



PowerPack for Advance Steel 2025



Table of Contents

Wel	come to Graitec Powerpack for Advance Steel 2025	3
1.1	Compliance with Autodesk Advance Steel 2025	
Intro	oducing New Features	4
New	Powerpack Features	5
3.1	Multi Grid Level tool: Manual label control	5
3.2	Multi Grid Level tool: Sub Axis options	5
3.3	Camera Browser: Selected objects & Predefine query option	6
New	Railing Features	8
4.1	Lap Joint	
4.2	Stem model role for 'By Bar' Top Handrail to post connection	10
New	Stairs Features	11
5.1	The Cage Ladder	11
5.2	Ladder features	
5.2.1	Primary Geometry	12
5.2.2	2 Ladder – Overview tab- Rung spacing	13
5.2.3	3 Ladder General – Profile selection and Weld designation	13
5.2.4	Ladder Exit Types & Step off Feature	14
5.2.8	5 Ladder supports	
5.3	Cage Features	19
5.3.1	Cage Geometry	19
5.3.2	2 Cage hoop spacing control	19
5.3.3	3 Cage Main Sections and Connections	
5.3.4	1 Cage Exit segment	21
5.4	Library options	
5.5	Ladder user profiles	
Clou	d Link command: Retirement	24
Onli	ne Help: continued update	25
	Weld 1.1 Intro New 3.1 3.2 3.3 New 4.1 4.2 New 5.1 5.2 5.2.1 5.2.2 5.2.3 5.3.2 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3	Welcome to Graitec Powerpack for Advance Steel 2025 1.1 Compliance with Autodesk Advance Steel 2025 Introducing New Features New Powerpack Features 3.1 Multi Grid Level tool: Manual label control 3.2 Multi Grid Level tool: Sub Axis options 3.3 Camera Browser: Selected objects & Predefine query option New Railing Features New Railing Features 4.1 Lap Joint 4.2 Stem model role for 'By Bar' Top Handrail to post connection New Stairs Features New Stairs Features 5.1 The Cage Ladder 5.2 Ladder features 5.2.1 Primary Geometry 5.2.2 Ladder General – Profile selection and Weld designation 5.2.4 Ladder General – Profile selection and Weld designation 5.2.5 Ladder supports 5.3 Cage Features 5.3.1 Cage Geometry 5.3.2 Cage hoop spacing control 5.3.3 Cage Main Sections and Connections 5.3.4 Cage Exit segment 5.4 Library options 5.5 Ladder user profiles Cloud Link command: Retirement Onlin

1. Welcome to Graitec Powerpack for Advance Steel 2025

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

1.1 Compliance with Autodesk Advance Steel 2025

The **PowerPack for Advance Steel 2025** is compliant with **Autodesk Advance Steel 2025**.

The **PowerPack for Advance Steel 2025** can be installed using the **Setup PowerPack for Advance Steel 2025**.

Due to the change to .NET 8 framework for the core platform, the installation of the 2025 version is only compatible with the 2025 version of Advance Steel.

To install the PowerPack version 2025, please follow these steps:

- 1. **Open Advance Setup 2025** of PowerPack for Advance Steel. The setup will automatically identify the installed software.
- 2. Press Install to begin the update process.



Advance Setup 2025 installer popup

2. Introducing New Features

In the 2025 version, we are excited to introduce several improvements to our existing tools within the PowerPack, along with a new feature requested by users for easier modelling of several key features. Our focus continues to be on enhancing productivity through additional features and improvements.

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

New Powerpack Features:

- Multi Grid Level: Manual Label Control.
- Multi Grid Level: Sub-axis options.
- Camera Browser: Selected Object & Predefine Query.

New Railing Features:

- Lap joint.
- Stem Model role.

New Stair Features:

• The Cage Ladder.

For more insight into these new features, please continue to explore the document as we outline the fundamentals of each addition 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 Powerpack Features

This section of the What's New guide focuses on the key features related to the main PowerPack application.

3.1 Multi Grid Level tool: Manual label control

The Multi Grid Level tool has been enhanced to allow users to add their manual label content to the text field relative to each grid line. Here's how to use this new feature:

By checking the Manual labelling check box under the Axis label page, with the Axis direction required, the user can then access the Grid label via the Grid Axis column cell on the Axis spacings page. The user can type text entry as required and it is displayed in the gridline in the model.

The user may change back to automatic labels, this will remove the previously manually entered text entries, resting back to the previous automatic label settings.



