SSI STRAINERS

Products Catalogue

Strainers | Suction Diffusers
Valves | Expansion Joints

ISO 9001 | CRN | 3 YEAR WARRANTY VIEW TERMS & CONDITIONS

Table of Contents

Y-Strainers | Overview

Sizes
1/4" to 16"

Pressure
up to 3705 PSIG

Temperature
up to 800ºF

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- Low pressure drop streamlined design
- Large strainer screens
- Compact end to end dimension
- Cast or Fabricated Construction

End Connections

- Flat Faced
- Raised Face
- RTJ Flanged
- Buttweld
- Threaded (NPT)
- Socketweld
- Sweat

Materials

- Cast Iron
- Ductile Iron
- Bronze
- Carbon Steel
- Low Temp Steel
- Stainless Steel

ASME Ratings

- Class 125
- Class 150
- Class 300
- Class 600
- Class 900
- Class 1500
- Class 2500

Body-Cover Flange Joints

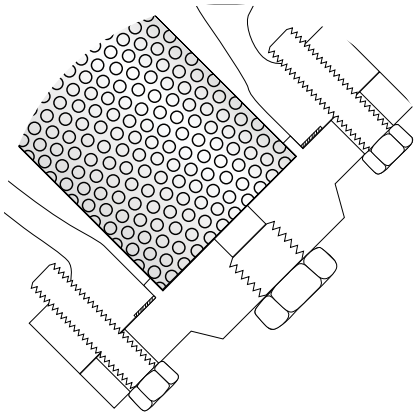
Flanged body-cover joints are designed to meet the requirements of ASME Section VIII, Div. 1 and / or ASME B16.5.

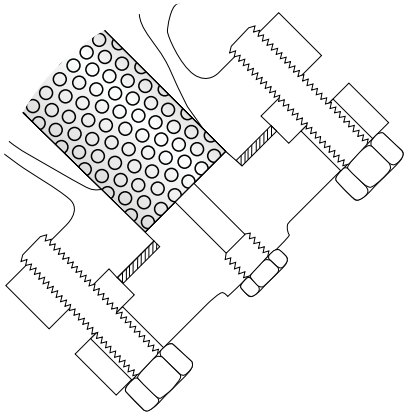
Series 150Y2 & 300Y2

For Series 150Y2 and 300Y2 strainers, the body-cover joint is designed using the equations found in Appendix II of the ASME Pressure Vessel Code. Calculations are performed using standard gaskets and with the existence of an edge moment. The gasket cavity is fully enclosed ensuring proper gasket alignment while preventing unwinding of spiral wound gaskets if used.

Series 600Y2, 900Y2 & 1500Y2

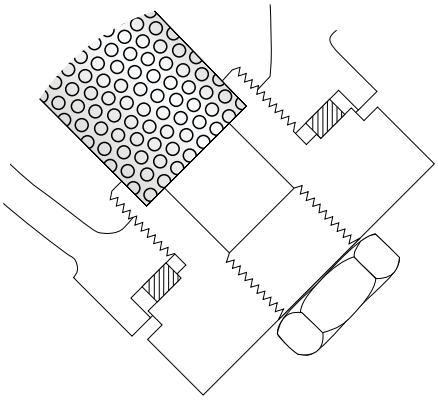
Series 600Y2, 900Y2 and 1500Y2 strainers incorporate a body-cover joint that is in dimensional accordance with the flange dimensions specified in ASME B16.5. Among the advantages of this strong leak-proof design is the convenience of using gaskets that are in accordance with ASME B16.20 and ASME B16.21. This feature eliminates the need for dimensionally special gaskets when maintenance is performed.





Body-Cover Threaded Joints

The design of a strong threaded body-cover joint is dependent on many factors. When designing these joints for strainers, calculations are performed taking into account thread shear (ASME B16.34), cover thickness and operating / gasket seating loads (ASME Sect. VIII, Div. 1). Basic dimensions such as wall thickness and band diameters are in accordance with ASME codes.

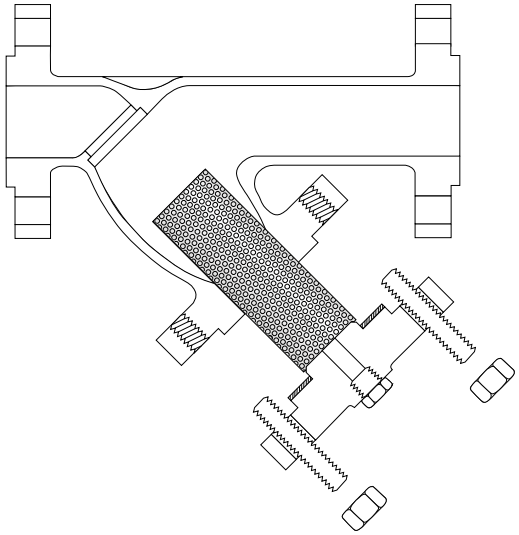


Screen Seating

All SSI Y-Strainers are manufactured with both upper and lower machined seats. This feature eliminates debris by-pass while also acts to securely hold the screen in position when in service.

For assembly and disassembly purposes, SSI Y-Strainers are designed so that the screen is securely slid over or into a machined lip on the cover bonnet. This allows the screen to be easily guided into the upper machined seat during assembly.

In particular, for Series 600Y2, 900Y2 and 1500Y2 strainers, where the cover flange tends to be heavy and difficult to manoeuvre, the screen is also guided around its circumference by the strainer body. This feature eliminates the possibility of misaligning the strainer screen during assembly while providing additional support to the screen when in service. This circumferential support reduces maintenance time and costs since the strainer can be assembled quicker and safer than with other designs.



Strainer Screens

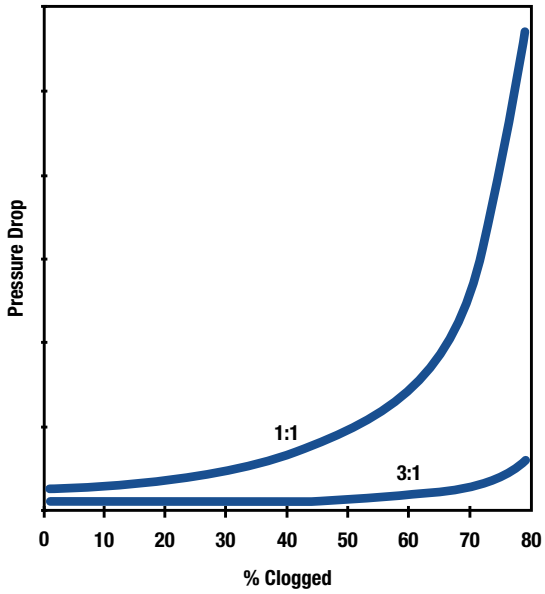
All SSI Y-Strainers are equipped with screens that have an open flow area many times greater than the pipe nominal cross-sectional area. This is important in order to reduce initial pressure drop and decrease the rate in which the pressure drop increases as the strainer screen becomes clogged. As shown in the figure the larger the screen area the lower the rate of increase in pressure drop. A Y-Strainer screen must be strong enough to handle the resulting differential pressure that occurs when in service. In general, all SSI strainer screens are designed to handle a minimum burst pressure of 50 psid. SSI calculates the burst pressure of screens using the formula:

$$P = \frac{St}{R-0.4t}$$

P = Burst Pressure
S = Reduced allowable stress
t = Thickness of screen material
R = Outside radius of screen

Using the above formula, SSI can design and manufacture any strainer screen to suit your specific strength requirements.

Effect of Screen Area on Pressure Drop



Note: Curves are for different ratios of free area to pipe area.

Sizes
3/8" to 12"

Pressure
up to 200 PSIG
(13.8 BARG)

Temperature
up to 450°F
(232°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- ASME Class 125 rated strainers
- NPT, SE and FF connections designed in accordance with ASME B16.15, B16.18 and B16.1
- One piece cast body
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings.

Applicable Codes (designed in accordance with)
- ASME B16.1
- ASME B16.15
- ASME B16.18

Models
- 125Y1T - Bronze, NPT, Threaded Cover
- 125Y1E - Bronze, Sweat Ends, Threaded Cover
- 125Y2F - Carbon, Flanged, Bolted Cover

Options
- Other perforated screens and mesh liners
- Other drain connections and gasket materials
- Oxygen cleaning
- Special internal/external coatings and linings
- Contact factory for other options

Canadian Registration - See appropriate Model pages

125Y Series Ordering Code

1					2						3		4	5	6
Inlet Size					Model						Body		Perf	Mesh	Optional
0	1	0	0	–	1	2	5	Y	1	T	B	–	A	2	_

1	Inlet Size				
0038	3/8"	0200	2"	0800	8"
0050	1/2"	0250	2½"	1000	10"
0075	3/4"	0300	3"	1200	12"
0100	1"	0400	4"	1400	14"
0125	1¼	0500	5"	1600	16"
0150	1½	0600	6"		

2	Model		
125Y1T	BR, NPT with Threaded Cover	125Y2F	CI, Flanged with Bolted Cover
125Y1E	BR, Sweat Ends with Threaded Cover		

3	Body Material		
I	Cast Iron	B	Bronze

4	Perf[1] (304SS Material[2])				
A	No Perf	2	1/16"	7	7/32"
1	1/32"	3	3/32"	8	1/4"
B	3/64	5	5/32"	9	3/8"
4	1/8"	6	3/16"		

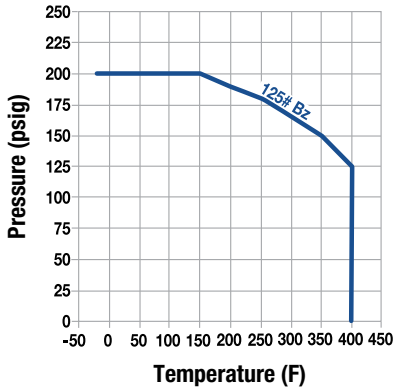
5	Mesh[1,2] (Leave Blank if not required)				
1	10	4	40	7	80
2	20	5	50	8	100
3	30	6	60	9	120

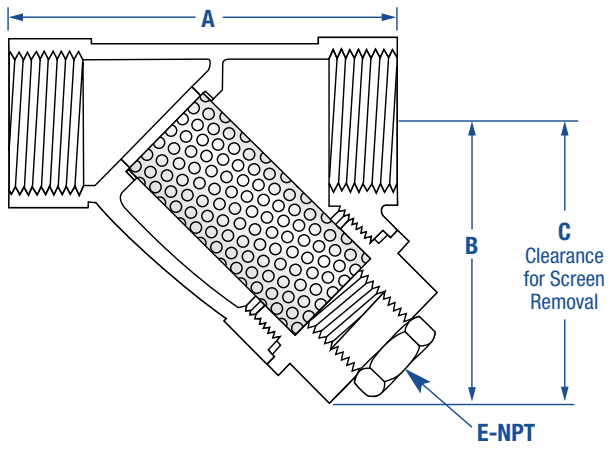
6	Optional (Leave Blank if not required)		
D	Special Drain Size	T	Special Testing
F	Silicon Free	X	Oxygen Cleaning
G	Special Gaskets	Y	Other / Multiple Specials

125Y1 Series | Y-Strainers

Bronze Body | NPT & Sweat Ends

Pressure / Temperature Chart
ASME B16.15





Description

SSI manufactures bronze y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI bronze y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

3/8" to 3"

Pressure Rating

200 PSIG (13.8 BARG)

Temperature Rating

450° F

End Connections

Threaded (NPT)
Sweat Ends

Screen Openings

20 Mesh | 304 SS

Features

- One piece cast body
- ASME Class 125 rated strainers
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

CRN

Dimensions

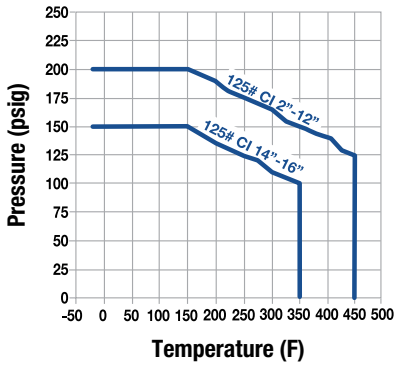
Size		A		B		C		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
⅜"	10	3.25	82	2.13	55	3.50	89	0.38	10	0.8	0.36
½"	15	3.25	82	2.13	55	3.50	89	0.38	10	1.0	0.25
¾"	20	4.00	100	2.75	70	4.50	114	0.38	10	1.2	0.60
1"	25	4.50	115	3.00	75	5.00	127	0.50	15	1.6	0.73
1¼"	32	5.38	136	3.56	90	5.75	146	0.50	15	2.5	1.1
1½"	40	6.31	160	3.88	98	6.38	162	0.50	15	3.4	1.6
2"	50	7.50	191	5.44	138	9.06	230	0.50	15	5.8	2.6
2½"	65	9.06	230	5.94	151	10.00	254	0.50	15	10.2	4.6
3"	76	10.19	259	6.31	160	10.38	264	0.50	15	13.7	6.2

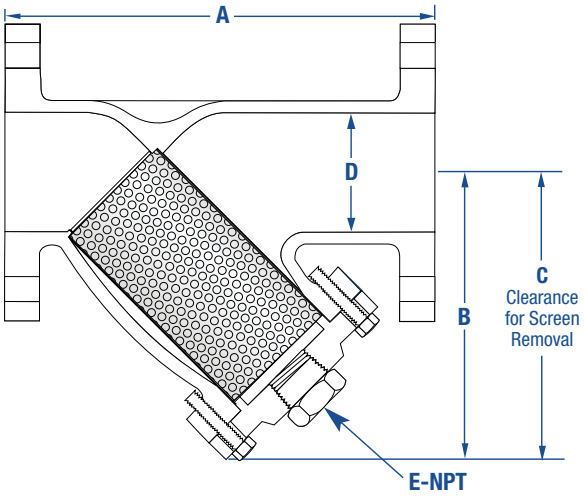
Materials

Part	Material
Body	Bronze B584
Cover	Bronze B584
Screen[1]	304 SS Mesh
Plug	Bronze B584
Gasket[1]	Garlock 2900

Dimensions applicable only to Y-Strainers with NPT Ends | Contact VSA for dimensions of Y-Strainers with Sweat Ends | Dimensions shown are subject to change. Consult factory for certified drawings when required. For Buttweld sizes please indicate pipe schedule on the order. | [1] Recommended Spare Parts

Pressure / Temperature Chart
ASME B16.1





Description

SSI manufactures bronze y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI bronze y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
2" to 16"

Pressure Rating
200 PSIG (13.8 BARG)

Temperature Rating
450° F

End Connections
Flanged

Screen Openings
2"–3" | 3/64" Perf | 304 SS
4"–16" | 1/8" Perf | 304 SS

Features
- One piece cast body
- ASME Class 125 rated strainers
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

CRN

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	8.88	226	6.13	156	8.50	216	2	51	0.5	15	22	10
2½"	65	10.75	273	8.06	205	11.25	286	2.5	64	1	25	35	16
3"	80	11.63	295	8.50	216	12.25	311	3	76	1	25	43	20
4"	100	13.88	353	9.63	245	13.38	340	4	102	1	25	75	34
5"	125	16.38	416	11.63	295	16.13	410	5	127	1.25	32	115	52
6"	150	18.50	470	12.63	321	17.69	449	6	152	1.5	40	154	70
8"	200	21.38	543	16.38	416	23.00	584	8	203	1.5	40	243	110
10"	250	26.00	660	19.13	486	26.69	678	10	254	2	50	390	117
12"	300	30.00	762	22.06	559	31.00	787	12	305	2	50	650	295
14"	350	37.38	949	30.69	780	41.00	1041	14	356	2	50	815	370
16"	400	42.50	1080	33.06	840	46.00	1168	16	406	2	50	1224	555

Materials

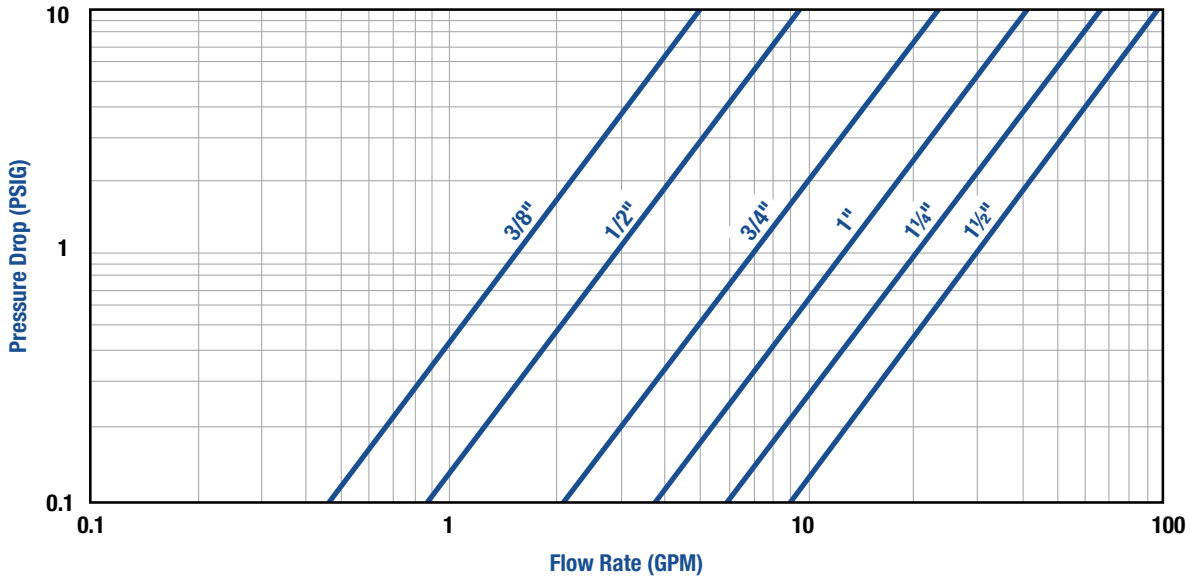
Part	Material
Body	Cast Iron A126-B
Cover	Cast Iron A126-B
Screen[1]	304 SS
Plug	Cast Iron A126-B
Gasket[1]	Graphite
Bolt/Stud[2]	A307-B
Nut[2]	A563

Dimensions shown are subject to change. Consult factory for certified drawings when required. | [1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

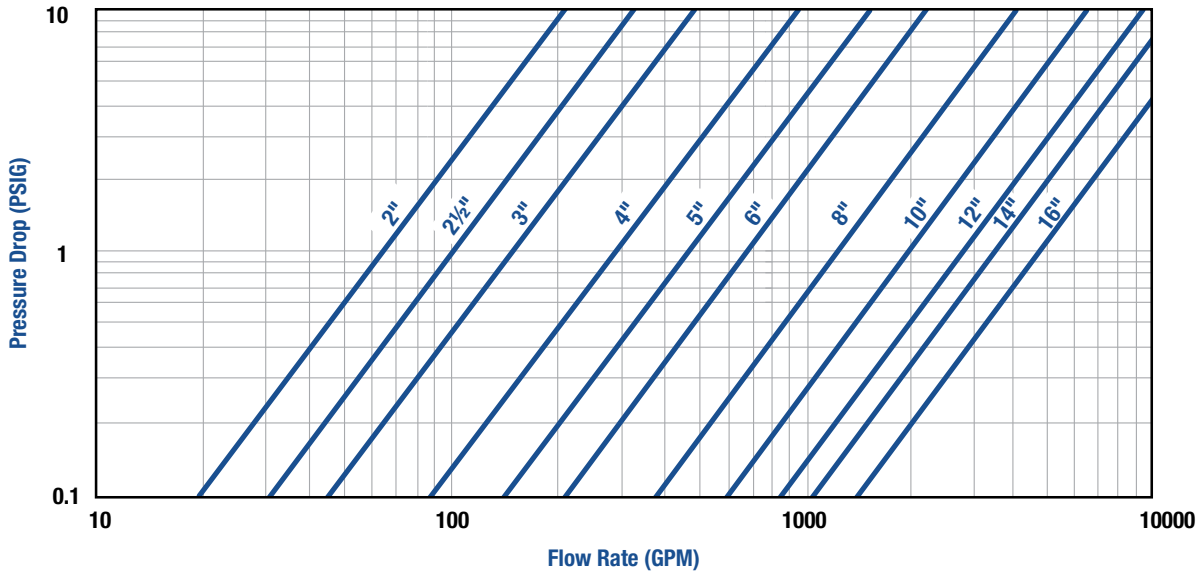
Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*

(Sizes 3/8" to 1½")



(Sizes 2" to 16")



* For Gas, Steam or Air service, consult factory.

Open Area Ratios

Standard Perforated Screen*

Bronze | 125Y1 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
⅜"	20	49	0.19	3.8	1.88	9.9
½"	20	49	0.30	3.8	1.88	6.2
¾"	20	49	0.53	5.5	2.71	5.1
1"	20	49	0.86	7.0	3.45	4.0
1¼"	20	49	1.50	11.1	5.42	3.6
1½"	20	49	2.04	15.2	7.46	3.7
2"	20	49	3.36	26.1	12.81	3.8
2½"	20	49	4.79	36.6	17.95	3.7
3"	20	49	7.39	49.0	24.00	3.2

Cast Iron | 125Y2 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
⅜"	20	49	0.19	3.8	1.88	9.9
½"	20	49	0.30	3.8	1.88	6.2
¾"	20	49	0.53	5.5	2.71	5.1
1"	20	49	0.86	7.0	3.45	4.0
1¼"	20	49	1.50	11.1	5.42	3.6
1½"	20	49	2.04	15.2	7.46	3.7
2"	20	49	3.36	26.1	12.81	3.8
2½"	20	49	4.79	36.6	17.95	3.7
3"	20	49	7.39	49.0	24.00	3.2

OAR = Free Screen Area / Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.
* Consult factory.

150Y Series | Y-Strainers

Bronze, Carbon & Stainless Steel Body | Flanged Ends

Sizes
½" to 12"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 750°F
(390°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 150 rated strainers
- RF, FF (Bronze only) and Buttweld connections designed in accordance with ASME B16.5, B16.24, B16.25 and B16.34
- All sizes complete with Bolted Cover
- Cover flange (CS, SS) in accordance with ASME Section VIII, Div 1 Appendix II and/or ANSI 16.5.
- One piece cast body
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings
- Drain/Blow-off connection furnished with plug

Applicable Codes (designed in accordance with)

- ASME B16.5
- ASME B16.25
- ASME B16.24
- ASME B16.34

Models

- 150Y2F – Carbon, Stainless or Bronze Flanged with Bolted Cover
- 150Y2B – Carbon or Stainless Buttweld with Bolted Cover

Options

- Other perforated screens and mesh liners
- Other drain connections and gasket materials
- Oxygen cleaning
- Special internal/external coatings and linings
- Contact factory for other options

150Y Series Ordering Code

1				–	2						3	4	5	6
Inlet Size					Model						Body	Perf	Mesh	Optional
0	2	0	0	–	1	5	0	Y	2	F	T	– B	_	_

1	Inlet Size				
0050	½"	0200	2"	0600	6"
0075	¾"	0250	2½"	0800	8"
0100	1"	0300	3"	1000	10"
0125	1¼"	0400	4"	1200	12"
0150	1½"	0500	5"		

2	Model
150Y2F	CS, SS or BR, Flanged with Bolted Cover

3	Body Material		
C	Carbon Steel	B	Bronze
T	Stainless Steel		

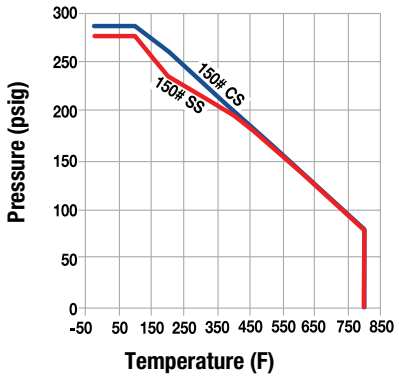
4	Perf[1] (304SS Material[3])				
A	No Perf	2	1/16"	7	7/32"
1	1/32"	3	3/32"	8	1/4"
B	3/64	5	5/32"	9	3/8"
4	1/8"	6	3/16"		

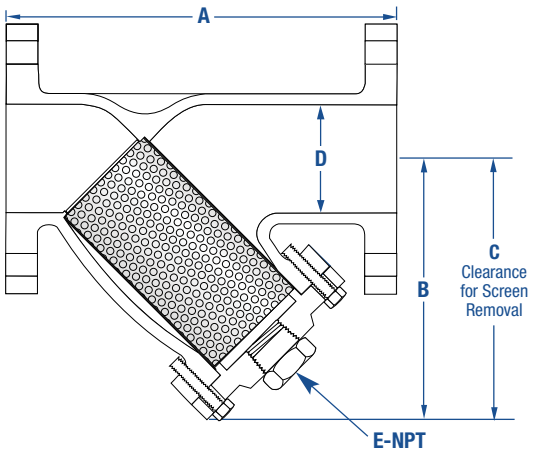
5	Mesh[2] (Leave Blank if not required)				
1	10	4	40	7	80
2	20	5	50	8	100
3	30	6	60	9	120

6	Optional (Leave Blank if not required)		
D	Special Drain Size	N	Nace MR01-75
F	Silicon Free	X	Oxygen Cleaning
G	Special Gaskets	Y	Other / Multiple Specials
T	Special Testing		

1. Standard Screens: ALL 1/2"-11/2"—1/32" perf, ALL 2"-3"—3/64" per, ALL >3"—1/8" perf.
2. For other screen material, contact factory.

Pressure / Temperature Chart
ASME B16.34





Description

SSI manufactures carbon steel y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
½" to 12"

Pressure
285 PSIG (19.7 BARG)

Temperature
750º F (390º C)

End Connections
RF Flanged

Screen Openings
½"–1½" | 1/32" Perf | 304 SS
2"–3" | 3/64" Perf | 304 SS
4"–12" | 1/8" Perf | 304 SS

Features

- One piece cast body
- ASME Class 150 rated strainers
- Upper and lower machined seats
- All sizes complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

CRN

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
½"	15	6.00	152	3.88	99	–	–	0.50	13	0.25	8	5.5	2.5
¾"	20	7.00	178	4.25	108	–	–	0.75	19	0.38	10	8	3.7
1"	25	7.50	191	4.75	121	5.91	150	1	25	0.5	15	10	4.6
1¼"	32	8.75	222	5.56	141	5.91	150	1.25	32	0.5	15	16	7.3
1½	40	9.00	229	5.63	143	6.00	152	1.5	38	0.5	15	18	8.2
2"	50	8.63	219	5.90	150	7.40	188	2	51	0.5	15	20	9.1
2½"	65	10.25	260	7.50	191	10.00	253	2.5	64	0.75	20	27	12.3
3"	76	11.63	295	7.69	195	11.00	279	3	76	1	25	41	18.6
4"	100	14.38	365	9.13	232	13.28	337	4	102	1.5	40	63	28.6
5"	125	17.63	448	11.00	279	15.50	394	5	127	2	50	99	45
6"	150	18.63	473	13.00	330	19.09	485	6	152	2	50	133	60.5
8"	200	24.38	619	15.31	389	22.16	563	8	203	2	50	222	100.9
10"	250	26.06	662	19.13	486	27.44	697	10	254	2	50	409	185.9
12"	300	30.38	772	22.00	559	32.38	822	12	305	2	50	605	275

Materials

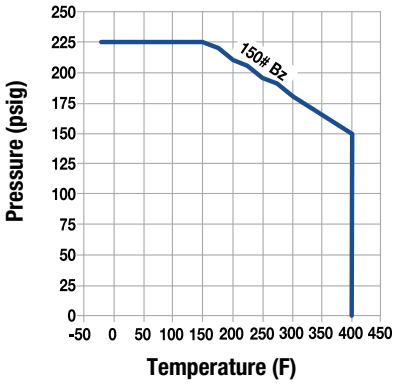
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	A182-316
Gasket[1]	Teflon / Spiral Wound 304 / GR[3]	Teflon / Spiral Wound 304 / GR[3]
Stud	A193-B7	A193-B8-1
Nut[2]	A194-2H	A194-8

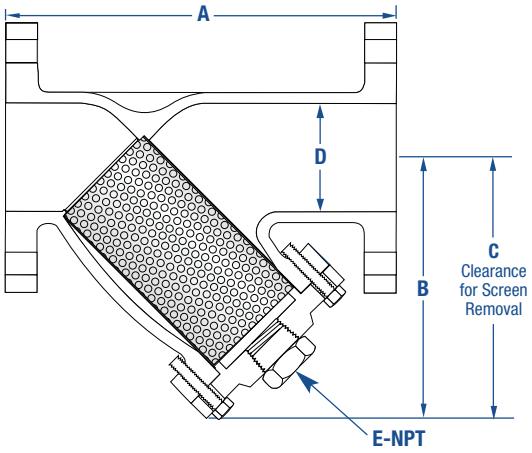
Dimensions shown are subject to change. Consult factory for certified drawings when required.
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] Teflon gasket for sizes 4" and below only

150Y2 Series | Y-Strainers

Bronze | Flanged Ends

Pressure / Temperature Chart
ASME B16.24





Description

SSI manufactures bronze y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI bronze y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

2" to 8"

Pressure

285 PSIG (19.7 BARG)

Temperature

750º F (390º C)

End Connections

RF Flanged

Screen Openings

2"–3" | 3/64" Perf | 304 SS

4"–8" | 1/8" Perf | 304 SS

Features

- One piece cast body
- ASME Class 150 rated strainers
- Upper and lower machined seats
- All sizes complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	8.63	219	4.88	124	7.50	191	2	51	0.5	15	20	9
2½"	65	10.25	260	7.50	191	10.50	267	2.5	64	1	25	32	15
3"	80	11.63	295	7.75	197	10.88	276	3	76	1	25	36	16
4"	100	14.38	365	9.13	232	13.00	330	4	102	1	25	61	28
5"	125	17.63	448	11.00	279	17.00	432	5	127	1.25	32	110	50
6"	150	18.63	473	13.38	340	18.38	467	6	152	1.5	40	160	73
8"	200	24.38	619	14.63	389	21.63	549	8	203	1.5	40	210	95

Materials

Part	Material
Body	B62
Cover	B62
Screen[1]	304 SS
Plug[2]	A105
Gasket[1]	Teflon
Bolt/Stud[2]	B16
Nut[2]	B16

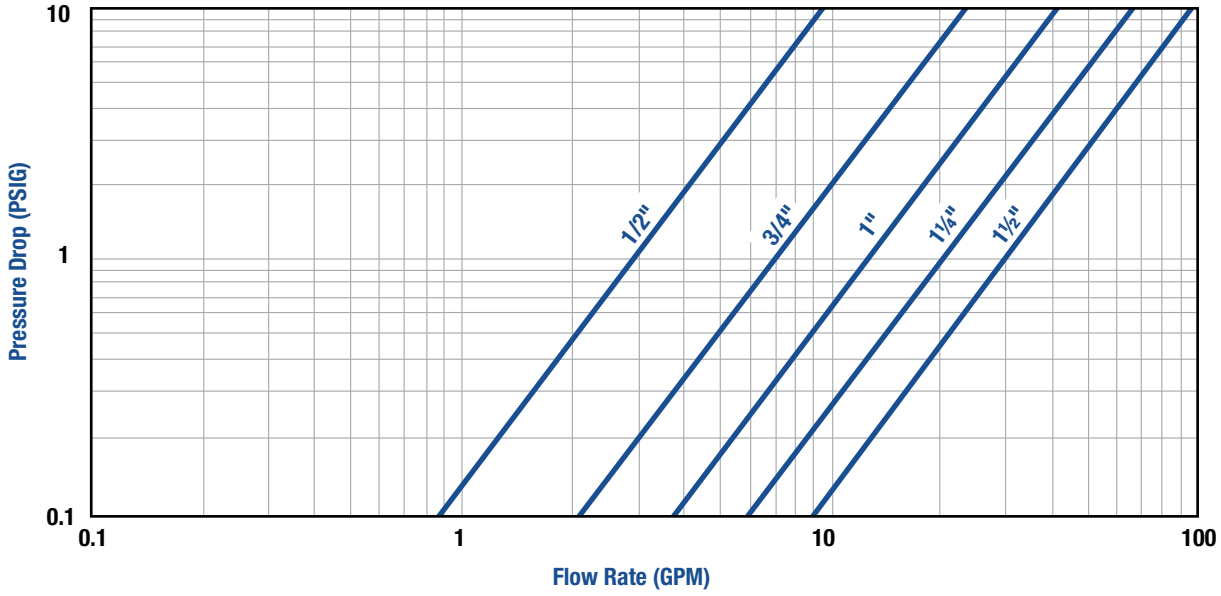
Dimensions shown are subject to change. Consult factory for certified drawings when required.

[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

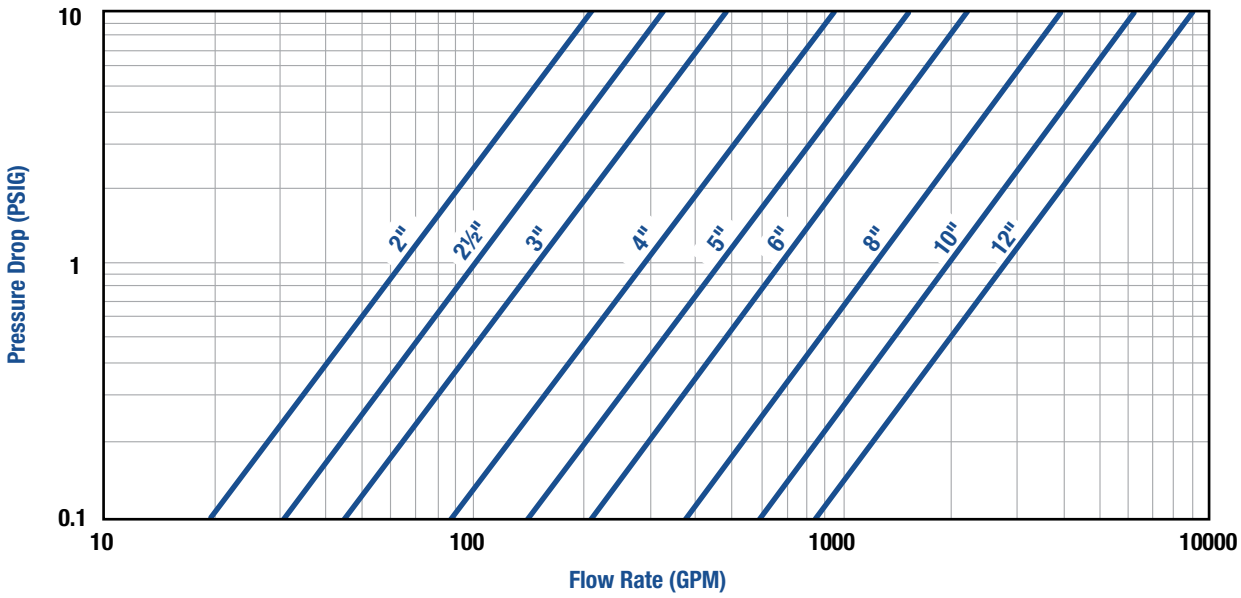
Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*

(Sizes 1/2" to 1½")



(Sizes 2" to 12")



* For Gas, Steam or Air service, consult factory.

Open Area Ratios

Standard Perforated Screen*

Bronze | 150Y2 Series | Y-Strainer						
Size	Perf. Diameter	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	21.1	21.1	2.4
2½"	3/64	36	4.91	52.3	52.3	3.8
3"	3/64	36	7.07	56.2	56.2	2.9
4"	1/8	40	12.57	100.1	100.1	3.2
5"	1/8	40	19.63	*	*	*
6"	1/8	40	28.27	199.6	199.6	2.8
8"	1/8	40	50.27	306.4	306.4	2.4

Carbon & Stainless Steel | 150Y2 Series | Y-Strainer						
Size	Perf. Diameter	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	1/32	28	0.20	5.4	1.52	7.7
¾"	1/32	28	0.44	8.5	2.37	5.4
1"	1/32	28	0.79	12.4	3.47	4.4
1¼"	1/32	28	1.23	22.8	6.39	5.2
1½"	1/32	28	1.77	22.8	6.39	3.6
2"	3/64	36	3.14	27.1	9.75	3.1
2½"	3/64	36	4.91	50.5	18.17	3.7
3"	3/64	36	7.07	65.9	23.71	3.4
4"	1/8	40	12.57	86.9	34.74	2.8
5"	1/8	40	19.63	148.7	59.47	3.0
6"	1/8	40	28.27	214.4	85.74	3.0
8"	1/8	40	50.27	329.3	131.71	2.6
10"	1/8	40	78.54	489.9	195.96	2.5
12"	1/8	40	113.10	710.9	284.36	2.5

OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.
* Consult factory.

Sizes
¼" to 12"

Pressure
up to 500 PSIG
(34.5 BARG)

Temperature
up to 450°F
(232°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 250 rated strainers
- NPT and FF connections designed in accordancewith ASME B16.1, B16.15 and B16.4
- One piece cast body
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings.
- Drain/Blow-off connection furnished with plug

Applicable Codes (designed in accordance with)

- ASME B16.1
- ASME B16.4
- ASME B16.15

Models

- 250Y1T - Bronze or Cast Iron, NPT, Threaded Cover
- 250Y1P - Bronze or Cast Iron, BSPT, Threaded cover
- 250Y2F - Ductile Iron, Flanged, Bolted Cover

Options

- Other perforated screens and mesh liners
- Other drain connections and gasket materials
- Oxygen cleaning
- Special internal/external coatings and linings
- Contact factory for other options

250Y Series Ordering Code

1 Inlet Size					2 Model							3 Body		4 Perf	5 Mesh	6 Optional
0	4	0	0	–	2	5	0	Y	2	F		D	–	4	_	_

1	Inlet Size				
0038	⅜"	**0200**	2"	**0800**	8"
0050	½"	**0250**	2½"	**1000**	10"
0075	¾"	**0300**	3"	**1200**	12"
0100	1"	**0400**	4"	**1400**	14"
0125	1¼"	**0500**	5"		
0150	1½"	**0600**	6"		

2	Model		
250Y1T	BR or CI, NPT with Threaded Cover	**250Y2F**	DI, Flanged with Bolted Cover

3	Body Material		
I	Cast Iron	**D**	Ductile Iron
B	Bronze		

4	Perf[1] (304SS Material[3])				
A	No Perf	**2**	1/16"	**7**	7/32"
1	1/32"	**3**	3/32"	**8**	1/4"
B	3/64	**5**	5/32"	**9**	3/8"
4	1/8"	**6**	3/16"		

5	Mesh[1,2] (Leave Blank if not required)				
1	10	**4**	40	**7**	80
2	20	**5**	50	**8**	100
3	30	**6**	60	**9**	120

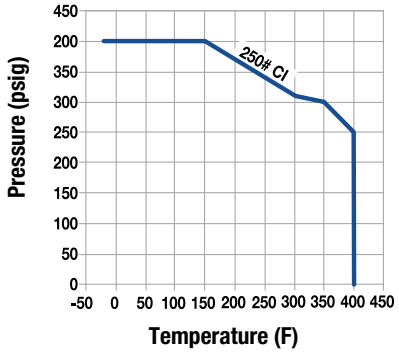
6	Optional (Leave Blank if not required)		
D	Special Drain Size	**T**	Special Testing
F	Silicon Free	**X**	Oxygen Cleaning
G	Special Gaskets	**Y**	Other / Multiple Specials

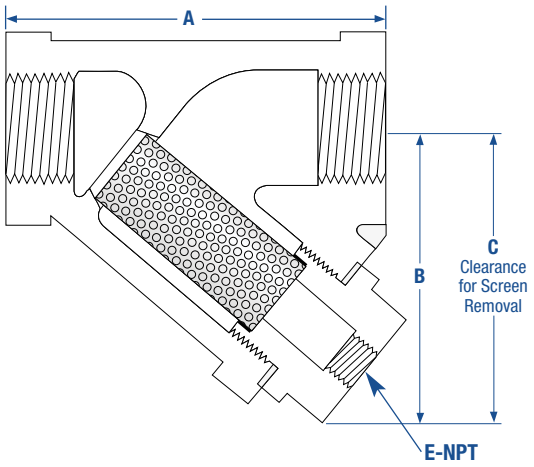
1. Standard Screens: Y1 Cast Iron 1/4"-2"—20 mesh, Y1 Cast Iron 2-1⁄2"-3"—3/64" perf, Y1 Bronze 1/2"-1"—30 mesh, Y1 Bronze 1-1⁄4"-3"—20 mesh, Y2 Ductile Iron 2"-3"—3/64" perf, Y2 Ductile Iron 4"-12"—1/8" perf.3.
2. For other screen material, contact factory.

250Y1 Series | Y-Strainers

Cast Iron Body | NPT Ends

Pressure / Temperature Chart
ASME B16.4





Description

SSI manufactures ductile iron y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI ductile iron y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

¼" to 3"

Pressure

500 PSIG (34.5 BARG)

Temperature

450° F (232° C)

End Connections

Threaded (NPT)

Screen Openings

¼"–2" | 20 Mesh | 304 SS

2½"–3" | 3/64" Perf | 304 SS

Features

- One piece cast body
- ASME Class 250 rated strainers
- Upper and lower machined seats
- All sizes complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

CRN

Dimensions

Size		A		B		C		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
¼"	8	3.19	81	2.00	50	3.13	80	0.25	8	1.5	0.7
⅜"	10	3.19	81	2.00	50	3.13	80	0.25	8	1.5	0.7
½"	15	3.19	81	2.00	50	3.13	80	0.25	8	1.5	0.7
¾"	20	3.75	95	2.69	68	3.69	94	0.38	10	2.5	0.5
1"	25	4.00	102	3.00	62	3.69	94	0.38	10	3.0	1.4
1¼"	32	5.00	127	3.44	87	5.06	129	0.75	20	6.0	1.4
1½"	40	5.75	146	3.78	96	5.75	146	0.75	20	8.0	3.6
2"	50	7.00	178	4.34	110	7.25	184	1.00	25	14.0	3.6
2½"	65	9.25	235	6.09	155	8.75	222	1.50	40	29.0	10.0
3"	80	10.00	254	7.41	188	9.00	229	1.50	40	38.0	13.6

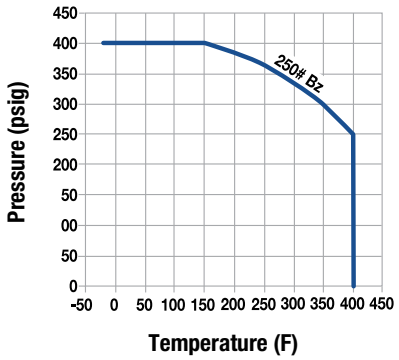
Materials

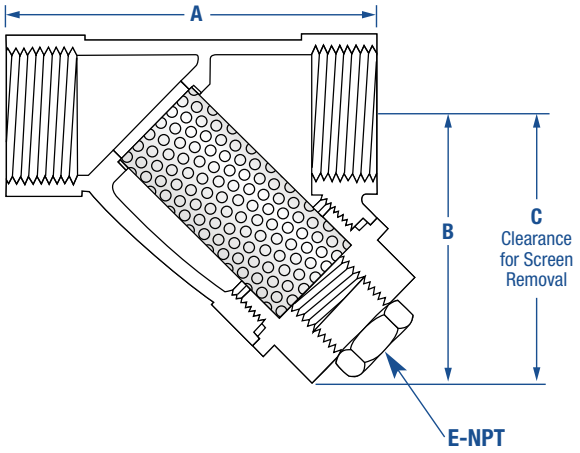
Part	Material
Body	A126-B
Cap/Cover	A126-B
Screen[1]	304 SS
Plug[2]	A126-B
Gasket[1]	Graphite

Dimensions shown are subject to change. Consult factory for certified drawings when required.

[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

Pressure / Temperature Chart
ASME B16.15





Description

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Sizes
½" to 3"

Pressure
500 PSIG (34.5 BARG)

Temperature
450° F (232° C)

End Connections
Threaded (NPT)

Screen Openings
½"–1" | 30 Mesh | 304 SS
1¼"–3" | 20 Mesh | 304 SS

Features

- One piece cast body
- ASME Class 250 rated strainers
- Upper and lower machined seats
- All sizes complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
½"	15	2.94	75	2.13	54	3.50	89	0.38	10	0.9	0.4
¾"	20	3.38	86	2.38	60	4.50	114	0.38	10	1.3	0.6
1"	25	4.06	103	3.00	76	5.00	127	0.75	20	2.1	1.0
1¼"	32	4.94	125	3.44	87	5.75	146	0.75	20	3.0	1.4
1½	40	5.75	146	3.81	97	6.38	162	0.75	20	4.0	1.8
2"	50	6.69	170	4.56	116	9.06	230	0.75	20	7.1	3.2
2½"	64	7.50	191	4.88	124	10.00	254	1.25	32	10.1	4.6
3"	76	8.50	216	5.50	140	10.38	264	1.25	32	13.3	6.1

Materials

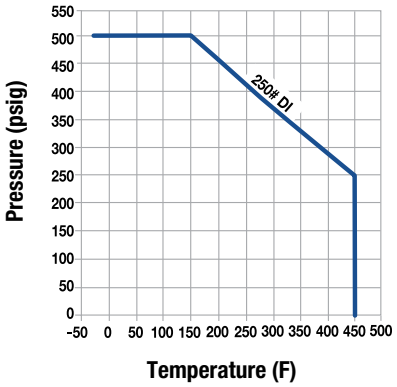
Part	Material
Body	B584
Cover	B584
Screen[1]	304 SS
Plug	B584
Gasket[1]	Silicone

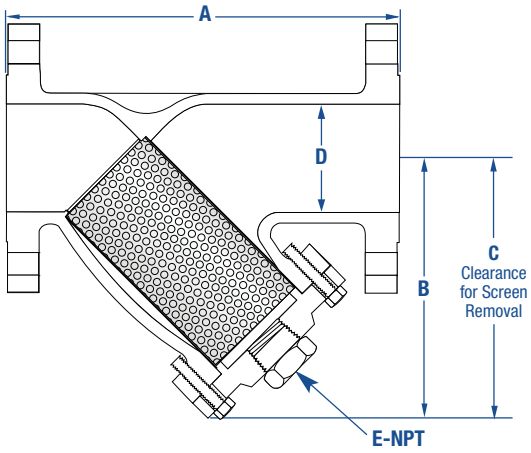
Dimensions shown are subject to change. Consult factory for certified drawings when required.
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

250Y2 Series | Y-Strainers

Ductile Iron | Flanged Ends

Pressure / Temperature Chart
ASME B16.1





Description

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Sizes

2" to 12"

Pressure

500 PSIG (34.5 BARG)

Temperature

450° F (232° C)

End Connections

RF Flanged

Screen Openings

2"–3" | 3/64" Perf | 304 SS

4"–12" | 1/8" Perf | 304 SS

Features

- One piece cast body
- ASME Class 250 rated strainers
- Upper and lower machined seats
- All sizes complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	8.88	226	5.75	146	9.13	232	2	50	0.5	15	28	13
2½"	65	11.31	287	6.88	175	9.88	251	2.5	65	1	25	38	17
3"	76	12.00	305	7.81	198	11.25	286	3	76	1	25	54	24
4"	100	14.50	368	9.13	232	15.00	381	4	100	1	25	110	50
5"	125	17.38	441	11.25	286	19.00	483	5	125	1.25	32	160	73
6"	150	19.50	495	12.00	305	22.75	578	6	150	1.5	40	224	102
8"	200	21.94	557	15.81	402	27.75	705	8	200	1.5	40	468	212
10"	250	27.25	692	18.63	473	29.75	756	10	250	2	50	590	268
12"	300	31.44	799	21.81	554	35.00	889	12	300	2	50	890	404

Materials

Part	Material
Body	A536
Cap	A536
Screen[1]	304 SS
Plug	A126-B
Gasket[1]	Graphite
Bolt/Stud[2]	A307-B
Nut[2]	A563

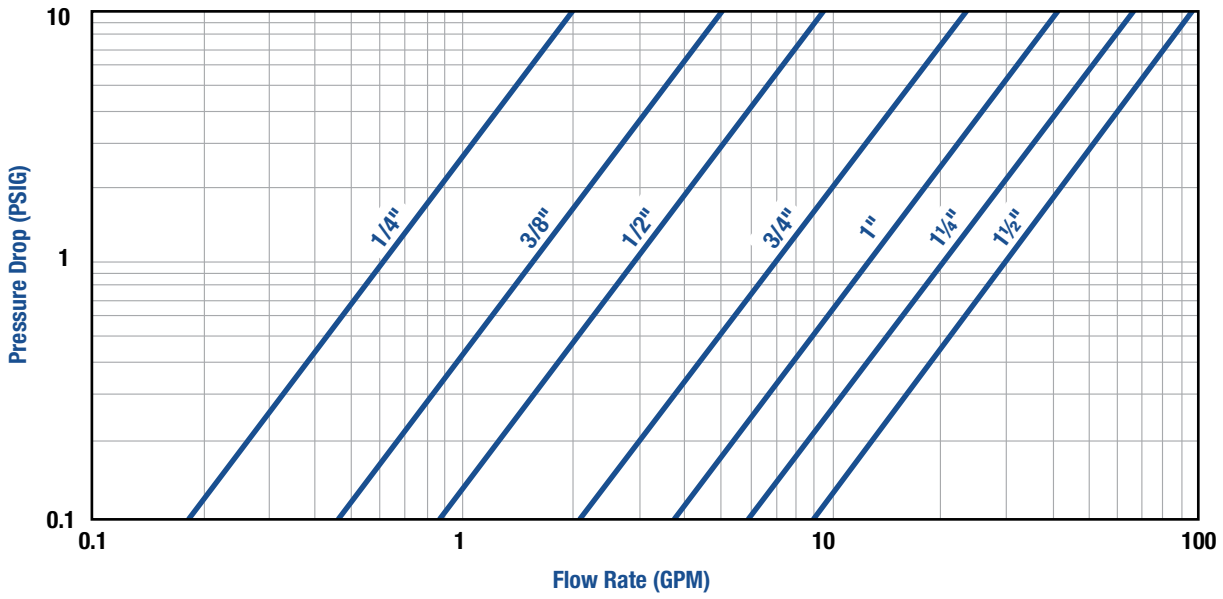
Dimensions shown are subject to change. Consult factory for certified drawings when required.

