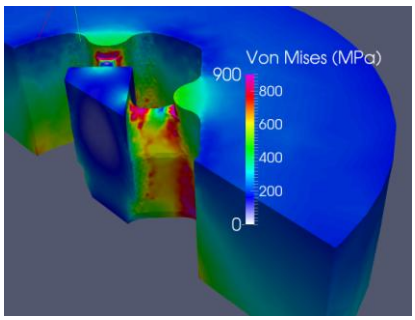
Design and Manufacturing Solutions for
Mechanical and Electrical Engineers

ExtrusionFlow

ExtrusionFlow is an advanced simulation software developed by aluminium extrusion experts for the die-makers and extruders. ExtrusionFlow enables the user to perform fast 3D simulations of the extrusion process to compute stress and deformation, temperature and fluid flow.



Product Features

ExtrusionFlow extends the base functionality of ExtrusionPower to enable users to simulate the flow of aluminium inside the extrusion die-set.

Costly and time-consuming die trials on presses can be replaced by virtual prototyping and testing with computers. Numerical trials allow designers to select the best design for aluminium extrusion die-sets. This leads to savings on die correction costs and longer lifetimes of the die-set components.

Efficient simulations with optimized algorithms enable the user to visualize and understand extrusion material flow, temperature, pressure, mechanical and thermal load. They help to design robust die-sets by accurately predicting deflections and stresses due to the loads. With the help of ExtrusionFlow die design time can be minimized, the associated costs can be reduced, thus the overall overall design productivity can be increased.

Calculation types

- Flow speed
- Pressure
- Temperature of material and die
- Stress and deformation of die

Die optimization

- Simulation with bearings defined by the designer
- Simulation with constant bearings
- Bearing length calculation (with the module “Automatic Bearing Calculator”)
- Die stress and deformation analysis (thermal, mechanical, thermal & mechanical) to understand the different effects on profile shape and tool deflections

Product quality and inspection

- Virtual trials
- Profile shape prediction with the help of thermal and mechanical simulation
- Surface defects with the help of thermal simulation
- Quality of welding seems in welding chamber with the help of pressure analysis
- Deformation and failure analysis with the help of thermal and mechanical die simulation
- Selection of the optimum bolster and sub-bolster

Material database

- Database of commonly used alloys for tools and materials
- Knowledge obtained from experiments on real production presses

Ordering Information

ExtrusionFlow License	M610L
ExtrusionFlow Maintenance	M610Y

System Requirements

Supported platforms:

- ☑ Windows 7 32 and 64 bit ™
- ☑ Windows 8 32 and 64 bit ™
- ☑ Windows10 32 and 64 bit ™

Delivery Information

Software download available through ExtrusionFlow web site

Supported languages

- ☑ English
- ☑ German
- ☑ Russian
- ☑ Italian
- ☑ Turkish
- ☑ Korean
- ☑ Chinese
- ☑ Japanese

For more information, please visit
http://www.extrusionflow.com