Multi Grid Level - Manual labelling

Advantages:

- Control the labels of the entire grid from one single command.
- Set specific labels when required to the text field that is relative to each grid line.
- Aligns with Standard Advance Steel manual label option.

3.2 Multi Grid Level tool: Sub Axis options

Another feature included in this version is the addition of Sub Axis within the grid structure. A new dialog page dedicated to Sub Axis allows users to enable and define sub axes on either side of the main grid. Users can use the main grid name and define prefix and suffix content.



Multi Grid Level - Sub axis tab

Within the sub axis options, when levels are used, there is an option to disable a Sub-axis on a level. In the image below, we can see that at Level 1, the Enable Sub-Axis check box is unchecked, and the Sub-axis is not present in the modelled grid structure.



Multi Grid Level - disable enable sub axis within levels



Advantages:

- Define the Sub-Axis directly from the same grid command.
- Replicate the sub-axis in Levels, with the option to display or hide them, as needed.

3.3 Camera Browser: Selected objects & Predefine query option

For the version, we are introducing the Selected objects and Predefined query options, which are found under the properties of a camera object within Advance Steel. These options will be part of the main browser table towards the right side of the column arrangement. You can find them by scrolling across the table or expanding the table window.



	70.0.0	101.0			14 JUNE 20 10		1.1.1.1		a .		
2 Front Depth	Z Rear Depth	XY Auto	X Delta	Y Delta	Model View camera activation	Select	objects for camera	Clear selection	Search query	Mark selection	Clear mark
_0	0	\checkmark	0	0	✓		0 Objects selecter	X	v	Mark	Х
0	0	\checkmark	0	0	✓		0 Objects selected	X	v	Mark	Х
0	0	\checkmark	0	0	\checkmark		0 Objects selecter	X	Ŷ	Mark	Х
0	0	\checkmark	0	0	\checkmark		0 Objects selected	X	Ý	Mark	X
0	0	\checkmark	0	0	✓		0 Objects selecter	X	Ý	Mark	X
1000.00	✓ 1000.00	✓	500.00	500.00			2 Objects selecter	X	×	Mark	Х
¢					_						
< rawing Styles	filtering										
rawing Styles rawing style drops	filtering down list shows or	nly styles pr	esent in the	e Drawing S	īyies palette.						
rawing Styles I User Styles	filtering down list shows or	nly styles pr	esent in the	Drawing 5	ityles palette.				Αp	ply	Cancel

Camera Browser - Additional column for object selection and Queries

The options in the Camera Browser allow users to **create/change a selected group of objects** using either the manual selection process "*Select object*" or the "*Predefine query/Save Searches*" features of Advance Steel, via the command button for this option. To complement these options, we can highlight the selection, with the "*Mark selection*" button and its counterpart to "*Clear marking*". These features also display the number of objects selected and show the active query within the dialog.



Camera Browser - highlighted objects from selection methods

Advantages:

- Direct change in the Camera Browser dialog.
- Add or remove the selected objects from the camera view after the creation.
- Selection of predefined queries from the model, already created and stored under the main model via the Project Explorer.
- Alignment with Standard Camera Functionality.

4. New Railing Features

In this version, we are introducing a lap style joint targeted for flat type handrails and middle rails. This allows users to create a simple splice plate type connection with options for welds and bolts to the main rail element.

4.1 Lap Joint

GRAITEC

The lap joint is designed to insert a plate segment to the bottom side of a handrail/middle rail element with a default setting of welded on one side, and the other side offering a bolted connection arrangement. The connection allows the user to change from these defaults to a desired configuration.



Lap Joint - Plate Definition

There are several pages to the connection allowing for control of the plate size relative to the main railing elements, the bolt arrangement, and the gap between elements.

