

CRAFTSMAN'S CRIBSHEET

NUMBER
03

Miles Free – Director of Technology and Research



Technical



Regulatory



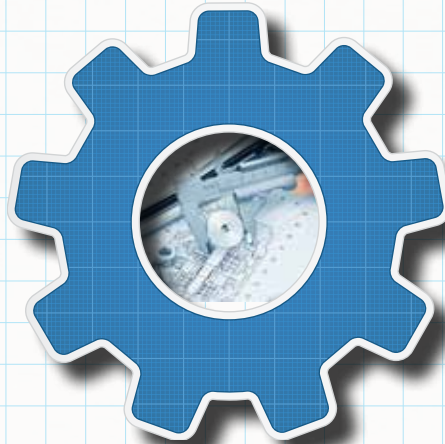
Quality



Management

5 BUYER DECISIONS THAT CAN INCREASE PART COSTS

- **Small Order Quantities**
- **Material Selection**
- **Special Diameter Holes**
- **Close Tolerances**
- **Unnecessarily Fine Surface Finish**



Small order quantities are a double-edged sword. Minimizing inventory on hand is an important lean concept; but often the cost of separate setups for small runs is more expensive than holding a modest inventory. If your parts are standard to you, getting the economic order quantity correct can save you money by minimizing what you have to pay for setup costs. (And by the way, we're working like crazy to reduce those setup costs.)

Material selection can increase costs of production and can mean missed deliveries if the grade is "just not commercially available." Engineering requirements for the end use must be paramount, but the material contribution to manufacturing costs needs to be evaluated as well. The reduction in suppliers and their inventories, and everyone's attention to 'lean' means that the 'perfect material' for the part just might be a 6-month leadtime rolling lot accumulation with no assurances of delivery.

Special diameter holes are often overlooked as a cost driver. But with every non-standard hole diameter specified, the supplier will need to purchase higher cost, non-standard drills, reamers and plug gages. Lead times for specials could also mean your parts are delayed while tools are made for your job. Are you certain that a standard hole size won't do the job needed?

Close tolerances are a source of pride to the craftsmen of the precision machining industry. Our people, processes and engineering can assure that the hole delivered is as specified. But if you specify tolerances that are 'closer than needed,' the extra attention, more frequent tool adjustments and changes, and loss of productivity to make those adjustments can add incrementally to the cost. We can make what you need—are you asking for more precision (cost) than you need?

Unnecessary fine surface finish, such as close tolerances, can add higher costs when specified unnecessarily. What is the reason for the finish specified? While today's modern tooling and machines are able to provide better surface finish than machining technology of the distant past, for some requirements a separate grinding, shaving, burnishing or other treatment may be required. If there is not really a close fit, sliding fit, and there is no movement on the surface, over-specifying surface finish can needlessly increase your part costs.

Many folks think that the obligation to be "lean" and to minimize waste is 100 percent the responsibility of the producer. The five items above point out that eliminating needless waste is also a responsibility of the buyer.

All Craftsman's Crib sheets are available for viewing and download at pmpa.org/knowledge-tools/craftsmans-cribsheets