

What's New

PowerPack for Revit 2025





Table of Contents

1. Welcome to Graitec Powerpack for Revit 2025	
2. General	4
2.1. Compatibility with Revit® 2025	4
2.2. Refine and Simplify Tool Collection	4
3. PowerPack Start Edition	5
3.1. WaterMark Manager	5
3.2. Split Columns for Slanted Columns	7
3.3. Rebar Imports for Linear Elements	9
4. PowerPack for Revit	10
4.1. Visualization for analytical members	10
4.2. Improvements in the Numbering Tool	12
4.2.1. Numbering Nested Families	13
4.2.2. Assembly Numbering	
4.2.3. Pick one by one	15
4.3. Element Lookup - Color Splasher	16
4.3.1. Element Search	16
4.3.2. Search Results	17
4.4. Analytical Model Check Sphere visualization	20

1. Welcome to Graitec Powerpack for Revit 2025

We are very pleased to introduce the latest version of the **PowerPack for Revit 2025**. This latest update brings features and enhancements regarding BIM workflow, improving tools designed to simplify error detection for correction in analytical models.

Furthermore, users will have access to new features that enhance graphical visualization and enable checking information within a model through colour distinctions, for instance.

Our goal is to keep improving **PowerPack for Revit** functionality and usability, and we believe this update will be a valuable addition for our users.



2. General

2.1. Compatibility with Revit 2025

Autodesk Revit 2025 is transitioning to a new software development platform for improved performance and cross-platform compatibility. Consequently, the PowerPack for Revit 2025 is also being updated to .NET 8 to ensure a performance improvement.

.NET 8 framework, developed by Microsoft, is a more versatile and robust platform that supports the creation and management of modern applications across various operating systems. This migration to .NET 8 involved a huge update of the PowerPack codebase to harness the enhanced performance and security features of the framework.

The transition to .NET 8 allows the PowerPack to operate with greater **efficiency** and **reliability**. Users will notice significant performance enhancements, reduced latency, and smoother operation due to optimized memory management. Furthermore, this upgrade enhances compatibility with the latest version of Revit, ensures better security protocols, and facilitates future updates and features additions, ensuring our plugin remains at the cutting edge of construction modeling technology.

2.2. Refine and Simplify Tool Collection

As a testament to our continuous dedication to improving our platform, we've implemented some refinements aimed at delivering an even smoother and more enhanced experience for our users. In line with this effort, to **optimize** our interface and pave the way for exciting new features, we've made the decision to remove certain redundant tools. This update breathes fresh life into our system by eliminating duplicates and preparing the groundwork for future innovations.



Removed features

3. PowerPack Start Edition

3.1. WaterMark Manager

An enhancement has been proposed for the **Watermark Manager** in response to feedback received, incorporating minor adjustments to both the interface and functionality. In this way, this change aims to add the option of creating **additional parameters** to the watermark manager, where these additional parameters could be customized as the data is stored in the family file.

The tool is available in the **Powerpack Ribbon => Files => Watermark Manager.**

	🕻 Watermark Manager			– 🗆 X
	Families			
	Add chosen family files Add all family files from folder Clear list			
	Family	Watermark	Action	Status
	Concrete - Rectangular - Beam.rfa	???	Verify	
	Concrete-Rectangular-Column.rfa	???	Verify	
Family Batch Element				
Manager Export Lookup				
ity				
Family Manager				
File Updater				
Family Exporter				
Remove Backup Files				
Watermark Manager				
	Watermark			
	Verify all Remove from all Add to all			Configuration
	T] GRAITEC		1	
	POWERPACK		Î	OK Cancel Help

Watermark manager setting interface

After clicking the configuration button in Watermaker Manager, a dialog box will appear with the generic parameters and custom parameters. Clicking the add parameters icon allows you to create a new customized parameter. Simply enter the name of the new parameter and click "OK."

C Watermark Configuration	×	Watermark Configuration		×
Generic Parameters Author French Market Company Graitec Url https://graitec.com/fr/		Generic Parameters Author Company Url	French Market Graitec https://graitec.com/fr/	
Custom Parameters <none> <add new="" parameter=""></add></none>		Custom Parameters Country Manufact	France Yes	• □ ● ► • □ ● ►
	New Parameter		×	
POWERPACK	Name: Manufactured		СК ОК	Cancel Help
L		OK Ca	ancel	

Example for custom parameters

Once created, you can remove, rename or duplicate all customized parameters by clicking on the adjacent symbols.

After selecting the parameters for the family watermark, users can now efficiently verify and implement watermarks to all the desired Revit families, visible in the family type properties.

