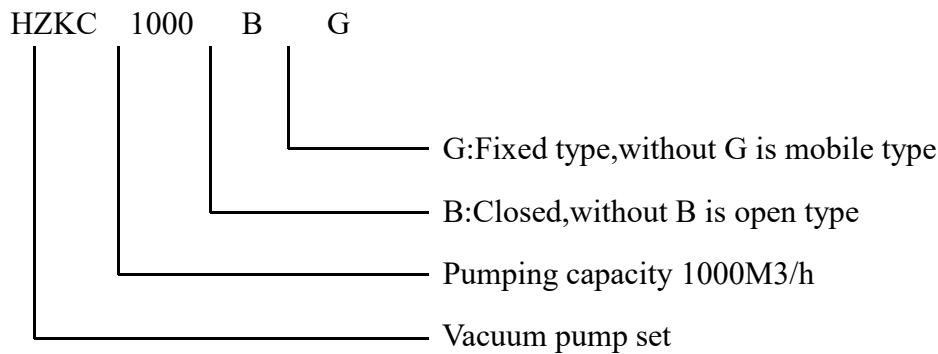


HZKC-1000 Vacuum pump set Technical Solution



I. Description of the models



II. Product technical parameters

1. Model: HZKC-1000
2. Pumping capacity: 1080M3/h
3. Ultimate vacuum: $\leq 5\text{Pa}$ (0.05mbar)
4. Operating noise: $\leq 75\text{dB(A)}$
5. Interface diameter: DN50
6. Ambient temperature: $-10\sim 50^{\circ}\text{C}$
7. Working power supply: 50Hz380V three-phase three-wire
8. Total power: 8kw
9. Dimensions: 1400×900×1600mm
10. Equipment weight: 850Kg
11. Continuous working time: ≥ 2000 hours
12. Average trouble-free working time: ≥ 50000 hours

III. Product function introduction

HZKC-XX series equipment is used to evacuate the gas in the transformer, so that the iron core, coil and insulating materials in the transformer are completely exposed to the high vacuum environment. In the high vacuum environment, the moisture absorbed by the iron core, coil and insulating material evaporates into the air and is discharged by the vacuum pump, so as to achieve the function of drying the transformer.

IV. Main features of the product

4.1 Exclusive use of balanced pressure technology, the vacuum pumping efficiency is increased by 50% (optional).

Adopt the world-class brand Roots vacuum pump - EDWARDS (UK), Edwards Roots

vacuum pump exclusively uses hydraulic clutch transmission technology, with balanced pressure technology, to ensure that the roots vacuum pump can start synchronously with the first-stage vacuum pump without causing motor overload , the pumping efficiency is increased by 50%.

4.2 High vacuum.

Two-stage or three-stage vacuum pump is used (two-stage vacuum pump is used for pumping capacity of 4,000 cubic meters and below, and three-stage vacuum pump is used for more than 4,000 cubic meters), and the ultimate vacuum can reach below 0.1Pa.

4.3 Highly stable and reliable.

Optional Atlas (Germany Laybold, British Edwards Edwards is a brand of Atlas) vacuum pump, Roots vacuum pump.

4.4 Unique environmental protection and energy saving technology.

When the vacuum degree of the container reaches the customer's set value, the vacuum pump above the second stage stops running, and the first stage vacuum pump runs to maintain the running vacuum, thereby realizing energy saving.

4.5 With liquid level protection.

The oil and gas separator is equipped with a liquid level sensor. When the PLC detects the liquid level, the vacuum unit stops running and sends an alarm message to prevent the vacuum pump oil from being polluted.

4.6 With power protection.

When the PLC detects that the power supply is out of phase, wrong phase or the voltage is too high or too low, the equipment enters the protection state and sends out an alarm message to prevent the vacuum from being damaged due to the reverse rotation of the motor.

