GRAITEC MODELING THE FUTURE

What's New

PowerPack for Advance Steel 2025.1



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1. Welcome to Graitec PowerPack for Advance Steel 2025.1

GRAITEC is pleased to present the latest version of Advance PowerPack for Advance Steel 2025, part of the Graitec Advance Suite.

1.1 Compliancy with Autodesk Advance Steel 2025.1.

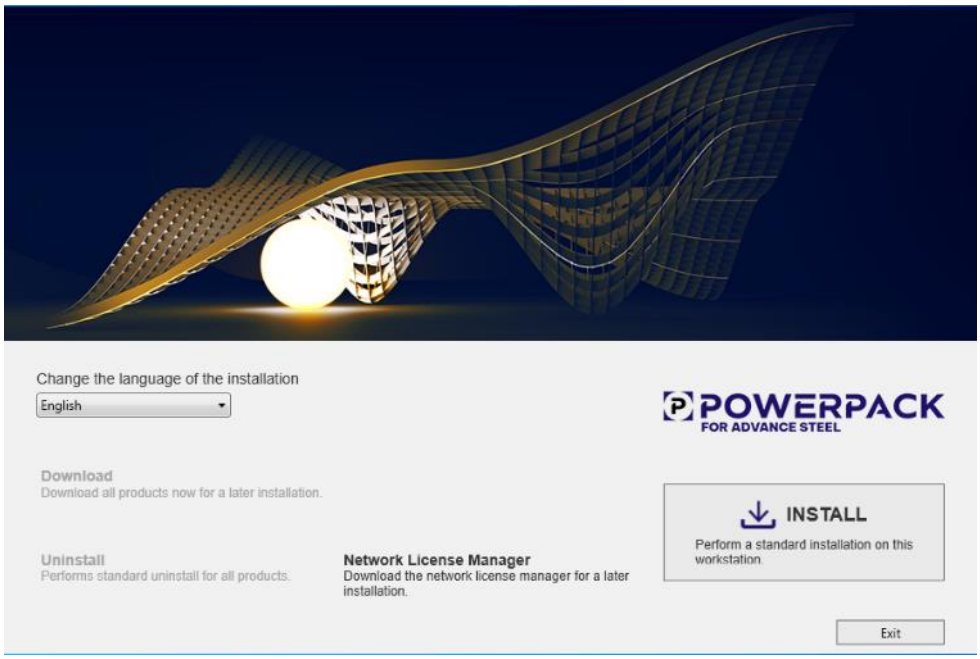
The **PowerPack for Advance Steel 2025.1** is compliant with **Autodesk Advance Steel 2025** and can be installed using the **Setup PowerPack for Advance Steel 2025.1.**

The installation of the 2025.1 version is compatible with the 2025 version of Advance Steel Installation.

To install the PowerPack version 2025.1, please follow these steps:

1. **Open Advance Setup 2025.1** of PowerPack for Advance Steel. The setup will automatically identify the installed software.

2. Press **Install** to begin the update process.



Advance Setup 2025.1 installer popup

2. Introducing New Features

With the 2025.1 version, we bring additional improvements to our existing tools within the PowerPack, to continue the upgrades of several key features added in the previous versions.

The focus remains on providing additional features and enhancements to aid productivity within the tool series.

The features listed below are detailed further in this document. For comprehensive command help, please refer to the online help portal (PowerPack for Advance Steel (graitec.com)) which will be updated with information on these new elements.

New Railing Features:

1. Lap joint

- Option for spacer plate combined with crossing member inclusion (Targeting cage ladder split option to provide a splice/lap connection)
- Grabrail miter corners
- Additional options for miter corners to the Grabrail elements

2. Wall Rail miter corners

- Additional options for miter corners to the Wall rail elements

New Stair Features:

1. The Cage Ladder

- Split option for Ladder stiles
- Split option for Cage Straps
- Welds control for the ladder Exit options (splayed & loop over)

2. Balance Stair

- Section profiles enabled for Stringers

For more insight into these new features, please continue to explore the document as we outline the fundamentals of new additions to the PowerPack for Advance Steel.

NOTE: *For further information on the command operation refer to the Powerpack for Advance Steel Online Help portal.*

