

Roseburg RFPI[®] Series I-Joists
Roseburg Forest Products Company

PR-L259(C)
Revised January 30, 2024

Products: Roseburg RFPI Series I-Joists
Roseburg Forest Products Company, 4500 Riddle Bypass Road, Riddle, Oregon 97469
(800) 347-7260
www.roseburg.com

1. Basis of the product report:
 - 2020 National Building Code of Canada (NBC): Clause 1.2.1.1 of Division A, and Clauses 4.1, 4.3.1.1, and 9.23.4.2 of Division B
 - CSA O86-19 Engineering Design in Wood
 - ASTM D5055-16 recognized in CAN/CSA O86-19
 - APA PRI-400 Performance Standard for Residential I-Joists (Limit States Design)
 - APA Reports T2000P-14, T2001P-64, T2002P-57, T2002P-62A, T2003P-15, T2003P-20, T2003P-67, T2005P-101C, T2006P-04, T2006P-76A, T2008P-11, T2008P-75, T2009P-33, T2009P-42, T2009P-48, T2009P-50, T2010P-35, T2010P-57, T2011P-51, T2011P-52, T2012P-31, T2013P-22, T2013P-24A, T2015L-05B, T2015P-06, T2017L-25, and T2018P-30, and other qualification data
2. Product description:

All RFPI series I-joists, as described in Table 1, are made with laminated veneer lumber (LVL) flanges with the exception of RFPI-40S, RFPI-60S, RFPI-65S, and RFPI-80S, which are made of lumber flanges, and OSB webs in accordance with the in-plant manufacturing standard approved by APA.
3. Design properties:

Tables 2 and 3 list the Limit States Design (LSD) properties for RFPI series I-joists. Table 4 shows web stiffener information. Design span information for RFPI series I-joists shall be in accordance with the recommendations provided by the manufacturer (www.roseburg.com).
4. Product installation:

RFPI Series I-Joists shall be installed in accordance with the recommendations provided by the manufacturer (see link above). Permissible web holes and cantilever reinforcements shall be in accordance with the recommendations provided by the manufacturer.
5. Fire-rated assemblies:

Fire-rated assemblies shall be constructed in accordance with the recommendations provided by the manufacturer (see link above), APA Product Report PR-S259, or Table 9.10.3.1.-B of NBC.
6. Limitations:
 - a) RFPI Series I-Joists shall be designed in accordance with the code using the design properties specified in this report.
 - b) RFPI Series I-Joists are limited to dry service conditions as defined in CSA O86, at which the average equilibrium moisture content of solid-sawn lumber over a year is 15% or less and does not exceed 19%.
 - c) All RFPI Series I-Joists are produced at Roseburg Forest Products Company facility in Riddle, Oregon under a quality assurance program audited by APA.
 - d) RFPI-40S, RFPI-60S, RFPI-65S, and RFPI-80S are also produced at the EACOM Timber Corporation (DBA INTERFOR) facility in Sault Ste. Marie, Ontario under a quality assurance program audited by APA.

- e) RFPI-40S and RFPI-60S are also produced at the IB EWP Inc.'s facility in Pohénégamook, Quebec under a quality assurance program audited by APA.
- f) This report is subject to re-examination in one year.

7. Identification:

The RFPI Series prefabricated wood I-joists described in this report are identified by a label bearing the manufacturer's name (Roseburg Forest Products Company) and/or trademark, the APA assigned plant number (1053 for Roseburg Forest Products, Riddle, Oregon, 1058 for EACOM (DBA INTERFOR), Sault Ste. Marie, Ontario, and 1135 for IB EWP Inc., Pohénégamook, Quebec), the I-joist depth and series, the APA logo, the report number PR-L259 or PR-L259(C), and a means of identifying the date of manufacture. RFPI-40, RFPI-70, and RFPI-90 are permitted to be labelled as onCENTER® BLI 400, BLI 700, and BLI 900, respectively.

