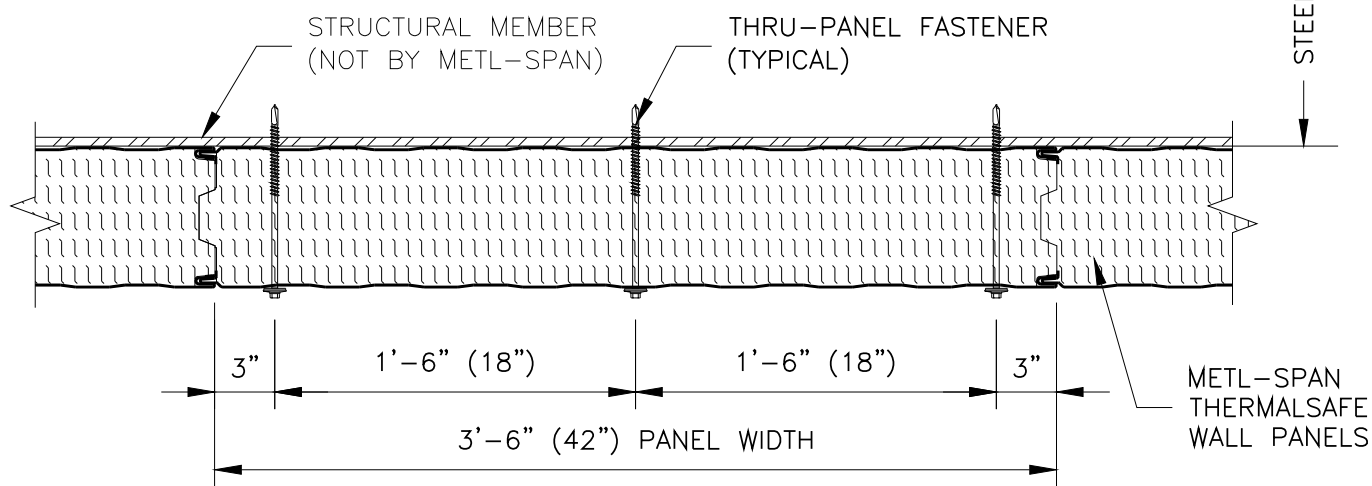


**Metl-Span ThermalSafe® Through Fastened Wall Panels**  
**24 Ga. Exterior / 24 Ga. Interior Facings**  
**Allowable Loads<sup>1,2,6,10</sup> (psf) for Two or More Equal Spans**