3. New Railing Features

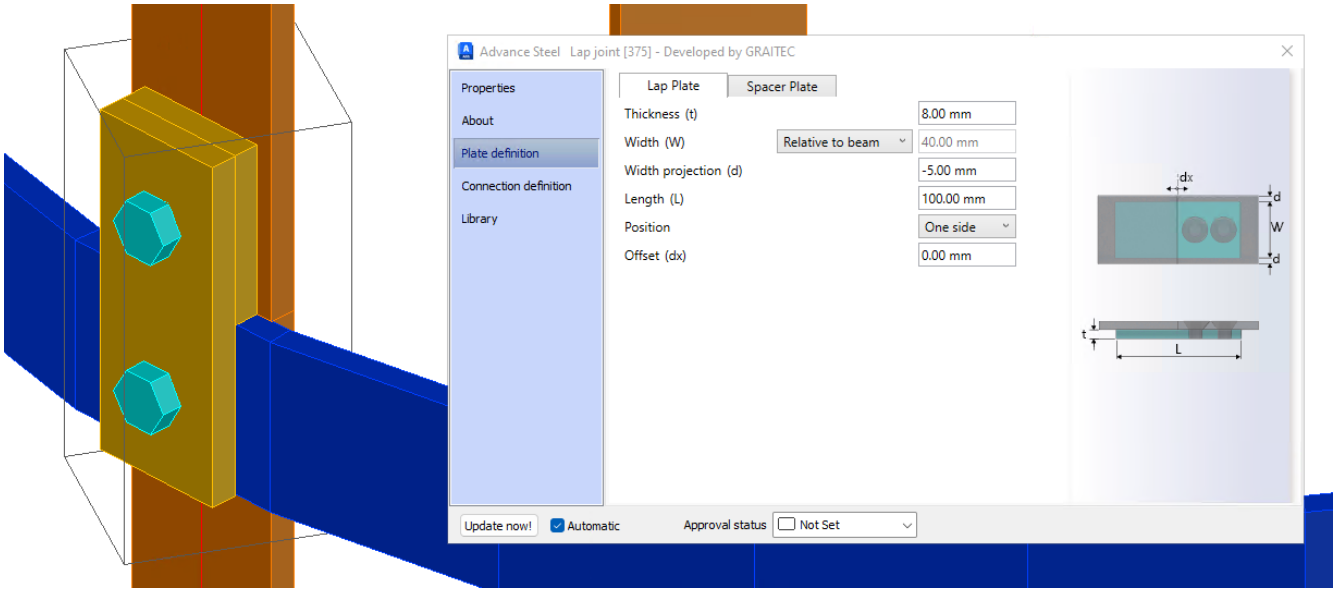
In this version, we are expanding the options for the **Lap Joint** feature introduced in the 2025 release version. These options include an additional input beam, combined with the optional space plate provision.

3.1 Lap Joint Improvements

We continue to progress with some additional features for this connection, to allow for an additional beam element to form part of the input selection and provide an additional option for a spacer plate. These options are targeted to provide an option to the user to apply the lap connections at beam element junctions that have a cross beam passing over the main supporting beams, in such arrangements seen within ladder cages.

The macro can continue to be used for handrailing as intended, by skipping the 3-element input, during the selection process, but also allowing for the user to select a crossing beam and then placing a suitable connection arrangement.

The joint provides the option for a spacer element, between the main and crossing elements to form a packing arrangement though a bolt would be typically placed, for a site installation.

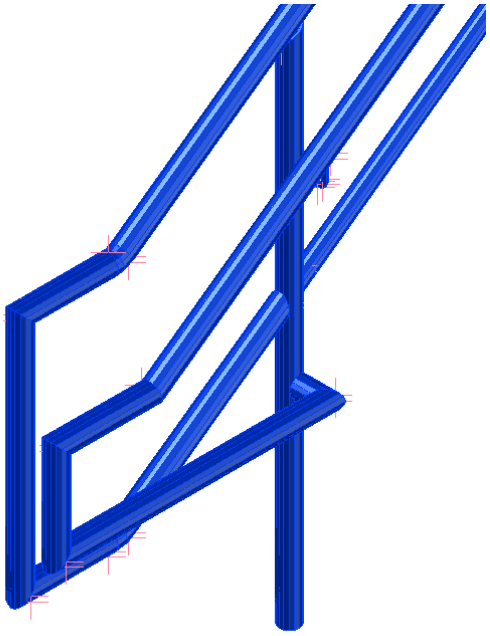


Lap joint - Cage ladder arrangement with spacer plate

3.2 Grabrail Loop Ending: Miter corner options

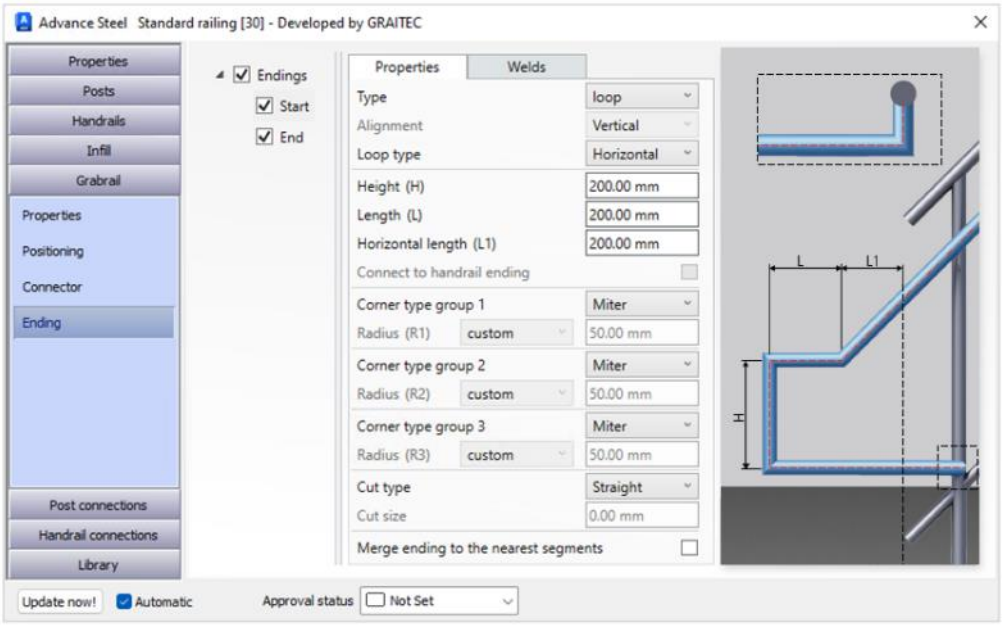
Under the grabrail ending subpage, the dialog has been reorganised to allow for the introduction of the Miter corner type. This aligns the dialog page with the main railing ending page where a similar change was made previously.

