

# PACMotion™ Servo Motor Upgrade

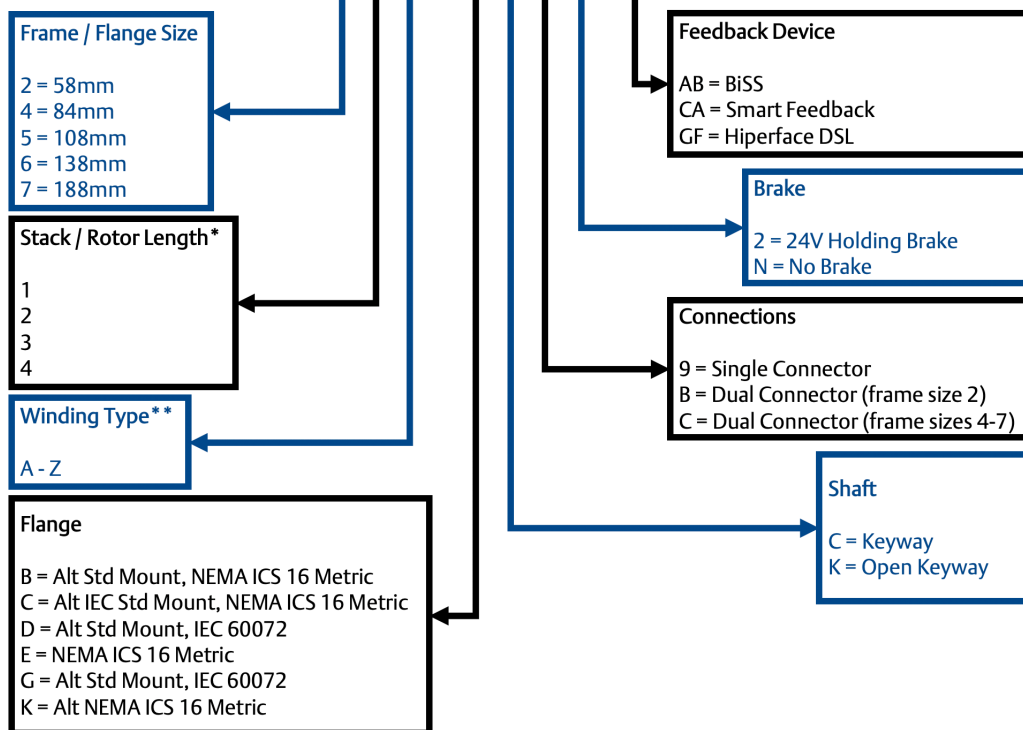
## Functional Replacements for FANUC Servo Motors

To help users with previous generations of PACMotion solutions migrate to the PACMotion High Speed Servo Motion Control solution, we've ensured upgrading is simple and painless. Our PMM345 Motion Controller is designed with the same footprint as its PMM335 predecessor and the intuitive PACMotion Workbench software enables easy servo drive configuration. Additionally, the PACMotion Servo Sizing App allows you to easily select the perfect motor for every situation. With a comprehensive list of advanced servo motors users can quickly swap modules with minimal disruption.



### PACMotion Servo Motors - Part Number Guide:

**IC830M 23E - CKBNAB00**



\*value varies by frame size  
\*\* see manual for full definitions

## PACMotion Servo Motor Upgrade – Quick Guide Table

This table lists FANUC Servo Motors beside the PACMotion models which act as functional upgrades: (Note that multiple replacement options may exist)

