



Introduction: KLEENTEK: Electrostatic Oil Cleaner

with Dehydration ("EDH")

Focus Machinery Pte Ltd, Singapore x
Kleentek Corporation Inc., Japan

Today's Agenda – Discussion



- 1. Our Heritage, History and Expertise
- Our knowledge in hydraulic fluid lubrication management
- 3. How we operate and work
- 4. Value proposition of using EDH
- 5. Working principle of EDH
- 6. EDH vs Traditional & Conventional Filters
- 7. What can EDH do?
- 8. Cost-Benefit Analysis ("CBA")
- 9. Case Study Benefits of EOCs

1. Focus Machinery Pte Ltd, Singapore – Our Story, History and Heritage

Focus Machinery Pte Ltd, Singapore has been working with Kleentek Corporation, Inc in Japan since 1999.

We started off supplying equipment such as dehumidifier dryers and parts and components dealing with used injection machine for the export market.

We supply and support equipment and tools of various make within the Asia Pacific Region, such as Singapore, Malaysia and Indonesia – Batam.

We've successfully supplied and delivered many units of Kleentek, Electrostatic Oil Cleaners ("EOCs") previously also known as Electrostatic Liquid Cleaners ("ELCs") to various industries such as Plastic Injection Moulding Industries, Injection Stretch Blow Moulding (PET bottles production) and power generation plants in the region of Singapore, Malaysia, Thailand and Indonesia – Batam.





To Whom It May Concern KLEENTEK Corporation are pleased to confirm that Focus Machinery Ptv Ltd. Block 5008, Ang Mo Kio Ave 5, #04-09, Techplace II, Singapore 569874 is our authorized agency to sell our following products in Malaysia, part of Indonesia 1. Electrostatic Oil Cleaners having the trade names of EOC-R100TP, EOC-R100A, EOC-R50TP, EOC-R50A, EOC-R25TP, EOC-R25A, EOC-R10A and EOC-R3A, etc. 2. Dehydration Filters having the trade names of DH-1B, DH-2B, DH-KS, DH-2KS etc. 3. Contaminants Checkers 4. Consumables for the above machines having the trade names of Collectors as CC-R50SP, CC-R25SP, CC-R10SP, CC-R3SP, DH-B, DH-S, etc. We shall be obliged if you will kindly support them. Yours very truly For and on behalf of Kleentek Corporation, Tokyo Japan Manager, Overseas Department Shinagawa Techno Bldg. 4F 2-7-7 Higashi-Ohi, Shinagawa-ku, Tokyo 140-0011, Japan Tel: +81-3-3740-4143 Fax: +81-3-3740-4966



May 15, 2023

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For and on behalf of Kleentek Corporation, Tokyo Japan,

Manager, Overseas Department

Shinagawa Techno Bldg. 4F 2-7-7 Higashi-Ohi, Shinagawa-ku, Tokyo 140-0011, Japan Tel: +81-3-3740-4143 Fax: +81-3-3740-4966





2. Value Proposition of Focus Machinery Pte Ltd, Singapore

To provide our customer with a cost effective
solution to their challenges
in the area of
hydraulic lubrication

