

MODEL 85 HEAVY-DUTY Y STRAINERS

1/4" to 10" • Carbon Steel and Stainless Steel • Threaded, Flanged and Socket Weld Connections

Rugged Design



Carbon steel and stainless steel Y strainers are offered in sizes for 1/4 in to 10 in pipelines

Features

- Heavy Duty Construction
- Compact Design
- Bolted or Threaded Covers
- Standard Stainless Steel Screens
- Synthetic Fiber Gaskets

Options

- 1/32" to 1/2" Perforated Stainless Steel Screens
- 40, 60, 80, 100, 200, 325 and 400 Mesh Stainless Steel Screens
- Monel Screens
- Chrome-Moly Construction
- Ring Type Joint Connections
- Butt Weld Connections
- 900#, 1500#, and 2500# Ratings Available

Eaton Model 85 Y Strainers are heavy duty ones—engineered to stand up to the most aggressive of industrial and commercial applications...year after year. There is simply no higher quality Y strainer available... at any cost.

It may seem strange to discuss quality as a special feature of a basically simple Y strainer, however, it is appropriate when you consider the critical operational parameters often associated with Y strainers used in steam and gas applications, extremely high temperatures and high pressures. A Y strainer is a pressure vessel, its wall thickness can be analyzed and evaluated by different applicable standards. Every rugged Eaton Model 85 Y strainer is designed to stand up the most demanding real world applications. With over 75 years experience in manufacturing, this is ensured.

There is a tendency to trivialize quality, particularly when price becomes a dominant consideration. What this design consideration amounts to in non-critical, light duty applications is an extra element of safety, as well as longer, more dependable service. We extend our preoccupation with quality to each screen that is supplied with Eaton Y strainers. It should not come as a surprise to learn that those Y strainers, whose bodies are trimmed to a bare minimum for cost reasons, are equipped with screens that lack structural integrity and are poorly seated and sealed. Eaton heavy duty Model 85 Y strainers are furnished with high quality stainless steel screens that are carefully fabricated to fit the

strainer body perfectly. This, coupled with the precision machined screen seat on the body of the strainer, protects against any bypass.

Eaton Model 85 Heavy Duty Y Strainers are available in carbon steel or stainless steel for pipeline sizes from 1/4" to 10", with threaded, flanged, or socket weld connections. Do you have a unique application where a standard strainer just won't work? Or...do you need special materials of construction, super high pressure ratings, special dimensions? Contact us. Our engineers will design and fabricate a strainer to match the requirements of the most complex applications.

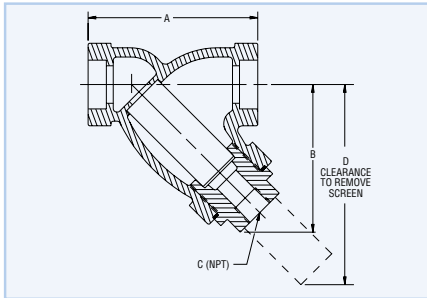
Y STRAINERS

Eaton Model 85 Y Strainers 1/4 to 10" Carbon and Stainless Steel - Threaded, Socket Weld & Flanged

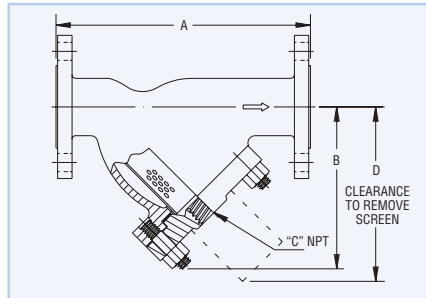
1/4" to 2"	Carbon Steel	Threaded or Socket Weld 600#	Threaded	1480 psi @ 100F	85
	Stainless Steel			1440 psi @ 100F	
1/4" to 10"	Carbon Steel	Flanged 150#	Bolted	285 psi @ 100F	
	Stainless Steel			740 psi @ 100F	
	Stainless Steel			275 psi @ 100F	
1/2" to 10"	Carbon Steel	Flanged 300#		720 psi @ 100F	
		Flanged 600#		1480 psi @ 100F	80

