

NICHIBO

DC MOTOR

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from a tiny motor

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中貿有限公司 NICHIBO TAIWAN CORP.

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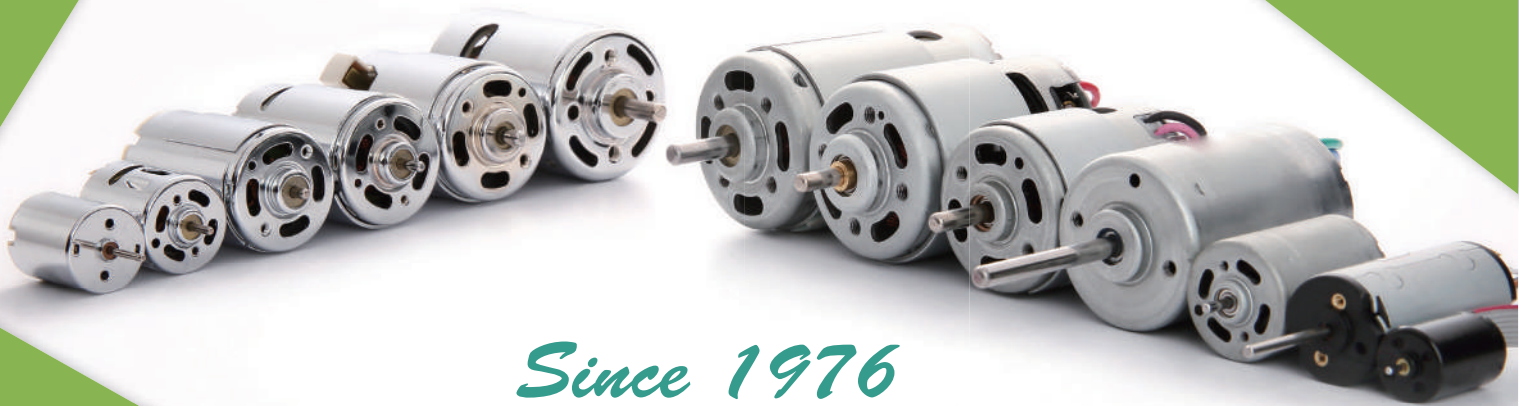
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NICHIBO

DC MOTOR



Since 1976

有刷馬達 DC MOTOR



PC-260



PC-280



UC-260



UC-280



DC-260



DC-280



RK-250



RK-L250



RK-290



FC-260



FC-280



M3N,M5N



M3FN,M5FN



L3N,L5N



L3FN,L5FN



J3,J5



J3FN,J5FN



GR



GRD



N3FN,N5FN



H3SN,H5N



H3SFN,H5FN



RK-525



K3N,K5N



K3SFN,K5FN



RK-665



736



755



775



K5FN-IE



7712/7724



997



987



9812/9824

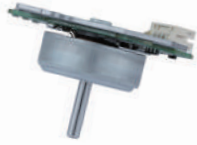


RS-800

無刷馬達 BLDC MOTOR



BL16E25



BL24E14



BL2430



BL2832



BL2838



BL2838S



BL3229



BL3640



BL3649



BL3657



BL3657S



BL40E16



BL4244



BL4259



BL4266



BL48F15



BL48F23



BL48F25



BL50F25



BL50F32

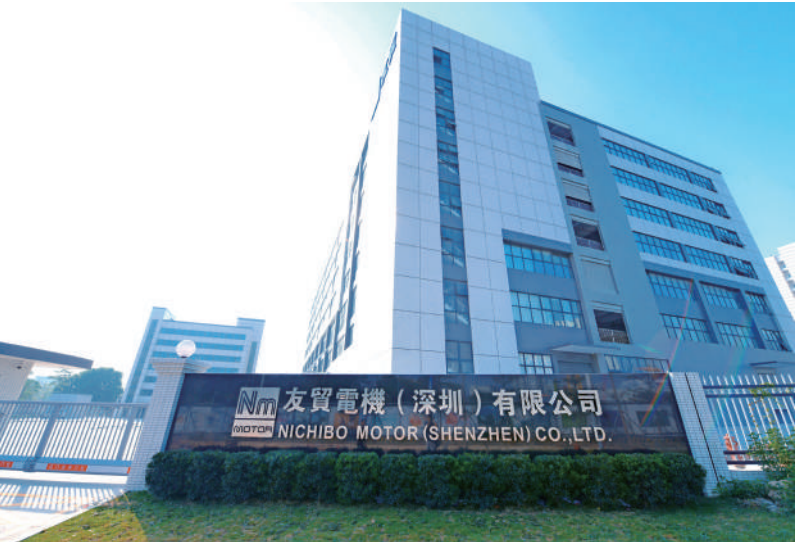


BL7084



NICHIBO

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企業簡介

中貿有限公司創立於 1976 年，本公司專業研發及生產製造直流馬達，產品行銷海內外深獲世界知名廠商的肯定。

隨著經營範圍的擴展于 1993 年在廣東深圳成立友貿電機廠，2002 年擴大廠房，目前廠房面積為 25000 平方米，月產 4000000 個。

為提升客戶滿意度以及配合客戶多樣化的需求，我們的研發團隊積極的研究創新，投入大量的人力與經費，以先進的軟硬體設備及專業優秀的設計人才，開發出更優良，更具競爭力的產品，只有不斷研發與改造創新，才能使我們的產品接受不同產業的需求及新產品的考驗，相信我們製造出來的馬達，不只是產品的生命，還能讓客戶生產出色的產品，去面對日新月異的環境。

中貿一直秉持「客戶至上、品質一流、技術創新、服務專業」的經管理念，為了落實公司的品質政策，藉由嚴格的品保制度與管理，從進料檢驗、一貫化製程到成品包裝出貨，皆層層嚴格把關，深受客戶好評，並且在 1997 年榮獲 ISO-9002，2003 年通過 ISO-9001 國際品質認證，2007 年通過 TS 16949 國際性汽車工業品質系統認證，為進軍車廠的一大里程碑，每一項產品都能達到高精度、高扭力、低噪音、長磨耗的品質水準，是本公司對客戶的保證與承諾。

本公司擁有一貫化的製程管理，從轉子芯片、馬達外鐵殼、塑膠蓋、轉子、蓋子、定子到馬達成品組合，均自行製造，品質全程監控。我們的產品規格種類繁多，主要應用在家電用品、汽車機件、個人隨身用品、電動玩具、電動工具等項目，更可專為客戶產品量身訂作馬達，提供技術服務。

中貿自成立以來，積極擴展海外市場，開發新機種，延攬各界菁英，並且不斷找尋品質更優的材料供應商與之配合，提供客戶更專業更有效率的服務。承蒙國內外客戶不斷地支持與愛護，未來我們將致力於國際品質水準、全員參與經營及研究創新產品的經營理念，以更快速的研發，結合流行的趨勢，來提供客戶更新穎的馬達；以更嚴謹的態度，持續提昇產品的價值，以臻世界級之水準；更將動員全體團隊堅守崗位創造全球化的經營，並與世界接軌，以邁向更弘遠的未來。

About Nichibo

Nichibo DC Motor was established in 1976. We produce DC brushed/brushless motors and are highly recognized by renowned customers in numerous countries. In 1993, as our business expanded, we established China production site in Sheng Zhen. In 2002, we have thrived into a land area at 25000 m² factory with 1400+ employees and produces over 4 million motors a month.

To raise satisfaction and meet various expectations, our dedicated R&D team actively engages in innovative researches. Through advanced software, top-of-the-line equipments and elite engineering talent our pursuit of competitive products to face new challenges in diversified industries continues. We believe, our motor not only drives the products but also assist our customer to explore and to excel in the ever-changing market.

At Nichibo, we uphold company philosophy as 「Customer supremacy, superior quality, innovated technology and comprehensive services.」 We receive reputation by conducting water-tight QA system throughout production. Certified with ISO-9002/9001 and Automotive TSI6949 symbolizes our relentless effort in pursuing high precision, high torque, low noise and endurance in motors.

Vertically integrated in-house production throughout lamination, housing, plastic cap, rotor, stator to assembly allows seamless QC monitoring. Customization and tech support comes with our versatile platforms applicable in home products, automotive parts, power tools and gardening tools and so on.

Our management strategy focus on overseas market, R&D, talent recruitment, enhanced material and supplier pool enable us to provide outstanding services. With the support from domestic and international clients, we continue to sustain quality assurance, whole-hearted enthusiasm and innovative R&D. In the long run, we aim to grow with market trend, to elevate product value by strengthening R&D efficiency and diligence. Our ultimate goal, together with our team, is to globalize with our vision in mind.



会社案内

中貿株式会社は1976年に創立されて、直流モーターの研究開発及び生産製造の専門会社として世界有名のメーカーに知られており、当社の製品も広く国内外に販売されています。

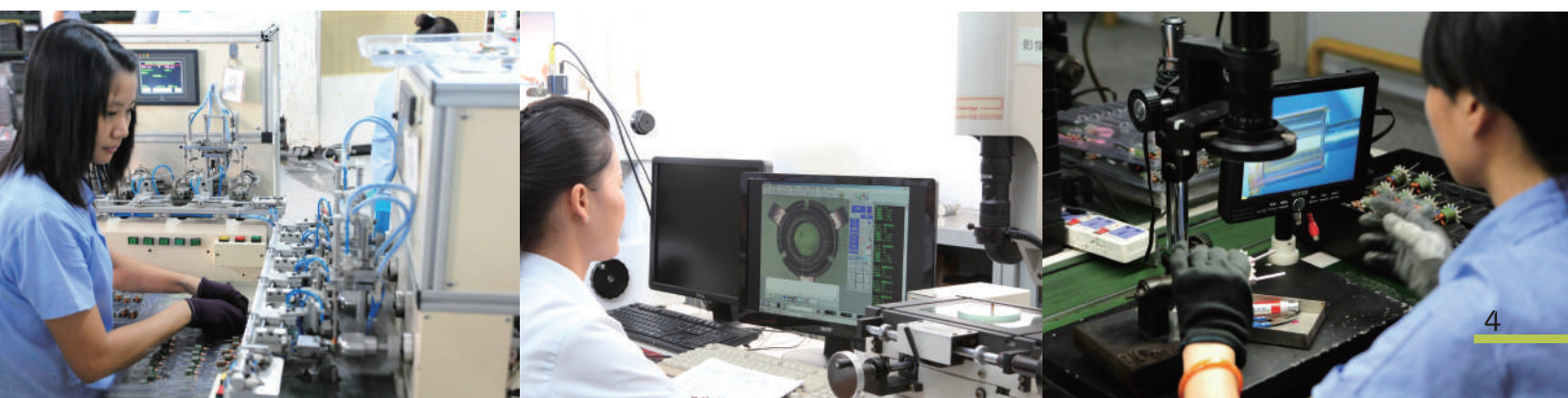
経営分野の拡大につれて、当社は1993年に広東深センにて友貿電機第一生産工場を設立し、2002年に友貿電機工場を拡張しました。現在工場面積が25,000平方メートルで、月度生産量が4,000,000個です。

お客様の満足度の向上及び多様のニーズに応えることを図り、当社の研究開発チームが積極的に研究と新製品の創出に取り組んでいます。大量の人力と経費を注いで、最先端のソフトウェアとハードウェア設備及び優秀な専門デザイン人材で、より良質でもっと競争力のある製品を開発しつづけています。当社は製品が各産業のニーズに応えて、そして新製品の挑戦に勝ち抜けるには、研究開発と改造創新し続けることしかないと信じております。日進月歩の環境に臨んで、当社は自社製モータは製品の命だけでなく、お客様により素晴らしい製品を作ることと信じております。

当社は常に「お客様を第一に、一流の品質、技術創新、専門のサービス」という経営理念を持ちまして、当社の品質政策を徹底させるように、厳しい品質保証制度と管理により、材料の入荷検査から一本化製造プロセス、そして製品包装出荷に至るまで、厳しくチェックしております。深く客先から評判されています。当社はさらに1997年にISO-9002、2003年にISO-9001国際認証に合格しました。2007年にTS16949国際自動車工業品質管理システム認証済みです。当社にとって、この認証を取得したことが自動車業界に進出する大きなマイルストーンとも言えます。今当社の製品はすべて高精度、高ねじり力、低騒音、耐磨耗の品質レベルに達することができます。これも当社がお客様に対する保証と承諾です。

当社には一本化製造管理制度を設けてあります。回転子のチップから、モータの鉄カバー、プラスチックカバー、回転子、カバー、固定子、さらにモーター製品組み立てまで、すべて自家製で、全製造プロセスにおいて品質が監視制御されています。当社製品は仕様と種類がたくさん揃っています。主に応用範囲は家電製品、自動車部品、ポータブル製品、テレビゲーム機、電動工具などにわたり、さらにお客様のためにモーターのオーダーメイドも取り扱っていて、技術サービスも提供しています。

当社は創立以来、積極的に海外市場を進出していて、新機種の開発に力を入れています。お客様により専門でより効率のいいサービスを提供するために、各界の人材を招いて、さらに品質優良の材料供給者を探しています。いつも国内外のお客様にご貢献されていて、これからもまた国際品質レベルに到達できるようにさらに取り込みます。研究開発のスピードアップを図るために、当社全員が経営と製品研究創新の経営理念を徹底します。さらに流行のトレンドと結び合って、お客様にもっと新しいモーターを提供します。これからもより慎重な態度を持ちまして、持続に製品の価値を向上させて、世界レベルに到達させます。さらに、グローバル化の経営を創り出すために、経営陣を動員して、自分の職務を貫徹させます。より広い未来に向かって、当社もまた世界標準に近づくように頑張っております。



工具

Renowed Clients



智能家居

Household items



汽車

Automotive



醫療及自動化

Medical & Automation



HOW TO READ THE PERFORMANCE CHART

性能表說明

N: 轉速

每分鐘轉子轉動之次數，轉速會隨著電壓 (V) 與負載的變化而改變。

It indicates the number of revolution per minute (rpm) of the rotor. Speed would be vary pending on voltage (V) and load point.

I: 電流

馬達端子通電後，每秒流過迴路的電子量、電流值與負載重量成正比的關係。

It indicates the amount of electrons (current) discharged when voltage is applied. The load applied to the motor is directly proportional to the current drawn by the motor.

T: 扭矩

推動轉子旋轉的扭動力量，扭矩會受到負載的不同與電流的變化所影響。

The twisting force causing rotation of the rotor. The value of torque depend on the load and the current drawn by by the motor.

P: 功率輸出

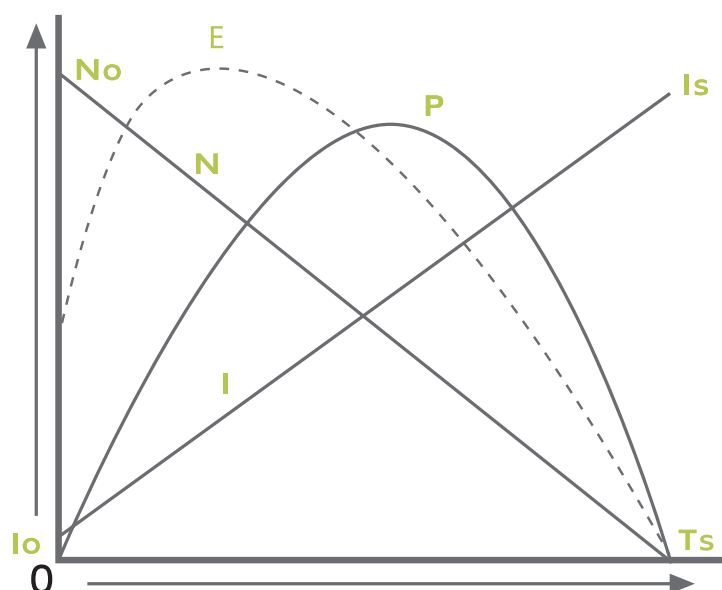
馬達所做之有用功率，即 N 及 T 之積，而最大功率是在 P 曲線於 $T_s/2$ 之位置顯示。

Power output is the product of N and T. The maximum output (P_{max}) would be at a point of $T_s/2$ on the P curve.

E: 效率

馬達機械能輸出與電能輸入功率的比率 (即 $E=P/V_i \times 100\%$)，最高效率點 (η 曲線的最高點) 通常介於 0 到 $1/2$ 的截止扭矩之間。

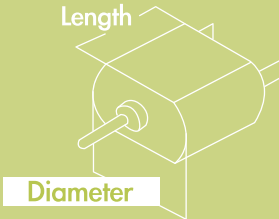
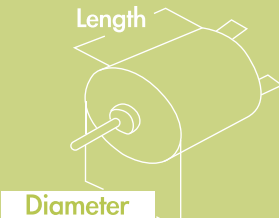
The percentage of mechanical power output induced by electrical input ($E=P/V_i \times 100\%$). The maximum efficiency (E_{max}) would be found at a point in the torque range less than $T_s/2$.



GENERAL INSTRUCTION OF NICHIBO MOTOR

1. Please be cautious with the use of adhesive or bonding agent while mounting the motor. Residue may cause damaged bearing and hindered rotation.
2. Please ensure the loading applied follows the guidance in motor spec. Avoid any external components or force that may hinder motor's rotation.
3. The external force on the shaft will affect motor lifetime. Example: external vibration or eccentric pinion.
4. Do not keep motor in high temperature and humidity condition, and avoid corrosive elements. Inadequate storage may cause motor to cease function in several ways.
5. Please avoid motor running in high temperature and humidity condition.
6. While conducting the soldering process on terminals, the temperature of soldering iron must be within $340^{\circ}\text{C} \pm 40^{\circ}\text{C}$. Heating time is less than 3 seconds. Process should avoid soldering tin getting into motor or wire end being broken.
7. Motor in use could overheat and burn out if shaft is hindered and stalled.
8. Please supply motor with stable voltage input.
9. Excessive screw length may hinder motor's rotation and disfunction.
10. In the case of inadequate assembly and nonconforming external component, Nichibo motor can not be held responsible for quality issues caused.

1. 在組裝馬達過程中，如果要使黏合劑時，請勿殘留在軸承或滲入馬達內部，否則會導致馬達卡死。
2. 請檢查馬達的負載品是否依照規定，勿在軸端掛有妨害轉動的物品。
3. 馬達軸上的承重會影響馬達壽命，例如：偏心輪或者來自外部的振動。
4. 請勿把馬達儲存在高溫高濕的環境中，也不能放置在有腐蝕性氣體的環境中，會導致馬達功能失常。
5. 馬達請勿運轉在高溫與潮溼的環境中，以免影響馬達壽命。
6. 電源正負極的馬達端子上要焊錫時，烙鐵溫度 $340^{\circ}\text{C} \pm 40^{\circ}\text{C}$ 、加熱時間 3 秒鐘以內，不可使塑膠變形；在工作中，請勿讓焊錫點流入馬達或折斷電線末端，這樣會使馬達功能衰退。
7. 當馬達通電時，請勿將馬達的軸卡住，否則將會在短時間內使馬達過熱，有燒毀的風險。
8. 請供應馬達穩定的電壓，並確保電壓在測試要求範圍內。
9. 安裝馬達時，若螺絲釘過長，會影響馬達正常運轉。
10. 如未依照注意事項使用馬達，或外力導致破壞，本公司無法保證馬達品質以及馬達壽命。

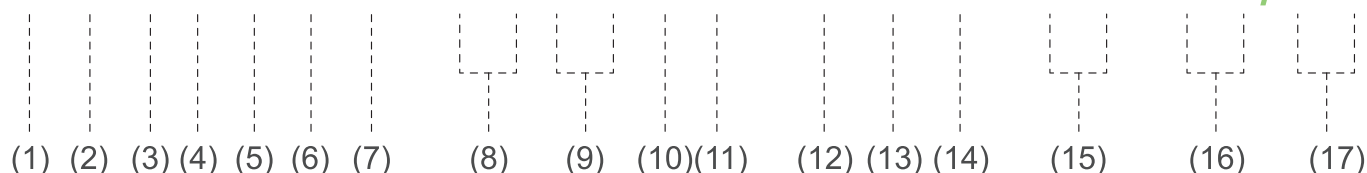
鐵殼形狀 Housing Shape	型號 Type	適用電壓 Operating Range	直徑 Diameter	長度 Length	頁次 Page
DC Motor Flat Type 	PC-260	3.0V - 24.0V	Ø24.2	27.0mm	13
	PC-280	3.0V - 24.0V	Ø24.2	30.5mm	14
	UC-260	3.0V - 24.0V	Ø24.2	27.0mm	15
	UC-280		Ø24.2	30.5mm	16
	DC-260	4.5V - 24.0V	Ø24.2	27.0mm	17
	DC-280		Ø24.2	30.5mm	18
DC Motor Round Type 	RK-250	6.0V - 24.0V	Ø22.0	30.5mm	19
	RK-L250	3.0V - 36.0V	Ø22.0	38.2mm	20
	FC-260	1.5V - 12.0V	Ø24.0	27.0mm	21
	RK-290	6.0V - 24.0V	Ø24.0	50.2mm	22
	FC-280	1.5V - 24.0V	Ø24.2	30.5mm	23
	M3N	2.4V - 24.0V	Ø27.8	32.5mm	24
	M5N				25
	M3FN		Ø27.8	32.2mm	26
	M5FN				27
	L3N	2.4V - 24.0V	Ø27.8	37.8mm	28
	L5N				29
	L3FN		Ø27.8	37.5mm	30
	L5FN				31
	J3	3.6V - 24.0V	Ø27.8	46.6mm	32
	J5				33
	J3FN		Ø27.8	46.5mm	34
	J5FN				35
	GR	4.5V - 24.0V	Ø32.0	29.0mm	36
	GRD	6.0V - 24.0V			37
	N3FN	6.0V - 36.0V	Ø36.0	65.0mm	38
	N5FN				39
	H3SN	3.6V - 24.0V	Ø36.0	50.1mm	40
	H5N				41
	H3SFN		Ø36.0	49.0mm	42
	H5FN				43
	RK-525	6.0V - 36.0V	Ø36.0	40.0mm	44
	RK-2910	10.0V-14.0V	Ø29.2	71.2mm	45
	K3N	6.0V - 24.0V	Ø36.0	57.1mm	46
	K5N				47
	K3SFN		Ø36.0	57.0mm	48
	K5FN				49
	K5FN-IE	7.2V - 36.0V			50
	RK-665	6.0V - 36.0V	Ø38.2	58.1mm	51
	736	12.0V - 24.0V	Ø42.2	53.5mm	52
755	6.0V - 36.0V	Ø42.4	59.0mm	53	
775	6.0V - 36.0V	Ø42.4	66.0mm	54	
7712/7724	90V - 150V	Ø42.4	65.0mm	55	
997	12.0V - 48.0V	Ø52.0	85.0mm	56	
987	6.0V - 48.0V	Ø52.0	69.0mm	57	
9812/9824	90V - 150V	Ø52.0	69.0mm	58	
RS-800	12.0V - 24.0V	Ø48.0	68.0mm	59	

鐵殼形狀 Housing Shape	型號 Type	適用電壓 Operating Range	直徑 Diameter	長度 Length	頁次 Page
 <p>BLDC Motor</p>	BL1625	9.0V-12.0V	Ø16.0	25.0mm	62
	BL2414	10.0V-16.0V	Ø23.8	13.6mm	63
	BL2430	9.0V-34.0V	Ø24.4	30.8mm	64
	BL2832	12.0V-28.5V	Ø27.7	32.2mm	65
	BL2838	12.0V-28.5V	Ø27.7	37.5mm	66
	BL2838S	7.0V-24.0V	Ø27.7	37.5mm	67
	BL3229	12.0V-28.0V	Ø32.0	29.0mm	68
	BL3640	12.0V-28.5V	Ø36.0	40.0mm	69
	BL3649	12.0V-28.5V	Ø36.0	49.0mm	70
	BL3657	12.0V-28.5V	Ø36.0	57.0mm	71
	BL3657S	12.0V-36.0V	Ø36.0	57.0mm	72
	BL4259	12.0V-24.0V	Ø42.4	59.0mm	73
	BL4266	12.0V-24.0V	Ø42.4	66.0mm	74
	BL4244	15.0V-22.0V	Ø42.4	43.8mm	75
	BL7084	29.0V-44.0V	Ø73.5	83.8mm	76
 <p>Separated BLDC Motor</p>	BL40E16	80-144VAC / 176-264VAC	----	45mm	77
	BL48F15	14.4-21.6V	Ø48.0	"15.0mm (Stator armature length)"	78
	BL48F23	14.4-21.6V	Ø48.0	"23.0mm (Stator armature length)"	79
	BL48F25	14.4-21.6V	Ø48.0	"25.0mm (Stator armature length)"	80
	BL50F25	18.0V-21.6V	Ø50.0	"25.0mm (Stator armature length)"	81
	BL50F32	18.0V-43.2V	Ø50.0	"32.0mm (Stator armature length)"	82

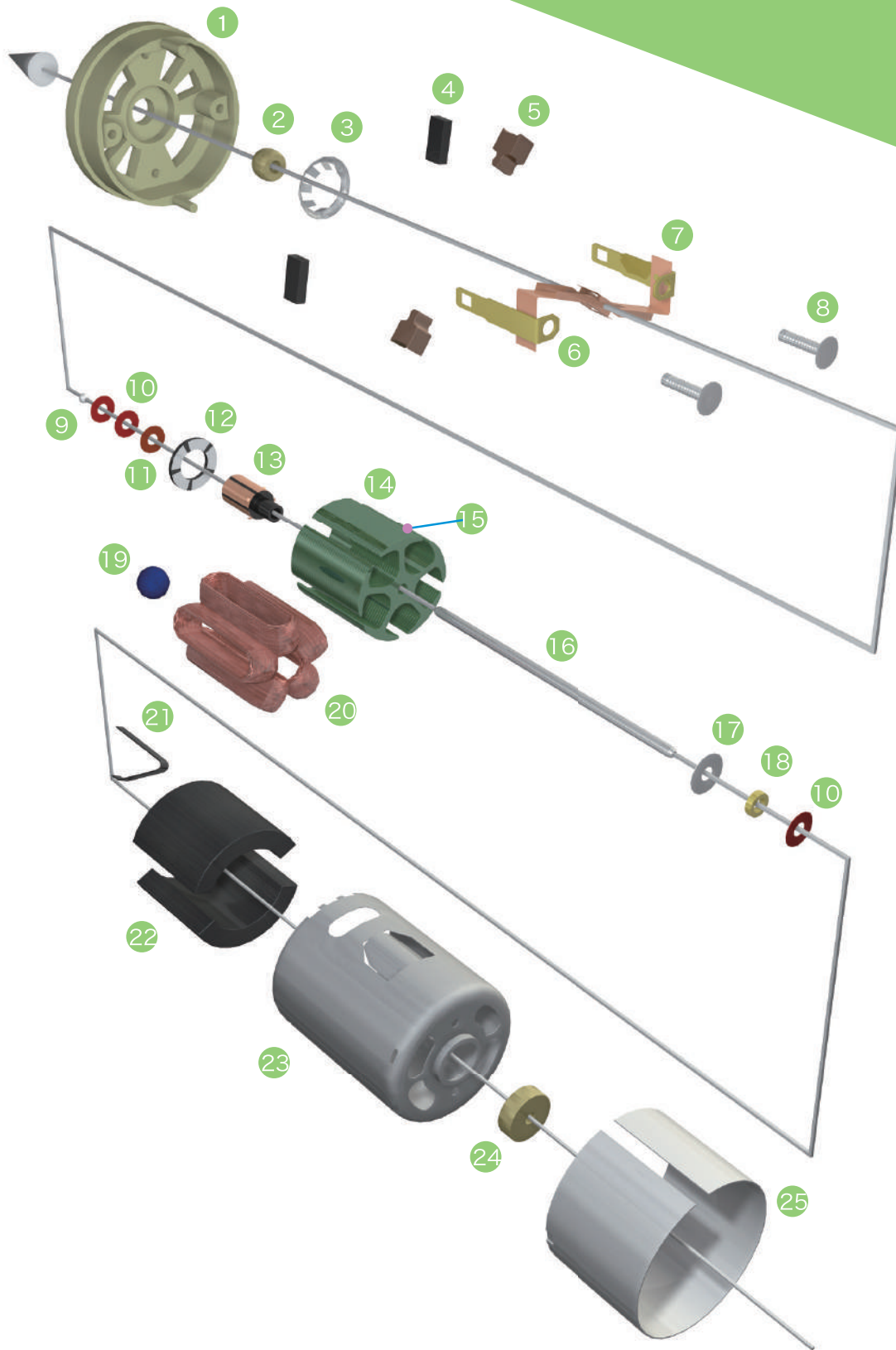
MOTOR DESIGNATION AND ITS MEANING

有刷馬達型號說明

KDL5BFN-3085FB-WRC-CE-IE/76



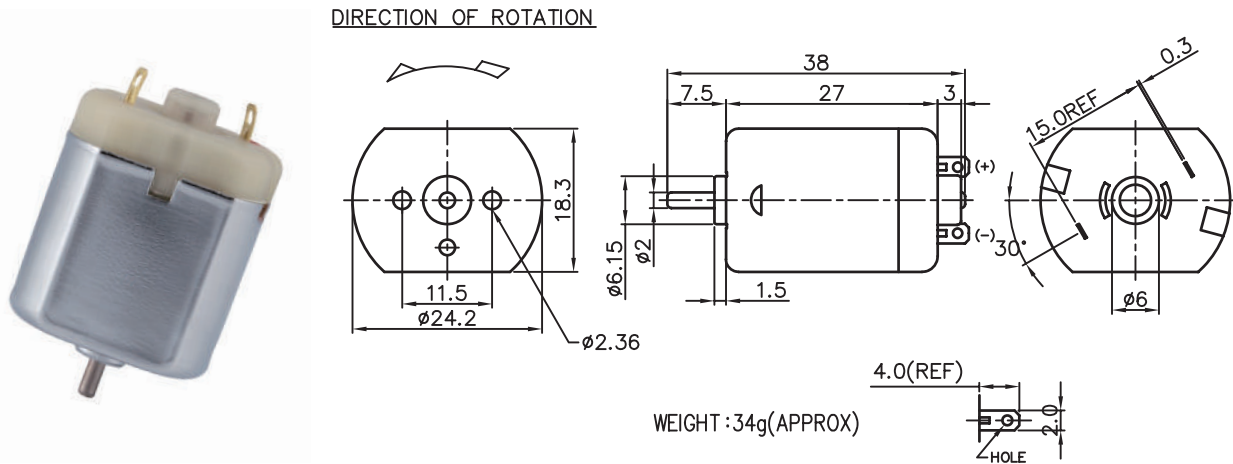
- | | |
|---|--|
| <p>(1) 馬達外徑 x 馬達長度
N : 36\varnothing x 65mm
K : 36\varnothing x 57mm
H : 36\varnothing x 49,50mm
J : 27.8\varnothing x 46.5mm
L : 27.8\varnothing x 37.5mm
M : 27.8\varnothing x 32.5m</p> <p>(2) 磁鐵種類
T : 等方性
S : 干壓式異方性
P : 濕壓式異方性
D : 濕壓式異方性普通
C : 濕壓式異方性強磁
V : 濕壓式異方性超強磁</p> <p>(3) 25\varnothing 轉子</p> <p>(4) 電機極數 : 3P、5P、7P、12P、24P</p> <p>(5) 二極體</p> <p>(6) 鐵后蓋, 膠蓋省略</p> <p>(7) 直立式鐵殼, 軸承座鐵殼省略</p> <p>(8) 漆包線線徑</p> <p>(9) 單匝繞線圈數</p> <p>(10) F : 散熱風葉, 無則省略
G : 齒輪 / 軸套
E : 偏心輪
P : 皮帶輪
W : 雙出軸, 單出軸則省略</p> <p>(11) S : 不銹鋼軸, 高碳鋼軸省略
A : 切軸
B : 滾花
L : 打厘士
D : 雙階軸
T : 鉸牙軸</p> <p>(12) 寬端子 4.8mm, 3.8mm 省略</p> <p>(13) 符合 RoHS</p> <p>(14) 封閉式外殼, 開放式省略</p> <p>(15) 電容</p> <p>(16) 電感</p> <p>(17) 軸長</p> | <p>(1) Motor diameter x motor length
N : 36\varnothing x 65mm
K : 36\varnothing x 57mm
H : 36\varnothing x 49,50mm
J : 27.8\varnothing x 46.5mm
L : 27.8\varnothing x 37.5mm
M : 27.8\varnothing x 32.5m</p> <p>(2) Magnet type
T : isotropic
S : dry anisotropy
P : low wet anisotropy
D : common wet anisotropy
C : strong wet anisotropy
V : stronger wet anisotropy</p> <p>(3) 25\varnothing rotor</p> <p>(4) Motor pole number : 3P、5P、7P、12P、24P</p> <p>(5) Varistor</p> <p>(6) Iron back cap, plastic cap is omitted</p> <p>(7) Upright iron housing, bearing housing iron housing is omitted</p> <p>(8) Enameled wire diameter</p> <p>(9) Turns of winding coils</p> <p>(10) F : cooling fan, if omitted
G : Gear / Sleeve
E : eccentric wheel
P : Pulley
W : two-way output shaft, one-way output shaft is omitted</p> <p>(11) S : stainless steel shaft, high carbon steel shaft omitted
A : Tangent axis
B : Knurled
L : tarifa
D : two-stage shaft
T : hinge axis</p> <p>(12) Wide terminal 4.8mm, 3.8mm is omitted</p> <p>(13) RoHS compliant</p> <p>(14) Enclosed housing, open omitted</p> <p>(15) capacitance</p> <p>(16) inductance</p> <p>(17) Shaft length</p> |
|---|--|



- | | | |
|-------------------------------|----------------------------|-----------------------------|
| 1 膠蓋 / PLASTIC CAP | 10 墊片 / WASHER | 19 平衡土 / BALANCING COMPOUND |
| 2 球型含油軸承 / SPHERICITY BEARING | 11 止油片 / OIL SLINGER | 20 漆包線 / ENAMELLED WIRE |
| 3 壓環 / BEARING BUSHING | 12 變阻器 / DISK VARISTOR | 21 磁石指針 / MAGNET PIN |
| 4 制振膠片 / BRUSH DAMPER | 13 電樞 / COMMUTATOR | 22 磁石 / MAGNET |
| 5 碳素 / CARBON BRUSH | 14 鐵芯片 / ARMATURE CORE | 23 鐵殼 / HOUSING |
| 6 電刷組 / BRUSH ARM | 15 絕緣漆 / INSULATION RESIN | 24 含油軸承 / SLEEVE BEARING |
| 7 端子 / TERMINAL | 16 軸 / SHAFT | 25 磁力護片 / FLUX RING |
| 8 鉚釘 / RIVET | 17 調整片 / INSULATION WASHER | |
| 9 錫絲 / SOLDER TIN | 18 止推環 / ROTOR RETAINER | |

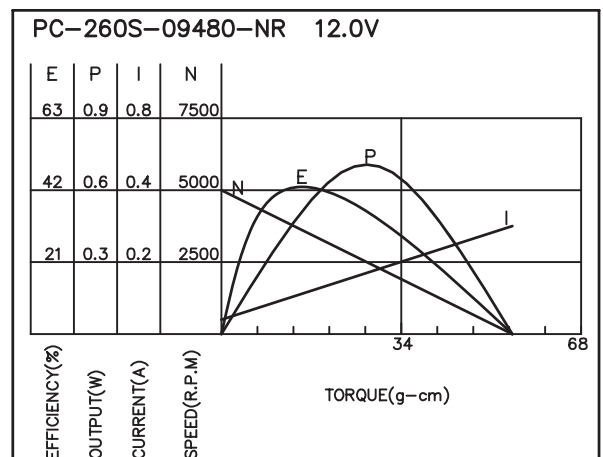
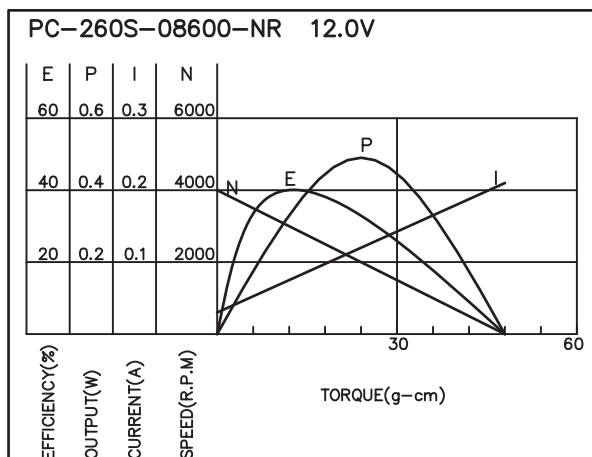
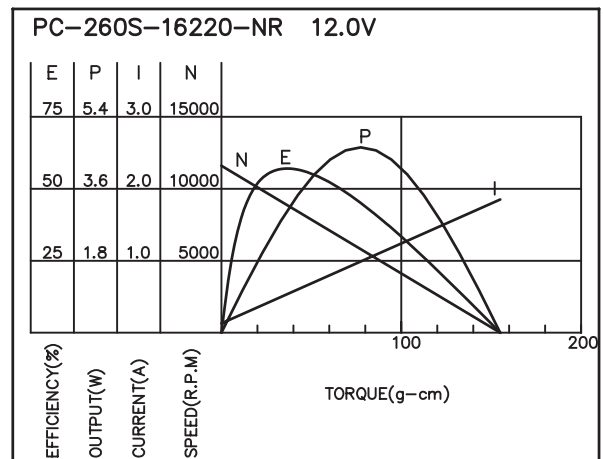
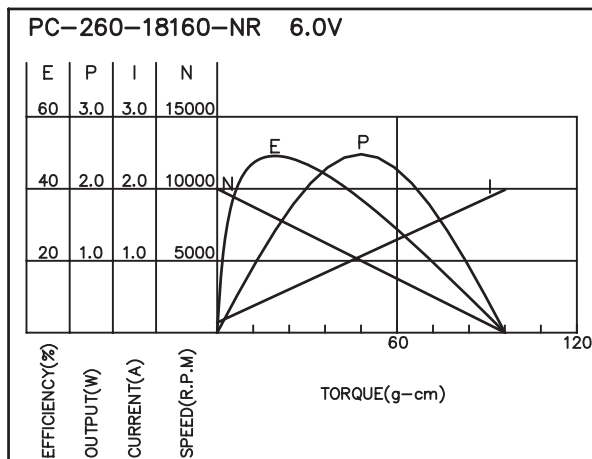
Application : Rearview Mirror 、 Electric Shaver 、 Door Locks

用途 : 後視鏡鏡面調整、電動刮鬍刀、門鎖



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
PC-260-18160-NR	3.0 - 9.0	6.0V CONSTANT	10000	0.14	7600	0.49	18	1.76	1.45	49	1.98	96	9.41
PC-260S-16220-NR	6.0 -18.0	12.0V CONSTANT	11600	0.13	9000	0.45	32	3.18	3.00	57	1.85	155	15.19
PC-260S-08600-NR	6.0 -24.0	12.0V CONSTANT	4000	0.03	2800	0.08	12	1.18	0.36	40	0.21	48	4.71
PC-260S-09480-NR	6.0 -24.0	12.0V CONSTANT	5000	0.04	3500	0.11	15	1.47	0.55	43	0.30	55	5.39

