



# STORM-LOCK

t i l e f a s t e n e r s

## ADVANCED ROOF TILE FASTENING SYSTEMS & ACCESSORIES

- Protects Waterproofing by Minimizing Penetrations
- High Wind Resistant
- Earthquake Resistant - Absorbs Seismic Energy

### **S** STORM-LOCK Tyle-Tye® Hurricane Strap System

This is the preferred system where optimum fastening is required. Tie Wires, Tie Rods or Connectors attach each tile into the Tyle-Tye® Hurricane Strap system fastened to the deck by ring shank nails, screws or spikes. The 1" continuous metallic strip installs under the rows of tile, eliminating any pressure or weight on the strip while maintaining the integrity of the roof system.

### **S** STORM-LOCK Tyle-Tye® Twisted Wire System

This continuous system of Twisted Wire features a special anchor that attaches through the underlayment to wood, concrete, or metal roof decks. Roof tiles are tied to the loops of the twisted wire. The waterproof membrane is punctured only at anchoring points, and the appropriate roofing mastic is used to seal these penetrations.

### **S** STORM-LOCK Riness Tile-Tie®

This single piece wire fastening system features a loop and hook fastener that interlocks the tiles. The Riness® Tile-Tie system requires no hand tying of the wires allowing for greater labor and cost savings. It can be used with almost any profile of clay roofing tiles and minimizes penetrations in the underlayment.

### **S** STORM-LOCK Tyle-Tye® Tile Nail

This is a unique fastener used in the cover portion of clay 2-piece mission tile, or clay "S" tile and some concrete roof tiles. Tyle-Tye® Tile Nail outperforms any direct-deck nailed roof tile fastener by securing the tile at two points with one fastener; prevents tile fractures or breaks and uses the uplift forces to drive the nail portion of the fastener deeper into the deck.



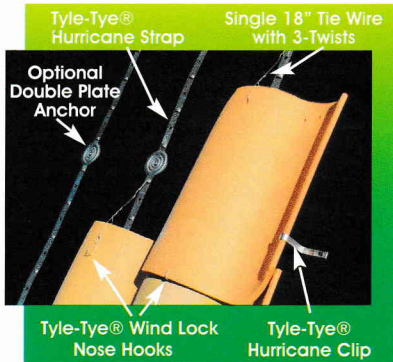
IAPMO ER #444

**Frances Fasteners Inc., dba STORM-LOCK Tile Fasteners**  
5180 Western Way, Perris, CA 92571  
Toll Free 855.383.1011 • Office 951.657.6777 • Fax 951.657.6770  
[www.storm-locktilefasteners.com](http://www.storm-locktilefasteners.com)

## STORM-LOCK Tyle-Tye® Systems

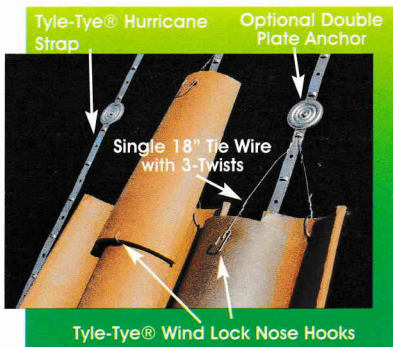
STORM-LOCK Tyle-Tye® Systems include the Hurricane Strap System, the Twisted Wire System and the Riness Tile-Tie® System. With these fastening methods the only puncture of the membrane is at the anchoring points. These anchoring points are sealed in the appropriate roofing mastic. STORM-LOCK Tyle-Tye® Systems are in compliance with IBC and IRC.

## STORM-LOCK Hurricane Strap System

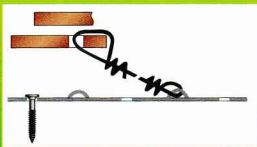


The Tyle-Tye® Hurricane Strap system is used where maximum holding power is required. Each strap is 10 feet long. Once the straps are fastened to the deck, and the fastening points are sealed in approved roofing mastic, each tile is connected to a punch out providing for a speedy installation.

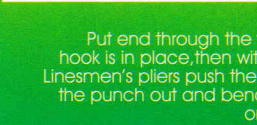
The Tyle-Tye® Hurricane Strap system consists of a 1" wide by 24 gauge strap with punch outs every 4" to connect each piece of roofing tile, and anchor holes every 4" to nail, screw or spike the strap securely to any type of roof deck. Individual tiles are secured to the strap using Tie Wires, Connectors, or Tie Rods. Besides being anchored at the eave and ridge, the straps are anchored at 5 foot intervals as required to avoid overstressing any one anchor point.



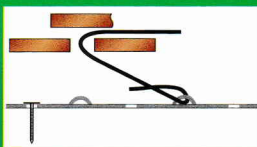
### Connection of Tiles into Tyle-Tye® Hurricane Strap/Twisted Wire



**Tie Wires**  
Wrap each tie wire through the tile, diamond or punch out then twist back on itself a minimum of 3 full revolutions.



