

CJC® Oil and Fuel Filtration **Rental Solutions** & Services



Constant clean oil and fuel with customised reliable service & solutions

CJC[®] Oil and Fuel Filtration

Using a rental solution provides a convenient, economical and flexible response

Why rent a CJC[®] Offline Oil Filter?

Renting a CJC[®] Oil Filter is a very flexible and efficient way to remove large amounts of particles, water, oil degradation by-products and acidity from oil and fuel.

Offering a filtration degree of \leq 3 µm absolute combined with the industry's highest dirt-holding capacity ensures long intervals between replacement of the CJC[®] Filter Inserts. Furthermore, you get the lowest cost per kg contamination removed from oil and fuel.

All rental CJC[®] Oil Filters are inspected, cleaned and upgraded before rented out to our customers.

You will benefit from solutions that are ready for **plug & play installation**, for which we can offer extended support from our professional service technicians who ensure that you get the most out of CJC[®] Rental solutions.



Online Condition Monitoring



On request, our units include an optional CJC[®] Oil Contamination Monitor, type OCM15, offering continuous online oil condition monitoring of particles, humidity and temperature in the oil.

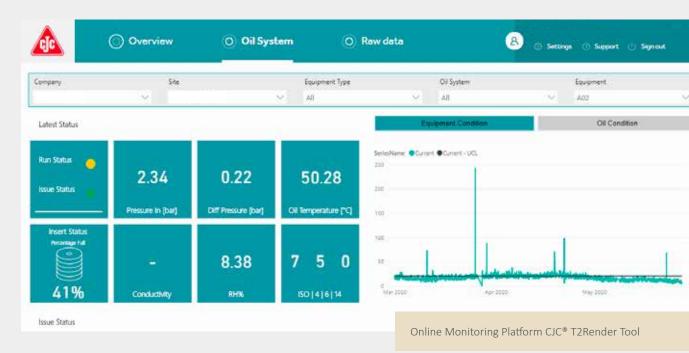
Monitoring the smallest micron particles using the CJC[®] OCM15 gives the earliest possible warning of breakdowns. Major damage can be PREDICTED and PREVENTED by stopping and repairing early in the wear process. Obviously, this will improve PROFIT.

Oil Contamination Monitor CJC® OCM15

Translated data - proactive warnings

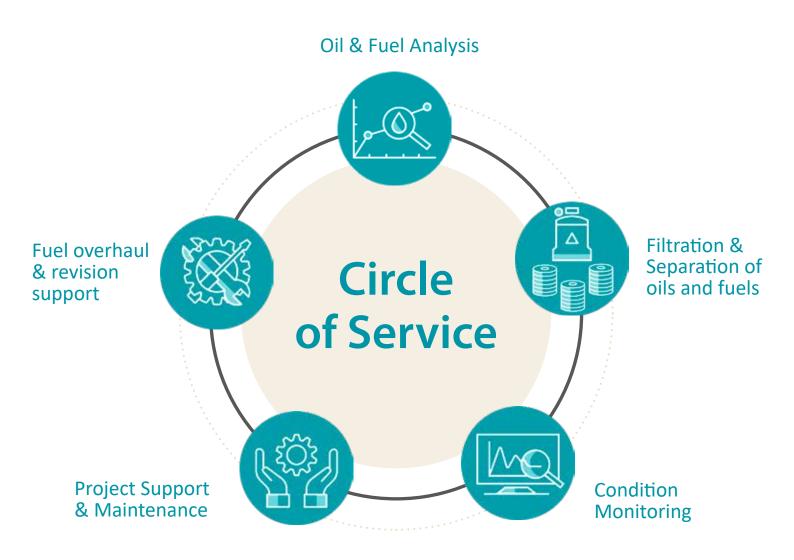
As an option is our surveillance software CJC[®] T²render Solutions, Basic or Pro, which translates your data into trends and provide pro-active warnings if abnormal deviations occur or other parameters are detected.

