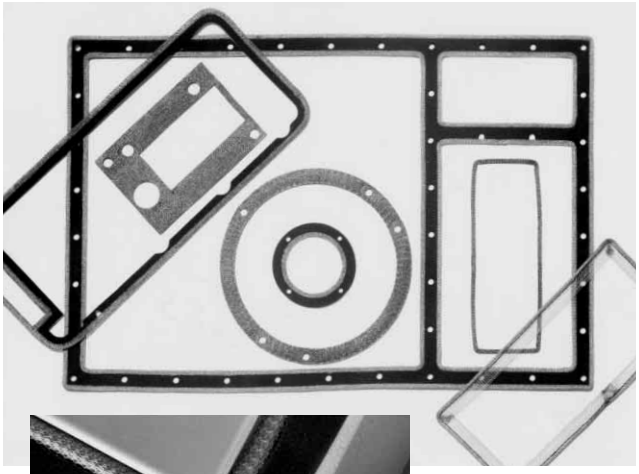
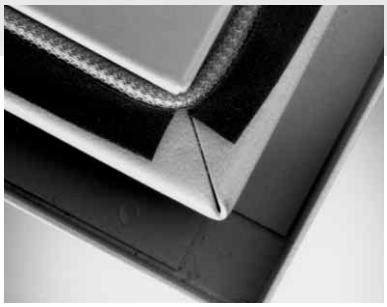
COMBO® STRIP Gaskets





COMBO STRIP Gaskets

COMBO STRIP gaskets combine MESH STRIP gasketing in parallel with an integral elastomer weather-sealing strip. They are available with or without adhesive backing in a broad range of standard cross sections. Configurations with MESH STRIP gasketing on both sides of the elastomer are also available.

COMBO STRIP gasketing is recommended for applications requiring a weather seal in addition to EMI/EMP shielding. This type of gasketing is also useful in applications requiring shielding only and where the adhesive backing on the elastomer would provide a convenient means of mounting. To obtain a reliable shield and seal, both portions of the COMBO STRIP gasket must come in contact with both mating surfaces.

For applications in which over-compression might cause deterioration of the elastomer seal, metal compression stops may be incorporated within the elastomer portion of the gasket.

The standard EMI/EMP shield in COMBO gasketing is monel or Ferrex* wire, although other metals and alloys (such as aluminum) are available. The standard elastomers are neoprene sponge (MIL-R-6130, Type II), hollow solid neoprene (MIL-R-6855, Class II), silicone sponge (AMS-3195), or solid silicone (ZZ-R-765, Class 2B). Other elastomers, such as fluorosilicones, may be substituted.

For high deflection applications with low closure force, COMBO gaskets with sponge elastomers are recommended. Mesh over elastomer core, in conjunction with a sponge elastomer, can further improve low closure force capabilities. For applications requiring less compressibility, solid elastomers are preferred.

Adhesive Backing

A high tack, long shelf-life acrylic adhesive is available as an option on both neoprene and silicone elastomers.

Compression and Closure Characteristics

For COMBO gasketing with solid elastomer core, the wire mesh is normally 0.031 in. (0.79 mm) higher than the elastomer to assure adequate compression of the mesh. In general, solid elastomer closure pressure is in the 25 to 100 psi (0.17-0.69 MPa) range. For moderate EMI shielding, and when sponge elastomer is used for limited environmental sealing, pressure as low as 10 psi (0.07 MPa) is adequate.

For applications in which sponge elastomer is required, over-compression at the bolt holes can be avoided by bonding washer-type metal compression stops within the seal.

To ensure against over-compression in applications where excessive force is concentrated on the cover gasket, solid metal stops can be bonded into the gasket between bolt holes. The two types of compression stops are illustrated here.

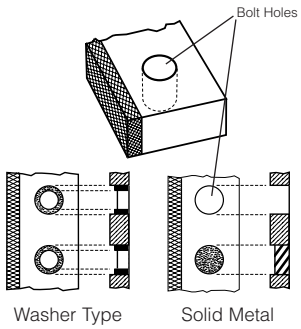


Figure 1 Compression Stops

Ordering Procedure

Standard COMBO STRIP Gasketing: Standard roll length is 25 feet (7.62 meters). Contact Chomerics about custom roll lengths. Order by part numbers from Tables 2 and 3. If no listed part is suitable, specify desired cross section, elastomer material, and EMI mesh material. *Note the following size ranges:*

Mesh dimensions

min. (C) = 0.062 in. (1.57 mm)
(D) = 0.125 in. (3.18 mm)
max. (C) = 0.375 in. (9.53 mm)
(D) = 1.000 in. (25.4 mm)

Elastomer dimensions

min. (A) = 0.062 in. (1.57 mm)
(B) = 0.125 in. (3.18 mm)
max. (A) = 0.375 in. (9.53 mm)
(B) = 1.000 in. (25.4 mm)

For solid elastomers, the mesh material is normally 0.031 in. (0.79 mm) thicker than the elastomer.

