EliteValve

elitevalve.com

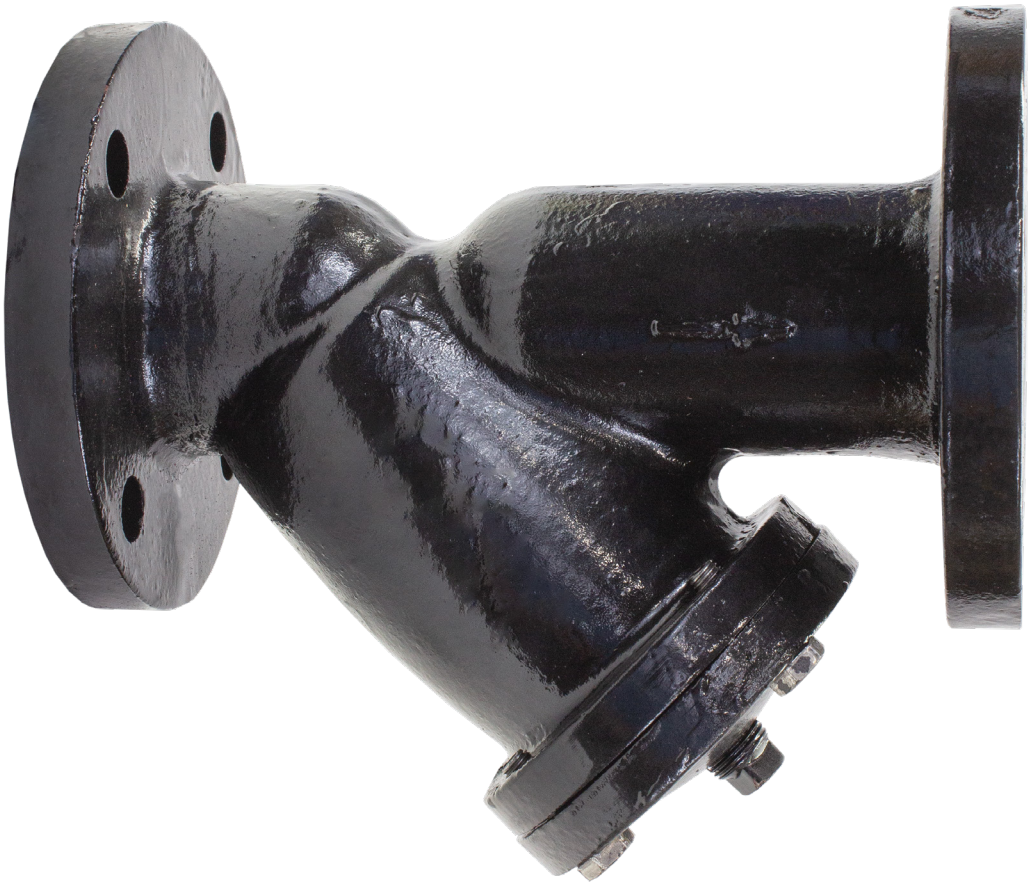
Customized
valve solutions
for the toughest
applications

Strainers

Offering both standard and custom-engineered solutions, Elite Valve can meet all your process requirements.

Contents

Overview



Sizes
1/4" to 16"

Temperature
up to 800°F

Pressure
up to 3705 PSIG

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

Materials

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

End Connections

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

ASME Ratings

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

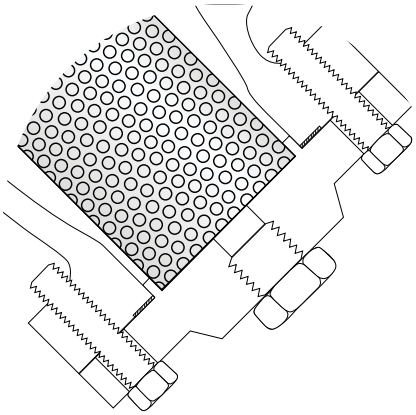
Design Features

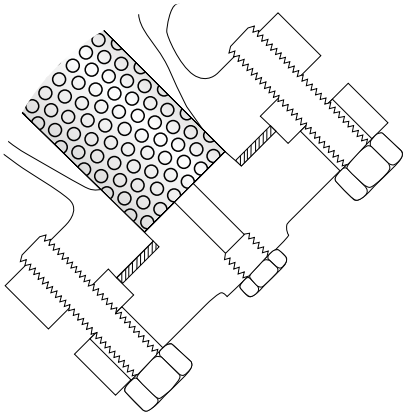
Body-Cover Flange Joints

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.



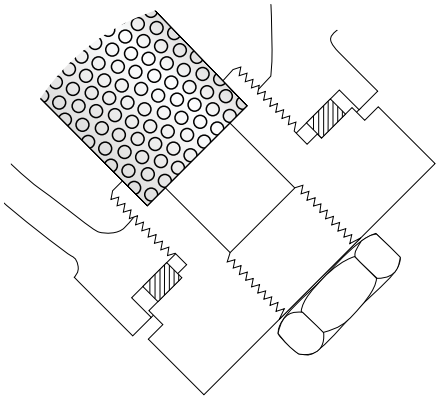


Series 600Y2, 900Y2 & 1500Y2

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.



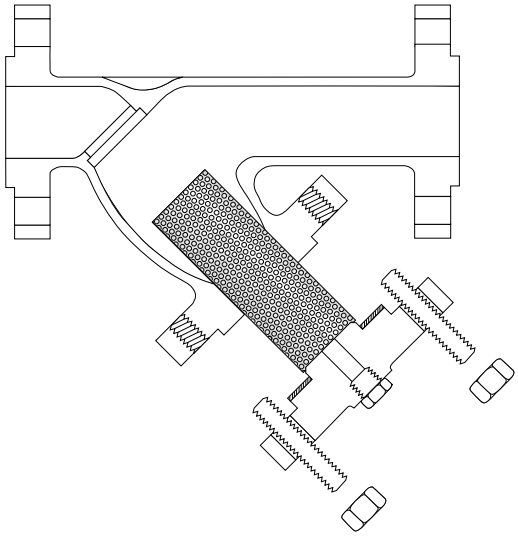
Design Features

Screen Seating

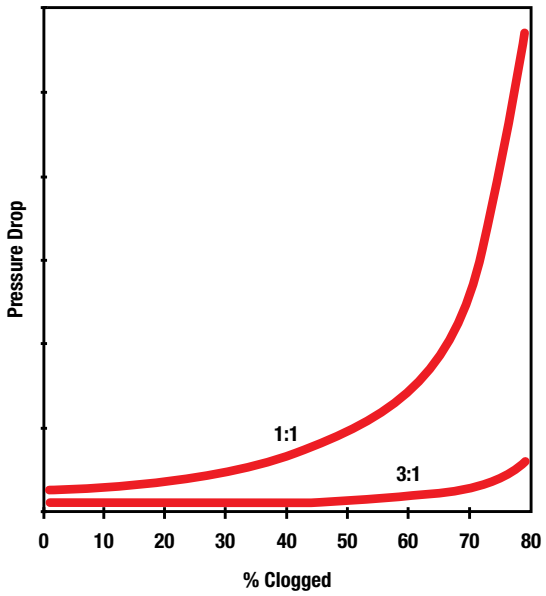
All Elite Valve Y-Strainers are manufactured with both upper and lower machined seats. This feature eliminates debris by-pass while also acts to securely hold the screen in position when in service.

For assembly and disassembly purposes, Elite Valve 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 maneuver, 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.



Effect of Screen Area on Pressure Drop



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

Strainer Screens

All Elite Valve 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 Elite Valve strainer screens are designed to handle a minimum burst pressure of 50 psid. Elite Valve 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, Elite Valve can design and manufacture any strainer screen to suit your specific strength requirements.

125Y Series

How to Order

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)				
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

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

Sizes
1/4" to 16"

Temperature
up to 450°F

Pressure
up to 200 PSI

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

125Y1 Series

Sizes
3/8" to 3"

Pressure Rating
200 PSI

Temperature Rating
400° F

End Connections
Threaded (NPT)
Sweat Ends

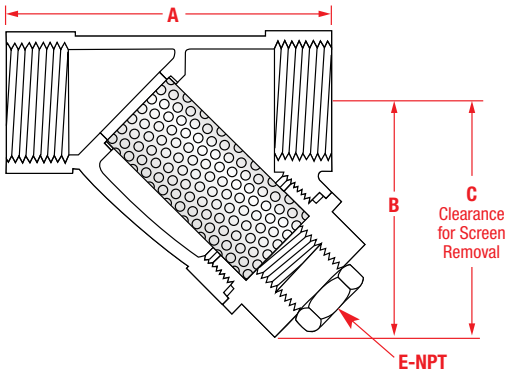
Screen Openings
20 Mesh | 304 SS

Description

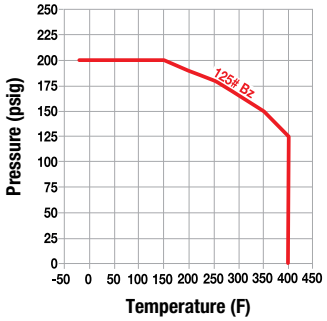
Elite Valve manufactures bronze Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve bronze Y-Strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining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

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



Pressure / Temperature Chart
ASME B16.15



Dimensions

Size		A		B		C		E		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
3/8"	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

125Y2 Series

Sizes
2" to 16"

Pressure Rating
200 PSIG (13.8 BARG)

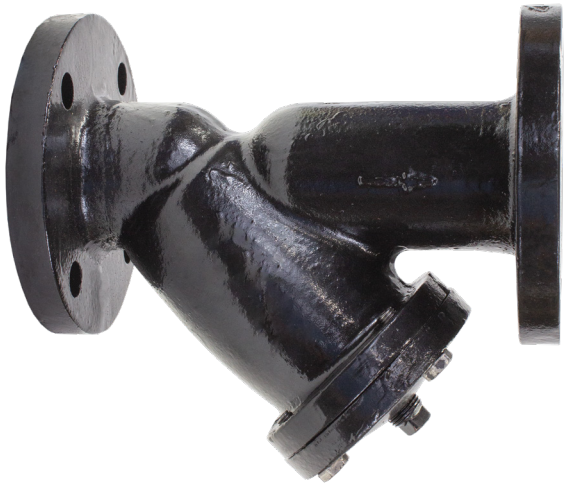
Temperature Rating
450° F

End Connections
Flanged

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

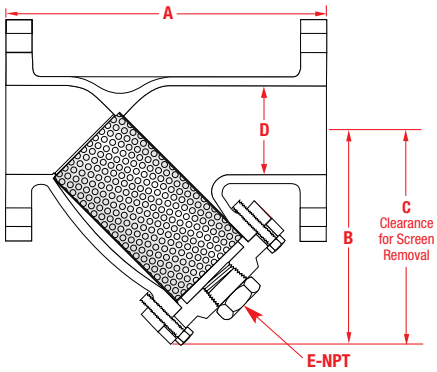
Description

Elite Valve manufactures bronze Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

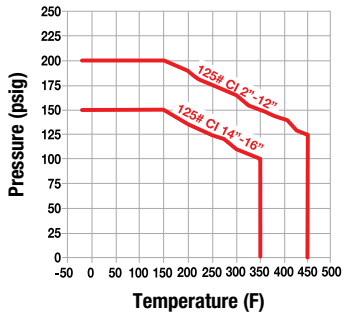


Features

- 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



Pressure / Temperature Chart
ASME B16.1



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

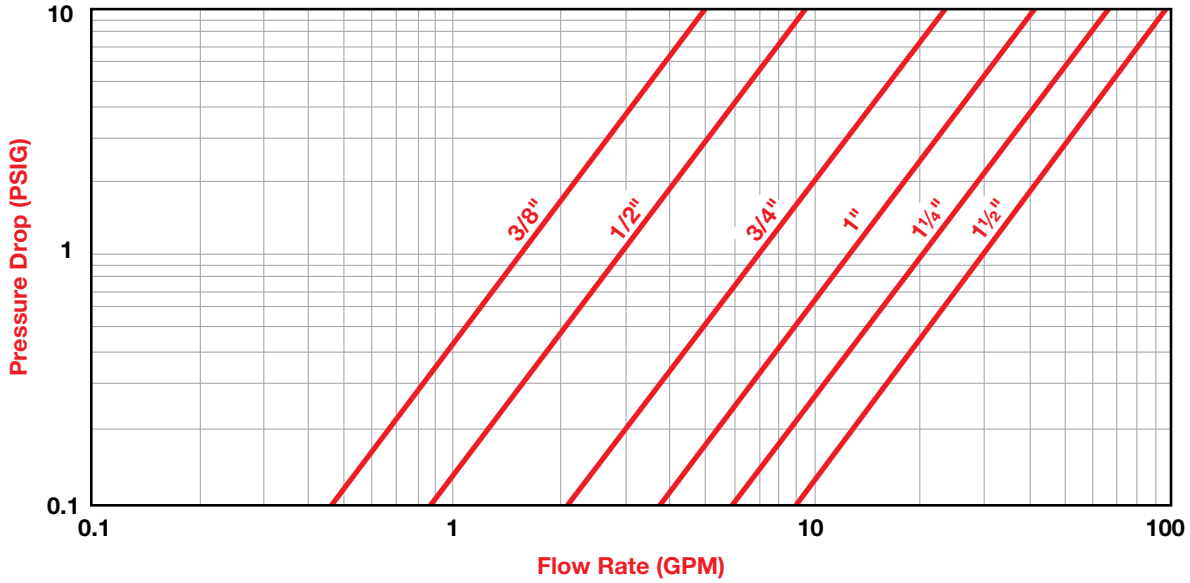
Dimensions shown are subject to change. Consult factory for certified drawings when required. | 1 Recommended Spare Parts | 2 Materials of equivalent strength may be substituted

