



CJC™ Filter Separator

Solutions for separation of water, removal of particles, adsorption of oxidation by-products and varnish from oils



80% of all breakdowns in oil systems are related to particle and water contamination of the oil



Your Challenge

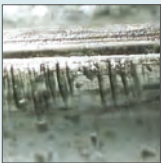
80% of all breakdowns in oil systems are related to particle and water contamination of the oil

In-line filters do not keep the oil system clean

Particle and water contamination of an oil system will lead to various problems which can cause machinery breakdowns, frequent repairs of equipment and reduced oil lifetime. This will result in inefficient production, unnecessary expenses for repairs and frequent oil changes.



Water Contaminated Oil



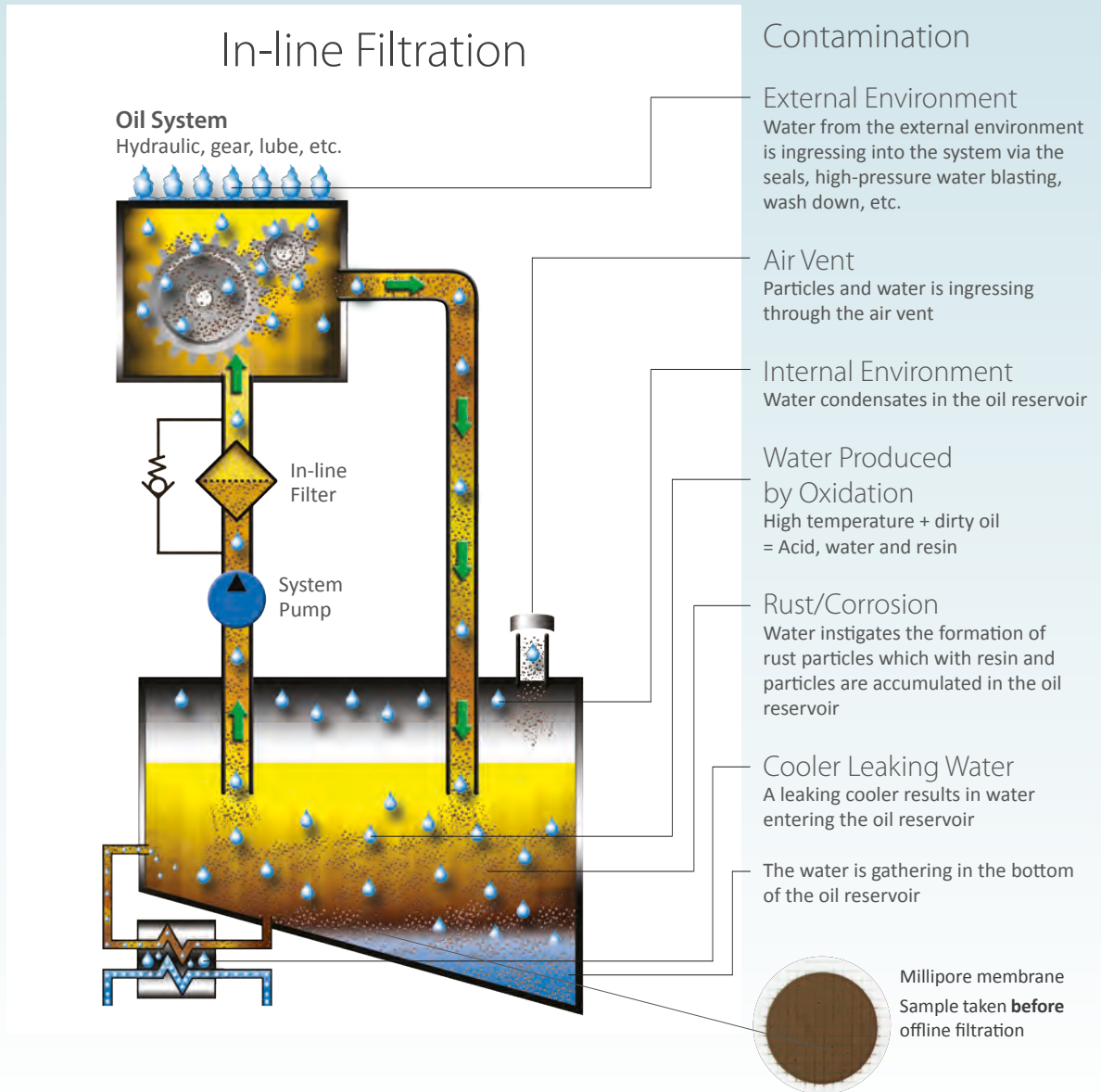
Abrasion



Corrosion/Rust



Resin/Varnish



Contamination

External Environment
Water from the external environment is ingressing into the system via the seals, high-pressure water blasting, wash down, etc.