Table 1. Description of Roseburg Forest Products RFPI Series of I-Joists^(a)

| Joist Series | Joist Depth, mm (in.) | Flange | | | | Web | |
|--------------|----------------------------|---------------------------|---------------------|-----------------|-----------------|----------|---------------------|
| | | Material | G ^(b) | Dimension | | Material | Thickness, mm (in.) |
| | | | | Depth, mm (in.) | Width, mm (in.) | | |
| RFPI-20 | 241 – 356 (9-1/2 – 14) | LVL | 0.50 | 35 (1-3/8) | 44 (1-3/4) | OSB | 9.5 (3/8) |
| RFPI-40S | 241 – 406 (9-1/2 – 16) | Proprietary SPF/DFL (MSR) | 0.42 ^(c) | 38 (1-1/2) | 64 (2-1/2) | OSB | 9.5 (3/8) |
| RFPI-400 | 241 – 406 (9-1/2 – 16) | LVL | 0.50 | 35 (1-3/8) | 52 (2-1/16) | OSB | 9.5 (3/8) |
| RFPI-40 | 241 – 406 (9-1/2 – 16) | LVL | 0.50 | 35 (1-3/8) | 59 (2-5/16) | OSB | 9.5 (3/8) |
| RFPI-60S | 241 – 406 (9-1/2 – 16) | Proprietary SPF/DFL (MSR) | 0.46 ^(c) | 38 (1-1/2) | 64 (2-1/2) | OSB | 9.5 (3/8) |
| RFPI-65S | 302 – 406 (11-7/8 – 16) | Proprietary SPF | 0.42 | 38 (1-1/2) | 89 (3-1/2) | OSB | 9.5 (3/8) |
| RFPI-70 | 241 – 406 (9-1/2 – 16) | LVL | 0.50 | 38 (1-1/2) | 59 (2-5/16) | OSB | 9.5 (3/8) |
| RFPI-80S | 302 – 406 (11-7/8 – 16) | MSR SPF/DFL | 0.46 ^(c) | 38 (1-1/2) | 89 (3-1/2) | OSB | 9.5 (3/8) |
| RFPI-90 | 241 – 406 (9-1/2 – 16) | LVL | 0.50 | 38 (1-1/2) | 89 (3-1/2) | OSB | 11.1 (7/16) |
| RFPI-700 | 457 – 610 (18 – 24) | LVL | 0.50 | 38 (1-1/2) | 59 (2-5/16) | OSB | 11.1 (7/16) |
| RFPI-900 | 457 – 610 (18 – 24) | LVL | 0.50 | 38 (1-1/2) | 89 (3-1/2) | OSB | 11.1 (7/16) |

^(a) Referenced dimensions are nominal. Tolerances are as specified in the plant quality manual.

^(b) Relative density of flanges for use in diaphragm design based on oven-dry weight and oven-dry volume for lumber flanges or equivalent specific gravity for LVL flanges.

^(c) The relative density is permitted to be increased to 0.49 if the flange species is Douglas fir-Larch.

Table 2. Factored Resistances of RFPI Series I-Joists^(a)

