

The Hardcast Four Bolt Duct Connection System is designed to provide a simple and effective means of connecting rectangular duct sections together. This connection system may be used on all rectangular duct from 14 GA to 26 GA, resulting in sealed joints with clean lines that are aesthetically pleasing.



Four Bolt Duct Connection System Installation Guide

INSTALLATION INSTRUCTIONS

1. Prepare the duct – raw edge, no notches. On transitions etc. a 1 1/2" flat area must be provided on the ends to attach the flange.
2. Cut the "J" flange 1 3/8" shorter than the duct measurement.
Cut the "G" flange 1 1/4" shorter than the duct measurement.
3. Form a frame by inserting 4 corner pieces in hollow ends of the flange.
4. Place frame on the duct. Tap with mallet to ensure duct edge is embedded in integral sealant and duct edges protrude past the corner pieces. (See Figure 1)
5. Use clamps to ensure that the frame remains in place.
6. Secure frame to duct. Spot welding or dimpling is recommended. If other methods are used, e.g. screws, pop rivets, etc., apply sealant to the fastener on the inside of the duct. Secure as follows:

Low Pressure	18" – 24" Centers
Medium Pressure	9" – 12" Centers
High Pressure	6" – 09" Centers

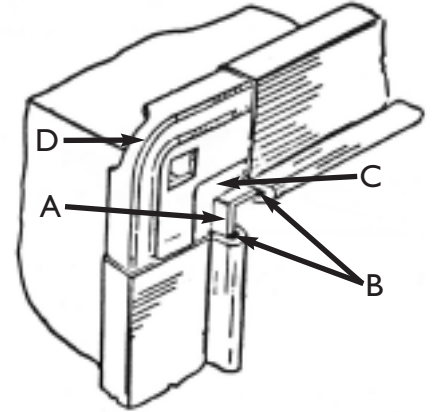
The flanges must be secure to the duct within 3/4" of the end of the flange.

7. Apply gasket. (To reduce damage, apply gasket in the field.)
(See Figure 2)
8. Bolt sections of duct together using the special carriage bolts supplied. Only 4 bolts are required regardless of duct size. Alternately, corners may be joined using two #10 sheet metal screws through holes provided.
9. Apply the snap/drive cleat as follows:

Low Pressure	4" – 6" Clips – 18 – 24" Centers
Medium Pressure	4" – 6" Clips – 12 – 18" Centers
High Pressure	4" – 6" Clips – 12" Centers or Continuous

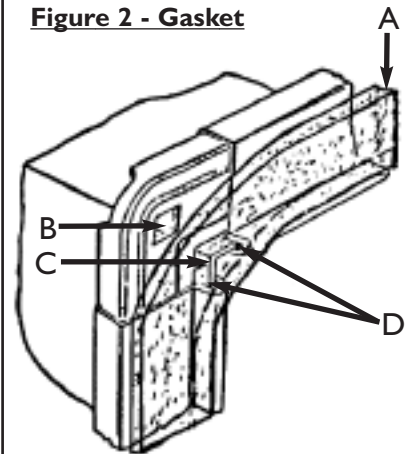
Note: The Hardcast Four Bolt Duct Connection System will provide a virtually leak-free joint when duct construction and sealing practices comply with either SMACNA or ASHRAE Standards.

Figure 1 - Integral Sealant



In order to obtain a seal along the length of the flange, the raw edge duct (A) must be imbedded in the integral sealant (B) and the duct edge (A) must project past the corner piece (D). This projection should be about 1/10". If for any reason this projection is less than 1/10", a bead of sealant should be applied in the pocket or recessed edge of the "J" or "G" corner (C).

Figure 2 - Gasket



To ensure that the system is air-tight, a closed-cell gasket (A), with the exception of the corners, should be applied approximately in the center of the flange width. At the corners, the gasket (A) should be curved so as to avoid blocking the bolt hole (B) and it should cut across the flange ends (D) about 1/4" back from these ends. The gasket should completely cover the duct edge (C) allowing the edge to become imbedded in the gasket when the bolts are tightened.