4.7 Equipped with motor overload protection.

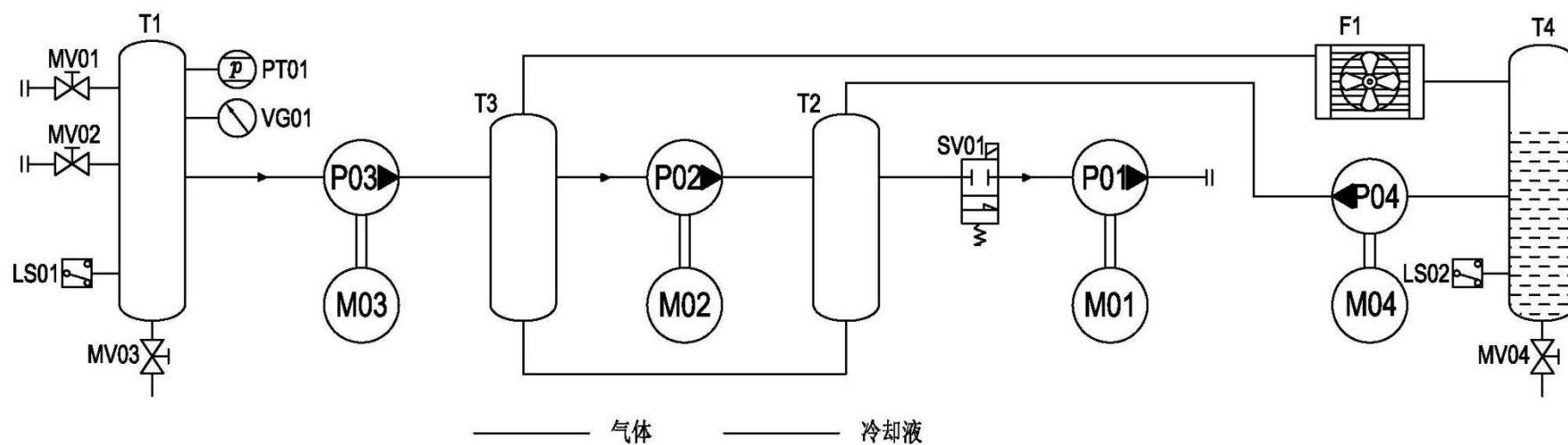
When the PLC detects that the motor current exceeds the set value, the device enters the protection state and sends out an alarm message to prevent the motor from being damaged.

4.8 Simple operation mode.

Using PLC intelligent control, the equipment starts and stops with one key, without manual intervention.

V.The working principle

5.1 Product Schematic



P01, M01	P02,M02	P03,M03	P04,M04	T1	T2	T3	F1	MV01,MV02	SV01	LS01, LS02	PT01	VG01
真空泵	一级罗茨泵	二级罗茨泵	循环泵	缓冲罐	热交换器	水箱	散热风机	吸气阀	电磁真空带充气阀	液位传感器	皮拉尼真空计	真空表

5.2 Main product parts list

No.	Name	Function	Remark
MV01	Exhaust valve	Isolation of vacuum units and vessels	
MV02	Exhaust valve	Isolation of vacuum units and vessels	
P01	Primary vacuum pump	Tap discharge container air	
P02	Two stage roots vacuum pump	To compress air	
P03	Three stage roots vacuum pump	To compress air	
T1	Oil and gas separator	Separation of oil vapour from air	
T2,T3	Heat exchanger	To lower air temperature	
T4	Water tank	Store coolant	
VG01	Vacuum gauge	Show vacuum	
PT01	Electronic vacuum	Show vacuum	
VS01	Vacuum switch	Detect vacuum	
SV1	Vacuum inflation valve	Prevent vacuum pump from oiling back	
LS01,LS02	Liquid level sensor	Detect liquid level	

VI.Main configuration list

No.	Name	Model	Qty	Brand
1	Vacuum Butterfly Valve	DN50	1	
2	Drain valve	DN15	1	
3	Primary vacuum pump	X-200 (200M ³ /h)	1	Shanghai Jiuxin
4	Two stage roots vacuum pump	ZJP-300 (1080M ³ /h)	1	Ushin Nanko
5	Sync Start Kit	-	1 Set	-
6	Oil and gas separator	OGS219	1	
7	Vacuum gauge	212.53.063	1	ACUTEK
8	Electronic vacuum		1	Hangzhou Pangu
9	Level Switch	GMF-80SL-2A2	1	
10	Electric		1 set	Tracy

11	PLC		1 set	
12	touch screen			
13	Rack pipe			
14	Stainless steel bellows		10m	