🛕 Advance Steel Lap jo	int [86] - Develop	ed by GRAITEC			×
Properties	Side 1	Connection type:	Welded	3	
About	Side 2	Bolt definition	Positioning	Welds	
Plate definition		Weld size	4.0	0 mm	
Connection definition		Weld type	Fil	et weld	~
Library		Weld location	Sh	ор	. 109
					+
Update now! Automa	atic App	roval status 🔲 Not Se	t v		

Lap joint - connection definition - welded option

🛕 Advance Steel Lap jo	oint [3] - Develop	ed by GRAITEC		×
Properties	Side 1	Connection type:	Bolted ~	
About	Side 2	Bolt definition	Positioning Welds	
Plate definition		Diameter	10.00 mm	\checkmark
Connection definition		Туре	Countersunk Screw ISO 106	~
Library		Grade	8.8 Setlere	Y TOP
		Assembly Rolta reversed		
		Hole telerance	2 00 mm	
		Hole tolerance	2.00 mm	
Update now! 🛛 Autom	atic Ap	proval status 🔲 Not S	et v	

Lap joint - connection definition - bolted

🛕 Advance Steel Lap jo	int [88] - Developed by GRAITEC			×
Properties	Search			
About	Name	Set as default	Save	
Plate definition	Default test	\checkmark	Load	
Connection definition			Rename	
Library			Remove	
Update now! 🖸 Automa	atic Approval status Not Set	~		

Lap joint -library page

4.2 Stem model role for 'By Bar' Top Handrail to post connection

GRAITEC

The railing macro includes a top handrail to post connections feature, with an option for **By Bar**. This option introduces a short profile section, defaulted to round, between the handrail element and the post cap plate element. This element now has the model role **Stem**, applied automatically when selecting the connection option.



Stem model role - By Bar handrail to post connection type



Stem model role - element properties - naming page - model role

5. New Stairs Features

In this version, we are introducing a new type of stair: the **Cage Ladder**. This new macro complements the existing stair tools in the PowerPack. The Cage Ladder macro allows you to create a single ladder (vertical or inclined) with a step-off feature and ladder stays, combined with various cage types. The cage arrangements work in combination with different ladder exit types for both straight and splayed configurations. Additionally, the macro includes several smaller features to aid the detailing of the ladder.

5.1 The Cage Ladder

The Cage Ladder macro creates the ladder element from a series of point inputs: a start and an end point. These points can be aligned vertically or at an incline. The ladder is then created from these points, oriented to the World Coordinate System. Users can adjust the height, inclination, and rotation of the ladder via the dialog, with these adjustments based on the start point of the ladder.

The macro interface design allows users to define the basics of the ladder and cage geometry initially. It then provides dedicated pages for controlling more detailed aspects of those elements. These pages, subpages, and tabs enable control over spacing arrangements, profile selections, and connections between elements, along with options to turn on or off certain features of the ladder.

The dialog arrangement is aligned to aid the workflow of creating the ladder and cage from a series of predefined default options for section types and sizes, combined with dimensional values taken for available standards. These parameters are editable within the system and can be stored in the library of macro for the user to create their form ladder types to their requirements.

Within the macro, there are a series of tab elements aligned to provide constraints for the ladder. These are typically taken to be from regional standards. The constraints are then implemented to aid the user in seeing via visual changes the inputs as to whether they are exceeding those designated constraints.

Ĥ			H			
	🛕 Advance Steel 🛛	Cage Ladder [2] - Developed by GR	AITEC			×
	Properties Properties About	Type Name: Upgrade to primary connection	Cage Ladder		~	
		P	P2	P2 P1		
	Ladder					
	Ladder Supports					
	Cage Library					
	Update now!	utomatic Approval status	🗆 Not Set 🛛 🗸			

Cage Ladder – main properties page

Advantages:

- Cage element of macro works with splayed exit types, including Splayed ladder exit and Splayed ladder loop over exit.
- Create an inclined ladder without having to set a custom User coordinate system.
- Adjustment of ladder incline after creation.
- Ladder rotation on plan after creation.
- Automated rung calculation method, with User defined options.
- Holes are created in the ladder for rung connections (round, circular tubes), with full hole depth for external weld placement.
- Ladder supports aligned to inside/middle/outside of the main ladder stiles (stringers), with bolted/welded options.
- The cage features automated hoop spacing.
- Define constraints for the ladder and cage based on local standards. Constraints for ladder and cage.
- Interaction with main definition entries, highlighting exceeding these parameters.

5.2 Ladder features

Within the dialog, several key features and options are available for users to modify after creating the initial ladder:

5.2.1 **Primary Geometry**

The dialog offers primary control of the following key geometric parameters:

- Ladder Height: editable.
- Ladder width: editable.
- Ladder inclination: editable.
- Ladder rotation: editable.



Ladder definition – geometry tab for ladder

Each one of those is a primary geometry option and editable under the Definition page of the dialog.



