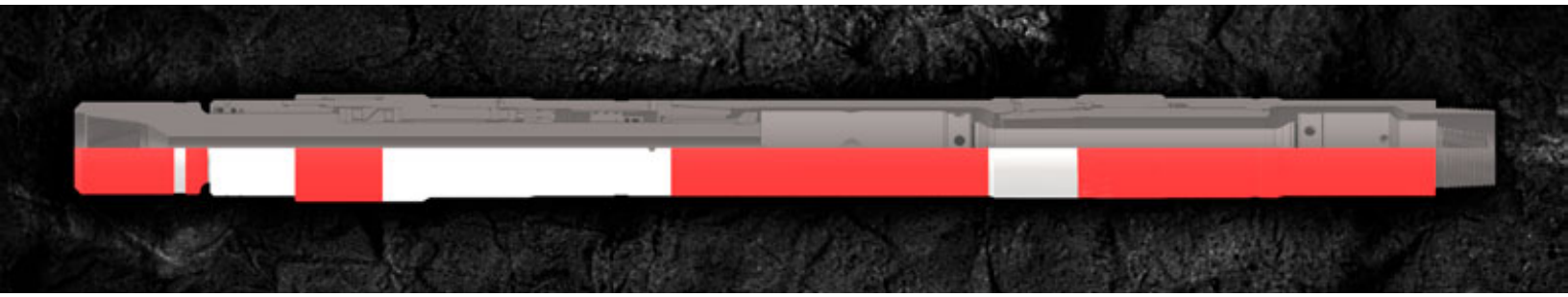
WZL INDUSTRIES

WZL OIL SEALED

Oil Sealed Bearing Assemblies

A TRIED AND TRUE WORKHORSE

WZL oil sealed bearing assemblies are built for ease of use and maintenance, lower service costs and reliable performance in low-to-moderate temperature wells.



FEATURES & BENEFITS

A tried and true workhorse

Customers around the world have entrusted WZL oil sealed bearing assemblies with their high-performance drilling needs for decades. These sturdy beasts have set a new standard for capable and reliable drilling, regularly outperforming when combined with even-wall and hard-rubber power section technology.

Modern, optimized design

The oil-sealed bearing packs are isolated from drilling fluid, keeping the internal components guarded against debris. This design – coupled with high strength, low-alloy steel and tungsten carbide coated parts – makes our motor resistant to corrosion and extends the life of seals and bearings. It also allows more fluid to be directed to the bit for maximized hydraulic efficiency, improved bottom-hole cleaning, better ROP and increased bit life.

Other features such as an optimized balance piston design, high WOB thrust bearing capacity and an adjustable load-bearing shoulder give operators confidence and flexibility to chase a higher ROP.

Flexibility

WZL oil sealed motors are designed to drill any conventional hole size, and the screw-on stabilizer feature enables the use of a wide variety of stabilizers with multiple gauge outside diameters. We also offer custom screw-on stabilizer designs to meet the needs of your unique application. These motors can be equipped with our fixed bend or 0 – 3° adjustable bend for directional drilling, or straight housing for rotary steerable applications.

Optimization for rotary steerable systems

Fit your oil sealed motor with our pin-down mandrel and straight housing options to achieve high downhole RPM with rotary steerable systems (RSS). Restricted bypass plugs can also be installed to give you full control over the amount of fluid flowing to your rotary steerable system and bit.

