

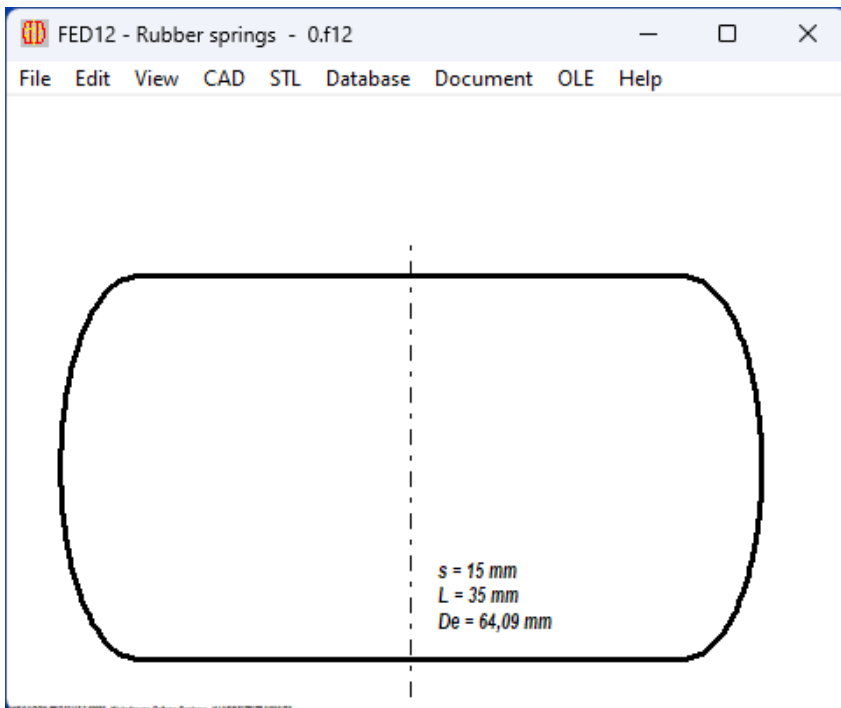
# FED12



## Software for Calculation of Rubber Springs

for Windows

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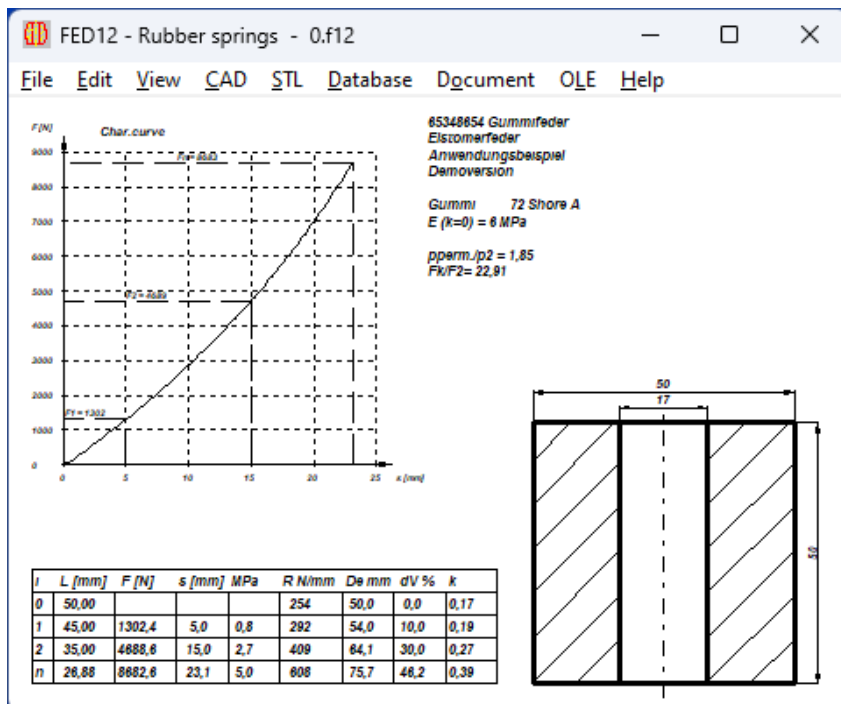


### Calculation of Rubber Springs

FED12 calculates characteristic line of spring (load-deflection diagram), pressure and deformation of cylindrical compression springs with and w/o bore, made from rubber or elastomere material. Material can be selected from integrated database. Load-deflection curve of rubber springs is progressive due to variation of pressure area and form factor at deformation process. Modulus of elasticity for elastomere materials depends on form factor. Form factor  $k$  is the ratio of pressure area to free deformation area. Under load, rubber spring deforms from cylindrical to barrel shape.