| Joist Depth, mm (in.) | Joist Series | Permitted to be Labelled as | EI ^(b) , 10 ⁹ N-mm ² (10 ⁶ lbf-in. ²) | M _r ^(c) , N-m (lbf-ft) | V _r ^(d) , N (lbf) | VLC _r ^(e) , kN/m (plf) | K ^(f) , 10 ⁶ N (10 ⁶ lbf) |
|--------------------------|--------------|--------------------------------|---|--|---|--|--|
| 241 (9-1/2) | RFPI-20 | BLI 400 | 473 (165) | 6,360 (4,690) | 8,565 (1,926) | 42.3 (2,900) | 22.0 (4.94) |
| | RFPI-40S | | 554 (193) | 6,000 (4,426) | 7,865 (1,768) | 42.3 (2,900) | 22.0 (4.94) |
| | RFPI-400 | | 554 (193) | 7,545 (5,563) | 8,565 (1,926) | 42.3 (2,900) | 22.0 (4.94) |
| | RFPI-40 | BLI 700 | 617 (215) | 8,480 (6,254) | 9,340 (2,099) | 42.3 (2,900) | 22.0 (4.94) |
| | RFPI-60S | | 663 (231) | 7,650 (5,644) | 7,865 (1,768) | 42.3 (2,900) | 22.0 (4.94) |
| | RFPI-70 | | 763 (266) | 11,570 (8,532) | 9,340 (2,099) | 42.3 (2,900) | 22.0 (4.94) |
| | RFPI-90 | | 1,142 (398) | 17,655 (13,023) | 13,270 (2,983) | 42.3 (2,900) | 22.0 (4.94) |
| 302 (11-7/8) | RFPI-20 | BLI 400 | 812 (283) | 8,210 (6,054) | 9,970 (2,241) | 42.3 (2,900) | 27.5 (6.18) |
| | RFPI-40S | | 947 (330) | 7,710 (5,686) | 9,970 (2,241) | 42.3 (2,900) | 27.5 (6.18) |
| | RFPI-400 | | 947 (330) | 9,730 (7,177) | 10,390 (2,336) | 42.3 (2,900) | 27.5 (6.18) |
| | RFPI-40 | BLI 700 | 1,050 (366) | 10,950 (8,075) | 10,880 (2,447) | 42.3 (2,900) | 27.5 (6.18) |
| | RFPI-60S | | 1,136 (396) | 9,910 (7,311) | 9,970 (2,241) | 42.3 (2,900) | 27.5 (6.18) |
| | RFPI-65S | | 1,303 (454) | 11,205 (8,265) | 11,375 (2,557) | 42.3 (2,900) | 27.5 (6.18) |
| | RFPI-70 | | 1,306 (455) | 14,985 (11,052) | 10,880 (2,447) | 42.3 (2,900) | 27.5 (6.18) |
| | RFPI-80S | BLI 900 | 1,570 (547) | 15,715 (11,593) | 11,165 (2,510) | 42.3 (2,900) | 27.5 (6.18) |
| RFPI-90 | 1,940 (676) | | 22,875 (16,873) | 14,395 (3,236) | 42.3 (2,900) | 27.5 (6.18) | |
| 356 (14) | RFPI-20 | BLI 400 | 1,205 (420) | 9,765 (7,202) | 11,305 (2,541) | 42.3 (2,900) | 32.4 (7.28) |
| | RFPI-40S | | 1,383 (482) | 9,630 (7,102) | 12,005 (2,699) | 42.3 (2,900) | 32.4 (7.28) |
| | RFPI-400 | | 1,395 (486) | 11,590 (8,549) | 12,005 (2,699) | 42.3 (2,900) | 32.4 (7.28) |
| | RFPI-40 | BLI 700 | 1,550 (540) | 13,045 (9,622) | 12,425 (2,794) | 42.3 (2,900) | 32.4 (7.28) |
| | RFPI-60S | | 1,676 (584) | 11,935 (8,803) | 12,005 (2,699) | 42.3 (2,900) | 32.4 (7.28) |
| | RFPI-65S | | 1,905 (664) | 13,495 (9,956) | 12,745 (2,865) | 42.3 (2,900) | 32.4 (7.28) |
| | RFPI-70 | | 1,928 (672) | 17,870 (13,181) | 12,425 (2,794) | 42.3 (2,900) | 32.4 (7.28) |
| | RFPI-80S | BLI 900 | 2,301 (802) | 18,920 (13,954) | 12,885 (2,896) | 42.3 (2,900) | 32.4 (7.28) |
| RFPI-90 | 2,847 (992) | | 27,285 (20,125) | 15,410 (3,465) | 42.3 (2,900) | 32.4 (7.28) | |
| 406 (16) | RFPI-40S | BLI 400 | 1,885 (657) | 11,160 (8,233) | 13,830 (3,109) | 42.3 (2,900) | 37.0 (8.32) |
| | RFPI-400 | | 1,908 (665) | 13,260 (9,780) | 13,830 (3,109) | 42.3 (2,900) | 37.0 (8.32) |
| | RFPI-40 | | 2,115 (737) | 14,915 (11,002) | 13,830 (3,109) | 42.3 (2,900) | 37.0 (8.32) |
| | RFPI-60S | BLI 700 | 2,293 (799) | 13,840 (10,207) | 13,830 (3,109) | 42.3 (2,900) | 37.0 (8.32) |
| | RFPI-65S | | 2,586 (901) | 15,655 (11,548) | 14,040 (3,157) | 42.3 (2,900) | 37.0 (8.32) |
| | RFPI-70 | | 2,634 (918) | 20,475 (15,102) | 13,830 (3,109) | 42.3 (2,900) | 37.0 (8.32) |
| | RFPI-80S | | 3,134 (1,092) | 21,940 (16,183) | 14,535 (3,267) | 42.3 (2,900) | 37.0 (8.32) |
| | RFPI-90 | BLI 900 | 3,874 (1,350) | 31,265 (23,060) | 16,360 (3,678) | 42.3 (2,900) | 37.0 (8.32) |

