

# ROOF SPANS 125% NON-SNOW

## ALLOWABLE SPANS FOR PWI JOISTS – 20 PSF LIVE LOAD – 10 PSF DEAD LOAD

Joist Series	Joist Depth	Simple Span								
		Slopes to 4 in 12			Slopes to 8 in 12			Slopes to 12 in 12		
		16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
PWI 20	9½"	21'-2" <sup>(1)</sup>	19'-10" <sup>(1)</sup>	18'-5" <sup>(1)</sup>	19'-11" <sup>(2)</sup>	18'-9" <sup>(2)</sup>	17'-4" <sup>(2)</sup>	18'-6" <sup>(2)</sup>	17'-5" <sup>(2)</sup>	16'-1" <sup>(2)</sup>
	11⅞"	25'-6" <sup>(1)</sup>	24'-0" <sup>(1)</sup>	22'-2" <sup>(2)</sup>	24'-1" <sup>(2)</sup>	22'-7" <sup>(2)</sup>	20'-11" <sup>(2)</sup>	22'-4" <sup>(2)</sup>	21'-0" <sup>(2)</sup>	19'-5" <sup>(3)</sup>
	14"	29'-1" <sup>(1)</sup>	27'-4" <sup>(2)</sup>	25'-1" <sup>(2)</sup>	27'-5" <sup>(2)</sup>	25'-9" <sup>(2)</sup>	23'-10" <sup>(3)</sup>	25'-5" <sup>(3)</sup>	23'-11" <sup>(3)</sup>	22'-2" <sup>(3)</sup>
PWI 30	9½"	21'-11" <sup>(1)</sup>	20'-7" <sup>(1)</sup>	19'-0" <sup>(1)</sup>	20'-8" <sup>(2)</sup>	19'-5" <sup>(2)</sup>	18'-0" <sup>(2)</sup>	19'-2" <sup>(2)</sup>	18'-0" <sup>(2)</sup>	16'-8" <sup>(2)</sup>
	11⅞"	26'-5" <sup>(1)</sup>	24'-9" <sup>(1)</sup>	22'-11" <sup>(2)</sup>	24'-11" <sup>(2)</sup>	23'-4" <sup>(2)</sup>	21'-8" <sup>(2)</sup>	23'-1" <sup>(2)</sup>	21'-8" <sup>(3)</sup>	20'-1" <sup>(3)</sup>
	14"	31'-8" <sup>(1)</sup>	29'-4" <sup>(2)</sup>	26'-3" <sup>(2)</sup>	29'-10" <sup>(2)</sup>	28'-1" <sup>(2)</sup>	25'-8" <sup>(3)</sup>	27'-8" <sup>(3)</sup>	26'-0" <sup>(3)</sup>	24'-1" <sup>(3)</sup>
PWI 40	9½"	23'-3" <sup>(1)</sup>	21'-10" <sup>(1)</sup>	20'-3" <sup>(1)</sup>	21'-11" <sup>(2)</sup>	20'-7" <sup>(2)</sup>	19'-1" <sup>(2)</sup>	20'-4" <sup>(2)</sup>	19'-1" <sup>(2)</sup>	17'-9" <sup>(3)</sup>
	11⅞"	27'-8" <sup>(1)</sup>	26'-2" <sup>(1)</sup>	23'-11" <sup>(2)</sup>	26'-3" <sup>(2)</sup>	24'-8" <sup>(2)</sup>	22'-10" <sup>(2)</sup>	24'-5" <sup>(2)</sup>	22'-11" <sup>(3)</sup>	21'-3" <sup>(3)</sup>
	14"	31'-8" <sup>(1)</sup>	29'-4" <sup>(2)</sup>	26'-3" <sup>(2)</sup>	29'-10" <sup>(2)</sup>	28'-1" <sup>(2)</sup>	25'-8" <sup>(3)</sup>	27'-8" <sup>(3)</sup>	26'-0" <sup>(3)</sup>	24'-1" <sup>(3)</sup>
PWI 50	9½"	23'-0" <sup>(1)</sup>	21'-7" <sup>(1)</sup>	20'-0" <sup>(1)</sup>	21'-8" <sup>(2)</sup>	20'-4" <sup>(2)</sup>	18'-10" <sup>(2)</sup>	20'-1" <sup>(2)</sup>	18'-11" <sup>(2)</sup>	17'-6" <sup>(3)</sup>
	11⅞"	27'-8" <sup>(1)</sup>	25'-11" <sup>(1)</sup>	24'-0" <sup>(2)</sup>	26'-1" <sup>(2)</sup>	24'-6" <sup>(2)</sup>	22'-8" <sup>(2)</sup>	24'-2" <sup>(2)</sup>	22'-9" <sup>(3)</sup>	21'-1" <sup>(3)</sup>
