DELMIAWorks

Quoting

Release: 2022

Contents

Quoting

The EnterpriseIQ Quoting module is a powerful tool used to fine tune estimated costs and profit margins. The quote structure is similar to creating a Bill of Manufacture (BOM), but allows the user to run unlimited “what if” scenarios without affecting the manufacturing side. An approved quote can be quickly converted to a BOM.

The **EnterpriseIQ** Quoting module can help the user create a bid on a new project (RFQ-Request for Quote) or examine costs and profit margins on existing BOMs.

Before You Begin

Prior to entry of quotes, it is recommended that the user enter the following information:

- Customer Data
- Raw Materials
- Inserts
- Packaging
- Quote Parameters
- System Configuration Options—*Equipment/Work Centers and Labor Rates.*

All of the information shown above can be accessed from the Quote module if the user needs to create an entry on the fly.

There are three steps to building a quote:

1. **General Information** - Supplying the general information such as RFQ number, description, customer, cycle and setup time, and raw materials.
2. **Item Information** - Providing details on the item to be produced and the components and/or packaging items to be consumed.
3. **Calculation** - Calculating the quote pricing and cost information and providing a Quote Letter.

NOTE: The user is not required to enter a quote for all BOMs. Functions within EnterpriseIQ will calculate the standard costs for manufactured items. Refer to the Inventory section for more details.

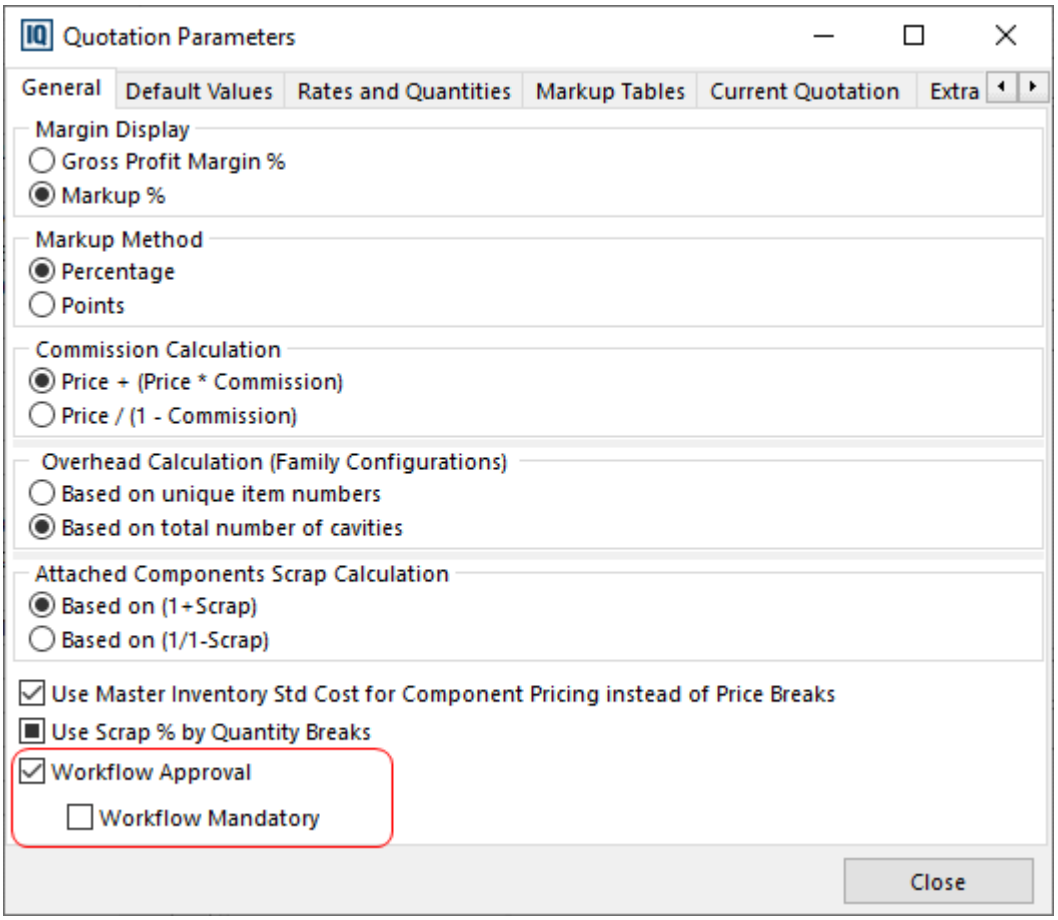
Quotation Parameters

Before entering a quote, basic configuration information must be entered into the system. The system requires general quote parameters (i.e. margin display and gross margin calculation), default value and quantities, and markup tables.

Note: This section should be completed BEFORE creating a quote.

From within the **Quote** module:

- Select **Miscellaneous->|Rates and Parameters** from the main menu bar. The following screen will appear.



Quote Parameters - General Tab

General Parameters define several default calculations, as explained below:

Margin Display

Gross Profit Margin %	((Total Revenue – Total Cost) / Total Revenue) * 100 **Example**: Revenue = 300.00 Total Cost = 240.00 ((300.00 - 240.00) / 300.00) * 100 = 20%
Markup %	((Total Revenue – Total Cost) / Total Cost) * 100 **Example**: Total Revenue = 300.00 Total Cost = 240.00 ((300.00 - 240.00) / 240.00) * 100 = 25%

Mark-up By

Percentage	The Percentage function takes a certain percentage of the cost, and Adds that value back to the original. **Example**: Item cost is $1.00 with a 25% percentage markup calculates to $1.25 (1.00 x .25) + 1.00 = 1.25.
Points	The Points function increases the total cost by the percentage used. This is accomplished by dividing the cost by one minus the percentage. **Example**: Item cost is $1.00 with a 25% Points markup calculates to $1.3333 (1.00 / .75 = 1.3333).

Commission Calculation

Price +	Commissions can be calculated using the formula **Price + (price x commission)**
Price/	Commissions can be calculated using this formula: **Price/(1-commission)**

Overhead Calculation (family configurations)

The overhead calculation for quotes for family tools can be changed to one of the following options. The default method is based on unique item numbers.

Based on unique item numbers	This option takes overhead cost and divides by the number of unique items being quoted and then takes that number divided by the number of cavities for a specific item. For example: The quote has two unique items, one with 2 cavities and one with one cavity. The total overhead cost = 97.50 O.H. Cost for the 2 Cavity item = (97.50/2)/2 = 24.38 O.H. Cost for the 1 Cavity item = (97.50/2)/1 = 48.75
Based on total number of cavities	This option adds all of the cavities together and divides the total overhead by the total cavities. For example: The quote has two unique items, one with 2 cavities and one with one cavity. The total overhead cost = 97.50 O.H. Cost for both items = (97.50/3) = 32.50

Attached Components Scrap Calculation

This controls how the scrap on components is calculated. There are two options.

Based on (1+Scrap)	This is the default method.
Based on (1/1-Scrap)	This is the same method that is used in the costing module.

Use Master Inventory Std Cost for Component Pricing instead of Price Breaks

When this option is checked the system will use the standard cost for components rather than the price breaks. The materials forms will change to show the standard costs rather than the price breaks. With this option checked when converting from a BOM to a Quote, the system will not create a new quote inventory record (QINVT) if the quote inventory item already exists.

Use Scrap % by Quantity Breaks

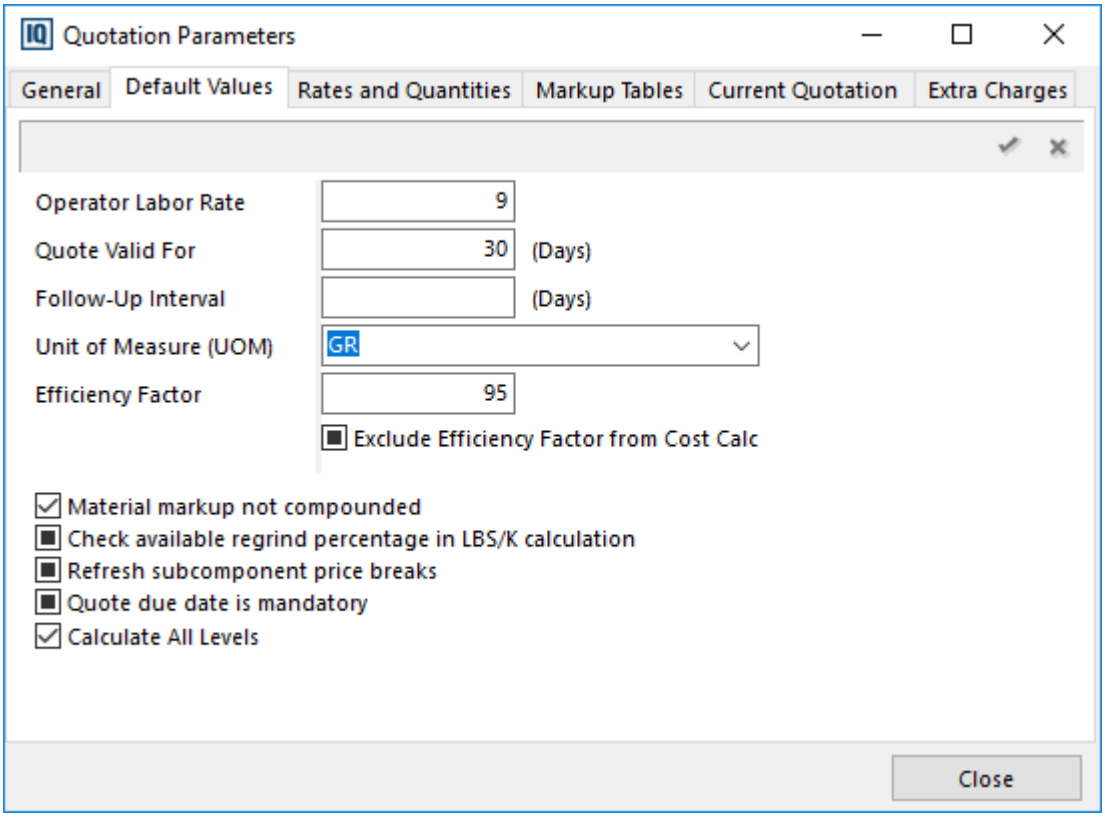
If this parameter is checked, a column is added to the 'Rates and Quantities' tab->'Standard Quote Quantities' section for 'Scrap %'. Each quantity can have a different scrap percent. On the 'Calculations' tab the Scrap % column is added in the quantities grid displaying the scrap percent from 'Standard Quote Quantities'. This field can be edited. A Scrap % row is also added to the calculations grid for displaying the scrap percent associated to the quote quantity. The quantity scrap rates function the same as the scrap percent entered on the General Quote Values tab if this option is not selected. Note: When changing this parameter setting users have to leave and come back to the quote to reflect the change.

Workflow Approval

Workflow Approval - Check this option to utilize the workflow functionality in the quoting module. When this is checked the workflow functionality will become available on the Engineering Quote->General Quote Values tab. See Engineering Quote Workflow for details.

Workflow Mandatory - Workflow Approval can also be marked mandatory by checking the 'Workflow Mandatory' box. This will require users to create a workflow for all quotes. Note: If the Workflow Approval check box is not checked and the user checks this box, the system will automatically check the Workflow Approval box.

Default Values in Quotation Parameters



Default Values

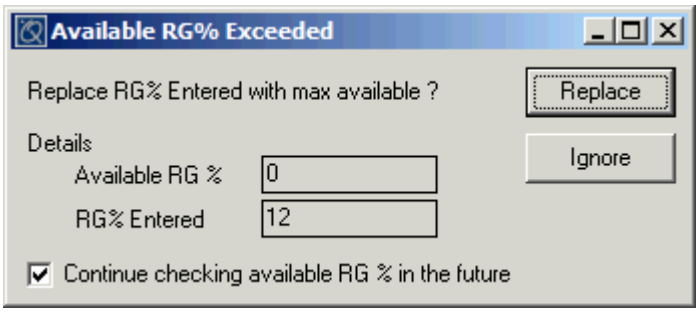
Operator Labor Rate	The default operator rate that will be used for all quotes. Can be overridden for individual quotes using different employee levels.
Quote Valid For	The number of days that the quote will be valid for.

<table>
<tr><td>UOM</td><td>The unit of measure that the part weights will be calculated in. Select from the arrow down list. The options are: GR, LBS, OZ, FT, IN, M, KM, YD, KG, and CM.

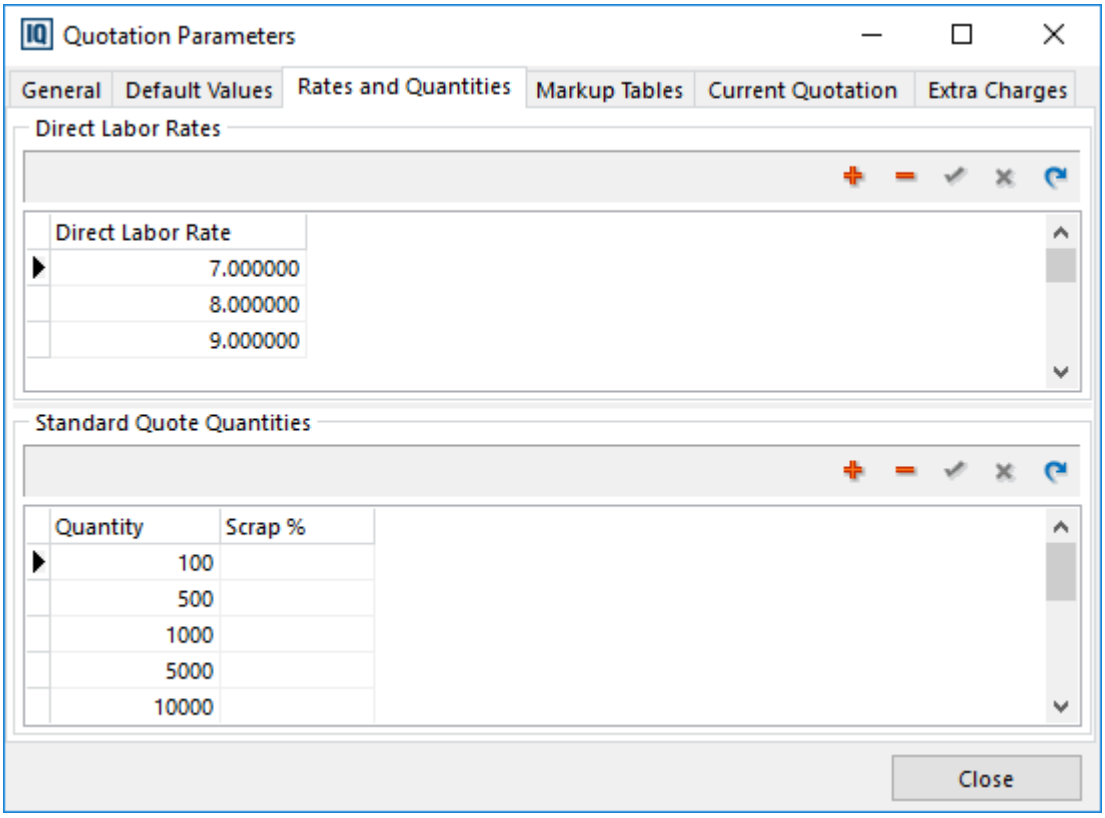
The UOM will be converted to the nearest Imperial/Metric version of the UOM depending on the setting in System Parameters->Regional tab or EPlant Parameters (Enterprise->Miscellaneous tab) for Imperial or Metric UOM.

<table>
<tr><th>Quote Parameters</th><th>Metric</th><th>Imperial</th></tr>
<tr><td>GR</td><td>GR</td><td>GR</td></tr>
<tr><td>LBS</td><td>KG</td><td>LBS</td></tr>
<tr><td>OZ</td><td>GR</td><td>OZ</td></tr>
<tr><td>KG</td><td>KG</td><td>LBS</td></tr>
<tr><td>FT</td><td>M</td><td>FT</td></tr>
<tr><td>IN</td><td>CM</td><td>IN</td></tr>
<tr><td>CM</td><td>CM</td><td>IN</td></tr>
<tr><td>M</td><td>M</td><td>FT</td></tr>
<tr><td>YD</td><td>M</td><td>YD</td></tr>
<tr><td>KM</td><td>KM</td><td>FT</td></tr>
</table>

Note: The system also uses this for new BOMs.</td></tr>
<tr><td>Follow-Up Interval</td><td>The number of days from the Date Out field to follow up on the quote. Once the Date Out field is populated on the quote the Follow-Up Date will fill in based on the number of days entered in this field from the Date Out date. For example, if the follow-up interval is 10 days, and the date out is 6/9/08 the Follow-Up date will populate with 6/19/08.</td></tr>
<tr><td>Efficiency Factor</td><td>The efficiency factor accounts for time that the machine operates. It affects the assumed production time (Net Cycles/hr) and therefore the overhead cost for the produced item. An efficiency factor of 100% assumes that the machine will run 60 minutes per hour and an efficiency factor of 90% assumes the machine will run 54 minutes per hour.</td></tr>
<tr><td>Exclude Efficiency Factor from Cost Calc</td><td>If this is checked the system will exclude the efficiency factor when calculating overhead costs. The system will use an efficiency factor of 100 rather than the Quotes efficiency factor.</td></tr>
<tr><td>Material Markup Not Compound</td><td>Controls whether a manufactured sub-component is marked up again when it is used as a component in a higher level BOM. If checked, the lower level manufactured materials that make up the subassembly will NOT be marked up again.</td></tr>
</table>

Check Available Regrind%	If this is selected, when the program calculates the lbs/K, the calculation checks to see available regrind (Runner Weight / Shot Weight) * 100) and will give a warning if the allowable regrind entered exceeds the calculated available regrind. The warning will display the maximum available regrind percent and ask if the user would like to Replace the regrind value or Ignore it. The pop up form also has a check box. 'Continue checking available RG %..', if Replace is selected the user can un-select this option and the system will no longer check for available regrind. If ignore is selected, the system also ignores any changes made to this check box.  This setting is global for all new quotes. It can be overridden on the Current RFQ# tab in Rates and Parameters (see below).
Refresh Sub-Components Price/Break	With this option selected the system will refresh the price breaks on manufactured sub components before calculating a quote.
Quote Due Date is Mandatory	Select this option to force the user to enter a quote due date.
Calculate All Levels	Check this option to calculate the costs for each item associated to the 'top' level item with one click. For example, Item C consumes Item B, which consumes Item A. With this option checked when calculating the quote for Item C, the system will automatically calculate Item B and A. If this is not checked in order to get the correct cost for Item C you must open the quote for Item A and calculate, then open the quote for Item B and calculate, then open the quote for C and calculate. This value can be overridden on the Calculation tab for an individual quote. Note: The automatic calculations will only affect the actual items that are part of the current "tree" and not other quotes they may be attached to. Note: In order for this to work, 'Refresh Subcomponent Price Breaks' must be checked on the Default Values tab of Quote Parameters, and 'Use Master Inventory Std Cost for Component Pricing Instead of Price Breaks' must be unchecked on the General tab of Quote Parameters.

Rates and Quantities in Quotation Parameters



Direct Labor Rates

Schedule of labor rates for operations. This list is visible in the drop down list when adding labor costs to an RMA or when toggling an item from Non-Conform to conforming.

Default Standard Quote Quantities

An unlimited number of quote quantities may be entered and the system will calculate price and cost information for each of the quantities entered. These are defaults which can be changed at the individual quote level.

If the 'Use Scrap % by Quantity Breaks' parameter is checked in the Miscellaneous menu->Rate and Parameters, a column is added to the 'Rates and Quantities' tab in the 'Standard Quote Quantities' section for 'Scrap %'. Each quantity can have a different scrap percent. Enter the scrap percent in the Scrap % field for each quote quantity if desired.

On the Calculations tab a Scrap % column is added in the quantities grid displaying the scrap percent from Standard Quote Quantities. These values can be edited. A Scrap % row is added to the calculations grid for displaying the scrap percent associated to the quote quantity. The quantity scrap rates function the same as the scrap percent entered on the General Quote Values tab if this option is not selected.

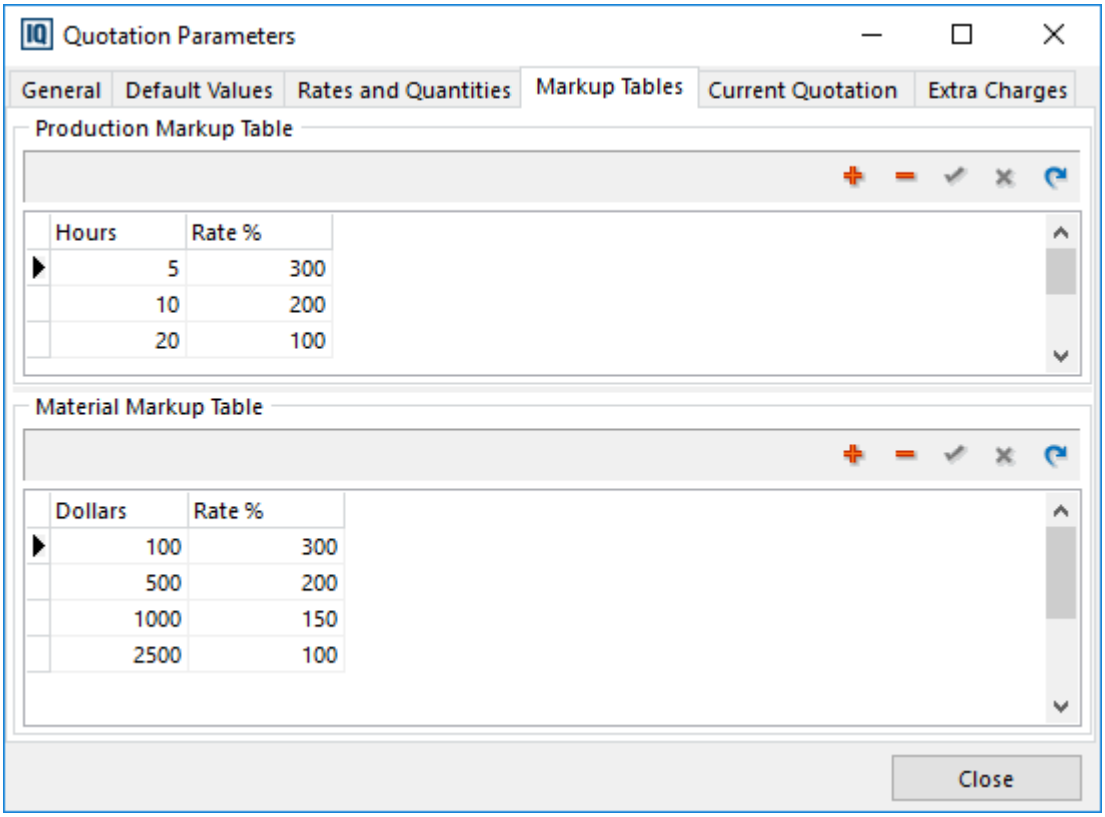
The user can *Add, Delete, post, cancel, or refresh* changes made by selecting these functions from the Navigator bar.

Markup Tables

EnterpriseIQ allows productions costs and material costs to be marked up separately using the Production markup and Material markup defaults.

To set up the default Production and Material markup tables:

- Select the "Markup Tables" tab from within the General Quote Parameters screen. The following screen will appear:



EnterpriseIQ will use the default values when initially calculating a quote. However, these values may be modified once a quote has been calculated.

Production Markup Table

Production mark-up rates are based on *Production Hours per Quote Quantity*. The system matches the generated production hours (based on cycle time, set up, etc.) with the Hours column in this table, and finds the corresponding markup rate. If the calculated production hours fall between two hour entries, it will take the rate for the lowest of the two values. For example, a job that will run 7 hours will be marked up 30% using the above schedule.

Note: The Production markup table shown above is a sample only and should not be assumed to be accurate or valid for your environment.

- Adding Hourly Values

The user may enter an unlimited number of Production markup values.

To 'Add' an hourly value:

- Click on the Add [+] key from the Navigator Bar under the Production Markup Table. This will create a new entry line.
- Enter in the number of Hours and the Rate %.
- Press the Add [+] key or use the arrow down key to Add Additional entries.
- Select [Save] on the Navigator bar.

To Edit the Production Markup table, highlight the field to be changed and enter the new value.

To Delete entries, click on the line to be removed and press the Delete [-] key on the Navigator bar. A confirmation box will appear asking to confirm the action.

Material Mark-up Table

Material markups are based on *Material Costs per Quote Quantity.* Like production hours, the Dollars column is calculated based on the total material costs to run the individual Quote Quantity. The calculation is therefore based on the total dollar volume being processed, NOT the number of pounds being processed. If the calculated material value falls between two entries, it will take the rate for the lower of the two values.

The total dollar volume includes costs for all raw materials, including plastics, additives, inserts, and packaging attached to the item.

- Adding Dollar Values - The user may enter an unlimited number of dollar values.

To **Add** a new value:

- Click on the **Add [+]** key on the Navigator Bar (under the Material Markup Table.) This will create a new entry line.

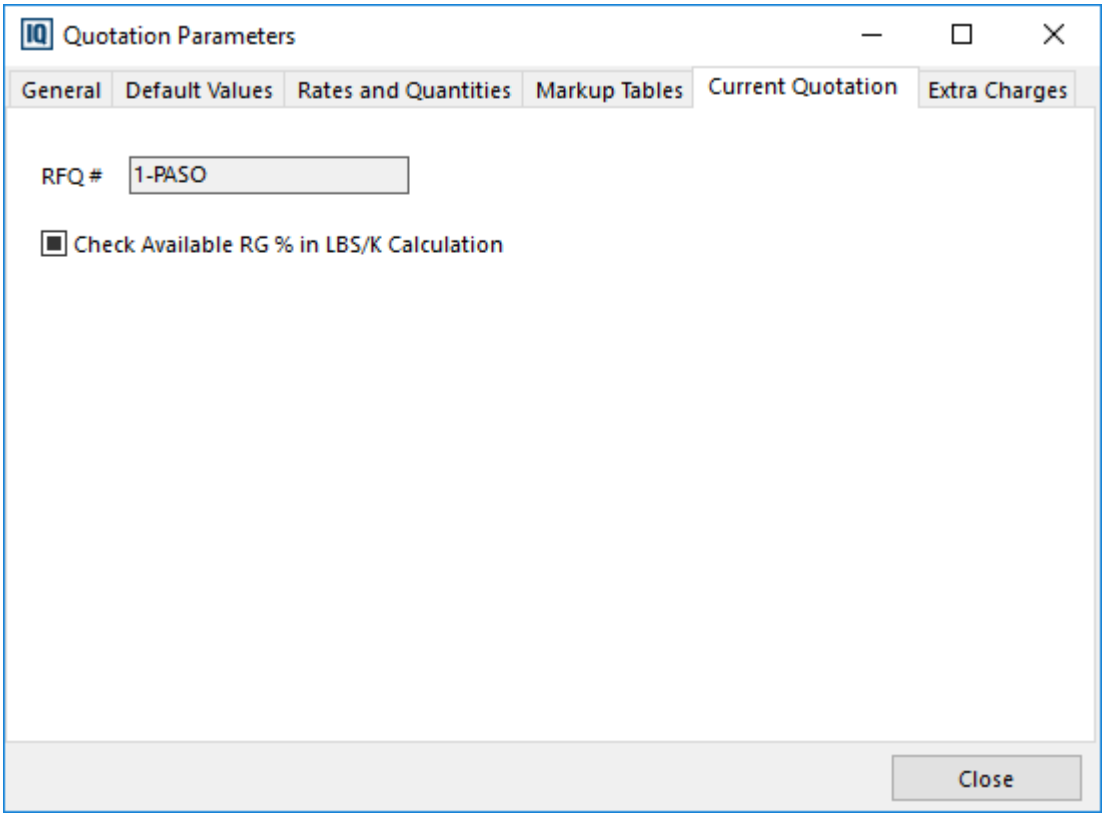
- Enter in the **Dollars** and the **Rate %.**
- Press the **Add [+]** key or use the arrow down key to Add Additional entries.
- Select [**Save**] on the Navigator bar.

To **Edit** the Material Markup table, highlight the field to be changed and enter the new value.

To **Delete** entries, click on the line to be removed and press the **Delete [-]** key on the Navigator bar. A confirmation box will appear asking to confirm the action.

Current RFQ#

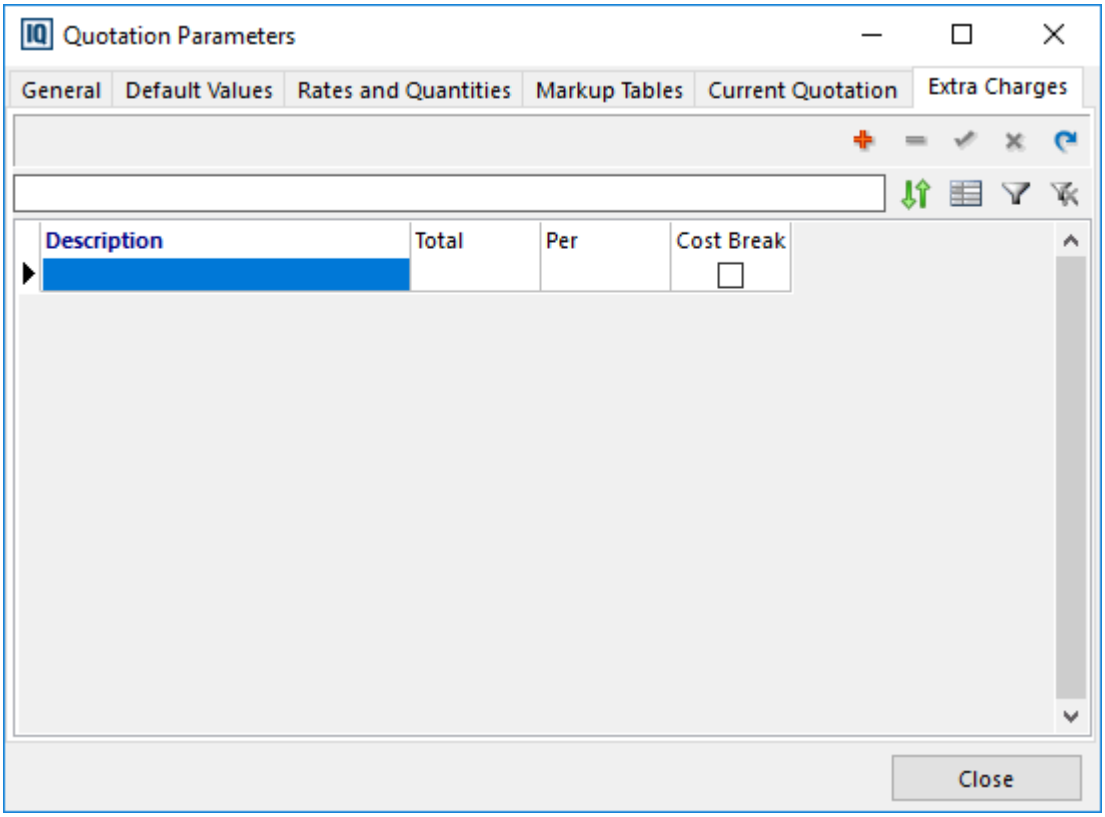
This tab shows the current quote number and has a quote specific check box to check the available regrind percent in LBS/K calculation. The default to check available regrind is on the General Parameters tab but the user can specify something other than the default for each individual quote.



To return to the main **Quote** entry screen, click on [**Close**]. For Additional information on the Markup table functions, please see Calculation Parameters.

Extra Charges in Quotation Parameters

This tab allows the user to enter a list of extra charges. The user can then select from this pick list when adding extra charges to a quote rather than having to manually entering them each time. For more information on Extra Charges please see the Extra Charges and Commissions section below.



Creating Quotes - General Quote Values

Manufacturing quotes are used to quote individual items or multiple items made from the same tool (family tools). Before entering a new quote, the basic configuration information covered above must be entered into the system. If re-quoting an item, follow the first two steps below and Edit the quote from there.

Multi-Level Quoting

A quote will need to be created for each step in the process required for manufacturing the final product. For example, a part may first be injected molded (Injection Quote) then sonic welded (Generic Quote), and may be sent out for outside processing (Outsource Quote) then come back in for additional assembly (Generic Quote). Just as in creating BOM's, a quote will need to be created for each of those steps.

To create a quote for an item that moves through multiple processes the user can start by creating the quote for the first step then create a quote for the second step attaching the item created in the first, and so on. Or the quoting process can be started at the top level (final step) and the user can work their way down. Attached components can be marked 'RFQ Required' which creates a place holder for the item. See Creating a Quote from the Top Level down for more information.

Creating a New Quote

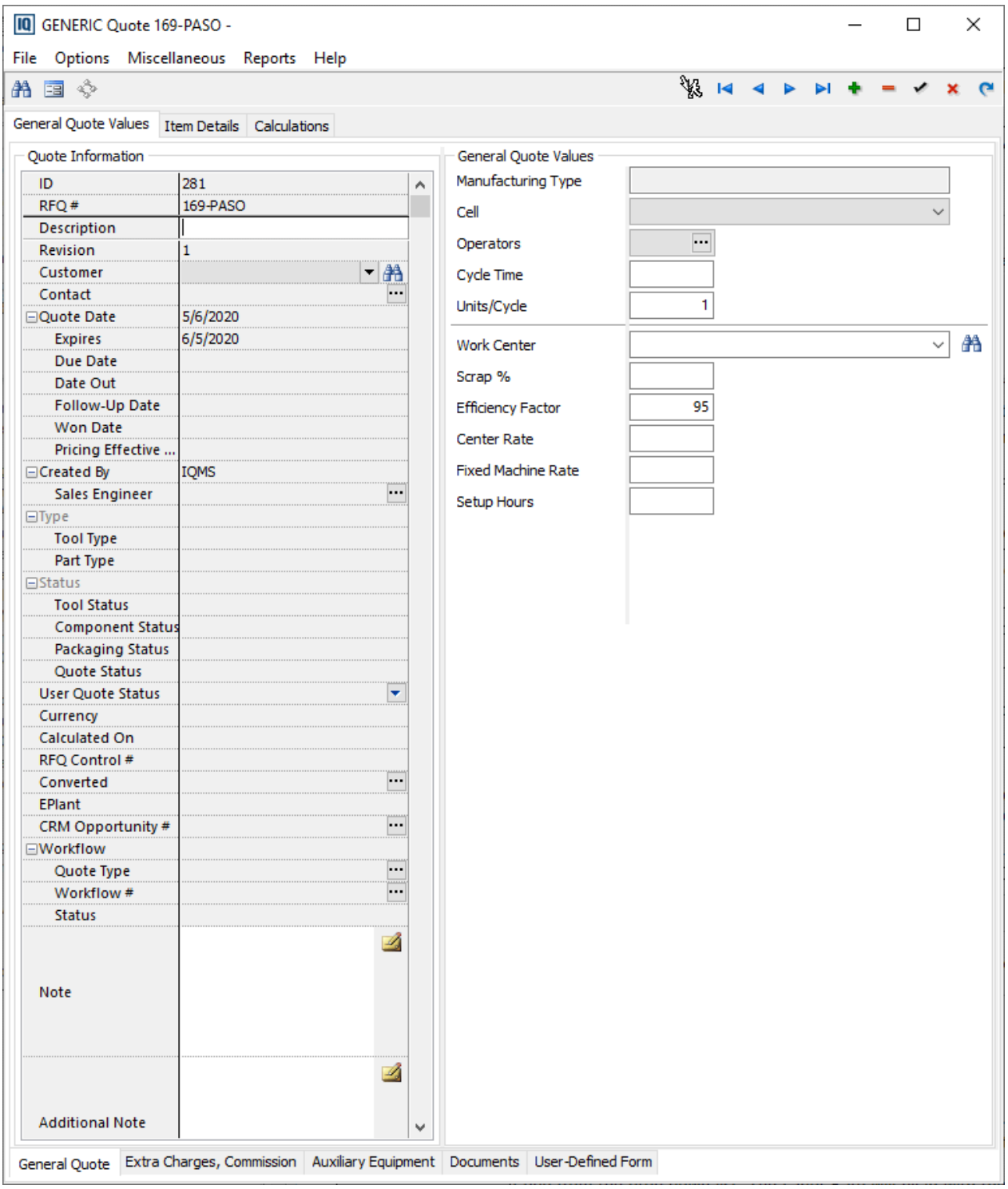
To create a NEW quote:

- From the EIQ Launcher Bar, select the Estimating Tab and click on the 'Quoting' button. The Select from RFQ pick list will appear.
- To create a new quote, click on the 'New' button located in the bottom right corner of the pick list. A new quote can also be created by selecting an existing quote from the pick list and selecting either the Add [+] key, or Quote|New from the main menu bar.

Note: The information and examples in the following pages are based on creating an Injection Molding quote. The Injection quote is used as it illustrates the basic steps for most types of quotes, such as Blow Molding and Rotational molding. For information on other MFG Types such as Generic (Generic Manufacturing Type Quotes), Extrusion (Extrusion Manufacturing Type Quotes), and Thermoform (Thermoform and TFORM2 Manufacturing Type Quotes), and Outsource (Outsource Manufacturing Type Quotes), see those sections below. For ASSY MFG Types please refer to the Assembly Manufacturing help file.

EnterpriseIQ supports multiple manufacturing definitions, such as Injection, Extrusion, Generic, Blow Molding, Outsourcing, as well as user defined manufacturing types. Each definition contains unique elements that complement the manufacturing method. For example, the Injection type supports the concept of cycle times, regrind and includes a direct attachment of a material specification that is consumed during production. The Extrusion definition handles continuous manufacturing processes, while Generic types are used to perform manufacturing processes other than molding.

- Select a Manufacturing Type from the Selection Criteria box and click on 'OK'. The General Quote Values entry screen will appear. This screen contains the general information required when creating a quote. All fields will be blank except for the defaults specified under Rates and Parameters (i.e. UOM, Date, Expires, Efficiency Factor, and Operator Labor Rate) as shown in the screen below.

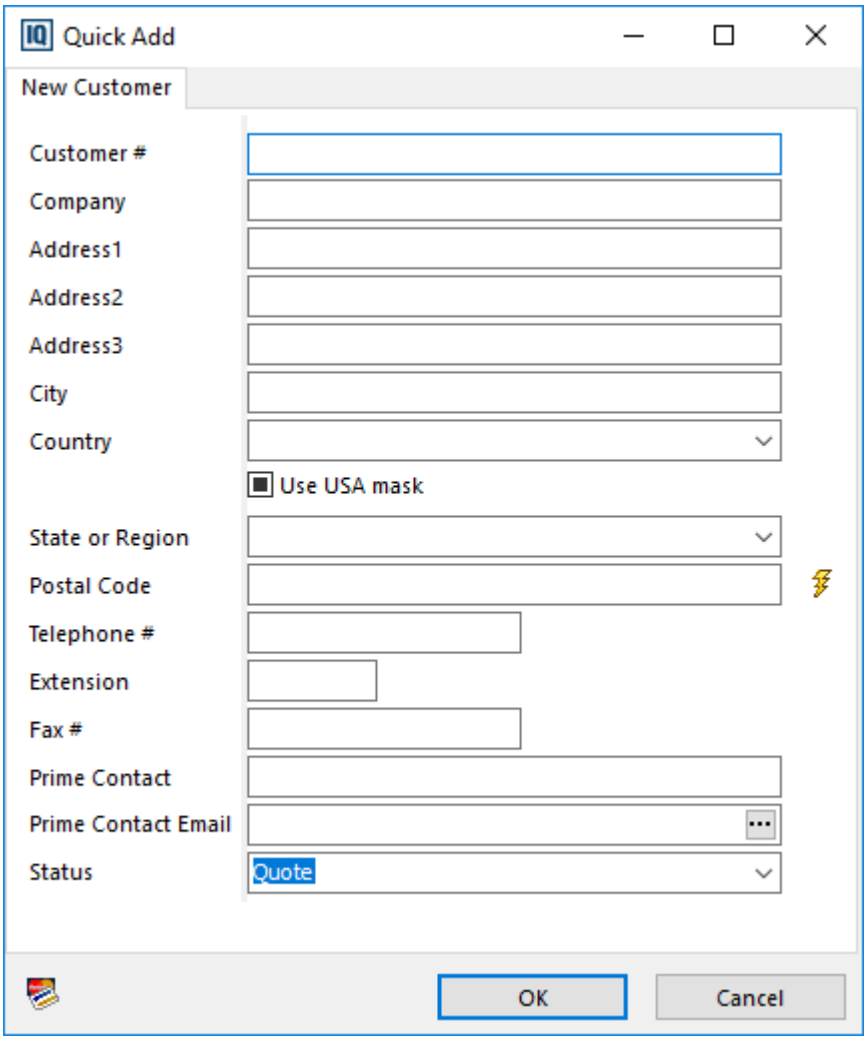


Note: If the quote you are viewing was received from Marketplace, the quote screen will display a blue banner at the top of the screen: "This quote was received from Dassault Systemes Marketplace."

Below lists the field description for the General Quote form:

ID	ID is the system generated ID number for this quote and cannot be changed. This field is also included in the pick list.
RFQ # (required)	The RFQ # is the quote tracking number for this quote. The combination of RFQ # and Revision must be unique or an error message will appear NOTE: RFQ numbers can be set to increment automatically each time a quote is entered. This feature is located in System Setup/System Parameters/Sequential Numbering. If the enable check box is marked with a black check mark, the system will automatically increment the RFQ numbers
Rev	This field is used to enter the Quote revision number (defaults to 1). This field is used to keep track of how many times the quote has been changed. The revision is user defined so it does not update automatically after each calculation. A quote can be cloned as a new revision, using the Clone option from the File menu.
Description	This field is used to enter a description of what is being manufactured in this Quote.
Customer	Select from the drop down list or select the pick list button next to this field to select a Customer to associate to the quote. This pick list is comprised of existing customers, if you want to include CRM 'prospect' customers also, check the 'Do Not Filter Out CRM Customers' under the Options menu. Note: If this option is not checked a quote for a prospect will appear in the pick list but cannot be opened.
Contact	Select the ellipsis button to access the pick list of contacts associated to the customer. Select the contact to be assigned to the quote from the pick list.

If the customer is not in the pick list, create the customer by selecting ‘New’. The new customer will be added to the existing pick list of customers in the AR section with a status of quote. Selecting **New** will bring up the following screen:



- Assign a unique customer number and complete the remaining information. Note: The State drop down list will only appear for selected countries where States apply, such as the United States and Canada.

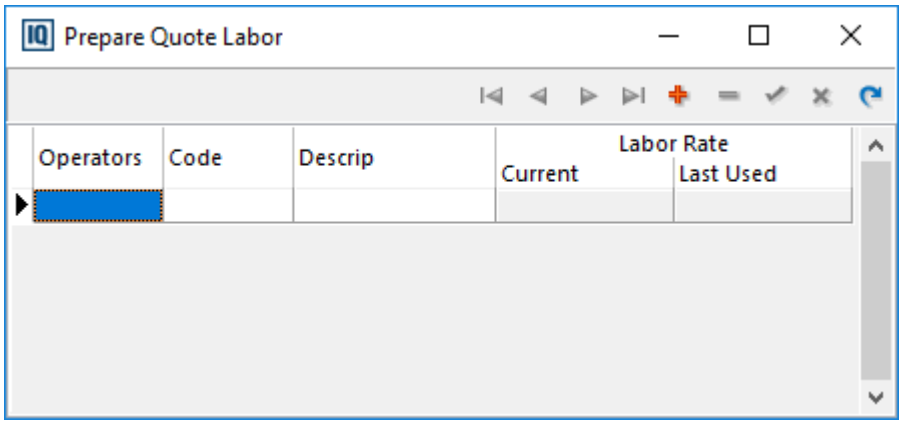
Note: The Quick Add function does not provide the ability to enter all customer information. Remaining information is entered in the Customer Maintenance screen under Accounts Receivable or System Setup.

- Press 'OK' to return to the General Quote Values screen.

Quote Date	The date field fills in automatically with the date the quote was created. This can be changed by choosing a different date from the drop down calendar. Select the + button next to the field to expand the view to show the additional date fields: ▪ **Expires** - This is the date that the quote will expire. The expiration date is calculated from the date the quote is generated and the 'Quote Valid For' in General Quote Parameters. ▪ **Due Date** - This is the date the quote is due to the customer. This is entered manually using the drop down calendar from the RFQ module or the RFQ Log. ▪ **Date Out** - This is the date the quote was sent out. This is entered manually using the drop down calendar from the RFQ module or the RFQ Log. ▪ **Follow Up Date** - If a 'Follow-Up Interval' is entered in rates and parameters, this date will populate once the Date Out has been entered. Or it can be manually entered using the drop down calendar from the RFQ module or the RFQ Log. ▪ **Won Date** - The date the quote was won. ▪ **Pricing Effective Date** - If a date is populated in this field, when converting the quote to a BOM the system will populate the FG Inventory and AKA Inventory price breaks with the Effective date. It will also use the Quote's Effective Date to populate the Inactive Date for any current price breaks with the same Quantity as the Quotes Price Break Quantities.
Created By	The Created By field is populated with the login name of the person who created the quote. Select the + button next to the field to expand the view to show the Sales Engineer field. Enter the 'Sales Engineer' by clicking on the button in the field and choosing 'Assign to me' or 'Select User'. The Assign to me option will populate this field with the Login Name of the user who is logged in. To choose a different person select an employee from the pick list. (The available user list is made up of employees that have the employee name associated to the user name in security inspector).
Type	Select the + button to expand the Type field to display **Tool Type** and **Part Type**. Select from the drop down list next to each field and select the appropriate type: ▪ New ▪ Existing ▪ Requote These fields can also be entered from the RFQ Log module.

Status	Select the + button to expand the Status field to display Tool, Component, Packaging, and Primary Material Status fields. Select from the drop down list next to each field and select the appropriate status: ▪ OK ▪ Purchasing ▪ Estimating ▪ Sales - For Component, Packaging, and Primary Material Status' ▪ Engineering - For Tool Status These fields can also be entered from the RFQ Log module.
Quote Status	The status of the quote in regards to acceptance by the customer. Select the quote status from the drop down list: ▪ Pending ▪ Won ▪ Lost This field can also be entered from the RFQ Log module.
User Quote Status	This is an additional user defined status field. Right click on the field and select 'Define Label Text' to change the label. This field also has a user definable drop down list accessed by right clicking on the blue drop down arrow and selecting 'Edit User Defined List'. This field is also visible in the RFQ Log.
Currency	If Multi-currency is enabled the currency field will be present. This will automatically populate with the currency associated to the customer. Click on the arrow down button to select a different currency. This is informational only, as the currency on a quote is always in the native currency associated to the EPlant or the native in System Parameters for non-EPlant users..
UOM	This is the unit of measure associated to the part weight and runner/sprue.
Calculated On	This is the last date the quote pricing was calculated. This will fill in automatically when the quote pricing is first calculated and updated if the quote is recalculated.
RFQ Control #	The control # records the user name, date and time that the quote was last revised. This will fill in automatically when the quote is saved. **Note:** The format of the Control # can be set in System Parameters->Company File Information->Application tab. If this field is blank it will default to MM-DD-RRRR-HH24:MI:SS (e.g. Username 03-16-2010-16:56:35). The user name is always the prefix. The format must start with a dash (-). But the order of the 'RRRR', 'MM', 'DD', HH24, MI or SS can be changed.
Converted	This field displays the number of times the quote has been converted to a BOM. Click on the ellipsis button to view the list of BOM's it has been converted to. The user can jump to the actual BOM from this list.
EPlant	This will show which plant the quote is being created in. This will only be filled in if EPlant is being used.

CRM Opportunity #	A CRM Opportunity record can be linked to a quote. Select the ellipsis button in this field and select Link CRM Opportunity. A pick list of existing opportunities will display. Choose the desired record from the list. Once a CRM Opportunity is linked the user can select Jump To CRM Opportunity to view the record. Select Clear CRM Opportunity to remove the link to the quote.
Workflow	If the Workflow Approval' parameter is checked these fields will be visible on the General Quote tab: ▪ **Quote Type** - When using the Quote workflow functionality users will select the Quote Type from the pick list accessed by clicking the ellipsis button. Once a Quote Type is selected a workflow is created automatically with the template associated to the Quote Type. If the 'Workflow Mandatory' parameter is checked users are required to select a Quote Type. If the user attempts to save a quote without selecting a Quote Type an error will display stating, "The quote type is required". If the user selected a Quote Type that does not have a template assigned, a message will display stating, "No workflow exists for the quote type. Select YES to create a template; NO to cancel your changes". When YES is selected the workflow template pick list will appear. Select New to create a new template to associate to the Quote Type (refer to the Engineering Quote Workflow topic for details). If NO is selected the user will be returned to the quote for editing. ▪ **Workflow #** - This field displays the Workflow number. Click the ellipsis button and select 'Jump to Workflow' to access the associated workflow. ▪ **Status** - This field displays the status of the Workflow. This can be Inactive (not started), Pending (in process), Not Approved, (rejected), Approved (workflow is complete). See the Engineering Quote Workflow section for more details.
Note	This Note field allows for 4,000 characters. To enter text select the button next to the field to bring up the Note form. This field can be used for additional information on the screen or added to a report. Text can also be entered from a boiler plate. Right click in the Note field, the following options will be available: ▪ Load Boiler Plate: Allows you to select a message from an existing boiler plate. ▪ View/Edit Boiler Plate: Allows the user to view and or edit existing boiler plates. ▪ Save as Boiler Plate: Allows the user to type a new comment and save it as a boiler plate for future use The table and field are *Quote.Note1*. This field will print on the RFQ report and can be added to other reports. This note field is also visible from the RFQ Log and can be edited from there as well.
Additional Note	This is an additional note field that functions the same as the Note field described above. The table and field are *Quote.Note2*.
Manufacturing Type	This is the manufacturing type that the quote is being created for. (i.e. Injection, Generic, etc.).
Cell	Select the cell in which the item will be manufactured. The **Cell** field is optional and may be left blank if cells are not being used. To select a cell, click on the arrow down button to make a selection

Operators	This is the labor required at the work center to run this operation. Click on the ellipsis button in the labor field to enter the required labor. The following form will appear. (Note: The quote must be saved prior to entering this information).  From this screen click on the ADD (+) button, enter in the quantity of operators required (this does not have to be a whole number) then select the Employee Level Code from the drop down list. The Labor Rate will fill in with the Quote Rate associated with the code (Quote Rates are entered in the Employee Level form accessed from the Lists menu in System Parameters). The user can select multiple labor codes and associate fractions of operators per code or multiple operators per code. EnterpriseIQ supports a range of 0.00 to 999 operators per job. A number less than 1 can be used for jobs running automatically and an operator is not always at the press. For these tools, a partial number such as 0.5 is entered depending upon the number of machines the operator is tending. The Employee Levels list is created in Sys Setup->System Parameters->Lists. An unlimited number of employee levels may be created for use in the BOM and RFQ modules. The system comes with a Default labor code. If the Default labor code is selected the system will use the default Operator Labor Rate from Rates and Parameters. **Labor Rate Hierarchy** - Below describes the hierarchy of how the system will determine the quote standard labor rate: **1** Employee level quote rate **2** Quote/Miscellaneous/Rates and Parameters/Default Values/Operator Labor Rate **3** Mfg Cell **4** Mfg Type **Note:** When using employee levels, in order to have Setup hours included in the quote users must have an employee level with a labor type of Setup associated to the quote also. This designates the setup labor cost. The 'Last Used' column is useful to see the labor rate that was used when the quote was last calculated.

Cycle Time	This is the time that it takes to make one unit (i.e., one shot, one assembly unit, etc.). This is based on the Cycle Time set on the Manufacturing Type, i.e. seconds.
Units/Cycle (required)	This is the number of units manufactured during the cycle time. This is not necessarily the number of cavities per cycle. EnterpriseIQ uses this value to determine how many shots are required on a production run. The calculation is simply the number of Items Required / Units per cycle. This value is used in the calculation for: Net Value/Hr, Prod Hrs, and Lbs Req. Essentially, for a tool that produces one item, the units per cycle will equal the number of cavities. For a family tool, the units per cycle will equal the lowest cavitation for any part.

The following examples demonstrate the **Units/Cycle** concept:

Examples:

One item, 4 cavities, sold individually. Units/Cycle is 4 because each cavity is sold separately. Requirement is for 1000 pieces, the shots required would be 250 (1000/4 = 250).

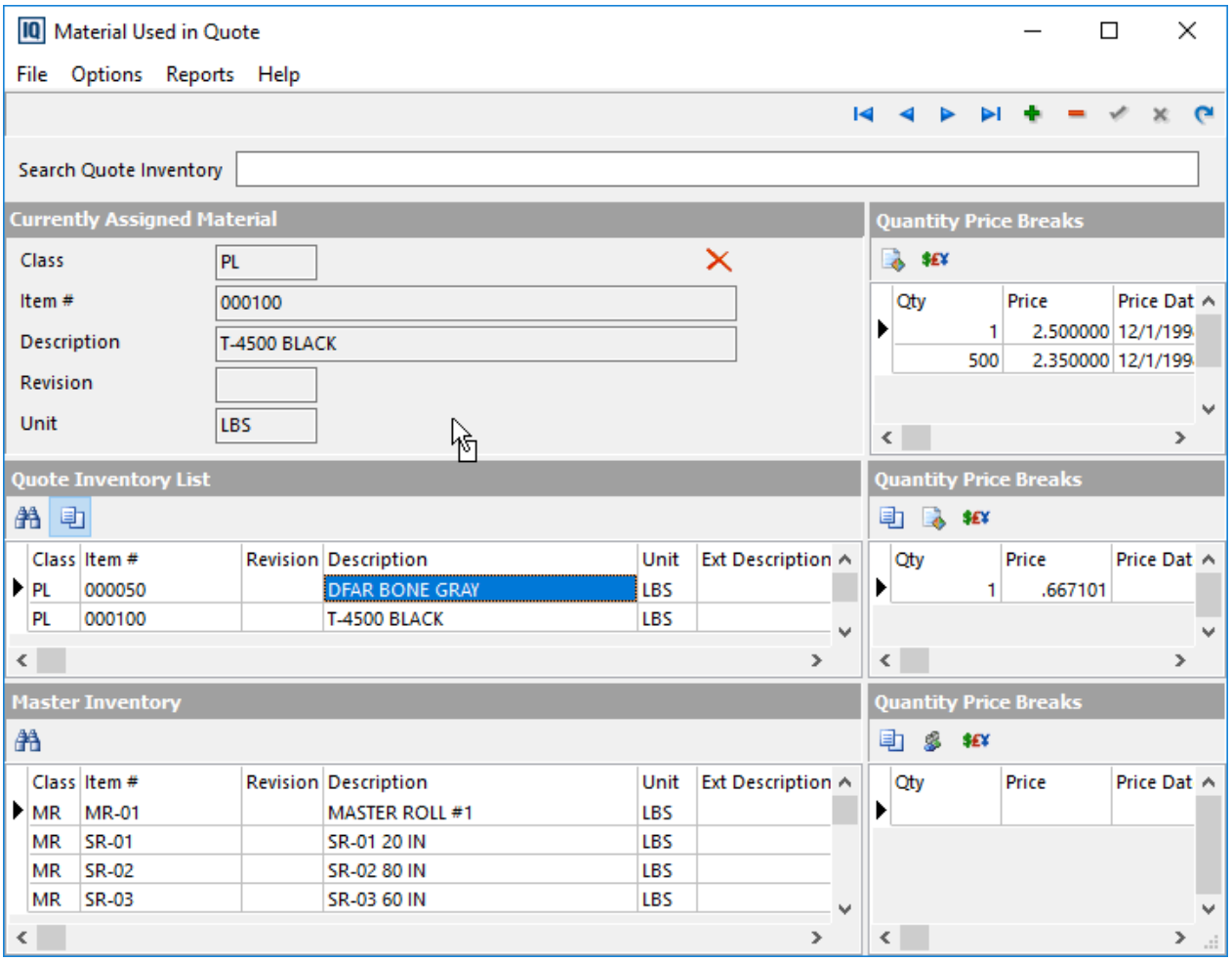
Two item numbers, 2 cavities each, sold as a set or as each. Units/Cycle is 2. The quote will calculate the price for a set as well as the individual item prices. The requirement is for 1000 pieces of each, the shots required is 500 (1000 / 2 = 500).

Two item numbers (Item A and Item B), 1 cavity for Item A and 3 cavities for Item B, sold individually or as a set (1 of Item A and 1 of Item B). This is a ONE unit per cycle configuration because you only get one set per shot. The quote will calculate the price for a set as well as the individual item prices. The requirement is for 1000 pieces of each, the shots required is 1000 in order to produce 1000 pcs of Item A (1000 / 1). If you put the units per cycle as 3. The system would calculate shots required at 334 (1000/3) and you would only produce 334 Item A's.

EnterpriseIQ will allow less than 1 unit per cycle for situations when one shot is not enough to produce a set. In this case, divide the Unit/Cycle by the number of shots needed to produce one set.

Work Center (required)	This is the type of work center that the item will be manufactured on. Select from the drop down list or select the pick list button next to this field. Both lists include the center #, description, type, rate, setup hours, and startup shots. After selecting a **Work Center**, a prompt will ask "Paste SetUp Hours, StartUp Shots & Rate from Selected Work Center?" If "Yes" is selected, the **Setup Hours, Startup Shots, and Center Rate** (defined under Work Centers) will automatically populate the appropriate fields. The entries can be changed for a particular quote without changing the default for the work center. Selecting "No" will leave the fields blank.

Scrap%	This is the estimated amount of scrap that the production process will generate. This amount is used in calculating the extra production time and raw material necessary to make the correct number of good parts. This scrap rate does not affect any attached components. A separate scrap rate can be associated to an attached component in the Attached Materials section of the Item Details tab. Note: This field will not be present on this tab if the '**Use Scrap % by Quantity Breaks**' parameter is checked in the Miscellaneous menu->Rate and Parameters. When checked a column is added to the 'Rates and Quantities' tab 'Standard Quote Quantities' section for 'Scrap %'. Each quantity can have a different scrap percent. On the 'Calculations' tab a 'Scrap %' column is added in the quantities grid displaying the scrap percent from 'Standard Quote Quantities'. This field can be edited. A 'Scrap %' row is added to the calculations grid for displaying the scrap percent associated to the quote quantity. The quantity scrap rates function the same as the scrap percent entered on the General Quote Values tab if this option is not selected.
Efficiency Factor	The efficiency factor accounts for time that the machine operates. It affects the assumed production time (Net Cycles/hr) and therefore the overhead cost for the produced item. This field will show the default value from Rates and Parameters, but can be edited for a particular quote. **Note**: If the '*Exclude Efficiency Factor from Cost Calc*' option is checked in Rates and Parameters->Default Values tab (Miscellaneous menu), the system will exclude the efficiency factor when calculating overhead costs. The system will use an efficiency factor of 100 rather than the Quotes efficiency factor.
Center Rate	This is the rate that will be used in calculating the production cost. The value can be 'pasted' from the Center Rate associated to the selected work center or a value may be entered in manually. This rate can be a rate used for quoting or the user can use an actual cost.
Fixed Machine Rate	This value comes from the Fixed Machine Rate associated to the selected work center or a value may be entered in manually. The system uses this value to calculate the variable gross margin percent on the calculations tab. (See the VGM% calculation in the Calculation Display Box section).
Start Cycles	Start Cycles are the number of shots required before a good part is produced. They affect the start-up costs calculated in the quote, with the number of Startup Shots being added to the number of cycles required to produce the quote quantity.
Setup Hrs	Setup hours are the number of hours required to set up the machine. The Set Up hours affect the length of the production run and the production cost. When using employee levels in the Operators field, in order to have Setup hours included in the quote users must have an employee level with a labor type of Setup associated to the quote also. This designates the setup labor cost
Material	The material to be used in the quote. Clicking on the pick list will access the following screen. For MFG Types with a primary material this field must be populated. If it is not, when the user attempts to calculate the quote an error will appear stating, 'RFQ # XXX - primary material required for quote calculation.'


