Screen & Basket Facts

Perforations

Dependent upon the thickness of the metal, .020 through 1" perforations are available. In the case of monel or stainless steel, the smallest perforation available is usually twice the thickness of the metal. Rather than use the light gauge sheet metal which would be necessary in obtaining exceptionally small perforations, we suggest heavy gauge perforated metal screens with large perforations lined with wire mesh cloth. Obviously this would not apply in the case of small size strainers in which lighter gauges of metal are satisfactory.

Mesh

The term "mesh" applies to woven wire cloth and is not to be confused with perforations, which applies to perforated sheet metal. While mesh screens are satisfactory for small sizes of screwed end Y strainers, we consider them to be unsuitable for larger strainers unless furnished as a liner for a perforated metal screen or basket. Mesh screens are primarily furnished for very fine straining with openings so small they could not be obtained in perforated metal.

EXAMPLE: 100 mesh means 100 vertical and 100 horizontal strands of wire per square inch, resulting in 10,000 openings of .0045" square.

Ratio and Capacity

The 4" to 1" ratio means that the open area of the screen or basket should be equal to four times the cross-sectional area of the corresponding pipe size. To compute capacity, use the following formula:

EXAMPLE: 3" Model 758 flanged Y strainer, with ⅛" perforated screen.

78.5 sq. in. total screen area
x .40 (⅛" perforated metal has a 40 % open area)
31.4 (total open area of screen)
31.4/7.393 (area of 3 inch pipe) = 4.25 or "4.25 to 1 ratio"

See Technical Data Section of this Engineering binder for Area of Circles chart.

Pressure Drop

The pressure drop charts published in this catalog are the result of extensive physical tests. Consult our Engineering Department for pressure drop information on steam, gases or viscous fluids.

Suggested Perforations or Meshes

SERVICE		STRAINER			
		SIZE	COARSE	MEDIUM	FINE
WATER		¼" - 2"	.062	.033	.020
		2½" - 4"	⅛	.062	.045
		5" up	¼	3/16	⅛
OIL	LOW VISCOSITY	¼" - 2"	.062	.033	.020
		2½" - 6"	3/16	⅛	.062
		8" up	⅜	¼	⅛
	MEDIUM VISCOSITY	¼" - 2"	1/10	.062	.033
		2½" - 6"	¼	3/16	⅛
		8" up	⅜	¼	3/16
	HIGH VISCOSITY	¼" - 2"	⅛	1/10	.062
		2½" - 6"	⅜	¼	3/16
		8" up	½	⅜	¼
GASOLINE		¼" - 2"	.033	.020	.005*
		2½" - 6"	.062	.033	.009*
		8" up	1/10	1/32*	1/64*
STEAM		¼" - 2"	.062	.033	.020
		2½" up	.062	3/64	1/32*
AIR/GAS		¼" - 2"	.033	.009*	.005*
		2½" - 6"	.062	.033	.009*
		8" up	⅛	1/10	1/64*

* Mesh lined Screen. See Strainer Information in this Section of the Engineering binder for more information.

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