

PCS-621B Auto density control double pump cementing skid

1. Overview

PCS-621B Auto density control double pump cementing skid is new generation of cementing unit with adoption of plunger pump TPB600 and ACM-III.1 auto mixing system.

SERVA TPB600 pump has prominent features of small size and lighter weight. With two pump back to back installation, the overall width will only be 2580mm which can extremely decrease the overall dimension (weight) of unit, especially applicable to truck-mounted units or offshore equipments.

The high energy mixing system is mainly powered by two transmissions PTOs. The entire skid is very compact, so it is applicable for the areas with strict requirements for space, such as offshore drilling platform, etc.

2. General specification

Max. working pressure: 97.5MPa (14,140Psi W/ 3" fluid end)

Max. flow: 4.2m³/min (w/ two 4 1/2" fluid ends)

Density range: 1.3~2.5g/cm³

Auto control precision: ±0.02 g/cm³

Mixing capacity: 0.3~2.3m³/min

Working ambient temperature: -20°C ~ 50°C

Overall dimension (mm): 7200(L) x 2500(W) x 3250 (H)

Net weight: 23500kg

4. Features

- High energy recirculating jet mixing system.
- Emergency kill system of air inlet shutoff.
- Plunger pump overpressure protection system.
- SPS non-leakage packing system.
- Emergency mixing system.
- C7 auxiliary power unit is available.
- Portable wireless/ wired data acquisition system available.
- Simplify operation, adapts to working habits in oilfield.
- Fan radiator or sea water heat exchanger is available.
- Off-center dry cement valve avoids bulk cement from choking.
- 10" operation screen, convenient to monitor the working data.
- Engine auxiliary cold start, pneumatic or hydraulic start available.
- F300 Non-radioactive densitometer is easy to wash, safe and reliable.
- ZONE-II Explosion-proof kit is available for application to hazardous areas.

3. Technical specification

Technical specification				
Engine	Caterpillar C13 475 HP@2100 RPM (2sets) Caterpillar C15 540HP@2100RPM (optional) Detroit 560 475HP@2100RPM (optional)			
Transmission	Allison 47000FS (5 forward gears + neutral gear) (2sets)			
Hydraulic system	Driven by transmission PTO, closed loop for c-pumps, open loop for agitators			
Triplex pump (2 sets)				
Model/type	SERVA TPB600 Reciprocal, horizontal single action plunger pump			
Stroke	6" (152.4mm)			
Max. B.H.P.	600 BHP (447Kw)			
Gear ratio	4.6:1			
Fluid End	3"	3 1/2"	4"	4 1/2"
Rated pressure	14,140PSI(97.5Mpa)	10,000PSI(69Mpa)	7,958PSI (56.1Mpa)	6,290PSI(43.4Mpa)
Max. flow	0.95 m ³ /min	1.27 m ³ /min	1.67 m ³ /min	2.13m ³ /min
ACM-III.1 mixing system				
Mixer	High energy recirculating jet mixer			
Dry cement valve	off-center bulk cement metering valve			
Mixing water pump	SERVA 4X3 (1.5 m ³ /min@0.78Mpa)			
Recirculating/pressure pump	SERVA RA56 (3.7 m ³ /min@0.45Mpa) (two sets)			
Densitometer	Micro Motion 3" F300 non-radioactive densitometer			
Computer system	AB PLC			
Others				
Mixing tank	8 BBL(1.4m ³)	Fuel tank	900L	
Average tank	200BBL (2x1.5m ³)	Hydraulic oil tank	170L	
displacement tank	2x 10BBL (2x1.5m ³)	Air tank	80L	