* DIN flanges and BSP threads available

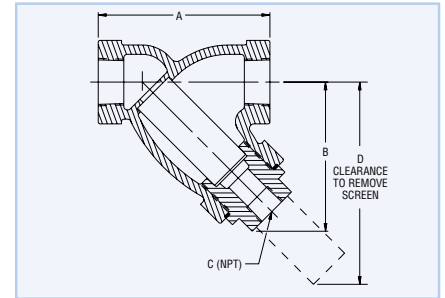
Dimensional Drawings



Typical Solder End Y Strainer



Typical Flanged Y Strainer



Typical Threaded Y Strainer

Flanged Carbon Steel and Stainless Steel – 150 lb (in / mm)

Size	A	B	C (Nom.)	D	Wt (lb / kg)
1/2	5.00 / 127	2.75 / 70	3/8 / 10	3.50 / 89	5 / 2.3
3/4	5.63 / 143	3.00 / 76	3/8 / 10	4.00 / 102	7 / 3.2
1	6.38 / 162	3.64 / 92	1/2 / 15	5.00 / 127	9 / 4.1
1-1/4	7.25 / 184	4.25 / 108	3/4 / 20	5.75 / 146	14 / 6.3
1-1/2	8.88 / 226	5.75 / 146	3/4 / 20	6.50 / 165	18 / 8.2
2	7.88 / 200	6.00 / 152	1 / 25	8.25 / 210	16 / 7.3
2-1/2	9.75 / 248	6.50 / 165	1 / 25	9.25 / 235	25 / 11.4
3	10.00 / 254	7.25 / 184	1-1/4 / 32	10.50 / 267	35 / 16
4	12.13 / 308	9.75 / 248	1-1/2 / 40	14.75 / 375	70 / 32
6	18.50 / 470	14.25 / 362	2 / 50	21.00 / 533	130 / 59
8	21.63 / 549	18.00 / 457	2 / 50	26.75 / 679	240 / 109
10	26.00 / 660	22.50 / 565	2 / 50	33.75 / 857	300 / 136

Flanged Carbon Steel and Stainless Steel – 300 lb (in / mm)

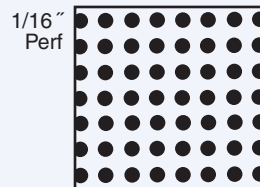
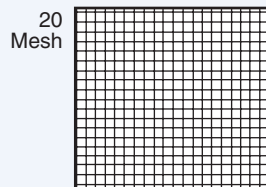
Size	A	B	C (Nom.)	D	Wt (lb / kg)
1/2	5.25 / 133	2.75 / 70	3/8 / 10	3.50 / 89	6 / 2.7
3/4	6.00 / 152	3.00 / 76	3/8 / 10	4.00 / 102	9 / 4.1
1	6.88 / 175	3.63 / 92	1/2 / 15	5.00 / 127	13 / 6.0
1-1/4	7.75 / 197	4.25 / 108	3/4 / 20	5.75 / 146	18 / 8.2
1-1/2	9.38 / 238	5.75 / 146	3/4 / 20	6.50 / 165	24 / 11
2	8.63 / 219	6.25 / 159	1 / 25	8.25 / 210	30 / 13.6
2-1/2	10.63 / 270	7.00 / 178	1 / 25	9.25 / 235	40 / 18.2
3	12.00 / 305	7.75 / 197	1-1/4 / 32	10.50 / 267	55 / 25
4	14.50 / 368	10.50 / 267	1-1/2 / 40	14.75 / 375	105 / 48
6	20.00 / 508	14.75 / 375	2 / 50	21.00 / 533	200 / 91
8	23.38 / 594	18.75 / 476	2 / 50	27.00 / 686	360 / 164
10	27.38 / 695	22.75 / 578	2 / 50	34.50 / 876	430 / 195

Socket Weld and Threaded Carbon Steel and Stainless Steel – 600 lb (in / mm)