(Footnotes on the following page)

Table 2. Factored Resistances of RFPI Series I-Joists^(a) (Continued)

| Joist Depth, mm (in.) | Joist Series | Permitted to be Labelled as | EI ^(b) , 10 ⁹ N-mm ² (10 ⁶ lbf-in. ²) | M _r ^(c) , N-m (lbf-ft) | V _r ^(d) , N (lbf) | VLC _r ^(e) , kN/m (plf) | K ^(f) , 10 ⁶ N (10 ⁶ lbf) |
|--------------------------|--------------|--------------------------------|---|--|---|--|--|
| 457 (18) | RFPI-700 | | 3,573 (1,245) | 23,565 (17,380) | 18,080 (4,064) | 46.6 (3,190) | 50.4 (11.34) |
| | RFPI-900 | | 5,306 (1,849) | 36,260 (26,744) | 20,255 (4,554) | 46.6 (3,190) | 50.4 (11.34) |
| 508 (20) | RFPI-700 | | 4,531 (1,579) | 26,160 (19,293) | 19,235 (4,325) | 46.6 (3,190) | 56.0 (12.60) |
| | RFPI-900 | | 6,706 (2,337) | 40,265 (29,696) | 20,675 (4,648) | 46.6 (3,190) | 56.0 (12.60) |
| 559 (22) | RFPI-700 | | 5,610 (1,955) | 28,730 (21,189) | 20,605 (4,633) | 38.1 (2,610) | 61.6 (13.86) |
| | RFPI-900 | | 8,282 (2,886) | 44,230 (32,624) | 21,135 (4,751) | 38.1 (2,610) | 61.6 (13.86) |
| 610 (24) | RFPI-700 | | 6,815 (2,375) | 31,275 (23,069) | 21,485 (4,830) | 37.0 (2,538) | 67.3 (15.12) |
| | RFPI-900 | | 10,032 (3,496) | 48,155 (35,518) | 21,485 (4,830) | 37.0 (2,538) | 67.3 (15.12) |

- (a) All factored resistance values include the resistance factor specified in CSA-O86. The tabulated values are for the standard term of load duration (K_D = 1.0). All values, except for EI, VLC_r, and K, are permitted to be adjusted for other load durations in accordance with the code.
- (b) Bending stiffness (EI) of the I-joist.
- (c) Factored moment resistance (M_r) of the I-joist, which shall not be increased by any system factor (K_H = 1.0).
- (d) Factored shear resistance (V_r) of the I-joist.
- (e) Factored uniform vertical load resistance (VLC_r) of the I-joist.
- (f) Coefficient of shear deflection (K). For calculating uniform load and center-point load deflections of the I-joists in a simple-span application, use Equations 1 and 2.

$$\text{Uniform Load: } \delta = \frac{5 \omega L^4}{384 EI} + \frac{\omega L^2}{K} \quad [1]$$

$$\text{Center-Point Load: } \delta = \frac{PL^3}{48 EI} + \frac{2 PL}{K} \quad [2]$$

where δ = calculated deflection, mm (in.), ω = unfactored uniform load, kN/mm (lbf/in.),
P = unfactored concentrated load, kN (lbf), L = design span, mm (in.),
EI = bending stiffness of the I-joist, kN-mm² (lbf-in.²), and K = coefficient of shear deflection, kN (lbf).

Table 3. Additional Factored Resistances of RFPI Series I-Joists^(a,b,c)

