

FED11

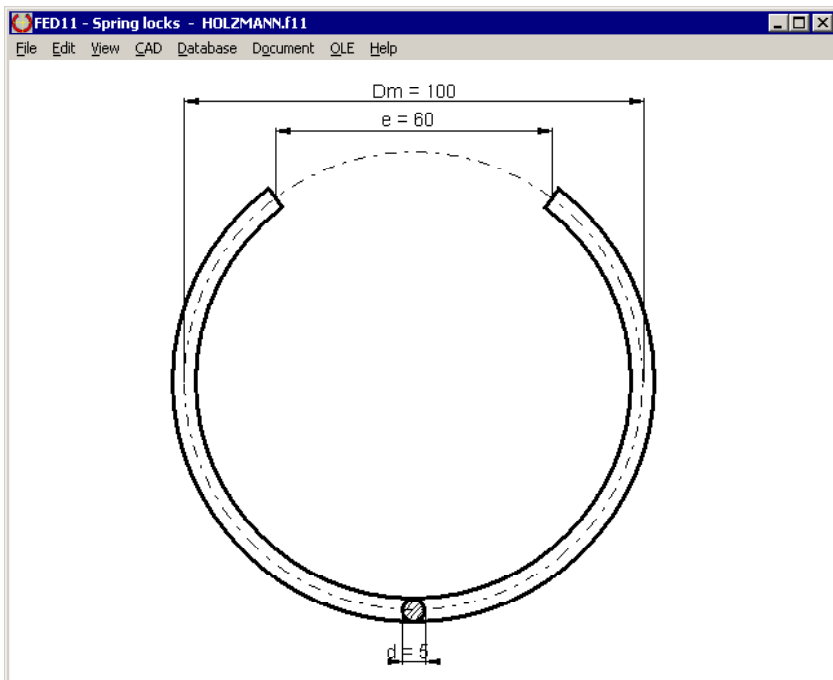


www.hexagon.de

Software for Spring Locks and Tension Sleeves

for Windows

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Calculation

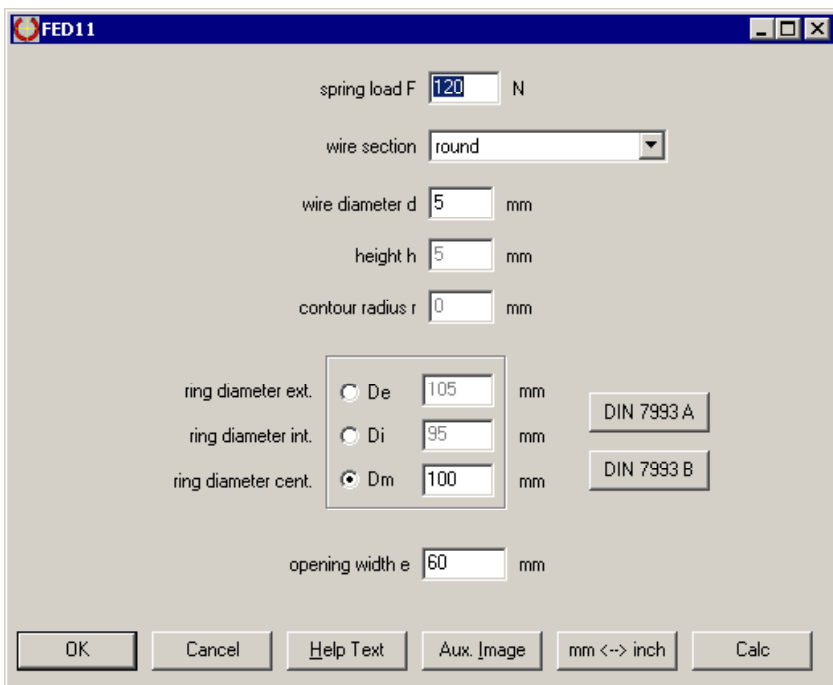
FED11 calculates admissible spring load and deflection of spring locks and tension sleeves. FED11 displays diagrams of stress curve and bending curve for a given spring force.

Spring Lock Geometry

Cross section of the spring lock may be circular, square, rectangular, elliptic or oval. To calculate clamping sleeves, select rectangular cross-section and input width and flat thickness. For circular spring locks, you also can select standard dimensions from database with spring locks according to DIN 7993.

Material Database

The integrated material database includes more than 50 spring materials. You can extend and modify database by your own data.



Spring Lock Database

Standard spring lock dimensions according to DIN 7993A and DIN 7993B can be selected from integrated spring lock database.

Diagrams

FED11 calculates stress curve and deflection curve of the spring lock. Diagrams can be printed or exported to documentation via DXF or clipboard.

Quick-View

Quick-View shows spring drawing, diagrams with stress curve and deflection curve as well as result table, altogether on one screen.

FED11 - Spring locks - HOLZMANN.f11

File Edit View CAD Database Document OLE Help

Spring Lock 24565-56.2

Example application
from Holzmann: Technische Mechanik, part 1, No. 8.15.

EN 10270-1-DH		Pat.ges. Federstahl Draht	
modulus of elasticity	E	MPa	206000
shear modulus	G	MPa	82000
density	rho	kg/dm ³	7.85
tensile strength	Rm	MPa	1706
perm.bending stress	sig.perm	MPa	1194

RESULTS		i		perm	
spring load	F	N	120	155,8	
bending moment	Mb	Nmm	10800	14022	
bending stress	Sig.b	MPa	880	1194	
bending stress (q=1.045)	Sig.bq	MPa	919,8	1194	
deflection	s	mm	4,614	5,99	
opening width	e	mm	71,06	74,27	
safety Sigma bperm/Sigma b	S		1,298	1	

Printout

Calculation results with extreme values of bending moment, deflection, stresses and safety as well as material data and input values can be printed, saved as text or HTML file, or exported to MS-Excel.

Spring Drawing

FED11 generates a true-scale drawing of the spring lock or tension sleeve (dimensioned or not) to be loaded with CAD as DXF or IGES file.

Spring under Load

Enter spring load and get true-scale drawing of the bended spring on screen, or export to CAD.

Animation

Animation simulates the deformation of the spring on screen. You can define minimum and maximum load as starting position and end position of the animation.

Production Drawing

FED11 generates a production drawing with all dimensions of the spring. Drawing information and modification index can be entered within FED11.

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HEXAGON FED11 - Spring locks v3.1

material: EN 10270-1-DH

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Interfaces

All drawings and diagrams can be saved as DXF or IGES file to be loaded with CAD programs. The OLE interface of FED11 lets you import/export data from/to Excel.

HEXAGON-Help System

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

System Requirements

FED11 is available as 32-bit and 64-bit application for Windows 7, Windows 8, Windows 10.

Scope of Delivery

FED11 program with database files, example applications and help images, user manual (pdf), license granting unrestricted rights of use.

Software Maintenance

HEXAGON Software is continuously improved and updated. Registered users are regularly kept informed of updates and new editions.

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.