Size	A	B	C (Nom.)	D	Wt (lb / kg)
1/4	3.00 / 76	3.00 / 76	3/8 / 10	4.00 / 102	2 / 0.9
3/8	3.00 / 76	3.00 / 76	3/8 / 10	4.00 / 102	2 / 0.9
1/2	3.00 / 76	3.00 / 76	3/8 / 10	4.00 / 102	2 / 0.9
3/4	3.75 / 95	3.50 / 89	3/8 / 10	4.75 / 121	4 / 1.8
1	4.63 / 118	4.00 / 102	1/2 / 15	5.75 / 146	6 / 2.7
1-1/4	5.00 / 127	4.63 / 118	3/4 / 20	6.50 / 165	8 / 3.6
1-1/2	5.63 / 143	5.25 / 133	3/4 / 20	7.50 / 191	10 / 4.5
2	7.00 / 178	5.75 / 146	1 / 25	8.75 / 222	15 / 6.8

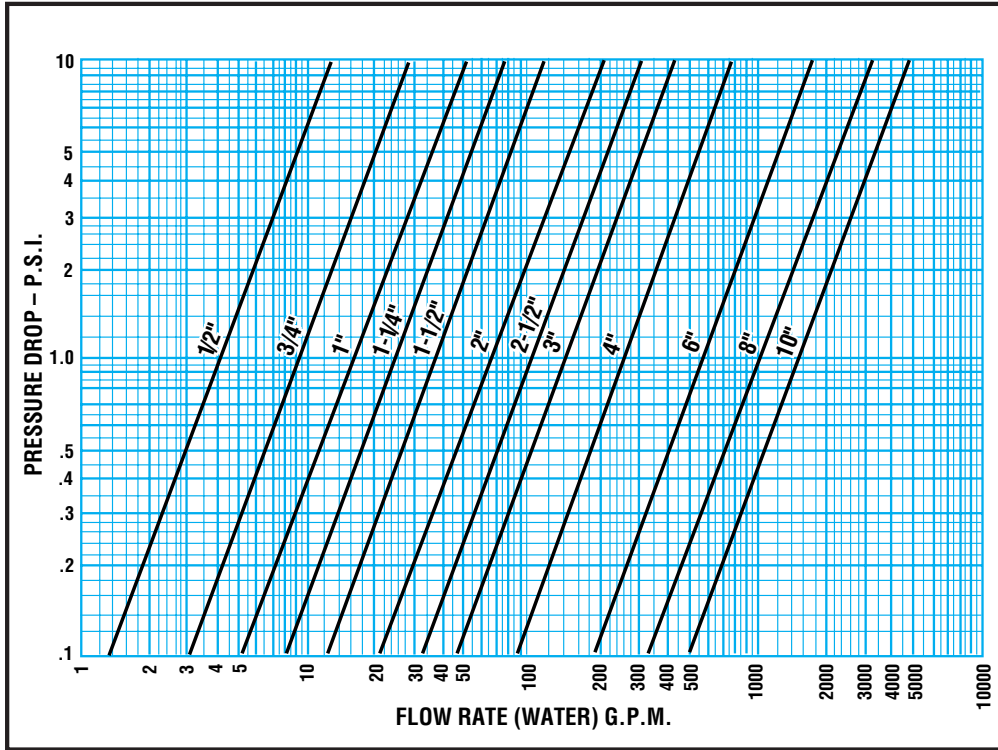
Consult us for 12" and larger size dimensions. Dimensions and weights are for references only. Contact us for certified drawings.

Typical Perforations (Shown Actual Size)



Y STRAINERS

Water Pressure Drops



Calculating Saturated Steam Pressure Drop

Example:

Pressure = 300 psig
Flow Rate = 20,000 lb/hr
Strainer Size = 4 inches

1. Locate steam flow on Scale A.
2. Follow vertical line to required pressure.
3. Follow horizontal line to strainer size.
4. Follow vertical line downward and read pressure drop on Scale C.
5. Pressure drop equals 1.25 psi.

Calculating Superheated Steam Pressure Drop

Example:

Pressure = 300 psig
Flow Rate = 18,000 lb/hr
Strainer Size = 4 inches

1. Locate steam flow on Scale B.
2. Follow horizontal line to superheat.
3. Follow vertical line to pressure.
4. Follow horizontal line to strainer size.
5. Follow vertical line downward and read pressure drop on Scale C.
6. Pressure drop equals 1.25 psi.

Note: Use the superheat temperature value above the saturated steam temperature to obtain the point on this graph.

Consult Eaton for 12" and larger sizes.

Steam Pressure Drops

