

KNITSHIELD | Knitted Mesh KE Shielding

Applications:

In comparison with 'solid' mesh types, elastomer-cored knitted wire meshes have a high degree of recovery so they are more suitable for use on doors and covers that are regularly opened and closed. The closing pressure is much lower and a good EMI shield is formed even where there are minor surface irregularities. KE gaskets will also provide limited environmental sealing, particularly against dust. Where there are hazardous conditions fluorosilicone or other special formulations can be specified to meet your requirements.

Elastomer-cored knitted wire mesh gaskets can either be retained in a groove or channel or fixed with adhesive (the wire contact points can penetrate a thin film). To facilitate clamping or riveting, 'round-with-tail' and 'double-round-with-tail' sections are available. Many KE Shielding cross-sections are available with a pressure sensitive adhesive backing applied across part of one face for easy fitting.

Alternative fixing methods use tandem or 'Twinstrip' environmental seals (see KC Shielding) or round-with-tail mesh pre-fitted into aluminium mounting frames (see KM Shielding), which can be pre-drilled for easy fitting.

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) |
| Silicone Sponge | - AMS 3195 | |
| Silicone Solid/Tube | - ZZ-R-765 | |
| Neoprene Solid/Tube | - Mil-R-6855 | |

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 - $\pm 0.8\text{mm}$ on all dimensions

Our KE Shielding elastomer-cored knitted wire meshes consist of two layers of knitted wire over a low-closing-force rubber or elastomer core and offer almost the same shielding effectiveness as all-mesh types.

In some cases a single mesh layer will be sufficient but in extreme cases, such as EMP, up to seven layers of TCS will be used. Cored knitted mesh is sometimes combined with an environmental seal to provide IP ratings of 65 or above, depending on the materials used and the suitability of the mating surfaces (see KC Shielding).

The core materials are usually sponges (neoprene, silicone, EPDM or PU) although for many applications a silicone or neoprene tube can be specified.



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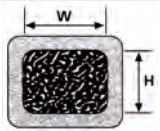
| SERIES | WIRE CODE | ELASTOMER | STYLE | SIZE |
|--------|-------------------|----------------------|----------------------------|-----------|
| KE | M=Monel | SS=Silicone Sponge | 60=Round | xxxx-xxxx |
| | A=Aluminium | ST=Silicone Tube | 70=Rectangular | |
| | T=TCS | NS=Neoprene Sponge | 80=Round with tail | |
| | S=Stainless Steel | NT=Neoprene Tube | 90= Double round with tail | |
| | | SX=Solid Silicone | | |
| | | NX= Solid Neoprene | | |
| | | PU=Polyurethane Foam | | |

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ROUND SECTION

| OUTSIDE DIA X INSIDE DIA | PART NUMBER |
|--------------------------|--------------|
| 1.57 x ----- | 60-0016 |
| 2.36 x ----- | 60-0024 |
| 3.18 x 1.57 | 60-0032-0016 |
| 4.75 x 3.18 | 60-0048-0032 |
| 6.35 x 3.18 | 60-0064-0032 |
| 7.92 x 4.75 | 60-0080-0048 |
| 9.53 x 6.35 | 60-0095-0064 |
| 11.1 x 7.92 | 60-0111-0080 |
| 12.7 x 9.53 | 60-0127-0095 |
| 14.9 x 11.1 | 60-0149-0111 |
| 19.1 x ----- | 60-0191 |
| 25.4 x ----- | 60-0254 |



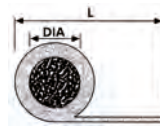
RECTANGULAR

| HEIGHT X WIDTH | PART NUMBER |
|----------------|--------------|
| 2.36 x 3.18 | 70-0024-0032 |
| 2.36 x 4.78 | 70-0024-0048 |
| 2.36 x 6.35 | 70-0024-0064 |
| 3.18 x 3.18 | 70-0032-0032 |
| 3.18 x 4.78 | 70-0032-0048 |
| 3.18 x 6.35 | 70-0032-0064 |
| 3.18 x 9.53 | 70-0032-0095 |
| 3.18 x 12.7 | 70-0032-0127 |
| 4.78 x 4.78 | 70-0048-0048 |
| 4.78 x 6.35 | 70-0048-0064 |
| 4.78 x 9.53 | 70-0048-0095 |
| 6.35 x 6.35 | 70-0064-0064 |
| 6.35 x 9.53 | 70-0064-0095 |
| 6.35 x 12.7 | 70-0064-0127 |

