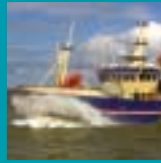




CJC™ Filter Separator

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



Intended for:

- Diesel Oils
- Gear Oils
- Hydraulic Fluids
- Various Lube Oils

Application examples:
Marine, Off-shore, Fishing,
Light and Heavy Industry



Oil Maintenance



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1

The Problem

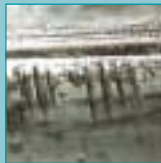
80% of all breakdowns in oil systems are related to particle and water contamination of the oil

Problems caused by contamination

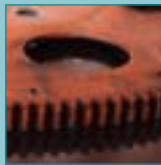
Water Contaminated Oil



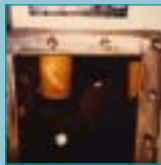
Abrasion



Corrosion /Rust



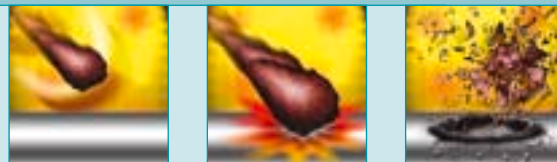
Resin/Varnish



The most common types of wear caused by contamination:

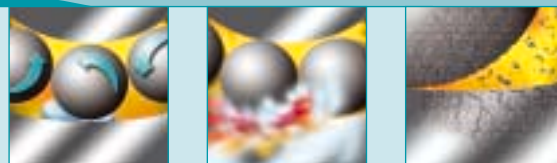
"Sandblasting"

When particles subjected to high flow velocity are catapulted against metal parts, destroying the metal surfaces and generating new particles.



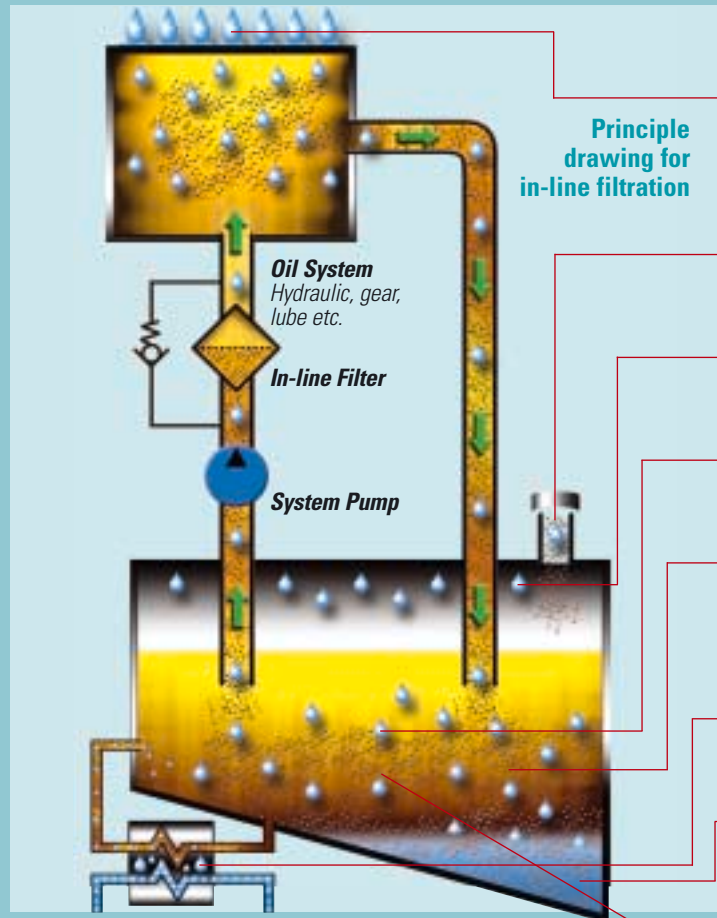
Cavitation

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



Grinding

When hard particles are wedged between movable metal parts, the metal surfaces may deteriorate and be open for further chemical subversion.



Contamination Sources:

External Environment

Water from the external environment is ingressing the system via the elements, high-pressure water blasting, washing etc.

Air Vent

Particles and water is ingressing through the air vent

Internal Environment

Water condensate 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** off-line filtration

2

The Solution

Water and particle free oil through off-line filtration and separation

PTU
15/25



The CJC™ Filter Separators combine depth filtration with water separation and are used for water contaminated lubricating and hydraulic oils.