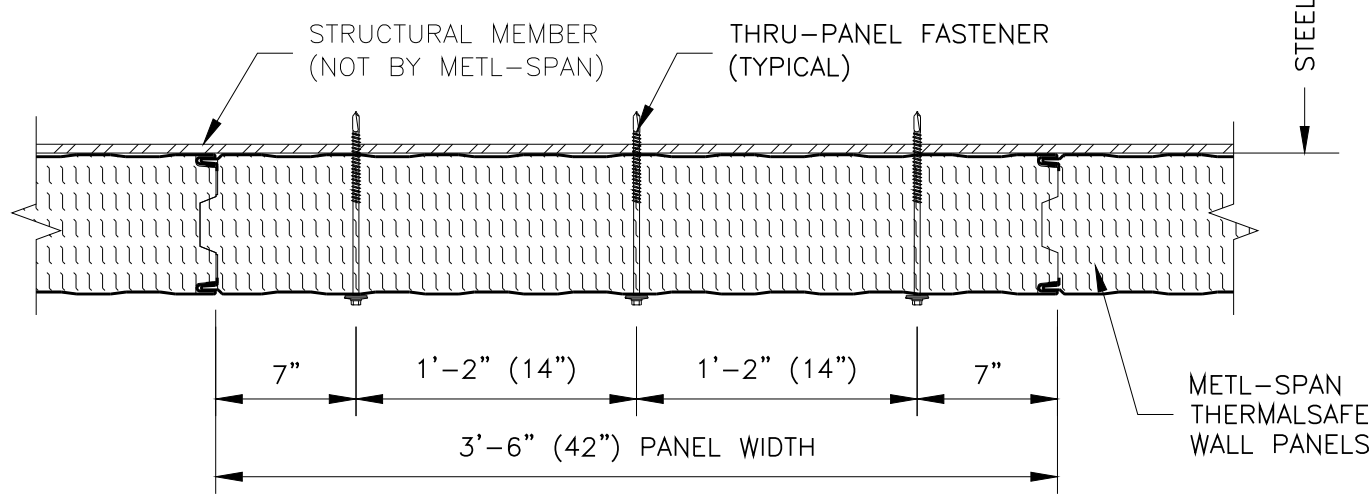
TS Panel	Design Criteria <sup>5,7</sup>			Allowable Load (psf)											
				Panel Span (ft)											
				5	6	7	8	9	10	11	12	13	14	15	16
4" Thick	Bending & Shear <sup>3,4</sup>			72.0	59.1	50.0	43.3	38.1	34.1	30.8	28.1	25.7	23.8	22.0	20.6
	Deflection (L/240) <sup>3,4</sup>			119.4	96.3	79.9	67.5	57.9	50.3	44.1	38.8	34.3	30.4	27.1	24.3
	Min Support Thickness	14 ga	TSFP1 <sup>8</sup>	72.0	59.1	50.0	43.3	38.1	34.1	30.8	28.1	25.7	23.8	22.0	20.6
			TSFP2 <sup>9</sup>	72.0	59.1	50.0	43.3	38.1	34.1	30.8	28.1	25.7	23.8	22.0	20.6
		16 ga	TSFP1 <sup>8</sup>	60.7	49.6	41.8	36.1	31.6	28.1	25.3	23.0	21.1	19.5	18.1	16.9
TSFP2 <sup>9</sup>			72.0	59.1	50.0	43.3	38.1	34.1	30.8	28.1	25.7	23.8	22.0	20.6	
5" Thick	Bending & Shear <sup>3,4</sup>			85.7	70.2	59.4	51.4	45.2	40.4	36.5	33.3	30.6	28.2	26.2	24.4
	Deflection (L/240) <sup>3,4</sup>			144.7	117.4	97.9	83.2	71.8	62.6	55.2	49.0	43.8	39.3	35.3	31.8
	Min Support Thickness	14 ga	TSFP1 <sup>8</sup>	83.9	68.8	58.0	50.0	43.9	39.0	35.1	31.9	29.2	26.9	25.0	23.3
			TSFP2 <sup>9</sup>	85.7	70.2	59.4	51.4	45.2	40.4	36.5	33.3	30.6	28.2	26.2	24.4
		16 ga	TSFP1 <sup>8</sup>	61.4	50.3	42.5	36.6	32.1	28.6	25.7	23.3	21.4	19.7	18.3	17.0
TSFP2 <sup>9</sup>			81.9	67.1	56.6	48.8	42.8	38.1	34.3	31.1	28.5	26.3	24.4	22.7	
6" Thick	Bending & Shear <sup>3,4</sup>			97.3	79.8	67.4	58.3	51.3	45.8	41.3	37.7	34.6	32.0	29.7	27.7
	Deflection (L/240) <sup>3,4</sup>			166.3	135.5	113.4	96.8	83.9	73.5	65.0	58.0	52.1	47.0	42.6	38.7
	Min Support Thickness	14 ga	TSFP1 <sup>8</sup>	88.0	72.2	61.0	52.7	46.2	41.1	37.0	33.6	30.7	28.3	26.2	24.4
			TSFP2 <sup>9</sup>	97.3	79.8	67.4	58.3	51.3	45.8	41.3	37.7	34.6	32.0	29.7	27.7
		16 ga	TSFP1 <sup>8</sup>	62.0	50.9	43.0	37.1	32.6	29.0	26.0	23.6	21.6	19.9	18.5	17.2
TSFP2 <sup>9</sup>			82.7	67.9	57.3	49.5	43.4	38.6	34.7	31.5	28.9	26.6	24.6	23.0	
7" Thick	Bending & Shear <sup>3,4</sup>			114.5	93.9	79.4	68.6	60.3	53.8	48.6	44.3	40.6	37.6	34.9	32.6
	Deflection (L/240) <sup>3,4</sup>			195.9	160.0	134.3	114.9	99.7	87.6	77.7	69.5	62.5	56.6	51.5	47.0
	Min Support Thickness	14 ga	TSFP1 <sup>8</sup>	91.7	75.4	63.8	55.1	48.3	43.0	38.7	35.1	32.1	29.6	27.4	25.5
			TSFP2 <sup>9</sup>	114.5	93.9	79.4	68.6	60.3	53.8	48.6	44.3	40.6	37.6	34.9	32.6
		16 ga	TSFP1 <sup>8</sup>	62.3	51.2	43.3	37.4	32.8	29.2	26.3	23.8	21.8	20.1	18.6	17.3
TSFP2 <sup>9</sup>			83.1	68.3	57.8	49.9	43.8	39.0	35.0	31.8	29.1	26.8	24.8	23.1	
8" Thick	Bending & Shear <sup>3,4</sup>			131.7	108.1	91.4	79.0	69.5	62.0	55.9	50.9	46.7	43.2	40.1	37.5
	Deflection (L/240) <sup>3,4</sup>			225.5	184.6	155.2	133.0	115.7	101.9	90.5	81.1	73.1	66.3	60.4	55.3
	Min Support Thickness	14 ga	TSFP1 <sup>8</sup>	92.1	75.8	64.2	55.4	48.7	43.3	39.0	35.4	32.4	29.8	27.6	25.7
			TSFP2 <sup>9</sup>	119.8	98.6	83.5	72.1	63.3	56.4	50.7	46.0	42.1	38.8	35.9	33.5
		16 ga	TSFP1 <sup>8</sup>	62.6	51.5	43.6	37.7	33.1	29.4	26.5	24.0	22.0	20.2	18.7	17.5
TSFP2 <sup>9</sup>			83.4	68.7	58.1	50.2	44.1	39.2	35.3	32.0	29.3	27.0	25.0	23.3	

