



### Benefits and Features

- High allowable WOB and back reaming forces
- Equipped with 0 - 3° Easy Set Adjustable Housing (Series 22)
- Shorter bit to bend for more predictable build rates
- Features the Maxi-torque Driveline
- Stronger bearing mandrel for use with high torque power sections

### Drilling Motor Specifications

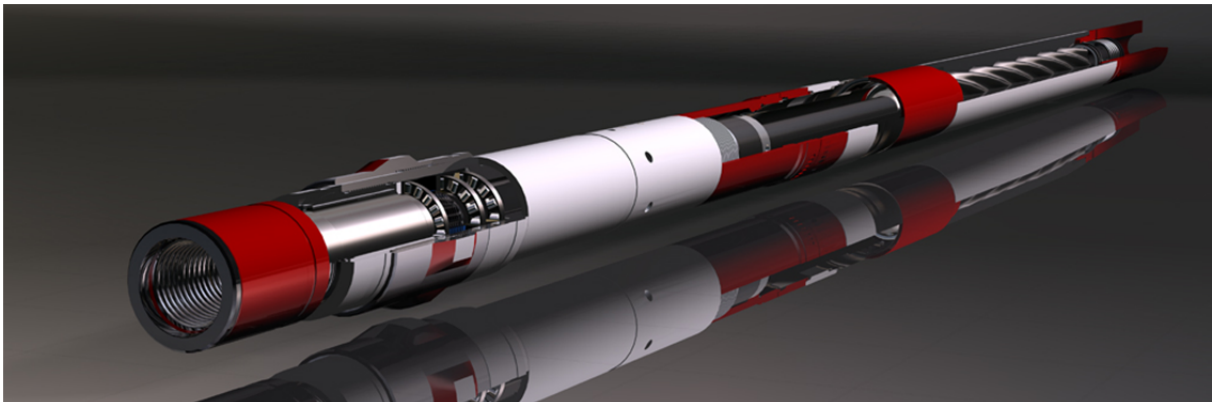
(See next page for Power Section Performance)

#### Imperial

Nominal OD	Designation	Bit Box to Bend	Hole Size	Standard Bit Box Thread	Max WOB	Max Pull While Back Reaming	Absolute Overpull	Adjustable Make-up Torque	Stabilizer Torque
2 7/8"	M6	2.74 feet	3 1/2" - 4 1/2"	2 3/8 Reg	11,400 lbs	19,000 lbs	157,000 lbs	1,500 ft lbs	600 ft lbs
3 1/8"	M6	2.82 feet	3 1/2" - 4 1/2"	2 3/8 Reg	11,400 lbs	19,000 lbs	157,000 lbs	4,500 ft lbs	2,000 ft lbs
3 1/2"	M6	3.11 feet	4 1/4" - 5 7/8"	2 7/8 Reg	18,500 lbs	30,900 lbs	226,000 lbs	5,500 ft lbs	2,200 ft lbs
4 3/4 - 5"	M5	5.13 feet	5 7/8" - 7 7/8"	3 1/2 Reg	53,300 lbs	52,400 lbs	515,000 lbs	15,000 ft lbs	6,000 ft lbs
6 1/2"	M6	5.57 feet	7 7/8" - 9 7/8"	4 1/2 Reg	90,200 lbs	85,600 lbs	780,000 lbs	35,000 ft lbs	12,000 ft lbs
7 3/4"	M6	6.65 feet	9 5/8" - 12 1/4"	6 5/8 Reg	87,400 lbs	145,600 lbs	908,350 lbs	40,000 ft lbs	35,000 ft lbs
8"	M6	6.75 feet	9 5/8" - 12 1/4"	6 5/8 Reg	105,000 lbs	175,000 lbs	1,116,000 lbs	45,000 ft lbs	40,000 ft lbs
9 1/2"	10A	9.33 feet	12 1/4" - 17 1/2"	6 5/8 Reg	190,000 lbs	136,600 lbs	1,328,000 lbs	60,000 ft lbs	40,000 ft lbs
11 1/4"	10A	10.12 feet	12 1/4" - 26"	7 5/8 Reg	225,000 lbs	191,700 lbs	1,948,300 lbs	80,000 ft lbs	50,000 ft lbs

