

Leakproof Canned Motor Retrofits for Reactor Water Cleanup Applications

Designed for the most demanding applications, the Hayward Tyler sealless Canned Motor Retrofit is a solution that combines the highest level of performance with the lowest possible risk of failure and dose exposure.

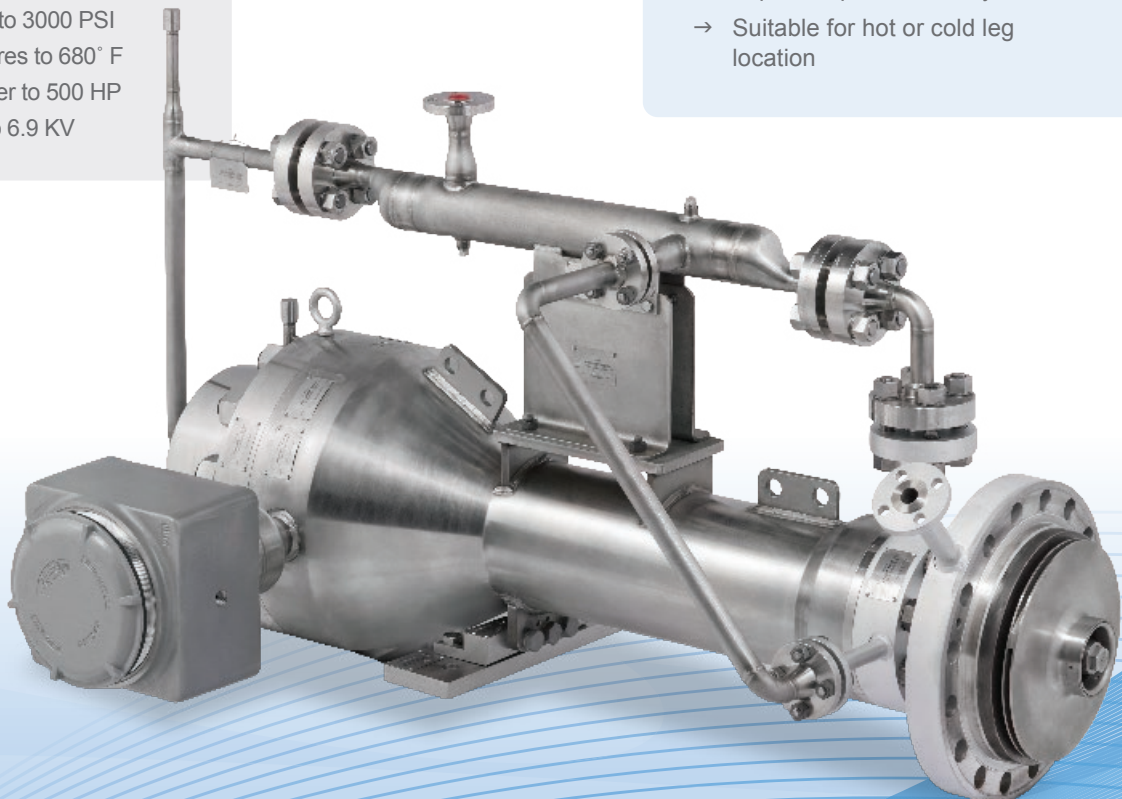
Specifically designed for your Reactor Water Clean-up (RWCU) system, the Hayward Tyler sealless Canned Motor Retrofit (CMR) replaces your existing configuration to eliminate the mechanical seal. The CMR can be installed without removing the existing pump or baseplate. Two joint construction and one-piece forging produces an ultra-safe seismic design that will run continuously, without failure or leakage with a minimum 8-year maintenance cycle.

KEY TECHNICAL FEATURES:

- Pressures to 3000 PSI
- Temperatures to 680° F
- Motor power to 500 HP
- Voltages to 6.9 KV

Unmatched performance

- No dynamic seals – zero leakage
- No alignment issues between pump and motor
- Utilizes existing pump baseplate and hydraulics
- 8-year maintenance cycle
- Thrust bearing to accommodate all hydraulic loads
- Greatly minimized radiation exposure
- Reduced Mean Time Between Failure (MTBF)
- Improved plant reliability
- Suitable for hot or cold leg location



SEALLESS DESIGN

The ultimate solution for safety and reliability.

