



Advance Steel to Advance Design GTCX Process, Quick Start Guide.



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GRAITEC

Introduction

Welcome to this Quick start guide for the GTCX tools within the Advance Design and Powerpack for Advance Steel, we aim to walk you through the process of creating GTCX exchange files that can be used to exchange and synchronise data between the platforms.

1. Where to find the GTCX tools.

Below are details of the where the user can find and install if required the GTCX tools within the PowerPack Advance steel and Advance Design platforms.

Graitec Powerpack for Advance Steel

For <u>Advance Steel users</u> the GTCX link comes as part of the '<u>Powerpack for Advance Steel</u>', the download for this use under the Graitec Advantages website, select version to suite you Advance Steel version.

Link to website: Welcome to Graitec Advantage! · Graitec Advantage

Filters	> 2022					
Select Product	MD5 checksum for PowerPack for Advance Steel 2022	Date: 01-Jun-2021		Size: 1.00 MB	Ownload	
Advance BIM Designers Advance CAD Advance Design	Advance PowerPack for Advance Steel 2022 (DVD ISO)	Date: 01-Jun-2021	What is new PowerPack for Advance Steel 2022	Size: 7080.00 MB	Ownload	 Alternative link Backup URL
Advance Workshop Advance Workshop / Arma+ Autodesk Advance Concrete Autodesk Advance Steel	Online Setup PowerPack for Advance Steel 2022	Date: 01-Jun-2021	 What is new PowerPack for Advance Steel 2022 	Size: 8.10 MB	Oownload	
IDEA StatiCa Opentree PowerPack for Autodesk Advance Steel	Online Setup Advance 2022	Date: 01-Jun-2021	 What is new PowerPack for Advance Steel 2022 	Size: 8.40 MB	Oownload	
PowerPack for Autodesk Inventor PowerPack for Autodesk Revit PowerPack for Autodesk Vault	MD5 checksum for Advance 2022	Date: 01-Jun-2021		Size: 1.00 MB	Ownload	
Select Version	Advance 2022 (DVD ISO)	Date: 01-Jun-2021	What is new PowerPack for Advance Steel 2022	Size: 12440.00 MB	Ownload	 Alternative link Backup URL
All	> 2021					

Once installed the user will see the **PowerPack Ribbon tab** and then look for the **Manage panel** and the **GTCX tools**.



Advance Design GTCX tools.

For <u>Advance Design users</u> the GTCX is part of the <u>Advance Design</u> BIM Exchange is <u>included in the software</u> and found under the <u>BIM Ribbon Tab</u>, under the Panel **GRAITEC BIM**





Alternately in the user is start their Advance design model from Advance steel they can use the BIM Import option, from the Start page of Advance design.

2. How to use GTCX from Advance Steel to Advance Design

Create and save your advance steel model, in the normal method.

Change to the PowerPack ribbon > Manage Panel > GTC Command Drop down list> Export

PowerPack	▲ ▼					1	Explode details	C <u>⊺</u> →
One bay ▾ One bay ▾	1 🔂 Export III Check status IIS Clear marking	Kinggaan Create CAM	MB Check MP SB Check SP B Check parts	Explode details Parts to Solids	Export 2		Parts to Solids	Export 3
	Fabr	ricate		Manage			G Impor	t
							Synch	ronization

With this activation the export process is started, and the user is promoted to save the Exchange file (*. GTCX)

$\leftarrow \rightarrow \land \uparrow$	User folder lo	ocation>	> AS-AD-GTCX-Step	by Step	5 V	Search AS-AD-0	STCX-Step by
Organise 👻 New	v folder					1	. . ()
	^	Name	^	Status	Date modified	Туре	Size
				No items m	atch your search.		
		<					
File name:	AS Step By Step 1.GTCX						
Save as type:	GTCX File (*.gtcx)						`

Once saved the process is continued and the user is prompted to save the model file again to maintain consistency during this process, select ok to move forward, the GTCX is created, and the User has manually choice to save the model file.



