

**FloEFD (Engineering Fluid Dynamics) is a different breed of Computational Fluid Dynamics (CFD) software that enables mechanical engineers to simulate fluid flow and heat transfer using 3D CAD models directly, with no need for data translations or copies.**

FloEFD can help you to:

- Reduce pressure drop
- Determine flow capacity
- Predict forces and torque on moving parts (e.g. springs)
- Identify flow rates
- Understand valve behavior
- Control cavitation and flashing
- Design for purpose rather than over-engineer
- Prove performance to customers before production



## From CAD to Analysis Effortlessly

Unlike other CFD tools, FloEFD was developed for engineers by engineers so it works the way you do. Combined with your preferred CAD software, FloEFD puts a powerful simulation tool on your desk. Now you can create a new concept design with CAD and use the same geometry immediately to:

- Understand and improve valve performance and reliability
- Test it without building a physical prototype
- Fix potential problems before they become problems

FloEFD enables you to understand and improve performance in many types of valves:

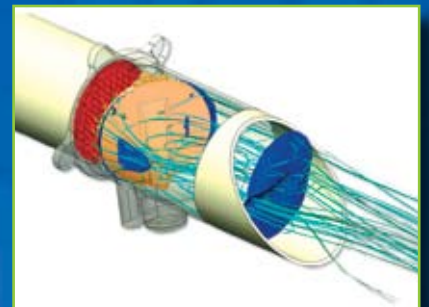
- Stop valves including globe, gate, ball and butterfly varieties
- Check and directional valves
- Solenoid and proportional valves
- Special purpose valves

FloEFD is extremely intuitive and most engineers report that they can use the software with less than eight hours of training. In short, FloEFD helps you get on with the business of creating and testing new valves while reducing prototyping costs without requiring you to become an analysis specialist.

## Customer Testimonial

*"The Grohe name stands for high quality engineering. Software tools such as FloEFD are imperative for us so that we can still retain our high quality standards at reasonable prices."*

K. Huck, Engineer, Grohe GmbH



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Graphics**

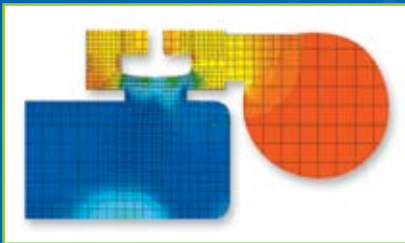
## MECHANICAL ANALYSIS

### Engineering Fluid Dynamics



*"FloEFD provided far more diagnostic information than can be obtained by testing a prototype, enabling engineers to move more directly to an optimized design."*

I. Soreefan, Project Manager,  
Actaris



*We had complete confidence in the simulation results because EFD had provided such an accurate simulation of the original design. Without CFD, this knowledge would have been hard won.*

R. Preble, Project Engineer,  
Shaw Aero

### **"What-if?" Testing Made Easy**

One of the most powerful features of FloEFD is the ease with which you can conduct "what-if?" analyses. FloEFD makes it simple to clone/modify your models and analyze design variations.

The process is very simple. Create your base model and analyze it. Then create multiple variations of your design by modifying the solid model without having to reapply boundary conditions, material properties etc. When the analysis is complete, FloEFD makes it easy to compare the results among the many options to choose your best possible design.

When you are satisfied with your design, publish your report at a touch of a button. You can even publish a fully interactive 3D dynamic plot and share it with colleagues or customers.

In short, FloEFD enables you to understand and improve performance in your valve designs quickly and easily.

### **Valve Manufacturers Around the World Depend on Mentor Graphics' Mechanical Analysis Division for Design Optimization**

Actaris	Kraus Group
Arichell Technologies	Kurimoto
Asco Joucomatic	Liebherr
Bayard	Meggitt Whittaker Controls
Biax-Fiberfilm Corp	Perry Equipment
Buschjost	PetrolValves
Camozzi	Purolator-Facet
Champion Laboratories	Puretec Rotarex S.A.
Danfoss	Rainbird
DeLaval International	Recyclair
Delphi Automotive	Samson AG
Flow Matrix Inc.	Shaw Aero Devices
Graco	Sturman Industries
Graviton	Swagelok
Griswold Controls	Toto Ltd.
Grohe	Toyo Valve Co. Ltd.
Honeywell	Tyco Valves & Controls
Hydra-Stop	Watts Industries
Illumina Inc.	Waukesha Cherry Burrell
Johnson Design	Zeller Plastik

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