

Magnetic Coupling Success Story

Design-to-Cost & Design-to-Manufacturing: Achieved Part Count reduction and cost savings

Challenge: Major Pump / Motor Manufacturer serving numerous industries such as Chemical, Water Treatment and Food required a seal-less pumping system magnetic coupling re-design. The coupling needed to be fully sealed to exposed dangerous fluids and elements, components minimized, cost reduced and supplied full turn key. The existing design consisted of the customer sourcing six unique high precision components. One currently supplied by Quadrant; i.e. magnetic multipole ring mounted on steel flux ring. This required in house assembly of all six components followed by testing for internal leakage. The assembly could not be re-worked and experiences close to 10% rejection rate due to assembly issues and test failures.

Solution: Quadrant was able to reduce the part count by 50% (from 6 to 3) while designing out tight tolerance features thus reducing complexity and cost while enhancing performance. The re-designed assembly was manufactured in house by Quadrant giving the customer the desired full turnkey solution.

Result: Quadrant has been producing this re-designed magnetic coupling for nearly a decade. Significant cost savings have been achieved with a 100% quality rated and on time delivery.

