Knitted Wire Mesh

Overview

A range of knitted wire mesh gaskets, providing a cost-effective solution to high shielding performance applications in the magnetic and electrical fields RFI/EMI and including EMP.

Manufactured on a circular wire knitting machine using a single wire. The mono-filament interlocking-loop construction gives strength while allowing it to conform to almost any size or shape. The manufacturing process allows for an optional elastomer core to be included in to the product to aid compression. An additional environmental seal/carrier is also an option. It is available in a variety of combinations to suit many EMC and environmental sealing applications.

Kemtron's knitted wire mesh is available in 3 options

1. Solid Knitted Wire Mesh.
2. Elastomer cored knitted wire mesh.
3. Knitted wire mesh with an additional environmental seal.

Summary	Solid Knitted Wire Mesh	Elastomer Cored Knitted Wire Mesh	Knitted Wire Mesh with an Additional Environmental with Seal
RFI/EMI/EMC shield	•	•	•
EMP survivability	•	•	•
Environmental seal	Dust only	Dust only	•
Frequent opening		•	•
Continuous lengths	•	•	•
Cut to length	•	•	•
Fabricated gasket	•	•	•
Mesh over elastomer core		•	•
Silicone/neoprene carrier			•
Compression stops/collars			•

Production Capabilities

Kemtron has developed its knitted wire mesh production facility and expertise in this area to enable it to produce RFI/EMI gaskets in a wide range of materials and in many different size configurations. Together with our extensive fabrication capabilities and large stocks of raw materials, we can manufacture knitted wire mesh gaskets to suit many applications.

We offer a bespoke service, which can also produce economical gaskets, with good delivery times, in prototype quantities or for short, medium or large commercial production runs.

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Knitted Wire Mesh
Solid Knitted Wire Mesh

Product Overview

The product consists of a knitted wire that is formed into an all wire profile forming a continuous gasket strip.

Application

Solid knitted mesh gaskets provide an excellent EMI/RFI/EMP gasket shield between two metallic surfaces and with the choice of wire mesh material available allows for a good galvanic match with mating flanges, thereby limiting the possibility of corrosion between gasket and flange.

- RFI/EMI/EMP applications.
- Panel seals in screened rooms.
- Areas with infrequent access.
- Cable Shielding (Wrapping with flat bandage).

Availability

- In continuous lengths, cut to length or fabricated into finished gaskets by spot welding and stitching to suit customer requirements.
- Variety of profiles and sizes available.
- Fabricated gaskets.
- Compressed mesh rings.
- Self adhesive backing is not recommended with this version of mesh.

Design Considerations

- Consideration should be given to the termination of cut mesh ends. Sometimes loose wires are evident after cutting. Kemtron are experts at mesh termination however if you choose to cut the mesh yourself loose wires can be avoided by:
  - Dipping the end in glue
  - Spot welding the cut end
  - Sewing the cut mesh end.
- Compression forces required to achieve good contact. Also the rigidity of the host metalwork.
- Galvanic compatibility. Select from a choice of wire.
- Water and moisture sealing is not possible with this product. However it does offer a limited dust seal.
- Solid knitted wire mesh suffers from compression set. So it is not recommended for frequent opening of panels.

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Knitted Wire Mesh
Solid Knitted Wire Mesh

Typical Shielding Performance

H Field				
MHz	0.01	0.1	1.0	10.0
Monel	28	45	64	>104
TCS	47	67	88	>104
S/St	35	43	50	
Aluminium	36	47	64	>104

E Field				
MHz	0.01	0.1	1.0	100
Monel	>118	>136	>123	99
TCS	>118	>136	>126	109
S/St	119	102		
Aluminium	>118	>136	>120	91

P Field				
MHz	400	1000	10,000	
Monel	96	84	46	
TCS	98	77	43	
S/St	85	62	36	
Aluminium	86	72	34	

Materials

Monel Alloy 400 Wire (Mon)
Wire diameter 0.11mm
UK Specification to BS3075 NA13
USA Specification to AMS 4730

Tin Plated Copper Clad Steel (TCS)
Wire diameter 0.11mm
UK Specification BS2316*, BS4087*
USA Specification ASTM B277*, ASTM B452*, ASTM B520, ASTM B33*, AISI 1010

* There is no complete specification for this material.
Processes have been derived from parts of the above where applicable.

Stainless Steel (S/St)
UK Specification BS EN 10088-3 2005 316 S19
Wire diameter 0.11mm

Aluminium (Alu)
Specification BS EN 537 pt 3
Wire diameter 0.13mm

Tolerances

- Round and rectangular sections ± 0.8mm
- Fin Dimensions ± 1.5mm

How To Order

To make a part number, use the wire material code from the 'material code' box followed by the part number.

Example

112-0032 = round section monel wire 3.2mm diameter.

Flat Bandage

Note: This product is approx 0.5mm thick.

Profile

Material Codes

Width	Mon 142	TCS 144	S/St 146	Alu 148	Part No.
6.4mm					0064
12.7mm					0127
19.1mm					0191
25.4mm					0254
38.1mm					0381

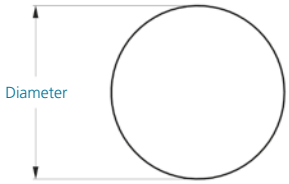
Other sizes are available on request

Knitted Wire Mesh
Solid Knitted Wire Mesh

Round

Rectangular

Profile



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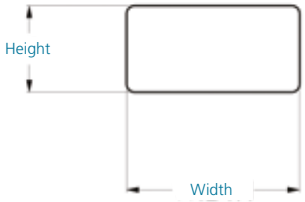


Material Codes

Diameter	Mon	TCS	S/St	Alu	Part No.
	112	114	116	118	
1.6mm					0016
2.4mm					0024
3.2mm					0032
4.8mm					0048
6.4mm					0064
8.0mm					0080
9.5mm					0095
12.7mm					0127

