GENERAL

Quality and flexibility have top-priority.

Wedge wire screens are manufactured around the world using different techniques and for different applications. The level of quality varies a lot. TRISLOT wedge wire screens are at the top !!

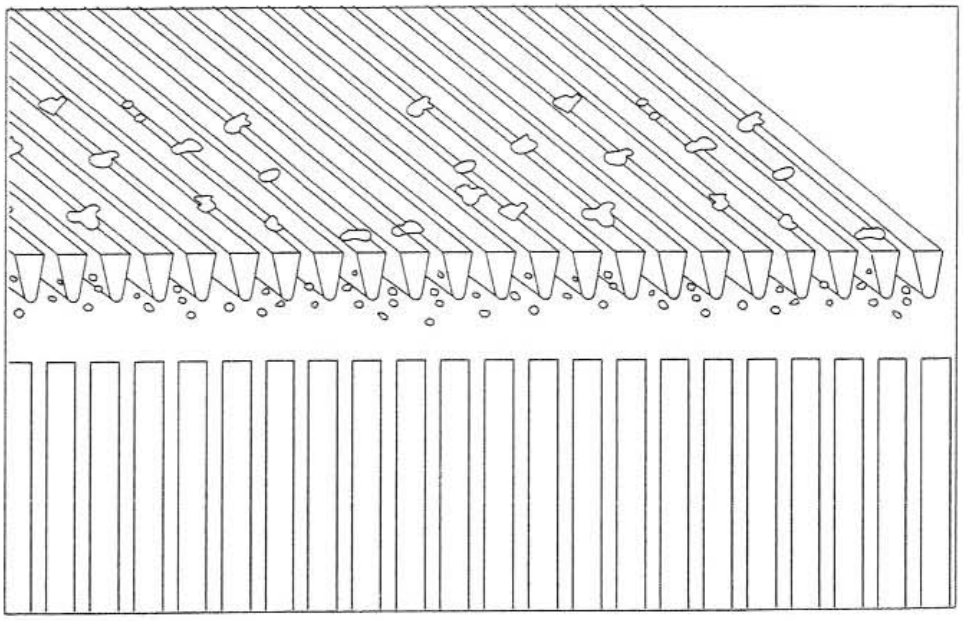
TRISLOT products meet the severest demands with respect to quality and they are manufactured according to specifications that are established with the application and the customers requirements in mind.

We emphasize the importance of thorough technical discussions with our customers, if possible at the disign phase. This can lead to improved products at lower cost.

The quality of our products depends on many different things, namely :

- materials
- tolerances
- surface conditions
- control systems

In this general introduction part of this brochure we will give some more details about these aspects



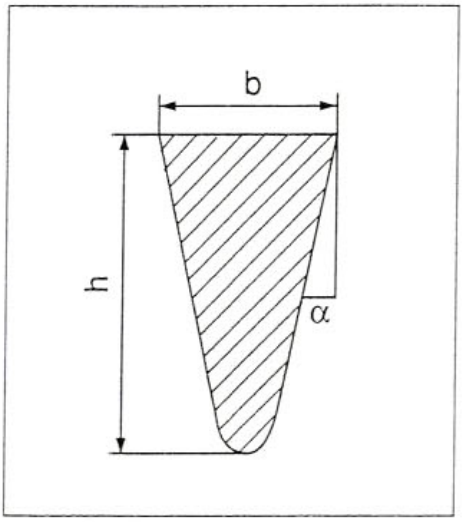
WELDED SCREENS

SURFACE WIRES

Several different V-shaped wires are available as standard. Some special wires (round, diamond shape) are available on request.

TRISLOT is also prepared to develop specific profile shapes for specific applications, provided that sufficient quantities are involved.

The following table indicates the standard surface profiles with specific data and availibility in the different material types.



b = width of profile
h = height of profile
α = relief angle
Q = section
W = section-modulus
I = moment of inertia

\+ available
\- not available

Profile	b (mm)	h (mm)	α (°)	Q (mm^2)	W (mm^3)	I (mm^4)	AISI 430	AISI 304	AISI 316L
12S	1	2	10	1.3	0.33	0.39	-	-	+
18S	1.5	2.5	12	2.4	0.75	1.11	-	-	+
22S	1.8	3.7	10	4.25	1.97	4.33	+	+	+
28S	2.2	4.5	10	6.33	5.57	9.56	+	+	+
34S	2.8	5.5	10	9.43	6.19	20.6	+	+	+
42S	3.4	6.8	10	14.48	12.07	49.12	+	+	+
50S	3.4	7.5	10	15.53	23.1	62.2	+	+	+

