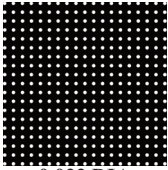


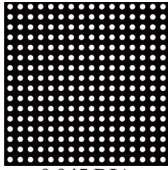
## SCREEN OPTIONS

The screen or basket is the heart of the Keckley strainer. The media flows into the open end of the screen or basket and is strained as it passes through the screen towards the outlet. All particles larger than the screen opening are trapped inside. Screens are provided in perforated metal or wire mesh, depending on strainer size and/or material being strained. Only the best materials of the proper gauge to suit the service are used. All seams are spot welded for maximum strength. Double or reinforced screens are spot welded on the end peripheries as well as the seams. Reinforced screens consist of a perforated sheet lined with wire mesh. Keckley engineers have designed the screens to provide maximum total screen area.

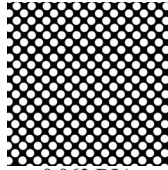
### Perforated Sheet Metal Sizes



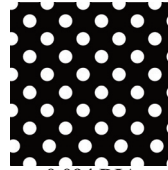
**0.033 DIA**  
1/32" Approximately  
331 Holes Per Sq. In.  
29% Open Area



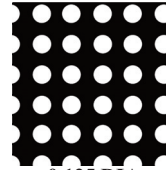
**0.045 DIA**  
3/64" Approximately  
225 Holes Per Sq. In.  
33% Open Area



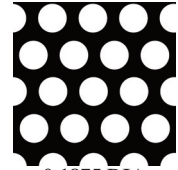
**0.062 DIA**  
1/16" Approximately  
98 Holes Per Sq. In.  
30% Open Area



**0.094 DIA**  
3/32" Approximately  
51 Holes Per Sq. In.  
36% Open Area

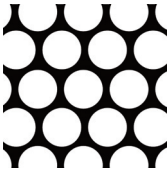


**0.125 DIA**  
1/8" Approximately  
29 Holes Per Sq. In.  
43% Open Area



**0.1875 DIA**  
3/16" Approximately  
18 Holes Per Sq. In.  
51% Open Area

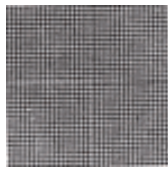
### Mesh Sizes



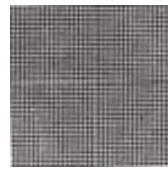
**0.25 DIA**  
1/4" Approximately  
12 Holes Per Sq. In.  
58% Open Area



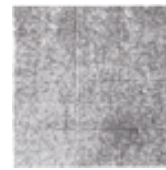
**20 MESH**  
Wire Dia. 0.015  
Opening 0.034  
49% Open Area



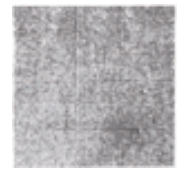
**30 MESH**  
Wire Dia. 0.011  
Opening 0.021  
45% Open Area



**40 MESH**  
Wire Dia. 0.009  
Opening 0.016  
41% Open Area



**50 MESH**  
Wire Dia. 0.0085  
Opening 0.011  
33% Open Area



**60 MESH**  
Wire Dia. 0.0065  
Opening 0.010  
38% Open Area



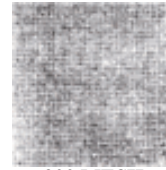
**80 MESH**  
Wire Dia. 0.0055  
Opening 0.0070  
31% Open Area



**100 MESH**  
Wire Dia. 0.0045  
Opening 0.0055  
30% Open Area



**150 MESH**  
Wire Dia. 0.0026  
Opening 0.0041  
37% Open Area



**200 MESH**  
Wire Dia. 0.0021  
Opening 0.0029  
34% Open Area



**\*300 MESH**  
Wire Dia. 0.0012  
Opening 0.002  
41% Open Area

\*300 Mesh available in Duplex Strainers only.

Stainless steel screens are standard in all strainers except for Style F-300, E-300 and flanged bronze strainers; these strainers are supplied with brass screens. Other screen materials are available upon request (i.e. 316 SS, Monel, Hastelloy C276, Alloy 20, Duplex Stainless Steel, Titanium). In stainless steel, the smallest perforation obtainable is generally twice the thickness of the metal itself. Therefore, perforations from 0.033" through 0.250", dependent on metal thickness, are readily available. When extra fine straining is required of the larger strainers, reinforced screens consisting of a perforated sheet lined with wire mesh are recommended. This allows removal of fine particles with added durability.



