

HYDAC

INTERNATIONAL

**Service and
Fluid Engineering for
Automotive Production.**

Final Process

No Start	Lack Rep	Scw Rep	Wass Rep	RB Rep
ECOS	Spur	DVT	WASS	Care
			WASS	Care
100	90	95	95	95

ZP
Ziel
200

UML
Ziel
200

ON HOLD

DIREC
Ziel
200

HYDAC

Your Professional Partner for Automotive Production.

With over 5,000 employees worldwide, HYDAC is one of the leading suppliers of fluid technology, hydraulic and electronic equipment.

Our wide range of products, combined with our expertise in development, production, sales and service enables automotive production worldwide to overcome the most diverse problems.

Our quality and environment certification to ISO 9001/2000 and ISO 18001 denote first class quality and responsible management of our resources.

Global yet local.

With 40 overseas subsidiaries and over 500 distributors and service partners, HYDAC is your reliable partner worldwide.

Worldwide approval in the automotive industry.

DESINA-conforming products.

Worldwide component availability.



HYDAC Headquarters Germany



HYDAC USA



HYDAC China



HYDAC India



HYDAC Korea



HYDAC France



HYDAC Italy



HYDAC Czech Republic



HYDAC in Automotive Production.

HYDAC Fluid Engineering is a total package of technical components, systems and services for our end customers.

Our aim is to increase machine availability and to optimise hydraulic systems, as well as reduce operational costs.

HYDAC Fluid Engineering covers the complete range of operating fluids, whether it is hydraulic oil, lubricants, cooling lubricants, water, cleaning or test fluids.

HYDAC Fluid Engineering encompasses:

- Reduction in start-up breakdowns by optimising technical cleanliness
- Reduction in consumption of operating fluids
- Increase in availability of machines and systems through condition monitoring
- Analysis, advice and engineering throughout the process chain
- Component and system expertise
- Service, repair, maintenance and the supply of spare parts
- Comprehensive training package

Measurement technology and condition monitoring for machine tools and presses

HYDAC sensors are used for online monitoring, recording and diagnostics of fluid-related parameters such as:

- Pressure
- Filter differential pressure
- Overheating
- Change in viscosity
- Water content
- Particle contamination
- Fluid level

These first class sensors enable intervention in production processes in good time.



Pressure switch EDS 3000



Pressure Transmitter HDA 4000



Fluid Level Sensor ENS 3000



Water and Contamination Sensor as FluidMonitoring Module.



HYDACLab® HLB 1000 Oil Condition Sensor



Water Sensor AS 1000



Clogging Indicator GW

Decentralised supply of cooling lubricants using high pressure unit

HYDAC back-flushing and candle filters safeguard the service life of systems very efficiently. HYDAC high pressure units reliably provide the required pressures and fluid volumes. Failures at rotary joints, pumps and tools are minimised thanks to consistently high fluid quality.



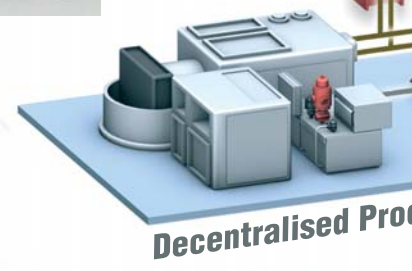
Cooling lubricant pressure unit



Automatic Back-flushing Filter RF4® and RF3®



6



Decentralised Production



1 Fluid panel consisting of Hydraulic Power Unit, Hydraulic Control, Filtration, Pneumatics, Central Lubrication and FWKS Cooling System.