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

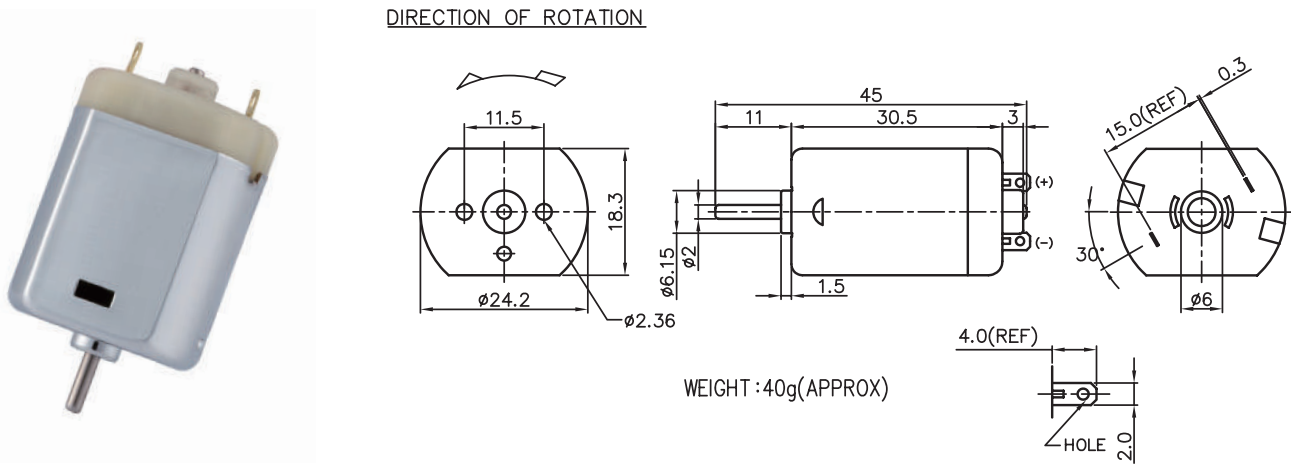


PC-280

Carbon-brush motors

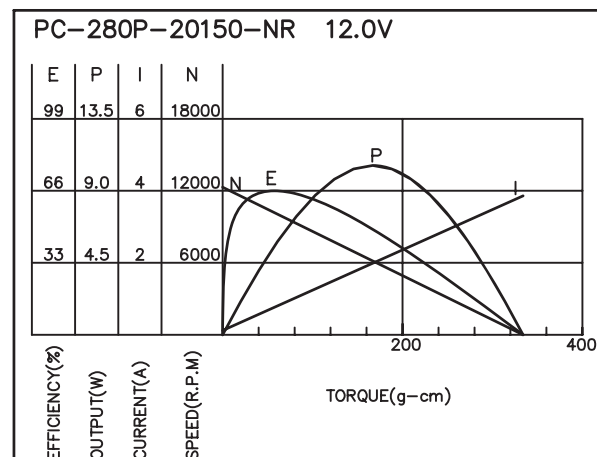
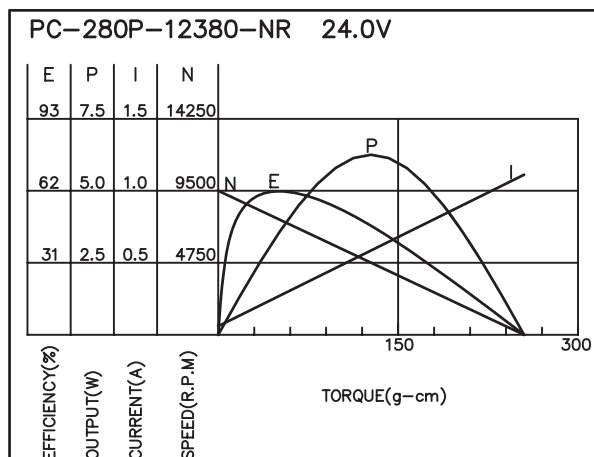
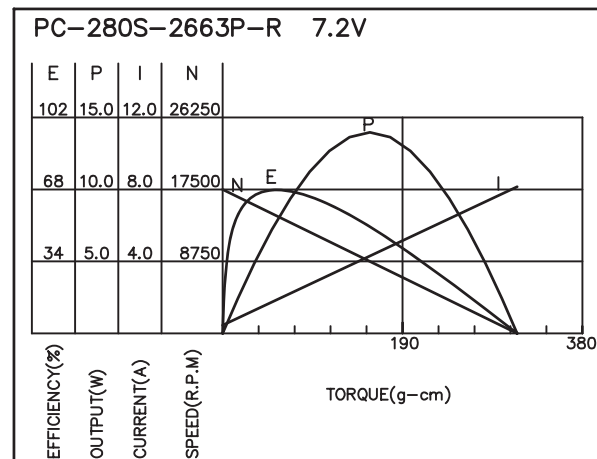
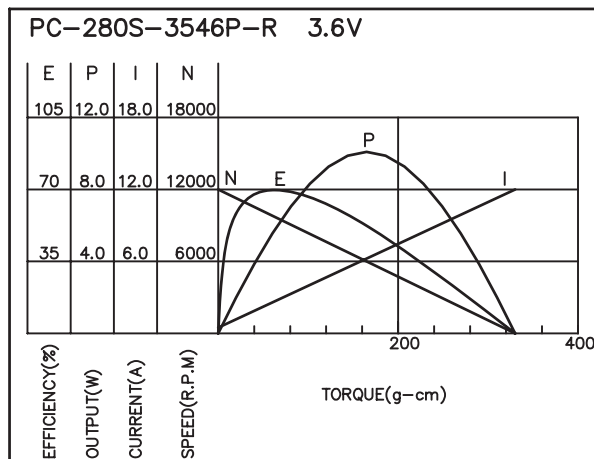
Application : Car Side Mirrors 、 Central Locks 、 Printer 、 Vending Machine 、 Beauty Equipment

用途：後視鏡電動收折、中控鎖、印表機、自動販賣機、美容儀器



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
PC-280S-3546P-R	3.0 - 4.5	3.6V CONSTANT	12000	0.48	10000	2.20	52	5.10	5.39	70	11.62	330	32.35
PC-280S-2663P-R	6.0 - 9.0	7.2V CONSTANT	17500	0.45	15129	1.33	41	4.02	6.36	68	8.15	311	30.49
PC-280P-12380-NR	12.0-24.0	24.0V CONSTANT	9500	0.06	7305	0.25	49	4.80	3.65	62	1.11	256	25.10
PC-280P-20150-NR	6.0 - 12.0	12.0V CONSTANT	12300	0.12	10300	0.72	53	5.20	5.64	66	3.86	334	32.75

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

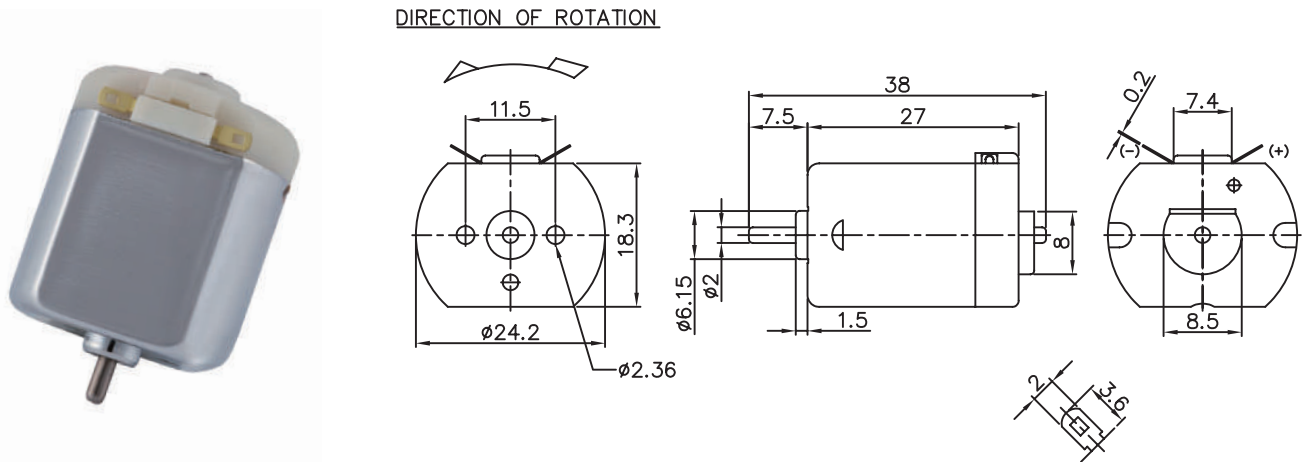


UC-260

Carbon-brush motors

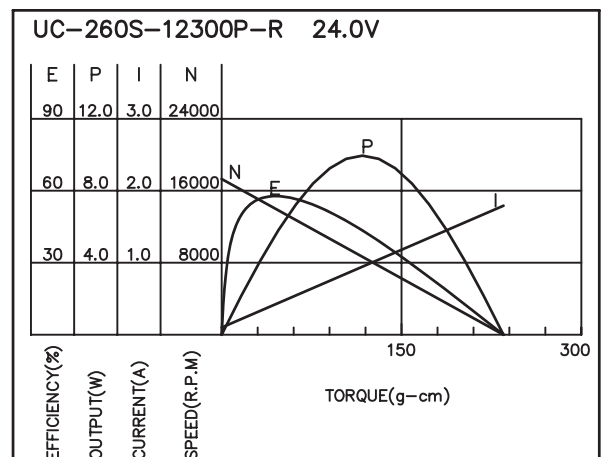
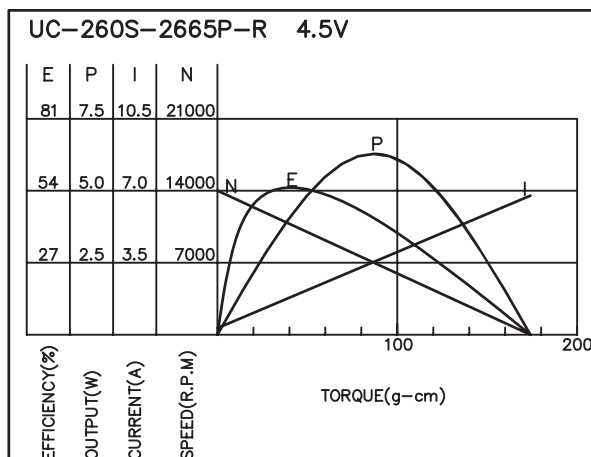
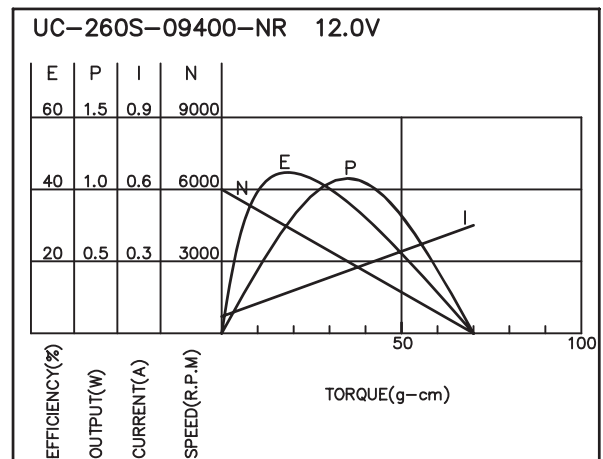
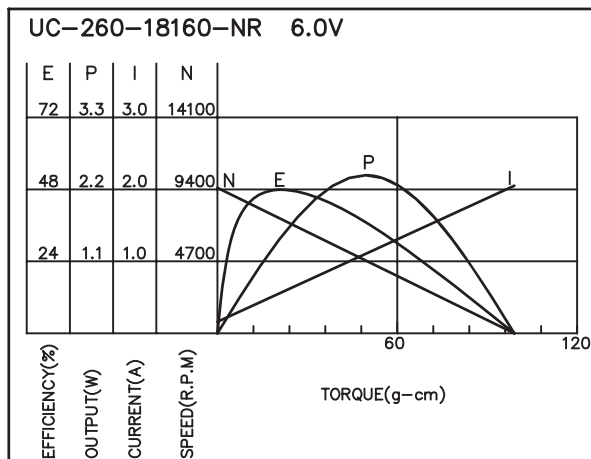
Application : Hair Dryer 、 Central Locks 、 Automatic Soap Dispenser

用途：吹風機、中控鎖、自動給皂機



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
UC-260-18160-NR	3.0 - 9.0	6.0V CONSTANT	9500	0.16	7380	0.53	20	1.96	1.52	48	2.05	99	9.71
UC-260S-09400-NR	12.0 - 24.0	12.0V CONSTANT	6000	0.07	4520	0.15	17	1.66	0.80	44	0.45	70	6.86
UC-260S-2665P-R	3.0 - 6.0	4.5V CONSTANT	14000	0.32	10893	1.82	40	3.92	4.48	55	6.76	174	17.06
UC-260S-12300P-R	12.0 - 24.0	24.0V CONSTANT	16500	0.10	13021	0.43	45	4.44	6.06	58	1.79	235	23.04

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

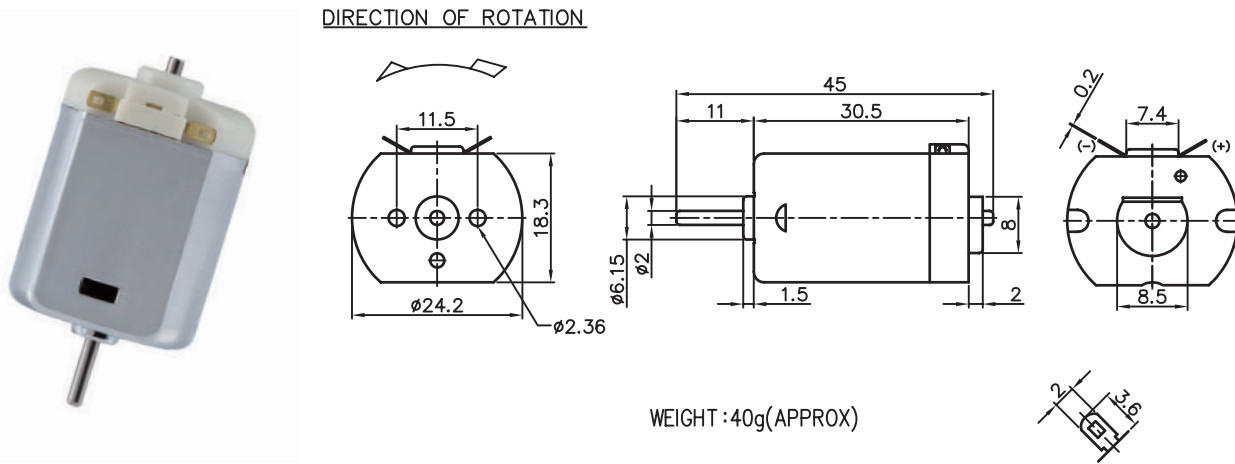


UC-280

Carbon-brush motors

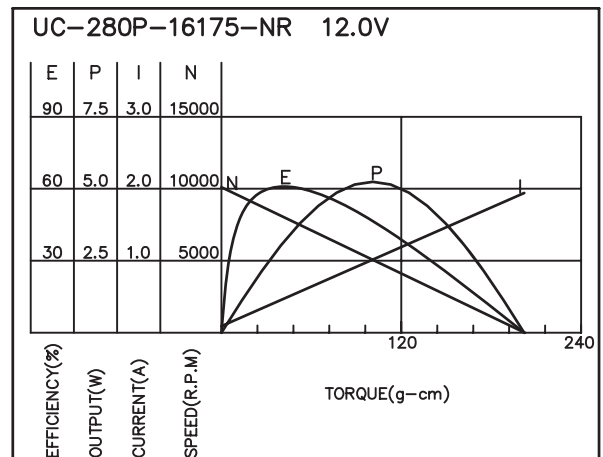
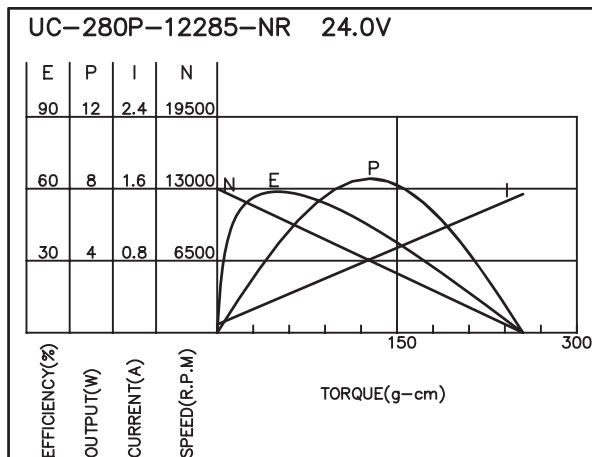
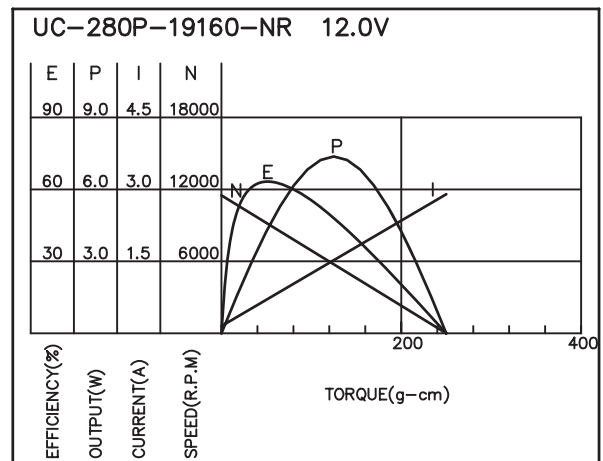
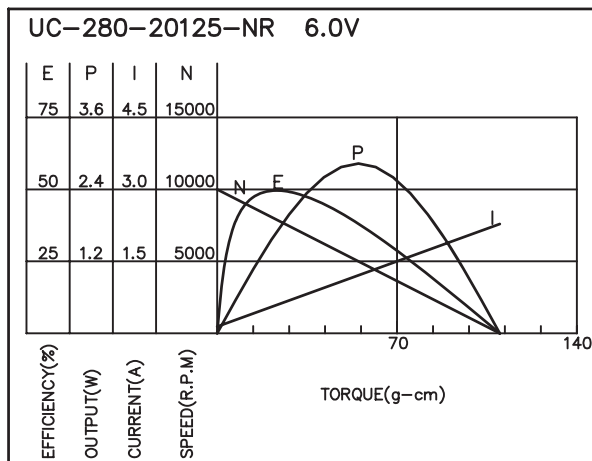
Application : Central Locks

用途：中控鎖



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
UC-280-20125-NR	3.0 - 9.0	6.0V CONSTANT	10000	0.14	7600	0.52	19	1.86	1.51	49	2.28	110	10.78
UC-280P-19160-NR	6.0 - 12.0	12.0V CONSTANT	11500	0.15	9000	0.57	46	4.51	4.30	63	2.90	250	24.51
UC-280P-12285-NR	6.0 - 24.0	24.0V CONSTANT	13000	0.09	10100	0.37	49	4.80	5.19	59	1.54	255	25.00
UC-280P-16175-NR	6.0 - 12.0	12.0V CONSTANT	10100	0.09	8100	0.45	37	3.63	3.13	61	1.94	202	19.80

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

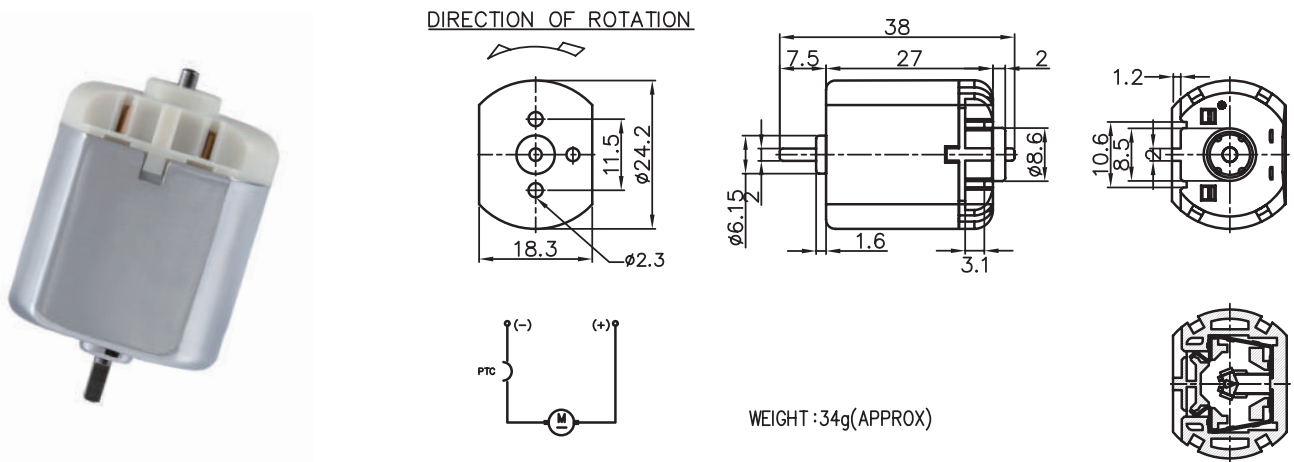


DC-260

Carbon-brush motors

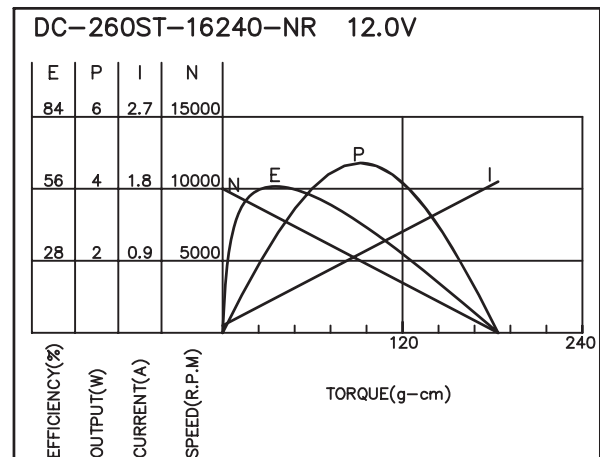
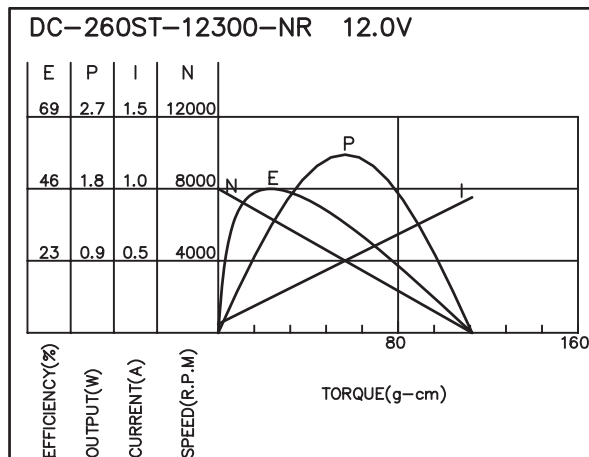
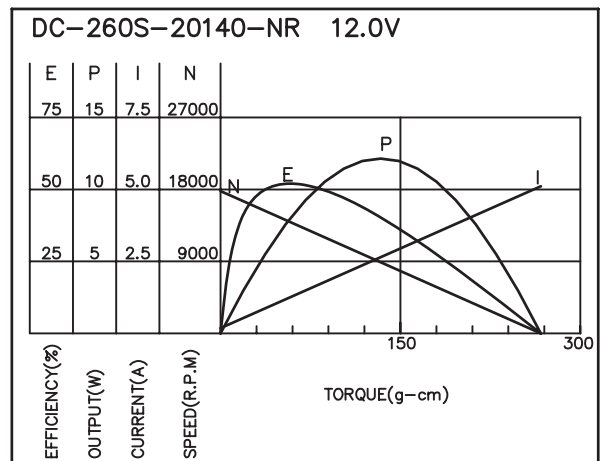
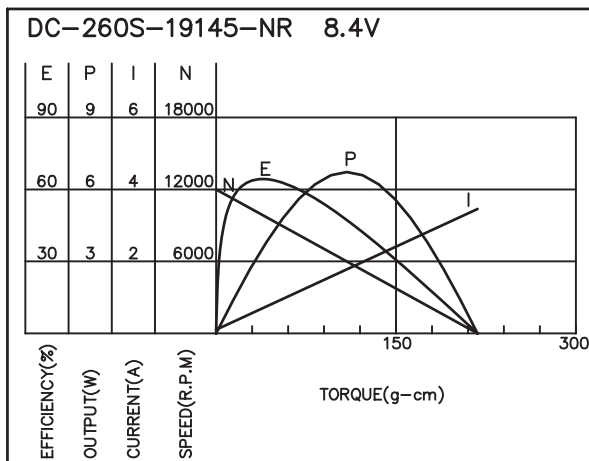
Application : Central Locks 、Rearview Mirror

用途：中控鎖、後視鏡鏡面調整



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
DC-260S-19145-NR	6.0 - 12.0	8.4V CONSTANT	12000	0.13	9700	0.72	38	3.73	3.83	64	3.45	218	21.37
DC-260S-20140-NR	6.0 - 12.0	12.0V CONSTANT	17800	0.18	13600	1.39	60	5.88	8.50	52	5.11	267	26.18
DC-260ST-12300-NR	12.0 - 24.0	12.0V CONSTANT	8000	0.06	6100	0.26	23	2.25	1.46	46	0.94	113	11.08
DC-260ST-16240-NR	6.0 - 12.0	12.0V CONSTANT	10000	0.09	8100	0.43	35	3.43	2.94	57	1.89	184	18.04

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

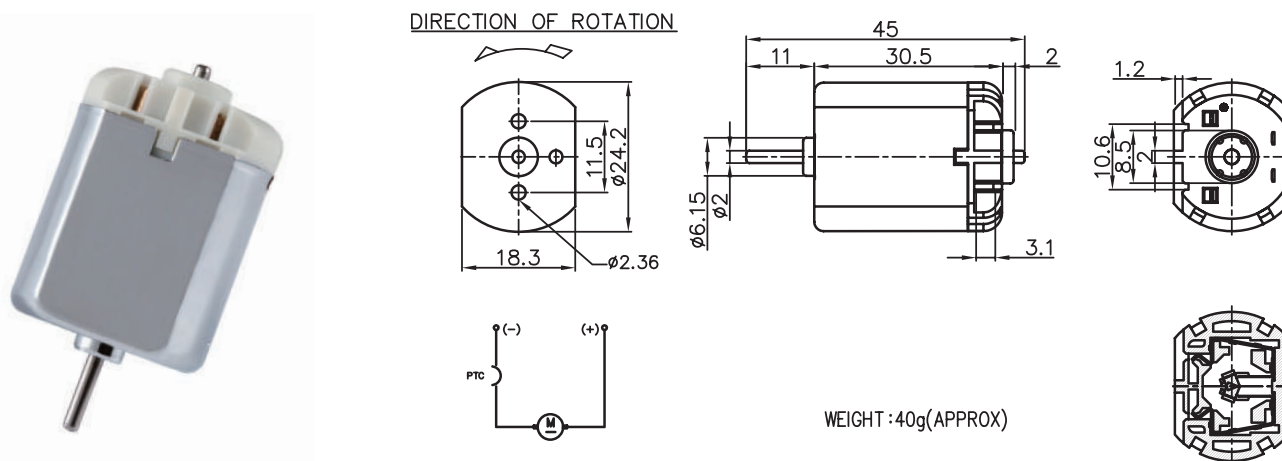


DC-280

Carbon-brush motors

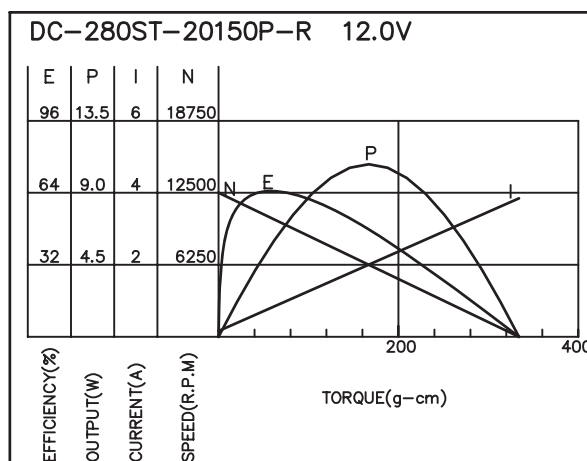
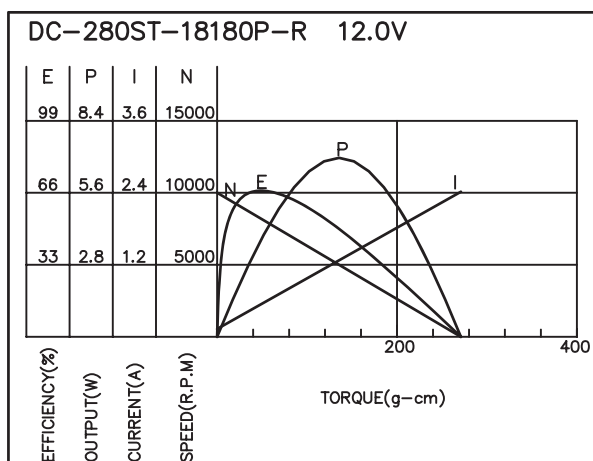
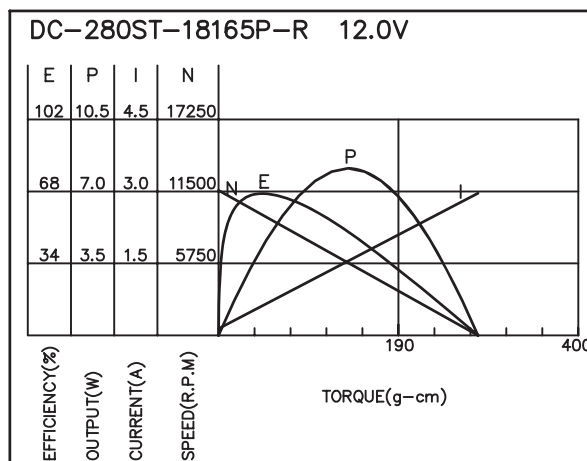
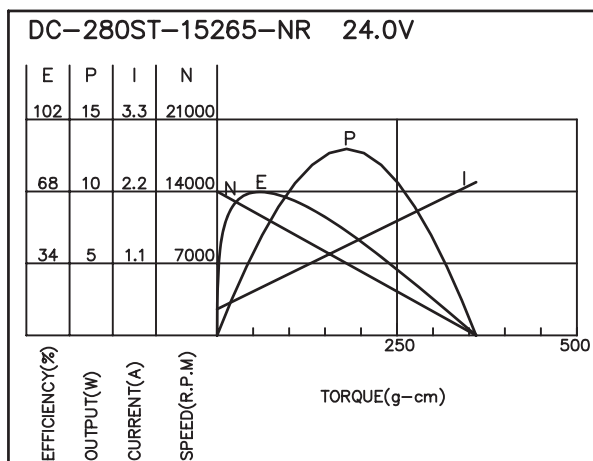
Application : Central Locks

用途：中控鎖



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
DC-280ST-15265-NR	12.0 - 24.0	24.0V CONSTANT	14000	0.10	12361	0.41	52	5.10	6.54	69	2.34	360	35.29
DC-280ST-18165P-R	6.0 - 12.0	12.0V CONSTANT	11500	0.14	10060	0.59	44	4.31	4.55	67	2.96	275	26.96
DC-280ST-18180P-R	6.0 - 12.0	12.0V CONSTANT	10000	0.13	8299	0.51	47	4.61	4.01	67	2.42	271	26.57
DC-280ST-20150P-R	6.0 - 12.0	12.0V CONSTANT	12500	0.16	10616	0.80	54	5.29	5.95	65	3.85	337	33.04

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

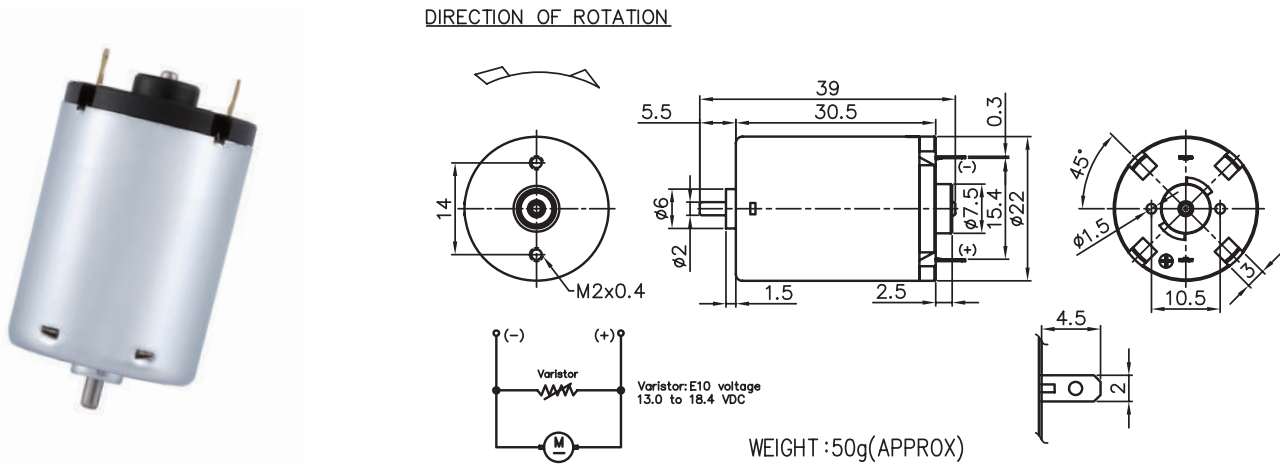


RK-250

Carbon-brush motors

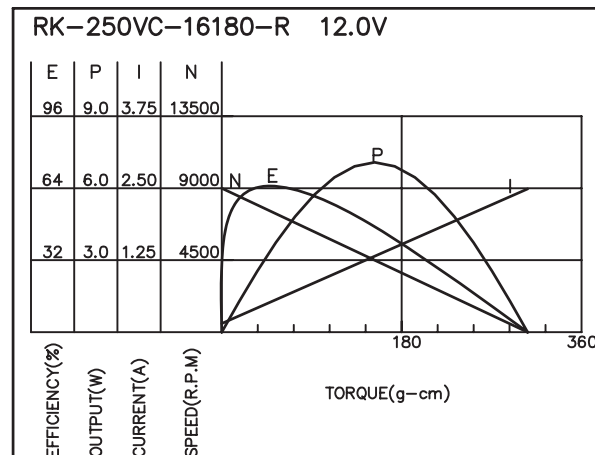
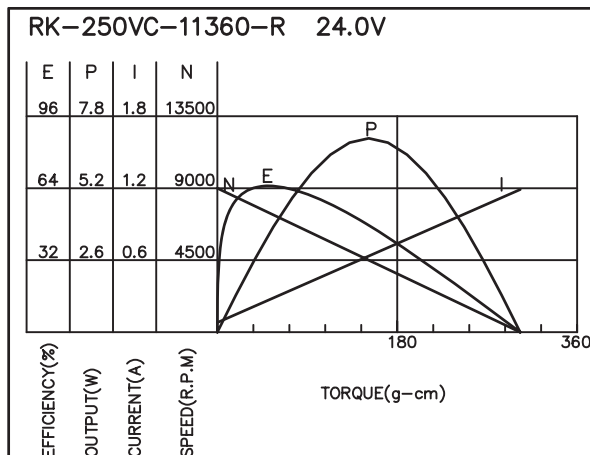
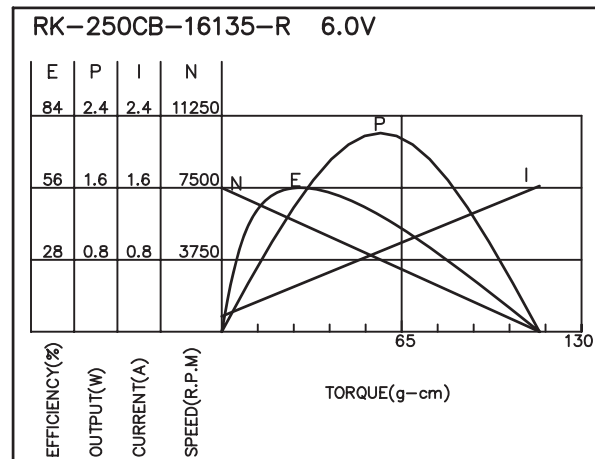
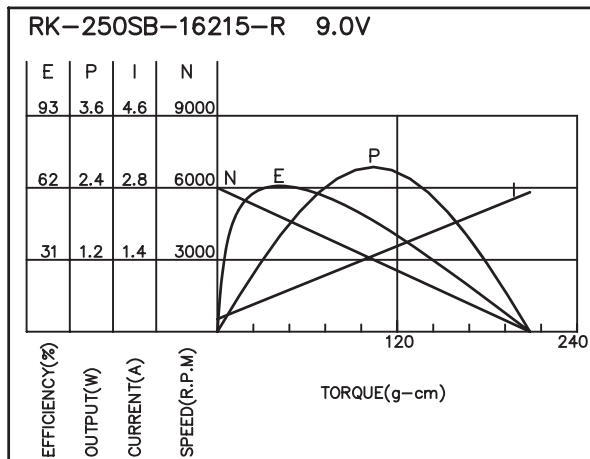
Application : Electric Curtains 、 Mobile Relay Station

用途：電動窗簾、基站



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF %	CURRENT A	TORQUE g-cm	mN-m	
RK-250SB-16215-R	6.0 - 18.0	9.0V CONSTANT	6000	0.14	4798	0.36	39.86	3.82	1.96	63	1.55	208	20.39
RK-250CB-16135-R	6.0 - 18.0	6.0V CONSTANT	7500	0.17	5605	0.46	26.90	2.64	1.55	56	1.62	115	11.27
RK-250VC-11360-R	12.0 - 28.0	24.0V CONSTANT	9000	0.08	7174	0.23	49.27	4.83	3.63	65	1.19	303	29.71
RK-250VC-16180-R	4.5 - 15.0	12.0V CONSTANT	9000	0.15	7321	0.47	45.40	4.45	3.41	65	2.49	306	30.00

