KAYDON FILTRATION
Filtration Group®

TURBO-TOC®

Turbine Oil Conditioning Systems

Making the world safer, healthier
and more productive®

KAYDON FILTRATION

With over 80 years of experience, Kaydon Filtration is a trusted global leader in delivering high-quality filtration solutions.

We specialize in protecting mission-critical fluids, safeguarding the integrity of vital processes across diverse sectors.

Guided by a commitment to quality, reliability, and customer satisfaction, we provide innovative solutions tailored to meet unique industry needs. Our mission is to help you reduce downtime, extend equipment life, and meet environmental goals through reliable and efficient filtration.

Our products are engineered to deliver superior performance, durability, and compliance with the most stringent industry standards, ensuring operational excellence and long-term value for our clients. We prioritize exceptional service, lead times, and a customer-focused approach that promotes collaboration and drives results. This enables us to exceed expectations at every stage.

At Kaydon Filtration, we don't just provide filtration systems—we build lasting partnerships. With our expertise and unwavering reliability, we deliver solutions our clients can trust, helping to make the world safer, healthier, and more productive®.

TURBO-TOC®

Turbine Oil Conditioning Systems

The most efficient conditioning system in the market for water removal, TURBO-TOC® removes 100% of damaging water from turbine oil and reduces Total Water Content to 100 ppm (0 ppm free, 0 ppm emulsified, 100 ppm dissolved).

Engineered for high-efficiency fluid conditioning

TURBO-TOC® systems deliver 99% removal of free and emulsified water in a single pass, reducing total water content to below 100 ppm. Designed for continuous-duty operation, units provide variable flow rates—up to 125 gpm—enabling multiple reservoir turnovers per day depending on system size and oil temperature.

This high-frequency circulation supports rapid decontamination, especially after seal failures or water ingress events. TURBO-TOC® units consistently achieve ISO 15/13/11 cleanliness levels and restore turbine oil to “clear and bright” condition, minimizing the risk of varnish formation, bearing wear, and unplanned outages.

LONGER TURBINE LIFE

TURBO-TOC® continuously removes harmful contaminates, keeping your oil system flushed and increasing reliability.

REDUCED BEARING FAILURE

When both water and particulate are brought down to acceptable levels, bearing failures are eliminated.

FEWER FORCED OUTAGES

A continuous flow filtration system efficiently removes contamination, preventing forced outages.

LESS-COSTLY TURBINE REBUILDS

Clean turbine oil increases turbine dependability and helps reduce repair costs directly associated with contaminated oil.

SYSTEMS

The Ultimate Plug-and-Play Solution: Easy to Use, Easy to Maintain, Ready to Perform

The Kaydon TURBO-TOC® system stands out for both its exceptional performance and user-friendly design. Delivered as a pre-engineered, ready-to-use solution, it requires no customer adjustments—simply install and operate.

All KL10, KL30, KL60, and KL100 TURBO-TOC® units feature advanced control panels equipped with PLC controllers, allowing seamless integration with existing monitoring systems and enabling remote operation. Minimal training is needed, making operation intuitive and maintenance straightforward.

With its easy-to-use, low-maintenance design, the Kaydon TURBO-TOC® system delivers more than just filtration—it ensures optimal oil cleanliness and reliable protection for your critical machinery.

Stationary Systems

The TURBO-TOC® KL Series is engineered for continuous, high-flow oil conditioning in large turbine lube oil reservoirs, supporting volumes up to 24,000 gallons. With multi-stage coalescing technology, particulate control, and water removal, KL systems are optimized for permanent installation in steam turbine-driven power facilities where uptime, oil cleanliness, and system reliability are critical.

Portable Carts

The TURBO-TOC® KLP Series provides the same fluid cleanliness performance as the KL line in a compact, mobile platform designed for systems up to 1,800 gallons. Ideal for service teams or facilities with multiple smaller reservoirs, KLP units deliver ISO-compliant particulate and water removal with field flexibility, making them a strategic solution for planned maintenance, commissioning, or rotating equipment support.

