



# DRILL-TEC™ LOCKING IMPACT NAIL (1 of 2)

## Description

Drill-Tec™ Locking Impact Nail is for attaching base ply, recovery board, and insulation (minimum embedment of 1" [25.4 mm]) to cementitious wood fiber, poured gypsum decks, and LWIC (light weight insulating concrete).

## Composition

Factory preassembled components consisting of:

**Tube:** Precision formed from galvanized (G-90) coated steel to prevent corrosion. The tube is shaped to easily penetrate decking and existing membranes.

**Disk:** Precision formed from Galvalume® (AZ-55) coated steel to prevent corrosion. Securely clamped to the tube, 2.7" (69 mm) diameter, rib reinforced to resist cupping.

**Locking Staple:** Precision formed from high tensile steel wire. Coated to prevent corrosion.

## Code Approvals



## Technical Data

**Fastening Pattern:** Consult Factory Mutual or Miami-Dade County requirements for recommended patterns in normal, exposed, and hurricane areas.

**Field Testing:** On-site withdrawal testing should always be performed to evaluate the ability of the roofing substrate to satisfactorily accept and retain fasteners. Such testing may alter fastener selection and modify applicable fastening patterns. Drill-Tec™ Locking Impact Nail should always be embedded into the structural roof deck to a depth of at least 1" (25.4 mm).

## Installation

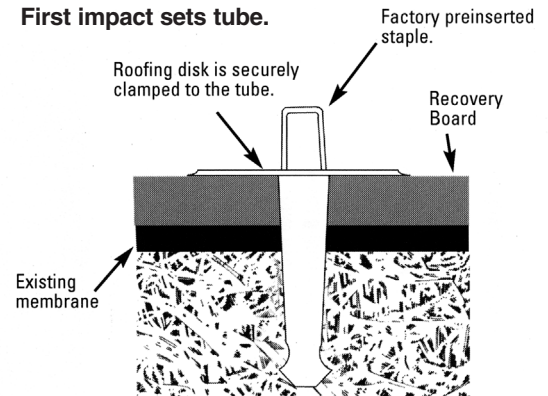
**Installation Tools:** Drill-Tec™ Locking Impact Nail Driver-BS is for installing base sheet and recovery board to the substrate. Consult GAF for the specific driver for your application.

**Method:** Drive fastener perpendicular to roof deck seating disk/plate flush with roofing surface. Once tube is set, drive the locking staple thru the tube/disk unit into the deck until the top of the staple is flush with the cap (see illustration).

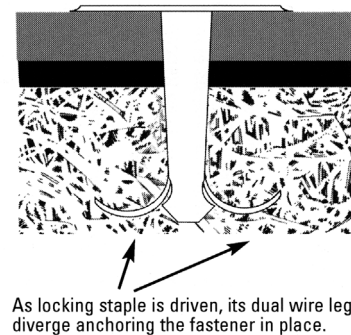
**Operation:** When locking staple is driven, its dual wire legs diverge anchoring the fastener in place (see illustration). Uplift resistance may vary depending on the density and integrity of the substrate.

**Packaging:** 1.4" (35.6 mm) and 1.8" (45.7 mm) Locking Impact Nails packaged 500 per carton.

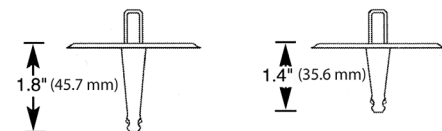
## First impact sets tube.



## Second impact actuates staple.



## 2 Lengths





# DRILL-TEC™ LOCKING IMPACT NAIL (2 of 2)

## Using The Drill-Tec™ Locking Impact Nail

Fastener density and spacing vary depending on applicable uplift requirements. Local codes, governing approval bodies, membrane manufacturers, and individual roof deck manufacturers all may have specific requirements that need to be addressed prior to beginning any roofing project. Drill-Tec™ Locking Impact Nail should always be embedded into the structural roof deck to a depth of at least 1" (25.4 mm). The following illustrates typical Factory Mutual-recommended fastening patterns widely accepted by membrane and roof deck manufacturers.

