



Heat Generation

- ▶ Heat generator working on the principle of cavitation water heating
- ▶ Low-noise and low-wear tubular heaters
- ▶ Flexible installation
- ▶ Maintenance-free flow cavitation reactor without rubbing and rotating parts inside

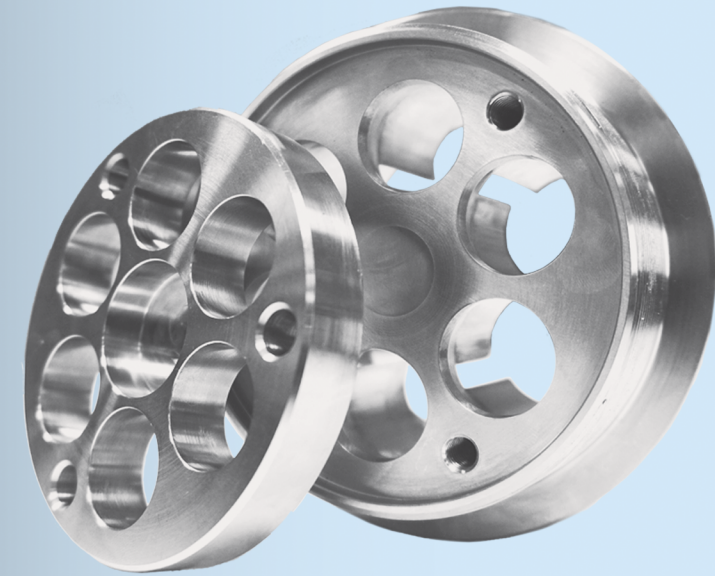
How It works

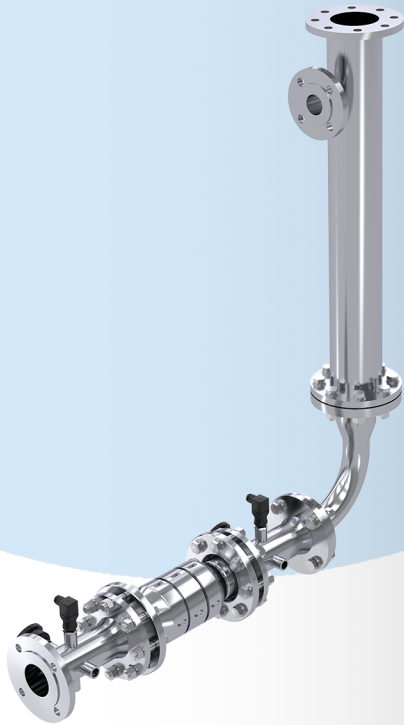
The technology produces a stable emulsion of oil and water as well as homogenizes fuel oil having particle size $\sim 5\mu\text{m}$ utilizing the effects of cavitation. The modular in-line mixing and homogenizing units use proven proprietary processes. RAPTECH[®] modular and scalable systems can be installed in 8-12 months and designed both for continuous and batch production.

- ▶ Multistage hydrodynamic high shear
- ▶ Reduced process times
- ▶ Customized modular solutions

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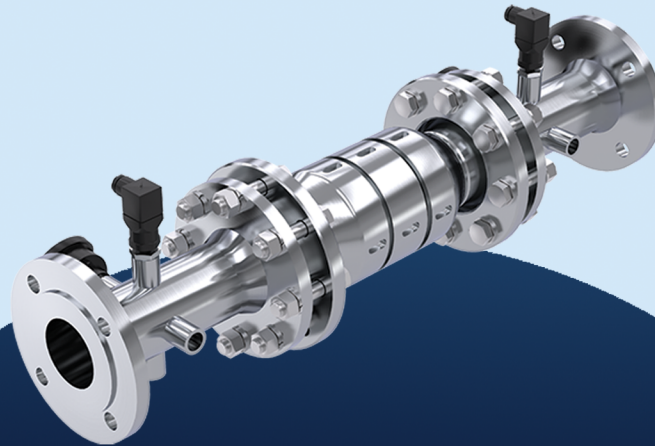
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Mixing

- ▶ Patented technology (UADA) to produce oil-water emulsions
- ▶ Scalable from 1 m³/h to 100 m³/h
- ▶ Mixing, Homogenization achieved with no moving parts
- ▶ No moving parts means better scalability and droplet distribution
- ▶ Droplets reduced to below 5 micron
- ▶ Significant reduction in NO_x, CO_x emissions



Blending & Homogenization

- ▶ Modification involving intense high-pressure inline turbulence
- ▶ Modification of fuel oil improving rheological properties
- ▶ Multiple-feed homogenizing reduces tank requirements
- ▶ Fluid velocity changes shears working medium inline
- ▶ No to less maintenance



Separation

- ▶ High-speed centrifugal oil-water separation (OWS) system
- ▶ Reduced operating costs thanks to low maintenance, automated control, minimal waste disposal
- ▶ Continuous, single-stage operation that requires less tank holding volume, providing more payload capacity