

## Shorter processing thanks to interchange

### Interfaces for data interchange

We construct and develop in CAD with the program Mechanical Desktop 2006 Power Pack from Autodesk and the supplement sheet programming module from SPI. All component parts are drawn up parametrically as 3D solids and can be modified and adapted without any difficulties. As the actual construction is often drawn up from the customer, a take-over of the existing CAD files allows a shorter processing time on our part and in conclusion a shortening of the delivery deadline.

An optimal data interchange of CAD files occurs either directly via the DWG format from Autocad or via the two interface formats STEP for the 3D model and PDF for the 2D drawing. In principle both 2D as well as 3D data can be retrieved.

#### 2D / 3D

#### Model Data

DWG	up to and with R2006
STEP	AP203 / AP214
DXF	up to and with R2004
IGES	up to and with R5.3
SAT (ACIS)	up to and with R7.0
STL	Stereo lithography
PDF	up to and with R7

All current graphic formats such as:

JPG, BMP, TIF, WMF, EDRW (E-Drawing), 3DS, VRLM, EPS, IDF, WMF, BMP

#### Construction clues for bending radii

While interchanging 3D data it is imperative to attach importance to formation of the bending radii while constructing sheet metal parts. While manufacturing a developed view automatically the deduction for the respective bending edge is calculated on the basis of the existing bending radii. In principle it has a favourable effect when the sheet metal parts are constructed sharp-edged, i.e. both internal as well as external radius are zero. Most of the time it is still not possible and not useful. In this case the following rules can be taken into consideration:

Type	Internal Radius	External radius
Normal edging	0,20 mm	0,20 mm + sheet thickness
Step folding	0,10 mm	0,10 mm + sheet thickness
Folding (180°-Biegung)	0,01 mm	0,01 mm + sheet thickness
large radii	Radius	Radius + sheet thickness

All 3D models should have a constant sheet thickness in all edgings.