螺杆钻具 DOWNHOLE SCREW MOTORS

螺杆钻具是一种以液体为动力，把液体的压力能转化为机械能的井下动力工具。当动力液进入液压马达，在液压马达的进出口产生一定的压差，推动液压马达的转子绕定子轴线作行星运动，以一定的转速和扭矩驱动钻头，达到钻井的目的。可用于直井、定向井和水平井钻井及各种修井作业。

The downhole screw motor is a type of downhole power tool which takes power from the fluid and then translates fluid pressure into mechanical energy. When power fluid flows into the screw motor, the pressure difference built between the motor inlet and outlet can rotate the rotor within the stator, providing necessary torque and speed to the drill bit below to start penetration. The downhole screw motor is suitable for vertical, directional and horizontal wells.

螺杆钻具性能及特点：

1、螺杆钻具产生的扭矩只用来驱动钻头，减少了钻杆磨损；

2、可组合大造斜率的专用钻具，也可组合用于连续控制的导向钻具；

3、螺杆钻具的输出扭矩与钻井液通过液压马达产生的压力降在一定范围内成线性关系；

4、中空转子螺杆钻具可大排量输入，提高上返速度和携砂能力；

5、标准化，系列化，适用于各种钻头的选配。

Features:

1. The torque generated by the screw motor only turns the drill bit , which can dramatically decrease drill pipe wear;
2. The screw motor can be incorporated into special BHA to realize high built-up rate or screwed to orientating tool to perform continu ously controlled kick-off;
3. Output torque of the screw motor is in linear relationship with drilling fluid differential pressure generated by the hydraulic motor ;
4. Screw motor with hollow rotor allows for large flow rate, which then leads to accelerated flowback speed and sand carrying capacity;
5. Standardized screw motors in different series are available for various types of drill bits.