

StairTrends represents the finest in quality craftsmanship, integrity, strength and natural hardwood beauty.

It is the responsibility of the purchaser to follow code regulations and install our stair products in accordance with all local or national building codes. Note: all products in this catalog are designed for interior application only.

- **Number of Risers:** Ideal riser height is $7\frac{1}{2}$ " and should not exceed 8" in height.

The overall rise (finished floor to finished floor height) divided by the riser height will give you the number of risers (round this figure). The overall rise divided by the number of risers gives you the net riser height.

Example:

Overall rise of $106\frac{3}{4} \div 7\frac{1}{2} = 14.23$ number of risers. Rounding down gives you 14 risers. Net height of each riser is $106\frac{3}{4} \div 14 = 7-5/8$ ".

- **Tread Size:** The number of treads will always be one less than the number of risers.

(In our example 13 treads) The overall run (horizontal distance from first riser to landing) divided by the number of treads is the tread run. The tread run plus 1" for the tread nosing is your overall tread size.

Example: Overall run of $133\frac{1}{4}$ ".

Tread run = $133\frac{1}{4} \div 13$ treads = $10\frac{1}{4}$ " tread run. Actual net tread size needed would be $10\frac{1}{4} + 1" = 11\frac{1}{4}$ ". If you have the room you may adjust the overall run to make the tread size come out even.

For stairs open on one side order mitered return treads and specify returned 1 end. When facing the stair at the bottom of the stair a right hand (RH) open stair will be open on your right hand side.

For stairs open two sides specify returned two ends. Specify the distance between the mitered returns.

- **Stringer Board or Skirtboard:** Stringer board should be ordered at 13" per tread plus any additional for extension past the first and last risers.

In our example 13 treads x 13" = 169".

- **Landing Tread:** Use the B8090 is suitable for newels 3" thick. For thicker newels specify BB8090-5 (newels wider than 4" may require a custom landing tread). Order enough lineal footage to cover your balcony and the width of each tread at every landing

- **Cove Moulding:** Order lineal footage to place under landing tread and under each tread and mitered return.

- **Handrail:** Check local building codes for a "graspability" rule (width of handrail at the point where you would grab the handrail). Choose your handrail accordingly (most codes allow up to 2-5/8" width).

Handrail lengths can be figured at a rate of 13" per tread plus your straight balcony.

We offer lengths in 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, and 16 feet.

Note: Some local codes require a continuous rail from the bottom of the stair to the 2nd floor. In applications where the first few treads are open ended and the remaining treads are closed (by a wall) you may need to use fittings B2#12 or B2#13.

- **Wall Rail:** Check local building codes for wall rail requirements. Wall rail lengths can be figured at a rate of 13" per tread. Wall rail brackets should be placed at start and finish of each run with additional brackets every 2'-3". All of our standard rails may be used for wall rails.

- **Balusters per Tread:** "Four Inch Sphere Rule". There must be no place in the balustrade where a 4" sphere can pass through. You may be required to use 3 balusters per tread to satisfy this rule.

- **Balusters:** Check local building codes for balcony height (top of rail to top of floor). Most codes call for a minimum of 36". Some local codes require 42".

For balcony runs place 4"-6" on center (remember the 4" sphere rule). Subtract one baluster for each newel post (not including your 1st newel) and subtract one baluster from the total to allow for the end of the balcony.

Rake handrail height is the distance from the top of the handrail to the top of the leading edge of the tread. Current codes call for a distance between 34"-38". Check your local codes.

If using a 30" rake code then your baluster heights per tread will be 31" and 34" [31", 34" and 36" if using three balusters]. Use our **On • the • Level** balusters for this application.

Baluster heights for a 34" rake code can vary depending on rise/run being used.

On • the • Level and **On • the • Rise** balusters may be used for this application.

For a $7\frac{1}{2}$ " rise and a $9\frac{1}{2}$ " run ($10\frac{1}{2}$ " tread) the baluster heights would be 34" and 38".

Volute balusters: 30"- 34" rake code

- For $1\frac{1}{4}$ " balusters use 6 balusters 36" long.

- For $1\frac{3}{4}$ " balusters use 4 balusters 36" long.

Volute balusters: 34"- 38" rake code

- For $1\frac{1}{4}$ " balusters use 6 balusters 42" long.

- For $1\frac{3}{4}$ " balusters use 4 balusters 42" long.

Turnouts: 30"- 34" rake code requires two $1\frac{1}{4}$ " (one 36" and one 39") balusters or one 42" if using $1\frac{1}{4}$ ".

34"- 38" rake code requires two 42" $1\frac{1}{4}$ " balusters or one 42" if using $1\frac{3}{4}$ ".

- **Newels:** Newels should be placed at each point of stairway transition (this includes the starting newel, landings, balconies and each time the stairway changes direction).

Use a newel when a balcony run exceeds 9 feet.

Post-to-Post Newels

Starting: For the 30"- 34" rake code newels should be approximately 43".

Newels for the 34"- 38" rake can be 48" if surface installed or 56" under other applications.

Intermediate Landing: Use the newels with a $14\frac{1}{2}$ " face when NOT using a landing fitting. If using a landing fitting you may choose a newel with a 5" face square.

Landing (2nd Floor): Use the newels with a 11" face when NOT using a landing fitting. Note if your balcony is 42" you will need to use a landing fitting (you can use a 48" tall newel if surface mounting)

Winder Newels: For intermediate landings with 2-winder treads and a landing fitting chose a 72" long newel.

For intermediate landings with 3-winder treads and a landing fitting chose a 78"- 84" long newel.

Over-the-Post Newels

Volute and Turnouts: For the 30"- 34" rake code use a 43" pin top newel designated for volutes or turnouts. For the 34"- 38" rake code use a 48" tall volute/turnout newel. You may use a standard 43" volute newel if using a climbing volute.

Starting Newel Cap: For the 30"- 34" rake code use 43"- 48". For the 34"- 38" rake use a 48" if no starting step is used.

Intermediate Landing: Use a 56" newel at the corner of an L-shaped stair. If using a landing fitting you may choose a newel with a 5" face square

Landing (2nd Floor): Use 43"- 48" newels. If the newel is to extend below the 2nd floor surface use a 56" or longer newel.

Winder Newels: For intermediate landings with 2-winder treads and a landing fitting chose a 72" long newel.

For intermediate landings with 3-winder treads and a landing fitting chose a 78"- 84" long newel.