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

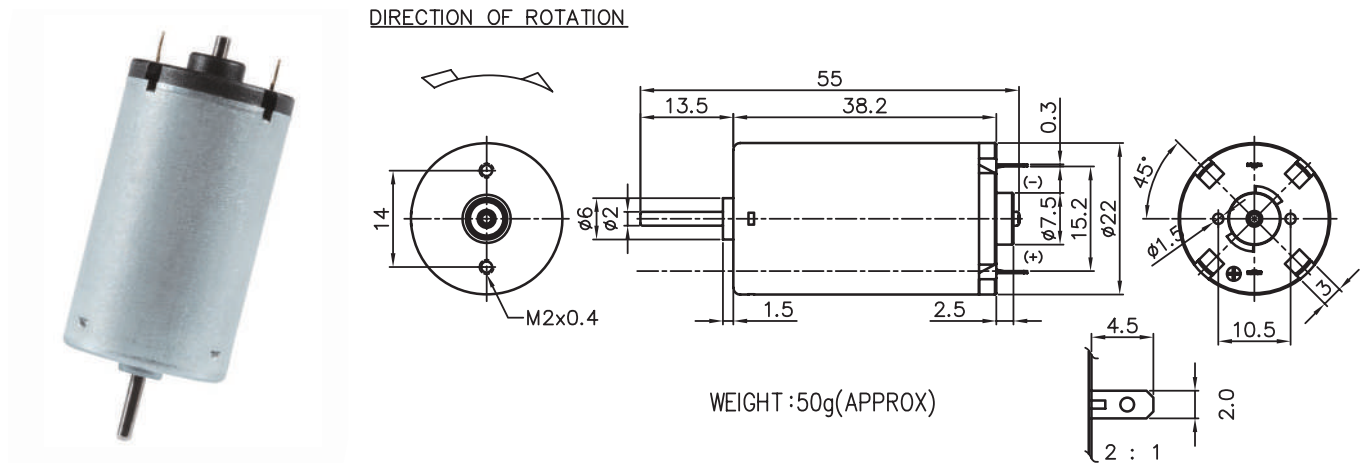


RK-L250

Carbon-brush motors

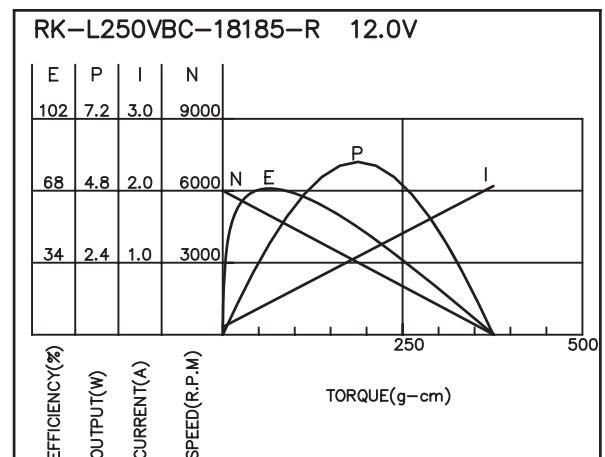
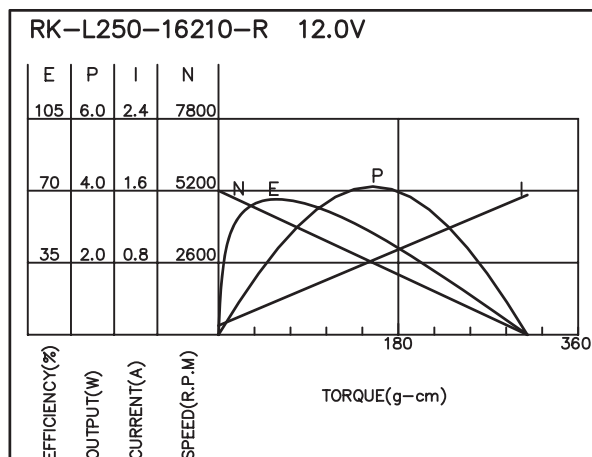
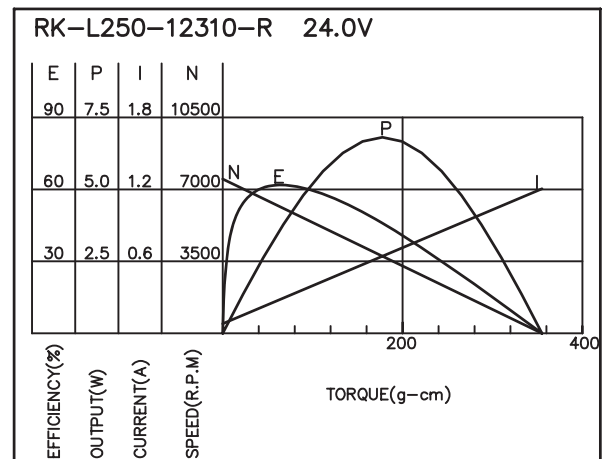
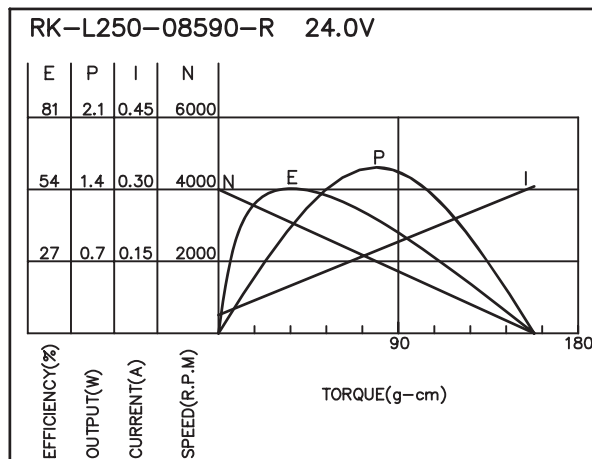
Application : Electric Curtains 、 Electrical Tin Opener

用途：電動窗簾、電動開罐器



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
RK-L250-08590-R	14.0 - 30.0	24.0V CONSTANT	4000	0.038	3067	0.088	34.45	3.38	1.09	54.18	0.31	158	15.49
RK-L250-12310-R	12.0 - 30.0	24.0V CONSTANT	7500	0.080	5938	0.254	60.61	5.94	3.70	61.63	1.20	355	34.80
RK-L250-16210-R	6.0 - 24.0	12.0V CONSTANT	5200	0.100	4474	0.337	54.71	5.36	2.51	65.57	1.55	309	30.29
RK-L250VBC-18185-R	6.0 - 18.0	12.0V CONSTANT	6000	0.105	5071	0.359	54.06	5.30	2.81	68.98	2.07	377	36.96

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

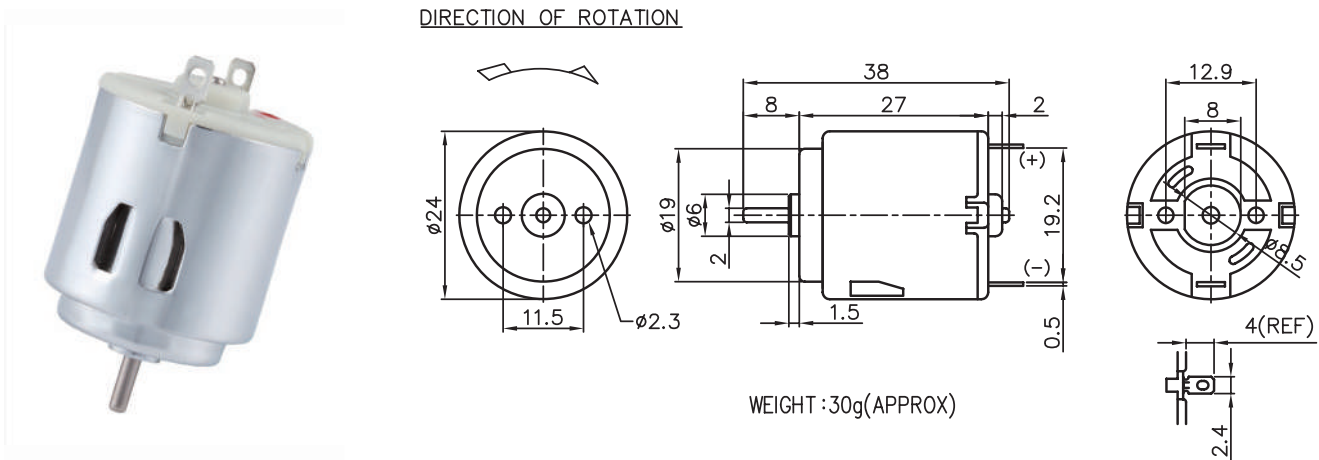


FC-260

Carbon-brush motors

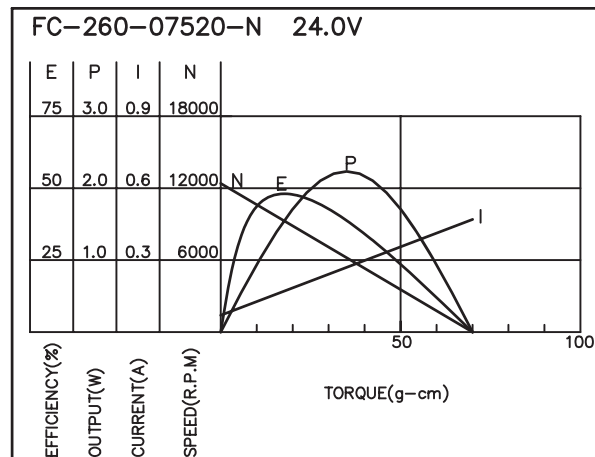
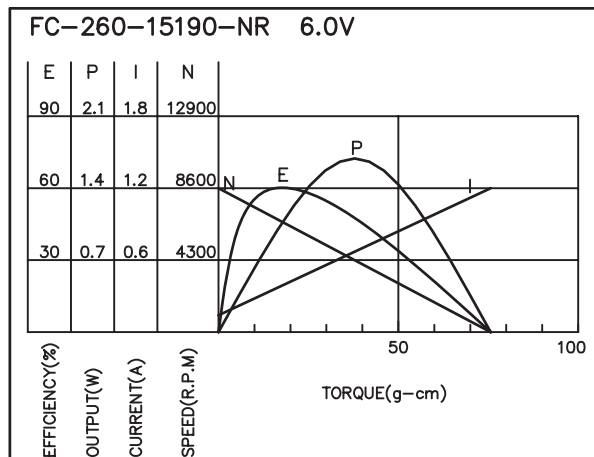
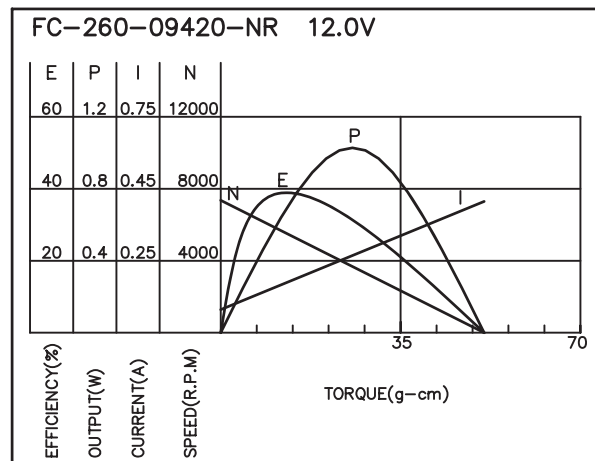
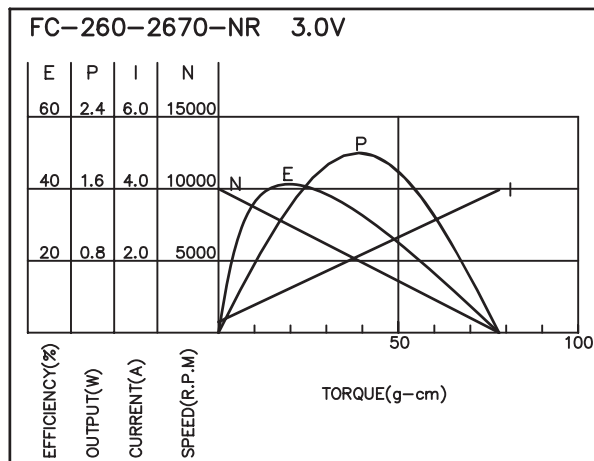
Application : Massager、R/C Car、Portable Fan

用途：電動按摩器、遙控車、小風扇



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
FC-260-2670-NR	3.0 - 4.5	3.0V CONSTANT	10000	0.30	7800	1.09	16.83	1.65	1.35	41.40	3.97	78	7.65
FC-260-09420-NR	6.0 - 18.0	12.0V CONSTANT	7850	0.08	5685	0.16	12.23	1.20	0.71	38.85	0.45	51	5.00
FC-260-15190-NR	6.0 - 12.0	6.0V CONSTANT	8600	0.14	6173	0.34	16.32	1.60	1.03	50.97	1.26	76	7.45
FC-260-07520-NR	12.0 - 24.0	24.0V CONSTANT	12400	0.07	9500	0.14	15.88	1.56	1.56	47.85	0.47	70	6.86

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

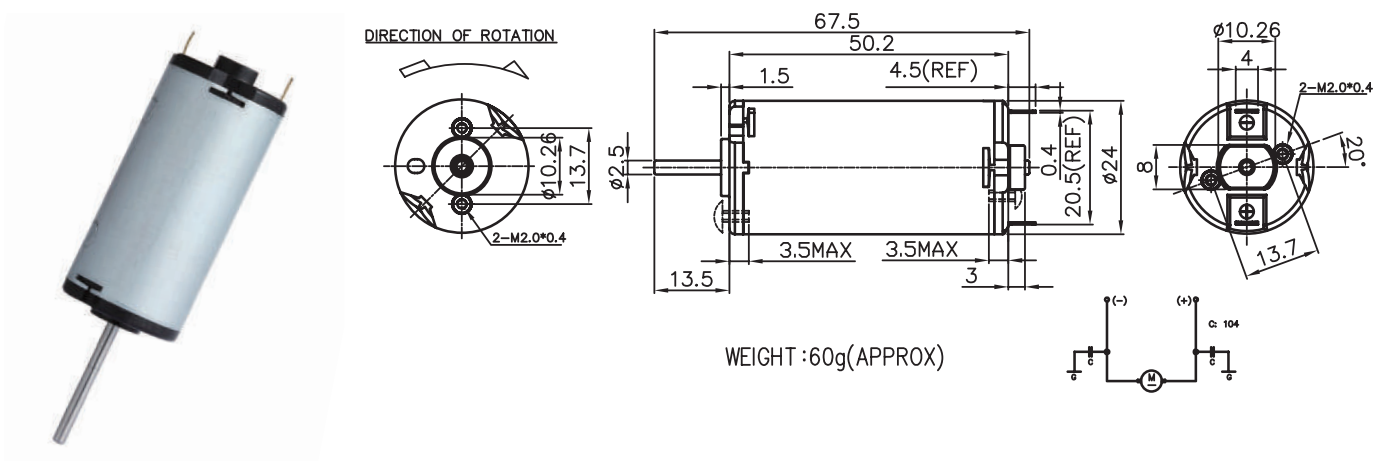


RK-290

Carbon-brush motors

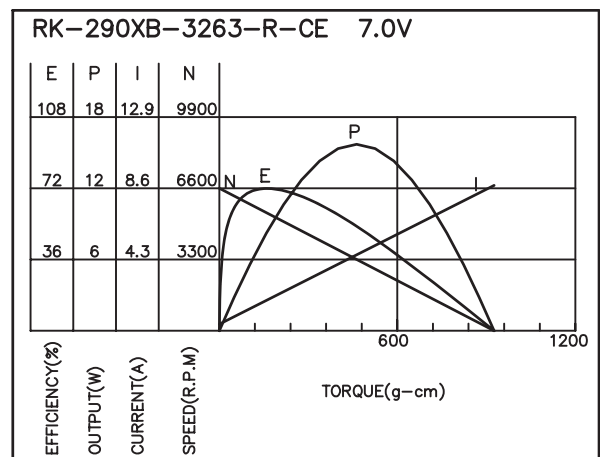
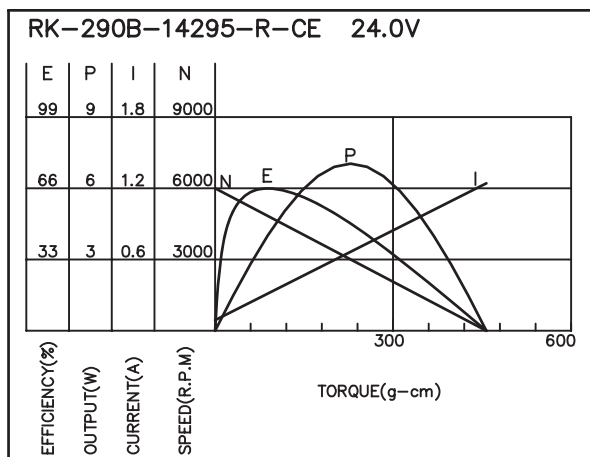
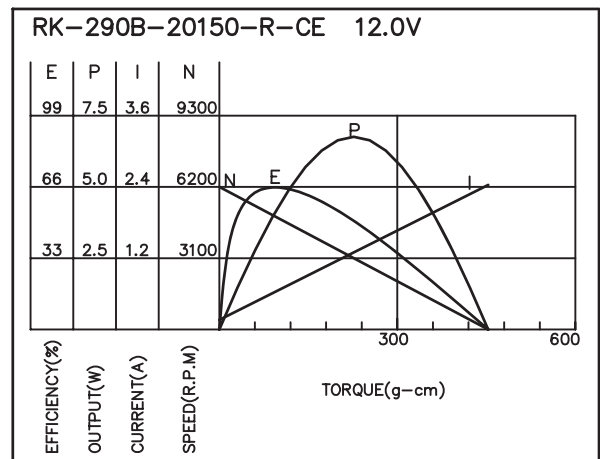
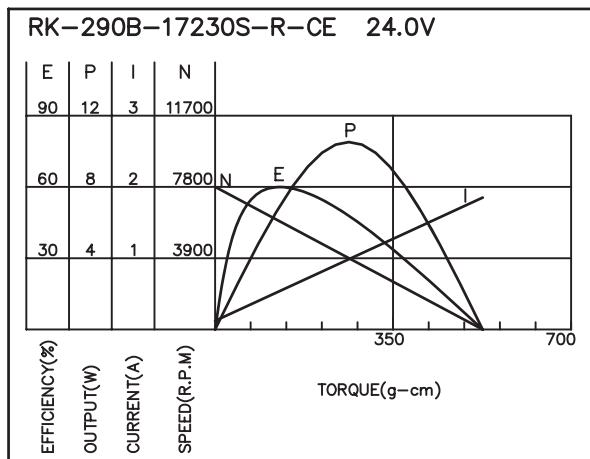
Application : Electric Window/Curtain

用途：電動開窗器、智能窗簾



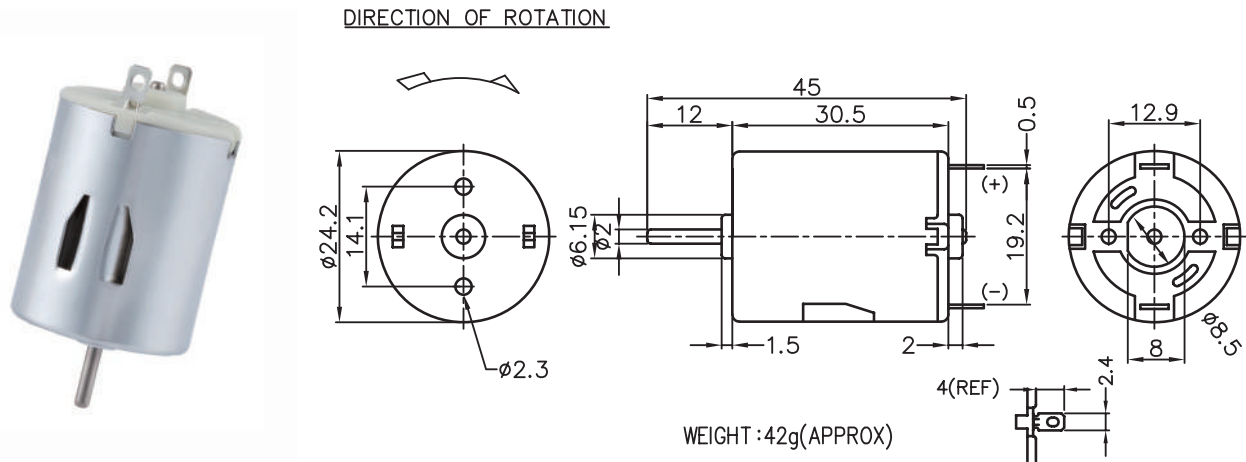
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
RK-290B-17230S-R-CE	18.5-29.5	24.0V CONSTANT	7800	0.12	5760	0.53	124.8	12.24	7.38	60	1.85	526	51.56
RK-290B-20150-R-CE	12.0-24.0	12.0V CONSTANT	6200	0.16	4792	0.54	83.1	8.15	4.09	66	2.43	454	44.51
RK-290B-14295-R-CE	12.0-36.0	24.0V CONSTANT	6000	0.09	4861	0.27	81.6	8.00	4.07	66	1.24	457	44.80
RK-290XB-3263-R-CE	6.0-12.0	7.0V CONSTANT	6600	0.40	5624	1.52	128.5	12.60	7.42	72	8.77	927	90.88

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



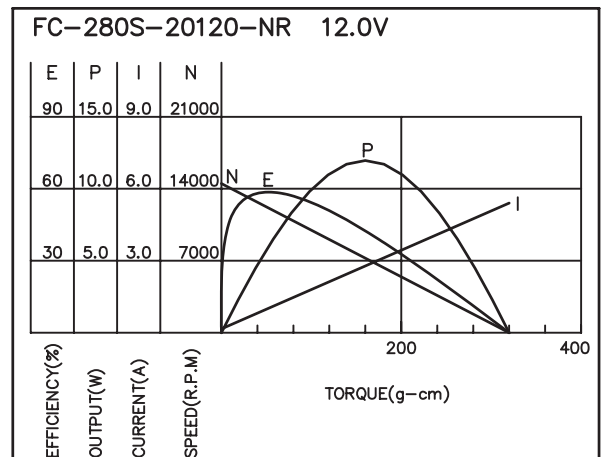
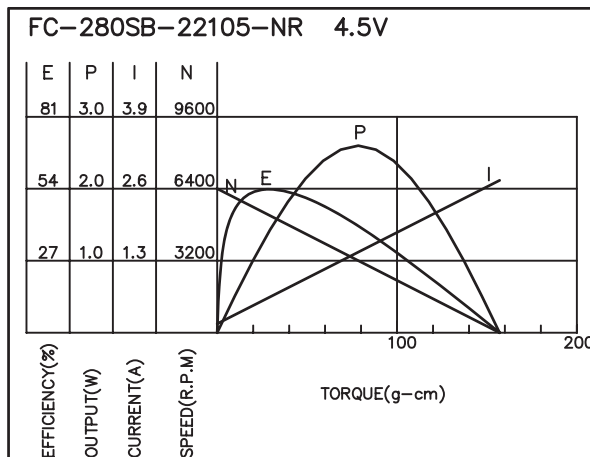
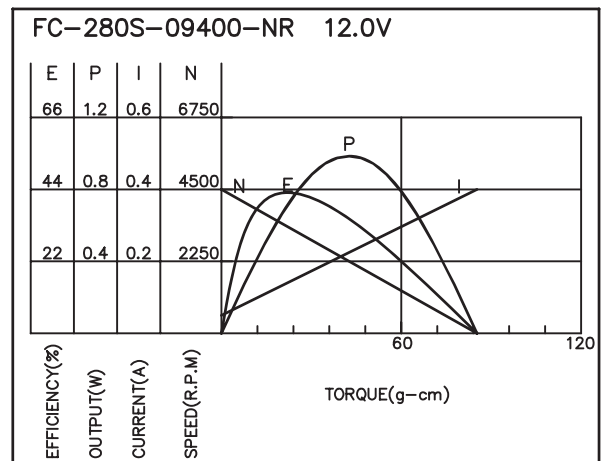
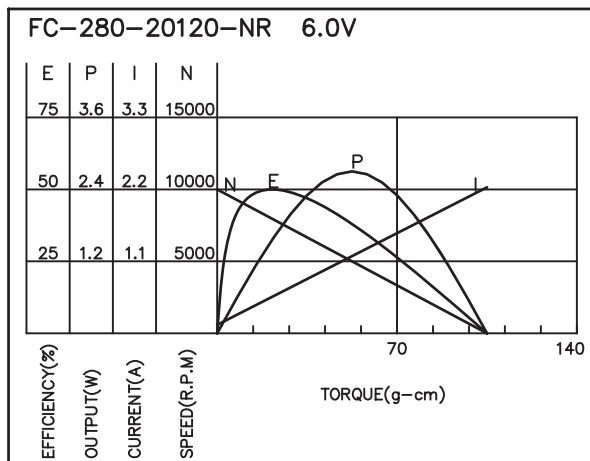
Application : Hair Clipper 、 Massager 、 R/C Car 、 Central Locks

用途：電動理髮器、電動按摩器、遙控車、中控鎖



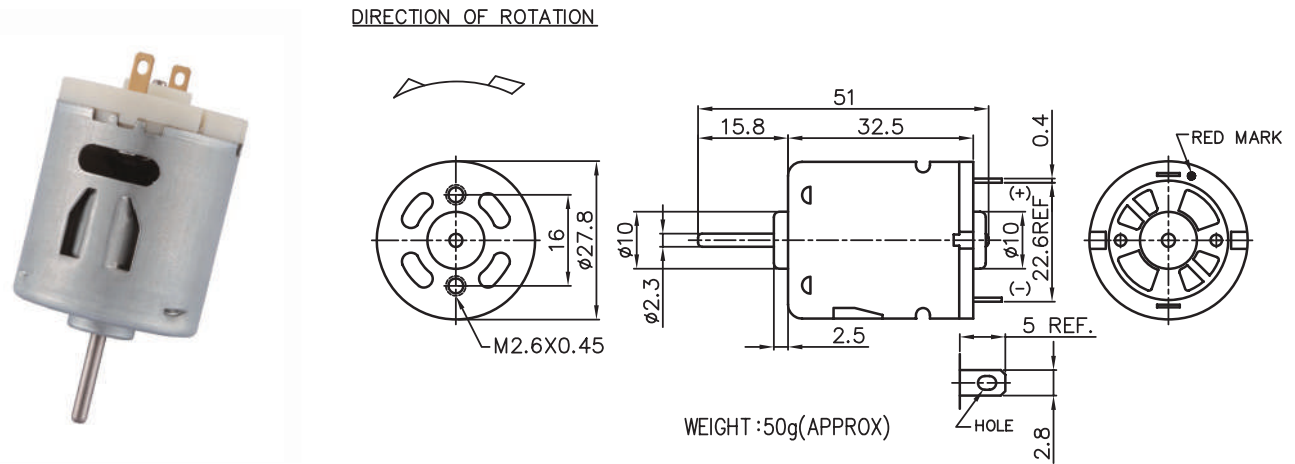
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
FC-280-20120-NR	4.5 - 9.0	6.0V CONSTANT	10000	0.13	7800	0.60	21.62	2.11	1.70	50.00	2.23	105	10.29
FC-280S-09400-NR	12.0-24.0	12.0V CONSTANT	4500	0.05	3095	0.14	21.57	2.11	0.69	43.00	0.41	85	8.33
FC-280SB-22105-NR	4.5 - 9.0	4.5V CONSTANT	6400	0.16	5147	0.59	26.23	2.57	1.39	54.00	2.76	157	15.39
FC-280S-20120-NR	4.5 - 12.0	12.0V CONSTANT	14500	0.16	12200	0.88	49.17	4.82	6.19	58.63	5.40	320	31.37

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



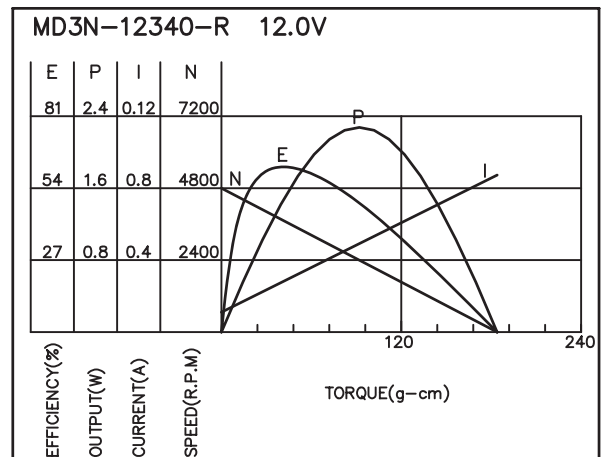
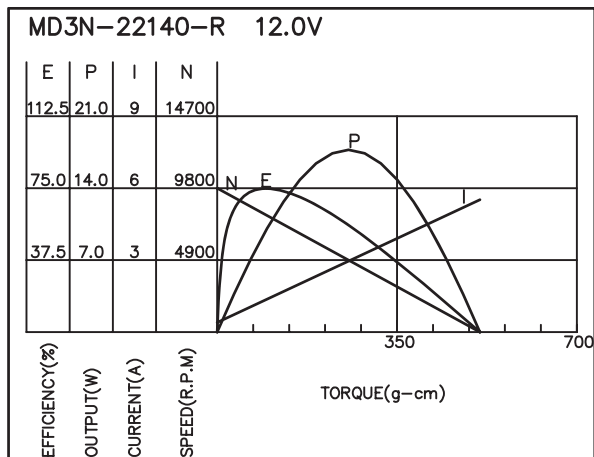
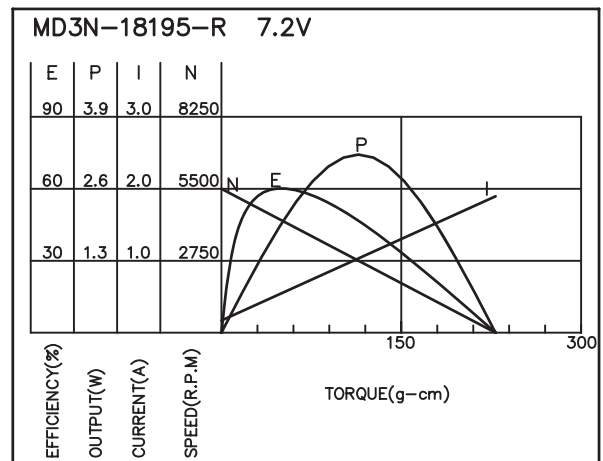
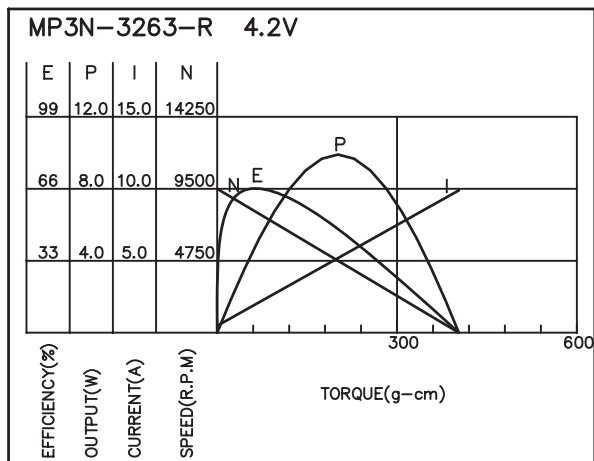
Application : Warning Light 、 Pump 、 ATM

用途：警示燈、泵浦、自動提款機



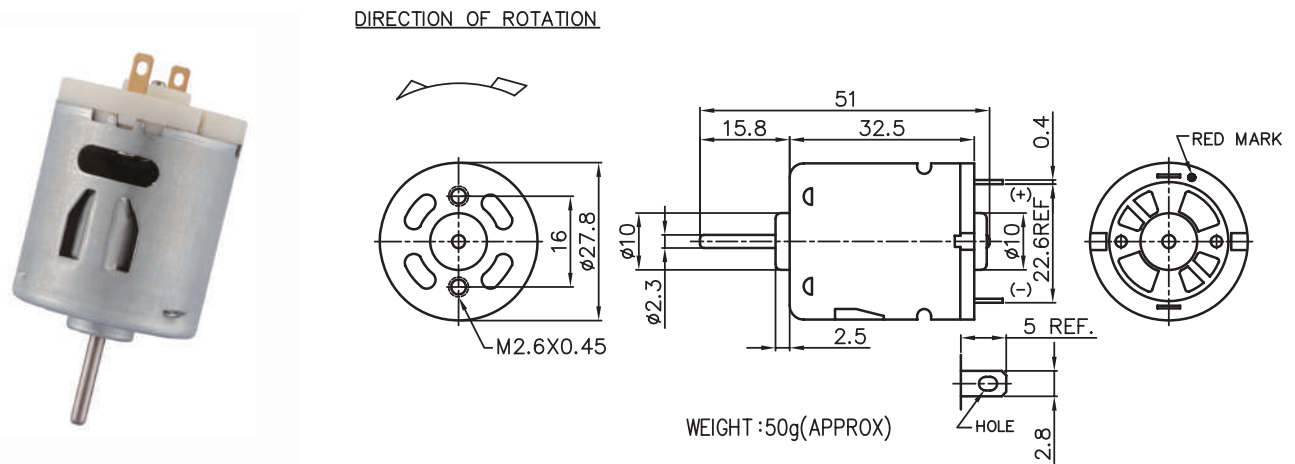
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
MP3N-3263-R	3.0 - 6.0	4.2V CONSTANT	9500	0.48	8065	1.74	57	5.59	4.75	66	9.88	403	39.51
MD3N-18195-R	6.0 - 12.0	7.2V CONSTANT	5500	0.17	4153	0.49	48	4.71	2.04	60	1.90	229	22.45
MD3N-22140-R	4.5 - 12.0	12.0V CONSTANT	13500	0.40	11325	1.19	88	8.63	10.19	75	5.53	511	50.10
MD3N-12340-R	12.0 - 24.0	12.0V CONSTANT	4800	0.11	3903	0.24	40	3.92	1.59	55	0.87	184	18.04

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



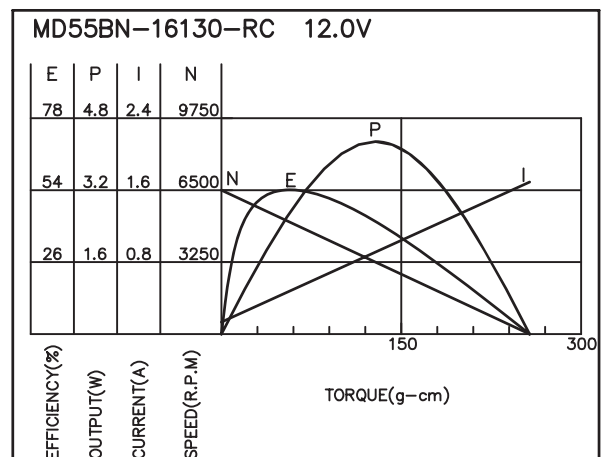
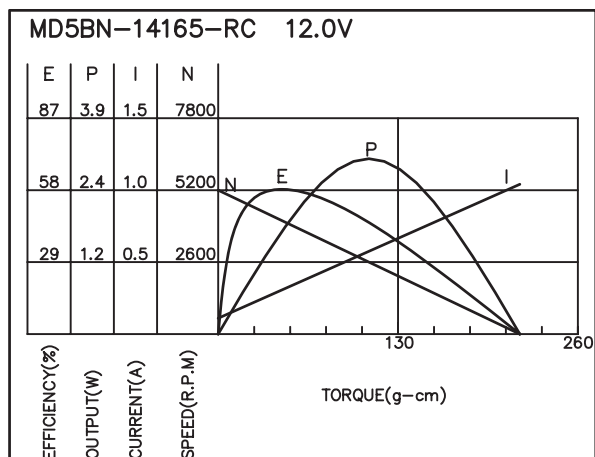
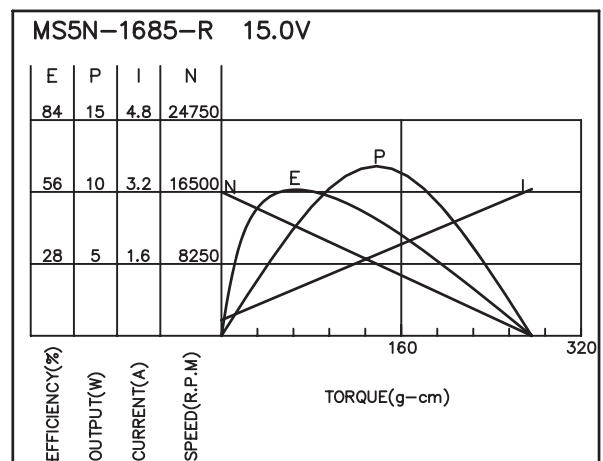
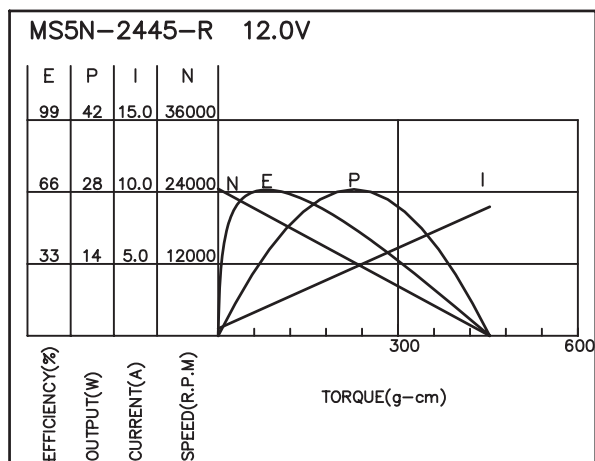
Application : Hair Dryer 、 Pump 、 Vacuum Robot

用途：吹風機、泵浦、智能吸塵機器人



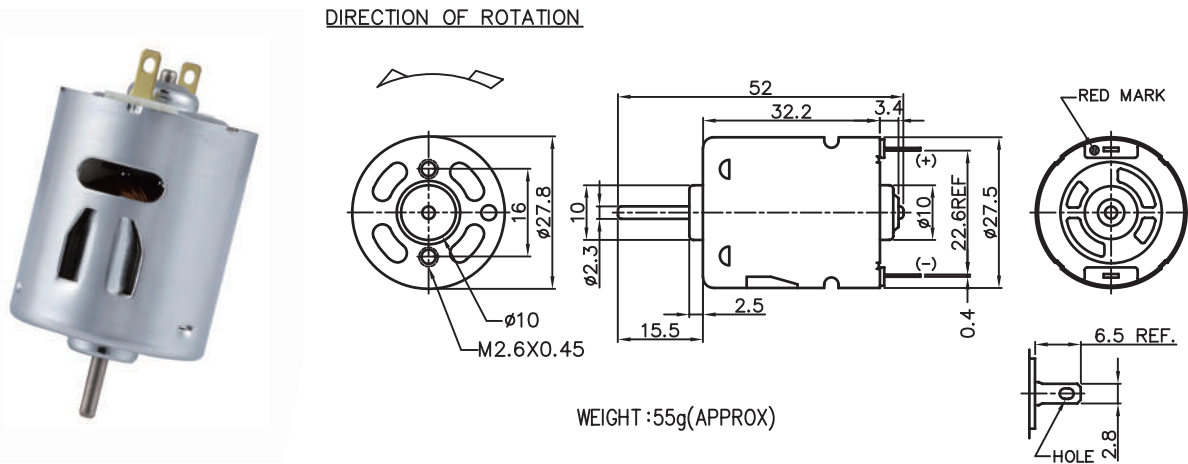
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	%	CURRENT A	TORQUE g-cm	mN-m
MS5N-2445-R	6.0-12.0	12.0V CONSTANT	24500	0.50	18900	2.22	91	8.92	17.74	67	8.96	453	44.41
MS5N-1685-R	6.0-15.0	15.0V CONSTANT	16500	0.35	12151	0.99	66	6.47	8.20	57	3.26	277	27.16
MD5BN-14165-RC	12.0-24.0	12.0V CONSTANT	5200	0.11	3861	0.29	50	4.90	1.98	58	1.04	219	21.47
MD55BN-16130-RC	12.0-24.0	12.0V CONSTANT	6500	0.14	5118	0.47	54	5.29	2.84	52	1.69	257	25.20