2 Pressure Boost Unit



3 Automatic Back-flushing Filters



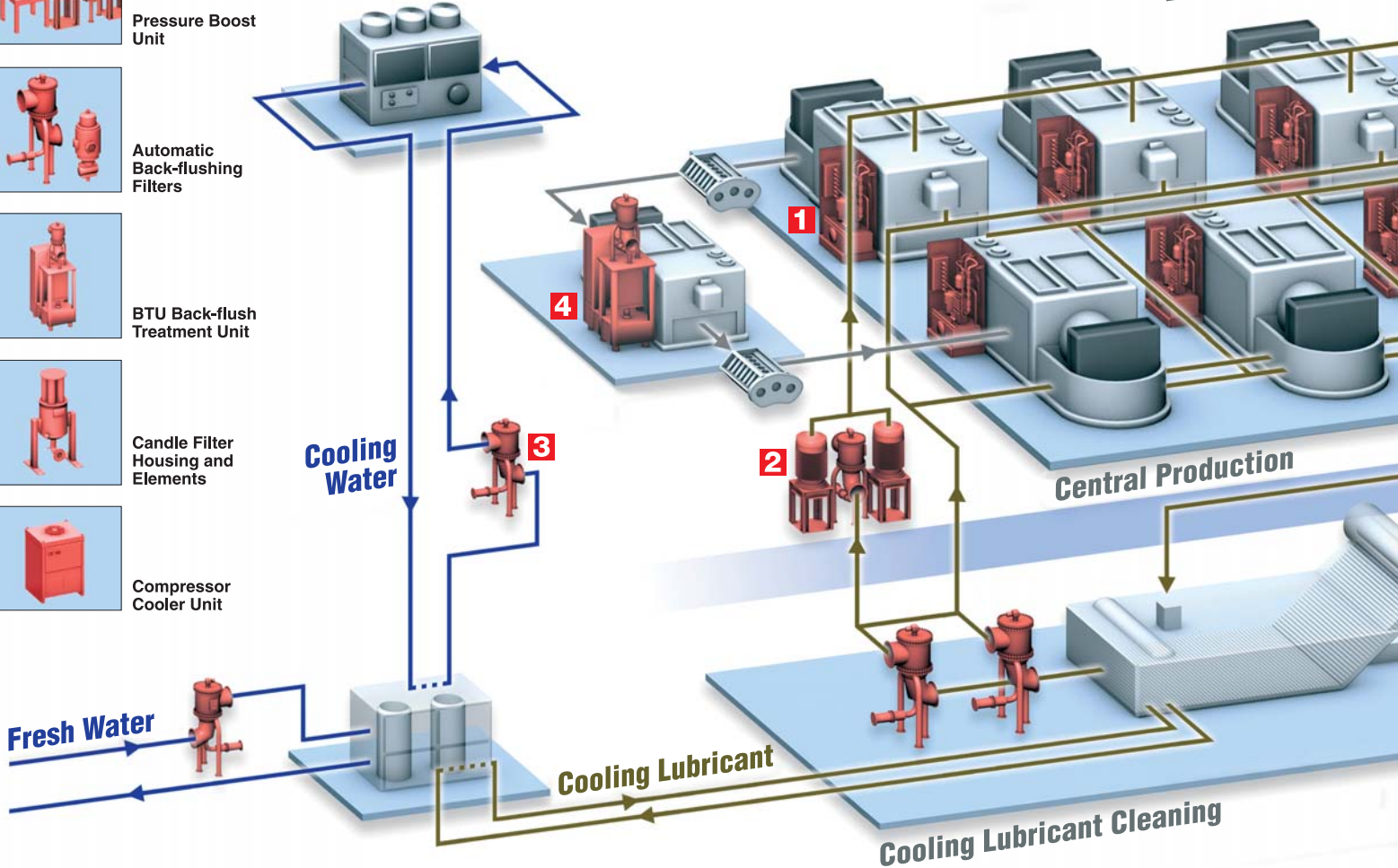
4 BTU Back-flush Treatment Unit



5 Candle Filter Housing and Elements



6 Compressor Cooler Unit



Central Cooling Lubricant Supply

Modern production techniques with high cutting speeds and large quantities require a high level of reliability and ease of maintenance. HYDAC ensures production quality by using reliable filters and cooling systems to maintain consistent fluid condition. HYDAC filter systems are used mainly as protective filters after the central plant or as working filters. Fluid lifetime is thus extended, overhaul work is reduced and system breakdowns and rejects due to defects are minimised.



Cooling lubricant cleaning using automatic back-flushing filter RF3® for flow rates up to 50,000 l/min per filter.



Immersion Cooler

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Machine Tools / Presses

Increasingly high speeds, pressures, dimensional precision and availability of the machines demand compact, efficient and high capacity systems. HYDAC products such as filtration technology (including filters which require no consumables and absolute filters for highly sensitive applications), precision-temperature cooling systems using air, water or compressor cooling, compact power units and hydraulic power units, right up to complete fluid panels and accumulator stations, have proved themselves worldwide. HYDAC provides solutions - from the components to complex systems.



