

Resolute RSI I-Joists  
Resolute Engineered Wood Larouche Inc.

PR-L340(C)  
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Products: Resolute RSI I-Joists

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[www.resolutefp.com](http://www.resolutefp.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 CSA O86-19
  - APA PRI-400 Performance Standard for Residential I-Joists (Limit States Design)
  - Intertek LPI 20, LPI 20X1.7 and LPI 32 Test Report, Intertek LPI 20X1.5 Test Report, PFS LPI 23 (a.k.a. LPI 32) Test Report, APA Reports T2005M-21, T2005M-52, T2006M-03, T2006M-07, T2008P-69, T2008P-97, T2008P-111, T2009P-82, T2010P-52B, T2010P-58, T2011P-08, T2013P-38, T2014P-03, T2014P-29, and T2017P-32, and other qualification data
2. Product description:

Resolute RSI I-joists are described in Table 1 in accordance with the in-plant manufacturing standard approved by APA.
3. Design properties:

Tables 2 and 3 list the factored resistances for the Resolute RSI I-joists covered by this report. The maximum spans for Resolute RSI I-joists shall be in accordance with the recommendations provided by the ([www.resolutefp.com](http://www.resolutefp.com)) and with APA PRI-400, *Performance Standard for Residential I-Joists (Limit States Design)*, Form PRI-400 CA ([www.apawood.org/resource-library](http://www.apawood.org/resource-library)), for depths contained in the PRI Series.
4. Product installation:

Resolute RSI I-joists covered by this report 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), or Table 9.10.3.1.-B of the NBC.
6. Limitations:
  - a) Resolute RSI I-joists shall be designed in accordance with the code using the design properties specified in this report.
  - b) Resolute RSI 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) Resolute RSI I-joists are produced at the Resolute Engineered Wood Larouche Inc. facilities in Larouche, Quebec under a quality assurance program audited by APA.
  - d) This report is subject to re-examination in one year.

7. Identification:

Resolute RSI I-joists described in this report are identified by a label bearing the manufacturer's name (Resolute Engineered Wood Larouche Inc.) and/or trademark, the APA assigned plant number (1068), the I-joist series designation and depth, the APA logo, the report number PR-L340 or PR-L340(C), and a means of identifying the date of manufacture.

Table 1. Description of Resolute RSI I-Joists<sup>(a)</sup>

Joist Series	Joist Depths, mm (in.)	Flanges			Web	
		Material	Dimension		Material	Thickness <sup>(b)</sup> , mm (in.)
			Depth, mm (in.)	Width, mm (in.)		
RSI 15	225 – 406 (8-7/8 – 16)	Proprietary SPF	38 (1-1/2)	64 (2-1/2)	OSB	9.5 (3/8)
RSI 25	225 – 406 (8-7/8 – 16)	Proprietary SPF	38 (1-1/2)	64 (2-1/2)	OSB	9.5 (3/8)
RSI 25x4	241 – 406 (9-1/2 – 16)	MSR SPF	38 (1-1/2)	89 (3-1/2)	OSB	9.5 (3/8)
RSI 35	225 – 406 (8-7/8 – 16)	MSR SPF	38 (1-1/2)	64 (2-1/2)	OSB	9.5 (3/8)
RSI 45	225 – 610 (8-7/8 – 24)	Proprietary SPF	38 (1-1/2)	89 (3-1/2)	OSB	9.5 <sup>(c)</sup> (3/8)
RSI 55	235 – 610 (9-1/4 – 24)	MSR SPF	38 (1-1/2)	89 (3-1/2)	OSB	11 (7/16)
RSI 65	302 – 610 (11-7/8 – 24)	LVL	38 (1-1/2)	89 (3-1/2)	OSB	11 (7/16)

<sup>(a)</sup> Referenced dimensions are nominal. Tolerances are as specified in the in-plant quality manual.

<sup>(b)</sup> 11-mm (7/16-inch) webs shall be permitted to substitute for 9.5-mm (3/8-inch) webs.

<sup>(c)</sup> 11-mm (7/16-inch) webs for joist depths exceeding 406 mm (16 inches).