125Y Series

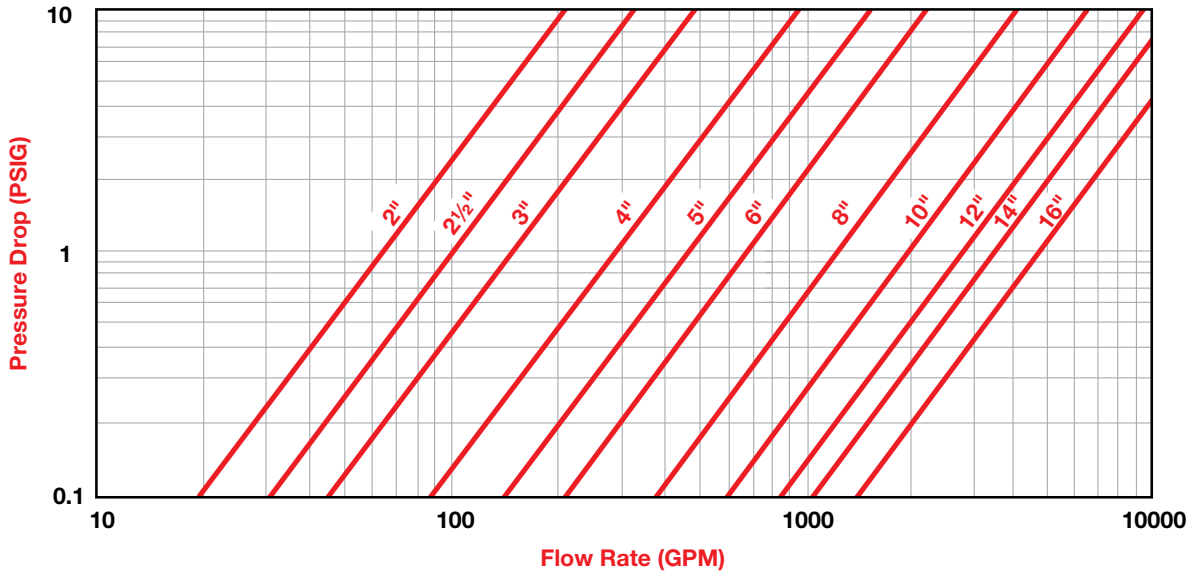
Pressure Drop VS. Flow Rate

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 (in2)**	**Gross Screen Area (in2)**	**Free Screen Area (in2)**	**Open Area Ratio (OAR)**
3/8"	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 (in2)**	**Gross Screen Area (in2)**	**Free Screen Area (in2)**	**Open Area Ratio (OAR)**
3/8"	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

How to Order

1 Inlet Size					2 Model						3 Body		4 Perf	5 Mesh	6 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.

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
- Contact factory for other options

Sizes
½" to 12"

Pressure
up to 285 PSIG (19.7 BARG)

Temperature
up to 800°F

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

150Y2 Series

Sizes
½" to 12"

Pressure Rating
285 PSIG (19.7 BARG)

Temperature Rating
800° F

End Connections
RF Flanged

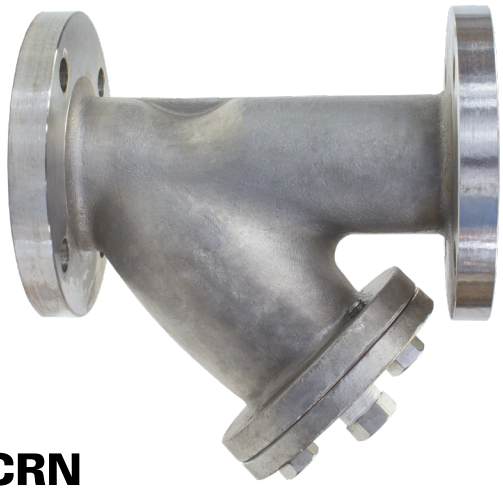
Screen Openings
½"–1½" | 1/32" Perf | 304 SS
2"–3" | 3/64" Perf | 304 SS
4"–12" | 1/8" Perf | 304 SS

Description

Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

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



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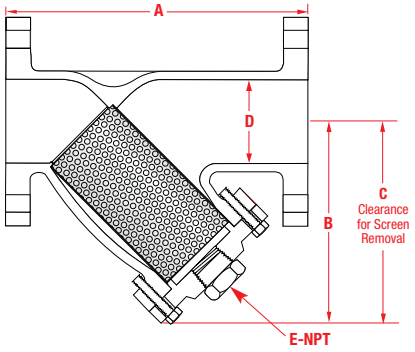
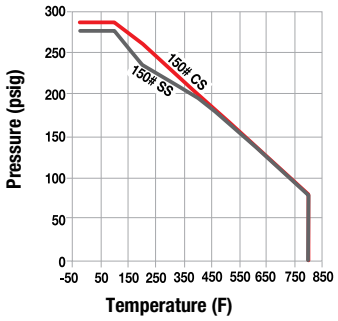


Pressure / Temperature Chart
ASME B16.34



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

Sizes
2" to 8"

Pressure Rating
225 PSI

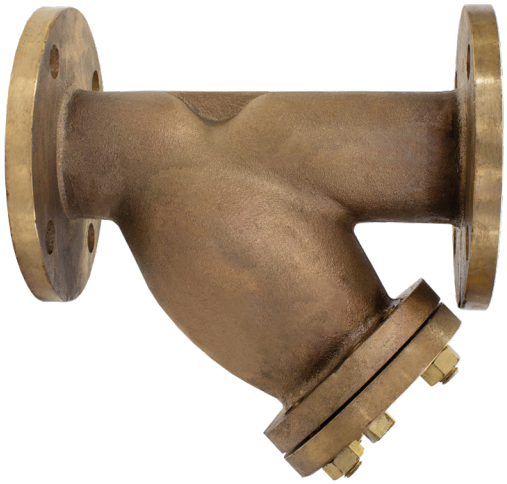
Temperature Rating
400° F

End Connections
RF Flanged

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

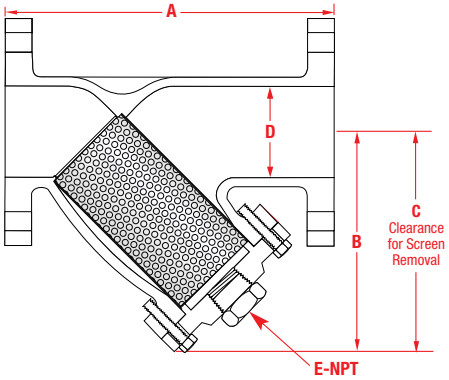
Description

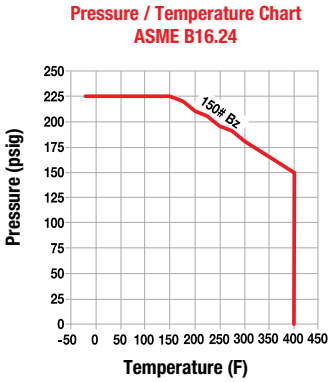
Elite Valve manufactures bronze Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve bronze Y-Strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal & mining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



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

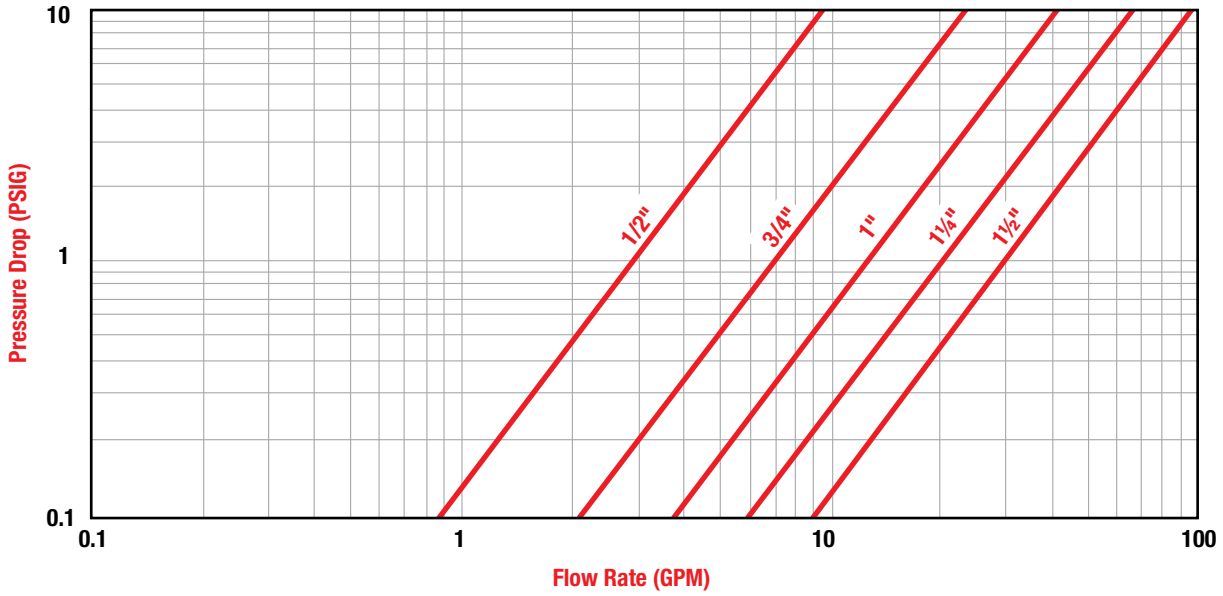
Part	Material
Body	B62
Cover	B62
Screen[1]	304 SS
Plug[2]	A105
Gasket[1]	Teflon
Bolt/Stud[2]	B16
Nut[2]	B16

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

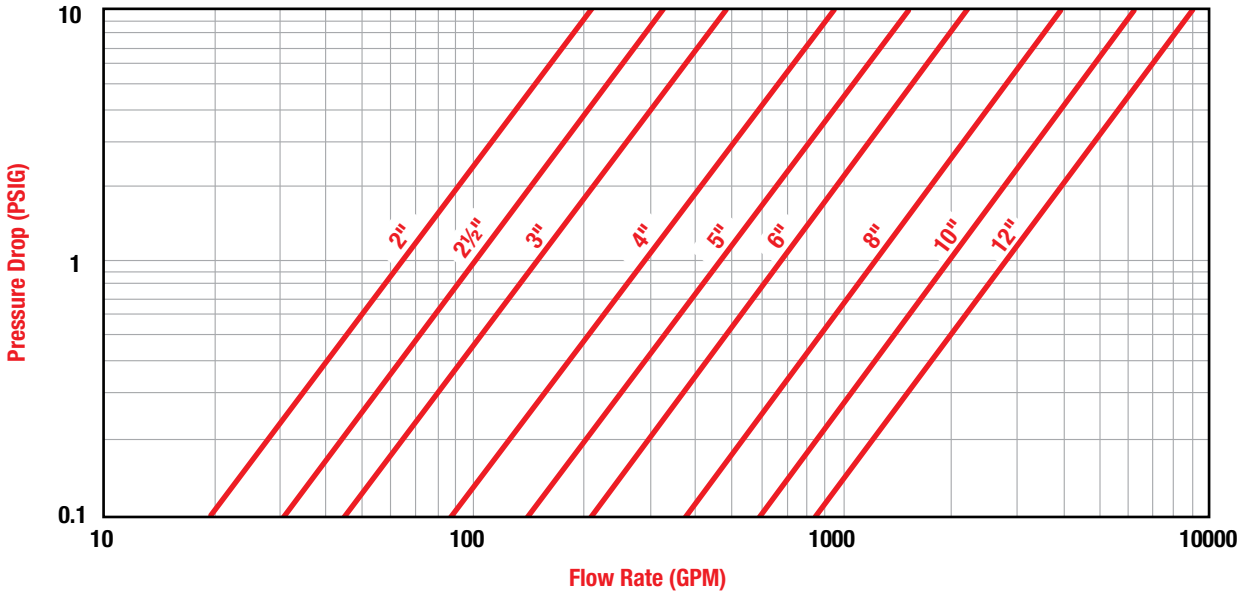
Pressure Drop VS. Flow Rate

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.

150Y Series

Open Area Ratios

Standard Perforated Screen*

Bronze | 150Y2 Series | Y-Strainer						
Size	Perf. Diameter	Opening %	Std Pipe Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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 and Stainless Steel | 150Y2 Series | Y-Strainer						
Size	Perf. Diameter	Opening %	Std Pipe Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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.

250Y Series

How to Order

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	3/8"	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.

Features

- ASME Class 250 rated strainers
- NPT and FF connections designed in accordance with 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

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

250Y1 Series

Sizes
¼" to 3"

Pressure Rating
200 PSI

Temperature Rating
400° F

End Connections
Threaded (NPT)

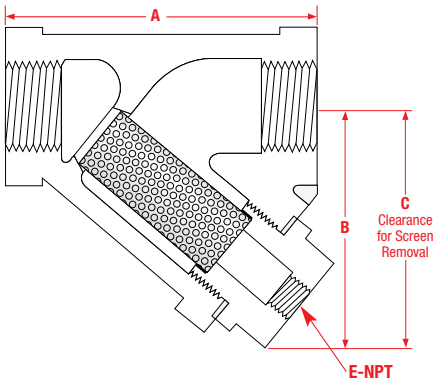
Screen Openings
¼"–2" | 20 Mesh | 304 SS
2½"–3" | 3/64" Perf | 304 SS

Description

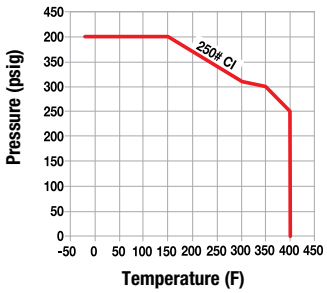
Elite Valve manufactures ductile iron Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve ductile iron Y-Strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical,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

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



Pressure / Temperature Chart
ASME B16.4



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

250Y1 Series

Sizes
½" to 3"

Pressure Rating
400 PSI

Temperature Rating
400° F

End Connections
Threaded (NPT)

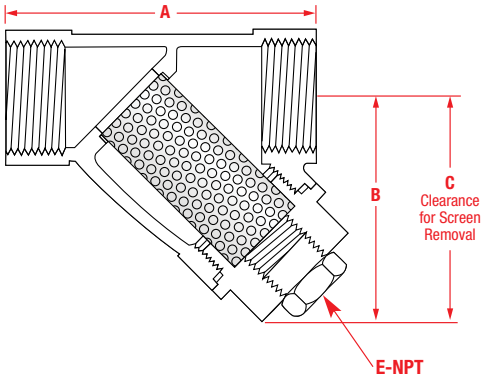
Screen Openings
½"–1" | 30 Mesh | 304 SS
1¼"–3" | 20 Mesh | 304 SS

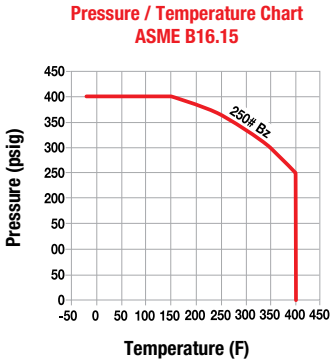
Description

Elite Valve manufactures bronze Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

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

Sizes
2" to 12"

Pressure Rating
500 PSIG (34.5 BARG)

Temperature Rating
450° F (232° C)

End Connections
RF Flanged

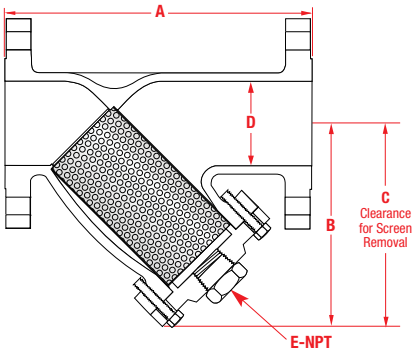
Screen Openings
2"–3" | 3/64" Perf | 304 SS
4"–12" | 1/8" Perf | 304 SS