The user has the option to control the corner via the grouping options changing from Bent to Miter as required. This action will enable and disable elements within the page, offering control over the functionality of the ending arrangement.



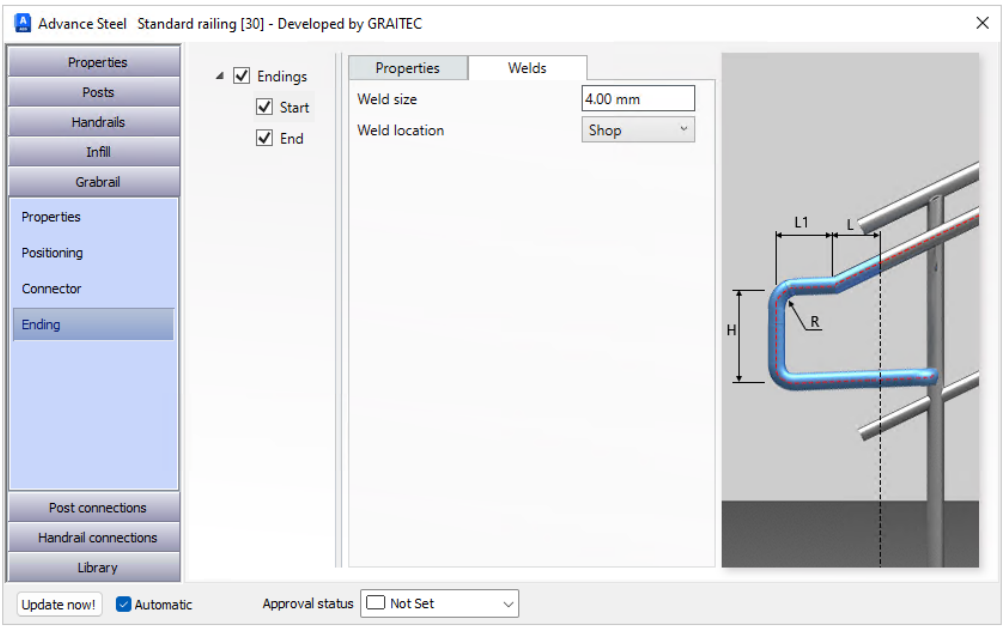
Grabrail – Loop ending with Miter setting

The basic function of the Grabrail Ending is identical to the previous versions. The revised dialog tab is shown below.



Grabrail-ending subpage-Properties tab with Miter options

The additional functions on the Properties page have resulted in the Weld features being moved to a new tab within the dialog. This aligns with the previous layout seen within the main handrail endings.

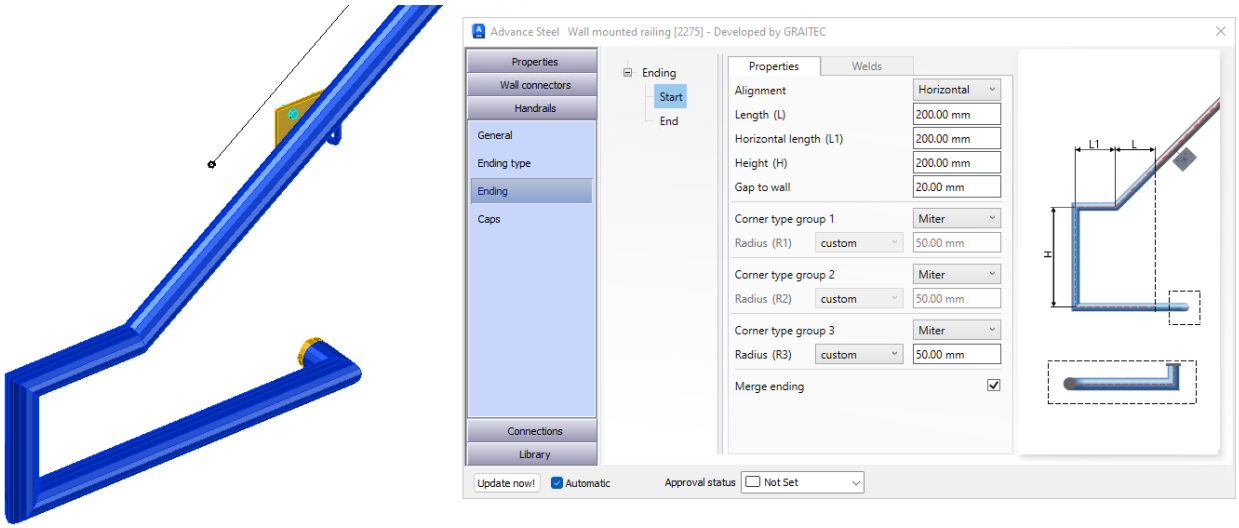


Graprail-Ending subpage -Welds tab

3.3 Wall Rail - Loop Ending type: Miter corner options

The wall rail macro has the Miter option added to the loop ending type. Similar to the Grabrail dialog reorganization, the Wall Rail follows the same approach, now presenting two tabs to the user: one for the main properties and another for welds.

The tabs offer the control for the corner types at the 3 group locations, allowing the original bent type and miter control, combined with the welds, found under the welding tab.