Table 2. Factored Resistances and Stiffnesses for Resolute RSI I-Joists<sup>(a)</sup>

Joist Series Designation	Joist Depth, mm (in.)	$EI_r^{(b)}$ 10 <sup>6</sup> kN-mm <sup>2</sup> (10 <sup>6</sup> lbf-in. <sup>2</sup> )	$M_r^{(c)}$ kN-mm (lbf-ft)	$V_r^{(d)}$ kN (lbf)	$VLC_r^{(e)}$ kN/m (plf)	$K_r^{(f)}$ kN (10 <sup>6</sup> lbf)
RSI 15	225 (8-7/8)	264 (92)	4,972 (3,665)	7.41 (1,665)	40.2 (2,755)	17,828 (4.01)
	235 (9-1/4)	327 (114)	5,220 (3,850)	7.72 (1,735)	40.2 (2,755)	18,521 (4.16)
	241 <sup>(g)</sup> (9-1/2)	407 (142)	5,333 (3,935)	7.93 (1,785)	40.2 (2,755)	18,948 (4.26)
	286 (11-1/4)	654 (228)	6,573 (4,850)	8.99 (2,020)	37.2 (2,552)	22,098 (4.97)
	302 <sup>(g)</sup> (11-7/8)	712 (248)	6,990 (5,155)	9.37 (2,105)	37.2 (2,552)	23,219 (5.22)
	356 (14)	1,065 (371)	8,388 (6,185)	10.60 (2,385)	33.9 (2,320)	27,115 (6.10)
	406 (16)	1,475 (514)	9,539 (7,035)	11.79 (2,650)	25.4 (1,740)	30,798 (6.92)
RSI 25	225 (8-7/8)	451 (157)	5,818 (4,290)	8.25 (1,855)	40.2 (2,755)	17,988 (4.04)
	235 (9-1/4)	496 (173)	6,111 (4,505)	8.60 (1,935)	40.2 (2,755)	18,682 (4.20)
	240	525 (183)	6,303 (4,650)	8.78 (1,975)	40.2 (2,755)	19,002 (4.27)
	241 <sup>(h)</sup> (9-1/2)	531 (185)	6,336 (4,675)	8.85 (1,990)	40.2 (2,755)	19,109 (4.30)
	286 (11-1/4)	804 (280)	7,689 (5,670)	10.00 (2,250)	37.2 (2,552)	22,258 (5.00)
	300	901 (314)	8,422 (6,210)	10.36 (2,330)	37.2 (2,552)	23,272 (5.23)
	302 <sup>(h)</sup> (11-7/8)	913 (318)	8,467 (6,245)	10.43 (2,345)	37.2 (2,552)	23,379 (5.26)
	356 <sup>(h)</sup> (14)	1,360 (474)	9,922 (7,320)	11.79 (2,650)	33.9 (2,320)	27,329 (6.14)
	360	1,400 (488)	10,057 (7,420)	11.94 (2,685)	31.7 (2,175)	27,649 (6.22)
	400	1,805 (629)	11,196 (8,260)	12.95 (2,910)	31.7 (2,175)	30,584 (6.88)
406 <sup>(h)</sup> (16)	1,871 (652)	11,388 (8,400)	13.13 (2,950)	31.7 (2,175)	31,065 (6.98)	
RSI 25x4	241 <sup>(h)</sup> (9-1/2)	531 (185)	6,336 (4,675)	8.85 (1,990)	40.2 (2,755)	19,109 (4.30)
	302 <sup>(h)</sup> (11-7/8)	913 (318)	8,467 (6,245)	10.43 (2,345)	37.2 (2,552)	23,379 (5.26)
	356 <sup>(h)</sup> (14)	1,360 (474)	9,922 (7,320)	11.79 (2,650)	33.9 (2,320)	27,329 (6.14)
	406 <sup>(h)</sup> (16)	1,871 (652)	11,388 (8,400)	13.13 (2,950)	31.7 (2,175)	31,065 (6.98)
RSI 35	225 (8-7/8)	531 (185)	7,532 (5,555)	8.25 (1,855)	46.6 (3,190)	17,988 (4.04)
	235 (9-1/4)	594 (207)	7,915 (5,840)	8.60 (1,935)	46.6 (3,190)	18,682 (4.20)
	241 <sup>(i)</sup> (9-1/2)	634 (221)	8,163 (6,020)	8.85 (1,990)	46.6 (3,190)	19,109 (4.30)
	286 (11-1/4)	950 (331)	9,944 (7,335)	10.00 (2,250)	46.6 (3,190)	22,258 (5.00)
	302 <sup>(i)</sup> (11-7/8)	1,076 (375)	10,576 (7,800)	10.43 (2,345)	46.6 (3,190)	23,379 (5.26)
	356 <sup>(i)</sup> (14)	1,575 (549)	12,729 (9,390)	11.79 (2,650)	33.9 (2,320)	27,329 (6.14)
	406 <sup>(i)</sup> (16)	2,132 (743)	14,759 (10,885)	13.13 (2,950)	31.7 (2,175)	31,065 (6.98)
RSI 45	225 (8-7/8)	781 (272)	11,173 (8,240)	8.88 (1,995)	46.6 (3,190)	20,550 (4.62)
	235 (9-1/4)	864 (301)	11,748 (8,665)	9.20 (2,070)	46.6 (3,190)	21,404 (4.81)
	240	910 (317)	12,042 (8,880)	9.37 (2,105)	46.6 (3,190)	21,884 (4.92)
	241 (9-1/2)	921 (321)	12,120 (8,940)	9.41 (2,115)	46.6 (3,190)	21,991 (4.94)
	286 (11-1/4)	1,377 (480)	14,770 (10,895)	10.88 (2,445)	46.6 (3,190)	26,047 (5.86)
	300	1,535 (535)	15,604 (11,510)	11.34 (2,550)	46.6 (3,190)	27,382 (6.16)
	302 <sup>(i)</sup> (11-7/8)	1,570 (547)	15,706 (11,585)	11.41 (2,565)	46.6 (3,190)	27,489 (6.18)
	356 <sup>(i)</sup> (14)	2,301 (802)	18,919 (13,955)	13.16 (2,960)	42.3 (2,900)	32,399 (7.28)
	360	2,368 (825)	19,178 (14,145)	13.30 (2,990)	42.3 (2,900)	32,773 (7.37)
	400	3,025 (1,054)	21,557 (15,900)	14.64 (3,290)	42.3 (2,900)	36,402 (8.18)
	406 <sup>(i)</sup> (16)	3,134 (1,092)	21,930 (16,175)	14.85 (3,340)	42.3 (2,900)	36,990 (8.32)
	457 (18)	3,825 (1,333)	24,805 (18,295)	17.94 (4,035)	36.0 (2,465)	51,241 (11.52)
	508 (20)	4,844 (1,688)	27,443 (20,240)	19.62 (4,410)	33.4 (2,291)	56,952 (12.80)
	559 (22)	5,992 (2,088)	30,070 (22,180)	21.27 (4,785)	27.5 (1,885)	62,610 (14.08)
	610 (24)	7,272 (2,534)	32,652 (24,085)	22.96 (5,160)	23.3 (1,595)	68,321 (15.36)

