



**Your project - Together we succeed** FNS1 040 - Off-line filter that challenges your competitors

## **INITIAL SITUATION**

A producer of reach stackers added an extra filter to his catalogue as an optional upgrade for better productivity and increased lifetime of machines. This was an an element made of cellulose.

ARGO-HYTOS was asked to prepare a study on long-life filters and to propose an alternative product.

## **SOLUTION**

The following advantages of the EXAPOR® AQUA technology were presented:

- great filtration efficiency of particles
- excellent water absorption regardless of the oil temperature (cellulose material does not keep water at higher temperatures)
- real dirt holding capacity, proven by the Multi-Pass Test

The customer tested the FNS1 040 off-line filter, compared it to the existing cellulose solution and was surprised by the results.

Although the hydraulic system already had a good relative humidity of 25% (no free water, only dissolved water), the FNS1 040 filter reduced the humidity to 15%! An important key to success was the unique way of installation. With large cylinders and a mechanical drive chain, the fluid in the hydraulic system of the reach stacker is not filtered except for the moments of cylinder movement during lifting or lowering of the container.

The FNS1 040 filter was directly connected to the high-pressure line via a flow control valve that set a flow rate of 2 l/min. This low but constant flow through the filter element improved the oil contamination by seven ISO 4406 classes in the 4  $\mu$ m size!

Ultimately, the customer received a solution which:

 does not require any modifications of the existing circuit

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- does not interfere with the operation of the machine
- can be installed as an upgrade by the manufacturer or end customer
- can be connected to a pressure line up to 320 bar
- guarantees filtration even in moments when cylinders are not moving.



- Extended oil service life by up to three times
- Reduced downtime and operating costs by 40%
- 15% higher productivity
- Return on investment within a few months
- Less harm to environment, reduced oil waste





## **APPLICATIONS**









## **Curious?**

Do you have a similar challenge for us? Contact our experts.



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