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DIVISION: 05 - METALS
Section: 05 31 00 - Steel Deck

REPORT HOLDER:

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EVALUATION SUBJECT:

VERCO STEEL DECKS:

- PLB, HSB, PLN, and N Roof Deck Panels
- PLB AC, HSB AC, PLN AC, and N AC Acoustical and Fully Perforated Roof Deck Panels
- PLB, B, BR, PLN, N, PLW2, W2, PLW3, and W3 FORMLOK Deck Panels
- $\frac{9}{16}$ -inch (Shallow) VERCOR, $1\frac{5}{16}$ -inch (Deep) VERCOR, and $1\frac{5}{16}$ -inch (Deep) VERCOR Ventlok Deck Panels
- PLB-CD, HSB-CD, PLN-CD, and N-24CD Cellular Roof Deck Panels; and PLB-CD, BCD, PLN-CD, NCD, PLW2-CD, W2CD, PLW3-CD, and W3CD FORMLOK Cellular Deck Panels
- PLB-CD AC, HSB-CD AC, PLN-CD AC, and N-24CD AC Acoustical Cellular Roof Deck Panels; and PLB-CD AC, BCD AC, PLN-CD AC, NCD AC, PLW2-CD AC, W2CD AC, PLW3-CD AC, and W3CD AC FORMLOK Acoustical Cellular Deck Panels

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes

- 2009 *International Building Code*® (IBC)

1.2 Evaluated in accordance with

- ICC-ES AC 43, effective November 1, 2010

1.3 Properties evaluated

- Structural
- Fire Resistance

2.0 USES

Verco steel decks are used as floor and roof systems to resist the code-required appropriate floor and roof loads.

3.0 DESCRIPTION

3.1 General

The steel deck panels described in this report are cold-formed from steel sheets into panels with fluted sections having galvanized, phosphatized/painted, painted/painted, or mill finishes. Panel dimensions and profiles are as shown in the tables and figures which accompany this report.

The galvanized deck panels are formed from either ASTM A 653 or A 1063 steel, with a minimum G30 galvanized coating designation. The phosphatized/painted, painted/painted, or mill finished steel deck panels are formed from either ASTM A 1008 or A 1039 steel. Phosphatized/painted deck panels have a phosphatized (uncoated) top surface and primer painted bottom surface. Painted/painted deck panels have primer painted top and bottom surfaces. Mill finished deck panels have no coating on either top or bottom surfaces.

A "PL" prefix indicates deck intended for installations where side seam (sidelap) connections are made with the Verco PunchLok tool. A suffix number indicates a deck cover width - for example, N-24 indicates a deck cover width of 24 inches (610 mm). The suffix "SS" indicates deck provided with extended female lips intended for installations where side seam connections are made with self-drilling, self-tapping screws as shown in Figure 1. The suffix "CD" indicates cellular deck panels composed of fluted top sections that are resistance welded to flat bottom sections. The suffix "AC" indicates fluted acoustical deck panels with perforations in the webs or acoustical cellular deck panels with perforated bands in the flat bottom sections.

3.2 Roof Deck Panels

Type PLB, HSB, PLN, and N roof deck panels are available as galvanized, painted/painted, or mill finished. Galvanized deck panels are formed from SS Designation, Grade 40 (minimum) steel.

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Painted/painted and mill-finished steel decks shall be formed from SS Designation Grade 45 (minimum), steel. The deck panels are available in thicknesses ranging from No. 22 to No. 16 gage [design base-metal thickness from 0.0299 inch (0.759 mm) to 0.0598 inch (1.52 mm)].

3.3 FORMLOK Deck Panels

Type PLB, B, BR, PLN, N, PLW2, W2, PLW3, and W3 FORMLOK Deck Panels are available as galvanized, phosphatized/painted, or mill finished. The deck panels are formed from SS Designation, Grade 50 (minimum) steel as designated in the tables which accompany this report. The deck panels have web embossments as shown in Figure 6. The deck panels are available in thicknesses ranging from No. 22 to No. 16 gage [design base-metal thickness from 0.0290 inch (0.737 mm) to 0.0598 inch (1.52 mm)]. FORMLOK deck panels are for use with or without concrete fill.

3.4 Acoustical Deck Panels

Type PLB, HSB, PLN, and N roof deck panels listed in Section 3.2 are also available as acoustical deck panels. See Figure 7 for web perforation patterns. Data in Tables 18 through 28 also apply to the acoustical versions. Acoustical uses are limited to non-fire resistance rated assemblies. See Table 4 for section properties for acoustical and fully perforated versions of PLB, HSB, PLN, and N roof deck panels.

3.5 Acoustical Cellular Deck Panels

Type PLB-CD, HSB-CD, PLN-CD and N-24CD roof deck panels and PLB-CD, BCD, PLN-CD, NCD, PLW2-CD, W2CD, PLW3-CD and W3CD FORMLOK deck panels are available with acoustical perforations in the flat bottom plate. Perforations are $\frac{5}{32}$ inch (4 mm) in diameter on $\frac{7}{16}$ inch (11.1 mm) staggered centers. The nominal widths of the perforated bands, which are centered under the top flanges of the fluted top sections, are: PLB-CD, HSB-CD and BCD—3.7 inches (94 mm); PLN-CD, N-24CD and NCD—5.6 inches (142 mm); PLW2-CD, W2CD, PLW3-CD and W3CD—6.7 inches (170 mm).

3.6 $\frac{9}{16}$ -inch (Shallow) VERCOR Deck Panels

These deck panels are available as galvanized,

painted/painted, or mill finished. The deck panels are formed from SS Designation, Grade 80 steel. The deck panels are available in thicknesses ranging from No. 26 to No. 22 gage [design base-metal thickness from 0.0179 inch (0.455 mm) to 0.0299 inch (0.759 mm)].

3.7 $1\frac{5}{16}$ -inch (Deep) VERCOR and $1\frac{5}{16}$ -inch (Deep) VERCOR Ventlok Deck Panels

These deck panels are available as galvanized, painted/painted, or mill finished. The deck panels are formed from SS Designation, Grade 80 steel. The deck panels are available in thicknesses ranging from No. 26 to No. 20 gage [design base-metal thickness from 0.0195 inch (0.495 mm) to 0.0374 inch (0.950 mm)].

3.8 PunchLok® System

The PunchLok system consists of PLB and PLN roof decks and PLB, PLN, PLW2, and PLW3 FORMLOK decks connected at sidelaps with the Verco Decking, Inc. proprietary connection. Acoustical, cellular, and acoustical cellular versions of the listed deck sections may also be used. The proprietary connection is referred to as the “Verco Sidelap Connection” (VSC), and is an interlocking connection between the male and female lips of the decks listed above. A VSC connection is made in either direction relative to the female lip. A VSC connection is made when the sidelap material has been sheared and offset so the sheared surface of the steel deck panel male lip is visible. This punched portion measures $\frac{5}{8}$ inch (15.9 mm) nominal width by $\frac{3}{8}$ inch (9.5 mm) nominal height. The PunchLok systems must be installed in accordance with Verco instructions. The resulting VSC connection is illustrated in Figure 3.

3.9 SHEARTRANZ® II-42 System

The ShearTranz II-42 system is a special end support connection that consists of the ShearTranz II-42 elements welded at shear collecting deck panel support members perpendicular to the corrugations of PLB-36 deck panels. The ShearTranz II-42 elements are formed from steels described in Section 3.1 of this report, but with a minimum yield strength of 33,000 psi (228 MPa). The ShearTranz II-42 elements are for use with PLB-36 deck panels, and are available in a thickness of No. 14 gage [design base-metal thickness of 0.070 inch (1.78 mm)]. See Figure 10.

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Hilti X-EDN19-THQ12, X-EDNK22-THQ12 and X-ENP-19 L15 power-actuated fasteners are used to attach steel deck panels to support members. The X-EDN19-THQ12 or X-EDNK22-THQ12 fasteners have a dome-style head and a $\frac{15}{32}$ -inch-diameter (11.9 mm) steel flat washer and a steel top-hat washer. The X-EDN19-THQ12 fastener has a brass-colored top-hat washer, and the X-EDNK22-THQ12 fastener has a silver-colored top-hat washer. The X-ENP-19 L15 fastener is 0.937 inch (23.8 mm) long with a 0.177-inch-diameter (4.5 mm) fully knurled tip and tapered shank fitted with two 0.590-inch-diameter (15 mm) steel cupped washers. The Hilti fasteners have an electroplated zinc coating conforming to ASTM B 633-07, SC 1 Type III. Refer to ICC-ES evaluation reports ESR-2197, ESR-2199, or ESR-2776 for additional information on Hilti fasteners.

3.11 Pneutek Fasteners

Pneutek SDK61075, SDK63075, K64062, K66062, or K66075 fasteners are used to attach steel deck panels to support members. The Pneutek fasteners have $\frac{1}{2}$ -inch-diameter (12.7 mm) heads. The Pneutek fasteners have a mechanical zinc + yellow chromate plating conforming to ASTM B695-04. Refer to ICC-ES evaluation report ER-3829 for additional information on Pneutek fasteners.

4.0 DESIGN AND INSTALLATION**4.1 Design**

4.1.1 General: The accompanying set of tables and figures, dated 11/2011, is a part of this report. Section properties and minimum design base-metal thicknesses are shown in Tables 4 and 6, and deck profiles are shown in Figures 6 and 8. Allowable reactions based on web crippling are shown in Table 5, and are applicable to bare deck panels, and to concrete filled composite deck panels during the construction phase only, prior to the concrete achieving the minimum specified compressive strength. Tables 8 through 30 describe allowable diaphragm shear values for each roof and composite deck panel type and superimposed loads for each composite deck panel type. The General Notes preceding the tables provide additional information.

Allowable tension loads for connections using arc seam

or arc spot (puddle) welds must be determined in accordance with Chapter E of AISI S100.

Design of steel decks used as a diaphragm must include the following considerations:

1. Diaphragm classification (flexible or rigid) must comply with IBC Section 1602; the diaphragm deflection (Δ) shall be calculated using the equation noted in the Diaphragm Flexibility Limitations Table (Table 7).
2. Diaphragm deflections must not exceed the permitted relative deflections of walls between the diaphragm level and the floor below. The flexibility limitations shown in Table 7 may be used as a guide in lieu of a rational analysis of the anticipated deflections.
3. Diaphragm deflection limits must comply with Section 12.12.2 of ASCE 7.
4. Horizontal shears must be distributed in accordance with ASCE 7 Section 12.8.4, 12.9.5, or 12.14.8.3.

4.1.2 Concrete Diaphragms with Stud Shear Connectors: Allowable diaphragm shears and details for concrete diaphragms with stud shear connectors and deck panel Types PLB, B, BR, PLB-CD, BCD, PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, W3CD, PLN, N, PLN-CD, NCD and $1\frac{5}{16}$ -inch (Deep) VERCOR are shown in Table 13 and Figure 9.

4.1.3 PunchLok® System Fastened with Welds: Allowable diaphragm shears and flexibility factors for PLW2 and PLW3 FORMLOK deck panels welded to supports without concrete and with sidelaps connected with the VSC connections are shown in Tables 14 and 16. The ends of the PLW2 and PLW3 deck may be either lapped a minimum of 2 inches (51 mm) or butted.

Allowable diaphragm shears and flexibility factors for PLB and PLN roof or FORMLOK deck panels welded to supports without structural concrete fill, using sidelaps connected with the VSC connections, are shown in Tables 18 and 24. The ends of the PLB and PLN deck must be lapped a minimum of 2 inches (51 mm).

4.1.4 PLB™-36 and PLN™-24 Deck Panels with the PunchLok® System Fastened with Hilti Fasteners: Allowable diaphragm shears and flexibility factors for PLB-36 and PLN-24 roof deck fastened to supports with

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the Hilti fasteners described in Section 3.10, with sidelaps connected with the VSC connections, are shown in Tables 19 and 25. The appropriate Hilti fastener must be selected based on the actual substrate thickness, as noted in the table headings. Allowable tension loads for the steel deck panel-to-support connections using Hilti fasteners are shown in Table 2.

4.1.5 PLB™-36 and PLN™-24 Deck Panel with the PunchLok® System Fastened with Pneutek Fasteners: Allowable diaphragm shears and flexibility factors for PLB-36 and PLN-24 roof deck fastened to supports with the Pneutek fasteners described in Section 3.11, with sidelaps connected with the VSC connections, are shown in Tables 20 and 26. The appropriate Pneutek fastener must be selected based on the actual substrate thickness, as noted in the table headings. Allowable tension loads for the steel deck panel-to-support connections using Pneutek fasteners are shown in Table 3.

4.1.6 SHEARTRANZ® II-42 System: Allowable diaphragm shears and flexibility factors for ShearTranz II-42 with PLB-36 deck panels welded to supports with sidelaps connected with the VSC connections are shown in Table 22.

4.2 Installation

4.2.1 General: Deck panels must be installed at locations in accordance with the plans and specifications approved by the code official. Arc seam or arc spot (puddle) welds for field assembly of steel decking must have an effective fusion area of at least $\frac{3}{8}$ inch by 1 inch (9.5 mm by 25 mm) or $\frac{1}{2}$ inch (12.7 mm) in diameter, respectively. Where arc spot welds and shear studs coincide, the arc spot weld may be eliminated. Seam welds are a minimum of $1\frac{1}{2}$ inches (38 mm) long. Minimum E60XX filler metal is used. Other weld requirements must comply with AWS D1.3. Connections made using the PunchLok system are described in Section 3.8.

4.2.2 PLB™-36 and PLN™-24 Deck Panels with the PunchLok® System Fastened with Hilti Fasteners: The PLB-36 and PLN-24 deck panels must fastened to the structural supports with the Hilti fasteners described in Section 3.10. Deck panel sidelaps must be connected with the VSC connections described in Section 3.8. The ends of the PLB-36 and PLN-24 deck shall be lapped a

minimum of 2 inches (51 mm). Fasteners connecting the deck panel to structural steel supports shall be centered not less than 1 inch (25 mm) from the ends of the sheets. Proper penetration of the Hilti fasteners into structural supports is shown in Figure 4.

4.2.3 PLB™-36 and PLN™-24 Deck Panels with the PunchLok® System Fastened with Pneutek Fasteners: The PLB-36 and PLN-24 deck panels must fastened to the structural supports with the Pneutek fasteners described in Section 3.11. Deck panel sidelaps must be connected with the VSC connections described in Section 3.8. The ends of the PLB-36 and PLN-24 deck shall be lapped a minimum of 2 inches (51 mm). Fasteners connecting the deck panel to structural steel supports shall be centered not less than 1 inch (25 mm) from the ends of the sheets. Fasteners must be driven such that there is tight contact between the fastener head and the attached panels as shown in Figure 5.

4.2.4 SHEARTRANZ® II-42 System: The No. 14 gage ShearTranz II-42 units are used with PLB-36 deck panels at shear collecting support elements perpendicular to the deck corrugations. No skewing of deck panel to collector supports is permitted. In addition to the standard details, the conditions described below may require the ShearTranz II-42 elements.

The first condition occurs with deck panels cantilevered over deck supports. In this condition, the ShearTranz II-42 element is installed as shown in Figure 10.

The second condition occurs when the deck ends abut at interior supports. In this condition, the top flanges of ShearTranz II-42 elements are centered over the butt joints. Installation details are shown in Figure 10.

4.2.5 Concrete-filled Composite Deck Panels: These deck panels are of the same material and finish as described above, but with various depths of concrete as set forth in the accompanying tables, and with web and flange embossments designated as FORMLOK (see Figure 6). Concrete must consist of normal-weight rock or expanded shale aggregates and must have a minimum 28-day compressive strength of 3,000 psi (20.7 MPa). The minimum concrete fill thickness is 2 inches (51 mm) above the top of the steel deck. The deck types used with concrete fill are as follows:

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1. Type PLB, B, PLB-CD, BCD, and BR FORMLOK decks.

2. Type PLN, N, PLN-CD, and NCD FORMLOK decks.

3. Type PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, and W3CD FORMLOK decks.

4.3 Fire-resistance-rated Assemblies

4.3.1 Restrained Fire-resistance-rated Assemblies:

4.3.1.1 Conditions of Restraint: Interior spans of continuous composite slabs may be considered thermally restrained. Perimeter spans are considered unrestrained unless restraint is substantiated by the registered design professional and approved by the code official. Appendix X3 of ASTM E 119 or ACI 216.1 may be referenced as guidance on other possible restraint conditions at both exterior spans and discontinuities within fire-resistance-rated constructions, subject to the approval of the code official.

4.3.1.2 Two-hour Fire-resistance-rated Roof Assembly: Type PLB, B, PLN, N, PLW2, W2, $1\frac{5}{16}$ -inch (Deep) VERCOR and $1\frac{5}{16}$ -inch (Deep) VERCOR Ventlok deck panels used for a two-hour fire-resistance-rated roof assembly, with exposed soffit, are subject to the following conditions:

1. The fill type, thickness, and construction are as set forth in IBC Table 720.1(3).

2. The maximum clear span for No. 26 gage decks shall be limited to 6 feet, 8 inches (2032 mm), and for heavier gage decks to 8 feet, 6 inches (2591 mm).

3. The decks must be attached to supporting structural elements as set forth in the tables accompanying this report.

4.3.1.3 Two-hour Fire-resistance-rated Roof or Floor Assembly: Type PLB, B, PLB-CD, BCD, BR, PLN, N, PLN-CD, NCD, PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, and W3CD FORMLOK deck panels, when used with a structural concrete fill, have a two-hour fire-resistive rating with exposed underside when used as either a roof or floor, provided:

1. The maximum clear spans for concrete-filled PLB, B,

PLB-CD, BCD, and BR FORMLOK are limited to 12 feet (3658 mm), while the spans for PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, W3CD, PLN, N, PLN-CD, and NCD FORMLOK are limited to 13 feet, 2 inches (4013 mm).

2. The minimum steel panel gage must be No. 22 for fluted deck panels and No. 20/20 for cellular deck panels.

3. No electrical raceways are placed in the concrete fill.

4. The minimum attachments are as follows:

a. All welds at each support shall be $\frac{1}{2}$ -inch (12.7 mm) effective diameter arc spot (puddle) welds as required for diaphragm shears, but there must be at least four welds for 30- and 36-inch-wide (762 and 914 mm) PLB, B, PLB-CD, BCD and BR FORMLOK deck panels; three welds for 24-inch wide (610 mm) decks; and one in each valley for PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, and W3CD FORMLOK deck panels. Where arc spot welds and shear studs coincide, the arc spot weld may be eliminated.

b. Attachment to chords or struts shall be welds as required for diaphragm shear with concrete fill.

c. Sidelaps (side seams) shall be button punched, screwed with minimum #10 x $\frac{3}{4}$ " long screws or welded at 3 feet (914 mm) on center, maximum. Sidelaps of PLB, PLN, PLW2, PLW3, PLB-CD, PLN-CD, PLW2-CD, and PLW3-CD FORMLOK deck panels are permitted to be connected with the VSC connections described in Section 3.8 at 3 feet (914 mm) on center, maximum. For BR FORMLOK deck panels, use a $1\frac{1}{2}$ -inch (38 mm) seam weld or minimum #10 x $\frac{3}{4}$ " long screw at 3 feet (914 mm) on center, maximum.

5. The concrete fill thickness above the deck panel top flange must be either $3\frac{1}{4}$ inches (83 mm) for structural sand-lightweight concrete having a unit weight of 110 ± 3 pounds per cubic foot (1762 ± 48 kg/m³) and a 28-day compressive strength of 3,000 psi (20.7 MPa); or $4\frac{1}{2}$ inches (114 mm) for normal-weight concrete having a unit weight of 150 ± 3 pounds per cubic foot (2403 ± 48 kg/m³) and a 28-day compressive strength, f'_c , of 3,500 psi (24.1 MPa).

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6. The concrete fill must be reinforced with minimum 6-by-6, W1.4-by-W1.4 welded-wire fabric, placed near the center of the concrete fill.

4.3.2 Additional Fire-resistance-rated Assemblies:

The following are additional restrained fire-resistance-rated assemblies for Types PLB, B, PLB-CD, BCD, BR, PLN, N, PLN-CD, NCD, PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, and W3CD FORMLOK deck panels:

- a. One-hour rating with $2\frac{1}{2}$ inches (63.5 mm) of 3,000 psi (20.7 MPa) structural sand-lightweight concrete [110 pcf (1762 kg/m³)], or $3\frac{1}{2}$ inches (89 mm) of 3,500 psi (24.1 MPa) normal-weight [150 pcf (2403 kg/m³)] concrete over top flange of deck panel.
- b. Three-hour rating with $4\frac{1}{4}$ inches (108 mm) of 3,000 psi (20.7 MPa) structural sand-lightweight [110 pcf (1762 kg/m³)] concrete over top flange of deck panel.

4.3.3 Unrestrained Fire-resistance-rated Assemblies:

4.3.3.1 Assemblies with PLB, B, PLB-CD, BCD, BR, PLN, N, PLN-CD, NCD, PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, and W3CD FORMLOK Deck Panels: The roof and floor assemblies with these structural concrete filled deck panels have a fire-resistive rating with the deck panel exposed on the underside, provided:

1. The minimum steel panel gage must be No. 22 for fluted deck panels and No. 20/20 for cellular deck panels.
2. Deck panels must be attached as follows:
 - a. All welds at each support shall be $\frac{1}{2}$ -inch (12.7 mm) effective diameter arc spot (puddle) welds as required for diaphragm shears, but there must be at least four welds for 30- and 36-inch-wide (762 and 914 mm) PLB, B, PLB-CD, BCD and BR FORMLOK deck panels; three welds for 24-inch wide (610 mm) decks; and one in each valley for PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, and W3CD FORMLOK deck panels. Where arc spot welds and shear studs coincide, the arc spot weld may be eliminated.

b. Attachment to chords or struts must be welds as required for decks with concrete fill to resist the diaphragm shear.

c. Sidelaps (side seams) shall be button punched, screwed with minimum #10 x $\frac{3}{4}$ " long screws or welded at 3 feet (914 mm) on center, maximum. Sidelaps of PLB, PLN, PLW2, PLW3, PLB-CD, PLN-CD, PLW2-CD, and PLW3-CD FORMLOK deck panels are permitted to be connected with the VSC connections described in Section 3.8 at 3 feet (914 mm) on center, maximum. For BR FORMLOK deck panels, use a $\frac{1}{2}$ -inch (38 mm) seam weld or minimum #10 x $\frac{3}{4}$ " long screw at 3 feet (914 mm) on center, maximum.

3. The concrete fill must be structural sand-lightweight concrete with expanded shale or slate aggregate and 4 to 7 percent entrained air. The unit weight of the concrete shall be 110 pounds per cubic foot (1,762 kg/m³), with a minimum 28-day compressive strength, f'_c , of 3,000 psi (20.7 MPa). The thickness above the top flange of the deck is $3\frac{1}{4}$ inches (83 mm).

4. The unrestrained assembly is assigned the same fire-resistive rating as the fire-resistive rating of the supporting steel beams, or a lesser rating.

4.3.3.2 Assemblies with Fireproofing Spray-applied to Deck: Fire-resistive ratings with fireproofing material spray-applied to galvanized deck underside are described in current ICC-ES evaluation reports ESR-1649 and ESR-1186. In addition, prime-painted Types PLB, B, BR, PLN, N, PLW2, W2, PLW3, and W3 decks can be sprayed with MK-6 (ICC-ES evaluation report ESR-1186) and DC/F or CAFCO 300 (ICC-ES evaluation report ER-1649) fireproofing materials.

4.4 Special Inspection

4.4.1 Concrete: Continuous special inspection for concrete and concrete reinforcement must be in accordance with IBC Section 1704.4. The inspector's duties include sampling and testing, and verification of concrete mixes, reinforcement types and placement, and concrete placement.

4.4.2 Jobsite Welding: Continuous special inspection for welding must be in accordance with IBC Section 1704.3. Prior to proceeding, the welder shall

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demonstrate his ability to produce the prescribed weld to the special inspector's satisfaction. The inspector's other duties include verification of materials, weld preparation, welding procedures and welding processes.

4.4.3 Periodic Special Inspections: Periodic special inspections in accordance with IBC Section 1707.4 are required where the steel deck panel systems are used as part of a seismic-force-resisting system in structures assigned to Seismic Design Category C, D, E, or F. Periodic special inspections in accordance with IBC Section 1706.3 are required where the steel deck panel systems are used as part of a wind-force-resisting system in structures constructed in the areas listed in IBC 1706.1. Periodic special inspections apply to connections such as screws, power actuated fasteners, Verco PunchLok system side seam connections, and button punches. Periodic special inspections also apply where noted in IBC Tables 1704.3 and 1704.4.

4.4.4 Continuous Special Inspections: Continuous special inspections must be provided where noted in IBC Tables 1704.3 and 1704.4.

4.4.5 Statement of Special Inspections: A statement of special inspections must be prepared by the registered design professional in charge and submitted to the code official as set forth in IBC Section 1705. The statement must include the special inspector's duties noted in this section (Section 4.4).

5.0 CONDITIONS OF USE

The Verco steel deck panels described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.1 of this report, subject to the following conditions:

5.1 The decks are manufactured, identified, and installed in accordance with this report, the accompanying tables and figures dated 11/2011, and Verco's published installation instructions. If there is a conflict between Verco's published installation instructions and this report with its accompanying tables and figures, this report governs.

5.2 Vertical load design of deck panels without concrete fill must be based on the section properties in Tables 4 and 6, and reaction loads in Table 5.

5.3 Where the deck panels are used as diaphragms:

5.3.1 The one-third stress increase permitted for Allowable Stress Design, for load combinations in IBC Section 1605.3.2 including wind or seismic forces, shall not be used for shear values in the diaphragm tables.

5.3.2 Allowable shear values are as set forth in the tables accompanying this report for the type of deck panel involved.

5.3.3 Diaphragm deflections shall not exceed the permitted relative deflections of walls between the diaphragm level and the floor below. Section 4.1 and the flexibility limitations shown in Table 7 may be used as a guide in lieu of rational analysis of the anticipated deflections.

5.3.4 Diaphragms may be zoned by varying deck gage and/or connections across a diaphragm to meet varying shear and stiffness (flexibility) demands.

5.4 Concrete-filled composite sections must not be used to support loads that are predominantly vibratory.

5.5 Fire-resistance-rated assemblies are as described in Sections 4.3 of this report or as set forth in IBC Table 720.1(3), provided the fill type, thickness, metal gage, and construction are as specified therein.

5.6 Roof systems with steel deck panels directly exposed to the exterior shall be attached with stainless steel fasteners or galvanized fasteners when covered with either a stainless steel sealing cap, corrosion resistant paint, or sealant. Welds shall not be permitted to attach steel roof panels directly exposed to the exterior.

5.7 Special inspection is provided in accordance with Section 4.4.

5.8 Calculations and details demonstrating that the loads applied to the decks comply with this report must be submitted to the code official for approval. Calculations and drawings must be prepared, signed, and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.9 The cellular deck panels are fabricated at the

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Antioch, California, facility under a quality program with inspections by Testing Engineers, Inc.

5.10 Bundles marked in accordance with Section 7.0 of this report provide the material traceability required to conform with the requirements of Table 1704.3, Item 3 of the IBC.

5.11 For fire resistance construction in Section 4.3.1, 4.3.2 and 4.3.3.1 reference Verco UL File Card CHWX.R6149 for additional information.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Steel Deck Roof and Floor Systems (AC43), effective November 2010.

6.2 Quality documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation (AC10), effective May 2008.

7.0 IDENTIFICATION

Each bundle of decking is marked with labels with the Verco Decking, Inc. name, the deck type, the minimum base-metal thickness (uncoated), minimum specified yield strength and the IAPMO Evaluation Report number 0217. The cellular deck panel labeling also includes the manufacturing location (Antioch, CA) and the name of the inspection agency (Testing Engineers, Inc.). SHEARTRANZ® II-42 pieces are stamped "SHEARTRANZ II-42". All bundles of SHEARTRANZ® II-42 pieces also are labeled with the Verco Decking, Inc. name and the IAPMO Evaluation Report number 0217.



IAPMO #0217

A handwritten signature in black ink, appearing to be "Am", written over a horizontal line.

Director of Evaluation Services

Report Number: 0217
Issued: 11/2011
Expires: 11/2012

SUPPLEMENT

CODE SUPPLEMENT to ER-0217

DIVISION: 05 - METALS
Section: 05 31 00 - Steel Deck

REPORT HOLDER:

VERCO DECKING, INC. a NUCOR company
4340 NORTH 42ND AVENUE
PHOENIX, ARIZONA 85019
(602) 272-1347
www.vercodeck.com

EVALUATION SUBJECT:

VERCO STEEL DECKS:

- PLB, HSB, PLN, and N Roof Deck Panels
- PLB AC, HSB AC, PLN AC, and N AC Acoustical and Fully Perforated Roof Deck Panels
- PLB, B, BR, PLN, N, PLW2, W2, PLW3, and W3 FORMLOK Deck Panels
- $\frac{9}{16}$ -inch (Shallow) VERCOR, $1\frac{5}{16}$ -inch (Deep) VERCOR, and $1\frac{5}{16}$ -inch (Deep) VERCOR Ventlok Deck Panels
- PLB-CD, HSB-CD, PLN-CD, and N-24CD Cellular Roof Deck Panels; and PLB-CD, BCD, PLN-CD, NCD, PLW2-CD, W2CD, PLW3-CD, and W3CD FORMLOK Cellular Deck Panels
- PLB-CD AC, HSB-CD AC, PLN-CD AC, and N-24CD AC Acoustical Cellular Roof Deck Panels; and PLB-CD AC, BCD AC, PLN-CD AC, NCD AC, PLW2-CD AC, W2CD AC, PLW3-CD AC, and W3CD AC FORMLOK Acoustical Cellular Deck Panels

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes

- 2010 California Building Code (CBC)

2.0 SUBSTANTIATING DATA

Data in accordance with the ICC-ES Acceptance Criteria for Steel Deck Roof and Floor Systems (AC43), effective November 1, 2010.

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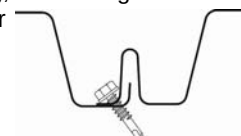
General Notes

The following notes apply to all tables in this report unless otherwise noted:

1. The allowable values for composite decks shown in the tables are applicable to either phosphatized/painted or galvanized decks, and the allowable values shown for roof decks are applicable to either painted, mill-finished, or galvanized decks unless specifically noted.
2. The allowable diaphragm shears listed in the tables are in pounds per linear foot. The flexibility factors listed in the tables are in micro-inches per pound.
3. The base-metal thickness for all decks is indicated in Tables 4 and 6. Thickness tolerances for all decks and SHEARTRANZ II-42 elements shall comply with Section A2.4 of the AISI NASPEC.
4. Interlocking deck panel side seams (sidelaps) may be connected with the Verco PunchLok® VSC connections, welds, or button punches, as indicated in the evaluation report. The length of seam welds shall be a minimum of 1½ inches (38 mm). The side seam, where required, shall be fastened at 3 feet (914 mm) on center, maximum. "SS" type deck panel side seams as shown in Figure 1 may be fastened with self-tapping, self-drilling steel screws in place of button punches without affecting the shear and flexibility factors, under the following conditions:
 - a. The screw size is minimum No. 10, with a minimum ¾-inch (19.1 mm) length.
 - b. The screw spacing is identical to the tabulated button punch spacing.
 - c. The deck material thickness is at least No. 22 gage (0.0276 inch base-metal thickness).
5. Arc seam or arc spot (puddle) welds shall have an effective fusion area to supporting members at least equivalent to ½ inch (12.7 mm) in diameter or ⅝ inch (9.5 mm) wide by 1 inch (25 mm) long.
6. Perpendicular support attachment patterns for the Types PLB, B, PLB-CD, BCD, BR, HSB, HSB-CD, PLN, N, PLN-CD, N-24CD, PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, and W3CD are shown in Figure 2. See Figure 10 for SHEARTRANZ II-42 system attachment.
7. Spacing of attachments to collector elements parallel to flutes:
 - a. Arc spot puddle welds to members such as chords and to collector elements such as struts or ties shall have a spacing in feet (mm) equal to $35,000(t) \div v$ [For **SI**: $6,130(t) \div v$], where:

t = Uncoated steel thickness of fluted deck, in inches (mm).

v = Actual diaphragm shear at boundary supports or actual shear transferred to collector (at struts or ties), in pounds per foot (N/mm). Allowable diaphragm shear values in pounds per foot are shown in Table 1.
 - b. Fillet welds are permitted to be used to attach the diaphragm to parallel members such as diaphragm chords, struts, ties, or other collector elements. Allowable capacity of fillet welds is determined in accordance with Section 2.2.2 of AWS D1.3. Spacing of the welds shall be based on the actual shear to be transferred.
 - c. The spacing of Hilti fasteners at collectors parallel to deck flutes shall be the same as the spacing of the sidelap connections. If the required shear transfer between the deck and an interior collector element parallel to the deck flutes exceeds the shear strength of the diaphragm, two Hilti fasteners shall be spaced the same as the side seam fasteners.
 - d. The spacing of Pneutek fasteners at collectors parallel to deck flutes shall be the same as the spacing of the sidelap connections. If the required shear transfer between the deck and an interior collector element parallel to the deck flutes exceeds the shear strength of the diaphragm, two Pneutek fasteners shall be spaced the same as the side seam fasteners.
 - e. The attachment spacing is 3 feet (914 mm), maximum.
8. For attachments at interior lines of shear transfer perpendicular to deck corrugations: The shear transfer from a diaphragm to interior tie or strut lines perpendicular to deck corrugations shall not exceed the shear values indicated in the tables. Two lines of connections of the type appropriate to the table (welds, power actuated fasteners, or screws) may be used to develop the actual shear transfer to these collector elements.
9. Where individual panels are cut, the partial panel shall be fastened in a manner to fully transfer the shears at the point of the diaphragm to the adjacent full panels for the values specified in the tables.
10. The minimum 28-day compressive strength for structural concrete shall be 3,000 psi (20.7 MPa), and unit weight shall be as indicated in the tables. The minimum depth of concrete shall be 2 inches (51 mm) over the top flange,



**FIGURE 1 - "SS"
TYPE SIDE SEAM**

and it is reinforced with a minimum 6-by-6, W1.4-by-W1.4 welded-wire fabric. Where concrete fill depth exceeds 3¼ inches (82 mm), welded-wire fabric with an area equal to 0.00075 times the area of concrete fill over the metal deck, is required.

11. All decks with structural concrete fill may be considered rigid diaphragms ($F < 1$). Table 7 describes flexibility categories.
12. For decks with structural concrete fill, the diaphragm shear values and flexibility factors apply to deck sections with or without embossments.
13. For decks with structural concrete fill, the diaphragm shear values and flexibility factors apply whether or not the sidelaps are attached.
14. For **SI** dimensions, the following conversions apply:
 1 inch = 25.4 mm; 1 lbf/ft = 14.6 N/m = 0.0146 N/mm; 1 in² = 645.16 mm²; 1 in³ = 16,387.06 mm³;
 1 in⁴ = 416,231.4 mm⁴; 1 psi = 6.89 kPa; 1 ft = 304.8 mm; 1 pcf = 16.018 kg/m³; 1 psf = 0.0479 kN/m²;
 1 lbf = 4.45 N.

FIGURE 2- ATTACHMENT PATTERNS

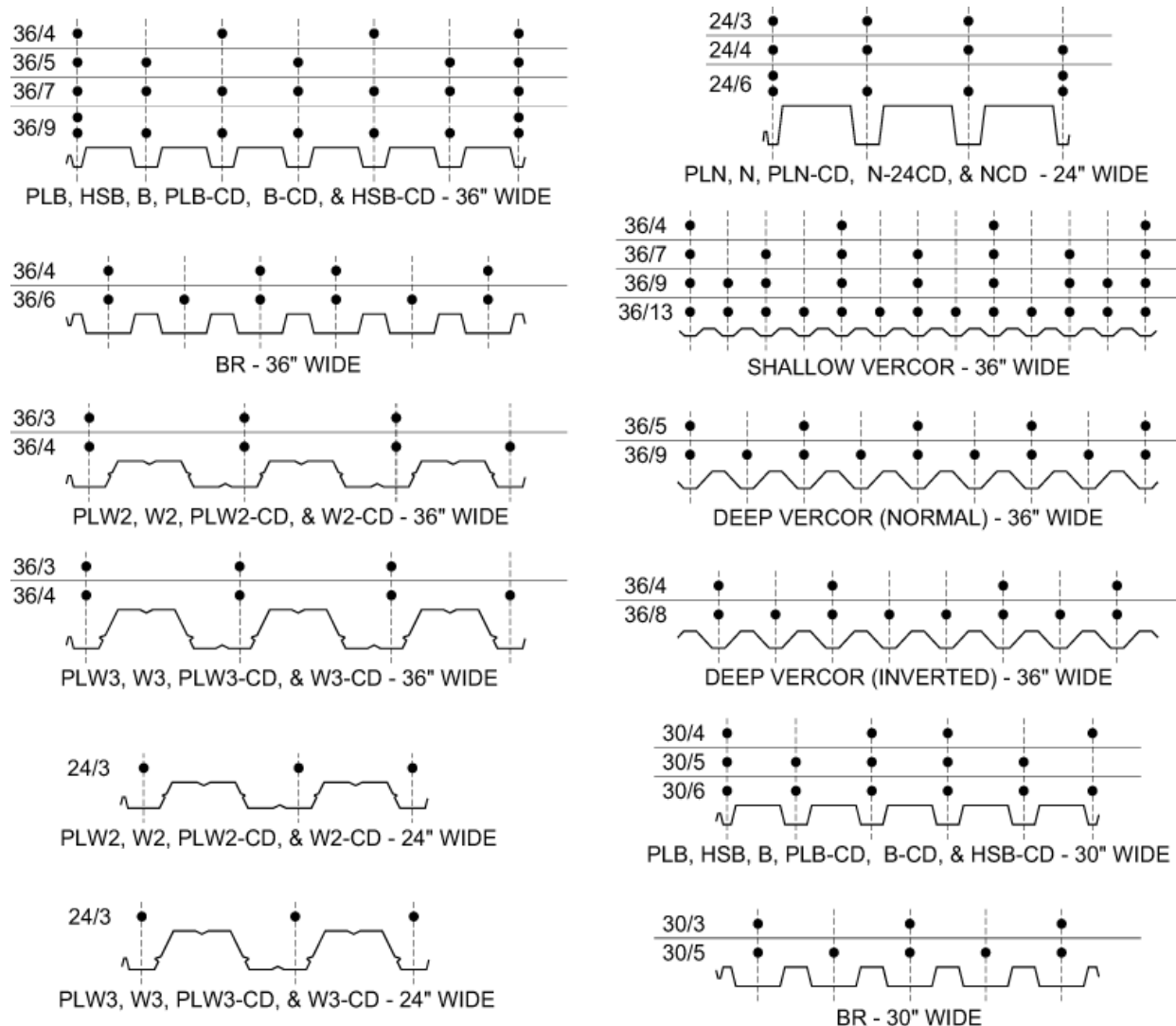


FIGURE 3—VERCO SIDELAP CONNECTION (VERCO PUNCHLOK® SYSTEM)

- ① Sheared surface of male leg.
- ② Sheared surface of female leg.
- ③ Male leg / sheet.
- ④ Female leg / sheet.
- ⑤ PunchLok® system connection - as shown, deformation of male & female sheets projects towards female sheet, but VSC may be made in either direction.

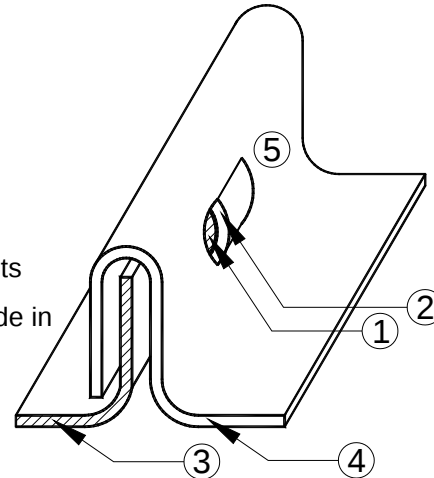


FIGURE 4—HILTI FASTENER NAIL HEAD STANDOFF (NHS)

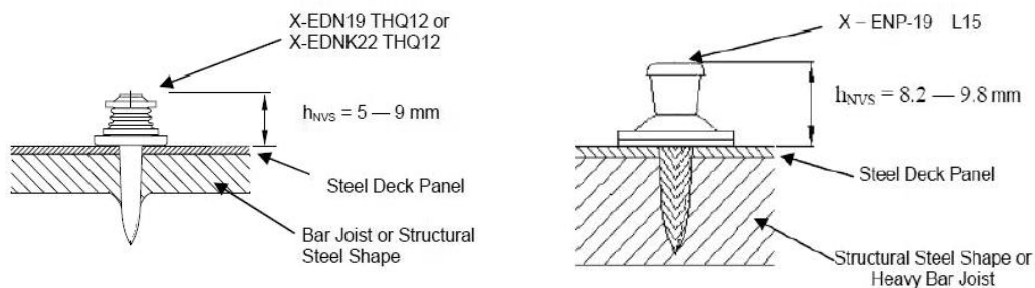
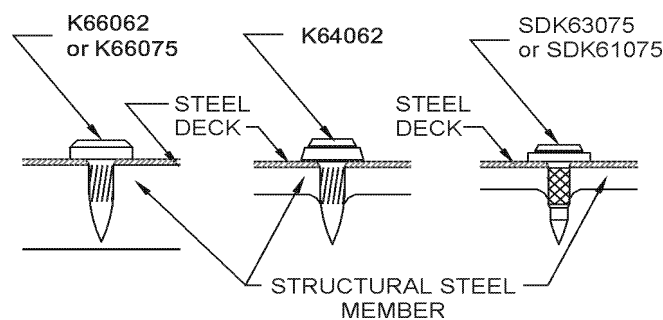


FIGURE 5 – PNEUTEK FASTENERS



**TABLE 1-ALLOWABLE DIAPHRAGM SHEAR VALUES (plf) FOR ARC SPOT OR ARC SEAM WELDS
PARALLEL TO DECK FLUTES FOR ALL DECKS EXCEPT VERCOR^{1,2,3,4,5}**

GAGE	PROFILE	BASE METAL THICKNESS (in.)	PUDDLE WELD SPACING (in.)			
			6	9	12	18
22	PLW3 & W3 FORMLOK	0.029	2030	1353	1015	677
	B & N	0.0299	2093	1395	1047	698
	PLW2 & W2 FORMLOK	0.03	2100	1400	1050	700
21	PLW2, W2, PLW3, & W3 FORMLOK	0.033	2310	1540	1155	770
20	B & N, PLW3 & W3 FORMLOK	0.0359	2513	1675	1257	838
	PLW2 & W2 FORMLOK	0.036	2520	1680	1260	840
19	PLW2 & W2, PLW3, & W3 FORMLOK	0.042	2940	1960	1470	980
18	PLW2 & W2 FORMLOK	0.047	3290	2193	1645	1097
	B & N, PLW3 & W3 FORMLOK	0.0478	3346	2231	1673	1115
16	PLW2 & W2 FORMLOK	0.059	4130	2753	2065	1377
	B & N, PLW3 & W3 FORMLOK	0.0598	4186	2791	2093	1395

¹ "B" - PLB, HSB, PLB & HSB Acoustical, and PLB & B Formlok

"N" - PLN, N, PLN & N Acoustical, and PLN & N-Formlok

² See General Note No. 7.a to determine shear values for other weld spacings.

³ The minimum arc spot weld effective fusion diameter, d_e , is 1/2 inch. The minimum arc seam weld effective fusion width, d_e , is 3/8 inch. The minimum arc seam weld length is 1 inch excluding circular ends. See AWS D 1.3 for details.

⁴ Details, workmanship technique and qualification of welds must comply with AWS D 1.3.

⁵ Allowable values may not be increased one-third for wind or earthquake loading.

**TABLE 2-ALLOWABLE TENSION LOADS (lb) FOR HILTI FASTENERS
SUBJECT TO WIND UPLIFT FORCES FOR B AND N DECK^{1,2}**

SUBSTRATE THICKNESS (in.)	HILTI FASTENER DESIGNATION	ALLOWABLE TENSION LOADS (lb)			
		DECK GAGE & THICKNESS (in.)			
		22 0.0299	20 0.0359	18 0.0478	16 0.0598
½ and thicker	X-ENP19 L15	382	459	519	519
0.313 to 3/8	X-EDN19-THQ12	382	459	519	519
0.250 to 0.313	X-EDN19-THQ12	382	426	426	426
0.188 to 0.250	X-EDNK22-THQ12	382	459	502	502
1/8 to 0.188	X-EDNK22-THQ12	382	396	396	396

¹ "B" - PLB, HSB, PLB & HSB Acoustical, and PLB & B Formlok

"N" - PLN, N, PLN & N Acoustical, and PLN & N-Formlok

² Allowable tension loads are the lesser value of the allowable pullover or pullout loads for the deck gage, fastener, and substrate thickness combination.

**TABLE 3-ALLOWABLE TENSION LOADS (lb) FOR PNEUTEK FASTENERS
SUBJECT TO WIND UPLIFT FORCES FOR B AND N DECK^{1,2}**

SUBSTRATE THICKNESS (in.)	PNEUTEK FASTENER DESIGNATION	ALLOWABLE TENSION LOADS (lb)			
		DECK GAGE & THICKNESS (in.)			
		22 0.0299	20 0.0359	18 0.0478	16 0.0598
0.281 and thicker	K66062 or K66075	411	494	657	818
0.187 to 0.312	K64062	411	494	657	671
0.155 to 0.250	SDK63075	411	470	470	470
0.113 to 0.155	SDK61075	373	373	373	373

¹ "B" - PLB, HSB, PLB & HSB Acoustical, and PLB & B Formlok

"N" - PLN, N, PLN & N Acoustical, and PLN & N-Formlok

² Allowable tension loads are the lesser value of the allowable pullover or pullout loads for the deck gage, fastener, and substrate thickness combination.

FIGURE 6-DECK PROFILES

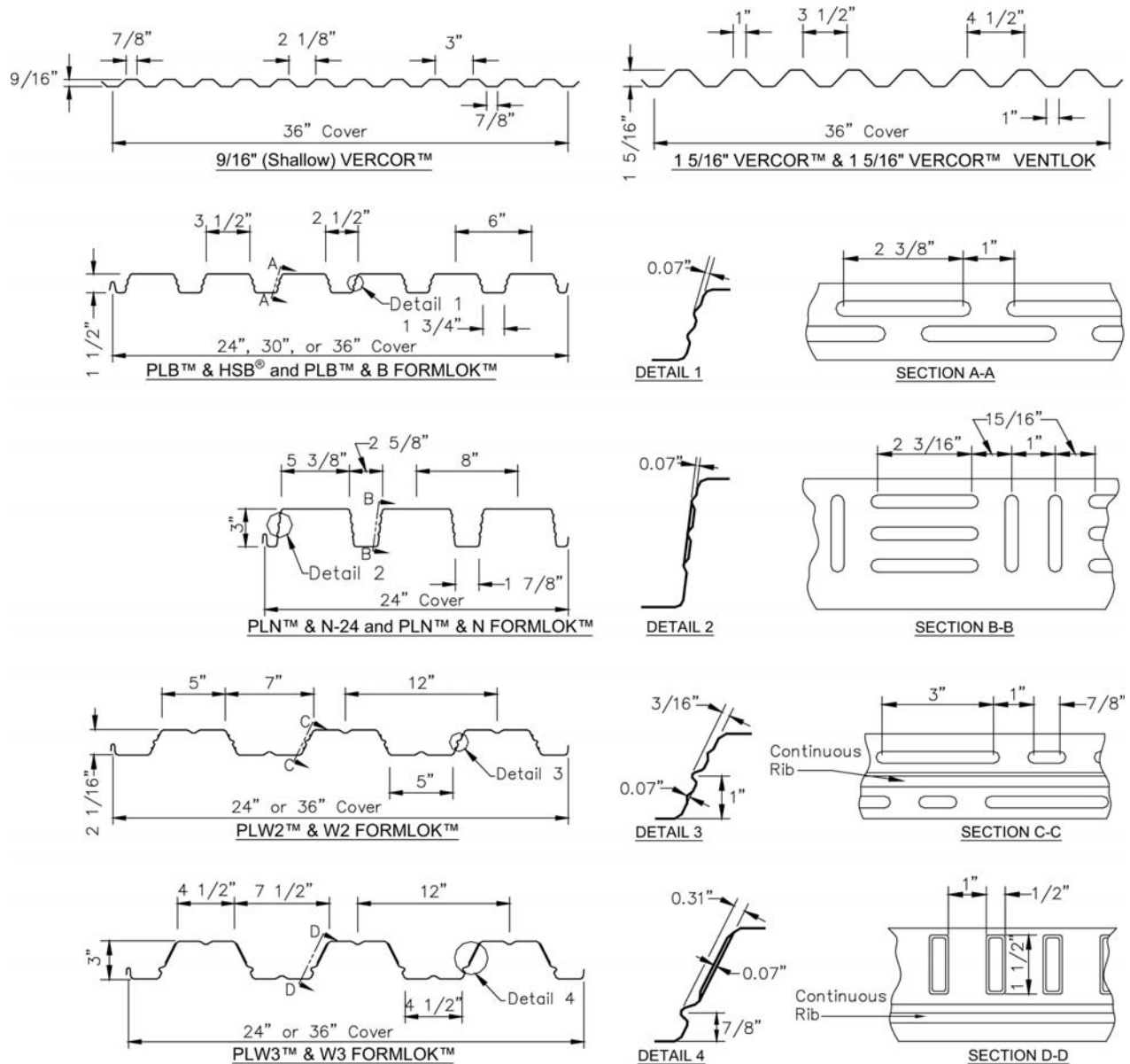


FIGURE 7-ACOUSTICAL DECK

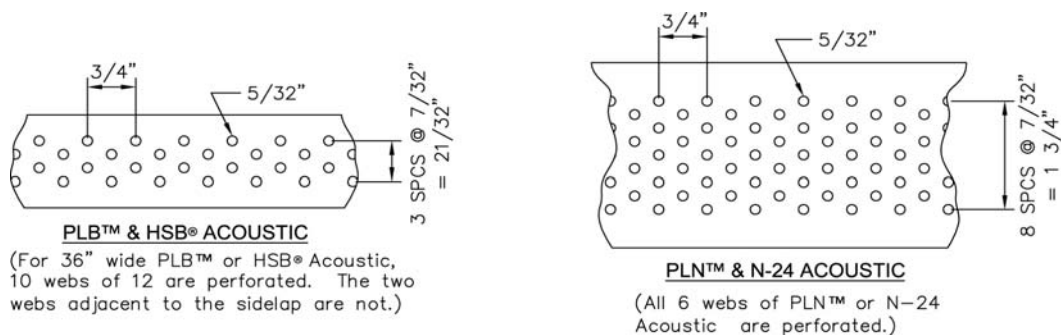


TABLE 4 - SECTION PROPERTIES AND MOMENT CAPACITIES (Per Foot of Width)^{1,2,3,4,5,6,7,8}

DECK PROFILE	DECK GAGE	MOMENT OF INERTIA					POSITIVE MOMENT ⁶		NEGATIVE MOMENT ⁶	
		GROSS	EFFECTIVE		I _d FOR DEFLECTION ⁵		+S	+M	-S	-M
		I _x	+I	-I	SPAN	SPAN				
		(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ³ /ft)	(in.-kip/ft)	(in. ³ /ft)	(in.-kip/ft)
PLB & HSB Roof Deck ^{1,2,7}	22	0.193	0.174	0.192	0.180	0.192	0.185	4.4	0.194	4.7
	20	0.231	0.219	0.231	0.223	0.231	0.233	5.6	0.244	5.9
	18	0.306	0.304	0.306	0.305	0.306	0.318	7.6	0.331	7.9
	16	0.381	0.381	0.381	0.381	0.381	0.404	9.7	0.410	9.8
PLN & N Roof Deck ^{1,2,7}	22	0.862	0.691	0.859	0.748	0.860	0.359	8.6	0.438	10.5
	20	1.032	0.872	1.032	0.926	1.032	0.464	11.1	0.542	13.0
	18	1.369	1.255	1.369	1.293	1.369	0.663	15.9	0.736	17.6
	16	1.706	1.648	1.706	1.667	1.706	0.850	20.4	0.914	21.9
PLB & B FORMLOK ³	22	0.193	0.170	0.192	0.177	0.192	0.176	5.3	0.188	5.6
	20	0.231	0.213	0.231	0.219	0.231	0.230	6.9	0.237	7.1
	18	0.306	0.300	0.306	0.302	0.306	0.314	9.4	0.331	9.9
	16	0.381	0.381	0.381	0.381	0.381	0.399	11.9	0.410	12.3
BR FORMLOK ³	22	0.193	0.192	0.170	0.192	0.192	0.188	5.6	0.176	5.3
	20	0.231	0.231	0.213	0.231	0.231	0.237	7.1	0.230	6.9
	18	0.306	0.306	0.300	0.306	0.306	0.331	9.9	0.314	9.4
	16	0.381	0.381	0.381	0.381	0.381	0.410	12.3	0.399	11.9
PLN & N FORMLOK ³	22	0.862	0.668	0.854	0.733	0.857	0.344	10.3	0.429	12.8
	20	1.032	0.845	1.031	0.908	1.032	0.443	13.3	0.531	15.9
	18	1.369	1.216	1.369	1.267	1.369	0.652	19.5	0.735	22.0
	16	1.706	1.610	1.706	1.642	1.706	0.837	25.0	0.914	27.4
PLW2 & W2 FORMLOK ³	22	0.362	0.330	0.327	0.340	0.340	0.246	7.4	0.256	7.7
	21	0.398	0.372	0.369	0.381	0.381	0.283	8.5	0.294	8.8
	20	0.434	0.416	0.412	0.422	0.422	0.323	9.7	0.333	10.0
	19	0.506	0.502	0.496	0.503	0.503	0.405	12.1	0.415	12.4
	18	0.565	0.564	0.560	0.564	0.564	0.471	14.1	0.481	14.4
	16	0.709	0.707	0.707	0.707	0.707	0.623	18.7	0.638	19.1
PLW3 & W3 FORMLOK ³	22	0.761	0.723	0.715	0.736	0.736	0.393	11.8	0.410	12.3
	21	0.840	0.816	0.806	0.824	0.824	0.453	13.6	0.470	14.1
	20	0.914	0.904	0.892	0.907	0.907	0.510	15.3	0.528	15.8
	19	1.068	1.067	1.058	1.067	1.067	0.636	19.0	0.652	19.5
	18	1.214	1.213	1.210	1.213	1.213	0.752	22.5	0.768	23.0
	16	1.517	1.515	1.516	1.516	1.516	0.968	29.0	0.966	28.9
9/16" (SHALLOW) VERCOR ⁴	26	0.256	0.013	0.013	0.013	0.013	0.041	1.5	0.043	1.5
	24	0.342	0.018	0.018	0.018	0.018	0.059	2.1	0.059	2.1
	22	0.428	0.022	0.022	0.022	0.022	0.073	2.6	0.073	2.6
1-5/16" (DEEP) VERCOR ⁴	26	0.304	0.075	0.073	0.075	0.075	0.099	3.5	0.103	3.7
	24	0.396	0.097	0.096	0.097	0.097	0.137	4.9	0.138	5.0
	22	0.490	0.120	0.120	0.120	0.120	0.172	6.2	0.171	6.2
	20	0.583	0.143	0.143	0.143	0.143	0.204	7.3	0.204	7.3

¹ All B and N roof deck profiles are available in Acoustical and Fully Perforated versions, see Figure 7 for the location of perforations and Footnote 7 for section property adjustment factors.

² Values based on yield strength of 40,000 psi.

³ Values based on yield strength of 50,000 psi.

⁴ Values based on yield strength of 60,000 psi (specified yield strength of 80,000 psi).

⁵ I_d is for deflection due to uniform loads.

⁶ S (+ or -) is the effective section modulus. M (+ or -) is the ASD allowable moment, $M = M_n / \Omega_b$, where $\Omega_b = 1.67$ and M_n is the nominal flexural strength.

⁷ Multiply tabulated B or N roof deck values by the following factors to obtain acoustical and fully perforated deck properties:

DECK TYPE	MOMENT OF INERTIA					MOMENT	
	I _x	+I	-I	I _d (SIMPLE)	I _d (MULT.)	POS.	NEG.
B - ACOUSTICAL	1.00	0.98	0.98	0.98	0.98	0.97	0.97
N - ACOUSTICAL	1.00	0.94	0.95	0.94	0.95	0.92	0.94
B - FULLY PERF.	1.00	0.54	0.54	0.69	0.69	0.44	0.44
N - FULLY PERF.	1.00	0.56	0.54	0.71	0.69	0.44	0.44

See Page 8 for additional footnotes.

