Design and examples of bearing arrangements

Spindle calculation using BEARINX

Spindle calculation by means of BEARINX, Figure 3 and Figure 4, offers:

■ recommendations for mounting fits as a function of the specified speed

■ calculation of design parameters for contact pressure and kinematics in the bearing

■ kinematic bearing frequencies for vibration analyses

■ calculation of the rigidity of the bearing arrangement at the operating point taking account of all relevant influences

■ diagrammatic shaft responses such as shaft deflection and shaft inclination

■ critical whirling speeds and the diagrammatic representation of the natural mode

■ calculation of the fatigue life in accordance with DIN ISO 281, Appendix 4

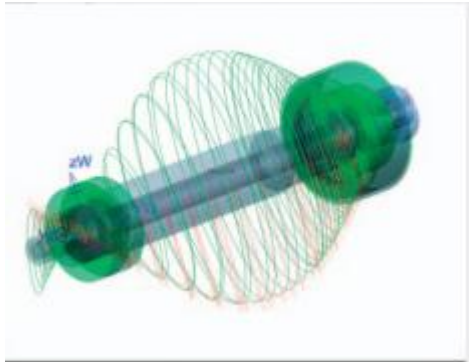■ many other pieces of additional information.

Figure Deflection of the shaft

Figure Calculation of the load distribution