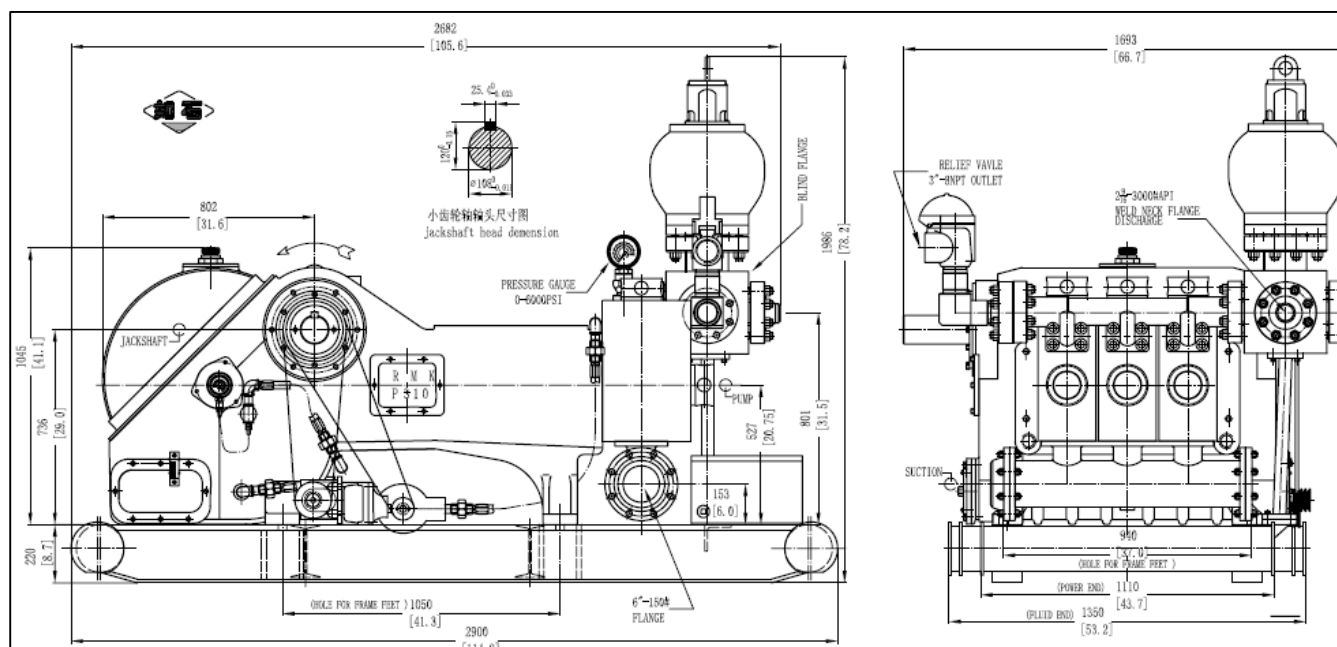


Triplex Single Acting Mud Pump

SEP PAH 310







Technical Specification

- Inlet power rating (KW) 213 (310HP)
- Rated (mm) 203(8")
- Gear ratio 4.625
- Rated speed of transmission shaft (RPM) 823
- Max. working pressure (Kg/sq.cm) 703(10000PSI)
- Valve size (API) 4#
- Max. liner diameter (in) $\Phi 5"$
- Max. displacement (GPM) 357
- Max. liner pressure (Kg/sq.cm) 95 (1350PSI)
- Diameter of suction pipe (mm) 158 (6 1/4")
- Diameter of discharge pipe (mm) 58 (2 9/32")
- Overall dimensions (with steel skid, LxWxH) 2900*1700*2000mm(114.2"x69"x79)
- Weight (Kg) (with skid) 5600(12400LBS)

SEP-310 Mud Pump Performance Data

RPM		PLUNGER DIAMETER											
PUMP RPM	INPUT RPM	5IN		127MM		4½IN		114MM		4 IN		102MM	
		GPM	PSI	LPM	KG/ CM²	GPM	PSI	LPM	KG/ CM²	GPM	PSI	LPM	KG/ CM²
175	670	357	1350	1351	95	289	1650	1094	116	228	2100	864	148
125	578	255	1900	965	134	206	2300	781	162	163	2900	617	204
75	462	153	3150	579	221	124	3900	469	274	98	4900	370	345
34	346	69	5000	262	352	56	8050	213	566	44	10000	168	703
Based on 90% mechanical efficiency and 100% volumetric efficiency. All sizes offered with pistons and liners. 4" and 4 1/2" sizes are offered with pistons or plungers, 5" available with pistons only.													

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:

- 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