

# GEO2

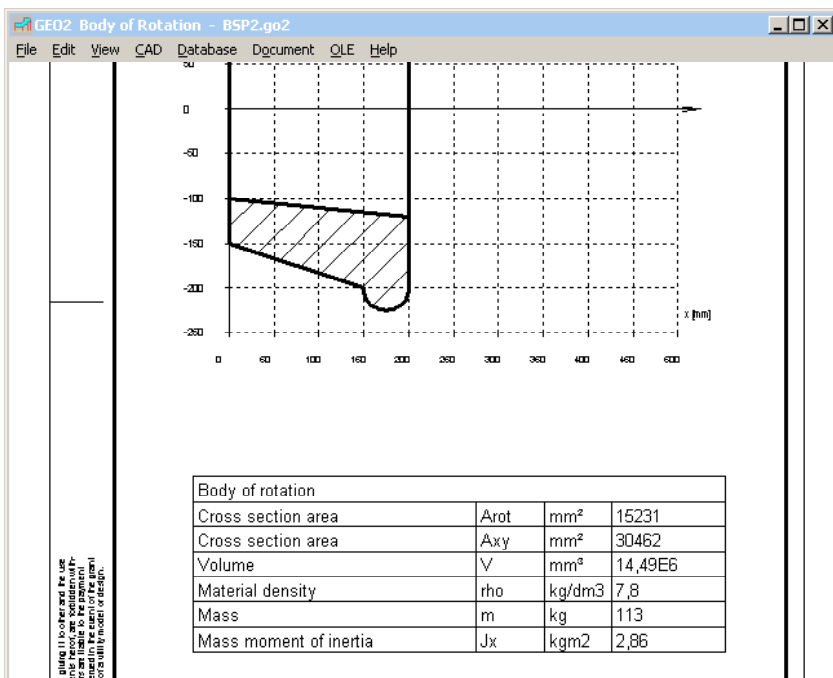
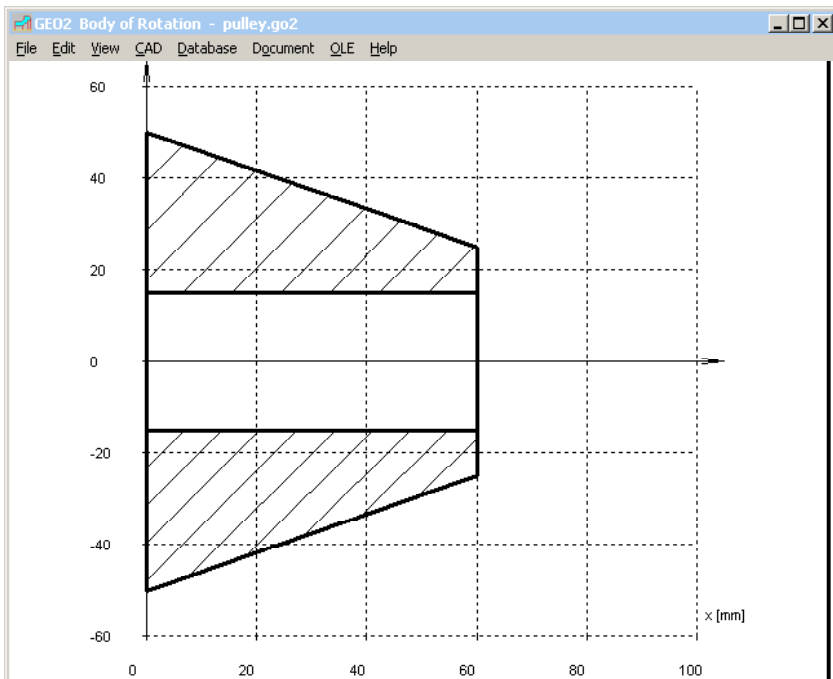


www.hexagon.de

## Software for Calculation of Rotation Bodies

for Windows

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### Calculation of Rotation Body

The GEO2 software calculates volume, mass and inertia moment of any kind of axially symmetrical bodies whose cut-section geometry consists of up to 200 straight lines and arcs. The geometry (in half-section) can be taken over from a CAD system as a DXF file. Of course, the co-ordinates can also be directly input in GEO2. Or you can get the coordinate table via Windows clipboard from other Windows applications.

### Geometry Input

The contour is defined by input of the x and y coordinates of the first and last point in the xyz coordinate system. For arcs the opening angle is also required. The outer contour is entered anti-clockwise, apertures and boreholes are entered clockwise.

