LENNTECH

Y Strainer

Model 85

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

Features

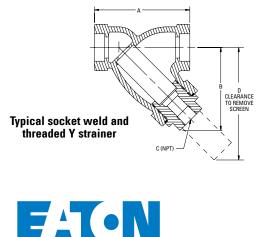
- Compact design
- Bolted or threaded covers
- Standard stainless steel screens
- Horizontal or vertical installation

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

MONEL® is a registered trademark of Special Metals Corporation group of Companies.





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 85Y strainers are manufactured with a precisionmachined screen seat on the body of the strainer and highquality 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	1480 psi (102 bar)	
1⁄4" to 2"	Stainless steel	Threaded or socket weld 600#	Threaded	1440 psi (99 bar)	
1⁄2" to 10"	Carbon steel	Flanged 150#	Bolted	285 psi (20 bar)	
¹ /2" to 10"	Carbon steel	Flanged 300#	Bolted	740 psi (51 bar)	
1⁄2" to 10"	Stainless steel	Flanged 150#	Bolted	275 psi (19 bar)	
1⁄2" to 10"	Stainless steel	Flanged 300#	Bolted	720 psi (50 bar)	
* @ 100 °F (38 °C)					

@ 100 °F (38 °C)

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

	•				
Size	А	В	C (Nom.)	D	Wt (lb / kg)
1/4	3.00 / <mark>76</mark>	3.00 / <mark>76</mark>	3⁄8	4.00 / 102	2 / 0.9
3⁄8	3.00 / <mark>76</mark>	3.00 / <mark>76</mark>	3⁄8	4.00 / 102	2 / 0.9
1/2	3.00 / <mark>76</mark>	3.00 / <mark>76</mark>	3⁄8	4.00 / 102	2 / 0.9
3⁄4	3.75 / <mark>95</mark>	3.50 / <mark>89</mark>	3⁄8	4.75 / <mark>121</mark>	4 / 1.8
1	4.63 / 118	4.00 / 102	1/2	5.75 / 1 <mark>46</mark>	6 / 2.7
1-1⁄4	5.00 / <mark>127</mark>	4.63 / <mark>118</mark>	3⁄4	6.50 / 1 <mark>65</mark>	8 / <mark>3.6</mark>
1-1⁄2	5.63 / <mark>143</mark>	5.25 / <mark>133</mark>	3⁄4	7.50 / <mark>19</mark> 1	10 / <mark>4.5</mark>
2	7.00 / 178	5.75 / 1 <mark>46</mark>	1	8.75 / 222	15 / <mark>6.8</mark>

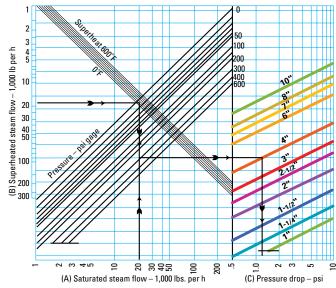
Consult Eaton for 12" and larger size dimensions. Dimensions and weights are for references only. Contact Eaton for certified drawings.

Model 85Y Strainer

Flanged car	rbon steel o	r stainless ste	el – 150#	# (in/mm)
i langea ca	DOIL SLEEL OF	310111033 310		r (111/11111)

Size	Α	В	C (Nom.)	D	Wt (lb / kg)
1/2	5.00 / 127	2.75 / <mark>70</mark>	3⁄8	3.50 / <mark>89</mark>	5 / <mark>2.3</mark>
3⁄4	5.63 / <mark>143</mark>	3.00 / <mark>76</mark>	3⁄8	4.00 / 102	7 / 3.2
1	6.38 / <mark>162</mark>	3.64 / <mark>92</mark>	1⁄2	5.00 / <mark>127</mark>	9 / 4.1
1-1⁄4	7.25 / 184	4.25 / <mark>108</mark>	3⁄4	5.75 / <mark>146</mark>	14 / <mark>6.3</mark>
1-1/2	8.88 / 226	5.75 / <mark>146</mark>	3⁄4	6.50 /1 <mark>65</mark>	18 / <mark>8.2</mark>
2	7.88 / <mark>200</mark>	6.00 / <mark>152</mark>	1	8.25 / <mark>210</mark>	16 / <mark>7.3</mark>
2-1/2	9.75 / <mark>248</mark>	6.50 / <mark>165</mark>	1	9.25 / <mark>235</mark>	25 / <mark>11.4</mark>
3	10.00 / <mark>254</mark>	7.25 / <mark>184</mark>	1-1⁄4	10.50 / <mark>267</mark>	35 / <mark>16</mark>
4	12.13 / <mark>308</mark>	9.75 / <mark>248</mark>	1-1/2	14.75 / <mark>375</mark>	70 / <mark>32</mark>
6	18.50 / <mark>470</mark>	14.25 / <mark>362</mark>	2	21.00 / 533	130 / <mark>59</mark>
8	21.63 / <mark>549</mark>	18.00 / <mark>457</mark>	2	26.75 / <mark>679</mark>	240 / 109
10	26.00 / <mark>660</mark>	22.50 / <mark>565</mark>	2	33.75 / <mark>857</mark>	300 / <mark>136</mark>

