

HYDAC INTERNATIONAL

**Filter Systems.
Systematic
Fluid Service.**



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HYDAC

Your Professional Partner for Ideal Conditioning of Your Operating Fluids.

Customer focus is company policy.

With over 6,500 employees worldwide, HYDAC is one of the leading suppliers of fluid technology, hydraulic and electronic equipment.

We have a wide-ranging and versatile portfolio of innovative products and systems. This, combined with our expertise in development, manufacturing, sales and service, has grown over time, meeting our customers' requirements and providing solutions for the most diverse challenges associated with fluid and lube oil monitoring and conditioning in almost all sectors of industry.

Global presence. Local expertise.

With over 45 overseas companies, and more than 500 sales and service partners in all industrial countries HYDAC not only has worldwide presence, but local expertise in close proximity to the customer and his projects.

HYDAC system solution: One contact. One supplier. One responsibility.

Wherever you need us, we are there for you. Whatever the application, we will help you not only by finding the most effective solution, but also because we manufacture components and systems under our own responsibility.

World-wide specifications and approvals.



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Systematic Fluid Service. From HYDAC.

The trend for miniaturisation of components and systems continues. At the same time better and better performance must be achieved at maximum efficiency. This increases the requirements both for monitoring as well as conditioning of the operating fluids.

In the early days of fluid conditioning, sporadic or preventive cleaning was considered sufficient. Today, systematic fluid service, which is adapted to the fluid and system conditions, is necessary. This safeguards productivity, prevents machine downtime and reduces operating costs.



As a versatile supplier of products and services, finding a solution for the customer is our priority. Activities in fluid conditioning have over the years expanded through close cooperation with operators and partners into the areas of fluid monitoring and technical cleanliness.

In close cooperation with end-users and partners, we work on new challenges. We develop solutions which reflect HYDAC's innovative product portfolio and broad-based industry knowledge.

Direct contact, proximity to the market and looking beyond our own horizons are fundamental to the continuous improvement and expansion of our product range.

With our comprehensive range of fluid sensors, systems, power units, filter elements and laboratory equipment, HYDAC can support you with professional fluid engineering, a worldwide distribution network and service.

This is backed by decades of experience in almost all industries and applications, a global network of production facilities and an in-house research and development centre.

The Benefits to You:

- Maintenance intervals are extended
- Critical machine conditions are identified in good time
- Defence against unjustified complaints
- Basis of a guaranteed availability concept, maintenance scheduling, etc.
- Reduction in the Life Cycle Cost (LCC)
- Improvement in service life for both components and system filters
- Greater machine availability
- Longer oil change intervals
- Responsible management of resources
- Reduction in costs as a result of less production waste
- Identification and elimination of weak points in processes
- Reduction in production-stage failures
- Optimization of both internal and external handling processes
- Documentation of the technical cleanliness of components and systems according to standards ISO 16232 / ISO 18413

More Efficiency for Your Operating Fluids.

Fluid Condition Monitoring

- Monitoring the operating fluid of hydraulic and lube systems to establish condition-based maintenance
- Measurement parameters: particle contamination to ISO, SAE, NAS; water saturation; metallic wear particles; oil ageing
- Solutions for permanent system installation, including hydraulic and electrical adaptation (Online Condition Monitoring)
- Plug & Work measuring equipment for sporadic system analysis (Offline Condition Monitoring)

Fluid Conditioning

- Stationary and mobile fluid service systems for filtering, dewatering, degassing and conditioning operating fluids.
- Removal of particle contamination, water, oil ageing products and gases
- Mobile and stationary conditioning systems
- Supplied ready for integration of fluid sensors
- Filter element technology specifically for offline use
- High contamination retention capacity
- High filtration performance