3. Our Knowledge in Hydraulic Fluid Lubrication Management

Product/Services

Used Oil Contamination Control Management

Oil Analysis Performance Benchmarking

Technical Support

Kleentek Corp Inc., - Agent for Singapore, Malaysia and Indonesia – Batam

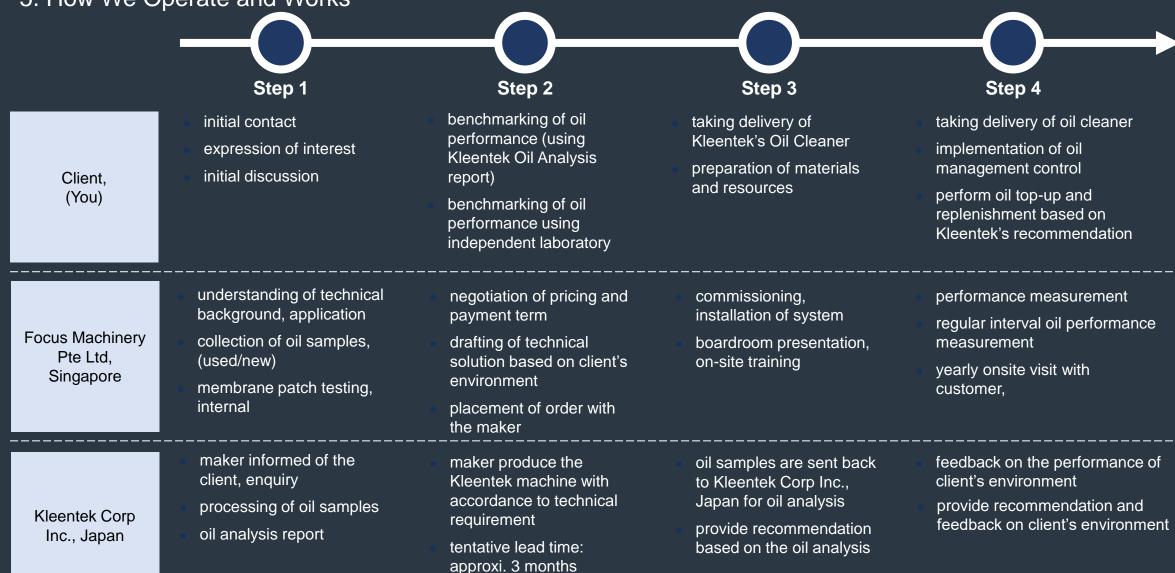
Illustration

- Provide used oil contamination control management for some of the major industry within the market; e.g. plastic manufacturing; utilities – power generations; automobile manufacturing and aviation
- Designed in-house proprietary used oil contamination control management framework for one oil cleaner to multiple machine environment
- Provide both independent and industry standard benchmarking for majority of the used oil analysis benchmarking.
- e.g. RULER (Remaining Useful Life Evaluation Routine) Oil Analysis measure the level of remaining antioxidant additive levels in lubricating oils turbine oil and hydraulic oil; Total Acidic Number (TAN) and Total Base Number (TBN)
- All KLEENTEK products supplied comes with manufacturer warranty coverage support, including spare parts and components – therefore you are not just coverage with your consumable, but also you can have a peace of mind whenever your machine encounter any technical issue.
- We supplies all range of Kleentek product directly from Kleentek Corp Inc., Japan therefore always remember to ask for your **Certificate of Origin** (**"C.O.I"**) upon any purchase, in order to ensure the product authenticity and validity.

4. Value Proposition of Kleentek: Electrostatic Oil Cleaner ("EOC")

To promote <u>sustainable practice</u> through the <u>reduced use of non-renewable</u> natural resource by refocusing the use refined mineral oil while ensuring <u>maximum uptime</u>; reduce cost of maintenance and <u>minimizing operational impact</u>.

5. How We Operate and Works



Introduction - KLEENTEK: Electrostatic Oil Cleaner with Dehydration ("EDH") Primary Advantage and Features

Application

It primary advantage and feature of using KLEENTEK: Electrostatic Oil Cleaner with Dehydration ("EDH") lies in its ability to reduce the water contamination from <2,000ppm to <500ppm in a single pass - allowing the function of the KLEENTEK: Electrostatic Oil Cleaner to function and work normally.



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Primary Use Case

The advantage of implementing KLEENTEK: Electrostatic Oil Cleaner with Dehydration ("**EDH**") Unit is it allow the removal of water contamination and oil oxidation product (e.g. varnish, oil oxidation product, and other insoluble solid contaminations) in a single-pass manner.

Electrostatic Oil Cleaner ("EOC") or the Dehydrator ("DH") can independently or in combination by simply changing the configuration of a few valves.



Summary: Operating Principle

The advantage of implementing KLEENTEK: Electrostatic Oil Cleaner with Dehydration ("**EDH**") Unit is it allow the removal of water contamination and oil oxidation product (e.g. varnish, oil oxidation product, and insoluble solid contamination) in a single-pass manner.

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Details Main Point allow the removal of water contamination and oil oxidation **Application:** product (e.g. varnish, oil oxidation product, and other insoluble solid contamination) in a single-pass manner where water contamination is persistent and continuous Digital Countdown Timer **Feature** Pressure Gauge Indicator Voltage/Ampere reading Hi/Low Volt – REV/OFF/NOR Pump Switch EDH-R25A; Available in EDH-R50A-2B; Following Models: EDH-R100A-2B; EDH-R100-3B Electrostatic Oil Cleaning in Operation Only **Model of Operation:** Electrostatic Oil Cleaning + Dehydration Only **Dehydration Mode Only** Pump Flow (lit/min) : 5.0 L/min @ 50Hz **Specification:** Dimension (L x W x H)(mm) : 535 x 375 x 940