WELDED SCREENS

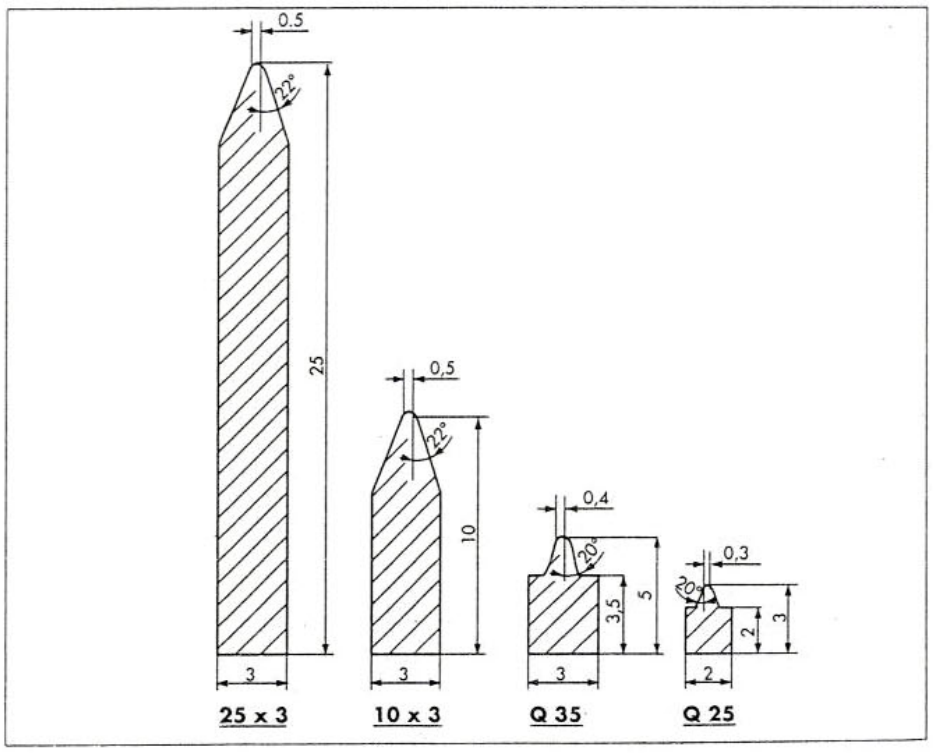
SUPPORT WIRES

The type of support wire is mainly selected with regard to the load on the screen. As standard, there is a choice of four different support wires, sufficient to solve alsmost all load problems.
These profiles are shaped in a way that allows for optimal welding quality.

TRISLOT is also willing to study the use or development of other support wires.

The following table gives data on the standard support wires.

Profile	Q (mm^2)	W (mm^3)	I (mm^4)	AISI 430	AISI 304	AISI 316L
Q25	4.66	1.39	2.51	-	-	+
Q35	11.92	6.03	17.9	-	-	+
10 x 3	26.13	31.86	178	+	+	+
25 x 3	71.13	245.45	3406	-	-	+



SLOT TUBES

TRISLOT slot tubes are composed of a V-shaped profile wire (surface wire) that is spirally wound around axial supporting profiles (support wires) and joined together by means of resistance welding.

This technology, originaly developed to make water well screens (large and heavy), has been brought to such a high level by TRISLOT, that now very precise and narrow slots can be produced and the tubes are also almost perfectly round instead of polygonal.

