

### Short introduction:

This explosion proof fuel pump ( vane type ) is positive displacement type, equipped with a Explosion proof motor and a Explosion proof transforming switch, explosion proof mark: Exde II BT4GB, using environmental temperature: -40°C~ 80°C, it can be used for pumping gasoline, kerosene or diesel etc. The pump's performance is stable, high flow, simple structure, easy maintenance, portable. This pump is installed on gas station, oil depot, dock and airport etc., it is a good power equipment for pumping oil ( prohibited to be used for pumping water ).

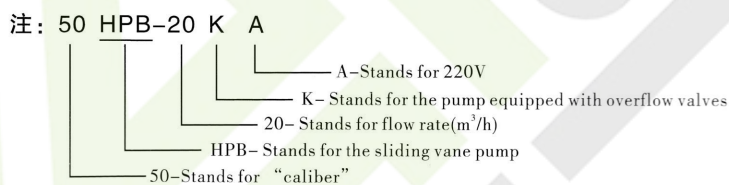
### Working principle

The blades ( or vanes ) are mounted in the slotted rotor and the rotor is eccentrically mounted in the pump body. When the rotor rotates, the blade slides out of the rotor and slides against the internal surface of the pump. The space formed by the rotor, slide, and pump body changes periodically with the rotation of the rotor. When the chamber is enlarged, the medium is inhaled, and the cavity becomes smaller, the medium is discharged, repeatedly rotate until the process of the medium output is completed.

### Model & parameters

Mode	Main performance parameters				Ex motor	
	Flow(m <sup>3</sup> /h)	Head(m)	Suction head(m)	Dia.(mm)	voltage(V)	Power(kW)
19HPB-4.2K	4.2	25	7	19	220V	1.1
25HPB-4.5K	4.5	25	7	25	220V	1.1
38HPB-7.5K	7.5	25	7	38	220V	1.1
50HPB-20A	20	25	7	50	220V	2.2
25HPB-10K	10	25	7	25	380V	1.1
38HPB-15	15	25	7	38	380V	1.5
38HPB-15K	15	25	7	38	380V	1.5
50HPB-20	20	25	7	50	380V	2.2
50HPB-20K	20	25	7	50	380V	2.2
65HPB-20	20	25	7	65	380V	2.2
65HPB-20K	20	25	7	65	380V	2.2
80HPB-40	40	25	7	80	380V	4

### Use & maintenance



To ensure the pump working normally, necessary to check whether the connection of each component is firm, whether the pipeline is unobstructed, and whether the electrical system and grounding line are reliable before starting the pump.

As the pump is mainly used in flammable and explosive places, to ensure safety, please find a professional electrician to operate according to the electrical, circuit system-related operations, protection, and common sense procedures.

An AC contactor (0~10A) and a motor protector (0~10A) must be installed at the front of the pump power supply.

The new pump or long-term unused pump should be pumped into the pump before delivery to pump the appropriate amount of oil to lubricate the pump components.

## The company has passed GB/T19001-2016/ISO 9001:2015 quality management system certification.

Before using new pump or long-term unused pump, please input proper amount of delivered oil into pump for lubricating the mechanical components inside the pump.

In order to improve the self-priming capacity of the pump, it is necessary to ensure that the seal of each connection point of the oil suction pipeline is intact without any leakage ( the leakage will cause the pump's self-priming ability to decrease or not absorb oil ).

The length of the suction pipeline of the pump should not exceed the performance parameters of the pump, Max. 6 to 7 meters is better.

The oil inlet of the pump is prohibited to be installed the equipment such as a nozzle, valve etc., if to be installed on these equipment, it should be used the pump body with a bypass valve.

After connecting the electrical circuit, the oil pipeline, and the preparatory work for each work, the motor should be started instantaneously. Look at the fan cover at the rear of the motor to see if the direction of the rotation is the same to the direction of the arrow on the motor.

After the pump is started for 30 seconds, stop the pump and check the cause if the oil cannot be delivered normally The oil pump is designed to prevent inhalation compared to particulate matter, especially when the filter is installed at the oil inlet. The filter is blocked by small debris such as cotton. This will affect the pump's oil absorption..

To prevent suck the larger particles, a filter is installed on the oil inlet, if the filter is blocked by small debris such as cotton etc., it will influence the pump' s oil absorption. Therefore, the filter should be checked and cleaned regularly, and the filter should be changed if broken.

There is a drain hole in the lower part of the pump cover. When oil overflows from the drain hole, it means that the shaft oil seal on the back cover has aged and damaged, and it should be replaced in time. (If you find that the drain outlet is overflowing, do not block it to prevent the oil entered the motor).

After the pump has been decommissioned for a long period of time, the pump should be filled with engine oil , preserved after being sealed.

### Abnormal phenomenon & Explanation

Abnormal phenomenon	Reason analysis	Solutions
No oil output	<ol style="list-style-type: none"> <li>1、 Suction pipeline leakage</li> <li>2、 Suction pipeline too lone or suction head too high</li> <li>3、 Pump inversion</li> <li>4、 Outlet pipeline is on close status</li> <li>5、 Oil too dirty, oil inlet filter block</li> </ol>	<ol style="list-style-type: none"> <li>1、 Remove after detection</li> <li>2、 Reduce suction and shorten suction piping</li> <li>3、 Adjust the number of phases</li> <li>4、 Open pipeline valve</li> <li>5、 Clear dirties.</li> </ol>
Insufficient pump flow	<ol style="list-style-type: none"> <li>1、 Serious wear on both ends of the rotor</li> <li>2、 Suction pipeline leakage</li> <li>3、 Blades wear and uneven</li> <li>4、 The sediment in the bottom of the oil stuck in the blade and rotor slot, makes the blade could not slide freely.</li> <li>5、 Bypass valve poorly seals</li> </ol>	<ol style="list-style-type: none"> <li>1、 Repair or replace the rotor</li> <li>2、 Check where leaks and solve</li> <li>3、 Replace blades</li> <li>4、 Open the pump and clean, advise installing a filter</li> <li>5、 Adjust the bypass valve gap</li> </ol>
Noise &.tremor	<ol style="list-style-type: none"> <li>1、 Air exists in oil</li> <li>2、 Pump and frame fixed screws loose</li> <li>3、 Blades stuck in slot, can not slide freely</li> </ol>	<ol style="list-style-type: none"> <li>1、 Install oil gas seperator, check suction oil pipeline &amp;. oil seal's sealing</li> <li>2、 Fastening screws</li> <li>3、 Open the pump and clean, make the blades can slide freely in the rotor slot</li> </ol>
Motor start failed	<ol style="list-style-type: none"> <li>1、 Oil drain tube is too long</li> <li>2、 Motor phase loss</li> <li>3、 Dirties inside the pump</li> </ol>	<ol style="list-style-type: none"> <li>1、 Reduce the length of the oil drain tube</li> <li>2、 Check and adjust</li> <li>3、 Open front cover, clear dirties</li> </ol>

### Pump accessories with pump

Name	Specifications						Mounting position
	25mm	38mm	50mm	65mm	80mm	Qty	
Oil inlet filter	25	42	54	54	80	1	Inlet couplings
Oil seal	17x40x7	17x40x7(220V) 25x40x10(380V)	30x45x10	30x45x10	30x45x10	2	Back cover motor shaft
O'ring	125x3.55	140x3.55	140x3.55	140x3.55	180x3.55	2	Front &.back cover
O'ring	28x2.65	50x3.1	60x3.1	60x3.1	88x4.1	2	Inlet &.outlet couplings

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