	14"	31'-7" <sup>(1)</sup>	29'-8" <sup>(2)</sup>	27'-6" <sup>(2)</sup>	29'-10" <sup>(2)</sup>	28'-0" <sup>(2)</sup>	25'-11" <sup>(3)</sup>	27'-8" <sup>(3)</sup>	26'-0" <sup>(3)</sup>	24'-1" <sup>(3)</sup>
PWI 60	9½"	24'-8" <sup>(1)</sup>	23'-2" <sup>(1)</sup>	21'-6" <sup>(2)</sup>	23'-3" <sup>(2)</sup>	21'-10" <sup>(2)</sup>	20'-3" <sup>(2)</sup>	21'-7" <sup>(2)</sup>	20'-4" <sup>(2)</sup>	18'-10" <sup>(3)</sup>
	11⅞"	29'-7" <sup>(1)</sup>	27'-10" <sup>(2)</sup>	25'-9" <sup>(2)</sup>	27'-11" <sup>(2)</sup>	26'-3" <sup>(2)</sup>	24'-3" <sup>(3)</sup>	25'-11" <sup>(3)</sup>	24'-4" <sup>(3)</sup>	22'-7" <sup>(3)</sup>
	14"	33'-9" <sup>(2)</sup>	31'-8" <sup>(2)</sup>	29'-4" <sup>(2)</sup>	31'-10" <sup>(2)</sup>	29'-11" <sup>(3)</sup>	27'-8" <sup>(3)</sup>	29'-6" <sup>(3)</sup>	27'-9" <sup>(3)</sup>	25'-8" <sup>(3)</sup>
PWI 70	9½"	24'-8" <sup>(1)</sup>	23'-2" <sup>(1)</sup>	21'-6" <sup>(2)</sup>	23'-3" <sup>(2)</sup>	21'-10" <sup>(2)</sup>	20'-3" <sup>(2)</sup>	21'-7" <sup>(2)</sup>	20'-4" <sup>(2)</sup>	18'-10" <sup>(3)</sup>
	11⅞"	30'-8" <sup>(1)</sup>	28'-9" <sup>(2)</sup>	26'-8" <sup>(2)</sup>	28'-11" <sup>(2)</sup>	27'-2" <sup>(2)</sup>	25'-2" <sup>(3)</sup>	26'-10" <sup>(3)</sup>	25'-3" <sup>(3)</sup>	23'-4" <sup>(3)</sup>
	14"	34'-10" <sup>(2)</sup>	32'-9" <sup>(2)</sup>	30'-4" <sup>(2)</sup>	32'-10" <sup>(2)</sup>	30'-11" <sup>(3)</sup>	28'-7" <sup>(3)</sup>	30'-6" <sup>(3)</sup>	28'-8" <sup>(3)</sup>	26'-7" <sup>(3)</sup>
PWI 77	9½"	25'-9" <sup>(1)</sup>	24'-5" <sup>(1)</sup>	22'-5" <sup>(2)</sup>	24'-3" <sup>(2)</sup>	22'-5" <sup>(2)</sup>	21'-1" <sup>(2)</sup>	22'-6" <sup>(2)</sup>	21'-2" <sup>(3)</sup>	19'-7" <sup>(3)</sup>
	11⅞"	30'-9" <sup>(1)</sup>	28'-10" <sup>(2)</sup>	26'-9" <sup>(2)</sup>	29'-0" <sup>(2)</sup>	27'-3" <sup>(2)</sup>	25'-3" <sup>(3)</sup>	26'-11" <sup>(3)</sup>	25'-3" <sup>(3)</sup>	23'-5" <sup>(3)</sup>
	14"	34'-11" <sup>(2)</sup>	32'-10" <sup>(2)</sup>	30'-5" <sup>(2)</sup>	33'-0" <sup>(2)</sup>	31'-0" <sup>(3)</sup>	28'-8" <sup>(3)</sup>	30'-7" <sup>(3)</sup>	28'-9" <sup>(3)</sup>	26'-8" <sup>(3)</sup>
PWI 90	9½"	29'-6" <sup>(1)</sup>	27'-2" <sup>(1)</sup>	25'-7" <sup>(2)</sup>	27'-10" <sup>(2)</sup>	26'-1" <sup>(2)</sup>	24'-2" <sup>(3)</sup>	25'-10" <sup>(3)</sup>	24'-3" <sup>(3)</sup>	22'-5" <sup>(3)</sup>
	11⅞"	35'-1" <sup>(2)</sup>	33'-0" <sup>(2)</sup>	30'-6" <sup>(2)</sup>	33'-2" <sup>(2)</sup>	31'-2" <sup>(3)</sup>	28'-10" <sup>(3)</sup>	30'-9" <sup>(3)</sup>	28'-11" <sup>(3)</sup>	26'-9" <sup>(3)</sup>
	14"	39'-11" <sup>(2)</sup>	37'-6" <sup>(2)</sup>	34'-8" <sup>(2)</sup>	37'-8" <sup>(3)</sup>	35'-4" <sup>(3)</sup>	32'-9" <sup>(3)</sup>	34'-11" <sup>(3)</sup>	32'-10" <sup>(3)</sup>	30'-5" <sup>(3)</sup>