PTU2
27-27



PTU1
27-54



PTU3
27-81



PTU3
4x27/
108



The Coalescing Principle

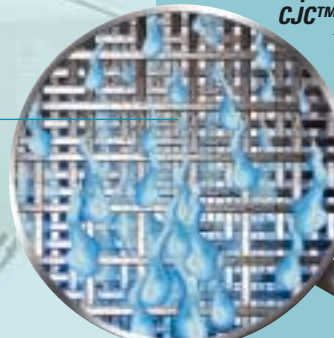
Coalescing of Water in the CJC™ Fine Filter Insert

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



Automatic Water Discharge Unit

Simple mechanical level control and discharge unit



Removal of Particles

Particles down to 0.8 µm are retained in the filter mass



Adsorption of Oxidation By-Products

Resin in the oil is attracted to the polar fibres of the filter mass and are retained there



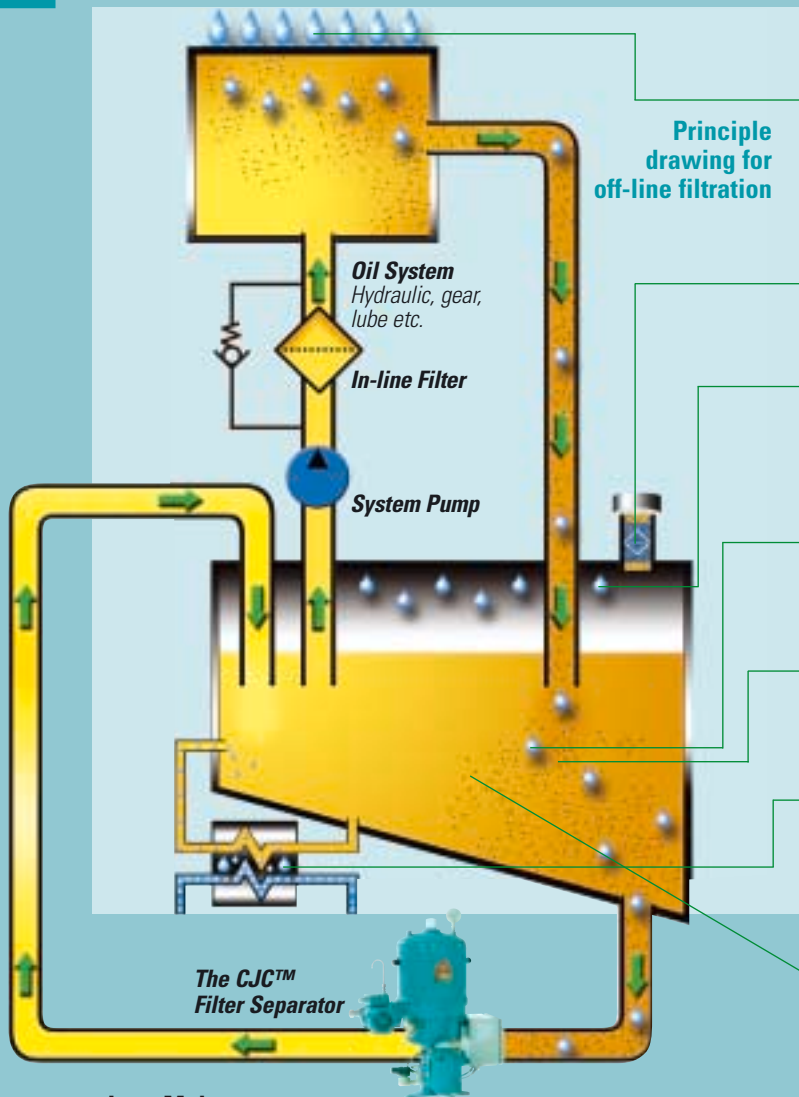
3

The Result

Less maintenance, increased productivity and lower energy consumption

Benefits and advantages of using CJC™ Filter Separators

The benefits that you can have 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.



Contamination Sources are now under control:

External Environment

Water from the external environment is still ingressing into the system but with the CJC™ Filter Separator installed it is continuously removed

Air Vent

Contamination can be reduced by adding an Air/Silica Gel filter

Internal Environment

Water still condensates in the oil reservoir but with the CJC™ Filter Separator installed it is removed before it reaches the oil system

Water Produced by Oxidation

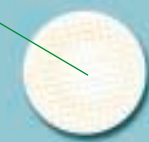
The risk of developing water, acids, and oxidation by-products has been considerably decreased

Rust/Corrosion

Contamination is still being created but is removed by the CJC™ Filter Insert

Cooler Leaking Water

The leaking cooler can be repaired at scheduled overhauls as the CJC™ Filter Separator continuously remove water in large volumes



Millipore membrane

Sample taken after off-line filtration

Water content is now maintained at low level

Less Maintenance

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

Increased Productivity

- Fewer unplanned breakdowns and stops of production
- Leaking coolers can be repaired at scheduled overhauls

Lower Energy Consumption

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

- all advantages to the total economy!