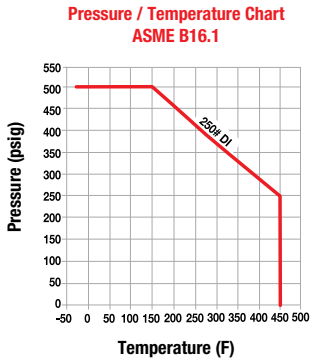
Description

Elite Valve manufactures ductile iron Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

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

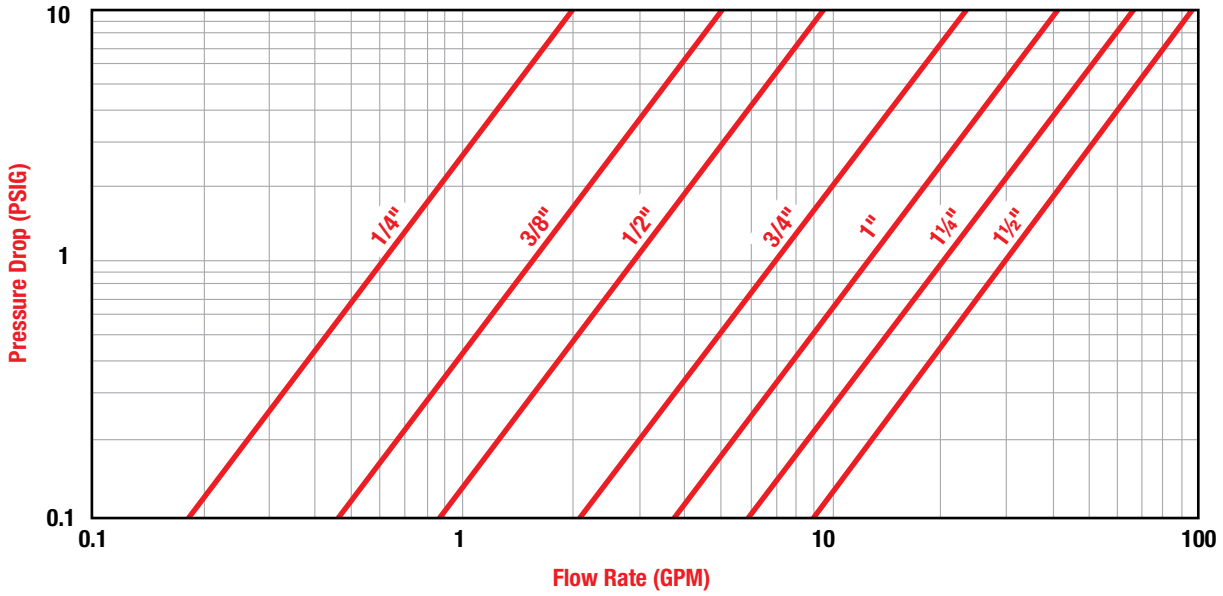
Part	Material
Body	A536
Cap	A536
Screen[1]	304 SS
Plug	A126-B
Gasket[1]	Graphite
Bolt/Stud[2]	A307-B
Nut[2]	A563

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

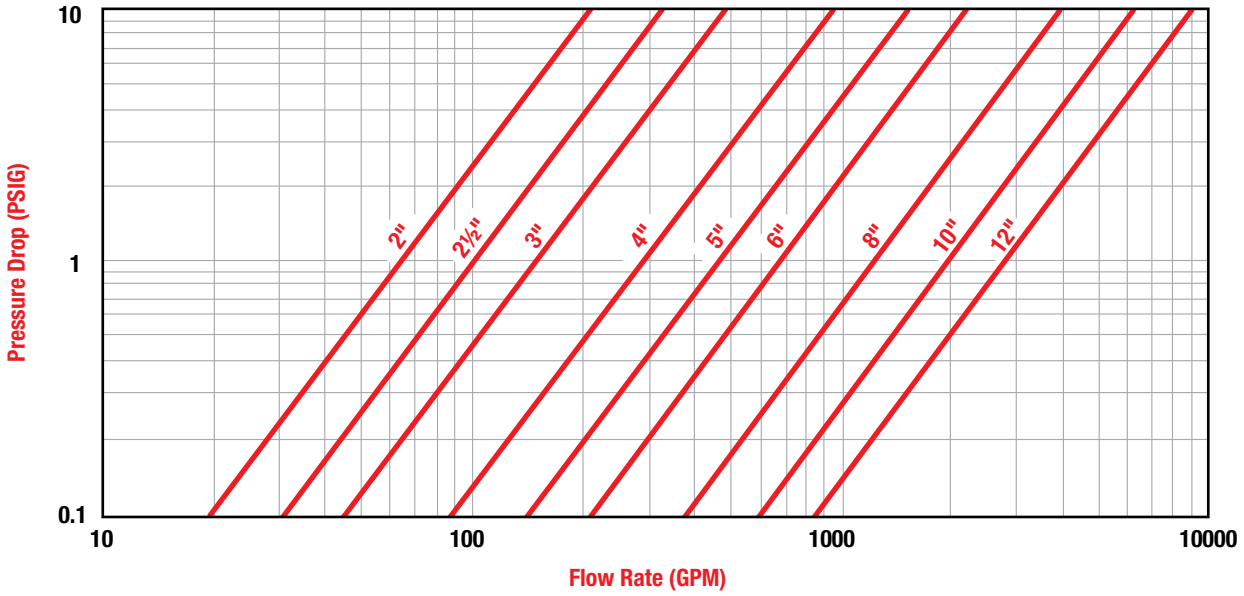
Pressure Drop VS. Flow Rate

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.

250Y Series

Open Area Ratios

Standard Perforated Screen*

Bronze | 250Y1 Series | Y-Strainer						
Size	Mesh	Opening %	Std Pipe Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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 (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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 (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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.

300Y Series

How to Order

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"	**0150**	1½"	**0300**	3"	**0600**	6"	**1000**	10"
0075	¾"	**0200**	2"	**0400**	4"	**0800**	8"	**1200**	12"
0100	1"	**0250**	2½"						

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	**4**	1/8"	**5**	5/32"	**8**	1/4"
1	1/32"	**2**	1/16"	**6**	3/16"	**9**	3/8"
B	3/64	**3**	3/32"	**7**	7/32"		

5 Mesh[3] (Leave Blank if not required)

1	10	**3**	30	**5**	50	**7**	80	**9**	120
2	20	**4**	40	**6**	60	**8**	100		

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.

Features

- ASME Class 300 rated strainers
- NPT, RF, Socketweld and Buttweld connections designed 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

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

300Y1 Series

Sizes
½" to 3"

Pressure Rating
740 PSIG (51 BARG)

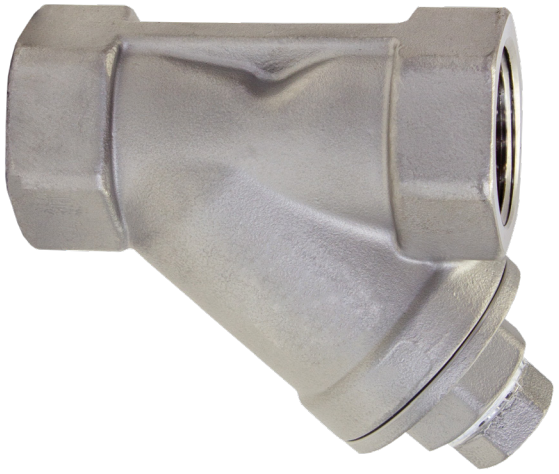
Temperature Rating
400° F

End Connections
Threaded (NPT)
Socketweld

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

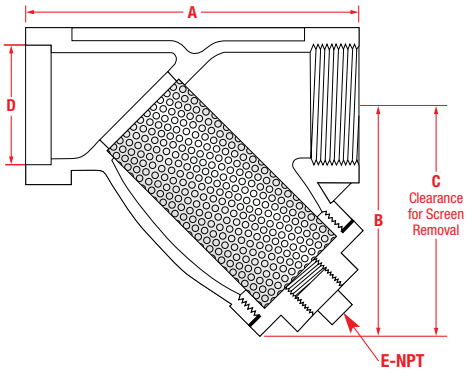
Description

Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

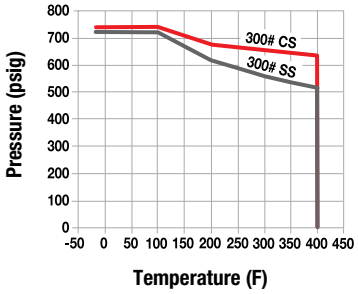


Features

- 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



Pressure / Temperature Chart
ASME B16.34



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

300Y2 Series

Sizes
½" to 12"

Pressure Rating
740 PSIG (51 BARG)

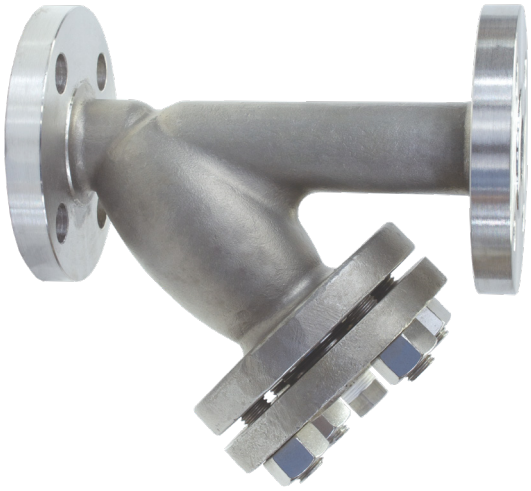
Temperature Rating
800° F (427° C)

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

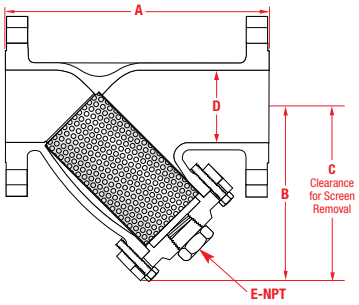
Description

Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

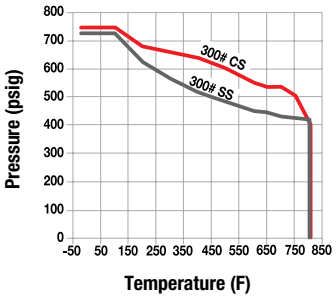


Features

- 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



Pressure / Temperature Chart
ASME B16.34



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

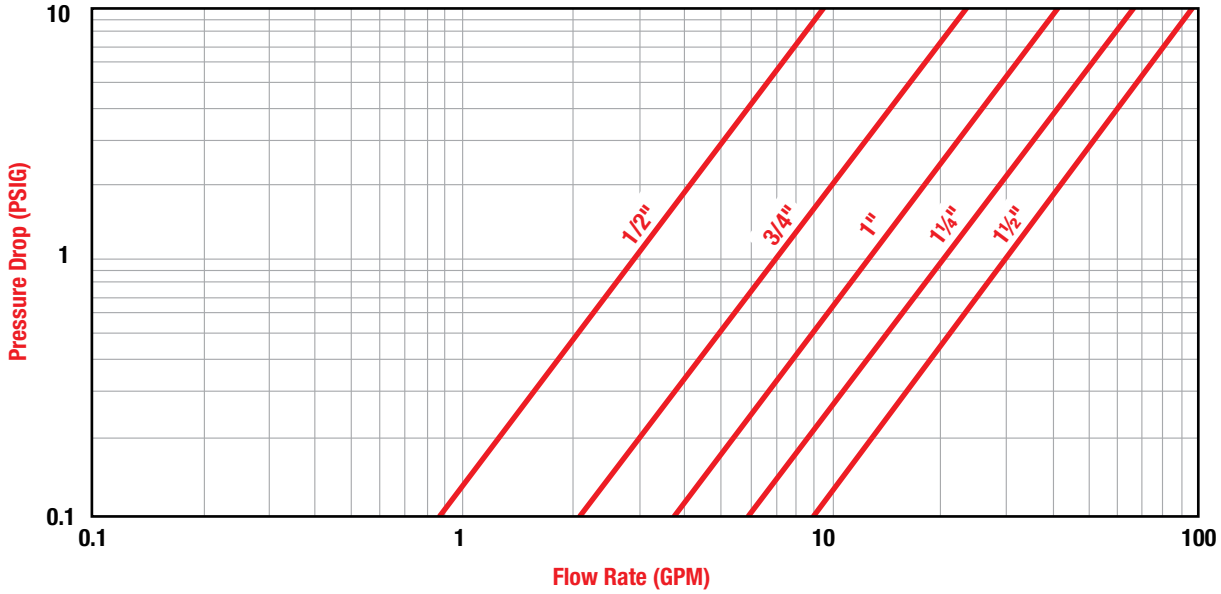
Dimensions shown are subject to change.
Consult factory for certified drawings when required.
1 Recommended Spare Parts | 2 Materials of equivalent strength may be substituted | 3 For Buttweld connections please specify mating pipe schedule

300Y Series

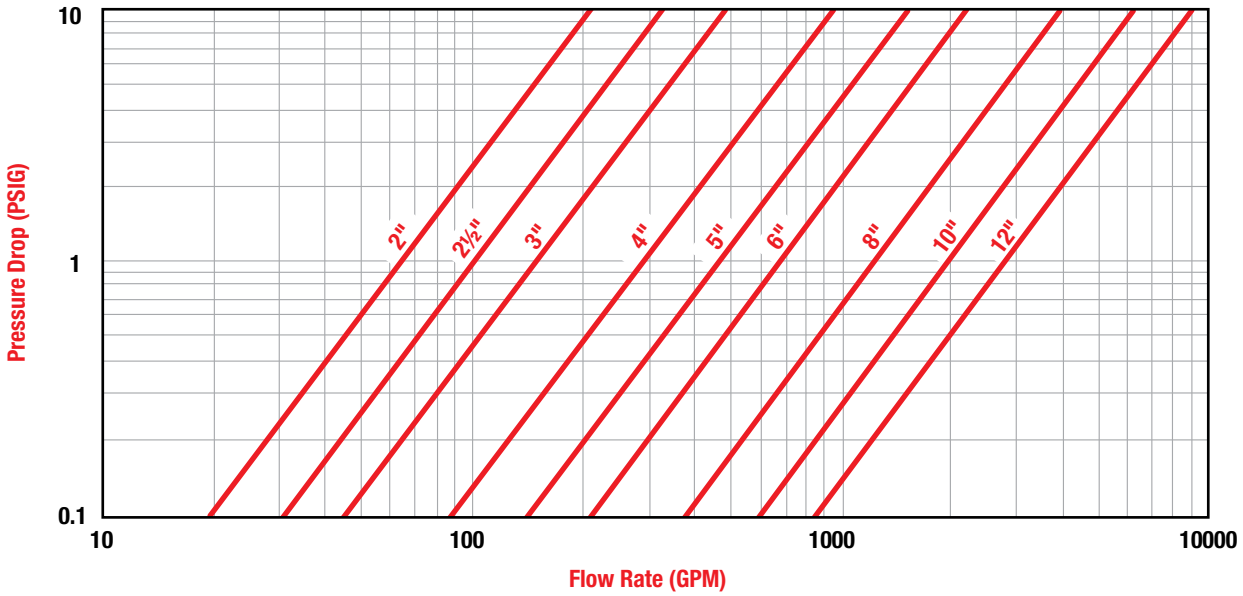
Pressure Drop VS. Flow Rate

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 and Stainless Steel | 250Y1 Series | Y-Strainer						
Size	Perf. Diameter (mm2)	Opening %	Std Pipe Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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 and Stainless Steel | 250Y2 Series | Y-Strainer						
Size	Perf. Diameter (mm2)	Opening %	Std Pipe Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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

How to Order

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

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	**600Y2B**[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	**4**	1/8"	**5**	5/32"	**8**	1/4"
1	1/32"	**2**	1/16"	**6**	3/16"	**9**	3/8"
B	3/64	**3**	3/32"	**7**	7/32"		

5 Mesh[4] (Leave Blank if not required)

1	10	**3**	30	**5**	50	**7**	80	**9**	120
2	20	**4**	40	**6**	60	**8**	100		

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.

