

# PCS-821B Auto density control double pump cementing skid

## 1. Overview

PCS-821B Auto density control double pump cementing skid is newly developed cementing equipment based on QPA1000 plunger pump and ACM-IV.1 auto mixing system.

QPA1000 pump is applicable for deep well cementing, sand control equipments, small and medium-sized fracturing jobs. With features of light weight and compact structure, it is the new model with power between 600HP and 1800HP which fills up the gap with no suitable cementing plunger pump. Many components of QPA1000 and TPB/TPD600 pump can be used interchangeably. The high energy mixing system of the skid is mainly driven by two transmissions PTO. The entire skid is compact, applicable for the areas with strict requirements for space, such as offshore drilling platform, etc.

## 2. General specification

Pressure range: Max. pressure 14,140Psi (97.5MPa, w/ 3" fluid end)

Max. Flow: 7m<sup>3</sup>/min (w/ two 4 1/2" fluid ends)

Density range: 1.3~2.5g/cm<sup>3</sup>

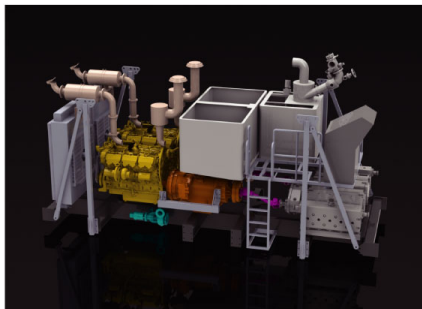
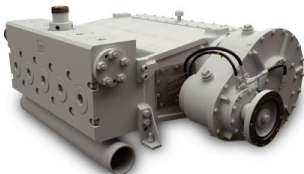
Auto control precision: ±0.02 g/cm<sup>3</sup>

Mixing capacity: 0.3~2.3m<sup>3</sup>/min

Working temperature: -20°C ~ 50°C

Overall dimension (mm): 7200(L) x3100(W) x3250(H)

Net weight: 28000kg



Technical specification				
Engine	Caterpillar C27 1150 HP@2100 RPM (Zsets)			
Transmission	Allison S8610			
Hydraulic system	Driven by transmission PTO, closed loop for c-pumps, open loop for agitators			
Triplex pump (2 sets)				
Model/type	SERVA QPA1000 Reciprocal, horizontal single action plunger pump			
Stroke	6" (152.4mm)			
Max. B.H.P.	1000 BHP (746Kw)			
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. discharge rate	1.65 m <sup>3</sup> /min	2.13 m <sup>3</sup> /min	2.78 m <sup>3</sup> /min	3.52m <sup>3</sup> /min
ACM-IV.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 <sup>3</sup> /min@0.78MPa)			
Slurry recirculating booster pump	SERVA RA56 (3.7 m <sup>3</sup> /min@0.45MPa) (two sets)			
Densitometer	Micro Motion 3" F300 non-radioactive densitometer			
Computer system	AB PLC			
Others				
Mixing tank	8 BBL (1.4 m <sup>3</sup> )	Fuel tank	1500 L (optional)	
Measuring tank	2X10 BBL (2X1.5 m <sup>3</sup> )	Hydraulic oil tank	200 L	
Air tank	80L			

## 3. Features

- Off-center dry cement valve avoids bulk from choking.
- Emergency kill system of air inlet shutoff.
- Plunger pump overpressure protection system.
- SPS non-leakage packing system.
- Emergency mixing system.
- F300 Non-radioactive densitometer is easy to wash, safe and reliable.
- Simplify operation, adapt to working habits in oilfield.
- 10" operation screen, convenient to monitor the working data.
- Portable wireless/ wired data acquisition system.