| Joist Depth, mm (in.) | Joist Series | Permitted to be Labelled as | Factored End Reactions, N (lbf) | | | | | | Factored Intermediate Reactions, N (lbf) | | | | Web Bearing Stiffener Nails |
|-----------------------|--------------|-----------------------------|---------------------------------|-------------------|---------------------------|-------------------|------------------------|-------------------|--|-------------------|----------------------------|-------------------|-----------------------------|
| | | | 45 mm (1-3/4 in.) Bearing | | 89 mm (3-1/2 in.) Bearing | | 102 mm (4 in.) Bearing | | 89 mm (3-1/2 in.) Bearing | | 133 mm (5-1/4 in.) Bearing | | |
| | | | No B.S. | B.S. | No B.S. | B.S. | No B.S. | B.S. | No B.S. | B.S. | No B.S. | B.S. | |
| 241 (9-1/2) | RFPI-20 | | 6,390 (1,436) | 8,075 (1,815) | 8,075 (1,815) | 8,425 (1,894) | 8,565 (1,926) | 8,565 (1,926) | 12,460 (2,802) | 13,165 (2,960) | 14,040 (3,157) | 16,150 (3,630) | 4-8d |
| | RFPI-40S | | 7,580 (1,705) | 7,865 (1,768) | 7,795 (1,752) | 7,865 (1,768) | 7,865 (1,768) | 7,865 (1,768) | 15,165 (3,409) | 15,725 (3,536) | 15,725 (3,536) | 15,725 (3,536) | 4-8d |
| | RFPI-400 | | 7,195 (1,618) | 8,565 (1,926) | 8,250 (1,855) | 8,565 (1,926) | 8,565 (1,926) | 8,565 (1,926) | 15,095 (3,394) | 15,795 (3,551) | 16,150 (3,630) | 17,130 (3,851) | 4-8d |
| | RFPI-40 | BLI 400 | 7,580 (1,705) | 8,565 (1,926) | 8,915 (2,005) | 9,160 (2,060) | 9,340 (2,099) | 9,340 (2,099) | 15,795 (3,551) | 17,550 (3,946) | 17,905 (4,025) | 18,605 (4,183) | 4-8d |
| | RFPI-60S | | 7,580 (1,705) | 7,865 (1,768) | 7,795 (1,752) | 7,865 (1,768) | 7,865 (1,768) | 7,865 (1,768) | 15,165 (3,409) | 15,725 (3,536) | 15,725 (3,536) | 15,725 (3,536) | 4-8d |
| | RFPI-70 | BLI 700 | 7,865 (1,768) | 9,340 (2,099) | 8,985 (2,020) | 9,340 (2,099) | 9,340 (2,099) | 9,340 (2,099) | 16,395 (3,686) | 17,550 (3,946) | 17,905 (4,025) | 18,605 (4,183) | 4-8d |
| | RFPI-90 | | 9,340 (2,099) | 11,130 (2,502) | 11,340 (2,549) | 12,780 (2,873) | 11,935 (2,683) | 13,270 (2,983) | 21,205 (4,767) | 24,185 (5,438) | 24,185 (5,438) | 24,395 (5,485) | 4-10d |
| 302 (11-7/8) | RFPI-20 | | 6,670 (1,499) | 8,600 (1,934) | 9,230 (2,076) | 9,655 (2,170) | 9,970 (2,241) | 9,970 (2,241) | 13,585 (3,054) | 14,285 (3,212) | 14,990 (3,370) | 17,095 (3,843) | 4-8d |
| | RFPI-40S | | 8,425 (1,894) | 9,410 (2,115) | 9,620 (2,162) | 9,830 (2,210) | 9,970 (2,241) | 9,970 (2,241) | 17,550 (3,946) | 18,430 (4,143) | 18,675 (4,199) | 19,940 (4,483) | 4-8d |
