

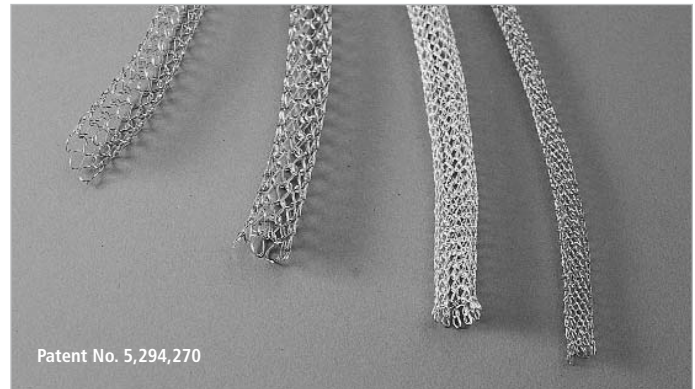
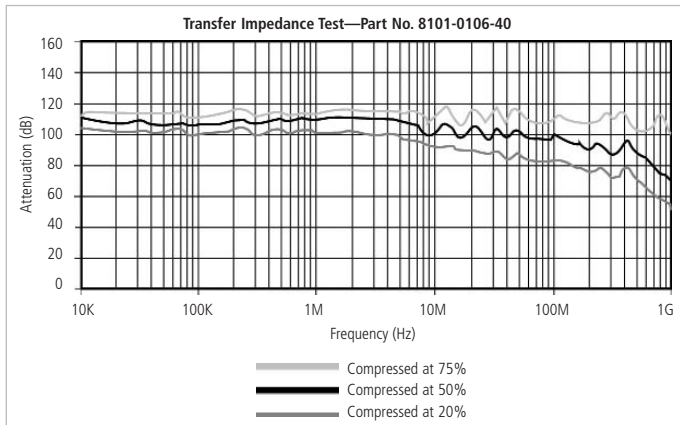


# ULTRAFLEX® ELECTRONIT® BERYLLIUM COPPER KNITTED WIRE SHIELDING

UltraFlex® ElectroNit® combines the optimum mechanical properties of beryllium copper with shielding effectiveness as much as 20 dB higher than conventional materials. It offers superb resiliency for consistent, point-to-point contact requiring the lowest compression forces among all other shielding materials and configurations. A wide range of platings, sizes, configurations, and excellent flexibility create optimum design latitude.

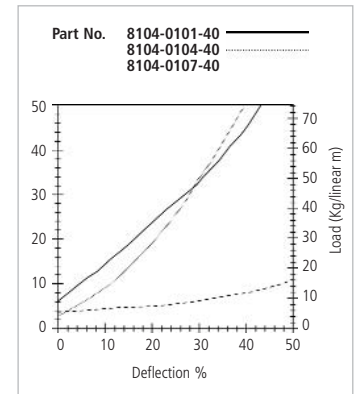
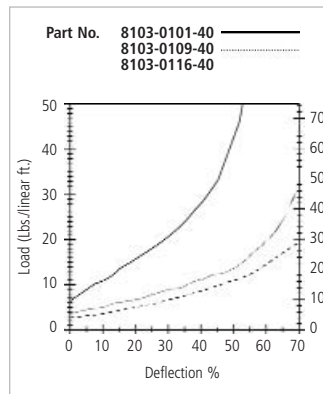
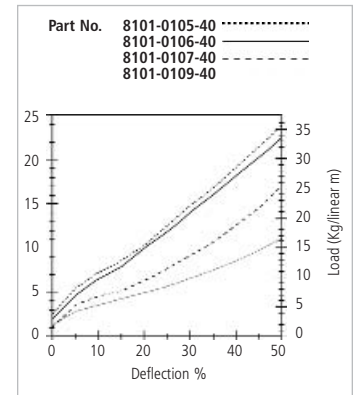
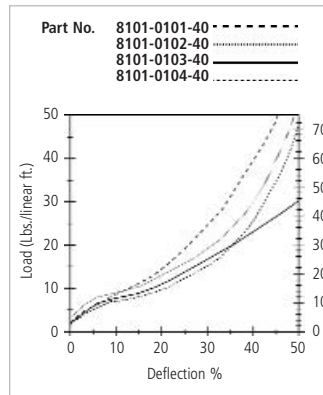
- Compression force 80% less than conventional knitted wire shielding with elastomer core
- >90% recovery of original height at up to 75% deflection preserving shielding effectiveness values
- Optimum attenuating properties of beryllium copper, one of shielding's most effective materials
- Up to 75% lighter than conventional wire knit materials
- High cycle life for high traffic applications
- No moisture absorption
- Available in UltraFlex Lite single strand BeCu mesh, offering 50% load reduction from standard product
- Also offered in aluminum and stainless steel for increased galvanic compatibility with mating surfaces
- Other platings available upon request UltraFlex is supplied on spools in continuous minimum lengths of 25 ft. (7,6 m).

