

## ROUTING AND RESOURCES

*A complete set of tools to define how and what you do*

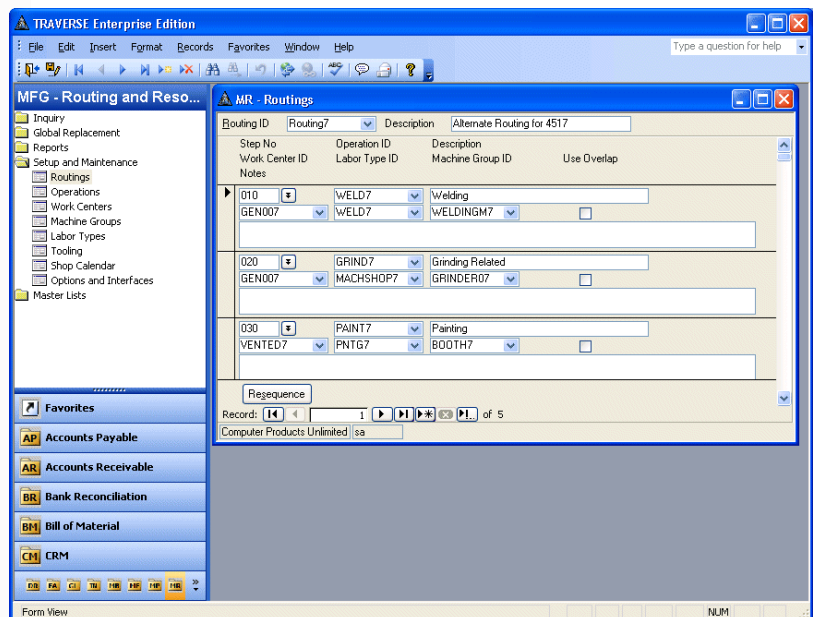
The labor, machinery, and tooling elements of manufacturing can be as crucial as the component materials you use. These are the elements that can cause production to come to a crawl and cause costs to far exceed projections. The TRAVERSE Routing and Resources application provides the functionality to define these important pieces of your manufacturing software solution.

Working with the Bill of Materials module, the Routing and Resources application defines the elements such as work centers, labor, machinery, and tooling. In terms of costs and times, these elements make up the process side of the manufacturing bill of materials.

By breaking down the process in the labor types, machine groups, and tooling, Routing and Resources enables you to define operations as a combination of these elements. Routings are then created as a set of step-by-step operations and can be used in the Bill of Materials application without needing to be recreated every time.

The system allows for the definition of queue time, setup time, run time, wait time and move times. All times are defined in terms of seconds, minutes, or hours. Overlap logic is used to determine the rate of pass-through. Flexible costing algorithms can be set up for labor and machinery. Overhead methods can be unique for each work center.

Routing and Resources also provides a sophisticated base for future customization with a comprehensive tooling database, labor and machinery pricing algorithms, and a complete shop calendar feature.



Step No	Work Center ID	Operation ID	Description	Labor Type ID	Machine Group ID	Use Overlap
010	GEN007	WELD7	Welding	WELD7	WELDINGM7	<input type="checkbox"/>
020	GEN007	GRIND7	Grinding Related	MACHSHOP7	GRINDER07	<input type="checkbox"/>
030	VENTED7	PAINT7	Painting	PNTG7	BOOTH7	<input type="checkbox"/>

*From Tooling to Labor, the Routing and Resources module is flexible enough to grow with your company.*

## Routing and Resources Features:

- global replacement of labor types, machine groups, tooling, etc.
- flexible overhead calculation by labor, machinery, piece, and/or flat rate
- optional required labor by machine group
- optional defined tooling by operation
- optional employee by labor type
- optional billing rate estimation
- G/L interface and account definition for costing purposes
- comprehensive user definable shop calendars
- extensive notes fields
- provision for media attachments for videos and pictures
- detailed tooling database
- flexible costing algorithms
- extra user definable fields
- complete routing setup by operation
- provision for subcontracted operations
- multiple subcontractor vendor information

## Routing and Resources Reports:

- Work Center Where Used
- Labor Types Where Used
- Tooling Where Used
- Machine Groups Where Used
- Operations Where Used
- Work Centers List
- Labor Types List
- Tooling List
- Machine Groups List
- Operations List
- Routings List
- Shop Calendars List

**MR - Work Centers**

Work Center ID: WELDING7  
Description: Welding Area

Shop Calendar ID: 11  
GL Offset Account: 00-000-1000  
Work Center Supervisor: Smith  
Cost Group ID: Overh

Media Group ID: Foil

Billing Information: Rate: 43.5000  
Pct Over Cost: ☐ Per Hour: ☒

Notes: General Welding should be done here unless the project is so large it would need to be completed outside. Check with Jerry in those cases to make sure it gets routed correctly.

Fixed Amount: 5.0000  
Overhead Amount per Piece: .0000  
Machine Overhead Pct: 2.00  
Labor Overhead Pct: .50

Available Machinery

Machine Group	Description
GRINDER07	Delta 23-725 Industrial Grndr
WELDINGM7	Hobart 135 Welder

Record: 1 of 1

Computer Products Unlimited | sa | F2 Lookup

*Work Centers enable you to determine overhead costs in a variety of methods.*

*Operations define what you do and provide a comprehensive method of determining how long each operation takes.*

**MR - Operations**

Operation ID: BEND7  
Description: Metals Bending

Internal ☐ Subcontractor ☐

Work Center ID: METALS7  
Machine Group ID: BEND07  
Labor Type ID: MACHSHOP7  
Setup Labor Type ID: MACHSHOP7  
Operators Required: 1  
Media Group ID: PressBrake

Queue Time: 1.500 Hrs  
Machine Setup Time: 15.000 Mins  
Labor Setup Time: 15.000 Mins  
Machine Run Time: 10.000 Mins  
Labor Run Time: 10.000 Mins  
Wait Time: .000 Hrs  
Move Time: .500 Hrs

Notes: Let's keep work queued up here to a minimum because we don't have the floorspace to maintain it here. If you have questions on new specs ask Linda where the latest documentation is located.

Tooling ID: CLAMP2, Description: 2" Spring Clamps  
CLAMP7, Description: 7" C - Clamp

Record: 1 of 2

Computer Products Unlimited | sa