

**SteelDeck**  
f r a m i n g   s y s t e m  
*by Xccent and Dietrich*

# Build Smart. Live Safe.

Builders are turning to alternative materials for deck construction due to environmental construction liability risks, concerns and technological advancements. Steel joists offer a framing solution that is strong, durable, efficient, economical and easy to install.

**SteelDeck Framing System** provides the perfect complement to any decking material and helps eliminate the most serious problems encountered in treated lumber framing damage—corrosion reactions, termites, water damage, mold and decay.



## Why use SteelDeck?

### —The ACQ Dilemma.

If you are already using an alternative to wood for your decking surface why not protect the most important part—the sub structure!

The newer chemicals used to treat wood, like alkaline copper quatarnary (ACQ) can be very corrosive, when coming in contact with fasteners, hangers and other steel materials. This corrosive reaction can deteriorate steel fasteners and hangers causing structural damage or deck failure. The SteelDeck product offers the safest, most efficient solution to building a high quality deck.

## What the Experts Say

*“This was our first project that we used the SteelDeck joist system and it won't be our last. We were impressed by the strength and uniformity of the product. This new innovative product will last a lifetime.”*

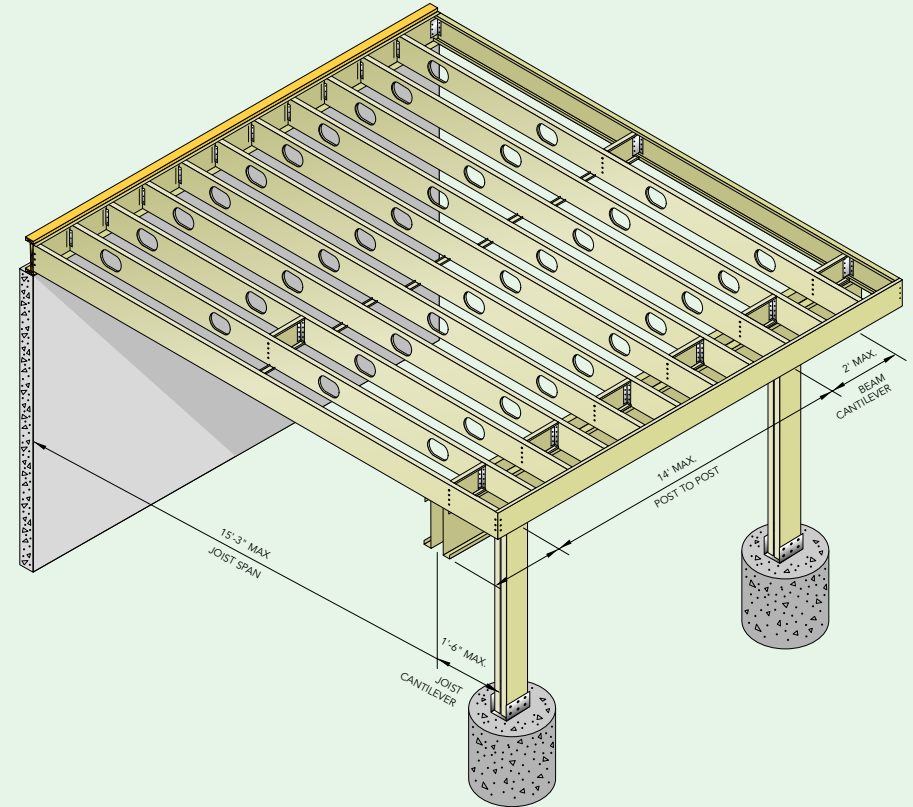
— **Tom Jacques, Owner/President**  
Hickory Dickory Decks  
(Largest Deck Builder in Canada)

*“I was impressed with the durability of the top-coating as well as reassured by the galvanized under-coating. The uncertainty in terms of the integrity of fasteners, hangers and connectors in contact with ACQ treated lumber is no longer an issue and takes away from my liability concerns as a builder.”*

— **John A. Poulakos, President**  
Valley USA  
(Building Decks Since 1969)

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# SteelDeck Capabilities.



**SteelDeck Steel Joist Allowable Span Table**

10 psf Dead Load and 40 psf Live Load			
TL Deflection = L/360, LL Deflection = L/480			
JOIST MEMBER	Single Span Spacing (in.) o.c.		MAX OVERHANG (in.)
	16"	24"	
9.25" TDJ16	17' 6"	15' 3"	1'-6"

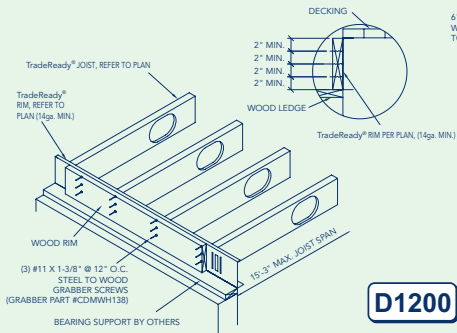
**NOTE:** The span of a joist is measured from the centerline of bearing at one end of the joist to the centerline of bearing at the other end and does not include overhangs.

