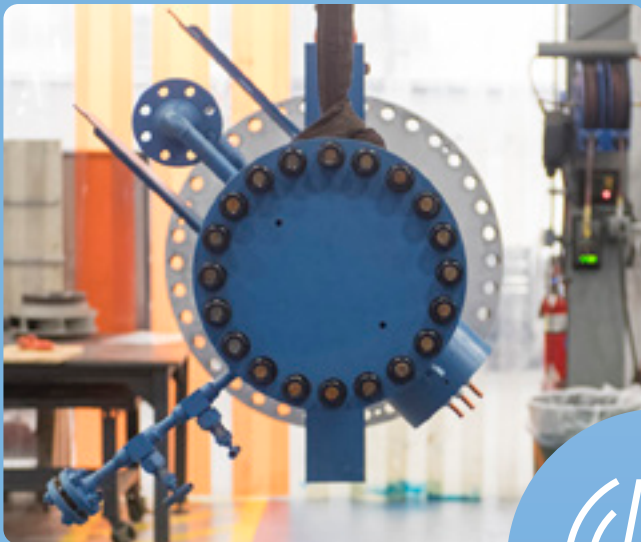


CONVENTIONAL POWER

Pumps, Motors & Services

Safe, reliable, and economical solutions
for the energy sector



Hayward Tyler designs, manufactures and services glandless pumps for performance-critical applications across the conventional power market.

With more glandless circulating pumps installed worldwide than any other manufacturer, we are the industry's first choice for reliability, performance, and low cost of ownership.

- 60 years' experience
- Designed world's first glandless circulating pump
- Largest installed base
Over 2500 glandless circulating pumps worldwide
- 11kV high voltage design
- Super critical circulation and economizer re-circulation capability
- 30+ years' design lifetime
- 40-week standard lead time
- 24/7/365 customer service



Glandless pumps for maximum reliability.

The global energy demand is requiring improved efficiency and increased flexibility for power plants.

At Hayward Tyler, we are supporting this demand by supplying high pressure and high temperature solutions. Our circulating pumps are used on sub-critical plants for forced circulation and on super-critical once through boilers to allow for fast start-up. Our economizer re-circulation pumps allow for NOx reduction by recirculating feed water to allow flue gas temperatures to maintain higher.

The gas being at an elevated temperature allows it to react with the required catalyst and lower emissions up the stack.