* 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.

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Parker Seals

Fabricated COMBO GASKETS: Select the appropriate elastomer and wire mesh material, and determine gasket thickness and width. Determine need and type of compression stop. Prepare and submit a drawing of specifications, dimensions, and tolerances to Chomerics' Sales Department.

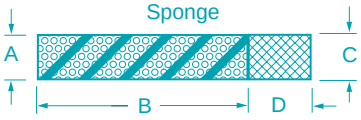
For additional design assistance, contact Chomerics' Applications Engineering Department.

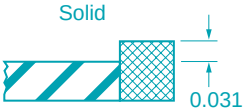
Table 1

COMPRESSION STOP TOLERANCES		
Thickness*	**Aluminum**	**Stainless Steel**
0.040-0.072 (1.02-1.83)	±0.004 (0.10)	±0.006 (0.15)
0.073-0.098 (1.85-2.49)	±0.006 (0.15)	±0.008 (0.20)
0.099-0.130 (2.51-3.30)	±0.008 (0.20)	±0.010 (0.25)
0.131-0.150 (3.32-3.81)	±0.010 (0.25)	±0.012 (0.30)

* Choose standard-gauge sheet material only.

COMBO STRIP Gasketing





Also available with solid neoprene or solid silicone, please inquire.

When using "solid" elastomer, mesh is normally 0.031 in. (0.79 mm) higher because mesh compresses easier than solid elastomer under same pressure.

