

GEO5

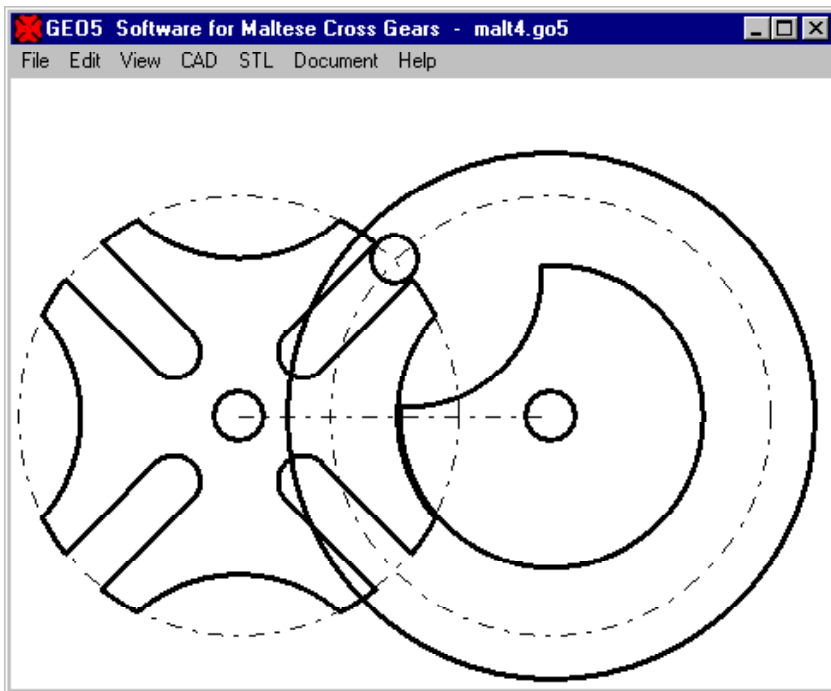


www.hexagon.de

Geneva Mechanism (Maltese Drive) Design Software

for Windows

© Copyright 2016-2018 by HEXAGON Software, Berlin, Kirchheim

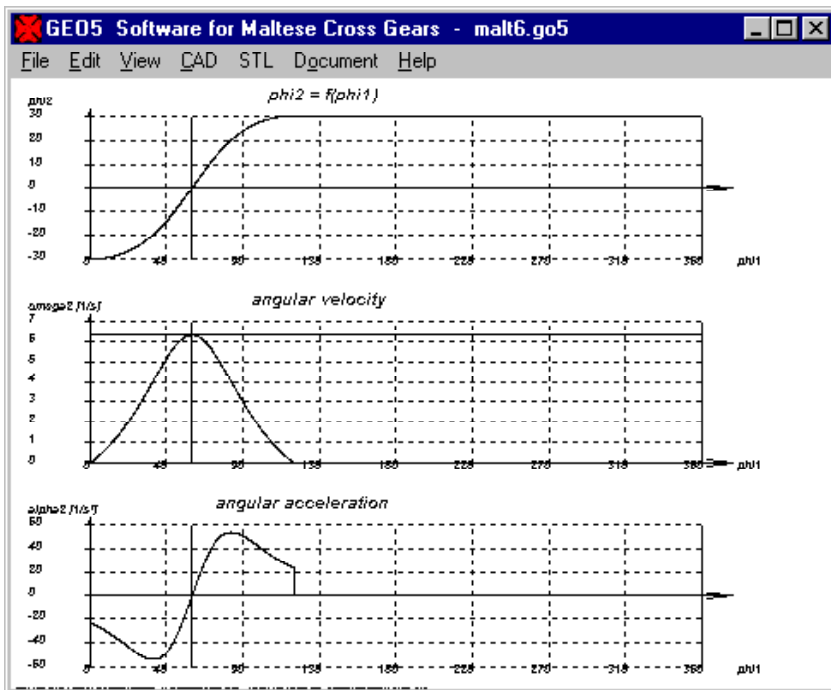


Calculation and Design of Geneva mechanism
GEO5 calculates dimensions, operation angle, velocity and acceleration of Maltese cross gears. GEO5 generates drawings of Maltese cross wheel and driving wheel as DXF or IGES files to be used with your CAD software. The component parts can be generated as STL files, then printed on a 3D printer and assembled as functioning model of a Geneva mechanism.

