Metal EMI Gaskets
MESH STRIP® All Metal Gaskets

MESH STRIP All-Metal Gaskets

MESH STRIP gaskets are compressible, all-metal EMI/EMP strips knitted into rectangular or round cross sections. The knitted wire forms many spring-like interlocked loops, making it highly resilient. Standard MESH STRIP gaskets are knitted from either monel (a nickel-copper alloy) or Ferrex* (tin-plated, copper-clad steel) wire.

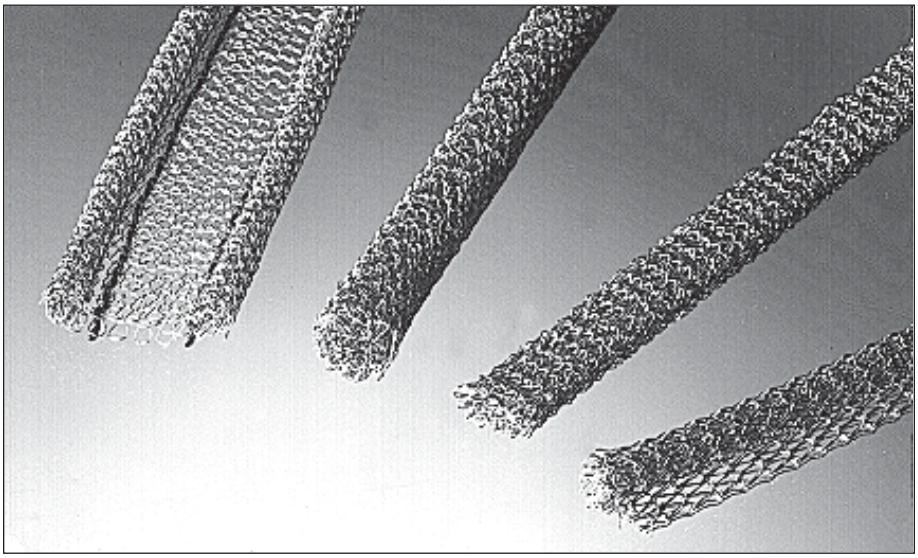
Chomerics also provides SPRINGMESH gaskets, special all-metal spring wire knitted mesh strips in a hollow tube shape with compression-deflection characteristics of 70-80%.

Other metals and alloys (such as aluminum mesh) are available. Monel is used most frequently due to its good aging properties, excellent tensile strength, and spring-like qualities. Ferrex offers the best EMI shielding performance, especially in H-fields, but has limited corrosion resistance.

All-metal MESH STRIP gasketing cannot provide a pressure or weather seal, and is not recommended for joined gaskets smaller than 2 in. (50.8 mm) x 2 in. (50.8 mm), or 3 in. (76.2 mm) in diameter.

Round cross-sectional gasketing is available with fins which simplify mounting by either riveting, spot-welding, or suitable structural adhesive bonding. The rectangular and round MESH STRIP gaskets can be held in grooves or slots by sidewall friction.

*Ferrex® is Chomerics' tin-plated, copper-clad steel wire per ASTM B-520. ASTM (QQ-W-343) tin-plate, 2-3% by weight; ASTM B-227 copper-cladding 30-40% by weight; SAE 1010 steel wire, balance by weight.



Ordering Procedure

MESH STRIP gasketing is supplied on spools in continuous lengths, or can be formed into ready-to-use, one-piece fabricated gaskets.

Standard MESH STRIP – Order by part numbers listed in Tables 2-5 (on page 2), and specify total length required.

Fabricated MESH STRIP Gaskets – Specify material by part number in Tables 2-5. Submit a drawing of the required gasket shape and dimensions. Tolerances for fabricated gaskets are as follows: 0 – 4.9 in. ±0.03 in. (0 – 125 mm ±0.76 mm); 5.0 – 10.0 in. ±0.06 in. (127 – 254 mm ±1.52 mm); over 10.0 in. (over 254 mm) ±6%.

Custom MESH STRIP shapes are also available.