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



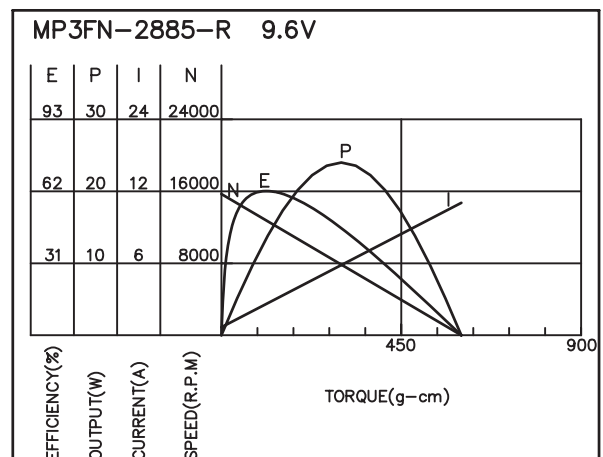
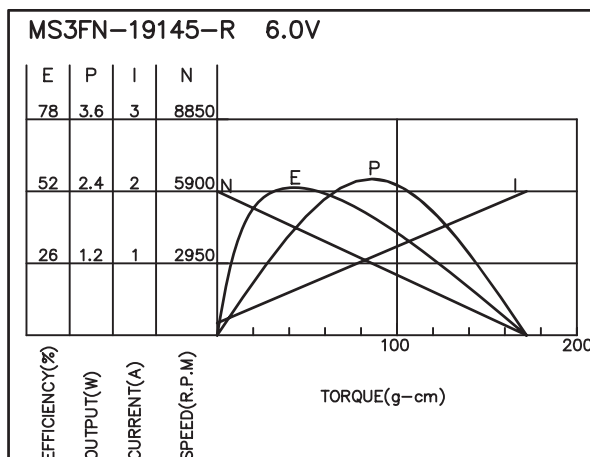
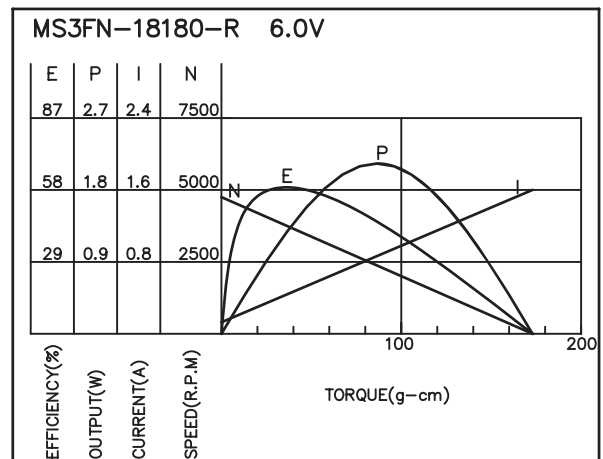
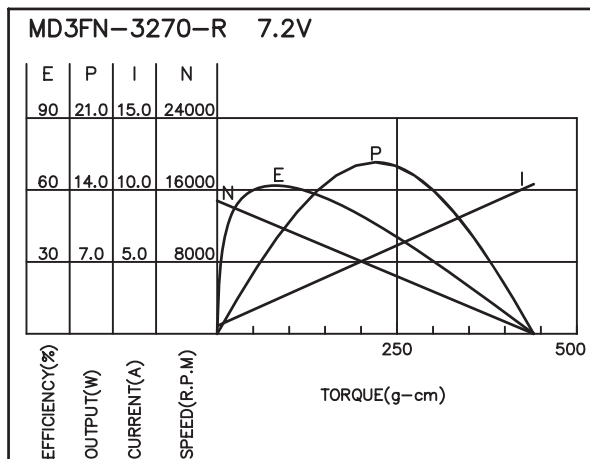
Application : Copy Machine 、 Vending Machine 、 Massager 、 Water Pump

用途：影印機、自動販賣機、電動按摩器、水泵



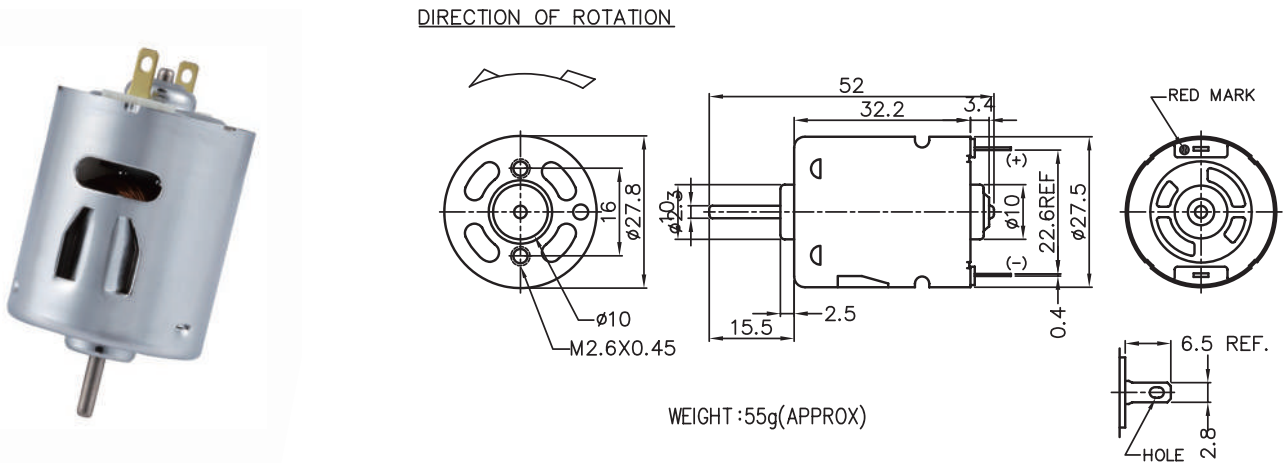
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
MD3FN-3270-R	3.0 - 7.2	7.2V CONSTANT	14800	0.55	12200	2.10	75	7.35	9.32	61	10.40	440	43.14
MS3FN-18180-R	6.0 - 12.0	6.0V CONSTANT	4750	0.13	3700	0.42	36	3.53	1.38	59	1.60	173	16.96
MS3FN-19145-R	6.0 - 12.0	6.0V CONSTANT	5900	0.17	4300	0.59	40	3.92	1.81	53	2.01	172	16.86
MP3FN-2885-R	6.0 - 12.0	9.6V CONSTANT	15700	0.45	12900	2.40	106	10.39	14.22	62	11.05	600	58.82

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



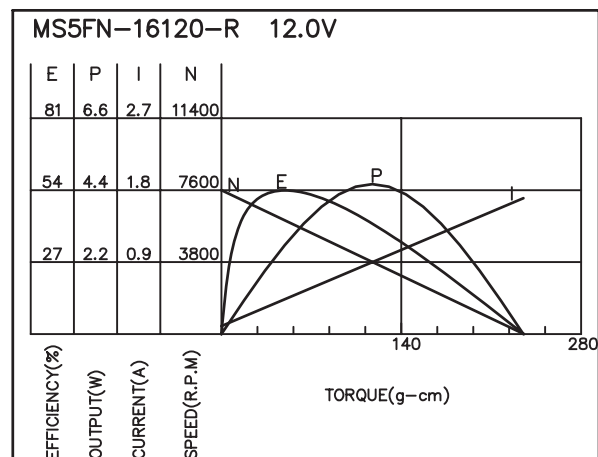
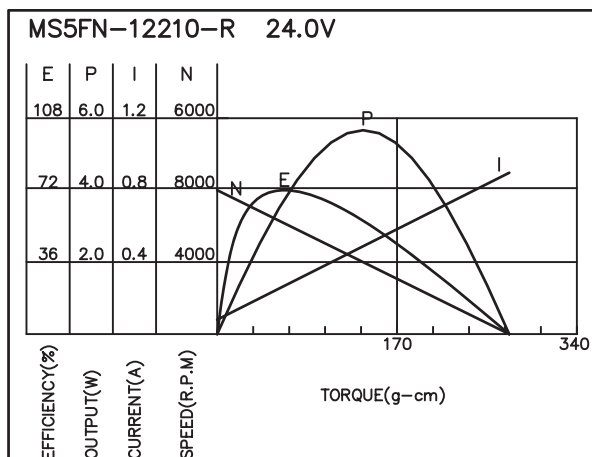
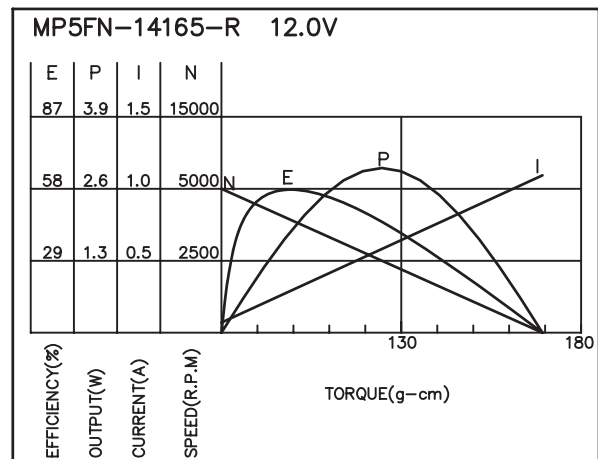
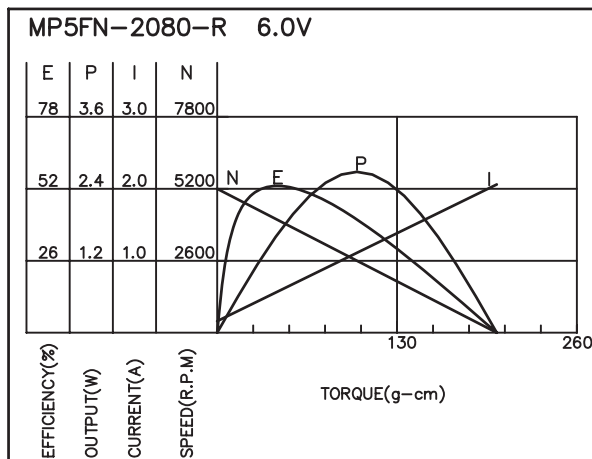
Application : Hair Dryer、Printer、Vacuum Robot

用途：吹風機、印表機、智能吸塵機器人



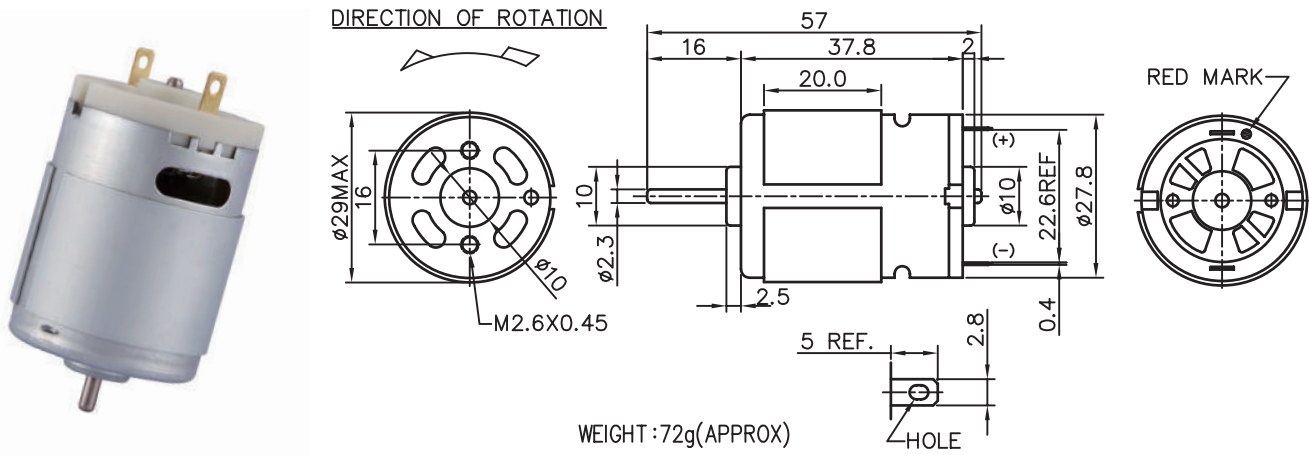
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	%	CURRENT A	TORQUE g-cm	mN-m
MP5FN-2080-R	6.0-12.0	6.0V CONSTANT	5200	0.16	4000	0.54	41	4.02	1.70	53	2.06	202	19.80
MP5FN-14165-R	6.0-24.0	12.0V CONSTANT	5000	0.07	3920	0.26	43	4.22	1.71	58	1.09	232	22.75
MS5FN-12210-R	12.0-24.0	24.0V CONSTANT	8000	0.08	6313	0.24	60	5.88	3.88	73	0.88	276	27.06
MS5FN-16120-R	12.0-24.0	12.0V CONSTANT	7600	0.10	5800	0.46	48	4.71	2.89	54	1.70	235	23.04

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



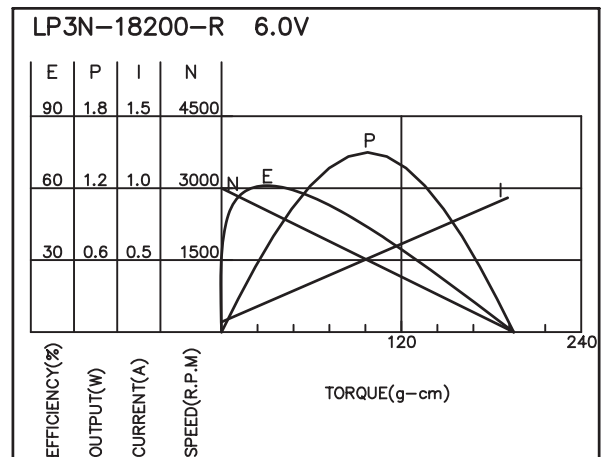
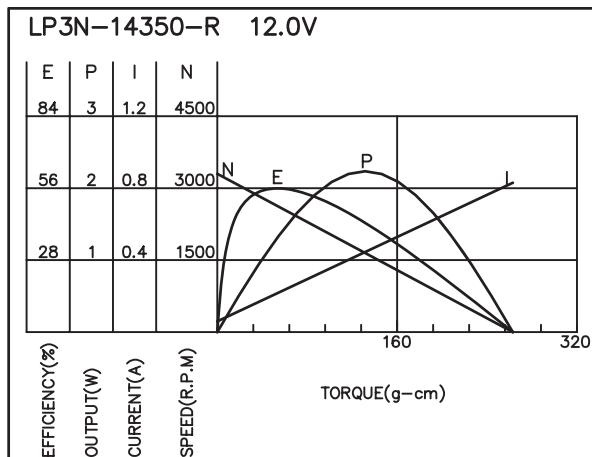
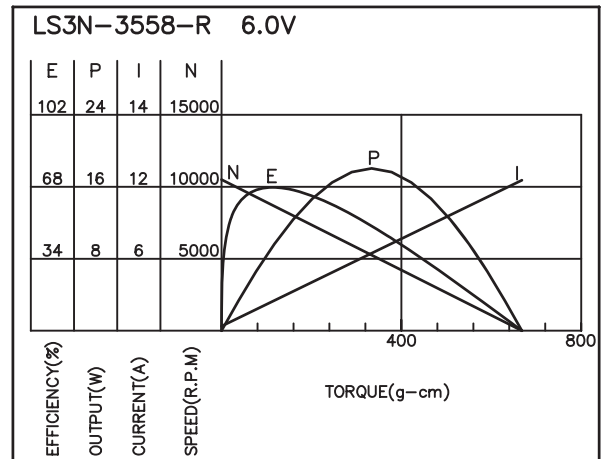
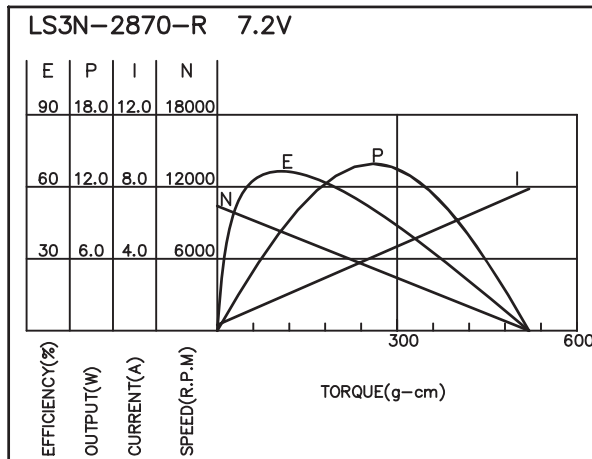
Application : Warning Light 、 Drill & Screwdriver

用途：警示燈、電動工具



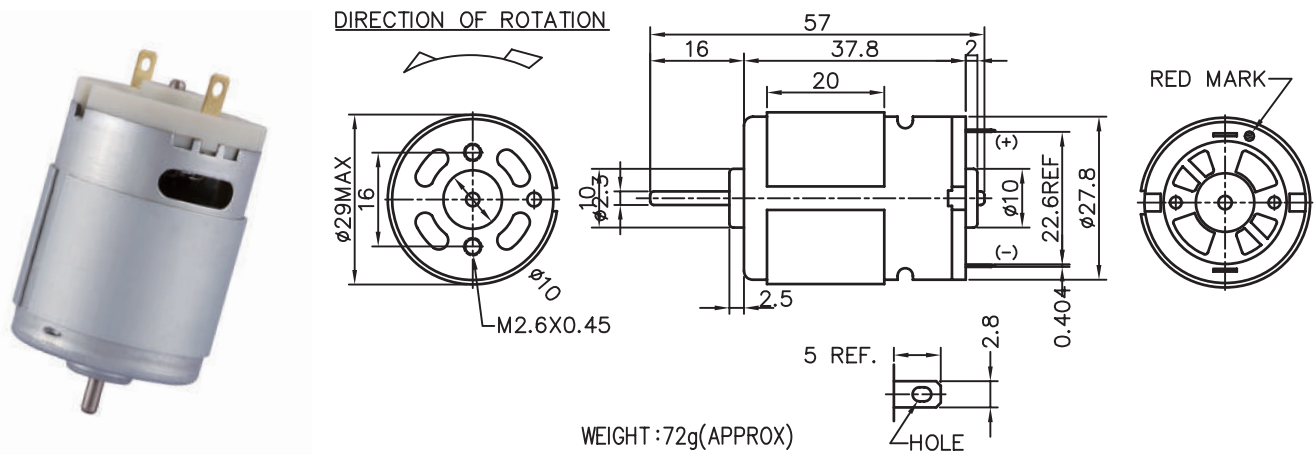
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
LS3N-2870-R	6.0 - 12.0	7.2V CONSTANT	10400	0.32	8400	1.73	94	9.21	8.28	66	7.88	520	50.98
LS3N-3558-R	3.0 - 7.2	6.0V CONSTANT	10500	0.40	8800	2.20	98	9.61	8.93	68	12.60	668	65.49
LP3N-14350-R	6.0 - 12.0	12.0V CONSTANT	3200	0.06	2600	0.21	57	5.20	1.43	57	0.83	263	25.78
LP3N-18200-R	6.0 - 12.0	6.0V CONSTANT	3000	0.08	2400	0.23	61	2.84	0.74	61	1.12	195	19.11

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
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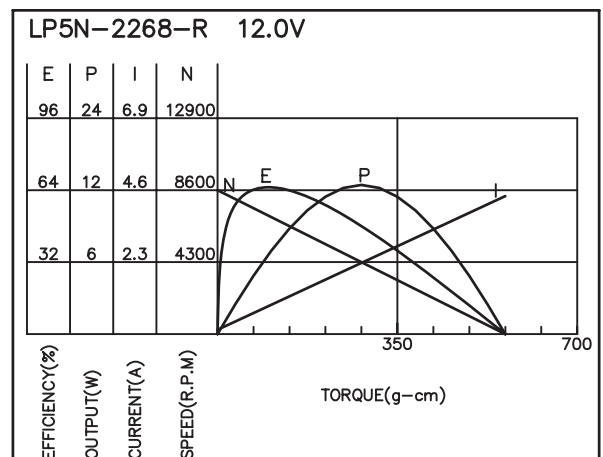
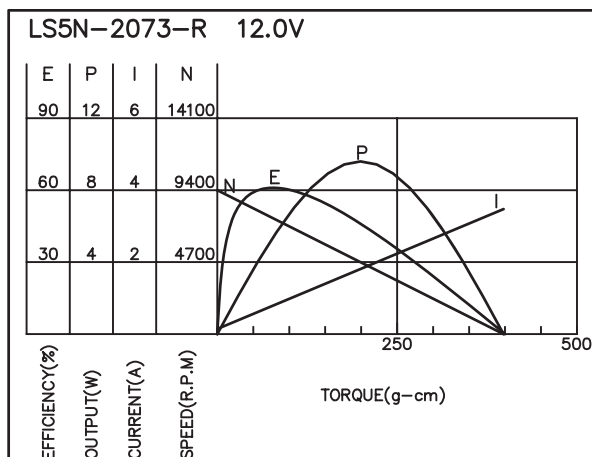
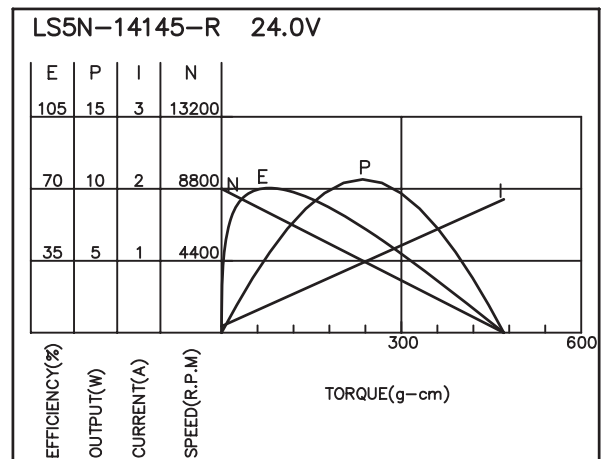
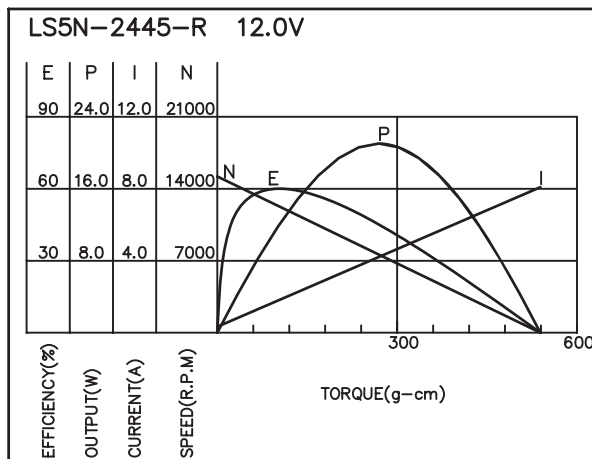
Application : Hair Dryer 、 Vacuum Cleaner

用途：吹風機、吸塵器



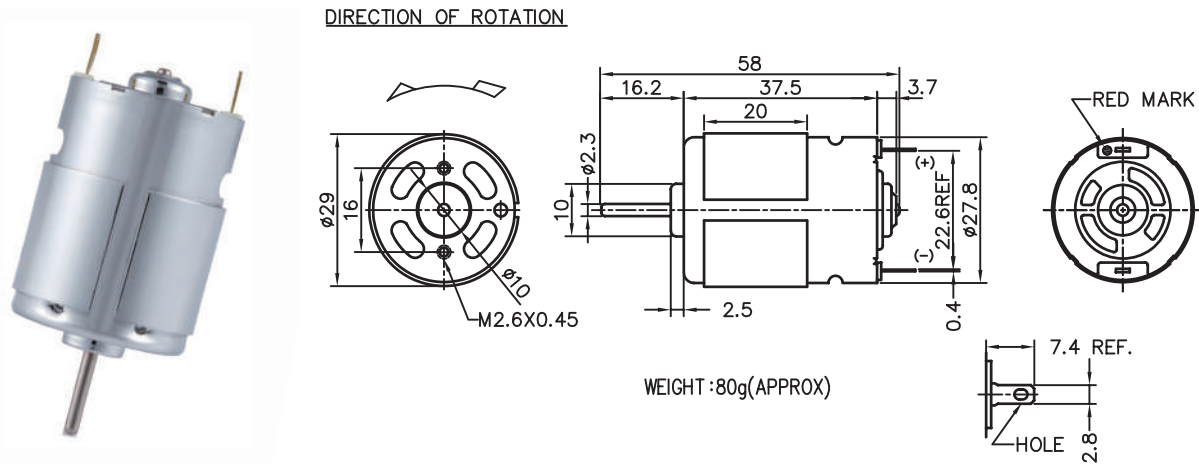
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m
LS5N-2445-R	6.0 - 12.0	12.0V CONSTANT	15200	0.33	12600	1.63	90	8.82	11.75	60	8.09	539	52.84
LS5N-14145-R	12.0 - 24.0	24.0V CONSTANT	8800	0.09	7500	0.32	65	6.37	5.06	70	1.85	471	46.18
LS5N-2073-R	6.0 - 18.0	12.0V CONSTANT	9400	0.14	7200	0.82	79	7.75	5.93	61	3.47	398	39.02
LP5N-2268-R	6.0 - 18.0	12.0V CONSTANT	8600	0.14	7100	0.89	93	9.11	6.87	65	4.41	560	54.90

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



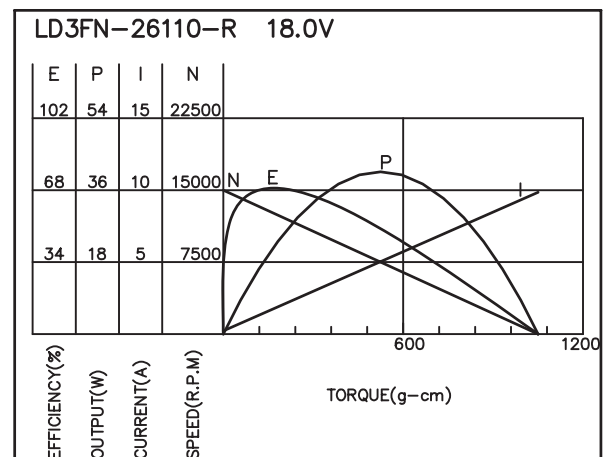
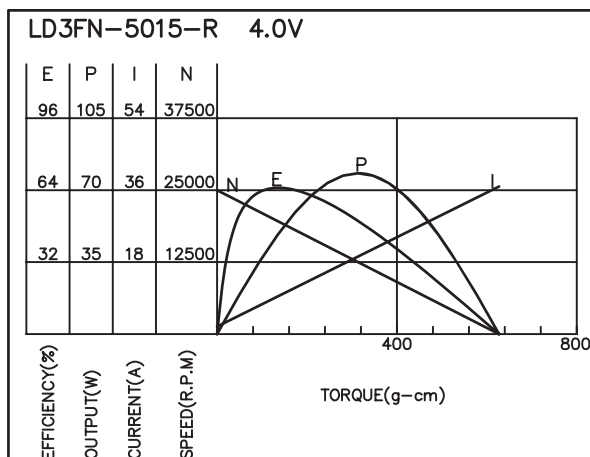
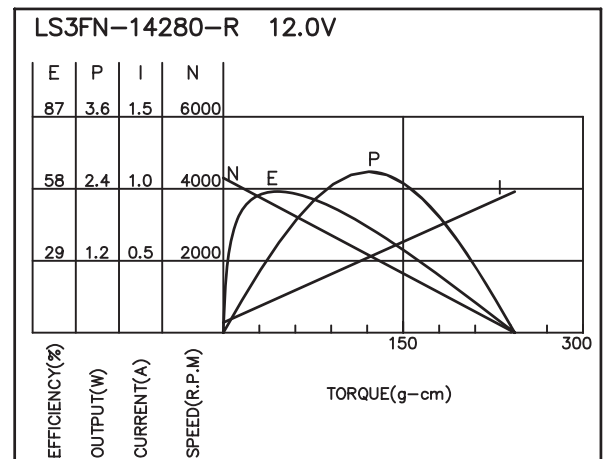
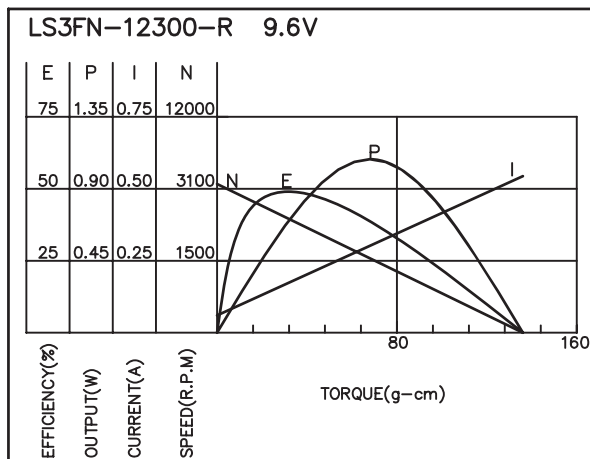
Application : Drill & Screwdriver 、 Pump

用途：電動工具、泵浦



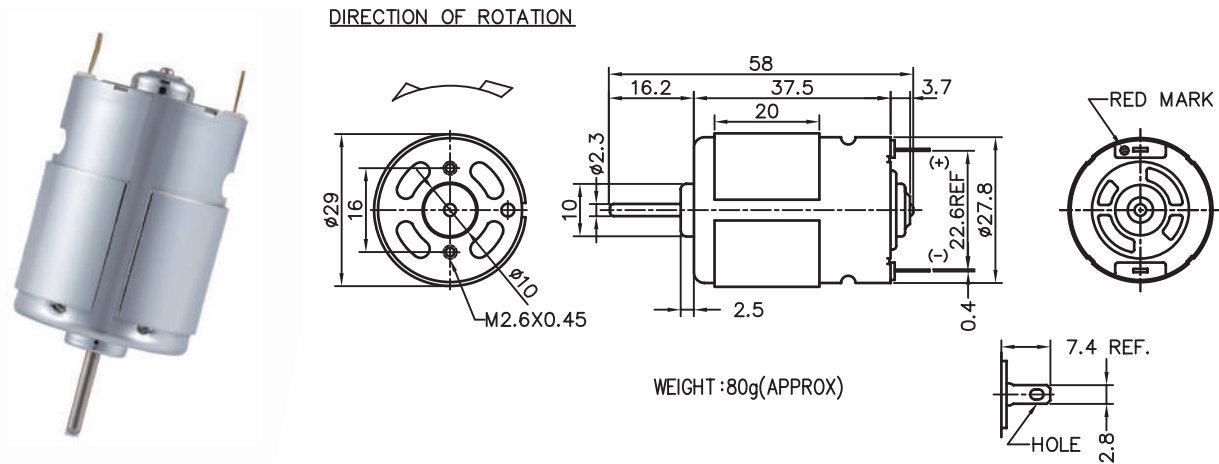
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
LS3FN-12300-R	6.0-24.0	9.6V CONSTANT	3100	0.06	2300	0.17	31	3.04	0.74	49	0.54	136	13.33
LS3FN-14280-R	6.0-24.0	12.0V CONSTANT	4300	0.07	3400	0.23	42	4.12	1.49	57	0.98	243	23.82
LD3FN-5015-R	2.4- 4.8	4.0V CONSTANT	25000	2.10	19900	10.77	135	13.24	27.69	65	41.90	627	61.47
LD3FN-26110-R	6.0-18.0	18.0V CONSTANT	15000	0.22	12800	1.60	149	14.61	19.61	69	9.85	1050	102.94

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



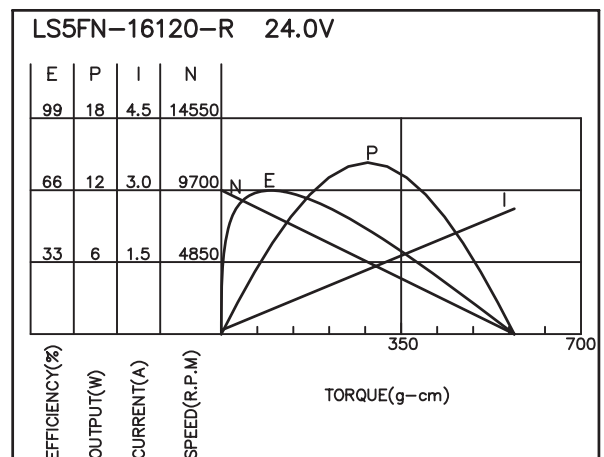
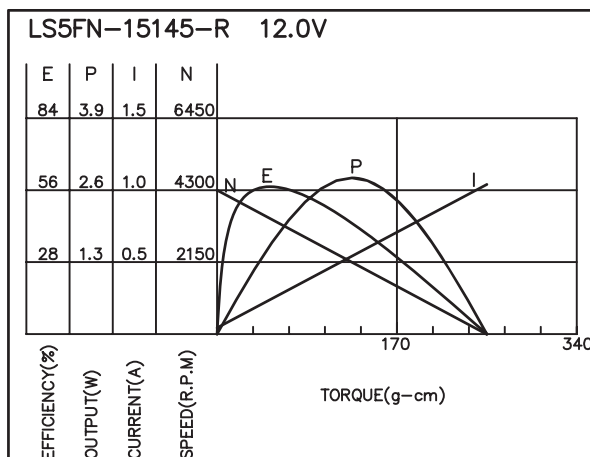
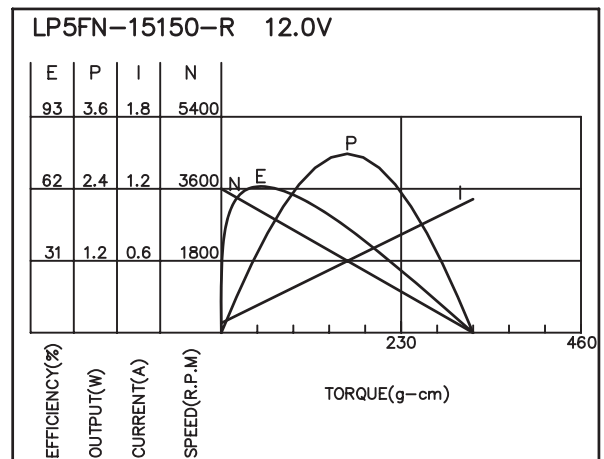
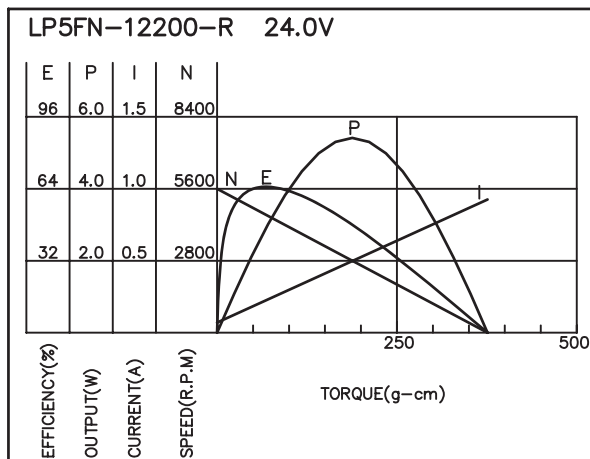
Application : Printer 、 Copy Machine 、 Vacuum Robot

用途：印表機、影印機、智能吸塵機器人



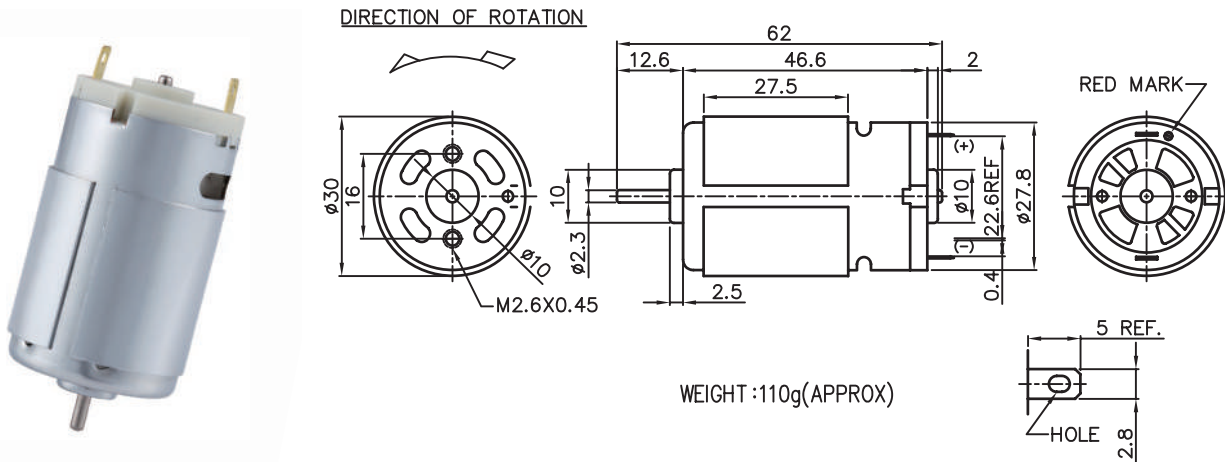
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
LP5FN-12200-R	12.0-36.0	24.0V CONSTANT	5600	0.07	4554	0.20	63	6.18	2.96	65	0.93	376	36.86
LP5FN-15150-R	9.0-24.0	12.0V CONSTANT	3600	0.08	3078	0.23	51	5.00	1.63	63	1.11	322	31.57
LS5FN-15145-R	9.0-24.0	12.0V CONSTANT	4300	0.06	3400	0.26	49	4.80	1.73	57	1.04	255	25.00
LS5FN-16120-R	12.0-32.0	24.0V CONSTANT	9700	0.08	8200	0.46	82	8.04	7.01	66	2.61	570	55.88

