GPM @ 1PSIΔP)

The Cv values in the following table are only available for ANSI Class 125 working pressure designed butterfly valves size from 2" to 48".

Size	Flow in GPM @ 1 PSIΔP@Various Disc Angles.								Full 90° Open
	10°	20°	30°	40°	50°	60°	70°	80°	
2"	0.1	5	12	24	45	64	90	125	135
2 1/2"	0.2	8	20	37	65	98	144	204	220
3"	0.3	12	22	39	70	116	183	275	302
4"	0.5	17	36	78	139	230	364	546	600
5"	0.8	29	61	133	237	392	620	930	1,022
6"	2	45	95	205	366	605	958	1,437	1,579
8"	3	89	188	408	727	1,202	1,903	2,854	3,136
10"	4	151	320	694	1,237	2,047	3,240	4,859	5,340
12"	5	234	495	1,072	1,911	3,162	5,005	7,507	8,250
14"	6	338	715	1,549	2,761	4,568	7,230	10,844	11,917
16"	8	464	983	2,130	3,797	6,282	9,942	14,913	16,388
18"	11	615	1,302	2,822	5,028	8,320	13,168	19,752	21,705
20"	14	791	1,674	3,628	6,465	10,698	16,931	25,396	27,903
24"	22	1,222	2,587	5,605	9,989	16,528	26,157	39,236	43,116
28"	36	1,813	3,639	6,636	11,061	18,673	29,732	44,343	49,500
32"	45	2,387	4,791	8,736	13,788	20,613	31,395	48,117	68,250
36"	60	3,021	6,063	11,055	17,449	26,086	39,731	60,895	86,375
40"	84	4,183	8,395	15,307	24,159	36,166	55,084	84,425	119,750

Notes

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

Product Options - Technical Information



Torque Values (Inch Pounds)

Size	Standard Disc, Differential Pressure							
	125 psi		150 psi		200 psi		285 psi	
	Bronze	PTFE	Bronze	PTFE	Bronze	PTFE	Bronze	PTFE
2"	106	100	117	106	129	111	140	117
2 1/2"	152	150	166	163	181	176	195	189
3"	213	207	230	220	248	322	265	244
4"	321	290	386	323	450	357	515	390
5"	481	423	598	481	715	540	832	598
6"	692	599	878	691	1,063	783	1,248	875
8"	1,326	1,060	1,716	1,183	2,106	1,307	2,496	1,430
10"	2,239	1,671	3,010	1,872	3,780	2,074	4,550	2,275
12"	3,959	2,568	4,953	2,795	5,948	3,023	6,942	3,250
14"	4,881	2,640	6,226	3,070	7,570	3,500		
16"	7,020	4,260	8,580	4,880	10,140	5,500		
18"	10,105	6,287	12,202	7,243	14,300	8,200		
20"	13,923	8,360	16,582	9,180	19,240	10,000		
24"	23,617	15,427	26,953	16,813	30,290	18,200		
30"	39,721	27,313	43,391	29,407	47,060	31,500		

Notes

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

The above torque values are only available for ANSI Class 125 working pressure designed butterfly valves for sizes from 2" to 30".

All torque values shown on chart are for "wet" (water and other non-lubricating medium) on-off service. For "dry" service (non-lubricating, dry gas media), multiply values by 1.6. For "lubricating medium" service (clean, non-abrasive lubricating media), multiply values by 0.85. When sizing actuators for single Valve applications, multiply values by 1.25. When sizing for 3-way ("tee") applications, multiply values by 1.5.

Under certain conditions, hydrodynamic torque can meet or exceed seating and unseating torques. When designing valve systems, hydrodynamic torque must be considered to help ensure correct selection of application.

Disc and Seat Material Data

Nickel Plated Ductile Iron

- ASTM B-320 Plating and ASTM A536 (Cast) Ductile Iron which has strength properties similar to steel is enhanced with the addition of Nickel Plating by adding to its ability to resist corrosion. Nickel Plating further adds to Ductile Iron, the ability to resist abrasion due to its inherent hardness features.

Applications:

Suitable for Air, Kerosene, Oils, Ketones and Potable Water.

Bronze

- ASTM B148-92 Bronze while being recognized for steam rated valves is also resistant to corrosion, pitting and is also resistant to many chemicals

Applications:

Suitable for Air, Alcohols, Ethers, Freons, Oils, Oxygen and Potable Water. Widely used in the HVAC market.

316 Stainless Steel

- ASTM A-351 Grade CF-8M 316SS is an excellent choice for corrosion resistance to many chemicals and environmental applications. Investment Cast stainless steel has no need of additional heat treating, it has inherent high strength and is used for many industrial applications.

Applications:

Suitable for Acetic Acids, Air, Automotive Oils & Fuels, Beer, Freon, Gasoline, Ketones, Oils, Oxygen, Steam and Potable Water.

Buna - N

(NBR/Nitrile) (Butadiene Acrylonitrile Copolymer) Buna - N is widely used as a seat material for water and sewage butterfly valve applications. It is also used in certain petroleum applications.

Applications:

- Buna - N is suitable for and resistant to most all petroleum products. It is also resistant to many chemicals, ethylene glycol, fats, grease, hydrocarbons, hydraulic fluids and oils.
- Buna - N should not be used where Chlorinated and Nitro Hydrocarbons, Esters, Ketones and Ozone will be found.

Temperature Range:

0° to 180° F Continuous Service / 0° to 200° F Intermittent

EPDM

(Ethylene Propylene EPM) (Ethylene Propylene Copolymer and Terpolymer) EPDM has a wide variety of uses being generally resistant to many chemicals, higher temperatures (low pressure steam to 30 psi) and abrasion. It is used in many HVAC and industrial applications.

Applications:

- EPDM is suitable for and resistant to animal and vegetable oils, ozone, oxidizing chemicals. EPDM is good for diluted acids and alkalis, brake fluid and ketones.
- EPDM should not be used where mineral oils, solvents and aromatic hydrocarbons are present.

Temperature Range:

40° to 250° F Continuous / 40° to 275° F Intermittent



Butterfly
Valves

Flexible Expansion Joints

Ten Advantageous Features of Using Strainflex Flexible Rubber Joints

1. Absorbs Vibration, Noise and Shock

Sound, travelling axially through Strainflex Joints, is stopped at once. Water hammer, pumping impulses and waterborne noises are absorbed by the molded, lightweight, thin-wall structure.

2. Easy to Install, Easy to Remove

Loose flanges, no need of gasket or packing, and elastic spherical body make the joint easy to install or remove.

3. Security Assured in Usage

Special spherical carcass enables its body, when subjected to high pressure and expansion, not contacting with the connecting bolt head. Thus, the joint may be used in a sense of damage proof and full security.

4. Higher Burst Strength

Spherical shape is stronger than cylindrical shape or other configuration. Thus under pressure, Strainflex Joint is 4 times as strong as a cylindrical joint. Additionally, our products are made of best suitable material, and hence their burst pressure is much higher than those of other makes.

5. Suitable for Suction and Delivery (Discharge)

Owing to its excellent molding technique with its tough chemical fiber, Strainflex Joint can satisfactorily withstand the suction and discharge. Vacuum rating can stand up to 750mm Hg.

6. High Efficiency

Strainflex Joints have streamlined, flowing arch to reduce turbulence, sediment build-up, thrust area and the effects of thrust on the piping system equipment.

7. Low Deformation Under Pressure

Internal pressure is exerted in all directions distributing forces evenly over a large area. Hence, the deformation of Strainflex Joint due to pressure is much lower than that of other makers.

8. Light and Compact

The space required for the installation of a Strainflex Joint is about half of the requirement of cylindrical. Weight is about one third.

9. Greater Movements Are Available

Axial compression and elongation, deflection and angular movements will be greater.

10. Wide Service Range

Made with chemical elastomers such as Neoprene.

Use In:

- Air conditioning systems
- Air ducts
- Chemical lines
- Circulating water lines
- Compressor lines
- Paper stock lines
- Pump-suction and discharge
- Refrigeration lines
- Turbine to condenser

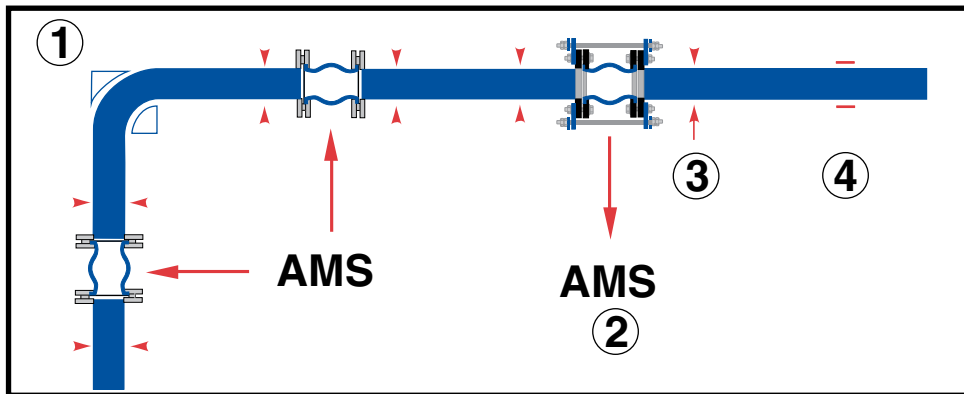
Marine Installations

- Air intake on diesel engines
- Ballast
- Between scoop and condenser
- Circulating lines to condenser
- Fog foam lines
- Fire and bilge pump lines
- Forced draft
- Overboard discharge
- Sanitary system
- Ventilation lines

Applicable Fluids: Water, warm water, seawater, weak acids, alkalies, compressed air, etc.

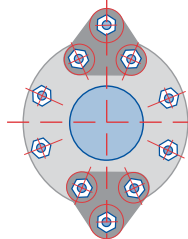
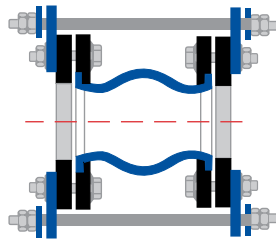
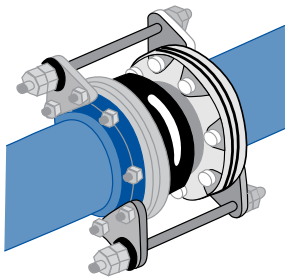
Flexible Expansion Joints

Control Rods - Control of Extension



Installation Scheme

- 1) Anchor
- 2) With control rods
- 3) Fixation points
- 4) Guiding points



Applications

It is used to prevent an excessive extension of the control rod or compression (cf. rating table) which could damage the extension joint: in general when there are high pressure risks (starting a pump...) or when wide temperature fluctuations occur.

Control rod unit must be installed when pressure (test surge, operating) exceeds the rating below.

Joints Size	AMS (psig)	AMT (psig)
1" - 4"	150	150
5" - 10"	135	135
12" - 14"	90	90
16" - 24"	45	45

Contact Factory for information on our Control Rods.

Mounting Instructions

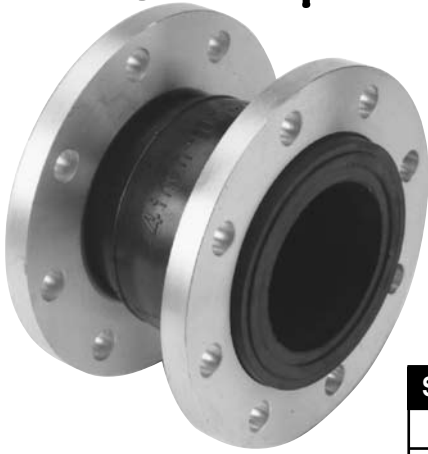
- 1) The alignment of the piping system should be adjusted and secured with fixation points as close as possible on each side of the expansion joint at a distance less than 3 times the pipe's nominal diameter.
 - 2) These fixation points must be installed when mounting an expansion joint with control rods or in a case of an elbow pipe. If there is considerable distance between 2 fixation points, guiding points can be installed in order to support and guide the pipe (cf. installation scheme)
 - 3) When installing, take care the rubber expansion joints don't support compression or extension due to the weight of the upstream or downstream pipe.
 - 4) Verify that the upstream and downstream pipe alignment does not deviate more than 1/8" (3 mm) and that the expansion joint does not support heavy weight.
 - 5) Verify that the surfaces, coming on contact with the joint, are perfectly clean and without cutting edges (pipe) thus avoiding damage to the joint surface.
 - 6) Insert the bolts on the arch side of the joint, thus avoiding direct contact with the rubber.
 - 7) If welding is carried out within close range, cover or dismount the expansion joint.
 - 8) Do not paint or coat the joint with insulation.
 - 9) During installation, the precompression should not exceed 5 mm.
 - 10) Store the joint in a flat position avoiding humidity and extreme temperatures.
- Note: Bolt tightness should be checked daily within the first month after services and checked periodically thereafter.**

Mounting order:

- 1 - Upstream pipe; anchor
- 2 - Downstream pipe; anchor
- 3 - Expansion joint.

- 3(b) When installing the rubber expansion joint take care (specially for type AMU) that it must not be twisted in any case.

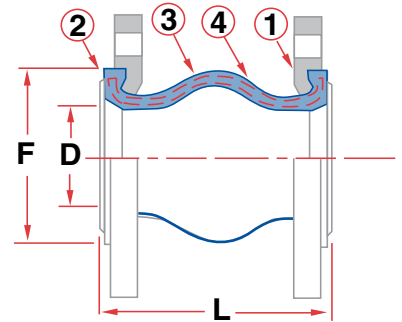
Single-Sphere Connectors - With Floating Flanges - 150 lb.



