

Composite Limiting Heights with 5/8" Type X Gypsum Board

TRAKLOC Elevator Studs (TLE)

Width (in)	Stud Member (TLE)	Design thickness (in)	Yield strength (ksi)	Spacing (in)	5 PSF			7.5 PSF			10 PSF		
					L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
2-1/2	TRAKLOC 25 (18mil) 250TLE125-18	0.0188	33	12	17'-0"	15'-1"	12'-11"	14'-11"	13'-2"	11'-4"	13'-6"	12'-0"	10'-3"
				16	15'-6"	13'-9"	11'-9"	13'-6"	12'-0"	10'-3"	12'-0" f	10'-11"	9'-0"
				24	13'-6"	12'-0"	10'-3"	11'-4" f	10'-6"	8'-6"	9'-10" f	9'-5"	—
	TRAKLOC 20EQ (24mil) 250TLE125-24	0.0250	57	12	18'-9"	15'-9"	13'-8"	16'-5"	13'-9"	12'-0"	14'-11"	12'-6"	10'-11"
				16	17'-1"	14'-4"	12'-5"	14'-11"	12'-6"	10'-11"	13'-6"	11'-4"	9'-11"
				24	14'-11"	12'-6"	10'-11"	13'-0"	10'-11"	9'-4"	11'-10"	9'-11"	7'-10"
	TRAKLOC 30mil 250TLE125-30	0.0312	33	12	20'-0"	16'-9"	14'-7"	17'-6"	14'-7"	12'-8"	15'-11"	13'-3"	11'-7"
				16	18'-2"	15'-2"	13'-3"	15'-11"	13'-3"	11'-7"	14'-5"	12'-1"	10'-6"
				24	15'-11"	13'-3"	11'-7"	13'-11"	11'-7"	10'-1"	12'-7"	10'-6"	8'-9"
	TRAKLOC 33mil 250TLE125-33	0.0346	33	12	20'-0"	16'-9"	14'-7"	17'-6"	14'-7"	12'-8"	15'-11"	13'-3"	11'-7"
				16	18'-2"	15'-2"	13'-3"	15'-11"	13'-3"	11'-7"	14'-5"	12'-1"	10'-6"
				24	15'-11"	13'-3"	11'-7"	13'-11"	11'-7"	10'-1"	12'-7"	10'-6"	8'-9"
3-5/8	TRAKLOC 25 (18mil) 362TLE125-18	0.0188	33	12	20'-7"	17'-2"	14'-6"	18'-0"	15'-0"	12'-8"	16'-1" f	13'-7"	11'-5"
				16	18'-9"	15'-7"	13'-2"	16'-1" f	13'-7"	11'-5"	13'-11" f	12'-4"	10'-2"
				24	16'-1" f	13'-7"	11'-5"	13'-2" f	11'-11"	9'-8"	11'-5" f	10'-8"	8'-7"
	TRAKLOC 20EQ (24mil) 362TLE125-24	0.0250	57	12	22'-6"	17'-10"	15'-7"	19'-8"	15'-7"	13'-7"	17'-10"	14'-2"	12'-5"
				16	20'-5"	16'-3"	14'-2"	17'-10"	14'-2"	12'-5"	16'-3"	12'-10"	11'-1"
				24	17'-10"	14'-2"	12'-5"	15'-7"	12'-5"	10'-7"	14'-2"	11'-1"	9'-5"
	TRAKLOC 30mil 362TLE125-30	0.0312	33	12	24'-5"	19'-5"	16'-11"	21'-4"	16'-11"	14'-10"	19'-5"	15'-5"	13'-5"
				16	22'-3"	17'-8"	15'-5"	19'-5"	15'-5"	13'-5"	17'-8"	14'-0"	12'-1"
				24	19'-5"	15'-5"	13'-5"	16'-11"	13'-5"	11'-7"	15'-5"	12'-1"	10'-4"
	TRAKLOC 33mil 362TLE125-33	0.0346	33	12	25'-4"	20'-1"	17'-7"	22'-2"	17'-7"	15'-4"	20'-1"	15'-11"	13'-11"
				16	23'-0"	18'-3"	15'-11"	20'-1"	15'-11"	13'-11"	18'-3"	14'-6"	12'-8"
				24	20'-1"	15'-11"	13'-11"	17'-7"	13'-11"	12'-1"	15'-11"	12'-8"	10'-11"
4	TRAKLOC 25 (18mil) 400TLE125-18	0.0188	33	12	21'-1"	18'-3"	15'-4"	18'-5"	15'-11"	13'-5"	16'-8"	14'-6"	12'-2"
				16	19'-1"	16'-7"	13'-11"	16'-8"	14'-6"	12'-2"	14'-8" f	13'-2"	10'-10"
				24	16'-8"	14'-6"	12'-2"	13'-10" f	12'-8"	10'-3"	12'-0" f	11'-5"	9'-1"
	TRAKLOC 20EQ (24mil) 400TLE125-24	0.0250	57	12	24'-9"	19'-8"	17'-2"	21'-8"	17'-2"	15'-0"	19'-8"	15'-7"	13'-8"
				16	22'-6"	17'-10"	15'-7"	19'-8"	15'-7"	13'-8"	17'-8" f	14'-2"	12'-5"
				24	19'-8"	15'-7"	13'-8"	16'-8" f	13'-8"	11'-11"	14'-5" f	12'-5"	10'-6"
	TRAKLOC 30mil 400TLE125-30	0.0312	33	12	27'-3"	21'-7"	18'-10"	23'-9"	18'-10"	16'-6"	21'-7"	17'-2"	15'-0"
				16	24'-9"	19'-8"	17'-2"	21'-7"	17'-2"	15'-0"	19'-8"	15'-7"	13'-7"
				24	21'-7"	17'-2"	15'-0"	18'-10"	15'-0"	13'-1"	17'-2"	13'-7"	11'-9"
	TRAKLOC 33mil 400TLE125-33	0.0346	33	12	27'-1"	21'-6"	18'-10"	23'-8"	18'-10"	16'-5"	21'-6"	17'-1"	14'-11"
				16	24'-8"	19'-7"	17'-1"	21'-6"	17'-1"	14'-11"	19'-7"	15'-6"	13'-7"
				24	21'-6"	17'-1"	14'-11"	18'-10"	14'-11"	13'-0"	17'-1"	13'-7"	11'-9"
6	TRAKLOC 25 (18mil) 600TLE125-18	0.0188	33	12	—	22'-7"	20'-7"	—	19'-8" f	17'-11"	—	17'-1" f	16'-4"
				16	—	20'-8"	18'-8"	—	17'-1" f	16'-4"	—	14'-9" f	14'-9" f
				24	—	17'-1" f	16'-3"	—	13'-11" f	13'-11" f	—	12'-1" f	12'-1" f
	TRAKLOC 20EQ (24mil) 600TLE125-24	0.0250	57	12	28'-9" f	25'-11"	21'-8"	23'-6" f	22'-8"	19'-1"	20'-4" f	20'-4" f	17'-5"
				16	24'-11" f	23'-6"	19'-10"	20'-4" f	20'-4" f	17'-5"	17'-7" f	17'-7" f	15'-11"
				24	20'-4" f	20'-4" f	17'-5"	16'-7" f	16'-7" f	15'-4"	14'-4" f	14'-4" f	13'-11"
	TRAKLOC 30mil 600TLE125-30	0.0312	33	12	33'-3"	27'-0"	23'-11"	27'-6" f	23'-11"	21'-1"	23'-10" f	21'-10"	19'-3"
				16	29'-2" f	24'-9"	21'-10"	23'-10" f	21'-10"	19'-3"	20'-8" f	20'-0"	17'-7"
				24	23'-10" f	21'-10"	19'-3"	19'-6" f	19'-3"	16'-11"	16'-10" f	16'-10" f	—
	TRAKLOC 33mil 600TLE125-33	0.0346	33	12	33'-3"	27'-0"	23'-11"	27'-6" f	23'-11"	21'-1"	23'-10" f	21'-10"	19'-3"
				16	29'-2" f	24'-9"	21'-10"	23'-10" f	21'-10"	19'-3"	20'-8" f	20'-0"	17'-7"
				24	23'-10" f	21'-10"	19'-3"	19'-6" f	19'-3"	16'-11"	16'-10" f	16'-10" f	—

