

Product Report



Pictures may not show every (all) optional feature (s) on actual bit

12 1/4" R30AP-A1

Design Features of this bit

RockForce™

Premium journal bearing insert and tooth bits in sizes 3 3/4" through 12 1/4". Key to the product line is the completely new RockForce™ bearing system, re-engineered from the ground up to provide consistent, superior performance in the constantly increasing demands of directional and vertical drilling. Additional technologies include SuperTuff™ inserts, MatchFit™ insert retention and industry-leading MudPick® hydraulics.

FULL ENCAPSULATED BALL RETENTION

Precision ground ball bearings fully encapsulated in bore and journal for maximum cone retention at higher energy levels.

Premium Journal Bearing

Precision finished journal bearing with silver plated bushing, silver plated thrustwasher and stellite inlay. Includes precisely ground ball bearings, fully encapsulated in cone and journal for maximum cone retention at higher energy levels.

Radial Seal - HNBR

Hydrogenated Nitrile Butadiene Rubber (HNBR) radial seal.

MudPick® Hydraulics

Direct nozzle flow for cleaning of the gauge and interlock rows just prior to entering the formation providing improved cleaning and faster drilling.

GageGuard™

Additional row of protruding inserts located between gauge row teeth providing superior gauge protection.

MatchFit™ Insert Retention.

Patented process that captures entire insert shank, improving insert retention especially with large diameter inserts.

General Data

IADC Code	537
Bearing Type	Friction
Seal Type	RADIAL - HNBR
Journal Angle	33°
Cone Skew	3°

Cutting Structure

<i>Gauge Row Inserts</i>	
Count	53
Shape	Flat Top Chisel Formed Gage
<i>Main Row Inserts</i>	
Shape	Flat Top Chisel
Total Count	159

API Pin Size (ins)	6.625"
Maximum make-up Torque (ft-lbs)	32000
Shipping Weight (lbs)	250
Nozzle Code	D

Recommended Operating Parameters

<i>Weight on Bit Range</i>	
Max (klbs)	75
Min (klbs)	25
Max (tonne)	34
Min (tonne)	11
Rotary Speed (RPM)	200-50

Additional Information

Min Annular Area (in ²)	26.80
Bit Breaker	138788

In some applications this bit is run successfully beyond these parameters. Contact your NOV Downhole Representative for recommended operating parameters in your application. NOV Downhole reserves the right to revise these specifications, based on advances and improvements in technology.

This report is valid for 30 days from 16-May-2012