ADDITIONAL FOOTNOTES FOR TABLE 4

⁸ Base metal thicknesses (BMT) and deck weights are as follows:

DECK PROFILE	DECK GAGE	BMT (in.)	WEIGHT (psf)	DECK PROFILE	DECK GAGE	BMT (in.)	WEIGHT (psf)
PLB & HSB Roof, and PLB, B, & BR FORMLOK	22	0.0299	1.9	PLW3 & W3 FORMLOK	22	0.0299	1.9
	20	0.0359	2.3		21	0.0330	2.1
	18	0.0478	2.9		20	0.0359	2.3
	16	0.0598	3.5		19	0.0420	2.7
PLN & N Roof, and PLN & N FORMLOK	22	0.0299	2.2		18	0.0478	2.9
	20	0.0359	2.6		16	0.0598	3.5
	18	0.0478	3.5	9/16" (Shallow) VERCOR	26	0.0179	1.0
	16	0.0598	4.2		24	0.0239	1.3
PLW2 & W2 FORMLOK	22	0.030	1.8		22	0.0299	1.6
	21	0.033	2.0	1-5/16" (Deep) VERCOR	26	0.0195	1.1
	20	0.036	2.1		24	0.0254	1.4
	19	0.042	2.4		22	0.0314	1.7
	18	0.047	2.7		20	0.0374	2.1
	16	0.059	3.3				

TABLE 5 - ALLOWABLE REACTIONS BASED ON WEB CRIPPLING (Pounds Per Foot of Width)^{1,2,3,4,5,6,7}

DECK PROFILE	DECK GAGE	END REACTION			INTERIOR REACTION		DECK PROFILE	DECK GAGE	END REACTION			INTERIOR REACTION	
		LENGTH OF BEARING ON SUPPORT							LENGTH OF BEARING ON SUPPORT				
		1½"	2"		1½"	2"			2"	3"	4"	3"	4"
9/16" (SHALLOW) VERCOR ¹	26	581	644		788	862	1-5/16" (DEEP) VERCOR ¹	26	492	572	639	829	916
	24	980	1081		1375	1497		24	802	927	1032	1366	1503
	22	1466	1611		2105	2283		22	1184	1361	1510	2029	2225
								20	1628	1864	2064	2807	3069
		2"	3"	4"	3"	4"			2"	3"	4"	4"	5"
PLB & HSB Roof Deck ^{2,4,5}	22	748	861	931	1248	1337	PLN & N Roof Deck ^{2,4,5}	22	523	602	669	1040	1121
	20	1041	1193	1287	1752	1872		20	737	844	935	1458	1569
	18	1745	1988	2133	2972	3160		18	1253	1427	1573	2468	2645
	16	2612	2959	3164	4485	4751		16	1893	2145	2357	3719	3974
		2"	3"	4"	3"	4"			2"	3"	4"	4"	5"
PLB & B FORMLOK ³	22	935	1076	1163	1559	1671	PLN & N FORMLOK ³	22	654	753	836	1300	1402
	20	1301	1492	1609	2190	2340		20	921	1056	1169	1823	1961
	18	2181	2484	2667	3714	3950		18	1566	1783	1967	3085	3307
	16	3265	3699	3955	5607	5938		16	2367	2681	2946	4648	4967
		2"	3"	4"	4"	5"			2"	3"	4"	4"	5"
PLW2 & W2 FORMLOK ³	22	412	475	527	793	855	PLW3 & W3 FORMLOK ³	22	383	441	490	778	839
	21	492	565	626	945	1018		21	461	530	588	934	1005
	20	577	661	732	1109	1193		20	540	619	686	1091	1173
	19	765	874	966	1472	1580		19	724	828	914	1456	1563
	18	940	1071	1182	1808	1939		18	922	1049	1157	1845	1978
	16	1424	1613	1773	2738	2926		16	1395	1581	1737	2780	2970

¹ Values based on yield strength of 60,000 psi (specified yield strength of 80,000 psi).

² Values based on yield strength of 40,000 psi.

³ Values based on yield strength of 50,000 psi.

⁴ All B and N roof deck profiles are available in Acoustical and Fully Perforated versions, see Figure 7 for the location of perforations and Footnote 5 for allowable reaction adjustment factors.

⁵ Multiply tabulated B or N roof deck values by the following factors to obtain acoustical deck reactions:

DECK TYPE	END	INTERIOR
B - Acoustical	1.00	0.76
N - Acoustical	1.00	0.84

⁶ Allowable reactions based on web crippling = $(P_n \times \text{number of webs per foot}) / \Omega_w$, where $\Omega_w = 1.70$ (end bearing) or 1.75 (interior bearing) and P_n is the nominal web crippling strength.

⁷ The allowable values are reactions (or concentrated loads) applied to bare deck, or to composite decks during the construction phase only, prior to the concrete achieving minimum specified compressive strength.

**TABLE 6 - CELLULAR DECK SECTION PROPERTIES, MOMENT CAPACITIES,
AND SHEAR STRENGTHS (Per Foot of Width)^{1,2,3,4,5,6,7,8,9,10,11,12}**

DECK PROFILE ^{1,11}	DECK GAGE ⁴	MOMENT OF INERTIA					POSITIVE MOMENT ⁵		NEGATIVE MOMENT ⁵		VERTICAL SHEAR ⁶	
		GROSS	EFFECTIVE		I _d FOR DEFLECTION							
		I _x	+I	-I	SIMPLE SPAN	MULTIPLE SPAN	+S	+M	-S	-M	END	INTERIOR
		(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ⁴ /ft)	(in. ³ /ft)	(in.-kip/ft)	(in. ³ /ft)	(in.-kip/ft)	(lb/ft)	(lb/ft)
PLB-CD & HSB-CD Roof Deck ²	20/20	0.448	0.413	0.284	0.424	0.424	0.294	7.0	0.398	9.5	340	483
	20/18	0.490	0.450	0.327	0.463	0.463	0.302	7.2	0.432	10.3	318	352
	20/16	0.525	0.481	0.381	0.496	0.496	0.309	7.4	0.450	10.8	306	295
	18/20	0.550	0.538	0.359	0.542	0.542	0.440	10.6	0.469	11.2	369	574
	18/18	0.603	0.590	0.401	0.594	0.594	0.452	10.8	0.556	13.3	517	630
	18/16	0.649	0.634	0.458	0.639	0.639	0.461	11.0	0.580	13.9	491	503
	16/18	0.708	0.707	0.476	0.707	0.707	0.618	14.8	0.655	15.7	549	718
	16/16	0.763	0.762	0.533	0.762	0.762	0.631	15.1	0.706	16.9	718	781
PLN-CD & N-24CD Roof Deck ²	20/20	1.961	1.587	1.232	1.712	1.712	0.562	13.5	0.728	17.4	559	989
	20/18	2.154	1.738	1.384	1.877	1.877	0.558	13.4	0.949	22.7	522	689
	20/16	2.312	1.829	1.579	1.990	1.990	0.601	14.4	1.032	24.7	500	531
	18/20	2.381	2.114	1.541	2.203	2.203	0.845	20.2	0.873	20.9	608	1187
	18/18	2.624	2.317	1.709	2.419	2.419	0.867	20.8	1.095	26.2	850	1216
	18/16	2.829	2.486	1.896	2.600	2.600	0.884	21.2	1.330	31.9	805	926
	16/18	3.054	2.869	2.027	2.931	2.931	1.180	28.3	1.239	29.7	906	1383
	16/16	3.299	3.092	2.219	3.161	3.161	1.204	28.8	1.537	36.8	1181	1440
PLB-CD & BCD FORMLOK ³	20/20	0.448	0.400	0.280	0.416	0.416	0.279	8.4	0.382	11.4	340	510
	20/18	0.490	0.436	0.318	0.454	0.454	0.287	8.6	0.428	12.8	318	369
	20/16	0.525	0.465	0.367	0.485	0.485	0.293	8.8	0.447	13.4	306	303
	18/20	0.550	0.528	0.354	0.535	0.535	0.417	12.5	0.453	13.6	369	612
	18/18	0.603	0.579	0.391	0.587	0.587	0.428	12.8	0.552	16.5	517	667
	18/16	0.649	0.622	0.443	0.631	0.631	0.437	13.1	0.575	17.2	491	524
	16/18	0.708	0.702	0.467	0.704	0.704	0.587	17.6	0.629	18.8	549	757
	16/16	0.763	0.757	0.517	0.759	0.759	0.599	17.9	0.700	20.9	718	821
PLN-CD & NCD FORMLOK ³	20/20	1.961	1.541	1.211	1.681	1.681	0.518	15.5	0.706	21.2	559	1039
	20/18	2.154	1.685	1.356	1.841	1.841	0.515	15.4	0.909	27.2	522	718
	20/16	2.312	1.770	1.531	1.951	1.951	0.555	16.6	1.022	30.6	500	550
	18/20	2.381	2.048	1.519	2.159	2.159	0.805	24.1	0.852	25.5	608	1253
	18/18	2.624	2.241	1.679	2.369	2.369	0.826	24.7	1.055	31.6	850	1275
	18/16	2.829	2.402	1.845	2.544	2.544	0.843	25.2	1.318	39.5	805	966
	16/18	3.054	2.795	1.994	2.881	2.881	1.121	33.6	1.199	35.9	906	1455
	16/16	3.299	3.009	2.174	3.106	3.106	1.144	34.3	1.475	44.2	1181	1498
PLW2-CD & W2CD FORMLOK ³	20/20	0.690	0.655	0.497	0.666	0.666	0.363	10.9	0.429	12.8	404	614
	20/18	0.740	0.700	0.552	0.714	0.714	0.372	11.1	0.446	13.3	376	433
	20/16	0.781	0.738	0.650	0.753	0.753	0.377	11.3	0.458	13.7	359	392
	18/20	0.848	0.847	0.619	0.847	0.847	0.526	15.8	0.549	16.4	439	755
	18/18	0.912	0.911	0.678	0.911	0.911	0.536	16.1	0.570	17.1	596	741
	18/16	0.965	0.964	0.792	0.964	0.964	0.544	16.3	0.586	17.5	562	643
	16/18	1.088	1.087	0.813	1.087	1.087	0.704	21.1	0.702	21.0	638	867
	16/16	1.154	1.152	0.883	1.153	1.153	0.714	21.4	0.722	21.6	831	949
PLW3-CD & W3CD FORMLOK ³	20/20	1.456	1.455	1.050	1.456	1.456	0.542	16.2	0.625	18.7	571	912
	20/18	1.562	1.550	1.163	1.554	1.554	0.541	16.2	0.652	19.5	528	617
	20/16	1.647	1.599	1.367	1.615	1.615	0.566	16.9	0.672	20.1	502	554
	18/20	1.814	1.813	1.331	1.813	1.813	0.852	25.5	0.813	24.3	628	1171
	18/18	1.950	1.949	1.452	1.949	1.949	0.862	25.8	0.846	25.3	869	1144
	18/16	2.063	2.061	1.688	2.062	2.062	0.859	25.7	0.874	26.2	816	956
	16/18	2.317	2.315	1.738	2.315	2.315	1.105	33.1	1.037	31.1	934	1354
	16/16	2.454	2.452	1.882	2.453	2.453	1.123	33.6	1.073	32.1	1206	1406

See Page 10 for footnotes.

(continued)

FOOTNOTES FOR TABLE 6

- ¹ All roof and FORMLOK composite cellular deck profiles are available in Acoustical versions with perforations in the flat bottom section, see Footnote 11 for section property adjustment factors.
- ² Values based on yield strength of 40,000 psi.
- ³ Values based on yield strength of 50,000 psi.
- ⁴ Gage "xx/yy" shall be defined as: First Number (xx) is the gage of the fluted top section. Second Number (yy) is the gage of the flat bottom section.
- ⁵ S (+ or -) is the effective section modulus. M (+ or -) is the ASD allowable moment, $M = M_n / \Omega_b$, where $\Omega_b = 1.67$ and M_n is the nominal flexural strength.
- ⁶ Vertical Shear is the ASD allowable vertical shear strength based on the horizontal shear strength of the resistance welds, where $V = V_n / \Omega$, with $\Omega = 2.35$. "END" shear strength values are applicable adjacent to supports where deck is not continuous and "INTERIOR" shear strength values are applicable adjacent to supports where deck is continuous
- ⁷ Reactions shall be compared to the allowable reactions due to web crippling as shown in Table 5, based on the gage of the fluted top section of the cellular deck.
- ⁸ Superimposed load and diaphragm capacities for FORMLOK composite decks shown in Tables 8-12 for a given concrete type and thickness may be applied to composite cellular sections with a fluted top section of the same profile and gage, with or without acoustical perforations in the flat bottom section of the cellular deck.
- ⁹ Diaphragm capacities and flexibility factors for roof decks shown in Tables 14-28 may be applied to cellular sections with a fluted top section of the same profile but with the gage of the flat bottom sheet, with or without acoustical perforations in the flat bottom section of the cellular deck.
- ¹⁰ Cellular deck resistance welds locations are illustrated in Figure 8.
- ¹¹ Multiply tabulated values for roof or FORMLOK deck by the following factors to obtain acoustical cellular deck section properties:

DECK TYPE	MOMENT OF INERTIA					MOMENT		VERTICAL SHEAR	
	I_x	+I	-I	I_d (SIMPLE)	I_d (MULT.)	POS.	NEG.	END	INTERIOR
BCD Acoustical	1.00	0.97	0.86	0.97	0.97	0.99	0.86	1.00	1.00
NCD Acoustical	1.00	0.97	0.85	0.97	0.97	0.99	0.84	1.00	1.00
W2CD Acoustical	1.00	0.98	0.87	0.98	0.98	1.00	0.98	1.00	1.00
W3CD Acoustical	1.00	0.98	0.88	0.98	0.98	0.99	0.97	1.00	1.00

- ¹² Deck weights and base metal thicknesses are as follows:

DECK GAGE	DECK WEIGHT (psf)				BASE METAL THICKNESS (in.)	
	BCD	NCD	W2CD	W3CD	BCD, NCD, & W3CD	W2CD
20/20	3.6	4.1	3.4	3.6	0.0359/0.0359	0.036/0.0359
20/18	4.1	4.6	3.8	4.0	0.0359/0.0478	0.036/0.0478
20/16	4.5	5.1	4.3	4.5	0.0359/0.0598	0.036/0.0598
18/20	4.1	4.8	3.9	4.1	0.0478/0.0359	0.047/0.0359
18/18	4.6	5.3	4.3	4.6	0.0478/0.0478	0.047/0.0478
18/16	5.1	5.8	4.8	5.0	0.0478/0.0598	0.047/0.0598
16/18	5.3	6.1	4.9	5.2	0.0598/0.0478	0.059/0.0478
16/16	5.8	6.6	5.4	5.7	0.0598/0.0598	0.059/0.0598

FIGURE 8 - CELLULAR DECK RESISTANCE WELD LOCATIONS

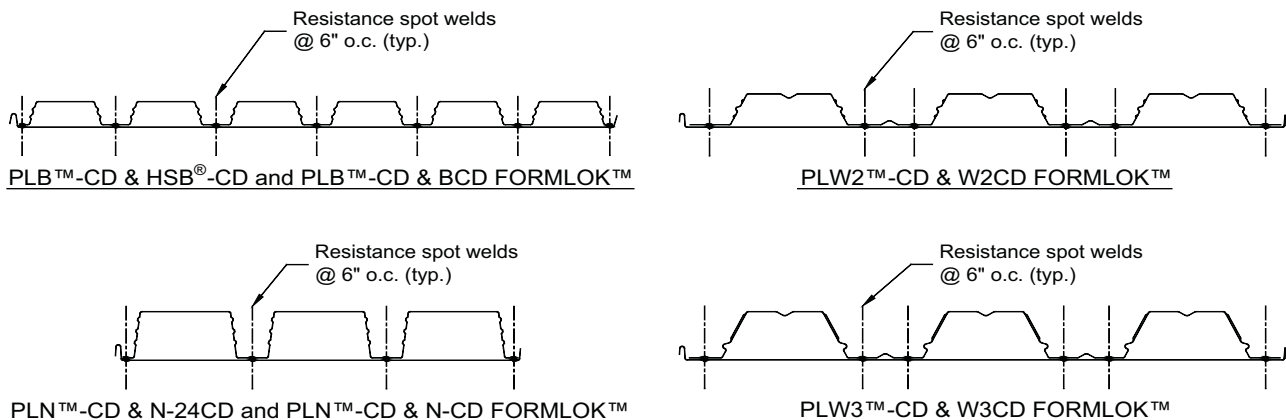


TABLE 7—DIAPHRAGM FLEXIBILITY LIMITATION^{1,2,3,4,5,6}

F	MAXIMUM SPAN FOR MASONRY OR CONCRETE WALLS (in feet)	SPAN-DEPTH LIMITATION			
		ROTATION NOT CONSIDERED IN DIAPHRAGM		ROTATION CONSIDERED IN DIAPHRAGM	
		MASONRY OR CONCRETE WALLS	FLEXIBLE WALLS ³	MASONRY OR CONCRETE WALLS	FLEXIBLE WALLS ³
>150	Not used	Not used	2:1	Not used	1½:1
70-150	200	2:1 or as required for deflection	3:1	Not used	2:1
10-70	400	2½:1 or as required for deflection	4:1	As required for deflection	2½:1
1-10	No limitation	3:1 or as required for deflection	5:1	As required for deflection	3:1
<1	No Limitation	As required for deflection	No limitation	As required for deflection	3½:1

¹ Diaphragms must be investigated regarding their flexibility and recommended span-depth limitations.

² Diaphragms supporting masonry or concrete walls must have their deflections limited to the following amount:

$$\Delta_{wall} = \frac{H^2 f_c}{0.01 Et}$$

where:

H = Unsupported height of wall in feet.

t = Thickness of wall in inches.

E = Modulus of elasticity of wall material for deflection determination in pounds per square inch.

f_c = Allowable compression strength of wall material in flexure in pounds per square inch. For concrete, $f_c = 0.45 f'_c$. For masonry, $f_c = F_b = 0.33 f'_m$.

³ The total deflection Δ of the diaphragm may be computed from the equation: $\Delta = \Delta_f + \Delta_w$

where:

Δ_f = Flexural deflection of the diaphragm determined in the same manner as the deflection of beams

Δ_w = The web deflection may be determined by the equation:

$$\Delta_w = \frac{q_{ave} L F}{10^6}$$

where:

L = Distance in feet between vertical resisting element (such as shear wall) and the point to which the deflection is to be determined.

q_{ave} = Average shear in diaphragm in pounds per foot over length L .

F = Flexibility factor: The average micro inches (μm) a diaphragm web will deflect in a span of 1 foot (m) under a shear of 1 pound per foot (N/m).

⁴ When applying these limitations to cantilevered diaphragms, the allowable span-depth ratio will be half that shown.

⁵ Diaphragm classification (flexible or rigid) and deflection limits must comply with the Diaphragm Design Considerations (Section 4.1.1) of this evaluation report.

⁶ The flexibility limitation may be used as a guide in lieu of rational analysis of the anticipated deflections.

**TABLE 8 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLB™-36 FORMLOK™ & B-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4}**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
3½" Normal Weight (145 pcf)	22	1: 6'-6"	261	228	170	148	130	115	101	90	80	71	64
		2: 7'-8"	261	228	202	180	130	115	101	90	80	71	64
		3: 7'-9"	261	228	202	180	130	115	101	90	80	71	64
		q - 4 welds	1825	1787	1754	1726	1701	1679	1659	1642	1626	1612	1599
		F - 4 welds	0.45	0.46	0.47	0.48	0.48	0.49	0.50	0.50	0.51	0.51	0.52
		q - 7 welds	2035	1981	1934	1893	1858	1827	1799	1774	1752	1732	1713
	20	F - 7 welds	0.41	0.42	0.43	0.44	0.44	0.45	0.46	0.46	0.47	0.48	0.48
		1: 7'-9"	274	240	212	189	138	122	108	96	85	76	68
		2: 9'-1"	274	240	212	189	170	153	140	96	85	76	68
		3: 9'-3"	274	240	212	189	170	153	140	96	85	76	68
		q - 4 welds	1893	1847	1808	1773	1743	1717	1694	1673	1654	1637	1621
		F - 4 welds	0.40	0.41	0.42	0.42	0.43	0.44	0.44	0.45	0.45	0.46	0.46
	18	q - 7 welds	2145	2079	2023	1975	1932	1895	1861	1832	1805	1780	1758
		F - 7 welds	0.35	0.36	0.37	0.38	0.39	0.40	0.40	0.41	0.42	0.42	0.43
		1: 8'-10"	297	260	230	205	184	166	119	106	95	85	76
		2: 10'-8"	297	260	230	205	184	166	151	138	127	117	76
		3: 11'-0"	297	260	230	205	184	166	151	138	127	117	108
		q - 4 welds	2046	1985	1932	1887	1847	1812	1781	1753	1728	1705	1684
	16	F - 4 welds	0.32	0.33	0.34	0.35	0.35	0.36	0.37	0.37	0.38	0.38	0.39
		q - 7 welds	2381	2294	2219	2155	2098	2048	2004	1964	1929	1896	1867
		F - 7 welds	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.33	0.34	0.34	0.35
		1: 9'-6"	297	260	230	205	184	166	151	138	94	84	75
		2: 11'-10"	297	260	230	205	184	166	151	138	127	117	108
		3: 11'-7"	297	260	230	205	184	166	151	138	127	117	108
4" Normal Weight (145 pcf)	22	q - 4 welds	2215	2138	2073	2016	1966	1922	1883	1848	1816	1788	1762
		F - 4 welds	0.26	0.27	0.28	0.29	0.30	0.30	0.31	0.32	0.32	0.33	0.33
		q - 7 welds	2634	2525	2432	2351	2280	2218	2162	2113	2068	2027	1991
		F - 7 welds	0.22	0.23	0.24	0.25	0.26	0.26	0.27	0.28	0.28	0.29	0.29
		1: 6'-2"	303	229	198	173	151	133	118	104	93	83	74
		2: 7'-3"	303	265	234	173	151	133	118	104	93	83	74
	20	3: 7'-4"	303	265	234	173	151	133	118	104	93	83	74
		q - 4 welds	2065	2026	1993	1965	1940	1918	1898	1881	1865	1851	1838
		F - 4 welds	0.40	0.41	0.41	0.42	0.42	0.43	0.43	0.44	0.44	0.45	0.45
		q - 7 welds	2274	2220	2173	2133	2097	2066	2038	2013	1991	1971	1952
		F - 7 welds	0.36	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.42	0.42
		1: 7'-5"	318	279	246	183	160	141	125	111	99	89	79
	20	2: 8'-8"	318	279	246	220	197	178	125	111	99	89	79
		3: 8'-9"	318	279	246	220	197	178	125	111	99	89	79
		q - 4 welds	2132	2086	2047	2012	1983	1956	1933	1912	1893	1876	1860
		F - 4 welds	0.35	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.40	0.40	0.40
		q - 7 welds	2384	2318	2262	2214	2171	2134	2100	2071	2044	2020	1997
		F - 7 welds	0.32	0.32	0.33	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.38

See Page 17 for footnotes.

(continued)

**TABLE 8 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLB™-36 FORMLOK™ & B-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
4" Normal Weight (145 pcf)	18	1: 8'-5"	344	301	266	237	213	155	138	123	109	98	88
		2: 10'-2"	344	301	266	237	213	192	175	160	147	98	88
		3: 10'-5"	344	301	266	237	213	192	175	160	147	98	88
		q - 4 welds	2285	2224	2171	2126	2086	2051	2020	1992	1967	1944	1923
		F - 4 welds	0.29	0.29	0.30	0.31	0.31	0.32	0.32	0.33	0.33	0.34	0.34
		q - 7 welds	2620	2533	2459	2394	2337	2287	2243	2203	2168	2135	2106
		F - 7 welds	0.25	0.26	0.27	0.27	0.28	0.29	0.29	0.30	0.30	0.31	0.31
	16	1: 9'-1"	342	300	265	236	212	192	174	121	108	97	87
		2: 11'-3"	342	300	265	236	212	192	174	159	146	135	125
		3: 11'-2"	342	300	265	236	212	192	174	159	146	135	125
		q - 4 welds	2454	2377	2312	2255	2205	2161	2122	2087	2055	2027	2001
		F - 4 welds	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29
		q - 7 welds	2873	2764	2671	2590	2519	2457	2401	2352	2307	2267	2230
		F - 7 welds	0.20	0.21	0.22	0.23	0.23	0.24	0.24	0.25	0.25	0.26	0.26
4½" Normal Weight (145 pcf)	22	1: 5'-11"	306	263	227	198	174	153	135	120	107	95	85
		2: 6'-11"	348	304	227	198	174	153	135	120	107	95	85
		3: 7'-0"	348	304	269	198	174	153	135	120	107	95	85
		q - 4 welds	2304	2265	2232	2204	2179	2157	2138	2120	2104	2090	2077
		F - 4 welds	0.36	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.39	0.39	0.40
		q - 7 welds	2513	2459	2412	2372	2336	2305	2277	2252	2230	2210	2191
		F - 7 welds	0.33	0.34	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.38
	20	1: 7'-1"	365	319	282	210	184	162	144	128	114	102	91
		2: 8'-3"	365	319	282	252	226	162	144	128	114	102	91
		3: 8'-4"	365	319	282	252	226	162	144	128	114	102	91
		q - 4 welds	2371	2325	2286	2252	2222	2195	2172	2151	2132	2115	2099
		F - 4 welds	0.32	0.32	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.36	0.36
		q - 7 welds	2623	2557	2501	2453	2410	2373	2340	2310	2283	2259	2237
		F - 7 welds	0.29	0.29	0.30	0.31	0.31	0.32	0.32	0.33	0.33	0.33	0.34
	18	1: 8'-1"	393	344	304	271	244	178	158	140	125	112	101
		2: 9'-9"	393	344	304	271	244	220	200	183	125	112	101
		3: 10'-0"	393	344	304	271	244	220	200	183	168	112	101
		q - 4 welds	2524	2463	2410	2365	2325	2290	2259	2231	2206	2183	2162
		F - 4 welds	0.26	0.26	0.27	0.28	0.28	0.28	0.29	0.29	0.30	0.30	0.30
		q - 7 welds	2859	2772	2698	2633	2576	2527	2482	2442	2407	2374	2345
		F - 7 welds	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27	0.28
16	16	1: 8'-8"	391	342	302	269	242	219	156	138	124	111	99
		2: 10'-9"	391	342	302	269	242	219	199	182	167	154	99
		3: 10'-9"	391	342	302	269	242	219	199	182	167	154	99
		q - 4 welds	2693	2616	2551	2494	2444	2400	2361	2326	2295	2266	2240
		F - 4 welds	0.22	0.22	0.23	0.23	0.24	0.24	0.25	0.25	0.25	0.26	0.26
		q - 7 welds	3112	3003	2910	2829	2758	2696	2640	2591	2546	2506	2469
		F - 7 welds	0.19	0.19	0.20	0.21	0.21	0.22	0.22	0.22	0.23	0.23	0.24

See Page 17 for footnotes.

(continued)

**TABLE 8 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLB™-36 FORMLOK™ & B-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
5" Normal Weight (145 pcf)	22	1: 5'-8"	347	297	257	224	197	173	153	136	121	108	96
		2: 6'-8"	393	344	257	224	197	173	153	136	121	108	96
		3: 6'-9"	393	344	257	224	197	173	153	136	121	108	96
		q - 4 welds	2543	2504	2472	2443	2418	2396	2377	2359	2343	2329	2316
		F - 4 welds	0.32	0.33	0.33	0.34	0.34	0.34	0.35	0.35	0.35	0.35	0.36
		q - 7 welds	2752	2698	2651	2611	2575	2544	2516	2492	2469	2449	2431
	20	F - 7 welds	0.30	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.33	0.34	0.34
		1: 6'-9"	400	361	272	237	208	184	163	145	129	115	103
		2: 7'-11"	400	361	319	284	208	184	163	145	129	115	103
		3: 8'-0"	400	361	319	284	255	184	163	145	129	115	103
		q - 4 welds	2610	2564	2525	2491	2461	2434	2411	2390	2371	2354	2338
		F - 4 welds	0.29	0.29	0.30	0.30	0.31	0.31	0.31	0.31	0.32	0.32	0.32
	18	q - 7 welds	2862	2796	2740	2692	2649	2612	2579	2549	2522	2498	2476
		F - 7 welds	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.30	0.30
		1: 7'-9"	400	389	344	306	227	201	178	159	142	127	114
		2: 9'-4"	400	389	344	306	275	249	226	159	142	127	114
		3: 9'-7"	400	389	344	306	275	249	226	207	142	127	114
		q - 4 welds	2763	2702	2650	2604	2564	2529	2498	2470	2445	2422	2401
	16	F - 4 welds	0.24	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.27	0.27	0.27
		q - 7 welds	3098	3011	2937	2872	2816	2766	2721	2682	2646	2613	2584
		F - 7 welds	0.21	0.22	0.22	0.23	0.23	0.24	0.24	0.24	0.25	0.25	0.25
		1: 8'-4"	400	386	341	304	273	198	176	157	140	125	112
		2: 10'-4"	400	386	341	304	273	247	224	205	188	125	112
		3: 10'-4"	400	386	341	304	273	247	224	205	188	125	112
6" Normal Weight (145 pcf)	22	q - 4 welds	2932	2856	2790	2733	2683	2639	2600	2565	2534	2505	2479
		F - 4 welds	0.20	0.20	0.21	0.21	0.22	0.22	0.22	0.23	0.23	0.23	0.24
		q - 7 welds	3351	3242	3149	3068	2997	2935	2880	2830	2785	2745	2708
		F - 7 welds	0.17	0.18	0.19	0.19	0.19	0.20	0.20	0.21	0.21	0.21	0.22
	20	1: 5'-4"	400	369	320	279	244	215	191	169	151	134	120
		2: 6'-2"	400	369	320	279	244	215	191	169	151	134	120
		3: 6'-3"	400	369	320	279	244	215	191	169	151	134	120
		q - 4 welds	3021	2983	2950	2921	2896	2874	2855	2837	2822	2807	2794
		F - 4 welds	0.27	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29
		q - 7 welds	3230	3176	3129	3089	3053	3022	2995	2970	2947	2927	2909
	20	F - 7 welds	0.26	0.26	0.26	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28
		1: 6'-3"	400	389	337	295	259	228	202	180	160	143	128
		2: 7'-4"	400	400	395	295	259	228	202	180	160	143	128
		3: 7'-5"	400	400	395	295	259	228	202	180	160	143	128
		q - 4 welds	3088	3042	3003	2969	2939	2912	2889	2868	2849	2832	2817
		F - 4 welds	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.26	0.27	0.27
		q - 7 welds	3340	3275	3219	3170	3128	3090	3057	3027	3000	2976	2954
		F - 7 welds	0.23	0.23	0.23	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25

See Page 17 for footnotes.

(continued)

**TABLE 8 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLB™-36 FORMLOK™ & B-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
6" Normal Weight (145 pcf)	18	1: 7'-3"	400	400	400	321	282	250	222	197	177	158	142
		2: 8'-8"	400	400	400	379	340	308	222	197	177	158	142
		3: 8'-11"	400	400	400	379	340	308	222	197	177	158	142
		q - 4 welds	3241	3180	3128	3082	3042	3007	2976	2948	2923	2900	2880
		F - 4 welds	0.20	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.23
		q - 7 welds	3577	3490	3415	3350	3294	3244	3199	3160	3124	3092	3062
		F - 7 welds	0.18	0.19	0.19	0.19	0.20	0.20	0.20	0.21	0.21	0.21	0.21
	16	1: 7'-10"	400	400	400	376	279	246	219	195	174	156	140
		2: 9'-7"	400	400	400	376	337	305	277	253	174	156	140
		3: 9'-8"	400	400	400	376	337	305	277	253	174	156	140
		q - 4 welds	3410	3334	3268	3211	3161	3117	3078	3043	3012	2983	2957
		F - 4 welds	0.17	0.17	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20
		q - 7 welds	3829	3721	3627	3546	3476	3413	3358	3308	3263	3223	3186
		F - 7 welds	0.15	0.16	0.16	0.16	0.17	0.17	0.17	0.18	0.18	0.18	0.18
3½" Structural Light Weight (110 pcf)	22	1: 7'-0"	261	228	202	156	137	122	109	97	87	78	71
		2: 8'-3"	261	228	202	180	161	122	109	97	87	78	71
		3: 8'-4"	261	228	202	180	161	122	109	97	87	78	71
		q - 4 welds	1501	1463	1430	1401	1376	1354	1335	1317	1302	1287	1275
		F - 4 welds	0.55	0.56	0.58	0.59	0.60	0.61	0.62	0.63	0.63	0.64	0.65
		q - 7 welds	1711	1656	1609	1569	1534	1502	1475	1450	1427	1407	1389
		F - 7 welds	0.48	0.50	0.51	0.53	0.54	0.55	0.56	0.57	0.58	0.59	0.59
	20	1: 8'-5"	274	240	212	189	170	129	115	103	93	84	75
		2: 9'-10"	274	240	212	189	170	153	140	119	93	84	75
		3: 10'-0"	274	240	212	189	170	153	140	119	102	84	75
		q - 4 welds	1569	1523	1483	1449	1419	1393	1369	1348	1329	1312	1297
		F - 4 welds	0.48	0.49	0.51	0.52	0.53	0.54	0.55	0.56	0.57	0.57	0.58
		q - 7 welds	1820	1755	1699	1650	1608	1570	1537	1507	1480	1456	1434
		F - 7 welds	0.41	0.43	0.44	0.46	0.47	0.48	0.49	0.50	0.51	0.52	0.52
	18	1: 9'-8"	297	260	230	205	184	166	151	135	102	92	83
		2: 11'-7"	297	260	230	205	184	166	151	135	116	100	87
		3: 11'-9"	297	260	230	205	184	166	151	135	116	100	87
		q - 4 welds	1722	1660	1608	1562	1523	1487	1456	1428	1403	1380	1360
		F - 4 welds	0.38	0.39	0.41	0.42	0.43	0.44	0.45	0.46	0.46	0.47	0.48
		q - 7 welds	2057	1970	1895	1830	1774	1724	1680	1640	1604	1572	1542
		F - 7 welds	0.32	0.33	0.34	0.36	0.37	0.38	0.39	0.40	0.41	0.41	0.42
	16	1: 10'-4"	297	260	230	205	184	166	151	138	127	91	83
		2: 12'-9"	297	260	230	205	184	166	151	138	127	111	96
		3: 12'-4"	297	260	230	205	184	166	151	138	127	111	96
		q - 4 welds	1890	1814	1748	1691	1641	1597	1558	1523	1492	1463	1438
		F - 4 welds	0.31	0.32	0.33	0.34	0.36	0.36	0.37	0.38	0.39	0.40	0.41
		q - 7 welds	2310	2201	2107	2027	1956	1893	1838	1788	1743	1703	1666
		F - 7 welds	0.25	0.26	0.28	0.29	0.30	0.31	0.32	0.33	0.33	0.34	0.35

See Page 17 for footnotes.

(continued)

**TABLE 8 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLB™-36 FORMLOK™ & B-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
4" Structural Light Weight (110 pcf)	22	1: 6'-9"	303	265	206	181	160	142	126	113	101	91	82
		2: 7'-11"	303	265	234	209	160	142	126	113	101	91	82
		3: 8'-0"	303	265	234	209	188	142	126	113	101	91	82
		q - 4 welds	1659	1621	1588	1559	1534	1512	1493	1475	1460	1445	1433
		F - 4 welds	0.50	0.51	0.52	0.53	0.54	0.55	0.55	0.56	0.56	0.57	0.58
		q - 7 welds	1869	1814	1767	1727	1692	1660	1633	1608	1585	1565	1547
	20	F - 7 welds	0.44	0.45	0.47	0.48	0.49	0.50	0.50	0.51	0.52	0.53	0.53
		1: 8'-1"	318	279	246	220	197	150	134	120	108	97	88
		2: 9'-5"	318	279	246	220	197	178	162	120	108	97	88
		3: 9'-7"	318	279	246	220	197	178	162	148	108	97	88
		q - 4 welds	1726	1680	1641	1607	1577	1551	1527	1506	1487	1470	1455
		F - 4 welds	0.44	0.45	0.46	0.47	0.48	0.49	0.49	0.50	0.51	0.51	0.52
	18	q - 7 welds	1978	1913	1857	1808	1766	1728	1695	1665	1638	1614	1592
		F - 7 welds	0.38	0.39	0.41	0.42	0.43	0.44	0.44	0.45	0.46	0.47	0.47
		1: 9'-2"	344	301	266	237	213	192	175	131	118	106	96
		2: 11'-1"	344	301	266	237	213	192	175	160	147	135	125
		3: 11'-4"	344	301	266	237	213	192	175	160	147	135	125
		q - 4 welds	1880	1818	1766	1720	1681	1645	1614	1586	1561	1538	1518
	16	F - 4 welds	0.35	0.36	0.37	0.38	0.39	0.40	0.40	0.41	0.42	0.42	0.43
		q - 7 welds	2215	2128	2053	1988	1932	1882	1838	1798	1762	1730	1700
		F - 7 welds	0.29	0.31	0.32	0.33	0.34	0.35	0.35	0.36	0.37	0.38	0.38
		1: 9'-10"	342	300	265	236	212	192	174	159	117	105	95
		2: 12'-3"	342	300	265	236	212	192	174	159	146	135	125
		3: 11'-11"	342	300	265	236	212	192	174	159	146	135	125
4 3/4" Structural Light Weight (110 pcf)	22	q - 4 welds	2048	1972	1906	1849	1799	1755	1716	1681	1650	1621	1596
		F - 4 welds	0.28	0.30	0.31	0.32	0.32	0.33	0.34	0.35	0.35	0.36	0.37
		q - 7 welds	2468	2359	2265	2185	2114	2051	1996	1946	1901	1861	1824
		F - 7 welds	0.24	0.25	0.26	0.27	0.28	0.28	0.29	0.30	0.31	0.31	0.32
		1: 6'-4"	370	290	253	221	195	173	155	138	124	112	101
		2: 7'-5"	370	324	286	221	195	173	155	138	124	112	101
	20	3: 7'-6"	370	324	286	255	195	173	155	138	124	112	101
		q - 4 welds	1896	1858	1825	1796	1771	1749	1730	1712	1697	1682	1669
		F - 4 welds	0.43	0.44	0.45	0.46	0.47	0.47	0.48	0.48	0.49	0.49	0.49
		q - 7 welds	2105	2051	2004	1964	1929	1897	1870	1845	1822	1802	1784
		F - 7 welds	0.39	0.40	0.41	0.42	0.43	0.43	0.44	0.45	0.45	0.46	0.46
		1: 7'-7"	389	340	301	268	206	183	163	146	132	119	107
	20	2: 8'-10"	389	340	301	268	241	217	163	146	132	119	107
		3: 8'-11"	389	340	301	268	241	217	163	146	132	119	107
		q - 4 welds	1963	1917	1878	1844	1814	1788	1764	1743	1724	1707	1692
		F - 4 welds	0.38	0.39	0.40	0.41	0.41	0.42	0.43	0.43	0.44	0.44	0.44
		q - 7 welds	2215	2150	2094	2045	2003	1965	1932	1902	1875	1851	1829
		F - 7 welds	0.34	0.35	0.36	0.37	0.38	0.38	0.39	0.40	0.40	0.41	0.41

See Page 17 for footnotes.

(continued)

**TABLE 8 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLB™-36 FORMLOK™ & B-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"
4¾" Structural Light Weight (110 pcf)	18	1: 8'-8"	400	366	324	289	259	234	178	160	144	130	118
		2: 10'-5"	400	366	324	289	259	234	213	195	179	130	118
		3: 10'-8"	400	366	324	289	259	234	213	195	179	165	118
		q - 4 welds	2117	2055	2003	1957	1917	1882	1851	1823	1798	1775	1755
		F - 4 welds	0.31	0.32	0.33	0.33	0.34	0.35	0.35	0.36	0.36	0.37	0.37
		q - 7 welds	2452	2365	2290	2225	2169	2119	2074	2035	1999	1967	1937
		F - 7 welds	0.27	0.28	0.28	0.29	0.30	0.31	0.31	0.32	0.33	0.33	0.34
	16	1: 9'-3"	400	364	321	287	257	233	211	158	142	128	116
		2: 11'-6"	400	364	321	287	257	233	211	193	177	164	151
		3: 11'-5"	400	364	321	287	257	233	211	193	177	164	151
		q - 4 welds	2285	2209	2143	2086	2036	1992	1953	1918	1887	1858	1833
		F - 4 welds	0.26	0.26	0.27	0.28	0.29	0.29	0.30	0.30	0.31	0.31	0.32
		q - 7 welds	2705	2596	2502	2421	2351	2288	2233	2183	2138	2098	2061
		F - 7 welds	0.22	0.22	0.23	0.24	0.25	0.25	0.26	0.27	0.27	0.28	0.28
5¾" Structural Light Weight (110 pcf)	22	1: 5'-11"	400	364	317	278	245	218	194	174	156	141	127
		2: 6'-11"	400	400	317	278	245	218	194	174	156	141	127
		3: 7'-0"	400	400	358	278	245	218	194	174	156	141	127
		q - 4 welds	2212	2174	2141	2112	2087	2065	2046	2028	2013	1998	1985
		F - 4 welds	0.37	0.38	0.39	0.39	0.39	0.40	0.40	0.41	0.41	0.41	0.42
		q - 7 welds	2421	2367	2320	2280	2245	2213	2186	2161	2138	2118	2100
		F - 7 welds	0.34	0.35	0.36	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.39
	20	1: 7'-1"	400	400	376	293	259	230	205	184	165	149	135
		2: 8'-3"	400	400	376	335	301	230	205	184	165	149	135
		3: 8'-4"	400	400	376	335	301	230	205	184	165	149	135
		q - 4 welds	2279	2233	2194	2160	2130	2104	2080	2059	2040	2023	2008
		F - 4 welds	0.33	0.34	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.37	0.37
		q - 7 welds	2531	2466	2410	2361	2319	2281	2248	2218	2191	2167	2145
		F - 7 welds	0.30	0.31	0.31	0.32	0.32	0.33	0.33	0.34	0.34	0.35	0.35
	18	1: 8'-1"	400	400	400	361	324	250	223	201	181	163	148
		2: 9'-8"	400	400	400	361	324	293	266	243	181	163	148
		3: 10'-0"	400	400	400	361	324	293	266	243	223	163	148
		q - 4 welds	2433	2371	2319	2273	2233	2198	2167	2139	2114	2091	2071
		F - 4 welds	0.27	0.27	0.28	0.29	0.29	0.30	0.30	0.30	0.31	0.31	0.31
		q - 7 welds	2768	2681	2606	2541	2485	2435	2390	2351	2315	2283	2253
		F - 7 welds	0.24	0.24	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.29	0.29
	16	1: 8'-8"	400	400	400	358	321	290	221	198	178	161	146
		2: 10'-9"	400	400	400	358	321	290	264	241	221	204	146
		3: 10'-8"	400	400	400	358	321	290	264	241	221	204	146
		q - 4 welds	2601	2525	2459	2402	2352	2308	2269	2234	2203	2174	2149
		F - 4 welds	0.22	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.26	0.27	0.27
		q - 7 welds	3021	2912	2818	2737	2667	2604	2549	2499	2454	2414	2377
		F - 7 welds	0.19	0.20	0.21	0.21	0.22	0.22	0.23	0.23	0.24	0.24	0.25

¹ Shoring calculations based on the following:

- Deck supporting dead load of concrete plus either 20 psf uniform or 150 pound concentrated construction live load for flexure.
- Dead load deflection limited to L/180 of span length, not to exceed 3/4-inch.
- Allowable reactions based on maximum bearing length permitted by AISI S100. Support reactions for unshored spans due to dead loads and uniform construction live loads must be evaluated based on the allowable reactions set forth in Table 5.

² Shoring is required at midspan for superimposed load values to the right of the heavy line.

³ Total slab depth is nominal depth from top of concrete to bottom of steel deck.

⁴ Concrete fill to have minimum compressive strength $f'_c = 3,000$ psi.

TABLE 9 - ALLOWABLE SUPERIMPOSED LOADS (psf), DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR BR-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4}

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
3½" Normal Weight (145 pcf)	22	1: 6'-6"	185	161	141	124	109	97	86	77	68	61	54
		2: 7'-6"	221	197	141	124	109	97	86	77	68	61	54
		3: 7'-9"	221	197	141	124	109	97	86	77	68	61	54
		q - 4 welds	1698	1675	1655	1637	1622	1608	1595	1584	1574	1564	1556
		F - 4 welds	0.52	0.53	0.54	0.54	0.55	0.55	0.56	0.56	0.57	0.57	0.57
		q - 6 welds	1815	1785	1758	1735	1714	1695	1678	1663	1649	1636	1624
	20	F - 6 welds	0.49	0.50	0.51	0.51	0.52	0.53	0.53	0.54	0.54	0.54	0.55
		1: 7'-7"	232	207	150	132	117	103	92	82	73	65	58
		2: 8'-7"	232	207	186	168	117	103	92	82	73	65	58
		3: 8'-10"	232	207	186	168	117	103	92	82	73	65	58
		q - 4 welds	1731	1704	1680	1659	1640	1623	1608	1595	1582	1571	1561
		F - 4 welds	0.47	0.48	0.48	0.49	0.50	0.50	0.51	0.51	0.51	0.52	0.52
	18	q - 6 welds	1872	1836	1804	1775	1750	1728	1707	1689	1672	1657	1643
		F - 6 welds	0.43	0.44	0.45	0.46	0.46	0.47	0.48	0.48	0.49	0.49	0.49
		1: 8'-6"	251	224	201	182	128	114	102	91	82	73	66
		2: 10'-0"	251	224	201	182	165	151	139	91	82	73	66
		3: 10'-4"	251	224	201	182	165	151	139	91	82	73	66
		q - 4 welds	1818	1781	1750	1722	1697	1674	1654	1636	1620	1605	1591
	16	F - 4 welds	0.39	0.40	0.40	0.41	0.42	0.42	0.43	0.43	0.43	0.44	0.44
		q - 6 welds	2006	1957	1915	1877	1843	1813	1786	1762	1740	1719	1701
		F - 6 welds	0.35	0.36	0.37	0.38	0.38	0.39	0.39	0.40	0.40	0.41	0.41
		1: 9'-1"	250	223	200	181	165	113	101	90	81	72	65
		2: 11'-2"	250	223	200	181	165	150	138	127	118	72	65
		3: 11'-3"	250	223	200	181	165	150	138	127	118	72	65
4" Normal Weight (145 pcf)	22	q - 4 welds	1921	1875	1836	1801	1769	1742	1716	1694	1673	1654	1637
		F - 4 welds	0.33	0.34	0.34	0.35	0.36	0.36	0.37	0.37	0.38	0.38	0.38
		q - 6 welds	2157	2095	2042	1995	1953	1915	1882	1851	1823	1798	1775
		F - 6 welds	0.29	0.30	0.31	0.32	0.32	0.33	0.33	0.34	0.35	0.35	0.35
	20	1: 6'-3"	214	186	163	143	127	112	100	89	79	70	63
		2: 7'-2"	255	186	163	143	127	112	100	89	79	70	63
		3: 7'-5"	255	186	163	143	127	112	100	89	79	70	63
		q - 4 welds	1937	1914	1894	1877	1861	1847	1834	1823	1813	1803	1795
		F - 4 welds	0.46	0.47	0.47	0.47	0.48	0.48	0.49	0.49	0.49	0.49	0.50
		q - 6 welds	2055	2024	1997	1974	1953	1934	1917	1902	1888	1875	1864
	20	F - 6 welds	0.43	0.44	0.45	0.45	0.46	0.46	0.46	0.47	0.47	0.47	0.48
		1: 7'-3"	267	197	173	152	135	119	106	95	85	76	68
		2: 8'-2"	267	238	214	152	135	119	106	95	85	76	68
		3: 8'-5"	267	238	214	152	135	119	106	95	85	76	68
		q - 4 welds	1970	1943	1919	1898	1879	1862	1847	1834	1821	1810	1800
		F - 4 welds	0.41	0.42	0.42	0.43	0.43	0.44	0.44	0.44	0.45	0.45	0.45
		q - 6 welds	2112	2075	2043	2014	1989	1967	1946	1928	1911	1896	1882
		F - 6 welds	0.38	0.39	0.40	0.40	0.41	0.41	0.42	0.42	0.43	0.43	0.43

See Page 23 for footnotes.

(continued)

TABLE 9 - ALLOWABLE SUPERIMPOSED LOADS (psf), DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR BR-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4" Normal Weight (145 pcf)	18	1: 8'-2"	289	257	231	167	148	132	117	105	94	84	76
		2: 9'-6"	289	257	231	209	190	173	117	105	94	84	76
		3: 9'-10"	289	257	231	209	190	173	117	105	94	84	76
		q - 4 welds	2057	2020	1989	1961	1936	1913	1893	1875	1859	1844	1830
		F - 4 welds	0.34	0.35	0.35	0.36	0.36	0.37	0.37	0.38	0.38	0.38	0.38
		q - 6 welds	2245	2196	2154	2116	2082	2052	2025	2001	1979	1958	1940
		F - 6 welds	0.31	0.32	0.33	0.33	0.34	0.34	0.35	0.35	0.36	0.36	0.36
	16	1: 8'-9"	287	256	230	208	146	130	116	103	93	83	74
		2: 10'-8"	287	256	230	208	189	172	158	146	93	83	74
		3: 10'-9"	287	256	230	208	189	172	158	146	93	83	74
		q - 4 welds	2160	2114	2075	2040	2009	1981	1956	1933	1912	1893	1876
		F - 4 welds	0.29	0.30	0.30	0.31	0.31	0.32	0.32	0.33	0.33	0.33	0.34
		q - 6 welds	2396	2335	2281	2234	2192	2154	2121	2090	2062	2037	2014
		F - 6 welds	0.26	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.31	0.31	0.31
4½" Normal Weight (145 pcf)	22	1: 6'-0"	244	212	186	163	144	128	114	101	90	80	72
		2: 6'-10"	244	212	186	163	144	128	114	101	90	80	72
		3: 7'-1"	290	212	186	163	144	128	114	101	90	80	72
		q - 4 welds	2233	2202	2176	2153	2133	2116	2100	2086	2074	2062	2052
		F - 4 welds	0.40	0.40	0.41	0.41	0.42	0.42	0.42	0.43	0.43	0.43	0.43
		q - 6 welds	2370	2329	2294	2263	2236	2213	2192	2173	2156	2141	2127
		F - 6 welds	0.38	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.41	0.42	0.42
	20	1: 6'-11"	257	224	197	173	153	136	121	108	97	86	77
		2: 7'-10"	304	271	197	173	153	136	121	108	97	86	77
		3: 8'-1"	304	271	243	173	153	136	121	108	97	86	77
		q - 4 welds	2277	2241	2209	2182	2158	2137	2118	2101	2086	2073	2060
		F - 4 welds	0.36	0.36	0.37	0.37	0.38	0.38	0.38	0.39	0.39	0.39	0.39
		q - 6 welds	2442	2393	2351	2314	2282	2253	2228	2206	2185	2167	2150
		F - 6 welds	0.33	0.34	0.35	0.35	0.36	0.36	0.36	0.37	0.37	0.37	0.38
	18	1: 7'-10"	328	292	215	190	168	150	134	120	107	96	86
		2: 9'-1"	328	292	262	237	216	150	134	120	107	96	86
		3: 9'-5"	328	292	262	237	216	150	134	120	107	96	86
		q - 4 welds	2387	2338	2296	2260	2228	2200	2175	2153	2133	2114	2098
		F - 4 welds	0.30	0.30	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.33	0.34
		q - 6 welds	2606	2541	2484	2435	2393	2355	2321	2291	2264	2240	2218
		F - 6 welds	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.31	0.31	0.31	0.32
16	16	1: 8'-5"	325	290	260	188	166	148	132	118	105	95	85
		2: 10'-3"	325	290	260	235	214	196	180	118	105	95	85
		3: 10'-4"	325	290	260	235	214	196	180	118	105	95	85
		q - 4 welds	2513	2451	2399	2354	2314	2279	2248	2220	2195	2172	2151
		F - 4 welds	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.29	0.29	0.29
		q - 6 welds	2788	2705	2635	2574	2520	2473	2431	2393	2360	2329	2301
		F - 6 welds	0.23	0.23	0.24	0.24	0.25	0.25	0.26	0.26	0.27	0.27	0.27

See Page 23 for footnotes.

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TABLE 9 - ALLOWABLE SUPERIMPOSED LOADS (psf), DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR BR-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
5" Normal Weight (145 pcf)	22	1: 5'-9"	274	239	209	184	163	144	128	114	102	91	81
		2: 6'-7"	274	239	209	184	163	144	128	114	102	91	81
		3: 6'-10"	274	239	209	184	163	144	128	114	102	91	81
		q - 4 welds	2415	2392	2372	2355	2339	2325	2313	2301	2291	2282	2273
		F - 4 welds	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39
		q - 6 welds	2533	2502	2475	2452	2431	2412	2395	2380	2366	2353	2342
	20	F - 6 welds	0.35	0.36	0.36	0.36	0.37	0.37	0.37	0.37	0.38	0.38	0.38
		1: 6'-8"	290	253	222	195	173	154	137	122	109	98	87
		2: 7'-6"	341	304	222	195	173	154	137	122	109	98	87
		3: 7'-9"	341	304	222	195	173	154	137	122	109	98	87
		q - 4 welds	2448	2421	2397	2376	2357	2341	2325	2312	2299	2288	2278
		F - 4 welds	0.33	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.35	0.36	0.36
	18	q - 6 welds	2590	2553	2521	2493	2467	2445	2425	2406	2390	2374	2360
		F - 6 welds	0.31	0.32	0.32	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34
		1: 7'-7"	368	328	242	214	190	169	151	135	121	108	97
		2: 8'-9"	368	328	294	266	190	169	151	135	121	108	97
		3: 9'-1"	368	328	294	266	242	169	151	135	121	108	97
		q - 4 welds	2535	2499	2467	2439	2414	2392	2372	2353	2337	2322	2308
	16	F - 4 welds	0.28	0.28	0.29	0.29	0.29	0.29	0.30	0.30	0.30	0.30	0.31
		q - 6 welds	2723	2675	2632	2594	2561	2531	2504	2479	2457	2437	2418
		F - 6 welds	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.28	0.29	0.29	0.29
		1: 8'-1"	365	325	292	211	187	166	148	133	119	107	96
		2: 9'-10"	365	325	292	264	240	219	148	133	119	107	96
		3: 10'-0"	365	325	292	264	240	219	201	133	119	107	96
6" Normal Weight (145 pcf)	22	q - 4 welds	2638	2593	2553	2518	2487	2459	2434	2411	2390	2372	2354
		F - 4 welds	0.24	0.24	0.25	0.25	0.25	0.26	0.26	0.26	0.26	0.27	0.27
		q - 6 welds	2874	2813	2759	2712	2670	2633	2599	2568	2540	2515	2492
		F - 6 welds	0.22	0.22	0.23	0.23	0.24	0.24	0.24	0.25	0.25	0.25	0.25
		1: 5'-5"	337	293	257	227	200	178	158	141	126	112	101
		2: 6'-2"	337	293	257	227	200	178	158	141	126	112	101
	20	3: 6'-4"	337	293	257	227	200	178	158	141	126	112	101
		q - 4 welds	2893	2870	2850	2833	2817	2803	2791	2779	2769	2760	2751
		F - 4 welds	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.32	0.32	0.32	0.32
		q - 6 welds	3011	2980	2954	2930	2909	2890	2873	2858	2844	2832	2820
		F - 6 welds	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.32
		1: 6'-3"	356	310	272	240	213	189	169	151	135	121	108
	22	2: 7'-0"	400	310	272	240	213	189	169	151	135	121	108
		3: 7'-3"	400	310	272	240	213	189	169	151	135	121	108
		q - 4 welds	2926	2899	2875	2854	2835	2819	2804	2790	2778	2766	2756
		F - 4 welds	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.29
		q - 6 welds	3068	3031	2999	2971	2946	2923	2903	2884	2868	2852	2839
		F - 6 welds	0.26	0.27	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.29

See Page 23 for footnotes.

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TABLE 9 - ALLOWABLE SUPERIMPOSED LOADS (psf), DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR BR-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
6" Normal Weight (145 pcf)	18	1: 7'-1"	400	338	297	263	233	208	186	166	149	134	121
		2: 8'-2"	400	400	360	263	233	208	186	166	149	134	121
		3: 8'-6"	400	400	360	326	233	208	186	166	149	134	121
		q - 4 welds	3013	2977	2945	2917	2892	2870	2850	2832	2815	2800	2786
		F - 4 welds	0.23	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.25
		q - 6 welds	3202	3153	3110	3072	3039	3009	2982	2957	2935	2915	2896
		F - 6 welds	0.22	0.22	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.24
	16	1: 7'-8"	400	398	294	259	230	205	183	164	147	132	118
		2: 9'-2"	400	398	357	323	293	205	183	164	147	132	118
		3: 9'-5"	400	398	357	323	293	205	183	164	147	132	118
		q - 4 welds	3116	3071	3031	2996	2965	2937	2912	2889	2869	2850	2832
		F - 4 welds	0.20	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22
		q - 6 welds	3352	3291	3237	3190	3148	3111	3077	3046	3019	2993	2970
		F - 6 welds	0.19	0.19	0.19	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21
3½" Structural Light Weight (110 pcf)	22	1: 7'-1"	221	169	149	132	118	105	94	85	76	69	62
		2: 8'-2"	221	197	177	132	118	105	94	85	76	69	62
		3: 8'-5"	221	197	177	132	118	105	94	85	76	69	62
		q - 4 welds	1373	1350	1331	1313	1297	1284	1271	1260	1249	1240	1231
		F - 4 welds	0.65	0.66	0.67	0.68	0.69	0.69	0.70	0.71	0.71	0.72	0.72
		q - 6 welds	1491	1460	1434	1410	1389	1370	1353	1338	1324	1312	1300
		F - 6 welds	0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.67	0.68	0.68
	20	1: 8'-3"	232	207	186	140	125	112	100	90	81	74	67
		2: 9'-4"	232	207	186	168	153	112	100	90	81	74	67
		3: 9'-8"	232	207	186	168	153	140	100	90	81	74	67
		q - 4 welds	1406	1379	1355	1334	1316	1299	1284	1270	1258	1246	1236
		F - 4 welds	0.58	0.59	0.60	0.61	0.62	0.63	0.63	0.64	0.65	0.65	0.66
		q - 6 welds	1548	1511	1479	1451	1426	1403	1383	1365	1348	1333	1319
		F - 6 welds	0.52	0.54	0.55	0.56	0.57	0.58	0.59	0.60	0.60	0.61	0.62
	18	1: 9'-3"	251	224	201	182	165	123	110	99	90	81	74
		2: 10'-10"	251	224	201	182	165	151	139	128	90	81	74
		3: 11'-3"	251	224	201	182	165	151	139	128	111	81	74
		q - 4 welds	1493	1457	1425	1397	1372	1350	1330	1312	1295	1280	1266
		F - 4 welds	0.47	0.48	0.49	0.50	0.51	0.52	0.53	0.54	0.54	0.55	0.56
		q - 6 welds	1682	1633	1590	1552	1519	1489	1462	1437	1415	1395	1376
		F - 6 welds	0.42	0.43	0.44	0.45	0.46	0.47	0.48	0.49	0.50	0.50	0.51
	16	1: 9'-11"	250	223	200	181	165	150	109	98	89	80	73
		2: 12'-2"	250	223	200	181	165	150	138	127	118	108	95
		3: 12'-0"	250	223	200	181	165	150	138	127	118	108	95
		q - 4 welds	1596	1551	1511	1476	1445	1417	1392	1369	1349	1330	1313
		F - 4 welds	0.39	0.41	0.42	0.43	0.44	0.44	0.45	0.46	0.47	0.47	0.48
		q - 6 welds	1832	1771	1718	1670	1628	1591	1557	1527	1499	1473	1450
		F - 6 welds	0.34	0.36	0.37	0.38	0.39	0.40	0.40	0.41	0.42	0.43	0.43

See Page 23 for footnotes.

