

## DECK LEDGER TO RIM JOIST

### CONNECTION DETAILS

The LedgerLok Ledger Board Fastener has been designed specifically for attaching the deck ledger to the rim joist of the house in a code compliant manner.

#### 2009 IRC Code Reference: 502.2.2.2 – Alternate Deck Ledger Connections

As stated in this IRC section, deck ledger connections can be designed in accordance with accepted engineering practices. Using tested and approved values as published in ICC-ES Report #1078, the LedgerLok can be used to meet this code requirement. In addition, the proprietary coating on this fastener exceeds the corrosion resistance of code approved hot-dipped galvanized coatings.

### INSTALLATION PROCEDURES

- Choose 3<sup>5</sup>/<sub>8</sub>" or 5" LedgerLok so that threads fully engage the rim material and fastener tip extends beyond the inside face of the rim joist.
- Use a high torque, 1/2" variable speed drill (18V if cordless).
- Follow the minimum spacing and fastening patterns from Figure 1 and Table 1.
- Install fasteners through the ledger and sheathing. Continue into the rim joist until the washer head is drawn firm and flush to the ledger board. Do not overdrive.

### CORROSION STATEMENT

LedgerLok has been tested and is approved for use in above ground (.25 pcf) and ground contact (.40 pcf) ACQ treated wood applications.

Under the recently adopted ICC standard (AC257 – Acceptance Criteria for Corrosion-Resistant Fasteners and Evaluation of Corrosion Effects of Wood Treatment Chemicals), the proprietary coating on this fastener has been tested and found to exceed the corrosion protection offered by code compliant hot-dipped galvanized (HDG) coatings. Under the "Alternative Materials" provision of the code (IRC & IBC, Section 104.11), inspecting agencies and specifying design professionals may use the results of this test report to show equivalency of the LedgerLok coating to the approved HDG coatings, thereby meeting code.

For applications within 1,000 feet of saltwater, we recommend the use of a stainless steel fastener.

### SPACING REQUIREMENTS

Fasteners should be staggered in a "W" pattern and spaced as follows:

- A. Minimum end distance = 3<sup>3</sup>/<sub>4</sub>"
- B. Minimum edge distance = 1<sup>3</sup>/<sub>4</sub>"
- C. On-center spacing = Per Table 1

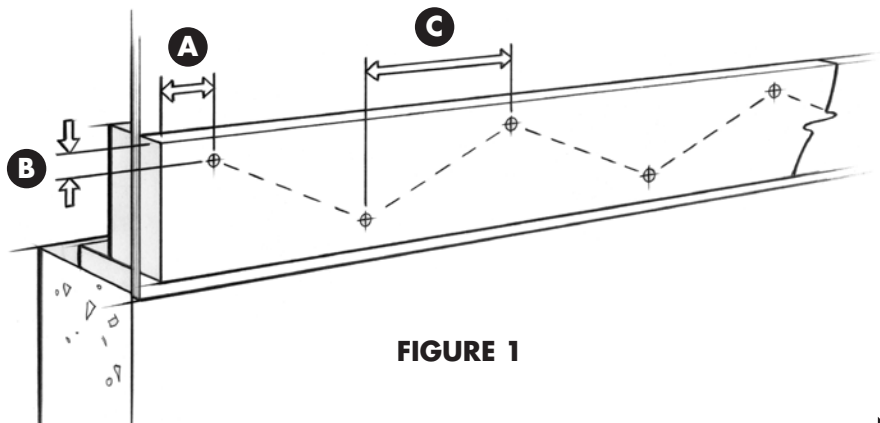


FIGURE 1



Effective until December 31, 2010. Updated information must be obtained after this date.

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**FASTENING PATTERN**

Based on the joist span of your deck (as measured from ledger to first supporting beam), and the live load required by your local code, determine the correct fastening pattern from Table 1 below.

**TABLE 1****Fastening pattern for attaching deck ledger to rim joist using LedgerLok**

Joist Span	6' and less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'
Live Load	<b>O.C. spacing of fasteners in inches</b>				
40 psf	12	9	7	6	5
60 psf	8	6	5	4	4
100 psf	5	4	3	3	2

All fastening patterns outlined in the table above are based on the most conservative design values for the FastenMaster LedgerLok from ICC-ES Report ESR #1078 using the following materials:

- **Ledger:** 2 x 8 pressure-preservative-treated No. 2 grade Hem-Fir lumber or better. Douglas Fir-Larch, Southern Pine and all species above 0.43 specific gravity allowed.
- **Sheathing:**  $1\frac{5}{32}$ " or  $7\frac{1}{16}$ " OSB sheathing. Additional materials between ledger and rim joist may be allowed. See guidelines below.
- **Rim joist:** 2 x \_\_ Spruce-Pine-Fir lumber or 1" minimum Engineered Wood (EW) Rim. EW Rim material must be solid LVL, LSL or PSL. For wood rims, all species above 0.42 specific gravity allowed.

A wet service factor has already been applied to all design values so as to provide the most conservative patterns for exposure to exterior conditions. **No further reductions need to be applied for wet service.**

The code-standard dead load for building materials of 10 pounds per square foot is assumed in all calculations above.

As required by IRC Section 502.2.2.2, the calculations and installation instructions found in this bulletin have been reviewed and found to be in accordance with accepted engineering practices. For a copy of the engineer stamped/sealed letter, please contact FastenMaster at 800-518-3569.

**GENERAL FASTENING GUIDELINES**

- The LedgerLok is not designed for use in masonry or concrete.
- Ledger connections shall be properly flashed to prevent water from contacting the rim joist.
- Deck ledger shall be minimum 2 x 8 pressure-preservative-treated No.2 grade lumber.
- As code requires, where positive connection to the rim joist cannot be inspected, deck shall be self supporting.
- Wood structural panel sheathing or gypsum board sheathing not exceeding 1" in thickness shall be permitted provided that the maximum distance between the inner face of the ledger board and the outer face of the rim joist is no greater than 1" and is properly fastened to the rim.
- Ledger cannot be attached over stucco, siding or brick veneer.
- LedgerLok is not designed for attaching to open web floor trusses, stud walls or house overhangs (cantilevers).
- Under the following conditions, a design professional should be consulted for proper spacing requirements:
  1. In areas where live load or snow load requirements exceed 100 lbs. per square foot.
  2. For decks designed to carry increased dead loads (ex: hot tubs, stationary planters).
  3. Three-season or fully enclosed decks supporting an overhead roof.
- All local code requirements and guidelines outlined on this technical bulletin must be followed for values outlined above to be applicable.