



# CJC™ Fine Filters

Solutions for removal of particles, water, acid and oil degradation products from oils and other fluids

- a must-have for your oil system!



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



# Your Challenge

80% of all breakdowns in oil systems are related to contamination of the oil  
 - avoid expenses on repairs and oil changes

## In-line filters do not keep the oil system clean

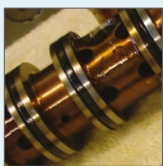
Contamination of an oil system leads to various problems which can result in machine downtime, frequent repairs of equipment and reduced oil lifetime. All of which means inefficient production and unnecessary expenses spent on repair and oil change.



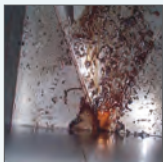
Abrasion on gear



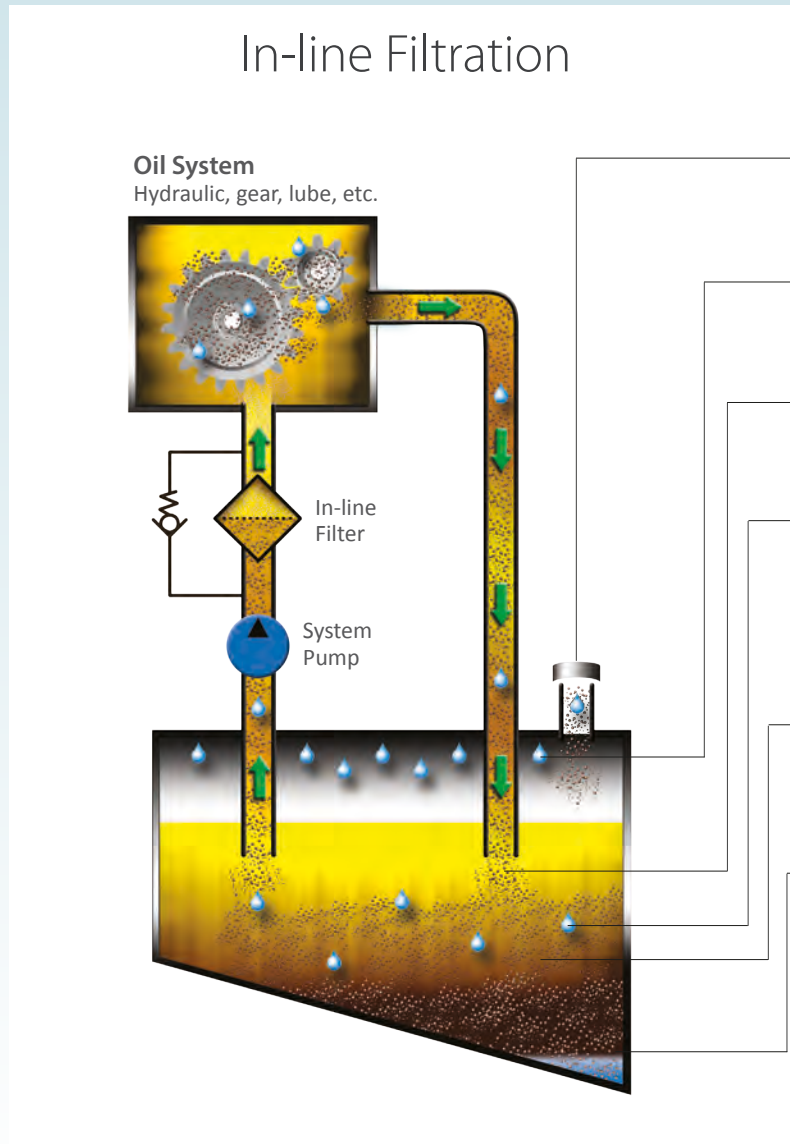
Pitting on bearing



Varnish on valve



Sludge in tank



### Contamination

- Air Vent**  
Particles and water ingress through the air vent and worn seals
- Internal Environment**  
Water condensate in the oil reservoir
- Oil Reservoir**  
Contamination is returned to the oil reservoir from the system
- Oil Degradation**  
Wear metals, water and high oil temperature act as catalysts and lead to oil degradation. The result is dirty oil, acid, sludge and varnish formation
- Rust/Corrosion**  
Water causes formation of rust particles which separate out at the bottom of the reservoir
- Bottom Sediment**  
Water settles at the bottom of the oil reservoir resulting in bacteria growth, sludge and oil degradation. Wear particles act as catalysts to speed up the varnish formation