## SHIELDING EFFECTIVENESS



▲ Hollow core UltraFlex is available in round, round with single fin, double round configuration, and D shape.

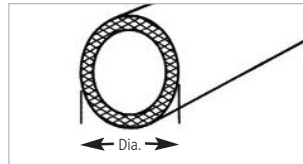
## Compression-Deflection



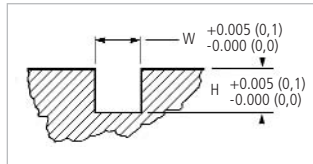


## SIZE VS. TOLERANCE: ULTRAFLEX HOLLOW CORE ROUND

Size Range	Tolerance	
	Diameter	
To 0.120 (3,1)	+ 0.020/- 0.000 (+0,5/-0,0)	
0.130 to 0.380 (3,3 to 9,7)	+ 0.030/- 0.000 (+0,8/-0,0)	
0.390 to 0.050 (9,9 to 12,7)	+ 0.046/- 0.000 (+1,2/-0,0)	
0.510 to 1.000 (13,0 to 25,4)	+ 0.062/- 0.000 (+1,6/-0,0)	



### Groove Dimensions

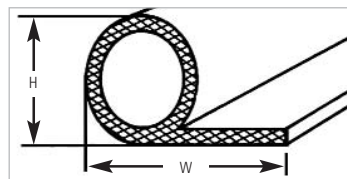


## ULTRAFLEX HOLLOW CORE ROUND

Laird Technologies Part No.	Groove Dimensions		Diameter
	W	H	
8101-0101-40	0.062 (1,6)	0.060 (1,5)	0.047 (1,2)
8101-0102-40	0.093 (2,4)	0.090 (2,3)	0.069 (1,8)
8101-0103-40	0.125 (3,2)	0.120 (3,1)	0.093 (2,4)
8101-0104-40	0.156 (4,0)	0.150 (3,8)	0.117 (3,0)
8101-0105-40	0.187 (4,8)	0.180 (4,6)	0.140 (3,6)
8101-0106-40	0.250 (6,4)	0.240 (6,1)	0.187 (4,8)
8101-0107-40	0.312 (7,9)	0.292 (7,4)	0.234 (5,9)
8101-0108-40	0.375 (9,5)	0.360 (9,1)	0.281 (7,1)
8101-0109-40	0.500 (12,7)	0.485 (12,3)	0.375 (9,5)
8101-0135-40	0.750 (19,1)	0.730 (18,5)	0.563 (14,3)

## SIZE VS. TOLERANCE: ULTRAFLEX HOLLOW CORE ROUND WITH SINGLE FIN

Size Range	Tolerance	
	Dim W	Dim H
To 0.180 (4,6)	N/A	+ 0.020/- 0.000 (+0,5/-0,0)
0.190 to 0.380 (4,8 to 9,7)	+ 0.060/- 0.030 (+1,5/-0,8)	+ 0.030/- 0.000 (+0,8/-0,0)
0.390 to 0.050 (9,9 to 12,7)	+ 0.060/- 0.060 (+1,5/-1,5)	+ 0.046/- 0.000 (+1,2/-0,0)
0.510 to 1.000 (13,0 to 25,4)	+ 0.090/- 0.060 (+2,3/-1,5)	+ 0.062/- 0.000 (+1,6/-0,0)