[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

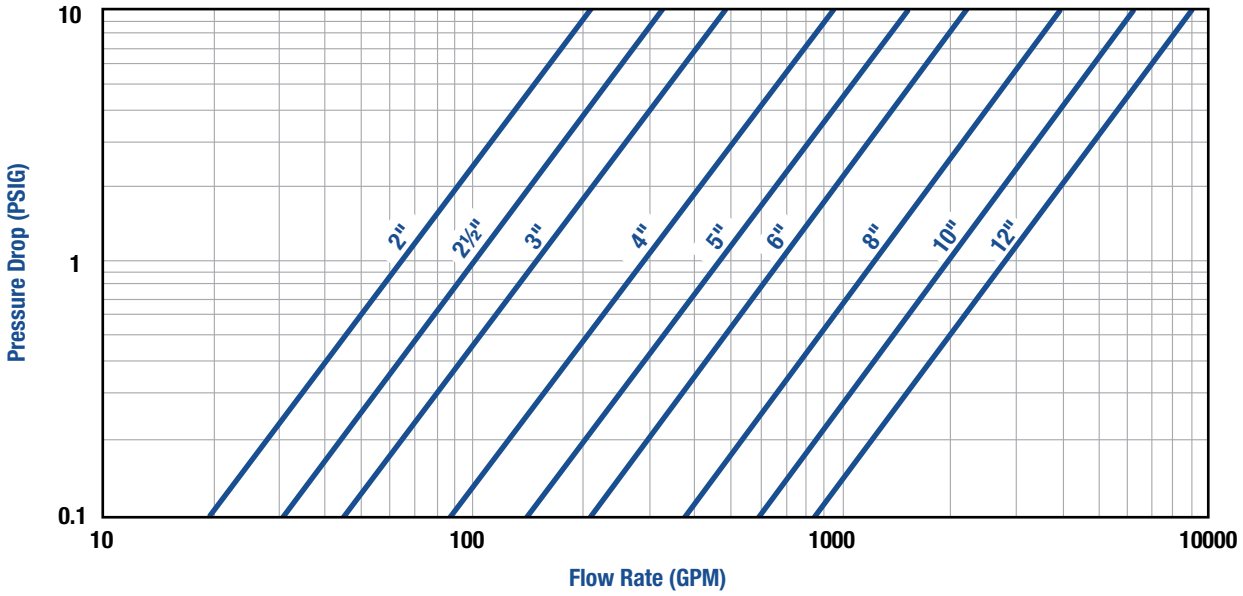
Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*

(Sizes 1/4" to 1½")



(Sizes 2" to 12")



* For Gas, Steam or Air service, consult factory.

Open Area Ratios

Standard Perforated Screen*

Bronze | 250Y1 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	30	45	0.30	2.9	1.28	4.2
¾"	30	45	0.53	5.6	2.52	4.7
1"	30	45	0.86	9.0	4.03	4.7
1¼"	20	49	1.50	15.1	7.38	4.9
1½"	20	49	2.04	21.7	10.64	5.2
2"	20	49	3.36	29.2	14.31	4.3
2½"	20	49	4.79	35.9	17.61	3.7
3"	20	49	7.39	49.9	24.45	3.3

Cast Iron | 250Y1 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
¼"	20	49	0.30	3.7	1.80	5.9
⅜"	20	49	0.30	3.7	1.80	5.9
½"	20	49	0.30	3.6	1.74	5.7
¾"	20	49	0.53	6.3	3.11	5.8
1"	20	49	0.86	7.9	3.85	4.5
1¼"	20	49	1.50	13.0	6.35	4.2
1½"	20	49	2.04	16.6	8.13	4.0
2"	20	49	3.36	28.3	13.85	4.1
2½"	3/64	36	4.79	44.7	16.08	3.4
3"	3/64	36	7.39	43.2	15.55	2.1

Ductile Iron | 250Y2 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	29.4	10.58	3.4
2½"	3/64	36	4.91	46.0	16.56	3.4
3"	3/64	36	7.07	57.0	20.51	2.9
4"	1/8	40	12.57	99.0	39.59	3.2
5"	1/8	40	19.63	146.5	58.58	3.0
6"	1/8	40	28.27	174.0	69.60	2.5
8"	1/8	40	50.27	327.3	130.91	2.6
10"	1/8	40	78.54	495.2	198.08	2.5
12"	1/8	40	113.10	645.0	257.99	2.3

OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.
* Consult factory.

Sizes
½" to 12"

Pressure
up to 740 PSIG
(51 BARG)

Temperature
up to 800°F
(427°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 300 rated strainers
- NPT, RF, Socketweld and Buttweld connectionsdesigned in accordance with ASME B16.5, B16.25, B16.11 and B16.34
- All Flanged connections complete with Bolted Cover
- Cover flange (CS, SS) in accordance with ASME Section VIII, Div 1 Appendix II and/or ANSI 16.5
- One piece cast body - Investment cast on NPT and socketweld versions
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings
- Drain/Blow-off connection furnished with plug

Applicable Codes (designed in accordance with)

- ASME B16.11
- ASME B16.5
- ASME B16.25
- ASME B16.34

Models

- 300Y1T – Carbon or Stainless Steel, NPT with Threaded Cover
- 300Y1W – Carbon or Stainless Steel, Socketweld with Threaded Cover
- 300Y2F – Carbon or Stainless Steel, Flanged with Bolted Cover
- 300Y2B – Carbon or Stainless Steel, Buttweld with Bolted Cover

Options

- Other perforated screens and mesh liners
- Other drain connections and gasket materials
- Oxygen cleaning
- Special internal/external coatings and linings
- Contact factory for other options

Canadian Registration - See appropriate Model pages

300Y Series Ordering Code

1	2	3	4	5	6
Inlet Size	Model	Body	Perf	Mesh	Optional
0 2 0 0	– 3 0 0 Y 1 W	C	– 6	_	_

1	Inlet Size				
0050	½"	0200	2"	0800	8"
0075	¾"	0250	2½"	1000	10"
0100	1"	0300	3"	1200	12"
0125	1¼"	0400	4"		
0150	1½"	0600	6"		

2	Model		
300Y1T	CS or SS, NPT with Threaded Cover	300Y2F	CS or SS, Flanged with Bolted Cover
300Y1W	CS or SS, Socketweld with Threaded Cover	300Y2B[1]	CS or SS, Buttweld with Bolted Cover

3	Body Material		
C	Carbon Steel	T	Stainless Steel

4	Perf[2] (304SS Material[3])				
A	No Perf	2	1/16"	7	7/32"
1	1/32"	3	3/32"	8	1/4"
B	3/64	5	5/32"	9	3/8"
4	1/8"	6	3/16"		

5	Mesh[3] (Leave Blank if not required)				
1	10	4	40	7	80
2	20	5	50	8	100
3	30	6	60	9	120

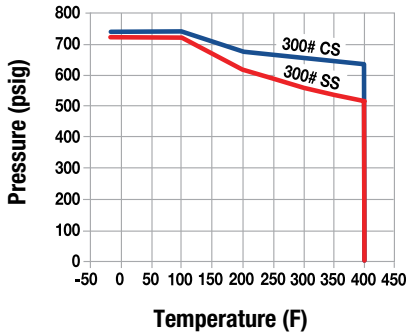
6	Optional (Leave Blank if not required)		
D	Special Drain Size	N	Nace MR01-75
F	Silicon Free	X	Oxygen Cleaning
G	Special Gaskets	Y	Other / Multiple Specials
T	Special Testing		

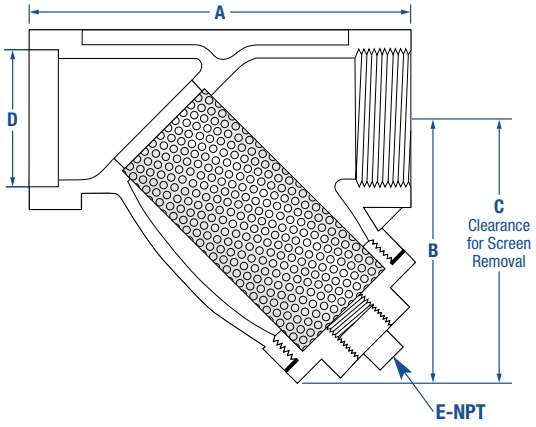
1. For Buttweld connections please specify mating pipe schedule.
2. Standard Screens: Y1<2"—1/32" perf, Y1 >2"—3/64" perf, Y2<11/2"—1/32" perf, Y2 2"-3"—3/64" perf, Y2 >3"—1/8" perf.
3. For other screen material, contact factory.

300Y1 Series | Y-Strainers

Carbon Steel Body & Stainless Steel Body | NPT & Socketweld Ends

Pressure / Temperature Chart ASME B16.34





Description

SSI manufactures carbon steel y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

½" to 3"

Pressure

740 PSIG (51 BARG)

Temperature

800° F (427° C)

End Connections

Threaded (NPT)
Socketweld

Screen Openings

½"–2" | 1/32" Perf | 304 SS
2½"–3" | 3/64" Perf | 304 SS

Features

- One piece cast body
- Investment cast on NPT and socketweld versions
- ASME Class 300 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
½"	15	2.53	65	1.63	41	2.38	60	0.855	21.72	0.25	6	0.50	0.22
¾"	20	3.19	80	2.00	51	3.19	81	1.065	27.05	0.25	6	0.82	0.37
1"	25	3.56	90	2.38	66	4.00	102	1.330	33.78	0.5	15	1.50	0.68
1¼"	32	4.13	105	2.88	73	4.50	114	1.675	42.55	0.5	15	2.0	0.90
1½"	40	4.75	119	3.25	83	4.75	121	1.915	48.64	0.5	15	2.8	1.27
2"	50	5.44	138	3.81	96	5.75	146	2.406	61.11	0.5	15	4.3	1.95
2½"	65	7.25	184	4.81	124	7.25	184	2.906	73.81	0.5	15	10	4.54
3"	76	8.06	205	5.44	138	7.50	191	3.535	89.79	0.5	15	14	6.35

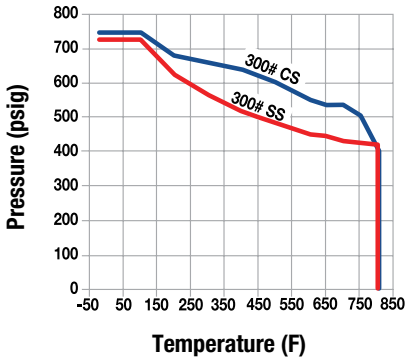
Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cap	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug	A105	A182-316
Gasket[1]	Teflon	Teflon

Dimensions shown are subject to change. Consult factory for certified drawings when required.

[1] Recommended Spare Parts

Pressure / Temperature Chart
ASME B16.34



Description

SSI manufactures carbon steel y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

½" to 12"

Pressure

740 PSIG (51 BARG)

Temperature

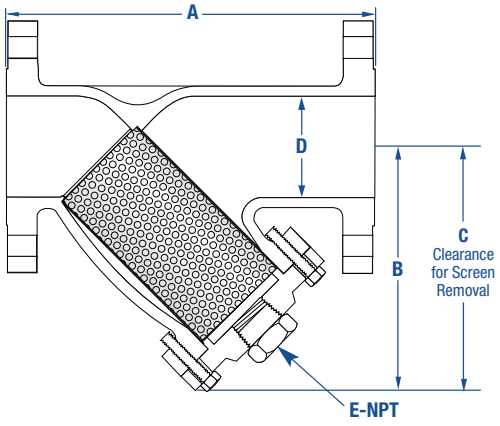
800° F (427° C)

End Connections

Flanged
Buttweld[3]

Screen Openings

½"–1½" | 1/32" Perf | 304 SS
2"–3" | 3/64" Perf | 304 SS
4"–12" | 1/8" Perf | 304 SS



Features

- One piece cast body
- Investment cast on NPT and socketweld versions
- ASME Class 300 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

CRN

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
½"	15	6.50	165	3.88	99	5.75	146	0.5	13	0.25	6	8	3.6
¾"	20	7.75	197	4.25	108	6.75	171	0.75	19	0.38	10	14	6.4
1"	25	7.88	200	4.75	121	8.13	206	1	25	0.5	13	15	6.8
1½"	40	10.50	267	5.63	143	10.25	260	1.5	38	0.5	13	32	15.0
2"	50	9.31	237	5.91	150	8.00	203	2	51	0.5	13	25	11.4
2½"	65	11.18	284	7.50	191	10.25	260	2.5	64	1.0	25	38	17.3
3"	76	12.63	320	7.68	195	11.50	292	3	76	1.0	25	56	25.5
4"	100	14.63	372	9.13	232	13.63	346	4	102	1.5	38	90	40.9
5"	125	18.50	470	11.00	279	21.50	546	5	127	2.0	50	180	82
6"	150	19.75	502	13.00	330	21.20	546	6	152	2.0	50	203	92.3
8"	200	25.00	635	15.31	389	22.00	559	8	203	2.0	50	323	146.8
10"	250	27.63	702	19.13	486	30.00	762	10	254	2.0	50	571	259.6
12"	300	32.88	835	22.00	559	34.38	873	12	305	2.0	50	893	405.9

Materials

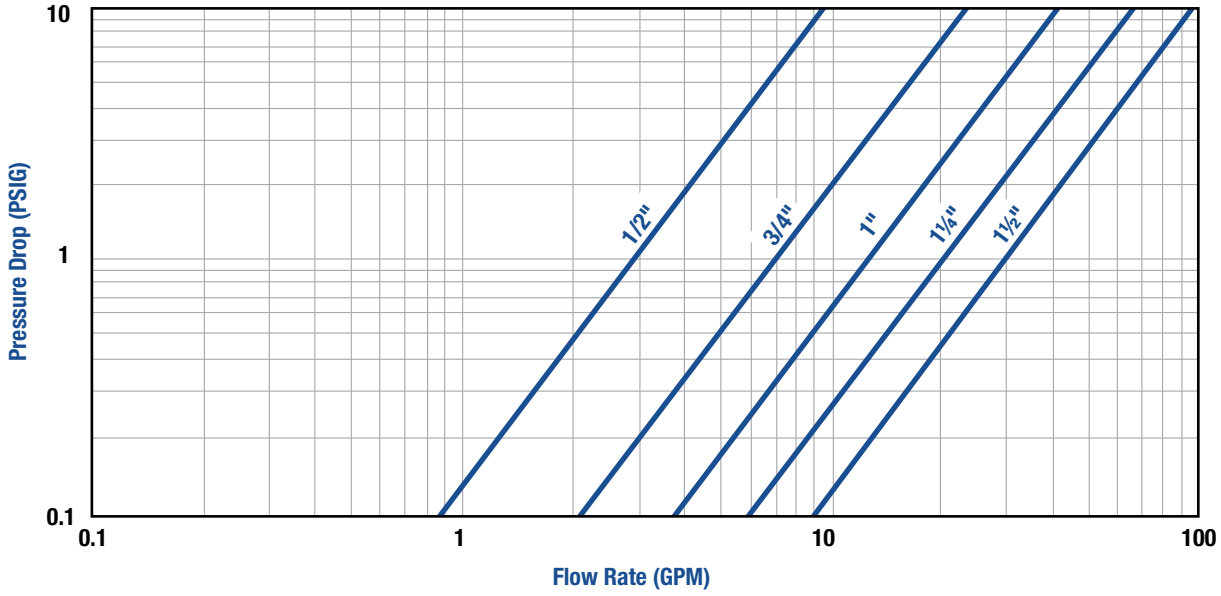
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	A182-316
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound
Stud	A193-B7	A193-B8-1
Nut[2]	A194-2H	A194-8

Dimensions shown are subject to change. Consult factory for certified drawings when required.
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] For Buttweld connections please specify mating pipe schedule

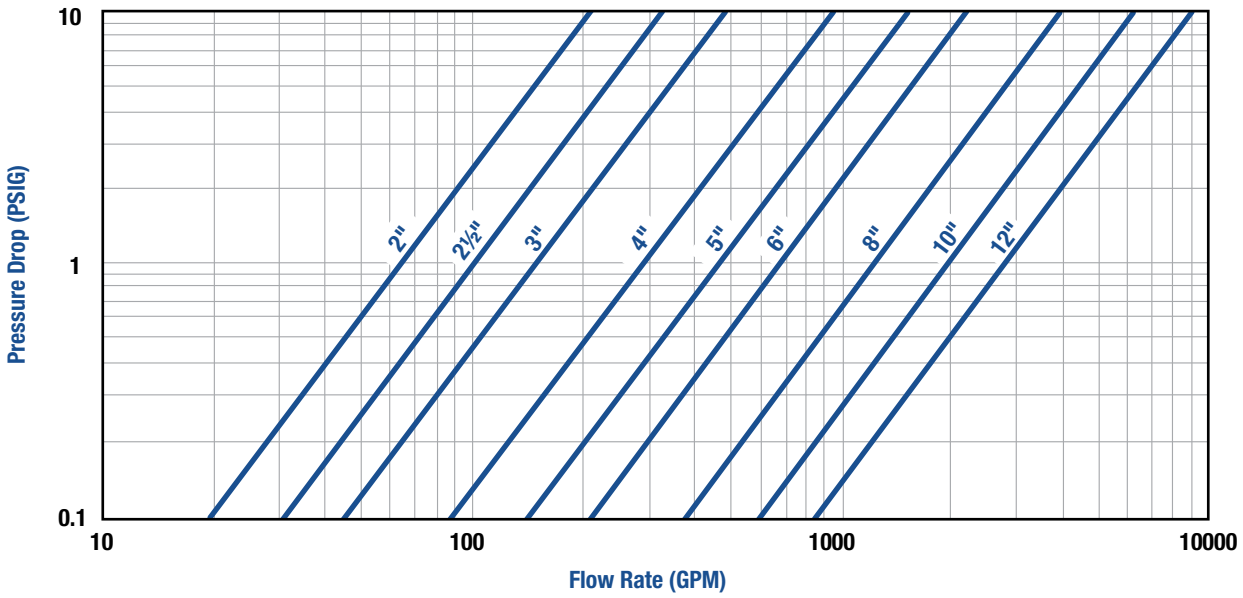
Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*

(Sizes 1/2" to 1½")



(Sizes 2" to 12")



* For Gas, Steam or Air service, consult factory.

Open Area Ratios

Standard Perforated Screen*

Carbon & Stainless Steel | 250Y1 Series | Y-Strainer						
Size	Perf. Diameter (mm^2)	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	1/32	28	0.30	3.2	1.13	3.7
¾"	1/32	28	0.53	5.1	1.80	3.4
1"	1/32	28	0.86	8.1	2.82	3.3
1¼"	1/32	28	1.50	10.2	3.56	2.4
1½"	1/32	28	2.04	14.6	5.10	2.5
2"	1/32	28	3.36	21.2	7.41	2.2
2½"	3/64	36	4.79	37.0	12.94	2.7
3"	3/64	36	7.39	47.6	16.66	2.3

Carbon & Stainless Steel | 250Y2 Series | Y-Strainer						
Size	Perf. Diameter (mm^2)	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	1/32	28	0.20	6.8	1.91	9.7
¾"	1/32	28	0.44	10.4	2.92	6.6
1"	1/32	28	0.79	15.3	4.27	5.4
1½"	1/32	28	1.77	32.5	9.11	5.2
2"	3/64	36	3.14	28.7	10.35	3.3
2½"	3/64	36	4.91	48.1	17.32	3.5
3"	3/64	36	7.07	71.2	25.62	3.6
4"	1/8	40	12.57	106.3	42.54	3.4
6"	1/8	40	28.27	233.2	93.29	3.3
8"	1/8	40	50.27	340.3	136.14	2.7
10"	1/8	40	78.54	489.9	195.96	2.5
12"	1/8	40	113.10	710.9	284.36	2.5

OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.
* Consult factory.

600Y Series | Y-Strainers

Carbon & Stainless Steel Body | NPT, Flanged, Socketweld, Ring Joint & Buttweld Ends

Sizes
½" to 12"

Pressure
up to 1480 PSIG
(102 BARG)

Temperature
up to 800°F
(427°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 600 rated strainers
- NPT, RF or RTJ, Socketweld and Buttweld connections designed in accordance with ASME B16.11, B16.25, B16.34 and B16.5
- SSI Exclusive -Body blow down flange and cover flange dimensions are in dimensional accordance with ASME B16.5
- All Flanged connections complete with Bolted Cover
- One piece cast body
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings.
- Drain/Blow-off connection furnished with plug

Applicable Codes (designed in accordance with)

- ASME B16.1
- ASME B16.4
- ASME B16.15

Models

- 600Y1T* – NPT with Threaded Cover
- 600Y1W* – Socketweld with Threaded Cover
- 600Y2F – Flanged with Bolted Cover
- 600Y2J – Ring Joint with Bolted Cover
- 600Y2B – Buttweld with Bolted Cover

*Carbon Steel, Stainless Steel, Low Carbon Steel or Alloy 20

Options

- Low Carbon Steel and Alloy 20 bodies available on Y1T and Y1W models
- Other perforated screens and mesh liners
- Other drain connections and gasket materials
- Oxygen cleaning
- Special internal / external coatings and linings
- Contact Factory for other Options

600Y Series Ordering Code

1 Inlet Size				-	2 Model						3 Body	-	4 Perf	5 Mesh	6 Optional
0	3	0	0	–	6	0	0	Y	1	W	C	–	B	_	_

1	Inlet Size				
0050	½"	0200	2"	0800	8"
0075	¾"	0250	2½"	1000	10"
0100	1"	0300	3"	1200	12"
0125	1¼"	0400	4"		
0150	1½"	0600	6"		

2	Model		
600Y1T	CS or SS, NPT with Threaded Cover	600Y2J[1]	CS or SS, Ring Joint with Bolted Cover
600Y1W	CS or SS, Socketweld with Threaded Cover	300Y2B[1,2]	CS or SS, Buttweld with Bolted Cover
600Y2F[1]	CS or SS, Flanged with Bolted Cover		

3	Body Material		
C	Carbon Steel	T	Stainless Steel

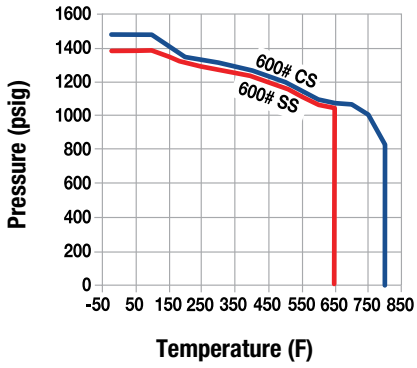
4	Perf[3] (304SS Material[3])				
A	No Perf	2	1/16"	7	7/32"
1	1/32"	3	3/32"	8	1/4"
B	3/64	5	5/32"	9	3/8"
4	1/8"	6	3/16"		

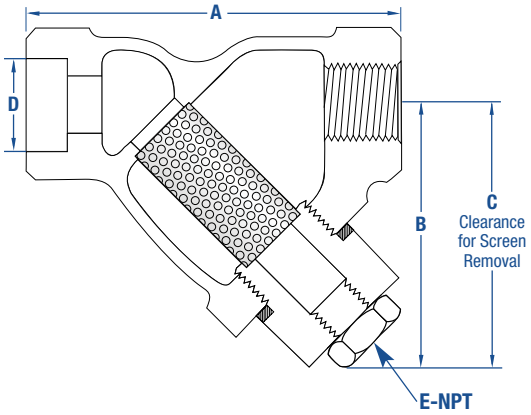
5	Mesh[4] (Leave Blank if not required)				
1	10	4	40	7	80
2	20	5	50	8	100
3	30	6	60	9	120

6	Optional (Leave Blank if not required)		
D	Special Drain Size	N	Nace MR01-75
F	Silicon Free	X	Oxygen Cleaning
G	Special Gaskets	Y	Other / Multiple Specials
T	Special Testing		

1. Stainless Steel available in sizes 2" to 6".
2. For Buttweld connections please specify mating pipe schedule.
3. Standard Screens: All 1/2"-11/2"—1/32" perf, All 2"-3"—3/64" perf, All >3"—1/8" perf.
4. For other screen material, contact factory.

Pressure / Temperature Chart
ASME B16.34





Description

SSI manufactures carbon steel y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
½" to 2"

Pressure
1480 PSIG (102 BARG)

Temperature
800° F (427° C)

End Connections
Threaded (NPT)
Socketweld

Screen Openings
½"–1½" | 1/32" Perf | 304 SS
2" | 3/64" Perf | 304 SS

Features

- One piece cast body
- Investment cast on NPT and socketweld versions
- ASME Class 600 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

CRN

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
½"	15	3.00	76	2.44	62	3.13	80	0.855	21.72	0.25	8	1.4	0.6
¾"	20	3.75	95	2.94	75	3.56	90	1.065	27.05	0.38	10	2.2	1.0
1"	25	4.63	118	3.75	95	3.94	100	1.330	33.78	0.38	10	4.1	1.9
1¼"	32	5.00	127	4.00	102	4.25	108	1.675	42.55	0.75	20	5.3	2.4
1½"	40	5.63	143	4.81	122	4.63	118	1.915	48.64	0.75	20	8.4	3.8
2"	50	7.00	178	6.13	156	6.75	171	2.406	61.11	1.00	25	12.6	5.7

Materials

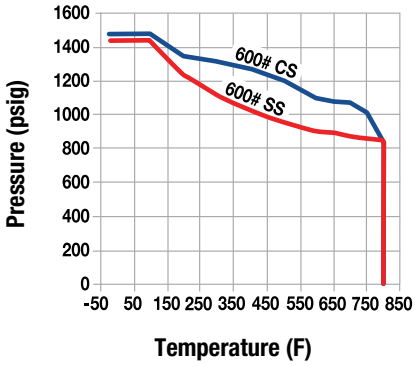
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cap[2]	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	304 SS
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound

Dimensions shown are subject to change. Consult factory for certified drawings when required.
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

600Y2 Series | Y-Strainers

Carbon Steel Body & Stainless Steel Body | Flanged, Ring Joint & Buttweld Ends

Pressure / Temperature Chart ASME B16.34



Description

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Sizes

2" to 12"

Pressure

1480 PSIG (102 BARG)

Temperature

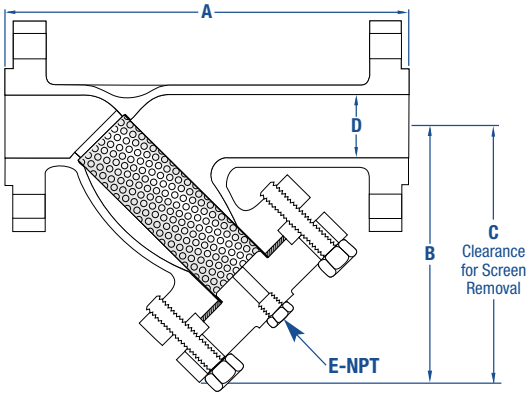
800° F (427° C)

End Connections

Flanged
Ring Joint
Buttweld

Screen Openings

2"–3" | 3/64" Perf | 304 SS
4"–12" | 1/8" Perf | 304 SS



Features

- One piece cast body
- Investment cast on NPT and socketweld versions
- ASME Class 600 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	12.50	318	8.00	203	9.50	235	2	51	0.5	15	46	20.9
3"	80	15.63	397	10.13	257	11.38	289	3	76	1.25	32	93	42.2
4"	100	20.00	508	13.00	330	14.25	362	4	102	1.5	40	187	85.0
6"	150	25.50	648	17.00	432	18.25	463	6	152	2	2	403	183.2
8"	200	30.00	330	21.38	543	22.69	576	8	203	2	2	660	300.0
10"	250	37.63	959	24.75	629	26.00	660	10	254	2	2	1428	649.1
12"	300	42.00	1067	30.00	762	31.25	794	12	305	2	2	1608	730.9

Materials

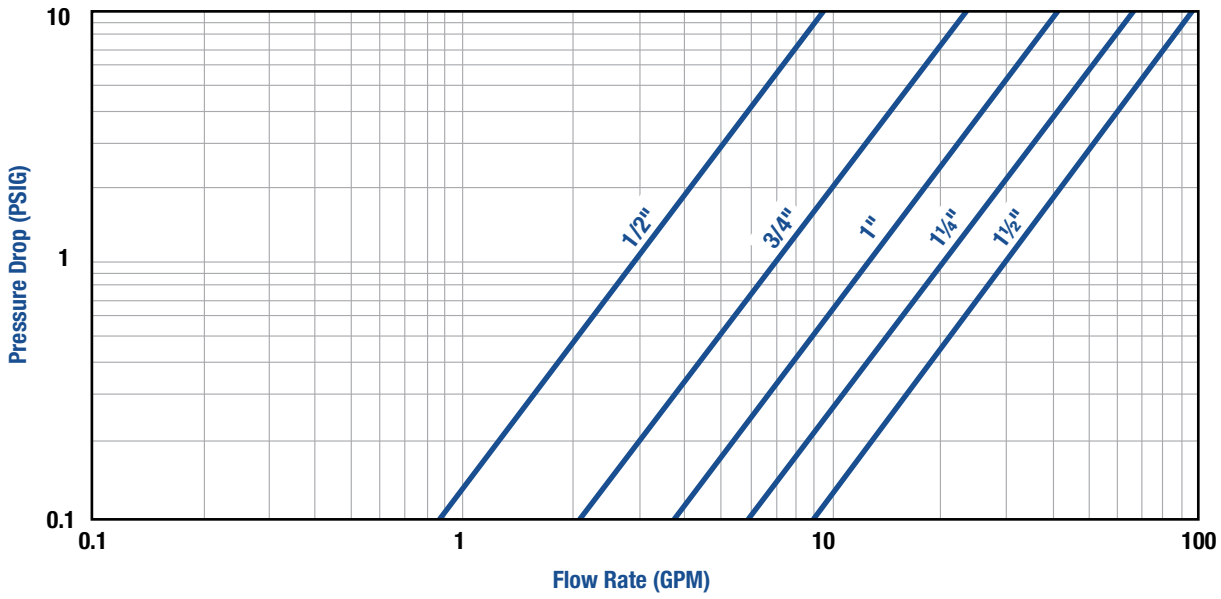
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	304 SS
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound
Stud	A193-B7	A320-B8
Nut[2]	A194-2H	A194-8

Dimensions applicable only to Y-Strainers with Flanged and Buttweld Connections | Contact VSA for dimensions of Y-Strainers with Ring Joint Connections | Dimensions shown are subject to change.
Consult factory for certified drawings when required | [1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] For Buttweld connections please specify mating pipe schedule

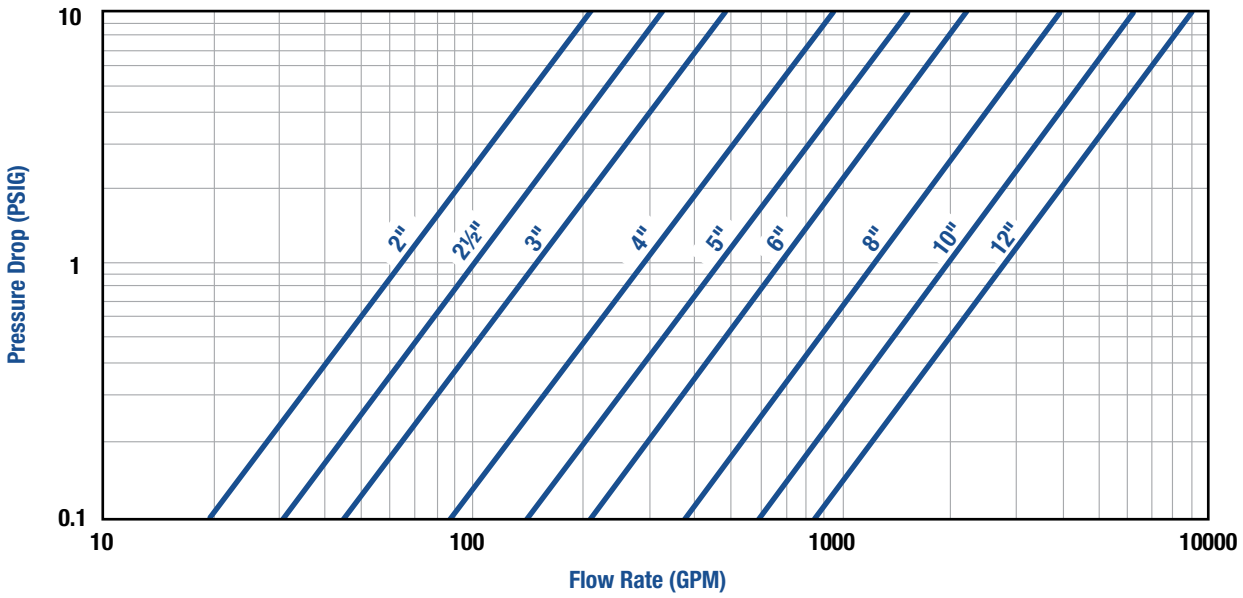
Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*

(Sizes 1/2" to 1½")



(Sizes 2" to 12")



* For Gas, Steam or Air service, consult factory.

Open Area Ratios

Standard Perforated Screen*

Carbon & Stainless Steel | 600Y1 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	1/32	28	0.23	2.7	0.76	3.3
¾"	1/32	28	0.43	4.6	1.28	3.0
1"	1/32	28	0.72	8.5	2.38	3.3
1¼"	1/32	28	1.28	12.8	3.58	2.8
1½"	1/32	28	1.77	16.5	4.61	2.6
2"	3/64	36	2.95	27.8	19	3.4

Carbon & Stainless Steel | 600Y2 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	38.4	13.82	4.4
3"	3/64	36	7.07	74.2	26.72	3.8
4"	1/8	40	12.57	127.6	51.06	4.1
6"	1/8	40	28.27	261.2	104.49	3.7
8"	1/8	40	50.27	408.5	163.42	3.3
10"	1/8	40	78.54	598.9	239.57	3.1
12"	1/8	40	113.10	817.7	327.08	2.9

OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.
* Consult factory.

900Y Series

Sizes
2" to 8"

Pressure
up to 2200 PSIG
(153 BARG)

Temperature
up to 800°F
(427°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 900 rated strainers
- RF or RTJ, and Buttweld connections designed inaccordance with ASME B16.34, B16.5 and B16.25
- SSI Exclusive - Body blow down flange and cover flange dimensions are in dimensional accordance with ASME B16.5
- All Flanged connections complete with Bolted Cover
- One piece cast body
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings.
- Drain/Blow-off connection furnished with plug

Models

- 900Y2F – Carbon or Stainless Steel Flanged with Bolted Cover
- 900Y2J – Carbon or Stainless Steel Ring Joint with Bolted Cover
- 250Y2F - Ductile Iron, Flanged, Bolted Cover

Note: 900# flanges are the same as 1500# flanges in sizes 1/2" - 2

Options

- Other perforated screens and mesh liners
- Drain connections and other gasket materials
- Oxygen cleaning
- Special internal/external coatings and linings
- Contact factory for other options

Applicable Codes (designed in accordance with)

- ASME B16.5
- ASME B16.34
- ASME B16.25

900Y Series Ordering Code

1					2						3		4	5	6
Inlet Size					Model						Body		Perf	Mesh	Optional
0	8	0	0	–	9	0	0	Y	2	B	C	–	4	_	_

1	Inlet Size				
0200	2"	0300	3"	0600	6"
0250	2½"	0400	4"	0800	8"

2	Model		
900Y2F	CS or SS, Flanged with Bolted Cover	900Y2J	CS or SS, Ring Joint with Bolted Cover

3	Body Material		
C	Carbon Steel	T	Stainless Steel

1. Standard Screens: All <3"—3/64" perf, All >3"—1/8" perf.
2. For other screen material, contact factory.

4	Perf[1] (304SS Material[2])				
A	No Perf	2	1/16"	7	7/32"
1	1/32"	3	3/32"	8	1/4"
B	3/64	5	5/32"	9	3/8"
4	1/8"	6	3/16"		

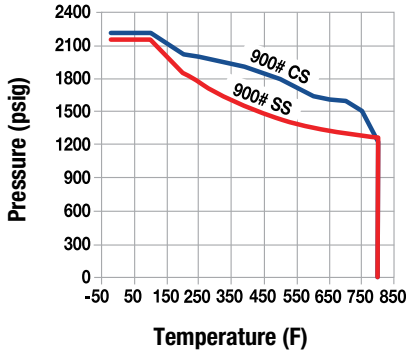
5	Mesh[2] (Leave Blank if not required)				
1	10	4	40	7	80
2	20	5	50	8	100
3	30	6	60	9	120

6	Optional (Leave Blank if not required)		
D	Special Drain Size	N	Nace MR01-75
F	Silicon Free	X	Oxygen Cleaning
G	Special Gaskets	Y	Other / Multiple Specials
T	Special Testing		

900Y2 Series | Y-Strainers

Carbon Steel Body & Stainless Steel Body | Flanged & Ring Joint Ends

Pressure / Temperature Chart
ASME B16.34



Description

SSI manufactures carbon steel y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

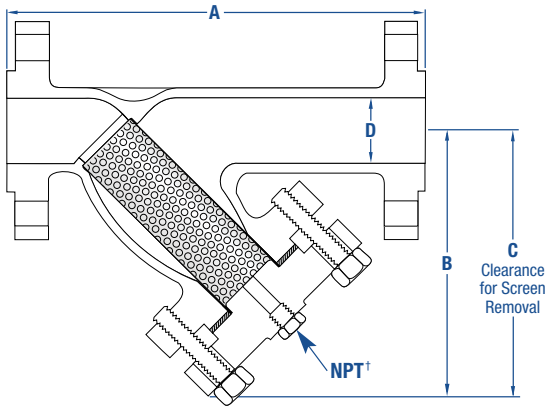
Sizes
2" to 8"

Pressure
2220 PSIG (153 BARG)

Temperature
800° F (427° C)

End Connections
Flanged
Ring Joint

Screen Openings
2"–3" | 3/64" Perf | 304 SS
4"–8" | 1/8" Perf | 304 SS



Features

- One piece cast body
- ASME Class 900 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		D		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	16.25	413	10.50	268	14.88	378	1.87	48	125	57
3"	80	20.25	514	12.75	324	18.00	457	2.87	73	163	74
4"	100	23.25	541	15.00	381	21.25	539	3.87	98	253	115
6"	150	27.75	705	18.88	480	26.63	667	5.75	5.75	580	263.6
8"	200	34.50	876	22.63	575	32.00	813	7.50	7.50	1080	490.9

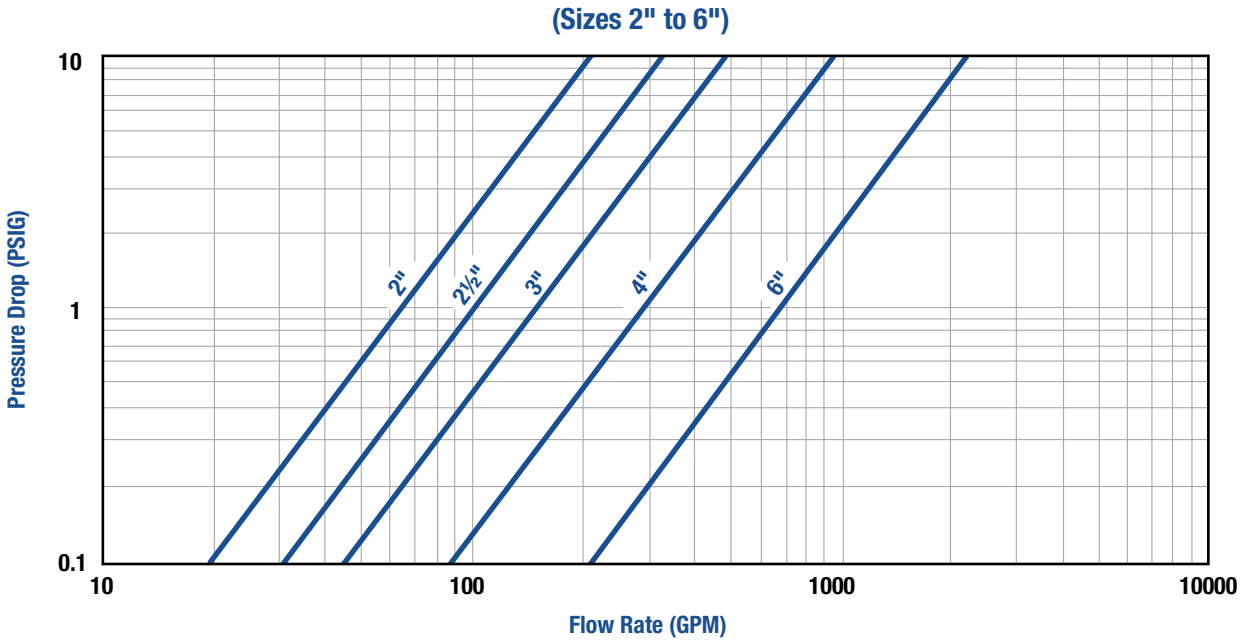
Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cap	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	304 SS
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound
Stud	A193-B7	A320-B8
Nut[2]	A194-2H	A194-8

Dimensions applicable only to Y-Strainers with Flanged Connections | Contact VSA for dimensions of Y-Strainers with Ring Joint Connections | Dimensions shown are subject to change. Consult factory for certified drawings when required
† 900Y strainers are not furnished with a drain/blow-down connection Consult factory if required. | [1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*



Open Area Ratios

Standard Perforated Screen*

Carbon & Stainless Steel | 900Y2 Series | Y-Strainer						
Size	Perf. Diameter (mm^2)	Opening %	Flange Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	48.9	17.61	5.6
3"	3/64	36	7.07	99.5	35.83	5.1
4"	1/8	40	12.57	161.6	64.62	5.1
6"	1/8	40	28.27	290.7	116.28	4.1
8"	1/8	40	50.27	440.2	176.08	3.5

OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.
* For Gas, Steam or Air service, consult factory.

1500Y Series | Y-Strainers

Carbon & Stainless Steel Body | NPT, Socketweld, Flanged, Ring Joint & Buttweld Ends

Sizes
½" to 6"

Pressure
up to 3705 PSIG
(258.5 BARG)

Temperature
up to 800°F
(426°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 1500 rated strainers
- NPT, RF or RTJ, Socketweld and Buttweld connections designed in accordance with ASME B16.34, B16.5, B16.25 and B16.11
- SSI Exclusive - Body blow down flange and cover flange dimensions are in dimensional accordance with ASME B16.5
- All Flanged connections complete with Bolted Cover
- One piece cast body
- Upper and lower machined seats
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings
- Drain/Blow-off connection furnished with plug

Applicable Codes (designed in accordance with)

- ASME B16.11
- ASME B16.5
- ASME B16.34
- ASME B16.25

Models

- 1500Y1T – Carbon or Stainless NPT with Threaded Cover
- 1500Y2W – Carbon or Stainless Socketweld with Threaded Cover
- 1500Y2T – Carbon, Stainless or Chrome Moly NPT with Bolted Cover
- 1500Y2W – Carbon, Stainless or Chrome Moly Socketweld with Bolted Cover
- 1500Y2F – Carbon or Stainless Flanged with Bolted Cover
- 1500Y2J – Carbon or Stainless Ring Joint with Bolted Cover

Options

- Chrome Moly bodies available on Y2T and Y2W models
- Other perforated screens and mesh liners
- Drain connections and other gasket materials
- Oxygen cleaning
- Special internal/external coatings and linings
- Contact factory for other options

1500Y Series Ordering Code

1					2							3		4	5	6
Inlet Size					Model							Body		Perf	Mesh	Optional
0	1	5	0	–	1	5	0	0	Y	2	T	R	–	3	_	_

1	Inlet Size				
0200	2"	0300	3"	0600	6"
0250	2½"	0400	4"		

2	Model		
1500Y1T	CS or SS, NPT with Threaded Cover	1500Y1W	CS or SS, Socketweld with Bolted Cover
1500Y1W	CS or SS, Socketweld with Threaded Cover	1500Y2F	CS or SS, Flanged with Bolted Cover
1500Y2T	CS or SS, NPT with Bolted Cover	1500Y2J	CS or SS, Ring Joint with Bolted Cover

3	Body Material		
C	Carbon Steel	T	Stainless Steel

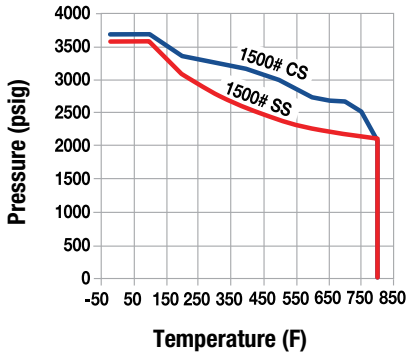
4	Perf[1] (304SS Material[2])				
A	No Perf	2	1/16"	7	7/32"
1	1/32"	3	3/32"	8	1/4"
B	3/64	5	5/32"	9	3/8"
4	1/8"	6	3/16"		

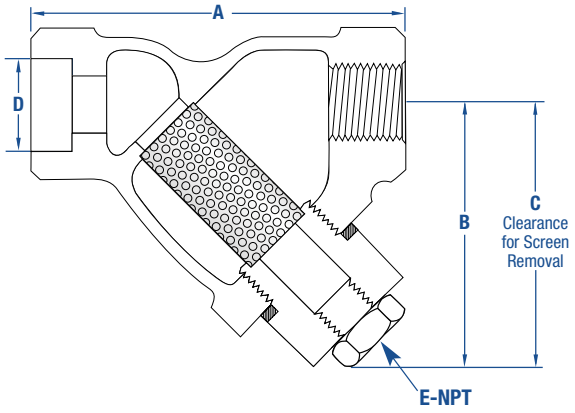
5	Mesh[2] (Leave Blank if not required)				
1	10	4	40	7	80
2	20	5	50	8	100
3	30	6	60	9	120

6	Optional (Leave Blank if not required)		
D	Special Drain Size	N	Nace MR01-75
F	Silicon Free	X	Oxygen Cleaning
G	Special Gaskets	Y	Other / Multiple Specials
T	Special Testing		

1. Standard Screens: Y1T and Y2T, 1/2"-11/2"—1/32" perf, Y2 2"-6"— 1/8" perf.
2. For other screen material, contact factory.