Properties Type Parameter Value Structural Columns (1) Electit Type Frameter Value Constraints 2 Structural Structural Not Defined Base Level Fondations Base Offset 0.0000 Othermstons Defined Top Level Niveau 1 Niveau 1 Othermstons Defined Defined Column Style Slanted - End Point Driven Model Model Model Move Top With Grids Manufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Type forments Room Bounding Image URL Nttps://graitec.com/ft/ URL URL Description Assembly Code Cott Cott Cott Cott					Wate	ermark	Action	Status		
amily Watermark Action Status Concrete-Rectangular-Column.nfa No watermark Add OK Concrete-Rectangular-Column.nfa No watermark Add OK Samily Watermark Add OK Concrete-Rectangular-Column.nfa No watermark Add OK Concrete-Rectangular-Column.nfa Watermark Remove Done Concrete-Rectangular-Column.nfa Watermark Remove Done Concrete-Rectangular-Column.nfa Watermark Remove Done Concrete-Rectangular-Column.nfa Watermark Remove Done Statutor : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Ves Statutaria Columns (1) Befort Type Perameter Valee Statutaria Columns (1) Befort Type Perameter Valee Statutaria Columns (1) Befort Type Statutaria Gasto Statutori : Enclosed in the status Gasto Gasto Gasto Statutori : Control : Status Gasto Gasto Gasto Statutor	mily Watermark Action Status noncrete-Rectangular-Column.rfa No watermark Add OK mily Watermark Action Status oncrete-Rectangular-Column.rfa Watermark Remove Oncrete Muthor : French Market Company : Gratite: Uti : Date : 16/05/2024 16:29:54 +00:200 Country: France Manufactured: Ves Socialization Goodston Watermark Remove Oone Socialization Company : Gratite: Uti : https://granitec.com/fr/ Date : 16/05/2024 16:29:54 +00:200 Country: France Manufactured: Ves Socialization Controls Free Reverse Value Not Defined Socialization Controls Socialization Socialization Socialization Socialization Controls Socialization Socialization Socialization Socialization Controls Socialization Socialization	oncrete-Rectagular	r Beam.rfa		???		Verify			
No watermark Add OK oncrete-Rectangular-Column.rfa No watermark Add OK amily Watermark Action Status oncrete-Rectangular-Column.rfa Watermark Remove Done Image: Author : French Market Company : Graitec Url : Date : 16/05/2024 16:29:49 +02:00 Country, France Manufactured: Yes Image: Concrete-Rectangular-Column.rfa Watermark Remove Done Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Stock Image: Concrete-Rectang	Increte-Rectangular Learnurfa No watermark Add OK mily Watermark Add OK mily Watermark Action Status mily Watermark Remove Done Muthor : French Market Company : Graitec Ufl : Date : 16(05/2024 16:29:54 - 02:00 Country: France Manufactured: Vics Oncrete-Rectangular-Column.rfa Watermark Remove Done Image: Second Seco	oncrete-Rectangula	ar-Column.rfa		???		Verify			<u></u>
No watermark Add OK amily Watermark Action Status concrete-Rectangular Beam Ifa Watermark Remove Donie Image: Concrete-Rectangular Column.rfa Watermark Remove Donie Image: Concrete-Rectangular-Column.rfa Watermark Remove Done Image: Concrete-Rectangular-Column.rfa Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 +02:00 Country: France Manufactured: Yes Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Structural Columns (1) Image: Eletit Type: Parameter Value Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Structural Columns (1) Image: Conconcrete-Rectangular-Column	Increte-Rectangular-Column1fa No watermark Add OK mily Watermark Action Status parcetel-Rectangular-Column1fa Watermark Remove Done Mathor : French Market Company : Graitec Urf : Date : 16/05/2024 16:29:49 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Urf : Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Urf : https://graitec.com/fi/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Concrete-Rectangular-Column Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image:	mily			Wate	ermark	Action	Status		
No watermark Add OK amily Watermark Action Status concrete-Rectangular Beam Ifa Watermark Remove Donie Image: Concrete-Rectangular Column.rfa Watermark Remove Donie Image: Concrete-Rectangular-Column.rfa Watermark Remove Done Image: Concrete-Rectangular-Column.rfa Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 +02:00 Country: France Manufactured: Yes Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Structural Columns (1) Image: Eletit Type: Parameter Value Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Image: Concrete-Rectangular-Column Structural Columns (1) Image: Conconcrete-Rectangular-Column	Increte-Rectangular-Column1fa No watermark Add OK mily Watermark Action Status parcetel-Rectangular-Column1fa Watermark Remove Done Mathor : French Market Company : Graitec Urf : Date : 16/05/2024 16:29:49 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Urf : Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Urf : https://graitec.com/fi/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Concrete-Rectangular-Column Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image: Status Image:	oncrete-Rectagular	Beam.rfa		Now	vatermark	Add	ок		
Concrete-Rectagular Beam.rfa Watermark Remove Done Image: Author : French Market Company : Graitec Url : Date : 16/05/2024 16:29:49 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : Matermark Remove Done Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Concrete-Rectangular-Column	Uncrete-Rectagular Beam.rfa Watermark Remove Done Image: Author : French Market Company : Graitec Url : Date : 16/05/2024 16/29:49 +02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16/29:54 +02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16/29:54 +02:00 Country: France Manufactured: Yes Image:									
Concrete-Rectagular Beam.rfa Watermark Remove Done Image: Author : French Market Company : Graitec Url : Date : 16/05/2024 16:29:49 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : Matermark Remove Done Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Concrete-Rectangular-Column	Uncrete-Rectagular Beam.rfa Watermark Remove Done Image: Author : French Market Company : Graitec Url : Date : 16/05/2024 16/29:49 +02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16/29:54 +02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16/29:54 +02:00 Country: France Manufactured: Yes Image:									