### Notes:

- Table values apply to uniformly loaded roof joists that are sloped at least ¼" in 12".
- Span is measured on the horizontal from face to face of supports.
- Table values do not account for stiffness added by glued or nailed sheathing.
- Provide at least 1¾" of bearing length at end supports and 3½" at intermediate supports.
- The numbers in parentheses refer to the minimum connection required at each support.
  - Beveled plate and two nails (205 lbs. lateral capacity @ 125%), or joist hanger
  - Beveled plate and four nails (410 lbs. lateral capacity @ 125%), or (3)
  - Gussets at high support (1620 lbs. lateral capacity @ 125%), birdsmouth cut at low support, or (4)
  - Strap (1640 lbs. lateral capacity @ 125%) or pair of twist straps (950 lbs. lateral capacity each @ 125%) at high support, birdsmouth cut at low support
- Provide lateral restraint at supports (e.g. blocking panels, rim board) and along the compression flange of each joist (e.g. roof sheathing, gypsum board ceiling).
- Consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing conditions, concentrated loads, multiple span joists).

# ROOF SPANS 125% NON-SNOW

## ALLOWABLE SPANS FOR PWI JOISTS – 20 PSF LIVE LOAD – 15 PSF DEAD LOAD

Joist Series	Joist Depth	Simple Span								
		Slopes to 4 in 12			Slopes to 8 in 12			Slopes to 12 in 12		
		16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
PWI 20	9½"	20'-0" (1)	18'-10" (1)	17'-5" (1)	18'-10" (2)	17'-8" (2)	16'-4" (2)	17'-4" (2)	16'-4" (2)	15'-1" (3)
	11⅞"	24'-2" (1)	22'-8" (2)	21'-0" (2)	22'-8" (2)	21'-4" (2)	19'-9" (3)	20'-11" (3)	19'-8" (3)	18'-3" (3)
	14"	27'-6" (2)	25'-10" (2)	23'-1" (2)	25'-10" (2)	24'-3" (3)	22'-5" (3)	23'-10" (3)	22'-5" (3)	20'-9" (3)
PWI 30	9½"	20'-9" (1)	19'-6" (1)	18'-0" (2)	19'-6" (2)	18'-3" (2)	16'-11" (2)	18'-0" (2)	16'-10" (2)	15'-8" (3)
	11⅞"	25'-0" (1)	23'-6" (2)	21'-9" (2)	23'-5" (2)	22'-0" (2)	20'-5" (3)	21'-8" (3)	20'-4" (3)	18'-10" (3)
	14"	29'-9" (2)	27'-1" (2)	24'-3" (2)	28'-2" (2)	26'-4" (3)	23'-6" (3)	26'-0" (3)	24'-5" (3)	22'-7" (3)
PWI 40	9½"	22'-0" (1)	20'-8" (1)	19'-2" (2)	20'-8" (2)	19'-5" (2)	18'-0" (2)	19'-1" (2)	17'-11" (3)	16'-7" (3)
	11⅞"	26'-5" (1)	24'-8" (2)	22'-1" (2)	24'-9" (2)	23'-1" (2)	21'-5" (3)	22'-10" (3)	21'-4" (3)	19'-11" (3)
	14"	29'-9" (2)	27'-1" (2)	24'-3" (2)	28'-2" (2)	26'-4" (3)	23'-6" (3)	26'-0" (3)	24'-5" (3)	22'-7" (3)
PWI 50	9½"	21'-9" (1)	20'-5" (1)	18'-11" (2)	20'-5" (2)	19'-2" (2)	17'-9" (2)	18'-10" (2)	17'-8" (3)	16'-5" (3)
	11⅞"	26'-2" (1)	24'-7" (2)	22'-9" (2)	24'-7" (2)	23'-1" (2)	21'-4" (3)	22'-8" (3)	21'-4" (3)	19'-9" (3)
	14"	29'-11" (2)	28'-1" (2)	26'-0" (2)	28'-1" (2)	26'-5" (3)	24'-5" (3)	25'-11" (3)	24'-5" (3)	22'-7" (3)
