



**MOTOR MOUNTING INSTRUCTION**

**1**

Double-check the motor and gearbox size  
Clean the mounting surface

**2**

Remove the plug on the adapter plate  
Rotate the set collar till the bolt is line up

**3**

a Remove motor key  
b Insert balance key, if necessary

**4**

Check motor shaft size and insert bushing if necessary

**Correct Installation**

When installing on flatted shafts, be sure to align the collet gap over the flat and the set collar bolt perpendicular to the flat

**5**

Set at vertical position, tighten the mounting bolts (including washer) in 1~4 order with wrench to 5% specified torque (see table 1)

**6**

Tighten the set collar bolt with torque wrench to specified torque (see table 2)

**7**

Tighten the mounting bolts in 1~4 order with torque wrench to specified torque (see table 1)

**8**

Tighten back the screw plug

For more information, please visit our website: [www.apexdyna.nl](http://www.apexdyna.nl)

**High Precision Planetary Gearboxes**

**MOTOR MOUNTING INSTRUCTION****Table 1** Tightening torque recommended for motor mounting bolt

Bolt size	Width Across Flats	Strength 8.8 Tightening Torque		Strength 10.9 Tightening Torque		Strength 12.9 Tightening Torque	
	[mm]	[Nm]	[In-lbs]	[Nm]	[In-lbs]	[Nm]	[In-lbs]
M3 x 0.5P	2.5	1.3	12	1.8	16	2.1	19
M4 x 0.7P	3	3	27	4.1	37	4.9	44
M5 x 0.8P	4	6.1	55	8.2	73	9.8	87
M6 x 1P	5	11	98	14	124	17	151
M8 x 1.25P	6	25	222	34	302	41	364
M10 x 1.5P	8	49	434	67	594	80	709
M12 x 1.75P	10	85	753	116	1028	139	1232
M14 x 2P	12	137	1214	186	1648	223	1976
M16 x 2P	14	210	1860	286	2534	343	3038

**Table 2** Tightening torque recommended for set collar bolt

Gearbox size		Motor shaft diameter	Bolt size	Width across flats	Tightening torque	
		[mm]			[mm]	[mm]
ADR047 ALR070	1-stage	≤ 11	M3 x 0.5P x 8L	2.5	2.1	19
	2-stage	≤ 11	M3 x 0.5P x 8L	2.5	2.1	19
ADR064 ALR095	1-stage	≤ 14	M4 x 0.7P x 12L	3	4.9	44
	2-stage	≤ 11	M3 x 0.5P x 8L	2.5	2.1	19
ADR090 ALR110	1-stage	≤ 19	M5 x 0.8P x 14L	4	9.8	87
	2-stage	≤ 14	M4 x 0.7P x 12L	3	4.9	44
ADR110 ALR150	1-stage	≤ 32	M6 x 1P x 16L	5	17	151
	2-stage	≤ 19	M5 x 0.8P x 14L	4	9.8	87
ADR140 ALR190	1-stage	≤ 38	M8 x 1.25P x 20L	6	41	364
	2-stage	≤ 32	M6 x 1P x 16L	5	17	151
ADR200 ALR230	1-stage	≤ 48	M10 x 1.5P x 25L	8	80	709
	2-stage	≤ 38	M8 x 1.25P x 20L	6	41	364
ADR255 ALR280	1-stage	≤ 55	M12 x 1.75P x 30L	10	139	1232
	2-stage	≤ 48	M10 x 1.5P x 25L	8	80	709

**Note:** Holding torques must be bigger than values shown above. Bolts can be tightened up to 20% higher for increased holding torques.

**Apex Dynamics bv**  
Churchillaan 101  
NL-5705 BK Helmond  
The Netherlands

Tel. : +31 (0)492 509 995  
Fax : +31 (0)492 509 997  
E-mail : sales@apexdyna.nl

For more information, please visit our website: [www.apexdyna.nl](http://www.apexdyna.nl)

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