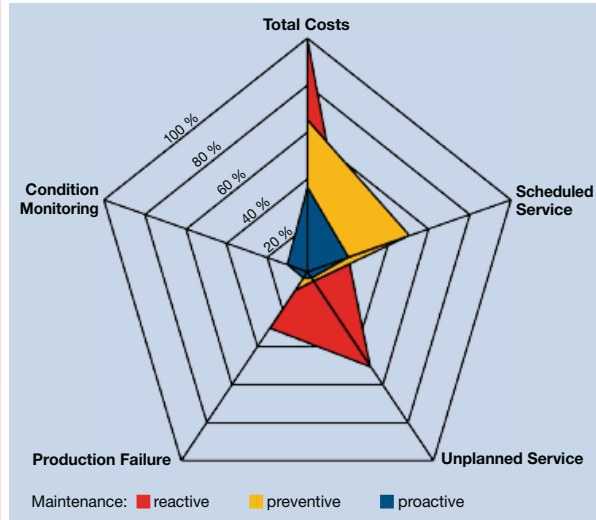
Technical Cleanliness

- Test equipment and modular systems for analyzing the technical cleanliness of components and systems.
- Extraction methods: spraying, rinsing, ultrasonic (laboratory)
- Simple operation via PC-controlled sequence
- Indirect cleanliness analysis of the rinsing fluid via particle counter (end-use simulation)
- Reliable and reproducible analysis results



Economy by System Design.

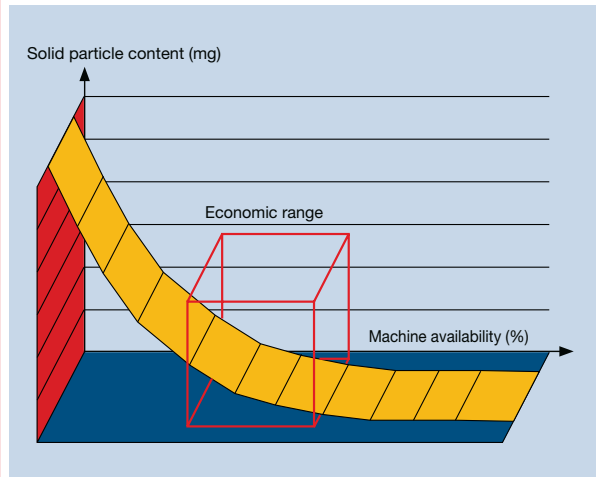
Fluid Condition Monitoring



- Maintenance intervals are extended
- Critical machine conditions are identified in good time
- Defence against unjustified complaints
- Basis of a guaranteed availability concept, maintenance planning etc.
- Reduction in the Life Cycle Cost



Fluid Conditioning



Elimination of the solid contamination from the oil to reduce:

- Component wear
- Internal leakage
- Control inaccuracies
- Jamming of valves
- Sludge accumulation in the oil
- Acceleration in oil ageing

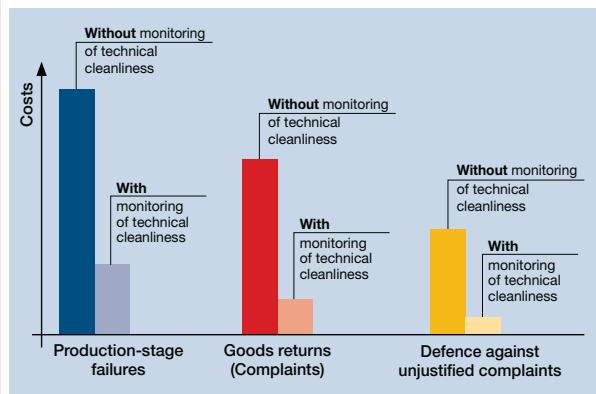
Elimination of water from the oil to reduce:

- Corrosion
- Wear
- Oil ageing

Elimination of gases from the oil to:

- Reduce corrosion
- Reduce oil ageing
- Increase energy efficiency
- Increase production output
- Reduce unit costs
- Increase operating safety

Technical Cleanliness



- Reduction in costs due to less production waste
- Identification and elimination of weak points in processes
- Reduction in production-stage breakdowns / product recall campaigns
- Optimization of both internal and external handling processes
- Documentation of technical cleanliness of components and systems to ISO 16232 / ISO 18413 Standards

In Every Sector.

The versatility of the products from HYDAC Filter Systems products enables applications in numerous sectors of industry:

Steel industry



Fluid condition monitoring and fluid conditioning in hydraulic circuits and lubrication systems e.g. of presses, rolling mills, central hydraulics

Paper industry



Fluid condition monitoring and fluid conditioning on calenders, refiners, dryer section/wet-end

Plastics industry



Fluid condition monitoring and fluid conditioning to increase machine availability

Power industry



Fluid condition monitoring and fluid conditioning of lube systems on turbines, boiler feed pumps, transmissions etc.