Table 2

COMBO STRIP GASKETS							
Dimensions, inch (mm)				**Part Number**			
				Neoprene Sponge		**Silicone Sponge**	
A	**B**	**C**	**D**	**Monel**	**Ferrex**	**Monel**	**Ferrex**
0.062 (1.57)	0.250 (6.35)	0.062 (1.57)	0.125 (3.18)	01-0201-1756	01-0204-1756	01-0301-1772	01-0304-1772
0.062 (1.57)	0.375 (9.53)	0.062 (1.57)	0.125 (3.18)	01-0201-1757	01-0204-1757	01-0301-1773	01-0304-1773
0.062 (1.57)	0.500 (12.70)	0.062 (1.57)	0.125 (3.18)	01-0201-1692	01-0204-1692	01-0301-1774	01-0304-1774
0.062 (1.57)	0.625 (15.88)	0.062 (1.57)	0.125 (3.18)	01-0201-1739	01-0204-1739	01-0301-1775	01-0304-1775
0.093 (2.36)	0.250 (6.35)	0.093 (2.36)	0.125 (3.18)	01-0201-1344	01-0204-1344	01-0301-1776	01-0304-1776
0.093 (2.36)	0.375 (9.53)	0.093 (2.36)	0.125 (3.18)	01-0201-1332	01-0204-1332	01-0301-1777	01-0304-1777
0.093 (2.36)	0.500 (12.70)	0.093 (2.36)	0.125 (3.18)	01-0201-1758	01-0204-1758	01-0301-1778	01-0304-1778
0.093 (2.36)	0.750 (19.05)	0.093 (2.36)	0.125 (3.18)	01-0201-1333	01-0204-1333	01-0301-1779	01-0304-1779
0.125 (3.18)	0.125 (3.18)	0.125 (3.18)	0.125 (3.18)	01-0201-1138	01-0204-1138	01-0301-1780	01-0304-1780
0.125 (3.18)	0.188 (4.78)	0.125 (3.18)	0.125 (3.18)	01-0201-1136	01-0204-1136	01-0301-1781	01-0304-1781
0.125 (3.18)	0.250 (6.35)	0.125 (3.18)	0.125 (3.18)	01-0201-1135	01-0204-1135	01-0301-1782	01-0304-1782
0.125 (3.18)	0.250 (6.35)	0.125 (3.18)	0.250 (6.35)	01-0201-1130	01-0204-1130	01-0301-1783	01-0304-1783
0.125 (3.18)	0.375 (9.53)	0.125 (3.18)	0.125 (3.18)	01-0201-1132	01-0204-1132	01-0301-1784	01-0304-1784
0.125 (3.18)	0.500 (12.70)	0.125 (3.18)	0.125 (3.18)	01-0201-1134	01-0204-1134	01-0301-1785	01-0304-1785
0.125 (3.18)	0.500 (12.70)	0.125 (3.18)	0.250 (6.35)	01-0201-1131	01-0204-1131	01-0301-1786	01-0304-1786
0.125 (3.18)	0.500 (12.70)	0.125 (3.18)	0.500 (12.70)	01-0201-1133	01-0204-1133	01-0301-1787	01-0304-1787
0.125 (3.18)	0.625 (15.88)	0.125 (3.18)	0.125 (3.18)	01-0201-1055	01-0204-1055	01-0301-1788	01-0304-1788
0.125 (3.18)	0.750 (19.05)	0.125 (3.18)	0.125 (3.18)	01-0201-1759	01-0204-1759	01-0301-1789	01-0304-1789
0.188 (4.78)	0.188 (4.78)	0.188 (4.78)	0.125 (3.18)	01-0201-1760	01-0204-1760	01-0301-1790	01-0304-1790
0.188 (4.78)	0.250 (6.35)	0.156 (3.96)	0.125 (3.18)	01-0201-1056	01-0204-1056	01-0301-1515	01-0304-1515
0.188 (4.78)	0.250 (6.35)	0.188 (4.78)	0.125 (3.18)	01-0201-1622	01-0204-1622	01-0301-1791	01-0304-1791
0.188 (4.78)	0.375 (9.53)	0.188 (4.78)	0.125 (3.18)	01-0201-1761	01-0204-1761	01-0301-1792	01-0304-1792
0.188 (4.78)	0.500 (12.70)	0.188 (4.78)	0.125 (3.18)	01-0201-1762	01-0204-1762	01-0301-1793	01-0304-1793
0.188 (4.78)	0.750 (19.05)	0.188 (4.78)	0.250 (6.35)	01-0201-1763	01-0204-1763	01-0301-1794	01-0304-1794
0.250 (6.35)	0.250 (6.35)	0.250 (6.35)	0.125 (3.18)	01-0201-1764	01-0204-1764	01-0301-1795	01-0304-1795
0.250 (6.35)	0.500 (12.70)	0.250 (6.35)	0.125 (3.18)	01-0201-1766	01-0204-1766	01-0301-1797	01-0304-1797
0.250 (6.35)	0.750 (19.05)	0.250 (6.35)	0.125 (3.18)	01-0201-1767	01-0204-1767	01-0301-1798	01-0304-1798
0.375 (9.53)	0.250 (6.35)	0.375 (9.53)	0.125 (3.18)	01-0201-0817	01-0204-0817	01-0301-1800	01-0304-1800
0.375 (9.53)	0.500 (12.70)	0.375 (9.53)	0.250 (6.35)	01-0201-1768	01-0204-1768	01-0301-1801	01-0304-1801
0.375 (9.53)	0.750 (19.05)	0.375 (9.53)	0.250 (6.35)	01-0201-1769	01-0204-1769	01-0301-1802	01-0304-1802

For pressure-sensitive adhesive backing: change 02 to 06.

For pressure-sensitive adhesive backing: change 03 to 07.

continued

(mm dimensions in parentheses)

COMBO-2 STRIP Gasketing *(mesh on two sides)*

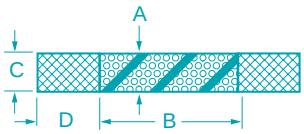


Table 3

COMBO- 2 STRIP GASKETS							
Dimensions, inch (mm)				Part Number			
				Neoprene Sponge		Silicone Sponge	
A	B	C	D	Monel	Ferrex	Monel	Ferrex
0.125 (3.18)	0.250 (6.35)	0.125 (3.18)	0.125 (3.18)	01-0201-1765	01-0204-1765	01-0301-1796	01-0304-1796
0.125 (3.18)	0.375 (9.53)	0.125 (3.18)	0.125 (3.18)	01-0201-1770	01-0204-1770	01-0301-1799	01-0304-1799
0.125 (3.18)	0.500 (12.70)	0.125 (3.18)	0.125 (3.18)	01-0201-1771	01-0204-1771	01-0301-1803	01-0304-1803
0.125 (3.18)	0.250 (6.35)	0.156 (3.96)	0.125 (3.18)	01-0201-1804	01-0204-1804	01-0301-1805	01-0304-1805
0.125 (3.18)	0.375 (9.53)	0.156 (3.96)	0.125 (3.18)	01-0201-1681	01-0204-1681	01-0301-1806	01-0304-1806
0.125 (3.18)	0.500 (12.70)	0.156 (3.96)	0.125 (3.18)	01-0201-1807	01-0204-1807	01-0301-1810	01-0304-1810
0.188 (4.78)	0.250 (6.35)	0.188 (4.78)	0.125 (3.18)	01-0201-1808	01-0204-1808	01-0301-1811	01-0304-1811
0.188 (4.78)	0.500 (12.70)	0.188 (4.78)	0.125 (3.18)	01-0201-1809	01-0204-1809	01-0301-1812	01-0304-1812

For pressure-sensitive adhesive backing: change 02 to 06.