FANUC Servo Motors	PACMotion Servo Motor Upgrades
Alpha 2 / 6000HVis	IC830M41E-DC
Alpha 2 / 6000HVis	IC830M42G-DC
Alpha 4 / 5000HVis	IC830M42E-GC
Alpha 4 / 5000HVis	IC830M43G-GC
Alpha 6 / 3000is	IC830M62L-EK
Alpha 8 / 6000HVis	IC830M62L-BK
Alpha 8 / 6000HVis	IC830M62M-BK
Alpha 12 / 4000HVis	IC830M63L-BK
Alpha 12 / 4000HVis	IC830M63M-BK
Alpha 22 / 3000HVi	IC830M72P-KK
Alpha 22 / 3000is (Alpha I F 22/3000)	IC830M72Q-KK
Alpha 22 / 3000is (Alpha I F 22/3000)	IC830M72R-KK
Alpha 22 / 4000HVis	IC830M72P-KK
Alpha 30 / 4000HVis	IC830M73P-KK
Alpha 30 / 4000HVis	IC830M74Q-KK
Alpha 40 / 4000HVis	IC830M73P-KK
Alpha 40 / 4000HVis	IC830M74Q-KK
Alpha 50 / 3000HVis (with fan)	IC830M74Q-KK
Beta 0.4 / 5000is	IC830M21C-KK
Beta 0.5/6000is	IC830M22E-KK
Beta 1/6000is	IC830M23E-CK
Beta 1/6000is	IC830M24F-CK
Beta 2/4000HVis	IC830M41E-DC
Beta 2/4000HVis	IC830M42E-DC
Beta 2/4000is	IC830M42H-DC
Beta 4/4000HVis	IC830M42E-GC
Beta 4/4000HVis	IC830M43G-GC
Beta 4/4000is	IC830M42G-GC
Beta 4/4000is	IC830M43K-GC
Beta 8/3000HVis	IC830M62H-EK
Beta 8/3000is	IC830M62L-EK
Beta 12/3000HVis	IC830M62H-BK
Beta 12/3000HVis	IC830M62K-BK
Beta 12/3000is	IC830M62L-BK
Beta 12/3000is	IC830M62M-BK
Beta 22/2000HVis	IC830M72L-KK
Beta 22/2000is	IC830M72P-KK

## PACMotion Servo Motor Upgrade – Quick Guide Table

This table lists FANUC Servo Motors beside the PACMotion models which act as functional upgrades:  
 (Note that multiple replacement options may exist)