GTCX File generated and stored automatically within the user system. (Exchange file is small size, compared to model)

^	Name	Status	Date modified	Туре	Size
	🚰 AS Step By Step 1.dwg	g	24/02/2022 12:55	AutoCAD Drawing	316 KB
	AS Step By Step 1.dwl	C	24/02/2022 12:55	DWL File	1 KB
	AS Step By Step 1.dwl2	e	24/02/2022 12:55	DWL2 File	1 KB
	ሯ AS Step By Step 1.GTCX	C	24/02/2022 13:07	Advance Design	28 KB

Tip: The user may wish to introduce and additional folder into their structure to store the GTCX file if they so wish, to keep GTCX files stored in one place within the project structure.

This completes the process within the Advance steel platform to generate the GTCX file for data exchange to Advance Design.

Within Advance Design, the user would see a couple of methods to bring in the Data exchange GTCX file, we will expand upon them below:

Bim Import method.

Used when starting new project with the model coming from an GTCX source file. This is found on the initial start page of the project.



Selecting this then allows the user to browse to the generated file from Advance steel and import that into a new workspace. The user will be prompted to select the GTCX file that was created within PowerPack Advance steel and with that the file is imported.

Advance Design - V	ersion 2022.1 Recent Files			
Update	🚱 Open file		×	
	$\leftrightarrow \rightarrow \checkmark \uparrow$	AS-AD-GTCX-Step by Step	 ・ ・ ・	
🔊 New	Organise 👻 New folder		≣≕ - □ 😗	
🗁 Open	^ Nar	ne Status	Date modified	
BIM Import		AS Step By Step 1.GTCX	24/02/2022 13:07	
Configuration				
		-		
	× <		>	
	File name: AS Step By Step 1.GT	CX	✓ Graitec Exchange Archive (*.gtc ∨	
			Open Cancel	

Selecting the file and then open will start the import process.

The file is imported, during that process, the user may be prompted with the Project titles dialog, for them to complete to skip as they required, if *this is not Check to be not displayed at start-up*

Project Titles		×
Name		
Lot		
Address		
City		
No	Phase	Variant A
	List of business stakeholders	
All wizard parameters are	accessible on the 'File $\ Project$ titles' menu.	
Do not display		

The GTCX is then turned into an Advance Design model, they are an automatic name to the file coming from the GTCX and a default save location. (The user may choose to save the model elsewhere.)



The user may start their analysis process from this imported file.

BIM Ribbon tab> Graitec Bim commands

Using the Graitec BIM tools from Bim ribbon is the other method to bring in a transfer file into a project model that is already started, maybe to bring in some additional structure from adjoined elements, this maybe the preferred method by the user to start a project.

The user starts by selecting the Import command from the available dropdown listing under the Graitec Bim panel.



This process will then start, and the user will be prompted to confirm the import process into the current model, selecting yes will continue the process.

	Advance Design	23	
G	Do you want to import the GTC file in the current model?		
	Yes No Cance	I	

Next the user will see a dialog to browser and select the required GTCX file, selecting this file and then the open button to import the data into the current model.

	> AS-AD-GTCX-Ste	ep by Step	5 V	,> Sear	ch AS-AD-GTC	X-Step by
Organise 👻 New folder						
	^ Name ^	Status	Date modified	1		
	AS Step By Step 1	0	24/02/2022 14:24	F		
	FTDoc1	C	24/02/2022 14:27	F		
	🗇 AS Sten By Sten 1.GTCX		24/02/2022 13:07			
		C	24/02/2022 13:07	4		
	~ <			>		

The model is now imported into the current workspace of Advance design for the Analysis process to start.



The user may start their analysis process from this imported file.



3. How to use GTCX from Advance Design to Advance Steel

In this section we focus upon the export from Advance design via GTCX.

In Advance Design the GTCX tools are input into the BIM Ribbon and found under the GRAITEC BIM Panel. The user will see the options to import, export and Synchronise under the drop-down menu available.



GTCX Export

Selecting from the drop down the '**Export'** option the user will then be prompted to save the GTCX file to be exported from Advance Design via a browser window, allowing the user to save the file to their required location.

