

ECP 600K SERIES

KNITTED EMI SHIELDING GASKETS



A range of knitted gaskets with excellent electromagnetic and radio frequency interference (EMI/RFI) shielding characteristics.

Knitted gaskets reduce the leakage of unwanted fields through a joint between two parts of a metal enclosure (or metal coated plastics) by providing a continuous low resistance path between the parts (ie. a box and a lid). they are also resilient enough to conform to a large joint unevenness and the wiping action of the wires can improve surface contact.

The main applications are in sealing doors and panels in enclosures and cabinets, mounting conductive windows into housings, mounting vents cabinets.

Available in many configurations, the mesh comes with or without an elastomer core, depending on the degree of resilience required. It can also be supplied bonded to an elastomer seal for improved environmental protection. A choice of metal wire allows good electrochemical compatibility.

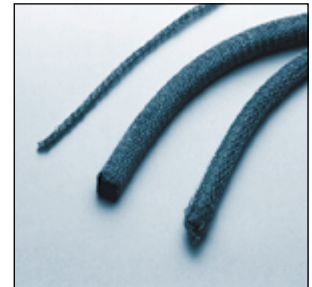


SPECIFICATION

WIRE MATERIALS

The majority of shielding requirements can be satisfied by using the material below. Other speciality metals can be used. Most applications require 2 layers of wire to achieve optimum shielding effectiveness.

WIRE SPECIFICATION	DIAMETER mm	REF
MONEL (BS3075-NA13)	0.112	MO
STAINLESS STEEL	0.112	SS
TIN PLATED COPPER CLAD STEEL	0.112	TCS
ALUMINIUM	0.140	AL



GASKET COMPRESSIBILITY AND SHIELDING PERFORMANCE

Optimum Shielding and Sealing performance is obtained within the compressibility range quoted below.

TYPE	COMPRESSION %
ALL METAL MESH	5-30
MESH OVER SPONGE	5-40
MESH OVER TUBING	10-40
GASKETS WITH ENVIRONMENTAL SEAL	10-40

	H - FIELD (dB)				E - FIELD (dB)						
	Frequency MHz				Frequency MHz						
	0.01	0.1	1.0	1.0	0.1	1.0	10	100	400	1000	10,000
Monel	28	45	64	>104	>118	>136	123	99	96	84	46
Aluminium	36	47	64	>104	>118	>136	>120	91	76	72	34
TCS	47	67	88	>104	>118	>136	>126	109	98	77	43

SALES 01706 647718



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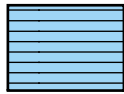
ALL METAL TYPES

ECP 600K



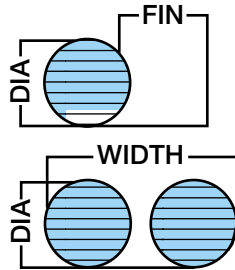
All metal mesh, circular section
Size range: 2.0mm to 13.0mm diameter.

ECP 610K



All Metal mesh, square/rectangular section
Size range: Width: 2.0mm to 32.0mm
Thickness: 2.0mm to 10mm

ECP 606K



All Metal mesh, circular section + fin (P-section)
Size range: 3.0mm to 10mm diameter
and 13.0mm to 25mm overall width

This number also cover a range of double circular sections joined by a fin.
Size range: 3.0mm to 10mm diameter
and 10mm to 32mm overall width

ECP 624K



All metal flat bandage, about 0.5mm thick.
Size range: 6.0mm to 330mm.

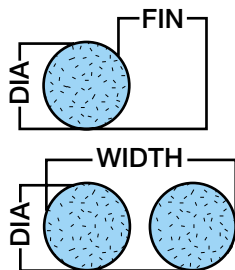
METAL MESH ON ELASTOMER SPONGE

ECP 602K



Metal mesh on sponge core, circular section
Size range: 2mm to 19 mm diameter

ECP 608K



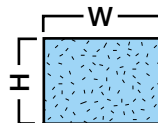
Metal mesh on sponge core, circular section plus mesh fin (P-section).

Size range: 3.0mm dia + 13mm overall width
and 13.0mm dia + 25mm overall width

This number also covers a range of double circular cores joined by a fin.

Size range: 3mm to 10mm diameter core
and 13mm to 32mm overall width

ECP 612K



Metal mesh on sponge core, square/rectangular section.

Size range : Width 3.0mm to 19mm
Height 3.0mm to 13mm

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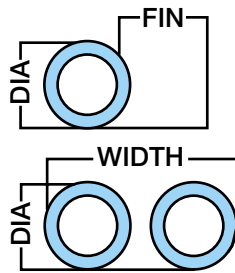
METAL MESH ON ELASTOMER TUBING

ECP 604K



Metal mesh on elastomer tubing, circular section.
Size range: 3.0mm to 13.0mm diameter.