## 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.



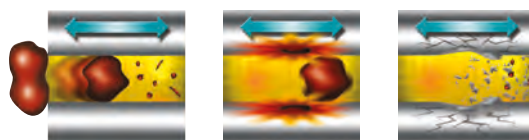
### Cavitation & pitting

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

Clean oil and guaranteed success through offline filtration  
- we offer highly qualified technical back-up

## One Filter - 4 Solutions

CJC™ Filter Inserts have a 3 µm absolute filtration ratio and will remove particles, water, acid and oil degradation products in one and the same operation. The CJC™ Filter Insert has a very large dirt holding capacity. The CJC™ products are almost maintenance free and have a very low cost of operation.



HDU 15/12



HDU 15/25 PV



HDU 27/27 P



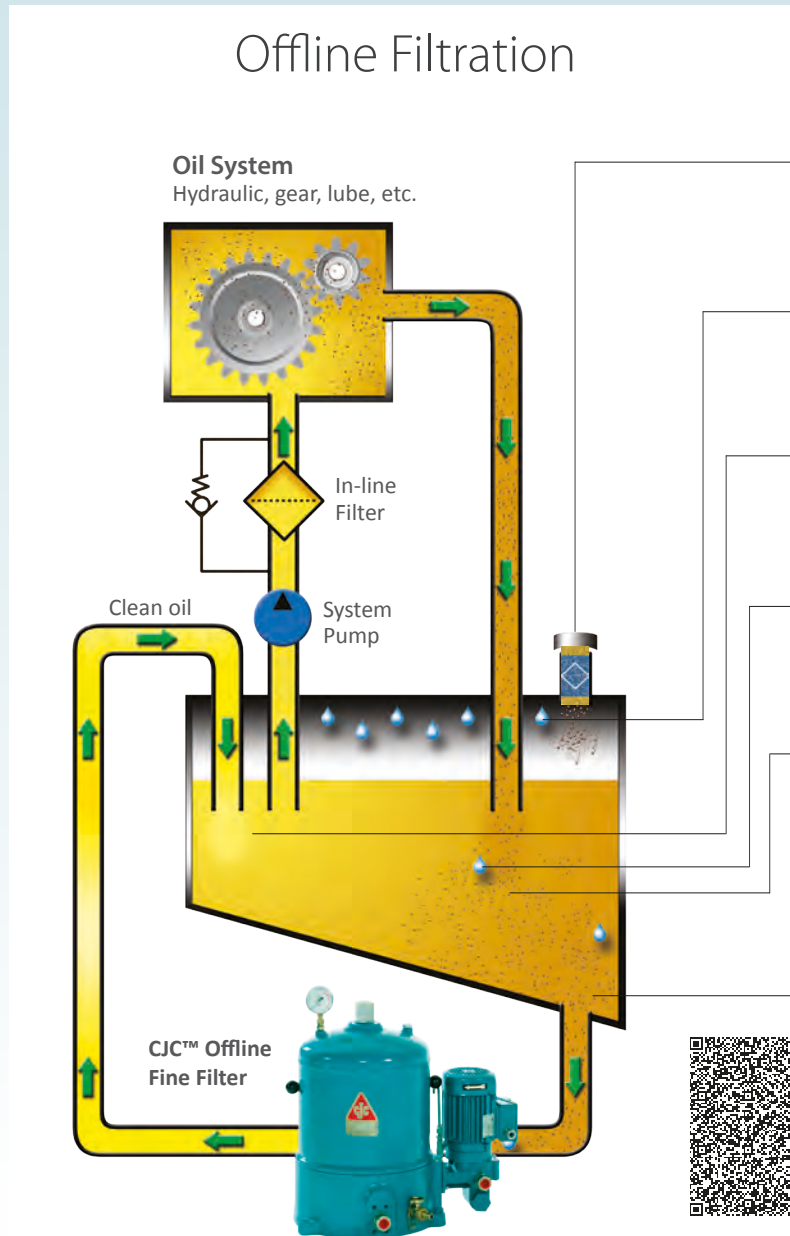
HDU 2x27/108 P



HDU 427/108 P



Marine Lube Oil Purifier



Contamination now under control

**Air Vent**  
Contamination can be reduced by adding an air breather filter that eliminates particles and moisture

**Internal Environment**  
Water still condensates in the oil reservoir, but with the CJC™ Fine Filter it will be absorbed

**Oil Reservoir**  
Clean oil from the CJC™ Fine Filter is returned to the oil reservoir - ready to be used in the system

