

OSHPD
OPM
Approved



NO
KNOWN
EQUAL
Patents &
Patents Pend.

City Of
Los Angeles
COLA
Approved

— No-Drill™ HANGERS —

BADGER INDUSTRIES
NO-DRILL™ HANGERS

Integrated Lean Construction Through Innovation

www.nodrillhangers.com

Patents and Patents Pending



Fast & Easy To Install

Fast & Easy To Inspect

Fast & Easy To Remove

Trade Design Schedule Savings

Trade Coordination Schedule Savings

Trade Clash Resolution Schedule Savings

Field Construction Schedule Savings

Change Order Schedule Savings

Inspection Schedule Savings

NO NOISE

*NO HAMMER
DRILL*

NO HEPA VAC



*NO HAZARDOUS
SILICA DUST*





No PERMANENT HOLES IN THE DECKING

No ABANDONED ANCHORS OR INSERTS

No HOLES DRILLED THROUGH FLOORS

No HAZARDOUS SILICA DUST

No NOISY HAMMER DRILL OR HEPA VAC

No POUNDING ANCHORS INTO CONCRETE

No EXPENSIVE ANCHOR INSPECTIONS

Badger No-Drill™ Hangers - Visual Inspection Compliant

Integrated Lean Construction Through Innovation



The Industries 1st Removable All Trades Hanging System



LINK TO VIDEO

<http://www.badgerindustries.com>



0720

~ JURISDICTIONAL APPROVALS ~

COLA - City Of Los Angeles
OSHPD - Office of Statewide Health Planning and Development



COLA
Approved
See COLA
Report #26090

OSHPD
OPM Approved
See OPM-0043-13

No-Drill™ Hanger
Part# MDH3812



COLA
Approved
See COLA
Report #26090

OSHPD
OPM Approved
See OPM-0043-13

No-Drill™ Hanger
Part# MDH1258

OSHPD
OPM Approved
See OPM-0043-13

OSHPD
OPM Approved
See OPM-0043-13



COLA
Approved
See COLA
Report #26090

No-Drill™ Hanger
Part# NDH38FV-W3



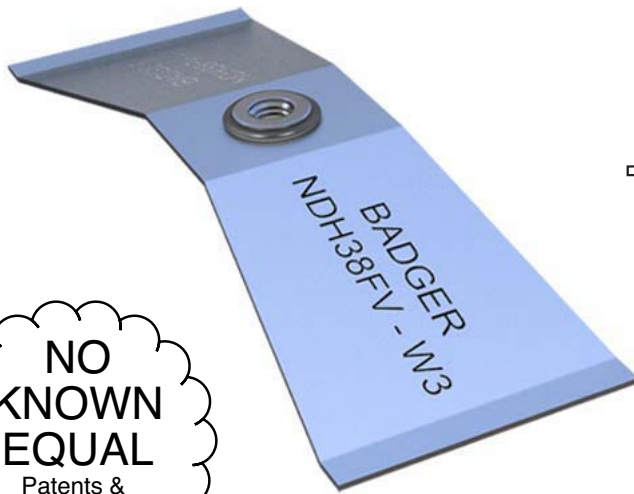
COLA
Approved
See COLA
Report #26090

No-Drill™ Hanger
Part# NDH4S-W3

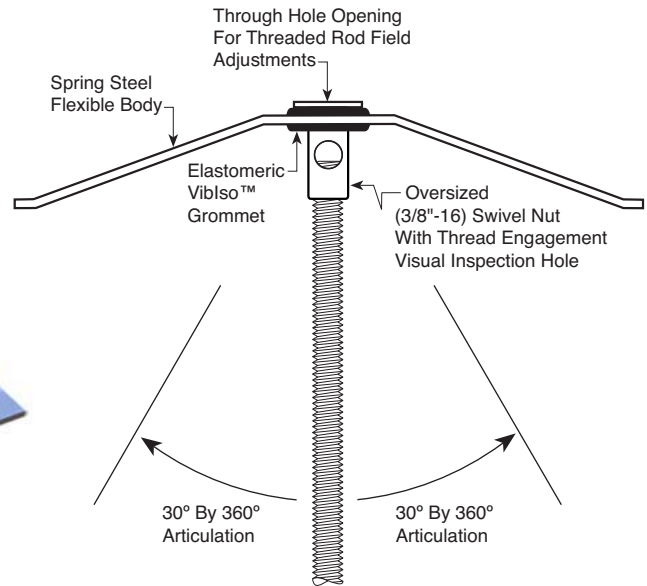


EXTREME INNOVATION

NDH38FV-W3



NO
KNOWN
EQUAL
Patents &
Patents Pend.



[NDH38FV-W3] Features:

- Oil-resistant elastomer insert designed to carry a 500% overload without failure.
- Hanger element with minimum lateral stiffness of 1.0 times the rated vertical stiffness.
- Hanger element seismic cyclic tested to carry a 500% (tension and/or compression) overload without failure.
- Hanger element that allows for a 30° arc in all directions without metal-to-metal contact.

REMOVABLE

NOISE ISOLATION

VIBRATION ISOLATION

OSHPD SEISMIC APPROVED

DUCTILE FAILURE PERFORMANCE

FLEXIBLE OVERLOAD PERFORMANCE

VISUAL INSPECTION COMPLIANT

IBC and CBC COMPLIANT

ANSI/AISI S922-19 COMPLIANT

ANSI/FM 1950-16 COMPLIANT



0720

~ GENERAL NOTICE ~

Neither NUSIG nor Badger Industries is responsible for engineering or detailing the use of NUSIG, Badger Industries and/or others products and components for a specific project and/or application. All such engineering is to be performed by an engineer, retained by others, who is licensed to perform the necessary engineering, and who is insured to provide "Responsible Engineer" engineering services. All design submittals specifying NUSIG / Badger Industries products and components must be sealed and signed by the Responsible Engineer, and submitted for review and approval to the project S.E.O.R. (Structural Engineer of Record).

Read all notices and instructions prior to design and usage. Laboratory testing (even that recognized by building codes and standards) is not necessarily indicative of actual project specific application usage conditions. The NUSIG / Badger Industries components shall not be used for fall protection and/or lifting device usage conditions. The usage, design, engineering, installation and inspection of NUSIG / Badger Industries components (both seismic and non-seismic) shall take into account the capacity limits of the weakest components and conditions within the overall assembly, including but not limited to the building structure, threaded rod compression with or without rod stiffeners, prying and eccentricity interactions, etc. Such shall be the responsibility of non NUSIG / Badger Industries others.

NUSIG / Badger Industries documents are subject to change without notice or responsibility. NUSIG / Badger Industries products, components and documents are for interior use. It is the responsibility of the user to qualify that they are using the most current NUSIG / Badger Industries documents.

LIMITATION OF LIABILITY

To the fullest extent permissible by law, NUSIG, Badger Industries, and their respective owners, officers, directors, employees, agents and representatives (collective, the "Parties") excludes all liability except liability that is directly attributable to the willful negligence of the Parties. Should the Parties be held liable, under any theory, the aggregate liability of all of them is limited to the total purchase price of the Parties products that caused the injury or loss. In addition to the foregoing, THE PARTIES ARE IN NO EVENT LIABLE FOR ANY LOSS OF BUSINESS OR PROFITS, LOSS OF USE, LOSS OF OPPORTUNITIES, DOWNTIME OR DELAY, LABOR, REPAIR OR MATERIAL COST OR ANY OTHER SIMILAR OR DISSIMILAR, INCIDENTAL OR CONSEQUENTIAL LOSS OR DAMAGE INCURRED BY BUYER. By purchasing the Parties' products, you agree to this limitation of liability on your behalf, and on behalf of the person or organization purchasing the products.

WARRANTY

NUSIG and/or Badger Industries products are warranted to be free from defects in material and workmanship at the time of shipment. NO OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), SHALL EXIST IN CONNECTION WITH THE SALE OR USE OF ANY NUSIG AND/OR BADGER INDUSTRIES PRODUCTS. Products claimed to be defective or nonconforming must be identified in writing and returned (within 30 calendar days) to NUSIG / Badger Industries for inspection. Notice of a warranty claim within this 30 day period is a condition precedent to this Warranty. In no event shall NUSIG / Badger Industries be responsible if the products have been improperly stored, improperly used, abused or misused. NUSIG / Badger Industries will, at its option, either repair or replace defective or nonconforming products for which it is responsible or return the purchase price to the BUYER. THE FOREGOING STATES BUYER'S EXCLUSIVE REMEDY FOR ANY BREACH OF THE NUSIG AND/OR BADGER INDUSTRIES WARRANTY AND FOR ANY CLAIM, WHETHER SOUNDING IN CONTRACT, TORT OR NEGLIGENCE, FOR LOSS OR INJURY CAUSED BY THE SALE OR USE OF ANY NUSIG AND/OR BADGER INDUSTRIES PRODUCT(S).

WARNING

The improper use, misuse and/or misapplication of these documents and/or NUSIG / Badger Industries products may cause product malfunction, property damage, bodily injury and death.



~ CODE COMPLIANCE NOTICE ~

- (1.) Badger No-Drill™ Metal Deck Hangers are compliant with the IBC, ASCE/SEI 7, CBC, and OSHPD CBC A-Chapters section 2210, therefore there is no basis to require a product approval report issued under alternate materials, means or methods provisions of the code.

Badger No-Drill™ Hangers connect hanging and/or bracing loads to Verco cold-formed steel composite deck. Connections of adjoining materials to cold-form steel deck are covered by ANSI/AISI S100 North America specification for the Design of Cold-Formed Steel Structural Members. This design standard contains provisions for the design of connections to cold-formed steel by test in section A1.2(a) and section K. The factored strengths for the Badger No-Drill™ Hanger are in conformance with the provisions of ANSI/AISI S100 specified in section 2210 of the IBC, CBC and the OSHPD CBC A-Chapter.

Testing was performed following an approved industry standard in accordance with ASCE 7-16 Section 1.3.1.3.2. The test program was performed by an independent approved laboratory having accreditation to the ISO Accreditation Standard 17025. Testing was under the responsible charge of an independent California licensed engineer. Seismic testing was performed meeting both ANSI/AISI S922 Test Standard for Determining the Strength and Stiffness of Bearing-Friction Interference Connector Assemblies in Profiled Steel Panels and ANSI/FM 1950 and/or ACI 355.2 seismic cyclic protocols. Gravity and ceiling wire testing was performed using ANSI/ASTM E488 tension protocols. Results were used for engineered analysis / determination of capacities and Codes / Standards compliance and Jurisdictional Approvals listed within NUSIG / Badger Installation Details.

No-Drill™ Hanger Badger Industries Manufacturer's Certification:			Verco Deck
Part No:	Usage:	Compliance Method:	Fitment:
MDH3812	Ceiling Wire Vertical Support	Testing & Analysis	W2 & W3
MDH3812	Ceiling Wire Angled Support	Testing & Analysis	W2 & W3
MDH3812	Threaded Rod Vertical Support	Testing & Analysis	W2 & W3
MDH1258	Threaded Rod Vertical Support	Testing & Analysis	W3
NDH38FV-W3	Ceiling Wire Vertical Support	Testing & Analysis	W3
NDH38FV-W3	Threaded Rod Vertical Support	Testing & Analysis	W3
NDH4S-W3	Threaded Rod Vertical Support	Testing & Analysis	W3
NDH4S-W3	Seismic Bracing - Rigid & Cable	Testing & Analysis	W3



~ NFPA-13 COMPLIANCE NOTICE ~

- (1.) Both the City Of Los Angeles (COLA) approvals and California Office of Statewide Health Planning and Development (OSHPD) approvals are applicable for us with fire protection piping systems.
- (2.) Per 2016 NFPA-13 Chapter 9, Paragraph 9.1.1.2, Badger No-Drill™ Hangers can be certified by a registered professional engineer for use with other jurisdictional fire protection piping systems.

NFPA-13 vertical support hanger usage references below are based on pipe full of water weight, (times 5, plus 250 pounds). Ultimate test capacities listed for the Badger No-Drill™ Hangers where derived from ANSI/FM 1950 seismic cyclic testing performed by an independent laboratory having accreditation to the ISO Accreditation Standard 17025. Testing was under the responsible charge of an independent California licensed engineer.

Sch 40 Steel Piping No-Drill™ Hangers Usage Per 2016 NFPA-13 Chapter 9, Paragraph 9.1.1.2:

Nom. Pipe Size:	Water-Filled Wt. Per Foot:	Max. Spacing:	NFPA-13 Load:	Ult. Test Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
3/4"	1.30 lbs.	12 ft.	328 lbs.	790 lbs.	NDH38FV-W3	W3
				972 lbs.	MDH3812	W2 & W3
1"	2.06 lbs.	12 ft.	374 lbs.	790 lbs.	NDH38FV-W3	W3
				972 lbs.	MDH3812	W2 & W3
1-1/4"	2.92 lbs.	12 ft.	426 lbs.	790 lbs.	NDH38FV-W3	W3
				972 lbs.	MDH3812	W2 & W3
1-1/2"	3.60 lbs.	15 ft.	520 lbs.	790 lbs.	NDH38FV-W3	W3
				972 lbs.	MDH3812	W2 & W3
2"	5.11 lbs.	15 ft.	634 lbs.	790 lbs.	NDH38FV-W3	W3
				972 lbs.	MDH3812	W2 & W3
2-1/2"	7.87 lbs.	15 ft.	841 lbs.	972 lbs.	MDH3812	W2 & W3
				2,912 lbs.	NDH4S-W3	W3
3"	10.79 lbs.	15 ft.	1,060 lbs.	1,613 lbs.	MDH1258	W3
				2,912 lbs.	NDH4S-W3	W3
3-1/2"	13.40 lbs.	15 ft.	1,255 lbs.	1,613 lbs.	MDH1258	W3
				2,912 lbs.	NDH4S-W3	W3
4"	16.32 lbs.	15 ft.	1,474 lbs.	1,613 lbs.	MDH1258	W3
				2,912 lbs.	NDH4S-W3	W3
5"	23.30 lbs.	15 ft.	1,998 lbs.	2,912 lbs.	NDH4S-W3	W3
6"	31.51 lbs.	15 ft.	2,614 lbs.	2,912 lbs.	NDH4S-W3	W3

Note: Above listed Badger No-Drill™ Hanger parts and Verco Deck Fitment sizes are applicable for piping schedules with less than Sch 40 wall thickness.



0720

~ SINGLE HANGER CAST IRON PIPING ~

Vertical Hanger Gravity Support Reference Tables

No-Hub Cast Iron Piping - Waste / Drain / Overflow Usage:

Nom. Pipe Size:	Water-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
4" and Smaller	13.0 lbs.	10 ft. / 2	65 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
6" and Smaller	23.4 lbs.	10 ft. / 2	117 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
8"	60.8 lbs.	10 ft. / 2	299 lbs.	300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
15" and Smaller	128.8 lbs.	10 ft. / 2	644 lbs.	728 lbs.	NDH4S-W3	W3

Note: Above listed No-Hub Cast Iron Pipe Hanger Loads are based on a minimum of (2) hangers per 10' foot length of piping. Load is calculated using 5' feet tributary pipe full of water weight.

No-Hub Cast Iron Piping - Vent Usage:

Nom. Pipe Size:	Empty-Pipe Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
6" and Smaller	11.0 lbs.	10 ft. / 2	55 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
12" and Smaller	35.5 lbs.	10 ft. / 2	178 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
15"	51.5 lbs.	10 ft. / 2	258 lbs.	300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3

Note: Above listed No-Hub Cast Iron Pipe Hanger Loads are based on a minimum of (2) hangers per 10' foot length of piping. Load is calculated using 5' feet tributary pipe full of water weight.



0720

~ SINGLE HANGER PVC SCH. 40 PIPING ~ Vertical Hanger Gravity Support Reference Tables

PVC Schedule 40 Piping - Waste / Drain / Overflow Usage:

Nom. Pipe Size:	Water-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
4" and Smaller	7.41 lbs.	7 ft.	52 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
8" and Smaller	26.88 lbs.	7 ft.	188 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
12" and Smaller	58.52 lbs.	10 ft.	586 lbs.	728 lbs.	NDH4S-W3	W3

PVC Schedule 40 Piping - Vent Usage:

Nom. Pipe Size:	Empty-Pipe Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
8" and Smaller	5.28 lbs.	7 ft.	37 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
12" and Smaller	10.02 lbs.	10 ft.	101 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3



0720

~ SINGLE HANGER PVC SCH. 80 PIPING ~ Vertical Hanger Gravity Support Reference Tables

PVC Schedule 80 Piping - Waste / Drain / Overflow Usage:

Nom. Pipe Size:	Water-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
4" and Smaller	7.62 lbs.	7 ft.	54 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
8" and Smaller	27.82 lbs.	7 ft.	195 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
12" and Smaller	60..37 lbs.	10 ft.	604 lbs.	728 lbs.	NDH4S-W3	W3

PVC Schedule 80 Piping - Vent Usage:

Nom. Pipe Size:	Empty-Pipe Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
8" and Smaller	8.02 lbs.	7 ft.	57 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
12" and Smaller	16.37 lbs.	10 ft.	164 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3



0720

~ SINGLE HANGER COPPER PIPING ~ Vertical Hanger Gravity Support Reference Tables

Copper Types K, L & M Tube - Full Of Water and Insulated Usage:

Nom. Pipe Size:	Water-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
2-1/2" and Smaller	6.2 lbs.	10 ft.	62 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
4" and Smaller	14.8 lbs.	10 ft.	148 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
8" and Smaller	55.5 lbs.	10 ft.	555 lbs.	728 lbs.	NDH4S-W3	W3

Note: Weight full of water for 2-1/2" and smaller piping based on 1" thick fiberglass pipe insulation with an ASJ paper covering. Weight full of water for 8" and smaller piping based on 2" thick fiberglass pipe insulation with an ASJ paper covering.