| | RFPI-400 | | 7,370 (1,657) | 8,880 (1,997) | 9,690 (2,178) | 10,040 (2,257) | 10,390 (2,336) | 10,390 (2,336) | 15,795 (3,551) | 16,500 (3,709) | 16,500 (3,709) | 18,605 (4,183) | 4-8d |
| | RFPI-40 | BLI 400 | 8,425 (1,894) | 9,830 (2,210) | 10,320 (2,320) | 10,635 (2,391) | 10,880 (2,447) | 10,880 (2,447) | 17,475 (3,929) | 18,430 (4,143) | 18,675 (4,199) | 20,150 (4,530) | 4-8d |
| | RFPI-60S | | 8,425 (1,894) | 9,410 (2,115) | 9,620 (2,162) | 9,830 (2,210) | 9,970 (2,241) | 9,970 (2,241) | 17,550 (3,946) | 18,430 (4,143) | 18,675 (4,199) | 19,940 (4,483) | 4-8d |
| | RFPI-65S | | 8,425 (1,894) | 10,250 (2,304) | 9,690 (2,178) | 11,130 (2,502) | 10,040 (2,257) | 11,375 (2,557) | 19,730 (4,435) | 23,170 (5,209) | 22,465 (5,051) | 24,925 (5,603) | 4-10d |
| | RFPI-70 | BLI 700 | 8,425 (1,894) | 10,320 (2,320) | 10,320 (2,320) | 10,740 (2,415) | 10,880 (2,447) | 10,880 (2,447) | 17,550 (3,946) | 18,430 (4,143) | 18,675 (4,199) | 20,150 (4,530) | 4-8d |
| | RFPI-80S | | 8,985 (2,020) | 11,165 (2,510) | 10,460 (2,352) | 11,165 (2,510) | 10,880 (2,447) | 11,165 (2,510) | 19,730 (4,435) | 22,325 (5,019) | 21,765 (4,893) | 22,325 (5,019) | 4-10d |
| | RFPI-90 | BLI 900 | 9,830 (2,210) | 12,250 (2,754) | 12,460 (2,802) | 13,900 (3,125) | 13,235 (2,975) | 14,395 (3,236) | 23,555 (5,296) | 24,395 (5,485) | 24,395 (5,485) | 25,800 (5,801) | 4-10d |
| 356 (14) | RFPI-20 | | 6,670 (1,499) | 9,055 (2,036) | 9,935 (2,233) | 10,775 (2,423) | 10,880 (2,447) | 11,305 (2,541) | 13,585 (3,054) | 14,285 (3,212) | 14,990 (3,370) | 17,095 (3,843) | 4-8d |
| | RFPI-40S | | 8,425 (1,894) | 10,740 (2,415) | 10,320 (2,320) | 11,725 (2,636) | 10,880 (2,447) | 12,005 (2,699) | 17,550 (3,946) | 19,235 (4,325) | 19,340 (4,349) | 21,415 (4,814) | 4-8d |
| | RFPI-400 | | 7,370 (1,657) | 9,160 (2,060) | 10,075 (2,265) | 11,375 (2,557) | 10,880 (2,447) | 12,005 (2,699) | 15,795 (3,551) | 16,500 (3,709) | 16,500 (3,709) | 18,605 (4,183) | 4-8d |
| | RFPI-40 | BLI 400 | 8,425 (1,894) | 10,950 (2,462) | 10,320 (2,320) | 12,075 (2,715) | 10,880 (2,447) | 12,425 (2,794) | 17,550 (3,946) | 19,235 (4,325) | 19,340 (4,349) | 21,520 (4,838) | 4-8d |
| | RFPI-60S | | 8,425 (1,894) | 10,740 (2,415) | 10,320 (2,320) | 11,725 (2,636) | 10,880 (2,447) | 12,005 (2,699) | 17,550 (3,946) | 19,235 (4,325) | 19,340 (4,349) | 21,415 (4,814) | 4-8d |

