



Getting Started Guide

A Comprehensive Guide to Installing and Using ProfitFab

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Micro Concepts & Solutions
5015 Paul Wayne St.
Boling, TX 77420
USA
Sales: (979) 531-0743
Support: (979) 531-1679

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Introduction

Micro Concepts and Solutions originated in 1991 and later incorporated in 1993, with a mission to develop and market a fully integrated relational manufacturing management system specifically for the precision fabrication and machining job shop industry. Micro Concepts and Solutions, Inc. has established a satisfied customer base internationally, with the sales, service and installation of ProfitFab Manufacturing Management, ProfitFab Quote, First Article Inspection and Reverse Engineering systems, all while maintaining a proven record for consistent company growth and financial stability.

In 1993 Micro Concepts and Solutions, Inc. introduced the Metal Mizer and Metal Mizer Pro Job Shop Manufacturing Management Systems. These products were designed and developed to offer the industry a comprehensive manufacturing management solution that would operate on an inexpensive PC based network. As computer and PC network technology progressed, Micro Concepts and Solutions, Inc. transformed Metal Mizer Pro's detailed product structure into a graphical user interface native to Windows 3.X, 95 and NT. This kind of progression is what pioneered our ProfitFab ERP - Manufacturing Management Software. ProfitFab's strategic Job Shop structure provides a fully integrated manufacturing management system that allows business owners to maximize their efficiency and profitability by gaining control of the company's daily operations. ProfitFab also incorporates the ability to interactively link with other Windows compatible applications such as Accounting, CAD/CAM, Edit/DNC, QC and Multi-Media applications.

In 1997 Micro Concepts and Solutions, Inc. introduced Laser InSPEC 2000. Micro Concepts and Solutions, Inc. conceived the concept to incorporate a laser projection system into the 2D inspection processes of sheet metal job shops and OEM manufacturers. In 1998 Micro Concepts and Solutions, Inc. introduced ProfitFab Quote. This product carries all of the integrated detail from the ProfitFab system to provide a comprehensive quotation system for smaller job shops and OEM manufacturers.

In 2002, Micro Concepts & Solutions, Inc. updated ProfitFab Quote with new features and introduced it as ProfitFab Lite. With this new entry level quoting program that is fully compatible with ProfitFab ERP, ProfitFab Lite users can get started into the world of ERP and when ready to take the next step up, can upgrade to ProfitFab ERP with no loss of data and no missteps. We also offer a lifetime upgrade policy where the full price paid for ProfitFab Lite is discounted towards the purchase of ProfitFab ERP, giving smaller shops the ability to get started using a powerful ERP program essentially for free.

In 2003, Micro Concepts & Solutions, Inc. introduced ProfitFab RFid as an alternative method to track employee and job time. ProfitFab RFid removes the computer interface from the time-tracking methodology, eliminating the time wasted when employees leave their workstations to report time, and also eliminating mistakes made during data entry due to operator error, operator misuse, or lack of operator training.

In 2004, Micro Concepts & Solutions, Inc. introduced ProfitFab Plus, bridging the gap between ProfitFab Lite and ProfitFab ERP and offering job shops and OEM manufacturers another choice when getting started using ERP software. ProfitFab Plus, like ProfitFab Lite, is completely compatible with ProfitFab ERP and offers the same upgrade policy.

Today, ProfitFab ERP continues to evolve to meet the needs of jobs shops and OEM manufacturers. **Updates to the program are made 3 to 4 times per year, adding new features based on customer feedback.** Our existing customer base contains shops engaged in the sheet metal, machining, and plastics industries, as well as many different types of OEM manufacturers. Our customers range in size from a single person shop to a publicly traded company with over 200 employees. **ProfitFab ERP is helping shops gain control around the world.**

Who Should Read This Guide

Anyone considering using an ERP (Enterprise Resource Planning) system to streamline processes within their organization can benefit from reading this guide. From the owners of the company to the employees on the floor, there is information in here for everyone. Even consultants looking for solutions for their customers can find this guide useful.

How To Use This Guide

What do you do if someone gives you a small cardboard box and walks away? You open the box to find hundreds of funny-shaped little cardboard pieces. You pour them out onto a table and you notice that each piece is colored on one side and plain cardboard on the other side. Instantly, you realize this is a jigsaw puzzle, and that it is your job to put the puzzle together.

Knowing what jigsaw puzzles are, and knowing that, fundamentally, the pieces need to go together to form a single finished picture does not help you in getting started. You could start by finding all of the outer pieces, since you at least know that they should be straight on one edge. But once you get that finished, what next? You could flounder with fitting each piece, one at a time, to every available place until you start to get the right pieces into the right places. However, this process would take so long that you would most likely give up in frustration and just forget about the whole project.

But, what if you had a picture of what the finished puzzle should look like? Knowing how to put puzzles together, and knowing what your goal is, you could start to group pieces together based on similar color schemes according to the final result, and work on sections at a time. Knowing how to put the groups together will certainly speed up the process and alleviate most of the frustration involved with building the puzzle.

This Getting Started Guide is designed to do just that – help you to put the pieces together so that you can begin using ProfitFab and reach the final goal of having an ERP program that your business can use to gain control over your operations. After all, you already know that ProfitFab is an ERP program, and you assume that you will be able to connect Quotes to Orders and Purchases to Jobs. With that in mind, our approach in this Getting Started Guide is to start at the top and work our way down to the every day functions of the program. This guide will provide the steps to follow to put the pieces together. By following the steps outlined below, you should be able to start using ProfitFab within hours to create real quotes, orders, jobs, and invoices for real customers.

Step 1—Start at the Beginning

In the View from 10,000 feet, we cover the features of the program to give you a clear and concise picture about what you can expect from ProfitFab. This section is for everyone who will use the program plus the people at the top of the organization that need to know what to expect from the program, but will not necessarily be using the program.

In the View from 1000 feet, we cover a general overview of the program and introduce the flow of the program. We cover topics in enough detail that anyone reading it should be able to functionally describe the program. All personnel who use the program should read this section.



When going through the **View from the ground**, launch the program with the demo data by using the short cut that was installed on your desktop during installation of the program.

In the **View from the Ground**, we cover major aspects of the program. We focus on the day-to-day operations of running the program. This section demonstrates a hypothetical shop that has been using ProfitFab for day-to-day tasks. It includes sample screenshots, Tips, and Alternative Methods for accomplishing the tasks.

Step 2

After familiarizing yourself with the program, the next step is to start using it for real. During installation, a shortcut will be placed on your desktop that will run the program with a blank set of data files. Run this program and enter the Company Name and Registration Code that was sent to you by Micro Concepts and Solutions. Use the 'Entering Initial Information' section of this guide as a reference to enter your information.

Entering some of the startup information can seem tedious, but keep in mind that you only have to enter it once and it is there forever.

Step 3

Once you have entered your startup data, assign employees to specific tasks based on their job position within your organization and have them begin using the program. Have them read through the relevant sections of this guide to familiarize themselves with the program. Then take some real customer purchase orders and make Part Definitions for them. Create orders, jobs, and print Route Sheets. Create quotes and email them to your customers.

Documentation Typeface Conventions

<i>Italics</i>	Indicates what to type at the keyboard such as <i>Type This</i>
SMALL CAPS	Indicates keystrokes to enter at the keyboard, such as ENTER OR ESCAPE
Boldface	Indicates commands or options from a pull down menu or text in a dialog window
[Brackets]	Indicates buttons on screens within the program that you click with your left mouse button, such as [Ok] or [Cancel]

Icons used in this Guide



Tip Icon: important time saving information



Alternate Paths Icon: ProfitFab has many options to get the job done. The **Alternate Paths** icon offers ideas on how tasks can be approached from different directions. The alternate paths given should not be understood as the "Only" path to take.



This icon indicates that these features are included in ProfitFab ERP version.



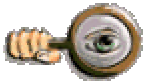
This icon indicates that these features are included in ProfitFab Plus version.



This icon indicates that these features are included in ProfitFab Lite version.

How To Get Help

To access ProfitFab's online help, select the **Help** pull down from the upper right corner of the ProfitFab window. From the pull down menu select the **Contents** option. The system will then display the ProfitFab Help main index screen. Scroll through the Index for a variety of ProfitFab topics. Upon selecting a Topic or Sub Topic the system will display the help information for the selected area.



Tip: On many screens, pressing the **F1 key** will immediately open the Help file on the topic for the active screen.

Technical Support

Please feel free to contact our technical support staff. Our hours of operation for telephone support are 9:00am to 12:00pm and 1:00pm to 5:00pm Central Time, Monday through Friday.

Phone: (979) 531-1679

Email: support@profitfab.com

<http://www.profitfab.com/>

Problems with Registration Code

If experiencing difficulty with the registration code, please try the following before contacting customer support

1. Press your Caps Lock key to turn on all Caps. In the Registration Code, all alphabetical characters are in upper case
2. Check the code carefully so as not to confuse the following letters and numbers
 - I is an upper case letter (i) and not a lower case letter L
 - l is the number 1
 - O is an upper case letter o
 - 0 is the number 0

Installation

ProfitFab is designed to be installed on a file server and run on a workstation. A file server is simply a computer that “holds” the files in a common place for multiple user access. A workstation is a computer that people use every day to do their jobs.

The file server, or ‘the server’, can be any computer on the network. Many shops have a dedicated server to run network operations. The dedicated server is the most logical computer to install ProfitFab for more security and backup control. Performing updates and running utilities can be done from the designated server.

For shops that do not have a dedicated server and use a Peer-to-Peer network, ProfitFab can be installed on to any computer in the network and that computer is considered to be “The Server”. If installing ProfitFab to a computer in this type of network, it is highly recommended that a non-workstation computer be used. If the computer acting as the ProfitFab server is also used as a regular workstation, the chances of “the server” getting locked up and causing potential data loss are increased due to the nature of Windows applications.

Workstation computers run the program. Each workstation needs a shortcut pointing to the program on the server.

If you need to move ProfitFab from one server to another, copy the ProfitFab folder from the first computer and paste it onto the second computer. For the workstations, make sure that the shortcuts point to the new location.

If the server crashes, restore files from your backup. If the entire ProfitFab folder has a backup on the server, restore the folder from backup. There is no need to “reinstall” the software.

Installing ProfitFab on your File server:

If installing on a Novell server: logon to the network with full Supervisor rights on a network terminal (workstation). If installing on a Windows server: log on to the network with Administrator privileges on the physical server computer or a terminal (workstation).

Note: If reinstalling the software to the server, everyone must be logged out of ProfitFab.

If you purchased the optional CD-ROM, insert the ProfitFab CD-ROM into your CD-ROM drive. If the Setup program does not automatically run, select the Start Button from the Task Bar then select the Run option. Windows will prompt you for the file to open – Type D:\SETUP where D is the drive letter of your CD-ROM drive.

If you downloaded the setup program from our web site, all you need to do is run that program.

From the Installation Welcome follow the instructions to complete the installation process on the server. When prompted for it, we recommend allowing the installation wizard install the Startup Data.

Installing ProfitFab on workstations:

Once ProfitFab is installed on the server, set up each workstation as an administrator station, shop clock station, or both.

At each workstation, go to 'My Computer' or Windows Explorer and select WSETUP.EXE from the server in the folder where ProfitFab is installed.

From the Installation Welcome screen, select the **Administrative Workstation** or **Shop Workstation**. Follow instructions on the screen to complete the installation process on the administrator and shop clock stations.

Note: This step will install shortcuts to each workstation. Shortcuts will be placed on the Desktop for easy access to the program.

Starting ProfitFab

When executing ProfitFab for the first time, enter your Company Name and Registration number. Once you have entered the necessary information, click the [Ok] button and the Login screen will appear.

Enter User ID at the login screen. **The User ID will be Supervisor the first time ProfitFab is launched.**

For instructions on setting up initial company data, see the section on **Entering Initial Information** in this guide.

Starting the Clock Program

The ProfitFab Installation Wizard places a shortcut on Shop Clock workstations, providing easy access to start the ProfitFab Shop Clock module. If Autorun was selected, the Shop Clock Module will automatically execute when Windows is started.

Getting Started

The View From 10,000 Feet

After following the procedures defined in this guide, ProfitFab can be fully integrated in a matter of weeks and before the first month is over.

The diagram below shows the general flow of data throughout the program. The program is centered on daily activities – send quotes, enter customer orders, purchase material, build parts, ship parts, and invoice customers.



Features

ProfitFab ERP will help gain control:

- Generate quick, accurate quotes.
- Fax or email quotes straight from ProfitFab.
- Quote now and enter job details later.
- Attach drawings, finished part pictures, detailed assembly instructions, G code, and movies with setup instructions to each and every part.
- Estimate labor, machine, material and outside services costs in a detailed estimate.
- Check out profit percentages before sending quotes.
- See what percentage of quoted parts turn into jobs.
- Turn quotes right into orders. Automatically creates complete bill of material and routing. No double entry required.
- Set up multiple shipments against a single manufacturing run, or set up a blanket order and post jobs against it.
- Handle Time and Material jobs.
- Handle prototype jobs without estimates. Just release the job to the floor and let them build the part definition for you.
- Handle complex assemblies with each manufactured part detailed.
- Allocate material directly from inventory in real time when it is pulled from the shelf.
- Automatically schedule the job so you can see when you need to start it and when it will be finished.
- Print out the entire job route sheet: Bar coded route sheet includes material listed at operation used.
- Use MRP to see exactly what needs to be purchased based on the orders that have been entered.

Features (cont)

- Purchase material directly for the job(s) or order material for stock based on Min/Max levels.
- Automatically generate invoices, packing slips, and packing labels when jobs are shipped. Ship jobs from the shop floor. Packing Labels can be bar coded or not based on your customer's preference.
- Unlimited shipping addresses for each customer.
- Handle partial shipments.
- Eliminate manual time tickets and manual data entry.
- Bar-coded job route sheets guarantee accurate job data entry.
- Prevent time from being posted to a job that shipped days ago.
- Eliminate time going to the wrong job.
- Real-time job costing and job tracking.
- Track scrap and rework time.
- Compare time spent in productive labor, non-productive labor, and idle.
- Shop clock module allows shop personnel to view job details, scheduling, drawings and other attachments on the computer, without wasting paper.
- Operation Scheduler tells shop personnel exactly which jobs to work on next.
- Capacity Reports show operation bottlenecks.
- View current work in process by job or employee.
- What-if capacity report allows realistic ship dates.
- Infinite or finite schedule the entire shop by machine or by operation.
- Give specific jobs high priority in the scheduler.
- Control access to the system with multi-level individual security. Users can only access areas needed for their job function.
- Automatic setup of printers for reports. Send all invoices to one printer, purchase orders to another, quotes to another, etc.
- Use built-in internal messaging system like email.

Reports:

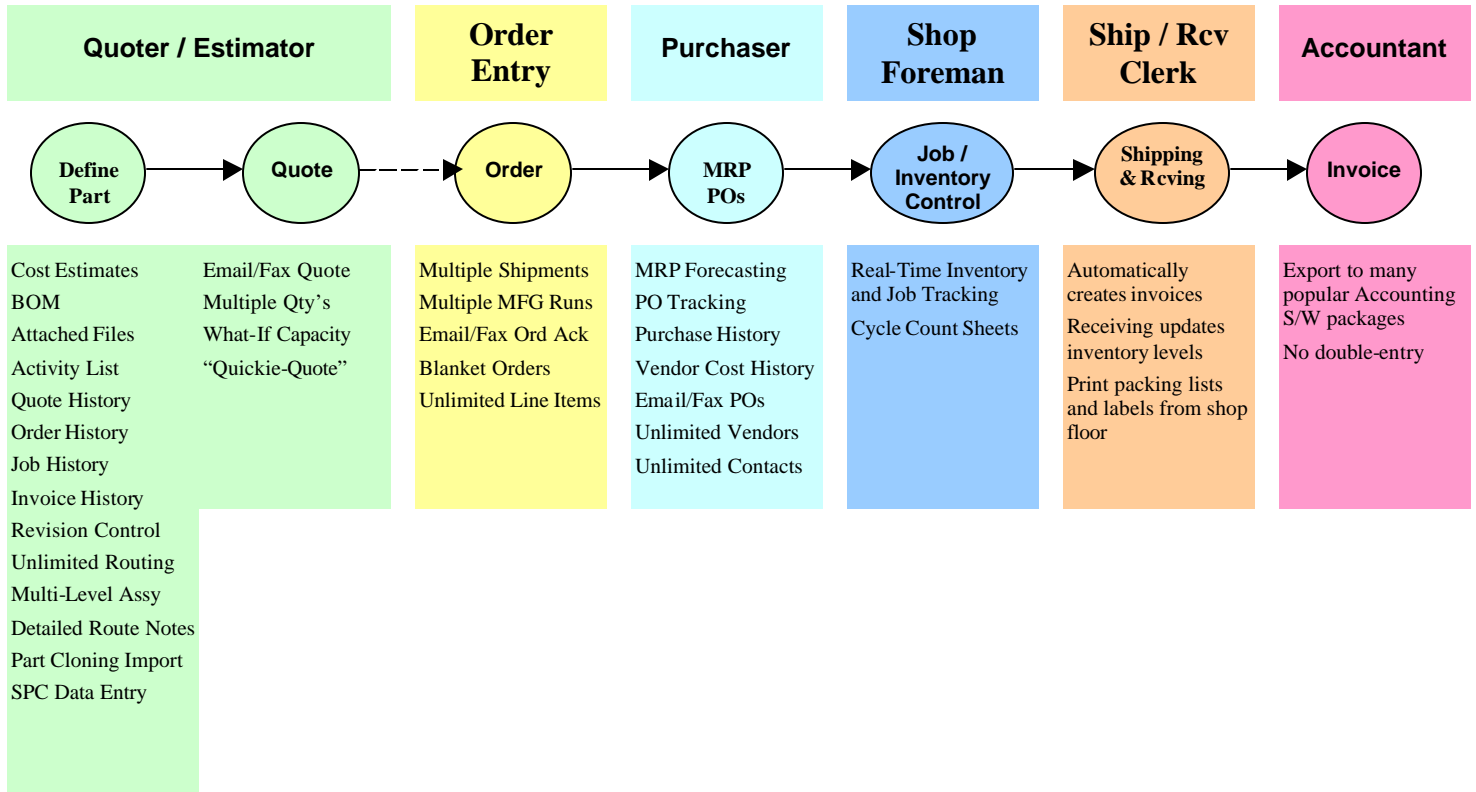
ProfitFab has over 90 built-in reports designed to provide information needed to make the right business decisions. You can also create Ad Hoc reports with the optional Clarion Report Writer and build them into ProfitFab.

The list below shows some of the reports already built into the program. This list grows each year based on customer feedback.

Customer and Parts Reports	Quote Reports	Order Reports	Invoice Reports
Assembly Component Links Assembly Map Customer Labels Customer Listing Customer Parts Costing Customer Parts Listing New Customers Graph Operation Link to Parts Part Definition	Open Quotes Listing Quote / Order / Invoice Graph Quote Estimation Report Quote What-If Capacity Graph Quote Wins % Graph Quote Wins Graph Verified Quotes Listing	Open Orders Order Estimation Report Quote / Order / Invoice Graph Sales by Sales Rep Graph Verified Orders Verified Orders Graph	Invoice Register Quote / Order / Invoice Graph Sales Graph Shipped Detailed Invoice Shipped Summary Invoice Working Detailed Invoice Working Summary Invoice
Job Reports	Inventory Control & Purchasing Reports	Employee Reports	
Active Job Status Listing AR WIP Forecast Capacity & Time Graph Completed Jobs Job Completion Report Job Completion Summary Job Forecast Job Route Sheet Job Time Detail Off-Schedule for Job Ship Red Flag Off-Schedule for Job Shortage Red Flag Off-Schedule for Job Start Red Flag Off-Schedule for Purchases Red Flag On Time Shipping Operation Forecast Operation Load Graph Operation Schedule Operation Time Detail Order Time Detail Scrap Report Setup & Rework Cost Graph Shipping Schedule Station Schedule Work in Process	Customer Part Labels Customer Parts Physical Count Sheets Inventory Product Labels MRP by Job Number MRP by Job Start Date MRP by Vendor MRP Forecast Off-Schedule for Stock Order to Stock – Customer Parts Red Flag Order to Stock – In-House Parts Red Flag Order to Stock – Products Red Flag Outside Service Link to Parts Pending Service POs PO Delivery Product / Service Listing Product by Vendor Listing Product Category Listings Product Costing Product Physical Count Sheets Product/Finish Link to Parts Purchase Orders Graph Requisitions Vendor Invoices Vendor Invoices Graph Vendor Labels Vendor Listing	Employee Absentee Red Flag Employee Activity Listing Employee Barcode Badges Employee Hours Graph Employee Labels with Barcodes Employee Listing Employee Listing with Barcodes Employee Payroll Employee Payroll Graph Employee Productivity Employee Time Detail Employee Time Detail by Operation Incomplete Time Entries	

The View From 1000 Feet

This level describes the general flow of data through the program. The diagram below demonstrates the daily process along with task assignments and features associated with each task.



General Overview of ProfitFab ERP Plus Lite

Part Definitions and Quotes

The **Part Definition** is the heart of ProfitFab. A **Part Definition** defines what it takes to make a single part. The information used to make a single part is used to accurately make any number of those parts. The **Part Definition** contains routing information to calculate labor and machine costs, and material information to calculate material costs. The routing information is used to create the Route Sheet (sometimes called the Job Traveler) or In House Work Order. Any information entered into a **Part Definition** for any operation on any part will be tied to that part for every job that is created. Likewise, material is attached and used to compute MRP requirements for every job that is created for the part. The Station Scheduler uses routing information to determine how much capacity is required for the quantity of the parts on a job.

Once a part is defined, it can be used over and over again, in quotes, orders, jobs, or invoices. A part only has to be defined once. The **Part Definition** can be refined over time to create a more precise definition without recreating it from scratch. Part Definitions also make revision changes quick and easy.

The built-in tools in ProfitFab estimate the cost as close as possible while building a detailed **Part Definition**. Using detailed **Part Definitions**, you will be confident that quotes are accurate.

In some situations, a “skeleton” **Part Definition** can be made to quickly quote a part to a customer. Once the quote is won, the Part Definition can be detailed. In other words, you do not have to spend a lot of time detailing something that you may not make or sell.

Quoting is a separate process from building a Part Definition. Quotes do not create jobs or commit materials. (Jobs are created and material is committed only when an **order** is verified. Parts can be placed directly onto **orders** without first putting them onto **quotes**) ProfitFab maintains a history of quotes to see how the price has varied over time for a part, percentages of winning quotes can be measured, and potential affects on shop capacity can be viewed.