← → × ↑ <mark>_</mark> «	> > > AS-AD-GTC	(-Step by Step	ر ت ~	Search AS-AD-GTCX-S	Step by
Organise 🔻 New folder				*== *	?
	^ Name ^	Status	Date modified	Туре	Size
	AS Step By Step 1	S	24/02/2022 14:24	File folder	
	AS Step By Step 2	0	24/02/2022 14:46	File folder	
	Gy AS Step By Step 1.GTCX	0	24/02/2022 13:07	Advance Design	2
	🖾 AS Step By Step 2.GTCX	0	24/02/2022 13:07	Advance Design	2
	v <				>
File name: AS Step By S	itep 2.GTCX				>

Once saved the process is continued and the user is prompted to save the model file again to maintain consistency during this process, select ok to move forward, the GTCX is created, and the User has manually choice to save the model file.

GTCX File generated and stored automatically within the user system. (Exchange file is small size, compared to model)

With the GTCX file saved the file maybe shared with the other software, in this example Advance Steel.

GTCX Import to Advance Steel.

Using the Generated GTCX file from Advance design the Advance Steel user can start a new model file from a template, recommend saving that model file ready for the import.

The GTCX import tool is found under the Powerpack ribbon Tab, go to the Manage panel and then select from the drop down list the 'Import' command.

La Clear marking	PowerPack One bay +	Export Check status	Create CAM	MB Check MP SB Check SP	Explode details	G1 Export	Parts to Solide	Export
Pabricate Manage 3		Fabi	ricate	•	Manage	2	G_ Import	t

This command will then open a dialog for the user to browser to the required file. (For this example, we give the file a new name to differentiate from the source file we created within AS)

	93. 87 s			at 1 (1990).	12/11/2012 01:01	201
$\leftrightarrow \rightarrow \neg \uparrow$	> AS-AD-G	TCX-Step by Step	٩	Search AS-A	AD-GTCX-Ste	p by
Organise 👻 New folder				8=	•	0
	^ Name	Status	Date modified			
	AS Step By Step 1	٢	24/02/2022 14:24	F		
	FTDoc1	C	24/02/2022 14:27	F		
	G AS Step By Step 1.GTCX	0	24/02/2022 13:07	1		
	🖾 AS Step By Step 2.GTCX	C	24/02/2022 13:07	2		
	v <					
	× <			>	A 1 - 10	

The model is then populated with the elements contained with the GTCX file created from the Advance design platform.

During the process you may encounter a mapping dialog, asking you map entries into the mapping database.

The model is generated within the Advance steel workspace, the user should save the file after the import process.

The user may now start to work on the file.



4. GTCX Synchronizing data

As part of the GTCX Toolset there is a Synchronization option to allow the users of both Advance Steel and Advanced design to exchange Changes within their models, without having to change out the whole model, the dialog and options allow for the user to select elements within the dialog and keep them, as either group selection or single item. Within this section we will explore that function.

Advance Design Synchronisation tool

The synchronisation command is located under the BIM Ribbon tab within the Graitec BIM panel and under the drop-down list, the bottom item shown.



Advance Steel Synchronisation tool

The synchronisation command is located under the 'Powerpack' Ribbon tab within the 'Manage' panel and under the drop-down list, the bottom item shown.

PowerPack							Explode _ details	GI .
One bay + One bay +	1	Create CAM	MB Check MP SB Check SP B Check parts	Explode details Parts to Solids	Export 2		Parts to Solide	Export
	Fabi	ricate		Manage			G_ Import	
						3	Synchi	ronization

Synchronization operation – an example

To demonstrate the Synchronization operation, we can take an Advance design model, that may have previously come from Advance Steel (it could be the reverse of this) within that Advance Design model we can make a simple change to a section profile size, this can then be exported via the Same Export options we showed earlier.

For this example, we change the column size to a UC 356x368x129

See example image on next page:



After the change then go to the **BIM Ribbon> Graitec BIM and the Export** command and **create a New GTCX file** with these changes in place.