### Standard Geometries

For cylinder, hollow cylinder, ball, ball with bore, cone, frustum, frustum with bore, annulus and ellipsoid you can simply enter diameters, length and height of the body and GEO2 generates cross-section coordinates

### Text Output

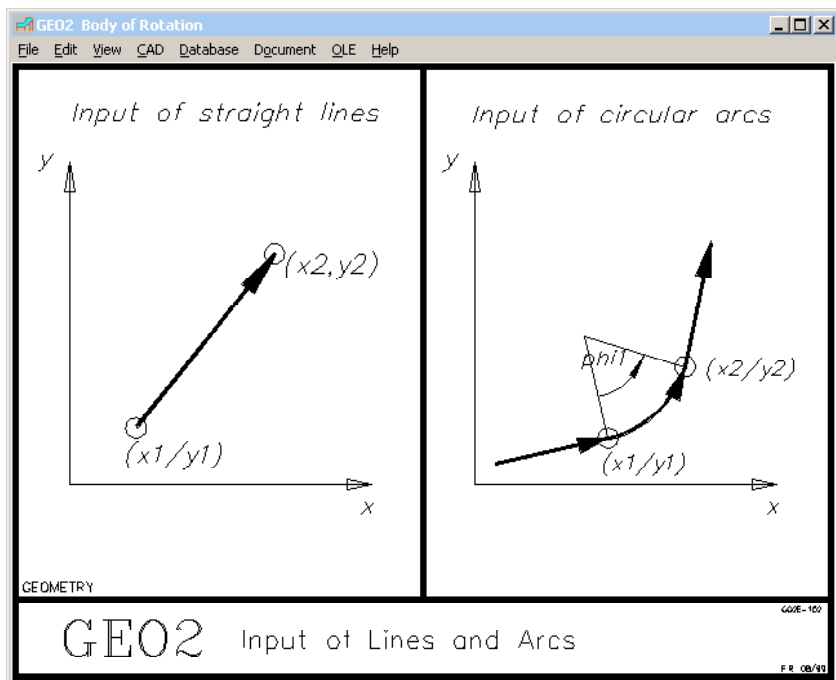
Input data and calculation results may be printed, saved as text or HTML file, or exported to MS Excel via OLE interface.

### Graphic Output

The defined contour (half-section of the rotation body) is displayed as screen graphic. The table drawing shows cross-section of the rotation body added by a table with result data. The drawings can be printed on any Windows printer. Layers, colours and line thickness may be configured.

### CAD Interface

Geometry and result tables are generated by GEO2 as DXF or IGES files. This enables export to CAD systems or other programs.



## DXF Import

On the other hand the contour of the rotating cross-section need not be input in GEO2, but can be imported as a DXF file provided the contour has been drawn as a polyline (POLYLINE command).

## Coordinate Transformation

The input or loaded geometry can be rotated, shifted, scaled, mirrored or its orientation sense can be reversed.

## Table Drawing

The geometry is shown in a system of coordinates in half-section. Below, a table of the calculation results is presented. Drawing information and changes can be input in the program. They will be printed out along with the drawing in the drawing's header and in the changes' index.

## Units

Units can be switched between metric (mm) and imperial (inches).

## Interfaces

All drawings and diagrams can be saved as DXF or IGES file to be loaded with CAD programs.

The OLE interface lets you import/export data from/to Excel.

## HEXAGON Help System

For each input there is a help text and auxiliary picture of the utilized denominations available in the HEXAGON Help System. GEO2 displays warnings and error messages when exceeding a limit. For every error message you can have a description and remedy suggestion.

## Export Formats

DXF, IGES, HTML, TXT, DBF, Excel, GO2.

## Import Formats

DXF, TXT, DBF, Excel, GO2.

## System Requirements

GEO2 is available as 32-bit app or as 64-bit app for Windows XP, Vista, Windows 7, 8, Windows 10.

## Scope of Delivery

Program with example applications and help images, user manual (pdf), license agreement for an indefinite period of time

## Software Maintenance

GEO2 is constantly being improved and updated. Registered users will be informed about news, and can get new versions at a reasonable update price.

## Guarantee

HEXAGON gives a 24 month guarantee on full functionality of the software.

## Information and Update Service

HEXAGON Software is continuously improved and updated. Customers are regularly informed about updates and new editions.

The screenshot shows the GEO2 software interface for a pulley design. The top window title is "GEO2 Body of Rotation - pulley.go2". Below the title bar, the text "HEXAGON GEO2 Body of Rotation V2.4" is displayed. The main area shows a drawing of a pulley on a coordinate grid with axes x [mm] and y [mm]. The pulley is symmetric about the y-axis. Below the drawing, there is a table with the following data:

Body of rotation			
Cross section area	Arot	mm <sup>2</sup>	6354
Cross section area	Axy	mm <sup>2</sup>	12709
Volume	V	mm <sup>3</sup>	4,498E6
Material density	rho	kg/dm.3	7,8
Mass	m	kg	35,08
Mass moment of inertia	Jx	kgm <sup>2</sup>	0,656

Below the table, there is a data entry table with columns for "Date" and "Name". The "Date" column contains "19.07.1999" and the "Name" column contains "Pulley Riemenscheibe". At the bottom, there is a table with columns for "Code", "Modifikation", "Date", "Name", "ROTUM kernel", and "Page". The "Code" column contains "12345". At the bottom left, there is a small text block: "Copying of this document and giving it to other and the use or communication of the contents thereof are forbidden without permission of HEXAGON. All rights are reserved in the event of the present software or the registration of a utility model or design." At the bottom right, there is a small text block: "6766.2015.1696".