

SPIRAL STAIRWAY ORDER GUIDE

TECHNICAL SPECIFICATIONS

CONSTRUCTION

KD: Unless specified otherwise, all spiral stairs are shipped “Knocked-Down”. Enjoy the confidence of knowing your stair is completely assembled during fabrication. This minimizes field assembly time and assures a quality product.

Set-Up: A stair that's shipped “Set-Up” has all welded connections. It can't be knocked down.

Connections – Most welded connections are a type 2 NOMMA finish. An optional type 1 finish is also available. Please inquire.

Material

A variety of materials can be used for the basic stair construction (center column and tread frames).

- Steel (*assumed unless specified otherwise*)
- Galvanized Steel (*actually zinc plated steel*)
- Aluminum
- Stainless Steel (*brushed finish*)

Bright Metals

Brass, copper, and stainless components are supplied without any coating. A protective coating is optionally available for brass mid-balusters. A coating on handrails is not recommended.

Brass and copper are supplied with a #7 polished finish. Optionally they can be “aged”.

Stainless steel is supplied with a #4 brushed finish.

Exterior Stairs – Aluminum or Galvanized Steel are recommended for exterior applications to prevent corrosion. A Set-Up steel stair is also an option, however packing and freight costs can be substantial. A KD steel stair is intended for interior use only.

Building Codes – We can build spiral stairways to meet any building code requirement if you inform us of the requirement. Due to local variations and interpretations of building codes, it is recommended that you review code-related information with your local official.

Tread & Platform Surfaces (*all thicknesses listed below are actual*)

We can build to any specifications, however, unless specified otherwise, the following specifications will be applied to your order.

- **Frame Only:** The stair will be built for tread and platform covers of 3/4" particle board with carpet. A pattern is supplied. You should specify the thickness of your particular tread cover to ensure proper rise and attachment height. For Platform Frames where you are installing your own wood flooring, you can request a plywood cover on the frame to make attaching your flooring to the platform easier. You must specify your flooring thickness.
- **Carpet Grade:** 3/4" high-density particle board on the treads and 3/4" CDXU plywood on the platform.
- **Red Oak Edge:** 1-1/2" Red Oak & 3/4" particle board.
- **Hardwood:** A 1" tread is available for all sizes.
- **Decking-ready:** Tread built and holes drilled to accommodate 1" x 5-1/4" decking.
- **Pan:** Built for your application. Our standard pan is 12 gauge steel and is 1-1/4" deep.
- **Smooth or Checkerplate:** 12 gauge steel is standard.
- **Radial Grate:** The maximum space is less than 1".
- **Glass Block:** 1" thick block set into a special pan.
- **Laminated Glass:** 1" thick laminated glass set into a special frame.
- **Laser Cut:** Custom designs using 1/4" steel bar or aluminum material.

Wood – All hardwood is sanded to 80 grit. Finish is by others. Hardwood railcaps are supplied long to be job fit.

Risers – Custom Iron open riser staircases (open riser is standard for most models) do not meet the 4" sphere code requirement. To comply with the 4" sphere code requirement on the risers, we offer four riser options.

Closure – Available to conceal the bottom of the tread frame. Depending on the tread surface chosen, flathead screws may be visible. They can be puttied, sanded smooth and painted over during installation.



SPIRAL STAIRWAY ORDER GUIDE

Balcony Railings

These custom balcony railings CANNOT be cut to length on site. Balcony railings are built to job specifications.

Customize Your Spiral

Many options are available to customize your spiral. Select from a variety of Tread and Platform covers, Finials, Closures, Risers and Finish Colors.

1 DIAMETER

Common sizes of spiral stairways range from 42" to 72" diameter. A 60" diameter spiral stair meets requirements of many building codes.

2 HEIGHT

Measure the vertical distance from finished floor to finished floor. The stair is not adjustable.