Organise 🔻 New folder					?
Autodesk Docs	^ Name	Status	Date modified	Type	Size
B BIM 360 Team	AC Chan Du Chan 1		24/02/2022 14:24	Sin failden	
	AS Step By Step 1	.	24/02/2022 14:24	File folder	
Desuments	AS Step By Step 2		24/02/2022 14:40	File folder	
	AS Step By Step 1 GTCV	ő	23/02/2022 14:19	Advance Decign	
Downloads	AS Step By Step 1-2 GTCX	ă	24/02/2022 15:07	Advance Design	
🛝 Drive	AS Step By Step 1-2.0 ICX	ő	25/02/2022 14:19	Advance Design	
👌 Music	As step by step 2.0 lex	•	23/02/2022 14/21	Advance Design	
Pictures					
📑 Videos					
🏪 Windows (C:)					
Recovery Image (D:)					
HP_TOOLS (E:)					
Data (G:)	v <				
File name: AS Step By Ste	p 2-Sync columns.GICX				

Then returning to the Advance Steel Platform, within the same model space, then going to the Powerpack Ribbon and Manage panel select the synchronization command.

One bay 👻 One bay 👻	Export II Check status II Clear marking	Create CAM	MB Check MP SB Check SP B Check parts	Explode details Parts to Solids	Ct→ Export 2	Parts to Solide	Export
	Fab	ricate		Manage		C Import	

When selecting this command a new dialog will appear, showing the synchronisation tools. Select the GTCX file just created from within the advance design export process.



The dialog is then populated with the Changes found within the Sync dialog.

- oynemonisatie									
Den		te	a f		\oplus				
FileName : Loaded :	AS Step By Ste 02:54 25/02/22	Analysis Cle	a L ar Co Op	LLI O olumn otions	T=.1 Ge Tolerance Rep	ort		Hide/S	how Columns
Modified :	02:49 25/02/22	Result packages							
		FEM Results		Not ava	ilable				
Legend :		Reinforcement		Not ava	ilable				
New	0 objects								
Modified	4 objects		Decision	GTC ID	Object Type	Status	Level	Changed Attributes	
Deleted	0 objects	[Search]	[Search]	[Search]	[Multiple Selection]	[Multiple Selection]	[Search]	[Search]	
Unchanged	520 object	Column	Keep 🕤	384	Column	Modified	- -	Туре	
		Column	Keep 🗡	832	Column	Modified	- -	Туре	
		Column	Keep 🗡	3152	Column	Modified	- -	Туре	
		Column	Keep 🗡	5456	Column	Modified	- -	Туре	
Kept : Accepted :	524 objects 0 objects								

The items within the dialog are expandable and there are tools to allow filtering when encountering multiple object types and changes etc.

Also, the user may select multiple lines and change at once all the items that are the same, using the 'Shift key'

For this example, we can see that the change in column sizes has been introduced into the dialog, showing the change as a modification, with then options to **'Keep'**, **'ignore'**, **'accept'**. For this example, we are going to select **'Accept'**.

A Synchronisatio	on								- 0	×
Open FileName : Loaded : Modified : Legend :	AS Step By Ste 02:54 25/02/22 02:49 25/02/22	Analysis Clea Result packages FEM Results Reinforcement	ar Co	Not ava	Tolerance Rep	et port			Hide/Show Colum	ns <<
New Modified	0 objects		Decision	GTC ID	Object Type	Status	Level	Changed Attributes	Туре	
	4 objects 0 objects	[Search]	[Search]	[Search]	[Multiple Selection]	[Multiple Selection]	[Search]	[Search]	[Search]	
Unchanged	520 object	Column	Keep ~	384	Column	Modified		Туре	UC254x254x107 UC356x368x129	
		Parameters	Keep ~		-	Modified	- -	Туре	UC254x254x107 UC356x368x129	
		Name Type	D	ecision eep	Host UC25	Application Value 4x254x107	GTC File UC356x3	Value 68x129		
			Keep 🗡	832	Column	Modified	- -	Туре	UC254x254x107 UC356x368x129	
		Column	Keep 🗡	3152	Column	Modified	- -	Туре	UC254x254x107 UC356x368x129	
		Column	Кеер 🗡	5456	Column	Modified	- -	Туре	UC254x254x107 UC356x368x129	
Kept :	524 objects									
Accepted :	0 objects									
Ignored :	0 objects									
									OK Apply C	lose
	1									

Note: The basic of the decision column, is that if you choose to 'Ignore' then the change will be removed from the listing under the sync, 'Keep' will maintain it within the process and 'Accept' will commit it to the exchange process and change it in the physical model.

With the decision set to ACCEPT the columns are then changed to accept and the user selects apply.