**Strainer Information**

**MAGNETS**

Magnets can be provided as an option which, when placed inside the strainer screen, will remove very fine iron or steel particles present in fluid.

Magnets provide protection for equipment against abrasive damage.

Strainer Size	Magnets required
2½" – 4" .....	1 magnets
5" – 6" .....	2 magnets
8" – 10" .....	3 magnets
12" – 14" .....	4 magnets
16" – 18" .....	5 magnets

\*Sizes 2" and smaller strainers can be furnished with magnetic plugs.

**REINFORCING BANDS**

Reinforcing bands can be used to add additional strength and durability to the screens or baskets when straining conditions have higher than normal pressure drops.

**DETERMINING NET FREE AREA RATIOS**

To calculate the ratio, use the following formula:

**Formula:**

1. Choose the size perforation or mesh needed to remove particles from the media passing through the strainer.
2. Multiply the *TOTAL SCREEN AREA* by the *PERCENT OF OPEN AREA of the screen*. The result equals the *OPEN AREA of the screen*.
3. Divide the result (*OPEN AREA of the screen*) by the *INSIDE AREA of the pipe* to give the *ratio of net free area of the screen to the pipe*.

**Example:** (2" Style B screwed "Y" strainer with a 20 mesh 304 stainless steel screen)

$$\begin{array}{r}
 36.23 \text{ (total screen area in}^2\text{)} \\
 \times .49 \text{ (20 mesh = 49\% open area)} \\
 \hline
 17.753 \text{ (total open area of screen)}
 \end{array}$$

$$17.753'' / 3.356'' \text{ (inside area of 2'' pipe)} = 5.29:1$$

(RATIO OF NET FREE AREA OF THE SCREEN TO PIPE AREA)

<b>INSIDE AREA OF THE PIPE (in<sup>2</sup>)</b>							
Size	(in <sup>2</sup> )	Size	(in <sup>2</sup> )	Size	(in <sup>2</sup> )	Size	(in <sup>2</sup> )
1/4"	0.104	1-1/4"	1.496	4"	12.732	12"	111.946
3/8"	0.191	1-1/2"	2.036	5"	20.008	14"	135.294
1/2"	0.304	2"	3.356	6"	28.894	16"	176.738
3/4"	0.534	2-1/2"	4.788	8"	48.914	18"	223.71
1"	0.864	3"	7.394	10"	78.865	20"	278.04

<b>Screen Opening Equivalents</b>				
Fractional Inches	Decimal Inches	Millimeters	Microns	Mesh
--	0.001	--	25	--
--	0.0015	--	37	400
--	0.002	--	50	300
--	0.003	--	75	<b>200</b>
--	0.004	1/10	100	<b>150</b>
--	0.005	1/8	125	115
--	0.006	--	149	<b>100</b>
--	0.007	--	177	<b>80</b>
--	0.010	1/4	250	<b>60</b>
--	0.011	--	280	<b>50</b>
--	0.016	--	406	<b>40</b>
--	0.020	1/2	500	--
--	0.021	--	533	<b>30</b>
--	0.030	3/4	750	--
<b>1/32</b>	0.033	--	838	--
--	0.034	--	840	<b>20</b>
--	0.039	1	1000	16
<b>3/64</b>	0.045	--	1143	--
--	0.046	--	1190	14
--	0.055	--	1410	12
--	0.059	1-1/2	1500	--
<b>1/16</b>	0.062	--	1575	--
--	0.065	--	1680	10
--	0.079	2	2000	9
--	0.093	--	2380	8
<b>3/32</b>	0.094	--	2388	--
--	0.110	--	2790	7
--	0.118	3	3000	--
<b>1/8</b>	0.125	--	3175	--
--	0.131	--	3330	6
--	0.156	4	4000	5
--	0.185	--	4700	4
<b>3/16</b>	0.1875	--	4763	--
--	0.197	5	5000	--
--	0.236	6	6000	--
<b>1/4</b>	0.250	--	6350	--
--	0.263	--	6700	3

Sizes in **bold red** are available from stock at Keckley Company. Consult Factory for the availability of other sizes including those not listed.