

ROMAC SERIES 8 FABRICATION PACKAGE

Installation

Materials Database

Version 8.0

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OPERATOR'S MANUAL

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Software License Agreement and Limited Warranty

The Romac Series 8 Fabrication Package software and documentation is protected by United States copyright laws and also by international treaty provisions. The Fabrication Package (Production Control, Inventory Control, Purchase Orders) software is subject to the following license agreement and limited warranty.

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Overview

The Romac Series 8 Fabrication Package consists of three main modules (Production Control, Inventory Control, and Purchase Orders). Each module can be used alone without interface with the other modules. If more than one of the modules is installed on a system, some degree of interface between the modules may be possible.

The Production Control module is used the shop bill of material including shop cutting lists, production tracking, and shipping. Length Nesting and Plate Nesting modules are available which allow the Production Control program to interface with the Inventory Control program.

The Inventory Control module is used to manage the raw material. Both materials that are purchased for a specific job and materials that are maintained in stock are maintained in the Inventory Control program.

The Purchase Order module is used to generate purchase orders including weight and cost extensions. Materials added to the purchase orders can be automatically added to the inventory. All material receipts are noted through the purchase order program.

Romac Series 8 Fabrication Package are Windows programs and are compatible with Windows XP, Windows 7 and Windows8. The programs must be installed onto each user's workstation. Project data can be shared among users on a network. When used on a network, a lock feature allows only one user to access project data at any one time.

This documentation was derived from version 7.0.0 of Romac Series 8 Fabrication Package. Later versions of the program may contain features and functions not included in this documentation or may have different implementation methods. Please contact Romac Computer Services, Inc. or refer to our website www.romacinc.com for information regarding the latest versions of the program and documentation.

Installation

Romac Series 8 Fabrication Package is a multi-user application and can be installed on a standalone computer, as a single-user application on a computer attached to a network, or can be installed on several computers attached to a Windows network.

System Requirements

Operating System - Windows XP, Windows 7 or Windows 8

Network – Windows peer to peer (optional)

System memory – The programs should run on systems with the minimum amount of memory recommended for the operating system. If you think your system may have a marginal amount of memory in which to run the program, try running the program with the marginal memory then buy additional memory only if necessary.

Hard disk space – varies from a few hundred meg. If you have been using our Series 5.3 system, data storage space will probably be 3-4 times as much as required for Series 5.3 data.

Monitor screen resolution – Minimum screen resolution is 800 x 600 with small or normal size (96 dpi) fonts.

The installation CD consists of four setup programs. FP8Setup.exe installs the data files. IN8Setup.exe, PO8Setup.exe, and PC8Setup.exe installs the Inventory Control, Purchase Order, and Production Control programs.

Single User installation (without network)

If installing onto a single computer not attached to a network, all setup programs would of course be run on that single computer. In this case we recommend that the default installation and folder names be used. Using installation defaults, data folders and files will be located as follows:

C:\Romac7 – Contains Fabrication Package data common to all applications.

C:\Romac7\InvData – Contains all Inventory data files

C:\Romac7\PoData – Contains all Purchase Order data files

C:\Romac7\ProdCtrl – Contains all data files related to Production Control.

C:\Program Files\Romac – Contains program files for all applications.

When installing onto a single user, first run FP7Setup.exe then IN7Setup.exe, PO7Setup.exe and PC7Setup.exe. After installation, see “Linking programs to data files” below.

Single User installation (with network)

If installing a single user onto a computer connected to a network, you have two installation options. You can install everything onto a single computer as outlined above or you can install the data files onto one computer and the program files onto a separate computer similar to the network installation described below. The advantage to separating programs and data is that data files can be stored on a computer that has a regular backup routine. In either case, a frequent backup routine should be implemented.

Network installation

When installing onto a network with two or more users accessing the data files, the data files should be installed onto a single computer which can be accessed by all users. The program files must be installed onto each individual computer. The computer containing the data files can also contain program files and be used to access the data.

The data files should be installed first. Run FP8Setup.exe on the computer which you will be storing data. The setup program is designed to create folders Romac7, Romac7\InvData and Romac7\ProdCtrl. We recommend that you maintain this folder naming and structure. This makes it easier for troubleshooting and keeps all your data files together for simpler backups and restore. Romac7 can be placed in the root directory on the data drive or it can be placed in a subfolder. In any case, all users must have full read/write/create/delete rights for the Romac7 folder and all subfolders.