### Material Database

The material database of FED12 provides material properties and parameters of modulus of elasticity as function of form factor for essential elastomere materials. Databases can be modified and extended by the user.

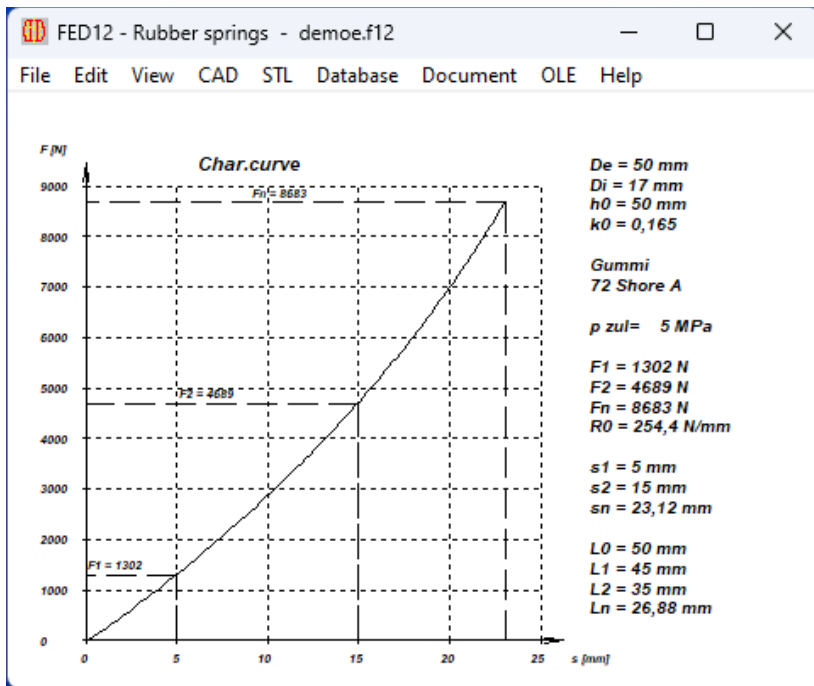


### Diagrams

FED12 calculates characteristic line of spring (load-deflection diagram) as function of spring travel and spring length. FED12 also plots the curves of spring rate and spring energy as function of spring travel (deflection), and modulus of elasticity as function of the form factor  $k$ .

### Quick-View

Quick-View provides spring drawing, load-deflection diagram and a table with essential results, altogether on one screen.



### Printout

Calculation results with spring loads, pressure and deformation data can be printed, saved as text or HTML file, or exported to MS-Excel.