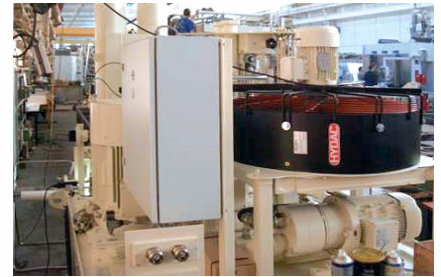
Compressor Cooler Unit
RFCS



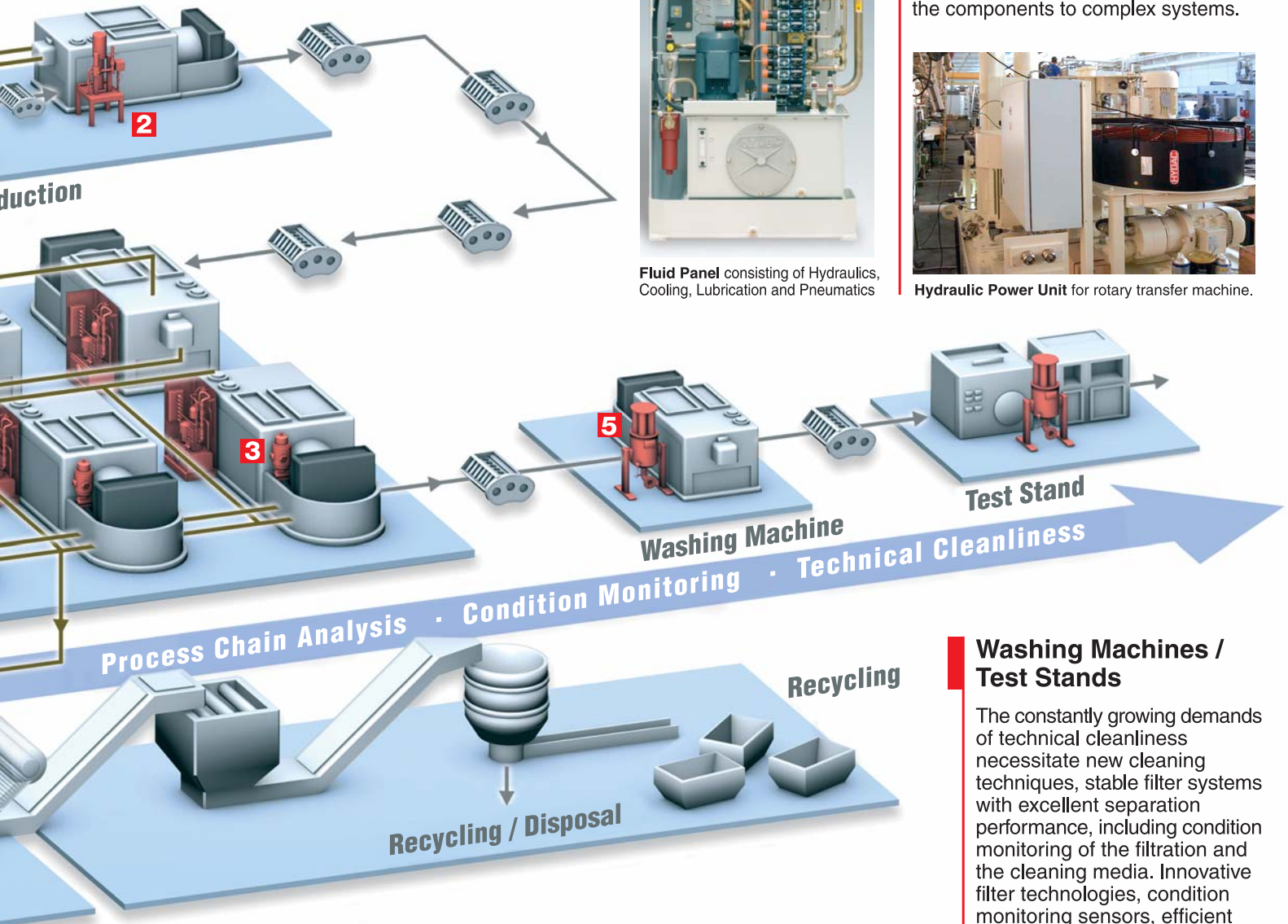
Water Cooling System
FWKS



Fluid Panel consisting of Hydraulics,
Cooling, Lubrication and Pneumatics



Hydraulic Power Unit for rotary transfer machine.



Washing Machines / Test Stands

The constantly growing demands of technical cleanliness necessitate new cleaning techniques, stable filter systems with excellent separation performance, including condition monitoring of the filtration and the cleaning media. Innovative filter technologies, condition monitoring sensors, efficient hydraulics and excellent temperature precision are significant requirements of modern test stands.



Stainless Steel Elements



FlexMicron Elements



Housing with
Candle Filter Elements.



Hydraulic Power Units for bodywork test stands.

Technical Cleanliness

The reduction and elimination of start-up breakdowns and more sophisticated technology combined with higher warranty benefits, place ever greater demands on cleanliness management. Cleanliness monitoring of the components produced, the source of the contaminating particles on the surfaces in contact with the fluid and the necessary chemical analysis, are areas of activity in which HYDAC is collaborating with various automotive manufacturers and suppliers.

The specifically developed extraction test stands in the series Contamination Test Unit CTU and Contamination Test Module CTM for testing technical cleanliness have numerous applications in automotive production.