Operating Pressures and Temperatures

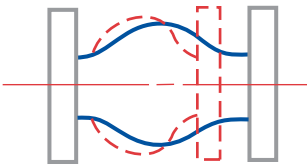
Operating Conditions	2" - 12"	14" - 24"
Operating Pressure	214 psig	114 psig
Burst Pressure	850 psig	340 psig
Vacuum Rating	26" Hg	
Temperature	-10°C to 115°C (14°F to 240°F)	

Symbol	Part	Engineering Material
1	Flanges	C.S. Zinc Plated
2	Wire	Carbon Steel Wire Strand
3	Elastomer	Special Synthetic Rubber
4	Reinforcing Fabric	Synthetic Fiber (Neoprene)

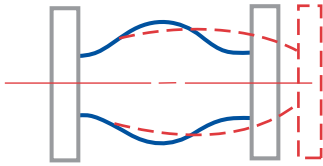


Allowable Movements

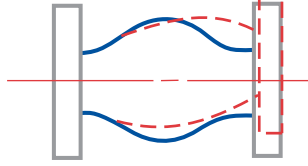
1. Axial Compression



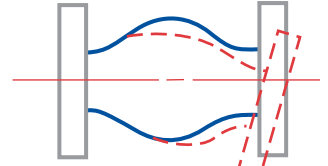
2. Axial Elongation



3. Transverse Movement



4. Angular Deflection



Dimensional Data

Size		L	Axial Compression	Axial Elongation	Transverse Movement	Angular Deflection	Shipping Weight (lbs)
Inches	Prefix						
2"	0200	6"	1/2"	3/8"	±1/2"	15°	10
2-1/2"	0250	6"	1/2"	3/8"	±1/2"	15°	16
3"	0300	6"	1/2"	3/8"	±1/2"	15°	20
4"	0400	6"	5/8"	3/8"	±1/2"	15°	24
5"	0500	6"	5/8"	3/8"	±1/2"	15°	30
6"	0600	6"	5/8"	3/8"	±1/2"	15°	36
8"	0800	6"	5/8"	3/8"	±1/2"	15°	50
10"	1000	8"	3/4"	1/2"	±3/4"	15°	70
12"	1200	8"	3/4"	1/2"	±3/4"	15°	96
14"	1400	8"	3/4"	1/2"	±3/4"	15°	120
16"	1600	8"	3/4"	1/2"	±3/4"	15°	140
18"	1800	8"	3/4"	1/2"	±3/4"	15°	145
20"	2000	8"	3/4"	1/2"	±3/4"	15°	170
24"	2400	8"	3/4"	1/2"	±3/4"	15°	220

Ordering Information

Example: Include full description

Size Model #
0200 - AMS

2" Pump Connector, 150 lb. single sphere

Notes

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

AMT Series

Twin-Sphere Connectors - With Floating Flanges - 150 lb.

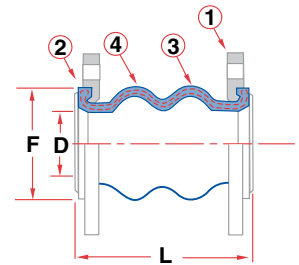


Operating Pressures and Temperatures

Operating Conditions	2" - 12"
Operating Pressure	214 psig
Burst Pressure	850 psig
Vacuum Rating	26" Hg
Temperature	-10°C to 115°C (14°F to 240°F)

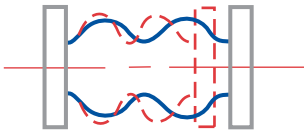
Comes standard with root ring.

Symbol	Part	Engineering Material
1	Flanges	C.S. Zinc Plated
2	Wire	Carbon Steel Wires Strand
3	Elastomer	Special Synthetic Rubber
4	Reinforcing Fabric	Synthetic Fiber (Neoprene)

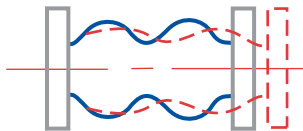


Allowable Movements

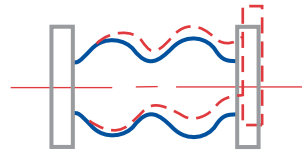
1. Axial Compression



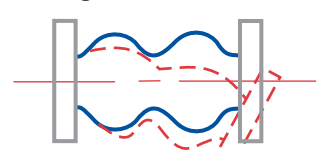
2. Axial Elongation



3. Transverse Movement



4. Angular Deflection



AMERICAN STANDARD

Dimensional Data

Size		L	Axial Compression	Axial Elongation	Transverse Movement	Angular Deflection	Shipping Weight (lbs)
Inches	Prefix						
2"	0200	7"	1"	3/4"	1"	40°	12
2-1/2"	0250	7"	1"	3/4"	1"	40°	15
3"	0300	7"	1"	3/4"	1"	40°	17
4"	0400	9"	1-1/4"	1"	1-1/4"	35°	19
5"	0500	9"	1-1/4"	1"	1-1/4"	30°	35
6"	0600	9"	1-1/4"	1"	1-1/4"	30°	40
8"	0800	13"	1-1/2"	1"	1-3/8"	30°	56
10"	1000	13"	1-1/2"	1"	1-3/8"	30°	77
12"	1200	13"	1-1/2"	1"	1-3/8"	20°	129

Expansion Joints

Ordering Information

Example: Include full description
Size Model #

0200 - AMT

2" Pump Connector, 150 lb. double sphere

Notes

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



Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
International 1-905-335-1350 International Fax: 1-905-332-4993
Email: info@sureflowequipment.com www.sureflowequipment.com

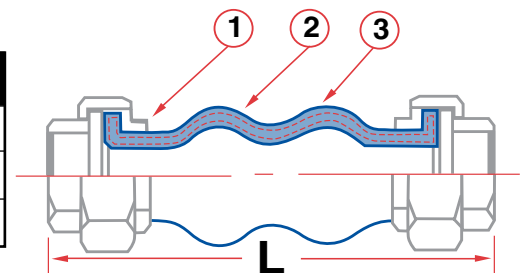
Twin Sphere Connectors - With Union Threads



Operating Pressures and Temperatures

Operating Conditions	3/4" - 2"
Operating Pressure	150 psig
Burst Pressure	710 psig
Vacuum Rating	16" Hg
Temperature	-10°C to 105°C (14°F to 221°F)

Symbol	Part	Engineering Material
1	Union	Zinc Plated
2	Reinforcing Cloth	Nylon Fabric
3	Elastomer	Synthetic Rubber (Neoprene)



Standard item employs BS Union. May be replaced with ANSI, DIN, and other standard.

Dimensional Data

Size		L	Axial Compression	Axial Elongation	Transverse Movement	Angular Deflection	Shipping Weight (lbs)
Inches	Prefix						
3/4"	0075	8"	7/8"	1/4"	7/8"	30°	4
1"	0100	8"	7/8"	1/4"	7/8"	25°	5
1 1/4"	0125	8"	7/8"	1/4"	7/8"	25°	7
1 1/2"	0150	8"	7/8"	1/4"	7/8"	20°	9
2"	0200	8"	7/8"	1/4"	7/8"	15°	10

Ordering Information

Example: Include full description
Size **Model #**

0200 - AMU

2" NPT Screwed twin sphere connector

Notes

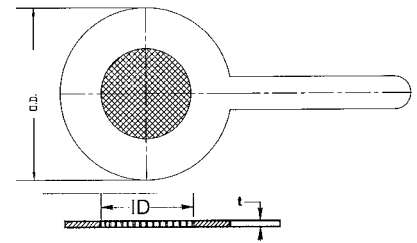
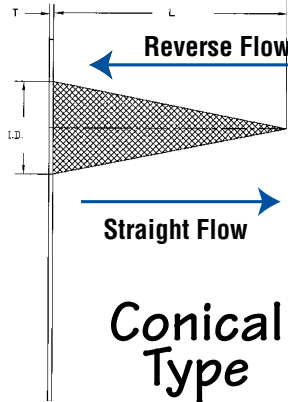
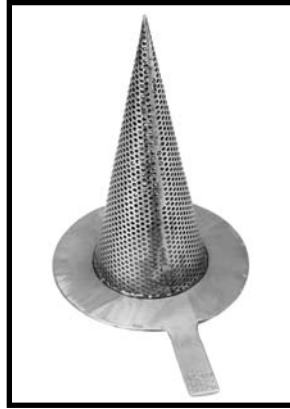
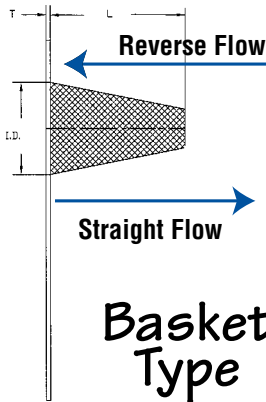
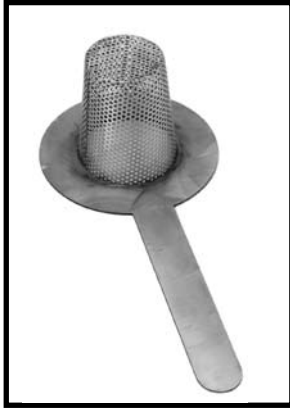
Manufacturer reserves the right to modify dimensions, materials, or design. Contact factory for certification.

Expansion Joints

Temporary Cone and Basket Strainers

Features

Sure Flow Temporary Strainers are used for start-up of new or revamped piping systems. They will prevent construction debris from causing damage to downstream equipment. The screen cone is tig welded around the entire circumference of the flange ring to provide strength and prevent unwanted bypass.



Size: Range in sizes from 1/4" to 60" nominal pipe size as standard.

Open Area: Range in open area of strainer to cross section area of the pipe from 100% to 300% as standard

Material Thickness: Gauge of strainer material ranges between 22 to 11 depending on hole size.

Perforation: Perforation hole sizes range from 1/16" to 1/4" as standard (For standards - Page 97)

Type of Material: Materials include carbon steel, various grades of stainless steel and alloys.

Flange/Facings: Strainer support rings can be constructed to accommodate raised face flanges, ring type joint flanges or any other standard flange facing.

Welding: Resistance welding, TIG and Oxyacetylene.

Liners/Covers: Available for small particle removal 200 thru 10 mesh carbon steel; stainless steel, etc. (See Page 97)

Straight Flow - mesh on inside

Reverse Flow - mesh on outside

Ordering Information

Example: Include full description

Model #	Type & Material	Length	*Screen Opening
---------	-----------------	--------	-----------------

0400 - CS150SS - M - 125

S = Standard M = 150% L = 200%

Temporary Cone Strainer, Stainless Steel for 4" 150# Service with 1/8" Perf. screen, (Standard), 150% Open Area

Notes

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

When Ordering Specify:

1. Pipe size
2. Pressure rating/flange rating
3. Perforation or mesh size
4. Material
5. Style - cone, basket, etc.
6. Direction of flow - straight or reverse
7. Percentage of open area or length.

Temporary Cone and Basket Strainers

Dimensional Data

FLANGE DIMENSIONS						
Nominal Pipe Size	ID	OD				
		150/300# ASA	300# ASA	600# ASA	900# ASA	1500#ASA
3/4	5/8	2 1/8	2 1/2	2 1/2	2 5/8	2 5/8
1	3/4	2 1/2	2 3/4	2 3/4	3	3
1 1/2	1 1/4	3 1/4	3 5/8	3 5/8	3 3/4	3 3/4
2	1 3/4	4	4 1/4	4 1/4	5 1/2	5 1/2
2 1/2	2 1/4	4 3/4	5	5	6 3/8	6 3/8
3	2 3/4	5 1/4	5 3/4	5 3/4	6 1/2	6 3/4
4	3 3/4	6 3/4	7	7 1/2	8	8 1/8
5	4 5/8	7 5/8	8 1/4	9 3/8	9 5/8	9 7/8
6	5 1/2	8 5/8	9 3/4	10 3/8	11 1/4	11
8	7 3/8	10 7/8	12	12 1/2	14	13 3/4
10	9 3/8	13 1/4	14 1/8	15 5/8	17	17
12	11	16	16 1/2	17 7/8	19 1/2	20 3/8
14	12 1/4	17 3/8	18 7/8	19	20 3/8	22 5/8
16	14	20 1/8	21	21 7/8	22 1/2
18	15 3/4	21 1/4	23 1/4	23 3/4	25
20	17 1/2	23 1/2	25 1/2	26 5/8
24	21 1/4	27 7/8	30 1/4	30 7/8

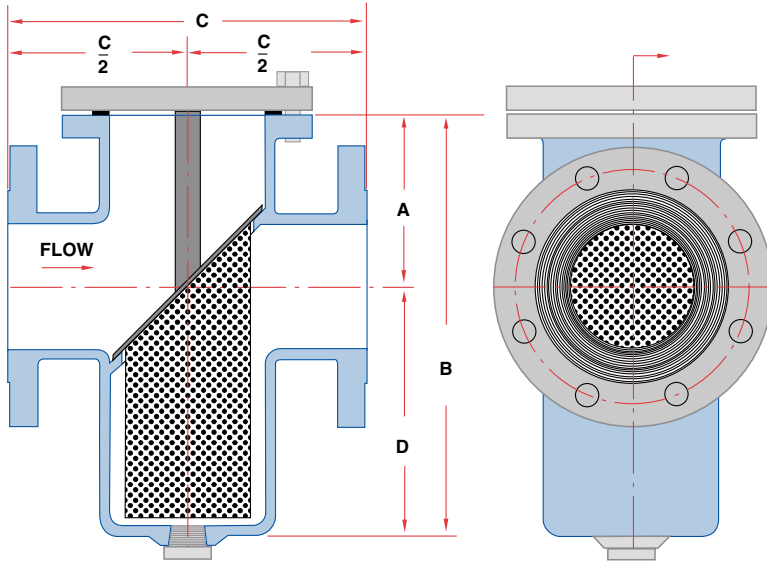
CONE STRAINER Length = L				
Nominal Pipe Size	100% C-1	150% C-1.5	200% C-2	300% C-3
3/4	3	4	5	6
1	3	4	5	6
1 1/2	3 1/2	4 1/2	6	6
2	4	6	8	11
2 1/2	4	6	8	11
3	5	7	9	13
4	8	10	12	18
5	8	11	14	22
6	9	13	18	25
8	12	17	23	33
10	14	21	28	41
12	16	25	34	49
14	18	27	36	53
16	21	31	40	61
18	24	35	46	68
20	26	38	51	76
24	31	45	61	90
30	38	57	76	114
36	46	68	91	130

BASKET STRAINER Length = L				
Nominal Pipe Size	100% B-1	150% B-1.5	200% B-2	300% B-3
3/4	1 1/2	2	3	4
1	1 1/2	2	3	4
1 1/2	2	2 1/2	3 1/2	5
2	2 1/2	3	4	6
2 1/2	2 1/2	3	4 1/2	6
3	3	4 1/2	6	8
4	4	5	7	11
5	4 1/2	7	9	14
6	5 1/2	8	11	17
8	7	11	14	21
10	8	13	17	26
12	10	15	20	31
14	10	16	22	33
16	12	19	24	37
18	14	21	27	41
20	26	24	31	48
24	18	28	37	57
30	22	34	46	71
36	27	42	58	85

Temporary Strainers

Standard Vertical Basket Strainers

Designed to minimize pressure drop by maintaining a minimum of 1.15 ratio of annulus outlet area as compared to outlet nozzle cross section area.



When Ordering, Specify:

1. Flow rate
2. Specific Gravity
3. Perforation (For standards, page 97)
4. Flange rating and pipe size
5. Type of closure
6. Basket area ratio
7. Type of material
8. Desired maximum pressure drop in service

Special Note:

We recommend Dimension "B" to be used for basket removal clearance.