Other sizes are available on request

Material Codes

Height	Width	Mon	TCS	S/St	Alu	Part No.
		132	134	136	138	
1.6mm	1.6mm					0016-0016
1.6mm	2.4mm					0016-0024
1.6mm	3.2mm					0016-0032
1.6mm	4.8mm					0016-0048
2.4mm	2.4mm					0024-0024
2.4mm	3.2mm					0024-0032
2.4mm	4.8mm					0024-0048
3.2mm	3.2mm					0032-0032
3.2mm	4.8mm					0032-0048
3.2mm	6.4mm					0032-0064
3.2mm	9.5mm					0032-0095
4.8mm	4.8mm					0048-0048
4.8mm	6.4mm					0048-0064
4.8mm	9.5mm					0048-0095
6.4mm	6.4mm					0064-0064
6.4mm	9.5mm					0064-0095
9.5mm	9.5mm					0095-0095

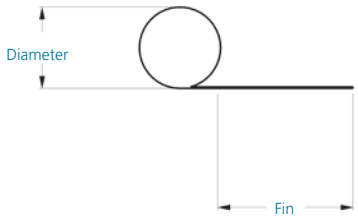
Other sizes are available on request

Knitted Wire Mesh
Solid Knitted Wire Mesh

Round with Fin

Twin Round with Fin

Profile



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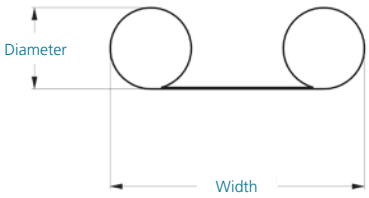

Material Codes

Diameter	Fin Width	Mon 122	TCS 124	S/St 126	Alu 128	Part No.
3.2mm	6.4mm					0032-0064
3.2mm	9.5mm					0032-0095
3.2mm	12.7mm					0032-0127
4.8mm	9.5mm					0048-0095
4.8mm	12.7mm					0048-0127
4.8mm	15.9mm					0048-0159
6.4mm	9.5mm					0064-0095
6.4mm	12.7mm					0064-0127
6.4mm	15.9mm					0064-0159
8.0mm	9.5mm					0080-0095
8.0mm	12.7mm					0080-0127
8.0mm	15.9mm					0080-0159
9.5mm	12.7mm					0095-0127
9.5mm	15.9mm					0095-0159
12.7mm	12.7mm					0127-0127

Other sizes are available on request

Material Codes

Diameter	Width	Mon 152	TCS 154	S/St 156	Alu 158	Part No.
3.2mm	12.7mm					0032-0127
3.2mm	19.1mm					0032-0191
3.2mm	25.4mm					0032-0254
4.8mm	19.1mm					0048-0191
4.8mm	25.4mm					0048-0254
6.4mm	19.1mm					0064-0191
6.4mm	25.4mm					0064-0254

Other sizes are available on request

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Knitted Wire Mesh Over an Elastomer Core

Product Overview

This product is a knitted wire mesh over an elastomer core such as neoprene or silicone cellular profile or tube. Usually this consists of 2 layers of knitting over the elastomer core but small sections 1.5mm diameter requiring only 1 layer. The knitted mesh is then formed into the selected profile making a continuous gasket strip which is flexible and compressible and which makes an excellent RFI/EMI/EMP gasket.

Application

In addition to making an excellent EMI/RFI/EMP shield between two metallic surfaces the choice of wire mesh material available also allows for a good galvanic match with mating flanges, thereby limiting the possibility of corrosion between gasket and flange. Further, the elastomer core of the gasket allows it to be compressed using low to medium force conforming to uneven surfaces and recovering well after use.

- Groove gaskets such as O-Rings.
- Due to its resiliency and low compression force, ideal for use in situations where repeated opening and closing operations are necessary.

Design Considerations

- Consideration should be given to the termination of cut mesh ends. Sometimes loose wires are evident after cutting. Kemtron are experts at mesh termination however if you choose to cut the mesh yourself loose wires can be avoided by:
  - Dipping the end in glue.
  - Spot welding the cut end.
  - Sewing the cut mesh end.
- Compression forces required to allow good contact. Also the rigidity of the host metalwork.
- Galvanic compatibility. Select from a choice of wire.
- Water and moisture sealing is not possible with this product. However, it does offer a limited dust seal.

Availability

- In continuous lengths.
- Cut to length.
- Fabricated into finished gaskets.
- Variety of profiles and sizes.
- Fabricated gaskets.
- Selection of wire to meet galvanic compatibility requirements.
- Large selection of elastomer cores are available to meet conditions such as temperature range, compression set, compression force.
- Although round or rectangular cross sections are the most commonly used, other sections can be made to custom designs.
- Where EMP protection is needed, a minimum of 7 layers is recommended. Additional layers can also be added depending on the application of the equipment and degree of shielding required.
- Self adhesive backing is not recommended with this version of mesh.

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Knitted Wire Mesh Over an Elastomer Core

Typical Shielding Performance

H Field				
MHz	0.01	0.1	1.0	10.0
Monel	28	45	64	>104
TCS	47	67	88	>104
S/St	35	43	50	
Aluminium	36	47	64	>104

E Field				
MHz	0.01	0.1	1.0	100
Monel	>118	>136	>123	99
TCS	>118	>136	>126	109
S/St	119	102		
Aluminium	>118	>136	>120	91

P Field				
MHz	400	1000	10,000	
Monel	96	84	46	
TCS	98	77	43	
S/St	85	62	36	
Aluminium	86	72	34	

Materials

Monel Alloy 400 Wire (Mon)
Wire diameter 0.11mm
UK Specification to BS3075 NA13
USA Specification to AMS 4730

Tin Plated Copper Clad Steel (TCS)
Wire diameter 0.11mm
UK Specification BS2316*, BS4087*
USA Specification ASTM B277*, ASTM B452*, ASTM B520, ASTM B33*, AISI 1010

* There is no complete specification for this material. Processes have been derived from parts of the above where applicable.