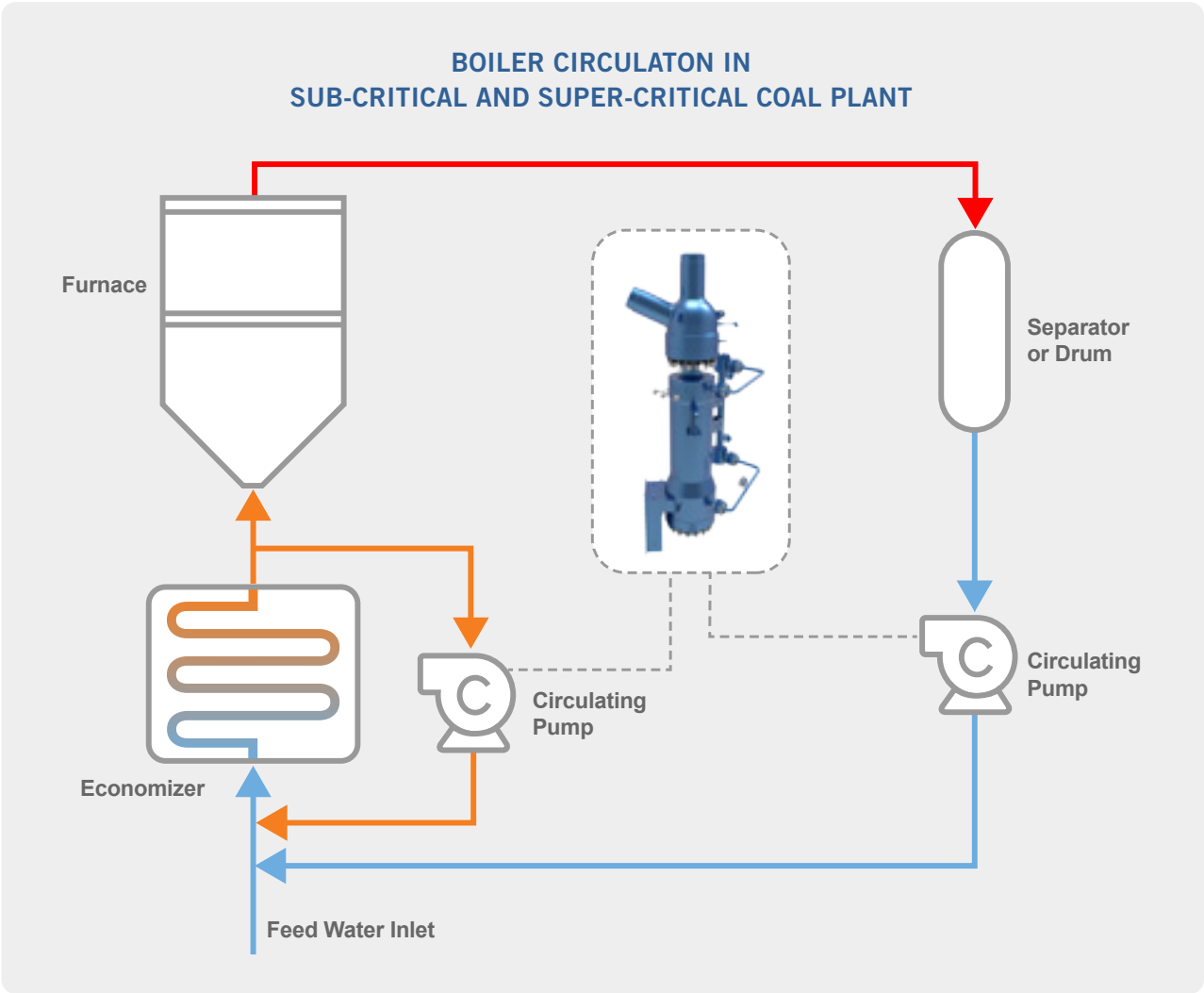
As the inventor of the glandless circulating pump, we have more than 2,500 units operating worldwide — including Sub, Super and Ultra Super Critical Boilers, Integrated Gasification Combined Cycle, Fluidized Bed and Selective Catalytic Reduction installations. Our products can meet international standards including ASME, PED, IBR, EN and ISO.

KEY FEATURES

- Glandless design eliminates mechanical seal
- 30+ year pump design life
- 65,000 hours between maintenance cycles
- Hotneck thermally isolates motor from pump
- Fluid-filled bearings offer exceptional life
- Rewindable stator extends pump life

Applications

Our glandless pumps are ideal solutions for your high temperature and high pressure applications. Eliminating the mechanical seal offers the safest most reliable pumping solution available.