For additional design assistance, contact Chomerics' Applications Engineering Department.

Table 1 MESH STRIP Cross Section Tolerances

Rectangular Strips
0.062 to 0.188; +0.015, –0.000 (1.57 to 4.78; +0.38, –0.00)
Over 0.188 to 0.375; +0.032, –0.000 (4.78 to 9.53; +0.81, –0.00)
Over 0.375 to 0.500; +0.047, –0.000 (9.53 to 12.70; +1.19, –0.00)
Over 0.500 to 1.000; +0.062, –0.000 (12.70 to 25.40; +1.57, –0.00)
Round Strips
0.062 to 0.125; +0.015, –0.000 (1.57 to 3.18; +0.38, –0.00)
Over 0.125 to 0.188; +0.032, –0.000 (3.18 to 4.78; +0.81, –0.00)
Over 0.188 to 0.375; +0.047, –0.000 (4.78 to 9.53; +1.19, –0.00)
Over 0.375 to 0.750; +0.062, –0.000 (9.53 to 19.05; +0.157, –0.00)
Single or Double Round with Fin (Overall Width)
Under and including 1.00; ± 0.06 (under 25.40 ±1.52) Over 1.00; ± 0.12 (over 25.40 ±3.04)

continued next page

Chomerics' "Quick-Cut" technology provides terminated custom lengths with non-fraying ends. Available for most cross sections shown here. Contact our Applications Engineering Department.

(mm dimensions in parentheses)

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Europe **Tel:** (44) 1628 404000 **Fax:** (44) 1628 404090
Parker Seals

Note: *Contact Chomerics for part numbers of these sizes in aluminum.*

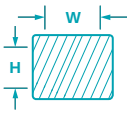


Table 2

RECTANGULAR CROSS SECTIONS

Height	Width	Part Number	
		Monel	Ferrex
0.062 (1.57)	0.062 (1.57)	01-0101-0408	01-0104-0408
0.062 (1.57)	0.125 (3.18)	01-0101-0218	01-0104-0218
0.062 (1.57)	0.187 (4.75)	01-0101-0213	01-0104-0213
0.062 (1.57)	0.250 (6.35)	01-0101-0144	01-0104-0144
0.062 (1.57)	0.312 (7.92)	01-0101-0777	01-0104-0777
0.062 (1.57)	0.375 (9.53)	01-0101-0149	01-0104-0149
0.062 (1.57)	0.500 (12.70)	01-0101-0780	01-0104-0780
0.062 (1.57)	0.625 (15.88)	01-0101-0812	01-0104-0812
0.062 (1.57)	0.750 (19.05)	01-0101-0258	01-0104-0258
0.062 (1.57)	1.000 (25.40)	01-0101-1539	01-0104-1539
