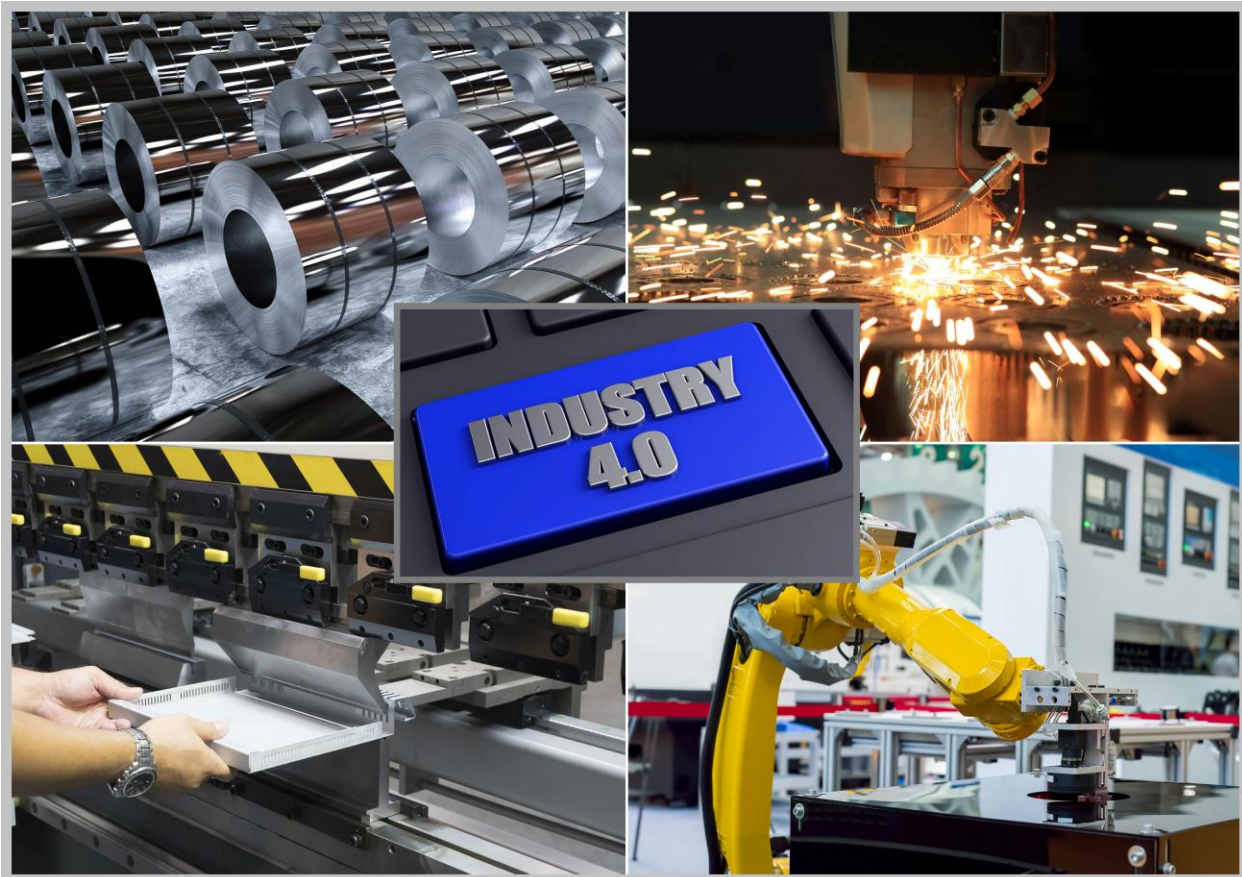




Global Edge® Engineering Assistant



Global Edge® Engineering Assistant Demonstration Guide

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Demo Section 3: Document Interface / Quoting

Global Edge® Integrated Manufacturing starts with the process of receiving RFQ (Request for Quote) information from a potential customer. The quoting stage includes the automated capture, organization, and storage of additional RFQ information such as CAD files and product specifications that need to be analyzed for the purpose of developing an accurate sales quote. The sections within this quoting stage include:

- **3.1 – Outlook Interface / Incoming Information**
- **3.2 – DXF Flat File Processing / Manufacturability Testing**
- **3.3 – Automated Sales Quote Generation**

Section 3: Document Interface / Quoting Overview

The following is an overview of Section 3 and what is illustrated within each of the steps.

- **3.1 – Outlook Interface / Incoming Information**: The steps within this section illustrate how the **Global Edge** software can optionally automate the task of managing incoming request for quote information. Automated tasks illustrated include:
 - **Automated Capture of Incoming Email Information**
 - **Automated Generation of Sales Opportunities Linked to Prospect / Customer Record**
 - **Automated Organization and Storage of Received RFQ Information**
- **3.2 – DXF Flat File Processing / Manufacturability Testing**: The steps within this section illustrate how **Global Edge** automates the importation of DXF flat files and the testing of sheet metal parts to help ensure they can be successfully fabricated before reaching the shop floor. Automated tasks illustrated include:
 - **Automated Importation and Analysis of Sheet Metal Part Parameters**
 - **Manufacturability Testing**
- **3.3 – Automated Sales Quote Generation**: The steps within this section illustrate how the **Global Edge** software can automatically generate routings based on part parameters from imported DXF Files and rolled up time and material costs. Automated tasks illustrated include:
 - **Automated Generation of Sales Quote with Imported Parts Attached**
 - **Automatically Generates Routings from Part Parameters**
 - **Automatically Rolls Up Costs for Multiple Quantity Production Runs**
 - **Contact / Sales Opportunity Management**

3.1 – Outlook Interface / Incoming Information

These steps illustrate how the automated quoting process can automatically capture, organize and store incoming RFQ (Request For Quote) information.

Sample Request For Quote – Fabricated Sheet Metal Parts

PAGE: 001



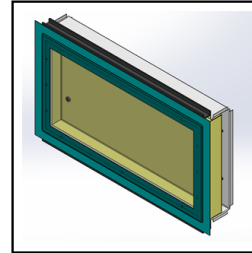
ABC Manufacturing

ABC Manufacturing Company
 5000 West Industrial Way
 Milwaukee, WI 55555
 Phone: 414-555-1100 Fax: 414-555-1101

REQUEST FOR QUOTATION

RFQ #: ABC-1001-08132017
 SUBMIT DATE: 08/14/2017
 QUOTE DUE DATE: 08/21/2017
 REQ. DELIVERY DATE: 09/20/2017
 SHIP METHOD: Truck

CONTACT: Robert Smith, V.P. of Engineering
 E-MAIL: rsmith@abc-manufacturing.com
 PHONE: 414-555-1100
 EXT: 101



SUBMITTED TO:

LDC Manufacturing, Incorporated
 1000 West Product Avenue
 P.O. Box 5544
 Productionville, WI 55555-5544
 United States of America

RFQ INSTRUCTIONS

This Request for Quote is to build a prototype for quality testing prior to full scale production. We would like cost estimates for prototype model and cost estimates for production levels that include: Monthly production runs of: 100 Units, 200 Units, 350 Units, and 500 Units.

ITEM #	PART NUMBER	DESCRIPTION	QTY	UOM	NOTES	IMAGES
1	DEMO-00-LIGHT	LIGHT FIXTURE ASSEMBLY		each	Requires 24,000 x 48,000 inch Outside dimension	
2	DEMO-01-LENSE-FRAME	LIGHT FIXTURE LENSE FRAME	1.000	each		
3	DEMO-02-LENSE	LIGHT FIXTURE LENSE	1.000	each	Receive from ABC Mfg. for Assembly	
4	DEMO-03-LENSE-BRACKET	LIGHT FIXTURE LENSE BRACKET	1.000	each		
5	DEMO-04-HOUSING-FLANGE	LIGHT FIXTURE HOUSING FLANGE	1.000	each		
6	DEMO-05-LENSE-RET-BRKT	LIGHT FIXTURE LENSE RETAINING BRACKET	1.000	each		
7	DEMO-06-FIXTURE-HOUSING	LIGHT FIXTURE HOUSING	1.000	each		
8	DEMO-07-YOKE-BRACKET	LIGHT FIXTURE YOKE BRACKET	1.000	each		
9	DEMO-10-BOLT	LIGHT FIXTURE BOLT	4.000	each	Requires chrome plated bolt	
10	DEMO-08-DOOR-GASKET	LIGHT FIXTURE DOOR GASKET	1.000	each		
11	DEMO-09-FRAME-CHANNEL	LIGHT FIXTURE FRAME CHANNEL	2.000	each		
12	DEMO-11-NUT	LIGHT FIXTURE NUT	4.000	each	Requires chrome plated nut	

NON-STANDARD CUSTOMIZATIONS

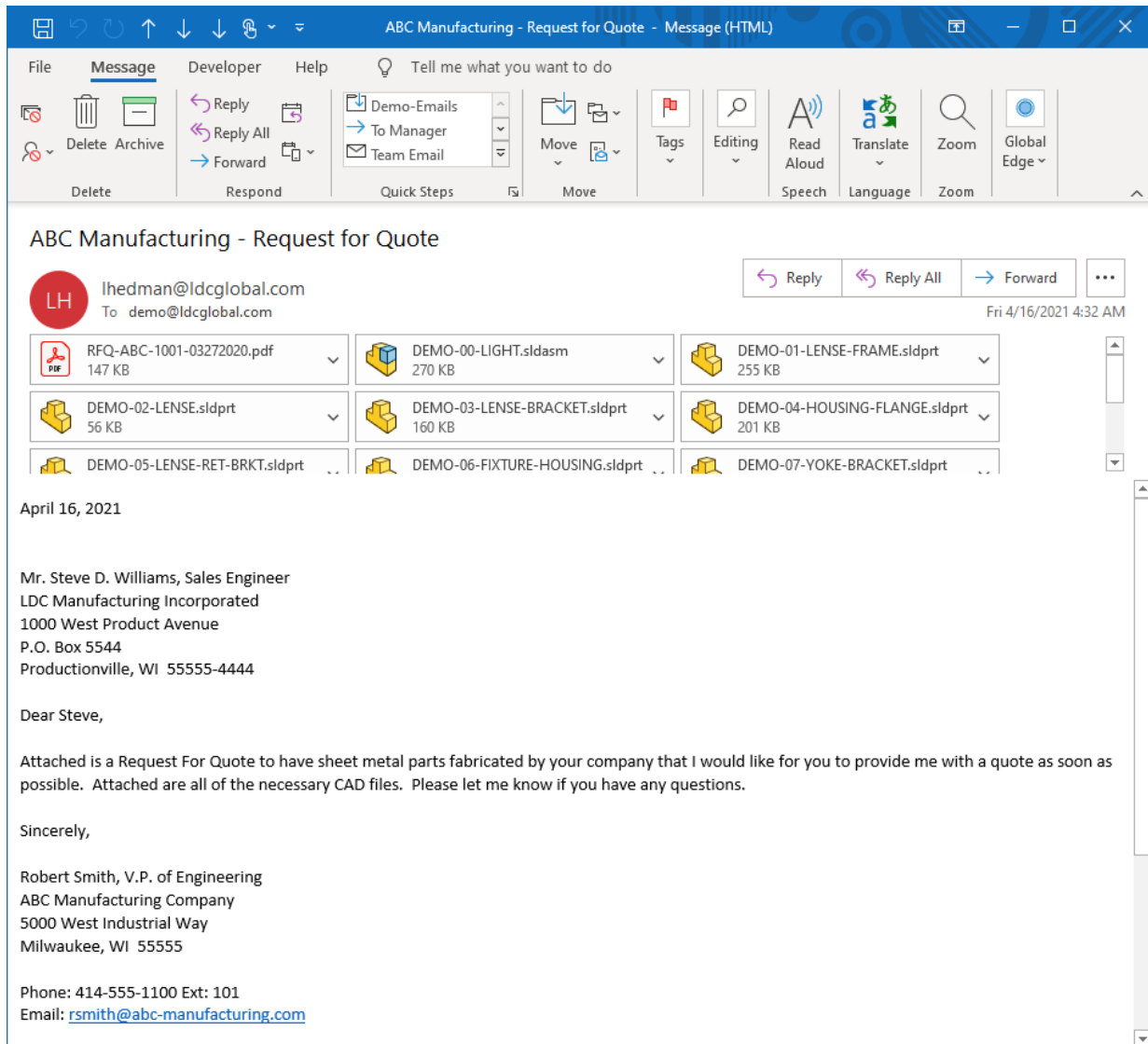
Based on projected steel prices, please recommend optimal choices for next 12 months.

COMMENTS / NOTES

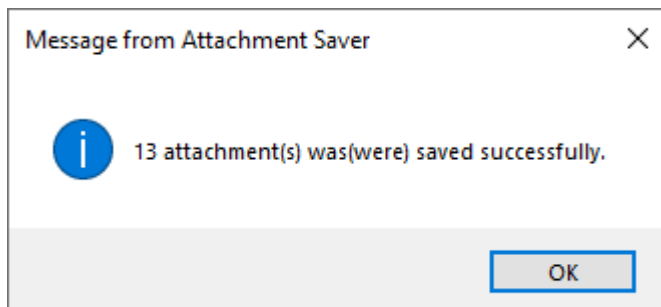
Potential delivery would be by the 15th of each month.