After data files are installed, the programs should be installed onto each computer that will be running the program(s). Installation programs are:

Production Control – PC8Setup.exe

Inventory Control – IN8Setup.exe

Purchase Order – PO8Setup.exe

The applications can be run by accessing Programs | Romac Applications from the Windows Start menu.

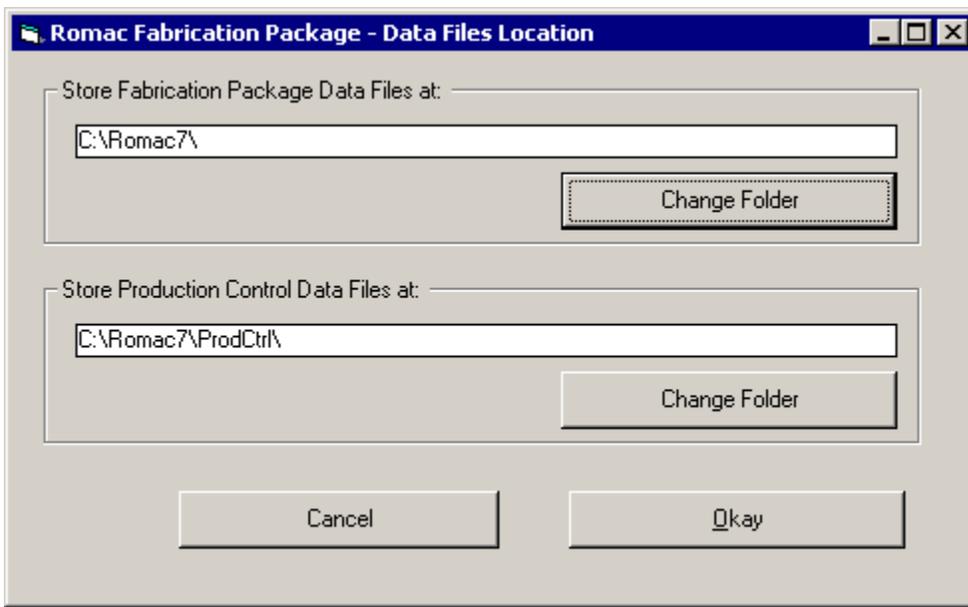
Linking programs to data files

Before either of the Fabrication Package applications can be used, the installed programs must be linked to the data files location. Upon initial startup, a screen will be displayed to allow you to browse to the data files location. This data files location will be the location files installed with FP8Setup.exe were installed to. Each of the applications will need to be linked to the “Fabrication Package Data Files” location plus the location of it’s own data files.

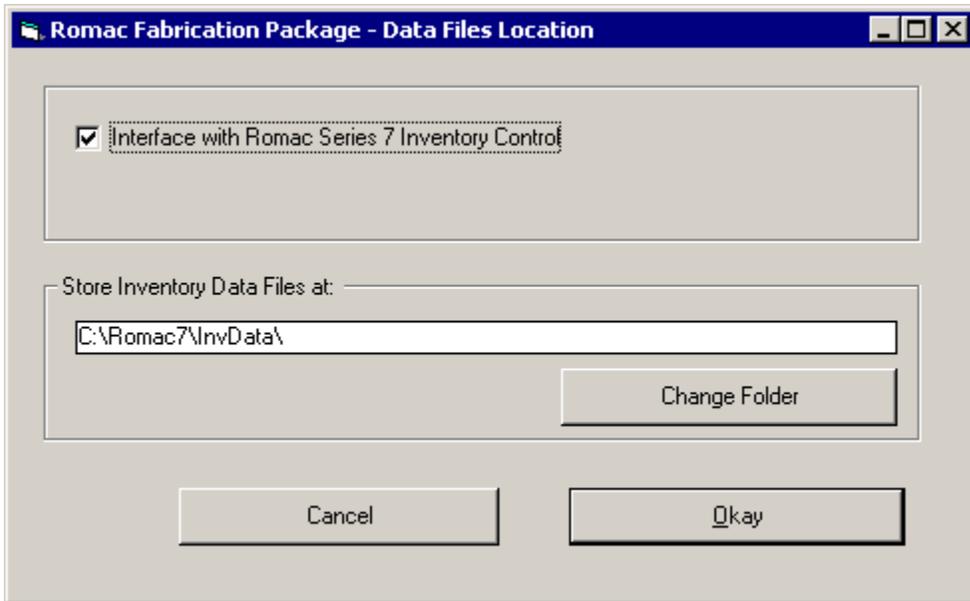
Using the default installation, these locations will be:

Fabrication Package -\\Romac7\
Production Control -\\Romac7\\ProdCtrl\
Inventory Control and Purchase Order -\\Romac7\\InvData\

This option can also be accessed using the menu chain Maintenance | Set Configuration | Data Files Location.