Please note:

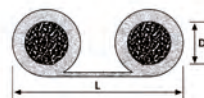
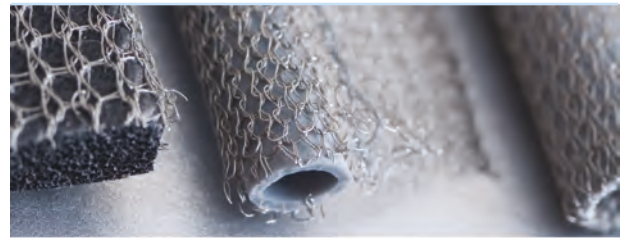
- Knitted meshes are available in continuous lengths, cut pieces or as fabricated gaskets
- The above are examples of standard profiles and sizes that we offer - other sizes are available - please ask!

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



ROUND WITH TAIL

| DIA X LENGTH | PART NUMBER |
|--------------|-------------------|
| 1.57 x 12.7 | 80-0016-0127 |
| 1.57 x 15.9 | 80-0016-0159 |
| 1.57 x 19.1 | 80-0016-0191 |
| 2.36 x 12.7 | 80-0024-0127 |
| 2.36 x 19.1 | 80-0024-0191 |
| 3.18 x 12.7 | 80-0032-0016-0127 |
| 3.18 x 15.9 | 80-0032-0016-0159 |
| 3.18 x 19.1 | 80-0032-0016-0191 |
| 3.96 x 12.7 | 80-0040-0127 |
| 3.96 x 19.1 | 80-0040-0191 |
| 4.75 x 12.7 | 80-0048-0032-0127 |
| 4.75 x 15.9 | 80-0048-0032-0159 |
| 4.75 x 19.1 | 80-0048-0032-0191 |
| 4.75 x 25.4 | 80-0048-0032-0254 |
| 6.35 x 12.7 | 80-0064-0048-0127 |
| 6.35 x 15.9 | 80-0064-0048-0159 |
| 6.35 x 19.1 | 80-0064-0048-0191 |
| 6.35 x 25.4 | 80-0064-0048-0254 |
| 9.53 x 19.1 | 80-0095-0064-0191 |
| 9.53 x 25.4 | 80-0095-0064-0254 |



TWIN ROUND WITH TAIL

| DIA X LENGTH | PART NUMBER |
|--------------|-------------------|
| 3.18 x 9.53 | 90-0032-0016-0095 |
| 3.18 x 12.7 | 90-0032-0016-0127 |
| 3.18 x 15.9 | 90-0032-0016-0159 |
| 4.75 x 15.9 | 90-0048-0032-0159 |
| 4.75 x 19.1 | 90-0048-0032-0191 |
| 4.75 x 25.4 | 90-0048-0032-0254 |
| 6.35 x 15.9 | 90-0064-0032-0159 |
| 6.35 x 19.1 | 90-0064-0032-0191 |
| 6.35 x 25.4 | 90-0064-0032-0254 |
| 9.53 x 25.4 | 90-0095-0064-0254 |

How to order:

Standard sizes can be specified from the tables opposite. Alternatively, specify:

Series - Wire Code - Elastomer - Style-Size/Dimensions

Examples:

KE-MST-60-0024 is 2.4 mm diameter round 2 x Monel layers over silicone tube
KE-ANS-70-0032-0095-(1) S/A is 3.2 x 9.5 mm rectangular neoprene sponge with 1 x Aluminium mesh layer and PSA backing

Notes:

- Suffix #1= number of layers.
E.g. (1) indicates one layer, default is 2 layers
- S/A = Self-adhesive
- N/A = No adhesive
- Adhesive cannot be used on more than one layer



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