(continued)

TABLE 9 - ALLOWABLE SUPERIMPOSED LOADS (psf), DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR BR-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4" Structural Light Weight (110 pcf)	22	1: 6'-10"	223	196	172	153	136	122	109	98	88	80	72
		2: 7'-10"	255	227	172	153	136	122	109	98	88	80	72
		3: 8'-1"	255	227	204	153	136	122	109	98	88	80	72
		q - 4 welds	1531	1508	1489	1471	1455	1441	1429	1418	1407	1398	1389
		F - 4 welds	0.58	0.59	0.60	0.61	0.61	0.62	0.62	0.63	0.63	0.64	0.64
		q - 6 welds	1649	1618	1592	1568	1547	1528	1511	1496	1482	1470	1458
		F - 6 welds	0.54	0.55	0.56	0.57	0.58	0.58	0.59	0.60	0.60	0.61	0.61
	20	1: 7'-11"	267	238	182	162	144	129	116	104	94	85	77
		2: 8'-11"	267	238	214	193	144	129	116	104	94	85	77
		3: 9'-3"	267	238	214	193	176	129	116	104	94	85	77
		q - 4 welds	1564	1537	1513	1492	1474	1457	1442	1428	1416	1404	1394
		F - 4 welds	0.52	0.53	0.54	0.54	0.55	0.56	0.56	0.57	0.57	0.58	0.58
		q - 6 welds	1706	1669	1637	1609	1584	1561	1541	1523	1506	1491	1477
		F - 6 welds	0.48	0.49	0.50	0.51	0.51	0.52	0.53	0.53	0.54	0.55	0.55
	18	1: 8'-11"	289	257	231	209	158	141	127	114	104	94	85
		2: 10'-5"	289	257	231	209	190	173	159	114	104	94	85
		3: 10'-9"	289	257	231	209	190	173	159	147	104	94	85
		q - 4 welds	1651	1615	1583	1555	1530	1508	1488	1470	1453	1438	1424
		F - 4 welds	0.43	0.44	0.44	0.45	0.46	0.47	0.47	0.48	0.48	0.49	0.49
		q - 6 welds	1840	1791	1748	1710	1677	1647	1620	1595	1573	1553	1534
		F - 6 welds	0.38	0.39	0.40	0.41	0.42	0.43	0.43	0.44	0.45	0.45	0.46
	16	1: 9'-6"	287	256	230	208	189	172	125	113	102	93	84
		2: 11'-8"	287	256	230	208	189	172	158	146	135	125	84
		3: 11'-7"	287	256	230	208	189	172	158	146	135	125	84
		q - 4 welds	1754	1709	1669	1634	1603	1575	1550	1527	1507	1488	1471
		F - 4 welds	0.36	0.37	0.38	0.39	0.39	0.40	0.41	0.41	0.42	0.42	0.43
		q - 6 welds	1990	1929	1876	1828	1786	1749	1715	1684	1657	1631	1608
		F - 6 welds	0.32	0.33	0.34	0.34	0.35	0.36	0.37	0.37	0.38	0.39	0.39
4 1/4" Structural Light Weight (110 pcf)	22	1: 6'-5"	270	237	209	185	165	148	132	119	107	97	88
		2: 7'-5"	308	237	209	185	165	148	132	119	107	97	88
		3: 7'-7"	308	274	209	185	165	148	132	119	107	97	88
		q - 4 welds	1768	1745	1726	1708	1692	1678	1666	1655	1644	1635	1626
		F - 4 welds	0.50	0.51	0.52	0.52	0.53	0.53	0.53	0.54	0.54	0.54	0.55
		q - 6 welds	1886	1855	1829	1805	1784	1765	1748	1733	1719	1707	1695
		F - 6 welds	0.47	0.48	0.49	0.49	0.50	0.50	0.51	0.51	0.52	0.52	0.53
	20	1: 7'-6"	323	288	221	196	175	156	140	126	114	103	94
		2: 8'-5"	323	288	258	196	175	156	140	126	114	103	94
		3: 8'-9"	323	288	258	233	175	156	140	126	114	103	94
		q - 4 welds	1801	1774	1750	1729	1711	1694	1679	1665	1653	1641	1631
		F - 4 welds	0.45	0.46	0.46	0.47	0.48	0.48	0.48	0.49	0.49	0.50	0.50
		q - 6 welds	1943	1906	1874	1846	1821	1798	1778	1759	1743	1728	1714
		F - 6 welds	0.42	0.43	0.43	0.44	0.45	0.45	0.46	0.46	0.47	0.47	0.47

See Page 23 for footnotes.

(continued)

TABLE 9 - ALLOWABLE SUPERIMPOSED LOADS (psf), DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR BR-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4¾" Structural Light Weight (110 pcf)	18	1: 8'-5"	348	310	278	213	190	171	154	139	125	114	103
		2: 9'-10"	348	310	278	251	229	209	154	139	125	114	103
		3: 10'-2"	348	310	278	251	229	209	192	139	125	114	103
		q - 4 welds	1888	1852	1820	1792	1767	1745	1725	1707	1690	1675	1661
		F - 4 welds	0.37	0.38	0.39	0.39	0.40	0.40	0.41	0.41	0.42	0.42	0.42
		q - 6 welds	2077	2028	1985	1947	1914	1884	1857	1832	1810	1790	1771
		F - 6 welds	0.34	0.35	0.35	0.36	0.37	0.37	0.38	0.38	0.39	0.39	0.40
	16	1: 9'-0"	345	307	276	250	227	168	152	137	124	112	102
		2: 11'-0"	345	307	276	250	227	207	190	175	162	112	102
		3: 11'-1"	345	307	276	250	227	207	190	175	162	112	102
		q - 4 welds	1991	1946	1906	1871	1840	1812	1787	1764	1744	1725	1707
		F - 4 welds	0.32	0.32	0.33	0.34	0.34	0.35	0.35	0.36	0.36	0.37	0.37
		q - 6 welds	2227	2166	2112	2065	2023	1986	1952	1921	1894	1868	1845
		F - 6 welds	0.28	0.29	0.30	0.30	0.31	0.32	0.32	0.33	0.33	0.34	0.34
5¼" Structural Light Weight (110 pcf)	22	1: 6'-0"	335	294	259	230	205	183	165	148	134	121	110
		2: 6'-11"	335	294	259	230	205	183	165	148	134	121	110
		3: 7'-2"	380	294	259	230	205	183	165	148	134	121	110
		q - 4 welds	2084	2061	2041	2024	2008	1994	1982	1971	1960	1951	1942
		F - 4 welds	0.43	0.43	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.46	0.46
		q - 6 welds	2202	2171	2145	2121	2100	2081	2064	2049	2035	2023	2011
		F - 6 welds	0.40	0.41	0.42	0.42	0.42	0.43	0.43	0.43	0.44	0.44	0.44
	20	1: 7'-0"	399	310	274	243	217	194	174	157	142	129	117
		2: 7'-11"	399	355	274	243	217	194	174	157	142	129	117
		3: 8'-2"	399	355	319	243	217	194	174	157	142	129	117
		q - 4 welds	2117	2090	2066	2045	2026	2010	1995	1981	1969	1957	1947
		F - 4 welds	0.38	0.39	0.39	0.40	0.40	0.40	0.41	0.41	0.41	0.42	0.42
		q - 6 welds	2259	2222	2190	2162	2137	2114	2094	2075	2059	2044	2030
		F - 6 welds	0.36	0.37	0.37	0.38	0.38	0.38	0.39	0.39	0.39	0.40	0.40
	18	1: 7'-11"	400	383	297	264	236	212	191	172	156	141	129
		2: 9'-2"	400	383	344	311	282	212	191	172	156	141	129
		3: 9'-6"	400	383	344	311	282	258	191	172	156	141	129
		q - 4 welds	2204	2168	2136	2108	2083	2061	2041	2023	2006	1991	1977
		F - 4 welds	0.32	0.32	0.33	0.33	0.34	0.34	0.35	0.35	0.35	0.35	0.36
		q - 6 welds	2393	2344	2301	2263	2230	2200	2173	2148	2126	2106	2087
		F - 6 welds	0.29	0.30	0.31	0.31	0.32	0.32	0.32	0.33	0.33	0.33	0.34
16	16	1: 8'-5"	400	379	341	261	233	209	188	170	154	139	127
		2: 10'-4"	400	379	341	308	280	256	235	170	154	139	127
		3: 10'-5"	400	379	341	308	280	256	235	170	154	139	127
		q - 4 welds	2307	2262	2222	2187	2156	2128	2103	2080	2060	2041	2023
		F - 4 welds	0.27	0.28	0.28	0.29	0.29	0.30	0.30	0.30	0.31	0.31	0.31
		q - 6 welds	2543	2482	2428	2381	2339	2302	2268	2237	2210	2184	2161
		F - 6 welds	0.25	0.25	0.26	0.26	0.27	0.27	0.28	0.28	0.28	0.29	0.29

¹ Shoring calculations based on the following:

- Deck supporting dead load of concrete plus either 20 psf uniform or 150 pound concentrated construction live load for flexure.
- Dead load deflection limited to L/180 of span length, not to exceed 3/4-inch.
- Allowable reactions based on maximum bearing length permitted by AISI S100. Support reactions for unshored spans due to dead loads and uniform construction live loads must be evaluated based on the allowable reactions set forth in Table 5.

² Shoring is required at midspan for superimposed load values to the right of the heavy line.³ Total slab depth is nominal depth from top of concrete to bottom of steel deck.⁴ Concrete fill to have minimum compressive strength $f'_c = 3,000$ psi.

**TABLE 10 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW2™-36 FORMLOK™ & W2-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5}**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4" Normal Weight (145 pcf)	22	1: 7'-9"	261	232	172	152	135	120	107	96	86	78	70
		2: 9'-0"	261	232	209	189	171	120	107	96	86	78	70
		3: 9'-2"	261	232	209	189	171	120	107	96	86	78	70
		q - 3 welds	1635	1619	1606	1594	1583	1573	1565	1557	1550	1543	1537
		q - 4 welds	1762	1734	1708	1686	1667	1649	1633	1619	1606	1594	1583
	21	1: 8'-6"	292	260	234	211	155	139	125	112	101	91	82
		2: 9'-8"	292	260	234	211	192	175	125	112	101	91	82
		3: 10'-0"	292	260	234	211	192	175	161	112	101	91	82
		q - 3 welds	1637	1620	1605	1592	1580	1570	1560	1552	1544	1537	1530
		q - 4 welds	1788	1756	1729	1704	1683	1663	1646	1630	1616	1602	1590
	20	1: 9'-3"	324	288	259	234	213	158	142	128	116	105	95
		2: 10'-3"	324	288	259	234	213	195	179	128	116	105	95
		3: 10'-8"	324	288	259	234	213	195	179	165	116	105	95
		q - 3 welds	1643	1624	1608	1593	1580	1569	1559	1549	1541	1533	1526
		q - 4 welds	1816	1781	1751	1725	1701	1680	1661	1643	1628	1613	1600
	19	1: 10'-0"	389	347	311	275	242	214	190	161	146	133	121
		2: 11'-5"	389	347	311	275	242	214	190	169	152	133	121
		3: 11'-10"	389	347	311	275	242	214	190	169	152	136	121
		q - 3 welds	1659	1637	1618	1602	1587	1573	1561	1550	1540	1531	1523
		q - 4 welds	1877	1836	1801	1770	1742	1718	1696	1675	1657	1640	1625
	18	1: 10'-5"	400	386	335	293	258	229	203	181	162	146	131
		2: 12'-3"	400	386	335	293	258	229	203	181	162	146	131
		3: 12'-5"	400	386	335	293	258	229	203	181	162	146	131
		q - 3 welds	1678	1653	1632	1613	1596	1581	1568	1556	1545	1534	1525
		q - 4 welds	1931	1886	1847	1812	1781	1753	1729	1706	1686	1667	1650
	16	1: 11'-2"	400	396	356	322	292	261	233	208	187	157	143
		2: 13'-11"	400	396	356	322	292	261	233	208	187	168	148
		3: 13'-1"	400	396	356	322	292	261	233	208	187	168	148
		q - 3 welds	1733	1702	1675	1652	1631	1612	1595	1580	1566	1553	1541
		q - 4 welds	2071	2015	1965	1922	1883	1848	1817	1789	1763	1740	1718
4½" Normal Weight (145 pcf)	22	1: 7'-5"	294	220	194	171	152	135	121	108	97	87	78
		2: 8'-7"	294	262	235	213	152	135	121	108	97	87	78
		3: 8'-9"	294	262	235	213	152	135	121	108	97	87	78
		q - 3 welds	1874	1858	1845	1833	1822	1812	1804	1796	1789	1782	1777
		q - 4 welds	2001	1973	1947	1925	1906	1888	1872	1858	1845	1833	1822
	21	1: 8'-1"	329	293	263	196	174	156	140	125	113	102	92
		2: 9'-3"	329	293	263	238	216	156	140	125	113	102	92
		3: 9'-6"	329	293	263	238	216	198	140	125	113	102	92
		q - 3 welds	1876	1859	1844	1831	1819	1809	1799	1791	1783	1776	1769
		q - 4 welds	2027	1995	1968	1943	1922	1902	1885	1869	1855	1842	1829
	20	1: 8'-9"	364	324	291	263	198	177	159	143	130	117	106
		2: 9'-10"	364	324	291	263	239	219	159	143	130	117	106
		3: 10'-2"	364	324	291	263	239	219	201	143	130	117	106
		q - 3 welds	1882	1863	1847	1832	1819	1808	1798	1788	1780	1772	1765
		q - 4 welds	2055	2020	1990	1964	1940	1919	1900	1882	1867	1853	1839
	19	1: 9'-7"	400	389	349	316	287	262	199	180	163	149	136
		2: 10'-11"	400	389	349	316	287	262	241	222	163	149	136
		3: 11'-4"	400	389	349	316	287	262	241	222	206	149	136
		q - 3 welds	1898	1877	1857	1841	1826	1812	1800	1789	1779	1770	1762
		q - 4 welds	2116	2075	2040	2009	1982	1957	1935	1915	1896	1880	1864

See Page 29 for footnotes.

(continued)

**TABLE 10 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW2™-36 FORMLOK™ & W2-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4½" Normal Weight (145 pcf)	18	1: 10'-0"	400	400	399	361	328	300	275	211	192	176	161
		2: 11'-9"	400	400	399	361	328	300	275	254	235	210	161
		3: 12'-0"	400	400	399	361	328	300	275	254	235	210	185
		q - 3 welds	1917	1892	1871	1852	1835	1820	1807	1795	1784	1774	1764
		q - 4 welds	2170	2125	2086	2051	2020	1992	1968	1945	1925	1906	1889
	16	1: 10'-8"	400	400	397	359	327	298	274	253	191	174	159
		2: 13'-6"	400	400	397	359	327	298	274	253	234	217	197
		3: 12'-8"	400	400	397	359	327	298	274	253	234	217	197
		q - 3 welds	1972	1941	1914	1891	1870	1851	1834	1819	1805	1792	1781
		q - 4 welds	2310	2254	2204	2161	2122	2087	2056	2028	2002	1979	1957
5" Normal Weight (145 pcf)	22	1: 7'-1"	329	246	216	191	169	151	135	120	108	97	87
		2: 8'-3"	329	293	263	191	169	151	135	120	108	97	87
		3: 8'-4"	329	293	263	191	169	151	135	120	108	97	87
		q - 3 welds	2113	2097	2084	2072	2061	2051	2043	2035	2028	2022	2016
		q - 4 welds	2240	2212	2187	2164	2145	2127	2111	2097	2084	2072	2061
	21	1: 7'-9"	367	328	247	219	195	174	156	140	126	114	103
		2: 8'-10"	367	328	294	266	195	174	156	140	126	114	103
		3: 9'-2"	367	328	294	266	242	174	156	140	126	114	103
		q - 3 welds	2116	2098	2083	2070	2058	2048	2038	2030	2022	2015	2009
		q - 4 welds	2266	2234	2207	2182	2161	2141	2124	2108	2094	2081	2069
	20	1: 8'-5"	400	363	326	247	221	198	178	160	145	131	119
		2: 9'-5"	400	363	326	294	268	198	178	160	145	131	119
		3: 9'-9"	400	363	326	294	268	245	178	160	145	131	119
		q - 3 welds	2121	2102	2086	2071	2059	2047	2037	2027	2019	2011	2004
		q - 4 welds	2294	2259	2229	2203	2179	2158	2139	2122	2106	2092	2078
	19	1: 9'-3"	400	400	390	353	321	246	222	201	182	166	151
		2: 10'-6"	400	400	390	353	321	293	269	248	182	166	151
		3: 10'-10"	400	400	390	353	321	293	269	248	182	166	151
		q - 3 welds	2137	2116	2097	2080	2065	2051	2039	2028	2019	2009	2001
		q - 4 welds	2355	2314	2279	2248	2221	2196	2174	2154	2135	2119	2103
	18	1: 9'-7"	400	400	400	400	366	334	259	235	214	196	179
		2: 11'-3"	400	400	400	400	366	334	307	283	262	196	179
		3: 11'-8"	400	400	400	400	366	334	307	283	262	243	179
		q - 3 welds	2156	2131	2110	2091	2074	2059	2046	2034	2023	2013	2003
		q - 4 welds	2409	2364	2325	2290	2259	2232	2207	2184	2164	2145	2128
	16	1: 10'-4"	400	400	400	400	364	332	305	233	212	194	177
		2: 12'-11"	400	400	400	400	364	332	305	281	260	242	225
		3: 12'-4"	400	400	400	400	364	332	305	281	260	242	225
		q - 3 welds	2211	2180	2154	2130	2109	2090	2073	2058	2044	2031	2020
		q - 4 welds	2549	2493	2443	2400	2361	2326	2295	2267	2241	2218	2196
5½" Normal Weight (145 pcf)	22	1: 6'-10"	313	273	240	212	188	167	149	134	120	108	97
		2: 7'-11"	365	325	240	212	188	167	149	134	120	108	97
		3: 8'-0"	365	325	292	212	188	167	149	134	120	108	97
		q - 3 welds	2352	2336	2323	2311	2300	2291	2282	2274	2267	2261	2255
		q - 4 welds	2480	2451	2426	2403	2384	2366	2350	2336	2323	2311	2300
	21	1: 7'-5"	400	311	274	243	216	193	173	155	140	126	114
		2: 8'-6"	400	364	326	295	216	193	173	155	140	126	114
		3: 8'-9"	400	364	326	295	216	193	173	155	140	126	114
		q - 3 welds	2355	2337	2323	2309	2298	2287	2278	2269	2261	2254	2248
		q - 4 welds	2505	2474	2446	2422	2400	2380	2363	2347	2333	2320	2308

See Page 29 for footnotes.

(continued)

**TABLE 10 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW2™-36 FORMLOK™ & W2-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
5½" Normal Weight (145 pcf)	20	1: 8'-1"	400	400	361	274	245	219	197	177	160	145	132
		2: 9'-0"	400	400	361	327	297	219	197	177	160	145	132
		3: 9'-4"	400	400	361	327	297	219	197	177	160	145	132
		q - 3 welds	2360	2341	2325	2310	2298	2286	2276	2267	2258	2250	2243
		q - 4 welds	2533	2499	2468	2442	2418	2397	2378	2361	2345	2331	2318
	19	1: 8'-11"	400	400	400	391	303	272	246	222	202	184	168
		2: 10'-1"	400	400	400	391	355	325	298	222	202	184	168
		3: 10'-5"	400	400	400	391	355	325	298	222	202	184	168
		q - 3 welds	2376	2355	2336	2319	2304	2290	2278	2268	2258	2249	2240
		q - 4 welds	2594	2554	2518	2487	2460	2435	2413	2393	2374	2358	2342
	18	1: 9'-3"	400	400	400	400	400	318	287	261	237	217	198
		2: 10'-10"	400	400	400	400	400	370	340	314	237	217	198
		3: 11'-2"	400	400	400	400	400	370	340	314	290	217	198
		q - 3 welds	2395	2370	2349	2330	2314	2299	2285	2273	2262	2252	2242
		q - 4 welds	2648	2603	2564	2529	2498	2471	2446	2423	2403	2384	2367
	16	1: 9'-11"	400	400	400	400	400	368	284	258	235	214	196
		2: 12'-5"	400	400	400	400	400	368	338	311	288	267	249
		3: 12'-0"	400	400	400	400	400	368	338	311	288	267	249
		q - 3 welds	2450	2419	2393	2369	2348	2329	2312	2297	2283	2270	2259
		q - 4 welds	2788	2732	2682	2639	2600	2565	2534	2506	2480	2457	2435
6½" Normal Weight (145 pcf)	22	1: 6'-4"	377	329	290	256	227	202	180	161	145	130	117
		2: 7'-5"	400	329	290	256	227	202	180	161	145	130	117
		3: 7'-6"	400	392	290	256	227	202	180	161	145	130	117
		q - 3 welds	2830	2815	2801	2789	2778	2769	2760	2752	2745	2739	2733
		q - 4 welds	2958	2929	2904	2882	2862	2844	2828	2814	2801	2789	2778
	21	1: 6'-11"	400	375	331	293	261	233	209	187	169	152	138
		2: 7'-11"	400	400	331	293	261	233	209	187	169	152	138
		3: 8'-2"	400	400	393	293	261	233	209	187	169	152	138
		q - 3 welds	2833	2816	2801	2787	2776	2765	2756	2747	2739	2732	2726
		q - 4 welds	2983	2952	2924	2900	2878	2859	2841	2825	2811	2798	2786
	20	1: 7'-6"	400	400	372	331	295	264	237	214	193	175	159
		2: 8'-5"	400	400	400	331	295	264	237	214	193	175	159
		3: 8'-9"	400	400	400	393	295	264	237	214	193	175	159
		q - 3 welds	2838	2819	2803	2789	2776	2764	2754	2745	2736	2728	2721
		q - 4 welds	3011	2977	2947	2920	2896	2875	2856	2839	2823	2809	2796
	19	1: 8'-5"	400	400	400	400	365	328	296	268	243	221	202
		2: 9'-5"	400	400	400	400	400	328	296	268	243	221	202
		3: 9'-9"	400	400	400	400	400	391	296	268	243	221	202
		q - 3 welds	2855	2833	2814	2797	2782	2769	2757	2746	2736	2727	2718
		q - 4 welds	3072	3032	2997	2966	2938	2913	2891	2871	2853	2836	2821
	18	1: 8'-9"	400	400	400	400	400	382	346	314	286	261	239
		2: 10'-1"	400	400	400	400	400	400	400	314	286	261	239
		3: 10'-5"	400	400	400	400	400	400	400	314	286	261	239
		q - 3 welds	2873	2849	2827	2808	2792	2777	2763	2751	2740	2730	2721
		q - 4 welds	3126	3081	3042	3007	2976	2949	2924	2901	2881	2862	2845
	16	1: 9'-4"	400	400	400	400	400	378	342	310	282	258	236
		2: 11'-7"	400	400	400	400	400	400	400	374	346	321	236
		3: 11'-6"	400	400	400	400	400	400	400	374	346	321	236
		q - 3 welds	2928	2898	2871	2847	2826	2807	2790	2775	2761	2749	2737
		q - 4 welds	3267	3210	3161	3117	3078	3044	3012	2984	2958	2935	2914

See Page 29 for footnotes.

(continued)

**TABLE 10 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW2™-36 FORMLOK™ & W2-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4" Structural Light Weight (110 pcf)	22	1: 8'-6"	261	232	209	189	144	129	116	105	95	86	78
		2: 9'-10"	261	232	209	189	171	157	116	105	95	86	78
		3: 10'-1"	261	232	209	189	171	157	144	105	95	86	78
		q - 3 welds	1310	1295	1281	1269	1258	1249	1240	1232	1225	1219	1213
		q - 4 welds	1438	1409	1384	1362	1342	1324	1309	1294	1281	1269	1258
	21	1: 9'-4"	292	260	234	211	192	147	133	120	109	100	90
		2: 10'-6"	292	260	234	211	192	175	156	134	109	100	90
		3: 10'-11"	292	260	234	211	192	175	156	134	109	100	90
		q - 3 welds	1313	1296	1281	1268	1256	1245	1236	1227	1220	1212	1206
		q - 4 welds	1463	1432	1404	1380	1358	1339	1321	1305	1291	1278	1266
	20	1: 10'-2"	324	288	259	234	213	188	161	136	121	106	93
		2: 11'-2"	324	288	259	234	213	188	161	139	121	106	93
		3: 11'-7"	324	288	259	234	213	188	161	139	121	106	93
		q - 3 welds	1318	1300	1283	1269	1256	1244	1234	1225	1216	1209	1201
		q - 4 welds	1491	1457	1427	1400	1376	1355	1336	1319	1303	1289	1276
	19	1: 10'-11"	389	347	308	270	237	201	173	149	130	113	100
		2: 12'-5"	389	347	308	270	237	201	173	149	130	113	100
		3: 12'-11"	389	347	308	270	237	201	173	149	130	113	100
		q - 3 welds	1335	1313	1294	1277	1262	1249	1237	1226	1216	1207	1199
		q - 4 welds	1552	1512	1477	1446	1418	1393	1371	1351	1333	1316	1301
	18	1: 11'-4"	400	376	328	288	249	211	181	157	136	119	105
		2: 13'-5"	400	376	328	288	249	211	181	157	136	119	105
		3: 13'-3"	400	376	328	288	249	211	181	157	136	119	105
		q - 3 welds	1353	1329	1307	1289	1272	1257	1243	1231	1220	1210	1201
		q - 4 welds	1607	1562	1522	1487	1457	1429	1404	1382	1361	1342	1325
	16	1: 11'-11"	400	396	356	322	276	235	201	174	151	132	116
		2: 14'-10"	400	396	356	322	276	235	201	174	151	132	116
		3: 13'-11"	400	396	356	322	276	235	201	174	151	132	116
		q - 3 welds	1408	1378	1351	1327	1306	1287	1271	1255	1241	1229	1217
		q - 4 welds	1747	1690	1641	1597	1558	1524	1493	1464	1439	1415	1394
4½" Structural Light Weight (110 pcf)	22	1: 8'-1"	294	262	235	181	161	145	130	118	106	97	88
		2: 9'-5"	294	262	235	213	193	145	130	118	106	97	88
		3: 9'-7"	294	262	235	213	193	177	130	118	106	97	88
		q - 3 welds	1468	1453	1439	1427	1416	1407	1398	1390	1383	1377	1371
		q - 4 welds	1596	1567	1542	1520	1500	1482	1467	1452	1439	1427	1416
	21	1: 8'-11"	329	293	263	238	184	166	149	135	123	112	102
		2: 10'-1"	329	293	263	238	216	198	181	135	123	112	102
		3: 10'-5"	329	293	263	238	216	198	181	135	123	112	102
		q - 3 welds	1471	1454	1439	1426	1414	1403	1394	1385	1378	1370	1364
		q - 4 welds	1621	1590	1562	1538	1516	1497	1479	1463	1449	1436	1424
	20	1: 9'-8"	364	324	291	263	239	219	169	153	139	127	116
		2: 10'-9"	364	324	291	263	239	219	201	185	139	127	116
		3: 11'-1"	364	324	291	263	239	219	201	185	167	127	116
		q - 3 welds	1476	1458	1441	1427	1414	1402	1392	1383	1374	1367	1359
		q - 4 welds	1649	1615	1585	1558	1534	1513	1494	1477	1461	1447	1434
	19	1: 10'-6"	400	389	349	316	287	262	238	205	173	156	138
		2: 11'-11"	400	389	349	316	287	262	238	205	179	156	138
		3: 12'-4"	400	389	349	316	287	262	238	205	179	156	138
		q - 3 welds	1493	1471	1452	1435	1420	1407	1395	1384	1374	1365	1357
		q - 4 welds	1710	1670	1635	1604	1576	1551	1529	1509	1491	1474	1459

See Page 29 for footnotes.

(continued)

**TABLE 10 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW2™-36 FORMLOK™ & W2-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
4½" Structural Light Weight (110 pcf)	18	1: 10'-10"	400	400	399	361	327	291	250	216	188	164	144
		2: 12'-10"	400	400	399	361	327	291	250	216	188	164	144
		3: 12'-10"	400	400	399	361	327	291	250	216	188	164	144
		q - 3 welds	1511	1487	1465	1447	1430	1415	1401	1389	1378	1368	1359
		q - 4 welds	1765	1720	1680	1645	1615	1587	1562	1540	1519	1500	1483
	16	1: 11'-7"	400	400	397	359	327	298	274	238	207	182	160
		2: 14'-5"	400	400	397	359	327	298	274	238	207	182	160
		3: 13'-6"	400	400	397	359	327	298	274	238	207	182	160
		q - 3 welds	1566	1536	1509	1485	1464	1445	1429	1413	1399	1387	1375
		q - 4 welds	1905	1848	1799	1755	1716	1682	1650	1622	1597	1573	1552
5¼" Structural Light Weight (110 pcf)	22	1: 7'-8"	347	309	240	213	190	171	154	139	125	114	103
		2: 8'-11"	347	309	277	251	190	171	154	139	125	114	103
		3: 9'-0"	347	309	277	251	228	171	154	139	125	114	103
		q - 3 welds	1705	1690	1676	1664	1653	1644	1635	1627	1620	1614	1608
		q - 4 welds	1833	1804	1779	1757	1737	1719	1703	1689	1676	1664	1653
	21	1: 8'-5"	388	345	310	242	217	195	176	159	145	132	120
		2: 9'-6"	388	345	310	280	255	233	176	159	145	132	120
		3: 9'-10"	388	345	310	280	255	233	176	159	145	132	120
		q - 3 welds	1708	1691	1676	1663	1651	1640	1631	1622	1614	1607	1601
		q - 4 welds	1858	1827	1799	1775	1753	1734	1716	1700	1686	1673	1661
	20	1: 9'-1"	400	382	343	310	282	220	199	180	164	150	137
		2: 10'-2"	400	382	343	310	282	258	237	180	164	150	137
		3: 10'-6"	400	382	343	310	282	258	237	218	164	150	137
		q - 3 welds	1713	1694	1678	1664	1651	1639	1629	1620	1611	1604	1596
		q - 4 welds	1886	1852	1822	1795	1771	1750	1731	1714	1698	1684	1671
	19	1: 9'-11"	400	400	400	372	338	309	245	223	204	186	171
		2: 11'-3"	400	400	400	372	338	309	283	261	242	186	171
		3: 11'-8"	400	400	400	372	338	309	283	261	242	225	171
		q - 3 welds	1730	1708	1689	1672	1657	1644	1632	1621	1611	1602	1594
		q - 4 welds	1947	1907	1872	1841	1813	1788	1766	1746	1728	1711	1696
	18	1: 10'-3"	400	400	400	400	385	352	323	260	237	218	200
		2: 12'-2"	400	400	400	400	385	352	323	298	276	251	221
		3: 12'-4"	400	400	400	400	385	352	323	298	276	251	221
		q - 3 welds	1748	1724	1702	1684	1667	1652	1638	1626	1615	1605	1596
		q - 4 welds	2002	1957	1917	1882	1852	1824	1799	1776	1756	1737	1720
	16	1: 11'-0"	400	400	400	400	383	350	321	296	274	215	198
		2: 13'-10"	400	400	400	400	383	350	321	296	274	254	237
		3: 13'-0"	400	400	400	400	383	350	321	296	274	254	237
		q - 3 welds	1803	1773	1746	1722	1701	1682	1666	1650	1636	1624	1612
		q - 4 welds	2142	2085	2036	1992	1953	1919	1887	1859	1834	1810	1789

See Page 29 for footnotes.

(continued)

**TABLE 10 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW2™-36 FORMLOK™ & W2-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)										
			7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
6¼" Structural Light Weight (110 pcf)	22	1: 7'-2"	400	329	291	259	231	207	187	168	152	138	126
		2: 8'-4"	400	375	337	259	231	207	187	168	152	138	126
		3: 8'-5"	400	375	337	259	231	207	187	168	152	138	126
		q - 3 welds	2021	2006	1992	1980	1969	1960	1951	1943	1936	1930	1924
		q - 4 welds	2149	2120	2095	2073	2053	2035	2019	2005	1992	1980	1969
	21	1: 7'-10"	400	400	331	294	263	237	214	193	176	160	146
		2: 8'-11"	400	400	376	340	263	237	214	193	176	160	146
		3: 9'-3"	400	400	376	340	309	237	214	193	176	160	146
		q - 3 welds	2024	2007	1992	1978	1967	1956	1947	1938	1930	1923	1917
		q - 4 welds	2174	2143	2115	2091	2069	2050	2032	2016	2002	1989	1977
	20	1: 8'-6"	400	400	400	376	296	267	241	219	199	182	166
		2: 9'-6"	400	400	400	376	342	313	241	219	199	182	166
		3: 9'-10"	400	400	400	376	342	313	241	219	199	182	166
		q - 3 welds	2029	2010	1994	1980	1967	1955	1945	1936	1927	1919	1912
		q - 4 welds	2202	2168	2138	2111	2087	2066	2047	2030	2014	2000	1987
	19	1: 9'-4"	400	400	400	400	400	328	297	270	247	226	207
		2: 10'-7"	400	400	400	400	400	374	343	317	247	226	207
		3: 10'-11"	400	400	400	400	400	374	343	317	247	226	207
		q - 3 welds	2046	2024	2005	1988	1973	1960	1948	1937	1927	1918	1909
		q - 4 welds	2263	2223	2188	2157	2129	2104	2082	2062	2044	2027	2012
	18	1: 9'-8"	400	400	400	400	400	400	345	315	288	264	243
		2: 11'-4"	400	400	400	400	400	400	392	361	334	264	243
		3: 11'-9"	400	400	400	400	400	400	392	361	334	310	243
		q - 3 welds	2064	2040	2018	1999	1983	1968	1954	1942	1931	1921	1912
		q - 4 welds	2317	2272	2233	2198	2167	2140	2115	2092	2072	2053	2036
	16	1: 10'-5"	400	400	400	400	400	400	388	311	284	261	240
		2: 13'-0"	400	400	400	400	400	400	388	358	331	308	286
		3: 12'-5"	400	400	400	400	400	400	388	358	331	308	286
		q - 3 welds	2119	2089	2062	2038	2017	1998	1981	1966	1952	1940	1928
		q - 4 welds	2458	2401	2352	2308	2269	2235	2203	2175	2149	2126	2105

¹ Shoring calculations based on the following:

- Deck supporting dead load of concrete plus either 20 psf uniform or 150 pound concentrated construction live load for flexure.
- Dead load deflection limited to L/180 of span length, not to exceed 3/4-inch.
- Allowable reactions based on maximum bearing length permitted by AISI S100. Support reactions for unshored spans due to dead loads and uniform construction live loads must be evaluated based on the allowable reactions set forth in Table 5.

² Shoring is required at midspan for superimposed load values to the right of the heavy line.

³ Total slab depth is nominal depth from top of concrete to bottom of steel deck.

⁴ Concrete fill to have minimum compressive strength $f'_c = 3,000$ psi.

⁵ PLW2-36 and W2-36 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, $F < 1$.

**TABLE 11 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW3™-36 FORMLOK™ & W3-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5}**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS		SPAN (ft-in.)														
				(ft-in.)	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"
5" Normal Weight (145 pcf)	22	1: 10'-0"	254	229	208	190	175	120	108	97	88	79	72	65	58	53	48	
		2: 10'-7"	254	229	208	190	175	161	108	97	88	79	72	65	58	53	48	
		3: 10'-7"	254	229	208	190	175	161	108	97	88	79	72	65	58	53	48	
		q - 3 welds	1606	1594	1583	1573	1565	1557	1550	1544	1538	1532	1527	1523	1518	1514	1511	
		q - 4 welds	1708	1686	1666	1648	1633	1618	1605	1593	1583	1572	1563	1555	1547	1539	1532	
		21	1: 10'-11"	274	248	225	206	189	174	120	108	98	89	81	73	66	60	55
	2: 11'-8"		274	248	225	206	189	174	161	150	98	89	81	73	66	60	55	
	3: 12'-1"		274	248	225	206	189	174	161	150	140	89	81	73	66	60	55	
	q - 3 welds		1605	1592	1580	1570	1560	1552	1544	1537	1530	1524	1519	1514	1509	1505	1500	
	q - 4 welds		1729	1704	1683	1663	1646	1630	1616	1602	1590	1579	1569	1560	1551	1543	1535	
	20		1: 11'-7"	294	265	241	220	202	187	173	160	108	98	89	81	74	67	61
		2: 12'-4"	294	265	241	220	202	187	173	160	149	98	89	81	74	67	61	
		3: 12'-10"	294	265	241	220	202	187	173	160	149	140	89	81	74	67	61	
		q - 3 welds	1608	1593	1580	1569	1559	1549	1541	1533	1526	1520	1513	1508	1503	1498	1493	
		q - 4 welds	1750	1724	1700	1679	1660	1643	1627	1613	1600	1588	1577	1567	1557	1548	1540	
		19	1: 12'-1"	333	301	274	250	230	212	191	172	155	116	106	97	89	82	75
	2: 13'-9"		333	301	274	250	230	212	191	172	155	140	126	115	89	82	75	
	3: 14'-2"		333	301	274	250	230	212	191	172	155	140	126	115	104	82	75	
	q - 3 welds		1618	1602	1587	1573	1561	1550	1540	1531	1523	1515	1508	1502	1496	1490	1485	
	q - 4 welds		1801	1770	1742	1718	1696	1675	1657	1640	1625	1611	1598	1586	1575	1565	1555	
	18		1: 12'-5"	370	334	304	278	255	232	208	187	169	134	122	112	103	95	88
		2: 14'-10"	370	334	304	278	255	232	208	187	169	153	139	126	115	104	88	
		3: 14'-7"	370	334	304	278	255	232	208	187	169	153	139	126	115	104	88	
		q - 3 welds	1634	1615	1598	1583	1569	1557	1546	1535	1526	1517	1509	1502	1495	1488	1482	
		q - 4 welds	1854	1819	1787	1759	1734	1711	1690	1671	1654	1638	1623	1609	1597	1585	1574	
		16	1: 13'-1"	400	400	365	333	299	268	241	217	197	178	162	143	132	122	113
	2: 16'-4"		400	400	365	333	299	268	241	217	197	178	162	148	135	123	113	
	3: 15'-4"		400	400	365	333	299	268	241	217	197	178	162	148	135	123	113	
	q - 3 welds		1679	1655	1633	1614	1597	1582	1568	1555	1543	1532	1522	1513	1504	1496	1489	
	q - 4 welds		1973	1929	1890	1855	1823	1795	1769	1745	1723	1703	1684	1667	1651	1637	1623	
	5½" Normal Weight (145 pcf)		22	1: 9'-7"	278	251	228	209	145	130	117	105	95	85	77	70	63	57
		2: 9'-9"		278	251	228	209	145	130	117	105	95	85	77	70	63	57	51
		3: 9'-9"		278	251	228	209	145	130	117	105	95	85	77	70	63	57	51
		q - 3 welds		1845	1833	1822	1813	1804	1796	1789	1783	1777	1771	1766	1762	1757	1753	1750
		q - 4 welds		1947	1925	1905	1888	1872	1857	1844	1832	1822	1812	1802	1794	1786	1778	1772
		21		1: 10'-5"	300	271	247	225	207	144	130	117	106	96	87	79	71	65
2: 11'-2"			300	271	247	225	207	191	177	117	106	96	87	79	71	65	59	
3: 11'-7"			300	271	247	225	207	191	177	164	106	96	87	79	71	65	59	
q - 3 welds			1844	1831	1819	1809	1799	1791	1783	1776	1769	1763	1758	1753	1748	1744	1739	
q - 4 welds			1968	1943	1922	1902	1885	1869	1855	1842	1829	1818	1808	1799	1790	1782	1774	
20			1: 11'-2"	321	290	264	241	221	204	189	128	116	106	96	87	79	72	66
		2: 11'-10"	321	290	264	241	221	204	189	175	116	106	96	87	79	72	66	
		3: 12'-3"	321	290	264	241	221	204	189	175	163	106	96	87	79	72	66	
		q - 3 welds	1847	1832	1819	1808	1798	1788	1780	1772	1765	1759	1753	1747	1742	1737	1733	
		q - 4 welds	1989	1963	1939	1918	1899	1882	1866	1852	1839	1827	1816	1806	1796	1787	1779	
		19	1: 11'-9"	363	328	298	273	250	231	214	198	138	125	115	105	96	88	80
2: 13'-2"			363	328	298	273	250	231	214	198	185	173	162	105	96	88	80	
3: 13'-7"			363	328	298	273	250	231	214	198	185	173	162	152	96	88	80	
q - 3 welds			1857	1841	1826	1812	1800	1789	1779	1770	1762	1754	1747	1741	1735	1729	1724	
q - 4 welds			2040	2009	1982	1957	1935	1915	1896	1880	1864	1850	1837	1825	1814	1804	1794	

See Page 35 for footnotes.

(continued)

**TABLE 11 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW3™-36 FORMLOK™ & W3-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS		SPAN (ft-in.)														
		(ft-in.)	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"	
5½" Normal Weight (145 pcf)	18	1: 12'-1"	400	364	331	302	277	256	237	220	205	144	132	121	111	102	94	
		2: 14'-3"	400	364	331	302	277	256	237	220	205	191	179	168	158	102	94	
		3: 14'-2"	400	364	331	302	277	256	237	220	205	191	179	168	158	102	94	
		q - 3 welds	1873	1854	1837	1822	1808	1796	1785	1774	1765	1756	1748	1741	1734	1727	1721	
		q - 4 welds	2093	2058	2027	1998	1973	1950	1929	1910	1893	1877	1862	1849	1836	1824	1813	
	16	1: 12'-9"	400	400	395	361	332	306	283	263	245	223	166	153	141	131	121	
		2: 15'-11"	400	400	395	361	332	306	283	263	245	223	203	185	169	155	142	
		3: 14'-11"	400	400	395	361	332	306	283	263	245	223	203	185	169	155	121	
		q - 3 welds	1918	1894	1873	1853	1836	1821	1807	1794	1782	1771	1761	1752	1743	1735	1728	
		q - 4 welds	2213	2168	2129	2094	2062	2034	2008	1984	1962	1942	1924	1906	1891	1876	1862	
6" Normal Weight (145 pcf)	22	1: 9'-2"	304	274	250	176	158	141	127	114	103	93	83	75	68	61	55	
		2: 9'-0"	304	274	250	176	158	141	127	114	103	93	83	75	68	61	55	
		3: 9'-0"	304	274	250	176	158	141	127	114	103	93	83	75	68	61	55	
		q - 3 welds	2084	2072	2061	2052	2043	2035	2028	2022	2016	2010	2005	2001	1997	1992	1989	
		q - 4 welds	2186	2164	2144	2127	2111	2096	2083	2072	2061	2051	2041	2033	2025	2017	2011	
	21	1: 10'-0"	328	296	269	246	226	157	141	127	115	104	94	85	77	70	63	
		2: 10'-9"	328	296	269	246	226	208	141	127	115	104	94	85	77	70	63	
		3: 11'-2"	328	296	269	246	226	208	193	127	115	104	94	85	77	70	63	
		q - 3 welds	2083	2070	2058	2048	2038	2030	2022	2015	2009	2003	1997	1992	1987	1983	1979	
		q - 4 welds	2207	2182	2161	2141	2124	2108	2094	2081	2069	2058	2047	2038	2029	2021	2013	
6" Normal Weight (145 pcf)	20	1: 10'-8"	350	317	288	263	241	223	154	139	126	114	104	94	86	78	71	
		2: 11'-5"	350	317	288	263	241	223	206	139	126	114	104	94	86	78	71	
		3: 11'-10"	350	317	288	263	241	223	206	191	126	114	104	94	86	78	71	
		q - 3 welds	2086	2071	2059	2047	2037	2027	2019	2011	2004	1998	1992	1986	1981	1976	1972	
		q - 4 welds	2229	2202	2178	2157	2138	2121	2105	2091	2078	2066	2055	2045	2035	2026	2018	
	19	1: 11'-5"	396	358	325	297	273	252	233	164	149	136	124	113	104	95	87	
		2: 12'-8"	396	358	325	297	273	252	233	216	201	188	124	113	104	95	87	
		3: 13'-1"	396	358	325	297	273	252	233	216	201	188	176	113	104	95	87	
		q - 3 welds	2097	2080	2065	2051	2039	2028	2019	2009	2001	1994	1987	1980	1974	1968	1963	
		q - 4 welds	2279	2248	2221	2196	2174	2154	2135	2119	2103	2089	2076	2064	2053	2043	2033	
6" Normal Weight (145 pcf)	18	1: 11'-9"	400	396	360	329	302	278	258	239	170	156	142	131	120	110	101	
		2: 13'-8"	400	396	360	329	302	278	258	239	223	208	195	183	120	110	101	
		3: 13'-9"	400	396	360	329	302	278	258	239	223	208	195	183	120	110	101	
		q - 3 welds	2112	2093	2076	2061	2047	2035	2024	2013	2004	1995	1987	1980	1973	1967	1961	
		q - 4 welds	2332	2297	2266	2237	2212	2189	2169	2150	2132	2116	2101	2088	2075	2063	2052	
	16	1: 12'-5"	400	400	400	392	360	332	307	285	266	195	179	165	152	141	130	
		2: 15'-4"	400	400	400	392	360	332	307	285	266	248	233	218	206	191	176	
		3: 14'-6"	400	400	400	392	360	332	307	285	266	248	233	218	206	191	130	
		q - 3 welds	2157	2133	2112	2093	2075	2060	2046	2033	2021	2010	2000	1991	1982	1974	1967	
		q - 4 welds	2452	2407	2368	2333	2301	2273	2247	2223	2201	2181	2163	2145	2130	2115	2101	
6½" Normal Weight (145 pcf)	22	1: 8'-10"	331	299	215	192	171	153	138	124	111	100	90	81	73	66	59	
		2: 8'-5"	331	242	215	192	171	153	138	124	111	100	90	81	73	66	59	
		3: 8'-5"	331	242	215	192	171	153	138	124	111	100	90	81	73	66	59	
		q - 3 welds	2323	2311	2300	2291	2282	2274	2267	2261	2255	2250	2245	2240	2236	2232	2228	
		q - 4 welds	2425	2403	2383	2366	2350	2336	2323	2311	2300	2290	2281	2272	2264	2257	2250	
	21	1: 9'-7"	357	323	293	268	189	170	153	138	125	113	102	92	83	75	68	
		2: 10'-3"	357	323	293	268	246	170	153	138	125	113	102	92	83	75	68	
		3: 10'-3"	357	323	293	268	246	170	153	138	125	113	102	92	83	75	68	
		q - 3 welds	2323	2309	2298	2287	2278	2269	2261	2254	2248	2242	2236	2231	2226	2222	2218	
		q - 4 welds	2446	2422	2400	2380	2363	2347	2333	2320	2308	2297	2286	2277	2268	2260	2252	

See Page 35 for footnotes.

(continued)

**TABLE 11 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW3™-36 FORMLOK™ & W3-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)														
			8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
6½" Normal Weight (145 pcf)	20	1: 10'-3"	381	345	313	286	263	185	167	151	137	124	113	102	93	84	77
		2: 11'-0"	381	345	313	286	263	242	224	151	137	124	113	102	93	84	77
		3: 11'-5"	381	345	313	286	263	242	224	151	137	124	113	102	93	84	77
		q - 3 welds	2325	2310	2298	2286	2276	2267	2258	2250	2243	2237	2231	2225	2220	2215	2211
		q - 4 welds	2468	2441	2417	2396	2377	2360	2345	2330	2317	2305	2294	2284	2274	2265	2257
	19	1: 11'-2"	400	389	354	323	297	274	253	178	162	147	134	123	112	102	94
		2: 12'-2"	400	389	354	323	297	274	253	235	219	147	134	123	112	102	94
		3: 12'-8"	400	389	354	323	297	274	253	235	219	205	134	123	112	102	94
		q - 3 welds	2336	2319	2304	2290	2278	2268	2258	2249	2240	2233	2226	2219	2213	2207	2202
		q - 4 welds	2518	2487	2460	2435	2413	2393	2374	2358	2342	2328	2315	2303	2292	2282	2272
	18	1: 11'-6"	400	400	391	358	328	303	280	260	184	169	154	141	130	119	109
		2: 13'-3"	400	400	391	358	328	303	280	260	242	226	212	141	130	119	109
		3: 13'-6"	400	400	391	358	328	303	280	260	242	226	212	199	130	119	109
		q - 3 welds	2352	2332	2315	2300	2286	2274	2263	2252	2243	2234	2226	2219	2212	2206	2200
		q - 4 welds	2571	2536	2505	2477	2451	2428	2408	2389	2371	2355	2340	2327	2314	2302	2291
	16	1: 12'-2"	400	400	400	400	391	360	333	310	288	211	194	179	165	152	140
		2: 14'-9"	400	400	400	400	391	360	333	310	288	269	252	237	223	210	140
		3: 14'-2"	400	400	400	400	391	360	333	310	288	269	252	237	223	152	140
		q - 3 welds	2396	2372	2351	2332	2314	2299	2285	2272	2260	2249	2239	2230	2221	2213	2206
		q - 4 welds	2691	2647	2607	2572	2540	2512	2486	2462	2440	2420	2402	2385	2369	2354	2340
7½" Normal Weight (145 pcf)	22	1: 8'-3"	388	283	251	224	200	179	161	144	130	117	105	95	85	77	69
		2: 7'-4"	320	283	251	224	200	179	161	144	130	117	105	95	85	77	69
		3: 7'-4"	320	283	251	224	200	179	161	144	130	117	105	95	85	77	69
		q - 3 welds	2801	2789	2778	2769	2760	2753	2745	2739	2733	2728	2723	2718	2714	2710	2706
		q - 4 welds	2903	2881	2861	2844	2828	2814	2801	2789	2778	2768	2759	2750	2742	2735	2728
	21	1: 8'-11"	400	378	276	247	221	198	179	161	145	131	119	107	97	88	79
		2: 9'-2"	400	378	344	247	221	198	179	161	145	131	119	107	97	88	79
		3: 9'-2"	400	378	344	247	221	198	179	161	145	131	119	107	97	88	79
		q - 3 welds	2801	2787	2776	2765	2756	2747	2739	2732	2726	2720	2714	2709	2704	2700	2696
		q - 4 welds	2924	2900	2878	2859	2841	2825	2811	2798	2786	2775	2765	2755	2746	2738	2731
	20	1: 9'-7"	400	400	367	335	240	216	195	176	160	145	131	119	108	98	89
		2: 10'-4"	400	400	367	335	308	216	195	176	160	145	131	119	108	98	89
		3: 10'-8"	400	400	367	335	308	284	195	176	160	145	131	119	108	98	89
		q - 3 welds	2803	2789	2776	2764	2754	2745	2736	2729	2721	2715	2709	2703	2698	2693	2689
		q - 4 welds	2946	2919	2896	2875	2856	2838	2823	2808	2795	2783	2772	2762	2752	2744	2735
	19	1: 10'-6"	400	400	400	378	347	320	228	207	188	171	156	143	130	119	109
		2: 11'-5"	400	400	400	378	347	320	296	207	188	171	156	143	130	119	109
		3: 11'-10"	400	400	400	378	347	320	296	275	188	171	156	143	130	119	109
		q - 3 welds	2814	2797	2782	2769	2757	2746	2736	2727	2718	2711	2704	2697	2691	2686	2680
		q - 4 welds	2997	2966	2938	2913	2891	2871	2853	2836	2821	2807	2794	2782	2770	2760	2750
	18	1: 11'-0"	400	400	400	400	384	354	327	236	215	196	180	164	151	138	127
		2: 12'-5"	400	400	400	400	384	354	327	304	283	196	180	164	151	138	127
		3: 12'-10"	400	400	400	400	384	354	327	304	283	264	180	164	151	138	127
		q - 3 welds	2830	2811	2794	2778	2765	2752	2741	2731	2721	2713	2705	2697	2690	2684	2678
		q - 4 welds	3050	3014	2983	2955	2929	2907	2886	2867	2849	2833	2819	2805	2792	2780	2769
	16	1: 11'-8"	400	400	400	400	400	400	389	361	267	245	225	208	191	177	163
		2: 13'-10"	400	400	400	400	400	400	389	361	336	314	294	276	191	177	163
		3: 13'-8"	400	400	400	400	400	400	389	361	336	314	294	276	191	177	163
		q - 3 welds	2874	2850	2829	2810	2793	2777	2763	2750	2738	2728	2717	2708	2700	2692	2684
		q - 4 welds	3169	3125	3085	3050	3019	2990	2964	2940	2918	2898	2880	2863	2847	2832	2818

See Page 35 for footnotes.

(continued)

**TABLE 11 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW3™-36 FORMLOK™ & W3-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)														
			8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
5" Structural Light Weight (110 pcf)	22	1: 11'-1"	254	229	208	190	175	161	149	107	97	89	81	74	68	62	57
		2: 11'-11"	254	229	208	190	175	161	149	138	97	89	81	74	68	62	57
		3: 12'-4"	254	229	208	190	175	161	149	138	129	89	81	74	68	62	57
		q - 3 welds	1281	1269	1259	1249	1240	1233	1226	1219	1213	1208	1203	1198	1194	1190	1186
		q - 4 welds	1383	1361	1342	1324	1308	1294	1281	1269	1258	1248	1239	1230	1222	1215	1208
	21	1: 12'-1"	274	248	225	206	189	174	161	150	140	99	90	83	76	70	64
		2: 12'-9"	274	248	225	206	189	174	161	150	140	130	90	83	76	70	64
		3: 13'-3"	274	248	225	206	189	174	161	150	140	130	120	83	76	70	64
		q - 3 welds	1281	1268	1256	1245	1236	1227	1220	1212	1206	1200	1194	1189	1185	1180	1176
		q - 4 welds	1404	1380	1358	1339	1321	1305	1291	1278	1266	1255	1245	1235	1226	1218	1211
	20	1: 12'-5"	294	265	241	220	202	187	172	155	140	108	99	91	84	77	71
		2: 13'-6"	294	265	241	220	202	187	172	155	140	127	115	105	84	77	71
		3: 14'-0"	294	265	241	220	202	187	172	155	140	127	115	105	96	77	71
		q - 3 welds	1283	1269	1256	1244	1234	1225	1216	1209	1202	1195	1189	1183	1178	1173	1169
		q - 4 welds	1426	1399	1376	1355	1336	1318	1303	1289	1276	1263	1252	1242	1233	1224	1215
	19	1: 12'-11"	333	301	274	250	230	212	191	172	156	141	116	107	99	91	85
		2: 15'-0"	333	301	274	250	230	212	191	172	156	141	129	117	106	96	87
		3: 15'-1"	333	301	274	250	230	212	191	172	156	141	129	117	106	96	87
		q - 3 welds	1294	1277	1262	1249	1237	1226	1216	1207	1199	1191	1184	1177	1171	1166	1160
		q - 4 welds	1477	1446	1418	1393	1371	1351	1333	1316	1301	1287	1274	1262	1250	1240	1230
	18	1: 13'-3"	370	334	304	278	255	230	207	187	170	154	140	122	112	101	91
		2: 16'-3"	370	334	304	278	255	230	207	187	170	154	140	125	112	101	91
		3: 15'-7"	370	334	304	278	255	230	207	187	170	154	140	125	112	101	91
		q - 3 welds	1310	1291	1274	1258	1245	1232	1221	1211	1201	1193	1185	1177	1170	1164	1158
		q - 4 welds	1530	1494	1463	1435	1410	1387	1366	1347	1329	1313	1299	1285	1272	1260	1249
	16	1: 14'-0"	400	400	365	331	296	266	240	217	197	175	155	139	124	112	101
		2: 17'-5"	400	400	365	331	296	266	240	217	197	175	155	139	124	112	101
		3: 16'-4"	400	400	365	331	296	266	240	217	197	175	155	139	124	112	101
		q - 3 welds	1354	1330	1309	1290	1273	1257	1243	1230	1218	1208	1198	1188	1180	1172	1164
		q - 4 welds	1649	1605	1566	1530	1499	1470	1444	1420	1399	1379	1360	1343	1327	1312	1298
5½" Structural Light Weight (110 pcf)	22	1: 10'-7"	278	251	228	209	191	176	128	116	106	96	88	80	74	67	62
		2: 11'-6"	278	251	228	209	191	176	163	152	106	96	88	80	74	67	62
		3: 11'-9"	278	251	228	209	191	176	163	152	106	96	88	80	74	67	62
		q - 3 welds	1439	1427	1417	1407	1398	1391	1384	1377	1371	1366	1361	1356	1352	1348	1344
		q - 4 welds	1541	1519	1500	1482	1466	1452	1439	1427	1416	1406	1397	1388	1380	1373	1366
	21	1: 11'-6"	300	271	247	225	207	191	177	164	117	107	98	90	82	76	69
		2: 12'-4"	300	271	247	225	207	191	177	164	153	107	98	90	82	76	69
		3: 12'-9"	300	271	247	225	207	191	177	164	153	143	98	90	82	76	69
		q - 3 welds	1439	1426	1414	1403	1394	1385	1378	1370	1364	1358	1352	1347	1342	1338	1334
		q - 4 welds	1562	1538	1516	1497	1479	1463	1449	1436	1424	1413	1403	1393	1384	1376	1369
	20	1: 12'-1"	321	290	264	241	221	204	189	175	163	117	107	98	90	83	77
		2: 13'-0"	321	290	264	241	221	204	189	175	163	152	143	98	90	83	77
		3: 13'-6"	321	290	264	241	221	204	189	175	163	152	143	134	90	83	77
		q - 3 welds	1441	1427	1414	1402	1392	1383	1374	1367	1360	1353	1347	1341	1336	1331	1327
		q - 4 welds	1584	1557	1534	1513	1494	1476	1461	1447	1433	1421	1410	1400	1391	1382	1373
	19	1: 12'-6"	363	328	298	273	250	231	214	198	185	173	125	116	107	99	91
		2: 14'-5"	363	328	298	273	250	231	214	198	185	173	162	152	138	99	91
		3: 14'-8"	363	328	298	273	250	231	214	198	185	173	162	152	138	125	91
		q - 3 welds	1452	1435	1420	1407	1395	1384	1374	1365	1357	1349	1342	1335	1329	1324	1318
		q - 4 welds	1635	1604	1576	1551	1529	1509	1491	1474	1459	1445	1432	1420	1408	1398	1388

See Page 35 for footnotes.