Additionally, if you want to interface the installed application with another application, you must select this option through the menu chain Maintenance | Set Configuration | Inventory [Production Control] Interface.



Start Up

If the default installation was used; click the Start button, then click on 'Programs', next click 'Romac Applications' and finally click Romac Series 8 application you wish to run.

Software Purchase and Registration

Upon installation of this software, you will be given a 45-day evaluation period which gives you access to most program features.

You may purchase and register the software at any time during or after the evaluation period. Each registration gives you a license to use a single installation of the software in accordance with the Software License Agreement and Limited Warranty.

General Program User Interface

The Romac Series 8 applications generally follow the guidelines published by Microsoft for the user interface. A basic knowledge of the common Windows user interface should be enough to use the programs features.

One deviation from the Windows standard is that our applications can use the ENTER key in addition to the TAB key to exit a data entry field.

For users of our previous steel related applications, we have retained the same methods for entering steel material descriptions and lengths. The redefined fractions keys are still used to enter fractions in descriptions and dimensions.

The Series 8 Fabrication Package programs are multi-user applications. File locks are internally handled by the program. If a user attempts an operation that is in conflict with what another user is working on, the program will advise and not allow the second user to proceed.

Materials Database

The Materials Database is used by the Romac Series 8 applications to lookup weights and surface areas. U. S. standard (imperial) and metric items can be entered into the database.

Each database record consists of; item description, type of material (Carbon Steel, Stainless, Aluminum, etc.), weight unit, surface area unit, and an option equivalent or substitute description in metric (or US standard) dimensions.

The supplied database contains most steel items listed in the AISC Manual of Steel Construction, Ninth Edition. The database also contains metric equivalents as listed in the AISC Metric Properties of Structural Shapes publication dated 1992. The database is supplied as is and Romac Computer Services, Inc. assumes no liability regarding the completeness or accuracy of the database.

Database records can be added, revised, or deleted using the Maintain | Update Materials Database option.

Update Materials Database

US Std Desc: W 10 x 22

Type of Material: Carbon Steel

Weight Unit: 22 Unit method: Per Lin. Foot

Surface Area Unit: 3.53

Description Type

US Std

Metric

Metric Equivalent/Substitute

Status

Not Applicable Equivalent Substitute

Metric Desc: W 250 x 33

Okay Delete Cancel Exit

Material Description

The material description entry is made by entering the shape code followed by [ENTER] (or the space bar) then the description. For most entries, if the description contains fractions, the fraction entry is made using re-defined fractions keys. This allows you to make fraction entries using one keystroke. The re-defined fraction keys are:

W=1/16, E=1/8, R=3/16, T=1/4, Y= 5/16,
U=3/8, I=7/16, O=1/2, S=9/16, D=5/8,
F=11/16, G=3/4, H=13/16, J=7/8, K=15/16

The shape codes and corresponding description formats are:

Note, these examples are based on US standard description entry. Metric description entries are similar except fractions are not applicable. Depending upon whether you are updating a US standard or metric item, the appropriate Description Type at the upper right of the window must be checked.

W, WT, C, MC, S, ST, M, MT, & HP - (Structural shapes as per AISC designations).

Description is entered by typing in the shape followed by [ENTER] (or space) then the depth, then X, then the weight per foot followed by [ENTER]. Spaces are automatically inserted before and after the 'X'. Use the decimal point where required. Optionally, the '+' key can be used rather than 'X'.

Example: W 10 x 22

L – (Angles). Input is in inches and inch fractions. Description is entered by typing in the shape followed by [ENTER] (or space) then leg 1, then X, then leg 2, then X, then the thickness followed by [ENTER]. Fractions must be entered using the redefined single key. Spaces are inserted by the computer where required for clarity.