3 DIRECTION OF ROTATION

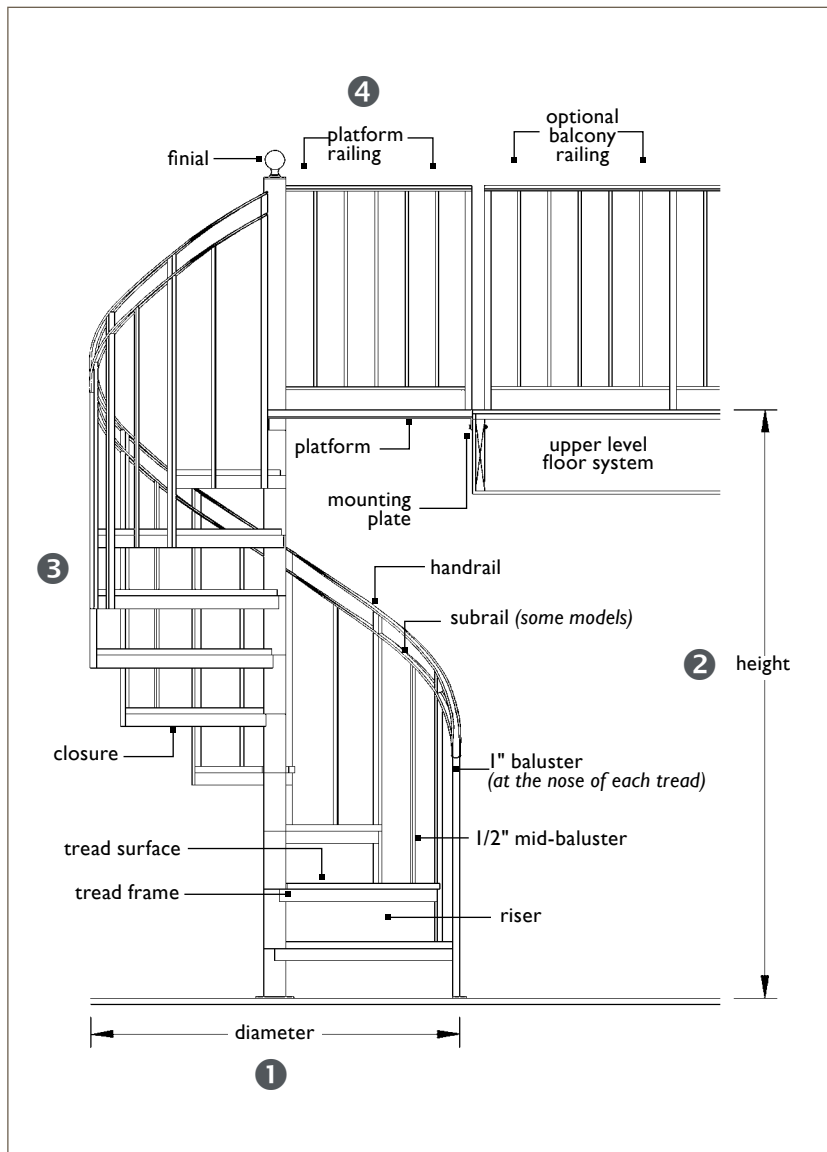
Down to the **left**
(counter-clockwise)
Down to the **right**
(clockwise)

4 PLATFORM STYLE

Style B: Designed for use in a stairwell. The stairwell is assumed square unless specified round or otherwise.

Style C: Designed for attaching to a balcony and has railings on two sides.

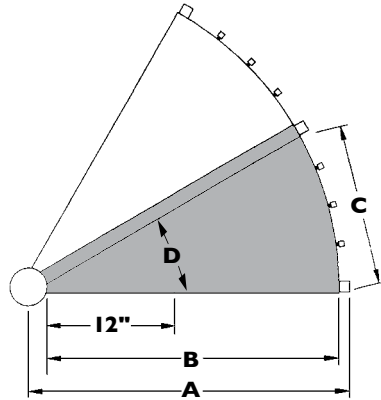
Style D: Designed for attaching to a balcony and has an "L" shaped railing on two sides.



SPIRAL STAIRWAY ORDER GUIDE

1 DIAMETER

Common sizes of spiral stairways range from 42" to 72" diameter. A 60" diameter spiral stair meets requirements of many building codes. Custom diameters are available upon request. The finished opening should be 4" larger than the stair diameter to assure proper handrail clearance.



Tread Dimensions

Diameter	42"	48"	54"	60"	66"	72"
A (radius)	21"	24"	27"	30"	33"	36"
B	18"	21"	24"	27"	30"	33"
C @ 30°	10-1/4"	11-3/4"	13-1/4"	15"	16-1/2"	18"
D @ 30°	7-1/2"	7-1/2"	7-1/2"	7-1/2"	7-1/2"	7-1/2"
C @ 27°	9-1/4"	10-3/4"	12"	13-1/2"	14-3/4"	16-1/4"
D @ 27°	6-5/8"	6-5/8"	6-5/8"	6-5/8"	6-5/8"	6-5/8"

(Dimensions C & D are from the nosing of one tread to the nosing of the next tread.)

