

REMOVES WATER AND GAS IN INSULATING OIL FINE AND EFFICIENCY

BULLETIN KC-3E



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

KLVC-AX-I series



ELECTRIC MFG.CO.

Highly Effective Selfcontained Model KLVC-AX-I 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 5 PPM or less, residual gas content in oil from 10 vol.% to 0.1 vol.% or less, refined dielectric strength of oil from 30KV to 70KV or more.

(2) Several passages result:

Residual moisture content in oil from 5 PPM to 2 PPM or less, residual gas content in oil from 0.5 vol.% to 0.05 vol.%, refined dielectric strength of oil from 60KV to 80KV 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.

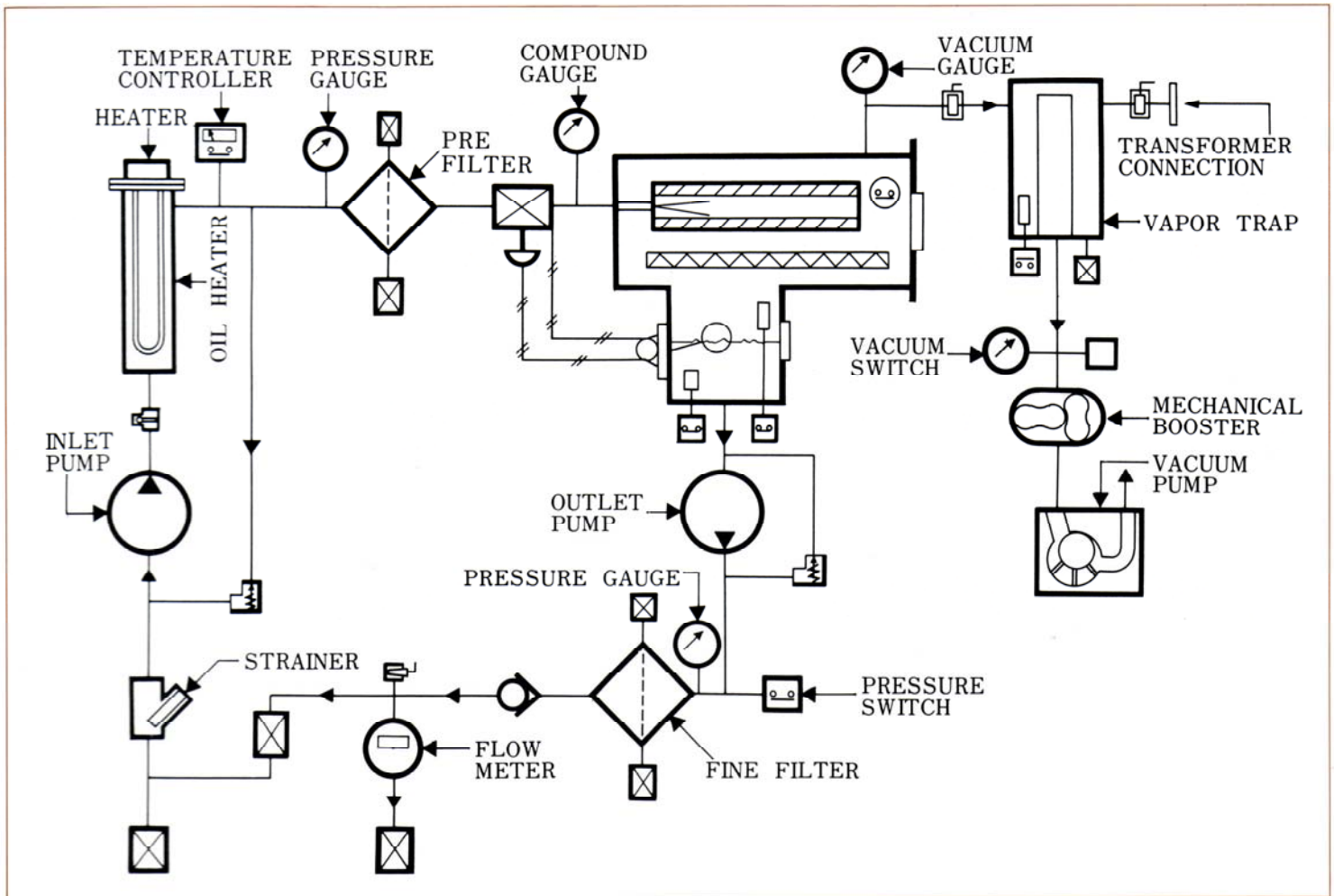
Standard Features:

- 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.