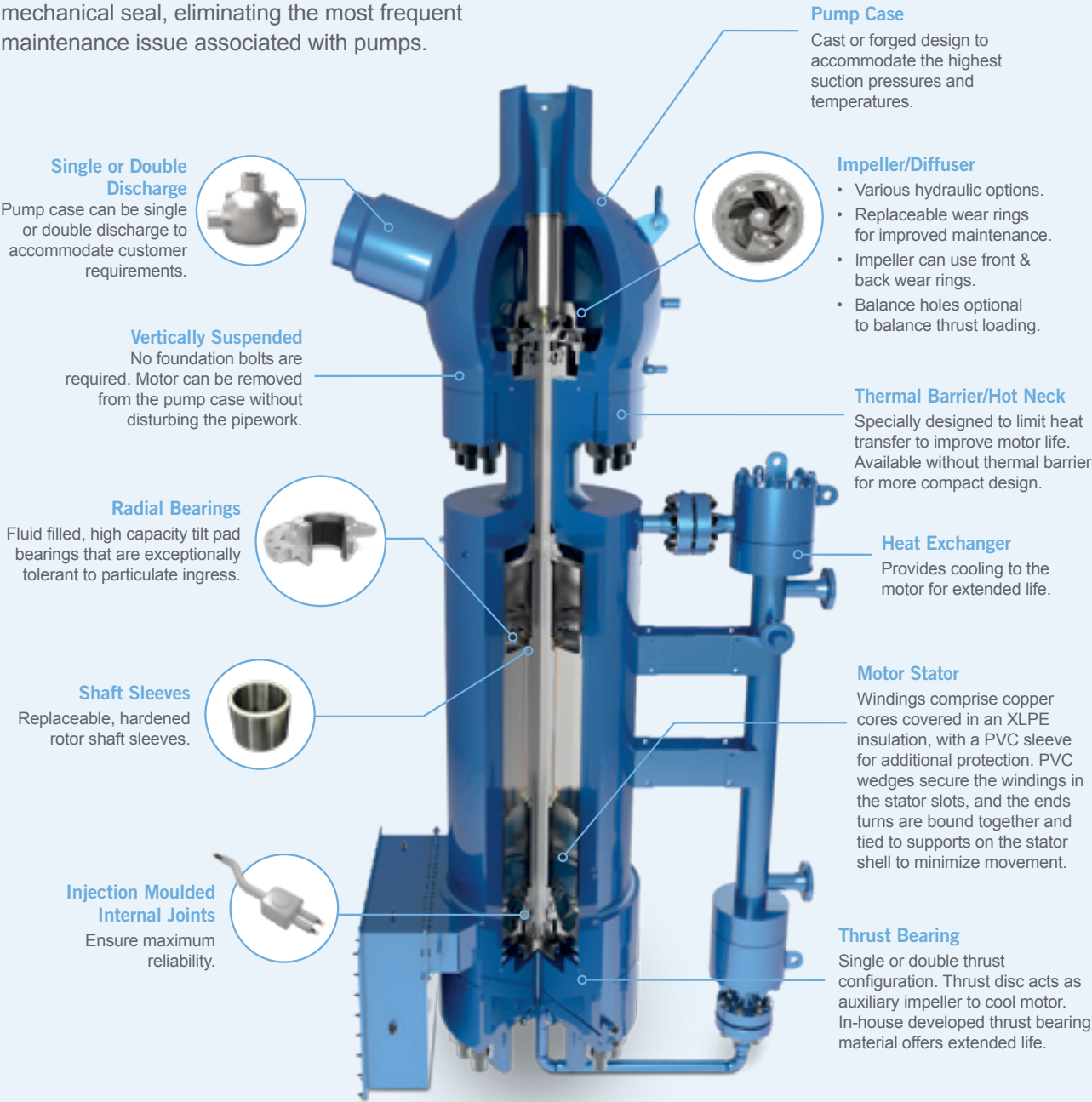
COMMON CONVENTIONAL POWER APPLICATIONS

- | | |
|------------------------------------------------------------|--------------------------------------------------------------|
| → Drum Boiler Circulation | → Ultra-Ultra Super Critical Once Through Boiler Circulation |
| → Subcritical Boiler Circulation | → Gas Temperature Control Economizer Recirculation |
| → Circulated Fluidized Bed Circulation | → Selective Catalytic Reduction Economizer Recirculation |
| → Super-Critical Once Through Boiler Circulation | → Selective Catalytic Reduction – Start-up Recirculation |
| → Ultra-Super Critical Once Through Boiler Circulation | |
| → Ultra-Super Critical Secondary Reheat Boiler Circulation | |



Zero leakage, high reliability, low maintenance.

Our design features have been improved over 60 years of product innovation, offering the safest option for your pumping needs. Our glandless design eliminates the need for a mechanical seal, eliminating the most frequent maintenance issue associated with pumps.



Operating Data

	US	SI		US	SI
Power	400-3350HP	300-2,500kW	Design Temperature	32 to 750° F	0 to 400° C
Voltage	380-11kV	380-11kV	Flow	44,000 USgpm	10,000 m³/hr
Design Pressure	0-5800+ psig	0-400 bar	Head	1,800 ft	550 m

Aftermarket support & service

We have the capability to repair and upgrade your glandless pumps at multiple facilities around the globe, providing you a local solution. We have design solutions to upgrade the performance of your glandless pump to help maximise the life of your equipment.