(continued)

**TABLE 11 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR
PLW3™-36 FORMLOK™ & W3-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)														
			8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
5½" Structural Light Weight (110 pcf)	18	1: 12'-11"	400	364	331	302	277	256	237	220	205	191	143	132	122	113	105
		2: 15'-8"	400	364	331	302	277	256	237	220	205	191	176	161	146	131	119
		3: 15'-1"	400	364	331	302	277	256	237	220	205	191	176	161	146	131	119
		q - 3 welds	1468	1449	1432	1416	1403	1390	1379	1369	1359	1351	1343	1335	1328	1322	1316
		q - 4 welds	1688	1652	1621	1593	1568	1545	1524	1505	1487	1471	1457	1443	1430	1418	1407
		1: 13'-7"	400	400	395	361	332	306	283	263	243	222	201	179	152	141	131
	16	2: 16'-11"	400	400	395	361	332	306	283	263	243	222	201	179	161	145	131
		3: 15'-11"	400	400	395	361	332	306	283	263	243	222	201	179	161	145	131
		q - 3 welds	1512	1488	1467	1448	1431	1415	1401	1388	1376	1366	1356	1346	1338	1330	1322
		q - 4 welds	1807	1763	1724	1688	1657	1628	1602	1578	1557	1536	1518	1501	1485	1470	1456
	22	1: 10'-0"	317	287	261	238	219	160	145	132	120	109	100	91	83	76	70
		2: 10'-7"	317	287	261	238	219	202	145	132	120	109	100	91	83	76	70
		3: 10'-7"	317	287	261	238	219	202	145	132	120	109	100	91	83	76	70
		q - 3 welds	1676	1664	1653	1644	1635	1628	1621	1614	1608	1603	1598	1593	1589	1585	1581
		q - 4 welds	1778	1756	1737	1719	1703	1689	1676	1664	1653	1643	1634	1625	1617	1610	1603
	21	1: 10'-10"	342	309	281	257	236	218	160	145	133	121	111	101	93	85	78
		2: 11'-8"	342	309	281	257	236	218	201	187	133	121	111	101	93	85	78
		3: 12'-1"	342	309	281	257	236	218	201	187	174	121	111	101	93	85	78
		q - 3 welds	1676	1663	1651	1640	1631	1622	1614	1607	1601	1595	1589	1584	1579	1575	1571
		q - 4 welds	1799	1775	1753	1734	1716	1700	1686	1673	1661	1650	1640	1630	1621	1613	1606
	20	1: 11'-7"	366	330	300	275	252	232	215	200	144	132	121	111	102	94	86
		2: 12'-4"	366	330	300	275	252	232	215	200	186	132	121	111	102	94	86
		3: 12'-9"	366	330	300	275	252	232	215	200	186	174	121	111	102	94	86
		q - 3 welds	1678	1664	1651	1639	1629	1620	1611	1604	1597	1590	1584	1578	1573	1568	1564
		q - 4 welds	1821	1794	1771	1750	1731	1713	1698	1684	1670	1658	1647	1637	1627	1619	1610
	19	1: 12'-1"	400	373	339	310	285	263	243	226	210	154	142	131	120	111	103
		2: 13'-8"	400	373	339	310	285	263	243	226	210	196	184	173	120	111	103
		3: 14'-1"	400	373	339	310	285	263	243	226	210	196	184	173	163	111	103
		q - 3 welds	1689	1672	1657	1644	1632	1621	1611	1602	1594	1586	1579	1572	1566	1561	1555
		q - 4 welds	1872	1841	1813	1788	1766	1746	1728	1711	1696	1682	1669	1657	1645	1635	1625
	18	1: 12'-5"	400	400	375	343	315	290	269	250	232	175	161	149	137	127	118
		2: 14'-10"	400	400	375	343	315	290	269	250	232	217	203	191	180	170	118
		3: 14'-7"	400	400	375	343	315	290	269	250	232	217	203	191	180	170	118
		q - 3 welds	1705	1686	1669	1653	1640	1627	1616	1606	1596	1588	1580	1572	1565	1559	1553
		q - 4 welds	1925	1889	1858	1830	1805	1782	1761	1742	1724	1708	1694	1680	1667	1655	1644
	16	1: 13'-1"	400	400	400	400	375	346	320	297	277	259	242	185	171	159	148
		2: 16'-4"	400	400	400	400	375	346	320	297	277	259	242	228	214	202	186
		3: 15'-4"	400	400	400	400	375	346	320	297	277	259	242	228	214	202	186
		q - 3 welds	1749	1725	1704	1685	1668	1652	1638	1625	1613	1603	1593	1583	1575	1567	1559
		q - 4 welds	2044	2000	1960	1925	1894	1865	1839	1815	1793	1773	1755	1738	1722	1707	1693

See Page 35 for footnotes.

(continued)

TABLE 11 - ALLOWABLE SUPERIMPOSED LOADS (psf) AND DIAPHRAGM SHEAR VALUES, q (plf), FOR PLW3™-36 FORMLOK™ & W3-36 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4,5} (Cont'd.)

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)														
			8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
7¼" Structural Light Weight (110 pcf)	22	1: 9'-4"	373	337	307	231	208	188	170	154	140	128	117	107	97	89	82
		2: 9'-4"	373	337	307	231	208	188	170	154	140	128	117	107	97	89	82
		3: 9'-4"	373	337	307	231	208	188	170	154	140	128	117	107	97	89	82
		q - 3 welds	1992	1980	1969	1960	1951	1944	1937	1930	1924	1919	1914	1909	1905	1901	1897
		q - 4 welds	2094	2072	2052	2035	2019	2005	1992	1980	1969	1959	1950	1941	1933	1926	1919
	21	1: 10'-2"	400	364	331	302	278	206	187	170	155	142	130	119	109	100	92
		2: 10'-11"	400	364	331	302	278	256	187	170	155	142	130	119	109	100	92
		3: 11'-4"	400	364	331	302	278	256	237	170	155	142	130	119	109	100	92
		q - 3 welds	1992	1978	1967	1956	1947	1938	1930	1923	1917	1911	1905	1900	1895	1891	1887
		q - 4 welds	2115	2091	2069	2050	2032	2016	2002	1989	1977	1966	1956	1946	1937	1929	1922
	20	1: 10'-11"	400	388	353	323	296	273	203	185	169	155	142	130	119	110	101
		2: 11'-7"	400	388	353	323	296	273	253	235	169	155	142	130	119	110	101
		3: 12'-0"	400	388	353	323	296	273	253	235	219	155	142	130	119	110	101
		q - 3 welds	1994	1980	1967	1955	1945	1936	1927	1920	1912	1906	1900	1894	1889	1884	1880
		q - 4 welds	2137	2110	2087	2066	2047	2029	2014	1999	1986	1974	1963	1953	1943	1935	1926
	19	1: 11'-7"	400	400	399	364	334	308	285	265	197	181	166	153	141	130	120
		2: 12'-10"	400	400	399	364	334	308	285	265	247	231	166	153	141	130	120
		3: 13'-4"	400	400	399	364	334	308	285	265	247	231	216	153	141	130	120
		q - 3 welds	2005	1988	1973	1960	1948	1937	1927	1918	1909	1902	1895	1888	1882	1877	1871
		q - 4 welds	2188	2157	2129	2104	2082	2062	2044	2027	2012	1998	1985	1973	1961	1951	1941
	18	1: 11'-11"	400	400	400	400	369	341	315	293	222	204	188	174	161	149	138
		2: 13'-11"	400	400	400	400	369	341	315	293	273	255	239	224	161	149	138
		3: 13'-11"	400	400	400	400	369	341	315	293	273	255	239	224	161	149	138
		q - 3 welds	2021	2002	1985	1969	1956	1943	1932	1922	1912	1904	1896	1888	1881	1875	1869
		q - 4 welds	2241	2205	2174	2146	2120	2098	2077	2058	2040	2024	2010	1996	1983	1971	1960
	16	1: 12'-7"	400	400	400	400	400	400	375	348	324	303	233	215	200	185	172
		2: 15'-7"	400	400	400	400	400	400	375	348	324	303	283	266	251	236	223
		3: 14'-8"	400	400	400	400	400	400	375	348	324	303	283	266	251	236	172
		q - 3 welds	2065	2041	2020	2001	1984	1968	1954	1941	1929	1919	1909	1899	1891	1883	1875
		q - 4 welds	2360	2316	2276	2241	2210	2181	2155	2131	2109	2089	2071	2054	2038	2023	2009

¹ Shoring calculations based on the following:

- Deck supporting dead load of concrete plus either 20 psf uniform or 150 pound concentrated construction live load for flexure.
- Dead load deflection limited to L/180 of span length, not to exceed 3/4-inch.
- Allowable reactions based on maximum bearing length permitted by AISI S100. Support reactions for unshored spans due to dead loads and uniform construction live loads must be evaluated based on the allowable reactions set forth in Table 5.

² Shoring is required at midspan for superimposed load values to the right of the heavy line.

³ Total slab depth is nominal depth from top of concrete to bottom of steel deck.

⁴ Concrete fill to have minimum compressive strength $f'_c = 3,000$ psi.

⁵ PLW3-36 and W3-36 FORMLOK decks with structural concrete fill may be assumed to have a Flexibility Factor, $F < 1$.

**TABLE 12 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLN™-24 FORMLOK™ & N-24 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4}**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS		SPAN (ft-in.)														
				(ft-in.)	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"
5" Normal Weight (145 pcf)	22	1: 9'-9"	241	218	198	181	131	118	107	97	88	80	72	66	60	55	50	
		2: 11'-5"	241	218	198	181	166	153	142	97	88	80	72	66	60	55	50	
		3: 11'-6"	241	218	198	181	166	153	142	132	88	80	72	66	60	55	50	
		q - 4 welds	1699	1678	1658	1641	1625	1611	1599	1587	1576	1566	1557	1549	1541	1534	1527	
		F - 4 welds	1.10	1.11	1.13	1.14	1.15	1.16	1.17	1.18	1.19	1.19	1.20	1.21	1.21	1.22	1.22	
	20	1: 11'-5"	255	231	210	192	176	162	150	104	95	86	78	71	65	59	54	
		2: 13'-2"	255	231	210	192	176	162	150	139	130	121	114	71	65	59	54	
		3: 13'-5"	255	231	210	192	176	162	150	139	130	121	114	71	65	59	54	
		q - 4 welds	1741	1715	1692	1671	1652	1635	1620	1606	1593	1581	1570	1560	1551	1542	1534	
		F - 4 welds	0.98	0.99	1.01	1.02	1.03	1.04	1.05	1.06	1.07	1.08	1.09	1.09	1.10	1.11	1.11	
	18	1: 13'-1"	257	232	211	193	177	163	151	140	131	122	114	72	65	59	54	
		2: 15'-4"	257	232	211	193	177	163	151	140	131	122	114	107	101	95	90	
		3: 15'-8"	257	232	211	193	177	163	151	140	131	122	114	107	101	95	90	
		q - 4 welds	1842	1808	1777	1749	1724	1702	1681	1663	1646	1630	1615	1602	1589	1578	1567	
		F - 4 welds	0.80	0.82	0.83	0.84	0.86	0.87	0.88	0.89	0.90	0.91	0.91	0.92	0.93	0.94	0.94	
	16	1: 13'-11"	259	234	213	195	179	165	152	142	132	123	115	108	65	60	54	
		2: 17'-0"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	91	
		3: 16'-5"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	91	
		q - 4 welds	1959	1916	1877	1843	1812	1783	1758	1734	1713	1693	1675	1658	1643	1628	1615	
		F - 4 welds	0.67	0.69	0.70	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.79	0.80	0.80	0.81	0.82	
5½" Normal Weight (145 pcf)	22	1: 9'-4"	264	238	217	158	142	128	115	104	94	85	77	70	64	58	52	
		2: 10'-10"	264	238	217	198	182	168	115	104	94	85	77	70	64	58	52	
		3: 10'-11"	264	238	217	198	182	168	115	104	94	85	77	70	64	58	52	
		q - 4 welds	1938	1917	1897	1880	1865	1850	1838	1826	1815	1805	1796	1788	1780	1773	1766	
		F - 4 welds	0.96	0.97	0.98	0.99	1.00	1.01	1.02	1.02	1.03	1.03	1.04	1.04	1.05	1.05	1.06	
	20	1: 10'-10"	278	252	229	209	192	177	123	112	101	92	84	76	69	63	57	
		2: 12'-6"	278	252	229	209	192	177	164	152	142	132	84	76	69	63	57	
		3: 12'-9"	278	252	229	209	192	177	164	152	142	132	84	76	69	63	57	
		q - 4 welds	1980	1954	1931	1910	1891	1874	1859	1845	1832	1820	1809	1799	1790	1781	1773	
		F - 4 welds	0.86	0.87	0.88	0.89	0.90	0.91	0.92	0.92	0.93	0.94	0.94	0.95	0.95	0.96	0.96	
	18	1: 12'-8"	279	252	229	209	192	177	164	152	142	132	83	75	69	62	57	
		2: 14'-8"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	57	
		3: 15'-1"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	98	
		q - 4 welds	2081	2047	2016	1988	1963	1941	1920	1902	1885	1869	1854	1841	1828	1817	1806	
		F - 4 welds	0.71	0.72	0.73	0.74	0.75	0.76	0.77	0.78	0.78	0.79	0.80	0.80	0.81	0.81	0.82	
	16	1: 13'-5"	279	253	230	210	193	178	164	153	142	133	124	75	68	62	56	
		2: 16'-3"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98	
		3: 15'-11"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98	
		q - 4 welds	2198	2155	2116	2082	2051	2022	1997	1974	1952	1932	1914	1897	1882	1867	1854	
		F - 4 welds	0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.68	0.69	0.70	0.70	0.71	0.71	
6" Normal Weight (145 pcf)	22	1: 8'-11"	289	261	192	172	154	138	125	113	102	92	83	76	68	62	56	
		2: 10'-4"	289	261	238	217	199	138	125	113	102	92	83	76	68	62	56	
		3: 10'-5"	289	261	238	217	199	138	125	113	102	92	83	76	68	62	56	
		q - 4 welds	2178	2156	2136	2119	2104	2090	2077	2065	2054	2045	2035	2027	2019	2012	2005	
		F - 4 welds	0.86	0.87	0.87	0.88	0.89	0.89	0.90	0.90	0.91	0.91	0.92	0.92	0.93	0.93	0.93	
	20	1: 10'-4"	304	275	250	229	210	148	133	121	109	99	90	82	74	67	61	
		2: 12'-0"	304	275	250	229	210	193	179	166	155	99	90	82	74	67	61	
		3: 12'-2"	304	275	250	229	210	193	179	166	155	99	90	82	74	67	61	
		q - 4 welds	2219	2193	2170	2149	2130	2113	2098	2084	2071	2059	2048	2038	2029	2020	2012	
		F - 4 welds	0.77	0.78	0.79	0.79	0.80	0.81	0.81	0.82	0.82	0.83	0.83	0.84	0.84	0.84	0.85	

See Page 39 for footnotes.

(continued)

**TABLE 12 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLN™-24 FORMLOK™ & N-24 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS		SPAN (ft-in.)														
				(ft-in.)	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"
6" Normal Weight (145 pcf)	18	1: 12'-4"	304	274	250	228	209	193	179	166	154	98	89	81	73	66	60	
		2: 14'-1"	304	274	250	228	209	193	179	166	154	144	135	127	119	66	60	
		3: 14'-7"	304	274	250	228	209	193	179	166	154	144	135	127	119	113	60	
		q - 4 welds	2321	2286	2255	2227	2202	2180	2159	2141	2124	2108	2093	2080	2067	2056	2045	
	F - 4 welds	0.64	0.65	0.66	0.66	0.67	0.68	0.68	0.69	0.70	0.70	0.71	0.71	0.71	0.72	0.72		
	16	1: 13'-1"	303	274	249	228	209	193	178	166	154	144	135	80	72	66	59	
		2: 15'-7"	303	274	249	228	209	193	178	166	154	144	135	127	119	113	106	
		3: 15'-5"	303	274	249	228	209	193	178	166	154	144	135	127	119	113	106	
q - 4 welds		2437	2394	2355	2321	2290	2262	2236	2213	2191	2172	2153	2136	2121	2106	2093		
F - 4 welds	0.54	0.55	0.56	0.57	0.58	0.58	0.59	0.60	0.60	0.61	0.61	0.62	0.62	0.63	0.63			
6½" Normal Weight (145 pcf)	22	1: 8'-6"	316	286	209	187	167	150	135	122	110	100	90	82	74	67	60	
		2: 9'-11"	316	286	260	237	167	150	135	122	110	100	90	82	74	67	60	
		3: 10'-0"	316	286	260	237	218	150	135	122	110	100	90	82	74	67	60	
		q - 4 welds	2417	2395	2376	2358	2343	2329	2316	2304	2293	2284	2275	2266	2258	2251	2244	
	F - 4 welds	0.77	0.78	0.79	0.79	0.80	0.80	0.81	0.81	0.81	0.82	0.82	0.82	0.83	0.83	0.83		
	20	1: 9'-11"	332	301	273	250	178	161	145	131	118	107	97	88	80	73	66	
		2: 11'-6"	332	301	273	250	229	211	196	182	118	107	97	88	80	73	66	
		3: 11'-7"	332	301	273	250	229	211	196	182	118	107	97	88	80	73	66	
		q - 4 welds	2458	2432	2409	2388	2369	2352	2337	2323	2310	2298	2288	2277	2268	2259	2251	
	F - 4 welds	0.69	0.70	0.71	0.71	0.72	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.75	0.75	0.76		
	18	1: 12'-0"	331	299	272	248	228	210	195	181	168	106	96	87	79	71	65	
		2: 13'-6"	331	299	272	248	228	210	195	181	168	157	147	138	79	71	65	
		3: 14'-0"	331	299	272	248	228	210	195	181	168	157	147	138	130	71	65	
		q - 4 welds	2560	2525	2494	2466	2442	2419	2399	2380	2363	2347	2332	2319	2307	2295	2284	
	F - 4 welds	0.58	0.59	0.59	0.60	0.61	0.61	0.62	0.62	0.63	0.63	0.63	0.64	0.64	0.64	0.65		
	16	1: 12'-9"	329	298	271	247	227	209	194	180	168	157	94	85	77	70	63	
2: 15'-0"		329	298	271	247	227	209	194	180	168	157	147	138	130	122	116		
3: 15'-1"		329	298	271	247	227	209	194	180	168	157	147	138	130	122	116		
q - 4 welds		2677	2633	2594	2560	2529	2501	2475	2452	2430	2411	2392	2376	2360	2345	2332		
F - 4 welds	0.49	0.50	0.51	0.52	0.52	0.53	0.53	0.54	0.54	0.55	0.55	0.56	0.56	0.56	0.57			
7½" Normal Weight (145 pcf)	22	1: 7'-11"	313	277	246	220	197	177	159	143	129	117	105	95	86	78	70	
		2: 9'-2"	373	338	307	220	197	177	159	143	129	117	105	95	86	78	70	
		3: 9'-3"	373	338	307	220	197	177	159	143	129	117	105	95	86	78	70	
		q - 4 welds	2895	2873	2854	2836	2821	2807	2794	2782	2772	2762	2753	2744	2736	2729	2722	
	F - 4 welds	0.65	0.65	0.65	0.66	0.66	0.67	0.67	0.67	0.67	0.68	0.68	0.68	0.68	0.68	0.69		
	20	1: 9'-2"	392	355	322	233	209	188	170	153	138	125	113	103	93	84	76	
		2: 10'-8"	392	355	322	295	270	249	170	153	138	125	113	103	93	84	76	
		3: 10'-9"	392	355	322	295	270	249	170	153	138	125	113	103	93	84	76	
		q - 4 welds	2936	2910	2887	2866	2848	2831	2815	2801	2788	2777	2766	2756	2746	2737	2729	
	F - 4 welds	0.58	0.59	0.59	0.59	0.60	0.60	0.61	0.61	0.61	0.61	0.62	0.62	0.62	0.62	0.62		
	18	1: 11'-5"	389	352	320	292	268	247	229	151	136	123	111	101	91	82	75	
		2: 12'-7"	389	352	320	292	268	247	229	212	198	185	111	101	91	82	75	
		3: 13'-0"	389	352	320	292	268	247	229	212	198	185	173	101	91	82	75	
		q - 4 welds	3038	3003	2972	2945	2920	2897	2877	2858	2841	2825	2811	2797	2785	2773	2762	
	F - 4 welds	0.49	0.49	0.50	0.50	0.51	0.51	0.51	0.52	0.52	0.52	0.53	0.53	0.53	0.53	0.53		
	16	1: 12'-2"	386	349	317	290	266	246	227	211	197	121	109	99	89	81	73	
2: 14'-0"		386	349	317	290	266	246	227	211	197	184	172	162	152	81	73		
3: 14'-4"		386	349	317	290	266	246	227	211	197	184	172	162	152	81	73		
q - 4 welds		3155	3111	3073	3038	3007	2979	2953	2930	2908	2889	2871	2854	2838	2824	2810		
F - 4 welds	0.42	0.42	0.43	0.43	0.44	0.44	0.45	0.45	0.45	0.46	0.46	0.46	0.47	0.47	0.47			

See Page 39 for footnotes.

(continued)

**TABLE 12 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLN™-24 FORMLOK™ & N-24 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS	SPAN (ft-in.)														
			(ft-in.)	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"
5" Structural Light Weight (110 pcf)	22	1: 10'-9"	241	218	198	181	166	153	115	105	96	88	80	74	68	63	58
		2: 12'-7"	241	218	198	181	166	153	142	132	123	109	80	74	68	63	58
		3: 12'-8"	241	218	198	181	166	153	142	132	123	109	80	74	68	63	58
		q - 4 welds	1375	1353	1334	1317	1301	1287	1274	1262	1252	1242	1233	1224	1217	1209	1203
		F - 4 welds	1.36	1.38	1.40	1.42	1.44	1.45	1.47	1.48	1.49	1.50	1.52	1.53	1.54	1.54	1.55
		1: 12'-7"	255	231	210	192	176	162	150	139	130	118	86	79	73	67	62
	20	2: 14'-3"	255	231	210	192	176	162	150	139	130	118	105	94	84	67	62
		3: 14'-9"	255	231	210	192	176	162	150	139	130	118	105	94	84	76	62
		q - 4 welds	1416	1390	1367	1346	1328	1311	1295	1281	1269	1257	1246	1236	1226	1218	1209
		F - 4 welds	1.20	1.23	1.25	1.27	1.28	1.30	1.32	1.33	1.34	1.36	1.37	1.38	1.39	1.40	1.41
		1: 13'-11"	257	232	211	193	177	163	151	140	131	122	114	107	73	67	62
		2: 16'-8"	257	232	211	193	177	163	151	140	131	122	114	107	96	87	78
	18	3: 16'-8"	257	232	211	193	177	163	151	140	131	122	114	107	96	87	78
		q - 4 welds	1518	1483	1452	1425	1400	1377	1357	1338	1321	1305	1291	1277	1265	1253	1242
		F - 4 welds	0.97	1.00	1.02	1.04	1.06	1.07	1.09	1.10	1.12	1.13	1.14	1.16	1.17	1.18	1.19
		1: 14'-10"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	62
		2: 18'-5"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	87
		3: 17'-6"	259	234	213	195	179	165	152	142	132	123	115	108	102	96	87
	16	q - 4 welds	1635	1591	1553	1518	1487	1459	1433	1410	1389	1369	1351	1334	1318	1304	1290
		F - 4 welds	0.81	0.83	0.85	0.87	0.89	0.91	0.92	0.94	0.95	0.96	0.98	0.99	1.00	1.01	1.02
5½" Structural Light Weight (110 pcf)	22	1: 10'-3"	264	238	217	198	182	137	124	113	103	95	87	79	73	67	62
		2: 11'-11"	264	238	217	198	182	168	155	144	103	95	87	79	73	67	62
		3: 12'-1"	264	238	217	198	182	168	155	144	134	95	87	79	73	67	62
		q - 4 welds	1533	1511	1492	1475	1459	1445	1432	1420	1410	1400	1391	1382	1375	1367	1361
		F - 4 welds	1.22	1.24	1.25	1.27	1.28	1.29	1.30	1.32	1.33	1.33	1.34	1.35	1.36	1.37	1.37
		1: 12'-0"	278	252	229	209	192	177	164	152	142	101	93	85	78	72	66
	20	2: 13'-8"	278	252	229	209	192	177	164	152	142	132	124	116	78	72	66
		3: 14'-1"	278	252	229	209	192	177	164	152	142	132	124	116	110	72	66
		q - 4 welds	1574	1548	1525	1504	1486	1469	1453	1439	1427	1415	1404	1394	1384	1376	1367
		F - 4 welds	1.08	1.10	1.12	1.13	1.15	1.16	1.17	1.18	1.20	1.21	1.21	1.22	1.23	1.24	1.25
		1: 13'-6"	279	252	229	209	192	177	164	152	142	132	124	117	78	72	66
		2: 16'-0"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	98
	18	3: 16'-1"	279	252	229	209	192	177	164	152	142	132	124	117	110	103	98
		q - 4 welds	1676	1641	1610	1583	1558	1535	1515	1496	1479	1463	1449	1435	1423	1411	1400
		F - 4 welds	0.88	0.90	0.92	0.93	0.95	0.96	0.98	0.99	1.00	1.01	1.02	1.03	1.04	1.05	1.06
		1: 14'-4"	279	253	230	210	193	178	164	153	142	133	124	117	110	71	65
		2: 17'-9"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98
		3: 16'-11"	279	253	230	210	193	178	164	153	142	133	124	117	110	104	98
	16	q - 4 welds	1793	1749	1711	1676	1645	1617	1591	1568	1547	1527	1509	1492	1476	1462	1448
		F - 4 welds	0.74	0.76	0.77	0.79	0.80	0.82	0.83	0.84	0.85	0.87	0.88	0.89	0.89	0.90	0.91
6¼" Structural Light Weight (110 pcf)	22	1: 9'-7"	302	273	248	227	172	155	141	128	117	107	98	90	82	76	69
		2: 11'-2"	302	273	248	227	208	192	178	128	117	107	98	90	82	76	69
		3: 11'-4"	302	273	248	227	208	192	178	128	117	107	98	90	82	76	69
		q - 4 welds	1770	1748	1729	1712	1696	1682	1669	1657	1647	1637	1628	1619	1612	1604	1597
		F - 4 welds	1.06	1.07	1.08	1.09	1.10	1.11	1.12	1.13	1.13	1.14	1.15	1.15	1.16	1.16	1.17
		1: 11'-3"	318	288	262	239	219	202	187	137	125	114	105	96	88	81	75
	20	2: 12'-11"	318	288	262	239	219	202	187	174	162	151	105	96	88	81	75
		3: 13'-2"	318	288	262	239	219	202	187	174	162	151	142	96	88	81	75
		q - 4 welds	1811	1785	1762	1741	1723	1706	1690	1676	1663	1652	1641	1631	1621	1613	1604
		F - 4 welds	0.94	0.95	0.97	0.98	0.99	1.00	1.01	1.02	1.02	1.03	1.04	1.05	1.05	1.06	1.06

See Page 39 for footnotes.

(continued)

**TABLE 12 - ALLOWABLE SUPERIMPOSED LOADS (psf),
DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR
PLN™-24 FORMLOK™ & N-24 FORMLOK™ DECK PANELS WITH CONCRETE FILL^{1,2,3,4} (Cont'd.)**

TOTAL SLAB DEPTH & CONC. TYPE	DECK GAGE	NO. OF DECK SPANS & MAX UNSHORED CLEAR SPANS (ft-in.)	SPAN (ft-in.)														
			8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"	13'-6"	14'-0"	14'-6"	15'-0"
6 1/4" Structural Light Weight (110 pcf)	18	1: 12'-11"	317	287	260	238	219	201	186	173	161	151	103	95	87	80	73
		2: 15'-1"	317	287	260	238	219	201	186	173	161	151	141	133	125	118	111
		3: 15'-5"	317	287	260	238	219	201	186	173	161	151	141	133	125	118	111
		q - 4 welds	1913	1878	1847	1820	1795	1772	1752	1733	1716	1700	1686	1672	1660	1648	1637
		F - 4 welds	0.77	0.79	0.80	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.88	0.88	0.89	0.90	0.90
	16	1: 13'-9"	316	286	260	237	218	201	186	173	161	150	141	132	86	79	72
		2: 16'-9"	316	286	260	237	218	201	186	173	161	150	141	132	124	117	111
		3: 16'-3"	316	286	260	237	218	201	186	173	161	150	141	132	124	117	111
		q - 4 welds	2030	1986	1948	1913	1882	1854	1828	1805	1784	1764	1746	1729	1713	1699	1685
		F - 4 welds	0.65	0.67	0.68	0.69	0.70	0.71	0.72	0.73	0.74	0.75	0.76	0.76	0.77	0.78	0.78
7 1/4" Structural Light Weight (110 pcf)	22	1: 8'-11"	359	324	250	225	203	183	166	151	138	126	115	105	97	89	81
		2: 10'-5"	359	324	295	269	247	183	166	151	138	126	115	105	97	89	81
		3: 10'-6"	359	324	295	269	247	228	166	151	138	126	115	105	97	89	81
		q - 4 welds	2086	2064	2045	2027	2012	1998	1985	1973	1963	1953	1944	1935	1927	1920	1913
		F - 4 welds	0.90	0.91	0.91	0.92	0.93	0.94	0.94	0.95	0.95	0.96	0.96	0.97	0.97	0.97	0.98
	20	1: 10'-5"	377	341	310	283	260	195	177	161	147	134	123	113	103	95	87
		2: 12'-1"	377	341	310	283	260	240	222	206	192	134	123	113	103	95	87
		3: 12'-3"	377	341	310	283	260	240	222	206	192	134	123	113	103	95	87
		q - 4 welds	2127	2101	2078	2057	2039	2022	2006	1992	1979	1968	1957	1947	1937	1928	1920
		F - 4 welds	0.80	0.81	0.82	0.83	0.84	0.84	0.85	0.86	0.86	0.87	0.87	0.88	0.88	0.88	0.89
	18	1: 12'-4"	374	338	307	281	258	238	220	204	190	132	121	111	102	93	86
		2: 14'-2"	374	338	307	281	258	238	220	204	190	178	167	156	147	93	86
		3: 14'-7"	374	338	307	281	258	238	220	204	190	178	167	156	147	139	86
		q - 4 welds	2229	2194	2163	2136	2111	2088	2068	2049	2032	2016	2002	1988	1976	1964	1953
		F - 4 welds	0.66	0.67	0.68	0.69	0.70	0.71	0.71	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.76
	16	1: 13'-1"	372	336	305	279	256	236	219	203	189	177	165	109	100	92	84
		2: 15'-8"	372	336	305	279	256	236	219	203	189	177	165	155	146	138	130
		3: 15'-6"	372	336	305	279	256	236	219	203	189	177	165	155	146	138	130
		q - 4 welds	2346	2302	2264	2229	2198	2170	2144	2121	2100	2080	2062	2045	2029	2015	2001
		F - 4 welds	0.56	0.57	0.58	0.59	0.60	0.61	0.62	0.62	0.63	0.64	0.64	0.65	0.65	0.66	0.66

¹ Shoring calculations based on the following:

- Deck supporting dead load of concrete plus either 20 psf uniform or 150 pound concentrated construction live load for flexure.
- Dead load deflection limited to L/180 of span length, not to exceed 3/4-inch.
- Allowable reactions based on maximum bearing length permitted by AISI S100. Support reactions for unshored spans due to dead loads and uniform construction live loads must be evaluated based on the allowable reactions set forth in Table 5.

² Shoring is required at midspan for superimposed load values to the right of the heavy line.

³ Total slab depth is nominal depth from top of concrete to bottom of steel deck.

⁴ Concrete fill to have minimum compressive strength $f'_c = 3,000$ psi.

**TABLE 13—ALLOWABLE DIAPHRAGM SHEAR VALUES (plf) FOR DECKS
WITH CONCRETE FILL AND 3/4" DIAMETER STUD SHEAR CONNECTORS** ^{1-8, 16, 17, 19}

CONCRETE TYPE ⁹	CONCRETE THICKNESS ¹⁰	SPACING OF STUD SHEAR CONNECTORS ^{11, 14}							F ¹²
		12"	16"	18"	24"	30"	32"	36"	
MINIMUM CONCRETE REINFORCEMENT OF 0.0025 TIMES THE AREA OF FILL ABOVE THE DECK									
NW	2" ¹⁸	3110	3110	3110	3110	3110	3110	2870	0.40
	2½"	3890	3890	3890	3890	3440	3230	2870	0.32
	3"	4670	4670	4670	4300	3440	3230	2870	0.26
	3½"	5450	5450	5450	4300	3440	3230	2870	0.23
	4½"	7000	6460	5740	4300	3440	3230	2870	0.18
	6"	8610	6460	5740	4300	3440	3230	2870	0.13
LW	2" ¹⁸	2910	2910	2910	2910	2910	2910	2850	0.56
	2½"	3640	3640	3640	3640	3420	3200	2850	0.45
	3¾"	4740	4740	4740	4270	3420	3200	2850	0.35
	4¼"	6190	6190	5700	4270	3420	3200	2850	0.26
	6"	8550	6410	5700	4270	3420	3200	2850	0.19
MINIMUM CONCRETE REINFORCEMENT OF 0.00075 TIMES THE AREA OF FILL ABOVE THE DECK ¹³									
NW	2" ¹⁸	1310	1310	1310	1310	1310	1310	1310	0.40
	2½"	1640	1640	1640	1640	1640	1640	1640	0.32
	3"	1970	1970	1970	1970	1970	1970	1970	0.26
	3½"	2300	2300	2300	2300	2300	2300	2300	0.23
	4½"	2950	2950	2950	2950	2950	2950	2870	0.18
	6"	3940	3940	3940	3940	3440	3230	2870	0.13
LW	2" ¹⁸	1110	1110	1110	1110	1110	1110	1110	0.56
	2½"	1390	1390	1390	1390	1390	1390	1390	0.45
	3¾"	1810	1810	1810	1810	1810	1810	1810	0.35
	4¼"	2370	2370	2370	2370	2370	2370	2370	0.26
	6"	3350	3350	3350	3350	3350	3200	2850	0.19

¹ The allowable diaphragm shear values are based on concrete slab reinforcement with a minimum area as stated in the table below. Reinforcement shall have an equivalent area and spacing in both directions. Welded wire fabric of the sizes listed below meet this requirement. The fabric is placed approximately one inch below the top of the concrete.

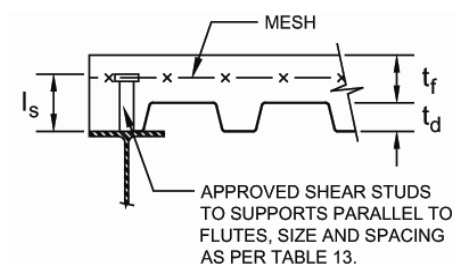
Minimum Reinforcement for Tabulated Shear Values

Concrete Thickness ¹⁰	Reinforcement = 0.0025 times area of fill above deck		Reinforcement = 0.00075 times area of fill above deck	
	Area of Steel (in ² /ft)	Suggested Fabric ¹⁵	Area of Steel (in ² /ft)	Suggested Fabric ¹⁵
2"	0.060	4 x 4 - W2.0 x W2.0	0.028	6 x 6 - W1.4 x W1.4
2½"	0.075	4 x 4 - W2.5 x W2.5	0.028	6 x 6 - W1.4 x W1.4
3"	0.090	6 x 6 - W4.5 x W4.5	0.028	6 x 6 - W1.4 x W1.4
¾"	0.098	6 x 6 - W5.0 x W5.0	0.029	6 x 6 - W2.0 x W2.0
3½"	0.105	4 x 4 - W3.5 x W3.5	0.032	6 x 6 - W2.0 x W2.0
4¼"	0.128	6 x 6 - W6.5 x W6.5	0.038	6 x 6 - W2.0 x W2.0
4½"	0.135	4 x 4 - W4.5 x W4.5	0.041	4 x 4 - W1.4 x W1.4
6"	0.180	4 x 4 - W6.0 x W6.0	0.054	6 x 6 - W2.9 x W2.9

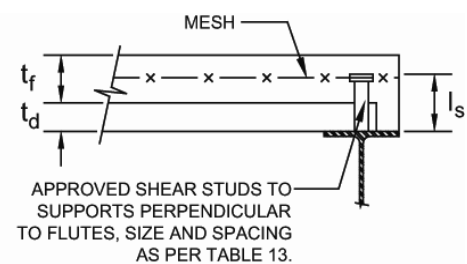
² Stud shear connector diameter must be less than or equal to 2.5 times the steel support thickness unless connector is located directly over support web.

- ³ See Figure 9 for details.
- ⁴ Allowable diaphragm shear strengths assume "weak stud position" as described in AISC Steel Construction Manual (13th Ed.) Figure C-I3.4, with a single stud shear connector per rib at the spacings shown in the tables. The allowable values may be used when deck is either perpendicular or parallel to supports.
- ⁵ For local shear transfer within the field of the diaphragm, 3/4" diameter studs have an allowable shear value of 8.60 kips per stud for normal weight concrete fills and 8.55 kips per stud for structural light weight concrete. However, when using 1-5/16" (Deep) Vercor, 1/2" diameter studs having an allowable shear value of 3.83 kips per stud for normal weight concrete and 3.80 kips for light weight concrete must be used.
- ⁶ Sidelap connections must be spaced at 36" on center maximum with either button-punch, No. 10 screw, 1 1/2" long top-seam weld (standing seams), or 1 1/2" long fillet weld (nested seams). Sidelaps of PLB, PLW2, PLW3, and PLN must be connected with Vercor sidelap connections (VSC) at 36" on center maximum.
- ⁷ To obtain factored (LRFD) diaphragm strengths, the values may be multiplied by a factor of 1.5 for all load combinations.
- ⁸ See ACI 318, Section 9.3.4 for possible reductions of the diaphragm shear capacity dependent on the vertical components of the primary lateral-force-resisting system. Tabulated values may be multiplied by $\phi / 0.75$, where ϕ is modified in accordance with ACI 318, Section 9.3.4.
- ⁹ Design compressive strength $f'_c = 3000$ psi minimum.
NW = Normal Weight concrete (145 pcf)
LW = Structural Light Weight concrete (110 pcf)
- ¹⁰ Concrete thickness (t_f) is measured above the top flute of the steel deck.
- ¹¹ Formlok deck types PLB, B, PLB-CD, BCD, BR, PLW2, W2, PLW2-CD, W2CD, PLW3, W3, PLW3-CD, W3CD, PLN, N, PLN-CD, and NCD must use minimum 3/4" diameter studs to achieve the allowable values. 1-5/16" (Deep) Vercor must use minimum 1/2" diameter studs. The tabulated shear values must be multiplied by a factor of 0.44 for 1-5/16" (Deep) Vercor.
- ¹² Flexibility factor (F) indicates deflection in micro inches of 1 foot element under a shear of 1 pound per foot.
- ¹³ Also compare to allowable diaphragm capacity of composite decks in Tables 8 through 12.
- ¹⁴ The maximum center-to-center spacing of stud shear connectors must not exceed eight times the total slab thickness nor 36".
- ¹⁵ Minimum lap of welded wire fabric must be 12".
- ¹⁶ Steel decks must be fastened to intermediate deck supports with arc spot welds or mechanical fasteners
- ¹⁷ Shear stud connectors shall extend not less than 1-1/2" above top of steel deck and shall have at least 1/2" concrete cover. Minimum stud lengths for each deck profile are given in Figure 9.
- ¹⁸ Tabulated shear values for slabs with 2" concrete cover thickness are not applicable to 1-5/16" Deep Vercor deck unless shear stud connectors meeting the requirements of footnote 17 are used.
- ¹⁹ All FORMLOK and 1-5/16" (Deep) VERCOR steel deck profiles have an average rib width, w_r , of not less than 2" as required in AISC 360 Section I3.2.

FIGURE 9-STUD SHEAR CONNECTOR DETAILS



STUD SHEAR CONNECTORS AT SUPPORTS
PARALLEL TO FLUTES



STUD SHEAR CONNECTORS AT SUPPORTS
PERPENDICULAR TO FLUTES

DECK HEIGHT (t_d)	STUD LENGTH (l_s)
1-5/16"	3"
1 1/2"	3"
2"	3 1/2"
3"	4 1/2"

(Minimum Finished Length)

TABLE 14—ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F , FOR TYPE PLW2™-36 FORMLOK™ DECK WITH SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6}

GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)										
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"		
36/4 WELD PATTERN AT SUPPORTS												
22	VSC @ 24"	q	443	429	386	380	351	348	327	326	309	
		F	11.6+54R	10.9+46R	13.3+41R	12.6+36R	14.8+32R	14.1+29R	16.1+27R	15.4+25R	17.4+23R	
	VSC @ 12"	q	554	519	492	470	453	438	426	415	393	
		F	6.3+54R	6.6+46R	6.9+41R	7.2+36R	7.4+32R	7.7+29R	7.9+27R	8.1+25R	8.3+23R	
	VSC @ 8"	q	640	613	573	547	506	471	441	415	393	
		F	4.8+54R	4.8+46R	5.1+41R	5.2+36R	5.4+32R	5.4+29R	5.7+27R	5.7+25R	5.9+23R	
	VSC @ 4"	q	742	661	598	547	506	471	441	415	393	
		F	3.6+54R	3.6+46R	3.7+41R	3.7+36R	3.8+32R	3.8+29R	3.9+27R	3.9+25R	3.9+23R	
	21	VSC @ 24"	q	542	523	471	463	427	424	397	397	376
			F	9.5+44R	9.0+37R	10.9+33R	10.3+29R	12.1+26R	11.6+24R	13.3+22R	12.7+20R	14.3+19R
VSC @ 12"		q	674	630	597	570	549	531	516	503	476	
		F	5.3+44R	5.6+37R	5.8+33R	6.0+29R	6.3+26R	6.5+24R	6.7+22R	6.8+20R	7.0+19R	
VSC @ 8"		q	776	742	694	662	612	570	534	503	476	
		F	4.1+44R	4.2+37R	4.4+33R	4.4+29R	4.7+26R	4.7+24R	4.9+22R	4.9+20R	5.1+19R	
VSC @ 4"		q	898	800	724	662	612	570	534	503	476	
		F	3.1+44R	3.2+37R	3.2+33R	3.3+29R	3.3+26R	3.4+24R	3.4+22R	3.4+20R	3.5+19R	
20		VSC @ 24"	q	646	622	560	550	508	503	472	471	447
			F	7.9+36R	7.5+31R	9.1+27R	8.7+24R	10.1+22R	9.7+20R	11.1+18R	10.6+17R	11.9+15R
	VSC @ 12"	q	801	748	708	676	650	629	611	596	566	
		F	4.6+36R	4.8+31R	5.0+27R	5.2+24R	5.4+22R	5.5+20R	5.7+18R	5.9+17R	6.0+15R	
	VSC @ 8"	q	919	878	821	788	728	678	635	598	566	
		F	3.6+36R	3.7+31R	3.9+27R	3.9+24R	4.1+22R	4.1+20R	4.2+18R	4.2+17R	4.4+15R	
	VSC @ 4"	q	1068	952	861	788	728	678	635	598	566	
		F	2.8+36R	2.9+31R	2.9+27R	2.9+24R	3.0+22R	3.0+20R	3.0+18R	3.1+17R	3.1+15R	
	19	VSC @ 24"	q	863	829	746	732	675	669	628	626	594
			F	5.8+25R	5.5+22R	6.6+19R	6.3+17R	7.3+15R	7.0+14R	8.0+13R	7.7+12R	8.7+11R
VSC @ 12"		q	1063	992	937	895	861	833	809	789	770	
		F	3.5+25R	3.7+22R	3.8+19R	4.0+17R	4.1+15R	4.2+14R	4.3+13R	4.4+12R	4.5+11R	
VSC @ 8"		q	1216	1160	1084	1054	991	923	865	814	770	
		F	2.9+25R	2.9+22R	3.0+19R	3.1+17R	3.2+15R	3.2+14R	3.3+13R	3.3+12R	3.4+11R	
VSC @ 4"		q	1454	1295	1172	1073	991	923	865	814	770	
		F	2.3+25R	2.4+22R	2.4+19R	2.4+17R	2.4+15R	2.5+14R	2.5+13R	2.5+12R	2.5+11R	
18		VSC @ 24"	q	984	1003	888	885	817	809	760	757	719
			F	4.6+20R	4.4+17R	5.2+15R	5.0+13R	5.8+12R	5.6+11R	6.3+10R	6.1+9R	6.8+8R
	VSC @ 12"	q	1283	1196	1131	1080	1038	1005	977	953	933	
		F	2.9+20R	3.0+17R	3.1+15R	3.3+13R	3.4+12R	3.5+11R	3.5+10R	3.6+9R	3.7+8R	
	VSC @ 8"	q	1465	1397	1306	1269	1208	1156	1083	1020	965	
		F	2.4+20R	2.5+17R	2.6+15R	2.6+13R	2.7+12R	2.7+11R	2.8+10R	2.8+9R	2.9+8R	
	VSC @ 4"	q	1821	1622	1468	1344	1241	1156	1083	1020	965	
		F	2.0+20R	2.1+17R	2.1+15R	2.1+13R	2.1+12R	2.1+11R	2.2+10R	2.2+9R	2.2+8R	
	16	VSC @ 24"	q	1261	1320	1132	1184	1050	1096	993	1033	950
			F	2.9+12R	2.8+10R	3.3+9R	3.2+8R	3.6+7R	3.5+6R	3.9+6R	3.8+5R	4.2+5R
VSC @ 12"		q	1792	1672	1582	1512	1455	1410	1372	1340	1313	
		F	2.0+12R	2.1+10R	2.2+9R	2.2+8R	2.3+7R	2.3+6R	2.4+6R	2.5+5R	2.5+5R	
VSC @ 8"		q	2043	1949	1823	1774	1691	1663	1604	1587	1520	
		F	1.8+12R	1.8+10R	1.8+9R	1.9+8R	1.9+7R	1.9+6R	2.0+6R	2.0+5R	2.0+5R	
VSC @ 4"		q	2608	2472	2313	2117	1956	1821	1706	1607	1520	
		F	1.6+12R	1.6+10R	1.6+9R	1.6+8R	1.6+7R	1.6+6R	1.6+6R	1.6+5R	1.6+5R	

¹ VSC = Verco sidelap connection.

² The dimension from the first and last sidelap connection within each span is to be no more than one-half of the specified spacing.

³ R is the vertical span (L_v) of deck units divided by the length (L_s) of the deck sheet: $R = L_v/L_s$.

⁴ The flexibility limitations shown in Table 7 may be used as a guide in lieu of rational analysis of the anticipated deflections.

⁵ Interpolation of diaphragm strength between adjacent spans or sidelap spacings is permissible. For interpolated lengths, use diaphragm flexibility factor for the closest span length.

⁶ Diaphragm shear values for side seam fasteners placed at spacings other than those in the table should be determined based on the number of fasteners in each span.

TABLE 15–ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR W2-36 FORMLOK™ DECK WITH BUTTON PUNCHES (BP) OR 1½ INCH TOP SEAM WELDS (TSW) AT SIDELAPS ¹

GAGE	SIDELAP ATTACH- MENT		SPAN (ft-in.)								
			6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"
36/4 WELD PATTERN AT SUPPORTS											
22	BP @ 24"	q	195	181	159	152	138	134	124	122	114
		F	15.1+255R	16.4+218R	18.6+191R	19.6+170R	21.7+153R	22.5+139R	24.7+127R	25.3+118R	27.4+109R
	BP @ 12"	q	242	222	207	195	186	179	173	168	164
		F	12.8+255R	13.9+218R	14.9+191R	15.9+170R	16.8+153R	17.6+139R	18.4+127R	19.2+118R	19.9+109R
	TSW @ 24"	q	221	220	192	194	174	177	162	166	154
		F	11+255R	9.9+218R	10.0+191R	9.2+170R	9.3+153R	8.6+139R	8.7+127R	8.2+118R	8.2+109R
	TSW @ 12"	q	331	314	301	291	283	277	272	267	263
		F	8.3+255R	7.8+218R	7.4+191R	7.1+170R	6.8+153R	6.5+139R	6.3+127R	6.1+118R	6.0+109R
21	BP @ 24"	q	245	225	197	188	169	164	151	148	138
		F	13.3+191R	14.5+164R	16.4+143R	17.5+128R	19.4+115R	20.3+104R	22.2+96R	23.0+88R	24.9+82R
	BP @ 12"	q	296	269	249	234	223	213	205	199	194
		F	11.4+191R	12.5+164R	13.5+143R	14.5+128R	15.4+115R	16.2+104R	17.0+96R	17.8+88R	18.5+82R
	TSW @ 24"	q	286	281	245	246	221	224	204	208	193
		F	9.8+191R	8.9+164R	9.0+143R	8.4+128R	8.4+115R	7.9+104R	8.0+96R	7.5+88R	7.5+82R
	TSW @ 12"	q	418	395	377	364	353	344	337	331	325
		F	7.5+191R	7.1+164R	6.8+143R	6.5+128R	6.2+115R	6.0+104R	5.8+96R	5.7+88R	5.5+82R
20	BP @ 24"	q	300	273	240	226	204	197	181	177	165
		F	11.7+147R	12.9+126R	14.6+111R	15.7+98R	17.4+88R	18.3+80R	20.1+74R	20.9+68R	22.7+63R
	BP @ 12"	q	355	321	296	277	262	250	240	232	225
		F	10.3+147R	11.3+126R	12.3+111R	13.2+98R	14.1+88R	14.9+80R	15.7+74R	16.5+68R	17.2+63R
	TSW @ 24"	q	362	353	307	306	274	277	253	257	238
		F	8.8+147R	8.1+126R	8.2+111R	7.6+98R	7.7+88R	7.2+80R	7.3+74R	6.9+68R	7.0+63R
	TSW @ 12"	q	519	488	464	446	432	420	410	402	395
		F	6.9+147R	6.5+126R	6.2+111R	6.0+98R	5.7+88R	5.6+80R	5.4+74R	5.2+68R	5.1+63R
19	BP @ 24"	q	424	382	335	313	283	270	248	240	224
		F	9.4+93R	10.4+80R	11.8+70R	12.8+62R	14.3+56R	15.2+51R	16.7+46R	17.5+43R	19.0+40R
	BP @ 12"	q	486	437	400	371	349	331	316	304	293
		F	8.4+93R	9.4+80R	10.3+70R	11.1+62R	11.9+56R	12.7+51R	13.5+46R	14.3+43R	15.0+40R
	TSW @ 24"	q	548	527	458	452	404	405	369	372	344
		F	7.3+93R	6.8+80R	6.9+70R	6.4+62R	6.5+56R	6.1+51R	6.2+46R	5.9+43R	6.0+40R
	TSW @ 12"	q	762	711	672	642	619	599	583	570	558
		F	5.8+93R	5.5+80R	5.3+70R	5.1+62R	4.9+56R	4.8+51R	4.7+46R	4.5+43R	4.4+40R
18	BP @ 24"	q	536	480	421	391	353	335	308	297	276
		F	7.9+66R	8.9+57R	10.1+50R	11.0+44R	12.3+40R	13.1+36R	14.4+33R	15.2+31R	16.6+28R
	BP @ 12"	q	604	539	491	454	425	402	382	366	352
		F	7.2+66R	8.1+57R	8.9+50R	9.7+44R	10.5+40R	11.2+36R	12.0+33R	12.7+31R	13.4+28R
	TSW @ 24"	q	734	705	612	599	536	533	485	487	450
		F	6.3+66R	5.9+57R	6.0+50R	5.6+44R	5.7+40R	5.4+36R	5.5+33R	5.2+31R	5.3+28R
	TSW @ 12"	q	1001	935	880	838	804	777	754	735	718
		F	5.1+66R	4.9+57R	4.7+50R	4.5+44R	4.4+40R	4.3+36R	4.2+33R	4.1+31R	4.0+28R
16	BP @ 24"	q	812	720	631	581	524	493	453	433	403
		F	5.7+33R	6.4+29R	7.3+25R	8.0+22R	8.9+20R	9.7+18R	10.6+17R	11.4+15R	12.4+14R
	BP @ 12"	q	890	788	712	654	607	570	539	513	492
		F	5.3+33R	5.9+29R	6.6+25R	7.2+22R	7.9+20R	8.5+18R	9.2+17R	9.8+15R	10.4+14R
	TSW @ 24"	q	1075	1026	904	888	805	805	743	750	702
		F	4.6+33R	4.4+29R	4.5+25R	4.3+22R	4.3+20R	4.2+18R	4.2+17R	4.1+15R	4.1+14R
	TSW @ 12"	q	1417	1324	1257	1208	1170	1142	1119	1102	1089
		F	3.8+33R	3.7+29R	3.6+25R	3.5+22R	3.4+20R	3.4+18R	3.3+17R	3.2+15R	3.2+14R

¹ Footnotes 2–6 of Table 14 apply to this table.