Material Used in Quote
File
Options
Reports
Help
Search Quote Inventory
Currently Assigned Material
Class
PL
Item #
000100
Description
T-4500 BLACK
Revision
Unit
LBS
Quantity Price Breaks
Qty
Price
Price Dat
1
2.500000
12/1/199
500
2.350000
12/1/199
Quote Inventory List
Class
Item #
Revision
Description
Unit
Ext Description
PL
000050
DFAR BONE GRAY
LBS
PL
000100
T-4500 BLACK
LBS
Quantity Price Breaks
Qty
Price
Price Dat
1
.667101
Master Inventory
Class
Item #
Revision
Description
Unit
Ext Description
MR
MR-01
MASTER ROLL #1
LBS
MR
SR-01
SR-01 20 IN
LBS
MR
SR-02
SR-02 80 IN
LBS
MR
SR-03
SR-03 60 IN
LBS
Quantity Price Breaks
Qty
Price
Price Dat

This screen shows the raw material assigned to the current quote, the Quote Inventory List, and the Master Inventory List. **EnterpriseIQ** maintains an inventory of quote items separate from the Master Inventory to allow for the use of items not from the Master Inventory in quotes and modification of pricing for particular quotes.

Adding Items to the Quote Inventory from Master Inventory

To Add items to the Quote Inventory from the Master Inventory, find the material in the Master Inventory and drag and drop it into the Quote Inventory List. The Quote Inventory can have the same items from the Master Inventory with cost breaks different from those in the Master Inventory.

Notes: Under Options select 'Include Prices w/ Transfer' if you want the prices to transfer from the master inventory. Pricing comes from the buying price section for purchased items and the selling price section for manufactured items by default; or the standard cost if the 'Use Std Cost in Engineering Quote' option is checked in Master Inventory->Additional tab). If the 'Include Prices w/ Transfer' option is not checked, the user must enter in the pricing information for the quote inventory.

Both active and inactive pricing from the Buy/Sell tab in inventory will appear in the Master Inventory section, however, only active pricing will be carried over when dragging material from Master Inventory to the Quote Inventory List or to the Currently Assigned Material. To only see active pricing in the Master Inventory section select the Hide/Show Inactive button  . The Hide/Show Inactive button is also available in the Quote Inventory section to hide quote pricing that has been marked inactive.

If the 'Use Master Inventory Std Cost for Component Pricing instead of Price Breaks' quote parameter is checked the standard cost will be displayed instead of the price breaks.

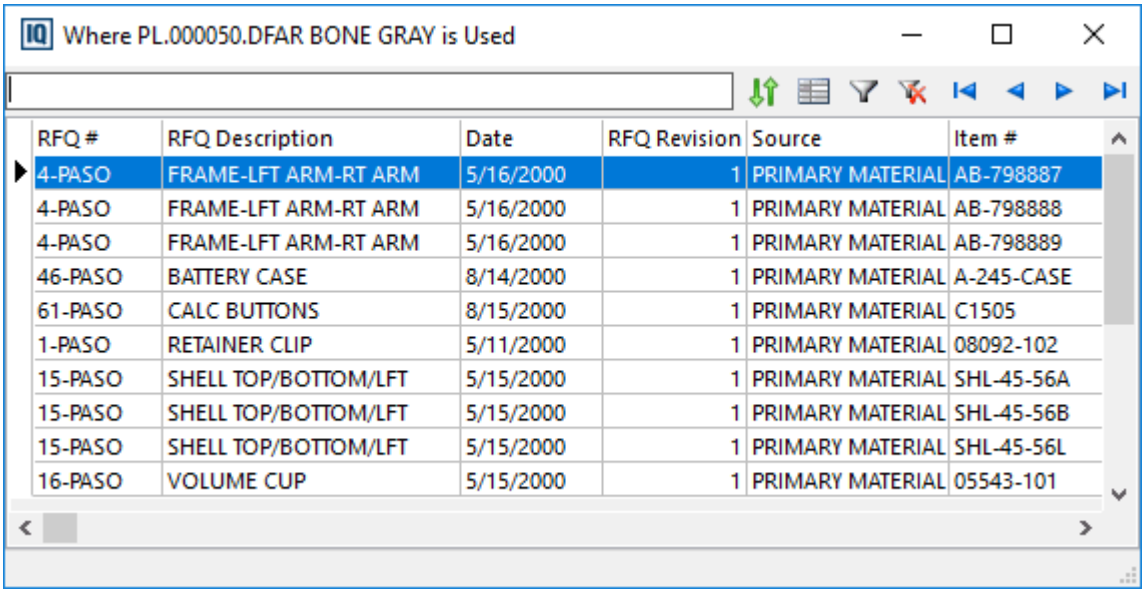
In Quote inventory you can have the same item number with a different description, but in Master Inventory the item number must be unique. Therefore, if the item is added via the 'drag' method from the Master Inventory list, the record chosen will be the first matching Item # in the Quote Inventory List. This can lead to the wrong item being added if multiple Quotes were made for the same item number with different descriptions or pricing.

Searching for Inventory Items

To search for items in the Quote Inventory, use the pick list speed button in the Quote Inventory section. Or click once in the Quote Inventory List section so the caption next to the field at the top of the screen reads 'Search Quote Inventory'. To search, begin typing in the Class and the Item Number of the item (do not leave a space between the Class and the Item Number) and the Quote Inventory List will hyperbrowse to the item.

Use the pick list or hyperbrowse method, in the same manner as described above, to search for items in the master inventory list.

Right Click Options - From the Master Inventory section users can right click and Jump to Inventory. If the item is a blend, users can select Jump to Blend to access the Blend Operations form. The Jump to Blend option is also available in the Quote Inventory List section. From the Quote Inventory List section right click and select Where Used to see a list of RFQs that the material is associated to as a primary material or a component.



RFQ #	RFQ Description	Date	RFQ Revision	Source	Item #
4-PASO	FRAME-LFT ARM-RT ARM	5/16/2000	1	PRIMARY MATERIAL	AB-798887
4-PASO	FRAME-LFT ARM-RT ARM	5/16/2000	1	PRIMARY MATERIAL	AB-798888
4-PASO	FRAME-LFT ARM-RT ARM	5/16/2000	1	PRIMARY MATERIAL	AB-798889
46-PASO	BATTERY CASE	8/14/2000	1	PRIMARY MATERIAL	A-245-CASE
61-PASO	CALC BUTTONS	8/15/2000	1	PRIMARY MATERIAL	C1505
1-PASO	RETAINER CLIP	5/11/2000	1	PRIMARY MATERIAL	08092-102
15-PASO	SHELL TOP/BOTTOM/LFT	5/15/2000	1	PRIMARY MATERIAL	SHL-45-56A
15-PASO	SHELL TOP/BOTTOM/LFT	5/15/2000	1	PRIMARY MATERIAL	SHL-45-56B
15-PASO	SHELL TOP/BOTTOM/LFT	5/15/2000	1	PRIMARY MATERIAL	SHL-45-56L
16-PASO	VOLUME CUP	5/15/2000	1	PRIMARY MATERIAL	05543-101

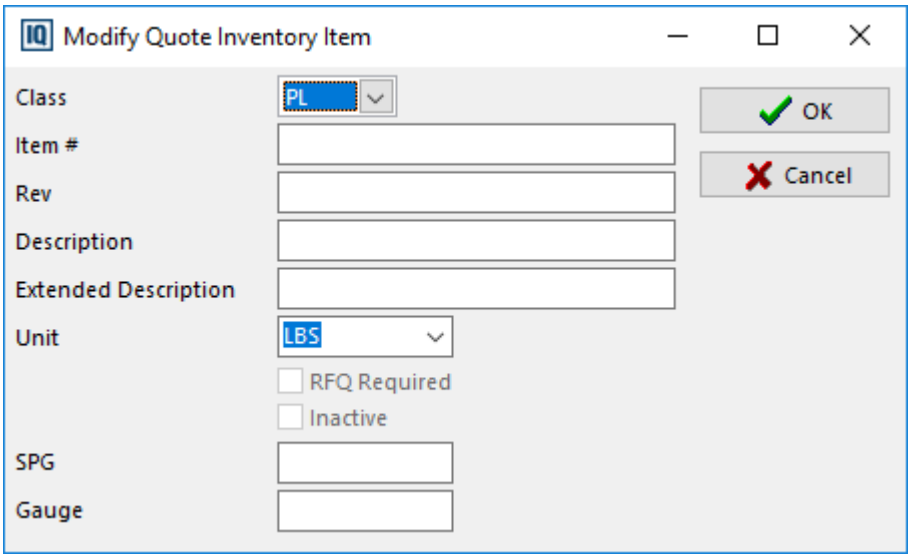
Vendor RFQ

From the Quote Inventory section the user can create a Vendor RFQ for items by selecting the Vendor RFQ speed button  . Please see Vendor RFQ for details.

Adding New Material to the Quote Inventory

If the item does not exist in either the Quote or Master Inventory, click on any item within the Quote Inventory list.

- Next, click on File->Add Material or click on the 'Add' [+] button. The following screen will appear:



- The Class of the item will default to PL, but can be modified.
- Next, enter the Item #.
- Enter a Rev number, if applicable.
- Enter the Description of the item.
- Enter an Extended Description if desired.
- Select the Unit (i.e. LBS, KG).
- Enter the SPG (Specific Gravity), if applicable.
- Click on 'OK' to return to the Quote Inventory screen. The item that you created will be added to the Quote Inventory list only.

Note: When the quote is converted to a standard, the item will be added to the Master Inventory list. During the conversion process, the item may be reviewed and edited.

- Enter Qty / Price break for the material in the fields to the right.

Attaching the Material to a Quote

To attach a material to the quote

Highlight the item within the Master or Quote Inventory List.

- Double click on the item that is highlighted, or hold down the left mouse button and drag the item to the Quote Inventory list or directly to the Currently Assigned Material field.
- **Options Menu**: Three options are available in the add material form.

- Confirm Every Transfer - with this checked every time material is moved from one section to another a form will appear asking the user to confirm the move.
- Include Prices with Transfer - with this checked when material is moved from one section to another the pricing will also transfer. (Does not apply to the AKA Pricing option, see below).
- Reset Screen sets the screen to the original size.

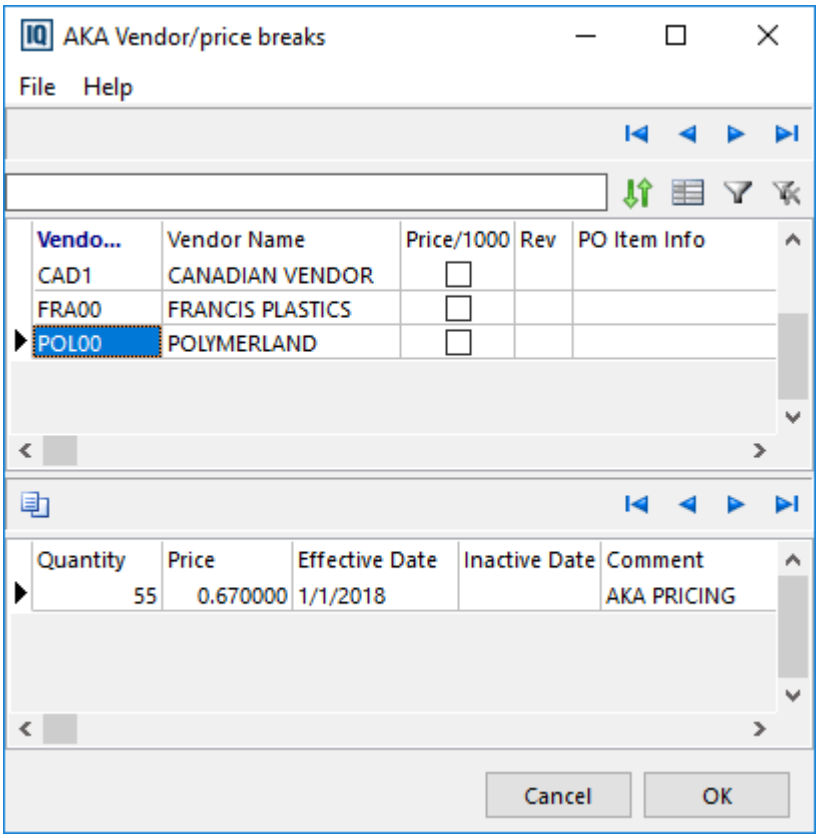
Changes can be made to the Qty / Price break field in the Quote Inventory before adding the material item to the Currently Assigned Material field or after the material has been assigned to the quote.

Note: Changes cannot be made to the Qty / Price break fields shown in the Master Inventory List.

Attaching the Material to a Quote Using AKA Pricing

The default quantity price breaks listed for the master Inventory items comes from the Buying section of the Buy/Sell Pricing tab in inventory. However, users can select the 'Propagate AKA Vendor/price breaks' button in the Quantity Price Breaks section to assign AKA pricing to the quote inventory and the Currently Assigned Material  . To use AKA pricing:

- Highlight the item to be associated to this quote in the Master Inventory section.
- Select the AKA button and a form will appear listing the vendors and price breaks.



- Highlight the desired record and select OK.
- This will populate the Currently Assigned Material section with the selected item and its AKA price breaks. If the selected item already exists in the Quote Inventory the pricing will be updated with the AKA pricing. If it does not exist in the Quote Inventory, the system will add a new record with the AKA pricing.

Note: AKA pricing will populate both sections regardless of the 'Include Prices w/ transfer Option.

- To clear the currently assigned material and add a different one, select the red clear (X) button.
- To exit, click on File->Exit or click on the [X] in the upper right hand corner of the screen. The selected material should now be displayed in the Material field.

Runner/Sprue	This is the combined weight of the runner and sprue. The runner and sprue information is used to calculate the material required for production. Note: Material requirements are calculated based on the total shot weight, which includes all cavities plus the runner and sprue.

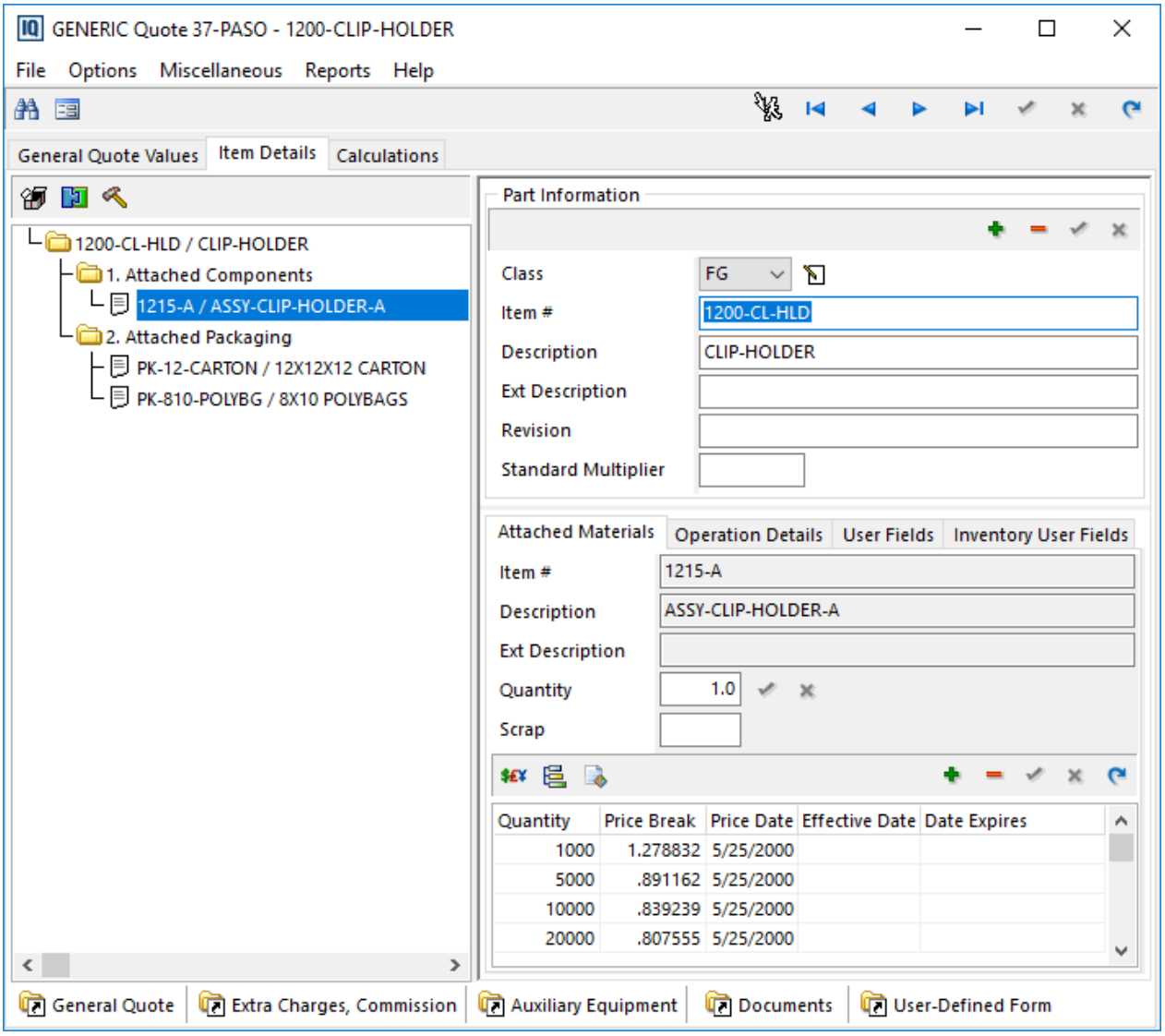
Dry Time	This is the amount of time required to dry the raw material prior to production. If material is being dried away from the press or within the set up time, leave this field at zero (0) as the dry time will affect the production hours. This information does not transfer to the BOM upon conversion. The dry time is on the raw material item in inventory and is used for informational purposes only.
Regrind%	This is the anticipated amount of regrind that will be used in the production. EnterpriseIQ will assume regrind consumption up to this amount and calculate pricing based on the value of the regrind material. The Regrind% affects material required and also the material cost.

After all entries have been made, save the information and click on the 'Item Info' tab to continue building the quote.

Quote Item Information

The next step in completing the quote is to enter in the item information.

Upon selecting the 'Item Details' tab the following screen will be displayed:



The first time this screen is accessed, it will not contain any data. The illustration above shows the Item Details screen after all entries have been made. The upper right portion of the screen provides information on the items to be produced and the lower right hand portion provides information on items to be consumed in the production process.

Note: If the quote you are viewing was received from Marketplace, the quote screen will display a blue banner at the top of the screen: "This quote was received from Dassault Systemes Marketplace."

To begin making entries click on the **Add (+)** button and fill in the fields:

Class	Select the Inventory Class for the item using the drop down list.
Item #	This is the item that will be produced (*required field*). The item number is an alphanumeric field up to 50 characters in length. A new item created here will exist only in the Quote Inventory until the quote is converted to a BOM.
Revision	The revision number for the item.
Weight	The weight of a *single* item (*required field*). If the weight of the item is not known, please see Weight Work Sheet for more information. DO NOT multiply the item weight by the number of cavities or include the runner and sprue weight. This information is collected on the main page of the quoting form. Also, DO NOT include any additional weight that an insert might add.
Std Cav **Standard Multiplier**	This is the standard cavities or multiplier, or the number of items produced per cycle (*required field*).
Description	The description or common name of the item (*required field*). This field can be up to 36 characters in length.
Ext Description	This provides an additional field of 100 characters in length for an extended description *(optional field)*.

- Save your entries and the information will populate the left side of the screen.

Quoting a Family Tool

To add multiple items and create a quote for a family tool, click on the 'Add' [+] button and enter information on the other items to be produced. Each of these items will be displayed on the left hand side of the screen when the input is saved.

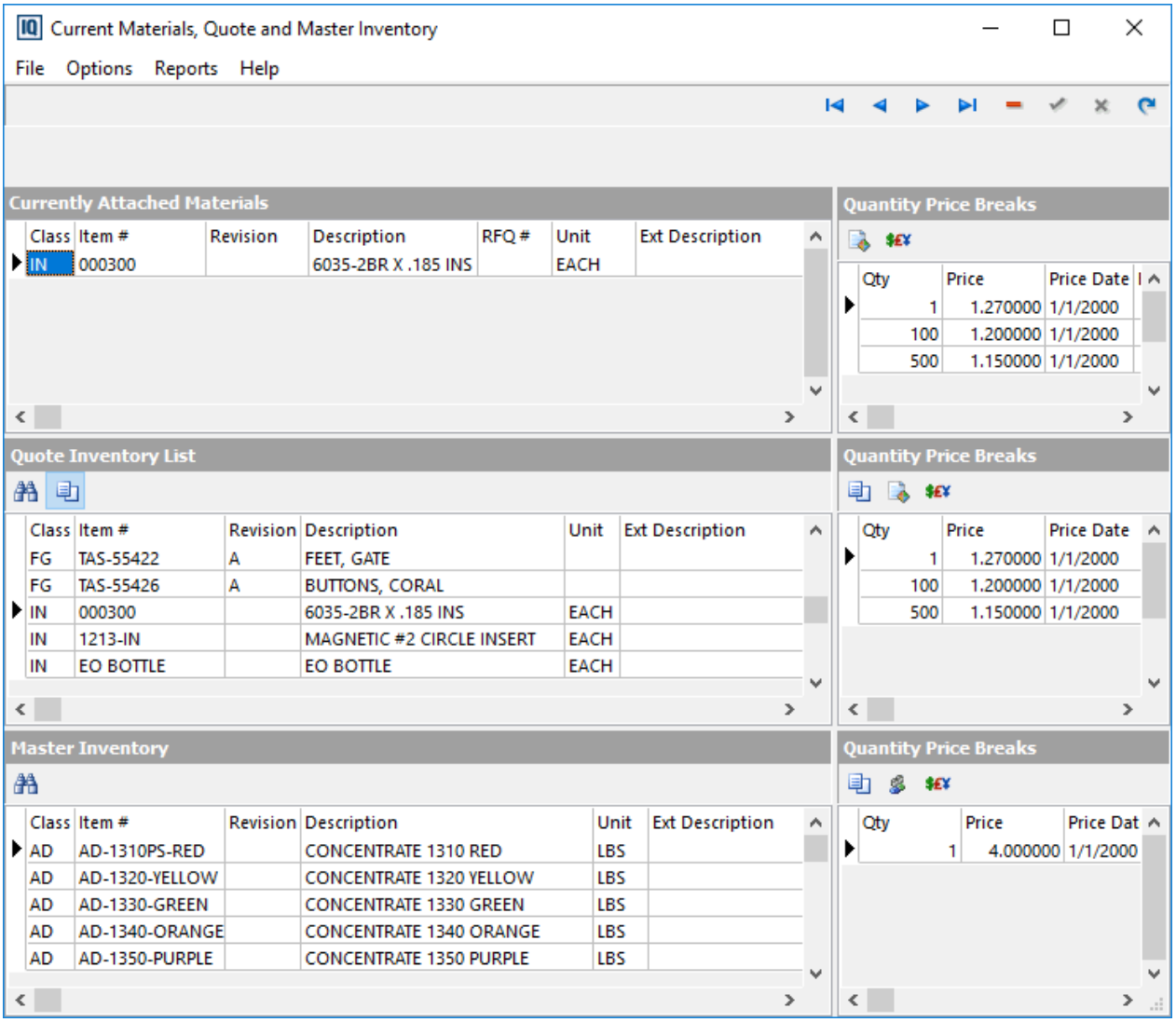
Attached Materials Specification

The **Quote** module supports unlimited components per individual item such as purchased components, other finished goods, or packaging. Any item that is maintained in the Quote or Master Inventory files may be attached.

Attaching Components

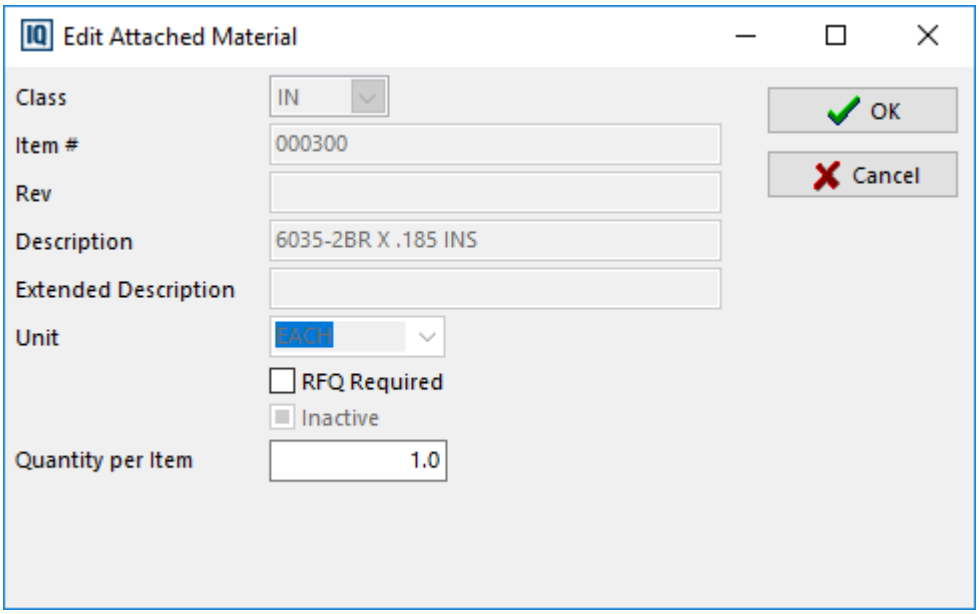
Attaching a component(s) is accomplished as follows:

- Select the item that the component will be attached to in the items tree (left side of screen).
- "Right click" and select **Add Component,** or click on the **Add Component** button at the top of this screen. The following screen will appear:



- Select the item from either the Master Inventory list or the Quote Inventory list.
- "Double click" or "drag" the new item from the **Quote Inventory List** up to the **Currently Attached Components** list.

Note: In Quote inventory you can have the same item number with a different description, but in Master Inventory the item number must be unique. Therefore, if the item is added via the 'drag' method from the Master Inventory list, the record chosen will be the first matching Item # in the Quote Inventory List. This can lead to the wrong item being added if multiple Quotes were made for the same item number with different descriptions or pricing.



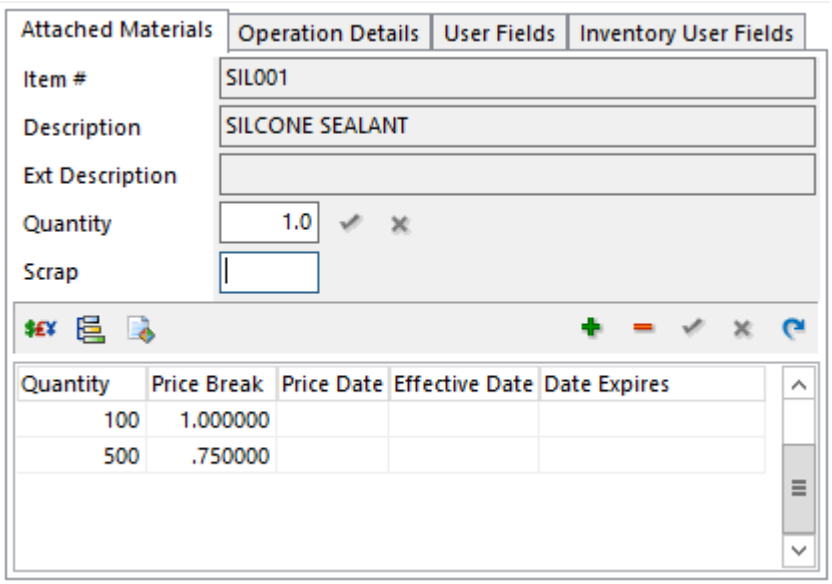
- Next, enter the **Quantity per Item**. The **Quantity per Item** is how many pieces will be consumed for each of the selected items manufactured. Press [**OK**] to return to the Quote Inventory screen.

- If the component is a manufactured item that will need to be quoted the user can select the **RFQ Required** box. The item will be marked in red indicating an RFQ is required. Once the RFQ for the item is created the item will be marked in black. This feature is used in the top down quoting method. This option will be grayed out on the 'Modify Quote Inventory Item' form. This is the form you use to add an item to the quote inventory. Once you drag the newly created item to the Currently Attached Materials section the box will be enabled on the 'Edit Attached Material' form. This will indicate that the item needs to be quoted, in other words it is something you manufacture that does not have a quote created for it yet.

- Modify the **Quantity** and **Price Break** information for the component, if necessary.

- Add Additional components, as necessary.

- To exit, click on **File|Exit** or click on the **[X]** in the upper right hand corner of the screen. The selected components will now be displayed in the visual view to the left under the item they are attached to and the details for the selected component will be displayed in the lower right hand portion of the screen.



- Each added component can have a **Scrap** percentage associated with it. Enter a value in the Scrap field for the attached item. The system will use this value to calculate the component cost. For example, if the Attached Component Scrap Calculation in Quotation parameters is set to 'Based on (1+Scrap)', and the quantity required per item is one and the scrap value is 10%, for a quote quantity of 10000, the system will calculate the component requirement as 11000 (10000 * 1.10). If the parameter is set to 1/1-Scrap, the component requirement would be 11111.11. Where if the scrap value is zero the component requirement would be 10000. Then the cost is determined by multiplying the corresponding price break times the calculated component quantity.

- **User Fields** - This tab includes the same user fields that are seen in the Attached Materials section of the BOM. (User Text 1-3 and User Numeric 1-3). When a quote is converted to a BOM, these user fields will be transferred over to the BOM's user fields as well.

- **Inventory User Fields** - This tab will surface all Inventory user fields for attached materials that were brought in from master inventory. This will be read only and will only be available for items in master inventory.

Note: Under Options select **Include Prices w/ Transfer** if you want the prices to transfer from the master inventory. By default, the pricing comes from the buying price section for purchased items and the selling price section for manufactured items; or the standard cost if the 'Use Std Cost in Engineering Quote' option is checked in Master Inventory->Additional tab). If the 'Include Prices w/ Transfer' option is not checked, the user must enter in the pricing information for the quote inventory.

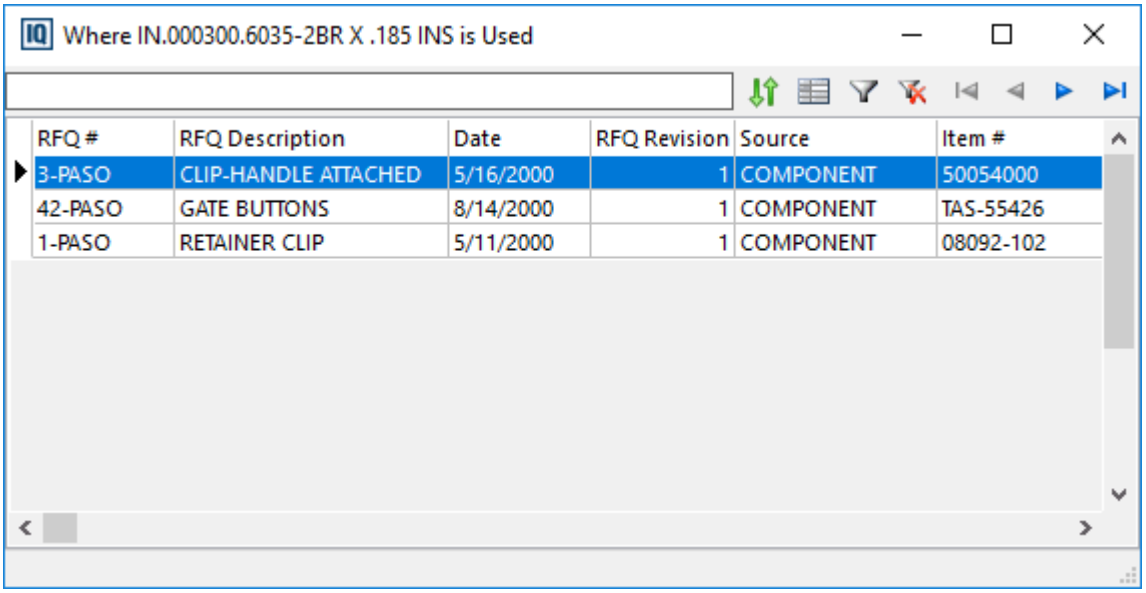
Note: Both active and inactive pricing from the Buy/Sell tab in inventory will appear in the Master Inventory section, however, only active pricing will be carried over when dragging material from Master Inventory to the Quote Inventory List or to the Currently Assigned Material. To only see active pricing in the Master Inventory section select the Hide/Show Inactive button  . The Hide/Show Inactive button is also available in the Quote Inventory section to hide quote pricing that has been marked inactive.

Note: If the 'Use Master Inventory Std Cost for Component Pricing instead of Price Breaks' quote parameter is checked the standard cost will be displayed instead of the price breaks.

Searching for Inventory Items

To search for items in the Quote Inventory, use the pick list speed button in the Quote Inventory section. Or click once in the Quote Inventory List section so the caption next to the field at the top of the screen reads 'Search Quote Inventory'. To search, begin typing in the Class and the Item Number of the item (do not leave a space between the Class and the Item Number) and the Quote Inventory List will hyperbrowse to the item.

From the Quote Inventory List section right click and select Where Used to see a list of RFQs that the material is associated to.


Where IN.000300.6035-2BR X .185 INS is Used
RFQ #
RFQ Description
Date
RFQ Revision
Source
Item #
3-PASO
CLIP-HANDLE ATTACHED
5/16/2000
1
COMPONENT
50054000
42-PASO
GATE BUTTONS
8/14/2000
1
COMPONENT
TAS-55426
1-PASO
RETAINER CLIP
5/11/2000
1
COMPONENT
08092-102

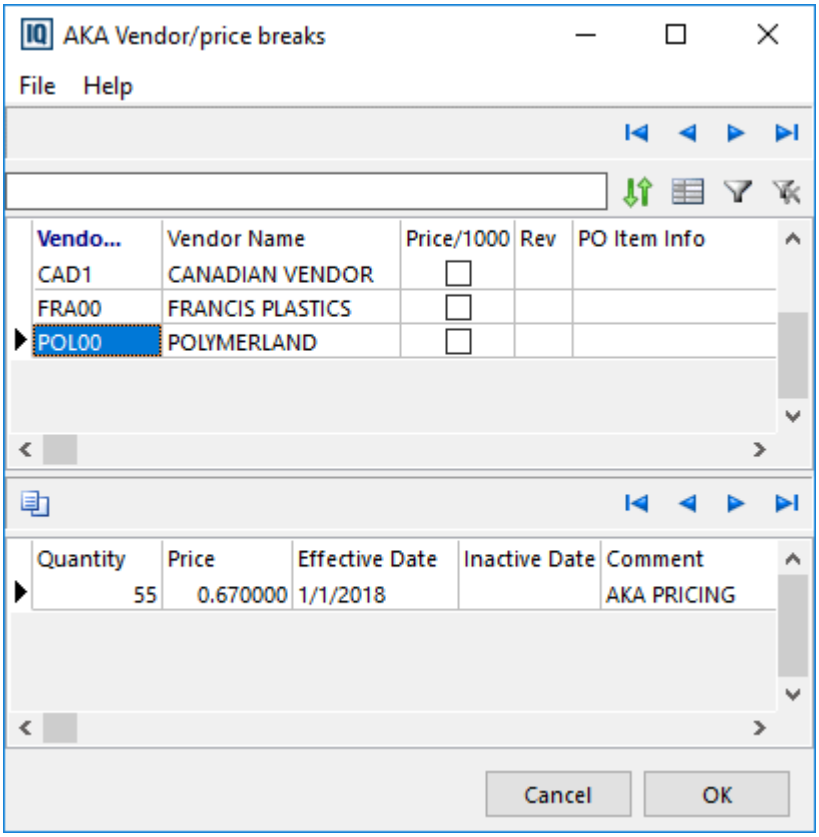
Vendor RFQ

The user can create a Vendor RFQ from the Quote Inventory section for items by selecting the Vendor RFQ speed button. Please see Vendor RFQ for details.

Attaching Components to a Quote Using AKA Pricing

The default quantity price breaks listed for the master Inventory items comes from the Buying section of the Buy/Sell Pricing tab in inventory. However, users can select the 'Propagate AKA Vendor/price breaks' button  in the Quantity Price Breaks section to assign AKA pricing to the quote inventory and the Currently Attached Materials. To use AKA pricing:

- Highlight the item to be associated to this quote in the Master Inventory section.
- Select the AKA button and a form will appear listing the vendors and price breaks. This form also includes a Unit column so users can easily see the unit of measure associated to the AKA record and the price breaks.



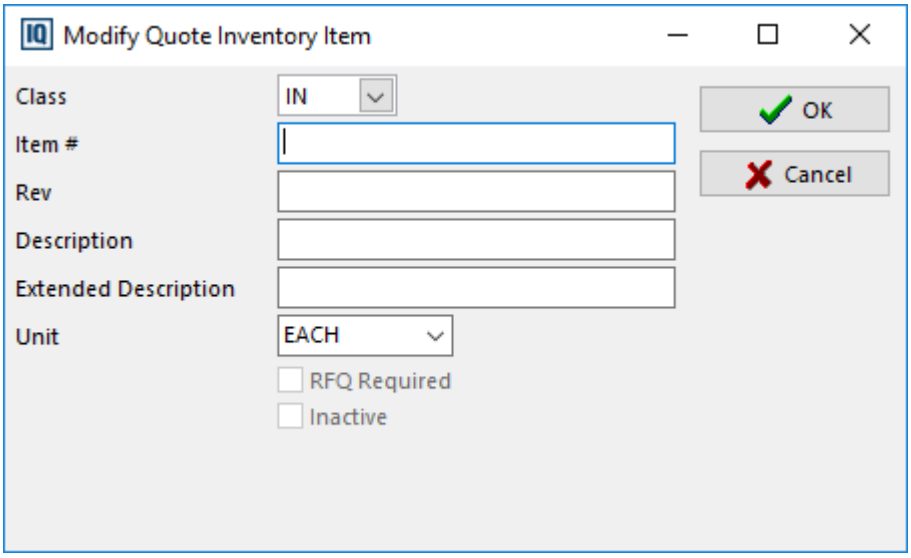
- Highlight the desired record and select OK.
- This will populate the Currently Attached Materials section with the selected item and its AKA price breaks. If the selected item already exists in the Quote Inventory the pricing will be updated with the AKA pricing. If it does not exist in the Quote Inventory, the system will add a new record with the AKA pricing.

Note: AKA pricing will populate both sections regardless of the 'Include Prices w/ transfer Option.

Adding Quote Inventory on the Fly

If the item does not exist in the Quote Inventory or Master Inventory, click on any item within the **Quote Inventory list**.

- Next, click on **File|Add Material.** The following screen will appear:



- Select the Class of the item (i.e. IN, PL, FG, or PK).
- Next, enter the Item #.
- Enter a Rev number.
- Enter the Description of the item.
- Enter an Extended Description if desired.
- Select the Unit (i.e. EACH, LBS, KG, GAL, ROLL, FT).
- Click on [OK] to return to the Quote Inventory screen. The item that you created will be Added to the Quote Inventory list only. To Add the newly created item to the quote drag it up to the 'Currently Attached Materials' section. If the item is manufactured by the user, the RFQ Required option can be selected. Only select this option if the item will require a quote to be created.

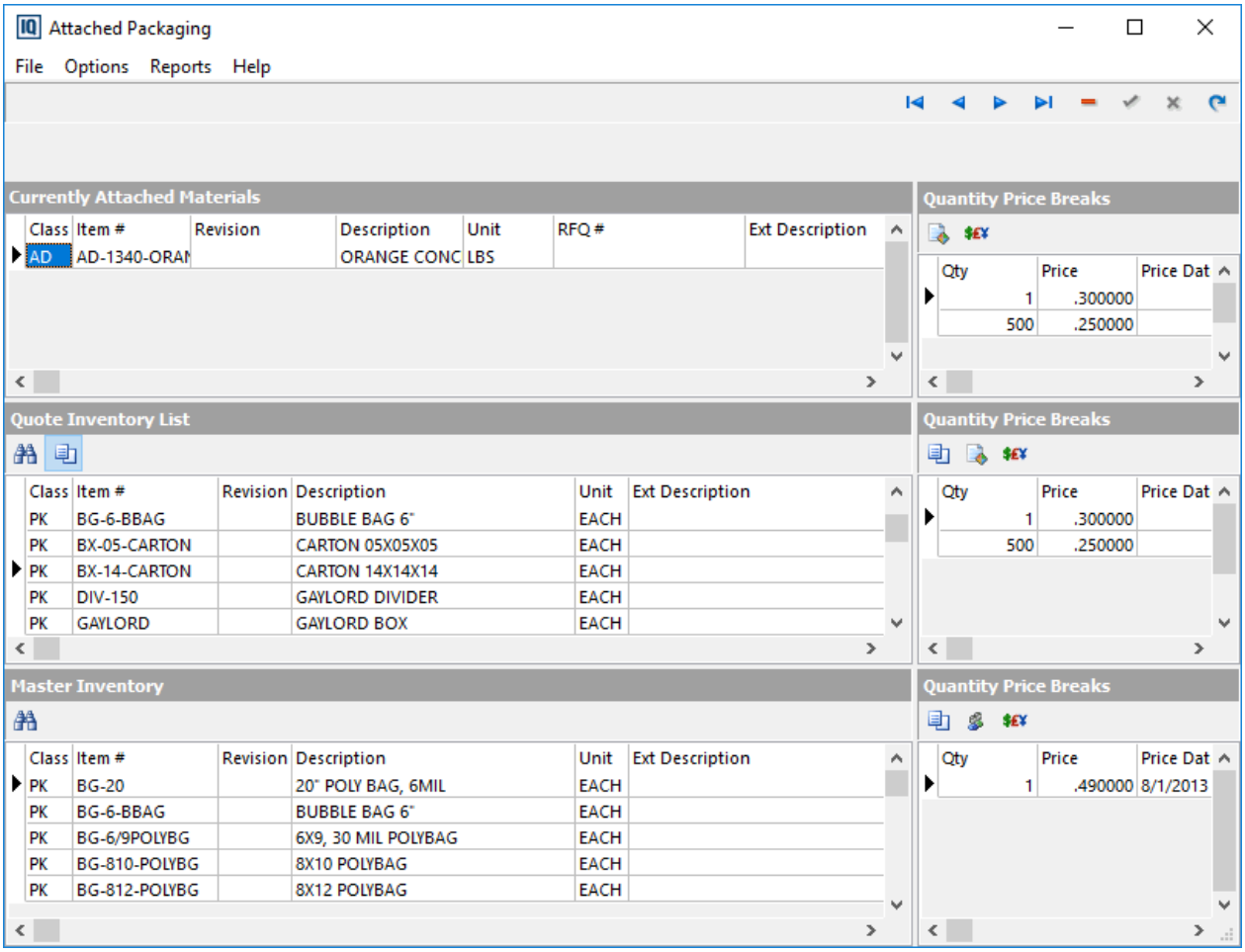
Note When the quote is converted to a BOM, the item will be added to the Master Inventory list. During the conversion process, the item may be reviewed and edited.

- Enter Qty / Price break information for the item in the fields to the right.

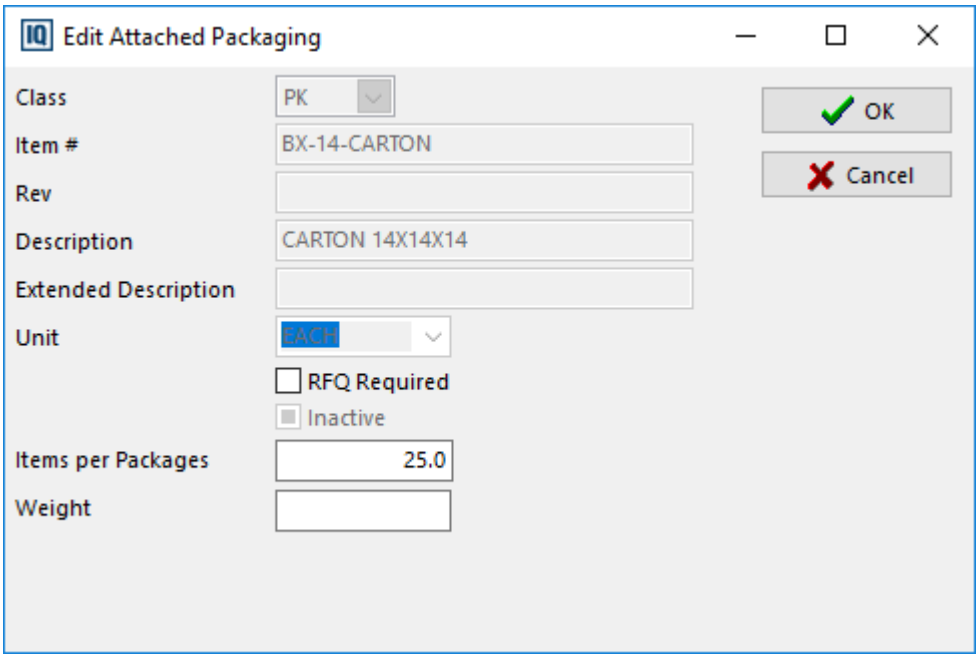
Attaching Packaging

The Quote module supports unlimited packaging items per individual item. To attach a packaging item, complete the following steps:

- Select the item that the packaging will be attached to in the items tree (left side of screen).
- Right click and choose Add Packaging from the menu, or select the Add Pack button at the top of the screen. The following screen will appear:


Attached Packaging
File Options Reports Help
Currently Attached Materials
Class Item # Revision Description Unit RFQ # Ext Description
AD AD-1340-ORAN ORANGE CONC LBS
Quantity Price Breaks
Qty Price Price Dat
1 .300000
500 .250000
Quote Inventory List
Class Item # Revision Description Unit Ext Description
PK BG-6-BBAG BUBBLE BAG 6" EACH
PK BX-05-CARTON CARTON 05X05X05 EACH
PK BX-14-CARTON CARTON 14X14X14 EACH
PK DIV-150 GAYLORD DIVIDER EACH
PK GAYLORD GAYLORD BOX EACH
Quantity Price Breaks
Qty Price Price Dat
1 .300000
500 .250000
Master Inventory
Class Item # Revision Description Unit Ext Description
PK BG-20 20" POLY BAG, 6MIL EACH
PK BG-6-BBAG BUBBLE BAG 6" EACH
PK BG-6/9POLYBG 6X9, 30 MIL POLYBAG EACH
PK BG-810-POLYBG 8X10 POLYBAG EACH
PK BG-812-POLYBG 8X12 POLYBAG EACH
Quantity Price Breaks
Qty Price Price Dat
1 .490000 8/1/2013

- Select the item from either the Master Inventory list or the Quote Inventory list.
- Double click or drag the new item from the Quote Inventory List up to the *Currently Attached Packaging* list.



- Enter the Items/Pack. The Items/Pack is how many of the manufactured items will be put into each packaging item.

Note: If entering a zero for items/pack (i.e. for a Non Material PK item), the user will receive a warning when calculating the quote stating, 'Attached Packaging Items per Part is zero.', with an Ignore and Cancel button. Select Ignore to continue calculating the quote, or Cancel to not calculate.

- Enter the Weight and Label FMT. (Optional).
- If the item is manufactured by the user, the RFQ Required option can be selected. Only select this option if the item will require a quote to be created.
- Press [OK] to return to the Attached Packaging screen.
- Enter the Quantity and Price Break information for the packaging item.
- Add Additional packaging, as necessary.

Note: When adding multiple packaging items, keep in mind when the RFQ is converted to a BOM the packaging sequence will populate based on the order they are attached to the quote. Sequence numbers can be edited in the BOM.

- To exit, click on File|Exit or click on the [X] in the upper right hand corner of the screen. The selected packaging items will now be displayed in the visual view to the left and the details for the selected packaging will be displayed in the lower right hand portion of the screen.
- Each added packaging item can have a Scrap percentage associated with it. Enter a value in the Scrap field for the attached packaging item. The system will use this value to calculate the packaging cost. For example, if the parts per packaging item is 500 item and the scrap value is 10%, for a quote quantity of 10000, the system will calculate the packaging requirement as 22 (10000/500 * 1.10). Where if the scrap value is zero the packaging requirement would be 20. Then the cost is determined by multiplying the corresponding price break times the calculated packaging quantity.

Searching for Inventory Items

Use the pick list or hyperbrowse method, in the same manner as described above, to search for items in the master inventory list.

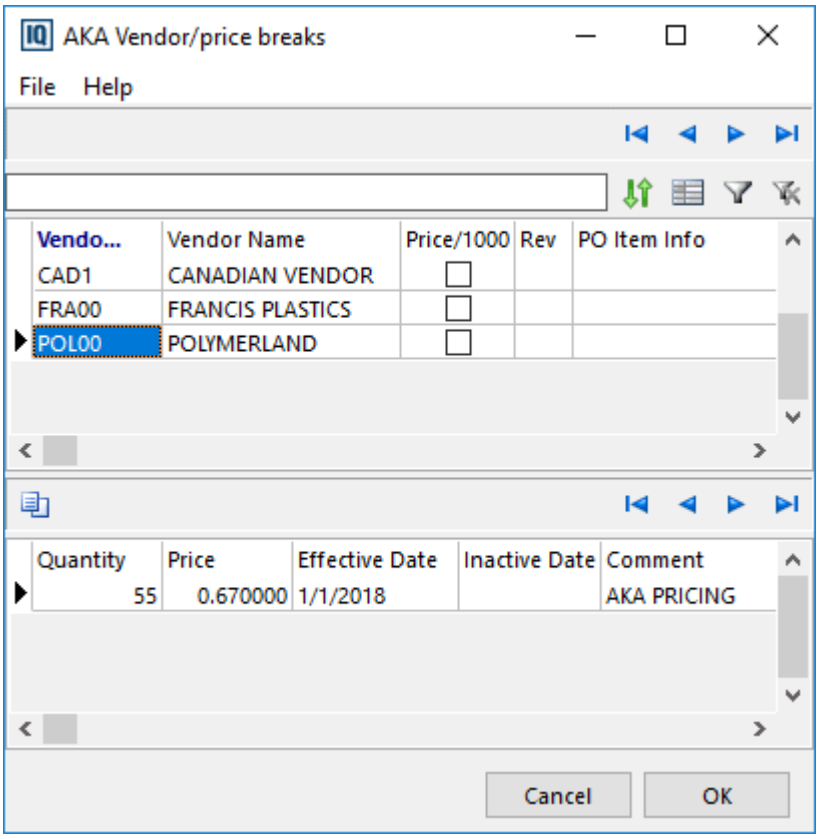
Users can right click from the Master Inventory section to jump to inventory.

Attaching Packaging to a Quote Using AKA Pricing

The default quantity price breaks listed for the master inventory items comes from the Buying section of the Buy/Sell Pricing tab in inventory. However, users can select the 'Propagate AKA Vendor/price breaks' button  in the Quantity Price Breaks section to assign AKA pricing to the quote inventory and the Currently Attached Materials. To use AKA pricing:

- Highlight the item to be associated to this quote in the Master Inventory section.

- Select the AKA button and a form will appear listing the vendors and price breaks.



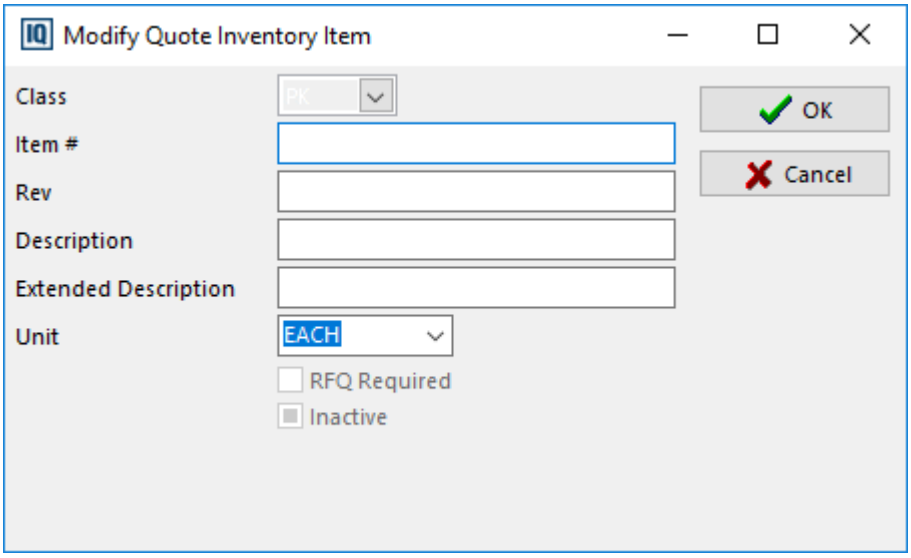
- Highlight the desired record and select OK.
- This will populate the Currently Attached Materials section with the selected item and its AKA price breaks. If the selected item already exists in the Quote Inventory the pricing will be updated with the AKA pricing. If it does not exist in the Quote Inventory, the system will add a new record with the AKA pricing.

Note: AKA pricing will populate both sections regardless of the 'Include Prices w/ transfer Option.

Adding Packaging Inventory on the Fly

If the item does not exist in the Quote Inventory or the Master Inventory, click on any item within the Quote Inventory list.

- Next, click on **Inventory|Add Material**. The following screen will appear:



- The Class will default to (PK).
- Next, enter the Item #.
- Enter a Rev number.
- Enter the Description of the item.
- Enter an Extended Description if desired.
- Select the Unit (i.e. EACH, FT).
- Click on [OK] to return to the Quote Inventory screen. The item that you created will be Added to the Quote Inventory list only. To Add the newly created item to the quote drag it up to the 'Currently Attached Materials' section. If the item is manufactured by the user the RFQ Required option can be selected. Only select this option if the item will require a quote to be created.

Note: When the quote is converted to a BOM, the item will be added to the Master Inventory list. During the conversion process, the item may be reviewed and edited.

- Enter Qty / Price break information for the item in the fields to the right.

Editing a Packaging Item or Component

To **Edit** an attached packaging item or component:

- Highlight the attached component or packaging item.
- Under 'Attached Material Specifications' (lower right portion of the screen), change the Quantity and/or Quantity and Price breaks.

The user can also Edit the item by highlighting the item/component and selecting Change Material from the submenu that will appear.

- Make sure to SAVE the changes when finished.

Attaching Operations

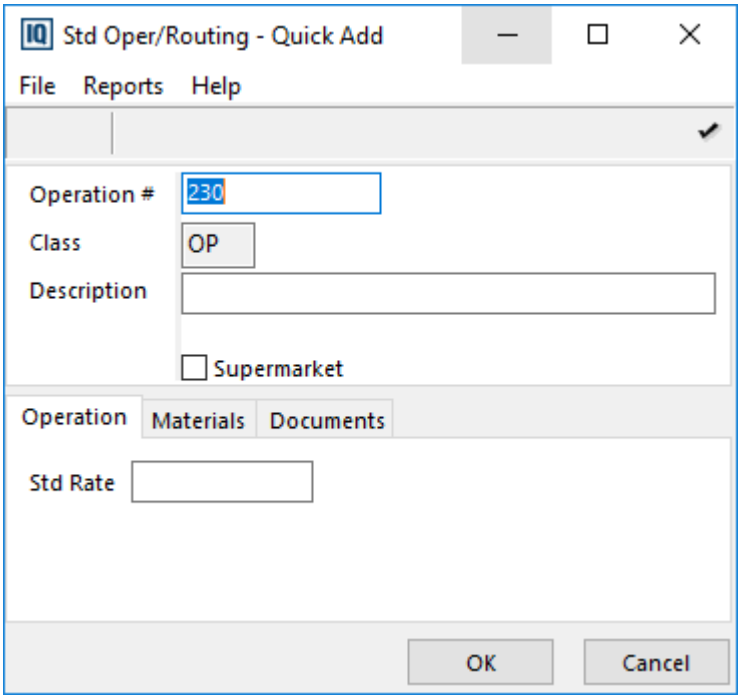
Attaching operations is accomplished in a similar manner as attaching components or packaging items. This feature is used to attach operations to the quote versus creating a generic quote. By adding the operation here the assumption is made that it will be done within the cycle time and the operation does not change the part number. If the part number changes due to the operation (i.e. hot stamping a logo) or the operation time needs to be scheduled a generic quote should be created with the manufactured item attached as a component.

To attach an operation, complete the following steps:

- Select the item that the operation will be attached to.

- "Right Click" and choose **Add Operation** from the menu or click on the **Add Oper** button at the top of the screen.

- The **Select from Std Oper/ Routing pick list** will appear. Use the **Search** or **Sort** function to locate an existing Operation number within the pick list or create a new operation "on the fly". If you click on new the following screen will appear:



Use the field listing below for assistance in filling in each of the fields on this screen.

Operation #	This number is automatically populated by the system. It can be edited but if this number is manually changed users could potentially end up receiving a unique constraint error if the number is already used.
Class	Defaults to OP and cannot be changed.
Description	25 alpha-numeric description of the operation.
Operation Info	Std Rate: The rate used for calculating the labor or overhead costs associated with the operation.
Materials	Attach materials from inventory associated with the operation by clicking in the item # field to get an inventory drop down menu. Specify the number of parts per item and verify the price break information.
Documents	Add any Internal or External documents related to the specific operation.

Operation Details

From the Operation Details tab on the Item Details tab in Quoting establish the cost of the operation. Select the UOM (Sec, Min, Hour, Day) from the drop down and then enter the cycle time. The system will multiply the Std Rate defined on the operation times the Hours/Item to calculate the standard cost per item. For example, if the time required is 15 seconds at a rate per hour of 25, the system will calculate the cost as 15/3600 * 25 = 0.104167. This information will flow to the Operation Cost row on the Calculations tab.

Deleting a Packaging Item, Component or Operation

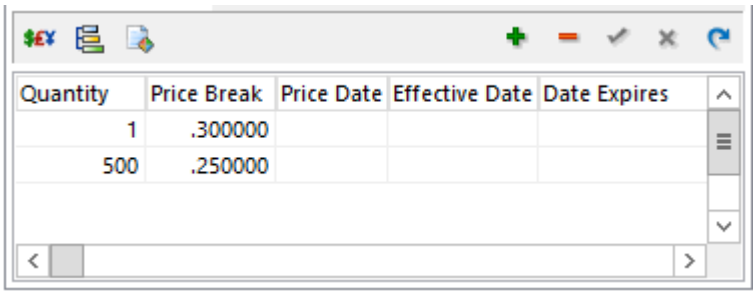
To Delete a packaging item or component from the list:

- Highlight the item to delete and "right click."
- Select **Delete Item** from the submenu. The item will then be removed. If there are any other packaging items underneath the one deleted, they should move up in place of the one that was removed.
- To delete an operation, select **Delete Operation** from the submenu.

Note: Make sure that the cursor is sitting on the operation that is to be deleted. Failure to do this could result in deletion of the wrong item.

Qty / Price Break

The Quantity and Price Breaks are the prices the system will use to calculate the cost and price of the quoted item. These price breaks are only used in the Quote module.