0.093 (2.36)	0.093 (2.36)	01-0101-0424	01-0104-0424
0.093 (2.36)	0.125 (3.18)	01-0101-0377	01-0104-0377
0.093 (2.36)	0.187 (4.75)	01-0101-0203	01-0104-0203
0.093 (2.36)	0.250 (6.35)	01-0101-0167	01-0104-0167
0.093 (2.36)	0.312 (7.92)	01-0101-0332	01-0104-0332
0.093 (2.36)	0.375 (9.53)	01-0101-0197	01-0104-0197
0.093 (2.36)	0.500 (12.70)	01-0101-0285	01-0104-0285
0.093 (2.36)	0.625 (15.88)	01-0101-0238	01-0104-0238
0.125 (3.18)	0.125 (3.18)	01-0101-0199	01-0104-0199
0.125 (3.18)	0.187 (4.75)	01-0101-0177	01-0104-0177
0.125 (3.18)	0.250 (6.35)	01-0101-0153	01-0104-0153
0.125 (3.18)	0.312 (7.92)	01-0101-0336	01-0104-0336
0.125 (3.18)	0.375 (9.53)	01-0101-0192	01-0104-0192
0.125 (3.18)	0.500 (12.70)	01-0101-0286	01-0104-0286
0.125 (3.18)	0.625 (15.88)	01-0101-1607	01-0104-1607
0.125 (3.18)	0.750 (19.05)	01-0101-0251	01-0104-0251
0.125 (3.18)	1.000 (25.40)	01-0101-1092	01-0104-1092
0.156 (3.96)	0.125 (3.18)	01-0101-0194	01-0104-0194
0.187 (4.75)	0.187 (4.75)	01-0101-0168	01-0104-0168
0.187 (4.75)	0.250 (6.35)	01-0101-0958	01-0104-0958
0.187 (4.75)	0.312 (7.92)	01-0101-0516	01-0104-0516
0.187 (4.75)	0.375 (9.53)	01-0101-0217	01-0104-0217
0.187 (4.75)	0.500 (12.70)	01-0101-1639	01-0104-1639
0.187 (4.75)	0.625 (15.88)	01-0101-1815	01-0104-1815
0.187 (4.75)	0.750 (19.05)	01-0101-0547	01-0104-0547
0.187 (4.75)	1.000 (25.40)	01-0101-1817	01-0104-1817
0.250 (6.35)	0.250 (6.35)	01-0101-0169	01-0104-0169
0.250 (6.35)	0.312 (7.92)	01-0101-0581	01-0104-0581
0.250 (6.35)	0.375 (9.53)	01-0101-0310	01-0104-0310
0.250 (6.35)	0.500 (12.70)	01-0101-1523	01-0104-1523
0.250 (6.35)	0.625 (15.88)	01-0101-0818	01-0104-0818
0.250 (6.35)	0.750 (19.05)	01-0101-1530	01-0104-1530
0.250 (6.35)	1.000 (25.40)	01-0101-1598	01-0104-1598
0.312 (7.92)	0.312 (7.92)	01-0101-0390	01-0104-0390
0.375 (9.53)	0.375 (9.53)	01-0101-0265	01-0104-0265
0.375 (9.53)	0.625 (15.88)	01-0101-1816	01-0104-1816

