



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.

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.

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 Dia.	Bolt Size	Width Across Flats	Tightening Torque	
		[mm]		[mm]	[mm]	[Nm]
AT065FL / AT065FL1 AT065FH / AT065FC	1 stage	≤11	M3 x 0.5P x 8L	2.5	2.1	19
AT075FL / AT075FL1 AT075FH / AT075FC	1 stage	≤14	M4 x 0.7P x 12L	3	4.9	44
AT090FL / AT090FL1 AT090FH / AT090FC	1 stage	≤19	M5 x 0.8P x 14L	4	9.8	87
AT110FL / AT110FL1 AT110FH / AT110FC	1 stage	≤24	M5 x 0.8P x 14L	4	9.8	87
AT140FL / AT140FL1 AT140FH / AT140FC	1 stage	≤32	M6 x 1P x 16L	5	17	151
AT170FL / AT170FL1 AT170FH / AT170FC	1 stage	≤38	M8 x 1.25P x 20L	6	41	364
AT210FL / AT210FL1 AT210FH / AT210FC	1 stage	≤42	M8 x 1.25P x 20L	6	41	364
AT240FL / AT240FL1 AT240FH / AT240FC	1 stage	≤48	M10 x 1.5P x 25L	8	80	709
AT280FL / AT280FL1 AT280FH / AT280FC	1 stage	≤55	M12 x 1.75P x 30L	10	139	1232

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



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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 Dia.	Bolt Size	Width Across Flats	Tightening Torque	
		[mm]	[mm]	[mm]	[Nm]	[In-lbs]
AT065FL / AT065FL1	2 stage	≤12	M6 x 1P x 8L	3	5.6	50
AT065FH / AT065FC						
AT075FL / AT075FL1	2 stage	≤12	M6 x 1P x 8L	3	5.6	50
AT075FH / AT075FC						
AT090FL / AT090FL1	2 stage	≤16	M8 x 1.25P x 10L	4	9.5	85
AT090FH / AT090FC						
AT110FL / AT110FL1	2 stage	≤24	M10 x 1.5P x 12L	5	23	205
AT110FH / AT110FC	3 stage	≤12	M6 x 1P x 8L	3	5.6	50
AT140FL / AT140FL1	2 stage	≤24	M10 x 1.5P x 12L	5	23	205
AT140FH / AT140FC	3 stage	≤12	M6 x 1P x 8L	3	5.6	50
AT170FL / AT170FL1	2 stage	≤24	M10 x 1.5P x 12L	5	23	205
AT170FH / AT170FC	3 stage	≤16	M8 x 1.25P x 10L	4	9.5	85
AT210FL / AT210FL1	2 stage	≤32	M12 x 1.75P x 16L	6	45	400
AT210FH / AT210FC	3 stage	≤16	M8 x 1.25P x 10L	4	9.5	85
AT240FL / AT240FL1	2 stage	≤38	M16 x 2P x 20L	8	78	693
AT240FH / AT240FC	3 stage	≤24	M10 x 1.5P x 12L	5	23	205
AT280FL / AT280FL1	2 stage	≤38	M16 x 2P x 20L	8	78	693
AT280FH / AT280FC	3 stage	≤24	M10 x 1.5P x 12L	5	23	205

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



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