**Notes:**

- The Load Span Table above is based on Allowable Stress Design (ASD). For loads calculated based on ASCE 7-10 (LRFD), please refer to section 2.4.1 of ASCE 7-10 for the applicable load combinations using Allowable Stress Design.
- Based on TS panel with 24 ga. exterior & interior face (min Fy = 33 ksi) for 2 or more spans condition.
- Allowable positive or inward load is the lowest value of the panel bending and shear strength or deflection limit.
- Allowable suction or outward load is the lowest value of the panel bending and shear strength, deflection limit and connection strength for each fastener pattern. The numbers have been reduced to reflect the lowest value.
- Loads based on panel stress, deflection and connection design criteria are derived from ASTM E-72 testing.
- Allowable loads are calculated with a factor of safety of 2.5 for bending, 3.0 for shear and 2.0 for connection, and deflection limitation of L/240.
- The through fasteners are as follows: Panels fastened to min. 16 ga. steel supports with ¼"-14 Type 3 or Type 5 SDS, ¼"-14 Self-Tapping, ¼"-20 Type 5 SDS, or ¼"-28 Type 5 SDS with nominal 5/8" diameter neoprene bonded washers. Fastener shall be of sufficient length to penetrate through the support a minimum of 3 full pitches of thread. Other than noted, fastener selection will be based on fastener pullout capacity from support steel members:
- TSFP1 (3 Through Fasteners): End Supports (3"-18"-18"-3") & Intermediate (7"-14"-14"-7").
- TSFP2 (4 Through Fasteners): End Supports (3"-12"-12"-12"-3") & Intermediate (5¼"-10½"-10½"-10½"-5¼").
- The structural capacity of the girts are not considered and must be examined independently.