Mechanical seal deterioration is a primary cause of leakage and failure, necessitating plant downtime and dangerous, costly maintenance. The Hayward Tyler sealless motor pump is designed with a singular forged housing for the pump impeller and motor shaft, with no dynamic shaft seals to fail, zero leakage, and minimized man-rem exposure, essential for ALARA considerations.

High performance

Temperature control: A heat exchanger provides optimal temperature maintenance with a closed-loop cooling and lubricating system. The motor is subject to the same internal pressure as the pump, but is kept at a relatively low temperature by the heat exchanger.

Motor design: The slim motor reduces parasitic losses without compromising reliability.

Anti-corrosion: Stainless steel laminations and pump end internals are anti-corrosive for ease of maintenance and longer life.

Increased bearing load capacity: Our exclusive tilting pad bearing design increases bearing load capacity, contributing to a long bearing life. Reactor water lubricates bearings and circulates throughout the motor, and does not interchange with reactor flow.

Low maintenance

Ease of maintenance: Easy access to wear components reduces maintenance time and costs.

Safe maintenance: Motor and pump internals are easily serviced without needing to remove the pump casing, which reduces radiation exposure (ALARA) and protects personnel.

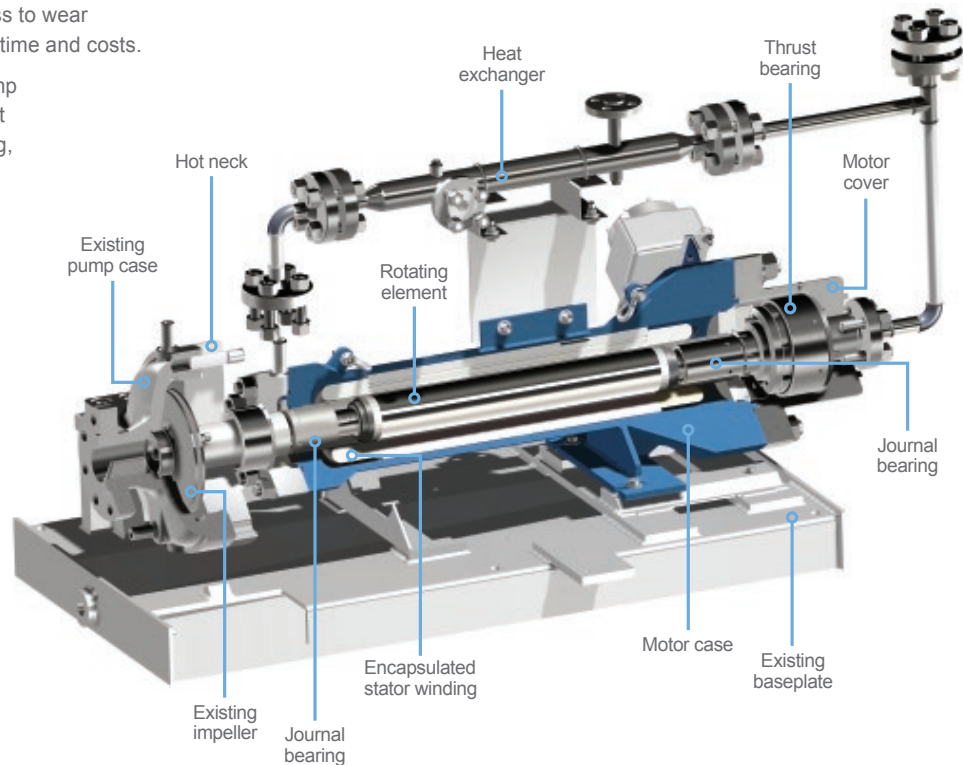
CASE STUDY:

Duke Energy Brunswick

Hayward Tyler successfully installed two RWCU Canned Motor Retrofits at Duke Energy, Brunswick Plant.

Brunswick had tried various solutions, including mechanical seals and shaft upgrades, and refined maintenance practices. None of these solutions addressed the core problem of the high-pressure and high-temperature application, and resulted in increased exposure to personnel.

Hayward Tyler Canned Motor Retrofits were installed in place of the conventional motor/mechanical seal. This installation utilized the existing baseplate, impeller, and pump case, and required no large bore piping modifications. The Hayward Tyler Canned Motor Retrofit has mitigated the risk of seal leaks by eliminating the mechanical seal, resulting in higher pump availability and reduced exposure. The installation exposure was equivalent to two seal changes.



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