



CJC™ Fine Filter

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



Intended for:

- Gear Oils
- Transmission Oils
- Hydraulic Fluids
- Various Lube Oils
- Quenching Oils
- Heat Transfer Oils
 - Esters
- Water Glycols
- Insulating Oils

Application examples: Light and Heavy Industries, Power Stations, Wind Turbines, Mining

Clean Oil - Bright Ideas



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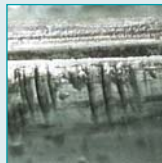
The Problem

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

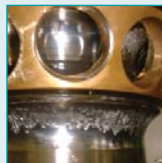
In-line filters do not keep the oil system clean

Contamination of an oil system leads to various problems which can result in machinery breakdowns, frequent repairs of equipment and reduced oil life-time. All of which means inefficient production and unnecessary expenses spend on repair and oil change.

Abrasion



Grinding



Varnish



Resin



The most common types of wear caused by contamination:

"Sandblasting"

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



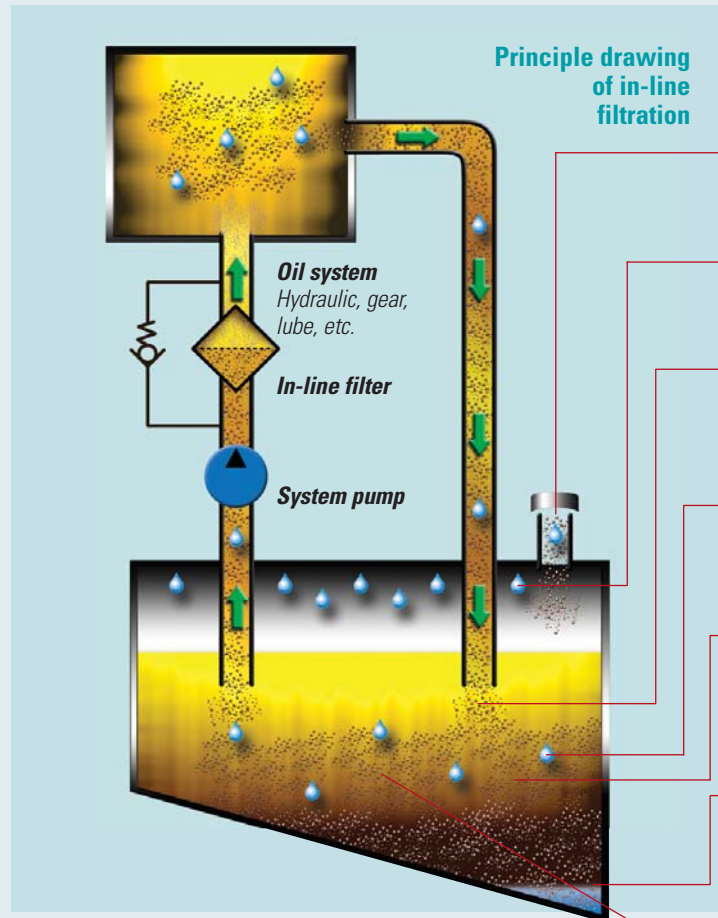
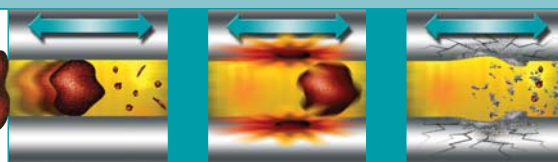
Cavitation

Cavitation occurs in areas where water is present and oil is compressed; the water implodes and blows particles off the metal surface, which crackles.



Grinding

When clearance sized hard particles are wedged between movable metal parts, it destroys the metal surface further and can result in chemical subversion.



Contamination Sources:

Air Vent

Particles and water is ingressing through the air vent

Internal Environment

Water condensate in the oil reservoir

Oil Reservoir

Contamination is returned to the oil reservoir from the system

Water Produced by Oil Degradation

High temperature + dirty oil = Acid, water and resin

Rust/Corrosion

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

Resin, micro particles and water are accumulated in the bottom of the oil reservoir



Millipore membrane

Sample taken **before** off-line filtration

2

The Solution

Clean oil through off-line filtration and highly qualified technical back-up

**CJC™
Off-line
Fine Filters
fit all
oil systems**

The CJC™ depth filter insert has a very large dirt holding capacity. CJC™ Filters are therefore almost maintenance free and have low operation costs.

All CJC™ Fine Filter Inserts have a 3 µm absolute filtration ratio and will remove particles, resin and water in one and the same operation.

