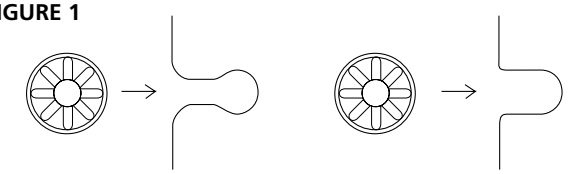
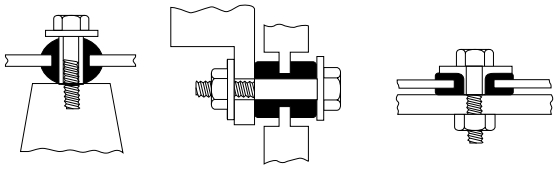
HINTS FOR INSTALLING E-A-R GROMMETS

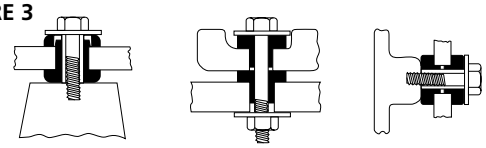
GROMMET INSERTION
FIGURE 1



TYPICAL ISODAMP GROMMET INSTALLATIONS
FIGURE 2

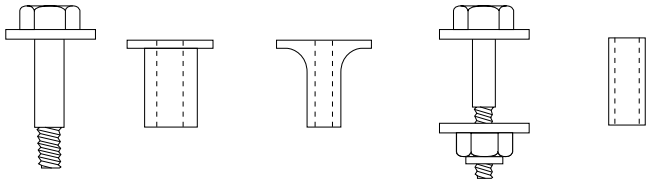


TYPICAL ISODAMP BUSHING AND RING INSTALLATIONS
FIGURE 3



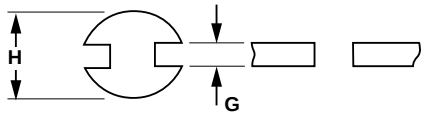
Ring & bushing | Double bushing | Double bushing

RECOMMENDED HARDWARE TO OPTIMIZE PERFORMANCE
FIGURE 4



Shoulder bolt with washer | Metal ferrule | Plastic ferrule | Lock nut | Sleeve

FOR PRELOAD CALCULATION
FIGURE 5



To meet a wide range of performance and assembly needs, E-A-R offers both one-piece and two-piece styles of ISODAMP grommets.

ONE-PIECE GROMMETS—RIBBED AND NON-RIBBED

Here are typical methods for installing one-piece ISODAMP grommets in a frame or panel.

1. For use in automated assembly, the preferred method of grommet installation is the straight-side or keyhole slot. See Figure 1. This method accommodates robotic assembly and is the easiest for manual assembly as well. Using this method, the grommet and the hardware recommended to optimize performance can be installed in a single step, or the hardware can be added later. See Figure 2.

2. For manual assembly without keyhole slots, ISODAMP grommets can be heated to make them more pliable. They can then more easily be pushed into position in the frame or plate.

TWO-PIECE GROMMETS—BUSHINGS AND RINGS

For non-standard-thickness panels or frames, use of two-piece grommets (bushings and rings, or two bushings, as shown in Figure 3) can provide a major installation advantage. Two-piece ISODAMP grommets eliminate the need for preheating. The two pieces are installed from opposite sides to accommodate many panel thicknesses.

HARDWARE

Common hardware, typically used with ISODAMP grommets to mechanically limit preload, is shown in Figure 4. The hardware may include a shoulder bolt with washer, plastic or metal spacer, sleeve, or locking nuts with bolt and washers.

Optimum performance of vibration and shock is generally achieved with up to 5 percent preloading of ISODAMP grommets, especially for ribbed styles. The ideal hardware height to obtain maximum recommended preload can be calculated from the formula **Hardware Height = 0.95 (H) + 0.05(G),** where **H** is the overall grommet height and **G** is the thickness of the mounting plate. See Figure 5.

WARMING GROMMETS

For all one-piece grommet installation procedures, other than those involving the use of slots, ISODAMP grommets can be heated to increase their pliability.

The degree to which the grommets should be heated depends on the C-1000 Series formulation (C-1002, C-1105, C-1100). Good results have been reported by using the temperature ranges shown here.

C-1002 grommets should be warmed to	90F to 100F (32C to 38C)
C-1105 grommets should be warmed to	110F to 120F (43C to 49C)
C-1100 grommets should be warmed to	120F to 130F (49C to 54C)

Note that ribbed grommets, with their lower stiffness, can generally be inserted easily when they are heated to the low side of the ranges shown above. Non-ribbed grommets, with their higher stiffness, should generally be heated to the upper side of their appropriate range.