Wall rail-Ending subpage -Properties tab

NOTE: *Additional new options for loop end:* ***Gap distance for the return element*** *to the wall face, combined with the* ***Cap plate options not active under the loop end****.*

4. New Stairs Features

Following the introduction of the **Cage Ladder**, we continue to progress with some additional features to allow for the ladder and cage elements to be split into manageable segments for delivery and installation. This update was combined with some changes in the Lap joint previously shown to allow for an external connection element to the split locations. Also, we exposed the Weld features for the different exit arrangements, allowing users to adjust as required the type, size, and assembly location.

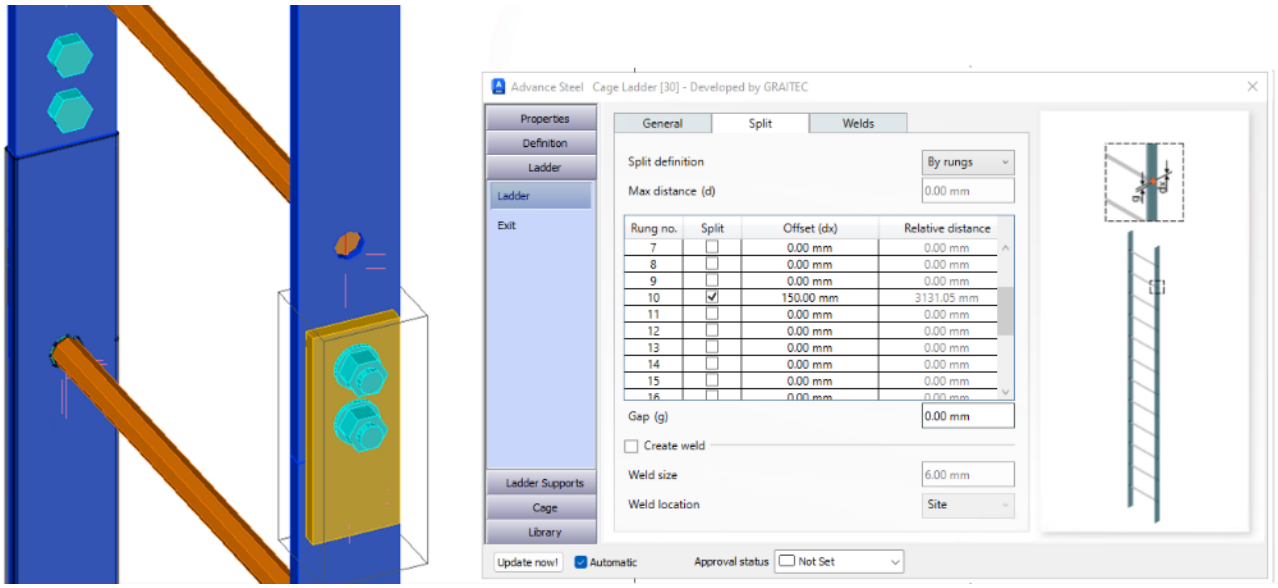
4.1 Ladder Stile Split

Within the current Ladder page of the macro, the user will see a new tab added under the ladder subpage for the **Split**. The purpose of this tab is to enable the option to separate the ladder stiles at a given height based on an overall distance value or relative to a rung location within the ladder arrangement.

The methodology of the split is that the user enables the introduction of the split feature and then chooses a preferred method for this instance of the ladder. The **By distance** method applies a user-defined measurement relative to the ladder base point. The **By rung** method uses the rung selected within the table and splits at that location. If an offset is entered, then the split is moved to that biased location.

The Split has the option to place a weld at this location so that if the user chooses for a site applied weld between the stile elements is possible.

There is a separate lap style joint, which is part of the railing connections that can also be applied outside the main macro to create a joint arrangement using splice/lap plates, bolts and welds.



Cage Ladder - Stile Split tab

4.2 Cage Strap Split

For the Cage element of the ladder, relative to the cage straps, the user will now have the option to add a split to separate the cage straps. This will interact with the bolted and welded junctions within the overall cage assembly.

The purpose of this split tab is to enable the option to separate the cage straps at a given height based on an overall distance value or relative to a hoop location within the cage arrangement.

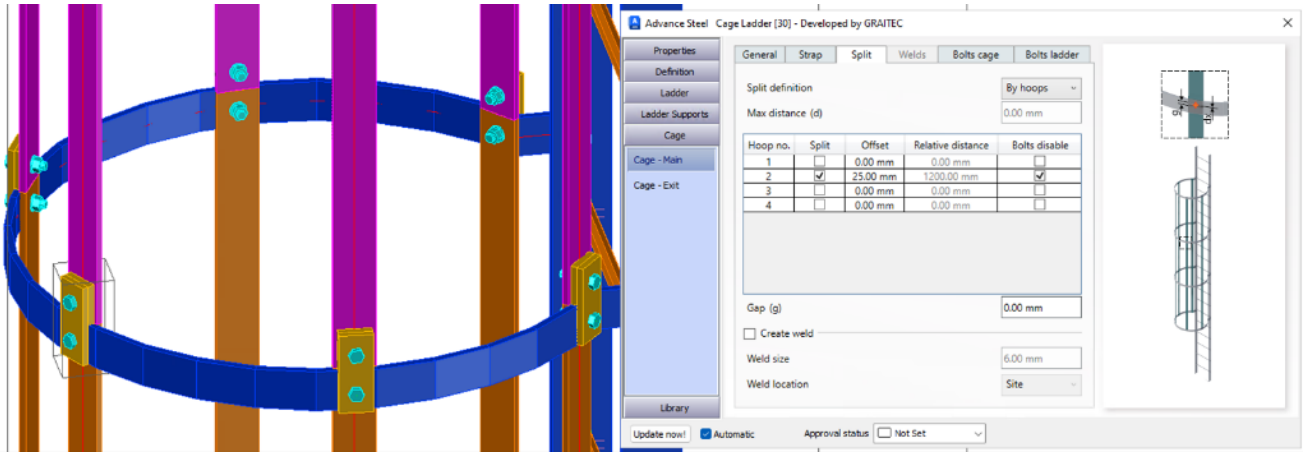
The methodology of the split is that the user enables the introduction of the split feature and then chooses a preferred method for this instance of the cage.