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



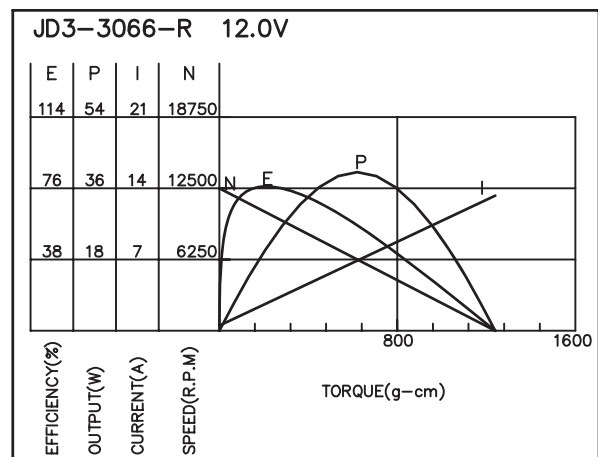
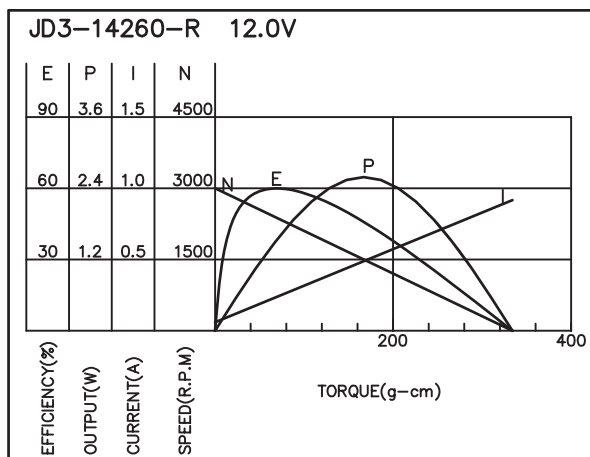
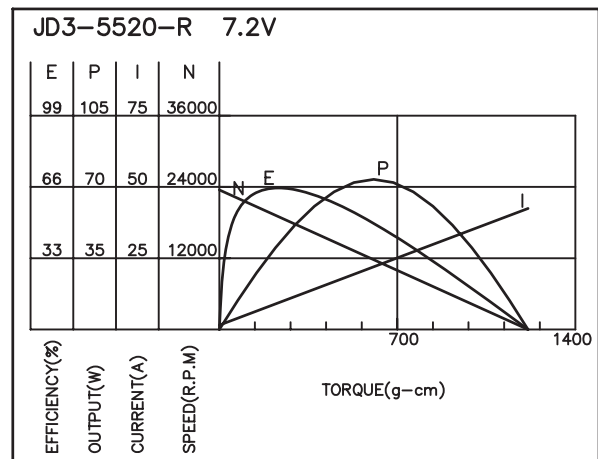
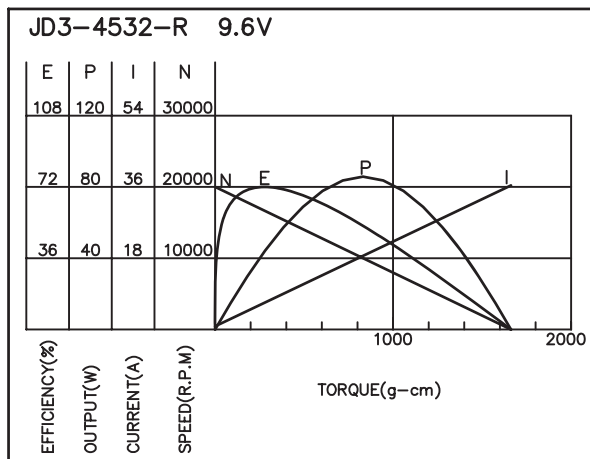
Application : Drill & Screwdriver 、 Vacuum Robot

用途：電動工具、智能吸塵機器人



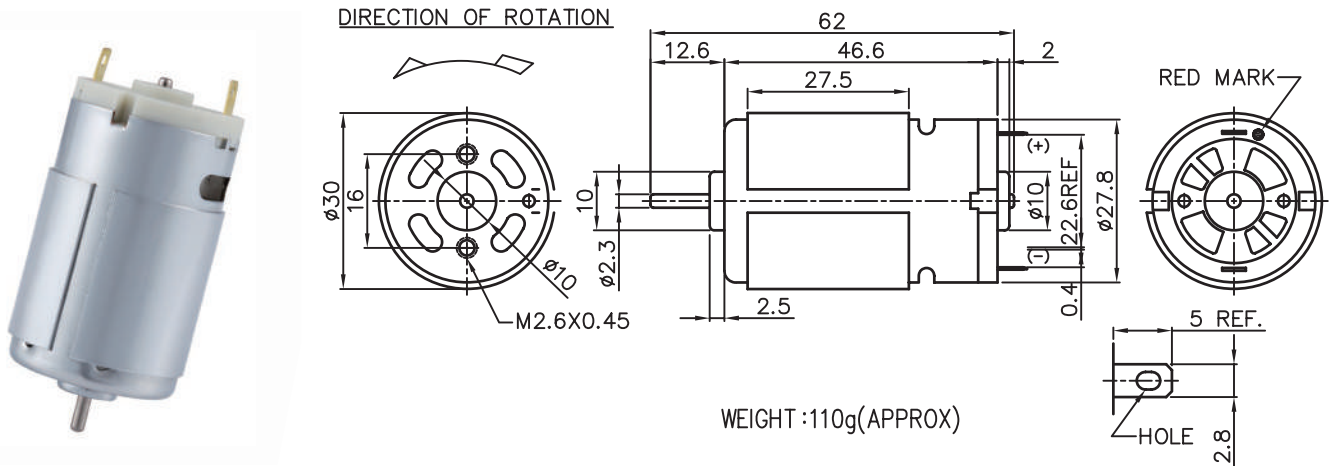
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF %	CURRENT A	TORQUE g-cm	mN-m	
JD3-4532-R	4.8 - 9.6	9.6V CONSTANT	20000	0.80	16800	5.60	223	23.86	38.73	72	36.39	1662	162.94
JD3-5520-R	3.6 - 7.2	7.2V CONSTANT	23500	1.50	19500	8.17	191	18.73	38.35	66	42.45	1214	119.02
JD3-14260-R	6.0 - 24.0	12.0V CONSTANT	3000	0.06	2300	0.22	64	6.27	1.54	60	0.91	334	32.75
JD3-3066-R	6.0 - 18.0	12.0V CONSTANT	12500	0.35	10661	1.96	160	15.69	17.50	77	13.28	1240	121.57

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



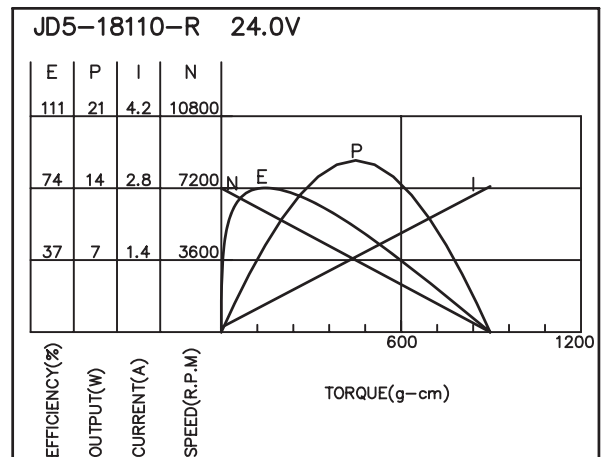
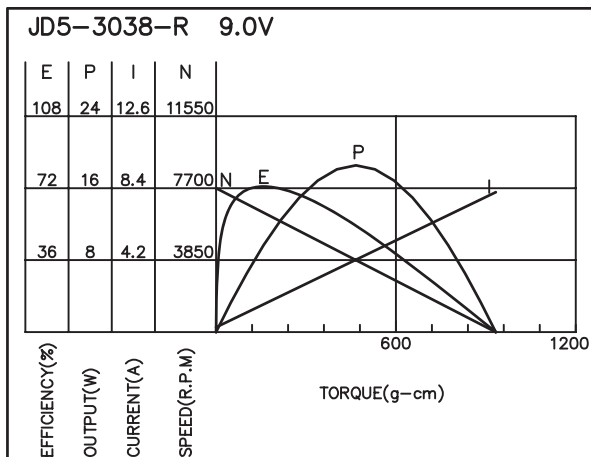
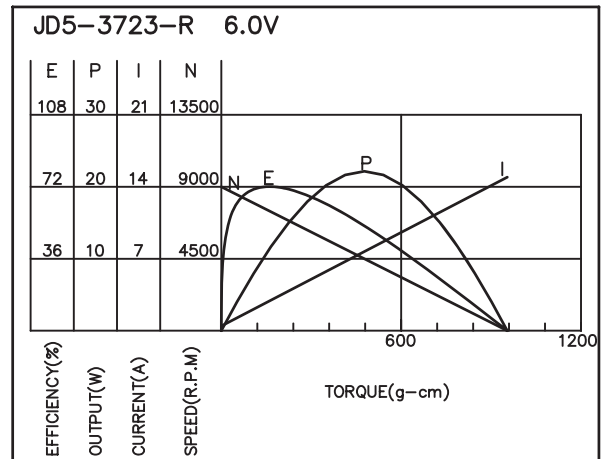
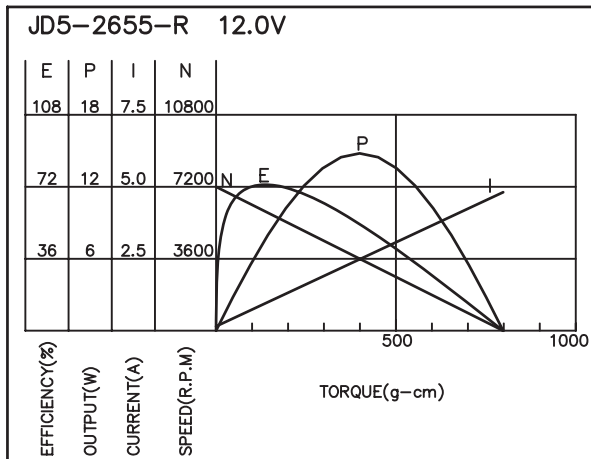
Application : Hair Clipper 、 Hair Remover 、 Pump

用途：電動理髮器、電動刮毛器、泵浦



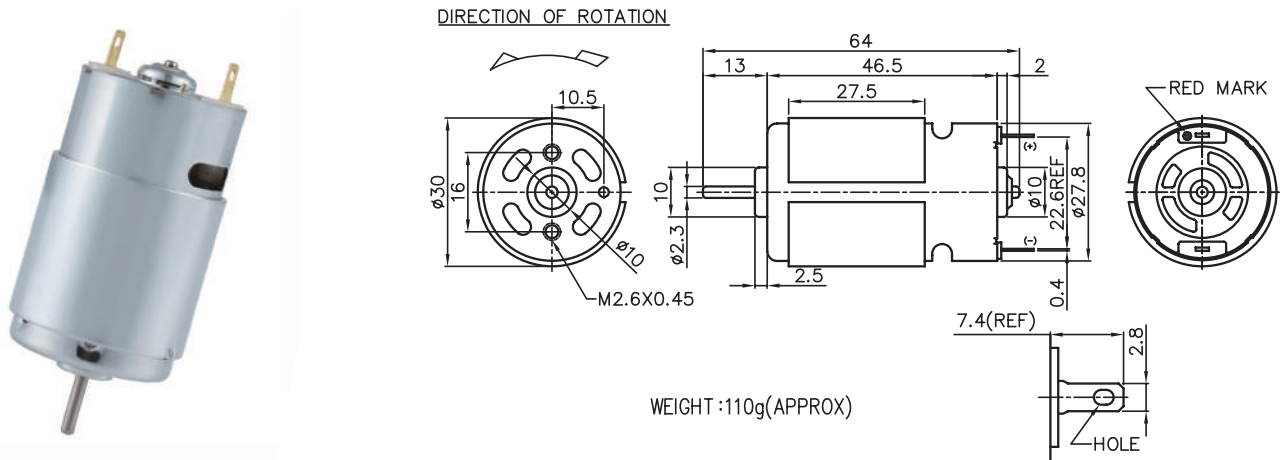
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	%	CURRENT A	TORQUE g-cm	mN-m
JD5-2655-R	6.0-24.0	12.0V CONSTANT	7200	0.15	5900	0.87	123	12.11	7.50	73	4.81	798	78.25
JD5-3723-R	6.0-12.0	6.0V CONSTANT	9000	0.45	7500	2.46	136	13.33	10.64	72	14.97	954	93.53
JD5-3038-R	6.0-24.0	9.0V CONSTANT	7700	0.28	6623	1.33	126	12.35	8.60	73	8.17	933	91.47
JD5-18110-R	12.0-24.0	24.0V CONSTANT	7200	0.09	6262	0.41	112	10.98	7.20	74	2.83	898	88.04

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



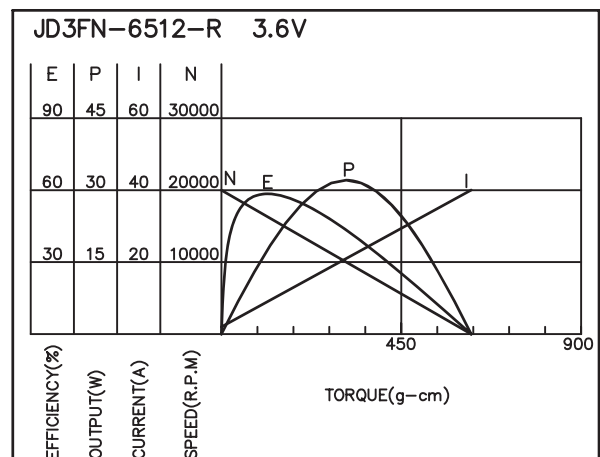
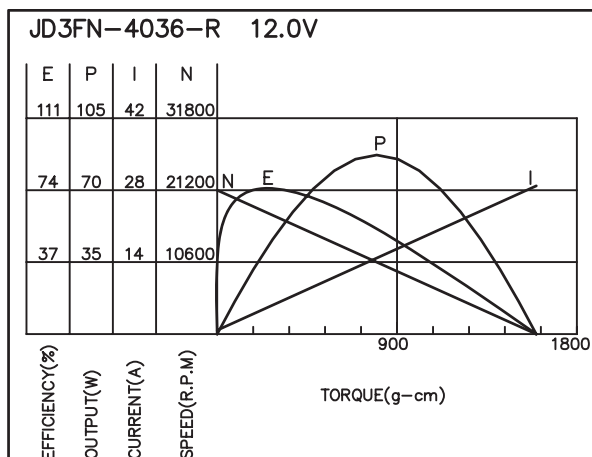
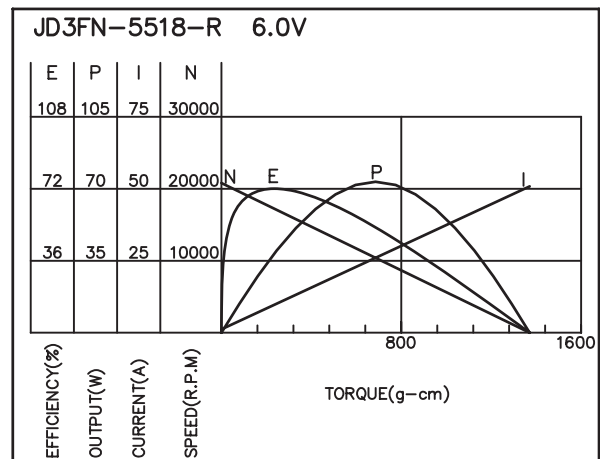
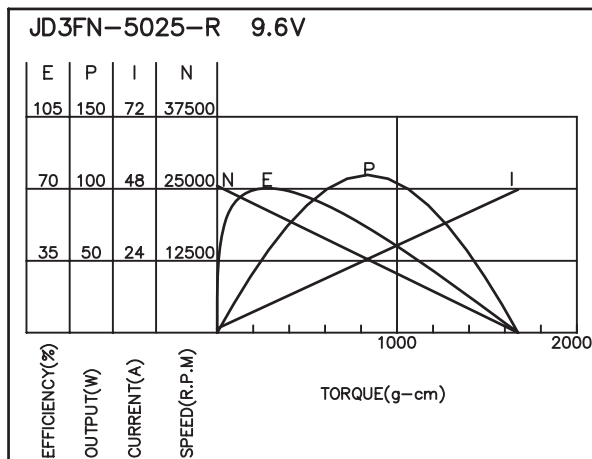
Application : Figurine 、 Drill & Screwdriver 、 Air Pump

用途：模型、電動工具、氣泵



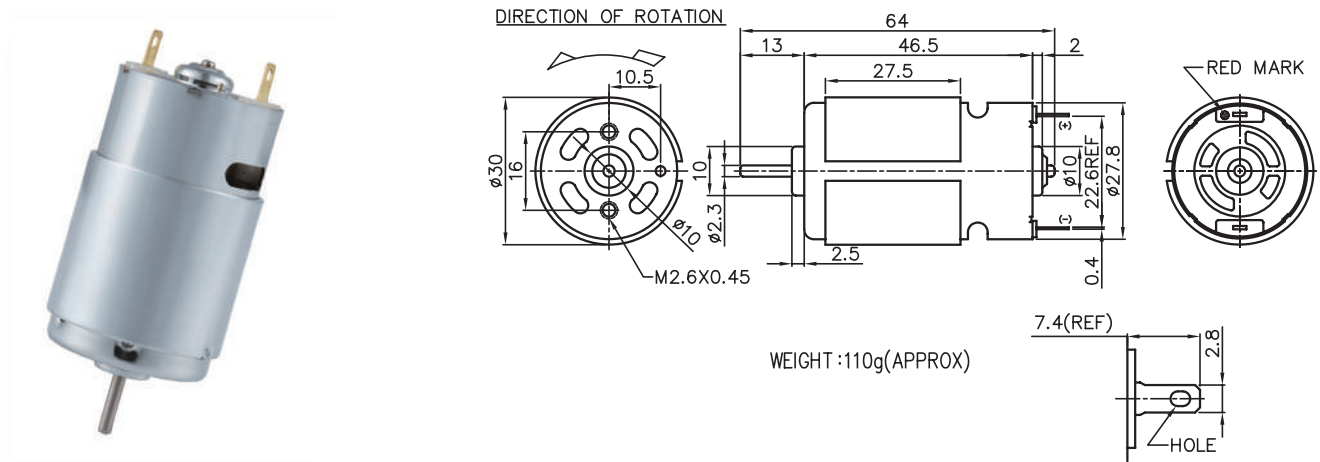
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
JD3FN-5025-R	4.8 - 9.6	9.6V CONSTANT	25500	1.40	21800	7.75	230	22.55	51.68	70	47.75	1673	164.02
JD3FN-5518-R	3.6 - 6.0	6.0V CONSTANT	20800	1.20	17600	8.76	209	20.49	37.98	72	50.84	1371	134.41
JD3FN-4036-R	6.0 - 12.0	12.0V CONSTANT	21200	0.75	17986	4.77	289	28.33	42.22	75	28.77	1598	156.67
JD3FN-6512-R	2.4 - 3.6	3.6V CONSTANT	20000	2.00	16340	8.89	113	11.08	18.89	59	40.05	626	61.37

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



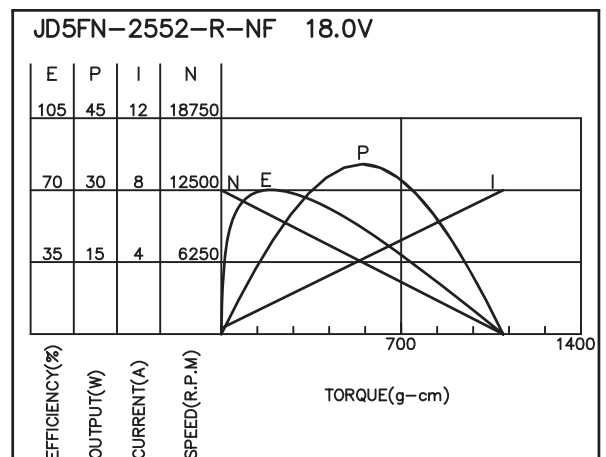
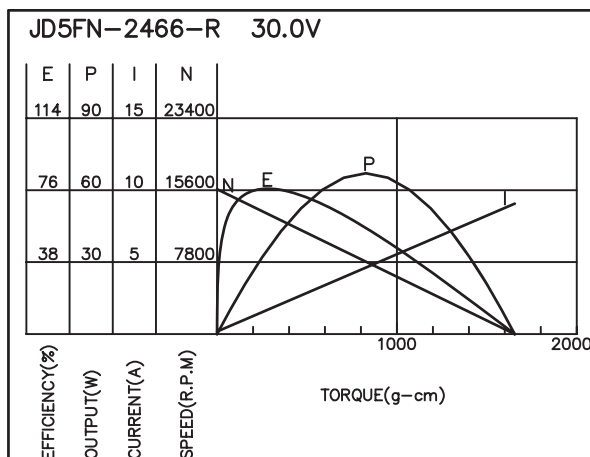
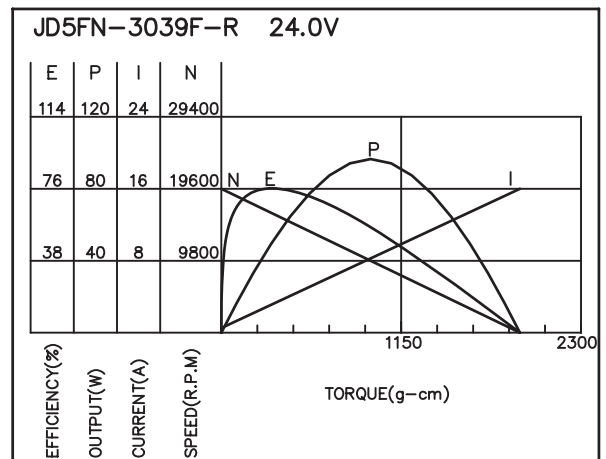
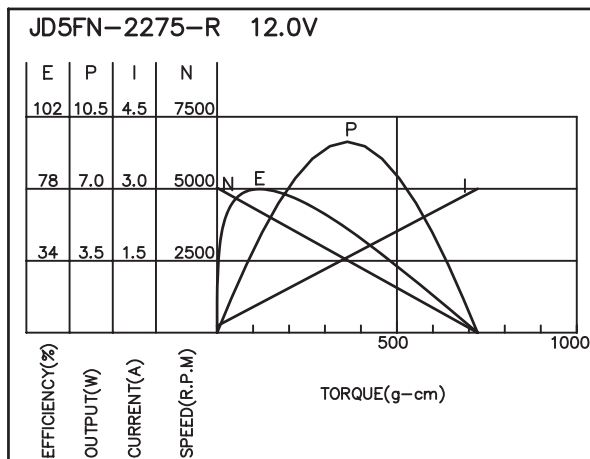
Application : Car Window Shade 、Printer 、Pump 、Drill & Screwdriver

用途：汽車遮陽簾、印表機、泵浦、電動工具



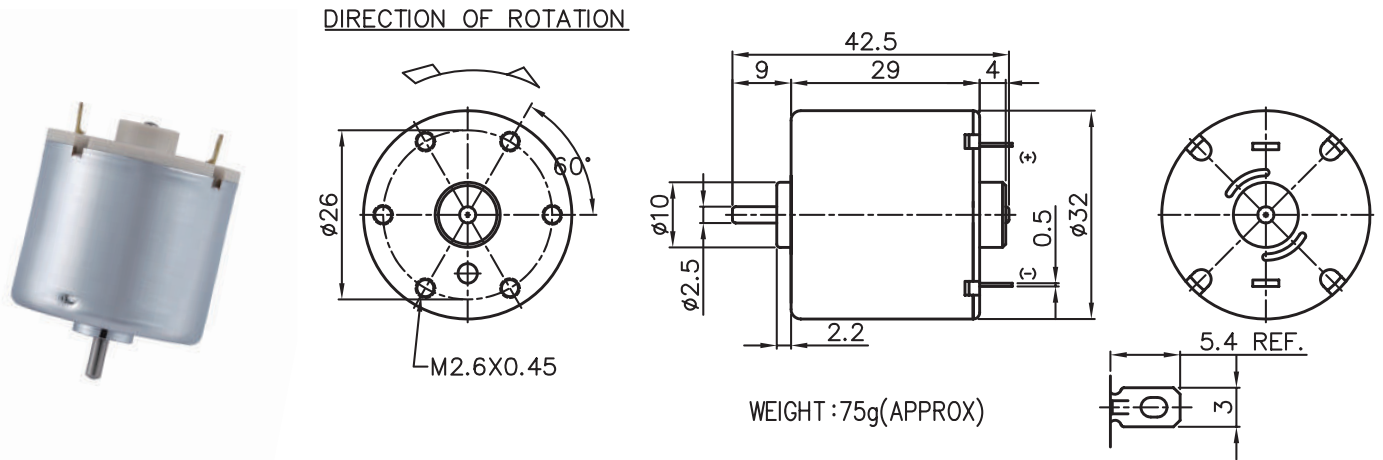
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
JD5FN-2275-R	12.0-24.0	12.0V CONSTANT	5000	0.14	4177	0.55	103	10.10	4.42	68	3.23	724	70.98
JD5FN-3039F-R	6.0-24.0	24.0V CONSTANT	19600	0.52	16784	2.38	250	24.51	43.05	76	15.82	1909	187.16
JD5FN-2466-R	12.0-36.0	30.0V CONSTANT	15700	0.18	13900	1.12	173	16.96	24.89	77	9.07	1655	162.25
JD5FN-2552-R-NF	12.0-24.0	18.0V CONSTANT	12500	0.32	10650	1.51	176	17.25	19.23	70	8.08	1098	107.65

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



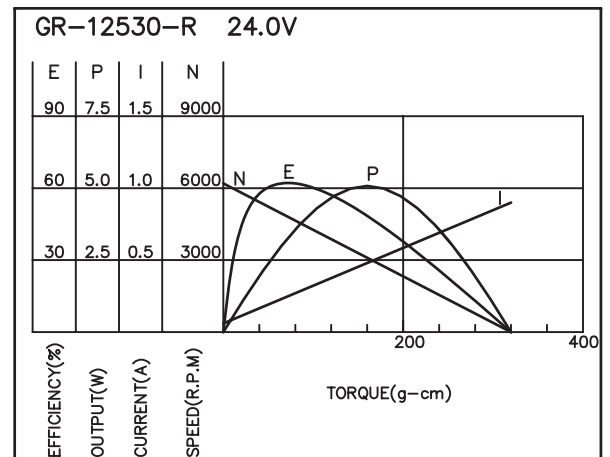
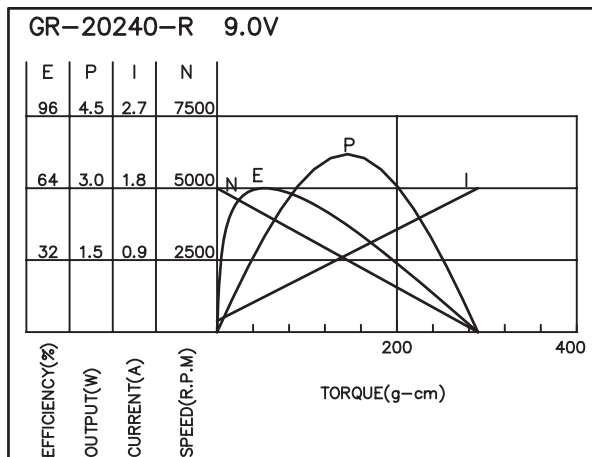
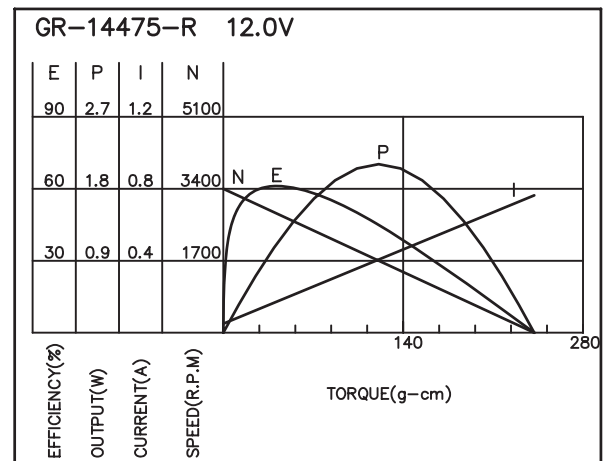
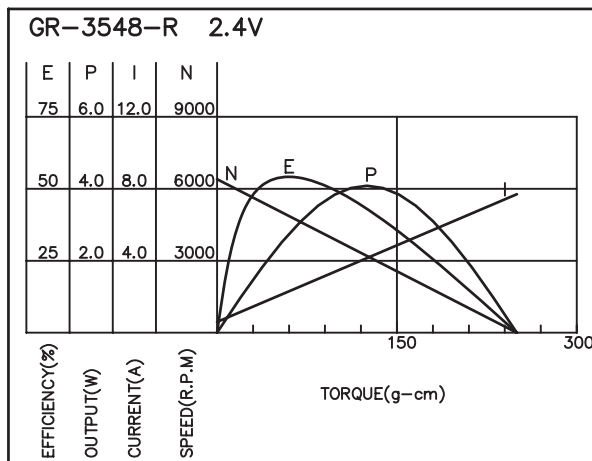
Application : Vending Machine 、 Power antenna 、 Electric Screwdriver

用途：自動販賣機、電動天線、電動螺絲起子



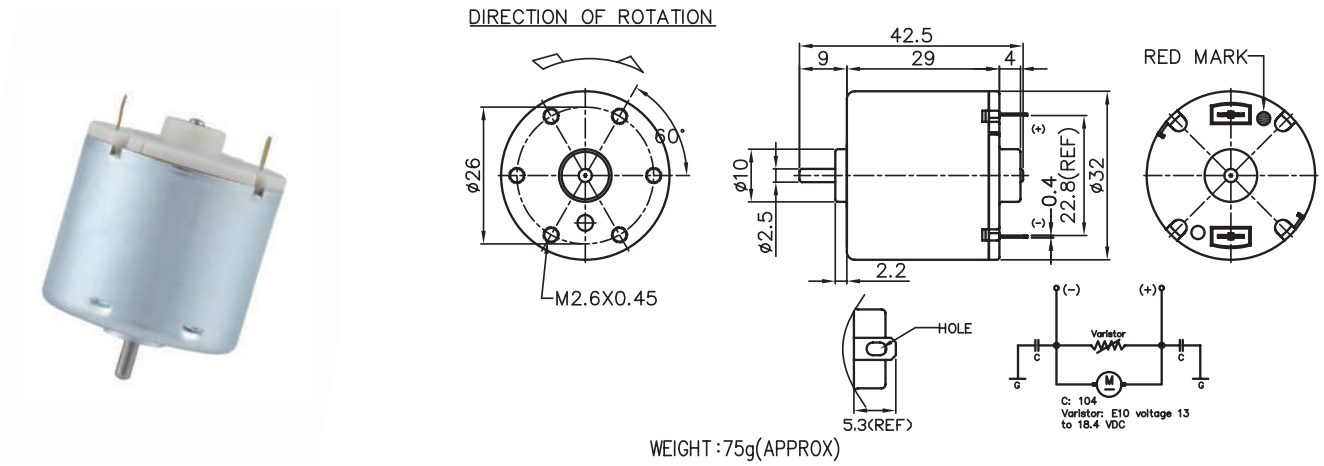
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
GR-3548-R	1.2 - 3.6	2.4V CONSTANT	6400	0.60	5000	2.15	54.55	5.35	2.80	54.27	7.70	250	24.51
GR-14475-R	12.0-24.0	12.0V CONSTANT	3400	0.06	2944	0.14	30.05	2.95	0.91	61.00	0.76	242	23.73
GR-20240-R	6.0-18.0	9.0V CONSTANT	5000	0.14	4021	0.36	45.62	4.47	1.88	64.00	1.82	290	28.43
GR-12530-R	12.0-24.0	24.0V CONSTANT	6200	0.06	5000	0.21	61.76	6.05	3.17	62.31	0.90	320	31.37

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



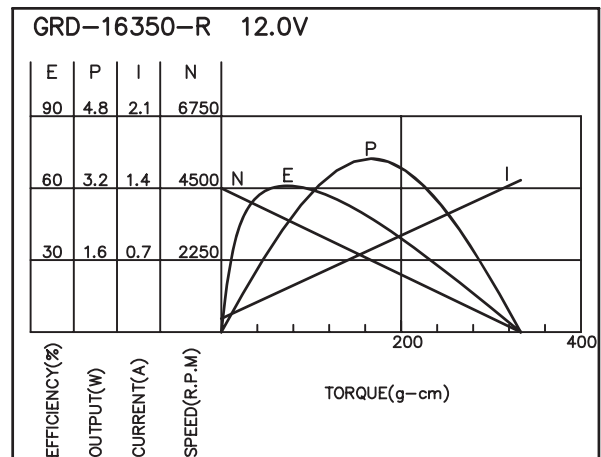
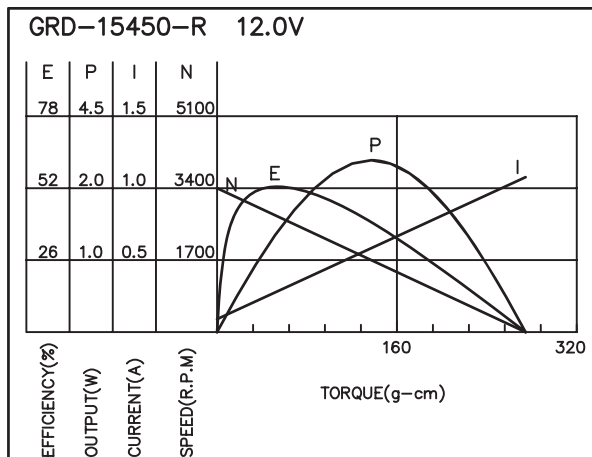
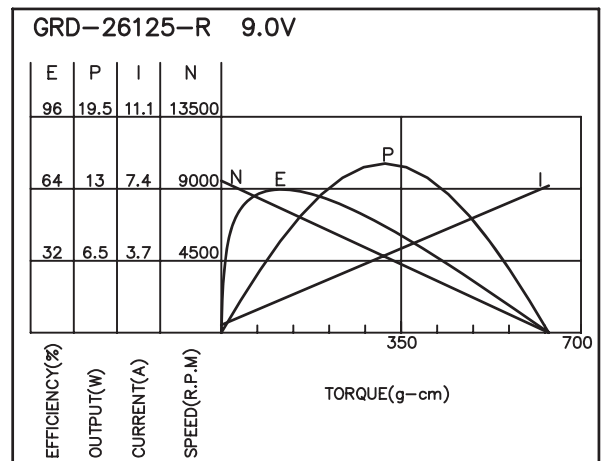
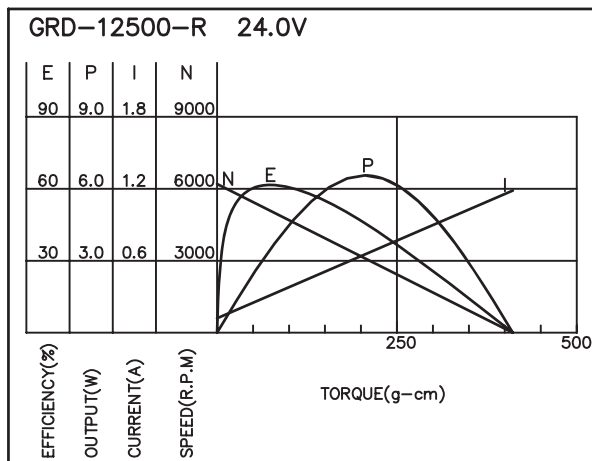
Application : Drill & Screwdriver 、 Tire Pump 、 Power antenna 、 Auto Transformer

用途：電動工具、汽車打氣泵、電動天線、自動變壓器



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
GRD-12500-R	12.0-24.0	24.0V CONSTANT	6200	0.12	4958	0.27	73.67	7.22	3.75	61.31	1.19	411	40.29
GRD-26125-R	3.0-9.0	9.0V CONSTANT	9500	0.40	7746	1.39	97.96	9.60	7.79	64.00	7.55	637	62.45
GRD-15450-R	12.0-24.0	12.0V CONSTANT	3400	0.09	2851	0.24	45.89	4.50	1.34	52.08	1.08	273	26.76
GRD-16350-R	12.0-24.0	12.0V CONSTANT	4500	0.13	3574	0.34	65.11	6.38	2.39	61.25	1.48	333	32.65

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

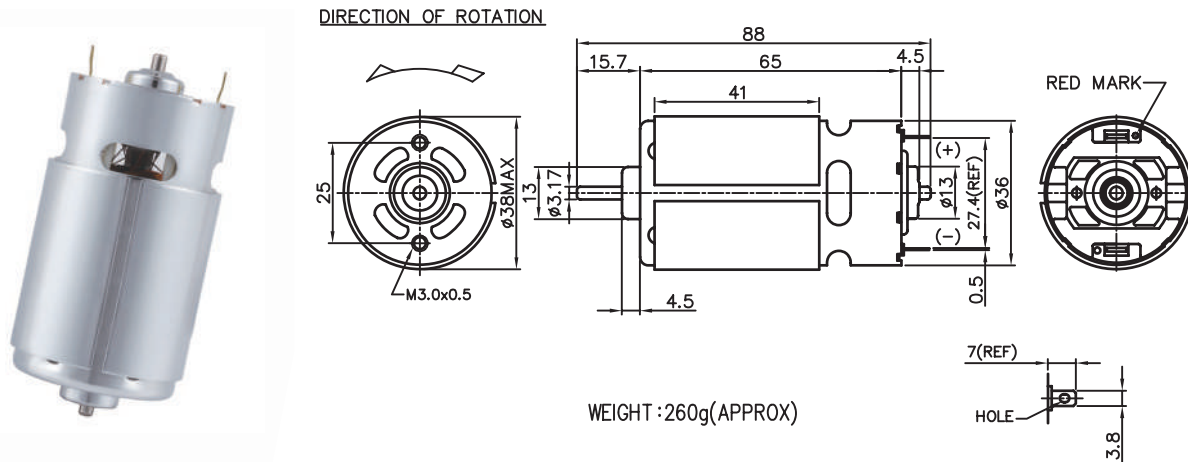


N3FN

Carbon-brush motors

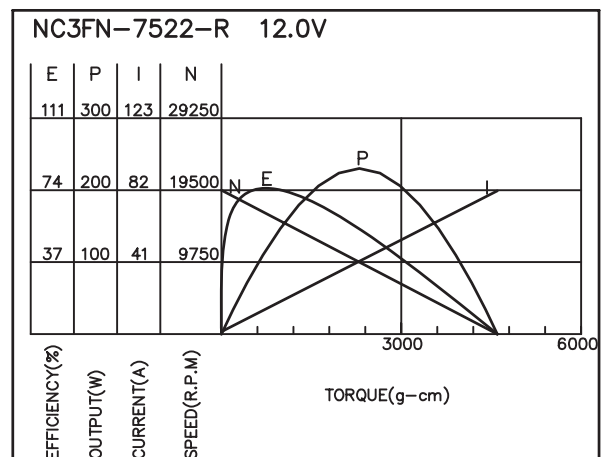
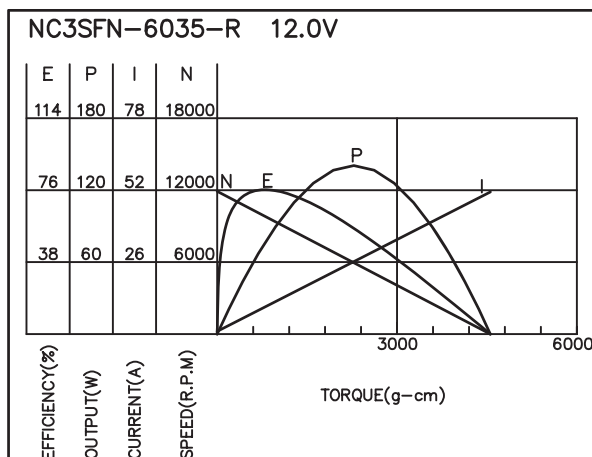
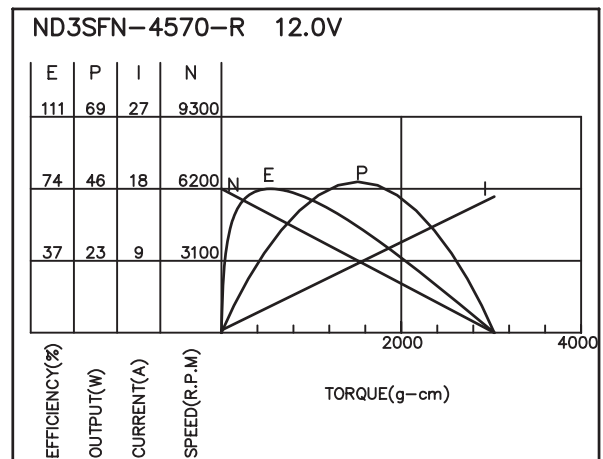
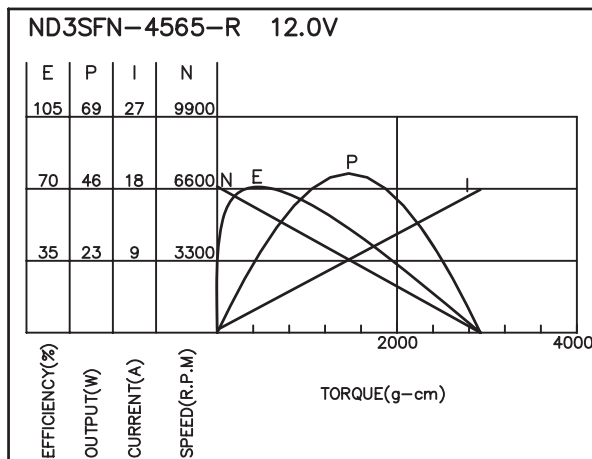
Application : Drill & Screwdriver 、 Motorized Toy