TURBO-TOC® KL SPECIFICATIONS

Elements

Type		KL10S2	KL30S2	KL60S2	KL100S2
Prefilter	PN	K1100	K1100	K1100	K1100
	Qty	1	1	1	3
Coalescer	PN	K2100	K2100	K2100	K2100
	Qty	2	5	8	10
Separator	PN	K3100	K3100	K3100	K3100
	Qty	1	3	4	9

Specifications

		KL10S2	KL30S2	KL60S2	KL100S2
Flow Rate	gpm	10	10 - 30	20 – 60	20 - 100
	lpm	38	30 – 113	76 – 227	76 - 378
Reservoir Size	gallons	1801 – 2400	4801 – 7200	7201 – 14400	14401 - 24000
	liters	6801 – 9080	18201 – 27260	27261 – 54510	54511 - 90850
Performance		ISO Cleanliness: 15/13/11 Total water: < 100 ppm			
Fluid Compatibility		Mineral-based Turbine Oil			
Maximum Viscosity		ISO 68			
Design Pressure		150 psi / 10.3 Bar			
Approximate Dimensions (in)		48 L x 46 W x 82 H	55 L x 54 W x 94 H	69 L x 65 W x 92 H	91 L x 88 W x 102 H
Approximate Weight (lbs.)	Dry	1700	2750	4600	5040
	Full	2050	3500	6000	7016
Materials of Construction		Carbon Steel, Bronze, Stainless Steel, Buna-N			
Coating		Exterior: C4 Classification Paint (ISO 12944) Interior: Epoxy			
Vessel Design		ASME Sec. VIII, Div. I			
Inlet Connection		1 ½" RF Flange	2" RF Flange	2" RF Flange	3" RF Flange
Outlet Connection		1 ½" RF Flange	1 ½" RF Flange	1 ½" RF Flange	2" RF Flange
Water Drain		Automatic			
Water Level Detection		Visual Sight Glass			
Voltage		460 VAC / 60 Hz / 3 PH			
Pump Motor Rating		1.5 HP / 1.1 KW	5 HP / 3.7 KW	7.5 HP / 5.6 KW	15 HP / 11.2 KW
Oil Heater Rating		7.5 KW	22.5 KW	45 KW	75 KW
Controls		NEMA 4 Control Panel with PLC and Touch Screen Interface			

TURBO-TOC® KLP SPECIFICATIONS

Elements

Type		KLP-3	KLP-5	KLP-20
Prefilter	PN	KMP9600AKF8B	KMP9600AKF8B	K1100
	Qty	1	1	1
Coalescer	PN	C220270	C220270	K2100
	Qty	2	2	2
Separator	PN	C220271	C220271	K3100
	Qty	1	1	1

Specifications

		KLP-3	KLP-5	KLP-20
Flow Rate	gpm	3	6	20
	lpm	11	23	76
Reservoir Size	gallons	≤ 720	721 - 1800	2401 - 4800
	liters	≤ 2725	2726 - 6800	9081 - 18200
Performance		ISO Cleanliness: 15/13/11 Total water: < 100 ppm		
Fluid Compatibility		Mineral-based Turbine Oil		
Maximum Viscosity		ISO 68		
Design Pressure		100 psi / 6.9 Bar	100 psi / 6.9 Bar	150 psi / 10.3 Bar
Approximate Dimensions (in)		38 L x 26 W x 44 H	48 L x 30 W x 44 H	71 L x 44 W x 87 H
Approximate Weight (lbs.)	Dry	400	500	2050
	Full	500	600	2550
Materials of Construction		Carbon Steel, Bronze, Stainless Steel, Buna-N		
Coating		Exterior: C4 Classification Paint (ISO 12944) Interior: Epoxy		
Vessel Design		ASME Sec. VIII, Div. I (Non-Stamped)[1]	ASME Sec. VIII, Div. I (Non-Stamped)[1]	ASME Sec. VIII, Div. I (U-Stamped)
Inlet Connection		¾" NPT	¾" NPT	2" RF Flange
Outlet Connection		½" NPT	½" NPT	1 ½" RF Flange
Water Drain		Manual	Automatic	Automatic
Water Level Detection		Visual Sight Glass		
Voltage		120 VAC / 60 Hz / 1 PH	460 VAC / 60 Hz / 3 PH	460 VAC / 60 Hz / 3 PH
Pump Motor Rating		0.5 HP / 0.37 KW	0.75 HP / 0.56 KW	3 HP / 2.2 KW
Oil Heater Rating		N/A	2.5 KW	15 KW
Controls		NEMA 4 Control Panel with PLC and Touch Screen Interface		

