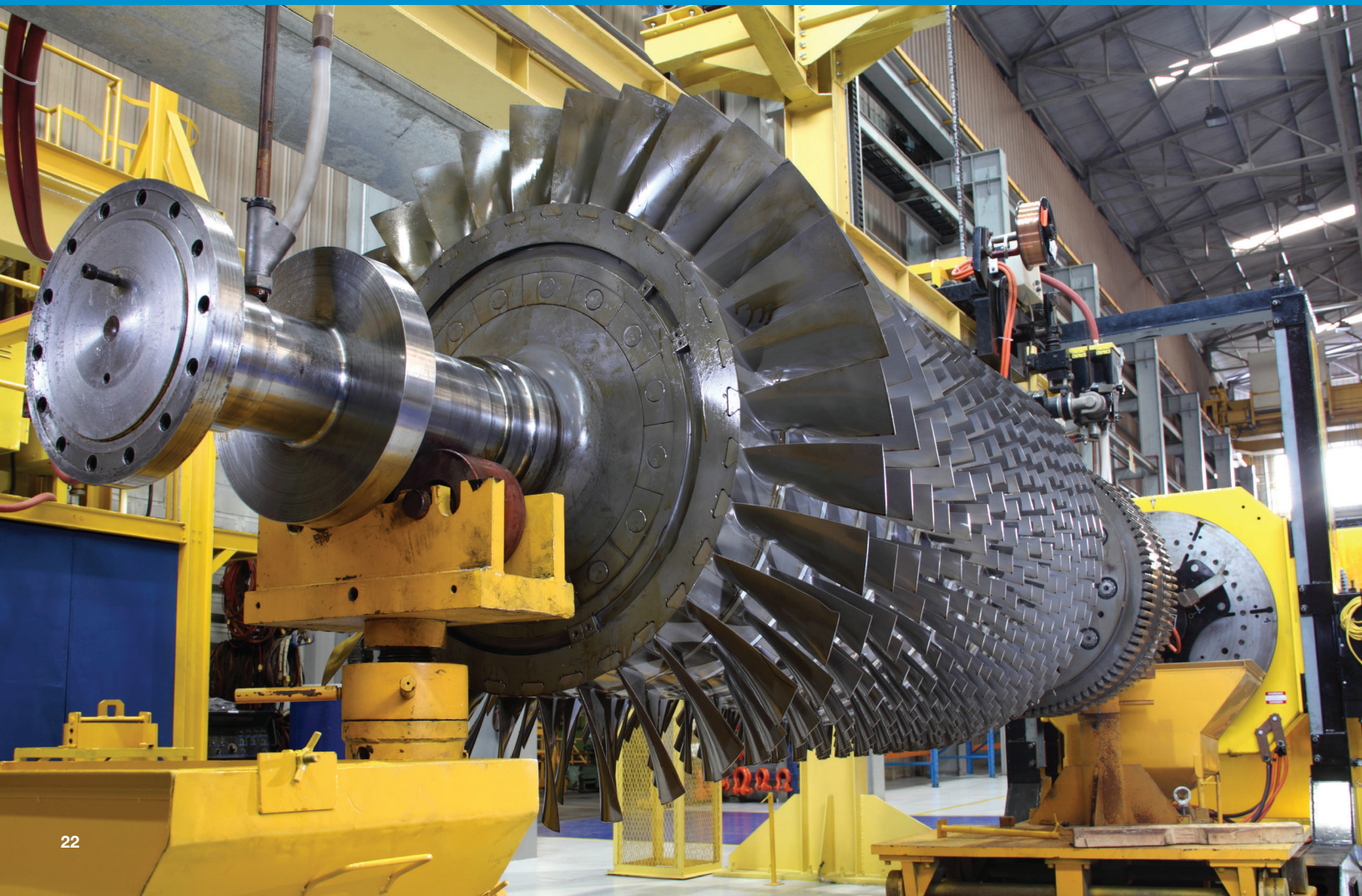


# VARNISH REMOVAL SYSTEMS FOR TURBINE LUBRICATION

Varnish is the hidden enemy of turbine oil lube systems. A continuous functioning varnish removal system is necessary to dislodge varnish build-up and block future attacks. The Kaydon Filtration Model KPV-10 Varnish Removal system provides varnish stripping to the extent that varnish-related issues such as sticking valves, oil flow restrictions, reduction in heat exchanger efficiency, accelerated rotating component wear, and oil degradation will no longer be a detriment to the turbine lubrication system. The Kaydon Filtration KPV-10 Varnish Removal system provides efficient sub-micron filtration of varnish-forming components. The KPV-10 system provides an efficient clean-out of a turbine lube oil system that has a pre-existing varnish problem, or can be installed in new installations to stop varnish before it starts.



## KPV-10 Varnish Removal System



Oils have the potential to create varnish - an insoluble film that forms inside the lubrication and hydraulic systems. If left unchecked, varnish contamination leads to valve sticking and the formation of deposits on metal surfaces throughout these systems. If these deposits occur on heat exchangers or reservoir walls, the varnish reduces the equipment's ability to transfer heat from the system.

Power generation equipment and hydraulic systems have seen an increase in varnish-related issues due to higher operating temperatures, smaller reservoirs and the creation of electrostatic discharge. Successful removal and elimination of varnish in the turbine lube oil is essential to the operation of efficient, cost-effective systems.

Operating at a maximum flow rate of 10 GPM (38 LPM), the KPV-10 system can provide a clean-out of a turbine lube oil system that has a pre-existing varnish problem, or be installed in new installations where the varnish problem can be blocked. The system uses easy-to-understand and easy-to-operate controls, along with simple installation. The filtration of the varnish producing sub-micron particles is made possible by the Kaydon Filtration technology K1100 prefilter and K4100 polishing element.

