

Metl-Span ThermalSafe® NEF (Non-Exposed Fastener) Wall Panels

26 Ga. Exterior / 26 ga. Interior Facings

Allowable Loads^{1,2,6,9} (psf) for Two or More Equal Spans

TS Panel	Design Criteria ^{5,7}	Allowable Load (psf)											
		Panel Span (ft)											
		5	6	7	8	9	10	11	12	13	14	15	16
4" Thick	Bending & Shear ^{3,4}	71.1	58.3	49.4	42.8	37.8	33.8	30.5	27.7	25.4	23.5	21.8	20.4
	Deflection (L/240) ^{3,4}	117.2	94.0	77.5	65.2	55.6	48.0	41.6	36.3	31.8	28.0	24.7	21.9
	Connection TSFP3 ⁸	39.3	32.1	27.1	23.3	20.5	18.2	16.4	14.9	13.7	12.6	11.7	11.0
5" Thick	Bending & Shear ^{3,4}	85.3	69.9	59.2	51.2	45.2	40.4	36.5	33.3	30.5	28.1	26.1	24.4
	Deflection (L/240) ^{3,4}	142.5	115.1	95.4	80.7	69.3	60.2	52.8	46.6	41.2	36.6	32.6	29.2
	Connection TSFP3 ⁸	39.9	32.6	27.5	23.7	20.8	18.5	16.6	15.1	13.9	12.8	11.9	11.1
6" Thick	Bending & Shear ^{3,4}	96.4	79.0	66.8	57.8	50.9	45.5	41.1	37.5	34.4	31.8	29.5	27.5
	Deflection (L/240) ^{3,4}	164.2	133.2	111.0	94.3	81.4	71.0	62.6	55.6	49.7	44.5	39.9	36.0
	Connection TSFP3 ⁸	40.3	33.0	27.8	24.0	21.1	18.7	16.8	15.3	14.0	12.9	12.0	11.2
7" Thick	Bending & Shear ^{3,4}	113.4	93.0	78.6	68.0	59.8	53.4	48.2	44.0	40.4	37.4	34.7	32.3
	Deflection (L/240) ^{3,4}	193.6	157.6	131.7	112.2	97.0	84.9	75.0	66.8	59.9	54.0	48.7	44.1
	Connection TSFP3 ⁸	40.5	33.3	28.1	24.2	21.2	18.9	17.0	15.4	14.1	13.0	12.1	11.2
8" Thick	Bending & Shear ^{3,4}	130.5	107.0	90.5	78.2	68.8	61.4	55.4	50.5	46.4	42.9	39.9	37.2
	Deflection (L/240) ^{3,4}	223.2	182.0	152.4	130.1	112.8	98.9	87.6	78.2	70.3	63.5	57.6	52.3
	Connection TSFP3 ⁸	40.7	33.5	28.3	24.4	21.4	19.0	17.1	15.5	14.2	13.1	12.1	11.3

Notes:

1. 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.
2. Based on TS panel with 26 ga. exterior & interior face (min Fy = 33 ksi) for 2 or more spans condition.
3. Allowable positive or inward load is the lowest value of the panel bending and shear strength or deflection limit.
4. 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.
5. Loads based on panel stress, deflection and connection design criteria are derived from ASTM E-72 testing.
6. 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.
7. 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:
8. TSFP3: 3 Through Fasteners at End Supports (3"-18"-18"-3"). Exposed fastener heads will be covered by trim. 4 structural blind rivets specified by Metl-Span at Intermediate (5¼"-10½"-10½"-10½"-5¼"). The shape of the intermediate support member must accommodate back fastening.
9. The structural capacity of the girts are not considered and must be examined independently.

Metl-Span ThermalSafe® NEF (Non-Exposed Fastener) Wall Panels
24 Ga. Exterior / 26 ga. Interior Facings
Allowable Loads^{1,2,6,9} (psf) for Two or More Equal Spans

