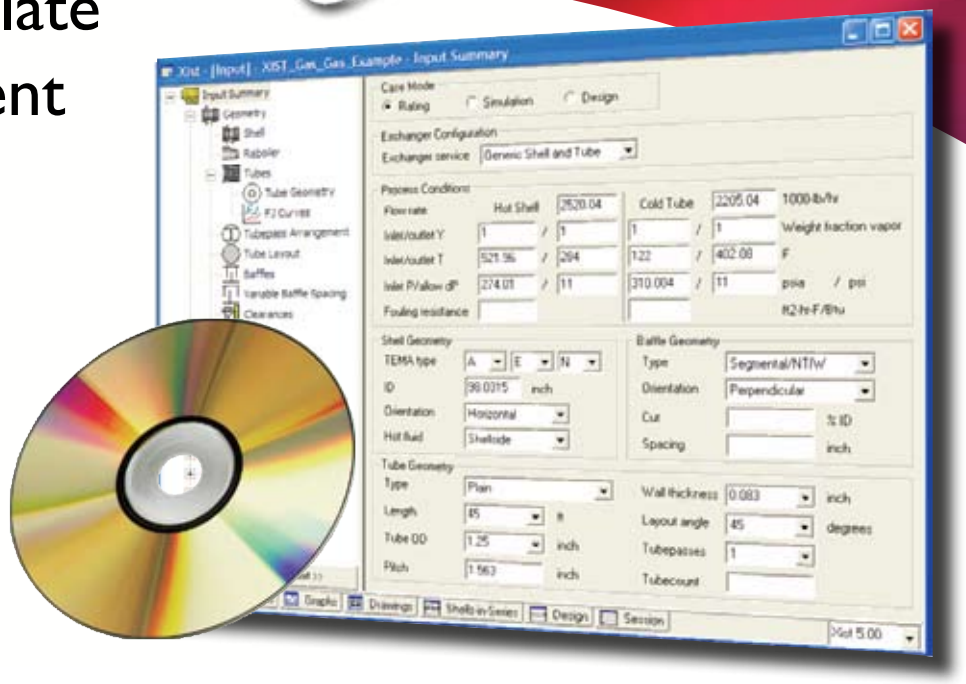
HTRI *Xchanger Suite* 6

Design, rate, and simulate heat transfer equipment

***X**changer Suite* includes components for the design, rating, and/or simulation of

- heat exchangers
  - air coolers and economizers (***X**ace*)
  - shell and tube (***X**ist*)
  - hairpin (***X**hpe*)
  - jacketed pipes (***X**jpe*)
  - plate and frame (***X**phe*)
  - spiral plate (***X**spe*)
- fired heaters (***X**fh*)

...plus additional components for tube layout and vibration analysis



HTRI ***X**changer Suite*, from the global leader in process heat transfer and heat exchanger technology, includes components for heat transfer and associated calculations of heat exchangers and fired heaters. Methods contained in the HTRI calculations are integrated in the Windows interface and supported by the extensive data collected by HTRI on industrial-sized heat transfer equipment for for nearly 50 years. Ongoing research and testing at our state-of-the-art facility means that our methods are continually updated to meet your evolving engineering needs.

All ***X**changer Suite* components are highly flexible, allowing rigorous specification of the exchanger geometry. This capability makes the best use of HTRI's proprietary heat transfer and pressure drop correlations and allows the most accurate performance predictions possible for all exchangers.

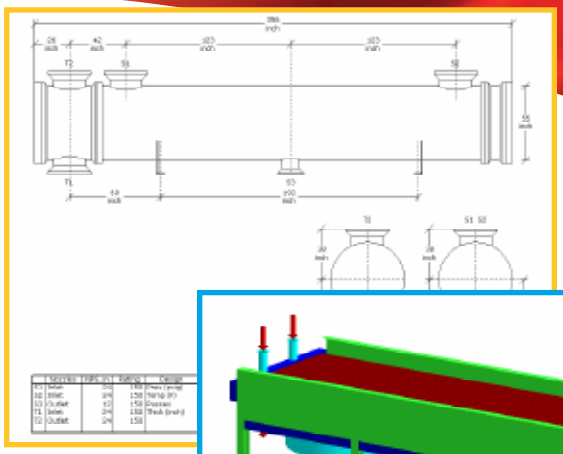
Features

- Calculation modules are fully incremental and calculate localized heat transfer and pressure drop using local fluid properties
- Includes VMGThermo™, an extensive and rigorous fluid physical property generator
- Extensive output reports provide detailed results including local profiles of all important parameters
- Comprehensive online help provides background information, graphs, explanation of input panels and output reports, user tips, and more
- Graphs and scale drawings provide in-depth visualization of calculated results
- Quick Calc tools let you easily perform unit conversions and select exchanger types
- Interfaces to
  - process simulators
  - physical property databanks
  - mechanical design programs
  - integrated engineering software
  - Microsoft Excel
  - CAPE-OPEN compliant applications

