

# **OPEN JOIST**<sup>TM</sup>

[www.openjoist.com](http://www.openjoist.com)

**Fire Code Compliant**  
**Spans to 32 Feet**  
**Job Site Trimmable**  
**Individually Tested**  
**Warranted Floor System**  
**Best Span-To-Cost Ratio**

*where*  
**Speed**  
*meets*  
**Strength**



A product of  
Allegheny Structural Components





# OPEN JOIST<sup>SM</sup>

## **Floor Truss Innovation**

OPEN JOIST relies on the same proven engineering principles that give superior strength to open web floor trusses. But OPEN JOIST goes beyond...eliminating steel plates that interfere with mechanical systems installation and add excessive weight...making it possible to trim trusses to fit at the job site...and testing every truss to more than twice its required strength before it ships from the factory.

OPEN JOIST's unique finger-jointed connections are fused with adhesives that exceed building code fire endurance requirements. These adhesives remain stable under the most rigorous conditions and are waterproof. They replace heavy steel connector plates that can snag mechanicals, injure installers and consume significant energy when produced.

## **Faster and Stronger**

Open web access allows faster installation of mechanical, electrical and plumbing systems. Because these systems can be hidden in the floor/ceiling envelope, building design options are expanded.

OPEN JOIST's superior strength allows long clear span designs. This strength can also reduce costs through wider on-center spacing and the elimination of intermediate bearings. OPEN JOIST trusses boast the best strength-to-cost ratio of any engineered floor joist product.

Trusses are available in six depths (9-1/4", 11-7/8", 14", 16", 18" and 20") and can clear-span more than 31 feet. OPEN JOIST is engineered to produce maximum strength from the most efficient use of wood fiber...another reason OPEN JOIST gives builders the best cost option for floor framing.

## **Faster Shipment**

OPEN JOIST floor trusses are already engineered and built to trimmable stock lengths so order turnaround is measured in days instead of weeks.

## **Fire Code Compliant**

OPEN JOIST is certified for fire performance equivalent to 2X10's, qualifying as Exception 4 of IRC Sections R302.13 (2015) and R501.3 (2012) "Fire Protection of Floors". OPEN JOIST is the only engineered floor framing product qualifying as Exception 4 with no coating or cladding. No basement ceiling is required.

## **Lifetime Warranty**

OPEN JOIST offers builders and residents peace of mind through a lifetime floor system warranty.



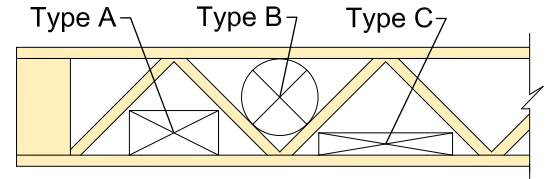
## STANDARD TRUSS CONFIGURATIONS

Truss Depth	Truss Length	Chord Size & Grade
9-1/4"	3' thru 16'	3x2 #2
9-1/4"	17' thru 20'	4x2 MSR 2100
11-7/8"	3' thru 17'	3x2 #2
11-7/8"	18' thru 19'	4x2 #2
11-7/8"	20' thru 23'	4x2 MSR 2100
14"	3' thru 18'	3x2 #2
14"	19' thru 21'	4x2 #2
14"	22' thru 25'	4x2 MSR 2100
16"	3' thru 17'	3x2 #2
16"	18' thru 22'	4x2 #2
16"	23' thru 26'	4x2 MSR 2100
16"	27' thru 30'	4x2 MSR 2400
18"	3' thru 22'	4x2 #2
18"	23' thru 27'	4x2 MSR 2100
18"	27' thru 31'	4x2 MSR 2400
20"	3' thru 22'	4x2 #2
20"	23' thru 28'	4x2 MSR 2100
20"	29' thru 32'	4x2 MSR 2400

Note: Special order trusses may be constructed with chord sizes and grades greater than those shown above.



## THROUGH-TRUSS CLEARANCES FOR MEP INSTALLATION



Truss Depth	Type A	Type B	Type C
9-1/4"	3" x 9"	5" Diameter	N/A
11-7/8"	5-1/2" x 5-1/2"	6-1/2" Diameter	3" x 10"
14"	6-1/2" x 6-1/2"	8" Diameter	4" x 12"
16"	6" x 12"	10" Diameter	3" x 18"
18"	8" x 12"	11-1/2" Diameter	5" x 18"
20"	10" x 12"	13-1/2" Diameter	7" x 18"

Trusses also feature large centered chase openings. See website for chase sizes.