At the end of the rental period, an oil condition report will be provided, documenting the results you've achieved by installing a CJC[®] Oil Filter.



About our Service

We believe in flexible solutions that suit your equipment demands, because your time and your system health is important to us



Circle of Service

Our service is not just one unit. It is a philosophy and a responsible attitude.

Plug 'n' play treatment

Our units are transportable and easy to connect. We facilitate complete oil and fuel projects, covering removal of particles, water and oil degradation products.

Our units have various capacities and appropriate hydraulic components to meet your system demands, e.g. hoses, couplings and flanges.

WorldWide service support:

Support from international CCJ Service Technician Teams.



What can you expect from our "Circle of Service"?

Oil and Fuel Analysis	• Oil analyses (sampling, analysis, reporting and review of the results)		
Filtration & Separation of oils and fuels	 Removal of particles, water and oil degradation products Inhouse testing or testing at customer location of CJC[®] equipment Oil & Fuel recovery at customer location or at C.C.JENSEN premises Bag filtration of oil and fuel (<i>high flow filtration</i>) 		
Condition Monitoring	• Oil condition monitoring (particle counting, moisture and oxidation measurement)		
Project Support & Maintenance	 Maintenance and service agreements CJC[®] Filter Insert changes Refurbishment of old CJC[®] Oil Filtration and Water Separation units Commissioning of new CJC[®] Oil Filter Units Facilitating of complete oil and fuel projects and systems 		
 System overhaul and revision support Oil & Fuel storage, IBC and container handling' Oil & Fuel tank inspection and cleaning support Oil transfer via high flow pumping Oil & Fuel system/piping flushing (with or without preheating) 			

Oil Cleaning or Oil & System Cleaning?

When cleaning the oil with CJC[®] Oil Filtration units, your oil system is also automatically cleaned

Impact

The CJC[®] Oil Filters not only remove various types of contamination from the oil. The clean oil will also clean the system acting in a certain way as a cleaning detergent when continuous oil filtration is installed.

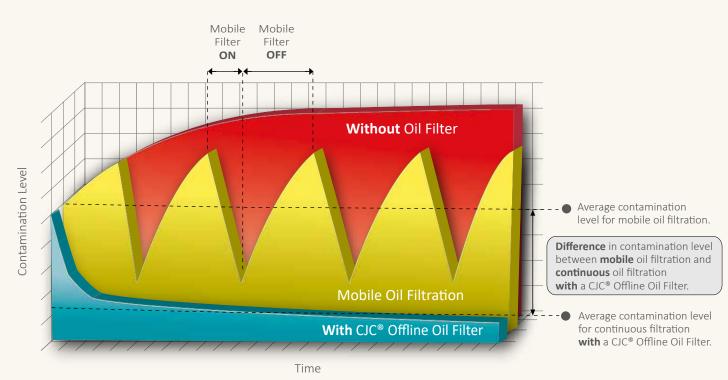
What is the impact of non-continuous oil filtration?

After disconnecting the CJC[®] Rental Unit from your system, various types of contamination might occur again in your system. In that situation a continuous oil filtration solution is needed.

Our oil analysis service can help to advice you if only a rental solution is recommended or if continuous oil filtration is needed.

Oil maintenance options

Continuous Oil Filtration vs. Mobile Oil Filtration



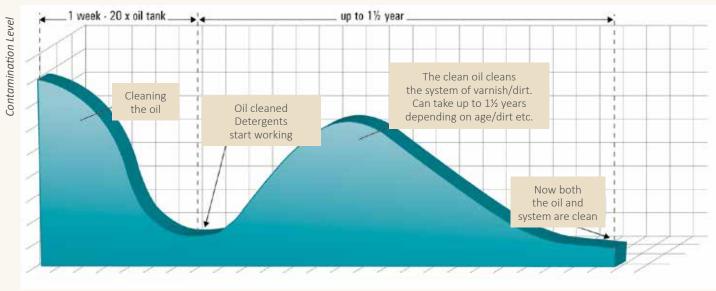
Outcome

Your longer Return on Investment with CJC®

It's a fact and has been proven that your long term ROI will increase with CJC[®] Oil and Fuel Filtration. The majority of industrial applications will benefit from lower operational costs once continuous CJC[®] Oil Filtration is applied.

