M SEALS
- Part of Diploma PLC

Case Study

Marine

ROV Hydraulic Actuator

A leading ROV (Remotely Operated Vehicle) manufacturer approached us with a sealing issue in one of their hydraulic cylinders. They were experiencing leakage at low pressures, but the seal also needed to withstand high pressures of up to 230 bar. The problematic piston seal, supplied by another company, was a bronze-filled PTFE O-ring energised seal similar to our KB08 model. While the KB08 seal excels in high pressure applications and provides smooth, stick-slip-free operation, it is typically suited for applications under specific conditions.

ASSESSMENT

This particular situation presented additional challenges; the hydraulic cylinder could be operated with various fluids, limiting the range of materials we could use for an optimal solution.

The client wanted to avoid redesigning or modifying the existing housing dimensions. This was no problem, as thanks to our bespoke design software, we can produce seals tailored to fit our customers' existing housings.

SOLUTION

Instead of altering the seal's base material, we opted to maintain the same composition as the KB08. However, we shifted to our XB64 profile, a versatile seal designed primarily as a media separator—ideal for applications involving gas on one side and fluid on the other. The XB64 performs exceptionally well in situations where sealing is needed across both low and high-pressure ranges, making it the perfect choice for this application.

RESULT

We swiftly manufactured and delivered two XB64 profile seals within seven days. After thorough testing, the customer reported excellent results, with the seals effectively resolving the leakage issues while maintaining high performance under both low and high pressures. The customer was highly satisfied with the solution, reinforcing our commitment to delivering tailored, fast, and effective sealing solutions.

Denmark
+45 49130205
Støberivej 26,
3000 Helsingør

Sweden
+46 35 159940
Industrivägen 17,
302 41 Halmstad

Finland
+358 942411169
Korvenaho 37
86360 Raahe

Poland
+48 724828401
1B/1, Kurpinskiego Street
62-030 Lubon

Leicester
+44 1162754720
Quartz Close, Enderby
Leicestershire, LE19 4SG

Newcastle
+44 1914224200
Unit E Kingsway North
Gateshead NE11 0JH

Sheffield
+44 1142432777
Unit 22-26 Julian Road
Sheffield S9 1FZ

m-seals.com