



# PATTERSON RENTAL TOOLS

## 4 1/2" SLIM HOLE GRADE S-135 16.60 LBS DRILL PIPE W/ DELTA 425 CONNECTIONS

Product:	4 1/2" SH	DP412SHS135DELTA
Tube Size:	4 1/2"	In.
Normal Weight per Foot:	16.60	Lbs.
Tube Grade:	S-135	
Connection:	DELTA 425	
TUBE SPECIFICATIONS		
Inside Diameter:	3.826	In.
Wall Thickness:	0.337	In.
Tensile Yield New:	595,000	Lbs.
Premium:	468,300	Lbs.
Torsional Yield New:	55,453	Ft.-Lbs.
Premium:	43,450	Ft.-Lbs.
PSI Burst (New/Premium):	17,690 / 16,200	PSI
Collapse (New/Premium):	16,770 / 10,960	PSI
ENGINEERING DATA		
Drift Diameter:	2.875	In.
Adjusted Weight per Foot:	19.48	Lbs./Ft.
Average Joint Length/Weight:	31	Ft.
Displacement (Open):	0.30	Gal./Ft.
	0.71	Bbl./100 Ft.
Capacity:	0.56	Gal./Ft.
	1.33	Bbl./100 Ft.
CONNECTION SPECIFICATIONS		
Outside Diameter:	5.375	In.
Minimum OD:	4.990	In.
Inside Diameter:	3.000	In.
Tensile Yield New:	786,353	Lbs.
Approx. Tension to Yield Pin at Recommended Make-Up Torque:	482,858	Lbs.
Torsional Strength New:	49,748	Ft.-Lbs.
Recommended Torque New:	35,000*	Ft.-Lbs.
ID Markings:	2 GROOVES 1 SLOT	
Minimum usage length:	Box 6 1/2" Pin 6"	

\* Make up torque is based on 60% torsional strength of connection including 1.15 friction factor thread compound.

\* Technical information contained herein is furnished without charge or obligation and is given and accepted at recipient's sole risk. Because conditions of use may vary and are beyond our control, Patterson Services, Inc. makes no representation about, and is not responsible or liable for the accuracy or reliability of the data, described herein. Nothing contained in this document shall be considered a recommendation for any use that may infringe patent rights, or an endorsement of any particular material, equipment, service, or other item. The properties listed in this document are not specification. They are provided as information only and in no way modify, amend, enlarge or create any specification or warranty.

**Tubing**  
1" thru 4-1/2"

**Drill Pipe**  
2 3/8" thru 5 1/2"

**Heavy Weight Drill Pipe**  
2 7/8" thru 6 5/8"

**Drill Collars**  
2 7/8" thru 10"

**Blow-Out Preventers**  
**Annular Type**  
2 9/16" 5M thru 29 1/2" 500 PSI

**Hydraulic Ram Type**  
**Single and Double**  
3 1/16" 10M thru 16 3/4" 5M

**Valves Manual & Hydraulic**  
**12" Ball Valves**  
2 1/16" 5M thru 4 1/16" 15M