ECP 609K



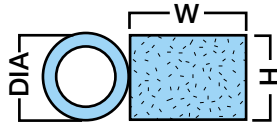
Metal mesh on elastomer tubing, circular section plus mesh fin.
Size range: 3.0mm to 10mm
and: 7.5mm to 28mm overall width

This number also cover a range of double cores joined by a mesh fin.
Size range: 3.0mm to 10mm diameter
and 13mm to 32mm overall width

CONSTRUCTION WITH ADDED NEOPRENE OR SILICONE SPONGE FLUID SEALS

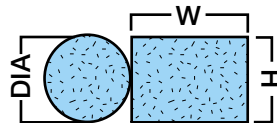
CAN BE SUPPLIED WITH SELF-ADHESIVE BACKED TAPE.

ECP 614K



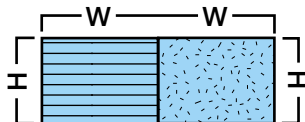
Metal mesh on silicone tube bonded to a rectangular silicone or neoprene sponge seal.
Size range: 3.0mm to 13.0mm tubing
and 3.0 x 3.0mm to 9.0 x 19.0mm seal

ECP 616K



Metal mesh on silicone sponge core bonded to a silicone or neoprene sponge seal.
Size range: 3.0mm to 19.0mm
and: 3.0 x 3.0mm to 9.0 x 19.0mm seal

ECP 618K



A square / rectangle metal mesh bonded to a silicone or neoprene sponge seal.
Size range: 2.0 x 3.0 mesh + 2.0 x 6.0 seal
up to: 9.0 x 6.0 mesh + 9.0 x 19.0 seal.

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ELECTROCHEMICAL COMPATIBILITY

To avoid galvanic action between contacting metals refer to the following chart. Materials in adjacent groups may be safely used together. Choosing materials from within a single group in the table will provide the least corrosion due to galvanic action, when the materials are in contact for an extended period of time with appropriate protective finish.

GROUP 1	GROUP 2	GROUP 3	GROUP 4
Magnesium	Aluminium	Cadmium Plating	Brass
Magnesium Alloys	Aluminium Alloys	Carbon Steel	Stainless Steel
Aluminium	Beryllium	Iron	Copper & Copper Alloys
Aluminium Alloys	Zinc & Zinc Plating	Nickel & Nickel Plating	Nickel / Copper Alloys
Beryllium	Chromium Plating	Tin & Tin Plating	Monel
Zinc & Zinc Plating	Cadmium Plating	Tin / Lead Solder	Silver
Chromium Plating	Carbon Steel	Brass	
	Iron	Stainless Steel	
	Nickel & Nickel Plating	Copper & Copper Alloys	
	Tin & Tin Plating	Monel	
	Tin / Lead Solder		

HOW TO ORDER

600K Series - Knitted Gaskets

A "line call-out" is used when ordering gaskets. Dimensions are given as a four figure number, e.g. 5.0mm is expressed as -0050,. Metal wire references used :-Monel - MO, Stainless Steel - SS, Copper - C, Tinned Copper - TC, Tin Plated Copper Clad Steel - TCS, Aluminium - AL, Silver Plated Copper - SC. Elastomer Core/Fluid Seal reference:- Neoprene - NEO, Silicone - SIL.

EXAMPLES

- Circular, All Monel wire, 5.0mm diameter ECP 600K-0050-MO
- Twin Neoprene sponge cores, 6.0mm diameter, stainless steel wire mesh, 19.0mm overall width. ECP 608K-0060 x 2 - 0190-SS-NEO
- Silicone Tube, 5.0mm dia.,aluminium wire+neoprene sponge fluid seal, 3.0x12.0mm self adhesive back ECP 614K-0050SIL-0030-0120-AL-NEO/SAB

Gaskets can be supplied in continuous lengths except for ECP614K, 616K and 618K which are in lengths up to 10 metres long or as finished gaskets to customers specifications. The sponge can be accurately die cut to size and compression stops/collars fitted to eliminate the risk of overtightening the gaskets.

TOLERANCES ON DIMENSIONS

Long length gaskets : body size $\pm 0.8\text{mm}$, fin. size $\pm 1.6\text{mm}$.

ECP614k, 616K and 618K - gaskets with fluid seals. Mesh size $\pm 0.8\text{mm}$ fluid seal size $\pm 0.8\text{mm}$

Finished gaskets: $\pm 0.8\text{mm}$ up to 300mm. Hole centres $\pm 0.4\text{mm}$

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