Quantity	Price Break	Price Date	Effective Date	Date Expires
1	.300000			
500	.250000			

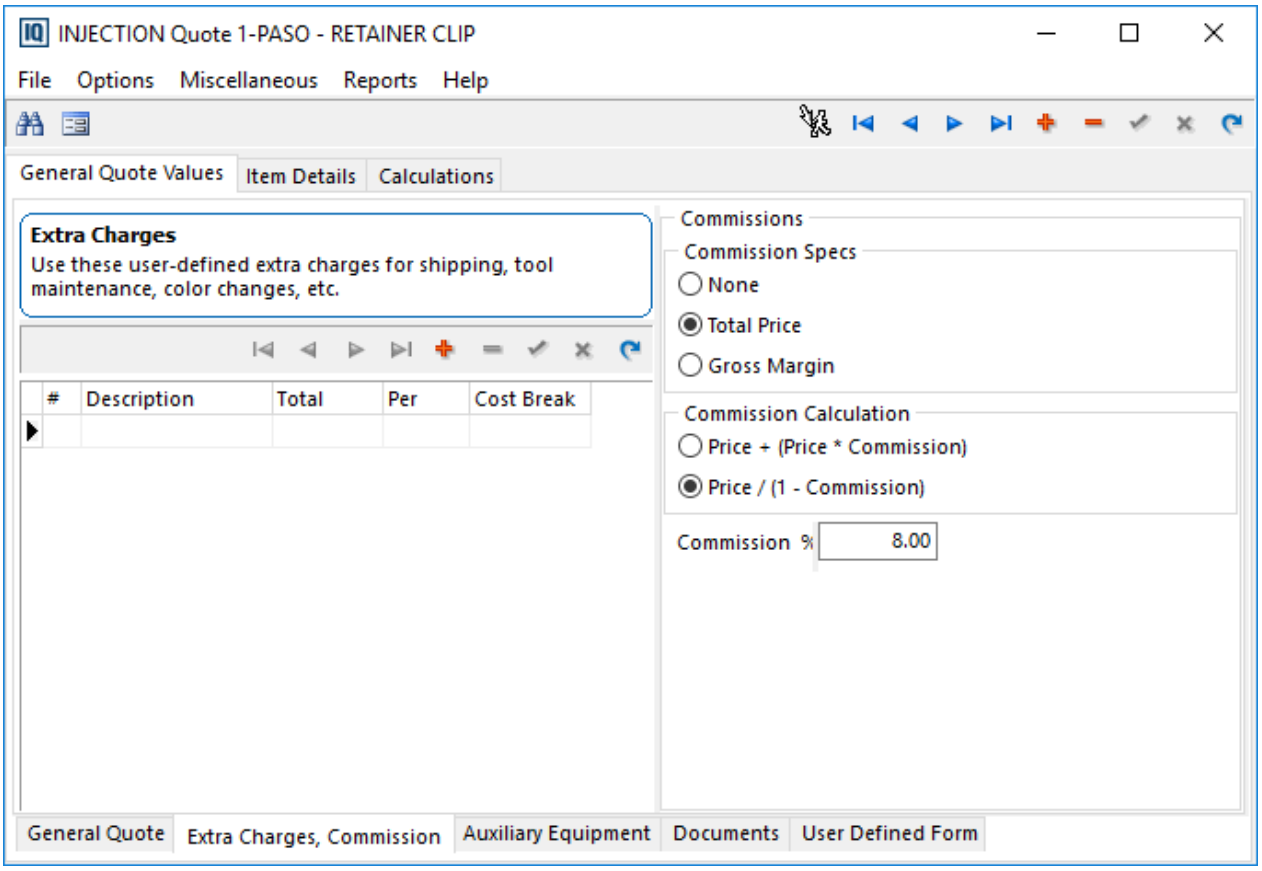
The user can change the price breaks before calculating the quote.

- To change the quantity, place the cursor in the **Qty** field.
- Type in the quantity and use the [**Tab**] key to move to the next column. Enter in each Price Break. The default **Qty / Price break** information may be loaded by selecting that function on the Navigator bar at the bottom of this section.
- To view the price breaks in another currency, click on the FX Rates button and choose the currency from the drop down list on the pop up form.
- Save your changes.

Extra Charges

To enter extra charges relating to the item being quoted on:

- Select the **Extra Charges, Commission** tab at the bottom of the screen. The following screen will appear:



There are unlimited fields for any additional charges not accounted for in the normal quote input screens. Examples of additional charges may be Tool Maintenance, Tool Amortization, Special Setups, Color Changes, Freight Charges, etc.

The extra charges can be entered manually from this screen or defaults can be set up in Rates and Parameters for users to select from. To select a default extra charge click on the Description field and then select the ellipsis button. This will open the pick list of Extra Charges created in Rates and Parameters. To enter an extra charge manually type the information in the fields described below.

Note: A sequence # is required. If the sequence number is left null, the user will be prompted with a pop-up warning.

These charges can be controlled in three different ways:

Amortize Cost Over Each Quantity	Divides the **Total** by each quoted quantity and applies the cost directly to the per item price. **Example**: **Total** = $500, **Per** set at zero, and **Cost Break** at N. Applies a $500 charge to each price break and divides the $500 by the Quote Quantity and adds that to the item price. For 5000 items, charge is $0.10 per item For 125000 items, charge is $.004 per item.
Add a Cost for Every X Number of Items Produced, Pro-rated	Divides the **Total Amount** by the **Per** Quantity and adds that amount to the per item price. **Example**: **Total** = $250, **Per** set at 10000, and **Cost Break** at N. Applies a $0.025 charge to the item price. (250/10000) For 5000 items, charge is $125 For 125000 items, charge is $3,125
Add a Cost for Every X Number of Items, Not Pro-rated	Divides the Quote Quantity by the **Per** quantity, rounds the number **UP** to the next whole number, multiplies that whole number by the **Total Amount**, divides this number by the Quote Quantity, and adds that amount to the per item price. **Examples**: **Total** = $250, **Per** set at 10000, and **Cost Break** at Y. For 5000 items, total additional charge is $250, per item charge is $0.05 For 125000 items, total additional charge is $3250, per item charge is $0.026

NOTE: The Total field may be entered up to a four decimal precision.

Commissions

Adding Commissions

Sales commissions will be added into the final item price on either the Total Price or the Gross Margin.

- Select Total Price or Gross Margin by clicking on the radio button next to the field.
- Choose how the commission should be calculated: price + (price x commission) or price/(1-commission).
- Type in a Commission percentage. The value entered can be up to a two decimal precision.
- To save any entries made within this screen, click on the check mark located on the Navigator bar.

Commission Examples

The chart below displays examples of the commission options using the following information:

TOTAL = 5000

COMMISSION % = 5%

QUOTE QTY - 1000

TOTAL PROFIT = 4000

OPTION	CALCULATION	COMMISSION per part
TOTAL PRICE & PRICE + (PRICE X COMM %)	(TOTAL /QUOTE QTY) X COMMISSION % (5000/1000) x .05 5 x .05	.250
TOTAL PRICE & PRICE / (1-COMMISSION)	(TOTAL / 1 - COMMISSION %) - TOTAL / QUOTE QTY ((5000/.95) - 5000)/1000 (5263.159 - 5000)/1000 263.159/1000	.263
GROSS MARGIN & PRICE + (PRICE X COMM %).	(TOTAL PROFIT / QUOTE QTY) x COMMISSION % 4000/1000 X .05 4 X .05	.200

OPTION	CALCULATION	COMMISSION per part
GROSS MARGIN & PRICE / (1-COMMISSION)	((TOTAL PROFIT/(1 - COMMISSION %)) - TOTAL PROFIT) / QUOTE QTY (4000 / 1-.05) - 4000)) / 1000 (4210.526 - 4000)/1000 210.526/1000	.2105

Assigning Auxiliary Equipment

Adding auxiliary equipment to a quote can affect the hourly machine rate and thus the production cost. Access the Auxiliary Equipment screen by clicking on the tab labeled **Auxiliary Equipment** on the bottom of the screen.

Create Auxiliary Equipment

Prior to assigning Auxiliary Equipment to a quote, the equipment must be added to the Auxiliary Equipment list. To add equipment to the list:

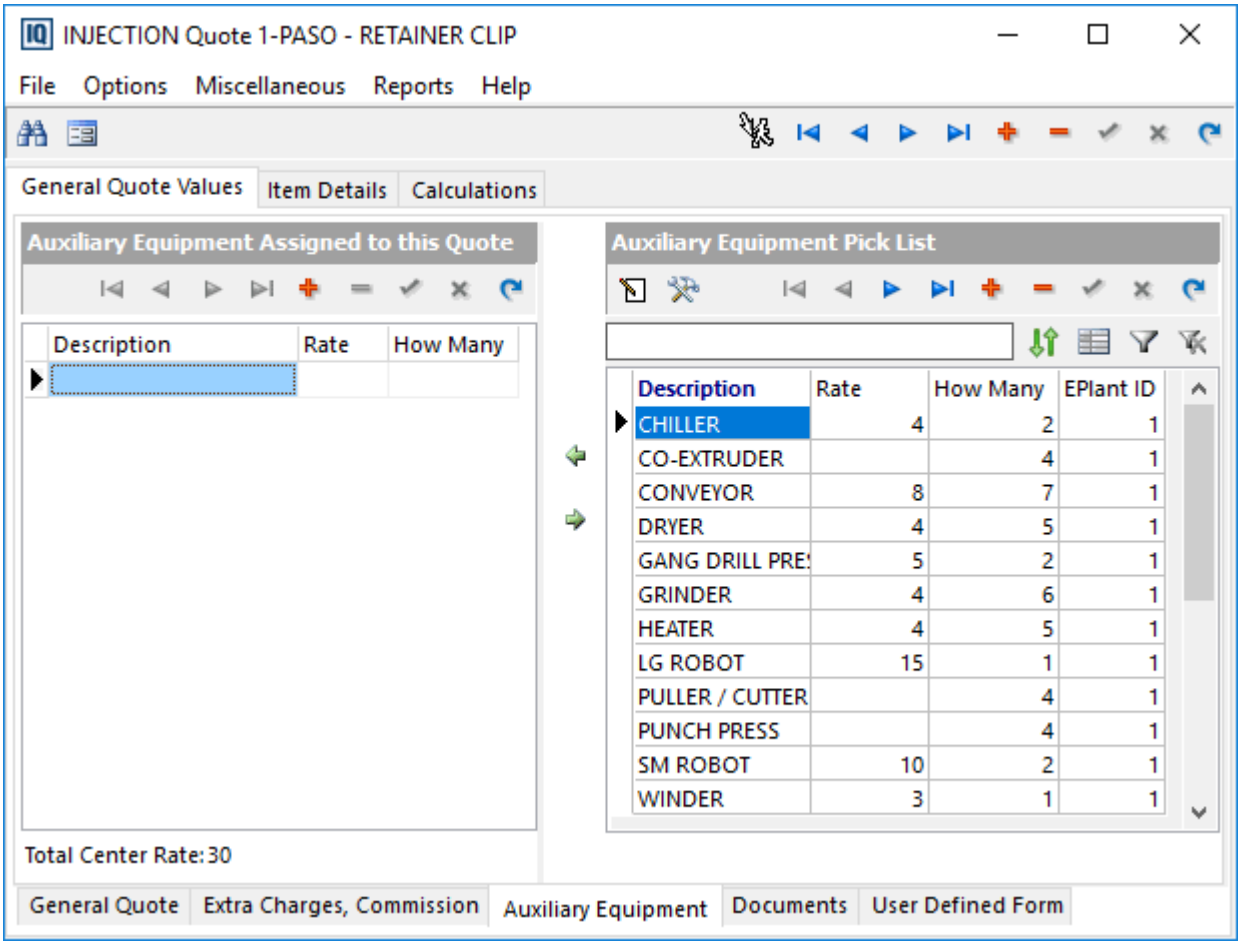
- Select the **Auxiliary Equipment** tab. Click on the **Add (+)** button in the middle right of the form and enter the information in the fields. The auxiliary equipment is EPlant specific.

Description	The description of the auxiliary equipment
Rate	The hourly charge rate for the equipment. This rate will be added to the machine rate and included in production costs.
How Many	How many of these particular items are available on the floor. If the quote is converted to a BOM, this information is used to determine scheduling conflicts.

Assigning Auxiliary Equipment

To assign auxiliary equipment to a quote:

- At the bottom of the **General Quote Values** screen, select the **Auxiliary Equipment** tab. The following screen will appear:



The items entered in the Auxiliary Equipment table will be shown on the right side of the screen. This equipment is filtered based on the EPlant you are logged into. The equipment list can be sorted by Description or EPlant by clicking on the header for the field to sort on.

The equipment assigned to the specific quote will be shown on the left side of the screen.

- To assign equipment to the Quote, highlight the desired piece of equipment and click on the arrow over key  or drag and drop the equipment. Type in how many of each item should be used in the quote.

NOTE: The cost(s) for the Auxiliary Equipment assigned to the quote are added to the Total Center Rate displayed at the bottom of the Auxiliary Equipment screen.

Deleting Items from the Auxiliary Pick list

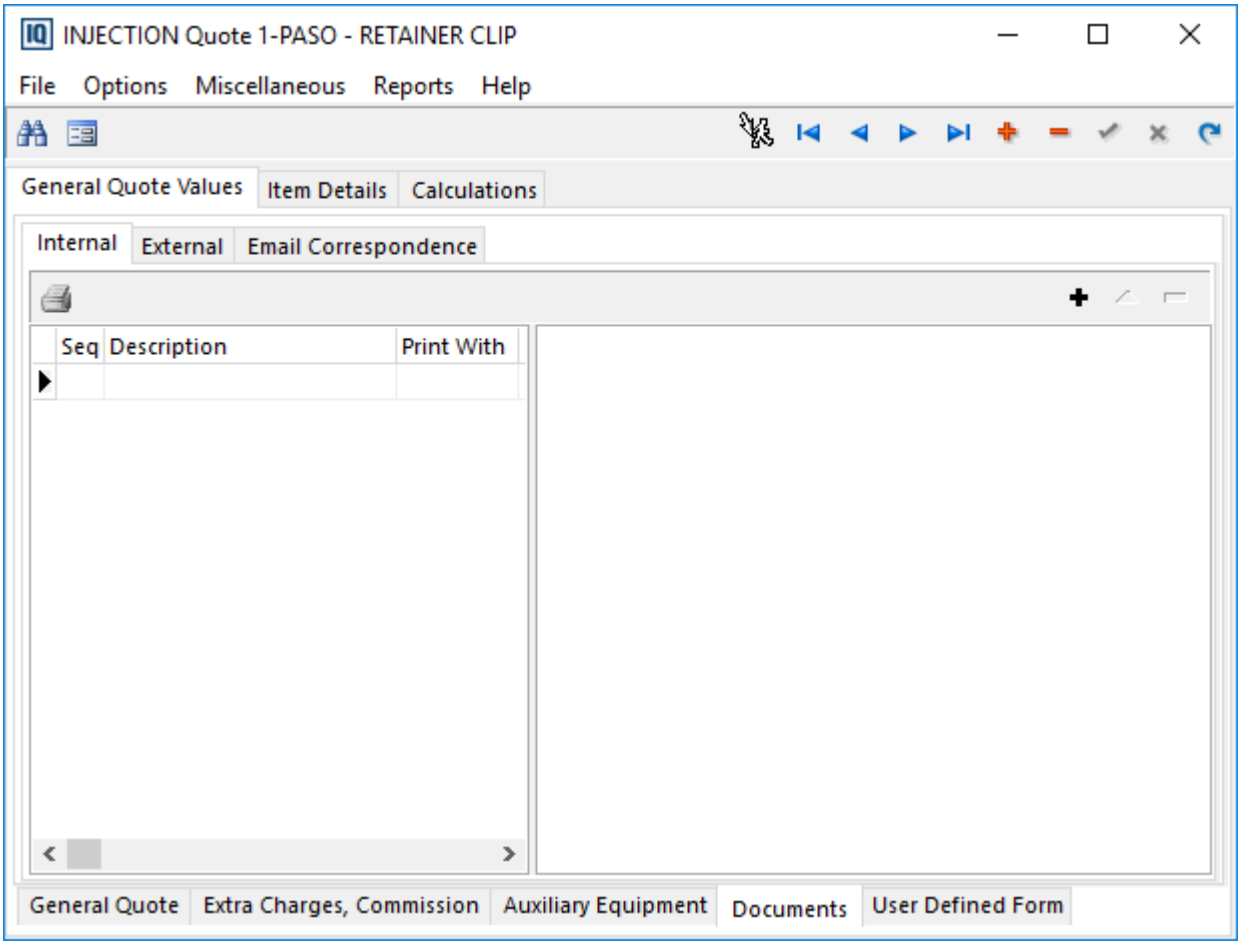
To delete an item, highlight it on the left side and click the arrow back key  . This will delete the item from the list. When finished editing, **Save** the changes before returning to the main quote entry screen.

Quote Documents

An **unlimited** number of documents can be attached to the quote. Each quote may have its own set of documents. **EnterpriseIQ** supports a basic word processor to create these documents (notes) or the user can link existing documents. There are two sections to this screen which are discussed briefly on the following pages.

NOTE: Both Internal and External documents can be printed with the Request for Quote (RFQ).

Select the **Documents** tab at the bottom of the screen. The following screen will appear:



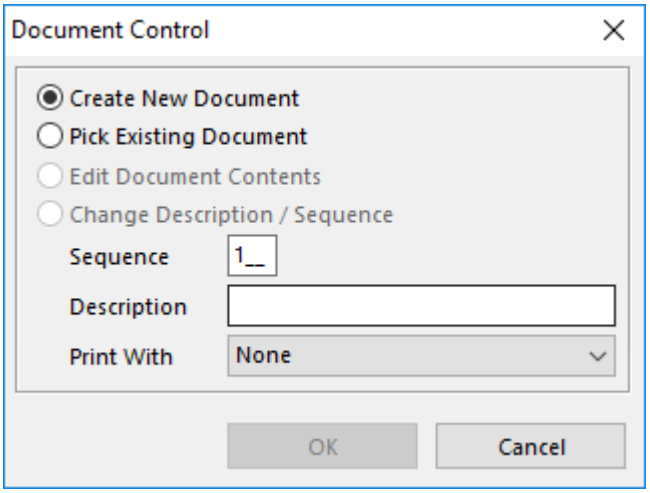
Internal Documents

This option allows an unlimited amount of miscellaneous notes to be attached to the quote. The notes are stored in the Oracle database and can be accessed at all times from the program. The internal documents section acts like a word processor--the user can *add, edit, delete* or *print* documents from this screen.

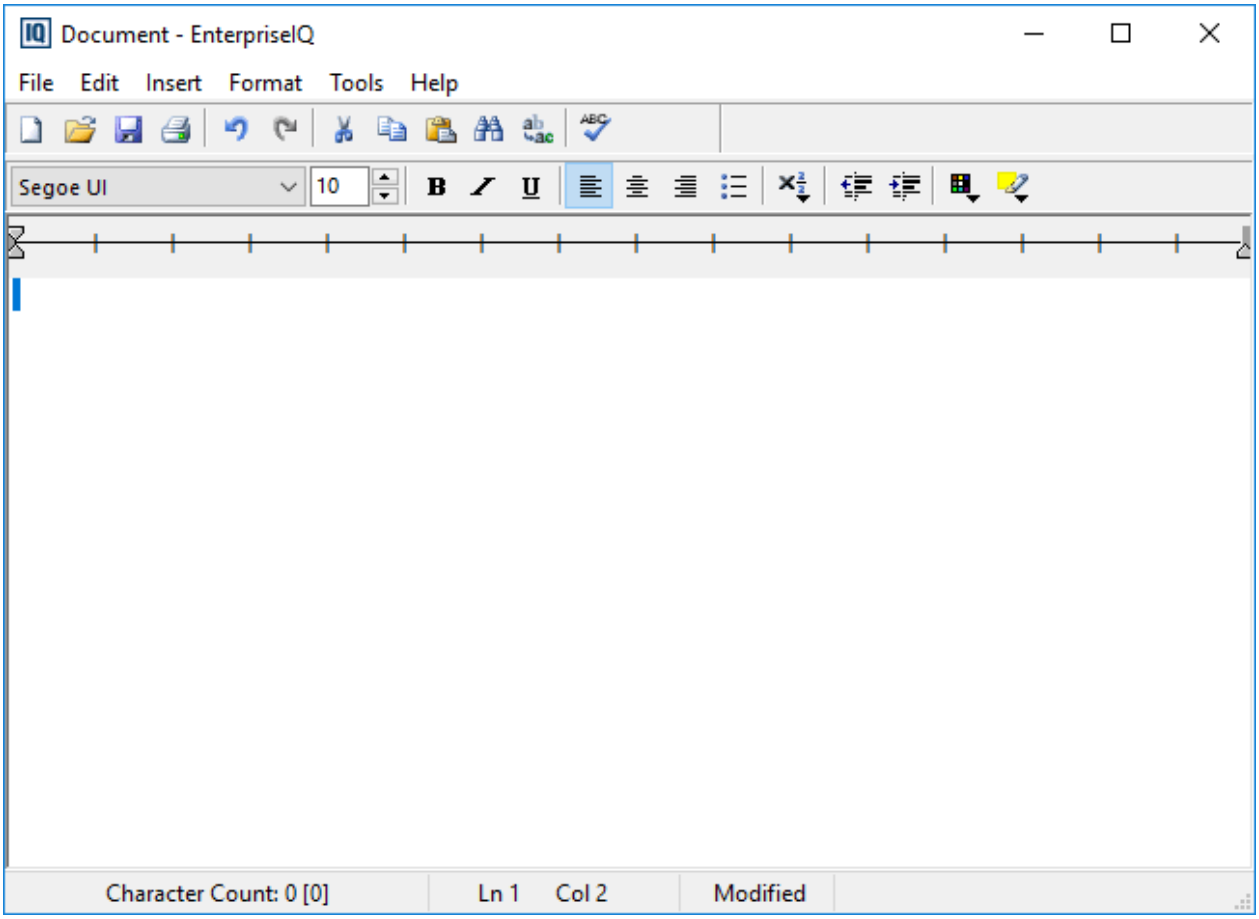
Creating Internal Documents

To create an internal document:

- Access the documents screen and click on the **Add** button. The following screen will appear:



- Select the **Create New Doc** radio button, and fill in the document description.
- Select whether to print the document with the RFQ by selecting from the arrow down list next to the Print with field.
- Click on **[OK]** and the following screen will appear.



This screen is a word processor and document text may be entered by typing the information in or may be copied and pasted in from other sources. Images may be imported by selecting **File|Insert File** from the menu. All changes must be saved prior to exiting from the word processor. To exit, click on the **[X]** in the upper right hand corner.

Linking Existing Internal Documents

To link an existing internal document to the quote select the **Pick Existing Doc** radio button.

- Click on **OK** and a pick list of the existing internal documents linked to the quote module will appear. Select the document to be linked and click **OK.** The document will show in the list of internal documents.

Editing Internal Documents

To edit an existing internal document, access the documents screen and select the **Edit Doc Contents** radio button.

- Click on **OK** and the word processor will open. The internal document can then be edited. All quotes that have the specific document linked to them will then reflect the changes made here.

External Documents

This section allows the user to link or open documents created in different applications such as spreadsheet, word processing, CAD, etc. and map the path to these documents so that anyone can access them. To open an external document, the program used to create the external document must be installed on the work station.

To CREATE a new external document link:

- Click on the **Add [+]** key from the Navigator bar.
- Locate the document on the computer or the network, and click on [**Open**] when finished. The File Name field will now contain the path or location of the document that is being attached. If the user has the EnterpriseIQ Document Control module the user will first select the Library and then the specific document in that library to be attached rather than the path.
- If this document is to be printed with the Request for Quote (RFQ), select RFQ from the arrow down list under the **Print with** column. The attached external document will print when the RFQ is printed using the speed button, but will not print when the RFQ is selected from the Reports menu.

Additional Options:

- Search - The External Documents tab in all modules includes the Search button to access the pick list for easier navigation through multiple documents.
- Filter Dataset - Each External Documents tab within the modules will have a Filter Dataset button to enable users to filter the attached external documents by a field within the library, including the user defined fields. Select the filter speed button and enter the filter criteria in the pop up form.

- Launch Document Control - This will open the document control module to the library and document for the highlighted record.
- Print - This option will open and print the document.
- Scan - A document can be scanned to a library by selecting the Scan button on the External Documents tab. The Scan Document form will appear. Select the Library from the drop down list and enter the additional details such as file name, color and source.

To OPEN the document:

- Double-click on the file name, or select the document and right click and select [**Execute**] from the submenu. The program will open both the application the document was created in as well as the document itself. When finished viewing the document, click on [**Exit**].

- When finished viewing the document, click on [**Exit**].

Email Correspondence

- In addition to documents there is an Email Correspondence tab. From this tab users can to attach Email correspondence related to the RFQ. To add an Email simply drag and drop it from Outlook or other email programs into the form. The Received Date will fill in based on the email's received date and time. A Received Date box surfaces if the system is unable to determine the date (such as: the Received and Sent dates differ, unclear binary data, or older data, etc.). Users are asked to provide the Received Date by selecting the correct date from the calendar. The From and Subject fields will also automatically populate with the information from the email. The date, from, and subject fields cannot be edited. A comment can be entered by double clicking the field. Enter the comment in the pop up box to further describe the email correspondence.

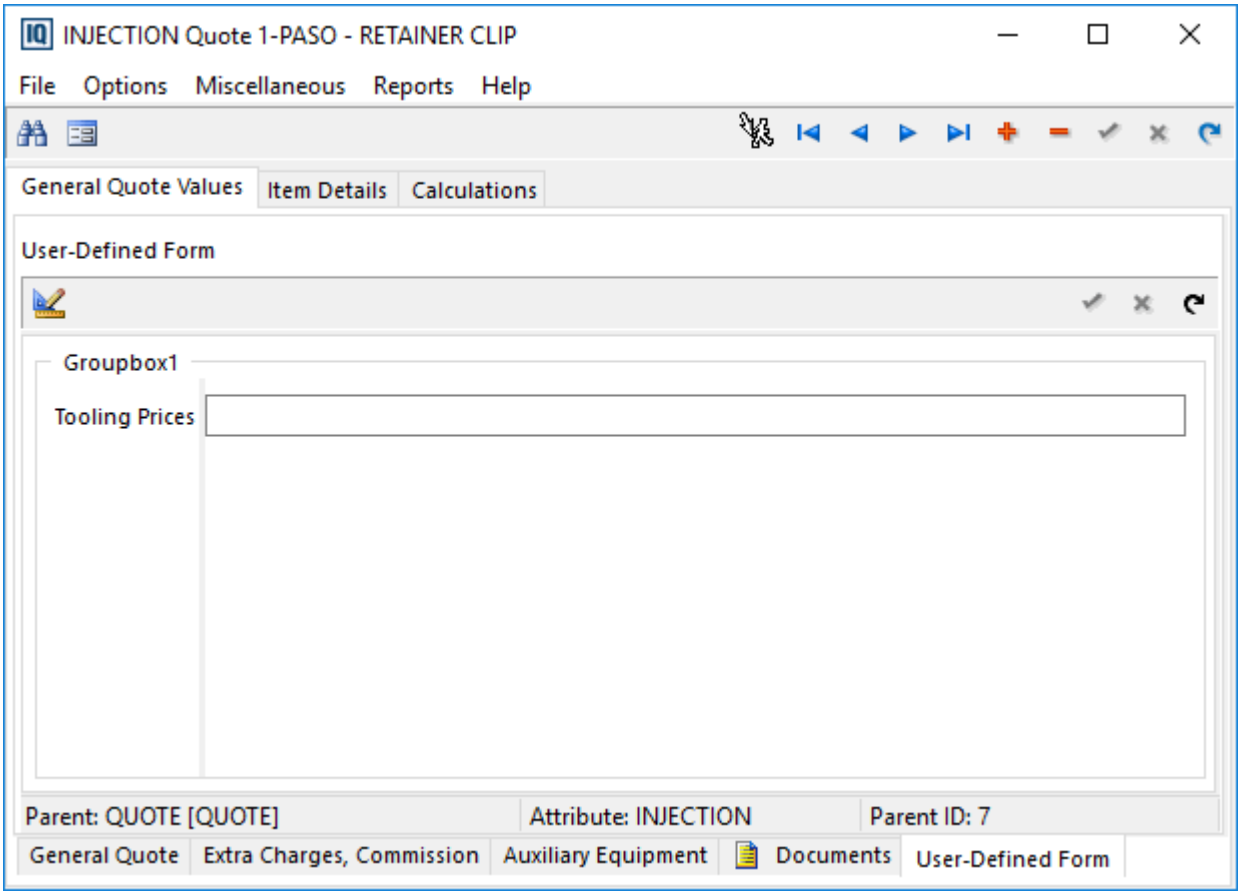
- There are three ways to access the Email once associated to the RFQ:

- Double click on either the Received, From, or Subject fields.
- Right click and select View email.
- Or select the View email button.

- Note: If the email has attachments, or multiple attachments, the total attachment size cannot be more than 4GB. The size allowance might further be limited by the chosen email program used. In order to view emails that have attachments, special formatting (e.g. stationary), or images embedded in the body of the email, the user must go into BDE Administrator and set the BLOB SIZE to 1000 for the database they are using (i.e. IQORA).

See the Documents section for more information.

User Defined Form in Quotations



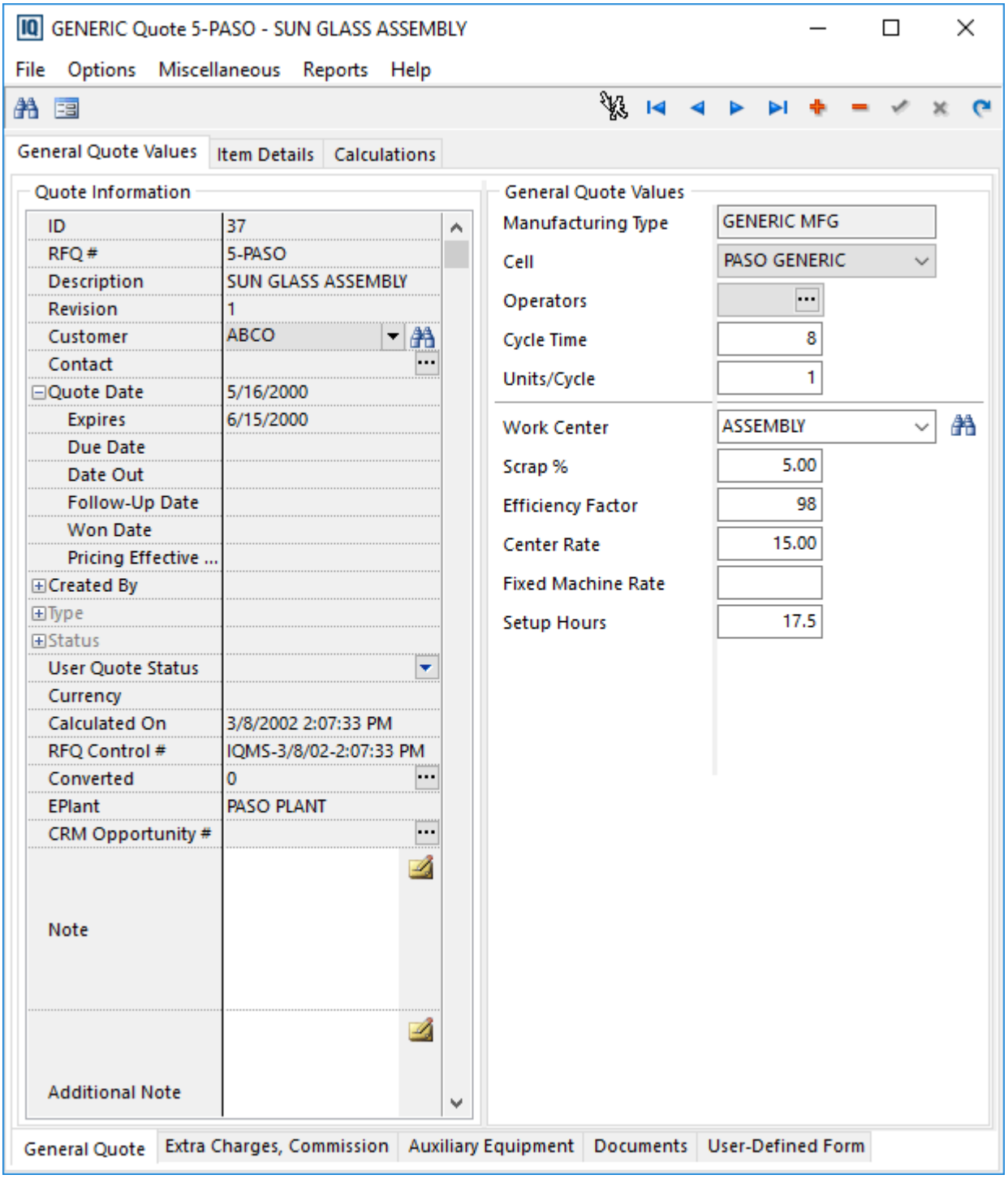
The User Defined Form allows the user to add new fields to a blank, user defined table. A maximum of 64 new descriptive fields can be established. These fields can then be used in customized reports and can be useful when creating a quote letter as it allows for different verbiage for different situations. The user fields will hold up to 250 characters. This is also available from the Options menu. For more information on setting up the user defined form please see User Defined Forms in the Setup manual.

Note: Security for this User Defined Form can be granted from the User Defined Form accessed from the Options menu in the quote or from the User Defined Form tab.

Generic Manufacturing Type Quotes

The Generic manufacturing type is used to quote product that is not done using a molding process such as injection or extrusion. Examples of generic manufacturing are sonic welding, assembly, pad printing, etc. Quoting a product using the Generic Manufacturing type is basically identical to creating an Injection quote. The main difference is there is no raw material required, the work center used is a generic type, and on the items detail tab it is Standard Multiplier instead of cavities.

Below is an example of the General Quote Values Tab for a Generic Quote:


GENERIC Quote 5-PASO - SUN GLASS ASSEMBLY
File
Options
Miscellaneous
Reports
Help
General Quote Values
Item Details
Calculations
Quote Information
ID
37
RFQ #
5-PASO
Description
SUN GLASS ASSEMBLY
Revision
1
Customer
ABCO
Contact
Quote Date
5/16/2000
Expires
6/15/2000
Due Date
Date Out
Follow-Up Date
Won Date
Pricing Effective ...
Created By
Type
Status
User Quote Status
Currency
Calculated On
3/8/2002 2:07:33 PM
RFQ Control #
IQMS-3/8/02-2:07:33 PM
Converted
0
EPlant
PASO PLANT
CRM Opportunity #
Note
Additional Note
General Quote Values
Manufacturing Type
GENERIC MFG
Cell
PASO GENERIC
Operators
Cycle Time
8
Units/Cycle
1
Work Center
ASSEMBLY
Scrap %
5.00
Efficiency Factor
98
Center Rate
15.00
Fixed Machine Rate
Setup Hours
17.5
General Quote
Extra Charges, Commission
Auxiliary Equipment
Documents
User-Defined Form

All of the fields are the same as on an injection quote except there is no material field and the fields associated with material such as dry time.

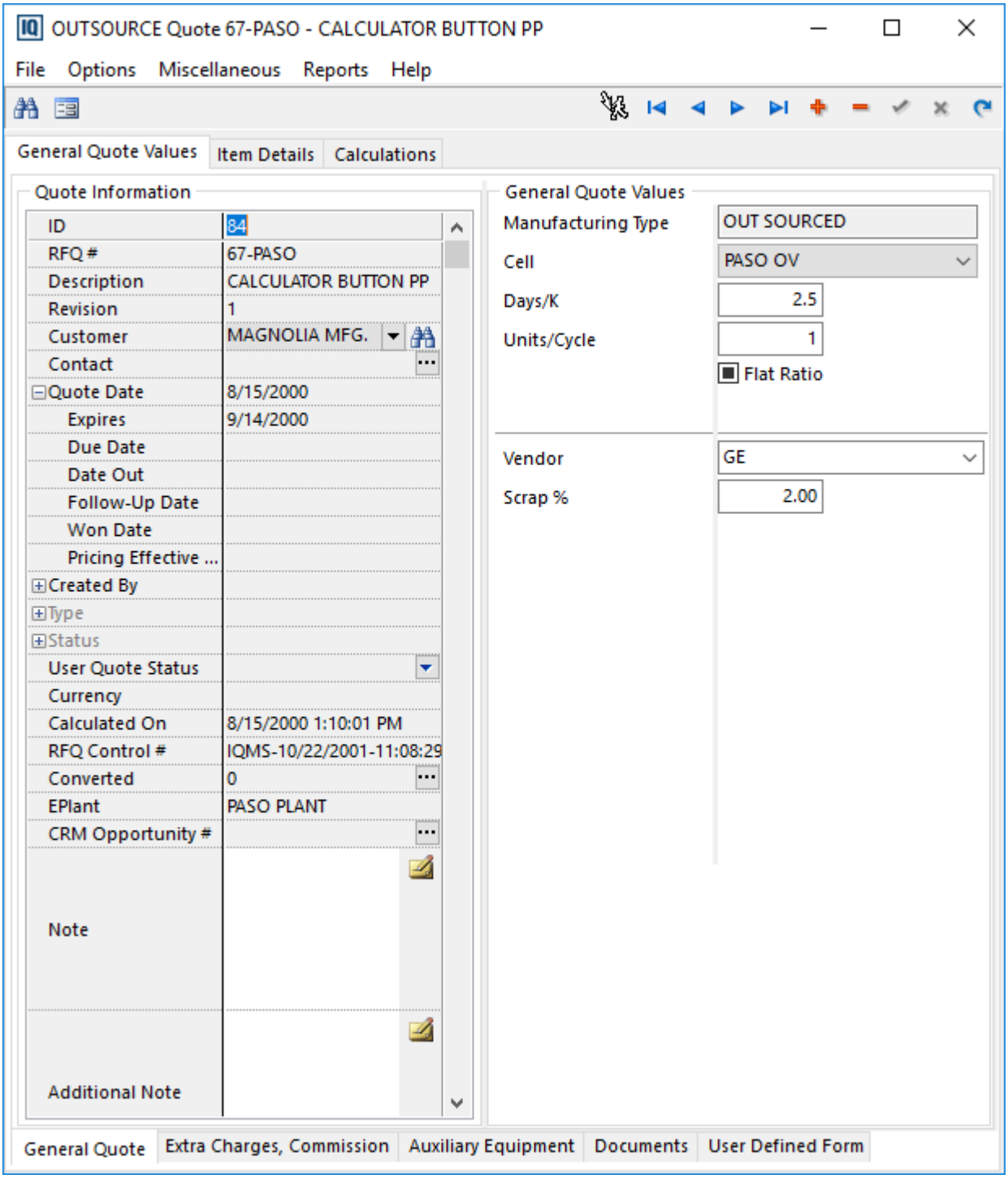
Assembly Mfg Type

The Assembly manufacturing type (not ASSY types) also use a similar form as above.

Note: The Cycle time for the Assembly Mfg Type in the estimating module is in seconds where in BOMs it is in hours. When converting an Assembly manufacturing type quote to a BOM the system will convert the cycle time to hours.

Outsource Manufacturing Type Quotes

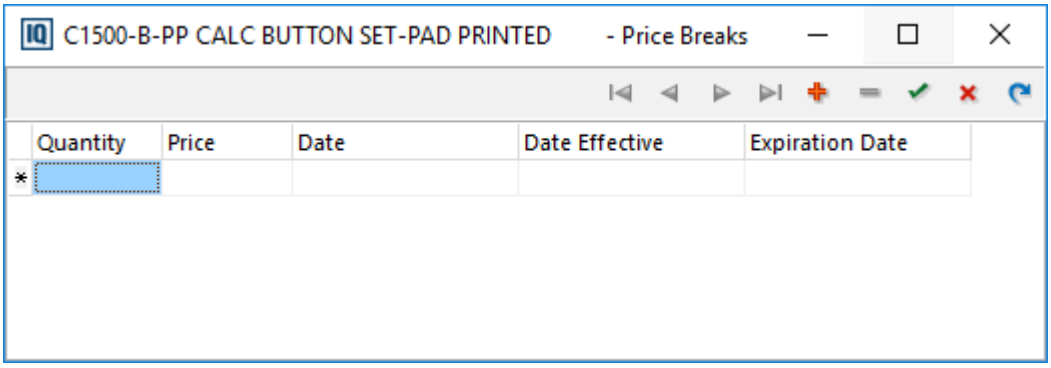
Outsource manufacturing quotes are used to quote a process that is not done in house. These quotes use the vendor's costs in the Quantity Breaks table on the Item Details screen. Below is an example of an Outsource Quote form:



Most of the fields are the same as on a Generic quote with the exception of cycles. Instead of cycles the system uses days per thousand or a flat number of days.

- Days/K - The rate of production for an outsource operation is handled with the Days per 1000 parts field entry unless the Flat Ratio is checked. This field is used to generate the approximate time the operation will consume.
- Flat Ratio - Check this box if the rate of production is based on the number of days and not days per 1000 parts. Once checked, enter the number of production days in the preceding Days field to complete this operation.

An outsource quote utilizes a vendor set up as a work center and the costs come from the Quantity Price Breaks set up on the Item Details tab. Click on the  and the following form will appear.



To enter in price breaks click on the **ADD (+)** button and enter as many price breaks as desired.

Note: For the Outsource MFG Type (or a user defined MFG Type that defaults to Outsource), if the Variable rate is filled in with 'Labor Based Rate' option selected (MFG Types->Labor/Overhead tab), this will be included in the calculation of production costs in Outsource quotes.

Extrusion Manufacturing Type Quotes

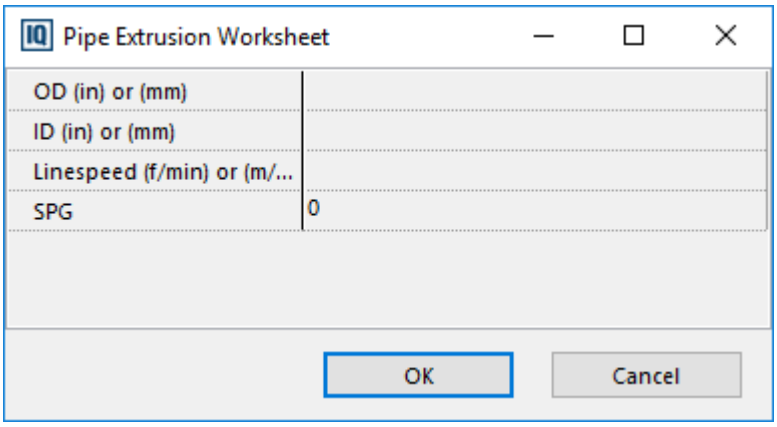
There are three extrusion manufacturing types available in the system: Extrusion, Extrusion2, and Extrusion3. Quoting a product using one of the Extrusion Manufacturing types is basically identical to creating an Injection quote. The fields will vary slightly based on the type. The chart below describes some of the differences:

Type	Item	BOM Info.	Work Center	Typical UOM
EXT	Part Length	Feet/Lb and Lbs/Hr; RT Signal Rate recommended	Line Size	Feet

EXT2	Part Weight	Lbs/Hr; RT Signal Rate required	Center Type	Lbs.
EXT3	Part Weight	Lbs/Hr; No RT Signal rate	Center Type	Eaches

Pipe Extrusion Worksheet

For the EXT MFG Type there is an option on the general tab of the quote called Pipe Extrusion Worksheet. Select the button next to the Feet/Lb field and enter in the diameter and linespeed details in the pop up form.



If a material is attached the system will populate the SPG field with the SPG associated to the material in inventory, or it can be entered manually.

Calculations:

Ft / Lb (Sets_disp) = 1000/((OD * OD - ID * ID) * 3.14159 / 4 * SPG)

Lbs / Hr (Cycletm_disp) = (OD * OD - ID * ID) * 3.14159 / 4 * SPG * line_speed * 60/1000

Thermoform and TFORM2 Manufacturing Type Quotes

Creating a quote for a Thermoforming manufacturing type is essentially the same process as for all quotes. The differences mostly lie in the material information. The fields that differ from an Injection quote are discussed below:

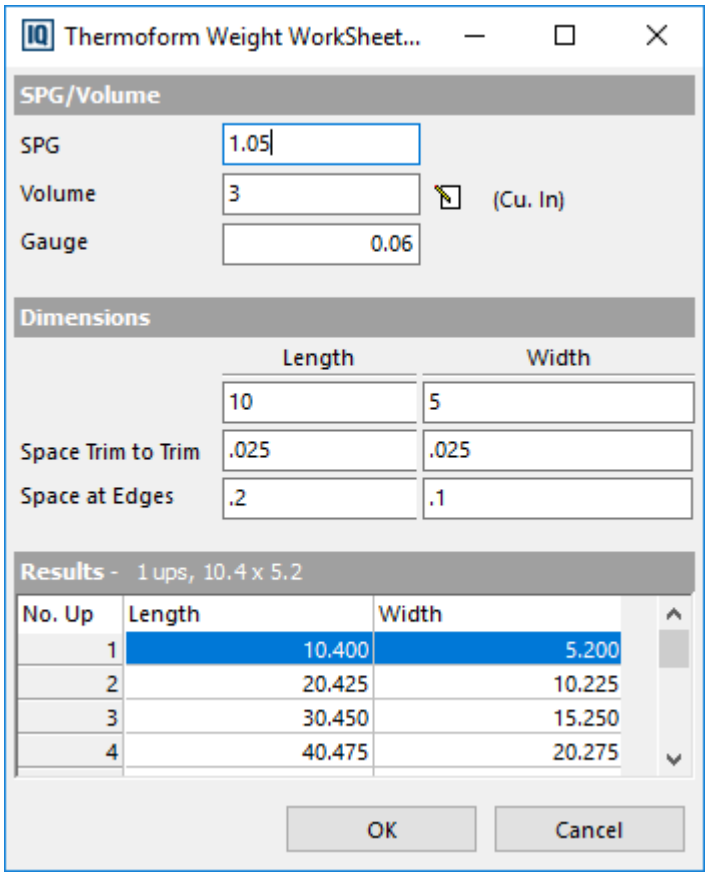
Material/Regrind

Material	This field is used for selecting the material that will be used for this job. This section has two fields, one will list the material item number and the other will fill in with the description. The user can modify the quote inventory item by selecting the Edit Material button next to the material description field this will pop up a form to edit fields such as SPG and Gauge.
Gauge	The gauge of the raw material. This will fill in based on the gauge associated to the attached material. This field can be changed for the specific quote without affecting the default gauge associated to the raw material.
SPG	The specific gravity of the raw material. This populates automatically based on the SPG associated to the selected item.
Tool Width	The width of the tool. This is entered on the General tab for THERMOFORM. For TFORM2 this value comes from the specified material. If a material has been brought over from master inventory it will bring the information over that was entered in the UOM Conversion Factors form in Master Inventory. If creating a new material or editing an existing one, the width field will display on the add and edit forms in the Materials Used in Quote screen. This field can also be edited by selecting the Edit Material button next to the material description field. (Note: This field is not available from Quote Inventory (Miscellaneous menu).
Rail	Optional. The rail material on the sides used to align the sheet to the tool. (Not applicable to TFORM2).
Tool Length	The length of the tool. This is entered on the General tab for THERMOFORM. For TFORM2 this value comes from the specified material. If a material has been brought over from master inventory it will bring the information over that was entered in the UOM Conversion Factors form in Master Inventory. If creating a new material or editing an existing one, the length field will display on the add and edit forms in the Materials Used in Quote screen. This field can also be edited by selecting the Edit Material button next to the material description field. (Note: This field is not available from Quote Inventory (Miscellaneous menu).
Clamp	Optional. The clamp material on the end used to align the sheet to the tool. (Not applicable to TFORM2).

Sheet Weight	**Thermoform**: Sheet Weight = (Width +Rail) x (Length + Clamp) x SPG x Gauge x .0361. (Multiplied by 453.59237 if the UOM is in grams). **TFORM2**: Sheet Weight = Width x Length x SPG x Gauge x .0361. (Multiplied by 453.59237 if the UOM is in grams).

Item Details Tab->Part Information

Standard Up	The Standard Up is the number of items produced during the cycle.

Weight	Enter the weight for a single item. The weight will be shown in either pounds, grams or ounces. Do not multiply the weight by the number of ups. The weight can be calculated using the Thermoform Weight Worksheet. Select the Weight Worksheet button next to the Weight field and the following form will appear:  Enter the SPG, Gauge, Length, Width and other applicable information. The volume can be calculated by the system by clicking on the calculate button next to the volume field. It is calculated as follows: **Volume** = Length x width x Gauge. Once the volume is calculated and the SPG is entered the system can determine the weight in grams of the part. The calculation is: **Weight** = (Volume x SPG x .0361) x 453.59 The Results in the lower section of the worksheet are calculated using the entered dimensions. **For one Up**: Length = Length + (Space at Edges x 2) Width = Width + (Space at Edges x 2) **For additional Ups**: Length = (Length x No. Ups) + (Space Trim to Trim x (No. Ups -1)) + (Space at Edges x 2) Width = Width x No. Ups) + (Space Trim to Trim x (No. Ups -1)) + (Space at Edges x 2

	Highlight the length and width to be used for the quote. The information will display in blue in the white box. Press OK and the system will update the Tool Length and Tool Width on the General Quote Values tab and the Std Up value in the Part Information section on the Item Details tab.
Costing Weight	By default the costing weight equals the Weight + By-product. If the 'Exclude By-product' option on the Calculations tab is checked then the Sheet Weight = Weight. Costing Weight is used to determine material costs.
Sheet Weight	The calculated Sheet Weight from the General Quote Values tab.

Skeleton Weight	Skeleton Weight = Sheet Weight - (Part Weight * Up)

Attached Materials

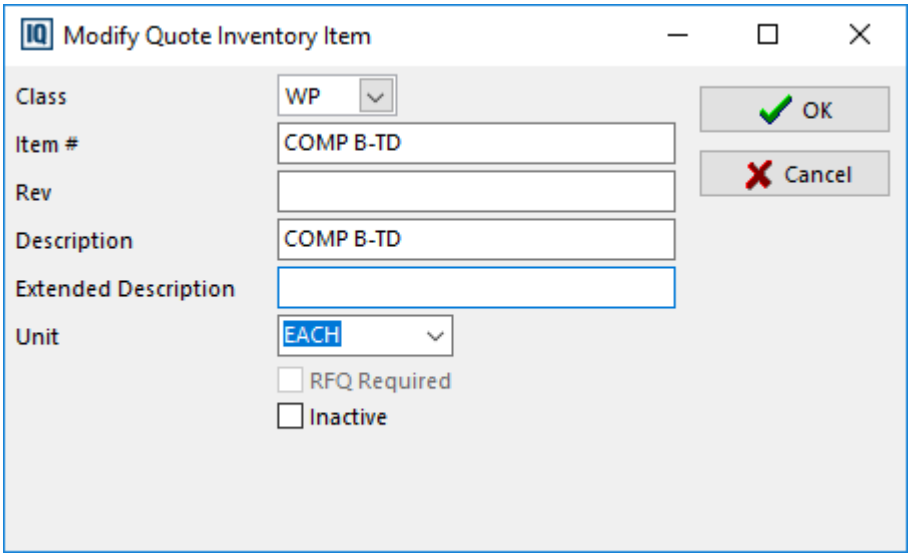
By Product	To add a By Product select the speed button next to the Skeleton Weight field. The Assign By Product form will appear to choose from or select File->Add to create a new By Product quote inventory item. The Modify Quote Inventory form will appear to enter the By Product Item Number, Description, Rev, unit of measure, etc. The Class defaults to PL. If a By Product item is created based on the Skeleton Weight the By Product box will be checked. It cannot be manually checked or unchecked. Note: The value of the skeleton (By Product) does not impact the cost/price of the manufactured item. However, if the quote is converted to a BOM, during Production Reporting both items will be dispositioned into inventory.
Parts Per	The parts per for the By Product is the skeleton weight divided by the number of standard ups converted to the selected unit of measure. This will be a negative value so that it is put into inventory during dispositions.

Creating a Quote from the Top Level down

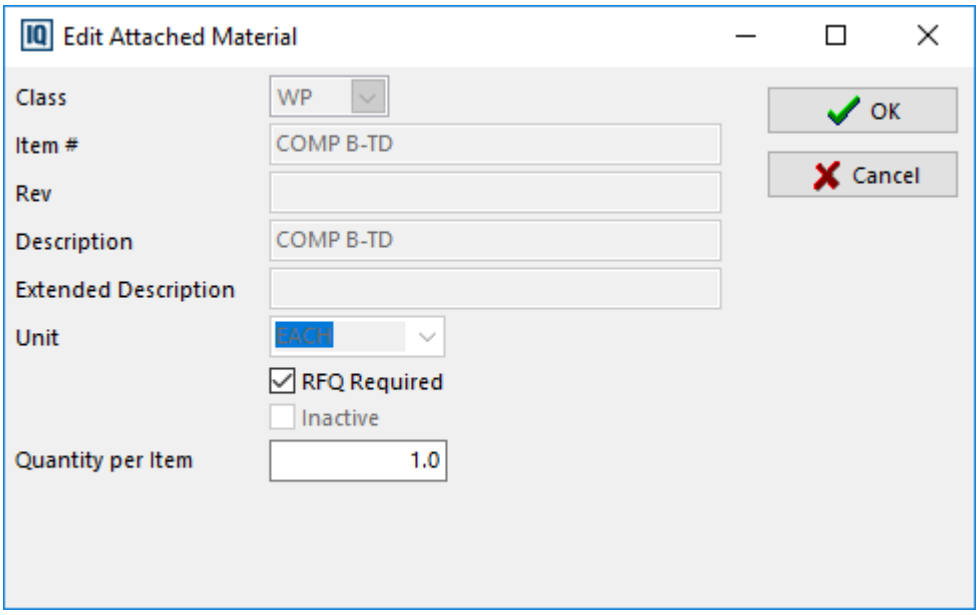
To create a quote starting at the top level manufactured item the user will create the highest level quote then work their way down to the lowest level. First determine the last step the item will go through and create a quote for that item selecting the correct manufacturing type.

For example: An item is produced that first is injection molded then it is assembled with another item, and finally it is pad printed as the finished good. In this scenario we have three steps, molding, assembly, and pad printing. The first quote created will be for the Pad Printing operation.

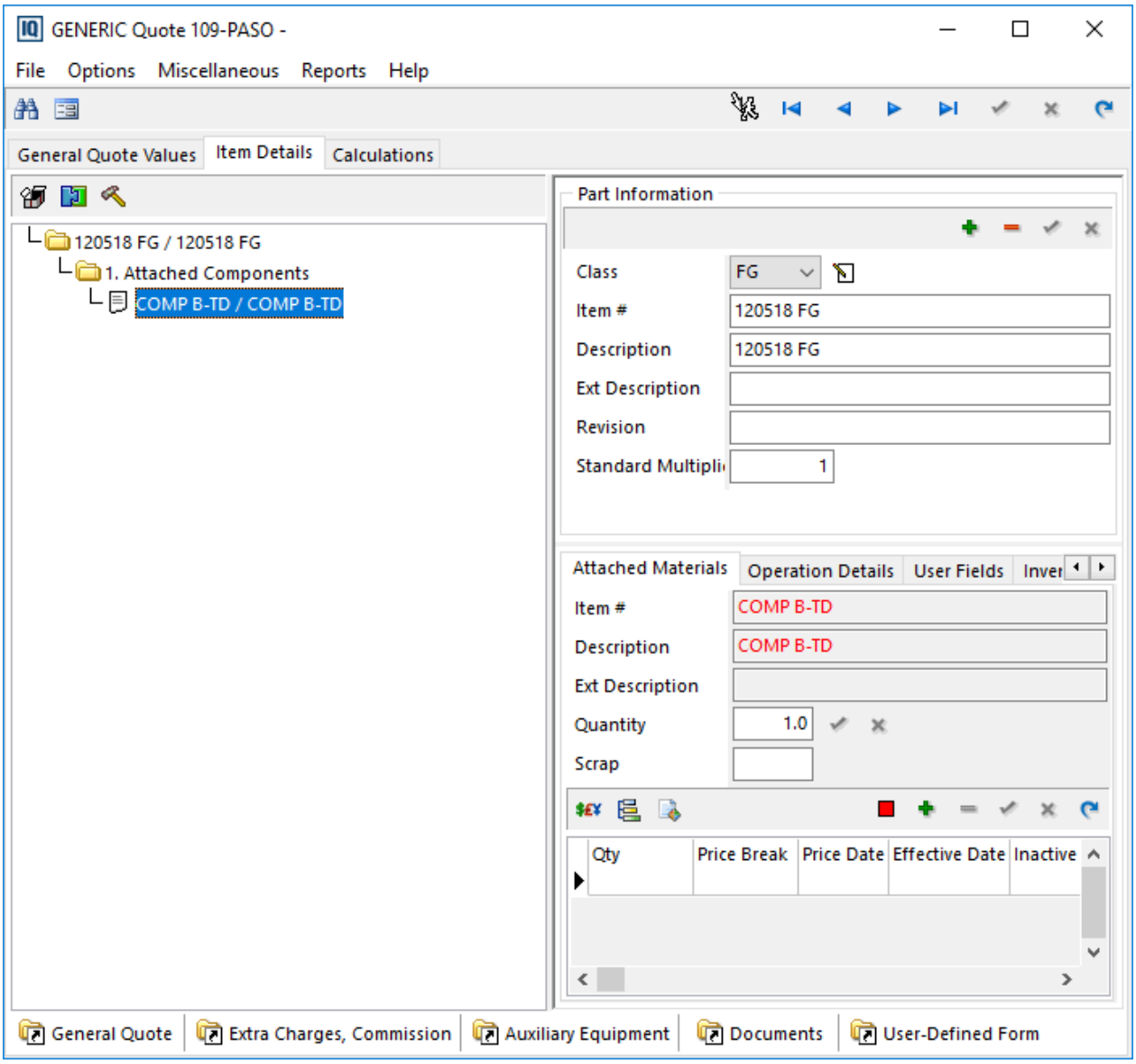
Create the quote for the pad printed item. On the Item Details tab select Add Component and create a new item in the quote inventory for the assembled item by selecting the Add (+) button and entering the item details on the 'Modify Quote Inventory Item' form:



This item will now exist in the Quote Inventory. Next, select the newly created item and drag it to the ‘Currently Attached Materials’ section and the ‘Edit Attached Material’ box will display:



Enter the 'Qty per Item' and be sure to check the 'RFQ Required' box. This will mark the item in red indicating a quote must be created for the item. Add any additional requirements such as packaging.



Next, right click on the Attached Component (assembled part in our example), and select **Jump to RFQ**. The manufacturing type selection criteria screen will appear because the system will recognize that a quote needs to be created for the item. Select the correct manufacturing type/cell and press OK.

A new quote form will appear with the same RFQ # with a dash 1. In our example the pad printed quote created was number 109, the assembled part quote is number 109-1. The Description will fill in automatically with the description from the first quote but can be modified. Also, the item information will fill in automatically on the Item Details tab.

From the Item Details tab select the 'Add Component' button and follow the steps above to create the manufactured item. Right click on the manufactured item and select Jump to RFQ. The system will again ask for a manufacturing type/cell to create the new quote for the manufactured item.

Calculating the Quotes

Now that all of the quotes are created they can be calculated. If the 'Calculate All Levels' option is not checked for all of the quotes, start with the lowest level quote. Once the highest level is reached all of the steps will have been quoted and will be included in the final prices for the finished good.

If the 'Calculate All Levels' option is checked on all related quotes the system will calculate the costs for each item associated to the 'top' level item with one click. For example, Item C consumes Item B, which consumes Item A. With this option checked when calculating the quote for Item C, the system will automatically calculate Item B and A.

Note: The automatic calculations will only affect the actual items that are part of the current "tree" and not other quotes they may be attached to.

Note: In order for this to work, 'Refresh Subcomponent Price Breaks' must be checked on the Default Values tab of Quote Parameters, and 'Use Master Inventory Std Cost for Component Pricing Instead of Price Breaks' must be unchecked on the General tab of Quote Parameters.

Note: If the Workflow Approval Quote parameter is checked, the system will apply the same Quote Type to the RFQs created from the place holders.