5.2.2 Ladder - Overview tab- Rung spacing

GRAITEC

Within the ladder definition, several methods are available to control the rung spacings of the ladder based on the designated top level of the rung. Users can move away from the fully automated option to control the number of rungs with an equal distance or to unlock options to define rung distance with the remaining distance within the first rung distance cell. These options provide flexibility for rung placement.

Properties	Overview Constraints		
Definition	-		
eometry	Automatic	✓	
dder	Rungs equally spaced	\checkmark	
0e	Rung Rise (R)	300.00 mm	9
·3~	Total Rung number	20	
	Rung alignment	Тор 🗸	
	First rung distance (Fr)	300.00 mm	
	Ladder pitch	90.00 °	
			<u>م</u>
			٥
Ladder			
Ladder Supports			٥
Cage			I L
Library			

Definition - Ladder - Overview tab - rung calculation options

5.2.3 Ladder General – Profile selection and Weld designation

As the users progress through the creation of the ladder, they have the option to control the profile type and size selection for both the ladder Stile and rungs. Within this subpage, users can also control the connection arrangement of the Rungs to the Stile, with options for *Aligned, Cut* and *Penetration*.

roperties	General Web	ds			
Definition					
Ladder	Stile Section Profile	► Flat ►	FL70X12	×	
	Stile rotation		0	~	•
	Stile flip profile				
	Stile alignment in plane	0.00 mm	Middle	~	
	Rung Section Profile	Round El	N 10 > RD20	~	
	Rung Rotation		0	~	
	Rung connection type		Penetration	~	
	Rung extend/shorten (dx)		0.00 mm		
	Rung clearance (d)		1.00 mm		
er Supports					
Cage					

Ladder – Ladder – General Tab for section selection and rung to stile connections

The *Penetration* type is designed to create **holes for round bars/tubes**. For other profiles, it creates a contour feature.



Rung - hole designation for round type

Under the **Welds Tab**, there are options to control the weld location as well as type and size. These are particularly useful when using *Penetration* type and weld can be designated for the **Both**, **Internal** and **External** rung/Stile arrangement.

	Advance Steel Properties Definition Ladder Exit	Cage	l Ladder [15567] - I General Weld size Weld type Weld position Weld location	Developed by GRA		4.00 mm Fillet weld v Both v Shop v	×
	Ladder Supports Cage Library Update now!	Autor	natic App	roval status 🔲 N	lot Set V		

Ladder – Ladder – Welds Tab

5.2.4 Ladder Exit Types & Step off Feature

Within the Exit subpage of the dialog, the user can change the exit type between the default of *Straight extended* to *Splayed* or *Splayed loop over*. Changing between these types enables/disables different elements of the Tabs available within the overall exit page.





Ladder - Exit -general tab - exit type selection

These options allow for different exit arrangements, that later can interact with the Exit Cage.



Ladder - Exit Types-Straight-Splayed-Splayed loop over

These tabs provide options to control the additional rungs, the exit type dimensions, and the enablement of the step-off feature for the ladder exit. Each tab allows users to change the arrangement and dimensional parameters to fit their specific requirements.

Advance Stee	Cage Ladder [15567] - Developed b	IY GRAITEC		
Properties	General Exit details Run	gs Additional Step-off 1	Step-o	ff 2
Definition	Splay distances			
Ladder	Splay type		Distance	· · ·
Ladder	Distance (A)		100.00 mm	
5.0	Distance (B)		100.00 mm	
Exit	Angle (C*)		45.00 *	
	Loop distances			
	Distance (D)		300.00 mm	
	Distance (E)		1680.00 mm	
	Stile corner type			
	Corner type		Miter	~
	Radius (R ₁)	Custom ~	50.00 mm	
	Merge stile			
	Loop corners type			
	Corner type		Miter	<u> </u>
	Radius (R ₂)	Custom v	50.00 mm	
Ladder Support	s Butt joint positioning		On stile	
Com.			-	

Ladder – Exit – Exit Details tab

Properties	General Exit details Rungs Additional	Step-off 1 Step-off 2	
Definition	Rung spacing method	by spacings	
Ladder	Rung spacing method	by spacings	τ
Ladder	Rung spacing as main ladder		ŧ ——
Exit	Minimum end distance	100.00 mm	
	End distance (d)	180.00 mm	1
	Rung exit spacing (s)	300.00 mm	
	Bung No	5	S I
	Rang No	5	Ť
			S
			*
Ladder Supports			1
Cage			