Author : French Market Company : Graitec Utl : Date : 16/05/2024 16:29:54 9 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Author : French Market Company : Graitec Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Concrete-Rectangular-Column 300 x 450mm Im	Author : French Market Company : Graitec Uri : Date : 16/05/2024 16:29:49 + 02:00 Country: France Manufactured: Yes Directe-Rectangular-Column:rfa Watermark Remove Done Image: Author : French Market Company : Graitec Uri : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Country : Graitec Uri : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Country : Graitec Uri : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Country : Graitec Uri : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Country : Graitec Uri : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec Image: Country : Graitec	mily			Wate	ermark	Action	Status		
Concrete-Rectangular-Column.fa Watermark Remove Done Image: Concrete-Rectangular-Column 300 x 450mm Url : https://graitec.com/fr/ Date : 16/05/2024 16:29:54 + 02:00 Country: France Manufactured: Yes Image: Concrete-Rectangular-Column 300 x 450mm Image: Concrete-Rectangular-Column 300 x 450mm Image: Concrete-Rectangular-Column Structural Columns (1) Image: Concrete-Rectangular-Column 300 x 450mm Image: Concrete-Rectangular-Column 300 x 450mm Image: Concrete-Rectangular-Column 300 x 450mm Structural Columns (1) Image: Concrete-Rectangular-Column 300 x 450mm Image: Concrete-Rectangular-Column 300 x 450mm Image: Concrete-Rectangular-Column 300 x 450mm Structural Section Shape Not Defined Image: Concrete-Rectangular-Column 30000 Image: Concrete-Rectangular-Column 30000 Top Level Nivesu 1 Image: Concrete-Rectangular-Column 40000 Image: Concrete-Rectangular-Column 40000 Top Level Nivesu 1 Image: Concrete-Rectangular-Column 40000 Image: Concrete-Rectangular-Column 40000 Move Base With Grids Image: Concrete-Rectangular-Column 40000 Image: Concrete-Rectangular-Column 40000 Move Base With Grids Image: Concrete-Rectangular-Column 40000 Image: Concrete-Rectangular-Column 40000 Column Location Mark Concrete-Rectangular-Column 40000 Image: Concrete-Rectangular-Column 40000 Column Location Mark Concrete-Rectangular-Column 400000	Uncrete-Rectangular-Column.rfa Watermark Remove Done Image: Author : French Market Company : Graitec Uff : https://graitec.com/fir/ Date : 16/05/2024 16:29:54 +02:00 Country: France Manufactured: Yes Toperties Image: Coursete-Rectangular-Column Image: Coursete-Rectangular-Column <td>oncrete-Rectagular</td> <td>Beam.rfa</td> <td></td> <td>Wate</td> <td>rmark</td> <td>Remove</td> <td>e Done</td> <td></td> <td></td>	oncrete-Rectagular	Beam.rfa		Wate	rmark	Remove	e Done		
Type Properties Type Properties Structural Columns (1) Concrete-Rectangular-Column Structural Columns (1) Celefit Type Section Shape Not Defined Dimensions Dimensions Base Level Ondottons Dimensions Celefit Type Move Base With Grids Celefit Type Rom Bounding Celefit Type Outmaticature Celefit Type Optimetics Celefit Type Optimetics Celefit Type Structural Column Location Mark Column Location Mark Column Location Mark <tr< td=""><td>Toperties Concrete-Rectangular-Column Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Contraints Base Level Contraints Base Level Contraints De Outmo Location Nove Base With Grids Contraints Construction Construction<td>Author : Fre</td><td>ench Market Company</td><td>y : Graitec</td><td>Url : https://</td><td>gmitec.com/in/ Date :</td><td>16/05/2024 16:29:49 +02</td><td>2:00 Country: France M</td><td>Manufactured: Yes</td><td></td></td></tr<>	Toperties Concrete-Rectangular-Column Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Contraints Base Level Contraints Base Level Contraints De Outmo Location Nove Base With Grids Contraints Construction Construction <td>Author : Fre</td> <td>ench Market Company</td> <td>y : Graitec</td> <td>Url : https://</td> <td>gmitec.com/in/ Date :</td> <td>16/05/2024 16:29:49 +02</td> <td>2:00 Country: France M</td> <td>Manufactured: Yes</td> <td></td>	Author : Fre	ench Market Company	y : Graitec	Url : https://	gmitec.com/in/ Date :	16/05/2024 16:29:49 +02	2:00 Country: France M	Manufactured: Yes	
Type Properties forperties Structural Columns (1) Concrete-Rectangular-Column 300 x 450mm Structural Columns (1) Concrete-Rectangular-Column Structural Columns (1) Concrete-Rectangular-Column Structural Structural Structural Structural Concrete-Rectangular-Column Structural Columns (1) Concrete-Rectangular-Column Structural Structural Section Shape Nove Top With Grids Move Base With Grids Move Base With Grids Type Image Virge Image <td>Toperties Concrete-Rectangular-Column Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Contraints Base Level Contraints Base Level Contraints De Outmo Location Nove Base With Grids Contraints Construction Construction<td>oncrete-Rectangula</td><td>ar-Column.rfa</td><td></td><td>Wate</td><td>rmark</td><td>Remove</td><td>e Done</td><td></td><td></td></td>	Toperties Concrete-Rectangular-Column Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Toperties Toperties Concrete-Rectangular-Column Toperties Contraints Base Level Contraints Base Level Contraints De Outmo Location Nove Base With Grids Contraints Construction Construction <td>oncrete-Rectangula</td> <td>ar-Column.rfa</td> <td></td> <td>Wate</td> <td>rmark</td> <td>Remove</td> <td>e Done</td> <td></td> <td></td>	oncrete-Rectangula	ar-Column.rfa		Wate	rmark	Remove	e Done		