## General Notes for SteelDeck Steel Joist Span Table:

- Spans are based on continuous lateral support of the compression flange.
- The joist rim must be installed according to the installation instructions.
- Spans are not valid if any portion of the Rolled Hole falls over a bearing point.
- Rim tab must be attached to the hard side of the joist.
- TDJ = 1 3/4" flange, TDW = 2" flange.
- Fy is 33 ksi for 18-gauge, 50 ksi for 16, 14, and 12-gauge.

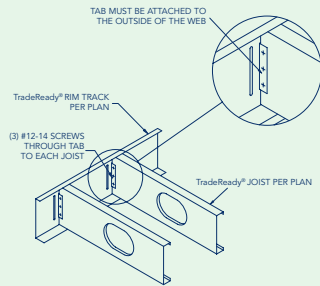
# SteelDeck Framing System – a solid framework for deckbuilding

**D1200 Deck Connection Detail (Rim Side)**

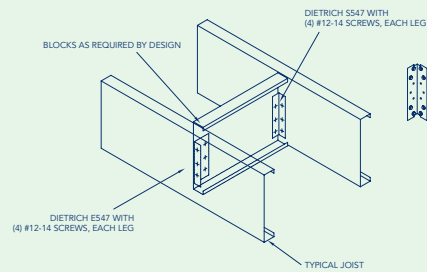


NOTE: TENSION LOADS MAY NEED TO BE RESISTED AT THE DECK TO HOUSE CONNECTION FOR A VARIETY OF REASONS, INCLUDING WIND, EARTHQUAKE, HUMAN ACTIVITY AND VARIOUS SPECIAL FRAMING CONDITIONS. IT IS RECOMMENDED THAT TENSION THE OPTION (D1122) OR 2 (D1115) BE USED AS APPLICABLE, BUT NO MORE THAN 6" TO 8" O.C. LOCAL CODE REQUIREMENTS, OR SPECIAL DECK FRAMING CONDITIONS MAY REQUIRE MORE FREQUENT CONNECTIONS.

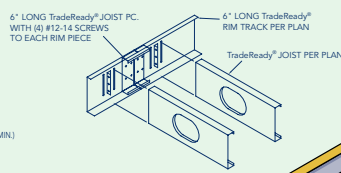
**D1100 Joist/Rim Attachment – Standard**



**D1401 Blocking/Bridging Detail**



**D1102 Joist Rim – Rim Splice**



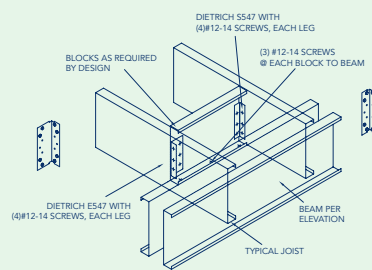
**D1102**

**D1200**

**D1100**

**D1401**

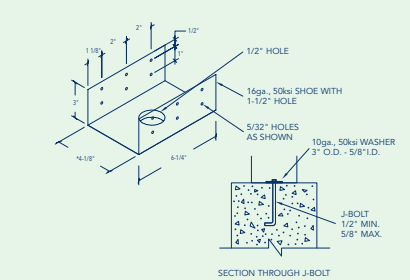
**D1400 Blocking/Bridging Over Beam Support**



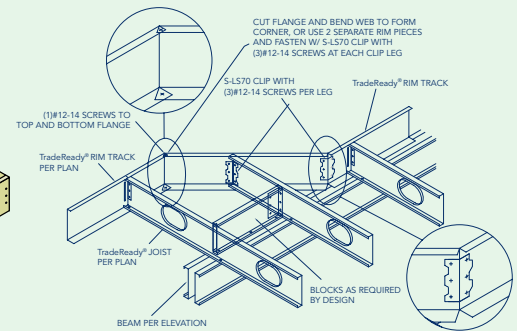
NOTE: @ SKEWED CONDITIONS, LONGER BLOCKS AND SKEWABLE CLIPS WILL BE REQUIRED.

**D1400**

**D1303 Post to Pier Connection**

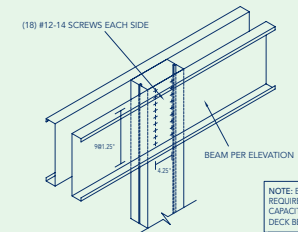


**D1101 Cantilever – Skewed Rim – S-LS70 Clip**



**D1303**

**D1300 Post/Beam Connection**



NOTE: ENGINEERING REVIEW REQUIRED TO ENSURE CONNECTION CAPACITY IS SUFFICIENT FOR THE DECK BEING CONSTRUCTED.

