

Impeller

Highly advanced computation fluid dynamic programming allows for performance design to truly offer an advancement in efficiency.

Each impeller vane configuration is matched with its own specific volute to optimize aerodynamic efficiency. Matching the specific speed with the diameter of the wheel assures the best aerodynamic efficiency possible.

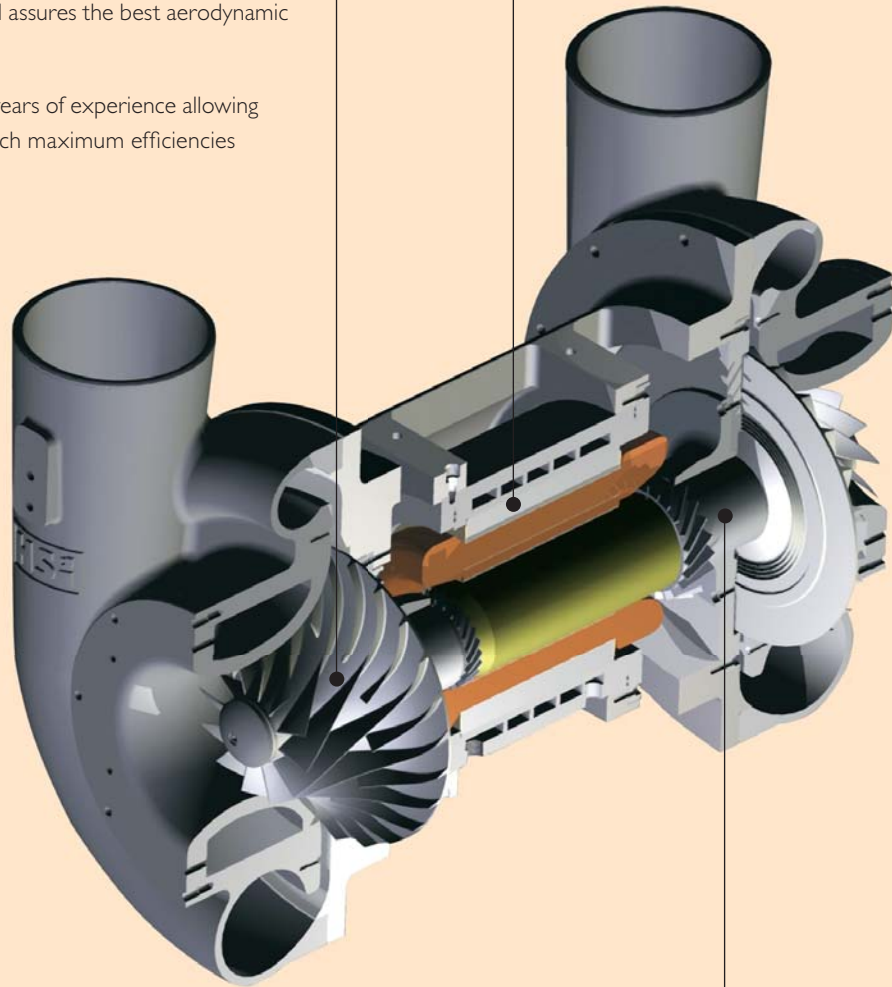
HSI's design team has more than 20 years of experience allowing for custom designed impellers to reach maximum efficiencies possible for any application.

Double suction symmetrical structure

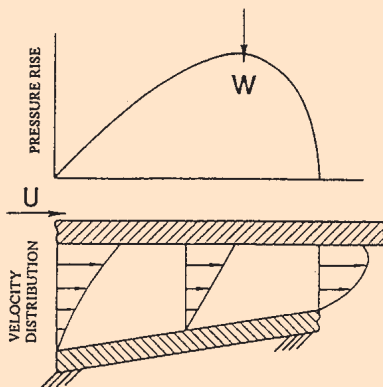
- Impellers at both ends of a common shaft counterbalance thrust load in the axial direction (axial load ≈ 0)
- Superior stability and durability
- Improved efficiency over single impeller designs
- Reduction of local stress or twisting

Motor/Frame

- Highly efficient and reliable motor design
- Specifically designed for high speed service
- Designed for high heat environments
- Air or Liquid cooled



Principle of Air Bearing Technology



Bearings

Air Bearings

- Individually layered bearings are assembled in the housing to support the shaft
- As the shaft rotates at high speed, an air film is formed between the shaft and the bearings which achieves friction free floating without the use of lubricants
- No additional cooling required
- Suitable for high speed; bearing load capability increases with higher RPM.

Superior durability

- Little or no wear after 35,000 continuous on/off cycles
- Possible to operate under extreme environment (max. 250°C)
- Little to no vibration or noise