Type Properties Image: concrete-Rectangular-Column 300 x 450mm Image: concrete-Rectangular-Column 300 x 450mm itructural Columns (1) Image: concrete-Rectangular-Column 300 x 450mm itructural Columns (1) Image: concrete-Rectangular-Column 300 x 450mm Structural Section Shape Not Defined Structural Section Shape Not Defined Dimensions Image: concrete-Rectangular-Column 300 x 450m Base Offset 0.0000 Top Level Niveau 1 Top Offset 0.0000 Column Style Stanted - End Point Driven Move Base Wirk Grids Image: concrete-Rectangular-Column 300 x 450m Identify Data Image: concrete-Rectangular-Column 300 x 450m Keynote Image: concrete-Rectangular-Column 40000 Column Style Stanted - End Point Driven Move Base Wirk Grids Image: concrete-Rectangular-Column 40000 Column Location Mark Image: concrete-Rectangular-Column 40000 Colum Location Mark <	Type Spir Properties Spir Properties Image: Section Statistics Spir Statistics Spir Statistics tructural Columns (1) Image: Spir Statistics Spir Statistics Spir Statistics Spir Statistics Spir Statistics Spir Statistics Spir Statistics Spir Statistics Spir Spir Statistics Spir Spir Spir Spir Spir Spir Spir Spir									-
Book x 450mm Parameter Value tructural Columns (1) Effetit Type Structural Structural Structural Structural Structural Not Defined asse Level Fondations Asse Othersions Dimensions Dimensions Dimensions asse Offset 0.0000 Identity Data Dimensions Dime	Box x 450mm Parameter Value tructural Columns (1) Image: Column Statistics Structural Structural Structural Base Verlet Fondations Image: Column Structural Diagono Diagono Diagono Base Offset 0.0000 Not Defined Diagono		V							Load Duplica
Itructural Columns (1) Image Not Defined onstraints Image Section Shape Not Defined Base Level Fondations Image Image Base Level Fondations Image Image Top Diffset 0.0000 Identity Data Column Style Slanted - End Point Driven Identity Data Move Top With Grids Image Image Move Base With Grids Image Image Column Location Mark Image Image Cross-Section Rotation 0.00° Image	tructural Columns (1)		ectangular-Column		Type: 300 x 450				~ D	
Dimensions Base Level Fondations Base Offset 0.0000 Top Level Niveau 1 Top Offset 0.0000 Column Syle Slanted - End Point Driven Move Top With Grids Image: Column Location Mark Column Location Mark Type Comments Column Location Mark Type Comments Column Location Mark Multiclutter Column Location Mark Column Location Mark	Dimensions Base Level Fondations Base Level Fondations Base Offset 0.0000 Top Level Niveau 1 Top Offset 0.0000 Column Style Slanted - End Point Driven Move Top With Grids Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 + 02:00 France Yes Type Comments Type Comments Type Comments Type Image URL https://graitec.com/fr/ Description Section Name Key Section Name Key Section Name Key Section Yer Section Name Key Secti	Concrete-Re		-	Type: 300 x 450 Type Parameters	mm		Value	~ D	Duplic
base Level Fondations Jase Offset 0.0000 iop Level Niveau 1 iop Offset 0.0000 Solume 1 Identity Data Keynote Keynote Aove Top With Grids Identity Data Kove Base With Grids Identity Data Kove Base With Grids Identity Data Kown Bounding Image: Column Location Mark Column Location Mark Image: Column Location Mark Column Location Mark Description Assembly Code Column Location Mark	base Level Fondations Jase Offset 0.0000 Top Level Niveau 1 Go Offset 0.0000 Solumn Style Slanted - End Point Driven Move Tap With Grids Image: Comments Kown Bounding Image: Comments Solumn Location Mark Image: Comments Iross-Section Rotation 0.00° Solumn Location Mark Description Assee Mith Grids Image: Comments Type Image Image: Comments Color Name Key Assembly Code Cost Name Key Assembly Description Type Mark OmniClass Number Set by: Image: 21 Image	Concrete-Re 300 x 450m	m	dit Type	Type: 300 x 450 Type Parameters Structural	mm	Not Defined	Value	~ D	Duplic
Identity Data Identity Data Top Offset 0.0000 Keynote Keynote Keynote Keynote Model	Construction Niveau 1 Cop Devel Niveau 1 Cop Offset 0.0000 Column Style Slanted - End Point Driven Alove Top With Grids Image: Common Style Alove Base With Grids Image: Common Style Column Location Mark Image: Common Style Column Location Mark Image: Common Style Column Location Mark Image: Common Style Cost Section Name Key Assenbly Code Cost Cost Section Name Key Assenbly Description Type Mark OmmiClass Number OmmiClass Number	Concrete-Re 300 x 450m	m		Type: 300 x 450 Type Parameters Structural Section Shape	mm	Not Defined	Value	~ D	Duplic
Cop Offset 0.0000 Keynote Inclumination Jobum Style Slanted - End Point Driven Model Model Jove Top With Grids Inclumination Graitec - French Market (c) 16/05/2024 16/2954 + 02/00 France Yes Jove Base With Grids Inclumination France Science France Science Journ Location Mark Inclumination Inclumination France Science Journ Location Mark Inclumination Inclumination Inclumination Journ Location Mark Inclumination Assembly Code Inclumination Journ Location Mark Inclumination Inclumination	op Offset 0.0000 column Style Slanted - End Point Driven Aove Top With Grids I Toy Barding I ioora Base With Grids I ioora Bounding I iooran Location Mark I iooran Location Mark Description Cost Image VR Section Name Key Assembly Description Image Type Mark Image OmmicIcas Number Image Section Name Key Image Sectorin Name Key Image	Concrete-Re 300 x 450m ructural Columns (1) onstraints	m ~ ∰ E		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions	mm		Value	~ D	Duplic
Model Model Aver Top With Grids I Inverse Base With Grids I Inverse Top With Grids <td>Slanted - End Point Driven Model Aeve Top With Grids Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Yoe Base With Grids Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Yoe Base With Grids Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Yoe Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes</td> <td>Concrete-Re 300 x 450m ructural Columns (1) onstraints lase Level</td> <td>m V (借 E Fondations</td> <td></td> <td>Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h</td> <td>mm</td> <td>0.3000</td> <td>Value</td> <td>~ D</td> <td>Duplic</td>	Slanted - End Point Driven Model Aeve Top With Grids Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Yoe Base With Grids Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Yoe Base With Grids Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Yoe Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes You Double Comments Imanufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes	Concrete-Re 300 x 450m ructural Columns (1) onstraints lase Level	m V (借 E Fondations		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h	mm	0.3000	Value	~ D	Duplic