Pressure / Temperature Chart
ASME B16.34





Description

SSI manufactures carbon steel y-strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel y-strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
½" to 1"

Pressure
3705 PSIG (258.5 BARG)

Temperature
800º F (427º C)

End Connections
Threaded (NPT)
Socketweld

Screen Openings
½"–1" | 1/32" Perf | 304 SS

Features

- One piece cast body
- ASME Class 1500 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
½"	15	3.94	100	3.56	90	5.31	135	0.88	22.23	0.25	8	2.4	1.1
¾"	20	4.25	108	3.94	100	5.00	127	1.06	27.05	0.38	10	3.3	1.5
1"	25	5.00	127	4.69	120	7.50	178	1.33	33.78	0.50	15	6.0	2.7

Materials

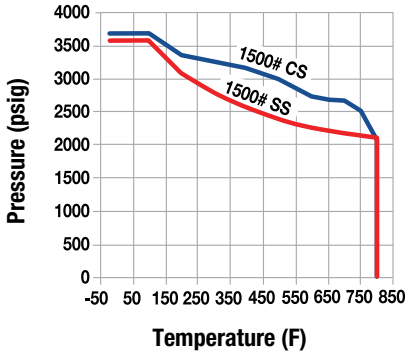
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cap[2]	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	A182-316
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound

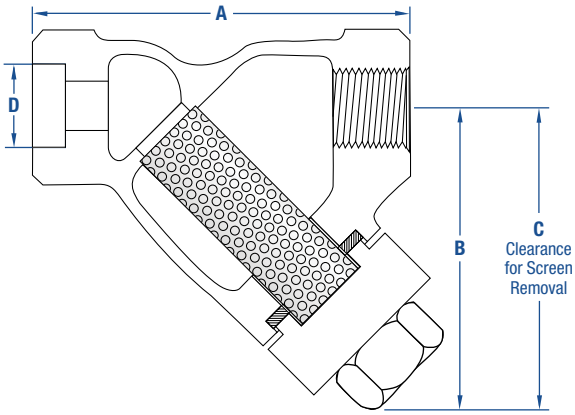
Dimensions shown are subject to change. Consult factory for certified drawings when required.
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

1500Y2 Series | Y-Strainers

Carbon Steel Body & Stainless Steel Body | NPT & Socketweld Ends

Pressure / Temperature Chart ASME B16.34





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Sizes

½" to 2"

Pressure

3705 PSIG (258.5 BARG)

Temperature

800° F (427° C)

End Connections

Threaded (NPT)
Socketweld

Screen Openings

½"–1½" | 1/32" Perf | 304 SS
2" | 3/64" Perf | 304 SS

Features

- One piece cast body
- ASME Class 1500 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

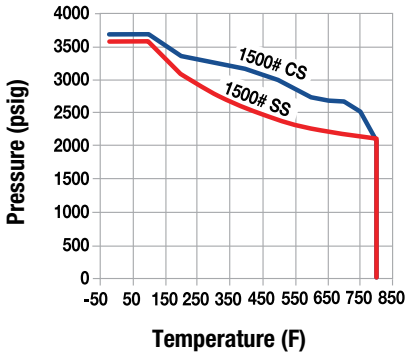
Size		A		B		C		D		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
½"	15	3.94	100	5.13	130	6.50	165	0.88	22	7	3.2
¾"	20	4.25	108	5.91	150	7.09	180	1.13	29	11	5
1"	25	5.00	127	6.69	170	8.47	215	1.31	33	15	6.8
1¼"	32	8.38	213	7.06	179	8.63	219	1.69	43	22	10
1½"	40	8.38	213	7.06	179	8.63	219	1.94	49	22	10
2"	50	9.38	238	7.88	200	10.00	254	2.44	62	26	11.8

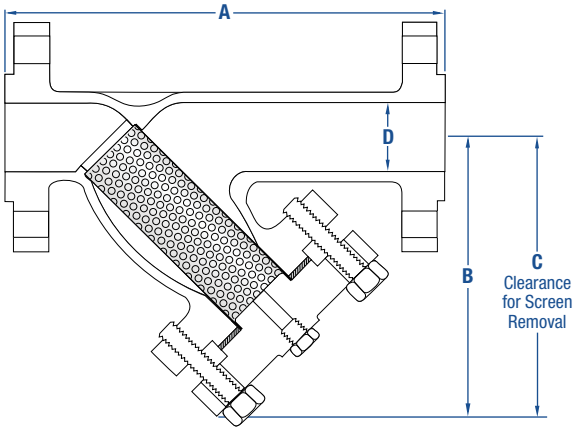
Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover[2]	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound
Stud	A193-B7	A193-B8-1
Nut	A194-2H	A194-8

Dimensions shown are subject to change. Consult factory for certified drawings when required.
1500Y2 strainers are not furnished with a drain/blow-down connection Consult factory if required. | [1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

Pressure / Temperature Chart
ASME B16.34





Description

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Sizes

2" to 6"

Pressure

3705 PSIG (258.5 BARG)

Temperature

800° F (427° C)

End Connections

Flanged
Ring Joint

Screen Openings

2"–3" | 3/64" Perf | 304 SS
4"–6" | 1/8" Perf | 304 SS

Features

- One piece cast body
- ASME Class 1500 rated strainers
- Upper and lower machined seats
- All Flanged connections complete with Bolted Cover
- Drain / Blow-off connection furnished with plug
- Generous screen area and properly proportioned straining chamber to minimize initial pressure drop while maximizing time between cleanings

Dimensions

Size		A		B		C		D		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	16.25	413	10.50	268	14.88	378	1.88	48	125	56.7
2½"	65	19.38	492	13.38	340	14.50	368	2.25	47	142	64.6
3"	80	22.25	565	14.50	368	20.50	521	2.75	73	243	110.2
4"	100	25.25	641	16.38	416	23.00	584	3.63	92	388	176
6"	150	32.00	813	21.75	551	30.50	775	5.38	137	817	370.6

Materials

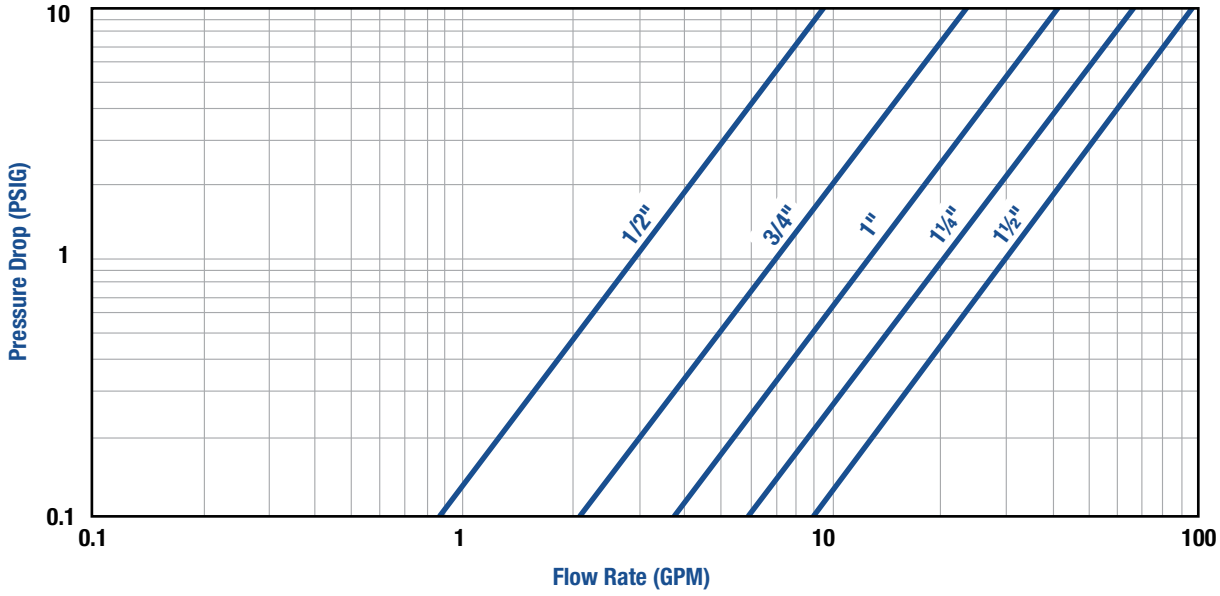
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	304 SS
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound
Stud	A193-B7	A320-B8
Nut[2]	A194-2H	A194-8

Dimensions shown are subject to change. Consult factory for certified drawings when required.
1500Y2 strainers are not furnished with a drain/blow-down connection Consult factory if required. | [1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted

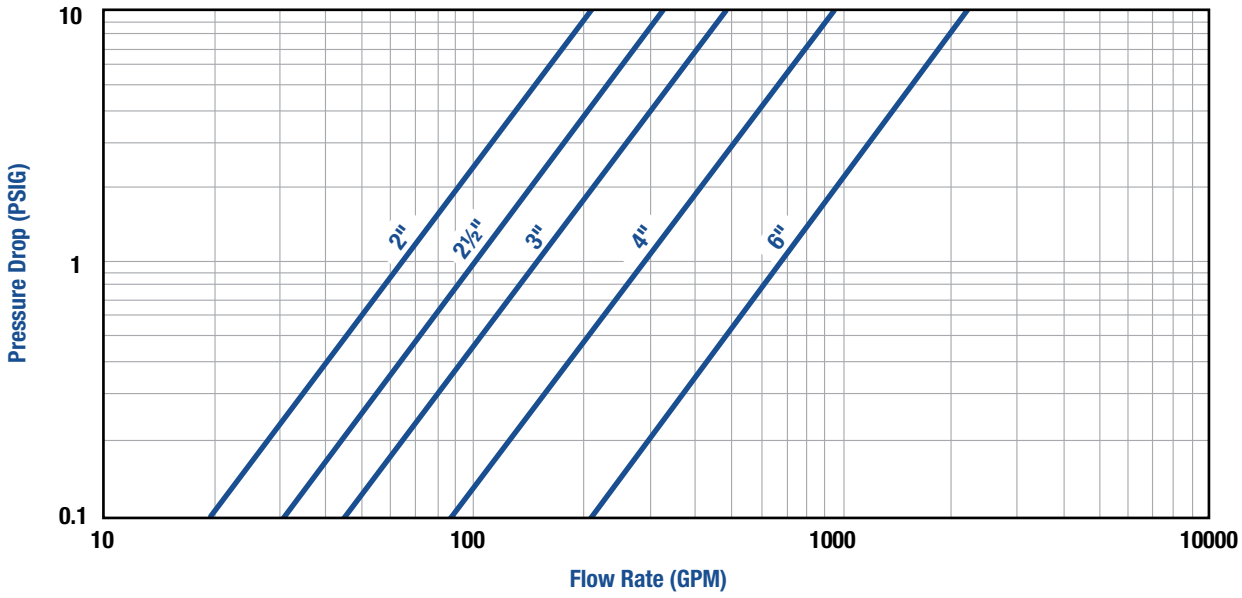
Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*

(Sizes 1/2" to 1½")



(Sizes 2" to 6")



* For Gas, Steam or Air service, consult factory.

Open Area Ratios

Standard Perforated Screen*

Carbon & Stainless Steel | 1500Y1 Series | Y-Strainer						
Size	Perf. Diameter (inches)	Opening %	XH Pipe Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	1/32	28	0.23	5.0	1.4	6.0
¾"	1/32	28	0.43	6.6	1.8	4.3
1"	1/32	28	0.72	10.6	3.0	4.1

Carbon & Stainless Steel | 1500Y2 Series | Y-Strainer						
Size	Perf. Diameter (inches)	Opening %	XH Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	1/32	36	0.23	6.2	1.7	7.5
¾"	1/32	36	0.43	8.3	2.3	5.4
1"	1/32	36	0.72	13.7	3.8	5.4
1¼"	1/32	28	1.23	24.9	7.0	5.7
1½"	1/32	36	1.77	24.9	6.9	4.0
2"	3/64	36	2.95	31.4	11.31	8.6

Carbon & Stainless Steel | 1500Y2 Series | Y-Strainer						
Size	Perf. Diameter (inches)	Opening %	Flanged Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	48.9	17.61	5.6
2½"	3/64	36	4.91	83.4	30.02	6.1
3"	3/64	36	7.07	109.9	39.56	5.6
4"	1/8	40	12.57	165.0	66.01	5.3
6"	1/8	40	28.27	314.5	125.78	4.4

OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.

Pressure Drop Correction Factors

Centistokes	SSU	Unlined Perforated Basket	20 Mesh Lined Basket	40 Mesh Lined Basket	60 Mesh Lined Basket	80 Mesh Lined Basket	100 Mesh Lined Basket	200 Mesh Lined Basket
2	30 (water)	1	1.05	1.2	1.4	1.6	1.7	2
100	500	1.6	1.7	1.9	2.1	2.4	2.6	3.1
216	1000	1.7	2	2.2	2.4	2.6	2.8	3.3
433	2000	1.9	2.2	2.4	2.7	2.9	3.2	3.8
650	3000	2	2.3	2.6	2.9	3.2	3.5	4.1
1083	5000	2.2	2.6	3	3.5	4	4.5	5.3
2200	10000	2.5	3	3.5	4.2	5	6	7.1

1) Obtain water pressure drop from graphs on appropriate product page.
2) Multiply the pressure drop obtained from (1) by the specific gravity of the liquid.
3) Multiply the pressure drop from (2) by the appropriate correction factor for the mesh liner and/or viscosity.

Example	Answer
Model: 150Y2 **Size:** 4" **Body:** Carbon Steel **Filtration:** 1/8" perf. screen 40 Mesh **Flow Rate:** 200 GPM **Fluid:** Water **SG:** 1 **Viscosity:** 30 SSI	**A)** From Pressure Drop Chart on page 13 pressure drop of water is .48 psid. **B)** Multiply by specific gravity; .48 x 1 = .48 psid. **C)** From chart above, multiply answer from B) by correction factor .48 x 1.2 (correction factor) =.576 psid.

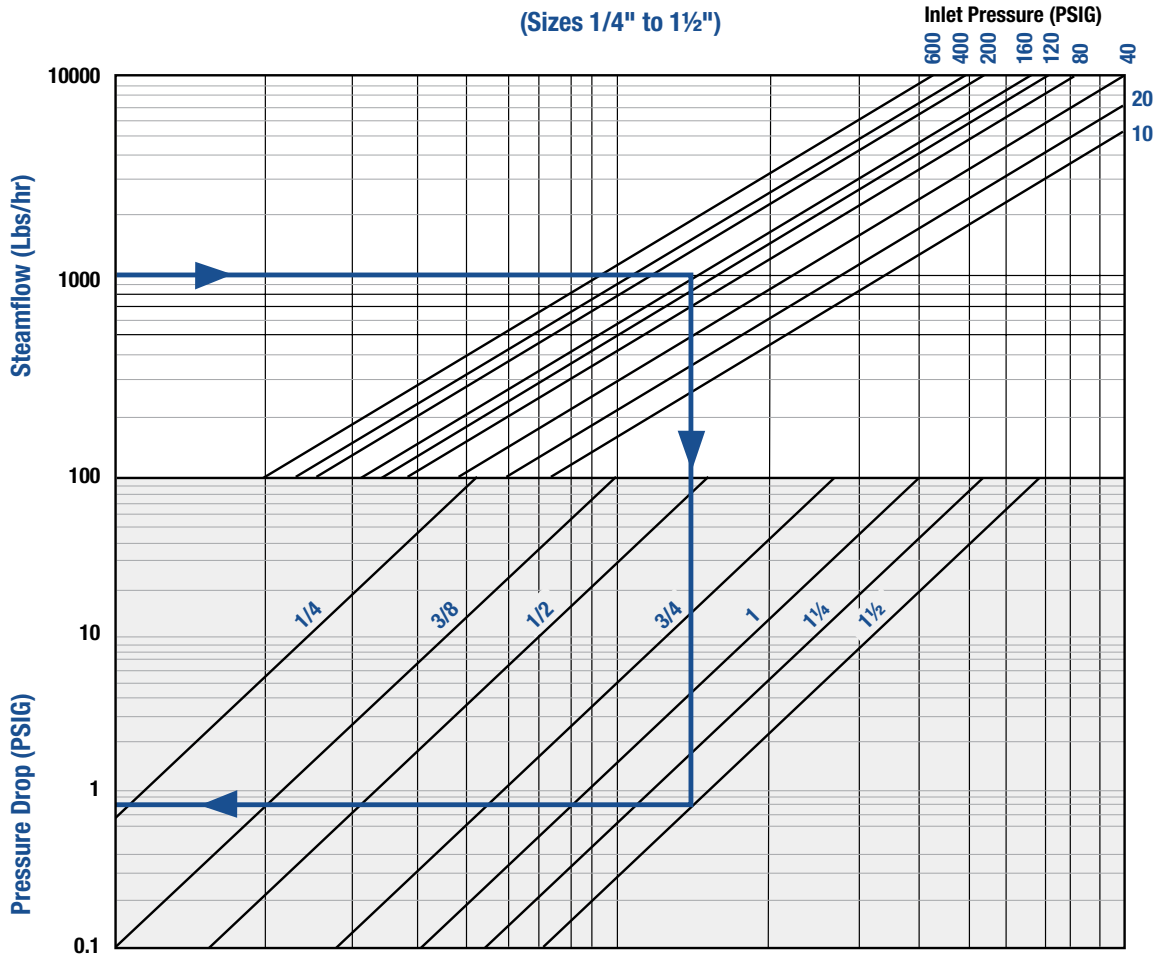
Correction Factors for Clogged Screens

% Clogged	Ratio of Free Screen Area to Pipe Area						
	10:1	8:1	6:1	4:1	3:1	2:1	1:1
10	–	–	–	–	–	–	3.15
20	–	–	–	–	–	1.15	3.9
30	–	–	–	–	–	1.4	5
40	–	–	–	–	–	1.8	6.65
50	–	–	–	–	1.25	2.5	9.45
60	–	–	–	1.15	1.8	3.7	14.5
70	–	–	–	1.75	2.95	6.4	26
80	–	1.1	1.75	3.6	6.25	14	58
90	2.3	3.45	6	13.5	24	55	–

* Multiply values obtained from Pressure Drop Charts by the appropriate values shown below.

Example	Answer
Strainer Size: 6" **Model:** 150Y2 **Body:** Carbon Steel **Filtration:** 1/8" Perf. **Flow rate:** 1000 GPM **Service**: Water **% Clogged:** 60%	**A)** The Pressure Drop Chart on page 13 indicates a drop of 2.2 psid **B)** The Effective Area Chart indicates a ratio of 3.0 free area to pipe area. **C)** Using the Chart above read the correction factor of 3:1 to be 1.8 at 60% clogged. **D)** Total pressure drop equals 2.2 x 1.8 = 3.96 psid.

Pressure Drop Correction Factors



1) Pressure drop curve is based on saturated steam flow with standard screens. See page 40 for correction factors to be used with other fluids and/or screen openings.
2) Chart can be used for air and gas by using the following formula:

$$Qs = 0.138Qg\sqrt{(460+t)\ s.g.}\ \left\{\frac{DP}{P2}<1.0\right\}_{\text{FOR NON-CRITICAL FLOW}}$$

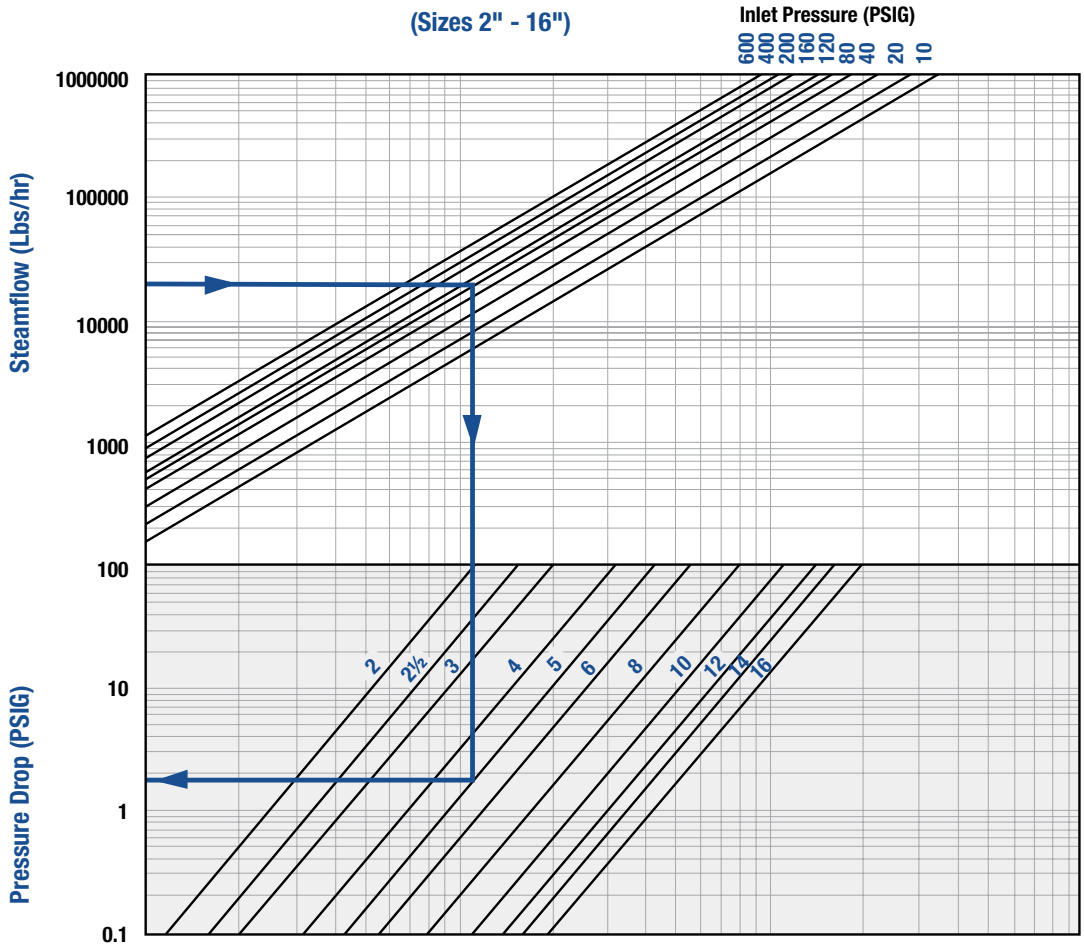
Qs = Equivalent Steam Flow, lbs./hr.
Qg = Air or gas flow, SCFM.
t = Temperature, °F.
s.g. = Specific gravity (s.g. = 1 for air.)
DP = Pressure Drop, psid
P2 = Outlet Pressure

Example

Service: Saturated Steam Flow
Pressure: 160 PSIG
Steam Flow: 1000 Lbs/hr
Size: 1-1/2"

- Locate steam flow.
- Follow horizontal line to required pressure.
- Follow vertical line downwards to required strainer size.
- Follow horizontal line to read pressure drop.
- Pressure drop equals 0.8 psid.

Pressure Drop Correction Factors



1) Pressure drop curve is based on saturated steam flow with standard screens. See page 40 for correction factors to be used with other fluids and/or screen openings.
2) Chart can be used for air and gas by using the following formula:

$$Qs = 0.138Qg\sqrt{(460+t)\ s.g.}\ \left\{\frac{DP}{P2}<1.0\right\}_{\text{FOR NON-CRITICAL FLOW}}$$

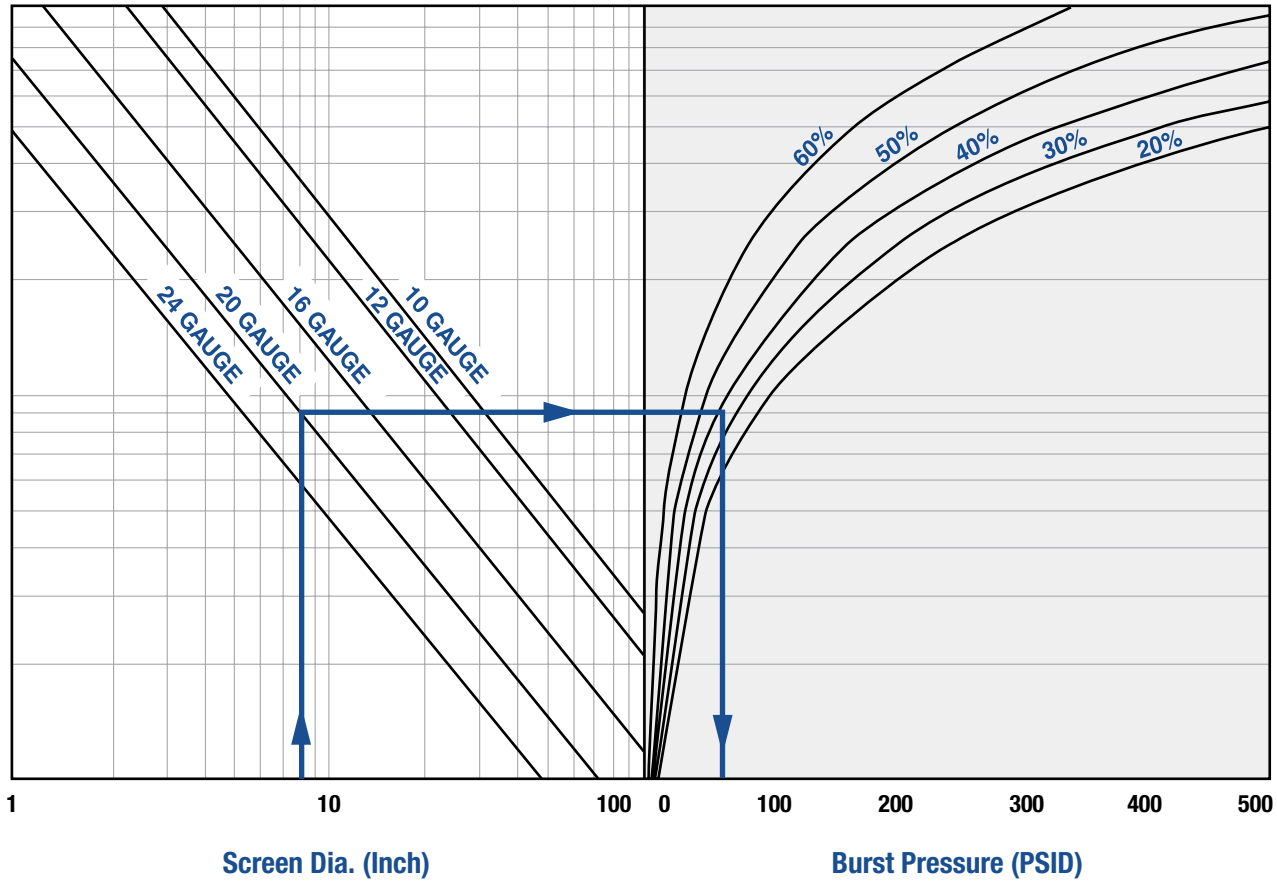
Qs = Equivalent Steam Flow, lbs./hr.
Qg = Air or gas flow, SCFM.
t = Temperature, °F.
s.g. = Specific gravity (s.g. = 1 for air.)
DP = Pressure Drop, psid
P2 = Outlet Pressure

Example

Service: Saturated Steam Flow
Pressure: 120 PSIG
Steam Flow: 20,000 Lbs/hr
Size: 5"

- Locate steam flow.
- Follow horizontal line to required pressure.
- Follow vertical line downwards to required strainer size.
- Follow horizontal line to read pressure drop.
- Pressure drop equals 1.8 psid.

Pressure Drop Correction Factors



1) The above chart is for use with perforated plate and based on the formula:

$$P = \frac{St}{R - 0.4t}$$

P = Burst pressure, psid
S = Reduced allowable stress, psi
t = Thickness of perforated plate, in.
R = Outside radius of screen, in.

2) The above chart is based on a screen material of stainless steel and is valid for operating temperatures up to 100°F The chart may be used for higher temperatures however it will result in a safety factor reduction. (At 100°F the charts safety factor is approximately four (4), at 1000°F the chart safety factor is reduced to approximately two (2). It is the responsibility of the user to determine an acceptable safety factor.
3) The chart may be used for carbon steel at an approximate 25% reduction in safety factor.
3) See Screen Openings Chart for % Open Area's of inventoried perforated plate.

Example

Strainer Size: 8"
Screen Thickness: 20 Gauge
Screen Perforations: 0.125" (40% O.A.)

- Locate screen diameter (assume 8" diameter screen)
- Follow vertical line to gauge thickness.
- Follow vertical line downwards to required strainer size.
- Follow vertical line downward to read burst pressure.
- Burst pressure equals 60 psid approx.

Strainer Checklist

Please take the factors listed below into account when selecting a strainer. Kindly fill out and send the pertinent information, to your best ability, so that we can recommend a Strainer to suit your specific requirements.

1) Fluid to be strained:		**9)** Nature of solids to be strained out:	
2) Flow rate:		**10)** Size of solids to be strained:	Size of mesh/perf. required:
3) Density of fluid:		**11)** Clearance limitation - Above:	Below:
4) Viscosity of fluid:		Left:	Right:
5) Fluid working pressure:	Maximum pressure:	**12)** Maximum pressure drop with clean screen:	
6) Fluid working temperature:	Maximum temperature:	**13)** Expected cleaning frequency:	
7) Preferred material of strainer construction:		**14)** Any other information deemed relevant	
8) Present pipeline size and material:			

Contact Information

Name:		Company:	
Address:		City/Town:	
Province/State:	Postal/Zip Code:	Phone:	Email:

Installation and Maintenance Instructions

Strainer Installation Instructions

- Ensure all machined surfaces are free of defects and that the inside of the strainer is free of foreign objects.
- For horizontal and vertical pipelines, the strainer should be installed so that the blow-down drain connection is pointed downward.
- For flanged end strainers, the flange bolting should be tightened gradually in a back and forth clockwise motion. Threaded end strainers should use an appropriate sealant.
- Once installed, increase line pressure gradually and check for leakage around joints.
- If the strainer is supplied with a start-up screen, monitor pressure drop carefully.

Screen Removal Instructions

- Drain piping.
- Vent line to relieve pressure.
- Loosen cover and open to access screen.
- Remove, clean and replace screen in original position (Note: In some instances, a high pressure water jet or steam may be required for effective cleaning).
- Inspect cover gasket for damage. If necessary, replace. (Note: If spiral wound gaskets have been used, they must be replaced and can not be used again).
- Tighten cover. The strainer is ready for line startup.

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

Maintenance Instructions

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

Trouble Shooting and Diagnostic Techniques

- After pressurizing, inspect cover and other joints for leakage. Gasket replacement or cover tightening is necessary if leakage occurs.
- If the required filtration is not taking place, ensure the screen is installed in the correct position, that being flush to the screen seating surfaces.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

Basket Strainers | Overview

Sizes
1/2" to 20"

Pressure
up to 740 PSIG

Temperature
up to 800ºF

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- Cast or Fabricated construction
- Filtration down to 40 microns
- Large strainer baskets
- Compact & high capacity units available

End Connections

- Flat Faced
- Raised Face
- Buttweld
- Threaded (NPT)
- Socketweld

Materials

- Cast Iron
- Bronze
- Carbon Steel
- Stainless Steel

ASME Ratings

- Class 125
- Class 150
- Class 300

Sizes
2" to 20"

Pressure
up to 200 PSIG
(13.8 BARG)

Temperature
up to 450°F
(232°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- ASME Class 125 rated strainers
- FF connections designed in accordance with ASME B16.1
- Angular basket for straight through flow
- Stainless steel perforated basket is standard
- Recommended minimum straining level is 250 microns
- NPT drain connection furnished with plug as standard

Applicable Codes (designed in accordance with)
- ASME B16.1

Models
- 125B1F - Straight Flow

Options
- Other screen perforations and mesh liners
- Quick Opening Covers - see page 60

125B Series Ordering Code

1							2						3		4	5	6
Inlet Size							Model						Body		Perf	Mesh	Optional
0	8	0	0	–	1	2	5	B	1	F	I	–	4	_	_		

1	Inlet Size				
0200	2"	**0600**	6"	**1600**	16"
0250	2½"	**0800**	8"	**1800**	18"
0300	3"	**1000**	10"	**2000**	20"
0400	4"	**1200**	12"		
0500	5"	**1400**	14"		

2	Model
125B1F	Straight Flow

3	Body Material
I	Cast Iron

4	Perf[1] (304SS Material[2])				
B	3/64" (std < 4")	**2**	1/16"	**7**	7/32"
4	1/8" (std => 4")	**3**	3/32"	**8**	1/4"
A	None	**5**	5/32"	**9**	3/8"
1	1/32"	**6**	3/16"	**Z**	Other

5	Mesh[1,2] (Leave Blank if not required)				
1	10	**5**	50	**9**	120
2	20	**6**	60	**Z**	Other
3	30	**7**	80		
4	40	**8**	100		

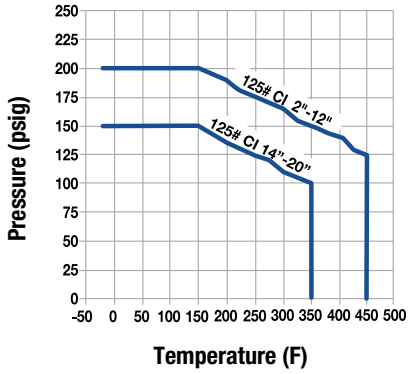
6	Optional (Leave Blank if not required)		
D	Special Drain Size	**G**	Special Gaskets
E1	1/4" Vent	**T**	Special Testing
E2	3/8" Vent	**V1**	Clamp Cover
E3	1/2" Vent	**X**	Oxygen Cleaning
F	Silicon Free	**Y**	Other / Multiple Specials

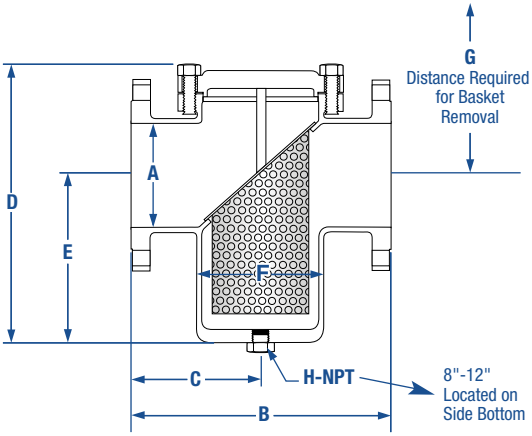
1. Standard screens All 2"-3"—3/64" perf, All 4"-20"— 1/8" perf.
2. For other screen materials contact factory.

125B Series | Basket Strainers

Cast Iron Body | Flanged Ends

Pressure / Temperature Chart ASME B16.1





Description

SSI manufactures cast iron basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI cast iron basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

2" to 6"

Pressure

200 PSIG (13.8 BARG)

Temperature

450º F (232º C)

End Connections

FF Flanged

Screen Openings

2"–3" | 3/64" Perf | 304 SS

4"–20" | 1/8" Perf | 304 SS

Features

- ASME Class 125 rated strainers
- Connections designed in accordance with ASME B16.1
- Angular basket for straight through flow
- Stainless steel perforated basket is standard
- Recommended minimum straining level is 250 microns
- NPT drain connection furnished with plug as standard

CRN

Dimensions

Size		A		B		C		D*		E		F		G		H**		Weight Cover		Weight Unit	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
2"	50	2	51	8.13	206	4.06	103	9.06	230	5.00	127	2.94	75	11.75	298	0.5	15	5	2.3	23	10
2½"	56	2.5	64	8.25	210	4.13	106	9.81	249	6.00	152	4.00	102	13.25	337	0.75	20	7	3.2	33	15
3"	80	3	76	8.88	251	4.94	125	12.19	310	7.13	181	5.00	127	15.38	391	0.75	20	9	4	44	20
4"	100	4	102	11.50	292	5.75	146	13.63	346	8.00	203	5.81	148	17.75	451	1	25	13	6	67	30
5"	125	5	127	13.13	333	6.56	167	14.56	370	8.50	216	7.06	179	20.50	521	1	25	20	9	88	40
6"	150	6	152	14.88	378	7.44	189	15.75	400	9.00	229	7.94	202	23.00	584	1	25	26	12	120	54
8"	200	8	203	18.69	475	9.38	238	19.94	506	12.00	305	9.84	250	30.00	762	1.5	40	45	20	220	100
10"	250	10	254	20.13	511	10.00	254	26.00	660	13.19	335	12.31	313	35.50	902	1.5	40	70	32	353	160
12"	300	12	305	26.75	679	13.38	349	30.13	765	16.22	412	15.34	390	42.50	1080	2	50	110	50	523	237
14"	350	14	356	30.25	768	15.13	384	37.50	953	22.00	559	18.00	457	53.00	1346	1.5	40	140	64	815	370
16"	400	16	406	33.13	841	16.63	422	39.50	1003	22.88	581	20.75	527	55.63	1413	2	50	180	82	1041	472
18"	450	18	457	38.50	978	19.25	489	40.00	1016	19.00	483	24.25	616	61.00	1549	2	50	220	100	1446	656
20"	500	20	508	41.38	1051	20.69	525	46.25	1175	23.25	591	26.50	673	69.25	1759	2	50	285	129	1980	898

Materials

Part	Material
Body	A126-B
Cover	A126-B
Screen[1]	304 SS
Plug[2]	A126-B
Gasket[1]	Graphite[3]
Bolt/Stud[2]	A307-B
Nut[2]	A563

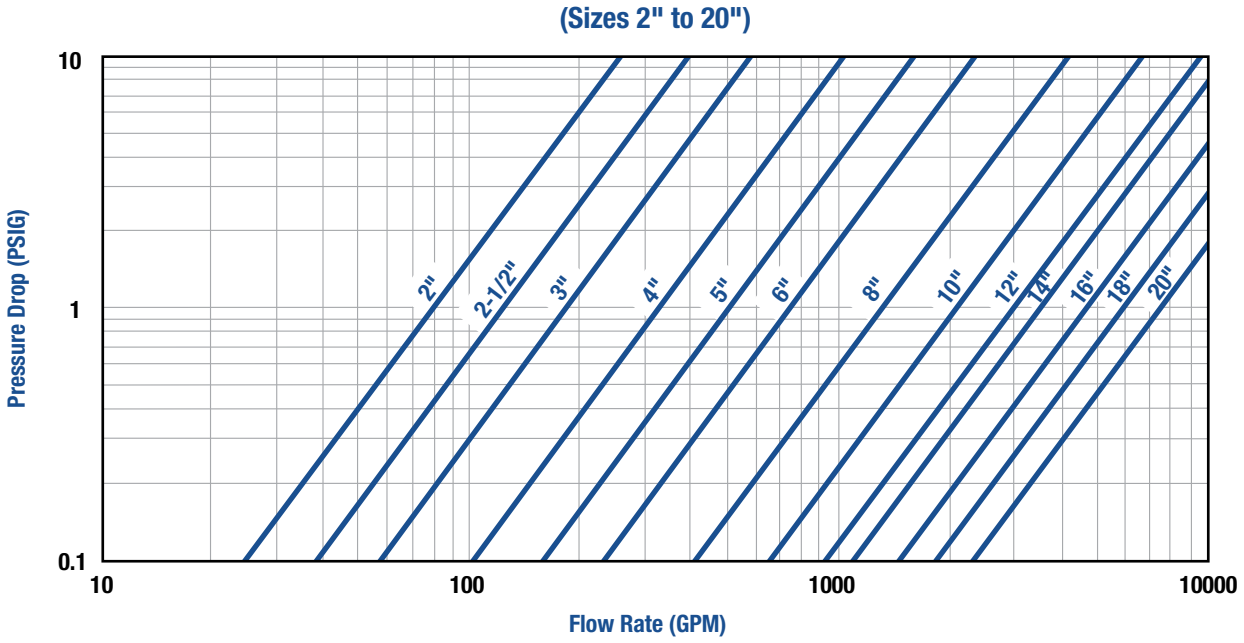
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] Gasket for bolted cover (Quick Opening Covers see page 60)

* For models with Quick Opening Cover, consult factory. For sizes 2"-6", allow clearance for bottom drain bolt removal | ** Side drain is standard on sizes 8" and larger, bottom drain is optional

Dimensions shown are subject to change. Consult factory for certified drawings when required.

Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*



Open Area Ratios

Standard Perforated Screen*

Cast Iron | 125B Series | Basket Strainer						
Size	Opening diameter (in)	Opening %	Nominal Outlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	29.4	10.6	3.5
2½"	3/64	36	4.91	43.6	15.7	3.3
3"	3/64	36	7.07	75.0	27.0	3.9
4"	1/8	40	12.57	104.4	41.8	3.3
6"	1/8	40	28.27	177.3	70.9	2.5
8"	1/8	40	50.27	307.0	122.8	2.4
10"	1/8	40	78.54	450.0	180.0	2.3
12"	1/8	40	113.1	688.5	275.4	2.4
14"	1/8	40	153.94	1019.1	407.6	2.6
16"	1/8	40	201.06	1248.6	499.4	2.5

For Gas, Steam or Air service, consult factory | OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.

150B1 Series

Basket Strainers

Bronze, Carbon & Stainless Steel Body | Flanged Ends

Sizes
2" to 12"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 406°F
(207°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 150 rated strainer
- RF or FF connections designed in accordance with ASME B16.5, B16.34 and B16.24
- Cover flange in accordance with ASME Section VIII, Div 1 Appendix II and ASME B16.5
- Angular basket for straight through flowd
- Stainless steel perforated basket is standard
- Recommended minimum straining level is 250 microns
- NPT drain connection furnished with plug as standard

Applicable Codes (designed in accordance with)

- ASME B16.5
- ASME B16.24
- ASME B16.34

Models

- 1150B1F – Straight Flow

Options

- Other screen perforations and mesh liners
- Quick Opening Covers - see page 60

150B1 Series Ordering Code

1 Inlet Size					2 Model							3 Body		4 Perf	5 Mesh	6 Optional
0	6	0	0	–	1	5	0	B	1	F		C	–	4	_	_

1	Inlet Size				
0200	2"	**0400**	4"	**0800**	8"
0250	2½"	**0500**	5"	**1000**	10"
0300	3"	**0600**	6"	**1200**	12"

2	Model
150B1F	Straight Flow

3	Body Material		
B	Bronze	**T**	Stainless Steel
C	Carbon Steel		

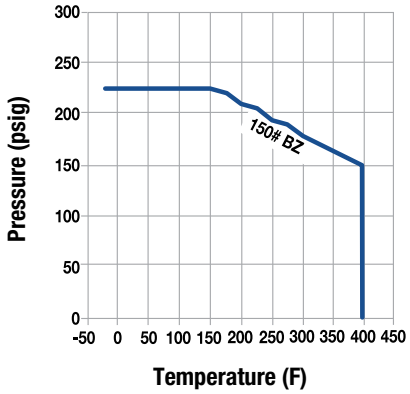
4	Perf[1] (304SS Material[2])				
B	3/64" (std < 4")	**2**	1/16"	**7**	7/32"
4	1/8" (std => 4")	**3**	3/32"	**8**	1/4"
A	None	**5**	5/32"	**9**	3/8"
1	1/32"	**6**	3/16"	**Z**	Other

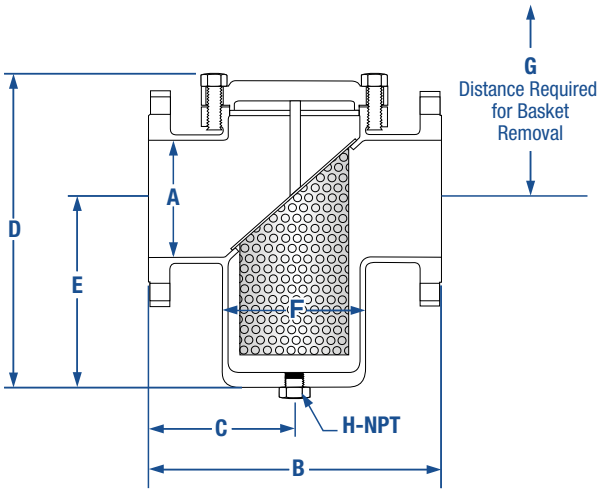
5	Mesh[1,2] (Leave Blank if not required)				
1	10	**5**	50	**9**	120
2	20	**6**	60	**Z**	Other
3	30	**7**	80		
4	40	**8**	100		

6	Optional (Leave Blank if not required)		
D	Special Drain Size	**G**	Special Gaskets
E1	1/4" Vent	**T**	Special Testing
E2	3/8" Vent	**V1**	Clamp Cover
E3	1/2" Vent	**X**	Oxygen Cleaning
F	Silicon Free	**Y**	Other / Multiple Specials

1. Standard screens All 2"-3"—3/64" perf, All 4"-20"— 1/8" perf.
2. For other screen materials contact factory.

Pressure / Temperature Chart
ASME B16.34 & ASME B16.24





Description

SSI manufactures bronze basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI bronze basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
2" to 6"

Pressure
285 PSIG (19.7 BARG)

Temperature
406° F (207° C)

End Connections
FF Flanged

Screen Openings
2"–3" | 3/64" Perf | 304 SS
4"–6" | 1/8" Perf | 304 SS

Features
- ASME Class 150 rated strainers
- Connections designed in accordance with ASME B16.5, B16.34 and B16.24
- Cover flange in accordance with ASME B16.5
- Angular basket for straight through flow
- Stainless steel perforated basket is standard
- Recommended minimum straining level is 250 microns
- NPT drain connection furnished with plug as standard

Dimensions

Size		A		B		C		D		E		F		G		H		Weight Cover		Weight Unit	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
2"	50	2	51	8.13	206	4.06	103	8.56	218	5.00	127	2.88	73	11.75	298	0.5	13	5	2.3	29	13
2½"	56	2.5	64	8.75	222	4.38	111	8.94	227	6.25	159	3.88	98	13.75	349	0.25	19	7	3.2	33	15
3"	80	3	76	9.88	251	4.94	125	11.25	286	7.13	181	4.75	121	15.38	391	0.25	19	9	4.1	48	21.8
4"	100	4	102	11.50	292	5.75	146	13.19	335	8.00	203	5.69	145	17.75	451	1	25	13	5.9	69	31.4
5"	125	5	127	13.13	333	6.56	167	14.50	368	8.50	216	6.94	176	20.50	521	1	25	20	9.1	105	48
6"	150	6	152	14.88	378	7.44	189	15.00	381	9.00	229	7.94	202	23.00	584	1	25	26	12	121	55

Materials

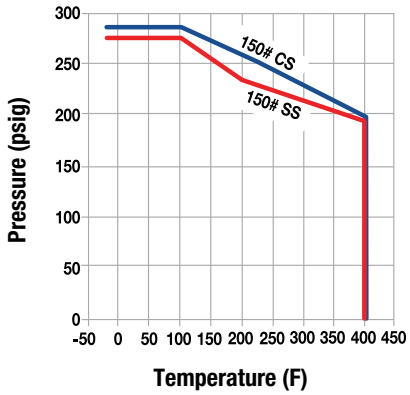
Part	Material
Body	B62
Cover	B62
Screen[1]	304 SS
Plug[2]	B16
Gasket[1]	Teflon[3]
Bolt/Stud[2]	B16
Nut[2]	Nonferrous

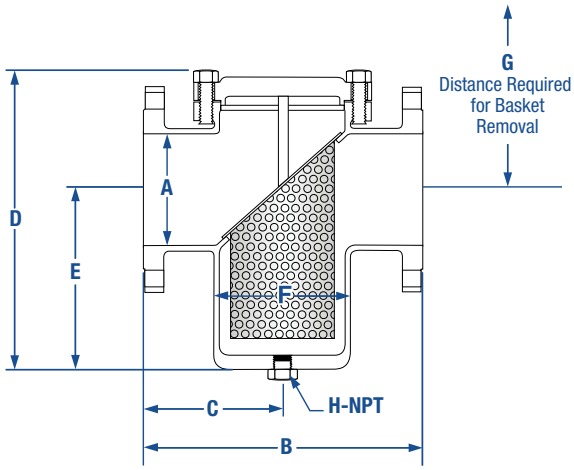
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] Gasket for bolted cover (Quick Opening Covers see page 60)
* For models with Quick Opening Cover, consult factory | Dimensions shown are subject to change. Consult factory for certified drawings when required

150B1 Series | Basket Strainers

Carbon Steel Body & Stainless Steel Body | Flanged Ends

Pressure / Temperature Chart
ASME B16.34 & ASME B16.24





Description

SSI manufactures carbon steel basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

2" to 12"

Pressure

285 PSIG (19.7 BARG)

Temperature

406° F (207° C)

End Connections

RF Flanged

Screen Openings

2"–3" | 3/64" Perf | 304 SS
4"–12" | 1/8" Perf | 304 SS

Features

- ASME Class 150 rated strainers
- Connections designed in accordance with ASME B16.5, B16.34 and B16.24
- Cover flange in accordance with ASME B16.5
- Angular basket for straight through flow
- Stainless steel perforated basket is standard
- Recommended minimum straining level is 250 microns
- NPT drain connection furnished with plug as standard

CRN

Dimensions

Size		A		B		C		D		E		F		G		H		Weight Cover		Weight Unit	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
2"	50	2	51	8.13	206	4.06	103	9.56	243	5.63	143	3.25	83	12.50	318	1	25	5	2.3	29	13
2½"	56	2.5	64	8.75	222	4.38	111	10.81	275	5.94	152	3.38	86	14.00	356	1	25	7	3.2	33	15
3"	80	3	76	9.88	251	4.94	125	12.50	318	7.56	192	3.56	90	15.38	391	1	25	9	4.1	48	21.8
4"	100	4	102	11.50	292	5.75	146	16.00	406	10.13	257	4.63	118	21.25	540	1	25	13	5.9	69	31.4
5"	125	5	127	13.13	333	6.56	167	15.88	403	9.50	241	7.50	191	22.25	565	1	25	20	9.1	105	48
6"	150	6	152	14.88	378	7.44	189	17.19	437	10.13	241	6.38	162	22.50	572	1	25	26	12	121	55
8"	200	8	203	18.75	476	9.38	238	21.94	559	13.06	332	8.88	226	29.38	746	1	25	45	20	214	97.3
10"	250	10	254	20.13	511	10.06	256	25.00	629	13.38	240	10.63	270	35.00	889	1	25	70	32	309	140.5
12"	300	12	305	26.25	667	13.13	333	30.69	780	17.00	432	14.88	378	42.50	1080	2	50	110	50	476	216.4

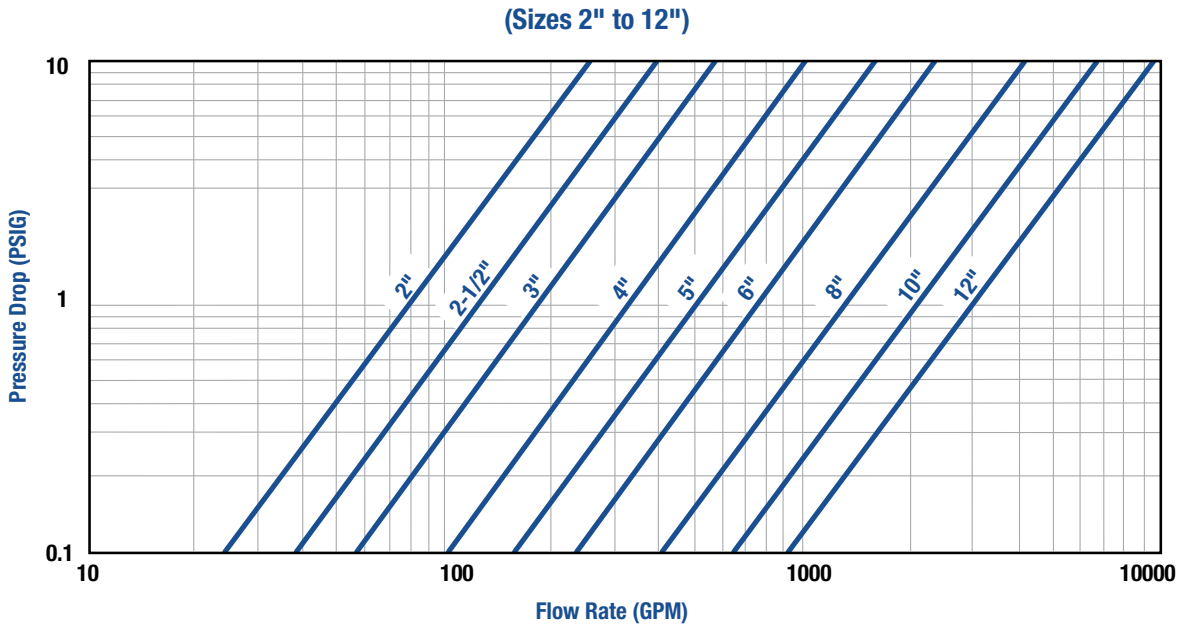
Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	A182-316
Gasket[1]	Teflon[3]	Teflon[3]
Bolt/Stud[2]	A193-B7	A193-B8-1
Nut[2]	A194-2H	A194-B

[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] Gasket for bolted cover (Quick Opening Covers see page 60)
* For models with Quick Opening Cover, consult factory | Dimensions shown are subject to change. Consult factory for certified drawings when required

Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*



Open Area Ratios

Standard Perforated Screen*

Bronze | 150B1 Series | Basket Strainer						
Size	Opening Diameter (in)	Opening %	Flange Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	29.4	10.9	3.5
2½"	3/64	36	4.91	44.3	16.4	3.3
3"	3/64	36	7.07	66.7	24.7	3.5
4"	1/8	40	12.57	97.2	38.9	3.1
5"	1/8	40	28.27	170.1	68.0	2.4
6"	1/8	40	50.27	318.6	127.5	2.5

Carbon & Stainless Steel | 150B1 Series | Basket Strainer						
Size	Opening Diameter (in)	Opening %	Nominal Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
2"	3/64	36	3.14	38.1	13.7	4.4
2½"	3/64	36	4.91	41.6	15.0	3.0
3"	3/64	36	7.07	59.6	21.5	3.0
4"	1/8	40	12.57	119.9	48.0	3.8
6"	1/8	40	28.27	177.4	71.0	2.5
8"	1/8	40	50.27	296.5	118.6	2.4
10"	1/8	40	78.54	413.5	165.4	2.1
12"	1/8	40	113.10	730.3	292.1	2.6

For Gas, Steam or Air service, consult factory | OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.