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
- Elite Valve 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

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

600Y1 Series

Sizes
½" to 2"

Pressure Rating
1480 PSIG (102 BARG)

Temperature Rating
800° F (427° C)

End Connections
Threaded (NPT)
Socketweld

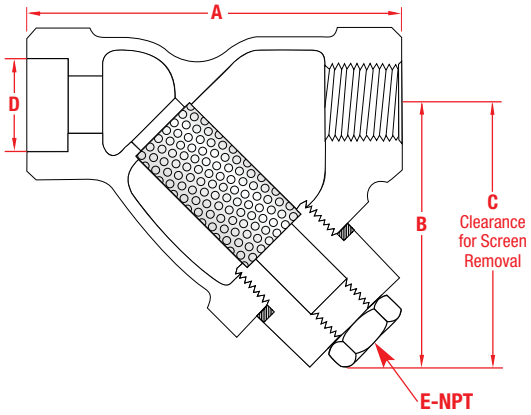
Screen Openings
½"–1½" | 1/32" Perf | 304 SS
2" | 3/64" Perf | 304 SS

Description

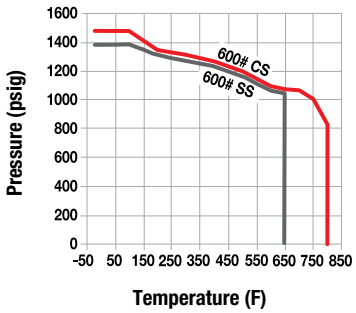
Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve carbon steel Y-Strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical,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

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



Pressure / Temperature Chart
ASME B16.34



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

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

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

600Y2 Series

Sizes
2" to 12"

Pressure Rating
1480 PSIG (102 BARG)

Temperature Rating
800° F (427° C)

End Connections
Flanged
Ring Joint
Buttweld

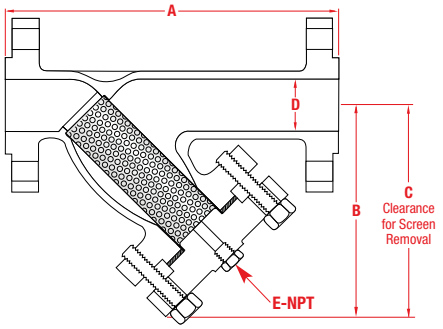
Screen Openings
2"–3" | 3/64" Perf | 304 SS
4"–12" | 1/8" Perf | 304 SS

Description

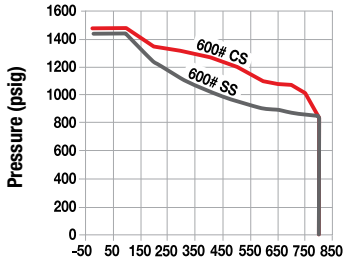
Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve carbon steel Y-Strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical,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

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



Pressure / Temperature Chart
ASME B16.34



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

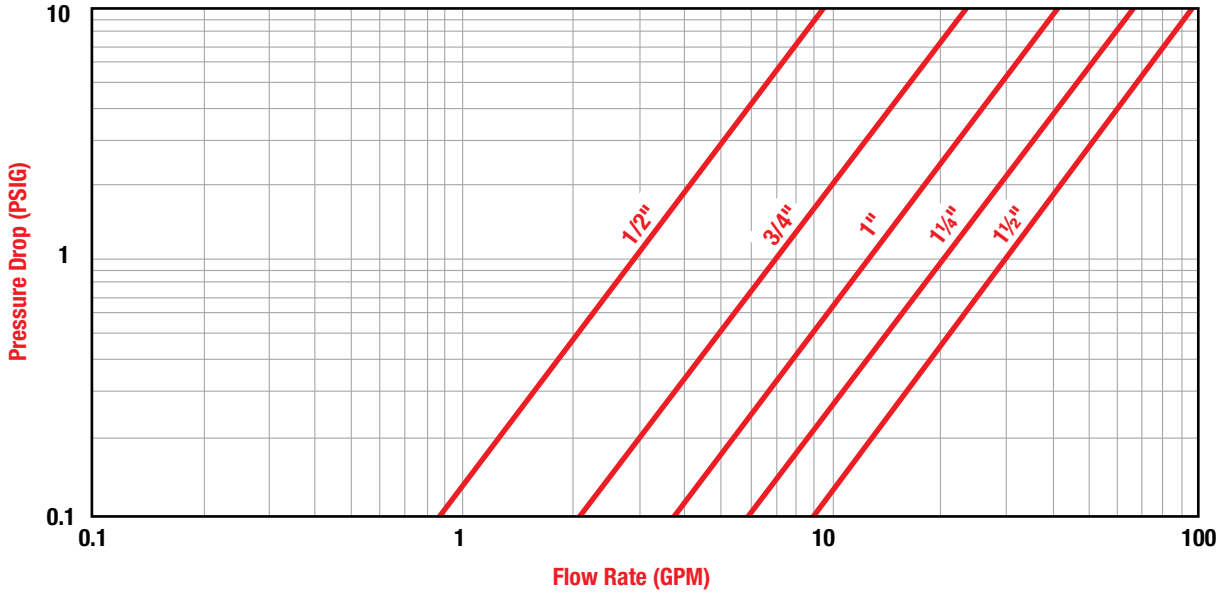
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	304 SS
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound
Stud	A193-B7	A320-B8
Nut[2]	A194-2H	A194-8

Dimensions applicable only to Y-Strainers with Flanged and Buttweld Connections
Contact Elite Valve 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

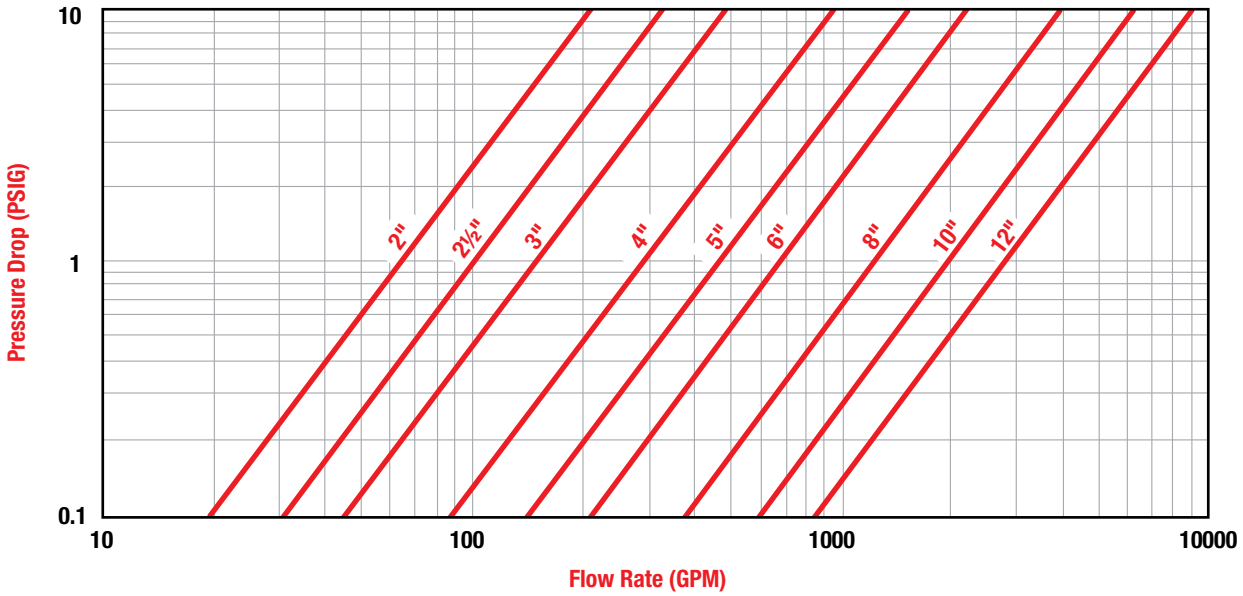
Pressure Drop VS. Flow Rate

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.

600Y Series

Open Area Ratios

Standard Perforated Screen*

Carbon and Stainless Steel | 600Y1 Series | Y-Strainer						
Size	**Mesh**	**Opening %**	**Std Pipe Inlet Area (in2)**	**Gross Screen Area (in2)**	**Free Screen Area (in2)**	**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 and Stainless Steel | 600Y2 Series | Y-Strainer						
Size	**Mesh**	**Opening %**	**Std Pipe Inlet Area (in2)**	**Gross Screen Area (in2)**	**Free Screen Area (in2)**	**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

How to Order

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

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

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

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

Features

- ASME Class 900 rated strainers
- RF or RTJ, and Buttweld connections designed in accordance with ASME B16.34, B16.5 and B16.25
- Elite Valve 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

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

900Y2 Series

Sizes
2" to 8"

Pressure Rating
2200 PSI

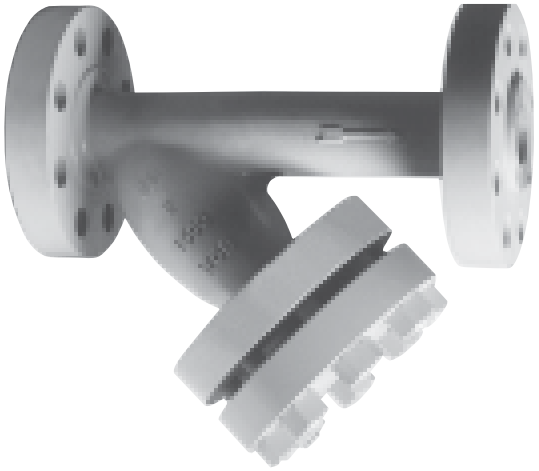
Temperature Rating
800° F (427° C)

End Connections
Flanged
Ring Joint

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

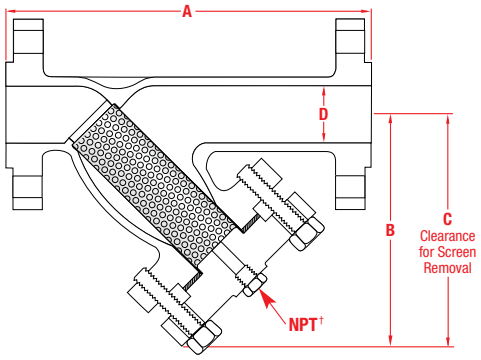
Description

Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

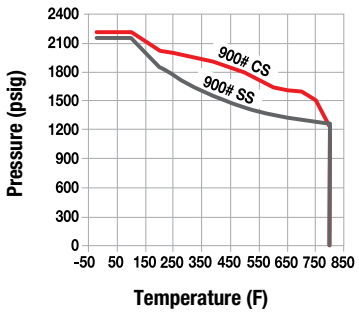


Features

- 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



Pressure / Temperature Chart
ASME B16.34



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

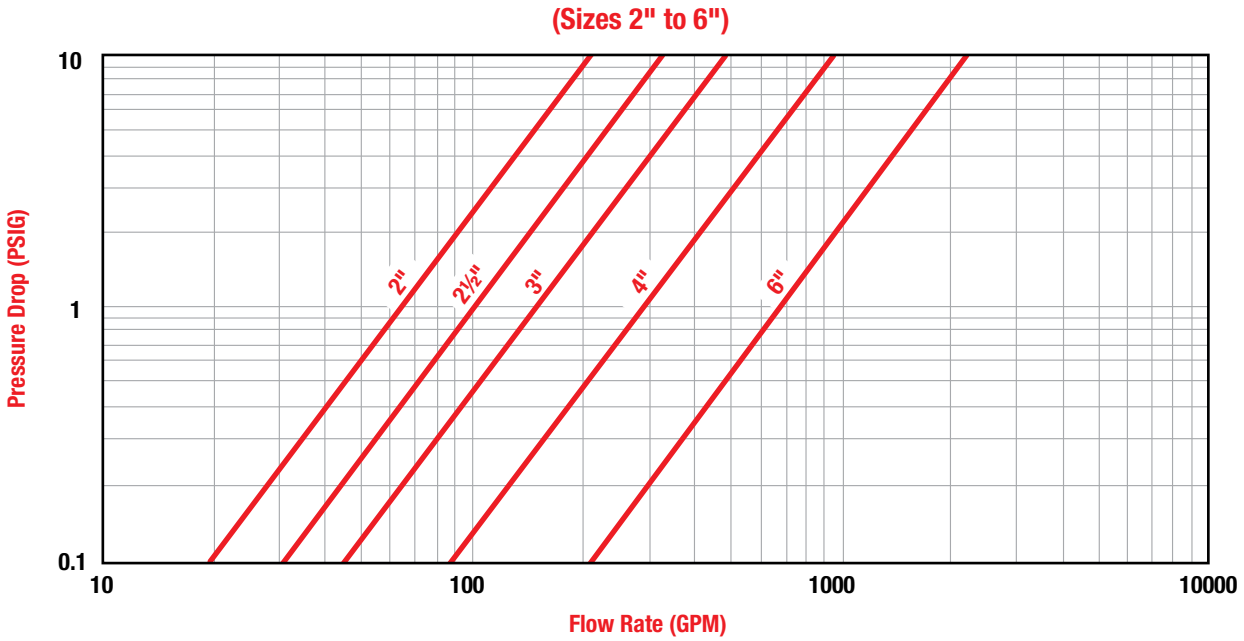
Dimensions applicable only to Y-Strainers with Flanged Connections | Contact Elite Valve for dimensions of Y-Strainers with Ring Joint Connections | Dimensions shown are subject to change. Consult factory for certified drawings when required
† 900Y strainers are not furnished with a drain/blow-down connection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

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

Pressure Drop VS. Flow Rate

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



Open Area Ratios

Standard Perforated Screen*

Carbon and Stainless Steel | 900Y2 Series | Y-Strainer						
Size	Perf. Diameter (mm2)	Opening %	Flange Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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

How to Order

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

1 Inlet Size

0200	2"	**0250**	2½"	**0300**	3"	**0400**	4"	**0600**	6"

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

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.