**Connectors**  
Put end through the tile until the nose hook is in place, then with a good pair of Linesmen's pliers push the straight end into the punch out and bend it back on itself one full revolution.

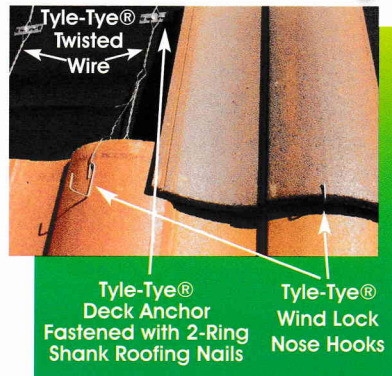


**Tie Rod**  
Put tie rod through the tile and bend it back parallel to the plane of the tile, then put the other end through a punch out, or diamond and bend it back on itself one full revolution.

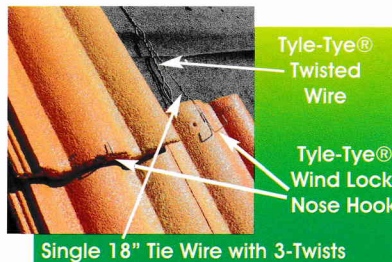
## STORM-LOCK



## Tyle-Tye® Twisted Wire System



The Tyle-Tye® Twisted Wire is a continuous element of twisted wire that is attached by means of a Tyle-Tye® Deck Anchor or Double Plate Anchor to the roof deck through the chosen underlayment. The continuous element consists of two wires twisted together with a loop or eyelet approximately every six (6) inches. The loops or eyelets on the twisted wire are used to accommodate whichever wire is selected to fasten individual roof tiles.

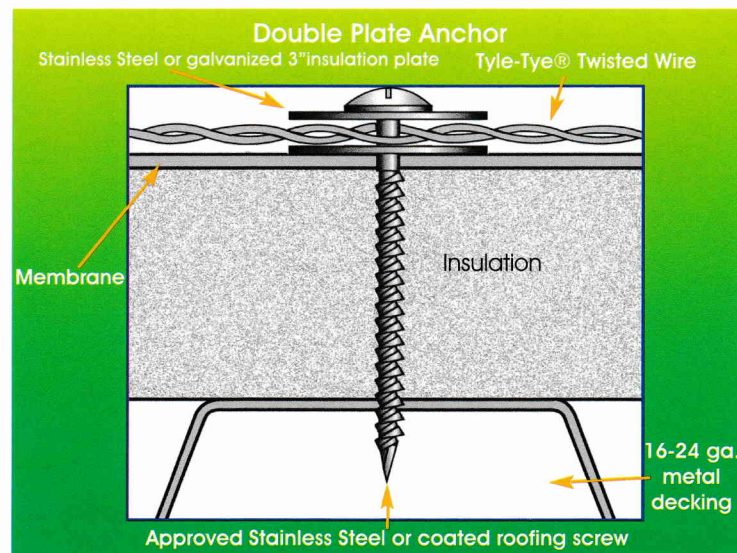


A loop in the Tyle-Tye® Twisted Wire is slipped down over the stem of the Tyle-Tye® Deck Anchor, and the two stem elements are then bent apart to engage the Twisted Wire loop to prevent it from slipping off. The Double Plate Anchor system can also be used to fasten the Tyle-Tye® Twisted Wire to the roof deck.



Individual roof tiles are tied into the loops of the Tyle-Tye® Twisted Wire by means of a Tie Wire or Tie Rod of similar metal. Besides being anchored at eave and ridge, the Tyle-Tie® Twisted Wire system is anchored at 5 foot intervals as required to avoid overstressing any one anchor point.

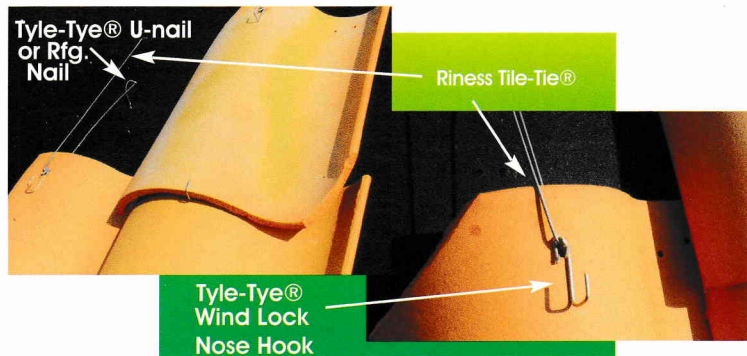
For further information refer to the Tyle-Tie® Twisted Wire Specifications.