Automotive



Monitoring the technical cleanliness of components and systems, process chain analysis, optimization of part washers used for technical cleanliness, fluid conditioning monitoring and fluid conditioning on hydraulic and lube systems of presses, machine tools, plastic injection moulding machines and test rigs.

Machine tools



Fluid condition monitoring and fluid conditioning on hydraulic and lube systems

Mining



Fluid conditioning on mining and conveyor systems

Offshore



Fluid condition monitoring and fluid conditioning on hydraulic and lube systems

Marine



Fluid condition monitoring and fluid conditioning on hydraulic and lube systems

Aviation



Fluid condition monitoring and fluid conditioning on hydraulic and lube systems, test rigs and kerosene filling stations

Wind power



Fluid condition monitoring on gearboxes and hydraulic systems, fluid conditioning on gearboxes

Mobile hydraulics



Technical cleanliness with monitoring of the condition of components on delivery and despatch, offline filtration and dewatering to condition biodegradable fluids and hydraulic oils

For Every Application.



Filter Systems: from Analysis to Accessories.

Measurement and analysis systems



HYDAC offers a comprehensive range of easy-to-use measurement and analysis equipment. Whether it be solid particles or fluid contamination, for sporadic checking or as a permanent installation, in field conditions or in the laboratory.

The right tool for every application:

Fluid sensors (to measure particle contamination and water saturation in oil)

Sampling systems

Laboratory equipment

Component analysis equipment

Software and controls for:

- Predictable availability of systems and components
- Prevention of sudden failures
- Reduction of operating costs
- Prevention of catastrophic damage to systems and the subsequent supply shortages
- Preventive and condition-oriented maintenance

Fluid conditioning systems



Mobile filtration systems

For servicing several systems, there are convenient mobile units for particle filtration available.

- Portable filtration units
- Mobile filtration units

Advantages:

- Clean filling and flushing
- Flexible as can be used on different systems
- Relieves the load on the main flow filter
- Increased system availability
- Reduction in Life Cycle Cost

Stationary filter systems

The units in this wide product range are installed permanently offline.

Stationary filter systems from HYDAC are designed to remove particles (with or without integrated fluid sensors)

Advantages:

- Offline filter for working filters
- Simple to retrofit on existing plants
- Relieves the load on the main flow filter
- Increased system availability
- Reduction in Life Cycle Cost

Dewatering / degassing and other fluid conditioning systems

The HYDAC product range has both mobile and stationary fluid service systems for:

- Dewatering using vacuum or coalescence techniques
- Elimination of acids and oil ageing products
- Degassing and conditioning of transformer oil
- Removal of oil from water

Fluid conditioning systems with fluid sensors



The mobile and stationary fluid conditioning units from HYDAC can be supplied with tried and tested fluid sensors as an option. Integrated fluid sensors enable the fluid condition to be monitored during cleaning.

ContaminationSensor CS 1000

To monitor particle contamination in hydraulic and lubrication fluids.

AquaSensor AS 1000

To monitor the water saturation (in %) in hydraulic and lubrication fluids

MetallicContamination Sensor MCS 1000

To monitor metallic particle contamination (ferromagnetic and non-ferromagnetic particles) in lube fluids

Oil Condition Sensor HYDACLab®

To monitor the relative change in dielectric constant

SensorMonitoring Unit SMU 1200

Display unit for displaying and saving measured data from HYDAC fluid sensors

Filter elements

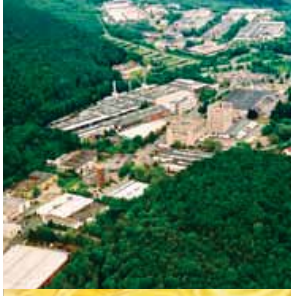


For the numerous offline filters in the product range there are various types of filter elements to remove solid particles, water and oil-ageing products, in pleated or Spun-Spray designs.

Advantages:

- Excellent filtration ratings
- Long service life thanks to high contamination retention capacity
- Reduction in Life Cycle Costs

Global Presence. Local Expertise. www.hydac.com



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HYDAC USA



HYDAC China



HYDAC Korea



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HYDAC England



HYDAC Czech Rep.



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