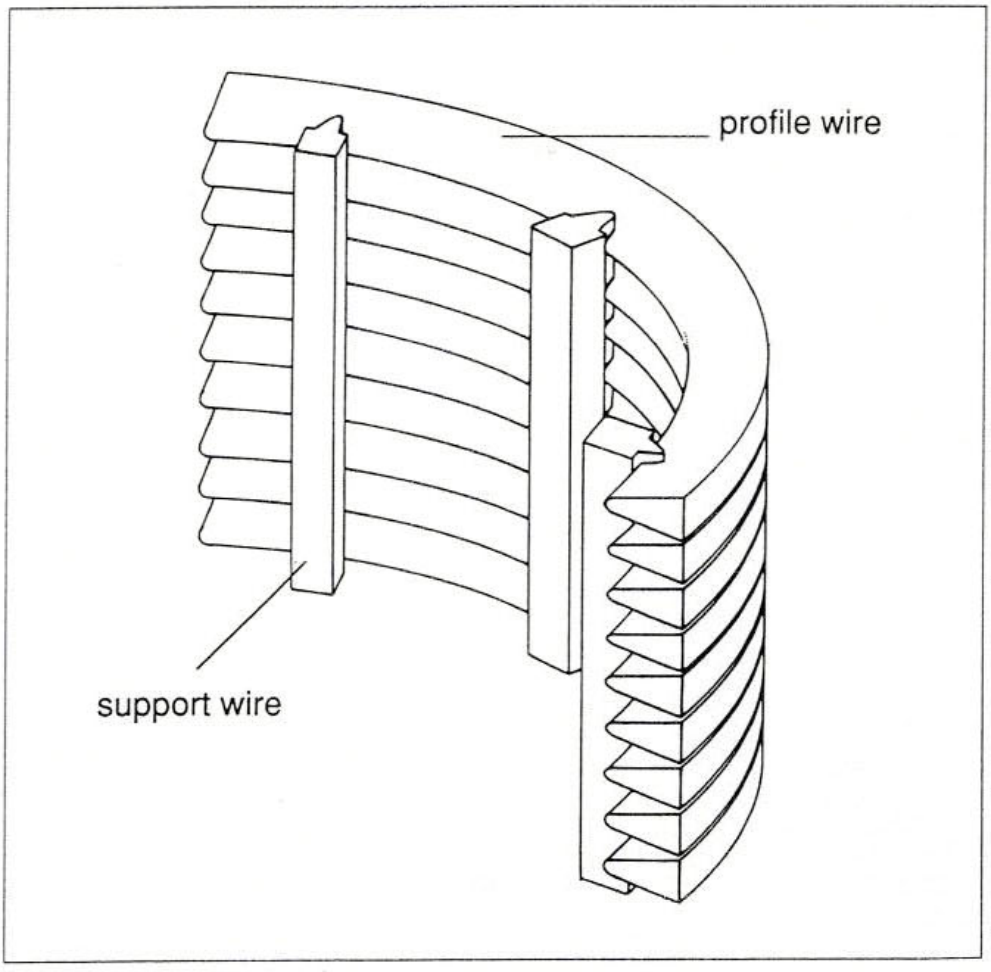
CONSTRUCTION

The construction of a slot tube is described as follows :

surface wire / support wire x number of support wires.

example : 12S/Q25 x 8

This means that the profile wire is 12S. The support wire is Q25 and there are 8 support wires, equally spaced in the 360° circle.
Many different profiles are available for surface and support wires. Basically the same profiles as for the welded flat screens can be used for slot tubes.



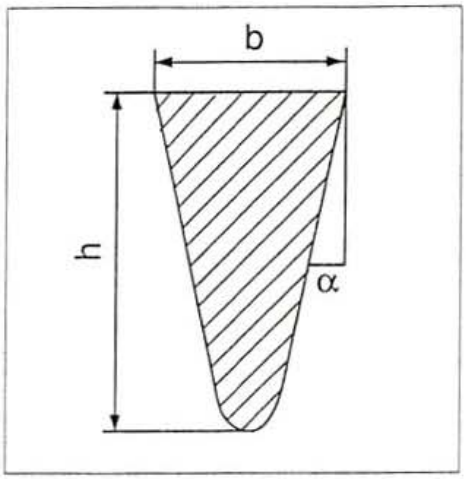
SLOT TUBES

SURFACE WIRES

A large selection of V-shaped surface wires is available.

Also, TRISLOT is prepared to develop new or specific wires providing there is enough potential volume.

