

Except for our rolling diaphragm 1X type parts, all Airmount[®] isolators and Airstroke[®] actuators are available with bead rings for those applications where bead plates are not suitable. Typical examples where bead rings are often used would be as follows:

1. Where parts are stacked to increase stroke.
2. Where parts are being used as a boot or flexible connector.
3. When used as an Airmount isolator with an auxiliary reservoir.
4. When air, or other media, must move in or out of the unit at an extremely fast rate.
5. When used with an internal shaft, to either guide the part or the pull rather than push a load.

When using bead rings, the customer will need to fabricate his own mounting plates. Hot or cold rolled steel provides satisfactory mounting surfaces, with specific finishes of 250 micro inches, if machined in a circular fashion, and 32 micro inches when ground. Since the rubber part provides its own seal, "O" rings are not needed when installing the part. On page 2 is a chart listing the type of bead ring, bolt circle diameter and number of bolts required per ring for each style Airmount-Airstroke airspring. On page three is a cross-sectional view of the different style rings and bolts.

The ribbed neck bead ring is also available in an unequal bolt hole spacing pattern. The sale of this ring should be limited to replacement parts only and not sold for new applications.

Stainless Steel Bead Rings

When using bead rings, the customer will have to fabricate his own mounting plates. Stainless steel plates with the surface finishes described above should be used. Page 4 lists the different styles that have stainless bead rings available.

Firestone does not furnish stainless steel bolts, these will need to be supplied by the customer.

WARNING: Do not allow the threaded end of the bolt to extend beyond the bottom surface of the bead ring, damage to the rubber bellows will result and could cause premature failure.

Tighten all bolts one(1) turn each time in a "Star" pattern around the bolt circle, until continuous contact is made between the bead ring and the mounting plate.

Bead Rings

Airmount® Airstroke® Style	Bolt Style	Bolt Circle Diameter (inches)	Bolts Required per Ring	Max. O.D. of Ring
16 110 131 25 1T12E-3	Socket Head Cap Screw	4.500	6	5.370
116 116-1 26 224	Counter Sunk	5.312	6	6.100
115 20 1T14	Counter Sunk	6.312	8	7.040
19 22 22-1.5 1T15 series	Counter Sunk	9.00	12	9.730
113 21 21-2 313 1T19 series	Counter Sunk	11.312	12	12.100
28 312	Ribbed Neck	13.812	18	15.125
121 203 323	Ribbed Neck	16.500	24	17.750
29 320	Ribbed Neck	19.000	24	20.361
200	Ribbed Neck	22.000	24	23.600
138-1.5 215 321	Ribbed Neck	23.500	32	25.134
148-1 248-2 348-3	Ribbed Neck	32.68	40	35.04

Bolt, nuts, washers not furnished.

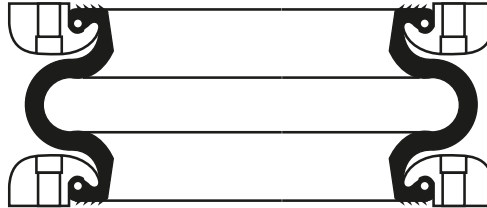
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Bead Rings Cross Sectional Views

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Socket Head Cap Screw

1/4" Bolts—not furnished



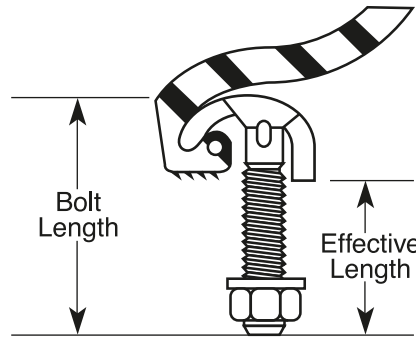
Countersunk 5/16"-24 UNF

Bolt Length

0.84
1.22
1.34

Effective Length

1.250
1.625
1.750



Tightening Torque Lbs.-Ft.

17-22

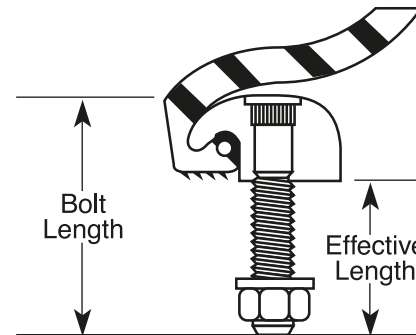
Ribbed Neck 3/8"-24 UNF

Bolt Length

1.28
0.66

Effective Length

1.875
1.250



Tightening Torque Lbs.-Ft.

28-33

STYLE	Part No. W01-358-	Dim. A (in.) (mm)	Thread B	Dia. C (in.) (mm)	Dia. D (in.) (mm)	Bolts Required Per Ring	Torque Limits (lbf-FT) (N-m)
16, 131, 110, 25, 1T12E-3	3495	0.62 15.7	1/4-20 UNC	4.5000 114.3	5.37 136.4	6	12-16 16-21
116, 116-1, 26, 224	3496	0.62 15.7	1/4-20 UNC	5.312 134.9	6.20 157.5	6	12-16 16-21
115, 20, 1T14	3515	0.62 15.7	3/8-16 UNC	6.312 160.3	7.10 180.3	8	22-27 130-35
19, 22, 22-1.5, 1T15	3497	0.62 15.7	3/8-16 UNC	9.000 228.6	10.36 263.1	12	22-27 30-35
113, 21, 21-2, 313, 1T19	3514	0.62 15.7	3/8-16 UNC	11.312 287.3	12.66 321.6	12	22-27 30-35
28, 312	3513	0.75 19.1	3/8-16 UNC	13.812 350.8	15.12 384.0	18	22-27 30-35
29, 320	3494	0.75 19.1	3/8-16 UNC	19.000 482.6	20.36 517.1	24	22-27 30-35
138-1.5, 215, 321	3493	0.75 19.1	3/8-16 UNC	23.500 596.9	25.17 639.3	32	22-27 30-35

Bolt circle diameters remain the same; all bead rings are drilled and tapped as shown.

1. Firestone does not furnish stainless steel bolts; the customer must furnish.
2. Assemblies are to be ordered through your regional manager - for pricing use two bead rings price, plus the bellows price, less discount for quantity. There is not cost for assembling.