Manufacturer Graitec - French Market (c) 16/05/2024 1629-54 +02:00 France Yes Move Top With Grids Image Image Move Base With Grids Image Image Solumn Location Market Image Image Column Location Market Image Image Image Image Image URL https://graite.com/fr/ Image Column Location Market Image Image Image Image Image URL Assembly Code Image Cost Image Image	Manufacturer Graitec - French Market (c) 16/05/2024 16:29:54 +02:00 France Yes Type Comments Type Comments Type Image URL URL URL URL URL URL Description Assembly Code Cost Section Rotation Type Mark OmniClass Number Sort by: ↓ 2↓ ↓	Concrete-R 300 x 450m ructural Columns (1) onstraints Base Level Base Offset "op Level	m Fondations 0.0000 Niveau 1		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data	mm	0.3000	Value	~ D	Duplic
Type Comments Type Comments Avore Base With Grids Implements Koom Bounding Implements Column Location Mark Implements Column Location Mark Description Column Location Mark Assembly Code Cost Cost	Nove Boy With Grids Image: Comments Nove Base With Grids Image: Comments Nove Base With Grids Image: Comments Nove Base With Grids Image: Comments Column Location Mark Image: Comments Cross-Section Rotation 0.00° Cost Cost Section Name Key Assembly Code Cost Cost Section Name Key Cost Sort by: Image: 2↓ Image	Concrete-R 300 x 450m inuctural Columns (1) onstraints Jase Level Jase Offset op Level op Offset	m Fondations 0.0000 Niveau 1 0.0000		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote	mm	0.3000	Value	~ D	Duplic
Type Image Type Image Room Bounding IURL https://graitec.com/fr/ Column Location Mark Description Essembly Code Cross-Section Rotation 0.0° Code	Worke base with Gilds Image Type Image URL Skom Bounding Image Column Location Mark Description Cross-Section Rotation 0.00° Section Name Key Section Name Key Assembly Description Image Type Mark OmniClass Number OmniClass Number Set by:	Concrete-Rr 300 x 450m tructural Columns (1) onstraints Base Level Base Offset Top Level Top Offset Column Style	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote Model	mm	0.3000 0.4500			Duplic
Column Location Mark Description Cross-Section Rotation 0.00° Assembly Code Cost	Column Location Mark Description Assembly Code Cost Section Name Key Assembly Description Type Mark OmniClass Number Section Same Key Section Name Key Assembly Description Type Mark OmniClass Number	Concrete-R 300 x 450m tructural Columns (1) onstraints Jase Level Jase Offset Top Level Fop Offset Column Style Move Top With Grids	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote Model Manufacturer	mm	0.3000 0.4500			Duplic
iross-Section Rotation 0.00° Assembly Code Cost Cost	ross-Section Rotation 0.00° Assembly Code Cost Section Name Key Assembly Description Type Mark Omnic(Lass Number Set by: the section Sectio	Concrete-R 300 x 450m nructural Columns (1) onstraints lase Level tase Offset top Level op Offset Solum Style Aove Top With Grids Aove Base With Grids	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions D h Idenity Data Keynote Mondel Manufacturer Type Comments	mm	0.3000 0.4500			Duplic
Cost	Assentialy Code Cost Section Name Key Assembly Description Type Mark OrmiClass Number Sort by: Sort by:	Concrete-Rr 300 x 450m tructural Columns (1) onstraints Jase Level Jase Offset Column Style Column Style Gover Day With Grids Wove Base With Grids Noom Bounding	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote Model Manufacturer Type Comments Type Image	mm	0.3000 0.4500 Graitec - French Market (c)			Duplic
	Section Name Key Assembly Description Type Mark OrmiClass Number Sort by: ≣€ ⊉↓ ₹↓	Concrete-Rr 300 x 450m ructural Columns (1) onstraints ase Level Base Offset op Devel op Offset Column Style Move Top With Grids Move Base With Grids Move Base With Grids Scom Bounding Column Location Mark	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote Moddel Manufacturer Type Image URL Description	mm	0.3000 0.4500 Graitec - French Market (c)			Duplic
	Assembly Description Type Mark OmniClass Number Sort by: ■1 2↓ ₹↓	Concrete-Rr 300 x 450m tructural Columns (1) onstraints Base Level Base Offset Top Devel Top Offset Column Style Move Top With Grids Move Base With Grids Scom Bounding Column Location Mark	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote Model Manufacturer Type Comments Type Image URL Description Assembly Code	mm	0.3000 0.4500 Graitec - French Market (c)			Duplic
	Type Mark OmniClass Number Sort by: ⊑t 2↓ X↓	Concrete-Rr 300 x 450m tructural Columns (1) onstraints Base Level Base Offset Top Devel Top Offset Column Style Move Top With Grids Move Base With Grids Scom Bounding Column Location Mark	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions D h h Keynote Model Manufacturer Type Comments Type Image URL Description Assembly Code Cost	mm	0.3000 0.4500 Graitec - French Market (c)			Duplic
	OmniClass Number Sort by: ⊑t ⊉↓ ズ↓	Concrete-R 300 x 450m tructural Columns (1) onstraints Base Level Base Offset Top Devel Top Offset Column Style Move Top With Grids Move Base With Grids Move Base With Grids Room Bounding Column Location Mark	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote Model Manufacturer Type Comments Type Image URL Description Assembly Code Cost Section Name Key	mm Parameter	0.3000 0.4500 Graitec - French Market (c)			Duplic
	Sort by: 📑 ≜↓ 🛣	Concrete-R 300 x 450m tructural Columns (1) onstraints Base Level Base Offset Top Devel Top Offset Column Style Move Top With Grids Move Base With Grids Move Base With Grids Room Bounding Column Location Mark	m Fondations 0.0000 Niveau 1 0.0000 Slanted - End Point Driven		Type: 300 x 450 Type Parameters Structural Section Shape Dimensions b h Identity Data Keynote Model Manufacturer Type Comments Type Image URL Description Assembly Code Cost Section Name Key Assembly Description	mm Parameter	0.3000 0.4500 Graitec - French Market (c)			Duplic

