



12 1/4" SDF516S

Design Features of this bit

SpeedDrill™ Drill Bits - Combines the award-winning advances of the SpeedReamer™ bi-center bits with special design features to further enhance steerability. The result is a revolutionary bit design that sets a new benchmark for ROP, longer bit life, and directional control. The SpeedDrill™ bit is designed to use less energy in drilling an oversized hole, leaving more energy to drill ahead. Like our SpeedReamer series, it utilizes two gauges to stabilize the bit, improving resistance to string vibration and reducing bit whirl.

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.

SmoothTorque™ Torque Control Components - SmoothTorque™ torque control components are inserts placed between primary cutters to provide a predictable torque response to applied weight-on-bit and reduction in torque variance.

Impact Arrestors - High impact-resistant inserts placed directly behind the primary cutting structure to protect the cutters from impact damage.

Back Reaming Cutters - PDC cutters positioned on the back of the gauge pad or gauge back angle enable back reaming operations to be performed.

HardFacing - A coating of erosion resistant carbide material applied to steel-bodied bits and tools dramatically enhances the erosions resistance of the body. By virtue of the strength of steel, high blades and face volumes allow higher ROPs to be achieved.

Cutting Structure

Pilot	Qty	Location	Diameter	Shape
Primary	32	PILOT FACE	16 mm	RAZOREDGE
Primary	5	PILOT GAGE	13 mm	CYLINDER
TCC	6	FACE	11 mm	DOME TOPPED
Impact Arrester	5	GAGE	11 mm	DOME TOPPED

Reamer	Qty	Location	Diameter	Shape
Primary	25	REAMER FACE	16 mm	CYLINDER
Primary	5	REAMER GAGE	13 mm	CYLINDER
Impact Arrester	5	REAMER GAGE	16 mm	DOME TOPPED
Impact Arrester	5	REAMER FACE	14 mm	RADIAL
Upream	5	REAMER BACK-ANGLE	13 mm	CYLINDER

Design Specifications

Make up Length (ft):	1.94
Shank Bore (ins):	2.835
Shank Diam (ins):	8.000
Connection std:	Y
Connection Size(ins):	6.625
Connection Type:	Api Reg Box
Make up Torque (ft-lbs):	47500
IADC Code92:	S422
Diameter:(ins)	12 1/4"
Pilot Diam(ins):	9 7/8"

Body Materials

Pilot:	Steel
Reamer:	Steel

Blade Quantity

Pilot:	5
Reamer:	5

Bit Profile: Short Taper - Shallow Cone

Recommended Operating Parameters

Max Operating WOB (klbs):	50
HSI:	1-6

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

This report is valid for 30 days from 22-Jan-2016

Nozzles & Ports

Pilot	Qty	Type	Size
	5	AAK	VARIABLE

Reamer	Qty	Type	Size
	5	AAK	VARIABLE