END CONDITION

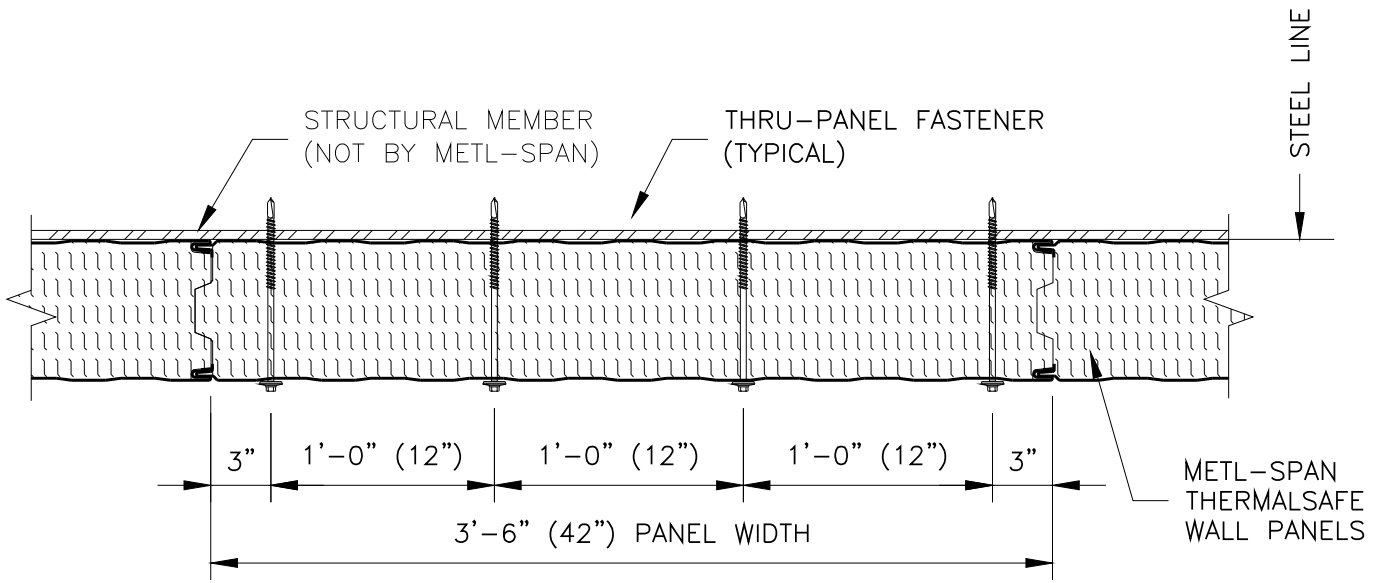


INTERMEDIATE CONDITION

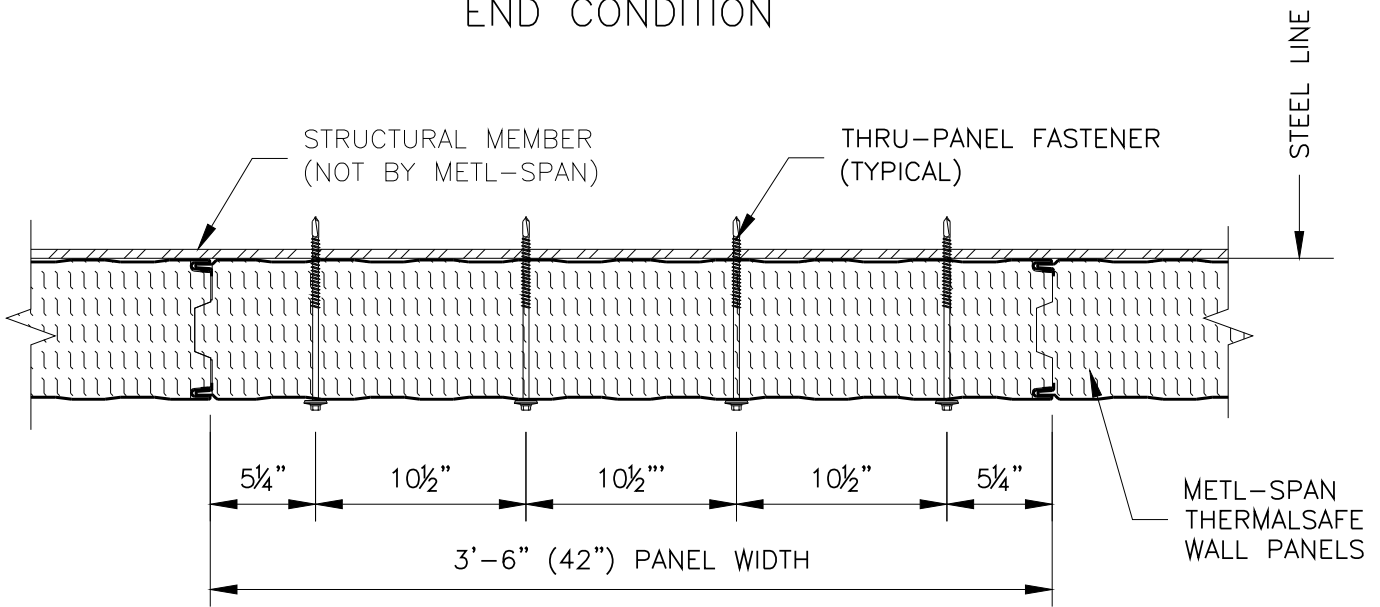
VERTICAL PANEL – THRU PANEL FASTENER PATTERNS  
TSFP1

NOTE: FASTENER PATTERN TO BE DETERMINED PER SPECIFIC PROJECT DESIGN REQUIREMENTS.

<p>COMMERCIAL AND INDUSTRIAL</p>	<p>FASTENER PATTERNS TSFP1 THERMALS SAFE PANEL</p>	<p>TSW03010 DATE: 01-12-2016</p>
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END CONDITION



INTERMEDIATE CONDITION

VERTICAL PANEL – THRU PANEL FASTENER PATTERNS  
TSFP2

NOTE: FASTENER PATTERN TO BE DETERMINED PER SPECIFIC PROJECT DESIGN REQUIREMENTS.

COMMERCIAL AND  
INDUSTRIAL

FASTENER PATTERNS TSFP2  
THERMSAFE PANEL

TSW03011  
DATE: 01-12-2016