4 Perf[1] (304SS Material[2])

A	No Perf	**4**	1/8"	**5**	5/32"	**8**	1/4"
1	1/32"	**2**	1/16"	**6**	3/16"	**9**	3/8"
B	3/64	**3**	3/32"	**7**	7/32"		

5 Mesh[2] (Leave Blank if not required)

1	10	**3**	30	**5**	50	**7**	80	**9**	120
2	20	**4**	40	**6**	60	**8**	100		

6 Optional (Leave Blank if not required)

D	Special Drain Size	**T**	Special Testing	**X**	Oxygen Cleaning
F	Silicon Free	**N**	Nace MR01-75	**Y**	Other / Multiple Specials
G	Special Gaskets				

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
- Elite Valve 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

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

1500Y1 Series

Sizes
½" to 1"

Pressure Rating
3705 PSIG (258.5 BARG)

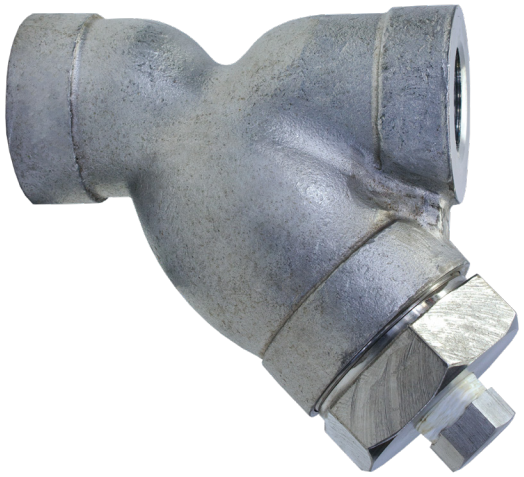
Temperature Rating
800° F (427° C)

End Connections
Threaded (NPT)
Socketweld

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

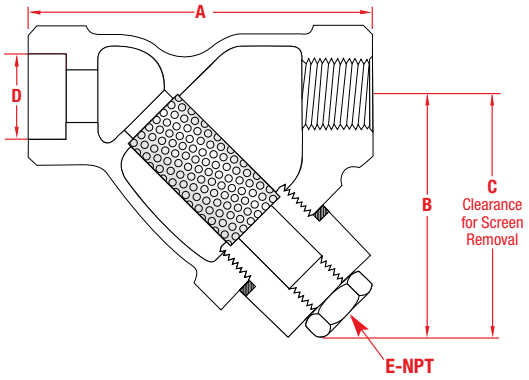
Description

Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

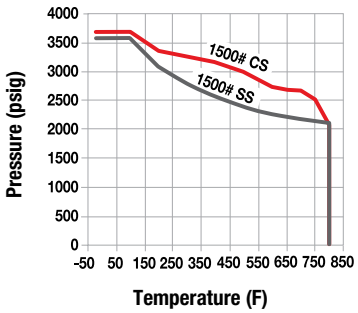


Features

- 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



Pressure / Temperature Chart
ASME B16.34



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

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

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

1500Y2 Series

Sizes
½" to 2"

Pressure Rating
3705 PSIG (258.5 BARG)

Temperature Rating
800° F (427° C)

End Connections
Threaded (NPT)
Socketweld

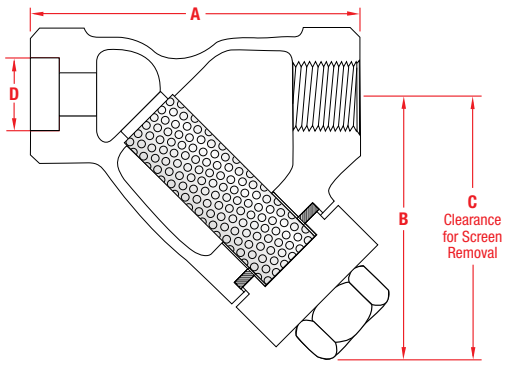
Screen Openings
½"–1½" | 1/32" Perf | 304 SS
2" | 3/64" Perf | 304 SS

Description

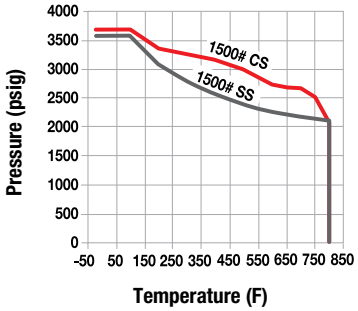
Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve carbon steel Y-Strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical,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

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



Pressure / Temperature Chart
ASME B16.34



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

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

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

1500Y2 Series

Sizes
2" to 6"

Pressure Rating
3705 PSIG (258.5 BARG)

Temperature Rating
800° F (427° C)

End Connections
Flanged
Ring Joint

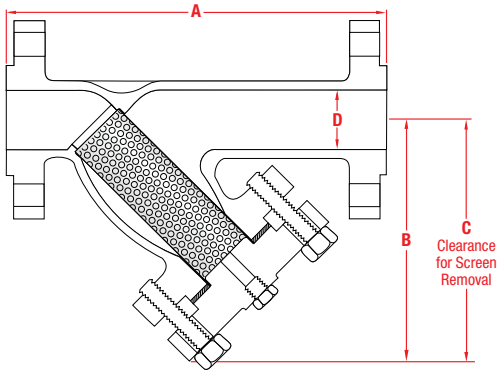
Screen Openings
2"–3" | 3/64" Perf | 304 SS
4"–6" | 1/8" Perf | 304 SS

Description

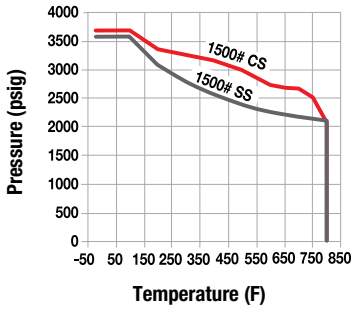
Elite Valve manufactures carbon steel Y-Strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve carbon steel Y-Strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical,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

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



Pressure / Temperature Chart
ASME B16.34



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

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

Materials

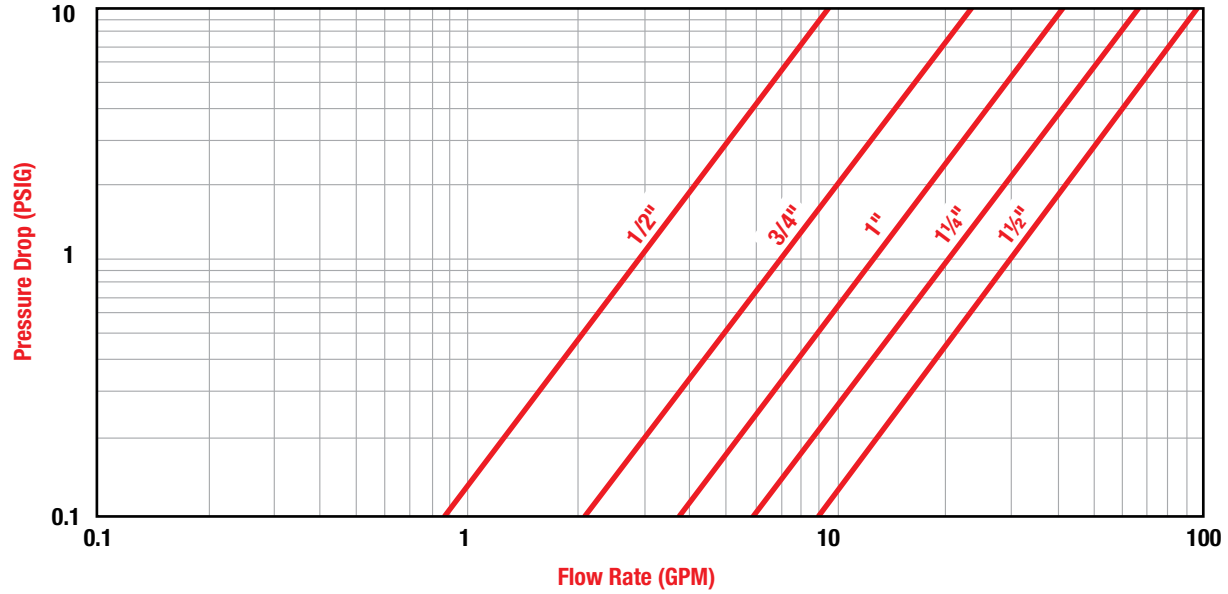
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	304 SS
Gasket[1]	304 SS Spiral Wound	304 SS Spiral Wound
Stud	A193-B7	A320-B8
Nut[2]	A194-2H	A194-8

1500Y Series

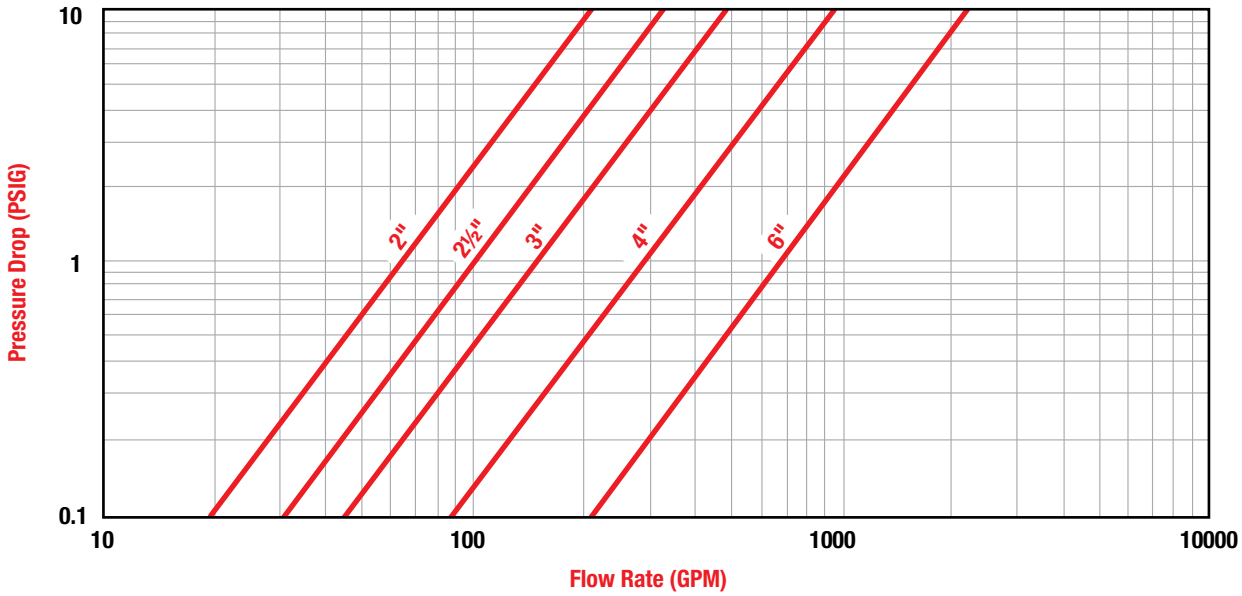
Pressure Drop VS. Flow Rate

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 and Stainless Steel | 1500Y1 Series | Y-Strainer						
Size	Perf. Diameter (inches)	Opening %	XH Pipe Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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 and Stainless Steel | 1500Y2 Series | Y-Strainer						
Size	Perf. Diameter (inches)	Opening %	XH Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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 and Stainless Steel | 1500Y2 Series | Y-Strainer						
Size	Perf. Diameter (inches)	Opening %	Flanged Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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.

Technical Information

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.