Weight (kilogram – kg)



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Main Point

Details

Application:

- allow the removal of water contamination and oil oxidation product (e.g. varnish, oil oxidation product, and other insoluble solid contamination) in a single-pass manner
- where water contamination is persistent and continuous

Feature

- Digital Countdown Timer
- Pressure Gauge Indicator
- Voltage/Ampere reading
- Hi/Low Volt REV/OFF/NOR Pump Switch

Available in Following Models:

- EDH-R25A;
- EDH-R50A-2B:
- EDH-R100A-2B; EDH-R100-3B

Model of Operation:

- 1. Electrostatic Oil Cleaning in Operation Only
- 2. Electrostatic Oil Cleaning + Dehydration Only
- 3. Dehydration Mode Only

Specification:

- Pump Flow (lit/min) : 5.0 L/min @ 50Hz
- Dimension (L x W x H)(mm) : 535 x 375 x 940
- Weight (kilogram kg) : 62



Main Point	Details	
Application:	 allow the removal of water contamination and oil oxidation product (e.g. varnish, oil oxidation product, and other insoluble solid contamination) in a single-pass manner where water contamination is persistent and continuous 	
Applicable Fluid:	 Water Glycol/Mineral Oil Fatty Acid Ester Wash Oil Phosphate Ester Fluid 	
Environment:	 Automotive Industry/ ATF & CVTF Test Stand Anti rust oil, Wash oil, Processing line for bearing, precision component and coachbuilding 	
Consumable:	Element, B-45Cartridge Collector, CC-RxxSP	
Specification:	 Pump Flow (lit/min) : 5.0 L/min @ 50Hz Dimension (L x W x H)(mm) : 535 x 375 x 940 Weight (kilogram – kg) : 62 	



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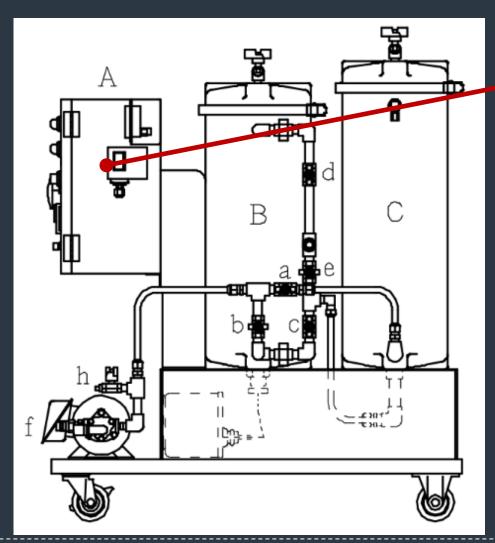
Weight (kilogram – kg)

Details

Main Point

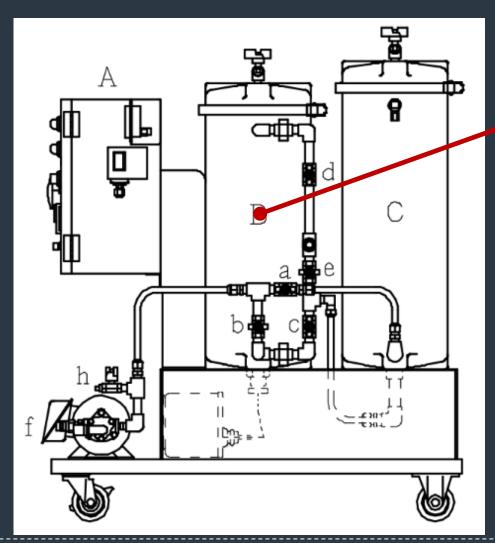
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Specification:	 Pump Flow (lit/min) : 5.0 L/min @ 50Hz Dimension (L x W x H)(mm) : 535 x 375 x 940 	Lifespan: Approx. 2,000 hours

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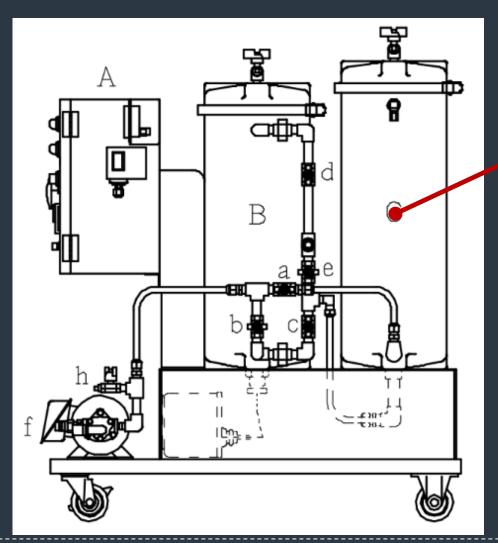
EDH Series: Product Parts Identification