150B2 Series | Basket Strainers

Carbon & Stainless Steel Body | Flanged Ends

Sizes
1½" to 8"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 800°F
(427°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 150 rated strainers
- RF connections designed in accordance with ASME B16.5 and/or B16.34
- SSI Exclusive - Cover flange is in dimensional accordance with ASME B16.5
- Over the top flow and machined basket seat eliminate any chance of dirty fluid bypass
- Large screen area minimizes pressure drop and cleaning intervals
- Stainless steel perforated baskets are standard
- Recommended minimum straining level is 40 microns
- NPT drain connection furnished with plug as standard

Applicable Codes (designed in accordance with)

- ASME B16.5
- ASME B16.34

Models

- 150B2F - Over the top flow

Options

- Other screen perforations and mesh liners
- Quick Opening Covers - see page 60

150B2 Series Ordering Code

1					2						3		4	5	6
Inlet Size					Model						Body		Perf	Mesh	Optional
0	4	0	0	–	1	5	0	B	2	F	C	–	4	_	_

1	Inlet Size				
0150	1½"	**0300**	3"	**0600**	6"
0200	2"	**0400**	4"	**0800**	8"

2	Model
150B2F	Over the top

3	Body Material		
C	Carbon Steel	**T**	Stainless Steel

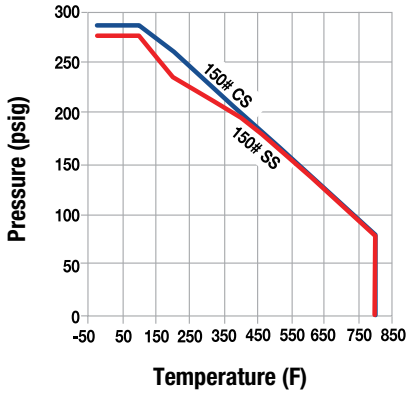
4	Perf[1] (304SS Material[2])				
B	3/64" (std < 4")	**2**	1/16"	**7**	7/32"
4	1/8" (std => 4")	**3**	3/32"	**8**	1/4"
A	None	**5**	5/32"	**9**	3/8"
1	1/32"	**6**	3/16"	**Z**	Other

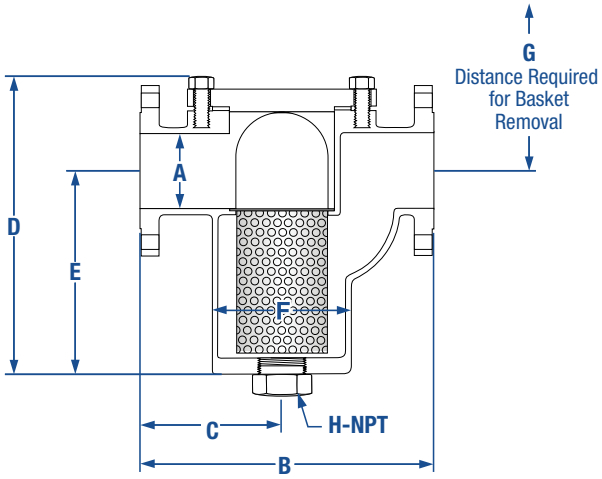
1. Standard screens All 11/2"— 1/32" perf, All 2"-3"—3/64" perf, All 4"-8" — 1/8" perf.
2. For other screen materials contact factory.

5	Mesh[1,2] (Leave Blank if not required)				
1	10	**5**	50	**9**	120
2	20	**6**	60	**Z**	Other
3	30	**7**	80		
4	40	**8**	100		

6	Optional (Leave Blank if not required)		
D	Special Drain Size	**G**	Special Gaskets
E1	1/4" Vent	**T**	Special Testing
E2	3/8" Vent	**V1**	Clamp Cover
E3	1/2" Vent	**X**	Oxygen Cleaning
F	Silicon Free	**Y**	Other / Multiple Specials

Pressure / Temperature Chart
ASME B16.34





Description

SSI manufactures carbon steel basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
1½" to 8"

Pressure
285 PSIG (19.7 BARG)

Temperature
800° F (427° C)

End Connections
RF Flanged

Screen Openings
1½" | 1/32" Perf | 304 SS
2"–3" | 3/64" Perf | 304 SS
4"–8" | 1/8" Perf | 304 SS

Features

- ASME Class 150 rated strainers
- Connections designed in accordance with ASME B16.5 and/or B16.34
- Cover flange in accordance with ASME B16.5
- Over the top flow and machined basket seat eliminate any chance of dirty fluid bypass
- Large screen area min. pressure drop and cleaning intervals
- Stainless steel perforated basket is standard
- Recommended minimum straining level is 40 microns
- NPT drain connection furnished with plug as standard

Dimensions

Size		A		B		C		D		E		F		G		H		Weight Cover		Weight Unit	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
1½"	40	1.5	38	9.50	241	4.75	121	10.25	260	6.88	175	3.44	87	13.50	343	0.5	15	5	2.3	30	13.6
2"	50	2	51	10.50	267	5.25	133	11.81	300	8.19	208	4.13	105	15.63	397	0.75	20	7	3.2	46	20.9
3"	80	3	76	13.13	333	6.56	167	15.56	395	11.19	284	5.38	137	19.75	502	1	25	17	7.7	78	35.5
4"	100	4	102	17.25	438	8.88	225	16.13	410	11.44	291	6.69	170	20.75	527	2	50	20	9.1	114	51.8
6"	150	6	152	19.63	498	10.88	276	25.56	649	19.31	491	10.00	254	31.13	791	2	50	45	20.5	241	109.5
8"	200	8	203	27.00	686	14.63	371	35.44	900	27.94	710	12.31	313	42.25	1073	2	50	70	31.8	432	196.4

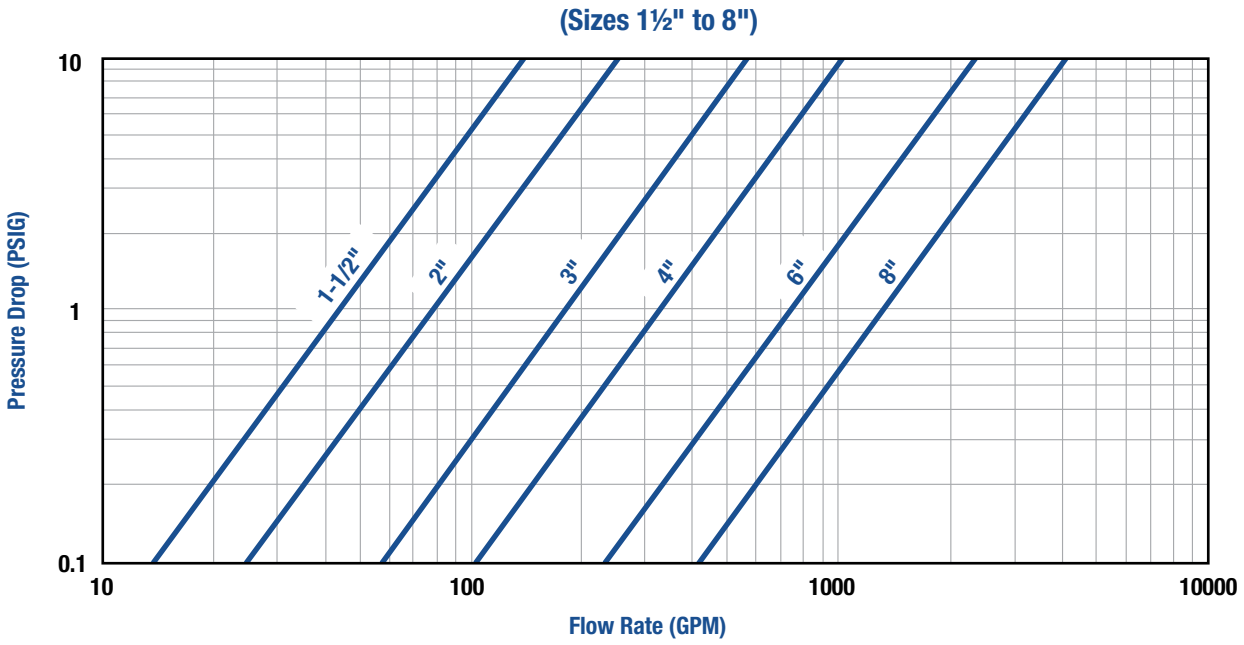
Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	304 SS
Gasket[1]	304 SS Spiral Wound[3]	304 SS Spiral Wound[3]
Bolt/ Stud[2]	A193-B7	A320-B8
Nut[2]	A194-2H	A194-8

[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] Gasket for bolted cover (Quick Opening Covers see page 60)
* For models with Quick Opening Cover, consult factory. Allow clearance for bottom drain bolt removal | Dimensions shown are subject to change. Consult factory for certified drawings when required

Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*



Open Area Ratios

Standard Perforated Screen*

Carbon Steel | 150B2 Series | Basket Strainer						
Size	Opening diameter (in)	Opening %	Nominal Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
1½"	1/32	28	1.77	29.1	8.2	4.6
2"	3/64	36	3.13	42.8	15.4	4.9
3"	3/64	36	7.07	101.0	36.4	5.1
4"	1/8	40	12.57	118.1	47.2	3.8
6"	1/8	40	28.27	365.7	146.3	5.2
8"	1/8	40	50.27	675.4	270.1	5.4

For Gas, Steam or Air service, consult factory | OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.

Sizes
½" to 2"

Pressure
up to 740 PSIG
(51 BARG)

Temperature
up to 800°F
(427°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- ASME Class 300 rated strainers
- NPT and Socketweld connections designed in accordance with ASME B16.5 and B16.34
- SSI Exclusive - Cover flange is in dimensional accordance with ASME B16.5
- Over the top flow and machined basket seat eliminate any chance of dirty fluid bypass
- Large screen area minimizes pressure drop and cleaning intervals
- Threaded or socketweld connections
- Stainless steel perforated baskets are standard
- Recommended minimum straining level is 40 microns
- NPT drain connection furnished with plug as standard

Applicable Codes (designed in accordance with)
- ASME B16.5
- ASME B16.34

Models
- 300B2T – Threaded over the top flow
- 300B2W – Socketweld over the top flow

Options
- Other screen perforations and mesh liners
- Quick Opening Covers - see page 60
- Socketweld Connections

300B Series Ordering Code

1							2					3	4		5	6	7
Inlet Size							Model					Connection	Body		Perf	Mesh	Optional
0	1	5	0	–	3	0	0	B	2	T	T	–	1	_	_		

1	Inlet Size				
0050	½"	0100	1"	0150	1½"
0075	2"	0125	1¼"	0200	2"

2	Model
150B2F	Over the top

3	Connections		
T	Threaded	W	Socketweld

4	Body Material		
C	Carbon Steel	T	Stainless Steel

1. Standard screens All 1/2" - 11/2"—1/32" perf, All 2"—3/64" perf.
2. For other screen materials contact factory.

5	Perf[1] (304SS Material[2])				
1	1/32"	3	3/32"	7	7/32"
B	3/64"	4	1/8"	8	1/4"
A	None	5	5/32"	9	3/8"
2	1/16"	6	3/16"	Z	Other

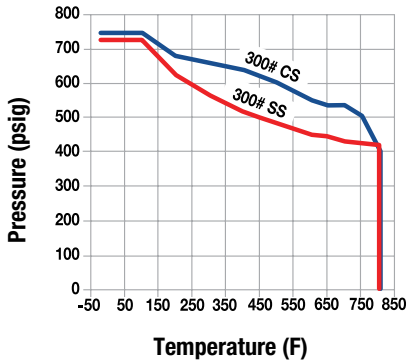
6	Mesh[1,2] (Leave Blank if not required)				
1	10	5	50	9	120
2	20	6	60	Z	Other
3	30	7	80		
4	40	8	100		

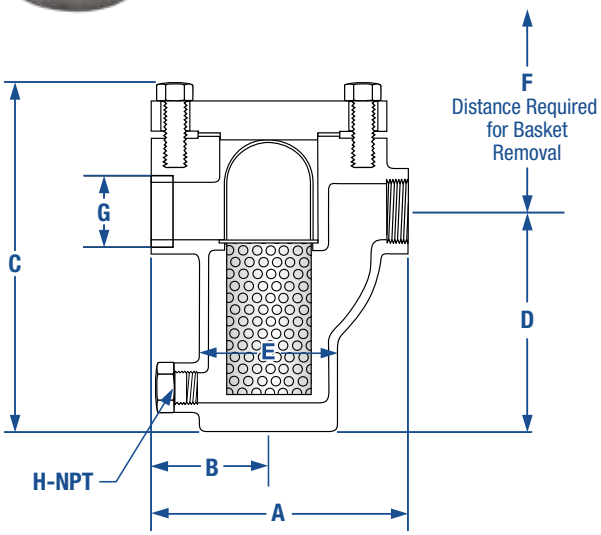
7	Optional (Leave Blank if not required)		
D	Special Drain Size	T	Special Testing
F	Silicon Free	V1	Clamp Cover
G	Special Gaskets	X	Oxygen Cleaning
N	Nace MR01-75	Y	Other / Multiple Specials

300B Series | Basket Strainers

Carbon Steel Body & Stainless Steel Body | Threaded & Socketweld Ends

Pressure / Temperature Chart ASME B16.34





Description

SSI manufactures carbon steel basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

½" to 2"

Pressure

740 PSIG (51 BARG)

Temperature

800° F (427° C)

End Connections

Threaded (NPT)
Socketweld

Screen Openings

½"–1½" | 1/32" Perf | 304 SS
2" | 3/64" Perf | 304 SS

Features

- ASME Class 300 rated strainers
- Connections designed in accordance with ASME B16.5 and B16.34
- Cover flange in accordance with ASME B16.5
- Over the top flow and machined basket seat eliminate any chance of dirty fluid bypass
- Large screen area min. pressure drop and cleaning intervals
- Stainless steel perforated basket is standard
- Recommended minimum straining level is 40 microns
- NPT drain connection furnished with plug as standard

Dimensions

Size		A		B		C*		D		E		F		H		Weight Cover		Weight Unit	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
½"	15	6.13	156	3.13	80	6.31	179	4.00	102	2.13	54	5.75	146	0.38	10	6	2.7	20	9.1
¾"	20	6.75	171	3.44	87	8.38	213	5.00	127	2.50	64	7.44	189	0.38	10	8	3.6	25	11.4
1"	25	6.75	171	3.44	87	8.38	213	5.00	127	2.50	64	7.44	189	0.50	15	8	3.6	25	11.4
1¼"	32	8.13	206	4.31	109	11.94	303	7.75	197	3.44	87	11.06	281	0.75	20	12	5.4	46	20.9
1½"	40	8.13	206	4.31	109	11.94	303	7.75	197	3.44	87	11.06	281	0.75	20	12	5.4	46	20.9
2"	50	9.00	229	4.81	122	12.44	316	7.75	197	4.25	108	11.69	297	1.00	25	16	7.3	61	27.8

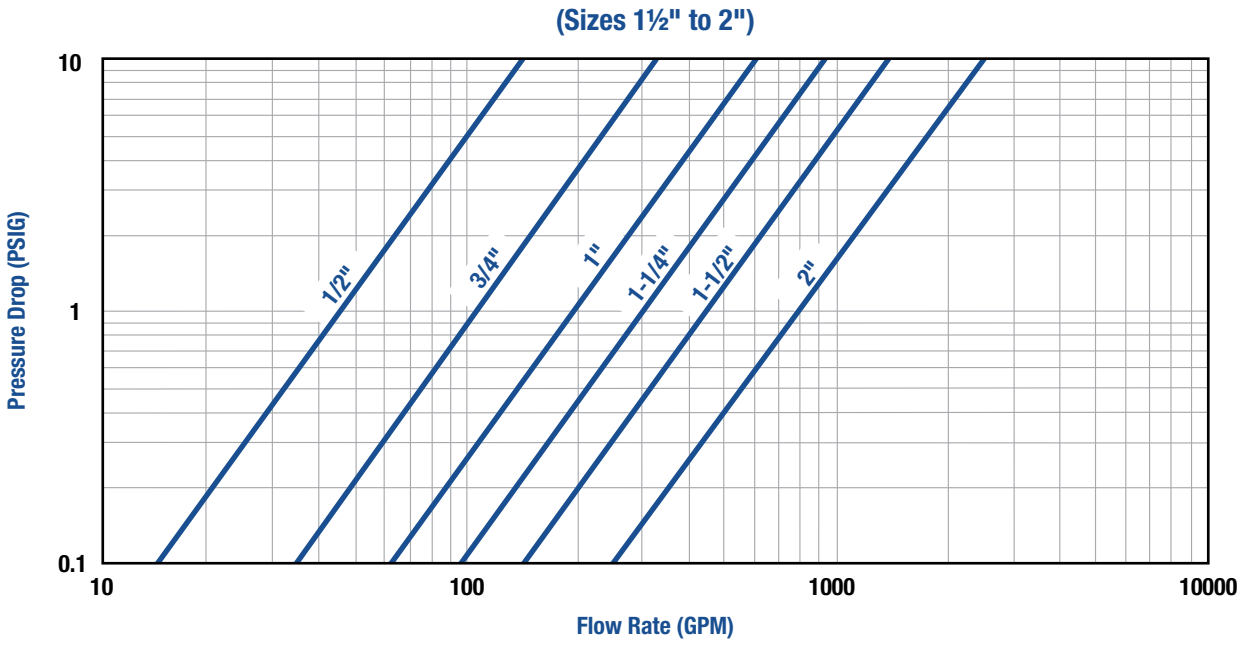
[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] Gasket for bolted cover (Quick Opening Covers see page 60)
* For models with Quick Opening Cover, consult factory | Dimensions shown are subject to change. Consult factory for certified drawings when required

Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	A182-316
Gasket[1]	304 SS Spiral Wound[3]	304 SS Spiral Wound[3]
Bolt/Stud[2]	A193-B7	A193-B8-1
Nut[2]	A194-2H	A194-8

Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*



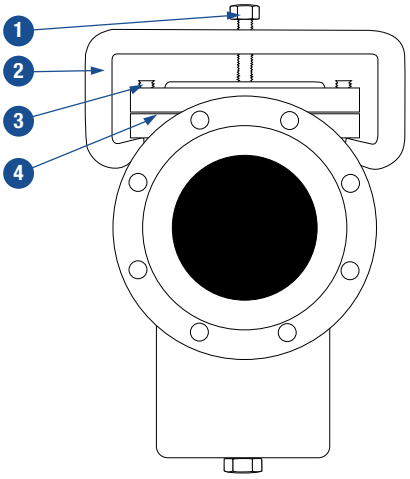
Open Area Ratios

Standard Perforated Screen*

Carbon & Stainless Steel | 300B Series | Basket Strainer						
Size	Opening diameter (in)	Opening %	Nominal Inlet Area (in^2)	Gross Screen Area (in^2)	Free Screen Area (in^2)	Open Area Ratio (OAR)
½"	1/32	28	0.30	14.1	4.0	13.0
¾"	1/32	28	0.53	22.3	6.2	11.7
1"	1/32	28	0.86	22.3	6.2	7.2
1¼"	1/32	28	1.50	46.9	13.1	8.8
1½"	1/32	28	2.04	46.9	13.1	6.4
2"	3/64	36	3.36	57.1	20.6	6.1

For Gas, Steam or Air service, consult factory | OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.

Quick Opening Covers | Type C | C-Clamp



Description

- Ideal for low pressure applications.
- Allows for extremely quick access to strainer basket.
- To be used on non-lethal liquid service only.

Sizes

- ½" to 12"

Weight	
Part Number	Weight (lbs)
0200-clamp	5
0250-clamp	5
0300-clamp	5
0400-clamp	9
0500-clamp	10
0600-clamp	19
0800-clamp	21
1000-clamp	24
1200-clamp	27

Upper Pressure Limits | Non-Shock			
M.A.W.P		Max. Working Temperature	
PSIG	bar	°F	°C
50	3.44*	100	37.8

Materials of Construction		
#	Part	Material
1	Clamp Bolt (2)	A449 Grade 5
2	Clamp	A516-70 Carbon Steel
3	Anti-rotating Stud (2)	A307-B
4	Gasket - 1/2" - 6"	Flat Rubber (Non-asbestos)
	Gasket - 8" - 12"	Buna-N O-ring (Groove in Cover)

* Through 5" inlet consult factory for larger sizes

CAUTION: This type of closure does not meet the requirements of Section UG-35.2 of ASME Section VIII, Div. 1. | Use caution when utilizing this type of device

Pressure Drop Correction Factors

Centistokes	SSU	Unlined Perforated Basket	20 Mesh Lined Basket	40 Mesh Lined Basket	60 Mesh Lined Basket	80 Mesh Lined Basket	100 Mesh Lined Basket	200 Mesh Lined Basket
2	30 (water)	1	1.05	1.2	1.4	1.6	1.7	2
100	500	1.6	1.7	1.9	2.1	2.4	2.6	3.1
216	1000	1.7	2	2.2	2.4	2.6	2.8	3.3
433	2000	1.9	2.2	2.4	2.7	2.9	3.2	3.8
650	3000	2	2.3	2.6	2.9	3.2	3.5	4.1
1083	5000	2.2	2.6	3	3.5	4	4.5	5.3
2200	10000	2.5	3	3.5	4.2	5	6	7.1

1) Obtain water pressure drop from graphs on appropriate product page.
2) Multiply the pressure drop obtained from (1) by the specific gravity of the liquid.
3) Multiply the pressure drop from (2) by the appropriate correction factor for the mesh liner and/or viscosity.

Example	Answer
Model: 150B1 **Size:** 4" **Filtration:** 1/8" perf. screen 40 Mesh **Flow Rate:** 200 GPM **Fluid:** Water **SG:** 1 **Viscosity:** 30 SSI	**A)** From Pressure Drop Chart, pressure drop of water is .38 psid **B)** Multiply by specific gravity; .38 x 1 = .38 psid **C)** From chart above, multiply .38 x 1.2 (correction factor) = .456 psid

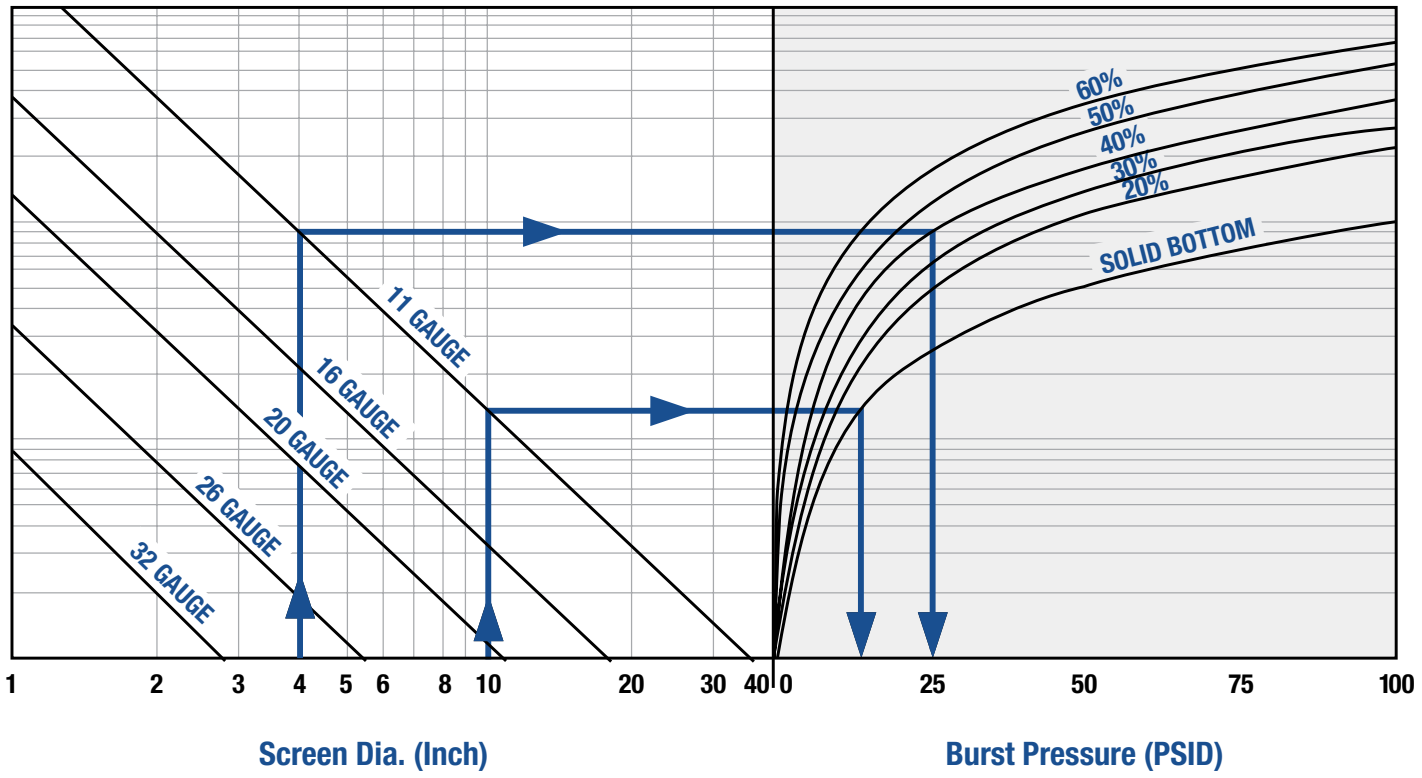
Correction Factors for Clogged Screens

% Clogged	Ratio of Free Screen Area to Pipe Area						
	10:1	8:1	6:1	4:1	3:1	2:1	1:1
10	–	–	–	–	–	–	3.15
20	–	–	–	–	–	1.15	3.9
30	–	–	–	–	–	1.4	5
40	–	–	–	–	–	1.8	6.65
50	–	–	–	–	1.25	2.5	9.45
60	–	–	–	1.15	1.8	3.7	14.5
70	–	–	–	1.75	2.95	6.4	26
80	–	1.1	1.75	3.6	6.25	14	58
90	2.3	3.45	6	13.5	24	55	–

* Multiply values obtained from Pressure Drop Charts by the appropriate values shown below.

Example	Answer
Strainer Size: 6" **Model:** 150B1 **Body:** Carbon Steel **Filtration:** 1/8" Perf. **Flow rate:** 1000 GPM **Service**: Water **% Clogged:** 60%	**A)** The Pressure Drop Chart indicates a drop of 1.50 psid with standard screen. **B)** The Effective Area Chart indicates a ratio of 2.5:1 free area to pipe area. **C)** Using chart above we read the correction factor of 2.5:1 (2:1 approx.) to be 3.7 at 60% clogged. **D)** Total pressure drop equals 1.50 x 3.7 = 5.55 psid.

Pressure Drop Correction Factors



- Baskets with perforated bottoms are standard.
- Chart is based on standard dimensions. Higher burst pressure ratings are available. Please consult factory.
- Chart is based on stainless steel screen material. No safety factor is incorporated. It is the responsibility of the user to determine an acceptable safety factor.

Example

Strainer Size: 10"
Basket Type: Perforated Screen with 11 gauge solid flat bottom.
Screen Material Open Area: 20% – 60%

- Locate Strainer size.
- Follow vertical line to solid thickness.
- Follow horizontal line to solid bottom curve.
- Follow vertical line downward to read burst pressure.
- Burst pressure equals 15 psid.

Strainer Checklist

Please take the factors listed below into account when selecting a strainer. Kindly fill out and send the pertinent information, to your best ability, so that we can recommend a Strainer to suit your specific requirements.

1) Fluid to be strained:		**9)** Nature of solids to be strained out:	
2) Flow rate:		**10)** Size of solids to be strained:	Size of mesh/perf. required:
3) Density of fluid:		**11)** Clearance limitation - Above:	Below:
4) Viscosity of fluid:		Left:	Right:
5) Fluid working pressure:	Maximum pressure:	**12)** Maximum pressure drop with clean screen:	
6) Fluid working temperature:	Maximum temperature:	**13)** Expected cleaning frequency:	
7) Preferred material of strainer construction:		**14)** Any other information deemed relevant	
8) Present pipeline size and material:			

Contact Information

Name:		Company:	
Address:		City/Town:	
Province/State:	Postal/Zip Code:	Phone:	Email:

Installation and Maintenance Instructions

Strainer Installation Instructions

- Ensure all machined surfaces are free of defects and that the inside of the strainer is free of foreign objects.
- For horizontal and vertical pipelines, the strainer should be installed so that the blow-down drain connection is pointed downward.
- For flanged end strainers, the flange bolting should be tightened gradually in a back and forth clockwise motion. Threaded end strainers should use an appropriate sealant.
- Once installed, increase line pressure gradually and check for leakage around joints.
- If the strainer is supplied with a start-up screen, monitor pressure drop carefully.

Screen Removal Instructions

- Drain piping.
- Vent line to relieve pressure.
- Loosen cover and open to access screen.
- Remove, clean and replace screen in original position (Note: In some instances, a high pressure water jet or steam may be required for effective cleaning).
- Inspect cover gasket for damage. If necessary, replace. (Note: If spiral wound gaskets have been used, they must be replaced and can not be used again).
- Tighten cover. The strainer is ready for line startup.

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

Maintenance Instructions

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

Trouble Shooting and Diagnostic Techniques

- After pressurizing, inspect cover and other joints for leakage. Gasket replacement or cover tightening is necessary if leakage occurs.
- If the required filtration is not taking place, ensure the screen is installed in the correct position, that being flush to the screen seating surfaces.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

Temporary Strainers

Sizes
3/4" to 6"

Pressure
up to 3705 PSIG

Temperature
up to 800°F

Applications
Process Industry | Power Industry | Chemical Industry | Marine
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Steel Mills

Features

- Cone strainers
- 100% to 200% open area range (OAR) as standard

End Connections

- Wafer Flat Faced

Materials

- Stainless Steel

TC Series | Temporary Strainers

Stainless Steel | Cone

Sizes
3/4" to 6"

Pressure
up to 285 PSIG
(19.6 BARG)

Temperature
up to 800°F
(427°C)

Applications
Process Industry | Power Industry | Chemical Industry | Marine
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Steel Mills

Features
- Standard and custom designs
- Primarily used for new pipeline start-up or where solid loading is minimal
- Filtration down to 40 Microns available
- 100% to 200% open area range (OAR) as standard
- 304SS construction is standard. Construction in other materials is available
- May be installed in horizontal or vertical pipelines

Applicable Codes (designed in accordance with)
- ASME Class 150 rated temporary strainers

Note: Temporary Strainers are designed for start up service of new or revamped piping systems. Temporary Strainers are not intended to be used in a permanent application. Contact factory when permanent applications are required

Models
- TC1 – 100% open area - Flow inside to outside
- TC4 – 150% open area – Flow inside to outside
- TC7 – 200% open area – Flow inside to outside

Options
- Custom engineered designs
- Customer specified Open Area
- Other Screen and/or Mesh - See page 60

TC Series Ordering Code

1			2	3	4	5		6	7	8
Model			Material	Inlet Size	Class	Connection		Cover	Perf	Mesh
T	C	1	V	M	1	W	–	A	4	A

1	Model		
TC1	100% I/O Flow	TC7	200% I/O Flow
TC4	150% I/O Flow		

2	Material
V	304 Stainless Steel (Standard)

3	Inlet Size				
D	3/4"	H	2"	M	4"
E	1"	J	2½"	N	5"
G	1½"	K	3"	P	6"

4	Class
1	150

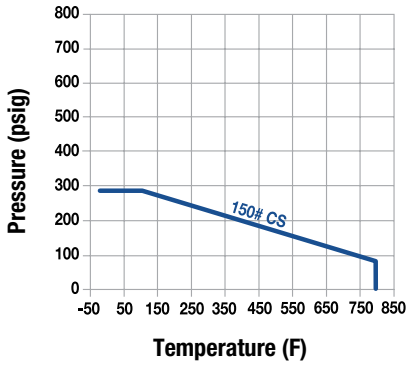
5	Connection
W	Wafer Flat Face Smooth Finish (Designed to fit between RF Flanges)

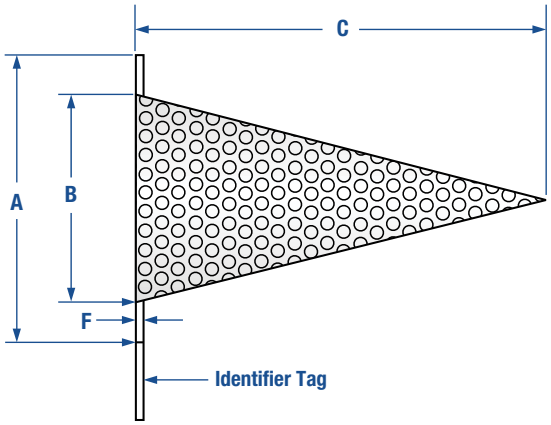
6	Cover
A	None

7	Perf
4	1/8"

8	Mesh
A	None

Pressure / Temperature Chart
ASME B16.1





Description

SSI manufactures temporary cone strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI temporary cone strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
¾" to 6"

Pressure
275 PSIG (18.9 BARG)

Temperature
800º F (427º C)

End Connections
Wafer Falt Faced

Screen Openings
¾"–6" | 1/8" Perf | 22 Gauge[1]

Features

- Primarily used for new pipeline start-up or where solid loading is minimal
- Available in conical configuration
- 100% to 200% open area range (OAR) as standard
- 304SS construction is standard
- May be installed in horizontal or vertical pipelines

Dimensions

Size		A		B		C						F		Weight	
						100%		150%		200%					
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
¾"	20	2.13	54	0.63	16	1.13	29	1.67	43	2.25	57	0.13	3	0.5	0.2
1"	25	2.50	64	0.75	19	1.63	41	2.50	64	3.33	84	0.13	3	0.5	0.2
1½"	40	3.25	83	1.25	32	2.20	56	3.38	86	4.50	114	0.13	3	0.5	0.2
2"	50	4.00	102	1.75	44	3.00	76	4.50	114	6.00	152	0.13	3	0.5	0.2
2½"	65	4.75	121	2.25	57	3.20	81	5.00	127	6.67	170	0.13	3	1	0.5
3"	80	5.25	133	2.75	70	4.00	102	6.25	159	8.50	216	0.13	3	1	0.5
4"	100	6.75	171	3.75	95	5.13	130	7.88	200	10.63	270	0.13	3	2	0.9
5"	125	7.63	194	4.63	117	6.50	165	10.13	257	14.00	356	0.13	3	2	0.9
6"	150	8.63	219	5.38	137	8.13	207	13.00	330	17.00	432	0.13	3	3	1.4

Materials

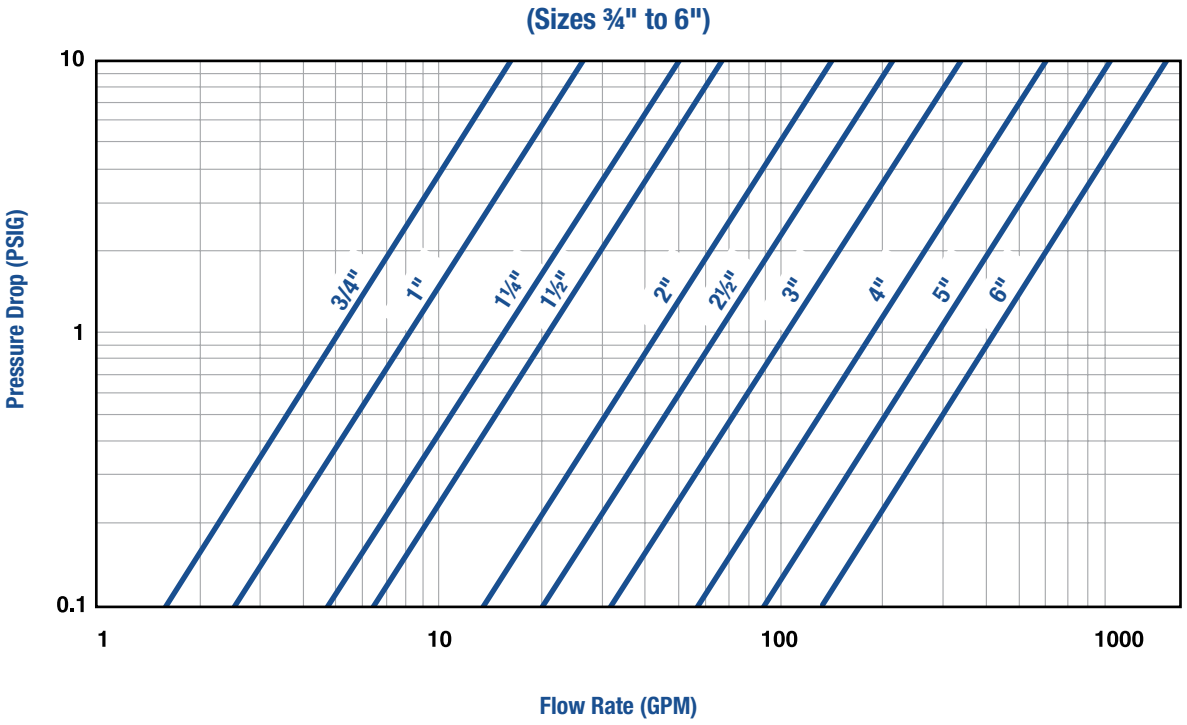
Part	Material
Ring	A240-304
Handle	A240-304
Perf Plate	A240-304
Mesh	A276-304

[1] Dimensions shown using 1/8" perf and no mesh. Open Area percentage will change with alternate perf and/or mesh. The change will equal the ratio of the open area of the perf/mesh compared to the open area of 1/8" mesh.

* Open Area % for 1/8" perf is 40% | Dimensions shown are subject to change. Consult factory for certified drawings when required.

Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/8" to 1/4" Perforated Screen*



For Gas, Steam or Air service, consult factory | OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.

Pressure Drop Correction Factors

Centistokes	SSU	Unlined Perforated Basket	20 Mesh Lined Basket	40 Mesh Lined Basket	60 Mesh Lined Basket	80 Mesh Lined Basket	100 Mesh Lined Basket	200 Mesh Lined Basket
2	30 (water)	1	1.05	1.2	1.4	1.6	1.7	2
100	500	1.6	1.7	1.9	2.1	2.4	2.6	3.1
216	1000	1.7	2	2.2	2.4	2.6	2.8	3.3
433	2000	1.9	2.2	2.4	2.7	2.9	3.2	3.8
650	3000	2	2.3	2.6	2.9	3.2	3.5	4.1
1083	5000	2.2	2.6	3	3.5	4	4.5	5.3
2200	10000	2.5	3	3.5	4.2	5	6	7.1

1) Obtain water pressure drop from graphs on appropriate product page.
2) Multiply the pressure drop obtained from (1) by the specific gravity of the liquid.
3) Multiply the pressure drop from (2) by the appropriate correction factor for the mesh liner and/or viscosity.

Example	Answer
Model: TCIVMIW-A44 **Size:** 4" **Filtration:** 1/8" perf. screen 40 Mesh **Flow Rate:** 200 GPM **Fluid:** Water **SG:** 1 **Viscosity:** 30 SSI	**A)** From Pressure Drop Chart, pressure drop of water is 1.25 psid **B)** Multiply by specific gravity; 1.25 x 1 = 1.25 psid **C)** From chart above, multiply 1.25 x 1.2 (correction factor) = 1.5 psid

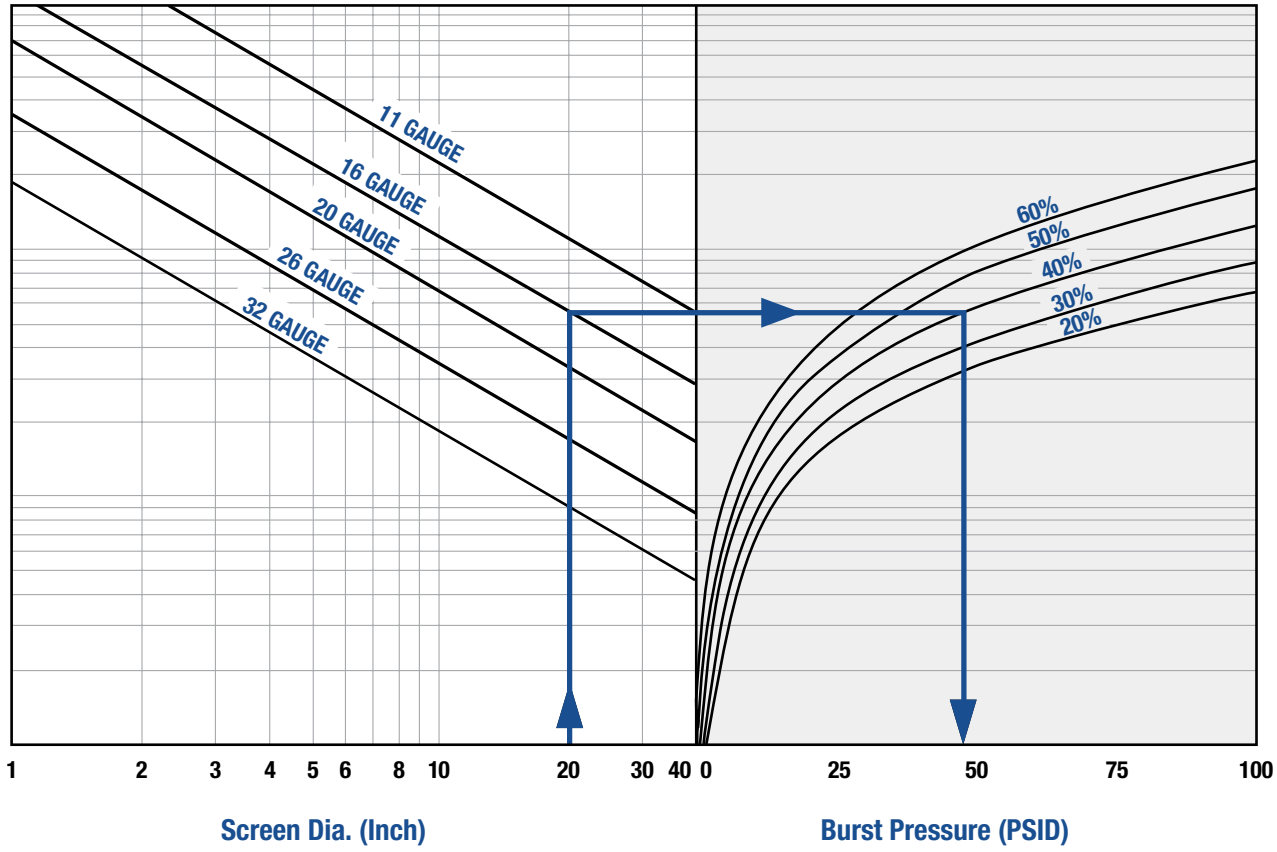
Correction Factors for Clogged Screens

% Clogged	Ratio of Free Screen Area to Pipe Area						
	10:1	8:1	6:1	4:1	3:1	2:1	1:1
10	–	–	–	–	–	–	3.15
20	–	–	–	–	–	1.15	3.9
30	–	–	–	–	–	1.4	5
40	–	–	–	–	–	1.8	6.65
50	–	–	–	–	1.25	2.5	9.45
60	–	–	–	1.15	1.8	3.7	14.5
70	–	–	–	1.75	2.95	6.4	26
80	–	1.1	1.75	3.6	6.25	14	58
90	2.3	3.45	6	13.5	24	55	–

* Multiply values obtained from Pressure Drop Charts by the appropriate values shown below.