(Footnotes on the following page)

Table 3. Additional Factored Resistances of RFPI Series I-Joists^(a,b,c) (Continued)

| Joist Depth, mm (in.) | Joist Series | Permitted to be Labelled as | Factored End Reactions, N (lbf) | | | | | | Factored Intermediate Reactions, N (lbf) | | | | Web Bearing Stiffener |
|-----------------------|--------------|-----------------------------|---------------------------------|-------------------|---------------------------|-------------------|------------------------|-------------------|--|-------------------|----------------------------|-------------------|-----------------------|
| | | | 45 mm (1-3/4 in.) Bearing | | 89 mm (3-1/2 in.) Bearing | | 102 mm (4 in.) Bearing | | 89 mm (3-1/2 in.) Bearing | | 133 mm (5-1/4 in.) Bearing | | |
| | | | No B.S. | B.S. | No B.S. | B.S. | No B.S. | B.S. | No B.S. | B.S. | No B.S. | B.S. | |
| 356 (14) | RFPI-65S | | 8,425 (1,894) | 11,375 (2,557) | 10,495 (2,360) | 12,425 (2,794) | 11,095 (2,494) | 12,745 (2,865) | 21,205 (4,767) | 24,255 (5,453) | 23,765 (5,343) | 26,045 (5,856) | 4-10d |
| | RFPI-70 | BLI 700 | 8,425 (1,894) | 11,165 (2,510) | 10,320 (2,320) | 12,145 (2,731) | 10,880 (2,447) | 12,425 (2,794) | 17,550 (3,946) | 19,235 (4,325) | 19,340 (4,349) | 21,520 (4,838) | 4-8d |
| | RFPI-80S | | 8,985 (2,020) | 12,285 (2,762) | 10,460 (2,352) | 12,745 (2,865) | 10,880 (2,447) | 12,885 (2,896) | 21,205 (4,767) | 23,590 (5,303) | 22,535 (5,067) | 25,275 (5,682) | 4-10d |
| | RFPI-90 | BLI 900 | 9,830 (2,210) | 13,235 (2,975) | 12,460 (2,802) | 14,920 (3,354) | 13,235 (2,975) | 15,410 (3,465) | 23,555 (5,296) | 24,575 (5,524) | 24,575 (5,524) | 27,030 (6,077) | 4-10d |
| 406 (16) | RFPI-40S | | 8,425 (1,894) | 12,005 (2,699) | 10,320 (2,320) | 13,410 (3,015) | 10,880 (2,447) | 13,830 (3,109) | 17,550 (3,946) | 20,010 (4,498) | 20,010 (4,498) | 22,820 (5,130) | 4-8d |
| | RFPI-400 | | 7,370 (1,657) | 9,410 (2,115) | 10,075 (2,265) | 12,850 (2,889) | 10,880 (2,447) | 13,830 (3,109) | 15,795 (3,551) | 16,500 (3,709) | 16,500 (3,709) | 18,605 (4,183) | 4-8d |
| | RFPI-40 | BLI 400 | 8,425 (1,894) | 12,005 (2,699) | 10,320 (2,320) | 13,410 (3,015) | 10,880 (2,447) | 13,830 (3,109) | 17,550 (3,946) | 20,010 (4,498) | 20,010 (4,498) | 22,820 (5,130) | 4-8d |
| | RFPI-60S | | 8,425 (1,894) | 12,005 (2,699) | 10,320 (2,320) | 13,410 (3,015) | 10,880 (2,447) | 13,830 (3,109) | 17,550 (3,946) | 20,010 (4,498) | 20,010 (4,498) | 22,820 (5,130) | 4-8d |
| | RFPI-65S | | 8,425 (1,894) | 12,285 (2,762) | 11,270 (2,533) | 13,655 (3,070) | 12,075 (2,715) | 14,040 (3,157) | 22,925 (5,154) | 25,275 (5,682) | 24,995 (5,619) | 27,135 (6,101) | 4-10d |
| | RFPI-70 | BLI 700 | 8,425 (1,894) | 12,005 (2,699) | 10,320 (2,320) | 13,410 (3,015) | 10,880 (2,447) | 13,830 (3,109) | 17,550 (3,946) | 20,010 (4,498) | 20,010 (4,498) | 22,820 (5,130) | 4-8d |
| | RFPI-80S | | 8,985 (2,020) | 13,340 (2,999) | 10,460 (2,352) | 14,250 (3,204) | 10,880 (2,447) | 14,535 (3,267) | 21,205 (4,767) | 24,750 (5,564) | 23,240 (5,225) | 28,085 (6,314) | 4-10d |
| | RFPI-90 | BLI 900 | 9,830 (2,210) | 14,215 (3,196) | 12,460 (2,802) | 15,865 (3,567) | 13,235 (2,975) | 16,360 (3,678) | 23,555 (5,296) | 24,750 (5,564) | 24,750 (5,564) | 28,260 (6,353) | 4-10d |
| 457 (18) | RFPI-700 | | 7,900 (1,776) | 15,445 (3,473) | 11,585 (2,604) | 18,080 (4,064) | 12,635 (2,841) | 18,080 (4,064) | 19,270 (4,333) | 28,435 (6,393) | 21,240 (4,775) | 31,420 (7,063) | 8-8d |
| | RFPI-900 | | 10,355 (2,328) | 18,045 (4,057) | 12,390 (2,786) | 20,255 (4,554) | 12,990 (2,920) | 20,255 (4,554) | 21,060 (4,735) | 35,875 (8,066) | 24,395 (5,485) | 40,090 (9,013) | 8-16d |
| 508 (20) | RFPI-700 | | 7,655 (1,720) | 16,150 (3,630) | 11,130 (2,502) | 19,235 (4,325) | 12,110 (2,723) | 19,235 (4,325) | 19,270 (4,333) | 28,435 (6,393) | 21,240 (4,775) | 31,420 (7,063) | 8-8d |
| | RFPI-900 | | 9,480 (2,131) | 18,710 (4,206) | 11,935 (2,683) | 20,675 (4,648) | 12,635 (2,841) | 20,675 (4,648) | 21,060 (4,735) | 35,875 (8,066) | 24,395 (5,485) | 40,090 (9,013) | 8-16d |
| 559 (22) | RFPI-700 | | NA | 16,850 (3,788) | NA | 20,605 (4,633) | NA | 20,605 (4,633) | NA | 29,135 (6,550) | NA | 32,330 (7,269) | 10-8d |
| | RFPI-900 | | NA | 19,340 (4,349) | NA | 21,135 (4,751) | NA | 21,135 (4,751) | NA | 37,945 (8,531) | NA | 42,265 (9,502) | 10-16d |
| 610 (24) | RFPI-700 | | NA | 17,550 (3,946) | NA | 21,485 (4,830) | NA | 21,485 (4,830) | NA | 29,135 (6,550) | NA | 32,330 (7,269) | 10-8d |
| | RFPI-900 | | NA | 20,010 (4,498) | NA | 21,485 (4,830) | NA | 21,485 (4,830) | NA | 37,945 (8,531) | NA | 42,265 (9,502) | 10-16d |

