

## **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.

### **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.



#### **LONGER TURBINE LIFE**

TURBO-TOC® continuously removes harmful contaminants, 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.

**Separator Spares & Equipment LLC**  
*Authorized Kaydon Filtration Distributor*  
(985) 346-0122 Office  
[www.separatorequipment.com](http://www.separatorequipment.com)  
[info@separatorequipment.com](mailto:info@separatorequipment.com)

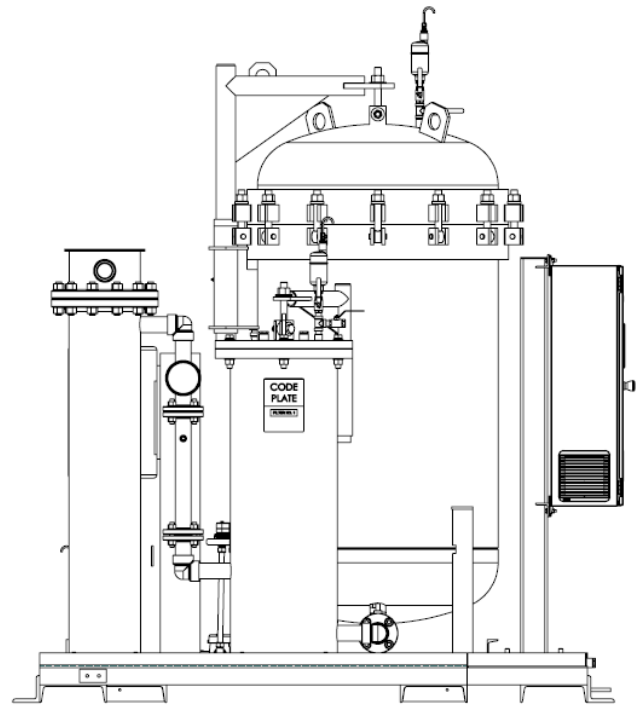
# **TURBO-TOC®**

Turbine Oil Conditioning Systems

## **KL SERIES 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.

| Elements  |     | 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       |



|                             |                                                                  | 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<br>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)<br>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         |                    |                    |                    |                     |

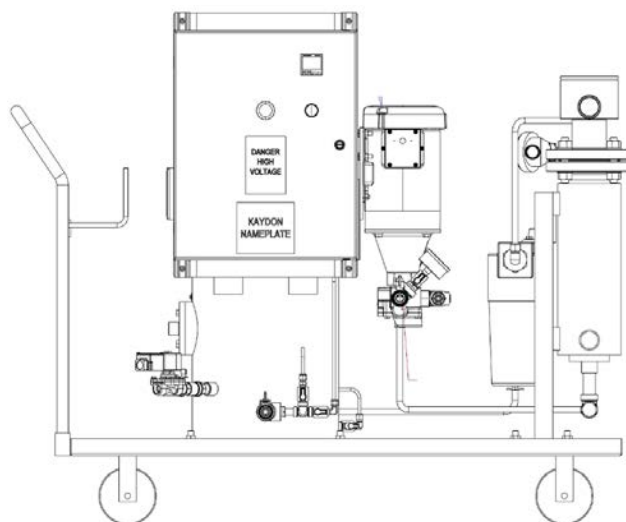
# TURBO-TOC®

Turbine Oil Conditioning Systems

## KLP SERIES PORTABLE SYSTEMS

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.

| Elements  |     | 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      |



|                             |         | 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<br>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)<br>Interior: Epoxy |                                                   |                                    |
| Vessel Design               |         | ASME Sec. VIII, Div. I (Non-Stamped) <sup>1</sup>                | ASME Sec. VIII, Div. I (Non-Stamped) <sup>1</sup> | 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         |                                                   |                                    |

# **TURBO-TOC®**

Turbine Oil Conditioning Systems

## **ELEMENTS** **STATIONARY SYSTEMS**

The Kaydon TURBO-TOC® system is a high-performance turbine oil conditioning platform designed to continuously remove particulate and water contamination from lubricating oil. Utilizing coalescing and particulate filtration technologies, TURBO-TOC® enhances turbine reliability, extends oil life, and supports long-term equipment performance during both operation and shutdown.



### **TURBO-TOC®** **Particulate Elements**

TURBO-TOC® particulate filters are engineered to remove fine solid contaminants from turbine oil systems with high efficiency.

These filters support aggressive ISO Cleanliness Code targets and protect sensitive bearing surfaces, enabling extended oil service intervals and reduced unplanned maintenance.



### **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                 |                 | K1100                     | K4100                     | K2100                     | K3100                    |
|-----------------------------|-----------------|---------------------------|---------------------------|---------------------------|--------------------------|
| Element Type                |                 | Particulate               | Particulate               | Coalescer                 | Separator                |
| Performance                 | ISO Cleanliness |                           |                           |                           | -                        |
|                             | Efficiency      | $\beta_x = 1000 @ 4.2\mu$ | $\beta_x = 1000 @ 7.1\mu$ | $\beta_x = 1000 @ 1\mu$   | -                        |
| 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)          |

# TURBO-TOC®

Turbine Oil Conditioning Systems

## ELEMENTS PORTABLE SYSTEMS

The Kaydon Portable Turbo-TOC® (KLP Series) is a mobile turbine oil conditioning system designed to provide on-demand removal of water and particulate contamination. Ideal for reservoir maintenance and outage support, the KLP unit delivers ISO cleanliness improvements and rapid water separation without interrupting turbine operation.



### TURBO-TOC® Particulate Elements

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

Kaydon's portable TURBO-TOC® systems use dedicated coalescer and separator elements to remove free and emulsified water from turbine oil with high efficiency. The coalescer captures dispersed water and merges it into larger droplets, while the separator prevents re-entry—delivering dry, clean oil without the need for heat, chemicals, or vacuum systems.

| Part Number                 |                 | KMP9600AKF8V              | C220270                   | C220271                  |
|-----------------------------|-----------------|---------------------------|---------------------------|--------------------------|
| Element Type                |                 | Particulate               | Coalescer                 | Separator                |
| Performance                 | ISO Cleanliness | ISO 15/13/11              | ISO 15/13/11              | -                        |
|                             | Efficiency      | $\beta_x = 1000 @ 4.2\mu$ | $\beta_x = 1000 @ 5.1\mu$ | -                        |
| 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)          |



**KAYDON FILTRATION**  
Filtration Group®



**SEPARATOR**  
**SPARES & EQUIPMENT** LLC

*Authorized Kaydon Filtration Distributor*

144 Intracoastal Dr.

Houma, LA 70363

Toll Free: (866) 218-0013

Phone: (985) 346-0122

Fax: (985) 346-0244

[www.separatorequipment.com](http://www.separatorequipment.com)

[info@separatorequipment.com](mailto:info@separatorequipment.com)