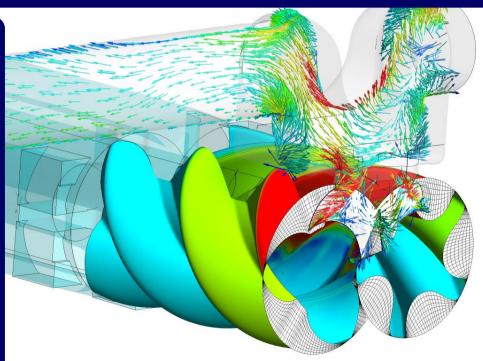
# **SCORG**<sup>™</sup>



### Design, Grid Generation, Thermodynamics and CFD Analysis of Positive Displacement Screw Machines

Twin screw compressors Twin screw expanders Twin screw pumps vacuum, multiphase, liquid Twin screw motors Three and four rotor screw machines Roots blowers Gear pumps, fuel pumps Progressive cavity pumps Rotary screw extruders Vane compressors, expanders and pumps



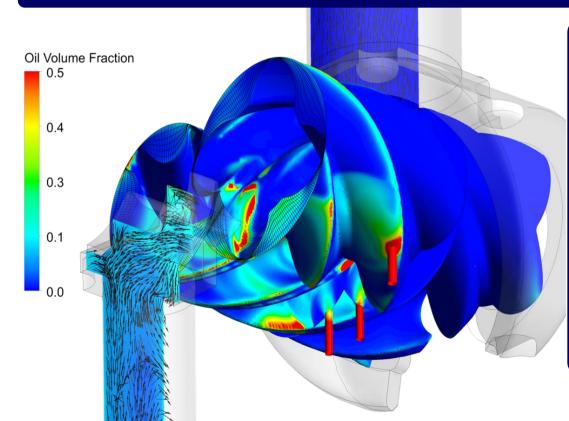
Easy design of oil free screw compressors using SCORG<sup>™</sup> in conjugation with Simerics-MP<sup>+</sup>, Ansys CFX<sup>®</sup>, Ansys Fluent, STAR-CCM+<sup>®</sup>, OpenFOAM<sup>®</sup> or GT-Suite

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### CFD Analysis of multiphase flows in Positive Displacement Screw Machines

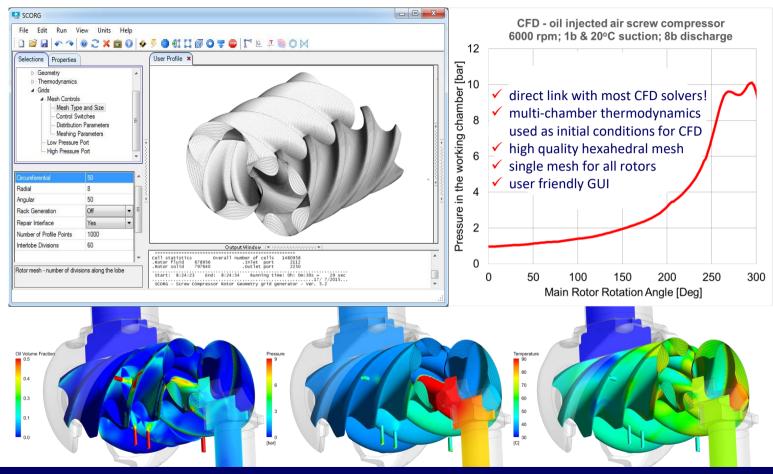


accurate and reliable multiphase calculation of

## Oil Injected Screw Compressors

- single domain rotor mesh
- pressure based solver
- Euler-Euler approach
- oil injection induced by pressure difference
- initial conditions from multi-chamber model
- designed for use of CFD by R&D engineers

### SCORG<sup>™</sup> will minimise efforts for performance analysis and optimisation of oil injected screw compressors and expanders



Use SCORG<sup>™</sup> directly with : Simerics-MP+, Ansys CFX®, Ansys Fluent, STAR-CCM+®, OpenFOAM®