The **By distance** method applies a user-defined measurement relative to the cage base hoop.

The **By hoop** method uses the hoop selected within the table and splits at that location. If an offset is entered, then the split is moved to that biased location.

The Split has an option to place a weld at this location so that if the user chooses for a site applied weld between the strap elements is possible.

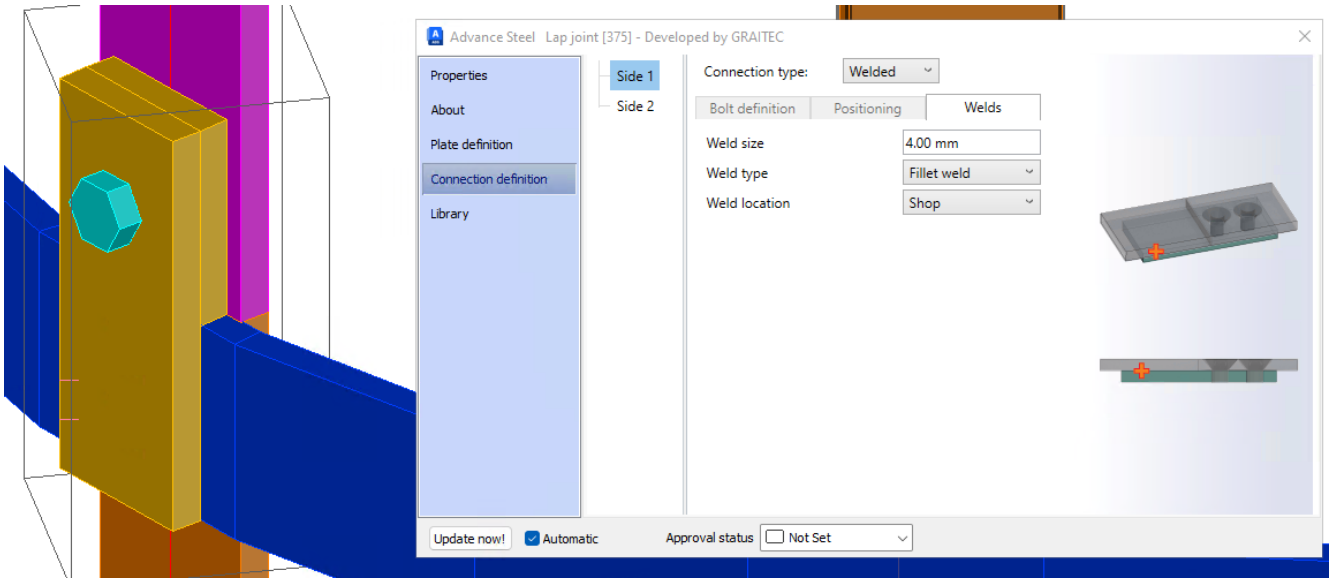
There is a separate lap style joint, which is part of the railing connections that can also be applied outside the main macro to create a joint arrangement using splice/lap plates, bolts and welds. This external joint has been improved to function within the Cage arrangements, where we see a combination of straps and hoops at a junction of the cage assembly.



Cage Ladder-Main Cage Strap Split Tab

An additional feature of the split, seen within the split table is the option to control the Bolt that is applied to the junction between the strap and the hoop. When the user selects the hoop split location, the bolt at that location is turned off, by the automatic action of the Bolt off/on checkbox within that line of the table. The user can return the bolt to being placed at this junction, via unchecked of the checkbox within that field cell.

The reasoning behind this is to avoid a clash of bolts/elements that will be caused by the introduction of a lap joint to this location, the joint will add a lap plate/s and or bolt/weld. If the bolt via the cage is left on it would produce a clash with these external joint elements.