Workflow Steps

1. Receive RFQ (Request For Quote) in Microsoft Outlook including attachments:



2. Select "**Global Edge > Inbound**" icon to execute capturing attachments of inbound email:



3. After selecting “OK”, the following *Global Edge – Outlook Interface* screen is displayed:

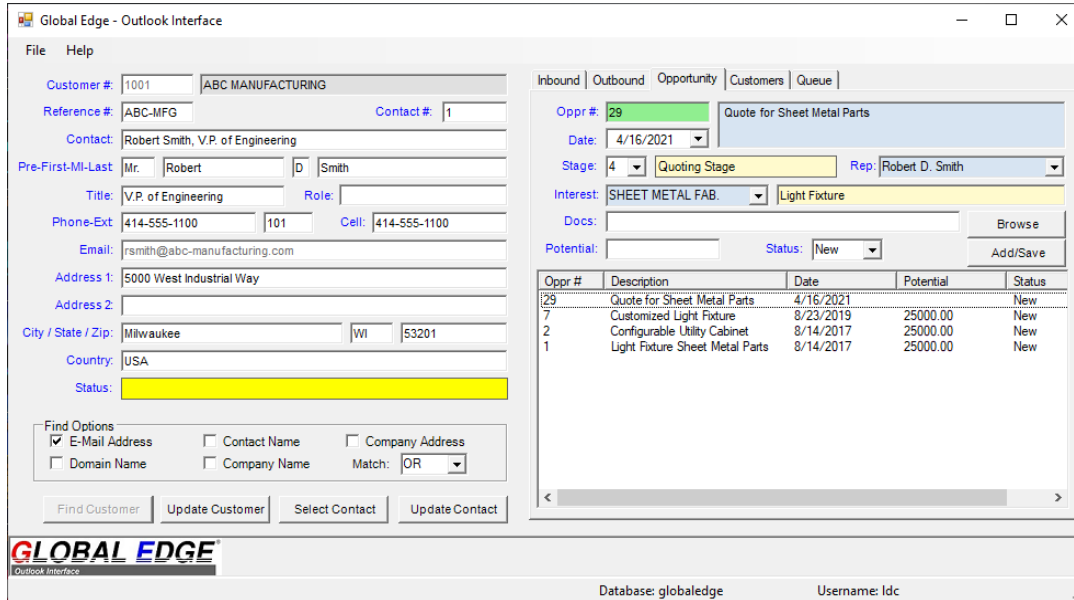
The screenshot shows the 'Global Edge - Outlook Interface' window. On the left, there is a contact information form for 'ABC MANUFACTURING'. The contact is 'Robert Smith, V.P. of Engineering'. The email body on the right is dated 'April 16, 2021' and contains a request for quote. The attachments list includes several CAD files such as 'DEMO-00-LIGHT.sldasm' and 'DEMO-01-LENSE-FRAME.sldprt'.

4. Select the “*Opportunity*” option to display the current Sales Opportunities that are attached the existing ABC MANUFACTURING customer record stored in the *Global Edge* database:

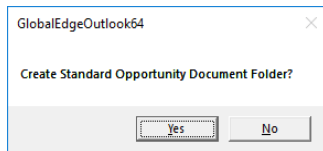
The screenshot shows the 'Global Edge - Outlook Interface' window with the 'Opportunity' tab selected. The left sidebar remains the same. The main area displays a table of sales opportunities for the selected customer.

Opportunity #	Description	Date	Potential	Status
7	Customized Light Fixture	8/23/2019	25000.00	New
2	Configurable Utility Cabinet	8/14/2017	25000.00	New
1	Light Fixture Sheet Metal ...	8/14/2017	25000.00	New

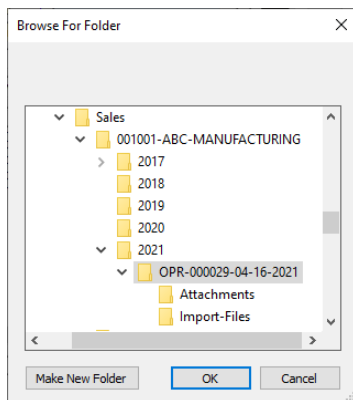
5. Fill in upper-right portion of screen with Sales Opportunity information, then select **“Add/Save”** option:



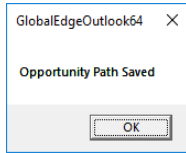
6. Select **“Browse”** option and the following prompt is displayed:



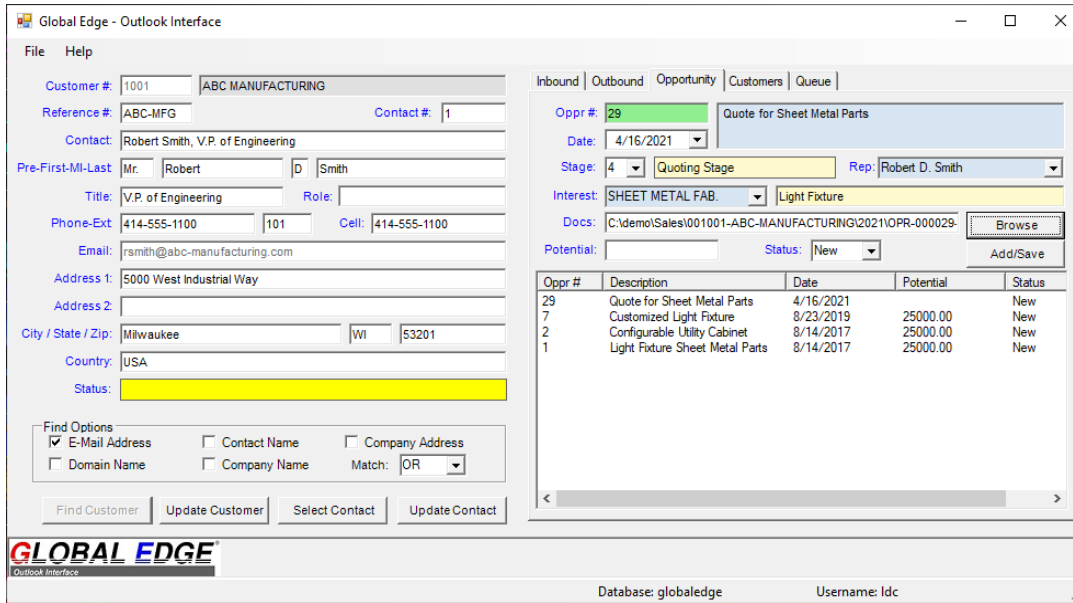
7. When answering **“Yes”** option, the following screen is displayed:



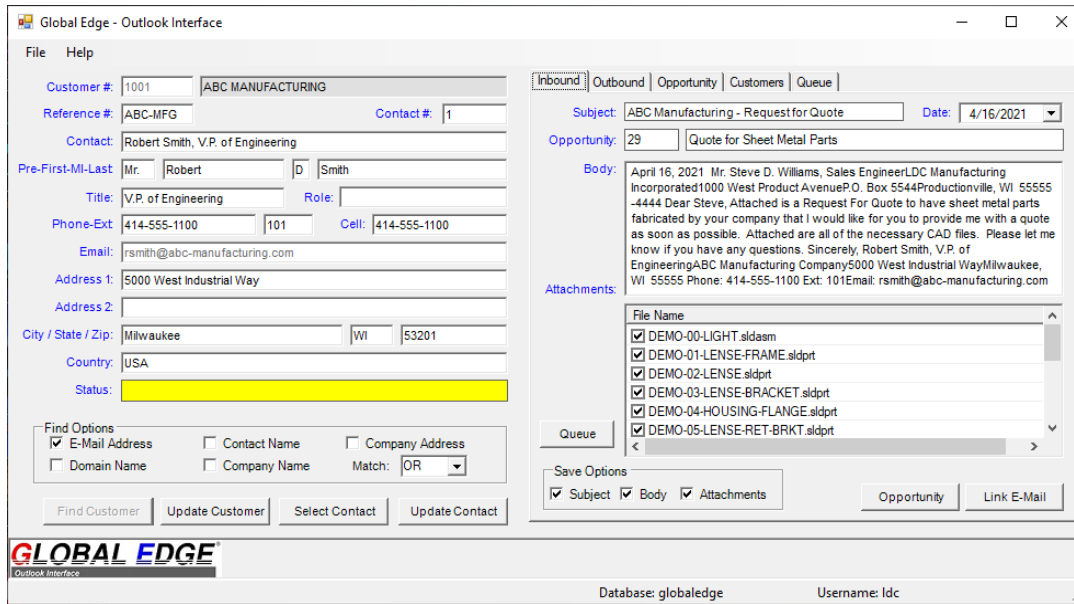
8. Highlight new Sales Opportunity folder and select “OK” option and the following prompt is displayed:



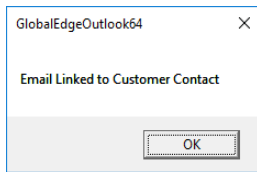
9. Select “OK” option which adds the selected document path to the below screen:



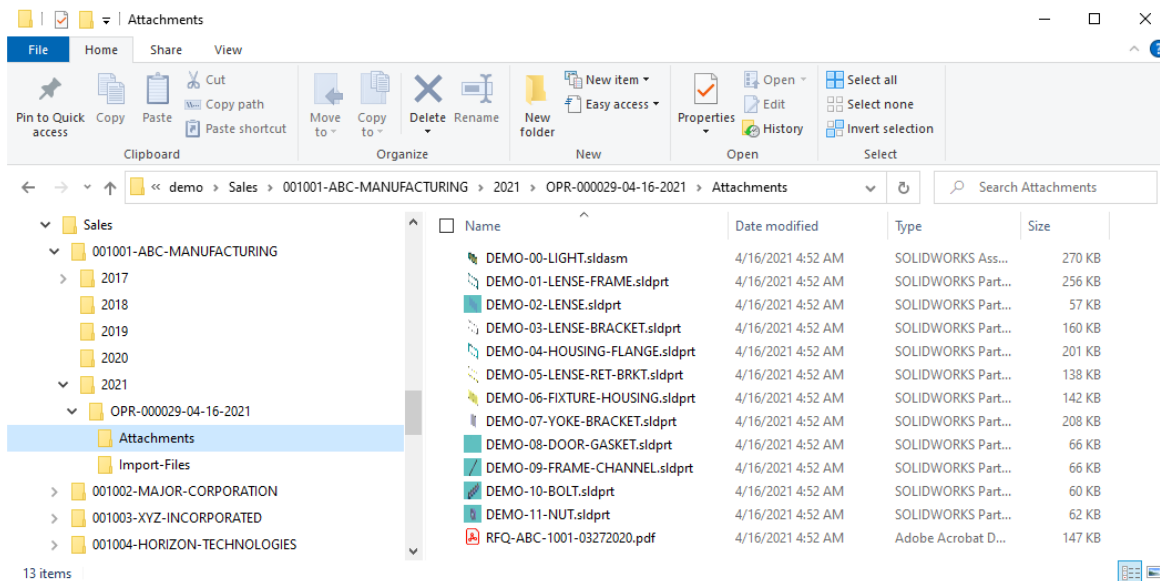
10. Select **“Inbound”** tab, then select the **“Link E-Mail”** option to update database and move selected attachments to Sales Opportunity folder:



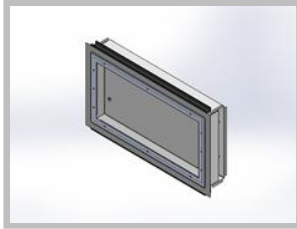
11. Upon completion of software execution, the following message is displayed:



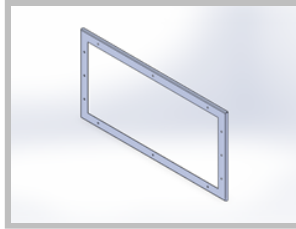
12. The following shows a sample of the folders that are automatically created when a Sales Opportunity is generated and attached to a customer record in the **Global Edge** database including how that attached files are stored:



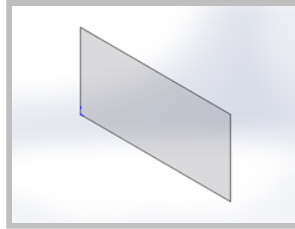
Light Fixture CAD Models



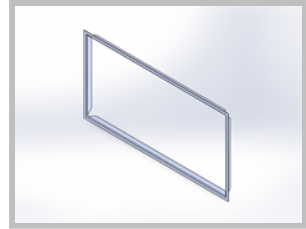
LIGHT-00-LIGHT
LIGHT FIXTURE ASSEMBLY



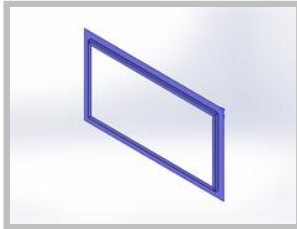
LIGHT-01-LENSE-FRAME
LIGHT FIXTURE LENSE FRAME



