



RACING ELECTRIC INSTRUMENT CO.,LTD.

EXCELLENT
QUALITY PRODUCTS
Exceeding Our Customer Expectations



AEROSPACE



INDUSTRY



DEFENSE



GREEN POWER
PRODUCTS

- **Actuator**
- **Servo Motor**
- **Torque Motor**
- **Positioners**
- **Resolver**
- **Brush & Brushless Motor**
- **Drive Director Motor**
- **Potentiometer**



Catalog Download Here

Company Profile



ABOUT US

Racing Electric Instrument Co., LTD. was founded in 1986 with business focusing on the design, assembly and manufacturing of electric motors and components in the aerospace and defense sector.

We specialize on custom-design (ODM) and built-to-print products (OEM) to our customers.

In 2013, we expand our business to the industrial motors market, starting with a joint cooperation with a renowned market leader to develop and manufacture light-weighted and highly efficient fluid pumps and motors.

Our Management Team are originally from Taiwan's National Chung-Shan Institute of Science & Technology (NCSIST), with technical backgrounds in the fields of mechanical and electrical engineering.

About Racing Electric Instrument

Racing Electric Instrument Co., LTD. is an AS9100 certified company on the design, assembly and manufacture of electric motors and related components for use in industrial, military, and aerospace applications. We are proud of supplying high-quality and low-cost electric motors and components (stators & rotors)、high-precision linear actuator、potentiometer and synchronous generator to our valuable Customers, who include many well-known names in the aerospace industries.

builds its competitive advantage by focusing its core business on a niche market (aerospace and defense sector) and providing low-cost solutions (ODM & OEM) to our valuable Customers. In responding to the accelerated speed of global change and global competition, we quicken our response time and reduce wastes by redirecting resources toward the highest priorities and making analytical and predictive improvement.

Certificat Certificate



N° 2010/38703.5

AFNOR Certification certifies that the management system implemented by:

RACING ELECTRIC INSTRUMENT CO., LTD.

For the following activities:

DESIGN AND MANUFACTURING OF ELECTRIC MACHINERY MOTORS
FOR THE AEROSPACE INDUSTRY.

has been assessed and found to meet the requirements of:

ISO 9001 : 2015

and is developed on the following locations:

1F&2F, NO.27-2 & 1F&2F&4F, NO.27-3 & 8F, NO.27-1 & 6F, NO.27, JILIN RD.,
ZHONGLI DIST., TAOYUAN CITY 320, TAIWAN (R.O.C.)



N° 2010/39005.5

AFNOR Certification certifies that the quality system implemented by:

RACING ELECTRIC INSTRUMENT CO., LTD.

For the following activities:

DESIGN AND MANUFACTURING OF ELECTRIC MACHINERY MOTORS
FOR THE AEROSPACE INDUSTRY.

has been audited in accordance with the EN 9104-001:2013 and found to meet the requirements of the standard:

AS9100:D / JISQ 9100:2016 / EN 9100:2018

and is developed on the following locations:

Central Function: 1F&2F, NO.27-2 & 1F&2F&4F, NO.27-3 & 6F, NO.27-1 & 6F,
NO.27, JILIN RD., ZHONGLI DIST., TAOYUAN CITY 320, TAIWAN (R.O.C.)

Expiry date - Date d'expiration

2024-05-05



Julien NIZRI
Managing Director of AFNOR Certification
Directeur Général d'AFNOR Certification



Julien NIZRI
Managing Director of AFNOR Certification
Directeur Général d'AFNOR Certification

Certificat Certificate



This certificate is granted and awarded by the authority of the Nadcap Management Council to:

Racing Electric Instrument Co., Ltd.

