

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.

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Specifications

Performance

OD (in./ <i>mm</i>)	Maximum Torque Output (ft-lbf/ <i>N•m</i>)	Maximum Bit Pressure Drop (psi/ <i>MPa</i>)	Minimum Flow Rate (gal/min, <i>L/min</i>)	Maximum Flow Rate (gal/min, <i>L/min</i>)	Speed Range (rpm)	Maximum Weight on Bit (Ib/ <i>kg</i>)	Maximum Temperature (°F/°C)	Maximum Overpull (lb/ <i>kg</i>)
1-11/16 <i>42.900</i>	170 230		20 75.71	50 189.27	280 to 700	7,920 3,592		12,000 <i>5,443</i>
2-1/8 53.975	400 542		25 94.64	65 246.05	180 to 550	9,240 <i>4,191</i>		18,250 <i>8,278</i>
2-3/8 60.325	435 590	2,000 13.79	30 113.56	80 302.83	300 to 575	12,300 <i>5,57</i> 9	300	22,000 <i>9,979</i>
2-7/8 73.025	720 975		60 227.12	120 454.25	220 to 460	18,240 <i>8,274</i>	149	34,000 <i>15,422</i>
3-1/2 88.900	1,100 <i>1,491</i>		80 302.83	160 605.67	190 to 400	26,000 <i>11,7</i> 93		50,000 <i>22,680</i>
4-3/4 120.650	1,640 2,224	1,500 <i>10.34</i>	100 380.00	230 870.64	70 to 230	38,000 <i>17,000</i>		107,500 <i>48,000</i>

Equipment

						Makeup Torque		
OD (in./ <i>mm</i>)	Overall Length (ft/ <i>m</i>)	Configuration	Stages	Weight (lb/ <i>kg</i>)	Standard Thread Connections	Top Connection (ft-lbf/ <i>N•m</i>)	Bottom Connection (ft-lbf/ <i>N•m</i>)	Bit Size Range (in./ <i>mm</i>)
1-11/16 <i>42.900</i>	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 <i>3.21</i>	7.0	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	7.8	5.0	250 113.39	2 3/8-in. API Reg	2,908 <i>3,943</i>		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 <i>12,33</i> 8	7,500 1 <i>0,16</i> 9	5-7/8 to 7-7/8 149.00 to 200.00

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