

**CAD specification for production tooling and fixtures
(Part of Request for Quotation)**

The design of production tooling and fixtures has to be done in attention of the following CAD Specification and the arrangements for data exchange. The newest Version of these regulations and additional links can be found in the BMW Partner Portal (<https://b2b.bmw.com> → public area → Departments → Technologies → Assembly → Production tooling and fixtures)

CAD Specifications

Production tooling and fixtures are workshop facilities (like hand tools, assembly rigs, measuring and test equipment), special purpose machines (like handling equipment, manipulators, systems engineering and automated equipment) and conveyor equipment (like crossbars, hangers, carriers, workpiece holders).

The design of production tooling and fixtures has to be realized with CATIA V5 and the results have to be delivered in the Catia V5 release that is used by BMW in the productive environment. Designs made with other CAD systems which have been converted to CATIA V5 will not be accepted. 3D-models have to be delivered as intermediate results of the design process. Before producing hardware (prototype or series-production status), associative 2D-drawings (assembly and production drawings) as well as the bill of materials have to be delivered in addition to the 3D-models. The bill of materials has to be derived from the part metadata in Catia V5 with the Carisma software and has to be completed with the BMW bill of materials editor FM Stueli if necessary. Exception: A bill of materials on sheet 1 may contain up to 5 positions.

The production of hardware may only be started after the construction is released by BMW Group.

The present *“OEM-guideline for design of production tooling”* and the *“guideline for design of production tooling”* as well as the usage of the Carisma software for the preparation of CA-models is committing. It is necessary to use the version of the Carisma software that is productive at BMW (download from BMW Partner Portal). Manuals for Carisma, data exchange and further BMW CAD-standards can be found at BMW Partner Portal.

The present *“BMW production equipment specifications”* have to be kept in mind. Especially the following *“BMW production equipment specifications”* have to be noticed in conjunction with the CAD-documentation:

- BV-A0 (general production equipment specification)
- BV-Z0 (production equipment specification for CAD drawings)
- BV-ZAE0 (production equipment specification for drawing revisions)

The following start- and basic drawing-models have to be used for the design process:

- G000060_T_Grundmodell_Drawing
- G000198_TK-2_Startmodell
- G000199_TK-2_Startproduct

Data Exchange

BMW sends the relevant data of car components in the Catia V5 data format (CATProduct, CATPart, cgr) and partially in the Catia V4 format (model) via CA Data Exchange (ODETTE File Transfer Protocol, OFTP). The intermediate results, as well as the final index have to be sent to BMW also via CA Data Exchange (OFTP).

BMW offers the partner work place (PAP) for a direct connection from the supplier to the BMW systems. It enables access to the BMW PDM-System Prisma. Information about Prisma is available in the Prisma manual. The application for Partner Link-up for CA Data Exchange can be arranged at BMW Partner Portal.