# Instant Stair Parameters

Most of the menu items are accompanied by an image to identify the function. Units for this tutorial are shown in inches, but any units that Sketchup supports including Metric or Architectural may be used.

Type
The basic type of stair or ramp. Click the ⊞ icon to display the image gallery. A family of related styles can sometimes be made from a single style simply by changing type and saving as a new style.
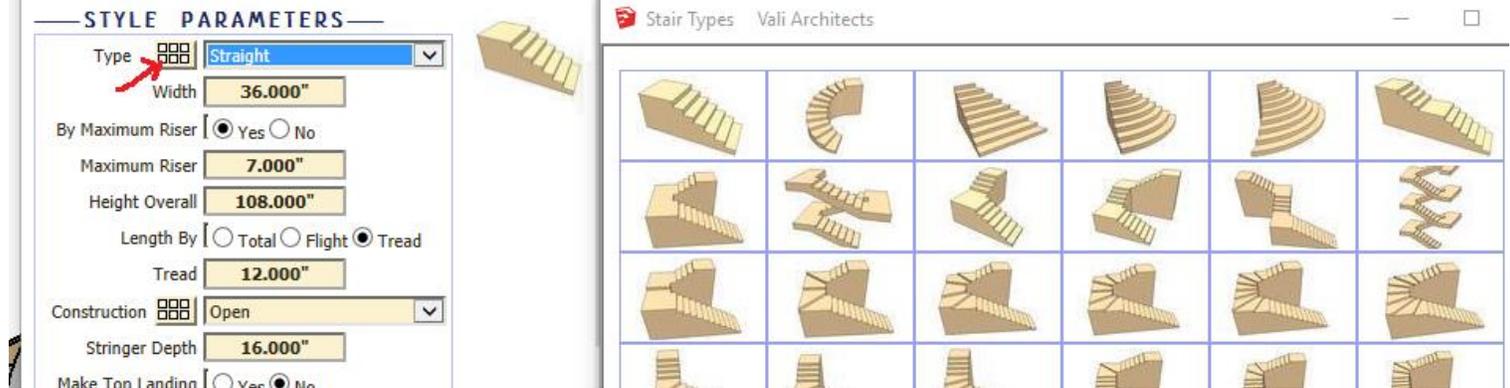
Hand
For stairs or ramps that are not straight.

Flair and Fan Arc stairs
Flair distance is chosen separately for right and left sides for Flair stairs. For Fan Arc stairs the Flair parameter adds a curve in addition to the Flair Angle (see below) and the same for both sides.

Fan and Fan Arc stairs
The angle for the stair shape in degrees

Width
The width of the stair or ramp not including curbs or stringer width if any. Units for this tutorial are shown in inches, but any units that Sketchup supports including Metric or Architectural may be used.

Options for setting Stair Height
There are 3 ways to set the height of the stair
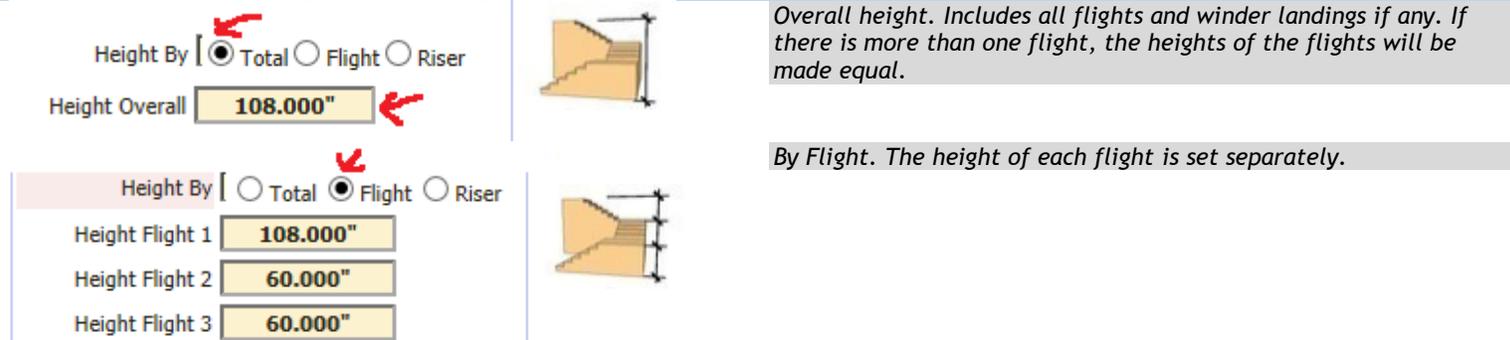
Overall height. Includes all flights and winder landings if any. If there is more than one flight, the heights of the flights will be made equal.

