



BADGER NUSIG CONNECTORS <sup>1,2,8</sup>										
Model	Deck Family-Slab Type <sup>10</sup>	Applicable Load Type <sup>3</sup>	Min. Spacing and/or Max. Load Angle for Full Capacity <sup>8,9</sup>	Strength <sup>4,5</sup>					Max. Fire Sprinkler Pipe <sup>6</sup>	
				P <sub>n</sub> (lbs)	P <sub>n</sub> /Ω (lbs)	φP <sub>n</sub> (lbs)	Ω	φ	Rod Size (in.)	Pipe Size (in.)
NDH3812 or MDH3812	W2	Vertical	27 1/2 in.	2119	588	953	3.60	0.45	3/8 1/2	4 5
	W3	Vertical	12 3/4 in.	1266	477	759	2.65	0.60	3/8 1/2	4 3 1/2
NDH1258 or MDH1258	W3	Vertical	19 3/8 in.	1845	658	1107	2.80	0.60	1/2 5/8	4 5
NDH4S-W3	W3	Vertical and Bracing	9 1/2 in. 40°	2946	1052	1620	2.80	0.55	3/8 1/2 5/8	4 6 6
NDH38FV-W3	W3	Vertical	-	556	182	305	3.05	0.55	3/8	1 1/2

**Notes:**

- <sup>1</sup> Badger NUSIG Connectors shall be installed and inspected per manufacturer instructions.
- <sup>2</sup> Composite Deck-Slab with minimum  $f'_c = 3000$  psi, 110 pcf minimum LWC or NWC.
- <sup>3</sup> Vertical load assumes deck in a horizontal plane  $\pm 5^\circ$ . Bracing load may be applied in any horizontal direction.
- <sup>4</sup> The allowable strength,  $P_n/\Omega$ , shall be equal to or greater than the governing nominal load or load combination for Allowable Stress Design (ASD) as stipulated in the IBC or ASCE/SEI 7.
- <sup>5</sup> The factored strength,  $\phi P_n$ , shall be equal to or greater than the governing factored load or factored load combination for Load and Resistance Factor Design as stipulated in the IBC or ASCE/SEI 7.
- <sup>6</sup> Maximum fire sprinkler pipe size in accordance with NFPA 13 assuming minimum connector spacing for full capacity.
- <sup>7</sup> Applicable to all threaded rod sizes that can be used with Badger NUSIG Connector. Load shall not exceed the strength of the threaded rod provided by others.
- <sup>8</sup> For Badger NUSIG Connectors at spacings less than the minimum spacing required for full capacity, the nominal strength shall be calculated using equations BN-1 through BN-3
 

For NDH3812 or MDH3812 in W2 deck-slabs	$P_n = 2119 \cdot \alpha_S$	$\alpha_S = 0.014 \cdot S + 0.601 \leq 1$	$\Omega = 3.60$	$\phi = 0.45$	[BN-1]
For NDH3812 or MDH3812 in W3 deck-slabs	$P_n = 1266 \cdot \alpha_S$	$\alpha_S = 0.013 \cdot S + 0.833 \leq 1$	$\Omega = 2.65$	$\phi = 0.60$	[BN-2]
For NDH1258 or MDH1258 in W3 deck-slabs	$P_n = 1845 \cdot \alpha_S$	$\alpha_S = 0.016 \cdot S + 0.690 \leq 1$	$\Omega = 2.80$	$\phi = 0.60$	[BN-3]
- <sup>9</sup> For Badger NUSIG Connectors at spacings less than the minimum spacing required and/or the maximum load application angle from vertical for full capacity, the nominal strength shall be calculated using equation BN-4
 

For NDH4S-W3 installed in W3 deck-slabs	$P_n = 2946 \cdot \alpha_S \cdot \alpha_\theta$	$\alpha_S = 0.030 \cdot S + 0.714 \leq 1$	$\Omega = 2.80$	$\phi = 0.55$	[BN-4]
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Where:

$\alpha_\theta = 0.506 \cdot \cos\theta + 0.612 \leq 1$

$P_n$  = Nominal Strength of Badger NUSIG Connector  
 $S$  = Badger NUSIG Connector spacing (in.)  
 $\theta$  = load application angle from the axis of the threaded rod (deg),  $\leq 60^\circ$

<sup>10</sup> Applicable to deck manufactured after 06/21/2022