Air Vent
Particles and water is ingressing through the air vent

Internal Environment
Water condensates in the oil reservoir

Water Produced by Oxidation
High temperature + dirty oil = Acid, water and resin

Rust/Corrosion
Water instigates the formation of rust particles which with resin and particles are accumulated in the oil reservoir

Cooler Leaking Water
A leaking cooler results in water entering the oil reservoir

The water is gathering in the bottom of the oil reservoir

Millipore membrane Sample taken **before** offline filtration

The most common types of wear caused by contamination

"Sand blasting"

When particles are transported with the high oil flow, the particles collide with metal parts, destroying the metal surface and forming new particles.



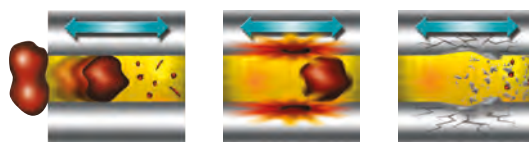
Cavitation & pitting

Occurs in areas where water is present and oil is compressed; the water implodes, causing the metal surfaces to crackle and release more particles.



Abrasive wear

When clearance size particles are wedged between movable metal parts, they destroy the metal surface.



Our Solution

Water and particle free oil through offline filtration and separation

1 Filter - 4 Solutions

The benefits that you get when implementing a CJC™ Filter Separator will have a positive effect on your maintenance budget as well as increase your productivity and reduce your energy consumption.



