CITY OF PORTLAND, MAINE
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 11/15/16

Classic Steel Spiral Stair Technical Specifications

Classic Steel Code Stair with wood tread covers

Code Stair Package

Benefits of a Code Package

Designed for applications regulated by the national building codes. See our Codes Specifications section for further information.

Please check with your local building inspector for the dimensional requirements in your area before placing your order. The smallest stair available to still maintain the building code is 5' diameter. Salter Spiral Stair manufactures Code Stair Packages in 5', 5'6" and 6' diameter. Code Stair Packages also include extra center balusters for a maximum spacing of 4" *(safety feature for stairs that will be used by small children to prevent pass through). *Verify if your local code enforcement requires Code Riser treads, which are sold separately.*

Code Packages Include:

(Metal Stairs) 30° stair treads; 3 to 4 balusters per tread *(maximum spacing of 4")*; 60° platform *(This will provide a minimum of 6'6" headroom)*; 1 ½" aluminum handrail with end caps; Platform railing, 1" x 1" frame with 1" round balusters; Center column, base plate and top cap; 40" tall column extension

Code Package – 30°

Diameter	Recommended Finished Well Opening*	Platform Size	Clear Walking Path
5'	62" x 62"	31" x 31"	26"
5'6"	68" x 68"	34" x 34"	29"
6'	74" x 74"	37" x 37"	32"

** Minimum opening is 2" smaller than the recommended opening size. Talk to your salesperson for further information.*

30° Tread for Stair Sizes

5' | 5'6" | 6'

Floor to Floor Height Tread Adjustment		Treads & Risers Required		Degree of Rotation
Min.	Max.	Treads	Risers	
85"	95"	9	10	270°
93 ½"	104 ½"	10	11	300°
102"	114"	11	12	330°
110 ½"	123 ½"	12	13	360°
119"	133"	13	14	390°

NOTE: A special 60° platform is supplied with this package. The platform is not as versatile as a square one. For ordering purposes use these diagrams to choose the appropriate layout. Available sizes are 5', 5'2", 5'6" and 6" diameters with custom and larger sizes available upon request.

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Standard Stair Package

(Does Not Meet Code Compliancy)

Standard Packages Include:

(Metal Stairs) Center column, base plate and top cap; 1" outside diameter steel balusters; adjustable treads; 1 ½" outside diameter handrail; Platform railing, 1" x 1" frame with 1" round balusters, platform (square); 40" tall column extension

Diameter	Recommended Finished Well Opening*	Platform Size	Clear Walking Path
3'6"	44" x 44"	22" x 22"	17"
4'	50" x 50"	25" x 25"	20"
4'6"	56" x 56"	28" x 28"	23"
5'	62" x 62"	31" x 31"	26"
5'6"	68" x 68"	34" x 34"	29"
6'	74" x 74"	37" x 37"	32"
6'6"	80" x 80"	40" x 40"	35"

** Minimum opening is 2" smaller than the recommended opening size. Talk to your salesperson for further information.*

30° Tread for Stair Sizes

3'6" | 4' | 4'6" | 5' | 5'6" | 6'

Floor to Floor Height Tread Adjustment		Treads & Risers Required		Degree of Rotation
Min.	Max.	Treads	Risers	
85"	95"	9	10	270°
93 ½"	104 ½"	10	11	300°
102"	114"	11	12	330°
110 ½"	123 ½"	12	13	360°
119"	133"	13	14	390°

22 ½° Tread for Stair Sizes

5' | 5'6" | 6' | 6'6"

Floor to Floor Height Tread Adjustment		Treads & Risers Required		Degree of Rotation
Min.	Max.	Treads	Risers	
82 ½"	95"	10	11	225°
90"	102"	11	12	247 ½°
97 ½"	110 ½"	12	13	270°
105"	119"	13	14	292 ½°
112 ½"	127 ½"	14	15	315°

