

# CORTEX



## AUTO-PROGRAMMING

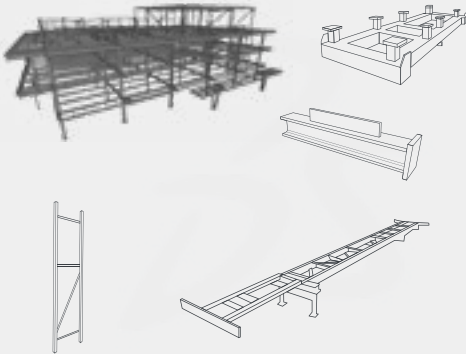
ONE CLICK TO WELD



# WHAT IS CORTEX ?

CREATING A ROBOT PROGRAM HAS NEVER BEEN EASIER.

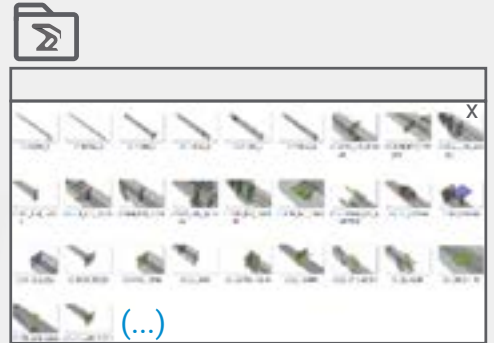
## 1 EXPORT MODEL



## 2 AUTOMATICALLY GENERATE PROGRAMS




Let CORTEX automatically create custom-tailored robotic welding programs for every unique beam.



 Tekla Structures

 SDS/2 DESIGN DATA

 SOLIDWORKS

 bocad Software Direct

 AUTODESK INVENTOR

 AUTODESK ADVANCE STEEL

 CATIA

 Solid Edge

## THE FASTEST WAY TO PROGRAM A ROBOT IS TO NOT PROGRAM IT!

Robot programming has come a long way, even though teach pendant is still the most popular way to program a robot. With the development of Offline Programming, Kinetic programming and more user-friendly methods, programming a robot has never been easier.

However, all these techniques still involve a robot programmer in the process. CORTEX completely automates the programming process. The end result: a virtually tested program ready for production.



## PERFECT SOLUTION FOR

LOW-VOLUME | HIGH-MIX  
SMALL BATCH  
LOT-OF-ONE  
QUANTITY ONE



INFINITE NUMBER OF COMBINATIONS

However you define it, CORTEX is the solution for all of your unique beams produced in small quantities. You have seen robots operate and know they are fast, repeatable, and that they show up every morning, yet you also know that each part needs to be programmed. If you have hundreds of combinations, each program will take many hours, if not many days. With CORTEX you don't need qualified welders and you don't need to program.



## WORKS WITH MOST POPULAR 3D CAD SOFTWARE

For structural steel customers, CORTEX includes plugins that work inside Tekla or SDS/2 which allows the entire assembly or building to be exported in one operation

For heavy fabrication, CORTEX can import the 3D geometry and custom add ons can be added to get the welding information (position and size).



CAD Add-on



Welding Schedule Development

## CAN BE CUSTOMIZED TO YOUR NEEDS

CORTEX capabilities can be extended in many ways. For non-structural applications, custom add-ons are typically needed to:

- Get the «where to weld» information
- Get the «weld size»
- Create generic rules

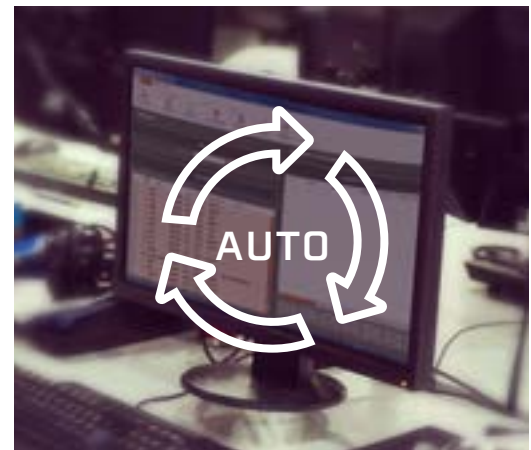
Also, the weld schedule database typically needs to expand to add new joint possibilities.

## NO PROGRAMMING = NO HUMAN INTERVENTION THE ONLY TRUE NO-PROGRAMMING SOLUTION FOR ROBOTIC WELDING!

This is WHY the BEAMMASTER has quickly become the number one selling robotic welding system for structural steel. In a typical building there are many similar beams but only a few are ever exactly the same making it impractical to automate using conventional robotic programming methods (teach pendant, offline programming, etc.). CORTEX was specifically developed for the structural steel industry to automatically batch process an entire building to create completely tailor-made robot programs for each unique beam.

### CORTEX WILL AUTOMATICALLY:

- ✓ Position the beams in the rotators
- ✓ Read the weld information from CAD or auto-generate welds as per your specifications
- ✓ Generate welding paths
- ✓ Associate welds with the correct welding schedule
- ✓ Generate the joint finding paths
- ✓ Generate weld to weld movements
- ✓ Generate the torch maintenance routines
- ✓ Sequence welds to prevent heat distortion
- ✓ Rotate beams to access all faces
- ✓ Convert lengthy, longitudinal welds into stitches and more !



## NO PROGRAMMING = NO PROGRAMMER

Don't be fooled by other manufacturers' claims that their solutions require no-programming. If the software user needs to indicate to the robot what welds to perform by clicking on the joint and specifying the weld leg size, or position the beam inside the robotic system... THAT IS PROGRAMMING! It may be a simpler more graphical method than generating lines of code, but it still requires a skilled user (programmer) and adds time and cost to your process!

ONLY CORTEX is a true no-programming solution. With CORTEX, only a few mouse clicks are necessary to start the program creation process for an ENTIRE BUILDING. The result is hundreds of unique robot programs created totally automatically.









# CREATING A ROBOT PROGRAM HAS NEVER BEEN THAT EASY !

Once the model has been exported in the proper 3D, format, it literally takes SECONDS to launch the automatic batch program creation process.

## PROGRAMMING TIME

Teach Pendant		8 TO 36h
Offline Prog		4 TO 24h
		0

### 1. OPEN FILE GENERATED FROM CAD



### 2. SELECT ALL PARTS



### 3. LAUNCH AUTOMATIC ROBOT PROGRAM CREATION AND SIMULATION



## WORKS WITH MANY CONFIGURATIONS

Robotic Welding cells have many different designs. CORTEX will work with many configurations like robot on rail, robot on gantry, positioners, etc.



## AUTO-PROGRAMMING ONE CLICK TO WELD



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