Ladder – Exit – Rungs Additional tab

Properties Definition Ladder	General Exit details Rungs Additi Enable step off area Supports	ional Step-off 1	Step-o	ff 2	∳
Ladder	Exit type		Rung type		
Exit	Step off length (L)		230.00 mm		
	Support profile	Flat FL100X1	2	~	
	Support placement		Middle	~	
	Support extension over stile (Ov)		25.00 mm		
	Support vertical offset (dx1)		0.00 mm		
£	Support horizontal offset (dx ₂)		0.00 mm		
	Support rotation		0	~	
	Support flip				
	Support alignment in plane	0.00 mm	Middle	~	
Laddar Sumaula	Welds				
Caober Supports	Weld size		6.00 mm		
Cage	Weld type		Fillet weld	~	

Ladder - Exit - Step-off1tab

Advance Steel Cr. Properties Definition Ladder Ladder Exit	Ige Ladder [15567] - Developed by GRAITEC General Exit details Rungs Additional Step-off 1 Step-off 2 Spacing method Rung gaps maximum (di) Number of rungs End gap (dg) Rung section profile Rung section profile Rung connection type Rung connection type Rung extend/shorten (da) Rung extend/shorten (da)	3→
Ladder Supports Cope Library Update now! @ Au	Rung connection type Penetration ~ Rung extend/shorten (d ₂) 0.00 mm Ladder rung extend through support Rung clearance (d ₄) 1.00 mm Weld size 6.00 mm Weld type Fillet weld ~ Weld position Both ~	3

Ladder - Exit -Step-off 2 tab

5.2.5 Ladder supports

Under the Ladder Supports page, the subpage for supports, tab General, allows the user to choose start height and end distances with maximum distances, combined with options for local offset. The supports can be positioned externally (Default), internal, or centrally to the ladder stile.

	Properties	General Support	Bolts Welds	
	Definition	Eachia susanata		
	Ladder	enable supports		
	Ladder Supports	Support Type	Folded plate 👋	
	Supports	Support alignment	outside ~	
		Flip support		K .
		Support start height (H)	1000.00 mm	
		End distance (d)	150.00 mm	
		Spacing method	By max dista 👋	
		Support max spacing	2000.00 mm	
		Support Number	4	
		Support spacings (s)	1616.67 mm	
		Support no.	Offset (dx)	
		1	100.00 mm	
U 7		2	0.00 mm	
	Cage	4	0.00 mm	1
	Library		4	

Ladder Supports - Support - General tab

Changing to the tab for Supports, the user has control parameters for the strap body, overlap to stile and flange fixture hole.

GRAITEC	What's N	lew in PowerPack	for Auto	desk Advance Steel 2025
	Advance Steel C Properties Definition Ladder Ladder Supports Supports Cage Ubrary	age Ladder [15567] - Developed by GRATTEC General Support Boils Support depth (dp) Support extension (L) Stie overlap (Ov) Fixing flange length (d) Bend radius (R) Holes arrangement Hole diameter (D) Distance horisontal (d1) Distance vertical (d2) Support to ladder	Welds 50.00 mm 10.00 mm 230.00 mm 25.00 mm	
	Update now! 🛃 AL	itomatic Approval status Not Set	-	

Ladder Supports - Supports - Support tab

Users can choose whether the stays are welded or bolted to the ladder. Selecting an option will activate the corresponding tab within the dialog page.

As users proceed to the connections, the bolts become active. Users can then navigate to the Bolts tab to see various parameter options for bolt type and location, with options to control the Positioning.



Ladder supports - supports - bolts tab

The Welds tab becomes active when set under the support tab and allows for weld size and weld type to be designated.



Ladder supports - supports - welds

Next, we will outline the Cage features available within the cage ladder macro.



5.3 Cage Features

The cage for the ladder can be activated under the **Definition - Geometry - Cage** tab via a simple check box. This will enable the cage primary features in this tab and allow for the further activation of the cage options within the dialog. The overall cage is split into two main segments main and exit cages, controlled within the overall dialog arrangements.

5.3.1 Cage Geometry

The primary page for the cage is the **Geometry**, under the **Definition**. The user enables the main cage and adjustment to key parameters such as Main radius, distance from rung, start height, and some other minor parameters.