6F.,No. 27-1, JILIN RD., ZHONGLI DIST.
Taoyuan City, 320
Taiwan

This certificate demonstrates conformance and recognition of accreditation for specific services, as listed in www.eAuditNet.com on the Qualified Manufacturer's List (QML), to the revision in effect at the time of the audit for:

Welding

Jay Solomon
Executive Vice President & Chief Operating Officer

Performance Review Institute (PRI) | 161 Thorn Hill Road | Warrendale, PA 15086-7527

AS-9100 Aerospace Certification

Actuator Series / 同服致動器系列



(一)、RA-900S1 同服致動器：

No.	項目	規格
1. 電器規格		
1-1	最大負載扭矩 (Stall Torque)	≥900in-lb
1-2	動態負載扭矩 (Rated Torque)	≥450±20in-lb
1-3	無載轉速 (No Load Speed)	≥150°/Sec
1-4	負載轉速 (Rated Speed) at rated torque	≥100°/Sec
1-5	操作電壓 (Supply Voltage)	28VDC
1-6	操作電壓範圍 (Supply Voltage Range)	22 ... 29VDC
1-7	靜態負載電流 (Rated Current) at stall torque	≤9A
1-8	動態負載電流 (Peak current) at rated torque	≤15A
2. 機械特性規格		
2-1	外觀尺寸 (Case Dimensions)	≤219(W)×124(L)×54(H)mm
2-2	機械齒隙 (Backlash (Mechanical))	≤0.5°@1.5in-lb
2-3	電控行程(Electric Travel Angle)	±45° (Error : ± 2°)
2-4	機械行程(Mechanical Travel Angle)	±50° (Error : ± 2°)
2-5	重量 (Weight)	≤2.7kg
3. 控制特性規格		
3-1	通訊介面 (Communication Interface)	Dual CAN @ver. 2.0B
3-2	控制精準度(Control Accuracy)	≤0.3°
3-3	操作溫度(operative temperature)	-40°C~71°C

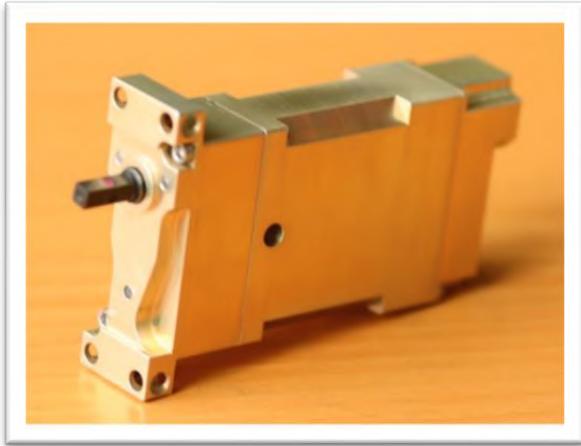
Actuator Series II 伺服致動器系列



(二)、RA-120 伺服致動器：

No.	項目	規格
1. 電器規格		
1-1	最大負載扭矩 (Stall Torque)	$\geq 120\text{in-lb}$
1-2	動態負載扭矩 (Rated Torque)	$\geq 60\pm 20\text{in-lb}$
1-3	無載轉速 (No Load Speed)	$\geq 300^\circ/\text{Sec}$
1-4	負載轉速 (Rated Speed) at rated torque	$\geq 200^\circ/\text{Sec}$
1-5	操作電壓 (Supply Voltage)	28VDC
1-6	操作電壓範圍 (Supply Voltage Range)	22 ... 29VDC
1-7	靜態負載電流 (Rated Current) at rated torque	$\leq 1.5\text{A}$
1-8	動態負載電流 (Peak current) at stall torque	$\leq 4\text{A}$
2. 機械特性規格		
2-1	外觀尺寸 (Case Dimensions)	$\leq 101(\text{L}) \times 101(\text{W}) \times 43.2(\text{H})\text{mm}$
2-2	機械齒隙 (Backlash (Mechanical))	$\leq 0.5^\circ @ 1.5\text{in-lb}$
2-3	電控行程(Electric Travel Angle)	$\pm 45^\circ$ (Error : $\pm 2^\circ$)
2-4	機械行程(Mechanical Travel Angle)	$\pm 50^\circ$ (Error : $\pm 2^\circ$)
2-5	重量 (Weight)	$\leq 0.75\text{kg}$
3. 控制特性規格		
3-1	通訊介面 (Communication Interface)	CAN @ver. 2.0B
3-2	控制精準度(Control Accuracy)	$\leq 0.3^\circ$
3-3	操作溫度(operative temperature)	-40°C~71°C