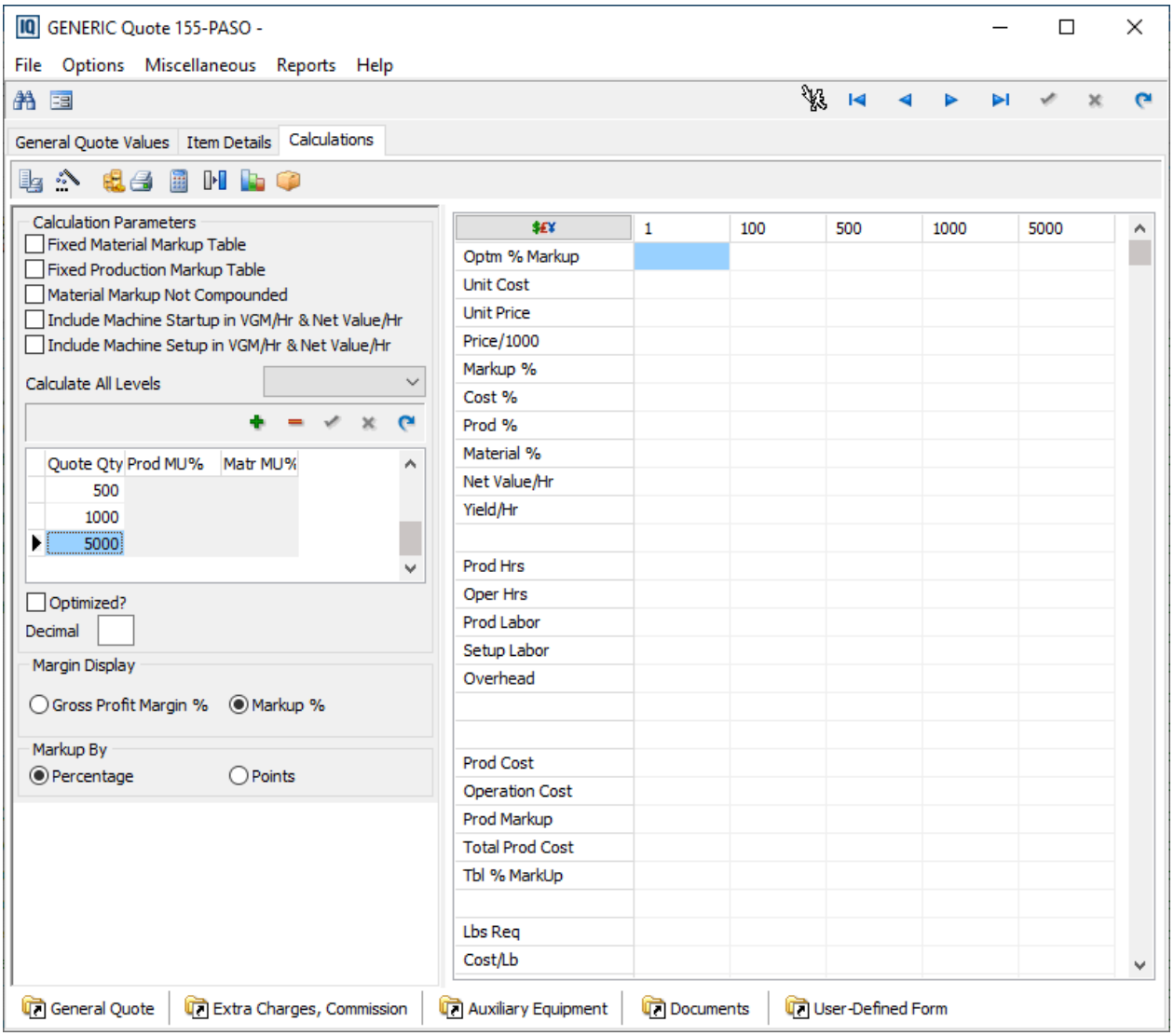
Calculating the Quote

The last step in building the quote is *calculating*. Before calculating, make sure that the required information has been entered.

If any required information is missing, an error message will appear and the user will not be able to continue with the calculation of the quote.

To calculate the quote, follow the steps below.

- Select the 'Calculations' tab. The following screen will appear:



This calculation screen is divided into two sections, the *Calculation Parameters* on the left and the *Calculation Display* box on the right. If you right click within the *Calculation Display* box, the you can choose to Display the Production Data, Display the Calculation Parameters or Optimize the quote.

The *Calculation Display* box contains several columns of information. For a detailed analysis of how these fields are calculated, please see the Calculation Display Box at the end of this section.

Note: If the quote you are viewing was received from Marketplace, the quote screen will display a blue banner at the top of the screen: "This quote was received from the Dassault Systemes Marketplace."

Calculating the Quote

To Calculate the quote, click on the Calculate button  .

Note: Certain manufacturing types (such as Injection, Blowmold, and Thermoform) require a valid cycle time in order to calculate the quote. If a cycle time is not entered or scrap is set to 100% the user will receive a warning: "Either cycle time is too low or scrap is too high. Calculations aborted."

Quote Calculations and Standard Cost Calculations

In order for Quote costing to match Standard Costing, the following conditions must apply:

- Quotation Parameters
  - The 'Use Master Inventory Std Cost for Component Pricing instead of Price Breaks' must be checked.
  - The 'Based on (1/1-Scrap)' Attached Components Scrap Calculation option must be selected.
- Inventory
  - 'Use Std Cost in Engineering Quote' (Inventory->Additional tab) must be checked for consumed material, components, and packaging.

The following are calculated differently in Quote costing and therefore will not match standard costing:

- Fixed Machine Rate
- Setup Labor
- Setup Hours

Calculation Parameters on Calculations Tab

Fixed Material and/or Fixed Production Markup Tables

EnterpriseIQ allows markups on both production and material costs. The user may choose from two methods to tell the system how to markup the calculated values. The markups may be calculated using the markup tables set up in the Rates and Parameters, or the user may create fixed markup tables for the individual quote on the calculation tab. The default Material Markup Table and/or Production Markup Table data entered in the Rates and Parameters as defaults may be overridden for an individual quote by using either one of the fixed table options on the Calculations tab. Entries in this section are entered as whole numbers, not decimals (to set the markup to 5%, type 5, 15%, type 15, etc.).

Default Markup Tables **(Misc->Rates and Parameters**	If both the Fixed Material and/or Fixed Production Markup check boxes are left unchecked, the system will use the default markup table information set up under Misc->Rates and Parameters. The markup values stored here are based on the total number of hours the job will run and the total dollar amount of material used.
Fixed Markup Tables **(Calculations tab for individual quote)**	Click on either one of these boxes to override the default mark-up table for this quote only. Where the Default option uses the pre-defined tables based on various values, the fixed option matches a percentage with the quantity to be quoted based on user input. To use a Fixed Markup Table (production or material) instead of the default tables, click on the check box next to either the Fixed Material Markup Table or Fixed Production Markup Table. When the box is checked, the Prod MU% or Matr MU% column will become white to allow data entry. If either Markup % Table is left at zero, the quote will not receive a markup. Using one of the Fixed options allows you to change any and/or all Quote Quantity production markups within that particular table. After running the calculate function, the corresponding markups will be placed in the table available for viewing. If you wish to create a quote with NO markups in either the Fixed Material Markup Table or Fixed Production Markup Table, you may do so by using both the fixed options and setting all quantities to zero. This is used for calculating pure cost.

Additional Calculation Parameters

Calculate All Levels	The default value for this option is set in Quotation Parameters->Default Values tab. This value can be overridden on the Calculation tab for an individual quote. Check this option to calculate the costs for each item associated to the 'top' level item with one click. For example, Item C consumes Item B, which consumes Item A. With this option checked when calculating the quote for Item C, the system will automatically calculate Item B and A. If this is not checked in order to get the correct cost for Item C you must open the quote for Item A and calculate, then open the quote for Item B and calculate, then open the quote for C and calculate. **Note**: The automatic calculations will only affect the actual items that are part of the current "tree" and not other quotes they may be attached to. **Note**: In order for this to work, 'Refresh Subcomponent Price Breaks' must be checked on the Default Values tab of Quote Parameters, and 'Use Master Inventory Std Cost for Component Pricing Instead of Price Breaks' must be unchecked on the General tab of Quote Parameters. **Note**: If the 'Calculate All Levels' parameter is not checked as the default in Rates and Parameters, for multiple levels to be calculated each higher level quote that is part of the tree will need to have the 'Calculate All Levels' option is set to Yes. For example, Item C consumes Item B, which consumes Item A; if the 'Calculate All Levels' option is set to Yes on C, but not B, then the system will only calculate C and B, but not A.
Include Machine Startup in VGM/Hr & Net Value/Hr	By default, Machine Start Up Hours will be excluded from the VGM/Hr and Net Value/Hr calculations. To include Machine Start Up in those calculations check this box. The calculation for Net Value/Hr with Machine Start Hours included is: ▪ **Net Value/Hr** = [(((Total Revenue - (Extra Charges + Material Cost + Prod Labor + Setup Labor)) / Quote Qty) * (3600/Cycle Time) * (1-Scrap Rate) * (Eff Factor %) * Units per Cycle] + (Machine Startup Hours) The calculation for VGM/Hr with Machine Start Hours included is: ▪ **VGM/Hr** = (((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Amount - Commissions) / (Prod Hrs + Machine Startup Hours)
Include Machine Setup in VGM/Hr & Net Value/Hr	By default, Machine Setup Hours will be excluded from the VGM/Hr and Net Value/Hr calculations. Check this box to include Machine Setup Up in those calculations. The calculation for Net Value/Hr with Machine Setup Hours included is: ▪ **Net Value/Hr** = (((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Amount - Commissions) / Prod Hrs + (Machine Setup Hours) The calculation for VGM/Hr with Machine Setup Hours included is: ▪ **VGM/Hr** = (((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Amount - Commissions) / (Prod Hrs + Machine Setup Hours)

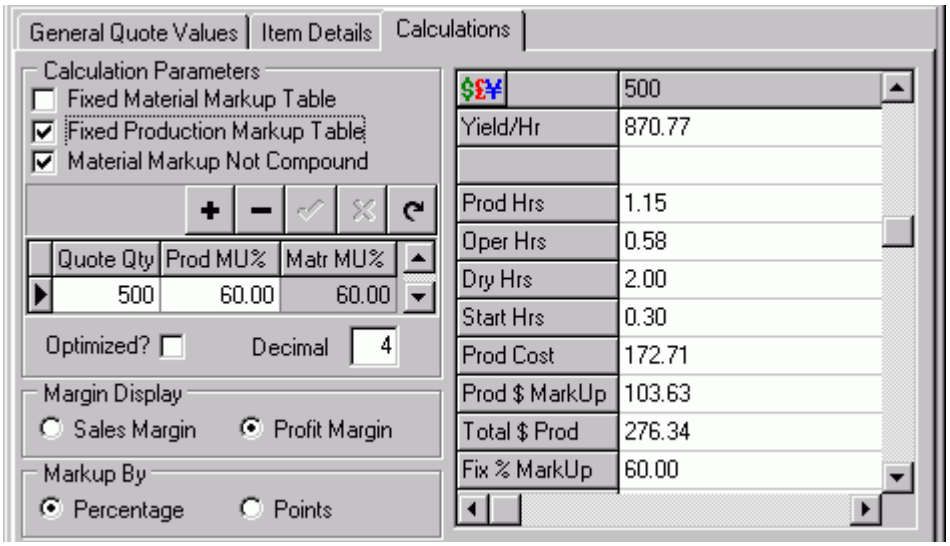
Both Options checked	If both options are checked both the Machine Startup Hours and Machine Setup Hours will be added to the calculations: ▪ **Net Value/Hr** = [(((Total Revenue - (Extra Charges + Material Cost + Prod Labor + Setup Labor)) / Quote Qty) * (3600/Cycle Time) * (1-Scrap Rate) * (Eff Factor %) * Units per Cycle] + (Machine Setup Hours + Machine Startup Hours) ▪ **VGM/Hr** = (((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Amount - Commissions) / (Prod Hrs + Machine Setup Hours + Machine Startup Hours)
Adding and Deleting Quote Quantities	To add additional quote quantities to the table, click on the Add [+] key on the Navigator bar directly above the table. Enter in the new quantity (and markup percentages if fixed) and Save the change. To edit, select the appropriate markup percentage table and click on the field to edit. Quantities and percentages can be deleted from this section by highlighting the quantity to be deleted and clicking on the Delete [-] key on the Navigator bar directly above the table.
Material Markup Not Compounded	This check box controls whether a manufactured sub-component is marked up again when it is used as a component in a higher level BOM. If checked, the lower level materials that make up the subassembly will NOT be marked up again. If you wish to use this option, place a check mark in the box in front of the Material Markup Not Compounded field.
Optimized	If the quote has been optimized in the past, a check mark will be present in the 'Optimized?' box. If the box is blank, the quote has not been optimized. See Optimizing the Quote for more information.
Decimal	To change the precision of the decimal display (the system defaults to two decimal places), enter the number of decimal places to display and save the change. The new values will be displayed automatically. The maximum number of decimals is six.
Margin Display	The user has the option of being able to calculate the quote using either Markup % or Gross Profit Margin %. (Refer to the General Tab for more information).
Markup By	EnterpriseIQ allows the user to calculate production and material markup rates by percentage or points. When creating a quote, the user can accept the default as setup under 'Rates and Parameters' or override the default for each individual quote by selecting one of these two options. ▪ **Percentage -** Takes a percentage of the cost, and adds that value back to the original. **Example**: A 25% markup on a Prod Cost of $1.00 Total Prod = [($1.00 x .25) + $1.00] = $1.25 Prod Markup = ($1.25 - $1.00) = $0.25 ▪ **Points -** Increases the total cost by the percentage used by dividing the cost by the inverse of the percentage listed. **Example**: A 25% markup on a Prod Cost of $1.00 Total Prod = [1.00 / (1 - 0.25)] = $1.333 Prod Markup = ($1.333 - $1.00) = $0.333

Markup Examples

Use the examples below to help understand the calculations. The information displayed in both examples are limited to a Quote Quantity of 500 units.

EXAMPLE 1 - Using Percentages

For this example, the 'Fixed Production Markup Table' was selected.

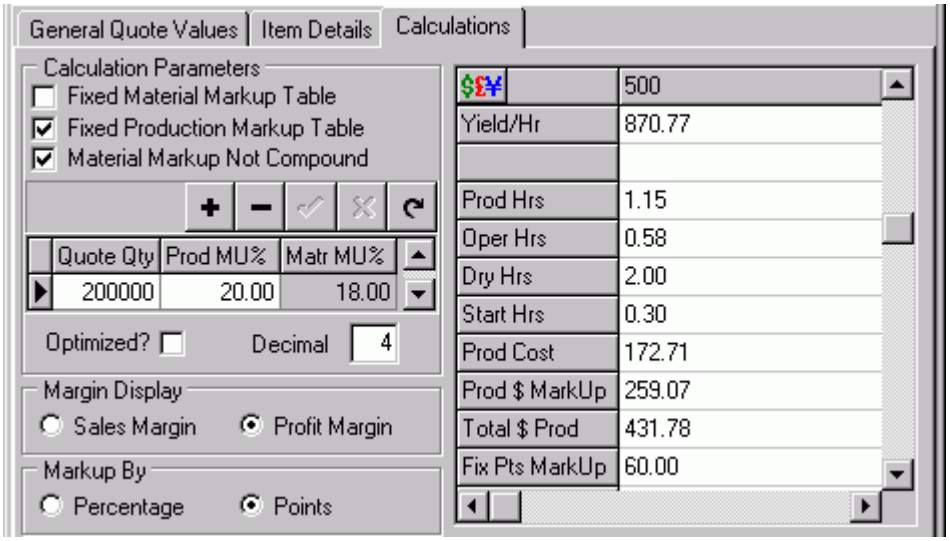


The markup on a Quote Quantity of 500 is as follows:

Prod Markup = (Prod Cost * (FixPtsMarkup / 100) = (172.71 * 0.6)
Prod Markup = 103.63
Total Prod Cost = Prod Cost + Prod Markup = (172.71 + 103.63)
Total Prod Cost = 276.34

EXAMPLE 2 -Using Points

Again, the 'Fixed Production Markup Table' was selected.



The markup on a Quote Quantity of 500 is as follows:

Total Prod Cost = Prod Cost / (1 - (FixPtsMarkup / 100)) = (172.71 / 0.4)
Total Prod Cost = 431.78
Prod Markup = Total Prod Cost - Prod Cost = (431.78 - 172.71)
Prod Markup = 259.07

Note: If the Production Markup table percentage shows 60%, the inverse of the cost percentage would be 40%.

Note: If calculating markup is by points, and the user enters a MU% of 100 the system will present an error that the system is attempting to divide by zero. By definition, markup calculated by points would not allow for a markup of 100%. The error that will appear is: 'Markup by points, Invalid Prod MU% and/or Mat. MU% for Quote Qty ### - Operation aborted'.

Optimizing the Quote

The system allows quotes to be optimized by Price, Percent, Margin, Yield/Hr, VGM Amount, VGM/Hr, and Net Value/Hr. The optimization process allows the user to input values for each of these criteria and then calculate the markups and prices and fine tune the final price for the item.

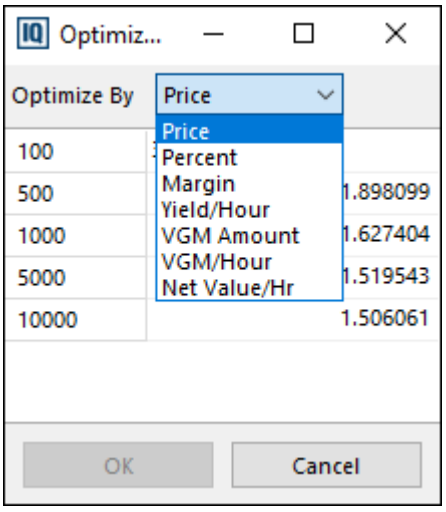
Once the quote is optimized, the optimized percentage is displayed at the top of the calculations screen. The optimized percentage is the percent of change between the original calculated unit price and the new optimized unit price.

To optimize a quote:

- On the Calculations screen, right click within the Calculations Display screen (right side) and select Optimize... from the submenu, or click on the Optimize button at the top of the screen. The system will remember the last option that was used when exiting and going back into the optimization screen.

Seven methods of optimization are available:

- **Price -** Directly inputs the quote price. Note: if the quote is for a family tool the price for the individual items can be optimized by selecting the individual pricing option. (See Individual Pricing in the Other Calculation Options section for more details).
- **Percent -** Raises or lowers the quote price by the percentage input.
- **Margin -** Changes the Total Margin or Sales Margin directly which also changes the quote price.
- **Yield/Hr -** Optimize the quote price by yield/hr.
- **VGM Amount** - Optimizes the quote calculations based on the VGM Amount.
- **VGM/Hour**- Optimizes the quote calculations based on the VGM/Hour.
- **Net Value/Hr** - Optimizes the quote calculations based on the Net Value/Hr.

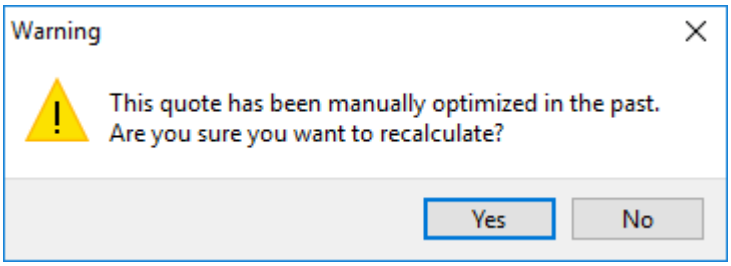


Any combination of optimization methods may be used. For example, one Quote Quantity can be optimized by Price and then a second quantity can be optimized by the Margin and any others by Percent.

As you optimize, the optimization percentage is recalculated and displayed under the Optm % Markup column.

Note: When performing the optimization calculations, the system applies the commission value after the optimization is calculated for price per unit. Refer to the Calculation Example section for details on the calculations.

After optimizing the quote, the changes are saved to the quote database and the Optimize? box will contain a check mark showing that the quote has been optimized. If the user attempts to recalculate, a warning message will appear as follows:

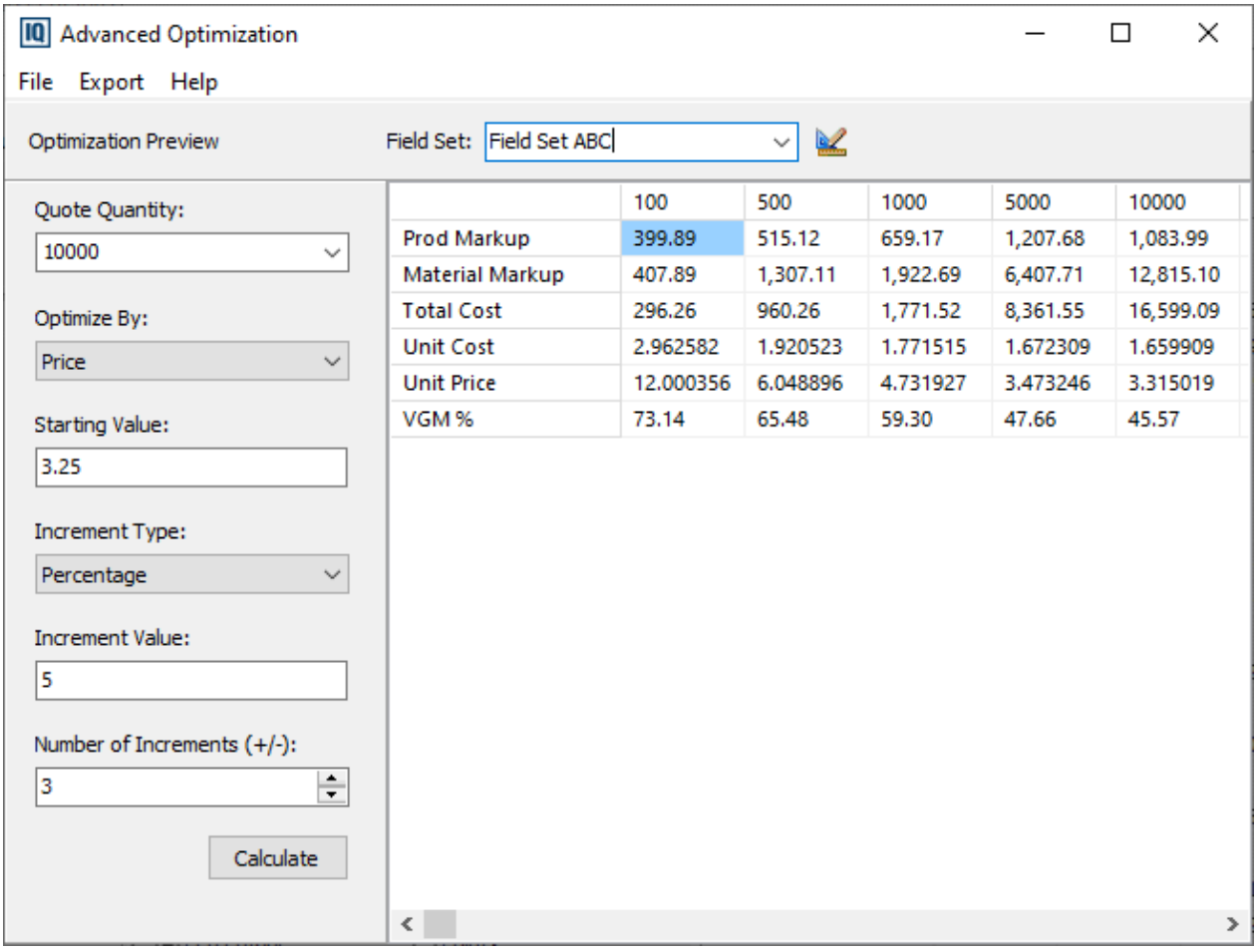


If 'Yes' is selected, it will remove the optimization and recalculate the pricing. Any changes made to the quote will be reflected in the new calculation.

Advanced Optimization

Advanced Optimization is a customizable optimization tool that provides users with the ability to quickly evaluate profitability and competitive pricing by choosing the calculations and variables to include in the optimization process. To access this module, right click on the Quote->Calculations tab or select the 'Advanced Optimization' option from the drop down list next to the 'Optimize speed button on the Calculation tab. 

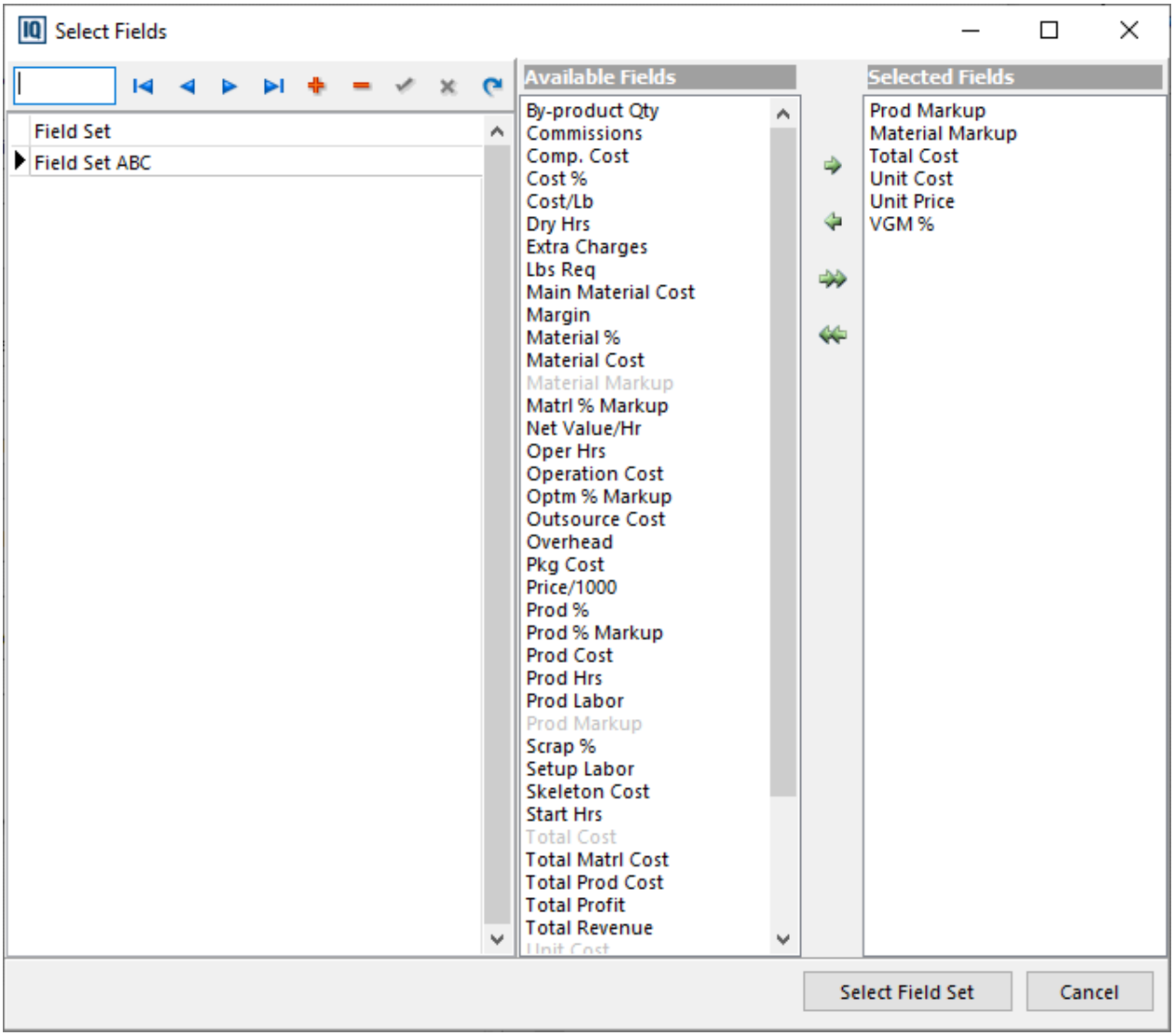
When the form is first accessed the Calculation grid will display the current calculations from the Engineering Quote->Calculation Tab. The system uses the same decimal precision setup in Engineering Quotes -> Calculation tab. The Optimization fields will be null. When the form is accessed again the system will remember the values in the editable fields.



Note: Users cannot access the Advanced Optimization form if another user is in the form on the same quote. A 'Failed to acquire exclusive lock' message will display to the user who has locked the record.

Select Fields

Multiple 'Fields Sets' can be created that will determine the fields that display in the grid. Click the 'Select Fields' button next to the 'Field Set' field to access the 'Select Fields' form.



1. Select the + button to create a new 'Field Set' and enter the name of the set in the field.
2. Choose the desired fields to be included from the 'Available Fields' list and arrow them over to the 'Selected Fields' list using the single right arrow button. The Shift/Ctrl keyboard buttons can be used to select multiple fields at once. All fields can be added using the double right arrow button.
3. All fields or individual fields can be removed from the 'Selected Fields' section by using the left arrow buttons.

4 If the user is highlighted on a field in the 'Available Fields' section that may change based on EPlant, MFG Type or Calculations Parameters, a hint will display on the bottom of the 'Select Fields' form, "The Field Set label may change based on EPlant Login, Manufacturing Type and Calculations Parameters."

5 The order of the fields can be changed by dragging and dropping a field into the desired place. The fields will display on the Advanced Optimization screen in the order they have been established here.

6 Once all of the 'Selected Fields have been chosen click the 'Select Field Set' button. The Advanced Optimization grid will populate with the selected fields and their values.

Follow the steps above to create additional 'Field Sets', or use the 'Clone' option to clone a field set and modify it.

Clone - Fields Sets can be cloned by highlighting a 'Field Set', right clicking and selecting 'Clone'. A new 'Field Set' will be created with the same name as the highlighted one. The name can be changed, and the fields associated to the 'Field Set' can be modified.

Note: If a user later changes a calculation parameter or radio button that could affect the Advanced Optimization form field set labels, the system will automatically change the field set labels. For example, the Margin Display field will change based on the parameter that is checked. It will be either 'Gross Profit Margin %' or 'Markup %'.

Note: Another example is if the Calculation Parameters for 'Fixed Production Markup' is checked, the field will change from 'Tbl % Markup' to 'Fix % Markup'. If these fields are part of the field set it is recommended to include the 'Material Cost' and 'Prod Cost' fields so you know how they are being marked up (Fixed or Table).

Field Set Selection

From the Advanced Optimization form select the field set to view from the drop down list in the Field Set field. If a field set is selected that does not have any fields, the calculation grid in the Advanced Optimization screen will not display any fields.

Optimizing the Quote

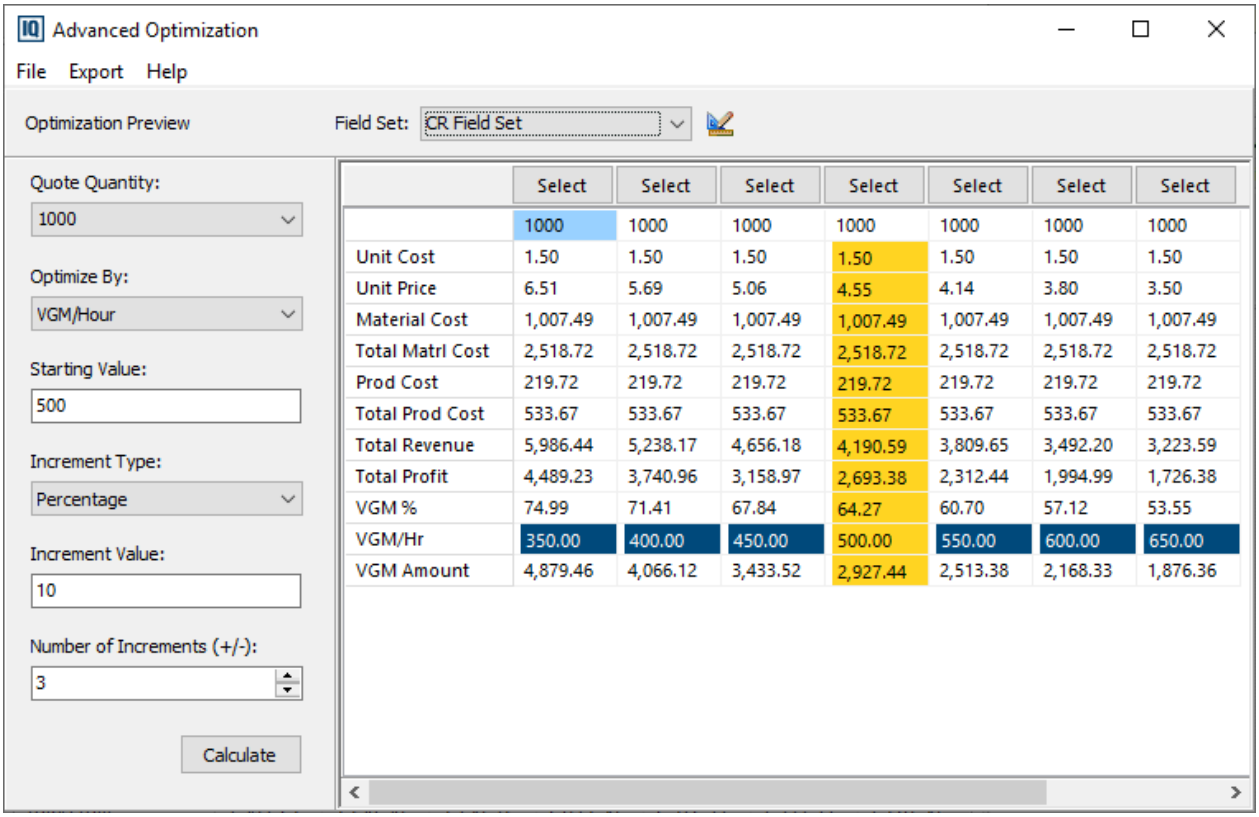
To optimize the quote enter values in the fields below:

Quote Quantity	This is a drop down menu based on the Quote Quantities assigned to the quote in the Markup Table on the Engineering Quotes -> Calculations tab. (The Quote Qty can only be whole numbers, no decimals).
Optimization By	This is a drop down list that includes all of the optimization methods: Price, Percent, Margin, Yield/Hour, VGM Amount, VGM/Hour, and Net Value/Hour.
Starting Value	This is a free form field to define which value you want to optimize by. This will set the 'middle' ground from which the system will increment by based on the values entered in he 'Increment Type' and 'Increment Value' fields.
Increment Type	This is a drop down list with Percentage or Flat Amount. This is used to define how to increment in both directions.

Increment Value	This is a free form field that defines how much to increment in either direction based on the starting value.
Number of Increments (+/-)	This is the number of increments in either direction. The max is 4 and must be a whole number.

Populate the fields above and select the 'Calculate' button. The form will display the advanced optimization calculations based on the values in the optimization fields. The starting value column will be highlighted in yellow. The 'Optimize By' field will be highlighted in blue. The Quote Quantity field cannot be edited.

Note: The user will receive an error stating, "Field set and all optimization values must be selected" if all of the fields are not populated or there is not a field set.



If the values in the optimization fields are changed, select the 'Calculate' button to update the calculations.

After optimizing the quote, users can decide which column they would like to commit to the Calculation screen by clicking the 'Select' button for the column to commit. A confirm message with 'Yes' and 'No' buttons will display stating, "Apply the calculated Advanced Optimization?" Selecting 'Yes' will close the Advanced Optimization form and update the calculations screen to display the optimized values for the quote quantity that was optimized. This will check the 'Optimized?' check box on Engineering Quotes->Calculation tab. Selecting 'No' on the message will return the user to the Advanced Optimization form with no changes made to the Quote Calculations tab.

Export

Users can export the optimized calculations by selecting the 'Export' menu option. This is similar to the 'Print RFQ' button on the Calculations tab. This will print a report of the general quote information including labor, material, blend details, part information, and the calculation information from the Advanced Optimization form currently open. This report is hard coded into the system, it is not a Crystal Report and therefore cannot be edited. However, it will also create an Excel spreadsheet which by default is saved in the local home folder in a sub-folder named rfq_print. The location where these are saved can be changed by setting the location from the RFQ Print -.xls Destination option available from the Miscellaneous menu. Once this option is selected the user will see the spreadsheet briefly appear then a Print box will come up to choose the printer to send the report to or cancel if a hard copy is not desired.

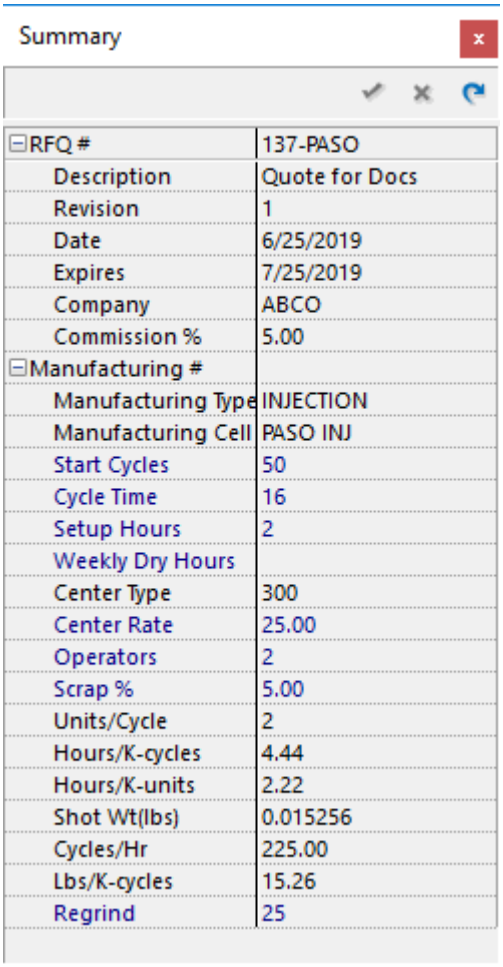
Note: This feature requires that Microsoft Excel is installed on the computer. If it is not installed, when selecting the Export menu, a message will appear stating"Microsoft Excel is required".

Calculation Example

After a quote has been calculated, the data is displayed in the right hand portion of the **Calculations** screen, referred to as the '*Calculation Display'* screen. The calculation process goes through a series of operations to arrive at a quote price. **EnterpriseIQ** uses the price breaks on the manufactured components, includes the costs for inserts and packaging, and includes markups and commissions. The table below shows how **EnterpriseIQ** calculates each of the fields in the '*Calculation Display'* screen.

Calculation Display example

$£¥	1000	2000	5000	10000	20000
Optm % Markup					
Unit Cost	0.3210	0.2219	0.1625	0.1427	0.1328
Unit Price	0.5041	0.2510	0.1856	0.1638	0.1529
Price/1000	504.1030	251.0420	185.6370	163.8040	152.9100
Gross Profit Margin %	33.15	7.19	8.06	8.51	8.78
Cost %	66.85	92.81	91.94	91.49	91.22
Prod %	40.54	61.28	66.59	69.30	70.94
Material %	5.48	10.61	14.03	15.79	16.85
Net Value/Hr	114.70	45.63	37.61	34.92	33.59
Yield/Hr	184.47	86.88	61.73	53.36	49.18
Prod Hrs	2.46	4.92	12.31	24.62	49.25
Oper Hrs	4.46	6.92	14.31	26.62	51.25
Prod Labor	36.90	73.80	184.65	369.30	738.75
Setup Labor	40.00	40.00	40.00	40.00	40.00
Overhead	117.75	179.25	364.00	671.75	1,287.50
Dry Hrs					
Start Hrs	0.25	0.25	0.25	0.25	0.25
Prod Cost	194.65	293.05	588.65	1,081.05	2,066.25
Operation Cost					
Prod Markup	145.99	29.31	58.87	108.11	206.63
Total Prod Cost	340.64	322.36	647.51	1,189.15	2,272.88
Fix % MarkUp	75.00	10.00	10.00	10.00	10.00
Lbs Req	8.39	16.02	38.90	77.04	153.32
Cost/Lb	2.4500	2.4500	2.4500	2.4500	2.4500
Plastic Cost	20.56	39.25	95.31	188.75	375.64
Comp. Cost					
Pkg Cost	5.75	11.50	28.75	57.50	115.00
Outsource Cost					
Material Cost	26.31	50.75	124.06	246.25	490.64
Material Markup	13.15	5.07	12.41	24.63	49.06
Total Matrl Cost	39.46	55.82	136.47	270.88	539.70
Fix % MarkUp	50.00	10.00	10.00	10.00	10.00
Extra Charges	100.00	100.00	100.00	100.00	100.00
Commissions	0.0240	0.0120	0.0088	0.0078	0.0073
Total Revenue	480.10	478.18	883.98	1,560.04	2,912.58
Total Cost	320.96	443.80	812.71	1,427.30	2,656.89
Total Profit	159.14	34.38	71.27	132.73	255.69
VAP %	35.07	8.04	9.38	10.10	10.56
VGM %	59.10	38.39	33.30	30.70	29.12
VGM Amount	297.9177	192.7507	309.0845	502.8723	890.5906
VGM/Hr	63.2522	26.8829	21.2283	18.7150	17.2930



RFQ #	137-PASO
Description	Quote for Docs
Revision	1
Date	6/25/2019
Expires	7/25/2019
Company	ABCO
Commission %	5.00
Manufacturing #	
Manufacturing Type	INJECTION
Manufacturing Cell	PASO INJ
Start Cycles	50
Cycle Time	16
Setup Hours	2
Weekly Dry Hours	
Center Type	300
Center Rate	25.00
Operators	2
Scrap %	5.00
Units/Cycle	2
Hours/K-cycles	4.44
Hours/K-units	2.22
Shot Wt(lbs)	0.015256
Cycles/Hr	225.00
Lbs/K-cycles	15.26
Regrind	25

Calculation Samples

The calculation samples provided below are based on both the Calculation Display information and the Production Summary screen (shown above) and are limited to a Quote Quantity of **1000** units only. All percentages or amounts shown in the calculated fields have been rounded off.

To help understand how the calculations were reached in the Calculation Display screen, use the information shown in the two screen shots above, plus the following details:

- The 'Markup By' is set to Percentage
- Operators: One non setup operator ($15) and one setup operator ($20)
- Dry Hours = 0
- No Auxiliary Equipment attached

The field listing below outlines and shows the calculations for each field:

Optm % MarkUp	If a quote is Optimized, the resulting percent change is displayed here. The optimized percentage is the percent of change between the original calculated unit price and the new optimized unit price. The column will be blank if the quote has not been optimized. **Example**: The price is optimized from $1.00 to $1.25. The Opt % Markup field displays 25 indicating that the quoted price is 25% higher than the calculated price. All percentages are based on the calculated price.
Unit Cost	The cost to make the product per unit. **Calculation**: a. Total Cost / Quote Quantity b. 320.96 / 1000 **Unit Cost** = $0.3210
Unit Price	Suggested sales price per unit. **Calculation**: a. (Total Revenue / Quote Quantity) + Commission b. (480.10 / 1000) + 0.0240 **Unit Price** = $0.5041
Price/1000	The price for 1000 units of product. **Calculation**: a. Unit Price * 1000 b. 0.5041 * 1000 **Price/1000** = $504.10
Profit/Total Margin	This will display either the Markup % or the Gross Profit Margin % depending on which option is selected in the Margin Display section on the Calculations Parameters screen. The default is set in Rates and Parameters. **Calculation if Markup % is selected**: a. ((Total Revenue – Total Cost) / Total Cost) * 100 b. (480.10 - 320.96) / 320.96) * 100 c. (159.14 / 320.96) * 100 **Markup %** = 49.58 **Calculation if Gross Profit Margin is selected**: a. ((Total Revenue – Total Cost) / Total Revenue) * 100 b. (480.10 - 320.96) / 480.10) * 100 c. (159.14 / 480.10) * 100 **Gross Profit Margin** = 33.15

Cost %	Total cost as a percent of the Unit Price. **Calculation**: a. Total Cost / Total Revenue b. 320.96 / 480.10 * 100 **Cost %** = 66.85
Prod %	The production costs as a percentage of the total price. **Calculation**: a. Prod Cost / Total Revenue x 100 b. (194.65 / 480.10) * 100 **Prod %** = 40.54
Material %	The material costs as shown as a percentage of the total price. **Calculation**: a. Material Cost / Total Revenue * 100 b. (26.31 / 480.10) * 100 **Total Material** % = 5.48

Net Value/Hr	This is the effective hourly press rate, after removing extra charges, materials and labor. It is calculated by taking the Total Revenue less Extra Charges, Material Cost, Production labor and Setup labor then dividing by the quote quantity, and multiplying by the net cycles per hour [which is calculated: (3600 / (cycle Time)) * (1-Scrap Rate percentage) * (Efficiency Factor)] times the units per cycle. **Calculation**: a. (((Total Revenue - (Extra Charges + Material Cost + Prod Labor + Setup Labor)) / Quote Qty) * (3600/Cycle Time) * (1-Scrap Rate) * (Eff Factor %) * Units per Cycle b. (((480.10 - (100 + 26.31 + 36.90+ 40.00) / 1000) * ((3600/16) (1 - 0.05) (0.95)) * 2 c. ((276.89 / 1000) * (225 * 0.95 * 0.95) * 2) d. (0.27689 * 203.06) * 2 **Net Value/Hr** = 112.44 If the Calculation Parameters 'Include Machine Startup in VGM/Hr & Net Value/Hr' and 'Include Machine Setup in VGM/Hr & Net Value/Hr' are checked the calculations will include those values. **Calculation**: a. (((Total Revenue - (Extra Charges + Material Cost + Prod Labor + Setup Labor)) / Quote Qty) * (3600/Cycle Time) * (1-Scrap Rate) * (Eff Factor %) * Units per Cycle + (Machine Setup Hours + Machine Startup Hours) b. (((480.10 - (100 + 26.31 + 36.90+ 40.00) / 1000) * ((3600/16) (1 - 0.05) (0.95)) * 2 + 2 + 0.25 c. ((276.89 / 1000) * (225 * 0.95 * 0.95) * 2) + 2.25 d. (0.27689 * 203.06) * 2 + 2.25 **Net Value/Hr** = 114.70 Note: If the *'Exclude Efficiency Factor from Cost Calc'* setting is checked (Rates and Parameters->Default Values tab) the system will exclude the quote efficiency factor in the calculation. The system will use an efficiency factor of 100 rather than the Quotes efficiency factor.
Yield/Hr	The total yield per hour for the Quote Quantity. Essentially the amount made per hour after material costs (raw material, components, and packaging) and commissions, but before labor costs. **Calculation**: a. (Total Revenue - Material Cost - Commissions) / Prod Hours b. (480.10 - 26.31 - 0.024) / 2.46 **Yield/Hr** = 184.47

Prod Hrs	Production Hours required for the Quote Quantity. **Calculation**: a. (Qty / (3600 / Cycle Time)) / (1 - Scrap %) / (Eff Factor %) / (Units per Cycle) b. (1000 / (3600 / 16)) / (1 - 0.05) / (0.95) / 2 c. (1000 / 225) / (0.95) / (0.95) / 2 d. (4.44 / 0.95 / 0.95) / 2 e. 4.924 / 2 **Prod Hrs** = 2.46 Note: If the *'Exclude Efficiency Factor from Cost Calc'* setting is checked (Rates and Parameters->Default Values tab) the system will exclude the quote efficiency factor in the calculation. The system will use an efficiency factor of 100 rather than the Quotes efficiency factor. **Extrusion MFG Type Calculations:** For Extrusion manufacturing types the calculation for Prod Hrs differs slightly. EXT MFG Type: (Quote Qty * Part Length) / ((Ft. Lb * Lbs/Hr) x (1 - Scrap %) x Eff Factor %) EXT2 MFG Type: Quote Qty / Lbs/Hr / (1 - Scrap %) / Eff Factor % EXT3 MFG Type: Quote Qty * Part Weight / Lbs/Hr / (1 - Scrap %) / Eff Factor %
Oper Hrs	Total number of operator hours required for production. **Calculation**: a. Production Hours * [sum(non setup operators) + Setup Hours * sum(setup operators)] b. (2.46 * 1) + (2 * 1) **Oper Hrs** = 4.46
Prod Labor	Total Production Labor a. Production Hours * sum(non setup operators) * Labor Rate b. (2.46 * 1) * 15 **Prod Labor** = 36.90
Setup Labor	Total cost for setup labor. Setup Hours * sum(setup operators) * Labor Rate (2 * 1) * 20 = 40.00

Overhead	The total overhead costs. (Production Hrs + Start Hrs + Dry Hrs + Setup Hrs) * (Work Center Rate + Auxiliary Equipment Rate) (2.46 + .25 + 0 + 2) * (25 + 0) = 117.75 **MFG Type Overhead set to Labor**: If the Overhead calculation option for the Manufacturing Type is set to 'Labor' the calculation will use the Labor Rate setup on the Manufacturing Type screen to calculate the Prod Cost instead of the Total Center Rate. It also considers the number of non set up type operators. It will still use the Center Rate for Setup Hours. Example: Labor Based rate = 50; Non Setup operators = 1 (((2.46 + .25 + 0) *1) *50) + (2 * (25 + 0)) = 185.50
Dry Hrs	Total number of hours needed for drying this item. Note: Dry Time is included in the calculation for Total Production Hours (TPH). **Calculation**: a. Weekly Dry Hours * Production weeks b. 0 * 1 **Dry Hrs** = 0
Start Hrs	The number hours required to "dial in" a tool based on the Start/Cycles. This value will effect the amount of material required as well as the Total Production Hours. Each week of production will include the start up hours. For example, when the production hours exceeds 168 (24 * 7) the start up hours will be doubled. **Calculation**: a. (Start Cycles / (3600 / Cycle Time)) / (Eff Factor%) / (1-Scrap %) b. (50 / (3600 / 16)) / (0.95) / (1 - 0.05) c. (50 / 225) / (0.95 / (0.95) d. 0.2222 / 0.95 / 0.95 **Start Hours** = 0.25 Note: If the *'Exclude Efficiency Factor from Cost Calc'* setting is checked (Rates and Parameters->Default Values tab) the system will exclude the quote efficiency factor in the calculation. The system will use an efficiency factor of 100 rather than the Quotes efficiency factor.

Prod Cost	The total production cost for the Quote Quantity. Based on the Total Production Hours (TPH) for the job. This calculation used for Prod Cost depends on whether the quote has operators (labor) associated with it. **Calculation *with* Labor:** a. (TPH * Total Center Rate) + (Prod Hrs * Prod Labor Rate) + (((Setup Operator Quantity * Labor Rate) * Setup Hours) + (Total Center Rate * Setup Hours)) b. (2.71 * 25) + (2.46 * 15.00) + (((1 x 20) * 2) + (25 * 2)) c. (67.75) + (36.90) + (40 + 50) Prod Cost = 194.65 **With Labor the calculation for TPH** = Prod Hrs + Dry Hrs + Start Hrs 2.46+ 0.00 + 0.25 = 2.71 **Total Center Rate** = Work Center Rate + Auxiliary Equipment Rates. (25 + 0) = 25 **Calculation *without* Labor:** a. (TPH * Total Center Rate) b. (4.71 * 25) Prod Cost = 117.75 **Without Labor the calculation for TPH** = Prod Hrs + Dry Hrs + Start Hrs + Setup Hrs 2.46+ 0.00 + 0.25 + 2 = 4.71 **Notes:** ▪ **MFG Type Overhead set to Labor**: If the Overhead calculation option for the Manufacturing Type is set to 'Labor' the calculation will use the Labor Rate setup on the Manufacturing Type screen to calculate the Prod Cost instead of the Total Center Rate. ▪ When adding labor, in order to have **Setup hours** included in the quote users must have an employee level with a labor type of Setup associated to the quote also. This designates the setup labor cost. ▪ Quotes that existed before the addition of employee levels will calculate the old way: (TPH x Total Center Rate) + (Oper Hrs x Labor Rate), unless a change is made to employee levels. ▪ Labor Based Rate Fixed rate entered on the Labor/Overhead tab of the Manufacturing type is not currently used in an Engineering Quote calculation for Prod Cost. Variable rate can be used. ▪ If the '**Exclude Overhead from Setup Cost Calculation**' is checked (in System Parameters->Inventory Setup tab) the system will not add the work center rate times the setup hours to the calculation. In the example with labor the calculation would be:

	a. (TPH * Total Center Rate) + (Prod Hrs * Prod Labor Rate) + (((Setup Operator Quantity * Labor Rate) * Setup Hours) b. (2.71 * 25) + (2.46 * 15.00) + (((1 * 20) * 2) c. 67.75 + 36.90 + 40 **Prod Cost** = 144.65
Operation Cost	The cost of attached operations. Operation Details (Item Details tab)->Calc Cost. a. Operation calc cost * Qty Example: Cycle Time of operation = 20 seconds Rate = 10 Calc Cost = (20/3600) * 10 = .055556
Prod MarkUp	The amount the production is being marked up. **Percentage Calculation:** a. Prod Cost * (% Markup/100) b. (194.65) * (0.75) **Prod MarkUp** = 145.99
Total Prod Cost	The total production amount, including markup. **Calculation**: a. Prod Cost + Operation Cost + Prod MarkUp b. (194.65 + 0 + 145.99) **Tot Prod Cost** = 340.64
Tbl % MarkUp or Fixed MarkUp	The production markup percentage as specified in the Calculation Parameters section.

Lbs Req	The total pounds of raw material required to produce the Quote Quantity. Please see **Calculations for LBS/K Cycles** at the end of this field listing to see details on how to calculate this figure. The 'LBS/K-cycles' and 'Shot Wt(lbs)' are displayed on the Production Data Summary form (right click and select 'Display Production Data'). **Calculation**: a. ((LBS/K-cycles / units per cycle) / 1000) * Qty + ((Start/Cycles * Lbs. per shot) * unit per cycle) b. ((15.26 / 2) / 1000) * 1000) + ((50 * .015256) * 2) c. 7.63 + 0.7628 **Lbs Req** = 8.39 Note: Start Cycles are added to the Lbs Required calculation for every 168 hours (24 hours x 7 days) of Prod Hrs. Note: For Thermoform and TFORM2 MFG Types: The Lbs Req. is based on the Costing weight. The costing weight includes the By-product unless the 'Exclude By-product' options is checked on the Calculations tab.
Cost/Lb	Total cost per pound is taken from the price break information for the attached material. The price break used is based on the quantity of material required.
Plastic Cost	Total cost of plastic for the Quote Quantity. **Calculation**: a. Lbs. Req * Cost per Lb. b. 8.39 * 2.45 **Plastic Cost** = 20.56 Note: For Stamping and Diecast Mfg Types this field will be called Main Material Cost.

Comp. Cost	Total Cost of components needed for this quoted quantity. Pricing is based on default price breaks and number of units required. The units required takes into consideration the scrap percentage associated to the component if any. The example calculation above does not have a component attached. **Additional Example:** Quantity required per item = 1, Scrap value =10%, Component price break = 0.50 quote quantity of 1000 **Calculation:** a. (Quote Qty * 1 + Scrap Percentage) * component cost b. (1000 * 1.10) * 0.50 **Comp. Cost** = 550.00 If the Attached Components Scrap Calculation in Rates and Parameters is set to 'Based on (1/1-Scrap)', the calculation would be: a. (1000 * (1/1-0.10)) * 0.50 b. 1000 * 1.11111 * 0.50 **Comp. Cost** = 555.5556
Pkg Cost	Total Packaging cost for the quoted quantity. Pricing is based on default price breaks and number of units. The items required takes into consideration the scrap percentage associated to the packaging item if any. The system will round up to the nearest whole packaging item required and multiply times the cost to determine total Pkg Cost. For the calculation display example above parts per carton = 1000 and parts per divider = 100: 1 carton at 0.75 = 0.75 10 dividers at .50 = 5.00 **Pkg Cost** = 5.75 Additional Example: Parts per packaging item = 580, Scrap % = 10, quote qty = 10000, cost = 0.25 ((Quote Qty/parts per) * 1+ Scrap %) * pkg cost ((10000/580) * 1.1) * 0.25 = 19 * 0.25 = 4.75 Note the pkg req's are rounded up to a whole pkg item. In this example 18.97 is rounded up to 19.
Outsource Cost	This is the outsource cost calculated from the Quantity Price Breaks entered in the 'Part Information' section for outsource items. **Calculation:** Quote Qty * Associated price break's price.

Material Cost	Total cost of material for this quoted quantity. **Calculation**: a. Plastic Cost + Comp Cost + Pkg Cost b. 20.56 + 0 + 5.75 **Material Cost** = 26.31 Note: For Stamping and Diecast Mfg Types the calculation is: Main Material Cost + Comp Cost + Pkg Cost
Material MarkUp	The amount the materials are being marked up. **Calculation**: a. Material Cost * (% Markup / 100) b. 26.31 * (0.50) **Material MarkUp** = 13.15
Total Matrl Cost	The total material amount, including markup. **Calculation**: a. Material Cost + Material MarkUp b. 26.31 + 13.15 **Total Matrl Cost** = 39.46
Fix or Tbl % MarkUp	The material markup percentage as specified in the Calculation Parameters section.
Extra Charges	Additional charges not accounted for in the normal quote input screen such as extra shipping charges, mold maintenance, color changes, etc. See the section on Extra Charges for more information. **Extra charges** = 100.00
Commissions	Sales commissions will be added into the item price based on Total Price or Gross Margin and one of two calculations. (See the Commissions section for more details). **Calculation**: a. **Total Price**: Total Revenue / Qty * Commission%/100 b. 480.10 / 1000 * 0.05 c. 0.02400
Total Revenue	Total Revenue for the Quote Quantity including the Optm % MarkUp (top row). **Calculation**: a. (Total Prod Cost + Total Matrl Cost + Extra Charges) * (1 + (Optm % MarkUp / 100)) b. (340.64 + 39.46 + 100.00) * (1 + (0/ 100)) c. 480.10 * 1 **Total Revenue** = 480.10

Total Cost	The Total Cost to produce the Quote Quantity (break-even). **Calculation**: a. Prod Cost + Material Cost + Extra Charges b. 194.65 + 26.31 + 100 **Total Cost** = 320.96
Total Profit	Total Profit that will be made on the Quote Quantity. **Calculation**: a. Total Revenue - Total Cost b. 480.10 - 320.96 **Total Profit** = 159.14
VAP%	Value Added percentage. **Calculation:** a. Total Profit / (((Unit Price - Commissions) * Qty) - Material Cost) b. 159.14 / (((0.5041 - 0.0240) * 1000 pcs.) - 26.31) c. 159.14 / 453.79 **VAP% =** 35.07%
VGM%	Variable Gross Margin percent. **Calculation**: a. (((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Revenue - Commissions) * 100 b. ((480.10 - 0.0240) - 194.65 - 0 - 26.31) + (10 * 2.46) / (480.10 - 0.0240) c. 259.11 + 24.60 / 480.07 **VGM%** = 59.10% Note: The VGM% field is not calculated for ASSY1, ASSY2, ASSY3, and OUTSOURCE MFG Types.
VGM Amount	Variable Gross Margin amount. **Calculation**: a. (((((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Revenue - Commissions) * 100) / 100) * Unit Price * Qty. b. ((480.10 - 0.0240) - 194.65 - 0 - 26.31) + (10 * 2.46) / (480.10 - 0.0240) * 0.504103 * 1000 c. (259.116 + 24.60 / 480.07) * 0.504103 * 1000 **VGM Amount** = 297.9177 Note: The VGM Amount field is not calculated for ASSY1, ASSY2, ASSY3, and OUTSOURCE MFG Types.

