



### ENHANCEMENT THROUGH ADAPTABILITY

Koch Heat Transfer specializes in the design and fabrication of various tube inserts that can enhance process optimization and can help achieve cost reductions in your existing applications.

- **Twisted Tape** tube inserts work by inducing swirl flow which increases the tube-side heat transfer coefficient. This allows for improved performance of existing equipment and more economical designs of new equipment with minimal impact in pressure drop.
- **HELI-CORE™** tube inserts offer a unique design that induce swirl flow while taking more flow area for higher velocities. Its design is considerably more robust than Twisted Tape allowing for easier removal and re-insertion during cleaning cycles.
- **Wire Wrapped Core** tube inserts reduce the flow area resulting in a higher tubeside velocity coupled with swirl flow for maximum increase in heat transfer coefficient. Its design also makes for easy removal and re-insertion during cleaning cycles.
- **Bare Core** tube inserts reduce the flow area resulting in higher tube-side velocity. It can be used to meet minimum velocity requirements and provide equalization of pressure to solve maldistribution issues, particularly commonly seen in air cooled heat exchangers.

### CREATING A DESIGN AND PROCESS ADVANTAGE

Koch Heat Transfer specializes in the design and fabrication of various tube inserts which can:

- Reduce the size and cost of designs
- Increase the efficiency of equipment
- Reduce the fouling rate
- Increase tube side velocity
- Ensure complete vaporization

### EQUIPMENT APPLICATIONS

- SHELL AND TUBE
- AIR COOLED HEAT EXCHANGERS
- HAIRPINS

### APPLICATIONS

- VAPORIZING
- FLUID VISCOSITY IN EXCESS OF 2CP
- FLUID IN LAMINAR FLOW
- LOW TUBE VELOCITY
- MALDISTRIBUTION

