



Get safe, efficient, and consistent drilling fluids performance

i-Trak automated fluids monitoring services

The i-Trak™ automated fluids monitoring service from Baker Hughes reduces your operational risks and well delivery costs by combining continuous monitoring of fluid properties and drilling parameters as well as automated analysis with expert, real-time analysis and technical support.

As part of the service, an automated fluids measurement device, the i-Trak™ Automated Fluids Monitoring (AFM) unit, captures accurate, real-time fluids measurements including rheology, density, and temperature. The unit can also capture more advanced pressure readings and gel strengths data on a pre-defined, configurable cycle.

REMOTE OVERSIGHT AND MANAGEMENT

Those measurements are automatically analyzed and transmitted to fluids experts stationed remotely who actively monitor the fluid properties and other key drilling parameters. Using these data, the fluids engineers can determine any additions or adjustments that need to be made to your fluid system. Any necessary adjustments to the fluid system are implemented by rigsite personnel to ensure optimal safety and performance.

AUTOMATED ANALYSIS AND CONTROL

In addition to the real-time oversight from remote fluids engineers, the real-time fluids properties can also be incorporated into Baker Hughes's i-Trak™ drilling automation service. Baker Hughes i-Trak services aggregate real-time surface and downhole data to populate hybrid physics-based and data-driven models that are used in combination with automated standardized operating procedures and checklists to automatically control key drilling activities. Fluids measurements play a critical role in providing automated analysis and advice on determining optimal tripping speeds, ensuring proper pressure control, maintaining adequate hole cleaning, and mitigating torque and drag.

In today's complex drilling environment where surface and downhole real-time systems must deliver according to plan safely and effectively, the ability to automate and/or control drilling activities remotely is crucial. Contact your Baker Hughes representative to learn how the this or other i-Trak drilling automation services can help you improve the consistency, efficiency, and accuracy of your drilling operations.

APPLICATIONS

- Real-time, remote fluids monitoring of:
 - Mud density
 - Rheology
 - Gel strengths
 - Mud temperature
 - Eight different shear rates
 - 16 unique pressure readings
- Remote fluids support and management
- Automated drilling activities

BENEFITS

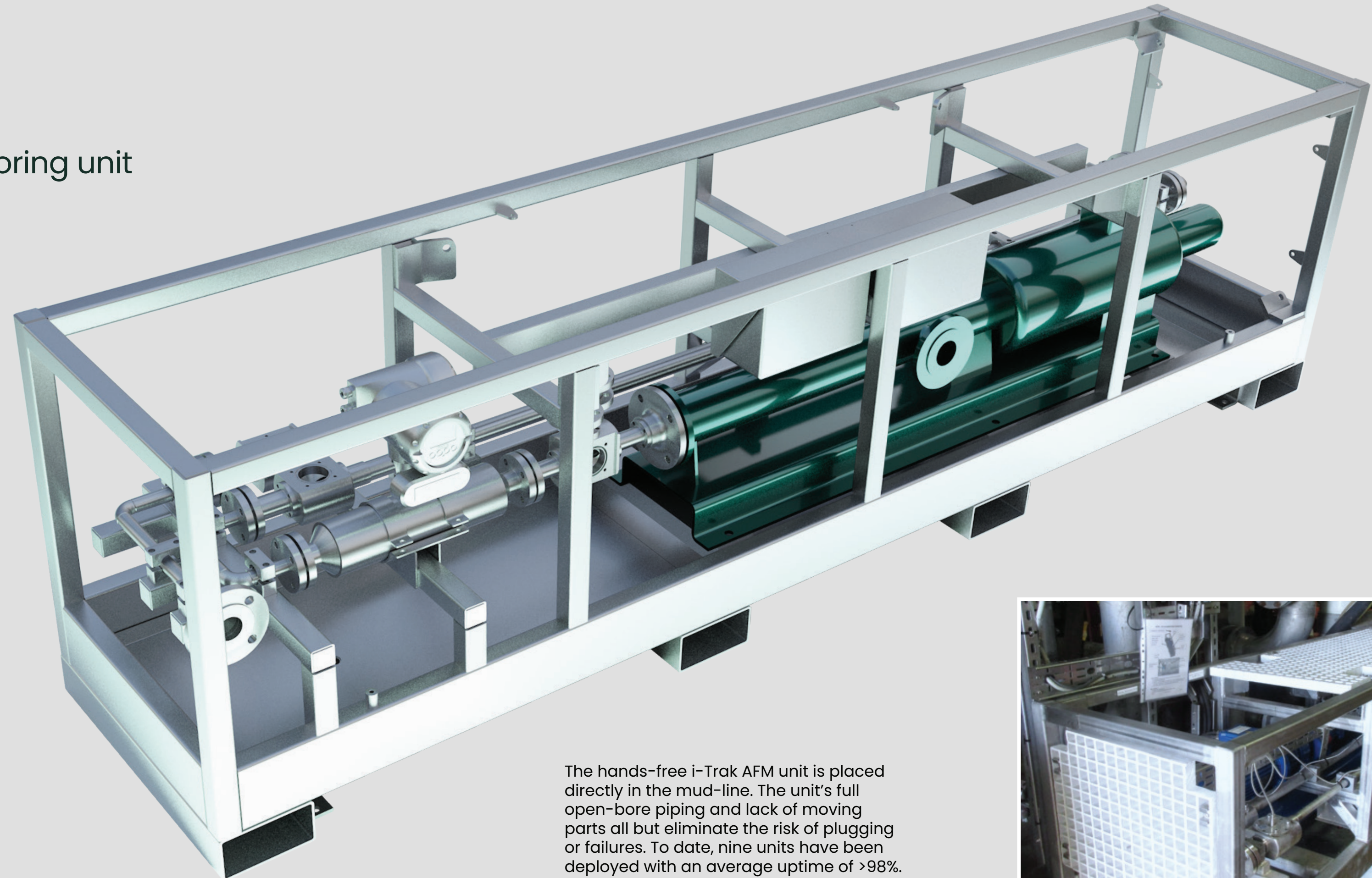
- Consistent and repeatable high-quality drilling fluids performance
 - Superior operational efficiency
 - Accurate, reliable measurement of key drilling fluids properties
- 24-hour real-time aggregation, monitoring, and analysis of fluids data
- Reduced HSE risks
- Integrated drilling advice through wellsite, operator, and remote support teams

i-Trak™

Automated fluids monitoring unit

SPECIFICATIONS

Dimensions	129.9 x 35.4 x 27.6-in (3300 x 900 x 700 mm)
Power supply	
Pump and fan motor	380 – 690 VAC 3-phase
Control cabinet and local operation panel	115 – 230 VAC 1-phase
New skid weight	1,598.4 lb (725 kg)
Process input flange	DN65 PN 16 (2½-in.)
Process output flange	DN50 PN 16 (2-in.)
Air supply	ANSI B16.5 (2.54 mm) 1-in. CI 150 RF (purging only)
Water/base oil supply	ANSI B16.5 (2.54 mm) 1-in. CI 150 RF (flushing only)
Certification/Alignment/Approvals	DNVGL-OS-E101, DNVGL-2.7-3, EU 97/23/EC (PED), CE, NORSOK Z-015 ATEX Zone 1



The hands-free i-Trak AFM unit is placed directly in the mud-line. The unit's full open-bore piping and lack of moving parts all but eliminate the risk of plugging or failures. To date, nine units have been deployed with an average uptime of >98%.