## Clear Span Capabilities

\*Because OPEN JOIST is a "stock" product, the length of an OPEN JOIST truss determines the size and grade of the chords for each truss (see "Standard Truss Configurations" table above). Maximum spans published in these charts may be limited by standard truss configuration. To find maximum clear span for a given truss depth in a given loading condition, refer to the bottom line of spans shown for that particular truss depth.

NOTE: Clear spans shown on these charts are presented under the following conditions: (1) Bearing size varies and is determined by loading conditions, truss span and truss spacing; (2) "Strongback" bracing is not considered; (3) Assumes composite action with a single layer of nominal 3/4" wood sheathing glued and nailed or screwed; (4) Spans are clear distance between supports for uniformly loaded trusses and include allowable increases for repetitive member use.

### 9-1/4" Depth Maximum Live Load Deflection - L/360 and L/480, 1-1/2" Minimum Bearing Each End

Chord* Size	Chord* Grade	Loading (PSF)		12" O.C.		16" O.C.		19.2" O.C.		24" O.C.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	15'-9"	15'-9"	15'-9"	14'-11"	15'-6"	14'-0"	14'-3"	12'-10"
4x2	MSR 2100	40	15	19'-9"	19'-5"	19'-1"	17'-3"	17'-11"	16'-6"	16'-11"	--
3x2	#2	50	15	15'-9"	15'-3"	15'-3"	13'-9"	14'-3"	12'-10"	13'-2"	11'-11"
4x2	MSR 2100	50	15	19'-9"	17'-11"	17'-11"	16'-4"	16'-11"	--	--	--
3x2	#2	100	15	13'-2"	11'-11"	11'-11"	10'-8"	11'-1"	9'-11"	9'-3"	8'-9"

### 11-7/8" Depth Maximum Live Load Deflection - L/360 and L/480, 1-1/2" Minimum Bearing Each End

Chord* Size	Chord* Grade	Loading (PSF)		12" O.C.		16" O.C.		19.2" O.C.		24" O.C.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-8"	16'-9"	15'-2"
4x2	#2	40	15	18'-9"	18'-9"	18'-9"	18'-9"	18'-9"	18'-7"	17'-2"	17'-2"
4x2	MSR 2100	40	15	22'-9"	22'-9"	22'-9"	21'-0"	21'-5"	19'-10"	19'-3"	--
3x2	#2	50	15	16'-9"	16'-9"	16'-9"	16'-5"	16'-9"	15'-2"	15'-4"	14'-1"
4x2	#2	50	15	18'-9"	18'-9"	18'-9"	18'-5"	17'-8"	17'-3"	16'-3"	--
4x2	MSR 2100	50	15	22'-9"	21'-5"	21'-5"	19'-8"	20'-3"	--	--	--
3x2	#2	100	15	15'-7"	14'-1"	13'-11"	12'-9"	12'-3"	11'-11"	10'-4"	10'-4"
4x2	#2	100	15	16'-11"	--	--	--	--	--	--	--

Clear Span Capabilities Continued on Back Page

# Clear Span Capabilities

## 14" Depth Maximum Live Load Deflection - L/360 and L/480, 1-1/2" Minimum Bearing Each End

Chord* Size	Chord* Grade	Loading (PSF)		12" O.C.		16" O.C.		19.2" O.C.		24" O.C.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	17'-9"	17'-9"	17'-9"	17'-9"	17'-9"	17'-9"	17'-9"	16'-4"
4x2	#2	40	15	20'-9"	20'-9"	20'-9"	20'-9"	20'-9"	19'-10"	18'-9"	18'-5"
4x2	MSR 2100	40	15	24'-9"	24'-9"	24'-8"	22'-9"	23'-5"	21'-2"	20'-10"	--
3x2	#2	50	15	17'-9"	17'-9"	17'-9"	17'-7"	17'-9"	16'-5"	16'-4"	15'-3"
4x2	#2	50	15	20'-9"	20'-9"	20'-9"	19'-8"	19'-9"	18'-6"	--	--
4x2	MSR 2100	50	15	24'-9"	23'-2"	23'-2"	21'-0"	21'-10"	--	--	--
3x2	#2	100	15	16'-9"	15'-2"	14'-4"	13'-8"	12'-10"	12'-8"	10'-9"	10'-9"
4x2	#2	100	15	18'-4"	--	--	--	--	--	--	--

