

## Introduction of 3ZB, 5ZB Series Water Injection Pumps

## for Oil Field





#### I. Instruction

As the horizontal triplex single acting reciprocating pumps,3ZB&5ZB series Injection Pumps was developed based on our over 50-year R&D experience and civil fluid tech of China Aerospace Sixth Research Institute. It is made of power end,fluid end and lubricant system for injecting clean or produced water at oil fields. Once the fluid material is changed, it can also be used for delivering strong corrosive fluids such as acid, alkali, etc. The series are special for high pressure or booster injection water in a single well, which adapt



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reasonable structure, smooth running, lower noise, higher efficiency and obtain higher discharge power rate, reliable operation and convenient maintenance. It is on a complete base with smaller volume, lighter body for hoisting and other types of installation.

#### **II. Main Tech Parameters**

Pump Model	3ZB7.5、3ZB18.5、3ZB37、	5ZB160、5ZB220
	3ZB55、3ZB90、3ZB160、3ZB250	
Plunger Dia.	16 $\sim$ 90mm	32~110mm
Stroke	65∼180mm	120~150mm
Discharge flow	0.4~76m³/h	6.5~83m³/h
Discharge	4~50MPa	
pressure		
Pump speed	150∼300min <sup>-1</sup>	
Input power	4∼250kW	160∼220kW
Exported area	Dubai,Nigeria	

#### III. Technical parameters of 3ZB250 (for example)

Structural Design: Meet with API674、GB/T9234 Fluid: Congruent water, clean water or produced water Rated motor power: 248.1-335.3Hp(185~250Kw)

Discharge Flow rate: 9.5~97m³/h, Discharge pressure(D.P): 6.3~50MPa

Stroke: 180mm

Plunger DN: 40—125mm

Stroke: 180mm

Pump shaft speed: 230-290rpm

Inlet DN: 50-150mm Outlet DN: 32-125mm

### IV. Pump Unit

- 1. Suction should be paralleled at pump's left side of the pump (from the electric motor back)
- 2. Discharge is paralleled at pump's right side. The discharge regulator has good voltage stabilization to reduce the pipe vibration and protect the pipe's gap from cracking. The inflate pressure of regulator are separately 2/3 of pump's suction pressure and discharge pressure.
- 3. Transmission belt is ZV25 type with higher power, smaller pulley and longer life.



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# **V.Application Cases**

The water injection pump series has widely used for the pumping water, booster pressure on the oil fields. They have been exported and used in the markets of Dubai and Nigeria.