Example	Answer
Strainer Size: 6" **Model:** TCIVPIW-A4A **Filtration:** 1/8" Perf. **Flow rate:** 200 GPM **Service**: Water **% Clogged:** 60%	**A)** The Pressure Drop Chart indicates a drop of 1.50 psid with standard screen. **B)** The Effective Area Chart indicates a ratio of 2.5:1 free area to pipe area. **C)** Using chart above we read the correction factor of 2.5:1 (2:1 approx.) to be 3.7 at 60% clogged. **D)** Total pressure drop equals 1.50 x 3.7 = 5.55 psid.

Pressure Drop Correction Factors



1) The above chart is for use with perforated plate and based on the formula:

$$P = \frac{2St \cos \theta}{D + 1.2t \cos \theta}$$

SOURCE: ASMESection VIII, Div. 1., Appendix 1.

P = Burst pressure, psi
S = Reduced allowable stress
t = Thickness of perforated plate, in.
D = Dimension B (See page 83)
θ = 15 Degree

2) The above chart is based on standard dimensions. Higher burst pressure ratings are available. Please contact factory.
3) The above chart is based on a screen material of stainless steel. No safety factor is incorporated. It is the responsibility of the user to determine an acceptable safety factor.
3) See Screen Openings Chart for % Open Area's of inventoried perforated plate.

Example

Strainer Size: 20"
Screen Thickness: 16 Gauge
Screen Perforations: 40%

- Locate strainer size.
- Follow vertical line to gauge thickness.
- Follow horizontal line to required perforation open area.
- Follow vertical line downward to read burst pressure.
- Burst pressure equals 48 psid.

Installation and Maintenance Instructions

The temporary strainer is a device temporarily installed in a pipeline to remove sediment and debris from fluids. The temporary strainer is to be used for piping start-up applications only. The strainer is not to be used permanently installed in the process piping. If a permanent strainer is required after start-up, please contact the factory and/or refer to the SSI complete product line of pipeline strainers for your application.

Strainer Installation Instructions

- Unpack the strainer. Inspect for any damage occurring during transit. Report damage to the carrier.
- Ensure all machined surfaces are free of defects and that the inside of the strainers is free of foreign materials.
- Verify that the correct size and flange rating for the application.
- Review the application and chemical compatibility of the process fluid to the materials of construction of the strainer.
- If the strainer application has a mesh liner, it is important to note the position of this mesh liner.
- As specified at the time of order, the mesh liner is on the inside or outside of the strainer.
- Install the strainer into the pipeline between the pipe flanges. Ensure that the mesh lining (if provided) is facing the flow.
- Be sure to install the necessary gaskets and bolting. Torque bolts properly by using standard piping practices.
- Expel air for the pipeline where the strainer is installed. Start the system gradually. This will eliminate sudden shock to the strainer and other equipment in the line. Close any open pipeline vents after air is expelled.

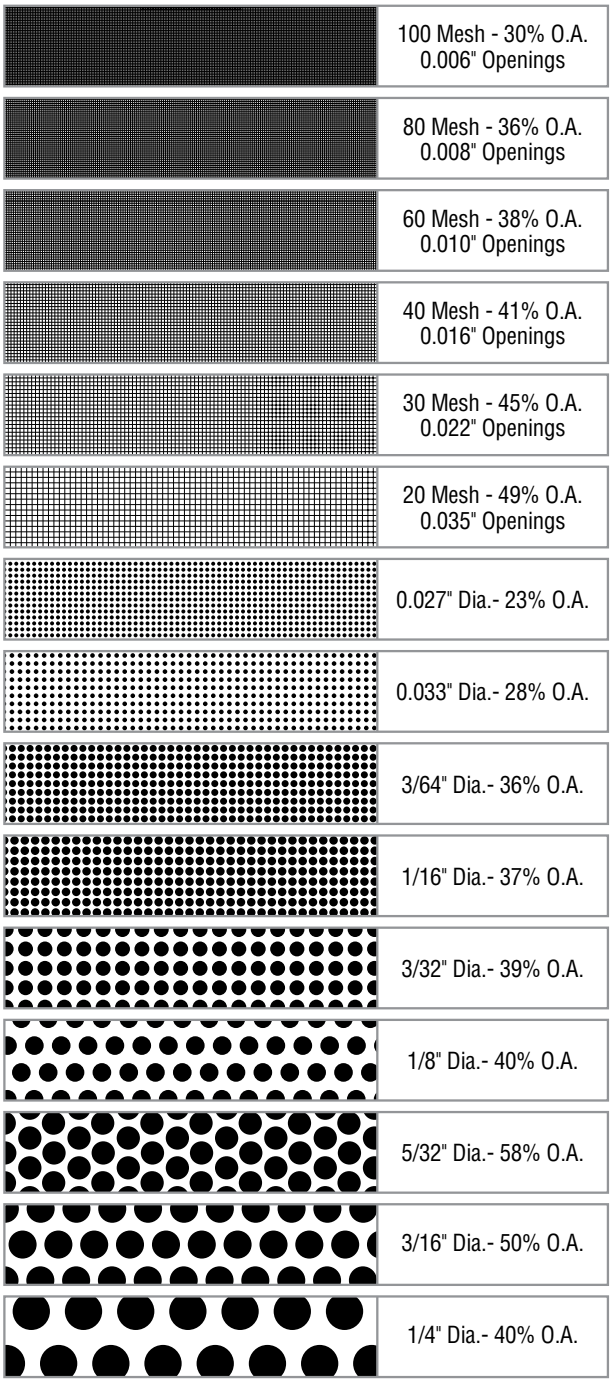
Maintenance Instructions

- For maximum efficiency, determine the length of time it takes for the pressure drop to double that in the clean condition.
- Once the pressure drop reaches an unacceptable value, the strainer should be clean and/or removed.
- A pressure gauge installed before and after the strainer in line will indicate pressure loss due to clogging and may be used to determine when cleaning is required.
- Slowly close the pipeline valves upstream and downstream for the strainer. Make sure these valves are tightly closed.
- Relieve the fluid pressure from the pipeline where the strainer is installed. The pipeline must be drained and internal pressure relieved prior to removing the strainer. Proceed to remove the strainer.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

Screen Openings



Factors to Consider

1) Purpose

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

2) Service

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

3) Filtration Level

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

Screen openings other than those shown above are readily available. Various mesh sizes as fine as 5 micron and perforated plate as coarse as ½" Dia. are in inventory.

Screens are available in a wide range of materials. Screens of carbon steel, stainless steel (304, 316), alloy 20, monel 400, hastelloy C and titanium grade 2 are in inventory.

Custom manufactured screens are available upon request. Please consult factory.

Replacement Cylindrical Screens

Design Features

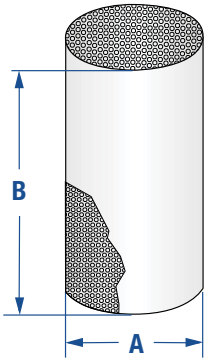
SSI design's and manufactures screens and baskets for all makes of Y, basket and duplex strainers. The range of materials and size of units is unlimited.

SSI is able to provide baskets manufactured from:

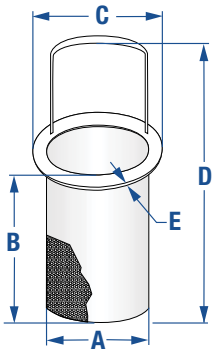
- Perforated Plate
- Mesh or Mesh/Perf. combination
- Wedge Wire
- Electron Beam Small Hole Perforated Plate

Using the above processes or combination thereof, SSI can provide screens and baskets suitable for a wide range of applications.

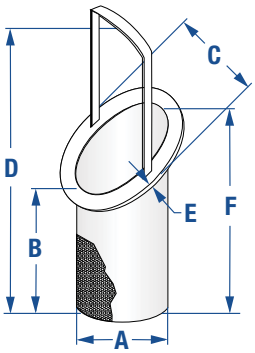
Style A



Style D



Style B



Performance Requirements

Required Level of Filtration =
Material of Construction =
Minimum Specified Burst Pressure =
Flow Direction =
Other =

Contact Information

Name	
Company:	
Phone:	Email:

Dimensional Requirements

Style:
Screen Outer Diameter (A) =
Screen Height (B) =
Ring OD (C) =
Overall Height (D) =
Ring Thickness (E) =
Basket Long Height (F) =

Suction Diffusers | Overview

Sizes
2"x1½" to 12"x12"

Pressure
up to 200 PSIG

Temperature
up to 212ºF

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- Filtration Down to 40 Microns
- Large Diffuser Screens
- Long and Short Neck Versions Available
- Cast Construction

End Connections
- Flat Faced
- Raised Face
- Buttweld

Materials
- Cast Iron

ASME Ratings
- Class 125

Sizes
2"x1¼" to 12"x12"

Pressure
up to 200 PSIG (13.8 BARG)

Temperature
up to 250°F (121°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- All encompassing Strainer, Flow Straightener, Elbow and Pipe Reducer for pump applications
- Direct mount to the suction side of a pump in either horizontal or vertical position
- Flow turbulence reduced through integral straightening vanes for improved pump efficiency
- All strainers supplied with removable Stainless Steel startup mesh over Stainless Steel perforated plate
- Cast Iron FF Flanges on all sizes
- All sizes complete with O-ring sealed covers with knob bolts to minimize down time
- Supporting pads for easy mounting of standard I.D. support foot
- Drain connection with plug furnished as standard

Applicable Codes (designed in accordance with)
- ASME B16.1

Models
- 125SFI – Cast Suction Diffuser

Options
- Other perforated screens and mesh liners
- EPDM or Viton cover O-ring
- Differential connections
- Bolted covers

125S Series Ordering Code

1							2						3		4	5
Inlet Size							Model						Outlet		Perf	Mesh
0	6	0	0	–			1	2	5	S	F	I	N	–	4	2

1	Inlet Size				
0200	2"	**0400**	4"	**0800**	8"
0250	2½"	**0500**	5"	**1000**	10"
0300	3"	**0600**	6"	**1200**	12"

2	Model
125SFI	125# Flanged

3	Outlet Size				
G	1½"	**M**	4"	**R**	10"
H	2"	**N**	5"	**S**	12"
J	2½"	**P**	6"		
K	3"	**Q**	8"		

4	Perf
4	1/8"

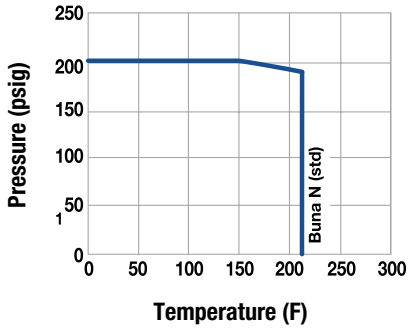
5	Mesh
2	20"

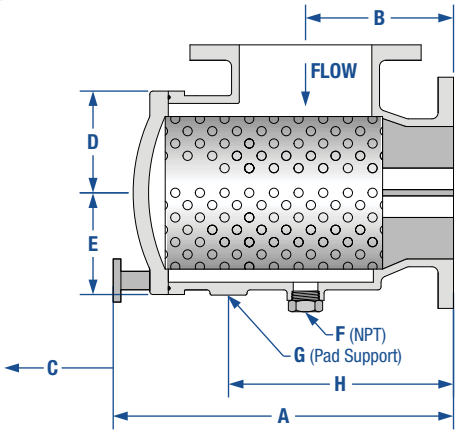
Cast Suction Diffusers are supplied standard with Buna N cover O-ring and 1/8 perforated screen with a removable 20 mesh start up liner.
For other screen materials contact factory.

125S Series | Suction Diffusers

Cast Iron Body | Flanged Ends

Pressure / Temperature Chart





Sizes
2" x 1½" to 12" x 12"

End Connections
FF Flanged

Pressure
200 PSIG (18.96 BARG)

Screen Openings
2"–12" | 1/8" Perf | 20 Mesh*

Temperature
212º F (100º C)

Features

- All-encompassing Strainer, Flow Straightener, Elbow and Pipe Reducer for pump applications
- Direct mount to the suction side of a pump in a horizontal or vertical position
- Flow turbulence reduced through integral straightening vanes for improved pump efficiency
- All strainers supplied with removable Stainless Steel startup mesh over Stainless Steel perforated plate
- All sizes complete with O-ring sealed covers with knob bolts to minimize down time
- Supporting pads for easy mounting of the standard I.D. support foot
- Drain connection with plug furnished as standard

Dimensions

Size				A		B		C[3]		D		E		F		G[4]		H		Weight	
Inlet		Outlet																			
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	1½"	40	10.25	260	5	114.3	5.00	127	4.5	114.3	2.19	55.0	0.75	20	0.75	20	5.94	151	21	9.5
2"	50	2"	50	10.25	260	5	114.3	5.00	127	4.5	114.3	2.19	55.0	0.75	20	0.75	20	5.94	151	23	10.4
2½"	65	2"	50	10.88	276	5	127.0	5.00	127	5.0	127.0	2.50	64.0	0.50	15	1.00	25	6.56	167	32	14.5
2½"	65	2½"	65	10.88	276	5	127.0	5.00	127	5.0	127.0	2.50	64.0	0.50	15	1.00	25	6.56	167	34	15.4
3"	80	2"	50	10.25	260	6	139.7	5.00	127	5.5	139.7	2.19	55.0	0.75	20	1.00	25	5.94	151	37	16.8
3"	80	2½"	65	11.31	288	6	139.7	5.00	127	5.5	139.7	3.00	76.0	0.75	20	1.00	25	7.06	179	49	22.2
3"	80	3"	80	11.31	288	6	139.7	5.25	133	5.5	139.7	3.00	76.0	0.75	20	1.00	25	7.06	179	55	24.9
4"	100	3"	80	13.00	332	7	165.1	5.25	133	6.5	165.1	3.88	98.0	0.75	20	1.00	25	8.75	223	57	25.9
4"	100	4"	100	12.81	325	7	165.1	7.13	181	6.5	165.1	3.88	98.0	0.75	20	1.25	32	8.25	210	92	41.7
5"	125	4"	100	15.75	400	8	190.5	7.13	181	7.5	190.5	4.44	112.5	0.75	20	1.25	32	7.63	194	97	44.0
5"	125	5"	125	16.13	411	8	190.5	7.13	181	7.5	190.5	5.56	141.0	1.00	25	1.25	32	10.00	254	101	45.8
6"	150	4"	100	13.00	332	8	203.2	7.13	181	8.0	203.2	3.88	98.0	0.75	20	1.25	32	8.75	223	140	63.5
6"	150	5"	125	17.00	433	8	203.2	7.13	181	8.0	203.2	5.44	138.0	1.00	25	1.25	32	10.69	272	145	65.8
6"	150	6"	150	17.00	433	8	203.2	7.13	181	8.0	203.2	5.44	138.0	1.00	25	2.00	50	10.69	272	182	82.6
8"	200	6"	150	17.00	433	8	203.2	7.13	181	9.0	228.6	5.44	138.0	1.00	25	2.00	50	10.69	272	197	89.4
8"	200	8"	200	20.81	528	9	228.6	16.25	413	9.0	228.6	7.00	176.5	1.00	25	2.00	50	11.63	295	292	132.5
10"	250	8"	200	20.81	528	9	228.6	16.25	413	11.0	279.4	7.00	176.5	1.00	25	2.00	50	11.63	295	312	141.5
10"	250	10"	250	26.25	667	11	279.4	16.25	413	11.0	279.4	9.75	248.0	1.00	25	2.00	50	14.19	360	398	180.5
12"	300	8"	200	25.31	643	11	279.4	16.25	413	11.0	279.4	8.25	209.0	1.00	25	2.00	50	13.75	349	412	186.9
12"	300	10"	250	26.25	667	11	279.4	16.25	413	12.0	304.8	9.75	248.0	1.00	25	2.00	50	14.19	360	491	222.7
12"	300	12"	300	26.25	677	12	304.8	18.13	461	12.0	304.8	9.75	248.0	1.00	25	2.00	50	15.38	360	573	259.9

Materials

Part	Material
Body	A126-B
Cover	A126-B
Screen[1]	304 SS
Mesh	304 SS
Knob[2]	Ductile Iron
O-Ring[1]	Buna N
Plug[2]	Malleable Iron

[1] Recommended Spare Parts | [2] Materials of equivalent strength may be substituted | [3] Distance required for Screen Removal | [4] Mounting Pad Support

* 20 Mesh Liner is removeable | Dimensions shown are subject to change. Consult factory for certified drawings when required

Open Area Ratios

Standard Perforated Screen*

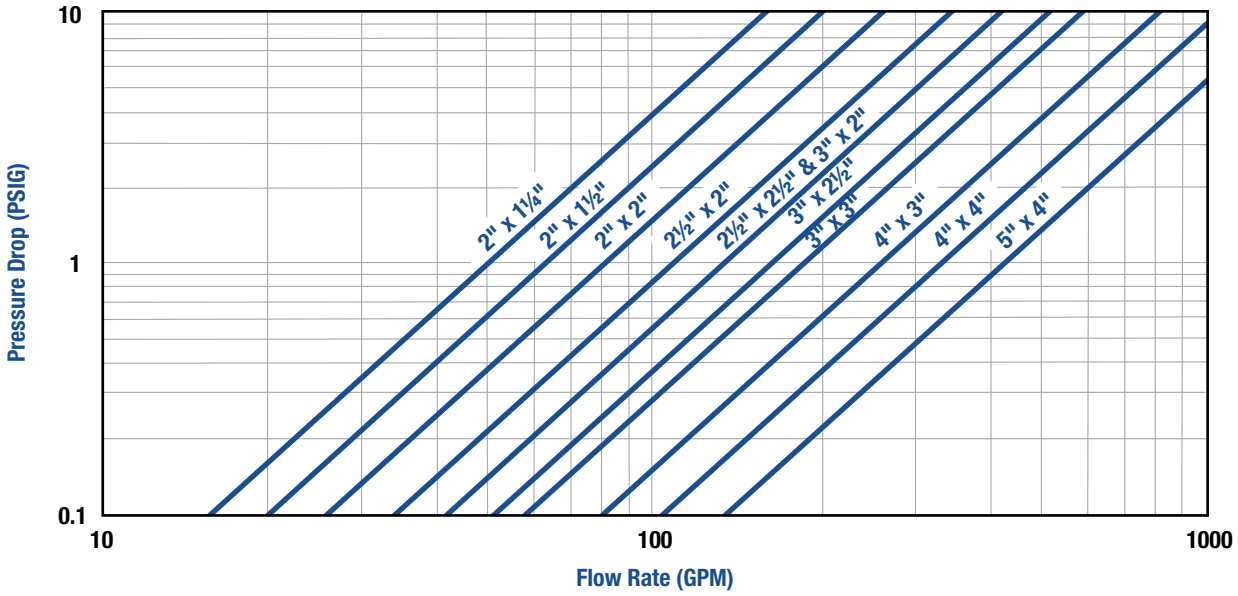
Opening 40% | 1/8" Diameter				
Size	Nominal Outlet Area (in^2)	Gross Screen Area (in2)	Free Screen Area (in2)	Open Area Ratio (OAR)
2 x 1½	1.77	25	10.00	5.6
2 x 2	3.14	36	14.40	4.6
2½ x 2	3.14	36	14.40	4.6
2½ x 2½	4.91	49	19.60	4.0
3 x 2	3.14	36	14.40	4.6
3 x 2½	4.91	49	19.60	4.0
3 x 3	7.07	60	24.00	3.4
4 x 3	7.07	111	44.40	6.3
4 x 4	12.57	105	42.00	3.3
5 x 4	12.57	111	44.40	3.5
5 x 5	19.64	176	70.40	3.6
6 x 4	12.57	111	44.40	3.5
6 x 5	19.64	245	98.00	5.0
6 x 6	28.27	245	98.00	3.5
8 x 6	28.27	245	98.00	3.5
8 x 8	50.27	428	171.20	3.4
10 x 8	50.27	428	171.20	3.4
10 x 10	78.54	665	266.00	3.4
12 x 8	50.27	428	171.20	3.4
12 x 10	78.54	665	266.00	3.4
12 x 12	113.10	739	295.60	2.6

OAR = Free Screen Area / Nominal Inlet Area | Free Screen Area = Opening % x Gross Screen Area | Values shown are approximate. Consult factory for exact ratios.

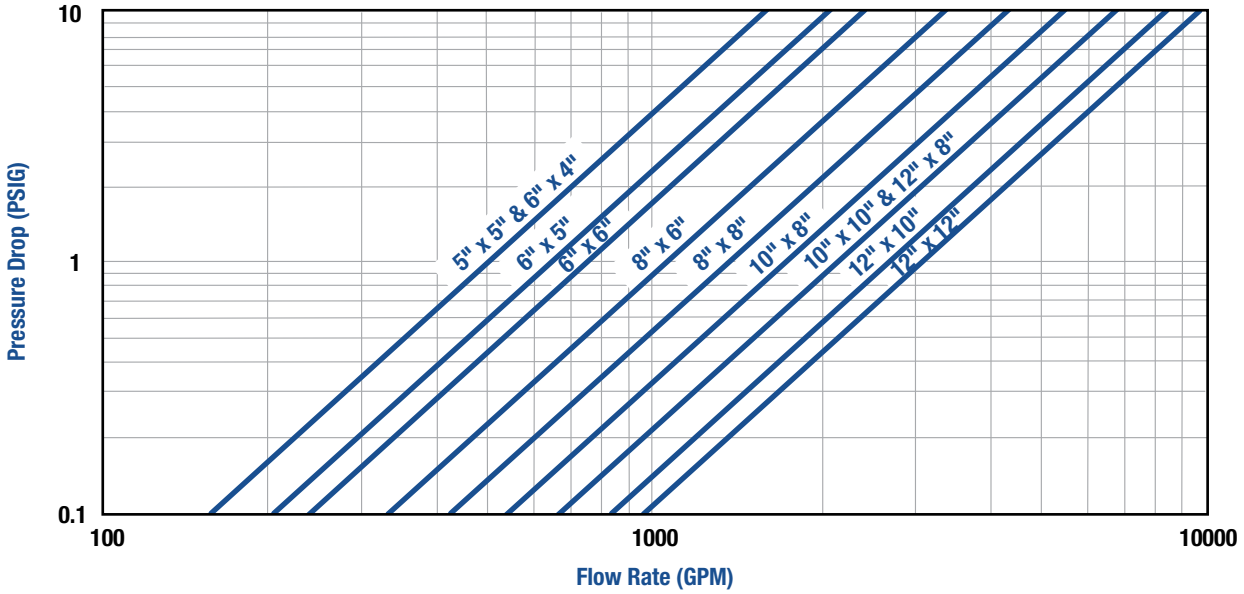
Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*

(Sizes 2"x1¼" to 5"x4")



(Sizes 5"x5" to 12"x12")



For Gas, Steam or Air service, consult factory

Installation and Maintenance Instructions

Installation Instructions

- Ensure all machined surfaces are free of defects and that the inside of the diffuser is free of foreign objects.
- Provide for distance “C” as this dimension represents the distance required for removal of the strainer.
- Mount standard support leg and foot to the pad of suction diffuser.
- Align inlet and outlet pipe connections. For flanged connections, the flange bolting should be tightened gradually in a back and forth clockwise motion.
- Once installed, increase line pressure gradually and check for a leak around joints.
- After piping and initial.

Maintenance Instructions

For maximum efficiency, determine the length of time it takes for the pressure drop to double that in the clean condition. Once the pressure drop reaches an unacceptable value, shut down the line, drain piping and remove, clean and replace the screen. A differential pressure gauge installed before and after diffuser in line will indicate pressure loss due to clogging and may be used to determine when cleaning is required.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

Triple Duty Valves | Overview

Sizes
2" to 14"

Pressure
up to 200 PSIG

Temperature
up to 212ºF

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- Practical 3-in-1 design
- Operates automatically and silently
- Standard handwheel for ease of operation

End Connections
- FF Flanged

Materials
- Cast Iron

ASME Ratings
- Class 125

Sizes
2" to 14"

Pressure
up to 200 PSIG
(13.8 BARG)

Temperature
up to 212°F
(100°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- All encompassing Strainer, Flow Straightener, Elbow and Pipe Reducer for pump applications
- Direct mount to the suction side of a pump in either horizontal or vertical position
- Flow turbulence reduced through integral straightening vanes for improved pump efficiency
- All strainers supplied with removable Stainless Steel startup mesh over Stainless Steel perforated plate
- Cast Iron FF Flanges on all sizes
- All sizes complete with O-ring sealed covers with knob bolts to minimize down time
- Supporting pads for easy mounting of standard I.D. support foot
- Drain connection with plug furnished as standard

Applicable Codes (designed in accordance with)
- ASME B16.1

Models
- 125SFI – Cast Suction Diffuser

Options
- Other perforated screens and mesh liners
- EPDM or Viton cover O-ring
- Differential connections
- Bolted covers

125T Series Ordering Code

1					2							3
Size					Model							O-Ring
0	4	0	0	–	1	2	5	T	F	I	–	B

1	Inlet Size				
0200	2"	0400	4"	0800	8"
0250	2½"	0500	5"	1000	10"
0300	3"	0600	6"	1200	12"

2	Model
125TFI	Triple Duty Valve

3	O-Ring
B	Buna N

Maximum Rated Flow Coefficients (Cv)*

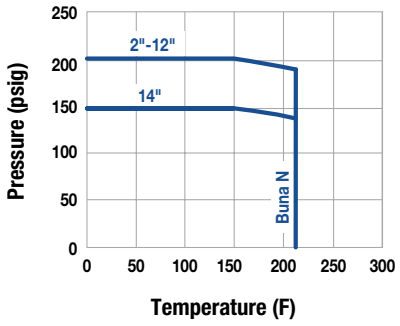
*** Maximum Cv rating is at 100% of stem rise**

Valve Size									
2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"
83	129	189	335	529	766	1372	2154	3106	4016

125T Series | Triple Duty Valves

Cast Iron Body | Flanged Ends

Pressure / Temperature Chart
ASME B16.1



Description

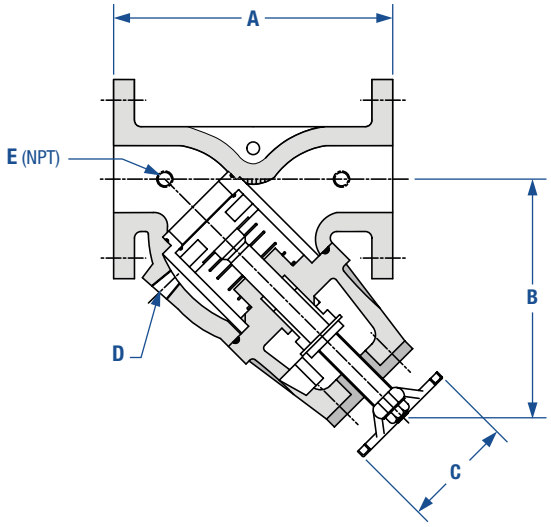
SSI manufactures 2-piece cast iron triple duty valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI 2-piece cast iron triple duty valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
2" to 14"

Temperature
212º F (100º C)

Pressure
200 PSIG (13.8 BARG)

End Connections
FF Flanged



Features

- Triple function includes a spring loaded silent check valve, balancing valve and shutoff valve to minimize cost and reduce installation time
- Operates automatically and silently
- Center guided soft seal disc ensures leak free performance
- Spring loaded Buna N disc provides no impact shutoff and prevents water hammer upon closing
- Graduated position indicator provides accurate visual check of valve position
- Standard handwheel for ease of operation
- Cracking pressure of 1/4 PSI
- Drain and differential connections with plug are furnished as standard

Dimensions

Size		A		B		C		D		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	8.38	213	9.63	244	6.31	159	0.5	15	0.25	8	34	15
2½"	65	9.81	250	10.00	254	6.31	159	0.5	15	0.25	8	40	18
3"	80	10.00	254	10.13	257	9.38	238	0.5	15	0.25	8	50	23
4"	100	14.50	368	12.63	321	9.38	238	0.5	15	0.25	8	100	45
5"	125	16.00	407	16.38	416	11.00	279	0.5	15	0.25	8	155	70
6"	150	18.00	457	17.50	444	11.00	279	0.75	20	0.25	8	200	91
8"	200	21.50	546	18.50	470	12.50	317	0.75	20	0.25	8	350	159
10"	250	25.50	648	21.69	552	12.50	317	1	25	0.25	8	480	218
12"	300	30.00	762	24.50	622	12.50	317	1	25	0.25	8	660	299
14"	350	30.38	771	24.50	622	12.50	317	1	25	0.25	8	790	359

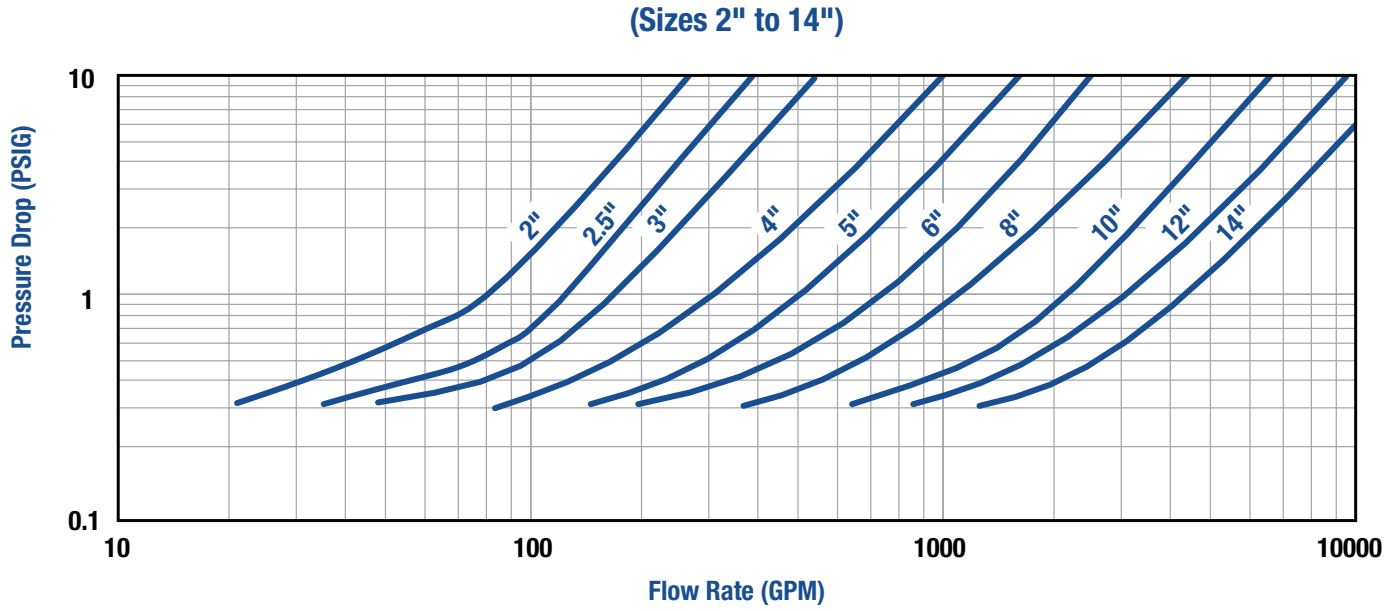
Materials

Part	Material
Body & Yoke	A126-B
Disc Guide	DI/Nickel Plate
Disc	Ductile Iron
Packing Gland	Ductile Iron
Packing	Graphite
Spring	Stainless Steel
Stem	Stainless Steel
Seat Seal	Buna N
Disc Seal	Buna N

* Dimensions shown are in full open position | Dimensions shown are subject to change. Consult factory for certified drawings when required.

Pressure Drop VS. Flow Rate

Water Service, Clean Basket, 1/32" to 1/4" Perforated Screen*



Installation and Maintenance Instructions

Installation Instructions

- Ensure all machined surfaces are free of defects and that the inside of the valve is free of foreign objects.
- The valve should be installed on the discharge side of the pump with the flow arrow pointed away from the pump discharge.
- Minimum recommended space for pump sizes 2" through 6" is 12". Minimum recommended space for pump sizes 8" through 14" is 24".
- It is not recommended to mount a valve directly to the pump.
- Sufficient clearance should be left around the valve for removal and/or repair.
- Valve should be mounted with the stem pointing up to facilitate proper seating of the valve disc.
- When connecting the valve to the line be sure that the flanges are the same – flat face to flat face. Flat face flanges require full face gaskets. The specified face-to-face dimension of the valve is approximate due to machining tolerances. Allow adjustment in prefabricated piping or request certified dimensions.
- Check to see that flange gaskets are properly positioned before tightening the bolts. Tighten bolts gradually in a back and forth clockwise motion.
- Once installed, “crack” the valve open before starting the pump.
- Gradually adjust the stem until the proper flow rate is reached. Tapped ports are provided on the valve to insert equipment to measure the valve pressure differential.

Maintenance Instructions

- Before starting, make a note of the position of the stem indicator.
- Shut down the pump and close the isolation valves.
- Open the valve completely so that the stem back seats against the inside of the yoke cover. Loosen the two nuts holding the flanged gland.
- Remove the old packing and clean out the packing box. Place a set (usually three or four) of the new packing rings around the stem. Be sure to stagger the 45 degrees split in the packing rings. Press packing rings into the packing box.
- Replace the flanged gland and nuts. Do not over tighten or the stem may seize.
- Adjust the valve stem indicator to its original position. If there is any leakage around the packing tighten both gland nuts a 1/4 turn at a time until the leakage stops. It is very important that the gland nuts be tightened evenly.
- For all other maintenance please contact the factory.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

Double Door Check Valves

Sizes
2" to 24"

Pressure
up to 1480 PSIG

Temperature
up to 600ºF

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- Compact design
- Low pressure loss
- Minimal installation costs

End Connections
- Wafer Flat Face
- Wafer Raised Face

Body Materials
- Cast Iron
- Carbon Steel
- Stainless Steel

Seat Materials
- Buna-N
- EPDM
- Viton
- Metal To Metal

ASME Ratings
- Class 125
- Class 150
- Class 300
- Class 600

Design Advantage

The short face to face design inherently makes this check valve significantly lighter (10% of the weight of a conventional swing check). The valve is designed to fit between two flanges and requires no flanges of its own. The double door check valve can be installed in any position as the spring aids in keeping the valve closed (Consult factory for vertical downward flow). These features allow you to design your piping layout in the most efficient and least expensive fashion.

Shock Bumpers

An integral cast bumper is present on all Series WT double door check valves (Except class 125 Lb.). The bumpers can be found on both discs, which meet when the valve reaches a fully open position. This design feature prevents the discs from pressing against the stop pin and eliminates leverage that would cause unnecessary stresses and wear. The purpose of the stop pin is to prevent over travel of either disc, which would result in valve failure.

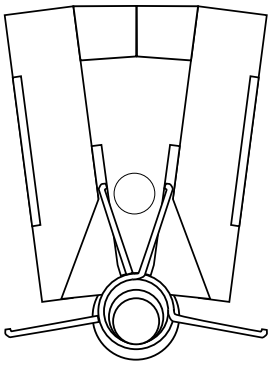


FIGURE 1

Resilient Seat

The basic design of the Series WT double door check valve is illustrated in Fig. 2. This seal is chemically bonded using specially designed adhesives that provide rubber tearing bonds throughout the operating range of the seat material. In case of resilient seat failure, the design permits the doors to float and make contact with the metal surface the seats were adhered to. This feature allows the valve to function even if the resilient seat is not present. The seat design illustrated in Fig. 3 is also available. This design results in a controlled seat squeeze and provides a metal to metal backup seal (Fig.4).

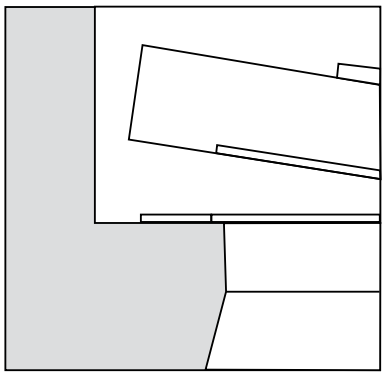


FIGURE 2

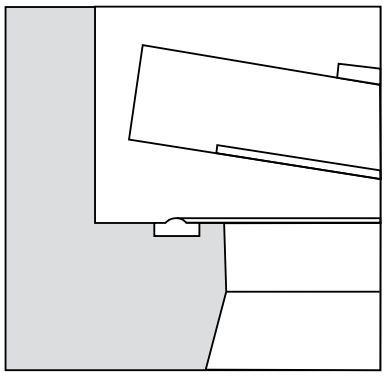


FIGURE 3

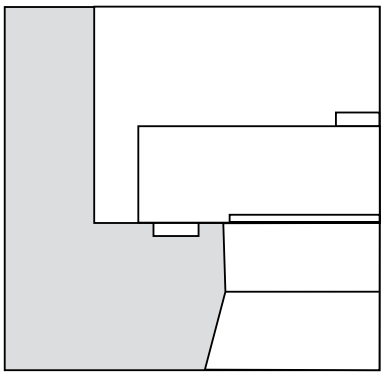


FIGURE 4

Minimal Seat Wear

The Series WT double door check valve was designed to eliminate the possibility of seat wear caused by friction at the heel of the double doors while maintaining low back pressure sealing capabilities. The clearance between the body, disc and hinge pin results in the discs cracking open at the heel location first. When the valve opens the heel does not drag across the seating surface and cause wear. As the valve closes, the spring will take the toe of the disc into the seating surface first, while the line back pressure will force the heels and hinge pin back to the seat to complete the seal.

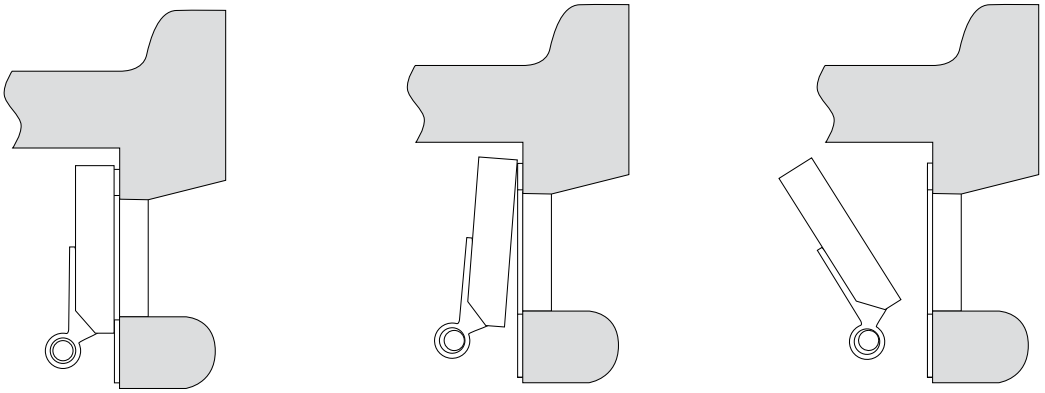


FIGURE 5

Spring Closing

The specially designed torsion spring in the Series WT double door check valve holds the valve discs closed under no flow conditions (Consult factory for vertical downward flow). Pipeline flow (head) causes the discs to open and conversely when flow decays to a point near zero velocity, the force from the legs of the torsion spring instantly closes the valve discs for non-slam shutoff. The Series WT double door check valve comes complete with corrosion resistant stainless steel springs as standard.

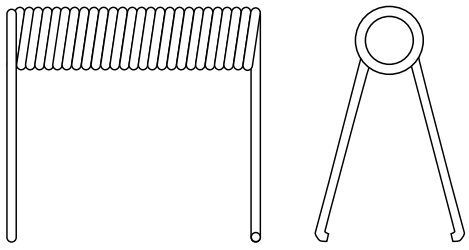


FIGURE 6

125WT Series | Double Door Check Valves

Cast Iron Steel Body | Wafer Style

Sizes
2" to 24"

Pressure
up to 200 PSIG
(13.8 BARG)

Temperature
up to 250°F
(121°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 125 rated Check Valves
- Wafer body style fits between FF or RF flanges
- Teflon thrust washers
- Resilient Buna-N seats
- Seat design lifts then swings discs to minimize seat wear
- Independent springs optimizes valve plate closing rates while minimizing spring stress
- Lifting lug tap on all valves 6" and larger

Applicable Codes (designed in accordance with)

- ASME Sec VIII and B16.1 Bodies
- API 598
- FM approved 30246911 (2"-10" only)

Models

- 125WTIB - Cast Iron Body, Bronze Disc, Buna Seat
- 125WTIT – Cast Iron Body, Stainless Steel Disc, Buna Seat

Options

- EPDM Seats
- Other Spring Material

Canadian Registration - OE10274.5C

125WT Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
1	0	0	0	–	1	2	5	W	T	I	B	B	–	T

1	Inlet Size				
0200	2"	0600	6"	1600	16"
0250	2½"	0800	8"	1800	18"
0300	3"	1000	10"	2000	20"
0400	4"	1200	12"	2400	24"
0500	5"	1400	14"		

2	Model
125WTIB	Cast Iron Body & Bronze Disc
125WTIT	Cast Iron Body & Stainless Steel Disc

3	Seat
B	Buna-N

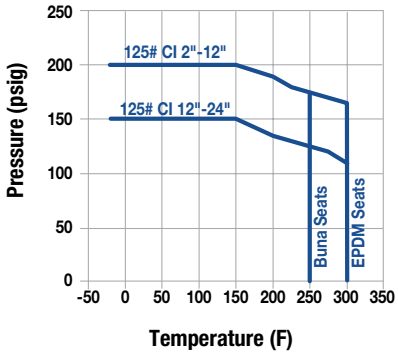
4	Spring
T	Stainless Steel

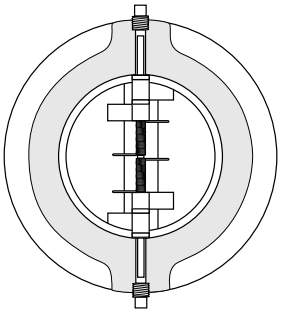
Flow Coefficient Values (Cv)*

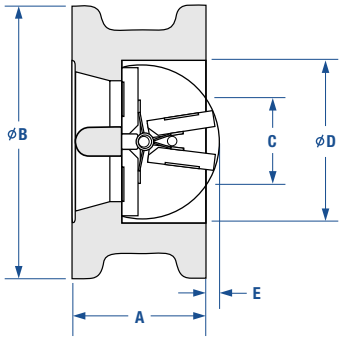
*** US-GPM @ 1 PSID**

Valve Size													
2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
60	100	170	340	520	850	1600	2400	3800	4400	5800	7500	9800	15000

Pressure / Temperature Chart
ASME B16.1







Description

SSI manufactures stainless steel double door check valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI stainless steel double door check valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
2" to 24"

Pressure
200 PSIG (13.8 BARG)

Temperature
250º F (121º C)

End Connections
Wafer Flanged

Cracking Pressure
Horizontal - 0.3 PSID
Vertical - 0.75 PSID

Features
- Wafer body style fits between FF or RF flanges
- Teflon thrust washers
- Resilient Buna-N seat design lifts then swing discs to minimize seat wear
- Independent springs optimize valve plate closing rates while minimizing spring stress
- Lifting lug tap on all valves 6" and larger

CRN

Dimensions

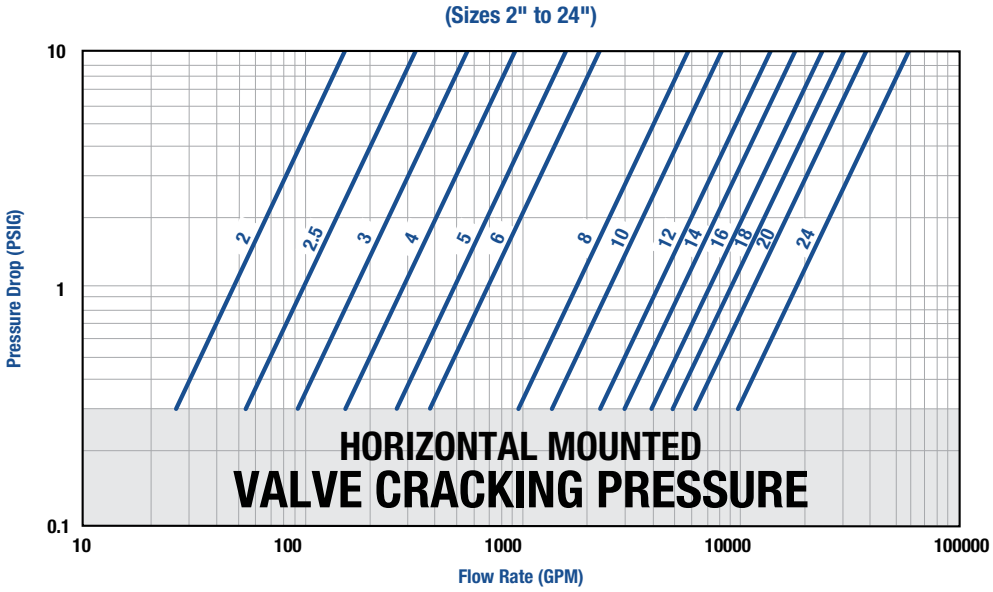
Size		A		B*		C¹		D		E		Stud Selection					Weight	
												Qty	Diameter		Length			
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	lbs	kg
2"	50	2.13	54	4.13	105	2	51	2.38	60	0.13	3	4	0.63	16	5.50	140	3	1.4
2½"	65	2.13	54	4.88	124	2.5	64	2.88	73	0.50	13	4	0.63	16	6.00	152	5	2.3
3"	80	2.25	57	5.38	137	3	76	3.50	89	0.63	16	4	0.63	16	6.25	159	8	3.6
4"	100	2.50	64	6.88	175	4	102	4.50	114	1.00	25	8	0.63	16	6.25	159	13	5.9
5"	125	2.75	70	7.75	197	5	127	4.50	140	1.25	32	8	0.75	19	7.00	184	16	7.3
6"	150	3.00	76	8.75	222	6	152	6.63	168	1.63	41	8	0.75	19	8.00	203	20	9.8
8"	200	3.75	95	11.00	279	8	203	8.63	219	2.38	60	8	0.75	19	9.50	241	37	16.8
10"	250	4.25	108	13.38	340	10	254	10.75	273	3.00	76	12	0.88	22	10.50	267	57	25.9
12"	300	5.63	143	16.13	410	12	305	12.75	324	3.88	99	12	0.88	22	12.25	311	93	42.2
14"	350	7.25	184	17.75	451	12.5	318	14.00	356	4.00	102	12	1.00	25	13.00	330	205	93.1
16"	400	7.50	191	20.25	514	15	381	16.00	406	5.25	133	16	1.00	25	13.50	343	271	123.0
18"	450	8.00	203	21.63	549	17	432	18.00	457	6.00	152	16	1.13	29	14.50	368	310	140.7
20"	500	8.38	213	23.88	606	19	483	20.00	508	6.88	175	20	1.13	29	15.25	387	377	171.2
24"	600	8.75	222	28.25	718	22.75	578	24.00	610	8.25	210	20	1.25	32	16.25	413	551	250.2

Materials

Part	Material
Body	A126-B
Discs	Al/Bz B148 C954 or 316SS A351-CF8M
Seat	Buna-N
Spring	316SS

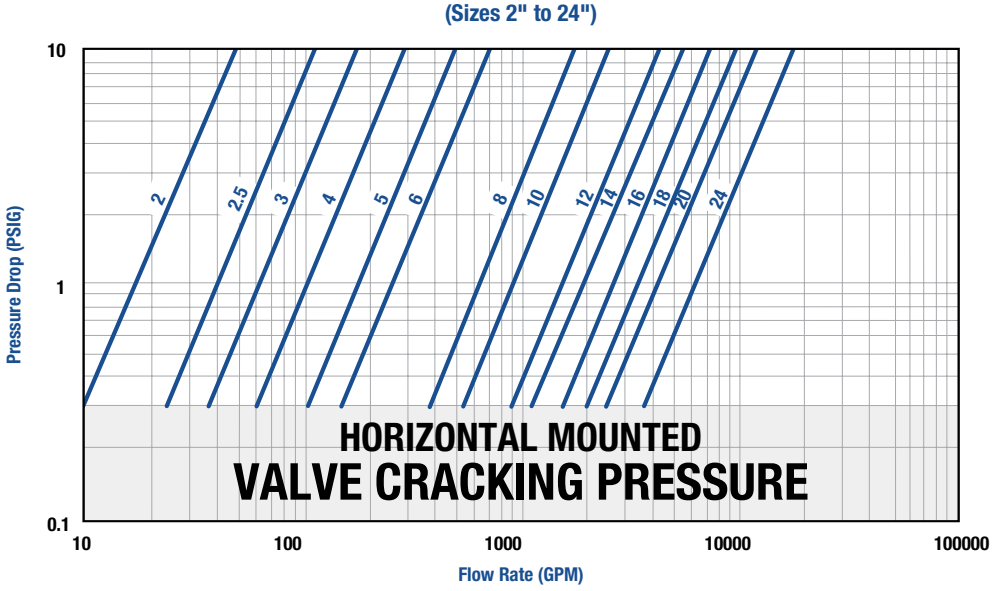
* Add the "B" dimensions and the diameter of the stud to achieve the ANSI B16.1 bolt hole circle diameter | ¹ Minimum bore diameter of companion flanges
Dimensions shown are subject to change. Consult factory for certified drawings when required.