### Spring Drawing

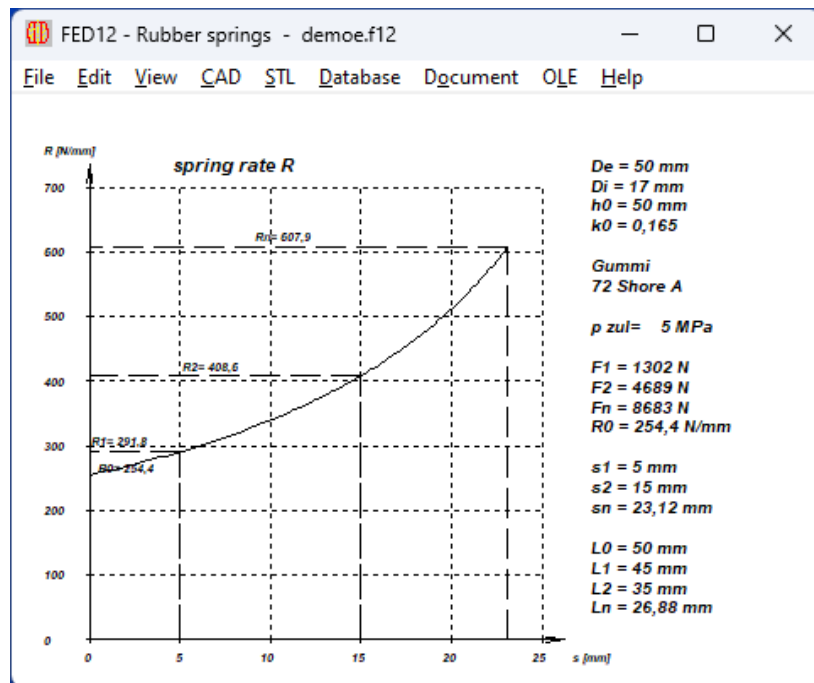
FED12 generates a true-scale drawing of the rubber spring ready for export to CAD. Or set spring length between L0 and Ln, FED12 draws deformed rubber spring in barrel shape.

### 3D Model

FED12 generates a 3D model of the spring as STL file to be printed on your 3D printer.

### Production Drawing

FED12 generates a production drawing of the rubber spring, ready for printout.



### Animation

Deformation of a rubber spring between two spring positions can be simulated on screen.

### HEXAGON-Help System

Auxiliary text and images are available for all dialogue windows. If error messages occur, you can get description and remedy suggestion.

### Interfaces

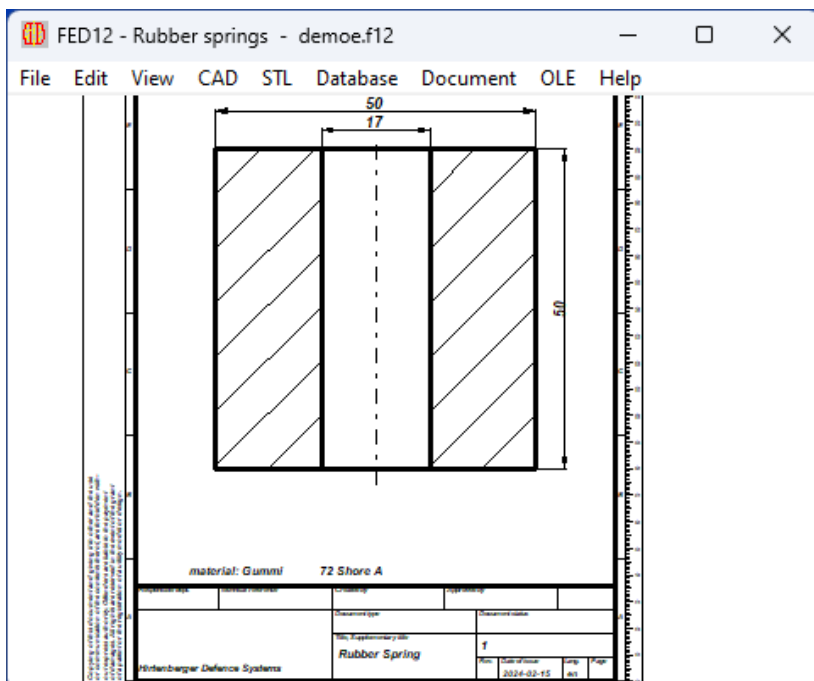
All drawings and diagrams can be saved as DXF or IGES file to be loaded with CAD programs. The OLE interface lets you import/export data from/ to Excel.

### Export Formats

DXF, IGES, STL, HTML, TXT, DBF, Excel, F12.

### Import Formats

TXT, DBF, Excel, F12.



### System Requirements

FED12 is available as 32-bit and 64-bit application for Windows 11, Windows 10, Windows 7.

### Scope of Delivery

FED12 program with database files, example application and help images, user manual (pdf), perpetual license contract for non-expiring right-to-use.

### Software Maintenance

FED12 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. We provide help and support by email without extra charge.