Table 3

ROUND CROSS SECTIONS

Diameter*	Part Number	
	Monel	Ferrex
0.062 (1.57)	01-0101-0064	01-0104-0064
0.093 (2.36)	01-0101-0056	01-0104-0056
0.125 (3.18)	01-0101-0006	01-0104-0006
0.156 (3.96)	01-0101-0311	01-0104-0311
0.187 (4.75)	01-0101-0020	01-0104-0020
0.250 (6.35)	01-0101-0250	01-0104-0250
0.312 (7.92)	01-0101-0439	01-0104-0439
0.375 (9.53)	01-0101-0017	01-0104-0017
0.437 (11.10)	01-0101-0088	01-0104-0088
0.500 (12.70)	01-0101-0110	01-0104-0110

* For diameters larger than 0.375 (9.53), inquire about Chomerics' exclusive spring core construction.

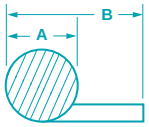


Table 4

ROUND WITH FIN

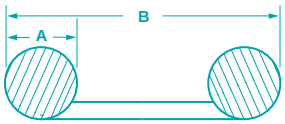
A Diameter*	B Overall Dimension	Part Number	
		Monel	Ferrex
0.062 (1.57)	0.375 (9.53)	01-0101-0983	01-0104-0983
0.062 (1.57)	0.500 (12.70)	01-0101-0756	01-0104-0756
0.062 (1.57)	0.625 (15.88)	01-0101-0091	01-0104-0091
0.062 (1.57)	0.750 (19.05)	01-0101-1160	01-0104-1160
0.093 (2.36)	0.375 (9.53)	01-0101-0826	01-0104-0826
0.093 (2.36)	0.500 (12.70)	01-0101-0977	01-0104-0977
0.093 (2.36)	0.750 (19.05)	01-0101-0998	01-0104-0998
0.125 (3.18)	0.375 (12.70)	01-0101-0008	01-0104-0008
0.125 (3.18)	0.437 (11.10)	01-0101-0076	01-0104-0076
0.125 (3.18)	0.500 (12.70)	01-0101-0060	01-0104-0060
0.125 (3.18)	0.562 (14.27)	01-0101-1161	01-0104-1161
0.125 (3.18)	0.625 (15.88)	01-0101-0061	01-0104-0061
0.125 (3.18)	0.750 (19.05)	01-0101-0079	01-0104-0079
0.156 (3.96)	0.500 (12.70)	01-0101-1162	01-0104-1162
0.156 (3.96)	0.750 (19.05)	01-0101-1163	01-0104-1163
0.187 (4.75)	0.437 (11.10)	01-0101-0075	01-0104-0075
0.187 (4.75)	0.500 (12.70)	01-0101-0092	01-0104-0092
0.187 (4.75)	0.625 (15.88)	01-0101-0058	01-0104-0058
0.187 (4.75)	0.750 (19.05)	01-0101-0051	01-0104-0051
0.187 (4.75)	0.875 (22.23)	01-0101-1164	01-0104-1164
0.250 (6.35)	0.500 (12.70)	01-0101-1331	01-0104-1331
0.250 (6.35)	0.625 (15.88)	01-0101-0109	01-0104-0109
0.250 (6.35)	0.750 (19.05)	01-0101-0106	01-0104-0106
0.250 (6.35)	0.875 (22.23)	01-0101-0534	01-0104-0534
0.250 (6.35)	1.000 (25.40)	01-0101-1330	01-0104-1330
0.312 (7.92)	0.625 (15.88)	01-0101-0530	01-0104-0530
0.312 (7.92)	0.750 (19.05)	01-0101-0362	01-0104-0362
0.312 (7.92)	0.875 (22.23)	01-0101-0592	01-0104-0592
0.375 (9.53)	0.625 (15.88)	01-0101-0568	01-0104-0568
0.375 (9.53)	0.750 (19.05)	01-0101-1191	01-0104-1191
0.375 (9.53)	0.875 (22.23)	01-0101-0009	01-0104-0009
0.375 (9.53)	1.000 (25.40)	01-0101-0270	01-0104-0270
0.437 (11.10)	0.750 (19.05)	01-0101-1192	01-0104-1192
0.437 (11.10)	0.875 (22.23)	01-0101-0098	01-0104-0098
0.437 (11.10)	1.000 (25.40)	01-0101-0274	01-0104-0274
0.500 (12.70)	0.750 (19.05)	01-0101-0789	01-0104-0789
0.500 (12.70)	0.875 (22.23)	01-0101-1193	01-0104-1193
0.500 (12.70)	1.000 (25.40)	01-0101-1040	01-0104-1040

* For diameters larger than 0.375 (9.53), inquire about Chomerics' exclusive spring core construction.