(Footnotes on Page 4)

Table 2. Factored Resistances and Stiffnesses for Resolute RSI I-Joists<sup>(a)</sup> (Continued)

Joist Series Designation	Joist Depth (inches, unless otherwise noted)	EI, <sup>(b)</sup> 10 <sup>6</sup> kN-mm <sup>2</sup> (10 <sup>6</sup> lbf-in. <sup>2</sup> )	M <sub>r</sub> , <sup>(c)</sup> kN-mm (lbf-ft)	V <sub>r</sub> , <sup>(d)</sup> kN (lbf)	VLC <sub>r</sub> , <sup>(e)</sup> kN/m (plf)	K, <sup>(f)</sup> kN (10 <sup>6</sup> lbf)
RSI 55	235 (9-1/4)	958 (334)	14,296 (10,545)	12.04 (2,705)	50.8 (3,480)	26,314 (5.92)
	241 (9-1/2)	1,022 (356)	14,747 (10,875)	12.25 (2,755)	50.8 (3,480)	27,062 (6.08)
	286 (11-1/4)	1,518 (529)	17,961 (13,245)	13.87 (3,115)	50.8 (3,480)	32,026 (7.20)
	302 (11-7/8)	1,722 (600)	19,111 (14,095)	14.43 (3,245)	50.8 (3,480)	33,787 (7.60)
	356 (14)	2,508 (874)	23,012 (16,975)	16.36 (3,680)	46.6 (3,190)	39,872 (8.96)
	406 (16)	3,395 (1,183)	26,688 (19,685)	18.15 (4,080)	42.3 (2,900)	45,530 (10.24)
	457 (18)	4,419 (1,540)	30,171 (22,255)	19.97 (4,490)	36.0 (2,465)	51,241 (11.52)
	508 (20)	5,590 (1,948)	33,396 (24,630)	21.80 (4,900)	33.4 (2,291)	56,952 (12.80)
	559 (22)	6,910 (2,408)	36,576 (26,975)	23.59 (5,305)	27.5 (1,885)	62,610 (14.08)
610 (24)	8,377 (2,919)	39,721 (29,295)	25.42 (5,715)	23.3 (1,595)	68,321 (15.36)	
RSI 65	302 (11-7/8)	1,917 (668)	22,933 (16,915)	14.43 (3,245)	50.8 (3,480)	29,303 (6.59)
	356 (14)	2,778 (968)	27,623 (20,375)	16.36 (3,680)	46.6 (3,190)	34,214 (7.69)
	406 (16)	3,733 (1,301)	32,032 (23,625)	18.15 (4,080)	40.2 (2,755)	38,911 (8.75)
	457 (18)	4,833 (1,684)	36,102 (26,630)	19.97 (4,490)	36.0 (2,465)	43,608 (9.80)
	508 (20)	6,069 (2,115)	40,138 (29,605)	21.80 (4,900)	33.4 (2,291)	48,305 (10.86)
	559 (22)	7,453 (2,597)	44,141 (32,555)	23.59 (5,305)	27.5 (1,885)	53,002 (11.92)
	610 (24)	8,974 (3,127)	48,121 (35,495)	25.42 (5,715)	23.3 (1,595)	57,699 (12.97)