Actuator Series III 伺服致動器系列

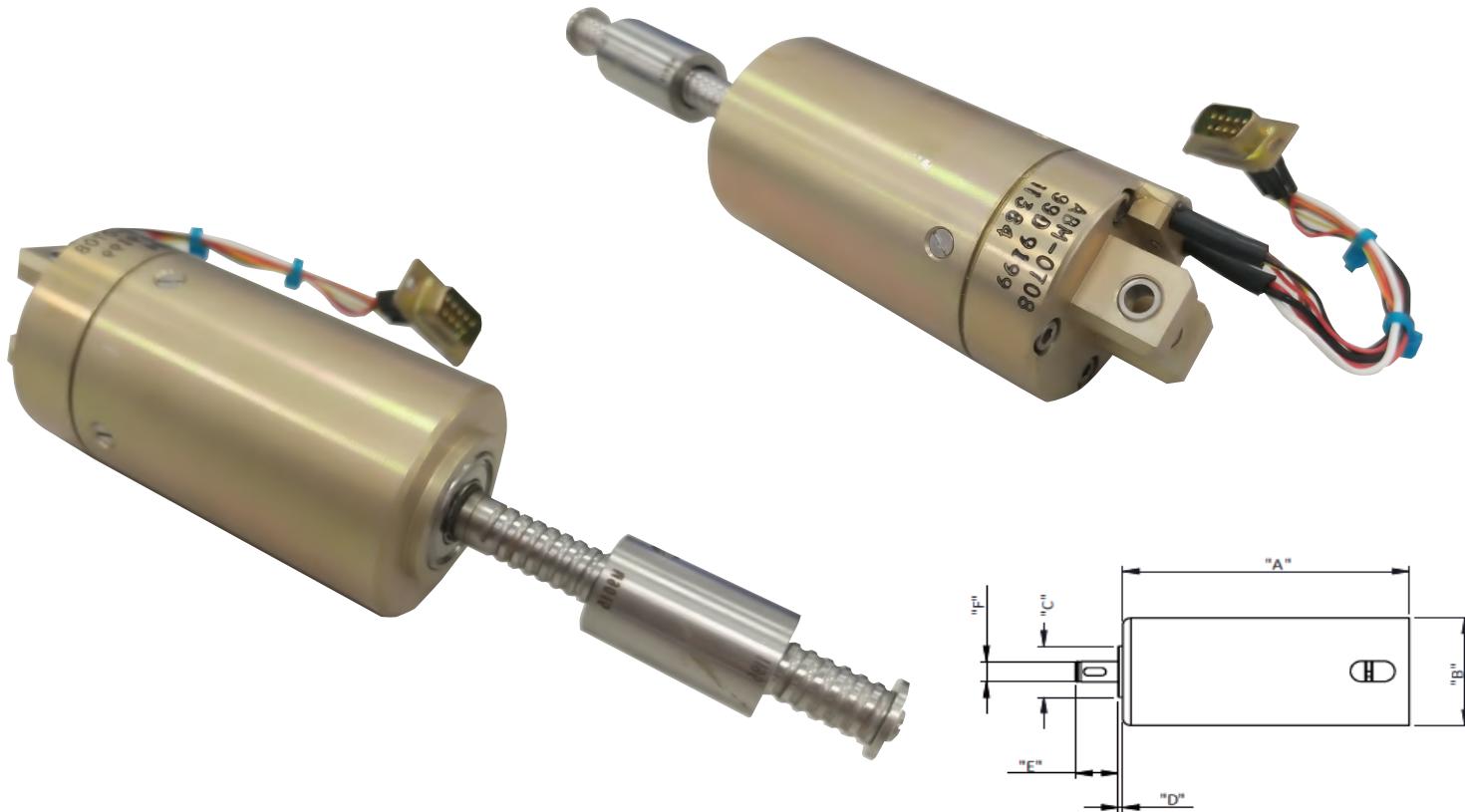


(三)、RA-105(R)(E)伺服致動器：

No.	項目	規格
1.電器規格		
1-1	最大負載扭矩 (Stall Torque)	$\geq 45\text{in-lb}$
1-2	動態負載扭矩 (Rated Torque)	$\geq 25 \pm 2\text{in-lb}$
1-3	無載轉速 (No Load Speed)	$\geq 200^\circ/\text{Sec}$
1-4	負載轉速 (Rated Speed) at rated torque	$\geq 150^\circ/\text{Sec}$
1-5	操作電壓 (Supply Voltage)	28VDC
1-6	操作電壓範圍 (Supply Voltage Range)	22 ... 29VDC
1-7	靜態負載電流 (Rated Current) at rated torque	$\leq 1\text{A}$
1-8	動態負載電流 (Peak current) at stall torque	$\leq 2\text{A}$
2.機械特性規格		
2-1	外觀尺寸 (Case Dimensions)	$\leq 160(\text{L}) \times 85(\text{W}) \times 30(\text{H}) \text{ mm}$
2-2	機械齒隙 (Backlash (Mechanical))	$\leq 0.5^\circ @ 1.5\text{in-lb}$
2-3	電控行程(Electric Travel Angle)	$\pm 45^\circ$ (Error : $\pm 2^\circ$)
2-4	機械行程(Mechanical Travel Angle)	$\pm 50^\circ$ (Error : $\pm 2^\circ$)