PTU 15/25



PTU2 27/27



PTU1 27/54



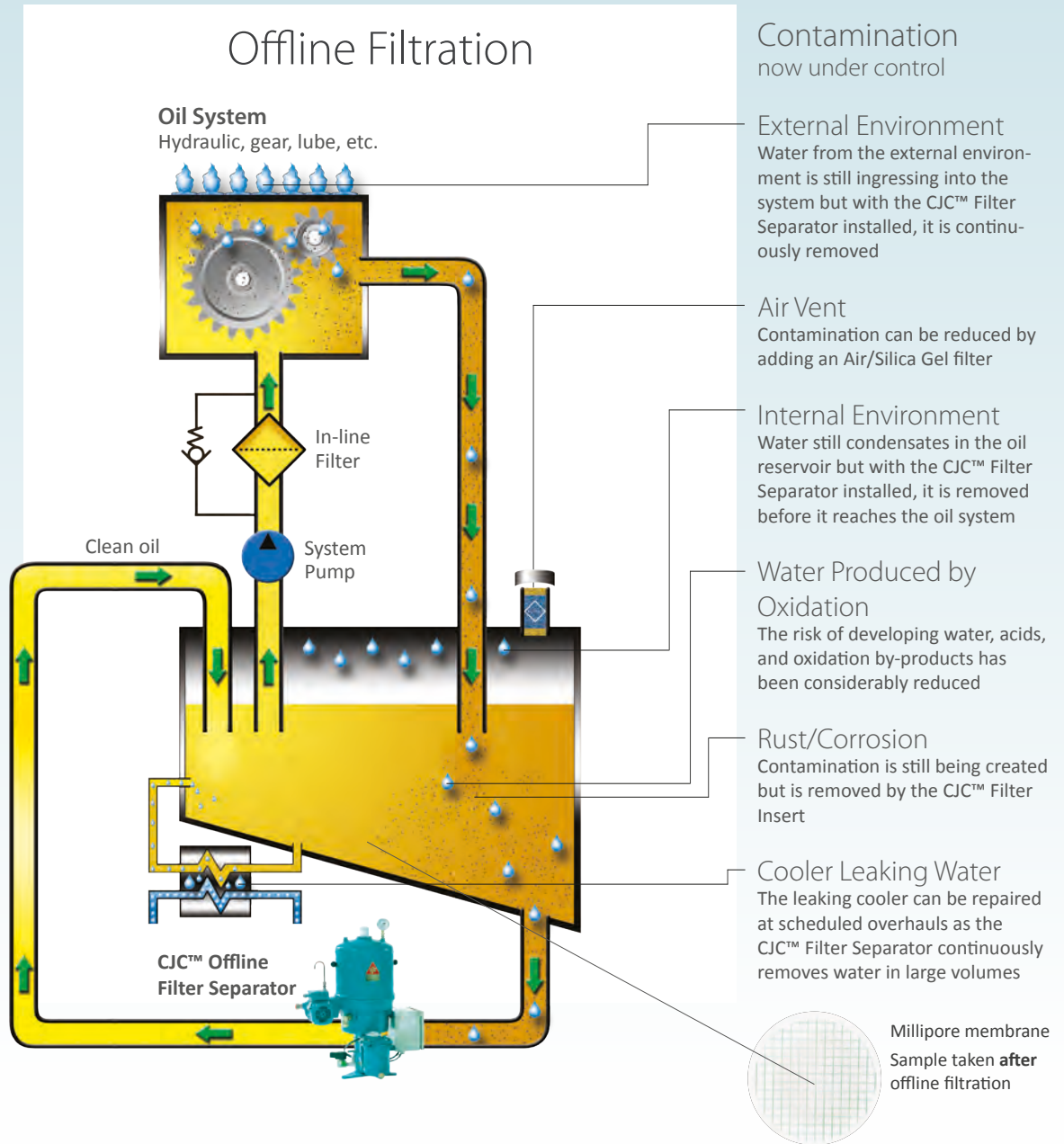
Thruster



PTU3 4x27/108



Marine Diesel Purifier



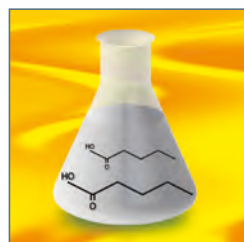
The most common types of contamination sources



Removal of Particles
Particles down to 0.8 µm are retained in the filter mass



Separation of Water
The filter insert and coalescer element separates the water



Removal of Acid
Special inserts neutralise acidic components in the fluid



Adsorption of Oxidation
Sludge/varnish in the oil is attracted to the polar sites of the filter mass and is retained there

Our Product

CJC™ Filters - Simple, Efficient and Low Maintenance

Key Features of the CJC™ Filter Separators

The CJC™ Filter Separators are depth filters for diesel, hydraulic and lubricating oils for all sizes of oil systems.



Coalescing of Water in the CJC™ Fine Filter Insert
The coalescing process starts in the filter insert. On their way through the cellulose fibres, microscopic water particles aggregate into water droplets, sinking down into the coalescing element



Separation of Water in the CJC™ Coalescing Element
The droplets aggregate (coalesce) in the coalescing element and settle in the bottom of the housing and filter base

Main Components PTU2 27/27 Series

Pressure Gauge
When the gauge indicates a pressure drop of 2 bar, the filter insert is due for replacement

Filter Housing
Easy to remove when changing the insert

CJC™ Filter Insert
3 µm absolute filtration ratio

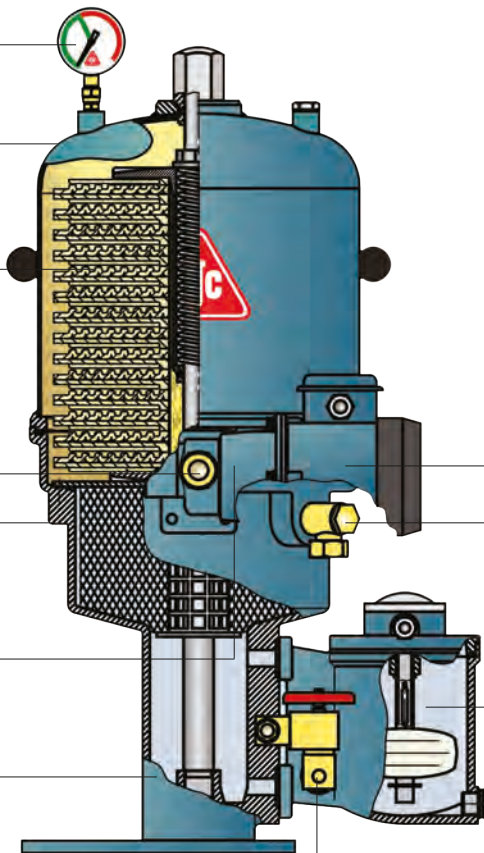
Oil Inlet
Contaminated oil is entering the filter

Coalescer Element
Cleanable stainless steel

Gear Pump
Reliable gear wheel pump

Filter Base
Constructed with fixture holes

Water Drain Valve



Electrical Motor
Low energy consumption

Oil Outlet
Clean oil is returning to the reservoir and oil system

Automatic Water Discharge Unit
Simple, mechanical level control and discharge unit



Dirty and clean CJC™ Filter Inserts

The CJC™ Filter Insert System

The modular build-up of the CJC™ Filter Inserts means that a CJC™ Filter Separator can be designed to fit any applications and requirements



Your Benefits

Reduce your maintenance cost, fewer breakdowns, fewer oil changes
- install a CJC™ Filter Separator!