PWI 60	9½"	23'-4" (1)	21'-11" (1)	20'-4" (2)	21'-11" (2)	20'-7" (2)	19'-1" (2)	20'-3" (2)	19'-0" (3)	17'-7" (3)
	11⅞"	28'-0" (2)	26'-4" (2)	24'-4" (2)	26'-4" (2)	24'-9" (3)	22'-11" (3)	24'-4" (3)	22'-10" (3)	21'-2" (3)
	14"	31'-11" (2)	30'-0" (2)	27'-9" (2)	30'-0" (3)	28'-2" (3)	26'-1" (3)	27'-8" (3)	26'-0" (3)	24'-1" (3)
PWI 70	9½"	29'-0" (2)	27'-3" (2)	25'-3" (2)	27'-3" (2)	25'-7" (3)	23'-8" (3)	25'-2" (3)	23'-8" (3)	21'-11" (3)
	11⅞"	33'-0" (2)	31'-0" (2)	28'-8" (2)	31'-0" (3)	29'-1" (3)	26'-11" (3)	28'-7" (3)	26'-11" (3)	24'-11" (3)
	14"	36'-7" (2)	34'-4" (2)	31'-9" (2)	34'-4" (3)	32'-3" (3)	29'-10" (3)	31'-8" (3)	29'-9" (3)	27'-7" (3)
PWI 77	9½"	40'-0" (2)	37'-7" (2)	34'-9" (2)	37'-7" (3)	35'-4" (3)	32'-8" (3)	34'-8" (3)	32'-7" (3)	30'-2" (3)
	11⅞"	43'-4" (2)	40'-8" (2)	37'-8" (2)	40'-8" (3)	38'-3" (3)	35'-5" (3)	37'-7" (3)	35'-4" (3)	32'-8" (3)
	14"	44'-4" (1)	42'-11" (2)	41'-2" (2)	44'-4" (3)	42'-6" (3)	39'-11" (3)	41'-2" (3)	39'-10" (3)	37'-5" (3)
PWI 90	9½"	29'-1" (2)	27'-4" (2)	25'-4" (2)	27'-4" (2)	25'-8" (3)	23'-9" (3)	25'-3" (3)	23'-8" (3)	21'-11" (3)
	11⅞"	33'-1" (2)	31'-1" (2)	28'-9" (2)	31'-1" (3)	29'-2" (3)	27'-1" (3)	28'-8" (3)	27'-0" (3)	25'-0" (3)
	14"	36'-8" (2)	34'-6" (2)	31'-11" (2)	34'-6" (3)	32'-5" (3)	30'-0" (3)	31'-10" (3)	29'-11" (3)	27'-8" (3)
PWI 90	16"	40'-2" (2)	37'-9" (2)	34'-11" (2)	37'-9" (3)	35'-5" (3)	32'-10" (3)	34'-10" (3)	32'-9" (3)	30'-4" (3)
	18"	43'-6" (2)	40'-11" (2)	37'-11" (3)	40'-11" (3)	38'-5" (3)	35'-7" (3)	37'-9" (3)	35'-6" (3)	32'-10" (3)
	20"	46'-10" (2)	44'-0" (2)	40'-9" (3)	43'-11" (3)	41'-4" (3)	38'-3" (3)	40'-7" (3)	38'-2" (3)	35'-4" (3)
PWI 90	22"	50'-0" (2)	47'-0" (3)	43'-5" (3)	46'-11" (3)	44'-1" (3)	40'-11" (3)	43'-4" (3)	40'-9" (3)	37'-9" (3)
	24"	27'-11" (2)	26'-2" (2)	24'-3" (2)	26'-2" (2)	24'-7" (3)	22'-9" (3)	24'-2" (3)	22'-9" (3)	21'-0" (3)
	11⅞"	33'-3" (2)	31'-3" (2)	28'-11" (2)	31'-3" (3)	29'-4" (3)	27'-2" (3)	28'-10" (3)	27'-1" (3)	25'-1" (3)
PWI 90	14"	37'-9" (2)	35'-6" (2)	32'-10" (2)	35'-6" (3)	33'-4" (3)	30'-10" (3)	32'-9" (3)	30'-9" (3)	28'-6" (3)
	16"	41'-10" (2)	39'-3" (2)	36'-4" (3)	39'-3" (3)	36'-11" (3)	34'-2" (3)	36'-3" (3)	34'-1" (3)	31'-7" (3)
	18"	45'-9" (2)	42'-11" (2)	39'-9" (3)	42'-11" (3)	40'-4" (3)	37'-4" (3)	39'-8" (3)	37'-3" (3)	34'-6" (3)
PWI 90	20"	49'-6" (2)	46'-6" (3)	43'-0" (3)	46'-6" (3)	43'-8" (3)	40'-5" (3)	42'-11" (3)	40'-4" (3)	37'-4" (3)
	22"	53'-2" (2)	49'-11" (3)	46'-3" (3)	49'-11" (3)	46'-11" (3)	43'-5" (3)	46'-1" (3)	43'-4" (3)	40'-1" (3)
	24"	56'-8" (3)	53'-3" (3)	49'-4" (3)	53'-3" (3)	50'-1" (3)	46'-4" (3)	49'-2" (3)	46'-2" (3)	42'-10" (3)

