

# Tornar® BOP Cleaner

## Advanced vortex cleaning technology for BOPs

The Tornar® BOP Cleaner removes wellbore debris from BOP cavities safely, rapidly and reliably. Tornar® flow ports create a high-velocity fluid vortex which combines powerful proprietary magnets to extract debris from ram and annular cavities—without harming the BOP.

Debris management is an industry challenge and is responsible for many of the operational difficulties and costs of maintaining BOPs. Drilling debris and mud solids can accumulate within BOP cavities causing them to malfunction; and milling operations generate an abundance of metallic junk and other particles that can seriously hinder the correct operation of the BOP. Even small objects can jeopardize well control, with potentially hazardous consequences to people, the environment and surface assets.

Cleaning debris from BOP cavities is especially challenging. Traditional cleaning methods may force debris further in to the BOP workings, and it is critical that cleaning operations are performed safely and efficiently. Archer's Tornar® BOP Cleaner combines Tornar® flow ports with powerful proprietary magnets to ensure the maximum extraction of harmful debris from BOP cavities and the well. The Tornar® BOP Cleaner can be configured to suit operational requirements to maximize debris retrieval.

### Benefits

- Rapid and effective BOP cleaning
- Reduced BOP maintenance and NPT
- High success rate and efficient operations
- Cleans even deep cavities
- Fishing magnet can be added for further cleaning assurance

### Features

- Powerful vortex suction effect
- Maximum metallic debris extraction
- Configured to suit BOP requirements
- Standard drill pipe connection
- One piece mandrels
- Non-rotating stabilizer and magnet

### Specifications

Cleaner string size, inch [mm]	13.375 [339.7]	17.45 [443.2]
BOP size, inch [mm]	13.625 [346]	18.75 [476.3]
Recommended pump rate	6500	6500
Min. recommended pump rate, lpm.	3500	3500
Material (main body)	AISI 4145M	AISI 4145M
Max. working temp degC [degF]	150[302]	150[302]
Max. OD, inch [mm]	13.375 [339.7]	17.45 [443.2]
Drift ID, inch [mm]	2.83 [71.9]	3.5 [88.9]
Tool joint OD, inch [mm]	6.535 [166]	7.25 [184.2]
Connections	NC50 b/p	5 1/2" FH b/p
Magnet rods	6 pcs @ 360°	8 pcs @ 360°

Specifications may be subject to change.