For Imperial: 1 mm = 0.0394 in., 1 N = 0.2248 lbf, 1 kN/m = 5.71 lbf/in.

- (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<sub>r</sub>, and K, shall be adjusted for other load durations in accordance with the code.
- (b) Bending stiffness (EI) of the I-joist
- (c) Factored moment resistance (M<sub>r</sub>) of the I-joist, which shall not be increased by any system factor ( $K_H = 1.0$ ).
- (d) Factored shear resistance (V<sub>r</sub>) of the I-joist.
- (e) Factored uniform vertical load resistance (VLC<sub>r</sub>) of the I-joist.
- (f) Coefficient of shear deflection (K). For calculating uniform load and center-point load deflections of the I-joist 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  $\delta$  = calculated deflection, mm (in.),  $\omega$  = uniform load, kN/mm (lbf/in.),  
 P = concentrated load, kN (lbf), L = design span, mm (in.),  
 EI = bending stiffness of the I-joist, kN-mm<sup>2</sup> (lbf-in.<sup>2</sup>), and K = coefficient of shear deflection, kN (lbf).

- (g) The 241 and 302-mm RSI 15 shall be permitted to be designed as PRI-20 I-joists.
- (h) The 241, 302, 356, and 406-mm RSI 25 and RSI-25x4 shall be permitted to be designed as PRI-40 I-joists.
- (i) The 241, 302, 356, and 406-mm RSI 35 shall be permitted to be designed as PRI-60 I-joists.
- (j) The 302, 356, and 406-mm RSI 45 are recognized as PRI-80 I-joists.

Table 3. Factored Reaction Resistances for Resolute RSI I-Joists<sup>(a,b,c,d)</sup> and Specified Compressive Strength Perpendicular to Grain for Flanges