- Electrical Control Box
- Oil Cleaning Chamber
- Dehydration Chamber
- Electric Pump Unit
- High-Voltage ("Hi-Volt") Transformer



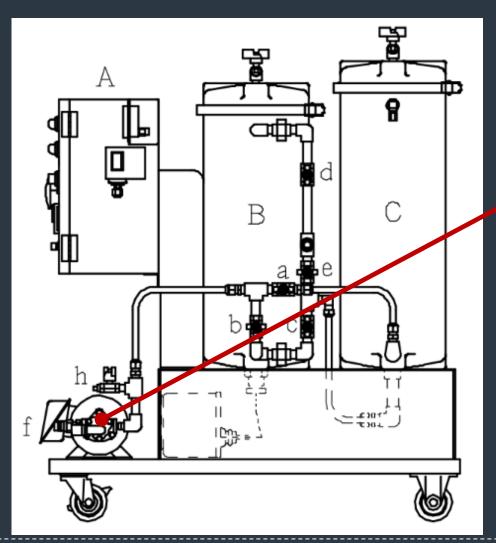
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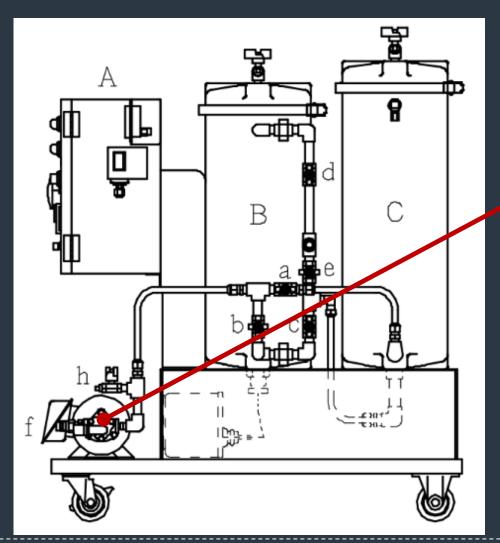
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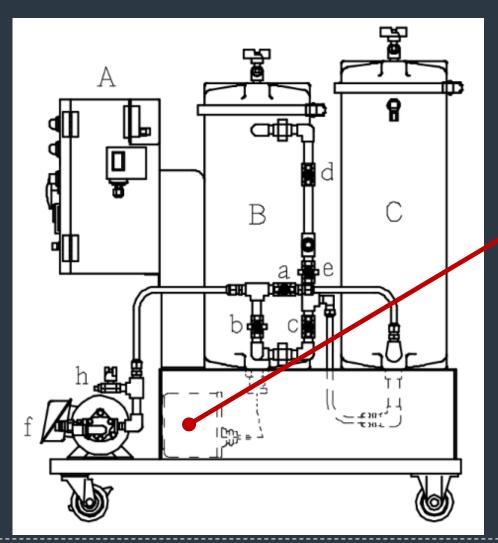
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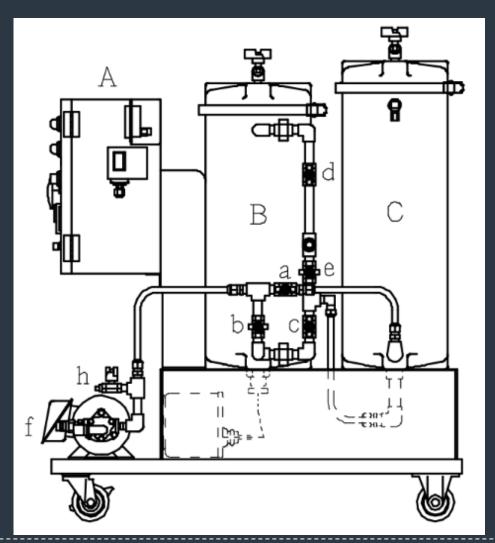
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EDH Series: Product Specification

- Capacity of Oil Cleaning Chamber
- Capacity of Dehydration Chamber
- # of Valve
- Electric Pump Unit
- High-Voltage ("Hi-Volt") Transformer