Quotes in ProfitFab are automatically numbered in a sequential fashion without alphabetic or special characters and can not be changed.

Customer Orders **ERP Plus Lite**

Orders can either be created directly or imported from a quote. Where quotes tend to stand alone, **orders** get everything else moving along. When a purchase order is received from a customer, there will be a commitment to build a specific number of parts. This commitment uses information from the **Part Definition** to automatically allocate materials and schedule shop capacity.

Part Definitions are built upon required operations, amount of time at each operation, and amount of material used by the part at each operation. Defining the correct operations has a direct affect on the printed Route Sheet for the job. Defining the correct times required at each operation allows the scheduler to assign the correct amount of capacity to the job. And, defining the appropriate amount of material ensures that the MRP will be automatically adjusted correctly.

In ProfitFab, verifying an order will automatically:

- Create Jobs based on the number of shipments of the part and the component levels if it is an assembly.
- Create MRP (Material Requirements Planning) for all material needed to fulfill the order and is utilized by the inventory and purchasing section of the program to ensure that no materials are overlooked or under-ordered.
- Place Jobs into the production schedule via the Station Scheduler.
- Allow Route sheets and Requisition lists to be printed.
- Add any special line items on invoices which may contain items from raw material inventory (which can be sold directly) or NRE (Non-Recurring Expense) items, such as special tooling charges.

While it is not critical to have a detailed Part Definition during the quoting phase, it is important to take the time to produce an accurate estimate of the part during the order phase. The information entered into the Part Definition will create a more streamlined and accurate system for future orders of the same part. This process creates control of your company and profits.

Orders in ProfitFab are numbered sequentially in ProfitFab using the same method as the quotes. The order number sequence can be changed. The new sequence number must be higher than the previous sequence used. For example, if you insert an order and the number comes up as 20, you can change it to 1000 and continue from there. However, if you insert an order and the number is 1000 and you change it to 20 (assuming that 20 had not previously been used), then the next order you create will again be numbered 1000.

MRP and Purchasing work together to ensure that materials are ordered for jobs in a timely manner without under/over-ordering. MRP is created for jobs at the time an order is verified. The numbers are based on the materials in the Part Definition and on the quantity of parts to manufacture for the job. While MRP is created on a job-by-job basis, common materials can be combined into a single line item of a purchase order.

MRP commits the use of certain materials. Your job is to tell the system how the materials will be acquired. You will buy the needed material or pull it from stock. To purchase the material and remove it from MRP, use the **Process MRP** from within the **Purchase Order Form**. The MRP Process Table shows MRP in several different sort orders: by the Current Vendor, by Job Start Date, By Job, or by Product. You can mark items as *Pull from On-hand* from the job itself, from the MRP Process Table within the Purchase Order, or from within the MRP Table. ProfitFab can also be set up to automatically mark items as *Pull from On-hand* if there is enough material in inventory to cover a job's material requirements. If this option is used, it will be automatically marked when the order is verified.

Purchasing does not only have to take place for items in MRP. Items from the inventory list can be directly placed on a purchase order. Material can be ordered for stock if the Min/Max system is set up for determining when to order. Services can be ordered for outside vendors that are a part of the job Part Definition. New equipment can even be ordered for your shop.

When sending out a Purchase Order from ProfitFab, print a Receiving form for the shipping/receiving clerk to fill out when items are received. Enter receipts into ProfitFab updates inventory levels and automatically creates a vendor invoice for items received. When the vendor invoice is received from a vendor, verify the information in ProfitFab and then export the vendor invoice to your accounting software.

Job and Inventory Control

The Job Form

Jobs are created when customer orders are verified in ProfitFab. Pertinent job information is found on the **Job Form**, accessible from either the **Customer Activity Center** or the **Company Job Activity Table**. The **Job Form** contains the following tabs of information:

- General – information includes Current Job Status on the shop floor, Current Job Cost, and Scheduled Events. Current information is updated in real time from the Shop Clock module.
- Routing and Products – this information is basically the Part Definition for the job and includes all routing and materials to be used. This information can be modified as necessary to handle last minute job changes such as engineering and revision changes. The Route Sheet can be reprinted for the job and the modified Part Definition can be copied back to the master Part Definition to be used for subsequent quotes, orders, and jobs.
- Job Load – a Gantt Chart displaying the stations, dates, and workload of the job as assigned by the Station Scheduler.
- Actual Cost – Actual costs attributed to the job for Products, Services, and Machine/Labor time. This information is automatically entered from the Shop Clock module, but can also be entered manually from the Job Form.
- MRP / Purchasing – all material needed for the job and placed into MRP along with the status of that MRP item. Materials that have been allocated as either “Pull from On Hand” or placed on a Purchase Order are reflected as such, and materials on purchase orders that have been received are so indicated here.
- Scrap – any scrap reported for the job is shown, along with the assigned “At-Fault” and scrap cost. Scrap that is not assigned can be edited to assign responsibility here.
- Invoice Stats – any invoices created for this job are shown. If partial shipments are made against a job, the invoice history of the job can be viewed here.

The Shop Clock

The Shop Clock module tracks Jobs and inventory in real time from computer terminals on the shop floor. This module presents an easy-to-use interface for shop floor employees to enter information about what they are doing, where they are working, and what they are working on. Information entered into the Shop Clock module is immediately available throughout the system in the administrative program. The Shop Clock module can run on as many terminals needed to adequately cover the shop floor. Any number of shop floor terminals can be run at no extra charge.

The Shop Clock module tracks:

- actual time on jobs for both equipment and direct labor
- actual setup and rework time
- actual material usage on jobs
- actual scrap for jobs
- actual inspection measurements for SPC data collection on parts

The Shop Clock module also allows:

- download control code to CNC equipment
- view files attached to a job, such as pictures, text instructions, CAD drawings, and movie files
- view the workload defined in the Operations Scheduler to determine what jobs to work on in what order
- send and receive messages via the internal messaging system
- collect productivity and efficiency information about the shop, operations, stations, and employees
- ship and complete jobs, print packing lists and packing labels

Scheduling Jobs

Station Scheduler



Operation Scheduler



Jobs can be scheduled with the Station Scheduler, the Operation Scheduler, or both. The Station Scheduler is an automatic finite resource scheduler. The Operation Scheduler is a manual infinite resource scheduler. Use either scheduler to print workload reports for shop floor employees.

Differences between the two schedulers . . .

Resource Constraints – The **Station Scheduler** assumes there are finite resources and will schedule jobs according to these limitations. The **Operation Scheduler** assumes there are infinite resources and no constraints. The resources that constrain the Station Scheduler are:

- Station Capacity – each station has a limited number of hours in a day that it can be used
- Material Requirements – primarily due to lead times of material that must be ordered for the job
- Current Job Load – jobs that have been scheduled and accounted for some available capacity
- Operation Sequence – operations must be scheduled in a specific order
- Individual operation time requirements – the Part Definition estimate of time required at a given operation is what needs to be scheduled
- Fragmenting—the need for a large production run to be split into smaller fragments of time in order to fit into a schedule.
- Paralleling—the ability to start production of a job at one operation and begin the next operation step

while the first operation continues to run

- Tandeming—the ability to split a large production run across multiple stations

Automatic vs. Manual Scheduling— The **Station Scheduler** is *automatic* and the **Operation Scheduler** is *manual*. The Station Scheduler is previously set up to automatically schedule work. The Operation Scheduler requires manually putting jobs in the desired order to be worked on. A color-code map indicates when jobs are ready to be worked on at a given operation and if material is available. Also, jobs marked high priority (higher than the default priority of 10) show up in **Red** for easy identification.

How and When Jobs are placed into the Schedulers — Active jobs will automatically be scheduled in the **Station Scheduler**. For the **Operation Scheduler**, jobs can be put in automatically when printing the route sheet or put in manually when released to the floor. The main difference between the two is how a job with a long lead time (ex: 6 months in the future) is handled. The **Station Scheduler** will schedule the job backwards from the ship date. Although the job is in the schedule, it has little impact on the current day's schedule. With the **Operation Scheduler**, you would not necessarily want to see jobs that far out into the future in the scheduler, because they tend to get in the way of what is important today, tomorrow, this week, etc.

Shipping and Receiving



Jobs can be shipped from the **Shop Clock** module or from the **Company Job Activity Table**. Shipping jobs will automatically place the parts shipped onto an invoice. When shipping a job, ProfitFab finds any invoices for the same customer and same customer PO number still in the Working state. (This indicates the packing list has not yet been printed for the invoice.) If the program finds an invoice that meets this criteria, the job currently being shipped is added to the invoice. If no invoice is found meeting this criteria, the program creates an invoice and places the current job on it. Next, the program searches through all active jobs to find any that came from the same customer order. If there are other jobs from the same order and same scheduled ship date, there is an option to ship them together. If so, a table opens showing all other active jobs from the same order. At this time you have the option to print the packing list for the job being shipped or wait for any other jobs that need to be finished first. If you choose to wait, the invoice will be held in the Working state and will “collect” line items as subsequent jobs are shipped.

Jobs can be fully or partially shipped. If partially shipping a job, the shipping screen should reflect a job balance less is being shipped than what is being manufactured. If there is a job balance, the shipping screen defaults to keeping the job open for future shipments with the quantity of parts on the job being equal to the job balance. When shipping or completing a job, more can be produced than intended to ship and the excess placed into stock. The combination of parts to ship and parts to put into stock cannot exceed the quantity of parts produced; however, if the quantity to ship exceeds the quantity produced, the remainder is assumed to be pulled from stock.

Invoicing



Customer invoices are created when shipping jobs or when verifying orders. Customer invoices can also be created manually as needed.

Vendor invoices are created when verifying receipt of materials. Vendor invoices cannot be created manually.

Customer invoices exist in one of three folders: Working – (currently collecting line items from completed jobs), Shipped (packing slip has been printed, no more shipped jobs will be added), and Verified (everything is complete, invoice can be sent to customer and exported to accounting). When shipping a job, the quantity of parts manufactured on the job are put into inventory. When verifying the customer invoice, the quantity of parts shipped is pulled out of inventory. If parts are overproduced on the job, the remainder will still be in inventory. After printing a packing slip and physically shipping parts to a customer, the parts just shipped will still show up in inventory if an inventory report for customer parts is run. The parts are still considered to be in inventory until the invoice for the parts is verified.

A customer invoice is created at the time an order is verified if the order contains either a product or an NRE (Non Recurring Expense) item. Items can be quoted and sold directly from inventory to the customer. Since no job is required to build the items, an invoice is automatically generated. NRE items are used for items with special instructions, but are not accounted for in the part price and not inventoried materials. Examples of NRE items might be special tooling charges or one-time mold making charges. When creating an invoice from an order, it will wait in the Working folder to collect jobs as they are shipped.

The View on the Ground

The View from the Ground describes a typical ProfitFab scenario. Once the program is installed and initial information is entered, the program is ready to perform daily job shop tasks. Each person using the program will use task descriptions to help define their role in implementing ProfitFab. When employees are doing their part to use the ProfitFab, information will run efficiently through the system. This efficiency will provide useful information for reports and helps maintain control of processes before they get out of control.

The format of this section of the guide is a hypothetical story about a customer providing a drawing for which he wants a quote. The story steps through the program the way your employees would under the same circumstances. Areas where a particular job function is defined are color-coded using the colors shown in the previous section. Data that is used during the story is available with the ProfitFab Demo data. The story will step through the following processes performed by the following employees:

NOTE: Due to continuing development, screenshots in this section may not be up to date.

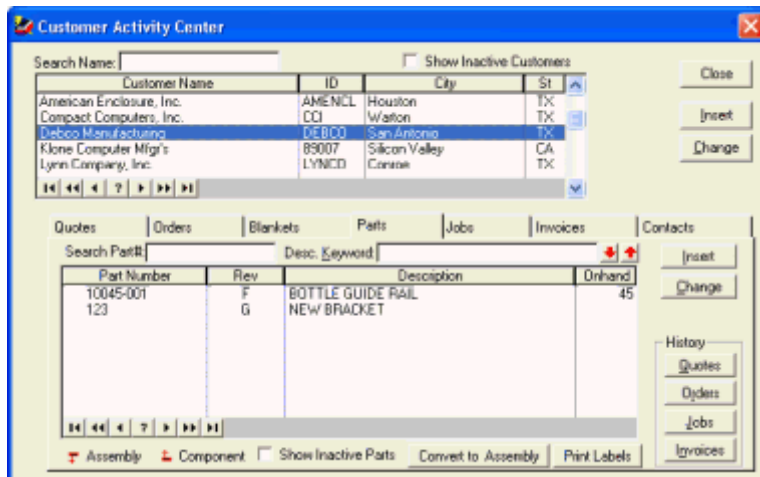
Task	Performed By	
Creating the Quote Defining the Part	Order Entry Clerk Gina	Quoter / Estimator Greg
Creating an Order Creating a Job	Order Entry Clerk Gina	Quoter / Estimator Greg
Ordering Material for the Job	Purchaser Max	
Tracking Time and Material Usage on the Job	Shop Foreman Vic	
Completing and Shipping the Job	Shipping/Receiving Bertha	
Invoicing the Customer	Accounting Terry	

Using ProfitFab

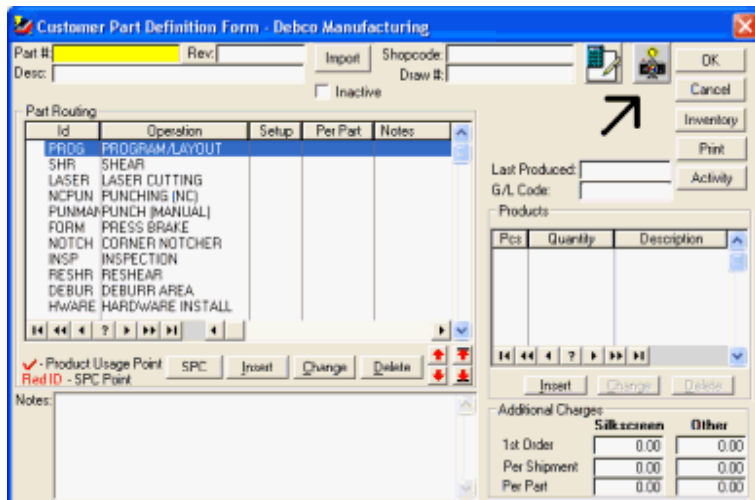
Creating a Quote

ERP Plus Lite

During lunch with a customer, Bob Baker from Debco Manufacturing hands you a cocktail napkin with the layout of a table that he wants made. He asks for a quote for 10 pieces, 50 pieces, and 100 pieces. Bob is a relatively new customer, but he has previously sent a couple of jobs to you and has been satisfied with your services so far.



In order to provide him with the quotes, you need to create a part in ProfitFab first. You give the cocktail napkin and information necessary to Gina, whose job, among other things, is to enter new parts into the system and create quotes and orders. The minimum information she needs is the Customer Name, the Part # and the Revision. Gina opens the **Customer Activity Center** and selects Debco Manufacturing from the **Customer Table**, then clicks on the **Parts** tab. She can see from the screen that Debco already has had previous parts defined. If she wanted, she could view the **history** of Quotes, Orders, Invoices, and Jobs for any of the parts built for Debco, simply by highlighting the part and clicking on the appropriate **history button**. To create the new part for Debco, Gina clicks on the [Insert] button.



A window will open asking Gina to **Select Type**: her choices are [Simple Part], [Assembly], or [Cancel]. She selects [Simple Part] (assemblies are discussed later in this manual). ProfitFab now opens the **Customer Part Definition Form**.

The Part # field is highlighted in yellow, indicating a **required field**. Gina enters the part # you gave her. She has now entered all the information she has, so she clicks [OK] to save the part in the file.



Gina can scan the napkin to make an image file of the drawing and attach this file to the **Part Definition** by selecting the Camera button.

Once the part is created, it is placed on a quote, even if there is no data on which to base a cost. You can use this method of creating **Part Definition** “skeletons” to quickly create parts to quote without investing the time to detail the parts out. For parts that you quote but never build, you do not want to invest any more time than is necessary to get the quote to the customer. When purchase orders come in for the part, then you can take the time to add all the necessary details, knowing that you are going to build the part and make money on it.

Bob Baker asked for a quote for quantities of 10, 50, and 100 parts. Gina has created a “skeleton” **Part Definition** and now it is time to create the quote. She returns to the **Customer Activity Center**, selects Debco Manufacturing from the customer list, then selects the **Quote tab**, which displays all quotes in the system for Debco. By clicking on the **[Insert]** button next to the table, she creates a new quote for Debco. The **Customer Quote Form** opens with the Quote #, today's date, and Debco's information already filled in.

Also filled in is the ID of the clerk who is creating this quote, a date through which the quote is valid, terms, FOB (Freight On Board), typical delivery turn-around requirement, and quote signature. (This information is established during set up and can be changed as needed.) Gina clicks the **ellipses [...]** button next to Contact and selects Bob Baker from the table.

To enter parts for the quote, she clicks on the **[Insert]** button to open the Quote Line Form. For the initial quantity, she enters 10 and leaves 1 for the number of manufacturing Runs. Clicking on the **ellipses [...]** button between the Rev and Description she opens the **Customer Parts Table** for Debco Manufacturing. Gina clicks the part she created, with the **Part Number** “Table”, and then clicks the **[Select]** button to bring that part back to the **Quote Line Form**. She then enters the additional quantities to be quoted.

Customer Quote Form

Quote #: 960036 Date: 6/01/2005

Customer: Debco Manufacturing
3490 Burchwood Drive
San Antonio TX 77634

Phone: (210) 651-7000
FAX: (210) 651-7099

Contact: Bob Baker Clerk: REC Salesman:

Quantity: 100 Part ID: 1 Rev: 1 Description: Table Price: 0.000

Valid thru: 7/01/2005 What-If: Print Detail on Part Insert Change Delete

Memo: Terms: Net 30 days Fob: HOUSTON Delivery: 3 Weeks Signed by: Justin Turner Title: President Total: \$0.00

When Gina clicks on the [OK] button in the **Quote Line Form**, the program adds 3 line items to our quote. These line items are all for the same part, "Table", and for the three different quantities to be quoted.

Notice there is no Price for the quoted parts. This is because we created a "skeleton" part definition with nothing to calculate the cost of the part. In ProfitFab, the cost of the part is calculated and the price is based as a markup of the cost. In situations where we are quoting a part for the first time, our estimator, Greg, will actually enter

prices for the parts being quoted. Also, the Verified checkbox is disabled. Security settings for Gina do not allow her to verify quotes. Verifying quotes is assigned to the quoter/estimator.

It took Gina approximately 3 to 5 minutes to create a "skeleton" part definition and a quote for the part. When she clicks the [OK] button, this quote will show up in the Open Quotes folder as a flag for the quoter/estimator to take action on it. Gina clicks [OK] to save her work.

ERP



Alternatively, Gina could use the internal messaging system to send a message letting Greg know that the quote is ready to be looked at.

Send Message

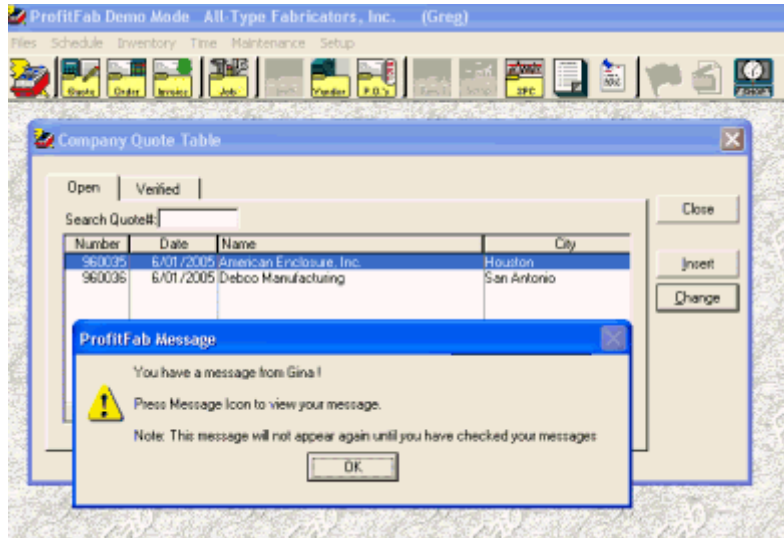
To: Greg

The Quote for Debco Manufacturing is ready for you to look at. The Quote number is 960036. The part # is Table

Send Message



This is what Greg would see if Gina uses the internal message system.



Finishing the Quote

Since Greg normally works with **open** quotes, he usually has the **Company Quote Table** open on his desktop. As soon as Gina saved the open quote, it appears in the **Company Quote Table** on Greg's computer.

Now he sees two quotes that need to be verified. His approach to updating and verifying quotes will vary depending on the nature of each quote. If a part has been quoted and manufactured in the past, he can quickly verify the quote since the part definition has already been detailed and potentially reconciled with actual labor data from the shop floor. For new parts with incomplete part definitions or parts that have never been manufactured, Greg needs to estimate the cost and establish a price to quote.

Greg can use ProfitFab to estimate the cost of Debco's Table. Building the **Part Definition** may take about 15-20 minutes to define labor, machine, and material requirements will determine the cost of building the part. But Greg has been estimating parts for years and has other methods that he uses to quickly estimate the cost/price of Debco's Table. He opens the quote for Debco Manufacturing and pulls out the drawing of the part that you gave him. He quickly estimates prices for the given quantities and opens the **Quote Line Form** for each line item to enter this information. Once this is done, he verifies the quote by clicking the **Verified** box. This enables the **Email Quote** box in the **Print** section. He selects this option and the quote is emailed to Bob Baker. Once he is finished with Debco's quote, he moves to the next quote in the table. Total time elapsed for Greg will vary with the complexity of the part being quoted, but most average 5 to 10 minutes per quote.



For the purpose of this example, the quoting phase was broken down into 3 steps

1. Create a skeleton Part Definition
2. Create a quote with the Skeleton Part Definition and no price
3. Estimate the price to quote using whatever means you already have in place for estimations

However, there are many different ways to approach creating Part Definitions and quotes. You can create Part Definitions from within a quote. You can detail the Part Definition up front to find the estimated cost and price. Or, you can even bypass the quote altogether and create a Part Definition to put directly onto an order, thereby creating jobs immediately. The method you use should be what is most comfortable for you.

