Secures multi-ply studs or posts to mudsills or foundation. Nail fastening makes for a convenient connection to studs or posts in cramped retrofit installations.

**Materials:** See chart
**Finish:** G90 galvanizing
**Codes:** See chart for code references

**Installation:**
- Use all specified fasteners to attach the strap portion of the connector to the side of stud, post, joist, purlin, or beam. Secure the base to the concrete or masonry wall with specified anchor bolt. A design professional shall specify the type, length, and embedment of the anchor bolt.
- HTT45 Max – Fill all round and diamond nail holes.
- Washers are not required on transfer plates that fit over the anchor bolt.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench.
- LL930 (#9 x 2-7/8" long) LumberLok Screws are included with HTT45KT.

![Typical HTT16 installation](image1)
![Typical HTT45 max installation](image2)

<table>
<thead>
<tr>
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<td>HTT4</td>
<td>10</td>
<td>2-1/2, 16, 2</td>
<td>1-3/8</td>
<td>1/3/4</td>
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1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) 16d sinkers may be substituted for the specified 10d common nails with no load reduction.
3) The designer must specify anchor bolt type, length and embedment depth.
4) Deflections are derived from static, monotonic load tests of devices connected to DF wood members with specified fasteners.
5) HTT holdowns raised off of the sill plate may have higher deflection values.
6) HTT45KT is sold as a kit and includes (1) HTT45 and (26) LL930 screws.
7) NAILS: 10d nails are 0.148" dia. x 3" long, 16d x 2-1/2" nails are 0.162" dia. x 2-1/2" long.
**LTS / LTTI Tension Ties**

**LTS series** – The LTS19 is designed for nail-on installation to 2x joists or studs, and the LTS20B provides a nail or bolt fastening option. The LTS20B will accommodate wood I-Joists if 10d (0.148”) x 1-1/2” nails are used instead of the specified 16d nails.

**LTTI31** – An open web joist tension tie designed for use with masonry or concrete construction.

**Materials:** See chart

**Finish:** G90 galvanizing; LTS19-TZ – G-185 galvanizing

**Codes:** IBC, FL

**Installation:**
- Use all specified fasteners to attach the strap portion of the connector to the side of stud, post, joist, purlin, or beam. Secure the base to the concrete or masonry wall with specified anchor bolt. A design professional shall specify the type, length, and embedment of the anchor bolt.
- Washers are not required on transfer plates that fit over the anchor bolt.
- LTTI31 and LTS connectors must be mounted flush to the mudsill.
- Allowable loads are based on either nail or bolt fastening; nail and bolt values cannot be combined.
- Tighten anchor bolt nuts finger tight to base plus 1/3 to 1/2 additional turns with a wrench.
- Refer to MiTek’s LTS19-TZ Deck Lateral Load Connector Technical Bulletin for deck rail reinforcement at MiTek-US.com.

<table>
<thead>
<tr>
<th>MiTek USP Stock No.</th>
<th>Ref. No.</th>
<th>Steel Gauge</th>
<th>Dimensions (in)</th>
<th>Nail Spacing</th>
<th>Fastener Schedule</th>
<th>DF/SP Allowable Tension Loads (Lbs.)</th>
<th>Corrosion Finish</th>
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<td>LTTI31</td>
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<td>20</td>
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</tbody>
</table>

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) LTS20B bolted installation requires a minimum 1-1/2” wood member thickness.
3) 16d sinkers may be substituted for the specified 10d common nails with no load reduction.
4) The designer must specify anchor bolt type, length and embedment depth.
5) Deflections are derived from static, monotonic load tests of devices connected to DF wood members with specified fasteners.
6) LTTI and LTS holdowns shall be installed tight to the sill plate.
7) **NAILS:** 10d x 1-1/2 nails are 0.148” dia. x 1-1/2” long, 10d nails are 0.148” dia. x 3” long, 16d nails are 0.162” dia. x 3-1/2” long.

**Corrosion Finish**:  ■ Stainless Steel  ■ Gold Coat  ■ HDG  ■ Triple Zinc