

F880

3D Geometry of
Suspension Springs





imess F880 checks the quality of unground suspension springs. Therefore, the spring is placed centrally on a central axis and fixed with a cone. An integrated laser moves automatically along the vertical axis of the spring while it is turning 360°. Relevant characteristics of the 3D geometry are evaluated subsequently and depicted both numerically and graphically. In order to analyse these values, a taught-in master spring or CAD data is used as reference.

Take a look:
www.imess.com/vertrieb/F880.mp4



Spring Quality Control

Characteristics in adjustable degree steps

Pitch Gap

Diameter

Radius Spring Eye

further characteristics on demand

Spring Range

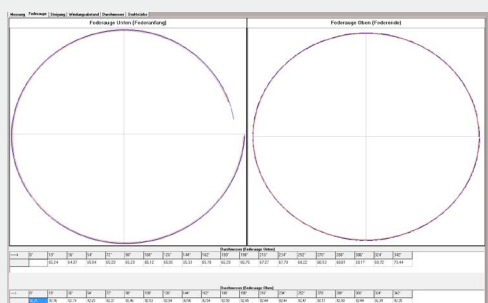
De up to	L ₀ max.	Wire Diameter
300 mm	600 mm	5 - 30 mm

Explanation:

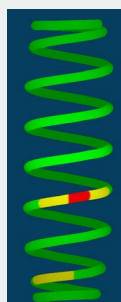
The measurement values are available in 1° steps to accurately analyse error measures. In addition, those are clearly recognisable in a false colour image of the real spring. The 3D data can also be stored as text file and read by CAD or simulation programs. They are used as feedback for the R&D department.

Characteristics:

- Setup time optimisation by comparison to master spring and clear depiction of deviation
- Trend graph for up to 20 measurements
- Storage of measurement values in Excel-readable files
- Using laser for high accuracy

