### KATO Well Known For

## **High Vacuum Oil Purifier**

REMOVES WATER AND GAS IN INSULATING OIL FINE AND EFFICIANCY





KATO Vacuum Oil Treatment System for reconditioning insulating oils used in transformers, switching equipment, OF cable, Hydraulic units and so on.

## KATO ELECTRIC MFG. CO., LTD

# **KLVC** series

#### **Highly Effective Self-contained**

#### KATO Vacuum Oil purifier for capacities from 500 to 20,000 LPH.

Removes water and dissolved gases efficiently from insulating oils.

The new KATO vacuum oil purifiers are available for refining insulating or hydraulic oils or for any application which requires high degree of purification.

#### **Capacities and basic forms**

KATO Vacuum oil purifiers are available in four basic models, KLV-LAX, KLVC-AX, KLVC-AX-I, and KLVC-AX-II, and in seven sizes with capacities ranging from 500 to 20.000 L/H.

All sizes can be delivered fixed or mobile. The mobile units have either skid base or trailer base.

#### **Guaranteed Performance:**

	Initial		Result after Single pass			Result after Multi (3) passes		
			(No mark)	-1	-11	(No mark)	-1	-11
Water [ppm] tested by ASTM D1533	50	to	10	5	2-3	5	2	1
Gas [Vol%] tested by ASTM D2945	10	to	0.25	0.1	0.05	0.1	0.01	0.01
Dielectric Strength [kV] tested by IEC156	30	to	60	70	80	70	80	90

#### CABLE OIL MODEL:

A special treatment plant of 100 to 300 L/H capacity with batch type degasser is available for treatment of cable oils. Full details upon request.

#### Application:

Transformers (Insulating oil), Vacuum pumps, Refrigerators, Compressors, Hydraulic units, Silicon oil, Turbine oil

#### **Standard Features:**

- Low watt density heater
- Single or Two stage Vacuum system with totally enclosed, fan cooled (TEFC) motors.
- Vacuum chamber of an effective design with a large evaporation area
- System protection sensing devices.
- High pressure alarm.
- High oil level in the vacuum chamber alarm.
- High oil level in the vapor trap.
- High foam level in the vacuum chamber alarm.

#### Principle of operation

After years of extensive research and development KATO engineers have designed the ultimate high capacity oil treatment plant. The flow schematic shows model KLVC series. The oil is drawn by inlet oil pump through inlet valve, then passes a strainer, oil heater, the pre-Filter. A low watt density heater heats oils to a temperature of between 30 deg. C and 50 deg. C and passes oils into the vacuum chamber. Since the untreated oil is under vacuum during this process, the absolute pressure is lowered, resulting in a substantially lower boiling temperature for the untreated oils. As the heated, untreated oil flows through the vacuum chamber, it is spread to a thin film by the degassing elements. This gives it maximum exposure to the vacuum for dehydration and degasification. The vacuum pump draw off the moisture and dissolved gasses in the form of vapor. Treated oil is then pumped from the vacuum chamber through a fine filter and to the outlet for re-use.

## Specifications:

## KLVC- AX (No mark)

Model		KLVC-1AX	KLVC-2AX	KLVC-3AX	KLVC-4AX	KLVC-5AX	KLVC-6AX
Flow Rate [L/h]			1,000	2,000	4,000	6,000	12,000
Heater [kW]		6	12	24	48	72	120
Motor [kW]		1.15	1.55	3.00	5.2	8.1	14.0
Vacuum Pump [L/m]	Vacuum Pump [L/m]		550	800	1,500	3,000	800
Mechanical Boos [m3/h]	Mechanical Booster [m3/h]		-	-	-	-	300
CONNECTION [in]		3/4	3/4	1	1-1/4	1-1/2	2
Approx.	L	150	180	180	200	230	250
Dimensions (Type C )	w	120	120	120	160	180	180
[cm]	н	150	180	180	180	220	220
Approx. Weight Ty [kg]	pe C)	900	1,000	1,200	1,800	2,600	2,700