TABLE 16--ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLW3™-36 FORMLOK DECK WITH SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6}

GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
36/4 WELD PATTERN AT SUPPORTS											
22	VSC @ 24"	q	389	377	339	335	309	307	288	272	261
		F	12.0+85R	11.2+73R	13.7+64R	12.9+57R	15.2+51R	14.4+46R	16.5+42R	17.8+36R	18.9+32R
	VSC @ 12"	q	489	458	434	415	400	387	376	359	346
		F	6.5+85R	6.8+73R	7.1+64R	7.4+57R	7.6+51R	7.9+46R	8.1+42R	8.5+36R	8.9+32R
	VSC @ 8"	q	566	542	507	494	470	462	444	413	374
		F	5.0+85R	5.0+73R	5.3+64R	5.3+57R	5.6+51R	5.6+46R	5.8+42R	6.1+36R	6.3+32R
21	VSC @ 4"	q	739	695	629	576	532	495	464	413	374
		F	3.7+85R	3.7+73R	3.8+64R	3.8+57R	3.9+51R	3.9+46R	4.0+42R	4.0+36R	4.1+32R
	VSC @ 24"	q	514	497	447	440	406	403	377	357	342
		F	9.2+63R	8.7+54R	10.5+48R	10.0+42R	11.7+38R	11.1+35R	12.7+32R	13.7+27R	14.6+24R
	VSC @ 12"	q	642	600	568	543	522	505	491	468	451
		F	5.2+63R	5.4+54R	5.7+48R	5.9+42R	6.1+38R	6.3+35R	6.4+32R	6.8+27R	7.1+24R
20	VSC @ 8"	q	739	707	661	643	611	600	578	535	484
		F	4.1+63R	4.1+54R	4.3+48R	4.3+42R	4.5+38R	4.6+35R	4.7+32R	4.9+27R	5.1+24R
	VSC @ 4"	q	960	900	814	745	689	641	601	535	484
		F	3.1+63R	3.2+54R	3.2+48R	3.2+42R	3.3+38R	3.3+35R	3.4+32R	3.4+27R	3.5+24R
	VSC @ 24"	q	582	561	505	496	457	454	425	402	385
		F	8.1+56R	7.7+48R	9.3+42R	8.9+37R	10.3+33R	9.9+30R	11.3+28R	12.1+24R	13.0+21R
19	VSC @ 12"	q	723	676	639	611	587	568	552	526	507
		F	4.7+56R	4.9+48R	5.1+42R	5.3+37R	5.5+33R	5.6+30R	5.8+28R	6.1+24R	6.4+21R
	VSC @ 8"	q	832	795	743	722	687	674	649	602	545
		F	3.7+56R	3.7+48R	3.9+42R	4.0+37R	4.1+33R	4.2+30R	4.3+28R	4.5+24R	4.6+21R
	VSC @ 4"	q	1077	1012	916	838	775	721	676	602	545
		F	2.9+56R	2.9+48R	3.0+42R	3.0+37R	3.0+33R	3.1+30R	3.1+28R	3.2+24R	3.2+21R
18	VSC @ 24"	q	831	798	718	704	650	643	603	570	545
		F	5.6+37R	5.4+32R	6.4+28R	6.1+25R	7.1+22R	6.8+20R	7.7+18R	8.3+16R	8.9+14R
	VSC @ 12"	q	1025	955	903	862	828	801	778	742	715
		F	3.5+37R	3.6+32R	3.7+28R	3.9+25R	4.0+22R	4.1+20R	4.2+18R	4.4+16R	4.6+14R
	VSC @ 8"	q	1173	1119	1045	1015	965	947	912	867	784
		F	2.8+37R	2.9+32R	3.0+28R	3.0+25R	3.1+22R	3.1+20R	3.3+18R	3.4+16R	3.5+14R
16	VSC @ 4"	q	1508	1427	1319	1207	1115	1039	973	867	784
		F	2.3+37R	2.3+32R	2.4+28R	2.4+25R	2.4+22R	2.4+20R	2.5+18R	2.5+16R	2.5+14R
	VSC @ 24"	q	982	973	875	857	791	783	735	694	664
		F	4.5+29R	4.3+25R	5.1+21R	4.9+19R	5.6+17R	5.4+16R	6.1+14R	6.6+12R	7.0+11R
	VSC @ 12"	q	1245	1160	1096	1046	1006	972	945	901	869
		F	2.9+29R	3.0+25R	3.1+21R	3.2+19R	3.3+17R	3.4+16R	3.5+14R	3.6+12R	3.8+11R
15	VSC @ 8"	q	1422	1356	1266	1229	1170	1148	1106	1060	982
		F	2.4+29R	2.4+25R	2.5+21R	2.6+19R	2.6+17R	2.7+16R	2.7+14R	2.8+12R	2.9+11R
	VSC @ 4"	q	1823	1724	1649	1512	1397	1301	1218	1085	982
		F	2.0+29R	2.0+25R	2.1+21R	2.1+19R	2.1+17R	2.1+16R	2.1+14R	2.2+12R	2.2+11R
	VSC @ 24"	q	1265	1325	1136	1189	1054	1100	997	955	922
		F	2.9+17R	2.8+15R	3.2+13R	3.5+11R	3.5+10R	3.4+9R	3.8+9R	4.1+7R	4.4+6R
14	VSC @ 12"	q	1761	1641	1551	1481	1425	1379	1341	1281	1238
		F	2.0+17R	2.1+15R	2.1+13R	2.2+11R	2.3+10R	2.3+9R	2.4+9R	2.5+7R	2.6+6R
	VSC @ 8"	q	2006	1912	1787	1737	1655	1625	1567	1505	1460
		F	1.8+17R	1.8+15R	1.8+13R	1.8+11R	1.9+10R	1.9+9R	2.0+9R	2.0+7R	2.1+6R
	VSC @ 4"	q	2561	2424	2320	2239	2174	2049	1920	1710	1547
		F	1.6+17R	1.6+15R	1.6+13R	1.6+11R	1.6+10R	1.6+9R	1.6+9R	1.6+7R	1.7+6R

¹ VSC = Verco sidelap connection.

² The dimension from the first and last sidelap connection within each span is to be no more than one-half of the specified spacing.

³ R is the vertical span (L_v) of deck units divided by the length (L_s) of the deck sheet: $R = L_v/L_s$.

⁴ The flexibility limitations shown in Table 7 may be used in lieu of a rational analysis of the anticipated deflections.

⁵ Interpolation of diaphragm strength between adjacent spans or sidelap spacings is permissible. For interpolated lengths, use diaphragm flexibility factor for the closest span length.

⁶ Diaphragm shear values for side seam fasteners placed at spacings other than those in the table should be determined based on the number of fasteners in each span.

TABLE 17—ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR W3-36 FORMLOK™ DECK WITH BUTTON PUNCHES (BP) OR 1½" TOP SEAM WELDS (TSW) AT SIDELAPS ¹

GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
36/4 WELD PATTERN AT SUPPORTS											
22	BP @ 24"	q	155	145	127	123	111	109	100	93	87
		F	15.4+410R	16.5+351R	18.7+308R	19.6+273R	21.7+246R	22.3+224R	24.4+205R	26.9+176R	29.2+154R
	BP @ 12"	q	196	180	169	160	153	148	143	137	132
		F	12.8+410R	13.8+351R	14.8+308R	15.7+273R	16.5+246R	17.2+224R	17.9+205R	19.2+176R	20.3+154R
	TSW @ 24"	q	194	195	170	173	156	160	146	139	134
		F	11.0+410R	9.9+351R	9.9+308R	9.1+273R	9.2+246R	8.5+224R	8.6+205R	8.1+176R	7.7+154R
	TSW @ 12"	q	296	283	272	264	258	252	248	241	236
		F	8.2+410R	7.7+351R	7.3+308R	7.0+273R	6.7+246R	6.4+224R	6.2+205R	5.9+176R	5.6+154R
21	BP @ 24"	q	211	195	171	163	147	143	131	121	113
		F	13.0+278R	14.1+239R	15.9+209R	16.9+186R	18.7+167R	19.5+152R	21.3+139R	23.7+119R	26.0+104R
	BP @ 12"	q	257	235	218	206	195	187	181	171	164
		F	11.1+278R	12.1+239R	13.0+209R	13.9+186R	14.7+167R	15.4+152R	16.2+139R	17.5+119R	18.7+104R
	TSW @ 24"	q	275	272	237	239	214	218	199	189	181
		F	9.5+278R	8.6+239R	8.7+209R	8.0+186R	8.1+167R	7.5+152R	7.6+139R	7.2+119R	6.9+104R
	TSW @ 12"	q	407	385	369	357	347	339	332	321	313
		F	7.2+278R	6.8+239R	6.5+209R	6.2+186R	6.0+167R	5.8+152R	5.6+139R	5.3+119R	5.0+104R
20	BP @ 24"	q	243	223	195	185	167	162	149	136	127
		F	11.9+233R	13.0+200R	14.8+175R	15.7+155R	17.4+140R	18.2+127R	19.9+117R	22.3+100R	24.6+87R
	BP @ 12"	q	292	265	246	231	219	209	201	190	181
		F	10.3+233R	11.3+200R	12.2+175R	13.1+155R	13.9+140R	14.7+127R	15.4+117R	16.7+100R	17.9+87R
	TSW @ 24"	q	322	317	276	277	248	252	230	217	208
		F	8.8+233R	8.1+200R	8.1+175R	7.5+155R	7.6+140R	7.1+127R	7.2+117R	6.8+100R	6.5+87R
	TSW @ 12"	q	471	444	425	410	397	387	379	366	357
		F	6.8+233R	6.4+200R	6.1+175R	5.9+155R	5.6+140R	5.5+127R	5.3+117R	5.0+100R	4.8+87R
19	BP @ 24"	q	372	336	295	276	249	239	219	198	183
		F	9.2+135R	10.2+116R	11.5+101R	12.4+90R	13.8+81R	14.6+74R	16.1+67R	18.2+58R	20.3+51R
	BP @ 12"	q	430	387	355	330	310	295	282	262	248
		F	8.2+135R	9.1+116R	9.9+101R	10.7+90R	11.5+81R	12.2+74R	12.9+67R	14.3+58R	15.5+51R
	TSW @ 24"	q	528	510	444	440	394	395	361	337	320
		F	7.1+135R	6.5+116R	6.6+101R	6.2+90R	6.3+81R	5.9+74R	6.0+67R	5.7+58R	5.5+51R
	TSW @ 12"	q	742	694	658	630	608	590	575	551	534
		F	5.6+135R	5.3+116R	5.1+101R	4.9+90R	4.8+81R	4.6+74R	4.5+67R	4.3+58R	4.1+51R
18	BP @ 24"	q	478	429	376	350	316	300	276	248	227
		F	7.8+96R	8.7+83R	9.8+72R	10.7+64R	11.9+58R	12.7+53R	13.9+48R	15.9+41R	17.9+36R
	BP @ 12"	q	542	484	442	409	383	362	345	318	299
		F	7.1+96R	7.9+83R	8.7+72R	9.4+64R	10.1+58R	10.8+53R	11.5+48R	12.8+41R	14.0+36R
	TSW @ 24"	q	663	643	566	564	511	515	476	442	417
		F	6.1+96R	5.7+83R	5.8+72R	5.5+64R	5.5+58R	5.2+53R	5.3+48R	5.1+41R	4.9+36R
	TSW @ 12"	q	912	859	822	794	773	756	744	710	685
		F	4.9+96R	4.7+83R	4.5+72R	4.4+64R	4.3+58R	4.1+53R	4.0+48R	3.8+41R	3.7+36R
16	BP @ 24"	q	752	667	585	538	486	457	420	374	340
		F	5.6+49R	6.2+42R	7.1+37R	7.8+32R	8.7+29R	9.4+27R	10.3+24R	11.9+21R	13.6+18R
	BP @ 12"	q	826	732	662	608	565	530	502	458	426
		F	5.2+49R	5.8+42R	6.4+37R	7.0+32R	7.7+29R	8.3+27R	8.9+24R	10.0+21R	11.2+18R
	TSW @ 24"	q	1003	958	844	830	752	752	694	656	629
		F	4.5+49R	4.3+42R	4.4+37R	4.2+32R	4.2+29R	4.0+27R	4.1+24R	4.0+21R	3.9+18R
	TSW @ 12"	q	1327	1241	1179	1133	1098	1071	1050	1021	1003
		F	3.8+49R	3.6+42R	3.5+37R	3.4+32R	3.3+29R	3.3+27R	3.2+24R	3.1+21R	3.0+18R

¹ Footnotes 2–6 of Table 16 apply to this table.

**TABLE 18--ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR
TYPE PLB™-36 DECK WITH SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6}**

GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/4 WELD PATTERN AT SUPPORTS											
22	VSC @ 24"	q	545	497	434	417	380	374	349	—	—
		F	13.7+161R	16.4+115R	20.2+87R	22.7+69R	26.6+57R	29.0+48R	32.9+41R	—	—
	VSC @ 18"	q	590	531	465	443	426	395	387	—	—
		F	12.8+161R	15.5+115R	19.0+87R	21.6+69R	24.0+57R	27.6+48R	29.9+41R	—	—
	VSC @ 12"	q	627	561	518	487	465	449	436	—	—
		F	12.2+161R	14.8+115R	17.4+87R	19.9+69R	22.3+57R	24.6+48R	26.9+41R	—	—
	VSC @ 8"	q	691	636	582	561	531	522	503	—	—
		F	11.4+161R	13.4+115R	15.8+87R	17.6+69R	19.9+57R	21.6+48R	23.7+41R	—	—
	VSC @ 6"	q	744	679	636	607	586	571	559	—	—
		F	10.8+161R	12.8+115R	14.7+87R	16.5+69R	18.2+57R	19.9+48R	21.6+41R	—	—
	VSC @ 4"	q	833	769	727	699	679	665	654	—	—
		F	9.9+161R	11.6+115R	13.2+87R	14.7+69R	16.1+57R	17.5+48R	18.9+41R	—	—
20	VSC @ 24"	q	802	722	628	598	544	532	496	492	466
		F	10.4+111R	12.6+80R	15.6+61R	17.8+48R	20.9+39R	22.9+33R	26.1+28R	28.0+24R	31.2+21R
	VSC @ 18"	q	861	767	670	633	606	560	547	537	510
		F	9.9+111R	12.0+80R	14.8+61R	16.9+48R	19.0+39R	21.9+33R	23.8+28R	25.8+24R	28.7+21R
	VSC @ 12"	q	910	807	739	692	658	632	612	596	584
		F	9.5+111R	11.6+80R	13.6+61R	15.7+48R	17.7+39R	19.6+33R	21.6+28R	23.5+24R	25.3+21R
	VSC @ 8"	q	994	906	824	789	745	729	701	694	675
		F	8.9+111R	10.6+80R	12.5+61R	14.0+48R	15.9+39R	17.3+33R	19.1+28R	20.5+24R	22.2+21R
	VSC @ 6"	q	1064	962	896	851	818	794	776	762	688
		F	8.4+111R	10.1+80R	11.7+61R	13.2+48R	14.7+39R	16.1+33R	17.5+28R	18.9+24R	20.2+21R
	VSC @ 4"	q	1181	1081	1016	972	941	918	902	818	688
		F	7.8+111R	9.2+80R	10.5+61R	11.8+48R	13.0+39R	14.2+33R	15.4+28R	16.5+24R	17.6+21R
18	VSC @ 24"	q	1336	1187	1029	971	881	855	796	785	743
		F	6.8+63R	8.3+45R	10.2+34R	11.7+27R	13.8+22R	15.3+19R	17.5+16R	19.0+14R	21.2+12R
	VSC @ 18"	q	1421	1253	1089	1021	971	896	872	853	808
		F	6.5+63R	7.9+45R	9.8+34R	11.2+27R	12.7+22R	14.7+19R	16.2+16R	17.6+14R	19.7+12R
	VSC @ 12"	q	1493	1310	1191	1108	1047	1002	967	940	919
		F	6.2+63R	7.6+45R	9.1+34R	10.5+27R	11.9+22R	13.3+19R	14.7+16R	16.1+14R	17.5+12R
	VSC @ 8"	q	1614	1455	1315	1250	1175	1145	1099	1084	1053
		F	5.9+63R	7.1+45R	8.4+34R	9.5+27R	10.8+22R	11.9+19R	13.2+16R	14.2+14R	15.5+12R
	VSC @ 6"	q	1716	1536	1420	1340	1283	1241	1210	1185	1057
		F	5.7+63R	6.8+45R	7.9+34R	9.0+27R	10.0+22R	11.1+19R	12.1+16R	13.2+14R	14.2+12R
	VSC @ 4"	q	1887	1710	1596	1519	1464	1425	1395	1257	1057
		F	5.3+63R	6.3+45R	7.2+34R	8.1+27R	9.0+22R	9.9+19R	10.8+16R	11.6+14R	12.4+12R
16	VSC @ 24"	q	1831	1618	1400	1316	1193	1155	1075	1058	1001
		F	4.8+40R	5.9+29R	7.2+22R	8.4+17R	9.9+14R	11.0+12R	12.6+10R	13.7+9R	15.4+8R
	VSC @ 18"	q	1940	1701	1478	1380	1309	1208	1173	1146	1086
		F	4.6+40R	5.6+29R	6.9+22R	8.0+17R	9.1+14R	10.6+12R	11.7+10R	12.8+9R	14.3+8R
	VSC @ 12"	q	2032	1775	1608	1492	1408	1345	1297	1259	1230
		F	4.5+40R	5.5+29R	6.5+22R	7.5+17R	8.6+14R	9.6+12R	10.7+10R	11.7+9R	12.8+8R
	VSC @ 8"	q	2186	1960	1768	1675	1573	1529	1467	1446	1405
		F	4.2+40R	5.1+29R	6.0+22R	6.9+17R	7.8+14R	8.6+12R	9.6+10R	10.4+9R	11.4+8R
	VSC @ 6"	q	2316	2064	1902	1791	1712	1654	1611	1578	1478
		F	4.1+40R	4.9+29R	5.7+22R	6.5+17R	7.3+14R	8.1+12R	8.9+10R	9.7+9R	10.4+8R
	VSC @ 4"	q	2533	2286	2128	2021	1945	1891	1851	1759	1478
		F	3.9+40R	4.6+29R	5.2+22R	5.9+17R	6.6+14R	7.3+12R	7.9+10R	8.5+9R	9.2+8R

See Page 48 for footnotes

(continued)

**TABLE 18--ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR
TYPE PLB™-36 DECK WITH SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6} – Continued**

GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/5 WELD PATTERN AT SUPPORTS											
22	VSC @ 24"	q	676	604	524	497	451	439	409	—	—
		F	9.9+78R	11.9+56R	14.5+42R	16.5+34R	19.3+28R	21.2+23R	24.2+20R	—	—
	VSC @ 18"	q	722	639	557	523	499	461	449	—	—
		F	9.4+78R	11.4+56R	13.8+42R	15.8+34R	17.7+28R	20.4+23R	22.2+20R	—	—
	VSC @ 12"	q	761	670	611	570	540	517	500	—	—
		F	9.1+78R	11.0+56R	12.9+42R	14.7+34R	16.6+28R	18.4+23R	20.3+20R	—	—
	VSC @ 8"	q	826	748	678	646	608	593	570	—	—
		F	8.6+78R	10.1+56R	11.9+42R	13.3+34R	15.1+28R	16.4+23R	18.1+20R	—	—
	VSC @ 6"	q	881	792	734	694	666	644	628	—	—
		F	8.2+78R	9.7+56R	11.2+42R	12.6+34R	14.0+28R	15.3+23R	16.7+20R	—	—
	VSC @ 4"	q	973	885	828	790	762	742	727	—	—
		F	7.7+78R	9.0+56R	10.2+42R	11.4+34R	12.6+28R	13.7+23R	14.8+20R	—	—
20	VSC @ 24"	q	1000	884	764	718	650	629	585	575	544
		F	7.6+54R	9.2+39R	11.2+29R	12.9+23R	15.1+19R	16.7+16R	19.1+14R	20.6+12R	23.1+10R
	VSC @ 18"	q	1060	930	807	754	715	658	639	623	590
		F	7.3+54R	8.8+39R	10.8+29R	12.4+23R	14.0+19R	16.1+16R	17.7+14R	19.2+12R	21.4+10R
	VSC @ 12"	q	1111	971	879	815	769	733	706	685	668
		F	7.0+54R	8.5+39R	10.1+29R	11.6+23R	13.1+19R	14.7+16R	16.2+14R	17.7+12R	19.2+10R
	VSC @ 8"	q	1197	1073	967	916	859	835	800	787	688
		F	6.7+54R	7.9+39R	19.4+29R	10.6+23R	12.0+19R	13.2+16R	14.6+14R	15.7+12R	17.1+10R
	VSC @ 6"	q	1269	1131	1042	980	936	903	878	818	688
		F	6.5+54R	7.7+39R	8.9+29R	10.0+23R	11.2+19R	12.4+16R	13.5+14R	14.6+12R	15.7+10R
	VSC @ 4"	q	1390	1254	1166	1107	1064	1033	990	818	688
		F	6.1+54R	7.1+39R	8.2+29R	9.2+23R	10.1+19R	11.1+16R	12.0+14R	12.9+12R	13.9+10R
18	VSC @ 24"	q	1667	1457	1256	1171	1058	1017	944	924	873
		F	5.0+31R	6.0+22R	7.4+17R	8.5+13R	10.1+11R	11.2+9R	12.9+8R	14.0+7R	15.7+6R
	VSC @ 18"	q	1755	1525	1319	1223	1152	1060	1024	995	942
		F	4.8+31R	5.8+22R	7.1+17R	8.2+13R	9.4+11R	10.8+9R	12.0+8R	13.1+7R	14.7+6R
	VSC @ 12"	q	1829	1584	1424	1313	1232	1171	1124	1087	1057
		F	4.7+31R	5.7+22R	6.7+17R	7.8+13R	8.9+11R	10.0+9R	11.1+8R	12.2+7R	13.3+6R
	VSC @ 8"	q	1953	1733	1553	1461	1365	1320	1262	1238	1057
		F	4.5+31R	5.3+22R	6.3+17R	7.2+13R	8.2+11R	9.0+9R	10.1+8R	10.9+7R	11.9+6R
	VSC @ 6"	q	2057	1817	1662	1555	1478	1421	1378	1257	1057
		F	4.4+31R	5.2+22R	6.0+17R	6.9+13R	7.7+11R	8.5+9R	9.4+8R	10.2+7R	11.0+6R
	VSC @ 4"	q	2233	1996	1844	1740	1666	1612	1521	1257	1057
		F	4.2+31R	4.9+22R	5.6+17R	6.3+13R	7.0+11R	7.7+9R	8.4+8R	9.1+7R	9.8+6R
16	VSC @ 24"	q	2284	1987	1711	1589	1435	1377	1278	1249	1179
		F	3.6+20R	4.3+14R	5.3+11R	6.1+8R	7.2+7R	8.1+6R	9.3+5R	10.2+4R	11.5+4R
	VSC @ 18"	q	2396	2073	1792	1656	1557	1432	1381	1341	1269
		F	3.5+20R	4.2+14R	5.1+11R	5.9+8R	6.8+7R	7.9+6R	8.7+5R	9.6+4R	10.8+4R
	VSC @ 12"	q	2490	2149	1927	1772	1660	1576	1511	1461	1421
		F	3.4+20R	4.1+14R	4.9+11R	5.6+8R	6.4+7R	7.3+6R	8.1+5R	8.9+4R	9.8+4R
	VSC @ 8"	q	2648	2340	2092	1963	1832	1769	1690	1658	1478
		F	3.3+20R	3.9+14R	4.6+11R	5.2+8R	6.0+7R	6.6+6R	7.4+5R	8.0+4R	8.8+4R
	VSC @ 6"	q	2781	2447	2232	2084	1978	1900	1841	1759	1478
		F	3.2+20R	3.8+14R	4.4+11R	5.0+8R	5.6+7R	6.3+6R	6.9+5R	7.5+4R	8.1+4R
	VSC @ 4"	q	3005	2676	2466	2322	2221	2148	2094	1759	1478
		F	3.1+20R	3.6+14R	4.1+11R	4.6+8R	5.2+7R	5.7+6R	6.2+5R	6.7+4R	7.3+4R

See Page 48 for footnotes

(continued)

**TABLE 18--ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR
TYPE PLB™-36 DECK WITH SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6} – Continued**

GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/7 WELD PATTERN AT SUPPORTS											
22	VSC @ 24"	q	792	707	620	592	544	535	505	–	–
		F	8.1+22R	7.8+17R	9.2+15R	8.8+12R	10.0+11R	9.5+10R	10.5+9R	–	–
	VSC @ 18"	q	836	743	655	621	599	561	554	–	–
		F	6.5+22R	6.6+17R	7.7+15R	7.6+12R	7.6+11R	8.4+10R	8.2+9R	–	–
	VSC @ 12"	q	873	774	713	673	646	628	616	–	–
		F	5.6+22R	5.9+17R	6.1+15R	6.3+12R	6.4+11R	6.5+10R	6.5+9R	–	–
	VSC @ 8"	q	936	853	784	757	724	718	701	–	–
		F	4.7+22R	4.8+17R	5.0+15R	5.0+12R	5.1+11R	5.1+10R	5.2+9R	–	–
	VSC @ 6"	q	988	898	844	811	790	778	753	–	–
		F	4.3+22R	4.4+17R	4.5+15R	4.5+12R	4.5+11R	4.5+10R	4.6+9R	–	–
	VSC @ 4"	q	1077	992	944	917	901	894	753	–	–
		F	3.8+22R	3.9+17R	3.9+15R	3.9+12R	3.9+11R	3.9+10R	3.9+9R	–	–
20	VSC @ 24"	q	1156	1025	897	852	782	766	722	721	688
		F	6.3+15R	6.2+12R	7.3+10R	7.0+9R	8.0+8R	7.6+7R	8.4+6R	8.1+6R	8.8+5R
	VSC @ 18"	q	1216	1074	944	892	857	802	789	782	688
		F	5.1+15R	5.3+12R	6.1+10R	6.1+9R	6.1+8R	6.7+7R	6.7+6R	6.6+6R	7.1+5R
	VSC @ 12"	q	1266	1117	1023	962	921	893	874	818	688
		F	4.5+15R	4.7+12R	4.9+10R	5.1+9R	5.2+8R	5.3+7R	5.3+6R	5.4+6R	5.4+5R
	VSC @ 8"	q	1351	1224	1120	1078	1028	1016	990	818	688
		F	3.8+15R	3.9+12R	4.1+10R	4.1+9R	4.2+8R	4.2+7R	4.3+6R	4.2+6R	4.3+5R
	VSC @ 6"	q	1422	1284	1202	1150	1119	1099	990	818	688
		F	3.5+15R	3.6+12R	3.6+10R	3.7+9R	3.7+8R	3.7+7R	3.8+6R	3.8+6R	3.8+5R
	VSC @ 4"	q	1542	1413	1338	1295	1270	1223	990	818	688
		F	3.1+15R	3.2+12R	3.2+10R	3.2+9R	3.2+8R	3.2+7R	3.2+6R	3.2+6R	3.2+5R
18	VSC @ 24"	q	1871	1651	1443	1364	1252	1224	1154	1150	1057
		F	4.3+9R	4.3+7R	5.0+6R	4.9+5R	5.5+4R	5.3+4R	5.9+3R	5.7+3R	6.2+3R
	VSC @ 18"	q	1961	1724	1515	1427	1368	1279	1258	1245	1057
		F	3.6+9R	3.7+7R	4.3+6R	4.3+5R	4.3+4R	4.7+4R	4.7+3R	4.7+3R	5.0+3R
	VSC @ 12"	q	2038	1789	1635	1534	1466	1420	1389	1257	1057
		F	3.2+9R	3.3+7R	3.5+6R	3.6+5R	3.7+4R	3.7+4R	3.8+3R	3.8+3R	3.9+3R
	VSC @ 8"	q	2166	1952	1783	1711	1631	1610	1521	1257	1057
		F	2.7+9R	2.8+7R	2.9+6R	2.9+5R	3.0+4R	3.0+4R	3.1+3R	3.1+3R	3.1+3R
	VSC @ 6"	q	2274	2044	1907	1822	1770	1738	1521	1257	1057
		F	2.5+9R	2.6+7R	2.6+6R	2.7+5R	2.7+4R	2.7+4R	2.7+3R	2.7+3R	2.8+3R
	VSC @ 4"	q	2455	2240	2116	2044	2002	1878	1521	1257	1057
		F	2.3+9R	2.3+7R	2.3+6R	2.3+5R	2.4+4R	2.4+4R	2.4+3R	2.4+3R	2.4+3R
16	VSC @ 24"	q	2524	2227	1948	1843	1692	1657	1564	1561	1478
		F	3.2+5R	3.2+4R	3.7+4R	3.7+3R	4.1+3R	4.0+2R	4.4+2R	4.3+2R	4.7+2R
	VSC @ 18"	q	2645	2325	2044	1926	1849	1731	1704	1690	1478
		F	2.7+5R	2.8+4R	3.2+4R	3.2+3R	3.2+3R	3.6+2R	3.6+2R	3.6+2R	3.8+2R
	VSC @ 12"	q	2746	2412	2205	2071	1982	1922	1882	1759	1478
		F	2.4+5R	2.5+4R	2.6+4R	2.7+3R	2.8+3R	2.8+2R	2.9+2R	2.9+2R	3.0+2R
	VSC @ 8"	q	2917	2630	2403	2308	2203	2178	2126	1759	1478
		F	2.1+5R	2.1+4R	2.2+4R	2.2+3R	2.3+3R	2.3+2R	2.4+2R	2.4+2R	2.4+2R
	VSC @ 6"	q	3060	2752	2570	2458	2391	2351	2129	1759	1478
		F	1.9+5R	2.0+4R	2.0+4R	2.1+3R	2.1+3R	2.1+2R	2.1+2R	2.1+2R	2.1+2R
	VSC @ 4"	q	3301	3013	2849	2755	2704	2628	2129	1759	1478
		F	1.8+5R	1.8+4R	1.8+4R	1.8+3R	1.8+3R	1.9+2R	1.9+2R	1.9+2R	1.9+2R

¹ VSC = Verco sidelap connection.

² The dimension from the first and last sidelap connection within each span is to be no more than one-half of the specified spacing.

³ R is the vertical span (L_v) of deck units divided by the length (L_s) of the deck sheet: $R = L_v/L_s$.

⁴ The flexibility limitations shown in Table 7 may be used as a guide in lieu of rational analysis of the anticipated deflections.

⁵ Interpolation of diaphragm strength between adjacent spans or sidelap spacings is permissible. For interpolated lengths, use diaphragm flexibility factor for the closest span length.

⁶ Diaphragm shear values for side seam fasteners placed at spacings other than those in the table should be determined based on the number of fasteners in each span.

TABLE 19 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB™-36 DECK PANELS ATTACHED WITH HILTI PINS TO SUPPORTS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4}

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/7 ATTACHMENT PATTERN FOR HILTI X-ENP-19 L15 AT SUPPORTS 1/4" THICK AND THICKER, HILTI X-EDN19 THQ12 AT SUPPORTS 0.313 – 3/8" THICK, OR HILTI X-EDNK22 THQ12 AT SUPPORTS 0.188 – 0.250" THICK											
22	VSC @ 24"	q 687 F 11.3+23R	627 11.9+27R	527 20.4+31R	501 21.0+35R	442 32.3+38R	428 32.8+42R	388 46.9+45R	-	-	
	VSC @ 18"	q 777 F 6.9+23R	689 8.2+27R	579 13.2+31R	540 14.8+35R	509 16.7+38R	456 24.2+42R	438 26.4+45R	-	-	
	VSC @ 12"	q 853 F 5.2+23R	743 6.4+27R	666 7.7+31R	609 9.2+35R	565 10.9+38R	530 12.8+42R	501 14.9+45R	-	-	
	VSC @ 8"	q 980 F 3.9+23R	878 4.3+27R	773 5.1+31R	722 5.6+35R	660 6.6+38R	629 7.1+42R	588 8.4+45R	-	-	
	VSC @ 6"	q 1087 F 3.5+23R	955 3.8+27R	862 4.1+31R	793 4.5+35R	740 5.0+38R	697 5.5+42R	661 6+45R	-	-	
	VSC @ 4"	q 1267 F 3.1+23R	1118 3.2+27R	1013 3.4+31R	935 3.6+35R	874 3.8+38R	824 4.0+42R	753 4.3+45R	-	-	
20	VSC @ 24"	q 826 F 10.1+13R	750 10.7+15R	631 18.5+17R	598 19.2+19R	528 29.7+21R	511 30.3+23R	464 43.6+25R	453 44.2+27R	419 60.0+29R	
	VSC @ 18"	q 929 F 6.1+13R	821 7.3+15R	691 11.9+17R	644 13.5+19R	606 15.3+21R	544 22.3+23R	522 24.5+25R	503 26.8+27R	465 36.1+29R	
	VSC @ 12"	q 1016 F 4.5+13R	883 5.6+15R	791 6.9+17R	723 8.3+19R	671 10.0+21R	629 11.7+23R	595 13.7+25R	566 15.8+27R	542 18.1+29R	
	VSC @ 8"	q 1161 F 3.4+13R	1039 3.7+15R	913 4.5+17R	853 4.9+19R	780 5.9+21R	744 6.4+23R	695 7.6+25R	672 8.2+27R	637 9.6+29R	
	VSC @ 6"	q 1284 F 2.9+13R	1126 3.2+15R	1017 3.6+17R	935 4.0+19R	872 4.4+21R	822 4.9+23R	780 5.4+25R	745 5.9+27R	688 6.5+29R	
	VSC @ 4"	q 1489 F 2.6+13R	1313 2.7+15R	1190 2.9+17R	1098 3.1+19R	1027 3.3+21R	969 3.5+23R	922 3.7+25R	818 4.0+27R	688 4.3+29R	
18	VSC @ 24"	q 1040 F 8.3+5R	941 8.9+6R	793 15.6+7R	750 16.3+8R	663 25.6+8R	640 26.3+9R	583 38+10R	569 38.8+11R	528 53+11R	
	VSC @ 18"	q 1162 F 4.9+5R	1025 6.0+6R	864 10.0+7R	804 11.4+8R	757 13.1+8R	680 19.3+9R	653 21.3+10R	630 23.5+11R	584 31.9+11R	
	VSC @ 12"	q 1265 F 3.6+5R	1099 4.6+6R	984 5.7+7R	900 7+8R	835 8.4+8R	784 10+9R	742 11.8+10R	707 13.8+11R	678 15.9+11R	
	VSC @ 8"	q 1438 F 2.6+5R	1285 2.9+6R	1131 3.6+7R	1056 4.0+8R	967 4.9+8R	923 5.4+9R	864 6.5+10R	835 7+11R	793 8.3+11R	
	VSC @ 6"	q 1583 F 2.3+5R	1389 2.5+6R	1254 2.8+7R	1155 3.2+8R	1078 3.6+8R	1017 4.0+9R	967 4.5+10R	925 5.0+11R	890 5.5+11R	
	VSC @ 4"	q 1827 F 2.0+5R	1612 2.1+6R	1462 2.3+7R	1350 2.4+8R	1264 2.6+8R	1195 2.8+9R	1139 3.0+10R	1092 3.2+11R	1052 3.5+11R	
16	VSC @ 24"	q 1215 F 7.0+2R	1096 7.6+3R	926 13.6+3R	874 14.3+4R	775 22.6+4R	748 23.4+4R	682 34.0+5R	667 34.9+5R	619 47.9+5R	
	VSC @ 18"	q 1352 F 4.1+2R	1191 5.1+3R	1007 8.7+3R	937 10.0+4R	881 11.5+4R	794 17.1+4R	763 19.0+5R	736 21.1+5R	683 28.7+5R	
	VSC @ 12"	q 1468 F 3+2R	1275 3.9+3R	1142 4.9+3R	1045 6.1+4R	971 7.4+4R	912 8.9+4R	864 10.5+5R	825 12.3+5R	791 14.2+5R	
	VSC @ 8"	q 1662 F 2.2+2R	1485 2.5+3R	1309 3.1+3R	1223 3.4+4R	1121 4.2+4R	1071 4.7+4R	1004 5.7+5R	972 6.2+5R	924 7.4+5R	
	VSC @ 6"	q 1826 F 1.9+2R	1603 2.1+3R	1449 2.4+3R	1335 2.7+4R	1248 3.0+4R	1179 3.4+4R	1122 3.9+5R	1075 4.3+5R	1036 4.9+5R	
	VSC @ 4"	q 2100 F 1.6+2R	1854 1.7+3R	1684 1.9+3R	1558 2+4R	1461 2.2+4R	1383 2.3+4R	1320 2.5+5R	1268 2.8+5R	1223 3.0+5R	

See Page 51 for footnotes.

(continued)

TABLE 19 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB™-36 DECK PANELS ATTACHED WITH HILTI PINS TO SUPPORTS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)								
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
36/7 ATTACHMENT PATTERN FOR HILTI X-EDN19 THQ12 AT SUPPORTS 0.250 – 0.313" THICK										
22	VSC @ 24"	q 563	514	432	411	362	351	318		
		F 17.0+23R	17.9+27R	30.6+31R	31.5+35R	48.5+38R	49.2+42R	70.4+45R	-	-
	VSC @ 18"	q 637	565	475	443	417	374	359		
		F 10.4+23R	12.3+27R	19.8+31R	22.2+35R	25.1+38R	36.3+42R	39.6+45R	-	-
	VSC @ 12"	q 699	609	546	499	463	435	411		
		F 7.8+23R	9.6+27R	11.6+31R	13.8+35R	16.4+38R	19.2+42R	22.4+45R	-	-
	VSC @ 8"	q 804	720	634	592	541	516	482		
		F 5.9+23R	6.5+27R	7.7+31R	8.4+35R	9.9+38R	10.7+42R	12.6+45R	-	-
	VSC @ 6"	q 891	783	707	650	607	572	542		
		F 5.3+23R	5.7+27R	6.2+31R	6.8+35R	7.5+38R	8.3+42R	9.0+45R	-	-
	VSC @ 4"	q 1039	917	831	767	717	676	617		
		F 4.7+23R	4.8+27R	5.1+31R	5.4+35R	5.7+38R	6.0+42R	6.5+45R	-	-
20	VSC @ 24"	q 677	615	517	490	433	419	380	371	344
		F 15.2+13R	16.1+15R	27.8+17R	28.8+19R	44.6+21R	45.5+23R	65.4+25R	66.3+27R	90.0+29R
	VSC @ 18"	q 762	673	567	528	497	446	428	412	381
		F 9.1+13R	11.0+15R	17.9+17R	20.3+19R	23.0+21R	33.5+23R	36.8+25R	40.2+27R	54.2+29R
	VSC @ 12"	q 833	724	649	593	550	516	488	464	444
		F 6.8+13R	8.4+15R	10.4+17R	12.5+19R	15.0+21R	17.6+23R	20.6+25R	23.7+27R	27.2+29R
	VSC @ 8"	q 952	852	749	699	640	610	570	551	522
		F 5.1+13R	5.6+15R	6.8+17R	7.4+19R	8.8+21R	9.6+23R	11.4+25R	12.3+27R	14.4+29R
	VSC @ 6"	q 1053	923	834	767	715	674	640	611	564
		F 4.4+13R	4.8+15R	5.4+17R	6.0+19R	6.6+21R	7.4+23R	8.1+25R	8.9+27R	9.8+29R
	VSC @ 4"	q 1221	1077	976	900	842	795	756	671	564
		F 3.9+13R	4.1+15R	4.4+17R	4.7+19R	5.0+21R	5.3+23R	5.6+25R	6.0+27R	6.5+29R
18	VSC @ 24"	q 853	772	650	615	544	525	478	467	433
		F 12.5+5R	13.4+6R	23.4+7R	24.5+8R	38.4+8R	39.5+9R	57.0+10R	58.2+11R	79.5+11R
	VSC @ 18"	q 953	841	708	659	621	558	535	517	479
		F 7.4+5R	9.0+6R	15.0+7R	17.1+8R	19.7+8R	29.0+9R	32.0+10R	35.3+11R	47.9+11R
	VSC @ 12"	q 1037	901	807	738	685	643	608	580	556
		F 5.4+5R	6.9+6R	8.6+7R	10.5+8R	12.6+8R	15.0+9R	17.7+10R	20.7+11R	23.9+11R
	VSC @ 8"	q 1179	1054	927	866	793	757	708	685	650
		F 3.9+5R	4.4+6R	5.4+7R	6.0+8R	7.4+8R	8.1+9R	9.7+10R	10.5+11R	12.5+11R
	VSC @ 6"	q 1298	1139	1028	947	884	834	793	759	730
		F 3.5+5R	3.8+6R	4.2+7R	4.8+8R	5.4+8R	6.0+9R	6.8+10R	7.5+11R	8.3+11R
	VSC @ 4"	q 1498	1322	1199	1107	1036	980	934	895	863
		F 3.0+5R	3.2+6R	3.5+7R	3.6+8R	3.9+8R	4.2+9R	4.5+10R	4.8+11R	5.3+11R
16	VSC @ 24"	q 996	899	759	717	636	613	559	547	508
		F 10.5+2R	11.4+3R	20.4+3R	21.5+4R	33.9+4R	35.1+4R	51.0+5R	52.4+5R	71.9+5R
	VSC @ 18"	q 1109	977	826	768	722	651	626	604	560
		F 6.2+2R	7.7+3R	13.1+3R	15.0+4R	17.3+4R	25.7+4R	28.5+5R	31.7+5R	43.1+5R
	VSC @ 12"	q 1204	1046	936	857	796	748	708	677	649
		F 4.5+2R	5.9+3R	7.4+3R	9.1+4R	11.1+4R	13.4+4R	15.8+5R	18.5+5R	21.3+5R
	VSC @ 8"	q 1363	1218	1073	1003	919	878	823	797	758
		F 3.3+2R	3.8+3R	4.7+3R	5.1+4R	6.3+4R	7.1+4R	8.6+5R	9.3+5R	11.1+5R
	VSC @ 6"	q 1497	1314	1188	1095	1023	967	920	882	850
		F 2.9+2R	3.2+3R	3.6+3R	4.1+4R	4.5+4R	5.1+4R	5.9+5R	6.5+5R	7.4+5R
	VSC @ 4"	q 1722	1520	1381	1278	1198	1134	1082	1040	1003
		F 2.4+2R	2.6+3R	2.9+3R	3.0+4R	3.3+4R	3.5+4R	3.8+5R	4.2+5R	4.5+5R

See Page 51 for footnotes.

(continued)

TABLE 19 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB™-36 DECK PANELS ATTACHED WITH HILTI PINS TO SUPPORTS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)								
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
36/7 ATTACHMENT PATTERN FOR HILTI X-EDNK22 THQ12 AT SUPPORTS 1/8 – 0.188" THICK										
22	VSC @ 24"	q 522	477	401	381	336	325	295		
	F 18.1+23R	19.0+27R	32.6+31	33.6+35R	51.7+38R	52.5+42R	75.0+45R			
	VSC @ 18"	q 591	524	440	410	387	347	333		
	F 11.0+23R	13.1+27R	21.1+31	23.7+35R	26.7+38R	38.7+42R	42.2+45R			
	VSC @ 12"	q 648	565	506	463	429	403	381		
	F 8.3+23R	10.2+27R	12.3+31	14.7+35R	17.4+38R	20.5+42R	23.8+45R			
	VSC @ 8"	q 745	667	587	549	502	478	447		
	F 6.2+23R	6.9+27R	8.2+31R	9.0+35R	10.6+38R	11.4+42R	13.4+45R			
	VSC @ 6"	q 826	726	655	603	562	530	502		
	F 5.6+23R	6.1+27R	6.6+31R	7.2+35R	8.0+38R	8.8+42R	9.6+45R			
	VSC @ 4"	q 963	850	770	711	664	626	572		
	F 5.0+23R	5.1+27R	5.4+31R	5.8+35R	6.1+38R	6.4+42R	6.9+45R			
20	VSC @ 24"	q 628	570	480	454	401	388	353	344	318
	F 16.2+13R	17.1+15R	29.6+17	30.7+19R	47.5+21R	48.5+23R	69.8+25R	70.7+27R	96.0+29R	
	VSC @ 18"	q 706	624	525	489	461	413	397	382	353
	F 9.8+13R	11.7+15R	19.0+17	21.6+19R	24.5+21R	35.7+23R	39.2+25R	42.9+27R	57.8+29R	
	VSC @ 12"	q 772	671	601	549	510	478	452	430	412
	F 7.2+13R	9.0+15R	11.0+17	13.3+19R	16.0+21R	18.7+23R	21.9+25R	25.3+27R	29.0+29R	
	VSC @ 8"	q 882	790	694	648	593	565	528	511	484
	F 5.4+13R	5.9+15R	7.2+17R	7.8+19R	9.4+21R	10.2+23R	12.2+25R	13.1+27R	15.4+29R	
	VSC @ 6"	q 976	856	773	711	663	625	593	566	523
	F 4.6+13R	5.1+15R	5.8+17R	6.4+19R	7.0+21R	7.8+23R	8.6+25R	9.4+27R	10.4+29R	
	VSC @ 4"	q 1132	998	904	834	781	736	701	622	523
	F 4.2+13R	4.3+15R	4.6+17R	5.0+19R	5.3+21R	5.6+23R	5.9+25R	6.4+27R	6.9+29R	
18	VSC @ 24"	q 790	715	603	570	504	486	443	432	401
	F 13.3+5R	14.2+6R	25.0+7R	26.1+8R	41.0+8R	42.1+9R	60.8+10R	62.1+11R	84.8+11R	
	VSC @ 18"	q 883	779	657	611	575	517	496	479	444
	F 7.8+5R	9.6+6R	16.0+7R	18.2+8R	21.0+8R	30.9+9R	34.1+10R	37.6+11R	51.0+11R	
	VSC @ 12"	q 961	835	748	684	635	596	564	537	515
	F 5.8+5R	7.4+6R	9.1+7R	11.2+8R	13.4+8R	16.0+9R	18.9+10R	22.1+11R	25.4+11R	
	VSC @ 8"	q 1093	977	860	803	735	701	657	635	603
	F 4.2+5R	4.6+6R	5.8+7R	6.4+8R	7.8+8R	8.6+9R	10.4+10R	11.2+11R	13.3+11R	
	VSC @ 6"	q 1203	1056	953	878	819	773	735	703	676
	F 3.7+5R	4.0+6R	4.5+7R	5.1+8R	5.8+8R	6.4+9R	7.2+10R	8.0+11R	8.8+11R	
	VSC @ 4"	q 1389	1225	1111	1026	961	908	866	830	800
	F 3.2+5R	3.4+6R	3.7+7R	3.8+8R	4.2+8R	4.5+9R	4.8+10R	5.1+11R	5.6+11R	
16	VSC @ 24"	q 923	833	704	664	589	568	518	507	470
	F 11.2+2R	12.2+3R	21.8+3R	22.9+4R	36.2+4R	37.4+4R	54.4+5R	55.8+5R	76.6+5R	
	VSC @ 18"	q 1028	905	765	712	670	603	580	559	519
	F 6.6+2R	8.2+3R	13.9+3R	16.0+4R	18.4+4R	27.4+4R	30.4+5R	33.8+5R	45.9+5R	
	VSC @ 12"	q 1116	969	868	794	738	693	657	627	601
	F 4.8+2R	6.2+3R	7.8+3R	9.8+4R	11.8+4R	14.2+4R	16.8+5R	19.7+5R	22.7+5R	
	VSC @ 8"	q 1263	1129	995	929	852	814	763	739	702
	F 3.5+2R	4.0+3R	5.0+3R	5.4+4R	6.7+4R	7.5+4R	9.1+5R	9.9+5R	11.8+5R	
	VSC @ 6"	q 1388	1218	1101	1015	948	896	853	817	787
	F 3.0+2R	3.4+3R	3.8+3R	4.3+4R	4.8+4R	5.4+4R	6.2+5R	6.9+5R	7.8+5R	
	VSC @ 4"	q 1596	1409	1280	1184	1110	1051	1003	964	929
	F 2.6+2R	2.7+3R	3.0+3R	3.2+4R	3.5+4R	3.7+4R	4.0+5R	4.5+5R	4.8+5R	

¹ Notes 1-6 of Table 18 apply to this table.

² See General Note 7c for spacing of Hilti fasteners at collector elements parallel to deck flutes.

³ See Table 2 for Allowable Tension Loads for Hilti fasteners subject to wind uplift loads.

⁴ See Section 3.10 for Hilti fastener details.

TABLE 20 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB™-36 DECK PANELS ATTACHED WITH PNEUTEK PINS TO SUPPORTS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4}

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/7 ATTACHMENT PATTERN FOR PNEUTEK K66062 OR K66075 AT SUPPORTS 0.281" THICK AND THICKER, OR PNEUTEK K64062 AT SUPPORTS 0.187 – 0.312" THICK											
22	VSC @ 24"	q 823 F 7.6+24R	781 8.5+19R	678 11.2+16R	653 12.1+14R	592 15.1+12R	582 16.0+11R	540 19.4+10R	-	-	
	VSC @ 18"	q 933 F 6.3+24R	843 7.4+19R	733 9.5+16R	698 10.6+14R	671 11.7+12R	617 14.2+11R	604 15.3+10R	-	-	
	VSC @ 12"	q 1003 F 5.6+24R	897 6.6+19R	826 7.6+16R	776 8.7+14R	738 9.8+12R	708 10.9+11R	684 12.0+10R	-	-	
	VSC @ 8"	q 1121 F 4.9+24R	1033 5.4+19R	940 6.3+16R	903 6.8+14R	850 7.8+12R	830 8.3+11R	753 9.3+10R	-	-	
	VSC @ 6"	q 1220 F 4.4+24R	1110 5.0+19R	1036 5.5+16R	984 6.1+14R	944 6.7+12R	913 7.2+11R	753 7.8+10R	-	-	
	VSC @ 4"	q 1387 F 4.0+24R	1273 4.3+19R	1197 4.7+16R	1143 5.1+14R	1102 5.5+12R	929 5.9+11R	753 6.3+10R	-	-	
20	VSC @ 24"	q 981 F 6.3+13R	1008 7.0+10R	810 9.3+8R	843 10.0+7R	720 12.5+6R	751 13.3+6R	665 16.0+5R	693 16.7+5R	627 19.6+4R	
	VSC @ 18"	q 1203 F 5.3+13R	1088 6.1+10R	947 7.9+8R	902 8.8+7R	867 9.7+6R	798 11.7+6R	781 12.7+5R	767 13.6+5R	688 15.8+4R	
	VSC @ 12"	q 1295 F 4.7+13R	1158 5.5+10R	1068 6.3+8R	1003 7.2+7R	954 8.1+6R	916 9.0+6R	885 9.9+5R	818 10.9+5R	688 11.8+4R	
	VSC @ 8"	q 1447 F 4.0+13R	1335 4.5+10R	1215 5.2+8R	1168 5.7+7R	1099 6.4+6R	1075 6.9+6R	990 7.7+5R	818 8.2+5R	688 9.0+4R	
	VSC @ 6"	q 1576 F 3.7+13R	1435 4.1+10R	1340 4.6+8R	1272 5.0+7R	1222 5.5+6R	1182 6.0+6R	990 6.5+5R	818 7.0+5R	688 7.4+4R	
	VSC @ 4"	q 1793 F 3.3+13R	1647 3.6+10R	1549 3.9+8R	1479 4.2+7R	1427 4.6+6R	1223 4.9+6R	990 5.2+5R	818 5.5+5R	688 5.9+4R	
18	VSC @ 24"	q 1260 F 4.6+5R	1302 5.2+4R	1047 6.8+3R	1094 7.3+3R	935 9.1+2R	978 9.6+2R	866 11.6+2R	904 12.1+2R	819 14.1+2R	
	VSC @ 18"	q 1678 F 3.9+5R	1523 4.5+4R	1311 5.8+3R	1267 6.4+3R	1221 7.0+2R	1124 8.5+2R	1102 9.2+2R	1084 9.8+2R	1023 11.4+2R	
	VSC @ 12"	q 1809 F 3.5+5R	1624 4.0+4R	1500 4.6+3R	1412 5.3+3R	1346 5.9+2R	1294 6.6+2R	1253 7.2+2R	1219 7.9+2R	1057 8.5+2R	
	VSC @ 8"	q 2029 F 3.0+5R	1878 3.3+4R	1713 3.8+3R	1650 4.1+3R	1555 4.7+2R	1523 5.0+2R	1460 5.6+2R	1257 5.9+2R	1057 6.5+2R	
	VSC @ 6"	q 2215 F 2.7+5R	2022 3.0+4R	1893 3.4+3R	1801 3.7+3R	1731 4.0+2R	1678 4.4+2R	1521 4.7+2R	1257 5.0+2R	1057 5.4+2R	
	VSC @ 4"	q 2526 F 2.5+5R	2327 2.7+4R	2194 2.9+3R	2099 3.1+3R	2027 3.3+2R	1878 3.6+2R	1521 3.8+2R	1257 4.0+2R	1057 4.3+2R	
16	VSC @ 24"	q 1518 F 3.6+2R	1576 4.0+2R	1269 5.3+1R	1331 5.7+1R	1139 7.0+1R	1194 7.4+1R	1058 8.9+1R	1107 9.3+1R	1003 10.8+1R	
	VSC @ 18"	q 2057 F 3.0+2R	1926 3.5+2R	1594 4.5+1R	1596 4.9+1R	1555 5.4+1R	1392 6.6+1R	1407 7.0+1R	1386 7.5+1R	1287 8.7+1R	
	VSC @ 12"	q 2284 F 2.7+2R	2058 3.1+2R	1907 3.6+1R	1799 4.1+1R	1717 4.6+1R	1654 5.0+1R	1604 5.5+1R	1562 6.0+1R	1478 6.5+1R	
	VSC @ 8"	q 2571 F 2.3+2R	2390 2.6+2R	2184 3.0+1R	2109 3.2+1R	1990 3.6+1R	1953 3.9+1R	1874 4.3+1R	1759 4.5+1R	1478 5.0+1R	
	VSC @ 6"	q 2813 F 2.1+2R	2577 2.4+2R	2418 2.6+1R	2305 2.9+1R	2220 3.1+1R	2154 3.4+1R	2101 3.6+1R	1759 3.9+1R	1478 4.1+1R	
	VSC @ 4"	q 3219 F 1.9+2R	2975 2.1+2R	2811 2.3+1R	2694 2.4+1R	2606 2.6+1R	2538 2.8+1R	2129 2.9+1R	1759 3.1+1R	1478 3.3+1R	

See Page 54 for footnotes.

(continued)

TABLE 20 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB™-36 DECK PANELS ATTACHED WITH PNEUTEK PINS TO SUPPORTS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/7 ATTACHMENT PATTERN FOR PNEUTEK SDK63075 AT SUPPORTS 0.155 – 0.250" THICK											
22	VSC @ 24"	q	782	742	644	621	562	553	513		
		F	7.6+24R	8.5+19R	11.2+16R	12.1+14R	15.1+12R	16.0+11R	19.4+10R	-	-
	VSC @ 18"	q	887	801	697	663	637	586	574		
		F	6.3+24R	7.4+19R	9.5+16R	10.6+14R	11.7+12R	14.2+11R	15.3+10R	-	-
	VSC @ 12"	q	953	852	785	737	701	673	650		
		F	5.6+24R	6.6+19R	7.6+16R	8.7+14R	9.8+12R	10.9+11R	12.0+10R	-	-
	VSC @ 8"	q	1065	982	893	858	807	789	753		
		F	4.9+24R	5.4+19R	6.3+16R	6.8+14R	7.8+12R	8.3+11R	9.3+10R	-	-
	VSC @ 6"	q	1159	1055	985	934	897	867	753		
		F	4.4+24R	5.0+19R	5.5+16R	6.1+14R	6.7+12R	7.2+11R	7.8+10R	-	-
	VSC @ 4"	q	1318	1210	1138	1086	1047	929	753		
		F	4.0+24R	4.3+19R	4.7+16R	5.1+14R	5.5+12R	5.9+11R	6.3+10R	-	-
20	VSC @ 24"	q	932	958	770	801	684	714	632	658	596
		F	6.3+13R	7.0+10R	9.3+8R	10.0+7R	12.5+6R	13.3+6R	16.0+5R	16.7+5R	19.6+4R
	VSC @ 18"	q	1143	1034	899	857	824	758	742	728	687
		F	5.3+13R	6.1+10R	7.9+8R	8.8+7R	9.7+6R	11.7+6R	12.7+5R	13.6+5R	15.8+4R
	VSC @ 12"	q	1230	1101	1014	952	906	870	841	817	688
		F	4.7+13R	5.5+10R	6.3+8R	7.2+7R	8.1+6R	9.0+6R	9.9+5R	10.9+5R	11.8+4R
	VSC @ 8"	q	1375	1268	1155	1109	1044	1021	978	818	688
		F	4.0+13R	4.5+10R	5.2+8R	5.7+7R	6.4+6R	6.9+6R	7.7+5R	8.2+5R	9.0+4R
	VSC @ 6"	q	1498	1363	1273	1209	1160	1123	990	818	688
		F	3.7+13R	4.1+10R	4.6+8R	5.0+7R	5.5+6R	6.0+6R	6.5+5R	7.0+5R	7.4+4R
	VSC @ 4"	q	1703	1564	1472	1405	1356	1223	990	818	688
		F	3.3+13R	3.6+10R	3.9+8R	4.2+7R	4.6+6R	4.9+6R	5.2+5R	5.5+5R	5.9+4R
18	VSC @ 24"	q	1197	1237	995	1039	888	929	822	859	778
		F	4.6+5R	5.2+4R	6.8+3R	7.3+3R	9.1+2R	9.6+2R	11.6+2R	12.1+2R	14.1+2R
	VSC @ 18"	q	1594	1446	1246	1203	1160	1068	1047	1030	972
		F	3.9+5R	4.5+4R	5.8+3R	6.4+3R	7.0+2R	8.5+2R	9.2+2R	9.8+2R	11.4+2R
	VSC @ 12"	q	1718	1543	1425	1341	1278	1229	1190	1158	1057
		F	3.5+5R	4.0+4R	4.6+3R	5.3+3R	5.9+2R	6.6+2R	7.2+2R	7.9+2R	8.5+2R
	VSC @ 8"	q	1928	1784	1628	1567	1477	1447	1387	1257	1057
		F	3.0+5R	3.3+4R	3.8+3R	4.1+3R	4.7+2R	5.0+2R	5.6+2R	5.9+2R	6.5+2R
	VSC @ 6"	q	2104	1921	1798	1711	1645	1594	1521	1257	1057
		F	2.7+5R	3.0+4R	3.4+3R	3.7+3R	4.0+2R	4.4+2R	4.7+2R	5.0+2R	5.4+2R
	VSC @ 4"	q	2400	2211	2084	1994	1926	1873	1521	1257	1057
		F	2.5+5R	2.7+4R	2.9+3R	3.1+3R	3.3+2R	3.6+2R	3.8+2R	4.0+2R	4.3+2R
16	VSC @ 24"	q	1442	1498	1206	1264	1082	1134	1005	1052	953
		F	3.6+2R	4.0+2R	5.3+1R	5.7+1R	7.0+1R	7.4+1R	8.9+1R	9.3+1R	10.8+1R
	VSC @ 18"	q	1954	1829	1514	1516	1477	1322	1337	1317	1222
		F	3.0+2R	3.5+2R	4.5+1R	4.9+1R	5.4+1R	6.6+1R	7.0+1R	7.5+1R	8.7+1R
	VSC @ 12"	q	2170	1955	1811	1709	1632	1572	1523	1484	1451
		F	2.7+2R	3.1+2R	3.6+1R	4.1+1R	4.6+1R	5.0+1R	5.5+1R	6.0+1R	6.5+1R
	VSC @ 8"	q	2443	2270	2075	2003	1891	1855	1780	1759	1478
		F	2.3+2R	2.6+2R	3.0+1R	3.2+1R	3.6+1R	3.9+1R	4.3+1R	4.5+1R	5.0+1R
	VSC @ 6"	q	2673	2448	2297	2190	2109	2046	1996	1759	1478
		F	2.1+2R	2.4+2R	2.6+1R	2.9+1R	3.1+1R	3.4+1R	3.6+1R	3.9+1R	4.1+1R
	VSC @ 4"	q	3058	2826	2670	2559	2476	2411	2129	1759	1478
		F	1.9+2R	2.1+2R	2.3+1R	2.4+1R	2.6+1R	2.8+1R	2.9+1R	3.1+1R	3.3+1R

See Page 54 for footnotes.