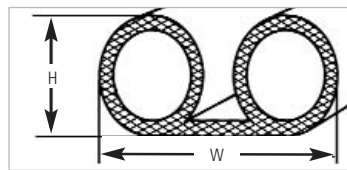


## ULTRAFLEX HOLLOW CORE ROUND WITH SINGLE FIN

Laird Technologies Part No.*	Width	Height
8103-0125-40	0.300 (7,6)	0.093 (2,4)
8103-0101-40	0.375 (9,5)	0.062 (1,6)
8103-0104-40	0.375 (9,5)	0.125 (3,2)
8103-0118-40	0.375 (9,5)	0.156 (4,0)
8103-0102-40	0.500 (12,7)	0.062 (1,6)
8103-0103-40	0.500 (12,7)	0.093 (2,4)
8103-0107-40	0.500 (12,7)	0.156 (4,0)
8103-0109-40	0.500 (12,7)	0.250 (6,4)
8103-0117-40	0.500 (12,7)	0.375 (9,5)
8103-0105-40	0.625 (15,9)	0.125 (3,2)
8103-0108-40	0.625 (15,9)	0.187 (4,8)
8103-0112-40	0.625 (15,9)	0.312 (7,9)
8103-0106-40	0.750 (19,1)	0.125 (3,2)
8103-0110-40	0.750 (19,1)	0.250 (6,4)
8103-0113-40	0.875 (22,2)	0.312 (7,9)
8103-0111-40	1.000 (25,4)	0.250 (6,4)
8103-0114-40	1.000 (25,4)	0.375 (9,5)
8103-0115-40	1.000 (25,4)	0.437 (11,1)
8103-0116-40	1.000 (25,4)	0.500 (12,7)

## SIZE VS. TOLERANCE: ULTRAFLEX HOLLOW CORE DOUBLE ROUND

Size Range	Tolerance	
	Dim W	Dim H
To 0.180 (4,6)	N/A	+ 0.020/- 0.000 (+0,5/-0,0)
0.190 to 0.380 (4,8 to 9,7)	+ 0.060/- 0.030 (+1,5/-0,8)	+ 0.030/- 0.000 (+0,8/-0,0)
0.390 to 0.050 (9,9 to 12,7)	+ 0.060/- 0.060 (+1,5/-1,5)	+ 0.046/- 0.000 (+1,2/-0,0)
0.510 to 1.000 (13,0 to 25,4)	+ 0.090/- 0.060 (+2,3/-1,5)	+ 0.062/- 0.000 (+1,6/-0,0)

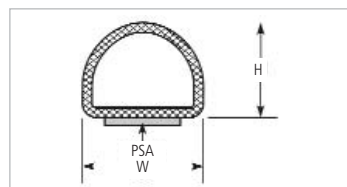


## ULTRAFLEX HOLLOW CORE DOUBLE ROUND

Laird Technologies Part No.*	Width	Height
8104-0101-40	0.500 (12,7)	0.062 (1,6)
8104-0102-40	0.500 (12,7)	0.125 (3,2)
8104-0105-40	0.625 (15,9)	0.187 (4,8)
8104-0103-40	0.750 (19,1)	0.125 (3,2)
8104-0107-40	0.750 (19,1)	0.250 (6,4)
8104-0104-40	1.000 (25,4)	0.125 (3,2)
8104-0106-40	1.000 (25,4)	0.187 (4,8)
8104-0108-40	1.000 (25,4)	0.250 (6,4)
8104-0109-40	1.000 (25,4)	0.375 (9,5)

## SIZE VS. TOLERANCE: ULTRAFLEX D WITH PSA

Size Range	Tolerance	
	Dim W	Dim H
0.120 to 0.250 (3,1 to 6,4)	+ 0.030/- 0.000 (+0,8/-0,0)	+ 0.030/- 0.000 (+0,8/-0,0)
0.260 to 0.380 (6,6 to 9,7)	+ 0.040/- 0.000 (+1,0/-0,0)	+ 0.040/- 0.000 (+1,0/-0,0)
0.390 to 0.050 (9,9 to 12,7)	+ 0.050/- 0.000 (+1,3/-0,0)	+ 0.040/- 0.000 (+1,0/-0,0)



For Size vs. Tolerance charts, dimensions measured under 4 oz. load (11,3 gms) with 0.750 dia. (19,1 mm) anvil.

## ULTRAFLEX D WITH PSA

Laird Technologies Part No.	Width	Height
8102-0202-40	0.200 (5,1)	0.130 (3,3)
8102-0209-40	0.250 (6,4)	0.125 (3,2)
8102-0203-40	0.250 (6,4)	0.190 (4,8)
8102-0204-40	0.312 (7,9)	0.250 (6,4)
8102-0205-40	0.380 (9,7)	0.312 (7,9)
8102-0206-40	0.500 (12,7)	0.375 (9,5)
8102-0207-40	0.750 (19,1)	0.670 (17,0)

For other platings, replace the suffix "40" as follows: **41**-Tin plate; **47**-Nickel plate; **48**-Cadmium plate; **49**-Zinc clear chromate. Other platings available upon request.

All dimensions shown are in inches (millimeters) unless otherwise specified.

\* For part number ordering information on pressure-sensitive adhesive tape see page 1.4.



## Compression Recovery

An important feature of UltraFlex® shielding gaskets is their capability to recover 90% or more of their free height after repeated deflections of up to 75% of free height.