Stator Rewind

We can extend the life of your glandless pump by rewinding the motor. We use the latest winding cable material (XLPE) to offer the best performance and improved reliability. Upgrades available include:

- Re-Rate Motor:** Increase the power of your existing motor.
- VFD Upgrades:** Upgrade the winding design to allow for variable frequency drive operation.
- Higher efficiency:** Redesigned stator windings for higher motor efficiency.

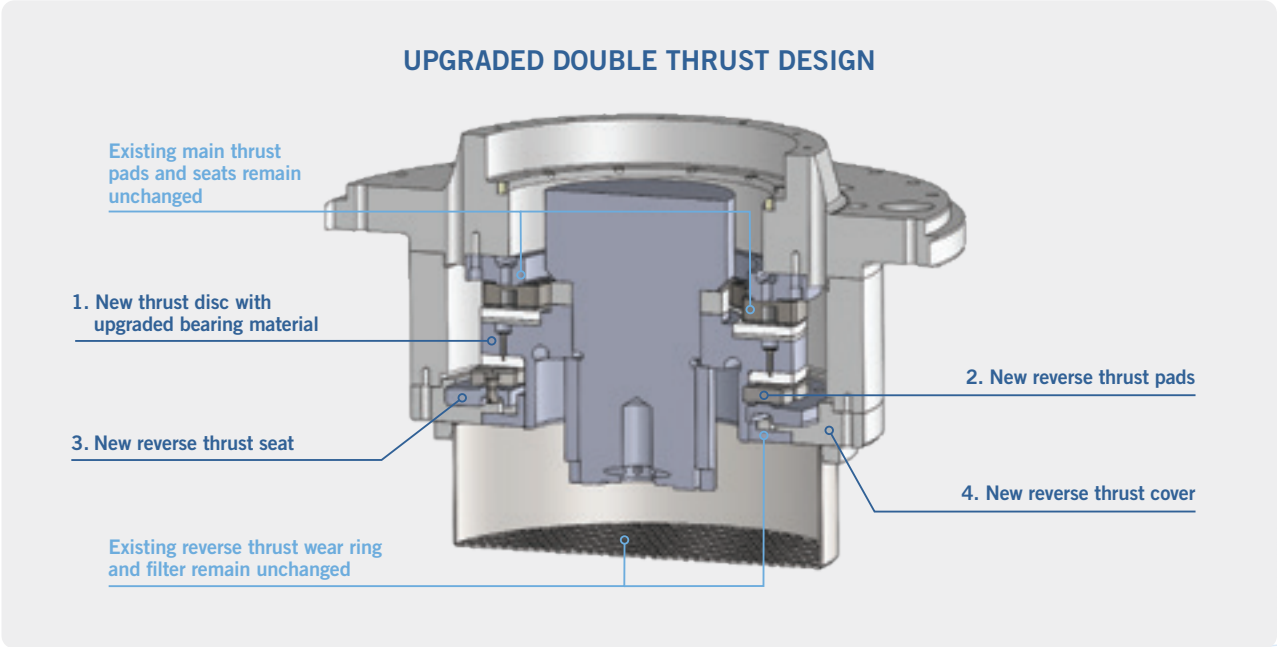
Stator or Rotor Restack

We can restack the electrical steel laminations in your motor to restore or improve the electrical performance.

Bearing Upgrades

We offer both radial and thrust bearing material upgrades or redesigns to improve reliability.

A common upgrade for single thrust bearing designs is to retrofit, in the same space, a double thrust design. This increases the bearing performance by up to 10x in the reverse direction.





Our global facilities

We have manufacturing facilities in the UK, USA, India, and China to provide worldwide support to our customers.

Each location offers repair services and has field service support capable of providing technical expertise to you, no matter where your location. Additionally, we have a network of partners across the globe to allow us to provide the most convenient options for your aftermarket support. We offer a wide range of repair options for all planned and predictive maintenance cycles, as well as comprehensive electrical and mechanical inspection capabilities.

Our field service support teams can be used on a supervisory or turnkey basis. With turnkey growing in popularity as an effective means of reducing staff overhead, Hayward Tyler is there to meet industry needs.



For further information on Hayward Tyler's conventional power industry expertise and products, please contact us at a location below or visit: www.haywardtyler.com



Engineered solutions for the global energy sector

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