Quotation



6/02/2005 Quote No.: 960036
To: Debco Manufacturing
3490 Burchwood Drive
San Antonio TX 77634

5015 PAUL WAYNE DRIVE
BOLING TX 77420
 (979) 531-1679 or (979) 531-0743
 FAX (979) 531-0743

Salesperson LKH
 Clerk REC
 Memo:

Phone: (210) 651-7000 FAX: (210) 651-7099

Dear Mr. Bob Baker:

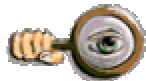
Thank you for calling on us for your fabrication needs. We are pleased to submit the following quotation for your consideration.

Terms Net 30 days	F.O.B. HOUSTON	Delivery 3 Weeks	Valid thru 7/01/2005	
Quantity	Runs Part Number	Rev	Description	Price/Unit
10	1 Table			45.00
50	1 Table			40.00
100	1 Table			35.00

Please contact me if you have any questions.

Sincerely,

Justin Timmer
President



The Quote, and all other reports in ProfitFab, can be customized to look exactly how you want them to look using the built-in Report Designer.

Detailing the Part Definition

ERP Plus Lite

Gina receives the purchase order from Debco Manufacturing for 50 Tables referencing our quote number 960036 and reflects a price of \$40.00 per part. To enter the order into the system, Gina selects Debco Manufacturing from the **Customer Activity Center** and clicks on the **Order** tab to display their orders. Next, she clicks the **[Insert]** button to create a new order for them. This opens the **Customer Order Form** with Debco's default information filled in.

Since the purchase order refers to the quote they were sent, Gina clicks the **[Import from Quote]** button and selects that quote from the table. This brings in all the line item information that was created on the quote. Since the purchase order was for 50 parts, she deletes the lines for the other quantities. The P.O. Number field is displayed in yellow, indicating that Debco is setup to require a purchase order number on their orders. All of the information that she is responsible for entering has been entered. She clicks **[OK]** to save the order in the **Open Orders** table and it is ready for Greg to verify.

Part of Greg's job description as an estimator is to verify quotes and orders. He monitors the **Open Quotes** and **Open Orders** tables. He reviews any open orders that appear in the table looking for the following things:

?

- Have the parts been built before?
- Are the part definitions detailed?
- Do the part definitions reflect the current revision
- Are drawings up to date and attached to the parts?

For orders containing parts that have been previously built, Greg checks for the accuracy of the information that makes up the part definition. For orders containing new parts that have not been built in the past, he is usually the person who builds the details into the **Part Definition**. Making the part definition as accurate as possible before creating jobs will have a positive impact on scheduling the work on the shop floor, ordering the right amount of material, and establishing a realistic ship date.

From the **Company Order Table**, Greg selects Debco Manufacturing, order number 970011. He finds the single line item and opens it with a double-click. In the **Order Line Form** he sees that there is a price, but no cost – a sign that he needs to add detail to the part definition. He clicks on the **Hold Price** box to save the price and clicks the **[Edit Part Definition]** button.

Since the **Part Definition** has no routing associated with it, the program prompts him for whether or not he wants all default routing brought in. Bringing in the default routing makes it easier to add the individual operations required for the part, so he answers [Yes] to import all.

The Part Definition consists of four general areas. At the top is general information related to the part. To the left is the routing table, which contains the labor operations necessary to build the part. To the right is the Products table, which adds material costs to the part. And, finally, at the bottom are part-specific notes and additional costs.

Greg needs to add routing and materials. The operations come from the **Default Operations Table** that is available from the **Setup ? Operations** pull-down menu. The operations in that table are sequenced to match the normal flow of work through the shop so that entering them into the part definition is as easy as going down the list and selecting the necessary operations. In the table above, you will also see that there are no Setup times or Per Part times entered for any of the operations. Putting time onto an operation is what holds it to the **Part Definition** when you are ready to save your work. When closing a part definition, any operations in the table without times allotted to the part are removed from the part definition.



ProfitFab includes several types of built-in calculators to assist in determining the time needed per part for an operation. Both Detailed Calculators and Speed Calculators can be set up for any operation created in ProfitFab.

All **Part Definitions** at this shop begin with the Program/Layout operation. We use this operation to track time on writing all required CNC machine code, to verify that drawings match revision levels, to verify material requirements against the drawings, and to perform any other in-house pre-production processes required. Greg puts this operation into our part definition by double-clicking it in the **Part Routing table**. This opens the **Part Routing Form** with Program/Layout already selected. Our Program/Layout operation defaults to 15 minutes of setup time and the amount of time required to perform this operation is independent of the number or parts being manufactured (there is no per part time needed). Greg adds this operation to the **Part Definition** by clicking the **[OK]** button to save his work.

Part Routing Form

Operation ID: PROGRAM/LAYOUT No. of Parts: 50

Operation Cost (Machine + Labor)

Normal 35.00 Proto 45.00 Special 0.00 Other 0.00

Print on Stock Router ☐ Schid Station:

Cancel

Setup Time: 1.00 h:mm:ss 35.000

Time Per Part: 0:00:00.0 h:mm:ss:ss 0.000

Total Time: 1:00:00.0 h:mm:ss:ss 35.000

Route Notes:

Total Operation Cost 35,000

Products

Pcs	Quantity	Id	Description
-----	----------	----	-------------

Insert Change Delete

Now, Greg needs to add the remaining operations to the part routing table. Referring to the drawing attached to the part, Greg sees that they will need to punch out the table tops, bend them, cut the table legs, drill holes in both the tops and legs for attachment, send them out to a finisher for powder coating, assemble, and ship them.

On the **Part Definition Form**, Greg finds the Punching operation, called Punching (NC). He double-clicks this operation to open it in the **Part Routing Form**. The form opens and shows us with a default setup time of 30 minutes. He decides to change the Setup Time to 15 minutes and estimates that it will take 30 seconds per part to complete this operation.

He will also add material to this operation. Aluminum sheet will be pulled from stock for punching. To add this material, Greg clicks the **[Insert]** button under the **Products Table** located at the bottom of the form. The **Part Product Form** opens and he needs to find the product to add. He clicks the **[...]** ellipses button next to the Product ID to open the **Product/Service Table**. He clicks the **Sheet** tab and then selects the **Category** tab to view only Aluminum sheet material. There he can find sheet stock of .040 Aluminum, which is 2-dimensional type material.

Product / Service Table

Sheet Structural Hardware Finish Other In-House

Product Id Category Vendor ☐ Show Inactive

ALUMINUM

Product Id	Description	Onhand
AL5052-020-3x10	ALUM .020 5052-H32 3x10	250.1
AL5052-020-4x10	ALUM .020 5052-H32 4x10	
AL5052-025-3x10	ALUM .025 5052-H32 3x10	
AL5052-025-4x10	ALUM .025 5052-H32 4x10	
AL5052-032-4x10	ALUM .032 5052-H32 4x10	
AL5052-032-4x12	ALUM .032 5052-H32 4x12	
AL5052-040-4x10	ALUM .040 5052-H32 4x10	
AL5052-040-4x12	ALUM .040 5052-H32 4x12	
AL5052-050-4x10	ALUM .050 5052-H32 4x10	12.1
AL5052-050-4x12	ALUM .050 5052-H32 4x12	44.1

Print Label

Categories

- ALUMINUM
- BRASS
- COLD ROLLED STEEL
- COPPER
- ELECTRO-GALVANIZED
- HOT ROLLED STEEL
- PLASTICS
- STAINLESS STEEL

Here, Greg sees that he has a couple of choices to use for a product. The 40 Gauge aluminum that we have comes in either 4x10 sheets, or 4x12 sheets. Since the dimensions on the table require a 17"x17" piece of aluminum, a quick calculation shows that he can get a minimum amount of drop out of the 10' sheet. He selects the 5052-H32 in 4x10 sheets for our part by highlighting it and then clicking the **[Select]** button. This returns him to the **Part Product Form**, which has been updated with the type of product he has chosen. Now, he will define a few more things so that ProfitFab can compute the material cost of the part

due to this product. He will determine how to charge the customer for the material, and needs to define how much of the material is used to make a part.

The **Quantity Calculator** contains the fields needed to set up the costing information for this particular part. With the size of the part not lining up exactly with the sheet, there will be some material left over on each sheet used. Greg is only going to charge Debco for the amount of material required to make the part. (To pass the cost of that material to the customer, Greg could choose the Drop + Part option.) Next, he enters the single part dimensions into the Part (Costing) Size fields and the amount of material needed between

consecutive parts with the punch being used is 0.5" in either direction. The punch has no grab dimensions, which are used to account for material lost from parts due to machine holding requirements in either direction. We will use the full sheet so the blank size and sheet size are the same. After entering the values, ProfitFab calculates 12 parts per blank. The calculated price for a part is \$1.6634 and 0.0535 sheets per part will be used. Greg clicks **[OK]** to save his work and return to the **Part Routing Form**. There, he clicks **[OK]** to return to the **Part Definition Form**, and the NC Punch operation has been added to our part definition.

Greg continues adding the operations that are needed on the part definition and adding materials to the operations where needed. At the Cut Off Saw he adds aluminum square bar for the legs and at the assembly operation he adds rivets to fasten the legs to the table top. Adding the aluminum square bar is very similar to the aluminum sheet that used for the table top with the exception that it is 1-dimensional. It only needs to be defined in terms of its linear component and he indicates there are 4 legs for each part being built. Adding the rivets is simply a matter of entering how many are required for a part.

These screen shots show the **Part Product Form** for each of these items.

Greg enters one final operation to send the parts to an outside vendor for powder coating. Setting up outside services in ProfitFab is similar setting up a regular operation in ProfitFab. The operation is set up as Finish (Outside) used for all outside services. This operation is placed onto Part Definitions as needed. In this Part Definition, Greg assigns one outside service (ProfitFab does not have a limit on the number of outside services that can be attached to a part definition).

Greg adds the Finish (Outside) operation to the **Part Routing table**. In the **Part Routing Form** for this operation, he will estimate the amount of time needed to prepare the parts to go to the vendor, *not the time required at the vendor itself*. The bottom portion of this form is where the actual service and its cost are defined. He clicks the **ellipses** next to the **Service ID** to open the **Service table**. From this table, he selects the Powder Coat per piece which is how City Paint Shop quoted him. After returning to the **Part Routing Form** with the service selected, he clicks the **ellipses** next to the **Vendor ID** to select City Paint Shop from the list of vendors who perform this service. Back on the **Part Routing Form**, he enters the price quoted to him of \$12.80 per part into the Quantity price break field. The service had been setup with default values with price breaks per 100 pieces. Since the order is for 50 pieces, he enters the price into the first field. (He could have entered more actual price breaks and prices for potential future runs of the part, but since he doesn't know if there will be subsequent orders, he only enters what is needed for this order.) After entering the information, the program calculates the **Service Cost per Part** and the total service cost for 50 parts.

Part Routing Form

Operation ID: FINOUT **FINISH (OUTSIDE)** No. of Parts: 50 OK

Operation Cost (Machine + Labor):
☒ Normal 35.00 ☐ Proto 45.00 ☐ Special 60.00 ☐ Other 100.00

☐ Print on Stock Router Schld Station: Cancel

Setup Time: 0:20 h:mm 11.667
 Time Per Part: 0:00:00.0 h:mm:ss 0.000
 Total Time: 0:20:00.0 h:mm:ss 11.667

Route Notes:

Total Operation Cost: **651.667**

Service ID: POWDER COAT Vendor ID: CITYPNT

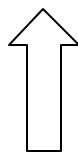
Service Cost: Per: PC Minimum Chg: 100.00

No. of Parts	1 to	101 to	201 to	301 to	401 and Above
	100	200	300	400	
	12.800	10.000	10.000	10.000	10.000

POWDER COATING
CITY PAINT SHOP

Service Cost/Part: 12.80
 Total Service Cost: 640.00

Specs



Finally, he clicks on the **Specs** button to enter a detailed instruction for the vendor which will print on the Service PO when it is issued.

Service Detail Specifications

OK

Apply powder coating I&W/ specs provided

Once Greg is satisfied with the setup of the outside service, he clicks **[OK]** on the **Part Routing Form** to return to the **Part Definition Form**. If the Finish (Outside) operation was not placed in the correct order in the **Part Routing Table**, the arrows under the table will move the routing to the correct position in the table.

Customer Part Definition Form - Debco Manufacturing

Part #: Table Rev: Import Shopcode: Draw #: OK Cancel Inventory Print Activity

Part Routing

Id	Operation	Setup	Per Part	Notes
✓ PROG	PROGRAM/LAYOUT	1.00		
✓ NCPUN	PUNCHING (NC)	0.15	0.00:30	
✓ FORM	PRESS BRAKE	0.15	0.01:30	
✓ CUTSAWCUT	CUT OFF SAW	0.10	0.01:00	
✓ REAM	REAMER (DRILL PRESS)	0.10	0.02:00	
✓ DEBUR	DEBURR AREA	0.05	0.01:30	
FINOUT	FINISH (OUTSIDE)	0.20		
✓ ASSY	ASSEMBLY	0.10	0.01:00	
✓ SHIP	SHIPPING	0.05	0.01:00	

Last Produced: G/L Code: Products: Pcs Quantity Description

Pcs	Quantity	Description
1	0.0517	ALUM .040 5052 H32 4
4	0.0833	ALUM SQUARE BAR 1
	16.0000	1/8x.251-.375 SST D0

Additional Charges: Silkscreen Other

	Silkscreen	Other
1st Order	0.00	0.00
Per Shipment	0.00	0.00
Per Part	0.00	0.00

He can quickly see at a glance all the information that he has entered in the system. The Part Definition Form displays the operation steps with setup and per part times, material required for the job, and routing steps with material usage.

To check pricing, he clicks the **Cost Calculator** button in the upper right corner.

The **Part Cost-Price Calculator** gives a breakdown of the cost of a given quantity of parts into the various components shown. There are 3 columns of information—two of them are based on default quantities from the **System Setup menu** and the 3rd column is variable. By default, since we are working within an order for 50 parts which is initially used in the variable column. Greg can change the quantities to see what affects it has on the overall cost-price of the part. He can also modify the part's markup percentages or add a manufacturing burden factor to the part. He can see that the price for 50 parts is quite close to what he had estimated. He clicks **[OK]** to return to the Part Definition where he again clicks **[OK]** to save his work. This returns him to the **Order Line Form** where the new costs are calculated and the markups are recalculated to result in our held price of \$40.00 per part.

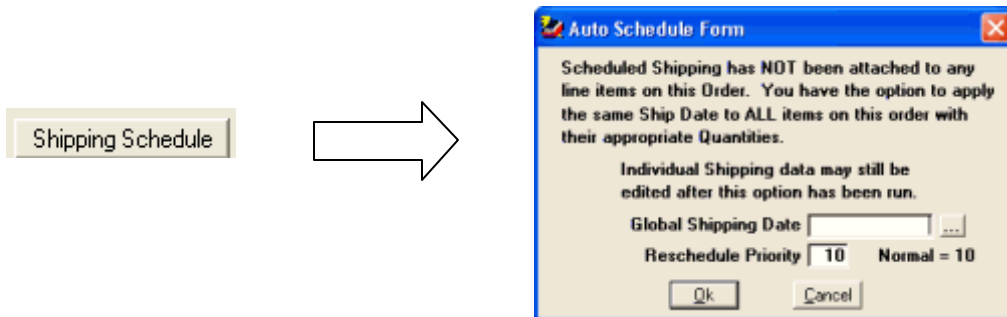
Part Cost-Price Calculator

Manufacturing Runs: Number of Parts

	10	100	50
Burden:			
Labor	13.792	5.579	6.492
Material	8.823	8.823	8.823
Products	1.760	1.760	1.760
Finish			
Silk Screen			
Services	12.800	12.800	12.800
Other			
Cost Each	37.175	28.962	29.875
Markup: Goods			30.00 %
Labor			25.00 %
Burden Cost			0.000 %
Price Each	47.636	37.372	38.513

History: Quotes Orders Jobs Invoices

On the **Order Line Form**, Greg clicks **[OK]** and returns to the **Customer Order Form**.



Now that the part is defined, Greg will set up a shipping schedule and create a job. To set up the scheduled shipment, he clicks the **[Shipping Schedule]** button below the table. This opens the **Auto Schedule Form**. He can set a global ship date for orders with multiple line items or for the single item from this order. He enters the date by clicking the **ellipses** button next the **Global Shipping Date** field and clicking the date on the calendar popup. Once the **[OK]** button is selected the order is ready to create jobs.

To create the job, the order must be verified. Verifying the order implies that everything on the order is as accurate as possible. In addition to creating a job, verifying on order also creates MRP requirements for material purchasing and it optionally adds the jobs to the production schedule. Making sure that the Part Definition is as accurate as possible will have an impact on these areas. To verify the order, Greg checks the **Verified** box which enables the printing of several reports related to the order. He can fax, email, or print to mail the Order Verification to Debco. (He can bypass these reports and they can be printed/sent by another person.) Greg checks the boxes to print the Route Sheet and the Order Acknowledgement. The Route Sheet is sent to the CAD programmers and the Order Acknowledgement is given to Gina to send to the customer.



The Order Acknowledgement can be faxed, emailed, or printed to mail to the customer directly from ProfitFab.



To set up **multiple shipments** of an item or to set up **multiple shipping dates** for different parts on the same order, use one of the following methods:

1. Set the Global Shipping Date to the date when most of the items are to be shipped.
2. Select line items with alternative shipping dates and click **[Shipping Schedule]** to modify the ship dates for those line items only.

OR

1. Click the **[Cancel]** button on the Auto Schedule Form to begin setting up individual shipments for the selected line item.
2. Select each line item and click **[Shipping Schedule]** to set up shipments.

When setting up shipments, you can also set up quantities to be manufactured, shipped, and pull from stock. You can set up jobs to be completely pulled from stock, which will produce a "From Stock" Route Sheet, containing only the operations you designate to print on From Stock routers.

Max performs all purchasing functions for our shop. He has set up the inventory into two types based on how he orders the material. The first type is material that is kept in stock and is ordered based on Min/Max stock levels. The second type is material that is ordered specifically for jobs and not necessarily kept in stock, although from time to time will have some in stock.

When Max comes to work, the first thing he normally does every day is to check on what materials need to be ordered for stock, what purchase orders are late in being delivered and causing problems with jobs, and what purchase orders are due to be delivered so that he can check on their status.

To accomplish the first two tasks, he runs two **Red Flag Reports**: the Scheduled Purchases Report and the Product Reorder Listing.



The dialog box titled "Red Flag Report Menu" contains several sections:

- Employee Absentee**: A checkbox that is unchecked.
- Shift**: Radio buttons for 1st, 2nd, 3rd, 4th, and 5th. The 1st shift is selected.
- Off Schedule**: Checkboxes for Purchases (checked), Job Start, Job Ship, and Job Shortage.
- Order to Stock**: Checkboxes for Products (checked), In House Products, and Customer Parts.
- A **Process Report** button at the bottom.
- A **Cancel** button in the top right corner.

From the Scheduled Purchases Red Flag Report, he finds that he needs to look at PO # 4 and follow up with the vendor to find out the status.

From the Product Reorder Red Flag Listing he sees there are several things to order to get them back to their Stock Level. Material only shows up on this report when the following conditions are met:

- ? Product has a Stock Level and Reorder Point set
- ? On Hand + On Order - Committed > Reorder Point

The Stock Levels are set at what Max wants to keep in stock. The Reorder Points are set based on usage of the material and the lead time it takes for the material to arrive, so that as the new material is being delivered we are just running out of what was in stock.

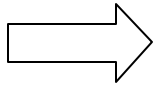
This report shows Max the quantity he needs to order to get back to his required Stock Level.

Date: 6/21/2005 Time: 3:41PM		Scheduled Purchases Red Flag Report				
Job Number	Part Number	Rev	Customer			
970011-001	Table		Debco Manufacturing			
Order By	Need By	P.O.#	Quantity	Received	Product Id	Description
6/20/2005	6/20/2005	4	4.1667		AL5052-040-4X10	ALUM .040 5052-H32 4x10

6/21/2005
4:21PM

Product Reorder Red Flag Listing

Id	Primary Vendor / Product Id - Description		On Hand	Committed	On Order	Stock Level	Reorder Point	Qty to Order
PEMENG	PEMM ENGINEERING							
	AS-832-22J	FLOATING PEM NUT ZINC	30.00	30.00		1000.00	50.00	1000.00
	CLS-0428-1	SST SELF-CLINCHING NUT	4000.00	2000.00		5000.00	2500.00	3000.00
	CLSS-032-1	SST SELF-CLINCHING NUT	300.00			1000.00	500.00	700.00
RELIAN	RELIANCE METAL SUPPLY, INC.							
	AL5052-050-4X10	ALUM .050 5052-H32 4x10	12.00			25.00	15.00	13.00
	AL5052-050-4X12	ALUM .050 5052-H32 4x12	44.00			75.00	50.00	31.00
	CR1010-048-4X10	CRS 18GA (.048) 4x10	10.25	8.41		10.00	5.00	8.16
	SS304-060-4X12	CRES 304 18GA (.060) 4x12	2.00			10.00	3.00	8.00
	SS304-105-4X10	CRES 304 12GA (.105) 4x10	25.00			50.00	30.00	25.00



To create a Purchase Order, Max goes to the **Vendor Activity Center** and selects the Vendor for the PO. He selects the **Purchase Orders** tab and clicks **[Insert]**. ProfitFab asks if the PO is for Outside Services or regular material. Max clicks **[No]** on the system message—this PO is for regular material.

Id	Vendor Name	City
NELSON	NELSON SPECIALTY HARDWARE, INC.	DALLAS
PEMENG	PEMM ENGINEERING	TIMBERLAND
RELIAN	RELIANCE METAL SUPPLY, INC.	HOUSTON
SOPLT	SOUTHERN PLATE AND FINISH	SEALY
TRID	TRIDENT STEEL, INC.	SUGARLAND

P.O. #	Date	Clerk	Total	Notes
1	10/09/2003	ML	3,135.48	



Max could also create a **Purchase Order** from the **Purchase Order Table**.



ProfitFab System Message

? Is this Purchase Order for Outside Services ?

Yes No

Purchase Order Form

Vendor: RELIANCE METAL SUPPLY, INC.
4545 NORTH LOOP
HOUSTON TX 77075

Terms: NET 30

Shipping: THEIR TRUCK

Vendor Qty	Vendor Id	Description	Price	Extension

Subtotal: 0.00
Shipping/Handling: 0.00
Other: 0.00
Order Total: 0.00

The **Purchase Order Form** opens with the selected Vendor's default information, such as **Terms** and **Shipping**. To insert parts onto the PO, Max clicks the **[Insert]** button. This opens the **Purchase Order Line Form (Detail)**.