### Fastening Guide 1

Base-Ply Attachment for built-up or modified bitumen roof covers.

Class I-60, I-75, or I-90 Windstorm Classification.

An FM-approved base ply is fastened in the field of the roof with Drill-Tec™ Locking Impact Nail installed 9" (227 mm) on center in the 2" (51 mm) wide base ply side laps and 1" (25.4 mm) on center staggered in 2 rows, equally spaced, between the base ply side laps.

When fastening meter-wide material with this pattern, expect to use approximately 86 fasteners per square (100 ft²).

### Fastening Guide 2

Recovery board and insulation attachment under built-up and modified bitumen roof covers.

Class I-90 Windstorm Classification.

An FM-approved recovery board/insulation suitable for use with minimum 3-ply built-up or modified membranes is attached with 8 Drill-Tec™ Locking Impact Nail fasteners per 4' x 4' (1.21 m x 1.21 m) board in a diamond-in-a-box pattern (1 fastener per 2 ft²) (0.18 m²).

Consult FM for a complete listing of approved recovery boards/insulations (limited thickness due to impact nail length).

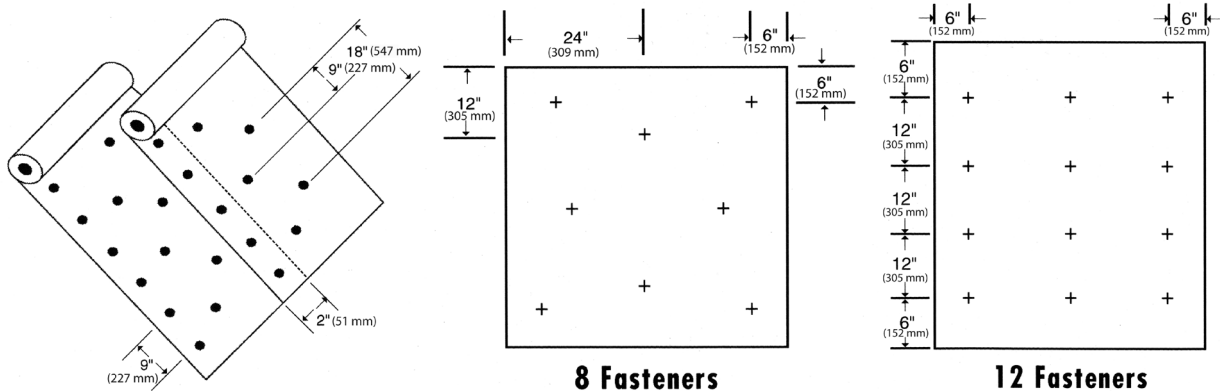
### Fastening Guide 3

Recovery board and insulation attachment (limited thickness due to impact nail length) under fully adhered single-ply membranes.

Class I-90 Windstorm Classification.

An FM-approved recovery board/insulation suitable for use with fully adhered single-ply membranes is attached with 12 Drill-Tec™ Locking Impact Nail fasteners per 4' x 4' (1.2 m x 1.2 m) board in 4 rows of 3 fasteners per row (1 fastener per 1.33 ft²) (0.12 m²).

Consult FM for a complete listing of approved recovery boards/insulations.



Physical Data				
Product	Length	Packaging (Box)	Weight	Quantity/Skid
1.4" Locking Impact Nail	1.4" (35.6 mm)	500	26 lb (11.79 kg)	13,500
1.8" Locking Impact Nail	1.8" (45.7 mm)	500	28 lb (12.70 kg)	13,500
Locking Impact Nail Driver-BS*	-	1	-	-

\* Use Locking Impact Nail Driver – BS for installing base sheet and recovery board to the substrate: for 1.4" (35.6 mm) and 1.8" (45.7 mm) fasteners only.

Note: All sizes are nominal.