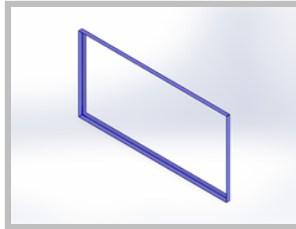
LIGHT-02-LENSE
LIGHT FIXTURE LENSE



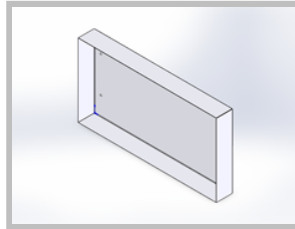
LIGHT-03-LENSE-BRACKET
LIGHT FIXTURE LENSE BRACKET



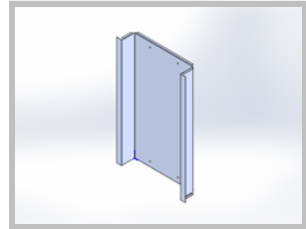
LIGHT-04-HOUSING-FLANGE
LIGHT FIXTURE HOUSING FLANGE



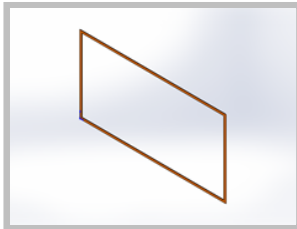
LIGHT-05-LENSE-RET-BRKT
LIGHT FIXTURE LENSE RET. BRACKET



LIGHT-06-FIXTURE-HOUSING
LIGHT FIXTURE HOUSING



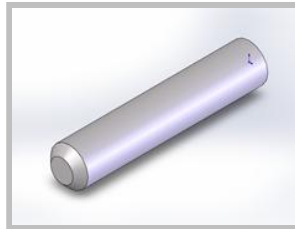
LIGHT-07-YOKE-BRACKET
LIGHT FIXTURE YOKE BRACKET



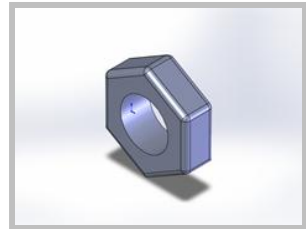
LIGHT-08-DOOR-GASKET
LIGHT FIXTURE DOOR GASKET



LIGHT-09-FRAME-CHANNEL
LIGHT-09-FRAME-CHANNEL



LIGHT-10-BOLT
LIGHT FIXTURE BOLT



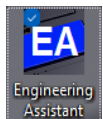
LIGHT-11-NUT
LIGHT FIXTURE NUT

3.2 – DXF Flat File Processing / Manufacturability Testing

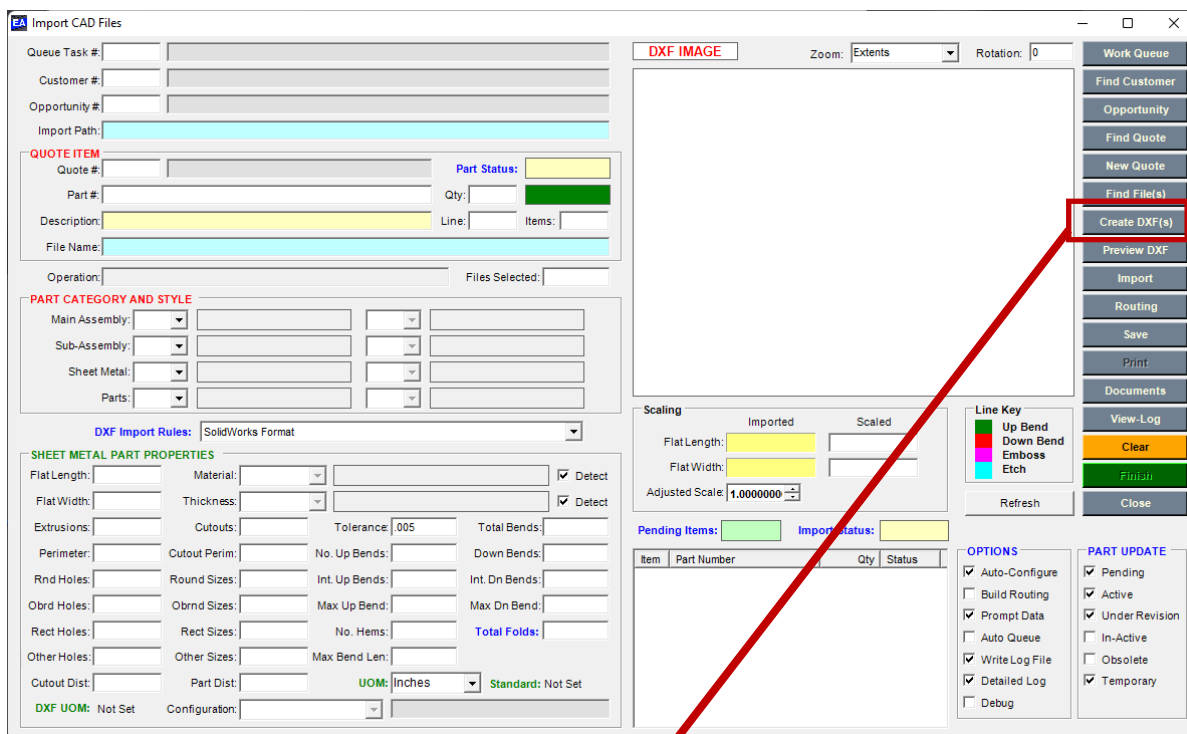
Global Edge® Engineering Assistant provides automated CAD model analysis to automatically analyze CAD part parameters and store these parameters in an SQL database. These CAD part parameters can then be utilized to automatically generate optimal routings including time and material cost rollups. Additionally, these CAD part parameters can be incorporated into DXF flat files to facilitate automated bend program generation for both press brakes and panel benders.

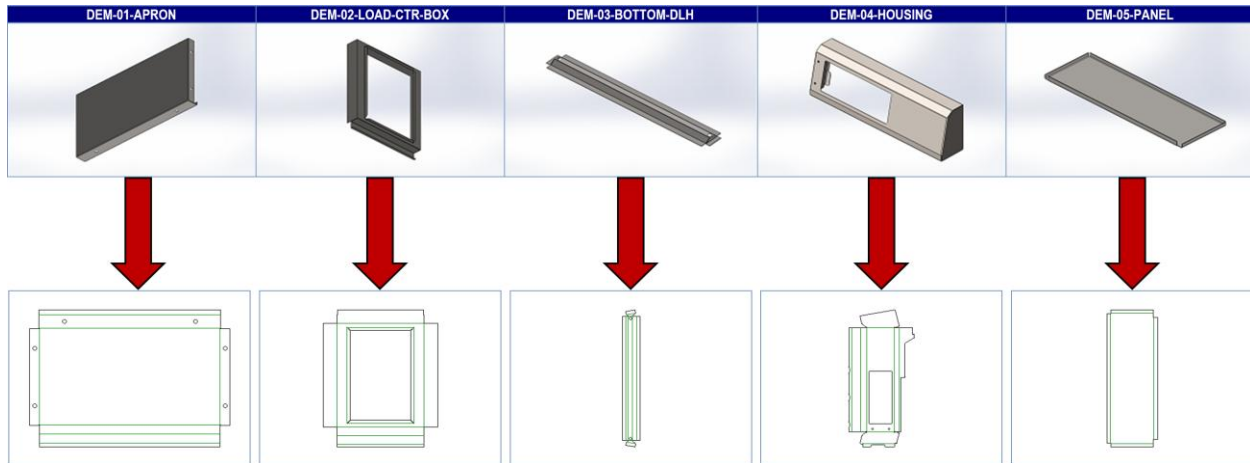
Workflow Steps

1. The first step is to open the **Global Edge® Engineering Assistant** software by clicking on the following desktop icon:

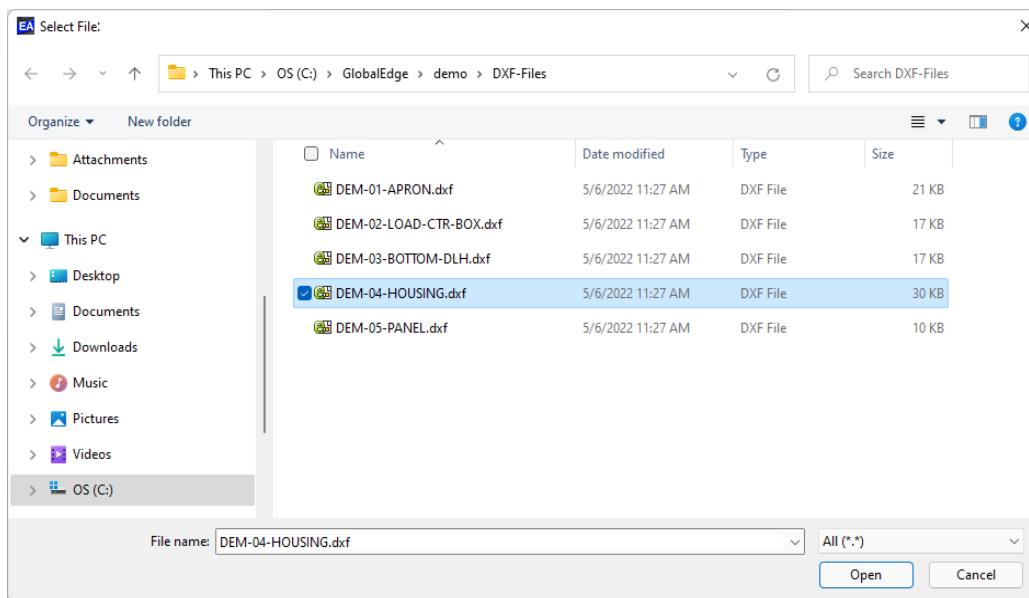


2. This will display the following screen form and menu options. Select **“Import > Import CAD Files”** option to display Import CAD Files screen. Select **“Create DXF(s)”** option to automatically generate 2D DXF Flat Files from 3D SolidWorks CAD Models. This process includes automatically embedding Extended Data into the 2D DXF Flat Files to drive Automated Bend Program Generation, Automated Routing Generation, and Automated Sales Quote Generation:





3. Select **“Find File(s)”** option and select the DXF file(s) to process with the Select File screen:



DXF File Processing (without CAD System)

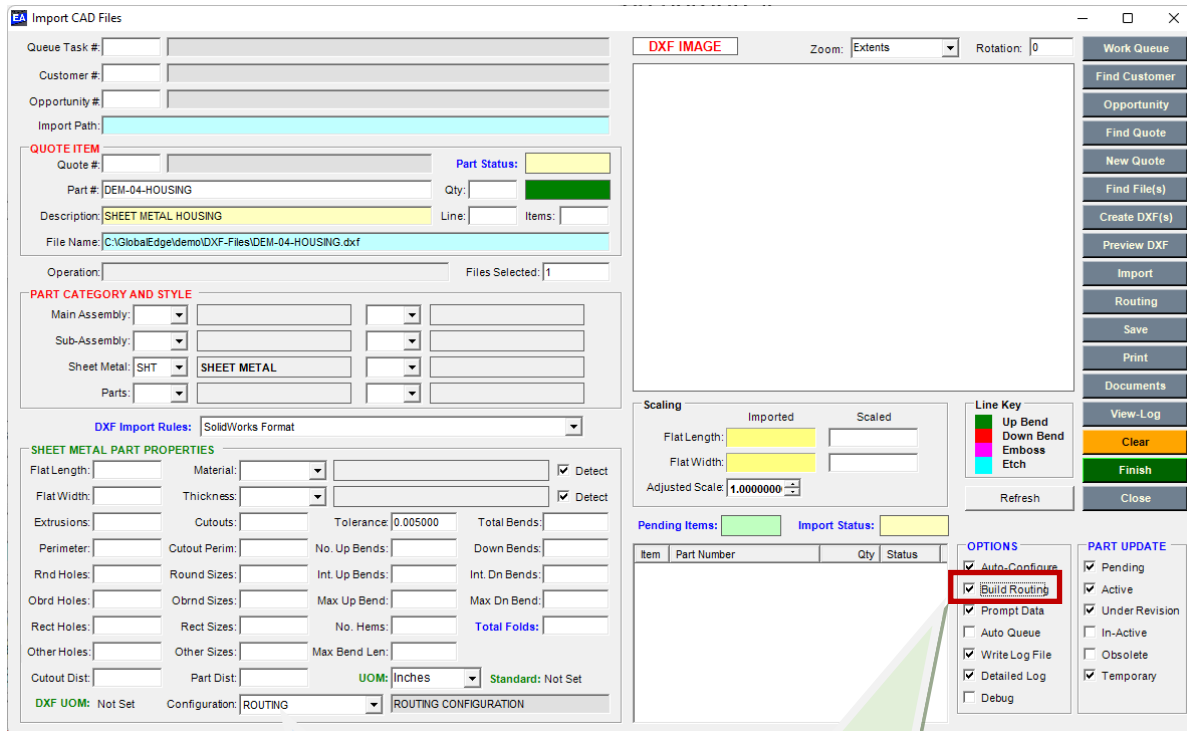
Global Edge® Engineering Assistant provides the capability to process DXF Flat Files without the use of a 3D CAD System such as SolidWorks, Solid Edge, Inventor, Pro/ENGINEER (Creo), Catia, etc. This includes the same capabilities included in the **Global Edge SolidWorks CAD Interface** minus the capability of producing the DXF Flat File from the associated 3D Sheet Metal Part Model.