Table 1 indicates cycle recovery data for standard UltraFlex diameters

**TABLE 1. ULTRAFLEX COMPRESSION CYCLE TEST RECOVERY DATA**

Laird Technologies Part No.*	% of Deflection	Recovery % After Cycle		
		100 Cycles	250 Cycles	500 Cycles
8101-0101-40	25	100	98	98
	50	98	98	94
	75	98	98	94
8101-0102-40	25	100	100	100
	50	98	98	96
	75	92	90	88
8101-0103-40	25	96	96	96
	50	96	96	96
	75	96	95	95
8101-0104-40	25	98	98	98
	50	98	98	98
	75	89	88	88
8101-0105-40	25	100	100	100
	50	100	98	98
	75	97	96	96
8101-0106-40	25	100	100	100
	50	100	100	99
	75	100	100	98
8101-0107-40	25	98	98	98
	50	98	98	97
	75	95	95	95
8101-0108-40	25	100	100	100
	50	100	99	99
	75	100	100	98
8101-0109-40	25	100	100	100
	50	98	98	97
	75	98	98	97

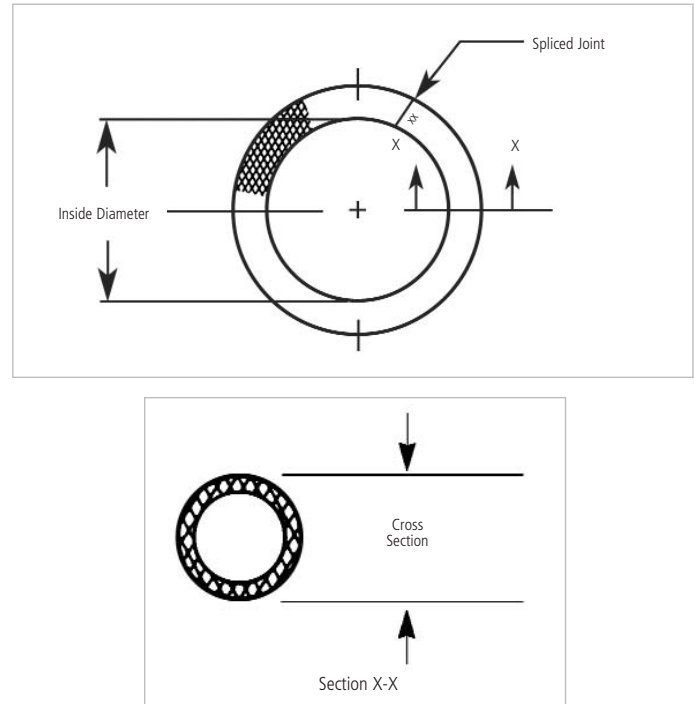
\* For part number ordering information on pressure-sensitive adhesive tape see page 1.4.

## Fabricated UltraFlex Gaskets

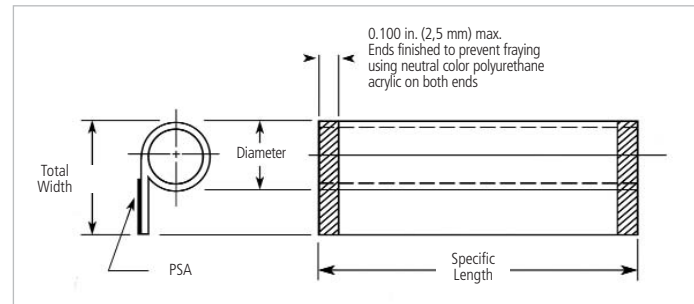
The UltraFlex products featured in this section can be supplied in bulk form on spools, or as individual gaskets fabricated to user specifications.

Shown below are diagrams of conventional O-ring and cut-to-length constructions.

**FIGURE 1. O-RING CONSTRUCTION**



**FIGURE 2. CUT-TO-LENGTH CONSTRUCTION HOLLOW CORE WITH FIN AND PSA TAPE**



All dimensions shown are in inches (millimeters) unless otherwise specified.



Laird Technologies ElectroNit® All Mesh EMI Gasketing has been designed to offer the highest possible levels of attenuation. Knit construction enhances long lasting resiliency, making it an ideal material for highly sensitive components in permanent or semi-permanent enclosures where environmental sealing is not a concern.