Copper Types K, L & M Tube - Medical Gas Usage (No Insulation):

Nom. Pipe Size:	Empty-Pipe Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
4" and Smaller	6.5 lbs.	10 ft.	65 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
6" and Smaller	13.9 lbs.	10 ft.	139 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
8" and Smaller	25.9 lbs.	10 ft.	259 lbs.	300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3



0720

~ SINGLE HANGER STEEL PIPING ~

Vertical Hanger Gravity Support Reference Tables

Carbon Steel Piping Sch 40 - Full Of Water and Insulated Usage:

Nom. Pipe Size:	Water-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
2" and Smaller	5.9 lbs.	10 ft.	59 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
4" and Smaller	19.5 lbs.	10 ft.	195 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
8" and Smaller	55.2 lbs.	10 ft.	552 lbs.	728 lbs.	NDH4S-W3	W3

Note: Weight full of water for 2" and smaller piping based on 1" thick fiberglass pipe insulation with an ASJ paper covering. Weight full of water for 8" and smaller piping based on 2" thick fiberglass pipe insulation with an ASJ covering.

Carbon Steel Piping Sch 40 - Vaporized Gas / Vent Usage:

Nom. Pipe Size:	Empty-Pipe Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
2-1/2" and Smaller	5.8 lbs.	10 ft.	58 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
6" and Smaller	19.0 lbs.	10 ft.	190 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
14" and Smaller	63.5 lbs.	10 ft.	635 lbs.	728 lbs.	NDH4S-W3	W3



0720

~ SINGLE HANGER STEEL PIPING ~

Vertical Hanger Gravity Support Reference Tables

Carbon Steel Piping Sch 80 - Full Of Water and Insulated Usage:

Nom. Pipe Size:	Water-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
1-1/2" and Smaller	5.3 lbs.	10 ft.	53 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
3" and Smaller	16.3 lbs.	10 ft.	163 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
8" and Smaller	68.3 lbs.	10 ft.	683 lbs.	728 lbs.	NDH4S-W3	W3

Note: Weight full of water for 2" and smaller piping based on 1" thick fiberglass pipe insulation with an ASJ paper covering. Weight full of water for 8" and smaller piping based on 2" thick fiberglass pipe insulation with an ASJ covering.

Carbon Steel Piping Sch 80 - Vaporized Gas / Vent Usage:

Nom. Pipe Size:	Empty-Pipe Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
2" and Smaller	5.1 lbs.	10 ft.	51 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
4" and Smaller	15.0 lbs.	10 ft.	150 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
10" and Smaller	64.5 lbs.	10 ft.	645 lbs.	728 lbs.	NDH4S-W3	W3

Note: Weight full of water for 1-1/2" and smaller piping based on 1" thick fiberglass pipe insulation with an ASJ paper covering. Weight full of water for 4" and smaller piping based on 2" thick fiberglass pipe insulation with an ASJ covering.



0720

~ SINGLE HANGER ELECTRICAL CONDUIT ~ Vertical Hanger Gravity Support Reference Tables

EMT Conduit - with Conductors Usage:

Nom. Pipe Size:	Wire-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
2-1/2" and Smaller	6.3 lbs.	10 ft.	63 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
4" and Smaller	13.1 lbs.	10 ft.	131 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3

IMC Conduit - with Conductors Usage:

Nom. Pipe Size:	Wire-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
2" and Smaller	5.8 lbs.	10 ft.	58 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
4" and Smaller	16.0 lbs.	10 ft.	160 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3

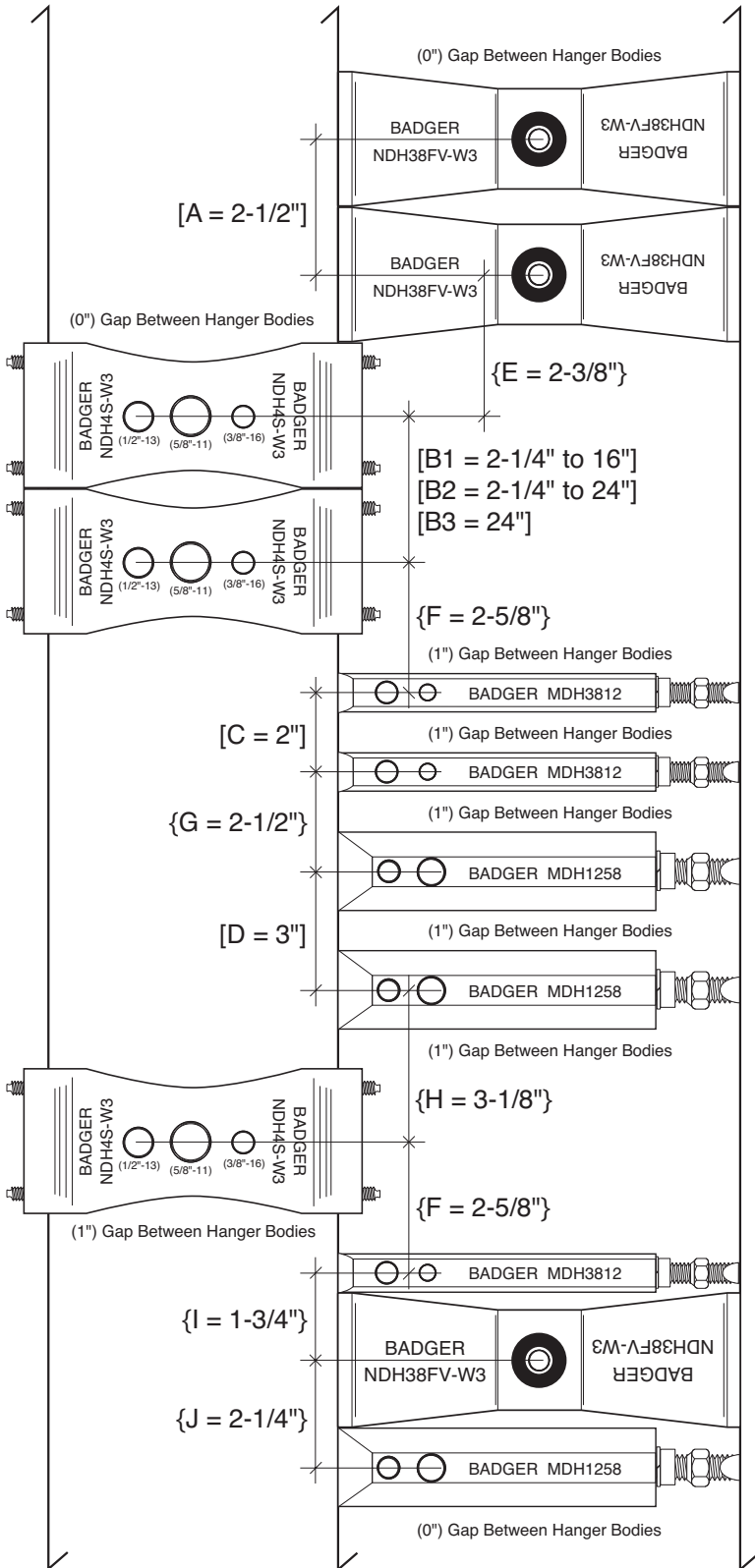
RMC Conduit - with Conductors Usage:

Nom. Pipe Size:	Wire-Filled Wt. Per Foot:	Hanger Spacing:	Hanger Load:	No-Drill™ Capacity:	No-Drill™ Hanger Part:	Verco Deck Fitment:
1-1/2" and Smaller	4.9 lbs.	10 ft.	49 lbs.	65 lbs.	NDH38FV-W3	W3
				200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
4" and Smaller	19.5 lbs.	10 ft.	195 lbs.	200 lbs.	MDH3812	W2 & W3
				300 lbs.	MDH1258	W3
				728 lbs.	NDH4S-W3	W3
6" and Smaller	57.7 lbs.	10 ft.	577 lbs.	728 lbs.	NDH4S-W3	W3



0720

~ MINIMUM BETWEEN SPACINGS DETAIL ~



~ BADGER INDUSTRIES ~ Detail (BNDH-MBS)	
Minimum Between No-Drill™ Hangers Spacing Condition	Badger Industries No-Drill™ Hanger Between Spacing Capacity Reduction
[A = 2-1/2"]	None
[B1 = 2-1/4" to 16"]	Varies For Vertical Hanger Connections See Badger Detail (NDH4S-W3)
[B2 = 2-1/4" to 24"]	Varies For Rigid Seismic Brace Connections See Badger Detail (RSB-NDH4S-W3)
[B2 = 2-1/4" to 24"]	Varies For Cable Seismic Brace Connections See Badger Detail (CSB-NDH4S-W3)
[B3 = 24"]	Rigid & Cable Seismic Brace Connections See Badger Detail (SB-NDH4S-W3-DAF)
[C = 2"]	None
[D = 3"]	None
{E = 2-3/8"}	None
{F = 2-5/8"}	None
{G = 2-1/2"}	None
{G = 3-1/8"}	None
{H = 2-3/8"}	None
{I = 1-3/4"}	None
{J = 2-1/4"}	None
<p>[x] Represents Minimum Required Spacing Between Same Badger No-Drill™ Hanger Types.</p> <p>{ x } Represents Minimum Required Spacing Between Different Badger No-Drill™ Hanger Types.</p> <p>(3") Minimum Spacing Required Between Badger No-Drill™ Hangers And Unfilled Drilled Anchor Holes, Failed Or Abandoned Shot-Pins And Shot-Pins Or Anchorage Concrete Damage Or Blow Outs.</p> <p>Proximity Or Spacing Of Grout Filled Anchor Holes To A Badger No-Drill™ Hanger Does Not Impact The Badger No-Drill™ Hangers Listed Capacities.</p>	

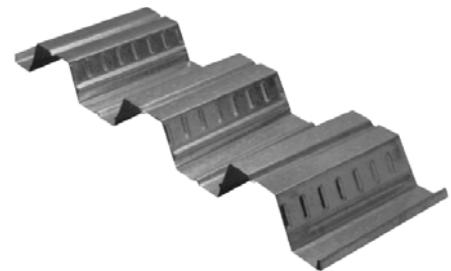


For VERC0 W3 Decking
Using No-Drill™ Hanger
Part No. NDH38FV-W3
Part No. MDH3812
Part No. MDH1258
Part No. NDH4S-W3

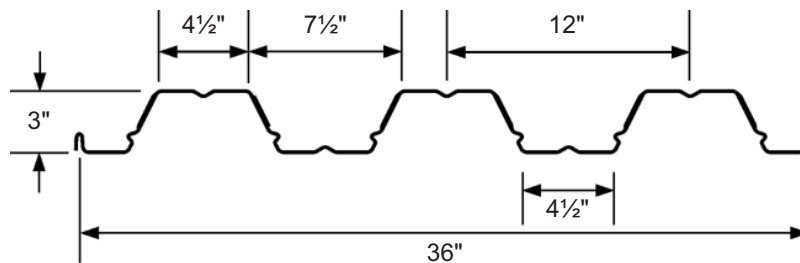


PLW3™ or W3 FORMLOK™

- 3" Deep Deck
- Galvanized or Phosphatized/Painted
- VERC0 DECKING, INC. www.vercodeck.com



Dimensions

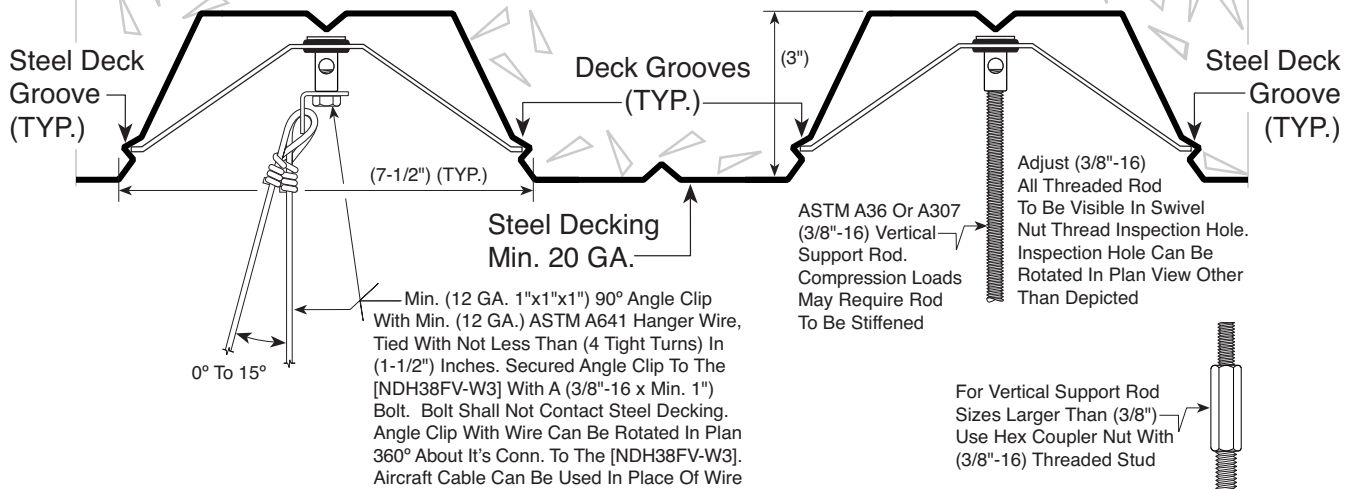




0720

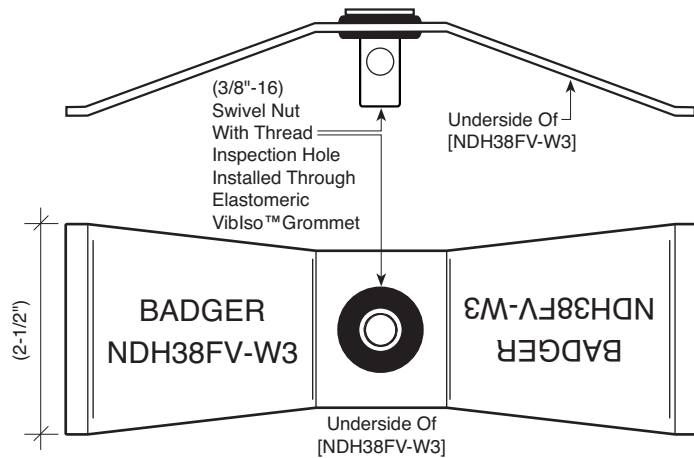
~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (*f'c* Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (NDH38FV-W3)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH38FV-W3]	[NDH38FV-W3] Maximum Capacity
Gravity (ASD)	65 lbs.
Gravity + Seismic (ASD)	130 lbs.
Gravity + Seismic (LRFD)	182 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2-1/2 in.
Minimum Edge Distance	1-1/2 in.
Capacity Not Controlled By Concrete Failure, Seismic Concrete Omega Not Required For Gravity And/Or Seismic Capacities.	
For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH38FV-W3] Does Not Impact The Listed [NDH38FV-W3] Capacities.	

BADGER INDUSTRIES [NDH38FV-W3] No-Drill™ Hanger Patented



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (1-1/2") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [NDH38FV-W3] Into One Steel Decking Groove, Aligning The Length Of The [NDH38FV-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Then Press The Opposite End Of The [NDH38FV-W3] Until The Opposite End Of The [NDH38FV-W3] Compresses And Snaps Into Its Applicable Steel Decking Groove.

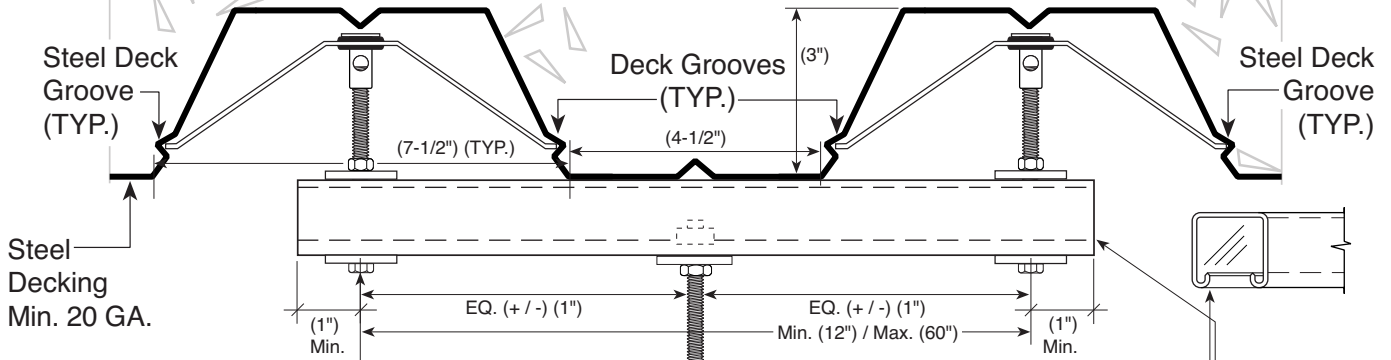
INSPECTION: Check For Engagement Of Both [NDH38FV-W3] Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [NDH38FV-W3] Body Length With The Length Of The Steel Decking Grooves. Check For Proper Attachment Of Items To The Badger [NDH38FV-W3].