See notes on page 28

# ROOF SPANS 125% NON-SNOW

## ALLOWABLE SPANS FOR PWI JOISTS – 20 PSF LIVE LOAD – 20 PSF DEAD LOAD

Joist Series	Joist Depth	Simple Span								
		Slopes to 4 in 12			Slopes to 8 in 12			Slopes to 12 in 12		
		16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.	16" o.c.	19.2" o.c.	24" o.c.
PWI 20	9½"	19'- 1" (1)	17'- 11" (1)	16'- 7" (2)	17'- 10" (2)	16'- 9" (2)	15'- 6" (2)	16'- 5" (2)	15'- 5" (3)	14'- 3" (3)
	11⅞"	23'- 0" (1)	21'- 8" (2)	19'- 9" (2)	21'- 7" (2)	20'- 3" (2)	18'- 9" (3)	19'- 10" (3)	18'- 7" (3)	17'- 3" (3)
	14"	26'- 3" (2)	24'- 2" (2)	21'- 7" (2)	24'- 7" (2)	23'- 1" (3)	20'- 10" (3)	22'- 7" (3)	21'- 3" (3)	19'- 8" (3)
PWI 30	9½"	19'- 9" (1)	18'- 7" (1)	17'- 2" (2)	18'- 6" (2)	17'- 5" (2)	16'- 1" (2)	17'- 0" (2)	16'- 0" (3)	14'- 10" (3)
	11⅞"	23'- 10" (2)	22'- 4" (2)	20'- 9" (2)	22'- 4" (2)	20'- 11" (3)	19'- 5" (3)	20'- 6" (3)	19'- 3" (3)	17'- 10" (3)
	14"	27'- 9" (2)	25'- 4" (2)	22'- 7" (2)	26'- 9" (3)	24'- 5" (3)	21'- 10" (3)	24'- 7" (3)	23'- 1" (3)	20'- 10" (3)
PWI 40	9½"	21'- 0" (1)	19'- 9" (2)	18'- 1" (2)	19'- 8" (2)	18'- 6" (2)	17'- 1" (3)	18'- 1" (3)	17'- 0" (3)	15'- 9" (3)
	11⅞"	25'- 2" (2)	23'- 0" (2)	20'- 7" (2)	23'- 4" (2)	22'- 1" (3)	19'- 10" (3)	21'- 8" (3)	20'- 4" (3)	18'- 10" (3)
	14"	27'- 9" (2)	25'- 4" (2)	22'- 7" (2)	26'- 9" (3)	24'- 5" (3)	21'- 10" (3)	24'- 7" (3)	23'- 1" (3)	20'- 10" (3)
PWI 50	9½"	20'- 9" (1)	19'- 6" (1)	18'- 0" (2)	19'- 5" (2)	18'- 3" (2)	16'- 11" (3)	17'- 10" (3)	16'- 9" (3)	15'- 6" (3)
	11⅞"	24'- 11" (2)	23'- 5" (2)	21'- 8" (2)	23'- 4" (2)	21'- 11" (3)	20'- 4" (3)	21'- 8" (3)	20'- 2" (3)	18'- 8" (3)