Example: L 3 1/2 x 3 1/2 x 5/16

PL - (Plate). Input is in inches and inch fractions. Description is entered by typing in the shape followed by [ENTER] (or space) then the thickness followed by [ENTER]. Maximum thickness is 9 15/16". Fractions must be entered using the redefined single key. Spaces are inserted by the computer where required for clarity.

Example: PL 1/2

PLD - (Plate – decimal thickness). Input is in decimal inches for the thickness and inches and inch fractions for the width. Description is entered by typing in the shape followed by [ENTER] (or space) then the thickness in decimal inches followed by [ENTER]. Thickness can be entered up to 3 decimal places. Decimal thickness plate must be added to the materials database. The program does not convert between fractional thicknesses and decimal thicknesses (PL 1/2 and PL .500 are not the same as far as the program is concerned).

Example: PL .500

PLA - (Plate - area). Input is in inches and inch fractions for the thickness and decimal square feet for the area. Description is entered by typing in the shape followed by [ENTER] (or space) then the thickness followed by [ENTER]. Weight is calculated using the PL thickness entry in the materials database. Fractions must be entered using the redefined single key. Spaces are inserted by the computer where required for clarity.

Example: PL 1/2

PLDA - (Plate – decimal thickness x area). Similar to PLA except thickness is entered in decimal inches.

Example: PL .500

BR - (Flat bar). Input is in inches and inch fractions. Description is entered by typing in the shape followed by [ENTER] (or space) then the thickness, then X, then the width followed by [ENTER]. The maximum width/thickness is 99 15/16".

Example: BR 1/2 x 4

SQ - (Square bar). Entry is in inches and inch fractions. The description is entered by typing in the shape followed by [ENTER] (or space) then the bar dimension followed by [ENTER]. Maximum dimension is 9 15/16". Fractions must be entered using the redefined single key.

Example: SQ 1/2

RD - (Round rod). Entry is in inches and inch fractions. The description is entered by typing in the shape followed by [ENTER] (or space) then the diameter followed by [ENTER]. Maximum diameter is 9 15/16". Fractions must be entered using the redefined single key.

Example: RD 3/4

RB - (Rebar). The description is entered by typing in the shape followed by [ENTER] (or space) then the bar size followed by [ENTER]. Allowed bar sizes are 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, and 18.

Example: RB 4

GA - (Gauge material). The description is entered by typing in the shape followed by [ENTER] (or space) then the gauge thickness followed by [ENTER].

Example: GA 11

FP - (Floor Plate). Entry is similar to plate (PL).

Example: FP 3/8

TS - (Square and rectangular tube). Entry is similar to Angle. The wall thickness must always be the last entry. If the wall thickness entry is 7 - 28, then a gauge wall thickness is assumed.

Example: TS 4 x 4 x 1/4

TO - (Round tube). Entry format is shape followed by [ENTER] (or space) then the outside diameter in inches and inch fractions), X, then the wall thickness. The wall thickness must always be the last entry. If the wall thickness entry is 7 - 28, then a gauge wall thickness is assumed.

Example TO 4 x 1/2

PI - (Pipe). Schedule pipe can be entered using this Shape code. The entry format is Shape, [ENTER] (or space), diameter, <X>, then the schedule followed by [ENTER].

Example: PI 4 x 40

PS, PE, and PD - (Pipe). Standard (PS), Extra strong (PE), and Double extra strong (PD) pipe can be entered using these Shape codes. The entry format is Shape, [ENTER], then the diameter followed by [ENTER].

Example: PS 4

PE 4

PD 4

CB - (Bar Channel). Entry is similar to Angle.

Example: CB 1 1/2 x 1/2 x 1/8

TB - (Bar Tee). Entry is similar to Angle.

Example: TB 1 1/2 x 1 1/2 x 3/16

BTH - (High strength Bolt). Enter the shape then [ENTER] (or space), diameter, then X, then the length followed by [ENTER]. All entries are in inches and inch fractions.

Example: BTH 3/4 x 2 1/2

BTM - (Machine Bolt). Enter the shape then [ENTER] (or space), diameter, then X, then the length followed by [ENTER]. All entries are in inches and inch fractions.

Example: BTM 3/4 x 2 1/2

BTN - (Nut). Enter the shape then [ENTER] (or space), diameter in inches and inch fractions followed by [ENTER].