2-5	重量 (Weight)	$\leq 0.35\text{kg}$
3.控制特性規格		
3-1	通訊介面 (Communication Interface)	Dual CAN @ver. 2.0B or PWM (option)
3-2	控制精準度(Control Accuracy)	$\leq 0.3^\circ$
3-3	操作溫度(operative temperature)	-40°C~71°C



六俊電機儀具股份有限公司
Racing Electric Instrument Co.,Ltd



Brushless DC Motor , with Linear Ball Screw

項目(Description)		規格(Specification)
1	外觀尺寸(Physical Dimension)	12.7(A) x 17.3 (B) x 37.8(C) 6.4(D) x 4.5(E) x 8.8(F) mm
2	額定電壓(Rated Voltage)	60 VDC
3	操作電流(Operation Current)	20 Amp
4	無負載電流(No Load Current)	0.5 Amp
5	繞線電阻(Winding Resistance)	0.95 Ω
6	繞線電感(Winding Inductance)	1.10 mh
7	輸出轉速與扭力(Rated Speed @ Rated Torque)	5500 rpm @67 oz-in
8	反電動勢常數(BEMF Constant, Kb)	≥0.049 V·sec/rad
9	扭力常數(Torque Sensitivity, Kt)	7.0 oz-in/Amp
10	重量(Weight)	≤ 0.635 Kg
11	轉子慣量(Rotor Inertia)(Jm)	6 x 10 -4 oz-in-sec2