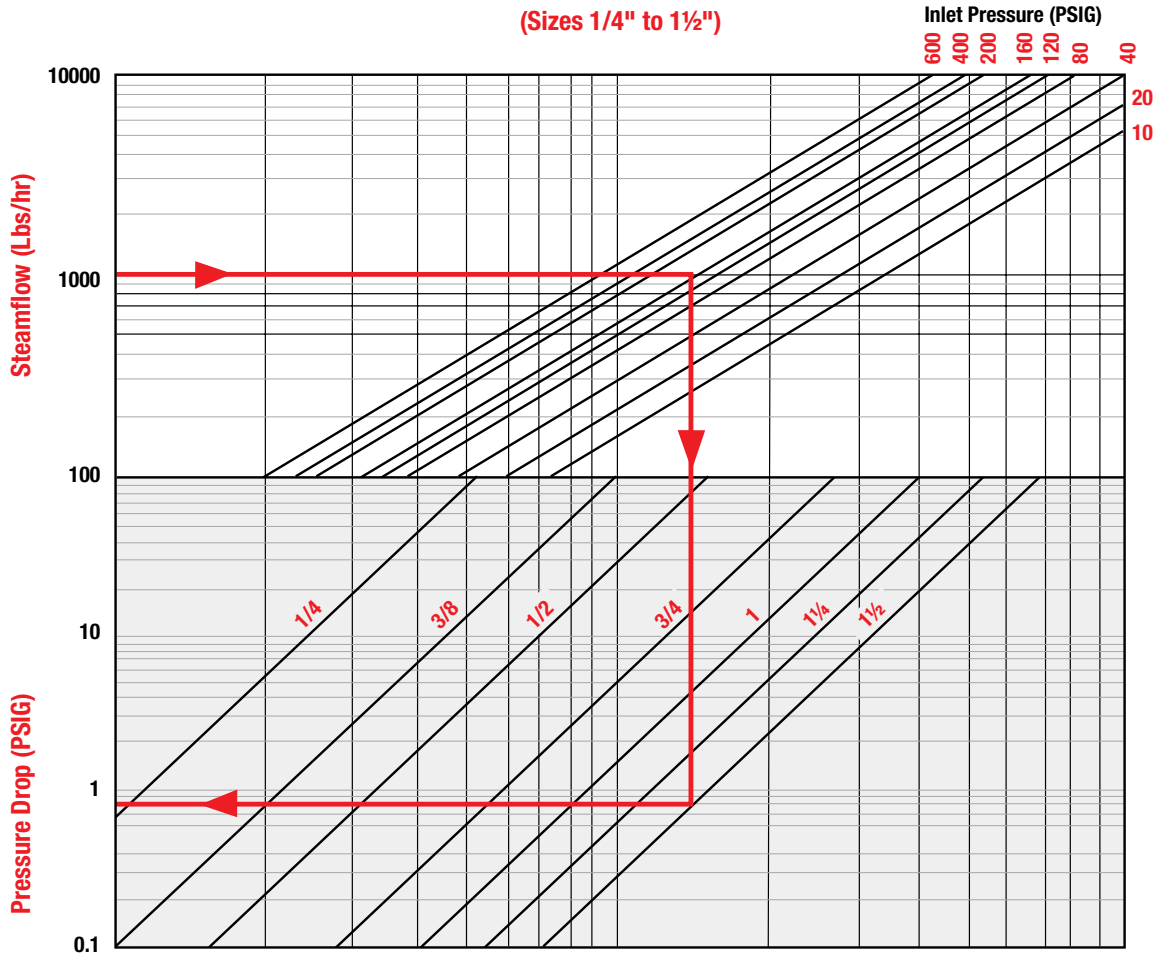
Correction Factors for Clogged Screens

% 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

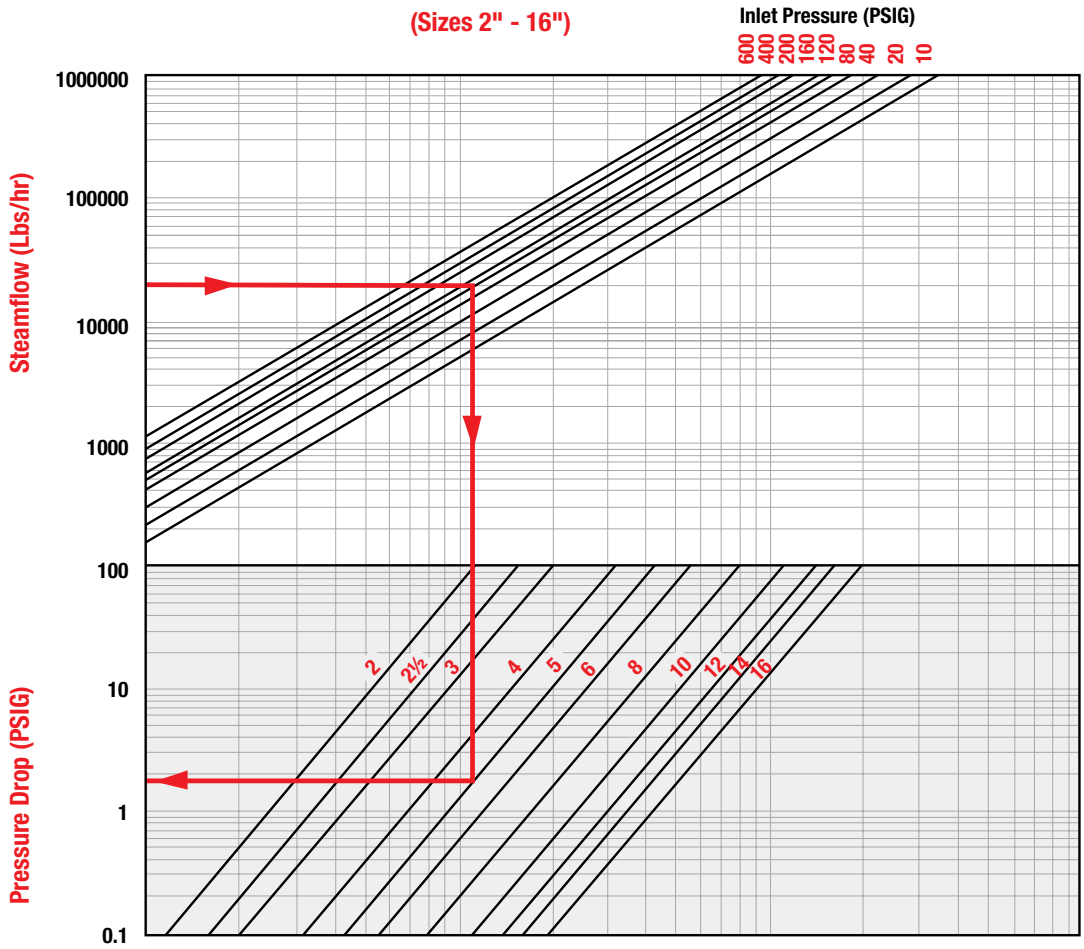
Example

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.

Technical Information

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.
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FOR NON-CRITICAL FLOW

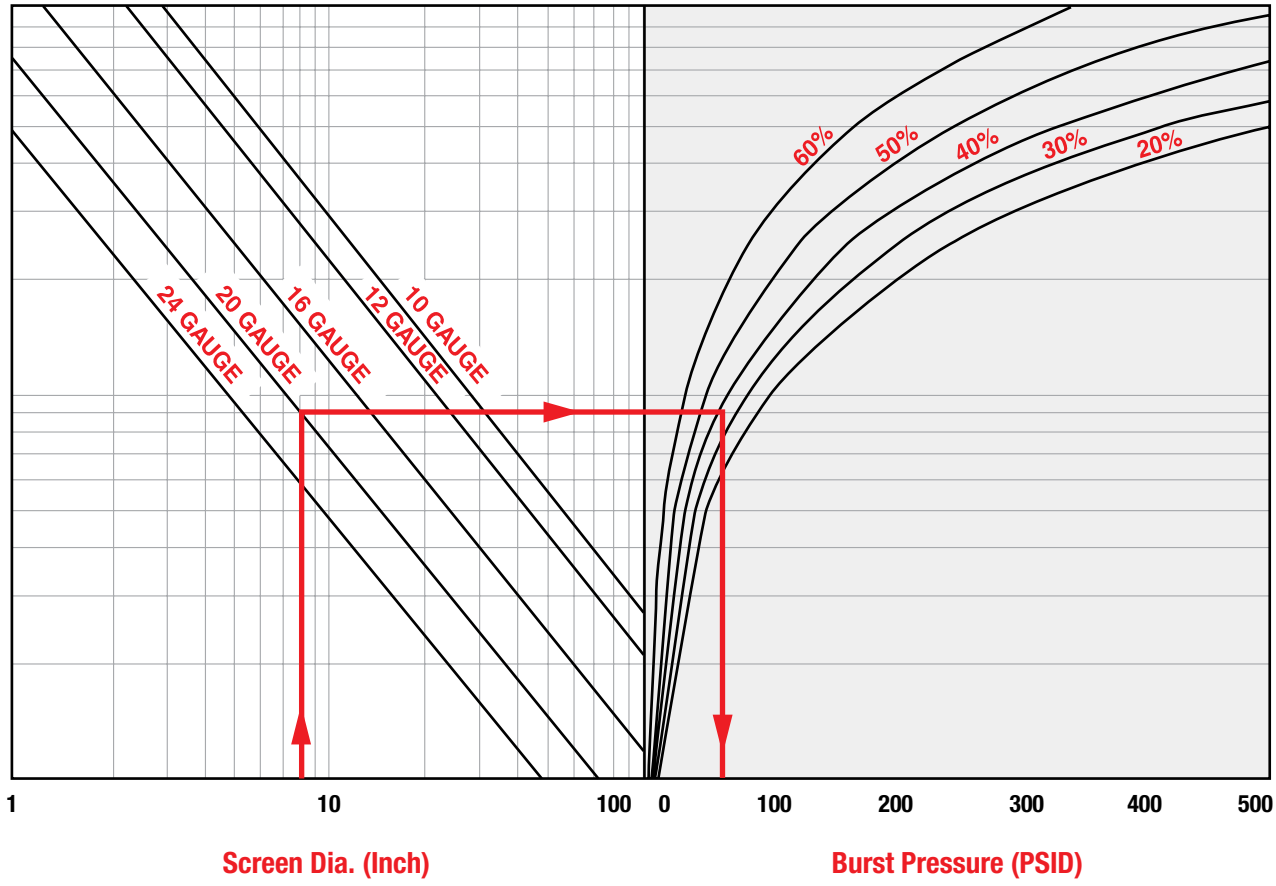
Qs = Equivalent Steam Flow, lbs./hr.
Qg = Air or gas flow, SCFM.
t = Temperature, °F.
s.g. = Specific gravity (s.g. = 1 for air.)
DP = Pressure Drop, psid
P2 = Outlet Pressure

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.
4) 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.

Technical Information

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 gases 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.

Overview

Sizes
1/2" to 20"

Temperature
up to 800°F

Pressure
up to 740 PSIG

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

125B Series

How to Order

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.

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

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

125B Series

Sizes
2" to 6"

Pressure Rating
200 PSIG (13.8 BARG)

Temperature Rating
450° F (232° C)

End Connections
End Connections
FF Flanged

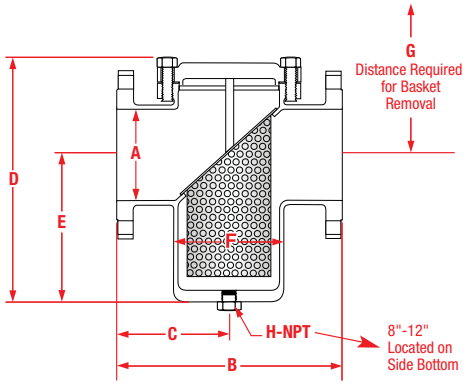
Screen Openings
2"–3" | 3/64" Perf | 304 SS
4"–20" | 1/8" Perf | 304 SS

Description

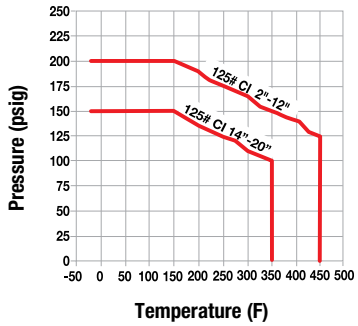
Elite Valve manufactures cast iron basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve cast iron basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical,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

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



Pressure / Temperature Chart
ASME B16.1



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

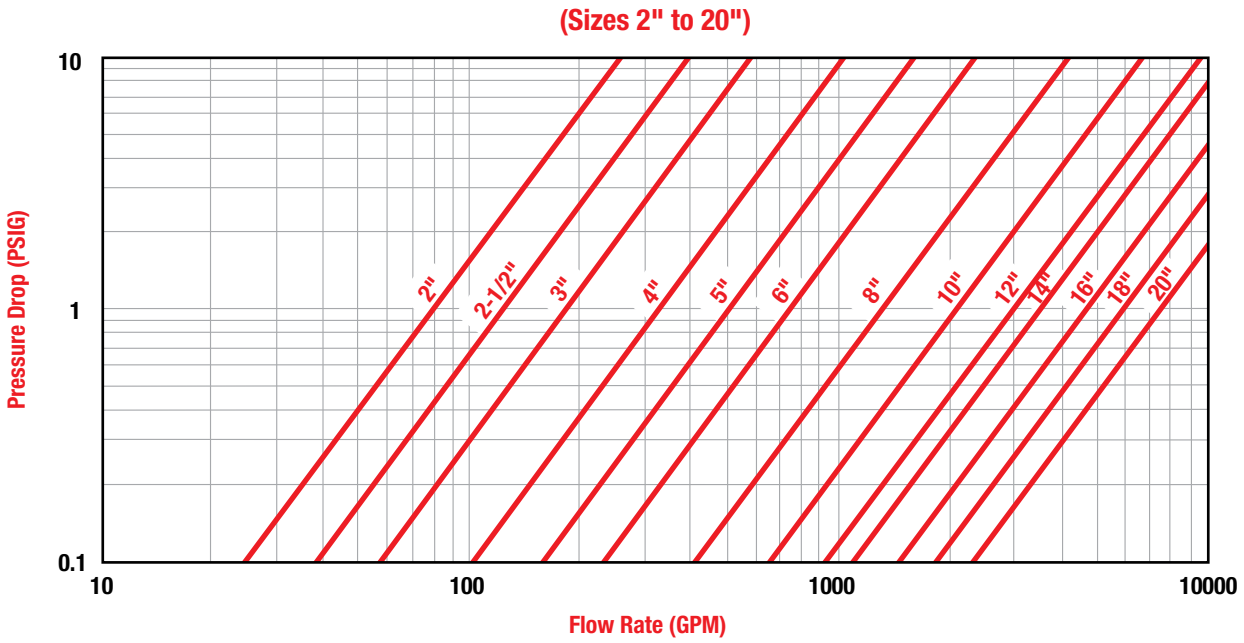
Materials

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 (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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

How to Order

1					2						3		4	5	6
Inlet Size					Model						Body		Perf	Mesh	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.

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

Models

- 1150B1F – Straight Flow

Options

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

Sizes
2" to 12"

Pressure
up to 285 PSIG
(19.7 BARG)

Temperature
up to 400°F
(207°C)

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

150B1 Series

Sizes
2" to 6"

Pressure Rating
285 PSIG (19.7 BARG)

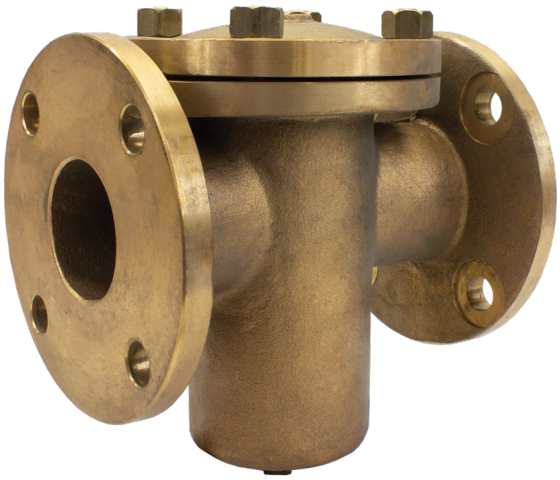
Temperature Rating
400° F

End Connections
FF Flanged

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

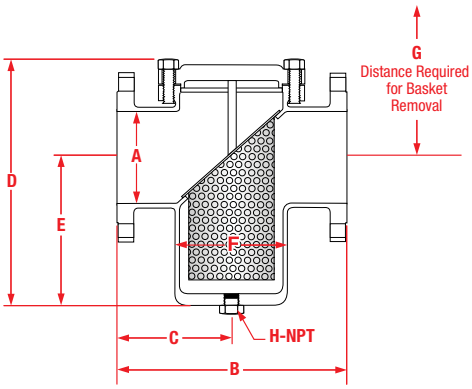
Description

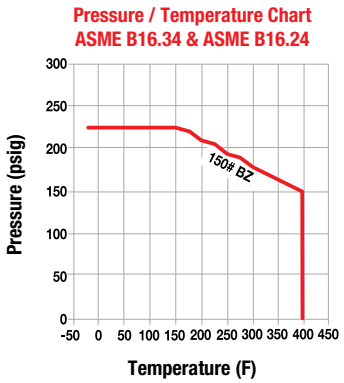
Elite Valve manufactures bronze basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve bronze basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment, chemical, metal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



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

Sizes
2" to 12"

Pressure Rating
285 PSIG (19.7 BARG)

Temperature Rating
400° F

End Connections
End Connections
RF Flanged

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

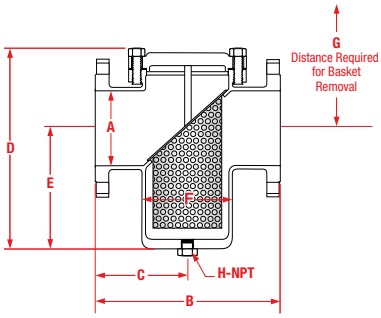
Description

Elite Valve manufactures carbon steel basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

