

# VFL (Virtual Fluid Lab) Series Clogging Indicator

## Intelligent Monitoring for Predictive Maintenance



### Intelligent Filter Element Life Monitor

VFL smart sensor technology uses a highly engineered algorithm in combination with learning-capable software to provide the most advanced filter element predictive maintenance. The algorithm, developed from extensive hydraulic and lube oil lab and field experience, collects  $\Delta P$ , temperature and hours of operation data and determines remaining element life. This method reduces life cycle cost and increases machine reliability.

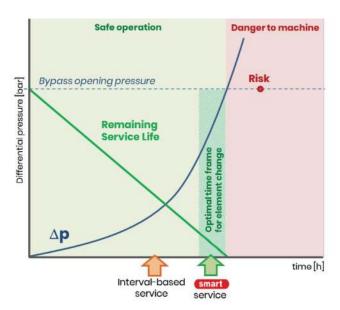
This technology is offered exclusively for use with HYDAC Quality Protected filters only, to ensure optimal performance and reliability.

#### **Cost reduction:**

- Maximum use of element
- Reduces number of element changes (condition-based)
- Increased service interval (fixed intervals no longer required)
- Planned service
   (no unexpected failures leading to costly downtime)

#### **Features and Benefits**

- High Pressure and Low Pressure Filter Applications, 6000 psi max
- · Smart Sensors Element life monitoring
- Algorithm (ΔP, Temp & Hours of operation)
- CANopen and IO-Link communication protocols
- Programmable functionality
- Maximized service intervals
- Less human interaction, less downtime
- 100% trip (2-bar, 5-bar, 8-bar (VD only))



Example: Expanding the service life through the use of VFL

## Reliability and Productivity:

- Reduces downtime
- Helps identify contamination-contributing equipment, before a costly failure can occur
- When used with HYDAC Quality Protected filters, the VFL will pull from its HYDAC element knowledge to provide the most accurate data for element life determination