Purchase Order Line Form (Detail)

Total Qty: 14.00 Sh
 Product Id: AL5052-050-4x10
 Description: ALUM .050 5052-H32 4x10

Order Information
 Order Qty: 14.0000 Sh
 Product Id: AL5052-050-4x10
 Description: ALUM .050 5052-H32 4x10
 Price: 1.44000 per Sh Total: 20.16

Delivery Date: (Optional)
 Stocking Information
 On Hand: 12.00
 On Order: 0.00
 Committed: 0.89
 Stocking Level: 25.00
 Reorder Point: 15.0

1 Job Entries

Quantity	Job Number	Start Date	Part Number	Rev	Customer
14.0000	n/a				

Line Notes
 Insert Change Delete Add Round Qty

Using the **Product Reorder Red Flag Listing**, he enters products onto the PO by typing the **Product ID** into the field where information about the product is automatically retrieved. Then he enters the quantity for the order by clicking the **[Insert]** button and entering the amount into the **Purchase Order Line Quantity Form**. After clicking **[OK]**, he returns to screen shown here. Then, he clicks the **[Close]** button to return to the **Purchase Order Form**.

Max continues to add line items to the PO until he has added all that is needed according to the report.

Purchase Order Form

Vendor: RELIANCE METAL SUPPLY, INC.
 4545 NORTH LOOP
 HOUSTON TX 77075
 Fax: (713) 879-2345
 Phone: (713) 879-1234

Date: 6/30/2005
 P.O. Number: 8
 P.O. Clerk: PUR
 Delivery: 7/06/2005

Terms: NET 30
 Contact: LUKE BRANDON
 Shipping: THEIR TRUCK

Print PO OK
 Fax PO Email PO
 Print Receiving
 Verify

Vendor Qty	Vendor Id	Description	Price	Extension
31.0000 Sh	AL5052-050-4x12	ALUM .050 5052-H32 4x12	48.24000	1,495.44
9.0000 Sh	CR1010-048-4x10	CRS 18GA (.048) 4x10	120.00000	1,080.00
8.0000 Sh	SS304-060-4x12	CRES 304 16GA (.060) 4x12	169.00000	1,352.00
25.0000 Sh	SS304-105-4x10	CRES 304 12GA (.105) 4x10	145.00000	3,625.00
14.0000 Sh	AL5052-050-4x10	ALUM .050 5052-H32 4x10	114.00000	1,596.00

Items: 5
 Subtotal: 9,148.44
 Shipping/Handling: 0.00
 Other: 0.00
 Order Total: 9,148.44

Process MRP
 Print Detail

The finished PO looks like this. He clicks the **Verify** checkbox, clicks the **Print PO** checkbox, and **[OK]**. The Purchase Order prints and is sent to the vendor.

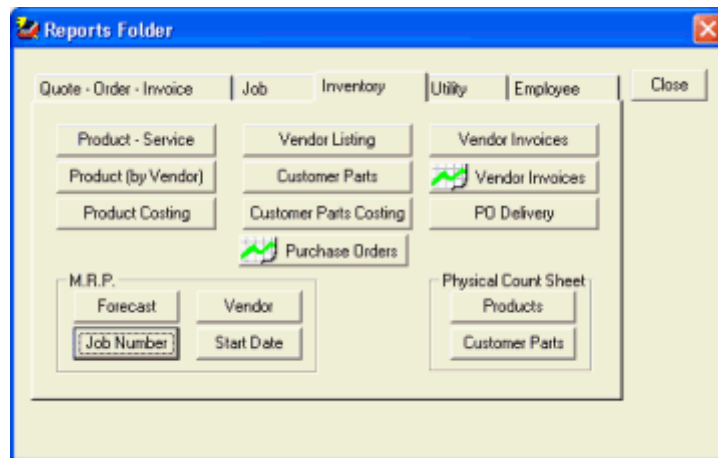
Next, Max checks the purchase orders that are due in the next few days by running the **Purchase Order Delivery Listing**. This is run from the **Reports Folder** under the **Inventory tab**. He calls the vendors to check on the delivery status for the listed items.

6/21/2005 Purchase Order Delivery Listing				
Period from 6/21/2005 to 6/30/2005				
ALL				
Vendor	PO Number	Delivery	Quantity	Product Description
RELIANCE METAL SUPPLY, INC.	4	6/21/2005	5.0	Sh ALUM .040 5052-H32 4x10
RELIANCE METAL SUPPLY, INC.	4	6/22/2005	13.0	Sh CRS 14GA (.074) 4x10
RELIANCE METAL SUPPLY, INC.	4	6/24/2005	1.0	Sh ELECTRO GALVANIZED 18GA 4x10
RELIANCE METAL SUPPLY, INC.	4	6/24/2005	12.0	Sh CRES 304 16GA (.060) 3x10
RELIANCE METAL SUPPLY, INC.	4	6/24/2005	4.0	Sh CRES 301 14GA (.075) 4x12
RELIANCE METAL SUPPLY, INC.	4	6/24/2005	1.0	Sh ALUM .063 5052-H32 4x10
RELIANCE METAL SUPPLY, INC.	4	6/24/2005	42.0	Sh ALUM .025 5052-H32 4x10
RELIANCE METAL SUPPLY, INC.	4	6/24/2005	6.0	Sh HRPO 7GA (.179) 4x10

After checking on the status of deliveries, Max investigates what materials need to be ordered for jobs. Material that is needed for a job is put into MRP (Material Resource Planning) when the job is created. There are several formats of MRP reports designed to assist Max in purchasing. These reports are:

- ? MRP by Product ID
- ? MRP by Job Number
- ? MRP by Vendor
- ? MRP by Need to Order by Date

These reports are accessed from the **Inventory tab** of the **Reports Folder**. Examples of each report are shown below, reflecting some or all of the material needed for our Debco Mfg. Job.



MRP Forecast Listing										
For Category: ALUMINUM										
Product	Job Number	Start Date	Sch'd Ship	Status Qty	Status	Net Requirement	Gross Jit Requirement			
							10 days	11 to 30	31 to 60	OVER 60
AL5052-025-4X10	ALUM .025 5052-H32 4x10			Est Cost:	20.506					
	970009-001	6/17/2005	6/30/2005			41.67	41.67			
	Committed:	41.67	On-Hand:	On-Order:	Product Totals:	41.67	41.67			
					Totals (Dollars)	854.40	854.40			
AL5052-040-4X10	ALUM .040 5052-H32 4x10			Est Cost:	32.198					
	970011-001	6/20/2005	6/30/2005			4.17	4.17			
	Committed:	4.17	On-Hand:	On-Order:	Product Totals:	4.17	4.17			
					Totals (Dollars)	134.16	134.16			

MRP Start Date Listing								
Period from: 6/20/2005 to 6/20/2005								
Start Date	Job Number	Sch'd Ship	Required	Product Id	Description	On-Hand	On-Order	Committed
6/20/2005								
	970011-001	6/30/2005	16.67	AL-875-875-144	ALUM SQUARE BAR .875			16.67
	970011-001	6/30/2005	4.17	AL5052-040-4X10	ALUM .040 5052-H32 4x10			4.17
	970011-001	6/30/2005	800.00	STSTD46	1/8X 251-.375 SST DOME RIVET	10000.00		5,800.00

MRP Vendor Listing										
RELIANCE METAL SUPPLY, INC.										
Product	Job Number	Start Date	Sch'd Ship	Required	Part Number	Rev	Customer			
<u>AL 5052-025-4X10</u>	<u>ALUM .025 5052-H32 4x10</u>									
	970009-001	6/17/2005	6/30/2005	41.67	ODH234	A				
			Total Required	10 days	11 to 30	31 to 60	OVER	On-Hand	On-Order	Committed
			41.67	41.67						41.67
<u>AL 5052-040-4X10</u>	<u>ALUM .040 5052-H32 4x10</u>									
	970011-001	6/17/2005	6/30/2005	4.17	Table		Debco Manufacturing			
			Total Required	10 days	11 to 30	31 to 60	OVER	On-Hand	On-Order	Committed
			4.17	4.17						4.17

MRP Job Number Listing							
From Job Number 970011-001 to 970011-001							
Job Number	Required	Product Id	Description	Vendor	On-Hand On-Order Committed		
<u>970011-001</u>	Start Date: 6/17/2005	Sch'd Ship: 6/30/2005	Part Number: Table	Rev:	Customer: Debco Manufacturing		
	4.17	AL5052-040-4X10	ALUM .040 5052-H32 4x10	RELIANCE METAL SUPPLY, INC.			4.17
	50.00	POWDER COAT	POWDER COATING - PER PIECE	CITY PAINT SHOP			
	16.67	AL-875-875-144	ALUM SQUARE BAR .875	TRIDENT STEEL, INC.			16.67
	600.00	STSTD46	1/8X.251-.375 SST DOME RIVET	PEMM ENGINEERING	10000.00		5600.00



MRP reports are designed to fit different ordering preferences. Shops that like to order material specifically for jobs will use the **MRP by Job Number**. Shops that only want to order material when it is needed will use the **MRP by Start Date**. It is not necessary to run all the reports to determine your material requirements.

Inventory	
Purchasing / Receiving	
On Hand - Cost Adjustment (Product)	
On Hand - Cost Adjustment (Parts)	
M.R.P.	
Adjust MRP	
Reports	►

Max opens the **MRP Process Tables** from the **Inventory** pull-down menu.

MRP Process Tables

Job Start Date: 6/23/2005 Job Number: 970005-002 Product: POWDER COATING - PER Sq In

Search Order by Date: 6/23/2005

Order by Date	Ship Date	Job Number	Quantity	Status	Id	Product Description	Vendor Name
6/23/2005	6/30/2005	970005-002	250.0000	Surplus	PWDR COAT	POWDER COATING - PER Sq In	CITY PAINT SHOP
6/23/2005	6/30/2005	970005-002	4,000.0000	Surplus	4000.00 B50S-032-20	SST BLIND STANDOFF	PEMM ENGINEERING
6/23/2005	6/30/2005	970005-002	1,000.0000	Surplus	1000.00 FHS-0420-10	STUD STAINLESS STEEL	PEMM ENGINEERING
6/23/2005	6/30/2005	970005-004	100.0000	Surplus	100.00 H461-2 1/2w/R	CASTER SW/VEL (TEAL 0700099)	PEMM ENGINEERING
6/23/2005	6/30/2005	970005-004	12.5000	Surplus	12.50 HR-095-1000-1000	HR SQTUBE 13GA 1.000x1.000	TRIDENT STEEL, INC.
6/23/2005	6/30/2005	970005-007	25.0000	Surplus	CHEM FILM GOLD	CHEM FILM GOLD	CITY PAINT SHOP
6/23/2005	6/30/2005	970005-007	4.1667	Surplus	20.00 AL-200X400-24	ALUM FLAT BAR 2.000T x4.000w	TRIDENT STEEL, INC.
6/23/2005	6/30/2005	970005-007	125.0000	Surplus	125.00 SIC 386 3/8-16	3/8-16 WELD NUT	PEMM ENGINEERING
6/23/2005	6/30/2005	970005-008	1,000.0000	Surplus	1000.00 #10 FLAT WASHER	#10 ZINC STEEL FLAT WASHER	PEMM ENGINEERING
6/23/2005	6/30/2005	970007-001	5.0000	Surplus	PAINT	PAINTING	CITY PAINT SHOP
6/23/2005	6/16/2005	970007-002	50.0000	Surplus	CHEM FILM GOLD	CHEM FILM GOLD	CITY PAINT SHOP
6/23/2005	6/16/2005	970007-002	8.3333	Surplus	20.00 AL-200X400-24	ALUM FLAT BAR 2.000T x4.000w	TRIDENT STEEL, INC.
6/23/2005	6/30/2005	970009-001	2,000.0000	Surplus	2000.00 FHS-832-12	STUD STAINLESS STEEL	PEMM ENGINEERING

Change Delete Red - Services ready to Order

Surplus Inventory Status

Max views the **MRP Process Tables** in **Job Start Date** order. He reviews the surplus items and tells the system that it's to be pulled from stock and doesn't need to be ordered. This is achieved by selecting the items that have a green background on the status column and pressing the **[Change]** button.

MRP Form

Job Number: 970011-001 Debco Manufacturing OK

Part Number: Table Rev: Cancel

Product Id: STSTD46 1/8X.251-.375 SST DOME RIVET

Vendor Id: PEMENG PEMM ENGINEERING

Order Date: 6/20/2005

Qty Required: 800.0000

☒ Pull from On Hand

Inventory Status:

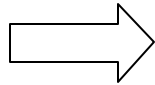
On Hand:	10,000.00	Committed:	5,800.00
On Order:	0.00	Stock Level:	0.00
Last PO #:	0	Reorder Point:	0.00
Last Ordered:	3/15/2005	Last Inventoried:	5/31/2005

Product Line Notes:

On the MRP Form, Max checks the box for **Pull from On Hand**. This will remove the item from MRP.

Max will continue to process all the surplus inventory items within the start date range of products he wants to order from his vendors. It is not necessary to process surplus inventory items scheduled to start far in the future because there may be order changes, cancellations, and part revisions by the scheduled start date. If these conditions occur, your MRP and surplus status will automatically change.

After Max finishes the **Pull from On Hand** process, he will then refer to the **MRP process table** to review any notes from the vendors he orders materials from and continues to create the purchase orders.



To create a Purchase Order, Max goes to the **Vendor Activity Center** and selects the Vendor for the PO. He selects the **Purchase Orders** tab and clicks **[Insert]**. ProfitFab asks if the PO is for Outside Services or regular material. Max clicks **[No]** on the system message—this PO is for regular material.

Id	Vendor Name	City
NELSON	NELSON SPECIALTY HARDWARE, INC.	DALLAS
PEMENG	PEMM ENGINEERING	TIMBERLAND
RELIAN	RELIANCE METAL SUPPLY, INC.	HOUSTON
SOPLT	SOUTHERN PLATE AND FINISH	SEALY
TRID	TRIDENT STEEL, INC.	SUGARLAND

P.O. #	Date	Clerk	Total	Notes
1	10/09/2003	ML	3,135.48	



Max could also create a **Purchase Order** from the **Purchase Order Table**.

ProfitFab System Message

? Is this Purchase Order for Outside Services ?

Yes No

Purchase Order Form

Vendor: RELIANCE METAL SUPPLY, INC.
4545 NORTH LOOP
HOUSTON TX 77075

Terms: NET 30
Contact: ... Shipping: THEIR TRUCK

Vendor Qty	Vendor Id	Description	Price	Extension

Items: 0
Subtotal: 0.00
Shipping/Handling: 0.00
Other: 0.00
Order Total: 0.00

Process MRP



Max can click the **[Process MRP]** button to see what products need to be ordered for this vendor.

MRP Process Tables

RELIANCE METAL SUPPLY, INC.

Current Vendor: _____ Job Start Date: _____ Job Number: _____ Product: _____

Search Order by Date: _____

Order by Date	Ship Date	Job Number	Quantity	Product	Description
✓ 6/17/2005	6/30/2005	970003-004	5.5556	HRPO-179-4x10	HRPO 7GA (.179) 4x10
✓ 6/17/2005	6/30/2005	970005-001	0.5000	AL5052-063-4x10	ALUM .063 5052-H32 4:
✓ 6/17/2005	6/30/2005	970005-002	12.5000	CR1010-074-4x10	CRS 14GA (.074) 4x10
✓ 6/17/2005	6/30/2005	970005-006	2.7778	SS304-060-3x10	CRS 304 16GA (.060) :
✓ 6/17/2005	6/30/2005	970005-007	1.1905	SS302-075-4x12	CRS 301 14GA (.075) :
✓ 6/17/2005	6/30/2005	970005-008	0.9091	EG-18-4x10	ELECTRO GALVANIZEI
✓ 6/17/2005	6/16/2005	970007-002	2.3810	SS302-075-4x12	CRS 301 14GA (.075) :
✓ 6/17/2005	6/30/2005	970009-001	41.6667	AL5052-025-4x10	ALUM .025 5052-H32 4:
✓ 6/20/2005	6/30/2005	970011-001	4.1667	AL5052-040-4x10	ALUM .040 5052-H32 4:
✓ 6/21/2005	6/30/2005	970005-005	8.3333	SS304-060-3x10	CRS 304 16GA (.060)

(Un) Mark Total Marked: 10 Insert Change Delete Red - Services ready to Order

Max views MRP by the Current Vendor. This view displays all MRP requirements for the vendor he is making a PO to. After clearing out all items that can be pulled from stock, he selects items for the PO and clicks the **[(Un)Mark]** button to select them for the PO. After items are selected, he clicks the **[Ok-Post to PO]** button and the PO is updated with all the selected items.

Purchase Order Line Form (Detail)

Total Qty: 5.00 Sh

Product Id: AL5052-040-4x10

Description: ALUM .040 5052-H32 4x10

Order Information

Order Qty: 5.0000 Sh

Product Id: AL5052-040-4x10

Description: ALUM .040 5052-H32 4x10

Price: 32.19840 per Sh Total: 160.99

Delivery Date: (Optional) 6/21/2005

Stocking Information

On Hand: 0.00

On Order: 0.00

Committed: 4.17

Stocking Level: 0.00

Reorder Point: 0.0

2 Job Entries

Quantity	Job Number	Start Date	Part Number	Rev	Customer
4.1667	970011-001	6/17/2005	Table		Decco Manufacturing
0.8333	n/a				

Insert Change Delete

Line Notes

Add Round Qty



You may have a separate delivery date (Need-by Date) for each line item on the PO. If you have items you want to receive different from the global delivery date, then these dates will be listed with the line item on the PO.

Purchase Order Form

Vendor: RELIANCE METAL SUPPLY, INC.
4545 NORTH LOOP
HOUSTON TX 77075

Fax: _____
Phone: _____

Date: 6/20/2005
P.O. Number: 4
P.O. Clerk: PUR
Delivery: 6/24/2005

Terms: NET 30
Contact: _____
Shipping: THEIR TRUCK

Print PO OK
Fax PO
Email PO
Print Receiving
Verify

Vendor Qty	Vendor Id	Description	Price	Extension
13.0000	ShCR1010-074-4x10	CRS 14GA (.074) 4x10	65.00000	845.00
1.0000	ShEG-18-4x10	ELECTRO GALVANIZED 18GA 4x10	39.20000	39.20
12.0000	ShSS304-060-3x10	CRES 304 16GA (.060) 3x10	39.37500	472.50
4.0000	ShSS302-075-4x12	CRES 301 14GA (.075) 4x12	79.04000	316.16
5.0000	ShAL5052-040-4x10	ALUM .040 5052-H32 4x10	32.19840	160.99
1.0000	ShAL5052-063-4x10	ALUM .063 5052-H32 4x10	22.17600	22.18

Items: 8
Insert Change Delete

Subtotal: 3,294.82
Shipping/Handling: 0.00
Other: 0.00
Order Total: 3,294.82

Remarks:

Process MRP
Print Detail



A detailed **Receiving Form** can be printed when verifying the PO. This will give Bertha, the shipping/receiving clerk a detail listing of the jobs and materials in case she wants to label the materials as they are received with the jobs they were originally ordered for.

Purchase Order Receiving Form

TRIDENT STEEL, INC.
7515 NORTH MAIN STREET
SUGARLAND TX 77065

P. O. Number 5 Order Date: 6/20/2005

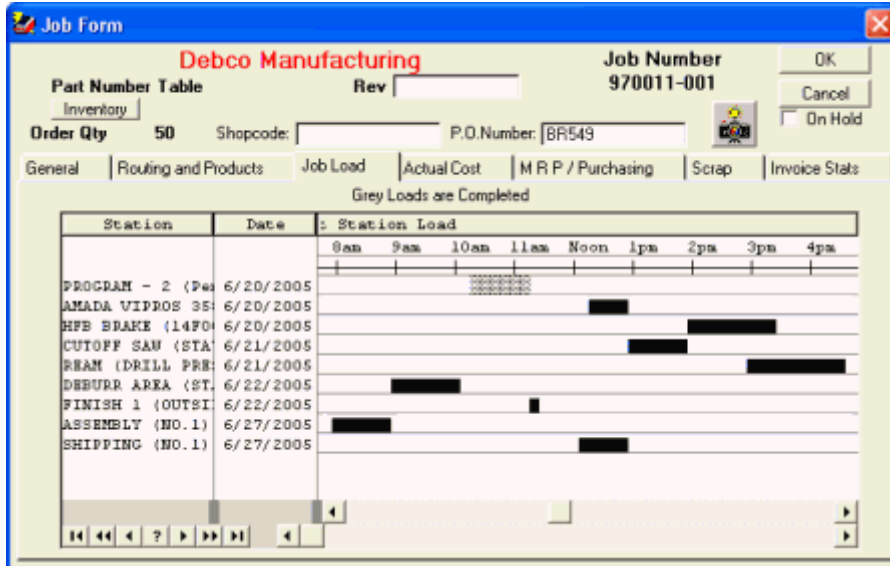
Product Id	Vendor Id	Vendor Description				G/L Code
AL-875-875-144	AL-875-875-144	ALUM SQUARE BAR .875				
Pre-Rcv'd/Date	Quantity	Job Number	Start by	Part Number	Rev	Customer
	16.67	970011-001	6/17/2005	Table		Debco Manufacturing
	0.33	-n/a-				-n/a-
Total Rcv'd	Qty Received	Total Qty	Vendor Qty	Unit	Cost/ St	Extension
0.00		17.00	17.00	St		



When creating a PO, you may mix and match the different processes. You may add items manually for stock, Process MRP, change quantities on MRP inserted items to include extra stock, or order items not used on jobs like office supplies.