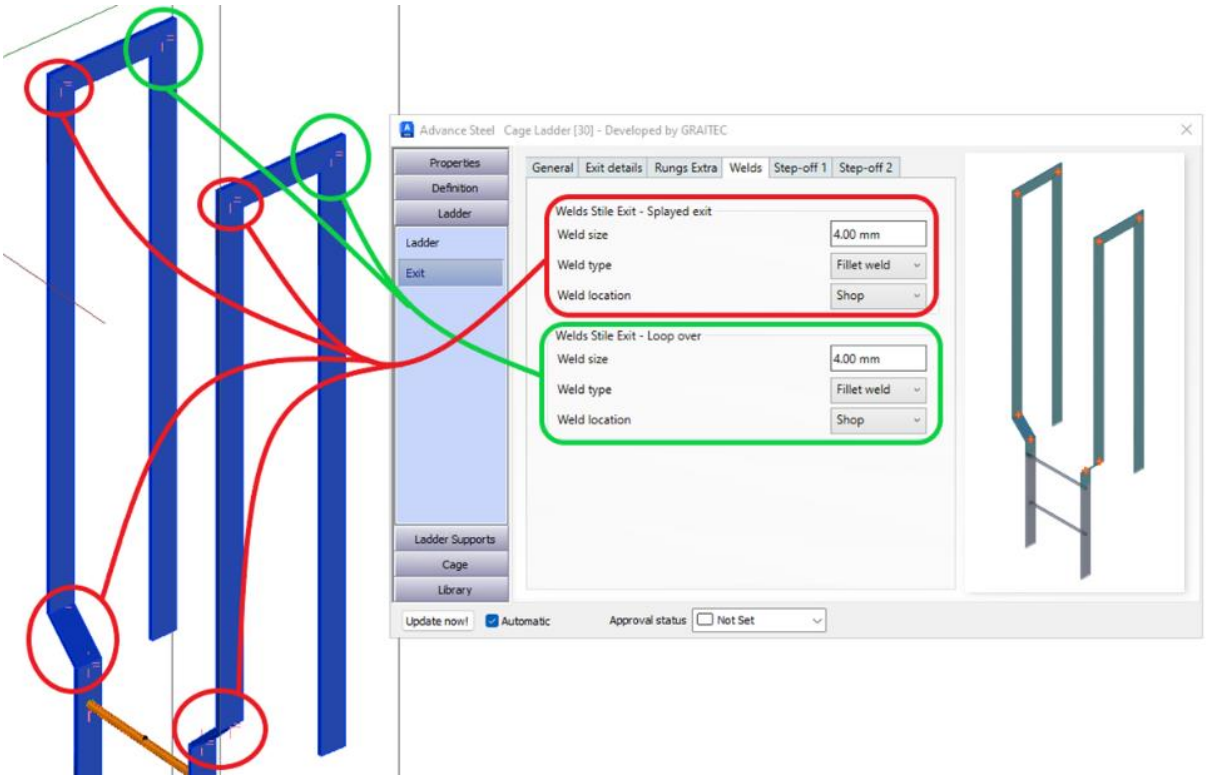
Cage Ladder-Split at hoop arrangement with lap joint

4.3 Ladder Exit Welds tab

Within the Cage ladder, there are exit types that form a series of elements to create their arrangements. These are welded to each other as part of the jointing process. For this version, we are introducing the option to control or edit these welds inside the macro dialog.

Under the Ladder Exit subpage, the welds tab offers options to control the following:

- Weld size
- Weld type
- Weld location



Cage Ladder-Exit Page-Welds tab

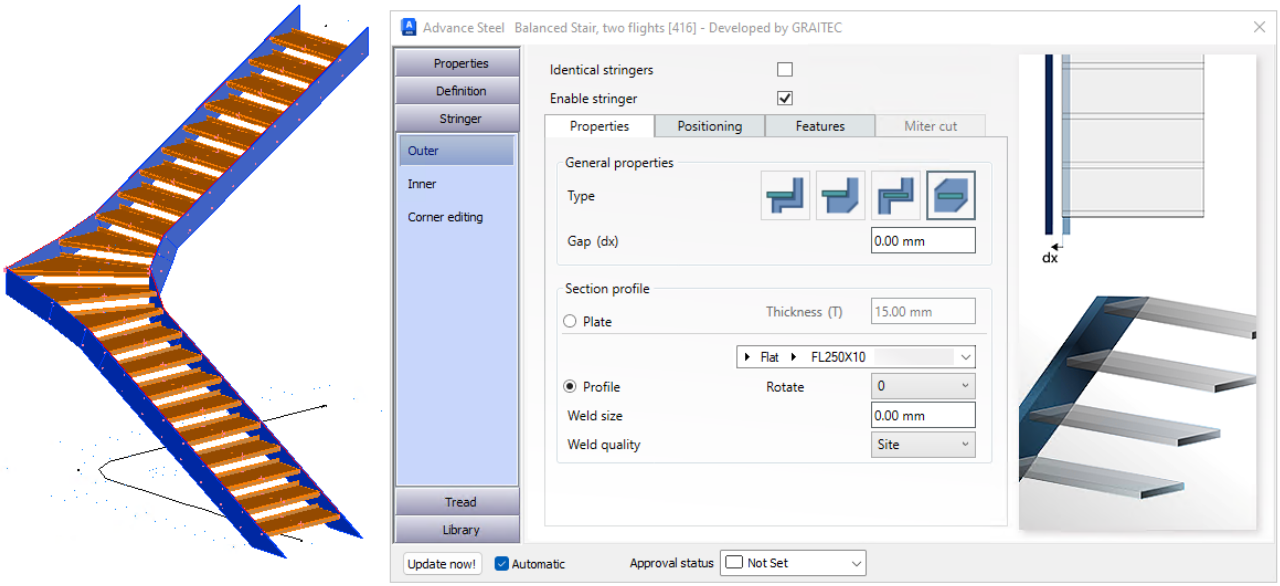
The weld locations are:

- At the splay element, the start, and the end of the element.
- At the loop-over element at the miter/butt locations at the ladder side and the return downward element.
- 8 no welds locations in total (as indicated above)

NOTE: *The number of welds editable is dependent upon the ladder exit type selected.*