#### KLVC- AX -I

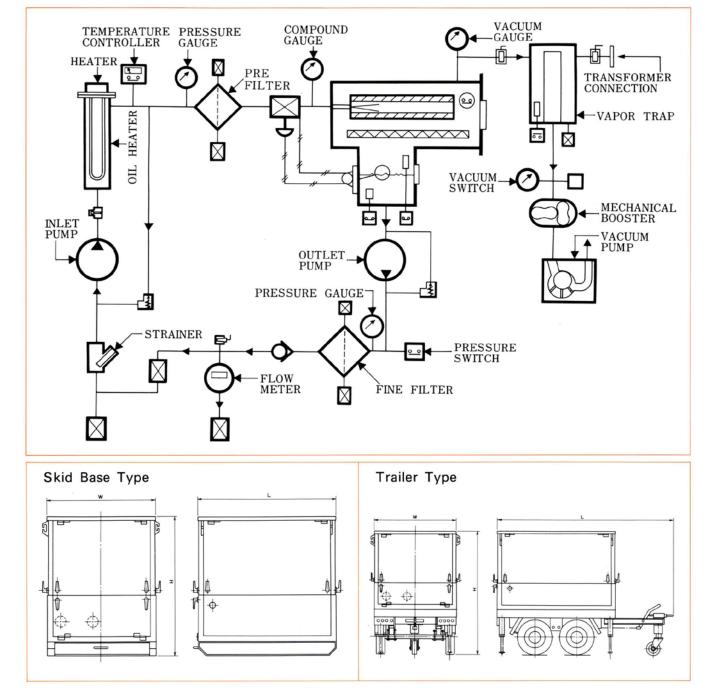
Model		KLVC-1AX-I	KLVC-2AX-I	KLVC-3AX-I	KLVC-4AX-I	KLVC-5AX-I	KLVC-6AX-I
Flow Rate [L/h]			1,000	2,000	4,000	6,000	12,000
Heater [kW]		6	12	24	48	72	120
Motor [kW]		1.15	2.3	3.7	6.7	7.4	15.4
Vacuum Pump [L/m]	Vacuum Pump [L/m]		800	1,500	3,000	800	1.500
Mechanical Boos [m3/h]	Mechanical Booster [m3/h]		-	-	-	300	500/600
CONNECTION [in]	CONNECTION [in]		3/4	1	1-1/4	1-1/2	2
Approx.	L	150	180	180	200	250	250
Dimensions (Type C )	w	120	120	120	160	180	190
[cm]	н	150	180	180	180	210	220
Approx. Weight Typ [kg]	Approx. Weight Type C ) [kg]		1,200	1,400	1,850	2,550	2,900

#### KLVC- AX -II

Model		KLVC-1AX-II	KLVC-2AX-II	KLVC-3AX-II	KLVC-4AX-II	KLVC-5AX-II	KLVC-6AX-II
Flow Rate [L/h]			1,000	2,000	4,000	6,000	12,000
Heater [kW]		6	12	24	48	72	120
Motor [kW]		1.9	3.0	5.2	6.0	8.8	18.4
Vacuum Pump [L/m]	Vacuum Pump [L/m]		1,500	3,000	800	1,500	3,740
Mechanical Boos [m3/h]	Mechanical Booster [m3/h]		-	-	300	500/600	1250/1500
CONNECTION [in]	CONNECTION [in]		3/4	1	1-1/4	1-1/2	2
Approx.	L	160	180	200	240	250	300
Dimensions (Type C )	w	140	140	150	160	160	200
[cm]	н	170	180	190	200	200	210
Approx. Weight Ty [kg]	Approx. Weight Type C ) [kg]		1,200	1,350	2,000	2,600	2,900

\* The above specifications may be modified without any notice.

## **FLOW SCHEMATIC**



#### **Model Indication**

KLVC- AX <Body Type> C : Skid Base / CT : Trolley / P : Trailer / SO : Stationary (Indoor Use)

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