

Screen Selection Chart To Fit Over Pipe

Pipe Size	Nominal OD	Inside Dia	Wrap	Support
1/2"	1.375"	1.020"	60	60
3/4"	1.470"	1.150"	60	60
1"	1.750"	1.410"	60	60
1-1/4"	2.050"	1.740"	60	60
1-1/2"	2.375"	2.065"	60	60
2"	2.875"	2.505"	60	60
2-1/2"	3.500"	2.950"	60	90
3"	4.000"	3.610"	60	90
4"	5.250"	4.900"	60	90

For Sizes Larger Than 4" Contact Concord Screen

**Screen Lateral:**

As an efficient collector, the screen lateral is available in several sizes, with various slots and end fittings. Most commonly, the screen lateral is provided with a solid cap on one end and a threaded pipe connection on the other end.

**Pipe Based Lateral:**

Screen laterals are supplied with an internal or external distributor pipe when extra strength and/or more effective backwashing distribution is required.

**Open Area of a Concord Screen**

To determine the open area of your Concord Screen, divide the slot opening size by the sum of the slot opening size plus the profile width of the wrap wire, then multiply the result by 100.

$$\% \text{ Open Area} = \frac{\text{Slot opening size}}{\text{Slot opening size} + \text{Width of wrap wire}} \times 100$$

U.S.	INCHES	MICRONS	MILLIMETRES
3	.265	6730	6.73
3	.223	5660	5.66
4	.187	4760	4.76
5	.157	4000	4.00
6	.132	3360	3.36
7	.111	2830	2.83
8	.0937	2380	2.38
10	.0787	2000	2.00
12	.0661	1680	1.68
14	.0555	1410	1.41
16	.0469	1190	1.19
18	.0394	1000	1.00
20	.0331	841	.84
25	.0280	707	.71
30	.0232	595	.59
35	.0197	500	.50
40	.0165	420	.42
45	.0138	354	.35
50	.0117	297	.297
60	.0098	250	.250
70	.0083	210	.210
80	.0070	177	.177
100	.0059	149	.149
120	.0049	125	.125
140	.0041	105	.105
170	.0035	88	.088
200	.0029	74	.074
230	.0024	63	.063
270	.0021	53	.053
325	.0017	44	.044
400	.0015	37	.037