Stainless Steel (S/St)
UK Specification BS EN 10088-3 2005 316 S19
Wire diameter 0.11mm

Aluminium (Alu)
Specification BS EN 537 pt 3
Wire diameter 0.13mm

Solid Silicone Rubber
Generally meets ZZ-R-765
Temperature range -40°C to +200°C
Service life >20 years

Sponge Silicone Rubber
USA Specification AMS 3195
Temperature range -40°C to +200°C
Service life >20 years

Sponge Neoprene Rubber
USA Specification ASTM D1056 (84) SCE 42
Temperature range -15°C to +80°C
Condition medium

Tolerances on Rubbers

- Round and rectangular mesh sections ± 0.8mm
- Up to 2.0mm diameter or thickness ± 0.5mm
- 2.0mm to 10.0mm diameter or thickness ± 0.8mm
- Above 10mm diameter or thickness ± 1.5mm

Note: All sizes listed are that of the Elastomer core, Allowances must be made for the wire mesh 1 layer approximately 0.4mm and 2 layers 0.8mm

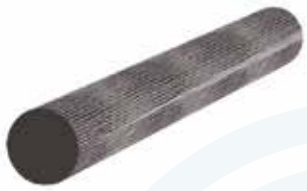
How To Order

The sizes shown on the tables are typical examples of our range other sizes are available on request. To make a part number, use the wire material code from the 'material code' box followed by the part number.

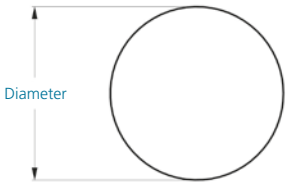
Example

212-0032 = Round section with 2 layers monel wire over 3.2mm diameter silicone sponge.

Round Neoprene Sponge Core



Profile



Material Codes

Diameter	Mon 202	TCS 204	S/St 206	Alu 208	Part No.
3.2mm					0032
4.8mm					0048
6.4mm					0064
8.0mm					0080
9.5mm					0095
12.7mm					0127

Other sizes are available on request.

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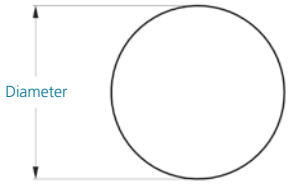
Knitted Wire Mesh Over an Elastomer Core

Round
Silicone Sponge Core

Profile



Material Codes

Diameter	Mon	TCS	S/St	Alu	Part No.
	212	214	216	218	
1.6mm					0016
2.4mm					0024
3.2mm					0032
4.8mm					0048
6.4mm					0064
8.0mm					0080
9.5mm					0095
12.7mm					0127

Other sizes are available on request.

Round
Silicone Tube Core

Profile

Material Codes

Diameter	Mon	TCS	S/St	Alu	Part No.
	242	244	246	248	
1.6mm					0016
2.4mm					0024
3.2mm					0032
4.8mm					0048
6.4mm					0064
8.0mm					0080
9.5mm					0095
12.7mm					0127

Other sizes are available on request.

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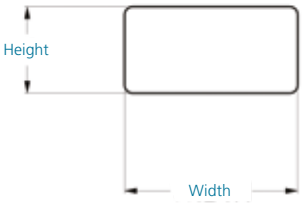
Knitted Wire Mesh Over an Elastomer Core

Rectangular Silicone Sponge Core

Profile



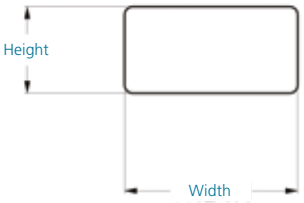
Material Codes

Height	Width	Mon	TCS	S/St	Alu	Part No.
		232	234	236	238	
3.2mm	3.2mm					0032-0032
3.2mm	4.8mm					0032-0048
3.2mm	6.4mm					0032-0064
3.2mm	9.5mm					0032-0095
3.2mm	12.7mm					0032-0127
4.8mm	4.8mm					0048-0048
4.8mm	6.4mm					0048-0064
4.8mm	9.5mm					0048-0095
4.8mm	12.7mm					0048-0127
6.4mm	6.4mm					0064-0064
6.4mm	9.5mm					0064-0095
6.4mm	12.7mm					0064-0127
9.5mm	9.5mm					0095-0095
9.5mm	12.7mm					0095-0127
12.7mm	12.7mm					0127-0127

Other sizes are available on request.

Rectangular Neoprene Sponge Core

Profile



Material Codes

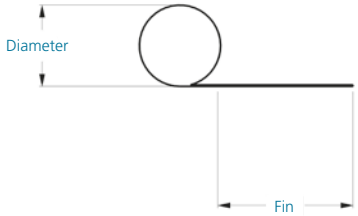
Height	Width	Mon	TCS	S/St	Alu	Part No.
		282	284	286	288	
3.2mm	3.2mm					0032-0032
3.2mm	4.8mm					0032-0048
3.2mm	6.4mm					0032-0064
3.2mm	9.5mm					0032-0095
3.2mm	12.7mm					0032-0127
4.8mm	4.8mm					0048-0048
4.8mm	6.4mm					0048-0064
4.8mm	9.5mm					0048-0095
4.8mm	12.7mm					0048-0127
6.4mm	6.4mm					0064-0064
6.4mm	9.5mm					0064-0095
6.4mm	12.7mm					0064-0127
9.5mm	9.5mm					0095-0095
9.5mm	12.7mm					0095-0127
12.7mm	12.7mm					0127-0127

Other sizes are available on request.

Knitted Wire Mesh Over an Elastomer Core

Round with Fin Silicone Sponge Core

Profile



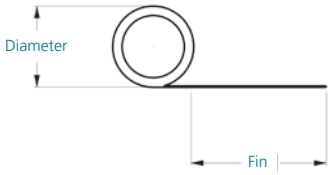
Material Codes

Diameter	Fin Width	Mon	TCS	S/St	Alu	Part No.
		222	224	226	228	
3.2mm	6.4 m					0032-0064
3.2mm	9.5mm					0032-0095
3.2mm	12.7mm					0032-0127
4.8mm	9.5mm					0048-0095
4.8mm	12.7mm					0048-0127
4.8mm	15.9mm					0048-0159
6.4mm	9.5mm					0064-0095
6.4mm	12.7mm					0064-0127
6.4mm	15.9mm					0064-0159
8.0mm	9.5mm					0080-0095
8.0mm	12.7mm					0080-0127
8.0mm	15.9mm					0080-0159
9.5mm	12.7mm					0095-0127
9.5mm	15.9mm					0095-0159
12.7mm	12.7mm					0127-0127

Other sizes are available on request.

