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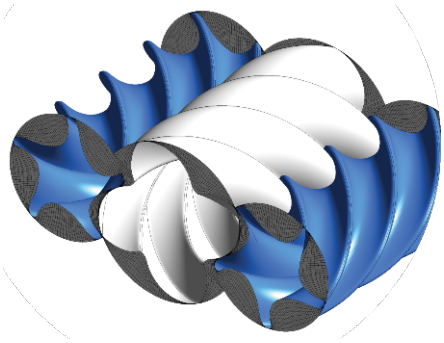
Centre for Compressor Technology

SCORPATH

Screw Compressor Optimal Rotor Profiling & Thermodynamics



About the Centre for Compressor Technology

Founded in 1995, the Centre for Compressor Technology has been leading the advancement of positive displacement compressors and expanders, particularly twin-screw machines. It is now an internationally recognised centre of excellence in this field and a hub for scientists, engineers and industrial experts to work together to solve some of the biggest challenges facing the compressor industry in energy utilisation.

SCORPATH

SCORPATH is a design software package based on a comprehensive mathematical model of the screw compressor geometry and working process. It is regularly checked by comparison with measured data obtained either on our experimental stands or by our numerous customers. It calculates and presents screw compressors and their processes and systems.

Starting from the specified compressor duty and the minimum number of assumptions, this program determines the optimum machine geometry and rotor profile to obtain the desired results. The output includes full details of the rotors and their porting which can be imported directly into a CAD system, together with performance predictions, bearing loads and suggested choice and details of the tool profile required to manufacture the rotors.

The package is accompanied with the full FORTRAN compiler and a complete package of graphical presentation software. SCORPATH is currently being used by some of the big industry players to design their rotor profiles.

Features

Geometry Generation

- Calculation based on a given screw compressor profile.
- Calculation of rotor flow areas, blow-hole areas, sealing lines and screw compressor volume.

Thermodynamics

- Compressor cycle process
- P-V diagram
- Mass flow, work and power, specific power and efficiencies Real fluid property routines: IIR, Lee-Kesler, NIST.
- Loads, force and torque calculations.

CONTACT US

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