**MEDIA RETENTION SCREENS**

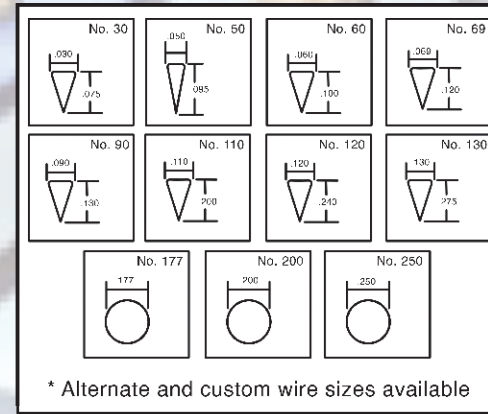


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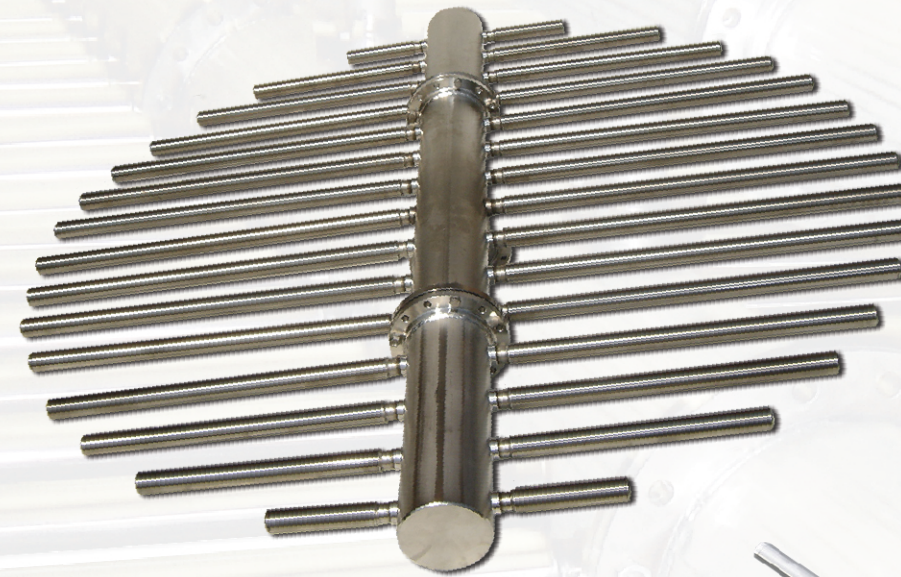
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Wedge wire screen has long been considered the most effective media for use in underdraining. Wedge wire has an inherent even pattern of open area that allows for accurate flow distribution. Its internal support rod structure gives it a higher collapse strength allowing it to handle the most demanding load applications. Constructed of stainless steel and many exotic alloys wedge wire is easily worked to meet both typical and unique underdrain designs. Although Concord Screen supplies a range of standard wire shapes, an in house wire forming facility allows for custom shaping if required by design.



### Lateral Assemblies.

Concord Screen uses its wedgewire screen to manufacture Hub and Lateral assemblies. Typical configuration include both horizontal herring bone style and vertical secured round hub. Concord Screen recognizes the specific needs of each and every customer. With an onsite ability to form wire, Concord Screen is able to control all variables in the wedge wire screen manufacturing process. Standard sized wires are available to complete a full range of wedge wire screen diameters and lengths.



### Header Assembly

In horizontal installations a main header is typically bolted into a longitudinal vessel. The header is supplied with welded couplings to accept either screen laterals or pipe based screen laterals.



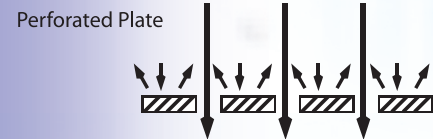
### Hub Assembly

With a vessel mounted upright the pattern required of the underdrain assembly is round. This style is achieved with a central hub. Again couplings are typically welded to the hub to accept either wedge wire screen laterals or pipe based laterals.



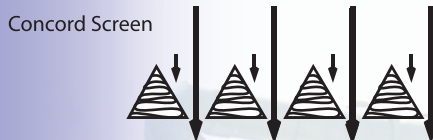
### Resin Traps and Drain Downs

When utilizing expensive resins and when quality of the treated liquid cannot be compromised, resin traps are installed. These screens are secured after the treatment vessel, down stream from the retention screen. The Resin Trap and Drain Down both act as a safe guard against any tramp material.



### During Regeneration.

The triangular shape of the surface wire on a screen gives wedgewire an extreme advantage when flow is reversed using either air or liquid. While the media side of the screen is smooth the opposite side of a screen acts much like a nozzle. When flow is delivered into the nozzle like entrance any particulate that is embedded in the screen is easily freed. Undersized particulate is either retained in the above media or removed through more efficient backflushing process. When it's necessary to clean the surface of the screen, back washing is made more effective in the Concord Screen. This is due to the abundance of open area and wedge wire construction. Typical perforated plate has a large amount of "Dead Space" which leads to reduced backwash efficiency.



### Nozzle Assemblies

One of the more traditional styles of underdraining uses a series of individual screens fixed to a plate in the base of a vessel. Nozzle assemblies are easily installed and easily maintained. Typically individual screens are fabricated with a threaded pipe stem. The stem will be inserted through a vessel orifice plate and secured with a nut on its opposite side. There are many variations of wedge wire screen nozzles. Concord Screen is well equipped to supply anything from the most typical to the most unique in design.



### Support Grid Assemblies.

Flat support grids are available in single piece construction. Typical designs are fabricated in sections to allow installation through a manway. Sections are fitted with flanged support frames. During installation the sections will be laid flat on an existing vessel support structure. Sections will be bolted together creating a single complete support grid. With each application loading requirements change. Support grids are available with many different wire configurations to achieve the most demanding loads. Additional supports are often utilized to accommodate extreme load conditions.