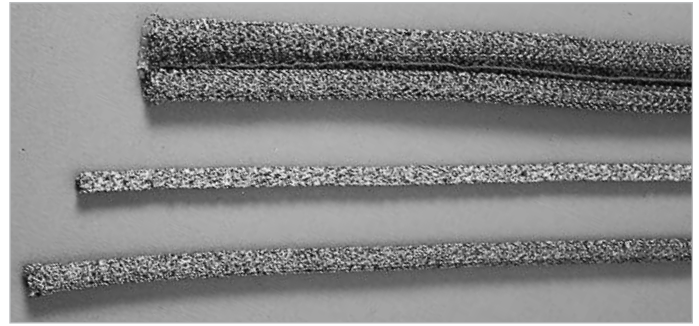
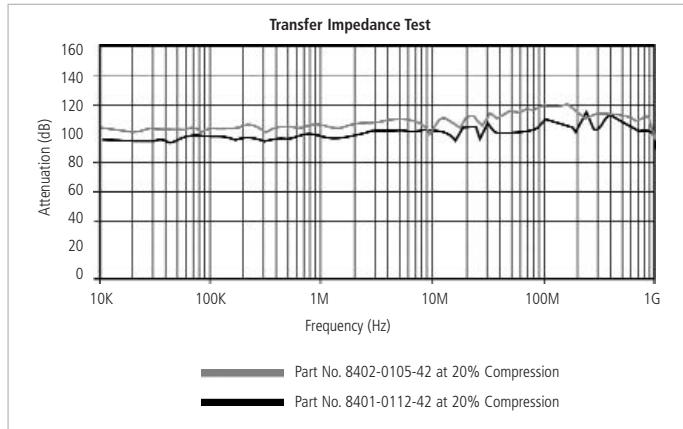
- Highest attenuation characteristics
- Available in beryllium copper, Monel®, tin plated copper clad steel, aluminum and stainless steel
- Versatile mounting
- Consistent point-to-point contact for high shielding effectiveness over life of gasket

ElectroNit All Mesh EMI Gasketing is supplied on spools in 25 ft. (7,6 m) minimum lengths. It is available in various alloys. To specify material type, select the material code number from Table 1 and insert the two-digit number in place of XX.

**TABLE 1. MATERIAL SPECIFICATIONS**

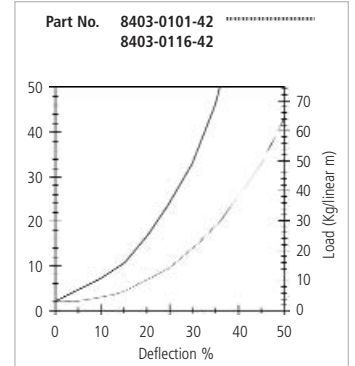
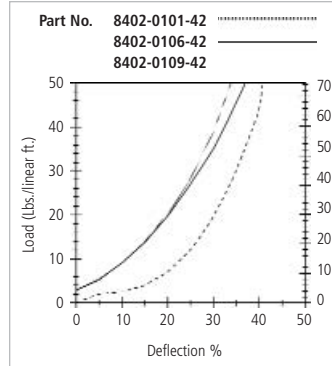
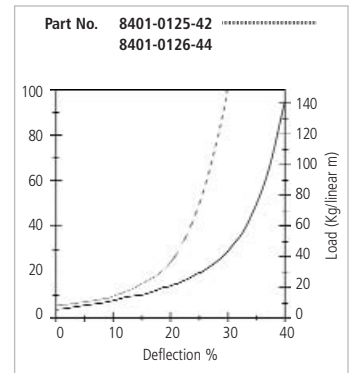
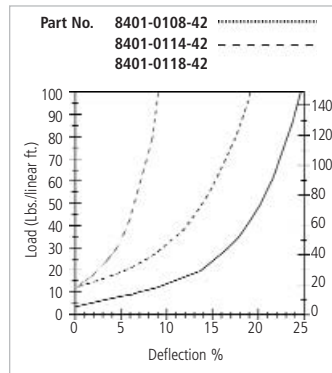
Material Code	Wire Type	Specification
40	Beryllium Copper	ASTM B 197
42	Monel®	QQ N 281 Class A
43	Aluminum	5056 Alloy
44	Tin Plated Copper Clad Steel	ASTM B 520
46	Stainless Steel Alloy	SS304

## SHIELDING EFFECTIVENESS



ElectroNit All Mesh Gasketing is available in a wide range of sizes in round or rectangular cross sections, as well as round with fin, and double round configurations.

