**Autodesk Revit 2013**

Stair Tool Enhancements

The release of Autodesk Revit 2013 products has seen a number of major enhancements to the Stair and Railing Tools. Improvements to stairs have come as a result of user feedback; that the tools are restrictive and often of limited use for accurate modelling of these items. The enhancements described below addresses a range of previous limitations, and make it easier to create, edit, and document stairs.

The entire concept of stairs within Revit has undergone an overhaul, with the option of creation via the traditional sketch method complemented with a new technique: Stair by Component. Using this approach, runs, landings, and supports (stringers) are treated as separate elements. Each of these elements is now defined by a separate system family and as such multiple types can be created.

When creating a Stair by Component, the single stair system family has been replaced with three system families: Assembled Stair (for all non-monolithic types), Precast Stair, and Cast-In-Place Stair. Each of these families have an expanded range of properties (both type and instance) making it much easier to create accurate models.

For component based stairs, new creation methods including Full-Step Spiral, L-Shape Winder and U-Shape Winder complement the Straight and Centre-Ends Spiral options that users will be familiar with from earlier versions. The custom Sketch option (manual placement of risers and boundary) is also available when using the Stair by Component tool.
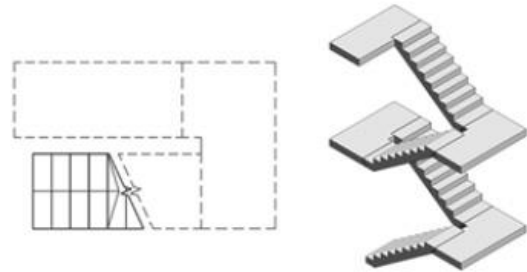
We've done some thorough testing of these tools, and its pleasing to find that many of the familiar shortcomings of old are no longer an issue. Users will find it simple to create spiral stairs that rotate through more than 360 degrees for example, and Revit no longer has difficulty with switchback stairs.

Of course it's not all about modelling, a range of handy documentation features round out the improvements. A new Stair Tread/Riser Number tool allows for easy numbering in Plan, Section, and Elevation views.

A new Stair Cut Mark system family has been included, which can be customised and applied via a stair's type properties. A common use of this will be to show a double-cut mark on stairs in plan.

Stair arrows are now treated as a separate System Family (named Automatic Up/Down Direction) which allows for increased customisation of direction arrows and text.

Additional subcategories have also been included under the stair category, giving users the ability to define the visibility and appearance of each element within a stair (Cut Marks, Nosing Lines, Supports, Treads/Risers etc.), with separate options for controlling these items both above and below the cut plane when the stair is viewed in plan.

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