	Properties	Ladder Cage		
TNI	Definition	Enable cage	✓	
	Geometry	Care time	Circular	<u>م</u> (
	Ladder	cage type		
	Cage	Cage main radius (R)	350.00 mm	
		Distance from rung (D)	700.00 mm	ð
		Rectangular width (W)	650.00 mm	
		Corner radius (R1)	150.00 mm	
		Cage start height (H)	2500.00 mm	
		Cage top offset (dx1)	0.00 mm	
				, LL
	Laddar			
	Ladder Supports			
	Cage			

Cage Geometry tab under definition page

5.3.2 Cage hoop spacing control

Cage hoop spacing control can be found under the **Definition – Cage** section. Within a series of tabs starting with **Overview**, users can check or uncheck options to affect the control of the hoops within the overall main cage body.

I		I	
Advance Steel C	age Ladder [2] - Developed by GRAITEC		×
Properties	Overview Constraints		
Definition			
Geometry	Automatic		v .
Ladder	Spacing method	By Number 🗸	
Cage	Number of hoops	0	
	Spacing minimum	900.00 mm	vi i i i i i i i i i i i i i i i i i i
	Spacing (s)	1150.00 mm	
			~
			<u>+</u>
Ladder			
Ladder Supports			
Cage			
Library			
Undate now! Au	tomatic Approval status Not Set	~	

Cage overview tab under definition - Cage subpage



5.3.3 Cage Main Sections and Connections

GRAITEC

Moving down to the Cage page of the dialog, the user will see two main subpages used to control the **Cage-Main** and **Cage-Exit** for hoop and strap sections. Both have options to control the strap placement method, combined with a series of tabs for bolted or welded arrangements.

Adv	ance Steel Cage Ladder [1	5567] - Developed by GR	AITEC				×
	operties General	Strap Welds	Bolts cage	Bolts ladder		1	
	efinition					jt≷	
	adder Type			C	ircular	()'	
Ladde	er Supports Cage se	ction profiles				$\left\{ \right\}$	
	Cage Hoop se	ection	► Flat ► FL	50×8	~		
Cage -	Main Hoop ro	tation		0			
Cage -	Exit Stile ove	erlap (Ov)		25.00 mm			
	Merge p	ooly beam				H	
	Strap pr	ofile	► Flat ► FL	50×8	~		
	Strap ro	tation		0		H	
	Cage co	nnections					
	Hoop to	strap connections		Bolts	~	<u> </u>	
	Hoop to	stile connections		Bolts	v		
	ibrary	terrerel abob a	N-10-1	_	_	•	
Update	now! Automatic	Approval status	Not Set	~			

Cage Main- General tab

	Properties	General Strap	Welds Bolts cage	Bolts ladder	
	Definition				
	Ladder	Strap distribution		By segments 🗸	
	Ladder Supports	Strap distibution zone			
	Cage	 All segments 	Definition on arc	By distance 🗸 🗸	
	Cage - Main	Segment S1			
	Cage - Exit	Segment S2	Start offset (dx1)	0.00 mm	1 21 8
		Segment S3	End offset (dxn)	265.23 mm	
			Spacing method	By number v	Se Se
			Maximum	300.00 mm	10/20/
			Number	1	S S
			Spacing (s)	0.00 mm	32
-PK			Strap gap (d)	0.00 mm	
	Library Update now!	tomatic Approval s	status Not Set	~	

Cage main - Strap tab

From the **General** tab there are options to control the welds and bolts within the cage itself and the cage to the ladder. These are then reflected in a series of tabs controlling those elements. These tabs are configured similarly to other bolt and welds tabs previously shown in this document.

What's New in PowerPack for Autodesk Advance Steel 2025

Properties	General	Strap	Welds	Bolts cage	Bolt	s ladder			
Definition	Della							<u>∗ⁿ²* </u>	
Ladder	BOITS				12.00 m	m		t	
Ladder Supports	Diameter				ENUCO	4017			
Cage	lype				EN 150	4017	~	[_d2]	
Cage - Main	Grade				0.0 N		~		
Cage - Exit	Tolerance					2.00 mm			
	Location				Site		~		
	Invert								
	Positionir	ng							
	No of row	vs (n1)				1			
	No of co	lumns (n2)				1			
	Distance	hetween n	ows (d1)			50.00 mm			
	Distance	between	- lun - (-12)			50.00	_		
	Distance	between c	olumns (a2)			50.00 mm	_		
	Row offse	et (dx1)				0.00 mm			
	Column o	offset (dx ₂)				0.00 mm			
Library									

Bolts for Cage-to-Cage connection option

5.3.4 Cage Exit segment

The exit cage is activated and controlled using a similar design of page and tab arrangement, to allow the same interaction with the key elements of the main cage. With options to allow the exit cage to match the main cage below and merge straps where possible.