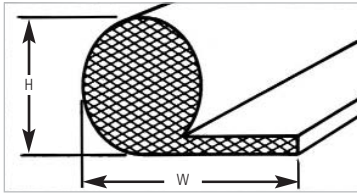
## Compression-Deflection





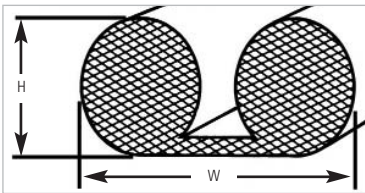
## SIZE VS. TOLERANCE: ALL MESH SINGLE ROUND WITH FIN STRIP

Size Range	Tolerance	
	Dim W	Dim H
0.130 to 0.380 (3,3 to 9,7)	+ 0.060/- 0.030 (+1,5/-0,8)	+ 0.030/- 0.030 (+0,8/-0,8)
0.390 to 0.050 (9,9 to 12,7)	+ 0.060/- 0.060 (+1,5/-1,5)	+ 0.040/- 0.030 (+1,2/-0,8)
0.510 to 1.000 (13,0 to 25,4)	+ 0.090/- 0.060 (+2,3/-1,5)	+ 0.062/- 0.040 (+1,6/-1,0)



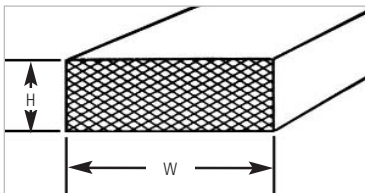
## SIZE VS. TOLERANCE: ALL MESH DOUBLE ROUND WITH FIN STRIP

Size Range	Tolerance	
	Dim W	Dim H
To 0.180 (4,6)	N/A	+ 0.020/- 0.000 (+0,5/-0,0)
0.190 to 0.380 (4,8 to 9,7)	+ 0.060/- 0.030 (+1,5/-0,8)	+ 0.030/- 0.030 (+0,8/-0,8)
0.390 to 0.050 (9,9 to 12,7)	+ 0.060/- 0.060 (+1,5/-1,5)	+ 0.040/- 0.030 (+1,2/-0,8)
0.510 to 1.000 (13,0 to 25,4)	+ 0.090/- 0.060 (+2,3/-1,5)	+ 0.062/- 0.040 (+1,6/-1,0)



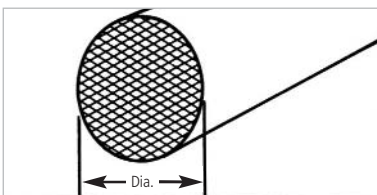
## SIZE VS. TOLERANCE: ALL MESH RECTANGULAR STRIP

Size Range	Tolerance	
	Dim W	Dim H
To 0.180 (4,6)	+ 0.020/- 0.000 (+0,5/-0,0)	+ 0.020/- 0.000 (+0,5/-0,0)
0.190 to 0.380 (4,8 to 9,7)	+ 0.030/- 0.000 (+0,8/-0,0)	+ 0.030/- 0.000 (+0,8/-0,0)
0.390 to 0.050 (9,9 to 12,7)	+ 0.046/- 0.000 (+1,2/-0,0)	+ 0.046/- 0.000 (+1,2/-0,0)
0.510 to 1.000 (13,0 to 25,4)	+ 0.062/- 0.000 (+1,6/-0,0)	+ 0.062/- 0.000 (+1,6/-0,0)



## SIZE VS. TOLERANCE: ALL MESH ROUND STRIP

Size Range	Tolerance
	Diameter
To 0.120 (3,1)	+ 0.020/- 0.000 (+0,5/-0,0)
0.130 to 0.380 (3,3 to 9,7)	+ 0.030/- 0.000 (+0,8/-0,0)
0.390 to 0.050 (9,9 to 12,7)	+ 0.046/- 0.000 (+1,2/-0,0)
0.510 to 1.000 (13,0 to 25,4)	+ 0.062/- 0.000 (+1,6/-0,0)



For Size vs. Tolerance charts, dimensions measured under 4 oz. load (11,3 gms) with 0.750 dia. (19,1 mm) anvils.