1. This displays the selected DXF file on the Import CAD Files screen:

Global Edge – Import DXF Files screen provides an easy method to import 2D DXF Sheet Metal Parts. The purpose of this functionality is to import the drawing attribute information into the **Global Edge** Engineering Data Warehouse for the purpose of Automated Routing Generation. Once a sheet metal part is imported, information such as: Part Height, Part Width, Part Perimeter, Number of Folds, Number of Hems, Number of Cutouts, and Cutout Perimeter is then stored in the **Global Edge** system.

The **Global Edge Engineering Assistant** provides the ability to process DXF Flat Files without the need of a 3D CAD system. The only required user input is specifying Material, Thickness, and Bend Radius if this is not included in the DXF Flat File. The above screen provides the ability to automatically launch an available 3D CAD system such as SolidWorks, Solid Edge, Inventor, Pro/ENGINEER (Creo), Catia, etc. This allows the user to produce DXF Flat Files with the appropriate 3D CAD system and make these files a part of the complete workflow of the **Global Edge** system including Manufacturability Testing and the incorporation Extended Data to each DXF Flat File to facilitate Automated Bend Program Generation.

2. The next step is to select the option to have the software automatically generate routings for the selected part:



The **Global Edge Engineering Assistant** provides the capability to define routing configuration rules that can generate routings based on imported CAD part parameters. These routing rules provides the ability to automatically calculate laser cut times based on material, thickness and specific laser capabilities that include:

- Laser Cut Speed
- Perimeter Cut Speed
- Cutout Cut Speed
- Piercing Time
- Load / Unload Time

This also includes machine time for punching, bending, welding, painting, assembly, and other related machine times that can be utilized for things like quoting, cost estimating and scheduling.

Select the **“Build Routing”** check box to have the software automatically generate routings with the ROUTING CONFIGURATION selected in the lower portion of the screen.

3. Select **“Import”** option which will display the Part Master Update screen:

Part Master Update

Part Number: DEM-04-HOUSING
SHEET METAL HOUSING

Customer #:
Cust Part #:

Category/Style
Category: SHT SHEET METAL
Style:

Inu Defru Process M Active Auto-Configure

Scaling
Imported Scaled
Flat Length: 19.699142 19.699142
Flat Width: 42.193245 42.193245
Adjusted Scale: 1.00000000

Material Properties
Material: 304-4 304-4 STAINLESS STEEL
Thickness: 14 GA. 0.075
Certified: No UOM: Inches

Default Sheet:
Sheet Length: 0 Width: 0
Blank Length: 0 Width: 0
Pieces per Sheet:

Cutting Process
Cutting Method: Open
Asset #: Laser
Config: ROUTING Open

Standard Bend Process
Process #:
Radius:
Model IR:
Status:

Editable Part Parameters
UOM inches
Extrusions: 0 Down Bends: 8
No. Up Bends: 0 Int. Dn Bends: 0
Int. Up Bends: 0 Max Dn Bend: 0
Max Up Bend: 0 Hem Count:
Total Bends: 8 Total Folds: 0
Min Flange Length: 0 Max Bend Length: 0
Min Bend Angle: 10 Max Bend Angle: 93
Min Flange: 0 Max Flange: 0
Min P... 0 Min Dn PEM Gap: 0
Min Emboss: 0 Min Dn Emboss: 0
Min Louver C... Min Dn Louver: 0
Min Taper Ga... Min Die Cutout: 0
Bend Direction:

Processes
 Blank
 Emboss
 Turret
 Laser
 Press Brake
 Panel Bender
 Pem Nut
 Pem Stud
 Grain
 Weld
 Deburr
 Paint

OK
Cancel

The **Global Edge Engineering Assistant** provides the ability to define routing rules that are executed by the built-in routing configurator. This includes the automated generation of cutting times. The choices in the drop-down include:

- Laser
- Turret
- Open

When selecting the **“Open”** option, the routing configurator will determine the optimal method to cut part based on cost and/or delivery time.

The **“Material Properties”** that are comprised of Material and Thickness are automatically displayed if they are defined in the original CAD model. If they are not defined, the user can select the proper material and thickness that will then subsequently be added to the DXF flat file as extended data.

The **Global Edge Engineering Assistant** provides the ability to define routing rules that are executed by the built-in routing configurator. This includes the automated generation of cutting times. The choices in the drop-down include:

- Laser
- Turret
- Open

When selecting the **“Open”** option, the routing configurator will determine the optimal method to cut part based on cost and/or delivery time.

The **“Editable Part Parameters”** section provides a list of 24 CAD part parameters. These 24 CAD part parameters can optionally be changed by the user need be. The software also analyzes an additional 24 CAD part parameters for a total of 48 CAD part parameters.

This section includes a **“Flip Bends”** option that allows the user to flip Up Bends to Down Bends or vice versa. This is to correct the bend direction from the original CAD model if it does not match the proper machine tool bend direction.

The **Global Edge Engineering Assistant** will automatically add extended data to the DXF file with the information contained on the above screen. The software additionally includes a total of 48 CAD part parameters that can be added to the DXF file and routing steps that are outlined on the next screen. Refer to Page ## for a list of information that can be added as extended data to the DXF file.

This column of check boxes allows you to select routing steps to be executed on the selected part. This includes the following manufacturing processes to execute:

- Blank
- Emboss
- Turret
- Laser
- Press Brake
- Panel Bender
- Pem Nut / Stud
- Grain
- Weld
- Deburr
- Paint

The software will generate routings including time calculations for accurate machine process times.

4. After selecting “OK” option, and if “Routing Check Box” was checked, the following Part Routing screen is displayed with the generated manufacturing steps:

These columns calculate / display the cost estimate to fabricate a single part. The software can also calculate the cost for various levels of production.

The screenshot shows the 'Part Routing' window for part 'DEM-04-HOUSING'. The 'Route' section shows 'Route # 1' and 'Description: STANDARD PART ROUTING'. Summary costs are: Set Up: \$142.50, Component: \$43.63, Process: \$24.77, and Total Cost: \$210.91. Below is a table of 14 routing operations.

Seq #	Routing	Routing Description	Type	Units / Hour	Estimated Cost	Mach #	Mach Ref
1	LASER-CUT	Laser Cut Operation	Process	200.00	15.0000	1003	LASER-1003
2	BEND	Press Brake Bending Operation	Process	100.00	0.7500	1007	PB-1007
3	TIG-WELD	TIG Weld	Process	6.67	6.7500	1010	WELD-1010
4	DEBURR	Deburring Operation	Process	14.53	3.0971	1011	FINISH-1011
5	SAND-PAINT-PREP	Sand / Paint / Preparation Operation	Process	62.36	0.6414	1018	PAINT-1018
6	HANGING	Hanging Operation	Process	50.00	0.5000	1015	HANG-1015
7	WASHING	Washing Operation	Process	100.00	0.2500	1016	WASH-1016
8	PAINTING	Painting Operation	Process	31.18	1.2828	1017	PAINT-1017
9	CURING	Curing Operation	Process	20.00	1.2500	1019	OVEN-1019
10	ASSEMBLY	Assembly Operation	Process	20.00	2.5000	1021	ASSM-1021
11	GENERAL-LABOR	General Labor Operation	Process	20.00	2.5000	1025	LABOR-1025
12	FINAL-INSPECT	Final Inspection Operation	Process	20.00	1.7500	1026	INSPECT-1026
13	PACKAGE	Package Operation	Process	20.00	1.7500	1027	PACK-1027
14	SHIPPING	Shipping Operation	Process	20.00	1.7500	1028	SHIP-1028

The **Global Edge Engineering Assistant** includes a configuration engine that runs in the background to generate routings based on the CAD part parameters and simple to define routing rules.

These columns (Units / Hour, Estimated Cost, Mach #) are automatically generated with the configuration engine which includes how many units can be produced per hour and the estimated cost per unit based on the machine tool selected for each specific process.

5. After selecting “OK” option, the following screen form is displayed upon completion of Import CAD Files process:

The **Global Edge Engineering Assistant** provides the ability to automatically analyze CAD part parameters. This includes a total of 48 CAD part parameters to drive:

- Automated Bend Program Generation
- Automated Routing Generation
- Manufacturability Testing
- Automated Sales Quote Generation

Refer to Page 13 for a listing of the information that is analyzed and generated with the CAD part importation process.

6. Select the “Print” option to generate Part DXF Import Report:

CAD Part Parameter Report (Part 1 of 3)

The first portion of the **CAD Part Parameter Report** includes the following 48 CAD part parameters that are analyzed and recorded in an SQL database. These CAD part parameters provide the foundation for the automated generation of bend programs for press brakes, panel benders and other robotic folders. This is accomplished with the **Global Edge Engineering Assistant** software comparing the CAD part parameters with your available machine tool tooling such as part size, bend angles, hem counts, pem and louver gaps from bend lines, etc.:

Part Number	Description	UOM	Type	Cat.	Style	Mtl.
BP-06-SS-304-4-075-125	BEND PROCESS TEST PART 06	EA	C	SHT	-	304-4
Setup Cost:	104.2500	Material:		304-4-STAINLESS STEEL		
Process Cost:	18.7399	Ship Weight:		110.97		
Component Cost:	525.1589	Ship Weight UOM:		lbs		
Rollup Cost:	648.1488	Standard Cost:		648.1488		

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:	3.000000	inches
4	Blank Width:	0.000000	inches	28	Minimum Down Emboss Gap:	1.200000	inches
5	Material thickness:	0.078120	inches	29	Minimum Louver Gap:	2.000000	inches
6	Perimeter:	312.338773	inches	30	Minimum Down Louver Gap:	0.000000	inches
7	Flat Length:	98.000000	inches	31	Min. Taper Bend Line Gap:	0.000000	inches
8	Flat Width:	58.169387	inches	32	Minimum Die Cutout:	0.000000	inches
9	Round Hole Count:	20.000000	-	33	Up Bend Count:	6.000000	-
10	Round Sizes Count:	2.000000	-	34	Internal Up Bends Count:	0.000000	-
11	Obround Hole Count:	0.000000	-	35	Maximum Up Bend:	0.000000	inches
12	Obround Sizes Count:	0.000000	-	36	Down Bend Count:	5.000000	-
13	Rectangular Hole Count:	1.000000	-	37	Internal Down Bends Count:	0.000000	-
14	Rectangular Sizes Count:	1.000000	-	38	Maximum Down Bend:	0.000000	inches
15	Other Hole Count:	0.000000	-	39	Fold Count:	11.000000	-
16	Other Sizes Count:	0.000000	-	40	Hem Count:	1.000000	-
17	Number of Cutouts:	21.000000	-	41	Extrude Count:	0.000000	-
18	Cutout Perimeter:	262.558000	inches	42	Bend Radius:	0.125000	inches
19	Minimum Bend Length:	35.000000	inches	43	Cutting Method:	Open	-
20	Maximum Bend Length:	80.000000	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:	4.000000	inches	47	Cutout Distance:	382.601221	inches
24	Maximum Flange Width:	12.000000	inches	48	Part Distance:	78.084693	inches

CAD Part Parameter Report (Part 2 of 3)

The second portion of the **CAD Part Parameter Report** includes a list of the routing steps generated by the Routing Configurator built into the **Global Edge Engineering Assistant**. These routing steps are based on user defined routing rules that utilize the CAD part parameters to generate accurate process times based on part size, material and thickness including an accurate rollout of costs:

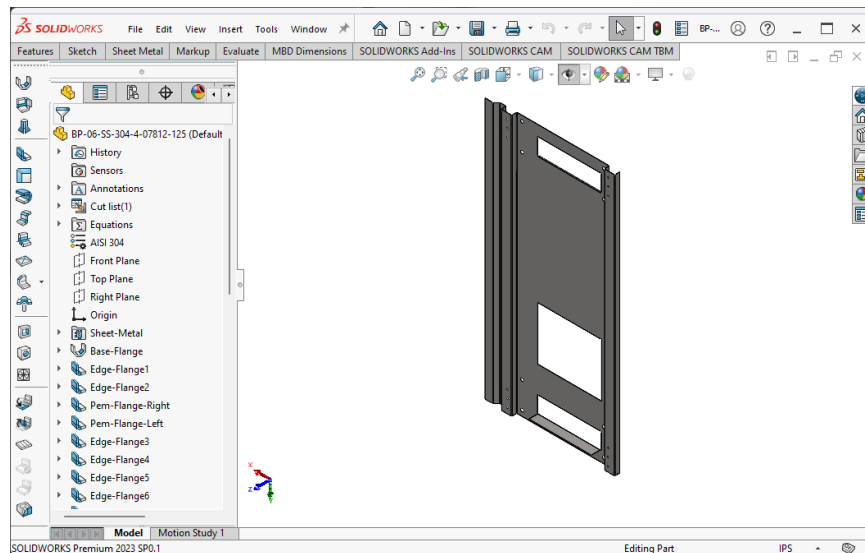
Part Routing								
Trans #	Seq. #	Process	Description	UOM	Setup Time	Setup Cost	Process Time	Std. Proc. Cost
986	1	LASER-CUT	Laser Cut Operation	hours	0.010000	1.50	0.100000	15.0000
987	2	BEND	Press Brake Bending Operation	hours	0.500000	37.50	0.010000	0.7500
988	3	TIG-WELD	TIG Weld	hours	0.500000	22.50	0.150000	6.7500
989	4	DEBURR	Deburring Operation	hours	0.200000	9.00	0.068824	3.0971
990	5	SAND-PAINT-PREP	Sand / Paint / Preparation Operation	hours	0.150000	6.00	0.016035	0.6414
991	6	HANGING	Hanging Operation	hours	0.150000	3.75	0.020000	0.5000
992	7	WASHING	Washing Operation	hours	0.150000	3.75	0.010000	0.2500
993	8	PAINTING	Painting Operation	hours	0.150000	6.00	0.032069	1.2828
994	9	CURING	Curing Operation	hours	0.250000	6.25	0.050000	1.2500
995	10	ASSEMBLY	Assembly Operation	hours	0.250000	12.50	0.050000	2.5000
996	11	GENERAL-LABOR	General Labor Operation	hours	0.250000	12.50	0.050000	2.5000
997	12	FINAL-INSPECT	Final Inspection Operation	hours	0.250000	8.75	0.050000	1.7500
998	13	PACKAGE	Package Operation	hours	0.250000	8.75	0.050000	1.7500
999	14	SHIPPING	Shipping Operation	hours	0.150000	5.25	0.050000	1.7500
					3.210000	\$144.00	0.706928	\$39.7713