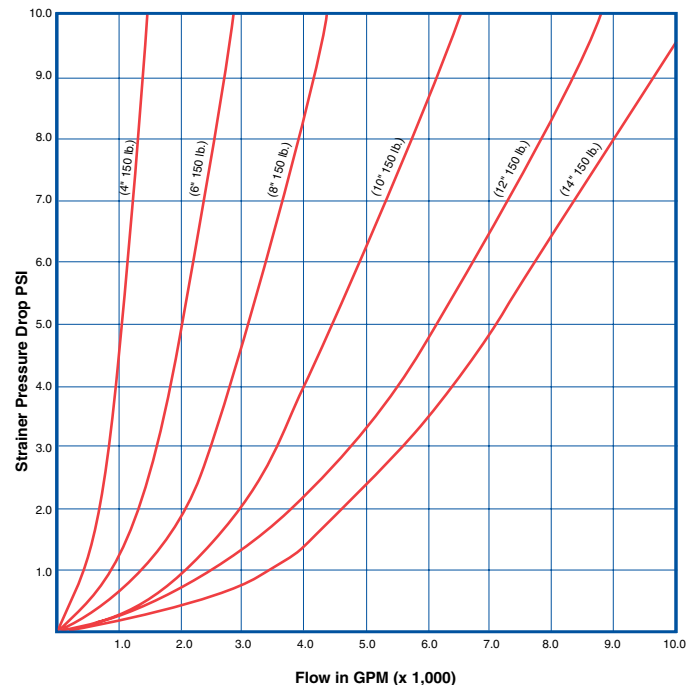


Contact factory for dimensional drawings.

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

Basket Strainer (PSI) – Pressure Drop

Based on Clean Water



Temporary Strainers

Tee Type Strainers

Construction

The Sure Flow Tee Strainer is a custom fabricated compact strainer. Designed to remove foreign pipeline particles from pipelines. This provides the ultimate protection for pumps, valves, and other related equipment. The Sure Flow Tee Strainer is fabricated to your specification.

The standard Sure Flow Tee Strainer is constructed of carbon or stainless steel material. Sure Flow has fabricated numerous assemblies of chrome moly. Optional materials, end connections and accessories are available.

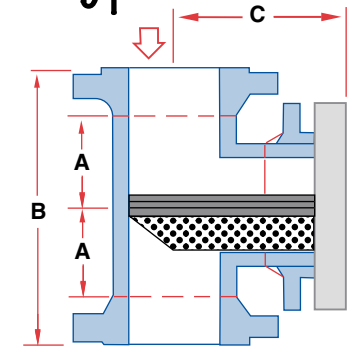
Standard Features

Size: 1" - 24" (larger on request)
End Connections: Flanged, butt weld
Body Material: Cast steel, stainless steel
Pressure Rating: 150 psig, 300 psig, 600 psig
Closure: Bolted
Basket: 304 Stainless Steel

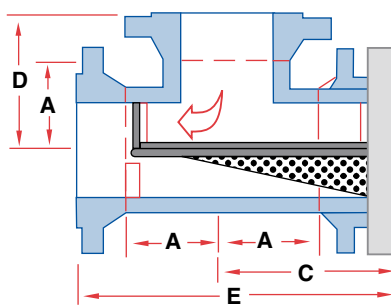
Optional Features

- Quick opening cover
- 900 and 1500 pressure ratings
- Variety of basket materials
- Special perf & mesh down to 5 micron
- Mounting legs
- Special linings
- Exotic materials ie. Titanium & Zirconium
- Pressure gauge taps
- Drain taps and vents

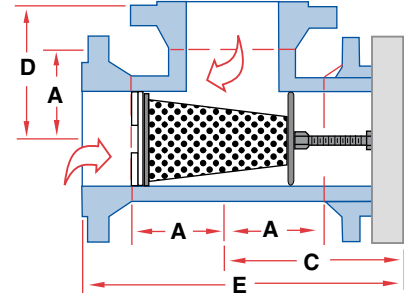
Tee Type Strainer Bodies



Tee Straight Flow Type



Tee Angle Flow Type



Tee Angle Flow Modified "TAM"

Tee Type Strainer Inserts

Pipe Size	A	B					C					D					E				
		150	300	600	900	1500	150	300	600	900	1500	150	300	600	900	1500	150	300	600	900	1500
2	2 1/2	10	10 1/2	11 1/4	13 1/2	13 1/2	5 7/8	6 1/8	6 7/8	8 1/2	8 1/2	5	5 1/4	5 5/8	9 1/4	9 1/4	10 3/4	11 3/8	12 1/2	15 1/4	15 1/4
2 1/2	3	11 1/2	12	12 1/2	14 3/4	14 3/4	6 5/8	7	7 3/4	9 1/4	9 1/4	5 3/4	6	6 3/8	10 3/8	10 3/8	12 3/8	13	13 7/8	16 5/8	16 5/8
3	3 3/8	12 1/4	13	13 3/4	15 1/4	16 1/2	7 1/16	7 5/8	8 3/8	9 3/8	10 3/8	6 1/8	6 1/2	6 7/8	11	11 5/8	13 3/16	14 1/8	15 1/4	17	18 5/8
4	4 1/8	14 1/4	15	16 3/4	17 3/4	18 1/2	8 1/16	8 3/4	10 1/8	10 7/8	11 3/8	7 1/8	7 1/2	8 3/8	13	13 3/8	15 3/16	16 1/4	18 1/2	19	20 7/8
5	4 7/8	16 3/4	17 1/2	19 1/4	20 1/4	22 1/2	9 5/16	10 1/8	11 5/8	12 3/8	14 3/8	8 3/8	8 3/4	9 5/8	15	16 1/8	17 11/16	18 7/8	21 1/4	22 1/2	25 5/8
6	5 5/8	18 3/4	19	21	22 3/4	25 1/4	10 1/8	10 15/16	12 5/8	13 3/16	16 1/8	9 1/8	9 1/2	10 1/2	17	18 3/4	19 1/4	20 7/16	23 3/8	25 3/16	28 3/4
8	7	22	22 3/4	25	27 1/4	31 1/4	12 1/8	13	14 15/16	16 3/8	19 1/2	11	11 3/8	12 1/2	20 5/8	22 5/8	23 1/8	24 3/8	27 7/16	30	35 1/8
10	8 1/2	25	26 1/4	29 1/2	32		13 11/16	15	17 1/2	19		12 1/2	13 1/8	14 3/4	24 1/2		26 3/16	28 3/8	32 1/4	35	
12	10	29	30 1/4	32 3/4	36 1/4		15 3/4	17 1/8	19 1/4	21 1/2		14 1/2	15 1/8	16 3/8	28 1/8		30 1/4	32 1/4	35 5/8	39 5/8	
14	11	32	33 1/4	35 1/2			17 3/8	18 3/4	20 7/8			16	16 5/8	17 3/4			33 3/8	35 3/8	38 1/2		
16	12	34	35 1/2	38 1/2			18 7/16	20	22 1/2			17	17 3/4	19 1/4			35 7/16	37 3/4	41 3/4		
18	13 1/2	38	39 1/2	42			20 9/16	22 1/8	24 1/2			19	19 3/4	21			39 9/16	41 7/8	45 1/2		
20	15	41 3/8	42 3/4	45 1/2			22 3/8	23 7/8	26 1/2			20 11/16	21 3/8	22 3/4			43 1/16	45 1/4	49 1/4		
24	17	46	47 1/4	50 1/2			24 7/8	26 3/8	29 1/2			23	23 3/8	25 1/4			47 7/8	50	50 3/4		

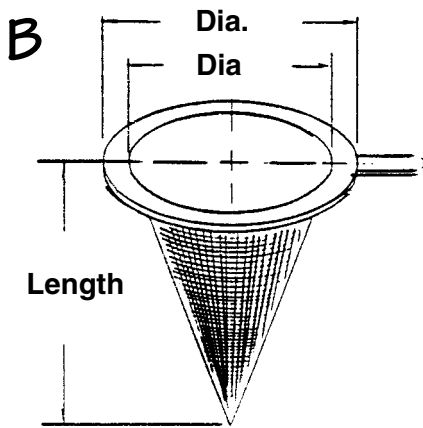
When Ordering, Specify:

1. Type - straight flow, angle flow, angle modified.
2. Nominal pipe size.
3. Flange rating and facing.
4. Pressure rating and facing.

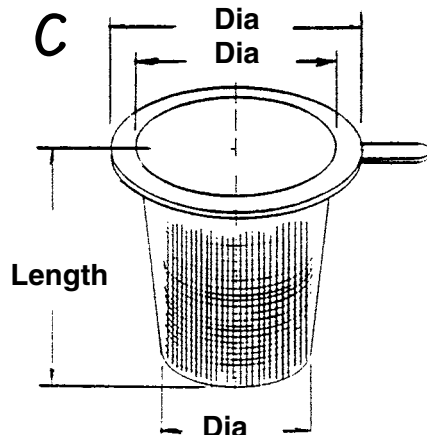
5. Corrosion conditions, if any (type of material).
6. Perforation (particle retention).

Flanges and bodies are designed to meet Section 1 of American Standard Code for Pressure Piping, ASA B31.1.

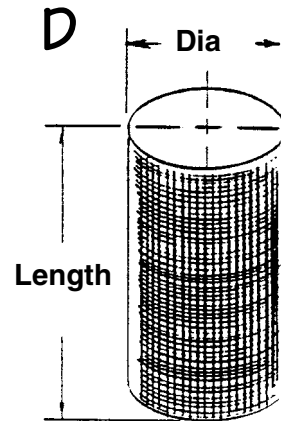
Custom Strainer Screens



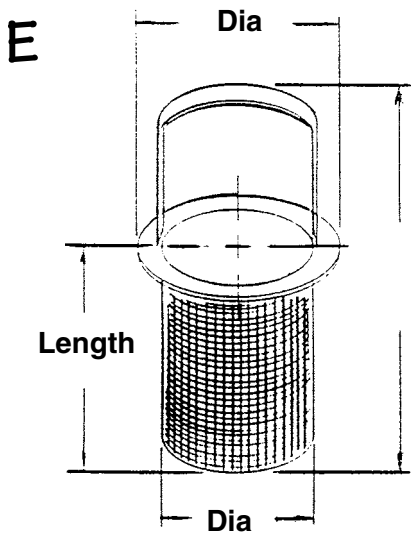
Cone Type Strainer



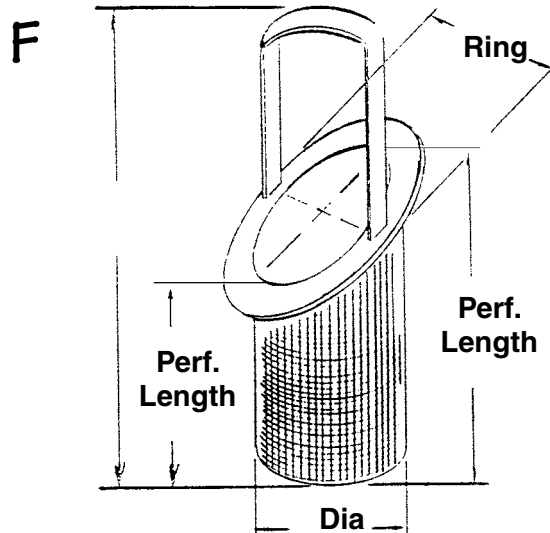
Cone Type Basket Strainer



Cylindrical Screen



Basket Strainer



Basket Strainer

Temporary Strainers

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 special needs.

Please send us your prints, samples or simply give us your requirements/specs in attached chart and let us design the strainer for you.

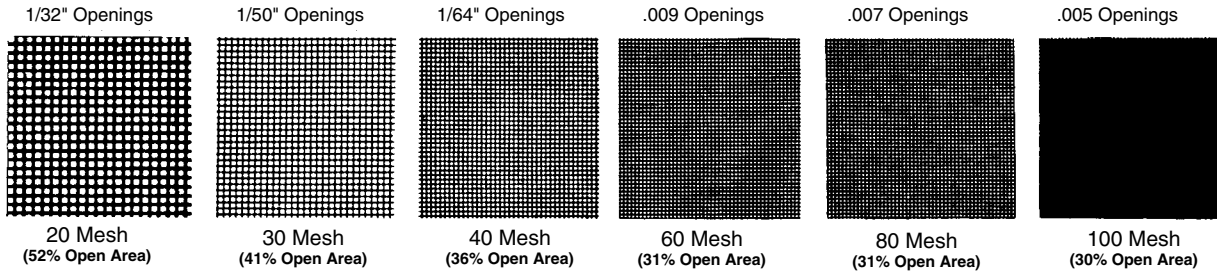
Custom product not subject to return credit or refund.

When Ordering Specify:

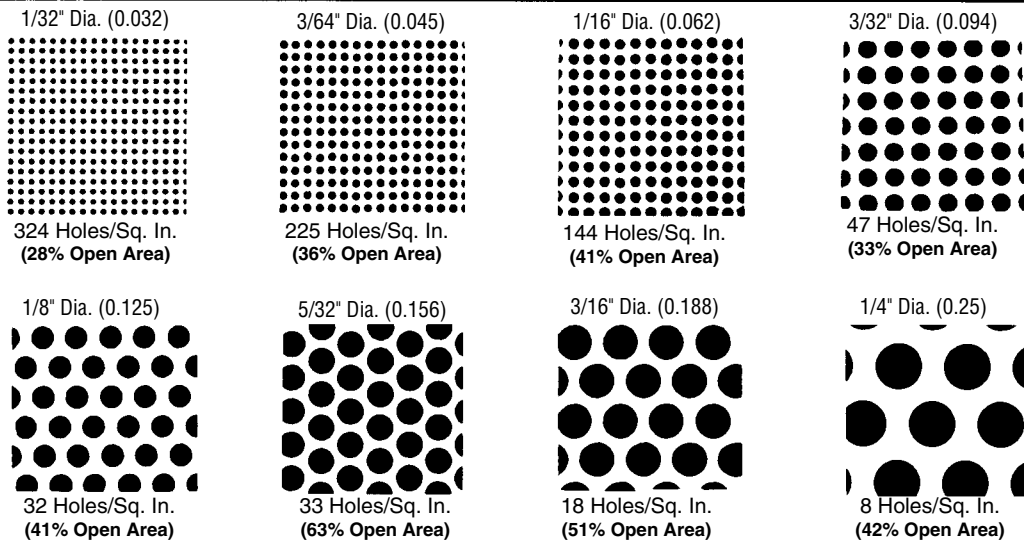
1. Pipe size _____
2. Pressure rating/flange rating _____
3. Perforation or mesh size _____
4. Material _____
5. Style – cone, basket, etc. _____
6. Direction of flow – straight or reverse _____
7. Percentage of open area or length _____