Example: BTN 3/4

WHF - (Flat Washer). Enter the shape then [ENTER] (or space), diameter in inches and inch fractions followed by [ENTER].

Example: WHF 3/4

WHB - (Bevel Washer). Enter the shape then [ENTER] (or space), diameter in inches and inch fractions followed by [ENTER].

Example: WHB 3/4

WHL - (Load indicator Washer). Enter the shape then [ENTER] (or space), diameter in inches and inch fractions followed by [ENTER].

Example: WHL 3/4

BTE - (Expansion Bolt). Enter the shape then [ENTER] (or space), diameter, then X, then the length followed by [ENTER]. All entries are in inches and inch fractions.

Example: BTE 3/4 x 4

BTW - (Wedge insert). Enter the shape then [ENTER] (or space), diameter in inches and inch fractions followed by [ENTER].

Example: BTW 3/4

AB - (Anchor Bolt). Enter the shape then [ENTER] (or space), diameter, then X, then the length followed by [ENTER]. All entries are in inches and inch fractions.

Example: AB 3/4 x 12

SC - (Shear Connector). Enter the shape then [ENTER] (or space), diameter, then X, then the length followed by [ENTER]. All entries are in inches and inch fractions.

Example: SC 1/2 x 4

GR - (Bar Grating). Enter the shape then [ENTER] (or space) then the bearing bar depth, then X, then the bearing bar thickness followed by [ENTER]. All entries are in inches and inch fractions.

Example: GR 1 1/4 x 3/16

REM - (Regular Expanded Metal). Enter the shape then [ENTER] (or space) then the diamond SWD, then X, then the gauge thickness followed by [ENTER].

Example: REM 3/4 x 16

FEM - (Flattened Expanded Metal). Enter the shape then [ENTER] (or space) then the diamond SWD, then X, then the gauge thickness followed by [ENTER].

Example: FEM 3/4 x 16

SI - (Special item with weight calculated per each or item). Used for entries such as castings where the weight is calculated by the item. SI can also be used for items that do not have a weight. At Shape type SI [ENTER], then a 24 character description followed by [ENTER]. Redefined fraction keys are not available for the description part of this entry.

Example: SI #101 CASTING

SA - (Special item with weight calculated by Area). Used for items such as grating where weight is calculated by area. At Shape type SA [ENTER], then a 15 character description followed by [ENTER]. Redefined fraction keys are not available for the description part of this entry.

Example: SA 1/8" PERF. PL

SL - (Special item with weight calculated by Length). Used for items such as extrusions or aluminum sections. At Shape type SL [ENTER], then a 24 character description followed by [ENTER]. Redefined fraction keys are not available for the description part of this entry.

Example: SL #101 EXTRUSION

PN – (Product with a Part Number and optional expanded description), This is similar to a SI item except the item description line is usually just the part number (up to 24 characters in length). A multi-line expanded description can be added in the materials database. When entering PN's in a bill of material, etc., only the shape (PN) plus the part number is entered – the expanded description is used from the database entry.

Categories

The Romac Series 8 software allows you to assign categories to SI, SL and PN shapes. The purpose is to easily duplicate syntax when entering those shapes into the SBOM, Purchase Order or Inventory master files. To use the category feature, you must first enter the item into the Materials Database. The initial entry is similar to any addition to the Material Database except you will be prompted for an optional Category and Default Spec.

The screenshot shows the 'Update Materials Database' dialog box. It features a title bar with a folder icon and the text 'Update Materials Database'. The main area contains several input fields and controls:

- US Std Desc:** A text box containing 'SI 4" ID X 8" OD GASKET'.
- Description Type:** A group box with two radio buttons: 'US Std' (selected) and 'Metric'.
- Type of Material:** A dropdown menu showing 'Not Appl.'.
- Weight Unit:** A text box with '0'.
- Unit method:** A label 'Per Each'.
- Surface Area Unit:** A text box with '0'.
- Category:** A text box containing 'GASKET'.
- Default Spec:** A dropdown menu showing 'N/A'.
- Metric Equivalent/Substitute:** A group box with a 'Status' label and three radio buttons: 'Not Applicable' (selected), 'Equivalent', and 'Substitute'.

At the bottom of the dialog are three buttons: 'Okay, Add to database', 'Cancel', and 'Exit'.

When entering into the Materials Database, you can create your own categories on the fly.