## 16" Depth Maximum Live Load Deflection - L/360 and L/480, 1-1/2" Minimum Bearing Each End

Chord* Size	Chord* Grade	Loading (PSF)		12" O.C.		16" O.C.		19.2" O.C.		24" O.C.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
3x2	#2	40	15	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"
4x2	#2	40	15	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"
4x2	MSR 2100	40	15	25'-9"	25'-9"	25'-9"	25'-9"	25'-9"	25'-6"	25'-9"	22'-5"
4x2	MSR 2400	40	15	29'-9"	29'-8"	29'-9"	27'-7"	28'-5"	--	26'-10"	--
3x2	#2	50	15	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"	16'-9"
4x2	#2	50	15	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	20'-10"
4x2	MSR 2100	50	15	25'-9"	25'-9"	25'-9"	25'-0"	25'-9"	22'-5"	23'-10"	--
4x2	MSR 2400	50	15	29'-9"	28'-2"	28'-3"	--	26'-10"	--	--	--
3x2	#2	100	15	16'-9"	16'-9"	16'-8"	16'-8"	13'-6"	13'-6"	11'-4"	11'-4"
4x2	#2	100	15	21'-9"	20'-10"	19'-1"	19'-0"	16'-9"	15'-9"	--	--
4x2	MSR 2100	100	15	23'-3"	--	--	--	--	--	--	--

## 18" Depth Maximum Live Load Deflection - L/360 and L/480, 1-1/2" Minimum Bearing Each End

Chord* Size	Chord* Grade	Loading (PSF)		12" O.C.		16" O.C.		19.2" O.C.		24" O.C.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
4x2	#2	40	25	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"
4x2	MSR 2100	40	25	25'-9"	25'-9"	25'-9"	25'-9"	25'-9"	25'-6"	25'-9"	25'-9"
4x2	MSR 2400	40	25	30'-9"	30'-9"	30'-9"	30'-8"	30'-9"	29'-0"	27'-8"	27'-0"
4x2	#2	100	25	21'-9"	21'-9"	21'-8"	21'-8"	17'-8"	17'-8"	14'-8"	14'-8"
4x2	MSR 2100	100	25	25'-9"	24'-10"	--	--	--	--	--	--
4x2	MSR 2400	100	25	27'-1"	--	--	--	--	--	--	--

## 20" Depth Maximum Live Load Deflection - L/360 and L/480, 1-1/2" Minimum Bearing Each End

Chord* Size	Chord* Grade	Loading (PSF)		12" O.C.		16" O.C.		19.2" O.C.		24" O.C.	
		Live	Dead	L/360	L/480	L/360	L/480	L/360	L/480	L/360	L/480
4x2	#2	40	25	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"	21'-9"
4x2	MSR 2100	40	25	25'-9"	25'-9"	25'-9"	25'-9"	25'-9"	25'-6"	25'-9"	25'-9"
4x2	MSR 2400	40	25	31'-9"	31'-9"	31'-9"	31'-9"	31'-9"	31'-9"	27'-8"	27'-8"
4x2	#2	100	25	21'-9"	21'-9"	21'-8"	21'-5"	17'-8"	17'-8"	14'-8"	14'-8"
4x2	MSR 2100	100	25	25'-9"	25'-7"	--	--	--	--	--	--
4x2	MSR 2400	100	25	28'-8"	26'-11"	--	--	--	--	--	--

### Building Codes Compliance

IAPMO has issued Evaluation Report ER-501 certifying OPEN JOIST floor trusses for use within requirements of the 2009, 2012 and 2015 International Building Code and the 2009, 2012 and 2015 International Residential Code.

IAPMO has issued Evaluation Report ER-480 certifying equivalent fire performance to 2 inch by 10 inch nominal dimension solid sawn lumber, recognizing installation without a membrane in accordance with Exception 4 to the 2015 IRC Section R302.13 or Section R501.3 of the 2012 IRC.

