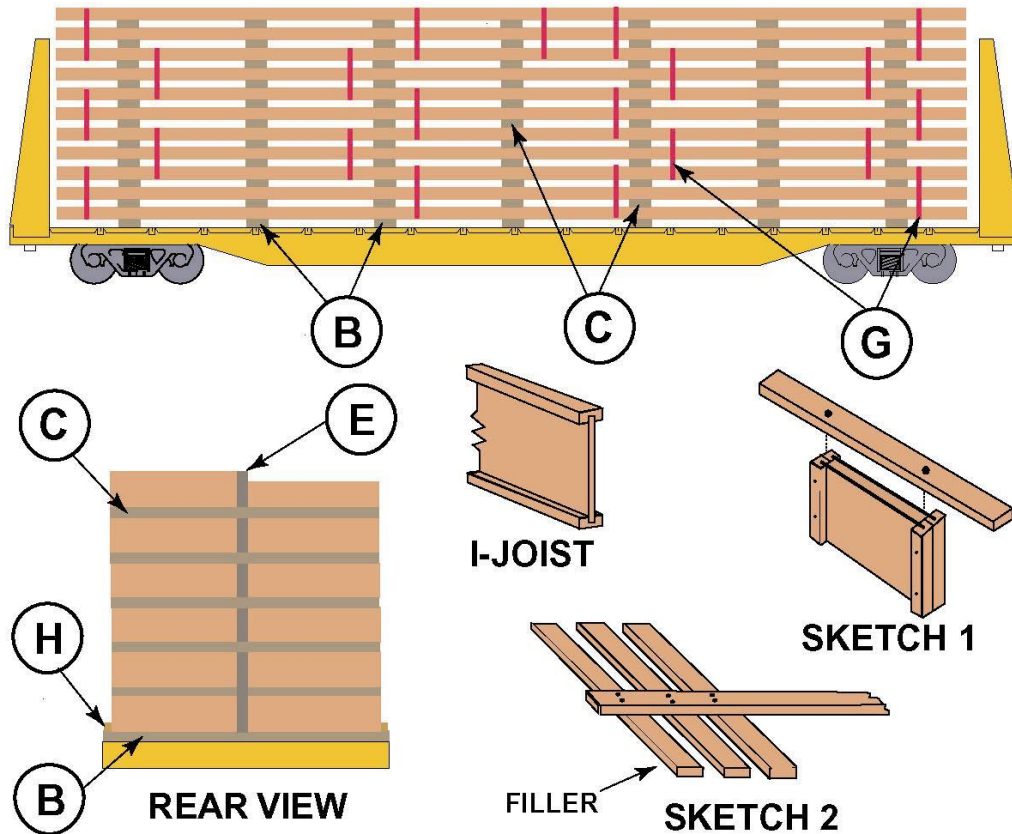


ENGINEERED-WOOD PRODUCTS, LVL, PSL,
AND LSL STRUCTURAL BEAMS AND I-JOISTS
PACKAGED-BULKHEAD FLATCARS, 48 FT LONG AND OVER, WITH
CUSHIONING DEVICES

RAC 15112
New 03-2004



	4 FT	10 FT	17 FT	24 FT	17 FT	10 FT	4 FT
48 FT							
58 FT	5"	12"	20"	28"	20"	12"	5"
60 FT	5"	13"	21"	30"	21"	13"	5"
66 FT	5"	14"	23"	33"	23"	14"	5"
70 FT	5"	15"	25"	35"	26"	15"	5"
FLOOR BEARING PCS	X	X	X	X	X	X	X
VERTICAL STABILIZERS	X		X	X	X		X
SEPARATORS	X	X	X	X	X	X	X

TABLE 1



ENGINEERED-WOOD PRODUCTS, LVL, PSL
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RAC 15112 (continued)
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Item	No. of Pcs..	Description
A		At origin, load must be centrally located on car, with the bottom layer no more than 2 ft from the bulkheads at each end of car.
B	7	Bearing pieces: 2 in. × 4 in. lumber, length must extend a minimum of 3 in. beyond each side of pile but not beyond the outside edge of stake pockets. Bearing pieces must be of equal height and free of decay and strength-impairing knots. Secure each to car floor with four common nails, the length to be not less than 2 in. greater than thickness of bearing pieces. Locate and space per Table 1 .
C	7	Separators: 2 in. × 4 in. lumber. Length equal to width of layer but not to extend beyond width of car. Locate and space per Table 1. When side-by-side packages are not of equal height, it will be necessary to apply a minimum of three fillers to ensure that separators are on a level plane. Fillers are to be 5 1/2 in. wide by 48 in. long, height to suit. Secure each to separators with two 16-D nails. See Sketch 1. When coated laminated material is located in any layer, a wood block 2 in. × 4 in. × 6 in. must be located on top and bottom of each separator against the side of packages. Secure each block with three 16-D nails.
D	2 per package 30 ft long or less. Add 1 for each additional 20 ft or less.	Spacers: constructed with two adjoining beams, affixed to 1 1/2 in. × 3 1/2 in. × minimum of 24 in. piece of lumber. Spacers must be used within a package when the combined width of packages in one layer varies from the combined width of adjacent packages. Height must be equal to height of packages. See Sketch 2.