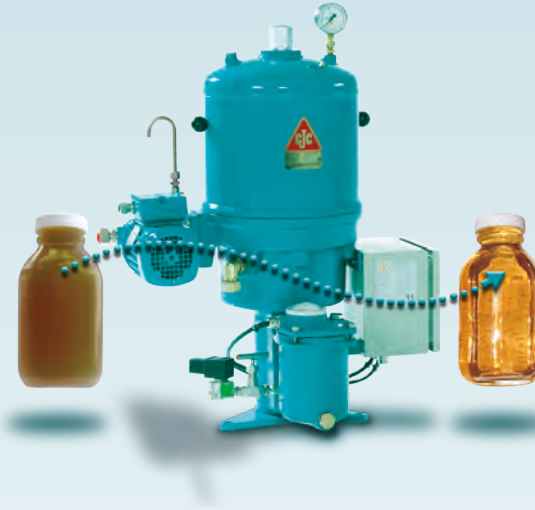
The cleanliness level achieved and maintained by offline filtration means that the predicted lifetime of machine components and oil is expected to be extended 2-10 times! The benefits that you can achieve when implementing CJC™ Offline Filter Separators will have a positive effect on many parameters such as:

Financial Benefits / Increased Productivity

- Increased uptime
- Reduced maintenance budget
- Fewer unplanned breakdowns and stops of production
- Enhanced operational precision
- Leaking coolers can be repaired at schedule overhauls

Less Maintenance

- Less wear and increased lifetime of components, oil and filter inserts
- Longer time between service intervals
- Enhanced operational precision



Lower Energy Consumption

- Lubricating capabilities remain intact
- Reduced friction
- Reduced pressure drop over in-line pressure filters
- Viscosity index is kept stable and efficiency is maintained

Environmental Benefits

- Fewer oil changes
- Reduced top-up of oil
- Less waste oil - less use of natural resources

-all advantages to the total economy!

Satisfied Customers

MARINE:

Mr. Bjørn Helge Amundsen
Tech. Superintendent
Gulf Offshore Norway, North Truck, Norway
Application: Supply vessel / work boat
Solution: CJC™ Filter Separator PTU2 27/27



"After having tested nearly every piece of water removing equipment on the market in order to solve our water and contamination problem, we went for the CJC™ Filter system, because it was simply the best. The filters did the job to our greatest satisfaction, removing particles, water and other waste products.

CJC™ Filter systems for oil maintenance are a very good investment. The return of investment is very short."

MINING:

Mr. Dave J. Gamble
Senior tribologist
Anglo American, South Africa
Application: Crusher
Solution: CJC™ Filter Separator 27/108



"The CJC™ Filter will release benefits as reduced downtime for maintenance, greatly reduced wear and consequent failures, increased availability, utilisation and production. All together, this results in extended oil life time.

This filter can easily clean the oil according to my recommendations, which is 16/14 on this type of application."

POWER:

Mr. Javier Gonzales
Mech. Maintenance Department
C.N. Vandellós II Tarragona, Spain
Application: Main Turbine, Nuclear Power Plant
Solution: CJC™ Filter Separator PTU3 5x27/108



"We bought this filter as a substitute for a centrifuge to remove the large amount of water that is generated in the turbine at start-up. But, unexpectedly, we have gained more benefits. Before installing the filter it was necessary to clean the varnish deposits off the walls in the heat exchanger at each stop of the plant. Now we just look at the system to verify that it is clean. We have never seen the oil so clean. The reliability of the equipment is increasing with time."

INDUSTRY:

Mr. Sylvester Kapias
Manager Heat Treatment
Nedschroef Altena GmbH
Application: Quench washing bath
Solution: CJC™ Filter Separator PTU1 27/108



"We already filter our quenching bath with a CJC™ Fine Filter. Therefore, we decided to run this test with the skimmed oil. By using the CJC™ Filter Separator we can annually save up to approximately EUR 70,000."

C.C.JENSEN will back you up
- we have 60 years of experience!

C.C.JENSEN - contact us today!



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