Pressure Drop - Liquids



- Pressure drop curves are based on water flow
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

Pressure Drop - Air



- Pressure drop curves are based on air flow at 60°F and 1 ATM pressure
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

[1] For correct installation and maintenance please see our I&M manual | [2] Horizontal installation – Disc pin must be installed in vertical position | [3] Vertical installation (downward flow) – Consult factory

150WT Series

Sizes
6" to 12"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 600°F
(316°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 150 rated check valves
- Wafer body style fits between FF or RF flanges
- Size 6" and larger are supplied with a valve lifting lug
- Upper and lower SS thrust washers
- Resilient Buna-N , Viton and metal seats
- Seat design lifts then swings discs to minimize seat wear
- Shock bumpers minimize stresses in hinge pins
- Independent springs optimizes valve plate closing rates while minimizing spring stress
- Dual rating 2" - 3" 150#, 300# and 600# Classes
- Dual ratings 4" 150# and 300# Classes

Applicable Codes (designed in accordance with)

- ASME B16.34 ratings
- API 594
- API 598

Models

- 150WTCT – Cast Steel Body, Stainless Steel Disc. Buna Seat
- 150WTTT – Stainless Steel Body, Stainless Steel Disc, Metal or Viton Seat

Options

- EPDM Seats
- Other Spring Material

Canadian Registration - OC10274.5C

150WT Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
0	8	0	0	–	1	5	0	W	T	C	T	B	–	T

1	Inlet Size		
0600	6"	1000	10"
0800	8"	1200	12"

3	Seat*		
B	Buna-N (CS Body only)	V	Viton (SS Body only)
M	Metal (SS Body only)		

2	Model
150WTCT	Carbon Steel Body
150WTTT	Stainless Steel Body

4	Spring
T	Stainless Steel

Flow Coefficient Values (Cv)*

*** US-GPM @ 1 PSID**

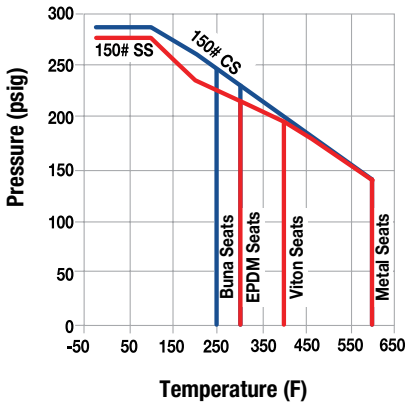
Valve Size			
6"	8"	10"	12"
705	1795	2563	4295

* 150WTCT - Buna-N seat only 150WTTT - Viton or Metal seat

150WT Series | Double Door Check Valves

Carbon Steel Body & Stainless Steel Body | Wafer Style

Pressure / Temperature Chart
ASME B16.34



Description

SSI manufactures carbon steel double door check valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel double door check valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

6" to 12"

Pressure

285 PSIG (19.7 BARG)

Temperature

600º F (316º C)

End Connections

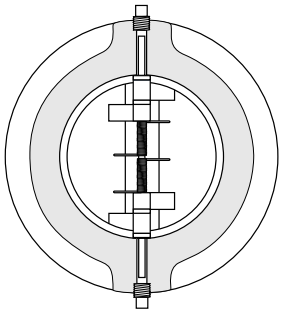
Wafer Flanged

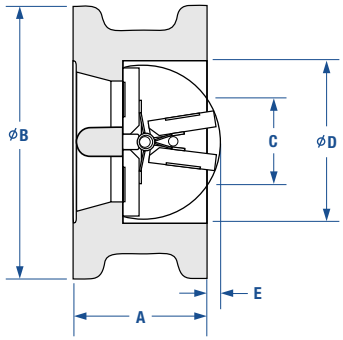
Cracking Pressure

Horizontal - 0.3 PSID
Vertical - 0.75 PSID

Features

- Wafer body style fits between FF or RF flanges
- Supplied with a valve lifting lug
- Upper and lower SS thrust washers
- Resilient Buna-N , Viton and metal seats
- Seat design lifts then swings discs to minimize seat wear
- Shock bumpers minimize stresses in hinge pins
- Independent springs optimizes valve plate closing rates while minimizing spring stress
- Dual rating 2"–3" 150#, 300# and 600# Classes
- Dual ratings 4" 150# and 300# Classes





CRN

Dimensions

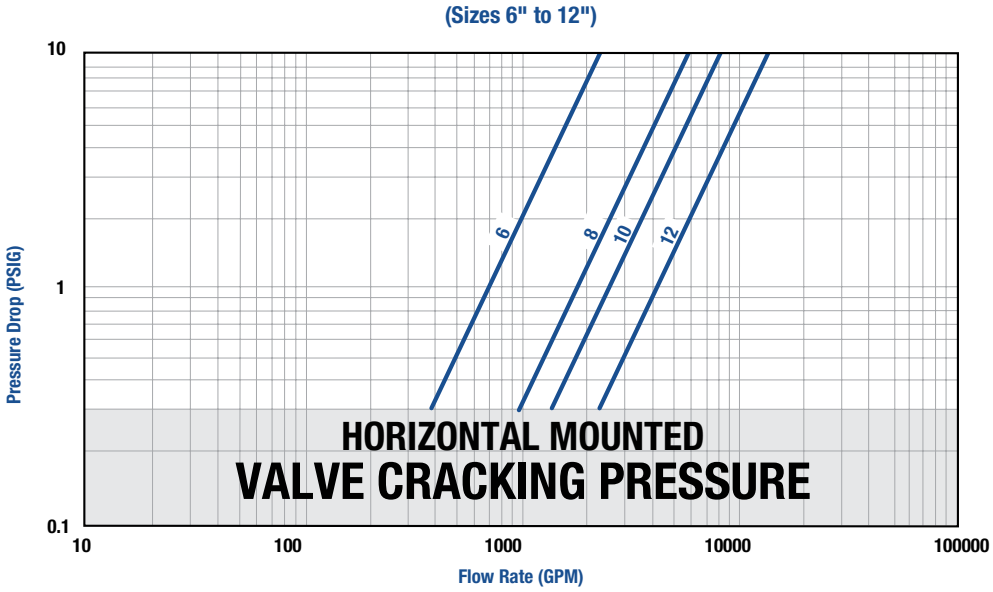
Size		A[1]		B*		C[2]		D		E		Stud Selection					Weight	
												Qty	Diameter		Length			
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	lbs	kg
2"[3]	50	Use 2" 600WT-150# on page 117-118																
2½"[3]	66	Use 2½" 600WT-150# on page 117-118																
3"[3]	80	Use 2" 600WT-150# on page 117-118																
4"[4]	100	Use 4" 300WT-150# on page 113-114																
6"	150	3.88	99	8.75	222	5.38	137	6.63	168	1.38	35	8	0.75	19	8.25	210	35	15.9
8"	200	5.00	127	11.00	279	7.38	187	8.63	219	2.00	51	8	0.75	19	9.75	248	70	31.8
10"	250	5.75	146	13.38	340	9.50	241	10.75	273	2.88	73	12	0.88	22	11	279	114	51.8
12"	300	7.13	181	16.13	410	11.25	286	12.75	324	3.38	86	12	0.88	22	12.25	311	180	81.8

Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Discs	A351-CF8M	A351-CF8M
Seat	Buna-N	Viton or Metal
Spring	316SS	316SS

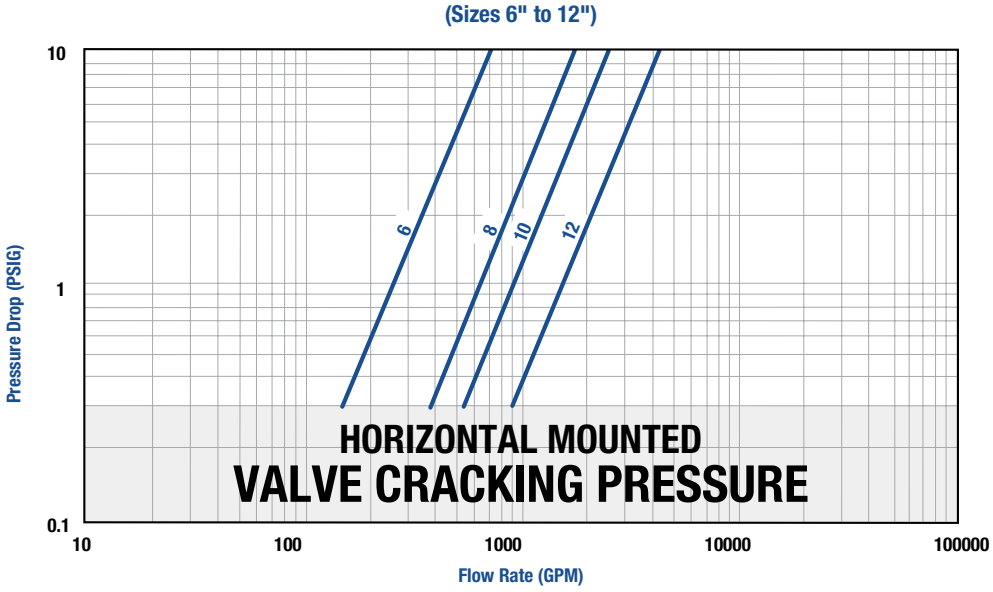
[1] Dimensions in accordance with API 594 | [2] Minimum bore diameter of companion flanges | [3] Sizes 2", 2½", 3" 150WT, 300WT & 600WT are interchangeable, use 600WT for all applications in these sizes
[4] Size 4", 150WT & 300WT are interchangeable, use 300WT for 4" size | Dimensions shown are subject to change. Consult factory for certified drawings when required.
* Add the "B" dimension and the diameter of the stud to achieve the ANSI B16.5 bolt hole circle diameter

Pressure Drop - Liquids



- Pressure drop curves are based on water flow
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

Pressure Drop - Air



- Pressure drop curves are based on air flow at 60°F and 1 ATM pressure
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

[1] For correct installation and maintenance please see our I&M manual | [2] Horizontal installation – Disc pin must be installed in vertical position | [3] Vertical installation (downward flow) – Consult factory

300WT Series | Double Door Check Valves

Carbon & Stainless Steel Body | Wafer Style

Sizes
4" to 12"

Pressure
up to 740 PSIG
(51 BARG)

Temperature
up to 600°F
(316°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 300 rated check valves
- Wafer body style fits between FF or RF flanges
- Size 6" and larger are supplied with a valve lifting lug
- Upper and lower SS thrust washers
- Resilient Buna-N and Viton
- Seat design lifts then swings discs to minimize seat wear
- Shock bumpers minimize stresses in hinge pins
- Independent springs optimizes valve plate closing rates while minimizing spring stress
- Dual rating 2" - 3" 150#, 300# and 600#
- Dual ratings 4" 150# and 300#

Applicable Codes (designed in accordance with)

- ASME B16.34 ratings
- API 594
- API 598

Models

- 300WTCT – Cast Steel Body, Stainless Steel Disc, Buna Seat
- 300WTTT – Stainless Steel Body, Stainless Steel Disc, Viton Seat

Options

- EPDM Seats
- Other Spring Material

Canadian Registration - OC10274.5C

300WT Series Ordering Code

1					2								3		4
Inlet Size					Model								Seat		Spring
0	6	0	0	–	3	0	0	W	T	C	T		B	–	T

1	Inlet Size		
0400	4"	1000	10"
0600	6"	1200	12"
0800	8"		

2	Model
300WTCT	Carbon Steel Body
300WTTT	Stainless Steel Body

3	Seat*		
B	Buna-N (CS Body only)	V	Viton (SS Body only)

4	Spring
T	Stainless Steel

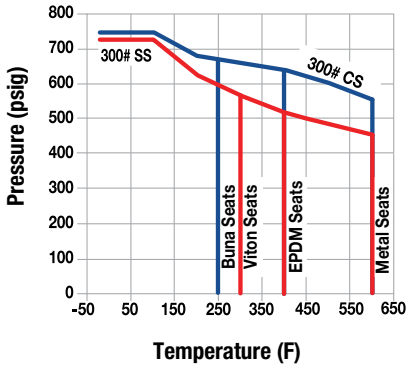
Flow Coefficient Values (Cv)*

*** US-GPM @ 1 PSID**

Valve Size					
4"	5"	6"	8"	10"	12"
291	494	705	1795	2563	4295

* 300WTCT - Buna-N seat only 300WTTT - Viton seat only

Pressure / Temperature Chart
ASME B16.34



Description

SSI manufactures carbon steel double door check valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel double door check valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

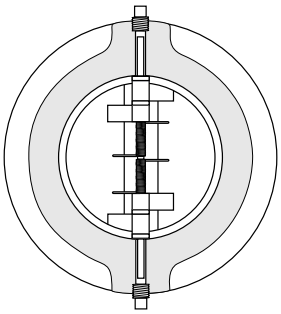
Sizes
4" to 12"

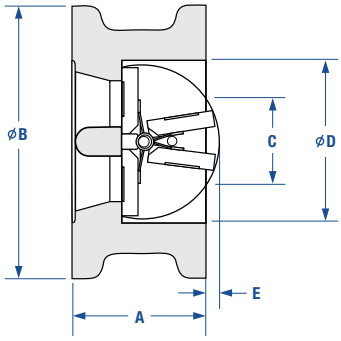
Pressure
740 PSIG (51 BARG)

Temperature
600º F (316º C)

End Connections
Wafer Flanged

Cracking Pressure
Horizontal - 0.3 PSID
Vertical - 0.75 PSID





Features

- Wafer body style fits between FF or RF flanges
- Supplied with a valve lifting lug
- Upper and lower SS thrust washers
- Resilient Buna-N and Viton seats
- Seat design lifts then swings discs to minimize seat wear
- Shock bumpers minimize stresses in hinge pins
- Independent springs optimizes valve plate closing rates while minimizing spring stress
- Dual rating 2"–3" 150#, 300# and 600# Classes
- Dual ratings 4" 150# and 300# Classes

CRN

Dimensions

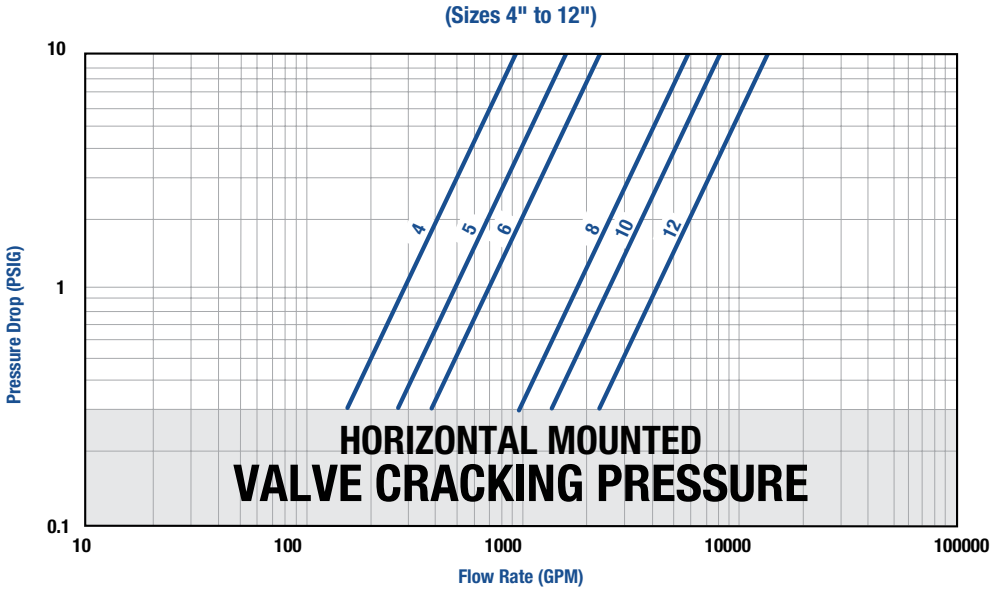
Size			A[1]		B*		C[2]		D		E		Stud Selection					Weight	
													Qty	Diameter		Length			
inch	mm		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	lbs	kg
2"[3]	50	-	Use 2" 600WT-300# on page 117-118																
2½"[3]	66	-	Use 2½" 600WT-300# on page 117-118																
3"[3]	80	-	Use 2" 600WT-300# on page 117-118																
4"[4]	100	150WT	2.88	73	6.88	175	3.38	86	4.50	114	0.75	19	8	0.63	16	7	178	18	8.2
		300WT	2.88	73	7.13	181	3.38	86	4.50	114	0.75	19	8	0.75	19	8.13	207	18	8.2
6"	150	-	3.88	99	9.88	251	5.38	137	6.63	168	1.38	35	12	0.75	19	9.63	245	44	20.0
8"	200	-	5.00	127	12.13	308	7.38	187	8.63	219	2.00	51	12	0.88	22	11.25	286	75	34.0
10"	250	-	5.75	146	14.25	362	9.50	241	10.50	273	2.88	73	16	1.00	25	12.75	324	123	55.8
12"	300	-	7.13	181	16.63	422	11.25	286	12.75	324	3.38	86	16	1.13	29	14.63	372	196	89.0

Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Discs	A351-CF8M	A351-CF8M
Seat	Buna-N	Viton
Spring	316 SS	316 SS

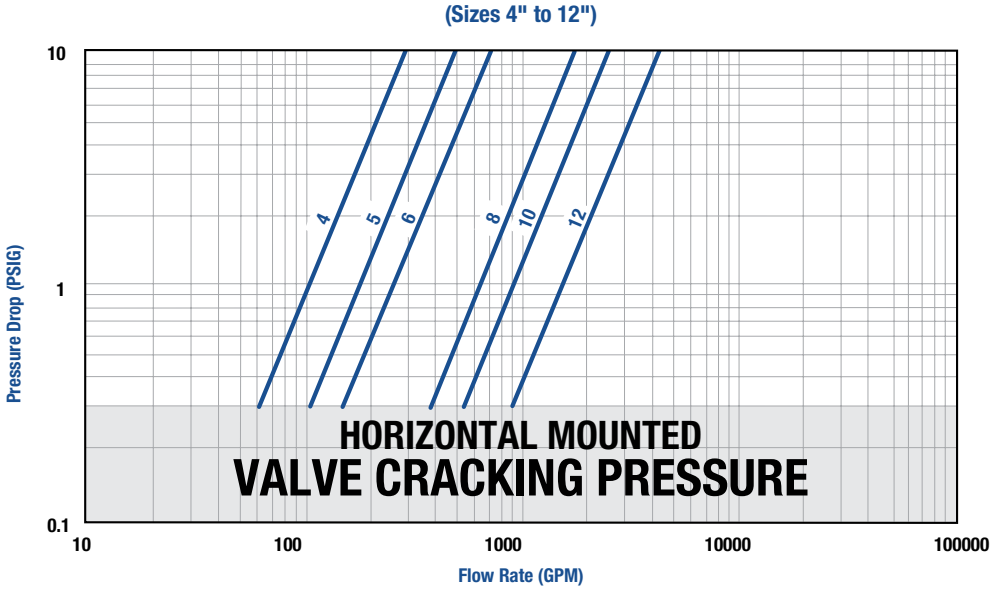
[1] Dimensions in accordance with API 594 | [2] Minimum bore diameter of companion flanges | [3] Sizes 2", 2½", 3" 150WT, 300WT & 600WT are interchangeable, use 600WT for all applications in these sizes
[4] Size 4", 150WT & 300WT are interchangeable, use 300WT for 4" size - 4" sizes fit between both 150# & 300# flanges | Dimensions shown are subject to change. Consult factory for certified drawings when required.
* Add the "B" dimension and the diameter of the stud to achieve the ANSI B16.5 bolt hole circle diameter

Pressure Drop - Liquids



- Pressure drop curves are based on water flow
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

Pressure Drop - Air



- Pressure drop curves are based on air flow at 60°F and 1 ATM pressure
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

[1] For correct installation and maintenance please see our I&M manual | [2] Horizontal installation – Disc pin must be installed in vertical position | [3] Vertical installation (downward flow) – Consult factory

600WT Series

Sizes
2" to 3"

Pressure
up to 1480 PSIG
(101.9 BARG)

Temperature
up to 600°F
(316°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- ASME Class 600 rated check valves
- Wafer body style fits between FF or RF flanges
- Upper and lower SS thrust washers
- Resilient Buna-N and Viton
- Seat design lifts then swings discs to minimize seat wear
- Shock bumpers minimize stresses in hinge pins
- Independent springs optimizes valve plate closing rates while minimizing spring stress
- Dual rating 2" - 3" 150#, 300# and 600#

Applicable Codes (designed in accordance with)
- ASME B16.34 ratings
- API 594
- API 598

Models
- 600WTCT – Cast Steel Body, Stainless Steel Disc, Buna Seat
- 600WTTT – Stainless Steel Body, Stainless Steel Disc, Metal or Viton Seat

Options
- EPDM Seats
- Other Spring Material

Canadian Registration - OC10274.5C

600WT Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
0	2	0	0	–	6	0	0	W	T	T	T	V	–	T

1	Inlet Size		
0200	2"	3000	3"
0250	2½"		

3	Seat*		
B	Buna-N (CS Body only)	V	Viton (SS Body only)
M	Metal (SS Body only)		

2	Model
600WTCT	Carbon Steel Body
600WTTT	Stainless Steel Body

4	Spring
T	Stainless Steel

Flow Coefficient Values (Cv)*

*** US-GPM @ 1 PSID**

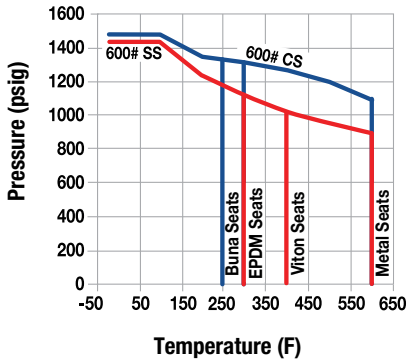
Valve Size		
2"	2½"	3"
48	90	171

* 300WTCT - Buna-N seat only 300WTTT - Viton seat only

600WT Series | Double Door Check Valves

Carbon Steel Body & Stainless Steel Body | Wafer Style

Pressure / Temperature Chart
ASME B16.34



Description

SSI manufactures carbon steel double door check valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel double door check valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

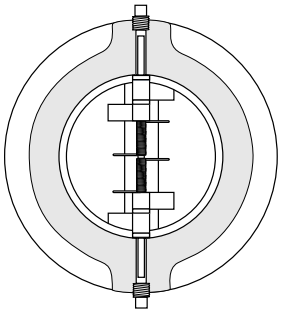
Sizes
2" to 3"

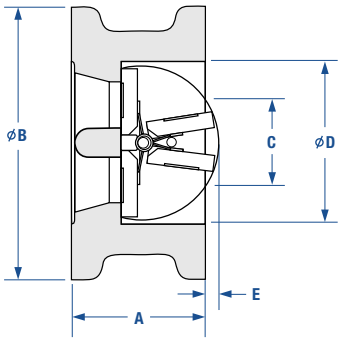
Pressure
1480 PSIG (101.9 BARG)

Temperature
600º F (316º C)

End Connections
Wafer Flanged

Cracking Pressure
Horizontal - 0.3 PSID
Vertical - 0.75 to 1.25 PSID





Features

- Wafer body style fits between FF or RF flanges
- Upper and lower SS thrust washers
- Resilient Buna-N , Viton and metal seats
- Seat design lifts then swings discs to minimize seat wear
- Shock bumpers minimize stresses in hinge pins
- Independent springs optimizes valve plate closing rates while minimizing spring stress
- Dual ratings 2"–3" 150#, 300# and 600#

CRN

Dimensions

Size			A[1]		B*		C[2]		D		E		Stud Selection					Weight	
													Qty	Diameter		Length			
inch	mm		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	lbs	kg
2"[3]	50	150#	2.38	60	4.13	105	–	–	2.38	60	–	–	4	0.63	15.9	6.00	152	6	2.7
		300#/ 600#	2.38	60	4.38	111	–	–	2.38	60	–	–	8	0.63	15.9	6.88	175	6	2.7
2½"[3]	65	150#	2.63	67	4.88	124	2	51	3.00	77	0.25	6	4	0.63	15.9	6.25	159	10	4.5
		300#/ 600#	2.63	67	5.13	130	2	51	3.00	77	0.25	6	8	0.75	19	7.50	190	10	4.5
3"[3]	80	150#	2.88	73	5.38	137	2	51	3.50	89	0.25	6	4	0.63	15.9	7.00	178	13	5.9
		300#/ 600#	2.88	73	5.88	149	2	51	3.50	89	0.25	6	8	0.75	19	8.13	207	13	5.9

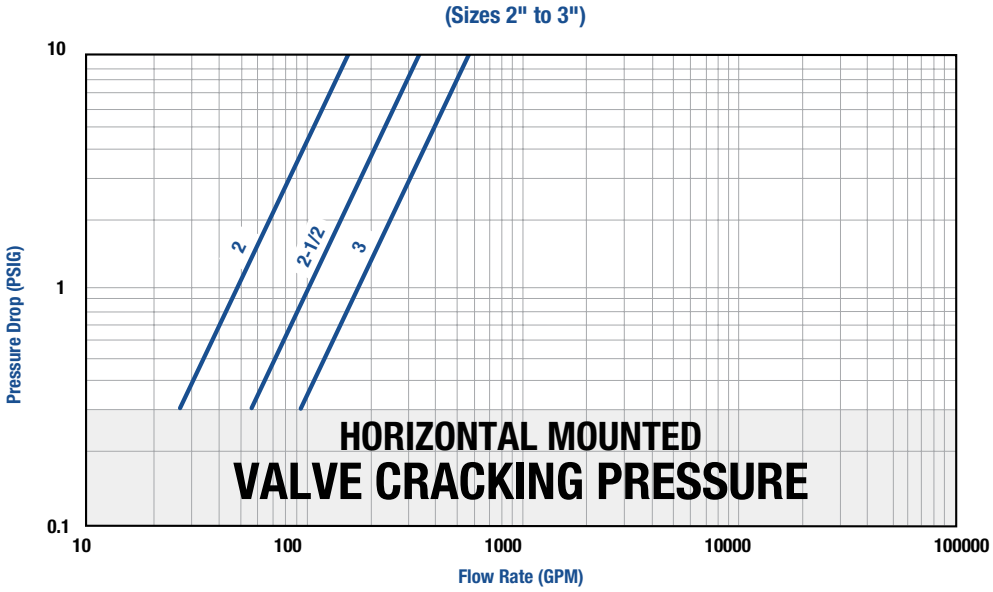
Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Discs	A351-CF8M	A351-CF8M
Seat	Buna-N	Viton or Metal
Spring	316 SS	316 SS

[1] Dimensions in accordance with API 594 | [2] Minimum bore diameter of companion flanges | [3] 300WT and 600WT are interchangeable, use 600WT for both applications

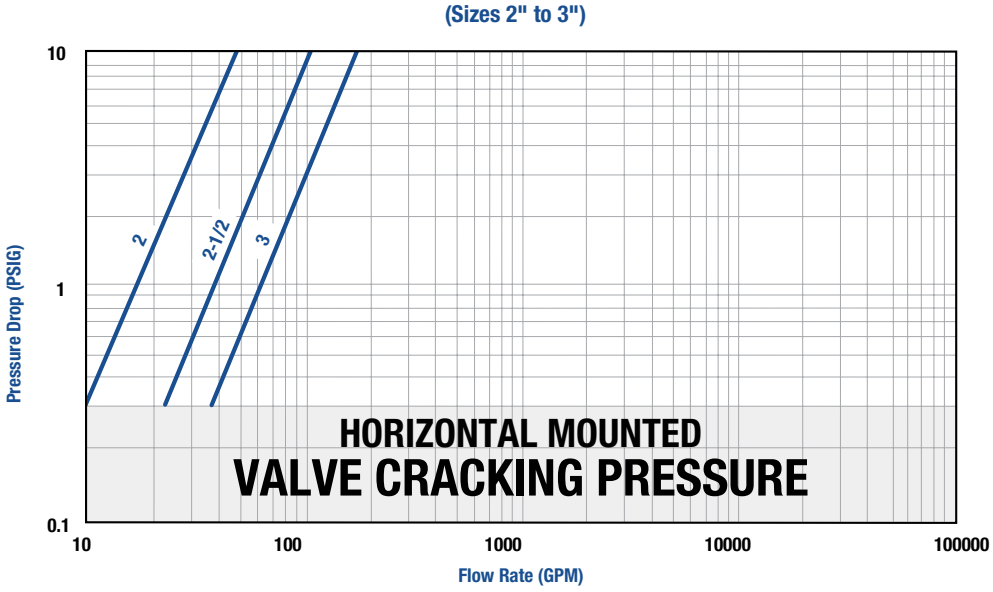
* Add the "B" dimension and the diameter of the stud to achieve the ANSI B16.5 bolt hole circle diameter | Dimensions shown are subject to change. Consult factory for certified drawings when required.

Pressure Drop - Liquids



- Pressure drop curves are based on water flow
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

Pressure Drop - Air



- Pressure drop curves are based on air flow at 60°F and 1 ATM pressure
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards

[1] For correct installation and maintenance please see our I&M manual | [2] Horizontal installation – Disc pin must be installed in vertical position | [3] Vertical installation (downward flow) – Consult factory

Valve Location & Orientation in Piping

Check valves should be installed, if possible, a minimum of 6 pipe diameters from other line elements, i.e. elbows, pumps, valves, etc.

Horizontal Lines

- Valves installed in horizontal lines must be bolted in place with the hinge post in the vertical position, i.e. in such a manner that the hinge pin retainers are at the top and bottom of the installed valve, perpendicular to the flow.

Vertical Lines

- In the upward position, no special attention needs to be given to the hinge post position. The only exception being when mounted directly downstream of an elbow. In this case, the hinge post should be mounted perpendicular to the outermost portion of the elbow. Consult factory for vertical down flow applications.

Precautions

- Do not install Series WT check valves directly against another valve whereby the check valve discharges downstream directly into the valve.
- Do not install the valve whereby it directly discharges downstream into a tee or elbow fitting.
- Series WT check valves should not be used in severe pulsating services such as reciprocating compressor discharges.
- It is recommended that the check valves be installed a minimum of three pipe diameters downstream of a pump or compressor.

Maintenance

- SSI Series WT check valves are permanently lubricated and normally require no routine maintenance.

Reconditioning

IMPORTANT! BEFORE DISASSEMBLY, VALVE MUST FIRST BE ISOLATED FROM SYSTEM PRESSURE AND FLOW.

Disc & Shaft Removal

CAUTION! BEFORE ATTEMPTING THE FOLLOWING SHAFT EXTRACTION, BE SURE TO PRESS A HAND OVER THE DISC SPRING. FAILURE TO DO THIS MAY RESULT IN PERSONAL INJURY DUE TO THE SPRING “LAUNCHING” ITSELF UNEXPECTEDLY ONCE THE SHAFT IS PULLED FREE OF IT.

- After observing the above precaution, remove the valve from the pipeline and lay flat with open, body cavity side facing up. Remove pipe plugs from top and bottom of body with a wrench. Insert a punch and lightly tap the top of the shaft until it is accessible on the other side of the body. Pull shaft through body to remove. The internals of the valve are now ready to be cleaned and inspected.

Reassembly

- Use new replacement parts, as required and a liberal amount of general-purpose grease (such as Mystic JT-6) on seals and machined mating surfaces. Reinsert the disc into the body cavity with the shaft holes in-line with top and bottom shaft port. Slide the shaft into the body through the shaft opening on one side of the valve. Continue sliding the shaft through the disc, spring and remaining shaft port the opposite side of the body. Install pipe plugs into the body using a good industrial grade thread sealant compound

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

Wafer Silent Check Valves

Sizes
2" to 12"

Pressure
up to 740 PSIG

Temperature
up to 400°F

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- Silent non-slam closure
- Wafer body style
- Reduces surge and water hammer

End Connections
- Wafer Flat Faced
- Wafer Raised Face

Body Materials
- Cast Iron
- Carbon Steel
- Stainless Steel

Disc Materials
- Bronze
- Stainless Steel

Materials
- Cast Iron
- Carbon Steel
- Stainless Steel

ASME Ratings
- Class 125
- Class 150
- Class 300

125WC Series | Wafer Silent Check Valves

Cast Iron Body | Wafer Style

Sizes
2" to 12"

Pressure
up to 200 PSIG
(13.8 BARG)

Temperature
up to 300°F
(149°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- ASME Class 125 rated check valves
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Compact face to face legnth for space saving
- Wafer body style fits between FF or RF flanges

Applicable Codes (designed in accordance with)
- ASME Sec VIII and B16.1 Bodies
- API 598

Models
- 125WCIB - Cast Iron Body, Bronze Disc
- 125WCIT – Cast Iron Body, Stainless Steel Disc

Options
- EPDM Seats
- Other Spring Material
- Heavier or Lighter Springs

Canadian Registration - OC10274.5C

125WC Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
0	8	0	0	–	1	2	5	W	C	I	B	M	–	T

1	Inlet Size				
0200	2"	0400	4"	0800	8"
0250	2½"	0500	5"	1000	10"
0300	3"	0600	6"	1200	12"

2	Model
125WCIB	Cast Iron Body, Bronze Disc
125WCIT	Cast Iron Body, Stainless Steel Disc

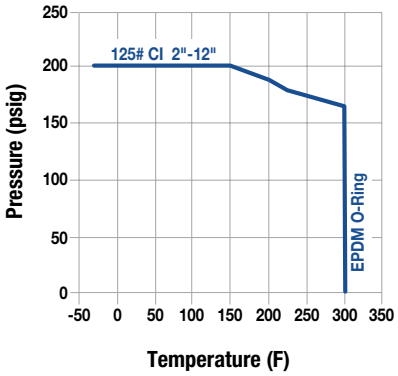
3	Seat
M	Metal

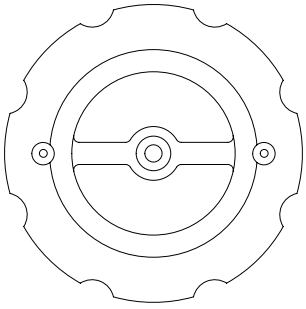
4	Spring
T	Stainless Steel

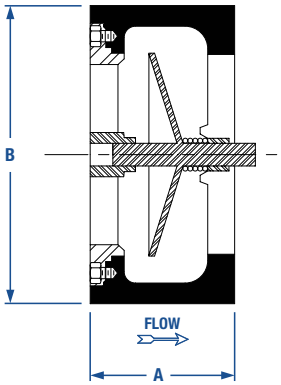
Flow Coefficient Values (Cv)

Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
2"	51	58	73
2½"	84	90	106
3"	119	134	168
4"	179	210	285
5"	265	300	391
6"	383	430	548
8"	639	740	964
10"	1114	1250	1581
12"	1604	1800	2277

Pressure / Temperature Chart
ASME B16.1







Description

SSI manufactures cast iron silent check valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI cast iron silent check valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
2" to 12"

Pressure
200 PSIG (13.8 BARG)

Temperature
300º F (149º C)

End Connections
Wafer Flanged

Cracking Pressure
Horizontal - 0.3 PSID
Vertical - 0.75 to 1.25 PSID

Features

- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Compact face to face length for space saving
- Wafer body style fits between FF or RF flanges

CRN

Dimensions

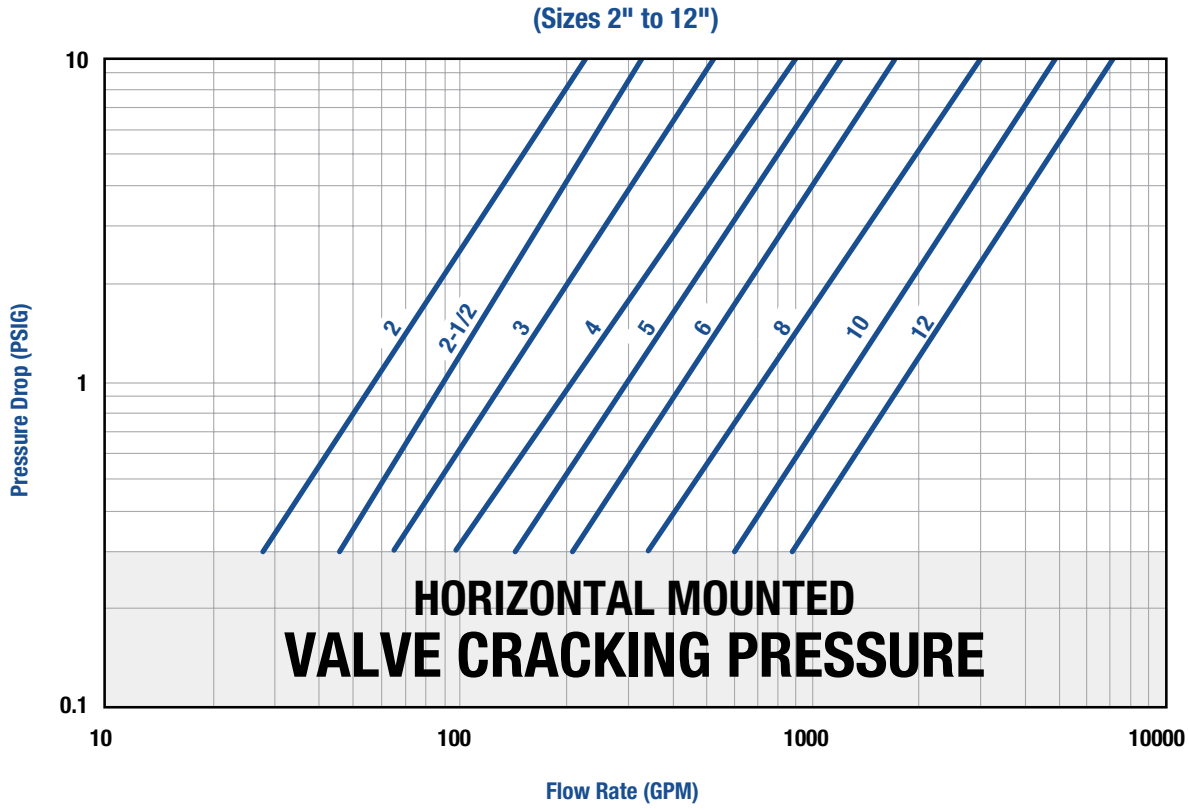
Size		A		B*		Qty	Stud Selection				Weight	
							Diameter		Length			
inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	lbs	kg
2"	50	2.69	68	4.13	105	4	0.63	16	6.50	165	5	2.3
2½"	65	2.88	73	4.88	124	4	0.63	16	6.75	171	8	3.6
3"	80	3.19	81	5.38	137	4	0.63	16	7.00	178	10	4.5
4"	100	4.00	103	6.88	175	8	0.63	16	8.00	203	19	8.6
5"	125	4.63	118	7.75	197	8	0.75	19	8.75	222	30	13.6
6"	150	5.56	142	8.75	222	8	0.75	19	10.50	267	42	19.1
8"	200	6.50	165	11.00	279	8	0.75	19	11.25	286	87	39.5
10"	250	8.22	209	13.38	340	12	0.88	22	12.25	311	146	66.2
12"	300	11.25	286	16.13	410	12	0.88	22	16.50	419	304	137.9

Materials

Part	Material
Body	A126-B
Discs	Al/Bz B148 C954 or 316SS A351-CF8M
Seat	Bronze or Stainless Steel
Spring	316 SS
O-Ring	EPDM

* Add the "B" dimension and the diameter of the stud to achieve the ANSI B16.5 Bolt Hole Circle Diameter | Dimensions shown are subject to change. Consult factory for certified drawings when required.

Pressure Drop VS. Flow Rate



- Pressure drop curves are based on water flow.
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally.
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards.

[1] For correct installation and maintenance please see our I&M manual | [2] Vertical installation (downward flow) – Consult factory | [3] Always use Strainers in upstream piping | [4] Not recommended for Steam Service

150WC Series

Sizes
8" to 12"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 400°F
(204°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features
- ASME Class 150 rated check valves
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Compact face to face legnth for space saving
- Wafer body style fits between FF or RF flanges
- Dual rating 150# and 300# in sizes 2" through 6"

Applicable Codes (designed in accordance with)
- ASME Sec. VIII and B16.34 Bodies
- API 598

Models
- 150WCCT – Cast Steel Body, Stainless Steel Disc
- 150WCTT – Stainless Steel Body, Stainless Steel Disc

Options
- Viton Seats
- Other Spring Material
- Heavier or Lighter Springs

Canadian Registration - OC10274.5C

150WC Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
1	0	0	0	–	1	5	0	W	C	T	T	M	–	T

1	Inlet Size				
0800	8"	1000	10"	1200	12"

2	Model
150WCCT	Carbon Steel Body, Stainless Steel Disc
150WCTT	Stainless Steel Body, Stainless Steel Disc

3	Seat
M	Metal

4	Spring
T	Stainless Steel

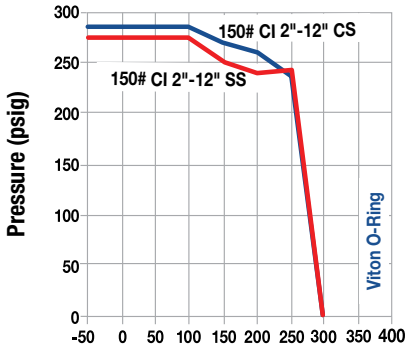
Flow Coefficient Values (Cv)

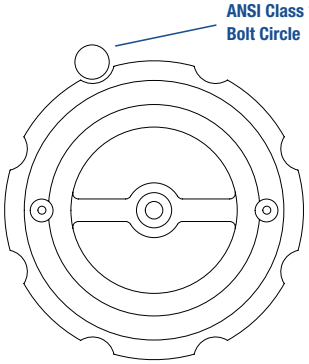
Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
8"	639	740	1297
10"	1114	1250	1800
12"	1297	1992	2593

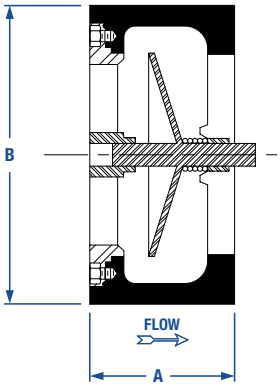
150WC Series | Wafer Silent Check Valves

Carbon Steel Body & Stainless Steel Body | Wafer Style

Pressure / Temperature Chart
ASME B16.34







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Sizes

8" to 12"

Pressure

285 PSIG (19.7 BARG)

Temperature

400° F (149° C)

End Connections

Wafer Flanged

Cracking Pressure

Horizontal - 0.3 PSID
Vertical - 0.75 to 1.25 PSID

Features

- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Compact face to face length for space saving
- Wafer body style fits between FF or RF flanges
- Dual rating 150# and 300# in sizes 2" through 6"

CRN

Dimensions

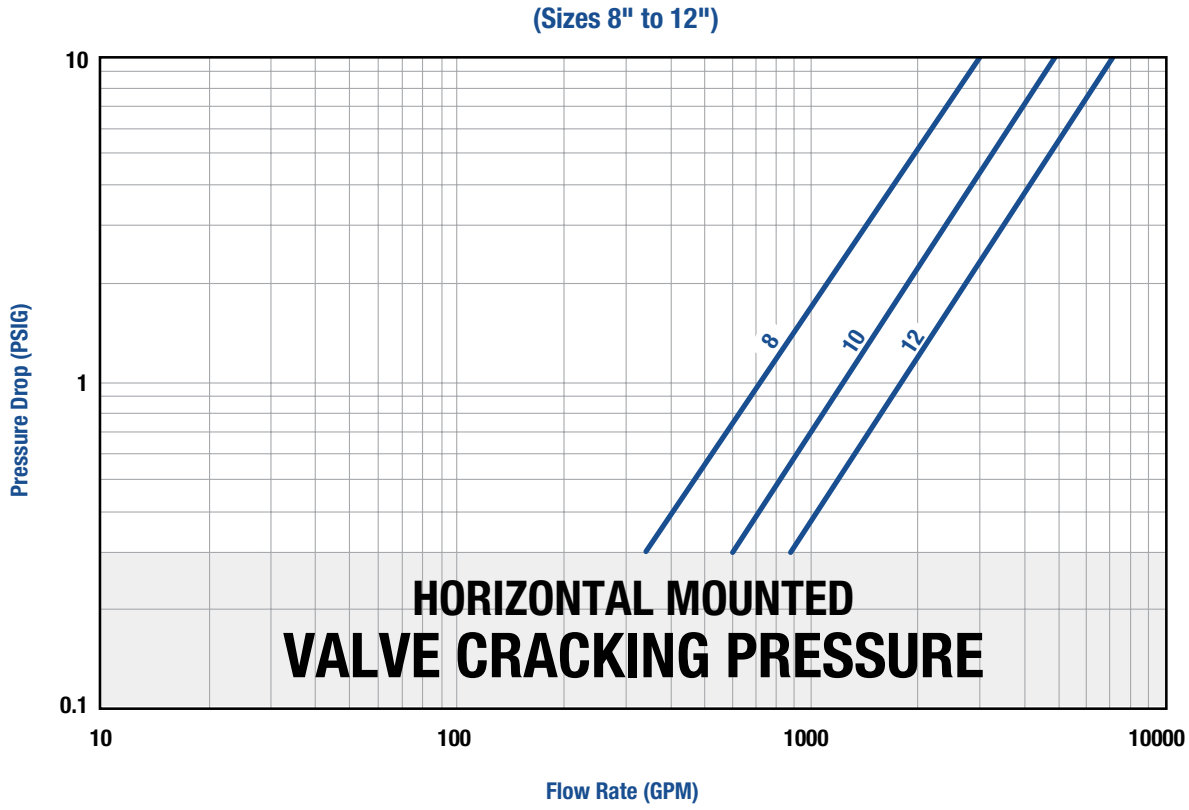
Size		A		B*		Qty	Stud Selection				Weight	
							Diameter		Length			
inch	mm	inch	mm	inch	mm		inch	mm	inch	mm	lbs	kg
2"	Use 2" 300WC on page 205											
2½"	Use 2½" 300WC on page 205											
3"	Use 3" 300WC on page 205											
4"	Use 4" 300WC on page 205											
5"	Use 5" 300WC on page 205											
6"	Use 6" 300WC on page 205											
8"	200	6.50	165	11.00	279	8	0.75	19	11.25	286	79	35.8
10"	250	8.25	209	13.38	340	12	0.88	22	12.25	311	147	66.7
12"	300	11.25	286	16.13	410	12	0.88	22	16.50	419	280	127

Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Discs	A351-CF8M	A351-CF8M
Seat	A351-CF8M	A351-CF8M
Spring	316 SS	316 SS
O-Ring	Viton	Viton

[1] Sizes 2" through 6" 150WC and 300WC are interchangeable, use 300WC for all applications in these sizes | Dimensions shown are subject to change. Consult factory for certified drawings when required.
* Add the "B" dimension and the diameter of the stud to achieve the ANSI B16.5 bolt hole circle diameter

Pressure Drop VS. Flow Rate



- Pressure drop curves are based on water flow.
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally.
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards.

