

INNOMAG® 4X83 HD

**Extra long high capacity heavy-duty string magnet
For cleaning and milling operations of 9 5/8" & 10 3/4" casing**

APPLICATIONS

- Cleaning during or after milling
- During casing exits
- Prior to running completions to clean the well
- Run as a part of drill string when doing a washing or circulation run

FEATURES

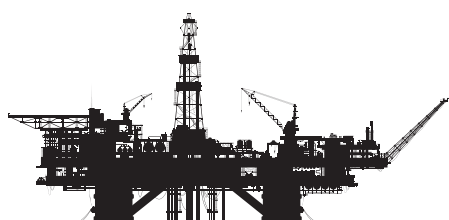
- Large fluid bypass
- Full 360° stabilization
- Magnet elements integrated in the tool
- Extreme magnetic area, magnets covered in stainless steel to make cleaning easy
- Full drillpipe strength

BENEFITS

- Custom made for milling operations
- Excellent cleaning capabilities due to extreme magnet range and length
- Easy cleaning and low maintenance

The Innovar Innomag® 4X83 HD string magnet is an extra long wellbore clean-up tool designed for casing exits and milling operations. A robust design with all external parts aligned on a heavy duty bearing system. This permits rotation of the DP while the magnets are stationary. The Innomag® 4X83 HD is capable of withstanding the extreme downhole conditions experienced during milling operations.

Dimensional data	
Model name	IM 4X83 HD
Max OD, inch	8,3
Min ID, inch	3,0
Fish neck OD, inch	7,0
Length, mm	5082
Material properties	
Body material	AISI 4145
Tensile Yield strength, lbs	1 100 000
Torsional Yield strength, ft-lbs	83 900
Magnet Ribs on stabilizer	7
Magnet type	Innovar specified
Operational data	
Flow by area, sq.in	6,8
Connection	MT 57
Max rotation, rpm	150
Swarf collection cap (ltr)	30
Swarf collection cap (kgs)	57
Transport Data	
Tool weight, kg	760



Rev: PDS-016-03

INNOMAG® 4X121 HD

**Extra long high capacity heavy-duty string magnet
For cleaning and milling operations of 13 3/8" casing**

APPLICATIONS

- Cleaning during or after milling
- During casing exits
- Prior to running completions to clean the well
- Run as a part of drill string when doing a washing or circulation run

FEATURES

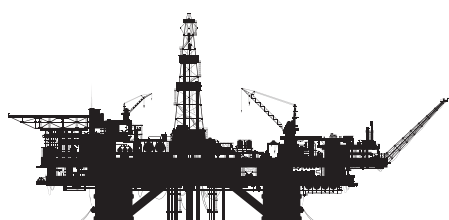
- Large fluid bypass
- Full 360° stabilization
- Magnet elements integrated in the tool
- Extreme magnetic area, magnets covered in stainless steel to make cleaning easy
- Full drillpipe strength

BENEFITS

- Custom made for milling operations
- Excellent cleaning capabilities due to extreme magnet range and length
- Easy cleaning and low maintenance

The Innovar Innomag® 4X121 HD string magnet is an extra long wellbore clean-up tool designed for casing exits and milling operations. A robust design with all external parts aligned on a heavy duty bearing system. This permits rotation of the DP while the magnets are stationary. The Innomag® 4X121 HD is capable of withstanding the extreme downhole conditions experienced during milling operations.

Dimensional data	
Model name	IM 4X121 HD
Max OD, inch	12,1
Min ID, inch	3,0
Fish neck OD, inch	7,0
Length, mm	5082
Material properties	
Body material	AISI 4145
Tensile Yield strength, lbs	1 100 000
Torsional Yield strength, ft-lbs	83 900
Magnet Ribs on stabilizer	5
Magnet type	Innovar specified
Operational data	
Flow by area, sq.in	30,2
Connection	MT 57
Max rotation, rpm	150
Swarf collection cap (ltr)	81,4
Swarf collection cap (kgs)	147,6
Transport Data	
Tool weight, kg	1 100



Rev: PDS-017-01

INNOMAG® 4X134 HD

**Extra long high capacity heavy-duty string magnet
For cleaning out BOP size 13 5/8" and larger**

APPLICATIONS

- Cleaning during or after milling
- During casing exits
- Prior to running completions to clean the well
- Run as a part of drill string when doing a washing or circulation run

FEATURES

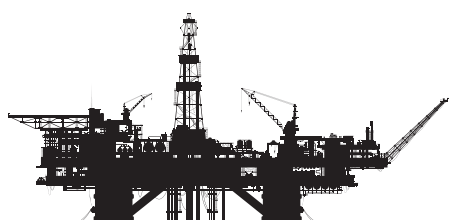
- Large fluid bypass
- Full 360° stabilization
- Magnet elements integrated in the tool
- Extreme magnetic area, magnets covered in stainless steel to make cleaning easy
- Full drillpipe strength

BENEFITS

- Custom made for milling operations
- Excellent cleaning capabilities due to extreme magnet range and length
- Easy cleaning and low maintenance

The Innovar Innomag® 4X134 HD string magnet is an extra long wellbore clean-up tool designed for casing exits and milling operations. A robust design with all external parts aligned on a heavy duty bearing system. This permits rotation of the DP while the magnets are stationary. The Innomag® 4X134 HD is capable of withstanding the extreme downhole conditions experienced during milling operations.

Dimensional data	
Model name	IM 4X134 HD
Max OD, inch	13,375
Min ID, inch	3,0
Fish neck OD, inch	7,0
Length, mm	5082
Material properties	
Body material	AISI 4145
Tensile Yield strength, lbs	1 100 000
Torsional Yield strength, ft-lbs	83 900
Magnet Ribs on stabilizer	8
Magnet type	Innovar specified
Operational data	
Flow by area, sq.in	136
Connection	MT 57
Make-up torque, ft-lbs	60 000
Max rotation, rpm	150
Swarf collection cap (ltr)	110
Swarf collection cap (kgs)	210
Transport Data	
Tool weight, kg	1 550



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