A CJC[®] Rental Filter represents a short-term solution to gain experience of our oil filtration performance for your specific applications.

Oil maintenance with continuous offline oil filtration



Time

PAY-BACK TIME less than

vear

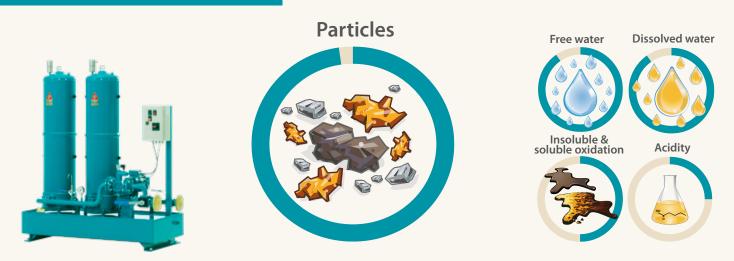
Contamination Sources & Solutions

One solution for removal of critical contamination sources

Contaminated oil in your oil system?

Contamination sources like particles, water, oxidation and acidity can considerably damage an oil system at different levels. CJC[®] solutions remove critical contaminants in one and the same process.

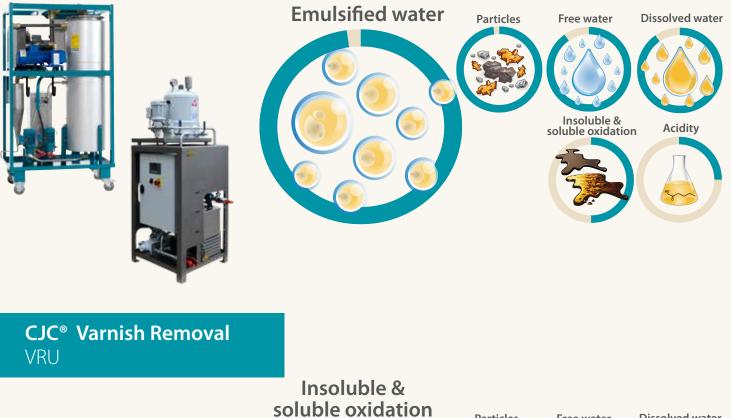
CJC[®] Fine Filters HDU



CJC[®] Filter Separators PTU



Desorbers & Desorber/Filter Combi





Flexible Rental Solutions

We have a huge variety of rental equipment to suit your specific needs. You get direct and no-fuss contact with our specialists, offering quick response and fast installation on-site.



In-house stock of Rental Equipment



Oil recovery services



CJC[®] Filter Insert change services



On-site filtration and storage handling



On-site commissioning



Oil sampling and analysis services

- Commissioned by high skilled C.C.JENSEN technicians
- Crossborder Commitments
- Easy exchange of solutions between our CCJ Service Hubs
- Global CCJ Service Hubs



Filter units including condition monitoring



High flow pump solutions



Flushing services



Oil storage filtration / tank cleaning



Varnish removal solutions



Dewatering solutions (incl. EAL oils)

Below is an overview of the rental CJC® Solutions available to you.