Perforated Metal and Mesh

AVAILABLE IN ALL MATERIALS



Mesh sizes other than shown - available on application



Mesh - Inch - Micron Conversion Chart

Meshes/Lineal Inch US and ASTM Std. Sieve No.			Meshes/Lineal Inch US and ASTM Std. Sieve No.		
Actual Opening Inches		Microns	Actual Opening Inches		Microns
10	.075	1905	130	.0043	109
12	.060	1524	140	.0042	107
14	.051	1295	150	.0041	104
16	.045	1143	160	.0038	97
18	.039	991	170	.0035	89
20	.034	864	180	.0033	84
24	.028	711	200	.0029	74
30	.020	508	250	.0024	61
35	.018	457	300	.0018	46
40	.015	381	400	.0015	38
50	.011	279	120 x 400	.0016	40
60	.009	229	80 x 700	.0012	30
70	.008	203	200 x 600	.0010	25
80	.007	178	165 x 1400	.0007	17
100	.006	152	200 x 1400	.0004	10
120	.0046	117	325 x 2300	.0002	5

Temporary Strainers

Sure Flow Knife Gate

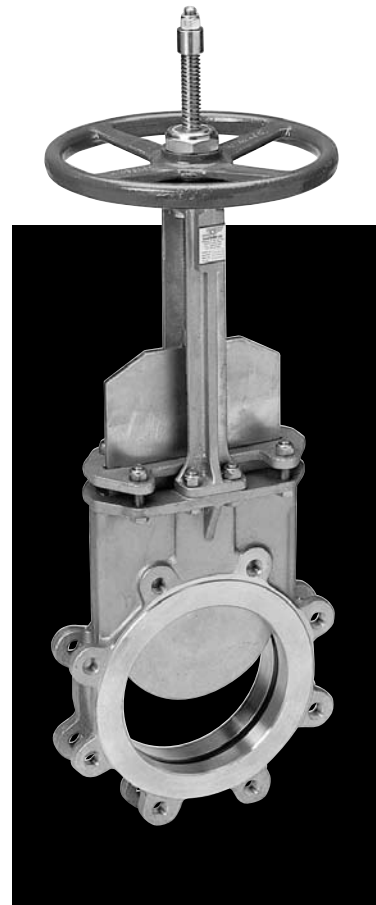
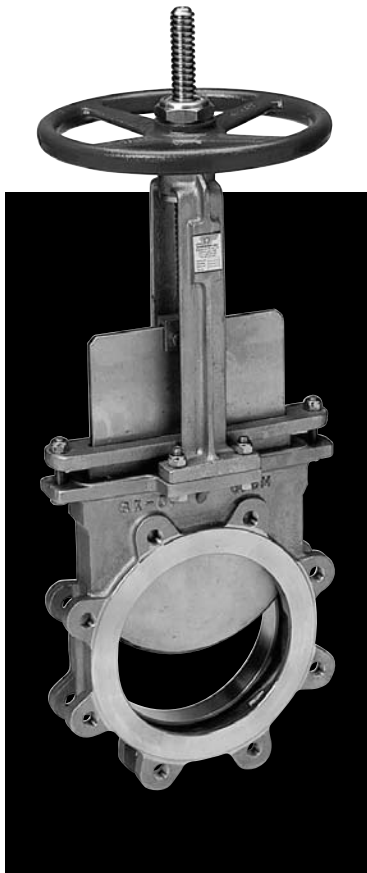
Cast Stainless Steel Full Port

Knife Gate, ANSI 150 lbs, Full Lug Type, Full Port,
Resilient Seat or Metal, Pressure 1050 K.P.A.

Features - Model KG150 MIR (Metal)

Model KG150 VIR (Viton Seat)

- ▲ Solid one piece all cast 316 SS body and top works
- ▲ Machine ground ultra thick gate jams
- ▲ Beveled knife on metal seats
- ▲ Blow out proof knife
- ▲ Inline field actuation landing flange
- ▲ Adjustable packing pusher
- ▲ Each valve tested MSS-SP81
- ▲ Full port — conforms to TAPPI
- ▲ Full lug pattern
- ▲ All valves assembled Silicone Free
- ▲ Bonnetless design
- ▲ Seats — Hycar, Viton, EPDM — Metal ring behind seat
- ▲ Handwheel — cast iron with lock nut washer to endure high vibration
- ▲ Thrust bearing to assist handwheel closure
- ▲ Bi-directional resilient seat



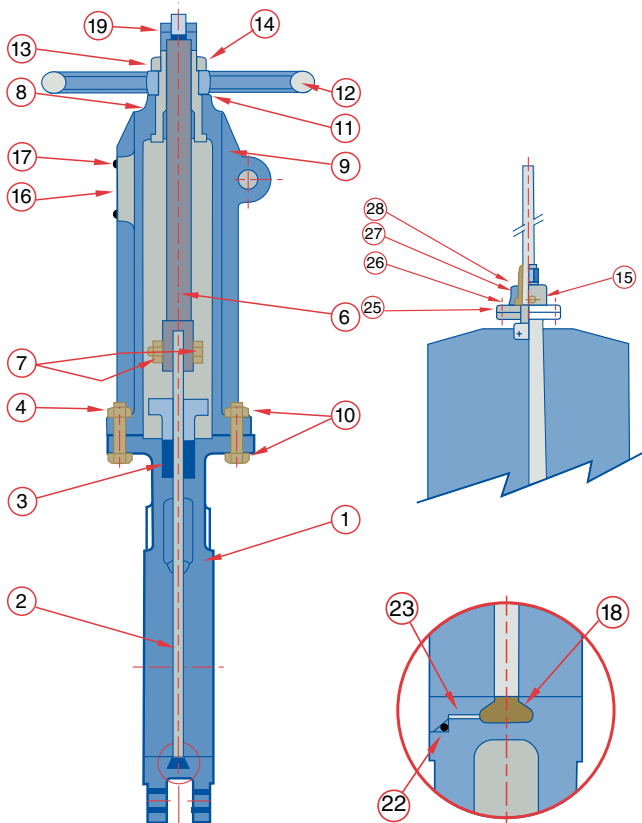
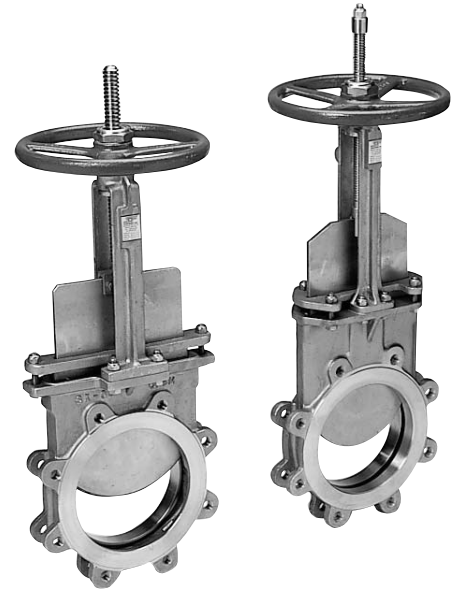
Knife Gate
Valves

Sure Flow Knife Gate

Cast Stainless Steel Full Port

Features and Benefits

- ▲ Sure Flow Knife Gate conforms to TAPPI TIS 405.8 face to face
- ▲ Flanged ends meet ASME B16.5 and design test to MSS - SP81
- ▲ Full lug pattern. Drilled and tapped to suit ANSI Class 150 Flanges (1050 KPA)
- ▲ Solid, all one-piece cast stainless steel valve body, yoke and packing gland. The one piece design eliminates twisting/ deflection that is encountered on a multiple post design.
- ▲ Easy bolt-on conversion to Actuator or Bevel Gear Operator
- ▲ PTFE impregnated packing suitable for temperatures up to 450° F / 232°C and a PH of 2 - 12
- ▲ Machine ground gate and lapped integral metal seat are designed to handle dense mixture of stock and slurries. The pure shearing action of the Knife cuts through solids and the venturi effect cleans the seat close



Materials of Construction

No.	Part Name	Material
1	Body	ASTM A351 Gr. CF8M (316) Stainless
2	Disc (Gate)	(316) Stainless Steel
3	Packing	PTFE Impregnated Syntax Yarn (non-asbestos)
4	Packing Gland	CF8M (316) Stainless Steel
5	Gland Bolt and Nut	ASTM A193 Gr. B8 / ASTM A194 Gr. 8 (Nyloc)
6	Stem	ASTM A276 TP 304 Stainless Steel
7	Disc Bolt and Nut	ASTM A193 Gr. B8 / ASTM A194 Gr. 8 (Nyloc)
8	Yoke Sleeve	Brass or Bronze
9	Yoke	ASTM A351 Gr. CF8 (304) Stainless Steel
10	Yoke Bolt and Nut	ASTM A193 Gr. B8 / ASTM A194 Gr. 8 (Nyloc)
11	Thrust Bearing Washer	Brass
12	Handwheel	Cast Ductile Iron
13	Wheel Nut	Brass
14	Set Screw	ASTM A193 Br. B7
15	Grease Nipple	Assembly
16	Name Plate	ASTM A240 TP 304 Stainless Steel
17	Rivet	Aluminium
18	Body Seat	Hycar-Viton-EDPM-Rubber-Metal
19	Stopper and Nut	ASTM A276 Ty. 304 / ASTM A194 Gr. 8 (Nyloc)
22	O-Ring	Hycar Rubber
23	Seat Retainer	CF8M (316) Stainless Steel
25	Bearing Housing	ASTM A351 Gr. CF8 (304) Stainless Steel
26	Housing Bolt and Nut	ASTM A193 Gr. B8 / ASTM A194 Gr. 8 (Nyloc)
27	Thrust Ball Bearing	Assembly
28	Sleeve Gland	ASTM A351 Gr. CF8 (304) Stainless Steel

Knife Gate Valves

Sure Flow Knife Gate

Cast Stainless Steel Full Port

- ▲ The uni-directional metal seated valve has fully guided gate at 180 degrees and jams at the bottom for the correct position on the gate against the seat. Fluid pressure assists sealing capacity.
- ▲ The two-way resilient seated valve provides bubble tight shut-off in both directions
- ▲ The Resilient Seated Valve is supplied standard with viton resilient seat good for temperatures up to 300°F / 150°C with PTFE adjustable packing pusher
- ▲ The standard resilient seat, "viton", is excellent for aging, sunlight resistance, water resistance, oil resistance, medium acid, and PH from 2 - 12 @ Universal Seat
- ▲ Resilient Seat is a positive retained seat that will not pull or roll over. No grooves or pockets to collect product, plus a backup secondary metal seat between the disc and body seat. True 100% full bore design.
- ▲ The edge on the resilient seat maintains the same shearing action as the metal seat to handle dense pulp stock and other slurries with a self-cleaning action to maintain bubble-tight shut-off.
- ▲ Multiple packing with true leveling stainless steel gland bolts and self-locking nuts
- ▲ One-piece stainless steel stem and thrust bearing to assist closure of handwheel — low torque, reduces rim pull
- ▲ Bonnetless design—O.S.Y. non-rising handwheel with a handwheel lockwasher which endures high vibration

Dimensional Data

NOM. SIZE (IN.)	2	3	4	6	8	10	12	14	16	18	20	24
Inside Diameter	2.00	3.00	4.00	6.00	8.00	10.00	12.00	13.25	15.25	17.25	19.25	23.25
Face to Face	1.88	2.00	2.00	2.25	2.75	2.75	3.00	3.00	3.50	3.50	4.50	4.50
Handwheel Diameter	8.00	8.00	8.00	12.00	12.00	16.00	16.00	18.00	18.00	20.00	24.00	24.00
Bolt Circle	4.75	6.00	7.50	9.50	11.75	14.25	17.00	18.75	21.25	22.75	25.00	29.50
Bolt Number	4	4	8	8	8	12	12	12	16	16	20	20
Thread Size	5/8	5/8	5/8	3/4	3/4	7/8	7/8	1	1	1-1/8	1-1/8	1-1/4
Threads per inch	8	6	6	5	5	5	5	4	4	3.5	3.5	3.5
Open Height Model MIR	13.78	17.13	20.35	25.75	32.76	40.08	46.18	52.36	60.24	67.32	75.20	85.43
Open Height VIR	15.35	19.29	21.26	28.15	33.86	42.32	49.02	53.94	62.20	68.90	75.98	88.58
Stem Diameter	0.63	0.79	0.79	1.00	1.00	1.00	1.00	1.25	1.25	1.50	1.50	1.50
Shipping Weight (lbs)	30	42	52	80	101	161	230	261	392	490	790	850

Knife Gate Valves



Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
 International 1-905-335-1350 International Fax: 1-905-332-4993
 Email: info@sureflowequipment.com www.sureflowequipment.com

Sure Flow Knife Gate

Cast Stainless Steel Full Port

Operating Thrust Force for Knife Gate Valves

Torques for working pressure (lb/in)

(1) Metal Seated Valve

Size	0 psig	30 psig	60 psig	85 psig	115 psig	150 psig
2"	157	331	661	944	1,275	1,574
3"	225	472	944	1,349	1,821	2,248
4"	337	708	1,417	2,024	2,732	3,373
6"	472	992	1,983	2,734	3,825	4,722
8"	610	1,281	2,562	3,659	4,940	6,099
10"	1,003	2,107	4,214	6,020	8,127	10,034
12"	1,188	2,494	4,989	7,127	9,624	11,878
14"	2,461	5,169	10,337	14,768	19,936	24,612
16"	2,817	5,915	11,830	16,901	22,816	28,168
18"	3,703	7,777	15,553	22,219	29,996	37,032
20"	4,466	9,379	18,758	26,796	36,175	44,661
24"	5,321	11,174	22,348	31,928	43,099	53,209

(2) Resilient Seated Valve

Size	0 psig	30 psig	60 psig	85 psig	115 psig	150 psig
2"	173	376	770	1,126	1,553	1,948
3"	237	527	1,104	1,632	2,284	2,906
4"	380	844	1,804	2,692	3,765	5,645
6"	540	1,114	2,416	3,556	5,238	6,727
8"	700	1,488	3,269	4,996	7,106	9,141
10"	1,146	2,770	5,454	8,469	13,050	16,679
12"	1,358	3,330	7,314	11,127	15,712	20,064
14"	2,877	7,050	15,469	23,479	33,140	42,280
16"	3,328	8,252	18,125	25,512	38,766	49,384
18"	4,321	10,827	23,884	36,302	51,196	65,253
20"	5,212	13,412	29,738	45,215	63,657	81,000
24"	6,140	16,341	36,372	55,251	77,628	98,567

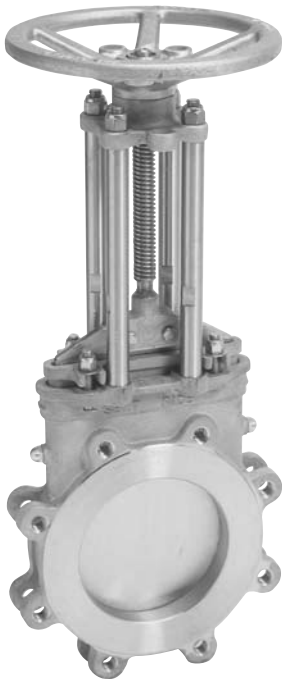
Knife Gate
Valves

Sure Flow Knife Gate

Cast Stainless Steel Full Port

The Cv (flow coefficient) of a valve is defined as the flow of water at 60°F, in gallons per minute, at a pressure drop of one pound per square inch across the valve.