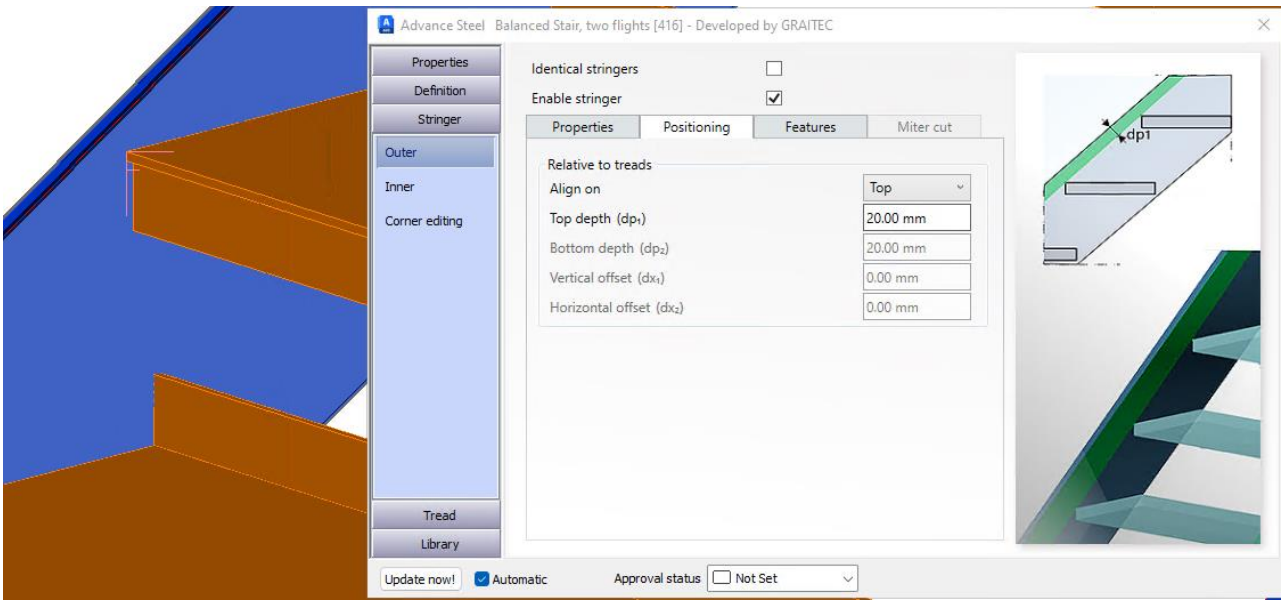
4.4 Balance Stair: Section Profiles for Stringers

The balance Stairs now have the option of a Section profile for the stringer elements of the stair. The radio button option activates the profile selection dialog, allowing access to that panel to control options for rotation and welds.



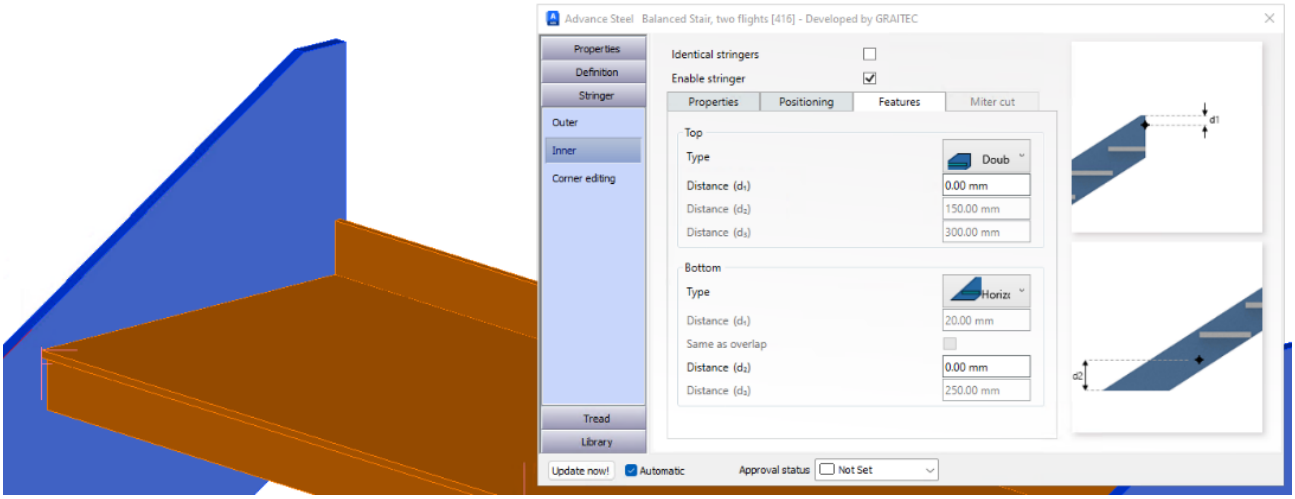
Balance Stair-Profile selector for Stringers

The tabs for Positioning and Features are providing the same level of adjustments as seen under the plate type, with options to control the relative offset to the nosing line or the heel side.