Table 5

DOUBLE ROUND WITH FIN

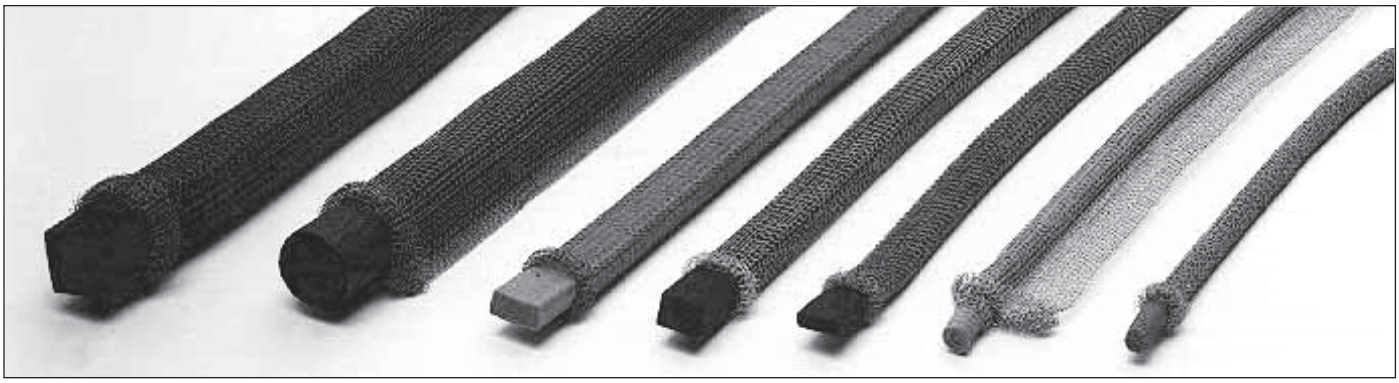
A Diameter	B Overall Dimension	Part Number	
		Monel	Ferrex
0.062 (1.57)	0.375 (9.53)	01-0101-6164	01-0104-6164
0.062 (1.57)	0.500 (12.70)	01-0101-0922	01-0104-0922
0.062 (1.57)	0.625 (15.88)	01-0101-0041	01-0104-0041
0.062 (1.57)	0.750 (19.05)	01-0101-1261	01-0104-1261
0.062 (1.57)	0.875 (22.23)	01-0101-1262	01-0104-1262
0.093 (2.36)	0.500 (12.70)	01-0101-6165	01-0104-6165
0.125 (3.18)	0.500 (12.70)	01-0101-0449	01-0104-0449
0.125 (3.18)	0.625 (15.88)	01-0101-0012	01-0104-0012
0.125 (3.18)	0.750 (19.05)	01-0101-0085	01-0104-0085
0.125 (3.18)	0.875 (22.23)	01-0101-0515	01-0104-0515
0.125 (3.18)	1.000 (25.40)	01-0101-0625	01-0104-0625
0.187 (4.75)	0.625 (15.88)	01-0101-0019	01-0104-0019
0.187 (4.75)	0.750 (19.05)	01-0101-0049	01-0104-0049
0.187 (4.75)	0.875 (22.23)	01-0101-0735	01-0104-0735
0.187 (4.75)	1.000 (25.40)	01-0101-0344	01-0104-0344
0.250 (6.35)	0.750 (19.05)	01-0101-0949	01-0104-0949
0.250 (6.35)	0.875 (22.23)	01-0101-1276	01-0104-1276
0.250 (6.35)	1.000 (25.40)	01-0101-0452	01-0104-0452
0.375 (9.53)	1.000 (25.40)	01-0101-1277	01-0104-1277
0.375 (9.53)	1.250 (31.75)	01-0101-1278	01-0104-1278



(mm dimensions in parentheses)

For tolerances, see page 1.

Metal EMI Gaskets
MESH STRIP® with Elastomer Core



MESH STRIP with Elastomer Core

Standard MESH STRIP gasketing with elastomer core consists of two layers* of wire mesh knitted around a rectangular or round core of neoprene or silicone. The knitted wire mesh provides the electrical conductivity for EMI/EMP shielding, and the core provides excellent compressibility with a high degree of resilience. Closing force is in the 50-100 psi (0.34-0.69 MPa) range.

Elastomer core MESH STRIP gasketing does not provide pressure sealing, but it does provide a seal against dust, rain, ventilating air and other limited environmental conditions.

The standard wire materials are monel (a nickel-copper alloy) and Ferrex** (tin-plated, copper-clad steel). Other metals and alloys such as aluminum mesh are available. Monel is used most frequently due to its good aging properties, excellent tensile strength and spring-like qualities. Ferrex offers the best EMI shielding performance, especially in H-fields, but has limited corrosion resistance.

Standard core materials include neoprene sponge (MIL-R-6130, Type II), hollow solid neoprene (MIL-R-6855, Class II), closed cell silicone sponge (AMS-3195) and solid silicone hollow tubing (ZZ-R-765, Class 2B).

In addition to the standard configurations listed, almost any elastomer core cross section can be produced, including UL 94V-0 rated core materials.

Also see SPRINGMESH gaskets, an all-metal spring wire hollow tube design with compression-deflection characteristics of 70-80%.

Ordering Procedure

Order by part numbers listed in Tables 2-6 (on page 4), and specify total length required. Gasketing is normally supplied on spools in continuous lengths.