Different mode of operation for different level of water contamination level: EDH-R25A Summary: Operating Parameters

A B C C

Case I

water contamination < 0.1%

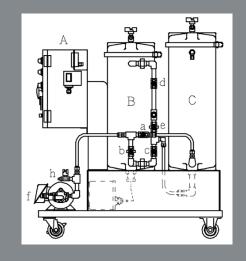
Level of Water

Contamination

being processed

Chamber where oil is

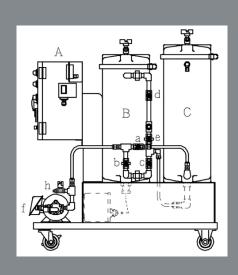
Chamber B & Chamber C continuously



Case II

water contamination > 0.1%

Chamber C continuously only



Case III

water contamination < 0.05%

Chamber B only

Summary: EDH-R25A

Different Mode of Operation to cater to different level of water contamination:

	f State of the sta	f light side of the state of th	f light and the state of the st
	Case I	Case II	Case III
Level of Water Contamination	water contamination < 0.1%	water contamination > 0.1%	water contamination < 0.05%
Chamber where oil is being processed	chamber B & chamber C continuously	chamber C continuously only	chamber B continuously only
Valve Setting: (open/close)	Stop valve "a" (V1) – open Stop valve "b" (V2) – close Stop valve "c" (V3) – open Stop valve "d" (V4) – open Stop valve "e" (V5) – close Oil flow directly into chamber "B" via chamber "C"	Stop valve "a" (V1) – open Stop valve "b" (V2) – close Stop valve "c" (V3) – close Stop valve "d" (V4) – close Stop valve "e" (V5) – open Oil flow directly into chamber "C" only	Stop valve "a" (V1) – open Stop valve "b" (V2) – close Stop valve "c" (V3) – open Stop valve "d" (V4) – open Stop valve "e" (V5) – close Oil flow directly into chamber "B" only

Summary: EDH-R25A

Different Mode of Operation to cater to different level of water contamination:

Level of Water Contamination

Chamber where oil is being processed

Application:



Case I

water contamination < 0.1%

chamber B & chamber C continuously

when the level of water contamination in the oil is greater than 0.05% (500ppm) but lesser than 0.1% (1,000ppm)



Case II

water contamination > 0.1%

chamber C continuously only

when the water contamination in the system is over 2,000ppm (dynamic environment – where is the oil is flowing consistency). It works by reducing the water contamination to 1,000ppm



Case III

water contamination < 0.05%

chamber B continuously only

when the level of water contamination within the oil is 2,000 part per million (ppm) (static, consistency – stable), before it is reduce to 0.05% (500ppm).

Different Power Supply Configuration of EDH-R25A Electrostatic Oil Cleaner ("EOC") with Dehydration Unit ("DH")

Available in Power Supply:

- 1P/120V/50Hz
- 1P/230V/50Hz
- 1P/240V/50Hz
- 3P/318V/50Hz
- 3P/400V/50Hz

Available in the Following Capacities:

- EDH-R25A-1B;
- EDH-R50A-2B;
- EDH-R100A-2B;
- EDH-R100A-3B.

Consumable Required:

- B-45, Dehydration Element
- CC-R25SP, Cartridge Collector



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Frequently Asked Question ("FAQ") Questions and Answer ("Q&A")

Question: What's the amount of water that the B-45 element can hold?

Answer: Each piece of B-45 element is designed to contain 4.0 litres ("L") of water

Question: How do we know when the dehydration element should be change? Or is due for

replacement?

Answer: The pressure alarm lamp turns ("RED") is lighted up

When the pressure gauge on the machine is greater than 0.3MP2

- please see photo on the right

Question: Can the dehydration element and the cartridge collector be changed independently?

Answer: Yes, the cartridge collector and the dehydration element can be changed independently of

each upon reaching its lifespan



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Frequently Asked Question ("FAQ") Questions and Answer ("Q&A")

Question: How should we know when should the dehydration element should be change?

Answer: [1] When the dehydration (DH) element is saturated with water, the pressure switch works ->

[2] the pump will automatically stop and the pressure alarm lamp ("RED") will be lighted ->

[3] the pump is stopped by the actuation of the pressure switch when the pressure in the cleaning chamber is 0.3IMPa

For more information, you may reach us at:



WRITE TO US

sales@focusmachinery.com.sg enquiry@focusmachinery.com.sg





Book a meeting with Benjamin Yong | Focus Machinery Pte Ltd