In the table below are listed the available standard wires as well as their availability in the different materials.



b = width of profile
h = height of profile
α = relief angle
Q = section
W = section-modulus
I = moment of inertia

+available
- not available

Profile	b (mm)	h (mm)	α (°)	Q (mm^2)	W (mm^3)	I (mm^4)	AISI 430	AISI 304	AISI 316L
10S	0.75	1.4	10	0.58	0.213	0.122	-	-	+
11S	0.75	1.8	8	0.75	0.30	0.20	-	-	+
12S	1	2	10	1.3	0.33	0.39	-	-	+
18S	1.5	2.5	12	2.4	0.75	1.11	-	-	+
22S	1.8	3.7	10	4.25	1.97	4.33	+	+	+
28S	2.2	4.5	10	6.33	3.57	9.56	+	+	+
34S	2.8	5.5	10	9.43	6.19	20.6	+	+	+
42S	3.4	6.8	10	14.48	12.07	49.12	+	+	+
50S	3.4	7.5	10	15.53	23.1	62.2	+	+	+

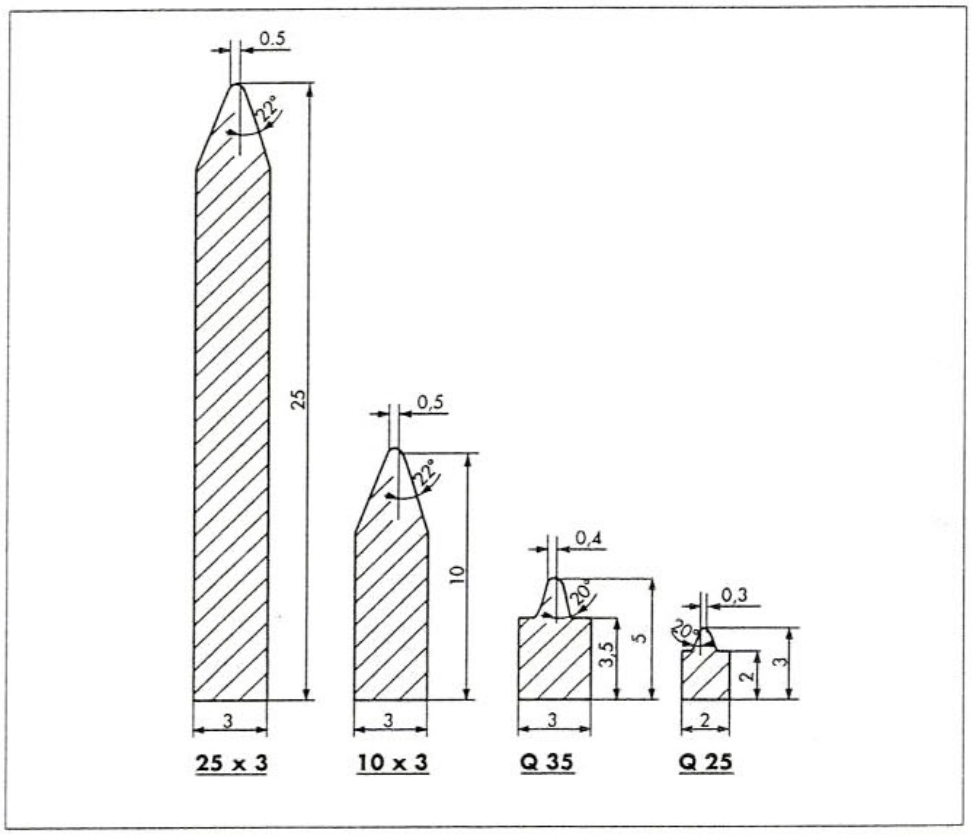
SLOT TUBES

SUPPORT WIRES

The same support wires as for the welded screens are available.

All are designed for optimal welding characteristics. The support wire is selected with regard to the loads that the tube has to take.

TRISLOT will be glad to advise you on which support wires to use.



Profile	Q (mm^2)	W (mm^3)	I (mm^4)	AISI 430	AISI 304	AISI 316L
Q25	4.66	1.39	2.51	-	-	+
Q35	11.92	6.03	17.9	-	-	+
10 x 3	26.13	31.86	178	+	+	+
25 x 3	71.13	245.45	3406	-	-	+

