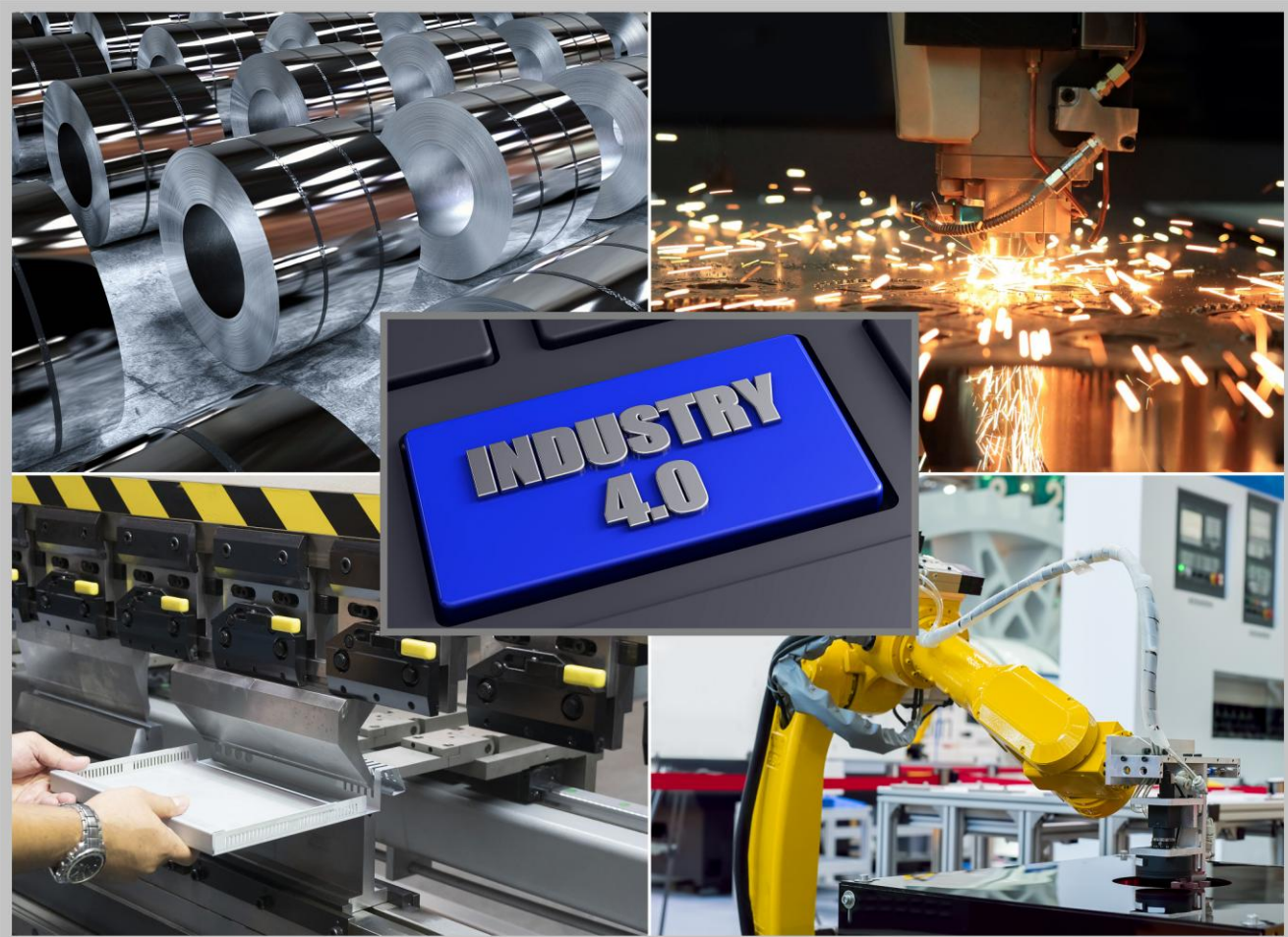


Global Edge[®] Engineering Assistant



Transforming Engineering & Manufacturing ...