ELEMENTS

TURBO-TOC® Turbine Oil Conditioning Elements are designed exclusively for TURBO-TOC® systems, delivering exceptionally clean and dry turbine oil. Kaydon's integrated filtration, coalescer, and separator elements provide superior particle and water removal.

TURBO-TOC® Particulate Elements

TURBO-TOC® particulate filters are engineered to remove fine solid contaminants from turbine oil systems with high efficiency. They support aggressive ISO Cleanliness Code targets and protect sensitive bearing surfaces, enabling extended oil service intervals and reducing unplanned maintenance.

The portable TURBO-TOC® system utilizes the same proven filter media as fixed TURBO-TOC® units in a more compact footprint. These filters maintain system cleanliness, support reliable turbine performance, and extend oil life during both runtime and maintenance events, all while offering the flexibility of mobile deployment.

TURBO-TOC® Coalescer and Separator Elements

The coalescer and separator elements in the TURBO-TOC® system work together to remove free and emulsified water from turbine oil without chemicals or heat. The coalescer aggregates dispersed water into large droplets, while the separator blocks re-entry into the system—keeping oil dry, equipment protected, and startups reliable.

Part Number		KMP9600AKF8V	C220270	C220271
Element Type		Particulate	Coalescer	Separator
Performance	ISO Cleanliness	ISO 15/13/11	ISO 15/13/11	-
	Efficiency	β_x = 1000 @ 4.2µ	β_x = 1000 @ 5.1µ	-
Fluid Compatibility		Mineral-based Turbine Oil		
Maximum Viscosity		ISO 68		
Operating Temperature Range		32 - 200 °F (0 - 93 °C)		
Terminal Pressure Drop		25 psid (1.7 bar)	15 psid (1.0 bar)	15 psid (1.0 bar)
Nominal Dimensions (D x L)		3 x 8 in (76 x 203 mm)	4 x 16 in (102 x 406 mm)	4 x 12 in (102 x 305 mm)
Weight (approx.)		13 lbs (5.89 kg)	3 lbs (1.36 kg)	2 lbs (0.91 kg)

Part Number		K1100	K4100	K2100	K3100
Element Type		Particulate	Particulate	Coalescer	Separator
Performance	ISO Cleanliness				-
	Efficiency	β_x = 1000 @ 4.2µ	β_x = 1000 @ 7.1µ	β_x = 1000 @ 1µ	-
Fluid Compatibility		Mineral-based Turbine Oil			
Maximum Viscosity		ISO 68			
Operating Temperature Range		32 - 200 °F (0 - 93 °C)			
Terminal Pressure Drop		25 psid (1.7 bar)	25 psid (1.7 bar)	15 psid (1.0 bar)	15 psid (1.0 bar)
Nominal Dimensions (D x L)		6 x36 in (152 x 914 mm)	6 x36 in (152 x 914 mm)	6 x 44 in (152 x 1118 mm)	6 x 28 in (152 x 711 mm)
Weight (approx.)		13 lbs (5.89 kg)	13 lbs (5.89 kg)	9 lbs (4.08 kg)	8 lbs (3.63 kg)

KAYDON FILTRATION
Filtration Group®

Scan QR Code to connect with our team

kaydon@facetfiltration.com
www.kaydonfiltration.com

20260306