

Product Report



17 1/2" TFR619M-A1

Design Features of this bit

Raptor® cutters - Thermostable PDC cutters featuring an unique layer of thermostable PDC that is 200% more heat tolerant and 400% more abrasion resistant than premium PDC. The thermostable layer dramatically improves abrasion resistance by maintaining a sharp, slow-wearing tough cutting edge. When a wearflat finally develops, the thermostable layer wears more slowly than the multimodal polycrystalline diamond behind it, forming two sharp lips that maintain ROP. This allows the bit to drill significantly further and faster than premium PDC cutter bits.

Titan Fixed Cutter bits - A range of large diameter fixed cutter bits that feature extremely high levels of lateral stability (high LSI) to resist bit whirl and other lateral vibrations. Profiles, gauge design and cutter technology are specifically chosen to give unrivaled performance in large diameter holes where inertial BHA forces can be enormous. These bits are recommended for all large diameter applications where erratic performance, mechanical cutter damage on the shoulder and bit/tool failures are limiting performance.

Cutting Structure

Type	Qty	Location	Diameter	Shape
Primary	63	FACE	19 mm	CYLINDER
Primary	6	GAGE	13 mm	PREFLATTED
Impact Arrester	34	FACE	16 mm	DOME TOPPED
Upream	12	BACK-ANGLE	13 mm	CYLINDER

Design Specifications

Make up Length (ft):	1.16
Shank Bore (ins):	3.688
Shank Diam (ins):	9.750
Connection std:	Y
Connection Size(ins):	7.625
Connection Type:	Api Reg Pin
Make up Torque (ft-lbs):	80000

IADC Code92:	M422
Diameter:(ins)	17 1/2"

Body Material:	Matrix
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JSA(in ²):	99.57
Face Volume:(in ³)	499.85
Normalised Face vol:	61.00%

Blade Qty:	6
Gauge Length:(ins)	4.000
Gauge Geometry:	Spiral-Trailing
Profile:	Short Taper - Medium Cone

Recommended Operating Parameters

Max Operating WOB (klbs):	70
TFA Range (ins ²):	0.442-3.976
Max Flow (gpm):	2500
Pressure Drop(psi):	700-1500
HSI:	1-6

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

Nozzles & Ports

Qty	Type	Size
9	BBK	VARIABLE