HYDAC also carries out cleanliness analyses according to VDA 19 / ISO 16232 and offers scanning electron microscope (SEM) analysis and energy dispersive X-ray (EDX) analysis, depending on the requirement.



Compact Power Units for clamping, holding and controlling manipulating functions.



Process Optimisation

In our role as partners in highly automated production techniques, we are encouraging progressive visualisation of the processes, the continuous assurance of product quality and constant cleanliness monitoring of the manufactured components.

New measurement technology, sensors, visualisation and measures for reducing contaminating particles in operating fluids, on the components and in the process chain, are issues which are increasingly gaining importance.



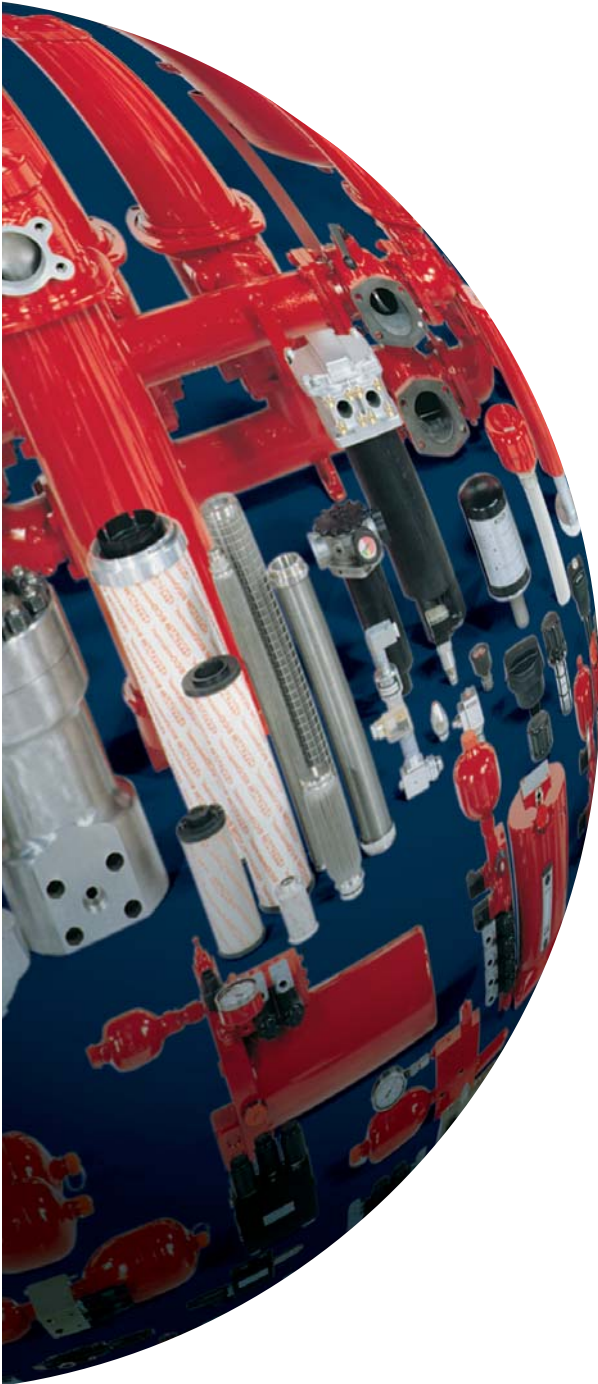
Accumulator Station for presses and test stands.



Fluid Engineering and Service – worldwide.

Systems and Service for analysis and diagnostics:

70 - 80 % of all breakdowns in hydraulic and lubrication systems are due to excess contamination of the fluids and components used. In practice, this is often not sufficiently recognized. HYDAC offers a comprehensive range of easy-to-use measurement and analysis equipment to monitor fluid and component cleanliness. Fluid laboratory vehicles are at your service worldwide.



Fluid Engineering for optimisation, maintenance and training.

As a specialist in systems and fluid service, HYDAC provides individual programmes from cleaning to complete maintenance packages and action plans for system optimisation.

Our aim is to increase machine availability and productivity. The HYDAC Training Centre provides comprehensive, experience-based knowledge in all aspects of hydraulics, measurement technology and maintenance. We also hold training sessions at customers' own premises.



Brochure: Accumulators DEF 3.000



Brochure: Filtration Range DEF 7.000



Brochure: Industrial Processing DEF 7.700



Brochure: Systematic Fluid Service DEF 7.929



Brochure: Compact Hydraulics DEF 5.300



Brochure: Accessories DEF 6.100






Brochure: Electronics 18.000



Broch.: Cooling Systems DEF 5.700

Global presence. Local expertise. www.hydac.com



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