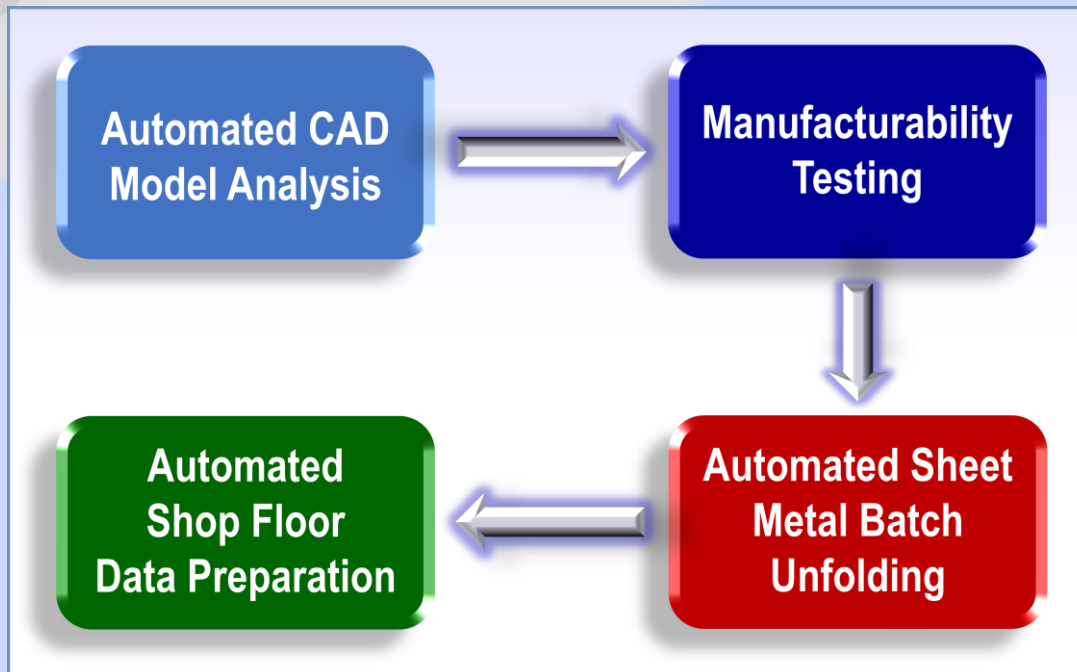


[**www.idcglobal.com**](http://www.idcglobal.com)

Global Edge® Engineering Assistant



Global Edge® Engineering Assistant is an innovative and affordable workflow tool that is designed to increase engineering capacity by automating labor intensive workflow tasks. This is accomplished with four key areas that can save your company thousands of engineering hours each year with the following:



Global Edge® Engineering Assistant is the ideal tool to get more out of your engineering department in terms of productivity, consistency, and information accuracy with labor intensive engineering workflow tasks.

Increase your engineering capacity by automating time consuming workflow tasks while freeing up time for creative value-added work that makes your business stand apart from the competition. Key features and benefits include:

- Automates Labor Intensive Engineering Workflow Tasks
- Manufacturability Testing to Eliminate Shop Floor Rework
- Facilitates Automated Programming of Press Brakes, Panel Benders & Robotic Folders
- Provides Automated Preparation of Shop Floor Data

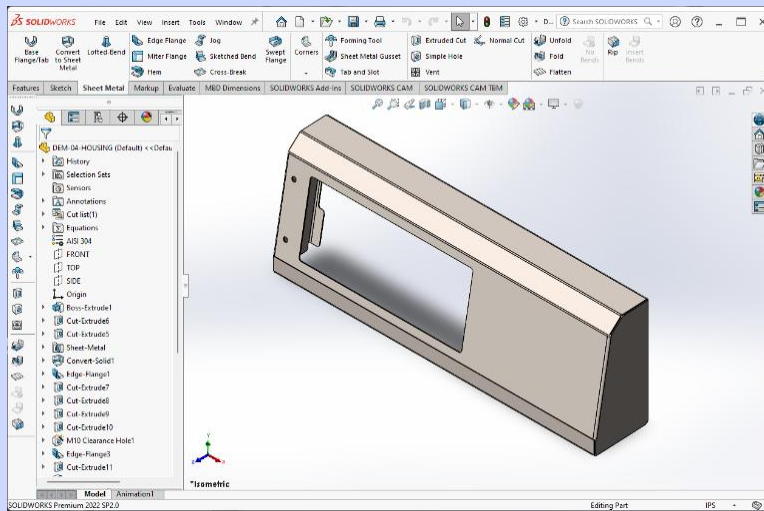
Global Edge® Engineering Assistant



Automated CAD Model Analysis

Global Edge® Engineering Assistant provides the capability to automatically analyze your CAD parts with a couple clicks of the mouse.

