WE ARE HERE TO HELP YOU

Accurate prediction of dynamic system behavior is an integral part of design and operation of power plants and energy systems. Apros® is your ideal solution to take dynamics into control.

Fortum offers turnkey solutions, engineering services and software licenses to find optimal solutions package tailored to your needs.

GET TO KNOW APROS® ALSO BY 2 MINUTE YOUTUBE VIDEO
FORTUM THERMAL APROS, WWW.FORTUM.COM/APROS
Apros® software is designed for the dynamic simulation of the processes of power plants, energy networks, automation and control, as well as power systems. Fortum delivers solutions based on Apros® to meet the needs of design, automation testing and operator training in power plant modernisation and investment projects. The unique benefits of Apros® includes the high level of realism in models in all types of operations and changes, ranging from cold start-ups to power change responses and equipment failures.

Apros® - Advanced Dynamic Simulation software - provides all that is needed to simulate a dynamic behavior of thermal power plants, energy networks and new energy concept's development tools. Several leading international power plant operators and equipment manufacturers have already selected Apros® - join the team!

**USE APROS® FOR:**
- Engineering & Design
- Automation testing
- Operator training
- Research & Development

**CUSTOMER BENEFITS:**
- Save money: Optimize plant and operator performance in transient operation
- Get precise models: Realistic models cover start up, shutdown and fast complicated transients
- Choose turn-key delivery: Our professionals take your plant to the next level

"Apros® is our cost saver, risk reducer, business enabler and business optimiser."

Customer’s voice

**EXAMPLES OF PROCESSES:**
- District heating and cooling networks
- Concentrated solar power (CSP)
- Compressed air energy storage (CAES)
- Industrial plant steam system optimization
- Coal-fired plant flexibility enhancements
- CCGT black start operations
- Boilers from sub-critical to ultra-supercritical
- Fluidized bed boilers using renewables
- Pressure surge, water hammer analysis
- Various new process concepts

Apros® Thermal customers:
- Aalto University, Andritz, Babcock-Dow, CERTH, Daewoo Marine, Doosan Heavy Industries, Fortum Värme and Stockholm Energi, Foster-Wheeler, Sumitomo, GE Power, Glücksburg Energi, KHI, Korea, Lappeenranta University of Technology, Mayar Turku, MTN Limited, Osaka Hochschule, Siemens VAI, Shanghai Minghua Electric Power Technology, South-East University, TU Darmstadt, TU Munich, TU Wien, TÜV SÜD, Uniper, Zhejiang University...

**1 MEUR**
- savings when optimizing power plant process and control designs

**Customers in 30+ countries worldwide have selected Apros®.**