# Tools and Accessories

# What you'll need to do the job

Installing SteelDeck Framing System requires three basic operations: cutting, clamping and fastening.

## Cutting Tools

Cutting tools may be required to cut blocking as well as framing members. Commonly used cutting tools for steel framing applications include standard wood framing Chop Saw and Circular Saw. Simply replace the blade with a metal cutting blade. (Part #0000000)

### Carbide Metal Cutting Blade

Carbide metal cutting blades may be used in conjunction with worm drive saws and some standard circular saws to cut framing members

## Clamping Tools

Clamps are essential tools for steel framing and come in a variety of sizes or throat openings.

### Locking C-Clamp

Locking C-Clamps are typically used to hold the steel pieces together during fastening.

## Fastening Tools

The most common methods of fastening steel to steel are screws. Self-drilling screws are the most prevalent fasteners, and they are typically applied with a positive-clutch electric screw gun.

A common fastening tool includes a Screw Gun (pictured).

### Screw Gun

A torque-adjustable, clutch-activated screw gun operating from 0-2500 RPMs.



Carbide Metal Cutting Blade



Locking C-Clamp



Screw Gun

## Screws

Self-drilling screws are the most prevalent fasteners for the SteelDeck Framing System. Below you will find a list of some of the most common screws made by Grabber Construction Products for a perfect fit with the SteelDeck Framing System.

### Self-Drilling Screw

Steel to Steel Connections.

HEX Head, Phillips Head, and LOX Head are acceptable.

#12, 3/4" Screw (Part #10075H3)



### Steel to Wood Screw

Light gauge steel to wood

#12, 1 5/8" Screw (Part #CDMWH138)



### Self-Drilling Decking Screw

Wood, composite or Xccent SteelDecking to steel joists.

#8, 1 5/8" (Part #CH58158JBWG2)



### GrabberGard Screws

GrabberGard exterior screws provide superior protection from rust and corrosion.

GrabberGard withstands destructive elements like salt water, chemicals, acid rain, sunlight and industrial pollutants.



www.grabberman.com

For more information  
call 1-800-477-8876

## Why use SteelDeck Framing System?

**Better Construction Quality:** Coated Steel is highly corrosion-resistant and dimensionally stable reducing cracking often associated with wood shrinkage and expansion. Steel does not contain knots, twists or warps virtually assuring a flat and level deck. Steel will not warp, split, rot or settle. Plus, SteelDeck Framing System steel joists are manufactured to strict standards of strength and consistency.

**Chemical free:** SteelDeck Framing System does not contain any chemical treatments that standard traditional treated lumber products have.

**Insect-proof:** The threat of wood-damaging insects like termites can be a major drawback when using wood framing – both in terms of maintenance and safety. SteelDeck Framing System helps eliminate insect threats.

**Mold-resistant:** Wood contains all three elements essential to mold creation—water, organic material and oxygen—while steel contains none of these.

**Strong & Lightweight:** Steel has one of the highest strength-to-weight ratios of any construction material. Less weight means a reduction in seismic loads and worker fatigue.

**Recyclable:** All steel products are 100% recyclable. The amount of steel recycled over the past decade has extended the life of the nation's landfills by more than three years.

**SteelDeck Framing System** steel joists provide additional ease of installation benefits including pre-spaced joist tabs that eliminate the need to layout joists.



# Two names you can trust

**Dietrich Metal Framing** is the largest manufacturer of steel framing products in the United States. Employing 2,000 people in 27 state-of-the-art facilities, Dietrich is committed to being the top producer of metal framing products and services and to exceeding the increasing demands of the construction industry.

Dietrich is a Worthington Industries company (NYSE: WOR). Worthington is a leading diversified metal processing company with annual sales of approximately \$2 billion. The Columbus, Ohio-based company is North America's premier value-added steel processor and a leader in manufactured metal products such as automotive part model stampings, pressure cylinders, metal framing, metal ceiling grid systems and laser welded blanks. Worthington employs 8,000 people and operates 63 facilities in 10 countries.

**Xccent Decking** is the premier manufacturer of vinyl coated steel decking and decking components. Xccent Decking is proud to offer the best value in low maintenance decking. When featured on The Learning Channel, the decking was designated "one of the most innovative products introduced to the residential market in recent years."

Founded in 1976 as Nickelson Plastics, the company gained a reputation for developing a number of unique industrial coatings and products, including a wide range of commercial outdoor furniture seen all across the country in a variety of settings, environments and clients. The experience in plastics, led to the development of Xccent Decking.

## SteelDeck

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**1.800.933.4748**

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**DIETRICH**  
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