



We think Globally and act Locally

AXIS

→ Why us ?

PROBLEM

Fluid control has become an unavoidable action to ensure high system reliability and increased efficiency of hydraulic and lubrication systems in following ways:

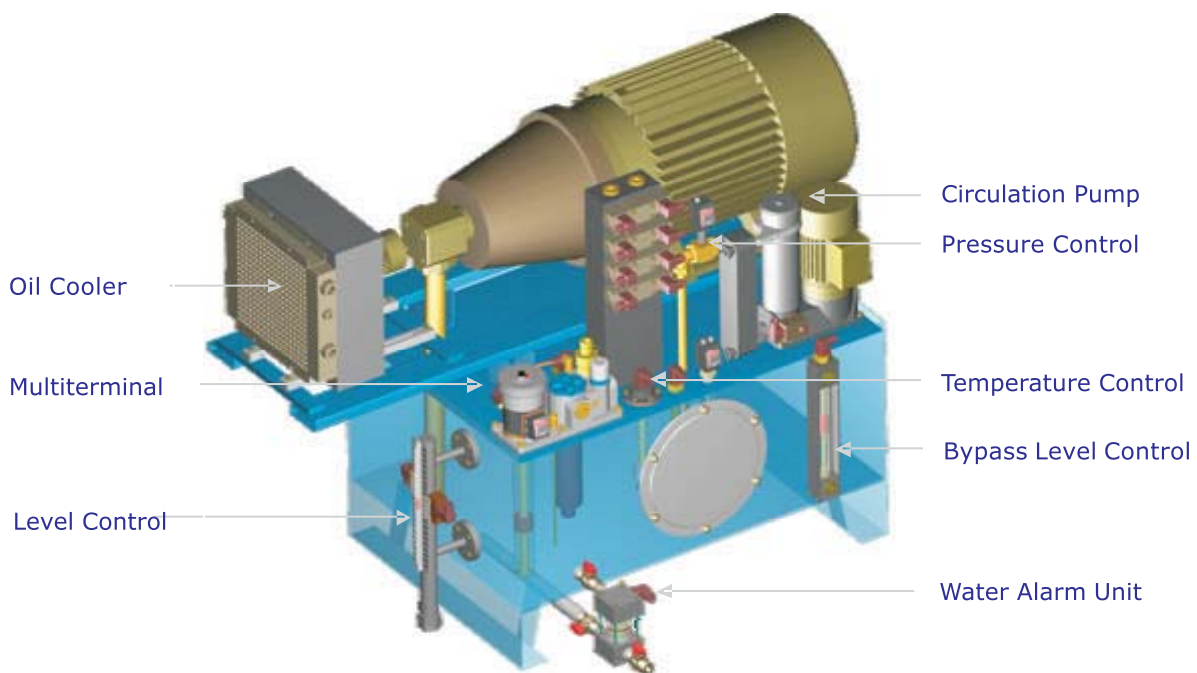
1. The control of liquid level in reservoirs, gear boxes and other complex constructions.
2. The ingress of water into fluid power or lubrication system will reduce lifetime of oil significantly and will cause damage to many components.
3. A stable operating temperature is essential for precise and trouble-free operation of hydraulic and lubrication systems.
4. Condition monitoring is considered a major factor in reducing operating and service costs of hydraulic and lubrication systems.

SOLUTION

Buhler Fluid control stands for effort to maintain a long service fluid and components in hydraulic and lubrication systems through condition monitoring by proactive leakage and temperature control as well as pressure control and oil care.

APPLICATIONS

- / Windmill applications
- / Hydraulic power packs
- / Automotive factory automation
- / Food industry
- / Injection moulding machinery
- / Gear boxes, transmissions
- / Rolling mills
- / Hydraulic presses
- / Machine tools
- / Lubrication systems
- / Shipyards



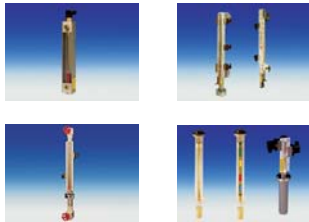
Fluid Control of Hydraulic Systems

→ Products

The following product range has been specifically developed for the manufacturer of hydraulic power packs and oil supply systems for lubrication circuits. The combination of standard functions typically found in these industries, into units and subsystems, follow two targets: reduction of demand for space and installation costs for the benefit of the system integrators, improvement of maintenance due to the agglomeration and better accessibility of maintenance points for the benefit of the system operator.