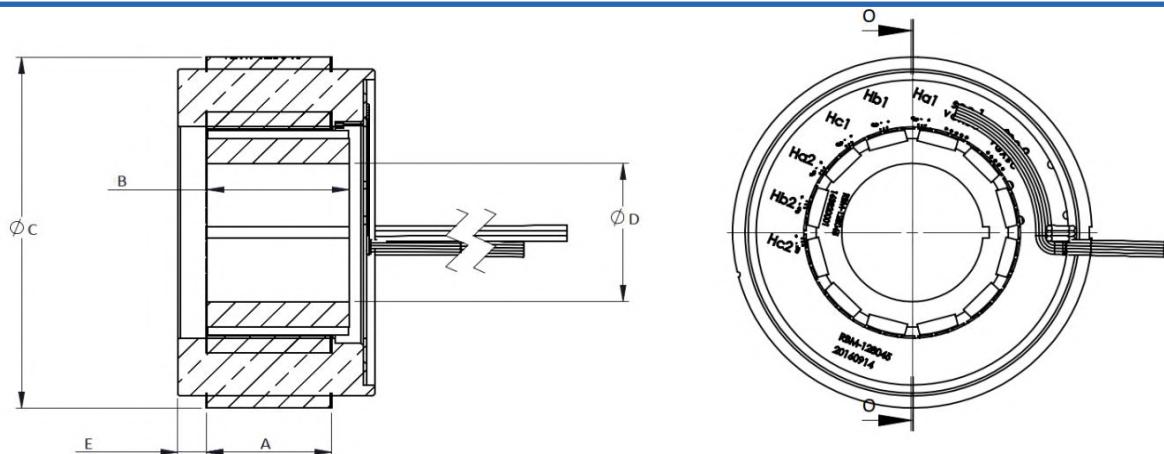


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RACING ELECTRIC INSTRUMENT CO.,LTD.

Torque Motor

A. FRAMLESS TYPE



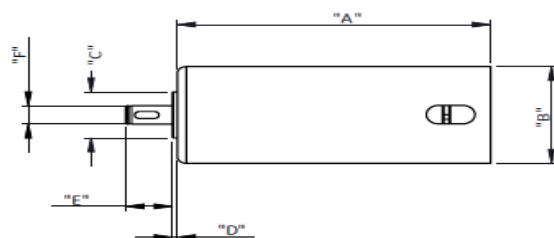
Model	"A"	"B"	"C"	"D"	"E"	"F"	Peak torque	Voltage
number	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	Oz-in	V
RBTM-128010	10.00 (0.39)	16.00 (0.63)	128.90 (5.07)	50.80 (2.00)	10.10 (0.40)	5.50 (0.22)	160	24
RBTM-037025	12.70 (0.50)	17.30 (0.68)	37.79 (1.49)	6.37 (0.25)	8.50 (0.33)	3.80 (0.15)	21.5	12
RBTM-229030	14.10 (0.56)	17.50 (0.69)	228.60 (9.00)	161.96 (6.38)	11.00 (0.43)	8.70 (0.34)	1900	24
RBTM-4935	19.10 (0.75)	23.60 (0.93)	49.20 (1.94)	10.02 (0.39)	10.20 (0.40)	5.20 (0.20)	158	24
RBTM-128045	45.00 (1.77)	51.00 (2.01)	128.90 (5.07)	50.80 (2.00)	15.47 (0.61)	10.20 (0.40)	800	24
RBTM-6066	50.80 (2.00)	55.37 (2.18)	60.35 (2.38)	12.72 (0.50)	10.16 (0.40)	5.10 (0.20)	424	60
RBTM-6093	74.40 (2.93)	81.50 (3.21)	60.35 (2.38)	12.72 (0.50)	12.60 (0.50)	5.50 (0.22)	566	28



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Torque Motor

- Housed Type



Model number	"A" mm in	"B" mm in	"C" mm in	"D" mm in	"E" mm in	"F" mm in	Peak torque Oz-in	Voltage V
RBM-2824	16.9	28	11	3.1	10.7	4	18	24
	0.67	1.10	0.43	0.12	0.42	0.16		
RBM-4485A	102	44.4	28.6	3.7	70.7	9.29	75	60
	4.02	1.75	1.13	0.15	2.78	0.37		
RBM-4989T	126	57.6	38.1	1.5	18.5	9.52	398	28
	4.96	2.27	1.50	0.06	0.73	0.37		
CBF-232A	112.8	49	23	5	13.8	5.5	600	180
	4.44	1.93	0.91	0.20	0.54	0.22		

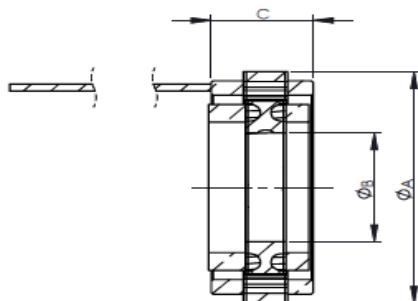


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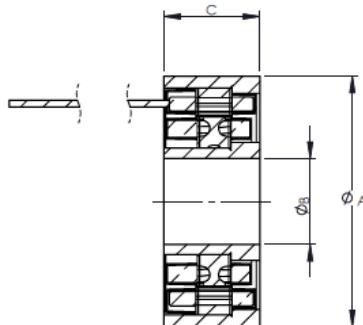
Resolver - Pancake Type