Joist Series Designation	Joist Depth, mm (in.)	Intermediate Reaction <sup>(e)</sup> , kN (lbf)				End Reaction <sup>(f)</sup> kN (lbf)				Specified Compressive Strength Perpendicular to Grain ( $f_{cp}$ ), MPa (psi)
		89 mm (3-1/2 in.) Brg. Length		140 mm (5-1/2 in.) Brg. Length		38 mm (1-1/2 in.) Brg. Length		102 mm (4 in.) Brg. Length		
		With Brg. Stiffeners		With Brg. Stiffeners		With Brg. Stiffeners		With Brg. Stiffeners		
		No	Yes	No	Yes	No	Yes	No	Yes	
RSI 15	225 (8-7/8)	13.62 (3,060)	14.71 (3,305)	15.20 (3,415)	16.29 (3,660)	6.11 (1,375)	6.95 (1,565)	6.85 (1,540)	7.41 (1,665)	5.3 (769)
	235 (9-1/4)	13.76 (3,095)	14.85 (3,340)	15.38 (3,455)	16.50 (3,710)	6.11 (1,375)	7.09 (1,595)	6.95 (1,565)	7.72 (1,735)	
	241 <sup>(g)</sup> (9-1/2)	13.87 (3,115)	14.99 (3,370)	15.48 (3,480)	16.64 (3,740)	6.11 (1,375)	7.20 (1,620)	6.99 (1,570)	7.93 (1,785)	
	286 (11-1/4)	14.50 (3,260)	15.69 (3,530)	16.15 (3,630)	17.55 (3,945)	6.11 (1,375)	7.79 (1,750)	7.23 (1,625)	8.99 (2,020)	
	302 <sup>(g)</sup> (11-7/8)	14.71 (3,305)	15.94 (3,585)	16.39 (3,685)	17.87 (4,015)	6.11 (1,375)	8.04 (1,805)	7.30 (1,640)	9.37 (2,105)	
	356 (14)	15.48 (3,480)	16.81 (3,780)	17.20 (3,865)	18.96 (4,260)	6.11 (1,375)	8.81 (1,980)	7.58 (1,705)	10.60 (2,385)	
	406 (16)	16.22 (3,645)	17.66 (3,970)	18.01 (4,050)	20.04 (4,505)	6.11 (1,375)	9.51 (2,140)	7.83 (1,760)	11.79 (2,650)	
RSI 25	225 (8-7/8)	15.16 (3,410)	16.36 (3,680)	16.92 (3,805)	18.11 (4,070)	6.81 (1,530)	7.72 (1,735)	7.62 (1,715)	8.25 (1,855)	5.3 (769)
	235 (9-1/4)	15.31 (3,440)	16.53 (3,715)	17.10 (3,845)	18.36 (4,130)	6.81 (1,530)	7.90 (1,775)	7.72 (1,735)	8.60 (1,935)	
	240	15.38 (3,455)	16.64 (3,740)	17.17 (3,860)	18.46 (4,150)	6.81 (1,530)	7.97 (1,790)	7.76 (1,745)	8.78 (1,975)	
	241 <sup>(h)</sup> (9-1/2)	15.41 (3,465)	16.67 (3,750)	17.20 (3,865)	18.50 (4,160)	6.81 (1,530)	8.00 (1,800)	7.79 (1,750)	8.85 (1,990)	
	286 (11-1/4)	16.11 (3,620)	17.45 (3,920)	17.97 (4,040)	19.52 (4,390)	6.81 (1,530)	8.67 (1,950)	8.04 (1,805)	10.00 (2,250)	
	300	16.32 (3,670)	17.69 (3,980)	18.18 (4,090)	19.83 (4,460)	6.81 (1,530)	8.92 (2,005)	8.11 (1,825)	10.36 (2,330)	
	302 <sup>(h)</sup> (11-7/8)	16.36 (3,680)	17.73 (3,985)	18.22 (4,095)	19.87 (4,465)	6.81 (1,530)	8.95 (2,010)	8.14 (1,830)	10.43 (2,345)	
	356 <sup>(h)</sup> (14)	17.24 (3,875)	18.71 (4,205)	19.13 (4,300)	21.10 (4,745)	6.81 (1,530)	9.79 (2,200)	8.42 (1,895)	11.79 (2,650)	
	360	17.31 (3,890)	18.78 (4,220)	19.24 (4,325)	21.20 (4,765)	6.81 (1,530)	9.86 (2,220)	8.46 (1,900)	11.94 (2,685)	
	400	17.94 (4,035)	19.52 (4,390)	19.90 (4,475)	22.12 (4,970)	6.81 (1,530)	10.50 (2,360)	8.67 (1,950)	12.95 (2,910)	
RSI 25x4	406 <sup>(h)</sup> (16)	18.04 (4,055)	19.62 (4,410)	20.01 (4,500)	22.29 (5,010)	6.81 (1,530)	10.60 (2,385)	8.71 (1,955)	13.13 (2,950)	5.3 (769)
	241 (9-1/2)	15.41 (3,465)	16.67 (3,750)	17.20 (3,865)	18.50 (4,160)	6.81 (1,530)	8.00 (1,800)	7.79 (1,750)	8.85 (1,990)	
	302 (11-7/8)	16.36 (3,680)	17.73 (3,985)	18.22 (4,095)	19.87 (4,465)	6.81 (1,530)	8.95 (2,010)	8.14 (1,830)	10.43 (2,345)	
	356 (14)	17.24 (3,875)	18.71 (4,205)	19.13 (4,300)	21.10 (4,745)	6.81 (1,530)	9.79 (2,200)	8.42 (1,895)	11.79 (2,650)	
	406 (16)	18.04 (4,055)	19.62 (4,410)	20.01 (4,500)	22.29 (5,010)	6.81 (1,530)	10.60 (2,385)	8.71 (1,955)	13.13 (2,950)	
RSI 35	225 (8-7/8)	15.16 (3,410)	16.36 (3,680)	16.92 (3,805)	18.11 (4,070)	6.81 (1,530)	7.72 (1,735)	7.62 (1,715)	8.25 (1,855)	6.5 (943)
	235 (9-1/4)	15.31 (3,440)	16.53 (3,715)	17.10 (3,845)	18.36 (4,130)	6.81 (1,530)	7.90 (1,775)	7.72 (1,735)	8.60 (1,935)	
	241 <sup>(i)</sup> (9-1/2)	15.41 (3,465)	16.67 (3,750)	17.20 (3,865)	18.50 (4,160)	6.81 (1,530)	8.00 (1,800)	7.79 (1,750)	8.85 (1,990)	
	286 (11-1/4)	16.11 (3,620)	17.45 (3,920)	17.97 (4,040)	19.52 (4,390)	6.81 (1,530)	8.67 (1,950)	8.04 (1,805)	10.00 (2,250)	
	302 <sup>(i)</sup> (11-7/8)	16.36 (3,680)	17.73 (3,985)	18.22 (4,095)	19.87 (4,465)	6.81 (1,530)	8.95 (2,010)	8.14 (1,830)	10.43 (2,345)	
	356 <sup>(i)</sup> (14)	17.24 (3,875)	18.71 (4,205)	19.13 (4,300)	21.10 (4,745)	6.81 (1,530)	9.79 (2,200)	8.42 (1,895)	11.79 (2,650)	
	406 <sup>(i)</sup> (16)	18.04 (4,055)	19.62 (4,410)	20.01 (4,500)	22.29 (5,010)	6.81 (1,530)	10.60 (2,385)	8.71 (1,955)	13.13 (2,950)	