To use this feature in SBOM, Purchase Order or Inventory Master File entry, rather than typing in the shape and description, type in the category. A list of all SI, SL or PN items that have been added to the Master Database under that category will be listed allowing you to pick the desired item.

To see a list of all categories you have used, type in CTG rather than a category name.

Type of Material

Type of Material is used to tie Material Specifications to the Materials Database. For instance, a W 10 x 22 could be listed in the Materials Database as 'Carbon Steel'. Specifications A36, A572/50, and A992 could be listed in the Material Specifications table as 'Carbon Steel'. These three specifications would be tied to the W 10 x 22 through the common Material Type 'Carbon Steel'.

Additionally, the same material description can be entered into the Materials Database with different Material Types. You could have L 3 x 3 x 5/16 listed as 'Carbon Steel', a second entry as 'Stainless', and a third entry as 'Aluminum'. Each entry would have a different weight unit and would be tied to the appropriate Material Specification by the Material Type.

Available Material Types are:

- Carbon Steel
- Stainless
- Aluminum
- Brass
- Bronze
- Copper
- Steel Bolt
- Plastic
- Not Appl.

The above Material Types cannot be modified by the user. If you need additional Material Types, please contact the program vendor, Romac Computer Services.

Weight Unit

The weight unit entry is in pounds (lbs.) or kilograms (kgs.) depending upon the record item's Description Type (US standard or Metric).

Weight units are per each for all bolt shapes (BTH, BTM, TC, BTN, WHF, WHB, WHL, BTE, BTW, AB, SC) and SI shapes.

Weight units are per area (square foot or square meter) for PL, GA, FP, GR, REM, and FEM shapes.

Weight units are per length (foot or meter) for all other shapes.

Surface Area Unit

The surface area unit entry is in square feet or meters depending upon the record item's Description Type.

Surface Area units are per each for all bolt shapes (BTH, BTM, TC, BTN, WHF, WHB, WHL, BTE, BTW, AB, SC) and SI shapes.

Surface Area units are per area (square foot or square meter) for PL, GA, FP, GR, REM, and FEM shapes. For most area items, the unit would be 2 square units of surface area for each square unit of the item. For items such as grating or expanded metal, the exact surface area unit would need to be calculated.

Surface Area units are per length (foot or meter) for all other shapes. For hollow sections such as pipe or tube, the surface area units in the database supplied by Romac Computer Services are for outside surfaces only. The surface area would need to be approximately doubled to include the inside surface (such as calculations for hot dipped galvanized areas).

Equivalent / Substitute Description

For certain shapes, a soft conversion exists between US standard and metric dimensions. If an item has a US standard nomenclature and a metric nomenclature that refer to the same item then the items would have Equivalent status. In these cases the database would have two entries. The first entry would be the US standard with the metric equivalent; the second entry would be the metric description with the US standard description as the equivalent.

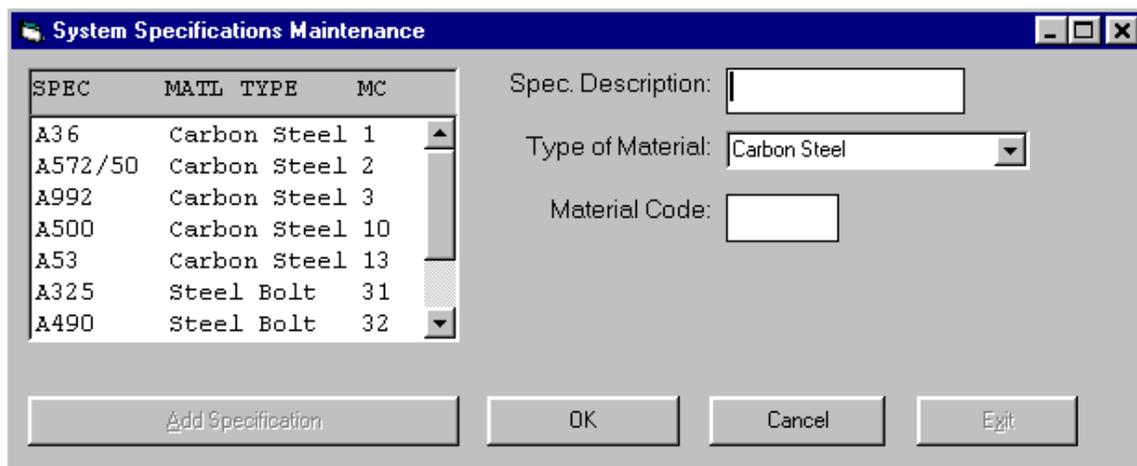
Substitute status would apply when you could use a US standard item in place of a metric item but could not use the same metric item in place of a US standard item. This might be applicable for plates where the US standard inch fraction thickness does not convert to a common mm thickness. For instance, you might substitute a thicker US standard plate for a specified metric thickness but could not substitute the thinner metric thickness for the specified US standard. The database supplied by Romac Computer Services does not contain any substitute entries.