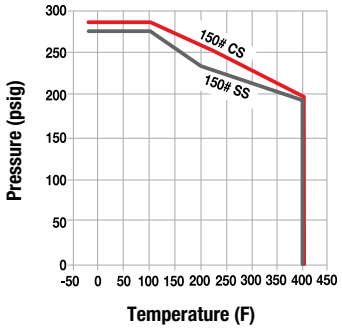
Features

- 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



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



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

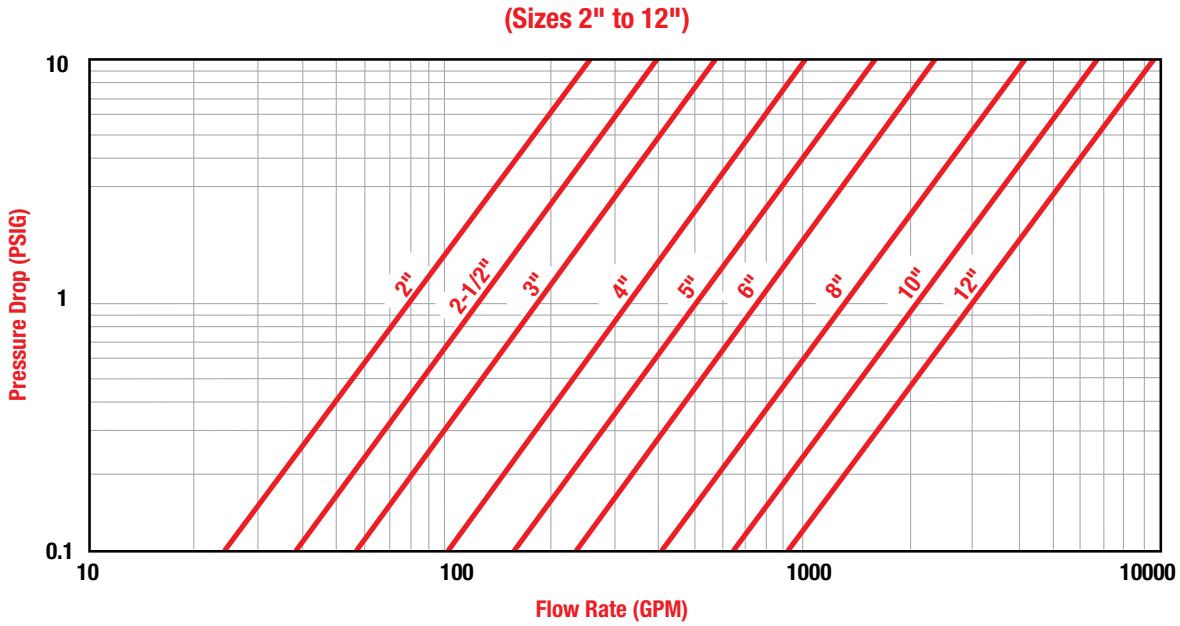
Part	Carbon Steel	Stainless Steel
Body	A216-WCB	A351-CF8M
Cover	A216-WCB	A351-CF8M
Screen[1]	304 SS	304 SS
Plug[2]	A105	A182-316
Gasket[1]	Teflon[3]	Teflon[3]
Bolt/Stud[2]	A193-B7	A193-B8-1
Nut[2]	A194-2H	A194-B

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

150B1 Series

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 (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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 and Stainless Steel | 150B1 Series | Basket Strainer						
Size	Opening Diameter (in)	Opening %	Nominal Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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

How to Order

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 Material2)				
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

Features

- ASME Class 150 rated strainers
- RF connections designed in accordance with ASME B16.5 and/or B16.34
- Elite Valve 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

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

150B2 Series

Sizes
1½" to 8"

Pressure Rating
285 PSIG (19.7 BARG)

Temperature Rating
800° F (427° C)

End Connections
RF Flanged

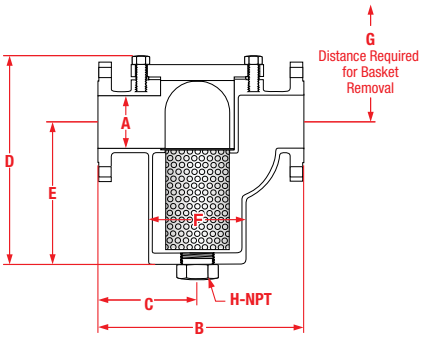
Screen Openings
1½" | 1/32" Perf | 304 SS
2"–3" | 3/64" Perf | 304 SS
4"–8" | 1/8" Perf | 304 SS

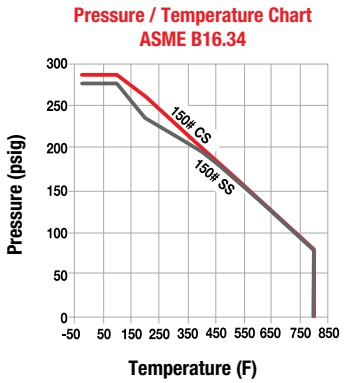
Description

Elite Valve manufactures carbon steel basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

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		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

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

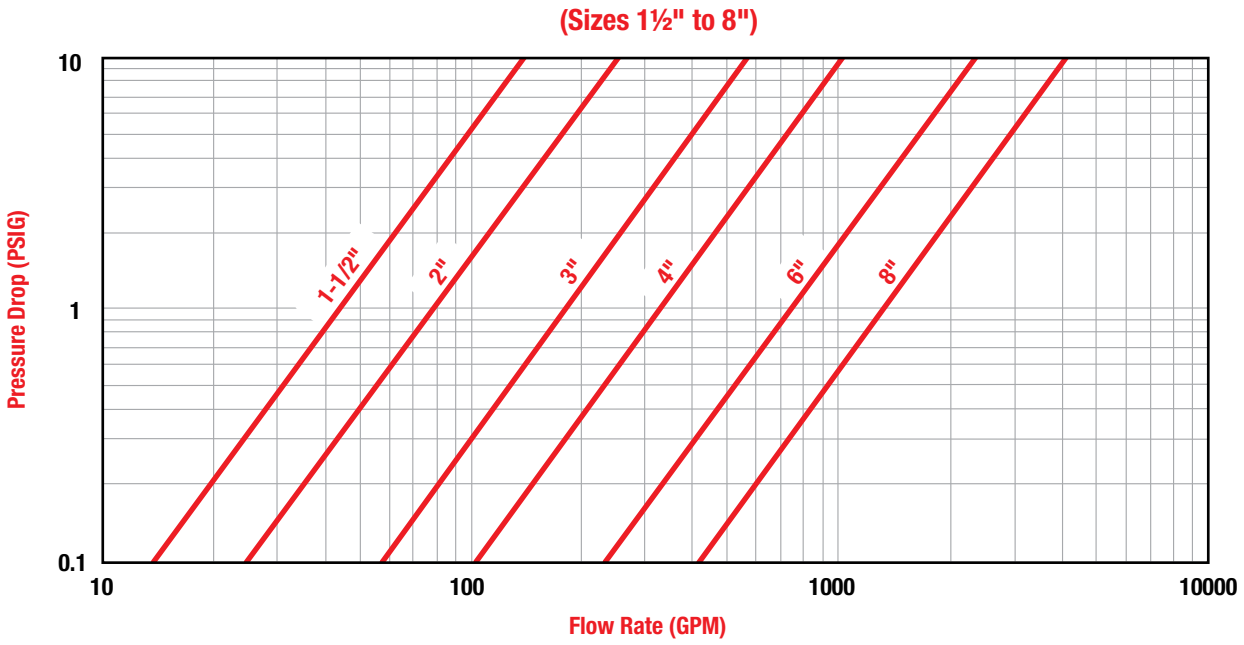
Materials

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

150B2 Series

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 (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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.

300B Series

How to Order

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	¾"	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 Material2)				
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

Features

- ASME Class 300 rated strainers
- NPT and Socketweld connections designed in accordance with ASME B16.5 and B16.34
- Elite Valve 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

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

300B Series

Sizes
½" to 2"

Pressure Rating
740 PSIG (51 BARG)

Temperature Rating
800° F (427° C)

End Connections
Threaded (NPT)
Socketweld

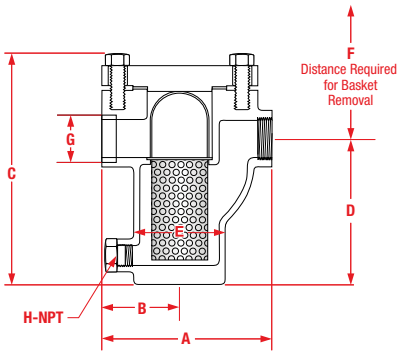
Screen Openings
½"–1½" | 1/32" Perf | 304 SS
2" | 3/64" Perf | 304 SS

Description

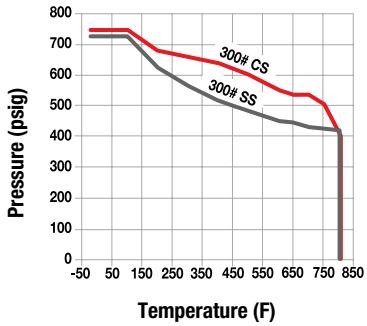
Elite Valve manufactures carbon steel basket strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve carbon steel basket strainers are suitable for a full range of steam, liquid, gas & oil, power, pulp & paper, process equipment,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

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



Pressure / Temperature Chart
ASME B16.34



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

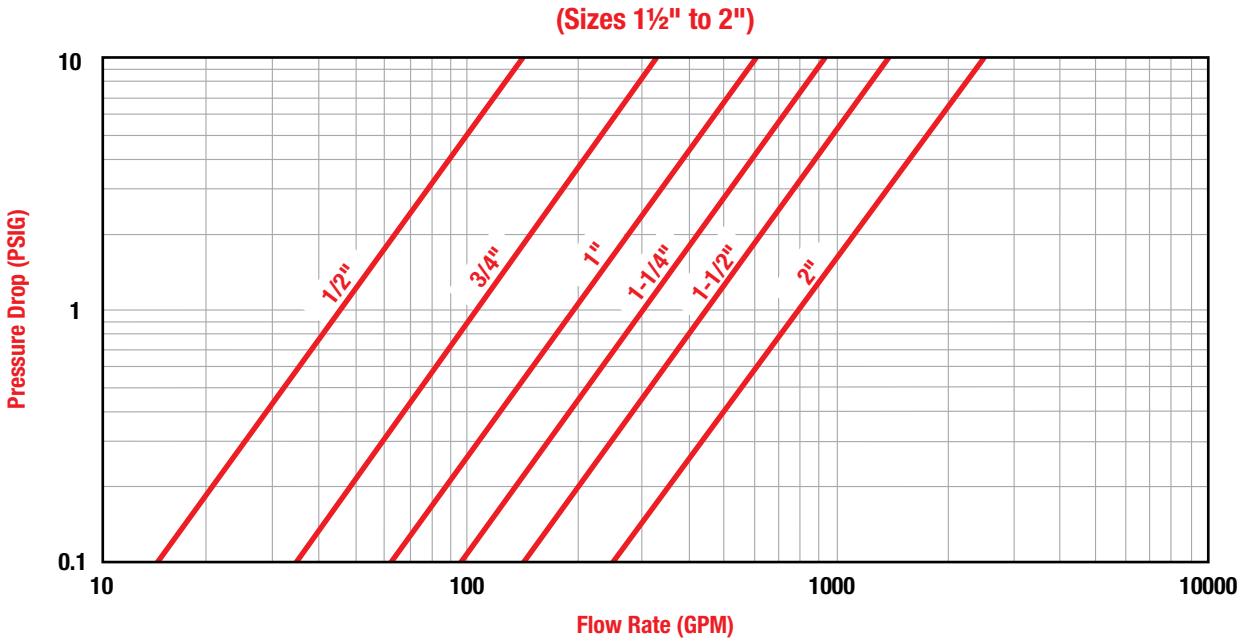
1 Recommended Spare Parts | 2 Materials of equivalent strength may be substituted | 3 Gasket for bolted cover (Quick Opening Covers see page 60)
* For models with Quick Opening Cover, consult factory | Dimensions shown are subject to change. Consult factory for certified drawings when required

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

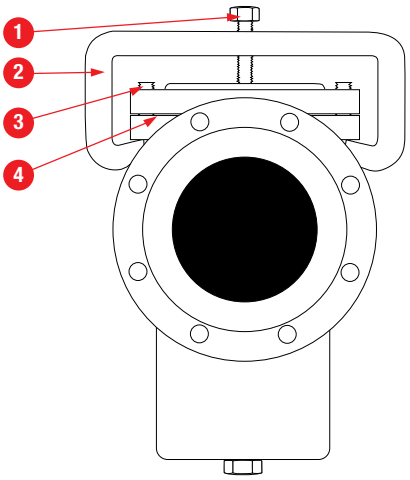
Standard Perforated Screen*

Carbon and Stainless Steel | 300B Series | Basket Strainer						
Size	Opening Diameter (in)	Opening %	Nominal Inlet Area (in2)	Gross Screen Area (in2)	Free Screen Area (in2)	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.

Basket Strainers

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

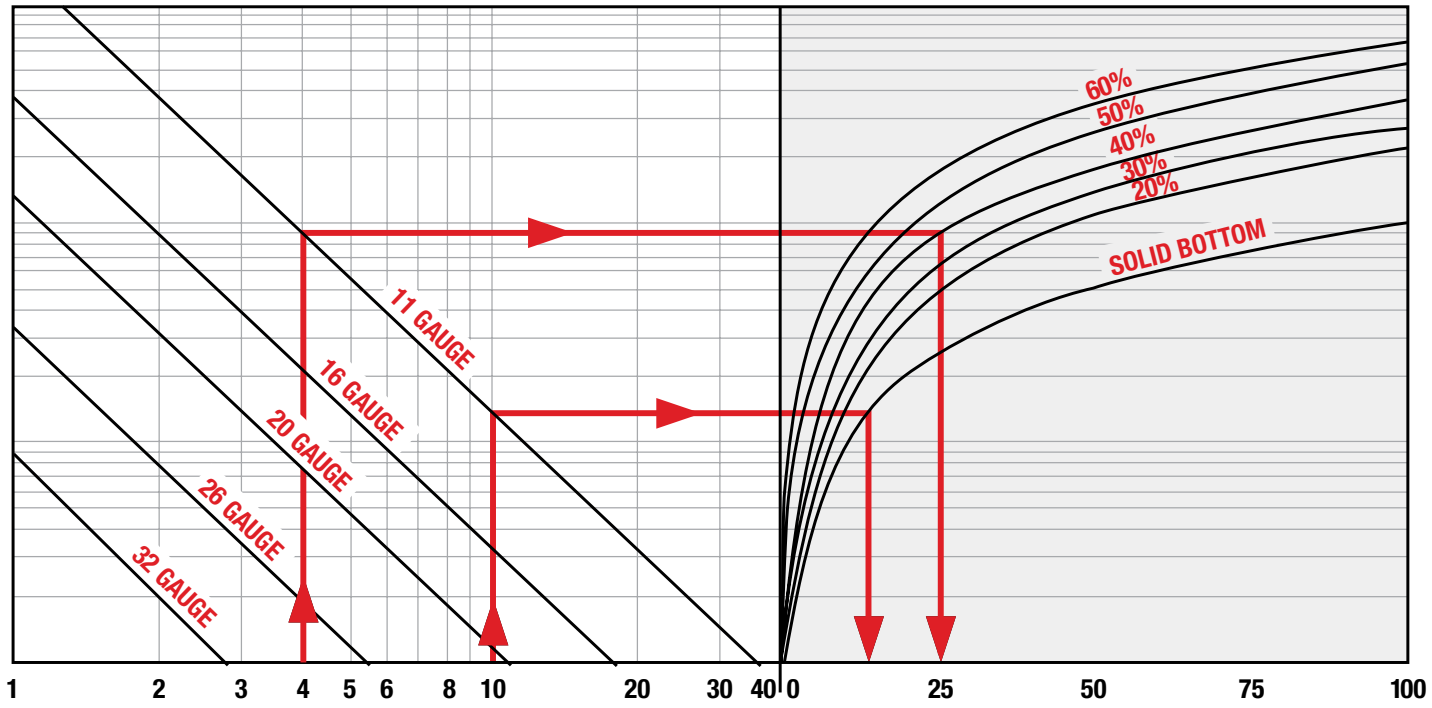
% Clogged	Ratio of Free Screen Area to Pipe Area						
	10:1	8:1	6:1	4:1	3:1	2:1	1:1
10	–	–	–	–	–	–	3.15
20	–	–	–	–	–	1.15	3.9
30	–	–	–	–	–	1.4	5
40	–	–	–	–	–	1.8	6.65
50	–	–	–	–	1.25	2.5	9.45
60	–	–	–	1.15	1.8	3.7	14.5
70	–	–	–	1.75	2.95	6.4	26
80	–	1.1	1.75	3.6	6.25	14	58
90	2.3	3.45	6	13.5	24	55	–

* 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.

