

# TOP FLANGE HANGERS TESTED OVER SHEETROCK™

Fire safety in wood structures has become a great concern of builders, building inspectors, and designers / engineers. This has increased the demand for top mount hangers installed on a double top plate covered by Sheetrock™.

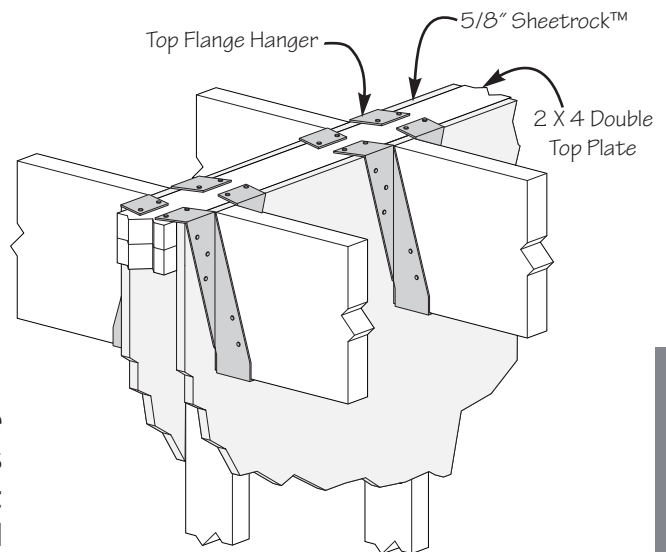
USP Structural Connectors® tested our top mount hangers, as used in firewall applications, on a single 5/8" piece of Sheetrock™ over a double DF-L 2 X 4 top plate. The results show allowable load reductions when compared to allowable load values published in USP's current *Full Line Catalog*.

Refer to the allowable load values listed in the chart below.

Several reasons for the allowable load reductions, as observed during testing, are as follows:

- Sheetrock™ crushes much more readily than solid wood. In consequence, the top flange deforms to 1/8" at a lower load than standard solid wood testing.
- The nails installed in the top flange of a top mount hanger are moved closer to the outside edge of the nailer plate. This may cause splitting of the nailer plate to occur at a lower load than normal applications.

The primary cause of failure was due to the crushing of the Sheetrock™ edge. This crushing caused the hangers to deflect earlier than when installed on a solid wood header.



USP Hanger Series	Header Nails <sup>2,4</sup>		Allowable Loads (Lbs.)	
	Top	Face	DF-L / SP <sup>3</sup>	Uplift <sup>1</sup>
			100%	160%
TFL	(4) 10d x 1-1/2	(2) 10d x 1-1/2	1140	295
THO	(4) 10d x 1-1/2	(2) 10d x 1-1/2	1300	295
THO double	(4) 16d	(6) 16d	2500	295
BPH	(4) 16d	(4) 16d	2350	535

- 1) Uplift loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
- 2) Minimum nail embedment into the framing member shall be 1-5/8" for 16d nails.
- 3) Listed loads shall not be increased.
- 4) **NAILS:** 10d x 1-1/2 nails are 0.148" dia. x 1-1/2" long, 16d nails are 0.162" dia. x 3-1/2" long.

USP supplies quality products to build Stronger Safer Structures



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