

Face Mount Hanger "Gap" Testing

Tech Bulletin

For proper installation and to achieve the published load, USP Structural Connectors® recommends a maximum 1/8" gap between supporting and supported members when using our face mount hanger products.

If this 1/8" gap tolerance is exceeded, the connection requires further evaluation. USP conducted extensive testing with our face mount hangers to determine reduction factors for gaps from 3/16" thru 1". The tables below indicate what allowable load multiplier should be applied to the published hanger capacity to achieve the necessary reduced load capacity.

Table 1 - Gravity Loads

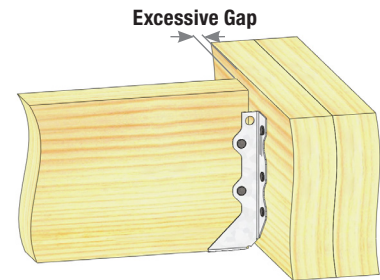
Product Series ¹	Allowable Load Multiplier														
	Gap between Carried Member and Carrying Member														
	≤1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
JL	1.00	1.00	1.00	0.90	0.80	0.70	0.65	0.60	0.55	0.50	0.45	---	---	---	---
JUS 2x	1.00	0.95	0.90	0.80	0.65	0.55	0.45	0.45	0.40	0.40	0.40	---	---	---	---
JUS W > 1-1/2"	1.00	0.95	0.90	0.80	0.70	0.60	0.50	0.50	0.45	0.45	0.45	---	---	---	---
SUH	1.00	0.95	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50	---	---	---	---
HD 2x	1.00	1.00	1.00	0.90	0.90	0.85	0.85	0.80	0.80	0.75	0.75	---	---	---	---
HD W > 1-1/2"	1.00	1.00	1.00	0.90	0.90	0.85	0.85	0.80	0.80	0.75	0.75	0.70	0.70	0.65	0.65
HUS 2x	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
HUS W > 1-3/4"	1.00	0.95	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50	---	---	---	---
THD 2x	1.00	0.95	0.90	0.85	0.80	0.70	0.65	0.65	0.60	0.60	0.60	0.55	0.55	0.50	0.50
THD W > 1-1/2"	1.00	0.95	0.95	0.90	0.90	0.85	0.85	0.80	0.80	0.75	0.75	0.70	0.70	0.65	0.65
THDH	1.00	1.00	1.00	0.90	0.85	0.80	0.75	0.65	0.60	0.55	0.50	0.30	0.30	0.30	0.30

1) The connector is assumed to be installed with the 1/8" gap exceeded, but otherwise in accordance with applicable codes and current product literature.

Table 2 - Uplift Loads

Product Series ¹	Allowable Load Multiplier														
	Gap between Carried Member and Carrying Member														
	≤1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
JL	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	---	---	---	---	---
JUS 2x	1.00	0.80	0.60	0.50	0.45	0.40	0.35	---	---	---	---	---	---	---	---
JUS W > 1-1/2"	1.00	0.80	0.60	0.50	0.45	0.40	0.35	---	---	---	---	---	---	---	---
SUH	1.00	0.95	0.90	0.85	0.80	0.75	0.70	0.65	0.65	0.60	0.60	---	---	---	---
HD 2x	1.00	0.90	0.80	0.75	0.70	0.65	0.60	0.55	0.50	0.45	0.40	---	---	---	---
HD W > 1-1/2"	1.00	0.95	0.90	0.85	0.85	0.80	0.80	0.75	0.75	0.70	0.70	0.65	0.65	0.60	0.60
HUS 2x	1.00	0.80	0.60	0.50	0.45	0.40	0.35	---	---	---	---	---	---	---	---
HUS W > 1-3/4"	1.00	0.80	0.60	0.50	0.45	0.40	0.35	---	---	---	---	---	---	---	---
THD 2x	1.00	0.95	0.90	0.85	0.85	0.80	0.80	0.75	0.75	0.70	0.70	0.65	0.65	0.60	0.60
THD W > 1-1/2"	1.00	0.95	0.90	0.85	0.85	0.80	0.80	0.75	0.75	0.70	0.70	0.65	0.65	0.60	0.60
THDH	1.00	0.80	0.60	0.50	0.45	0.40	0.35	---	---	---	---	---	---	---	---

1) The connector is assumed to be installed with the 1/8" gap exceeded, but otherwise in accordance with applicable codes and current product literature.



Example Calculation:

A roof truss with a double 2x6 bottom chord supported by a THD26-2 hanger with a gap between the end of the carried truss and the supporting member of 9/16".

Gravity Loads:

Published capacity of THD26-2:
 = 3,150 lbs. @ 115%
 = 3,355 lbs. @ 125%
 (values from USP Product Catalog)

Allowable Load Multiplier: 0.80
 (from Table 1- Gravity Loads)

Reduced THD26-2 capacity:
 3,150 lbs. x 0.80 = 2,520 lbs. @ 115%
 3,355 lbs. x 0.80 = 2,684 lbs. @ 125%

Uplift Loads:

Published uplift capacity of THD26-2:
 = 2,340 lbs. @ 160%
 (values from USP Product Catalog)

Allowable Load Multiplier: 0.75
 (from Table 2- Uplift Loads)

Reduced THD26-2 capacity:
 2,340 lbs. x 0.75 = 1,872 lbs. @ 160%