

## DOWNHOLE MOTOR

### Downhole Motor

Downhole motor is a positive-displacement motor, widely used in drilling, kick-off, azimuth control, coring, reaming and work over for directional wells and horizontal wells in oilfields and coal mines etc., PPGL provides various downhole motors through size from 3 1/2" to 17 1/2".



Downhole Motor

### Technical Specification of Downhole Motor

Motor Type	PPGL-DM -5LZ73x7	PPGL-DM -5LZ89x7	PPGL-DM -5LZ95x7	PPGL-DM -5LZ120x7	PPGL-DM- 5LZ120 II x7	PPGL-DM- 5LZ165x7	PPGL-DM- 5LZ165x7IV	PPGL-DM- 5LZ73x7V
Hole Size (in)	3 1/8~4 3/4	4 1/2~ 6	4 5/8~6	5 7/8~7 7/8	5 7/8~7 7/8	8 3/8~9 7/8	8 3/8~9 7/8	8 3/8~9 7/8
Flow Rate Range (L/S)	2~4	3~8	8~13	9~14	9~16	20~28	20~28	20~28
Rotation Speed (Rpm)	125~220	95~200	80~165	95~200	95~200	90~160	90~160	90~160
Pressure Fall of Motor(Mpa)	2.4	2.4	2.4	2.4	2.4	2.4	3.2	4.0
Operating Torque (N.m)	320	560	1,200	1,350	1,700	3,300	4,500	5,600
Stall Torque (N.m)	560	980	2,100	2,360	2,950	5,775	7,875	9,800
Output Power (Kw)	4.2~4.7	5.6~11.7	10~20.7	13.4~28.3	16.9~35.6	31.1~55.3	42.4~75.4	52.8~93.8
Bit diff. Pressure (Mpa)	1.4~7	1.4~7	1.4~7	1.4~7	1.4~7	1.4~7	1.4~7	1.4~7
Recommended W.O.B.T.	1.5	2	2.5	3	3	6	8	10
Max. W.O.B.T.	2	3	5	5	5	16	16	16
Connection	Upper Box	2 3/8TBG	2 3/8	2 7/8	3 1/2	3 1/2	4 1/2	4 1/2
	Lower Box	2 3/8	2 3/8	2 7/8	3 1/2	3 1/2	4 1/2	4 1/2
Vertical	3,670	2,700	4,035	3,385	4,555	5,860	6,770	7,665
Tool Length (mm)	Single-bent		4,035	3,900	4,555	5,860	6,770	7,665
	Double-bent		4,185	4,060	4,715	6,110	7,020	7,915
Vertical	85	83	140	200	265	668	730	810
Tool Weight (kg)	Single-bent		145	248	270	688	750	830
	Double-bent		150	258	280	714	776	856

Motor Type		PPGL-DM-5 LZ72x7IV	PPGL-DM-5 5LZ172x7V	PPGL-DM-5 5LZ197x7V	PPGL-DM-5 5LZ197x7VI	PPGL-DM-5 5LZ203x7	PPGL-DM-5 5LZ203x7V	PPGL-DM-5 5LZ215x7	PPGL-DM-5 5LZ244x7
Hole Size (in)		8 3/8~9 7/8	8 3/8~9 7/8	9 7/8~12 1/4	9 7/8~12 1/4	9 7/8~12 1/4	9 7/8~12 1/4	12 1/4~15 1/4	12 1/4~17 1/2
Flow Rate Range (L/S)		25~35	25~35	30~50/60	30~50/60	30~50/60	30~50/60	30~50	50~70
Rotation Speed (Rpm)		90~160	90~160	90~160	90~160	90~160	90~160	100~160	85~140
Pressure Fall of Motor(Mpa)		3.2	4.0	4.0	4.8	3.2	4.0	3.2	3.2
Operating Torque (N.m)		5,300	6,600	8,800	10,000	8,500	10,000	11,000	17,000
Stall Torque (N.m)		9,275	11,550	12,180	14,000	11,900	14,000	19,250	24,650
Output Power (Kw)		49.9~88.8	62.2~110.6	83~145	94~167	80~142	94~165	115.2~184.3	151~249
Bit diff. Pressure (Mpa)		1.4~7	1.4~7	1.4~7	1.4~7	1.4~7	1.4~7	1.4~7	1.4~7
Recommended W.O.B.T.		8	10	17	18	16	17	17	22
Max. W.O.B.T.		16	16	25	26	24	25	28	33
Connection	Upper Box	4 1/2	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	6 5/8
	Lower Box	4 1/2	4 1/2	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8	6(7) 5/8
Vertical			7,630	9,050	10,200	7,900	9,050	8,480	9,510
Tool Length (mm)	Single-bent		7,630	9,050	10,200	7,900	9,050	8,480	9,510
	Double-bent	6,980	7,880	9,350	10,500	8,200	9,350	8,780	9,810
Vertical			913	1,395	1,646	1,262	1,512	1,440	1,830
Tool Weight (kg)	Single-bent	830	934	433	1,689	1,300	1,550	1,473	1,930
	Double-bent		962	1,478		1,345	1,595	1,528	2,005