For SI Units: 1 inch = 25.4 mm, 1 ft = 0.3048m, 1 psf = 47.88 Pa

NOTES

- Allowable composite limiting heights were determined in accordance with ICC-ES AC86-2012.
- Additional composite wall testing and analysis requirements of the SFIA Code Compliance Certification Program were observed.
- In accordance with current building codes and AISI design standards, the 1/3 Stress Increase for strength was not used.
- The composite limiting heights provided in the tables are based on a single layer of 5/8" Type X Gypsum Board complying with ASTM C1396 and from the following manufacturers: American Gypsum, CertainTeed, Georgia Pacific, Continental, National Gypsum or USG.
- The gypsum board must be applied full height in the vertical orientation to each stud flange and installed in accordance with ASTM C754 using minimum No. 6 Type S fine thread Drywall bugle head screws spaced as listed below:
 - Screws spaced a maximum of 12 inch on-center studs.
 - Screws spaced 16 inch on-center to the top and bottom track.
- No fasteners are required for attaching the stud to the track except as detailed in ASTM C754.
- Stud end bearing must be a minimum of 1 inch.
- The minimum overlap of the TSO (Outer Stud) and TSE (Inner Stud) must be 11 inches.
- f Adjacent to the height value indicates that flexural stress controls the allowable wall height.
- s Adjacent to the height value indicates that shear/end reaction controls the allowable wall height.