(continued)

TABLE 20 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB™-36 DECK PANELS ATTACHED WITH PNEUTEK PINS TO SUPPORTS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/7 ATTACHMENT PATTERN FOR PNEUTEK SDK61075 AT SUPPORTS 0.113 – 0.155" THICK											
22	VSC @ 24"	q	535	508	441	425	385	378	351		
		F	7.6+24R	8.5+19R	11.2+16R	12.1+14R	15.1+12R	16.0+11R	19.4+10R	–	–
	VSC @ 18"	q	607	548	477	454	436	401	393		
		F	6.3+24R	7.4+19R	9.5+16R	10.6+14R	11.7+12R	14.2+11R	15.3+10R	–	–
	VSC @ 12"	q	652	583	537	504	480	460	445		
		F	5.6+24R	6.6+19R	7.6+16R	8.7+14R	9.8+12R	10.9+11R	12.0+10R	–	–
	VSC @ 8"	q	729	672	611	587	552	540	517		
		F	4.9+24R	5.4+19R	6.3+16R	6.8+14R	7.8+12R	8.3+11R	9.3+10R	–	–
	VSC @ 6"	q	793	722	674	639	614	594	577		
		F	4.4+24R	5.0+19R	5.5+16R	6.1+14R	6.7+12R	7.2+11R	7.8+10R	–	–
	VSC @ 4"	q	901	828	778	743	716	696	679		
		F	4.0+24R	4.3+19R	4.7+16R	5.1+14R	5.5+12R	5.9+11R	6.3+10R	–	–
20	VSC @ 24"	q	638	655	527	548	468	488	432	451	408
		F	6.3+13R	7.0+10R	9.3+8R	10+7R	12.5+6R	13.3+6R	16.0+5R	16.7+5R	19.6+4R
	VSC @ 18"	q	782	707	615	586	564	519	508	498	470
		F	5.3+13R	6.1+10R	7.9+8R	8.8+7R	9.7+6R	11.7+6R	12.7+5R	13.6+5R	15.8+4R
	VSC @ 12"	q	841	753	694	652	620	595	575	559	546
		F	4.7+13R	5.5+10R	6.3+8R	7.2+7R	8.1+6R	9.0+6R	9.9+5R	10.9+5R	11.8+4R
	VSC @ 8"	q	941	868	790	759	714	699	669	660	639
		F	4.0+13R	4.5+10R	5.2+8R	5.7+7R	6.4+6R	6.9+6R	7.7+5R	8.2+5R	9.0+4R
	VSC @ 6"	q	1025	933	871	827	794	768	748	731	688
		F	3.7+13R	4.1+10R	4.6+8R	5.0+7R	5.5+6R	6.0+6R	6.5+5R	7.0+5R	7.4+4R
	VSC @ 4"	q	1165	1070	1007	962	928	901	880	818	688
		F	3.3+13R	3.6+10R	3.9+8R	4.2+7R	4.6+6R	4.9+6R	5.2+5R	5.5+5R	5.9+4R
18	VSC @ 24"	q	819	846	680	711	608	636	563	588	532
		F	4.6+5R	5.2+4R	6.8+3R	7.3+3R	9.1+2R	9.6+2R	11.6+2R	12.1+2R	14.1+2R
	VSC @ 18"	q	1090	990	852	823	794	731	717	705	665
		F	3.9+5R	4.5+4R	5.8+3R	6.4+3R	7.0+2R	8.5+2R	9.2+2R	9.8+2R	11.4+2R
	VSC @ 12"	q	1176	1056	975	918	875	841	814	792	774
		F	3.5+5R	4.0+4R	4.6+3R	5.3+3R	5.9+2R	6.6+2R	7.2+2R	7.9+2R	8.5+2R
	VSC @ 8"	q	1319	1221	1114	1072	1011	990	949	937	908
		F	3.0+5R	3.3+4R	3.8+3R	4.1+3R	4.7+2R	5.0+2R	5.6+2R	5.9+2R	6.5+2R
	VSC @ 6"	q	1440	1314	1230	1170	1125	1090	1062	1039	1020
		F	2.7+5R	3.0+4R	3.4+3R	3.7+3R	4.0+2R	4.4+2R	4.7+2R	5.0+2R	5.4+2R
	VSC @ 4"	q	1642	1513	1426	1364	1318	1282	1253	1229	1057
		F	2.5+5R	2.7+4R	2.9+3R	3.1+3R	3.3+2R	3.6+2R	3.8+2R	4.0+2R	4.3+2R
16	VSC @ 24"	q	987	1025	825	865	740	776	688	720	652
		F	3.6+2R	4.0+2R	5.3+1R	5.7+1R	7.0+1R	7.4+1R	8.9+1R	9.3+1R	10.8+1R
	VSC @ 18"	q	1337	1252	1036	1037	1011	904	915	901	836
		F	3.0+2R	3.5+2R	4.5+1R	4.9+1R	5.4+1R	6.6+1R	7.0+1R	7.5+1R	8.7+1R
	VSC @ 12"	q	1485	1338	1239	1169	1116	1075	1042	1015	993
		F	2.7+2R	3.1+2R	3.6+1R	4.1+1R	4.6+1R	5.0+1R	5.5+1R	6.0+1R	6.5+1R
	VSC @ 8"	q	1671	1553	1420	1371	1294	1269	1218	1204	1167
		F	2.3+2R	2.6+2R	3.0+1R	3.2+1R	3.6+1R	3.9+1R	4.3+1R	4.5+1R	5.0+1R
	VSC @ 6"	q	1829	1675	1572	1498	1443	1400	1366	1337	1314
		F	2.1+2R	2.4+2R	2.6+1R	2.9+1R	3.1+1R	3.4+1R	3.6+1R	3.9+1R	4.1+1R
	VSC @ 4"	q	2092	1933	1827	1751	1694	1649	1614	1585	1478
		F	1.9+2R	2.1+2R	2.3+1R	2.4+1R	2.6+1R	2.8+1R	2.9+1R	3.1+1R	3.3+1R

¹ Notes 1-6 of Table 18 apply to this table.

² See General Note 7d for spacing of Pneutek fasteners at collector elements parallel to deck flutes.

³ See Table 3 for Allowable Tension Loads for Pneutek fasteners subject to wind uplift loads.

⁴ See Section 3.11 for Pneutek fastener details.

TABLE 21 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB-36 DECK ATTACHED TO SUPPORTS WITH #12 SCREWS AND SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6,7,8}

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	
36/4 ATTACHMENT PATTERN											
22	VSC @ 24"	q	322	318	267	272	237	246	221	230	211
		F	-24.2+542R	-12.1+360R	-4.6+269R	-1.0+215R	2.9+178R	4.4+153R	7.0+133R	7.6+118R	9.6+106R
	VSC @ 12"	q	387	366	354	343	336	330	326	322	319
		F	-25.3+542R	-13.2+361R	-7.0+270R	-3.2+216R	-0.6+180R	1.3+154R	2.7+135R	3.8+120R	4.7+108R
	VSC @ 8"	q	426	424	406	408	395	398	389	392	385
		F	-26.0+543R	-14.5+362R	-8.3+271R	-4.9+217R	-2.3+180R	-0.7+155R	0.8+135R	1.7+120R	2.6+108R
	VSC @ 4"	q	476	472	471	469	468	467	466	466	465
		F	-27.1+543R	-15.8+362R	-10.1+271R	-6.6+217R	-4.4+181R	-2.7+155R	-1.5+136R	-0.5+121R	0.2+109R
20	VSC @ 24"	q	409	412	351	362	319	332	301	315	291
		F	-13.2+342R	-5.4+228R	-0.1+170R	2.1+136R	5.0+112R	5.8+96R	7.8+84R	8.1+74R	9.6+66R
	VSC @ 12"	q	490	471	459	449	442	437	433	430	427
		F	-14.2+343R	-6.4+228R	-2.3+171R	0.2+136R	1.9+114R	3.1+97R	4.0+85R	4.8+76R	5.4+68R
	VSC @ 8"	q	534	535	517	520	508	512	503	507	500
		F	-14.9+343R	-7.6+229R	-3.5+171R	-1.4+137R	0.4+114R	1.4+98R	2.4+85R	2.9+76R	3.6+68R
	VSC @ 4"	q	584	581	580	578	578	577	576	576	576
		F	-15.9+344R	-8.7+229R	-5.0+172R	-2.8+137R	-1.4+114R	-0.3+98R	0.4+86R	1.0+76R	1.5+69R
18	VSC @ 24"	q	488	505	445	463	386	400	350	365	329
		F	-2.3+166R	1.3+111R	4.9+82R	5.6+66R	7.7+54R	7.7+47R	9.2+40R	8.9+36R	10.1+32R
	VSC @ 12"	q	569	559	553	548	544	541	539	537	536
		F	-4.0+167R	0+111R	2.0+83R	3.3+67R	4.1+55R	4.7+47R	5.2+42R	5.5+37R	5.8+33R
	VSC @ 8"	q	604	607	596	599	592	595	590	593	589
		F	-4.9+168R	-1.4+112R	0.7+84R	1.7+67R	2.6+56R	3.0+48R	3.6+42R	3.8+37R	4.2+33R
	VSC @ 4"	q	635	634	634	633	633	633	633	633	633
		F	-6.1+168R	-2.6+112R	-0.8+84R	0.3+67R	1.0+56R	1.5+48R	1.9+42R	2.2+37R	2.4+34R
16	VSC @ 24"	q	517	537	442	449	374	388	340	354	319
		F	1.7+94R	3.5+63R	6.3+47R	6.3+37R	8.0+31R	7.7+26R	8.9+23R	8.5+20R	9.5+18R
	VSC @ 12"	q	583	577	575	572	571	569	568	565	555
		F	-0.3+95R	2.1+63R	3.3+47R	4.0+38R	4.5+32R	4.9+27R	5.1+24R	5.4+21R	5.5+19R
	VSC @ 8"	q	605	607	602	604	600	602	599	601	599
		F	-1.2+96R	0.7+64R	2.1+48R	2.5+38R	3.2+32R	3.3+27R	3.7+24R	3.8+21R	4.0+19R
	VSC @ 4"	q	623	623	623	622	622	622	622	622	622
		F	-2.4+96R	-0.3+64R	0.7+48R	1.3+38R	1.7+32R	2.0+27R	2.2+24R	2.4+21R	2.5+19R
36/5 ATTACHMENT PATTERN											
22	VSC @ 24"	q	388	373	310	310	269	275	246	253	232
		F	-15.1+381R	-6.3+253R	-0.6+189R	2.1+151R	5.1+125R	6.3+107R	8.4+93R	8.9+82R	10.6+74R
	VSC @ 12"	q	461	428	409	392	380	371	365	359	354
		F	-15.9+381R	-7.2+254R	-2.6+190R	0.3+152R	2.2+126R	3.7+108R	4.8+94R	5.6+84R	6.4+75R
	VSC @ 8"	q	509	503	475	475	456	459	446	449	439
		F	-16.5+382R	-8.2+254R	-3.7+190R	-1.2+152R	0.8+127R	1.9+109R	3.1+95R	3.7+84R	4.4+76R
	VSC @ 4"	q	580	573	569	565	562	561	559	558	557
		F	-17.4+382R	-9.3+255R	-5.2+191R	-2.8+153R	-1.1+127R	0+109R	0.9+95R	1.6+85R	2.2+76R
20	VSC @ 24"	q	491	482	406	412	360	372	334	347	319
		F	-7.6+241R	-1.9+160R	2.1+119R	3.9+95R	6.2+78R	6.9+67R	8.5+58R	8.8+52R	10.1+46R
	VSC @ 12"	q	585	553	534	517	506	497	490	484	480
		F	-8.4+241R	-2.7+160R	0.4+120R	2.3+96R	3.6+80R	4.5+68R	5.3+59R	5.9+53R	6.3+47R
	VSC @ 8"	q	642	638	611	613	594	598	584	589	578
		F	-8.9+241R	-3.6+161R	-0.6+120R	1.0+96R	2.3+80R	3.0+69R	3.8+60R	4.2+53R	4.7+48R
	VSC @ 4"	q	715	709	706	704	702	700	699	699	698
		F	-9.8+242R	-4.6+161R	-2.0+121R	-0.4+97R	0.6+81R	1.4+69R	2.0+60R	2.4+54R	2.7+48R

See Pages 57 and 58 for footnotes.

(continued)

TABLE 21 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB-36 DECK ATTACHED TO SUPPORTS WITH #12 SCREWS AND SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6,7} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	
36/5 ATTACHMENT PATTERN (Cont'd.)											
18	VSC @ 24"	q	582	593	511	506	422	431	377	390	351
		F	0.1+117R	2.9+78R	5.8+57R	6.3+46R	8.2+38R	8.1+32R	9.5+28R	9.2+25R	10.3+22R
	VSC @ 12"	q	685	666	655	645	638	632	621	606	595
		F	-1.3+117R	1.7+78R	3.3+58R	4.3+47R	4.9+39R	5.4+33R	5.8+29R	6.1+26R	6.3+23R
	VSC @ 8"	q	734	737	719	723	711	716	707	711	704
		F	-2.0+118R	0.5+78R	2.1+59R	2.8+47R	3.5+39R	3.8+34R	4.3+29R	4.4+26R	4.7+23R
	VSC @ 4"	q	785	783	782	781	781	780	780	779	779
		F	-3.1+118R	-0.6+79R	0.7+59R	1.5+47R	2.0+39R	2.3+34R	2.6+30R	2.8+26R	3.0+24R
16	VSC @ 24"	q	618	638	495	491	409	418	366	378	340
		F	2.8+66R	4.3+44R	6.6+32R	6.7+26R	8.2+21R	7.9+18R	9.0+16R	8.7+14R	9.6+12R
	VSC @ 12"	q	708	698	692	680	645	621	602	588	577
		F	1.2+67R	3.0+44R	4.0+33R	4.6+26R	5.0+22R	5.3+19R	5.5+16R	5.6+15R	5.8+13R
	VSC @ 8"	q	743	747	736	740	733	736	731	734	730
		F	0.4+67R	1.8+45R	2.8+33R	3.2+27R	3.7+22R	3.8+19R	4.1+17R	4.1+15R	4.4+13R
	VSC @ 4"	q	774	773	773	773	772	772	772	772	772
		F	-0.7+67R	0.8+45R	1.5+34R	2.0+27R	2.2+22R	2.5+19R	2.6+17R	2.7+15R	2.8+13R
36/7 ATTACHMENT PATTERN											
22	VSC @ 24"	q	445	421	341	339	289	295	261	269	245
		F	4.1+60R	6.3+39R	8.4+28R	9.3+22R	10.8+18R	11.2+15R	12.5+12R	12.6+11R	13.7+9R
	VSC @ 12"	q	547	495	467	442	425	412	403	395	389
		F	3.5+60R	5.6+39R	6.9+29R	7.8+23R	8.4+19R	8.9+16R	9.4+14R	9.7+12R	10.0+11R
	VSC @ 8"	q	623	609	563	562	531	535	514	519	504
		F	3.0+60R	4.7+40R	5.9+30R	6.5+24R	7.1+19R	7.4+17R	7.8+14R	7.9+13R	8.2+11R
	VSC @ 4"	q	754	738	729	721	716	712	709	706	704
		F	2.2+61R	3.7+40R	4.5+30R	5.0+24R	5.4+20R	5.6+17R	5.8+15R	5.9+13R	6.1+12R
20	VSC @ 24"	q	567	551	450	455	390	403	358	372	339
		F	4.4+37R	6.0+24R	7.7+17R	8.3+14R	9.6+11R	9.8+9R	10.9+7R	10.9+6R	11.9+5R
	VSC @ 12"	q	705	651	621	595	577	563	553	545	538
		F	3.8+38R	5.3+25R	6.3+18R	6.9+14R	7.4+12R	7.8+10R	8.1+9R	8.4+7R	8.6+7R
	VSC @ 8"	q	800	792	742	744	711	718	694	702	684
		F	3.4+38R	4.5+25R	5.4+19R	5.8+15R	6.3+12R	6.4+10R	6.8+9R	6.8+8R	7.1+7R
	VSC @ 4"	q	946	933	925	919	915	912	909	907	906
		F	2.6+38R	3.7+25R	4.2+19R	4.5+15R	4.7+13R	4.9+11R	5.0+9R	5.1+8R	5.2+8R
18	VSC @ 24"	q	689	701	565	549	458	462	404	414	372
		F	5.7+17R	6.5+11R	8.3+8R	8.4+6R	9.7+4R	9.5+4R	10.6+3R	10.2+3R	11.1+2R
	VSC @ 12"	q	858	820	799	745	702	671	648	631	616
		F	4.6+18R	5.5+12R	6.1+9R	6.5+7R	6.8+6R	7.0+5R	7.1+4R	7.3+4R	7.4+3R
	VSC @ 8"	q	953	957	919	927	902	911	892	901	860
		F	3.9+18R	4.4+12R	5.1+9R	5.1+7R	5.5+6R	5.5+5R	5.7+4R	5.7+4R	5.9+3R
	VSC @ 4"	q	1067	1062	1059	1056	1054	1053	1052	1051	1051
		F	2.9+19R	3.4+12R	3.7+9R	3.9+7R	4.0+6R	4.1+5R	4.1+5R	4.2+4R	4.2+4R
16	VSC @ 24"	q	752	704	548	533	444	448	392	401	361
		F	5.9+9R	6.3+6R	7.9+4R	7.7+3R	9.0+2R	8.6+2R	9.6+1R	9.2+1R	10+1R
	VSC @ 12"	q	916	862	784	722	680	651	629	611	598
		F	4.5+10R	5.2+6R	5.6+5R	5.8+4R	6.0+3R	6.1+3R	6.3+2R	6.3+2R	6.4+2R
	VSC @ 8"	q	991	998	975	982	917	921	865	874	834
		F	3.8+10R	4.0+7R	4.5+5R	4.5+4R	4.8+3R	4.7+3R	4.9+2R	4.9+2R	5.0+2R
	VSC @ 4"	q	1066	1064	1063	1062	1061	1060	1060	1060	1060
		F	2.8+11R	3.1+7R	3.2+5R	3.3+4R	3.4+4R	3.4+3R	3.5+3R	3.5+2R	3.5+2R

See Pages 57 and 58 for footnotes.

(continued)

TABLE 21 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLB-36 DECK ATTACHED TO SUPPORTS WITH #12 SCREWS AND SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6,7} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)								
		2'-0"	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"
36/9 ATTACHMENT PATTERN										
22	VSC @ 24"	q 613	551	451	430	366	362	315	319	287
	F 3.0+60R	5.1+39R	6.9+29R	7.8+23R	9.1+18R	9.6+15R	10.7+13R	10.9+11R	11.9+9R	
	VSC @ 12"	q 710	626	578	536	506	484	467	454	443
	F 2.7+60R	4.7+40R	6.0+29R	6.9+23R	7.5+19R	8.1+16R	8.5+14R	8.9+12R	9.2+11R	
	VSC @ 8"	q 787	747	681	667	623	620	591	592	571
	F 2.4+60R	4.1+40R	5.3+30R	5.9+24R	6.6+19R	6.9+17R	7.3+14R	7.4+13R	7.8+11R	
20	VSC @ 4"	q 937	903	883	866	854	845	837	832	756
	F 1.9+61R	3.5+40R	4.3+30R	4.8+24R	5.2+20R	5.4+17R	5.6+15R	5.8+13R	5.9+12R	
	VSC @ 24"	q 767	707	581	564	483	484	430	437	397
	F 3.4+38R	5.0+25R	6.4+18R	7.1+14R	8.1+11R	8.5+9R	9.4+7R	9.6+6R	10.4+5R	
	VSC @ 12"	q 900	810	757	712	679	655	637	622	610
	F 3.1+38R	4.6+25R	5.5+18R	6.2+14R	6.7+12R	7.1+10R	7.4+8R	7.7+7R	7.9+7R	
18	VSC @ 8"	q 1001	966	893	883	833	835	801	805	780
	F 2.9+38R	4.1+25R	4.9+19R	5.3+15R	5.8+12R	6.0+10R	6.4+9R	6.5+8R	6.7+7R	
	VSC @ 4"	q 1177	1147	1130	1115	1105	1097	1091	1086	991
	F 2.4+38R	3.4+25R	4.0+19R	4.3+15R	4.6+13R	4.8+11R	4.9+9R	5.0+8R	5.1+7R	
	VSC @ 24"	q 897	870	723	676	563	553	483	484	436
	F 4.7+18R	5.7+11R	7.1+8R	7.4+6R	8.5+4R	8.5+4R	9.5+3R	9.3+3R	10.2+2R	
16	VSC @ 12"	q 1072	1002	961	871	807	762	727	701	680
	F 4.0+18R	5.0+12R	5.6+9R	6.0+7R	6.3+5R	6.6+5R	6.8+4R	6.9+3R	7.0+3R	
	VSC @ 8"	q 1184	1173	1113	1115	1051	1041	971	972	924
	F 3.5+18R	4.1+12R	4.7+9R	4.9+7R	5.2+6R	5.3+5R	5.5+4R	5.5+4R	5.7+3R	
	VSC @ 4"	q 1340	1326	1318	1311	1306	1303	1300	1298	1296
	F 2.8+19R	3.3+12R	3.6+9R	3.8+7R	3.9+6R	4.0+5R	4.1+5R	4.1+4R	4.1+4R	
12	VSC @ 24"	q 954	896	701	655	546	536	469	469	422
	F 4.9+10R	5.5+6R	6.9+4R	7.0+3R	8.1+2R	7.9+2R	8.8+1R	8.5+1R	9.3+1R	
	VSC @ 12"	q 1137	1054	937	845	783	738	705	680	659
	F 4.0+10R	4.7+6R	5.2+5R	5.5+4R	5.7+3R	5.9+2R	6.0+2R	6.1+2R	6.2+2R	
	VSC @ 8"	q 1236	1237	1174	1128	1019	1009	942	942	895
	F 3.5+10R	3.8+7R	4.3+5R	4.3+4R	4.6+3R	4.6+3R	4.8+2R	4.8+2R	4.9+2R	
8	VSC @ 4"	q 1349	1343	1340	1337	1335	1334	1333	1332	1331
	F 2.7+11R	3.0+7R	3.2+5R	3.3+4R	3.4+3R	3.4+3R	3.4+3R	3.5+2R	3.5+2R	

¹ Notes 1-6 of Table 18 apply to this table.

² The deck panels are attached with minimum #12 Screws (self drilling, self tapping) to supports. Select the appropriate screw based on actual substrate thickness. The table below is provided as a guide and proper selection should be verified based on the specific fasteners used.

SUPPORT THICKNESS	FASTENER DESIGNATION
33 mil (0.0346") to 3/16"	#3 Drill Point
1/8" to 1/4"	#4 Drill Point
1/8" to 1/2"	#5 Drill Point

³ All tabulated diaphragm and connection values are based on connection strengths determined in accordance with Section E4 of AISI S100. The self drilling, self tapping screws used must be compliant with ASTM C1315.

⁴ Diaphragm shear values based on a continuous 3 span condition for span lengths 4 ft and greater. For span lengths less than 4 ft, a 12 ft long sheet is assumed, with a maximum of 7 continuous spans.

See Page 58 for additional footnotes.

(continued)

ADDITIONAL FOOTNOTES FOR TABLE 21

- ⁵ Diaphragm values shown are for minimum 54 mil (16 gage) cold-formed steel supports with $F_y = 33$ ksi & $F_u = 45$ ksi. Modify tabulated q and F values based on actual substrate strength and thickness as follows:

$$\text{Allowable Diaphragm Strength} = q \cdot R_q$$

$$\text{Flexibility Factor} = F \cdot R_F$$

DECK GAGE		SUPPORT THICKNESS & STRENGTH, F_y / F_u , (ksi)					
		33 mil (0.0346 in.)		43 mil (0.0451 in.)		≥ 54 mil (0.0566 in.)	
		33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65
22	R_q	0.65	0.88	0.93	1.00	1.00	1.00
	R_F	1.27	1.24	1.16	1.00	1.00	1.00
20	R_q	0.51	0.73	0.79	1.00	1.00	1.00
	R_F	1.34	1.35	1.21	1.00	1.00	1.00
18	R_q	0.46	0.67	0.69	1.00	1.00	1.14
	R_F	1.18	1.32	1.11	1.14	1.00	1.00
16	R_q	0.48	0.69	0.71	1.02	1.00	1.33
	R_F	1.09	1.30	1.05	1.19	1.00	1.00

- ⁶ Spacing of screws at shear collectors parallel to the corrugations of the deck should be based on the shear to be transferred, but shall be no greater than the screw spacing at the sidelaps. The following table lists the allowable screw connection shear strength, in lbs., for a #12 screw.

DECK GAGE		SUPPORT THICKNESS & STRENGTH, F_y / F_u , (ksi)					
		33 mil (0.0346 in.)		43 mil (0.0451 in.)		≥ 54 mil (0.0566 in.)	
		33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65
22		200	277	294	320	320	320
20		188	272	298	384	384	384
18		188	272	280	405	407	511
16		188	272	280	405	394	600

The allowable shear strengths of the individual fasteners, as published by their manufacturer, must meet or exceed the allowable screw connection shear strengths listed above.

- ⁷ Fasteners subjected to tension loads must be evaluated based on allowable tension strength determined in accordance with Section E4 of AISI S100. The following table lists the allowable screw connection tension strength, in lbs., for a #12 screw with a minimum washer diameter of 5/16-in. Values are the lesser of the allowable pullover (deck pulling over the head of the screw) and pullout (screw pulling out of the support member) for a given combination of deck gage and support member strength and thickness.

DECK GAGE		SUPPORT THICKNESS & STRENGTH, F_y / F_u , (ksi)									
		33 mil (0.0346 in.)		43 mil (0.0451 in.)		54 mil (0.0566 in.)		68 mil (0.0713 in.)		97 mil (0.1017 in.)	
		33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65
22		95	138	124	179	156	225	196	257	257	257
20		95	138	124	179	156	225	196	284	280	309
18		95	138	124	179	156	225	196	284	280	405
16		95	138	124	179	156	225	196	284	280	405

The allowable tension strengths of the individual fasteners, as published by their manufacturer, must meet or exceed the allowable screw connection tension strengths listed above.

TABLE 22—ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR VERCO SHEARTRANZ® II-42 AND PLB™-36 DECK WITH SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2}

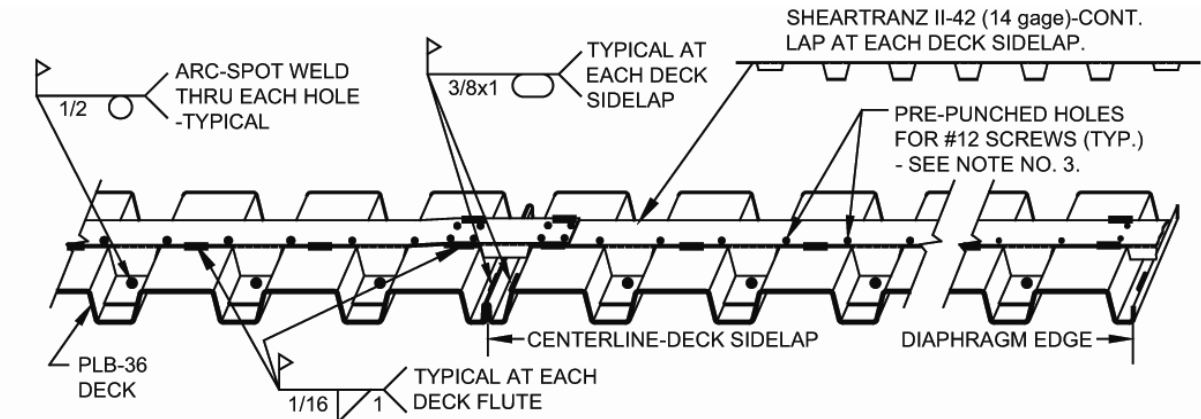
GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
36/7 WELD PATTERN AT SUPPORTS											
22	VSC @ 24"	q	1167	986	844	766	689	650	602	—	—
		F	5.5+4R	5.6+4R	6.7+5R	6.8+6R	7.8+7R	7.8+8R	8.8+9R	—	—
	VSC @ 18"	q	1199	1012	869	788	729	668	637	—	—
		F	4.7+4R	5.0+4R	5.8+5R	6.1+6R	6.3+7R	7.1+8R	7.2+9R	—	—
	VSC @ 12"	q	1225	1034	910	825	762	716	681	—	—
		F	4.3+4R	4.6+4R	4.9+5R	5.2+6R	5.5+7R	5.7+8R	6.0+9R	—	—
	VSC @ 8"	q	1270	1091	961	885	819	780	741	—	—
		F	3.9+4R	4.0+4R	4.3+5R	4.4+6R	4.6+7R	4.7+8R	4.9+9R	—	—
	VSC @ 6"	q	1308	1123	1004	923	866	824	753	—	—
		F	3.6+4R	3.8+4R	3.9+5R	4.1+6R	4.2+7R	4.3+8R	4.4+9R	—	—
	VSC @ 4"	q	1371	1190	1076	999	945	906	753	—	—
		F	3.4+4R	3.5+4R	3.6+5R	3.7+6R	3.7+7R	3.8+8R	3.9+9R	—	—
20	VSC @ 24"	q	1513	1287	1105	1009	911	864	802	778	688
		F	4.6+3R	4.7+3R	5.6+4R	5.7+5R	6.5+6R	6.5+6R	7.4+7R	7.3+8R	8.1+8R
	VSC @ 18"	q	1558	1323	1140	1040	968	891	853	818	688
		F	3.9+3R	4.2+3R	4.9+4R	5.1+5R	5.2+6R	5.9+6R	6.0+7R	6.1+8R	6.7+8R
	VSC @ 12"	q	1597	1356	1200	1093	1017	960	917	818	688
		F	3.6+3R	3.9+3R	4.1+4R	4.3+5R	4.6+6R	4.8+6R	4.9+7R	5.1+8R	5.3+8R
	VSC @ 8"	q	1661	1437	1274	1181	1098	1053	990	818	688
		F	3.2+3R	3.3+3R	3.6+4R	3.7+5R	3.9+6R	3.9+6R	4.1+7R	4.1+8R	4.3+8R
	VSC @ 6"	q	1715	1483	1335	1236	1166	1116	990	818	688
		F	3.0+3R	3.2+3R	3.3+4R	3.4+5R	3.5+6R	3.6+6R	3.6+7R	3.7+8R	3.8+8R
	VSC @ 4"	q	1806	1580	1439	1345	1281	1223	990	818	688
		F	2.8+3R	2.9+3R	3.0+4R	3.0+5R	3.1+6R	3.2+6R	3.2+7R	3.2+8R	3.3+8R
18	VSC @ 24"	q	2171	1870	1616	1496	1359	1304	1218	1195	1057
		F	3.4+2R	3.5+2R	4.2+3R	4.3+3R	4.9+4R	4.9+4R	5.5+5R	5.5+5R	6.1+6R
	VSC @ 18"	q	2250	1934	1678	1549	1459	1351	1308	1257	1057
		F	3.0+2R	3.1+2R	3.7+3R	3.8+3R	3.9+4R	4.4+4R	4.5+5R	4.6+5R	5.0+6R
	VSC @ 12"	q	2315	1990	1782	1642	1544	1473	1421	1257	1057
		F	2.7+2R	2.9+2R	3.1+3R	3.2+3R	3.4+4R	3.5+4R	3.7+5R	3.8+5R	3.9+6R
	VSC @ 8"	q	2426	2130	1910	1794	1686	1637	1521	1257	1057
		F	2.4+2R	2.5+2R	2.7+3R	2.7+3R	2.9+4R	2.9+4R	3.0+5R	3.1+5R	3.2+6R
	VSC @ 6"	q	2519	2210	2017	1891	1805	1747	1521	1257	1057
		F	2.3+2R	2.4+2R	2.4+3R	2.5+3R	2.6+4R	2.6+4R	2.7+5R	2.7+5R	2.8+6R
	VSC @ 4"	q	2676	2378	2197	2082	2006	1878	1521	1257	1057
		F	2.1+2R	2.2+2R	2.2+3R	2.3+3R	2.3+4R	2.3+4R	2.4+5R	2.4+5R	2.4+6R
16	VSC @ 24"	q	2839	2476	2154	2018	1844	1790	1682	1667	1478
		F	2.8+1R	2.8+2R	3.4+2R	3.4+3R	3.9+3R	3.9+3R	4.4+4R	4.3+4R	4.8+4R
	VSC @ 18"	q	2958	2573	2249	2100	1999	1863	1821	1759	1478
		F	2.4+1R	2.5+2R	2.9+2R	3.0+3R	3.1+3R	3.5+3R	3.6+4R	3.6+4R	3.9+4R
	VSC @ 12"	q	3058	2659	2408	2243	2130	2051	1996	1759	1478
		F	2.2+1R	2.3+2R	2.5+2R	2.6+3R	2.7+3R	2.8+3R	2.9+4R	3.0+4R	3.1+4R
	VSC @ 8"	q	3226	2873	2604	2477	2349	2304	2129	1759	1478
		F	1.9+1R	2.0+2R	2.1+2R	2.2+3R	2.3+3R	2.3+3R	2.4+4R	2.4+4R	2.5+4R
	VSC @ 6"	q	3368	2994	2768	2625	2533	2475	2129	1759	1478
		F	1.8+1R	1.9+2R	1.9+2R	2.0+3R	2.0+3R	2.1+3R	2.1+4R	2.2+4R	2.2+4R
	VSC @ 4"	q	3606	3252	3044	2918	2843	2628	2129	1759	1478
		F	1.7+1R	1.7+2R	1.8+2R	1.8+3R	1.8+3R	1.8+3R	1.9+4R	1.9+4R	1.9+4R

¹ Notes 1-6 of Table 18 apply to this table.

² See Figure10 for SHEARTRANZ II-42 details.

FIGURE 10-DETAILS FOR SHEARTRANZ® II-42 FOR PLB™-36 DECK

SECTION 1:

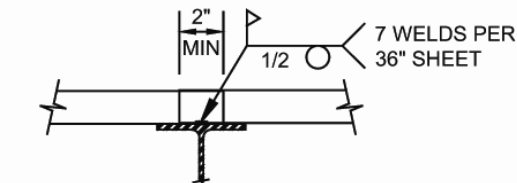


NOTE: CONTINUOUS RIB IN TOP FLANGE OF SHEARTRANZ II-42 NOT SHOWN FOR CLARITY.

- NOTES: 1) WELD BOTH SIDES ADJACENT TO DECK SIDELAP.
2) WELD BOTH SIDES AT EDGE OF DIAPHRAGM.
ALTERNATE ATTACHMENT:
3) #12 SCREWS THRU PRE-PUNCHED HOLES AT LOCATIONS SHOWN ARE PERMITTED TO REPLACE WELDS.

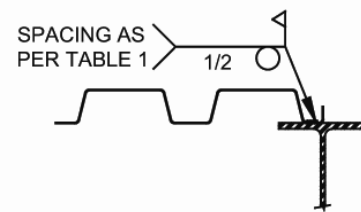
SHEARTRANZ® II-42 FOR PLB™-36 DECK with THE PUNCHLOK™ SYSTEM
with VSC SIDELAP CONNECTIONS MADE WITH THE PUNCHLOK™ TOOL

TYPICAL DETAILS

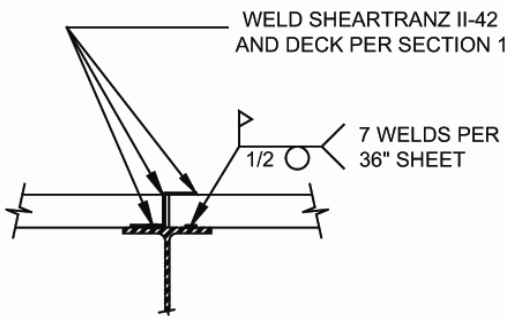


NOTE: LAP DECK MIN. 2" AT END LAPS.

TYPICAL INTERIOR SUPPORT

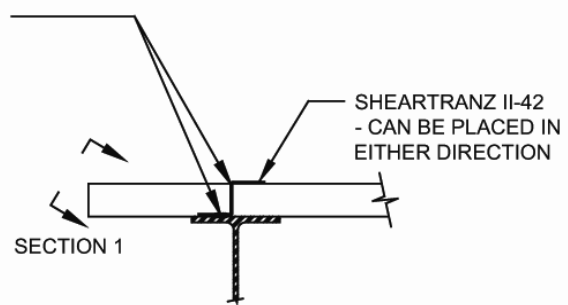


ATTACHMENT AT PARALLEL SUPPORTS



TYPICAL BUTT JOINT

SHEARTRANZ II-42 CONTINUOUS AT BUTT JOINTS. ATTACH TOP FLANGE OF SHEARTRANZ II-42 TO BOTH PIECES OF DECK AT BUTT JOINTS.



DETAIL AT DIAPHRAGM PERIMETER

DECK MAY BE CANTILEVERED OR STOP AT BEAM.

TABLE 23—ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR TYPE HSB®-36 DECK WITH BUTTON PUNCHES (BP) OR 1½" TOP SEAM WELDS (TSW) AT SIDELAPS¹

GAGE	SIDELAP ATTACH- MENT		SPAN (ft-in.)								
			4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
36/4 WELD PATTERN AT SUPPORTS											
22	BP @ 24"	q	303	308	289	291	277	262	232	—	—
		F	4.7+281R	5.7+224R	7.2+187R	8.8+160R	11.0+140R	13.2+125R	16.2+112R	—	—
	BP @ 12"	q	363	356	349	343	336	312	284	—	—
		F	4.4+281R	5.3+224R	6.5+187R	7.9+160R	9.6+140R	11.5+125R	13.8+112R	—	—
	TSW @ 24"	q	567	519	434	417	366	359	325	—	—
		F	38.7+159R	32.6+127R	42.6+106R	37.1+91R	45.3+80R	40.3+71R	47.3+64R	—	—
	TSW @ 18"	q	646	577	484	456	435	389	378	—	—
		F	23.8+159R	22.9+127R	29.6+106R	27.8+91R	26.7+80R	31.6+71R	30.1+64R	—	—
	TSW @ 12"	q	718	632	573	531	498	472	451	—	—
		F	17.0+159R	17.5+127R	17.9+106R	18.2+91R	18.4+80R	18.6+71R	18.8+64R	—	—
	TSW @ 6"	q	971	874	807	757	719	689	665	—	—
		F	8.0+159R	8.1+127R	8.2+106R	8.2+91R	8.2+80R	8.2+71R	8.2+64R	—	—
20	BP @ 24"	q	457	459	434	418	359	327	290	269	244
		F	4.3+162R	5.4+130R	7.0+108R	8.7+93R	11.0+81R	13.4+72R	16.5+65R	19.6+59R	23.7+54R
	BP @ 12"	q	528	517	506	478	421	378	343	314	290
		F	4.0+162R	5.0+130R	6.3+108R	7.9+93R	9.7+81R	11.9+72R	14.4+65R	17.2+59R	20.3+54R
	TSW @ 24"	q	794	710	595	561	493	477	432	424	390
		F	30.5+88R	26.4+70R	34.5+59R	30.6+50R	37.5+44R	33.8+39R	39.8+35R	36.4+32R	41.8+29R
	TSW @ 18"	q	884	777	651	607	573	512	494	478	441
		F	19.2+88R	18.8+70R	24.4+59R	23.2+50R	22.5+44R	26.8+39R	25.7+35R	25.0+32R	28.5+29R
	TSW @ 12"	q	967	840	755	693	646	609	579	554	534
		F	13.9+88R	14.5+70R	15.0+59R	15.4+50R	15.8+44R	16.1+39R	16.3+35R	16.5+32R	16.7+29R
	TSW @ 6"	q	1258	1119	1024	954	902	860	826	798	688
		F	6.8+88R	6.9+70R	7.0+59R	7.1+50R	7.1+44R	7.2+39R	7.2+35R	7.3+32R	7.3+29R
18	BP @ 24"	q	883	820	671	586	506	458	408	376	342
		F	3.8+69R	5.0+55R	6.7+46R	8.6+39R	11.0+34R	13.6+31R	16.9+27R	20.3+25R	24.6+23R
	BP @ 12"	q	978	891	747	644	567	507	459	420	387
		F	3.6+69R	4.8+55R	6.2+46R	7.9+39R	10.0+34R	12.4+31R	15.2+27R	18.4+25R	21.9+23R
	TSW @ 24"	q	1253	1092	914	845	743	707	639	619	571
		F	20.2+35R	18.0+28R	23.6+23R	21.5+20R	26.4+17R	24.3+15R	28.8+14R	26.8+13R	30.8+12R
	TSW @ 18"	q	1359	1170	980	899	837	748	713	684	631
		F	13.1+35R	13.1+28R	17.0+23R	16.6+20R	16.3+17R	19.5+15R	19.0+14R	18.7+13R	21.5+12R
	TSW @ 12"	q	1455	1244	1102	1000	923	863	815	775	742
		F	9.7+35R	10.3+28R	10.8+23R	11.3+20R	11.7+17R	12.0+15R	12.3+14R	12.6+13R	12.9+12R
	TSW @ 6"	q	1796	1571	1419	1310	1227	1162	1110	1067	1031
		F	5.0+35R	5.1+28R	5.3+23R	5.4+20R	5.5+17R	5.6+15R	5.6+14R	5.7+13R	5.8+12R
16	BP @ 24"	q	1296	1056	868	755	654	589	526	483	440
		F	3.6+35R	4.8+28R	6.5+23R	8.5+20R	11.0+18R	13.7+16R	17.1+14R	20.7+13R	25.1+12R
	BP @ 12"	q	1399	1124	941	810	712	636	575	525	483
		F	3.4+35R	4.6+28R	6.1+23R	8.0+20R	10.2+18R	12.8+16R	15.8+14R	19.2+13R	23.0+12R
	TSW @ 24"	q	1667	1431	1198	1094	962	907	820	788	726
		F	14.2+17R	13.0+13R	17.1+11R	15.8+10R	19.5+8R	18.2+7R	21.6+7R	20.3+6R	23.5+6R
	TSW @ 18"	q	1781	1516	1270	1153	1065	952	901	860	793
		F	9.4+17R	9.6+13R	12.5+11R	12.3+10R	12.3+8R	14.7+7R	14.5+7R	14.4+6R	16.6+6R
	TSW @ 12"	q	1885	1596	1402	1263	1159	1077	1012	959	915
		F	7.1+17R	7.6+13R	8.1+11R	8.5+10R	8.9+8R	9.3+7R	9.6+7R	9.9+6R	10.2+6R
	TSW @ 6"	q	2252	1950	1746	1600	1490	1404	1335	1279	1233
		F	3.8+17R	3.9+13R	4.1+11R	4.2+10R	4.3+8R	4.4+7R	4.5+7R	4.6+6R	4.6+6R

See Page 63 for footnotes

(continued)

TABLE 23—ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR TYPE HSB®-36 DECK WITH BUTTON PUNCHES (BP) OR 1½" TOP SEAM WELDS (TSW) AT SIDELAPS¹— Continued

GAGE	SIDELAP ATTACH- MENT		SPAN (ft-in.)								
			4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
36/5 WELD PATTERN AT SUPPORTS											
22	BP @ 24"	q	451	445	416	407	351	319	284		
		F	4.5+157R	5.4+126R	6.9+105R	8.4+90R	10.6+79R	12.8+70R	15.8+63R	—	—
	BP @ 12"	q	511	492	476	458	405	364	331	—	—
		F	4.3+157R	5.2+126R	6.3+105R	7.8+90R	9.5+79R	11.6+70R	13.9+63R	—	—
	TSW @ 24"	q	699	627	525	496	437	423	383	—	—
		F	26.3+77R	22.8+62R	29.6+51R	26.4+44R	32.1+39R	29.1+34R	34.1+31R	—	—
	TSW @ 18"	q	780	687	576	538	508	454	439	—	—
		F	16.8+77R	16.5+62R	21.2+51R	20.2+44R	19.6+39R	23.2+34R	22.3+31R	—	—
	TSW @ 12"	q	854	744	669	615	574	541	516	—	—
		F	12.4+77R	12.9+62R	13.3+51R	13.7+44R	14.0+39R	14.2+34R	14.4+31R	—	—
	TSW @ 6"	q	1115	993	910	850	804	768	738	—	—
		F	6.5+77R	6.6+62R	6.7+51R	6.7+44R	6.8+39R	6.8+34R	6.9+31R	—	—
20	BP @ 24"	q	690	675	590	516	447	405	361	334	304
		F	4.0+91R	5.1+73R	6.5+61R	8.2+52R	10.4+45R	12.8+40R	15.9+36R	19.0+33R	23.1+30R
	BP @ 12"	q	762	733	656	568	501	450	408	374	346
		F	3.9+91R	4.9+73R	6.1+61R	7.7+52R	9.5+45R	11.7+40R	14.3+36R	17.2+33R	20.6+30R
	TSW @ 24"	q	991	872	730	679	598	572	518	504	465
		F	20.5+43R	18.2+34R	23.7+28R	21.5+24R	26.2+21R	24.1+19R	28.3+17R	26.3+16R	30.2+14R
	TSW @ 18"	q	1084	941	788	727	680	608	583	561	518
		F	13.4+43R	13.4+34R	17.2+28R	16.6+24R	16.3+21R	19.4+19R	18.8+17R	18.5+16R	21.1+14R
	TSW @ 12"	q	1169	1006	895	816	756	709	672	641	615
		F	10.0+43R	10.6+34R	11.0+28R	11.4+24R	11.8+21R	12.1+19R	12.4+17R	12.6+16R	12.8+14R
	TSW @ 6"	q	1469	1293	1174	1088	1023	972	931	818	688
		F	5.4+43R	5.5+34R	5.6+28R	5.7+24R	5.8+21R	5.9+19R	5.9+17R	6.0+16R	6.0+14R
18	BP @ 24"	q	1264	1030	849	738	641	577	516	475	433
		F	3.5+39R	4.6+31R	6.1+26R	7.9+22R	10.2+19R	12.7+17R	15.9+15R	19.4+14R	23.6+13R
	BP @ 12"	q	1353	1089	914	788	694	621	562	514	475
		F	3.4+39R	4.5+31R	5.8+26R	7.5+22R	9.5+19R	12.0+17R	14.8+15R	18.0+14R	21.7+13R
	TSW @ 24"	q	1582	1359	1138	1040	914	862	780	750	691
		F	13.4+17R	12.3+13R	16.0+11R	14.9+10R	18.3+8R	17.1+7R	20.2+7R	19.1+6R	22.0+6R
	TSW @ 18"	q	1690	1440	1206	1096	1012	905	858	818	755
		F	9.0+17R	9.2+13R	11.9+11R	11.7+10R	11.7+8R	13.9+7R	13.8+7R	13.7+6R	15.7+6R
	TSW @ 12"	q	1790	1516	1333	1201	1102	1025	964	914	872
		F	6.9+17R	7.4+13R	7.8+11R	8.2+10R	8.6+8R	8.9+7R	9.2+7R	9.5+6R	9.8+6R
	TSW @ 6"	q	2140	1853	1661	1523	1419	1338	1273	1220	1057
		F	3.9+17R	4.1+13R	4.2+11R	4.3+10R	4.4+8R	4.5+7R	4.6+7R	4.7+6R	4.7+6R
16	BP @ 24"	q	1656	1343	1110	962	837	751	673	617	563
		F	3.2+20R	4.3+16R	5.9+13R	7.7+11R	10.0+10R	12.7+9R	16.0+8R	19.5+7R	23.9+7R
	BP @ 12"	q	1741	1400	1172	1010	888	793	717	655	603
		F	3.1+20R	4.2+16R	5.6+13R	7.4+11R	9.5+10R	12.1+9R	15.1+8R	18.5+7R	22.4+7R
	TSW @ 24"	q	2115	1794	1502	1358	1194	1117	1011	964	888
		F	9.5+8R	8.9+6R	11.6+5R	10.9+5R	13.5+4R	12.8+4R	15.2+3R	14.5+3R	16.7+3R
	TSW @ 18"	q	2232	1882	1576	1420	1302	1164	1096	1039	959
		F	6.5+8R	6.7+6R	8.7+5R	8.7+5R	8.8+4R	10.5+4R	10.5+3R	10.5+3R	12.1+3R
	TSW @ 12"	q	2339	1964	1713	1534	1400	1296	1212	1145	1088
		F	5.1+8R	5.5+6R	5.9+5R	6.2+5R	6.5+4R	6.8+4R	7.1+3R	7.4+3R	7.7+3R
	TSW @ 6"	q	2716	2329	2070	1884	1745	1638	1552	1482	1424
		F	3.0+8R	3.1+6R	3.2+5R	3.4+5R	3.5+4R	3.6+4R	3.6+3R	3.7+3R	3.8+3R

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(continued)

TABLE 23—ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR TYPE HSB®-36 DECK WITH BUTTON PUNCHES (BP) OR 1½" TOP SEAM WELDS (TSW) AT SIDELAPS¹— Continued

GAGE	SIDELAP ATTACH- MENT		SPAN (ft.-in.)								
			4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"
36/7 WELD PATTERN AT SUPPORTS											
22	BP @ 24"	q	623	598	522	458	397	360	322	—	—
		F	4.1+70R	4.9+56R	6.1+47R	7.5+40R	9.3+35R	11.3+31R	13.9+28R	—	—
	BP @ 12"	q	683	646	579	502	445	400	364	—	—
		F	4.0+70R	4.8+56R	5.8+47R	7.0+40R	8.6+35R	10.5+31R	12.7+28R	—	—
	TSW @ 24"	q	731	720	595	600	521	529	474	—	—
		F	12.2+6R	11.8+5R	16.0+4R	15.3+4R	19.4+3R	18.5+3R	22.6+3R	—	—
	TSW @ 18"	q	907	851	704	689	667	597	578	—	—
		F	8.4+6R	8.9+5R	11.8+4R	12.0+4R	12.3+3R	15.0+3R	15.1+3R	—	—
	TSW @ 12"	q	1072	972	877	808	756	715	682	—	—
		F	6.6+6R	7.3+5R	7.9+4R	8.5+4R	9.1+3R	9.6+3R	10.1+3R	—	—
	TSW @ 6"	q	1464	1310	1204	1127	1068	929	753	—	—
		F	4.2+6R	4.5+5R	4.7+4R	4.8+4R	5.0+3R	5.2+3R	5.3+3R	—	—
20	BP @ 24"	q	962	804	663	578	502	454	406	375	342
		F	3.7+41R	4.5+32R	5.7+27R	7.1+23R	9.0+20R	11.1+18R	13.8+16R	16.7+15R	20.4+14R
	BP @ 12"	q	1034	854	719	622	549	493	448	411	380
		F	3.6+41R	4.4+32R	5.4+27R	6.8+23R	8.5+20R	10.4+18R	12.8+16R	15.5+15R	18.6+14R
	TSW @ 24"	q	999	969	800	796	691	695	621	629	573
		F	9.8+4R	9.5+3R	13.0+3R	12.5+2R	16.0+2R	15.4+2R	18.8+2R	18.2+2R	21.5+1R
	TSW @ 18"	q	1224	1134	937	908	882	779	769	757	688
		F	6.8+4R	7.3+3R	9.6+3R	9.9+2R	10.2+2R	12.5+2R	12.7+2R	12.9+2R	15.1+1R
	TSW @ 12"	q	1431	1292	1189	1091	1016	958	912	818	688
		F	5.4+4R	6.0+3R	6.6+3R	7.1+2R	7.6+2R	8.1+2R	8.5+2R	9.0+2R	9.4+1R
	TSW @ 6"	q	1965	1745	1596	1488	1406	1223	990	818	688
		F	3.5+4R	3.7+3R	3.9+3R	4.1+2R	4.2+2R	4.4+2R	4.5+2R	4.6+2R	4.8+1R
18	BP @ 24"	q	1405	1140	943	818	712	640	574	527	482
		F	3.1+17R	4.0+14R	5.2+11R	6.7+10R	8.7+9R	10.9+8R	13.7+7R	16.8+6R	20.6+6R
	BP @ 12"	q	1475	1188	996	860	757	678	614	562	518
		F	3.0+17R	3.9+14R	5.0+11R	6.5+10R	8.3+9R	10.4+8R	12.9+7R	15.9+6R	19.2+6R
	TSW @ 24"	q	1571	1495	1229	1206	1044	1039	926	928	844
		F	6.8+2R	6.7+2R	9.1+1R	9.0+1R	11.4+1R	11.2+1R	13.7+1R	13.4+1R	15.9+1R
	TSW @ 18"	q	1895	1730	1424	1363	1312	1155	1131	1110	1010
		F	4.8+2R	5.2+2R	6.9+1R	7.1+1R	7.4+1R	9.1+1R	9.4+1R	9.6+1R	11.3+1R
	TSW @ 12"	q	2191	1952	1767	1612	1495	1405	1332	1257	1057
		F	3.9+2R	4.3+2R	4.8+1R	5.2+1R	5.6+1R	6.0+1R	6.4+1R	6.7+1R	7.1+1R
	TSW @ 6"	q	2878	2535	2304	2139	2014	1878	1521	1257	1057
		F	2.6+2R	2.8+2R	2.9+1R	3.0+1R	3.2+1R	3.3+1R	3.4+1R	3.5+1R	3.6+1R
16	BP @ 24"	q	1825	1475	1223	1058	922	826	741	679	621
		F	2.8+9R	3.7+7R	4.9+6R	6.5+5R	8.5+4R	10.8+4R	13.6+4R	16.8+3R	20.6+3R
	BP @ 12"	q	1891	1521	1273	1097	964	862	779	712	656
		F	2.7+9R	3.6+7R	4.8+6R	6.3+5R	8.1+4R	10.4+4R	13.0+4R	16.1+3R	19.6+3R
	TSW @ 24"	q	2171	2043	1675	1630	1406	1390	1236	1233	1119
		F	5.0+1R	5.1+1R	6.9+1R	6.8+1R	8.7+1R	8.6+1R	10.6+1R	10.4	12.4
	TSW @ 18"	q	2599	2350	1929	1833	1734	1540	1487	1431	1324
		F	3.6+1R	4.0+1R	5.2+1R	5.5+1R	5.7+1R	7.1+1R	7.3+1R	7.5	8.9
	TSW @ 12"	q	2985	2556	2270	2065	1912	1793	1699	1622	1478
		F	3.0+1R	3.3+1R	3.7+1R	4.0+1R	4.3+1R	4.7+1R	5.0+1R	5.3	5.6
	TSW @ 6"	q	3664	3215	2914	2698	2538	2413	2129	1759	1478
		F	2.0+1R	2.2+1R	2.3+1R	2.4+1R	2.5+1R	2.6+1R	2.7+1R	2.8	2.9

¹ Footnotes 2–6 of Table 18 apply to this table.

