

## Case Study

# Vickers® by Danfoss

## Collaboration is key during UK harbour cylinder refurbishment project



"Danfoss' collaboration with Flowtech enabled us to put together a cylinder solution with exceptional performance and future-proof design that will make future maintenance much easier for the customer."

**Derek Bryans**

Account Manager  
Danfoss Sales EMEA North-West

**Overview**

This case study outlines the successful refurbishment of a linkspan cylinder at a UK harbour, undertaken by Danfoss in collaboration with Flowtech. The project addressed significant corrosion issues affecting the cylinder's end caps, which were hindering its serviceability. The implemented solution not only resolved the immediate problem but also enhanced the cylinder's design for future maintenance.

**The Challenge****Corroded End Caps**

The primary challenge was the severe corrosion of the threaded end caps on the linkspan cylinder. This corrosion made disassembly and maintenance extremely difficult, threatening the cylinder's operational lifespan and the functionality of the linkspan. The existing design made it almost impossible to remove the end caps without causing further damage.

**VICKERS**  
by Danfoss **FLOWTECH**  
a world of motion

## The Solution

### Innovative Engineering and Collaboration

Danfoss engineers devised a solution involving machining down the corroded end caps and re-engineering the design to incorporate bolted end caps. The result was a refurbished 9m long cylinder with a new design that offered a more secure and accessible method for future disassembly and maintenance. The collaboration with Flowtech was crucial, leveraging their local expertise and facilitating seamless communication with the client.

### Implementation and Communication

Throughout the project, Danfoss maintained transparent and consistent communication with the client. Regular progress reports, Gantt charts, photographs, team calls, and weekly reports were provided to keep the client informed. This proactive approach ensured that the client was aware of the project's status and any potential challenges.

## The Results

### Key Performance Indicators

A key performance indicator achieved was the improved ease of disassembly for future maintenance due to the bolted end cap design. The new design significantly reduced the time and effort required for maintenance, minimizing downtime and associated costs. The successful refurbishment extended the cylinder's operational life and ensured the continued functionality of the harbour linkspan.

### Customer Satisfaction and Future Collaboration

The customer expressed high satisfaction with the solution provided by Danfoss. They were particularly impressed with the professionalism, experience, and open communication demonstrated throughout the project. The successful completion of this project has strengthened the relationship between Danfoss, Flowtech and harbour commission, paving the way for potential future collaborations.

## Why Danfoss

The customer chose Danfoss based on a strong existing relationship with Flowtech and a recommendation from their Major Projects Team. Danfoss's reputation for engineering expertise, responsiveness, and effective communication also played a significant role in the decision.

The refurbishment of the linkspan cylinder at the harbour stands as a testament to Danfoss's engineering capabilities and commitment to customer satisfaction. By addressing a complex challenge with an innovative solution and maintaining open communication, Danfoss not only resolved the immediate problem but also improved the cylinder's long-term serviceability. This case study highlights the importance of collaboration, expertise, and communication in achieving successful project outcomes.