Scheduling the Job

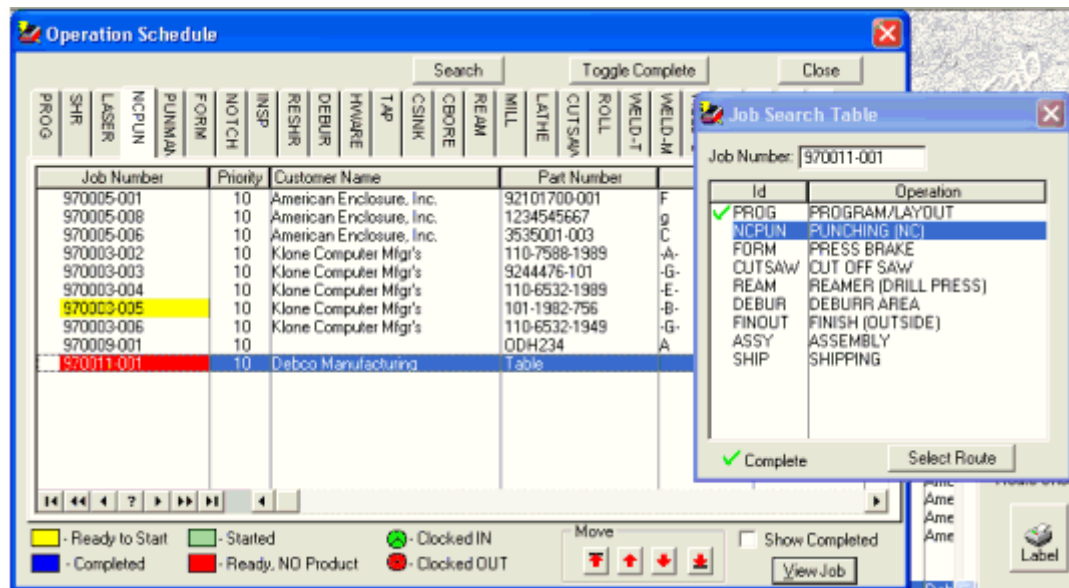
While for material to be received and waiting to start the actual production of the job, there are still things going on in the background. The job has been scheduled by both the station scheduler and the operation scheduler. The programmer has already logged into the job, tracked his time spent laying out the part, and writing the G code for it. Below are some screen shots which reflect the actions of the station scheduler and the operation scheduler.



From the Station **ERP** Scheduler **Job Form**, the gray load for the Programming station indicate that this operation has been completed already.

The screen below is the **Operation Scheduler**. The Search feature allows you quickly find all operations for a specific job. From the search table, the Punching (NC) operation follows the Programming operation and is next to be worked on. The **Red** marking of the job means material is required and has not yet been

received. When material for this job has been received in the system the job prompt will turn Yellow indicating that nothing is preventing this job from being started.



ERP Plus

Bertha, the Shipping/Receiving clerk, receives some materials, including material needed for the Debco job. She fills out the Receiving Forms and Max enters the receipts into the program.

Max takes the receiving forms and opens the **Purchase Order Table** in ProfitFab. He selects the Purchase Order in the **Pending Receipt** tab and clicks the **[Receive Products]** button to open the **Purchase Order Receiving Form**.

The **Purchase Order Receiving Form** contains a table showing all line items from the PO. To receive an item, Max selects it in the table and clicks the **[Change Receipt]** button to open the **Purchase Order Line Receiving Breakdown Table**.

This particular PO only contains one line item, but if it had multiple line items, Max would receive them one at a time.



Bertha could actually perform the receiving function at her workstation, directly from the shipping tickets, without the need to print a Receiving Form in ProfitFab. This would update the system in real time and reduce the amount of paperwork needed to perform this task.

In this table, each entry that made up the line item is shown. If a material had been ordered for multiple jobs, it can be received against a particular job in situations where a partial delivery was made. Or, it can be received against all jobs by clicking the **[Receive All]** button. Clicking the **[Enter Receipts]** button will bring up an edit form for the selected line and will default to the amount ordered.

Max clicks the **[Receive All]** button, answers the Receive All prompt affirmatively and returns to the **Purchase Order Receiving Form**.

Max enters an Invoice Number for the vendor invoice which is to follow and verifies receipt of the material.

When he clicks the [OK] button, several things are going to happen in the system.

First, a vendor invoice will be created that reflects the received shipment. Since the program needs an invoice number to create the invoice, Max enters the purchase

order number in situations when the invoice does not come with the shipment. This makes it much easier to find in the invoice table when it does come in.

The second thing that happens is that ProfitFab updates on-hand inventory for the amount of material just received.

The third thing is that ProfitFab takes a snapshot of how much of the material was currently on hand and the current inventory price and saves it along with the quantity of the material just received. Then, when the vendor invoice does come in and get processed, ProfitFab uses these values to update the average inventory cost of the material.

Finally, once receipts are entered and verified, ProfitFab automatically updates jobs and schedules with this information. Vic, the supervisor, can make decisions about the production schedule based on this information.



Max could use the internal message system to let Vic know that material has arrived for specific jobs.

Once Max enters receipts into the system, he runs the Red Flag Reports to investigate which deliveries are missing and what other material he needs to order.

The **Red Flag Off Schedule Purchases Report** finds any open POs that should have already been received. This report shows all past due POs that may cause jobs to ship late.

The **Red Flag Order to Stock Products Report** finds items that need to be ordered to replenish stock levels. These items are not ordered specifically for jobs. These are the types of items that are bought in bulk and usually marked "Pull from On Hand" when Max processes his MRP. For each of these types of items he has set up a Min/Max level (or Stock Level) and Reorder Point.

Job Form

Debco Manufacturing

Part Number Table Rev Job Number 970011-001

Inventory Order Qty 50 Shopcode: P.O. Number: BR549

General Routing and Products Job Load Actual Cost M R P / Purchasing Scrap Invoice Stats

Order Date 6/13/2005

Product Information			Requirement	
P.O. #	Product ID	Product Description	Quantity	Units
	STST046	1/8X.251-.375 SST DOME RIVET	800.000	EA
	POWDER COAT	POWDER COATING - PER PIECE	50.000	PC
✓	4 AL5052-040-4X10	ALUM .040 5052-H32 4x10	4.167	Sh
✓	5 AL-875-875-144	ALUM SQUARE BAR .875	16.667	St

Insert Change Delete

✓ Received ✗ Partial Received From On Hand

Note: Items already placed On Order have P.O. # assigned

The **Job Form** image above reflects the receipts Max entered. Below, the **Operation Schedule** reflects that the NC Punch operation is ready with the necessary materials.

Reviewing the **Operation Schedule**, Vic sees that material has been received for jobs and moves the jobs to the top of the list.

Operation Schedule

Search Toggle Complete Close

PROG	SHR	LASER	NC PUN	PUNCH	FORM	NOTCH	INSP	RESHR	DEBUR	HWARE	TAP	CSINK	CBORE	REAM	MILL	LATHE	CUTSaw	ROLL	WELD-T	WELD-M	WELD-S	GRIND	FINISH	FINOUT	ASSY
Job Number	Priority	Customer Name	Part Number	Rev	Ship Date																				
970003-005	10	Klone Computer Mfg's	101-1982-756	-B-	6/30/2005																				SH
970011-001	10	Debco Manufacturing	Table		6/30/2005																				PF
970005-001	10	American Enclosure, Inc.	92101700-001	F	6/30/2005																				SH
970005-008	10	American Enclosure, Inc.	1234545667	g	6/30/2005																				PR
970005-006	10	American Enclosure, Inc.	3535001-003	C	6/30/2005																				SH
970003-002	10	Klone Computer Mfg's	110-7588-1989	-A-	6/30/2005																				SH
970003-003	10	Klone Computer Mfg's	9244476-101	-G-	6/30/2005																				SH
970003-004	10	Klone Computer Mfg's	110-6532-1989	-E-	6/30/2005																				SH
970003-006	10	Klone Computer Mfg's	110-6532-1949	-G-	6/30/2005																				SH
970009-001	10		ODH234	A	6/30/2005																				SH

14 << < ? > >> >

☐ - Ready to Start
 ☐ - Started
 ☐ - Clock IN
 ☐ - Clock OUT
 ☐ - Ready, NO Product
 ☐ - Completed
 ☐ - Show Completed
 Move
 View Job

The **Shop Clock** Module is designed for capturing data from the shop floor. The shop floor data is actual time/labor put into the operations on the job, actual material allocated and used for the job, the completion of operations, and the amount of parts completed. The Shop Clock Module can also be used to report parts that have been scrapped for any reason.

The basic screen most employees will see in the Shop Clock Module is the **Timeclock Entry Form**. This form allows employees to indicate what job(s), operation, and station they are working at. All of the job-related information needed on this form can be found on the **Job Route Sheet**. Route sheets can be set up with barcodes and a bar code reader can be installed on shop floor computer terminals easy and accurate data entry.

Timeclock Entry Form

June 22, 2005 1:28 PM

DAVID LODGE

☒ In ☐ Out

Employee ID

Job #

Operation
PUNCHING (NC)

Station
AMADA VIPROS 358

No Photo Available

Previous Activity


DAVID LODGE - OUT - previous station.
DAVID LODGE - IN - AMADA VIPROS 358
970011-001 - IN - AMADA VIPROS 358





David Lodge is a Punch Operator. Vic informs him that Job # 970011-001 is ready to start production and gives him the routing package containing the route sheet, drawings, and other documents related to the job. David takes the route sheet and scans in the information at the shop clock terminal using his employee badge to scan in his Employee ID. He sets up the punch while another employee brings him the sheet material needed for the job.



David has several methods to find out what jobs he should be working on:

1. Vic could give him a copy of the Station Schedule Report for Punch # 1.
2. Vic could give him a copy of the Operation Schedule Report for the Punch Operation.
3. David could view the Operation Schedule from within the Shop Clock Module to find jobs that are ready to be worked on at the Punch.

ROUTE SHEET						
Customer : Debco Manufacturing			Job #: 970011-001			
Part #: Table		Rev:		Order Date: 6/13/2005		
Desc:				Drawing #		
Shop Code:				Cust PO#: BR549		
Start: 6/17/2005 Prod Start: 6/20/2005		Sch Ship: 6/30/2005 Mfg. Qty: 50		Ship Qty: 50		

Id	Operation	Emp/Insp	Remarks	Est. Time
PROG	PROGRAM LAYOUT			1:00 su
				1:00 /part
				total
NCPUN	PUNCHING (NC)			0:15 su
				0:00:30.0 /part
				0:40 total
	Product Usage	4.167 sheets	AL 5052-040-4X10 ALUM .040 5052-H32 4x10 5 blanks @ 120.00" x 48.00"	0.052 sheets/part 17.25" x 17.25" Bin:
				12 Parts Per Blank
FORM	PRESS BRAKE			0:15 su
				0:01:30.0 /part
				1:30 total
CUTSAW	CUT OFF SAW			0:10 su
				0:01:00.0 /part
				1:00 total
	Product Usage	16.667 sticks	AL-875-875-144 4 units/part ALUM SQUARE BAR .875 17 blanks @ 144.00"	0.083 sticks/part 200 @ 12.00" L Bin:
				12 Parts Per Blank



Route Sheets may be customized for individual preference. Several layouts are included with the Report Designer to choose from. The location, font, or size of any fields can be changed. Fields can also be deleted and custom text inserted anywhere on page. Even a picture of the part can be included on the Route Sheet.

Employee Activity Center

Name Search: ☐ Show Inactive Employees

ID	Name	Shift	Title
BER	BERTHA KING	1	SHIPPING/RECEIVING
BG	BRIAN GASSETT	1	LASER OPERATOR
DL	DAVID LODGE	1	PUNCH OPERATOR
RG	RICHARDO GAMBOA	1	GENERAL LABOR
SM	SAL MOSCHITTA	1	GENERAL LABOR
SO	SCOTT OTTENS	1	PRESS BRAKE OPERATOR (HFB & F

Time Clock | Activity | Scrap | Assigned Operations

The Operation Listed in the table will be the only Operations that the employee may clock into when logging into jobs from the Shop Time Clock.

Operation
PUNCHING (NC)
PUNCH (MANUAL)
LUNCH BREAK
MACHINE MAINTENANCE
SHOP CLEAN-UP

Buttons: Close, Change, Insert, Delete, FIT >>>, Import All

David is allowed to clock into the Punch operation because it is on his list of Assigned Operations. Other employees who are not assigned to work on the NC Punch can not clock into this operation.



ProfitFab can be set up to automatically pull material from inventory when employees clock into the operation where the material is to be used. When set up this way, employees will not have to respond to the following screen prompts about material usage. The program will allocate material as it is defined in the Part Definition on the job and employees can manually edit material usage in situations where substitute material was used or quantity used was different from the Route Sheet specifications.

After David finishes working on this job, he returns to the shop clock computer terminal and enters the information to clock the job out. The program knows that material was supposed to be used at this operation, so it asks him via a popup message. He clicks [Yes] to update material usage on the job. This opens the **Job Product Usage Form**.

ProfitFab System Message

***PRODUCT UPDATE**

Job Number: 970011-001
Operation: NCPUN Pass: 0

Were any products used at this operation ?

Buttons: Yes, No

Job Product Usage Form

Job # 970011-001
Table

Number of Produced Parts: 50

Id	Description	Total Required	Previous Used	Used This Run	Source Id
AL 5052-040-4x10	ALUM .040 5052-H 32 4x10	4.167	0.000	0.000	

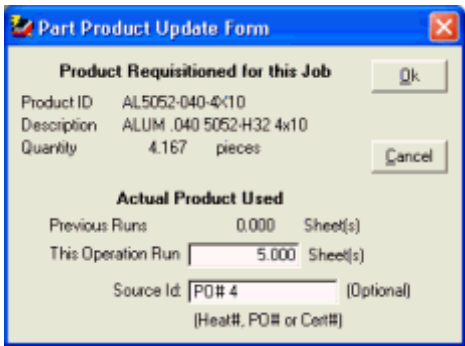
Buttons: Ok, Cancel, Attach Product, Edit, Auto Update

Customer Supplied

On this form, David can do one of three things. He can click the **[Attach Product]** button to attach material that was not originally on the route sheet, as in the case of substituting one material for another. He can click the **[Edit]** button to manually enter the amount of the selected material used on the job if the amount used is different from the amount called for. Finally, he can click the **[Auto Update]** button to automatically have the system allocate the entire amount of material that was called for on the job.

David needs to click the **[Edit]** button to manually enter material usage.

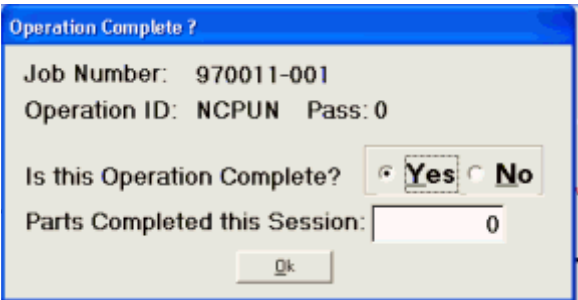
Clicking the **[Edit]** button to open the **Part Product Update Form**, David enters the quantity of material used and, for tracking purposes, enters the PO # the material was purchased from. He clicks **[OK]** to return to the **Job Product Usage Form**. He clicks **[OK]** on this screen to save the data.



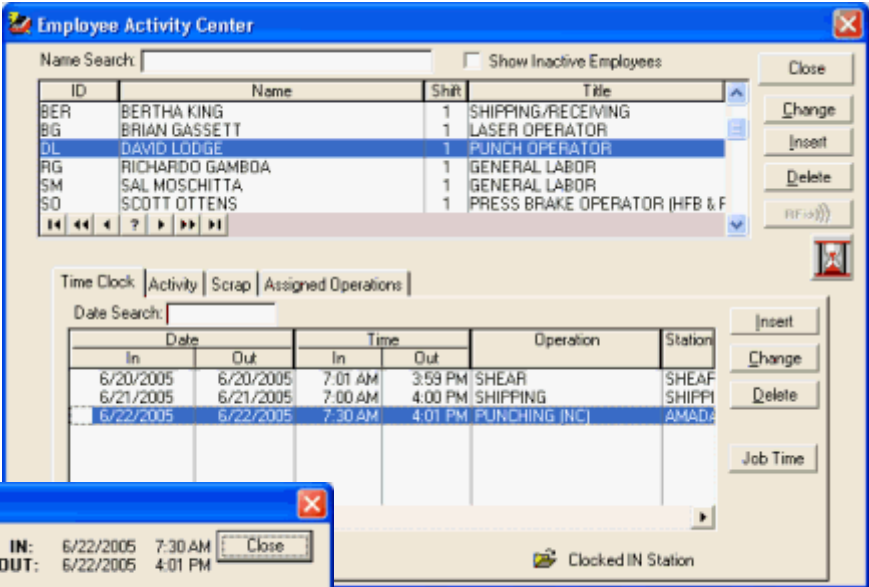
The **Part Product Update Form** contains two sections. The first section, **Product Requisitioned for this Job**, includes fields for Product ID (AL5052-040-4x10), Description (ALUM .040 5052-H32 4x10), and Quantity (4.167 pieces). The second section, **Actual Product Used**, includes fields for Previous Runs (0.000 Sheet(s)), This Operation Run (5.000 Sheet(s)), and Source Id (PO# 4). There are **OK** and **Cancel** buttons.

The program asks if the operation is complete and how many parts were completed during this session. David enters the information and clicks **[OK]**.

He can now clock another job into the system and continue working while other employees come to the shop clock computer terminal to enter their job information. Once information is entered at the Shop Clock Module, it is immediately available to the rest of the system.

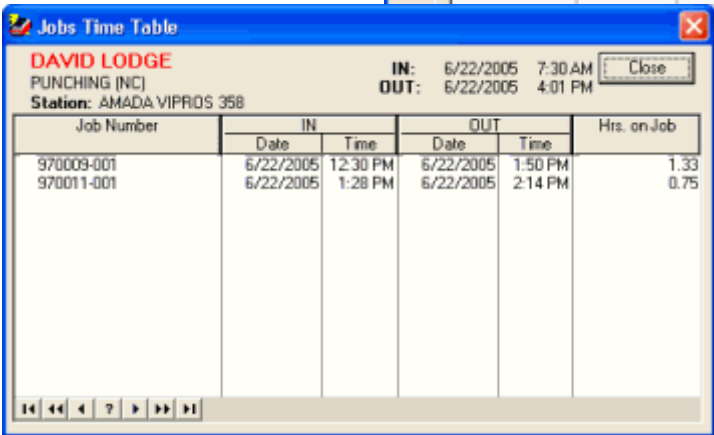


The **Operation Complete ?** dialog box displays Job Number: 970011-001 and Operation ID: NCPUN Pass: 0. It asks "Is this Operation Complete?" with **Yes** and **No** radio buttons. Below, it shows "Parts Completed this Session:" with a value of 0. An **OK** button is at the bottom.



The **Employee Activity Center** window shows a list of employees with columns for ID, Name, Shift, and Title. David Lodge is highlighted. Below the list are tabs for Time Clock, Activity, Scrap, and Assigned Operations. The Time Clock tab shows a table with columns for Date, In, Out, Time, Operation, and Station. David's record for 6/22/2005 is shown. On the right are buttons for Change, Insert, Delete, and Job Time.

Date	In	Out	Time	Operation	Station
6/20/2005	6/20/2005	7:01 AM	3:59 PM	SHEAR	SHEAF
6/21/2005	6/21/2005	7:00 AM	4:00 PM	SHIPPING	SHIPP
6/22/2005	6/22/2005	7:30 AM	4:01 PM	PUNCHING (NC)	AMADA



The **Jobs Time Table** window shows David Lodge's time record for 6/22/2005. It includes a table with columns for Job Number, Date, IN Time, OUT Time, and Hrs. on Job. Two jobs are listed: 970009-001 and 970011-001.

Job Number	Date	IN Time	OUT Time	Hrs. on Job
970009-001	6/22/2005	12:30 PM	1:50 PM	1.33
970011-001	6/22/2005	1:28 PM	2:14 PM	0.75

The **Employee Activity Center** shows David's time record for the day.

Clicking on the **[Job Time]** button shows the jobs David worked on while clocked into the Punch Operation.

Job Form

Debco Manufacturing

Job Number: 970011-001

Part Number Table: Rev []

Order Qty: 50 Shopcode: [] P.O. Number: BR549

General | Routing and Products | Job Load | Actual Cost | M R P / Purchasing | Scrap | Invoice Stats

Products / Services | Operation Time

Operation	Station	Parts	Date In	Time	Pass
PUNCHING (NC)	AMADA VIPROS 358	50	6/22/2005	0:45	

Employee On Job Time Table

970011-001 IN: 6/22/2005 1:28 PM
PUNCHING (NC) OUT: 6/22/2005 2:14 PM
Station: AMADA VIPROS 358

Employee Name	Date	IN Time	Date	OUT Time	Hrs. on Job
DAVID LODGE	6/22/2005	7:30 AM	6/22/2005	4:01 PM	0.75

Viewing the **Actual Cost** tabs on the **Job Form** show the time and material accounted for at the shop clock terminal.

Job Form

Debco Manufacturing

Job Number: 970011-001

Part Number Table: Rev []

Order Qty: 50 Shopcode: [] P.O. Number: BR549

General | Routing and Products | Job Load | Actual Cost | M R P / Purchasing | Scrap | Invoice Stats

Products / Services | Operation Time

Products

Id	Description	Required	Used	Cost	Source
AL-875-875-144	ALUM SQUARE BAR .875	16.6667			
AL5052-040-4X10	ALUM .040 5052 H32 4x10	4.1667	5.000	160.99	PO#
STSTD46	1/8X.251-.375 SST DOME RIVET	800.0000			

Customer Supplied

Silk/Other

	Silk Screen	Other
Per Shpmt.	0.00	0.00
Per Part.	0.00	0.00
Actual	0.00	0.00

Services/Finish

Id	Operation	Parts	Cost
FINOUT	FINISH (OUTSIDE)	0	0.00

After finishing his operation, David takes the route packet to the employee who will perform the next operation. The job flows through the shop to each step as indicated on the route sheet. Each employee clocks the job in and out of their respective operations, and where necessary, updates the material usage on the job.

After the Debur operation is completed, the parts are taken to Bertha. She will prep the parts for an outside service at City Paint Shop for powder coating. Bertha clocks into the Finish (Outside) operation to track the time required to prepare the parts for shipping. When finished, she clocks the job out of the operation and indicates that the operation is complete.

MRP Process Tables

CITY PAINT SHOP Ok - Post to PO Close

Current Vendor: Job Start Date: Job Number: Product:

Search Order by Date:

Order by Date	Ship Date	Job Number	Quantity	Id	Product	Description
6/17/2005	6/30/2005	970005-002	250.0000	POWDR COAT	POWDER COATING - F	
6/17/2005	6/30/2005	970005-007	25.0000	CHEM FILM GOLD	CHEM FILM GOLD	
6/17/2005	6/30/2005	970007-001	5.0000	PAINT	PAINTING	
6/17/2005	6/16/2005	970007-002	50.0000	CHEM FILM GOLD	CHEM FILM GOLD	
6/17/2005	6/30/2005	970011-001	50.0000	POWDER COAT	POWDER COATING - F	

14 11 10 9 8 7 6 5 4 3 2 1

(Un) Mark Total Marked: 0 Insert Change Delete Red - Services ready to Order

As Max checks on MRP, the outside services that are ready (the operation has been marked complete) show up in Red, making them easy to identify. Max creates the PO and prints a Receiving Form for Bertha.



