



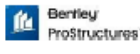



# Export CAD for CortexStructural

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.

	 	 IFC EM11	 IFC EM11	 PLUGIN   ON REQUEST <sup>13</sup>	 IFC 2X3   ON REQUEST <sup>14</sup>
<b>MAIN MEMBER TYPE</b>					
W-Beam	✓	✓	✓	✓	✓
HSS	✓	✓	✓	✓	✓
Channel	✓	✓	✓	✓	✓
Fabricated Beam	✓	✓	✓	✓	✓
<b>GENERAL FEATURES</b>					
Supports Coped beams	✓	✓	✓	✓	✓
Can Read Holes	✓	✓	✓	✓	✓
Holes Sent to Simulation	✓	✓	✓	✓	✓
<b>WELDING INFORMATION</b>					
Can read...					
...Weld Position	✓	0	0	0	0 <sup>15</sup>
...Weld Size	✓	✓	✓	✓	✓
...Multi-Pass information from CAD	✓	✓	✓	✓	✓
...Stitch Welds from CAD	✓	0	0	0	0 <sup>16</sup>
Cortex can generate					
...Welds in Catch All mode	✓	✓	✓	✓	✓
...Multi-Pass Welds in Catch All mode	✓	✓	✓	✓	✓
...Stitch Welds	✓	✓	✓	✓	✓
...Welds between coped section and accessories on IBeam	✓	✓	✓	✓	✓
...Welds between coped section and accessories on HSS	✓	✓	✓	✓	✓
<b>DELETE</b>					
...Accessories in Cortex	✓	✓	✓	✓	✓
...Welds in Cortex	✓	✓	✓	✓	✓
<b>GEOMETRY</b>					
Can Weld K-Section (Generate profile with curve)	✓	✓	✓	✓	✓
Can Weld HSS Convex Curve Section (eg. on end-plate)	✓	✓	✓	✓	✓
Can Adapt Weld Schedule with roundness section (eg. front of an angle)	✓	✓	✓	✓	✓
Can weld supported Flare Bevel Joints	✓	0	0	0	0 <sup>17</sup>

**LEGEND**  
 ✓ Supported  
 0 Not included (but technically possible to add in future releases)  
 X Not supported

### 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;

- 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 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](#)