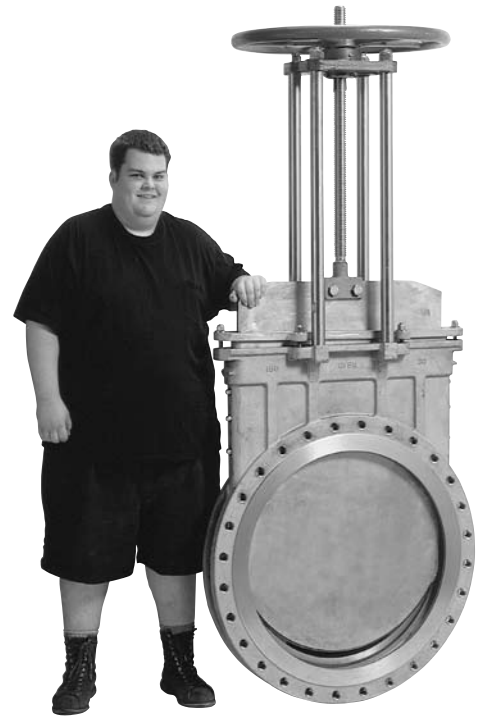
Flow Coefficient



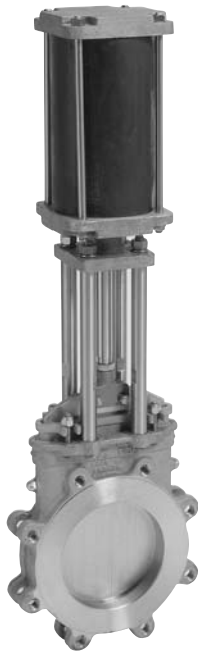
Valve Size	Cv
2"	306.8
3"	709.3
4"	1,297.2
6"	3,107.3
8"	5,718.0
10"	8,934.0
12"	13,351.1
14"	16,277.4
16"	21,562.3
18"	29,019.2
20"	36,138.4
24"	52,717.3

$$Cv = \frac{29.9 d^2}{\sqrt{K}}$$

- Cv = Flow Coefficient
- K = Resistance Coefficient
- d = Bore
- K = 8 fr
- fr = Friction Factor



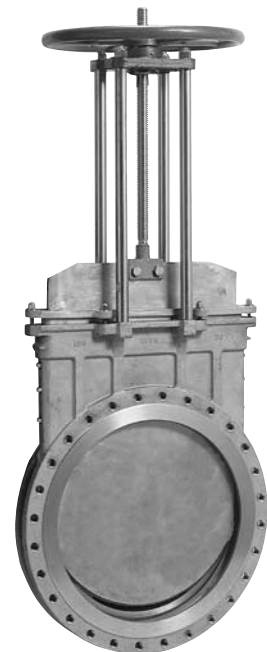
Knife Gate Valve Options



Pneumatic Actuators



O-Port Knife Gate Valves



30 inch to 48 inch Knife Gate Valves

Knife Gate Valves

Cast Iron Full Port Ball Valves

Type BV125IS Cast Iron Full Port Ball Valve c/w Stainless Steel Ball and Stem



As a complement to Sure Flow's extensive line of Flanged Ball Valves, we have available in Cast Iron, a Full Port Ball Valve.

The Sure Flow Simple Quarter Turn Ball Valve has the same face to face dimensions as a standard 125 lb. ANSI Gate Valve. Easily replaces those heavy, hard to open and maintain, Cast Iron Gate Valves and is a simpler, lighter solution.

Standard Features

- Stainless Steel Ball and Stem
- Positive Shut Off / Teflon Seats
- Blow-Out Proof Stem
- Open or Closed or Simple throttling
- Replaces Gate Valves - same End to End Dimension to ANSI B16.10
- Tapped Actuator Mounting Pad for Actuation
- Fused Epoxy Coating
- Full Open or Closed position lockable.
- Removable handles and adjustable for installation limitations.

Specifications

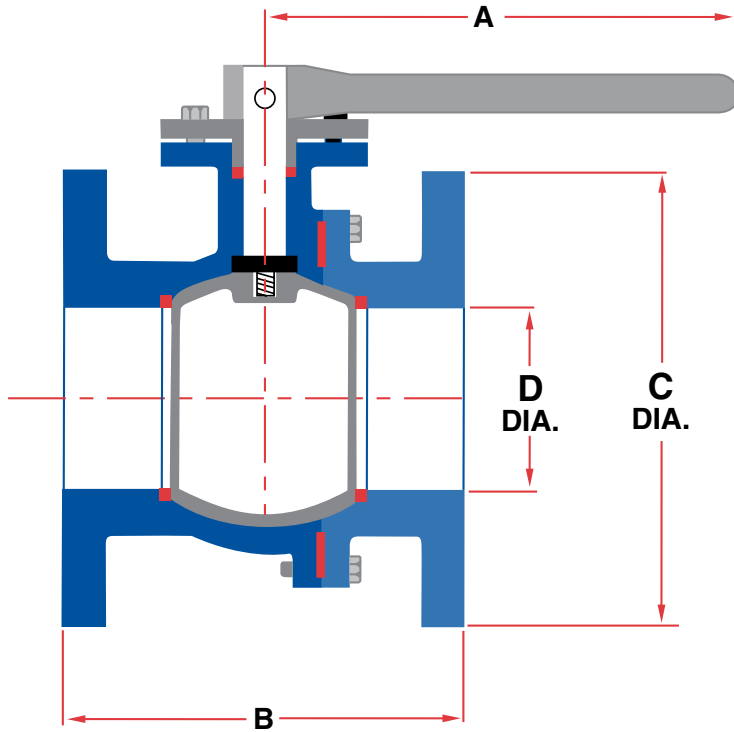
The valve shall comply with American standards for end to end or face to face dimensions (ANSI B16.10) for Class 125 Cast Iron Flanged Gate Valves. Valves shall have a Full Port Stainless Ball with PTFE Seats. The dimensions and drilling of the end flanges conform to Cast Iron Flanged Standard ANSI B16.1.

Materials of Construction

- Body - ASTM A126 Class B - Cast Iron
- Bolting - ASTM A6 - Carbon Steel
- Ball - ASTM A351-304 Stainless Steel
- Stem - AISI 304 - Stainless Steel
- Stem Packing - PTFE
- Travel Stop - ASTM A6 - Carbon Steel
- Gland - ASTM A126 Class B - Cast Iron
- Thrust Washer - PTFE
- Handle - Ductile Iron c/w non-slip grip pad
- Paint - Fused Epoxy Coating
- Seat - PTFE
- Gasket - PTFE



Cast Iron Full Port Ball Valves



Construction

Description	Material
Lever	Ductile Iron
Screw	Carbon Steel
Bolt	Carbon Steel
Gland	Cast Iron
Packing	PTFE
Stem	Stainless Steel
Thrust Washer	PTFE
Seat Ring	PTFE
Spring	Carbon Steel
Ball	Stainless Steel
Body	Cast Iron
Body Gasket	PTFE
Body Bolt	Carbon Steel

CV Ratings and Maximum Operating Torque

Size Inches	CV GPM	Torque In lbs
2	410	460
2-1/2	650	650
3	1200	780
4	2400	1416
6	4100	3200
8	8000	5400
10	10410	11900

Note: The flow coefficient (CV) is the number of gallons per minute of water flowing through a given size restriction of a pressure drop of 1 psi. Torque based on a clean water application.

Dimensional Data

Size		A	B	C	D	Shipping Weight (lbs)
Inches	Prefix					
2"	0200	10"	7"	6"	2"	32
2-1/2"	0250	16"	7 1/2"	7"	2 1/2"	46
3"	0300	16"	8"	7 1/2"	3"	59
4"	0400	17 11/16"	9"	9"	4"	86
6"	0600	21 11/16"	10 1/2"	11"	6"	148
8"	0800	*	11 1/2"	13 1/2"	8"	425
10"	1000	*	13"	16"	10"	520

* Standard with handwheel and gear actuator.

Ordering Information

Example: Include full description
Size **Model**
(Prefix) **Number**

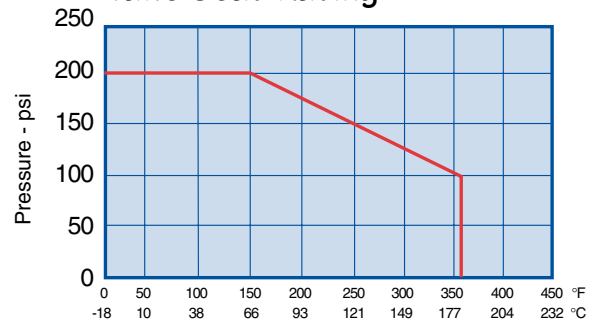
0200 - BV125IS

**2" Cast Iron Full Port Ball Valve with
 Stainless Steel Ball and Stem**

Notes:

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

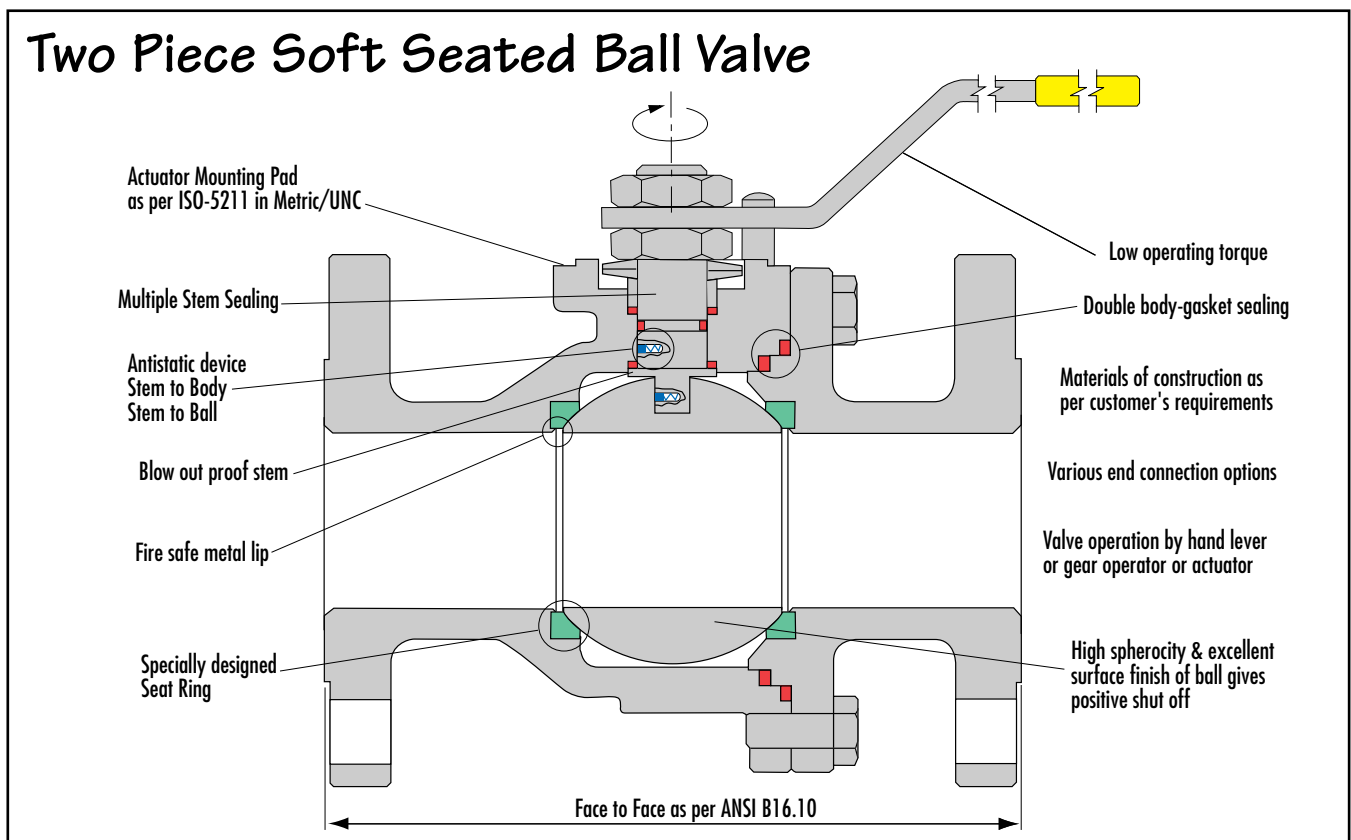
Valve Seat Rating



Fire Safe Ball Valves

Design & Testing Standards

- Sure Flow valves are designed and manufactured as per ANSI B 16.34, API 6D & BS 5351. These standards cover Pressure-Temperature ratings, minimum shell thickness and bore diameter for each size/class. Manufacturer has achieved ISO 9001 Certificate of Registration
- We offer valve castings and trim standard per NACE MR0175-96.
- Castings inspection as per MSS - SP 53, 54, 59, 93 & 94.
- Actuator mounting pad on the valve is as per ISO 5211.
- Other applicable standards:
 - ◆ Face to face: ANSI B 16.10
 - ◆ Flange dimensions: ANSI B 16.5
 - ◆ Butt welded valve ends: ANSI B 16.25
 - ◆ Pressure tests: API 598 / B 6 6755 Part 1
 - ◆ Fire safe: API 607 4th Edition / API 6FA / BS 6755 Part II



Range at a glance

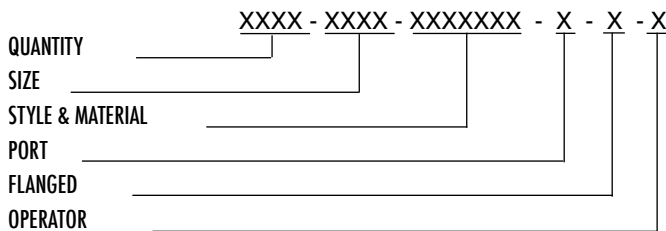
Soft Seated Ball Valve Range

Type	End Connection	Bore	ANSI Class	Size										
				1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"
Two Piece	Flanged	Full	150	•	•	•	•	•	•	•	•	•	•	•
		Reduced	150					•	•	•	•	•	•	•
		Full	300	•	•	•	•	•	•	•	•	•	•	•
		Reduced	300					•	•	•	•	•	•	•