0720

~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (f'c Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:

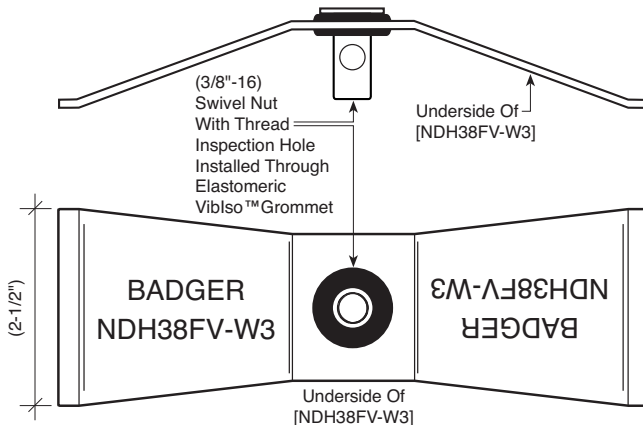


(TYP.x2) (3/8"-16) ASTM A36 Or A307 Threaded Rod Or Tap Bolt With (T&B) Hex Nut(s) And (T&B) Min. (3/16"x1-5/8") ASTM A36 Square Strut Washers. Threads To Be Visible In Inspection Hole. Threaded Rod Shall Not Contact Steel Decking. Tighten Both End Connections Evenly Until Strut Member Is In Contact Flat To Flat With Steel Decking, Do Not Over Tighten Causing Pre-Loading Of The [NDH38FV-W3] Hangers. Then Tighten Both Upper Hex Nuts With Square Washers Snug Tight

(TYP.) ASTM A36 Or A307 Vertical Support Rod With Hex Nut, Min. (3/16"x1-5/8") ASTM A36 Square Strut Washer And B-Line BN200 Strut Nut. For 3/8" Rod Size Tighten Hex Nut (19 ft. lbs.). For 1/2" Rod Size Tighten Hex Nut (50 ft. lbs.). For 5/8" Rod Size Tighten Hex Nut (50 ft. lbs.). For 3/4" Rod Size Tighten Hex Nut (50 ft. lbs.). Compression Loads May Require Vertical Support Rod To Be Stiffened. For Vertical Support Rod Off-Sets Greater Than (1") Calculate Reduced Maximum Capacity

12 GA. Min. 1-5/8"x1-5/8" Single Strut With (9/16") Round Holes, Or With Max. (9/16"x1-1/8" x 2" o.c.) Slotted Back Openings. Strut Length Can Be Installed Perpendicular Or Skewed To Steel Deck Ribs/Flutes

BADGER INDUSTRIES [NDH38FV-W3] No-Drill™ Hanger Patented



~ BADGER INDUSTRIES ~ Detail (NDH38FV-W3-DAF)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH38FV-W3]	Double [NDH38FV-W3] Maximum Capacity
Gravity (ASD)	110 lbs.
Gravity + Seismic (ASD)	220 lbs.
Gravity + Seismic (LRFD)	308 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2-1/2 in.
Minimum Edge Distance	1-1/2 in.
Capacity Not Controlled By Concrete Failure, Seismic Concrete Omega Not Required For Gravity And/Or Seismic Capacities.	
For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH38FV-W3] Does Not Impact The Listed [NDH38FV-W3] Capacities.	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (1-1/2") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [NDH38FV-W3] Into One Steel Decking Groove, Aligning The Length Of The [NDH38FV-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Then Press The Opposite End Of The [NDH38FV-W3] Until The Opposite End Of The [NDH38FV-W3] Compresses And Snaps Into Its Applicable Steel Decking Groove.

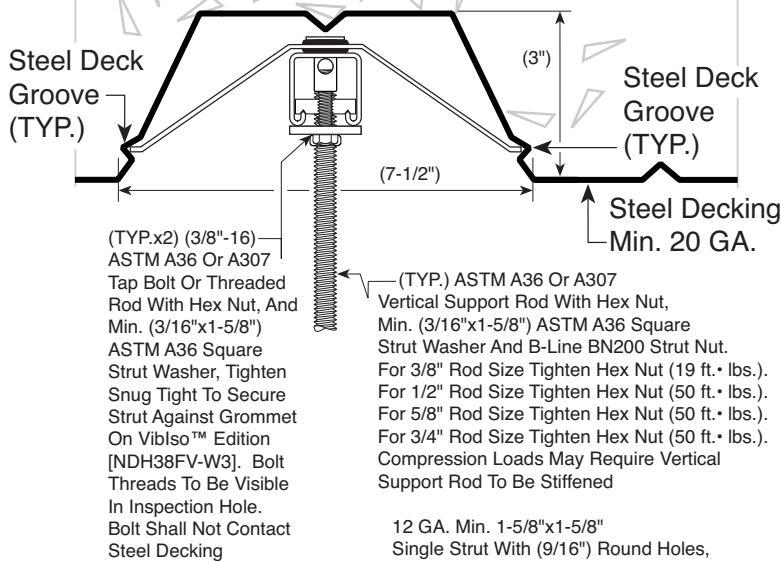
INSPECTION: Check For Engagement Of Both [NDH38FV-W3] Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [NDH38FV-W3] Body Length With The Length Of The Steel Decking Grooves. Check For Proper Attachment Of Items To The Badger [NDH38FV-W3].



0720

~ INSTALLATION DETAIL ~

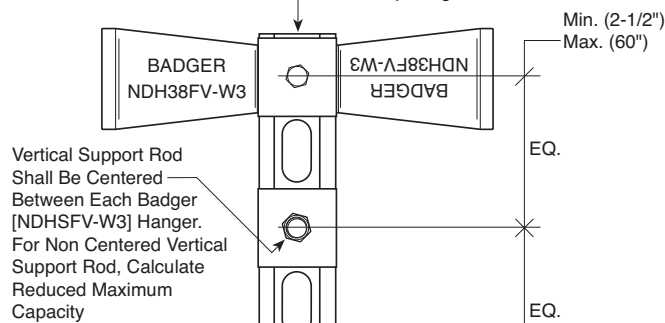
VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (*f'c* Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



(TYP.x2) (3/8"-16)
ASTM A36 Or A307
Tap Bolt Or Threaded
Rod With Hex Nut, And
Min. (3/16"x1-5/8")
ASTM A36 Square
Strut Washer, Tighten
Snug Tight To Secure
Strut Against Grommet
On VibIso™ Edition
[NDH38FV-W3]. Bolt
Threads To Be Visible
In Inspection Hole.
Bolt Shall Not Contact
Steel Decking

(TYP.) ASTM A36 Or A307
Vertical Support Rod With Hex Nut,
Min. (3/16"x1-5/8") ASTM A36 Square
Strut Washer And B-Line BN200 Strut Nut.
For 3/8" Rod Size Tighten Hex Nut (19 ft. • lbs.).
For 1/2" Rod Size Tighten Hex Nut (50 ft. • lbs.).
For 5/8" Rod Size Tighten Hex Nut (50 ft. • lbs.).
For 3/4" Rod Size Tighten Hex Nut (50 ft. • lbs.).
Compression Loads May Require Vertical
Support Rod To Be Stiffened

12 GA. Min. 1-5/8"x1-5/8"
Single Strut With (9/16") Round Holes,
Or Max. (9/16"x1-1/8" x 2" o.c.) Slotted
Back Openings



Underside Of Double
[NDH38FV-W3] With Strut Member
Assembly By Others

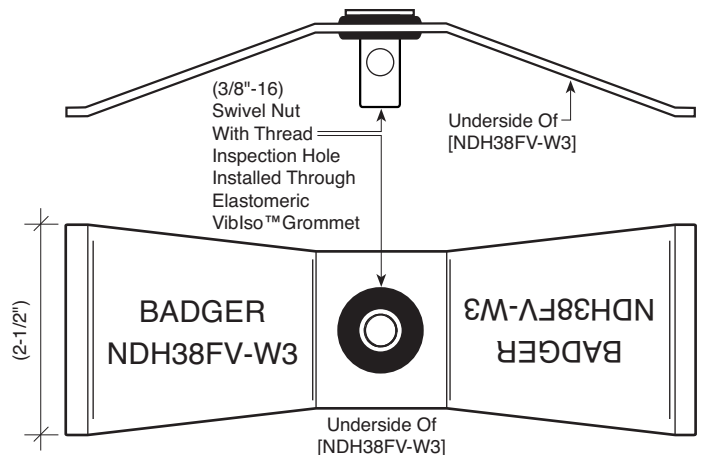
Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (1-1/2") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [NDH38FV-W3] Into One Steel Decking Groove, Aligning The Length Of The [NDH38FV-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Then Press The Opposite End Of The [NDH38FV-W3] Until The Opposite End Of The [NDH38FV-W3] Compresses And Snaps Into Its Applicable Steel Decking Groove.

INSPECTION: Check For Engagement Of Both [NDH38FV-W3] Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [NDH38FV-W3] Body Length With The Length Of The Steel Decking Grooves. Check For Proper Attachment Of Items To The Badger [NDH38FV-W3].

~ BADGER INDUSTRIES ~ Detail (NDH38FV-W3-DSF)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH38FV-W3]	Double [NDH38FV-W3] Maximum Capacity
Gravity (ASD)	130 lbs.
Gravity + Seismic (ASD)	255 lbs.
Gravity + Seismic (LRFD)	360 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2-1/2 in.
Minimum Edge Distance	1-1/2 in.
Capacity Not Controlled By Concrete Failure, Seismic Concrete Omega Not Required For Gravity And/Or Seismic Capacities.	
For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH38FV-W3] Does Not Impact The Listed [NDH38FV-W3] Capacities.	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

BADGER INDUSTRIES [NDH38FV-W3] No-Drill™ Hanger Patented

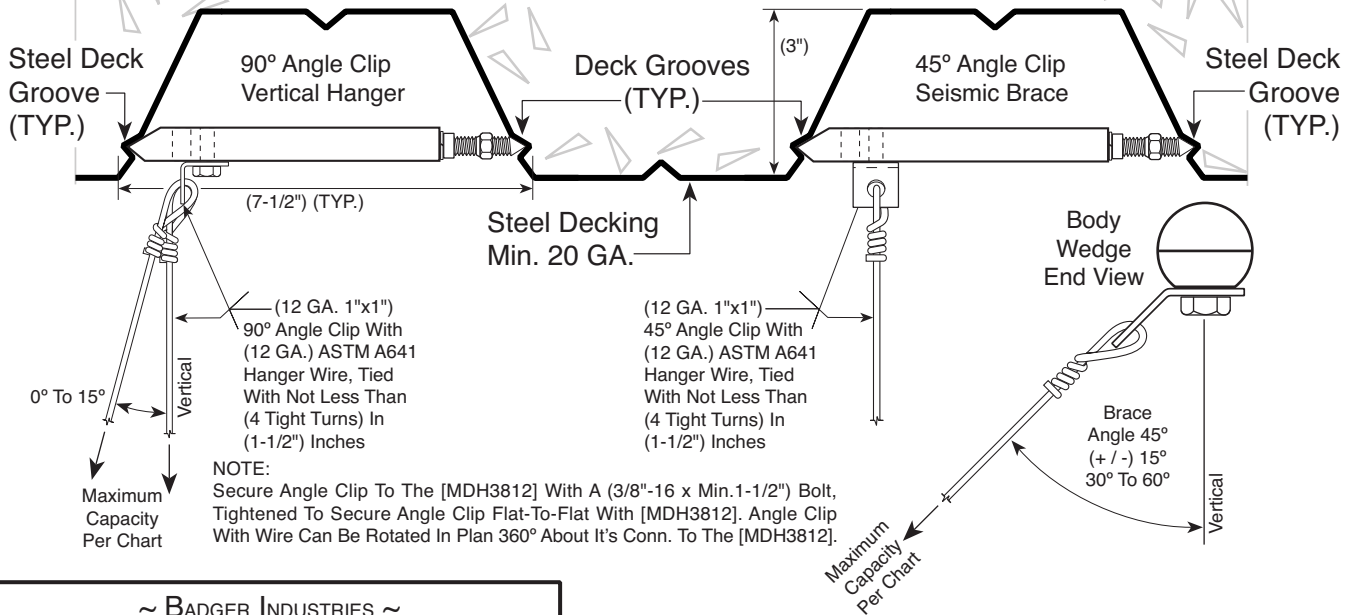




0720

~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (f'c Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (MDH3812-W3CW)

BADGER INDUSTRIES

No-Drill™ Hanger

Part # [MDH3812]

Hole "A" = (1/2"-13)

Hole "B" = (3/8"-16)

[MDH3812]
Maximum
Capacity

90° Angle Clip Vertical Hanger (ASD) **175 lbs.**

45° Angle Clip Seismic Brace (ASD) **175 lbs.**

45° Angle Clip Seismic Brace (LRFD) **245 lbs.**

Minimum Between Spacing
See Detail (BNDH-MBS) **2 in.**

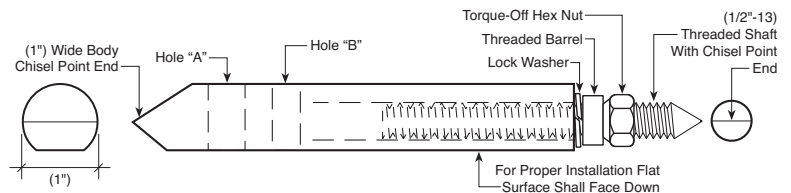
Minimum Edge Distance **6 in.**

Listed Capacities Controlled By Failure Of Identified 12 GA. Wire, Not By Concrete Failure. Thus Seismic Concrete Omega Not Required. Use Of Stronger Wire Or Alternate Materials (ie; Aircraft Cable) Will Require Seismic Concrete Omega To Be Included When Determining Seismic Design Demand.

Depicted Angle Clip Assemblies Can Be Rotated In Plan 360° About Their Conn. To The [MDH3812].

Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.

BADGER INDUSTRIES
[MDH3812]
No-Drill™ Hanger
Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. lbs.) Of Torque Is Required.

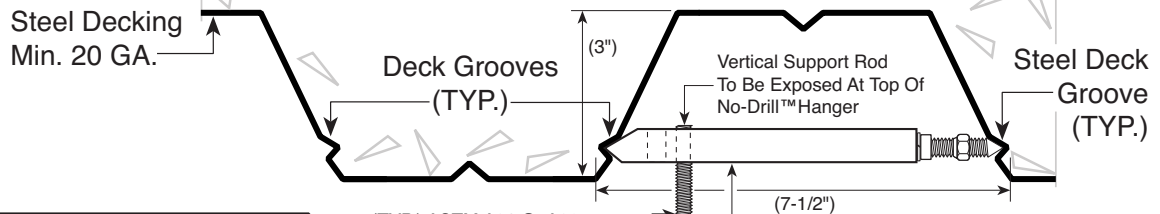
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



0720

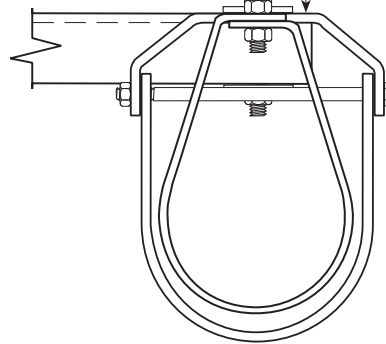
~ INSTALLATION DETAIL ~

**VERCO - W3 FORMLOK™ or PLW3,
Steel Decking - With ($f'c$ Min = 3,000 psi)
Sand-Lightweight Or Normal Weight**



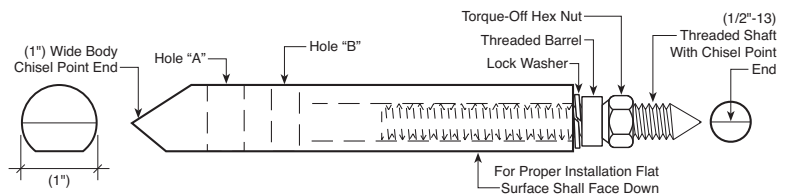
(TYP.) ASTM A36 Or A307
Vertical Support Rod Per (MRL).
Vertical Support Rod Shall Not
Contact Decking. Compression
Loads May Require Vertical
Support Rod To Be Stiffened

(TYP.) (MRL) Minimum Rod Length
To Be Measured From Underside Of
[MDH3812] To Top Of Pipe Hanger,
Top Of Trapeze Or Top Of Equipment
Unit That Rod Is Connected To.
(MRL) 3/8"-16 Rod = (8")
(MRL) 1/2"-13 Rod = (18")
(MRL) Not Required For Wire,
Cable Or Sheet Metal Strap
Hangers



NOTE:
Vertical Support Hangers Shall Be
Per Approved Project Construction
Documents, Which May Differ From
The Examples Depicted Within This
Detail. Hanger Can Be Rotated In
Plan 360° About It's Conn. To Vertical
Support Rod

**BADGER INDUSTRIES
[MDH3812]
No-Drill™ Hanger
Patent #9,850,659**



~ BADGER INDUSTRIES ~ Detail (MDH3812-W3)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812] Hole "A" = (1/2"-13) Hole "B" = (3/8"-16)	
[MDH3812] Maximum Capacity	
Gravity (ASD)	200 lbs.
Gravity + Seismic (ASD)	400 lbs.
Gravity + Seismic (LRFD)	560 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega. Seismic Concrete Omega Not Required For Gravity Only Usage. For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load. Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.	

Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

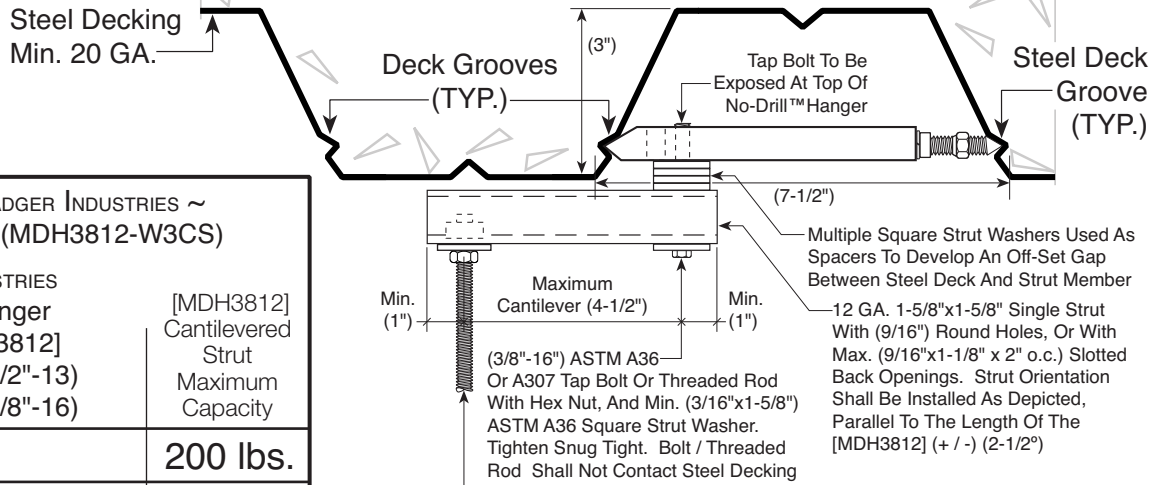
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



0720

~ INSTALLATION DETAIL ~

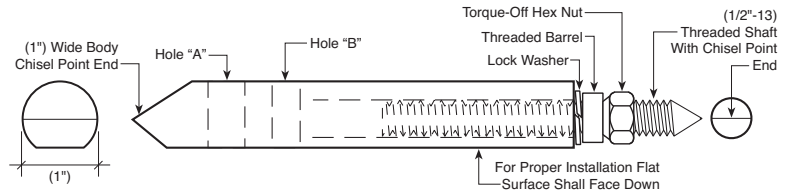
VERCO - W3 FORMLOK™ or PLW3, Steel Decking - With (*f'c* Min = 3,000 psi) Sand-Lightweight Or Normal Weight



~ BADGER INDUSTRIES ~ Detail (MDH3812-W3CS)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812] Hole "A" = (1/2"-13) Hole "B" = (3/8"-16)	[MDH3812] Cantilevered Strut Maximum Capacity
Gravity (ASD)	200 lbs.
Gravity + Seismic (ASD)	400 lbs.
Gravity + Seismic (LRFD)	560 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall Not Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

(7-1/2")
Multiple Square Strut Washers Used As Spacers To Develop An Off-Set Gap Between Steel Deck And Strut Member
12 GA. 1-5/8"x1-5/8" Single Strut With (9/16") Round Holes, Or With Max. (9/16"x1-1/8" x 2" o.c.) Slotted Back Openings. Strut Orientation Shall Be Installed As Depicted, Parallel To The Length Of The [MDH3812] (+ / -) (2-1/2")
Min. (1")
Maximum Cantilever (4-1/2")
Min. (1")
(3/8"-16") ASTM A36 Or A307 Tap Bolt Or Threaded Rod With Hex Nut, And Min. (3/16"x1-5/8") ASTM A36 Square Strut Washer. Tighten Snug Tight. Bolt / Threaded Rod Shall Not Contact Steel Decking
(TYP.) ASTM A36 Or A307 Vertical Support Rod With Hex Nut, Min. (3/16"x1-5/8") ASTM A36 Square Strut Washer And B-Line BN200 Strut Nut.
For 3/8" Rod Size Tighten Hex Nut (19 ft. • lbs.).
For 1/2" Rod Size Tighten Hex Nut (50 ft. • lbs.).
For 5/8" Rod Size Tighten Hex Nut (50 ft. • lbs.).
For 3/4" Rod Size Tighten Hex Nut (50 ft. • lbs.).
Compression Loads May Require Vertical Support Rod To Be Stiffened

BADGER INDUSTRIES [MDH3812] No-Drill™ Hanger Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

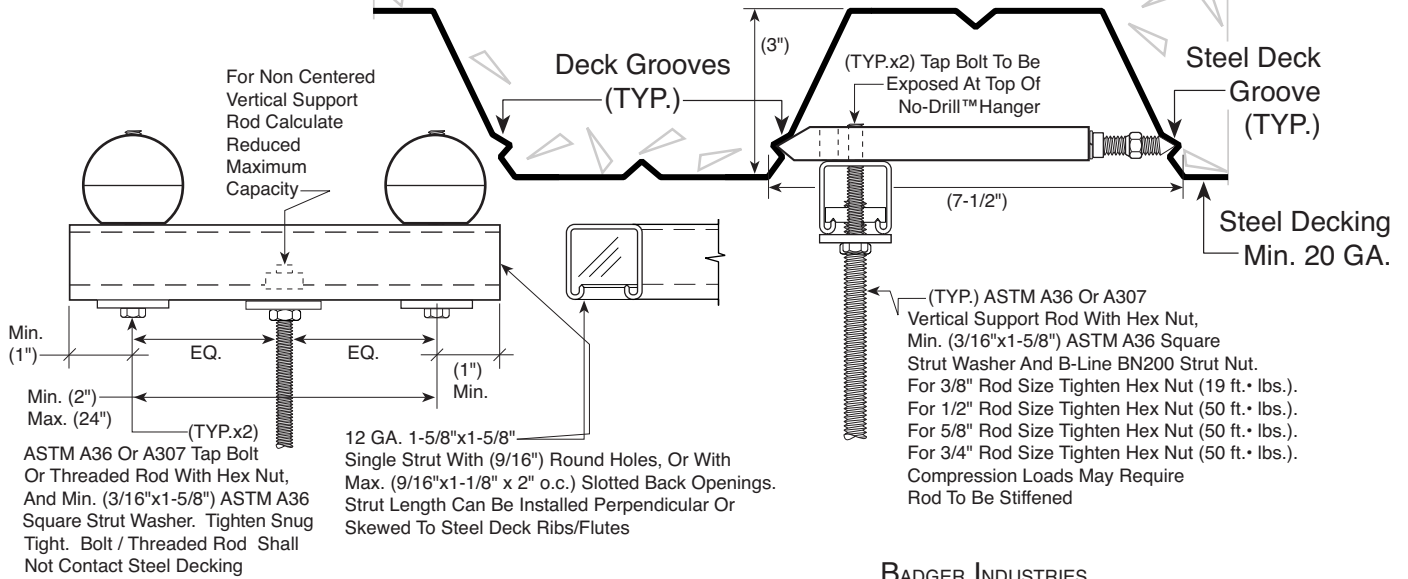
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



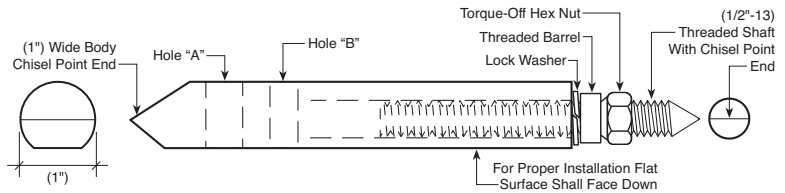
0720

~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking - With ($f'c$ Min = 3,000 psi) Sand-Lightweight Or Normal Weight



BADGER INDUSTRIES
[MDH3812]
No-Drill™ Hanger
Patent #9,850,659



~ BADGER INDUSTRIES ~ Detail (MDH3812-W3-DSF)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812] Hole "A" = (1/2"-13) Hole "B" = (3/8"-16)	Double [MDH3812] Maximum Capacity
Gravity (ASD)	400 lbs.
Gravity + Seismic (ASD)	760 lbs.
Gravity + Seismic (LRFD)	1,064 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Included Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

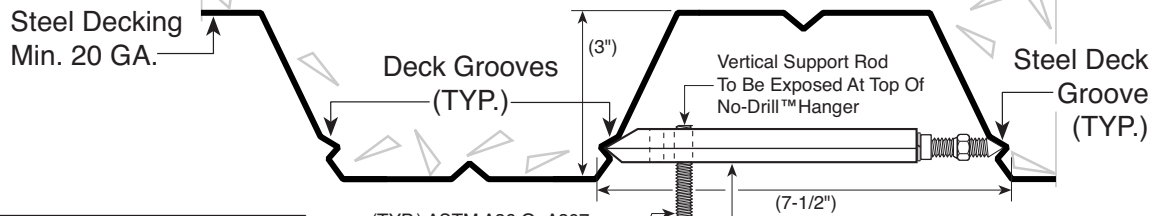
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



0720

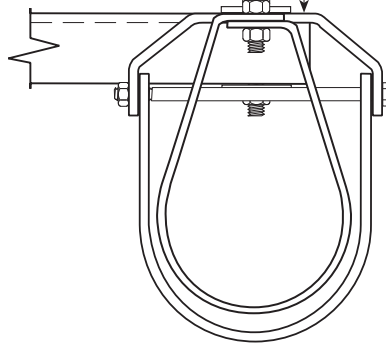
~ INSTALLATION DETAIL ~

**VERCO - W3 FORMLOK™ or PLW3,
Steel Decking - With ($f'c$ Min = 3,000 psi)
Sand-Lightweight Or Normal Weight**



(TYP.) ASTM A36 Or A307
Vertical Support Rod Per (MRL).
Vertical Support Rod Shall Not
Contact Decking. Compression
Loads May Require Vertical
Support Rod To Be Stiffened

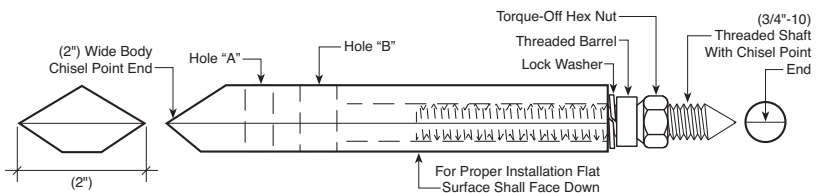
(TYP.) (MRL) Minimum Rod Length
To Be Measured From Underside Of
[MDH1258] To Top Of Pipe Hanger,
Top Of Trapeze Or Top Of Equipment
Unit That Rod Is Connected To.
(MRL) 1/2"-13 Rod = (8")
(MRL) 5/8"-11 Rod = (18")
(MRL) Not Required For Wire,
Cable Or Sheet Metal Strap
Hangers



NOTE:
Vertical Support Hangers Shall Be
Per Approved Project Construction
Documents, Which May Differ From
The Examples Depicted Within This
Detail. Hanger Can Be Rotated In
Plan 360° About It's Conn. To
Vertical Support Rod

~ BADGER INDUSTRIES ~ Detail (MDH1258-W3)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH1258] Hole "A" = (1/2"-13) Hole "B" = (5/8"-11)	[MDH1258] Maximum Capacity
Gravity (ASD)	300 lbs.
Gravity + Seismic (ASD)	600 lbs.
Gravity + Seismic (LRFD)	840 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	3 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH1258] Does Not Impact The Listed [MDH1258] Capacities.	

BADGER INDUSTRIES
[MDH1258]
No-Drill™ Hanger
Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH1258] Into One Steel Decking Groove, Aligning The Length Of The [MDH1258] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH1258] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (20 ft. • lbs.) Of Torque Is Required.

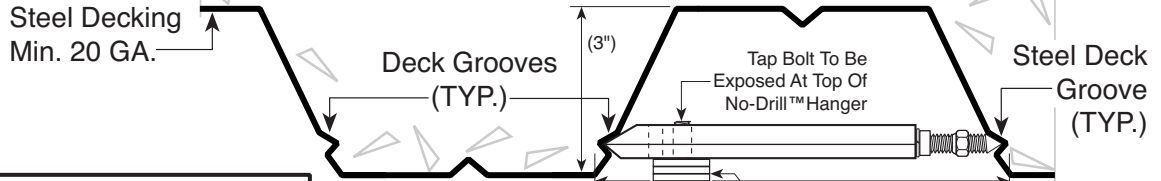
INSPECTION: Check For Engagement Of Both [MDH1258] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH1258] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH1258].



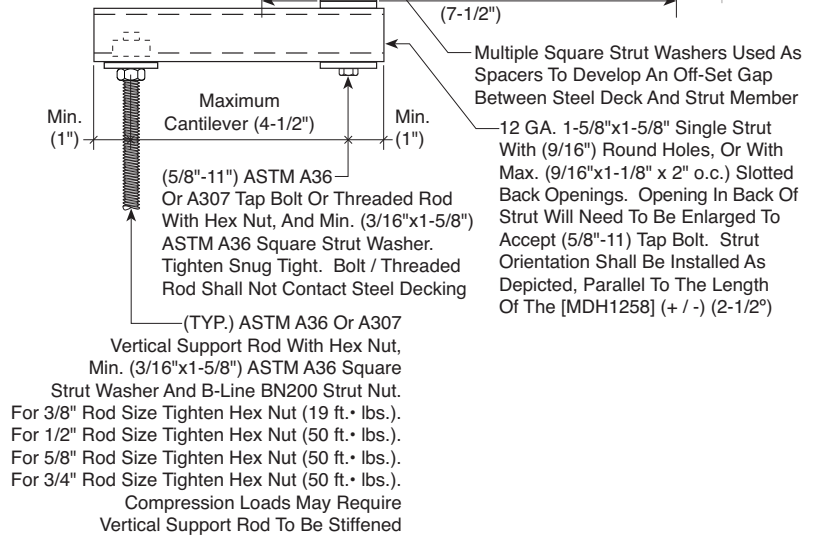
0720

~ INSTALLATION DETAIL ~

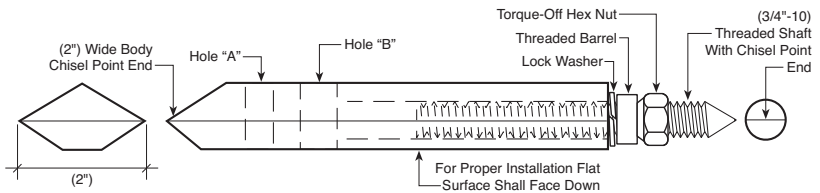
VERCO - W3 FORMLOK™ or PLW3, Steel Decking - With (*f'c* Min = 3,000 psi) Sand-Lightweight Or Normal Weight



~ BADGER INDUSTRIES ~ Detail (MDH1258-W3CS)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH1258] Hole "A" = (1/2"-13) Hole "B" = (5/8"-11)	[MDH1258] Cantilevered Strut Maximum Capacity
Gravity (ASD)	300 lbs.
Gravity + Seismic (ASD)	600 lbs.
Gravity + Seismic (LRFD)	840 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	3 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall Not Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH1258] Does Not Impact The Listed [MDH1258] Capacities.	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	



BADGER INDUSTRIES
[MDH1258]
No-Drill™ Hanger
Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH1258] Into One Steel Decking Groove, Aligning The Length Of The [MDH1258] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH1258] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (20 ft. • lbs.) Of Torque Is Required.

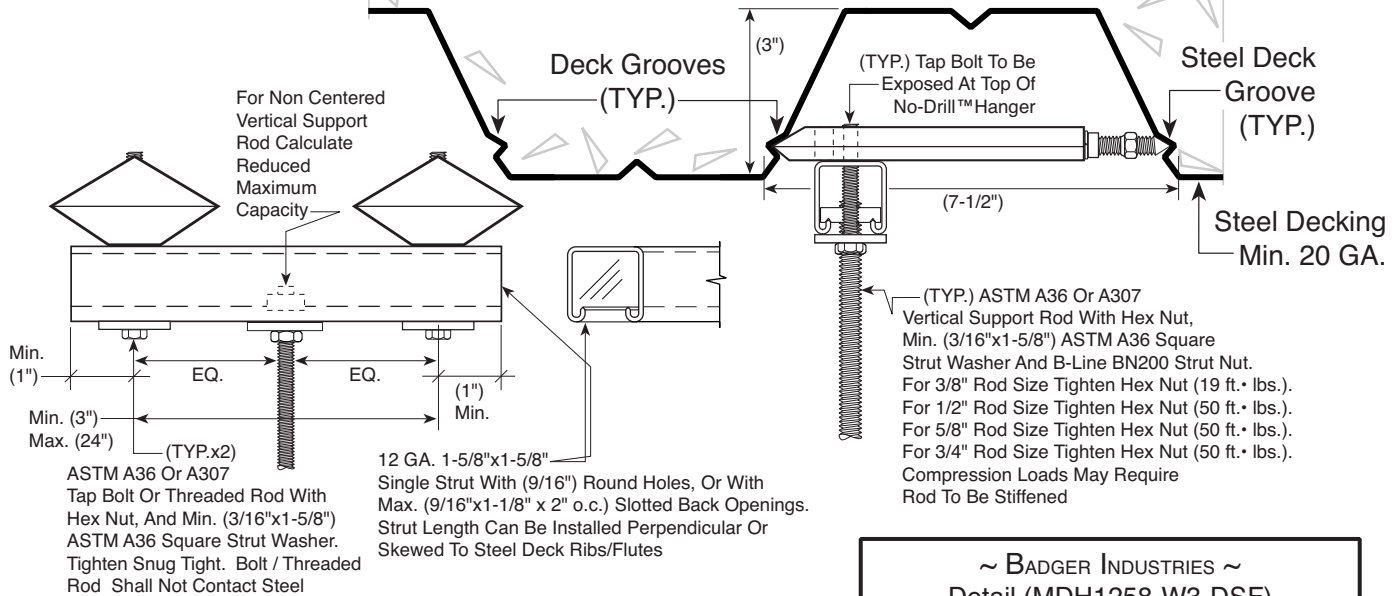
INSPECTION: Check For Engagement Of Both [MDH1258] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH1258] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH1258].