CAD Part Parameter Report (Part 3 of 3)

The third portion of the **CAD Part Parameter Report** includes Manufacturability Test Results. These test results are the result of comparing CAD part parameters with user defined bend processes which provides the allowable limits of your tooling sets. The left-hand portion of the report includes the bend process limits while the right-hand portion includes the CAD part parameters:

Manufacturability Test Results					
Process #:	4	Bnd Proc., SS 304-4, 0.075, Rad - 0.120		DEM-04-HOUSING	SHEET METAL HOUSING
Mtl. Code:	304-4	Pass		46	Material: 304-4 -
Thickness:	0.075000	Pass	Linear UOM: inches	5	Material thickness: 0.075000 inches
Min. Thickness:	0.072000		Max. 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	Bend Radius: 0.120000 inches
K Factor 90:	0.445000		Bend Allowance 90: 0.008000		
Gage Allowance 90:	0.003000		Tons Per Foot: 25.000000		
Min. Flat Length:	4.000000	Pass	Max. Flat Len: 72.000000	7	Flat Length: 19.699142 inches
Min. Flat Width:	2.000000	Pass	Max. Fl. Width: 48.000000	8	Flat Width: 42.193245 inches
Max. Bend Len:	72.000000	-	Max. Tonnage: 150.000000		
Max. Part Weight:	125.000000	-	Mass UOM: lbs		
Min. Angle:	39.000000	Fail		21	Minimum Bend Angle: 37.000000 degrees
Max. Angle:	180.000000	Pass		22	Maximum Bend Angle: 93.000000 degrees
Min Length:	0.750000	Pass		19	Minimum Bend Length: 8.451000 inches
Max Length:	96.000000	Pass		20	Maximum Bend Length: 32.210000 inches
Min. Flange Width:	1.200000	Pass		23	Minimum Flange Width: 0.927000 inches
Max. Flange Width:	24.000000	Pass		24	Maximum Flange Width: 5.296000 inches

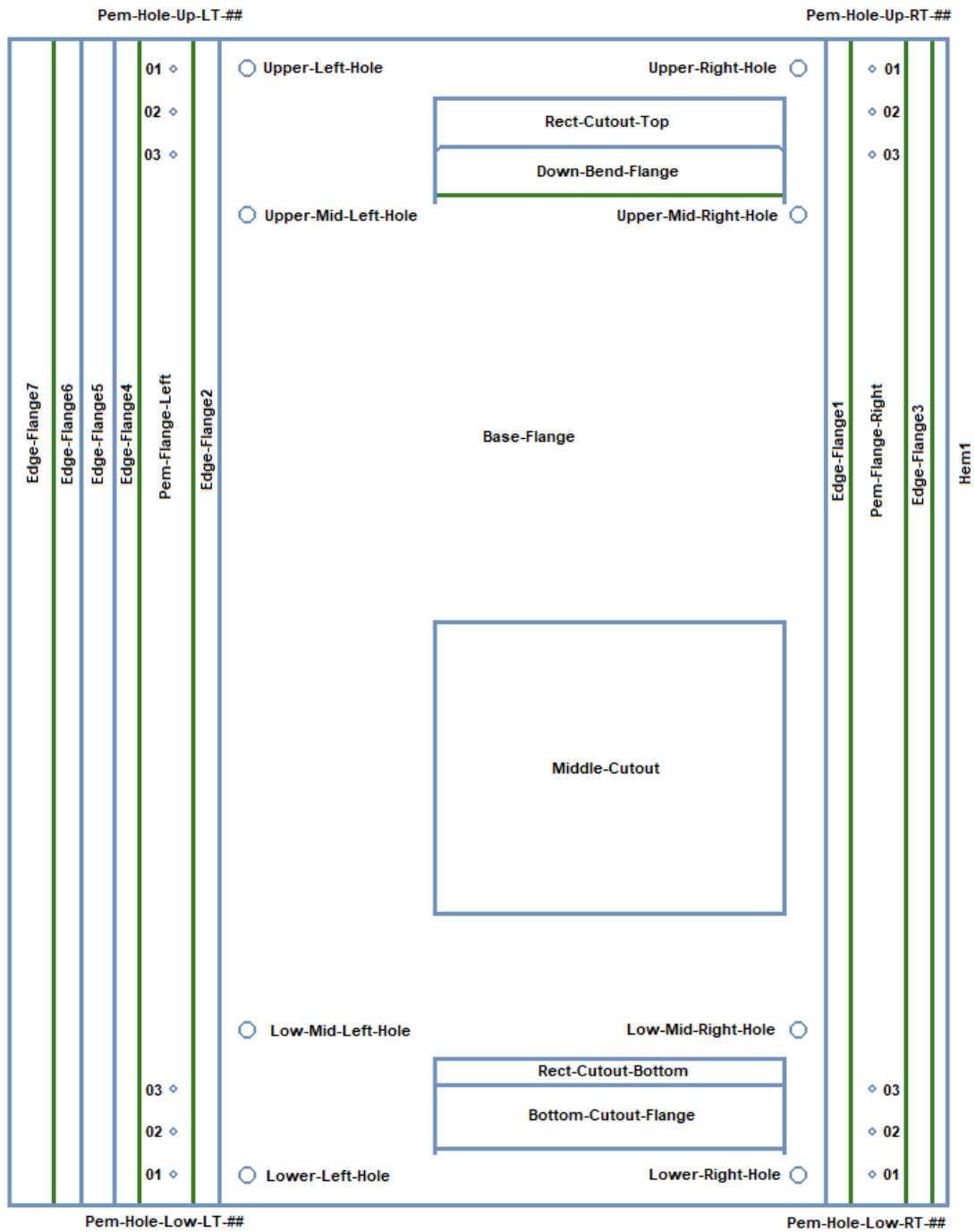
TRANS #	SEQ. #	PROCESS	DESCRIPTION	WC #	ASSET #	SETUP	SETUP	STD. COST
912	1		Cutting Group					
913	2	SHEAR	Sheet Metal Shear Operation	1	1109	0.250000	\$13.75	\$55.0000
914	3	PUNCH	Turret Punch Operation	4	1007	0.250000	\$18.75	\$75.0000
915	4	EMBOSS	Embossing Operation	4	1007	0.250000	\$18.75	\$75.0000
916	5	LASER-CUT	Laser Cut Operation	3	1123	0.100000	\$14.00	\$140.0000
917	6		End of Operation Group					
918	7		Forming Group					
919	8	BEND	Press Brake Bending Operation	7	1011	0.500000	\$37.50	\$75.0000
920	9	PANELBEND	Panel Bender Bending Operation	7	1009	0.100000	\$12.00	\$120.0000
921	10		End of Operation Group					
922	11		Hardware / Pem Group					
923	12	INSTALL-PEM-NUTS	Install Pem Nuts	11	1110	0.350000	\$17.50	\$50.0000
924	13	INSTALL-PEM-STUDS	Install Pem Studs	11	1110	0.350000	\$17.50	\$50.0000
925	14		End of Operation Group					
926	15		Welding Group					
927	16	TIG-WELD	TIG Weld	9	1112	0.500000	\$22.50	\$45.0000
928	17	MIG-WELD	MIG Weld	9	1111	0.500000	\$22.50	\$45.0000
929	18		End of Operation Group					
930	20	DEBURR	Deburring Operation	8	1108	0.200000	\$9.00	\$45.0000
931	21	GRAIN	Graining Operation	8	1160	0.250000	\$11.25	\$45.0000
932	22	SAND-PAINT-PREP	Sand / Paint / Preparation Operation	10	1086	0.150000	\$6.00	\$40.0000
933	25	HANGING	Hanging Operation	10	1077	0.150000	\$3.75	\$25.0000
934	26	WASHING	Washing Operation	10	1082	0.150000	\$3.75	\$25.0000
935	27	PAINTING	Painting Operation	10	1084	0.150000	\$6.00	\$40.0000
936	28	CURING	Curing Operation	10	1089	0.250000	\$6.25	\$25.0000
937	31	ASSEMBLY	Assembly Operation	11	1094	0.250000	\$12.50	\$50.0000
938	32	RIVET	Riveting Operation	11	1119	0.250000	\$12.50	\$50.0000
939	33	GASKETING	Gasketing Operation	11	1092	0.250000	\$8.75	\$35.0000
940	34	GENERAL-LABOR	General Labor Operation	11	1125	0.250000	\$12.50	\$50.0000
941	37	FINAL-INSPECT	Final Inspection Operation	12	1099	0.250000	\$8.75	\$35.0000
942	38	PACKAGE	Package Operation	12	1099	0.250000	\$8.75	\$35.0000
943	39	SHIPPING	Shipping Operation	15	1104	0.150000	\$5.25	\$35.0000



Sheet Metal Part Entities / Measurements

Global Edge® Integrated Manufacturing automatically identifies and stores the parameters contained in a sheet metal part including the specific measurements of each part:

Sheet Metal Part Parameters / Measurements



Sheet Metal Part Measurements

ELE. #	Element Name	Length	Width	Diameter	BL Dist. 1 (Inner)	BL Dist. 2 (Outer)
1	Overall Flat:	80.000	62.394	0.000	0.000	0.000
2	Base-Flange:	80.000	39.727	0.000	0.000	0.000
3	Edge-Flange1:	80.000	1.727	0.000	0.000	0.000
4	Edge-Flange2:	80.000	1.727	0.000	0.000	0.000
5	Pem-Flange-Right:	80.000	3.727	0.000	0.000	0.000
6	Pem-Flange-Left:	80.000	3.727	0.000	0.000	0.000
7	Edge-Flange3:	80.000	1.856	0.000	0.000	0.000
8	Edge-Flange4:	80.000	1.727	0.000	0.000	0.000
9	Edge-Flange5:	80.000	2.294	0.000	0.000	0.000
10	Edge-Flange6:	80.000	1.910	0.000	0.000	0.000
11	Edge-Flange7:	80.000	2.979	0.000	0.000	0.000
12	Hem1:	80.000	0.993	0.000	0.000	0.000
13	Rect-Cutout-Top:	6.658	24.000	0.000	0.000	0.000
14	Down-Bend-Flange:	3.294	24.000	0.000	0.000	0.000
15	Middle-Cutout:	20.000	24.000	0.000	0.000	0.000
16	Rect-Cutout-Bottom:	6.136	24.000	0.000	0.000	0.000
17	Bottom-Cutout-Flange:	4.364	24.000	0.000	0.000	0.000
18	Upper-Left-Hole:	0.000	0.000	1.000	0.000	0.000
19	Upper-Mid-Left-Hole:	0.000	0.000	1.000	0.000	0.000
20	Upper-Right-Hole:	0.000	0.000	1.000	0.000	0.000
21	Upper-Mid-Right-Hole:	0.000	0.000	1.000	0.000	0.000
22	Lower-Left-Hole:	0.000	0.000	1.000	0.000	0.000
23	Lower-Mid-Left-Hole:	0.000	0.000	1.000	0.000	0.000
24	Lower-Right-Hole:	0.000	0.000	1.000	0.000	0.000
25	Lower-Mid-Right-Hole:	0.000	0.000	1.000	0.000	0.000
26	Pem-Hole-Up-LT-01:	0.000	0.000	0.375	1.411	2.316
27	Pem-Hole-Up-LT-02:	0.000	0.000	0.375	1.411	2.316
28	Pem-Hole-Up-LT-03:	0.000	0.000	0.375	1.411	2.316
29	Pem-Hole-Low-LT-01:	0.000	0.000	0.375	1.411	2.316
30	Pem-Hole-Low-LT-02:	0.000	0.000	0.375	1.411	2.316
31	Pem-Hole-Low-LT-03:	0.000	0.000	0.375	1.411	2.316
32	Pem-Hole-Up-RT-01:	0.000	0.000	0.375	1.411	2.316
33	Pem-Hole-Up-RT-02:	0.000	0.000	0.375	1.411	2.316
34	Pem-Hole-Up-RT-03:	0.000	0.000	0.375	1.411	2.316
35	Pem-Hole-Low-RT-01:	0.000	0.000	0.375	1.411	2.316
36	Pem-Hole-Low-RT-02:	0.000	0.000	0.375	1.411	2.316
37	Pem-Hole-Low-RT-03:	0.000	0.000	0.375	1.411	2.316

Last Update: Friday, April 03, 2026

3.3 – Automated Sales Quote Generation

Global Edge® Engineering Assistant includes Automated Sales Quote Generation by incorporating the CAD part importation capabilities into the quoting process. Within the previous section of the software, the user can look up a customer, generate a sales quote header and attach imported CAD parts to the sales quote. Once CAD part parameters are imported and stored in the SQL database, this section of the **Global Edge® Engineering Assistant** software provides the capabilities of a full functioning quoting system.