CJC[®] Fine Filters

CJC [®] Units	Contamination Sources	System	Applications
CJC [®] Fine Filter	Dirt holding capacity:	System fit:	Applications:
HDU 15/12	0.75 kg	5 L - 800 L	HydraulicsGears
	Particles,	Pump range:	Turbines
	<3 micron absolute Water 	20 L/h - 120 L/h	CompressorsEngines
	 Water Oxidation by-products 	Power supply:	 Engines Diesel fuel
A CONTRACTOR OF	 Sludge 	3x 400 - 440V	
and the second s	Varnish	50 - 60 Hz	
CJC [®] Fine Filter	Dirt holding capacity:	System fit:	Applications:
HDU 15/25	1.5 kg	5 L - 2,000 L	 Hydraulics
			• Gears
	 Particles, <3 micron absolute 	Pump range: 30 L/h - 250 L/h	 Turbines and compressor Engines
	Water	50 L/11 - 250 L/11	EnginesDiesel fuel
	Oxidation by-products	Power supply:	Dieserraei
	 Sludge 	3x 400 - 440V	
	• Varnish	50 - 60 Hz	
CJC [®] Fine Filter	Dirt holding capacity:	System fit:	Applications:
HDU 27/27-54-108	Up to 16 kg	20 L - 10,000 L	Hydraulics
	Particles,	Pump range:	 Gears Steam and gas turbings
111	 Particles, <3 micron absolute 	30 L/h - 2,000 L/h	 Steam and gas turbines and compressors
a contraction of the second	Water Oxidation	50 L/ II 2,000 L/ II	 Engines
	by-products	Power supply:	Diesel fuel
	Sludge	3x 400 - 440V	
	Varnish	50 - 60 Hz	
		Options:	
		NAME IN THE STATE	

With or without Preheaters and Particle Counter

CJC[®] Fine Filters

CJC [®] Units	Contamination Sources	System	Applications
CJC [®] Fine Filter/ Flushing unit,	Dirt holding capacity: 32 or 64 kg	System fit: Up to 40,000 L	Applications: • Hydraulic
HDU 427/54-108			Gears
	 Particles, <3 micron absolute Water 	Pump range: 660 L/h - 11,500 L/h	 Steam and gas turbines and compressors Engines
-	 Oxidation by-products 	Power supply:	Diesel fuel
	Sludge	3x 400 - 440V	Lubrication systems
	Varnish	50 - 60 Hz	
		Options:	
a series		With or without	
		Particle Counter	
CJC [®] Varnish	Dirt holding capacity:	System fit:	Applications:
Removal Unit, VRU 27/108	Up to 16 kg	200 - 40,000 L	 Hydraulics Steam and gas turbines
VKO 27/108	• Particles,	Pump range:	and compressors
💼 👜	<3 micron absolute	45 L/h	
	 Oxidation by-products 	Power supply:	
3 . .	both insolubles and	3x 400 - 440V	
	solubles	50 - 60 Hz	
CJC [®] Filter Separ	ators		
CJC [®] Filter Separator	Dirt holding capacity:	System fit:	Applications:
PTU 15/12	0.75 kg	20 L - 800 L	 Hydraulics Turbines and compresso
	Particles,	Pump range:	Gears

- Particles,
 < 3 micron absolute
- Free water separation
- Oxidation by-products

Pump range: 20 L/h - 120 L/h

Power supply: 3x 400 - 440V 50 - 60 Hz

- Gears
- Diesel fuel

CJC® Filter Separators

CJC [®] Units	Contamination Sources	System	Applications
CJC [®] Filter Separator PTU 15/25	Dirt holding capacity: 1.5 kg	System fit: 20 L - 2,000 L	Applications:HydraulicsTurbines and compressors
	 Particles, <3 micron absolute Free water separation 	Pump range: 45 L/h - 120 L/h	GearsDiesel fuels
	Oxidation by-products	Power supply: 3x 400 - 440V 50 - 60 Hz	
CJC [®] Filter Separator PTU1 27/54-108	Dirt holding capacity: 8 kg	System fit: Upon request	Applications: Diesel fuel
	 Particles, <3 micron absolute Water 	Pump range: Up to 1,680 L/h	
	 Large amounts of free of free water Oxidation by-products 	Power supply: 3x 400 - 440V 50 - 60 Hz	