Bertha could use the internal messaging system to let Max know that the parts are ready to ship to the outside vendor.

Alternatively, Bertha could also create the PO herself as long as she is set up as an administrative user with the appropriate security.

Tracking Job Status

Part of Vic's task description as shop supervisor is to be aware of where jobs are located in the shop. There are several places to find job status information. From the **Job Form**, he can view the current status of the job by clicking the **[Refresh Status-Cost]** button.

Job Form

Debco Manufacturing

Job Number 970011-001

Part Number Table Rev

Order Qty 50 **Shopcode:** **P.O. Number:** BR549

General | **Routing and Products** | **Job Load** | **Actual Cost** | **MRP / Purchasing** | **Scrap** | **Invoice Stats**

Order Date 6/13/2005 ☐ **Route Sheet Printed** ☐ **Requisitions Printed**

Schedule Priority 10 **Ship Via** UPS **Freight** \$ 0.00 **Web Notes**

Current Status
 ***** Currently NOT Working *****
 Operation FINISH (OUTSIDE) Last Logged 6/22/2005
 Station FINISH 1 (OUTSIDE)

Job Qty 50

Current Job Cost

Machine/Labor	211.12	Order Estimate	29.88 ea.
Mat'l/Products	614.15	Job Estimate	1,493.75
Services	0.00	Job Actual	825.27

Quantity Breakdown

To Be Manufactured	50
Sch'd Ship Qty	50
To Ship From Stock	
Actual Qty Shipped	
Cumulative Shipped	

Events

Scheduled Start	6/17/2005
1st Oper. Start	6/20/2005
Last Oper. End	6/27/2005
Scheduled Ship	6/30/2005
Ship Date	

Refresh Status - Cost



Gina, the receptionist, can also view the Job Form and keep Bob Baker from Debco Manufacturing updated if he should call and ask for a status report.



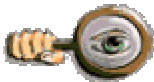
An alternative solution to having the shop supervisor, receptionist, or any other person on your staff spending time fielding calls from customers for job updates is to use **ProfitFab WebLink**. This program will read your ProfitFab job data and update your company website so your customers can get their information online, without calling you.

The **Active Job Status Listing** uses filters and sort orders, such as active jobs by Customer.

Active Job Status Listing												
From Debco Manufacturing to Debco Manufa												
Complete Date Listing												
Job#Shop Code	P.O. Number	Part Description	Part Number	Rev	Ordered Total	Ship Qty Order Qty	Shipped Bal. Due	Mfg Qty Stock Qty	Ship Start	Operation Current	Need	Total Comp %Comp
Debco Manufacturing												
970011-001	BR549	Table			6/13/2005	50	0	50	6/30/2005	FINOUT	ASSY	9.5 5.4 57%
					\$2,000.00	50	50	0	6/17/2005	Completed and NOT Working		

The **Work In Process (WIP) Report** gives Vic summary or detailed information about active jobs with regards to actual costs accumulated compared to estimates. With this information he can determine if jobs are running on budget and on time.

Work in Process Report										
Detail										
Job# / Order#	Part Number / Customer	Invoiced Order Amt	Machine/Labor Costs			Mtrl/Product Cost			Serv/Silk/Other	
			Job Estimate	Actual	%Comp	Job Estimate	Actual	%Comp	Job Estimate	Actual
970011-001	Table	\$2,000.00	\$324.58	\$211.12	65%	\$529.17	\$614.15	116%	\$840.00	\$0.00
Order Totals										
970011	Debco Manufacturing	\$2000.00	\$324.58	\$211.12	65%	\$529.17	\$614.15	116%	\$840.00	\$0.00
	0.76hrs. labor Invoiced.....	\$0.00 0%	On Job....	\$211.12		On Job....	\$614.15		On Job....	\$0.00
Grand Totals										
	Ordered.....	\$2000.00	\$324.58	\$211.12	65%	\$529.17	\$614.15	116%	\$840.00	\$0.00
	Invoiced.....	\$0.00 0%	On Job....	\$211.12		On Job....	\$614.15		On Job....	\$0.00
			On Job....	\$211.12		On Job....	\$614.15		On Job....	\$0.00
			0.76hrs.	\$10.40						
				\$200.72						
				Overhead						



When running the Work In Process Report, use the % Filter as follows:

% Filter = 1% to weed out jobs that have not yet started

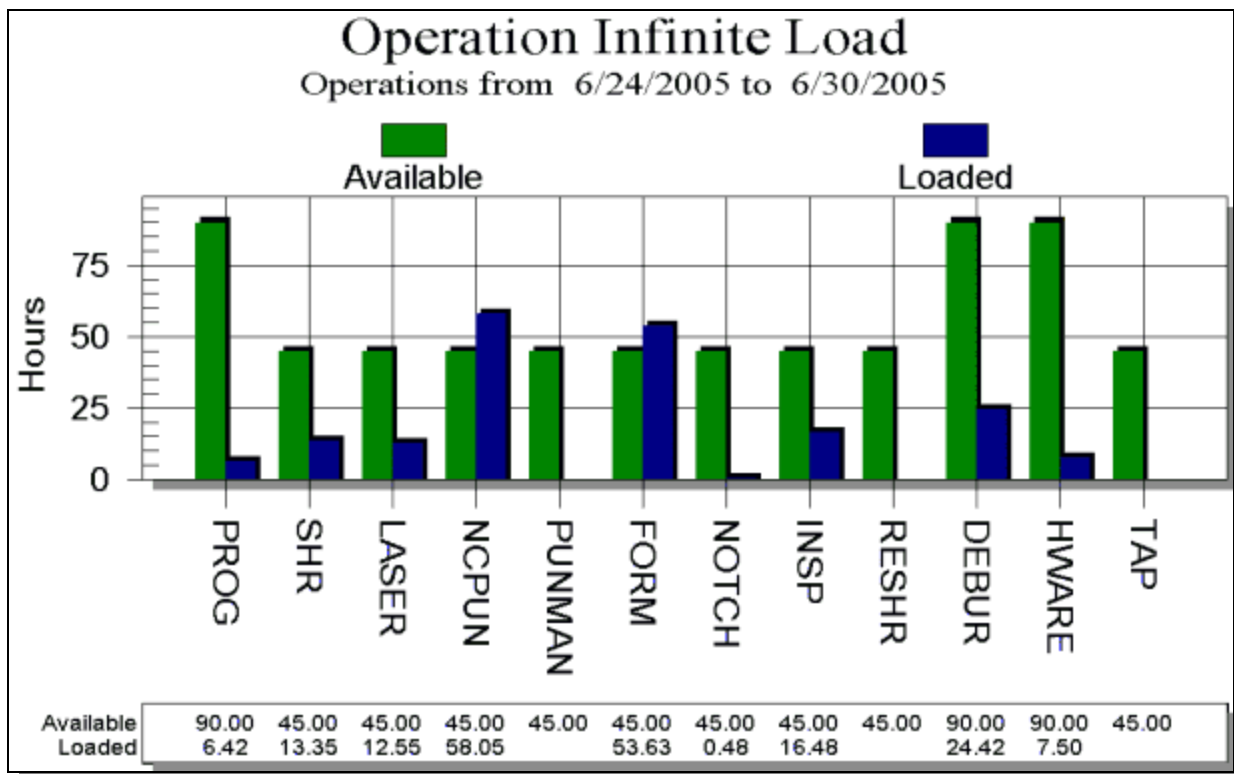
% Filter = 100% to find jobs that have gone over budget on labor and/or materials

Tracking Capacity

There are several reports for tracking future and past capacity. Future capacity reports are used for planning and identifying bottlenecks in production. Past capacity reports are used to measure how productive your shop has been in utilizing the available capacity.

Future Capacity Reports

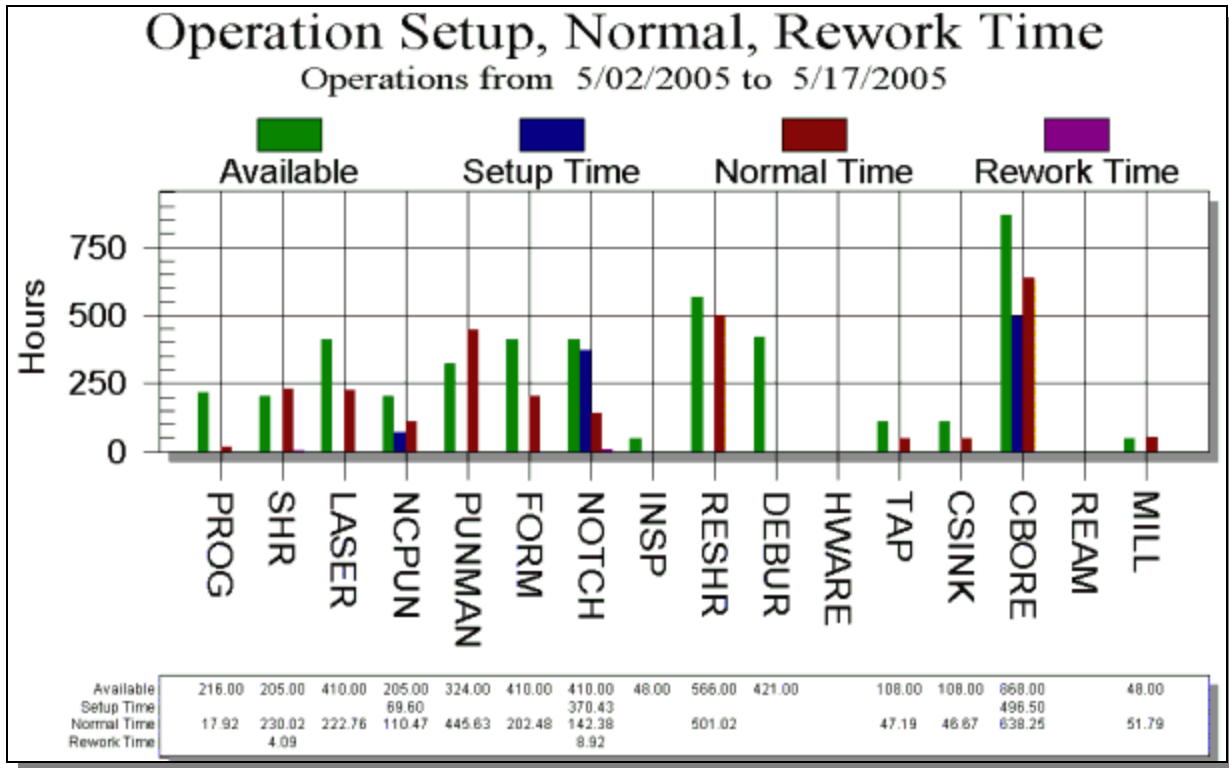
Future capacity reports include the graphical **Operation Load Report** and the **Operation Forecast Report**. The Operation Load Report is an **infinite** load report that displays available capacity and capacity required by jobs due to ship within a given time period. The Operation Forecast Report is a **finite** load report based upon data in the Station Scheduler. This report tells how much capacity is available, how much time is in the schedule, and how much of the time in the schedule is allocated to jobs that are going to ship late.



		Operation Forecast					
		From 6/24/2005 to 6/30/2005					
Id	Operation	Time (hours)			Percent of Available		Off-Schedule Schedule %
		Available	Scheduled	Off-Schedule	Scheduled	Off-Scheduled	
PROG	PROGRAMLAYOUT	90.00	15.54	11.64	17.3%	12.9%	74.9%
SHR	SHEAR	45.00	26.24	22.23	58.3%	49.4%	84.7%
LASER	LASER CUTTING	45.00	36.85	27.09	81.9%	60.2%	73.5%
NCPUN	PUNCHING (NC)	45.00	40.13	30.23	89.2%	67.2%	75.3%
PUNMAN	PUNCH (MANUAL)	45.00					
FORM	PRESS BRAKE	45.00	22.43	14.46	49.8%	32.1%	64.5%
NOTCH	CORNER NOTCHER	45.00	0.86	0.86	1.9%	1.9%	100.0%
INSP	INSPECTION	45.00	4.25		9.4%		
RESHR	RESHEAR	45.00					
DEBUR	DEBURR AREA	90.00	28.77	20.86	32.0%	23.2%	72.5%
HWARE	HARDWARE INSTALL	90.00	4.56	4.26	5.1%	4.7%	93.4%

Past Capacity Reports

Past capacity reports include the graphical **Capacity & Time Report** and the **Operation Time Detail Report**. The Capacity & Time Report provides a graphical layout of available capacity and actual time allocated to setup, rework, and normal time for a given date range. The Operation Time Detail Report shows actual job time allocated to an operation during a selected date range.



Operation Detail Time									
Period from 6/22/2005 to 6/22/2005									
From NCPUN to NCPUN									
Operation		Job Number	Date/Time IN		Date/Time OUT		Hours	Rate	Totals
<u>NCPUN</u>	<u>PUNCHING (NC)</u>								
Station: 1		AMADA VIPROS 358							
		970009-001	6/22/2005	12:30	6/22/2005	13:50	1.330	55.00	73.15
		970011-001	6/22/2005	13:28	6/22/2005	14:14	0.750	55.00	41.25
Station Totals							2.08 hrs		\$114.40

After a couple of days, City Paint Shop returns the parts sent out for powder coating. Bertha receives the parts just as she did with the regular material shipment. The parts are returned to production status and the Assembly operation is completed. (Plus and Lite versions have limited Completing and Shipping functions)

Once the Assembly operation is completed, the job returns to Bertha for shipping. She clocks into the Shop Clock Module on the Shipping operation.

When clocking the job out of Shipping, the program opens the **Ship-Complete Job Form**.

Bertha checks the information on the screen and enters the Freight Charges. She clicks the **[Ship Job]** button and the program will alert Bertha of any other jobs from the same customer order and same ship date in case there were other jobs that need to be shipped with this one. However, this was the only item on the customer's order, so there are no other jobs shown in the **Packing List Incompleted Jobs table**. She clicks the **[Yes]** button to print the **Packing List**.

Packing Labels are not needed for this shipment, so she clicks the **[No]** button when prompted for printing them.



Jobs can be shipped from within the Administrative program in the **Company Job Activity Table**. Packing Lists/Slips and Packing Labels can also be printed from the **Invoice Form**.

You can also bypass the extra screens that open when clocking a job out of the Shipping operation and ship the job by clicking on the **Ship-Complete Jobs icon** within the **Shop Clock Module**. This icon can be *password protected* to ensure security on who ships jobs from the Shop Clock Module.

Once the job has been shipped and the Packing List printed, the invoice automatically created by the system can be found in the **Company Invoice Table** under the **Shipped** folder. Terry, the accounting person, monitors the Company Invoice Table for new invoices in either the Working or Shipped folders. When new invoices appear in the Shipped folder, he knows that the parts have been physically sent to the customer. His job is to verify the invoice and send it to the customer.

Invoice #	Date	Customer Name	P.O. Number	Order #
960004	6/24/2005	Kione Computer Mfg's	6524	970003
960007	6/24/2005	Debco Manufacturing	BR549	970011

Terry opens the **Customer Invoice Form** by double-clicking the invoice in the **Company Invoice Table**. The invoice opens and he reviews the information against the customer's purchase order. He verifies the shipping charges added by Bertha from the shop clock module. He double checks the terms for Debco. The price is correct and agrees with both the customer's PO and the order entered into ProfitFab. Everything on the invoice looks correct so he clicks the **Verified** radio button, clicks the **Invoice** checkbox, and clicks **[OK]**. The invoice prints for delivery to Debco Manufacturing.

Ordered	Shipped	Part ID	Rev	Description	Price	Extension
50	50	Table			40.00	\$2000.00

Entering Initial Information

Before getting started in ProfitFab, you will need to set up default information about your company, your customers, your users, your employees, and other items. The following sections will step you through this process.

ERP Plus Lite

Plus and Lite versions will display only information associated with its respective version.

User Information — Important!

There are two types of ProfitFab users: **administrative users** and **shop floor users**. For the purpose of this discussion, the term “users” will refer to the administrative users and the term “employees” will refer to your shop floor personnel. Entering employee information is covered later in this guide.

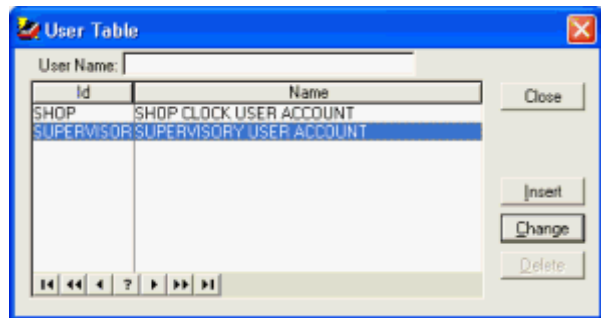
Note: Entering user information should only be performed by someone who will eventually have full supervisory rights within ProfitFab.

When you first logged into ProfitFab, you used the Supervisor account built into the system. This account cannot be deleted and it doesn't have a password. Use the **User Table** to give the Supervisor account a password and then set up your own supervisor account. This is important because anyone with Supervisor Rights will be able to access all of ProfitFab. To begin the process, go to the **Files** pull-down menu in the upper left corner of the ProfitFab window and select **User**.

Once you have changed the default Supervisory account password and entered your own account into ProfitFab, you may then add a user with less security to enter in the data for other areas of the program. **However, only a user with Supervisor rights may add or edit other users.**



From the **User Table**, select the Supervisory User Account and click the Change button. On the **User Form**, select the Security tab and enter a password of up to 6 characters. Click **OK** to save the password and close this form.



At the **User Table**, click the [Insert] button to open the **User Form** again. This time enter your **User ID**, **Title**, and **User Name**. The **User ID** field can be up to 10 characters long and this will be the name you enter when logging into ProfitFab.

For right now, don't worry about the Printers setup, other than to leave the **Capture Port** and **Printer Name** fields set to "None". Reports will print to your Windows default printer.

Click on the **Security** tab, enter your password, and check the **Supervisor Rights** box next to the Password field. Click on OK to save your changes and close the User Form.

The left screenshot shows the **User Form** with the **Printers** tab selected. It contains a table for printer settings:

Printer Direction	Capture Port	Printer Name
Quote	None	None
Order	None	None
Reports	None	None
Purchase Order	None	None
Packing Slip	None	None
Invoice	None	None
Label	None	None
Fax	None	None
Email Address		
Bcc: Email Address		

Below the table, it states: "Acknowledgment, Route Sheets and Requisitions will print to Order printer. Detail PO's and PO Receiving List will print to the Reports Printer. Quotes, Acknowledgments, and P.O.'s will be sent to Fax on request."

The right screenshot shows the **User Form** with the **Security** tab selected. It contains a **Password** field, a **Supervisor Rights** checkbox, and a list of permissions:

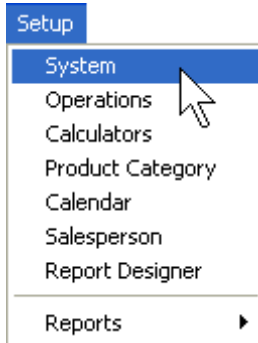
Product-Service	Operation	Station	Category	Salesperson
Employee	Time	Setup-Maintenance	User	
Customer	Part	Quote	Order	Invoice
			Job	Vendor
				Purchase Order

Below the table, there are checkboxes for **Customer Activity**, **View Details**, **Add**, **Edit**, **Delete**, and **Listing**. An **Import Security** button is at the bottom.

You can now add another user account for someone to begin entering in the rest of your System data.

At the **User Table**, click [Insert] to open the **User Form**. Select the **Security** tab and enter a new **User ID**, **Title**, **User Name**, and **Password**. Make sure the Supervisor Rights check box is NOT checked.

The best approach to giving users security within ProfitFab is to create the users and give them security to fit their job functions. The demo data in ProfitFab has users whose security is set up in this manner. You may use the security from the demo users as a model to tailor your own employees security settings. If you have multiple employees who have the same job functions, set up one employee then use the **[Import Security]** button to import that employee's security settings into another employee's record. Otherwise, by default, when creating new employee user accounts, ProfitFab will give them all security with the exception of Supervisor Rights.



To enter your company's system information, log into ProfitFab, go to the **Setup** pull-down menu, and select **System** to open the **System Information** form.

Some fields are self-explanatory, such as your company address and phone numbers. Some fields contain default information that can be changed to fit your company's profile as needed.

For field definitions, click **F1** to access **ProfitFab Help**.

 A screenshot of the 'System Information' form in ProfitFab. The form has a blue title bar and a yellow background. It contains several tabs: 'Schedule', 'SPC', 'Accounting', 'Time Clock', 'Company', 'Marketing Channels', 'Customer, Part Info', 'Quote & Email', and 'PO & Inventory'. The 'Company' tab is active. The form includes fields for 'Company Name' (All-Type Fabricators, Inc.), 'Address' (5015 PAUL WAYNE DRIVE), 'City, St, Zip' (BOLING TX 77420), 'Country', 'Ship Via' (COMPANY TRUCK), 'F.O.B.' (HOUSTON), 'Registration #' (3KCD11413G4416Z1Q312S282055), 'Telephones' (Voice #1, Voice #2, Fax), 'Forms and Updates' (Print on Preprinted Form, Enable Message System, Use 'Zip, City, State' Style when adding addresses), 'Copies to Print' (Quote, Packing Slip, Invoice, Order Ack, Purchase Order), 'Units' (Imperial, Metric cm, Metric mm), and 'Filename' (Snapshot Viewer/Editor, CAD Viewer, CAD Editor, CAM Editor/DNC, Wordprocessor/Text Editor, Movie Viewer).

If you have not already done so, enter the **Company Name** and **Registration #** that was provided to you by Micro Concepts & Solutions. These fields are part of the registration security and must be spelled exactly as they were provided to you. If the spelling of your company name needs to be changed in any way, contact ProfitFab Customer Support so we can provide you with a new registration code based on how you want your company name to appear in the program.

Continue to fill out information as necessary, providing your address, phone numbers, default data for **Ship Via**, and **F.O.B.** (Freight On Board).