TANK TOP LEVEL CONTROL : →

- Available fluid control terminal, multi-terminal, breather and filling adapter with all basic functions in one
- Available adjustable visual and electrical level controls
- Directly attached electronic contact thermometers available
- Connecting flange according to DIN 24 557 part 2



← BYPASS LEVEL CONTROLS :

- A combination of visual and electrical level control.
- For operating pressures from 0 to 360 bar.
- Shut off valve integrated. Available Compact flange valves
- Transparent sight glass with integrated electrical level control
- Mounting heads may be rotated by 90°

TEMPERATURE CONTROLS : →

- A range of cost effective temperature switches temperature sensors, temperature transmitters and displays



Temperature Switches :

- Switches with bi-metal contact, 2 contacts in one switch available
- Connection boss with elastomer seal and Electrical connector
- DIN connector plug in adjustable steps of 90°. G 3/4 " thread optional
- Tank top or external installation possible
- Up to six programmable alarm outputs with relay

Temperature Sensor / Transmitter series :

- Cable connector standard
- Variable insertion depth
- Spring loaded sensor also available

Oil Filters & Filter Units

- Qualified filtration is one of the essentials of our Fluid control activities. We provide the supply of both, complete filters and replacement elements.

← FILTERS :

Off-line Units :

- Fits into a van or trailer
- Off-line filter unit for mobile use in the workshop on site or for commissioning plant and is easy to displace
- Integrated drip pan with drain cock & filter with high dirt holding capacity
- Interchangeable DIN filter elements which provides qualified system cleanliness
- May also be used for filling and draining the reservoir

Cooling / Filter Units :

- Off-line filter units combined with very efficient brazed plate coolers.
- Low noise ge-rotor pump
- Filter with contamination indicator
- Oil / air blast cooler with pump and filter integrated
- May also be used for filling and draining the reservoir
- Selection of high quality DIN filter elements for specified system cleanliness possible

← COOLERS :

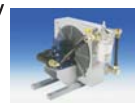
Oil- / Water Coolers :

- Brazed plate coolers offer a far better performance than traditional shell and tube heat exchangers.
- Highly efficient heat transfer & low water consumption
- Available Shell & tube coolers as certain of applications still require their use.
- Due to highly turbulent flow very little tendency of fouling, almost maintenance free
- Gasketed plates



Oil- / Air coolers :

- / Available also with integrated circulation pumps for off-line installation.
- / By-pass also available
- / High performance off-line coolers with compact dimensions, motor with two spindles for pump and fan.
- / Broad range up to 110 kW heat transfer
- / Matrix with defined dynamic fatigue life and easy to dismantle
- / A broad range of high performance air blast coolers cover most applications in the fluid power industry



← CIRCULATION PUMPS

- / For applications in fluid power or lubrication systems.
- / Low noise emission & good suction pressure
- / Low sensitivity to particulates
- / Ideal for the use in off-line filters and coolers and for the circulation of lube oils.



← WATER ALARM UNITS :

- / Effective surveillance of free water in oil.
- / Small indication volume makes it also suitable for small reservoirs
- / Reliable physical detection method
- / Up to 10 bar operational pressure
- / With mounting flange & Contacts: opener, closer or change over
- / Available functions: level control and water alarm detection



← PRESSURE CONTROLS :

- / Transducers with analog output and electronic pressure switches for direct or remote installation
- / Easy Mont rail system allows a very cost effective installation for applications where the indication is required remote from the measuring point.
- / Pressure ranges: 0-10, 0-25, 0-100, 0-250, 0-400 and 0-600 bar & Flexible cable connection.



← FILTER MONITORING :

- / Signal suppression during cold start and temporary pressure peaks
- / Visual/ electrical indication of status and fault
- / Self-checking with reset function, operating pressure max. 400 bar
- / Return-line filter and 2 alarm out puts
- / Differential pressure, back pressure
- / Capacity sensor with two standard analogue output signals 4 20 mA for monitoring filter capacity



← DISPLAY AND CONTROL UNITS :

- / Display and control units with a standard analogue input signal 4 - 20 mA.
- / Different adjustable indication units for level, temperature and pressure
- / Easy hydraulic installation with just one sealing point
- / Cable with unlimited length between transmitter and control unit
- / 5-digit, 14mm LED display background illuminated
- / Also Atex approved switch amplifiers for level and temperature switch available
- / Input signals 0-20 mA, 4-20 mA or 0-10V DC optional
- / Optional pc boards. Up to four switch points, 0/4-20 mA or 0-10 V analogue outputs, RS 232 interface

← APPROVED DEVICES :

- / The machine tool industry, the marine and offshore industries, or hazardous areas require specifically designed and approved equipment. Buhler offers for such areas a Tank top level and Temperature controls approved by different classification bodies.



AXIS

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