Round with Fin Silicone Tube Core

Profile



Material Codes

Diameter	Fin Width	Mon	TCS	S/St	Alu	Part No.
		252	254	256	258	
3.2mm	6.4mm					0032-0064
3.2mm	9.5mm					0032-0095
3.2mm	12.7mm					0032-0127
4.8mm	9.5mm					0048-0095
4.8mm	12.7mm					0048-0127
4.8mm	15.9mm					0048-0159
6.4mm	9.5mm					0064-0095
6.4mm	12.7mm					0064-0127
6.4mm	15.9mm					0064-0159
8.0mm	9.5mm					0080-0095
8.0mm	12.7mm					0080-0127
8.0mm	15.9mm					0080-0159
9.5mm	12.7mm					0095-0127
9.5mm	15.9mm					0095-0159
12.7mm	12.7mm					0127-0127

Other sizes are available on request.

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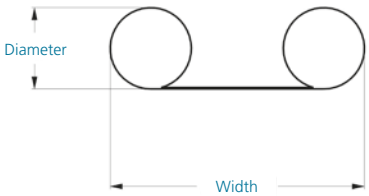
Knitted Wire Mesh Over an Elastomer Core

Twin Round with Fin Silicone Sponge Cores

Profile



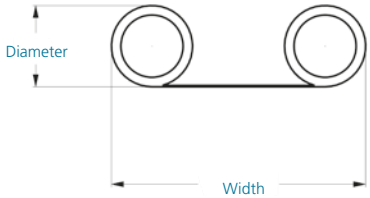
Material Codes

Diameter	Width	Mon	TCS	S/St	Alu	Part No.
		262	264	266	268	
3.2mm	12.7mm					0032-0127
3.2mm	19.1mm					0032-0191
3.2mm	25.4mm					0032-0254
4.8mm	19.1mm					0048-0191
4.8mm	25.4mm					0048-0254
6.4mm	19.1mm					0064-0191
6.4mm	25.4mm					0064-0254

Other sizes are available on request.

Twin Round with Fin Silicone Tube Cores

Profile



Material Codes

Diameter	Width	Mon	TCS	S/St	Alu	Part No.
		272	274	276	278	
3.2mm	12.7mm					0032-0127
3.2mm	19.1mm					0032-0191
3.2mm	25.4mm					0032-0254
4.8mm	19.1mm					0048-0191
4.8mm	25.4mm					0048-0254
6.4mm	19.1mm					0064-0191
6.4mm	25.4mm					0064-0254

Other sizes are available on request.

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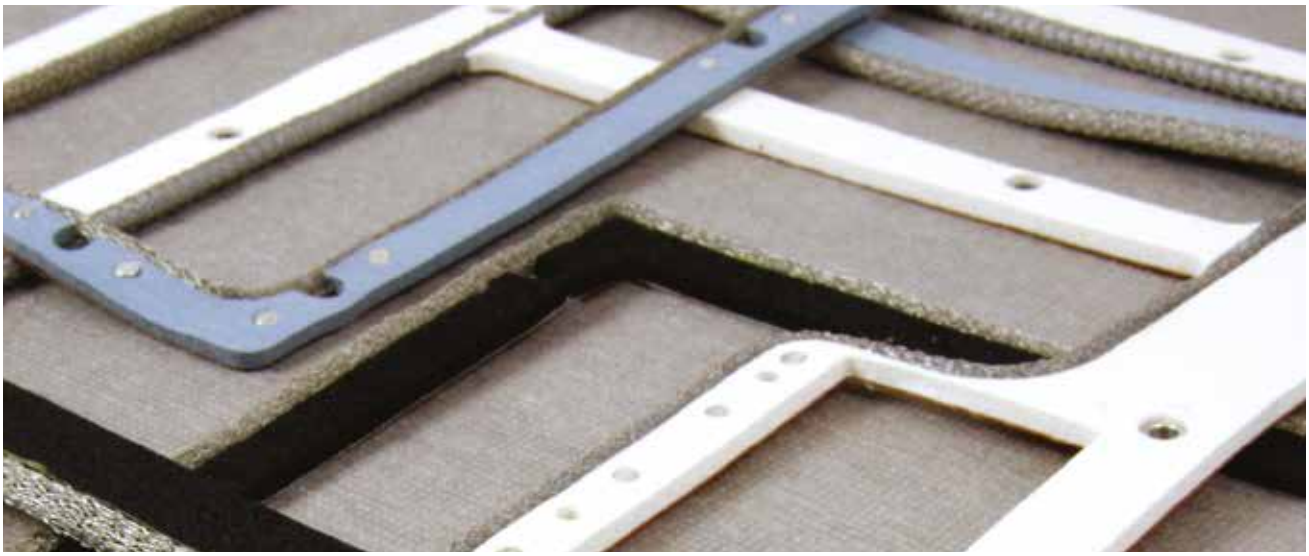
Knitted Wire Mesh with an Environmental Seal



Product Overview

Manufactured from either solid knitted wire mesh or knitted wire mesh over an elastomer core bonded to an elastomer environmental seal.

Application

This type of gasket is very suitable where a high level of shielding is required along with an environmental seal. Provides an economic approach to combination RFI/EMI/EMP and environmental sealing.

- Suitable for gaps with large tolerances.
- Door seals.
- Panel seals.
- Due to its resiliency and low compression force, ideal for use in situations where repeated opening and closing operations are necessary.

Availability

- Continuous lengths up to 10 mtrs long.
- Fabricated gaskets to customer's drawings.
- Can be fitted with compression limit stops or collars.
- Easily assembled using the optional self adhesive backing.
- A broad range of sizes available.
- A large range of materials to suit many RFI/EMI/EMP and climatic conditions including NBC.
- Large fabricated gaskets can be produced economically.
- UL flame retardant approved materials are also available.

