

# REMOVES WATER AND GAS IN INSULATING OIL FINE AND EFFICIENCY

BULLETIN KC-4E



**Kato Vacuum Oil Treatment  
System for reconditioning  
insulating oils used in  
transformers, switching  
equipment, OF cable and  
hydraulic units**

**KLVC-AX-II series**



**ELECTRIC MFG.CO.**

## Highly Effective Selfcontained Model KLVC-AX-II series 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:

(1) Single pass result:

Residual moisture content in oil from 50 PPM to 2 PPM or less, residual gas content in oil from 10 vol.% to 0.05 vol.% or less, refined dielectric strength of oil from 30KV to 80KV or more.

(2) Several passages result:

Residual moisture content in oil from 2 PPM to 1 PPM or less, residual gas content in oil from 0.5 vol.% to 0.01 vol.%, refined dielectric strength of oil from 60KV to 90KV or more.

### 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  
Vacuum pumps  
Circuit breakers  
OF cables  
Refrigerators  
Compressors  
Hydraulic units.

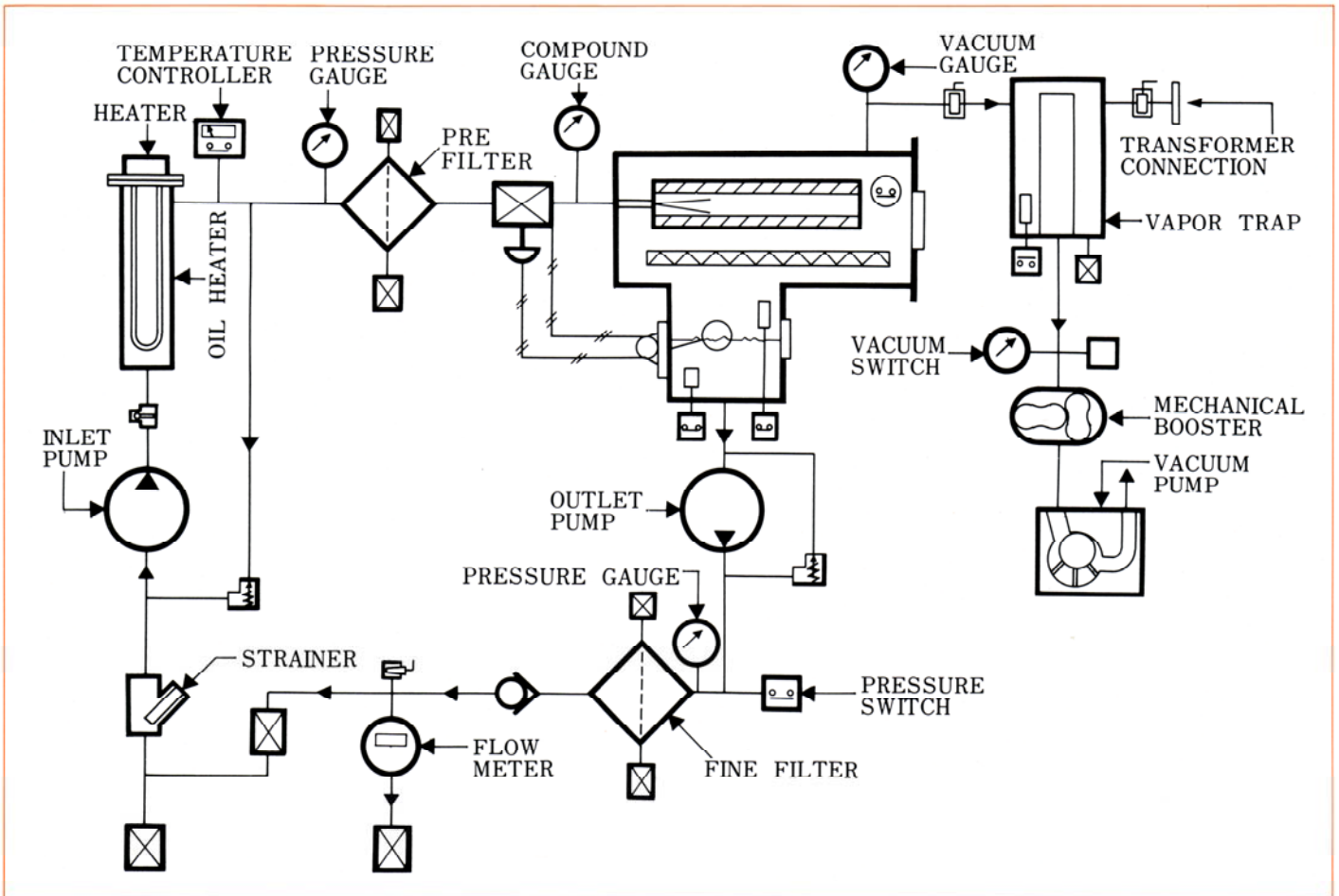
### Standard Features:

- Low watt density heater
- Single or Two stage Vacuum system with totally enclosed, fan cooled (TEFC) motors.
- Vacuum chamber of a 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.