Material of Construction

Part No.	Part	Material Options
01	Body	ASTM-A216 WCB / A351 CF8M
02	Body Adaptor	ASTM-A216 WCB / A351 CF8M
03	Ball	A351 CF8M
04	Stem	A 479 SS316
05	Seat	RPTFE
06	O Ring	VITON
07	Stem Gasket	RPTFE / GRAPHITE (Combination)
08	Spacer	ASTM - A479 SS316
09	Cup Spring	50 Cr V4
10	Stem Nut	A 194 GR8M / A 194 2H
11	Handle	MS (zinc plated)
12	Stop Pin	ASTM - A 479 SS316 / MS
13	Body Gasket	RPTFE / GRAPHITE (Combination)
14	Stud/Bolt	A 193 B8M / A 193 B7
15	Nut	A 194 GR8M / A 194 2H
16	Stem Bush	PHOSPHOR BRONZE
17	Stem Housing	ASTM - A216 WCB / A 351 CF8M

Ordering Information

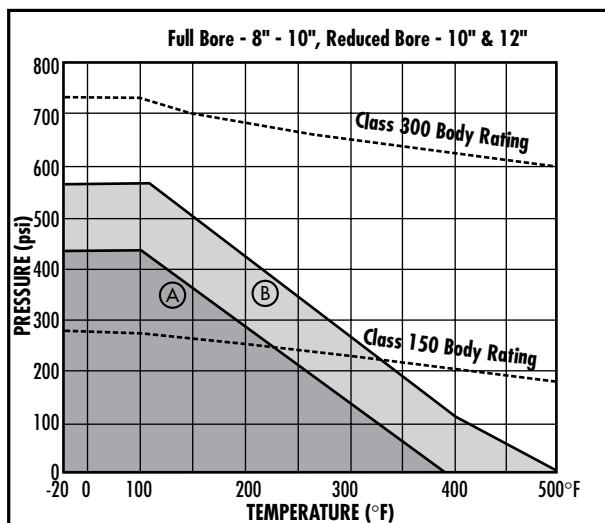
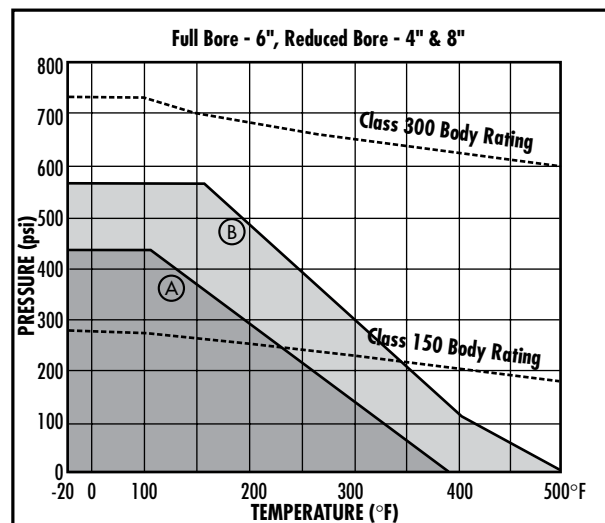
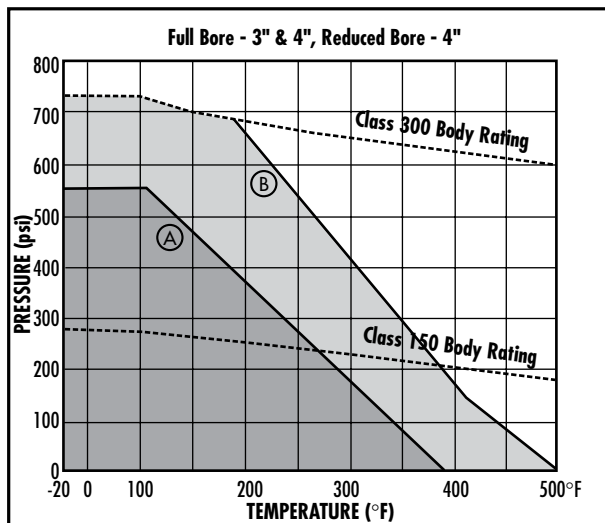
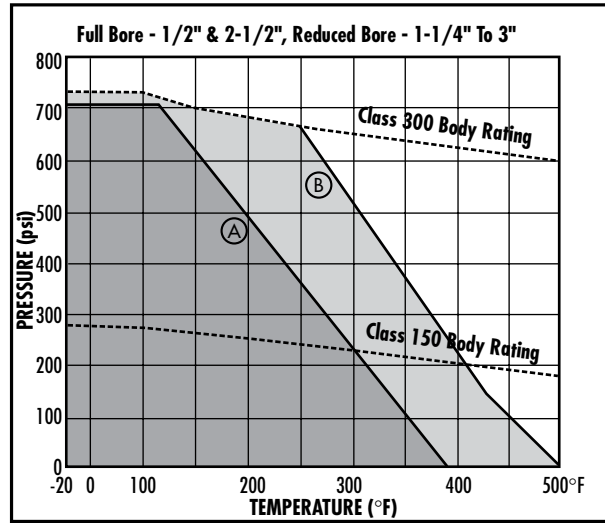
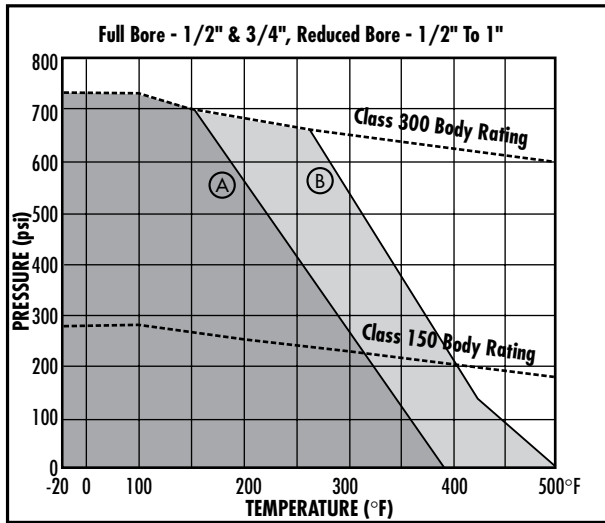


Examples: Include Full Description

- 0400/BV150CS/RFL**
4" 150# Carbon Steel Ball Valve
Reduced Bore, Flanged, Lever
- 0800/BV300SS/FFG**
8" 300# Stainless Steel Ball Valve
Full Bore, Flanged, Gear

SIZE	0050 - 1/2"	0075 - 3/4"	0100 - 1"	0150 - 1 1/2"
	0200 - 2"	0300 - 3"	0400 - 4"	0600 - 6"
	0800 - 8"	1000 - 10"	1200 - 12"	
BODY	BV150CS	CS	ASTM-A216 WCB	
STYLE &	BV150SS	SS	ASTM-A351 CF8M	
	BV 300CS	CS	ASTM-A216 WCB	
	BV300SS	SS	ASTM-A351 CF8M	
PORT	F - FULL BORE	R - REDUCED BORE		
FLANGE	F Face to Face ANSI B 16.10	Flange Dimension ANSI B 16.5		
OPERATOR	B - Bare Stem	L - Lever	G - Gear w/ wheel	

Pressure-Temperature Ratings



Seat Material:

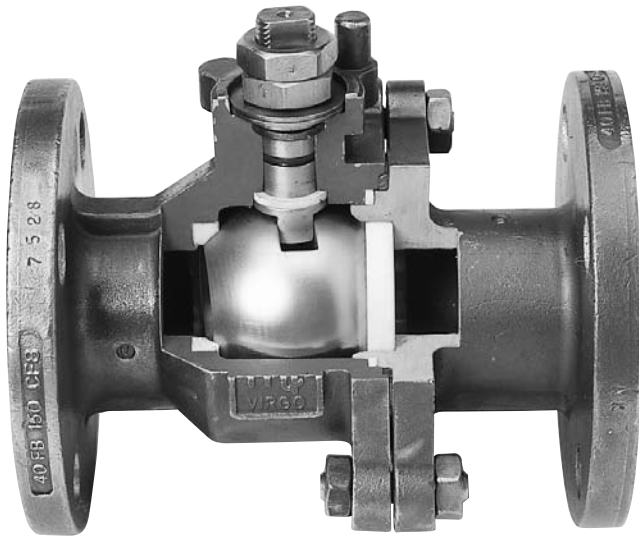
A = Virgin PTFE, B = RPTFE

Pressure - temperature seat ratings of valves are as given in the graph for body material A 216 - WCB. With the exception of body seat rings and primary soft seals, all valve components are capable of withstanding the pressure - temperature ratings as specified in ANSI B 16.34; BS 1560: Part II, S 4504 : Part I or BS 5351 as applicable.

Temperature Limits:

		Lower limit Deg. F	Upper limit Deg. F
Body Matl.	WCB	-20	1000
	LCB	-50	650
	CF8	-425	1500
	CF8M	-425	1500
Seat	RPTFE	-50	As per graph

Fire Safe Design Features



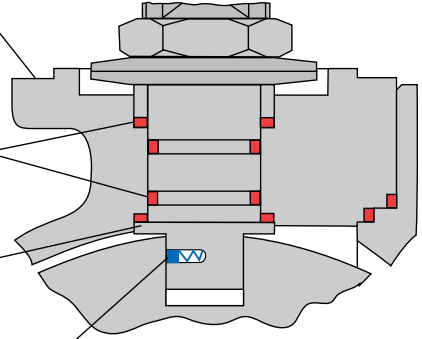
Multi-Seal Stem

ISO Mounting

Fugitive Emission Qualified Multiple Stem Sealing

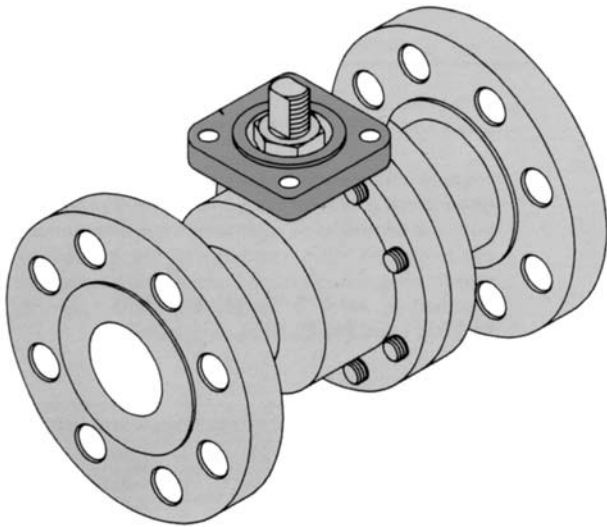
Blow Out Proof Stem

Anti static Device Stem to Body & Stem to Ball



- Anti static devices are built in the valve stem to ensure electrical continuity between ball, stem and body. Thus, providing greater safety while handling volatile media.
- Higher size ball valves are designed with stem bearing to absorb radial loading on the stem.
- Multiple stem sealing ensures high degree of sealing.

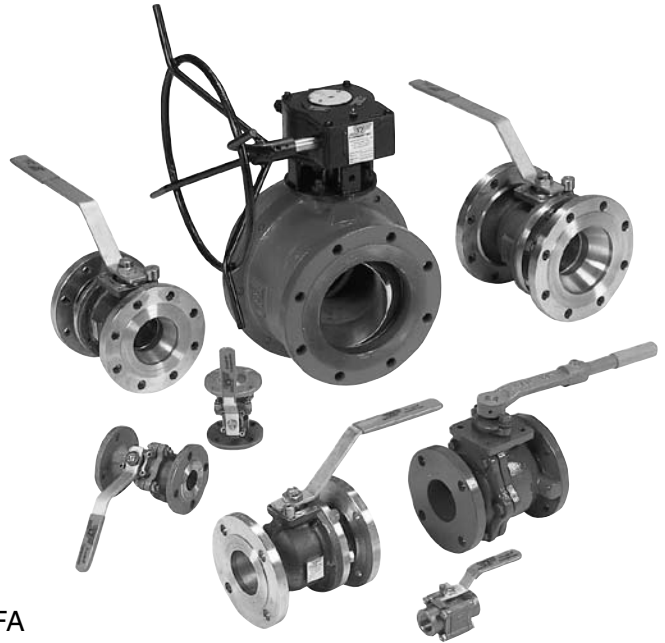
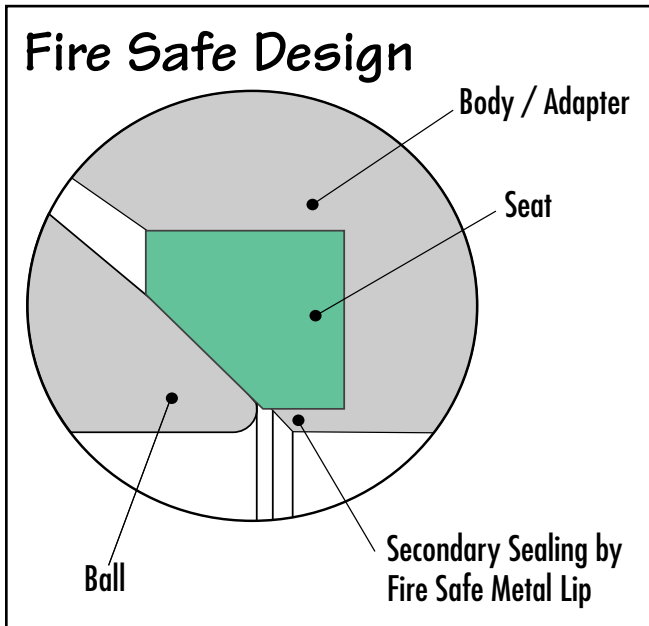
ISO Pad Details



- Sure Flow valves incorporate ISO-5211 top pad which simplifies actuator/gear operator mounting.

