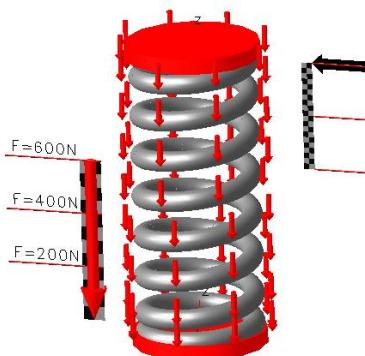
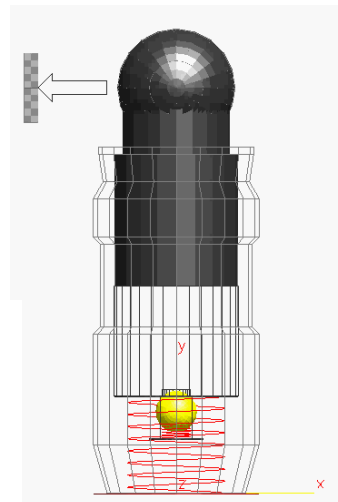
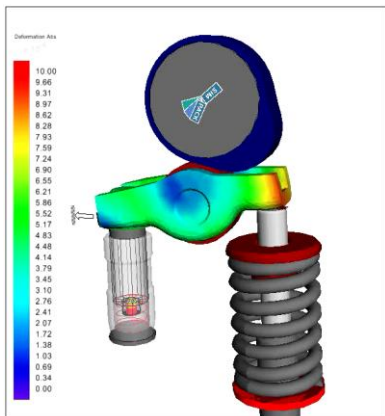
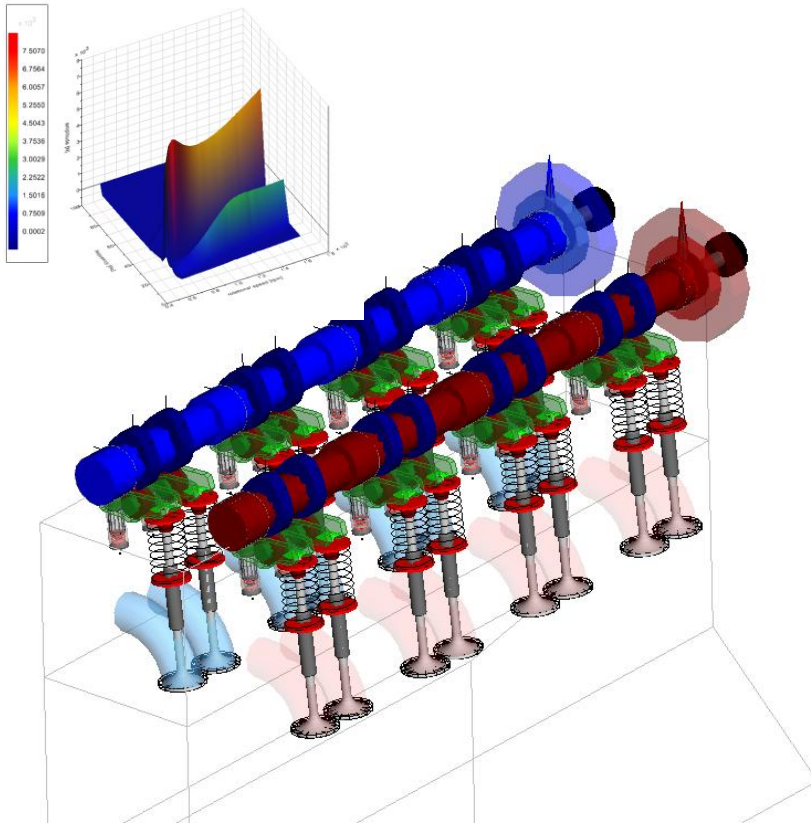




Accurate · Fast · Robust · Versatile

# SIMPACK VALVE TRAIN

## Application



## What is SIMPACK?

SIMPACK is a general-purpose multi-body simulation (MBS) software tool which is used to aid the development of any mechanical or mechatronic device, ranging from single components through to complete systems, e.g. wind turbines, vehicles, and high performance Formula 1 engines. All SIMPACK products are 100% compatible.

SIMPACK Valve Train is an add-on module tailored to the specific requirements of the engine simulation sector.

## Applications:

- Simulation of any valve train design
- Kinematic and dynamic analysis
- Single and complete valve train simulations
- Geometric and material modification
- Optimization
- Order analysis
- Durability

## Highlights:

- Unlimited modeling flexibility
- Extreme non-linear system behavior, e.g. EHD, advanced HLA model
- Acoustic analyses in the frequency and time domain
- Fully parameterized highly detailed engine database for all typical valve train types available
- Scalable detail and complexity
- Batch jobs
- Automatic report generation
- Interfaces to third party software (IST Tower, AMESim), etc.