By Flight. The height of each flight is set separately.

Height By [○ Total ○ Flight ● Riser
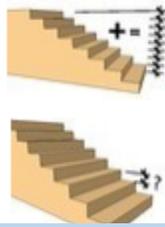
By Riser. The height of the stair is set by the number of risers x the riser height.

Riser [7.000"]

Options for setting Ramp Height *There are 3 ways to set the height of the ramp*

Height By [● Total ○ Flight ○ %
Height Overall [108.000"]

Overall height. Includes all flights and winder landings if any. If there is more than one flight, the heights of the flights will be made equal.

Height By [○ Total ● Flight ○ %
Height Flight 1 [108.000"]
Height Flight 2 [60.000"]
Height Flight 3 [60.000"]

By Flight. The height of each flight may be set separately.

Height By [○ Total ○ Flight ● %
% Grade [8.33]

Either height or length of ramp may be set by %, but not both for obvious reasons.

Number of Risers *The number of risers can be entered manually for each flight or the script can calculate the number of risers making them less than a maximum riser height. I generally prefer to use maximum riser height.*

By Maximum Riser [○ Yes ● No
Number of Risers [16]
Number of Risers 2 [9]
Number of Risers 3 [9]
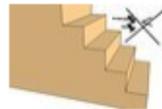
By Maximum Riser [● Yes ○ No
Maximum Riser [7.000"]
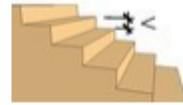
Number of Levels *For multi-level stacked stairs*

Number of Levels [2] ×

Stair Length *There are 3 ways to set the length of the stair.*

Length By [● Total ○ Flight ○ Tread
Length Overall [180.000"]

Overall length. Includes all flights. If there is more than one flight, the lengths of the flights will be made equal.

Length By [○ Total ● Flight ○ Tread
Flight 1 Length [180.000"]
Flight 2 Length [96.000"]
Flight 3 Length [96.000"]

By Length. The length of each flight is set separately.

Length By [○ Total ○ Flight ● Tread
Tread [12.000"]

Length By ● Line Length ○ Tread

Line Length is a parameter available to the Stair from Alignment method. If "Tread" is chosen for this parameter, the stair length will be based on the Tread length parameter instead of the input line length.

Ramp Length *There are 3 ways to set the length of the ramp.*

Length By ● Total ○ Flight ○ %
Length Overall 180.000"

Overall length. Includes all flights. If there is more than one flight, the lengths of the flights will be made equal.

**Length By** ○ Total ● Flight ○ %
Flight 1 Length 180.000"
Flight 2 Length 96.000"
Flight 3 Length 96.000"

By Length. The length of each flight is set separately.

% Grade 8.33

Either height or length of ramp may be set by %, but not both for obvious reasons.

Length By ○ Total ○ Flight ● %

Construction *The configuration for the stair or ramp run. Some stair and ramp types may not allow all options for construction. Click the ▦ icon to display the image gallery.*

Construction ▦ | Open ▾ |

Stair Types   Vali Architects   —
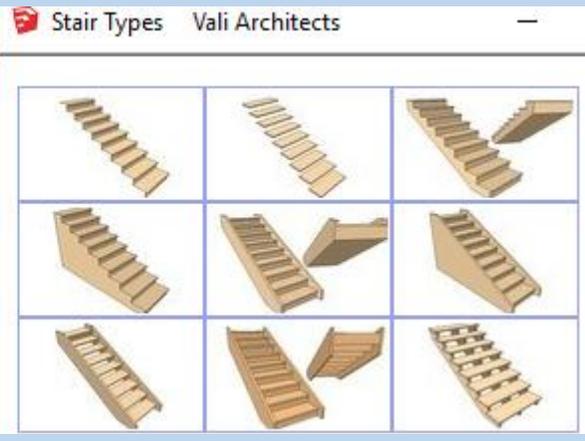
Radius *For Spiral stairs, to the mid point of the tread*