Example of a watermarked family

Note: Although the watermark may initially appear as a value in the Manufacturer, URL, or other type parameters, simply deleting these values from the family will not eliminate it. The genuine watermark is securely encrypted within the family itself and can only be fully eradicated through the explicit use of the Remove function provided by the Powerpack's **Watermark Manager** tool.

3.2. Split Columns for Slanted Columns

This tool is being significantly updated to make it applicable not only to vertical columns but also to slanted ones. This enhancement preserves existing functionalities while introducing a setting for users to specify the cut's orientation. By extending the tool's capabilities to accommodate **slanted columns**, users gain greater flexibility in structural design, enriching project possibilities and enhancing overall design flexibility.

The tool is available in the **Powerpack Ribbon => Structural => Split by Point/Level / Reference Plane.**



To use this command, the user needs to:

- 1. Hold the button "Shift" on the keyboard if you want the split horizontal, else split will be perpendicular.
- 2. Chose which function you want to apply
- 3. Select the element that you want to split
- 4. Select the intersection/level/reference plane



How to use command "Split Columns for Slanted Columns"

3.3. Rebar Imports for Linear Elements

Presenting a new implementation for Revit, we've redefined the import process for **reinforcement** data from GTCX files generated by the Tricalc software. This creates a 3D model that includes all the necessary steel reinforcements based on the calculation performed.

This new feature simplifies detailed rebar modeling for **linear elements**, footings, columns, more than ever before. Leveraging existing geometry imports, our solution seamlessly integrates into your workflow, enhancing BIM project management.

The tool is available in the **Powerpack Ribbon => BIM Connect => Import.**



Import setting interface

Once the GTCX file is generated from Tricalc, the user can import it into the project. In the dialog box that appears, it is important to activate the option "Import reinforcement cage from external file."



Rebar Imports for linear elements

Note: If any of the imported reinforcements are selected, Revit identifies them as native elements in its own format, allowing them to be modified using Revit tools.

4. PowerPack for Revit

4.1. Visualization for analytical members

In our PowerPack 2025 update, we're enhancing the **visualization** of analytical elements. Each structural type now features its own distinct **colour** automatically, eliminating the need for manual filter creation like previous versions. This improvement ensures clarity and efficiency in model interpretation, effortlessly streamlining workflows.

To create an analytical model, the tool is in the **Powerpack Ribbon => Structural => Create Analytical Model.**

PowerPack PowerPack Detailing PowerPack Design Modify 💿 🕶	
join Navisworks Openings Split Pipes 3D Views Structural Annotat Docume About	Automate lytical Model

Example of Creating an Analytical Model

After creation, the results of the enhancements are displayed as shown below.



New Visualization for Analytical Members

Note: Revit offers a Dynamo script to generate the analytical model, but the 'Create Analytical Model' tool will produce clearer results with these new options for colorizing analytical members and it will be faster in terms of model generation.



Analytical Model created by the native Revit function

4.2. Improvements in the Numbering Tool

Our proposal significantly enhances the "**Numbering Nested Families**" and "**Assembly Numbering**" features within the PowerPack's Numbering tool, particularly focusing on nested family components. These improvements allow users to systematically group and number nested items more effectively. For instance, users can now assign unique numbers to piles within a nested Pile-Cap. Additionally, we have extended the numbering capability to elements within newly created assemblies, enhancing usability and applicability.

Furthermore, we've enriched the user experience by implementing a feature that highlights selected elements when using the "**Pick one by one**" option for element selection. This ensures both accuracy and efficiency in the assembly numbering process, making it more intuitive and user-friendly.

The tool is available in the **Powerpack Ribbon => Annotations => Numbering.**



4.2.1. Numbering Nested Families

To use the Nested Families numbering, the user needs to:

- 1. Choose the category and parameter for change.
- 2. Describe the template for numbering.
- 3. Manage the family and type for numbering.
- 4. Select the elements.
- 5. Confirm the action in dialog box.