VGM/Hr	Default calculation for Variable Gross Margin per Hour **Calculation:** a. (((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Revenue - Commissions) * (Unit Price * Qty) / Prod Hrs b. ((480.10 - 0.0240) - 194.65 - 0 - 26.31) + (10 * 2.46) / (480.10 - 0.0240) * (0.504103 * 1000) / 2.46 c. (((259.116 + 24.60) / 480.07) * 504.103) / 2.46 **VGM/Hr** = 121.10 If the Calculation Parameters 'Include Machine Startup in VGM/Hr & Net Value/Hr' and 'Include Machine Setup in VGM/Hr & Net Value/Hr' are checked the calculations will include those values. (((Total Revenue - Commissions) - Prod Cost - Operation Cost - Material Cost) + (Fixed Machine Rate * Prod Hrs)) / (Total Amount - Commissions) / Prod Hrs + (Machine Setup Hours + Machine Startup Hours) b. ((480.10 - 0.0240) - 194.65 - 0 - 26.31) + (10 * 2.46) / (480.10 - 0.0240) * (0.504103 * 1000) / (2.46 + 2 + 0.25) c. (((259.116 + 24.60) / 480.07) * 504.103) / 4.71 **VGM/Hr** = 63.252 Note: The VGM/Hr field is not calculated for ASSY1, ASSY2, ASSY3, and OUTSOURCE MFG Types.
By-product Qty	For Thermoform and TFORM2 MFG Types only: By-product quantity * Quote Qty
Skeleton Cost	For Thermoform and TFORM2 MFG Types only: Skeleton Weight * Cost/Lb

Calculations for LBS/K

The following chart explains the calculations used by **EnterpriseIQ** in figuring the pounds of material required per thousand cycles (LBS/K).

Runner & Sprue	= 2 gr.
Scrap %	= 5%
Yield	= (100 - Scrap) / 100
Cav. Weight	= 3 gr. NOTE, if you have a quote with more than one item attached, each item will need to be summed up separately (individually).

Regrind %	= 20% (See below for the formula that includes zero regrind %)
AB	= AA x (Regrind % / 100)
Units per Cycle	= 4
Cavities	= 4
AA	= (Cav x Part Weight + (Runner/Sprue)) / Yield

If Regrind = 0% then the following formula would apply:

((Cav x Part Weight) + Runner & Sprue) / Yield x 1000 / 453.6

Regrind generated per 1000 item run

(AA - (Cav. x Cav. Weight)) x 1000 / 453.59

If Regrind is >0% then one of the following formulas would apply depending on the comparison of shot weight less the shot weight times the regrind % to the cavity times part weight:

If (AA - AB) < (Cav x Part Weight) then BB = (Cav x Part Weight) + (Sprue x defined percent of runner and sprue*)

or
If (AA - AB) > (Cav x Part Weight) then BB = AA - AB

* The Defined percentage of runner and sprue can be set up for Injection and Diecast MFG Types, and for Custom MFG Types that default to Injection and Diecast, from Mfg Types->File menu->Alter LBS/K Calculation. (See Alter LBS/K Calculation in the Manufacturing Types section). The default is 10%.

The first calculation checks to see if the Shot Weight less the Shot Weight times the Regrind Percentage is LESS than the Cavity weight total. If so, then the new Shot Weight (BB) will be equal to the total cavity weight plus the runner/sprue weight times defined percent of runner and sprue*. If not, then the second formula is invoked.

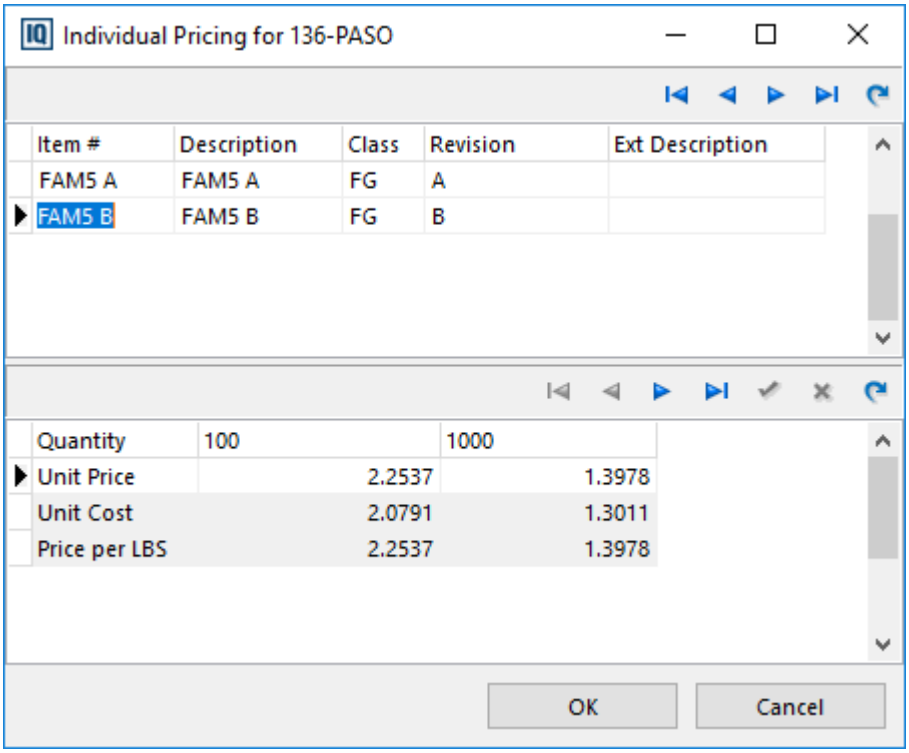
BB X 1000 / 453.6 / Units

Regrind generated per 1000 item run

(BB - (Cav x Part Weight)) x 1000 / 453.59

Individual Pricing

For a quote with more than one item number, this allows viewing and optimizing of the price and viewing of cost information for each item produced in the process, as shown below:



To access this option select the Individual button  near the top of the calculations tab.

The individual prices and costs will display. The user can **Optimize** the price for an individual item by typing over the calculated price. The new pricing will be summed up to the total unit price. The optimized individual pricing will be carried over to inventory when the RFQ is converted to a BOM.

Select the item number from the upper display grid to display the price and cost information on a per item basis.

The calculation used depends on the Quotation Parameter 'Overhead Calculation (Family Configurations)' (Quotation Parameters->General tab).

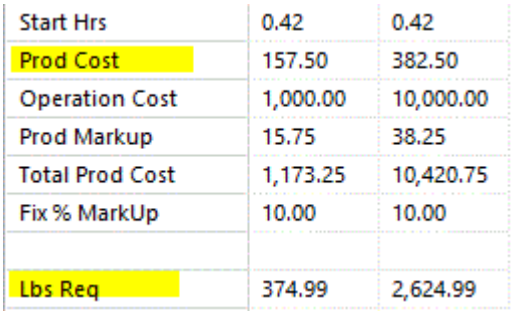
The Quotation Parameter 'Overhead Calculation (Family Configurations)' is set to: **'Based on total number of cavities'**

Unit Cost	The cost to make the product per individual item. Example scenario: ▪ Family tool with two items ▪ Item A has 2 std cavities ▪ Item B has 3 std cavities ▪ Units/Cycle = 2 **Calculation when 'Based on total number of cavities' is checked**: **Unit Cost** = (((Prod Cost + Raw Material Cost + Extra Charges + Operation Cost) - Prod Cost) / (Std Cav/Units per Cycle) + Prod Cost / Quote Quantity Example Item B for Quote Qty of 100: a. ((((63 + 167.365 + 50 + 0) - 63) / (3/2)) + 63) / 100 b. (((280.365 - 63) / 1.5) + 63) / 100 c. ((217.365 / 1.5) + 63) / 100 d. 207.91 / 100 e. 2.0791 **Raw Material Cost per item** = ((Total Lbs Req * (Std Cav for item/Total Cavities)) * Cost/LB) + Components and Packaging assigned to item Raw Material Calculation for Item B: a. ((374.99 * (3/5)) * 0.6672) + 17 + 0.25 b. ((374.99 * 0.60) * 0.6672) + 17 + 0.25 c. 224.994 + 17 + 0.25 d. 150.115 + 17 + 0.25 e. 167.365 **Prod Cost per item** = Total Prod Cost * (Units per Cycle/Total Cavities) Prod Cost Calculation for Item B: a. 157.50 * (2/5) b. 157.50 * 0.4 c. 63 **Note**: Total Lbs Req = Lbs Req from Calculations tab per quote quantity Total Prod Cost = Prod Cost from Calculations tab per quote quantity

Start Hrs	0.42	0.42
Prod Cost	157.50	382.50
Operation Cost	1,000.00	10,000.00
Prod Markup	15.75	38.25
Total Prod Cost	1,173.25	10,420.75
Fix % MarkUp	10.00	10.00
Lbs Req	374.99	2,624.99

Unit Price	Suggested sales price per individual item. This value includes markup for production and materials if applicable. In this example the markup percent for both production and materials is 10% **Calculation when 'Based on total number of cavities' is checked**: **Unit Price** = (((Prod Cost + Raw Material Cost + Extra Charges + Operation Cost) - Prod Cost) / (Std Cav/Units per Cycle) + Prod Cost / Quote Quantity Example Item B for Quote Qty of 100: a. ((((69.3 + 184.1015 + 50 + 0) - 69.3) / (3/2)) + 69.3) / 100 b. (((303.4015 - 69.3) / 1.5) + 69.3) / 100 c. ((234.1015 / 1.5) + 69.3) / 100 d. 225.3676 / 100 e. 2.2537 **Raw Material Cost per item** = ((Total Lbs Req * (Std Cav for item/Total Cavities)) * Cost/LB) + Components and Packaging assigned to item + material mark up Raw Material Calculation for Item B: a. ((374.99 * (3/5)) * 0.6672) + 17 + 0.25) * 1.1 b. ((374.99 * 0.60) * 0.6672) + 17 + 0.25 * 1.1 c. 224.994 + 17 + 0.25 * 1.1 d. 150.115 + 17 + 0.25 * 1.1 e. 167.365 * 1.1 f. 184.1015 **Prod Cost per item** = Total Prod Cost * (Units per Cycle/Total Cavities) * 1+ production mark up Prod Cost Calculation for Item B: a. (157.50 * (2/5)) * 1.1 b. (157.50 * 0.4) * 1.1 c. 63 * 1.1 d. 69.3
Price/LBS	The Price/Lbs field is calculated by taking the Unit Price and dividing by the weight of the individual part in pounds (no runner and sprue). a. 2.2537 / 1 b. 2.2537

The Quotation Parameter 'Overhead Calculation (Family Configurations)' is set to: **'Based on unique item numbers'**

Unit Cost	The cost to make the product per individual item. Example scenario: ▪ Family tool with two items ▪ Item A has 2 std cavities ▪ Item B has 3 std cavities ▪ Units/Cycle = 2 **Calculation when 'Based on unique item numbers' is checked**: **Unit Cost** = (((Prod Cost + Raw Material Cost + Extra Charges + Operation Cost) / (Std Cav/Units per Cycle) / Quote Quantity Example Item B for Quote Qty of 100: a. ((78.75 + 167.365 + 50 + 0) / (3/2) / 100 b. ((296.115 / 1.5) / 100 c. 197.41 / 100 d. 1.9741 **Raw Material Cost per item** = ((Total Lbs Req * (Std Cav for item/Total Cavities)) * Cost/LB) + Components and Packaging assigned to item Raw Material Calculation for Item B: a. ((374.99 * (3/5)) * 0.6672) + 17 + 0.25 b. ((374.99 * 0.60) * 0.6672) + 17 + 0.25 c. 224.994 + 17 + 0.25 d. 150.115 + 17 + 0.25 e. 167.365 **Prod Cost per item** = Total Prod Cost /(# of unique items made/Std Cav) * Std Cav Prod Cost Calculation for Item B: a. (157.50 / 2) / 3 * 3 b. 78.75 / 3 * 3 c. 78.75 **Note**: Total Lbs Req = Lbs Req from Calculations tab per quote quantity Total Prod Cost = Prod Cost from Calculations tab per quote quantity 

Start Hrs	0.42	0.42
Prod Cost	157.50	382.50
Operation Cost	1,000.00	10,000.00
Prod Markup	15.75	38.25
Total Prod Cost	1,173.25	10,420.75
Fix % MarkUp	10.00	10.00
Lbs Req	374.99	2,624.99

Unit Price	Suggested sales price per individual item. This value includes markup for production and materials if applicable. In this example the markup percent for both production and materials is 10% **Calculation when 'Based on unique item numbers' is checked**: **Unit Price** = (((Prod Cost + Raw Material Cost + Extra Charges + Operation Cost) / (Std Cav/Units per Cycle) / Quote Quantity Example Item B for Quote Qty of 100: a. ((86.625 + 184.1015 + 50 + 0) / (3/2)) / 100 b. (320.7265 / 1.5) / 100 c. 213.818 / 100 d. 2.1382 **Raw Material Cost per item** = ((Total Lbs Req * (Std Cav for item/Total Cavities)) * Cost/LB) + Components and Packaging assigned to item + material mark up Raw Material Calculation for Item B: a. ((374.99 * (3/5)) * 0.6672) + 17 + 0.25) * 1.1 b. ((374.99 * 0.60) * 0.6672) + 17 + 0.25 * 1.1 c. 224.994 + 17 + 0.25 * 1.1 d. 150.115 + 17 + 0.25 * 1.1 e. 167.365 * 1.1 f. 184.1015 **Prod Cost per item** = Total Prod Cost /(# of unique items made/Std Cav) * Std Cav * 1 + production mark up Prod Cost Calculation for Item B: a. ((157.50 / 2) / 3 * 3) * 1.1 b. ((78.75 / 3) * 3) * 1.1 c. 78.75 * 1.1 d. 86.625
Price/LBS	The Price/Lbs field is calculated by taking the Unit Price and dividing by the weight of the individual part in pounds (no runner and sprue). a. 2.1382 / 1 b. 2.1382

Note: Quote Costs will match Standard Costs when the 'Use Master Inventory Std Cost for Component Pricing instead of Price Breaks' Quote Parameter is checked, the 'Attached Components Scrap Calculation' Quote Parameter is set to 'Based on (1/1-Scrap)', and the 'Use Std Cost in Engineering Quote' Inventory parameter (Inventory->Additional tab) must be checked for inventory items associated to the quote.

Printing the Quote Letter

You can create a new document using Word and save it as a template with a .dot extension. A bookmark is needed in the Word template if you want the *.rpt file (Crystal report) to be inserted in a particular place in the letter. The bookmark is created in the Word template (using the Insert/Bookmark function). It does not matter what it is named, the system knows to put the data output of the .rpt file into the location of the bookmark. If the user chooses to omit the bookmark, then the *.rpt file will be inserted at the top of the quote letter.

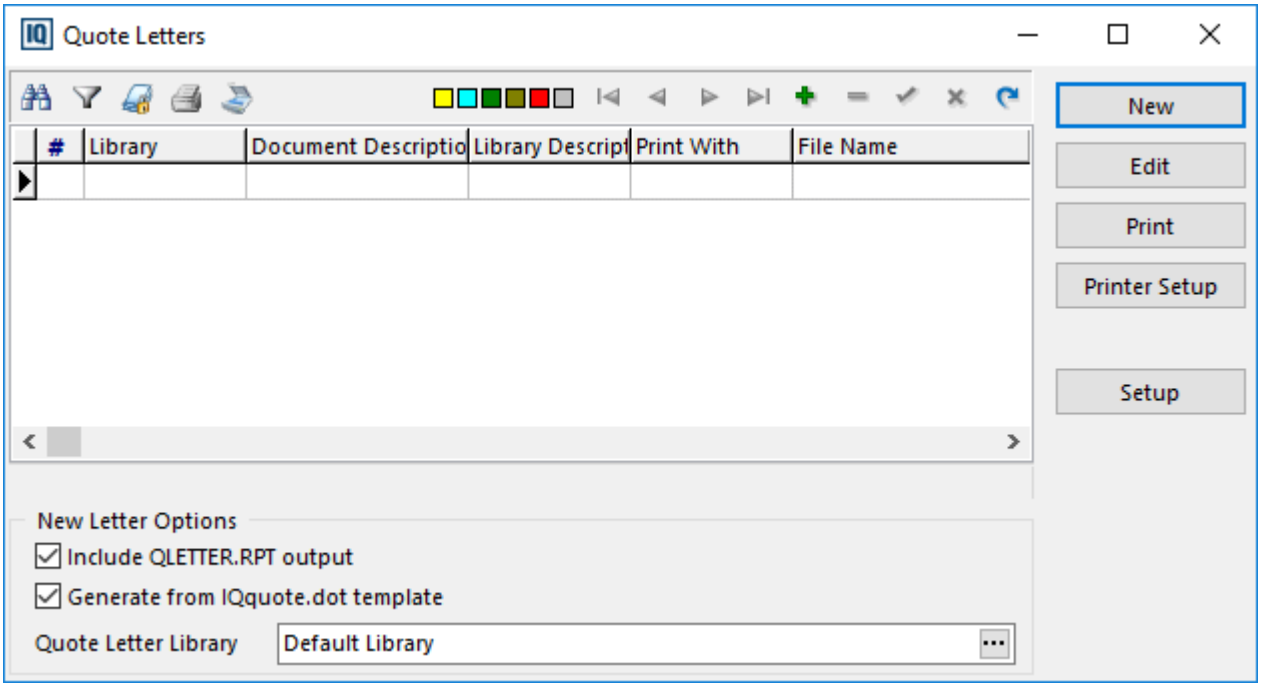
You can create your own Word templates and use the SETUP button (within the Quote Letter screen) to let the program know what template to use for letter generation.

Note: In order to use this feature, Microsoft Word must be installed on the workstation. If it is not installed this option will not be available.

Creating/Printing a Quote Letter

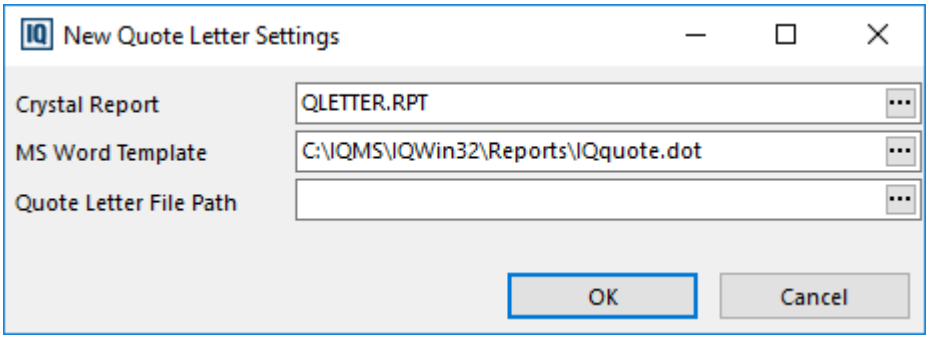
To print a Quote Letter, complete the following steps:

- Creating the Quote Letter can be accessed from the main menu bar (within Quoting) under Reports, or from the Calculations screen by selecting the **Print Letter** button at the top of the screen. In either case, the following screen will appear:



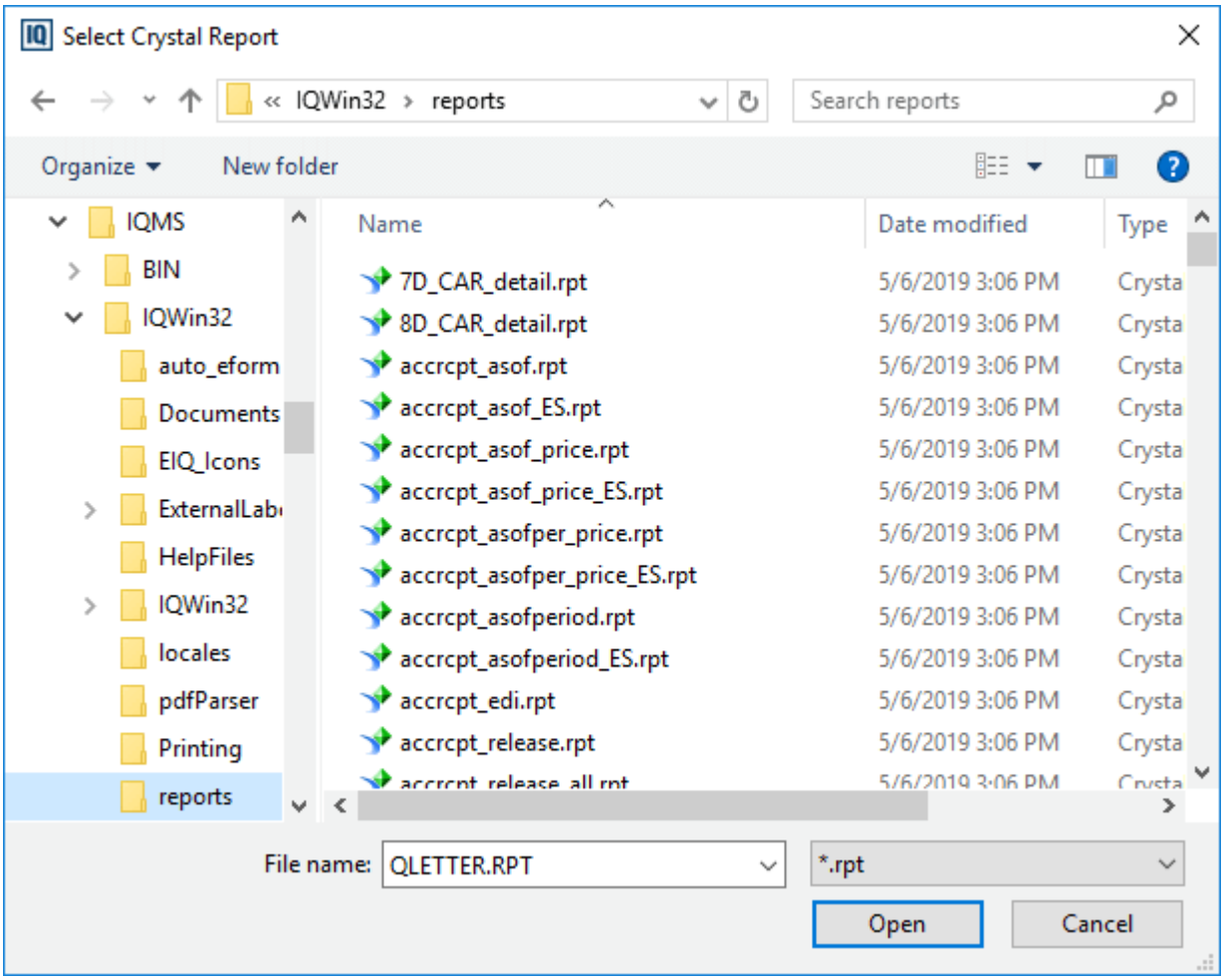
- Make sure that both options shown under 'New Letter Options' are checked. If a template does not exist, a prompt will appear at the bottom of the screen next to the 'Generate from...' field.

- Click on 'Setup' to select the correct paths for the Crystal Report and MS Word template. The following screen will appear:



The Crystal Report that populates is based on a hierarchy. The system will first check if the Customer assigned to the quote has a specific Engineering Quote Letter report assigned (Customer Maintenance->Forms/Reports tab). If not, it will use the default Quote Letter report assigned in System Parameters->Reports and Forms tab.

Select the ellipsis button in each field and select the location where the report and template reside. If you are selecting a Crystal Report, the following screen will appear:



- Select the correct report and click on 'Open'. You will be returned to the New Quote Letter settings screen.

- Click on [**OK**] when both paths are correct.

- **Quote Letter File Path** - This allows the user to set a default location to save quote letters when the Default Library is used. A UNC path is recommended. When a quote is printed the user will still have the option to edit this file path temporarily for individual quote letters. If this field is not filled in, the system defaults to save the quote letter in the IQWin32 local home or the previous path user selected.

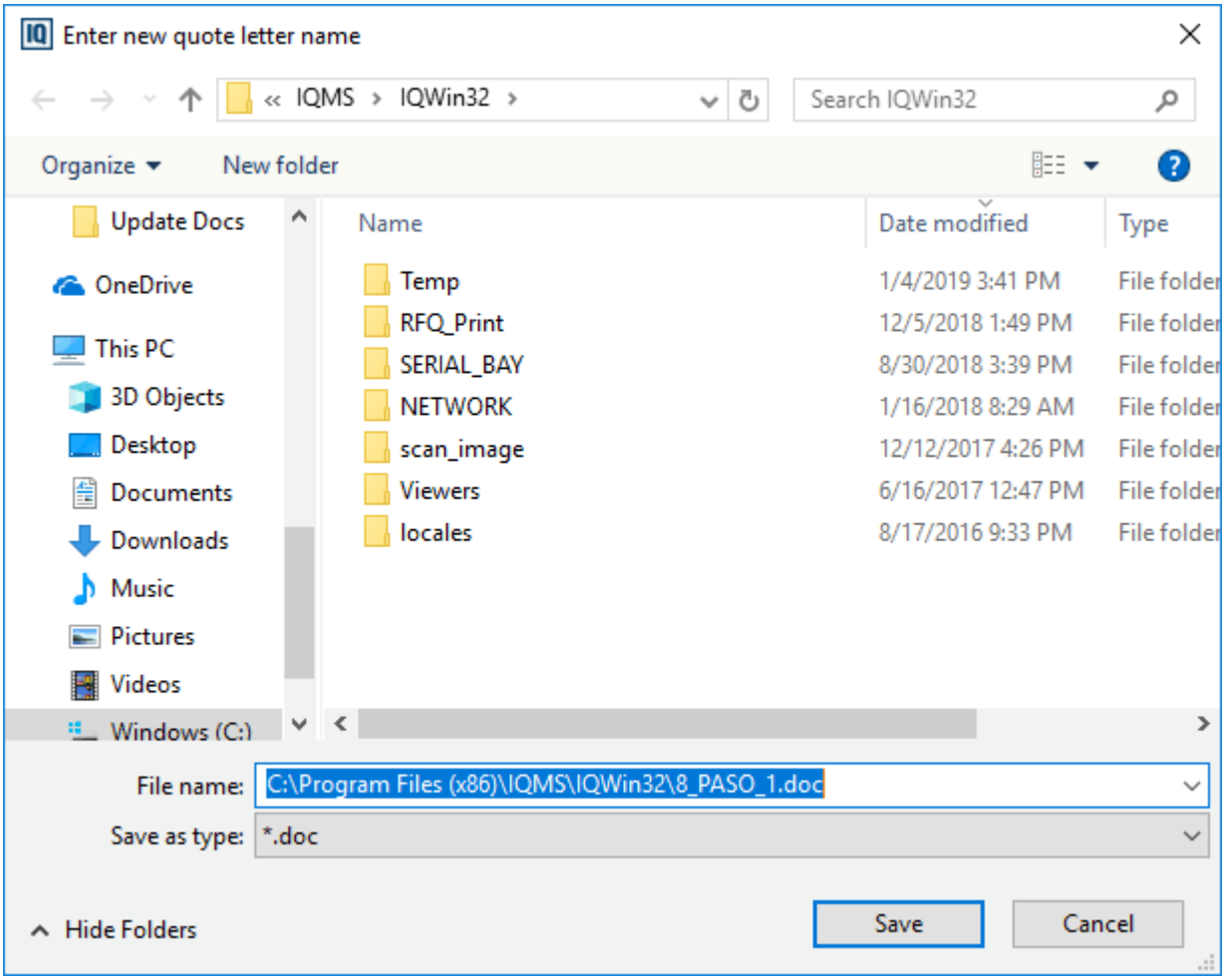
Quote Letter Library - By default the quote letters are added to the Default Library. A different library can be selected by clicking the ellipsis button in this field to access the list of document libraries. This list is soft filtered to display libraries from the EPlant the user is logged into as well as those not associated to an EPlant. The library selected is remembered in the registry for the Windows user. When the quote letter is created the UNC path associated to the library will display when entering the quote letter name. This location should not be changed. If it is the document will be highlighted red indicating the file does not exist in the library path.

Note: Currently the quote letter is added to the library without the Owner field populated. If the selected library is a Secure or Approval type library an owner will need to be added to the document before it can be checked out.

Creating a New Quote Letter

To CREATE a new quote letter:

- From the Quote Letter screen, click on 'New' to create the letter using Microsoft® Word. The following screen will appear:


Enter new quote letter name
« IQMS › IQWin32 ›
Search IQWin32
Organize
New folder
Update Docs
OneDrive
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Windows (C:)
Name
Date modified
Type
Temp 1/4/2019 3:41 PM File folder
RFQ_Print 12/5/2018 1:49 PM File folder
SERIAL_BAY 8/30/2018 3:39 PM File folder
NETWORK 1/16/2018 8:29 AM File folder
scan_image 12/12/2017 4:26 PM File folder
Viewers 6/16/2017 12:47 PM File folder
locales 8/17/2016 9:33 PM File folder
File name: C:\Program Files (x86)\IQMS\IQWin32\8_PASO_1.doc
Save as type: *.doc
Hide Folders
Save
Cancel

- The file name defaults to the RFQ# _# (the number of the letter, 1 for the first time a letter is created). You may override the default name and enter a new name for the quote letter (in the File Name field) followed by the extension. Select the location where the letter should be saved. Make sure to save the quote letter to a location on the network that other users would have access to. Press [**Save**] to continue. The system will create an entry in the Quote Entry screen and also bring up the Quote Template in Word in the background. Using Word, you can make any adjustments necessary prior to printing the letter.

Modifying an Existing Quote Letter

To MODIFY an existing Quote Letter:

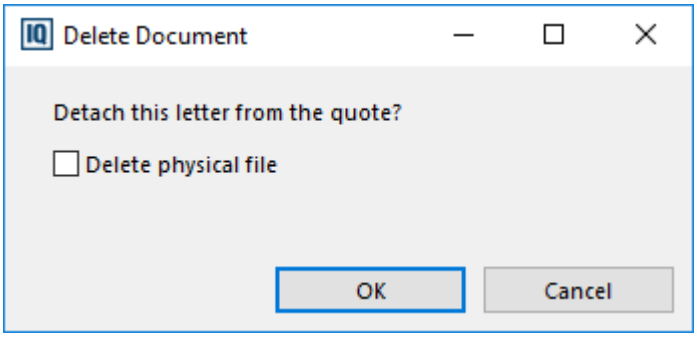
- From the Quote Letter screen, select the letter to modify and click on 'Edit'. The document will appear for Editing.

- Make sure to save the document after Editing.

Deleting a Quote Letter

To Delete a quote letter:

- From within the Quote Letter screen, select the letter to delete and click on the 'Delete' [-] key. The following prompt will appear:



- Click on the box next to 'Delete physical file' and click on [**OK**]. This deletes the letter from the selection list.

- To exit from the Quote Letter screen, click on the **[X]** located in the upper right corner of this screen.

Printing the Quote Letter

To Print a quote letter:

- From the Quote Letter screen, click on the 'Print' button. This will output the letter directly to the printer without reviewing.

- To review the letter before printing, click on 'Edit' from the Quote Letter screen. This will bring up the letter in Microsoft® Word where changes can be made.

- Select the print option from the main menu bar within the Word screen, or select File_>Print. This will output the letter to the printer.

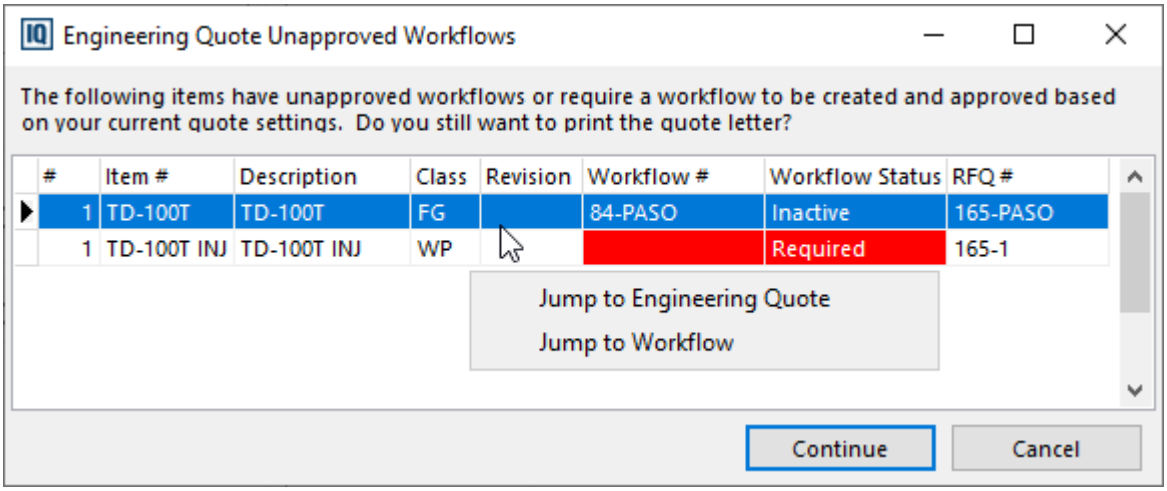
Printing When Workflow is Enabled for Quotes

Printing the quote letter for an engineering quote with an associated workflow that is not approved is not allowed without security to select 'Continue'.

A Quote letter cannot be printed under following conditions:

- If workflow mandatory is checked and workflow has not been approved.
- If workflow mandatory is checked and active workflow.
- If workflow mandatory is unchecked and active workflow.

If the quote letter cannot be printed a form will appear showing the items with unapproved workflows, or ones that require a workflow be created. This form will state the status of the workflow which will be 'Inactive', 'Pending', or 'Required'. If it is 'Required' the Workflow # and the Workflow Status columns will display in red. Users can right click and jump to the Engineering Quote or the Workflow associated to the highlighted record. Security is available on this form for the Jump To options and the Continue button. If security is not enabled on the Continue button users will not be able to perform the action. This button can also be made not visible so users will only see the Cancel button. The quote letter will print if Continue is selected.



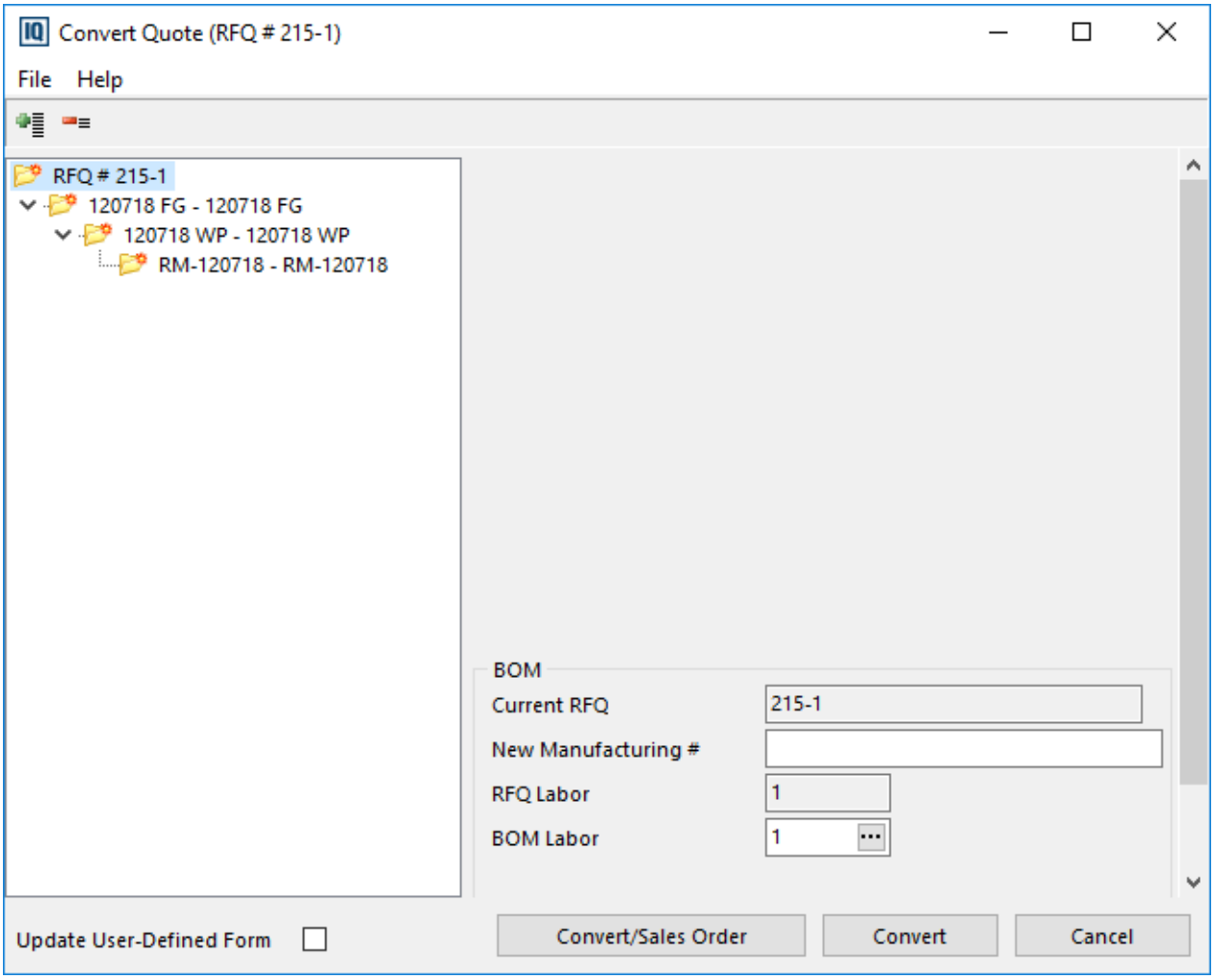
Quote letter can be printed under following conditions:

- If workflow mandatory is unchecked and no active workflow
- If workflow mandatory is checked and workflow is approved

Converting a Quote to a BOM

To convert a quote to a BOM, follow the steps below.

- Select the quote to convert from the quote pick list.
- Click on the Calculation tab and then click on the 'Convert' button at the top of the screen, or select File->Convert to BOM from the main menu. The following screen will appear.



- To review the information on all items and attached packaging/components, click on the **Full Expand** button. This allows the user to identify all items that are not currently in Master Inventory prior to converting the quote and to make any changes to the item number or description of new items prior to conversion.

Note: Items that exist only in the quote inventory and not master inventory will be displayed with an orange star on the folder.

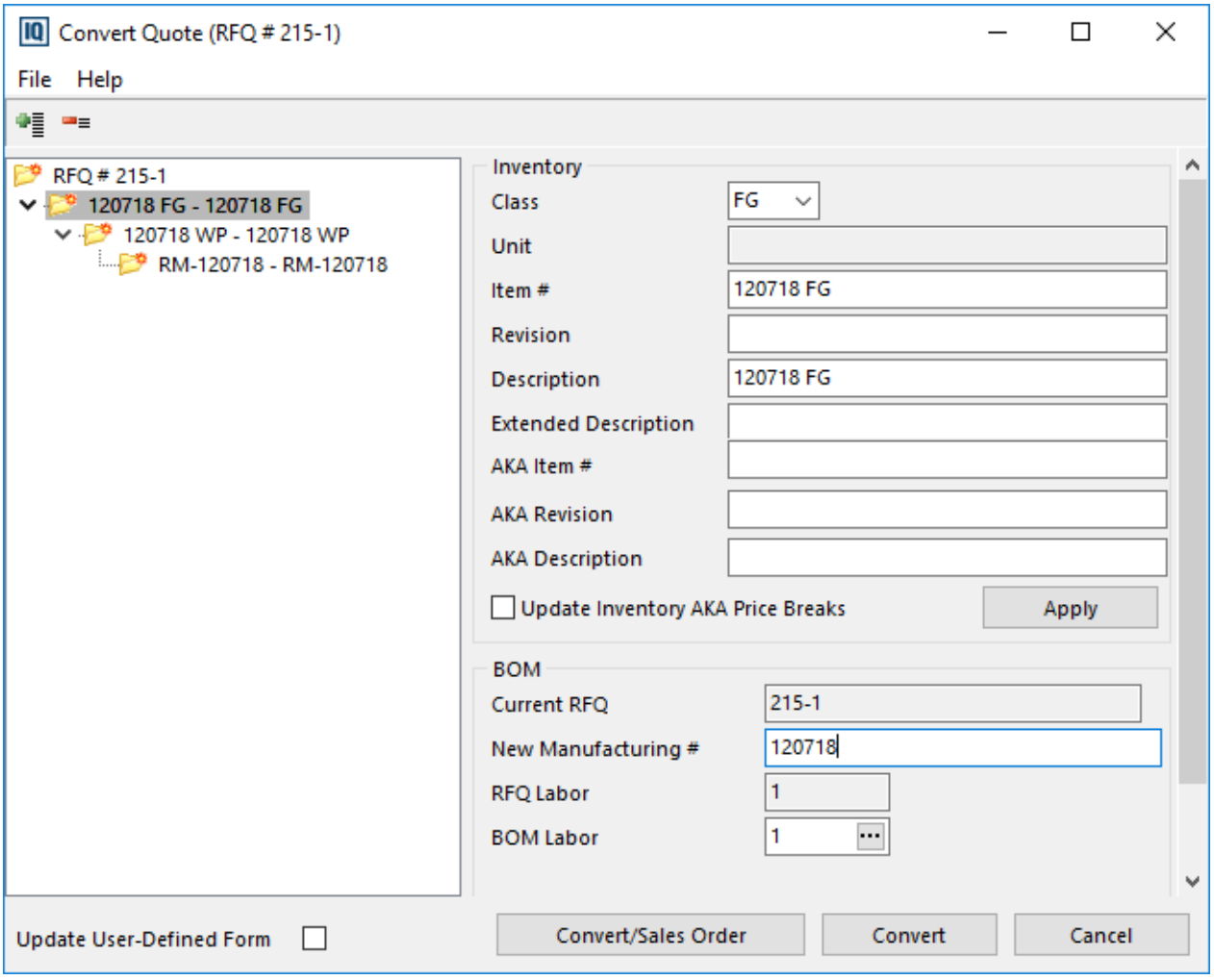
- Enter the new Manufacturing Number

- Enter the BOM Labor information (note this will not apply to quotes for the Outsource MFG Type). Click on the ellipsis button to bring up the BOM Labor form. Enter in the number of operators and a code (employee level) for each labor type required. Users can access the Employee Level list to add or edit the records by clicking the icon in the top left corner of the form  . (Security is available on this button).

- **Scrap %** - If the 'Use Scrap % by Quantity Breaks' parameter is checked in the Miscellaneous menu->Rate and Parameters, a Scrap % field will display on the Convert Quote form to enter the scrap % to apply to the BOM.

- Click on each item attached, make any changes as necessary and click on the 'Apply' button after each change. A red check mark will appear in each folder that is reviewed. **Note**: A description must be entered for each item or the quote cannot be converted to a BOM, because the description field is mandatory in BOMs.

- For manufactured items there is an option to also enter the AKA Item information (number, revision, and description) and have the pricing populate AKA Selling in inventory. The AKA pricing will populate in inventory if an AKA Item # is entered and the 'Update Inventory AKA Price Breaks' option is checked. When the quote is converted to a BOM the pricing will populate both the Selling section of the Buy/Sell pricing tab as well as the AKA Selling tab. The customer listed will be the one associated to the quote.


Convert Quote (RFQ # 215-1)
File
Help
RFQ # 215-1
120718 FG - 120718 FG
120718 WP - 120718 WP
RM-120718 - RM-120718
Inventory
Class
FG
Unit
Item #
120718 FG
Revision
Description
120718 FG
Extended Description
AKA Item #
AKA Revision
AKA Description
Update Inventory AKA Price Breaks
Apply
BOM
Current RFQ
215-1
New Manufacturing #
120718
RFQ Labor
1
BOM Labor
1
Update User-Defined Form
Convert/Sales Order
Convert
Cancel

- **Update User-Defined Form** - Select this option to have the fields from the user-defined form in the quote module copy over to matching BOM user-defined fields. Note: The structure of the fields in the BOM user-defined form must match the structure of the fields in the Quote user-defined form in order for the information to be copied over. This is Mfg Type specific. For example, the user-defined form for Generic Mfg Type quotes must be identical (Field Type, Field Kind, Label, etc.) to the user-defined form for Generic Mfg Type BOMs.

- Click on 'Convert' to proceed with the conversion process. The system will create the new configuration and automatically add any new item(s) to the Master Inventory along with the quantity and price break information. The packaging items' sequence numbers in the BOM will be based on the order they are attached to the quote.

Converting to an Existing BOM - When converting to a BOM or converting to BOM/Sales Order, all levels of the quote can also be converted to existing BOMs. Instead of creating a new BOM number type in an existing BOM number. When selecting the Convert or Convert//Sales Order buttons a confirm message will appear stating, "The manufacturing number 'xyz' already exists. This configuration will be replaced. Do you want to continue?". This message will appear for all levels of a multi-level quote when the same configuration number is entered. The pop up message includes a Yes and No button as well as the 'Do not show next time check box. Security can be placed on this form. If the user has security to select Yes, the configurations will be replaced. All of the settings that are not available in the Quote will be preserved as it was on the BOM before the conversion. For example, the Dispo by Cycles check box on attached components will stay as it was on the original BOM before the conversion from the quote. If No is selected the user will be taken back to the Convert Quote screen and no level of the quote will be converted to a BOM. **Note**: If there is more than one BOM with the same exact MFG #, but just a different routing sequence, the system will only update the first MFG # it finds.

Notes:

More than one manufacturing number may be required if the quote has manufactured sub-components attached that exist only as quoted items.

When converting a quote to a BOM or BOMs (for multi-level quotes), any attached components (including manufactured components) that are created during the convert will have the prices breaks written to the "Buy" pricing in inventory. However, if the item is associated to a Vendor RFQ the AKA Buying tab will be automatically populated with the vendor(s) and price break(s) from its Vendor RFQ.

When converting a WIP item to a BOM, the center type populates based on the quote, if this is changed on the BOM and that WIP item is attached to a new quote as a consumed item, if the 'New Mfg #' field is not changed when converting the new quote to a BOM, the WIP item's BOM's center type field will revert back to what it was in the quote module (the BOM control # is updated). If the 'New Mfg #' field is modified for the WIP item, then the original WIP BOM retains the updated work center type and the new WIP BOM has the quote work center type. Essentially the dependent manufactured items are re-converted based on the quote.

If the MFG Type has a default 'Shift Backflush Rule' (MFG Types->General tab) the default Shift Backflush Rule will be used when converting a quote to BOM for the designated MFG Type.

When converting a quote to a BOM, the system allows users to convert an archived Quote if it has never been converted before, or if the user enters a new MFG number every time they convert (new Manufacturing# is not found in the STANDARD table).

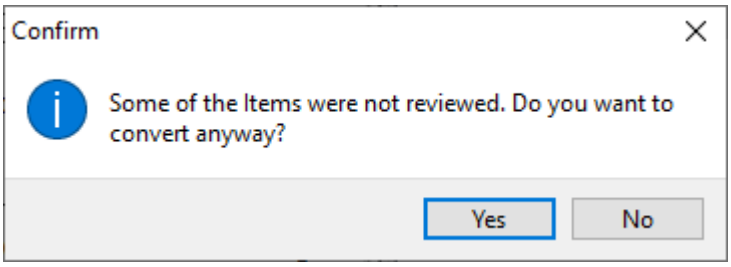
When converting a quote to a BOM the system will truncate the Quote description to 50 characters as that is the maximum allowed on the BOM Description field.

The Internal and External Documents attached to the quote will carry over to the BOM with the 'Print With' set to None.

If there are two quote inventory items with the same item name and are consumed as components in the same BOM, an error will display stating, "Engineering quote has the same Quote Inventory record added multiple times. Quote Item # xxx Quote ID = xxx and Quote Item xxx Quote ID = yyy. Please correct by removing one or more of the same quote inventory items before converting to a BOM."

If the ‘System-Generated Inventory#’ option is enabled in System Parameters->Sequential Numbering tab the system will populate the Item # with the next sequential number. The value can be overwritten if desired. There will also be an additional field on the 'Convert Quote' form displaying the 'Quote Item' # for reference. This field is grayed out and cannot be edited.

The following message may appear if some of the items were not reviewed:



When the quote has been converted the user will receive a prompt that the conversion was completed successfully.

- Click on 'OK' to return to the main screen.

Customer Status

When a customer is assigned to a quote that has a status other than Active, when converting the quote to a BOM, the customer's status will not change to Active if the customer's current status is Cr Hold, Ship Hold, or Mfg Hold. The system will change the status to ‘Active’ if the customer's current status is Inactive, Quote, or Obsolete.

Convert to BOM and Create a Sales Order

To convert a quote to a BOM and create a Sales Order at the same time, follow the steps above until all items have been reviewed and you are ready to convert to the BOM. Instead of clicking on the 'Convert' button, click on the 'Convert/Order' button to proceed with the conversion process and create the BOM and the Sales Order. If a customer is not associated to the quote the user will receive a warning and will not be able to continue creating the sales order, however the quote will still be converted to a BOM.

When the quote has been converted the user will receive a prompt that the conversion was completed successfully and the Sales Order form for the quoted item will be shown on the screen. If a Sales Order Note is associated with the customer (Customer Maintenance->Misc tab) it will appear on the screen with the sales order.

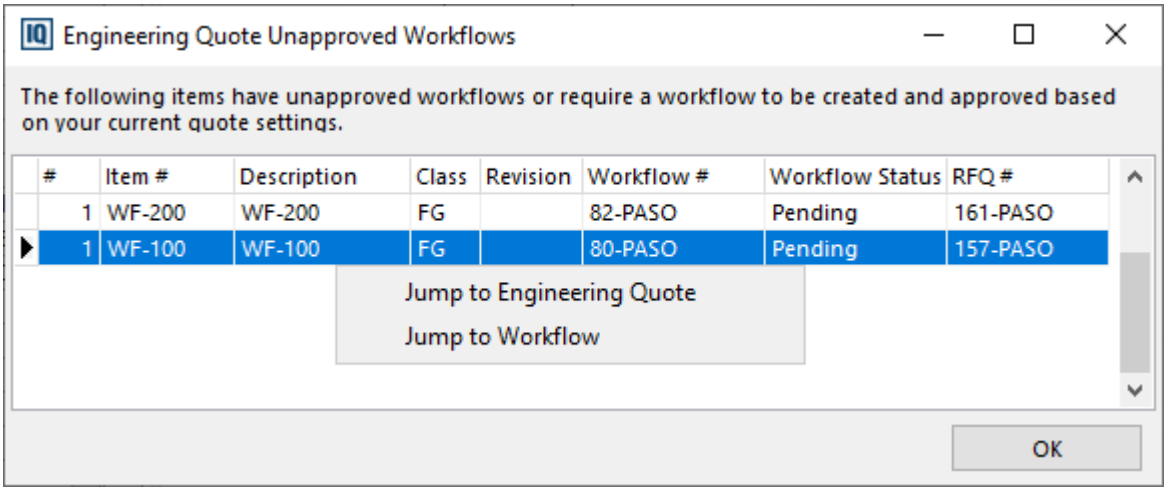
Engineering Quote Workflow Limitations

When using the workflow functionality for Engineering Quotes the system will prevent users converting to a BOM when a workflow is not approved for an item or its component quotes (this includes quotes for attached main materials). The system will restrict actions if the same level or lower level quote workflow is not approved.

A Quote Item cannot be converted to BOM or BOM/Sales Order under following conditions:

- If workflow mandatory is checked and workflow has not been approved.
- If workflow mandatory is checked and active workflow.
- If workflow mandatory is unchecked and active workflow.

If the quote cannot be converted to a BOM, or BOM/Sales Order a form will appear showing the items with unapproved workflows, or ones that require a workflow be created. Users can right click and jump to the Engineering Quote or the Workflow associated to the highlighted record.



Quote Item can be converted to BOM or BOM/Sales Order under following conditions:

- If workflow mandatory is unchecked and no active workflow
- If workflow mandatory is checked and workflow is approved

Converting a BOM to a Quote from the Engineering Quote Module

A single level BOM or multiple level BOMs can be converted to a Quote. This process will always make a new quote even if a quote exists for the exact BOM.

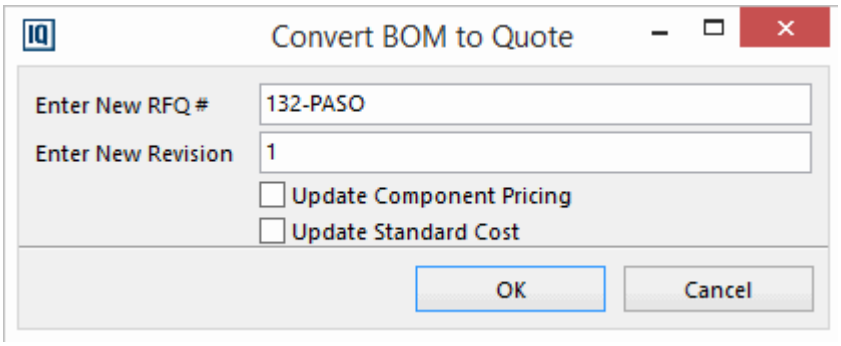
From the File menu in Quoting select New->Convert from BOM. There are two options: 'Convert to Quote (Single Level' and 'Convert to Quote (Multi Level)'.

Convert to Quote (Single Level)

After selecting this option, a pick list of BOMs associated to the EPlant the user is logged into will appear. Select a BOM from the list. A pop up form will appear with a field to enter the New RFQ # that will be created and a Revision.

- **Enter New RFQ #** - If the 'Enabled' checkbox is checked for the System-Generated RFQ # in System Parameters->Sequential Numbering tab, this field will be populated with the next sequential number. If the enabled option is not checked thisi field will be blank for the user to enter a value manually.
- **Enter New Version** - The revision field defaults to 1.

If the RFQ # and Revision already exist a warning will appear stating this.



- Select the **Update Component Pricing** box to have the system update the quote inventory price breaks and currently assigned price breaks with the Master Inventory price breaks from the Buying section (Buy/Sell tab). If the Update Component Pricing option is not selected, the pricing for purchased materials will come from the Buying section of the Buy/Sell tab in inventory for the item (never the AKA Buying section) *unless* the raw material is already in the Quote Inventory list. If it is in the Quote Inventory list, the system will use that pricing even if it is null. If the 'Update component pricing' is checked but the item has the 'Use Standard Cost in Engineering Quote' option checked (Additional tab in Inventory) then the system will not update the price breaks in the quote module.
- If the **Update Standard Cost** option is checked, items (primary material or attached materials) that have the 'Use Standard Cost in Engineering Quote' option checked will have the standard cost update in the price breaks in the quote module. If the item does not have the use standard cost option checked the system will update the price breaks based on the Buying section based on the Update Component Pricing check box.
- If the '**Quote Due Date is Mandatory**' default value (in Quotation Parameters) is checked the user must enter a due date for the new quote.

Select OK and a message will appear stating: 'Mfg # [BOM #] has been successfully converted to RFQ # [RFQ#]/ Rev #'. Select OK on the message and the new quote will open. All of the values from the fields in the BOM will populate into the quote such as Cell, Operators, Labor Rate, Cycle Time, Scrap, etc.

Note: The Units/Cycle field on the RFQ will default to one and should be updated to reflect the correct value.

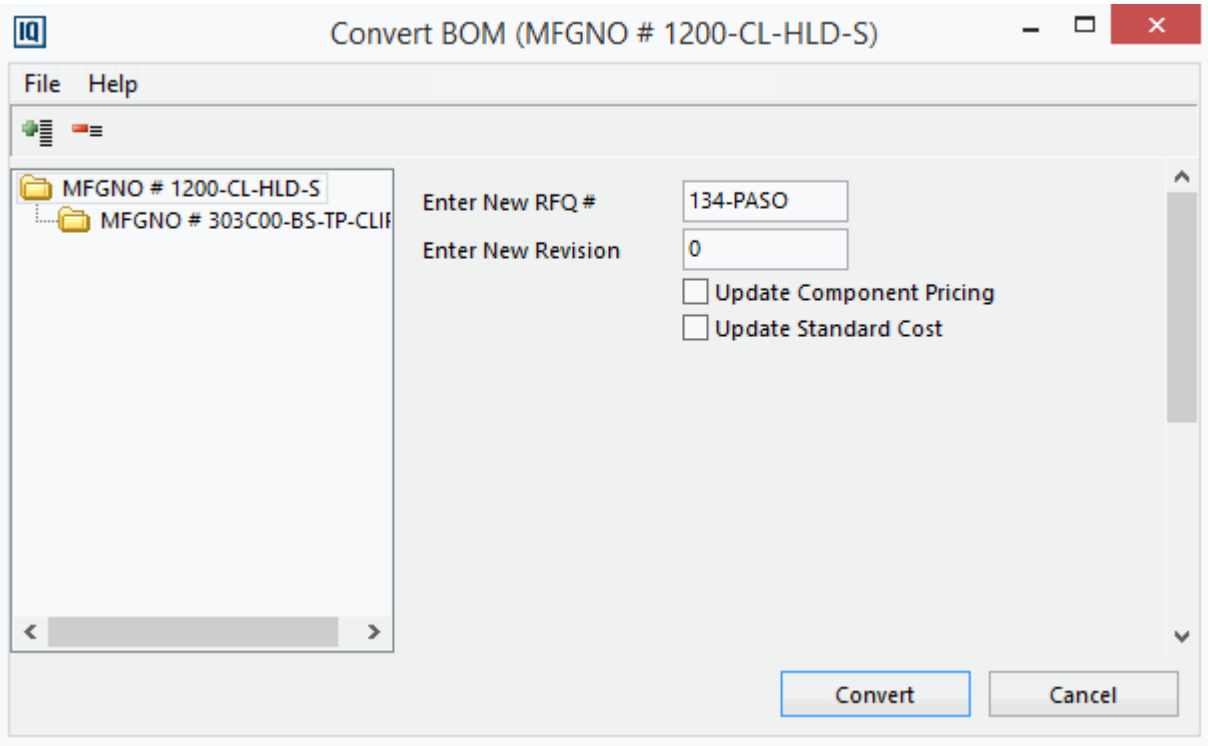
Note: Since a specific Work Center # is not associated to a BOM, when converting a BOM to a Quote using a Work Center with a Center Type that is also assigned to other Work Centers, the system will use the Center Rate, Fixed Center Rate, Setup Hours, and Startup Shots from the first Work Center created with that center type. To populate the fields for a specific work center, the user must select one by clicking the drop down or search button in the Work Center field on the quote and select Yes to the Confirm message to paste the values, then the rates associated to that work center will populate.

If the BOM is a Generic with attached items that are manufactured the system will first look in the quote database and if the item is found the system will use the quote prices. If the attached manufactured item cannot be found in the quote database, the system will use the pricing from the selling prices on the Buy/Sell Pricing tab in Inventory.

Convert to Quote (Multi Level)

If the BOMs to be converted include several levels, select the 'Convert to Quote (Multi Level)' option from the File menu then select a BOM from the pick list. The following form will appear to enter the New RFQ # and Revision for all associated BOMs. If the 'Enabled' checkbox is checked for the System-Generated RFQ # in System Parameters->Sequential Numbering tab, the Enter New RFQ # field will be populated with the next sequential number for each BOM being converted.

Note: If the same BOM is listed multiple times (same BOM attached to multiple different sub-BOMs), a new RFQ # is needed for each instance.