These activations are controlled by simple check box options.

Properties	General Hoop Strap	Welds Bol	ts cage Bolts I	adder	1.
Definition					
Ladder	Enable exit cage				
Ladder Supports	Type		Ci	rcular	t +
Cage	Same as main cage			~	
Cage - Main	Construction and floo				
Cage - Exit	Hoop section	► Flat ► F	L50X8	~	
	Hoop rotation		0		(TIB)
	Stile overlap (Ov)		25.00 mm		
	Merge poly beam			\checkmark	
	Strap profile	► Flat ► F	L50×8	\sim	
	Strap rotation		0		
	Cage connections				
	Hoop to strap connections		Bolts		
	Hoop to stile connections		Bolts		1
Library					

Cage exit- general tab with exit arrangement activated

The main check box to enable the exit is located under the **General** tab within **Cage-Exit** subpage.

The other tabs under this subpage are the same approach as the main. They are greyed and inactive when the same as the main cage is active, with an option to allow the user to interact and change these settings as required.

5.4 Library options

GRAITEC

The macro comes with a library option for the user to store the configuration and set it as their preferred default arrangement to start from.

_						
Advance Steel (Cage Ladder [138	57] - Developed by G	RAITEC			×
Properties	Search					
Definition		News		Catalan da fault	Sava	
Ladder		Name		Set as default	Save	
Ladder Supports					Load	
Cage					Rename	
Library					Remove	
Library						
Update now!	lutomatic	Approval status	Not Set	~		

Library tab

5.5 Ladder user profiles

The ladder feature includes an option to add user-defined profiles for the Stile and Rungs that form part of the ladder and the Step off areas.

This can be done by using the GUI-allowed Section table within the AstorRules of Advance Steel. The user can create and add these profiles, by following the process defined in Advance Steel via the Management Tools table editor.

To demonstrate this, refer to the mock-up entry based on a series of test user profiles created for this purpose.

ADVANCE STEEL MANAGEMENT TOOLS	w to mue					i	– ×
ස් පි 🗶							
AstorRules	Ke	y JointName	JointControl	AllowedSectionTyp	e AllowedSection		
JointsGUIAllowedSections	220	00 GRTCCageLadder	Stile	Section class	Usr GRTC Ladder Stile		
AstorSettings	220	01 GRTCCageLadder	Rung	Section class	Usr GRTC Ladder Rungs		
GUISettings	220	02 GRTCCageLadder	StileStepOff	Section class	Usr GRTC Ladder Stile		
GUISheets	220	02 00700 1 11	P 01 011	0.11.1	UL COTO L LL D		

User profiles - GUI allowed sections table

- Joint Name:
 - GRTCCageLadder
- Joint controllers:
 - For Ladder Stile: Stile
 - For Ladder rung: Rung
 - For Step off stile: StileStepOff



- For Step off rung: RungStepOff
- Allowed Section Type:
 - \circ If a user-defined profile shape is used, then set it to Section class.
 - \circ If a standard shape code reference is used, then use the Section shape.
- Allowed Sections:
 - This is the typename text entry from the profilemastertable of the Astorprofiles database. This links the profile to the GUI allowed sections.

User-defined profiles following the Standard Advance Steel user-defined profiles method. This involved defining all the coordinates and system points within the required profile shape and adding the range of stiles or profiles as required.

After adding the User profiles and GUI table references, these profiles will be available within the different dialog pages and sub-elements.



Ladder user profiles - Stile - Rung options



Ladder user profiles - Step off options

6. Cloud Link command: Retirement

We announce the retirement of the **Cloud Link** command starting with this version. This decision reflects the evolution of technology and user needs. As cloud data storage solutions become more sophisticated, users now benefit from a range of versatile access methods tailored to modern workflows. Consequently, this command has become redundant within a dedicated software solution.



Cloud link - current ribbon location for the command

The command and functionality will be removed from the PowerPack, resulting in the ribbon arrangement changing under this Manage ribbon panel.

7. 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.

	P 9
<section-header> Constraints and Levense Constraints and Constraints Consend Revense Constraints Co</section-header>	assed productivity and efficiency.

PowerPack for Advance Steel Online Help

Please check the portal for updates, which will be available shortly after the product release. Link: <u>PowerPack for Advance Steel (graitec.com)</u>