## ALL MESH SINGLE ROUND WITH FIN STRIP

Base Part No.*	Fin Portion Width	Round Portion Height	Base Part No.*	Fin Portion Width	Round Portion Height
8403-0101-XX	0.375 (9,5)	0.062 (1,8)	8403-0121-XX	0.750 (19,1)	0.187 (4,8)
8403-0104-XX	0.375 (9,5)	0.125 (3,2)	8403-0110-XX	0.750 (19,1)	0.250 (6,4)
8403-0102-XX	0.500 (12,7)	0.062 (1,8)	8403-0113-XX	0.875 (22,2)	0.312 (7,9)
8403-0103-XX	0.500 (12,7)	0.093 (2,4)	8403-0111-XX	1.000 (25,4)	0.250 (6,4)
8403-0107-XX	0.500 (12,7)	0.156 (4,0)	8403-0114-XX	1.000 (25,4)	0.375 (9,5)
8403-0109-XX	0.500 (12,7)	0.250 (6,4)	8403-0115-XX	1.000 (25,4)	0.437 (11,1)
8403-0105-XX	0.625 (15,9)	0.125 (3,2)	8403-0116-XX	1.000 (25,4)	0.500 (12,7)
8403-0108-XX	0.625 (15,9)	0.187 (4,8)	8403-0131-XX	1.500 (38,1)	0.375 (9,5)
8403-0112-XX	0.625 (15,9)	0.312 (7,9)	8403-0125-XX	1.500 (38,1)	0.500 (12,7)
8403-0106-XX	0.750 (19,1)	0.125 (3,2)			

## ALL MESH DOUBLE ROUND WITH FIN STRIP

Base Part No.*	Connecting Width	Round Height
8404-0101-XX	0.500 (12,7)	0.062 (1,6)
8404-0102-XX	0.500 (12,7)	0.125 (3,2)
8404-0105-XX	0.625 (15,9)	0.187 (4,8)
8404-0103-XX	0.750 (19,1)	0.125 (3,2)
8404-0107-XX	0.750 (19,1)	0.250 (6,6)
8404-0104-XX	1.000 (25,4)	0.125 (3,2)
8404-0106-XX	1.000 (25,4)	0.187 (4,8)
8404-0108-XX	1.000 (25,4)	0.250 (6,6)
8404-0109-XX	1.000 (25,4)	0.375 (9,5)
8404-0115-XX	1.250 (31,8)	0.250 (6,6)
8404-0124-XX	1.500 (38,1)	0.375 (9,5)
8404-0120-XX	1.500 (38,1)	0.500 (12,7)
8404-0121-XX	2.000 (50,8)	0.375 (9,5)
8404-0118-XX	2.000 (50,8)	0.500 (12,7)
8404-0122-XX	2.500 (63,5)	0.500 (12,7)

## ALL MESH RECTANGULAR STRIP

Base Part No.*	Width W	Height H	Base Part No.*	Width W	Height H
8401-0101-XX	0.062 (1,8)	0.062 (1,6)	8401-0123-XX	0.250 (6,4)	0.250 (6,4)
8401-0134-XX	0.093 (2,4)	0.062 (1,8)	8401-0104-XX	0.312 (7,9)	0.062 (1,6)
8401-0107-XX	0.093 (2,4)	0.093 (2,4)	8401-0115-XX	0.312 (7,9)	0.125 (3,2)
8401-0102-XX	0.125 (3,2)	0.062 (1,6)	8401-0122-XX	0.312 (7,9)	0.187 (4,8)
8401-0108-XX	0.125 (3,2)	0.093 (2,4)	8401-0124-XX	0.312 (7,9)	0.250 (6,4)
8401-0112-XX	0.125 (3,2)	0.125 (3,2)	8401-0105-XX	0.375 (9,5)	0.062 (1,6)
8401-0137-XX	0.156 (4,0)	0.062 (1,8)	8401-0111-XX	0.375 (9,5)	0.093 (2,4)
8401-0129-XX	0.156 (4,0)	0.125 (3,2)	8401-0116-XX	0.375 (9,5)	0.125 (3,2)
8401-0142-XX	0.156 (4,0)	0.156 (4,0)	8401-0125-XX	0.375 (9,5)	0.250 (6,4)
8401-0103-XX	0.187 (4,8)	0.062 (1,6)	8401-0127-XX	0.375 (9,5)	0.375 (9,5)
8401-0109-XX	0.187 (4,8)	0.093 (2,4)	8401-0106-XX	0.500 (12,7)	0.062 (1,6)
8401-0113-XX	0.187 (4,8)	0.125 (3,2)	8401-0117-XX	0.500 (12,7)	0.125 (3,2)
8401-0120-XX	0.187 (4,8)	0.187 (4,8)	8401-0133-XX	0.500 (12,7)	0.187 (4,8)
8401-0131-XX	0.218 (5,5)	0.156 (4,0)	8401-0126-XX	0.500 (12,7)	0.250 (6,4)
8401-0155-XX	0.250 (6,4)	0.062 (1,8)	8401-0118-XX	0.750 (19,1)	0.125 (3,2)
8401-0110-XX	0.250 (6,4)	0.093 (2,4)	8401-144-XX	0.750 (19,1)	0.187 (4,8)
8401-0114-XX	0.250 (6,4)	0.125 (3,2)	8401-0119-XX	1.000 (25,4)	0.125 (3,2)
8401-0121-XX	0.250 (6,4)	0.187 (4,8)			

