

BOP/RISER CLEANING ASSEMBLY

The most efficient Blow Out Preventer cleanout Equipped with WirlTool® circulation ports

APPLICATIONS

- Cleaning of debris from the BOP's and marine risers
 - Prior to pressure testing
 - After milling jobs
 - Prior to pulling the BOP

FEATURES

- Innomag® BOP Magnet
 - Innomag magnet technology
 - Drill pipe connections
 - 19,5 Inch² flow area
- WirlTool®
 - WirlTool Circulation Ports
 - Drill pipe connections
- Magnum Fishing Magnet®
 - Innovar laser focus magnet technology
 - Drill pipe connection
 - Up to 2800 kg lifting capacity

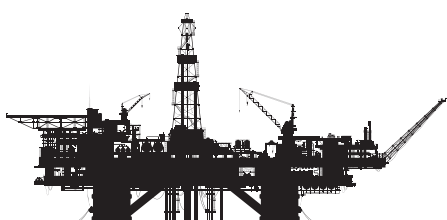
BENEFITS

- Quick and effective BOP cleaning
- Minimized risk of water cutting the BOP sealing elements
- Reduces spill of mud on deck
- Reduces risk of BOP problems during operation caused by shavings
- Prevents expensive and time-consuming maintenance of BOP on surface

The Innovar WirlTool® combined with the powerful Innomag® BOP Magnet and the Magnum Fishing Magnet® ensures the most efficient Blow Out Preventer (BOP) cleanout.

With the use of this bottom-hole assembly for BOP cleaning, you will minimize the risk of water cutting the BOP sealing elements as opposed to traditional jetting. By creating a powerful vortex, the BOP cleaning assembly assures efficient removal of cuttings, shavings and debris from the BOP and Riser. A clean BOP is essential for successful pressure testing and operational safety. It prevents expensive and time-consuming maintenance of the BOP on the surface and it reduces spill of mud on deck when the riser is laid down.

The WirlTool® can be run at a pump rate in excess of 5000ltr/min. The vortex washing effect works well above and below the fluid outlets, hence there is no need for accurate placement for optimal effect. During the WirlTool® cleaning process, the Innomag® and Magnum Fishing Magnet® will effectively catch ferrous metal debris circulated out from the BOP and Riser to prevent the debris from falling down into the well.



13 3/8" INNOMAG® BOP MAGNET MODEL BM 103

Dimensional data	
Max OD, inch	13.375
Min ID, inch	3,00
Fish neck OD, inch	6,500
Length, mm	2003
Material properties	
Body material	AISI 4140
Tensile Yield strength, lbs	1 030 000
Torsional Yield strength, ft-lbs	25 000 *)
Magnet Ribs on stabilizer	8
Magnet type	Innovar specified
Operational data	
Flow by area, sq.in	136 **)
Magnetic field effective reach, inches	18 3/4
Connection	NC 50
Max rotation, rpm	120
Transport Data	
Tool weight, kg	480

*) This is for internal compressional loads due to the internal threads.

For twist off, the Tool Joint is the weakest member.

**) inside 18 3/4 inch tube (riser/BOP)

13 3/8" WIRLTOOL®, CIRCULATING TOOL MODEL WT 100

Dimensional data	
Max OD, inch	13.375
Min ID, inch	3,00
Fish neck OD, inch	6,378
Length, mm	1300
Jet size diameter, mm	20
Number of jets	8
Material properties	
Body material	AISI 4140
Tensile Yield strength, lbs	1 298 000
Torsional Yield strength, ft-lbs	46 000
Operational data	
Total jet flow area, sq.in	3,9
Connection	NC 50
Max pump rate, lpm	5500
Recommended washing rotation, rpm	5
Recommended RIH speed washing, m/min	No limit
Recommended POOH speed washing, m/min	2
Transport Data	
Tool weight, kg	280

12,1" & 8,30" MAGNUM FISHING MAGNET® - MODELS FM 135L & FM 128L

Dimensional data		
Model	FM135L	FM128L
Max OD, inch	12,1	8,30
Fish neck OD, inch	6,38	6,38
Length, mm	730	678
Material properties		
Body material	AISI 4145	AISI 4145
Magnet size, mm	Ø280	Ø180
Magnet quantity	1	1
Magnet type	Innovar specified	Innovar specified

Operational data		
Lifting capacity, kg	2800	1800
Connection	NC 50	NC 50
Circulation ports, mm	4 x Ø45	4 x Ø45
Max rotation, rpm	40	40
Transport Data		
Tool weight, kg	156	96
Helicopter shielded	Yes	Yes
Choke insert available	Yes	Yes

