AFFIRMED PowerFit Motor
Get all the horsepower with none of the risk

Small-diameter wells provide greater wellbore stability and save you time and money during the drilling and completion phase of your operations. But, when you need to produce those wells with ESP systems, you’ve been forced to make a trade off – horsepower or space. Now you don’t have to choose.

APPLICATIONS
- Wells completed with 5½-in., 23 lb casing
- Wells completed with 5½-in., 20 lb casing that require a:
  - Chemical injection line
  - Sensor with discharge pressure
  - Modifications to 4.56-in. motors

BENEFITS
- Prolongs the life of the ESP system
  - Eliminates modifications to fit in small-diameter wells
  - Prevents erosion from sand entrained in the fluid stream
  - Reduces the risk of getting the ESP stuck in the well
  - Provides space for a chemical injection line
  - Facilitates the use of a downhole sensor with discharge pressure
  - Eliminates risks associated with triple-tandem motors
  - Extends run time with an advanced electromagnetic design
- Provides 208 HP per motor
  - Get the same HP as 4.56-in. motors with no risk of getting stuck in the well
  - Eliminate the need for triple-tandem 3.75-in. motors
- Keeps operations simple
  - Uses the same surface control system as all other induction motors
  - Requires no special HSE, installation, or operating procedures

UNBRIDLED ESP Systems’ AFFIRMED™ PowerFit motor helps you produce small-diameter unconventional wells that require an ESP system to achieve initial production rate targets. The AFFIRMED PowerFit motor – the industry’s only 4.20-in. outside diameter (OD) offering – features an advanced electromagnetic design that delivers optimal horsepower for wells completed with 5½-in. 20 lb or 23 lb casing. This first-of-its-kind motor eliminates the limitations and reliability concerns associated with 4.56-in. OD and 3.75-in. OD ESP motors in smaller, heavy-wall casing.

Typical 4.56-in. motors offer the necessary horsepower to meet production targets, but they must be modified to fit in 5½-in. casing, which compromises the reliability of the equipment, and they still pose a risk of getting stuck in the well. The tight fit also increases the velocity of the fluid past the motor to unacceptable levels, which can cause erosive wear on the equipment, and prevents the installation of a chemical injection line or a sensor with discharge pressure. All of these risks are eliminated with the AFFIRMED PowerFit motor.

Standard 3.75-in. motors easily fit in smaller-diameter wells, but triple-tandem configurations are required to achieve the comparable horsepower of just one AFFIRMED PowerFit motor. The use of triple-tandem designs significantly increases potential reliability concerns due to the multiple connection points in the motor.
Plus, the AFFIRMED PowerFit motor requires no changes to your standard operating procedures. It uses the same surface control system as standard 4.56-in. and 3.75 in. induction motors and requires no special HSE, installation, or operating procedures - unlike permanent magnet motors.

The motor’s design is based on proven motor technology with optimized rotor and stator laminations to deliver 208 HP per motor at up to 400 °F (204 °C) operating temperature.

Reliability features include:
- A high-load, polymer-coated tilt pad thrust bearing
- Greater polyimide insulation in the stator slots for better electrical integrity
- Outboard rotor bearings to reduce vibration and improve rotor stack stability
- Shaped rotor bars to minimize electrical losses and to reduce heat generation
- Involute shaft splines for higher torque capabilities

Based on extensive testing to validate the motor design and field trials in a variety of applications, you can depend on the AFFIRMED PowerFit motor to deliver the winning combination of power and reliability for your unconventional wells. For more information about this innovative new technology, contact your local UNBRIDLED ESP Systems representative or visit apergyals.com/powerfit