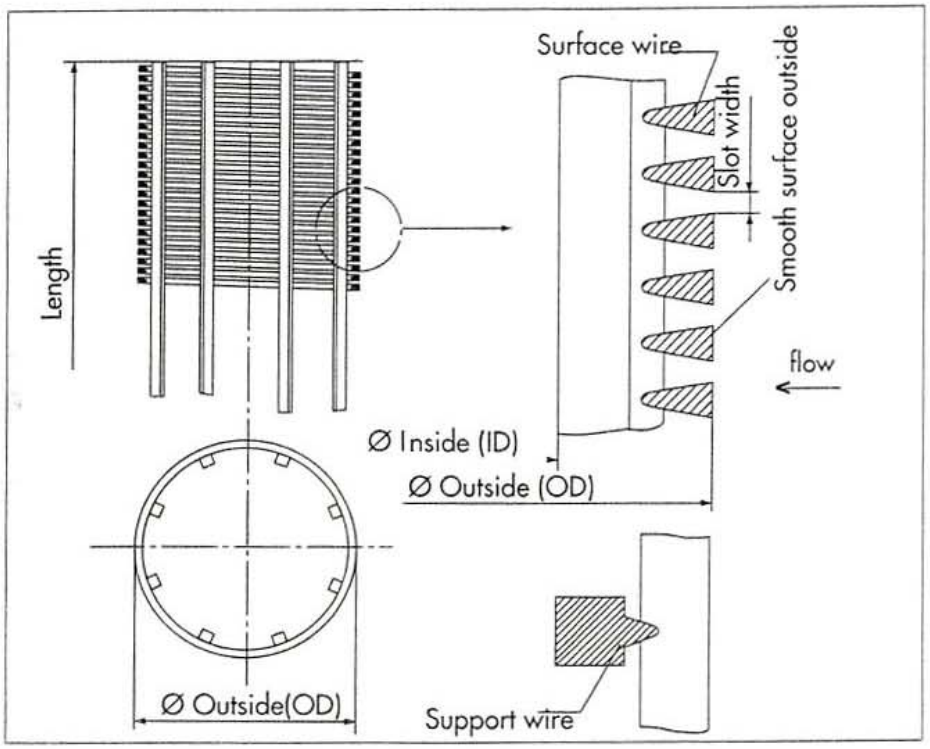
SLOT TUBES

STANDARD CONSTRUCTIONS

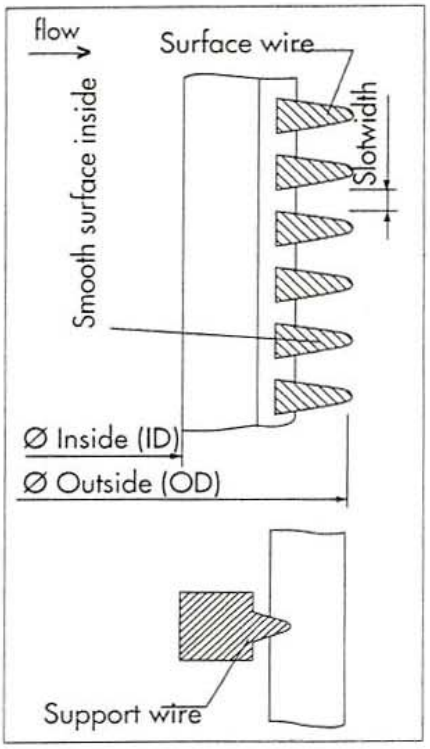
From a technical standpoint, it is possible to manufacture slot tubes with an outside diameter from 15 up to 630 mm. In order to reduce tooling costs and make economical production possible, TRISLOT has developed a range of standard diameters.

These diameters are chosen in such a way that they correspond to normal pipe sizes. (like ISO).
Under the normal construction, the flat side of the surface wire is at the outside of the tube. This is the construction that is used for filtration out to in, as in sketch A.

Sketch A



Sketch B



In some cases, it is preferred to have filtration from inside to outside (in to out). For those applications the surface profile is inverted i.e. the flat face of the surface wire is at the inside of the tube. To indicate the type of construction in a clear way, the letter R is added to the construction notation.(see sketch B)

Example : R 12S/Q25 x 8

This "R"-construction is, in some profile combinations, not possible. The availability is indicated in the tables on page 3.5. and 3.6. Although there is a large selection of standard constructions, it may be necessary to make something special, such as other diameters, other profile combinations or more or less support wires. TRISLOT will be glad to advise you on the possibilities.

