Blue Banger Hanger® *Cast-In-Place, Internally Threaded Inserts*

BLUE BANGER HANGER® – METAL DECK-INSERT

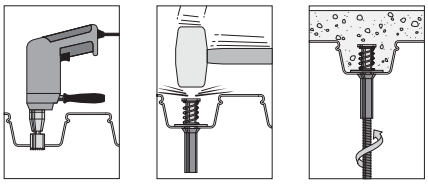
FEATURES:

- 3" plastic sleeve keeps internal threads clean.
- Extended length of the sleeve allows easy location of the insert even with fireproofing on the underside of the deck. Also provides guidance to align threaded rod with the internal threads.
- Installed height of 2" allows the insert to be used on top of, or between, deck ribs.
- Compression spring keeps the insert perpendicular to the deck, even if it is bumped or stepped on after installation.
- Multi-thread design: Each insert accepts 2–3 rod diameters.

INSTALLATION:

- Drill a hole in the metal deck using the appropriate diameter bit as referenced in the table.
- Insert the hanger into the hole and strike the top so that the plastic sleeve is forced through the hole and expands against the bottom side of the deck. The anchor can also be installed by stepping on it.

Metal-Deck Insert Installation Sequence



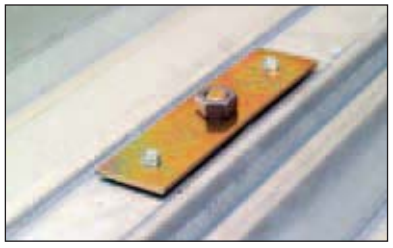
BLUE BANGER HANGER® – METAL-ROOF DECK INSERT

FEATURES:

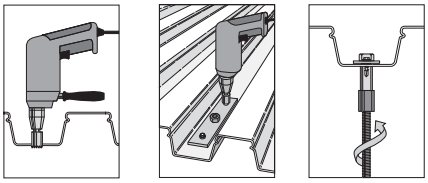
- Low profile design doesn't interfere with roofing material
- Plastic sleeve allows for easy identification and keeps internal threads clean.
- Positive attachment to the roof deck prevents spinning and keeps the hanger in position.
- Pre-staked screws allow quick installation.
- Multi-thread design: The insert accepts 3 rod diameters.

INSTALLATION:

- Drill a hole in the metal deck using the appropriate diameter bit as referenced in the table.
- Insert the hanger into the hole and fasten to the deck with the two pre-staked, self-drilling sheet metal screws provided.



Metal-Roof Deck Insert Installation Sequence



BLUE BANGER HANGER® – WOOD-FORM INSERT

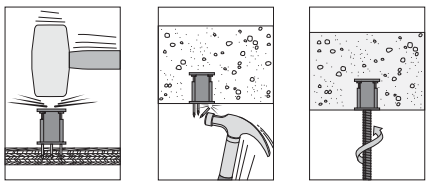
FEATURES:

- Blue plastic ring acts as an insert locator when forms are removed.
- Plastic ring creates a countersunk recess to keep internal threads clean from concrete residue.
- Nails snap off with the swipe of a hammer after the forms are removed.
- Multi-thread design: Each insert accepts 2–3 rod diameters.

INSTALLATION:

- Strike the top of the hanger and drive the 3 mounting nails into the forming material until the bottom of the hanger is flush with the plywood. The hanger should be sitting 90° perpendicular to the forming material.
- Once concrete is hardened, and forms are stripped, strike the mounting nails to break them off.

Wood-Form Insert Installation Sequence



Blue Banger Hanger® *Cast-In-Place, Internally Threaded Inserts*

Wood-Form Insert: Tension Loads in Normal-Weight Concrete

Model No.	Threaded Rod Dia. in.	Embed. Depth in. (mm)	Min. Edge Dist. in. (mm)	Min. Spacing in. (mm)	Tension Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Ultimate lbs. (kN)	Tension Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Allowable lbs. (kN)	Tension Load Based on Rod Strength A307 (SAE 1018) Allowable lbs. (kN)
BBWF2550	¼	2 (51)	7 (178)	8 (203)	6,820 (30.3)	1,705 (7.6)	940 (4.2)
	⅜						2,105 (9.4)
	½						3,750 (16.7)
BBWF3762	⅜	2 (51)	7 (178)	8 (203)	7,360 (32.7)	1,840 (8.2)	2,105 (9.4)
	½						3,750 (16.7)
	⅝						5,875 (26.1)
BBWF6275	⅝	2 (51)	7 (178)	8 (203)	7,420 (33.0)	1,855 (8.3)	5,875 (26.1)
	¾						8,460 (37.6)