Mid Baluster Quantity

Stair Diameter	42"	48"	54"	60"	66"	72"
Quantity	2	2	3	3	3	4

3 DIRECTION OF ROTATION

Down to the **left** (counter-clockwise)
Down to the **right** (clockwise)

Degree of Rotation

30° Many building codes require 30° treads. Spiral stairs with platform B, C or D are supplied with 30° treads, unless specified otherwise.

27° Stairs with No Platform are supplied with 27° treads to increase headroom under your 90° corner, unless specified otherwise. (WARNING: 27° treads may not meet your building code requirements.)

Custom tread rotation is also available.

4 PLATFORM STYLE

No Platform (N/P): 90° corner by others. Shown with 27° treads (see Degree of Rotation at right). This option is *not* recommended. In most cases, the 78" minimum headroom cannot be met without a platform by us. Please discuss with Design staff.

Style B: Designed for use in a stairwell. The stairwell is assumed square unless specified round or otherwise. "B" platforms connect at two sides to the opening. If the finished opening is not 4" larger than the stairway, please provide dimensions.

Style C: Designed for attaching to a balcony and has railings on two sides.

Style D: Designed for attaching to a balcony and has an "L" shaped railing on two sides.

Custom platforms are often required when access is limited. Please discuss with Design staff.

2 HEIGHT

– Measure the vertical distance from finished floor to finished floor. The "finished floor" can include concrete, underlayment, sub-floor, carpeting, wood, tile, etc. The finished floor thickness must be accounted for to ensure the correct height. The stair is not adjustable.

Exterior Height Measurement – Check for sloping ground between the deck edge and the location of the spiral column base footing. The centerline for the column base is the radius of the stair + 2". Use a level from the deck and measure out to the centerline location, and then measure height.

Tread quantity is determined by finished floor to floor height divided by 9.5.

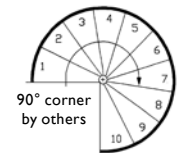
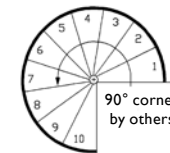
88 to 95".....	9 treads
> to 104-1/2".....	10 treads
> to 114".....	11 treads
> to 123-1/2".....	12 treads
> to 133".....	13 treads
> to 142-1/2".....	14 treads
> to 144".....	15 treads

Stairs are available to any height. Most building codes require a mid-rest landing platform for heights greater than 144". Multiple story spirals are available. Please inquire.

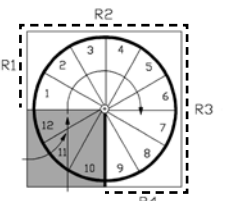
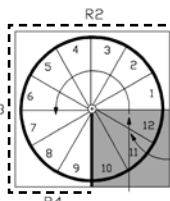
Down to the **left**
(counter-clockwise)

Down to the **right**
(clockwise)

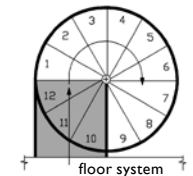
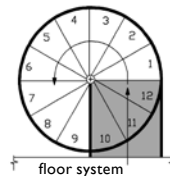
N/P
27° treads



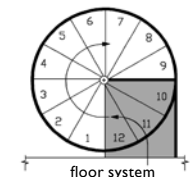
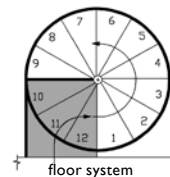
B
30° treads



C
30° treads



D
30° treads



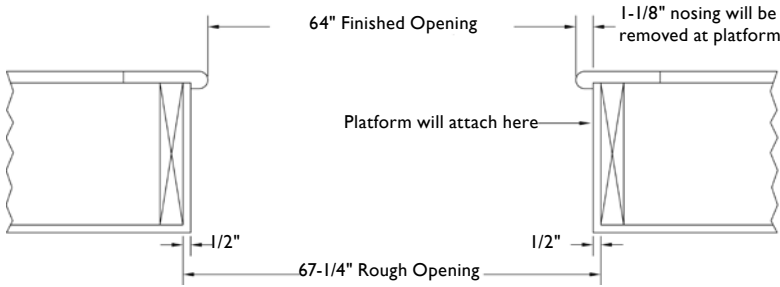
— Railing included with platform
--- Optional balcony railing

SPIRAL STAIRWAY ORDER GUIDE

Finished Opening

The Finished Opening for Custom Iron Spiral Stairs is defined as the clear space between any portion of the floor system. Measure in all directions. Square openings are rarely square.