PACMotion Servo Motors						FANUC Servo Motors						Increase	
Model	V	Tcont	Trated	Speed Rated	Power Rated	Model	V	Tcont	Trated	Speed Rated	Power Rated	Speed	Power
IC830M__-__	(Vac)	(Nm)	(Nm)	(RPM)	(Kw)		(Vac)	(Nm)	(Nm)	(RPM)	(Kw)	%	%
21C-KK	240	0.48	0.39	8000	0.32	Beta 0.4 /5000is	240	0.4	0.3	4000	0.13	200	246
22E-KK	240	0.87	0.7	8000	0.59	Beta 0.5/6000is	240	0.65	0.56	6000	0.35	133	169
23E-CK	240	1.2	0.98	6500	0.67	Beta 1/6000is	240	1.2	0.8	6000	0.5	108	134
24F-CK	240	1.4	1.12	8000	0.94	Beta 1/6000is	240	1.2	0.8	6000	0.5	133	188
41E-DC	480	2.0	1.58	6000	0.99	Beta 2/4000HVis	480	2.0	1.2	4000	0.5	150	198
41E-DC	480	2.0	1.58	6000	0.99	Alpha 2 / 6000HVis	480	2.0	1.6	6000	1	100	99
42E-DC	480	3.4	2.72	4000	1.14	Beta 2/4000HVis	480	2.0	1.2	4000	0.5	100	228
42E-GC	480	3.4	2.72	4000	1.14	Beta 4/4000HVis	480	3.5	2.4	3000	0.75	133	152
42E-GC	480	3.4	2.72	4000	1.14	Alpha 4 / 5000HVis	480	4.0	2.4	4000	1	100	114
42G-DC	480	3.5	2.35	6000	1.48	Alpha 2 / 6000HVis	480	2.0	1.6	6000	1	100	148
42G-GC	240	3.5	2.9	3500	1.06	Beta 4/4000is	240	3.5	2.4	3000	0.75	117	141
42H-DC	240	3.5	2.72	4500	1.72	Beta 2/4000is	240	2.0	1.2	4000	0.5	113	344
43G-GC	480	4.8	2.57	6000	2.16	Beta 4/4000HVis	480	3.5	2.4	3000	0.75	200	288
43G-GC	480	4.8	2.57	6000	2.16	Alpha 4 / 5000HVis	480	4.0	2.4	4000	1	150	216
43K-GC	240	4.9	2.62	6000	2.21	Beta 4/4000is	240	3.5	2.4	3000	0.75	200	295
62H-BK	480	11.9	9.9	2400	2.49	Beta 12/3000HVis	480	11.0	8.6	2000	1.8	120	138
62H-EK	480	11.9	9.9	2400	2.49	Beta 8/3000HVis	480	7.0	5.7	2000	1.2	120	208
62K-BK	480	12.2	8	4500	5.05	Beta 12/3000HVis	480	11.0	8.6	2000	1.8	225	281
62L-BK	240	12.2	10	2500	2.62	Beta 12/3000is	240	11.0	8.6	2000	1.8	125	146
62L-BK	480	12.2	10	2500	2.62	Alpha 8 / 6000HVis	480	8.0	3.5	6000	2.2	42	119
62L-EK	240	12.2	10	2500	2.62	Alpha 6 / 3000is	240	6	4.5	3000	1.4	83	187
62L-EK	240	12.2	10	2500	2.62	Beta 8/3000is	240	7.0	5.7	2000	1.2	125	218
62M-BK	240	12.2	9.5	3000	2.98	Beta 12/3000is	240	11.0	8.6	2000	1.8	150	166
62M-BK	480	12.2	5.7	6000	4.8	Alpha 8 / 6000HVis	480	8.0	3.5	6000	2.2	100	218
63L-BK	480	16.8	12	3500	4.4	Alpha 12 / 4000HVis	480	12.0	8.0	3000	2.5	117	176
63M-BK	480	17.0	10.5	4500	4.95	Alpha 12 / 4000HVis	480	12.0	8.0	3000	2.5	150	198
72L-KK	480	30.0	24.3	1800	4.58	Beta 22/2000HVis	480	20.0	11.9	2000	2.5	90	183
72P-KK	240	29.4	23.8	1800	4.49	Beta 22/2000is	240	20.0	11.9	2000	2.5	90	180
72P-KK	480	29.4	18.2	3500	6.67	Alpha 22 / 3000HVi	480	22.0	12.9	3000	4.04	117	165
72P-KK	480	29.4	18.2	3500	6.67	Alpha 22 / 4000HVis	480	22.0	14.3	3000	4.5	117	148
72Q-KK	240	29.5	23.3	2000	4.86	Alpha 22 / 3000is	240	22.0	12.7	3000	4	67	122
73P-KK	480	41.6	33.3	2800	4.72	Alpha 30 / 4000HVis	480	30.0	17.5	3000	5.5	93	86
73P-KK	480	41.6	33.3	2800	4.72	Alpha 40 / 4000HVis	480	40.0	17.5	3000	5.5	93	86
73Q-KK	480	29.4	18.2	3500	6.67	Alpha 22 / 4000HVis	480	22.0	14.3	3000	4.5	117	148
74Q-KK	480	52.2	27.3	3000	8.58	Alpha 30 / 4000HVis	480	30.0	17.5	3000	5.5	100	156
74Q-KK	480	52.2	27.3	3000	8.58	Alpha 40 / 4000HVis	480	40.0	17.5	3000	5.5	100	156
74Q-KK	480	52.2	27.3	3000	8.58	Alpha 50 / 3000HVis	480	75.0	44.6	3000	14	100	61

## PACMotion Servo Motor Upgrade – Dimension Data Table

This table lists PACMotion Servo Motor models and their dimensions beside the FANUC motors for which they are functional replacements. Also listed are the dimensional changes realized for each dimension when upgrading to PACMotion Servo Motors.