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The CJC™ Filter Separator

The CJC™ Filter Separator is of uncomplicated design and almost maintenance free

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.

Pressure Gauge

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

CJC™ Filter Inserts

3 micron absolute rating

Oil Inlet

Contaminated oil is entering the filter

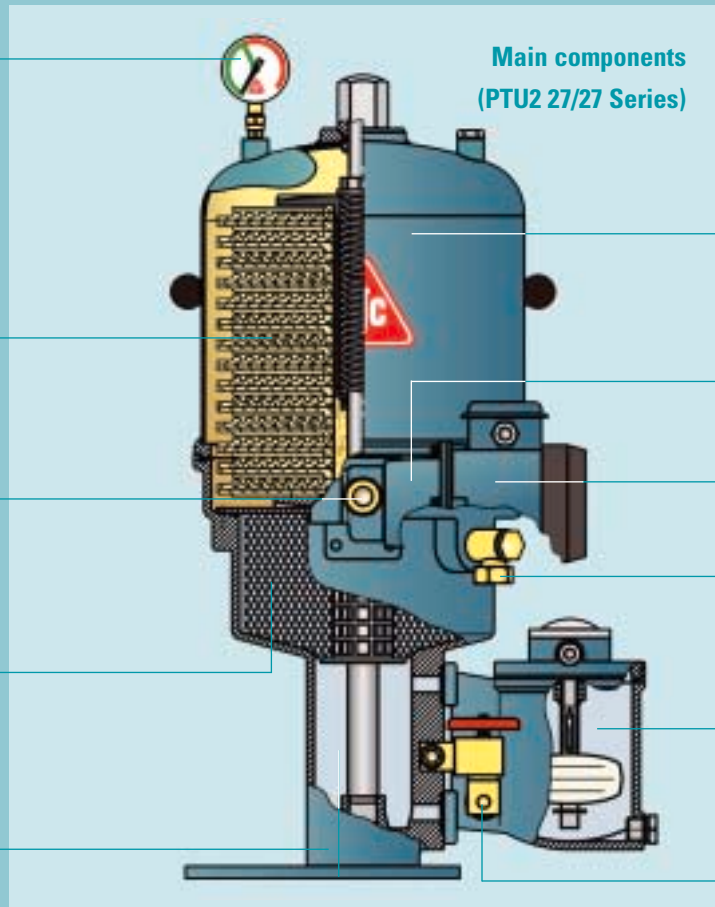
Coalescer Element

Cleanable stainless steel

Filter Base

For collecting separated water

Main components (PTU2 27/27 Series)



Filter Housing

Easy to remove when changing the insert

Gear Pump

Electrical Motor

Low energy consumption

Oil Outlet

Dry and particle free oil is returned to the oil system

Automatic Water Discharge Unit

Simple, mechanical level control and discharge unit

Water Drain Valve

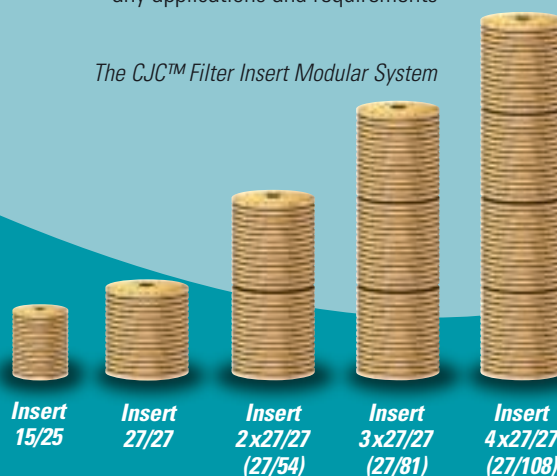
A used sliced through filter insert (sliced half way down) showing the large dirt holding capacity



The CJC™ Filter Insert System

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

The CJC™ Filter Insert Modular System



Insert 15/25

Insert 27/27

Insert 2x27/27 (27/54)

Insert 3x27/27 (27/81)

Insert 4x27/27 (27/108)



C.C.JENSEN all over the World

The CJC™ off-line Filters are distributed through our own international sales organisation and designated distributors

*CJC™
stands for
reliable
supply
world-wide*



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Find your nearest distributor on our website: www.cjcdk - or give us a call.

Your local CJC™ distributor

Oil Maintenance

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