The Pen-O-Trator reamer shoe has been specifically designed to aid with the installation of any casing, liner or screen application, where the operator has concerns over potentially difficult wellbore conditions such as swelling shales, ledges and washed out areas within the wellbore.

**FEATURES**

- Casing friendly tungsten carbide cutting structure
- Anti-aggressive left-hand blades minimize torque
- 360° cutting structure facilitates reaming past obstructions with or without rotation
- Well-bore seeking eccentric guide nose negotiates troublesome formations
- EZI-Drill® aluminium guide nose to aid drill out without compromising nose strength
- Flow ports offering 360° flow area
- Slick body design helps reduce ECD

**OPTIONS**

- Single & double valve system available
- Auto-fill system available
- 5,000 PSI & 10,000 PSI valves
- Concentric or other nose options available
- All API and premium connections available
- All material casing grades available

For further information on this tool and proposed applications, please contact your local DHP representative. Specifications may be liable to change without prior notice.
The EZI-Drill® Nose feature is designed to withstand high set-down weights when running the casing to T.D. During drill out, the aluminium will break into small chips to avoid “bird-nesting” of the bit to allow for a quick drill-out time.

For further information on this tool and proposed applications, please contact your local DHP representative. Specifications may be liable to change without prior notice.
The Reaper reamer shoe has been specifically designed to be the most aggressive shoe available in the industry for extreme wellbore conditions. The nose is designed to aid in getting casing to T.D. by using coated blades and optimised jetting to ream and clean out the hole as casing is run. The body blades have tungsten carbide buttons to further assist with hole cleaning.

**FEATURES**

- Nose with integrated blades to assist with wellbore reaming and cleanout
- Wellbore seeking eccentric guide nose negotiates troublesome formations
- Casing friendly tungsten carbide cutting structure on body
- Aggressive right-hand blades
- 360° cutting structure facilitates reaming past obstructions with or without rotation
- One piece milled steel body
- Optimised flow ports offering efficient hole cleaning
- Aluminium nose designed for fast and efficient drillout
- Profiled nose to provide good cement key
- Junk slot area position on nose to keep blades clean

**OPTIONS**

- Integral float valve qualified to API RP 10F CAT IIIC available
- All API and premium connections available
- All material casing grades available

For further information on this tool and proposed applications, please contact your local DHP representative. Specifications may be liable to change without prior notice.
The Pred-O-Tor reamer shoe has been designed to be an uncompromising solution for today’s most challenging wellbore conditions. The nose has an innovative profile design to aid in getting casing to T.D. by overcoming wellbore restrictions, but also includes integral hard-faced blades and optimized jetting, to ream and clean out the hole as the casing is run. The addition of PDC cutters on the outer shoulder of the Pred-O-Tor allows the shoe to efficiently ream and open the hole, where formation issues have impacted string progression. The body blades have tungsten carbide buttons to further assist with hole cleaning.

**FEATURES**

- Innovative nose profile
- Hard-faced blades
- PDC to aid reaming
- Efficient drill out
- Aggressive right-hand blades
- Casing friendly carbide gauge buttons

**OPTIONS**

- All API and premium connections available
- All casing grades and weight options
- Customized OD to suit client requirements
- Integral single or dual float valve
  - Qualified to API RP 10F, CAT IIIIC

For further information on this tool and proposed applications, please contact your local DHP representative. Specifications may be liable to change without prior notice.