

EMPIRE T O O L

Heavy Weight Drill Pipe Specs

Size: 4-1/2"

Grade: 38.9lb/ft 135KSI

Range: II (31')

Connection: DUO400

Tube

	New	
OD	4.500 in	114.30 mm
Wall thickness	0.906 in	23.01 mm
ID	2.688 in	68.26 mm
Material Yield Strength	95,000 psi	655,000 kPa
Torsional strength	71,300 ft-lbs	96,611 N-m
80% Torsional strength	57,040 ft-lbs	77,289 N-m
Tensile strength	971,810 lbs	432,282 daN
80% Tensile strength	777,448 lbs	345,825 daN
Internal Pressure capacity	33,500 psi	230,974 kPa
Collapse capacity	30,600 psi	210,979 kPa

Tool Joint

	New	
Material Yield Strength	130,000 psi	896,000 kPa
OD	5.250 in	133.35 mm
ID	2.688 in	68.26 mm
Torsional Strength	48,600 ft-lbs	65,853 N-m
Maximum Make-up Torque	31,600 ft-lbs	42,800 N-m
Recommended Make-up Torque	29,200 ft-lbs	39,600 N-m
Minimum Make-up Torque	24,300 ft-lbs	32,925 N-m
Tensile strength	918,900 lbs	408,745 daN
80% Tensile strength	735,120 lbs	326,997 daN

Heavy-weight Assembly with Connection

Adjusted weight	38.9 lbs/ft	57.88 kg/m
Approximate length	31.0 ft	9.45 m
Fluid displacement	0.0138690 bbl/ft	0.0072341 m ³ /m
Fluid capacity	0.0070161 bbl/ft	0.0036596 m ³ /m
Drift size	2.563 in	65.10 mm

While every effort has been made to insure the accuracy of the tables herein, this material is presented as a reference guide only. Empire Tool Company Ltd. cannot assume responsibility for the results obtained through the use of this material. No expressed or implied warranty is intended. All torques are based on a 1.0 friction factor.

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