A Synchronisatio	on								— C	×
Open FileName : Loaded : Modified : Legend :	AS Step By Ste 02:54 25/02/22 02:49 25/02/22	Analysis Cle Result packages FEM Results Reinforcement	a Co Par Op	lumn vtions Not ava	Tolerance Rep	O et ort			Hide/Show Colur	nns <<
New New	0 objects		Decision	GTC ID	Object Type	Status	Level	Changed Attributes	Type	
	4 objects 0 objects	[Search]	[Search]	[Search]	[Multiple Selection]	[Multiple Selection]	[Search]	[Search]	[Search]	
Unchanged	520 object	Column	Keep ~	384	Column	Modified	- -	Туре	UC254x254x107 UC356x368x129	
		Column	Keep 🗡	832	Column	Modified	- -	Туре	UC254x254x107 UC356x368x129	
		■ Column	Keep 🗡	3152	Column	Modified	- [-	Туре	UC254x254x107 UC356x368x129	
		. ■ Column	Keep 🗡	5456	Column	Modified	- -	Туре	UC254x254x107 UC356x368x129	
			Keep						·	
			Accept							
			Ignore							
Kept :	524 objects									
Accepted :	0 objects									
Ignored :	0 objects									
									OK Apply	Close

With the apply the user is prompted again as a double check to confirm these changes.

A Synchronisation		×
Apply changes?		
	Yes	No

This is then followed by a synchronisation report pop up for the user to decide if required or not.



Selecting yes will bring up the Save dialog, for user to select location and file name.

$\leftrightarrow \rightarrow \checkmark \uparrow$ \checkmark "	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	tep by Step	 5 	Search AS-AD-GT	CX-Step by
Organise 🝷 New folder					- ?
	^ Name ^	Status	Date modified	Туре	Size
	AS Step By Step 1	0	24/02/2022 14:24	File folder	
	AS Step By Step 2	C	24/02/2022 14:46	File folder	
	N 6				
	* *				
File nam :25_February_20	22_15_24.doc				~
Save as type: Document files (*.doc)				~
			_		

After this the user can close the dialog, the model is changed to reflect the synchronisation changes accepted from the process.

Positioning Naming Fabrication data User attributes Display type Behaviour Cambered properties	Section	• • UK Universal Colu • UC356x368x129	~
	Material Material Coating	Steel S355 Coating as specified	~
	Galvanizing Construction class Detail class	None	~

5. References/Resources

How to install the Powerpack, see the installation guide on the Graitec Advantages website, (*user registration required -free access*) under documentation download:

Link to website: Download Documentation · Graitec Advantage

> 2022					
What is new PowerPack for Advance Steel 2022.1	Date: 10-Oct-2021		Size: 1.00 MB	Oownload	Alternative link
What is new PowerPack for Advance Steel 2022	Date: 01-Jun-2021		Size: 3.50 MB	Download	Alternative link
Installation Guide 2022	Date: 01-Jun-2021		Size: 4.97 MB	Ownload	Alternative link
	What is new PowerPack for Advance Steel 2022.1 What is new PowerPack for Advance Steel 2022 Installation Guide 2022	What is new PowerPack for Advance Steel Date: 10-Oct-2021 What is new PowerPack for Advance Steel Date: 01-Jun-2021 Installation Guide 2022 Date: 01-Jun-2021	What is new PowerPack for Advance Steel Date: 10-Oct-2021 What is new PowerPack for Advance Steel Date: 01-Jun-2021 Installation Guide 2022 Date: 01-Jun-2021	What is new PowerPack for Advance SteelDate: 10-Oct-2021Size: 1.00 MBWhat is new PowerPack for Advance SteelDate: 01-Jun-2021Size: 3.50 MBInstallation Guide 2022Date: 01-Jun-2021Size: 4.97 MB	What is new PowerPack for Advance Steel 2022.1Date: 10-Oct-2021Size: 1.00 MBDownloadWhat is new PowerPack for Advance Steel 2022Date: 01-Jun-2021Size: 3.50 MBDownloadInstallation Guide 2022Date: 01-Jun-2021Size: 4.97 MBDownload

For full information over the synchronisation features check the Graitec Advantage site for documentation and Help links.