Workflow Steps

1. The first step is to open the **Global Edge® Engineering Assistant** software by clicking on the following desktop icon:



2. This will display the following splash screen and menu options:



- The first step is to select **“CRM-Quoting > Prospect / Quote Management”** option to display the following screen:

- Select **“Work-Queue”** option to display the following screen and menu options:

TASK #	BATCH #	DATE	FROM-TO	TYPE	PRIORITY	NOTE	APPLIES TO	ACTION	REQ. DATE	STATUS
1017	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-02-LOAD-CTR-BOX	Execute	2024-04-12 04:03	Pending
1016	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-01-APRON	Execute	2024-04-12 04:03	Pending
1018	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-03-BOTTOM-DLH	Execute	2024-04-12 04:03	Pending
1020	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-05-PANEL	Execute	2024-04-12 04:03	Pending
1019	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-04-HOUSING	Execute	2024-04-12 04:03	Pending

5. Select **“Execute-Task”** option and highlight workflow task to execute followed by **“OK”** option:

The screenshot shows the 'Work-Queue' window with the following details:

- Work-Queue:** Select Work-Queue Task to Execute, then Press [OK]:
- PRIORITY:** 3-NORMAL, 1-HIGHEST (highlighted), 4-LOW, 2-HIGH, 5-LOWEST.
- STATUS:** DRAFT, HOLD, PENDING (5), OPEN, WIP, FAILED, CLOSED, CANCELLED.
- PROGRAM:** Quote / Prospect
- MODE:** Prospect
- TASK DATE:** [Date Picker]
- REQUIRED DATE:** [Date Picker]
- PRIMARY SORT:** Date, Descending
- SECONDARY SORT:** Priority, Descending
- BATCH DATE:** 01/01/1980 12:00:00 AM
- QUERY:** SELECT * FROM work_queue WHERE (queue_program = "ldc_pros") OR (((queue_program = "GlobalEdgeDoc") OR (queue_program = "GlobalEdgeCAD_INV") OR (queue_program = "GlobalEdgeCAD_EDG") OR (queue_program = "GlobalEdgeCAD_SLD")) AND quote_num > 0) AND customer_num > 0 AND from_login = "ldc" AND (priority = 5 OR priority = 4 OR priority = 3 OR priority = 2 OR priority = 1) AND task_status MATCHES "[DPOWH]" ORDER BY task_date DESC, priority DESC
- Table:**

TASK #	BATCH #	DATE	FROM-TO	TYPE	PRIORITY	NOTE	APPLIES TO	ACTION	REQ. DATE	STATUS
1017	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-02-LOAD-CTR-BOX	Execute	2024-04-12 04:03	Pending
1016	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-01-APRON	Execute	2024-04-12 04:03	Pending
1018	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-03-BOTTOM-DLH	Execute	2024-04-12 04:03	Pending
1020	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-05-PANEL	Execute	2024-04-12 04:03	Pending
1019	3	2024-03-29 04:03	FROM: ldc	Quote	Normal	Create DXF File for PART #: DEM-...	DEM-04-HOUSING	Execute	2024-04-12 04:03	Pending
- ** TASK COUNT:** 5
- WO01**

6. Select **“Yes”** option when prompted to **“Start Pending Task?”**, which will display the following screen form and menu options:

The screenshot shows the 'Quote-Header' window with the following details:

- Quote-Header Information:**
 - CUST #: 1001, REF #: ABC MANUFACTURING
 - QUOTE #: 1001, QUOTE REF #: , REVISION #: , STATUS: Entered
 - NOTE: Fabricated Sheet Metal Parts, ENG. APPROVAL: No
 - LOCATION #: 1 CORP. HEADQUARTERS / MANUFACTURING, QUOTE DATE: 03/29/2024
 - CONTACT #: 1 Robert Smith, VALID THRU: 04/28/2024
 - OPPORTUNITY #: 1 Light Fixture Sheet Metal Parts, APPROVED: [Date Picker]
 - PROJECT #: , SUBMITTED: [Date Picker]
 - JOB #: ,
 - QUOTE BY: RDS, PURGE: No, PURGE DATE: [Date Picker]
 - SALES REP: RDS Robert D. Smith, CLOSE %: 0.0, GEN PART: No
 - SHIP WEIGHT: 439.5 lbs, SHIP DAYS: 10, OPEN TASKS: 4
 - SHIP VIA: UPS UNITED PARCEL SER., FOB LOCATION: Shipping Point
 - PAY TERMS: N30 NET 30 DAYS, NET CHARGE: \$28254.43
 - METHOD: Cost-Plus, FACTOR: 1.2, FREIGHT: \$175.00
 - PRICE LIST: 1 STANDARD PRICE LIST, SALES TAX: \$0.00
 - TAXABLE: No, RATE: 0.0 % 0.0 %
 - QUOTE TOTAL: \$28429.43
- Quote Items Table:**

LINE	PART NUMBER	QUANTITY	UNIT	UNIT PRICE	EXTENDED	CFG STATUS
1	DEM-01-APRON	50.0000	EA	\$173.6969	\$8684.85	Pending
2	DEM-02-LOAD-CTR-BOX	25.0000	EA	\$198.0316	\$4950.79	Pending
3	DEM-03-BOTTOM-DLH	35.0000	EA	\$168.2720	\$5889.52	Pending
4	DEM-04-HOUSING	10.0000	EA	\$210.9056	\$2109.06	Pending
5	DEM-05-PANEL	40.0000	EA	\$165.5053	\$6620.21	Pending
- PRO8**

7. Select **“Items > Update”** option and highlight Part Number **“DEM-01-APRON”**:

PROSPECT QUOTE: Global Edge Windows Demo Server

Quote-Header
 Quote Header Information
 Select Item to Update to Update, then Press [OK]:

CUST #: 1001 REF #: ABC MANUFACTURING

QUOTE #: 1001 QUOTE REF #: REVISION #: STATUS: Entered

NOTE: Fabricated Sheet Metal Parts ENG. APPROVAL: No

LOCATION #: 1 CORP. HEADQUARTERS / MANUFACTURING QUOTE DATE: 03/29/2024

CONTACT #: 1 Robert Smith VALID THRU: 04/28/2024

OPPORTUNITY #: 1 Light Fixture Sheet Metal Parts APPROVED:

PROJECT #: SUBMITTED:

JOB #:

QUOTE BY: RDS PURGE: No PURGE DATE:

SALES REP: RDS Robert D. Smith CLOSE %: 0.0 GEN PART: No

SHIP WEIGHT: 439.5 lbs SHIP DAYS: 10 OPEN TASKS: 4

SHIP VIA: UPS UNITED PARCEL SER. FOB LOCATION: Shipping Point

PAY TERMS: N30 NET 30 DAYS NET CHARGE: \$28254.43

METHOD: Cost-Plus FACTOR: 1.2 FREIGHT: \$175.00

PRICE LIST: 1 STANDARD PRICE LIST SALES TAX: \$0.00

TAXABLE: No RATE: 0.0 % 0.0 % QUOTE TOTAL: \$28429.43

LINE	PART NUMBER	QUANTITY	UNIT	UNIT PRICE	EXTENDED	CFG STATUS
1	DEM-01-APRON	50.0000	EA	\$173.6969	\$8684.85	Pending
2	DEM-02-LOAD-CTR-BOX	25.0000	EA	\$198.0316	\$4950.79	Pending
3	DEM-03-BOTTOM-DLH	35.0000	EA	\$168.2720	\$5889.52	Pending
4	DEM-04-HOUSING	10.0000	EA	\$210.9056	\$2109.06	Pending
5	DEM-05-PANEL	40.0000	EA	\$165.5053	\$6620.21	Pending

8. Select **“OK”** option to display the following screen form and menu options:

PROSPECT QUOTE: Global Edge Windows Demo Server

Quote-Item Quantity-Pricing Bill-of-Materials Nestings Image

CUST #: 1001 ABC MANUFACTURING

QUOTE #: 1001 ITEM #: 1 OPEN TASK #: 4

PART #: DEM-01-APRON PROJECT PHASE:

APRON LIST PRICE: \$0.00

STANDARD COST: \$190.1969

QUOTE COST: \$247.2560

ROLL-UP COST: \$190.1969

MFR. SET-UP COST: \$144.0000

ONE TIME CHARGE: \$0.0000

ON HAND: 0.0000

PRICE METHOD: Manual FACTOR: 1.2 TAXABLE?: No

PRICE LIST #: 1 STANDARD PRICE LIST

ORDER:	QUANTITY	UOM	UNIT PRICE	EXTENDED
	50.0000	EA	\$173.6969	\$8684.85

DISCOUNT: %

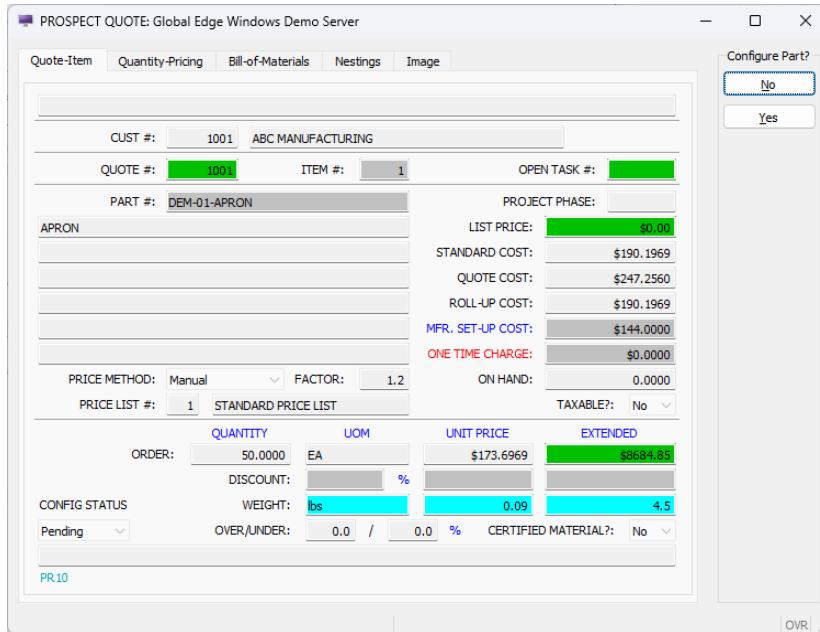
CONFIG STATUS: Pending WEIGHT: lbs 0.09 EXTENDED: 4.5

OVER/UNDER: 0.0 / 0.0 % CERTIFIED MATERIAL?: No

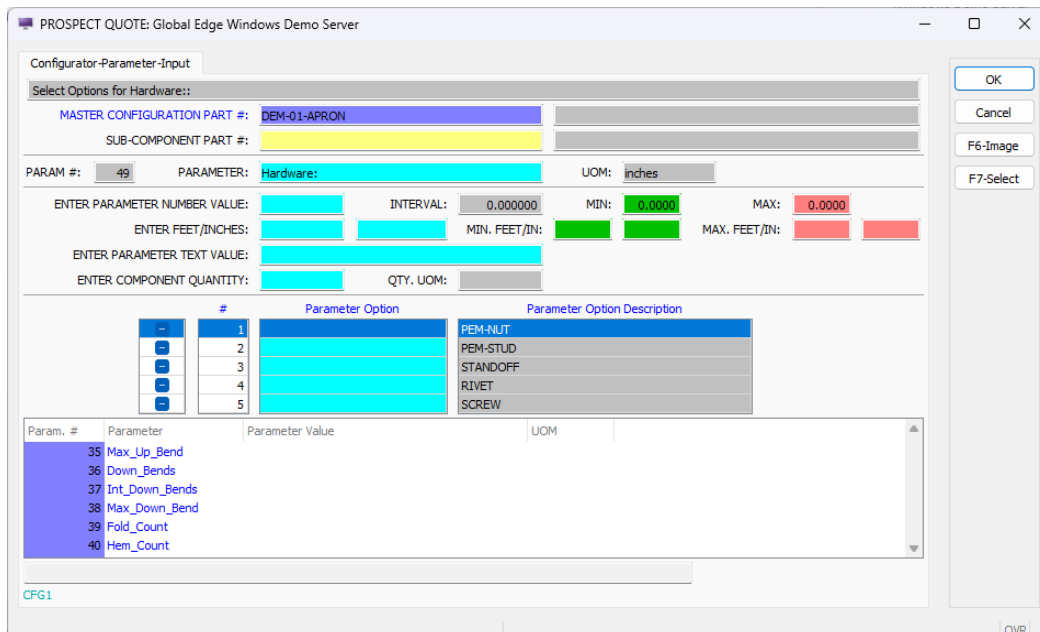
Update Quote Item

QUOTE-ITEM
 Update
 Next
 Previous
 groD-Qty
 Import-DXF
 Configure
 Fabrication
 Summary
 Notes
 Work-Queue
 Documents
 gTatus
 QUIT