[1] For correct installation and maintenance please see our I&M manual | [2] Vertical installation (downward flow) – Consult factory | [3] Always use Strainers in upstream piping | [4] Not recommended for Steam Service

300WC Series | Wafer Silent Check Valves

Carbon & Stainless Steel Body | Wafer Style

Sizes
2" to 6"

Pressure
up to 740 PSIG
(51 BARG)

Temperature
up to 400°F
(204°C)

Applications
Process Industry | Power Industry | Chemical Industry
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper

Features

- ASME Class 300 rated check valves
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Compact face to face legnth for space saving
- Wafer body style fits between FF or RF flanges
- Dual rating 150# and 300# in sizes 2" through 6"

Applicable Codes (designed in accordance with)

- ASME Sec. VIII and B16.34 Bodies
- API 598

Models

- 300WCCT – Cast Steel Body, Stainless Steel Disc
- 300WCTT – Stainless Steel Body, Stainless Steel Disc

Options

- Viton Seats
- Other Spring Material
- Heavier or Lighter Springs

Canadian Registration - OC10274.5C

300WC Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
0	3	0	0	–	3	0	0	W	C	C	T	M	–	T

1	Inlet Size				
0200	2"	**0300**	3"	**0500**	5"
0250	2½"	**0400**	4"	**0600**	6"

2	Model
300WCCT	Carbon Steel Body, Stainless Steel Disc
300WCTT	Stainless Steel Body, Stainless Steel Disc

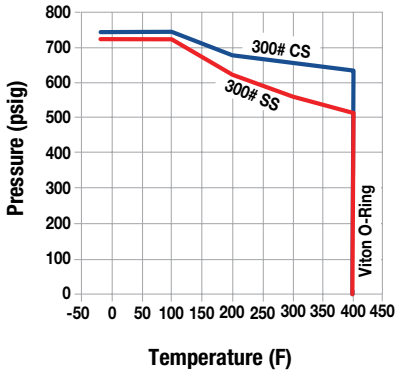
3	Seat
M	Metal

4	Spring
T	Stainless Steel

Flow Coefficient Values (Cv)

Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
2"	51	58	73
2½"	84	90	106
3"	119	134	168
4"	179	210	285
5"	265	300	391
6"	383	430	548

Pressure / Temperature Chart
ASME B16.34



Description

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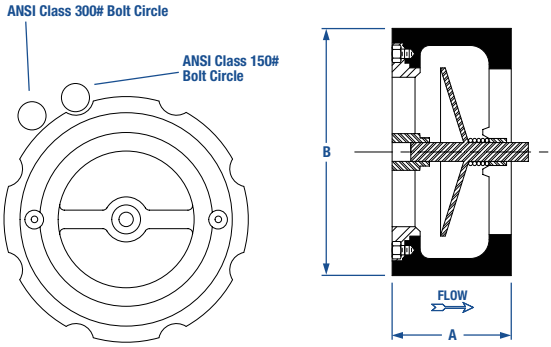
Sizes
2" to 6"

Pressure
740 PSIG (51 BARG)

Temperature
400º F (204º C)

End Connections
Wafer Flanged

Cracking Pressure
Horizontal - 0.3 PSID
Vertical - 0.75 to 1.25 PSID



Features

- Designed to reduce surge and Water Hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Compact face to face length for space saving
- Wafer body style fits between FF or RF flanges
- Dual rating 150# and 300# in sizes 2" through 6"

CRN

Dimensions

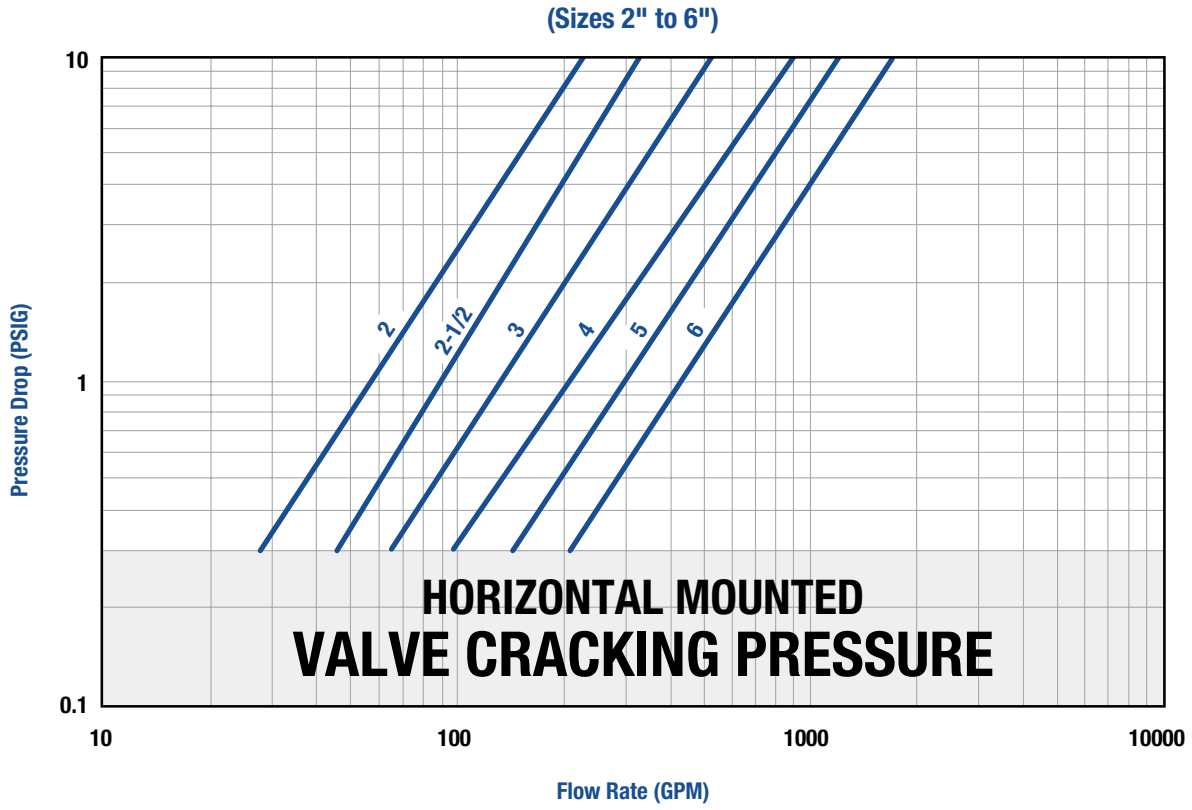
Size			A		B*		Qty	Stud Selection				Weight	
								Diameter		Length			
inch	mm		inch	mm	inch	mm		inch	mm	inch	mm	lbs	kg
2"	50	150	2.63	67	4.13	105	4	0.63	16	6.25	159	5	2.3
		300	2.63	67	4.38	111	8	0.63	16	6.50	165		
2½"	65	150	2.88	73	4.88	124	4	0.63	16	6.75	171	7	3.2
		300	2.88	73	5.13	130	8	0.75	19	7.25	184		
3"	80	150	3.13	79	5.88	137	4	0.63	16	7.00	178	11	5.0
		300	3.13	79	5.88	149	8	0.75	19	7.75	197		
4"	100	150	4.00	102	6.88	175	8	0.63	16	8.00	203	20	9.1
		300	4.00	102	7.13	181	8	0.75	19	9.00	229		
5"	125	150	4.63	117	7.75	197	8	0.75	19	8.50	216	34	15.4
		300	4.63	117	8.50	216	8	0.75	19	9.75	247		
6"	150	150	5.56	141	8.75	222	8	0.75	19	10.00	254	42	19.1
		300	5.56	141	9.88	251	12	0.75	19	10.75	273		

Materials

Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Discs	A351-CF8M	A351-CF8M
Seat	A351-CF8M	A351-CF8M
Spring	316 SS	316 SS
O-Ring	Viton	Viton

* Add the "B" dimension and the diameter of the stud to achieve the ANSI B16.5 bolt hole circle diameter | Dimensions shown are subject to change. Consult factory for certified drawings when required.

Pressure Drop VS. Flow Rate



- Pressure drop curves are based on water flow.
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally.
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards.

[1] For correct installation and maintenance please see our I&M manual | [2] Vertical installation (downward flow) – Consult factory | [3] Always use Strainers in upstream piping | [4] Not recommended for Steam Service

Check Valve Installation

- Valves may be installed upward vertically, horizontally, or at other angles. For vertical downward flow please consult with the factory.
- Install the valve with proper positioning of the flow arrow.
- Support and align adjacent piping and the valve.
- Install lubricated flange bolts.
- Hand tighten, then torque the bolts using the cross-over flange bolt-tightening method to load the bolts evenly, and eliminate concentrated stresses.
- Valves must be mounted to ANSI flanges with conventional flat face or ring gaskets.
- Proper centering of the ring gaskets is important to prevent internal leakage.
- Never lift the valve by the bronze or stainless steel trim.
- Install a strainer in the piping.

Precautions

- Do not install check valves directly against another valve whereby the check valve discharges downstream directly into the valve.
- Do not install the valve whereby it directly discharges downstream into a tee or elbow fitting.
- These valves are not suggested for installation in sewage ejector piping.
- Careful consideration should be given to the selection of valves for use in an air, steam, hot water and boiler feed systems. Consult our factory on these applications.
- Individuals performing removal and disassembly should be provided with suitable protection from possibly hazardous liquids.
- Before disassembly, the valve must first be isolated from system pressure and flow.
- Upon disassembly ensure spring pressure is released slowly to prevent personal injury due.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

Flanged Silent Check Valves | Overview

Sizes
2" to 18"

Pressure
up to 400 PSIG

Temperature
up to 400°F

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features
- Silent non-slam closure
- Flanged body style
- Metal to metal seats

End Connections
- Flat Face
- Raised Face

Body Materials
- Cast Iron
- Carbon Steel
- Stainless Steel

Disk Materials
- Bronze
- Stainless Steel

ASME Ratings
- Class 125
- Class 150
- Class 250

Sizes
2" to 18"

Pressure
up to 200 PSIG
(13.8 BARG)

Temperature
up to 300°F
(149°C)

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features
- ASME Class 125 rated check valve
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Flanged body style
- Bronze Metal to Metal Seats

Applicable Codes (designed in accordance with)
- Bodies in accordance with ASME B16.1
- API 598

Models
- 125FCIB - Cast Iron Body, Bronze Seat and Disc

Options
- Other Spring Material
- Heavier or Lighter Springs

125FC Series Ordering Code

1							2							3		4
Inlet Size							Model							Seat		Spring
0	8	0	0	–	1	2	5	F	C	I	B			M	–	T

1	Inlet Size				
0200	2"	0500	5"	1200	12"
0250	2½"	0600	6"	1400	14"
0300	3"	0800	8"	1600	16"
0400	4"	1000	10"	1800	18"

2	Model
125FCIB	Cast Iron Body, Bronze Disc

3	Seat
M	Metal

4	Spring
T	Stainless Steel

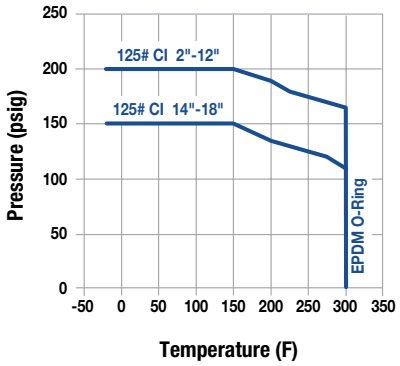
Flow Coefficient Values (Cv)

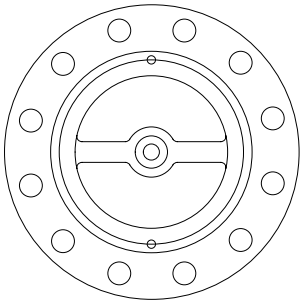
Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
2"	53	63	89
2½"	99	105	120
3"	135	148	174
4"	246	265	300
5"	402	430	474
6"	566	605	696

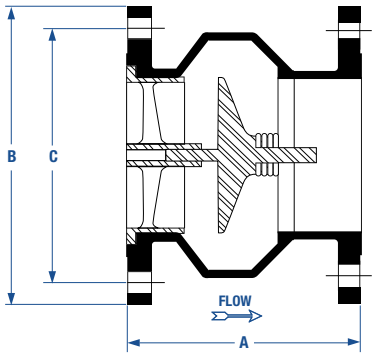
Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
8"	1004	1105	1297
10"	1579	1700	1992
12"	2556	2575	2593
14"	3286	3350	3479
16"	4199	4300	4427
18"	5112	5225	5376

125FC Series | Flanged Silent Check Valves

Cast Iron Body | Flanged Style







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Sizes

2" to 18"

Pressure

200 PSIG (13.8 BARG)

Temperature

300º F (149º C)

End Connections

FF Flanged

Cracking Pressure

Horizontal - 0.3 PSID
Vertical - 0.75 to 1.25 PSID

Features

- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Bronze Metal to Metal Seats
- Designed to reduce Water Hammer

CRN

Dimensions

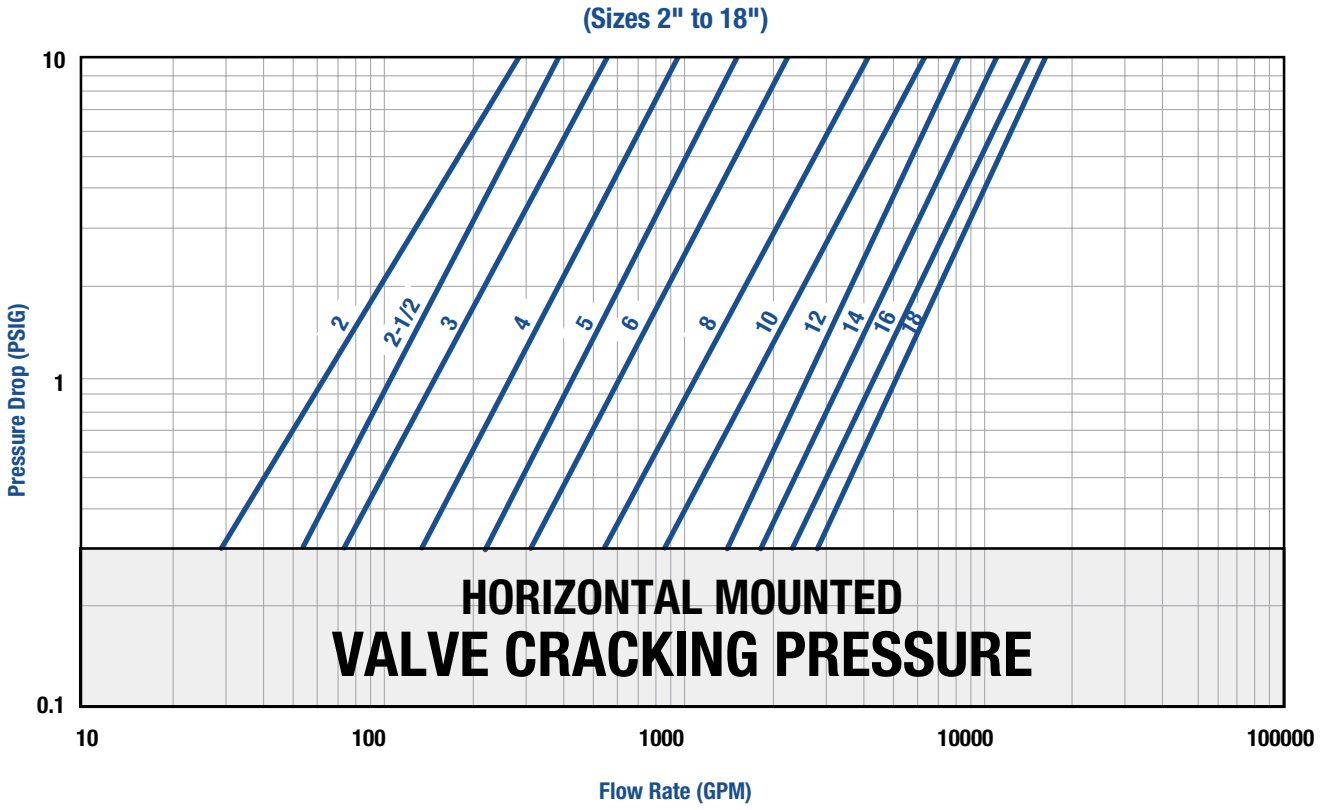
Size		A		B		C		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	6.13	156	6.0	152	4.75	121	21	9.4
2½"	65	7.00	178	7.0	178	5.50	140	31	13.8
3"	80	7.50	191	7.5	191	6.00	153	37	16.5
4"	100	8.50	216	9.0	229	7.50	191	62	28
5"	125	9.50	241	10.0	254	8.50	216	80	36
6"	150	10.50	267	11.0	280	9.50	241	106	48
8"	200	13.50	343	13.5	343	11.75	299	175	79
10"	250	16.25	413	16.0	406	14.25	362	267	121
12"	300	20.25	515	19.0	483	17.00	431	477	216
14"	350	22.75	580	21.0	533	18.75	477	785	356
16"	400	24.75	629	23.5	597	21.25	540	900	408
18"	450	22.50	572	25.0	635	22.75	578	1032	468

Dimensions shown are subject to change. Consult factory for certified drawings when required.

Materials

Part	Material
Body	A126-B
Discs	B62 Bronze
Seat	B62 Bronze
Spring	316 SS
O-Ring	EPDM

Pressure Drop VS. Flow Rate



- Pressure drop curves are based on water flow.
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally.
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards.

[1] For correct installation and maintenance please see our I&M manual | [2] Vertical installation (downward flow) – Consult factory | [3] Always use Strainers in upstream piping | [4] Not recommended for Steam Service

150FC Series | Flanged Silent Check Valves

Carbon & Stainless Steel Body | Flanged Style

Sizes
2" to 16"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 400°F
(204°C)

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features

- ASMEClass 150 rated check valve
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Flanged body style
- Stainless Steel Metal to Metal Seats

Applicable Codes (designed in accordance with)

- ASME Sec. VIII and B16.34 Bodies
- API 598

Models

- 150FCCT - Cast Steel Body, Stainless Steel Seat and Disc
- 150FCTT – Stainless Steel Body, Stainless Steel Seat and Disc

Options

- Other Spring Material
- Heavier or Lighter Springs

150FC Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
0	4	0	0	–	1	5	0	F	C	T	T	M	–	T

1	Inlet Size				
0200	2"	0500	5"	1200	12"
0250	2½"	0600	6"	1400	14"
0300	3"	0800	8"	1600	16"
0400	4"	1000	10"		

2	Model
150FCCT	Cast Steel Body, Stainless Steel Seat and Disc
150FCTT	Stainless Steel Body, Stainless Steel Seat and Disc

3	Seat
M	Metal

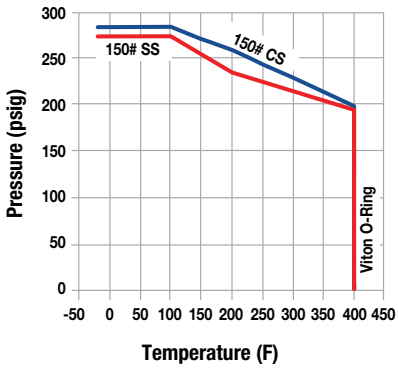
4	Spring
T	Stainless Steel

Flow Coefficient Values (Cv)

Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
2"	52	63	89
2½"	99	105	120
3"	135	148	174
4"	246	265	300
5"	402	430	474
6"	566	605	696

Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
8"	1004	1105	1297
10"	1579	1700	1992
12"	2556	2575	2593
14"	3286	3350	3479
16"	4199	4300	4427

Pressure / Temperature Chart
ASME B16.34



Description

SSI manufactures carbon steel silent check valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel silent check valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

2" to 16"

Pressure

285 PSIG (19.7 BARG)

Temperature

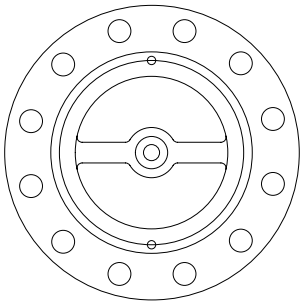
400º F (149º C)

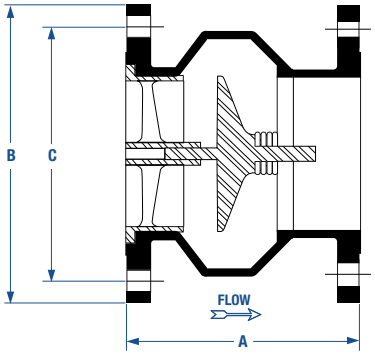
End Connections

FF Flanged

Cracking Pressure

Horizontal - 0.3 PSID
Vertical - 0.75 to 1.25 PSID





Features

- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Flanged body style
- Stainless steel metal to metal seats

CRN

Dimensions

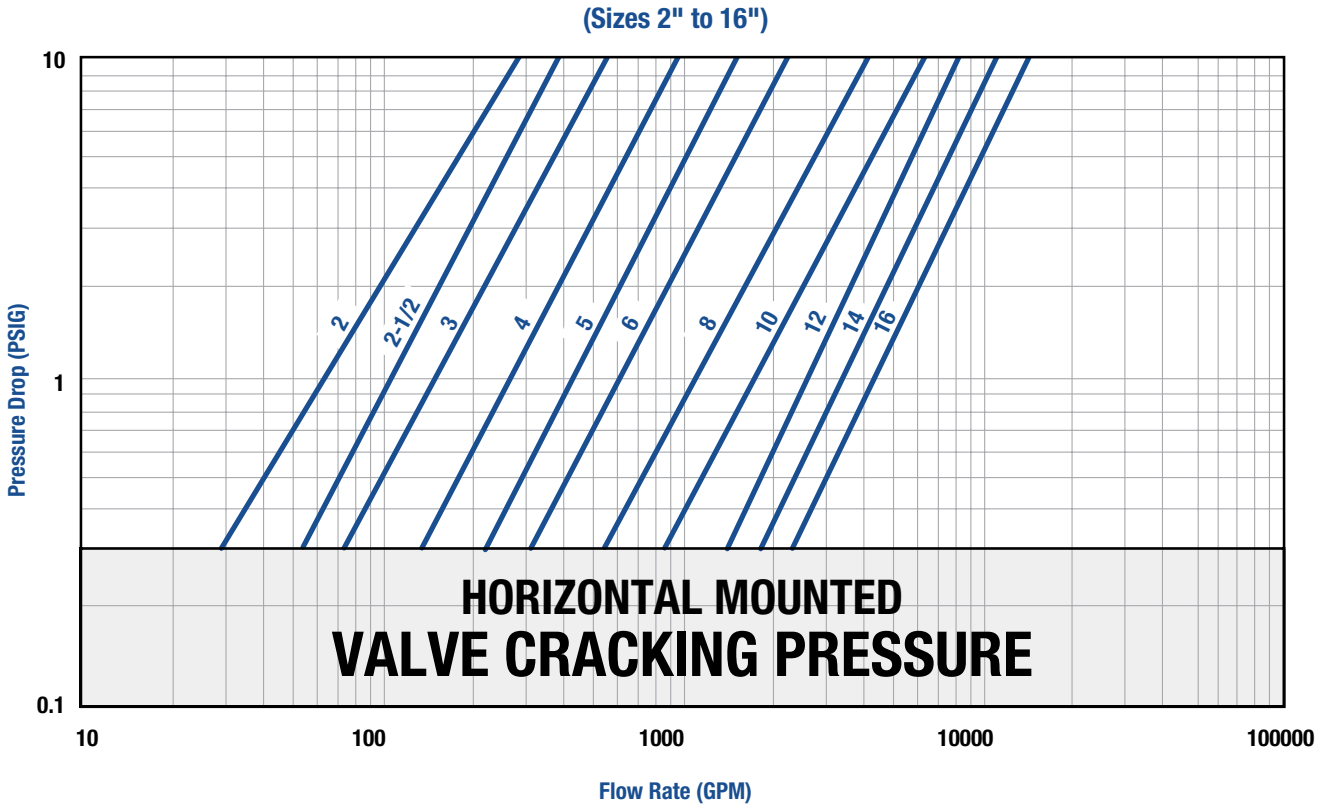
Size		A		B		C		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	6.25	159	6.0	152	4.75	121	15	6.6
2½"	65	7.00	178	7.0	178	5.50	140	21	9.3
3"	80	7.50	191	7.5	191	6.00	153	26	11.5
4"	100	8.50	216	9.0	229	7.50	191	48	21.3
5"	125	9.50	242	10.0	254	8.50	216	61	27.3
6"	150	10.50	267	11.0	280	9.50	241	76	34.1
8"	200	12.00	305	13.5	343	11.75	299	129	58.4
10"	250	14.00	356	16.0	406	14.25	362	183	82.8
12"	300	18.00	457	19.0	483	17.00	431	344	156
14"	350	19.50	495	21.0	533	18.75	477	433	196
16"	400	21.00	533	23.5	597	21.25	540	607	275

Dimensions shown are subject to change. Consult factory for certified drawings when required.

Materials

Part	Carbon Steel	Stainless Steel
Body	A216 WCB	A351 CF8M
Discs	A351 CF8M	A351 CF8M
Seat	A351 CF8M	A351 CF8M
Spring	316 SS	316 SS
O-Ring	Viton	Viton

Pressure Drop VS. Flow Rate



- Pressure drop curves are based on water flow.
- Valve cracking pressure is equal to or less than 0.3 psid when mounted horizontally.
- Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards.

[1] For correct installation and maintenance please see our I&M manual | [2] Vertical installation (downward flow) – Consult factory | [3] Always use Strainers in upstream piping | [4] Not recommended for Steam Service

Sizes
2½" to 12"

Pressure
up to 400 PSIG
(27.6 BARG)

Temperature
up to 200°F
(93°C)

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features
- ASME Class 250 rated check valve
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Flanged body style
- Bronze Metal to Metal Seats

Applicable Codes (designed in accordance with)
- ASME B16.1

Models
- 250FCIB - Cast Iron Body, Bronze Seat and Disc
- 150FCTT – Stainless Steel Body, Stainless Steel Seat and Disc

Options
- Other Spring Material
- Heavier or Lighter Springs

250FC Series Ordering Code

1					2							3		4
Inlet Size					Model							Seat		Spring
0	8	0	0	–	2	5	0	F	C	I	B	M	–	T

1	Inlet Size				
0250	2½"	0500	5"	1000	10"
0300	3"	0600	6"	1200	12"
0400	4"	0800	8"		

2	Model
250FCIB	Cast Iron Body, Bronze Disc

3	Seat
M	Metal

4	Spring
T	Stainless Steel

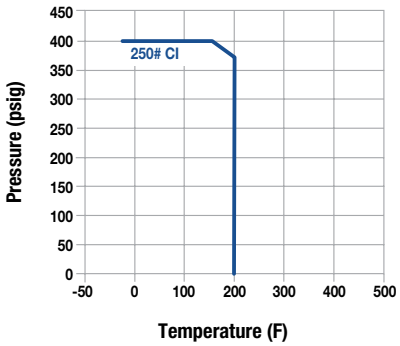
Flow Coefficient Values (Cv)

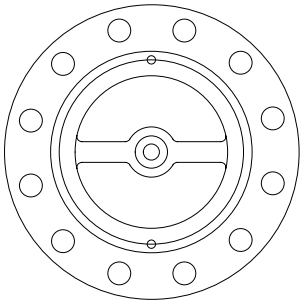
Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
2½"	78	110	348
3"	110	155	490
4"	197	278	879
5"	308	435	1376
6"	442	625	1976
8"	788	1115	3526
10"	1252	1770	5597
12"	1768	2500	7906

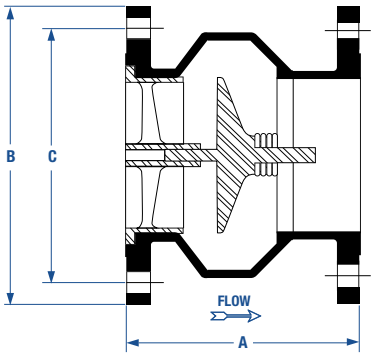
250FC Series | Flanged Silent Check Valves

Cast Iron Body | Flanged Style

Pressure / Temperature Chart
ASME B16.1







Description

SSI manufactures cast iron silent check valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI cast iron silent check valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

2" to 18"

Pressure

400 PSIG (27.6 BARG)

Temperature

200° F (93° C)

End Connections

FF Flanged

Cracking Pressure

Horizontal - 0.3 PSID
Vertical - 0.75 to 1.25 PSID

Features

- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Center guided at both ends to prevent binding and cocking
- Bronze metal to metal seats
- Designed to reduce water hammer

Dimensions

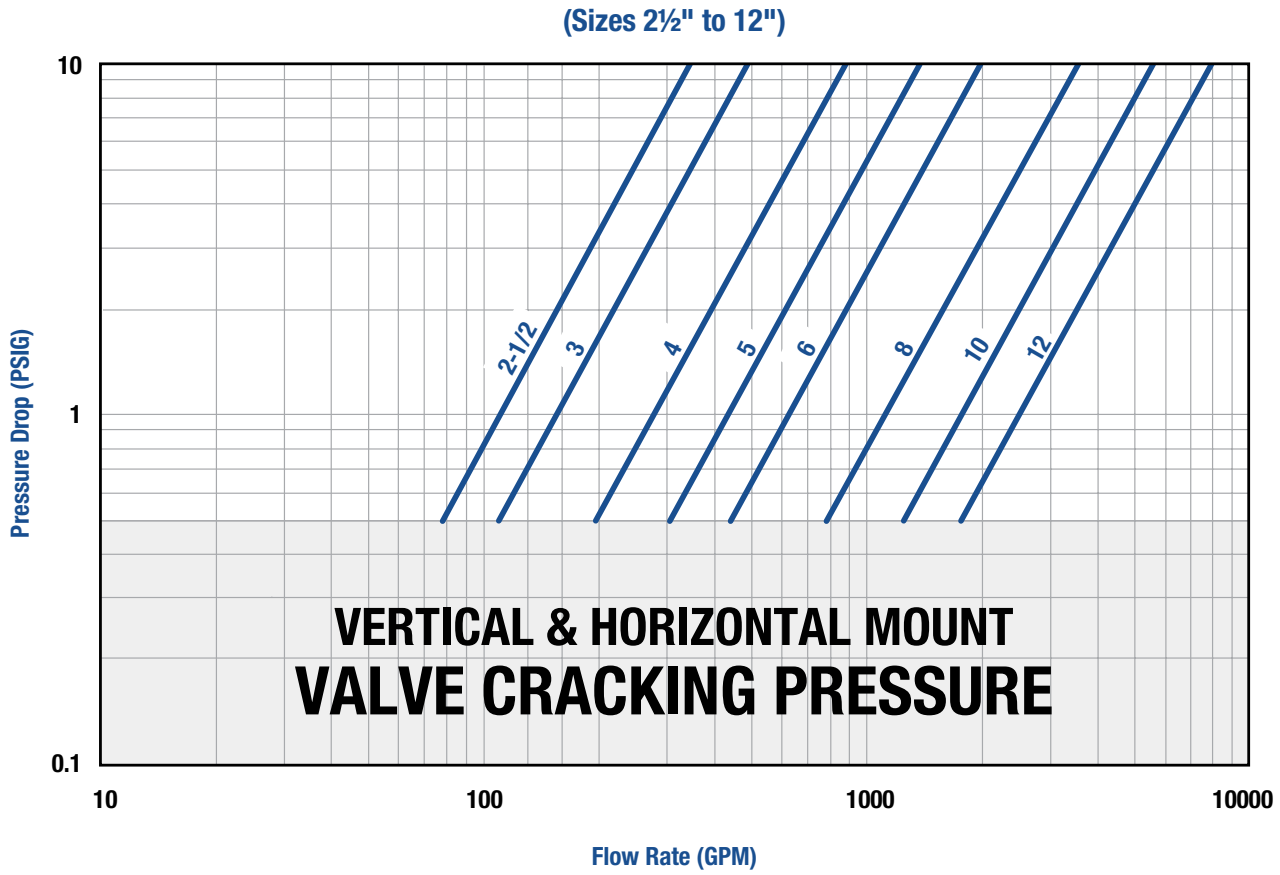
Size		A		B		C		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2½"	65	5.50	127	5.50	127	5.88	150	30	13.6
3"	80	6.00	150	8.25	216	6.63	168	36	16.4
4"	100	7.25	184	10.00	254	7.88	200	59	27
5"	125	8.50	216	11.00	280	9.25	235	78	36
6"	150	9.75	248	12.50	318	10.63	270	103	47
8"	200	12.50	318	15.00	381	13.00	331	179	82
10"	250	15.50	394	17.50	445	15.25	388	253	115
12"	300	14.25	362	20.50	521	17.75	451	401	182

Dimensions shown are subject to change. Consult factory for certified drawings when required.

Materials

Part	Material
Body	A126-A
Discs	B62 Bronze
Seat	B62 Bronze
Spring	316 SS
O-Ring	EPDM

Pressure Drop VS. Flow Rate



- Pressure drop curves are based on water flow.
- Valve cracking pressure is equal to or less than 0.5 psid when installed vertically and horizontally.

[1] For correct installation and maintenance please see our I&M manual | [2] Vertical installation (downward flow) – Consult factory | [3] Always use Strainers in upstream piping | [4] Not recommended for Steam Service

Check Valve Installation

- Valves may be installed upward vertically, horizontally, or at other angles. For vertical downward flow please consult with the factory.
- Install the valve with proper positioning of the flow arrow.
- Support and align adjacent piping and the valve.
- Install lubricated flange bolts.
- Hand tighten, then torque the bolts using the cross-over flange bolt-tightening method to load the bolts evenly, and eliminate concentrated stresses.
- Valves must be mounted to ASME flanges with conventional flat face or ring gaskets.
- Proper centering of the ring gaskets is important to prevent internal leakage.
- Never lift the valve by the bronze or stainless steel trim.
- Install a strainer in the piping.

Precautions

- Do not install check valves directly against another valve whereby the check valve discharges downstream directly into the valve.
- Do not install the valve whereby it directly discharges downstream into a tee or elbow fitting.
- These valves are not suggested for installation in sewage ejector piping.
- Careful consideration should be given to the selection of valves for use in an air, steam, hot water and boiler feed systems. Consult our factory on these applications.
- Individuals performing removal and disassembly should be provided with suitable protection from possibly hazardous liquids.
- Before disassembly, the valve must first be isolated from system pressure and flow.
- Upon disassembly ensure spring pressure is released slowly to prevent personal injury due to the spring “launching” itself unexpectedly.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

*** Check valves should be installed, if possible, a minimum of 6 pipe diameters from other line elements, i.e. elbows, pipes, valves, etc.**

Sizes
2" to 18"

Pressure
up to 285 PSIG

Temperature
up to 400°F

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features
- Silent non-slam closure
- Flanged body style
- Metal to metal seats

End Connections
- Flat Face
- Raised Face

Body Materials
- Cast Iron
- Carbon Steel
- Stainless Steel

Disk Materials
- Bronze
- Stainless Steel

ASME Ratings
- Class 125
- Class 150
- Class 250

125FV Series | Foot Valves

Cast Iron Body | Flanged Style

Sizes
2" to 18"

Pressure
up to 200 PSIG
(13.8 BARG)

Temperature
up to 300°F
(149°C)

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features

- ASMEClass 125 rated foot valve
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Heavy duty stainless steel screening with flow areas three to four times that of the pipe area
- Center guided at both ends to prevent binding and cocking
- Flanged body style
- Bronze Metal to Metal Seats

Applicable Codes (designed in accordance with)

- Bodies in accordance with ASME B16.1

Models

- 125FVIB – Cast Iron Body, Bronze Seat and Disc

Options

- Consult factory

125FV Series Ordering Code

1					2							3		4	5
Inlet Size					Model							Seat		Perf	Mesh
0	6	0	0	–	1	2	5	F	V	I	B	M	–	4	5

1	Inlet Size				
0200	2"	0500	5"	1200	12"
0250	2½"	0600	6"	1400	14"
0300	3"	0800	8"	1600	16"
0400	4"	1000	10"	1800	18"

2	Model
125FVIB	Cast Iron Body, Bronze Disc, Metal Seat

3	Seat
M	Metal

4	Perf (304SS Material[1])				
1	1/32"	3	3/32"	8	1/4"
B	3/64"	5	5/32"	9	3/8"
4	1/8" (std)	6	3/16"		
2	1/16"	7	7/32"		

5	Mesh (Leave Blank if not required)				
1	10	4	40	7	70
2	20	5	50	8	80
3	30	6	60	9	90

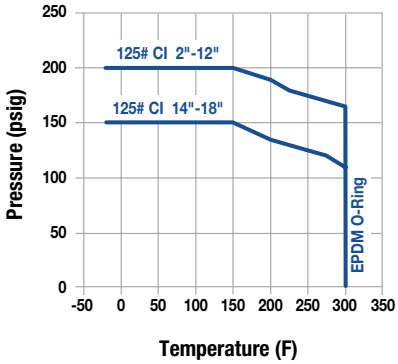
Flow Coefficient Values (Cv)

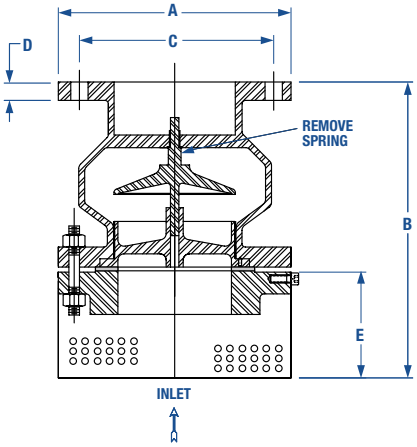
Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
2"	53	63	89
2½"	99	105	120
3"	135	148	174
4"	246	265	300
5"	402	430	474
6"	566	605	696

Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
8"	1004	1105	1297
10"	1579	1700	1992
12"	2556	2575	2593
14"	3286	3350	3479
16"	4199	4300	4427
18"	5112	5225	5376

1. For other screen materials contact factory.

Pressure / Temperature Chart
ASME B16.1





Description

SSI manufactures cast iron foot valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI cast iron foot valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes
2" to 18"

Pressure
200 PSIG (13.8 BARG)

Temperature
300º F (149º C)

End Connections
FF Flanged

Cracking Pressure
Vertical - Consult Factory

Features

- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Heavy duty stainless steel screening with flow areas three to four times that of the pipe area
- Center guided at both ends to prevent binding and cocking
- Bronze metal to metal seats

Dimensions

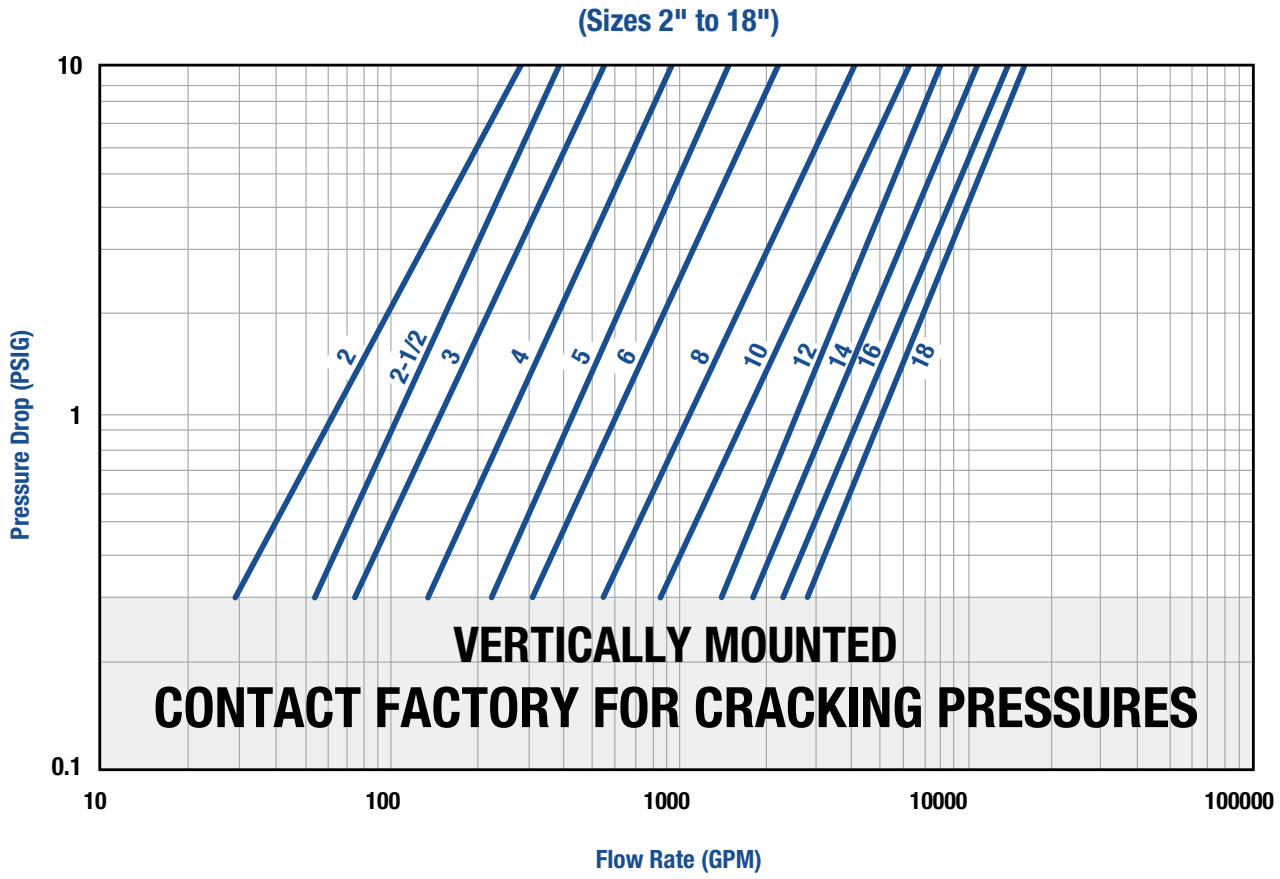
Size		A		B		C		D		E		Stud Lgth		Bolt Size		# of	Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	Bolts	lbs	kg
2"	50	6.0	152	8.38	213	4.75	121	0.75	19	3	76	3.25	83	0.63	16	4	30	14
2½"	65	7.0	178	8.63	219	5.50	140	0.88	22	3	76	3.50	89	0.63	16	4	45	20
3"	80	7.5	191	9.63	244	6.00	152	0.94	24	3	76	3.75	95	0.63	16	4	51	23
4"	100	9.0	229	11.13	283	7.50	191	0.94	24	3	76	3.75	95	0.63	16	8	83	38
5"	125	10.0	254	13.38	340	8.50	216	0.94	24	4	102	4.00	102	0.75	19	8	104	47
6"	150	11.0	279	15.88	403	9.50	241	1.00	25	5	127	4.00	102	0.75	19	8	133	60
8"	200	13.5	343	19.63	498	11.75	298	1.13	29	6	152	4.25	108	0.75	19	8	215	98
10"	250	16.0	406	23.63	600	14.25	362	1.19	30	7	178	4.75	121	0.88	22	12	324	147
12"	300	19.0	483	23.38	594	17.00	432	1.25	32	8	203	4.75	121	0.88	22	12	557	253
14"	350	21.0	533	25.88	657	18.75	476	1.38	35	9	229	5.25	133	1.00	25	12	890	404
16"	400	23.5	597	29.00	737	21.25	540	1.44	37	10	254	5.50	140	1.00	25	16	1034	469
18"	450	25.0	635	31.13	791	22.75	578	1.56	40	11	279	6.00	152	1.13	29	16	1171	531

Dimensions shown are subject to change. Consult factory for certified drawings when required.

Materials

Part	Material
Body	A126-B
Disc	B62
Seat	B62
Bolt	SA193 B8
Studs	SA193 B7
Hex Nuts	SA194 2H
Screen FLG	SA105
Screen	SA240 304
Gasket	Red Rubber

Pressure Drop VS. Flow Rate



- For correct installation and maintenance, please see our I & M manual.
- Mount only in vertical position with upward flow.

* Pressure drop curves are based on water flow.

150FV Series

Sizes
2" to 16"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 400°F
(204°C)

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features

- ASME Class 150 rated foot valve
- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Heavy duty stainless steel screening with flow areas three to four times that of the pipe area
- Center guided at both ends to prevent binding and cocking
- Flanged body style
- Stainless Steel Metal to Metal Seats

Applicable Codes (designed in accordance with)

- ASME Sec. VIII and B16.34 Bodies

Models

- 150FVCT – Carbon Steel Body, Stainless Steel Seat and Disc
- 150FVTT – Stainless Steel Body, Stainless Steel Seat and Disc

Options

- Consult factory

150FV Series Ordering Code

1					2							3		4	5
Inlet Size					Model							Seat		Perf	Mesh
0	6	0	0	–	1	5	0	F	V	C	T	M	–	4	5

1	Inlet Size				
0200	2"	0500	5"	1200	12"
0250	2½"	0600	6"	1400	14"
0300	3"	0800	8"	1600	16"
0400	4"	1000	10"		

2	Model
150FVCT	Carbon Steel Body, SS Disc, Metal Seat
150FVTT	Stainless Steel Body, SS Disc, Metal Seat

3	Seat
M	Metal

4	Perf (304SS Material[1])				
1	1/32"	2	1/16"	6	3/16"
B	3/64"	3	3/32"	7	7/32"
4	1/8" (std)	5	5/32"	8	1/4"

5	Mesh (Leave Blank if not required)				
1	10	4	40	7	80
2	20	5	50	8	100
3	30	6	60		

Flow Coefficient Values (Cv)

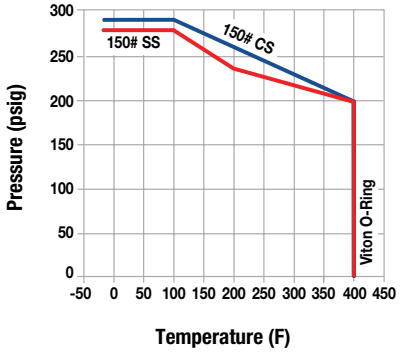
Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
2"	53	63	89
2½"	99	105	120
3"	135	148	174
4"	246	265	300
5"	402	430	474
6"	566	605	696

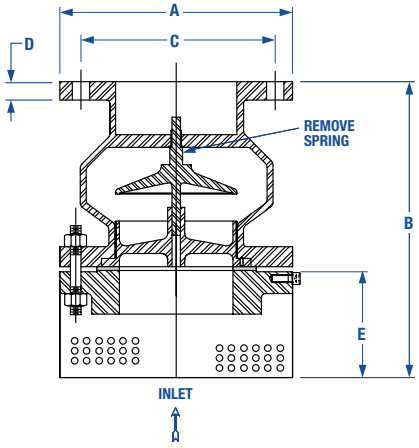
Size (in)	Min Cv (@ .3 PSID)	Cv (@ 1 PSID)	Max Cv (@ 10 PSID)
8"	1004	1005	1297
10"	1579	1700	1992
12"	2556	2575	2593
14"	3286	3350	3479
16"	4199	4300	4427

150FV Series | Foot Valves

Carbon Steel Body & Stainless Steel Body | Flanged Style

Pressure / Temperature Chart
ASME B16.34





Description

SSI manufactures carbon steel foot valves that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI carbon steel foot valves are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining and water & waste applications.

