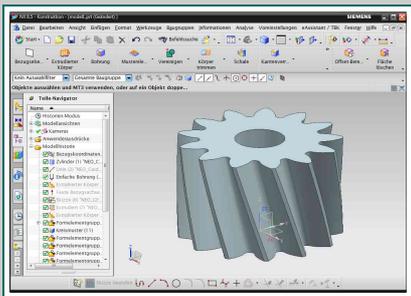
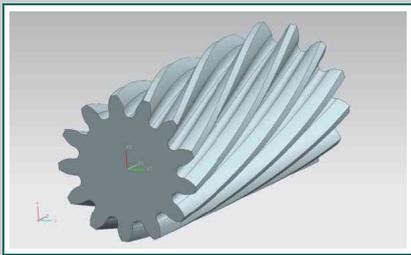
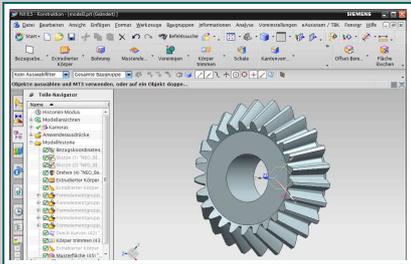
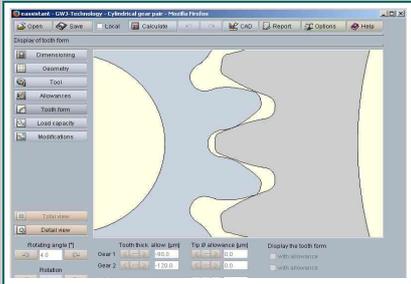


# eAssistant / TBK 2014 CAD Plugin for Siemens NX



## CAD Plugin for Siemens NX

The close co-operation with our partner neapps enables us to offer an intelligent and individual solution to connect calculation and CAD system to significantly increase the design and development process. The CAD plugin for SolidWorks offers a great way to connect calculation and design. Together with TBK 2014 or the web-based calculation software eAssistant, the CAD plugin allows to dimension, calculate and optimize various machine elements directly in Siemens NX.

The calculations are based on generally accepted calculation methods (e.g., DIN, ISO, VDI, ...) as well accepted literature. Detailed reports in HTML and PDF format provide all results and input values for the documentation.

## Direct Start

The plugin enables the user to open all eAssistant/TBK 2014 calculation modules directly through the Siemens NX menu. At the push of the button, the part can be created as a 3D part on the basis of the previously calculated data.

## Gears

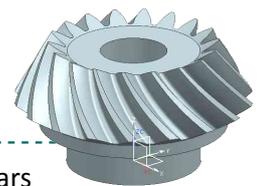
The geometry of cylindrical gears and involute splines, including allowances, addendum chamfer, profile shift and accurate gear tooth form, can be easily calculated. Animation/simulation of the gear tooth mesh is also possible. For this representation, the user can select the minimum, mean and maximum allowances for the tooth thickness and centre distance.

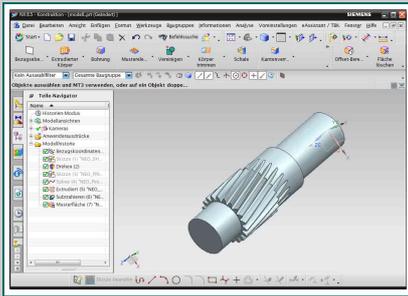
## 3D Models

External and internal spur and helical gears can be created as a feature-based 3D part in Siemens NX. This includes addendum chamfer and shaft bore. The attractiveness of this CAD plugin is additionally enhanced by the bidirectional connection between eAssistant/TBK 2014 and Siemens NX. As changes are made to a calculation, the 3D model is updated.

## Bevel Gears

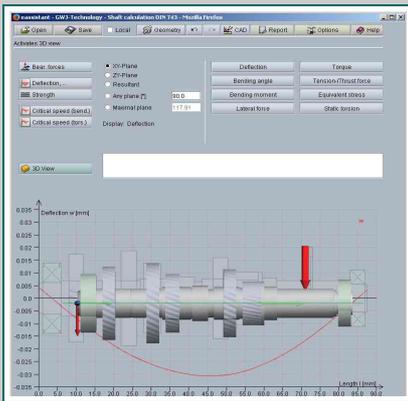
Based on the calculation, straight, helical and spiral bevel gears can be automatically created as a native 3D part in Siemens NX.





## Pinion Shafts

Involute gears can be placed directly on an existing part. Furthermore, a tool runout for pinion shafts can be modeled. For this purpose, the user has to specify an offset (increase of the facewidth) or a radius for the cutter or grinding wheel.

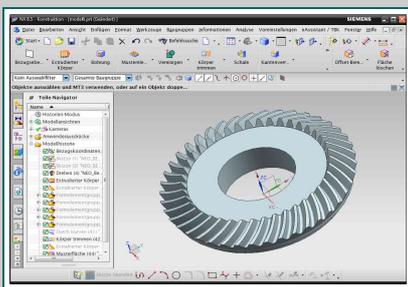


## Involute Splines

Involute spline profiles and hubs (internal teeth) are supported. Involute splines according to DIN 5480, DIN 5482, ISO 4156, ANSI B92.2M and ANSI B92.1 can be calculated and created with the plugin as a single part or directly on an existing part.

## Solid and Hollow Shafts

The CAD plugin provides a very fast and comfortable generation of 3D shafts. Solid and hollow shafts with an unlimited number of cylindrical and conical shaft segments can be created as a 3D part.



## Intelligent Parts

The calculation information is saved in the 3D model and can be opened at any time throughout the entire design phase. If a component contains several different calculation elements, it is possible to open the corresponding calculations.

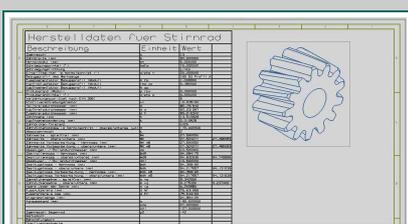
## Part Attributes

Part attributes will be created for cylindrical gears, involute splines and bevel gears in Siemens NX, so that the user can get information directly from the generated part, for example pressure angle, profile shift coefficient or module.



## Manufacturing Data in 2D

With just one click, the design table with all manufacturing details of cylindrical gears, bevel gears and involute splines can be placed on the manufacturing drawing. The appearance and size of that table is individually configurable. The advantage is that there is no need to manually add all design table parameters to the drawing.



## In Co-Operation with

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