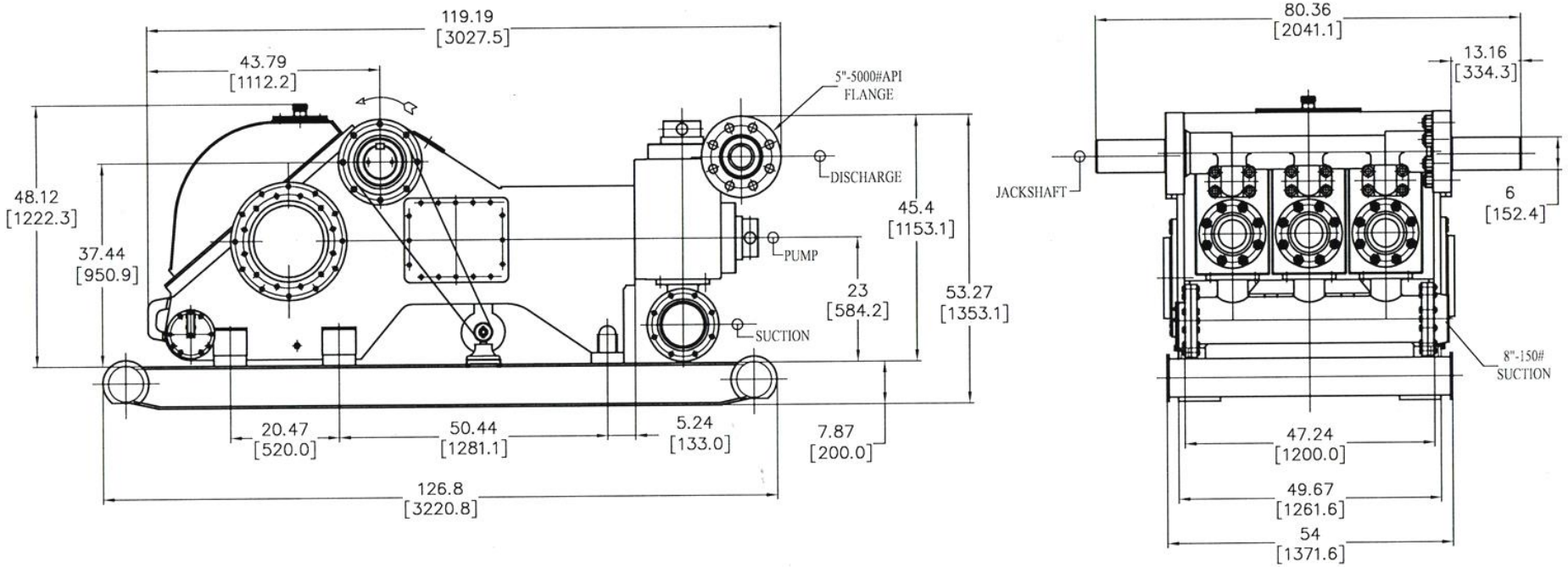
S.E.P.
Suministros & Equipos Petroleros

Triplex Single Acting Mud Pump

SEP PZ 550 HP



Note:All installations must contain a pressure relief valve in the discharge line near the pump

SEP PZ-550HPMud Pump

Technical Specification

Type	PZ-550HP
Input power rating (KW)	410 (550HP)
Rated pump speed (RPM)	145
Stroke Length (mm)	178 (7”)
Gear ratio	4.625
Max. working pressure (Kg/sq.cm)	670
Max. liner diameter (mm)	352 (5000PSI)
Valve size (API)	7#
Max. liner diameter (mm)	Φ7”
Max. displacement (GPM)	507
Max. liner pressure (Kg/sq.cm)	118 (1673PSI)
Diameter of suction pipe (mm)	203 (8”)
Diameter of discharge pipe (mm)	100 (4”)
Overall dimensions	3205*2250*2000mm
Weight （ton）（include five way joint and pulsation damper）	10800kg
Weight （lbs）（exclude five way joint and pulsation damper）	8300kg 18300lbs

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PZ-550HP Pump Performance Data

Dia. of Liner	IN	7”	6-1/2”	6”	5-1/2”	5”	4-1/2”	4”
Displacement	Gallon/Minute	507	437	373	313	259	210	166
	Liter/Minute	1919	1654	1412	1185	980	795	628
Discharge Pressure	PSI	1673	1940	2277	2710	3279	4048	5000
	(Kg/sq.cm)	118	136	160	191	231	285	352

Design features

- **The power end**
  - The pump frame is of casting and welded steel – plate construction. The bearing housings of the crankshaft, the transmission shaft and slides seats are made of steel castings and are welded to the frame after rough – machined. They are stress – relieved through resonance aging after welded.
  - Cuprum slide
  - The crankshaft is a hollow steel casting.
  - The bull gear and pinion shaft are composed of narrow groove helical gears in pairs respectively and middle hard teeth.
  - The crosshead is a one – piece casting and runs directly in the cuprum slide.
  - All the bearings, crossheads and slides are double lubricated with splash and force.
  - The jackshaft is equipped with single – row radial short – roller bearings.
  - The main bearings are double – row radial spherical – roller bearings.
  - The crosshead is equipped with long – roller bearings.
  - The mono-block forging of hollow sphere for the pulsation dampener is first made in China.

- **The Fluid End**
  - The fluid end is composed of three fluid modules (cylinders), each of which is a sectional and communicating construction. The suction and discharge are accomplished by suction and discharge pipes. The suction and discharge valves are vertically aligned with each other to minimize the volumetric clearance.
  - There is clamp connection between the piston rod and the intermediate rod, which facilitates the services of these parts.
  - The piston liner is pressed by the liner clamp, which is attached to fluid cylinder with bolts.
  - The threaded cover of the fluid cylinder is attached to the flange with buttress threads, which facilitates the services of them. The flange is fastened to the fluid cylinder, which facilitates the machining and servicing of the fluid cylinder.
  - The taper of the valve seat is 1:6. The bottom of the seat is provided with a shoulder to be suitable for high pressure. Confirm to API Spec. 7K.
  - The piston rod conforms to APE Spec 7K. The piston is fastened with 1-1/2" locknut and is lubricated and cooled by the water tank or the water with inhibitor supplied by a centrifugal spray pump.
  - There are 7 sizes of liners in I.D. All these liners are the same in O.D.
  - There are two types of liners: high-grade liner and plain liner. The high – grade liner is made of carbon steel as a base metal, which is casted or inserted with high – chrome alloy – steel to ensure wearability. The plain liner is made of low – carbon steel which is carburized and quenched inside to enhance the surface hardness.
  - There are suction inlets in front of and on both sides of the pump, which are connected to the suction manifold. The three suction flanges are of 10"ASAB16.5-150PSI.
  - The flanges of discharge pipe and five-way joint are of 4" 5000PSI flange.
  - The discharge pulsation damper is spherical and pre – pressured. Its Max. working pressure is 5000PSI, and volume is 75 liters (20 gallons). The pulsation dampener is

connected to the air filler and to the pressure gauge, using 3/4" – 14NPT and 1/4" – 18NPT respectively.

- It is advisable to equip a charging pump during operation to improve the suction performance and raise the efficiency of the charge pump.
- It is advisable to equip a liner lubrication pump during operation to cool the pistons and liners so as to extend their service life.

Optional Items：

- Suction and/or discharge dampeners，discharge five way joint
- Shear safety valve
- Pressure gauge
- Charge mud pump
- Large steel skid with non-skid decking
- Centrifugal suction charging pump
- Rubber valve inserts
- Oil heat exchanger
- Electromotor pump unitization
- Diesel motor pump unitization