用途：電動工具、玩具



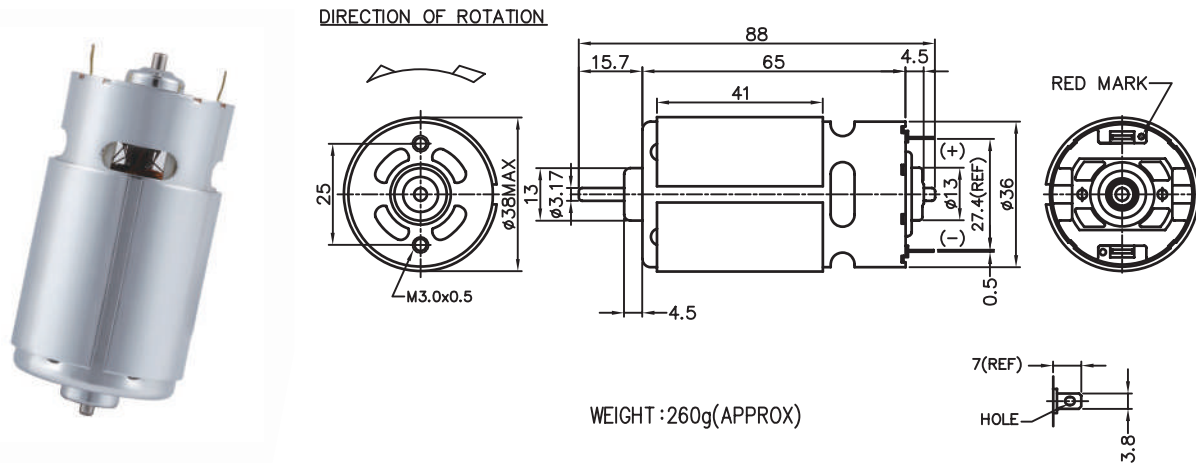
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
ND3SFN-4565-R	6.0 - 24.0	12.0V CONSTANT	6700	0.50	5800	2.60	367	35.98	22.00	71	17.91	2927	286.96
ND3SFN-4570-R	6.0 - 24.0	12.0V CONSTANT	6200	0.30	5400	2.17	342	33.53	19.08	74	17.02	3034	297.45
NC3SFN-6035-R	6.0 - 18.0	12.0V CONSTANT	12000	1.00	10700	5.63	465	45.59	51.50	76	51.36	4557	446.76
NC3SFN-7522-R	6.0 - 12.0	12.0V CONSTANT	19500	1.40	17500	9.42	466	45.69	83.95	75	81.60	4603	451.27

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



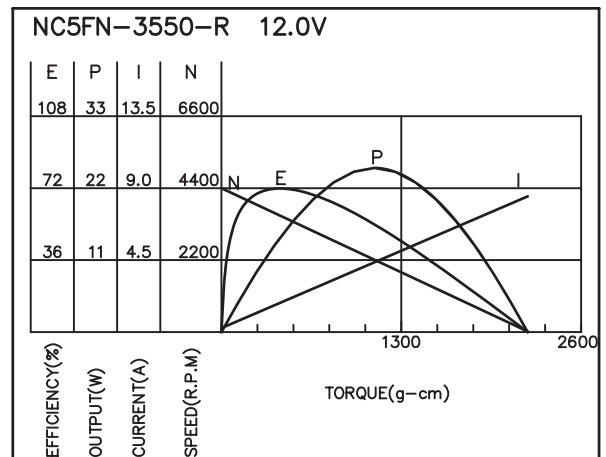
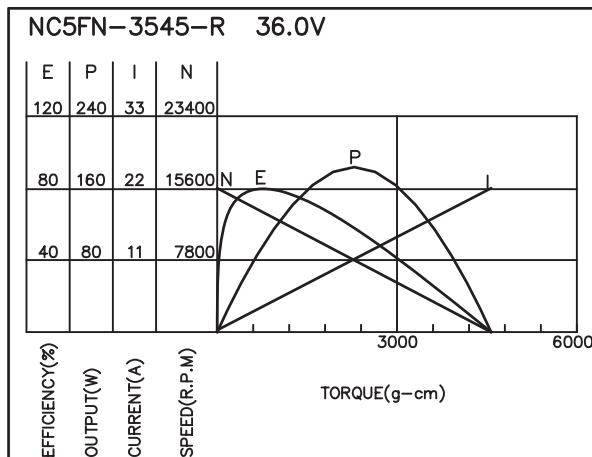
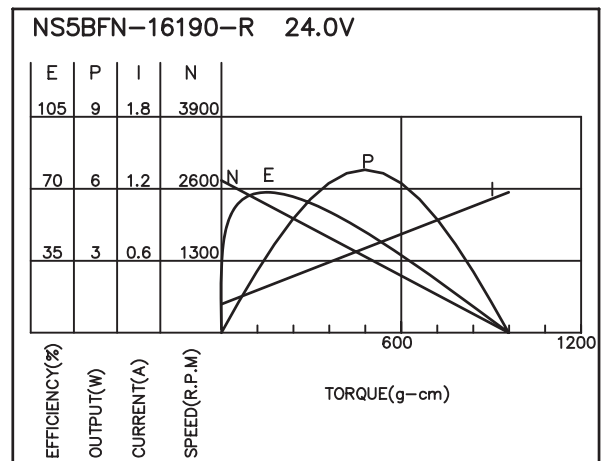
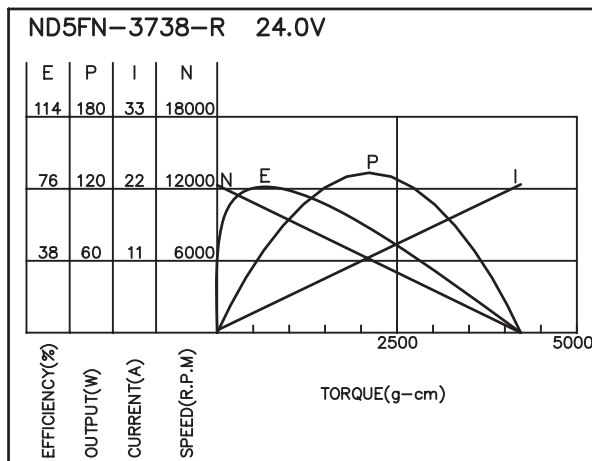
Application : Drill & Screwdriver 、 Motorized Toy

用途：電動工具、玩具



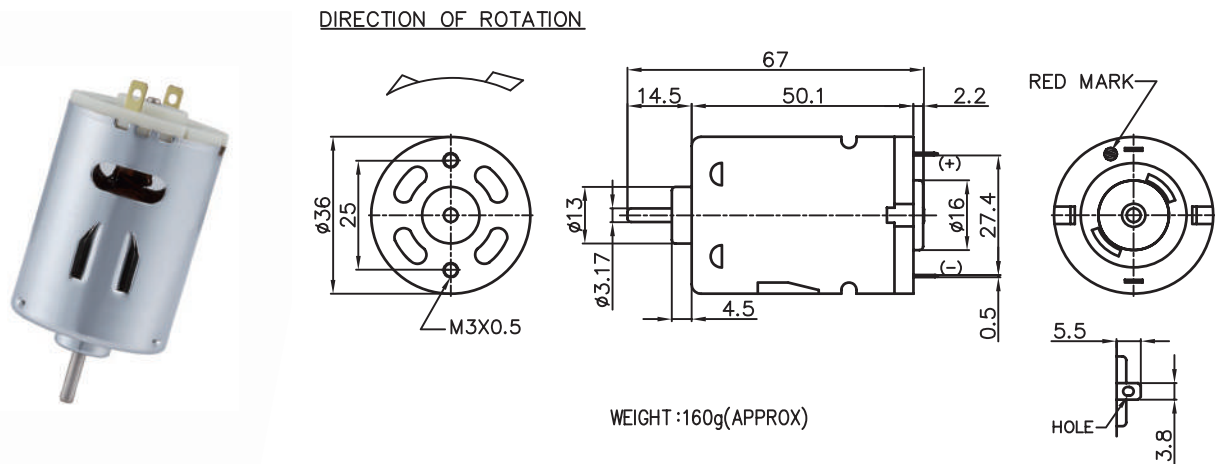
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	TORQUE mN-m	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m
ND5FN-3738-R	12.0 - 24.0	24.0V CONSTANT	12300	0.40	10900	2.60	452	44.31	50.89	77	22.65	4220	413.73
NS5BFN-16190-R	12.0 - 36.0	24.0V CONSTANT	2750	0.09	2199	0.24	155	15.18	3.49	68	1.18	958	93.92
NC5FN-3545-R	12.0 - 36.0	36.0V CONSTANT	15600	0.30	14300	2.14	415	40.69	21.85	80	21.85	4578	448.82
NC5FN-3550-R	12.0 - 36.0	12.0V CONSTANT	4400	0.25	3700	1.40	313	30.69	12.03	72	8.49	2214	217.06

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



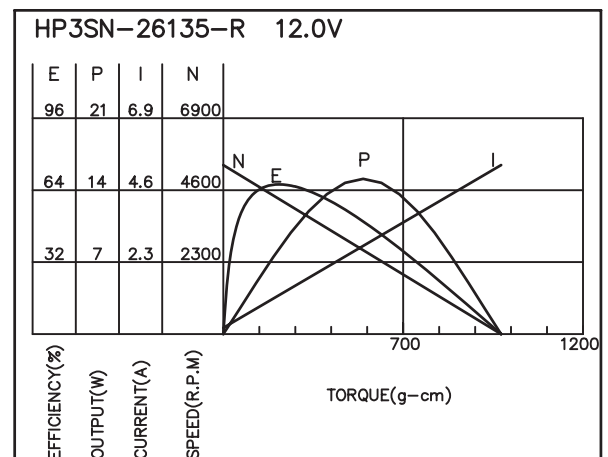
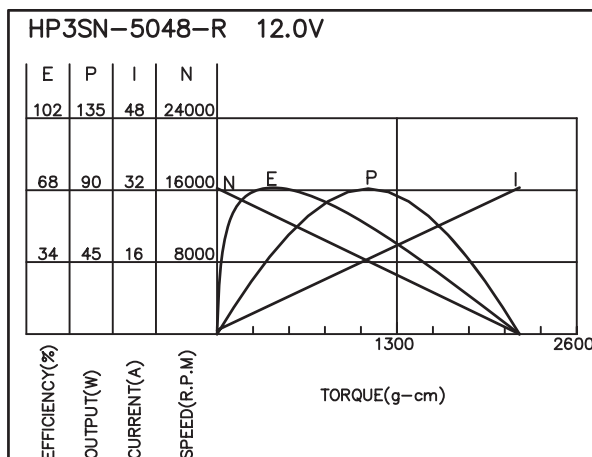
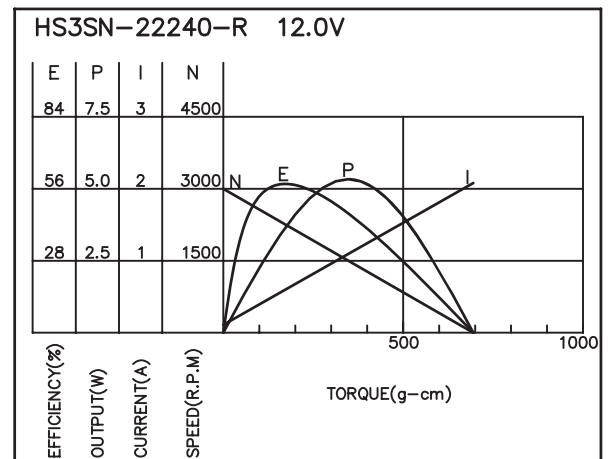
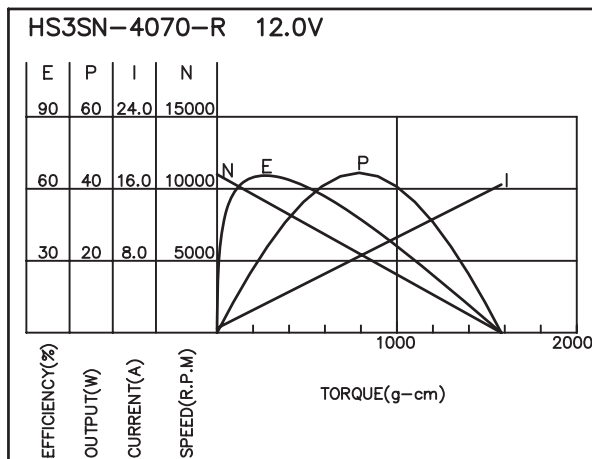
Application : R/C Car、Drill & Screwdriver、Tire Pump

用途：遙控車、電動工具、汽車打氣泵



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
HS3SN-4070-R	6.0 - 12.0	12.0V CONSTANT	11000	0.50	9300	2.87	235	23.04	22.58	65	16.46	1580	154.90
HS3SN-22240-R	12.0 - 24.0	12.0V CONSTANT	3000	0.11	2300	0.56	162	15.88	3.84	58	2.07	695	68.14
HP3SN-5048-R	6.0 - 12.0	12.0V CONSTANT	16200	0.86	13800	5.38	312	30.59	44.34	69	32.55	2186	214.31
HP3SN-26135-R	12.0 - 24.0	12.0V CONSTANT	5400	0.20	4400	0.98	163	15.98	7.50	65	5.43	1081	105.98

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

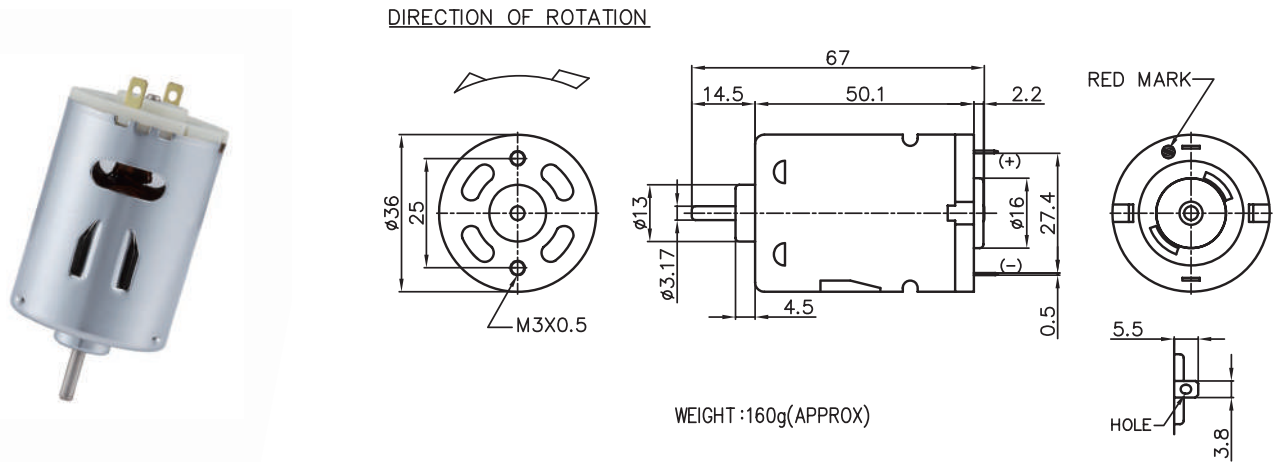


H5N

Carbon-brush motors

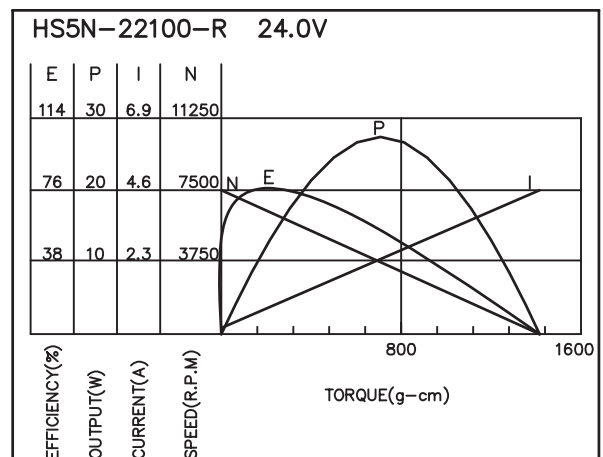
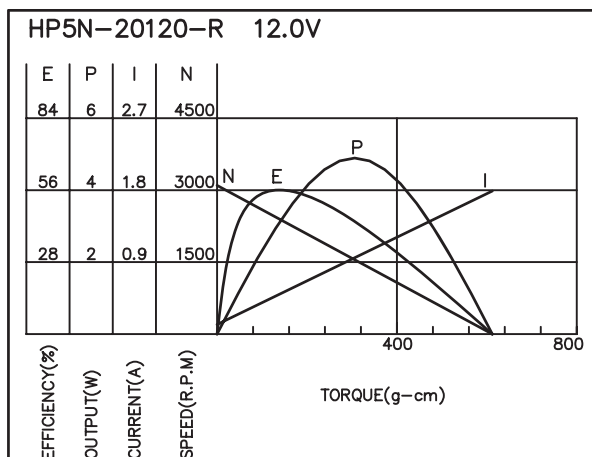
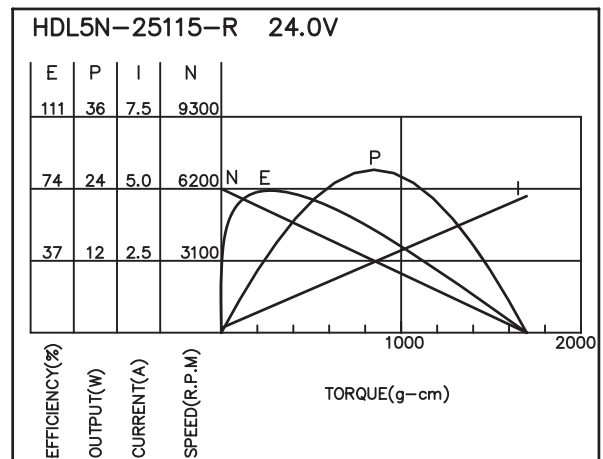
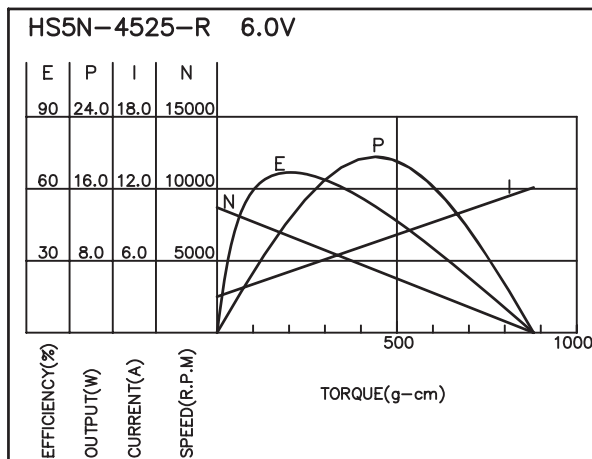
Application : Vacuum Cleaner 、 Drill & Screwdriver 、 Pump 、 Coffee Machine

用途：吸塵器、電動工具、泵浦、咖啡機



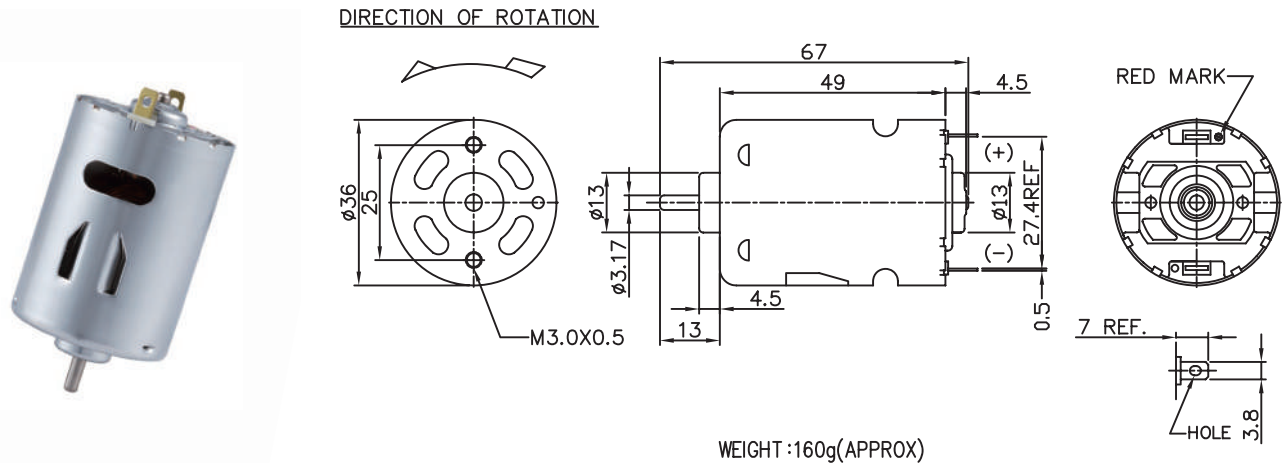
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
HS5N-4525-R	6.0 - 12.0	6.0V CONSTANT	8700	1.00	6800	3.30	190	18.63	13.25	66	12.10	880	86.27
HDL5N-25115-R	12.0 - 24.0	24.0V CONSTANT	6200	0.16	5405	0.85	263	25.78	14.60	74	4.74	1698	165.59
HP5N-20120-R	12.0 - 24.0	12.0V CONSTANT	3100	0.12	2300	0.47	129	12.65	3.17	56	1.79	612	60.00
HS5N-22100-R	12.0 - 24.0	24.0V CONSTANT	7500	0.20	6693	0.56	148	14.51	10.22	77	4.63	1417	138.92

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



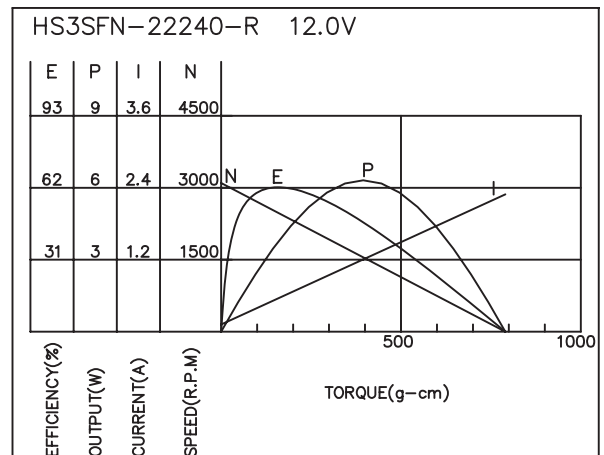
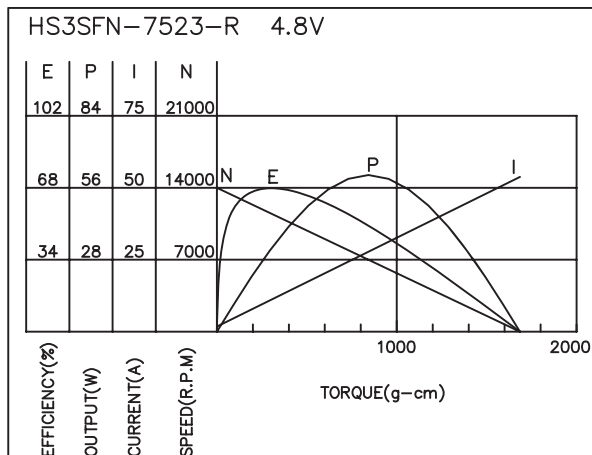
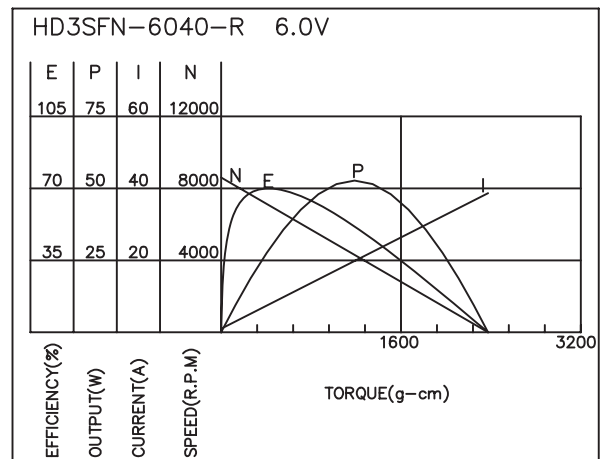
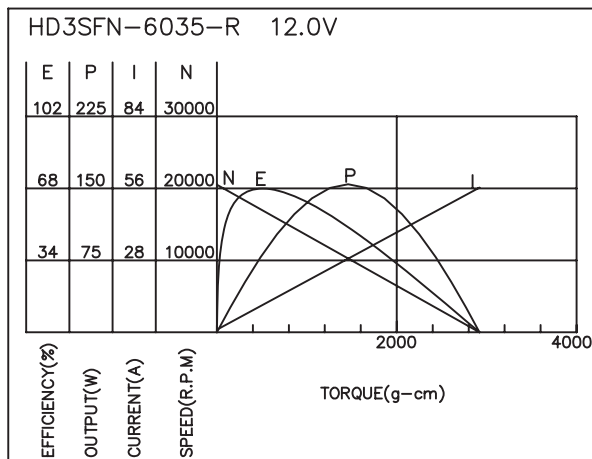
Application : Drill & Screwdriver 、 Automotive Water Pump

用途：電動工具、汽車噴水泵



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
HD3SFN-6035-R	6.0 - 12.0	12.0V CONSTANT	20500	1.00	17200	8.25	380	37.25	67.17	68	56.32	2920	286.27
HD3SFN-6040-R	6.0 - 12.0	6.0V CONSTANT	8600	1.00	7300	5.90	326	31.96	24.82	70	38.69	2375	232.84
HS3SFN-7523-R	3.6 - 6.0	4.8V CONSTANT	14000	1.80	11600	9.10	244	23.92	29.34	68	53.75	1685	165.20
HS3SFN-22240-R	6.0 - 24.0	12.0V CONSTANT	3100	0.12	2600	0.44	125	12.25	3.34	62	2.29	790	77.45

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

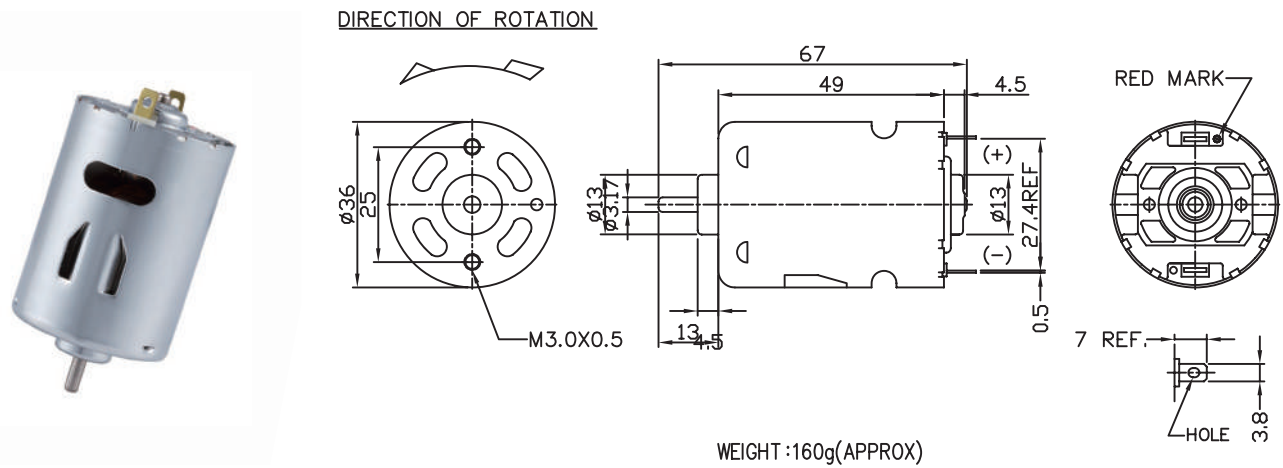


H5FN

Carbon-brush motors

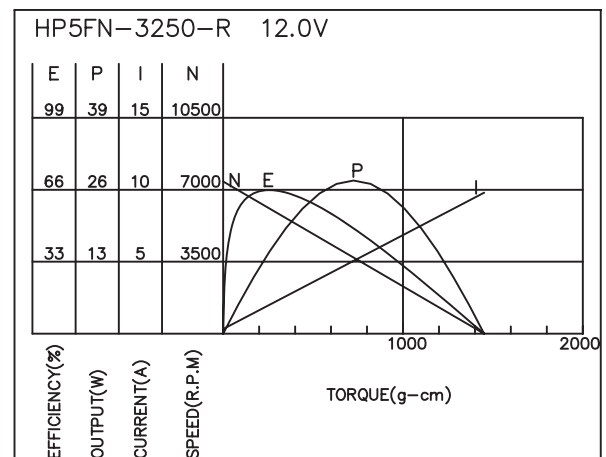
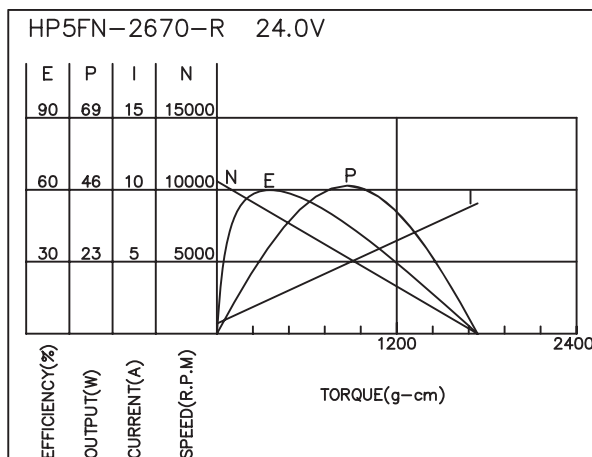
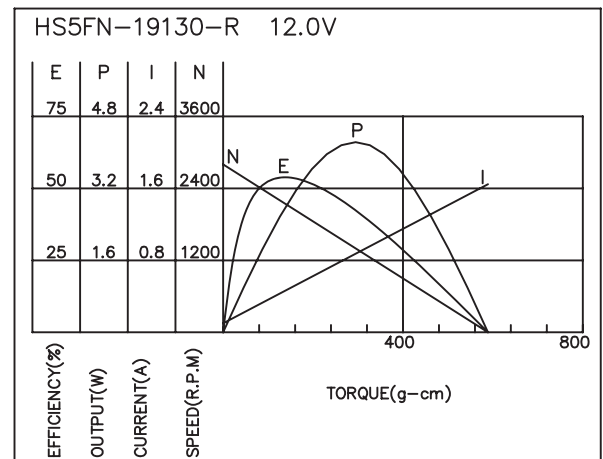
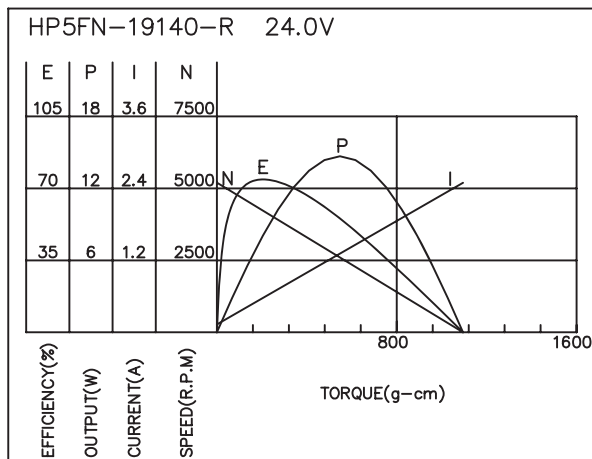
Application : Massager 、 Vacuum Cleaner 、 Drill & Screwdriver 、 Printer

用途 : 電動按摩器、吸塵器、電動工具、印表機



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
HP5FN-19140-R	12.0 - 24.0	24.0V CONSTANT	5200	0.13	4191	0.46	180	17.65	7.76	74	2.42	1095	107.35
HS5FN-19130-R	12.0 - 24.0	12.0V CONSTANT	2800	0.10	2100	0.44	126	12.35	2.81	54	1.65	589	57.75
HP5FN-2670-R	12.0 - 24.0	24.0V CONSTANT	10600	0.70	8600	1.93	311	30.49	27.69	60	9.05	1739	170.49
HP5FN-3250-R	12.0 - 24.0	12.0V CONSTANT	7400	0.32	6200	1.76	219	21.47	13.96	66	9.83	1451	142.25

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

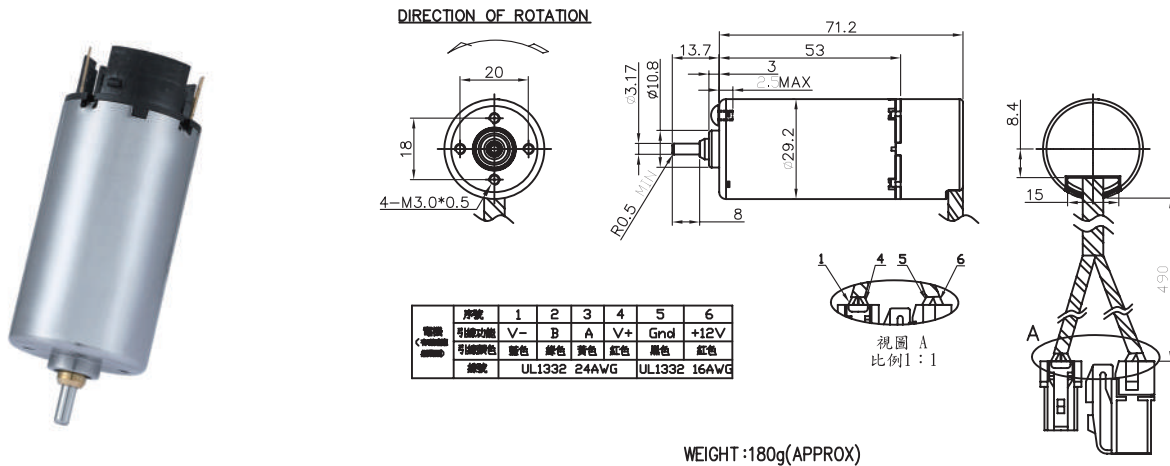


RK-2910

Carbon-brush motors

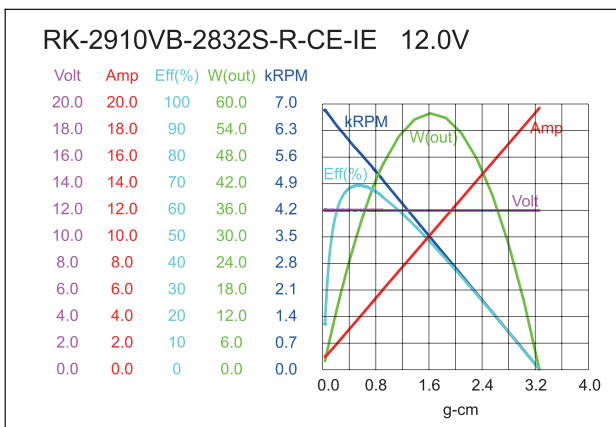
Application : Car Trunk Lifting Device

用途：汽車後尾門推杆



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	mA	rpm	A	Kg-cm	mN-m	W	%	A	Kg-cm	mN-m
RK-2910VB-2832S-R-CE-IE	10.0 - 14.0	12.0V CONSTANT	6600	700	5800	3.80	0.53	52	30	70	20	3.2	313