## ALL MESH ROUND STRIP

Base Part No.	Diameter	Base Part No.	Diameter
8402-0101-XX	0.062 (1,6)	8402-0106-XX	0.250 (6,4)
8402-0102-XX	0.093 (2,4)	8402-0107-XX	0.312 (7,9)
8402-0103-XX	0.125 (3,2)	8402-0108-XX	0.375 (9,5)
8402-0104-XX	0.156 (4,0)	8402-0109-XX	0.500 (12,7)
8402-0105-XX	0.187 (4,8)		

\* For part number ordering information on pressure-sensitive adhesive tape see page 1.4.

All dimensions shown are in inches (millimeters) unless otherwise specified.

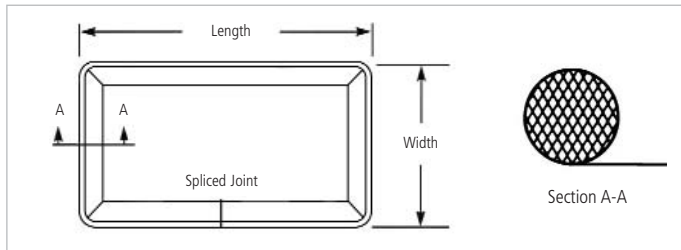


## Fabricated All Mesh Gaskets

Laird Technologies can supply fabricated gaskets, specified from the products highlighted in this section, to meet a vast range of custom assembly requirements.

Shown below are guidelines for three standard construction configurations.

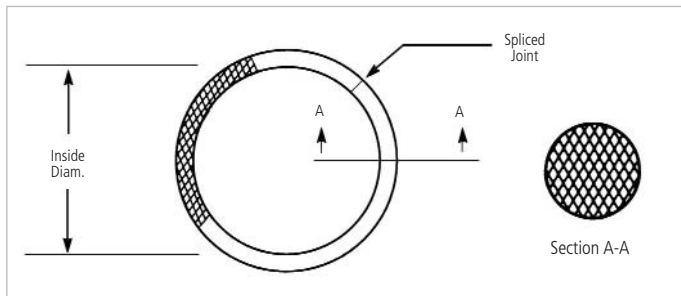
**FIGURE 1. SINGLE FIN RECTANGULAR CONSTRUCTION**



### TOLERANCE

Size Range	Tolerance
2.0 to 6.0 (50,8 to 152,4)	± 0.030 (0,8)
6.0 to 12.0 (152,4 to 304,8)	± 0.046 (1,2)
12.0 to 18.0 (304,8 to 457,2)	± 0.062 (1,6)
18.0 to 24.0 (457,2 to 609,6)	± 0.093 (2,4)

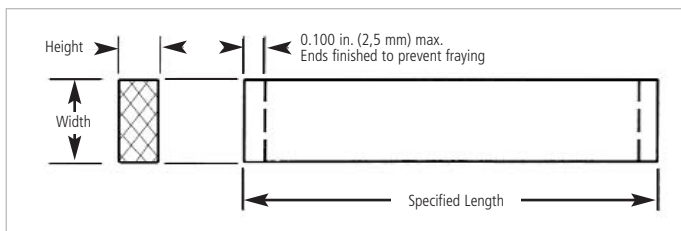
**FIGURE 2. O-RING CONSTRUCTION**



### TOLERANCE

Size Range	Tolerance
2.0 to 4.0 (50,8 to 101,6)	± 0.020 (0,5)
4.0 to 8.0 (101,6 to 203,2)	± 0.030 (0,8)
8.0 to 12.0 (203,2 to 304,8)	± 0.046 (1,2)
12.0 to 18.0 (304,8 to 457,2)	± 0.062 (1,6)

**FIGURE 3. CUT-TO-LENGTH RECTANGULAR**



### TOLERANCE

Size Range	Tolerance
1.0 to 4.0 (25,4 to 101,6)	± 0.030 (0,8)
4.0 to 8.0 (101,6 to 203,2)	± 0.060 (1,5)
8.0 to 12.0 (203,2 to 304,8)	± 0.093 (2,4)
12.0 to 18.0 (304,8 to 457,2)	± 0.125 (3,2)

All dimensions shown are in inches (millimeters) unless otherwise specified.