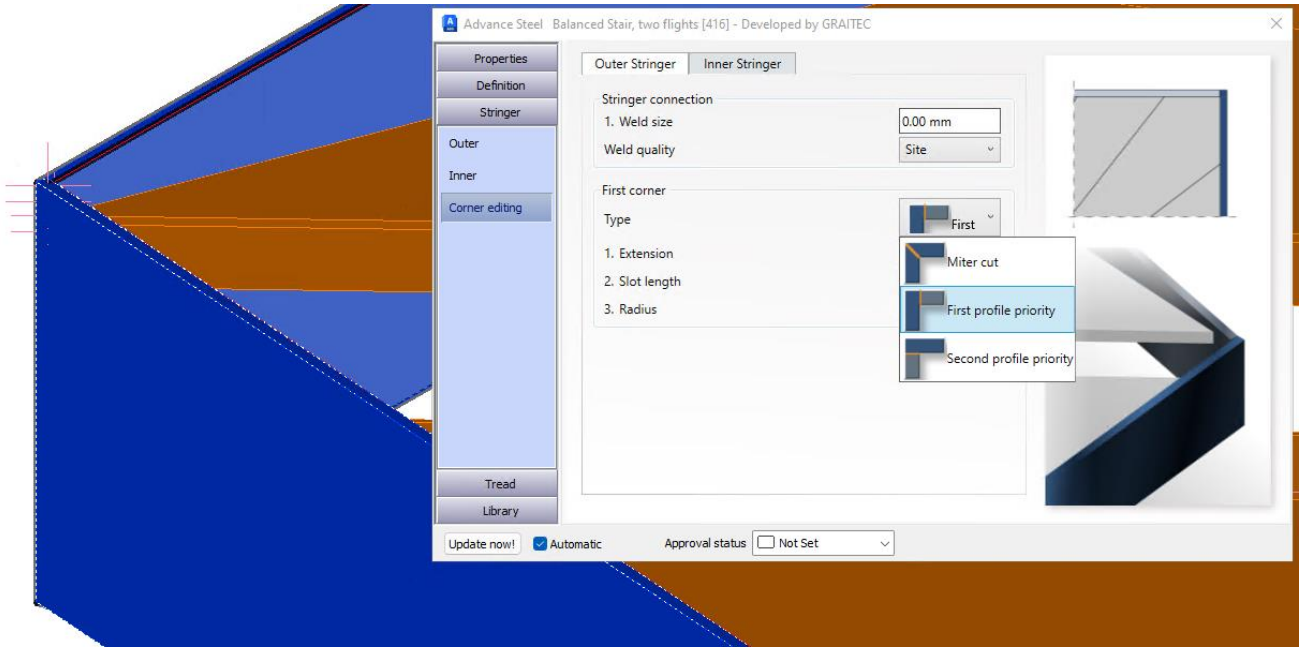
Balance Stair-Positioning tab for Stringers

The Features tab allows for the same options controlling the end of the stringer profiles at the top and bottom.



Balance Stair-Features tab for Stringers

The options associated with this extend also into the corner editing. When a profile is selected there are options for Miter, first profile and second profile.



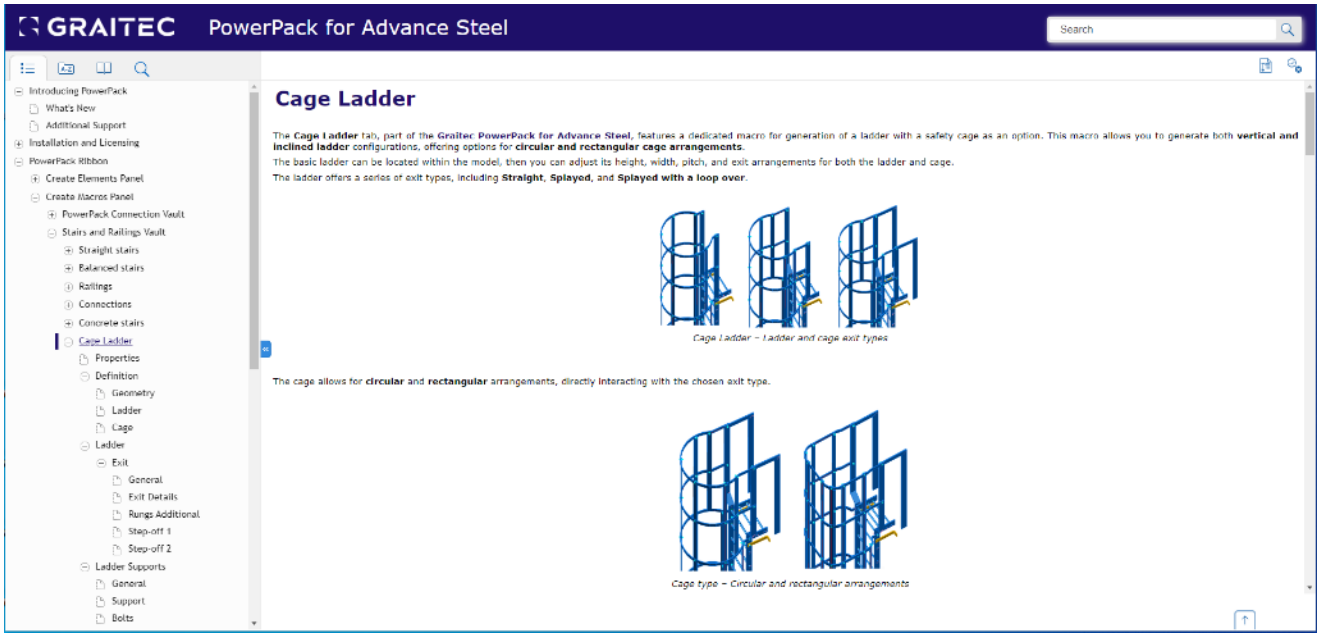
Balance Stair-Corner editing for Stringers

5. Online Help: Continued Update

We continue to update the PowerPack for Advance Steel online help portal. As new features are added to the system, the help portal will receive additional content to complement these new features. This ensures users have access to vital insights into the command operations, quick start guides, and accompanying media.

Notable updates in the 2025 version include:

- **Cage ladder** help segment



Online Help Portal-Cage Ladder Help added

Please check the portal for updates, which will be available shortly after the product release.

Link: [PowerPack for Advance Steel (graitec.com)]