

## Wireline Logging - Sidewall Coring Tool

In order to maximize the lifetime performance of any reservoir, it is important to understand and accurately characterize reservoir rocks and fluids. The mechanical sidewall coring tool recovers core samples from the well formation, and positively identifies the depth and time of each sample. Samples can then be analyzed for critical parameters such as porosity, density, and confirmation of hydrocarbons. The tool features a specially designed hydraulic motor used to drive the core drill into the sidewall of the rock formation.

### Motor Description:

The hydraulic motor consists of a two piece hollow shaft driven by the keyed IGR and supported by precision ball bearings. Inlet and outlet flow from the supply pump to the motor is routed through internal housing passageways to the IGR element. The motor is equipped with a thrust bearing system designed to minimize impact on the ball bearings by carrying the pressure load caused by the action of the drill. The motor is sealed by two mechanical face seals on either end of the internal shaft. The IGR and bearings are encased in 17Cr-4Ni stainless steel housings. The eccentric ring running surface is finished with an electroless nickel coating. The surfaces of the motor that are in contact with the IGR faces are coated with tungsten carbide by means of a high velocity oxygen fuel (HVOF) thermal spray process.



### Selected Performance Data:

Input Flow Rate	4.5 gpm
Input Pressure	650 psig (nom) – 1500 psig (max)
Temperature Range	50 degF – 400 degF
Ambient Pressure	25,000 psi
Duty Cycle	Continuous

