BOOTHROYD DEWHURST
## Design for Manufacture and Assembly

DFM Software - Product Costing

DFM Concurrent Costing software provides an immediate, thorough understanding of the primary cost drivers associated with manufacturing your product – and establishes a benchmark for what your product "should cost." Additionally, DFM guides you through an assessment of alternative processes and materials to help you generate various design proposals. Cost results update automatically as you specify tolerances, surface finishes, and other part details. Gradually, as you choose effective shape-forming processes and consider how to modify part features to lower cost, your product becomes cost optimised. Design for Manufacture is a systematic approach that allows engineers to identify and anticipate manufacturing issues in advance, during the design process when changes can still be made, and even when only rough details are known about the product.
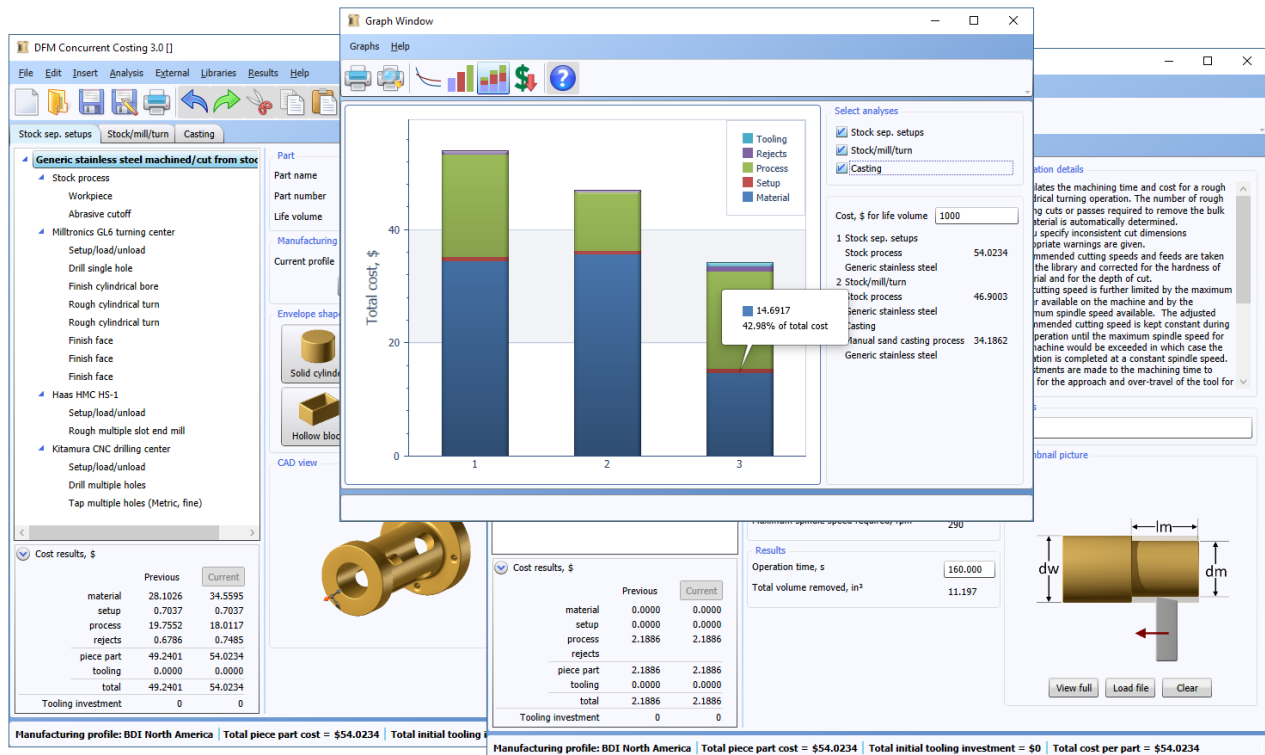
Benefits of using DFM Concurrent Costing software

- *Highly Accurate Cost-Estimator* - Thanks to over 40 years of industry experience, DFM consistently provides accurate feedback on the change in cost associated with changes in parts or their design. Parts that are more expensive to produce than others will always yield higher cost estimates, and the amount of added expense is always correctly portrayed in the DFM results, something that historical pricing and automated CAD analysis cannot do. Our approach to cost analysis provides superior accuracy because it correctly identifies each step required to manufacture the part and then quantifies each associated cost.

- *An Easily Implemented Solution* - DFM software delivers complete and accurate should-costing capability right out of the box. By contrast, many cost estimating packages require months or even years of expensive consulting to build custom templates for the user. These templates attempt to manually fix cost result errors the software makes, a process which inadvertently causes other cost

results to become incorrect. DFM software avoids this inflexible approach, instead using a solid understanding of cost drivers to quickly and effectively tell you what your parts really cost to make.

- *An Aid to Concurrent Engineering -* DFM shortens the product development cycle by providing early-stage cost transparency between design, manufacturing, marketing, finance and purchasing personnel. The ability to share cost information during early stages prevents many of the hurdles that the typical product development team encounters when trying to get a product to the market.

- *A Useful Design Tool -* Rather than simply providing cycle time and cost estimates, a DFM analysis educates the designer on the most important cost drivers of the proposed design. The availability of this information is invaluable when deciding how the design should be changed to reduce cost. As soon as improvements are identified, new DFM estimates can instantly be generated to get accurate results for alternative proposals.

- *An Effective Supplier-Negotiating Aid -* Thanks to reliable accuracy and transparency, DFM serves as a highly effective procurement tool. The software reports all of the values and assumptions that are used to generate a cost estimate. This offers a purchasing department far more negotiating leverage than a basic quote could ever provide. With DFM, supplier negotiation is about sharing relevant data instead of using pressure tactics to lower price.

- *A Competitive Benchmarking Tool -* DFM allows you to benchmark a competitor's product even when CAD models or supplier information isn't available. An understanding of what the competing product "should cost" is gained and can be compared with the cost results for your own design. With DFM, a strategic advantage is achieved because the market feasibility for your products can be evaluated while considering the cost of your competitor's products.

The Link to Design for Assembly

DFM complements Design for Assembly (DFA). Engineers use DFA to reduce the assembly labour within a product through the consolidation of single function parts into more elegant, multifunctional designs. The DFM software is then used to help the design engineer quickly compare the costs to produce each alternative design. Used together, the DFM and DFA software give engineers an early cost profile for each product design and provide a basis for planning and decision making. Such analyses, when performed at the earliest stages of concept design, have the potential to greatly influence manufacturing and other life cycle costs before they are solidified and become locked in place.

DFM software requirements

DFM Concurrent Costing (current version 4.2.3.286)

Windows 7, 8, 10, 11 (64bit recommended) .Net 6, Dual core Processor (Quad core recommended), 2GB (4GB or more recommended) RAM, Hard disk space: 1GB for installation (2GB or more recommended), and graphics should be Direct3D 11 or higher (For CAD functionality).

FLEXIm® License Manager (current version 11.19.2.0) for floating licenses only

Windows 7,8,10,11 Server (2012, 2016, 2019, 2022), Network access through TCP/IP, Hard disk space: 5MB