***NOTE:** To determine the number of treads and risers needed for your project, measure your finished floor to floor height and refer to the above charts. Since the standard stair packages use either 30° or 22 ½° treads, use the appropriate chart. Custom sizes available upon request.*

Standard Package – 30°

Standard Package – 22 ½°

Special Half-Turn Stair Package

(Does Not Meet Code Compliancy)

Diameter	Recommended Finished Well Opening	Platform Size	Clear Walking Path
5'6"	36" x 67"	N/A	28.5"
6'6"	42" x 79"	N/A	31.5"

Special Half-Turn Packages Include:

(Metal Stairs) Center Column, base plate and top cap; 1" outside diameter balusters; Adjustable treads; 1 ½" outside diameter handrail; Platform railing, 1" x 1" frame with 1" round balusters; 38" tall column extension; 180° wood balcony bracket

16.36° Tread for Stair Sizes

5'6" | 6'6"

Floor to Floor Height Tread Adjustment		Treads & Risers Required		Degree of Rotation
Min.	Max.	Treads	Risers	
90"	102"	11	12	180°
97 ½"	110 ½"	12	13	196 ⅓°

Half-Turn Package – 16.36°

NOTE: The half-turn does not require a platform

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SPIRAL STAIRCASE BUILDING CODE SPECIFICATIONS

Salter's Code Stair Packages will address and meet compliance with each of the requirements that are listed below. This information will apply to the **BOCA Code**, **UBC Code**, **IRC Code**, and **IFC codes**.

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IRC Stair Building Code

R311.1.10.1 Spiral stairways. Spiral stairways are permitted, provided the minimum clear width at and below the handrail shall be 26 inches (660 mm) with each tread having a 71/2-inch(190 mm) minimum tread depth at 12 inches (914 mm) from the narrower edge. All treads shall be identical. and the rise shall be no more than 91/2inches (241mm). A minimum headroom of 6 feet 6 inches (1982mm) shall be provided (See above diagram).

- Minimum clear walking path of 26 inches. A 5-foot diameter or larger stair will provide this width.
- Each tread will have a minimum of 7 1/2 inch tread depth at 12 inches from the narrow edge.
- All treads will be identical.
- The tread rise shall not be more than 9 1/2 inches high.
- Minimum headroom of 6 foot 6 inches shall be provided, measuring plumb from the edge of the platform down to the tread below.
- Landing width shall not be less than the required width of the stairway. Minimum spiral stair tread width is 26 inches. (Salter's code platforms start at 31 inches wide.)
- Stair balusters shall be spaced so a 4-inch object cannot pass between. The IRC Code permits a 4 3/8 inch space.
- Balcony/Well Enclosure guardrail balusters shall be spaced so a 4-inch object cannot pass.
- Balcony/Well Enclosure guardrail height shall not be less than 36 inches. (If your state or municipality requires 42-inch tall guardrails, the sales order must reflect this detail.)
- The stairway shall be equipped with one handrail on the wide edge of the tread.
- Handrail height, measured vertically from the tread nosing, shall be not less than 34 inches and not more than 38 inches.

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- Handrail grip size.

- Type I-Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 inches and not greater than 2 inches. (Salter's standard circular handrail is 1 1/2 inch diameter. This will address the UBC minimum cross section of 1 1/2 inch diameter.) If the handrail is not circular, it shall have a perimeter dimension not greater than 6 1/4 inches.

- Type II-Handrails, with a perimeter greater than 6 1/4 inches, shall provide a graspable finger recess area on both sides of the profile. For further information on our Type II options, please contact our sales department.

- (Verify what handrail size and shape your inspector will require. Handrail size and shape are a very controversial area within the building code. We recommend that you use our standard 1 1/2" round handrails or our 1 3/4" x 1 3/4" solid wood handrail to comply with the proper circumference.)

- A 300 lb. concentrated load is required. On request, our sales department can provide structural calculations for your job specifications.