Configuration Current configuration Current configuration	[Default]	× •	
Numbering applies to Category 1 Structural Foundations	* Parameter Mark	~	
Template for numbering Text Parameter Text Enumeration for groups (none) Capital Letters (A, B, C.) Start from 1 2 Number of digits 1 Increment by 1	Text Immersion for elements Text Parameter C Numeric (1, 2, 3) v (none) Start from 1	Text v Text Filter Filter Family and Type Function Family and Type Function Family and Type Function F	Excluded
Preview of numbering C001 C002 C003 C004 C005 C006 C007 Elements selection Algorithm and grouping Options		Pile Cap-2 Pile 800 x 1800 x 900mm Pile Cap-4 Record N 200 x 900mm Pile Cap-4 Record Pile Sandard Pile-Seel Pipe 400mm Diameter Pile-Seel Pipe 500m Diameter Pile-Seel Pipe 500m Diameter	Footing-Rectangular: 2400 x 1000 x 450mm Foundation State: Tomm Foundation State Foundation State: 200mm Foundation State Foundation State: 200mm Foundation State Foundation State: 200mm Foundation State Foundation State: 200mm Foundation State
Elements selection All from project All from active view		arameter nage	Wall Foundation: Retaining Footing - 300 x 600 x 300
Select by window Select Select multiple Select	Summary Selected elements : 130		v .
Select by path Select path		Exclude nested families if parent family is also excluded	
Pick one by one Pick		T GRANTIC T POWERPACK	12 OK Cancel Help
Choose systems Choose	B OK Ca	ncel Help	

How to use command "Numbering nested families"



The outcome is that both the piles and the pile cap from a nested family are numbered consecutively.

Numbering Results

4.2.2. Assembly Numbering

In this case, to use this tool for an assembly, the user needs to:

- 1. Select the category and parameter to modify. **It is now possible to choose "Assemblies"** as a category for numbering.
- 2. Describe the template for numbering.
- 3. Manage the family and type for numbering. All assemblies available for numbering.
- 4. Select the elements.
- 5. Confirm the action in dialog box.

Numbering				<		
Configuration Current configuration	[Def	7143	× 0			
Current configuration	[Def	auitj	· •			
Numbering applies to Category	v	Parameter Mark	v]		
Template for numbering				C Numbering - Exclude by Family and Type		- 🗆 ×
Text Parameter Text	Enumeration for groups Text Capital Letters (A, B, C) V A	Enumeration for elements Numeric (1, 2, 3)	Text Parameter Text	Filter		
2	Start from 1 Number of digits 1	Start from 1 Number of digits 3		Family and Type Available	Excluded	
-	Increment by 1	Increment by 1		Structural Columns Assembly: Support North-West sector		
Preview of numbering A001 A002 A003 A004 A005 A006	A007					
Elements selection Algorithm and grouping	Options	-			_	
Elements selection		Elements exclusion from selection			→	
All from project			e assigned value to the chosen parameter		€	
All from active view		Exclude by family and type	3 Manage			
 Select by window 	Select	Summary	lected elements : 1			
○ Select multiple	Select					
○ Select by path	Select path			Exclude nested families if parent family is also excluded		
O Pick one by one	Pick			POWERPACK	К	Cancel Help
Choose systems	Choose			L T POWERPACK		- Hep
			5			
POWERPACK			OK Cancel Help			

How to use command "Assembly numbering"

In this case, the result is that all selected assemblies are consecutively numbered.



Created assembly

4.2.3. Pick one by one

The "Pick one by one" option now highlights chosen elements, ensuring users stay informed about their selections. Once elements are chosen, users simply need to press "Enter" or "Esc" to confirm their selection.



How to use command "Pick one by one"

4.3. Element Lookup - Color Splasher

Introducing the upgraded **element lookup** command, now with **color-coding** and **legend creation**, transforming architecture and engineering workflows. Users can effortlessly apply colors to highlight parameters like diameters or section types, enhancing clarity instantly. This feature streamlines data interpretation by allowing quick identification of elements based on their values, making it an essential tool for professionals across all fields.

The tool is available in the **Powerpack Ribbon => Identity => Element Lookup.**



4.3.1. Element Search

To search for elements to use the element lookup improvements, the user needs to:

- 1. Click the "Colourise" button.
- 2. Select the scope of selection.
- 3. Choose the categories.
- 4. Select the desired parameter of the elements.
- 5. Click the "Search" button to finalize the search.

Filter Colourise 1
Scope
○ Whole Model
Cotococio
Categories
Search Hide un-checked
Category Name
Cameras
Floors
Shaft Openings
✓ Structural Columns
Structural Framing
Walls
Parameter Type: Instance Y
Select Parameter
Starts with
Area
Host Id
IdGtcParameter
IdGtcParameter
IFC Predefined Type
IfcGUID
Image
Keynote
Length
Structural Foundations
5
Search
Search

Figure 1: How to search for elements in "Element Lookup - Color Splasher"

4.3.2. Search Results

After finishing the search and obtaining the desired results, the user has numerous options to utilize with our new feature, as illustrated in the figure below.

sults (5)						
~} % *	ð					
Category	Family	Туре	Host Id	Count	Graphics	
Structural Foundations	M_Base-Rectangulaire	1800 x 1200 x 450mm	-1 (-1)	17		
Structural Foundations	M_Base-Rectangulaire	1200 x 1200 x 450mm	-1 (-1)	4		
Structural Foundations	Wall Foundation	Soubassement de soutènement - 300 x 600 x 300		17		
Structural Foundations	Wall Foundation	Footing1x0.3		65		

Search results interface

1. Isolate/Hide elements: Easily isolate or hide selected elements to focus on specific parts of your project.



Isolate/Hide Elements function

2. Automatically assign colors: For each value of the selected parameter, this feature assigns a unique colour to elements sharing the same selected parameter value. In the example below, the selected parameter was "Length," and therefore, colours were applied based on this criterion. Users can click multiple times to randomly reassign colours across all selected elements.

