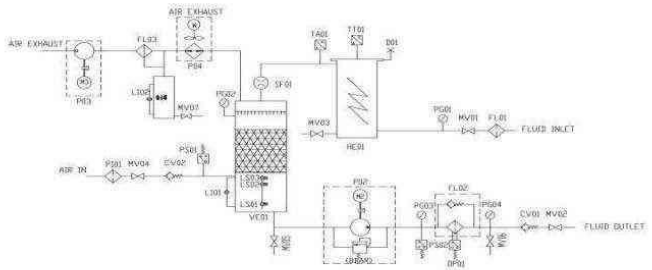
Introduction

VKVP mobile oil purifier can remove water, contaminated particles and gas in hydraulic and lubricating oil with various viscosities. The power supply parameters shown on the name plate include the voltage rating of the pump motor. Part of the control voltage is DC 20V.

Functions

Water: 100% free water and 90% dissolved water.
Gas: 100% free gas, related to operating vacuum setting.
Pollutants: sediment and contaminative particles

Schematic diagram of equipment



The contaminated oil is extracted out of the oil system by inlet pump P01 through inlet isolation valve MV01 and oil suction filter FL01.

When the vacuum degree of the pump inlet reaches – 0.8bar (the inlet filter is blocked or the inlet valve is not opened), the pump should be shut down and checked to be normal before starting.

When the vacuum at the pump inlet reaches –0.8bar (the inlet filter is blocked or the inlet valve is not opened), stop the pump and start it after checking that it is normal.

Normally, the oil enters the upper part of the vacuum container through the heating tank HE01 and window SF01, and is ejected through the nozzle to form a stable oil film in the vacuum tank.

The oil falls into the bottom of the container due to the action of gravity, and the gas and water vapor are discharged through the top of the container.

In order to maintain a stable vacuum, the air in the container is pumped out by the vacuum pump P03, and the external air enters the container after filtering through the side air filter PI01.

The air with low relative humidity and polluted oil flow form a large area of oil film cross flow.

Because the vapor pressure in the polluted oil film is much greater than that in the air, a large amount of water in the oil is gasified.

Vacuum pump P03 produces stable vacuum degree in the container, thus obtaining air with low relative humidity.

When the external air is sucked into the container through the air filter PI01 manual valve MV04, the volume can be expanded by 3–10 times according to the vacuum setting of the container, resulting in the decrease of the relative humidity.

When the external air is sucked into the container through the side air filter PI01 level manual valve MV04, its volume can be expanded by 3–10 times according to the vacuum setting of the container, resulting in the reduction of its relative humidity.

The vacuum in the container simultaneously causes dissolved gas and other gases in the oil to escape and be pumped out to the atmosphere.

At any time, if the vacuum degree of the container drops to –0.45bar, the system will shut down. This setting can be modified by the customer according to the specific application to obtain the best efficiency.

The oil settled at the bottom of the vessel is pumped out by the outlet pump P02, and then leaves the oil purifier after passing through the outlet filter FL02, check valve CV01 and outlet isolation valve MV02.

The sunken oil at the bottom of the container is pumped out by the outlet pump P02 and leaves the oil purifier after passing through the outlet filter FL02, one-way valve CV01 and outlet isolation valve MV02.

VkKVP series ordering information

Oil purifier election: VKVP ☐ ☐ – ☐
Table1 Table2 Table3

Filter element election: VER8314KS ☐ **H**
Table1

Table 1: Flow options

Code	Flow rate L / min	Filter element code
70	70	26
100	100	32
200	200	39

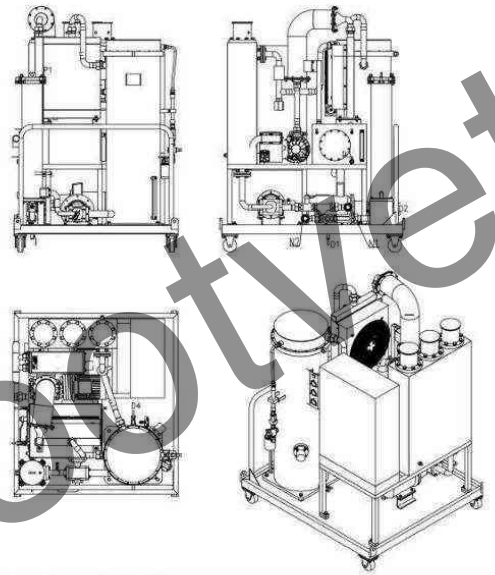
Table 2: product options

Code	Viscosity
A	< 100cst
B	≤100cst~320cst
C	≤320cst~460cst

Table 3: explosion protection level options

Code	Explosion Protection Level
standard	Nil
DIICT4	DIICT4
⋮	⋮

Dimensions of VKVP oil purifier



Technical parameters

Model		VKVP70			VKVP100			VKVP200		
Treatment capacity (L / min)		70			100			200		
Inlet pressure (bar)		–0.4 ~ 1								
Outlet pressure (bar)		≤8								
Normal operating vacuum (bar)		–0.6 ~ –0.9								
Inlet size		M60x2								
Outlet size		M52x2								
Maximum oil viscosity (CST) < 460		A	B	C	A	B	C	A	B	C
		<100cst	≤100cst~320cst	≤320cst~460cst	<100cst	≤100cst~320cst	≤320cst~460cst	<100cst	≤100cst~320cst	≤320cst~460cst
Total power (kw)		18.25	19.35	25.35	25.95	27.05	36.05	38	41	43.5
Application range of oil		Hydraulic oil, lubricating oil								
Maximum viscosity of oil (CST)		< 460								
Temperature range (℃)		40 ~ 70℃								
Net weight reference (kg)		790			980			1100		
Dimension reference	Length mm	1550			1600			1750		
	Width mm	1250			1450			1450		
	Height mm	2000			2200			2300		
Water removal	Free water	100%Free water								
	Dissolved water	95%Dissolved water								
Degassing	Free gas	100%Free gas								
	dissolved gas	90%dissolved gas								