SLOT TUBES

DN (mm)	OD (mm)	Construction	R	ID (mm)	Slot width(mm) min.	Slot width(mm) max.	Lmax. (mm)	Weight factors k_1	Weight factors k_2
30	30	10S/Q25x8	-	22.4	0.050	3	1700	0.30	0.58
	30	12S/Q25x8	+	21.4	0.050	3	1700	0.30	0.98
45	45	10S/Q25x10	-	37.4	0.050	3	2700	0.38	0.87
	45	12S/Q25x10	+	36.4	0.050	3	2700	0.38	1.47
	45	18S/Q25x10	-	35.4	0.050	3	2700	0.38	1.81
57	57	11S/Q25x12	-	48.6	0.050	3	2700	0.45	1.43
	57	12S/Q25x12	+	48.4	0.050	3	2700	0.45	1.86
	57	18S/Q25x12	+	47.4	0.050	3	2700	0.45	2.29
	57	22S/Q35x12	-	41.6	0.050	3	2700	1.14	3.38
70	70	11S/Q25x18	-	61.6	0.050	5	2700	0.67	1.76
	70	12S/Q25x18	+	61.4	0.050	5	2700	0.67	2.29
	70	18S/Q25x18	+	60.4	0.050	5	2700	0.67	2.81
	70	22S/Q35x18	+	54.6	0.050	5	2700	1.72	4.15
85	85	11S/Q25x18	-	76.6	0.050	5	2700	0.67	2.13
	85	12S/Q25x18	+	76.4	0.050	5	2700	0.67	2.78
	85	18S/Q25x18	+	75.4	0.050	5	2700	0.67	3.42
	85	22S/Q35x18	+	69.6	0.050	5	2700	1.72	5.04
97	97	11S/Q25x20	-	88.6	0.050	5	2700	0.75	2.44
	97	12S/Q25x20	+	88.4	0.050	5	2700	0.75	3.17
	97	18S/Q25x20	+	87.4	0.050	5	2700	0.75	3.90
	97	22S/Q35x20	+	81.6	0.050	5	2700	1.91	5.76
110	110	11S/Q25x24	-	101.6	0.050	5	2700	0.89	2.76
	110	12S/Q25x24	+	101.4	0.050	5	2700	0.89	3.59
	110	18S/Q25x24	+	100.4	0.050	5	2700	0.89	4.42
	110	22S/Q35x24	+	94.6	0.050	5	2700	2.29	6.53
137	137	12S/Q25x30	+	128.4	0.050	10	2700	1.12	4.48
	137	18S/Q25x30	+	127.4	0.050	10	2700	1.12	5.51
	137	22S/Q35x30	+	121.6	0.050	10	2700	2.86	8.13
164	164	12S/Q25x36	+	155.4	0.050	10	2700	1.34	5.36
	164	18S/Q25x36	+	154.4	0.050	10	2700	1.34	6.59
	164	22S/Q35x36	+	148.6	0.050	10	2700	3.43	9.73
215	215	12S/Q25x48	+	206.4	0.050	10	2700	1.78	7.02
	215	18S/Q25x48	+	205.4	0.050	10	2700	1.78	8.65
	215	22S/Q35x48	+	199.6	0.050	10	2700	4.58	12.76
268	268	12S/Q25x48	+	259.4	0.050	10	2700	1.78	8.76
	268	18S/Q25x48	+	258.4	0.050	10	2700	1.78	10.78
	268	22S/Q35x48	+	252.6	0.050	10	2700	4.58	15.89