Design Considerations

- It is important that this material is not over-compressed. If the design of the equipment does not allow for any mechanical method of preventing over-compression, the gasket should be fitted with built-in compression limiters, either metal stops fitted to the gasket, or metal collars fitted into each fixing hole.
- When specifying die cut gaskets minimum material width should not be less than 2mm or at least the material thickness in any part of the gasket. If this cannot be achieved around fixing holes consider using a slot. Particular attention is required if specifying compression collars in holes.
- Particular consideration must be given to compression forces hole centres, size and number of fixings and rigidity of mating flanges.
- Consideration should be given to the termination of cut mesh ends. Sometimes loose wires are evident after cutting. Kemtron are experts at mesh termination however if you choose to cut the mesh yourself loose wires can be avoided by:
  - Dipping the end in glue
  - Spot welding the cut end
  - Sewing the cut mesh end.
- Galvanic compatibility. Select from a choice of wire.

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Knitted Wire Mesh with an Environmental Seal

Surface Mounted Gaskets

With surface mounted elastomeric gaskets, the aim should be to limit the compression of the gasket to between 10% and 20%. 10% being the minimum with a solid silicone style of gasket. (Some form of compression stop or limit is essential with surface mounted gaskets to prevent over compression).

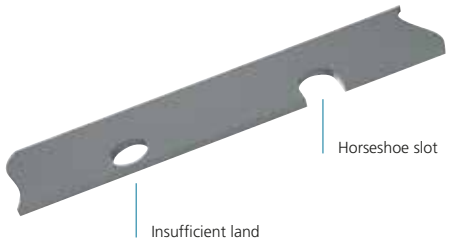
Compression stops can be built into many styles of gasket, or made as an integral part of the flange. Their height should equal that of the maximum compressed height of the gasket. Compression stops fitted into gaskets can be in the form of collars or washers so that fixing bolts can pass through them or as solid studs located either side of a fixing bolt.

The thickness of the gasket for a known application can be calculated as follows e.g. Consider a gasket which can be compressed between 10% and 25% to be used on flanges which are not perfectly flat, i.e. the flanges without gaskets touch at some points and leave gaps in others. Since the gasket will compress between 10% and 25% we will require 25% compression at the high points and 10% at the low points (the "gaps"). The greatest gap is therefore 15% of the gasket thickness. If that gap is 0.45mm, then a gasket of 3.0mm thickness is required.

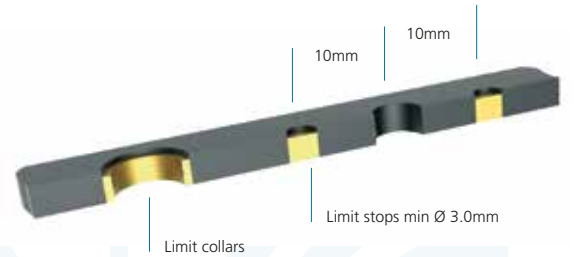
This is fine in theory provided that the flanges do not "bow" when placed under load. To overcome flange distortion, fixings may need to be added, the number of which will be determined by the flange stiffness/rigidity.

Minimum Land

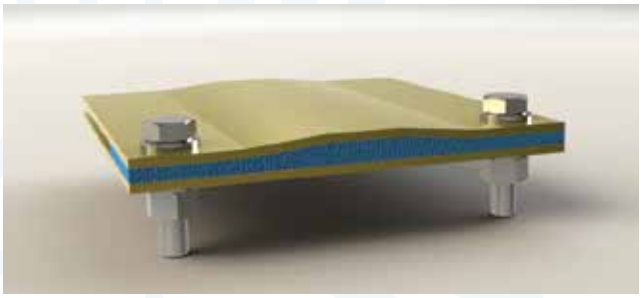
Horse Shoe Slot



Compression Limit Applications



Compression



Knitted Wire Mesh with an Environmental Seal

Typical Shielding Performance

For 300 series as achieved by testing to MIL-STD 285 modified.

H Field				
MHz	0.01	0.1	1.0	10.0
Monel	28	45	64	>104
TCS	47	67	88	>104
S/St	35	43	50	
Aluminium	36	47	64	>104

E Field				
MHz	0.01	0.1	1.0	100
Monel	>118	>136	>123	99
TCS	>118	>136	>126	109
S/St	119	102		
Aluminium	>118	>136	>120	91

P Field				
MHz	400	1000	10,000	
Monel	96	84	46	
TCS	98	77	43	
S/St	85	62	36	
Aluminium	86	72	34	

Materials

Monel Alloy 400 Wire
Wire diameter 0.11mm
UK Specification to BS3075 NA13
USA Specification to AMS 4730

Tin Plated Copper Clad Steel (TCS)
Wire diameter 0.11mm
UK Specification BS2316*, BS4087*
USA Specification ASTM B277*, ASTM B452*, ASTM B520, ASTM B33*, AISI 1010

* There is no complete specification for this material. Processes have been derived from parts of the above where applicable.

Stainless Steel (S/St)
UK Specification BS EN 10088-3 2005 316 S19
Wire diameter 0.11mm

Aluminium (Alu)
Specification BS EN 537 pt 3
Wire diameter 0.13mm

Solid Silicone Rubber
Generally meets ZZ-R-765
Temperature range -40°C to +200°C
Service life >20 years

Sponge Silicone Rubber
USA Specification AMS 3195
Temperature range -40°C to +200°C
Service life >20 years

Sponge Neoprene Rubber
USA Specification ASTM D1056 (84) SCE 42
Temperature range -15°C to +80°C
Condition medium

Tolerances

- Round and rectangular mesh sections ± 0.8mm
- Carrier size ± 0.8
- Finished gaskets ± 0.8mm up to 300mm
  ± 1.2mm over 300mm
- Hole centres ± 0.4mm

Note: All sizes listed that have an Elastomer core are the Elastomer size, Allowances must be made for the wire mesh, 1 layer approximately 0.4mm and 2 layers 0.8mm

Tolerances on Rubbers
- Up to 2.0mm diameter or thickness ± 0.5mm
- 2.0mm to 10.0mm diameter or thickness ± 0.8mm
- Above 10mm diameter or thickness ± 1.5mm

How To Order

The sizes shown on the tables are typical examples of our range other sizes are available on request. To make a part number, use the wire material code from the 'material code' box followed by the part number.