**TABLE 24—ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F,
FOR TYPE PLN™-24 DECK WITH SIDELAPS CONNECTED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4,5,6}**

GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 WELD PATTERN AT SUPPORTS											
22	VSC @ 24"	q	480	457	410	399	367	362	339	318	303
		F	20.4+51R	19.3+47R	24.3+44R	23.2+41R	27.9+39R	26.7+37R	31.2+36R	34.3+33R	37.2+31R
	VSC @ 18"	q	518	487	463	422	409	398	373	361	340
		F	15.0+51R	15.2+47R	15.5+44R	18.8+41R	18.9+39R	19.1+37R	22.1+36R	22.2+33R	25.0+31R
	VSC @ 12"	q	583	540	508	483	462	445	431	409	392
		F	10.0+51R	10.8+47R	11.5+44R	12.1+41R	12.8+39R	13.4+37R	13.9+36R	15.0+33R	16.1+31R
	VSC @ 8"	q	662	627	583	564	535	523	502	479	461
		F	7.0+51R	7.2+47R	7.8+44R	7.9+41R	8.5+39R	8.6+37R	9.2+36R	9.8+33R	10.3+31R
	VSC @ 6"	q	728	682	647	619	596	578	562	537	519
		F	5.7+51R	6.0+47R	6.2+44R	6.4+41R	6.7+39R	6.9+37R	7.1+36R	7.4+33R	7.8+31R
	VSC @ 4"	q	840	791	753	723	699	679	662	602	545
		F	4.5+51R	4.6+47R	4.7+44R	4.9+41R	5.0+39R	5.1+37R	5.2+36R	5.4+33R	5.6+31R
20	VSC @ 24"	q	680	646	580	563	518	510	477	448	426
		F	16.1+34R	15.4+31R	19.4+29R	18.5+27R	22.4+26R	21.5+25R	25.2+24R	27.8+22R	30.3+21R
	VSC @ 18"	q	733	687	652	595	576	560	525	507	477
		F	11.9+34R	12.1+31R	12.4+29R	15.1+27R	15.2+26R	15.4+25R	17.9+24R	18.1+22R	20.5+21R
	VSC @ 12"	q	820	759	713	677	648	624	604	573	549
		F	8.0+34R	8.7+31R	9.3+29R	9.8+27R	10.3+26R	10.9+25R	11.3+24R	12.3+22R	13.2+21R
	VSC @ 8"	q	927	877	815	787	747	730	701	668	644
		F	5.7+34R	5.8+31R	6.4+29R	6.5+27R	7.0+26R	7.0+25R	7.5+24R	8.0+22R	8.5+21R
	VSC @ 6"	q	1017	952	902	862	831	804	783	749	723
		F	4.6+34R	4.9+31R	5.1+29R	5.3+27R	5.4+26R	5.6+25R	5.8+24R	6.1+22R	6.4+21R
	VSC @ 4"	q	1169	1099	1046	1004	971	943	920	869	786
		F	3.7+34R	3.8+31R	3.9+29R	4.0+27R	4.1+26R	4.2+25R	4.3+24R	4.5+22R	4.6+21R
18	VSC @ 24"	q	1072	1016	913	885	816	802	752	707	674
		F	10.9+18R	10.5+16R	13.2+15R	12.7+14R	15.4+14R	14.8+13R	17.4+12R	19.4+12R	21.3+11R
	VSC @ 18"	q	1151	1079	1023	934	904	879	825	798	754
		F	8.1+18R	8.3+16R	8.6+15R	10.4+14R	10.5+14R	10.7+13R	12.5+12R	12.7+12R	14.4+11R
	VSC @ 12"	q	1284	1188	1116	1060	1015	978	948	900	865
		F	5.6+18R	6.0+16R	6.4+15R	6.8+14R	7.2+14R	7.6+13R	8.0+12R	8.7+12R	9.3+11R
	VSC @ 8"	q	1446	1367	1272	1229	1167	1141	1097	1048	1012
		F	4.0+18R	4.1+16R	4.5+15R	4.6+14R	4.9+14R	5.0+13R	5.3+12R	5.7+12R	6.1+11R
	VSC @ 6"	q	1583	1481	1404	1343	1295	1256	1224	1173	1136
		F	3.3+18R	3.5+16R	3.6+15R	3.8+14R	3.9+14R	4.0+13R	4.2+12R	4.4+12R	4.6+11R
	VSC @ 4"	q	1812	1705	1624	1561	1511	1469	1435	1383	1345
		F	2.6+18R	2.7+16R	2.8+15R	2.9+14R	3.0+14R	3.0+13R	3.1+12R	3.2+12R	3.4+11R
16	VSC @ 24"	q	1439	1364	1227	1192	1101	1084	1017	959	916
		F	7.9+11R	7.7+10R	9.7+9R	9.4+9R	11.3+8R	11.0+8R	12.9+8R	14.4+7R	15.8+7R
	VSC @ 18"	q	1544	1448	1375	1257	1219	1187	1116	1083	1025
		F	6.0+11R	6.1+10R	6.3+9R	7.7+9R	7.8+8R	7.9+8R	9.2+8R	9.4+7R	10.8+7R
	VSC @ 12"	q	1720	1594	1500	1426	1368	1321	1282	1221	1178
		F	4.1+11R	4.5+10R	4.8+9R	5.1+9R	5.4+8R	5.7+8R	6.0+8R	6.5+7R	7.0+7R
	VSC @ 8"	q	1937	1834	1709	1654	1573	1541	1484	1423	1378
		F	3.0+11R	3.1+10R	3.4+9R	3.4+9R	3.7+8R	3.8+8R	4.0+8R	4.3+7R	4.6+7R
	VSC @ 6"	q	2119	1985	1885	1808	1746	1696	1655	1593	1547
		F	2.5+11R	2.6+10R	2.7+9R	2.9+9R	3.0+8R	3.1+8R	3.2+8R	3.3+7R	3.5+7R
	VSC @ 4"	q	2424	2285	2181	2100	2036	1985	1942	1877	1831
		F	2.0+11R	2.1+10R	2.2+9R	2.2+9R	2.3+8R	2.3+8R	2.4+8R	2.5+7R	2.6+7R

¹ VSC = Verco sidelap connection.

² The dimension from the first and last sidelap connection within each span is to be no more than one-half of the specified spacing.

³ R is the vertical span (L_v) of deck units divided by the length (L_s) of the deck sheet: $R = L_v/L_s$.

⁴ The flexibility limitations shown in Table 7 may be used in lieu of a rational analysis of the anticipated deflections.

⁵ Interpolation of diaphragm strength between adjacent spans or sidelap spacings is permissible. For interpolated lengths, use diaphragm flexibility factor for the closest span length.

⁶ Diaphragm shear values for side seam fasteners placed at spacings other than those in the table should be determined based on the number of fasteners in each span.

TABLE 25 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH HILTI PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4}

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/3 ATTACHMENT PATTERN FOR HILTI X-ENP-19 L15 AT SUPPORTS 1/4" THICK AND THICKER											
22	VSC @ 24"	q	238	255	223	238	214	227	208	203	200
		F	11.3+126R	12.3+107R	15.2+93R	15.6+83R	17.9+74R	17.9+67R	19.8+61R	21.3+52R	22.4+45R
	VSC @ 12"	q	399	390	383	378	373	370	367	362	359
		F	6.4+128R	8.0+109R	9.2+95R	10.1+85R	10.9+76R	11.6+69R	12.1+63R	13.0+54R	13.6+47R
	VSC @ 8"	q	520	528	507	515	499	507	494	490	488
		F	4.0+129R	5.1+110R	6.4+96R	7.0+86R	7.9+77R	8.2+70R	8.9+64R	9.6+55R	10.1+48R
	VSC @ 4"	q	743	739	737	735	734	732	731	729	728
		F	0.9+129R	2.1+111R	3+97R	3.7+86R	4.3+78R	4.8+71R	5.2+65R	5.8+55R	6.2+48R
20	VSC @ 24"	q	337	365	319	343	308	328	301	296	292
		F	11.5+79R	12.1+67R	14.4+58R	14.4+52R	16.3+46R	16.1+42R	17.7+38R	18.8+32R	19.6+28R
	VSC @ 12"	q	553	543	536	530	525	521	518	513	509
		F	7.1+81R	8.2+69R	9+60R	9.7+53R	10.2+48R	10.6+43R	11+40R	11.6+34R	12.1+30R
	VSC @ 8"	q	708	720	696	707	688	698	683	679	676
		F	5.0+81R	5.7+70R	6.6+61R	6.9+54R	7.6+49R	7.8+44R	8.2+40R	8.7+35R	9.1+30R
	VSC @ 4"	q	958	955	953	951	950	949	948	947	946
		F	2.4+82R	3.1+70R	3.7+61R	4.2+55R	4.6+49R	4.9+45R	5.1+41R	5.5+35R	5.8+31R
18	VSC @ 24"	q	532	568	505	537	489	516	478	470	464
		F	10.8+37R	10.9+32R	12.6+27R	12.5+24R	13.9+21R	13.6+20R	14.8+18R	15.5+15R	16.0+13R
	VSC @ 12"	q	840	829	821	815	809	805	802	796	791
		F	7.1+39R	7.7+33R	8.2+29R	8.5+26R	8.8+23R	9.1+21R	9.3+19R	9.7+16R	9.9+14R
	VSC @ 8"	q	1050	1067	1037	1052	1030	1043	1024	1021	1018
		F	5.3+39R	5.6+34R	6.2+30R	6.3+26R	6.7+24R	6.8+21R	7.1+20R	7.3+17R	7.5+15R
	VSC @ 4"	q	1338	1335	1334	1333	1332	1331	1330	1329	1328
		F	3.2+40R	3.6+34R	3.9+30R	4.1+27R	4.3+24R	4.5+22R	4.6+20R	4.8+17R	5.0+15R
16	VSC @ 24"	q	715	766	683	727	664	702	651	641	634
		F	9.9+21R	9.9+18R	11.3+15R	11.1+13R	12.2+11R	11.9+11R	12.9+9R	13.5+8R	13.9+7R
	VSC @ 12"	q	1117	1105	1096	1089	1083	1078	1074	1068	1063
		F	6.6+22R	7.0+19R	7.4+16R	7.6+14R	7.8+13R	8.0+12R	8.2+11R	8.4+9R	8.6+8R
	VSC @ 8"	q	1373	1394	1360	1378	1352	1368	1346	1342	1339
		F	5.1+22R	5.3+19R	5.7+17R	5.7+15R	6.0+13R	6.0+12R	6.3+11R	6.4+9R	6.5+8R
	VSC @ 4"	q	1695	1693	1691	1690	1689	1689	1688	1687	1686
		F	3.3+23R	3.5+19R	3.7+17R	3.8+15R	4.0+14R	4.0+12R	4.1+11R	4.2+10R	4.3+9R
24/4 ATTACHMENT PATTERN FOR HILTI X-ENP-19 L15 AT SUPPORTS 1/4" THICK AND THICKER											
22	VSC @ 24"	q	304	312	273	282	254	263	241	232	225
		F	8.1+126R	9.5+108R	12.0+93R	12.8+83R	14.8+74R	15.1+67R	16.8+61R	18.4+51R	19.7+44R
	VSC @ 12"	q	469	452	439	429	420	413	408	398	392
		F	4.9+128R	6.5+109R	7.8+95R	8.9+84R	9.7+76R	10.4+69R	11+63R	12+54R	12.7+47R
	VSC @ 8"	q	603	606	577	582	561	567	550	542	536
		F	3.1+128R	4.3+110R	5.6+96R	6.3+85R	7.2+77R	7.6+70R	8.3+64R	9.1+55R	9.7+48R
	VSC @ 4"	q	887	878	872	867	863	859	856	852	849
		F	0.6+129R	1.9+111R	2.8+97R	3.5+86R	4.1+78R	4.6+70R	5.0+65R	5.6+55R	6.1+48R
20	VSC @ 24"	q	416	433	379	395	356	372	341	330	322
		F	8.8+79R	9.8+67R	11.7+58R	12.2+52R	13.8+46R	13.9+41R	15.3+37R	16.5+32R	17.5+27R
	VSC @ 12"	q	643	624	609	598	589	581	574	564	557
		F	5.9+80R	7.0+69R	7.9+60R	8.6+53R	9.2+48R	9.7+43R	10.1+40R	10.8+34R	11.3+29R
	VSC @ 8"	q	824	831	796	805	779	788	767	759	753
		F	4.3+81R	5.1+69R	6.0+61R	6.4+54R	7.1+48R	7.3+44R	7.8+40R	8.3+34R	8.7+30R
	VSC @ 4"	q	1165	1158	1152	1148	1144	1141	1139	1135	1132
		F	2.1+82R	3.0+70R	3.6+61R	4.0+54R	4.4+49R	4.7+45R	5.0+41R	5.4+35R	5.7+31R

See Page 68 for footnotes.

(continued)

TABLE 25 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH HILTI PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 ATTACHMENT PATTERN FOR HILTI X-ENP-19 L15 AT SUPPORTS 1/4" THICK AND THICKER (Cont'd.)											
18	VSC @ 24"	q	638	663	587	613	556	580	535	520	509
		F	8.7+38R	9.2+32R	10.6+27R	10.8+24R	12+21R	11.9+19R	13+17R	13.8+14R	14.4+12R
	VSC @ 12"	q	975	952	935	921	910	901	893	881	872
		F	6.2+39R	6.8+33R	7.4+29R	7.8+25R	8.1+23R	8.4+21R	8.7+19R	9.1+16R	9.4+14R
	VSC @ 8"	q	1233	1248	1203	1218	1184	1199	1172	1162	1155
		F	4.8+39R	5.2+34R	5.8+29R	6.0+26R	6.4+23R	6.5+21R	6.8+19R	7.1+17R	7.3+15R
	VSC @ 4"	q	1661	1654	1649	1645	1642	1639	1637	1634	1631
		F	3.1+40R	3.5+34R	3.8+30R	4.0+27R	4.2+24R	4.4+22R	4.5+20R	4.7+17R	4.9+15R
16	VSC @ 24"	q	849	887	788	825	750	785	725	707	693
		F	8.1+21R	8.4+18R	9.6+15R	9.6+13R	10.6+11R	10.5+10R	11.4+9R	12.1+7R	12.6+6R
	VSC @ 12"	q	1298	1272	1252	1236	1223	1213	1204	1190	1179
		F	5.9+22R	6.3+19R	6.7+16R	7.0+14R	7.3+13R	7.5+11R	7.7+10R	7.9+9R	8.2+8R
	VSC @ 8"	q	1625	1646	1593	1613	1572	1591	1558	1548	1541
		F	4.7+22R	4.9+19R	5.3+17R	5.4+15R	5.7+13R	5.8+12R	6.0+11R	6.2+9R	6.3+8R
	VSC @ 4"	q	2126	2120	2115	2111	2108	2106	2103	2100	2097
		F	3.2+23R	3.4+19R	3.6+17R	3.7+15R	3.9+14R	4.0+12R	4.0+11R	4.2+10R	4.3+8R
24/6 ATTACHMENT PATTERN FOR HILTI X-ENP-19 L15 AT SUPPORTS 1/4" THICK AND THICKER											
22	VSC @ 24"	q	415	407	356	356	320	323	296	279	267
		F	4.6+127R	6.3+108R	8.3+94R	9.3+83R	11+74R	11.6+67R	13+61R	14.6+51R	16.0+44R
	VSC @ 12"	q	593	559	533	513	498	485	474	457	444
		F	3.0+128R	4.6+109R	6.0+95R	7.0+84R	7.9+76R	8.7+69R	9.3+63R	10.4+53R	11.2+47R
	VSC @ 8"	q	751	739	694	691	660	660	636	619	606
		F	1.9+128R	3.2+110R	4.5+96R	5.3+85R	6.2+76R	6.7+69R	7.4+64R	8.2+54R	8.9+47R
	VSC @ 4"	q	1107	1085	1067	1053	1042	1033	1025	1013	1003
		F	0.1+129R	1.4+111R	2.4+97R	3.2+86R	3.8+77R	4.3+70R	4.7+64R	5.4+55R	5.9+48R
20	VSC @ 24"	q	549	546	478	484	435	444	407	387	371
		F	5.9+80R	7.0+68R	8.6+59R	9.3+52R	10.6+46R	11.0+42R	12.1+38R	13.4+32R	14.4+27R
	VSC @ 12"	q	811	771	741	717	697	681	668	647	631
		F	4.3+80R	5.5+69R	6.4+60R	7.2+53R	7.8+47R	8.3+43R	8.8+39R	9.6+33R	10.2+29R
	VSC @ 8"	q	1017	1009	954	955	916	920	889	870	856
		F	3.3+81R	4.2+69R	5.1+60R	5.6+54R	6.3+48R	6.6+44R	7.1+40R	7.6+34R	8.1+30R
	VSC @ 4"	q	1483	1461	1443	1430	1419	1410	1402	1390	1380
		F	1.8+82R	2.6+70R	3.2+61R	3.7+54R	4.1+49R	4.5+44R	4.7+41R	5.2+35R	5.5+30R
18	VSC @ 24"	q	812	821	718	736	662	682	625	598	578
		F	6.3+38R	7.0+32R	8.1+28R	8.5+24R	9.5+21R	9.7+19R	10.5+17R	11.4+14R	12.1+12R
	VSC @ 12"	q	1210	1161	1123	1093	1069	1049	1033	1006	986
		F	5.0+39R	5.6+33R	6.2+29R	6.7+25R	7.1+23R	7.4+21R	7.7+19R	8.2+16R	8.5+14R
	VSC @ 8"	q	1523	1523	1449	1457	1404	1415	1372	1350	1332
		F	4.1+39R	4.6+34R	5.1+29R	5.4+26R	5.8+23R	5.9+21R	6.2+19R	6.6+16R	6.8+14R
	VSC @ 4"	q	2167	2145	2127	2114	2102	2093	2085	2073	2063
		F	2.8+40R	3.2+34R	3.6+30R	3.8+26R	4.0+24R	4.2+22R	4.4+20R	4.6+17R	4.8+15R
16	VSC @ 24"	q	1074	1096	959	989	890	920	844	811	786
		F	6.1+21R	6.6+18R	7.5+15R	7.7+13R	8.5+11R	8.7+10R	9.4+9R	10.0+7R	10.6+6R
	VSC @ 12"	q	1604	1545	1501	1465	1437	1413	1393	1362	1338
		F	4.8+22R	5.3+18R	5.7+16R	6.1+14R	6.4+13R	6.6+11R	6.8+10R	7.2+9R	7.5+8R
	VSC @ 8"	q	2017	2022	1932	1946	1879	1896	1844	1817	1798
		F	4.1+22R	4.4+19R	4.8+16R	4.9+15R	5.2+13R	5.3+12R	5.5+11R	5.8+9R	6.0+8R
	VSC @ 4"	q	2816	2793	2775	2760	2749	2739	2731	2718	2708
		F	2.9+23R	3.2+19R	3.4+17R	3.6+15R	3.7+13R	3.8+12R	3.9+11R	4.1+10R	4.2+8R

See Page 68 for footnotes.

(continued)

TABLE 25 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH HILTI PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/3 ATTACHMENT PATTERN FOR HILTI X-EDN19 THQ12 AT SUPPORTS 0.250" – 3/8" THICK OR HILTI X-EDNK22 THQ12 AT SUPPORTS 1/8" – 0.250" THICK											
22	VSC @ 24"	q 234	251	220	235	211	224	206	202	199	
	F 14.7+126R	15.1+108R	18.4+93R	18.2+83R	20.8+74R	20.3+68R	22.5+61R	23.8+52R	24.7+46R		
	VSC @ 12"	q 389	381	375	370	366	363	361	356	353	
	F 7.7+128R	9.2+110R	10.3+96R	11.2+85R	11.9+77R	12.5+70R	13.0+64R	13.8+55R	14.4+48R		
	VSC @ 8"	q 505	513	494	502	487	494	483	479	477	
20	F 4.7+129R	5.7+111R	7+97R	7.5+86R	8.4+77R	8.6+70R	9.3+64R	10.0+55R	10.5+48R		
	VSC @ 4"	q 709	706	704	703	702	700	700	698	697	
	F 1.1+130R	2.3+111R	3.2+97R	3.9+86R	4.4+78R	4.9+71R	5.3+65R	5.9+56R	6.3+49R		
	VSC @ 24"	q 332	359	315	337	305	323	298	293	288	
	F 14.3+79R	14.3+68R	16.9+58R	16.5+52R	18.6+46R	18.1+42R	19.8+38R	20.7+33R	21.4+28R		
18	VSC @ 12"	q 538	530	523	518	514	511	508	503	500	
	F 8.2+81R	9.2+69R	9.9+60R	10.5+54R	11+48R	11.4+44R	11.7+40R	12.2+34R	12.6+30R		
	VSC @ 8"	q 685	696	674	684	668	677	663	660	657	
	F 5.5+81R	6.1+70R	7.0+61R	7.3+54R	8.0+49R	8.1+44R	8.6+41R	9.0+35R	9.3+30R		
	VSC @ 4"	q 908	906	905	904	903	902	901	900	899	
16	F 2.5+82R	3.3+70R	3.9+61R	4.3+55R	4.7+49R	4.9+45R	5.2+41R	5.6+35R	5.9+31R		
	VSC @ 24"	q 520	556	495	527	480	508	470	463	458	
	F 12.9+37R	12.6+32R	14.5+28R	14+25R	15.6+22R	15.0+20R	16.4+18R	16.9+15R	17.3+13R		
	VSC @ 12"	q 816	806	799	793	789	785	782	777	773	
	F 7.9+39R	8.4+33R	8.8+29R	9.1+26R	9.4+23R	9.6+21R	9.8+19R	10.1+17R	10.3+15R		
12	VSC @ 8"	q 1009	1025	999	1012	992	1004	988	985	982	
	F 5.7+40R	6.0+34R	6.5+30R	6.6+26R	7.0+24R	7.0+22R	7.3+20R	7.6+17R	7.7+15R		
	VSC @ 4"	q 1262	1260	1259	1258	1257	1256	1256	1255	1254	
	F 3.3+40R	3.7+34R	4+30R	4.2+27R	4.4+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R		
	VSC @ 24"	q 698	749	669	713	652	689	640	631	625	
8	F 11.7+21R	11.3+18R	12.9+15R	12.4+14R	13.7+12R	13.1+11R	14.2+10R	14.6+8R	15.0+7R		
	VSC @ 12"	q 1082	1072	1064	1057	1052	1048	1045	1039	1035	
	F 7.3+22R	7.6+19R	7.9+16R	8.1+15R	8.3+13R	8.5+12R	8.6+11R	8.8+9R	8.9+8R		
	VSC @ 8"	q 1315	1334	1304	1321	1298	1312	1293	1290	1287	
	F 5.5+23R	5.5+19R	5.9+17R	6.0+15R	6.2+13R	6.2+12R	6.4+11R	6.6+10R	6.7+8R		
4	VSC @ 4"	q 1595	1593	1592	1591	1590	1590	1589	1588	1588	
	F 3.4+23R	3.6+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R		
24/4 ATTACHMENT PATTERN FOR HILTI X-EDN19 THQ12 AT SUPPORTS 0.250" – 3/8" THICK OR HILTI X-EDNK22 THQ12 AT SUPPORTS 1/8" – 0.250" THICK											
22	VSC @ 24"	q 295	304	266	276	248	258	236	228	222	
	F 11.6+126R	12.6+107R	15.5+93R	15.8+83R	18.2+74R	18.1+67R	20.1+61R	21.5+52R	22.7+45R		
	VSC @ 12"	q 456	441	428	419	411	405	400	392	385	
	F 6.5+128R	8.1+109R	9.3+95R	10.2+85R	11.0+76R	11.7+69R	12.2+63R	13.1+54R	13.7+47R		
	VSC @ 8"	q 586	590	562	568	548	554	538	531	526	
20	F 4.0+129R	5.1+110R	6.4+96R	7.0+86R	7.9+77R	8.3+70R	8.9+64R	9.6+55R	10.2+48R		
	VSC @ 4"	q 852	845	839	835	831	829	826	822	819	
	F 0.9+129R	2.1+111R	3.0+97R	3.7+86R	4.3+78R	4.8+71R	5.2+65R	5.8+55R	6.2+49R		
	VSC @ 24"	q 406	423	370	388	349	366	335	325	318	
	F 11.7+79R	12.3+67R	14.6+58R	14.6+52R	16.5+46R	16.3+42R	17.9+38R	19.0+32R	19.8+28R		
18	VSC @ 12"	q 625	608	595	584	576	569	563	554	547	
	F 7.2+81R	8.3+69R	9.1+60R	9.7+53R	10.3+48R	10.7+44R	11.1+40R	11.7+34R	12.1+30R		
	VSC @ 8"	q 798	807	774	783	759	768	749	742	736	
	F 5.1+81R	5.7+70R	6.6+61R	7.0+54R	7.6+49R	7.8+44R	8.3+40R	8.7+35R	9.1+30R		
	VSC @ 4"	q 1113	1107	1102	1098	1095	1093	1091	1088	1085	
16	F 2.4+82R	3.2+70R	3.7+61R	4.2+55R	4.6+49R	4.9+45R	5.1+41R	5.5+35R	5.8+31R		

See Page 68 for footnotes.

(continued)

TABLE 25 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH HILTI PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)										
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"		
24/4 ATTACHMENT PATTERN FOR HILTI X-EDN19 THQ12 AT SUPPORTS 0.250" – 3/8" THICK OR HILTI X-EDNK22 THQ12 AT SUPPORTS 1/8" – 0.250" THICK (Cont'd.)												
18	VSC @ 24"	q	619	645	573	599	544	569	525	511	501	
		F	11.0+37R	11.1+32R	12.8+27R	12.6+24R	14+21R	13.7+20R	14.9+18R	15.6+15R	16.2+13R	
	VSC @ 12"	q	947	926	911	899	889	881	874	863	855	
		F	7.2+39R	7.8+33R	8.2+29R	8.6+26R	8.9+23R	9.2+21R	9.4+19R	9.7+16R	10.0+14R	
	VSC @ 8"	q	1191	1205	1165	1180	1149	1163	1138	1130	1124	
		F	5.4+39R	5.7+34R	6.2+30R	6.4+26R	6.8+24R	6.8+21R	7.1+20R	7.4+17R	7.6+15R	
16	VSC @ 4"	q	1576	1571	1567	1564	1561	1559	1557	1554	1552	
		F	3.2+40R	3.6+34R	3.9+30R	4.2+27R	4.3+24R	4.5+22R	4.6+20R	4.8+17R	5.0+15R	
	VSC @ 24"	q	824	864	769	807	735	769	712	695	682	
		F	10.1+21R	10.0+18R	11.4+15R	11.2+13R	12.4+12R	12.1+11R	13.1+9R	13.6+8R	14.0+7R	
	VSC @ 12"	q	1259	1236	1218	1204	1193	1184	1176	1163	1154	
		F	6.7+22R	7.1+19R	7.4+16R	7.7+14R	7.9+13R	8.1+12R	8.2+11R	8.5+9R	8.6+8R	
22	VSC @ 8"	q	1565	1585	1537	1557	1520	1538	1508	1500	1493	
		F	5.2+22R	5.3+19R	5.7+17R	5.8+15R	6.0+13R	6.0+12R	6.3+11R	6.4+9R	6.6+8R	
	VSC @ 4"	q	2012	2007	2003	2000	1997	1995	1994	1991	1989	
		F	3.3+23R	3.5+20R	3.7+17R	3.8+15R	4.0+14R	4.0+12R	4.1+11R	4.2+10R	4.3+9R	
	24/6 ATTACHMENT PATTERN FOR HILTI X-EDN19 THQ12 AT SUPPORTS 0.250" – 3/8" THICK OR HILTI X-EDNK22 THQ12 AT SUPPORTS 1/8" – 0.250" THICK (Cont'd.)											
	20	VSC @ 24"	q	398	392	343	344	310	314	288	272	260
F			7.8+126R	9.3+108R	11.7+93R	12.5+83R	14.5+74R	14.9+67R	16.5+61R	18.1+51R	19.4+44R	
VSC @ 12"		q	576	544	521	502	487	475	465	450	438	
		F	4.7+128R	6.4+109R	7.7+95R	8.7+84R	9.6+76R	10.3+69R	10.9+63R	11.9+54R	12.6+47R	
VSC @ 8"		q	727	717	676	674	644	645	622	607	595	
		F	3.0+128R	4.3+110R	5.6+96R	6.3+85R	7.2+77R	7.6+70R	8.2+64R	9.0+55R	9.6+48R	
18	VSC @ 4"	q	1070	1050	1034	1022	1012	1004	997	986	978	
		F	0.6+129R	1.8+111R	2.8+97R	3.5+86R	4.1+77R	4.6+70R	5.0+65R	5.6+55R	6.1+48R	
	VSC @ 24"	q	528	529	463	470	423	433	397	378	364	
		F	8.6+79R	9.5+67R	11.5+58R	11.9+52R	13.5+46R	13.7+41R	15.0+37R	16.3+32R	17.2+27R	
	VSC @ 12"	q	784	748	720	698	680	666	653	634	619	
		F	5.8+80R	6.9+69R	7.8+60R	8.5+53R	9.1+48R	9.6+43R	10.0+39R	10.7+34R	11.3+29R	
16	VSC @ 8"	q	985	980	928	931	894	899	870	853	840	
		F	4.2+81R	5.0+69R	6.0+61R	6.4+54R	7.0+48R	7.3+44R	7.7+40R	8.3+34R	8.7+30R	
	VSC @ 4"	q	1427	1408	1393	1381	1372	1364	1357	1347	1339	
		F	2.1+82R	2.9+70R	3.5+61R	4.0+54R	4.4+49R	4.7+45R	5.0+41R	5.4+35R	5.7+31R	
	VSC @ 24"	q	785	798	698	718	646	667	612	587	568	
		F	8.5+38R	9+32R	10.4+27R	10.6+24R	11.8+21R	11.8+19R	12.8+17R	13.6+14R	14.3+12R	
18	VSC @ 12"	q	1172	1127	1093	1066	1044	1026	1011	987	968	
		F	6.1+39R	6.8+33R	7.3+29R	7.7+25R	8.1+23R	8.4+21R	8.6+19R	9.0+16R	9.3+14R	
	VSC @ 8"	q	1474	1477	1409	1418	1368	1380	1340	1320	1304	
		F	4.8+39R	5.2+34R	5.7+29R	5.9+26R	6.3+23R	6.4+21R	6.7+19R	7.0+17R	7.3+15R	
	VSC @ 4"	q	2075	2056	2042	2030	2021	2013	2006	1996	1988	
		F	3.0+40R	3.5+34R	3.8+30R	4.0+27R	4.2+24R	4.4+22R	4.5+20R	4.7+17R	4.9+15R	
16	VSC @ 24"	q	1041	1068	934	967	870	902	827	797	774	
		F	7.9+21R	8.2+18R	9.4+15R	9.5+13R	10.5+11R	10.4+10R	11.3+9R	11.9+7R	12.4+6R	
	VSC @ 12"	q	1553	1501	1460	1428	1402	1381	1363	1335	1313	
		F	5.8+22R	6.3+18R	6.6+16R	6.9+14R	7.2+13R	7.4+11R	7.6+10R	7.9+9R	8.1+8R	
	VSC @ 8"	q	1950	1959	1875	1891	1829	1846	1797	1774	1757	
		F	4.7+22R	4.9+19R	5.3+17R	5.4+15R	5.7+13R	5.7+12R	6.0+11R	6.2+9R	6.3+8R	
VSC @ 4"	q	2689	2669	2654	2642	2633	2625	2618	2607	2599		
	F	3.1+23R	3.4+19R	3.6+17R	3.7+15R	3.9+14R	4.0+12R	4.0+11R	4.2+10R	4.3+8R		

¹ Notes 1-6 of Table 24 apply to this table.

² See General Note 7c for spacing of Hilti fasteners at collector elements parallel to deck flutes.

³ See Table 2 for Allowable Tension Loads for Hilti fasteners subject to wind uplift loads.

⁴ See Section 3.10 for Hilti fastener details.

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4}

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/3 ATTACHMENT PATTERN FOR PNEUTEK K66062 OR K66075 AT SUPPORTS 0.281" THICK AND THICKER											
22	VSC @ 24"	q 246	262	229	243	219	231	212	207	203	
		F 19.3+127R	18.6+109R	22.4+95R	21.3+84R	24.3+75R	23.1+69R	25.6+63R	26.5+54R	27.2+47R	
	VSC @ 12"	q 415	405	397	390	385	381	377	372	368	
		F 9.2+129R	10.6+110R	11.5+97R	12.3+86R	12.9+77R	13.4+70R	13.9+64R	14.5+55R	15.0+48R	
	VSC @ 8"	q 544	552	529	537	519	527	513	508	505	
20		F 5.4+129R	6.3+111R	7.6+97R	8.0+86R	8.8+78R	9.1+71R	9.7+65R	10.3+55R	10.8+48R	
	VSC @ 4"	q 799	795	791	789	787	785	783	781	779	
		F 1.3+130R	2.5+111R	3.3+97R	4.0+86R	4.6+78R	5.0+71R	5.4+65R	6.0+56R	6.4+49R	
	VSC @ 24"	q 349	375	328	351	315	335	307	301	296	
		F 17.9+80R	17.0+69R	20.0+59R	19+53R	21.3+47R	20.2+43R	22.2+39R	22.8+34R	23.3+30R	
18	VSC @ 12"	q 582	570	560	553	547	543	539	532	527	
		F 9.3+81R	10.2+70R	10.8+61R	11.4+54R	11.8+49R	12.1+44R	12.4+41R	12.8+35R	13.1+30R	
	VSC @ 8"	q 755	767	738	750	728	739	721	716	712	
		F 6.1+82R	6.6+70R	7.5+61R	7.7+55R	8.3+49R	8.4+45R	8.9+41R	9.3+35R	9.6+31R	
	VSC @ 4"	q 1060	1056	1053	1051	1049	1047	1046	1044	1042	
16		F 2.7+82R	3.4+70R	4.0+62R	4.4+55R	4.8+49R	5.0+45R	5.3+41R	5.6+35R	5.9+31R	
	VSC @ 24"	q 555	601	526	565	508	541	497	488	481	
		F 15.6+38R	14.6+33R	16.8+29R	15.8+26R	17.5+23R	16.6+21R	18.0+19R	18.4+16R	18.7+14R	
	VSC @ 12"	q 907	891	880	871	863	857	852	844	838	
		F 8.7+40R	9.2+34R	9.5+30R	9.8+26R	10.0+24R	10.1+22R	10.3+20R	10.5+17R	10.7+15R	
12	VSC @ 8"	q 1160	1179	1140	1157	1128	1144	1120	1114	1109	
		F 6.2+40R	6.3+34R	6.8+30R	6.9+27R	7.3+24R	7.3+22R	7.5+20R	7.7+17R	7.9+15R	
	VSC @ 4"	q 1558	1554	1551	1549	1547	1545	1544	1542	1540	
		F 3.5+40R	3.8+34R	4.1+30R	4.3+27R	4.5+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R	
	VSC @ 24"	q 765	826	727	777	705	744	688	674	665	
8		F 13.9+21R	12.9+19R	14.7+16R	13.8+14R	15.3+13R	14.4+12R	15.6+11R	15.9+9R	16.1+8R	
	VSC @ 12"	q 1236	1217	1203	1191	1182	1174	1168	1158	1150	
		F 8.0+22R	8.3+19R	8.5+17R	8.6+15R	8.8+13R	8.9+12R	9.0+11R	9.1+10R	9.2+8R	
	VSC @ 8"	q 1569	1595	1546	1569	1531	1552	1521	1514	1509	
		F 5.8+23R	5.8+19R	6.2+17R	6.2+15R	6.5+14R	6.4+12R	6.6+11R	6.7+10R	6.8+9R	
4	VSC @ 4"	q 2070	2065	2062	2059	2057	2055	2054	2051	2049	
		F 3.5+23R	3.7+20R	3.8+17R	4.0+15R	4.1+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R	
24/4 ATTACHMENT PATTERN FOR PNEUTEK K66062 OR K66075 AT SUPPORTS 0.281" THICK AND THICKER											
22	VSC @ 24"	q 321	326	285	293	264	272	249	239	231	
		F 17.1+126R	17.0+108R	20.5+94R	19.9+84R	22.7+75R	21.9+68R	24.2+62R	25.3+53R	26.1+46R	
	VSC @ 12"	q 493	473	457	445	436	428	421	410	402	
		F 8.6+128R	10.0+110R	11.0+96R	11.8+85R	12.5+77R	13.0+70R	13.5+64R	14.2+55R	14.7+48R	
	VSC @ 8"	q 633	634	601	606	582	587	569	559	552	
20		F 5.1+129R	6.0+111R	7.3+97R	7.8+86R	8.6+77R	8.9+70R	9.5+65R	10.2+55R	10.6+48R	
	VSC @ 4"	q 945	935	926	919	914	910	906	900	895	
		F 1.2+130R	2.4+111R	3.3+97R	4.0+86R	4.5+78R	5.0+71R	5.3+65R	5.9+56R	6.4+49R	
	VSC @ 24"	q 441	454	397	412	371	385	353	341	331	
		F 16.2+79R	15.8+68R	18.6+59R	17.9+53R	20.1+47R	19.3+43R	21.1+39R	21.9+33R	22.5+29R	
16	VSC @ 12"	q 682	658	640	626	615	605	597	585	576	
		F 8.8+81R	9.7+69R	10.4+61R	11.0+54R	11.4+49R	11.8+44R	12.1+40R	12.5+35R	12.9+30R	
	VSC @ 8"	q 876	881	841	849	819	828	804	793	785	
		F 5.9+82R	6.4+70R	7.3+61R	7.5+54R	8.2+49R	8.3+45R	8.7+41R	9.2+35R	9.5+31R	
	VSC @ 4"	q 1274	1263	1255	1248	1243	1239	1235	1229	1225	
12		F 2.6+82R	3.4+70R	3.9+62R	4.4+55R	4.7+49R	5.0+45R	5.2+41R	5.6+35R	5.9+31R	

See Page 76 for footnotes.

(continued)

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 ATTACHMENT PATTERN FOR PNEUTEK K66062 OR K66075 AT SUPPORTS 0.281" THICK AND THICKER (Cont'd.)											
18	VSC @ 24"	q	683	711	622	650	585	612	561	543	530
		F	14.3+38R	13.7+33R	15.8+28R	15+25R	16.7+22R	15.9+20R	17.3+18R	17.7+16R	18.1+14R
	VSC @ 12"	q	1055	1024	1001	982	967	955	945	928	916
		F	8.3+39R	8.8+34R	9.2+29R	9.5+26R	9.7+24R	9.9+21R	10.1+20R	10.3+17R	10.5+15R
	VSC @ 8"	q	1349	1362	1306	1321	1279	1294	1260	1247	1237
		F	6+40R	6.2+34R	6.7+30R	6.8+27R	7.2+24R	7.2+22R	7.5+20R	7.7+17R	7.8+15R
	VSC @ 4"	q	1900	1889	1880	1873	1868	1863	1859	1853	1848
		F	3.4+40R	3.8+34R	4.1+30R	4.3+27R	4.4+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R
16	VSC @ 24"	q	932	974	852	894	804	843	772	750	733
		F	12.9+21R	12.2+18R	13.9+15R	13.2+14R	14.5+12R	13.8+11R	15.0+10R	15.3+9R	15.6+7R
	VSC @ 12"	q	1436	1397	1367	1344	1325	1309	1296	1276	1260
		F	7.7+22R	8.0+19R	8.2+17R	8.4+15R	8.6+13R	8.7+12R	8.8+11R	9.0+9R	9.1+8R
	VSC @ 8"	q	1831	1850	1777	1799	1744	1765	1721	1704	1692
		F	5.6+23R	5.7+19R	6.1+17R	6.1+15R	6.4+14R	6.3+12R	6.5+11R	6.7+10R	6.8+8R
	VSC @ 4"	q	2540	2527	2517	2509	2502	2497	2492	2485	2480
		F	3.4+23R	3.7+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R
24/6 ATTACHMENT PATTERN FOR PNEUTEK K66062 OR K66075 AT SUPPORTS 0.281" THICK AND THICKER											
22	VSC @ 24"	q	447	434	380	377	339	341	312	293	279
		F	13.8+125R	14.4+108R	17.6+93R	17.5+83R	20.1+74R	19.7+67R	21.8+61R	23.1+52R	24.1+45R
	VSC @ 12"	q	625	586	557	535	517	502	490	470	456
		F	7.4+128R	8.9+110R	10.0+96R	10.9+85R	11.7+76R	12.3+69R	12.8+64R	13.6+54R	14.2+48R
	VSC @ 8"	q	794	778	728	722	688	687	660	640	625
		F	4.5+129R	5.5+110R	6.8+97R	7.4+86R	8.2+77R	8.5+70R	9.2+64R	9.9+55R	10.4+48R
	VSC @ 4"	q	1172	1144	1123	1106	1092	1080	1071	1055	1044
		F	1.1+130R	2.3+111R	3.2+97R	3.8+86R	4.4+78R	4.9+71R	5.2+65R	5.8+55R	6.3+49R
20	VSC @ 24"	q	596	586	513	515	463	469	430	407	389
		F	13.5+79R	13.7+67R	16.3+58R	16.0+52R	18.0+46R	17.6+42R	19.3+38R	20.2+32R	21.0+28R
	VSC @ 12"	q	860	813	778	750	728	710	695	671	654
		F	7.9+81R	8.9+69R	9.7+60R	10.3+54R	10.8+48R	11.2+44R	11.5+40R	12.1+34R	12.5+30R
	VSC @ 8"	q	1086	1072	1010	1007	962	964	930	907	889
		F	5.4+81R	6.0+70R	6.9+61R	7.2+54R	7.9+49R	8.0+44R	8.5+41R	8.9+35R	9.3+30R
	VSC @ 4"	q	1599	1569	1546	1528	1513	1501	1490	1474	1462
		F	2.5+82R	3.3+70R	3.8+61R	4.3+55R	4.6+49R	4.9+45R	5.2+41R	5.6+35R	5.8+31R
18	VSC @ 24"	q	897	894	782	793	714	728	668	635	610
		F	12.3+37R	12.2+32R	14.0+28R	13.6+25R	15.2+22R	14.7+20R	16+18R	16.6+15R	17.0+13R
	VSC @ 12"	q	1327	1263	1214	1176	1145	1119	1098	1064	1038
		F	7.7+39R	8.2+33R	8.7+29R	9.0+26R	9.3+23R	9.5+21R	9.7+19R	10.0+17R	10.2+14R
	VSC @ 8"	q	1665	1654	1565	1568	1503	1511	1461	1431	1408
		F	5.6+40R	5.9+34R	6.5+30R	6.6+26R	6.9+24R	7.0+22R	7.3+20R	7.5+17R	7.7+15R
	VSC @ 4"	q	2424	2389	2362	2340	2323	2308	2296	2277	2262
		F	3.3+40R	3.7+34R	4.0+30R	4.2+27R	4.4+24R	4.5+22R	4.7+20R	4.8+17R	5.0+15R
16	VSC @ 24"	q	1210	1212	1061	1079	971	995	912	869	837
		F	11.2+21R	10.9+18R	12.5+15R	12+13R	13.3+12R	12.8+11R	13.9+10R	14.4+8R	14.7+7R
	VSC @ 12"	q	1797	1715	1652	1603	1563	1530	1503	1459	1426
		F	7.1+22R	7.5+19R	7.8+16R	8.0+15R	8.2+13R	8.3+12R	8.5+11R	8.7+9R	8.8+8R
	VSC @ 8"	q	2258	2249	2132	2139	2054	2067	2001	1962	1933
		F	5.4+22R	5.5+19R	5.9+17R	5.9+15R	6.2+13R	6.2+12R	6.4+11R	6.5+10R	6.7+8R
	VSC @ 4"	q	3265	3222	3190	3164	3143	3126	3111	3088	3070
		F	3.4+23R	3.6+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R

See Page 76 for footnotes.

(continued)

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/3 ATTACHMENT PATTERN FOR PNEUTEK K64062 AT SUPPORTS 0.187" – 0.312" THICK											
22	VSC @ 24"	q	242	258	226	240	216	229	210	205	202
		F	19.3+127R	18.6+109R	22.4+95R	21.3+84R	24.3+75R	23.1+69R	25.6+63R	26.5+54R	27.2+47R
	VSC @ 12"	q	407	398	390	384	380	376	372	367	363
		F	9.2+129R	10.6+110R	11.5+97R	12.3+86R	12.9+77R	13.4+70R	13.9+64R	14.5+55R	15.0+48R
	VSC @ 8"	q	533	541	519	527	510	517	504	500	497
20	VSC @ 8"	F	5.4+129R	6.3+111R	7.6+97R	8.0+86R	8.8+78R	9.1+71R	9.7+65R	10.3+55R	10.8+48R
		q	772	769	766	763	762	760	759	757	755
	VSC @ 4"	F	1.3+130R	2.5+111R	3.3+97R	4.0+86R	4.6+78R	5.0+71R	5.4+65R	6.0+56R	6.4+49R
		q	348	374	327	349	315	334	306	300	296
	18	VSC @ 24"	F	17.9+80R	17.0+69R	20.0+59R	19.0+53R	21.3+47R	20.2+43R	22.2+39R	22.8+34R
q			578	566	557	550	545	540	536	530	525
VSC @ 12"		F	9.3+81R	10.2+70R	10.8+61R	11.4+54R	11.8+49R	12.1+44R	12.4+41R	12.8+35R	13.1+30R
		q	749	761	733	745	723	734	717	712	708
VSC @ 8"		F	6.1+82R	6.6+70R	7.5+61R	7.7+55R	8.3+49R	8.4+45R	8.9+41R	9.3+35R	9.6+31R
16	VSC @ 4"	q	1048	1044	1041	1039	1037	1035	1034	1032	1031
		F	2.7+82R	3.4+70R	4.0+62R	4.4+55R	4.8+49R	5.0+45R	5.3+41R	5.6+35R	5.9+31R
	VSC @ 24"	q	551	596	523	560	506	536	494	485	478
		F	15.6+38R	14.6+33R	16.8+29R	15.8+26R	17.5+23R	16.6+21R	18.0+19R	18.4+16R	18.7+14R
	VSC @ 12"	q	894	880	869	860	853	847	843	835	829
14	VSC @ 12"	F	8.7+40R	9.2+34R	9.5+30R	9.8+26R	10.0+24R	10.1+22R	10.3+20R	10.5+17R	10.7+15R
		q	1139	1157	1121	1138	1109	1125	1102	1096	1092
	VSC @ 8"	F	6.2+40R	6.3+34R	6.8+30R	6.9+27R	7.3+24R	7.3+22R	7.5+20R	7.7+17R	7.9+15R
		q	1514	1511	1508	1506	1504	1503	1502	1500	1498
	VSC @ 4"	F	3.5+40R	3.8+34R	4.1+30R	4.3+27R	4.5+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R
12	VSC @ 24"	q	751	802	713	757	689	728	673	662	653
		F	13.9+21R	12.9+19R	14.7+16R	13.8+14R	15.3+13R	14.4+12R	15.6+11R	15.9+9R	16.1+8R
	VSC @ 12"	q	1191	1175	1162	1153	1145	1139	1133	1125	1118
		F	8.0+22R	8.3+19R	8.5+17R	8.6+15R	8.8+13R	8.9+12R	9.0+11R	9.1+10R	9.2+8R
	VSC @ 8"	q	1494	1518	1475	1496	1463	1482	1455	1450	1445
10	VSC @ 8"	F	5.8+23R	5.8+19R	6.2+17R	6.2+15R	6.5+14R	6.4+12R	6.6+11R	6.7+10R	6.8+9R
		q	1920	1916	1914	1912	1910	1909	1908	1906	1905
	VSC @ 4"	F	3.5+23R	3.7+20R	3.8+17R	4.0+15R	4.1+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R
		q	313	319	279	288	259	268	245	236	228
	8	VSC @ 24"	F	17.1+126R	17.0+108R	20.5+94R	19.9+84R	22.7+75R	21.9+68R	24.2+62R	25.3+53R
q			482	463	448	437	428	421	414	405	397
VSC @ 12"		F	8.6+128R	10.0+110R	11.0+96R	11.8+85R	12.5+77R	13.0+70R	13.5+64R	14.2+55R	14.7+48R
		q	619	620	590	594	572	577	560	551	544
VSC @ 8"		F	5.1+129R	6.0+111R	7.3+97R	7.8+86R	8.6+77R	8.9+70R	9.5+65R	10.2+55R	10.6+48R
6	VSC @ 4"	q	918	908	901	895	890	886	883	877	873
		F	1.2+130R	2.4+111R	3.3+97R	4.0+86R	4.5+78R	5.0+71R	5.3+65R	5.9+56R	6.4+49R
	VSC @ 24"	q	438	451	395	410	369	383	351	339	330
		F	16.2+79R	15.8+68R	18.6+59R	17.9+53R	20.1+47R	19.3+43R	21.1+39R	21.9+33R	22.5+29R
	VSC @ 12"	q	677	654	636	623	611	602	595	582	573
4	VSC @ 12"	F	8.8+81R	9.7+69R	10.4+61R	11.0+54R	11.4+49R	11.8+44R	12.1+40R	12.5+35R	12.9+30R
		q	869	875	835	844	814	823	800	789	781
	VSC @ 8"	F	5.9+82R	6.4+70R	7.3+61R	7.5+54R	8.2+49R	8.3+45R	8.7+41R	9.2+35R	9.5+31R
		q	1260	1250	1242	1236	1231	1227	1223	1218	1214
	VSC @ 4"	F	2.6+82R	3.4+70R	3.9+62R	4.4+55R	4.7+49R	5.0+45R	5.2+41R	5.6+35R	5.9+31R

See Page 76 for footnotes.

(continued)

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 ATTACHMENT PATTERN FOR PNEUTEK K64062 AT SUPPORTS 0.187" – 0.312" THICK (Cont'd.)											
18	VSC @ 24"	q	674	703	615	644	579	606	556	539	526
		F	14.3+38R	13.7+33R	15.8+28R	15+25R	16.7+22R	15.9+20R	17.3+18R	17.7+16R	18.1+14R
	VSC @ 12"	q	1039	1010	988	970	956	944	935	919	908
		F	8.3+39R	8.8+34R	9.2+29R	9.5+26R	9.7+24R	9.9+21R	10.1+20R	10.3+17R	10.5+15R
	VSC @ 8"	q	1327	1340	1286	1301	1261	1276	1244	1231	1222
		F	6.0+40R	6.2+34R	6.7+30R	6.8+27R	7.2+24R	7.2+22R	7.5+20R	7.7+17R	7.8+15R
	VSC @ 4"	q	1853	1843	1835	1829	1824	1820	1816	1811	1806
		F	3.4+40R	3.8+34R	4.1+30R	4.3+27R	4.4+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R
16	VSC @ 24"	q	901	938	829	866	786	819	756	734	717
		F	12.9+21R	12.2+18R	13.9+15R	13.2+14R	14.5+12R	13.8+11R	15+10R	15.3+9R	15.6+7R
	VSC @ 12"	q	1381	1348	1322	1302	1286	1272	1261	1243	1230
		F	7.7+22R	8.0+19R	8.2+17R	8.4+15R	8.6+13R	8.7+12R	8.8+11R	9.0+9R	9.1+8R
	VSC @ 8"	q	1751	1772	1707	1728	1679	1699	1660	1646	1636
		F	5.6+23R	5.7+19R	6.1+17R	6.1+15R	6.4+14R	6.3+12R	6.5+11R	6.7+10R	6.8+8R
	VSC @ 4"	q	2377	2367	2359	2353	2348	2344	2341	2335	2331
		F	3.4+23R	3.7+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R
24/6 ATTACHMENT PATTERN FOR PNEUTEK K64062 AT SUPPORTS 0.187" – 0.312" THICK											
22	VSC @ 24"	q	432	421	368	367	330	332	304	286	273
		F	13.8+125R	14.4+108R	17.6+93R	17.5+83R	20.1+74R	19.7+67R	21.8+61R	23.1+52R	24.1+45R
	VSC @ 12"	q	609	573	545	524	507	493	482	464	450
		F	7.4+128R	8.9+110R	10.0+96R	10.9+85R	11.7+76R	12.3+69R	12.8+64R	13.6+54R	14.2+48R
	VSC @ 8"	q	773	759	712	707	674	674	648	630	616
		F	4.5+129R	5.5+110R	6.8+97R	7.4+86R	8.2+77R	8.5+70R	9.2+64R	9.9+55R	10.4+48R
	VSC @ 4"	q	1141	1116	1096	1081	1068	1058	1049	1035	1025
		F	1.1+130R	2.3+111R	3.2+97R	3.8+86R	4.4+78R	4.9+71R	5.2+65R	5.8+55R	6.3+49R
20	VSC @ 24"	q	589	581	508	511	460	466	427	404	387
		F	13.5+79R	13.7+67R	16.3+58R	16.0+52R	18.0+46R	17.6+42R	19.3+38R	20.2+32R	21.0+28R
	VSC @ 12"	q	854	808	773	746	724	707	692	669	651
		F	7.9+81R	8.9+69R	9.7+60R	10.3+54R	10.8+48R	11.2+44R	11.5+40R	12.1+34R	12.5+30R
	VSC @ 8"	q	1077	1064	1003	1000	956	959	925	902	885
		F	5.4+81R	6.0+70R	6.9+61R	7.2+54R	7.9+49R	8.0+44R	8.5+41R	8.9+35R	9.3+30R
	VSC @ 4"	q	1584	1556	1533	1516	1502	1490	1480	1464	1452
		F	2.5+82R	3.3+70R	3.8+61R	4.3+55R	4.6+49R	4.9+45R	5.2+41R	5.6+35R	5.8+31R
18	VSC @ 24"	q	879	879	769	781	703	719	659	627	604
		F	12.3+37R	12.2+32R	14.0+28R	13.6+25R	15.2+22R	14.7+20R	16.0+18R	16.6+15R	17.0+13R
	VSC @ 12"	q	1303	1242	1196	1159	1129	1105	1085	1052	1028
		F	7.7+39R	8.2+33R	8.7+29R	9.0+26R	9.3+23R	9.5+21R	9.7+19R	10.0+17R	10.2+14R
	VSC @ 8"	q	1636	1628	1542	1546	1484	1492	1444	1415	1393
		F	5.6+40R	5.9+34R	6.5+30R	6.6+26R	6.9+24R	7.0+22R	7.3+20R	7.5+17R	7.7+15R
	VSC @ 4"	q	2374	2342	2317	2297	2281	2268	2256	2238	2225
		F	3.3+40R	3.7+34R	4.0+30R	4.2+27R	4.4+24R	4.5+22R	4.7+20R	4.8+17R	5.0+15R
16	VSC @ 24"	q	1153	1164	1018	1041	937	963	883	845	816
		F	11.2+21R	10.9+18R	12.5+15R	12.0+13R	13.3+12R	12.8+11R	13.9+10R	14.4+8R	14.7+7R
	VSC @ 12"	q	1718	1646	1591	1547	1512	1483	1459	1420	1391
		F	7.1+22R	7.5+19R	7.8+16R	8.0+15R	8.2+13R	8.3+12R	8.5+11R	8.7+9R	8.8+8R
	VSC @ 8"	q	2162	2159	2053	2064	1986	2001	1940	1907	1881
		F	5.4+22R	5.5+19R	5.9+17R	5.9+15R	6.2+13R	6.2+12R	6.4+11R	6.5+10R	6.7+8R
	VSC @ 4"	q	3090	3056	3029	3009	2992	2978	2966	2947	2933
		F	3.4+23R	3.6+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R

See Page 76 for footnotes.

(continued)

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/3 ATTACHMENT PATTERN FOR PNEUTEK SDK63075 AT SUPPORTS 0.155" – 0.250" THICK											
22	VSC @ 24"	q	242	258	226	240	216	229	210	205	202
		F	19.3+127R	18.6+109R	22.4+95R	21.3+84R	24.3+75R	23.1+69R	25.6+63R	26.5+54R	27.2+47R
	VSC @ 12"	q	407	397	390	384	379	375	372	367	363
		F	9.2+129R	10.6+110R	11.5+97R	12.3+86R	12.9+77R	13.4+70R	13.9+64R	14.5+55R	15.0+48R
	VSC @ 8"	q	532	540	518	526	509	517	504	499	496
		F	5.4+129R	6.3+111R	7.6+97R	8.0+86R	8.8+78R	9.1+71R	9.7+65R	10.3+55R	10.8+48R
	VSC @ 4"	q	771	767	764	762	760	759	757	755	754
		F	1.3+130R	2.5+111R	3.3+97R	4.0+86R	4.6+78R	5.0+71R	5.4+65R	6.0+56R	6.4+49R
20	VSC @ 24"	q	339	366	320	344	309	329	302	297	293
		F	17.9+80R	17.0+69R	20.0+59R	19.0+53R	21.3+47R	20.2+43R	22.2+39R	22.8+34R	23.3+30R
	VSC @ 12"	q	556	546	539	533	528	524	521	516	512
		F	9.3+81R	10.2+70R	10.8+61R	11.4+54R	11.8+49R	12.1+44R	12.4+41R	12.8+35R	13.1+30R
	VSC @ 8"	q	714	726	701	712	693	703	688	684	681
		F	6.1+82R	6.6+70R	7.5+61R	7.7+55R	8.3+49R	8.4+45R	8.9+41R	9.3+35R	9.6+31R
	VSC @ 4"	q	971	968	966	964	963	962	961	960	958
		F	2.7+82R	3.4+70R	4.0+62R	4.4+55R	4.8+49R	5.0+45R	5.3+41R	5.6+35R	5.9+31R
18	VSC @ 24"	q	523	559	498	529	483	510	472	465	459
		F	15.6+38R	14.6+33R	16.8+29R	15.8+26R	17.5+23R	16.6+21R	18.0+19R	18.4+16R	18.7+14R
	VSC @ 12"	q	823	813	805	799	795	791	788	782	778
		F	8.7+40R	9.2+34R	9.5+30R	9.8+26R	10.0+24R	10.1+22R	10.3+20R	10.5+17R	10.7+15R
	VSC @ 8"	q	1021	1037	1010	1024	1003	1015	998	995	992
		F	6.2+40R	6.3+34R	6.8+30R	6.9+27R	7.3+24R	7.3+22R	7.5+20R	7.7+17R	7.9+15R
	VSC @ 4"	q	1283	1281	1280	1279	1278	1277	1277	1276	1275
		F	3.5+40R	3.8+34R	4.1+30R	4.3+27R	4.5+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R
16	VSC @ 24"	q	690	740	662	705	646	683	634	626	620
		F	13.9+21R	12.9+19R	14.7+16R	13.8+14R	15.3+13R	14.4+12R	15.6+11R	15.9+9R	16.1+8R
	VSC @ 12"	q	1063	1053	1046	1040	1036	1032	1029	1024	1020
		F	8.0+22R	8.3+19R	8.5+17R	8.6+15R	8.8+13R	8.9+12R	9.0+11R	9.1+10R	9.2+8R
	VSC @ 8"	q	1285	1303	1275	1290	1269	1282	1265	1262	1260
		F	5.8+23R	5.8+19R	6.2+17R	6.2+15R	6.5+14R	6.4+12R	6.6+11R	6.7+10R	6.8+9R
	VSC @ 4"	q	1544	1542	1541	1540	1540	1539	1539	1538	1538
		F	3.5+23R	3.7+20R	3.8+17R	4.0+15R	4.1+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R
24/4 ATTACHMENT PATTERN FOR PNEUTEK SDK63075 AT SUPPORTS 0.155" – 0.250" THICK											
22	VSC @ 24"	q	313	319	279	287	259	267	245	235	228
		F	17.1+126R	17.0+108R	20.5+94R	19.9+84R	22.7+75R	21.9+68R	24.2+62R	25.3+53R	26.1+46R
	VSC @ 12"	q	481	462	448	437	428	420	414	404	397
		F	8.6+128R	10.0+110R	11.0+96R	11.8+85R	12.5+77R	13+70R	13.5+64R	14.2+55R	14.7+48R
	VSC @ 8"	q	618	620	589	594	571	577	559	550	544
		F	5.1+129R	6.0+111R	7.3+97R	7.8+86R	8.6+77R	8.9+70R	9.5+65R	10.2+55R	10.6+48R
	VSC @ 4"	q	916	906	899	893	888	885	881	876	872
		F	1.2+130R	2.4+111R	3.3+97R	4.0+86R	4.5+78R	5.0+71R	5.3+65R	5.9+56R	6.4+49R
20	VSC @ 24"	q	419	435	381	397	358	373	342	331	323
		F	16.2+79R	15.8+68R	18.6+59R	17.9+53R	20.1+47R	19.3+43R	21.1+39R	21.9+33R	22.5+29R
	VSC @ 12"	q	648	628	613	601	592	584	577	567	559
		F	8.8+81R	9.7+69R	10.4+61R	11.0+54R	11.4+49R	11.8+44R	12.1+40R	12.5+35R	12.9+30R
	VSC @ 8"	q	830	838	802	811	784	794	772	764	757
		F	5.9+82R	6.4+70R	7.3+61R	7.5+54R	8.2+49R	8.3+45R	8.7+41R	9.2+35R	9.5+31R
	VSC @ 4"	q	1179	1172	1166	1161	1157	1154	1151	1147	1144
		F	2.6+82R	3.4+70R	3.9+62R	4.4+55R	4.7+49R	5.0+45R	5.2+41R	5.6+35R	5.9+31R

See Page 76 for footnotes.