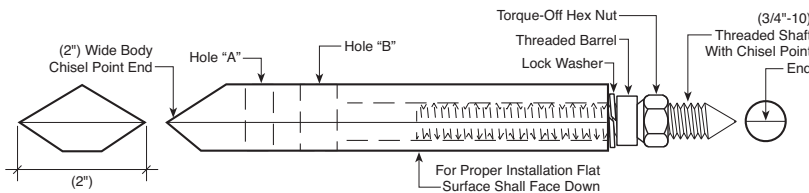
0720

~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking - With (f'c Min = 3,000 psi) Sand-Lightweight Or Normal Weight



BADGER INDUSTRIES
[MDH1258]
No-Drill™ Hanger
Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH1258] Into One Steel Decking Groove, Aligning The Length Of The [MDH1258] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH1258] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (20 ft. • lbs.) Of Torque Is Required.

INSPECTION: Check For Engagement Of Both [MDH1258] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH1258] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH1258].

~ BADGER INDUSTRIES ~ Detail (MDH1258-W3-DSF)

BADGER INDUSTRIES
No-Drill™ Hanger
Part # [MDH1258]
Hole "A" = (1/2"-13)
Hole "B" = (5/8"-11)

Double
[MDH1258]
Maximum
Capacity

Gravity (ASD)	600 lbs.
Gravity + Seismic (ASD)	1,200 lbs.
Gravity + Seismic (LRFD)	1,680 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	3 in.
Minimum Edge Distance	6 in.

Listed Seismic Capacities Do Not Include Seismic Concrete Omega.

Seismic Concrete Omega Not Required For Gravity Only Usage.

For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.

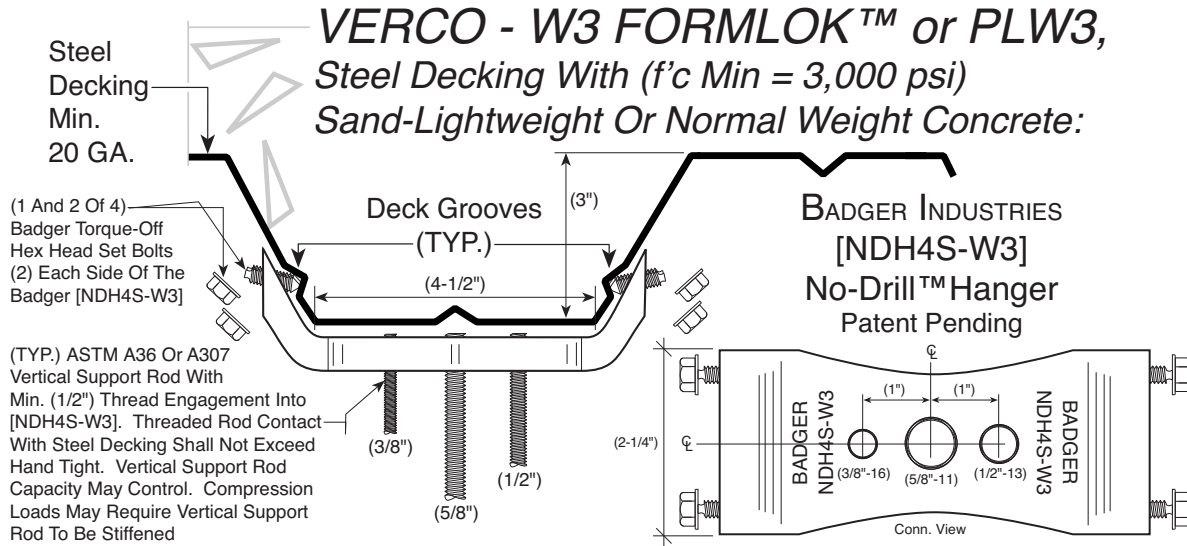
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH1258] Does Not Impact The Listed [MDH1258] Capacities.

Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.



~ INSTALLATION DETAIL ~

0720



~ BADGER INDUSTRIES ~ Detail (NDH4S-W3)				
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	[NDH4S-W3] Maximum Capacity	Reduced Between Spacing [NDH4S-W3] Maximum Capacity	Reduced Between Spacing [NDH4S-W3] Maximum Capacity	Reduced Between Spacing [NDH4S-W3] Maximum Capacity
Gravity (ASD)	730 lbs.	630 lbs.	570 lbs.	470 lbs.
Gravity + Seismic (ASD)	1,460 lbs.	1,260 lbs.	1,140 lbs.	940 lbs.
Gravity + Seismic (LRFD)	2,044 lbs.	1,764 lbs.	1,596 lbs.	1,316 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	16 in.	10 in.	6 in.	2-1/4 in.
Minimum Edge Distance	6 in.	6 in.	6 in.	6 in.

Listed Seismic Capacities Do Not Included Seismic Concrete Omega.
Seismic Concrete Omega Not Required For Gravity Only Usage.

For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.

Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute. Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities.

Notice:

INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. • lbs.) Of Torque Is Required. Prior To Connection Of A Vertical Threaded Rod Or Other Item, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

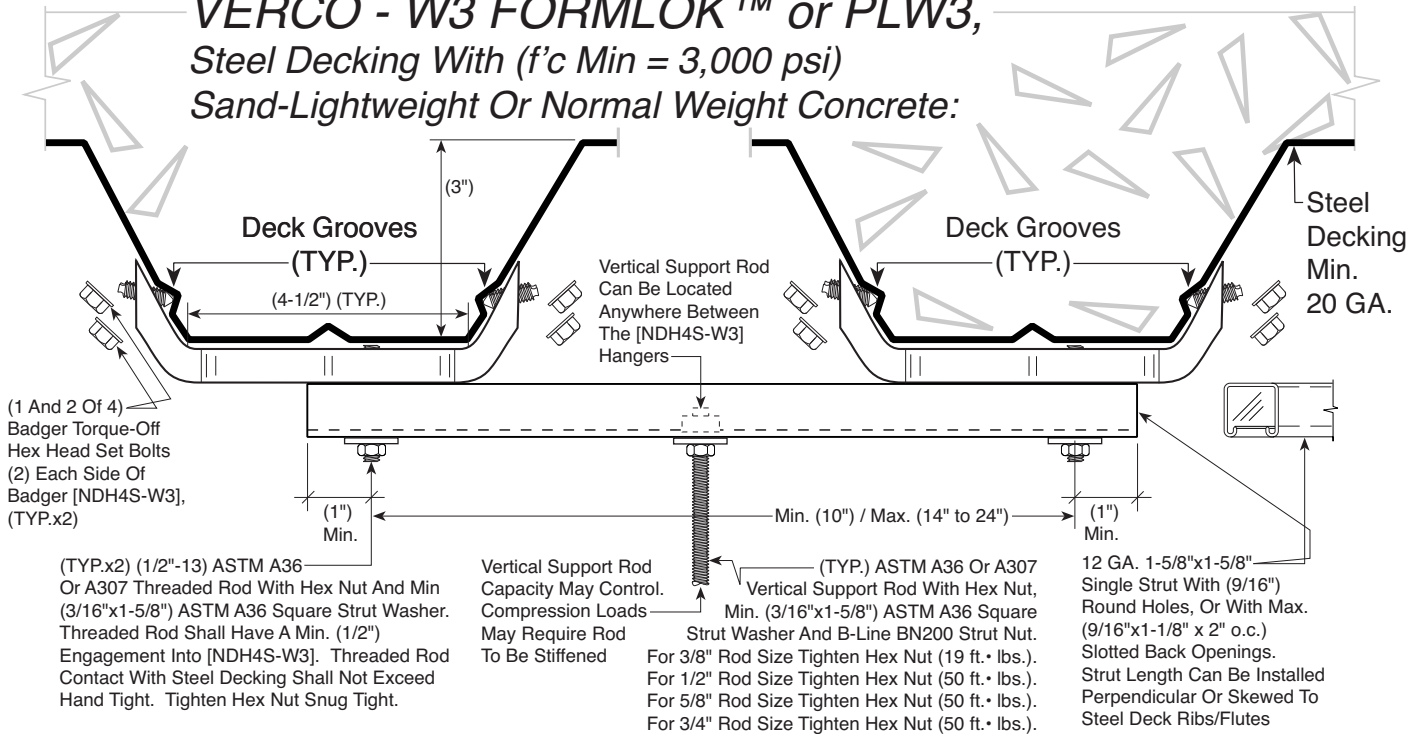
INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].



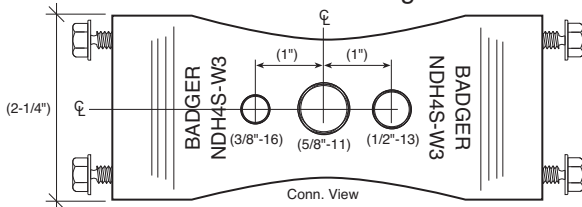
~ INSTALLATION DETAIL ~

0720

**VERCO - W3 FORMLOK™ or PLW3,
Steel Decking With (f'c Min = 3,000 psi)
Sand-Lightweight Or Normal Weight Concrete:**



**BADGER INDUSTRIES
[NDH4S-W3]
No-Drill™ Hanger
Patent Pending**



~ BADGER INDUSTRIES ~
Detail (NDH4S-W3-DAF)

BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	Maximum Span (24") Vertical Hanger Maximum Capacity	Maximum Span (14") Vertical Hanger Maximum Capacity
Gravity (ASD)	728 lbs.	728 lbs.
Gravity + Seismic (ASD)	760 lbs.	1,300 lbs.
Gravity + Seismic (LRFD)	1,064 lbs.	1,820 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	16 in.	
Minimum Edge Distance	6 in.	

Notice:

INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. lbs.) Of Torque Is Required. Prior To Connection Of A Vertical Threaded Rod Or Other Item, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].

Listed Seismic Capacities Do Not Include Seismic Concrete Omega.

Seismic Concrete Omega Not Required For Gravity Only Usage.

For Gravity + Seismic Loadings, The Gravity Demand Shall Not Exceed The Gravity Only Allowable Load.

Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute. Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities.

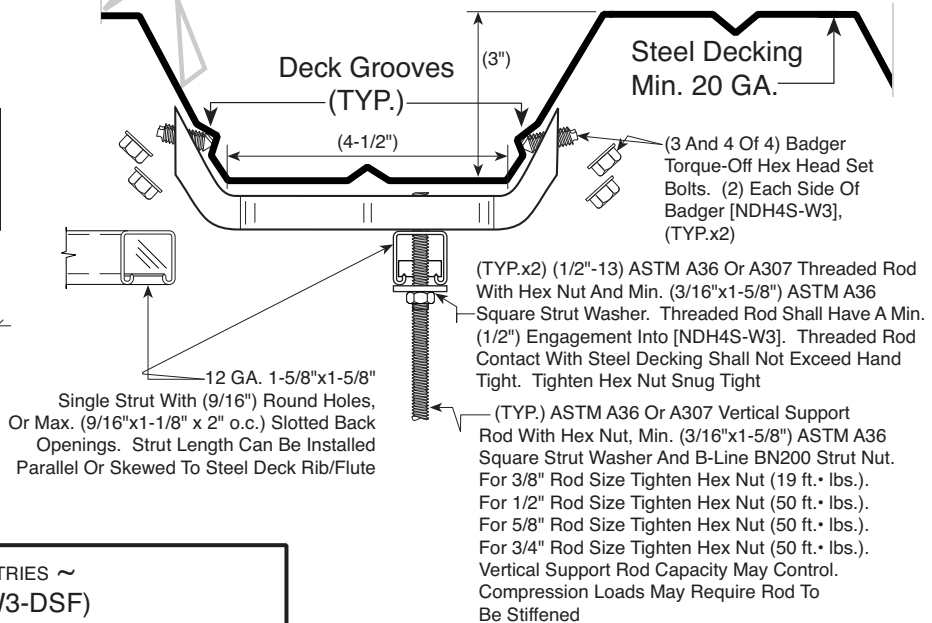
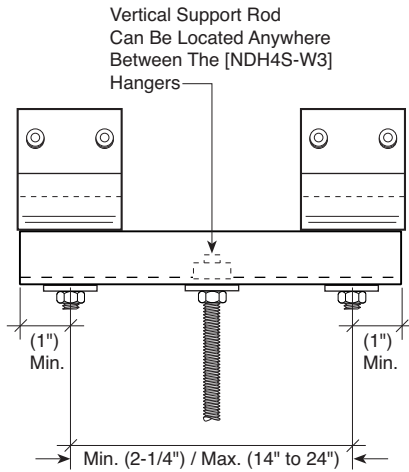
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.



0720

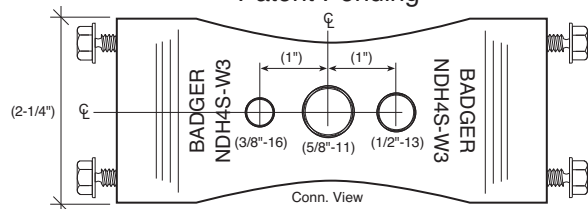
~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (f'c Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (NDH4S-W3-DSF)		
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	Maximum Span (24") Vertical Hanger Maximum Capacity	Maximum Span (14") Vertical Hanger Maximum Capacity
Gravity (ASD)	728 lbs.	728 lbs.
Gravity + Seismic (ASD)	760 lbs.	1,300 lbs.
Gravity + Seismic (LRFD)	1,064 lbs.	1,820 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	16 in.	
Minimum Edge Distance	6 in.	
Listed Seismic Capacities Do Not Included Seismic Concrete Omega. Seismic Concrete Omega Not Required For Gravity Only Usage. For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load. Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute. Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities. Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.		

BADGER INDUSTRIES [NDH4S-W3] No-Drill™ Hanger Patent Pending



Notice:

INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/OR Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. lbs.) Of Torque Is Required. Prior To Connection Of A Vertical Threaded Rod Or Other Item, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

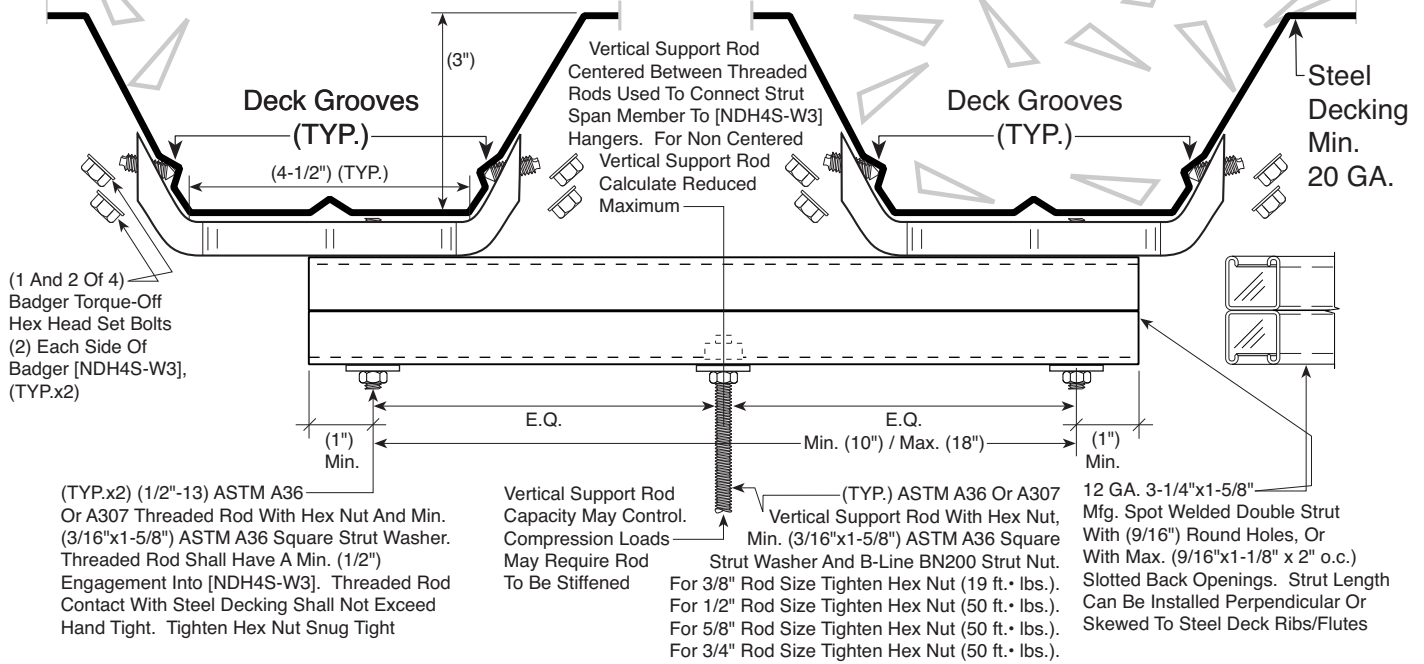
INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].