Example

334-0032-0032-0191 = 3.2mm diameter Silicone Sponge Core with 2 layers TCS wire mesh attached to Silicone Sponge carrier 3.2mm x 19.1mm. For self adhesive backing add suffix SAB to part number.

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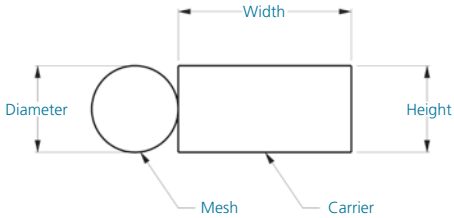
Knitted Wire Mesh with an Environmental Seal

Solid Mesh to Silicone Sponge Carrier

Solid Mesh to Neoprene Sponge Carrier

Profile



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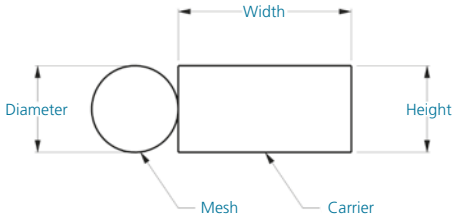


Material Codes

Mesh Diameter	Carrier Height	Carrier Width	Mon 392	TCS 394	S/St 396	Alu 398	Part No.
3.2mm	3.2mm	9.5mm					0032-0032-0095
4.0mm	3.2mm	12.7mm					0040-0032-0127
4.8mm	3.2mm	9.5mm					0048-0032-0095
4.8mm	4.8mm	12.7mm					0048-0048-0127
4.8mm	4.8mm	15.9mm					0048-0048-0159
6.4mm	4.8mm	12.7mm					0064-0048-0127

Other sizes are available on request.

Material Codes

Mesh Diameter	Carrier Height	Carrier Width	Mon 302	TCS 304	S/St 306	Alu 308	Part No.
3.2mm	3.2mm	9.5mm					0032-0032-0095
4.0mm	3.2mm	12.7mm					0040-0032-0127
4.8mm	3.2mm	9.5mm					0048-0032-0095
4.8mm	4.8mm	12.7mm					0048-0048-0127
4.8mm	4.8mm	15.9mm					0048-0048-0159
6.4mm	4.8mm	12.7mm					0064-0048-0127

Other sizes are available on request.

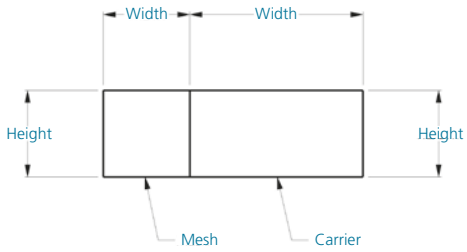
Kemtron
Proven EMC Shielding Performance

Knitted Wire Mesh with an Environmental Seal

Solid Mesh to Silicone Sponge Carrier

Silicone Sponge Core to Silicone Sponge Carrier

Profile



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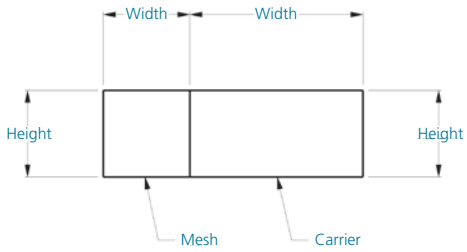

Material Codes

Mesh Height	Mesh Width	Carrier Height	Carrier Width	Mon	TCS	S/St	Alu	Part No.
				312	314	316	318	
2.4mm	2.4mm	2.4mm	9.5mm					0024-0024-0024-0095
2.4mm	2.4mm	2.4mm	12.7mm					0024-0024-0024-0127
3.2mm	3.2mm	3.2mm	9.5mm					0032-0032-0032-0095

Other sizes are available on request.

Material Codes

Mesh Height	Mesh Width	Carrier Height	Carrier Width	Mon	TCS	S/St	Alu	Part No.
				382	384	386	388	
2.4mm	2.4mm	2.4mm	9.5mm					0024-0024-0024-0095
2.4mm	2.4mm	2.4mm	12.7mm					0024-0024-0024-0127
3.2mm	3.2mm	3.2mm	9.5mm					0032-0032-0032-0095

Other sizes are available on request.

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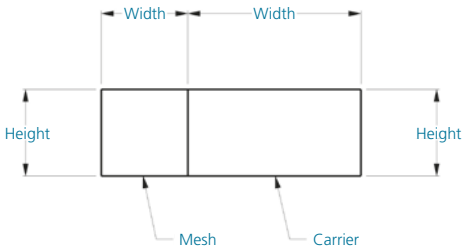
Knitted Wire Mesh with an Environmental Seal

Solid Mesh to Neoprene Sponge Carrier

Neoprene Sponge Core to Neoprene Sponge Carrier

Profile



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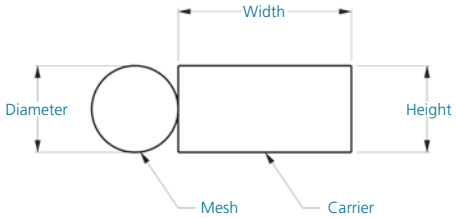


Material Codes

Mesh Height	Mesh Width	Carrier Height	Carrier Width	Mon 322	TCS 324	S/St 326	Alu 328	Part No.
2.4mm	2.4mm	2.4mm	9.5mm					0024-0024-0024-0095
2.4mm	2.4mm	2.4mm	12.7mm					0024-0024-0024-0127
3.2mm	3.2mm	3.2mm	9.5mm					0032-0032-0032-0095

Other sizes are available on request.