TS Panel	Design Criteria ^{5,7}	Allowable Load (psf)											
		Panel Span (ft)											
		5	6	7	8	9	10	11	12	13	14	15	16
4" Thick	Bending & Shear ^{3,4}	71.7	58.8	49.8	43.1	38.0	34.0	30.7	28.0	25.6	23.7	22.0	20.5
	Deflection (L/240) ^{3,4}	118.2	95.1	78.6	66.3	56.7	49.1	42.9	37.5	33.0	29.1	25.9	23.0
	Connection TSFP3 ⁸	39.5	32.3	27.2	23.5	20.6	18.3	16.5	15.0	13.8	12.7	11.8	11.0
5" Thick	Bending & Shear ^{3,4}	85.3	69.9	59.1	51.1	45.1	40.3	36.4	33.2	30.5	28.1	26.1	24.3
	Deflection (L/240) ^{3,4}	143.6	116.2	96.6	81.9	70.5	61.4	54.0	47.8	42.5	37.9	33.9	30.4
	Connection TSFP3 ⁸	40.1	32.8	27.7	23.8	20.9	18.6	16.7	15.2	13.9	12.8	11.9	11.1
6" Thick	Bending & Shear ^{3,4}	96.8	79.4	67.1	58.0	51.1	45.6	41.2	37.6	34.5	31.9	29.6	27.6
	Deflection (L/240) ^{3,4}	165.2	134.3	112.2	95.5	82.6	72.2	63.8	56.8	50.8	45.8	41.2	37.3
	Connection TSFP3 ⁸	40.5	33.2	28.0	24.2	21.2	18.9	17.0	15.4	14.1	13.0	12.0	11.2
7" Thick	Bending & Shear ^{3,4}	113.9	93.4	78.9	68.2	60.1	53.6	48.4	44.1	40.5	37.5	34.8	32.5
	Deflection (L/240) ^{3,4}	194.7	158.8	132.9	113.5	98.3	86.2	76.3	68.1	61.2	55.3	50.1	45.5
	Connection TSFP3 ⁸	40.7	33.4	28.2	24.4	21.4	19.0	17.1	15.5	14.2	13.1	12.1	11.3
8" Thick	Bending & Shear ^{3,4}	131.1	107.5	90.9	78.6	69.1	61.7	55.6	50.7	46.5	43.0	40.0	37.4
	Deflection (L/240) ^{3,4}	224.3	183.3	153.8	131.5	114.2	100.4	89.0	79.6	71.6	64.8	59.0	53.8
	Connection TSFP3 ⁸	40.9	33.6	28.4	24.5	21.5	19.2	17.2	15.6	14.3	13.2	12.2	11.4

Notes:

1. 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.
2. Based on TS panel with 24 ga. exterior & 26 ga interior face (min Fy = 33 ksi) for 2 or more spans condition.
3. Allowable positive or inward load is the lowest value of the panel bending and shear strength or deflection limit.
4. 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.
5. Loads based on panel stress, deflection and connection design criteria are derived from ASTM E-72 testing.
6. 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.
7. 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:
8. TSFP3: 3 Through Fasteners at End Supports (3"-18"-18"-3"). Exposed fastener heads will be covered by trim. 4 structural blind rivets specified by Metl-Span at Intermediate (5¼"-10½"-10½"-10½"-5¼"). The shape of the intermediate support member must accommodate back fastening.
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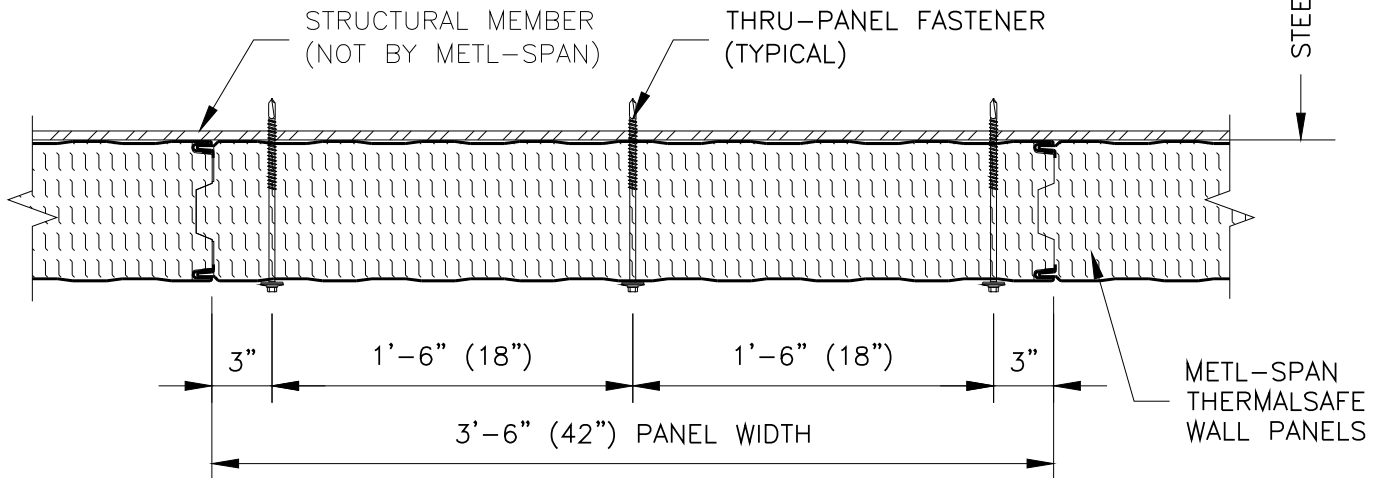
Metl-Span ThermalSafe® NEF (Non-Exposed Fastener) Wall Panels
24 Ga. Exterior / 24 ga. Interior Facings
Allowable Loads^{1,2,6,9} (psf) for Two or More Equal Spans