Dimensions

Number of slots in the Maltese cross may be 4, but also any number between 3 and 100.

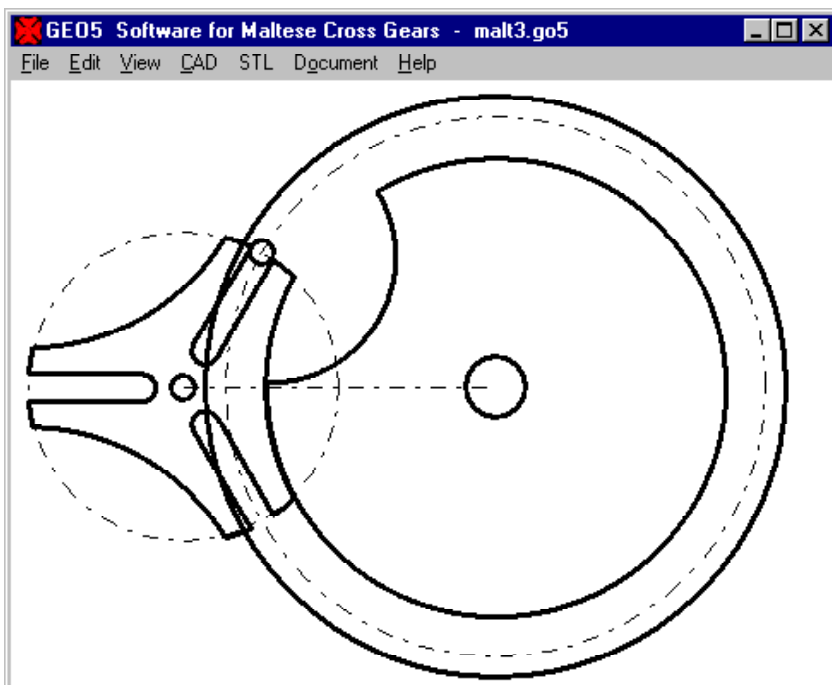
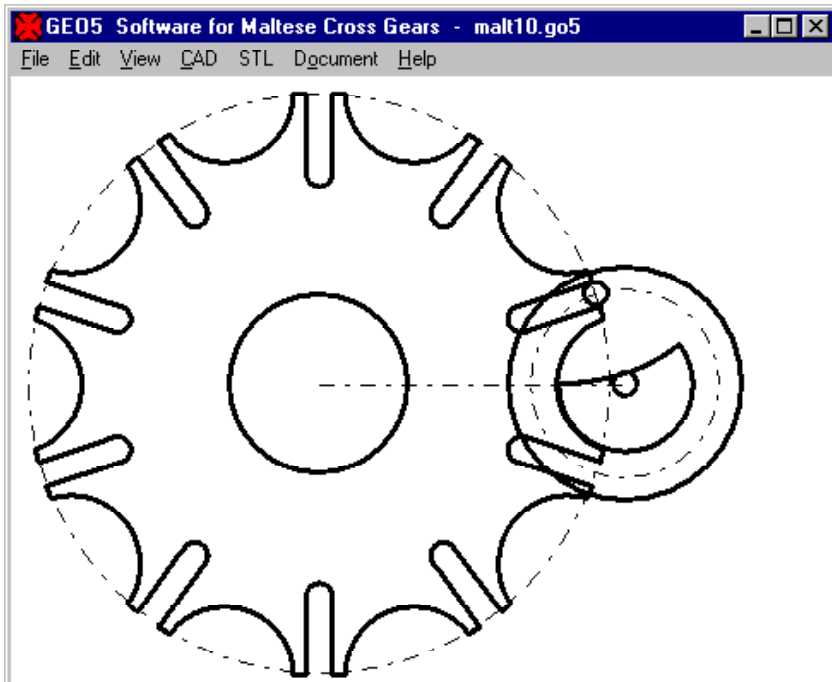
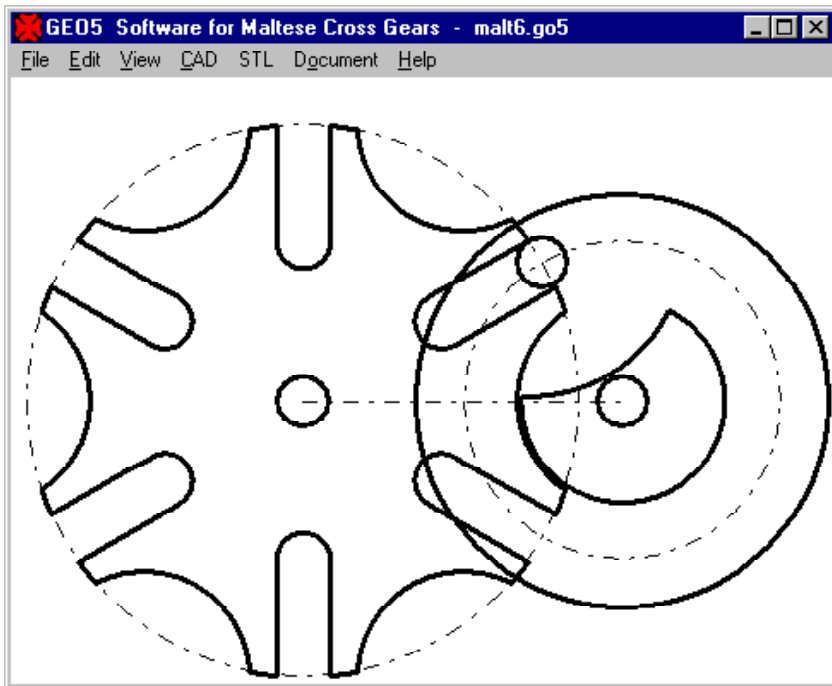
Size of the Geneva mechanism can be defined either by external diameter of the Maltese cross or by center distance. Then enter width of slots and driving bolt diameter. Dimensions of arc segments used as locking device are calculated by GEO5, just enter minimum wall thickness at slots and clearance between arc segments of Maltese cross and driving wheel.