CJC[®] Filter Separator PTU2 27/27



Dirt holding capacity: 2 kg

- Particles,
 <3 micron absolute
- Free water separation
- Oxidation by-products

System fit: 200 L - 2,000 L

Pump range: 90 L/h – 200 L/h

Power supply: 3x 400 - 440V 50 - 60 Hz

Applications:

- Hydraulics
- Turbines and compressors

CJC[®] Filter Separators

CJC [®] Units	Contamination Sources	System	Applications
CJC® Filter Separator PTU3 27/-	Dirt holding capacity: Up to 16 kg • Particles, <3 micron absolute • Free water separation • Oxidation by-products	System fit: 1,000 L - 20,000 L Pump range: 480 L/h - 1,680 L/h Power supply: 3x 400 - 440V 50 - 60 Hz <= ISO VG 220) Options: With or without Preheater and	 Applications: Hydraulics Gears Steam and gas turbines and compressors Engines Diesel fuel
CJC [®] Desorbers		Particle Counter	
CJC [®] Desorber/Filter Combi Unit, D5	Dirt holding capacity: 1.5 kg	System fit: <1,200 L (*)	 Applications: Hydraulics, lubrication
	Water removal: Nominal up to 1 L p/24 h (**) • Particles, <3 micron absolute • Water • Oxidation by-products • Salt	Pump range: 30 L/h Power supply: 3x 400 - 440V 50 - 60 Hz Viscosity range: ISO VG46-150	and cooling oils Stern tubes CPPs Thrusters Applications where (salt) water ingress is (dis-)continuous standard and biodegradable fluids
CJC [®] Desorber D10	Dirt holding capacity: 4 kg Water removal: Nominal up to 0.75 L p/h (**) • Water • Salt	System fit: < = 2,000 L (*) Pump range: 45 L/h Power supply: 3x 400 - 440V 50 - 60 Hz 1x 230V 50 - 60 Hz	 Applications: Hydraulics, lubrication and cooling oils Steam and gas turbines Gears Stern turbines CPPs Thrusters

Viscosity range: ISO VG32-150 Applications where (salt) water ingress is (dis-)continuous standard and biodegradable fluids

CJC® Desorbers

CJC [®] Units	Contamination Sources	System	Applications
CJC [®] Desorber D30	Water removal rate:	System fit:	Applications:
	Nominal up to 2 L p/h (**)	< 5,000 L	 Hydraulics, lubrication and cooling oils
	• Water	Pump range: 150 L/h	Steam and gas turbinesGears
11/07			• CPPs
		Power supply: 3x 400 - 440V	Thrusters
		50 - 60 Hz	
		Viscosity range:	
CJC [®] Key Filter		ISO VG32-320	
ese keyrinter			
CJC [®] Key Filter	Dirt holding capacity:	System fit:	Applications:
	2 kg	Upon request	HydraulicsLubrication
the second se	Particles,	Pump range:	Gears
	<3 micron absolute Water 	45 L/h - 120 L/h	
	Oxidation by-products	Power supply:	
		3x 400 - 440V 50 - 60 Hz	
CJC [®] Heat Trans	ter Oil Filter		
CJC [®] Heat Transfer	Dirt holding capacity:	System fit:	Applications:
Oil Filter, HTO HP	32 kg	200 L up to 20,000 L	Heat transfer oil systemsLubrication systems
			Lubricution Systems



- Particles, <3 micron absolute
- Water
- Oxidation by-products

Pump range: 1400 L/h

Power supply: 3x 400 - 440V 50 - 60 Hz

CJC[®] Pump Unit

CJC [®] Units	Contamination Sources	System	Applications
CJC [®] High Flow Pump Unit / Flushing unit	Dirt holding capacity: Upon request	System fit: Upon request	Applications:Hydraulics
e. 11 :	As from 2 micron nominal	Pump range: 60 L/h - 600 L/min.	 Gears Steam and gas turbines and compressors
		Power supply: 3x 400 - 440V 50 - 60 Hz	Diesel fuelLubrication oilBase oil

