

Product Report



12 1/4" DSF616M-F6

Design Features of this bit

DuraForce™ Cutters - Designed for maximized impact toughness. The cutter incorporates a new non-planar interface to minimize stresses in the cutter, polycrystalline diamond material chemistry specifically selected for impact toughness and a deep-leached Thermostable PDC surface layer for unrivaled abrasion resistance.

DiamondBack™ cutters - Are strategically positioned in the critical wear areas of the bit to provide a second row of cutters to some or all blades. This gives up to twice the PDC cutter density, enhancing the durability of the bit or tool, giving more footage and a higher average ROP (since the bit stays sharper for longer). Additionally, lateral stability is improved since the effective number of blades is dramatically increased. Available as an option in Hybrid PDC bits and tools, DiamondBack cutters replace the diamond impregnated studs in critical areas of the bit or tool.

Cutting Structure

Type	Qty	Location	Diameter	Shape
Primary	44	FACE	16 mm	CYLINDER
Primary	6	GAGE	13 mm	PREFLATTED
Secondary	24	FACE	16 mm	CYLINDER
Hybrid	9	FACE	11 mm	DOME TOPPED
Hybrid	3	FACE	11 mm	DOME TOPPED

Design Specifications

Make up Length (ft):	1.03
Shank Bore (ins):	3.000
Shank Diam (ins):	8.000
Connection std:	Y
Connection Size(ins):	6.625
Connection Type:	Api Reg Pin
Make up Torque (ft-lbs):	32000

Diameter:(ins) 12 1/4"

Body Material: Matrix

JSA(in²): 31.20

Face Volume:(in³) 176.00

Normalised Face vol: 55.00%

Blade Qty: 6

Gauge Length:(ins) 3.250

Gauge Geometry: Straight

Profile: Short Taper - Medium Cone

Recommended Operating Parameters

Max Operating WOB (klbs):	28
TFA Range (ins ²):	.4419 - 1.7667
Max Flow (gpm):	1100
Pressure Drop(psi):	700-2500
HSI:	2-7

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
6	AAK	VARIABLE