



Varnish Removal Unit, VRU

CJC® Fine Filter for Gas & Steam Turbines

Product Sheet

APPLICATION

The CJC® Varnish Removal Unit, VRU has an unheard high efficiency in removing soft contaminants from oil - dissolved and suspended – even from hot operating gas and steam turbines. Oxidation and varnish are known to cause problems in many industries, resulting in very costly production stops, turbine trips, loss in revenue etc.

BENEFITS

- Less varnish related turbine trips
- Lower maintenance costs
- Extends the lifetime of both oil and components
- No need for system flushing and tank cleaning
- Avoid temperature increase – no varnish in the cooling system

APPLICATIONS

Designed for efficient removal of soluble varnish from any size turbine:

- Gas and steam turbines with combined or separate lube and control oil system
- Base or peak loaded gas or steam turbines operating at low, medium or high oil temperatures
- Also for highly stressed and high temperature oil systems in general.

FUNCTION

The VRU is designed to remove dissolved and suspended soft contaminants by polar attraction in the optimized cellulose based Varnish Removal inserts, VRi. It does this without any additional power, chemicals or beads which may be harmful to the oil's additive package. The warm system oil is drawn from the bottom of the tank to the VRU by its own transfer pump. The oil is being treated and filtered in the VRU before sent back to the system tank as varnish free oil. The varnish free oil will start cleaning all system components in contact with oil, ultimately resulting in a complete varnish free system. The varnish level in the oil will typically be cut in half within a few weeks of operating the VRU.

The VRU is prepared for online data logging via CJC® Trender Tool.



The CJC® Varnish Removal Unit
VRU 27/108

TECHNICAL DATA

Varnish Removal Unit		VRU 27/108
		380 - 420V @ 50 Hz & 440 - 480V @ 60 Hz
Pump inlet pressure max.	bar/psi	0.5/7
Power consumption aver.	kW	2
Full load current max.	A	4
Filter Insert VRi 27/27	pcs.	4
Oil reservoir volume max. *)	ltr/gal	45,000/11,900
Oil viscosity **)		< ISO VG68
Oil temperature max *)	°C/°F	105/221
Varnish holding capacity up to	kg/lb	8/18
Total weight	kg/lb	290/640
Design pressure, filter	bar/psi	4/58
Dimensions	mm inches	1600x650x1598+575 63x25.6x62.9+22.6

*) For more than 45,000 L or higher temperatures, please contact us

**) For viscosities higher than ISO VG68, please contact us

APPLICABLE FILTER INSERTS

Type	Application for
Varnish Removal insert, VRi (product sheet on page 2)	Gas and steam turbines, large compressors and hydraulic oil systems



Varnish Removal insert, VRi 27/27

CJC® Offline Filter Insert for Gas & Steam Turbines

Product Sheet

APPLICATION

The **CJC® Varnish Removal insert, VRi 27/27** is used in the **CJC® Varnish Removal Unit, VRU**, and is specially designed for efficient removal of dissolved and suspended soft contaminants from turbine lube and hydraulic oils.

Applicable for: Gas and steam turbines, large compressors and hydraulic systems

FILTRATION CAPABILITY

Oil Degradation Products

Retains all phases of soft contaminants (dissolved and in suspension) oxidation by-products, resin/sludge and varnish.

The cellulose will retain more than 2 kg of degradation products per insert (8 kg/18 Lbs in total). The VRi 27/27 is documented not to affect the phenolic and aminic anti-oxidant additive package of the oil.

DIMENSIONS

The figures below are nominal:

Diameter: 27 cm (10.6")

Height: 27 cm (10.6")

COMPONENT

The **CJC® Varnish Removal insert, VRi 27/27** consists of bonded double discs made of a cellulose blend. Special types of cellulose fibres have been specially selected to obtain a filter, that is efficient at removing dissolved and suspended soft contaminants.

This insert type is only functional if used in conjunction with the **CJC® Varnish Removal Unit, VRU**.

The special treatment and flow, characteristic of the **CJC® VRU**, ensures crystallisation of dissolved varnish from the oil.

IDENTIFICATION

To order the **CJC® Varnish Removal insert VRi 27/27**, please use:

Article No:

1 x VRi 27/27: PA5601370



CJC® Varnish Removal insert, VRi 27/27