Display Materials Database

The Menu option Maintain | Display Materials Database gives you a scrollable screen listing of all items in the Materials Database.

Edit Specifications Table

The Specifications Table is a listing of all materials specifications used by the Romac Series 8 applications. The table is referenced whenever a steel material item is entered into a Romac Series 8 bill of material or other application. The table consists of the specification description, a material type, and an optional material code and can be accessed using menu option Maintain | Edit Specifications Table.



The Specification Description is an alpha/numeric entry of up to 8 characters. Typical descriptions would be as defined by ASTM or other standards organizations. Once entered into the system, the specification description cannot be deleted.

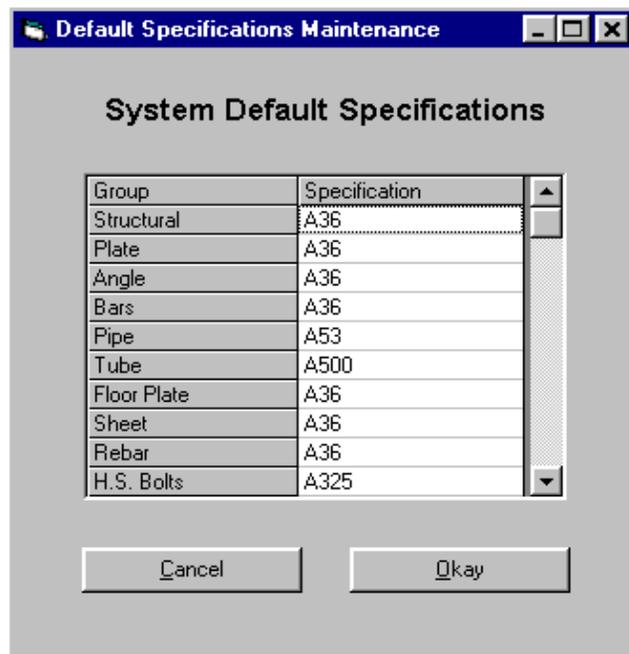
The Type of Material is one of the fixed material types as described in the materials database section. The material type ties a specification description to items in the Materials Database. The material type can be changed but the change does not affect any data previously entered into the system. If you had previously entered a specification with material type 'Aluminum' then entered bill of material into a job with weights calculated with the aluminum weights, changing the specification in this table to material type 'Carbon Steel' would not change the weights on the previously enter items.

The Material Code is an optional numeric entry in the range of 1 to 99. The material code is provided for data entry operators who have previously used DOS versions of Romac applications and is not required in Romac Series 8 applications. The numeric codes can be used as a shortcut at data entry (enter the numeric code rather than entering or selecting the actual specification description).

Edit Default Specifications

The Specifications Defaults table determines which material specification is assigned to a bill of material item at data entry. The default should be set for the most prevalent material specification in use for the shape. You are never locked into the default, the material specification for the item entry can always be changed as required.

The menu option Maintain | Edit Default Specifications allows you to edit the master defaults specifications table. This table is used by Romac Series 8 Inventory Control and Purchase Order applications and is also the initial default table for bill of material applications. A separate table is created for each job and can be edited elsewhere.



For default specification purposes, the various shapes are grouped as follows:

- Structural – W, WT, HP, S, ST, M, MT, C
- Plate - PL
- Angle – L, BC
- Bars – BR, SQ, RD
- Pipe – PI, PS, PE, PD
- Tube – TS, TO
- Floor Plate – FP
- Sheet – GA
- Rebar – RB
- H.S. Bolts – BTH, BTN, WHF, WHB, WHL, TC
- Mach. Bolts – BTM
- Other Bolts – BTE, BTW, AB, SC
- Other Matls. – SA, SI, SL, FEM, REM, GR