SPECIFICATIONS – IMPERIAL

						OPERATING CAPACITY				STATIC CAPACITY			
Nominal motor OD (in)	Nominal BA OD (in)	Motor series	Bit box to bend (in)	Bit box to fixed bend (in)	Hole size (in)	WOB (lb)	Max bit overpull (lb)	Torque (ft-lb)	Flow rate (gpm)	WOB to re-run (lb)	Bit overpull to re-run (lb)	Body overpull (lb)	Torque (ft-lb)
2 ⅞	2 ⅞	M6	33	n/a	3 ½ – 4 ½	11,500	11,500	800	125	40,900	40,900	106,000	1,250
3 ⅛	3 ⅛	M6	33	n/a	3 ¾ – 4 ½	11,500	11,500	800	125	40,900	40,900	134,000	1,250
3 ½	3 ½	M6	37	30	4 ½ – 5 ⅞	18,500	18,500	1,500	220	68,400	68,400	187,000	2,300
4 ¾	5	M5*	61	50	5 ⅞ – 7 ⅞	54,000 (33,000)	31,000	5,500	375	222,000 (133,000)	138,000	404,000	8,500
5	5 ⅛	M5*	61	50	5 ⅞ – 7 ⅞	54,000 (33,000)	31,000	5,500	375	222,000 (133,000)	138,000	424,000	8,500
5	5 ⅛	M5+	61	50	5 ⅞ – 7 ⅞	54,000	31,000	6,500	375	222,000	138,000	424,000	10,000
5	5 ¼	M35	53	43	6 ⅛ – 7 ⅞	54,000	21,000	9,000	450	222,000	118,000	472,000	14,000
5 ¼	5 ¼	M35	53	43	6 ⅛ – 7 ⅞	54,000	21,000	9,000	450	222,000	118,000	472,000	14,000
6 ½	6 ½	M6*	67	56	7 ⅞ – 9 ⅞	91,000 (66,000)	51,000	15,000	600	396,000 (261,000)	210,000	524,000	24,000
6 ¾	6 ½	M6*	67	56	8 ½ – 9 ⅞	91,000 (66,000)	51,000	15,000	600	396,000 (261,000)	210,000	568,000	24,000
6 ¾	7 ¼	M35	60	47	8 ½ – 9 ⅞	100,000	74,000	21,000	850	420,000	260,000	539,000	34,000
7	7 ¼	M35	60	47	8 ½ – 9 ⅞	100,000	74,000	21,000	850	420,000	260,000	659,000	34,000
7 ¼	7 ¼	M35	60	47	8 ½ – 9 ⅞	100,000	74,000	21,000	850	420,000	260,000	659,000	34,000
7 ¾	7 ¾	M6	80	67	9 ⅝ – 12 ¼	88,000	73,000	22,000	950	365,000	318,000	563,000	35,000
8	8	M6	80	67	9 ⅝ – 12 ¼	105,000	73,000	22,000	950	419,000	318,000	783,000	35,000
9 ⅝	9 ⅝	10	112	105	12 ¼ – 17 ½	190,000	82,000	30,000	1,350	907,000	416,000	1,177,000	48,000
11 ¼	11 ¼	10	122	108	14 ¾ – 26	225,000	119,000	40,000	1,800	1,118,000	610,000	1,425,000	70,000

M5* and M6* with single on-bottom-bearing option. (WOB capacity in brackets.)

The M5+ upgrade kit includes a redesigned output mandrel and flow restrictor, as well as the new WK5 driveline (available in 5”).

Specifications are based on as-new condition and are subject to change without notice. Motor assemblies are available in a multitude of speeds and configurations.

SPECIFICATIONS – METRIC

						OPERATING CAPACITY				STATIC CAPACITY			
Nominal motor OD (mm)	Nominal BA OD (mm)	Motor series	Bit box to bend (m)	Bit box to fixed bend (m)	Hole size (mm)	WOB (daN)	Max bit overpull (daN)	Torque (N·m)	Flow rate (lpm)	WOB to re-run (daN)	Bit overpull to re-run (daN)	Body overpull (daN)	Torque (N·m)
73	73	M6	0.84	n/a	89 – 114	5,100	5,100	1,100	500	18,200	18,200	47,000	1,700
79	79	M6	0.84	n/a	95 – 114	5,100	5,100	1,100	500	18,200	18,200	60,000	1,700
89	89	M6	0.94	0.76	114 – 149	8,200	8,200	2,000	800	30,400	30,400	83,000	3,100
121	127	M5*	1.55	1.27	149 – 200	24,000 (14,700)	13,800	7,500	1,400	99,000 (59,000)	61,400	180,000	11,500
127	130	M5*	1.55	1.27	149 – 200	24,000 (14,700)	13,800	7,500	1,400	99,000 (59,000)	61,400	189,000	11,500
127	130	M5+	1.55	1.27	149 – 200	24,000	13,800	8,800	1,400	99,000	61,400	189,000	13,600
127	133	M35	1.35	1.09	155 – 200	24,000	9,300	12,200	1,700	98,700	52,500	210,000	19,000
133	133	M35	1.35	1.09	155 – 200	24,000	9,300	12,200	1,700	98,700	52,500	210,000	19,000
165	165	M6*	1.70	1.42	200 – 251	40,500 (29,500)	23,000	20,300	2,300	176,000 (116,000)	93,000	233,000	32,500
171	165	M6*	1.70	1.42	216 – 251	40,500 (29,500)	23,000	20,300	2,300	176,000 (116,000)	93,000	253,000	32,500
171	184	M35	1.52	1.19	216 – 251	44,500	32,900	28,500	3,200	186,800	115,600	240,000	46,100
178	184	M35	1.52	1.19	216 – 251	44,500	32,900	28,500	3,200	186,800	115,600	293,000	46,100
184	184	M35	1.52	1.19	216 – 251	44,500	32,900	28,500	3,200	186,800	115,600	293,000	46,100
197	197	M6	2.03	1.70	244 – 311	39,000	32,000	29,800	3,600	162,000	141,000	250,000	47,500
203	203	M6	2.03	1.70	244 – 311	47,000	32,000	29,800	3,600	186,000	141,000	348,000	47,500
244	244	10	2.84	2.67	311 – 445	85,000	36,000	40,700	5,100	403,000	185,000	524,000	65,100
286	286	10	3.10	2.74	375 – 660	100,000	53,000	54,200	6,800	497,000	271,000	634,000	94,900

M5* and M6* with single on-bottom-bearing option. (WOB capacity in brackets.)

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