

# CJC® Filter Inserts, type F

Specially designed for purification of diesel and filtration of thermal oils

## CJC® F FILTER INSERTS

The CJC® F Filter Inserts are designed with fine filtration, high dirt holding capacity and low operation cost in mind. The F inserts remove contaminants like particles, water, bacteria and asphaltenes from diesel plus varnish and sludge from oils. The F Filter Inserts can be used in both CJC® Fine Filters HDU series and CJC® Filter Separators PTU series.

### Used in the CJC® Filter Separators PTU

it will continuously separate water from light distillates:

- Diesel
- Gas oils

### Used in a CJC® Fine Filters HDU

it will very cost efficiently remove large amounts of particles, varnish and sludge from:

- Quenching oils
- Heat transfer oils

## CONTAMINATION CAPACITY

Based on field experience we have observed that the total Dirt Holding Capacity (DHC) is dependent on shape and density of particles and other variables within an oil system.

When saturated, the total weight of accumulated contamination depends on the application, the combination of contaminants, as well as the density of the captured contamination.

Contamination Capacities	Size		
	15/25	27/27	38/20
Solids, kg	2	4	4
Water, ltr	0.75	2	2
Varnish, kg	1	4	4

## COMPONENTS

CJC® Filter Inserts consist of cellulose bonded discs,

**made of 100% natural cellulose fibres from sustainable resources; no plastic, no metal, no chemicals.**



## DISPOSAL OF USED CJC® FILTER INSERTS

CJC® Oil Filters are green solutions, and at C.C.JENSEN one of our objectives is caring for the environment. Therefore, please arrange proper disposal of used filter inserts in accordance with your own local legislation.

## IDENTIFICATION

To order the F Filter Inserts, please use:

### Article No.:

- 1 x F 15/25: PA5600507
- 1 x F 27/27: PA5600505
- 1 x F 2x27/27: PA5600506
- 1 x F 38/40: PA5600307
- 1 x F 38/60: PA5600308



## FILTRATION TECHNOLOGIES

### ► Oil filtration degree

*Particles can be removed according to the illustration below \*)*

For offline oil/diesel filtration, the dirt holding capacity is paramount because the offline process will have time to remove contaminants, unlike in-line filtration. Our focus is on removing the smallest and most harmful particles.

### ► Oxidation and oil degradation products

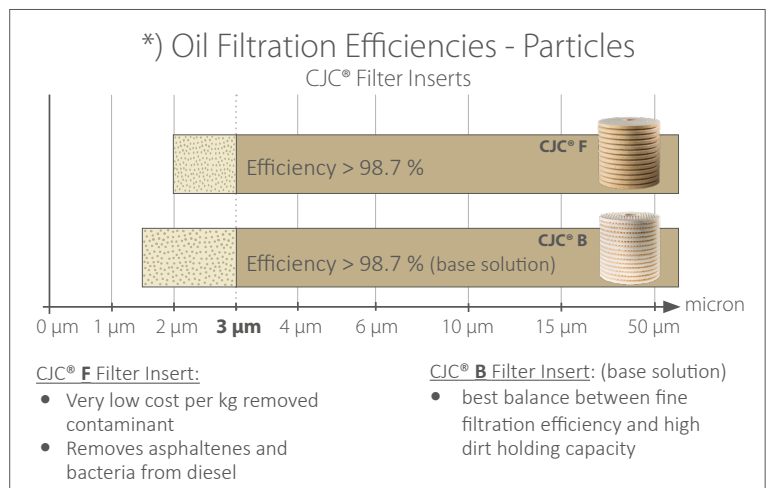
The cellulose material retains oxidation by-products, resins, sludge, and varnish. The huge surface area of the filter media removes contamination through absorption and adsorption. By effectively removing contaminants we can slow down the rate of oil degradation.

### ► Water removal

In quenching and heat transfer oil applications, the F Filter Inserts will typically be able to keep the water in the oil below saturation point (mineral/synthetic oils). All three stages of water (dissolved, emulsions and free) will be absorbed by the cellulose fibres. For diesel filtration, the F Filter Inserts are designed to let water pass through. After the initial absorption of some water, the filter insert will allow water to pass through to the separator element without increasing the pressure.

### ► Acidity stabilisation

Acidity is a natural part of the oil degradation process and will be retained by the CJC® Filter Insert using the absorption technology.



# BENEFITS in general

## C.C.JENSEN DEPTH FILTER EFFICIENCY TEST

CJC® Filter Inserts are designed to last for one year, therefore testing of a high density depth filter for a few hours does not make sense. The C.C.JENSEN test is inspired by a modified ISO 16889, using finer test dust (UFTD), which resembles real dust and wear particles better than the coarse MTD test dust used in the standard Multi-pass test - designed for thin pleated filter media. The test modification also includes a much longer test time to get close to a real-life application scenario. The main advantage of CJC® Filter Inserts is the huge surface area, which distributes the oil flow and particles evenly and ensures stable low velocity for optimum retention of contamination. The large filter mass makes this unmatched high dirt holding capacity possible.