(Footnotes on Page 7)

Table 3. Factored Reaction Resistances for Resolute RSI I-Joists<sup>(a,b,c,d)</sup> and Specified Compressive Strength Perpendicular to Grain for Flanges  
 (Continued)

Joist Series Designation	Joist Depth, mm (in.)	Intermediate Reaction <sup>(e)</sup> , kN (lbf)				End Reaction <sup>(f)</sup> , kN (lbf)				Specified Compressive Strength Perpendicular to Grain ( $f_{cp}$ ), MPa (psi)
		89 mm (3-1/2 in.) Brg. Length		140 mm (5-1/2 in.) Brg. Length		38 mm (1-1/2 in.) Brg. Length		102 mm (4 in.) Brg. Length		
		With Brg. Stiffeners		With Brg. Stiffeners		With Brg. Stiffeners		With Brg. Stiffeners		
		No	Yes	No	Yes	No	Yes	No	Yes	
RSI 45	225 (8-7/8)	20.15 (4,530)	21.24 (4,775)	20.29 (4,560)	21.80 (4,900)	8.21 (1,845)	8.88 (1,995)	8.71 (1,955)	8.88 (1,995)	6.5 (943)
	235 (9-1/4)	20.29 (4,560)	21.52 (4,840)	20.50 (4,610)	22.19 (4,990)	8.28 (1,865)	9.20 (2,070)	8.99 (2,020)	9.20 (2,070)	
	240	20.33 (4,570)	21.66 (4,870)	20.61 (4,635)	22.36 (5,025)	8.32 (1,870)	9.37 (2,105)	9.09 (2,045)	9.37 (2,105)	
	241 (9-1/2)	20.36 (4,575)	21.73 (4,885)	20.64 (4,640)	22.43 (5,045)	8.32 (1,870)	9.41 (2,115)	9.16 (2,060)	9.41 (2,115)	
	286 (11-1/4)	21.03 (4,725)	22.96 (5,160)	21.59 (4,855)	24.08 (5,415)	8.64 (1,940)	10.29 (2,310)	10.64 (2,390)	10.88 (2,445)	
	300	21.20 (4,765)	23.41 (5,265)	21.87 (4,915)	24.61 (5,530)	8.74 (1,965)	10.57 (2,375)	11.13 (2,500)	11.34 (2,550)	
	302 <sup>(j)</sup> (11-7/8)	21.24 (4,775)	23.45 (5,270)	21.90 (4,925)	24.68 (5,550)	8.74 (1,965)	10.60 (2,385)	11.20 (2,520)	11.41 (2,565)	
	356 <sup>(j)</sup> (14)	22.05 (4,955)	25.03 (5,625)	23.03 (5,175)	26.71 (6,005)	9.13 (2,050)	11.65 (2,620)	11.20 (2,520)	13.16 (2,960)	
	360	22.12 (4,970)	25.13 (5,650)	23.13 (5,200)	26.89 (6,045)	9.16 (2,060)	11.72 (2,635)	11.20 (2,520)	13.30 (2,990)	
	400	22.68 (5,100)	26.33 (5,920)	23.98 (5,390)	28.40 (6,385)	9.44 (2,125)	12.50 (2,810)	11.20 (2,520)	14.64 (3,290)	
	406 <sup>(j)</sup> (16)	22.78 (5,120)	26.50 (5,960)	24.12 (5,420)	28.64 (6,440)	9.48 (2,130)	12.64 (2,840)	11.20 (2,520)	14.85 (3,340)	
	457 (18)	24.22 (5,445)	30.08 (6,765)	27.03 (6,075)	32.47 (7,300)	10.53 <sup>(k)</sup> (2,370) <sup>(k)</sup>	16.18 <sup>(k)</sup> (3,640) <sup>(k)</sup>	11.87 (2,670)	17.94 (4,035)	
	508 (20)	24.22 (5,445)	30.96 (6,960)	27.03 (6,075)	33.95 (7,630)	10.53 <sup>(k)</sup> (2,370) <sup>(k)</sup>	17.20 <sup>(k)</sup> (3,865) <sup>(k)</sup>	11.87 (2,670)	19.62 (4,410)	
559 (22)	24.22 (5,445)	31.80 (7,150)	27.03 (6,075)	35.31 (7,940)	10.53 <sup>(k)</sup> (2,370) <sup>(k)</sup>	18.22 <sup>(k)</sup> (4,095) <sup>(k)</sup>	11.87 (2,670)	21.27 (4,785)		
610 (24)	24.22 (5,445)	32.58 (7,325)	27.03 (6,075)	36.58 (8,225)	10.53 <sup>(k)</sup> (2,370) <sup>(k)</sup>	18.99 <sup>(k)</sup> (4,270) <sup>(k)</sup>	11.87 (2,670)	22.96 (5,160)		