Note: Elastomer Core MESH STRIP gasketing is not easily joined into single-piece gaskets. For this reason, gasketing should be factory fabricated to customer specifications.

Fabricated Gaskets – Specify materials by part numbers from Tables 2-6. Submit a sketch of the required gasket dimensions. If possible, include a brief description of the shielding/sealing application.

For additional design assistance, contact Chomerics' Applications Engineering Department.

continued next page

Table 1 MESH STRIP with Elastomer Core Tolerances

Rectangular Elastomer		
Up to 0.125 (3.18)	+0.031 –0.015	(0.79) (0.38)
Over 0.125 (3.18) to 0.375 (9.53)	±0.031	(0.79)
Over 0.375 (9.53) to 0.750 (19.05)	±0.062	(1.57)
Round Elastomer		
Up to 0.500 (12.7) dia.	±0.031	(0.79)
Over 0.500 (12.7) dia.	±0.047	(1.19)
Overall Width, Round Single-Fin		
Up to 1.00 (25.40)	±0.062	(1.57)
Over 1.00 (25.40)	±0.12	(3.05)

Note: These dimensions and tolerances refer to the elastomer core. Outside dimensions or diameters, including mesh covers, will be approximately 0.031 in. (0.79 mm) greater.

* See tables for exceptions.

** Ferrex® is Chomerics' tin-plated, copper-clad steel wire per ASTM B-520. ASTM (QQ-W-343) tin-plate, 2-3% by weight; ASTM B-227 copper-cladding 30-40% by weight; SAE 1010 steel wire, balance by weight.

Chomerics' "Quick-Cut" technology provides terminated custom lengths with non-fraying ends. Available for most cross sections shown here. Contact our Applications Engineering Department.

(mm dimensions in parentheses)

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Parker Seals

MESH STRIP® with Elastomer Core *continued*

Note: *Contact Chomerics for part numbers of these sizes in aluminum.*

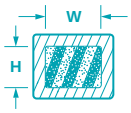

Table 2

RECTANGULAR CROSS SECTIONS/SPONGE CORE					
Height*	Width*	Part Number			
		Neoprene Sponge		Silicone Sponge	
		Monel	Ferrex	Monel	Ferrex
0.125 (3.18)	0.125 (3.18)	01-0401-1845	01-0404-1845	01-0501-0319	01-0504-0319
0.125 (3.18)	0.156 (3.96)	01-0401-1518	01-0404-1518	01-0501-0666	01-0504-0666
0.125 (3.18)	0.188 (4.78)	01-0401-1846	01-0404-1846	01-0501-1320	01-0504-1320
0.125 (3.81)	0.250 (6.35)	01-0401-1847	01-0404-1847	01-0501-1853	01-0504-1853
0.188 (4.78)	0.188 (4.78)	01-0401-1848	01-0404-1848	01-0501-1854	01-0504-1854
0.250 (6.35)	0.250 (6.35)	01-0401-1564	01-0404-1564	01-0501-1855	01-0504-1855
0.250 (6.35)	0.375 (9.53)	01-0401-0888	01-0404-0888	01-0501-1856	01-0504-1856
0.250 (6.35)	0.500 (12.70)	01-0401-1849	01-0404-1849	01-0501-1857	01-0504-1857
0.375 (9.53)	0.500 (12.70)	01-0401-0328	01-0404-1328	01-0501-1858	01-0504-1858
0.375 (9.53)	0.625 (15.88)	01-0401-1850	01-0404-1850	01-0501-1859	01-0504-1859
0.500 (12.70)	0.500 (12.70)	01-0401-1851	01-0404-1851	01-0501-1860	01-0504-1860
0.500 (12.70)	0.750 (19.05)	01-0401-1852	01-0404-1852	01-0501-1861	01-0504-1861

