

CPF-377

Double-pump cement trailer

APPLICATIONS

- High-pressure pumping services
- Mixing and pumping cement slurry

BENEFITS

- Lower NPT due to high system redundancy

FEATURES

- Pneumatic and gravity feeding of dry cement to the mixer
- Ability to meter mixing fluids and dry cement
- CemCAT* cementing computer-aided treatment
- Mark III SLURRY CHIEF* cement mixing equipment
- Automated density control system
- Two nonradioactive densitometers (NRDs)
- Two triplex pumps
- Two slurry centrifugal pumps
- Two makeup centrifugal pumps
- Full selection of fluid ends
- Oilfield or metric units display
- Coiled tubing (CT) sensor interface protocol
- Optional loose equipment package

The CPF-377 double-pump cement trailer provides high-pressure pumping services up to 760 hhp with EPA Nonroad Tier 3 or Tier 4 compliant engines.

The trailer is equipped with two triplex pumps and features two 10-bbl stainless steel displacement tanks used to store and measure fluids. The Advanced Cement Control (ACC) system is used in conjunction with a 6-bbl mixing tub and a 14-bbl density-averaging tank to provide superior density control. It enables accurate mixing of lightweight slurries down to 5 lbm/galUS via solids fraction monitoring and control.

The trailer also carries its own supply of treating iron, making it completely self-sufficient on all land locations.

The CPF-377 has four direct-drive centrifugal pumps to mix the cement slurry, pressurize the triplex pumps, and deliver water to the unit. CemCAT cementing computer-aided treatment can be used with this pump trailer to monitor and record sensor signals at the wellsite during pumping operations.



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CPF-377 Specifications

General

Chassis	Extended drop deck
Front engine, road	Caterpillar® C13 ACERT™, 475 bhp [354 kW] at 2,100 rpm
Rear engine, curb	Caterpillar C13 ACERT, 475 bhp at 2,100 rpm
Front transmission	Allison Transmission® 4700 OFS
Rear transmission	Allison Transmission 4700 OFS
Engine emissions compliance	EPA Nonroad Tier 3 or Tier 4

Triplex Pumps

Capacity	Two 600-hhp [447-kW] pumps (typically supplied with 3.5-in fluid ends)
Type	Slider crankshaft
Stroke	6 in [127 mm]
Max. output	380 hhp [283 kW] per pump
Maximum shaft input	2,100 rpm

Other

Discharge manifold	15,000-psi [103-MPa] max. working pressure
Displacement tanks	2 × 10 bbl [1.58 m³]

Other Equipment Specifications

Length	475 in [12.065 m]
Width	98 in [2.489 m]
Height	159 in [4.039 m]
Kingpin height	49.5 in [1.257 m]
Weight	76,200 lbm [34,564 kg]
Weight with standard loose equipment	78,900 lbm [35,789 kg]
Tires	8 × 11R22.5 LRH
Drive train	Optional two-speed underdrive available to allow pumping at half minimum rate for CT
Cement mixer	Mark III SLURRY CHIEF cement mixing equipment
Slurry pressurizing pumps	5x6 centrifugal pumps
Makeup pump	4x5 centrifugal pumps
Mixing water pump	4x5 centrifugal pumps
Fluid ends available	4.5 in [127 mm], 13.2-bbl/min [2.09 m³/min] max. rate, 6,288-psi [43-MPa] max. pressure 4.0 in [114 mm], 10.5-bbl/min [1.66 m³/min] max. rate, 7,958-psi [54-MPa] max. pressure 3.5 in [95 mm], 8.0-bbl/min [1.27 m³/min] max. rate, 10,394-psi [71-MPa] max. pressure 3.0 in [76.2 mm], 5.9-bbl/min [0.93 m³/min] max. rate, 14,147-psi [97-MPa] max. pressure 2.75 in [69.85 mm], 4.9-bbl/min [0.77 m³/min] max. rate, 16,836-psi [116-MPa] max. pressure 2.5 in [63.5 mm], 4.0-bbl/min [0.63 m³/min] max. rate, 20,000-psi [137-MPa] max. pressure
Gauge displays	Digital readings in oilfield (ft, psi, bbl) or metric (m, MPa, m³) units
Loose iron equipment package	Optional

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