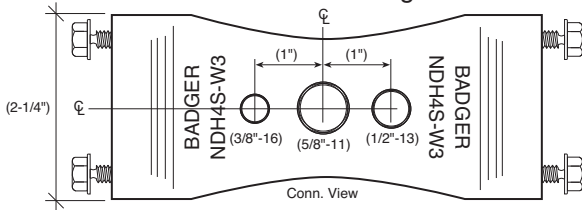
~ INSTALLATION DETAIL ~

0720

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (*f'c* Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



BADGER INDUSTRIES [NDH4S-W3] No-Drill™ Hanger Patent Pending



Notice:

INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. • lbs.) Of Torque Is Required. Prior To Connection Of A Vertical Threaded Rod Or Other Item, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].

~ BADGER INDUSTRIES ~ Detail (NDH4S-W3-DAFDS)

BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	Centered Vertical Hanger Maximum Capacity
Gravity (ASD)	1,445 lbs.
Gravity + Seismic (ASD)	2,845 lbs.
Gravity + Seismic (LRFD)	3,985 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	16 in.
Minimum Edge Distance	6 in.

Listed Seismic Capacities Do Not Included Seismic Concrete Omega.

Seismic Concrete Omega Not Required For Gravity Only Usage.

For Gravity + Seismic Loadings, The Gravity Demand Shall Not Exceed The Gravity Only Allowable Load.

Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute. Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities.

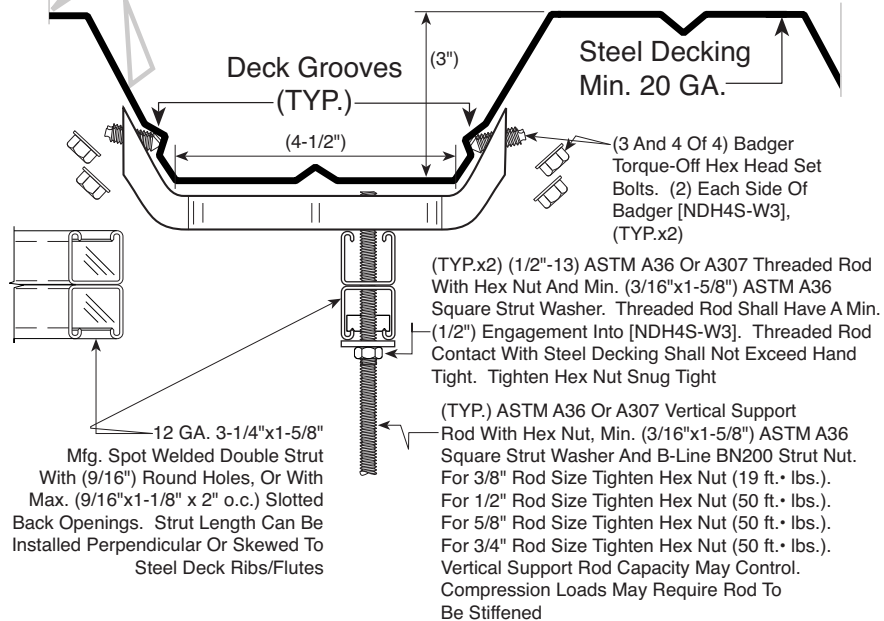
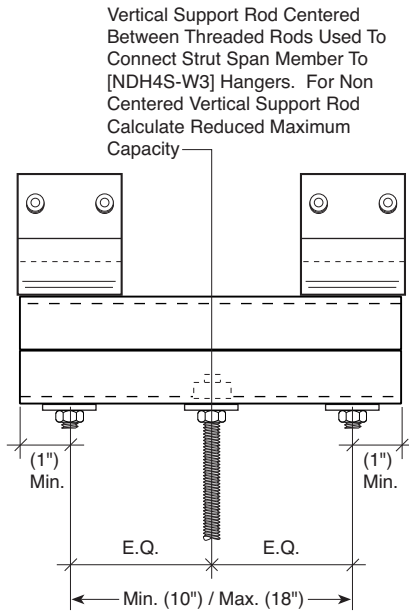
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.



0720

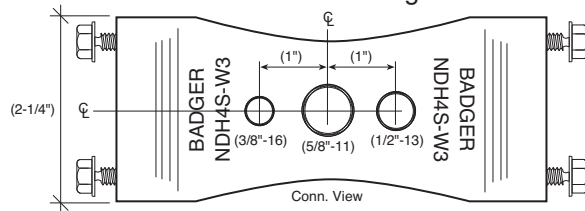
~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (*f'c* Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (NDH4S-W3-DSFDS)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	Centered Vertical Hanger Maximum Capacity
Gravity (ASD)	1,445 lbs.
Gravity + Seismic (ASD)	2,845 lbs.
Gravity + Seismic (LRFD)	3,985 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	16 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall Not Exceed The Gravity Only Allowable Load.	
Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute. Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities.	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

BADGER INDUSTRIES [NDH4S-W3] No-Drill™ Hanger Patent Pending



Notice:

INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. • lbs.) Of Torque Is Required. Prior To Connection Of A Vertical Threaded Rod Or Other Item, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

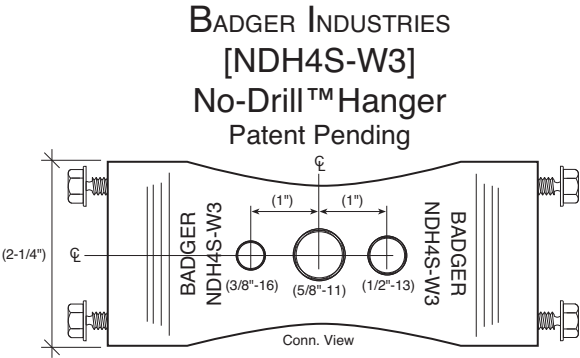
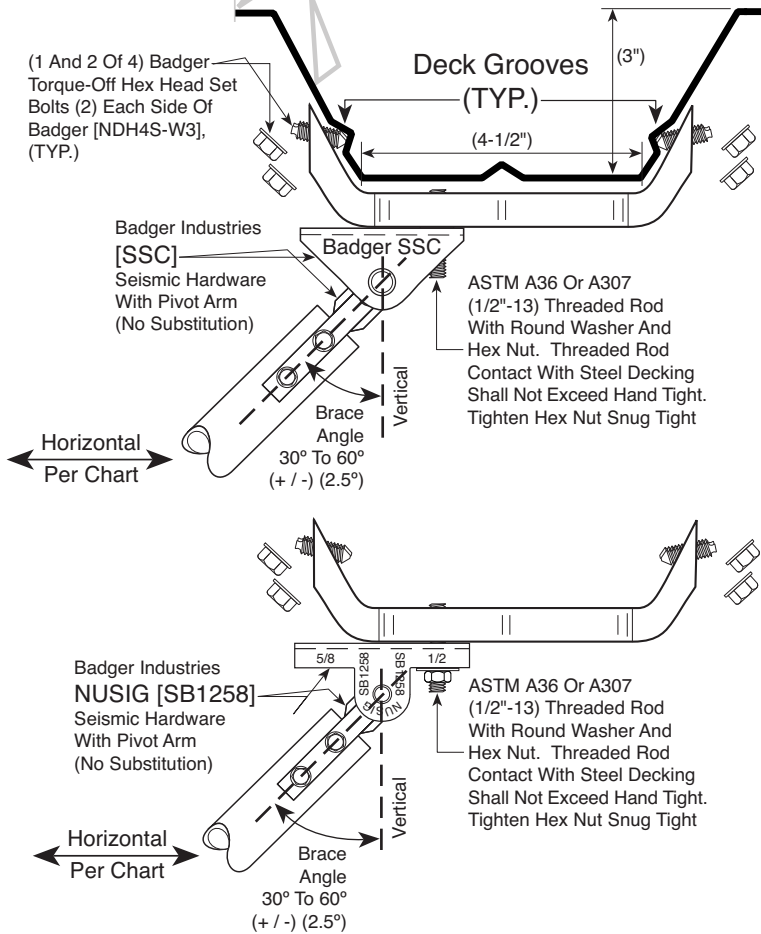
INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].



0720

~ INSTALLATION DETAIL ~

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With ($f'c$ Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (RSB-NDH4S-W3)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	Brace Angle 30° to 60° Maximum Horizontal
Seismic Brace (ASD)	913 lbs.
Seismic Brace (LRFD)	1,278 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	24 in.
Minimum Edge Distance	12 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega.	
Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities.	
For Between Spacings Of Less Than (24"), The Combined Design Demand Of Multiple [NDH4S-W3] Hangers Shall Not Exceed The Capacity Of A Single [NDH4S-W3].	
Depicted Seismic Brace Assemblies Can Be Rotated In Plan 360° About Their Conn. To The [NDH4S-W3].	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

Notice:

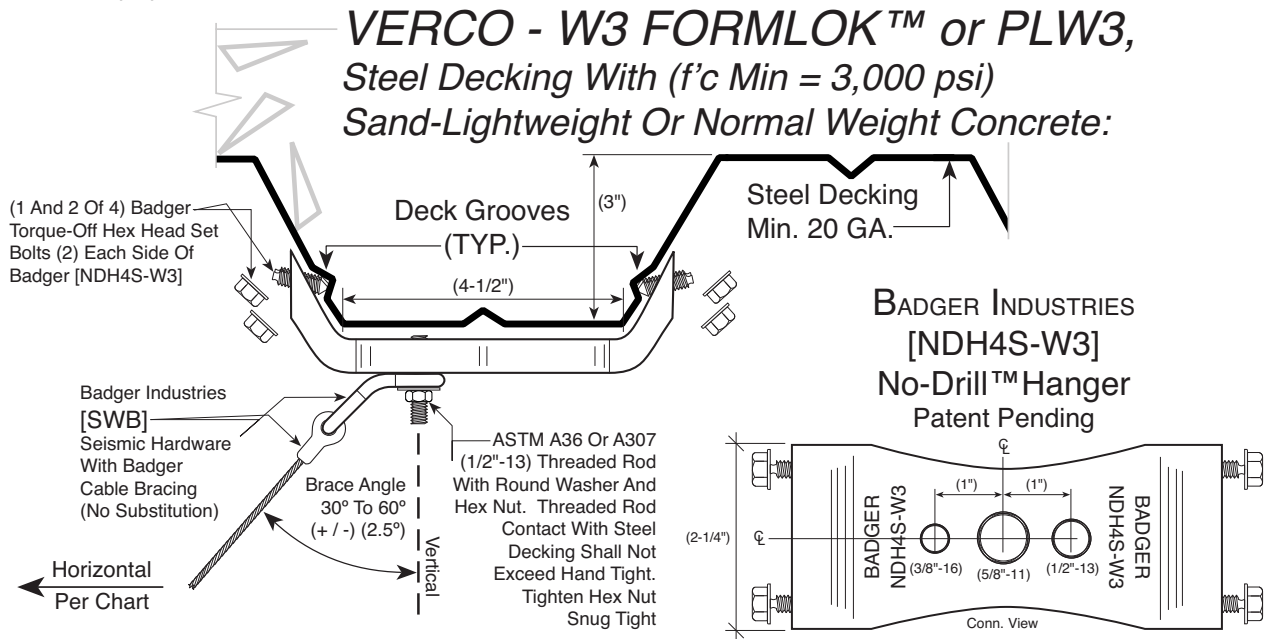
INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. • lbs.) Of Torque Is Required. Prior To Connection Of Seismic Hardware, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].



0720

~ INSTALLATION DETAIL ~



~ BADGER INDUSTRIES ~ Detail (CSB-NDH4S-W3)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	Brace Angle 30° to 60° Maximum Horizontal
Seismic Brace (ASD)	913 lbs.
Seismic Brace (LRFD)	1,278 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	24 in.
Minimum Edge Distance	12 in.
<p>Listed Seismic Capacities Do Not Included Seismic Concrete Omega.</p> <p>Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute.</p> <p>Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities.</p> <p>For Between Spacings Of Less Than (24"), The Combined Design Demand Of Multiple [NDH4S-W3] Hangers Shall Not Exceed The Capacity Of A Single [NDH4S-W3].</p> <p>Depicted Seismic Brace Assemblies Can Be Rotated In Plan 360° About Their Conn. To The [NDH4S-W3].</p> <p>Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.</p>	

Notice:

INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. • lbs.) Of Torque Is Required. Prior To Connection Of Seismic Hardware, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

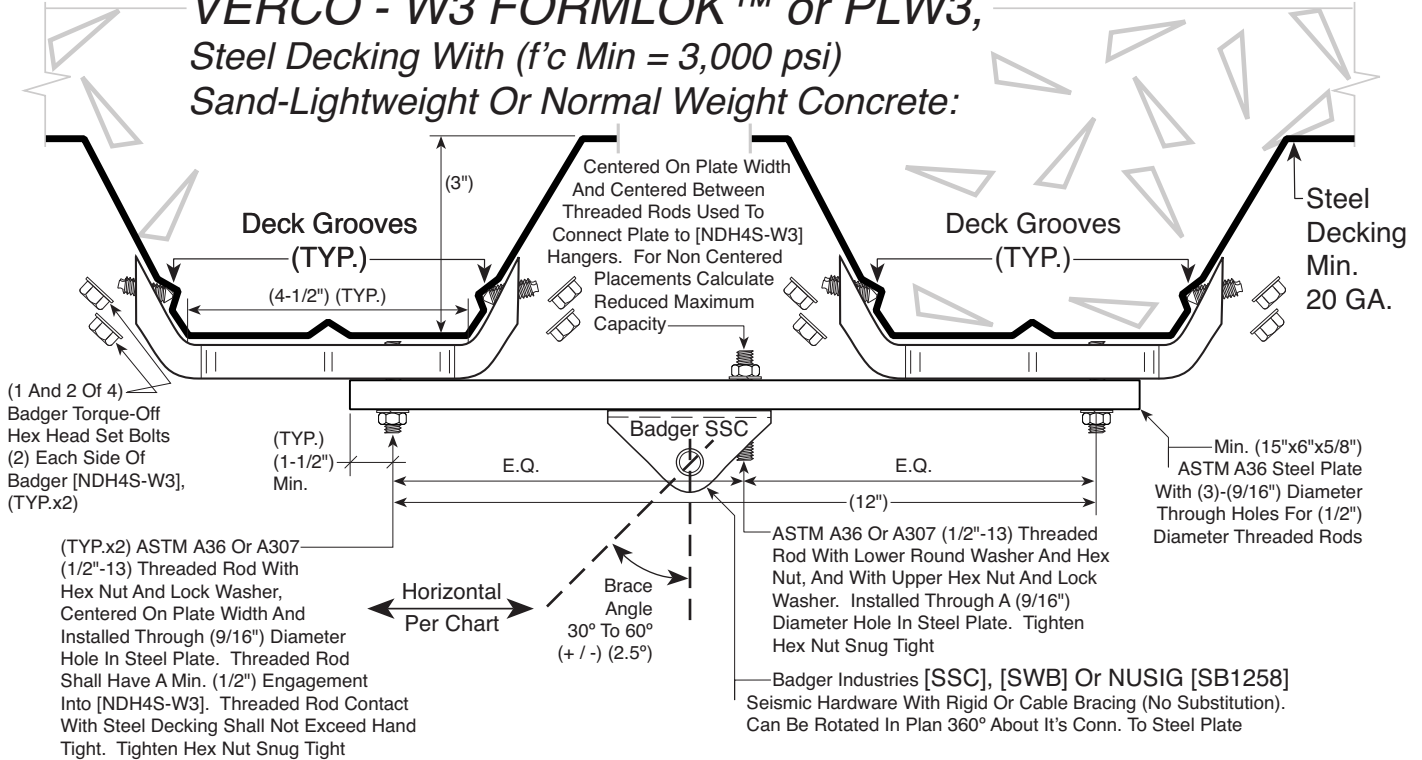
INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].



~ INSTALLATION DETAIL ~

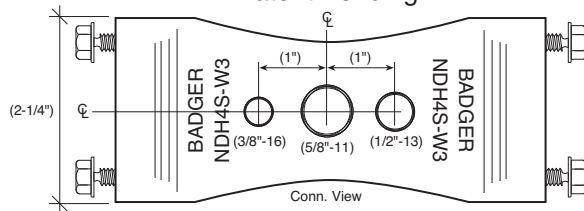
0720

VERCO - W3 FORMLOK™ or PLW3, Steel Decking With (f'c Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (SB-NDH4S-W3-DAF)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [NDH4S-W3]	Brace Angle 30° to 60° Maximum Horizontal
Seismic Brace (ASD)	1,826 lbs.
Seismic Brace (LRFD)	2,556 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	24 in.
Seismic Brace (LRFD)	12 in.
Listed Seismic Capacities Do Not Included Seismic Concrete Omega.	
Minimum Between Spacings Applies To [NDH4S-W3] Hangers Located Along The Same Decking Rib/Flute.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [NDH4S-W3] Does Not Impact The Listed [NDH4S-W3] Capacities.	
Depicted Seismic Brace Assemblies Can Be Rotated In Plan 360° About Their Conn. To The [NDH4S-W3].	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

BADGER INDUSTRIES [NDH4S-W3] No-Drill™ Hanger Patent Pending



Notice:

INSTALLATION: Grooves Shall Be Located On The Adjacent Side Webs Of The Same Steel Decking Rib/Flute, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Prior To Placement Of The Badger [NDH4S-W3] Confirm That All (4) Of The Provided Badger Torque-Off Set Bolts Are Installed Into The Body Of The [NDH4S-W3] With Their Pointed Ends Retracted So That They Are Not Exposed Beyond The Body Of The [NDH4S-W3]. Place The Badger [NDH4S-W3] Onto The Underside Of An Individual Steel Decking Rib/Flute, Aligning The Length Of The [NDH4S-W3] To Be Perpendicular To The Length Of The Steel Decking Grooves. Hand Tighten Equally And Alternately Each Of The (4) Retracted Badger Torque-Off Hex Head Set Bolts Making Sure That The Pointed End Of Each Individual Set Bolt Is Engaged Into A Steel Decking Groove. While Holding The [NDH4S-W3] In Place Continue Tightening The Set Bolts Equally And Alternately (Using A Box End Wrench) Until The Hex Head Breaks Away From Each Of The (4) Set Bolts. For Reference A Minimum (10 ft. • lbs.) Of Torque Is Required. Prior To Connection Of A Vertical Threaded Rod Or Other Item, Check To Confirm That The [NDH4S-W3] Is Properly Aligned With The Steel Decking, And That The Point End Of Each Of The (4) Set Bolts Is Properly Engaged Into A Steel Decking Groove.