HDU
15/25 PV



HDU
27/27 P
(sliced)



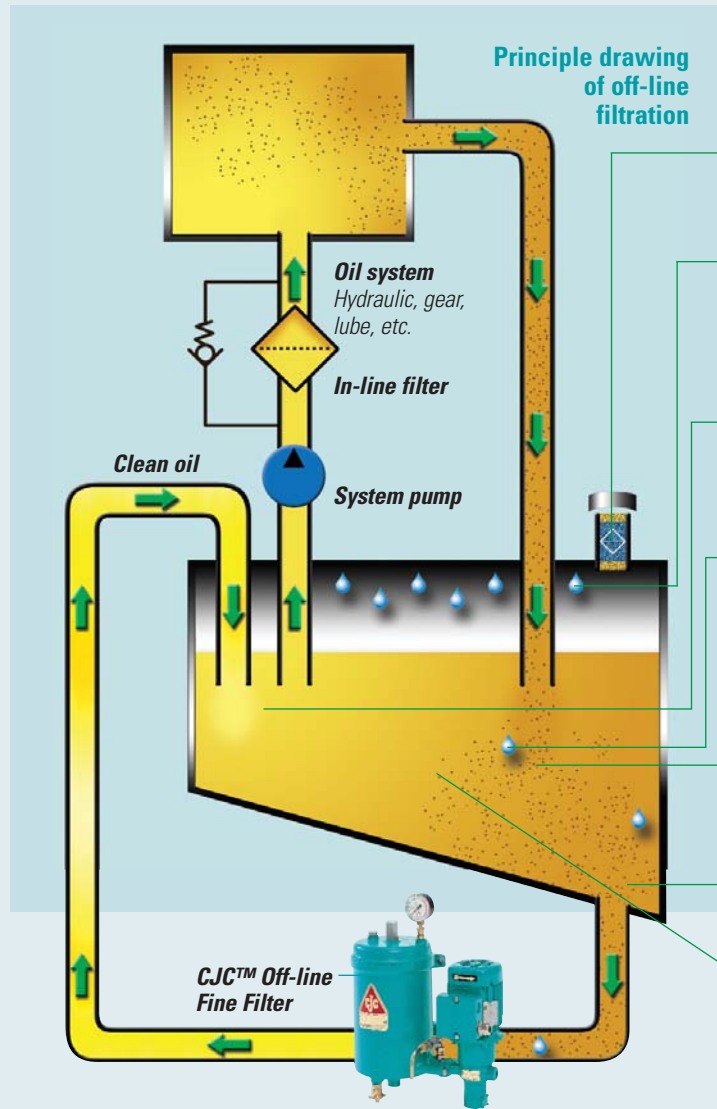
HDU
27/54 P



HDU
2x27/
108 P
GP-EPT



HDU
427/
108 P



Contamination Sources are now under control:

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™ Fine Filter installed it is removed before it reaches the oil system

Oil Reservoir

Clean oil from the CJC™ Fine Filter is pumped into the oil reservoir - ready to be used in the system

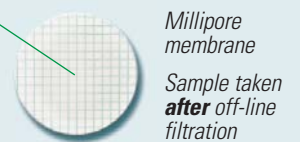
Water Produced by Oil Degradation

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

Resins and micro particles are now practically gone from the bottom of the oil reservoir



Removal of Particles

Particles down to 0.8 µm are retained in the filter mass

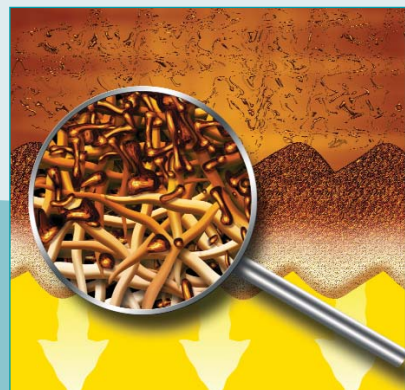
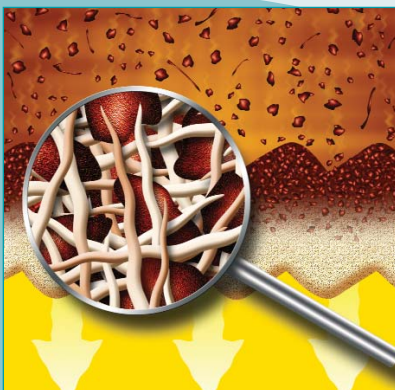
Absorption of Water

The cellulose fibres in the filter mass absorbs the water

Adsorption of Oxidation By-Products

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

One filter - 3 solutions



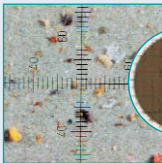
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The Result

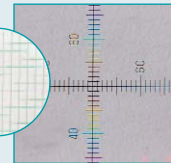
Less maintenance, increased productivity and lower energy consumption

Oil samples taken before and after installation of a CJC™ filter

The benefits that you can achieve when implementing CJC™ Off-line Fine Filters will have a positive effect on your maintenance budgets as well as increasing your productivity and lowering your energy consumption.