- Select **“Configure”** option to display the following prompt (Configure Part?) which will execute the Routing Configurator to generate routing steps for the selected part and automatically rollup the time and material costs based on the imported CAD part parameters:



- As the Configurator executes, the following prompts are made available:



- When prompted for **“Hardware:”**, select one or more of the available options (**“PEM-NUT”** and **“PEM-STUD”** selected)

26. After selecting “OK” on the previous screen form the following screen form and menu options are displayed to enter the quantity of the additional components:

Options-List
 Enter Quantities For Optional Items:

OPTION LIST: DEMO COMPONENTS OPTIONS LIST

	QTY	PART NUMBER	DESCRIPTION	LIST PRICE	UOM	EXTENDED
Include	1.0000	PACKAGING	PACKAGING	\$0.00	EA	\$0.00
Entry		BOX-32X24X24	BOX, 32 X 24 X 24 (S-4453)	\$0.00	EA	
Entry		BAG28-4-599	U-LINE S-2366 20IN X 30IN FLAT BAG	\$0.00	EA	
Include	1.0000	BOX-30X24X20	U-LINE BOX S-4961	\$0.00	EA	\$0.00
Entry		SP-032-1	10-32 PEM NUTS	\$0.00	EA	
Entry		832316	8-32 SELF-TAPPING SCREWS	\$0.00	EA	
Entry		MATERIAL-MARKUP	MATERIAL MARKUP	\$0.00	EA	
TOTAL:						\$0.00

OPTL

Enter Quantity to Include: OVR

27. After selecting “OK” on the previous screen form the following screen form and menu options are displayed to enter the quantity of other charge components:

Options-List
 Enter Quantities For Optional Items:

OPTION LIST: DEMO OTHER CHARGES OPTIONS LIST

	QTY	PART NUMBER	DESCRIPTION	LIST PRICE	UOM	EXTENDED
Include	1.0000	TAPE	TAPE CHARGE	\$0.00	EA	\$0.00
TOTAL:						\$0.00

OPTL

Enter Quantity to Include: OVR

28. When prompted, select the process(es) in the **“Programming Group”**:

SEQ #	PROCESS	PROCESS / ROUTING DESCRIPTION	STANDARD COST / HR.	SETUP TIME	SETUP COST	PROCESS TIME	STANDARD PROC. COST	TOTAL PROC. TIME	TOTAL PROC. COST
1	PROGRAM-NEW-PART	Program New Part Operation	\$50.0000			1.000000	\$50.0000	1.000000	\$50.0000
	PROOF-NEW-PART	Proof New Part Operation	\$50.0000			0.500000	\$25.0000	0.500000	\$25.0000

The above screen form displays the available processes as the Configurator executes with each of the process groups that have been defined. This screen allows the user to select which processes applies to the imported part including the routing sequence.

29. When prompted, enter the **“UNITS/HOUR”** that can be done for the **“BENCH-WORK”** process:

Configurator-Prompt

Routing Information

Select Process Time in Hours, then Press [OK]:

PART #: DEM-01-APRON APRON

SEQ #: 34 STD. PROCESS COST RATE: \$50.0000

PROCESS: BENCH-WORK Bench Work Operation

UNITS/HOUR: 50.00000 COST METHOD QTY: 1.000000

TIME/UNIT: 0.020000 HR(S) 1.200000 MINUTES COST METHOD UOM: hours

VENDOR: No

LOCATION: 1 CORP. HEADQUARTERS / MANUFACTURING

DEPT #: 8 MANUFACTURING

WC #: 11 ASSEMBLY / LABOR

MACHINE: 1053 Work Bench Table

30. When prompted, enter the **“UNITS/HOUR”** that can be done for the **“MIG-WELD”** process:

The screenshot shows a 'Configurator-Prompt' window titled 'PROSPECT QUOTE: Global Edge Windows Demo Server'. The 'Routing Information' section is active, with a prompt: 'Select Process Time in Hours, then Press [OK]:'. The form contains the following data:

PART #:	DEM-01-APRON	APRON
SEQ #:	37	STD. PROCESS COST RATE: \$45.0000
PROCESS:	MIG-WELD	MIG Weld Operation
UNITS/HOUR:	50.00000	COST METHOD QTY: 1.000000
TIME/UNIT:	0.020000 HR(S)	1.200000 MINUTES
COST METHOD UOM:	hours	
VENDOR:	No	
LOCATION:	1	CORP. HEADQUARTERS / MANUFACTURING
DEPT #:	8	MANUFACTURING
WC #:	9	WELDING
MACHINE:	1009	MIG Welder

At the bottom left, there is a text field 'Enter Standard Time in Hours for Routing:' and a status indicator 'BO84'. On the right side, there are 'OK' and 'Cancel' buttons.

31. When prompted, enter the **“UNITS/HOUR”** that can be done for the **“GENERAL-ASSEMBLY”** process:

The screenshot shows a 'Configurator-Prompt' window titled 'PROSPECT QUOTE: Global Edge Windows Demo Server'. The 'Routing Information' section is active, with a prompt: 'Select Process Time in Hours, then Press [OK]:'. The form contains the following data:

PART #:	DEM-01-APRON	APRON
SEQ #:	45	STD. PROCESS COST RATE: \$50.0000
PROCESS:	GENERAL-ASSEMBLY	General Assembly Operation
UNITS/HOUR:	50.00000	COST METHOD QTY: 1.000000
TIME/UNIT:	0.020000 HR(S)	1.200000 MINUTES
COST METHOD UOM:	hours	
VENDOR:	No	
LOCATION:	1	CORP. HEADQUARTERS / MANUFACTURING
DEPT #:	8	MANUFACTURING
WC #:	11	ASSEMBLY / LABOR
MACHINE:	1025	General Labor

At the bottom left, there is a text field 'Enter Standard Time in Hours for Routing:' and a status indicator 'BO84'. On the right side, there are 'OK' and 'Cancel' buttons.

34. After selecting "OK" on the previous screen form the following screen form to enter Units Per Hour for "PACK-FOR-SHIPMENT":

The screenshot shows a window titled "PROSPECT QUOTE: Global Edge Windows Demo Server" with a sub-tab "Configurator-Prompt". The "Routing Information" section contains the following data:

- Part #: DEM-01-APRON (APRON)
- SEQ #: 61 (highlighted in cyan)
- STD. PROCESS COST RATE: \$35.0000 (highlighted in green)
- PROCESS: PACK-FOR-SHIPMENT (Pack for Shipment)
- UNITS/HOUR: 100.0000
- COST METHOD QTY: 1.000000
- TIME/UNIT: 0.010000 HR(S) (highlighted in cyan), 0.600000 MINUTES
- COST METHOD UOM: hours
- VENDOR: No
- LOCATION: 1 CORP. HEADQUARTERS / MANUFACTURING
- DEPT #: 8 MANUFACTURING
- WC #: 14 PACKAGING
- MACHINE: 1027 Packaging Station

Buttons for "OK" and "Cancel" are on the right. At the bottom, it says "Enter Standard Time in Hours for Routing:" and "OVR| :".

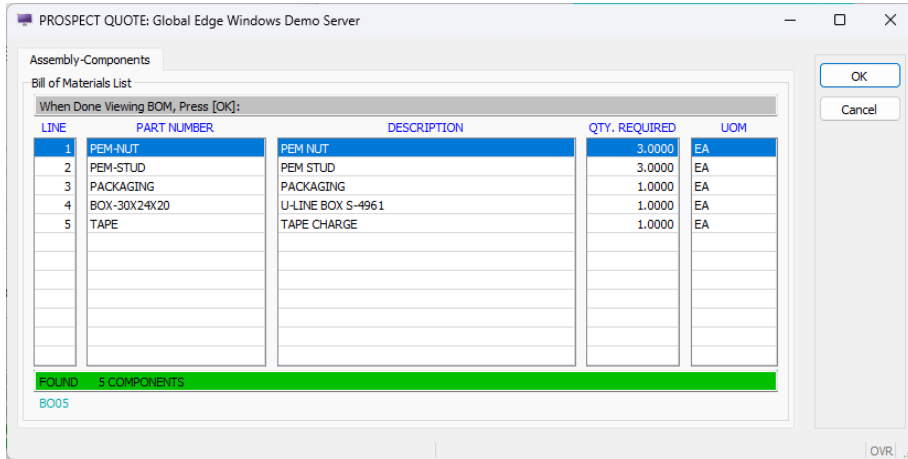
35. After the Configurator is done executing, the following screen form and menu options are displayed:

The screenshot shows a window titled "PROSPECT QUOTE: Global Edge Windows Demo Server" with a sub-tab "Configurator-Parameter-Input". The "Complete" menu on the right includes "BOM", "Documents", "Routing", and "QUIT". The main area shows:

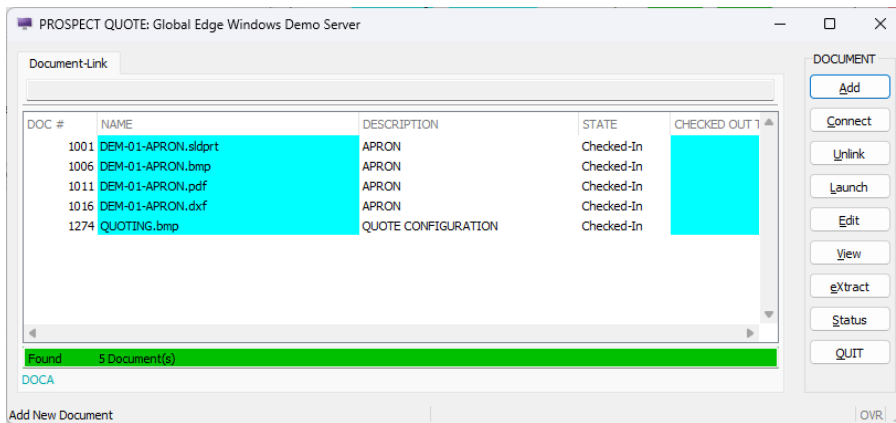
- MASTER CONFIGURATION PART #: DEM-01-APRON (APRON)
- SUB-COMPONENT PART #: TAPE (TAPE CHARGE)
- PARAM #: 4 (highlighted in cyan), PARAMETER: Material (highlighted in cyan), UOM: inches
- ENTER PARAMETER NUMBER VALUE: (highlighted in cyan), INTERVAL: (highlighted in cyan), MIN: 0.0000 (highlighted in green), MAX: (highlighted in red)
- ENTER FEET/INCHES: 0 (highlighted in cyan), MIN. FEET/IN: (highlighted in green), MAX. FEET/IN: (highlighted in red)
- ENTER PARAMETER TEXT VALUE: (highlighted in cyan)
- ENTER COMPONENT QUANTITY: (highlighted in cyan), QTY. UOM: (highlighted in cyan)

Below this is a table for "Parameter Option" with columns for "#", "Parameter Option", and "Parameter Option Description". At the bottom is a table with columns "Param. #", "Parameter", "Parameter Value", and "UOM". The status bar at the bottom says "View Bill of Materials" and "CFG1".