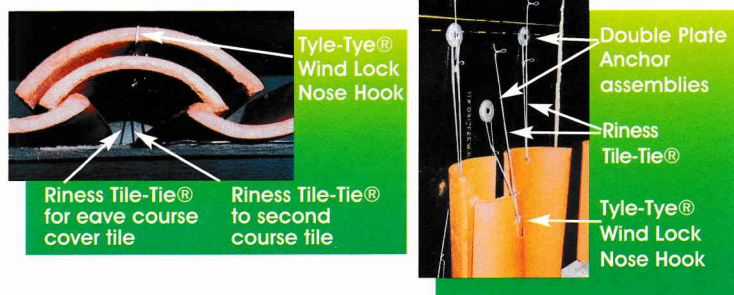
## STORM-LOCK Riness Tile-Tie® System

Use of the Riness Tile-Tie® (Single-Line) System as directed, results in a minimally penetrated membrane while the Riness® Tile-Tie interlocks the tiles together to resist wind damage, earthquake damage, or shifting of tile from other causes.

The Riness Tile-Tie® system consists of a series of interconnecting preformed wire ties through the holes of the tile to provide a continuous anchorage against sliding off. Riness Tile-Tie® is anchored to the deck using either the Tyle-Tye® U-Nails, roofing nails or the Double Plate Anchor method. Besides being anchored at the eave and ridge, the Riness Tile-Tie® is anchored at 5 foot intervals as required to prevent stress on the individual fasteners. For added protection and in designated high-wind areas, and seismic zones use the appropriate size Tyle-Tye® Wind Lock Nose Hook for the cover portion of all tiles or minimum of the first three courses from the eave up.



For further information refer to the Riness Tile-Tie® Specifications.



## STORM-LOCK Installation Tip

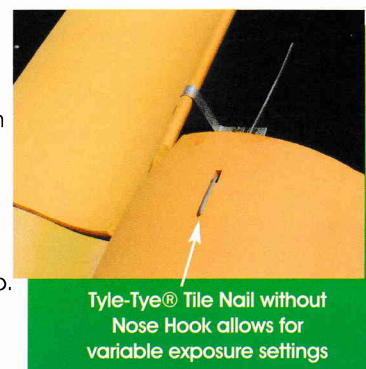
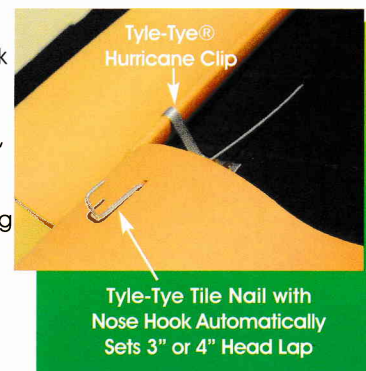
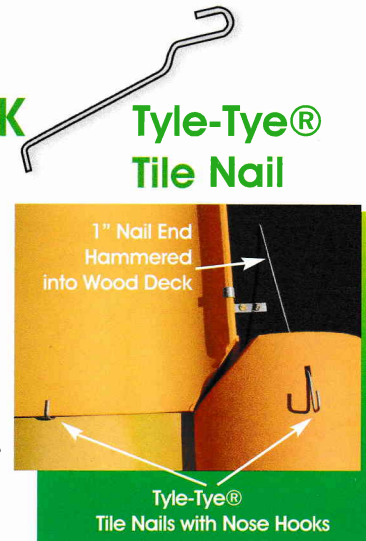
Use like metals for the entire system to prevent electrolysis. Use stainless steel tie wires and stainless steel anchors for stainless steel systems. Use copper tie wires and brass anchors for copper systems. Use galvanized steel tie wires and galvanized steel anchors for galvanized steel systems. For installation to metal roof decks use galvanized steel or stainless steel fastening systems. For installation to concrete decks, use stainless steel or galvanized steel fastening systems and stainless steel/galvanized compression spikes. When attaching to steel decks, use stainless steel or coated galvanized steel selfdrilling screws.

## STORM-LOCK Tyle-Tye® Tile Nail

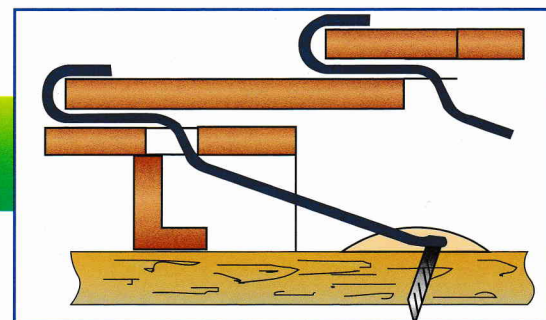
The Tyle-Tye® Tile Nail is a unique fastener used in the cover portion of clay 2-pc Mission, clay "S" and some concrete tiles that incorporates a Nose Hook and a nail in one fastener. The Tyle-Tye® Tile Nail eliminates breakage because the nail is away from the tile. They are approved to slopes of 2 1/2:12 to 24:12 and are particularly suited to mansard applications.