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

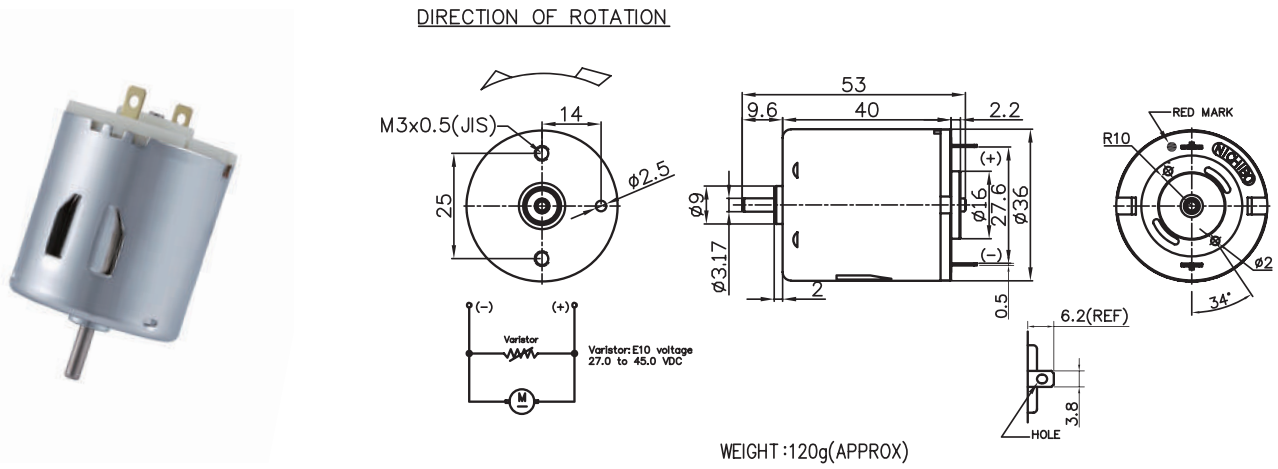


RK-525

Carbon-brush motors

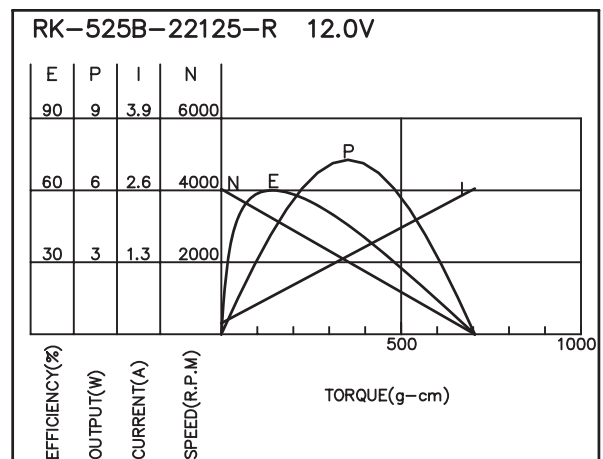
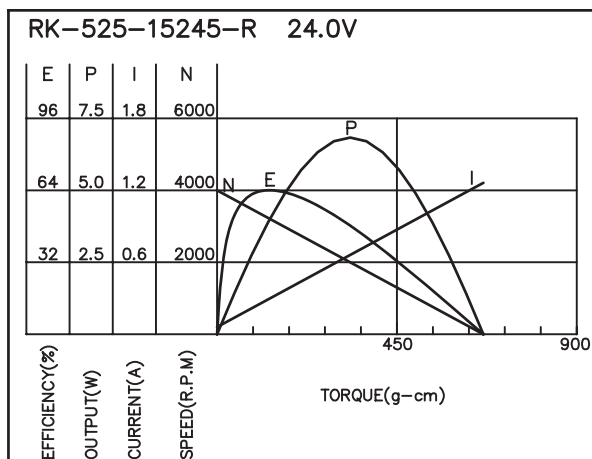
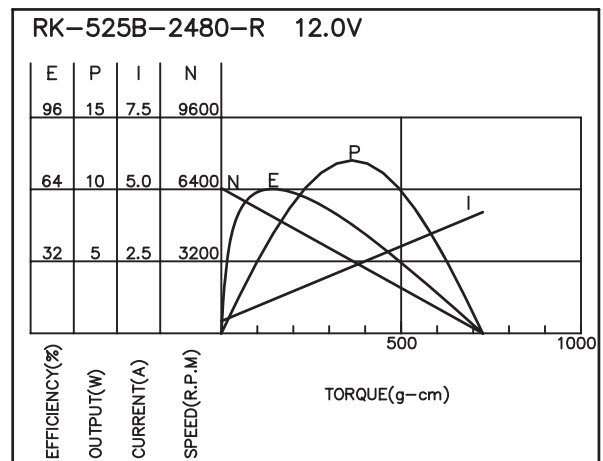
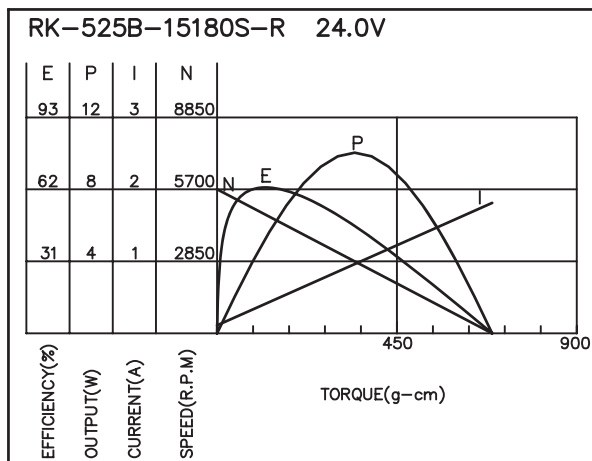
Application : Drill & Screwdriver 、 Gamepads 、 Vending Machine

用途：電動工具、電玩手把、自動販賣機



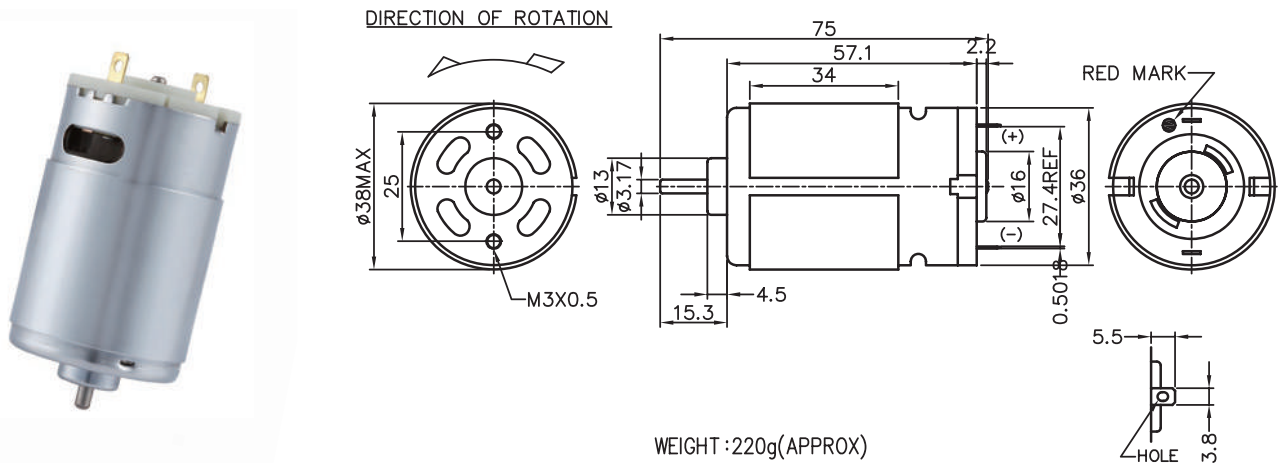
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m
RK-525B-15180S-R	6.0 - 36.0	24.0V CONSTANT	5700	0.11	4613	0.39	118	11.57	5.59	63	1.81	688	67.45
RK-525B-2480-R	6.0 - 36.0	12.0V CONSTANT	6450	0.42	5131	0.96	136	13.33	7.15	64	4.21	727	71.72
RK-525-15245-R	12.0 - 36.0	24.0V CONSTANT	4000	0.06	3305	0.27	116	11.37	3.93	64	1.26	666	65.29
RK-525B-22125-R	6.0 - 24.0	12.0V CONSTANT	4000	0.20	3226	0.59	127	12.45	4.20	60	2.63	704	69.02

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



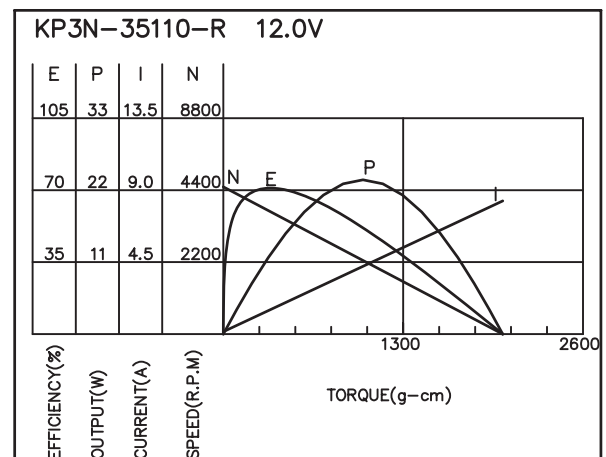
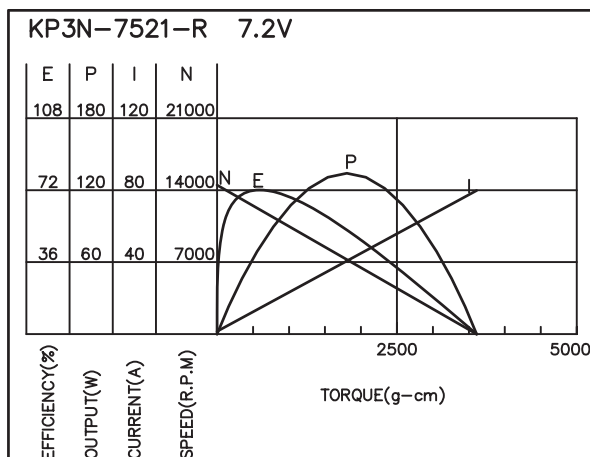
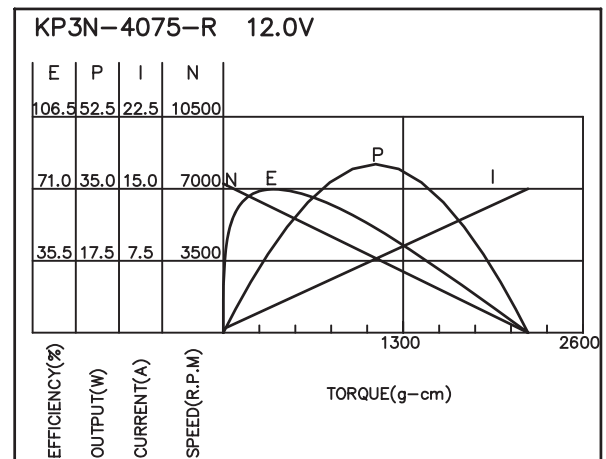
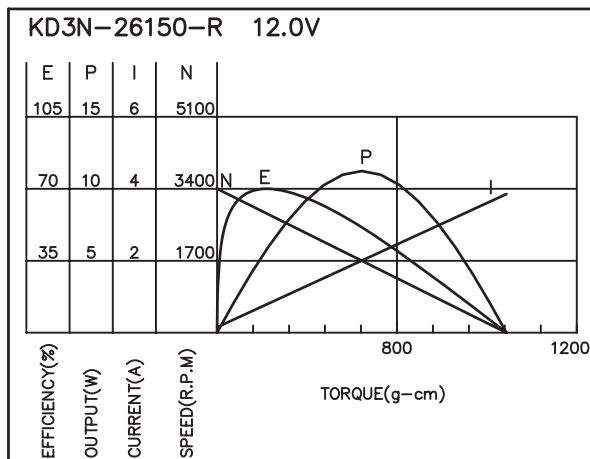
Application : Air Compressor 、 Drill & Screwdriver

用途：空壓機、電動工具



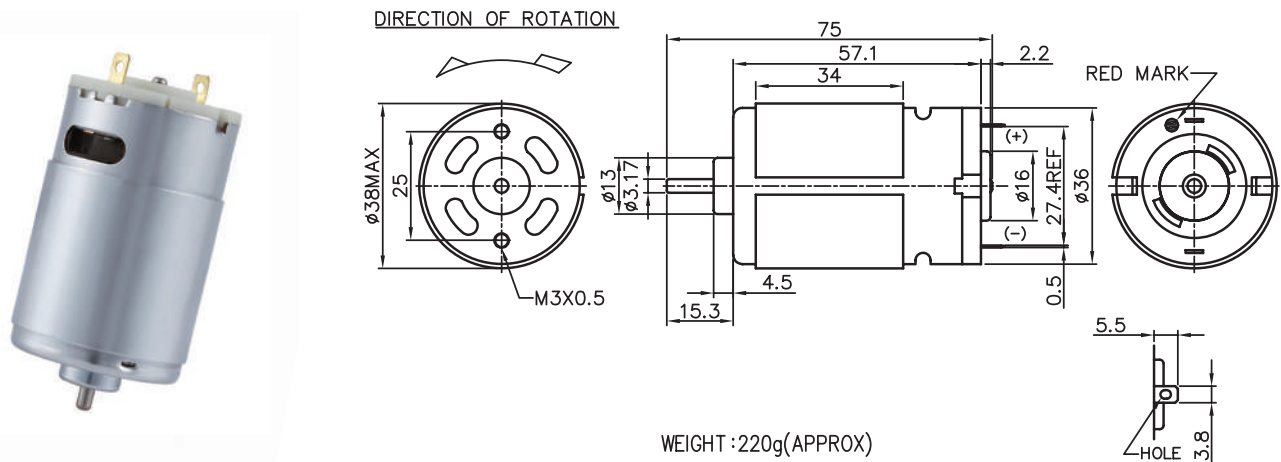
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	%	CURRENT A	TORQUE g-cm	mN-m
KD3N-26150-R	12.0 - 24.0	12.0V CONSTANT	3400	0.16	2788	0.68	192	8.82	5.50	70	3.85	1288	126.27
KP3N-4075-R	6.0 - 12.0	12.0V CONSTANT	7250	0.38	6494	1.65	209	20.49	13.95	71	15.36	2202	215.88
KP3N-7521-R	4.8 - 12.0	7.2V CONSTANT	14500	1.50	12700	9.89	390	38.24	51.24	72	79.81	3608	353.73
KP3N-35110-R	6.0 - 24.0	12.0V CONSTANT	4500	0.15	3800	1.14	242	23.73	9.61	71	8.33	2020	198.04

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



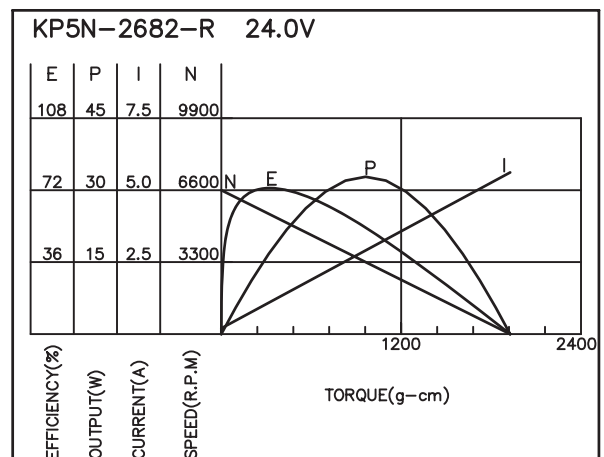
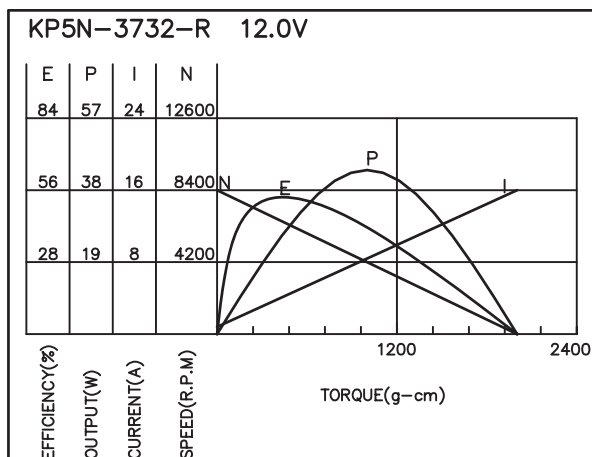
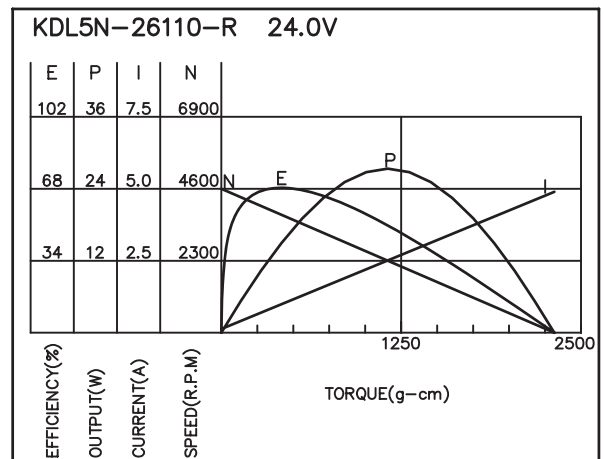
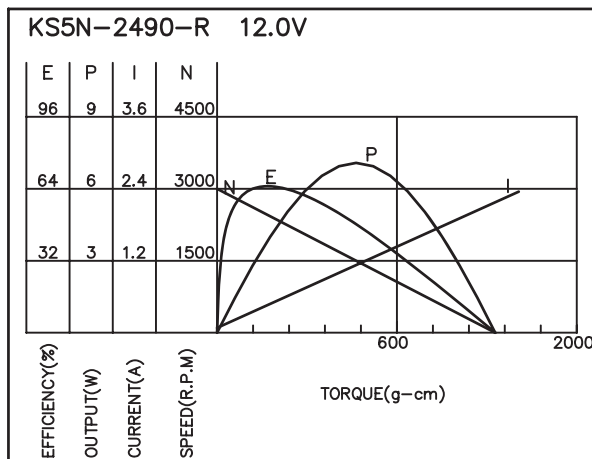
Application : Hair Dryer、Pump、Fan、Vending Machine

用途：吹風機、泵浦、風扇、自動販賣機



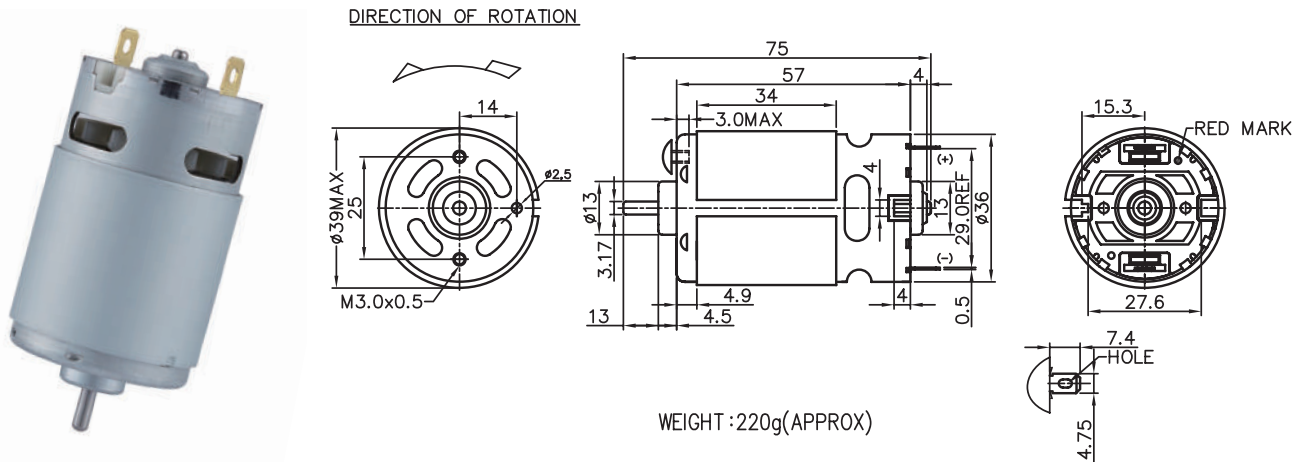
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	%	CURRENT A	TORQUE g-cm	mN-m
KS5N-2490-R	6.0 - 24.0	12.0V CONSTANT	3000	0.18	2446	0.51	160	15.69	4.01	65	2.53	929	91.08
KDL5N-26110-R	18.0 - 36.0	24.0V CONSTANT	4600	0.13	3897	0.91	358	35.10	14.33	69	4.89	2314	226.86
KP5N-3732-R	6.0 - 20.0	12.0V CONSTANT	8400	0.80	6262	4.28	434	42.55	27.91	55	16.11	2002	196.27
KP5N-2682-R	12.0 - 36.0	24.0V CONSTANT	6600	0.20	5790	0.83	242	23.73	14.37	73	5.62	1927	188.92

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



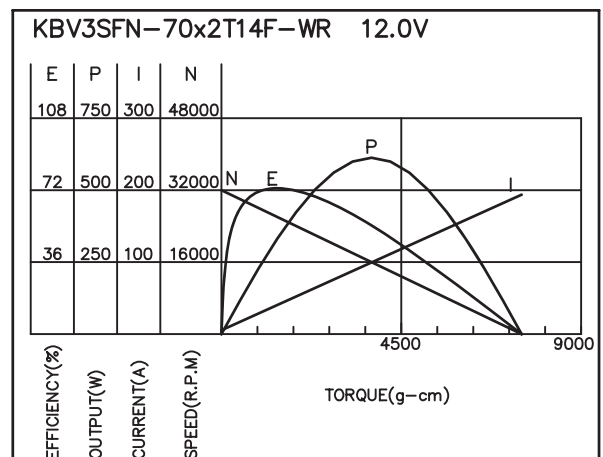
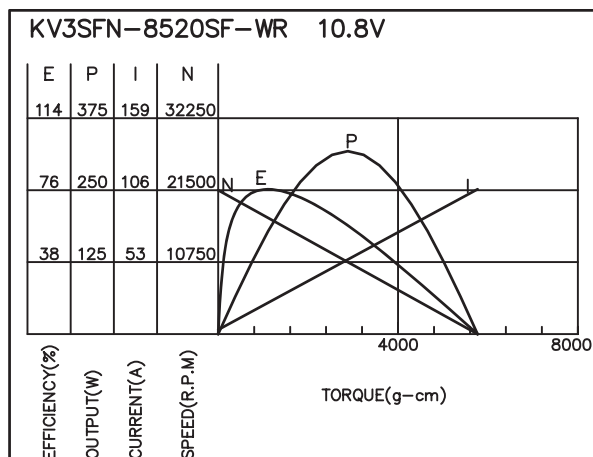
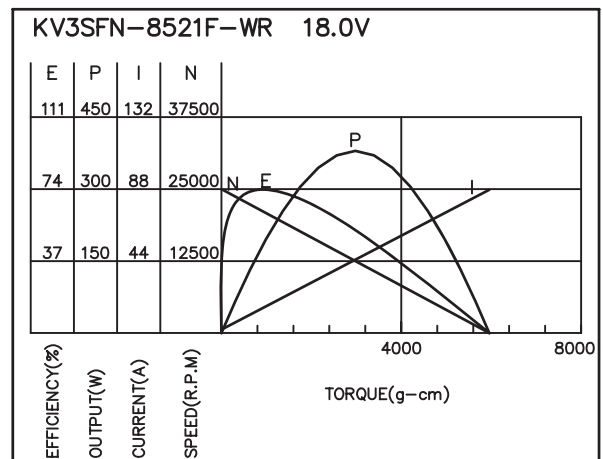
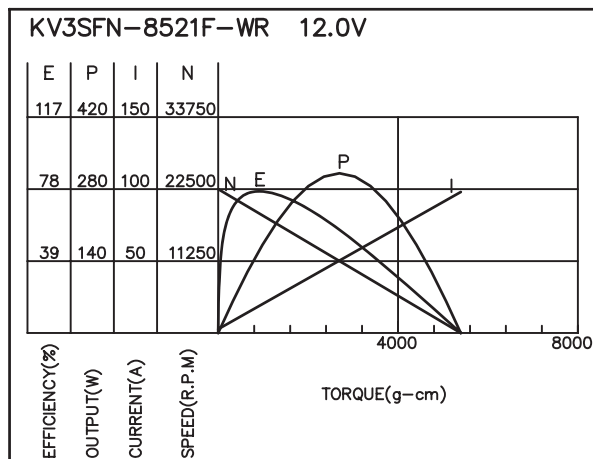
Application : Massager 、Drill & Screwdriver

用途：電動按摩器、電動工具



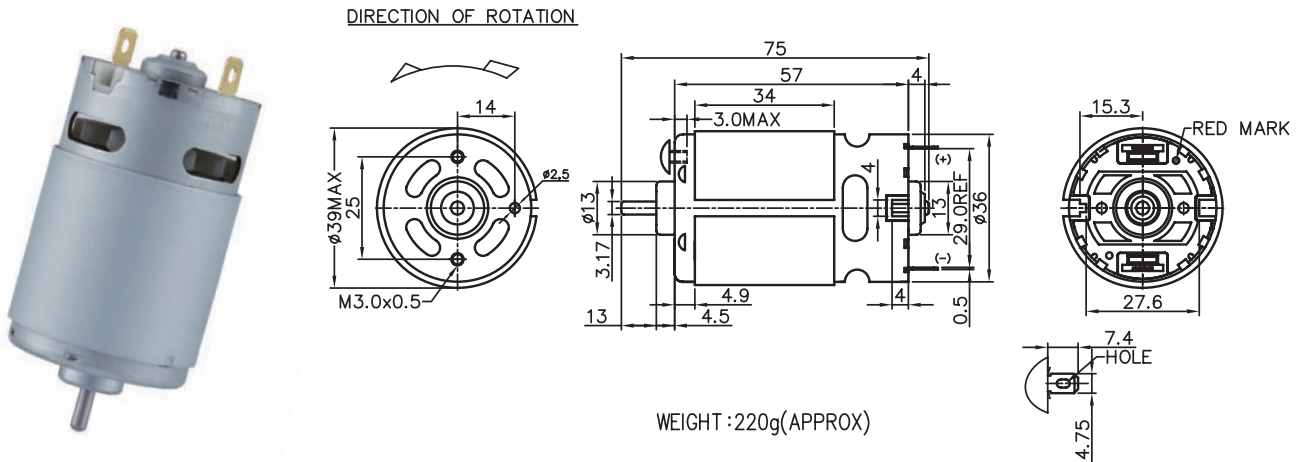
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF W	%	CURRENT A	TORQUE g-cm	TORQUE mN-m
KV3SFN-8521F-WR	6.0 - 12.0	12.0V CONSTANT	22500	2.70	19048	18.33	853	83.63	312.68	77	98.00	5394	528.82
KV3SFN-7527F-WR	6.0 - 18.0	18.0V CONSTANT	25000	2.10	21692	13.16	773	75.78	379.91	74	87.59	5958	584.12
KV3SFN-8520SF-WR	6.0 - 12.0	10.8V CONSTANT	21500	3.20	17091	22.67	1013	99.31	307.00	76	106.54	5768	565.49
KBV3SFN-70x2T14F-WR	6.0 - 12.0	12.0V CONSTANT	32000	5.40	24675	38.19	1236	121.18	569.43	72	193.64	7509	736.18

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



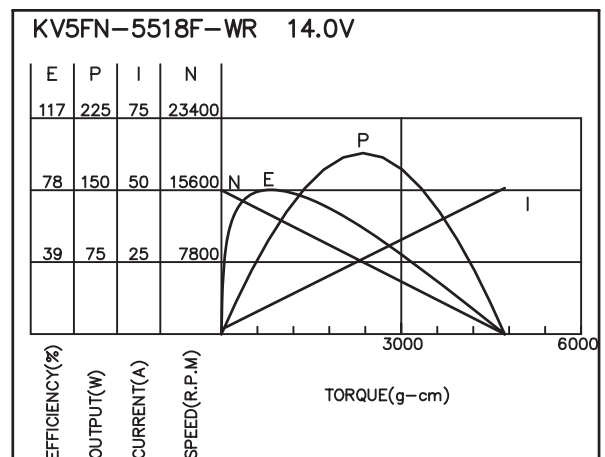
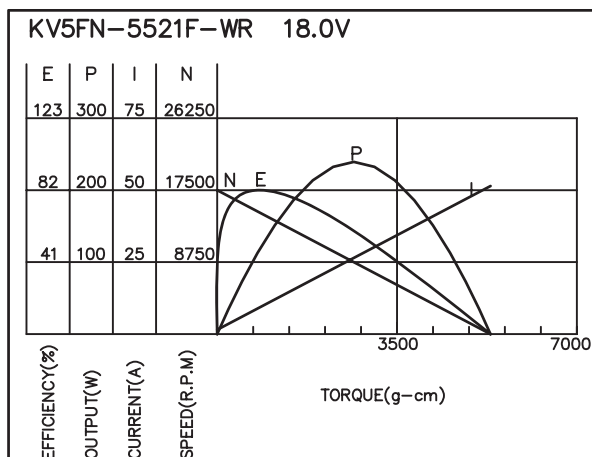
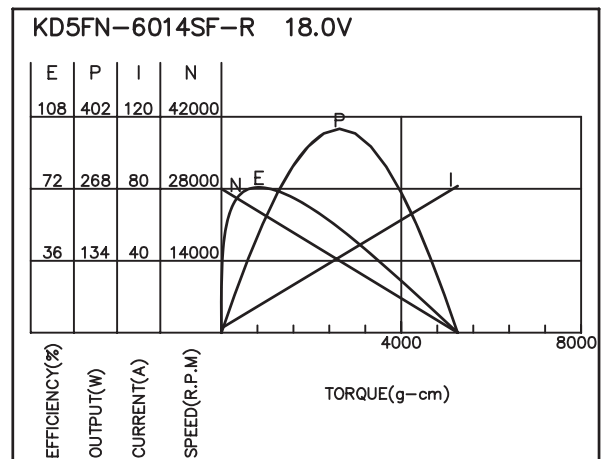
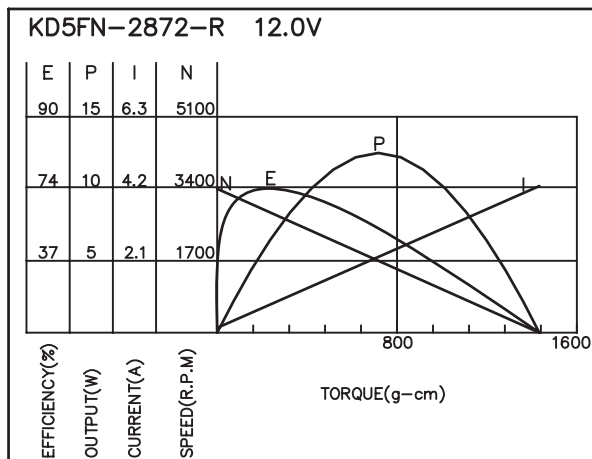
Application : Seat Belt Pretensioner、Drill & Screwdriver、Printer、Massager

用途：安全帶捲帶器、電動工具、印表機、電動按摩器



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
KD5FN-2872-R	12.0-24.0	12.0V CONSTANT	3400	0.14	3055	0.64	181	17.75	5.67	75	4.29	1433	140.49
KD5FN-6014SF-R	12.0-18.0	18.0V CONSTANT	28000	2.50	24038	14.49	759	74.41	187.37	72	81.47	5252	514.90
KV5FN-5521F-WR	6.0-24.0	18.0V CONSTANT	17500	1.50	15974	5.94	514	50.39	81.96	82	51.43	5319	521.47
KV5FN-5518F-WR	12.0-18.0	14.4V CONSTANT	15600	1.60	13889	7.98	610	59.8	77.57	78	50.80	4725	463.24

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

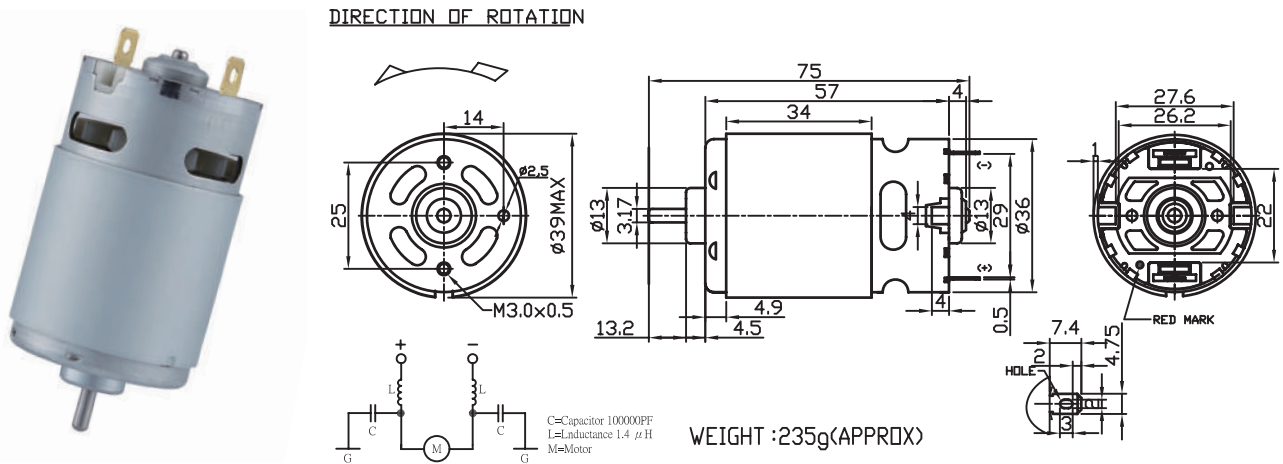


K5FN-IE

Carbon-brush motors

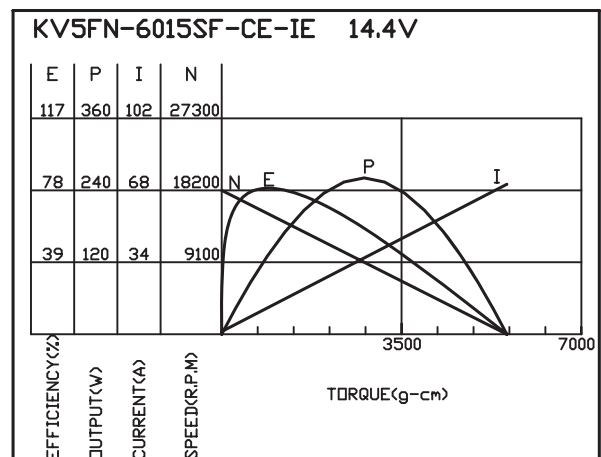
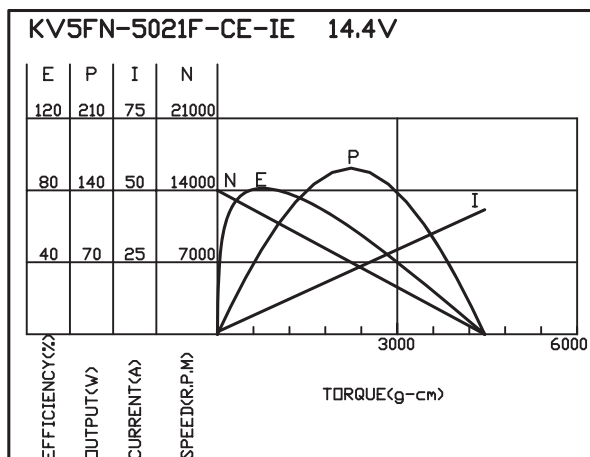
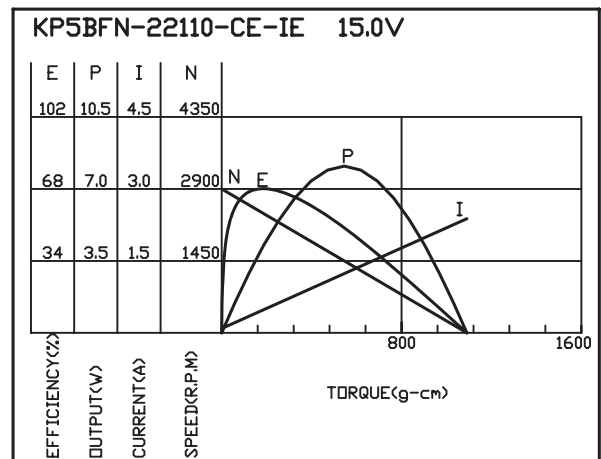
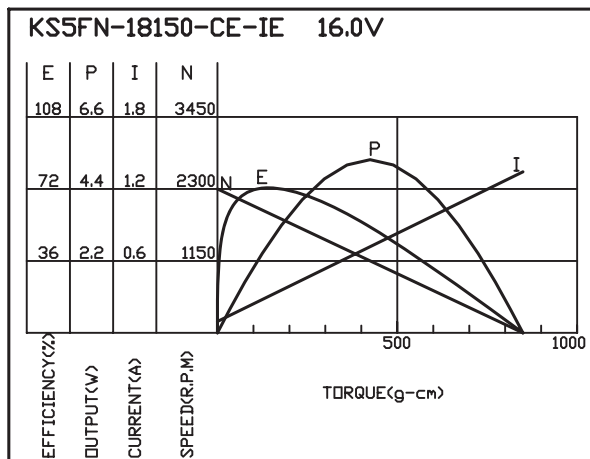
Application : Drill & Screwdriver

用途：電動工具



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m	
KS5FN-18150-CE-IE	12.0 - 36.0	16.0V CONSTANT	2300	0.09	2067	0.16	81	7.94	1.71	72	1.34	849	83.24
KP5BFN-22110-CE-IE	12.0 - 36.0	15.0V CONSTANT	2900	0.09	2483	0.39	151	14.80	3.85	68	2.38	1090	106.86
KV5FN-5021F-CE-IE	12.0 - 18.0	14.4V CONSTANT	14000	0.83	12077	6.13	562	55.10	69.70	81	43.23	4458	437.06
KV5FN-6015SF-CE-IE	12.0 - 18.0	14.4V CONSTANT	18200	1.26	16129	9.82	655	64.22	108.49	79	70.81	5548	543.92

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



RK-665

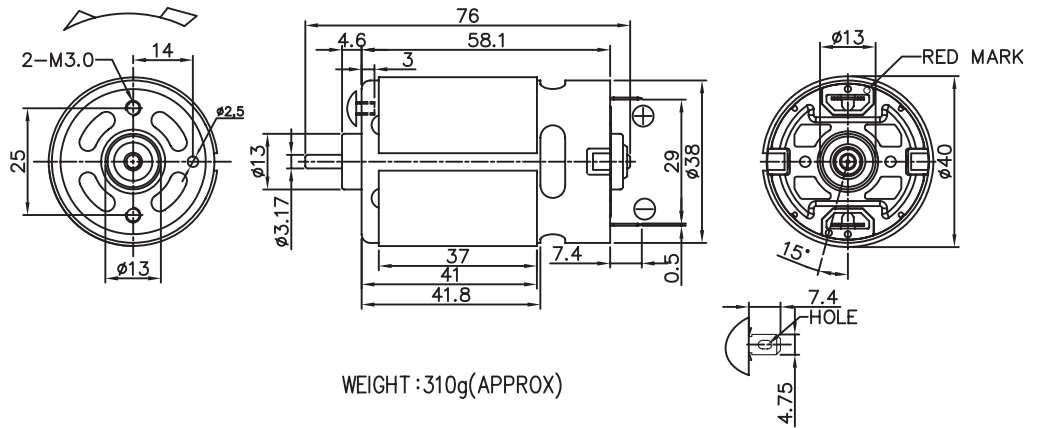
Carbon-brush motors

Application : Drill & Screwdriver、Gamepads

用途：電動工具、電玩手把



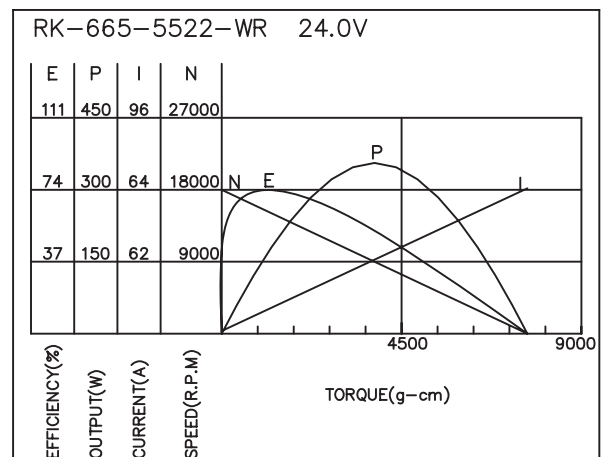
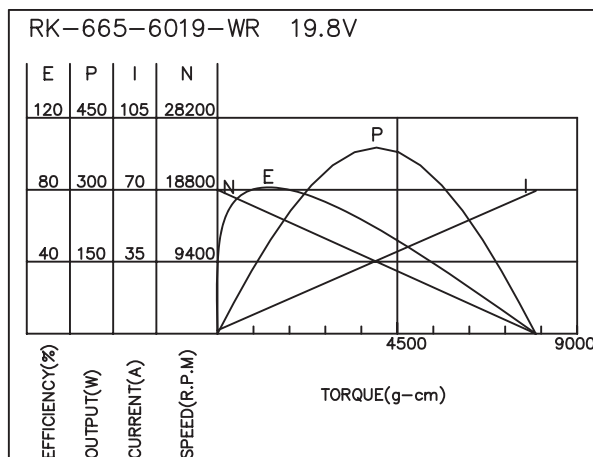
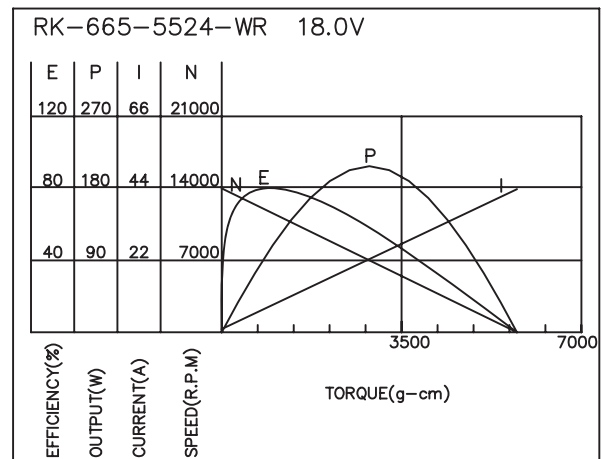
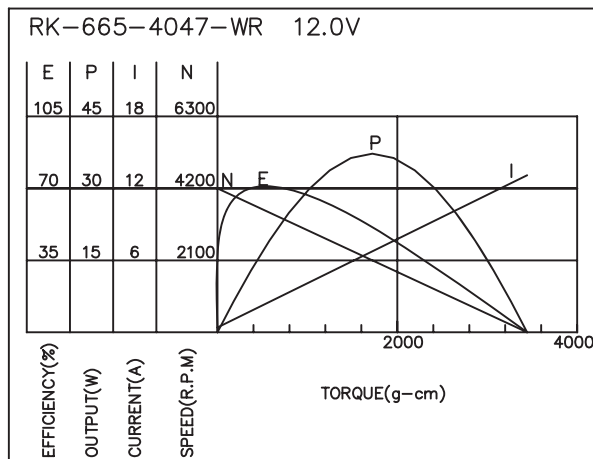
DIRECTION OF ROTATION