(Note: the winding chosen has no impact on the motor dimensions)

PACMotion Servo Motors										FANUC	Changewith Upgrade									
Model	Flange Width	Overall Length (no brake)	Pilot	Mounting Hole DIA	Bolt Circle DIA	Shaft DIA	Shaft Length	Key Width	Key Height	Model	Flange Width	Overall Length (no brake)	Pilot	Mounting Hole DIA	Bolt Circle DIA	Shaft DIA	Shaft Length	Key Width	Key Height	
IC830M_	mm	mm	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
21_-KK	58	95.4	50	5.8	70	9	25	3	10.2	B0.4/5000is	-2.0	+20.4	0.0	+0.3	0.0	0.0	0.0	0.0	0.0	0.0
22_-KK	58	114.4	50	5.8	70	9	25	3	10.2	B0.5/6000is	-2.0	+24.9	0.0	+0.3	0.0	0.0	0.0	0.0	0.0	0.0
23_-CK	58	133.4	50	5.8	70	14	30	5	16	B1/6000is	-2.0	+14.9	0.0	+0.3	0.0	0.0	0.0	0.0	0.0	0.0
24_-CK	58	152.4	50	5.8	70	14	30	5	16	B1/6000is	-2.0	+33.9	0.0	+0.3	0.0	0.0	0.0	0.0	0.0	0.0
41_-DC	84	147.8	80	7	100	10	32	3	11.2	B2/4000HVis	-6.0	+17.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
41_-DC	84	147.8	80	7	100	10	32	3	11.2	A2/6000HVis	-6.0	+17.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
42_-DC	84	147.8	80	7	100	10	32	3	11.2	B2/4000HVis	-6.0	+17.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
42_-DC	84	147.8	80	7	100	10	32	3	11.2	A2/6000HVis	-6.0	+17.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
42_-DC	84	147.8	80	7	100	10	32	3	11.2	B2/4000is	-6.0	+17.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
42_-GC	84	147.8	80	7	100	14	30	5	16	B4/4000HVis	-6.0	-18.2	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
42_-GC	84	147.8	80	7	100	14	30	5	16	A4/5000HVis	-6.0	-18.2	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
42_-GC	84	147.8	80	7	100	14	30	5	16	B4/4000is	-6.0	-18.2	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
43_-GC	84	176.8	80	7	100	14	30	5	16	B4/4000HVis	-6.0	+10.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
43_-GC	84	176.8	80	7	100	14	30	5	16	A4/5000HVis	-6.0	+10.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
43_-GC	84	176.8	80	7	100	14	30	5	16	B4/4000is	-6.0	+10.8	0.0	+0.4	0.0	0.0	0.0	0.0	0.0	0.0
62_-BK	138	172.2	110	9	145	24	55	8	27	B12/3000HVis	+8.0	-49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-BK	138	172.2	110	9	145	24	55	8	27	B12/3000HVis	+8.0	-49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-BK	138	172.2	110	9	145	24	55	8	27	B12/3000is	+8.0	-49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-BK	138	172.2	110	9	145	24	55	8	27	A8/6000HVis	+8.0	+6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-BK	138	172.2	110	9	145	24	55	8	27	B12/3000is	+8.0	-49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-BK	138	172.2	110	9	145	24	55	8	27	A8/6000HVis	+8.0	+6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-EK	138	172.2	110	9	145	19	55	6	21.5	A6/3000is	+8.0	-86.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-EK	138	172.2	110	9	145	19	55	6	21.5	B8/3000is	+8.0	+6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62_-EK	138	172.2	110	9	145	19	55	6	21.5	B8/3000HVis	+8.0	+6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63_-BK	138	197.2	110	9	145	24	55	8	27	A12/4000HVis	+8.0	-24.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63_-BK	138	197.2	110	9	145	24	55	8	27	A12/4000HVis	+8.0	-24.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72_-KK	188	201.7	114.3	13.5	200	35	79	10	38	B22/2000HVis	+14.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72_-KK	188	201.7	114.3	13.5	200	35	79	10	38	B22/2000is	+14.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72_-KK	188	201.7	114.3	13.5	200	35	79	10	38	A22/3000HVi	+14.0	-74.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72_-KK	188	201.7	114.3	13.5	200	35	79	10	38	A22/4000HVis	+14.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72_-KK	188	201.7	114.3	13.5	200	35	79	10	38	A22/3000i	+14.0	-74.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72_-KK	188	201.7	114.3	13.5	200	35	79	10	38	A22/3000i	+14.0	-74.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73_-KK	188	235.7	114.3	13.5	200	35	79	10	38	A30/4000HVis	+14.0	-3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73_-KK	188	235.7	114.3	13.5	200	35	79	10	38	A40/4000HVis	+14.0	-40.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73_-KK	188	235.7	114.3	13.5	200	35	79	10	38	A22/4000HVis	+14.0	+33.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74_-KK	188	269.7	114.3	13.5	200	35	79	10	38	A30/4000HVis	+14.0	+30.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74_-KK	188	269.7	114.3	13.5	200	35	79	10	38	A40/4000HVis	+14.0	-6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74_-KK	188	269.7	114.3	13.5	200	35	79	10	38	A50/3000HVis	+14.0	-146.3	0.0	0.0	0.0	0.0	-	-	-	-