Material Codes

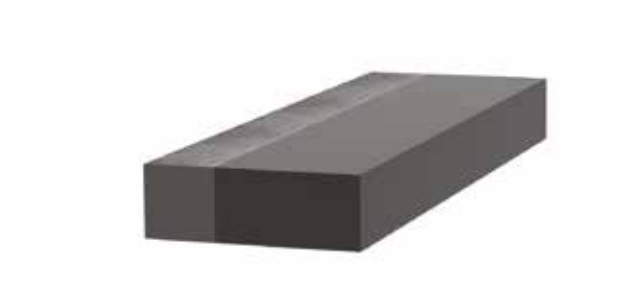
Mesh Diameter	Carrier Height	Carrier Width	Mon 342	TCS 344	S/St 346	Alu 348	Part No.
3.2mm	3.2mm	9.5mm					0032-0032-0095
4.0mm	3.2mm	12.7mm					0040-0032-0127
4.8mm	3.2mm	9.5mm					0048-0032-0095
4.8mm	4.8mm	12.7mm					0048-0048-0127
4.8mm	4.8mm	15.9mm					0048-0048-0159
6.4mm	4.8mm	12.7mm					0064-0048-0127

Other sizes are available on request.

Knitted Wire Mesh with an Environmental Seal

Silicone Tube Core to Neoprene Sponge Carrier

Neoprene Sponge Core to Neoprene Sponge Carrier



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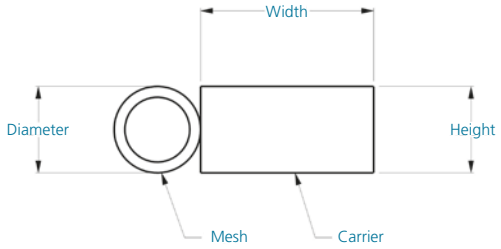

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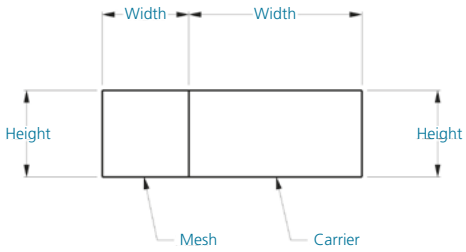

Material Codes

Mesh Diameter	Carrier Height	Carrier Width	Mon	TCS	S/St	Alu	Part No.
			362	364	366	368	
3.2mm	3.2mm	9.5mm					0032-0032-0095
4.0mm	3.2mm	12.7mm					0040-0032-0127
4.8mm	3.2mm	9.5mm					0048-0032-0095
4.8mm	4.8mm	12.7mm					0048-0048-0127
4.8mm	4.8mm	15.9mm					0048-0048-0159
6.4mm	4.8mm	12.7mm					0064-0048-0127

Other sizes are available on request.

Material Codes

Mesh Height	Mesh Width	Carrier Height	Carrier Width	Mon	TCS	S/St	Alu	Part No.
				372	374	376	378	
2.4mm	2.4mm	2.4mm	9.5mm					0024-0024-0024-0095
2.4mm	2.4mm	2.4mm	12.7mm					0024-0024-0024-0127
3.2mm	3.2mm	3.2mm	9.5mm					0032-0032-0032-0095

Other sizes are available on request.

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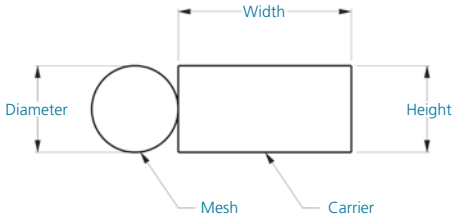
Knitted Wire Mesh with an Environmental Seal

Silicone Sponge Core to Silicone Sponge Carrier

Profile



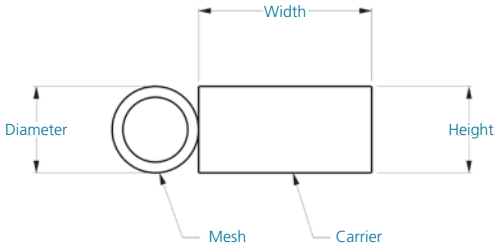
Material Codes

Mesh Diameter	Carrier Height	Carrier Width	Mon	TCS	S/St	Alu	Part No.
			332	334	336	338	
3.2mm	3.2mm	9.5mm					0032-0032-0095
4.0mm	3.2mm	12.7mm					0040-0032-0127
4.8mm	3.2mm	9.5mm					0048-0032-0095
4.8mm	4.8mm	12.7mm					0048-0048-0127
4.8mm	4.8mm	15.9mm					0048-0048-0159
6.4mm	4.8mm	12.7mm					0064-0048-0127

Other sizes are available on request.

Silicone Tube Core to Silicone Sponge Carrier

Profile



Material Codes

Mesh Diameter	Carrier Height	Carrier Width	Mon	TCS	S/St	Alu	Part No.
			352	354	356	358	
3.2mm	3.2mm	9.5mm					0032-0032-0095
4.0mm	3.2mm	12.7mm					0040-0032-0127
4.8mm	3.2mm	9.5mm					0048-0032-0095
4.8mm	4.8mm	12.7mm					0048-0048-0127
4.8mm	4.8mm	15.9mm					0048-0048-0159
6.4mm	4.8mm	12.7mm					0064-0048-0127

Other sizes are available on request.

Notice

Clip on Knitted Wire Mesh RFI/EMI Shielding Gasket Strip

Product Overview

Clip on knitted wire mesh gasket strip is a very flexible, easily compressible sponge EPDM tubular or bulb type gasket strip with a steel spring clip covered with a double knitted wire mesh layer for RFI/EMI shielding.

Application

Provides a good RFI/EMI shield for enclosures and electrical cabinets. The soft hollow bulb profile requires low closure force and makes the product particularly suitable for door applications where frequent opening and closing is required. The clip on gasket is easy to fit and will bend up to 90 degrees. The knitted wire mesh gives very low contact resistance between mating surfaces ensuring good shielding. The choice of wire mesh material available also allows for a good galvanic match with mating flanges, thereby limiting the possibility of corrosion between gasket and flange.