Sizes

2" to 16"

Pressure

285 PSIG (19.7 BARG)

Temperature

400º F (204º C)

End Connections

FF Flanged

Cracking Pressure

Vertical - Consult Factory

Features

- Designed to reduce surge and water hammer
- Silent, non-slam closure
- Heavy duty stainless steel screening with flow areas three to four times that of the pipe area
- Center guided at both ends to prevent binding and cocking
- Stainless steel metal to metal seats

Dimensions

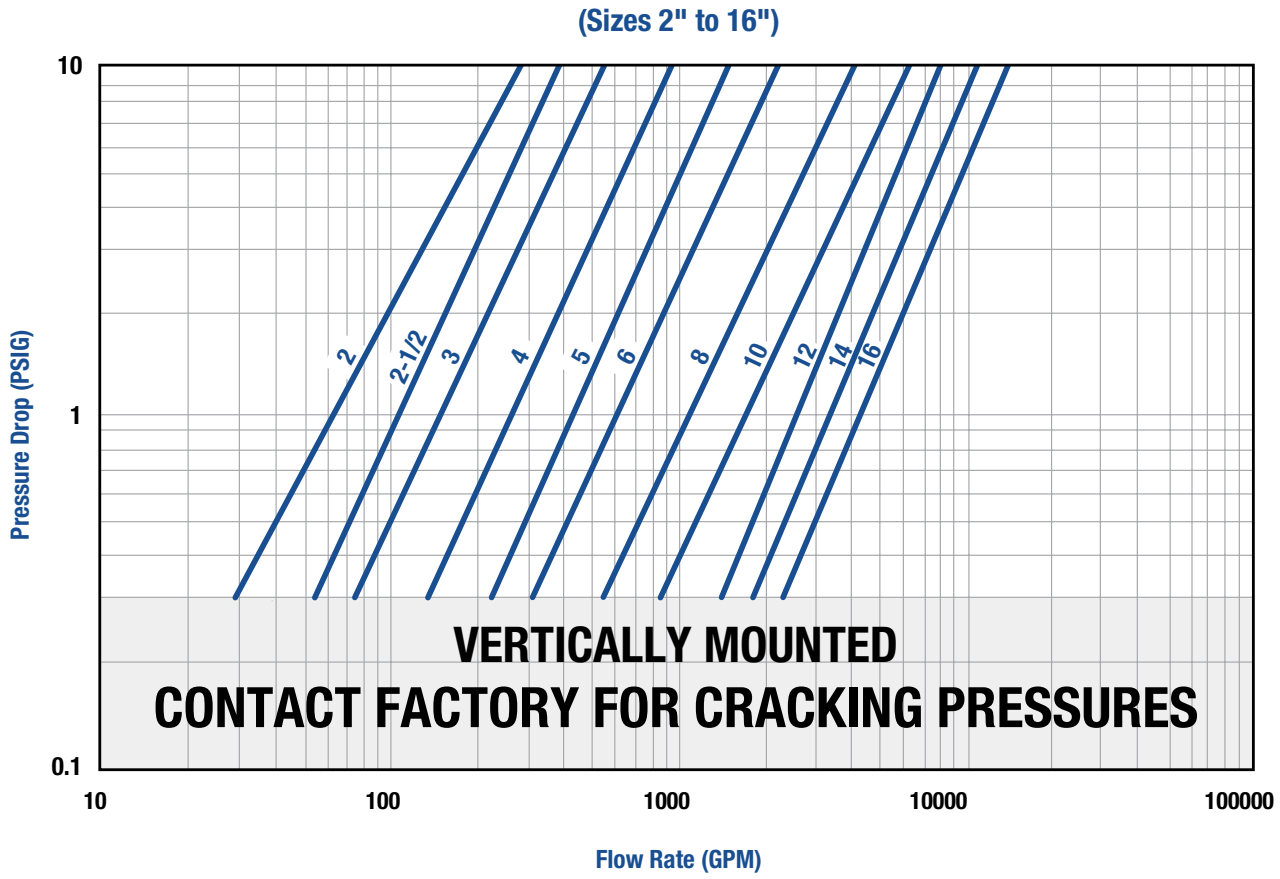
Size		A		B		C		D		E		Stud Lgth		Bolt Size		# of Bolts	Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		lbs	kg
2"	50	6.00	152	8.38	213	4.75	121	0.75	19	3	76	3.25	83	0.63	16	4	25	11
2½"	65	7.00	178	8.63	219	5.50	140	0.88	22	3	76	3.50	89	0.63	16	4	35	16
3"	80	7.50	191	9.63	244	6.00	152	0.94	24	3	76	3.75	95	0.63	16	4	45	20
4"	100	9.00	229	11.13	283	7.50	191	0.94	24	3	76	3.75	95	0.63	16	8	70	32
5"	125	10.00	254	13.38	340	8.50	216	0.94	24	4	102	4.00	102	0.75	19	8	90	41
6"	150	11.00	279	15.88	403	9.50	241	1.00	25	5	127	4.00	102	0.75	19	8	115	52
8"	200	13.50	343	19.63	498	11.75	298	1.13	29	6	152	4.25	108	0.75	19	8	181	82
10"	250	16.00	406	23.63	600	14.25	362	1.19	30	7	178	4.75	121	0.88	22	12	265	120
12"	300	19.00	483	23.38	594	17.00	432	1.25	32	8	203	4.75	121	0.88	22	12	425	193
14"	350	21.00	533	25.88	657	18.75	476	1.38	35	9	229	5.25	133	1.00	25	12	550	249
16"	400	23.50	597	29.00	737	21.25	540	1.44	37	10	254	5.50	140	1.00	25	16	695	315

Dimensions shown are subject to change. Consult factory for certified drawings when required.

Materials

Part	Carbon Steel	Stainless Steel
Body	A216 WCB	A351 CF8M
Disc	A351 CF8M	A351 CF8M
Seat	A351 CF8M	A351 CF8M
Bolt	SA193 B8	SA193 B8
Studs	SA193 B7	SA193 B7
Hex Nuts	SA194 2H	SA194 2H
Screen FLG	SA105	SS-304
Screen	SA240 304	SA240 316
Gasket	Red Rubber	Red Rubber

Pressure Drop VS. Flow Rate

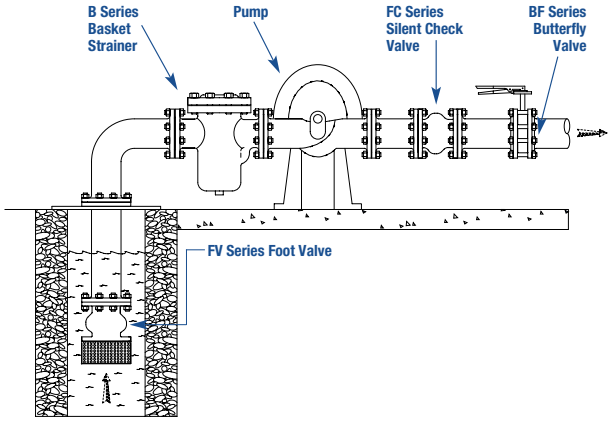


- For correct installation and maintenance, please see our I & M manual.
- Mount only in vertical position with upward flow.

* Pressure drop curves are based on water flow.

Foot Valve Installation

- Valves may be installed upward vertically only.
- Install the valve with proper positioning of the flow arrow.
- Support and align adjacent piping and the valve.
- Install lubricated flange bolts.
- Hand tighten, then torque the bolts using the cross-over flange bolt-tightening method to load the bolts evenly, and eliminate concentrated stresses.
- Valves must be mounted to ASME flanges with conventional flat face or ring gaskets.
- Do not install foot valve directly against another valve whereby the check valve discharges downstream directly into the valve.
- Do not install the valve whereby it directly discharges downstream into a tee or elbow fitting.
- These valves are not suggested for installation in sewage ejector piping.
- Never lift the valve by the bronze or stainless steel trim.



Precautions

- Individuals performing removal and disassembly should be provided with suitable protection from possible hazardous liquids.
- Do no install foot valve directly against another valve whereby the foot valve discharges downstream directly into the valve.
- Foot valves are not recommended for installation in sewage ejector piping.
- Prior to disassembly, the valve must first be isolated from the system's (electrically isolated pump) pressure and flow.

Maintenance

- Individuals performing removal and disassembly should be provided with suitable protection from possibly hazardous liquids.
- Before disassembly, valve must first be isolated from system pressure and flow.
- To replace screen remove two screen retainer bolts,replace the screen and reassemble retainer bolts.
- To replace gasket, first dismantle the screen and then remove nuts of the strainer flange studs and separate the gasket from foot valve. Replace the gasket and reassemble in the reverse order.
- To replace the valve seat, first dismantle the screen, screen flange and then remove two seat retaining countersunk screws and take out the valve seat. Replace the valve seat and reassemble in reverse order.
- Lubricate bolts/nuts, hand tighten, then torque the bolts using the crossover flange bolt-tightening method to load the bolts evenly, and eliminate concentrated stresses.

WARNING

This product operates in pipelines or with equipment that carries fluids and/or gasses at elevated temperatures and pressures. Caution should be taken to make sure that this equipment is installed correctly and inspected regularly. Caution should also be taken to protect personnel from fluid or gas leakage.

*** Check valves should be installed, if possible, a minimum of 6 pipe diameters from other line elements, i.e. elbows, pipes, valves, etc.**

Sizes
½" to 20"

Pressure
up to 225 PSIG

Temperature
up to 230°F

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features
- For connection pipes and equipment
- Easy to install
- Horizontal or vertical mounting

End Connections
- Flanged
- Threaded (NPT)

Body Materials
- Neoprene

End Materials
- Zinc Plated
- Ductile Iron

Expansion Joints

ASM, ATM & AUM Series

Neoprene Body | Flanged & NPT Style | Single & Double Sphere

Sizes
½" to 20"

Pressure
up to 225 PSIG
(15.51 BARG)

Temperature
up to 230°F
(110°C)

Applications
Process Industry | Power Industry | Chemical Industry | Liquid Service
Oil & Gas | Metals & Mining | Water & Waste | Pulp & Paper | Marine

Features

- For connection pipes and equipment where flanged ends are preferred
- Flat faced flanged single sphere connectors
- Easy to install floating flanges allow variable pressure, temperature and movement
- Increased acoustic resistance, dampens hydraulic surge and shock
- Accommodates thermal movement and misalignment
- Four way greater movement provides high level of installation flexibility
- Precision molded synthetic rubber reinforced with nylon cord
- Horizontal or vertical mounting

Applicable Codes (designed in accordance with)

- ASME/ANSI B1-20.1 (AUM)

Models

- ASM - Flanged Connection
- ATM - Flanged Connection
- AUM – NPT Connection

Options

- Control Rods (ASM and ATM)

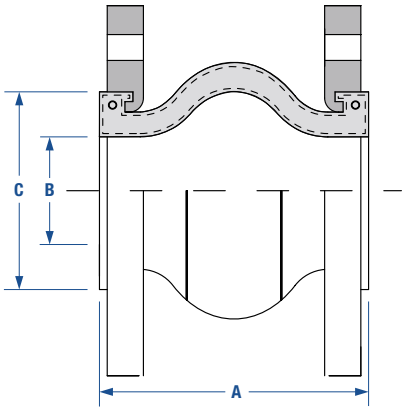
Expansion Joints Ordering Code

1				2			3		
Inlet Size				–	Model			Optional	
0	6	0	0	–	A	S	M	R	0	D

1	Inlet Size				
0050	½"	**0250**	2½"	**1000**	10"
0075	¾"	**0300**	3"	**1200**	12"
0100	1"	**0400**	4"	**1400**	14"
0125	1¼"	**0500**	5"	**1600**	16"
0150	1½"	**0600**	6"	**1800**	18"
0200	2"	**0800**	8"	**2000**	20"

2	Model
ASM	Single Sphere, FLG, CI, Neoprene
ATM	Double Sphere, FLG, CI, Neoprene
AUM	Double Sphere, NPT, CI, Neoprene

3	Optional
ROD	Control Rod (ASM and ATM only)



Description

SSI manufactures zinc plated expansion joints that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI zinc plated expansion joints are suitable for a full range of water, gas, steam, petrochemical and general use/utility services and applications.

Sizes
1" to 20"

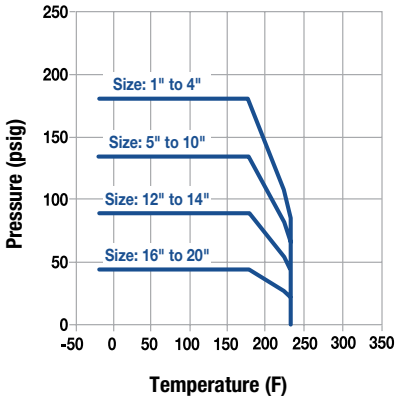
Pressure
225 PSIG (15.51 BARG)

Temperature
230º F (110º C)

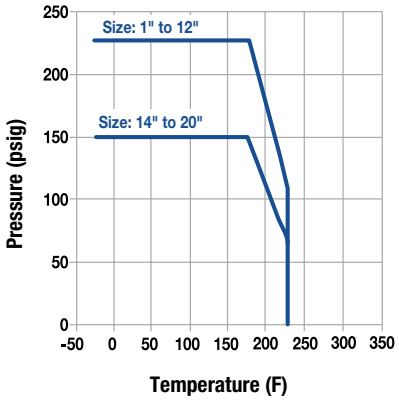
End Connections
FF Flanged

Burst Pressure
850 PSIG

Pressure / Temperature Chart Without Control Rods



Pressure / Temperature Chart With Control Rods



Features

- For connection pipes and equipment where flanged ends are preferred
- Easy to install floating flanges allow variable pressure, temperature and movement
- Increased acoustic resistance, dampens hydraulic surge and shock
- Accommodates thermal movement and misalignment
- Four-way greater movement provides high level of installation flexibility
- Precision molded synthetic rubber with nylon cord
- Horizontal or vertical mounting

Dimensions

Size		A		Allowable Movement								B		C		Weight			
				Axial Comp.		Axial Ext.		Lateral Deflect.		Angular Deflect.						No Rods		With Rods	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
1"	25	6.00	152	0.75	19	0.47	12	0.56	14	0.59	15	1.53	39	2.94	75	5	2.3	10	4.7
1¼"	32	6.00	152	0.75	19	0.47	12	0.56	14	0.59	15	1.53	39	2.94	75	7	3.2	10	4.7
1½"	38	6.00	152	0.75	19	0.47	12	0.56	14	0.59	15	1.53	39	2.94	75	8	3.6	12	5.4
2"	51	6.00	152	0.75	19	0.47	12	0.56	14	0.59	15	1.91	48	3.38	86	11	5.0	15	7.0
2½"	64	6.00	152	0.75	19	0.47	12	0.56	14	0.59	15	2.47	63	4.13	105	11	5.0	19	8.7
3"	76	6.00	152	0.75	19	0.47	12	0.56	14	0.59	15	2.88	73	4.66	118	13	5.9	23	10.4
4"	102	6.13	156	0.75	19	0.47	12	0.56	14	0.59	15	3.94	100	5.84	148	17	7.7	25	11.4
5"	127	6.13	156	0.75	19	0.47	12	0.56	14	0.59	15	5.00	127	7.02	178	21	9.5	30	13.6
6"	152	6.13	156	0.75	19	0.47	12	0.56	14	0.59	15	5.78	147	8.28	210	25	11.3	37	16.8
8"	203	6.13	156	1.00	25	0.47	12	0.88	22	0.59	15	7.84	199	10.25	260	37	16.8	53	24.0
10"	254	8.00	203	1.00	25	0.63	16	0.88	22	0.59	15	9.75	248	12.69	322	58	26.3	82	37.2
12"	305	8.00	203	1.00	25	0.63	16	0.88	22	0.59	15	11.66	296	14.56	370	80	36.3	109	49.4
14"	356	8.00	203	1.00	25	0.63	16	0.88	22	0.59	15	13.22	336	16.25	413	101	45.8	138	62.6
16"	406	8.00	203	1.00	25	0.63	16	0.88	22	0.59	15	15.16	385	18.28	464	127	57.6	176	79.8
18"	457	8.00	203	1.00	25	0.63	16	0.88	22	0.59	15	17.31	440	20.63	524	136	61.7	183	83.0
20"	508	8.00	203	1.00	25	0.63	16	0.88	22	0.59	15	19.28	490	22.56	573	158	71.7	212	96.1

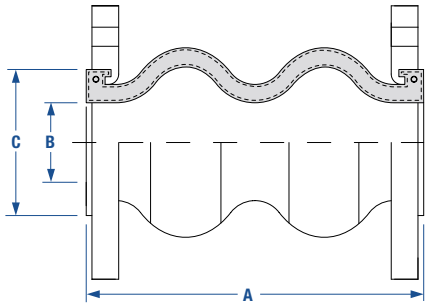
Dimensions shown are subject to change. Consult factory for certified drawings when required.

Materials

Part	Material
Body	Neoprene
Reinforcing Fabric	Nylon Cord
Wire	Hard Steel
Floating Flanges	CS Zinc Plated RST 37-2

ATM Series | Expansion Joints

Neoprene Body | Flanged Ends | Double Sphere



Description

SSI manufactures zinc plated expansion joints that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI zinc plated expansion joints are suitable for a full range of water, gas, steam, petrochemical and general use/utility services and applications.

Sizes
1" to 12"

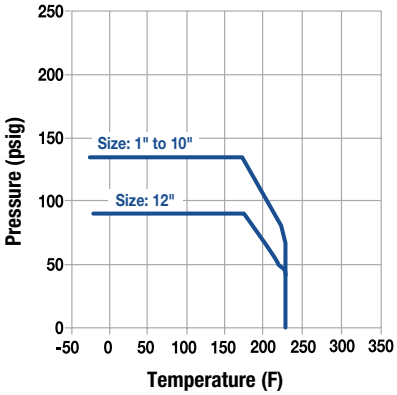
Pressure
225 PSIG (15.51 BARG)

Temperature
230° F (110° C)

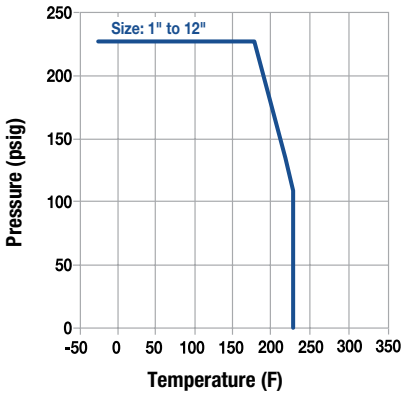
End Connections
FF Flanged

Burst Pressure
854 PSIG

Pressure / Temperature Chart Without Control Rods



Pressure / Temperature Chart With Control Rods



Features

- For connection pipes and equipment where flanged ends are preferred
- Easy to install floating flanges allow variable pressure, temperature and movement
- Increased acoustic resistance, dampens hydraulic surge and shock
- Accommodates thermal movement and misalignment
- Four-way greater movement provides high level of installation flexibility
- Precision molded synthetic rubber with nylon cord
- Horizontal or vertical mounting

Dimensions

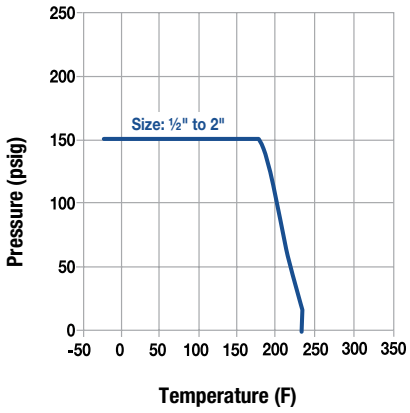
Size		A		Allowable Movement								B		C		Weight			
				Axial Comp.		Axial Ext.		Lateral Deflect.		Angular Deflect.						No Rods		With Rods	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg	lbs	kg
1"	25	4.75	121	2.09	53	1.06	27	1.78	45	1.59	40	1.53	39	2.95	75	5	2.3	10.6	4.8
1¼"	32	7.00	178	2.09	53	1.06	27	1.78	45	1.59	40	1.53	39	2.95	75	5	2.3	10.6	4.8
1½"	38	7.00	178	2.09	53	1.06	27	1.78	45	1.59	40	1.53	39	2.95	75	5	2.3	12.1	5.5
2"	51	7.00	178	2.09	53	1.06	27	1.78	45	1.59	40	1.53	48	3.34	85	8	3.6	15.9	7.2
2½"	64	7.00	178	2.09	53	1.06	27	1.78	45	1.59	40	2.47	63	4.66	105	10	4.5	19.9	8.9
3"	76	7.00	178	2.09	53	1.06	27	1.78	45	1.59	40	2.88	73	4.66	118	13	5.9	23.1	10.5
4"	102	9.00	229	2.09	53	1.22	31	1.59	40	1.38	35	3.94	100	5.84	148	19	8.6	26.7	12.1
5"	127	9.00	229	2.09	53	1.22	31	1.59	40	1.38	35	5.00	127	7.00	178	22	10.0	31.5	14.3
6"	152	9.00	229	2.56	65	1.22	31	1.59	40	1.38	35	5.78	147	8.28	210	27	12.2	39.2	17.8
8"	203	13.00	330	2.56	65	1.19	30	1.38	35	1.19	30	7.84	199	10.25	260	42	19.0	59.5	27.0
10"	254	13.00	330	2.56	65	1.19	30	1.38	35	1.19	30	9.75	248	12.69	322	58	26.3	88.0	39.9
12"	305	13.00	330	2.56	65	1.19	30	1.38	35	1.19	30	11.66	296	14.56	370	84	38.1	117.9	53.5

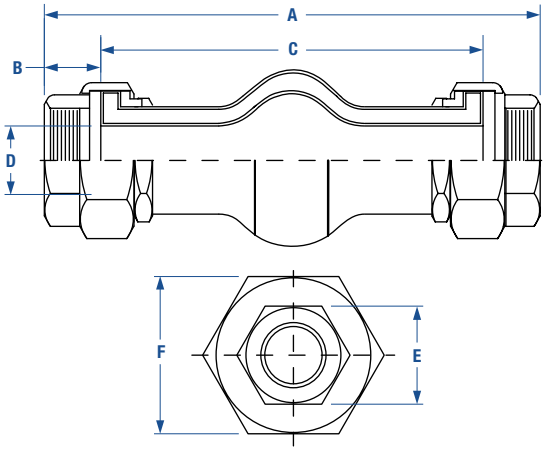
Dimensions shown are subject to change. Consult factory for certified drawings when required.

Materials

Part	Material
Body	Neoprene
Reinforcing Fabric	Nylon Cord
Wire	Hard Steel
Floating Flanges	CS Zinc Plated RST 37-2

Pressure / Temperature Chart





Description

SSI manufactures ductile iron expansion joints that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. SSI ductile iron expansion joints are suitable for a full range of water, gas, steam, petrochemical and general use/utility services and applications.

Sizes
½" to 2"

Pressure
150 PSIG (10.34 BARG)

Temperature
230° F (110° C)

End Connections
Threaded (NPT)

Burst Pressure
570 PSIG

Features

- For connection pipes and equipment where threaded union ends are preferred
- Excellent ability to absorb vibrations, sounds and withstand high pressures
- Accommodates thermal movement and misalignment
- Four-way greater movement provides high level of installation flexibility
- Precision molded synthetic rubber with nylon cord
- Easy to install

Dimensions

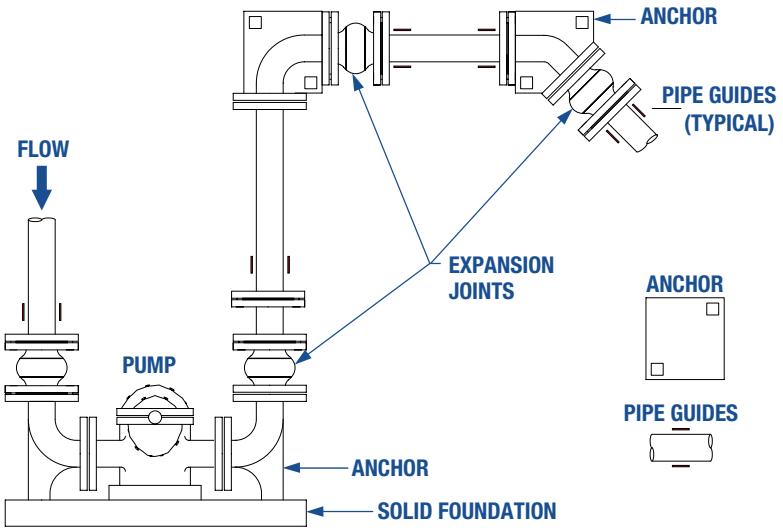
Size		Installed Length				Travel		Allowable Movement			B	C	D	Inner Dia.	E	F	Weight
		Neutral Length	Min. Length	Max. Length	Rec. Pipe Opening	Total Comp.	Total Extended	Axial Comp.	Lateral Deflect.	Angular Deflect.							
inch	½"	8	7.34	8.13	7.31	7.13	8.22	0.88	0.25	0.88	32	0.91	6.09	0.53	1.06	1.69	1
mm	13	203	187	206	186	181	209	22	6	22		23	155	13	27	43	0.5
inch	¾"	8	7.34	8.13	6.88	7.13	8.22	0.88	0.25	0.88	32	1.00	5.91	0.75	1.34	1.97	1
mm	19	203	187	206	175	181	209	22	6	22		25	150	19	34	50	0.5
inch	1"	8	7.34	8.13	6.63	7.13	8.22	0.88	0.25	0.88	25	1.19	5.53	1.00	1.63	2.50	2
mm	25	203	187	206	168	181	209	22	6	22		30	140	25	41	64	0.9
inch	1¼"	8	7.34	8.13	6.63	7.13	8.22	0.88	0.25	0.88	25	1.19	5.53	1.25	1.97	2.84	3
mm	32	203	187	206	168	181	209	22	6	22		30	140	32	50	72	1.5
inch	1½"	8	7.34	8.13	6.63	7.13	8.22	0.88	0.25	0.88	20	1.38	5.13	1.53	2.25	3.72	4
mm	38	203	187	206	168	181	209	22	6	22		35	130	39	57	94	2.0
inch	2"	8	7.34	8.13	6.63	7.13	8.22	0.88	0.25	0.88	15	2.00	4.72	1.84	2.75	3.72	6
mm	51	203	187	206	168	181	209	22	6	22		40	120	47	70	94	2.6

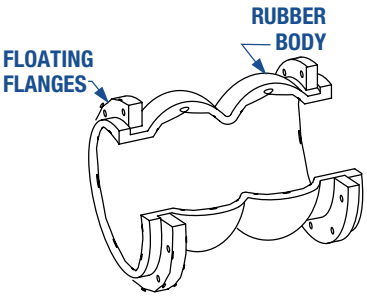
Dimensions shown are subject to change. Consult factory for certified drawings when required.

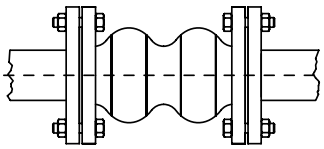
Materials

Part	Material
Body	Neoprene
Reinforcing Fabric	Nylon Cord
Wire	Hard Steel
NPT Ends	Ductile Iron

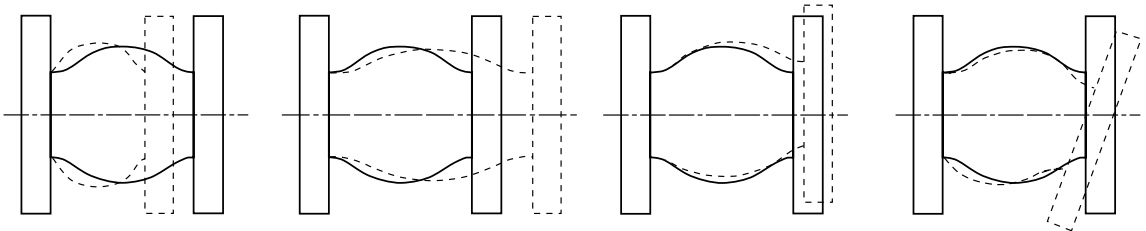
Typical Installation

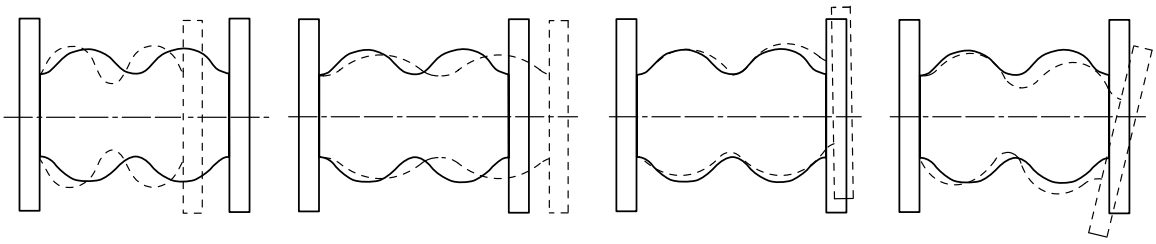






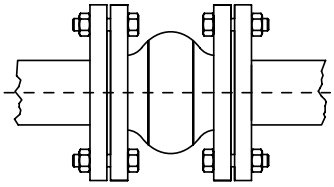
Allowable Movement



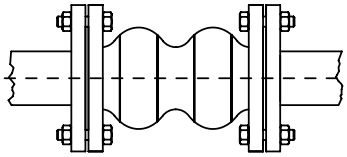


WARNING

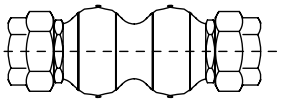
Expansion joints may operate in pipelines or equipment carrying fluids and or gases at elevated temperatures and pressures. Precaution should be taken to make sure these parts are installed correctly and inspected regularly. Caution should be taken to protect personnel in the event of leakage of fluids or gases.



SERIES ASM SINGLE SPHERE CONNECTOR



SERIES ATM SINGLE SPHERE CONNECTOR

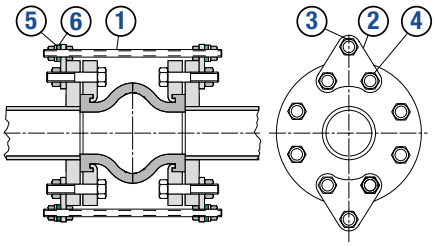


SERIES AUM CONNECTOR

Expansion Joint Mounting Instructions

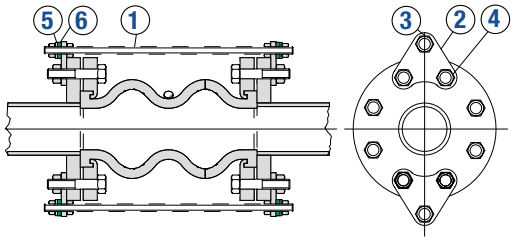
- Make sure that the expansion joint rating, for temperature, pressure, vacuum, movement and elastomeric materials, matches the systems requirements.
- Anchors are required whenever a piping system changes direction. Expansion joints should be located as close as possible to anchor points (See Figure 1).
- For piping that is not anchored, control rods must be used to prevent excessive movement from occurring (See Installation & Maintenance Instructions Control Rod for Expansion Joints).
- Expansion joints are not designed to make up for piping misalignment errors. Piping misalignments of more than 1/8", in any direction, will reduce the rated movement, stress the materials and reduce service life of the expansion joint.
- Before installation, check the interior, exterior and flange faces of the expansion joint for cuts and gouges.
- Piping must be supported so that expansion joint does not carry any weight. Make sure that the rubber expansion joints do not support compression or extension due to the weight of the upstream or downstream pipe.
- When installing the rubber expansion joint, make sure that the connector not be twisted in any case (especially for Series AUM).
- To determine end thrust, multiply thrust factor by PSIG.
- Vacuum rating is based on installed length, without external load. Product should not be installed "extended" on vacuum applications.
- Install at the face to face dimension shown on the drawing. Make sure the mating flanges are clean and are standard steel flat faced or no more than the 1/16" raised face type (See Figure 2).
- Joints must be pre-compressed approximately 1/8" to 3/16" in order to obtain a correct installed fact-to-face dimension.
- Floating metallic flanges freely rotate on the bellow to compensate for mating flange misalignment.
- Install the expansion joint against the mating pipe flanges and install bolts so that the bolt head is against the expansion joint flange.
- Flange-to-flange dimensions of the expansion joint must match the breech opening.
- Make sure mating flanges are clean and are FLAT FACED TYPE. When attaching beaded end flange expansion joints to raised face flanges, a ring gasket is required to prevent metal flange faces from cutting rubber bead during installation.
- Never install expansion joints next to wafer type check or butterfly valves. Serious damage to the rubber flange bead can result due to lack of flange mating surface and/or bolt connection.
- Do no use gaskets. Care must be taken when pushing the joint into the breech between the mating flanges so as not to roll the leading edge of the joint out of its flange groove.
- Do not bolt directly to another component with an elastomer face or to a specialty flange such as the Victualic® type without inserting a solid full-face metallic gasket.
- Cross tighten the bolts. Minimum recommended flange bolt torque foot pounds for the following joint sizes are: 1" to 2" – 28.90ft-lbm 2-1/2" to 8" – 43.40 ft-lb., 10" to 20" – 57.90 ft-lb.
- Do not over tighten to the point where there is metal to metal contact between the joint flange and the mating flange. Never tighten an expansion joint to the point that there is metal-to-metal contact between the expansion joint flange and the mating flange. NOTE: Over torquing bolts can cause deformation of the rubber expansion joint flanges, this resulting in possible premature failure. NOTE: Due to rubber's tendency to relax after initial tightening, it is necessary to retighten the flange bolts, typically within 1 week of initial installation.
- If bolt threads are facing the joint, trim the length of the bolts so they do not extend past the nut more than 1/8" to avoid contact with the joint.
- Insulation over expansion joints is not recommended. However, if insulation is required, it should be a design that is easy to remove to allow access to the flanges.
- Store expansion joints face down, in a cool dry location on a wooden pallet.
- Check the tightness of retaining rings two or three weeks after installation and re-tighten as necessary.

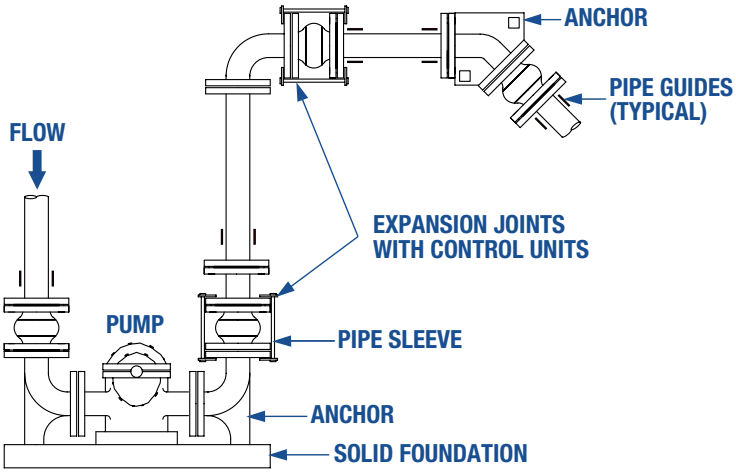
SERIES ASM WITH CONTROL RODS



1. ROD
2. PLATE
3. NUT
4. HEAD NUT
5. STEEL WASHER
6. RUBBER WASHER

SERIES ATM WITH CONTROL RODS





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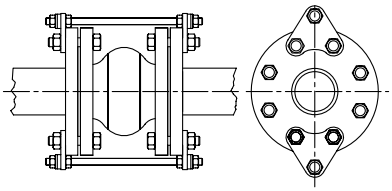
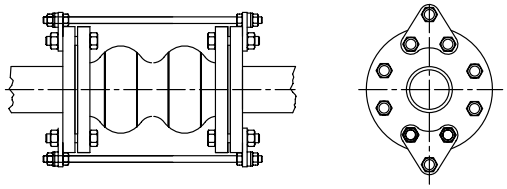


SERIES ATM WITH CONTROL RODS



Function

- Expansion joints are not designed to withstand excessive end thrusts, wide temperature fluctuations or high pressure changes (i.e. starting a pump). When pressures or temperatures exceed the unit's design capability, premature failure of the expansion joint will occur. To prevent excessive movement, Expansion joints must be installed in an anchored system, between two fixed anchor points in a piping system, to control expansion or contraction of the line. Piping anchors must be capable of withstanding the line thrust generated by internal pressure or wide temperature fluctuations. The failure of these anchors can cause excessive pipeline motion. When proper anchoring cannot be provided, control rods are required (See Figure 1).
- A control rod assembly is a set of two or more control rods placed across an expansion joint, from flange to flange, to minimize or prevent damage to the expansion joint caused by excessive extension, compression or motion of a pipeline and to absorb static pressure thrust. Control rods allow specified expansion joint movement (axial extension) and pipe contraction (axial compression) which will then preclude the possibility of motion that would over-elongate and damage the joint. The control rod assembly can also be set at the maximum allowable expansion and or contraction of the expansion joint. Control rods are not required in systems that are anchored. However, when used in this manner, control units are an additional safety factor and minimizes possible damage to adjacent equipment. Control rods are always required in unanchored systems.

WARNING

Expansion joints may operate in pipelines or equipment carrying fluids and or gases at elevated temperatures and pressures. Normal precautions should be taken to make sure these parts are installed correctly and inspected regularly. Caution should be taken to protect personnel in the event of leakage of fluids or gasses.

Expansion Joint Mounting Instructions

- Anchors are required whenever a piping system changes direction. Expansion joints should be located as close as possible to anchor points. If an anchoring system is not used, it is recommended that control rods be installed on the expansion join to prevent excessive movement from occurring due to pressure thrust in the line (See Figure 1).
- To determine end thrust, multiply thrust factor by operating pressure of system. This is the end thrust in PSIG.
- Vacuum rating is based on installed length, without external load. Product should not be installed “extended” on vacuum applications.
- Joints must be pre-compressed approximately 1/8" to 3/16" in order to obtain a correct installed face-to-face dimension. During installation, the pre-compression should not exceed 3/16" (5 mm).
- 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 three times the pipe’s nominal diameter.
- These fixation points must be installed when mounting an expansion joint with control rods or an elbow pipe. If there is considerable distance between two fixation points, guiding points can be installed in order to support and guide the pipe (cf. installation scheme).
- Before installation, check the interior, exterior and flange faces of the expansion joint for cuts and gouges.
- When installing, make sure that the rubber expansion joints do not support compression or extension due to the weight of the upstream or downstream pipe.
- When installing the rubber expansion joint, make sure that the connector is not twisted (especially for Series AUM).
- Mounting order: (1) upstream pipe – anchor, (2) downstream pipe – anchor, (3) expansion joint.
- 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.
- To prevent damage to the expansion joint surface, verify that the surfaces, coming in contact with the expansion joint, are clean and without cutting edges (pipe).
- Avoid direct contact with the expansion joint rubber surface by inserting the bolts on the arch side of the joint.
- If welding is carried out within close range, cover or dismount the expansion joint.
- Do not paint or coat the joint with insulation.
- Store the joint in a flat position avoiding humidity and extreme temperatures.
- Bolt tightness should be checked daily within the first month after services and checked periodically.

Terms & Conditions

1) **CANCELLATIONS & RESTOCKING POLICY:** Purchase orders once placed by Buyer and accepted by Seller can be cancelled only with Seller's written consent and upon terms which will save Seller from loss. No orders may be cancelled subsequent to delivery and/or shipment, whichever occurs first. As estimated actual damages, Buyer agrees to pay Seller the greater of Seller's actual costs incurred prior to cancellation plus a reasonable profit, or the following minimum cancellation charges: a) 20% of Order value if cancelled thirty (30) or more days prior to the original delivery/shipment date; b) 50% of the Order value if cancelled thereafter; or, c) 100% of the Order value of any non-standard items, which are items not built for stock or built to Buyer's specifications.

2) **RETURNED PRODUCT:** All sales are final; all custom products (non-stocking) are not subject to return, credit or refund. The return of obsolete and used Products shall not be permitted. The Purchaser shall not return Products without first obtaining Seller's written permission and shall be subject to a restocking charge. Products must be returned within 10 days after the date that written permission has been given. All transportation charges for any returned Products shall be paid by the Purchaser. Request to return Products must be accompanied by relevant customer order and Seller's invoice number(s). Final acceptance of returned Products is subject to examination and/or testing. Products will not be accepted for return or credit later than six (6) months after invoicing.

3) **PRICES:** Possession of price lists will not be accepted by the Seller as an obligation, or offer, to sell any goods listed therein. All prices contained in published price lists are subject to change without notice and supersede those of all previous lists. Prices quoted are based on current exchange rates; Seller reserves the right to adjust pricing to reflect the exchange rate in effect at the product receipt date to Seller's facility.

4) **LIQUIDATED DAMAGES:** Liquidated damages will not be accepted in the event of order placement.

5) **SALES TAXES, ETC.:** The Purchaser shall pay and be responsible for all provincial, local or federal sales, use or other taxes (including general sales or value added taxes) and customs duties now or hereinafter enacted which may be applicable to the sale of the Products or the importation of the Products to the destination specified by the Purchaser and which duties and taxes shall be the responsibility of the Purchaser.

6) **CREDIT APPROVAL:** Orders are accepted subject to satisfactory credit approval. Pending credit approval, delivery may be delayed without liability to Seller.

7) **TERMS OF PAYMENT:** The terms of payment for Products purchased pursuant to this Agreement are (I) upon acceptance of the purchase order a deposit in such amount as may be set out in the Seller's written acceptance notice and (II) the balance within 30 days from the date of invoice. Any invoice amount which is not paid when due shall bear interest at the rate of one and one-half (1 ½%) percent per month until paid in full.

   The Purchaser agrees that it will not have any rights of set off against or deduction from the purchase price for the Products payable by the Purchaser pursuant to this Agreement. The Purchaser grants to Seller a purchase money security interest in all Products delivered pursuant to this Agreement and all proceeds thereof (whether cash or non-cash and including, without limitation, accounts, instruments and chattel paper). Any failure by the Purchaser to pay the purchase price in full as provided in this Agreement shall constitute an event of default for purposes of said security interest. Upon the occurrence of any such default, Seller shall have all rights of a secured party after default under applicable law. Any repossession and removal of any Products shall be without prejudice to any of Seller's other remedies at law or in equity. The Purchaser agrees, without further consideration, at any time, to do or cause to be done, to execute and deliver, all such further acts and instruments (including, without limitation, financing statements approved for filing) as Seller may reasonably request in order to perfect Seller's security interest.

8) **DELIVERY DATE:** Seller will utilize reasonable best efforts to meet the delivery schedules stipulated in this Agreement. In the event the provisions of Section 14 hereof shall apply, the delivery date shall be extended by a number of days that is equal to the duration of the event or condition that is responsible for such delay.

9) **TITLE AND SHIPMENT:** All quotations and sales are FCA Loaded Truck ValvSource Warehouse (Inco Terms 2010) unless otherwise specified in writing and agreed by both parties. Seller's responsibility ceases upon delivery to carrier and title shall transfer and risk of loss shall be borne by Buyer at that point. Any expedited or other premium transportation charges requested by Buyer will be for the account of Buyer. Prices include domestic packing, blocked and strapped to open pallets and wrapped in Poly. No claims for price adjustments will be honored unless presented within six (6) months from date of invoice. All quotations are subject to change without notice and prior to sale of goods.

10) **INSPECTION BY PURCHASER:** All Products must be inspected by the Purchaser upon receipt and the Purchaser and Seller, collectively, agree to file appropriate claims with the carrier when there is evidence of shipping damage, either concealed or external. Claims for shortage or error in shipment or for damage other than shipping damage must be made within 5 days after receipt of shipment, failing which the Purchaser shall be deemed to have accepted the shipment.

11) **LIMITED WARRANTY:** Purchaser acknowledges that the Products are provided to the Purchaser subject only to the limited warranties provided by the manufacturer of the Products and are subject to all of the conditions, limitations and exclusions set out therein, all of which are hereby accepted by the Purchaser. The warranty exclusions include, without limitation, (I) any defects caused by faulty installation performed by Purchaser or third parties, (II) any damage caused by the contractors or tradesman of the Purchaser, (III) any damage caused by improper use or misuse, including exposure to excessive temperatures, moisture or cleaning agents and solvents and (IV) any damage caused during transportation or improper storage. Claims for warranty repairs and replacements must be made within the applicable time period described in the manufacturer's limited warranty. In no event shall Seller be liable for other than the repair or replacement of any defective Products. In no event shall Seller be liable for any damages, direct or indirect, special or consequential, including, without limitation, damages for lost profits, business interruption, or economic loss arising out of defects in the Products.

12) **EXCLUSION OF WARRANTIES:** Except as expressly set forth herein seller disclaims all warranties with regard to the products including, without limitation, all implied warranties of merchantability and fitness for a particular purpose.

13) **CATALOGUE AND OTHER PRINTED MATTER:** Seller's illustrations are representations of a certain size of each line of Product, but do not necessarily represent all sizes and materials in detail. Similarly, dimensions, weights and material information have been prepared with care, but their correctness is not guaranteed. Seller reserves the right to vary the designs and dimensions without notice.

14) **FORCE MAJEURE:** Any delay or failure of performance by Seller shall be excused if and to the extent caused, directly or indirectly, events beyond Seller's control including, without limitation, fire, flood earthquake, lightning, hurricane, explosion, accident or breakdown, acts of God, embargo, strike, labour dispute, labour trouble, lockout, shortage or control of power supply, shortage of supplies or raw materials, or any causes whether of the same kind as the causes enumerated before or not. Subject to any express provisions of this Agreement, any such causes of delay shall extend the time of performance by the length of delay occasioned thereby.

15) **NO WAIVER:** No waiver by Seller of any right hereunder or of any right granted in connection with a failure to perform or breach by the Purchaser shall be deemed as a waiver of any other right hereunder or of any right granted in connection with any other failure or breach by the Purchaser, whether of a similar nature or otherwise.

16) **NOTICE:** Any notice made under or in relation to this Agreement shall be sent to the addresses first above written or such other address as the intended recipient shall have previously designated by written notice, by postage prepaid registered mail or by telegram including telex, followed by a confirmation letter by postage prepaid and return receipt requested registered mail. The notice shall be deemed to be made on the fifth day following the date of mailing.

17) **ENTIRE AGREEMENT:** This Agreement contains the entire agreement and understanding of the parties hereto with respect to the subject matter of this Agreement, and supersedes all prior discussions, agreements, understandings of any and every nature, whether written or oral, between the parties with respect to the subject matter of this Agreement, and no condition, definition, warranty or representation other than those expressly provided for in this Agreement with respect to the subject matter of this Agreement shall be binding upon either party hereto.

18) **AMENDMENTS IN WRITING:** Any amendment, modification, change or alteration of this Agreement shall be made in writing which expressly refers to this Agreement and which is signed by a duly authorized officer or representative of each of the parties hereto.

19) **SEVERABILITY:** All provisions of this Agreement are severable and this Agreement shall be interpreted and enforced as if all completely invalid or unenforceable provisions were not contained herein. All partially valid and enforceable provisions shall be enforced to the extent they are valid and enforceable.

20) **NO AGENCY OR PARTNERSHIP:** Nothing herein contained shall be deemed or construed to constitute either party the agent or partner of the other. Neither party shall have any right, title or authority to enter into any contract, agreement or commitment on behalf of the other or to bind the other in any manner whatsoever.

21) **GOVERNING LAW:** This agreement shall be governed by and construed in accordance with the laws of the jurisdiction from which the products are shipped by the seller to the purchaser and the parties hereby attorn to the courts of such jurisdiction.

22) **ENUREMENT:** This Agreement shall enure to the benefit of and be binding upon the parties hereto and on their successors and permitted assigns.

23) **SELLER DEFINED:** For the purposes hereof, Seller means the Corporation listed as such on the front page of the Invoice or acceptance notice of which these terms and conditions of sale form a part.

Notes

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