The CAD part parameters analyzed provides the necessary information for quoting, routing generation, accurate cost rollups, manufacturability testing, and facilitating automatic bend program generation.



Part Number	Description	UOM	Type	Cat.	Style	Mtl.
DEM-04-HOUSING	SHEET METAL HOUSING	EA	C	SHT	-	304-4
Setup Cost:	142.5000		Material:	304-4-STAINLESS STEEL		
Process Cost:	24.7713		Ship Weight:	17.4537		
Component Cost:	43.6343		Ship Weight UOM:	lbs		
Rollup Cost:	210.9056		Standard Cost:	210.9056		

CAD Part Parameters

Par. #	Parameter Name	Value	UOM	Par. #	Parameter Name	Value	UOM
1	Sheet Length:	0.000000	inches	25	Minimum Pem Gap:	1.200000	inches
2	Sheet Width:	0.000000	inches	26	Minimum Down Pem Gap:	1.800000	inches
3	Blank Length:	0.000000	inches	27	Minimum Emboss Gap:	0.000000	inches
4	Blank Width:	0.000000	inches	28	Minimum Down Emboss Gap:	0.000000	inches
5	Material thickness:	0.075000	inches	29	Minimum Louver Gap:	0.000000	inches
6	Perimeter:	133.048128	inches	30	Minimum Down Louver Gap:	0.000000	inches
7	Flat Length:	42.193245	inches	31	Min. Taper Bend Line Gap:	0.000000	inches
8	Flat Width:	19.699142	inches	32	Minimum Die Cutout:	0.000000	inches
9	Round Hole Count:	2.000000	-	33	Up Bend Count:	8.000000	-
10	Round Sizes Count:	1.000000	-	34	Internal Up Bends Count:	0.000000	-
11	Obround Hole Count:	0.000000	-	35	Maximum Up Bend:	5.296000	inches
12	Obround Sizes Count:	0.000000	-	36	Down Bend Count:	0.000000	-
13	Rectangular Hole Count:	0.000000	-	37	Internal Down Bends Count:	0.000000	-
14	Rectangular Sizes Count:	0.000000	-	38	Maximum Down Bend:	0.000000	inches
15	Other Hole Count:	1.000000	-	39	Fold Count:	8.000000	-
16	Other Sizes Count:	1.000000	-	40	Hem Count:	0.000000	-
17	Number of Cutouts:	3.000000	-	41	Extrude Count:	0.000000	-
18	Cutout Perimeter:	48.355855	inches	42	Bend Radius:	0.120000	inches
19	Minimum Bend Length:	8.451000	inches	43	Cutting Method:	Laser	-
20	Maximum Bend Length:	32.210000	inches	44	Cutter Ref. Number:	-	-
21	Minimum Bend Angle:	45.000000	degrees	45	Certified Material:	No	-
22	Maximum Bend Angle:	90.000000	degrees	46	Material:	304-4	-
23	Minimum Flange Width:	0.927000	inches	47	Cutout Distance:	18.055118	inches
24	Maximum Flange Width:	5.296000	inches	48	Part Distance:	30.946193	inches



Manufacturability Testing

Global Edge® Engineering Assistant provides the ability to perform manufacturability tests on your sheet metal parts to determine if they can be successfully fabricated before reaching the shop floor.

This is made possible by comparing CAD part parameters with user defined bend processes that match the capabilities of your bending machine tools.

