The sheet metal design tools within NX allow companies to apply defaults – based on both industry and company best practices – to the values used in the creation of sheet metal parts. For example, bend radii and neutral factor values can be set to commonly used values to encourage re-use and save design time.

Folded and unfolded views of sheet metal components can be used in both the 3D environment as well as downstream in 2D documentation and for manufacturing.

Features of the NX sheet metal design solution include:

• A focused workflow tailored specifically to the design of sheet metal parts means the design intent is built in – the software automatically accommodates sheet metal production methods.
• Customer-defined values for thickness and bend radii enable designers to change materials, the thickness value and/or the neutral factor without re-creating the part model.
• An intuitive user interface allows designers to interact more directly with the model on the screen and less with dialog boxes. Less switching from mouse to keyboard saves design time.
• Built-in intelligence allows the system to automatically rip the material and apply bend reliefs as needed when features are added.
• The solution creates flat solid blanks of components that always reflect the current state of the 3D model.
• A complete set of bending features allows for the creation of flanges, bends and jogs that can all be un-bent and re-bent, as required.

With a reduced learning curve and intuitive interface, NX sheet metal design enables fast and efficient part design.

**Advanced sheet metal**

Advanced sheet metal design tools are also available, including utilities for general flattening and forming of complex solid models, including sheet metal parts. These flattening/forming utilities include flat pattern, metaform and fabric flattening. Each uses unique algorithms to form a solid part from one state to another, or to generate a flat blank shape that can then be delivered to manufacturing.

**Packaging and availability**

NX straight-brake sheet metal design tools are included in all NX Mach series solutions for design, styling and tooling, as well as in the Mach 3 and 4 NC machining products. The advanced sheet metal tools are available as an add-on package for NX Mach Series solutions.