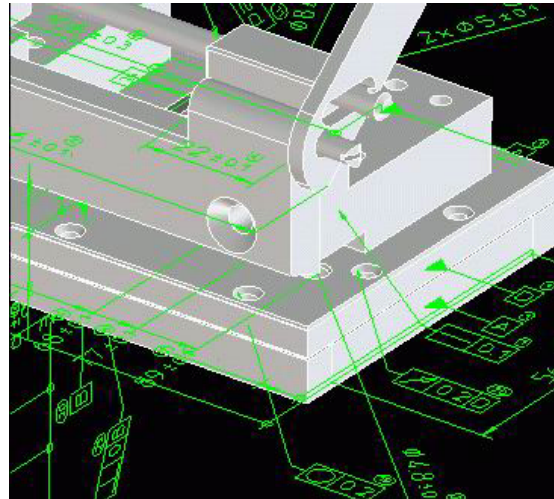


## Geometric Dimensioning and Tolerancing

Geometric Dimensioning and Tolerancing (GD&T), an add-on module to OneSpace Designer Modeling, extends the 3D documentation capabilities for increased support of a 3D based product development process. Critical information that is as important for a complete definition of a design as the 3D geometry itself, can be directly attached to elements of a 3D model.



### GD&T in 3D Design

Using the Geometric Dimensioning and Tolerancing (GD&T) module designers can add information critical to form, fit and function directly to the geometric model. Unlike traditional 2D based detailing and documentation processes, these information items can be added while the design is created. This results in more complete product models much earlier in the design process. Critical information can be made available to other project members already in the design phase and can be shared with engineers in downstream processes for review. Design improvements in the early stages when there is still flexibility to incorporate such changes lead to improved quality and lower costs. GD&T supports the 3D based product development process as well as traditional 2D processes, since GD&T data is leveraged into the 2D drawings.

### Key Features

The Geometric Dimensioning and Tolerancing module allows datum and tolerance information to be added to a 3D model. Based on classified functional features such as holes, pins, slots, tabs or general surface it guides the user in the creation of valid GD&T specifications. GD&T dimensions can control location or orientation of features relative to datum references bi-directionally. The GD&T module supports size control, slot tolerances, feature points and indexing.

### Dimensions

GD&T tolerances support the following dimension types:

- Distance dimension
- Angle dimension
- Coordinate dimension
- Baseline dimension
- Radius & diameter dimension
- Slot dimension

### Tolerances

GD&T supports the specification of the following tolerances:

- Tolerances of form
  - Straightness
  - Flatness
  - Circularity
  - Cylindricity
- Tolerances of profile
  - Profile of a line
  - Profile of a surface.
- Tolerances of orientation:
  - Angularity
  - Perpendicularity
  - Parallelism
- Tolerances of location
  - Position
  - Concentricity
  - Symmetry
- Tolerances of runout
  - Circular runout
  - Total runout

## OneSpace Designer Modeling

# Geometric Dimensioning and Tolerancing

### Datums

Datums can be defined on the model and datum identifiers are visualized by labels with a leader line to the reference element on the model.

### Functional Features and Feature Points

If the structure of a feature on the 3D model is too complex for automatic recognition, functional features and feature points can be manually defined to expand the possibilities of GD&T specifications.

### Indexing

The GD&T module automatically generates catalog indices for all created annotations. Indices can be edited and renumbered to specify different start index and sequence, and their visual appearance can be defined.

### Specific Product Features

- Add-on module to OneSpace Designer Modeling
- Fully integrated within the OneSpace Designer Modeling user interface (additional main menu)
- Use of the data created by the 3D documentation capabilities and the Geometric Dimensioning and Tolerancing module of OneSpace Designer Modeling
- The data created by the GD&T module can be easily modified with the 3D documentation functions used in the Inspection module.

### System Requirements

OneSpace 2002+ and later.

Runs on the same platforms as OneSpace Designer Modeling:

- HP-UX® 11.0/11i (ACE 1199)
- Windows NT™ 4.0
- Windows 2000™
- Windows XP™ professional

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HP-UX is a registered trademark of Hewlett-Packard Corporation.

<b>Ordering Information</b>	
Geometric Dimensioning and Tolerancing	C280
Geometric Dimensioning and Tolerancing Support	C280A
<b>Prerequisites</b>	
Modeling	C200
Electronic manuals are available on the OneSpace media.	

## CoCreate

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