The Tyle-Tye® Tile Nail outperforms any direct deck nailed roof tile by securing the tile at two points with one fastener. A Tyle-Tye® Wind Lock Nose Hook is incorporated into the front part of the Tyle-Tye® Tile Nail holding the butt end of the next tile, while the shaft is slipped into the hole of the head end of roof tile being nailed. The uplift forces acting upon the butt end of the tile will continue to drive the nail portion of the fastener deeper into the deck. In addition the Tyle-Tye® Tile Nail prevents accidental fractures and/or breaks of the tile because the hammer always swings away from the clay or concrete file.

Tyle-Tye® Tile Nails are available with or without a Nose Hook. When specifying Tyle-Tye® Tile Nails with Nose Hook, specify 3" or 4" headlap for clay "S" and 2-pc mission. Also available for some concrete tiles laid with a 3" headlap. (Check with factory for fastener compatibility)

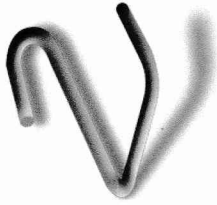


Eave detail with booster tile

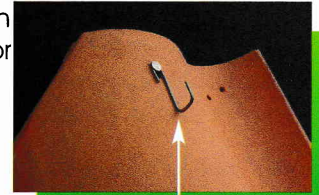




## **S** STORM-LOCK Tyle-Tye® Wind Lock Nose Hooks



Also known as "Tile Locks or Butt Hooks", Wind Lock Nose Hooks are for use with clay and concrete roofing tiles to all slopes. They provide a locking device for the butt edge of each cover tile. Tyle-Tye® Wind Lock Nose Hooks achieve greater holding power and are used in high wind designated areas. Tyle-Tye® Wind Lock Nose Hooks are compatible with all methods of tile attachment and are recommended for all roof tiles installed at slopes 7:12 or greater. Available in a squared configuration designed to better fit all different roof tile profiles tightly. Manufactured from type 300 series (.090" dia., 2.3mm) Stainless Steel or 11 gauge (.120" dia, 3mm) Electro-galvanized Steel (10 ga. Brass is available by special request).

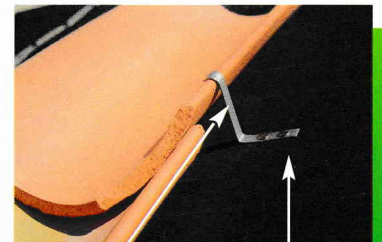


Tyle-Tye® Wind Lock Nose Hook attached to shank of standard roofing nail.

## **S** STORM-LOCK Tyle-Tye® Hurricane Clips



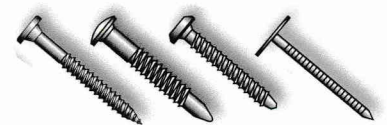
Also known as "Side Clips, Eave Clips or Wind Clips", the Tyle-Tye® Hurricane Clip is a strap-type locking device for the side edge of several types of roofing tiles. It provides maximum holding power when used in conjunction with Tyle-Tye® Wind Lock Nose Hooks or one of the other STORM-LOCK Tyle-Tye® Systems. Tyle-Tye® Hurricane Clips are suitable for most profiles of clay and concrete roof tiles. Advantages of the Tyle-Tye® Hurricane Clip include excellent holding power and invisibility of the part after installation. Tyle-Tye® Hurricane Side Clips are approved for all slopes. Tyle-Tye® Hurricane Clips are manufactured from 1/2" (13mm) x 18 gauge Electro-galvanized Steel or 1/2" (13mm) x 18 gauge type 304 series Stainless Steel. 1/2" x 18 gauge Brass is available upon special request.



Tyle-Tye® Hurricane Clip  
Ideal placement of Tyle-Tye® Hurricane Clip

**ALSO AVAILABLE**

**Copper and Stainless Steel Roofing Nails  
Screws for Roof Tile and Tyle-Tye® System**



These types of systems have been used for over 80 years to fasten any type of roofing tile, to any type of roof deck and to any slope. Extra tiles or boosters, mortar, staggered exposures, headlaps and other types of roof tile installation designs can be achieved using these multipurpose roof tile fastening systems.

**Frances Fasteners Inc., dba STORM-LOCK Tile Fasteners**  
**5180 Western Way, Perris, CA 92571**  
**Toll Free 855.383.1011 • Office 951.657.6777 • Fax 951.657.6770**  
**[www.storm-locktilefasteners.com](http://www.storm-locktilefasteners.com)**