

*For*  
*Power Companies*  
*And The*  
*Electrical Industry*



***Vacuum Oil-Purifiers***



Cargo Trailer Mount Option

## Applications

The most important applications of high vacuum degasifiers are in the field of extra high voltage transmission and in the manufacture of electrical apparatus for it. In addition, the high vacuum process is used in the degasification of cable oils including polybutenes. Outside of the electrical industry, this process is used for dehydration and degasification of oils for radar and electronic equipment, vacuum pump sealing oils, brake fluids, refrigeration oils—including phosphate esters and silicones.

Enervac offers the EHV Vacuum Oil-Purifier series designed for maximum efficiency in your operations...performance tested by experts, requiring minimum maintenance, and providing long, trouble-free service.

Backed by the full resources of Enervac's technical specialists, plus "know-how" and thorough research, your Vacuum Oil-Purifier is unique. Designed for unattended operation and suitable for operation on energized equipment—complete monitoring equipment is also available.

## Description Of Process

Oil is introduced into the vacuum chamber, where water, dissolved air and gases, and other low-boiling-range volatile contaminants are removed. Special chemically inert accelerator cartridges in the vacuum chamber are employed to serve the following functions:

First, their in-depth design structure allows free water to be rapidly separated from oil by coalescence even before it reaches the evaporation stage.

Second, millions of glass fibers 3-10 micrometer diameter provides a large total surface area for exposure of the thin oil film to the vacuum.

Third, sharp points of the glass fibers promote fast release of gases and vapors from oil.

Fourth, the elements act as a fine filter removing solid contaminants. The cartridges are easily replaced and disposable.

This method is more efficient than previously used spray nozzles and baffles which required several passes to obtain the same degree of degasification.

## Performance

The typical performance achieved with the EHV series is:

- Dehydration—at minimum oil temperatures of 27°C the water removal is from 50 ppm to less than 5 ppm.
- Degasification—reduce soluble air content from full saturation of approximately 12% to less than 0.25%.
- Particulate matter—standard after-filter provides filtration down to 0.5 micron
- Other contaminants such as products of oil oxidation, thermal degradation, dissolved varnishes, paints and acids can be removed by the addition of optional Fullers Earth filters to the system.



Open-Sided Container Mount Option

# VACUUM OIL-PURIFICATION SYSTEMS

## Model Nomenclature Chart

Standard features	Heater kW 25°C rise	Oil flow rate Litres per hour	Vacuum pump capacity Standard, m <sup>3</sup> h <sup>-1</sup>	With Roots booster Option 'VB', m <sup>3</sup> h <sup>-1</sup>
Unattended operation	3	200	25	150
Oil level controller	11	500	40	250
Foam controller	16	1,000	65	450
TEFC motors	32	2,000	100	450
Mechanical seal oil pumps	64	4,000	200	900
Low watt density heaters	96	6,000	300	1,450
IP52 central control panel	128	8,000	400	2,700
Welded steel piping	160	10,000	500	2,700
Exclusive processing chamber	192	12,000	600	4,500
PLC control				
0.5 micron after-filter				

**EHV-**  -  -

Option	Code	Features	Option	Code	Features
Filters	P	5 micron pre-filter	Electrical input	11	110 V, 1 phase, 50 or 60 Hz
Instrumentation	T	Electronic flow totaliser		22	220 V, 1 phase, 50 Hz or 220 V, 3 phase, 60 Hz
	M	Electronic flow meter		24	240 V, 1 phase, 50 Hz
	H1	Outlet hygrometer		38	380 V, 3 phase, 50 Hz
	H2	Inlet and outlet hygrometer		41	415 V, 3 phase, 50 Hz
	C1	Vacuum controller		46	460 V, 3 phase, 60 Hz
Miscellaneous	W	Caster-mounted		57	575 V, 3 phase, 60 Hz
	B	Circuit breakers	Special	X	Custom engineering
	V	Viton gaskets			

