

Machine Shop Pro™

is a unique PC software tool to develop accurate labor standards for metal-cutting operations quickly and easily. Designed for Industrial and Manufacturing Engineers, time study analysts and technicians, factory supervisors, and anyone needing time standards for labor performance measurement. *MS Pro* is quick, intuitive, and meets every need of the manufacturing cost control professional.

MS Pro has been designed by experienced professional industrial and manufacturing engineers. It is the product of extensive experience in manufacturing, work measurement, performance analysis, and methods analysis. Production Technology has offered industrial and manufacturing engineering since 1983.

MS Pro allows you add header information to every study. When you click the "Header Info" button on the Study Summary, a Header screen appears (below right). Use this form to provide data about the operation. You can choose to use any, all or no header fields.

MS Pro allows you to set or change the Personal, Fatigue, and Delay allowance (PF&D) applied in your study at any time, to any value. The default allowance is 15%.

On the *Main Menu*, you can open a new study or view the built-in *MS Pro* reference materials database. After developing a standard time for an operation, you can print the Study Summary for a permanent record. The printed summary shows every variable and time. value entered.

By far, *MS Pro* is the most cost-effective machine shop estimating tool available today! Easy to use and maintain, with no special training, certifications, or on-going costs.

Starting with an easy-to-use Windows menu, *Machine Shop Pro* is a complete labor standards generation tool for common machine shop metal-cutting operations. Easily build accurate labor standards for drilling, tapping, reaming, turning, and power sawing (band saw or power hacksaw). One click calculates the standard. Another click prints the study. For "what if..." scenarios, change feeds, speeds, or other variables and click again for instant results.

The *Study Summary* screen (below) is the main screen in the *MS Pro* program. Here, you select the type of operation, process conditions, workpiece geometry, holding device, and several other process variables. You select machine speeds and feeds applicable to the current type of operation. If desired, you can add any number of other job variables, which may include setup, teardown, quality checks, clerical operations, machine maintenance, tool changing, or other elements. You can input time and description for each item selected, and/or edit the many built-in descriptions displayed by *MS Pro*. Also, you can access the program's built-in material specification database, which provides reference speeds, feeds, condition, Brinell hardness, and spec numbers for many families of ferrous and non-ferrous metals. If desired, you can select a specific material description to be added to the current study automatically. Set up to calculate a labor standard for any of six common shop operations with a single click. After you select the operation type, *MS Pro* will show exactly what variables you must provide to calculate an instant standard!

In *MS Pro*, a click on the Calculate command button instantly computes normal minutes and seconds and standard times per piece, per 100, and per 1000. Reset the form instantly to do another estimate or change the type of machining operation, material specs, feeds and speeds, or any operation variable.

The **MS Pro** material specification screen below displays a built-in program database file with reference material data for six types of machining (drilling, reaming, tapping, turning, slab milling, and band and hack saw). Tables for each operation display material name, condition, specification, and Bhn hardness, together with recommended speeds and feeds for the material. The drilling table, for example, lists material specs for “stainless steel, austenitic” and provides representative speeds and feeds for nominal workpiece diameters from 1/16” to 2”. While the database is provided for reference use only, you can instantly select descriptive data from this screen for the current study.

Other Machine Shop Pro features and information

- ✓ A comprehensive User Guide on CD-ROM and on-line context sensitive Windows Help files.
- ✓ Technical support from Production Technology, a supplier of work measurement training and Industrial Engineering management services since 1983. Your satisfaction with **MS Pro** is guaranteed.
- ✓ Cost-effective site license agreements are available for **MS Pro**. The cost for organization-wide use of this unique manufacturing estimating tool is reasonable, and assures your legal use of this product. Contact Production Technology for information and a quotation.

Use these reference material specifications as a guide to selecting metal cutting variables for use in calculating labor standards on the MS Pro Study Summary screen. You may carry the selected (by the arrow at left of columns) material group, material, typical spec, and hardness forward to the Study Summary screen by using the Select button when enabled. You can edit the description on the study summary. Use the control below the grid to move through the data file. Use the scrolling control to move right or left to view all columns in the table. The number of columns and data will vary, dependent on type of operation.

Select Operation

Drill Tap Ream Turn Slab Mill Bandsaw Power Hack Saw

Material Specifications, Speed, and Feed at Nominal Hole Diameters - HSS Tools

| Material Group | Material | Condition | Hardness | Speed FPM | Diameter |
|------------------------------|----------|-----------|----------|-----------|----------|
| Stainless steel, austenitic | 302, 304 | Ann | 160 | 60 | 1-1/2" |
| Stainless steel, austenitic | 302, 304 | Ann | 160 | 60 | 2" |
| Stainless steel, martensitic | 410, 420 | Ann | 200 | 65 | 1/16" |
| Stainless steel, martensitic | 410, 420 | Ann | 200 | 65 | 1/8" |

HR=Hot Rolled; Norm=normalized; Ann=annealed; CD=cold drawn; QT=quenched and tempered; ST=solution treated; STA=solution treated and annealed; Hardness is BHN.

MS Pro™
for Windows
priced at \$129

MS Pro™

SOFTWARE ORDER FORM

Quick Labor Standards Calculator

- Check or money order for \$129 (add \$7 domestic shipping, \$12 international) enclosed. Payable to Production Technology, PO Box 24261, Tampa, FL 33623-4261 USA.
- Invoice company PO # _____ Signature: _____

Name _____ Title _____

Company Name _____ Telephone (____) _____

Shipping Address _____

City _____ State/Province _____ Zip/Postal Code _____

You may also order via e-mail (protech99@verizon.net), or on Production Technology’s web page at <http://www.protech-ie.com>

Purchase Order# _____ Authorizing Signature _____

MS Pro is a product of Production Technology Engineering and Management Services, PO Box 24261, Tampa FL 33623-4261 USA. © 1999 Production Technology. All rights reserved. Windows 95, Windows 98 and Windows NT are trademarks of Microsoft Corporation.