## Features:

- Detailed Hydraulic Lash Adjuster (HLA)
- Elasto-Hydrodynamic Bearings, EHD – IST Tower software package
- Detailed dynamic spring model
- 2D and 3D contacts, incl. flexible body contact
- Flexible body generation within SIMPACK
- Importation of flexible bodies from FEM codes
- Hertzian contact and friction
- Easy implementation of user specific code

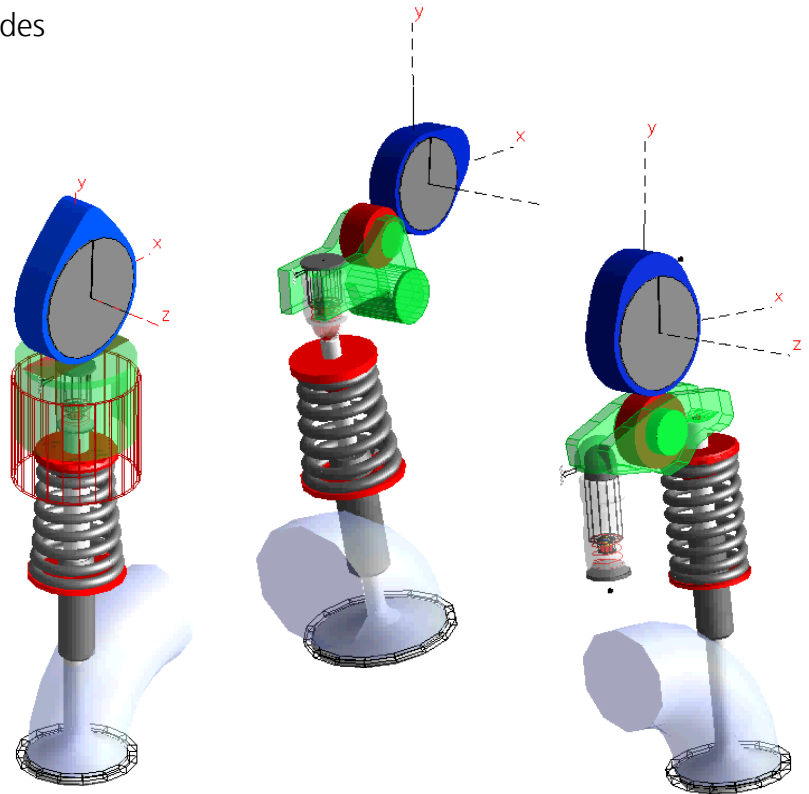
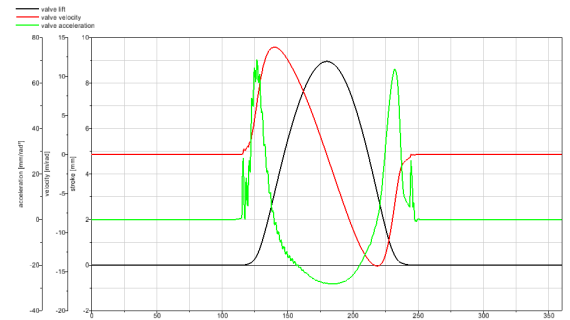
## Interfaces to:

- CAD software
- FEM software
- Hydraulic and Fluid dynamic software
- Control software
- Fatigue analysis software
- Optimization tools

## Operating systems:

- Windows and Linux.  
See: [www.SIMPACK.com/platforms.html](http://www.SIMPACK.com/platforms.html)

single valvetrain results



## SIMPACK Customer Solution Centers

### Germany

#### Worldwide Headquarters

SIMPACK AG  
Friedrichshafener Strasse 1  
82205 Gilching, Germany  
Phone: +49 (0)8105 77266-0  
Fax: +49 (0)8105 77266-11  
sales@SIMPACK.de  
www.SIMPACK.com

### USA

SIMPACK US Inc.  
Robert Solomon  
25925 Telegraph Road, Suite 101  
Southfield Michigan 48033, USA  
Phone: +1 248 996-8750  
Fax: +1 248 996-8930  
Mobile: +1 251 923 9566  
info@SIMPACK-US.com  
www.SIMPACK.com

### France

SIMPACK France S.A.S.  
Immeuble "Le President",  
4eme étage  
40, Avenue Georges Pompidou  
69003 Lyon, France  
Phone : +33 (0)437 5619-71  
info@SIMPACK.fr  
www.SIMPACK.com

### Japan

SIMPACK Japan K.K.  
5F Okubo Bldg.  
2-4-12 Yotsuya  
Shinjuku-ku  
Tokyo 160-0004, Japan  
Phone: +81 (0)3 5360-6631  
Fax: +81 (0)3 5360-6632  
info@SIMPACK.jp  
www.SIMPACK.jp

### Great Britain

SIMPACK UK Ltd.  
The Whittle Estate  
Cambridge Road  
Whetstone  
Leicester LE8 6LH, UK  
Phone: +44 (0)116 27513-13  
Fax: +44 (0)116 27513-33  
Mobile: +44 (0)7767 416 656  
info@SIMPACK.co.uk  
www.SIMPACK.co.uk