Model number	Oil flow Litres per hour	Length mm	Width mm	Height mm	Weight kg	Total power kW	Inlet mm	Outlet mm	Suggested oil treatment mass
200	200	1120	960	1580	685	6	19	12	850 kg
500	500	2030	1220	1780	700	15	19	12	2,500 kg
1000	1,000	2030	1220	1780	750	21	25	19	5 ton
2000	2,000	2080	1320	1780	1,200	40	25	19	10 ton
4000	4,000	2310	1570	1980	2,270	75	40	25	20 ton
6000	6,000	2590	1830	1980	3,000	110	40	40	30 ton
8000	8,000	3000	1830	2200	3,700	146	50	40	40 ton
10000	10,000	3000	1830	2200	4,250	185	50	50	50 ton
12000	12,000	4000	2000	2200	5,000	225	50	50	60 ton

"Suggested oil treatment mass" should be used as a guideline when selecting the EHV series flow rate

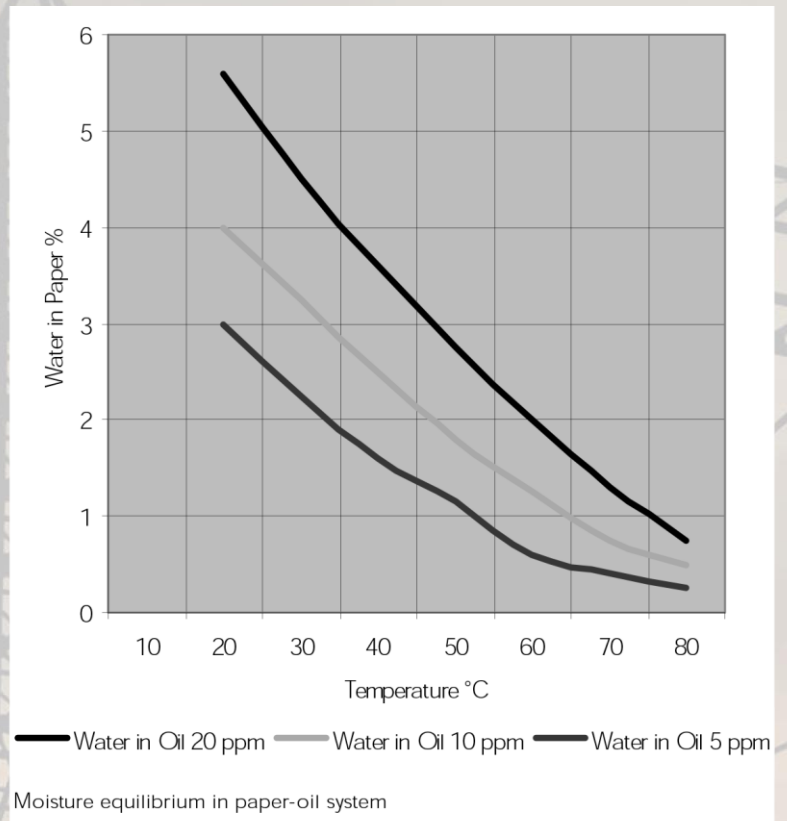
# & TRANSFORMER DRYING EQUIPMENT



### Special Options

ENERVAC units are extremely customisable, some of the options that are available include:

- Extra heater capacity for faster temperature rise
- Outlet heater to assist in maintaining transformer temperature
- Diesel or gas boiler to minimise power consumption
- Onboard power generator
- Onboard Fullers Earth system (E575A series)
- Inline dielectric strength tester
- Inline RGA
- Fully air-conditioned operators cabin
- Remote monitoring
- Wireless emergency dialout
- Touchscreen MMI
- TOLMS (Transformer Oil Level Monitoring System)
- Reverse flow changeover valves
- Mini-dehydrator for vacuum pump oil conditioning
- Hose storage reels
- Power cable storage reel
- Multi-voltage power input
- Interstage condenser
- Refrigerated cold trap
- Full aluminum trailer, from tagalong up to 16m semi-trailer
- Soft-side tarpaulin tagalong trailer
- EEx or NEMA 7 explosion-proof
- Full stainless steel option



Cargo Trailer Mount Option

**RECOVERY AND PURIFICATION SOLUTIONS THAT  
WORK FOR YOUR BUSINESS**

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