When a landing tread, or landing tread with fascia, are used to trim the opening, this must be noted. A cross-section sketch* is useful to clearly define the situation. The sketch should indicate to which vertical surface the platform will be mounted. See example.



* If there is only a rough opening when measurements are taken, you can ask the builder to provide this sketch, or you can sketch it and ask the builder to approve it.

Custom Balcony Railings

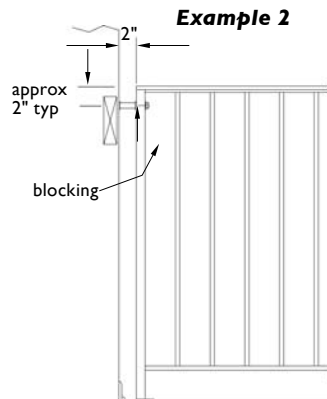
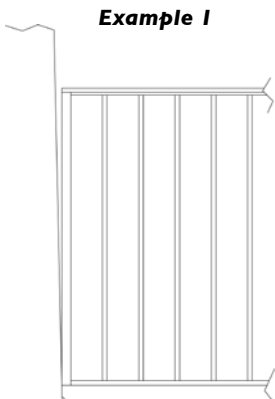
- **These custom balcony railings can NOT be cut to length on site.**

Balcony railings are very sturdy because they are built to job specifications. All posts are welded to the railing. Note: The baseplates on balcony railings are not designed to secure the railings without additional support provided elsewhere (such as wall studs or stairway posts).

- **Safety** – Custom balcony railing is designed 36-1/4" tall with spaces less than 4", unless specified otherwise. This complies with most residential building code requirements. Please specify if another height is required.

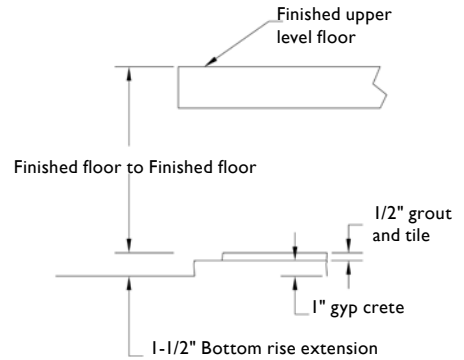
- **Your custom balcony railings will fit well and install easily.** Balcony Railings are designed to terminate 2" away from walls. This is because many walls are not plumb and the railings cannot be cut to length. A plumb railing attaching at the top and bottom to a wall that isn't plumb will leave a gap. **See Example 1.**

Balcony Railings are supported by walls using a 2" spacer and flat washer. This provides a more rigid connection. The spacer can be trimmed on-site as needed. Wherever railings approach a wall provide a secure anchor (possibly blocking). This secure anchor should typically be approximately 2" below the nominal height of the railing. **See Example 2.**



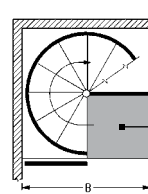
Bottom Rise Extension

A Bottom Rise Extension is used when the center column will be resting on a surface below the finished floor, such as on a footing. The bottom baluster can also be extended below the finished floor, or it can rest on top of it. You must specify. The value entered for a bottom rise extension is the difference in height between the underlying surface and the finished floor surface.



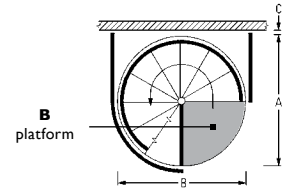
- **Let us determine the railing lengths.**

Supply a sketch of the finished opening with your order, including drywall or other finish material. The examples in this section illustrate the type of information required for us to build your railings accurately.



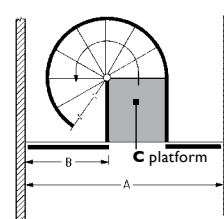
Square Opening

A & B are finished opening dimensions. (down to the right)



Round Opening

A & B are finished opening dimensions. C is the distance from the finished opening to the finished wall. (down to the left)



Balcony or Loft Railing

A & B are finished balcony dimensions. (down to the left)