Check the box for **Enable Message System** if you wish to use the internal messaging system. Check the boxes in the Print on Preprinted Form block only if you use custom forms made with your company logo on the letterhead. If you want multiple copies of the reports listed in the Copies to Print, enter that number next to the report. In the Filenames area, click the ellipse button next to each file type to find the programs associated with each of the functions listed. For the CAD viewer, do not use a program with CAD editing capability if you do not want your shop floor personnel the ability to edit your CAD drawings. When you are finished, click on the **Customer, Part Info** tab.

System Information

Schedule | SPC | Accounting | Time Clock | OK

Company | Marketing Channels | Customer, Part Info | Quote & Email | PO & Inventory | Cancel

Terms: Net 30 days

Delivery: COMPANY TRUCK

Sales Tax: 4.000 % ☐ Don't charge tax on freight

Part Information

Cost Estimating Quantities: 10 100

Markup

Goods: 30.00 %

Labor: 25.00 %

Adjust on Price Change

☐ Goods Markup

☒ Labor Markup

Sheet Grab Dimensions

Length: 0.00 in.

Width: 0.00 in.

☒ Do not show warnings if Shipping/Assembly Operations are missing

☐ Schedule Operations on Route Sheet Printing (Infinite)

On the **Customer, Part Info** tab, enter your normal terms for new customers and normal delivery method. Enter the tax rate that is accurate for the majority of your customers. Enter your desired markups for the Goods and Labor fields. Enter the default length and width of sheet grab for the equipment you use with sheet and structural material. When finished on this screen, click on the **Quote & Email** tab.

System Information

Schedule | SPC | Accounting | Time Clock | OK

Company | Marketing Channels | Customer, Part Info | Quote & Email | PO & Inventory | Cancel

Memo:

Valid: 30 days

Greeting: Dear

Quote Closing

Signature: Justin Timmer

Signature Title: President

If Signature or Title is left blank, the User Name and/or Title will be used on the Quote.

Email Quotes, Order Acknowledgements, POs, & Invoices

SMTP Server: smtp.sbcglobal.yahoo.com

BCC Address:

SMTP Server Authentication:

User Name: owner@sbcglobal.com

Password: *****

To email forms to your customers you must enter the name of your SMTP outgoing mail server. If you want all outgoing email blind copied to a particular address, enter it in the BCC Address field.

If your SMTP server requires authentication enter User Name and Password, otherwise leave blank.

Enter a memo to appear on your quotes, the number of days your quotes are usually valid for, and a greeting. On the actual quote, the customer contact's name will be entered automatically after the greeting. If desired, enter a Signature and Title to appear on quotes. If you want to email forms to your customers, enter the name of your SMTP outgoing mail server. You can either find this information in your default email program or you may have to contact your Internet Service Provider (ISP) to find this information. If you would like to receive a copy of every email that is sent from the program, enter an email address into the BCC (Blind Carbon Copy) address field. When you are finished on this screen, click on the **PO & Inventory** tab.

System Information

Schedule | SPC | Accounting | Time Clock

Company | Marketing Channels | Customer, Part Info | Quote & Email | PO & Inventory

Receiving Address

Company Name: All-Type Fabricators, Inc.

Address: 5015 PAUL WAYNE DRIVE

Address 2:

City, St, Zip: BOLING TX 77420

Country: Style

☐ Automatically mark "Pull from Stock" on MRP

☐ Substitute Shop Code for Part Number on Service POs

☐ Don't update product quote cost when verifying vendor invoices

☐ Don't update product inventory cost when verifying vendor invoices

☐ Don't update In-House product quote cost when completing jobs

☐ Don't update In-House product inventory cost when completing jobs

Service Quantity Ranges

From	To
1	100
101	200
201	300
301	400
401	and above

Product Quantity Ranges

From	To
1	100
101	200
201	300
301	400
401	and above

OK Cancel

Enter your company's receiving address, even if it is the same as your mailing address. Do not check the box for Automatically mark "Pull from Stock" on MRP. This is a setting that you can investigate once the system has been running for awhile and your inventory has stabilized in the program. Check the box for Substitute Shop Code for Part Number on Service POs if you do not want your customer's part numbers to show up on POs. Leave the boxes unchecked for updating product quote costs and inventory costs. In the two quantity range fields, enter the most common quantities for which you normally receive price breaks from your vendors. Remember, these are default values that can be changed for each product item you have. When finished on this screen, click the **Scheduler** tab.

System Information

Company | Marketing Channels | Customer, Part Info | Quote & Email | PO & Inventory

Schedule | SPC | Accounting | Time Clock

Global Lead Time: 1 days Global Efficiency: 100 %

Global Trail Time: 1 days ASAP Window: 14 days

☒ Schedule Stations on Order Verification (Finite)

☐ Give all working jobs highest schedule priority in Station Scheduler (Finite)

Shift Schedule (hh:mm)

Shift	Start	Stop
1	07:00	16:00
2		
3		
4		
5		

Round Clock IN-OUT Times

Round to nearest: None

Employee Grace Times

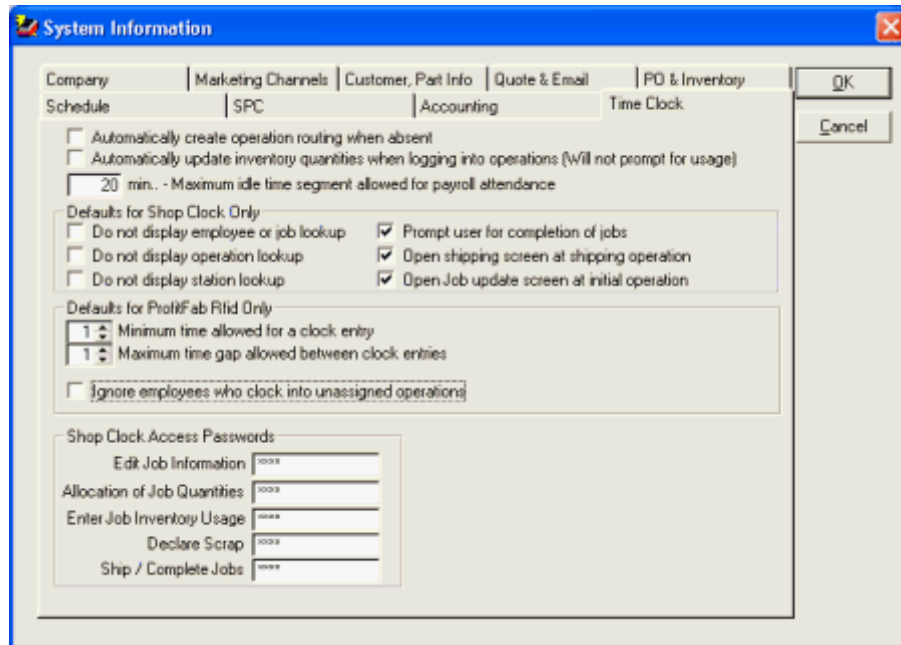
	Early	Late
IN	00:10 <input type="checkbox"/>	00:10 <input type="checkbox"/>
OUT	00:10 <input type="checkbox"/>	00:10 <input type="checkbox"/>

Employee Activity File will automatically be updated if not within above grace times. Check if you wish to force shift times

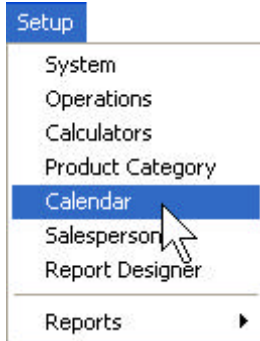
OK Cancel

Set the Global Lead Time to 1 day and the Global Trail Time to 1 day. Make the Global Efficiency 100% and the ASAP Window 14 days. Check the boxes for Schedule Job on Order Verification and Give all working jobs highest priority. In the Shift Schedule block, enter all shifts you are running (up to 5) using 24-hour notation, where 1600 is 4:00pm. This shift schedule is for shop floor employees and not necessarily for your administrative staff. Leave the Round to nearest set to None and the Employee

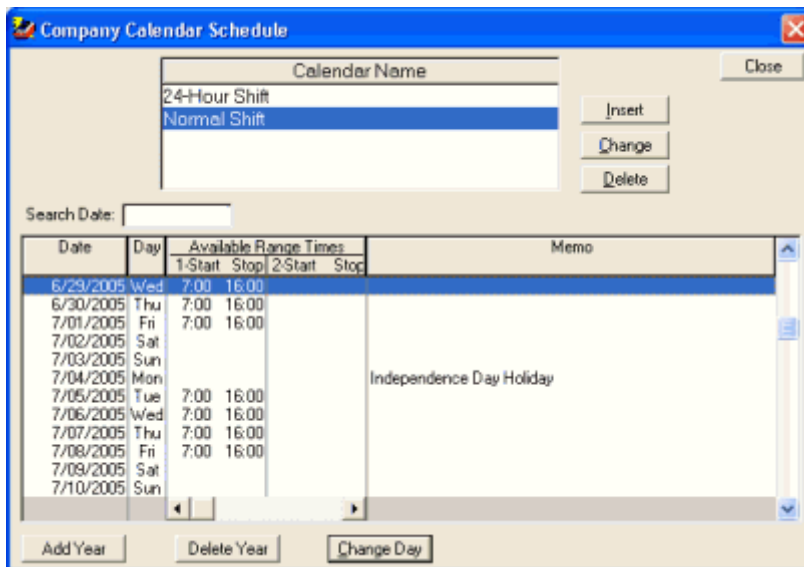
Grace Times set to 00:00 with the boxes unchecked. These are covered in more detail in ProfitFab Help (Use F1). When you are finished on this screen, click on the **Time Clock** tab.



Set up the Time clock tab just as you see it set here in the picture. We will discuss the settings on this screen in more detail later, but these settings will be sufficient to get you started. After the changes are complete, you have set up ProfitFab to build parts, create quotes, orders, jobs and purchase orders. The SPC and Accounting information can be setup at a later date when you are ready to begin using those features. They are covered in detail in ProfitFab Help (**F1**).



Calendars are used by the Station Scheduler to assign work to stations. The Station Scheduler schedules stations and not employees, so the calendar setup should reflect the capacity of equipment to operate. The main idea is to have a calendar to cover any possible station operating time. For example, you may have a punch machine with an automatic sheet loader that is capable of running 24 hours per day and you may have a welding station that is manned from 07:00 to 16:00. These two stations should be assigned to different calendars so that the scheduler can assign work to each station in the most efficient manner. Setting up stations (and Operations) is covered in detail in the next section.



To set up calendars, select **Calendar** from the **Setup pull-down menu**. This will open the **Company Calendar Schedule**. By default, there is already a Normal calendar installed with a time range set from 08:00 to 17:00. If you run a single shift during these times, then the Normal calendar will work for you without making any changes. If you normally run only a single shift from 07:00 to 15:00, the easiest way to set up the calendar would be to delete the years from the current calendar, then add new years with the correct time range.

To delete years, click the [Delete Year] button. Type in the year to be deleted and click the **[Delete Year]** button. Continue this process until all desired years have been deleted.

Calendar Year Extension Routine

Normal Shift

Year to Add: 2006

Default Weekly Schedule Range Times:

Range	1	2	3	4	5					
	Start	Stop	Start	Stop	Start	Stop	Start	Stop	Start	Stop
Sun										
Mon	7:00	16:00								
Tue	7:00	16:00								
Wed	7:00	16:00								
Thu	7:00	16:00								
Fri	7:00	16:00								
Sat										

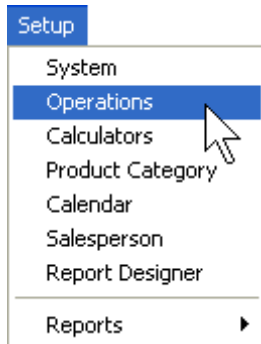
Note: 00:00 to 24:00 is a full 24 hour period.

Ranges are the times in which your stations (machines) are operating. (Do Not enter Employee Shifts)

To add a year with the new time ranges, click the [Add Year] button. The Calendar Year Extension Routine opens. Make sure the Year to Add has the correct year and enter 0700 and 1500 into the **Start** and **Stop** fields for Range 1 for Monday through Friday. When complete, click the [Add Year] button. A message confirms adding the year and asks if you would like to add another. If so, click yes and the form will open again allowing you to add another year using the same times. Continue this process until you have added several years into the calendar.

If you have equipment that runs on a different schedule than what you have already set up, insert a new calendar to account for this and add some years to it. To insert a new calendar, click the [Insert] button and give the new calendar a name. We suggest something descriptive such as '24 Hours' or "1st and 2nd Shift". When adding a 24 hour time range, enter the data as 0000 in the Start field, and 2400 in the Stop field. Note that when adding 0000 for a start time, the field will not display 00:00, but will be blank to indicate 00:00.

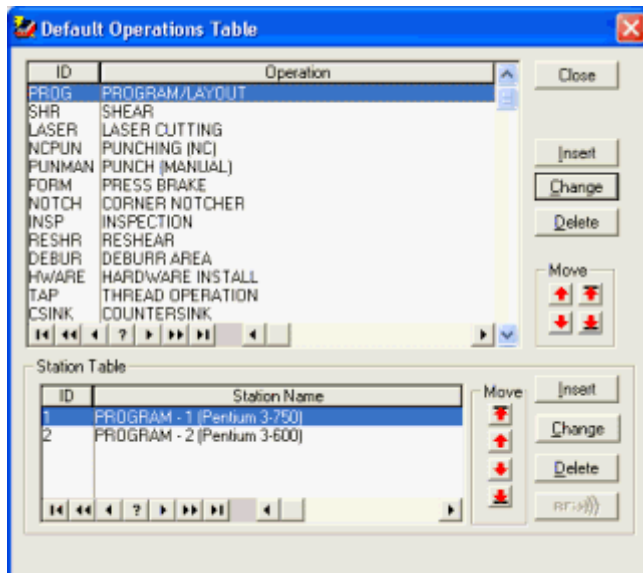
When you have finished setting up your calendars, click the [Close] button to exit the Company Calendar Schedule screen.



Operations are the building blocks for Part Definitions and jobs. Employees are assigned operations and clock into and out of these operations during the normal flow of a work day. Therefore, it is important to set up operations in a way that makes sense.

To enter operation information, you need to list all equipment that is necessary for manufacturing customer parts. This list of equipment needs to be categorized into types of operations. For example, you may have three press brakes, one 4ft. press brake and two 6ft press brakes. You would insert one operation called Press Brake and have 3 stations under the Press Brake operation.

To set up operation information, choose **Operations** from the **Setup** pull-down menu. If you elected to install the startup data from the installation wizard, you will have several operations in the operation list. The existing operation information can be changed to meet your needs.



Operations may be sequenced in the order they would generally pass through the shop by using the [Up] or [Down] arrow buttons. The [Up] arrow will move the operation highlighted on the screen up one line and the [Down] arrow will move the highlighted operation down one line. The [UP] and [DOWN] arrow buttons with the lines will move an operation to the top or bottom of the list.

Whenever you have an operation highlighted, its stations are listed in the Station Table. We will cover setting up a station next. First let's see how to set up an operation. To insert a new operation, click the [Insert] button in the upper table to open the Default Operations Form.

The Station Table and various associated scheduling fields are not available in the Plus and Lite versions.

Default Operations Form

Operation ID: Name:

Type of Operation:

Operation Specs

☐ Print on Stock Router ☐ Allow CAM/DNC
☐ Inspection Required ☒ Job # Required
☐ First Run Only ☒ Productive
☐ Outside Service ☐ Log Setup Time

Operation Cost

	Machine	Labor
Normal:	45.00	0.00
Prototype:	55.00	0.00
Special:	0.00	0.00
Other:	0.00	0.00

Tandem Scheduling

Stations: Minimum Time: hr

Estimated Setup: hh:mm

Calculator Type:

Speed Calculator Definition

Event Title	Time (min)	Events per (Setup Event Only)
Tool Setups	20.00000	<input checked="" type="radio"/> Part <input type="radio"/> Run
Bends	0.25000	<input checked="" type="radio"/> Part <input type="radio"/> Run
Handling	0.00111	<input type="radio"/> Part <input type="radio"/> Run
		<input type="radio"/> Part <input type="radio"/> Run
		<input type="radio"/> Part <input type="radio"/> Run
		<input type="radio"/> Part <input type="radio"/> Run

Notes:

Enter an **Operation ID**. This field is used for quick reference in looking up and/or inputting the operations into the customer part files. If your company currently uses operation billing codes in an accounting or shop management program you may choose to use the same codes as the Operation ID in order to ease implementation.

The **Name** field is used to define the operation. This description should be named in such a way that it accurately describes the actual operation to be accomplished by your employees.

Type of Operation: In setting up an operation you must define the Type of Operation. This setting will have various affects throughout the program. You may select the Type of Operation from a list by selecting the down arrow button. The types available are as follows:

Normal: This is the most common type of operation; it covers most of your productive work stations.

Inspection: This defines the operation as an inspection point. This works in conjunction with the inspection required function of the Operation Specs. When entering an operation to the routing table of a part that has the inspection required checkbox selected, the system will require that the next operation added to the route table to be an inspection type of operation.

Shipping: This defines the operation as a shipping/completion point. Upon entering the operations list you must have at least one operation with the shipping type selected. This operation should be the last operation in the routing table of all simple parts and the last operation in the routing table of a main assembly. The Station Scheduler also uses the Shipping Type of operation to define standard work days in your shop for scheduling purposes.

Assembly point: This defines your operation as an assembly point. This operation should be the last operation in the routing table of all the component parts that are attached to an assembly. This tells the system that the component parts of an assembly are complete and have been attached to a parent component or to the main assembly. You may want to set your welders, hardware install, etc. operations as an assembly point so you don't have to add a special assembly point operation.

Initial Operation: When selected, the employee clocking out of this operation will have the option to edit the actual quantity of parts to manufacture, routing table, hardware table and to print the Shop Route Sheet or Purchase Requisitions, etc. The scheduler also views operations of this type as not being full production type operations and will not assume that a job has begun production just because an initial type operation has logged time against it.

Operation Specs

Job Number Required: By checking this check box the system will further define the operation to require a job number be entered when an employee logs into this operation from the shop clock module. This field is to be checked for all operations that will appear on a route sheet. If not checked it will not be available for selection on route tables when estimating parts. Do not check this box on an operation

such as CLEANUP or MAINTENANCE that is not job route specific.

Inspection Required: By checking this check box the system will further define the operation by forcing the system to automatically prompt the user for an inspection operation after adding this operation into the routings of a customer's part file.

First Run Only: This check box is to flag the system to only charge this operations labor time on the first run only. By selecting this check box the system will only calculate this operations labor time as set in the routing of a customer's part file for this operation until the part has become a verified order. This is commonly used for the programming and layout operations.

Outside Service: This check box is to flag the system that this operation is to be performed by an outside vendor. Normally, you only need one operation in the entire list that is of this type. Whenever an outside service is to be performed on a job, this operation can be inserted as needed, and the specific service to be provided can be assigned to the Part Definition.

Log Setup Time: This check box is checked if you want employees to log setup time separate from per part time. It is recommended to not log setup time until employees are comfortable with the shop clock module. You may change this field at any time to automatically require setup time to be logged.

Productive: By checking this check box the system will consider this operation as a productive operation and give employees logging in to this operation credit for productive work. Normally this field is checked on job route related operations and not checked on operations such as CLEANUP or BREAKS.

Print on Stock Router: Check this box to print this operation only on From Stock Route Sheets. You may choose the operations that will be printed on route sheets that have no manufactured quantities and are to be pulled from stock for shipping. This option is useful when you have an assembly with many components that will be shipped from stock and you don't want to print route sheets for the components (Only the main assembly route sheet will print.). This will be the default used on newly created parts, but may be changed in the part definition if the part needs special attention on printing certain operations when shipping from stock quantities. Also these flags may be changed at the job level (Job Activity Folder) if you want to change a currently running jobs route sheet. Note: Operations with a 'Shipping' Type will always print on route sheets even if this checkbox is not checked.

Allow CAM/DNC: If this box is checked and the part definition of the job has a CAM/DNC file attached, the system will automatically prompt the employee when logging into that operation if he wants to download the CAM/DNC files. If answered 'YES' then the employee will be prompted with a list of files to view, edit, or download.

Operation Cost: In these fields you should put the costs per hour for each of the four price options provided. You will choose from this list when building individual Part Definitions. These costs should include all labor and overhead costs necessary to operate the equipment. It is very important to set these costs up correctly because these are the values ProfitFab will use to calculate the labor cost of making parts when you are creating quotes for your customers. If you try to pad these values with some extra profit, then when ProfitFab adds your markup to the costs, you may be over-quoting your prices and subsequently losing business as a result.

Tandem Scheduling: Do not worry about this feature at this time. This is used by the Station Scheduler and is covered in detail in **ProfitFab Help (F1)**.

Estimated Setup: This field is used to set the default (average) time it should take to prepare the operation to begin production. (NOTE: This is only the default and can be changed on a per operation basis from within the routing table of the customer's part file). Setup time for operations may include complicated tool setups, time required to get parts to the station, or any other activity that is required to be done before starting the production work.

Calculator Type: If the operation you are working with has a predefined Detail Calculator available, select it from the list by selecting the down arrow button. Calculators are currently available for operations such as Laser Jet, Water Jet, NC Punch, Plasma Cutting, Welding and Grinding. You can add calculators to the list to meet your needs. For more detail on the calculators see the Calculator section in ProfitFab Help.

Speed Calculator Definition: The Speed Calculator Definition area has been structured to allow you to

assign quick calculators for any operation. You may define a calculator for the Setup Field and up to five calculations for the per Part or per Run fields. For getting started, do not worry about assigning these fields. They will be addressed in detail on the Default Operations Form in **ProfitFab Help (F1)**.

Notes The notes field on the Operations form may be used to enter a default note which will transfer to the operation routes on parts automatically when adding operations to existing or new parts. You may also use this feature to 'seed' a unique heading to each operation on your route sheet.

Example: On Inspection you may have a place for your employees to initial the phases of inspection.

1st Insp. _____ 2nd Insp. _____ Final Insp. _____

After entering the desired information for the new operation, click the OK button to save your work and return to the Default Operations Table.

To set up stations for operations, click the [Insert] button in the **Station Table**. This opens the **Station Form**.

Station ID - used for quick reference in looking up and or inputting the stations into the shop time clock when logging into a job. If your company currently uses station billing codes in an accounting program you may choose to use the same codes for this field.

Station Name - used to give the tool or equipment a descriptive name that accurately defines the station.

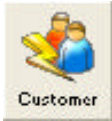
Calendar – select from the drop down list the calendar that will be used by the Station Scheduler. The calendars must have been previously defined in the calendar setup.