#### Metric

Nominal OD	Designation	Bit Box to Bend	Hole Size	Standard Bit Box Thread	Max WOB	Max Pull While Back Reaming	Absolute Overpull	Adjustable Make-up Torque	Stabilizer Torque
73mm	M6	0.9 m	89 - 114mm	2 3/8 Reg	5,100 daN	8,500 daN	69,800 daN	2,030 Nm	810 Nm
79mm	M6	0.9 m	89 - 114mm	2 3/8 Reg	5,100 daN	8,500 daN	69,800 daN	6,100 Nm	2,710 Nm
89mm	M6	0.9 m	108 - 149mm	2 7/8 Reg	8,200 daN	13,700 daN	100,500 daN	7,460 Nm	2,980 Nm
121-127mm	M5	1.6 m	149 - 200mm	3 1/2 Reg	23,700 daN	23,300 daN	229,100 daN	20,340 Nm	8,140 Nm
165mm	M6	1.7 m	200 - 251mm	4 1/2 Reg	40,100 daN	38,100 daN	346,900 daN	47,460 Nm	16,270 Nm
197mm	M6	2.0 m	245 - 311mm	6 5/8 Reg	38,900 daN	64,800 daN	404,000 daN	54,240 Nm	47,460 Nm
203mm	M6	2.1 m	245 - 311mm	6 5/8 Reg	46,700 daN	77,800 daN	496,400 daN	61,020 Nm	54,240 Nm
241mm	10A	2.8 m	311 - 445mm	6 5/8 Reg	84,500 daN	60,800 daN	590,700 daN	81,360 Nm	54,240 Nm
286mm	10A	3.1 m	311 - 660mm	7 5/8 Reg	100,100 daN	85,300 daN	866,600 daN	108,480 Nm	67,800 Nm