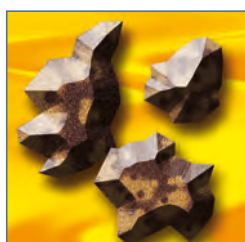
**Oil Degradation**  
The risk of developing acids, and oxidation by-products has been considerably decreased

**Rust/Corrosion**  
Contamination is still being created but is removed by the CJC™ Fine Filter

**Bottom Sediment**  
Water and particles no longer settle. No more bacteria or varnish



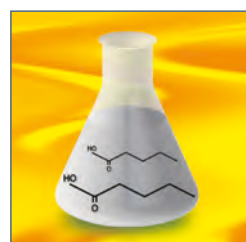
## The most common types of contamination sources



**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 absorb 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™ Fine Filters - simple, effective and low maintenance  
 - will guarantee your success!

## Key Features of the CJC™ Fine Filters

The CJC™ Fine Filters are offline depth filters for hydraulic and lubricating oils  
 - to all sizes of oil systems.  
 Our product range covers solutions for systems containing from 2 litres to  
 above 200,000 litres - ensuring clean oil and your success.

**Pressure Gauge**  
 The CJC™ Filter Insert must be replaced at least once a year or when pressure gauge reaches max. 2 bar

**CJC™ Filter Insert**  
 Increased lifetime of your in-line filter

**Sampling Valve**  
 For oil sampling  
 Check your oil contamination frequently

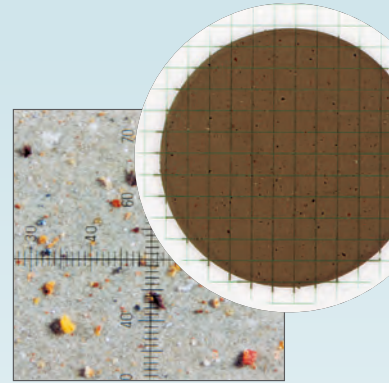
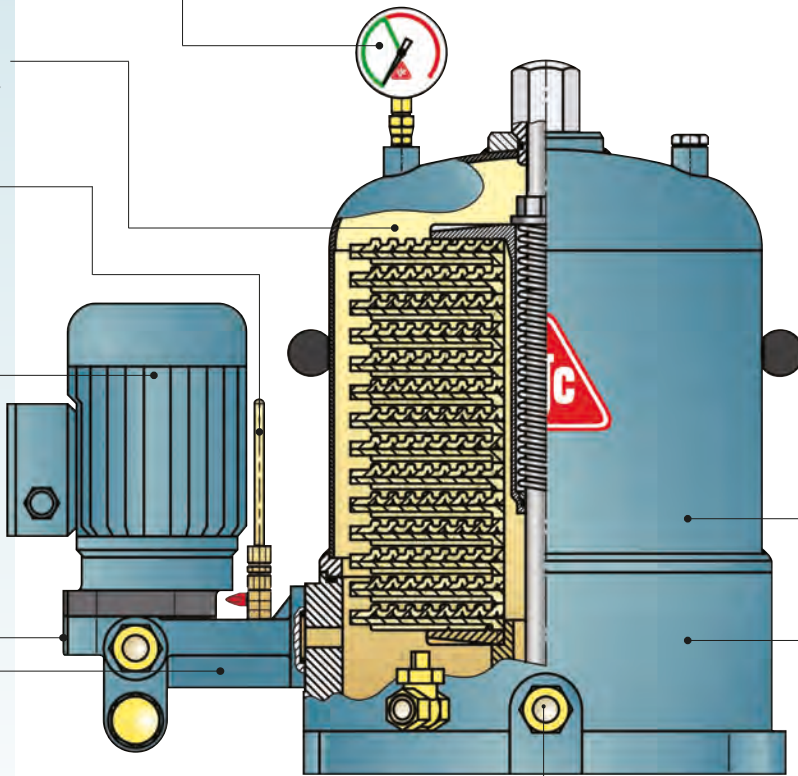
**Electrical Motor**  
 Low energy consumption

**Oil Inlet**  
 Easy to connect with hose

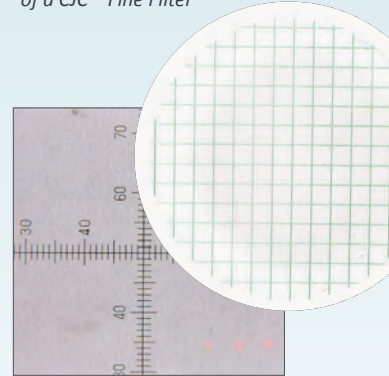
**Pump**  
 Reliable gear wheel pump, robust design incorporating a bypass safety valve

