

# Tornar® Sub Sea BOP Cleaner

Clean and solids-free BOP and riser  
Advanced vortex cleaning technology for BOPs and risers

The Tornar® Sub Sea BOP Cleaner removes wellbore debris from blow out preventer and marine riser cavities safely, rapidly and reliably. Tornar® flow ports create a high-velocity fluid vortex, which combines with powerful proprietary magnets to extract debris – whilst maintaining full well control.



#### Benefits

- Rapid and effective single-trip BOP and riser cleaning
- Reduced BOP maintenance and non-productive time
- Higher success rate and efficiency of BOP performance testing
- Allows short tripping with wellbore clean-up string
- Cleans even deep cavities

#### Applications

- Clearing debris from BOP's and marine risers

#### Features

- Tornar® technology creates powerful vortex suction effect
- 3-stage circulation ports enable full well control
- Tornar® Extreme magnets ensure maximum metallic debris extraction
- Easily configured to suit BOP and riser requirements
- Premium drill pipe connection
- One piece mandrels
- Non-rotating stabilizer and magnet.
- Built-in junk basket; spring-loaded self-adjusting dual brush
- Optional fishing magnet can be fitted to bottom of string

Debris management is a serious oilfield challenge and is responsible for many of the operational difficulties and costs of maintaining BOPs, especially in a deep water environment. Drilling debris and solids can accumulate within BOP and riser cavities causing BOPs 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.

Archer's Tornar® Sub Sea BOP Cleaner ensures the maximum extraction of harmful debris from BOP cavities and marine risers—without harming the BOP.

The Tornar® Sub Sea BOP Cleaner can be configured to suit operational requirements, for example by adjusting the ratio of flow ports to magnets, in order to maximize debris retrieval.

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## Specifications

Cleaner string size, inch [mm]	1745 [443.2]
BOP size, inch [mm]	18.75 [476.3]
Recomended pumprate	6,500
Min. recommended pump rate, lpm	3,500
Material (main body)	AISI 4145M
Max working temp, degC [degF]	150 [302]
Max. OD, inch [mm]	1745 [443.2]
Drift ID, inch [mm]	2.637 [67]
Tool joint OD, inch [mm]	7.252 [184.2]
Connections	5 1/2" FH b/p or VX-57 b/p

## BOP magnet

Max. OD, inch [mm]	1745 [443.2]
Drift ID, inch [mm]	3.5 [88.9]
Tool joint OD, inch [mm]	7.252 [184.2]
Magnet rods	8pcs @ 360°

## Riser magnet

Max. stabilizer OD, inch [mm]	1745 [443.2]
Brush OD, inch [mm]	18.75 to 20 [476.3 to 508]
Brush segment	8 rows, dual brush strips
Bristle type	Straigh flat wire
Magnet rods	8 pcs @ 360°
Junk bucket OD, inch [mm]	16 [406.4]



Riser Brush Magnet



BOP Magnet



3-Stage Tornar® BOP Cleaner



Well Filter



Tornar® Wash Magnet

Archer is a global oil services company with a heritage that stretches back over 40 years. With a strong focus on safety and delivering the highest quality products and services, Archer operates in 40 locations over 19 countries providing drilling services, well integrity & intervention, plug & abandonment and decommissioning to its upstream oil and gas clients. **We are Archer.**