Manufacturability Test Results			
Bend Process #:	18	Bottom Bend, SS, 304-4, 0.075, Radius - 0.120	DEM-04-HOUSING SHEET METAL HOUSING
Material Code:	304-4	Pass	Extend #: 1 46
Material Thickness:	0.075000	Pass	Linear UOM: inches 5
Minimum Thickness:	0.073000	Maximum Thickness:	0.077000
Upper Tool Set:	2	Upper Part #:	BIU-817
Lower Tool Set:	7	Lower Part #:	OZU-318
Inside 90 Radius:	0.120000	Pass	Radius Tol: 0.010000 42
K Factor 90:	0.445000	Bend Allowance 90:	0.008000
Gage Allowance 90:	0.003000	Tons Per Foot:	20.000000
Minimum Flat Length:	6.000000	Pass	Max. Flat Len: 96.000000 7
Minimum Flat Width:	4.000000	Pass	Max. Fl. Width: 60.000000 8
Maximum Tonnage:	80.000000	-	-
Maximum Part Weight:	50.000000	-	Mass UOM: lbs
Min. Bend Length:	0.750000	Pass	- 19
Max. Bend Length:	96.000000	Pass	- 20
Minimum Bend Angle:	39.000000	Pass	- 21
Maximum Bend Angle:	180.000000	Pass	- 22
Min. Flange Width:	1.200000	Fail	307 23
Max. Flange Width:	24.000000	Pass	- 24
Maximum Up Bend:	24.000000	Pass	- 35
Maximum Down Bend:	6.000000	N/A	- 38
Min. BL Up Pem:	1.500000	Fail	505 25
Min. BL Down Pem:	2.000000	Fail	506 26
Min. BL Up Emboss:	1.100000	N/A	- 27
Min. BL Dn. Emboss:	1.300000	N/A	- 28
Min. BL Up Louver:	0.900000	N/A	- 29
Min. BL Down Louver:	1.400000	N/A	- 30
Min. BL Taper Edge:	0.770000	N/A	- 31
Min. BL Die Cutout:	0.440000	N/A	- 32
			Minimum Bend Length: 8.451000 inches
			Maximum Bend Length: 32.210000 inches
			Minimum Bend Angle: 45.000000 degrees
			Maximum Bend Angle: 90.000000 degrees
			Minimum Flange Width: 0.927000 inches
			Maximum Flange Width: 5.296000 inches
			Maximum Up Bend: 5.296000 -
			Maximum Down Bend: 0.000000 -
			Minimum Pem Gap: 1.200000 inches
			Minimum Down Pem Gap: 1.800000 inches
			Minimum Emboss Gap: 0.000000 inches
			Minimum Down Emboss Gap: 0.000000 inches
			Minimum Louver Gap: 0.000000 inches
			Minimum Down Louver Gap: 0.000000 inches
			Min. Taper Bend Line Gap: 0.000000 inches
			Minimum Die Cutout: 0.000000 inches

Global Edge will identify part fabrication errors such as:

- ✓ Pem Holes Too Close to Bend Line
- ✓ Maximum Bend Tonnage Greater than Process Allows
- ✓ Part Too Big for Bend Process
- ✓ Bend Angle Exceeds Maximum Allowed

Global Edge® Engineering Assistant



Automated Sheet Metal Batch Unfolding

Global Edge® Engineering Assistant provides automated batch unfolding of 3D SolidWorks Sheet Metal CAD parts into DXF Flat Files.

This includes the automated unfolding of either a single, or large batch of SolidWorks sheet metal parts sorted by material, thickness, and optionally by job date, cutting and bending method.

Global Edge - File Export

Batch #: 11 Type: Manufacturability CAD Export & Manufacturability Test Date/Time: Status: Pending

Processing Part #: Processing Task: of:

Part Type: Material: Thickness:

File Path:

Operation: Ready

Task#	Doc #	File	Mir Test Results	Status
<input checked="" type="checkbox"/>	1110	--	C:\GlobalEdge\demo\CAD-Files\MFG-TEST\DEM-01-APRON.sldprt	Pending
<input checked="" type="checkbox"/>	1111	--	C:\GlobalEdge\demo\CAD-Files\MFG-TEST\DEM-02-LOAD-CTR-BOX.sldprt	Pending
<input checked="" type="checkbox"/>	1112	--	C:\GlobalEdge\demo\CAD-Files\MFG-TEST\DEM-03-BOTTOM-DLH.sldprt	Pending
<input checked="" type="checkbox"/>	1113	--	C:\GlobalEdge\demo\CAD-Files\MFG-TEST\DEM-04-HOUSING.sldprt	Pending
<input checked="" type="checkbox"/>	1114	--	C:\GlobalEdge\demo\CAD-Files\MFG-TEST\DEM-05-PANEL.sldprt	Pending

EXPORT OPTIONS

DXF Files - Version: none STEP File - Version: AP203 2D PDFs Silent Mode Data Import

DWG Files - Version: R2013 STL Files 3D PDFs Manufacturability Test Document Link

ACIS(SAT) Files Additive Manufacturing JPEG File Bend Resize: None Extended Data DXF

