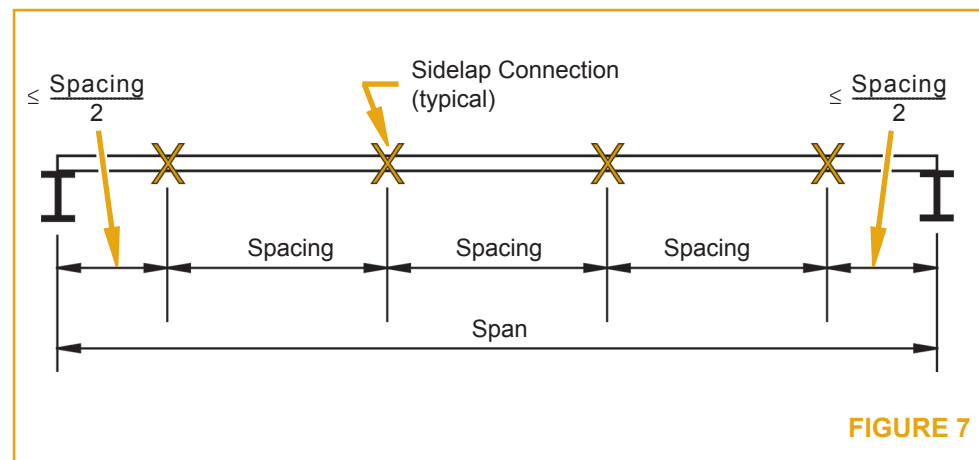


Sidelap Connections

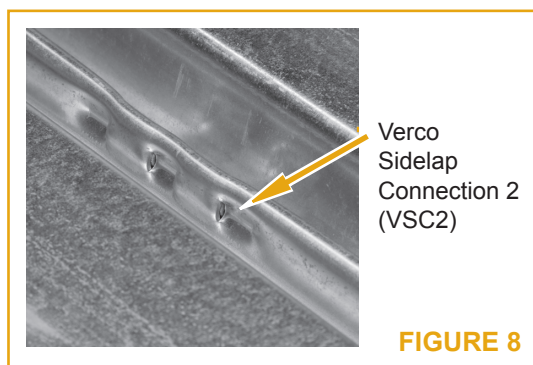
Verco roof decks are to be fastened at the sidelaps by one of four methods: VSC2s made with the PunchLok II Tool, 1½ in. long top seam welds, button punches, or #10 x ¾ in. long screws. Spacing of sidelap connections shall be as specified in the tables.



The dimension from the centerline of the supports to the first and last sidelap connection within each span is to be no more than one half the specified spacing as shown in Figure 7. The number of connections per span based on spacing are listed in Table 3.

Table 3: Number of Sidelap Connections per Span Based on Spacing

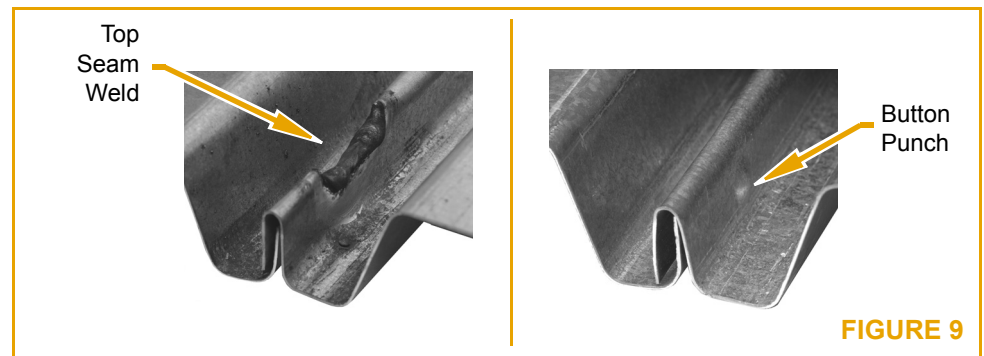
Spacing in inches	Span (ft.-in.)																			
	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	
24"	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	
18"	2	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12	12	13	14	
12"	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
8"	3	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	27	29	30	
6"	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	
4"	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	



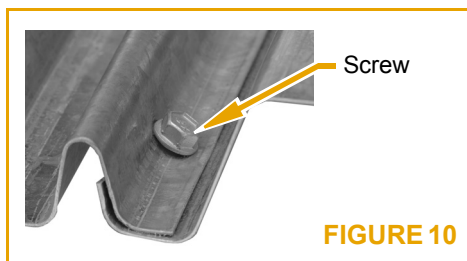
PunchLok® II System: The connection made by the PunchLok II Tool is referred to as a VSC2 (Verco Sidelap Connection 2). An acceptable VSC2 connection has been made when the sidelap material has been sheared and offset so the sheared surface of the male leg is visible in the cut (Figure 8).

The VSC2 connection may be made in either direction relative to the sidelap.

Top Seam Welds: When roof deck sidelaps are connected with top seam welds (TSW) (Figure 9, left), the 1½ in. long weld must engage the top of the inner (male) leg. Clinch the joint before welding to create contact between the lips.



Button Punches: When roof deck sidelaps are connected with button punches (Figure 9, right), an average-sized person should be able to stand (not jump) on the flute adjacent to the attachment without the joint coming apart.



Screws: When self-drilling, self-tapping screws are used to connect the sidelaps of roof decks, they are installed as shown in Figure 10. The diaphragm shear values and flexibility factors shown in the tables of this catalog are based on minimum #10 self-drilling, self-tapping screws. The “SS” designation for roof deck indicates interlocking deck provided with extended female lip for screw fastening. The “NS” designation for HSN3 roof deck indicates deck provided with nested sidelap. Deep and Shallow VERCOR deck are provided with a nested sidelap.

Parallel Collectors

Spacing of the attachments at diaphragm chords, struts, ties or other collector elements that are parallel to the deck flutes is based on the actual shear to be transferred and shear capacity of the connections used. The spacing of the connections at these shear transfer elements parallel to the deck flutes should not be larger than that for the interior sidelap connections in order to maintain diaphragm rigidity. The maximum spacing of attachments at parallel collectors is 3 ft.

Allowable shear loads for Arc Spot Welds, Arc Seam Welds, Hilti Fasteners, Pneutek Fasteners, and SDI Recognized Screws are listed in Table 4. Allowable shear loads for #12 screws that do not meet the requirements of SDI Recognized Screws are listed in Table 5.

Fillet Welds: Spacing of fillet welds used at collectors parallel to the deck flutes should be based on the shear to be transferred. Allowable shear strength for fillet welds should be determined in accordance with AISI S100.