

Downhole Products

A Varel International Energy Services Company

PEN-O-TRATOR™

Patented.

The PEN-O-TRATOR™ Reamer Guide Shoe has been specifically designed to be installed on Casing, Liner and Screen where operators have concerns about potentially difficult wellbore conditions such as, swelling shale's, ledges and washed out areas of wellbore, post drilling and prior to running casing.

The PEN-O-TRATOR™ Reamer Guide Shoe ensures that tubulars reach TD first time, saving both time and costs.



WELL-BORE SEEKING ECCENTRIC EZI-DRILL* OUT GUIDE NOSE NEGOTIATES TROUBLESOME FORMATIONS

Equipped with a profiled nose that has the ability to freely orientate off obstructions. (*International Patents Pending)

SURGE REDUCTION ENHANCEMENT

Designed to minimize ECD and maximize Flow-By, the Pen-o-trator's streamline design and smooth reaming surfaces, minimizes voids and fluid traps, thus maximising surge reduction.

PENETRATES BY REAMING PAST OBSTRUCTIONS WITH OR WITHOUT ROTATION

Due to the unique design of the tool Rotation is not necessary. Equipped with a reaming structure that re-establishes the hole size to the gauge of the tool, allowing easy passage of all casing, liner and screen assemblies.

INTEGRAL FLOAT VALVE – SPEC API (RP) 10F CAT 111C

Positive seal PDC drillable spring operated non-return poppet valve. The phenolic material valve is designed to withstand high temperature, large volumes of fluids pumped at high flow rates. Suitable for both high and low pressure conditions.

ANTI AGGRESSIVE LEFT HAND BLADES MINIMISE TORQUE

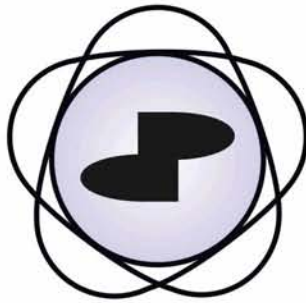
Non aggressive reaming action with passive angled left-hand blades, eliminates stalling and minimises torque build up on thread connections.

SLICK BODY ELIMINATES SOLIDS BUILD UP

The slick body design has eliminated potential areas which can trap solids and cuttings.

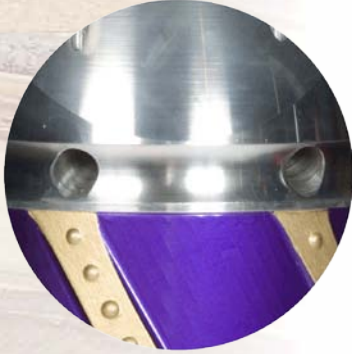
OPTIONAL INTEGRAL LOW TORQUE CENTRALISER

Optional free rotating centraliser bearing supports the tool and reduces torque and drag during running operations.



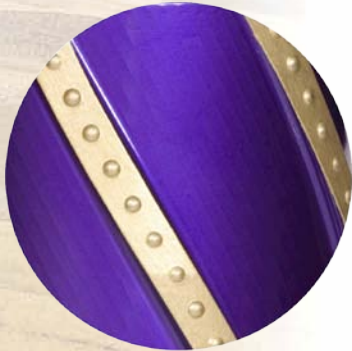
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DYNAMICALLY POSITIONED CIRCULATING PORTS FOR EFFECTIVE HOLE CLEANING

A single diverging circulating port on the nose is utilised to maximise and maintain circulation. Recessed up-jet angled ports assist cuttings removal and hole cleaning and gives 360° degree cement placement.



INNOVATIVE SELF CLEANING CUTTING STRUCTURE

Superior innovative tapered cutting structure of Tungsten Carbide Button Inserts. Solids will not stick and there are no sharp extrusions to damage wellhead seals and tubular.



EASY DRILL-THRU CAPABILITY – PDC, OR ROLLERCONE BIT

The high strength profiled alloy nose will anchor even in uncured cement to facilitate ease of drill out.



RUN WITH TORQUE AND DRAG REDUCING ZINC ALLOY SPIR-O-LIZERS TO OPTIMISE PERFORMANCE

The ultra low friction Spir-o-lizer will minimise drag and maximise the rotational ability of the Pen-o-trator and tubular string that follows.

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