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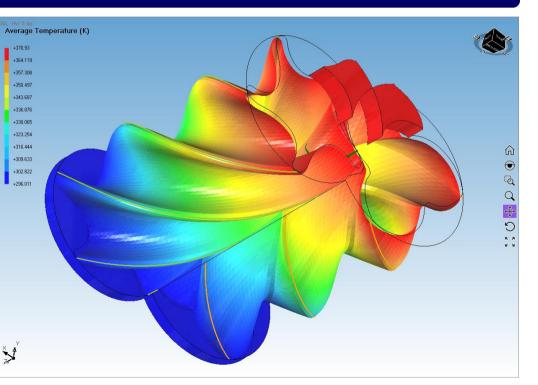
## Chamber Thermodynamics for Analysis of Positive Displacement Screw Machines using SCORG™

Twin screw compressors Twin screw vacuum pumps

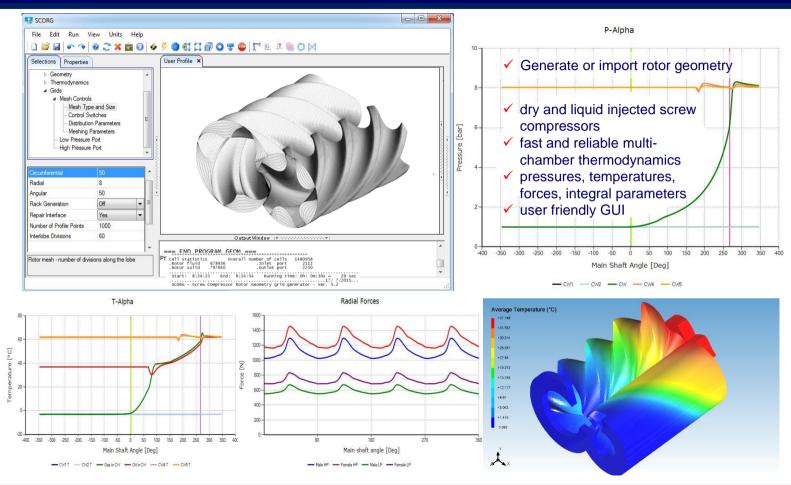
Three and four rotor screw machines

**Roots blowers** 

- Rotor profile
- Machine setup
- Performance calculation
- Optimisation
- Bearing force calculation
- Boundary distribution as input for FEA analysis



### SCORG<sup>™</sup> will minimise efforts for performance analysis and optimisation of screw compressors



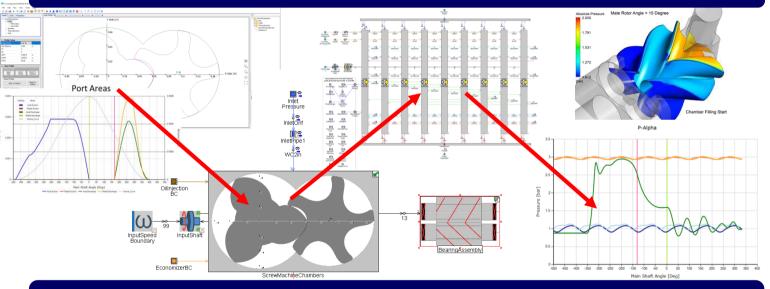
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### Integration of SCORG and GT-Suite for analysis of screw machines in refrigeration and power utilisation systems



SCORG<sup>™</sup> and GT-Suite integration allows high-fidelity multi-chamber modelling, optimisation and system level integration of screw compressors, expanders and pumps. Enhanced with GT-SUITE's multi-physics modelling, thermal management, friction, lubrication, structural and thermal FE and acoustics. User friendly SCORG<sup>™</sup> GUI enables seamless data exchange between SCORG<sup>™</sup> and GT-SUITE







# Design screw machines with ubiquitous cloud solution system



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