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RAC 15112 (continued)
New 03-2004

Item	No. of Pcs..	Description
E	5	Vertical load stabilizers: 2 in. × 4 in., free from decay and strength impairing knots. Length must extend to bottom of bottom layer, but not below and must not exceed height of load. Secure each with a minimum of two nails at least 2 in. longer than the thickness of stabilizers. Locate and space per Table 1 .
F	<p>2 per package 40 ft long or less. Add 1 additional for packages over 40 ft long</p> <p>2 per package 20 ft long or less. Add 1 for each additional 10 ft up to a maximum of 5 per package, up to 60 ft. Add 1 for each additional 20 ft or less over 60 ft long.</p> <p>2 per package 40 ft long or less. Add 1 additional for packages over 40 ft.</p>	<p>I-Joist Package bands: 3/4 in. × .020 in. high tension, on I-joists in packages up to 48 in. wide by 24 in. high. On packages of I-joists over 48 in. wide and/or 24 in. high, 1 1/4 in. × .029 high tension bands must be used.</p> <p>Veneer Lumber or (Solid) Beams in Packages Up to 24 in. Wide and Up to 16 in. High. Package bands: 3/4 in. × .022 in. high tension, on any laminated veneer lumber or beams other than I-beams.</p> <p>Veneer Lumber or (Solid) Beams in Packages Over 24 in. Wide and/or Over 16 in. High. Package bands: 1 1/4 in. × .029 in. high tension, on any laminated veneer lumber or beams, other than I-joists. Must be used on packages over 24 in. wide and/or over 16 in. high.</p>



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RAC 15112 (continued)
New 03-2004

Item	No. of Pcs..	Description
G	2 per package except top layer, 3 per package 4 per layer. Add 1 on each package exceeding height of bulkhead.	Interlacing bands: 1 1/4 in. × .029 in. high tension bands. Place underbottom layer encircling each package in the first, second, and third layers, locating midway between bearing pieces. Place through separation between second and third layers encircling third, fourth, and fifth layers. Interlacing must be repeated between each additional group of three layers or less to top of load. Any layer containing coated material having more than 24 in. total void space between the load and bulkheads must have two additional Item G bands applied to each end package.
H	1 per each side of load	Guide rails: 2 1/4 in. × 1 1/2 in. lumber, free from decay and strength impairing knots. Must be continuous and extend to ends of load in bottom layer. Secure to Items B with two 16-D nails. Guide rails must be made up of lengths spanning at least two bearing pieces, Item B, butted and capped with similar material of the same dimension as guide rails, a minimum of 36 in. long, secured with six 16-D nails, three on each side of joint. Joints must be made between bearing pieces. Locate straight, parallel with, and approximately 1/2 in. from base of load. When coated laminated material is located in the bottom layer, full 2 in. × 4 in. guide rails must be applied.



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RAC 15112 (concluded)

New 03-2004

Notes:

1. For the purposes of this figure, engineered-wood products include LVL (laminated veneer lumber), PSL (parallel-strand lumber), and LSL (laminated-strand lumber). Where veneer lumber is referred to, this includes LVL, PSL, and LSL product.
2. Maximum height of load must not exceed 17 ft 6 in. above top of rail, and combined center of gravity must not exceed 98 in. Any height restrictions stenciled on the car or bulkhead supersede the 17 ft 6 in. height allowance.
3. Height of packages in top layer must not vary more than 12 in.
4. The weight on both sides of load must be as close as possible but must not exceed a 4,000-lb variance.
5. It is the intent that longer layers be located in bottom portion of load.
6. Where the use of lumber is referred to in this figure, it may be substituted with AAR-approved laminated material per General Rule 11.6. Material used for bearing pieces, separators, vertical stabilizers, or guide rails, whether laminated or solid lumber must not be coated.
7. A layer may be no more than 6 in. narrower per side than the layer immediately beneath it with the exception of the top layer which may be 24 in. narrower per side than the layer immediately beneath it.
8. Package height must not exceed package width.
9. I-joists in a single package must be limited to one layer high.
10. When car is equipped with a steel deck or nailable steel floor, shippers must apply five pair of stub stakes with block-out material secured between the guide rails and the stakes. Stakes are to be placed to coincide with the location of Item B bearing pieces. Solid wood 2 × 4 blocking is to be cut to fill the lateral space between the outside of the guide rail and each stub stake. The lateral blocking is to be secured to the top of the bearing piece with at least three common nails, at least 2 in. longer than the thickness of the block. For this application, bearing piece location must be planned in advance to align with stake pockets to support the securement of lateral blocking.

For further details see the General Rules.