INSPECTION: Check That All (4) Badger Torque-Off Hex Head Set Bolts Have Been Tightened Until Hex Head Has Broken Away. Check For Proper Connection Of Attachments To The Badger [NDH4S-W3].

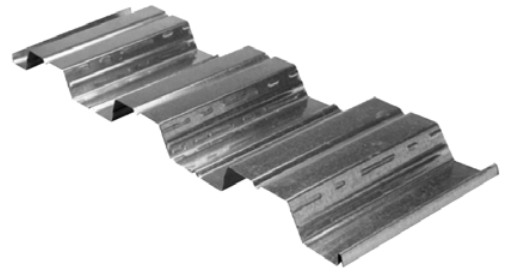


For VERC0 W2 Decking
Using No-Drill™ Hanger
Part No. MDH3812

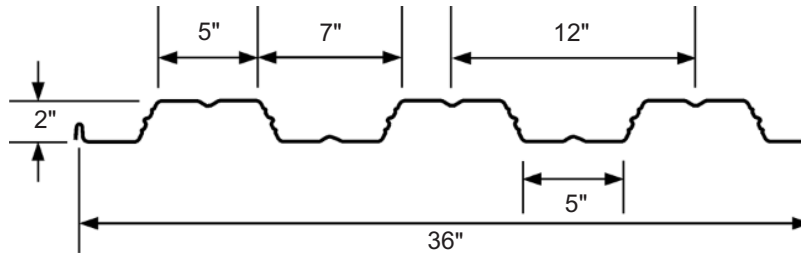


PLW2™ or W2 FORMLOK™

- 2" Deep Deck
- Galvanized or Phosphatized/Painted
- VERC0 DECKING, INC. www.vercodeck.com



Dimensions

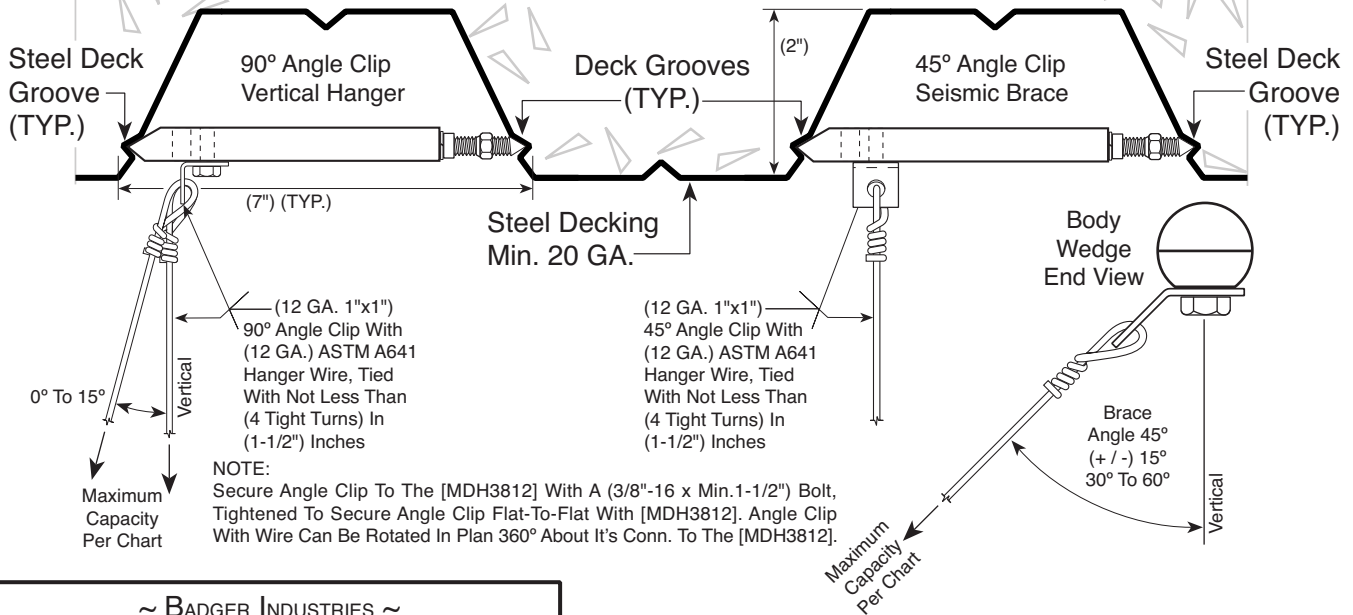




0720

~ INSTALLATION DETAIL ~

VERCO - W2 FORMLOK™ or PLW2, Steel Decking With (f'c Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (MDH3812-W2CW)

BADGER INDUSTRIES

No-Drill™ Hanger

Part # [MDH3812]

Hole "A" = (1/2"-13)

Hole "B" = (3/8"-16)

[MDH3812]
Maximum
Capacity

90° Angle Clip Vertical Hanger (ASD) **175 lbs.**

45° Angle Clip Seismic Brace (ASD) **175 lbs.**

45° Angle Clip Seismic Brace (LRFD) **245 lbs.**

Minimum Between Spacing
See Detail (BNDH-MBS) **2 in.**

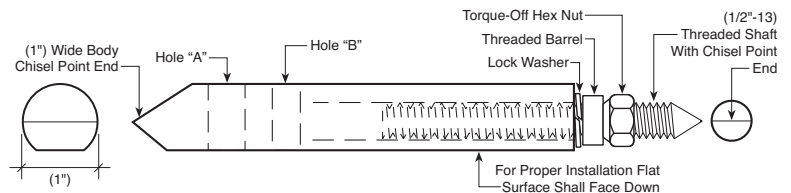
Minimum Edge Distance **6 in.**

Listed Capacities Controlled By Failure Of Identified 12 GA. Wire, Not By Concrete Failure. Thus Seismic Concrete Omega Not Required. Use Of Stronger Wire Or Alternate Materials (ie; Aircraft Cable) Will Require Seismic Concrete Omega To Be Included When Determining Seismic Design Demand.

Depicted Angle Clip Assemblies Can Be Rotated In Plan 360° About Their Conn. To The [MDH3812].

Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.

BADGER INDUSTRIES
[MDH3812]
No-Drill™ Hanger
Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. lbs.) Of Torque Is Required.

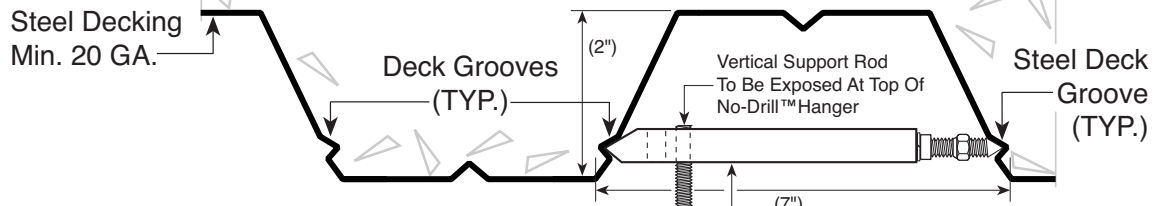
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



0720

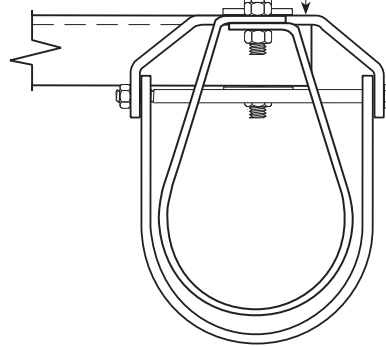
~ INSTALLATION DETAIL ~

**VERCO - W2 FORMLOK™ or PLW2,
Steel Decking - With ($f'c$ Min = 3,000 psi)
Sand-Lightweight Or Normal Weight**



(TYP.) ASTM A36 Or A307
Vertical Support Rod Per (MRL).
Vertical Support Rod Shall Not
Contact Decking. Compression
Loads May Require Vertical
Support Rod To Be Stiffened

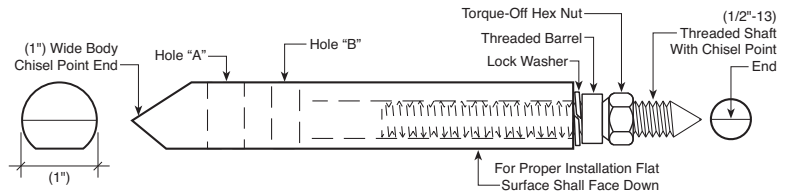
(TYP.) (MRL) Minimum Rod Length
To Be Measured From Underside Of
[MDH3812] To Top Of Pipe Hanger,
Top Of Trapeze Or Top Of Equipment
Unit That Rod Is Connected To.
(MRL) 3/8"-16 Rod = (10")
(MRL) 1/2"-13 Rod = (20")
(MRL) Not Required For Wire,
Cable Or Sheet Metal Strap
Hangers



NOTE:
Vertical Support Hangers Shall Be
Per Approved Project Construction
Documents, Which May Differ From
The Examples Depicted Within This
Detail. Hanger Can Be Rotated In
Plan 360° About It's Conn. To Vertical
Support Rod

~ BADGER INDUSTRIES ~ Detail (MDH3812-W2)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812] Hole "A" = (1/2"-13) Hole "B" = (3/8"-16)	[MDH3812] Maximum Capacity
Gravity (ASD)	200 lbs.
Gravity + Seismic (ASD)	400 lbs.
Gravity + Seismic (LRFD)	560 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.	

BADGER INDUSTRIES
[MDH3812]
No-Drill™ Hanger
Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

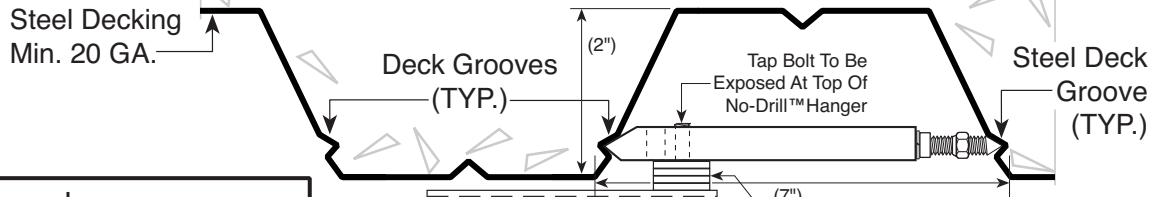
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



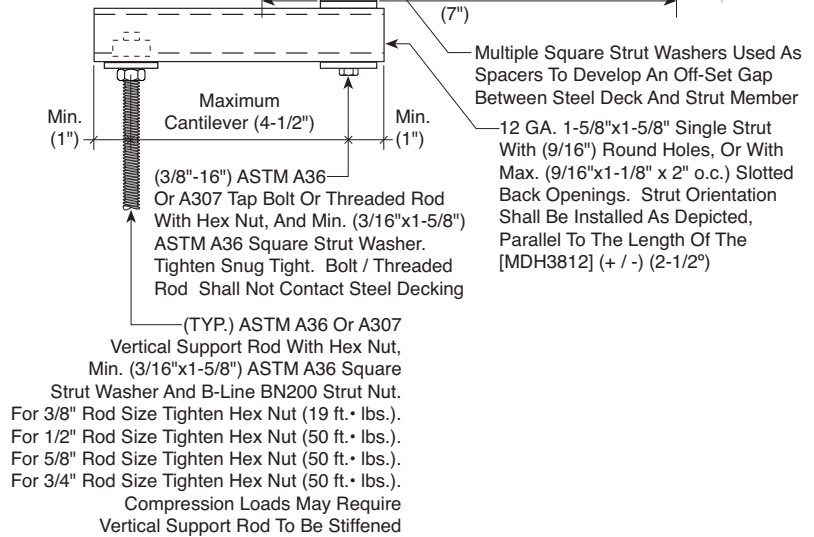
0720

~ INSTALLATION DETAIL ~

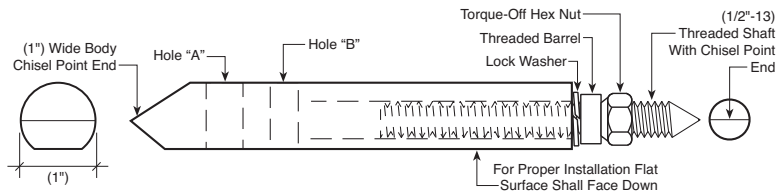
VERCO - W2 FORMLOK™ or PLW2, Steel Decking - With ($f'c$ Min = 3,000 psi) Sand-Lightweight Or Normal Weight



~ BADGER INDUSTRIES ~ Detail (MDH3812-W2CS)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812] Hole "A" = (1/2"-13) Hole "B" = (3/8"-16)	[MDH3812] Cantilevered Strut Maximum Capacity
Gravity (ASD)	200 lbs.
Gravity + Seismic (ASD)	400 lbs.
Gravity + Seismic (LRFD)	560 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Include Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall Not Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.	
Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	



BADGER INDUSTRIES [MDH3812] No-Drill™ Hanger Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

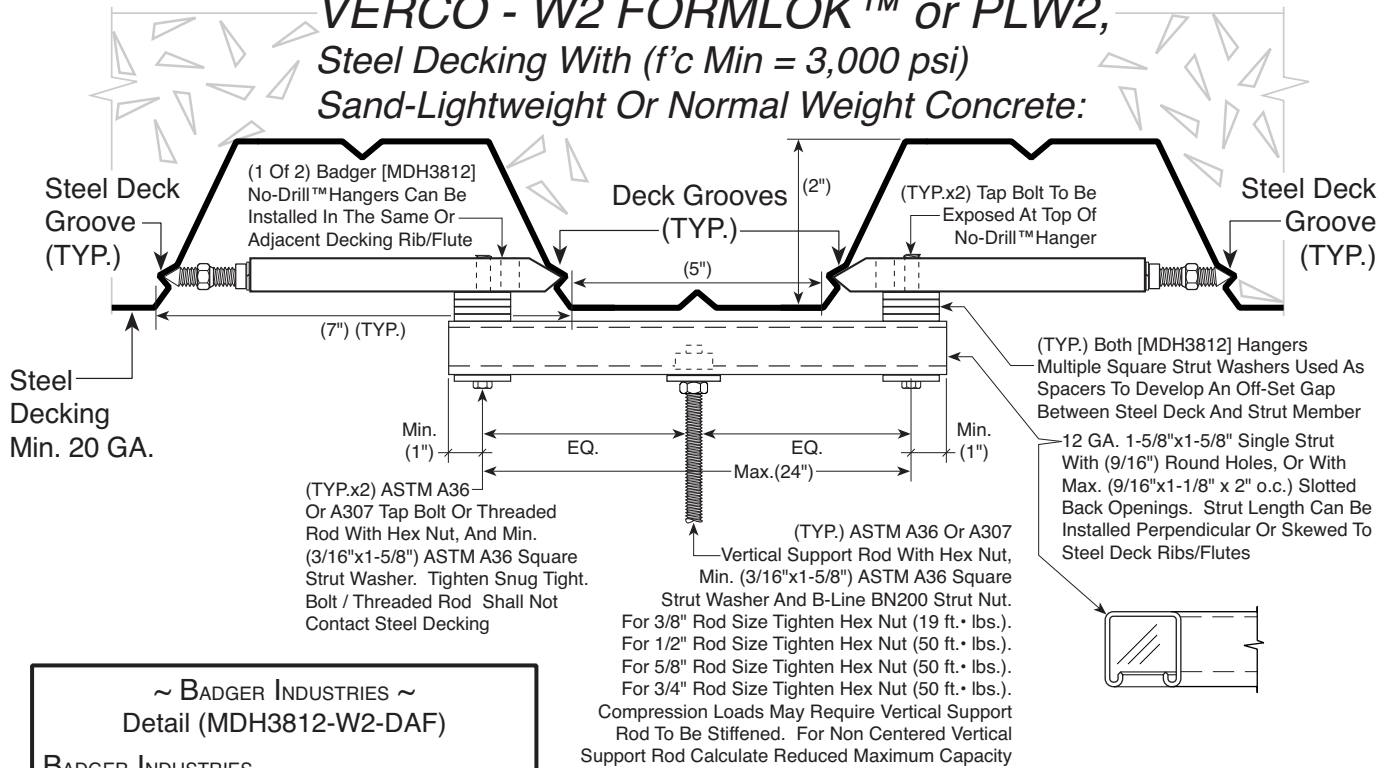
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



0720

~ INSTALLATION DETAIL ~

VERCO - W2 FORMLOK™ or PLW2, Steel Decking With ($f'c$ Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (MDH3812-W2-DAF)

BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812] Hole "A" = (1/2"-13) Hole "B" = (3/8"-16)		Double [MDH3812] Maximum Capacity
Gravity (ASD)		400 lbs.
Gravity + Seismic (ASD)		760 lbs.
Gravity + Seismic (LRFD)		1,064 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)		2 in.
Minimum Edge Distance		6 in.