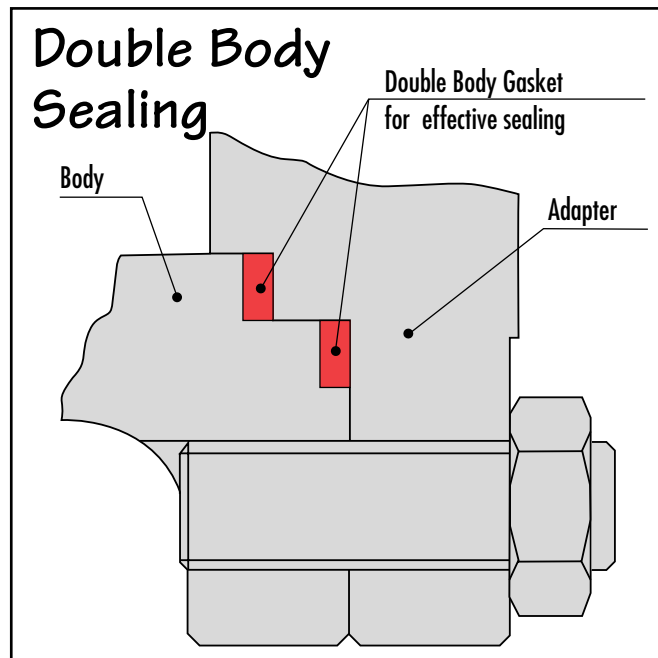
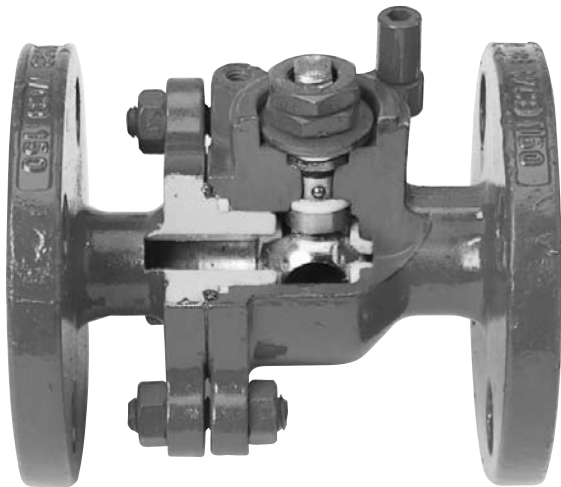


Fire Safe Design Features



- Fire safe conformance to API 607 (Edition IV) / API 6FA / BS-6755 Part II assures highest standard of safety.
- Certified by customer's inspector and independent certifying authorities.

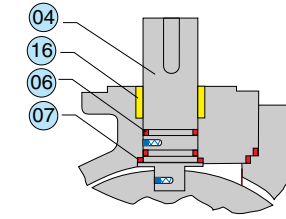
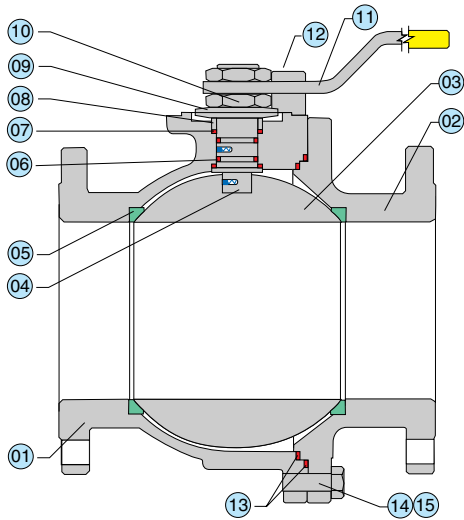
Fire safe tests have been witnessed and certified by Lloyd's Register



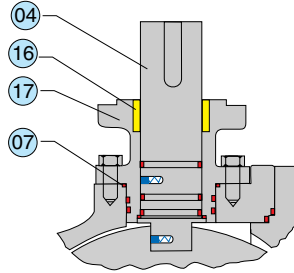
- Double body gasket ensures positive body-joint sealing against pipeline stresses.

Reduced Bore - Dimensions & Assembly

Two Piece Soft Seated Ball Valve



Stem Assembly Details
for 6" and 8"



Stem Assembly Details
for 10" and 12"

Item	Part Name
01	Body
02	Body Adapter
03	Ball
04	Stem
05	Seats
06	'O' Ring
07	Stem Gasket
08	Spacer
09	Cup Spring
10	Stem Nuts
11	Handle
12	Stop Pin
13	Body Gasket
14	Stud/Bolt
15	Nut
16	Stem Bush
17	Stem Housing



Size	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"
ANSI 150 REDUCED BORE											
E1 X E	.55 X .35	.75 X .55	1 X .75	1.5 X 1	2 X 1.5	3 X 2.5	4 X 3	6 X 4	8 X 6	10 X 8	12 X 10
L	4.25	4.62	5.00	6.50	7.00	8.00	9.00	10.50	11.50	13.00	24.00
H	2.20	3.66	3.86	5.00	6.50	7.28	8.66	9.49	12.22	-	-
G	4.33	7.09	7.09	8.27	8.27	11.42	17.72	17.72	26.38	-	-
F	3.50	3.88	4.25	5.00	6.00	7.50	9.00	11.00	13.50	16.00	19.00
C	2.38	2.75	3.12	3.88	4.75	6.00	7.50	9.50	11.75	14.25	17.00
R	1.38	1.69	2.00	2.88	3.62	5.00	6.19	8.50	10.62	12.75	15.00
T	0.44	0.50	0.44	0.56	0.62	0.75	0.94	1.00	1.12	1.19	1.25
N	0.62	0.62	0.62	0.62	0.75	0.75	0.75	0.88	0.88	1.00	1.00
No. of Holes	4	4	4	4	4	4	8	8	8	12	12
O	1.16	1.99	2.19	2.62	3.43	4.48	5.44	6.28	8.25	8.21	14.55
H1	0.61	1.50	1.65	1.89	2.48	3.21	3.86	4.80	6.57	10.45	11.97
ISO 5211 MTG	-	F05	F05	F05	F07	F07	F10	F10	F12	F14	F16
WT (lb.)	3.32	5.97	7.29	13.04	19.90	46.41	61.88	97.24	172.38	397.80	563.55
ANSI 300 REDUCED BORE											
E1 X E	.55 X .35	.75 X .55	1 X .75	1.5 X 1.25	2 X 1.5	3 X 2.5	4 X 3	6 X 4	8 X 6	10 X 8	12 X 10
L	5.50	6.00	6.50	7.50	8.50	11.12	12.00	15.88	16.50	18.00	19.75
H	2.20	3.66	3.86	5.79	5.79	7.28	8.66	9.49	-	-	-
G	4.33	7.09	7.09	8.27	8.27	11.42	17.72	17.72	-	-	-
F	3.75	4.62	4.88	6.12	6.50	8.25	10.00	12.50	15.00	17.50	20.50
C	2.62	3.25	3.50	4.50	5.00	6.62	7.88	10.62	13.00	15.25	17.75
R	1.38	1.69	2.00	2.88	3.62	5.00	6.19	8.50	10.62	12.75	15.00
T	0.56	0.62	0.69	0.81	0.88	1.12	1.25	1.44	1.62	1.88	2.00
N	0.62	0.75	0.75	0.88	0.75	0.88	0.88	0.88	1.00	1.12	1.25
No. of Holes	4	4	4	4	8	8	8	12	12	16	16
O	1.16	1.98	2.17	2.78	3.63	4.48	5.44	6.28	9.11	10.79	14.55
H1	0.61	1.50	1.65	2.06	2.48	3.21	3.86	4.80	7.11	8.46	11.97
ISO 5211 MTG	-	F05	F05	F05	F05	F07	F10	F10	F14	F14	F16
Wt. (lb.)	5.75	9.28	10.61	22.54	26.08	65.20	96.58	203.32	313.82	601.12	1200.00

• All dimensions are in inches. • Sizes 8" and above are with gear operator

Fire Safe
Ball Valves

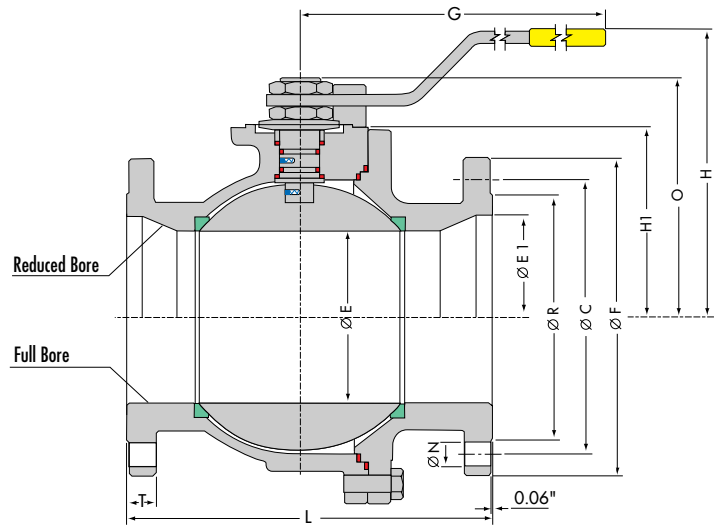


Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
 International 1-905-335-1350 International Fax: 1-905-332-4993
 Email: info@sureflowequipment.com www.sureflowequipment.com

Full Bore - Dimensions & Assembly



Two Piece Soft Seated Ball Valve



For Torque & Operator Mounting details, please contact Factory

Size	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"
ANSI 150 FULL BORE											
E	0.55	0.75	1.00	1.50	2.00	3.00	4.00	6.00	8.00	10.00	12.00
L	4.25	4.62	5.00	6.50	7.00	8.00	9.00	10.50	11.50	21.00	24.00
H	3.66	3.86	5.00	6.50	7.01	8.66	9.65	-	-	-	-
G	7.09	7.09	8.27	8.27	11.42	17.72	17.72	-	-	-	-
F	3.50	3.88	4.25	5.00	6.00	7.50	9.00	11.00	13.50	16.00	19.00
C	2.38	2.75	3.12	3.88	4.75	6.00	7.50	9.50	11.75	14.25	17.00
R	1.38	1.69	2.00	2.88	3.62	5.00	6.19	8.50	10.62	12.75	15.00
T	0.44	0.50	0.44	0.56	0.62	0.75	0.94	1.00	1.12	1.19	1.25
N	0.62	0.62	0.62	0.62	0.75	0.75	0.75	0.88	0.88	1.00	1.00
No. of Holes	4	4	4	4	4	4	8	8	8	12	12
O	1.99	2.19	2.62	3.43	4.14	5.44	6.28	8.73	10.77	14.15	20.16
H1	1.50	1.65	1.89	2.48	2.85	3.86	4.72	6.57	8.46	11.57	16.26
ISO 5211 MTG	F05	F05	F05	F05	F07	F10	F10	F12	F14	F16	F25
WT (lb.)	5.30	6.63	9.06	17.46	24.31	55.25	66.30	137.02	361.34	508.30	906.10
ANSI 300 FULL BORE											
E	0.55	0.75	1.00	1.50	2.00	3.00	4.00	6.00	8.00	10.00	12.00
L	5.50	6.00	6.50	7.50	8.50	11.12	12.00	15.88	16.50	22.38	25.50
H	3.66	3.86	5.00	5.79	7.01	8.66	9.65	-	-	-	-
G	7.09	7.09	8.27	8.27	11.42	17.72	17.72	-	-	-	-
F	3.75	4.62	4.88	6.12	6.50	8.25	10.00	12.50	15.00	17.50	20.50
C	2.62	3.25	3.50	4.50	5.00	6.62	7.88	10.62	13.00	15.25	17.75
R	1.38	1.69	2.00	2.88	3.62	5.00	6.19	8.50	10.62	12.75	15.00
T	0.56	0.62	0.69	0.81	0.88	1.12	1.25	1.44	1.62	1.88	2.00
N	0.62	0.75	0.75	0.88	0.75	0.88	0.88	0.88	1.00	1.12	1.25
No. of Holes	4	4	4	4	8	8	8	12	12	16	16
O	1.99	2.19	2.62	3.63	4.14	5.44	6.28	9.27	10.77	14.55	20.16
H1	1.50	1.65	1.89	2.48	2.85	3.86	4.72	6.95	8.46	11.97	16.26
ISO 5211 MTG	F05	F05	F05	F05	F07	F10	F10	F14	F14	F16	F25
Wt. (lb.)	7.07	9.95	12.82	24.09	33.15	75.14	99.45	254.15	425.35	740.35	1370.20

* All dimensions are in inches. * Sizes 6" and above are with gear operator

Valve Actuators

Quality Assurance

All products are manufactured in strict compliance with quality control standards and procedures. Sure Flow Equipment Inc. is certified as a Quality Assured Firm in full compliance with ISO 9001:2000.

Engineering

Sure Flow Actuators are designed with the same exacting standards of the world-class scotch yoke actuators. The result is a rack and pinion actuator that stands up to the most severe weather conditions. Corrosion-proof by design, Sure Flow rack and pinion actuators are designed to operate in a wide range of environments found in virtually all industries where quarter turn valves are used.

The Sure Flow Range Rack and Pinion Actuators are designed to operate "quarter turn valves". The wide torque range capabilities make Sure Flow actuators suitable for many ball valve and butterfly valve applications.

Operating Pneumatic Pressure Ranges

40 psig to 125 psig 2.7 bars to 8.6 bars

Operating Temperature Ranges

Standard Trim (Trim Code 0) -31°F to +230°F -35°C to +110°C

Features and Benefits

- ISO 5211 mounting on all models as well as a secondary bolt pattern for non-ISO mounting patterns
- Namur accessory mounting surfaces are standard on all Sure Flow actuators for attachment of control devices
- Available in Spring Return (SFAS) and Double Acting (SFAD) configurations. Multiple spring design allows for a wider range of torque from a single unit. All springs are self-contained and guided for optimum efficiency.
- Wide range available in both double acting and spring return models
- Unique travel stops in either open or close direction are standard on all models and independently adjustable using standard tools.
- Highly visible position indicator may be removed to expose external Namur drive shaft for simple attachment of Namur accessory devices
- One piece blow-out proof bottom entry drive shaft
- Corrosion resistant by design. Exacting standards of corrosion protection render Sure Flow suitable for most hostile environments
- Complete o-ring sealing protects against outside moisture and contaminants

Materials of Construction

Center Housing

Extruded Aluminum and electrolytic anodized

Spring Sets

Springs are Carbon Steel and coated for corrosion resistance. Spring guides are corrosion resistant nylon

End Caps

Precision-cast aluminum with a generous coat of polyurethane paint

Output Drive Shaft

Carbon Steel and PTFE coated

Pistons

Precision-cast aluminum and electrolytic anodized coated

Seals

Buna-N Nitrile as standard.