### Features

BCA® Technology Process

Inlet/Outlet Isolation Ball Valves

Easy to read control panel and gauges

Particle removal capability

Reduced System Maintenance

Skid Mounted

### Benefits

Varnish free lube system

Isolates the system when filter element needs replacement or maintenance

Easy to read

Ultra clean oil keeps turbine on line

BCA Technology requires annual inspection; Kaydon Filter Technology requires 2-4 change-outs per year

All components installed on one forklift mounted movable skid



# KPV-10 Varnish Removal System

## Specifications and Details

System Flow	10 GPM / 38 LPM (maximum flow)
System Pressure	100 PSIG / 6.9 BAR (maximum flow)
Environmental Parameters	NEMA 4 Rated Control Panel Minimum Ambient Temperature: 32° F / 0° C Maximum Ambient Temperature: 200° F / 93° C
Operating Voltage	460 VAC / 3 PH / 60 HZ / 10 AMPS
Materials of Construction	Metals: Carbon Steel and Bronze Elastomers: Buna-N Exterior Paint: Epoxy
Pressure Vessels	Prefilter and Polishing Vessels: Kaydon Filtration Model V-636 BCA® Technology Vessel: Designed and Manufactured to ASME code (ASME stamp or inspection not included)
Inlet/Outlet Connections	Type: NPT Inlet: 2 inch / 50.8 mm Outlet: 1 inch / 25.4 mm
Pump/Motor Assembly	Flow Rate: 10 GPM / 38 LPM Pump Type: Gear - Positive Displacement Motor: 1.5 HP / 1.1 KW
Fluid Compatibility	Mineral base turbine oil (maximum viscosity = ISO 68)
Filter Stages	1st Stage: Model K1100 High Efficiency Particulate Element 2nd Stage: BCA Technology (sub micron particle agglomerator) 3rd Stage: Model K4100 Polishing Element
Performance	ISO Cleanliness Level to 15/13/11
Weight (approximate)	715 lbs / 324 kg
Dimensions	48" L x 35" W x 64" H / 1220 mm L x 890 mm W x 1625 mm H

All design specifications are subject to change without notice.