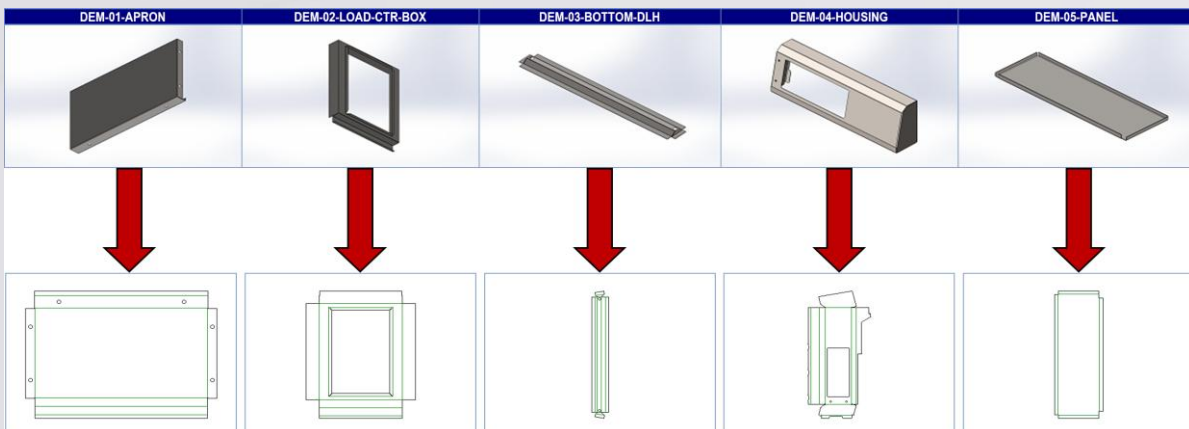
IGES Files 3D Manufacturing Debug Mode Save Model Changes

Output Directory Save Location

C:\GlobalEdge\demo\CAD-Files\MFG-TEST\DXF-Files

5 Total Files
0 Open Files

Database: globaledge Username: ldc



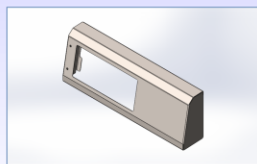


Automated Shop Floor Data Preparation

Global Edge® Engineering Assistant provides automated preparation of shop floor information that includes the generation of DXF flat files with extended data.

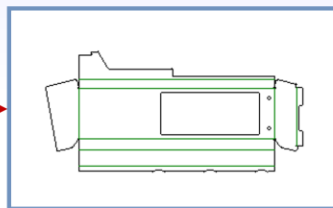
The extended data added to each DXF flat file helps facilitate automated bend programming including routing steps and machine tool selection for nestings.

Generates Needed Shop Floor Data



CAD Part Parameters

Routing Steps



DXF Flat File with Extended Data

Bend Programming

Nesting Software

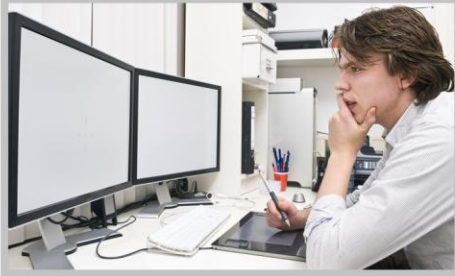
Scheduling Software

The Extended Data generated and incorporated into each DXF flat file includes:

- CAD Part Parameters
- Material / Thickness
- Required Processes
- Machine Tool / Tooling Selection



Logic Design Corporation



Software

Founded in 1983, Logic Design Corporation (LDC) is a technology integration and software development company that specializes in innovative software solutions to improve productivity and increase engineering capacity and achieve Industry 4.0.

LDC provides an innovative suite of software tools and programming services to solve some of the toughest engineering and manufacturing productivity challenges faced by manufacturers.

LDC delivers smart, practical to implement solutions that have resulted in savings of thousands of engineering hours annually for our customers.



Technology



Integration

Logic Design Corporation provides a full range of innovative software tools and services designed to reduce and eliminate expensive labor-intensive workflow tasks associated with the quoting, engineering and manufacturing workflow process:

- **Global Edge® Engineering Assistant**
- **2D / 3D CAD Programming**
- **Shop Floor Integration / Automation Planning**
- **Technology Integration Programming**
- **LDC Industry 4.0 Consulting**

LDC has the knowledge and expertise to help your company achieve Industry 4.0.

COOPER Power Systems

*“The marketplace for 100% automatic program generation (folding machines & press brakes) does not exist. **Global Edge** was the “missing link” that allowed us to expand our manufacturing technologies and capabilities. This has resulted in a savings of 1,000’s of man hours per year in our Engineering & Programming departments.”*

**Adam Popchock, Senior Manufacturing Engineer
Cooper Power systems – Waukesha, Wisconsin**

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