

Help Desk News Letter Article

Since introducing the new Global Parameter, Manufacturing Scheduling Factor (MSF) in PRICE H 3.0, we have received several inquires for additional information on MSF, its use and impact on cost and schedule.

MSF allows the analyst to control the convention for calculating monthly production rate through-out the production cycle. It was added for those customers who recognized the need for establishing production rate very early on in the production schedule.

The core equation for calculating production rate available in previous versions of PRICE H, is still available as the preset MSF value (see equation 1).

$$\text{Rate} = \frac{\text{QTY} - 1}{\text{PEND} - \text{PFAD}}$$

Equation 1

Equation 1 establishes the average monthly production rate after the completion of the first article (PFAD). The remaining production quantity is divided by the total number of months between PFAD and PEND to determine monthly production rate.

Entering values of .1 to .9 for MSF will include a percentage of elapsed time between PSTART and PFAD as well as the total production quantity into the production rate calculation (see equation 2).

$$\text{Rate} = \frac{\text{QTY}}{(\text{PEND} - \text{PFAD}) + ((\text{PFAD} - \text{PSTART}) * (1 - \text{MSF}))}$$

Equation 2

Entering a value of .4 for MSF indicates 40% of the scheduled time between PSTART and PFAD will elapse before manufacturing begins, and 60% of the remaining time to first unit completion will be used to establish production rate. Entering a value of zero for MSF will establish a monthly production rate starting with the first day of the production schedule (PSTART).

MSF has no direct impact on how the model calculates production schedule. Production schedule is still calculated as a function of Quantity, Weight, MCPLXE/S, PLTFM, NSHIFT, and Learning Curve.

The cost impact of MSF depends on the modeling scenario. Varying MSF will always impact the production Tooling and Test cost due to the impact of production rate on the amount of equipment needed to meet and sustain a specific rate. Since Tooling and Test Equipment cost drives Project Management and Data cost, these two elements will also be affected by changes to the MSF input values. The MSF input value will also affect the Production/Production cost (and T-1 and UPC) whenever Learning Curve is left for model calculation. Client supplied Learning Curve value (s) negate any MSF impact on Production/production cost.