	14"	28'- 7" (2)	26'- 10" (2)	24'- 10" (2)	26'- 9" (3)	25'- 1" (3)	23'- 3" (3)	24'- 7" (3)	23'- 1" (3)	21'- 5" (3)
PWI 60	9½"	22'- 3" (1)	20'- 11" (2)	19'- 4" (2)	20'- 10" (2)	19'- 7" (2)	18'- 2" (3)	19'- 2" (3)	18'- 0" (3)	16'- 8" (3)
	11⅞"	26'- 9" (2)	25'- 1" (2)	23'- 3" (2)	25'- 0" (3)	23'- 6" (3)	21'- 9" (3)	23'- 3" (3)	21'- 7" (3)	20'- 0" (3)
	14"	30'- 6" (2)	28'- 7" (2)	26'- 6" (2)	28'- 6" (3)	26'- 9" (3)	24'- 10" (3)	26'- 3" (3)	24'- 8" (3)	22'- 10" (3)
PWI 70	9½"	23'- 10" (2)	21'- 9" (2)	20'- 2" (2)	21'- 9" (2)	20'- 5" (2)	18'- 11" (3)	20'- 0" (3)	18'- 10" (3)	17'- 5" (3)
	11⅞"	27'- 8" (2)	26'- 0" (2)	24'- 1" (2)	25'- 11" (3)	24'- 4" (3)	22'- 6" (3)	23'- 10" (3)	22'- 5" (3)	20'- 9" (3)
	14"	31'- 6" (2)	29'- 7" (2)	27'- 4" (2)	29'- 6" (3)	27'- 8" (3)	25'- 7" (3)	27'- 1" (3)	25'- 5" (3)	23'- 7" (3)
PWI 77	9½"	23'- 3" (1)	21'- 10" (2)	20'- 2" (2)	21'- 9" (2)	20'- 5" (2)	18'- 11" (3)	20'- 0" (3)	18'- 10" (3)	17'- 5" (3)
	11⅞"	27'- 9" (2)	26'- 1" (2)	24'- 2" (2)	26'- 0" (3)	24'- 5" (3)	22'- 7" (3)	23'- 11" (3)	22'- 5" (3)	20'- 9" (3)
	14"	31'- 7" (2)	29'- 8" (2)	27'- 5" (2)	29'- 7" (3)	27'- 9" (3)	25'- 9" (3)	27'- 2" (3)	25'- 6" (3)	23'- 8" (3)
PWI 90	9½"	26'- 7" (2)	25'- 0" (2)	23'- 1" (2)	24'- 11" (2)	23'- 5" (3)	21'- 8" (3)	22'- 11" (3)	21'- 6" (3)	19'- 11" (3)
	11⅞"	31'- 9" (2)	29'- 9" (2)	27'- 7" (2)	29'- 8" (3)	27'- 11" (3)	25'- 10" (3)	27'- 4" (3)	25'- 8" (3)	23'- 9" (3)
	14"	36'- 0" (2)	33'- 10" (2)	31'- 4" (2)	33'- 9" (3)	31'- 8" (3)	29'- 4" (3)	31'- 0" (3)	29'- 2" (3)	27'- 0" (3)

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