36. Select **“BOM”** option to display the following screen form and menu options:



37. Select **“Cancel”** option to return to previous screen and select **“Documents”** option to display the following screen form and menu options:



38. Select **“QUIT”** option to return to previous screen and select **“Routing”** option to display the following screen form and menu options:

Routing

PART #: DEM-01-APRON APRON

ROUTE #: 1 OF: 1 DESCRIPTION: STANDARD PART ROUTING OPTIMIZATION: None

TYPE: Standard ROUTE SOURCE: OPTIMIZATION QTY: 1.000000

LOCATION LEVEL: None WORK QUEUE REBUILD: No SET-UP COST: \$110,7500

LOCATION #: 1 CORP. HEADQUARTERS / MANUFACTURING PROCESS COST: \$7,5223

DEPT #: 8 MANUFACTURING COMPONENT COST: \$4,3800

W.C. #: TOTAL COST: \$119,90

ASSET #: ROLL-UP DATE: 03/30/2024

SEQ #	ROUTING	ROUTING DESCRIPTION	TYPE	SET UP COST	PROC. COST	MACH.#	MACH.REF	TRANS #
1	PROGRAM-NEW-PART	Program New Part Operation	Process		\$0.0000			2072
2	SHEAR	Shearing Operation (Rough Cut)	Process	\$13.75	\$1,1000	1001	SHEAR-1001	2073
3	LASER-CUT	Laser Cut Operation	Process	\$14.00	\$0,6525	1003	LASER-1003	2074
4	PEM	Pemsert Operation	Process	\$12.50	\$0,5000	1006	PEM-1006	2075
5	BENCH-WORK	Bench Work Operation	Process	\$12.50	\$1,0000	1053	WORK-1053	2076
6	MIG-WELD	MIG Weld Operation	Process	\$15.75	\$0,9000	1009	WELD-1009	2077
7	GENERAL-ASSEMBLY	General Assembly Operation	Process	\$12.50	\$1,0000	1025	LABOR-1025	2078
8	INSPECT	Inspection Operation	Process	\$8.75	\$0,3500	1026	INSPECT-...	2079
9	POWDER-COAT	Powder Coat Operation	Process	\$6.00	\$0,4198	1017	PAINT-1017	2080
10	BATCH-OVEN	Batch Oven Operation	Process	\$6.25	\$1,2500	1019	OVEN-1019	2081
11	PACK-FOR-SHIPMENT	Pack for Shipment	Process	\$8.75	\$0,3500	1027	PACK-1027	2082

FOUND 11 SEQUENCES

BO 10

View Routing Sequences

ROUTING View QUIT

39. Select **“QUIT”** option to return to QUOTE-ITEM menu to display the following screen form and menu options:

Quote-Item

CUST #: 1001 ABC MANUFACTURING

QUOTE #: 1001 ITEM #: 1 OPEN TASK #:

PART #: DEM-01-APRON PROJECT PHASE:

APRON LIST PRICE: \$122.6523

STANDARD COST: \$122.6523

QUOTE COST: \$122.6523

ROLL-UP COST: \$122.6523

MFR. SET-UP COST: \$110.7500

ONE TIME CHARGE: \$35.0000

PRICE METHOD: Manual FACTOR: 1.2 ON HAND: 0.0000

PRICE LIST #: 1 STANDARD PRICE LIST TAXABLE?: No

ORDER:	QUANTITY	UOM	UNIT PRICE	EXTENDED
	50.0000	EA	\$173.6969	\$8684.83

CONFIG STATUS Complete WEIGHT: lbs 0.09 4.5 OVER/UNDER: 0.0 / 0.0 % CERTIFIED MATERIAL?: No

PR 10

Configure or Reconfigure Part/Assembly From Configuration Rules

QUOTE-ITEM Update ... Next ... Previous groD-Qty Import-DXF Configure Fabrication Summary Notes Work-Queue Documents gTatus QUIT

40. After the Configurator executes on a selected part, select the **“QUIT”** option, the software returns to the **“Quote-Item”** screen. Select **“Update”** option, fill in the remainder of the screen form with the proper information such as adding to the part description on the six descriptive lines located below the PART # field. Use the TAB key to move to the next data field. In the PRICE Method field, select **“Cost-Plus”** from the drop-down menu. In the FACTOR field, enter a factor as to what percentage the part should be marked up on the Sales Quote from the cost. Enter a factor of 1.5 to markup part. In the QUANTITY field, enter the quantity of parts to include on the Sales Quote:

ORDER:	QUANTITY	UOM	UNIT PRICE	EXTENDED
	50.0000	EA	\$173.6969	\$8684.85

41. For multiple price quantities, select the **“F10-Quantity”** option of right-hand menu to display the following **“Quantity-Pricing”** screen tab and fill in the various Quantity Prices in the QUANTITY field you want to appear on the Sales Quote:

ROW	QUANTITY	UNIT COST	UNIT PRICE	EXT.COST	EXT.PRICE
1	1.0000	\$122.6523	\$208.4363	\$122.6523	\$208.44
2	10.0000	\$22.9773	\$52.9163	\$229.7730	\$529.16
3	50.0000	\$14.1173	\$39.0923	\$705.8650	\$1954.61
4	100.0000	\$13.0098	\$37.3643	\$1300.9800	\$3736.43
5	250.0000	\$12.3453	\$36.3275	\$3086.3250	\$9081.87

42. Select “OK” option to display the following screen form and menu options:

PROSPECT QUOTE: Global Edge Windows Demo Server

Quote-Item | Quantity-Pricing | Bill-of-Materials | Nestings | Image

CUST #: 1001 ABC MANUFACTURING

QUOTE #: 1001 ITEM #: 1 OPEN TASK #: [Green]

PART #: DEM-01-APRON PROJECT PHASE:

APRON LIST PRICE: [Green]

STANDARD COST: \$122.6523

QUOTE COST: \$122.6523

ROLL-UP COST: \$122.6523

MFR. SET-UP COST: \$110.7500

ONE TIME CHARGE: \$35.0000

ON HAND: 0.0000

PRICE METHOD: Manual FACTOR:

PRICE LIST #: TAXABLE?: No

ORDER:	QUANTITY	UOM	UNIT PRICE	EXTENDED
	50.0000	EA	\$173.6969	\$8684.85

DISCOUNT: %

CONFIG STATUS: Complete WEIGHT: bs 0.09 4.5

OVER/UNDER: 0.0 / 0.0 % CERTIFIED MATERIAL?: No

PR10

Update Quote Item OVR...

43. Select “QUIT” option to return to QUOTE-ITEM menu to display the following screen form and menu options:

PROSPECT QUOTE: Global Edge Windows Demo Server

Quote-Header

Quote Header Information

CUST #: 1001 REF #: ABC MANUFACTURING

QUOTE #: 1001 QUOTE REF #: REVISION #: STATUS: Entered

NOTE: Fabricated Sheet Metal Parts ENG. APPROVAL: No

LOCATION #: 1 CORP. HEADQUARTERS / MANUFACTURING QUOTE DATE: 03/29/2024

CONTACT #: 1 Robert Smith VALID THRU: 04/28/2024

OPPORTUNITY #: 1 Light Fixture Sheet Metal Parts APPROVED:

PROJECT #: SUBMITTED:

JOB #:

QUOTE BY: RDS PURGE: No PURGE DATE:

SALES REP: RDS Robert D. Smith CLOSE %: 0.0 GEN PART: No

SHIP WEIGHT: 439.5 lbs SHIP DAYS: 10 OPEN TASKS: [Green]

SHIP VIA: UPS UNITED PARCEL SER. FOB LOCATION: Shipping Point

PAY TERMS: N30 NET 30 DAYS NET CHARGE: \$28254.43

METHOD: Cost-Plus FACTOR: 1.2 FREIGHT: \$175.00

PRICE LIST: 1 STANDARD PRICE LIST SALES TAX: \$0.00

TAXABLE: No RATE: 0.0 % 0.0 % QUOTE TOTAL: \$28429.43

LINE	PART NUMBER	QUANTITY	UNIT	UNIT PRICE	EXTENDED	CFG STATUS
1	DEM-01-APRON	50.0000	EA	\$173.6969	\$8684.85	Complete
2	DEM-02-LOAD-CTR-BOX	25.0000	EA	\$198.0316	\$4950.79	Pending
3	DEM-03-BOTTOM-DLH	35.0000	EA	\$168.2720	\$5889.52	Pending
4	DEM-04-HOUSING	10.0000	EA	\$210.9056	\$2109.06	Pending
5	DEM-05-PANEL	40.0000	EA	\$165.5053	\$6620.21	Pending

PR08

Update Quote Item OVR...

44. Select **“QUIT”** option to return to QUOTE menu to display the following screen form and menu options:

45. Select **“Print”** option to display the following screen form and menu options:

Sample Sales Quote

PAGE: 001

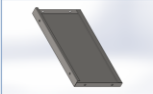

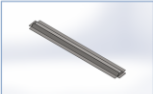
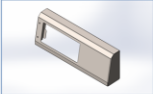
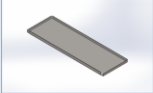


PRICE QUOTATION

1000 West Product Avenue
 P.O. Box 5544
 Productionville, WI 55555
 Phone: 262-695-1300 Fax: 262-695-1313
 www.ldcglobal.com

SUBMITTED TO:		SHIP TO:	
ABC Manufacturing Company 5000 West Industrial Way Milwaukee, WI 55555 United States of America		ABC Manufacturing Company 5000 West Industrial Way Milwaukee, WI 55555 United States of America	

CUST ID: 1001
 CONTACT: Robert Smith, V.P. of Engineering
 E-MAIL: rsmith@abc-manufacturing.com
 PHONE: 414-555-1100
 FAX: 414-555-1105

QUOTE #	REV #	QUOTE DATE	VALID THRU	SHIP VIA	DAYS2SHIP	PAY TERMS	SALES REP.
1001		04/03/2022	05/02/2022	BEST WAY	10	NET 30 DAYS	Robert Smith
QTY. QUOTED	UOM	PART #		DESCRIPTION	TAX	UNIT QUOTE	EXTENDED
50.000	EA	DEM-01-APRON		APRON 	N	173.6969	8,684.85
25.000	EA	DEM-02-LOAD-CTR-BOX		LOAD CENTER BOX 	N	198.0316	4,950.79
35.000	EA	DEM-03-BOTTOM-DLH		BOTTOM DISPLAY LIGHT HOUSING 	N	168.2720	5,889.52
10.000	EA	DEM-04-HOUSING		SHEET METAL HOUSING 	N	210.9056	2,109.06
40.000	EA	DEM-05-PANEL		SHEET METAL PANEL 	N	165.5053	6,620.21
** PAYMENT SCHEDULE **						QUOTE SUB-TOTAL:	28,254.43
						SALES TAX:	0.00
						FREIGHT:	175.00
						QUOTE TOTAL:	\$28,429.43

Configurator Prompts

The following 8 dimensions / parameters were defined in addition to the 34 dimension / parameters that are included with DXF File import process. The following user prompts and options are displayed when the Configurator executes:

PART #: QUOTE-STANDARD					
Dim #	Dim. Parameter / Option	UOM	Minimum	Maximum	Input Method
35	Blank_Before_Cut?				User Prompt
	Yes				
	No				
36	Embossed_Part?				User Prompt
	Yes				
	No				
37	Incl_Panel_Bender?				User Prompt
	Yes				
	No				
38	Hardware:				User Prompt
	PEM-NUT				
	PEM-STUD				
	STANDOFF				
	RIVET				
	SCREW				
39	Weld_Part?				User Prompt
	Yes				
	No				
40	Deburr_Part?				User Prompt
	Yes				
	No				
41	Grain_Part?				User Prompt
	Yes				
	No				
42	Paint_Part?				User Prompt
	Yes				
	No				

Configurator Routings

The following are the available Routings / Manufacturing Processes that have been defined for fabricated sheet metal parts. As the Configurator executes, the software will select the appropriate process based on user selection and/or routing formulas:

PART #: QUOTE-STANDARD							
SEQ #	PROCESS	DESCRIPTION	PROC. RATE	SETUP TIME	SETUP COST	MACH #	TRANS #
2	SHEAR	Sheet Metal Shear Operation	\$55.0000	0.250000	13.75	1109	463
3	PUNCH	Turret Punch Operation	\$75.0000	0.250000	18.75	1007	464
4	EMBOSS	Embossing Operation	\$75.0000	0.250000	18.75	1007	465
5	LASER-CUT	Laser Cut Operation	\$140.0000	0.100000	14.00	1123	466
8	BEND	Press Brake Bending Operation	\$75.0000	0.500000	37.50	1011	469
9	PANELBEND	Panel Bender Bending Operation	\$120.0000	0.100000	12.00	1009	470
12	INSTALL-PEM-NUTS	Install Pem Nuts	\$50.0000	0.350000	17.50	1110	473
13	INSTALL-PEM-STUDS	Install Pem Studs	\$50.0000	0.350000	17.50	1110	474
16	TIG-WELD	TIG Weld	\$45.0000	0.500000	22.50	1112	477
17	MIG-WELD	MIG Weld	\$45.0000	0.500000	22.50	1111	478
20	DEBURR	Deburring Operation	\$45.0000	0.200000	9.00	1108	481
21	GRAIN	Graining Operation	\$45.0000	0.250000	11.25	1160	482
22	SAND-PAINT-PREP	Sand - Paint Preparation Operation	\$40.0000	0.150000	6.00	1086	483
25	HANGING	Hanging Operation	\$25.0000	0.150000	3.75	1077	486
26	WASHING	Washing Operation	\$25.0000	0.150000	3.75	1082	487
27	PAINTING	Painting Operation	\$40.0000	0.150000	6.00	1084	488
28	CURING	Curing Operation	\$25.0000	0.250000	6.25	1089	489
31	ASSEMBLY	Assembly Operation	\$50.0000	0.250000	12.50	1094	492
32	RIVET	Riveting Operation	\$50.0000	0.250000	12.50	1119	493
33	GASKETING	Gasketing Operation	\$35.0000	0.250000	8.75	1092	494
34	GENERAL-LABOR	General Labor Operation	\$50.0000	0.250000	12.50	1125	495
37	FINAL-INSPECT	Final Inspection Operation	\$35.0000	0.250000	8.75	1099	498
38	PACKAGE	Package Operation	\$35.0000	0.250000	8.75	1099	499
39	SHIPPING	Shipping Operation	\$35.0000	0.150000	5.25	1104	500