Check the **Schedule this station** box and set the **Schedule Efficiency** to 100%.

Set the minimum number of employees that will be required to work at this station in order for a job to be worked on. Most stations will either be 0 or 1. If you have a station that can run unattended, either because it has an automatic sheet loader or because it can work on a job while the operator goes to work on a different station, then set this to 0. If an operation requires an employee to be present, for example welding or forming, then set to 1.

If only one job at a time can be worked on at a station, check the box. This would be for stations like welding, press brakes, etc.

The Parallel and Fragment settings should be left alone at this time. These advance scheduling features will be discussed in the Station Scheduler section of **ProfitFab Help (F1)**. Click OK to save your work and return to the **Default Operations Table**. Enter new operations or modify the existing operations to meet your specific needs and when finished, click the [Close] button.



To enter customer information, click the **Customer Activity icon** in the upper left corner of the ProfitFab window. The **Customer Activity Center** allows access to all customers, their quotes, orders, parts, jobs, invoices, and contacts. From this window, you can access most of the features in ProfitFab. To add a customer, click the [Insert] button to the right of the customer table. This will open the **Customer Form**.

Enter a **Customer ID**. This ID is used for quick reference in looking up and retrieving your customer data files when adding or editing your customer's part file, quotes, and orders. If your company currently uses an accounting or shop control program you may choose to use the same customer ID codes in order to ease implementation. If you use Peachtree accounting software and you want to export data into Peachtree, you must set up a customer in Peachtree using the same Customer ID.

In the **Mfg. ID** field, enter the customer's original equipment manufacturers code (if applicable). This is generally a number that your customer supplies to you for identification purposes. Enter the customer's billing and shipping addresses in the fields provided. The customer's name should be entered into the first field of each. The **Terms**, **Delivery**, and **Ship Via** fields will default to the values that were entered in your company setup. If necessary, change these fields to reflect the correct values for this customer. The **Last Invoice**, **Last Inv. Amt**, and **Period Volume** fields will automatically be updated by ProfitFab, so do not worry about these fields now. If this customer is taxable, then check the Taxable box and enter the tax rate.

If the customer will allow you to ship more parts than were ordered, check the **Allow Overage** box. If you wish to require a Purchase Order from this customer before allowing an order to be created, check the **PO Required** box. This will require a customer PO number to be entered on any orders and invoices for this customer. If this customer has a web site, you may enter it into the **Web Site** field for informational purposes. The **Web Password** field is for use with ProfitFab WebLink, to give your customer access to their job information via your web site. ProfitFab WebLink is a separate module and is not included as part of the standard ProfitFab program, so you may leave this field blank.

The **First Activity** and **Last Activity** fields will automatically be updated by ProfitFab as activity occurs for this customer. In the **Customer Priority** field, you may enter a number between 1 and 99, where 1 is the highest priority. This field is used when you schedule jobs. Jobs with the highest priority get scheduled first. If you leave this field at 0, then all jobs for this customer will default to priority 10. If you set this field to any number between 1 and 99, all jobs for this customer will default to that priority. You can override this priority level for each individual job that you have.

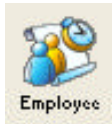
Enter any notes that are specific to this customer into the **Notes** field. If you check the **Alert Note** box, then the notes entered for this customer will open up to alert users every time they access this customer's file. If this customer has more than one shipping address, you may enter Alternate Shipping

addresses by clicking on that tab and then clicking the [Insert] button.

If there are contacts for this customer, enter them by clicking the Contacts tab and then clicking the [Insert] button. If entering multiple contacts for a single customer and they have common information such as the same address, phone number, etc. **use the tilde (~) key on a field to automatically insert the previous value used in that field.** Using this feature will save time by not typing repetitive information. This shortcut key will work in many areas of ProfitFab. Click the [OK] button to save your work and return to the Customer Activity Center.

Employee Information

ERP



Entering data for shop floor employees is not the same procedure as setting up administrative users. If a person is entered as both an administrative user and an employee and the internal message system is used, enter the admin user and the employee with the same **Name** to prevent sending duplicate messages. To enter employee information, click on the Employee icon. This will open the **Employee Activity Center**.

ID	Name	Shift	Title
BER	BERTHA KING	1	SHIPPING/RECEIVING
BG	BRIAN GASSETT	1	LASER OPERATOR
DL	DAVID LODGE	1	PUNCH OPERATOR
RG	RICHARDO GAMBOA	1	GENERAL LABOR
SM	SAL MOSCHITTA	1	GENERAL LABOR
SO	SCOTT OTTENS	1	PRESS BRAKE OPERATOR (HFB & F

Date	In	Out	Time	Operation	Station
6/20/2005	7:01 AM	3:59 PM	SHEAR	SHEAR	
6/21/2005	7:00 AM	4:00 PM	SHIPPING	SHIPPING	
6/22/2005	7:30 AM	4:01 PM	PUNCHING (NC)	PUNCHING	

This screen is similar to the Customer Activity Center. The top half contains a table of all employees and the bottom half contains records associated with the employee selected. From this screen allows access to time clock, activity, scrap, and assigned operation information about the selected employee. To enter a new employee, click the [Insert] button to the right of the employee table. This opens the Employee Form.



Employee Form (DAVID LODGE)

General | Productivity

Employee ID: DL ☐ Inactive Shift: 1 2 3 4 5 (7:00 AM to 4:00 PM) OK Cancel

Name: DAVID LODGE Title: PUNCH OPERATOR

Address: 12345 Oak St. City, St, Zip: Houston TX 77599 Country: ☐ Style

Emergency: 713-454-1043

Date of birth: 6/22/1955 Spouse: Debbie Goodson

Phone: (713) 344-9878

Pay rate: \$13.75 SS #: 454-44-9670

Notes: Hired: 05/25/1998

Disable Lookup at Clock Login: ☐ Operation List ☐ Station List



On the General tab of the Employee Form, enter the requested information. The **Employee ID** and **Name** fields are required, all others are optional. For the **Employee ID**, enter up to 8 characters. This is the ID that employees will enter to login to the Shop Clock Module.

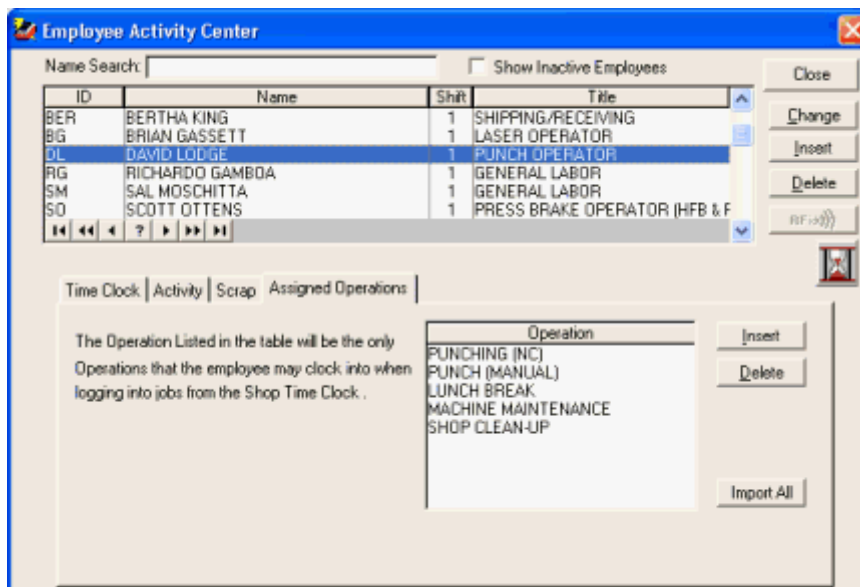
In the **Shift** block, select the appropriate shift for the employee. Shift times will be shown for each corresponding shift. If a shift does not exist, it will show 12:00AM to 12:00AM. For

startup, do not worry about disabling lookups on the 2 fields listed. As you use ProfitFab more, you may want to come back to these fields to disable some of them. The **Inactive** box should be checked only for employees that no longer work for you. This allows a history of the work they have done without having their records show up on all employee reports.

Do not worry about the Productivity tab information at this time. As you use ProfitFab, the program will accumulate productivity information automatically. When finished entering the desired information, click [OK] to save your work and return to the Employee Activity Center.

The final step to entering an employee is to set up the operations that the employee will be allowed to clock into. With the employee highlighted in the upper table, select the Assigned Operations tab. You can select the **Import All** button and delete unwanted operations.

During initial setup, there is no need to make entries in the Time Clock, Activity, and Scrap tabs. ProfitFab will automatically maintain this information, although you still have the ability to manually insert and edit this information.



Employee Activity Center

Name Search: ☐ Show Inactive Employees

ID	Name	Shift	Title
BER	BERTHA KING	1	SHIPPING/RECEIVING
BG	BRIAN GASSETT	1	LASER OPERATOR
DL	DAVID LODGE	1	PUNCH OPERATOR
RG	RICHARDO GAMBOA	1	GENERAL LABOR
SM	SAL MOSCHITTA	1	GENERAL LABOR
SO	SCOTT OTTENS	1	PRESS BRAKE OPERATOR (HFB & F)

Time Clock | Activity | Scrap | Assigned Operations

The Operation Listed in the table will be the only Operations that the employee may clock into when logging into jobs from the Shop Time Clock.

Operation
PUNCHING (INC)
PUNCH (MANUAL)
LUNCH BREAK
MACHINE MAINTENANCE
SHOP CLEAN-UP

Insert Delete Import All



Employee **Pay Rate** and **SS#** fields are only visible to users with Supervisor Rights



To set up vendor data, click the **Vendor icon**. This will open the Vendor Activity Folder. From here, you can access all vendor activity including purchase orders, products, invoices, and contacts. If you elected to have demo data installed by ProfitFab, you will see some vendors have been setup with generic names based on product types. If you already have a primary vendor for these types of products, set up these vendors by selecting the appropriate vendor from the table and then clicking the [Change] button. Replace the **ID** and **Name** fields with the correct vendor information and fill out the rest of the fields with the requested information. When finished, click the OK button to save.

ID	Vendor Name	City
NELSON	NELSON SPECIALTY HARDWARE, INC.	DALLAS
PEMENG	PEMM ENGINEERING	TIMBERLAND
RELIAN	RELIANCE METAL SUPPLY, INC.	HOUSTON
SOPLT	SOUTHERN PLATE AND FINISH	SEALY
TRID	TRIDENT STEEL, INC.	SUGARLAND

To insert a new vendor, click the [Insert] button to the right of the vendor table. This will open the Vendor Form.

Enter a **Vendor ID**. This field is used for quick reference in looking up and/or inputting the vendors into the raw product inventory files. If your company currently uses an inventory tracking program you may choose to use the same vendor codes to ease implementation. If you use Peachtree software for accounting and want to export vendor information from ProfitFab to Peachtree, then you must set up a vendor in Peachtree using the exact same ID.

Enter the Vendor **Name** and **Address**. Enter the terms which the vendor extends to you for payment of invoices and their usual shipping method.

To insert contacts for this vendor, click the

[Insert] button to the right of the Contacts table. Enter at least one contact for each vendor. Purchase orders to the vendor will be addressed to the contact chosen at the time you created it. Enter the requested data in the Vendor Contact Form. At a minimum, the contact's first name and last name are required. Click [OK] to close the Vendor Contact Form and return to the Vendor Form. Enter any special notes specific to this vendor in the Vendor **Notes** field.

Click [OK] to save and return to the Vendor Activity Center.



Open the Product/Service Table by selecting the Inventory icon.

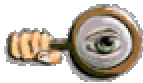
Product Id	Description	Onhand	Status
AL5052-020-3x10	ALUM .020 5052-H32 3x10	250.0	250.00
AL5052-025-3x10	ALUM .025 5052-H32 3x10		
AL5052-025-4x10	ALUM .025 5052-H32 4x10	42.0	0.33
AL5052-032-4x10	ALUM .032 5052-H32 4x10		
AL5052-032-4x12	ALUM .032 5052-H32 4x12		
AL5052-040-4x10	ALUM .040 5052-H32 4x10		10.00
AL5052-040-4x12	ALUM .040 5052-H32 4x12		
AL5052-050-4x10	ALUM .050 5052-H32 4x10	12.0	11.11
AL5052-050-4x12	ALUM .050 5052-H32 4x12	44.0	44.00

Inventory Status: Surplus Deficit

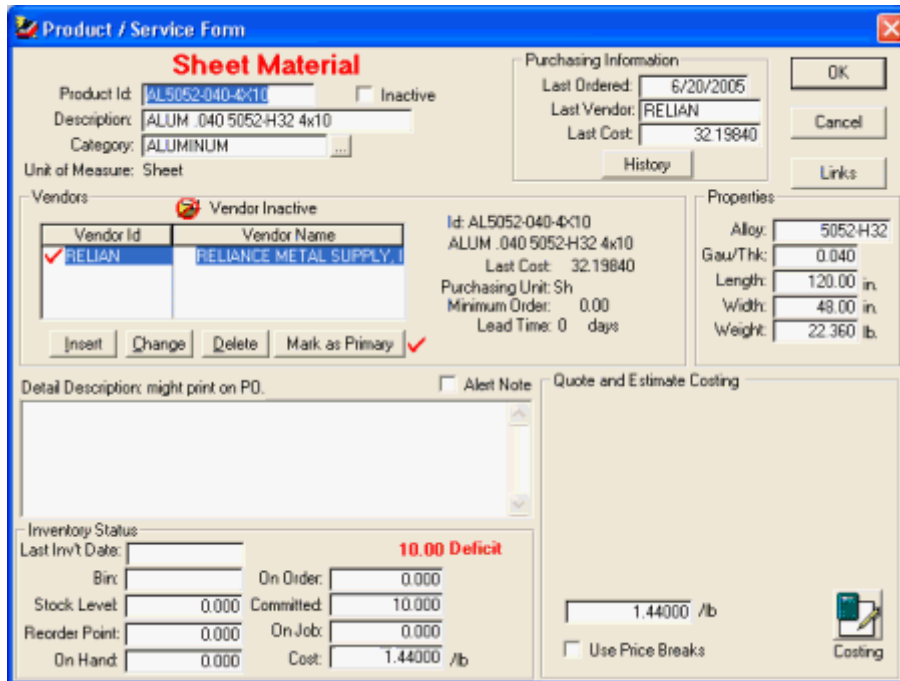
This table is broken down into types of product. The types are shown in the tabs across the top of the screen. Products can be viewed by type by either Product ID, Category, or Vendor by selecting the appropriate tab from within the table. You may add/edit the list supplied in ProfitFab's demo data or enter your own list from scratch.

Select the type of product to be added and then click the [Insert] button. The **Product/Service Form** opens and the screen will vary depending on the type of material chosen. For the purpose of this demo, we will look at adding a sheet material item.

Various inventory related fields are not available in the Plus and Lite versions.



Product Types are broken down by dimensions and how the material is used. Sheet type material is any type of material that is used in 2 dimensions—i.e. it has a length and width component. Structural material is 1-dimensional—it has only a linear component. Hardware, Finish, Other, and In-House Parts are all 0-dimensional—their unit of measure may be EA, PC (piece), G (gallon), etc.



Product / Service Form

Sheet Material

Product Id: ☐ Inactive
 Description:
 Category: ...
 Unit of Measure: Sheet

Purchasing Information
 Last Ordered:
 Last Vendor:
 Last Cost:

Vendors ☒ Vendor Inactive

Vendor Id	Vendor Name
<input checked="" type="checkbox"/> RELIAN	RELIANCE METAL SUPPLY, I

Id: AL5052-040-4x10
 ALUM .040 5052-H32 4x10
 Last Cost: 32.19840
 Purchasing Unit: Sh
 Minimum Order: 0.00
 Lead Time: 0 days

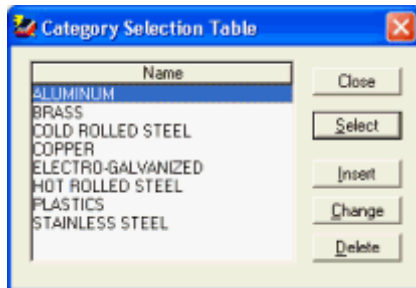
Properties
 Alloy:
 Gau/Thk:
 Length: in.
 Width: in.
 Weight: lb.

Detail Description: might print on PO. ☐ Alert Note

Inventory Status
 Last Inv't Date:
 Bin: On Order:
 Stock Level: Committed:
 Reorder Point: On Job:
 On Hand: Cost: /lb

Quote and Estimate Costing
 /lb
☐ Use Price Breaks

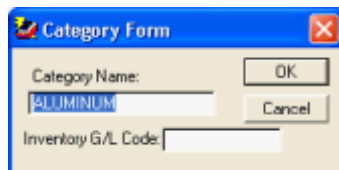
Enter a **Product ID** and the **Description**. These fields will be used to differentiate products and identify them. It is not required to use the same ID for a product that your vendor uses for that product. You can give each vendor that sells you this product their own ID so that POs to that vendor will have the correct information.



Category Selection Table

Name
ALUMINUM
BRASS
COLD ROLLED STEEL
COPPER
ELECTRO-GALVANIZED
HOT ROLLED STEEL
PLASTICS
STAINLESS STEEL

All products must be placed in a category. To select a category, click the ellipse button next to the category field. This will open the **Category Selection Table**. There may be default categories that ProfitFab installed. The categories shown in the figure are for Sheet type material only. Select a category for this product or create a new category for this product. To create a new one click the [Insert] button to open the Category Form and type in the **Category Name** and **Inventory General Ledger Code** (optional - for Peachtree users). Click [OK] to save it. Highlight the category you wish to assign this product to and then click the [Select] button to return to the **Product/Service Form**.



Category Form

Category Name:

Inventory G/L Code:

Click the [Insert] button in the Vendors block to open the Vendor Product Form.

Vendor Product Form

ALUM .040 5052-H32 4x10

Vendor Id: [RELIAN] [Select] [OK]

Vendor Name: RELIANCE METAL SUPPLY, INC.

Company Product Information

Minimum Order: [1.00] Sheets

Delivery Lead Time: [2] days

Vendor Product Information

Product Id: [AL5052-040-4x10]

Description: [ALUM .040 5052-H32 4x10]

How Purchased?

☒ Sheet (Stick) ☐ Pound ☐ Foot(Sq) ☐ In(Sq)

☐ Kilogram ☐ Meter(Sq) ☐ Cm(Sq)

Last Cost: [32.19840] Sheet

[Cancel]

Enter a **Vendor ID** by clicking the ellipse button and selecting a vendor from the list. Highlight the correct vendor and click the [Select] button. If you know the **Minimum Order** size and **Delivery Lead Time** requirements for this vendor, enter those values in the respective fields. The **Product ID** and **Description** should already be filled in with the data for the product you are currently working with. This is the default value and it can be changed to match the vendor's actual Product ID if different. This is the Product ID value that will print on your PO's to this vendor.

In the **How Purchased** block, select the unit by which the vendor sells this product. If known, enter the Last Cost for this product. Click [OK] to save and return to the **Product/Service Form**. If the vendor needs a red check mark next to the ID, highlight the vendor and click the [Mark as Primary] button.

On the Product/Service Form, go to the **Properties** block and enter the data to describe this product. These fields may or may not be present depending on the type of product you are currently working with. For instance, sheet material has all 5 fields present; Structural, Hardware, and Other material do not have a width field; and Services don't have any of these fields. It is important to enter the correct values into the **Length**, **Width**, and **Weight** fields. This data is used when determining the actual cost of this material when it is used on a Part Definition.

Properties

Alloy: [5052-H32]

Gau/Thk: [0.040]

Length: [120.00] in.

Width: [48.00] in.

Weight: [22.360] lb.

If checking the Alert Note box, product notes will pop up every time someone works with this product in ProfitFab. If you do not check the Alert Note box, this field can be used for detailed instructions for outside service vendors and will print on service purchase orders.

If needed, enter a Bin where the product is stored in the **Inventory Status** block. If you have just completed a physical inventory and know the amount of this product **On Hand**, then enter that amount. Leave the **On Order**, **Committed**, and **On Job** fields empty; ProfitFab will take care of these fields for you as you begin to use the program. Enter the current **Cost** per unit for the product. ProfitFab uses cost per pound for Sheet and Structural material, and cost per unit for Hardware, Finish, and Other types of material. If your vendor offers price breaks for this product, these breaks can be passed on to your customers by checking the Use Price Breaks box and setting up the quantity breaks and cost. Otherwise, enter a single price to use for quoting and estimating.

Inventory Status

Last Inv't Date: []

Bin: []

Stock Level: [0.000]

Reorder Point: [0.000]

On Hand: [0.000]

On Order: [0.000]

Committed: [10.000]

On Job: [0.000]

Cost: [1.44000] /lb

10.00 Deficit

Quote and Estimate Costing

Quantity Breaks per LB	Cost/unit
From: 1 to 100	1.44000
101 to 200	1.42000
201 to 300	1.40000
301 to 400	1.38000
401 and Above	1.36000

☒ Use Price Breaks

[Costing]

Quote and Estimate Costing

[1.44000] /lb

☐ Use Price Breaks

[Costing]



A costing calculator is available to help figure the cost per pound/unit for products.

The screenshot shows a 'Sheet Material Calculator' dialog box with the following fields and values:

Dimensions		Feet	Inches	Meters	Centimeters
Length		10.00	120.00	3.048	304.80
Width		4.00	48.00	1.219	121.92

Properties		Sq. Foot	Sq. Inch	Sq. Meter	Stock
Weight		0.559 lb	0.004 lb	2.73 kg	22.360 lb 10.142 kg
Cost		0.80	0.006	8.665	32.20

Cost per Pound: 1.44000 Cost per Kg: 3.17466

This feature is useful when the vendor prices the product differently than how ProfitFab prices the product. (Example: if a vendor prices sheet material by the sheet and ProfitFab uses cost per pound) Open the Sheet Material Calculator and enter the cost per sheet into the cost field under **Stock** and the calculator will calculate the **Cost per Pound**. Click the [OK] button and the cost per pound will be entered for you. Make sure the correct size and weight information has been entered.

During inventory setup, you may want to begin setting up default product categories. Insert new categories as needed while inputting your products or update all categories at one time by selecting **Product Category** from the **Setup** pull-down menu. Existing categories can be edited or insert new categories by clicking the appropriate button in the Category Table. There are only two fields associated with the category: the **Category Name** field and the **Inventory G/L Code**. The Inventory G/L Code field is optional and is useful if using separate codes in your accounting software to track material inventory.