Radius 96.000" ✕
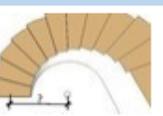
Arc Precision *Number of arc segments used for all round features (except round tread nosing which is fixed). Eg. Spiral Stairs, Fan Stairs, Curtail, Center Post.*

Arc Precision 32 ✕

Subtended Angle *For Spiral stairs. The angle that the stair turns through.*

Subtend Angle(Deg) 90 ✕

Center Post *For Spiral stairs, a cylindrical post may be placed in the center (Available tor Treads Only, Open Riser, and Closed Riser construction types only)*

Center Post ● Yes ○ No

Center Post [◯ Yes ⦿ No

Stringer and Curb *Some of these parameters will be unavailable for some types and construction.*

Stringer Depth   **16.000"**   ✕
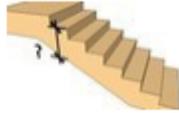
Curb Height   **4.000"**   ✕
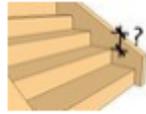
Stringer Width   **2.000"**   ✕

Stringer Extension   **4.000"**   ✕
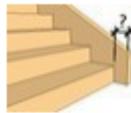
Landings

Make Top Landing [◯ Yes ⦿ No
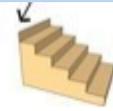
The top of a stair or ramp will terminate at the top of the ramp or highest stair riser

Make Top Landing [⦿ Yes ◯ No
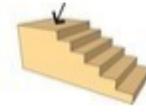
Creates a top landing at the top of a stair or ramp.

For Switchback shaped stairs and ramps

Landing Width   **96**   ✕

For Straight landing shaped stairs and ramps and top landings

Landing Depth   **60.000"**   ✕

Extension top   **12**   ✕

Extend landing at top of stair or ramp run.

*Extend landing at boitom of stair or ramp run.*

Extension Bot   **12**   ✕

Nosing *Check the NOSING box to add nosing to the treads. Nosing may also project past the side of the stair for some stair types and construction.*

☑ NOSING

Type [⦿ Angle ◯ Bull ◯ Rect

☑ NOSING

Type [◯ Angle ◯ Bull ⦿ Rect

☑ NOSING

Type [◯ Angle ⦿ Bull ◯ Rect

☑ **NOSING**

Type | ○ Angle ○ Bull ● Rect
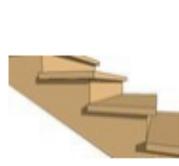
Side Nosing | ● Yes ○ No

Extend the nosing around the sides of the tread. Not available for some types and construction.

☑ **NOSING**

Type | ○ Angle ○ Bull ● Rect

Side Nosing | ○ Yes ● No
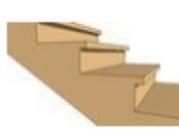
Nosing dimensions

Width | 1.125"

Thick | 1.125"
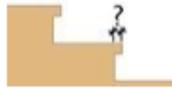
Curtail or Bullnose Step *Not available for some types and construction.*

☑ **CURTAIL**

Type | ● Left ○ Right ○ Both

☑ **CURTAIL**

Type | ○ Left ● Right ○ Both

☑ **CURTAIL**

Type | ○ Left ○ Right ● Both

Width | 20.000"

Exension | 3.000"

Railing Lines *Instant Stair does not make railings. But it can add curves and lines to assist with making railings by other means.*
Important: if you are using Instant Fence and railing and you are using the stair from alignment method or your stair has been rotated, you must copy/paste the stair curves out of the stair component, then make railings and cut/ paste the railings back into the stair component. If you make the railings in the rotated component they can get clipped.

☑ **RAILING LINES**

Offset Right +/- | -1.000"

Offset the line in or out from the right side of the stair.

Offset Left +/- | -1.000"
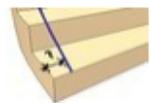
Offset the line in or out from the left side of the stair.

Extend Right +/- | 0.000"
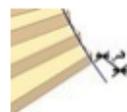
Lengthen or shorten the line from the first riser on the right side of the stair.

Extend Left +/- [**0.000"**]

Lengthen or shorten the line from the first riser on the left side of the stair.

Raise/Lower +/- [**0.000"**]
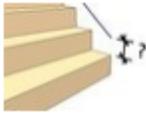
Raise/lower the lines above/below the stair top.