Category	Family	Type	Length	Count	Graphics
Walls	Basic Wall	Générique - 200 mm	15400	3	
Structural Foundations	Wall Foundation	Retaining Footing - 300 x 600 x 300	15400	1	
Structural Foundations	Wall Foundation	Footing1x0.3	15400	3	
Walls	Basic Wall	Générique - 200 mm	15700	1	
Walls	Basic Wall	Générique - 200 mm	23000	1	
Walls	Basic Wall	Générique - 200 mm	23175	1	

Automatically assign colors function

3. Apply colors: Apply colors to elements in the current view or across multiple views, ensuring consistent visualization throughout your project. Users have the capability to apply colors to elements in plan or 3D views, constrained by model display styles such as Wireframe, Hidden Line, Shaded, and Consistent Colors.





Apply colors function

4. Generate legend: Generate a legend based on the assigned colors, providing clear and concise information about element categorization and properties. For the creation, the user needs to choose the legend name and additional information for the legend such as Category, Family Name, Type Name, and Count.

Type Name	Category	Count	Colour
1800 x 1200 x 450mm	Structural Foundations	17	
1200 x 1200 x 450mm	Structural Foundations	4	
300 x 600 x 300	Structural Foundations	17	
Footing 1x0.3	Structural Foundations	65	
	1800 x 1200 x 450mm	1800 x 1200 x 450mm Structural Foundations 1200 x 1200 x 450mm Structural Foundations 300 x 600 x 300 Structural Foundations	1800 x 1200 x 450mm Structural Foundations 17 1200 x 1200 x 450mm Structural Foundations 4 300 x 600 x 300 Structural Foundations 17

Generate legend function

5. Revert to original colors: Quickly revert the colors of elements back to their original states in the current view or across multiple views, allowing for restoration of default settings.

ategory itructural Foundations	Family M_Base-Rectangulaire	Type 1800 x 1200 x 450mm	Category Structural Foundations	Count 17	Graphics
	M_Base-Rectangulaire	1200 x 1200 x 450mm	Structural Foundations	4	
Structural Foundations	Wall Foundation	Soubassement de soutènement - 300 x 600 x 300	Structural Foundations	17	
Structural Foundations	Wall Foundation	Footing1x0.3	Structural Foundations	65	



Revert to original colors function

4.4. Analytical Model Check Sphere visualization

In our PowerPack, the previous 'Detect errors' tool has been replaced by the enhanced "**Analytical Check**" feature, which now provides visual feedback for disconnected nodes in analytical models. Now, instead of just listing errors, each issue is represented by a **red sphere** within the model space, with its size adjusting based on your chosen tolerance. This enhancement offers users a more intuitive and efficient way to identify and address model discrepancies.

The tool is available in the **Powerpack Ribbon => Structural => Analytical Check.**



To utilize the Analytical Model Check Sphere visualization, users must:

- 1. Define the scope and rules for analytical checking.
- 2. Run the analytical check.
- 3. Examine the results to address any issues.
- 4. Activate the "Show Spheres" option to display each problem in the model.
- 5. Modify the sphere scale as needed.

(Ar	nalytical Check	—		×
Scope	1			
V Cr	neck only visible analytical elements in active view	6		
Rules		U		
V Cr	neck node connections between analytical members			
V Ch	neck node connections between analytical panels			
	neck node connections between analytical members a		els	
Assigr	an error for distances less than 0.3	00		
	2 Run Analytical Check			
Resul	ts 🔺			
No.	Problem 3	Comr	mands	
1	Panels are very close, but they are not connected ids = 520051, 520078	ø	3K NK	
2	Panels are very close, but they are not connected ids = 520048, 519946	Ø	3K NK	
3	Panels are very close, but they are not connected ids = 520046, 519960	ø	NK	
4	Panels are very close, but they are not connected ids = 520045, 519946	P	NE	
5	Panels are very close, but they are not connected ids = 520051, 520033	ø	NE	
6	Panels are very close, but they are not connected ids = 520048, 519943	P	NE	
Visua	lization			
Show spheres 4 5 Sphere scale				
POWERPACK				

How to use command "Analytical Check"

In the **scope**, users can opt to run the function solely for analytical elements within the active view. Conversely, if they wish to include the entire project, they can uncheck this option.

In the function's **rules**, users can select the element node connections they wish to analyze. This includes connections between analytical members, analytical panels, and/or between analytical members and panels. Furthermore, users can specify tolerance distances for error assignment.

In the **results**, the available commands allow you to zoom and center the node, or to isolate it. Afterward, you can fix the problem by manually adjusting the elements to form the proper node.



Commands available for the results

When the user selects "**Show Spheres**", a red sphere will appear in the model for each problem listed in the error list. These spheres are visible in the analytical views 3D, plan, and section. For optimal functionality and visibility of all spheres in plans and sections, it is essential to set the view range depth sufficiently deep to encompass the entire scope of the created spheres, ensuring no obstruction in both operation and display.



Check Sphere views

Note: The spheres are only visible when the Analytical Check function is running.

Therefore, the user can adjust the sphere **scales** from 0.25 to 5.00. This adjustment will automatically apply to all views.



Sphere Scale function