A. Bare



Model number	"ψA" mm	"ψB" mm	"ψC" mm	Speed	Function	Primary Winding	Input-VRMS	Freq. Hz	Accuracy 6'	Accuracy (optional) 3'
RHP-7018	69.85	44.32	15.24	1	RX	R	26	400	6'	3'
RHP-9614B	96.01	69.6	17.03	1	RX	R	26	2000	6'	3'
RHP-12619B	126.86	87.76	22.3	1	RX	R	26	2000	6'	3'
RHP-220021	209.55	158.25	21.6	1/32	RX	R	26	400	1"	
RHP-220021A	209.55	158.25	21.6	1	RX	R	26	400	20'	

B. Sleeve and Hub



Model number	"ψA" mm	"ψB" mm	"C" mm	Speed	Function	Primary Winding	Input-VRMS	Freq. Hz	Accuracy 8'	Accuracy (optional)
RHP-3413	33.34	11.43	12.7	2	RX	R	5	400	8'	
RHP-5513	60.32	27.94	13.46	2	RX	R	26	400	2'	

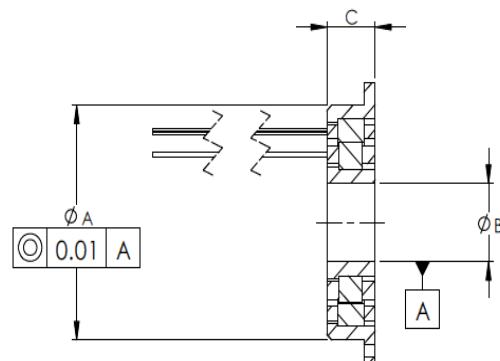


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Resolver-Pancake Type

C. Sleeve and Hub (Flange)



Model number	"ψA"	"ψB"	"C"	Speed	Function	Primary Winding	Input-VRMS	Freq. Hz	Accuracy	Accuracy (optional)
	mm	mm	mm							
RHP-3006	34	12	8.1	1	RX	R	10	3200	5'	3

EXCELLENT
QUALITY PRODUCTS
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六俊電機儀具股份有限公司
Racing Electric Instrument Co., LTD.

Ultimate UAV BLDC motor



RUM-3537



RUM-6639



RUM-144020



RUM-4540



RUM-8727

	RUM-3537	RUM-4540	RUM-6639	RUM-8727	RUM-144020
Configuration	12N14P	18N24P	24N28P	36N42P	36N42P
Motor Size	ψ35.3*37 mm	ψ44.7*32.5 mm	ψ66*39.1 mm	ψ87*27.1 mm	ψ144*78.1 mm
Permissible Winding TEMP	150°C	150°C	150°C	150°C	220°C
KV Value	1300	480	210	100	70
Peak Current	42.4A/Continuous 180S	25A/Continuous 180S	70A/Continuous 180S	25.3A/Continuous 180S	140A/Continuous 180S
Power	1009W/ Continuous 180S	750W/ Continuous 180S	3200W/ Continuous 180S	1200W/ Continuous 180S	12.5 KW/ Continuous 180S
Internal Resistance	0.0515Ω	0.075Ω	0.048Ω	0.135Ω	28.7Ω
Volts at peak torque	24 Volts	22.2 Volts	42~52 Volts	48 Volts	100 Volts
Motor weight	78g	134g	340g	280g	1650g
ESC Recommendation	RUMC-40A6S	RUMC-80A12S	RUMC-80A12S	RUMC-80A12S	RUMC-200AS24
Propeller Recommendation	7 inch	V13*4.4	V22*7.4	G27*8.8	40*16
Cable Length	250mm	600mm	600mm	90mm	100mm



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