(a) The tabulated values in Table 3 are for the standard term of load duration ($K_D = 1.0$). All values are permitted to be adjusted for other load durations as permitted by the code provided that the adjusted values do not exceed the factored compressive resistance perpendicular to grain (Q_r) of the bearing plate supporting the I-joist in accordance with CSA O86.

(b) Interpolation between bearing lengths is permitted.

(c) Bearing stiffeners shall be installed in accordance with the recommendations provided by the manufacturer and APA E715 CA.

Table 4. Minimum Dimensions for Web Stiffeners and Accompanying Nails

| Joist Designation | Minimum Dimensions | | |
|-------------------|---------------------|-----------------|---|
| | Web Stiffener | | Nails |
| | Thickness, mm (in.) | Width, mm (in.) | |
| RFPI-20 | 15 (19/32) | 59 (2-5/16) | 8d box – 64 mm x 2.87 mm (2-1/2 in. x 0.113 in.) |
| RFPI-40S | 25 (1) | 59 (2-5/16) | 8d box - 64 mm x 2.87 mm (2-1/2 in. x 0.113 in.) |
| RFPI-400 | 19 (3/4) | 59 (2-5/16) | 8d box - 64 mm x 2.87 mm (2-1/2 in. x 0.113 in.) |
| RFPI-40 | 25 (1) | 59 (2-5/16) | 8d box - 64 mm x 2.87 mm (2-1/2 in. x 0.113 in.) |
| RFPI-60S | 25 (1) | 59 (2-5/16) | 8d box - 64 mm x 2.87 mm (2-1/2 in. x 0.113 in.) |
| RFPI-65S | 38 (1-1/2) | 89 (3-1/2) | 10d box - 76 mm x 3.25 mm (3 in. x 0.128 in.) |
| RFPI-70 | 25 (1) | 59 (2-5/16) | 8d box - 64 mm x 2.87 mm (2-1/2 in. x 0.113 in.) |
| RFPI-80S | 38 (1-1/2) | 59 (2-5/16) | 10d box - 76 mm x 3.25 mm (3 in. x 0.128 in.) |
| RFPI-90 | 38 (1-1/2) | 59 (2-5/16) | 10d box - 76 mm x 3.25 mm (3 in. x 0.128 in.) |
| RFPI-700 | 22 (7/8) | 89 (3-1/2) | 8d box – 64 mm x 2.87 mm (2-1/2 in. x 0.113 in.) |
| RFPI-900 | 38 (1-1/2) | 89 (3-1/2) | 16d box – 89 mm x 3.4 mm (3-1/2 in. x 0.135 in.) |

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7011 So. 19th St. • Tacoma, Washington 98466
 Phone: (253) 565-6600 • Fax: (253) 565-7265 • Internet Address: www.apawood.org

PRODUCT SUPPORT HELP DESK
 (253) 620-7400 • E-mail Address: help@apawood.org

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