Basket Strainers

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:

Technical Information

Installation and Maintenance 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 gases 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.

Overview

Sizes
3/4" to 6"

Temperature
up to 800°F

Pressure
up to 275 PSI

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

How to Order

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

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

Sizes
3/4" to 6"

Pressure
275 PSI

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

TC Series

Sizes
¾" to 6"

Pressure Rating
275 PSIG (18.9 BARG)

Temperature Rating
800° F (427° C)

End Connections
Wafer Falt Faced

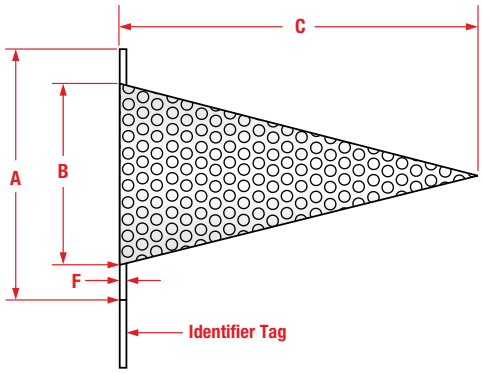
Screen Openings
¾"–6" | 1/8" Perf | 22 Gauge[1]

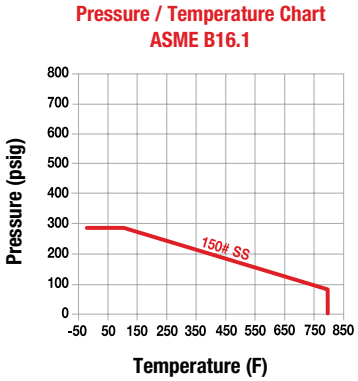
Description

Elite Valve manufactures temporary cone strainers that are long-lasting, functional, cost-effective, and are well suited for commercial and industrial use. Elite Valve 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.

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

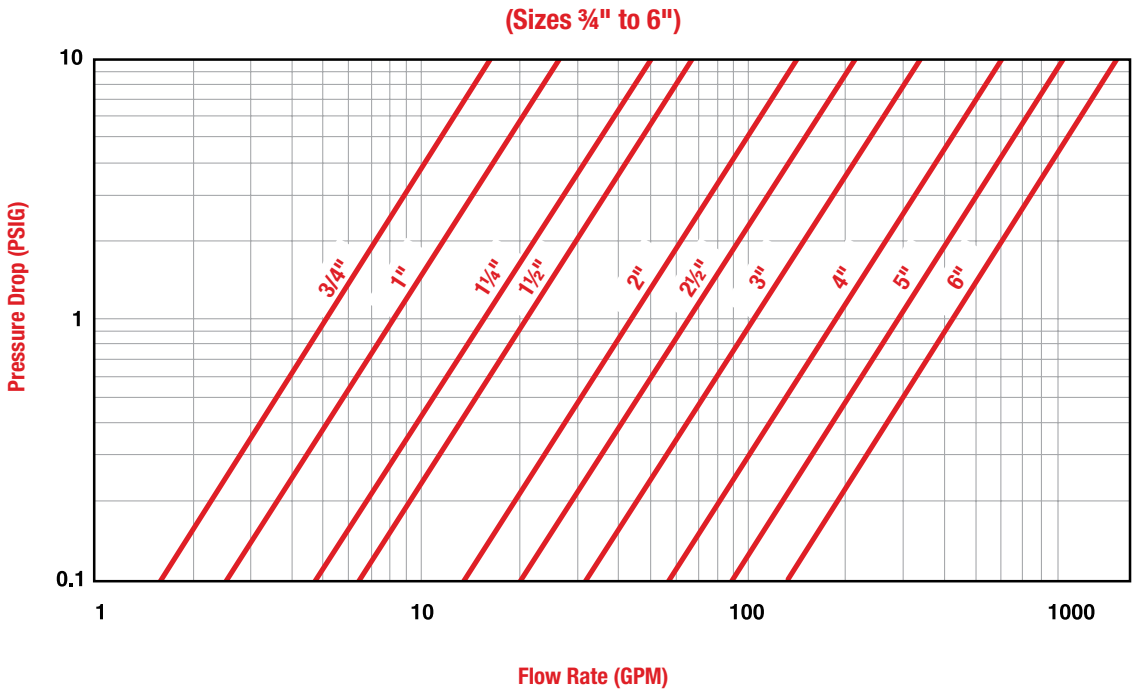
Materials

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

TC Series

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

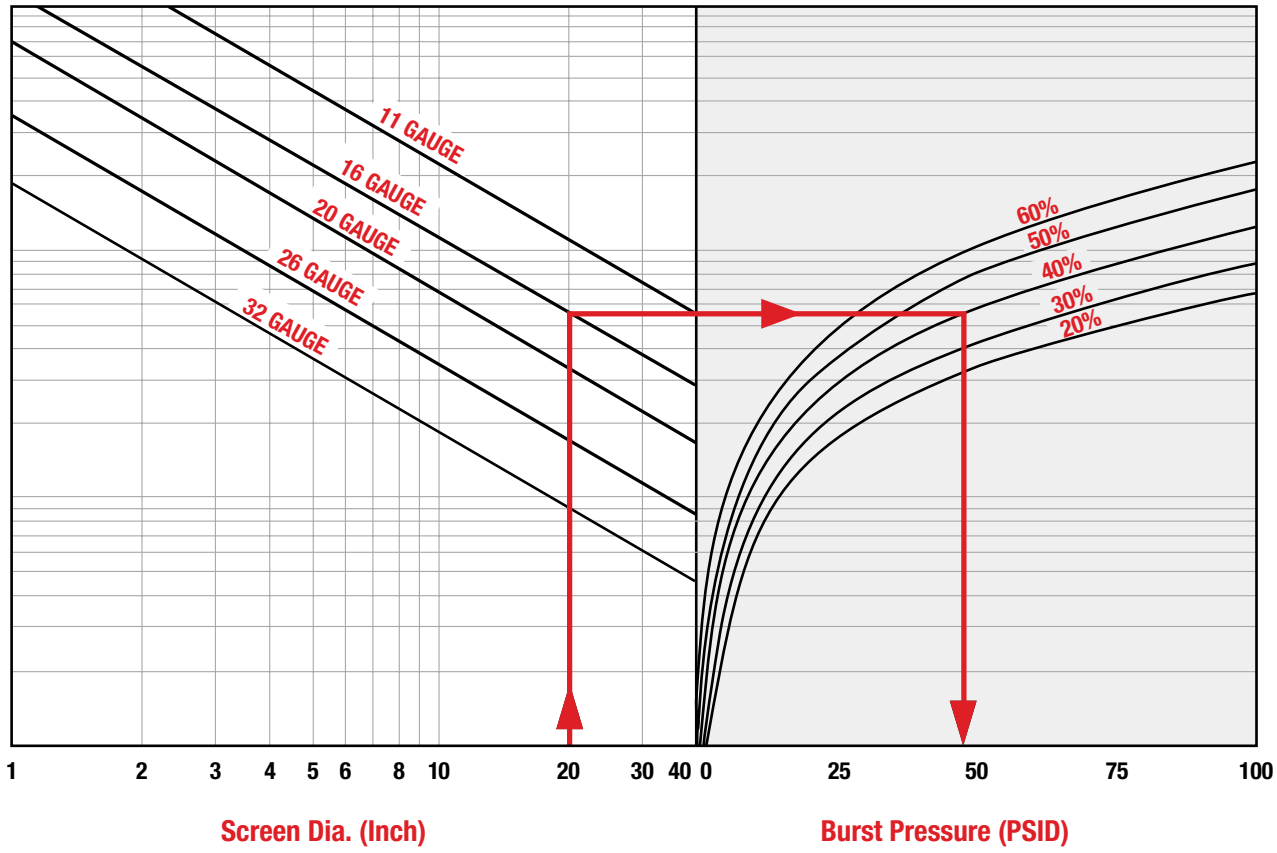
% Clogged	Ratio of Free Screen Area to Pipe Area						
	10:1	8:1	6:1	4:1	3:1	2:1	1:1
10	–	–	–	–	–	–	3.15
20	–	–	–	–	–	1.15	3.9
30	–	–	–	–	–	1.4	5
40	–	–	–	–	–	1.8	6.65
50	–	–	–	–	1.25	2.5	9.45
60	–	–	–	1.15	1.8	3.7	14.5
70	–	–	–	1.75	2.95	6.4	26
80	–	1.1	1.75	3.6	6.25	14	58
90	2.3	3.45	6	13.5	24	55	–

* 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.

Technical Information

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 Elite Valve 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.

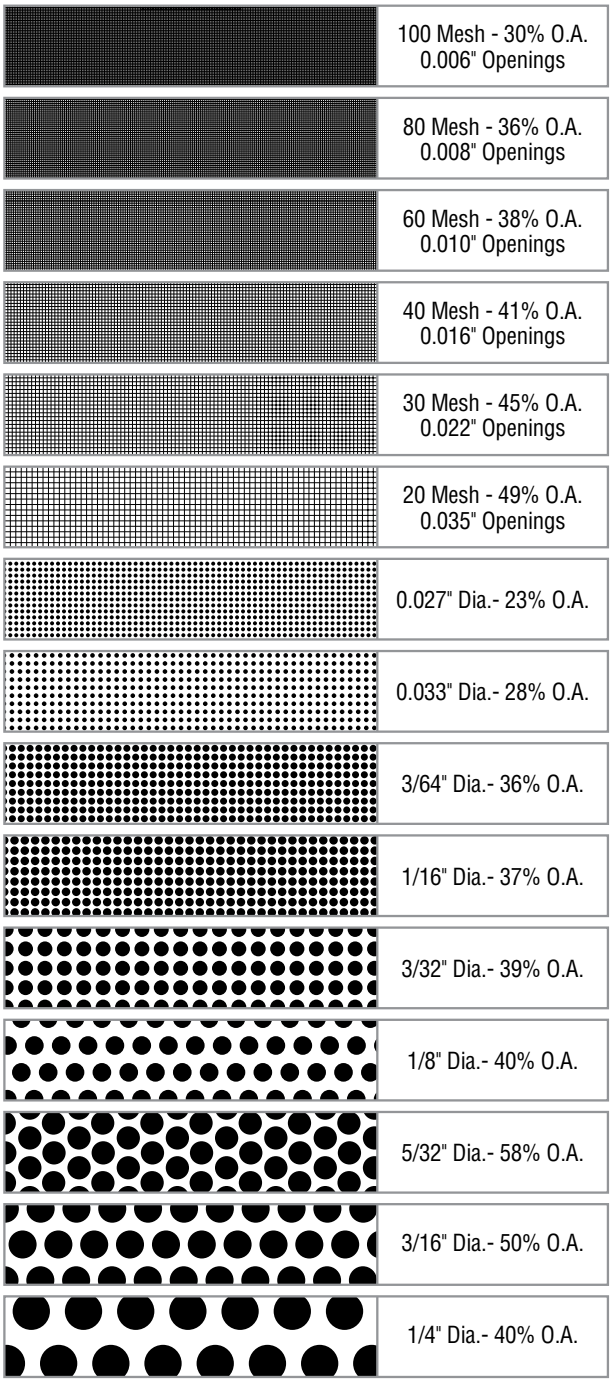
Maintenance Instructions

- 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 gases 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

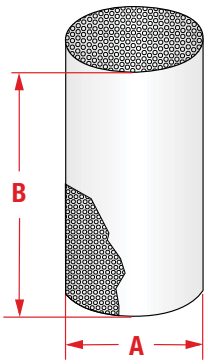
Elite Valve design's and manufactures screens and baskets for all makes of Y, basket and duplex strainers. The range of materials and size of units is unlimited.

Elite Valve is able to provide baskets manufactured from:

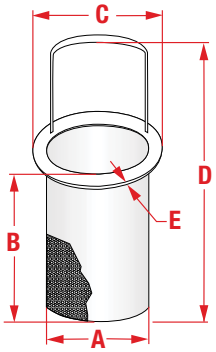
- Perforated Plate
- Mesh or Mesh/Perf. combination
- Wedge Wire
- Electron Beam Small Hole Perforated Plate

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

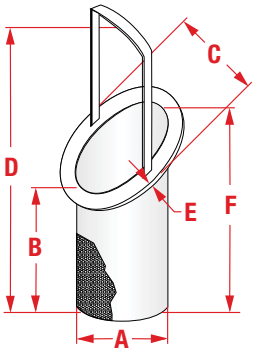
Style A



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) =

Notes

Notes

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Elite Valve is committed to being a global leader in valve technology. We recognize that not all process applications are the same, and as our clients' processes vary, so should the valve they technology they use. Registered as an ISO 9001 company, Elite Valve is committed to maintaining valve manufacturing technology centers, and delivering a reliable product every time called upon. In support of this commitment, Elite Valve has strategically located manufacturing and service centers within North America.

Our engineers are rewarded for innovative thinking… turning problems into opportunities and advancing product performance. Working closely with our customers is encouraged. Our modus operandi is "Strive to be the very best". It can be seen in the work we do daily. With these few words, we employ years of experience, handcrafting some of the best products available. Our ability to provide both standardized and custom-engineered solutions allows us to meet all your needs, in the most critical of applications.

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