

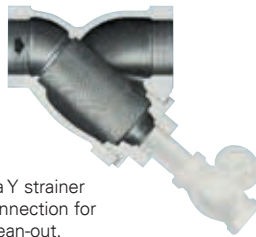
# Model 85



- 1/4" to 10"
- Carbon steel and stainless steel
- Threaded, flanged or socket weld connections

### Features

- Compact design
- Bolted or threaded covers
- Standard stainless steel screens
- Horizontal or vertical installation

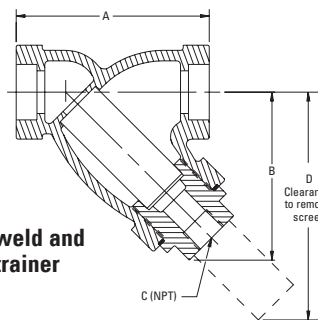


Cross-section of a Y strainer with "blow-off" connection for quick and easy clean-out.

### Options

- Basket perforations from 1/32" to 1/2"
- Basket mesh from 20 to 400
- MONEL® screens

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Typical socket weld and threaded Y strainer

Eaton Model 85 Y strainers are engineered to withstand aggressive industrial and commercial applications. Y strainers protect downstream process system components by mechanically removing unwanted solids from liquid, gas or steam lines by means of a perforated or wire mesh straining element.

To protect against any bypass, the Model 85 Y strainers are manufactured with a precision-machined screen seat on the body of the strainer and high-quality stainless steel screens fabricated to fit the strainer body perfectly. Model 85 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.

For cost-effective straining solutions, Y strainers work well in applications in which the amount of material to be removed from the flow is relatively small—resulting in long intervals between screen cleanings. The strainer screen is manually cleaned by shutting down the line and removing the strainer cap.

For applications with heavier dirt loading, Y strainers fitted with a "blow-off" connection permit cleaning of the screen without removing it from the strainer body.

### Eaton Model 85 Y strainers 1/4" to 10" carbon or stainless steel-threaded, socket weld or flanged

Size	Material	End connection	Cover	Rating (WOG) non-shock
1/4" to 2"	Carbon steel	Threaded or socket weld 600#	Threaded	102 bar @ 38 °C
1/4" to 2"	Stainless steel	Threaded or socket weld 600#	Threaded	99 bar @ 38 °C
1/2" to 10"	Carbon steel	Flanged 150#	Bolted	20 bar @ 38 °C
1/2" to 10"	Carbon steel	Flanged 300#	Bolted	51 bar @ 38 °C
1/2" to 10"	Stainless steel	Flanged 150#	Bolted	19 bar @ 38 °C
1/2" to 10"	Stainless steel	Flanged 300#	Bolted	50 bar @ 38 °C

### Socket weld, threaded carbon steel or stainless steel – 600# (in/mm)

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

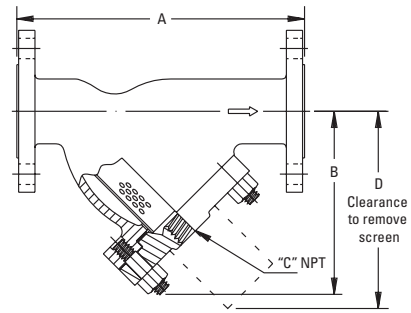
Consult Eaton for 12" and larger size dimensions. Dimensions and weights are for references only. Contact Eaton for certified drawings.

# Model 85Y Strainer

## Flanged carbon steel or stainless steel – 150# (in/mm)

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

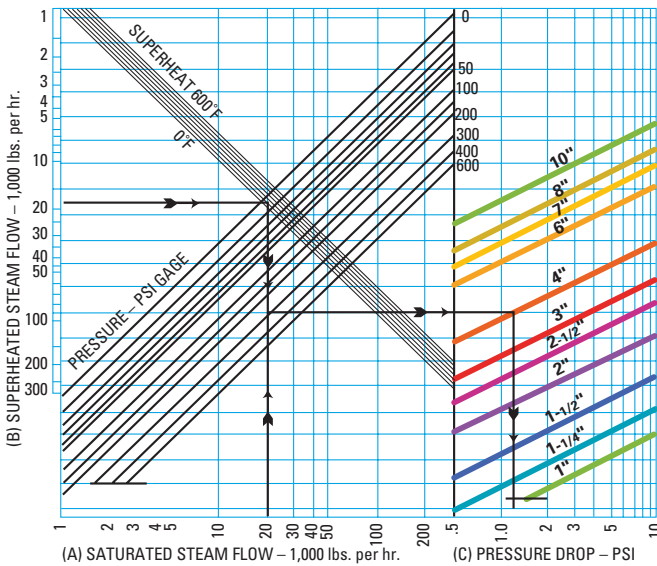
## Typical flanged Y strainer



## Flanged carbon steel or stainless steel – 300# (in/mm)

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

## Steam pressure drops



### Calculating saturated steam pressure drop

Example: Pressure = 20 bar  
Flow rate = 55,000 kg/h  
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 horizontal line downward and read pressure drop on Scale C.
5. Pressure drop equals 114 bar.

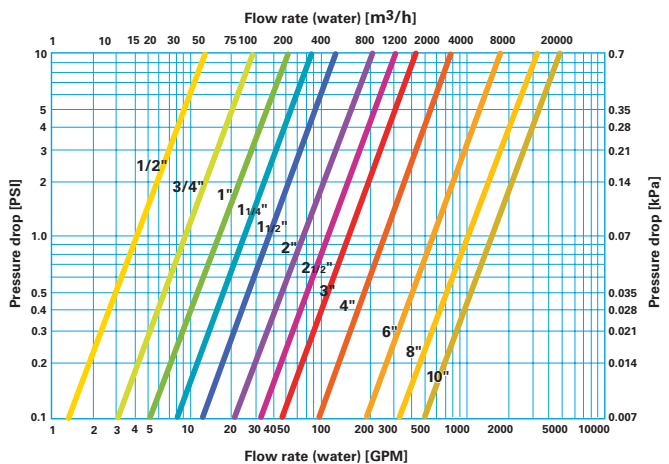
### Calculating superheated steam pressure drop

Example: Pressure = 20 bar  
Flow rate = 40,000 kg/h  
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 and read pressure drop on Scale C.
6. Pressure drop equals 114 bar.

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

## Flow rates



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EF-SSEA-4  
08-2018



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