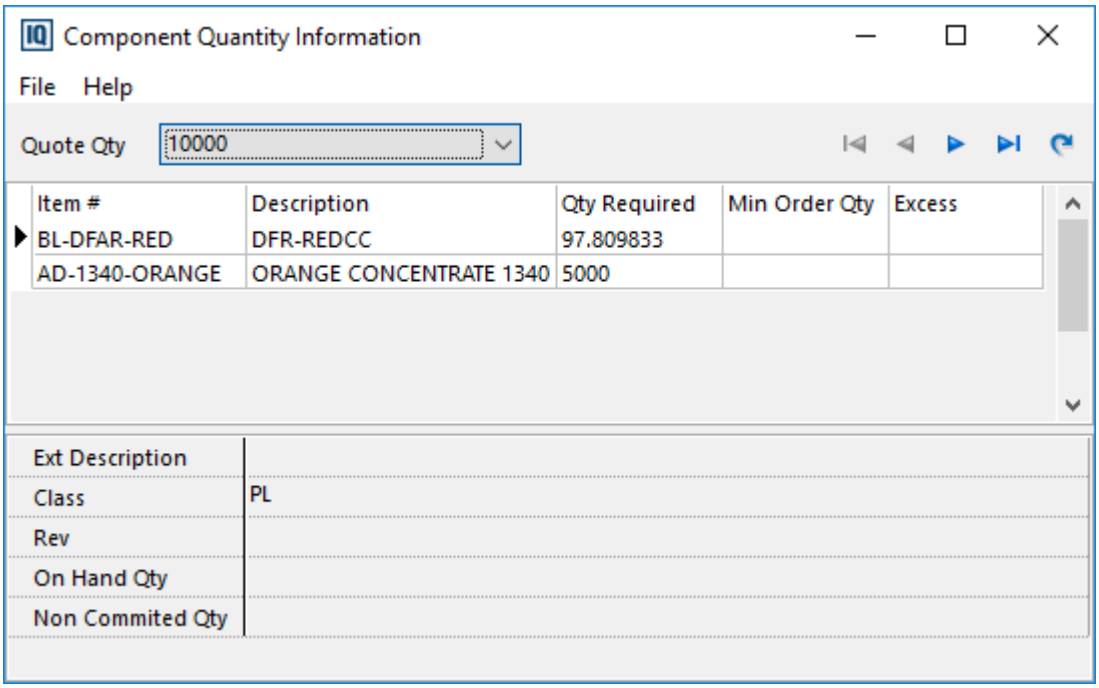


Highlight each BOM in the tree and enter the information in the fields. The check box options function the same as when converting to a single Quote.

Other Functions Available in Quoting

Component Quantity Information

Select the 'Component Quantity Information' button  on the Calculations tab to view the components associated to the quote and their required quantity, Min Order Qty and calculated excess quantity.



The top of the form by default displays the first quantity on the quote. A different quantity can be selected from the drop down list. The Qty Required field will populate with the quantity required based on the selected Quote Qty. The Min Order Qty field populates with the master inventory item's 'Min Order Qty' value on the General tab in Master Inventory. The Excess value is calculated as the Qty Required minus the Min Order Qty.

The bottom of the form shows the Ext Description, Class and Rev of the component along with the current On Hand Qty and Non-Committed Qty. If the item exists in master inventory users can right click and select 'Jump to Inventory' and 'Jump to Locations and Transactions'.

Note: The Min Order Qty and Excess quantity will not be populated if the component item is not in Master Inventory.

Engineering Quote Workflow

Workflow is a commonly used term that describes the automation of internal business operations and tasks to simplify and streamline current business processes. The Engineering Quote Workflow module is used to automate business processes relevant to quotes. This can lead to improved efficiency by helping the user to establish a template of tasks and assign the tasks to the right person with the right skills.

The Engineering Quote Workflow module allows you to create user-defined templates of the tasks (Elements and Checklists) that are required to complete the workflow for any type of quoting process. Emails are sent through a workflow process evaluation to the individuals responsible for the tasks, allowing for an emailed response back into the system. All of this information is maintained in a single form for reference. It is optional to utilize workflows in quoting. If it is being used it can be marked mandatory, which requires that workflows be performed for all quotes.

The information below outlines the steps in creating a Workflow in EnterpriseIQ as well as the details of the various sections of the Workflow form.

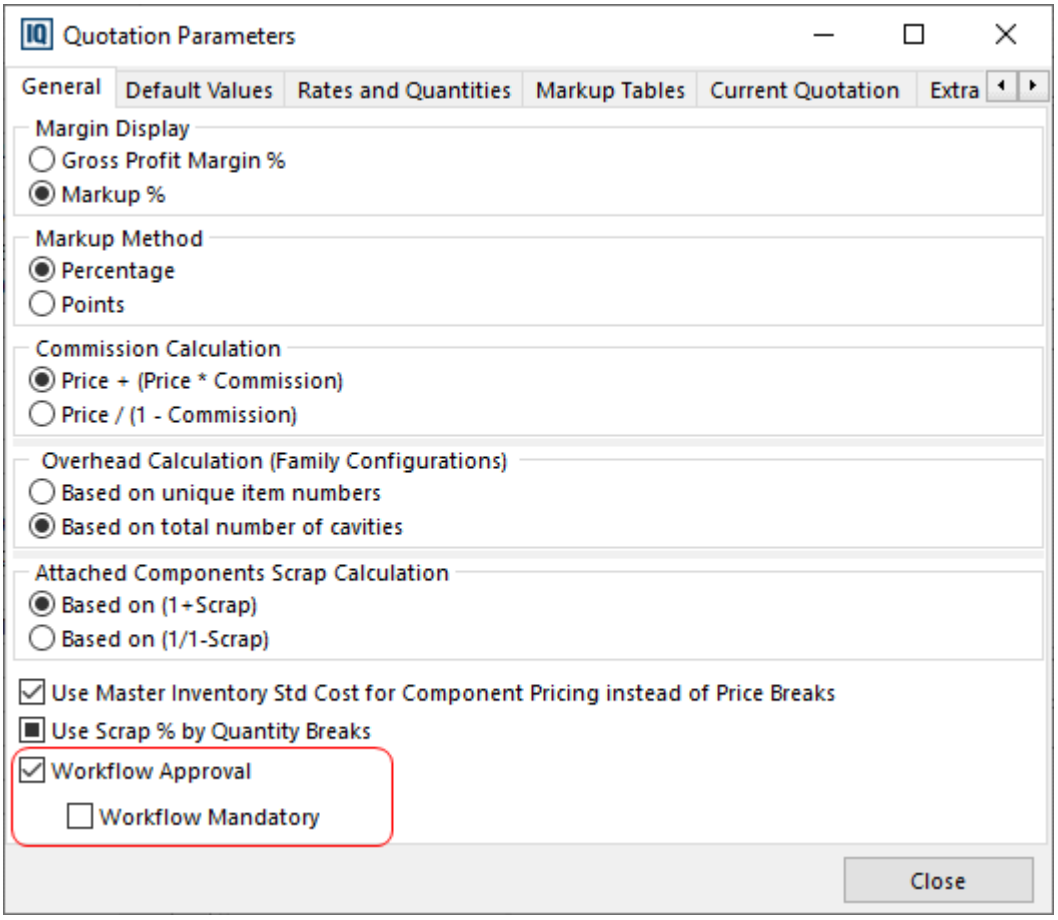
Steps for Using Workflows in Engineering Quotes:

- Activate Workflow Approval
- Create Quote Types
- Create an Approvers team
- Create templates
- Assign a template to the Workflow
- Enter in the general information
- Evaluate Workflow (email responsible team members)
- Perform items in checklists associated with the Workflow elements and mark the status of each checklist item
- Accept or Reject element

Activate Workflow Approval in Quotation Parameters

The Engineering Quote Workflow module is an optional feature. In Quotation Parameters there are two settings relevant to Engineering Quote Workflow:

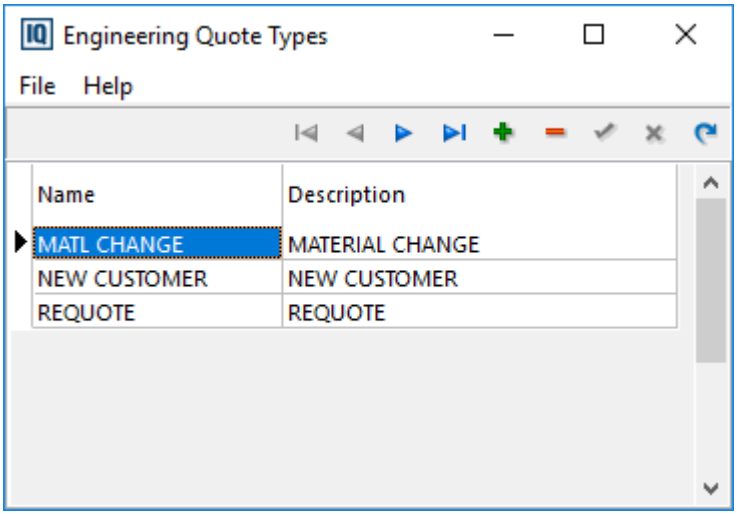
- **Workflow Approval** - The workflow approval functionality is activated from the Quotation Parameters form accessed from the Miscellaneous menu ->Rates and Parameters by clicking the 'Workflow Approval' box. Once this is checked the workflow functionality will become available on the Engineering Quote->General Quote Values tab.
- **Workflow Mandatory** - Workflow Approval can also be marked mandatory by checking the 'Workflow Mandatory' box. This will require users to create a workflow for all quotes. The Workflow Mandatory cannot be checked if Workflow Approval is not checked. Note: If the Workflow Approval check box is not checked and the user checks this box, the system will automatically check the Workflow Approval box.


Quotation Parameters
General
Default Values
Rates and Quantities
Markup Tables
Current Quotation
Extra
Margin Display
Gross Profit Margin %
Markup %
Markup Method
Percentage
Points
Commission Calculation
Price + (Price * Commission)
Price / (1 - Commission)
Overhead Calculation (Family Configurations)
Based on unique item numbers
Based on total number of cavities
Attached Components Scrap Calculation
Based on (1+Scrap)
Based on (1/1-Scrap)
Use Master Inventory Std Cost for Component Pricing instead of Price Breaks
Use Scrap % by Quantity Breaks
Workflow Approval
Workflow Mandatory
Close

Engineering Quote Types

This is a user-defined list of quote types. Quote Types are associated to workflow approval templates, and are required to be entered on a quote when using the workflow approval functionality. This enables the system to automatically create a workflow for the correct template. Having a quote type associated to a specific template provides functionality to apply specific business logic to specific quotes, such as situations where different approvers are required for certain business lines, or specific templates may be needed based upon the estimator preparing the quote.

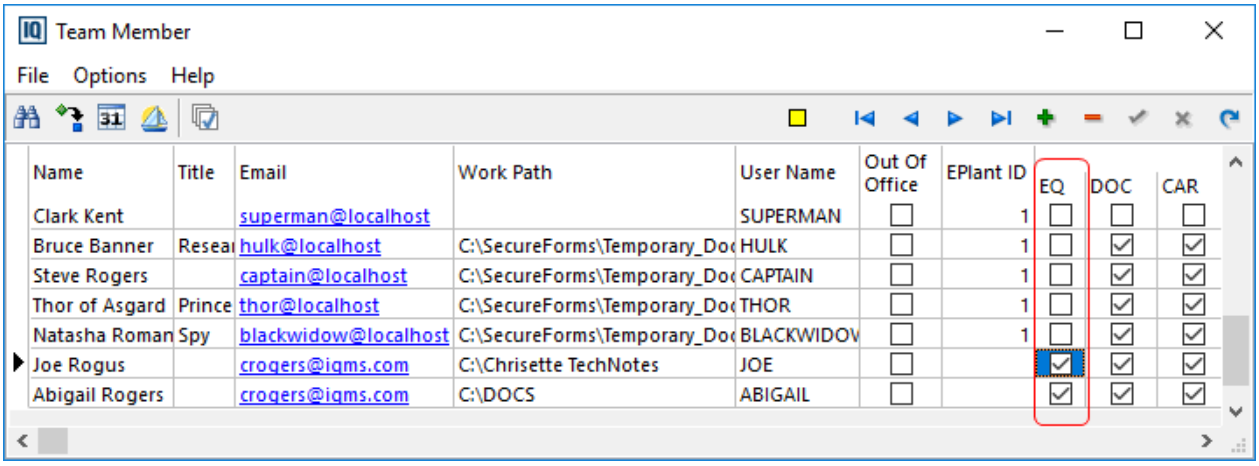
To access the Quote Types list select 'Engineering Quote Types' from the Options menu in Engineering Quotes. This list can also be accessed from System Parameters->List menu by selecting 'Engineering Quote Types'.



Select the insert record (+) button to add new quote types. Enter the Name and Description in the corresponding fields.

Approvers Team

The Approvers Team can be accessed from the File menu the Engineering Quote module. This will access the same Team Member module available on the Quality tab of the Launcher Bar, and include all of the same functionality.



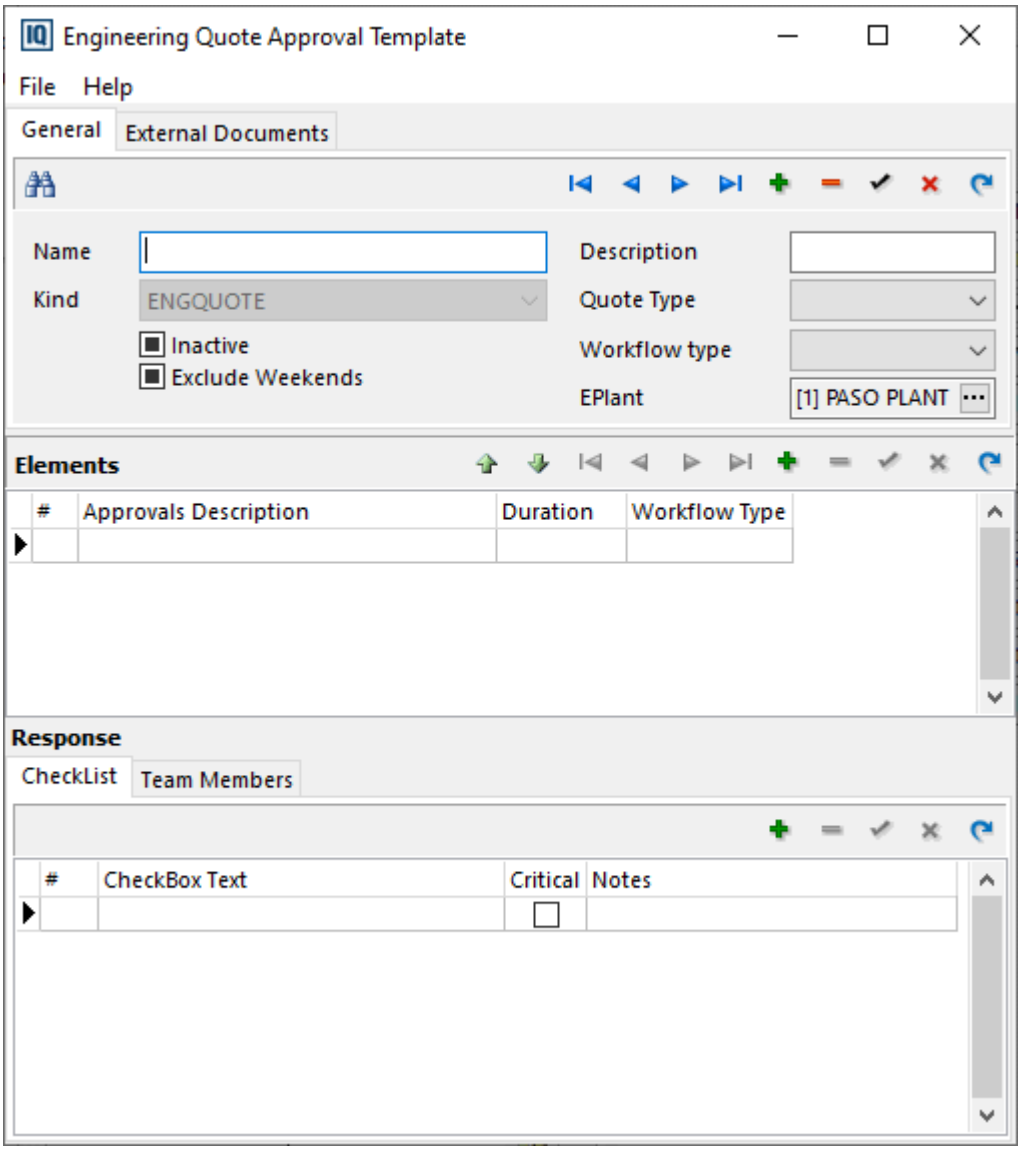
Select the 'EQ' check box for the Team Members that will be available in the Engineering Quote Workflows.

Note: Before a person can be added as team member, they must first be a user in the EnterpriseIQ system. See the ***Security and EnterpriseIQ Manual https://my.iqms.com/cfs-file.ashx/__key/HelpFile/15.3/security_2D00_and_2D00_enterpriseiq.pdf*** for more information on creating users for EnterpriseIQ. The users must have the WebDirect attribute checked.

Creating Approval Templates

Create templates with tasks for any type of Engineering Quote functionality that you would like to track through the workflow process.

From the File menu select 'Approval Templates', then select 'New' on the pick list and the following form will appear:



The Template form is divided into three sections:

- **Name** - The Name and Description of the template
- **Elements** - The elements (or steps) used when performing a Workflow that utilizes this template
- **Response** - Includes the Lookup List, CheckList, and Team Members

Top Section:

Enter the values in the template form to create an Engineering Quote Approval Template.

Name **Description**	Enter a Name and Description of the template.
Kind	The Kind will be ENGQUOTE since it is used in the Engineering Quote module.
Quote Type	Select the Quote Type associated to the template from the drop down list. This is a required field which enables the system to automatically create a workflow for the correct template.
Workflow Type	Select a Workflow type from the drop down. The options are Sequential or Broadcast. The workflow type selected in the header section refers to the Elements. When using IQAlert to evaluate workflows, the information will be sent either for one element at a time Sequential or for all elements Broadcast. ▪ **Sequential Workflow** - An email will be sent to all team members in the first element. Workflow cannot continue until the team members have responded to the element. ▪ **Broadcast** - This option will send an email notification to all team members for all elements.
Inactive	A template can be marked Inactive which hides it from pick lists.
Exclude Weekends	When the Exclude Weekends option is checked the calculation for Required Date will exclude weekend days. If it is not checked it will include all days when calculating the Required Date. For example, if the Duration of an element is 7 days and the workflow is marked active on a Wednesday, with this option checked the Required Date will be the following Friday. If it is not checked the Required Date will be the following Wednesday. Note: If this option is not checked but weekends have been marked off in the Workflow Calendar then the system will exclude weekends (see the Workflow Calendar in Team Members for information on setting days off for workflows).
EPlant	The EPlant is assigned based on the plant logged into when the template is created, or it will be null if logged into View All. To manually assign an EPlant select the ellipsis button in the field and select an EPlant from the pick list. The template pick list is soft filtered on EPlant so when creating new records users will see templates associated to the EPlant they are logged into or those without an EPlant assigned.

Elements:

The middle section is where the elements are entered. The elements are the steps that will be taken for the Workflow. To create the elements, click on the 'Add' (+) button in the Elements section and type in the description of the element.

Duration	The amount of time in days the Element is expected to take can be entered in the Duration field. This value will be used to calculate the Required Dates for each element. Continue this process until all elements have been entered. Note: The Required Date is calculated based off of midnight of the activation date. If, for example, a user had a Duration of 1.25 (1 day, 6 hours) set up on the template and the workflow is activated on December 11th, the Required Date will calculate December 12th at 6 AM. If a user wishes to have the element calculated from a different start time, the Required Date time stamp can be overridden when the 'Active' checkbox is unchecked. After the time is modified, users can right click within the Elements section and 'Update Subsequent Required Dates'.
Sequence	The Sequence number information will fill in automatically with the next number as you add elements, or can be overridden by the user. Duplicate sequence numbers are allowed which will indicate in the workflow that the elements can be done simultaneously (emails will be sent for all elements with the same sequence number at the same time). The required dates for elements with the same sequence number will calculated for each element's duration. Elements having subsequent sequence numbers will have their required dates calculated from the longest duration required date from the previous element sequence group.
Workflow Type	A Workflow Type can be associated with each Element. This workflow type refers to the Team Members. The information will be sent either for one team member at a time (Sequential) or for all team members associated to the element (Broadcast).

Other Element Options:

- **Moving Elements** - Once Elements are entered, the order they are in can be changed using the up and down arrow buttons. The element number will automatically change as it is moved.
- **Copy and Paste Elements** - Elements can be copied and pasted from one template to another template or to the same template as a time saving feature. When copying from one template to another the template must be of the same kind, i.e. ENGQUOTE to ENGQUOTE, PO to PO, etc. Highlight the element to copy and select 'Copy Element'. Go to the template where it is to be pasted to, right click and select 'Paste Element'. All of the Element information will copy over. The Description will be the same, but a new sequence number will be generated.

Response:

The bottom section is where the Response (Lookup List, Checklist, and Team Member) information associated with a specific element is entered.

Checklist	The Checklist is the list of steps involved in completing the corresponding element. To create checklist items, click on the 'Add' (+) button on the Checklist tab and type in the text. This information will appear on the Workflow form in the Problem Report section, and on the web based approval page. The checklist items can also be marked Critical by placing a check in the Critical box. A 'Y' will appear for the corresponding checklist item on the Workflow form, and signifies that the checklist item(s) is a critical step in the Workflow process. An element cannot be marked as completed unless team members affirm and respond to a critical checklist item. If a user attempts to approve an element without affirming the critical checklist items an error will occur stating “All critical checklist items must be affirmed in order to approve this element”. User defined Notes can be associated to a checklist item. The notes can be typed manually or selected from a user defined list. To create the list, right click on the field and select 'Edit User Defined List'. The notes will appear on the Checklist tab of web approval page and in the Checklist section on the main module.

Team Members	The Team Members is the list of personnel responsible for the specific element. The Approvers Team (Team Member) list can be accessed from the Engineering Quote File menu. (This is the same list used in Quality). When a new Workflow is created using the template, the team members added at the template level will automatically be added for the new Workflow. This is a time saving feature if the same team members typically perform a specific element for all Workflow's that utilize the template. Select the + button and select the team members from the pick list to add them to the template element. Set the Type to authorize or review. ▪ Authorize team members are required to sign off on the approval process. ▪ Review team members will receive an email notification through the workflow process, but are not required to sign off. If the Type is not selected at the template level it will default to Authorize on the Workflow form. If all team members are set to Review the element will not be completed. Team members set to review will appear in italics to distinguish them from authorize members. Enter notes if desired. The notes will display on the responsible tab of the Workflow form and on the web based approval page. **Delegate To** - A Delegate can be associated to a team member with a Days Threshold value. The 'delegate days threshold' will control when a second email is sent to the delegate if the original team member did not respond within that time. This will help prevent a workflow from stalling because someone is too busy or out of the office for an extended period of time without the initiators knowledge. Once the 'Days Threshold' has passed and the workflow is evaluated, the Delegate is sent an email and can log in to approve/deny the workflow. Both the delegate and the 'days threshold' can be edited for a specific workflow on the Responsible tab. **Note**: There is also the 'Pending Authorization Expired' number of days feature that can be setup on the IQAlert that processes workflows. The number of days should be greater than the delegate days threshold. **Copy and Paste Team Members** - Team Members can also be copied and pasted from one element to another as a time saving feature. Highlight the element whose team members you want to copy, right click and select 'Copy Team Members'. Highlight the element the team members are to be pasted to, right click and select 'Paste Team Members'. All of the team members, their Type, and Notes will copy over. This same feature is available from the Elements section on the main form.

External Documents

External documents can be associated to a template. This can be used to provide documentation for requirements for the specific template and the quality records it is associated to. Any external documents attached to a template will carry over to the Ext Docs tab for new records that utilize the template.

Create Additional Templates

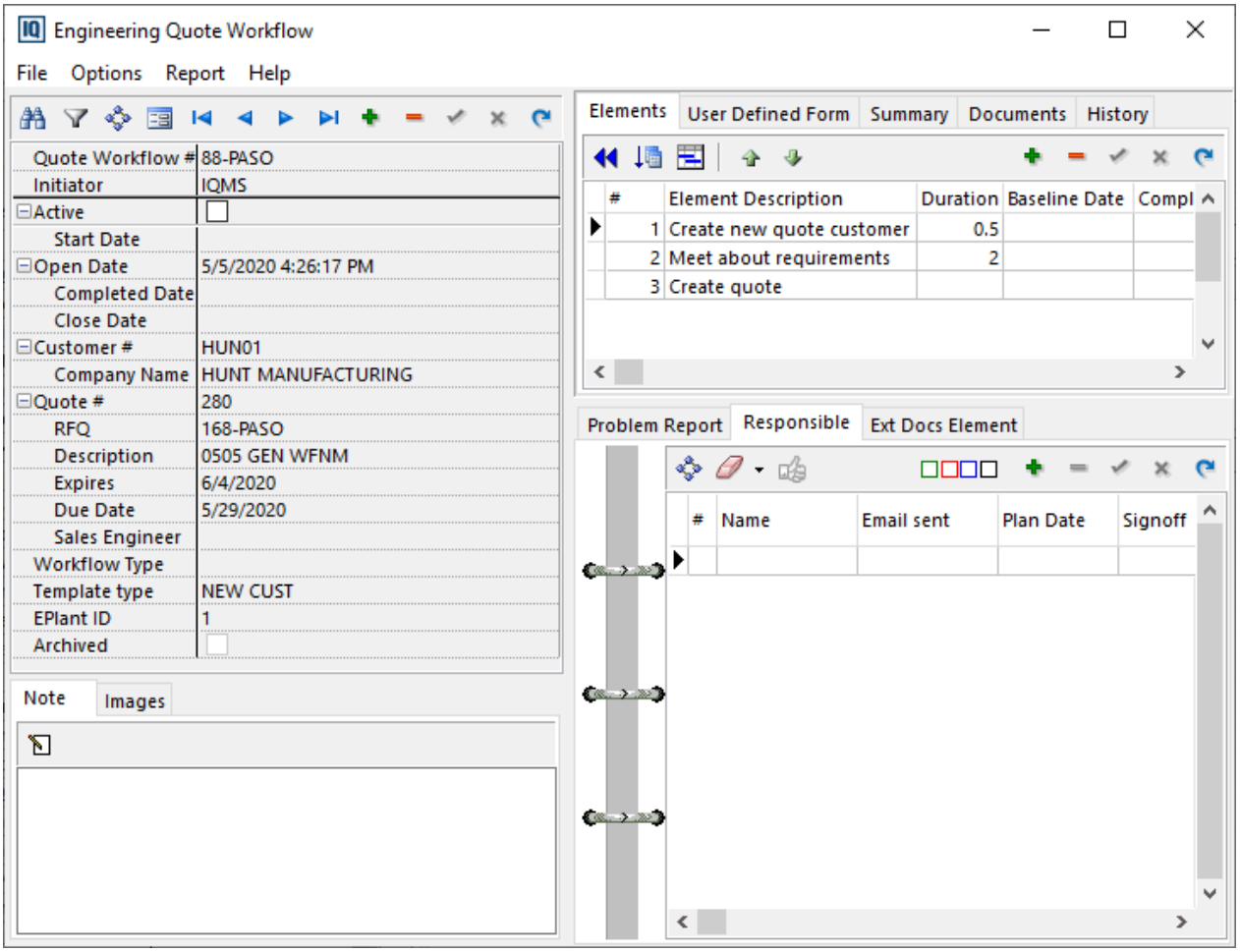
To create additional templates, click on the 'Add' (+) button on the Template form and complete the above steps.

Creating a Workflow

Once the Workflow Approval parameter is activated and templates have been created, a new Workflow can be started.

1. Click on the ellipsis button in the 'Quote Type' field on the General Quote Values tab in Engineering Quotes.
2. Select a Quote Type from the pick list.
3. Select the post edit button to save the change. The system will automatically create a workflow.
4. The Workflow number will display in the Workflow # field and will have a status of 'Inactive'.

5 Click the ellipsis button in the Workflow # field, then click on 'Jump to Workflow' to open the workflow.



The list below describes the fields in the top left section:

Quote Workflow #	This is the Workflow # for reference purposes. This number is assigned by the system in sequential order. If you are using EPlant this number will have the EPlant suffix after the number. This field can be overridden by typing over the existing number.
Initiator	The Initiator field displays the user login for the person who created the Workflow.

Active	This marks the Workflow as active. If Durations are entered for the elements the Required Dates will automatically be calculated based on the date the Workflow is marked Active. This field can be expanded to view the Start Date. This is the date the workflow was marked Active. **Note**: The evaluate workflow process cannot be started until this is checked. **Note**: Microsoft Excel must be installed in order to use this feature. When activating the workflow, the system automatically creates the RFQ report to be displayed on the approval page. If Excel is not installed, the user will receive an error stating: "Microsoft Excel is required when setting to active", when marking the workflow 'Active' and posting the change.
Open Date	This date defaults to the date and time the Workflow was created but can be changed using the drop down calendar. This field can be expanded by clicking on the **+** next to the field name to display two additional date fields, Completed Date and Close Date. The Completed date will automatically populate when all of the Elements have been completed. The Close date can be edited using the drop down calendar and selecting a date. Once a close date is added to the Workflow the status of the Workflow will be closed. The status is used for filtering purposes.
Customer # **Company Name**	This is the Customer associated with the Workflow. It is populated based on the Customer associated to the Quote, and cannot be changed. Click the + button to expand the field to see the Company Name.
Quote #	This is the Quote# associated to the quote record the workflow was created for. Click the + button to expand this field to see the Quote RFQ #, Description, Expiration date, Due Date, and Sales Engineer fields.
Workflow Type	This information will fill in automatically if a workflow type is associated to the selected template. It can be changed by selecting the workflow type from the drop down menu. There are two options: ▪ **Sequential Workflow** - An email will be sent to all team members in the first element. Workflow cannot continue until the team members have responded to the element. ▪ **Broadcast** - This option will send an email notification to all team members for all elements.
Template Type	This displays the Template Name associated with the Workflow.
EPlant ID	This is the ID for the EPlant associated with the Workflow. This field will automatically populate with the ID based on the EPlant the user is logged into.

Archived	This box will be checked if the workflow is archived. Select Archive from the File menu to archive a workflow record. Select Yes to confirm the status change. The Archived box will be checked. Archived records can be restored by selecting Restore from Archive from the File menu. The box will be un-checked. From the Options menu users can choose to view workflow records based on whether they are open or archived. Select View All, Open Only, or Archived Only to filter what is displayed based on this status.

Elements

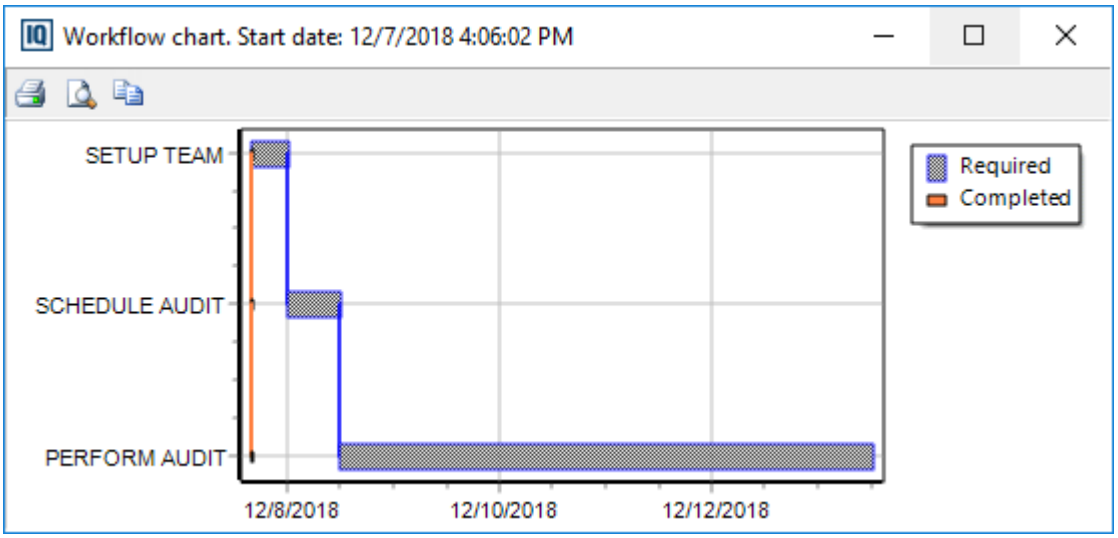
This section contains the elements associated with the template that was chosen when the Workflow was created. Elements can be added, deleted, and the order rearranged as long as the active box is not checked and the element does not have a complete date. Use the +, - and up and down arrow buttons to perform these functions.

If a duration was entered for the elements on the template the 'Required Date' and 'Baseline Date' will automatically populate once the Active box is checked. If no duration was entered for the elements, the 'Required Date' and 'Baseline Date' will populate with the date the record was marked active. The required dates cannot be changed once an element is completed. If the 'Required Date' for a non-complete element need to be changed, un-check the Active box and select a new date from the drop down calendar. To change the 'Required Date' on the subsequent elements, right click and select 'Update Subsequent Required Dates'. This will update the subsequent Elements' required dates based on the last 'Required Date' plus the 'Duration'.

The 'Baseline Date' does not change with edits to 'Required Dates' unless the 'Populate Baseline Date(s)' button is pressed, in which case the Baseline Date column is populated with the current Required Date for elements that have not been completed. Security can be applied to the 'Populate Baseline Date(s)' button to restrict access.

Once an element has been approved by all Authorize type team members, the completion date will fill in automatically after the workflow is evaluated again.

 **Workflow Gantt Chart** - This button will bring up a Gantt chart for the Elements.



 **Rewind/Reset Element workflow approval process** - This process resets an element's complete date as well as its workflow approval records so it can be re-evaluated again.

Once selected a confirm box will appear to select Yes or No. If Yes is selected, the system will reset the element and a box will display stating the number of processed workflow records that were reset. The line item(s) in the Responsible section will revert to black allowing the workflow for the element to be reevaluated.

User Defined Form

A User Defined Form with additional fields can be created for workflows. These fields can then be used in customized reports. The User Defined Form can be accessed from the speed button, the User Defined Form tab or from the Options menu. See the User Defined Forms portion in the Using EnterpriseIQ' section of the help files for more information on creating a user defined form.

Summary

The Summary tab displays summary information for each element. It includes the Element Description, Complete Date, Duration, Required Date, Workflow Type, and Response information. The user can select the number of panels to view (up to 15) from the **# Panels** drop down. This defaults to 'Auto' which will display a panel for each Element associated to the workflow.

History

From the History tab users can view the history related to the workflow. This tab includes the following information:

- Date - Event Date and Time
- Event - This will describe the event, such as Signoff, Checklist, or Reset One
- Signoff - Y or N
- Signoff Date and Time - The date and time the element was signed off
- Response - Response notes entered by team member. Double click this field to access the response text at the time of the history record. This field will say (Memo) if there are no notes. If it is in all caps (MEMO) it indicates there are notes that can be viewed by double clicking.
- Notes - These are the notes entered in the 'Note' field on the workflow. Double click this field to access the notes at the time of the history record. This field will say (Memo) if there are no notes. If it is in all caps (MEMO) it indicates there are notes.
- Checklist Text - The description of the Checklist item
- Checklist Status Old - The old Checklist status (Y, N, N/A)
- Checklist Status New - The new Checklist status (Y, N, N/A)
- Username - The Username that reset the rejected record
- Element Description
- Responsible Name - The name of the Team Member responsible for the entry
- Responsible Type - Review or Authorize based on the responsible type associated to the responsible team member within the responsible tab

Documents

In this section the user can attach internal or external documents, or Email Correspondence associated with the workflow.

Internal Documents

The screen acts like a word processor. The user can add, edit, delete, or print documents from here. Graphic images may also be imported into the document or text area. EnterpriseIQ supports .BMP or .WMF graphic files only.

External Documents

To attach a document, click on the (+) button and select the Document Library and document from the screens that appear. To OPEN the document, double-click on the file name, or select the document and right click. Select [Execute] from the submenu. The program will open both the application the document was created in as well as the document itself.

Color Coding for External Documents:

Each document will display in a color to indicate its status.

- Yellow - The document is checked out or new.
- Blue - The document is pending authorization and/or review.
- Green - The document is released.
- Olive Green - The document has expired. If a document is expired when a user attempts to open it or print it from a module a warning will appear stating, “The document is not available - it is expired and requires review.”
- Red - File does not exist
- Gray - Inactive document

Search - The External Documents tab in all modules includes the Search button to access the pick list for easier navigation through multiple documents.

Show Revisions - Select this option from the right click menu to view all the revisions of a document. Double clicking (or right click and select Execute) on the revision will allow the user to view the highlighted revision.

Print with Work order - When the print with work order option is selected, when a work order for the item(s) attached to the workflow is printed, the document(s) set to print with Work Order will also print.

The user can also jump to the Document Control module by clicking on the Launch Document Control speed button.

Email Correspondence

This section allows the user to attach Email correspondence related to the Engineering Quote. To add an Email simply drag and drop it from Outlook or other email programs into the form.

The 'Received Date' will fill in based on the email's received date and time. A Received Date box surfaces if the system is unable to determine the date (such as: The Received and Sent dates differ, unclear binary data, or older data, etc.). Users are asked to provide the Received Date by selecting the correct date from the calendar.

The 'From' and 'Subject' fields will also automatically populate with the information from the email. The date, from, and subject fields cannot be edited.

Comment - A comment can be entered by double clicking the field. Enter the comment in the pop up box to further describe the email correspondence.

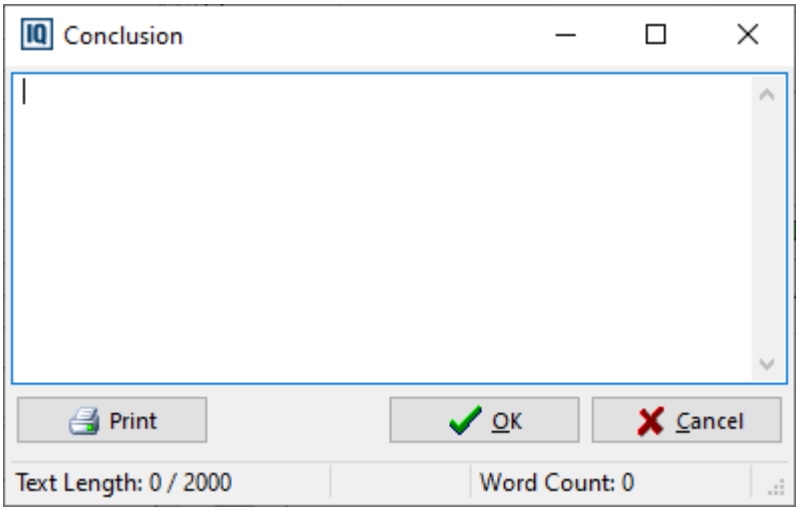
There are three ways to access the Email once associated to the Quote:

- Double click on either the Received, From, or Subject fields.
- Right click and select View email.
- Or select the View email button.

Note: If the email has attachments, or multiple attachments, the total attachment size cannot be more than 4GB. The size allowance might further be limited by the chosen email program used. In order to view emails that have attachments, special formatting (e.g. stationary), or images embedded in the body of the email, the user must go into BDE Administrator and set the BLOB SIZE to 1000 for the database they are using (i.e. IQORA).

Notes

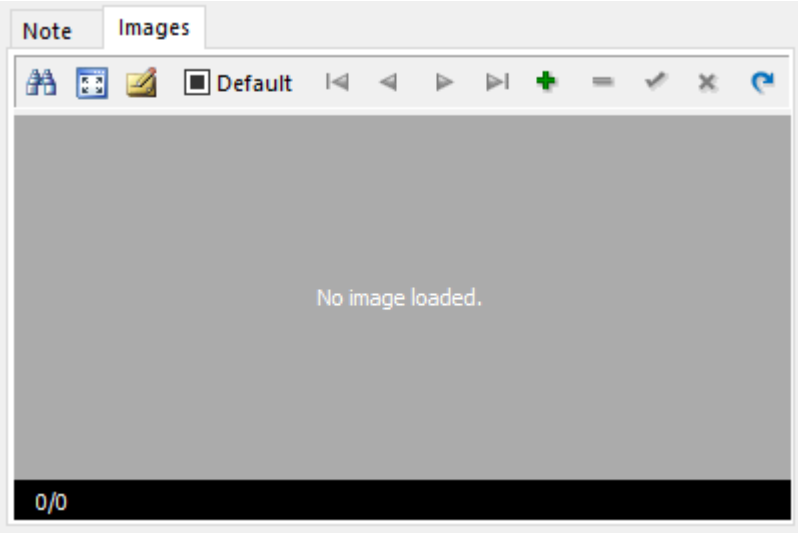
To add notes, type directly in the notes field, or click on the 'Edit Memo' button and type conclusion notes in the screen that appears. This field can contain up to 2000 characters.



Selecting the Print button at the bottom of the form will print notes.

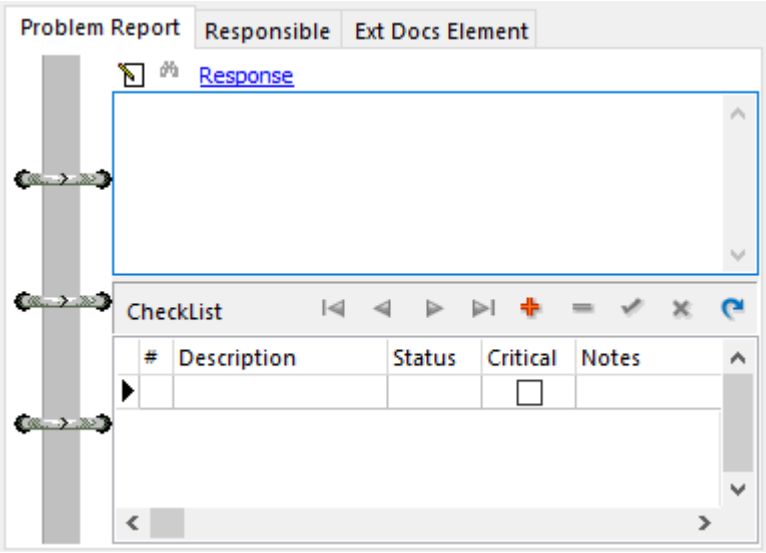
Images

Multiple images can be added to the workflow record on the Images tab. The images will be visible in the module only (not the web approval page).



Select the insert record button and select the image from the open form. An image can be marked as the default by checking the Default box, this will make that image the first to display. A description can be added to be displayed below the image. Select the 'Edit Description' button, or right click and select 'Edit Description'. A note editing screen will appear to enter up to 255 characters. In cases where the text is longer than the display area below the image, the user will need to open the editing window. The image can be viewed in full screen mode by selecting the button  , or select Full Screen from the right click menu. Press the Esc key to exit the full screen mode. Images can be deleted by clicking on the delete record button or from the right click menu. Select Replace from the right click menu to replace the current image with another one. An image can also be Saved to a File by selecting that option from the right click menu. Use the search button to access a pick list of images associated to the workflow record.

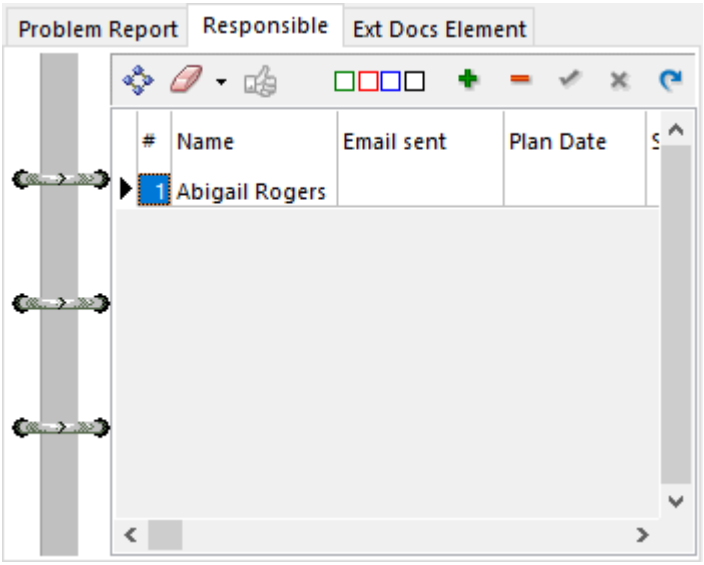
Problem Report tab



CheckList - This section displays the Checklist information associated with the highlighted Element. If the checklist item has been marked critical on the template, a 'Y' will be displayed in the Critical field. Each checklist item is given a status by clicking on the drop down arrow and selecting No, Yes, or N/A. 'Yes' indicates the checklist item is done, 'No' indicates it is not done, and 'N/A' indicates it is not applicable to this specific Workflow. The status can also be filled in from the web approval page. Checklist items can be added on the fly to any element.

Response - The Response information also appears on this tab. This information is input based on lists created at the template level or typed in manually. To select a response from the pick list created on the template click on the Lookup Response List button, and a pick list of responses associated with the Element will display.

Responsible tab



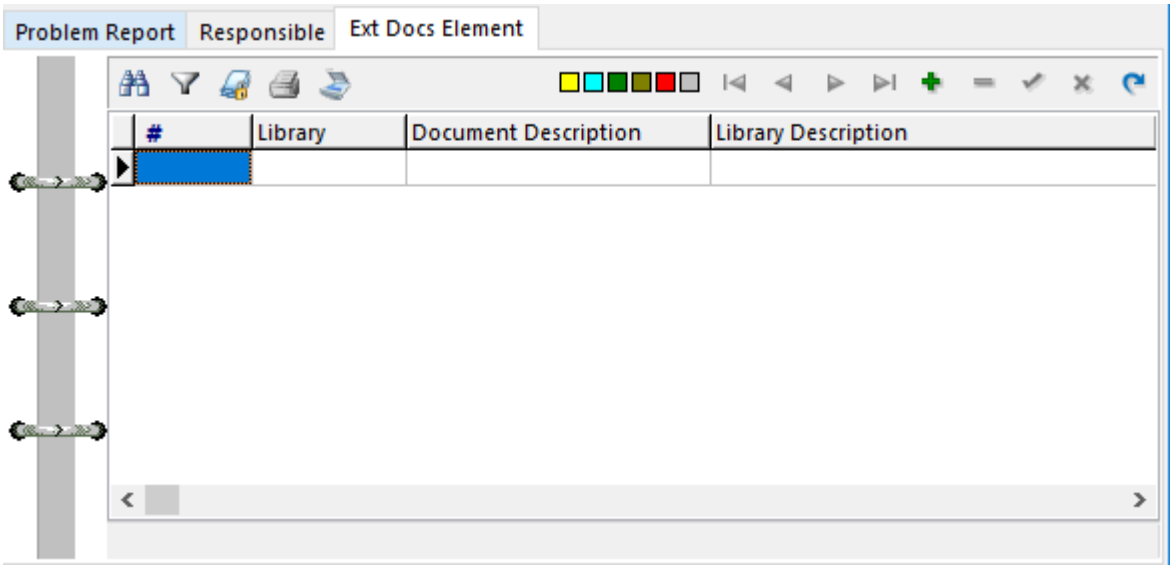
The responsible tab contains the team members responsible for authorization/review of the selected element of the Workflow. To add team members responsible for the element, click on the Add (+) button and select them from the Team Member list. All team members will be in the pick list. Multiple team members can be selected at once using the toggle buttons on the pick list or the Shift and Ctrl keyboard buttons. Team Members can also be copied from one element and pasted into another by right clicking in the Element section and selecting Copy Responsible and Paste Responsible. There is no specific check box in the Team Member module for Workflow. Continue this process until all required team members have been added. New team members can be added to the Team Member pick list by clicking on Team Members under Options on the tool bar.

The fields in the Responsible section of the form are described below:

#	This is the sequential number the team members were added in. If the sequence needs to be adjusted, this number can be changed manually.
Name	This is the Name of the team member.
Email sent	This field populates with the date and time the email was sent notifying the team member a workflow needs reviewed/authorized.

Type	If the type was set up on the template it will fill in automatically. If the type is not specified on the template it defaults to Authorize on the Workflow form. If no Type is specified on the Workflow form, a message will display stating it is a required field. To change it, select from the drop down list and choose either Authorize or Review. ▪ **Authorize** team members are required to sign off on the approval process. ▪ **Review** team members will receive an email notification through the workflow process, but are not required to sign off. Note: If all team members are Review, the element will not be completed.
Plan Date	This is the plan date associated with the Workflow Element and team member, and can be used as a due date for the element. Select the date from the drop down calendar.
Sign Off	If the team member approves the element and selects Authorize on the web based approval page, a 'Y' will automatically be put in this box. If the team member rejects the element, an 'N' will be displayed. This cannot be filled in manually.
Sign Off Date	This field will automatically fill in with the date the team member accepted or rejected the element.
Email	The email address for the team member. This information comes from the Team Member module.
Title	The title of the team member. This information comes from the Team Member module.
Note	Users can enter notes in this field under the Responsible tab, or on the web approval page. The notes entered in this field can be unique to each team member.
Delegate To	A Delegate can be associated to a team member with a Days Threshold value. The delegate days threshold will control when a second email is sent to the delegate if the original team member did not respond within that time. This will help prevent a workflow from stalling because someone is too busy or out of the office for an extended period of time without the initiators knowledge. Once the 'Days Threshold' has passed and the workflow is evaluated, the Delegate is sent an email and can log in to approve/deny the workflow.
Pending Authorization Expired	This will populate with the date/time the pending authorization/review expired based on the 'Expire Pending' days set in the Contingency Plan section of the Alert action. This function will also send an email to the 'Email To' address established on the Alert action indicating the pending authorization/review has expired. Once the responsible team member approves their element; the line turns green to go forward with the next element. The Pending Authorization Expired field remains populated.
Receive Notification	If this option is checked, the team member will receive an email when the element is completed.

Ext Docs Element



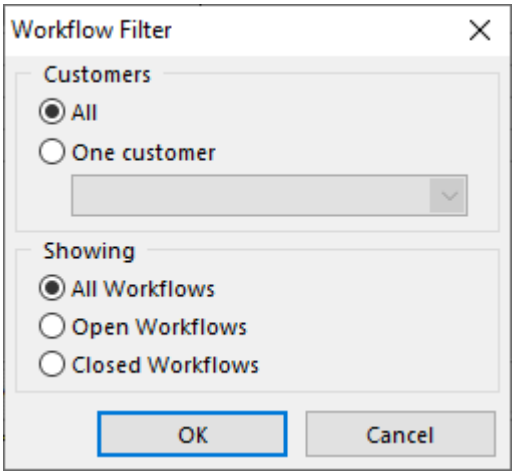
In this section the user can attach external documents associated with a specific element. To attach a document, click on the **ADD (+)** button and select the Document Library and document from the screens that appear. If the document is released it will be accessible in read only format from the web based approval screen.

The user can also jump to the Document Control module by clicking on the Launch Document Control speed button  .

Workflow Filter

To change the filter, click on the 'Filter' button at the top of the Workflow form  . A box will appear from which the user can select All Customers or One Customer, as well as Open Workflows, Closed Workflows, or both.

The Filter feature can also be used to filter the pick list when searching for a specific Workflow.



Access Workflows

Select the 'Workflow' speed button to access your pending approvals relevant to the module currently opened  . For example, when selecting the workflow speed button from the Engineering Quote Workflow module the user will be asked to log in and their pending quote workflow approvals will display. Select the record number to access the specific approval summary.

Limitations in Other Areas when using Engineering Quote Workflows

When using the workflow functionality for Engineering Quotes the system will prevent users from performing certain functions such as converting to a BOM or printing quote letters when a workflow is not approved for an item or its component quotes (this includes quotes for attached main materials). The system will restrict actions if the same level or lower level quote workflow is not approved.

Printing the quote letter from the calculations tab or RFQ Log

Printing the quote letter for an engineering quote with an associated workflow that is not approved is not allowed without security to select 'Continue'.

Printing the quote letter from Project Manager for unapproved workflows

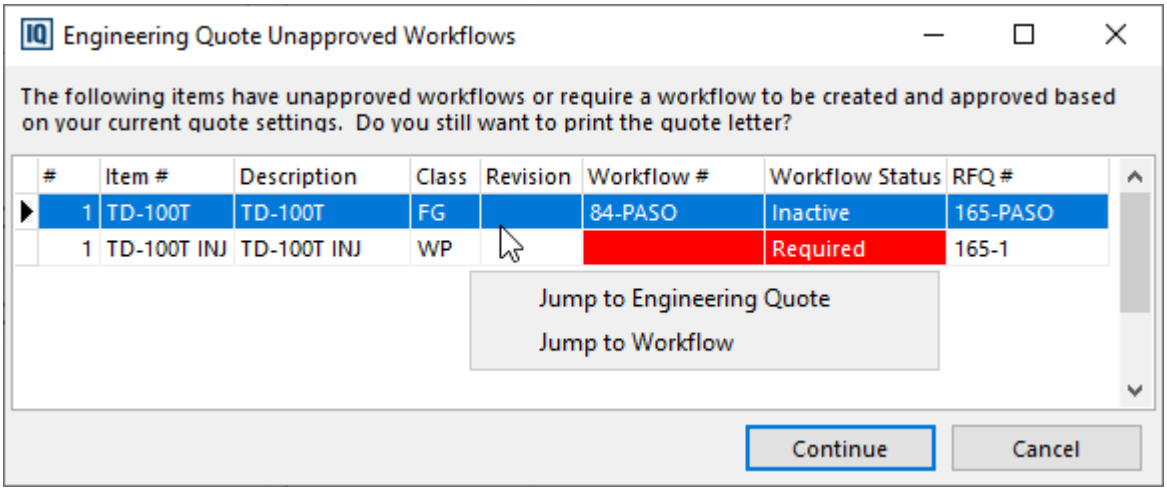
When an RFQ is associated to a Project Manager record (General tab->Part RFQ field) and the 'Include QLETTER_RPT output' box is checked on the Quote Letter form users may not be able to print the letter. When a user selects the 'New' button from the Quote Letter form the system will prevent users without security to select 'Continue' from printing the quote letter when a workflow associated to the engineering quote is not approved.

System Rules:

A Quote letter cannot be printed under following conditions:

- If workflow mandatory is checked and workflow has not been approved.
- If workflow mandatory is checked and active workflow.
- If workflow mandatory is unchecked and active workflow.

If the quote letter cannot be printed a form will appear showing the items with unapproved workflows, or ones that require a workflow be created. This form will state the status of the workflow which will be 'Inactive', 'Pending', or 'Required'. If it is 'Required' the Workflow # and the Workflow Status columns will display in red. Users can right click and jump to the Engineering Quote or the Workflow associated to the highlighted record. Security is available on this form for the Jump To options and the Continue button. If security is not enabled on the Continue button users will not be able to perform the action. This button can also be made not visible so users will only see the Cancel button. The quote letter will print if Continue is selected.


Engineering Quote Unapproved Workflows
The following items have unapproved workflows or require a workflow to be created and approved based on your current quote settings. Do you still want to print the quote letter?
Item # Description Class Revision Workflow # Workflow Status RFQ
1 TD-100T TD-100T FG 84-PASO Inactive 165-PASO
1 TD-100T INJ TD-100T INJ WP Required 165-1
Jump to Engineering Quote
Jump to Workflow
Continue
Cancel

Quote letter can be printed under following conditions:

- If workflow mandatory is unchecked and no active workflow
- If workflow mandatory is checked and workflow is approved

Convert Quote to BOM

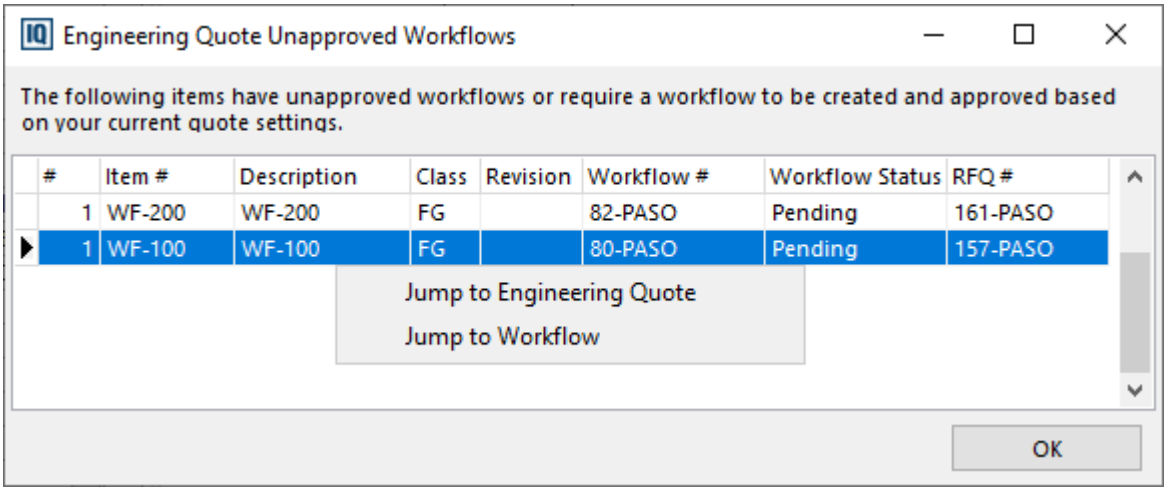
The system will restrict a quote from being converted to a BOM for unapproved workflows at its current level or any level lower in the quote hierarchy. This applies to converting from the Quote module, RFQ Log and Sales Quotations.

When using the workflow functionality for Engineering Quotes the system will prevent users from converting to a BOM when a workflow is not approved for an item or its component quotes (this includes quotes for attached main materials). The system will restrict actions if the same level or lower level quote workflow is not approved.

A Quote Item cannot be converted to BOM or BOM/Sales Order under following conditions:

- If workflow mandatory is checked and workflow has not been approved.
- If workflow mandatory is checked and active workflow.
- If workflow mandatory is unchecked and active workflow.

If the quote cannot be converted to a BOM, or BOM/Sales Order a form will appear showing the items with unapproved workflows, or ones that require a workflow be created. Users can right click and jump to the Engineering Quote or the Workflow associated to the highlighted record.



A Quote Item can be converted to BOM or BOM/Sales Order under following conditions:

- If workflow mandatory is unchecked and no active workflow
- If workflow mandatory is checked and workflow is approved

CRM Sales Quote Limitations

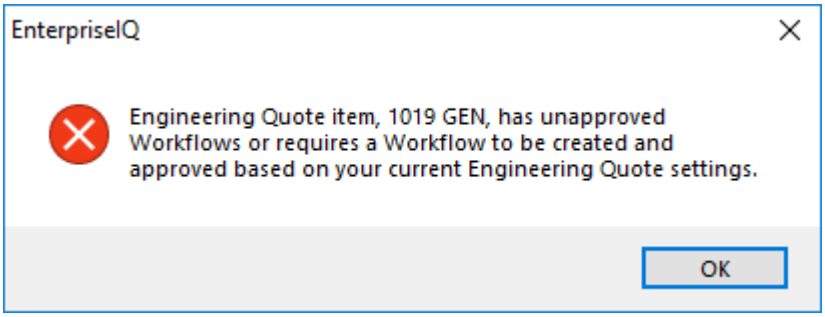
If a specific engineering quote or component engineering quotes have not been approved they cannot be added to a sales quote.

A Quote Item cannot be added to a sales quote under following conditions:

- If workflow mandatory is checked and workflow has not been approved.
- If workflow mandatory is checked and active workflow.
- If workflow mandatory is unchecked and active workflow.

