

■ MRI Cooling Pump Groschopp Motor Delivers on 50,000 Hour Specification

The Challenge

This application required a reliable vendor to supply motors for cooling pumps used in their customer's medical MRI machine. This OEM application had no room for field failures or less than optimum performance. Likewise, the pump is a critical piece in the supply chain – on-time delivery and unsurpassed quality were essential.

The Solution

- Single Phase AC Motors
- 50,000 Hour Life Testing in high temperature, continuous duty environment
- Custom designed mounting foot, capacitor bracket, end bell and shaft

The Groschopp solution resulted from extensive qualification of components, operating temperature tests, sampling of various materials and lubricants, and ultimately identifying potential operating issues that the customer hadn't even experienced yet.

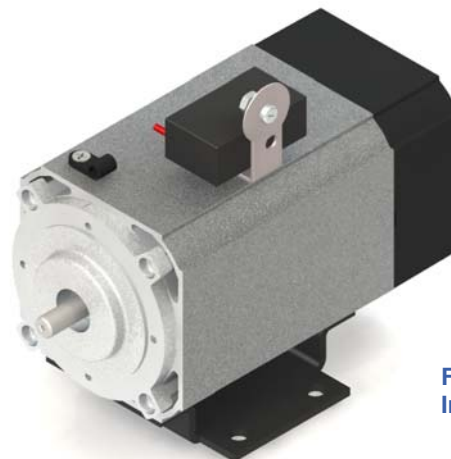
“As an OEM, buying the motor that my customer approves is just as important as buying the motor that my customer wants. The product design was distributed between me, my supplier (Groschopp) and the customer – it's a new world we're doing business in!”
Senior Engineer – Customer

This customer manufactures positive displacement pumps and leak testing equipment for a wide range of applications. They pride themselves in performance, flexible and innovative design, and gear pump engineering excellence. They have been coming to Groschopp for several years now, appreciating the motor design expertise and team design approach that has allowed them to meet their OEM customer's strict specifications.

“This story is all about supply chain management and product design management,” said the customer's Senior Engineer. After having failures with another manufacturer's motor that went so far as to prompt expensive recalls and field retrofits, he came to Groschopp, took a step back from his application, and with the classic engineer's approach, asked the objective question of “what affects the life of the motor?”

Groschopp's engineers had a simple response to that question – “temperature.” So together, the two engineering teams went to work evaluating the sources of temperature - temperature specifications of various motor components, and operating temperatures. To get real-life operating data, they installed a standard Groschopp motor into the customer's pumps, applied sensors in multiple locations, and began to gather data.

A life testing scheme, to meet the rigorous temperature and continuous operation specifications, was devised and yielded excellent results, with theoretical calculations suggesting well over 70,000 hours performance.



Fan-Cooled AC
Induction Motor