

The creation of 3D models in TARGET 3001! has the following syntax:

Coordinates are meant in mm, decimals are separated by a dot. At top view: X (red) is the abscissa. It positively points east, negatively it points west. Y (green) is the ordinate. It positively points north, negatively south. Z (blue) positively points upward (to the viewer), negatively downwards, i.e. orthogonally to the X/Y area.

Examples:

0,0,0 is the point of origin on the upper surface of the board.

0,0,0.5 is 0,5mm over the origin

Angles are shown in degrees 0.0 ... 360.0, decimals are separated by a dot. In the board area positive angles run from the X-axis to the Y-axis, orthogonally from the X-axis to the Z-axis or from the Y-axis to the Z-axis.

Examples:

0,90

90.0,180.0

Colors are defined as 3-byte hexadecimal RGB-value.

Examples:

\$FFFFFF White

\$0000FF Red

\$00FF00 Green

\$FF0000 Blue

The syntax for an element (a field, or corpus) is written in an endless line. The syntax for a new element thus begins in a new line. TAB and CR/LF are ignored.

For a solid (cuboid) all entries behind the chamferradius are interpreted as comments thus have no effect on the model.

For all other corpus all entries behind the color are interpreted as comments thus have no effect on the model.

The following elements are defined:

A Solid S (cuboid). The edges of the cuboid are chamfered by the chamferradius. Width and height can be understood as a widening of the middle axis (X1|Y1|Z1) to (X2|Y2|Z2). When entering a – (negative) in front of the S the corpus gets transparent except it's edges.

Syntax: SX1,Y1,Z1,X2,Y2,Z2,width,height,color,chamferradius;

Example: S0,0,15,20,0,15,10,5,\$0000FF,0.2

A Torus T has as **TZ** a rotation axis parallel to the Z-axis. Pm is the center, radius means the radius of the arc and thickness means the diameter of the "tube".

Syntax: TXm,Ym,Zm,radius,thickness,startangle,endangle,color

Example: TZ10,10,10,6,4,0,18,\$888888

A Torus T has as **TX** a rotation axis parallel to the X-axis. Pm is the center, radius means the radius of the arc and thickness means the diameter of the "tube".

Syntax: TXm,Ym,Zm,radius,thickness,startangle,endangle,color

Example: TX10,10,10,6,4,0,180,\$888888

A Torus T has as **TY** a rotation axis parallel to the Y-axis. Pm is the center, radius means the radius of the arc and thickness means the diameter of the "tube".

Syntax: TXm,Ym,Zm,radius,thickness,startangle,endangle,color

Example: TY10,10,15,6,4,0,180,\$888888

A Cylinder C with top and bottom covers, P1 is the startpoint, P2 is the endpoint. Thickness means the diameter of the "tube".

Syntax: CX1,Y1,Z1,X2,Y2,Z2,thickness,color

Example: C5,0,10,5,0,40,7,\$888888

An Extruded polygon E is placed always on area X-Y and is extruded in Z-direction. N is the number of polygon points. Z1 is the lower startheight, Z2 is the height of the polygon.

Syntax: EN,X1,Y1,,X2,Y2,X3,Y3,...,Z1,Z2,color

Example: E5,9,35,4,7,-14,10,-14,20,-8,13,0,3,\$FF0000

Text TT or Text is placed always parallel to the surface. Height defines its character height, Width defines its width. Angle means the angle in area X-Y. Basis is the point bottom left of the first character. The common variables "!Component", "!Value", "!Symbol" in "contents" are processed accordingly. You also might use a static text by typing it directly into the syntax line.

Syntax: TTX,Y,Z,height,width,angle,fonttype,contents,color

Example: TT0,0,16,4,4,45,TARGET,TARGET 3001!,\$0FFFFFF

COPYRIGHT: Ing. Buero Friedrich, Harald Friedrich, Am Schwarzen Rain 1, D-36124 Eichenzell