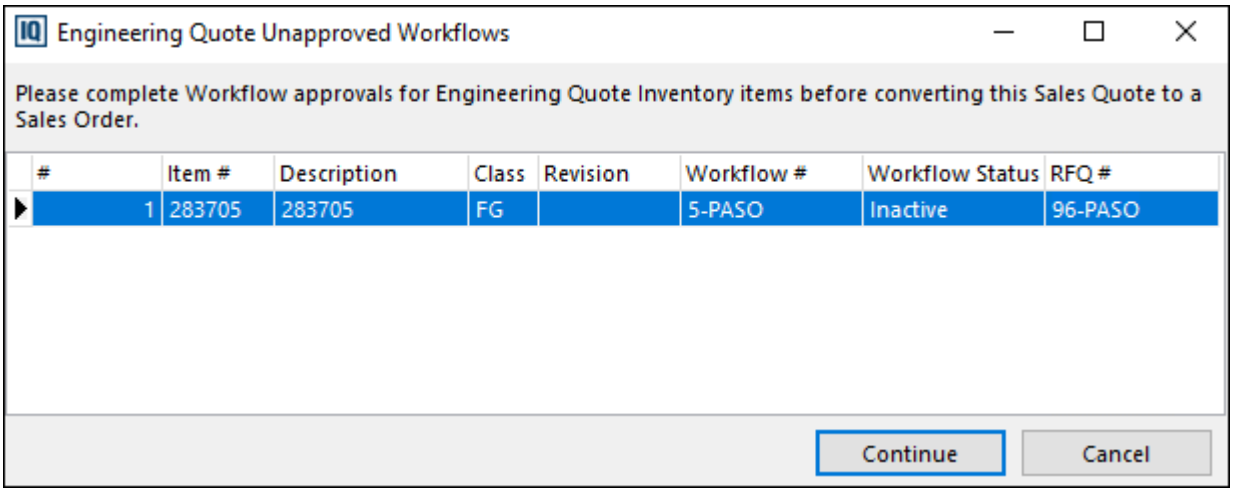
Also, if a workflow is associated to an Engineering Quote item after it has been added to a Sales Quote, and it is not approved, the sales quote cannot be converted to a sales order.

If these situations apply a message similar to the following will display indicating the quote number that has not been approved.



A sales quote can be converted to a sales order if prior approval of an inactive workflow exists. When attempted, the 'Engineering Quote Unapproved Workflows' form will appear with a 'Continue' button. Users with security to select 'Continue' can convert a sales quote to a sales order. If security is not enabled on the 'Continue' button users will not be able to perform the action. This button can also be made not visible so users will only see the 'Cancel' button.

Note: Selecting 'Continue' will bypass the approval of the workflow.



A Quote Item can be added to sales quote under following conditions:

- If workflow mandatory is unchecked and no active workflow
- If workflow mandatory is checked and workflow is approved

Evaluate Workflows

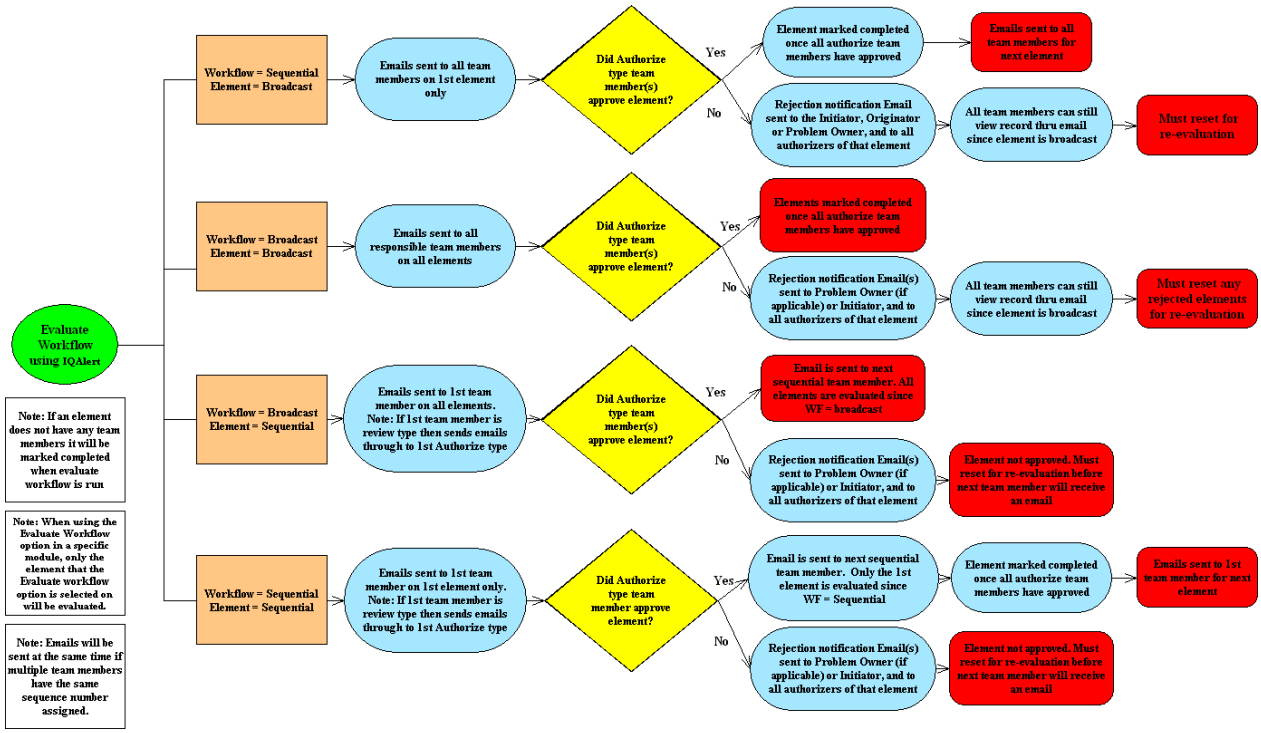
Evaluate Workflow automatically analyzes the status of the element in relation to each team member, and determines the action to take. This is the process that will send email notifications to team members that a Workflow element needs to be reviewed/authorized, and through which the element is approved or rejected based on the responses of the team members.

To start the workflow process:

1. Assign responsible team members. Be sure to post after adding team members, or workflow will not function properly.
2. Ensure that the Active Box in the Workflow main section is checked.
3. Use IQAlert to initiate the evaluation.
4. The team members will be marked in pending status and emails will be sent, according to the Workflow type selected, notifying the members that a Workflow Element needs to be reviewed/authorized.

Note: The Evaluate Workflow and Re-Evaluate Workflow functionality can be set up in IQAlert to occur automatically based on a defined schedule. Select the QUOTE control system. (See the IQAlert documentation for details).

When using IQAlert, the emails sent depend on whether the workflow and elements are set to Broadcast or Sequential. The workflow type selected in the main section of a module refers to the Elements. The information will be sent either for one element at a time (Sequential) or for all elements (Broadcast). A Workflow Type can be associated with each Element. This workflow type refers to the Team Members. The information will be sent either for one team member at a time (Sequential) or for all team members associated to the element (Broadcast). If the Workflow Type field is left blank it will default to Broadcast.



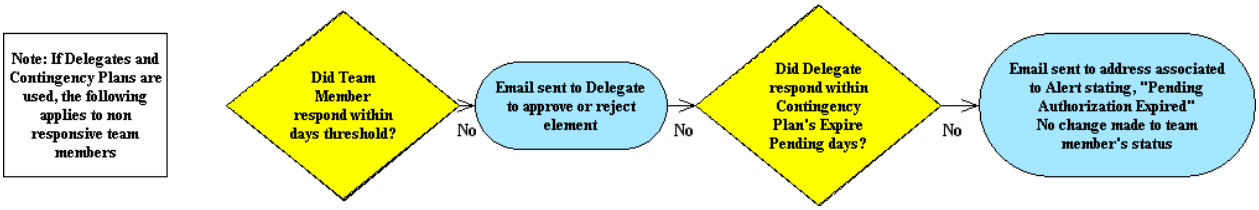
Additional Options:

Contingency Plan - A Contingency Plan can be set up on the Alert action to indicate the number of days when a pending authorization/review is considered expired. The 'Pending Authorization Expired' field in the Responsible section of the module will populate with the date and time it was marked expired. An email will be sent to the email address set up on the IQAlert action indicating the workflow authorization is expired and the responsible team member.

Delegate To - A Delegate can be associated to a team member on a template with a 'Days Threshold' value. The delegate days threshold will control when a second email is sent to the delegate if the original team member did not respond within that time. This will help prevent a workflow from stalling because someone is too busy or out of the office for an extended period of time without the initiators knowledge. Once the 'Days Threshold' has passed and the workflow is evaluated, the Delegate is sent an email and can log in to approve/deny the workflow.

Both the delegate and the 'days threshold' can be edited for a specific workflow on the Responsible tab.

Note: If both the Contingency Plan and Delegate options are used, the number of days on the Contingency Plan should be greater than the delegate days threshold.



Another IQAlert option is to create an SQL to re-evaluate workflow through an 'SQL statement' which can specify the number of days after which team members with pending workflows will be reset. Then subsequent SQL statements to evaluate workflow will send new emails. The combination of these SQL's for Reset and Evaluate Workflow is the equivalent of doing 'Reset for Re-Evaluation' and 'Evaluate Workflow' under the Responsible tab in modules that have workflow. After the Reset SQL statement is processed, and before the Evaluate Workflow SQL, if a team member attempts to get to the web approval page from an older email, they will receive a message that the approval link is no longer valid. Users may pick up the new SQL statement from MyDELMIAworks in the IQMS Alerts section in Support->Files. The file is 'Reset Workflow.zip'. For more information on setting up these alerts please refer to the Alert help file.

Notes:

Invalid emails (for employees where they no longer are active email addresses in the system) will be passed over and the workflow process will continue to the next responsible person or if no responsible person is indicated for the remainder of the elements, it will add a completed date to those elements. The system records any exceptions in the Event Log under the WORKFLOW ERROR class.

Evaluating workflow through IQAlert ensures workflow emails are sent to the correct team members in the correct order. If the 'Evaluate Workflow' button on the Workflow Approver tab is used instead, workflow emails may not be sent to the correct team members and potentially in non-sequential order.

Duplicate sequence numbers on Elements are allowed which will indicate in the workflow that the elements can be done simultaneously (emails will be sent for all elements with the same sequence number at the same time).

If any email is not being sent as expected for evaluate workflow and no error occurs, check to see whether the spam filter may be preventing the email from being sent.

Workflow Emails

The subject line of the email states the Quote Workflow number, the Workflow Element description, and the team member type (Authorize or Review).

Quote Workflow # 6-PASO, Review Design - Authorize

Quote RFQ #: 95-PASO
Quote Date: 04/30/2020
Expiry Date: 05/30/2020
Due Date:
EPlant: 1 [PASO PLANT]

Click on the link below to authorize Engineering Quote Workflow element 'Review Design'

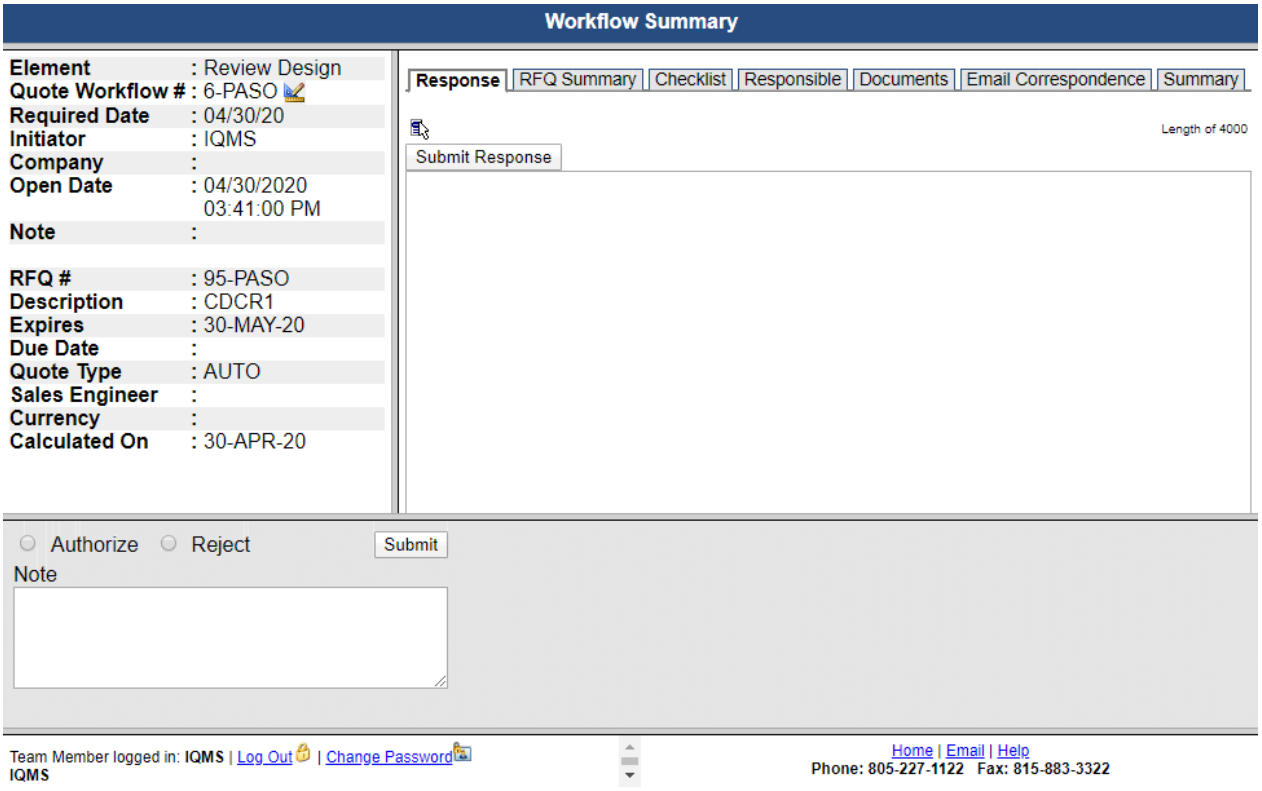
http://WTF-DEV-IIS2-OJ:8080/iqms/web_wf_admin.get_data?v_wf_responsibility_id=282&v_module=ENGQUOTE
Required Date: 04/30/2020

Thank you

(submission counter:)

The email provides a link to the browser. The browser form is where the Workflow Element is reviewed and either accepted or rejected by the team member. After clicking on the link, the user will be required to log into the network in order to access the Workflow review form.

Once logged in, the user will see the Workflow Summary form:



Note: Password Expiration Warning - If the user's password will expire within 30 days or less a message will appear stating, 'Warning Your password expires in x day(s). You need to change the password before the expire date. Would you like to change your password now?' Select 'Continue' to go to the workflow without changing the password, or select the 'Change Password' option to change the password. Users do have the option to change their password at any time via the 'Change Password' button at the bottom of the workflow web page.

Workflow Page

The left side of the Workflow Summary form displays the general information from the Workflow form in EnterpriseIQ including the RFQ #, Description, Company and Sales Engineer. This form shows the Notes entered in the Notes field on the main form. If the notes are larger than the display field, they can be viewed in their entirety by clicking on the + button. The Response notes entered on the response tab of the Workflow form will also display in the lower Note field.

Team members can select the **EIQ icon** next to the Quote Workflow # to jump to the quote in EnterpriseIQ. A confirmation message will appear stating, "About to jump to EnterpriseIQ. Please confirm to continue". Select OK to continue or Cancel to return to the summary. (Note: A second login will occur even though EIQ is already open if the shortcut to EIQ has "_multi_" added to the shortcut properties).

Note: This option is only available when using Internet Explorer (IE) with proper security levels set. When using another browser or if IE security is not established a message will appear stating, 'Unable to continue. Please check Internet Explorer security level. Error message = ActiveX object not defined. **Note**: Other browsers do not support this feature'. The settings for IE require that the server URL is added to Internet Explorer Trusted Sites, security must also be set to 'Low' for Trusted Sites to enable ActiveX controls, and set security to 'Low' for local intranet, and 'medium-hig'h for Internet security.

Note: When accessing a workflow through Smart Page, the system will jump to the EnterpriseIQ record with no message surfacing.

The right side of the summary form has six tabs:

- **Response** - Users can input a response by manually typing in the response section or select a predefined response from the response lookup list. To select from the Response Lookup list, select the response button and the Select Response form will appear. Enter the response information in the 'Search for' field, or leave it blank to return all responses, and select the Search button. The results will display. Select the desired response by clicking on the Code. The Response text is submitted by either clicking on Submit button, saying 'yes' the confirmation message, when clicking on another tab within the web approval page, or when logging out of the web approval page. All responses are available to other team members from their respective approval pages. The responses entered here will also transfer to the main form in EnterpriseIQ.
- **RFQ Summary** - This tab displays a PDF of all calculations. This is the same file that gets generated when using the 'Print RFQ' option. The RFQ Summary can be downloaded or printed by selecting the corresponding button on the form. There are also buttons to zoom in/out, or fit the document to the page.

- **Checklist** - Select the Checklist tab to view the checklist information along with the status of each checklist item in the Value column. To change the status of a checklist item, the user can select a value (Y, N, N/A) from the drop down list. If changes are made to the status the user must select the Submit Checklist Items button in the Checklist section to process the changes.
- **Responsible** - Select the Responsible tab to view the list of team members that are also responsible for the element. Users can send email to a team member directly from this tab by clicking on the team member's email address.
- **Documents** - Select this tab to view any attached external documents associated with the workflow, attached external documents associated to the specific element, or reports. The reports available are the same as what is in the Engineering Quotes module reports menu. If a team member is a customer or vendor, they are limited to viewing the current record only on a report. If the team member is not a customer or vendor, the selection criteria form will appear allowing the team member to enter the criteria desired for the report.
- **Email Correspondence** - If Email Correspondence is associated to the record it can be viewed from this tab. The tab will list all linked emails with the date received, who it's from, the subject, and the comment entered on the Email Correspondence tab in the module. The team member can click on the subject and the email will open in a separate pop up window.
- **Summary -** The Summary tab displays the Element summary information including responses.

Authorize, Reject, or Review:

Once the team member reviews/edits the checklist and responses, if they are an Authorize type team member, they will choose to authorize or reject the Workflow element. Review type team members will only be able to 'Submit Review'. If the team member rejects the element, a note must be entered in the Note field. Notes may also be added if the element is accepted. These notes will display on the Workflow form in the Note field on the line item associated with the team member.

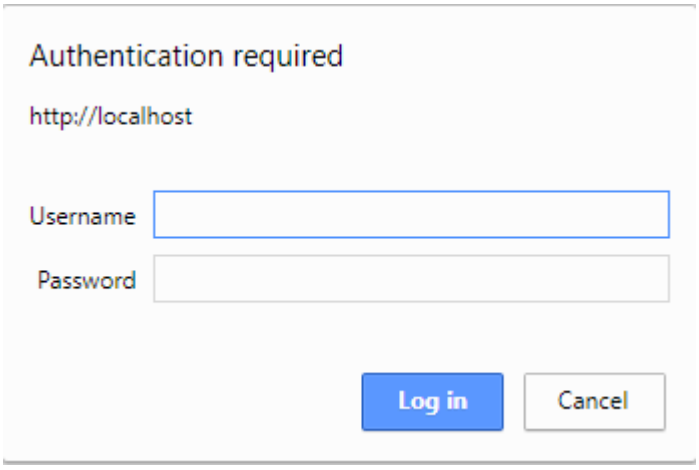
Note: If the user hits the back button on the browser and attempts to resubmit a workflow that has already been denied or approved, the user will receive an error: "There was an error processing your request. This element was already denied/approved on mm/dd/yy".

Once a team member has authorized/reviewed the Workflow element and submitted their response, the fields in the Response section of the Workflow form will populate with the new information such as Signoff (Y or N), Signoff Date, and Notes.

The text will also be color coded to visually show the status of the team member. The color codes are as follows:

- **Green** - The team member has approved the element.
- **Red** - The team member has rejected the element.
- **Blue** - A response is pending. The team member has been notified that an element needs to be reviewed, but has not yet replied.
- **Black** - The workflow has not been processed for the team member.

If the Electronic Signature option is selected when the team member clicks on the Submit button, the team member will be asked to enter their user name and password for the electronic signature.


Authentication required
http://localhost
Username
Password
Log in
Cancel

To enable this feature, check the 'Enable electronic signature sign off' in System Setup->System Parameters->Company File Information->Application tab. This is a global setting.

Completing a Workflow

Once an element has been approved by all Authorize type team members, the completion date will fill in automatically after the workflow is evaluated again. The team member ID that approved the element is stored in the WF_RESPONSIBILITY table (in SIGNOFF_TEAM_MEMBER_ID). This will populate with the team member ID of the user actually approving or rejecting the workflow element, including a delegate team member. If an element is re-wound and approved or rejected again, the value is re-written in the new column. An email will be sent to the Initiator and to team members that have the Receive Notification option checked when an element is completed. This check box is on the Responsible tab of each module.

Note: Review type team members can still access the workflow and submit their review after the element has been approved. The workflow will display this message "This element is closed, but has not been reviewed".

Rejected Elements

When an element is rejected, all users on the Responsible tab for the element set as 'Authorizer' will receive notification of the rejection, in addition to the user in the Initiator field. The email will include the record, element information, reason for rejection, and the authorizer that rejected the element.

 **My Pending Approvals** - This button will appear in the blue bar at the top of the web approval page. When the user mouses over the button, the hint will display the number of pending approvals they have. Click on the button to view the Pending Approval List.

My Pending Approvals

Material Review Board

	MRB #	Type	Initiator	Issue Date	Required Date	Element
	104-PASO	MRB1	JOE	09/18/12	09/18/12	Meeting

Expense Reports

Description	Submitted Date	Entered By	Report Total	Reimbursment Total
2014 ER	04/09/14	IQMS	560.00	505.00
User Group Expenses	11/05/12	IQMS	175.00	175.00

Employee Document Certification Training

Document #	Document Name	Revision	Certification
417	RealTime and RF for ASSY.docx	0.9	Certification Training 13
ABC123	DIMP.doc	3	Certification Training 25

Project Manager

	Project #	Project Name	Workflow #	Type	Initiator	Open Date	Required Date	Element
	67-3	67-3	178-PASO	BUILD	IQMS	09/30/13	02/06/14	Quote Customer

From this screen the user can select an item to review by clicking on the link.

Access Workflow from Responsible tab - The Responsible tab on the workflow form has an Approve Workflow speed button which enables team members to access the web based approval page for that specific record. Once the evaluate workflow process has begun this button will be enabled. Highlight your team member name and select the Approve speed button  . The web based approval page for the specific element will appear to authorize/review or reject.

Reset Element for Re-Evaluation

If an element has been rejected, the user can select the Reset for Re-Evaluation option to reset the workflow for the element  . Once reset, the element can be evaluated again using the Workflow function. The email notification that the team members receive has a submission counter to indicate the number of times an element has been evaluated.

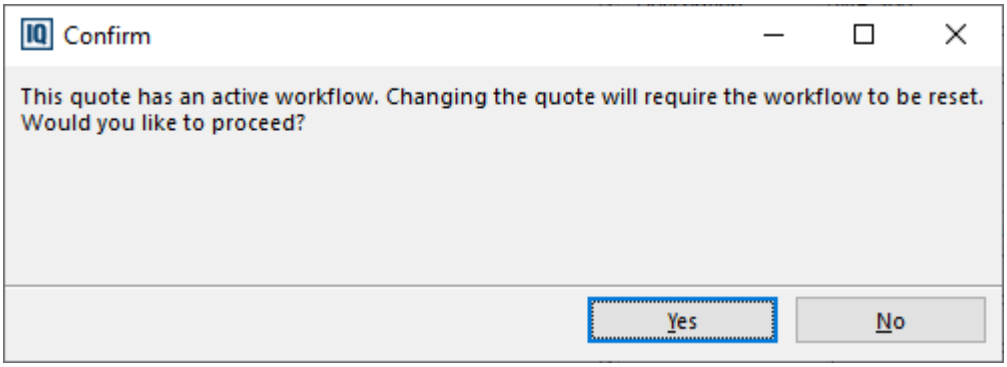
Clicking directly on the Reset for Re-Evaluation button will reset the workflow only for the selected team member that rejected the element. This can also be done by clicking on the drop down arrow next to the Reset for Re-Evaluation speed button, and choosing Reset This Rejected for Re-Evaluation.

Note: Archived quotes will retain the associated workflow record.

To reset the workflow for all team members for the element, click on the drop down arrow next to the Reset for Re-Evaluation speed button, and choose Reset All Records for Re-Evaluation.

Reset Workflows

A confirmation message will appear if changes are made to the quote. The pop up message will only display once for the first field a user changes.



The message includes Yes and No buttons:

- Yes - Select this to proceed with change and reset workflow to 'Inactive'. The Status field on the quote will be updated.
- No - Select this to cancel the change and not reset the workflow.

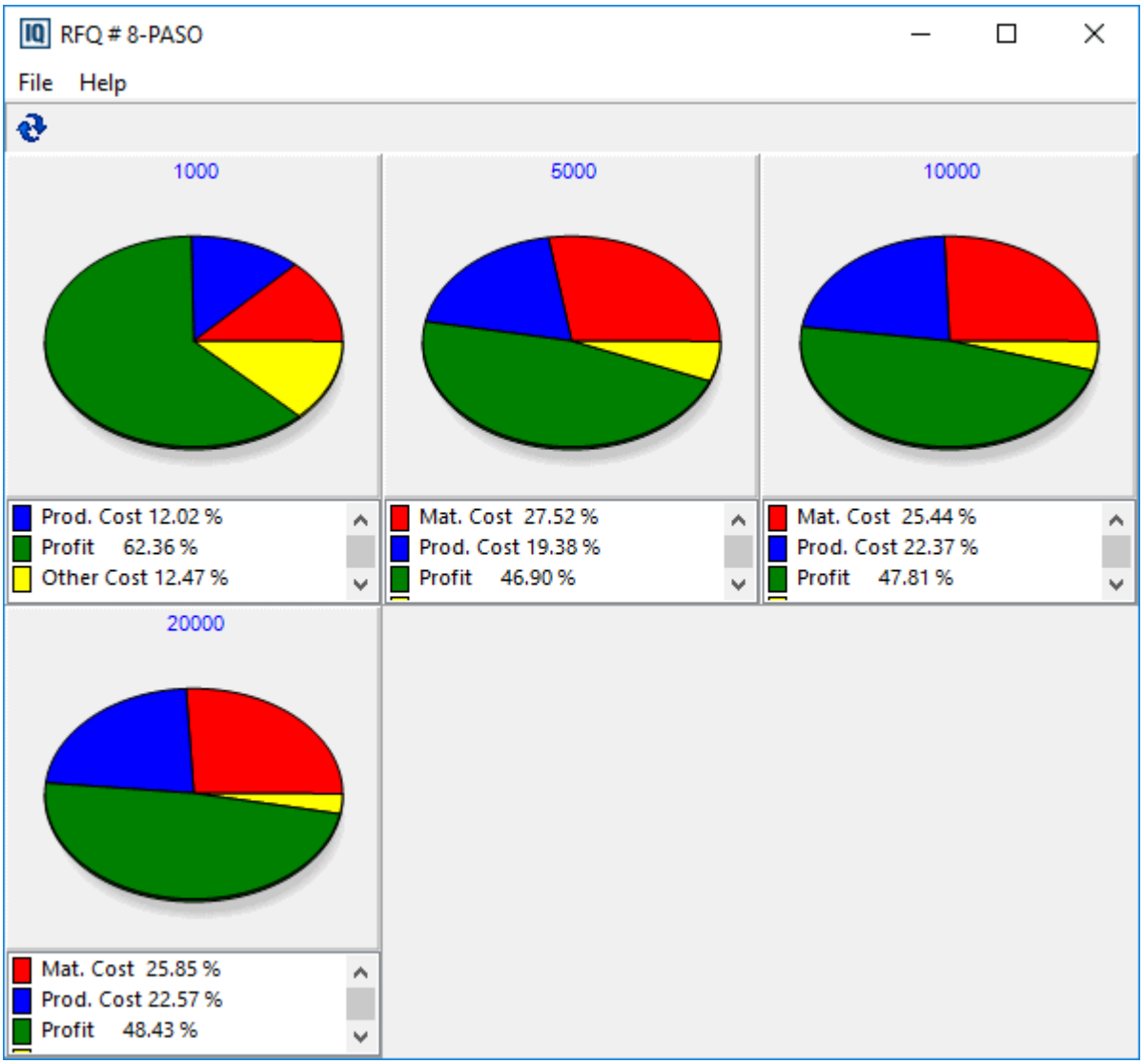
Security is available on this form to prevent users from selecting Yes.

Note: If changes have been made to the quote and a user attempts to mark the workflow active prior to recalculating the quote a message will appear stating: "Quote 'xxx' needs to be recalculated before activating the workflow".

Note: If a user attempts to delete a workflow when the 'Workflow Mandatory' parameter is enabled, an error will display stating: "Workflow cannot be deleted while "Workflow Mandatory" parameter is enabled."

Graphs in Quotations

Click on the Graphs button  to view the quote calculations in a pie chart format. The pie charts are based on a percentage breakdown of the calculations for this quote. After selecting Graphs, the following screen will appear:



The pie charts display the Material Cost %, Production Cost %, Other Cost % (Operation Costs), and Profit % for each quantity entered under the Rates and Parameters section.

 To rotate each graph, click on the “red” rotate arrow located in the upper left hand portion of this screen. This information is stored with the quote and is available for viewing at any time.

Print RFQ

 This option will print a two page print out of the general quote information including labor, material, blend details, part information, and the calculation information for the quote currently open. This report is hard coded into the system, it is not a Crystal Report and therefore cannot be edited. However, it will also create an Excel spreadsheet which is saved in the local home folder in a sub-folder named rfq_print. The location where these are saved can be changed by setting the location from the **RFQ Print -.xls Destination** option available from the Miscellaneous menu. Once this option is selected the user will see the spreadsheet briefly appear then a Print box will come up to choose the printer to send the report to or cancel if a hard copy is not desired.

Note: If the Control # Format field in System Parameters has been changed (and no longer matches the format of the RFQ Control # in the quote), the user will be prompted to recalculate the quote when attempting to print the RFQ.

Note: This feature requires that Microsoft Excel is installed on the computer. If it is not installed when the RFQ button is clicked a pop message will display stating "Microsoft Excel is required".

Note: If there are nine or more calculation quantities the additional quote quantities will spill over to additional pages and will not be aligned. To avoid this, you can calculate and print for calculation quantities 1 - 8, then do a separate calculate and print for any additional quantities.

Example RFQ spreadsheet:

Printed 9/18/2019				IQMS Quote Printout					RFQ 137-PASO PRODUCTION DETAILS BY QUANTITY - Cont.							
				RFQ: 137-PASO Rev. 1												
				Project: Quote for Docs						1000	2000	5000	10000	20000		
GENERAL QUOTE INFORMATION									Optm % Markup							
Customer	: ABCO					Cycle Time	: 16.00		Unit Cost		0.320955	0.221943	0.162535	0.142733	0.132832	
MFG #	: QFD1					Units/Cycle	: 2.00		Unit Price		0.504099	0.251094	0.185628	0.163807	0.152896	
Quote Date	: 6/25/2019					Operators	: 2.00		Price/1000		504.099000	251.094000	185.628000	163.807000	152.896000	
Expires On	: 7/25/2019					Default Lbr Rate	: 9.00		Gross Profit Margin %		33.15	7.19	8.06	8.51	8.78	
Last Calculated	: 9/18/2019 4:43:22 PM					Scrap %	: 5.00		Cost %		66.85	92.81	91.94	91.49	91.22	
Internal ID	: 246					Regrind %	: 25.00		Prod %		40.54	61.29	66.59	69.30	70.94	
Center Type	: 300								Material %		5.48	10.61	14.04	15.79	16.85	
Machine Rate	: 25.00 Rate does not include an Operator					Lbs/K-cycles	: 15.26		Net Value/Hr		112.44	43.39	35.35	32.67	31.33	
Setup Hours	: 2.00					Shot Wt(lbs)	: 0.02		Yield/Hr		184.29	86.81	61.72	53.36	49.17	
Start Cycles	: 50.00					UOM	: GR									
Currency	: United States Dollar (Rate: 1.00)								Prod Hrs		2.46	4.92	12.31	24.62	49.25	
MATERIAL INFORMATION									Oper Hrs		4.46	6.92	14.31	26.62	51.25	
Item #	: ABS-2802-NAT					Runner/Sprue	: 0.000000		Prod Labor		36.95	73.87	184.68	369.34	738.70	
Description	: BASF TERLUX ABS					Weekly Dry Hrs	: 0.00		Setup Labor		40.00	40.00	40.00	40.00	40.00	
									Overhead		117.70	179.27	363.93	671.73	1287.29	
LABOR INFORMATION									Dry Hrs							
	Operator	Code	Description	Rate					Start Hrs		0.25	0.25	0.25	0.25	0.25	
	1	OP	OPERATOR	15					Prod Cost		194.65	293.14	588.61	1081.07	2065.99	
	1	SETUP	SETUP LABOR	20					Operation Cost							
									Prod Markup		145.99	29.31	58.86	108.11	206.60	
PART INFORMATION									Total Prod Cost		340.63	322.45	647.48	1,189.18	2,272.59	
Part #1	: QFD1					Cavities	: 2.00		Fix % MarkUp		75.00	10.00	10.00	10.00	10.00	
Revision	:					Cavity Weight	: 3.46000000									
Description	: QFD1								Lbs Req		8.39	16.02	38.90	77.04	153.32	
Operation	Description								Cost/Lb		2.450000	2.450000	2.450000	2.450000	2.450000	
Q247.00	Attached Components								Plastic Cost		20.56	39.25	95.31	188.76	375.64	
Material Item #	Description			Parts Per	Scrap %				Comp. Cost							
IN-000300-2BR	INSERT 6035-2BR X .1			1.00	0.00				Pkg Cost		5.75	11.50	28.75	57.50	115.00	
Q248.00	Attached Packaging								Outsource Cost							
Material Item #	Description			Parts Per	Scrap %				Material Cost		26.31	50.75	124.06	246.26	490.64	
BX-05-CARTON	CARTON 05X05X05			1000.00	0.00				Material Markup		13.15	5.07	12.41	24.63	49.06	
PK-14-DIVIDER	14X14 DIVIDER			100.00	0.00				Total Matrl Cost		39.46	55.82	136.47	270.88	539.71	
									Fix % MarkUp		50.00	10.00	10.00	10.00	10.00	
									Extra Charges		100.00	100.00	100.00	100.00	100.00	
									Commissions		0.024005	0.011957	0.008839	0.007800	0.007281	
									Total Revenue		480.09	478.27	883.94	1560.06	2912.30	
									Total Cost		320.95	443.89	812.68	1427.33	2656.63	
									Total Profit		159.14	34.39	71.27	132.73	255.66	
									VAP %		35.07	8.04	9.38	10.10	10.56	
									VGM %		59.10	38.38	33.30	30.70	29.12	
									VGM Amount		0.590987	0.383841	0.333009	0.306993	0.291233	
									VGM/Hr		0.240239	0.078016	0.027052	0.012469	0.005913	
									IND PART							
									QFD1		0.504099	0.251094	0.185628	0.163807	0.152896	

Quote Inventory

The **Quote** module supports both a Master Inventory file, which is used by the full system, and a Quote Inventory file, used only in the quote module. The Quote Inventory file can be based on the Master Inventory or it can contain items that are not a part of the Master Inventory. Changes made to items in the Quote Inventory will not be mirrored in the Master Inventory.

New items can be added to the Quote Inventory. These items will not show up in the Master Inventory unless you convert a quote that is using one of these items over to a BOM. When a quote is converted to a BOM, **EnterpriseIQ** adds any new item(s) to the Master Inventory.

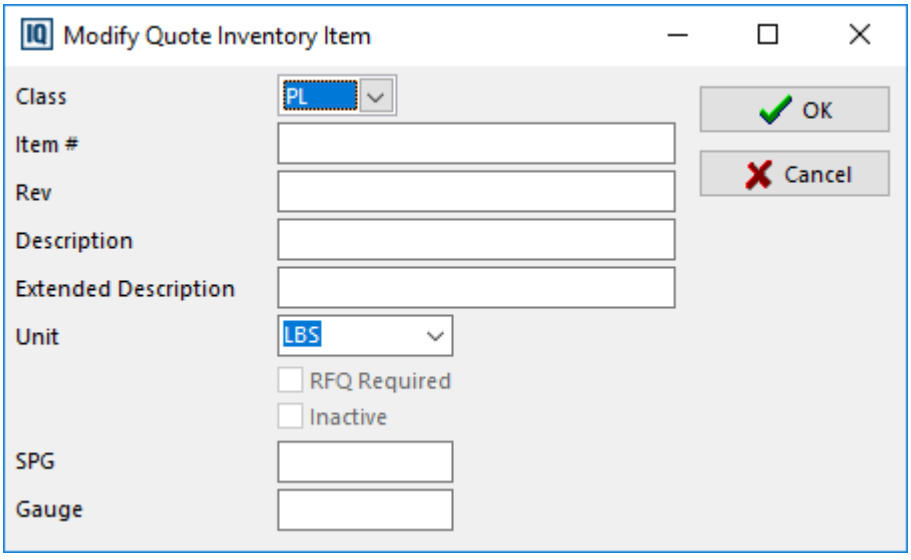
To access the Quote Inventory screen, select **Miscellaneous|Quote Inventory** from the main menu.

The following functions are available in the Quote Inventory maintenance screen.

- **Add**- Two options will be available for you to select from--Material and Blend.
- **Edit** - Select the item from the list that you wish to make changes to and then select **File|Edit** to bring up the following screen.
- **Delete** - Selecting Delete will bring up a confirmation box with a prompt asking the user to confirm the deletion. Click [**OK**] to remove the item from the Quote Inventory List.
- **Search** - The user can search for an item using the following methods: Use the pick list, or place your cursor in the "Search Quote Inventory" (hyperbrowse search method) field at the top of the Quote Inventory Maintenance screen. Type in the Class and the item number and the hyperbrowse will find the item.

Adding Items to the Quote Inventory

Selecting Material will bring up the following screen:



- Select the class by clicking on the arrow down button.
- Enter the Item #, Rev, Description, and Extended Description.
- Select the Unit of measurement (i.e. LBS, GAL, KG) from the arrow down list.
- Enter the SPG (specific gravity) and Gauge if desired (class PL items only).
- Click on [OK] and the item will appear in the Quote Inventory List.
- Enter in the Quantity and Price Break information for the item in the fields to the right.

Note: Items in the quote inventory are not unique. It is possible to have the same item listed multiple times in the quote inventory, this is because it has been added to multiple RFQ's.

Edit Items

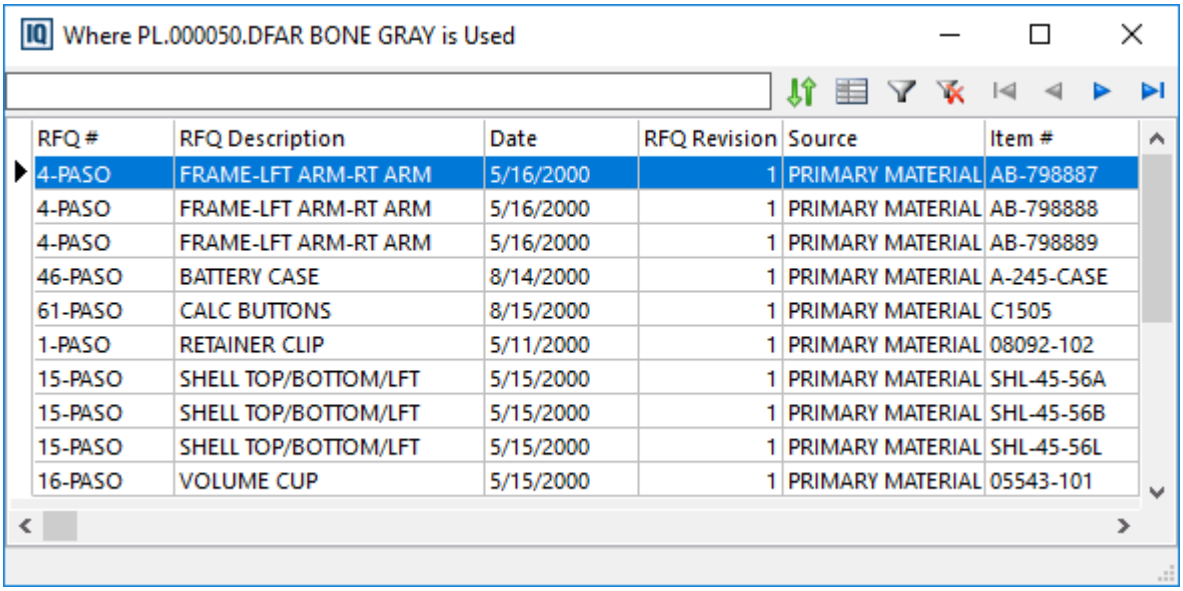
Select the Edit option from the File menu to make changes to an item. Quote Inventory can be marked Inactive which will hide it from the lists. Users can use the Show/Hide Inactive toggle button on the Quote Inventory screen to show or hide the inactive quote inventory. There is also a toggle button on the pick list. If an item in Master Inventory is marked inactive a confirm message will appear asking if the user would like to inactivate Quote Inventory as well. If Yes is selected the quote inventory item will be marked inactive as well as the master inventory item. If a master inventory item is toggled back to active, the quote item is not automatically marked active. If the quote item should be active again users must uncheck the box from the Modify Quote Inventory Item form.

Options

Under *Options* on the Quote Inventory Menu Bar, the following options are available:

- **Confirm Every Transfer** - If checked, when making transfers from Master Inventory to Quote Inventory, the user will receive the following prompt “Update Quote Inventory List?” If unchecked, the items are moved without the prompt.
- **Include Prices with Transfer** - If checked, when making transfers from Master Inventory to Quote Inventory, the quantity and price break information will transfer with the item.
- **Reset Screen** - Resets the screen to the default settings.

Where Used - Right click from the middle section and select Where Used to view a list of RFQ's where the highlighted item is used. Right click jump option is available on this form to jump to the highlighted RFQ.

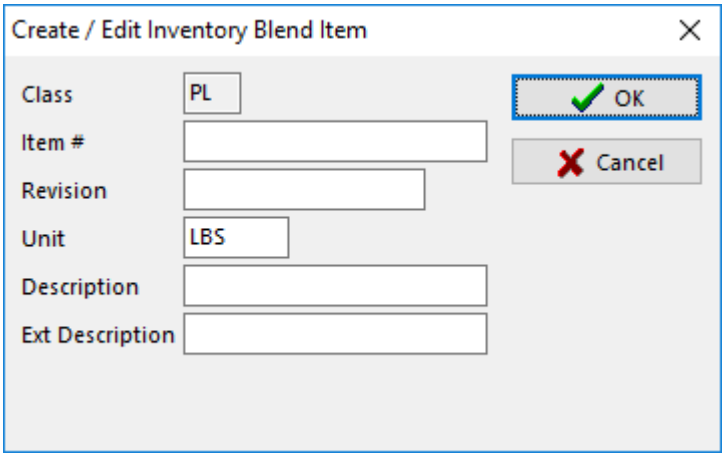


Both active and inactive pricing from the Buy/Sell tab in inventory will appear in the Master Inventory section, and active and inactive pricing will appear in the Quote Inventory List. To only see active pricing select the Hide/Show Inactive button  available in both sections.

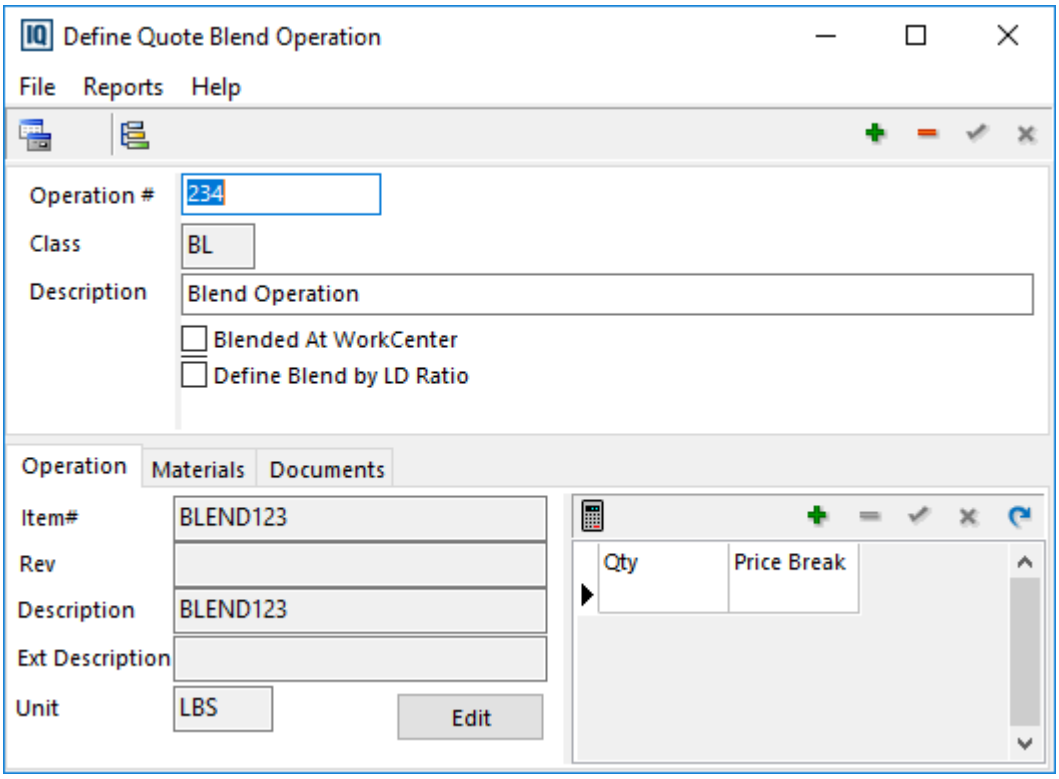
Note: If the 'Use Master Inventory Std Cost for Component Pricing instead of Price Breaks' quote parameter is checked the standard cost will be displayed instead of the price breaks.

Adding Blends to the Quote Inventory

If **Blend** is selected, the following screen will appear:



- The class will default to PL and cannot be changed.
- Enter the **Item #**, **Rev**, and **Description**.
- Select the **Unit** of measurement (i.e. LBS, KG).
- Click on [**OK**] and the following screen will appear:



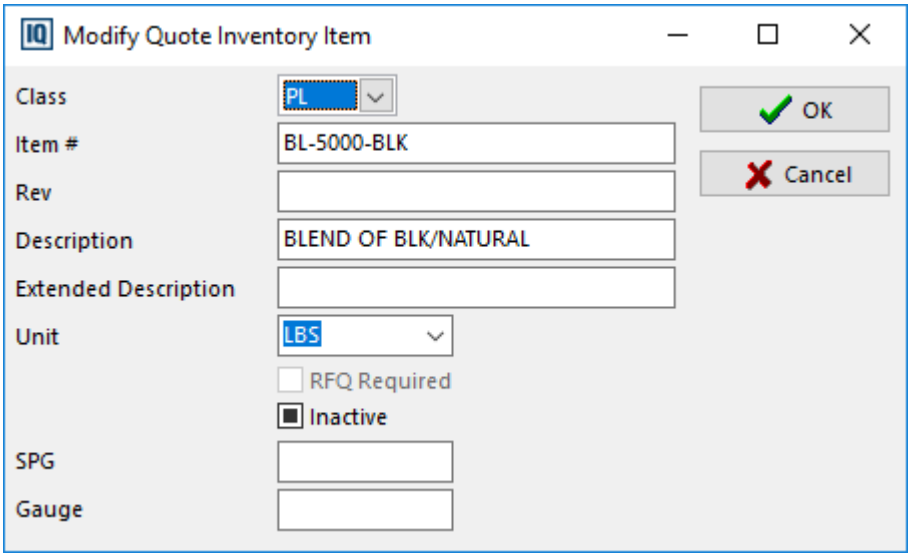
- The system will assign an **Operation number** and **Description** to the blend operation and the **Operation Info** tab will be filled in with the **Item #, Rev,** and **Description** and **Unit** entered above.
- Click on the **Blended at Work Center** check box if the item is to be blended at the work center.
- The user may choose to define the blend based on a **Let Down Ratio** versus percentages.
- Define the blend operation by clicking on the **Materials** tab and entering the additives and/or raw materials (along with percentages or Let Down ratios) that make up the blend.

NOTE: The total of the blend percentages for the individual components of the blend must equal 100.

- To calculate pricing for the blend from the individual prices of the components, go to the **Operation Info** tab, click on the **Calculate Blend Price Breaks** button, and select the component to be used as the basis for the price. The price breaks for the blend will then be calculated and displayed.
- When finished creating the blend, click on **File|Exit.**

Editing Items in the Quote Inventory

Select the item from the list that you wish to make changes to and then select **File|Edit** to bring up the following screen.

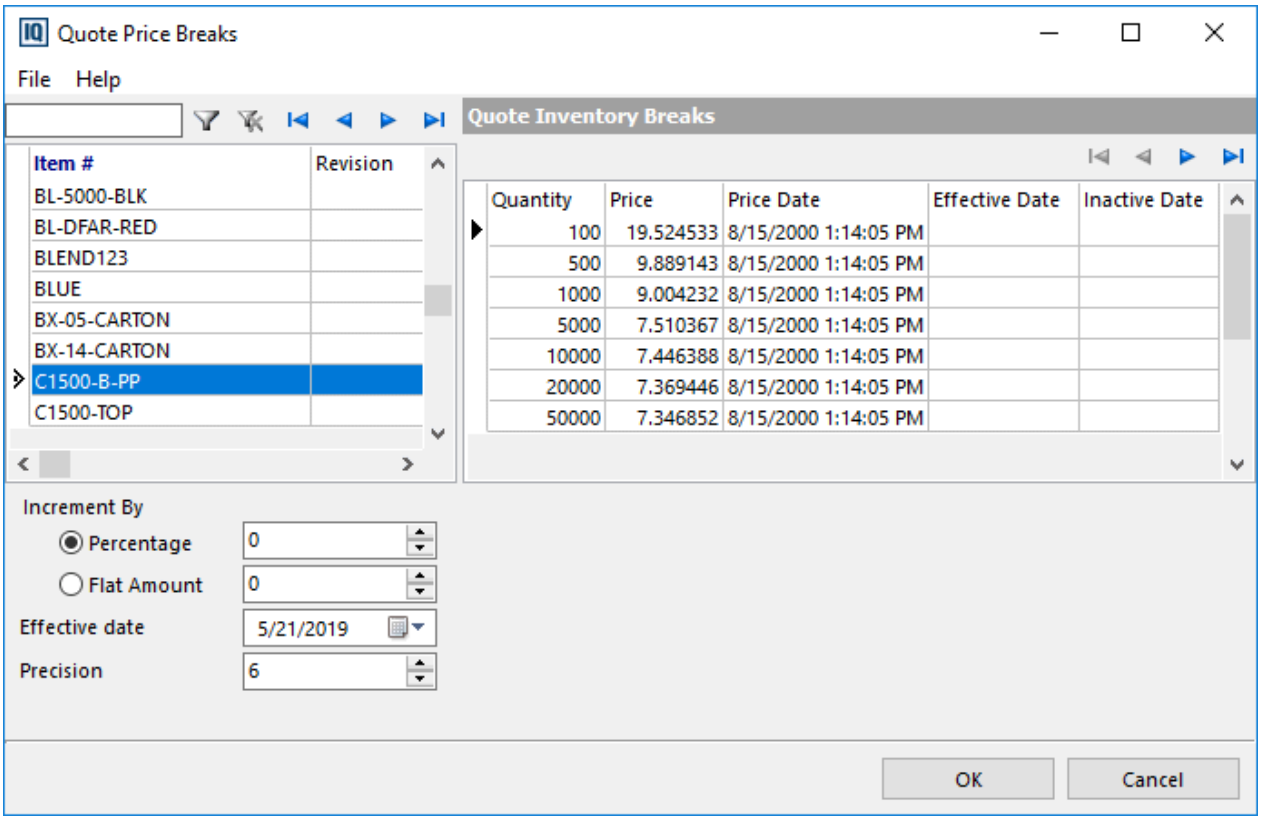


Make your changes and press [**OK**] when finished.

NOTE: The user can only Edit items in the Quote Inventory list--not in the Master Inventory list. The same applies to deleting items.

Mass Update Pricing for Quote Inventory

Users can update Quote Inventory pricing based on a percentage increase or decrease or a flat amount with an effective date for specific items. Select Mass Update Pricing from the Options menu. The system will calculate the new unit price and update the Quantity Price Breaks in the Quote Inventory Maintenance with the new prices. The Price Date field will populate with the current system date/time. The Inactive Date for the old pricing will populate with the system date.



To update pricing find the item(s) in the list that you would like to change the price breaks on. To find a specific item, enter information in the white box at the top of the form based on the sort criteria chosen (Item #, Rev, Description, Class, Ext Description). Advanced filtering is also available. Multiple items may be selected using the toggle buttons or the Ctrl and Shift buttons on your keyboard. Once the item(s) are selected the prices can be changed based on a Percentage or Flat Amount. Select the option and then enter the corresponding value. (To enter a decrease put in a negative number). Enter the effective date from the drop down calendar and the decimal precision level required (up to six decimals).

Click on the OK button and the system will calculate the new pricing and update the Quantity Price Breaks in the Quote Inventory Maintenance with the new prices.

Attached Items Maintenance in Quotes

Allows the user to create new packaging items, components (inserts), and/or raw material blend operations or edit any of the existing operations. This screen defines the operation, shows the materials (or components) that will be consumed, and allows the entry of Standard Labor Rates (located under Misc). Access this screen from **Misc|Attached Items Maintenance** and switch between the different types of items by selecting **View** from the menu. Examples of **Attached Items Maintenance** include:

- **Attached Packaging** - Review and/or change packaging operations.
- **Attached Components** - Change the details of attached components operations.
- **Blends** - Edit blend operations by changing blend percentages, blend components or pricing.
- **Process /Std Operation** - Edit attached processes or operations by changing the labor rate, the cost element or the materials involved.

Auxiliary Equipment

Allows the user to set up auxiliary equipment used in the production process, such as dryers, conveyors, etc. The auxiliary equipment can have hourly charge rates that will be used in calculating the overhead cost.
Create Auxiliary Equipment

Prior to assigning Auxiliary Equipment to a quote, the equipment must be added to the Auxiliary Equipment list. To add equipment to the list:

- Select **Misc|Auxiliary Equipment** from the main menu:
- Place the cursor in the Description column, and enter the description of the equipment.
- Move to the Rate column and enter the hourly charge rate for the equipment. This rate will be added to the machine rate and included in production costs.
- Move to the How Many column and enter a number showing how many of these particular items are available on the floor.
- To add Additional equipment, click on the **Add [+]** and enter the details.

Please see Assigning Auxiliary Equipment for additional information.

Work Centers - Access from the Estimating Module

- Select **Misc/Work Centers** from the main menu:
- Work centers are used to describe the type of equipment used to manufacture the items. Examples of work centers may include injection or blow molding machines, extruders, assembly tables, pad printers, heat stamping centers, etc.

NOTE: **EnterpriseIQ** recommends that work center information be entered into the Work Center module prior to creating a quote.

The user can Add, Edit, Delete, assign RealTime information or assign Cells by selecting this option.

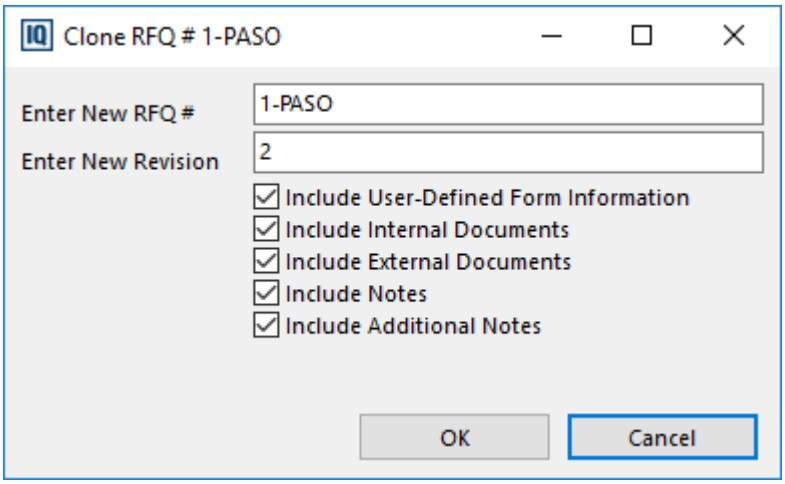
Entering work centers is discussed in more detail in the work center section.

Cloning a Quote

The cloning feature allows the user to create a duplicate of the quote and then make desired changes. This will create a new quote with either the new RFQ# or new revision using the system date as the RFQ date. This is excellent for tracking quote revisions, changing cavitation without having to enter all the data in again, or for doing "What If?" calculations. All of the information is cloned except the created by field does not populate on cloned quotes.

To **CLONE** an existing quote:

- From within the Quote module, select **File|Clone** from the main menu. The following screen will appear:



- The user can choose to enter a new RFQ# or keep the same RFQ # and create a new revision of that quote. The screen will default to display the same RFQ # with the revision incremented by one. Either field can be overwritten. Once entered press **OK**

- When cloning users can choose to include the User Defined Form, Internal Documents, External Documents, Notes and Additional Notes by checking the box.

Multi-Currency

If Multi-Currency is enabled, click on the **FxRate** button  on the **Calculations** screen to see what the values would be in the available currencies.

EIQ Bookmark for RFQ

This option allows the user to drag and drop the icon onto the desktop or a folder in order to open the exact RFQ up again with one click. Select the  EIQ Bookmark button then drag it to the desktop or folder and drop it. The shortcut will be named QUOTE_id#.eiq by default.

Trace Quote

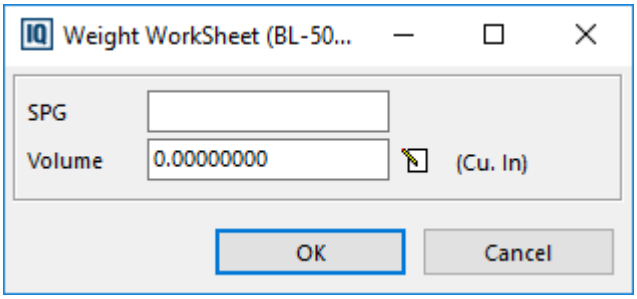
Users can utilize the trace option from the General Quote Values tab and the Item Details tab.

For more information on Trace please see IQTrace Tables for more information.

