

# EMPIRE T O O L

## Heavy Weight Drill Pipe Specs

Size: 5"

Grade: Welded 55ksi

Range: III (42.5')

Connection: NC50

### Tube

	New	
	OD	5.000 in
Wall thickness	1.000 in	25.40 mm
ID	3.000 in	76.20 mm
Torsional strength	56,496 ft-lbs	76,600 N-m
80% Torsional strength	45,197 ft-lbs	61,300 N-m
Tensile strength	691,150 lbs	308,200 daN
Internal Pressure capacity	19,250 psi	132,724 kPa
Collapse capacity	17,600 psi	121,348 kPa
Cross sectional area body	12.566 in <sup>2</sup>	8,107 mm <sup>2</sup>
Cross sectional area OD	19.635 in <sup>2</sup>	12,668 mm <sup>2</sup>
Cross sectional area ID	7.069 in <sup>2</sup>	4,560 mm <sup>2</sup>
Section modulus	10.681 in <sup>3</sup>	175,037 mm <sup>3</sup>
Polar section modulus	21.363 in <sup>3</sup>	350,074 mm <sup>3</sup>

### Tool Joint

	New		Premium	
	Yield Strength	120,000 psi	827,371 kPa	120,000 psi
OD	6.625 in	168.30 mm	6.141 in	156.00 mm
ID	3.000 in	76.20 mm	3.000 in	76.20 mm
Pin length	24.0 in	609.6 mm	10.0 in	254.0 mm
Box length	24.0 in	609.6 mm	10.0 in	254.0 mm
Torsional Strength	57,500 ft-lbs	78,000 N-m	38,800 ft-lbs	52,600 N-m
Recommended Make-up Torque	34,500 ft-lbs	46,800 N-m	23,300 ft-lbs	31,600 N-m
Min Make-up Torque	30,000 ft-lbs	40,700 N-m	20,500 ft-lbs	27,800 N-m
Tensile strength	1,397,000 lbs	622,900 daN	956,100 lbs	426,300 daN

### Heavy-weight Assembly with Connection

Adjusted weight	48.7 lbs/ft	72.61 kg/m
Approximate length	42.5 ft	12.96 m
Fluid displacement	0.745 gal/ft	0.009253 m <sup>3</sup> /m
Fluid capacity	0.367 gal/ft	0.004560 m <sup>3</sup> /m
Drift size	2.875 in	73.00 mm

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