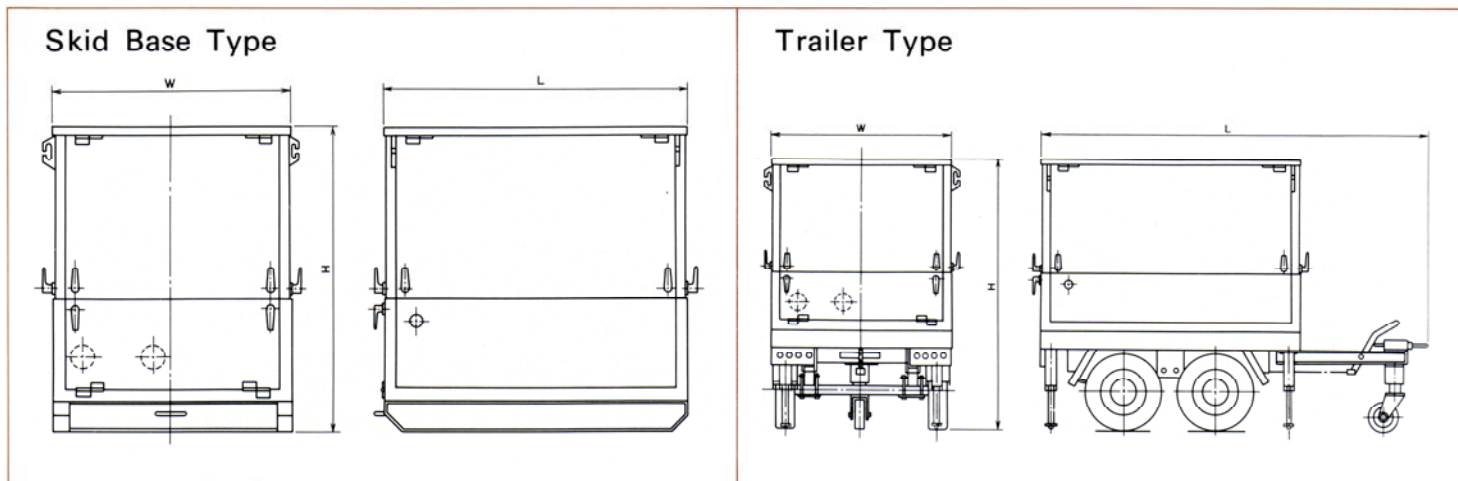
The flow schematic shows model KLVC -I series.

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 draws off the moisture and dissolved gases in the form of vapour. 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-I | KLVC-2AX-I | KLVC-3AX-I | KLVC-4AX-I | KLVC-5AX-I | KLVC-6AX-I | KLVC-7AX-I | |
|---------------------------------------|----------------------|------------|------------|------------|------------|------------|------------|------------|-----|
| 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 | | 1.15 | 2.3 | 3.7 | 6.7 | 6.65 | 15.4 | 22.4 | |
| VACUUM PUMP, L/M | | 550 | 800 | 1,500 | 3,000 | 550 | 1,500 | 3,000 | |
| MECHANICAL BOOSTER, M ³ /H | | — | — | — | — | 300 | 600 | 1,400 | |
| CONNECTION, IN. | | 3/4 | 3/4 | 1 | 1-1/4 | 1-1/2 | 2 | 2-1/2 | |
| DIMENSIONS, cm | STATIONARY TYPE "SO" | L | 150 | 180 | 180 | 200 | 250 | 250 | 330 |
| | | W | 120 | 120 | 120 | 160 | 180 | 190 | 200 |
| | | H | 150 | 170 | 170 | 170 | 200 | 220 | 250 |
| | SKID BASE TYPE "C" | L | 150 | 180 | 180 | 200 | 250 | 250 | 330 |
| | | W | 120 | 120 | 120 | 160 | 180 | 190 | 250 |
| | | H | 150 | 180 | 180 | 180 | 210 | 220 | 250 |
| | TRAILER TYPE "P" | L | 250 | 280 | 320 | 320 | 350 | 380 | 460 |
| | | W | 170 | 170 | 170 | 210 | 220 | 220 | 220 |
| | | H | 210 | 230 | 240 | 260 | 260 | 290 | 300 |
| WEIGHTS Kg | STATIONARY | 800 | 1,000 | 1,200 | 1,600 | 2,200 | 2,600 | 3,200 | |
| | SKID BASE | 1,000 | 1,200 | 1,400 | 1,850 | 2,550 | 2,900 | 3,800 | |
| | TRAILER | 1,300 | 1,500 | 1,800 | 2,200 | 2,900 | 3,400 | 4,200 | |

* The above specifications may be modified without any notice.

KATO ELECTRIC MFG. CO., LTD.

Represented by:

203, 17-19, EBARA 2-CHOME
SHINAGAWA-KU, TOKYO, JAPAN

PHONE: 81-3-3783-5761~3

TELEX : 246-6049 KATOF L J

FAX : 81-3-3784-6309 (SALES OFFICE)
81-0559-87-1144 (FACTORY)