## United State Office

Emerson Automation Solutions  
Intelligent Platforms, LLC  
2500 Austin Dr  
Charlottesville, VA

## China Office

Emerson Automation Solutions Intelligent  
Platforms (Shanghai) Co., Ltd  
No.1277, Xin Jin Qiao Rd, Pudong,  
Shanghai, China, 201206

## Singapore Office

Emerson Automation Solutions Intelligent  
Platforms Asia Pacific Pte. Ltd.  
1 Pandan Cres,  
Singapore, 128461

## Germany Office

Emerson Automation Solutions  
ICC Intelligent Platforms GmbH  
Memminger Straße 14  
Augsburg, Germany 86159

## Brazil Office

Emerson Automation Solutions  
Av. Hollingsworth, 325 – Iporanga  
Sorocaba – SP, 18087-105

## India Offices

Emerson Automation Solutions  
Intelligent Platforms Pvt. Ltd.,  
Building No.8, Ground Floor  
Velankani Tech Park, No.43  
Electronics City Phase I, Hosur Rd  
Bangalore-560100

## Americas Support – Technical and Commercial

Phone: 1-888-565-4155 or 1-434-214-8532 (if toll free 800 option is unavailable)

Email for Technical Support: support.mas@emerson.com

Email for Commercial Support: customercare.mas@emerson.com

Primary language of support: English

## Europe, Middle East, & Africa Support – Technical and Commercial

Phone: +800-4-444-8001

or +420-225-379-328 (if toll free 800 option is unavailable or dialing from a mobile telephone)

Email for Technical Support: support.mas.emea@emerson.com

Email for Commercial Support: customercare.emea.mas@emerson.com

Primary languages of support: English, German, Italian, Spanish

## Asia Support – Technical and Commercial

Phone: +86-400-842-8599 for Greater China

+65-6955-9413 (All Other Countries)

Email for Technical Support: support.mas.apac@emerson.com

Email for Commercial Support Asia: customercare.cn.mas@emerson.com

Primary languages of support: Chinese, English

**Support Website:** [www.emerson.com/iac-support](http://www.emerson.com/iac-support)

**Home Website:** [www.emerson.com/PACSystems](http://www.emerson.com/PACSystems)

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