See Notes Below

Roof-Deck Insert: Tension Loads in Metal Deck

Model No.	Drill Bit Dia. in.	Threaded Rod Dia. in.	Allowable Tension Load lbs. (kN) 1½" Deck	Allowable Tension Load lbs. (kN) 3" Deck
BBRD2550	13⁄16-⅞	¼	150 (0.7)	300 (1.3)
		⅜		
		½		

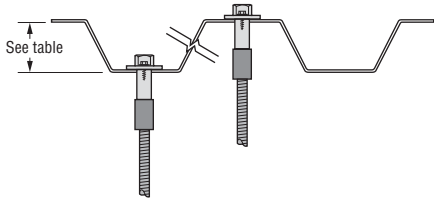
1. The allowable loads are based on a factor of safety of 4.0.
2. Allowable loads may not be increased for short-term loading due to wind or seismic forces.
3. Acceptability of deck deflection due to imposed loads must be investigated separately.
4. Threaded-rod strength must be investigated separately.
5. Anchors may be installed in the top or bottom flute of the metal deck.
6. Deck shall be 20-gauge minimum.

Wood-Form Insert: Shear Loads in Normal-Weight Concrete

Model No.	Threaded Rod Dia. in.	Embed. Depth in. (mm)	Min. Edge Dist. in. (mm)	Min. Spacing in. (mm)	Shear Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Ultimate lbs. (kN)	Shear Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Allowable lbs. (kN)	Shear Load Based on Rod Strength A307 (SAE 1018) Allowable lbs. (kN)
BBWF2550	½	2 (51)	7 (178)	8 (203)	8,750 (38.9)	2,185 (9.7)	1,930 (8.6)
BBWF3762	⅝	2 (51)	7 (178)	8 (203)	10,700 (47.6)	2,675 (11.9)	3,025 (13.4)
BBWF6275	¾	2 (51)	7 (178)	8 (203)	10,460 (46.5)	2,615 (11.6)	4,360 (19.4)

See Notes Below

Typical Roof-Deck Insert Installation in Metal Deck



Wood-Form Insert: Tension Loads in Sand-Lightweight Concrete

Model No.	Threaded Rod Dia. in.	Embed. Depth in. (mm)	Min. Edge Dist. in. (mm)	Min. Spacing in. (mm)	Tension Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Ultimate lbs. (kN)	Tension Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Allowable lbs. (kN)	Tension Load Based on Rod Strength A307 (SAE 1018) Allowable lbs. (kN)
BBWF2550	¼	2 (51)	7 (178)	8 (203)	4,280 (19.0)	1,070 (4.8)	940 (4.2)
	⅜						2,105 (9.4)
	½						3,750 (16.7)
BBWF6275	⅝	2 (51)	7 (178)	8 (203)	4,400 (19.6)	1,100 (4.9)	5,875 (26.1)
	¾						8,460 (37.6)

See notes below.

*See page 13 for an explanation of the load table icons

Wood-Form Insert: Shear Loads in Sand-Lightweight Concrete

Model No.	Threaded Rod Dia. in.	Embed. Depth in. (mm)	Min. Edge Dist. in. (mm)	Min. Spacing in. (mm)	Shear Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Ultimate lbs. (kN)	Shear Load Based on Concrete Strength f'c ≥ 3000 psi (20.7 MPa) Concrete Allowable lbs. (kN)	Shear Load Based on Rod Strength A307 (SAE 1018) Allowable lbs. (kN)
BBWF2550	½	2 (51)	7 (178)	8 (203)	8,600 (38.2)	2,150 (9.6)	1,930 (8.6)
BBWF6275	¾	2 (51)	7 (178)	8 (203)	9,260 (41.2)	2,315 (10.3)	4,360 (19.4)

1. Allowable load must be the lesser of the concrete or steel strength.
2. The allowable loads based on concrete strength are based on a factor of safety of 4.0.
3. Allowable loads may not be increased for short-term loading due to wind or seismic forces.
4. Mechanical and plumbing design codes may prescribe lower allowable loads. Verify with local codes.
5. Minimum concrete slab thickness = 2x embedment depth.