Steam pressure drops



Calculating saturated steam pressure drop

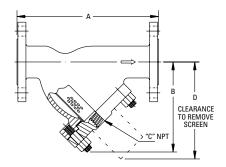
Example: Pressure = 300 psig (20 bar) Flow rate = 20,000 lb/h (55,000 kg/h) Strainer size = 4 inches

- 1. Locate steam flow on Scale A.
- Follow vertical line to required pressure.
 Follow begins the straight line to required pressure.
- Follow horizontal line to strainer size.
 Follow vertical line downward and
- Fullow vertical line downward and read pressure drop on Scale C.
- 5. Pressure drop equals 1.25 psi (114 bar).

Calculating superheated steam pressure drop

- Example: Pressure = 300 psig (20 bar) Flow rate = 18,000 lb/h (40,000 kg/h)
- Strainer size = 4 inches
- Locate steam flow on Scale B.
 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 1.25 psi (114 bar).
- Note: Use the superheat temperature value above the saturated steam temperature to obtain the point on this graph.

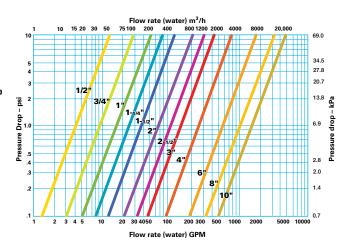
Typical flanged Y strainer



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

langea	ourbon steel	or stanness	51001 000	·# (III/ IIII/	
Size	Α	B	C (Nom.)	D	Wt (lb / kg)
1⁄2	5.25 / <mark>133</mark>	2.75 / <mark>70</mark>	3⁄8	3.50 / <mark>89</mark>	6 / <mark>2.7</mark>
3⁄4	6.00 / <mark>152</mark>	3.00 / <mark>76</mark>	3⁄8	4.00 /102	9 / <mark>4.1</mark>
1	6.88 / <mark>175</mark>	3.63 / <mark>92</mark>	1/2	5.00 / 127	13 / <mark>6.0</mark>
1-1⁄4	7.75 / <mark>197</mark>	4.25 / <mark>108</mark>	3⁄4	5.75 / <mark>146</mark>	18 / <mark>8.2</mark>
1-1⁄2	9.38 / <mark>238</mark>	5.75 / <mark>146</mark>	3⁄4	6.50 / <mark>165</mark>	24 / 11
2	8.63 / <mark>219</mark>	6.25 / <mark>159</mark>	1	8.25 / <mark>210</mark>	30 / 13.6
2-1⁄2	10.63 / <mark>270</mark>	7.00 / 178	1	9.25 / <mark>235</mark>	40 / 18.2
3	12.00 / <mark>305</mark>	7.75 / <mark>197</mark>	1-1⁄4	10.50 / <mark>267</mark>	55 / <mark>25</mark>
4	14.50 / <mark>368</mark>	10.50 / <mark>267</mark>	1-1/2	14.75 / <mark>375</mark>	105 / <mark>48</mark>
6	20.00 / 508	14.75 / <mark>375</mark>	2	21.00 / 533	200 / <mark>91</mark>
8	23.38 / <mark>594</mark>	18.75 / <mark>476</mark>	2	27.00 / 686	360 / <mark>164</mark>
10	27.38 / <mark>695</mark>	22.75 / <mark>578</mark>	2	34.50 / <mark>876</mark>	430 / <mark>195</mark>

Flow rates



US EF-SSEA-4 6-2014

LENNTECH

info@lenntech.com Tel. +31-152-610-900 www.lenntech.com Fax. +31-152-616-289 © 2014 Eaton. All rights reserved. All trademarks and registered trademarks are the property of their respective owners. All information and recommendations appearing in this brochure concerning the use of products described herein are based on tests believed to be reliable. However, it is the user's responsibility to determine the suitability for his own use of such products. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Eaton as to the effects of such use or the results to be obtained. Eaton assumes no liability arising out of the use by others of such products. Nor is the information herein to be construed as absolutely complete, since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.