SLOT TUBES

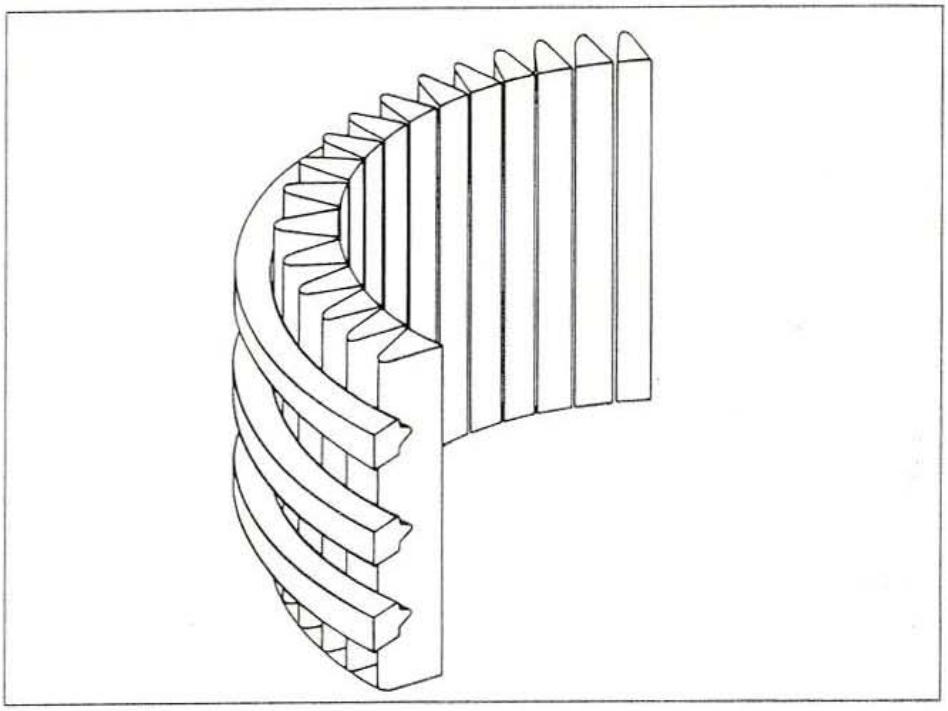
DN (mm)	OD (mm)	Construction	R	ID (mm)	Slot widt(mm) min.	max.	Lmax. (mm)	Weight factors k_1	k_2
300	302	22S/10x3-40	+	277	0.200	3.2	2000	8.36	17.92
	303	28S/10x3-40	+	277	0.200	2.8	2000	8.36	21.91
	305	34S/10x3-40	+	277	0.200	2.2	2000	8.36	25.82
	308	42S/10x3-40	+	277	0.200	1.6	2000	8.36	32.97
	309	50S/10x3-40	+	277	0.200	1.6	2000	8.36	35.47
375	377	22S/10x3-48	+	352	0.200	3.2	2000	10.03	22.37
	378	28S/10x3-48	+	352	0.200	2.8	2000	10.03	27.33
	380	34S/10x3-48	+	352	0.200	2.2	2000	10.03	32.16
	383	42S/10x3-48	+	352	0.200	1.6	2000	10.03	40.99
	384	50S/10x3-48	+	352	0.200	1.6	2000	10.03	44.08
450	454	22S/10x3-60	+	429	0.200	3.2	2000	12.54	26.94
	455	28S/10x3-60	+	429	0.200	2.8	2000	12.54	32.90
	457	34S/10x3-60	+	429	0.200	2.2	2000	12.54	38.68
	460	42S/10x3-60	+	429	0.200	1.6	2000	12.54	49.24
	461	50S/10x3-60	+	429	0.200	1.6	2000	12.54	52.92
500	505	22S/10x3-64	+	480	0.200	3.2	2000	13.38	29.97
	506	28S/10x3-64	+	480	0.200	2.8	2000	13.38	36.59
	508	34S/10x3-64	+	480	0.200	2.2	2000	13.38	43
	511	42S/10x3-64	+	480	0.200	1.6	2000	13.38	54.70
	512	50S/10x3-64	+	480	0.200	1.6	2000	13.38	58.78
620	619	22S/10x3-80	+	594	0.200	3.2	2000	16.72	36.73
	620	28S/10x3-80	+	594	0.200	2.8	2000	16.72	44.83
	622	34S/10x3-80	+	594	0.200	2.2	2000	16.72	52.65
	625	42S/10x3-80	+	594	0.200	1.6	2000	16.72	66.90
	626	50S/10x3-80	+	594	0.200	1.6	2000	16.72	71.86

DN : Nominal diameter in mm
OD : Outside diameter in mm
ID : Inside diameter in mm
L_{max} : Maximum length in mm
\+ : available in "R"
\- : not available in "R"

All constructions having 10 x 3 support wires can also be made with 25 x 3 support wires. The inside diameter, ID is then reduced by 30 mm.

SLOTTED CYLINDER

TRISLOT slotted cylinders have the slots running parallell to the axis of the cylinder (Slot tubes have radial slots). Usually, the smooth surface is at the inside (filtration is from in to out).



In some special cases the smooth surface can be chosen to be at the outside. In general, TRISLOT slotted cylinders are made from flat welded screens that are curved into a cylinder and the support wires are welded at the joint.
The minimum internal diameter is 25 mm and in principle all diameters, lengths and slot widths are possible. The same surface and support wires as for welded screens are used.

TRISLOT has also the capability to manufacture slotted cylinders in a continuous way. The support wires are replaced by a spirally wound profile. This technique is used for larger volumes of identical specifications. All slotted cylinder can be equipped with flanges, reinforcements and special fittings according to customer specifications.