

MDESIGN 2020

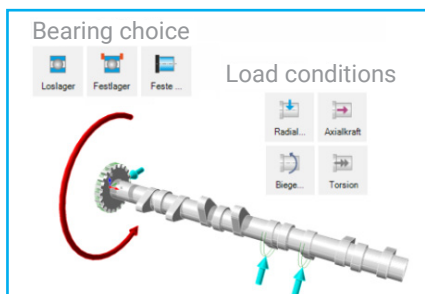
New tools and features (including MDESIGN 2020 Second Edition)



Modern user interface ► Everything in one place

MDESIGN explorer is the clear user interface for engineers: Calculation libraries, interactive formula collections, material properties and manufacturer information are centrally accessible. Your advantages:

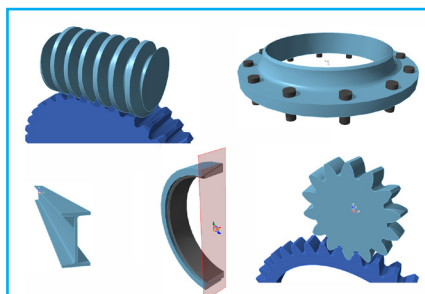
- High user-friendliness and uniform operability
- Integration of the online component catalog MDESIGN components
- Multilingualism (English on all interfaces, up to five other languages in selected modules)



Uniform 3D assistant ► Model component groups

With the 3D assistant, boundary conditions can be simulated and results such as deformation, tension or utilisation are clearly displayed. Your advantages:

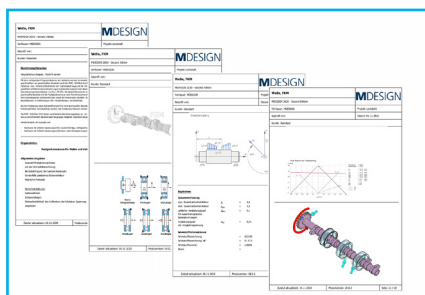
- Clear representation and flexible positioning of bearings, forces and boundary conditions in 3D
- Three-dimensional model construction, simulation and verification of results



Illustrative 3D models ► Visualize your results

Three-dimensional models can be exported into your CAD system (STEP format). 3D models are available in the following modules::

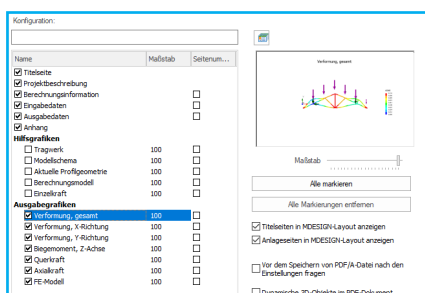
- Pressure vessel
- Flanges
- Cylindrical Worm gear
- Clamping Device Joint
- Cylindrical gear
- Beam
- Shaft



Documentation functions ► For standard-compliant documentation

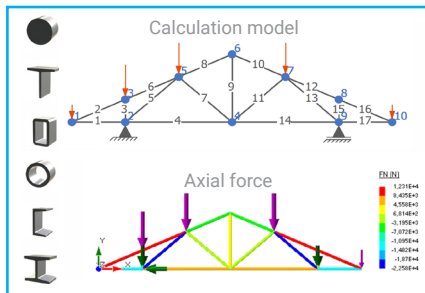
Perform increasing documentation requirements easily and create verification documentation including input data, the underlying standards, directives and formulae, calculation results, graphics and tables from your calculation with a click of the mouse - in up to 6 languages. Your advantages:

- Creation of project-oriented cover sheets and attachments
- Extension of your project documentation by integrating additional PDF pages
- Advanced evaluation options by displaying interactive 3D models in Adobe Acrobat PDF
- Additional configuration and customization options



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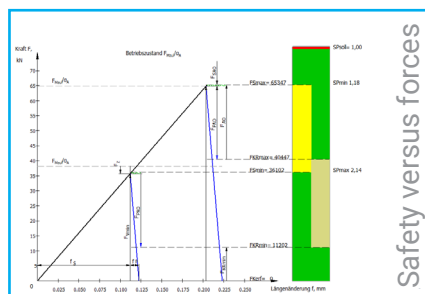


MDESIGN mechanical ► Unique scope of calculation

- Updated standards and directives
- Plant engineering including flange calculation (AD 2000)
- New module "Structure (2D)"

MDESIGN bolt ► Standard-compliant bolt calculation

- New function "Calculate with friction and temperature tolerances"
- Extended clamping diagram with new evaluation options

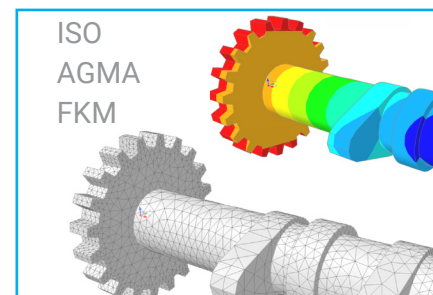


MDESIGN multibolt ► Analysis of multi bolted joints

- Determination of the highest loaded bolt within a multi-bolt connection
- New feature: Automatically calculate forces for all single bolts according to VDI 2230 sheet 1 in only one calculation step

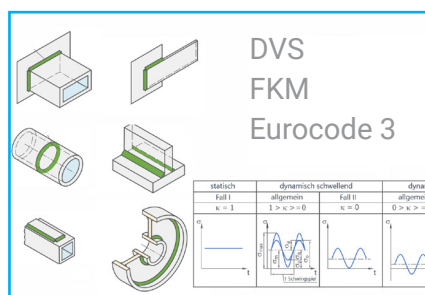
MDESIGN gear ► Extensive gear library

- New modules:
 - "Crown gear"
 - "Cylindrical gear" according to AGMA
- Determination of load capacity proofs against tooth flank fracture according to ISO 6336 part 4
- Expanded material selection: New plastics from leading manufacturers
- New lubricant database
- Integration of customers' own materials into the MDESIGN user database



MDESIGN shaft ► Reliable optimization of shafts

- New method for calculating the proof of strength according to FKM guidelines
- Automatic model building and calculation thanks to powerful FE solver
- Import and export of 3D CAD models in STEP format



MDESIGN weld ► Strength calculation for welded joints

- Advanced calculation methods according to FKM & Eurocode 3

MDESIGN espresso ► Design pressure vessel safely

- New modules:
 - "Flanges" according to DIN EN 13445 and AD 2000
 - "Flat ends, Plates" (AD2000-B5)
- New features:
 - Consideration of conical shells and flat ends in the module "Pressure vessel"
 - Analysis for cyclic loading (AD 2000-S1)
- Integration of customers' own data (materials, geometries) into the MDESIGN user database

