ATTACHMENT OF ROOF DECK

Support Fastening

The diaphragm shear tables of this catalog include two methods of attaching deck to the supports: welds and mechanical fasteners (power actuated fasteners or self-drilling, self-tapping screws).

**Welds:** When Verco roof deck is to be welded to supports, the effective fusion area is to be at least \( \frac{1}{2} \) in. diameter for arc spot (puddle) welds (Figure 3) or at least \( \frac{3}{8} \) in. \( \times \) 1 in. long for arc seam welds. Arc seam and arc spot welds are to be located and spaced as described in the tables.

**Hilti Fasteners:** Hilti X-EDNK22 THQ12, X-HSN 24, or X-ENP-19 L15 fasteners are to be installed as shown in Figure 4. Hilti X-HSN 24 fasteners have a dome style head, red guidance washer and a steel silver-colored top-hat washer. Hilti X-EDNK22 fasteners have a dome style head, a \( \frac{3}{8} \) inch diameter steel flat washer, and a steel top hat washer. The Hilti X-ENP-19 fastener has a fully knurled tip and tapered shank fitted with two 0.590 inch diameter steel cupped washers. Contact Hilti for additional information on the fasteners.

Proper penetration of the Hilti fasteners into structural supports is shown in Figure 4. Fasteners shall be located not less than 1 in. from the end of the sheets.

Select the appropriate fastener based on the actual substrate thickness.

**Pneutek Fasteners:** Pneutek K66062, K66075, K64062, K64075, SDK63075, or SDK61075 fasteners are to be installed as shown in Figure 5. The Pneutek fasteners have \( \frac{1}{4} \) inch diameter heads. Contact Pneutek for additional information on the fasteners.

Fasteners must be driven with the Pneutek Air/Safe fastening system to ensure tight contact between the fastener head and the attached deck as shown in Figure 5. Fasteners shall be located not less than 1 in. from the end of the sheets.
Select the appropriate fastener based on the actual substrate thickness. Note that K66075 or K64075 pins are to be used for attachment of four layers of 20 gage deck or three or four layers of 18 or 16 gage deck.

**ShearTranz® II-42 System**: Verco introduced the use of restraining elements, such as the ShearTranz II-42 System, to increase roof deck diaphragm rigidity.

The 14 gage ShearTranz II-42 elements are used with PLB-36 deck with sidelaps connected using the PunchLok II Tool.

The ShearTranz II-42 elements are used at shear collecting support elements perpendicular to the deck corrugations. When ShearTranz II-42 elements are used, the deck does not need to terminate at the support as it may be cantilevered.

Deck end laps of PLB-36 with the ShearTranz II-42 System must be at least 2 inches and fastened to supports with arc spot and arc seam welds. ShearTranz II elements are required if butted end joints are used. See installation details shown on page 66.