Particle removal with CJC® Bag-Filtration

CJC® Bag-Filtration



Dirt holding capacity: Upon request

Particles and sludge:

- 2 micron nominal
- 5 micron nominal
- 50 -100 -200 micron nominal

System fit: 5 L - 2,000 L

Pump range:

1900 L/h - 6,300 L/h

Power supply:

3x 400 - 440V 50 - 60 Hz

Applications:

- Hydraulics
- Gears
- Steam and gas turbines and compressors
- Engines
- Diesel fuel
- Lubrication oil
- Base oil

CJC[®] Bag-Pre-Conditioner Filter



Dirt holding capacity: Upon request

Particles and sludge:

- 2 micron nominal
- 5 micron nominal
- 50 -100 -200 micron nominal

System fit: Upon request

Pump range: Upon request

Power supply:

3x 400 - 440V 50 - 60 Hz

Applications:

- Hydraulics
- Gears
- Steam and gas turbines and compressors
- Engines
- Diesel fuel
- Lubrication oil
- Base oil

CJC[®] Misc. Solution

CJC [®] Units	Contamination Sources	System	Applications
IBC	-	Storage facilities with filtration handling	 Applications: Hydraulics, lubrication and cooling oils Steam and gas turbines Gears CPPs Thrusters

Pump bracket



Pumping/transfer of oil and fuel

Applications:

- Hydraulics, lubrication
- and cooling oils
- Steam and gas turbines
- Gears
- CPPs
- Thrusters

- Note (*) Larger oil volumes can be managed by the Desorber depending on hydraulic system layout and available connections for extracting contaminated oil.
- Note (**) The water discharge performance depends on the water contamination level, oil type, ambient temperature and air humidity.

At high water levels (above the oil saturation level) the amount of discharge water can exceed the given nominal values.

In case of questions on the demulsibility of the oil or oil condition, please consult C.C.JENSEN in advance.

Inspiration

We care for you

A story from one of our CCJ Service Technicians:

A shipowner had a whole host of issues with their thrusters and upon examining the heavily contaminated oil samples, which also contained a large amount of free water, they turned to C.C.JENSEN for a solution. According to Service Agreements we have with this customer, CCJ Service Technicians quickly installed a CJC[®] Thruster Unit on-site.

After a very short time in operation, the oil was cleaned to an acceptable level. Their thrusters now operate without any issues, and it also resulted in a long-term agreement.





Service Technician, C.C.JENSEN A/S

We support you in becoming more Green

For many years, C.C.JENSEN has focused on sustainability not only in terms of our CJC[®] Oil Filters, but also specially from a company perspective. As a result, we have reduced our CO_2 by 80% from 2008 and until now. Our sources include our own wind turbines, solar cells, heat pumps, optimisation of drying ovens, LED lighting, electric vehicles, etc.

Also our customers benefit from having clean oil, as the oil is cleaned and recycled, contributing positively to the customers' CO_2 account and saving the environment many litres of waste oil. Recent initiatives are the installation of new IE3 motors in our oil filter solutions as well as our "Flow Drive", a frequency converter that contributes to energy savings.

The technology behind our CJC[®] Filter Inserts makes it possible to achieve oil filtration rates as low as <3 μ m, which includes removal of even the smallest and very harmful particles - the life of the oil is extended and the environment is protected. Our CJC[®] Filter Inserts, which absorb the contamination sources, are produced from 100 percent natural cellulose fibres exclusively from sustainable raw materials. In other words, we don't use metal, plastic or chemicals.

C.C.JENSEN A/S is a family-owned company that was founded in 1953. Today, the company has about 300 employees, with 200 at our head office and production in Svendborg and about 100 in our 14 subsidiaries worldwide. In addition, our CJC[®] Oil Filters are traded through more than 40 distributors globally.



C.C.JENSEN

Contact us today



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