Weight Work Sheet

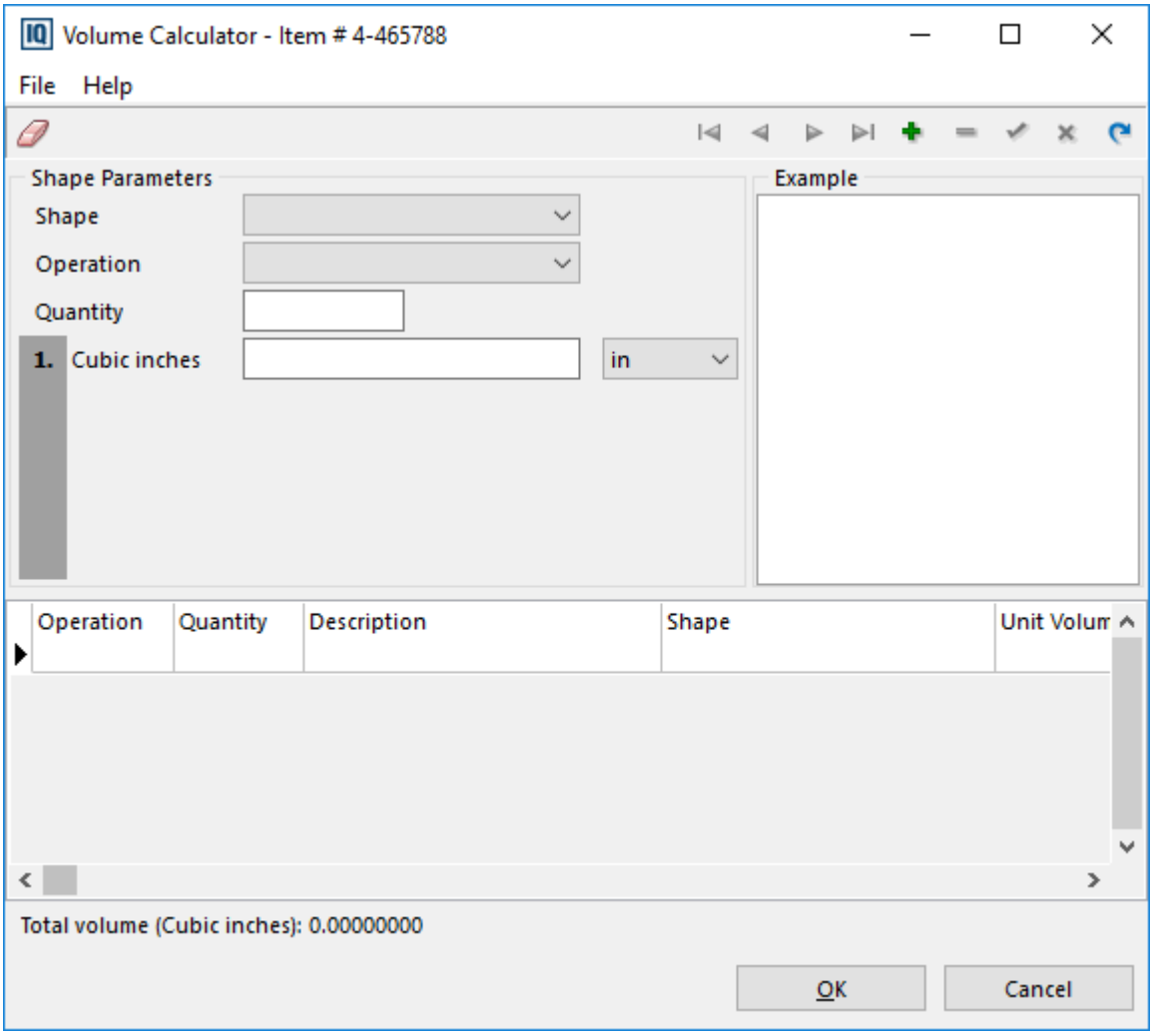
To have the system calculate the volume of an item, follow the steps below.

- Click on the **Weight Work Sheet** button  next to the Item Weight field located on the Item Details screen. The following screen will appear:



- Enter the **Specific Gravity** (SPG) of the item. The SPG should be available from the manufacturing specification sheet for the material. If the item is in master inventory and the SPG has been entered on the Additional tab it will fill in automatically with that value.

- Enter in the volume of the item or click on the **Volume Work Sheet** button next to the Volume field to calculate the volume. The following screen will appear:



- From this form users can build the item using the various shapes within the system and specifying each shapes dimensions.

- Select the UOM that the volume will be calculated in by clicking on the arrow down list within the UOM field. Select **in** for *cubic inches,* **cm** for *cubic centimeters,* or **mm** *cubic millimeters*.

Adding Shapes

To add a shape:

- Click on the **Add [+]** button on the Navigator bar.

- Select a geometric **Shape** from the arrow down list of shapes. The Custom Volume Value option allows the user to add volume values for unknown shapes.

- Select an **Operation**. Selecting **Solid** will **add** a positive value to the total volume and selecting **Vacuum** will **subtract** a negative value from the total volume.

- Enter the **Quantity** to calculate how many of the selected shapes to be added to the list. The default is one.

- Enter the **Shape Dimensions**. Depending on the shape of the item, this will include the radius, height, wall thickness, width, depth, and/or length.

- Click on the **Post/Edit** button (the check mark) to add the shape to the list at the bottom of the page.

- Type a **Description** (*optional*) for the shape in Description field in the table.

- To add additional shapes, click on the **Add [+]** button on the Navigator bar and repeat the above steps.

- Once all entries have been made, click **[OK]** to exit the **Volume Calculator** to the **Weight Worksheet** screen and click **[OK]** again to apply the amount to the **Weight** field within the quote.

Note: The system remembers the detail data within the Volume Calculator for a given RFQ number. This allows the user to view and edit how an item's volume calculation at any time.

Editing Shapes

To edit an existing entry in the volume calculator table:

- Select the record from the list at the bottom of the page.

- Change the values to the new entries and click the **Post/Edit** button (the check mark). To apply the total item volume to the Weight Work Sheet, click on [**OK**].

- Once all changes have been made, click **[OK]** to exit the **Volume Calculator** to the **Weight Worksheet** screen and click **[OK]** again to apply the amount to the **Weight** field within the quote.

Formulas Used in the Volume Calculator

The following table defines the formulas used by the **EnterpriseIQ** Volume Calculator.

Cone - Hollow	R = Radius of Larger Cone R2 = Radius of Smaller Cone = R - T S = Diameter = R * 2 S2 = Diameter = R2 * 2 T = Wall Thickness LB = Base area of larger cone = (S * S) * 0.785 SB = Base area of smaller cone = (S2 * S2) * 0.785 VolConeL = Volume of larger cone = ((LB / 3) * H) VolConeS = Volume of smaller cone = ((SB / 3) * (H-T)) H = Height Cone - Hollow = (VolConeL - VolConeS) [Difference between two volumes.]
Cone - Partial	D1 = Base Width D2 = Top Width H = Height Cone - Partial = (0.2619 * H) * ((D1 * D1) + (D1 * D2) + (D2 * D2))
Cone - Solid	H = Height R = Radius S = Diameter = R * 2 AB = Area of Base = (S * S) * 0.785 Cone - Solid = (AB / 3) * H
Cylinder - Solid	R = Radius H = Height S = Diameter = R * 2 Cylinder - Solid = ((S * S) * 0.785) * H
Cylinder - Thru	H = Height R = Radius T = Wall Thickness OD = Outside Diameter = R * 2 ID = Inside Diameter = (R - T) * 2 OC = Outside Cylinder = ((OD * OD) * 0.785) * H IC = Inside Cylinder = ((ID * ID) *0.785) * (H -T) Cylinder - Thru = OC - IC [Subtract the volume of the smaller cylinder from the larger cylinder.]

Cylinder - with Base	H = Height R = Radius T = Thickness OD = Outside Diameter = R * 2 ID = Inside Diameter = (R - T) * 2 OC = Outside Cylinder = ((OD * OD) * 0.785) * H IC = Inside Cylinder = ((ID * ID) *0.785) * (H -T) Cylinder - with Base = OC - IC [Subtract the volume of the smaller cylinder from the larger cylinder.]
Pyramid	L = Base Length W = Base Width H = Height Pyramid = = ((L * W) / 3) * H
Rectangle - Open Ended	L = Length W = Width D = Depth L2 = Inside Length W2 = Inside Width Rectangle - Open Ended = (L * W * D) - (L2 * W2 * D)
Rectangle - Solid	L = Length W = Width D = Depth Solid Rectangle = (L * W * D)
Rectangle - Thru	L = Length W = Width D = Depth L2 = Inside Length W2 = Inside Width Rectangle Thru = (L * W * D) - (L2 * W2 * D)
Rectangle - with Base	L = Length W = Width D = Depth T = Wall Thickness T2 = Wall Thickness, Doubled = T * 2 Rectangle with Base = (L * W * D) - ((L-T2) * (W-T2) * (D-T))
Sphere - Hollow	R = Radius T = Wall Thickness S = Diameter of larger sphere = R * 2 S2 = Diameter of smaller sphere = (R - T) * 2 VolSphereL = (S * S * S) * 0.524 VolSphereS = (S2 * S2 * S2) * 0.524 Sphere - Hollow = (VolSphereL - VolSphereS) [Difference between two volumes.]
Sphere - Solid	R = Radius S = Diameter = R * 2 Sphere - Solid = (S * S * S) * 0.524

Torus	L = Length (outer radius R) R = Radius (inside radius) Torus = $2 \times \Pi^2 \times R \times r^2$

Note: The Volume Calculator is also available from the Options menu. When accessed from the Options menu it is used as a volume calculator only and the values are not saved to the current open quote.

Main Menu Bar Functions and Speed Buttons

Menu functions are available across the top of the Quote module. These functions are discussed in the following pages.

File

Under **Quote** on the main menu, the following functions are available:

- **New** - Create a New quote. Clicking on the **Add [+]** key on the Navigator bar will also perform the same function. From New menu item in Quoting users can also convert a quote from a BOM. select New->Convert from BOM. There are two options: 'Convert to Quote (Single Level' and 'Convert to Quote (Multi Level)'.
- **Delete** - Delete a quote. Clicking on the **Delete [-]** key on the Navigator bar will also perform the same function.
- **Search** - "Search" for a particular quote using a pick list. The pick list can be sorted by RFQ#, RFQ Description, Date, Rev #, Item Description, Item # or Customer Name.
- **Archive** - Select this option to Archive the quote. This will allow the user to filter the quotes based on Open or Archived. From the Options menu the user can select which type of quotes to view: View All, View Open, or View Archived.
- **Restore from Archive** - This will restore an archived quote back to open status.
- **Clone...** - This function will create a new quote with the same RFQ # and a new revision or a new RFQ#. This can be used for changing cavitation or material without having to reenter all the data, or for doing "What If?" calculations.
- **Convert to BOM** - This function allows the user to convert a quote to a BOM without having to go through the Edit Quote section. Please see Converting a Quote to a BOM for Additional information.
- **Exit** - Closes the Quote Module.

Options

Selecting **Options**, provides the following functions:

- **View/Edit Operations -** Allows you to view/edit packaging operations, component operations, blends, or standard operations/routing. To choose which view, click on **View** from the menu and select the type of operations you want to see. Then choose from the pick list the specific operation to view/edit. See Attached Items Maintenance in Quotes for more information.
- **Display Production Summary** - Allows the user to view a Production Summary Report of the quote that is currently being viewed. In addition to the RFQ # and Manufacturing #, the fields on the Production Summary screen are described below.

Description	Quote Description.
Revision	Quote revision.
Date	Quote date.

Expires	Quote expiration date.
Company	Customer associated to the quote.
Commission %	Commission rate percentage.
Manufacturing Type	Manufacturing Type associated to the quote.
Manufacturing Cell	Manufacturing Cell associated to the quote.
Start/Cycles	The number of shots required to “dial in” a tool or get an operation up and running.
Lbs/Hr	Extrusion MFG Type only.
Cycle Time	The time, measured in seconds, that it takes to make one unit.
Set Up Hours	The number of hours that it will take to prepare work station.
Wkly Dry Hrs	The number of hours that a press will be down due to material drying at the press.
Center Type	The work center type that the item is made on. For Extrusion MFG Type: Line Size
Center Rate	The cost to operate the work center plus profit and/or markup.
Operators	The number of operators required to run the operation.
Scrap %	The estimated amount of scrap the process will generate.
Units/Cycle	The number of units per cycle.
Hours/K-cycles	The number of hours to complete 1000 cycles. **Calculation**: 1000 / Cycles per Hour
Hours/K-units	The number of hours to complete 1000 units. **Calculation:** (1000 / Units per Cycle) / Cycles per Hour
Cycle/Hr	The number of cycles completed per Hour. **Calculation**: 3600 / Cycle Time
Feet/Lb	Extrusion MFG Type only.
Feet/Hr	Extrusion MFG Type only. Feet/Lb x Lbs/hr
Length (ft)	Extrusion MFG Type only. (Pt. Length)

Inch/Min	Extrusion MFG Type only. [((Feet/Lb * 12) * Lbs/Hr)/60]
Shot Wt(lbs)	The shot weight in pounds. **Calculation**: ((Cav. x Cavity Wt.) + Runner/Sprue). (divide by 453.6 if the weights are in grams)
Lbs/K-cycles	The amount of material required to complete 1000 cycles. Used in material planning.
Regrind %	Estimated amount of regrind that the process will generate.

Click on the [**x**] in the upper right hand corner of this screen to exit back to the General Quote Value screen.

- **Display Calc Parameters** - Allows the user to view (from the Calculations screen) the calculation parameter information in addition to the calculated values.
- **Volume Calculator** - The user can estimate the volume of an item using the Volume Calculator. When accessed from the Options menu it is used as a volume calculator only and the values are not saved to the current open quote. This function can also be accessed from the Item Details screen by clicking on the icon next to the Weight field. When accessed from the Item Details tab the information will be saved and populate the Volume field on the weight worksheet. Refer to the Weight Work Sheet topic for details.
- **Engineering Quote Types** - This is a list of Quote Types for use in the Workflow module associated to Engineering Quotes.
- **Do not filter out CRM Customers** - This is an option to have the CRM customers appear in the pick list when choosing a customer for the quote. If the CRM customer quote is converted to a BOM, the CRM customer becomes an active customer and is included in the EnterpriseIQ Customer Maintenance module. Note: If this option is not checked a quote for a prospect will appear in the pick list but cannot be opened.
- **Views** - The user can select which types of quotes to view: View All, View Open, or View Archived. Based on the selection the pick list and the navigator buttons will only display those quotes associated to the type selected.
- **User Defined Form** - Allows the user to add new fields to a blank, user defined table. A maximum of 30 new descriptive fields can be established. These fields can then be used in customized reports. This is also available from the User Defined Form tab at the bottom of the General Quote Values (main form). For information on setting up the user defined form please see User Defined Forms in the Setup manual.

Reports

Selecting **Reports** provides the following functions:

- **Print** - Shows the different reports available for printing.
- **Quote Letter** - **Note**: This feature is currently unavailable in this version of WebIQ. In the desktop version this allows the user to create a quote letter using Microsoft Word and save it as a template. In order to use this feature, Word must be installed on the workstation you will be printing or creating the quote letter from. Please see Printing the Quote Letter for additional information.

Help Menu

Contents launches the Help Files.

About displays version number and date of the EnterpriseIQ system.

Visual Quote Routing

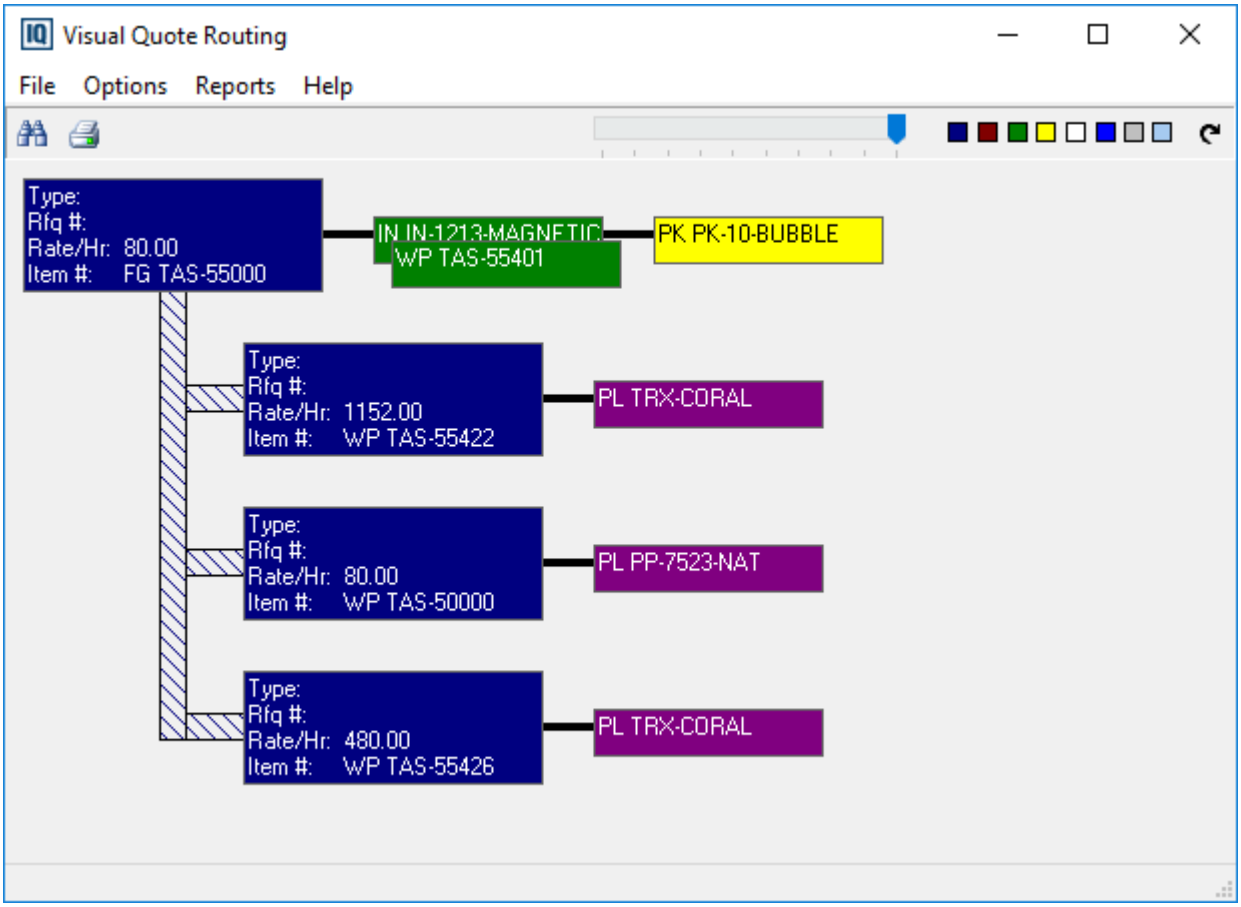
The **EnterpriseIQ** Visual Quote Routing module is a tool which enables the user to create a routing of quotes in a more visual way or view existing Quotes visually. This option is very similar to the Routing Diagram option available from the items details tab of a BOM except the Visual Quote Routing module has add and edit capabilities.

From this screen the user can create the Quotes for the entire routing process. To create a Quote Routing diagram, you start at the end of the process and work your way to the beginning routing steps required to make the final item. Once it is created it can be viewed in the original Quote format.

Overview

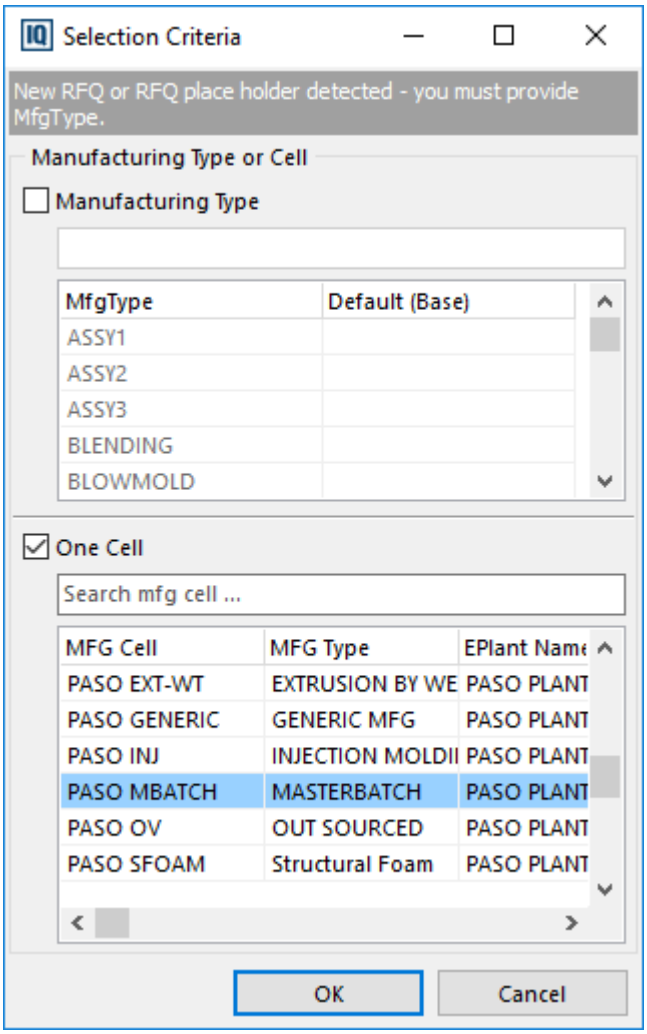
The basis of the EnterpriseIQ Visual Quote Routing module involves creating a routing structure for products to be quoted. This module is used to create routing diagrams for repetitive type manufacturing processes.

Below is an example of a Visual Quote Routing diagram:



Creating a New Visual Quote Routing

To create a new Quote Routing diagram go to the Visual Quote Routing speed button on the main launcher bar  . Click on the New button on the pick list and the following screen will appear:



From this screen you may choose a Mfg Type and cell you want the Quote assigned to.

Once a Mfg type (and optionally a cell) has been selected the Quote screen will appear. The work centers available will be based on the on the manufacturing type selected. Enter in the Quote information as described earlier in this document.

Once the information is entered, click on the OK button and the Visual Quote Routing screen will appear showing a blue box with the basic information regarding the step. Below is an example:

This box shows the work center type, RFQ #, a calculated rate per hour based on the cycle time in seconds (The calculation is 3600/cycle time in seconds), and the Item #.

Adding Routing Quote

To continue creating associated Quote Routing operations, right click and choose **Add Routing Quote**. Choose the Mfg Type and cell (optional) then fill in the fields on the form with the information for the step. An unlimited number of Quote Routing steps can be created.

Other Right Click Options

- **New Routing Quote** - This options starts the process from the beginning by creating a new top level quote.
- **Edit Routing Quote**- This function brings up the Quote for editing purposes.
- **Delete Routing Quote**- This function will delete the Quote Routing step you right clicked on and all of its attached steps. This only removes the routing step(s) from the diagram it does not delete the Quote(s). A pop up screen asking if you are sure will appear. To delete the step, click on the Yes button.
- **Expand** - This right click function opens up the colored box that was right clicked on to show additional information about the routing step. In addition to the four fields shown on the non expanded box, you will see the Item Description, Parts Per, and Required.

Under 'Options', Toggle Expanded allows the user the choice to be able to expand multiple windows or only one at a time. With this option checked, only one box may be expanded at a time. With this option not checked, multiple boxes may be expanded and open at one time.

- **Jump to Quote** - This function will take you to the Quote screen for the item that was right clicked on.

Color Coding

Each type of attached operation/component has a corresponding color associated with the information box.

- Blue - represents a BOM / Routing.
- Purple - is the Primary raw material.
- Green - is a Purchased Component.
- Yellow - is a packaging item.
- White - is a purchased component used in a sub-operation. A sub-operation is an operation attached to an existing BOM which has been attached to the BOM Routing. If components are attached to this sub-operation they will show in white.
- Medium Blue - is an Outsourced BOM.
- Gray - is a Process
- Light Blue - is an Assy Process

Once a Visual Quote Routing diagram is created, all of the steps are treated like traditional Quotes. All additional quoting functions can be done from the traditional quote form.

Note: When searching in the pick list, if a user is assigned CRM Customer Access in security inspector, when accessing the Visual Quote Routing pick list, the customer name field will be blank for records that have customers that are NOT assigned to the user.

Vendor RFQ

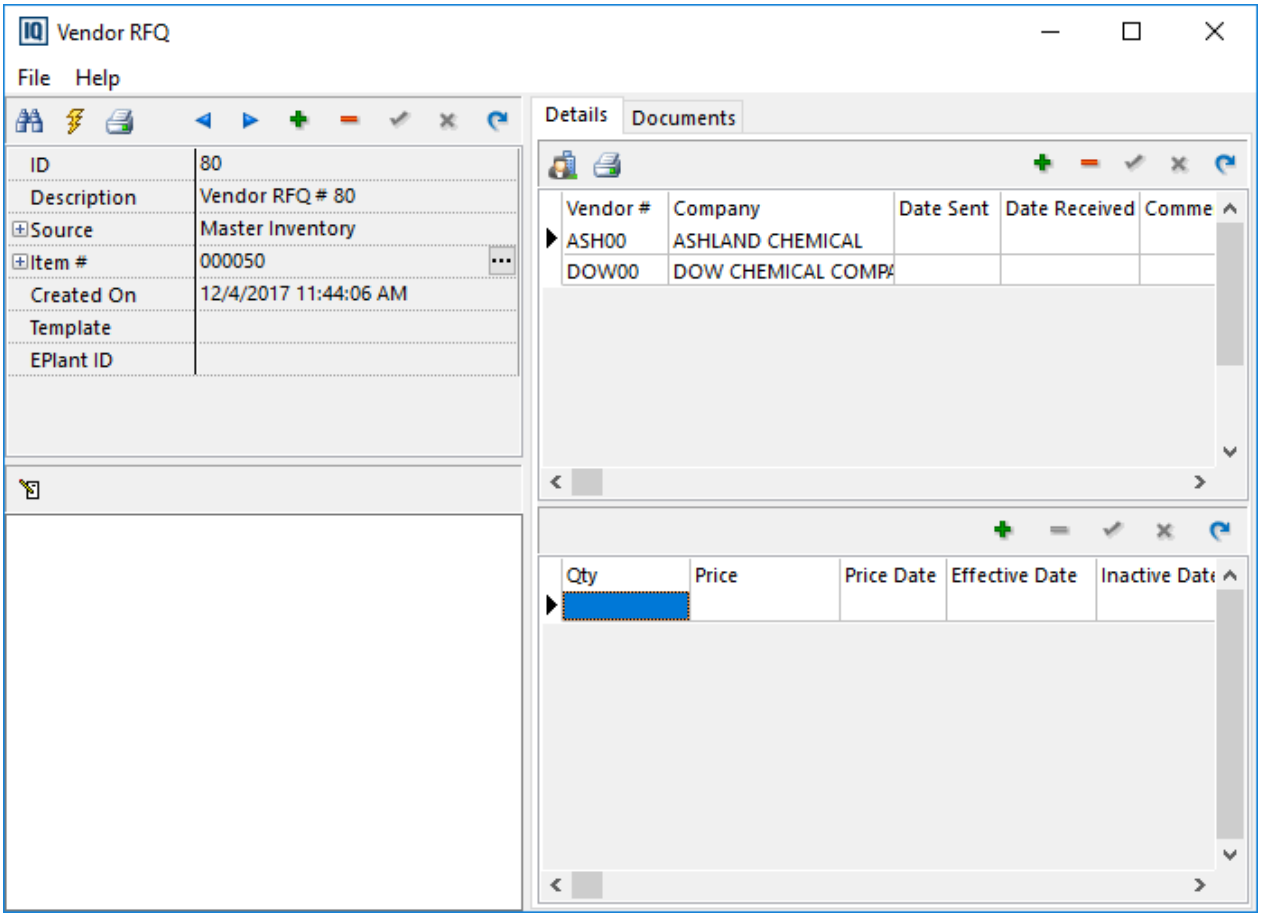
The Vendor RFQ module allows users to track quote requests to vendors for specific items or equipment. A Vendor RFQ can be created/accessed from several areas in the software: Quote Inventory, the Attached Materials tab on the Item Details tab of an engineering quote, the AKA Buying tab, the Buying section on the Buy/Sell Pricing tab in master inventory, the Projected Exceptions tab in Material Exceptions, Maintenance, Repair and Overhaul, and it is an icon the PO/Receiving tab. In all these areas the Vendor RFQ form is accessed by selecting the Vendor RFQ speed button  .

When creating a new Vendor RFQ from the PO/Receiving tab the user will first be asked to select the **Source** from the drop down list:

- Master Inventory
- AKA
- Quote
- Quote Inventory
- Material Exception
- Asset Management
- Capital Equipment

Once the Source is selected the Item or Equipment to be quoted must be selected. For sources except Capital Equipment, the item/equipment is chosen from the corresponding pick list accessed by selecting the ellipsis button in the Item #/Equipment # field. The pick list is filtered based on the EPlant the user is logged into. The Capital Equipment source is used to request RFQ's for new equipment so the Equipment and Equipment Description information is manually entered in the pop up form that appears after clicking the ellipsis button.

Upon launching Vendor RFQ for an item from Maintenance, Repair and Overhaul, inventory pricing, AKA pricing, or quote inventory, if the item is associated to a vendor RFQ with the same source the system will jump to the existing Vendor RFQ. If the item is not already associated to a Vendor RFQ the system will display this message: “Unable to find corresponding Vendor RFQ record. Would you like to add a new Vendor RFQ?” Select Yes and the Vendor RFQ form will appear with the item information filled in.



Vendor RFQ - Main Section Field Listing

ID	This is the Vendor RFQ ID. This will automatically populate with the next sequential ID number. This cannot be changed.
Description	This populates with the text 'Vendor RFQ # ID' but the user can manually type up to 50 characters to describe the RFQ.

Source	This is the source of the Vendor RFQ. This will fill in based on where the Vendor RFQ was created from, or if a new Vendor RFQ is created from the main module accessed on the PO/Receiving tab, the user will select the source from the drop down list. The Source options are: ▪ Master Inventory ▪ AKA ▪ Quote ▪ Quote Inventory ▪ Material Exception ▪ Asset Management ▪ Capital Equipment Note: If a Vendor RFQ is created from within a specific quote from the Attached Materials tab or the 'Currently Attached Materials' (top section of the Attached Materials, Packaging form), the 'Quote' source is assigned, and the RFQ will only be visible from that quote. If the Vendor RFQ is created from the Quote Inventory List section, or directly from Quote Inventory (Miscellaneous menu) it uses 'Quote Inventory' as the source, and can be viewed from other quotes. Note: When a RFQ is created from a Quote the user can expand this field to display the Description field which will show the Quote number. For all other sources this field will be blank.
Item or Equipment	This is the Item # or Equipment # associated to the vendor RFQ. When expanded this field will also show the item's Description, Class and Rev, or the Equipment's Description and Class.
Created On	This is the date and time the RFQ was created. This will default to the system date but can be changed using the drop down calendar.
Template	A Vendor RFQ Template can be associated to the RFQ. Templates are created from the File menu. See below for more details.
EPlant ID	This populates with the EPlant ID the user was logged into when the quote was created. It cannot be edited.
Comment	Select the Edit Memo button to enter up to 4000 characters of information related to the Vendor RFQ. This information can be printed by selecting the Print speed button on the pop up form.

Vendor RFQ Details Section

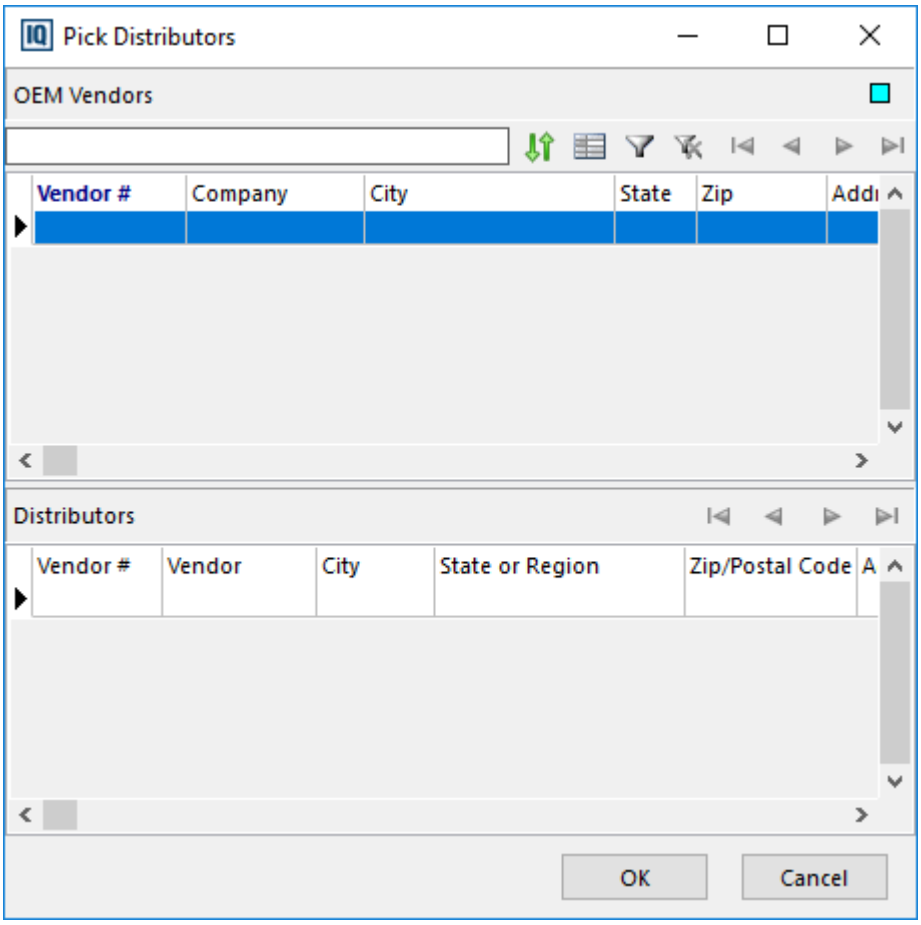
Below lists the field information on the Details tab:

Vendor #	This is the vendor number associated to the vendor RFQ. If the RFQ is created from the AKA Buying tab in Inventory, all of the vendors on the AKA Buying tab will automatically populate this section.

Company	Vendor Name.
Date Sent	Select the date the Vendor RFQ was sent to the vendor using the drop down calendar.
Date Received	Select the date the Vendor RFQ was received from the vendor using the drop down calendar.
Comment	Double click on this field to enter up to 4000 characters of information related to the Vendor RFQ. This information can be printed by selecting the Print speed button on the pop up form.
Primary/Default	This check box is automatically checked for the first Vendor added to the RFQ. It can be manually checked to mark a different vendor as the Primary/Default vendor. Only one vendor can be marked as the default. This will be checked automatically if the vendor is marked as the default in AKA Buying when the vendor RFQ is created from there.
Vendor Status	This is the Vendor Status from the Vendor Maintenance Rating tab.

Vendor Distributors

OEM Vendor distributors can be added to the list of vendors for an item. Select the Distributors button  to access a list of OEM vendors and their distributors. A form will appear listing all vendors that have been marked as an OEM in Vendor Maintenance. The bottom section will list all of the distributors associated to the highlighted OEM vendor. If the OEM vendor is listed in the item's AKA Buying section, they will be highlighted in blue.



To add distributors to the Vendor RFQ, highlight the desired vendor and select OK. That vendor's distributors will then be listed in the vendor section of the vendor RFQ.

Price Breaks section

The lower section displays the prices breaks associated to the highlighted vendor:

Quantity	The quantity associated with the price.
Price	The price of the item at that quantity.

Price Date	The date the price was created or revised.
Effective Date	The date that this price will be in effect.
Inactive Date	The date when this price will no longer be in effect.

Applying Qty/Price Breaks

The pricing information in this section can be applied to the source by selecting the Apply button  . This button is only available for the vendor marked as the Primary/Default vendor.

If the source is Master Inventory or Material Exception when the apply button is selected the price breaks from the Vendor RFQ will populate in the Buying section of the Buy/Sell Pricing tab. When the source is AKA the prices as well as the vendor information will populate in the AKA Buying tab in master inventory.

If the source is Quote the Apply function will update the quantity price breaks for the attached material on the specific quote. When the source is Quote Inventory the pricing will be updated in the Quote Inventory List.

Note: In all cases described above this will overwrite any existing price break information.

Note: When converting a quote to a BOM if the item is associated to a Vendor RFQ the AKA Buying tab will be automatically populated with the vendor(s) and price break(s) from its Vendor RFQ.

Note: The 'Apply Price Breaks' option does not apply to Asset Management and Capital Equipment source RFQs.

Vendor RFQ Document Tab

Internal or External documents can be associated to the Vendor RFQ. Select the Add button to attach an internal document and then choose Create New or Pick Existing. To attach an external document, click on the ADD (+) button and select the Document Library and document from the screens that appear. If the document is released it will be accessible from this tab. The user can also jump to the Document Control module by clicking on the Launch Document Control speed button.

Both internal and external documents can be set to print with the Vendor RFQ. This will default to None.

Email Correspondence

In addition to documents there is an Email Correspondence tab. From this tab users can to attach Email correspondence related to the Vendor RFQ. To add an Email simply drag and drop it from Outlook or other email programs into the form. The Received Date will fill in based on the email's received date and time. A Received Date box surfaces if the system is unable to determine the date (such as: The Received and Sent dates differ, unclear binary data, or older data, etc.). Users are asked to provide the Received Date by selecting the correct date from the calendar. The From and Subject fields will also automatically populate with the information from the email. The date, from, and subject fields cannot be edited. A comment can be entered by double clicking the field. Enter the comment in the pop up box to further describe the email correspondence.

There are three ways to access the Email once associated to the vendor RFQ:

- Double click on either the Received, From, or Subject fields.

- Right click and select View email.
- Or select the View email button.

Note: If the email has attachments, or multiple attachments, the total attachment size cannot be more than 4GB. The size allowance might further be limited by the chosen email program used. In order to view emails that have attachments, special formatting (e.g. stationary), or images embedded in the body of the email, the user must go into BDE Administrator and set the BLOB SIZE to 1000 for the database they are using (i.e. IQORA).

Print Vendor RFQ

A Vendor RFQ can be printed for all listed vendors or for a specific vendor. The printer speed button in the main section on the left will print the RFQ for all vendors. The From and To drop down lists will show RFQs from the EPlant the user is logged into and RFQs with no EPlant designation. To print the RFQ for a specific vendor, highlight a Vendor, then select the printer speed button in the details section on the right side of the form. When printing for a single vendor, the print form will populate the vendor_rfq_dtl.id in the From and To fields, and the vendor #. These are read only fields and cannot be changed. From either option the user can choose the destination (Printer, Screen, File, Email, or Fax). This report is set up in System Parameters->Reports and Forms tab. The default report is called VEND_RFQ_REPORT.rpt.

Add to PO

From both the vendor and price sections users can right click and select 'Add to PO' to add to an existing purchase order based on item/vendor combination or create a new requisition. When a new requisition is created from the upper section for a vendor, the line item section will populate with the item details but no quantity. Only Vendor RFQs with a source of Inventory or AKA can add items to the PO upon conversion. All other source types will not automatically populate line item information on the PO on conversion, items can be added manually after the PO has been created.

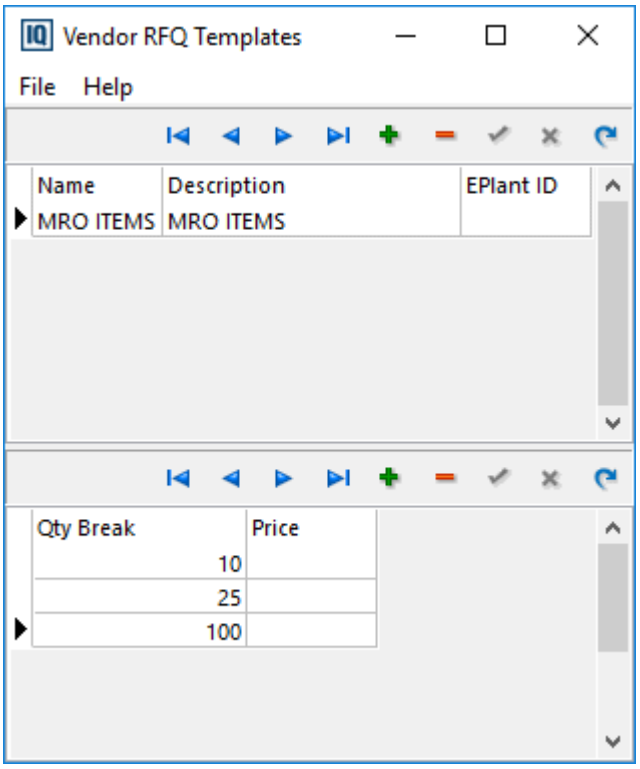
If the *new* requisition is created from the lower price section, the blanket quantity will fill in based on the highlighted quantity and a release will be created for that quantity with the next day as the promise date. The Unit Price field will only be populated if the pricing was applied and added to AKA Buying or the Buying section of the Buy/Sell Pricing tab. If the System Parameter 'Auto Populate Request & Promise Date based on Lead Time' is checked (Purchase Order & Sales Order Setup tab), the system will add the item's lead days from the next day's date to determine the promise date. The system looks first at AKA lead days when applicable, and if none uses the main item's lead days. For example, if the lead days is 10, when the new PO is created on 9/23 the promise date will be 10/4.

When adding to an existing PO from the lower section right click option, no additional releases will be added. The user will be taken to the PO to manually update it.

Vendor RFQ Templates

Vendor RFQ Templates can be created and then associated to specific Vendor RFQs. The templates contain specific quantity break details. When a template is assigned to a vendor RFQ the template's prices breaks can be applied to the vendor RFQ with a button click rather than having to manually enter required quantity breaks for each quote.

To access the Template form, select Templates from the File menu on the Vendor RFQ form. The first time this form is accessed it will be blank.



Select the insert record (+) button and enter the Name and Description of the template and save the record.

Next enter the quantity breaks and prices in the lower section. An unlimited number of quantity breaks/prices can be entered.

Once templates are created they can be assigned to a Vendor RFQ.

Assign a Template to a Vendor RFQ

To assign a template to a Vendor RFQ select the template from the drop down list in the Template field.

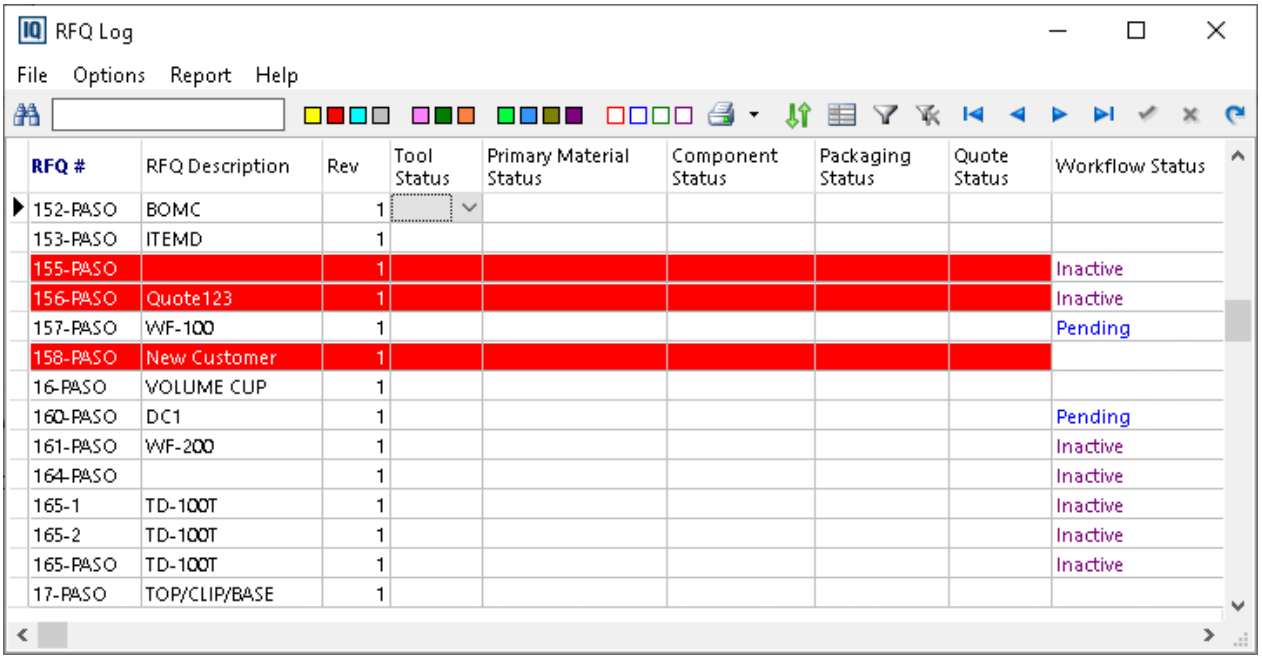
Next click on the 'Apply Template Qtys' button  to populate the quantity section of the form with the quantity breaks and prices from the selected template. Select Yes on the confirm message to continue.

(Note: A vendor must be assigned to the Vendor RFQ before a templates quantity breaks can be applied).

RFQ Log

 The RFQ Log module allows the user to maintain the status of all RFQ's and view them in a visually informative manner. The log displays the status details for the tool, primary material, components, and packaging using color codes. The log also provides easy maintenance of the In and Out Dates as well as due dates for RFQ's, again shown using color codes to alert the user of quoting requirements.

To access the RFQ Log select the RFQ Log button from the Estimating tab on the main launcher bar.



RFQ #	RFQ Description	Rev	Tool Status	Primary Material Status	Component Status	Packaging Status	Quote Status	Workflow Status
152-PASO	BOMC	1						
153-PASO	ITEMD	1						
155-PASO		1						Inactive
156-PASO	Quote123	1						Inactive
157-PASO	WF-100	1						Pending
158-PASO	New Customer	1						
16-PASO	VOLUME CUP	1						
160-PASO	DC1	1						Pending
161-PASO	WF-200	1						Inactive
164-PASO		1						Inactive
165-1	TD-100T	1						Inactive
165-2	TD-100T	1						Inactive
165-PASO	TD-100T	1						Inactive
17-PASO	TOP/CLIP/BASE	1						

The form will contain all existing quotes, both open and archived. Below is an alphabetical field listing for this module:

Component Status	This is the current status of the component if applicable. Select the appropriate status from the drop down list: OK Purchasing Estimating Sales This field can also be entered from the RFQ module.
Customer Name	The name of the customer associated to the RFQ.
Date Due	This is the date the quote is due to the customer. This is entered manually using the drop down calendar from the RFQ module or the RFQ Log.

Date IN	This is the In date of the RFQ. This will populate with the Quote date from the RFQ which fills in automatically with the date the quote was created. This can be changed by choosing a different date from the drop down calendar.
Date OUT	This is the date the quote was sent out. This is entered manually using the drop down calendar from the RFQ module or the RFQ Log.
Follow Up Date	This is a manually entered date used to set a follow up date. This is entered using the drop down calendar from the RFQ module or the RFQ Log.
Item #	The Item number associated to the RFQ. If the RFQ has more than one item it will be listed in the RFQ Log for each item number that is associated to it.
Item Description	The Item description associated to the RFQ.
Item Type	Select the appropriate type for the item from the drop down list next to the field: New Existing Requote This field can also be entered from the RFQ module.
Mfg Type	The manufacturing type associated to the quote.
Note	This is the Note field from the quote. Select the ellipsis button in this field to view or edit the note. Changes made from the RFQ Log will be visible in the quote module as well.
Packaging Status	This is the current status of the packaging if applicable. Select the appropriate status from the drop down list: OK Purchasing Estimating Sales This field can also be entered from the RFQ module.
Primary Material Status	This is the current status of the primary material if applicable. Select the appropriate status from the drop down list: OK Purchasing Estimating Sales This field can also be entered from the RFQ module.

Quote Status	The status of the quote in regards to acceptance by the customer. Select the quote status from the drop down list: Pending Won Lost This field can also be entered from the RFQ module.
Rev	This is the revision level of the quote.
RFQ #	The RFQ # is the unique quote tracking number for the quote.
RFQ Description	The RFQ description from the quote.
Sales Engineer	This is the Sales Engineer associated to the RFQ. This is only entered from the RFQ.
Tool Status	This is the current status of the tool. Select the appropriate status from the drop down list: OK Purchasing Estimating Engineering This field can also be entered from the RFQ module.
Tool Type	Select the appropriate type for the tool from the drop down list next to the field: New Existing Requote This field can also be entered from the RFQ module.
User Quote Status	This is an additional user defined status field. The information is only entered from the Quote.
Workflow #	This field will contain the Workflow # if an Engineering Quote has a workflow associated to it.
Workflow Quote Type	This is the Quote Type associated to the Quote Workflow.
Workflow Status	This is the status of the quote workflow. The text in the status field is color coded: ▪ Red - Not Approved ▪ Blue - Pending ▪ Green - Approved ▪ Purple - Inactive

Color Codes

There are color codes associated with the status' and dates.

Status Color Codes - The current status can be set for the Tool, Primary Material, Component, and Packaging. Each specific status field will be color coded based on the selected status:

- Pink - Estimating
- Green - Sales
- Orange - Engineering & Purchasing

Date Color Codes - All non status fields will be color coded based on the due date or completion date of the RFQ:

- Yellow - The RFQ is due within the next four days.
- Red - The RFQ is due within the next two days or it is overdue.
- Light Blue - The RFQ is due within five days or more.
- Gray - The RFQ has been completed. (The date out field has been filled in).

Quote Status Color Codes - The quote status field will be color coded based on the selected status:

- Light Green - The quote status is Pending.
- Medium Blue - The quote status is Won.
- Olive Green - The quote status is Lost.

Workflow Status - This field will be color coded to indicate the status of the workflow:

- Red - Not Approved
- Blue - Pending
- Green - Approved
- Purple - Inactive

Search

To search for a specific RFQ select the Search button to access the pick list. Or, first select the desired sort column by clicking on the header or by right clicking and selecting the column from the list. Next, type the known information corresponding to the sort field in the white box at the top of the form. The list will jump to the first record matching the typed information.

Filter

The RFQ Log can be filtered based on the Estimating, Engineering, Sales, and Purchasing status' and/or the Quote Status of Pending, Won, Lost, or In Process. To filter the log, right click on the form and select the desired filter option. The RFQ Log will only display the quotes that are associated to the selected statuses.

To clear the status, the user must exit the RFQ Log and re-enter it.

In addition to the right click filter options the **Advance Search** function is also available by selecting the Filter Dataset speed button at the top of the form. (Please see the Advanced Search section for more information).

Jump to Options

- Jump to Quote - The user can right click or double click a RFQ to jump to the quote.
- Jump to Workflow - Select this right click option to jump to the workflow associated to the highlighted record.

File Menu

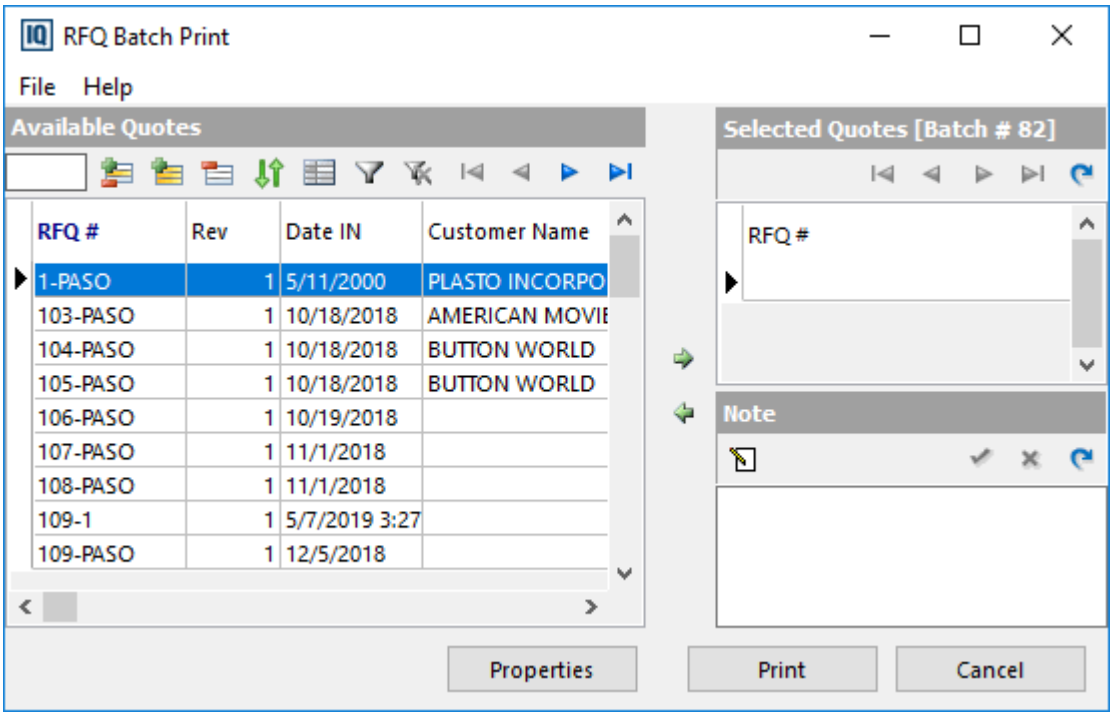
The following options are available from the File menu:

- **New** - Select this to create a new RFQ.
- **Edit** - Select this to edit the highlighted RFQ.
- **Delete** - Select this option to delete the highlighted RFQ. A confirm box will appear for the user to confirm or cancel the deletion of the quote.
- **Clone** - Select this option to clone the highlighted RFQ. This is the same clone functionality described earlier in this document.
- **Archive** - Select this option to archive the highlighted RFQ. A confirm box will appear for the user to select Yes or No to continue archiving the quote.
- **Convert to BOM** - Select this option to convert the highlighted RFQ to a BOM. Please see Converting a Quote to a BOM for more information.
- **Exit** - This will exit the RFQ Log.

RFQ Batch Print

Print Batch

Select the Batch Print button  to print a hard copy report for a batch of quotes. A form will appear to select the quotes to be printed on the batch report. Highlight the quote(s) on the left. Use the right arrow button to add them to the Selected Quotes section. Use the left arrow button to remove any quotes from the batch.



Select the **Properties** button to associate the batch report and an execute before print option if desired. The default report is called Qletter_multi.rpt and can be linked by clicking on the 'reset to default' arrow button. A note (up to 4000 characters) can be added using **Edit Note** button. The note can be printed on the report. Once all quotes are selected and a note entered (if desired), select the **Print** button to print the report to the printer. (The report can also be assigned in System Parameters->Reports and Forms to 'RFQ Batch').

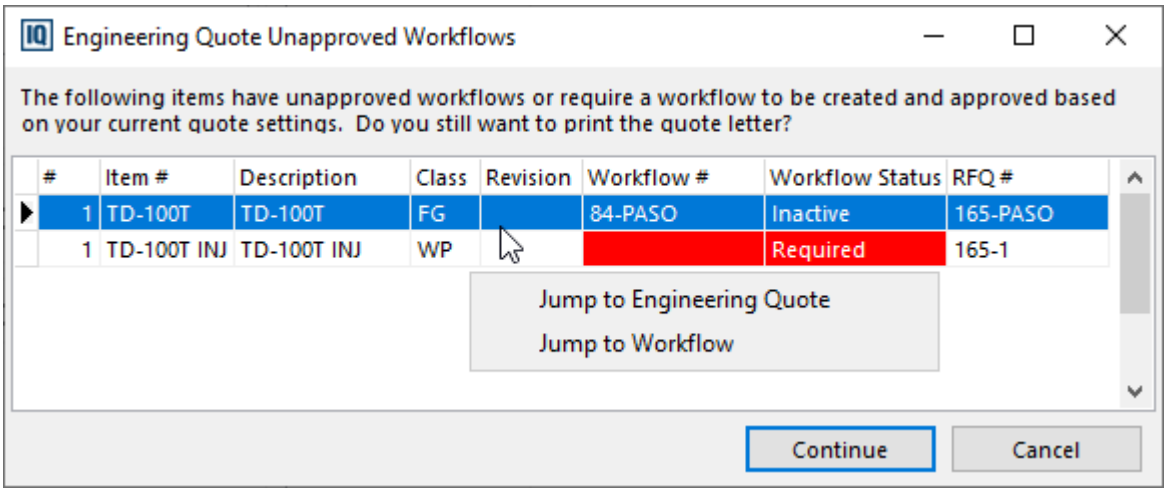
Printing When Workflow is Enabled for Quotes

Printing the quote letter for an engineering quote with an associated workflow that is not approved is not allowed if the user does not have security to select the 'Continue' button.

A Quote letter cannot be printed under following conditions:

- If workflow mandatory is checked and workflow has not been approved.
- If workflow mandatory is checked and active workflow.
- If workflow mandatory is unchecked and active workflow.

If the quote letter cannot be printed a form will appear showing the items with unapproved workflows, or ones that require a workflow be created. This form will state the status of the workflow which will be 'Inactive', 'Pending', or 'Required'. If it is 'Required' the Workflow # and the Workflow Status columns will display in red. Users can right click and jump to the Engineering Quote or the Workflow associated to the highlighted record. Security is available on this form for the Jump To options and the Continue Button. If security is not enabled on the Continue button users will not be able to perform the action. This button can also be made not visible so users will only see the Cancel button. If Continue is selected, the action will be performed, such as printing the quote letter.

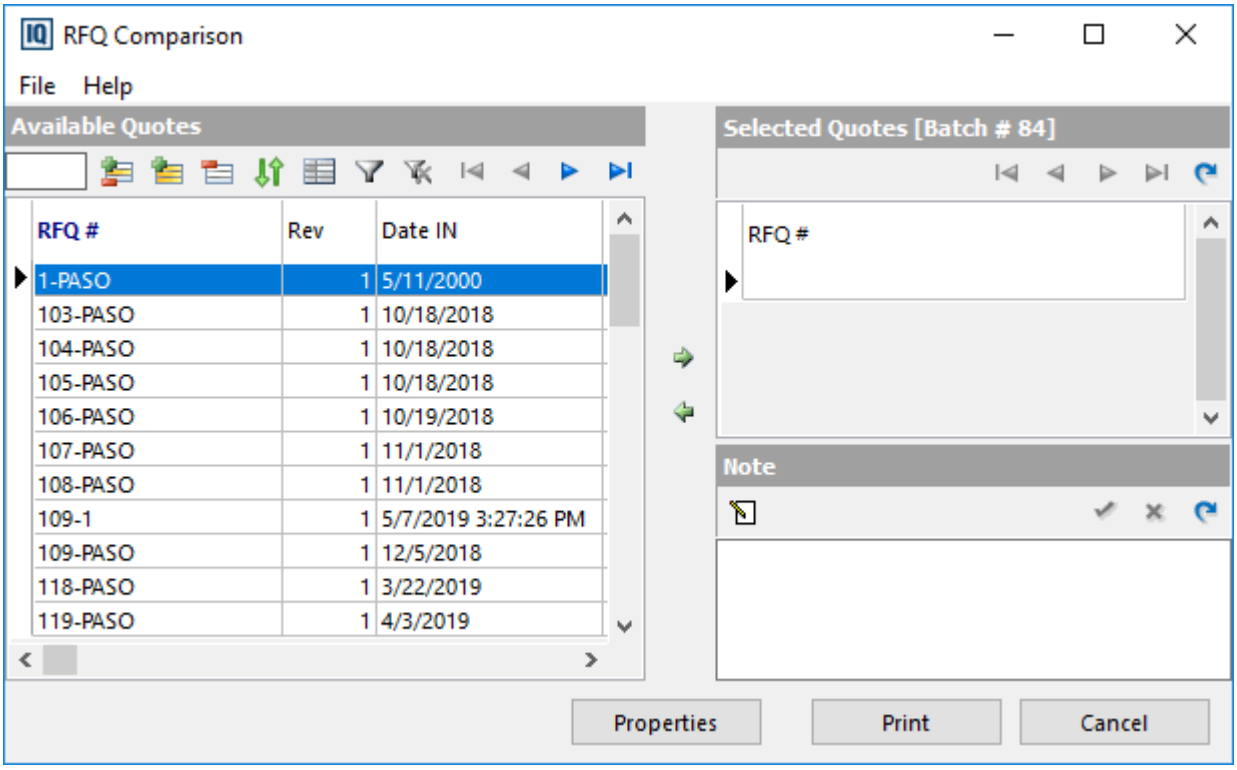


Quote letter can be printed under following conditions:

- If workflow mandatory is unchecked and no active workflow
- If workflow mandatory is checked and workflow is approved

RFQ Comparison

Select the drop down arrow next to the Batch Print speed button and select RFQ Comparison. A form will appear to select the quotes to be compared on the report. Highlight the quote(s) on the left. Use the right arrow button to add them to the Selected Quotes section. Use the left arrow button to remove any quotes from the batch.



Select the **Properties** button to associate the comparison report and an execute before print option if desired. The default report is called Quote_Compare.rpt and can be linked by clicking on the 'reset to default' arrow button on the properties pop up box.

A note (up to 4000 characters) can be added using **Edit Note** button. The note is printed on the default report. Once all quotes are selected and a note entered (if desired), select the **Print** button to print the report to the printer.

(The report can also be assigned in System Parameters->Reports and Forms to ‘RFQ Batch’).

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