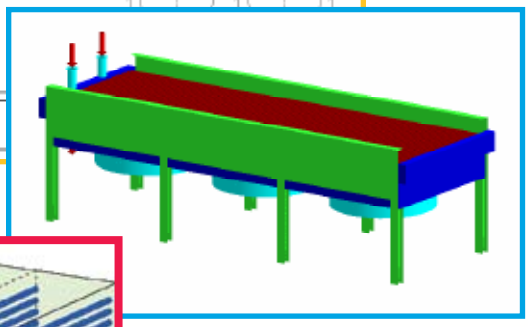
Now imports files from HTFS™ and UniSim® Heat Exchangers.

HTRI®

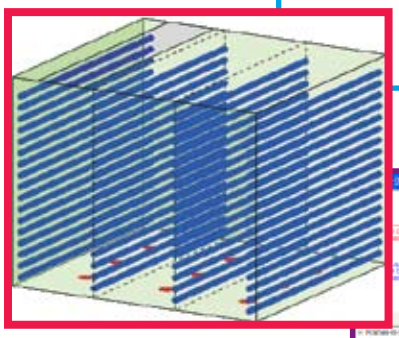
Design, rate, and simulate virtually any type of shell-and-tube exchanger including kettles, hairpins, thermosiphons, tubeside reflux condensers, and falling film evaporators. ***X**ist* includes support for all standard TEMA types, integrated flow-induced vibration calculations, and tube layout tools.



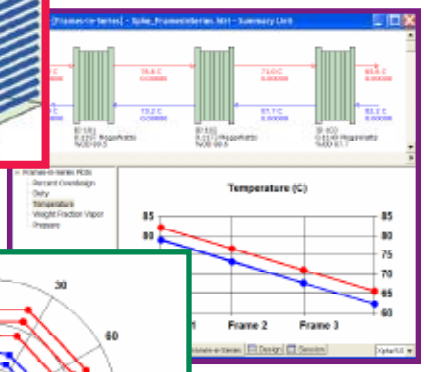
Design, rate, and simulate air coolers and economizers including natural draft (fans off) and forced draft conditions. ***X**ace* includes vendor fan selection calculations and options to simulate the effect of flow and temperature maldistribution.



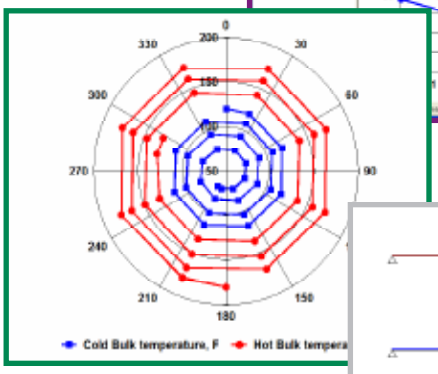
Simulate the performance of cylindrical and box heaters. ***X**fh* uses a Hottel zoning method to calculate localized radiant and process side performance. Additional combustion and convection section modules allow evaluation of a complete process fired heater.



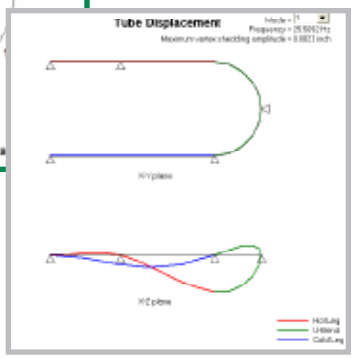
Design, rate, and simulate plate-and-frame exchangers using user-defined plate types or plates selected from an internal manufacturers' databank. ***X**phe* contains a port maldistribution model that calculates the flow through each plate channel.



Rate and simulate single-phase spiral plate exchangers using an incremental model with HTRI-validated heat transfer and pressure drop correlations. ***X**spe* models co- and counter-current spiral flow (Type I exchangers).



Calculate flow-induced vibration for a tube in a shell-and-tube exchanger using a rigorous finite element based algorithm. ***X**vib* considers fluidelastic instability and vortex shedding mechanisms for both plain and U-tubes.



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System Requirements and Recommendations

***X**changer Suite* requires Microsoft Windows 2000 or later running on an Intel Pentium or compatible CPU with at least 128 MB RAM (512 MB for Windows Vista, Windows Server 2008, or Windows 7), and approximately 425 MB of free disk space for a complete installation.

HTRI recommends a 1GHz or faster processor, 1 GB RAM, the Windows XP operating system, and a graphics resolution of at least 1024 x 768.

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