(continued)

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 ATTACHMENT PATTERN FOR PNEUTEK SDK63075 AT SUPPORTS 0.155" – 0.250" THICK (Cont'd.)											
18	VSC @ 24"	q	624	650	577	603	548	572	528	514	503
		F	14.3+38R	13.7+33R	15.8+28R	15.0+25R	16.7+22R	15.9+20R	17.3+18R	17.7+16R	18.1+14R
	VSC @ 12"	q	955	934	918	905	895	886	879	868	860
		F	8.3+39R	8.8+34R	9.2+29R	9.5+26R	9.7+24R	9.9+21R	10.1+20R	10.3+17R	10.5+15R
	VSC @ 8"	q	1203	1217	1176	1191	1159	1173	1147	1139	1133
		F	6.0+40R	6.2+34R	6.7+30R	6.8+27R	7.2+24R	7.2+22R	7.5+20R	7.7+17R	7.8+15R
	VSC @ 4"	q	1600	1595	1590	1587	1584	1582	1580	1577	1575
		F	3.4+40R	3.8+34R	4.1+30R	4.3+27R	4.4+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R
16	VSC @ 24"	q	812	853	759	797	726	762	705	689	677
		F	12.9+21R	12.2+18R	13.9+15R	13.2+14R	14.5+12R	13.8+11R	15.0+10R	15.3+9R	15.6+7R
	VSC @ 12"	q	1239	1217	1200	1187	1177	1168	1161	1149	1140
		F	7.7+22R	8.0+19R	8.2+17R	8.4+15R	8.6+13R	8.7+12R	8.8+11R	9.0+9R	9.1+8R
	VSC @ 8"	q	1534	1554	1508	1527	1492	1509	1481	1473	1467
		F	5.6+23R	5.7+19R	6.1+17R	6.1+15R	6.4+14R	6.3+12R	6.5+11R	6.7+10R	6.8+8R
	VSC @ 4"	q	1953	1949	1945	1943	1940	1939	1937	1935	1933
		F	3.4+23R	3.7+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R
24/6 ATTACHMENT PATTERN FOR PNEUTEK SDK63075 AT SUPPORTS 0.155" – 0.250" THICK											
22	VSC @ 24"	q	431	420	367	366	329	332	304	286	272
		F	13.8+125R	14.4+108R	17.6+93R	17.5+83R	20.1+74R	19.7+67R	21.8+61R	23.1+52R	24.1+45R
	VSC @ 12"	q	608	572	545	524	507	493	481	463	450
		F	7.4+128R	8.9+110R	10.0+96R	10.9+85R	11.7+76R	12.3+69R	12.8+64R	13.6+54R	14.2+48R
	VSC @ 8"	q	772	758	711	707	673	673	648	629	615
		F	4.5+129R	5.5+110R	6.8+97R	7.4+86R	8.2+77R	8.5+70R	9.2+64R	9.9+55R	10.4+48R
	VSC @ 4"	q	1140	1114	1095	1079	1067	1057	1048	1034	1024
		F	1.1+130R	2.3+111R	3.2+97R	3.8+86R	4.4+78R	4.9+71R	5.2+65R	5.8+55R	6.3+49R
20	VSC @ 24"	q	554	551	482	487	439	447	410	389	373
		F	13.5+79R	13.7+67R	16.3+58R	16.0+52R	18.0+46R	17.6+42R	19.3+38R	20.2+32R	21.0+28R
	VSC @ 12"	q	818	778	747	722	702	686	672	651	634
		F	7.9+81R	8.9+69R	9.7+60R	10.3+54R	10.8+48R	11.2+44R	11.5+40R	12.1+34R	12.5+30R
	VSC @ 8"	q	1025	1017	961	962	921	926	894	875	860
		F	5.4+81R	6.0+70R	6.9+61R	7.2+54R	7.9+49R	8.0+44R	8.5+41R	8.9+35R	9.3+30R
	VSC @ 4"	q	1498	1475	1457	1443	1431	1422	1414	1401	1391
		F	2.5+82R	3.3+70R	3.8+61R	4.3+55R	4.6+49R	4.9+45R	5.2+41R	5.6+35R	5.8+31R
18	VSC @ 24"	q	792	804	704	723	651	671	615	590	571
		F	12.3+37R	12.2+32R	14.0+28R	13.6+25R	15.2+22R	14.7+20R	16.0+18R	16.6+15R	17.0+13R
	VSC @ 12"	q	1183	1137	1101	1074	1051	1032	1017	992	974
		F	7.7+39R	8.2+33R	8.7+29R	9.0+26R	9.3+23R	9.5+21R	9.7+19R	10.0+17R	10.2+14R
	VSC @ 8"	q	1488	1490	1420	1429	1378	1390	1349	1328	1312
		F	5.6+40R	5.9+34R	6.5+30R	6.6+26R	6.9+24R	7.0+22R	7.3+20R	7.5+17R	7.7+15R
	VSC @ 4"	q	2101	2081	2066	2054	2044	2036	2029	2018	2010
		F	3.3+40R	3.7+34R	4.0+30R	4.2+27R	4.4+24R	4.5+22R	4.7+20R	4.8+17R	5.0+15R
16	VSC @ 24"	q	1025	1054	922	956	860	894	819	790	768
		F	11.2+21R	10.9+18R	12.5+15R	12+13R	13.3+12R	12.8+11R	13.9+10R	14.4+8R	14.7+7R
	VSC @ 12"	q	1528	1478	1439	1409	1385	1365	1348	1321	1300
		F	7.1+22R	7.5+19R	7.8+16R	8.0+15R	8.2+13R	8.3+12R	8.5+11R	8.7+9R	8.8+8R
	VSC @ 8"	q	1915	1925	1846	1862	1802	1820	1773	1751	1735
		F	5.4+22R	5.5+19R	5.9+17R	5.9+15R	6.2+13R	6.2+12R	6.4+11R	6.5+10R	6.7+8R
	VSC @ 4"	q	2622	2605	2591	2580	2572	2564	2558	2549	2541
		F	3.4+23R	3.6+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R

See Page 76 for footnotes.

(continued)

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/3 ATTACHMENT PATTERN FOR PNEUTEK SDK61075 AT SUPPORTS 0.113" – 0.155" THICK											
22	VSC @ 24"	q 235	252	221	236	212	225	206	202	199	
		F 19.3+127R	18.6+109R	22.4+95R	21.3+84R	24.3+75R	23.1+69R	25.6+63R	26.5+54R	27.2+47R	
	VSC @ 12"	q 393	384	378	373	369	365	363	358	355	
		F 9.2+129R	10.6+110R	11.5+97R	12.3+86R	12.9+77R	13.4+70R	13.9+64R	14.5+55R	15.0+48R	
	VSC @ 8"	q 510	518	498	506	491	499	487	483	480	
20		F 5.4+129R	6.3+111R	7.6+97R	8.0+86R	8.8+78R	9.1+71R	9.7+65R	10.3+55R	10.8+48R	
	VSC @ 4"	q 720	717	715	714	712	711	710	709	708	
		F 1.3+130R	2.5+111R	3.3+97R	4.0+86R	4.6+78R	5.0+71R	5.4+65R	6.0+56R	6.4+49R	
	VSC @ 24"	q 333	361	316	339	306	324	299	294	289	
		F 17.9+80R	17.0+69R	20.0+59R	19.0+53R	21.3+47R	20.2+43R	22.2+39R	22.8+34R	23.3+30R	
18	VSC @ 12"	q 542	533	526	521	517	513	510	506	502	
		F 9.3+81R	10.2+70R	10.8+61R	11.4+54R	11.8+49R	12.1+44R	12.4+41R	12.8+35R	13.1+30R	
	VSC @ 8"	q 691	702	680	690	673	682	668	665	662	
		F 6.1+82R	6.6+70R	7.5+61R	7.7+55R	8.3+49R	8.4+45R	8.9+41R	9.3+35R	9.6+31R	
	VSC @ 4"	q 920	918	917	915	914	913	913	911	911	
16		F 2.7+82R	3.4+70R	4.0+62R	4.4+55R	4.8+49R	5.0+45R	5.3+41R	5.6+35R	5.9+31R	
	VSC @ 24"	q 520	556	496	527	481	508	471	463	458	
		F 15.6+38R	14.6+33R	16.8+29R	15.8+26R	17.5+23R	16.6+21R	18.0+19R	18.4+16R	18.7+14R	
	VSC @ 12"	q 817	808	800	795	790	786	783	778	774	
		F 8.7+40R	9.2+34R	9.5+30R	9.8+26R	10.0+24R	10.1+22R	10.3+20R	10.5+17R	10.7+15R	
14	VSC @ 8"	q 1012	1027	1001	1015	995	1007	990	987	984	
		F 6.2+40R	6.3+34R	6.8+30R	6.9+27R	7.3+24R	7.3+22R	7.5+20R	7.7+17R	7.9+15R	
	VSC @ 4"	q 1266	1265	1263	1262	1262	1261	1260	1259	1259	
		F 3.5+40R	3.8+34R	4.1+30R	4.3+27R	4.5+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R	
	VSC @ 24"	q 696	746	668	711	650	688	639	630	624	
12		F 13.9+21R	12.9+19R	14.7+16R	13.8+14R	15.3+13R	14.4+12R	15.6+11R	15.9+9R	16.1+8R	
	VSC @ 12"	q 1077	1067	1059	1053	1048	1044	1041	1035	1031	
		F 8.0+22R	8.3+19R	8.5+17R	8.6+15R	8.8+13R	8.9+12R	9.0+11R	9.1+10R	9.2+8R	
	VSC @ 8"	q 1308	1326	1297	1313	1291	1305	1286	1283	1280	
		F 5.8+23R	5.8+19R	6.2+17R	6.2+15R	6.5+14R	6.4+12R	6.6+11R	6.7+10R	6.8+9R	
10	VSC @ 4"	q 1582	1580	1579	1578	1578	1577	1577	1576	1575	
		F 3.5+23R	3.7+20R	3.8+17R	4.0+15R	4.1+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R	
24/4 ATTACHMENT PATTERN FOR PNEUTEK SDK61075 AT SUPPORTS 0.113" – 0.155" THICK											
22	VSC @ 24"	q 298	306	268	278	250	259	238	229	223	
		F 17.1+126R	17.0+108R	20.5+94R	19.9+84R	22.7+75R	21.9+68R	24.2+62R	25.3+53R	26.1+46R	
	VSC @ 12"	q 461	444	432	422	414	408	402	394	387	
		F 8.6+128R	10.0+110R	11.0+96R	11.8+85R	12.5+77R	13.0+70R	13.5+64R	14.2+55R	14.7+48R	
	VSC @ 8"	q 592	595	567	573	552	558	542	535	529	
20		F 5.1+129R	6.0+111R	7.3+97R	7.8+86R	8.6+77R	8.9+70R	9.5+65R	10.2+55R	10.6+48R	
	VSC @ 4"	q 864	856	850	846	842	839	836	832	829	
		F 1.2+130R	2.4+111R	3.3+97R	4.0+86R	4.5+78R	5.0+71R	5.3+65R	5.9+56R	6.4+49R	
	VSC @ 24"	q 408	426	372	390	351	367	337	326	319	
		F 16.2+79R	15.8+68R	18.6+59R	17.9+53R	20.1+47R	19.3+43R	21.1+39R	21.9+33R	22.5+29R	
18	VSC @ 12"	q 630	612	598	588	579	572	566	557	549	
		F 8.8+81R	9.7+69R	10.4+61R	11.0+54R	11.4+49R	11.8+44R	12.1+40R	12.5+35R	12.9+30R	
	VSC @ 8"	q 805	813	780	789	764	773	754	746	740	
		F 5.9+82R	6.4+70R	7.3+61R	7.5+54R	8.2+49R	8.3+45R	8.7+41R	9.2+35R	9.5+31R	
	VSC @ 4"	q 1126	1119	1114	1111	1107	1105	1103	1099	1097	
16		F 2.6+82R	3.4+70R	3.9+62R	4.4+55R	4.7+49R	5.0+45R	5.2+41R	5.6+35R	5.9+31R	

See Page 76 for footnotes.

(continued)

TABLE 26 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH PNEUTEK PINS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2,3,4} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 ATTACHMENT PATTERN FOR PNEUTEK SDK61075 AT SUPPORTS 0.113" – 0.155" THICK (Cont'd.)											
18	VSC @ 24"	q	620	646	573	600	545	569	526	512	501
		F	14.3+38R	13.7+33R	15.8+28R	15.0+25R	16.7+22R	15.9+20R	17.3+18R	17.7+16R	18.1+14R
	VSC @ 12"	q	948	928	912	900	890	882	875	864	856
		F	8.3+39R	8.8+34R	9.2+29R	9.5+26R	9.7+24R	9.9+21R	10.1+20R	10.3+17R	10.5+15R
	VSC @ 8"	q	1193	1208	1167	1182	1151	1165	1140	1132	1126
		F	6.0+40R	6.2+34R	6.7+30R	6.8+27R	7.2+24R	7.2+22R	7.5+20R	7.7+17R	7.8+15R
	VSC @ 4"	q	1582	1576	1572	1569	1566	1564	1562	1559	1557
		F	3.4+40R	3.8+34R	4.1+30R	4.3+27R	4.4+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R
16	VSC @ 24"	q	821	861	766	805	733	767	710	693	681
		F	12.9+21R	12.2+18R	13.9+15R	13.2+14R	14.5+12R	13.8+11R	15.0+10R	15.3+9R	15.6+7R
	VSC @ 12"	q	1254	1231	1214	1200	1189	1180	1172	1160	1151
		F	7.7+22R	8.0+19R	8.2+17R	8.4+15R	8.6+13R	8.7+12R	8.8+11R	9.0+9R	9.1+8R
	VSC @ 8"	q	1558	1578	1530	1549	1513	1531	1502	1493	1487
		F	5.6+23R	5.7+19R	6.1+17R	6.1+15R	6.4+14R	6.3+12R	6.5+11R	6.7+10R	6.8+8R
	VSC @ 4"	q	1997	1992	1989	1986	1983	1981	1980	1977	1975
		F	3.4+23R	3.7+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R
24/6 ATTACHMENT PATTERN FOR PNEUTEK SDK61075 AT SUPPORTS 0.113" – 0.155" THICK											
22	VSC @ 24"	q	404	397	347	348	313	317	291	274	262
		F	13.8+125R	14.4+108R	17.6+93R	17.5+83R	20.1+74R	19.7+67R	21.8+61R	23.1+52R	24.1+45R
	VSC @ 12"	q	581	549	525	506	491	478	468	452	440
		F	7.4+128R	8.9+110R	10.0+96R	10.9+85R	11.7+76R	12.3+69R	12.8+64R	13.6+54R	14.2+48R
	VSC @ 8"	q	735	725	682	680	649	650	627	611	599
		F	4.5+129R	5.5+110R	6.8+97R	7.4+86R	8.2+77R	8.5+70R	9.2+64R	9.9+55R	10.4+48R
	VSC @ 4"	q	1082	1061	1045	1033	1022	1014	1007	995	987
		F	1.1+130R	2.3+111R	3.2+97R	3.8+86R	4.4+78R	4.9+71R	5.2+65R	5.8+55R	6.3+49R
20	VSC @ 24"	q	533	533	466	473	426	435	399	380	366
		F	13.5+79R	13.7+67R	16.3+58R	16.0+52R	18.0+46R	17.6+42R	19.3+38R	20.2+32R	21.0+28R
	VSC @ 12"	q	790	753	725	702	684	669	657	637	622
		F	7.9+81R	8.9+69R	9.7+60R	10.3+54R	10.8+48R	11.2+44R	11.5+40R	12.1+34R	12.5+30R
	VSC @ 8"	q	992	987	935	937	899	904	875	857	844
		F	5.4+81R	6.0+70R	6.9+61R	7.2+54R	7.9+49R	8.0+44R	8.5+41R	8.9+35R	9.3+30R
	VSC @ 4"	q	1441	1421	1405	1393	1383	1375	1368	1357	1349
		F	2.5+82R	3.3+70R	3.8+61R	4.3+55R	4.6+49R	4.9+45R	5.2+41R	5.6+35R	5.8+31R
18	VSC @ 24"	q	787	799	699	719	647	668	612	588	569
		F	12.3+37R	12.2+32R	14.0+28R	13.6+25R	15.2+22R	14.7+20R	16+18R	16.6+15R	17.0+13R
	VSC @ 12"	q	1174	1129	1095	1067	1045	1027	1012	988	970
		F	7.7+39R	8.2+33R	8.7+29R	9.0+26R	9.3+23R	9.5+21R	9.7+19R	10.0+17R	10.2+14R
	VSC @ 8"	q	1477	1480	1411	1421	1370	1382	1342	1322	1306
		F	5.6+40R	5.9+34R	6.5+30R	6.6+26R	6.9+24R	7.0+22R	7.3+20R	7.5+17R	7.7+15R
	VSC @ 4"	q	2081	2062	2047	2035	2026	2018	2011	2001	1993
		F	3.3+40R	3.7+34R	4.0+30R	4.2+27R	4.4+24R	4.5+22R	4.7+20R	4.8+17R	5.0+15R
16	VSC @ 24"	q	1037	1064	931	964	868	900	825	795	772
		F	11.2+21R	10.9+18R	12.5+15R	12.0+13R	13.3+12R	12.8+11R	13.9+10R	14.4+8R	14.7+7R
	VSC @ 12"	q	1547	1495	1455	1424	1398	1377	1359	1331	1310
		F	7.1+22R	7.5+19R	7.8+16R	8.0+15R	8.2+13R	8.3+12R	8.5+11R	8.7+9R	8.8+8R
	VSC @ 8"	q	1941	1950	1868	1884	1822	1840	1791	1768	1751
		F	5.4+22R	5.5+19R	5.9+17R	5.9+15R	6.2+13R	6.2+12R	6.4+11R	6.5+10R	6.7+8R
	VSC @ 4"	q	2672	2653	2639	2627	2617	2610	2603	2593	2585
		F	3.4+23R	3.6+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R

¹ Notes 1-6 of Table 24 apply to this table.

² See General Note 7d for spacing of Pneutek fasteners at collector elements parallel to deck flutes.

³ See Table 3 for Allowable Tension Loads for Pneutek fasteners subject to wind uplift loads.

⁴ See Section 3.11 for Pneutek fastener details.

TABLE 27 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH #12 SCREWS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2}

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/3 ATTACHMENT PATTERN											
22	VSC @ 24"	q 210	225	200	213	194	206	190	187	185	
	F	14.9+126R	15.3+108R	18.6+93R	18.4+83R	21.0+74R	20.5+68R	22.7+61R	23.9+52R	24.9+46R	
	VSC @ 12"	q 330	327	324	321	319	318	317	315	313	
	F	7.8+128R	9.3+110R	10.4+96R	11.3+85R	12.0+77R	12.6+70R	13.0+64R	13.8+55R	14.4+48R	
	VSC @ 8"	q 409	415	405	410	402	407	400	399	398	
20	F	4.7+129R	5.7+111R	7.0+97R	7.5+86R	8.4+77R	8.7+70R	9.3+64R	10.0+55R	10.5+48R	
	VSC @ 4"	q 511	511	510	510	509	509	509	508	508	
	F	1.1+130R	2.3+111R	3.2+97R	3.9+86R	4.4+78R	4.9+71R	5.3+65R	5.9+56R	6.3+49R	
	VSC @ 24"	q 293	314	282	300	275	291	271	266	261	
	F	14.5+79R	14.5+68R	17.1+58R	16.7+52R	18.8+46R	18.2+42R	20.0+38R	20.9+33R	21.5+28R	
18	VSC @ 12"	q 448	444	441	439	437	436	435	433	431	
	F	8.2+81R	9.2+69R	10.0+60R	10.5+54R	11.0+48R	11.4+44R	11.7+40R	12.2+34R	12.6+30R	
	VSC @ 8"	q 537	544	533	539	531	536	529	528	527	
	F	5.6+81R	6.2+70R	7.1+61R	7.4+54R	8.0+49R	8.1+44R	8.6+41R	9.0+35R	9.3+30R	
	VSC @ 4"	q 637	637	636	636	636	636	635	635	635	
16	F	2.5+82R	3.3+70R	3.9+61R	4.3+55R	4.7+49R	5.0+45R	5.2+41R	5.6+35R	5.9+31R	
	VSC @ 24"	q 417	445	390	415	373	395	362	354	348	
	F	13.0+38R	12.7+32R	14.7+28R	14.1+25R	15.7+22R	15.1+20R	16.5+18R	17.0+15R	17.4+13R	
	VSC @ 12"	q 662	659	656	653	652	650	649	647	645	
	F	7.9+39R	8.4+34R	8.9+29R	9.2+26R	9.4+23R	9.7+21R	9.8+19R	10.1+17R	10.3+15R	
12	VSC @ 8"	q 768	776	764	771	762	768	761	760	759	
	F	5.8+40R	6.0+34R	6.5+30R	6.6+26R	7.0+24R	7.0+22R	7.3+20R	7.6+17R	7.7+15R	
	VSC @ 4"	q 871	871	870	870	870	870	870	870	869	
	F	3.3+40R	3.7+34R	4.0+30R	4.2+27R	4.4+24R	4.6+22R	4.7+20R	4.9+17R	5.0+15R	
	VSC @ 24"	q 522	557	488	519	467	494	453	443	436	
8	F	11.8+21R	11.4+18R	13.0+15R	12.5+14R	13.8+12R	13.2+11R	14.3+10R	14.7+8R	15.0+7R	
	VSC @ 12"	q 868	865	861	859	850	843	837	827	819	
	F	7.3+22R	7.7+19R	7.9+16R	8.2+15R	8.3+13R	8.5+12R	8.6+11R	8.8+9R	8.9+8R	
	VSC @ 8"	q 989	999	986	994	984	991	983	982	981	
	F	5.5+23R	5.6+19R	6.0+17R	6.0+15R	6.3+13R	6.2+12R	6.5+11R	6.6+10R	6.7+8R	
4	VSC @ 4"	q 1101	1101	1100	1100	1100	1100	1100	1099	1099	
	F	3.4+23R	3.6+20R	3.8+17R	3.9+15R	4.0+14R	4.1+12R	4.2+11R	4.3+10R	4.4+9R	
24/4 ATTACHMENT PATTERN											
22	VSC @ 24"	q 251	261	232	243	220	230	213	207	203	
	F	11.9+125R	12.8+107R	15.8+93R	16.1+83R	18.4+74R	18.3+67R	20.3+61R	21.7+52R	22.9+45R	
	VSC @ 12"	q 383	375	369	364	360	357	354	349	346	
	F	6.6+128R	8.2+109R	9.4+96R	10.3+85R	11.1+76R	11.7+69R	12.3+63R	13.1+54R	13.8+47R	
	VSC @ 8"	q 482	488	472	478	465	471	461	457	455	
20	F	4.1+129R	5.2+110R	6.5+96R	7.1+86R	8.0+77R	8.3+70R	8.9+64R	9.7+55R	10.2+48R	
	VSC @ 4"	q 639	636	635	634	632	632	631	630	629	
	F	0.9+129R	2.1+111R	3.1+97R	3.8+86R	4.3+78R	4.8+71R	5.2+65R	5.8+55R	6.2+49R	
	VSC @ 24"	q 344	362	322	339	309	323	296	287	280	
	F	12.0+79R	12.5+67R	14.8+58R	14.8+52R	16.7+46R	16.5+42R	18.1+38R	19.1+32R	20.0+28R	
18	VSC @ 12"	q 523	514	508	503	499	495	492	488	484	
	F	7.3+81R	8.4+69R	9.2+60R	9.8+53R	10.3+48R	10.8+44R	11.1+40R	11.7+34R	12.2+30R	
	VSC @ 8"	q 644	652	634	642	628	635	624	621	618	
	F	5.1+81R	5.8+70R	6.7+61R	7.0+54R	7.6+49R	7.8+44R	8.3+40R	8.8+35R	9.1+30R	
	VSC @ 4"	q 809	808	806	805	805	804	803	803	802	
12	F	2.4+82R	3.2+70R	3.8+61R	4.2+55R	4.6+49R	4.9+45R	5.1+41R	5.5+35R	5.8+31R	
	VSC @ 24"	q 483	501	439	458	412	431	395	382	373	
	F	11.1+37R	11.2+32R	13.0+27R	12.8+24R	14.2+21R	13.9+20R	15.1+18R	15.8+15R	16.3+13R	
	VSC @ 12"	q 783	764	745	731	719	709	701	689	679	
	F	7.2+39R	7.8+33R	8.3+29R	8.7+26R	9.0+23R	9.2+21R	9.4+19R	9.7+16R	10.0+14R	
8	VSC @ 8"	q 938	949	928	938	922	931	918	915	913	
	F	5.4+39R	5.7+34R	6.3+30R	6.4+26R	6.8+24R	6.8+21R	7.1+20R	7.4+17R	7.6+15R	
	VSC @ 4"	q 1122	1120	1119	1118	1118	1117	1117	1116	1115	
	F	3.2+40R	3.6+34R	3.9+30R	4.2+27R	4.3+24R	4.5+22R	4.6+20R	4.8+17R	5.0+15R	

See Page 78 for footnotes.

(continued)

TABLE 27 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR PLN™-24 DECK PANELS ATTACHED TO SUPPORTS WITH #12 SCREWS AND SIDELAPS FASTENED WITH THE PUNCHLOK® SYSTEM^{1,2} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 ATTACHMENT PATTERN (Cont'd.)											
16	VSC @ 24"	q	604	627	549	573	516	539	494	478	466
		F	10.2+21R	10.1+18R	11.6+15R	11.3+13R	12.5+12R	12.2+11R	13.2+9R	13.7+8R	14.1+7R
	VSC @ 12"	q	987	956	932	914	899	887	877	862	850
		F	6.8+22R	7.2+19R	7.5+16R	7.7+14R	7.9+13R	8.1+12R	8.3+11R	8.5+9R	8.7+8R
	VSC @ 8"	q	1221	1234	1211	1223	1205	1215	1200	1197	1195
		F	5.2+22R	5.3+19R	5.7+17R	5.8+15R	6.1+13R	6.1+12R	6.3+11R	6.5+10R	6.6+8R
	VSC @ 4"	q	1426	1424	1423	1423	1422	1422	1421	1420	1420
		F	3.3+23R	3.5+20R	3.7+17R	3.9+15R	4.0+14R	4.1+12R	4.1+11R	4.2+10R	4.3+9R
24/6 ATTACHMENT PATTERN											
22	VSC @ 24"	q	318	323	283	291	262	270	248	238	230
		F	8.0+126R	9.5+108R	12.0+93R	12.7+83R	14.7+74R	15.1+67R	16.8+61R	18.4+51R	19.7+44R
	VSC @ 12"	q	475	456	443	432	423	415	409	400	392
		F	4.9+128R	6.5+109R	7.8+95R	8.8+84R	9.7+76R	10.4+69R	11+63R	12.0+54R	12.7+47R
	VSC @ 8"	q	597	598	570	574	554	559	543	534	528
		F	3.1+128R	4.3+110R	5.6+96R	6.3+85R	7.2+77R	7.6+70R	8.3+64R	9.1+55R	9.7+48R
	VSC @ 4"	q	841	833	827	822	818	815	813	808	805
		F	0.6+129R	1.9+111R	2.8+97R	3.5+86R	4.1+78R	4.6+70R	5.0+65R	5.6+55R	6.1+48R
20	VSC @ 24"	q	434	447	391	407	366	377	345	329	317
		F	8.8+79R	9.7+67R	11.7+58R	12.1+52R	13.7+46R	13.9+41R	15.3+37R	16.5+32R	17.4+27R
	VSC @ 12"	q	645	625	610	598	588	580	573	559	547
		F	5.9+80R	7.0+69R	7.9+60R	8.6+53R	9.2+48R	9.7+43R	10.1+40R	10.8+34R	11.3+29R
	VSC @ 8"	q	807	812	780	787	762	770	751	742	736
		F	4.3+81R	5.1+69R	6.0+61R	6.4+54R	7.1+48R	7.3+44R	7.8+40R	8.3+34R	8.7+30R
	VSC @ 4"	q	1093	1087	1082	1078	1074	1072	1069	1066	1063
		F	2.1+82R	2.9+70R	3.6+61R	4.0+54R	4.4+49R	4.7+45R	5.0+41R	5.4+35R	5.7+31R
18	VSC @ 24"	q	613	613	537	545	491	502	460	438	422
		F	8.7+38R	9.1+32R	10.6+27R	10.7+24R	11.9+21R	11.9+19R	13.0+17R	13.8+14R	14.4+12R
	VSC @ 12"	q	920	876	843	818	797	781	767	745	728
		F	6.2+39R	6.8+33R	7.4+29R	7.8+25R	8.1+23R	8.4+21R	8.7+19R	9.1+16R	9.4+14R
	VSC @ 8"	q	1199	1209	1150	1158	1104	1115	1073	1051	1035
		F	4.8+39R	5.2+34R	5.8+29R	6.0+26R	6.4+23R	6.5+21R	6.8+19R	7.1+17R	7.3+15R
	VSC @ 4"	q	1553	1547	1542	1539	1536	1533	1531	1528	1526
		F	3.1+40R	3.5+34R	3.8+30R	4.0+27R	4.2+24R	4.4+22R	4.5+20R	4.7+17R	4.9+15R
16	VSC @ 24"	q	767	767	671	682	614	628	575	548	527
		F	8.1+21R	8.4+18R	9.6+15R	9.6+13R	10.6+11R	10.5+10R	11.4+9R	12.0+7R	12.5+6R
	VSC @ 12"	q	1151	1096	1055	1023	997	977	959	932	911
		F	5.9+22R	6.3+19R	6.7+16R	7.0+14R	7.3+13R	7.5+11R	7.6+10R	7.9+9R	8.2+8R
	VSC @ 8"	q	1535	1535	1439	1449	1381	1395	1343	1315	1295
		F	4.7+22R	4.9+19R	5.3+17R	5.4+15R	5.7+13R	5.8+12R	6.0+11R	6.2+9R	6.3+8R
	VSC @ 4"	q	1996	1990	1986	1982	1979	1977	1975	1972	1969
		F	3.2+23R	3.4+19R	3.6+17R	3.7+15R	3.9+14R	4.0+12R	4.0+11R	4.2+10R	4.3+8R

¹ Notes 2-4 of Table 21 and Notes 1-6 of Table 24 apply to this table.

² Spacing of screws at shear collectors parallel to the corrugations of the deck should be based on the shear to be transferred, but shall be no greater than the screw spacing at the sidelaps. Fasteners subjected to tension loads must be evaluated based on allowable tension strength determined in accordance with Section E4 of AISI S100. The following table lists the allowable screw connection shear and tension strengths, in lbs., for a #12 screw with a minimum washer diameter of 5/16-in. through deck into supporting steel with a minimum 1/8" thickness and minimum tensile strength, $F_u = 58$ ksi. Tension values are the lesser of the allowable pullover (deck pulling over the head of the screw) and pullout (screw pulling out of the support member).

DECK GAGE	SCREW CONNECTION STRENGTH (lbs)	
	SHEAR	TENSION
22	320	257
20	384	309
18	511	411
16	639	444

The allowable shear and tension strengths of the individual fasteners, as published by their manufacturer, must meet or exceed the allowable screw connection shear and tension strengths listed above.

**TABLE 28—ALLOWABLE DIAPHRAGM SHEAR, q (plf), AND FLEXIBILITY FACTORS, F, FOR
TYPE N-24 DECK WITH BUTTON PUNCHES (BP) OR 1½" TOP SEAM WELDS (TSW) AT SIDELAPS ¹**

GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)									
		6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	14'-0"	16'-0"	
24/4 WELD PATTERN AT SUPPORTS											
22	BP @ 24"	q	234	216	189	180	163	158	145	130	119
		F	21.3+166R	23.3+143R	26.7+125R	28.4+111R	31.8+100R	33.2+91R	36.6+83R	41.1+71R	45.4+62R
	BP @ 12"	q	285	260	241	227	216	207	198	184	173
		F	18.0+166R	19.8+143R	21.5+125R	23.1+111R	24.6+100R	26.1+91R	27.4+83R	29.9+71R	32.1+62R
	TSW @ 24"	q	234	231	201	202	181	183	167	158	151
		F	15.5+166R	13.9+143R	14.1+125R	12.9+111R	13.1+100R	12.1+91R	12.2+83R	11.5+71R	11.0+62R
	TSW @ 12"	q	343	324	309	298	289	282	276	267	260
		F	11.4+166R	10.7+143R	10.1+125R	9.6+111R	9.2+100R	8.8+91R	8.5+83R	8.0+71R	7.5+62R
20	BP @ 24"	q	355	323	283	266	240	231	212	189	171
		F	16.3+96R	18.2+82R	20.9+72R	22.5+64R	25.3+58R	26.8+52R	29.6+48R	33.8+41R	37.8+36R
	BP @ 12"	q	415	374	344	321	303	289	277	253	235
		F	14.3+96R	16.0+82R	17.6+72R	19.1+64R	20.5+58R	21.9+52R	23.2+48R	25.7+41R	28.1+36R
	TSW @ 24"	q	384	371	322	320	286	287	262	245	232
		F	12.3+96R	11.3+82R	11.5+72R	10.6+64R	10.8+58R	10.1+52R	10.2+48R	9.7+41R	9.3+36R
	TSW @ 12"	q	540	505	479	459	443	429	418	401	389
		F	9.4+96R	8.9+82R	8.5+72R	8.1+64R	7.8+58R	7.5+52R	7.2+48R	6.8+41R	6.5+36R
18	BP @ 24"	q	637	568	498	461	416	394	362	324	296
		F	10.6+41R	12.0+35R	13.8+31R	15.2+27R	17.1+24R	18.5+22R	20.5+20R	23.9+17R	27.3+15R
	BP @ 12"	q	710	632	574	530	494	466	443	407	381
		F	9.7+41R	11.0+35R	12.2+31R	13.5+27R	14.7+24R	15.9+22R	17.1+20R	19.4+17R	21.6+15R
	TSW @ 24"	q	819	773	670	652	582	576	524	483	453
		F	8.4+41R	7.9+35R	8.0+31R	7.6+27R	7.7+24R	7.3+22R	7.4+20R	7.2+17R	6.9+15R
	TSW @ 12"	q	1096	1011	948	899	860	828	802	761	730
		F	6.7+41R	6.4+35R	6.2+31R	6.0+27R	5.8+24R	5.6+22R	5.5+20R	5.2+17R	5.0+15R
16	BP @ 24"	q	918	812	712	654	590	554	509	453	411
		F	7.5+21R	8.6+18R	9.9+16R	11.0+14R	12.5+12R	13.6+11R	15.1+10R	17.9+9R	20.7+8R
	BP @ 12"	q	1000	884	797	731	678	636	601	547	508
		F	7.0+21R	8.0+18R	9.0+16R	10.0+14R	11.0+12R	12.0+11R	13.0+10R	15.0+9R	17.0+8R
	TSW @ 24"	q	1197	1137	1002	982	891	888	821	774	742
		F	6.1+21R	5.8+18R	5.9+16R	5.7+14R	5.8+12R	5.6+11R	5.7+10R	5.5+9R	5.4+8R
	TSW @ 12"	q	1558	1453	1378	1322	1280	1248	1223	1190	1170
		F	5.0+21R	4.8+18R	4.7+16R	4.6+14R	4.5+12R	4.4+11R	4.3+10R	4.1+9R	3.9+8R

¹ Footnotes 2–6 of Table 24 apply to this table.

TABLE 29 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR 9/16" (SHALLOW) VERCOR DECK PANELS ATTACHED TO SUPPORTS WITH #12 SCREWS AND SIDELAPS FASTENED WITH #10 SCREWS^{1,2,3,4,5,6,7}

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)							
		1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	
36/4 ATTACHMENT PATTERN									
26	(none)	q	203	167	141	126	109		
		F	-20.1+489R	-7.8+324R	-0.6+241R	4.7+191R	8.9+157R	-	
	Screw @ 12"	q	223	211	189	188	171	174	161
		F	-21.7+490R	-11.4+326R	-5.3+244R	-2.4+195R	0.4+162R	1.7+139R	3.4+122R
	Screw @ 6"	q	234	223	215	210	205	203	200
		F	-22.5+490R	-12.0+327R	-6.8+245R	-3.6+196R	-1.5+163R	0.1+140R	1.2+122R
	Screw @ 4"	q	241	237	229	229	224	225	221
		F	-22.9+491R	-12.8+327R	-7.5+245R	-4.5+196R	-2.3+163R	-0.9+140R	0.3+123R
24	(none)	q	272	223	188	168	145		
		F	-6.6+236R	0.2+156R	4.6+116R	8.0+91R	10.9+74R	-	
	Screw @ 12"	q	300	287	259	260	238	242	225
		F	-8.0+237R	-2.9+158R	0.5+118R	1.9+94R	3.5+78R	4.1+67R	5.2+59R
	Screw @ 6"	q	316	303	294	289	284	281	277
		F	-8.6+238R	-3.4+158R	-0.8+119R	0.8+95R	1.9+79R	2.7+68R	3.3+59R
	Screw @ 4"	q	325	320	312	312	307	308	303
		F	-9+238R	-4.1+159R	-1.4+119R	0+95R	1.2+79R	1.8+68R	2.5+59R
22	(none)	q	340	279	235	210	182		
		F	-1.6+135R	3+88R	6.1+65R	8.6+50R	10.9+40R	-	
	Screw @ 12"	q	379	365	331	333	307	312	292
		F	-2.8+135R	0.2+90R	2.4+67R	3.2+54R	4.3+44R	4.6+38R	5.4+33R
	Screw @ 6"	q	398	384	375	369	363	360	356
		F	-3.4+136R	-0.3+90R	1.3+68R	2.2+54R	2.9+45R	3.3+39R	3.7+34R
	Screw @ 4"	q	409	405	396	396	390	391	387
		F	-3.7+136R	-0.9+91R	0.7+68R	1.5+54R	2.2+45R	2.6+39R	3.0+34R
36/7 ATTACHMENT PATTERN									
26	(none)	q	344	264	214	188	160		
		F	-2.2+175R	2.9+116R	6.1+85R	8.7+67R	10.9+55R	-	
	Screw @ 12"	q	383	340	286	279	244	245	220
		F	-3.1+176R	0.9+117R	3.6+87R	4.7+70R	6.1+58R	6.6+49R	7.6+43R
	Screw @ 6"	q	411	368	341	326	309	302	291
		F	-3.5+176R	0.5+117R	2.5+88R	3.8+70R	4.7+58R	5.3+50R	5.8+44R
	Screw @ 4"	q	432	410	381	377	357	358	344
		F	-3.8+176R	-0.1+117R	2.0+88R	3.1+70R	4+58R	4.5+50R	5.0+44R
24	(none)	q	459	352	286	251	213		
		F	1.5+84R	4.6+55R	6.7+40R	8.5+31R	10.2+25R	-	
	Screw @ 12"	q	518	467	395	389	341	344	310
		F	0.8+85R	2.9+56R	4.5+42R	5.1+33R	6.0+28R	6.2+24R	6.9+20R
	Screw @ 6"	q	559	507	473	455	435	426	413
		F	0.4+85R	2.5+57R	3.6+42R	4.3+34R	4.8+28R	5.1+24R	5.4+21R
	Screw @ 4"	q	588	563	528	525	501	503	486
		F	0.1+85R	2.0+57R	3.1+43R	3.7+34R	4.2+28R	4.4+24R	4.7+21R
22	(none)	q	575	441	357	313	267		
		F	2.7+48R	4.8+31R	6.5+22R	7.9+17R	9.2+13R	-	
	Screw @ 12"	q	655	597	508	503	443	449	405
		F	2.0+48R	3.3+32R	4.5+24R	4.8+19R	5.6+15R	5.7+13R	6.2+11R
	Screw @ 6"	q	709	649	611	590	567	556	541
		F	1.7+48R	3.0+32R	3.7+24R	4.1+19R	4.4+16R	4.7+14R	4.8+12R
	Screw @ 4"	q	746	719	679	677	650	652	633
		F	1.4+49R	2.5+32R	3.2+24R	3.6+19R	3.9+16R	4.0+14R	4.2+12R
36/9 ATTACHMENT PATTERN									
26	(none)	q	479	373	305	268	229		
		F	0.3+119R	3.9+79R	6.1+58R	7.9+46R	9.4+37R	-	
	Screw @ 12"	q	515	448	376	360	313	309	277
		F	-0.1+119R	2.7+79R	4.7+59R	5.6+47R	6.6+39R	7+33R	7.8+29R
	Screw @ 6"	q	544	478	434	410	383	371	354
		F	-0.4+120R	2.4+80R	3.9+59R	4.9+47R	5.5+39R	6.0+34R	6.4+29R
	Screw @ 4"	q	567	524	479	469	439	437	416
		F	-0.6+120R	2.0+80R	3.5+60R	4.3+48R	5.0+40R	5.3+34R	5.7+30R

TABLE 29 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F , FOR 9/16" (SHALLOW) VERCOR DECK PANELS ATTACHED TO SUPPORTS WITH #12 SCREWS AND SIDELAPS FASTENED WITH #10 SCREWS^{1,2,3,4,5,6,7} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft.-in.)							
		1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	
36/9 ATTACHMENT PATTERN (Cont'd.)									
24	(none)	q	640	498	407	358	306	—	—
		F	2.4+57R	4.5+38R	6+27R	7.3+21R	8.5+17R	—	—
	Screw @ 12"	q	695	611	515	497	434	431	387
		F	2.1+58R	3.6+38R	4.8+28R	5.3+23R	6.0+18R	6.2+16R	6.8+14R
	Screw @ 6"	q	736	654	600	570	536	521	500
		F	1.8+58R	3.3+38R	4.2+29R	4.7+23R	5.1+19R	5.4+16R	5.6+14R
	Screw @ 4"	q	769	720	664	653	616	614	588
		F	1.6+58R	3.0+39R	3.8+29R	4.2+23R	4.6+19R	4.8+16R	5.0+14R
22	(none)	q	800	624	509	448	382	—	—
		F	2.9+33R	4.4+21R	5.6+15R	6.6+11R	7.5+9R	—	—
	Screw @ 12"	q	876	778	659	639	560	559	503
		F	2.6+33R	3.6+22R	4.4+16R	4.8+13R	5.4+10R	5.5+9R	6.0+7R
	Screw @ 6"	q	932	835	771	736	697	679	654
		F	2.4+33R	3.3+22R	3.9+16R	4.3+13R	4.5+11R	4.7+9R	4.9+8R
	Screw @ 4"	q	974	920	854	844	800	799	768
		F	2.2+33R	3.0+22R	3.6+16R	3.8+13R	4.1+11R	4.2+9R	4.4+8R
36/13 ATTACHMENT PATTERN									
26	(none)	q	606	449	358	312	264	—	—
		F	6.9+7R	7.9+4R	8.8+2R	9.7+1R	10.6+0R	—	—
	Screw @ 12"	q	660	547	443	419	358	351	312
		F	6.6+7R	7.1+4R	7.8+3R	8+2R	8.5+1R	8.7+1R	9.1+1R
	Screw @ 6"	q	706	589	519	482	443	426	402
		F	6.4+7R	6.9+4R	7.2+3R	7.5+2R	7.7+2R	7.8+2R	8.0+1R
	Screw @ 4"	q	746	662	584	566	518	513	482
		F	6.2+7R	6.5+5R	6.9+3R	7.0+3R	7.2+2R	7.2+2R	7.4+2R
24	(none)	q	810	600	478	417	352	—	—
		F	5.5+3R	6.3+1R	7.0+0R	7.8+0R	8.5-1R	—	—
	Screw @ 12"	q	892	748	608	579	496	490	436
		F	5.2+3R	5.6+2R	6.1+1R	6.3+1R	6.8+0R	6.9+0R	7.3+0R
	Screw @ 6"	q	960	811	721	674	624	602	571
		F	5.0+3R	5.4+2R	5.7+1R	5.9+1R	6.0+1R	6.2+1R	6.3+0R
	Screw @ 4"	q	1017	917	817	796	735	730	689
		F	4.9+3R	5.1+2R	5.4+1R	5.5+1R	5.6+1R	5.6+1R	5.8+1R
22	(none)	q	1013	750	598	521	440	—	—
		F	4.6+1R	5.3+0R	5.9+0R	6.6-1R	7.3-1R	—	—
	Screw @ 12"	q	1126	955	779	747	641	637	566
		F	4.3+2R	4.7+1R	5.1+0R	5.3+0R	5.7+0R	5.8+0R	6.1+0R
	Screw @ 6"	q	1219	1040	933	876	816	789	751
		F	4.2+2R	4.5+1R	4.7+1R	4.9+0R	5.0+0R	5.1+0R	5.2+0R
	Screw @ 4"	q	1295	1181	1060	1038	963	960	909
		F	4.0+2R	4.2+1R	4.4+1R	4.5+1R	4.6+0R	4.7+0R	4.8+0R

¹ Notes 2-4 of Table 21 apply to this table.

² Fasten sidelaps of 9/16" (Shallow) VERCOR deck with #10 self-drilling, self-tapping screws spaced as indicated between supports. 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.

³ Spacing of screws at shear collectors parallel to the corrugations of the deck should be based on the shear to be transferred, but shall be no greater than the screw spacing at the sidelaps. The following table lists the allowable screw connection shear strength, in lbs., for a #12 screw.

DECK GAGE	SUPPORT THICKNESS & STRENGTH, F_y / F_u , (ksi)					
	33 mil (0.0346 in.)		43 mil (0.0451 in.)		≥ 54 mil (0.0566 in.)	
	33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65
26	205	216	216	216	216	216
24	218	277	285	288	288	288
22	200	281	308	360	360	360

The allowable shear strengths of the individual fasteners, as published by their manufacturer, must meet or exceed the allowable screw connection shear strengths listed above.

ADDITIONAL FOOTNOTES FOR TABLE 29

- ⁴ R is the vertical load span (L_v) of the deck divided by the length of the deck sheet (L_s): $R = L_v / L_s$.
- ⁵ Interpolation of diaphragm strength between sidelap spacings and adjacent spans is permissible. For interpolated lengths, use diaphragm flexibility factor for the closest span length.
- ⁶ Diaphragm values shown are for minimum 54 mil (16 gage) cold-formed steel supports with $F_y = 33$ ksi & $F_u = 45$ ksi. Modify tabulated q and F values based on actual substrate strength and thickness as follows:
Allowable Diaphragm Strength = $q \cdot R_q$
Flexibility Factor = $F \cdot R_F$

DECK GAGE		SUPPORT THICKNESS & STRENGTH, F_y / F_u (ksi)					
		33 mil (0.0346 in.)		43 mil (0.0451 in.)		≥ 54 mil (0.0566 in.)	
		33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65
26	R_q	0.95	1.00	1.00	1.00	1.00	1.00
	R_F	1.23	1.00	1.00	1.00	1.00	1.00
24	R_q	0.76	0.96	0.99	1.00	1.00	1.00
	R_F	1.47	1.35	1.25	1.00	1.00	1.00
22	R_q	0.56	0.78	0.85	1.00	1.00	1.00
	R_F	1.64	1.53	1.33	1.00	1.00	1.00

- ⁷ Fasteners subjected to tension loads must be evaluated based on allowable tension strength determined in accordance with Section E4 of AISI S100. The following table lists the allowable screw connection tension strength, in lbs., for a #12 screw with a minimum washer diameter of 5/16-in. Values are the lesser of the allowable pullover (deck pulling over the head of the screw) and pullout (screw pulling out of the support member) for a given combination of deck gage and support member strength and thickness.

DECK GAGE		SUPPORT THICKNESS & STRENGTH, F_y / F_u (ksi)									
		33 mil (0.0346 in.)		43 mil (0.0451 in.)		54 mil (0.0566 in.)		68 mil (0.0713 in.)		97 mil (0.1017 in.)	
		33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65	33 / 45	50 / 65
26		95	138	124	173	156	173	173	173	173	173
24		95	138	124	179	156	225	196	232	232	232
22		95	138	124	179	156	225	196	284	280	290

The allowable tension strengths of the individual fasteners, as published by their manufacturer, must meet or exceed the allowable screw connection tension strengths listed above.

TABLE 30 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR INVERTED AND "NORMAL" 1-5/16" (DEEP) VERCOR DECK PANELS ATTACHED WITH TEKS SCREWS^{1,2,3,4,5,6}

DECK GAGE	SIDELAP ATTACHMENT	SPAN (ft-in.)							
		1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	
		36/4 (INVERTED) OR 36/5 (NORMAL) ATTACHMENT PATTERN							
26	TEKS @ 24"	q	100	103	105	106	107	107	108
		F	19.4+265.9R	16.6+212.7R	14.9+177.3R	13.6+151.9R	12.7+132.9R	12.0+118.2R	11.5+106.4R
	TEKS @ 18"	q	139	141	143	144	145	146	146
		F	15.8+265.9R	13.9+212.7R	12.6+177.3R	11.7+151.9R	11.1+132.9R	10.6+118.2R	10.2+106.4R
	TEKS @ 12"	q	215	218	219	220	221	222	223
		F	12.5+265.9R	11.2+212.7R	10.4+177.3R	9.9+151.9R	9.5+132.9R	9.1+118.2R	8.9+106.4R
24	TEKS @ 24"	q	147	147	147	147	147	147	147
		F	13.9+178.9R	12.2+143.1R	11.0+119.2R	10.2+102.2R	9.6+89.4R	9.1+79.5R	8.8+71.5R
	TEKS @ 18"	q	197	196	196	196	196	196	196
		F	11.6+178.9R	10.3+143.1R	9.5+119.2R	8.9+102.2R	8.4+89.4R	8.1+79.5R	7.8+71.5R
	TEKS @ 12"	q	296	296	296	296	296	296	296
		F	9.4+178.9R	8.5+143.1R	8.0+119.2R	7.6+102.2R	7.2+89.4R	7.0+79.5R	6.8+71.5R
22	TEKS @ 24"	q	201	197	194	192	190	189	188
		F	10.6+130.1R	9.5+104.1R	8.7+86.7R	8.1+74.4R	7.7+65.1R	7.3+57.8R	7.0+52.0R
	TEKS @ 18"	q	263	258	255	253	252	251	250
		F	9.0+130.1R	8.2+104.1R	7.6+86.7R	7.1+74.4R	6.8+65.1R	6.5+57.8R	6.3+52.0R
	TEKS @ 12"	q	386	382	379	376	375	374	373
		F	7.4+130.1R	6.8+104.1R	6.4+86.7R	6.1+74.4R	5.9+65.1R	5.7+57.8R	5.5+52.0R
20	TEKS @ 24"	q	263	253	246	241	237	234	232
		F	8.5+100.1R	7.7+80.1R	7.1+66.7R	6.7+57.2R	6.4+50.1R	6.1+44.5R	5.9+40.0R
	TEKS @ 18"	q	336	326	319	314	310	308	305
		F	7.3+100.1R	6.7+80.1R	6.2+66.7R	5.9+57.2R	5.6+50.1R	5.4+44.5R	5.3+40.0R
	TEKS @ 12"	q	483	472	466	461	457	454	452
		F	6.1+100.1R	5.7+80.1R	5.3+66.7R	5.1+57.2R	4.9+50.1R	4.8+44.5R	4.6+40.0R

See Page 83 for footnotes.

(continued)

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TABLE 30 - ALLOWABLE DIAPHRAGM SHEAR VALUES, q (plf), AND FLEXIBILITY FACTORS, F, FOR INVERTED AND "NORMAL" 1-5/16" (DEEP) VERCOR DECK PANELS ATTACHED WITH TEKS SCREWS^{1,2,3,4,5,6} (Cont'd.)

DECK GAGE	SIDELAP ATTACH- MENT	SPAN (ft-in.)							
		1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	
36/8 (INVERTED) OR 36/9 (NORMAL) ATTACHMENT PATTERN									
26	TEKS @ 24"	q	118	117	116	115	115	115	114
		F	17.6+33.4R	15.6+26.7R	14.2+22.3R	13.2+19.1R	12.4+16.7R	11.9+14.9R	11.4+13.4R
	TEKS @ 18"	q	156	155	154	154	153	153	153
		F	14.9+33.4R	13.3+26.7R	12.3+22.3R	11.5+19.1R	10.9+16.7R	10.5+14.9R	10.1+13.4R
	TEKS @ 12"	q	233	231	231	230	230	229	229
		F	12.1+33.4R	11.0+26.7R	10.3+22.3R	9.8+19.1R	9.4+16.7R	9.1+14.9R	8.9+13.4R
24	TEKS @ 24"	q	176	169	165	162	160	158	157
		F	12.6+22.5R	11.4+18.0R	10.5+15.0R	9.9+12.8R	9.4+11.2R	9.0+10.0R	8.7+9.0R
	TEKS @ 18"	q	226	219	215	212	210	208	206
		F	10.9+22.5R	9.9+18.0R	9.2+15.0R	8.7+12.8R	8.3+11.2R	8.0+10.0R	7.8+9.0R
	TEKS @ 12"	q	325	319	314	311	309	307	306
		F	9.1+22.5R	8.3+18.0R	7.9+15.0R	7.5+12.8R	7.2+11.2R	7.0+10.0R	6.8+9.0R
22	TEKS @ 24"	q	245	231	221	215	210	206	203
		F	9.5+16.4R	8.8+13.1R	8.2+10.9R	7.8+9.3R	7.5+8.2R	7.2+7.3R	7.0+6.5R
	TEKS @ 18"	q	306	292	283	276	271	267	264
		F	8.4+16.4R	7.8+13.1R	7.3+10.9R	7.0+9.3R	6.7+8.2R	6.4+7.3R	6.3+6.5R
	TEKS @ 12"	q	429	415	406	399	394	390	387
		F	7.2+16.4R	6.7+13.1R	6.3+10.9R	6.0+9.3R	5.8+8.2R	5.7+7.3R	5.5+6.5R
20	TEKS @ 24"	q	323	299	283	272	263	257	252
		F	7.6+12.6R	7.1+10.1R	6.7+8.4R	6.4+7.2R	6.2+6.3R	6.0+5.6R	5.8+5.0R
	TEKS @ 18"	q	397	372	356	345	337	330	325
		F	6.8+12.6R	6.4+10.1R	6.0+8.4R	5.8+7.2R	5.6+6.3R	5.4+5.6R	5.3+5.0R
	TEKS @ 12"	q	543	519	503	492	483	477	472
		F	5.9+12.6R	5.5+10.1R	5.3+8.4R	5.0+7.2R	4.9+6.3R	4.8+5.6R	4.7+5.0R

¹ R is the vertical load span (L_v) of the deck divided by the length of the deck sheet (L_s): $R = L_v / L_s$.

² The spacing of TEKS Screws, a_s , to chords, struts, and shear transfer elements parallel to panel flutes is equal to: $a_s = 11,600 t / q'_s$
Where: a_s = Center to center spacing of screws, in feet.

t = Base metal thickness of deck sheet, in inches.

q'_s = Actual shear on diaphragm, in pounds per lineal foot.

³ Screws for deck-to-deck side seam (sidelap) fastening must be No. 12-14 X 3/4" TEKS 1. Screws for deck-to-support fastening must be one of the following:

SUPPORT THICKNESS	FASTENER DESCRIPTION
54 mil (0.0566") to 3/16"	#12-14 X 3/4" TEKS 3
1/8" to 1/4"	#12-24 X 7/8" TEKS 4
1/8" to 1/2"	#12-24 X 1-1/4" TEKS 5

See ICC-ES Evaluation Report ESR-1976 for additional details.

⁴ The flexibility limitations shown in Table 7 may be used as a guide in lieu of rational analysis of the anticipated deflections.

⁵ 8 or 4 screws are used for Inverted 1-5/16" (Deep) VERCOR and 9 or 5 screws are used for "Normal" 1-5/16" (Deep) VERCOR.

⁶ Fasteners subjected to wind uplift (suction loads) must be evaluated based on the allowable tension loads shown in the chart below. The tension loads are the lesser value of the allowable pullover (deck pulling over the head of the screw) or pullout (screw pulling out of the support member) loads for a given combination of deck gage and support member thickness. The allowable tension loads assume supports with minimum yield strength, $F_y = 33$ ksi, and tensile strength, $F_u = 45$ ksi.

DECK GAGE	SUPPORT THICKNESS						
	54 mil (0.0566 in.)	68 mil (0.0713 in.)	97 mil (0.1017 in.)	118 mil (0.0566 in.)	1/8" (0.125 in.)	3/16" (0.1875 in.)	≥ 1/4" (0.25 in.)
26	155	195	280	330	330	330	330
24	155	195	280	340	340	430	430
22	155	195	280	340	340	515	530
20	155	195	280	340	340	515	630

Allowable tension loads in the shaded area to the left of the heavy line may be multiplied by 1.44 for supports with minimum yield strength, $F_y = 50$ ksi, and tensile strength, $F_u = 65$ ksi.