For pressure-sensitive adhesive backing: change 03 to 07.

Table 4

COMBO AND COMBO-2 STRIP CROSS SECTION TOLERANCES		
Dimensions,* in. (mm)	Closed Cell Sponge	Solid Elastomer
A Under 0.125 (3.18)	+0.032 (0.81) – 0.016 (0.41)	±0.015 (0.38)
A 0.125 to 0.5 (3.18 to 12.7)	±0.063 (1.60)	±0.015 (0.38)
A Over 0.5 (12.7)	±0.094 (2.39)	±0.015 (0.38)
B Under 1.00 (25.4)	±0.031 (0.78)	±0.031 (0.78)
C & D 0.062 to 0.186 (1.57 to 4.72)	+0.015 −0.000 (+0.38 −0.00)	
C & D 0.187 to 0.375 (4.75 to 9.53)	+0.031 −0.000 (+0.78 −0.00)	

*See sketch on page 113.

Table 5

FABRICATED COMBO GASKET TOLERANCES		
Dimensions,* in. (mm)	Closed Cell Sponge	Solid Elastomer
A, B, C, & D for each 5 in. (127 mm) of length	±0.031 (0.78) ±0.031 (0.78)	±0.015 (0.38) ±0.015 (0.38)
G & J for each 5 in. (127 mm) of length	±0.015 (0.38) ±0.015 (0.38)	±0.015 (0.38) ±0.015 (0.38)
T Under 0.125 (3.18)	±0.016 (0.41)	±0.015 (0.38)
T 0.125 to 0.5 (3.18 to 12.7)	±0.063 (1.60)	±0.031 (0.78)
T Over 0.5 (12.7)	±0.094 (2.39)	±0.031 (0.78)
W & H 0.062 to 0.186 & (1.57 to 4.72)	+0.015 −0.000 (+0.38 −0.00)	
W & H 0.187 to 0.375 (4.75 to 9.53)	+0.031 −0.000 (+0.78 −0.00)	

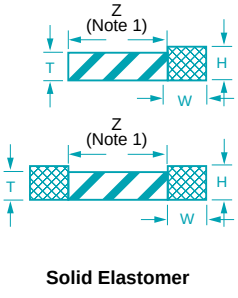
* See sketch below.

Figure 2 Typical Fabricated Combo Gasket Drawing

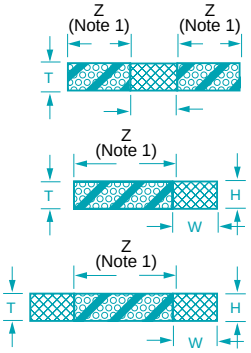
Notes:

1. Minimum width of elastomer (**Z**) is the greater of 0.125 in. (3.18 mm) or elastomer thickness (**T**).
2. Minimum wall width (between hole and edge) should equal elastomer thickness (**T**). "U" slots should be used if minimum wall requirement cannot be met.
3. Hole diameter (**E**) should be equal to or greater than elastomer thickness (**T**).

Cross Sections



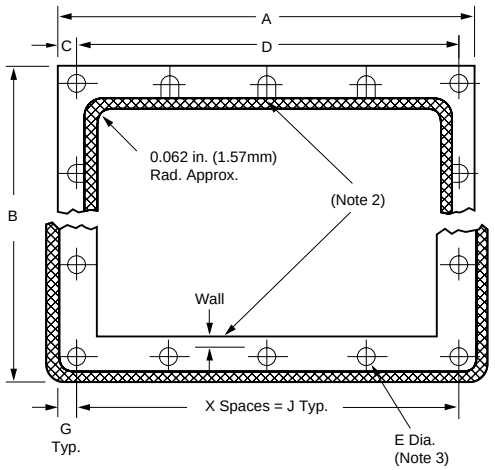
Solid Elastomer



Sponge Elastomer

= mesh portion

H = T +0.031 inch (0.79 mm)



(mm dimensions in parentheses)

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