Position Indicator

UV resistant polypropylene

Bearing Pad

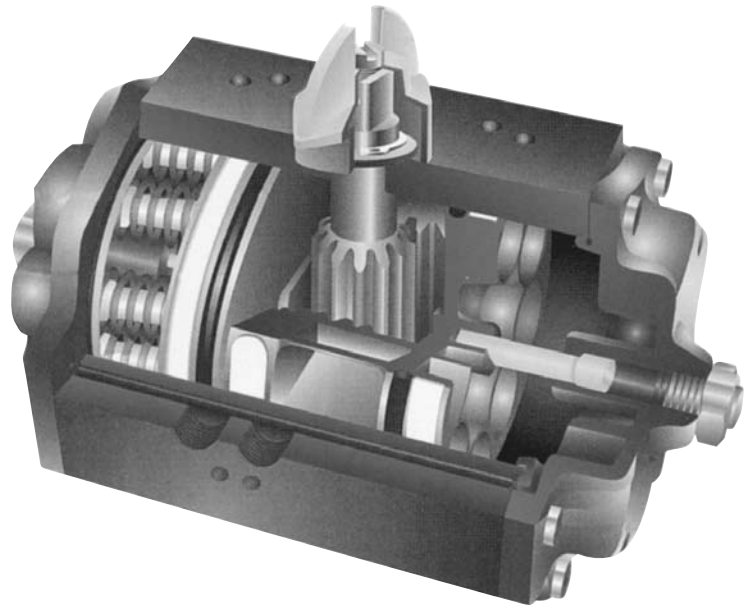
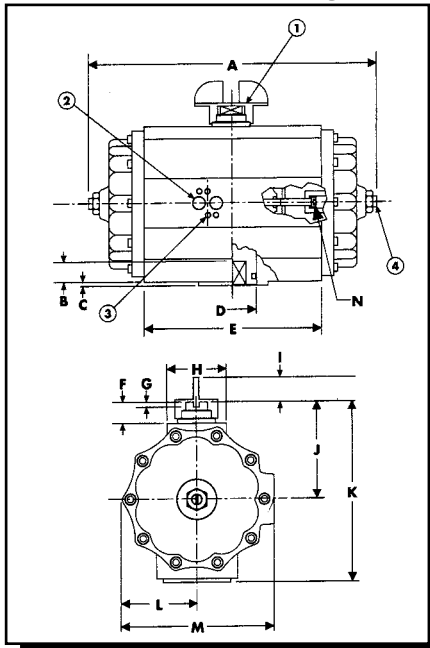
Corrosion resistant polymer

Fasteners

Stainless Steel

Valve Actuators

Dimensions - Weights - Connections



Dimensions (in.), Weights (lb.), ISO, and Connections

Model Numbers (SFAD = Double Acting, SFAS = Spring Return)

Item	SFAD005 SFAS005	SFAD008 SFAS008	SFAD012 SFAS012	SFAD020 SFAS020	SFAD030 SFAS030	SFAD040 SFAS040	SFAD060 SFAS060	SFAD100 SFAS100	SFAD200 SFAS200	SFAD250 SFAS250	SFAD370 SFAS370	SFAD500 SFAS500	SFAD750 SFAS750
A	7.17	8.86	9.09	11.02	11.14	13.46	14.65	17.13	21.50	18.19	26.30	21.65	22.83
B	0.63	0.79	0.91	1.05	1.05	1.22	1.22	1.50	2.01	2.01	2.52	3.11	3.11
C	0.06	0.06	0.06	0.06	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
D	1.10	1.25	1.34	1.73	1.73	2.12	2.28	2.87	3.62	2.87	4.60	4.21	4.50
E	3.94	4.96	5.20	7.01	6.22	8.46	9.13	10.70	14.17	12.48	17.72	18.90	19.49
F	0.79	0.79	0.79	0.79	0.79	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
G	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157
H	1.81	1.81	2.28	2.28	3.15	3.15	2.95	2.95	3.54	3.94	3.94	7.08	7.08
I	0.51	0.51	0.51	0.63	0.63	0.75	0.75	1.10	1.10	1.02	1.02	0.90	0.90
J	2.56	2.91	3.31	3.31	4.02	4.41	4.96	5.81	5.83	7.13	7.13	10.03	11.22
K	4.41	5.24	6.02	6.02	7.48	7.87	8.98	9.65	10.71	13.27	13.27	18.50	20.94
L	1.61	2.09	2.52	2.52	3.27	3.27	3.82	4.09	4.53	6.02	6.02	7.91	9.05
M	3.54	4.37	5.20	5.20	7.40	7.40	7.71	8.31	9.13	12.01	12.01	16.14	18.31
N*	5mm	5mm	6mm	6mm	8mm	8mm	10mm	10mm	10mm	12mm	14mm	14mm	14mm
Weight	4.0	7.5	9.9	13.2	17.6	23.1	31.9	57.2	88.0	121.0	169.4	815.7	851.8
ISO 5211	F.05	F.05	F.07	F.07	F.10	F.10	F.10	F.12	F.14	F.14	F.16	F.25	F.25

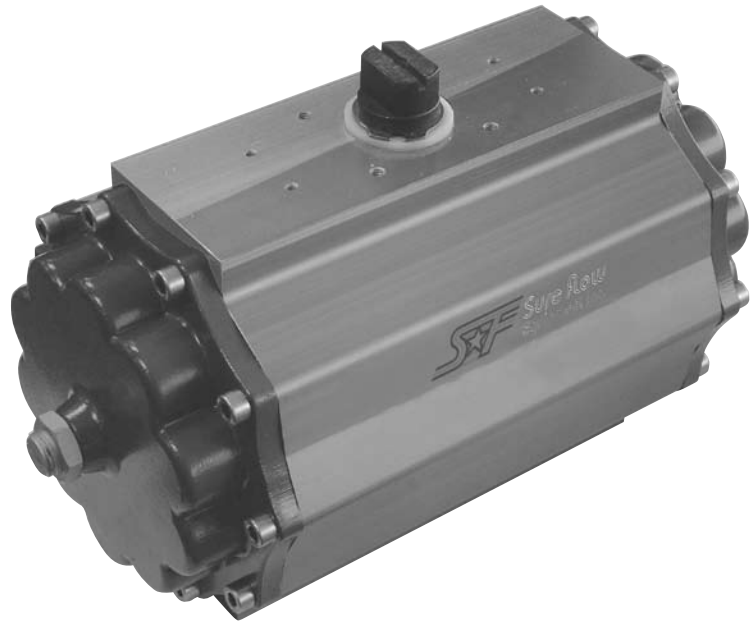
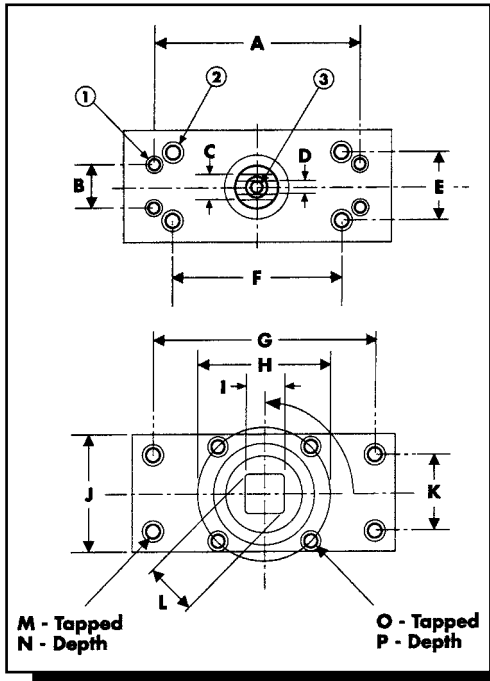
- 1 Indicator Shaft according to NAMUR VDI/VDE 3845
- 2 Solenoid Flanges according to NAMUR DIN .228/1
- 3 10-24 UNC, Depth 0.31
- 4 Outer Stop Adjustment by Screwdriver Slot and Wrench (both ends)
- 5 Port Connection = 1/4" NPT (female)

* Inner stop screw A/F socket size, both ends.
Refer to representative for actuator selection.
Sure Flow reserves the right make changes without notice. Revision O.

Valve Actuators

Valve Actuators

Mountings



Dimensions (in.)

Model Numbers (SFAD = Double Acting, SFAS = Spring Return)

Item	SFAD005 SFAS005	SFAD008 SFAS008	SFAD012 SFAS012	SFAD020 SFAS020	SFAD030 SFAS030	SFAD040 SFAS040	SFAD060 SFAS060	SFAD100 SFAS100	SFAD200 SFAS200	SFAD250 SFAS250	SFAD370 SFAS370	SFAD500 SFAS500	SFAD750 SFAS750
A	3.15	3.15	3.15	3.15	3.15	5.12	5.12	5.12	5.12	5.12	5.12	5.12	5.12
B	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.18
C	0.31	0.39	0.39	0.59	0.59	0.87	0.87	1.34	1.34	1.34	1.34	1.97	1.97
D	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157	0.157
E	1.38	1.38	1.38	1.38	1.38	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05
F	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36	2.36
G	3.25	3.25	4.31	4.31	4.31	4.31	6.46	6.46	10.00	10.00	12.59	16.73	16.73
H	1.97	1.97	2.76	2.76	4.02	4.02	4.02	4.92	5.51	5.51	6.5	10.00	10.00
I	0.43	0.55	0.67	0.75	0.75	0.87	0.87	1.06	1.42	1.42	1.81	2.17	2.17
J	1.69	1.81	2.44	2.44	3.54	3.54	3.54	4.33	5.12	6.10	6.10	7.09	10.24
K	1.17	1.17	1.75	1.75	1.75	1.75	2.24	2.24	3.89	3.89	3.94	3.94	3.94
L	0.56	0.71	0.87	0.99	0.99	1.11	1.11	1.43	1.90	1.90	2.37	2.84	2.84
M	1/4"-20 UNC		5/16"-18 UNC				3/8"-16 UNC	1/2"-13 UNC	5/8"-11 UNC			3/4"-10 UNC	3/4"-10 UNC
N	0.35	0.35	0.47	0.47	0.47	0.47	0.70	0.94	0.94	0.94	0.94	1.18	1.18
O	1/4"-20 UNC		5/16"-18 UNC		3/8"-16 UNC			1/2"-13 UNC	5/8"-11 UNC		3/4"-10 UNC	3/8"-11 UNC	3/4"-11 UNC
P	0.31	0.39	0.47	0.47	0.59	0.59	0.59	0.70	0.94	0.94	1.18	0.94	0.94

- 1 10-24 UNC Depth 0.31
- 2 3/4" 20 UNC Depth 1.35
- 3 M6, Depth 0.5

* Bolt Circle Diameter (BCD)

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Toll Free: 1-800-263-8251 Toll Free Fax: 1-800-876-1164
 International 1-905-335-1350 International Fax: 1-905-332-4993
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Valve Actuators

Torques

Spring Return

Quarter Turn, Rack & Pinion, Pneumatic

Output Torques (lbs. ins.) and Pressure Ratings											
Model No.	Spring Set	Operating Air Pressure									
		Spring Torque		40 psig		60 psig		80 psig		100 psig	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
SFAS005	6	53.8	98.4	80.2	37.3	145	103	-	-	-	-
	10	88.4	162	-	-	112	41	179	108	-	-
	12	106	200	-	-	-	-	159	72	224	136
SFAS008	8	112	178	170	94	388	218	-	-	-	-
	12	189	302	-	-	234	112	319	241	-	-
	16	227	286	-	-	-	-	341	187	477	311
SFAS012	8	157	286	270	145	471	347	-	-	-	-
	12	239	484	-	-	367	156	586	375	-	-
	16	319	583	-	-	-	-	534	280	735	481
SFAS020	8	232	415	407	231	721	546	-	-	-	-
	12	393	703	-	-	567	273	881	601	-	-
	16	474	847	-	-	-	-	822	464	1130	778
SFAS030	10	339	628	1950	920	984	701	-	-	-	-
	16	543	1005	-	-	1250	346	1940	802	-	-
	20	683	1269	-	-	-	-	1100	538	5380	3290
SFAS040	10	460	916	866	428	1520	1080	-	-	-	-
	16	729	1450	-	-	792	565	1250	1240	-	-
	20	938	1860	-	-	-	-	1740	847	2380	1490
SFAS060	10	701	1300	1260	692	2240	1650	-	-	-	-
	16	1110	2070	-	-	1840	920	2850	1930	-	-
	20	1430	2660	-	-	-	-	2550	1370	3500	2320
SFAS100	10	1120	2180	545	266	3450	2420	-	-	-	-
	16	1770	7480	-	-	2810	1170	4380	2740	-	-
	20	2270	4460	-	-	-	-	3900	1800	1530	966
SFAS200	10	2100	3530	3440	1870	6080	4520	-	-	-	-
	16	3020	5630	-	-	5010	2510	7750	5260	-	-
	20	3880	7210	-	-	-	-	6930	3737	9530	6330
SFAS250	22	2350	4360	4450	2510	7820	5870	-	-	-	-
	34	3670	6830	-	-	6540	3500	10040	7000	-	-
	40	4430	8240	-	-	-	-	9300	5650	12600	8950
SFAS370	10	4060	8130	7840	3940	13710	9810	-	-	-	-
	16	6470	12940	-	-	11410	5200	17530	11320	-	-
	20	8080	16370	-	-	-	-	17780	7810	21550	13600
SFAS500	26	10440	20620	-	-	-	-	30090	19560	41860	31860
	34	13720	26900	-	-	-	-	27170	12920	38670	25750
	42	16900	33270	-	-	-	-	23630	7170	35580	20000
SFAS750	28	11330	22830	-	-	26460	12040	40980	27790	-	-
	40	16200	32300	-	-	-	-	37350	20090	51770	35490
	50	20440	40800	-	-	-	-	33190	12746	47610	28230
	58	23630	47350	-	-	-	-	-	-	43360	20178

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Valve Actuators

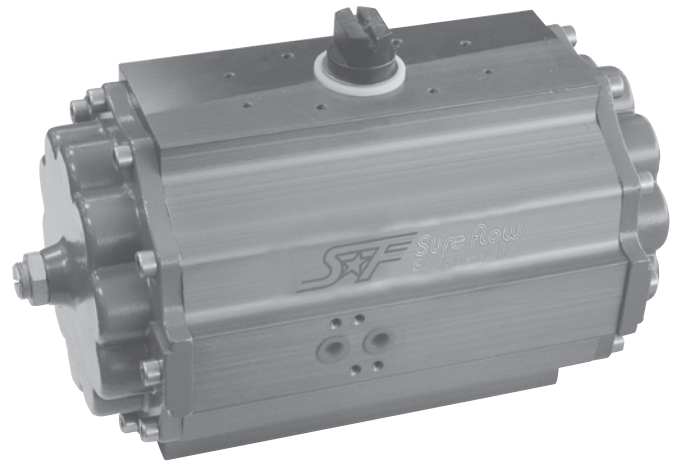
Valve Actuators

Torques

Double Acting

Quarter Turn, Rack & Pinion, Pneumatic

Model No.	Output Torque (lb.ins.)			
	Operating Air Pressure			
	40 psig	60 psig	80 psig	100 psig
SFAD005	136	205	275	342
SFAD008	288	432	583	725
SFAD012	437	647	875	1,084
SFAD020	656	984	1,330	1,659
SFAD030	902	1,358	1,832	2,278
SFAD040	1,358	2,041	2,752	3,427
SFAD060	2,023	3,035	4,092	5,086
SFAD100	3,144	4,712	6,344	8,076
SFAD200	5,496	8,249	11,111	13,819
SFAD250	6,991	12,220	14,123	17,574
SFAD370	12,242	18,358	24,730	30,755
SFAD500	17,430	29,200	41,500	53,630
SFAD750	22,120	37,080	52,660	68,140



Refer to representative for actuator selection. Sure Flow reserves the right to make changes without notice. Revision 0.

