



CTD® Motor

The Weatherford *CTD* positive displacement motor (PDM) is engineered to ensure reliable delivery of the optimal horsepower to the bit. Weatherford's proprietary power section is specifically designed to address the concerns of thru-tubing operations. The power section converts hydraulic energy of the drilling fluid to the mechanical horsepower necessary to rotate a bit. Using the latest elastomer technologies, the high-torque power section minimizes stalls and allows the operator to focus on other aspects of the operation. The *CTD* motor is dynamometer-tested and delivered with a chart of its characteristics.

Weatherford's PDMs are among the most powerful and reliable in the industry.

Applications

- Heavy-duty milling
- Coiled-tubing drilling
- Tubing cutting
- Underreaming
- Plug removal

Features, Advantages and Benefits

- Rugged design, with fully sealed and pressure-balanced bearing assembly, provides unparalleled longevity.
- Unique high-torque power sections minimize stalls, saving time and allowing the operator to focus on other aspects of the operation.
- High-performance power output speeds operations by maximizing penetration rates.
- Built-in safety mechanisms minimize risk of leaving costly fish in a well.
- Unique design of the *CTD* motor enhances performance in demanding environments, preventing costly fishing operations.
- Elevated weight-on-bit ratings effectively manage the higher loads experienced in heavy-duty milling and drilling applications, enhancing safety.





CTD® Motor

Specifications

Performance

OD (in./mm)	Maximum Torque Output (ft-lbf/N•m)	Maximum Bit Pressure Drop (psi/MPa)	Minimum Flow Rate (gal/min, L/min)	Maximum Flow Rate (gal/min, L/min)	Speed Range (rpm)	Maximum Weight on Bit (lb/kg)	Maximum Temperature (°F/°C)	Maximum Overpull (lb/kg)
1-11/16 42.900	170 230	2,000 13.79	20 75.71	50 189.27	280 to 700	7,920 3,592	300 149	12,000 5,443
2-1/8 53.975	400 542		25 94.64	65 246.05	180 to 550	9,240 4,191		18,250 8,278
2-3/8 60.325	435 590		30 113.56	80 302.83	300 to 575	12,300 5,579		22,000 9,979
2-7/8 73.025	720 975		60 227.12	120 454.25	220 to 460	18,240 8,274		34,000 15,422
3-1/2 88.900	1,100 1,491		80 302.83	160 605.67	190 to 400	26,000 11,793		50,000 22,680
4-3/4 120.650	1,640 2,224	1,500 10.34	100 380.00	230 870.64	70 to 230	38,000 17,000		107,500 48,000

Equipment

OD (in./mm)	Overall Length (ft/m)	Configuration	Stages	Weight (lb/kg)	Standard Thread Connections	Makeup Torque		Bit Size Range (in./mm)
						Top Connection (ft-lbf/N•m)	Bottom Connection (ft-lbf/N•m)	
1-11/16 42.900	7.2 2.20	5:6	2.5	44 19.96	1-in. AMMT	399 541		1-13/16 to 2-3/8 46.04 to 60.33
2-1/8 53.975	11.6 3.54		5.8	87 39.46	1 1/2-in. AMMT	672 911		2-1/4 to 3-1/2 57.15 to 88.90
2-3/8 60.325	11.6 3.54		5.6	126 57.15	1 1/2-in. AMMT	672 911		2-1/2 to 3-1/2 63.50 to 88.90
2-7/8 73.025	10.5 3.21	7:8	3.6	168 76.20	2 3/8-in. PAC	2,693 3,651		3-1/4 to 4-3/4 82.55 to 120.65
3-1/2 88.900	11.8 3.59		5.0	250 113.39	2 3/8-in. API Reg	2,908 3,943		3-7/8 to 5-1/4 98.43 to 133.35
4-3/4 120.650	18.8 5.71	4:5	3.5	750 340.00	3 1/2-in. IF 3 1/2-in. Reg	9,100 12,338	7,500 10,169	5-7/8 to 7-7/8 149.00 to 200.00