

Export CAD for CortexStructural

How to export data from different software

CAD files are the source of information for Cortex. Depending on the source software, some features will work or not.

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	Fiekla Structures	SDS/2	AUTODESK' ADVANCE STEEL 2018	Bentley ProStructures	AVEVA
MAIN MEMBER TYPE		IFC EM11	IFC EM11	PLUGIN ON REQUEST ¹³	IFC 2X3 ON REQUEST ³⁴
W-Beam					
HSS			<u> </u>		
Channel			<u> </u>	<u> </u>	<u> </u>
Fabricated Beam	¥	v V	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~
GENERAL FEATURES					
Supports Coped beams		✓			
Can Read Holes	 Image: A set of the set of the	 ✓ 	~	~	\checkmark
Holes Sent to Simulation	×	 Image: A second s	\checkmark	\checkmark	\checkmark
WELDING INFORMATION					
Can read					017
Weld Position	\checkmark	0	0	0	015
Weld Size	\checkmark	\sim	\checkmark	\sim	\sim
Multi-Pass information from CAD	✓	✓	\sim	\checkmark	\sim
Stitch Welds from CAD	✓	0	0	0	O ¹⁵
Cortex can generate					
Welds in Catch All mode	\checkmark	\checkmark	\checkmark	\sim	\sim
Multi-Pass Welds in Catch All mode	\checkmark	\sim	\checkmark	\sim	\sim
Stich Welds	✓	✓	\checkmark	\checkmark	\sim
Welds between coped section and accessories on IBeam	✓	✓	\sim	\checkmark	\sim
Welds between coped section and accessories on HSS	~	 	\checkmark	\checkmark	\checkmark
DELETE					
Accessories in Cortex	✓	 ✓ 	\checkmark	\checkmark	 Image: A set of the set of the
Welds in Cortex	×	 	\checkmark	\checkmark	\checkmark
GEOMETRY					
Can Weld K-Section (Generate profile with curve)	✓	✓	\sim	\checkmark	\sim
Can Weld HSS Convex Curve Section (eg. on end-plate)	\checkmark	 ✓ 	 Image: A set of the set of the	\sim	\sim
Can Adapt Weld Schedule with roundness section (eg. front of an angle)	✓	 ✓ 	 Image: A set of the set of the	\sim	\sim
Can weld supported Flare Bevel Joints	 ✓ 	0	0	0	017
	LEGEND V O X	Supported	echnically possible to add i	n future releases)	

1. BEAM/BUILDING ANALYSIS OVERVIEW

- Generally, AGT Robotics can test beams and buildings with CORTEX to follow these objectives:
 - Validate the compatibility between the CAD software but mostly how the beams and columns are drawn;
 - Welds:
 - Validate that the welds modeled in the CAD software can be read by Cortex; OR;

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- Validate that the auto-generated welds by CORTEX are located at the right position and with the right size.
- General accessibility:
 - Validate the overall results (what welds can be done with robots)?
 - Validate main reasons if welds are not supported.
- 2. PROCEDURE TO SEND BUILDING FOR ANALYSIS
 - Identify a few representative beams OR an entiran entire division that is representative
 - General guidelines to select beams:
 - Check with system specifications and send beams that fits with the specifications (ex: if system supports 48-in section maximum beams do not send beams that exceed this)
 - For good turnaround from AGT, select less than a 200 beams.
 - To have a general view of the division or the building, it is also a good practice to send the .IFC file (as it supports the relationship between beams and we will see the building as a whole)

3. GET CAD DATA

- TEKLA
 - Send the .AGTX using Cortex Plugin for Tekla
- SDS/2
 - Send .IFC file from SDS/2
- ADVANCED STEEL
 - Send .IFC file from Advanced Steel
- Aveva (BoCad) Export
 - Send .IFC from Aveva (BoCad)

4. UPLOAD .AGTX and/or .IFC files on

• Contact your sales representative to get an upload link

5. VISUALIZE RESULTS

• Download/Install Visual Components Experience

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