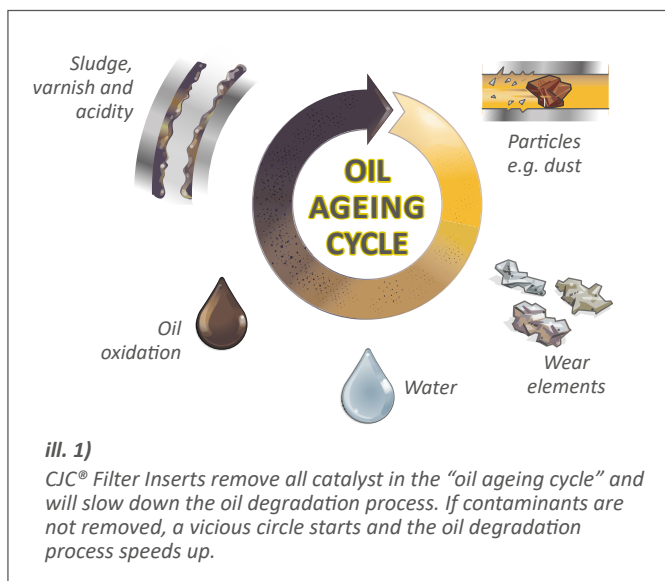
## DIRT HOLDING CAPACITY CREATES VALUE

Competitive Filter Insert costs divided by dirt holding in kg:

3-micron filtration	Example 1	Example 2
Filter Insert type	Competitive pleated filter	CJC® cellulose depth media
Cost of element vs. Filter Insert	1 x €	4 x €
Dirt holding capacity	0.100 kg	4 kg
Cost per kg removed contamination	10 x € per kg	1 x € per kg

## SLOW DOWN OIL AGEING

By removing all four contamination types (particles, water, acidity, and varnish), the CJC® Filter Inserts can slow down the oil ageing process and prolong the oil lifetime (see ill. 1). CJC® often results in 2-5 times longer oil lifetime, leading to considerable savings and reduction of CO<sub>2</sub> emissions. Field experiences show that removing particles of 3 µm and below with CJC® Filter Inserts has a significant effect on oil and component lifetime.



## YOUR BENEFITS WITH CJC®

CJC® Filter Inserts have the highest dirt holding capacity on the market due to special cellulose-based material. Furthermore, the unique construction of the bonded discs, creates a large filtration area (see ill. 2) resulting in reduced costs of ownership. The CJC® Filter Inserts are a modular design, which allows them to fit any applications and requirements.

### 1. The CJC® Filter Insert features:

- a. Depth media of moulded cellulose.
- b. Highest Dirt Holding Capacities (DHC).
- c. **100% natural cellulose fibres from sustainable resources; no plastic, no metal, no chemicals.**



### 2. Removal of contaminants, 4-in-1:

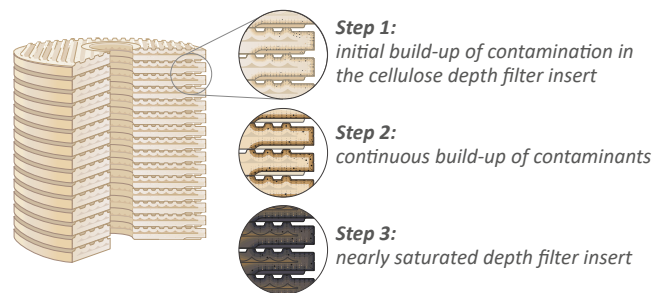
- a. **Particles:**  
Lifetime of both oil and component are increased considerably.
- b. **Oil degradation products:**  
Avoid sticking valves, lacquering, and varnish on metal surfaces.
- c. **Water:**  
Reduce the risk of micro-pitting, bacterial growth, sludge etc.
- d. **Acidity/TAN:**  
Reduce oil ageing and wear on equipment.

### 3. OEM requirements

Experience and application knowledge of C.C.JENSEN ensure that CJC® solutions can meet specifications from OEMs on oil cleanliness.

All helping to minimise further degradation of the oil.

## CJC® DEPTH FILTRATION EFFICIENCY



**ill. 2)**

This graphic describes the technology and the efficiency of depth Filter Inserts removing contaminants by adsorption & absorption.

## MAINTENANCE RECOMMENDATIONS

To achieve the highest possible oil cleanliness level, the CJC® Filter Inserts need to be changed at least once a year. Because of accumulated oil degradation products (oxidation, acids, and varnish) no matter what the pressure gauge indicates the used Filter Inserts should be replaced annually. Leaving filter media in service for longer than one year will result in decreased oil filtration efficiency and increased risk of breakdowns and component wear.

