

## DESCRIPTION

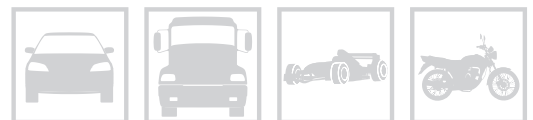
When a new engine is to be tested in a test bed, it is a particular challenge to select a drive shaft with the correct properties. It is important not only to transfer the corresponding torque, but also to take into consideration the stiffness and distribution of the inertia values.

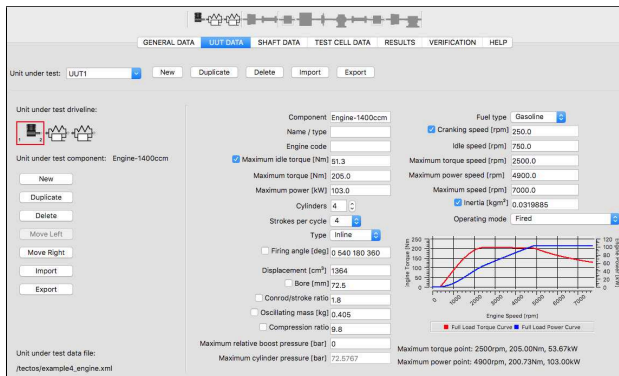
tShaft is a fast analysis tool which selects a drive shaft most suitable for a specific engine for a given test cell. All current engine types can be defined with just a few parameters. Integrated estimation algorithms are available for determining unknown quantities.

The analysis is achieved with a non-linear torsional vibration calculation. tShaft uses a shaft database, which contains details of all tectos drive shafts (e.g. t600, t650, t1000 and t2000 series, CV-shafts in various sizes). It is easy to add new drive shaft information to this database.

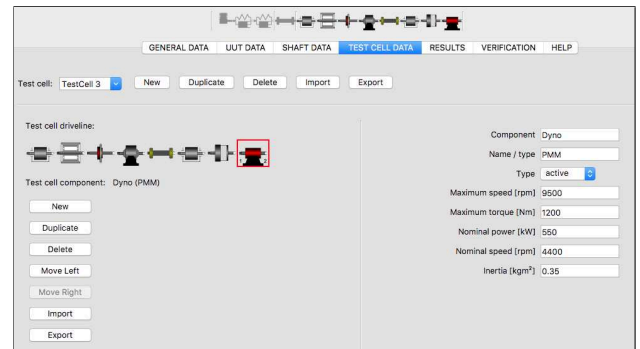
## Features

- support of various engine types: in-line, V-type, boxer
- parameters which are not available estimation algorithms are provided
- modeling support for flywheels, dual-mass flywheels, clutches, quill shafts and transmissions
- administration of multiple test cells
- possibility to add user-defined drive shafts
- pre-selection of available drive shaft in a test field
- PDF reporting with torque and loss curves, for individual components
- calculator to evaluate inertia and stiffness from geometric data

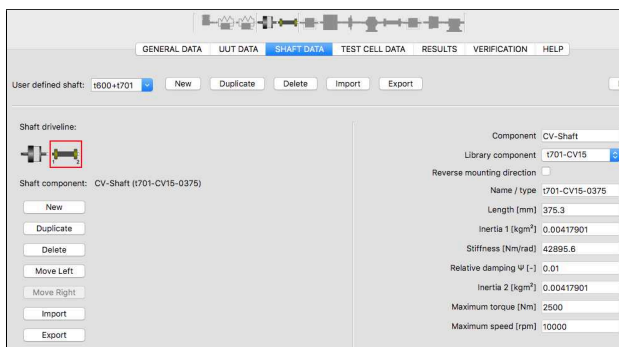




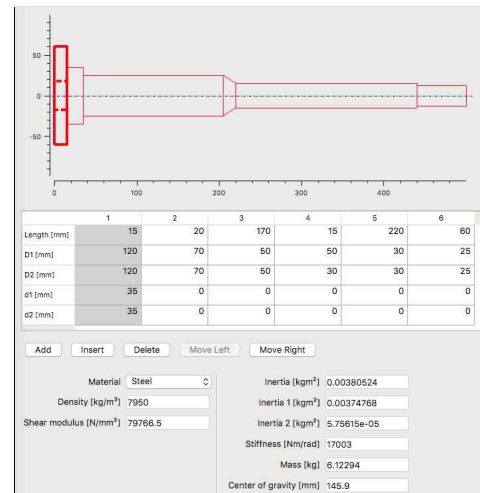
tShaft – unit under test parameters



tShaft – test cell parameters



tShaft – shaft parameters



tShaft – stiffness / inertia calculator

tShaft configurations	Lite	Standard	Advanced	Professional	
Base Version	✓	✓	✓	✓	Selection of drive shafts from given engine parameters and test cell data
Option: Extended Reporting	✓	✓	✓	✓	Extension for comprehensive report generation
Option: User-defined Shafts		✓	✓	✓	Extension for parameterizing additional shafts
Option: Stiffness and Inertia Calculation		✓	✓	✓	Extension for calculating stiffnesses and inertias from geometric data
Option: Extended Drive Line Modeling			✓	✓	Extension for modeling drive lines and transmissions of a test cell
Option: Motorcycle Transmission Modeling			✓	✓	Extension for modeling motorcycle transmissions
Option: Measurement Verification				✓	Extension for result verification with measured data

tShaft platforms	
Operating systems	MS Windows (minimum Windows 7), macOS (minimum Yosemite), GNU/Linux 64-bit (Ubuntu 16.04)
Interface languages	Deutsch, English, 日本語, 简体中文, further languages on request