G E O 2

Software for Calculation of Rotation Bodies

for Windows

www.hexagon.de
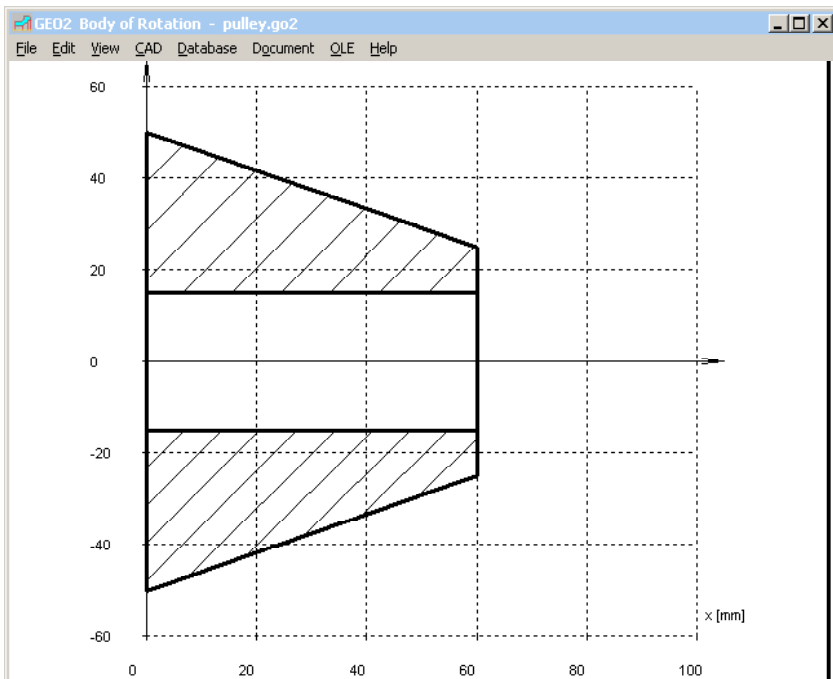
Calculation of Rotation Body

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 co-ordinates 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, frustrum, frustrum, frustrum with bore, annulus and ellipsoid you can simply enter diameters, length and height of the body and GEO2 generates cross-section coordinates

Text Output

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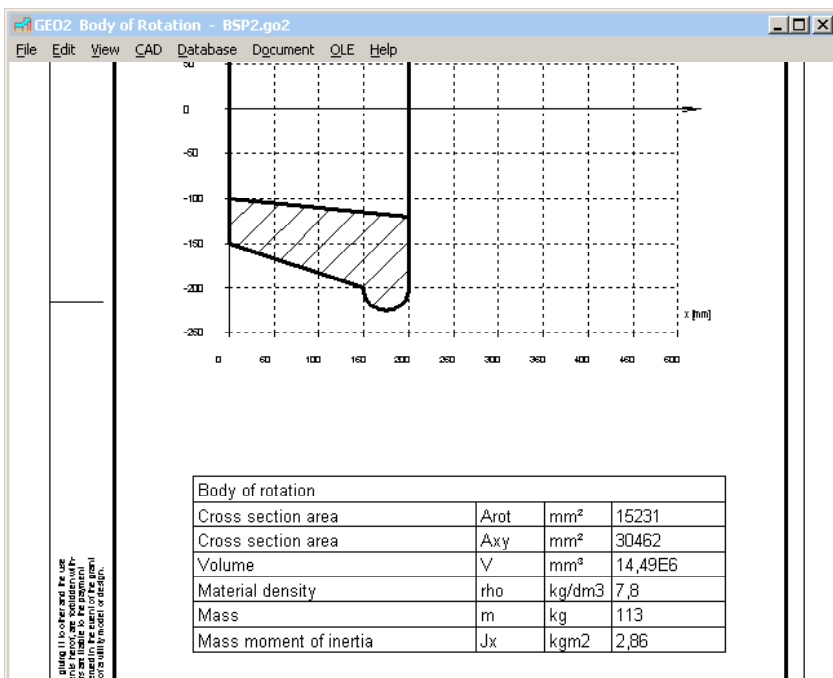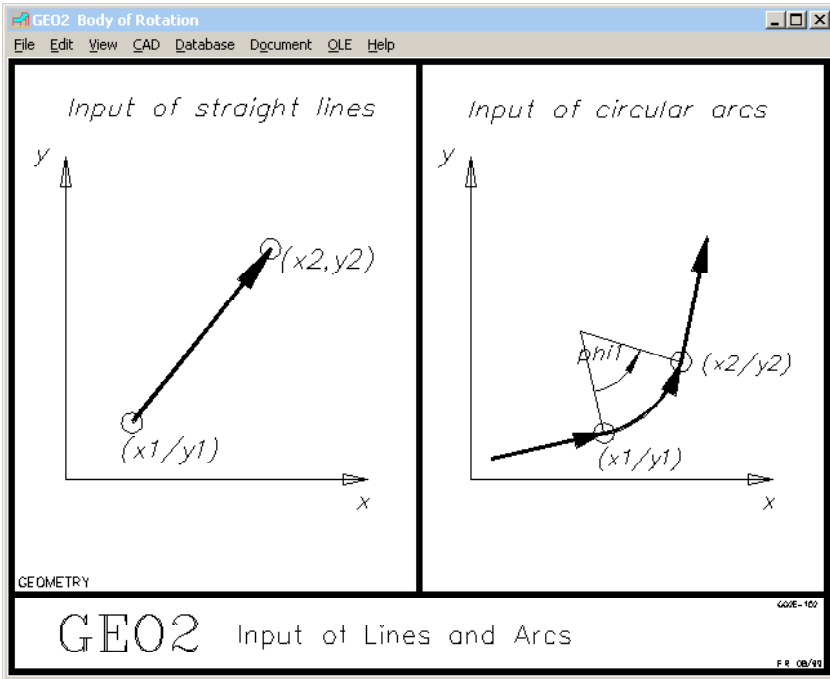
DXF Import
On the other hand the contour of the rotating cross-section need not be input in GEO2, but can be imported as a DXF file provided the contour has been drawn as a polyline (POLYLINE command).

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 7, Windows 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.

Body of rotation			
Cross section area	Arot	mm²	6354
Cross section area	Axy	mm²	12709
Volume	V	mm³	4,498E6
Material density	rho	kg/dm3	7,8
Mass	m	kg	35,08
Mass moment of inertia	Jx	kgm2	0,656