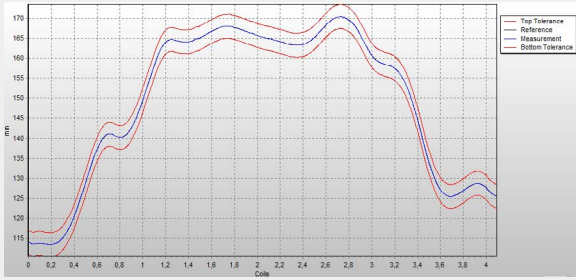


Depiction of first and last Coil with Diameters

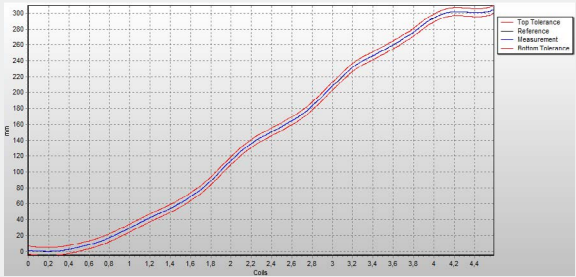


3D Model of the Spring in false Colour

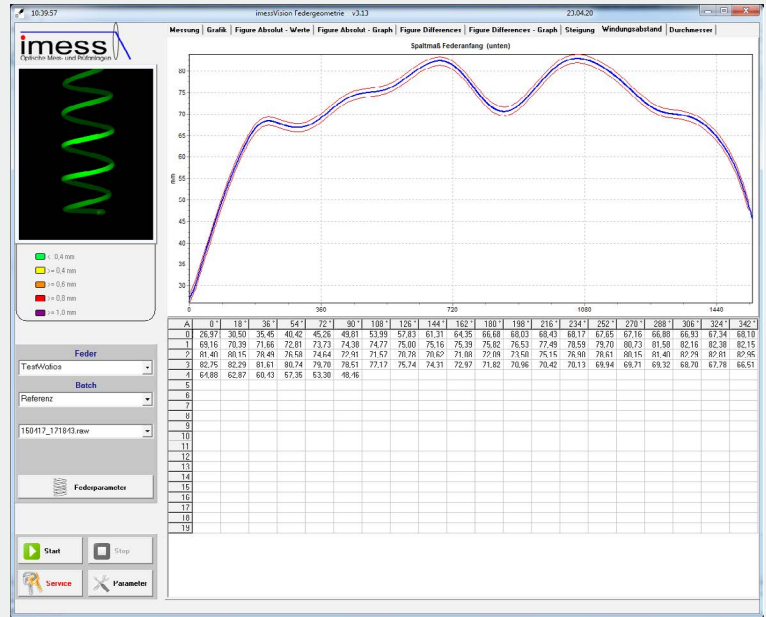
System Accuracy:
 +/- 0,1 mm



Diameter



Spring Length



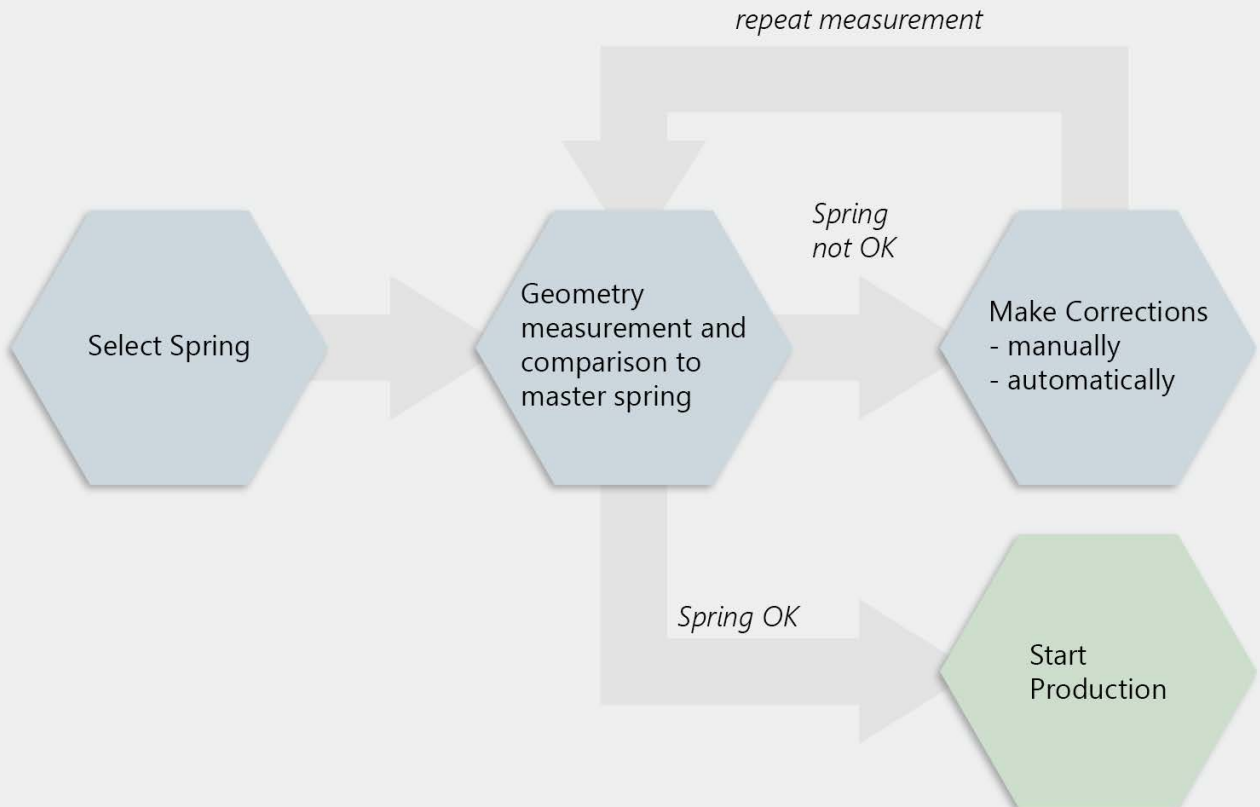
Main Screen

Coiler Setup

Explanation:

The spring geometry highly influences the spring's reaction under load. Therefore, production aims for constant spring geometry independent from user or production time. Thus, the F880 has an interface to the coiler. The entire coiling data of the spring is provided for the machine.

The correction is done either automatically by the manufacturer of the coiler or manually by the operator.



Process of Coiler Setup

