

KNITSHIELD | Knitted Mesh

KP Shielding

Knitted wire meshes are produced from a single continuous filament and produce very high levels of EMI shielding performance when evenly compressed between two metallic contact surfaces.

Our KP Shielding meshes are available in four basic wire types – Monel, Aluminium, TCS (Tinned Copper-clad Steel) and Stainless Steel. Each has its own specific characteristics but TCS is generally regarded as the most suitable for EMP (low frequency) shielding.

Applications:

Because knitted wire meshes are not as resilient as elastomer cored meshes (see KE Shielding), and will eventually take a compression-set, they are generally used where the panel mating surfaces are permanent or fixed.

KP meshes provide only limited environmental sealing so are normally used for applications that are not exposed to the elements unless they are protected by a further external elastomeric seal (see KC Shielding). They do, however, have a long service life and a high temperature tolerance.

For optimum effectiveness knitted mesh gaskets should be compressed by 20 – 25% of their relaxed height. If surface irregularities prevent this, an elastomer cored mesh (KE Shielding) would be more suitable.

Gaskets can either be retained in a groove or channel or fixed with adhesive (the wire contact points can penetrate a thin film), welding or soldering. To facilitate clamping or riveting, 'round-with-tail' and 'double-round-with-tail' sections are available.

Specifications:

Monel	- BS3075 – NA13	(0.11mm diameter)
Aluminium 5056	- AMS 4182	(0.13mm diameter)
TCS	- ASTM B520	(0.11mm diameter)
Stainless Steel	- Alloy 304	(0.11mm diameter)

Performance: Typical Attenuation dB

FREQUENCY	FIELD	MONEL	ALUMINIUM	TCS	S/STEEL
10KHz	H	45	40	60	40
100KHz	H	49	45	65	44
1MHz	H	60	60	85	58
1MHz	E	125	125	125	125
10MHz	E	120	120	120	120
100MHz	E	100	100	108	100
400MHz	P	98	95	99	94
1GHz	P	85	76	78	76
10GHz	P	80	65	62	60

Tolerances:

General +0.8mm / -0.0mm on all dimensions

How to order:

Standard sizes can be specified from the tables opposite.

Alternatively, specify:

Series - Wire Code - Style - Size/Dimensions

Examples:

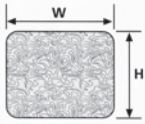
KP-M-10-0024 is Monel wire 2.4 mm diameter round

KP-A-20-0095-0127 is Aluminium wire 9.5 x 12.7 mm rectangular



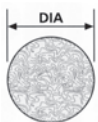
SERIES	WIRE CODE	STYLE	SIZE
KP	M=Monel	10=Round	xxxx-xxxx
	A=Aluminium	20=Rectangular	
	T=TCS	30=Round with tail	
	S=Stainless Steel	40= Double round with tail	

KNITSHIELD | Knitted Mesh KP Shielding



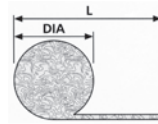
RECTANGULAR

HEIGHT X WIDTH	PART NUMBER
1.57 x 1.57	20-0016-0016
1.57 x 3.18	20-0016-0032
1.57 x 4.75	20-0016-0048
1.57 x 6.35	20-0016-0064
1.57 x 7.92	20-0016-0080
1.57 x 9.53	20-0016-0095
1.57 x 12.7	20-0016-0127
1.57 x 15.9	20-0016-0159
1.57 x 19.1	20-0016-0191
1.57 x 25.4	20-0016-0254
2.36 x 2.36	20-0024-0024
2.36 x 3.18	20-0024-0032
2.36 x 4.75	20-0024-0048
2.26 x 6.35	20-0024-0064
2.36 x 7.92	20-0024-0080
2.36 x 9.53	20-0024-0095
2.36 x 12.7	20-0024-0127
2.36 x 15.9	20-0024-0159
3.18 x 3.18	20-0032-0032
3.18 x 3.96	20-0032-0040
3.18 x 4.75	20-0032-0048
3.18 x 6.35	20-0032-0064
3.18 x 7.92	20-0032-0080
3.18 x 9.53	20-0032-0095
3.18 x 12.7	20-0032-0127
3.18 x 15.9	20-0032-0159
3.18 x 19.1	20-0032-0191
3.18 x 25.4	20-0032-0254
4.75 x 4.75	20-0048-0048
4.75 x 6.35	20-0048-0064
4.75 x 7.92	20-0048-0080
4.75 x 9.53	20-0048-0095
4.75 x 12.7	20-0048-0127
4.75 x 15.9	20-0048-0159
4.75 x 19.1	20-0048-0191
4.75 x 25.4	20-0048-0254
6.35 x 6.35	20-0064-0064
6.35 x 9.53	20-0064-0095
6.35 x 12.7	20-0064-0127
6.35 x 15.9	20-0064-0159
6.35 x 19.1	20-0064-0191
6.35 x 25.4	20-0064-0254
7.92 x 7.92	20-0080-0080
9.53 x 9.53	20-0095-0095
9.53 x 15.9	20-0095-0159



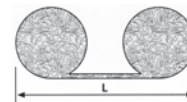
ROUND SECTION

DIAMETER	PART NUMBER
1.57	10-0016
2.36	10-0024
3.18	10-0032
3.96	10-0040
4.75	10-0048
6.35	10-0064
7.92	10-0080
9.53	10-0095
11.1	10-0111
12.7	10-0127



ROUND WITH TAIL

DIA X LENGTH	PART NUMBER
1.57 x 9.53	30-0016-0095
1.57 x 12.7	30-0016-0127
1.57 x 15.9	30-0016-0159
2.36 x 12.7	30-0024-0127
2.36 x 15.9	30-0024-0159
3.18 x 12.7	30-0032-0127
3.18 x 15.9	30-0032-0159
3.18 x 19.1	30-0032-0191
3.96 x 12.7	30-0040-0127
3.96 x 19.1	30-0040-0191
4.75 x 15.9	30-0048-0159
4.75 x 19.1	30-0048-0191
4.75 x 25.4	30-0048-0254
6.35 x 15.9	30-0064-0159
6.35 x 19.1	30-0064-0191
6.35 x 25.4	30-0064-0254
7.92 x 15.9	30-0080-0159
7.92 x 19.1	30-0080-0191
7.92 x 25.4	30-0080-0254
9.53 x 15.9	30-0095-0159
9.53 x 19.1	30-0095-0191
9.53 x 25.4	30-0095-0254
11.1 x 19.1	30-0111-0191
11.1 x 25.4	30-0111-0254
12.7 x 19.1	30-0127-0191
12.7 x 25.4	30-0127-0254



TWIN ROUND WITH TAIL

DIA X LENGTH	PART NUMBER
1.57 x 9.53	40-0016-0095
1.57 x 12.7	40-0016-0127
1.57 x 15.9	40-0016-0159
2.36 x 12.7	40-0024-0127
3.18 x 9.53	40-0032-0095
3.18 x 12.7	40-0032-0127
3.18 x 15.9	40-0032-0159
4.75 x 15.9	40-0048-0159
4.75 x 19.1	40-0048-0191
4.75 x 25.4	40-0048-0254
6.35 x 15.9	40-0064-0159
6.35 x 19.1	40-0064-0191
6.35 x 25.4	40-0064-0254
9.53 x 25.4	40-0095-0254

Please note:

- Knitted meshes are available in continuous lengths, cut pieces or as fabricated gaskets
- Compressed mesh gaskets and O-rings can be produced to customers specifications - see KR Shielding.
- Other sizes are available – please ask!

For details of fixing methods or any technical queries please contact our sales office.