Trailer Type

# FLOW SCHEMATIC



## Principle of operation

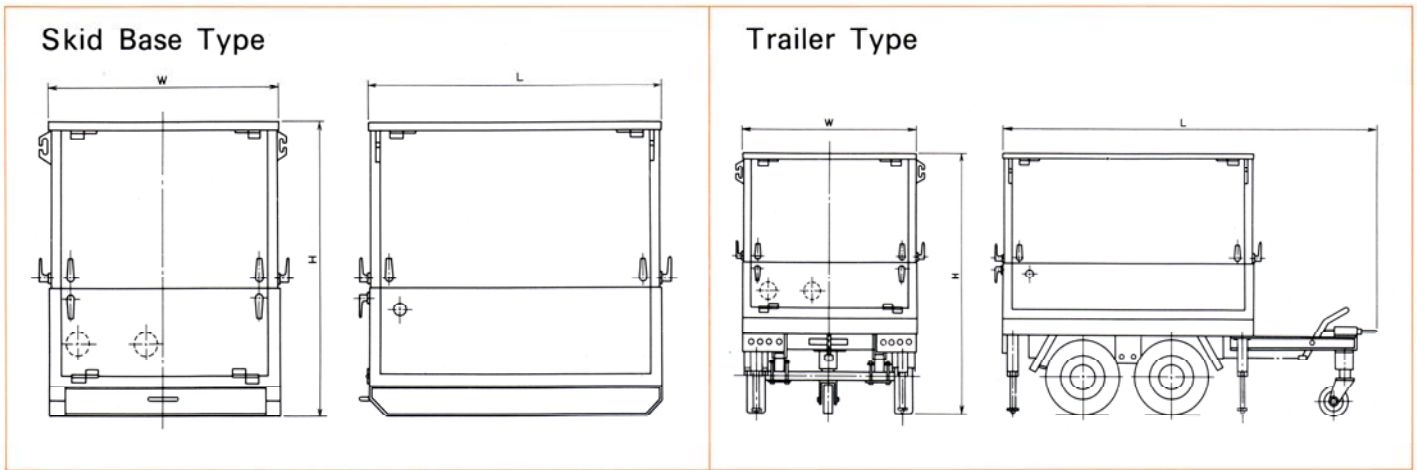
After years of extensive research and development KATO engineers have designed the ultimate high capacity oil treatment plant.

The flow schematic shows model KLVC-II 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°C and 50 °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 vapore. Treated oil is then pumped from the vacuum chamber through a fine filter and to the outlet for re-use.



### How to read Model Numbers:

Option: CT-Trolley type

SO: Stationary type

C: Skid base type

P: Trailer type

### Specifications:

MODEL NUMBERS		KLVC-1AX-II	KLVC-2AX-II	KLVC-3AX-II	KLVC-4AX-II	KLVC-5AX-II	KLVC-6AX-II	KLVC-7AX-II	
FLOW RATE, L/H		500	1,000	2,000	4,000	6,000	12,000	20,000	
HEATERS, KW		6	12	24	48	72	120	240	
MOTORS, KW		1.9	3.0	5.2	5.25	8.8	18.4	33.5	
VACUUM PUMP, L/M		800	1,500	3,000	550	1,500	3,000	6,000	
MECHANICAL BOOSTER, M <sup>3</sup> /H		—	—	—	300	600	1,400	2,500	
CONNECTION, IN.		3/4	3/4	1	1-1/4	1-1/2	2	2-1/2	
DIMENSIONS, cm	STATIONARY TYPE "SO"	L	160	180	200	240	250	300	380
		W	140	140	150	160	160	200	220
		H	160	170	180	190	200	210	230
	SKID BASE TYPE "C"	L	160	180	200	240	250	300	380
		W	140	140	150	160	160	200	220
		H	170	180	190	200	200	210	230
	TRAILER TYPE "P"	L	260	280	300	340	350	400	480
		W	190	190	200	210	210	220	220
		H	220	230	250	250	260	300	300
WEIGHTS Kg	STATIONARY	950	1,100	1,250	1,800	2,350	2,600	3,900	
	SKID BASE	1,100	1,200	1,350	2,000	2,600	2,900	4,500	
	TRAILER	1,400	1,500	1,650	2,400	3,100	3,400	4,900	

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

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