PWI 56L Properties and Residential Floor Span Tables

US (ASD)

May 2023
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This Tech Note must be used in conjunction with the appropriate PWT Technical Guide.

Design Values

Series	Depth	Weight (plf)	Moment (lb-ft)	EI (x 10^6) (lb-in^2)	K (x 10^4) (lb-ft/in)	Shear (lbs)
PWI 56L or LPI 56	11-7/8"	4.5	10170	668	0.549	2055
	14"	4.8	12250	968	0.641	2330
	16"	5	14205	1301	0.729	2585

Notes:

1. PWT I-Joists shall be designed for dry-use conditions only. Dry-use applies to products installed in dry, covered and well ventilated interior conditions in which the equivalent moisture content in lumber will not exceed 16%.
2. Moment and Shear are for normal load duration and shall be adjusted according to code.
3. Moment shall not be increased for repetitive member use.
4. Deflection calculations shall include both bending and shear deformations. Refer to the product report for the equation for simple span, uniform load deflection. Equations for other conditions can be found in engineering references.

Refer to APA Product Report PR-L238 for a full list of properties

Floor Span Tables

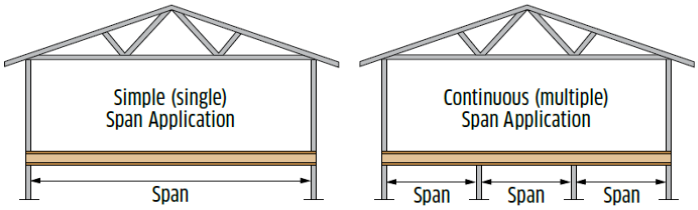
Table Usage:

1. Select the Simple Span or Continuous Span table, as required.
2. Find a span that meets or exceeds the required clear span.
3. Read the corresponding joist series, depth and spacing.

Caution:

For floor systems that require both simple span and continuous span joists, it is a good idea to check both before selecting a joist. Some conditions are controlled by continuous span rather than simple span.

Depth



40 PSF LIVE LOAD, 10 PSF DEAD LOAD

Series	Depth	Simple Span L/480 12" oc	Simple Span L/480 16" oc	Simple Span L/480 19.2" oc	Simple Span L/480 24" oc	Simple Span L/360 12" oc	Simple Span L/360 16" oc	Simple Span L/360 19.2" oc	Simple Span L/360 24" oc	Continuous Span L/480; No Web Stiffeners 12" oc	Continuous Span L/480; No Web Stiffeners 16" oc	Continuous Span L/480; No Web Stiffeners 19.2" oc	Continuous Span L/480; No Web Stiffeners 24" oc
PWI 56L or LPI 56	11-7/8"	26'-6"	24'-1"	22'-8"	21'-1"	29'-3"	26'-8"	25'-2"	23'-4"	28'-10"	26'-2"	24'-8"	22'-11"
	14"	29'-11"	27'-3"	25'-8"	23'-4"	33'-1"	30'-2"	28'-5"	23'-4"	32'-7"	29'-8"	27'-11"	24'-9"
	16"	33'-1"	30'-1"	28'-4"	23'-5"	36'-7"	33'-4"	29'-4"	23'-5"	36'-0"	32'-9"	30'-10"	24'-9"

40 PSF LIVE LOAD, 15 PSF DEAD LOAD

Series	Depth	Simple Span L/480 12" oc	Simple Span L/480 16" oc	Simple Span L/480 19.2" oc	Simple Span L/480 24" oc	Simple Span L/360 12" oc	Simple Span L/360 16" oc	Simple Span L/360 19.2" oc	Simple Span L/360 24" oc	Continuous Span L/480; No Web Stiffeners 12" oc	Continuous Span L/480; No Web Stiffeners 16" oc	Continuous Span L/480; No Web Stiffeners 19.2" oc	Continuous Span L/480; No Web Stiffeners 24" oc
PWI 56L or LPI 56	11-7/8"	26'-6"	24'-1"	22'-8"	21'-1"	29'-3"	26'-8"	25'-2"	21'-2"	28'-10"	26'-2"	24'-8"	22'-6"
	14"	29'-11"	27'-3"	25'-8"	21'-2"	33'-1"	30'-2"	26'-7"	21'-2"	32'-7"	29'-8"	27'-11"	22'-6"
	16"	33'-1"	30'-1"	26'-7"	21'-3"	36'-7"	32'-0"	26'-7"	21'-3"	36'-0"	32'-9"	28'-2"	22'-6"

Design Assumptions:

1. The spans listed are the clear distance between supports. Continuous spans are based on the longest span. The shortest span shall not be less than 50% of the longest span.
2. The spans are based on uniform floor loads as listed at the top of this page.
3. These tables reflect the additional stiffness provided by 48/24 APA RATED SHEATHING or 24 oc APA RATED STURD-I-FLOOR, or equal, glued and nailed to the top flange.
4. Live Loas deflection is limited to L/480, or L/360 as indicated in the tables.
5. Total Load deflection is limited to L/240.
6. The spans are based on an end bearing length of at least 1¾" and an interior bearing length of at least 3½", and are limited to the bearing capacity for an SPF wall plate (Fc T = 425 psi).

Additional Notes:

1. Web stiffeners are not required for these.
2. Web fillers are required for I-Joists seated in hangers that do not laterally support the top flange.
3. L/360 represents the maximum deflection allowed per code and may not provide suitable floor performance. L/480 or better is recommended for most applications.
4. These spans are not evaluated for vibration.
5. Though not required for the spans above, bridging, blocking, bottom-flange bracing or a direct-applied gypsum ceiling can improve the feel of a floor.
6. For conditions not shown, use the Uniform Floor Load (PLF) tables, the Exacte by PWT software, or contact your PWT distributor for assistance.

Our literature is updated frequently, so please visit www.pacificwoodtech.com for the most current version of our specifications.

Table date: May, 2023
Valid until: May, 2024

Cal. Prop 65 Warning:

WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.