**Oil Outlet**  
 Clean oil returns to the reservoir and the oil system

## Main Components HDU 27/- Series



Oil sample, **before** installation of a CJC™ Fine Filter



Oil sample, **after** installation of a CJC™ Fine Filter

**Filter Housing**  
 Easy to service  
 - only one top nut

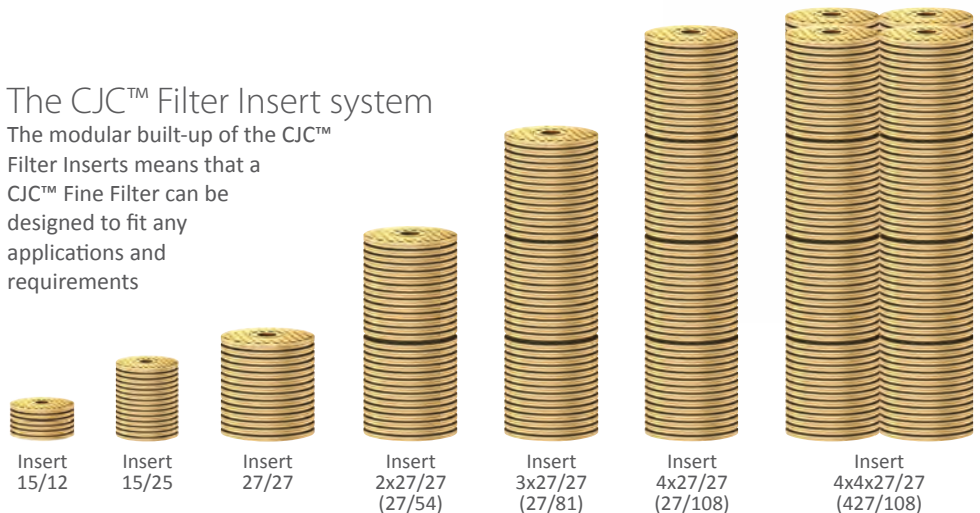
**Filter Base**  
 Designed for quick mounting



Dirty and clean CJC™ Filter Inserts

## The CJC™ Filter Insert system

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



# Your Benefits

Reduce your maintenance budget, fewer breakdowns, fewer oil changes  
- install a CJC™ Fine Filter!

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 Fine Filters will have a positive effect on many parameters such as:

## Financial Benefits

- Increased uptime
- Reduced maintenance budget
- Fewer unplanned breakdowns and stops of production
- Enhanced operational precision

## Less Maintenance

- Increased equipment reliability
- Less wear and increased lifetime of components and oil
- Longer lifetime of in-line filter



## Lower Energy Consumption

- Lubricating capabilities remain intact
- Reduced friction

## Environment Benefits

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

**-all advantages add to increased profit!**

## Satisfied Customers

### WIND:

Mr. Jason de la Tova,  
Wind Turbine Specialist,  
Windward Energy, USA:



*"Your filters are worth their weight in gold!"*

### MARINE:

Mr. Ivan Seistrup,  
Vice President,  
Maersk Supply Service,  
Denmark:



*"Clean Oil is a Must!  
The investment optimises performance, reduces the risk of errors and breakdowns, and saves maintenance costs!"*

### MINING:

Mrs. Leanne MacAdams,  
Reliability Engineer,  
BHP Billiton Iron Ore, Australia:



*"This project successfully reduced the contamination level in the crusher to below the target cleanliness level. This has significant impact on the life of the wear components in the crushers."*

### POWER:

Jørgen Brix Andersen,  
Studstrupværket,  
Elsam, Denmark:



*"Oil analyses show, we have achieved cleaner oil, after we have installed CJC™ Filters on our 8 coal mills. The need for oil change is gone, and the risk of a breakdown in the bearings has been extremely reduced. An oil change cost €3,230 per gear."*

### INDUSTRY:

Mr. Medir Lecha,  
Maintenance Chief, RUFFINI, S.A., Spain:



*"After knowing C.C.JENSEN Filters and having installed them on our injection machines, we have got the suitable oil quality and reduction of yearly unplanned stops from 18 to 2 times."*

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

# C.C.JENSEN

## - contact us today!



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- or give us a call!

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## Clean Oil - Bright Ideas

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