Parameters:

- slot number z: 6
- Outer diameter Maltese cross: do2: 43,99 mm
- Center distance: a: 25,40 mm
- diameter bolt dBolt: 4,1 mm
- Width slot bs: 4,3 mm
- wall thickness/slot width srel: 0,5
- clearance diameter cd: 0,3 mm
- height Maltese cross: 4 mm
- total height driving wheel: 8 mm
- Borehole diameter Maltese cross dB2: 4,1 mm
- Borehole diameter driving wheel dB1: 4,1 mm

Buttons: OK, Cancel, Help, Calc



Diagrams

Angle of rotation of the Maltese cross as function of the driving wheel as well as velocity and acceleration over one revolution can be shown as diagram.

Animation

Rotation on Maltese cross and driving wheel can be simulated on screen as animation.

Text Output

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

Graphics Output

Drawings and diagrams can be printed on any Windows printer, or exported to CAD.

CAD Interface

Drawing of Maltese cross, driving wheel, diagrams and tables can be exported as DXF- or IGES files, and opened in CAD. Layers, colours and text font can be configured in GEO5.

STL Interface

Maltese cross wheel, driving wheel, bearing plate and spacer sleeve can be generated as STL file and produced with 3D printer. This way you can assemble a Geneva mechanism with the printed parts, just to be completed with metal bolt and shafts.

HEXAGON Help System

GEO5 provides help text and auxiliary images. Warnings and error messages occur if exceeding a limit. For every error message you can have a description and remedy suggestion.

Units

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

Export Formats

DXF, IGES, STL, HTML, TXT, Excel, GO5.

Import Formats

TXT, Excel, GO5.

System Requirements

GEO5 is available as 32-bit app or as 64-bit app for Windows 10, 8, 7.

Scope of Delivery

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

Guarantee

HEXAGON gives a 24 month guarantee on full functionality of the software. We provide help and support by email and hotline without extra charge. GEO5 is constantly being improved and updated. Registered users will be informed about news, and can get new versions at a reasonable update price.