Table 3

ROUND CROSS SECTIONS/SPONGE CORE				
Diameter*	Part Number			
	Neoprene Sponge		Silicone Sponge	
	Monel	Ferrex	Monel	Ferrex
0.062 (1.57)	01-0401-1890**	01-0404-1890**	01-0501-1890**	01-0504-1890**
0.125 (3.18)	01-0401-0541	01-0404-0541	01-0501-1891	01-0504-1891
0.188 (4.78)	01-0401-0571	01-0404-0571	01-0501-1892	01-0504-1892
0.250 (6.35)	01-0401-0627	01-0404-0627	01-0501-1893	01-0504-1893
0.312 (7.92)	01-0401-0626	01-0404-0626	01-0501-1894	01-0504-1894
0.375 (9.53)	01-0401-1886	01-0404-1886	01-0501-1895	01-0504-1895
0.437 (11.11)	01-0401-0747	01-0404-0747	01-0501-1896	01-0504-1896
0.500 (12.70)	01-0401-0845	01-0404-0845	01-0501-1897	01-0504-1897
0.750 (19.05)	01-0401-0633	01-0404-0633	01-0501-1898	01-0504-1898

**This size has only one mesh layer.

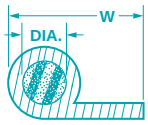

Table 4

RECTANGULAR CROSS SECTIONS/SPONGE CORE					
Diameter*	Width Overall	Part Number			
		Neoprene Sponge		Silicone Sponge	
		Monel	Ferrex	Monel	Ferrex
0.125 (3.18)	0.500 (12.70)	01-0401-1862	01-0404-1862	01-0501-0690	01-0504-0690
0.125 (3.18)	0.625 (15.88)	01-0401-1863	01-0404-1863	01-0501-1877	01-0504-1877
0.125 (3.18)	0.750 (19.05)	01-0401-1864	01-0404-1864	01-0501-1878	01-0504-1878
0.188 (4.78)	0.500 (12.70)	01-0401-0630	01-0404-0630	01-0501-1879	01-0504-1879
0.188 (4.78)	0.625 (15.88)	01-0401-1865	01-0404-1865	01-0501-1880	01-0504-1880
0.188 (4.78)	0.750 (19.05)	01-0401-1866	01-0404-1866	01-0501-1881	01-0504-1881
0.250 (6.35)	0.625 (15.88)	01-0401-0819	01-0404-0819	01-0501-1882	01-0504-1882
0.250 (6.35)	0.750 (19.05)	01-0401-1867	01-0404-1867	01-0501-1883	01-0504-1883
0.250 (6.35)	1.000 (25.40)	01-0401-1868	01-0404-1868	01-0501-1884	01-0504-1884
0.500 (12.50)	1.000 (25.40)	01-0401-1869	01-0404-1869	01-0501-1885	01-0504-1885
0.625 (15.88)	1.375 (34.93)	01-0401-1870	01-0404-1870	01-0501-0734	01-0504-0734

(mm dimensions in parentheses)

Table 5

ROUND CROSS SECTIONS/ HOLLOW SILICONE CORE		
Diameter*	Part Number	
	Monel	Ferrex
0.188 (4.78)	01-0501-6044	01-0504-6044
0.250 (6.35)	01-0501-6045	01-0504-6045
0.375 (9.53)	01-0501-6112	01-0504-6112
0.500 (12.50)	01-0501-6115	01-0504-6115

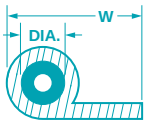

Table 6

SINGLE ROUND WITH FIN/ HOLLOW SILICONE CORE			
Diameter*	Width Overall	Part Number	
		Monel	Ferrex
0.188 (4.78)	0.500 (12.50)	01-0501-6105	01-0504-6105
0.250 (6.35)	0.625 (15.88)	01-0501-6110	01-0504-6110
0.375 (9.53)	0.750 (19.05)	01-0501-6113	01-0504-6113
0.500 (12.50)	1.000 (25.40)	01-0501-6114	01-0504-6114

* *These dimensions apply to the elastomer core. Outside dimensions, including mesh covers, will be approximately 0.031 in. (0.79 mm) greater. Wall thickness of standard hollow cores is 0.040 in. (1.02 mm).*

For tolerances, see page 3.