RSI 55	235 (9-1/4)	23.87 (5,365)	25.84 (5,810)	24.57 (5,525)	26.68 (6,000)	9.34 (2,100)	11.44 (2,575)	11.16 (2,510)	12.04 (2,705)	6.5 (943)
	241 (9-1/2)	23.87 (5,365)	26.05 (5,855)	24.68 (5,550)	26.96 (6,060)	9.37 (2,105)	11.58 (2,605)	11.23 (2,525)	12.25 (2,755)	
	286 (11-1/4)	23.98 (5,390)	27.56 (6,195)	25.31 (5,690)	28.86 (6,485)	9.55 (2,145)	12.46 (2,800)	11.69 (2,630)	13.87 (3,115)	
	302 (11-7/8)	24.01 (5,400)	28.08 (6,315)	25.52 (5,740)	29.56 (6,645)	9.62 (2,160)	12.78 (2,875)	11.87 (2,670)	14.43 (3,245)	
	356 (14)	24.12 (5,420)	29.91 (6,725)	26.29 (5,910)	31.87 (7,165)	9.72 (2,185)	13.83 (3,110)	12.95 (2,910)	16.36 (3,680)	
	406 (16)	24.22 (5,445)	31.63 (7,110)	27.03 (6,075)	34.09 (7,665)	9.83 (2,210)	14.81 (3,330)	13.94 (3,135)	18.15 (4,080)	
	457 (18)	24.22 (5,445)	33.35 (7,495)	27.03 (6,075)	36.26 (8,155)	11.94 <sup>(k)</sup> (2,685) <sup>(k)</sup>	17.48 <sup>(k)</sup> (3,930) <sup>(k)</sup>	14.95 (3,360)	19.97 (4,490)	
	508 (20)	24.22 (5,445)	35.03 (7,875)	27.03 (6,075)	38.44 (8,640)	11.94 <sup>(k)</sup> (2,685) <sup>(k)</sup>	18.78 <sup>(k)</sup> (4,220) <sup>(k)</sup>	14.95 (3,360)	21.80 (4,900)	
559 (22)	24.22 (5,445)	36.75 (8,265)	27.03 (6,075)	40.65 (9,140)	11.94 <sup>(k)</sup> (2,685) <sup>(k)</sup>	20.11 <sup>(k)</sup> (4,520) <sup>(k)</sup>	14.95 (3,360)	23.59 (5,305)		
610 (24)	24.22 (5,445)	38.47 (8,650)	27.03 (6,075)	42.83 (9,630)	11.94 <sup>(k)</sup> (2,685) <sup>(k)</sup>	21.45 <sup>(k)</sup> (4,820) <sup>(k)</sup>	14.95 (3,360)	25.42 (5,715)		
RSI 65	302 (11-7/8)	21.98 (4,940)	27.10 (6,095)	25.77 (5,795)	28.50 (6,410)	8.04 (1,805)	11.65 (2,620)	10.64 (2,390)	14.43 (3,245)	6.90 (1,001)
	356 (14)	21.98 (4,940)	28.47 (6,400)	25.77 (5,795)	30.19 (6,785)	8.04 (1,805)	12.32 (2,770)	10.78 (2,425)	16.36 (3,680)	
	406 (16)	21.98 (4,940)	29.80 (6,700)	25.77 (5,795)	31.77 (7,140)	8.04 (1,805)	12.95 (2,910)	10.92 (2,455)	18.15 (4,080)	
	457 (18)	21.98 (4,940)	31.14 (7,000)	25.77 (5,795)	33.35 (7,495)	9.23 <sup>(k)</sup> (2,075) <sup>(k)</sup>	16.15 <sup>(k)</sup> (3,630) <sup>(k)</sup>	11.06 (2,485)	19.97 (4,490)	
	508 (20)	21.98 (4,940)	32.44 (7,290)	25.77 (5,795)	34.93 (7,855)	9.30 <sup>(k)</sup> (2,090) <sup>(k)</sup>	17.24 <sup>(k)</sup> (3,875) <sup>(k)</sup>	11.20 (2,520)	21.80 (4,900)	
	559 (22)	21.98 (4,940)	33.77 (7,590)	25.77 (5,795)	36.51 (8,210)	9.37 <sup>(k)</sup> (2,105) <sup>(k)</sup>	18.32 <sup>(k)</sup> (4,120) <sup>(k)</sup>	11.34 (2,550)	23.59 (5,305)	
610 (24)	21.98 (4,940)	35.10 (7,890)	25.77 (5,795)	38.12 (8,570)	9.41 <sup>(k)</sup> (2,115) <sup>(k)</sup>	19.45 <sup>(k)</sup> (4,370) <sup>(k)</sup>	11.48 (2,580)	25.42 (5,715)		