TS Panel	Design Criteria ^{5,7}	Allowable Load (psf)											
		Panel Span (ft)											
		5	6	7	8	9	10	11	12	13	14	15	16
4" Thick	Bending & Shear ^{3,4}	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) ^{3,4}	119.4	96.3	79.9	67.5	57.9	50.3	44.1	38.8	34.3	30.4	27.1	24.3
	Connection TSFP3 ⁸	44.9	36.7	30.9	26.7	23.4	20.8	18.7	17.0	15.6	14.4	13.4	12.5
5" Thick	Bending & Shear ^{3,4}	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) ^{3,4}	144.7	117.4	97.9	83.2	71.8	62.6	55.2	49.0	43.8	39.3	35.3	31.8
	Connection TSFP3 ⁸	45.4	37.2	31.4	27.1	23.7	21.1	19.0	17.3	15.8	14.6	13.5	12.6
6" Thick	Bending & Shear ^{3,4}	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) ^{3,4}	166.3	135.5	113.4	96.8	83.9	73.5	65.0	58.0	52.1	47.0	42.6	38.7
	Connection TSFP3 ⁸	45.8	37.6	31.8	27.4	24.1	21.4	19.2	17.5	16.0	14.7	13.7	12.7
7" Thick	Bending & Shear ^{3,4}	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) ^{3,4}	195.9	160.0	134.3	114.9	99.7	87.6	77.7	69.5	62.5	56.6	51.5	47.0
	Connection TSFP3 ⁸	46.1	37.9	32.0	27.7	24.3	21.6	19.4	17.6	16.1	14.8	13.8	12.8
8" Thick	Bending & Shear ^{3,4}	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) ^{3,4}	225.5	184.6	155.2	133.0	115.7	101.9	90.5	81.1	73.1	66.3	60.4	55.3
	Connection TSFP3 ⁸	46.3	38.1	32.2	27.8	24.4	21.8	19.6	17.8	16.2	15.0	13.9	12.9

Notes:

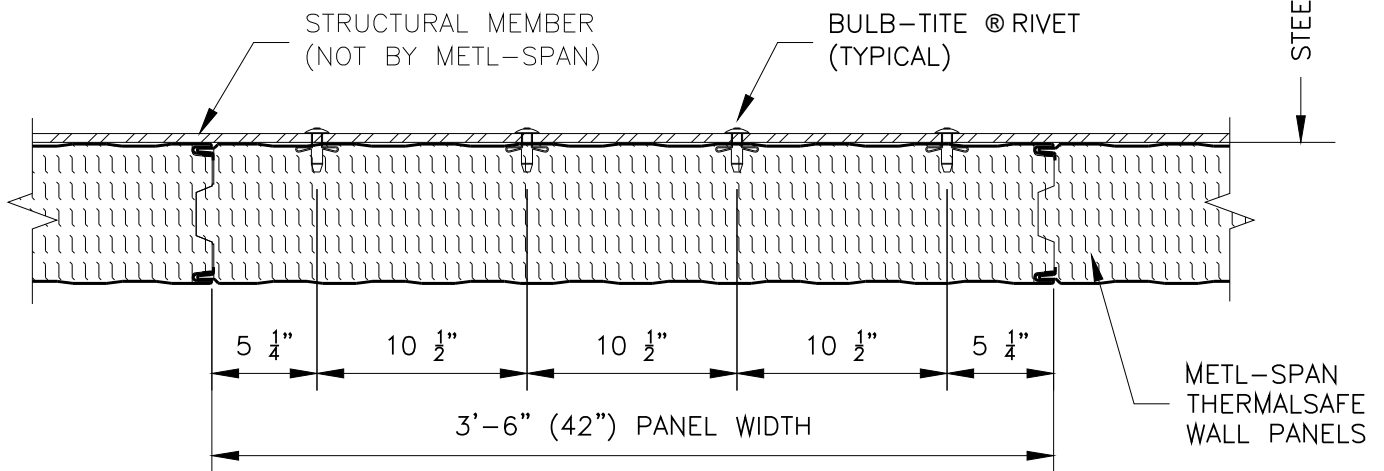
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STEEL LINE



END CONDITION

STEEL LINE



INTERMEDIATE CONDITION

VERTICAL PANEL – FASTENER PATTERNS TSFP3

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

COMMERCIAL AND INDUSTRIAL

FASTENER PATTERNS TSFP3
THERMALS SAFE PANEL

TSW03012
DATE: 01-12-2016