Listed Seismic Capacities Do Not Include Seismic Concrete Omega.

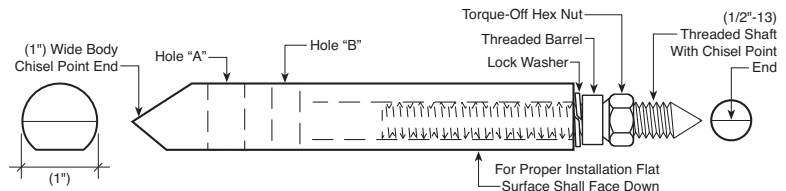
Seismic Concrete Omega Not Required For Gravity Only Usage.

For Gravity + Seismic Loadings, The Gravity Demand Shall Not Exceed The Gravity Only Allowable Load.

Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.

Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.

BADGER INDUSTRIES [MDH3812] No-Drill™ Hanger Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

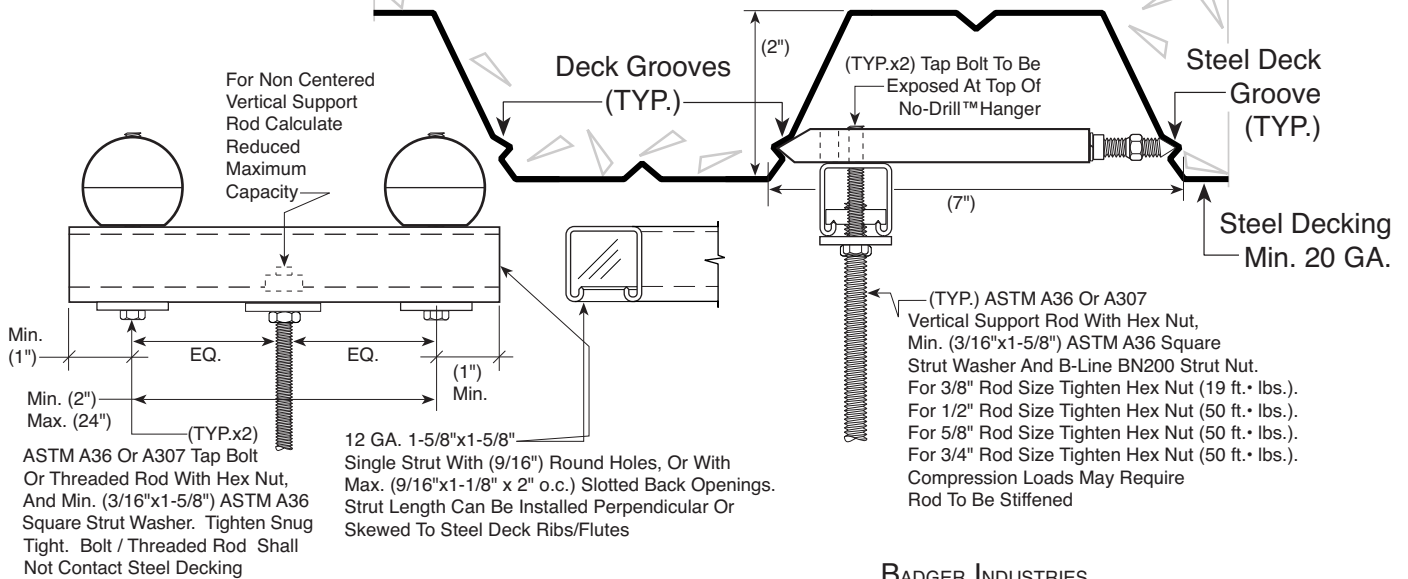
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



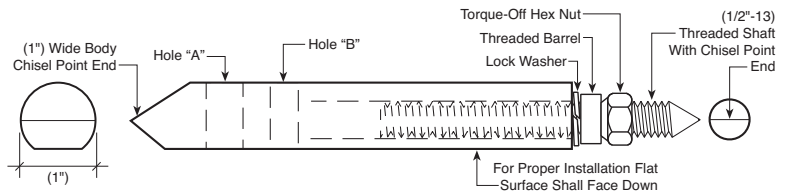
0720

~ INSTALLATION DETAIL ~

VERCO - W2 FORMLOK™ or PLW2, Steel Decking - With (*f'c* Min = 3,000 psi) Sand-Lightweight Or Normal Weight



BADGER INDUSTRIES
[MDH3812]
No-Drill™ Hanger
Patent #9,850,659



~ BADGER INDUSTRIES ~ Detail (MDH3812-W2-DSF)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812] Hole "A" = (1/2"-13) Hole "B" = (3/8"-16)	Double [MDH3812] Maximum Capacity
Gravity (ASD)	400 lbs.
Gravity + Seismic (ASD)	760 lbs.
Gravity + Seismic (LRFD)	1,064 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Included Seismic Concrete Omega. Seismic Concrete Omega Not Required For Gravity Only Usage. For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load. Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities. Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.	

Notice:

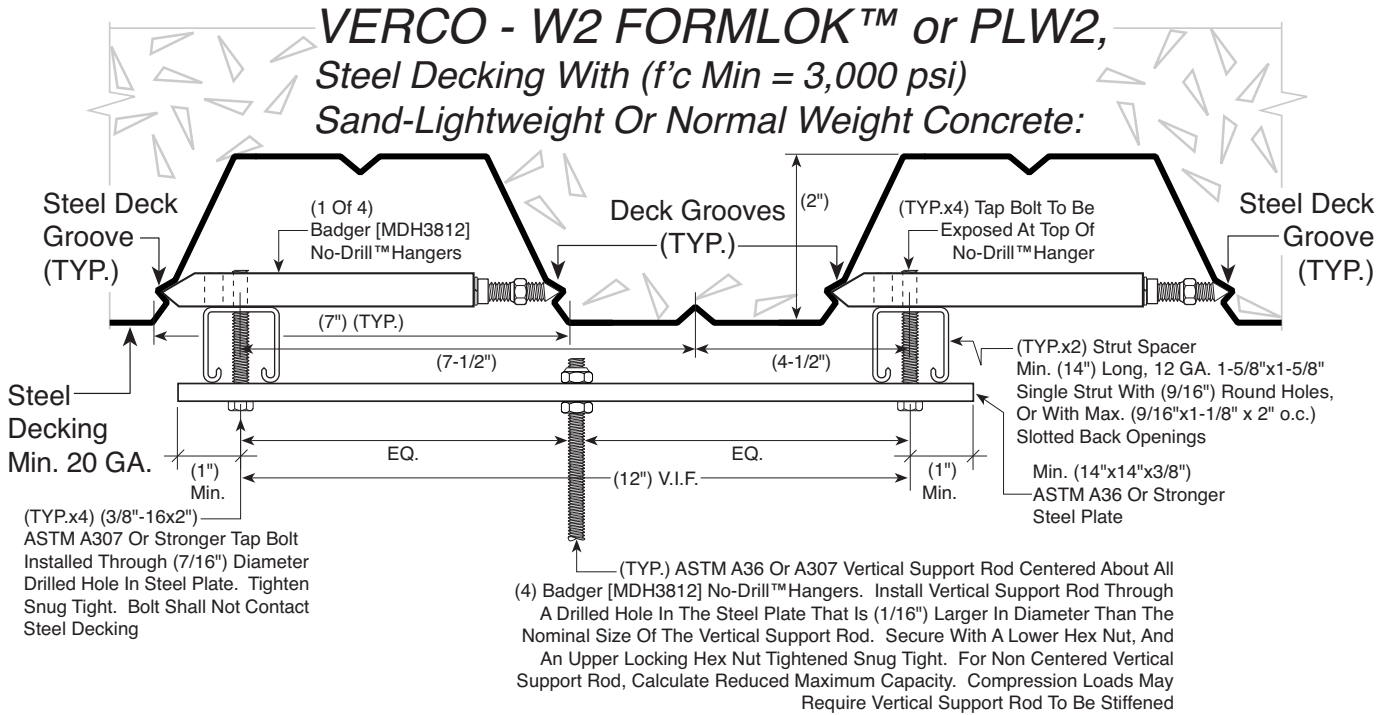
INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



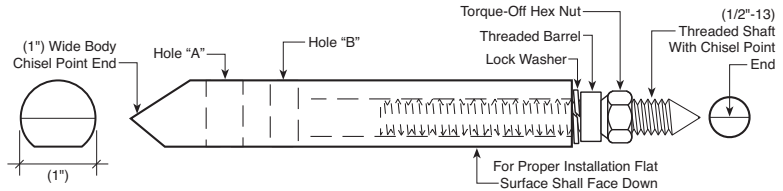
0720

~ INSTALLATION DETAIL ~



~ BADGER INDUSTRIES ~ Detail (MDH3812-W3-QAF)	
BADGER INDUSTRIES No-Drill™ Hanger Part # [MDH3812]	Quad [MDH3812] Maximum Capacity
Hole "A" = (1/2"-13)	
Hole "B" = (3/8"-16)	
Gravity (ASD)	800 lbs.
Gravity + Seismic (ASD)	1,600 lbs.
Gravity + Seismic (LRFD)	2,240 lbs.
Minimum Between Spacing See Detail (BNDH-MBS)	2 in.
Minimum Edge Distance	6 in.
Listed Seismic Capacities Do Not Included Seismic Concrete Omega.	
Seismic Concrete Omega Not Required For Gravity Only Usage.	
For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.	
Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities. Maintain A Minimum (2") Between Spacing From Shot-Pins Installed In The Web Or The Bottom Of The Decking Rib/Flute.	

**BADGER INDUSTRIES
[MDH3812]
No-Drill™ Hanger
Patent #9,850,659**



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

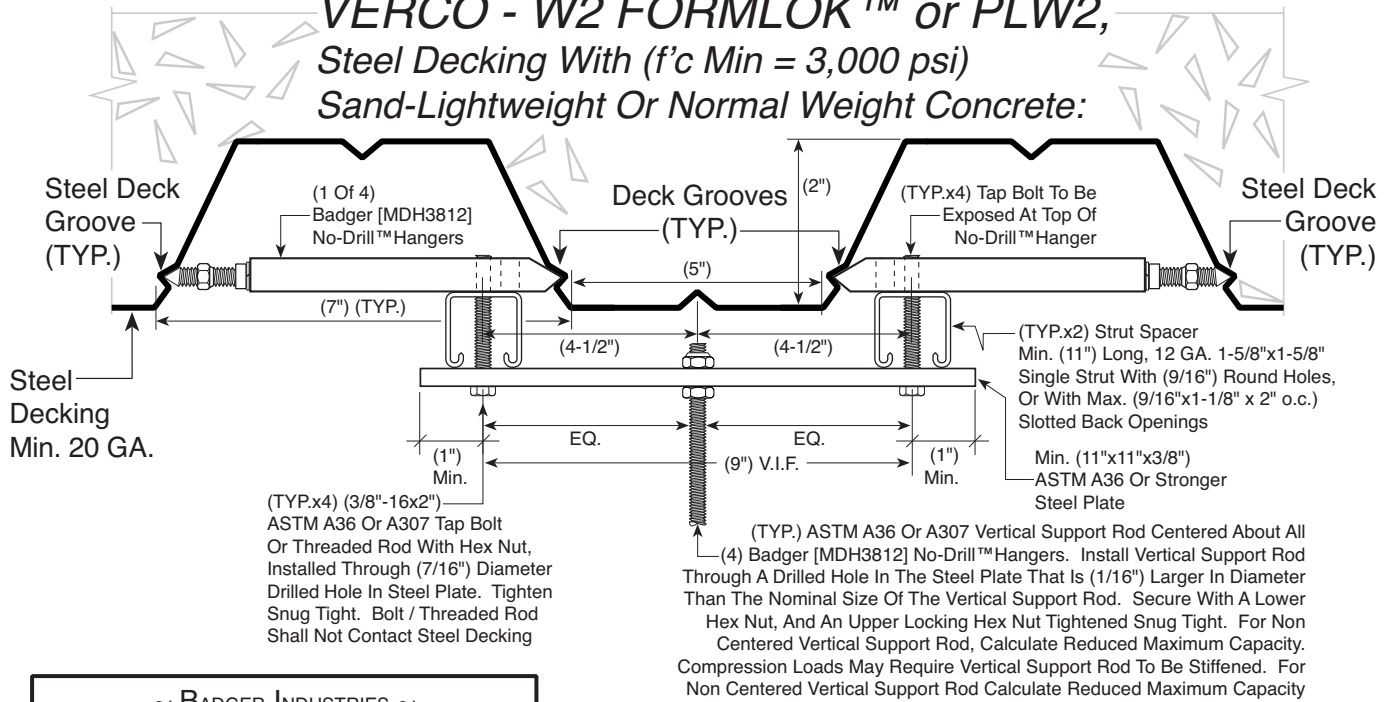
INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].



0720

~ INSTALLATION DETAIL ~

VERCO - W2 FORMLOK™ or PLW2, Steel Decking With ($f'c$ Min = 3,000 psi) Sand-Lightweight Or Normal Weight Concrete:



~ BADGER INDUSTRIES ~ Detail (MDH3812-W2-QSF)

BADGER INDUSTRIES

No-Drill™ Hanger

Part # [MDH3812]

Hole "A" = (1/2"-13)

Hole "B" = (3/8"-16)

Quad
[MDH3812]
Maximum
Capacity

Gravity (ASD) **800 lbs.**

Gravity + Seismic (ASD) **1,600 lbs.**

Gravity + Seismic (LRFD) **2,240 lbs.**

Minimum Between Spacing
See Detail (BNDH-MBS) **2 in.**

Minimum Edge Distance **6 in.**

Listed Seismic Capacities Do Not Included Seismic Concrete Omega.

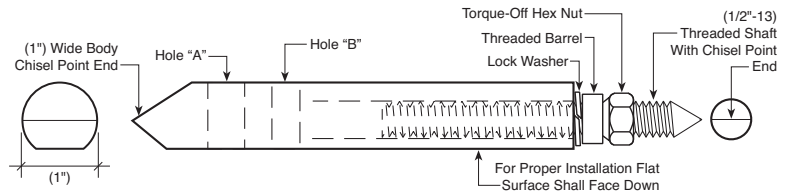
Seismic Concrete Omega Not Required For Gravity Only Usage.

For Gravity + Seismic Loadings, The Gravity Demand Shall No Exceed The Gravity Only Allowable Load.

Proximity Or Spacing Of New Or Existing Cast-In-Place Inserts Or Drilled Hole Anchors To The [MDH3812] Does Not Impact The Listed [MDH3812] Capacities.

Snug Tight Shall Be The Tightness Required To Bring The Connected Plies Into Firm Contact, And That The Nuts Could Not Be Removed Without The Use Of A Wrench.

BADGER INDUSTRIES [MDH3812] No-Drill™ Hanger Patent #9,850,659



Notice:

INSTALLATION: Grooves Shall Be Located On The Webs Of Adjacent Steel Decking Ribs/Flutes, And At The Same Elevation As Each Other. Clean The Steel Decking Grooves To Remove Concrete And/Or Fire Proofing Residue. Stay A Minimum (6") Away From Dented Or Damaged Steel Decking Grooves, Decking Edges, Openings And Closures. Accurately Place One End Of The Badger [MDH3812] Into One Steel Decking Groove, Aligning The Length Of The [MDH3812] To Be Perpendicular To The Length Of The Steel Decking Grooves. While Holding The [MDH3812] Firmly In Place, Tighten The Torque-Off Hex Nut Using An Open End Wrench. Tighten Until The Torque-Off Hex Nut Breaks Away From The Threaded Barrel. For Reference A Minimum (15 ft. • lbs.) Of Torque Is Required.

INSPECTION: Check For Engagement Of Both [MDH3812] Chisel Point Ends Into Steel Deck Grooves. Check For Perpendicular Alignment Of [MDH3812] Body Length With The Length Of The Steel Decking Grooves. Check That Lock Washer Is Compressed And Torque-Off Hex Nut Has Broken Away From Threaded Barrel. Check For Proper Connection Of Attachments To The Badger [MDH3812].

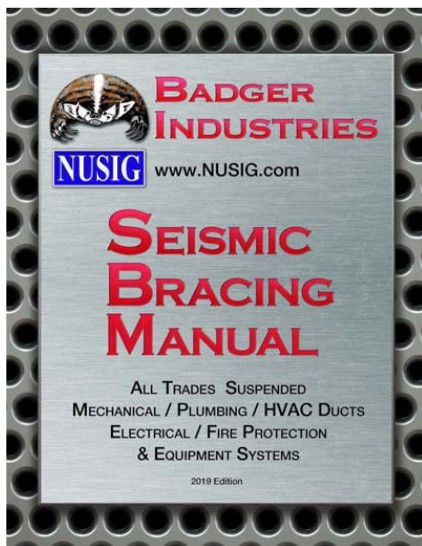


OSHPD
OPM
Approved

City Of
Los Angeles
COLA
Approved

NO
KNOWN
EQUAL

Integrated Lean Construction Through Innovation



www.seismicbracing.com



www.steelbeamclamps.com



www.seismicbracing.com