

Hawk cement mixing and pumping unit

Pressure Pumping Cementing

The self-contained, trailer-mounted Baker Hughes **Hawk™ cement mixing and pumping unit** includes an integral precision slurry mixing system that accurately maintains slurry density and consistency over a wide range of performance requirements. It is also equipped with Baker Hughes' latest control and monitoring systems for precise control of job parameters, real-time job data acquisition and post-job analysis. To ensure successful completion of a job in the event of a component failure, backup systems are provided for the hydraulic system, electronic system and drive train.

Health, Safety and Environment

- Complies with current EPA emissions standards
- Ample work area on deck
- Automatic overpressure shut-down safety systems
- Near dust-free mixing environment

Applications

Land cement pumping operations

Benefits

- Independently driven by two electronic transmissions and two diesel engines providing 100% backup for improved reliability
- Includes direct-feed bulk delivery system and automatic tub level control
- Provides a virtually dust-free environment and minimizes air entrainment
- Baker Hughes automatic cement control II system precisely controls slurry densities up to 22 ppg (2636 kg/m³)
- Control system allows programming of multiple slurry blends
- Micro Motion® mass meters accurately measure downhole density and flow rate
- Includes Baker Hughes wireless LAN for real-time job monitoring
- Can be easily modified to control the density of ultralightweight cementing slurries



Properties

- Equipped with two high-pressure pumps and two 10-bbl (1.6 m³) stainless steel displacement tank compartments
- De-aerating mixer contains 7-bbl (1.1 m³) mixing tank and a hydraulically driven recirculating pump
- Optional features are available that allow operation in subzero temperatures
- Optional electric start allows trailer to be self-sufficient
- Optional canopy available for operator protection

References

- Baker Hughes automated cement control II system product overview
- Baker Hughes precision slurry mixer product overview
- Baker Hughes **RAM™ recirculating averaging mixer** product overview

Typical Properties

Maximum HHP	1,000
Pressure rating	10,000 psi (68.9 MPa) with standard 4½-in. plunger 15,000 psi (103.4 MPa) with 3½-in. plunger
Maximum slurry rate	4 bbl/min @ 22 ppg (0.6 m ³ /min at 2636 kg/m ³) 10 bbl/min @ 13 ppg (1.6 m ³ /min at 1557 kg/m ³)
Density control	±0.1 ppg (11.9 kg/m ³)
Maximum displacement rate	20 bbl/min (3.2 m ³ /min) with 5-in. plunger