Oil sample taken before installation of the CJC™ Fine Filter



Oil sample taken after installation of the CJC™ Fine Filter

The cleanliness level achieved and maintained by off-line filtration means that the predicted lifetime of machine components and oil is expected to be extended by a factor of 2-10

Economical consequences of oil maintenance

Less Maintenance

- Less wear and increased lifetime of components and oil
- Longer time between service intervals
- Longer lifetime of in-line filter inserts

Increased productivity

- Fewer unplanned breakdowns and stops of production
- Enhanced operational precision

Lower energy consumption

- Lubricating capabilities remain intact
- Reduced friction
- Efficiency is maintained
- Viscosity index is kept stable
- Pressure loss over in-line filters is reduced (only by use of off-line fine filters)

-all advantages adds to increased profit





The CJC™ Fine Filter

The CJC™ Fine Filter is of simple design and almost maintenance free

Key features of the CJC™ Fine Filters

The CJC™ Fine Filters are depth filters for hydraulic and lubricating oils to all sizes of oil systems.

Main components (HDU 27/-Series)

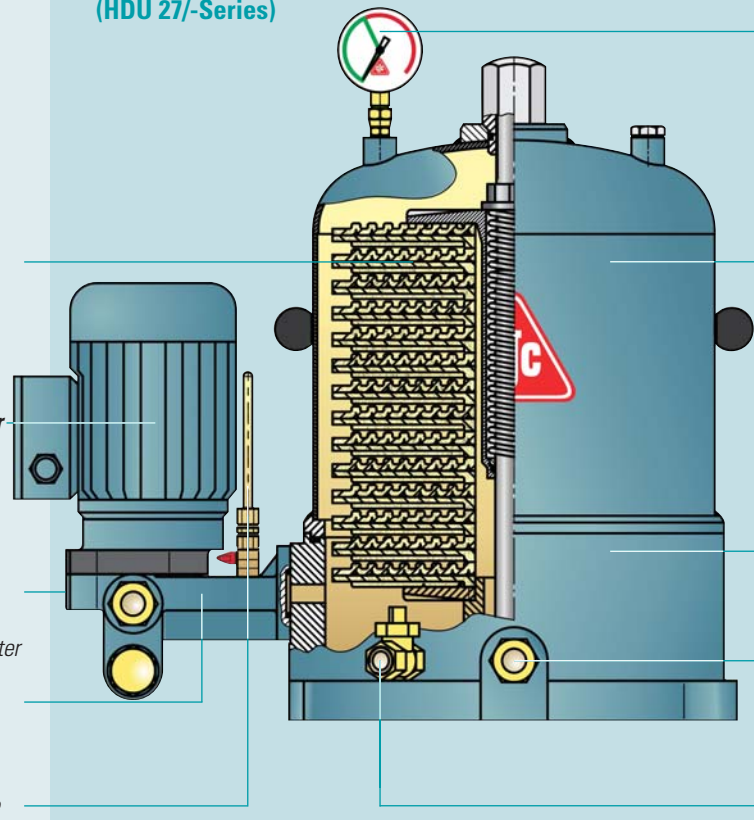
CJC™ Filter Insert
3 µm absolute filtration ratio

Electrical motor
Low energy consumption

Oil Inlet
Contaminated oil is entering the filter

Pump
Reliable gear wheel pump

Sampling Valve
For oil sampling and contamination level control



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

Filter Base
Constructed with fixture holes

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

Drain Valve
Easy to drain the filter housing before insert change

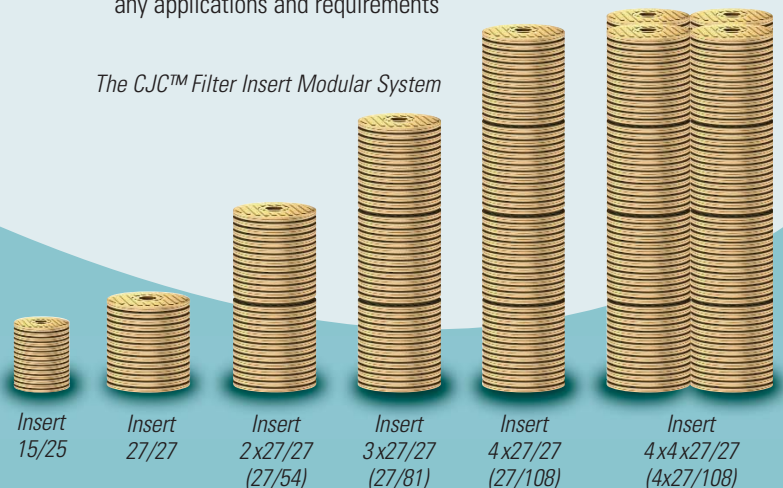
The CJC™ Filter Insert System

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



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

The CJC™ Filter Insert Modular System





C.C.JENSEN all over the World

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

*CJC™
stands for
reliable supply
all over the
world*



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Your local CJC™ distributor

We are represented all over the world by distributors. Find your nearest distributor on our website: www.cjc.dk - or give us a call.

Clean Oil - Bright Ideas

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