(Footnotes on Page 7)

For Imperial: 1 mm = 0.0394 in., 1 N = 0.2248 lbf, 1 MPa = 145.04 psi

- (a) Reaction capacity shall be limited by the tabulated I-joist reaction capacity, flange bearing capacity or the bearing capacity of the support material, whichever is less. The flange bearing capacity is based on the specified compressive strength perpendicular to grain of the I-joist flange, the net flange width and the bearing length, and may be further limited by the bearing capacity of the support material. To calculate the net flange width, subtract 6.4 mm (0.25 inch) from the flange width (see Table 1) of the RSI 15, RSI 25, RSI 25x4, RSI 35, RSI 45 and RSI 55 series I-joists, or subtract 2.5 mm (0.10 inch) from the flange width (see Table 1) of the RSI 65 series I-joists.
- (b) The tabulated values are for the standard term of load duration ( $K_D = 1.0$ ).
- (c) Interpolation between bearing lengths is permitted.
- (d) Bearing stiffeners shall be installed in accordance with the recommendations provided by the manufacturer.
- (e) For all depths of 241 mm (9-1/2 inches) and greater, the intermediate reaction with a minimum bearing length of 76 mm (3 inches) shall be permitted to be determined based on the intermediate reaction values with a bearing length of 89 mm (3-1/2 inches) and 140 mm (5-1/2 inches).
- (f) The minimum bearing length for end reactions is 38 mm (1-1/2 inches), unless otherwise noted.
- (g) The 241 and 302-mm RSI 15 shall be permitted to be designed as PRI-20 I-joists.
- (h) The 241, 302, 356, and 406-mm RSI 25 shall be permitted to be designed as PRI-40 I-joists.
- (i) The 241, 302, 356, and 406-mm RSI 35 shall be permitted to be designed as PRI-60 I-joists.
- (j) The 302, 356, and 406-mm RSI 45 are recognized as PRI-80 I-joists.
- (k) Minimum bearing length is 64 mm (2-1/2 inches).

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