# Millennium Motors

## Power Section Performance

Size		Configuration	Flow Rates		Speed Ratio		Bit Speed	Stall Torque		Maximum Recommended Differential	
Inch	mm		gpm	lpm	Rev / Gal	Rev / l	rpm	ft . lbs.	N . m	Psi	kPa
2 7/8	73	7/8 2 stg. Air	70 - 130	264 - 492	2.154	0.569	150 - 280	545	739	300	2,069
2 7/8	73	7/8 3 stg.	50 - 100	189 - 378	2.700	0.714	135 - 270	690	936	450	3,103
3 1/8	79	7/8 ml 3.7 stg.	60 - 130	227 - 492	2.300	0.608	138 - 229	1,100	1,491	733	994
3 1/2	89	7/8 3.8 stg.	75 - 150	284 - 568	1.570	0.415	118 - 235	1,655	2,243	665	4,585
4 3/4	121	5/6 6 stg.	150 - 350	568 - 1325	0.850	0.225	127 - 296	4,820	6,535	1,050	7,240
4 3/4	121	5/6 8.3 stg.	100 - 275	379 - 1041	1.030	0.270	103 - 283	4,650	6,305	1,130	7,797
4 3/4	121	7/8 2.2 stg. Slow	100 - 300	379 - 1136	0.300	0.079	30 - 92	4,093	5,550	385	2,655
4 3/4	121	7/8 3.8 stg.	150 - 300	568 - 1136	0.510	0.135	76 - 152	4,215	5,715	665	4,585
4 3/4	121	7/8 5 stg.	150 - 300	568 - 1136	0.630	0.166	94 - 189	4,789	6,493	875	6,033
4 3/4	127	7/8 3.7 stg.	150 - 300	568 - 1136	0.350	0.092	23 - 123	7,232	9804	875	6,033
4 3/4	127	7/8 5 stg.	150 - 300	568 - 1136	0.630	0.166	94 - 189	4,789	6493	875	6,033
4 3/4	127	9/10 2.1 stg	150 - 300	568-1136	0.170	0.037	26 - 51	7,983	10,825	362	2,496
6 1/2	165	6/7 5 stg.	200 - 500	757 - 1893	0.350	0.090	68 - 169	9,978	13,528	875	6,033
6 1/2	165	7/8 3 stg.	300 - 600	1136 - 2271	0.200	0.053	59 - 118	9,797	13,282	525	3,620
6 1/2	165	7/8 3 stg. Slow	200 - 600	757 - 2271	0.150	0.040	30 - 90	13,406	18,175	525	3,620
6 1/2	165	7/8 4.8 stg.	200 - 500	757 - 1893	0.320	0.085	64 - 161	10,215	13,850	840	5,792
6 1/2	165	7/8 6 stg.	300 - 600	1136 - 2271	0.260	0.069	78 - 157	14,288	19,375	1,050	7,239
6 1/2	165	9/10 3.5 stg.	350 - 625	1325 - 2366	0.150	0.040	53 - 94	16,128	21,866	619	4,268
7 3/4+8	197+203	7/8 2.5 stg. Slow	300 - 900	1136 - 3407	0.070	0.018	22 - 66	19,224	26,064	438	3,020
7 3/4+8	197+203	7/8 3 stg.	300 - 900	1136 - 3407	0.170	0.045	51 - 153	11,325	15,354	525	3,620
7 3/4+8	197+203	7/8 4 stg.	300 - 900	1136 - 3407	0.160	0.042	48 - 143	17,203	23,324	700	4,826
7 3/4+8	197+203	8/9 6 stg.	300 - 900	1136 - 3407	0.220	0.058	65 - 196	18,821	25,518	1,050	7,239
9 5/8	244	5/6 4 stg.	600 - 1200	2271 - 4542	0.110	0.029	65 - 130	25,188	34,149	700	4,826
9 5/8	244	5/6 5 stg. HR	600 - 1200	2271 - 4542	0.128	0.034	77 - 154	53,175	72,095	1,250	8,618
9 5/8	244	6/7 3.5 stg. ERT	600 - 1200	2271 - 4542	0.107	0.028	65 - 125	54,000	73,225	1,300	8,965
9 5/8	244	6/7 5 stg.	600 - 1200	2271 - 4542	0.120	0.032	76 - 148	27,674	37,520	875	6,033
9 5/8	244	7/8 2.5 stg. Slow	300 - 900	1136 - 3407	0.070	0.018	22 - 66	19,224	26,064	438	3,020
11 1/4	286	5/6 4.6 Stg	600 - 1100	2271 - 4164	0.160	0.042	96 - 176	19,642	26,631	805	5,550
11 1/4	286	6/7 3.5 stg. ERT	600 - 1200	2271 - 4542	0.107	0.028	65 - 125	54,000	73,225	1,300	8,965

Specifications are based on as new condition and are subject to change without notice.



Printed on  
September 2, 2011  
PS-M-0040 R5

### Wenzel Downhole Tools Ltd.

Calgary, Alberta  
Phone (403) 262-3050  
Fax (403) 265-8154

Edmonton, Alberta  
Phone (780) 440-4220  
Fax (780) 469-8054

Conroe, Texas  
Phone (936) 441-1480  
Fax (936) 756-5335

Casper, Wyoming  
Phone (307) 266-1580  
Fax (307) 266-1656

Oklahoma City, Oklahoma  
Phone (405) 787-4145  
Fax (405) 470-1968

Morgantown, West Virginia  
Phone (304) 777-2534  
Fax (304) 777-2539

Germany  
Phone +49 (0) 5141 977 65 0  
Fax +49 (0) 5141 977 65 65

Colombia  
Phone (571) 865-6012 - Ext. 102  
Fax (571) 865-6012