Availability

- In continuous lengths.
- Cut to length.
- Fabricated into finished gaskets.
- Variety of profiles and sizes.
- Fabricated gaskets.
- Selection of wire to meet galvanic compatibility requirements.

Other profiles and NBR rubber are available to special order – please enquire to discuss your application

Design Considerations

- Consideration should be given to the termination of cut mesh ends. Sometimes loose wires are evident after cutting. Kemtron are experts at mesh termination however if you choose to cut the mesh yourself loose wires can be avoided by:
  - Dipping the end in glue,
  - Sewing the cut mesh end.
- Galvanic compatibility. Select from a choice of wire.
- Water and moisture sealing is not possible with this product. However, it does offer a limited dust seal.

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Clip on Knitted Wire Mesh RFI/EMI Shielding Gasket Strip

Typical Shielding Performance

H Field				
MHz	0.01	0.1	1.0	10.0
Monel	28	45	64	>104
TCS	47	67	88	>104
S/St	35	43	50	
Aluminium	36	47	64	>104

E Field				
MHz	0.01	0.1	1.0	100
Monel	>118	>136	>123	99
TCS	>118	>136	>126	109
S/St	119	102		
Aluminium	>118	>136	>120	91

P Field				
MHz	400	1000	10,000	
Monel	96	84	46	
TCS	98	77	43	
S/St	85	62	36	
Aluminium	86	72	34	

Materials

Monel Alloy 400 Wire
Wire diameter 0.11mm
UK Specification to BS3075 NA13
USA Specification to AMS 4730

Tin Plated Copper Clad Steel (TCS)
Wire diameter 0.11mm
UK Specification BS2316*, BS4087*
USA Specification ASTM B277*, ASTM B452*, ASTM B520, ASTM B33*, AISI 1010

* There is no complete specification for this material. Processes have been derived from parts of the above where applicable.

Stainless Steel (S/St)
UK Specification BS EN 10088-3 2005 316 S19
Wire diameter 0.11mm

Aluminium (Alu)
Specification BS EN 537 pt 3
Wire diameter 0.13mm

EPDM
Sponge rubber (EPDM) black (clamping profile EPDM 65 ± 5 shore A).
UL50
UL95-HB

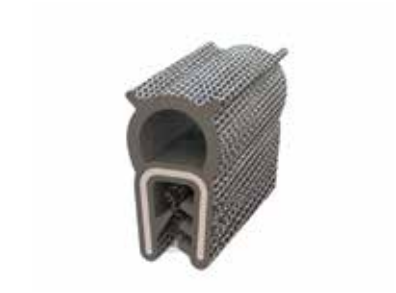
How To Order

The sizes shown on the tables are typical examples of our range other sizes are available on request. Each profile shape has its own part number and wire mesh material code.

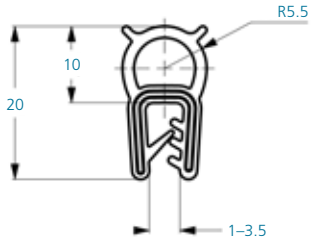
Example

6052 = profile shape 05 with Monel Wire Mesh

Profile Shape 05



Profile



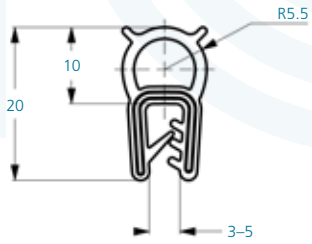
Material Codes

Mon	TCS	S/St	Alu
6052	6054	6056	6058

Other sizes are available on request.

Profile Shape 49

Profile



Material Codes

Mon	TCS	S/St	Alu
6492	6494	6496	6498

Other sizes are available on request.

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Kemtron
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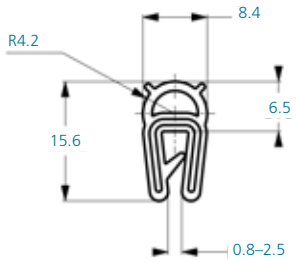
Clip on Knitted Wire Mesh RFI/EMI Shielding Gasket Strip

Profile Shape 10

Profile



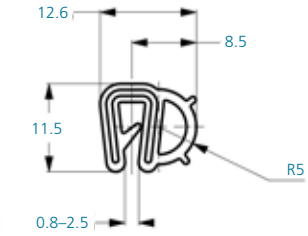
Material Codes

Mon	TCS	S/St	Alu
6102	6104	6106	6108

Other sizes are available on request.

Profile Shape 09

Profile



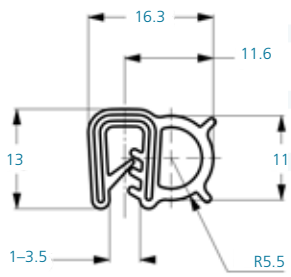
Material Codes

Mon	TCS	S/St	Alu
6092	6094	6096	6098

Other sizes are available on request.

Profile Shape 06

Profile

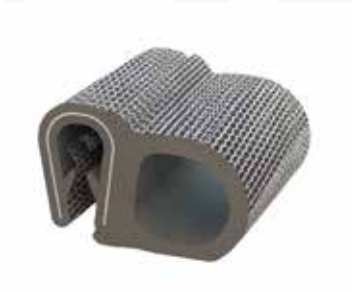


Material Codes

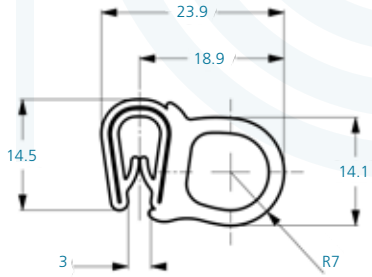
Mon	TCS	S/St	Alu
6062	6064	6066	6068

Other sizes are available on request.

Profile Shape 19



Profile



Material Codes

Mon	TCS	S/St	Alu
6192	6194	6196	6198

Other sizes are available on request.

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