WEIGHT : 310g(APPROX)

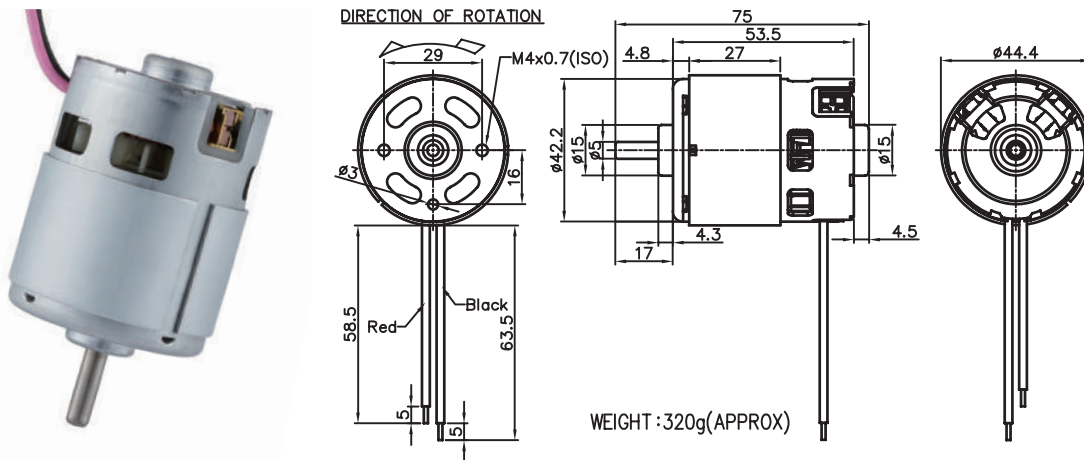
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m	
RK-665-4047-WR	9.0 - 24.0	12.0V CONSTANT	4200	0.40	3566	2.03	456	44.71	16.69	71	13.01	3444	337
RK-665-5524-WR	6.0 - 21.0	18.0V CONSTANT	14000	0.98	11792	6.83	813	79.71	98.45	81	43.76	5746	565
RK-665-6019-WR	6.0 - 21.0	19.8V CONSTANT	18800	1.60	15576	10.49	1040	101.96	166.36	81	69.45	7962	781
RK-665-5522-WR	12.0 - 24.0	24.0V CONSTANT	18000	1.20	15848	8.99	944	92.55	153.64	74	64.61	7648	750

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



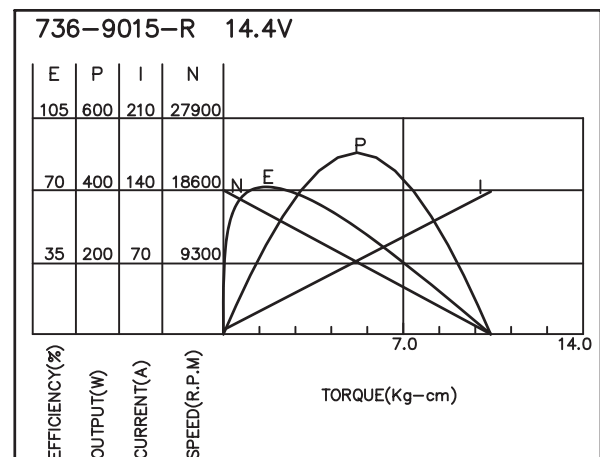
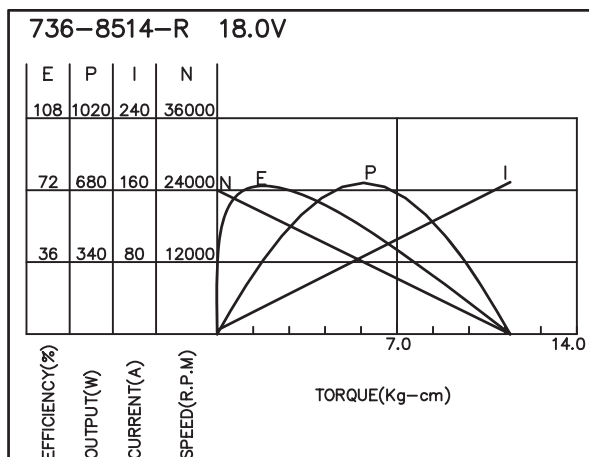
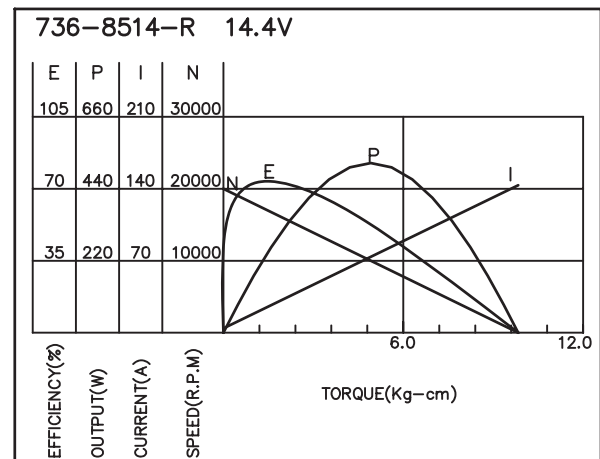
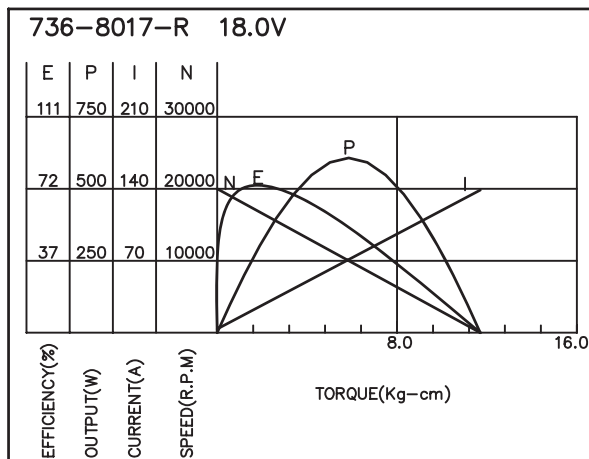
Application : Drill & Screwdriver 、 Electric Garden Tool

用途：電動工具、園林工具



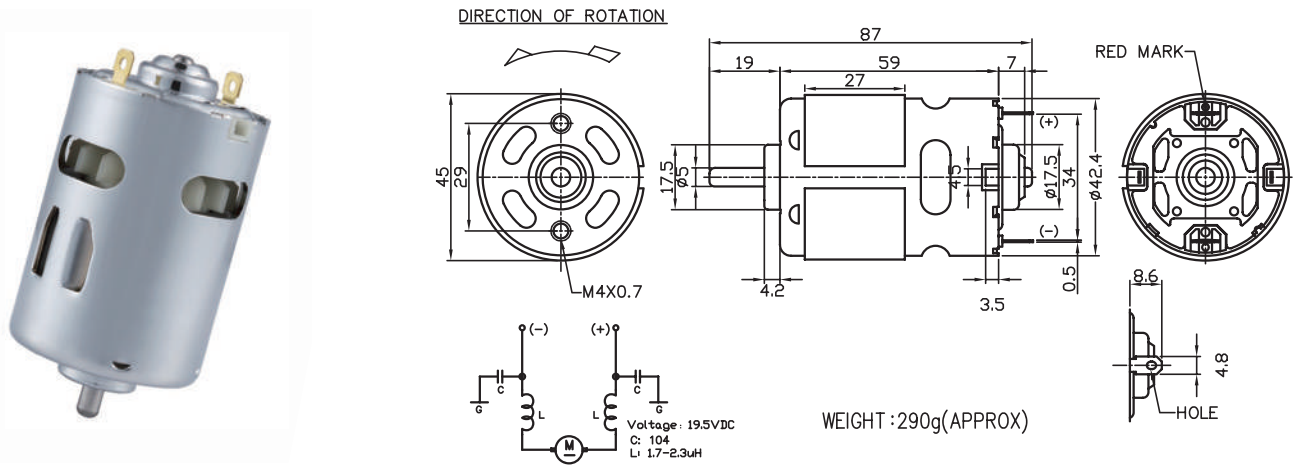
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
736-8017-R	12.0 - 24.0	18.0V CONSTANT	20000	3.60	17241	19.65	1426	139.80	252.48	75	137.35	11700	1147.1
736-8514-R	9.6 - 18.0	14.4V CONSTANT	20000	4.20	16920	19.97	1195	117.16	207.65	73	142.07	9830	963.7
736-8514-R	10.0 - 18.0	18.0V CONSTANT	24000	4.30	20877	22.21	1309	128.33	280.64	73	167.31	11400	1117.7
736-9015-R	9.6 - 18.0	14.4V CONSTANT	18600	4.00	15552	19.13	1216	119.22	194.21	71	137.30	10467	1026.2

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



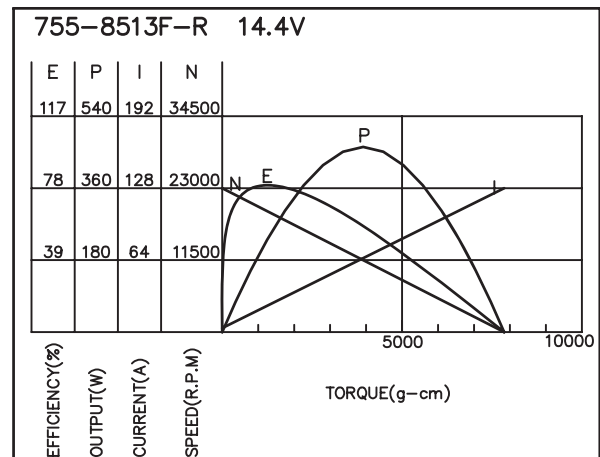
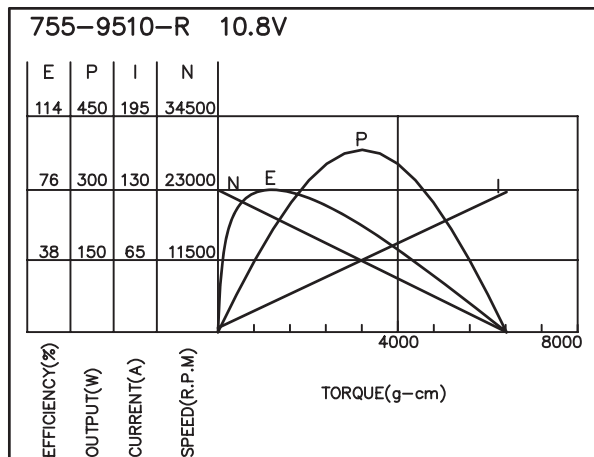
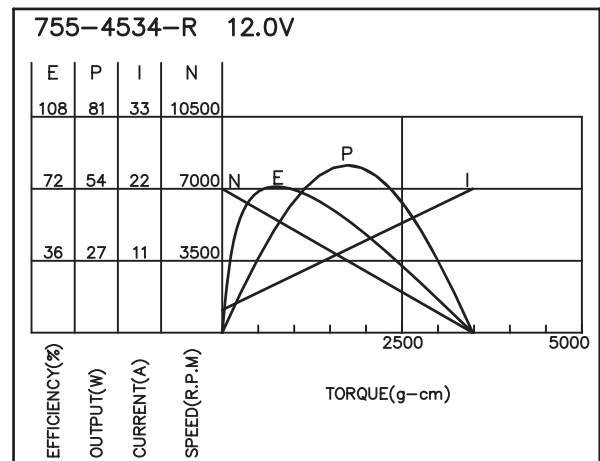
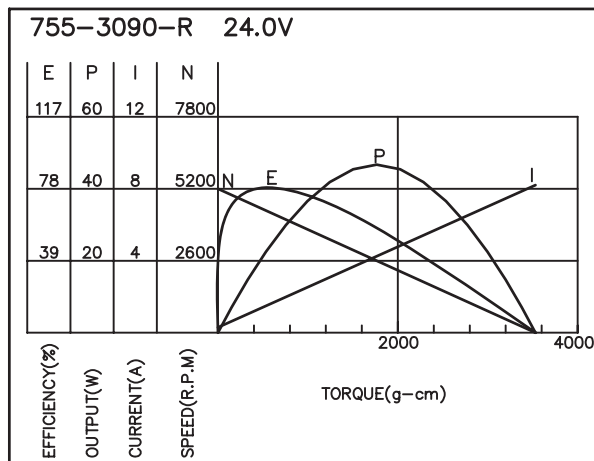
Application : Drill & Screwdriver 、 Copy Machine 、 Massager

用途：電動工具、影印機、電動按摩器



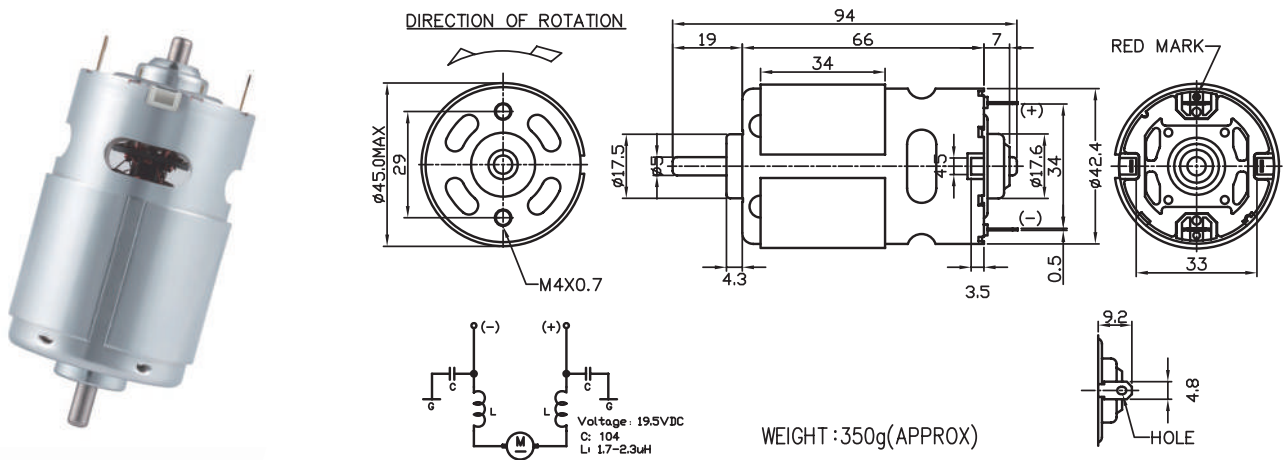
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
755-3090-R	18.0 - 36.0	24.0V CONSTANT	5200	0.30	4715	0.94	363	35.59	17.58	78.63	8.20	3530	346.08
755-4534-R	9.6 - 18.0	12.0V CONSTANT	7000	1.20	5862	5.08	699	68.53	42.08	72	22.66	3483	341.47
755-9510-R	7.2 - 10.8	10.8V CONSTANT	23000	3.80	18868	26.52	1112	109.02	215.47	76	125.82	6418	629.22
755-8513F-R	7.2 - 14.4	14.4V CONSTANT	23000	3.60	20367	17.53	919	90.10	192.22	79	127.96	7840	768.63

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



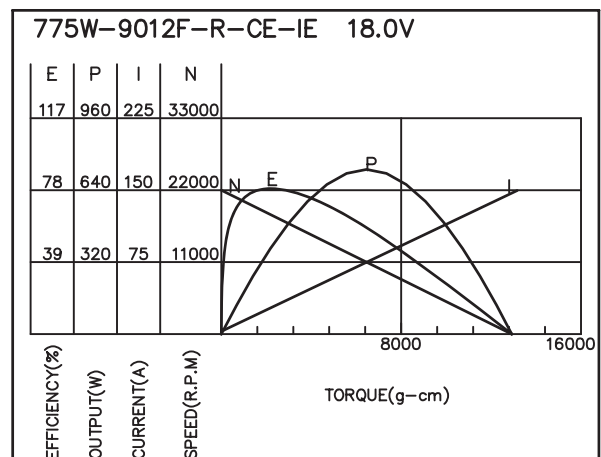
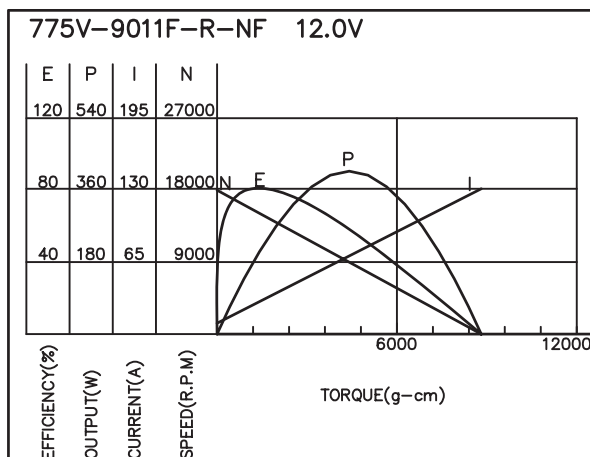
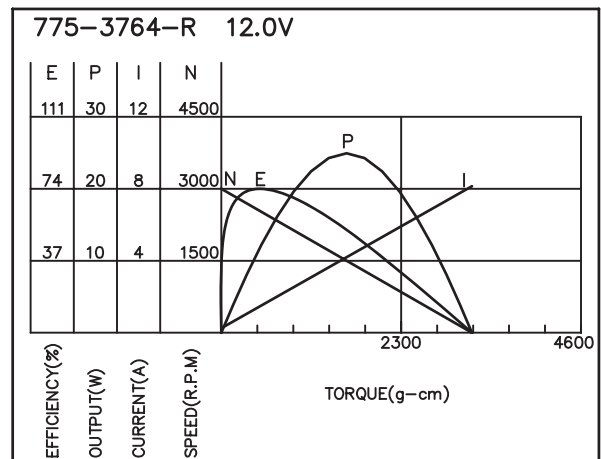
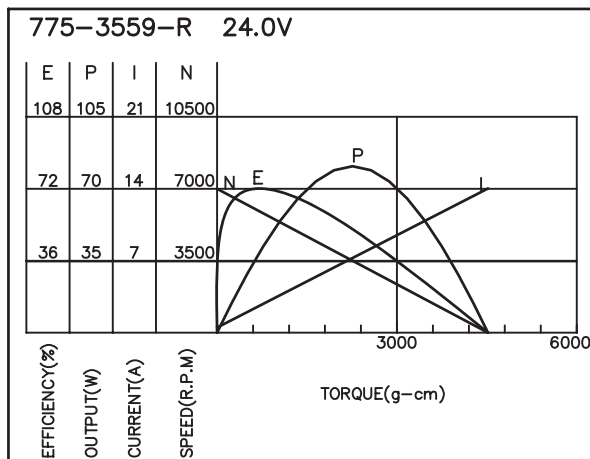
Application : Grass Trimmer 、Circular Saw 、Electric Sprayer

用途：割草機、電動工具、噴霧器



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m	
775-3559-R	6.0 - 36.0	24.0V CONSTANT	7000	0.50	5862	2.19	620	61	37.32	72	14.03	4519	443
775-3764-R	12.0 - 36.0	12.0V CONSTANT	3000	0.25	2523	1.12	382	37	9.90	74	8.15	3205	314
775V-9011F-R-NF	6.0 - 12.0	12.0V CONSTANT	18000	5.00	16287	1.05	1052	103	175.96	81	130.75	8814	864
775W-9012F-R-CE-IE	6.0 - 18.0	18.0V CONSTANT	22000	4.60	18939	1.74	1741	171	338.61	79	151.67	12920	1267

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

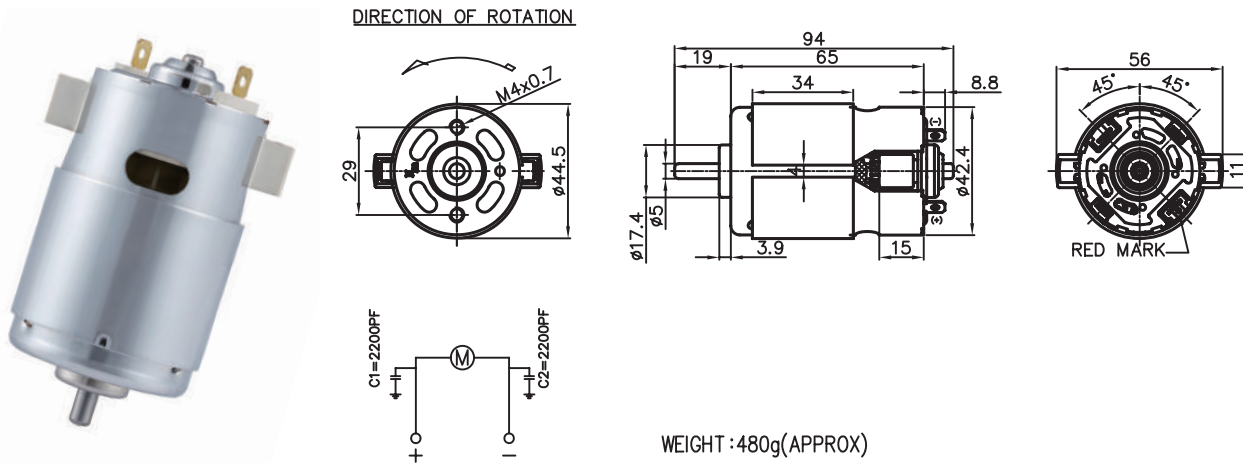


7712/7724

Carbon-brush motors

Application : Sewing Machine 、 Drill & Screwdriver

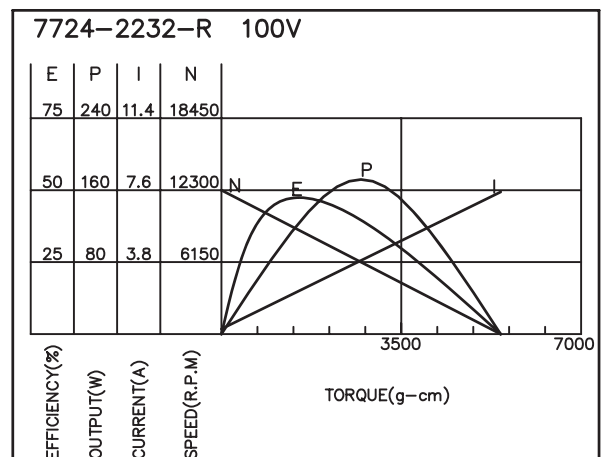
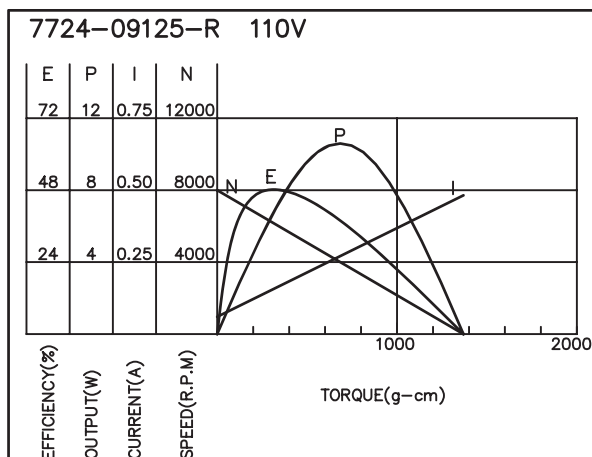
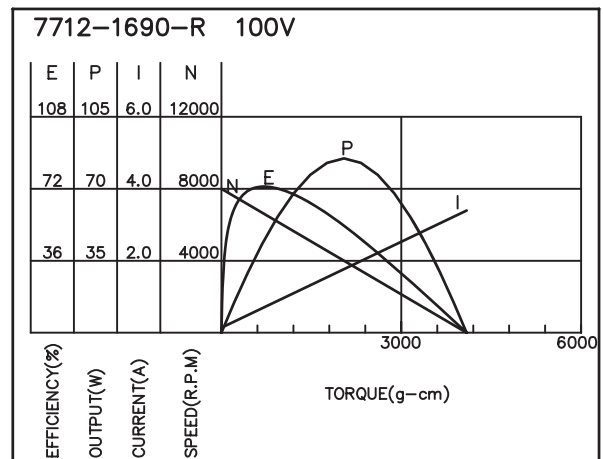
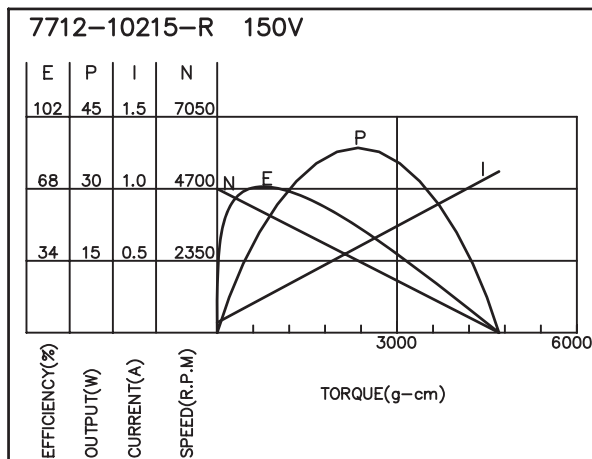
用途：縫紉機、電動工具



WEIGHT : 480g(APPROX)

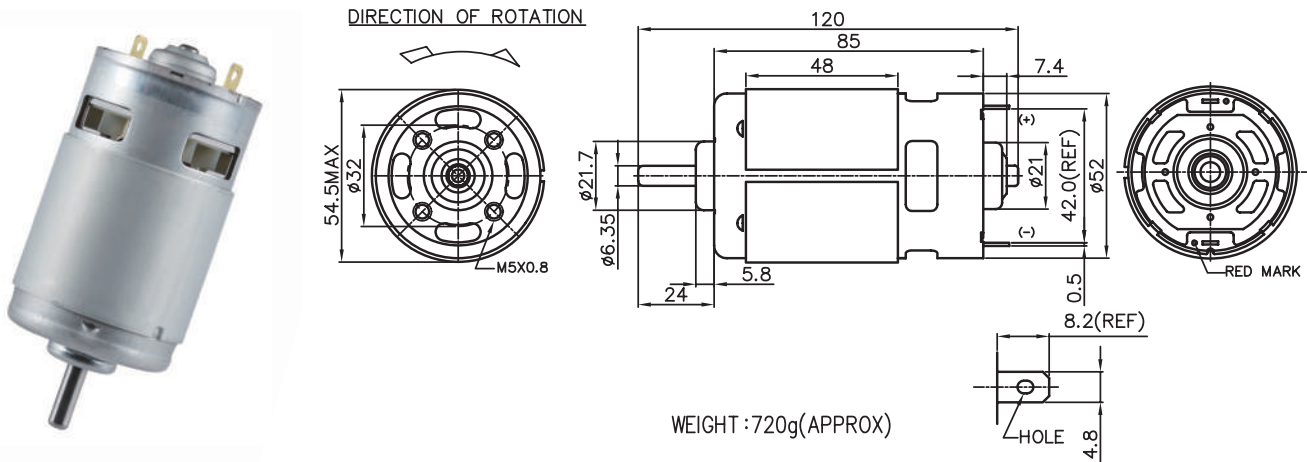
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m	
7712-10215-R	100 - 230	150V CONSTANT	4700	0.07	4058	0.20	477	46.76	19.88	69	1.12	3790	312.75
7712-1690-R	60 - 150	100V CONSTANT	8000	0.14	6845	0.52	532	52.16	37.40	73	3.39	4089	400.88
7724-09125-R	100 - 230	110V CONSTANT	3000	0.06	2304	0.16	352	34.51	8.33	48	0.48	1369	134.22
7724-2232-R	50 - 120	100V CONSTANT	12300	0.27	8643	2.86	1510	148.04	134.03	47	7.50	5433	532.65

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



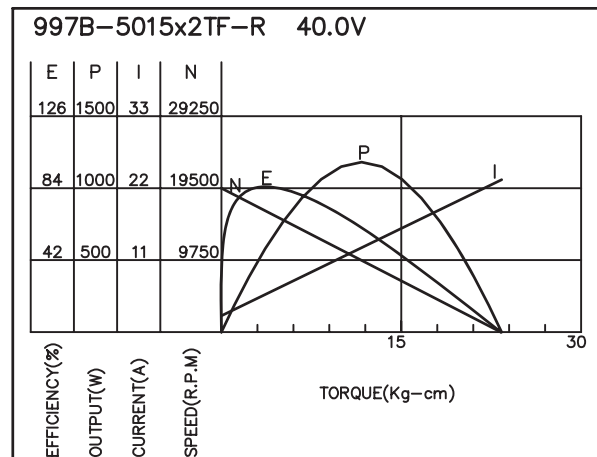
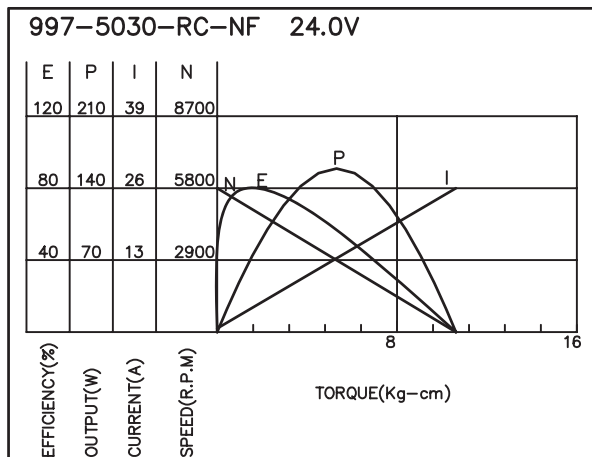
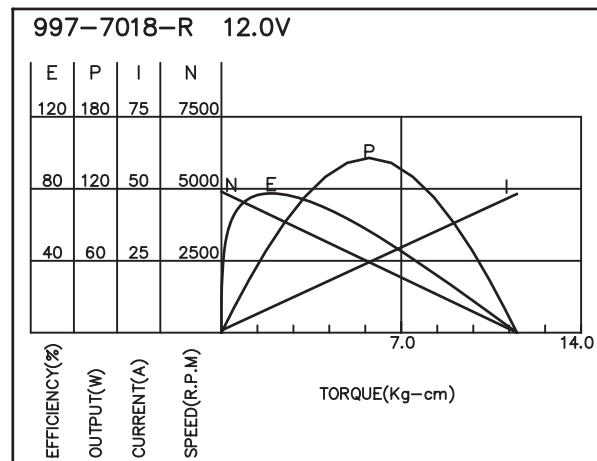
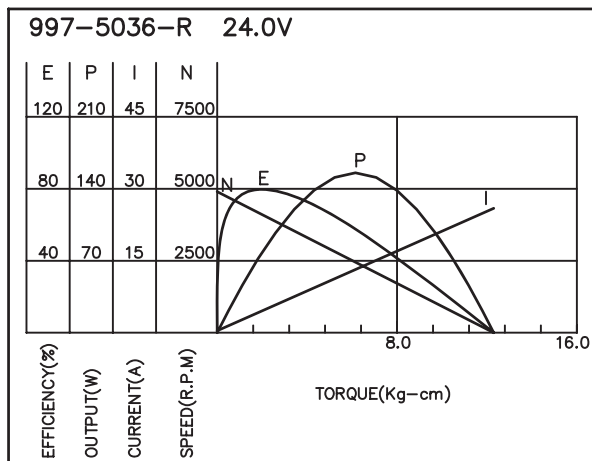
Application : Drill & Screwdriver 、 Electric Gate 、 Lawn Mower 、 Pool Clean Robot

用途：電動工具、電動門、智能割草機、水底吸塵機



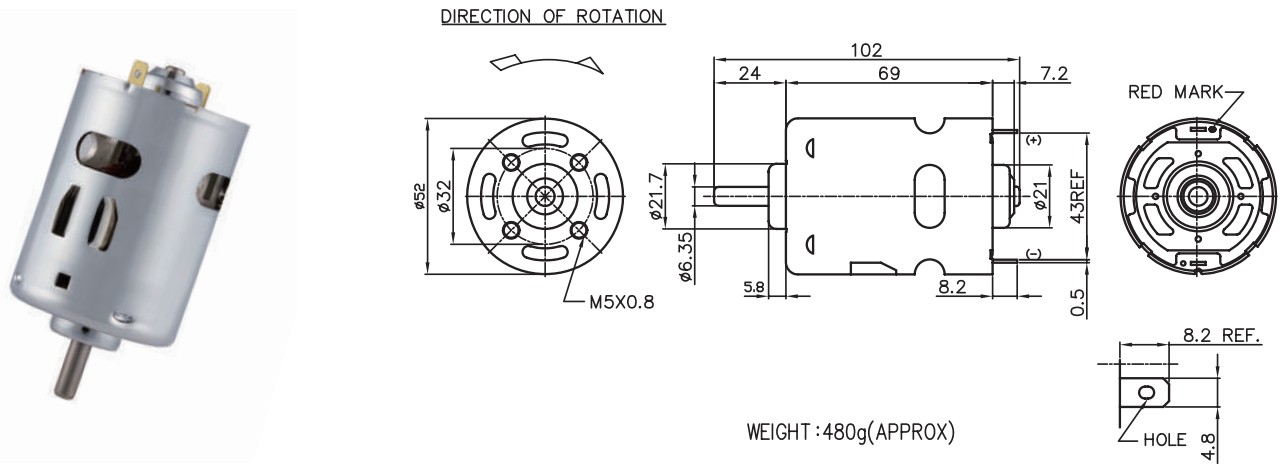
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
997-5036-R	18.0 - 48.0	24.0V CONSTANT	4900	0.42	4198	2.79	1197	117.35	51.60	79.67	25.95	12350	1211
997-7018-R	6.0 - 36.0	12.0V CONSTANT	4900	1.40	4182	5.40	1168	114.51	50.16	78.44	48.12	11499	1127
997-5030-RC-NF	12.0 - 36.0	24.0V CONSTANT	5800	0.65	5165	2.84	1022	100.20	54.21	80.00	26.65	10623	1041
997B-5015x2TF-R	24.0 - 40.0	40.0V CONSTANT	19500	2.50	17361	13.94	2634	258.24	469.62	85.00	110.79	23373	2291

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



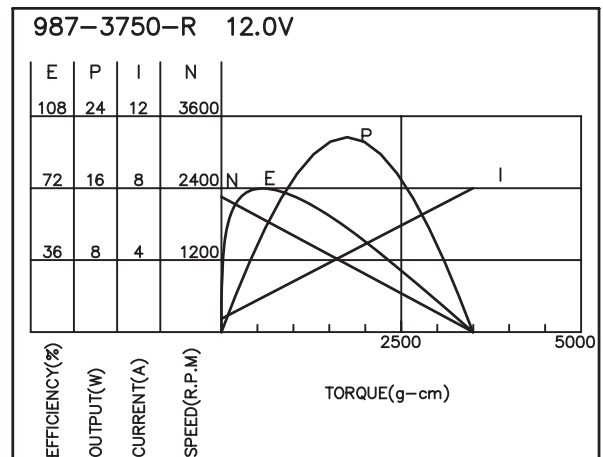
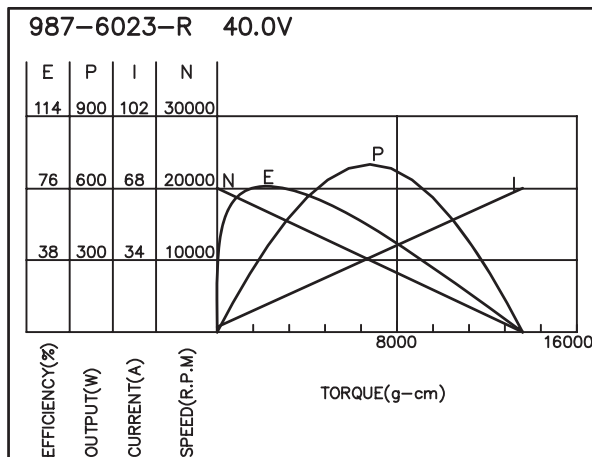
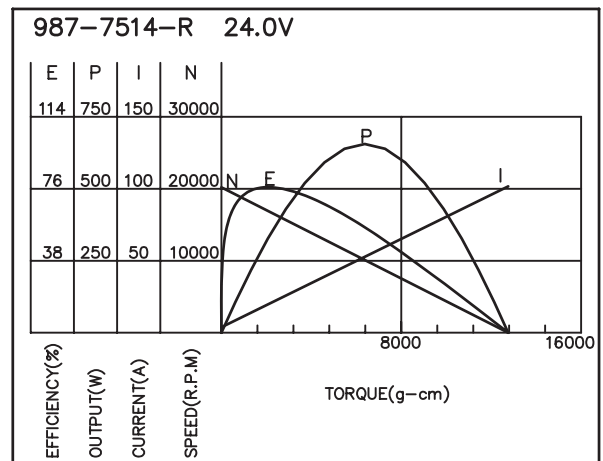
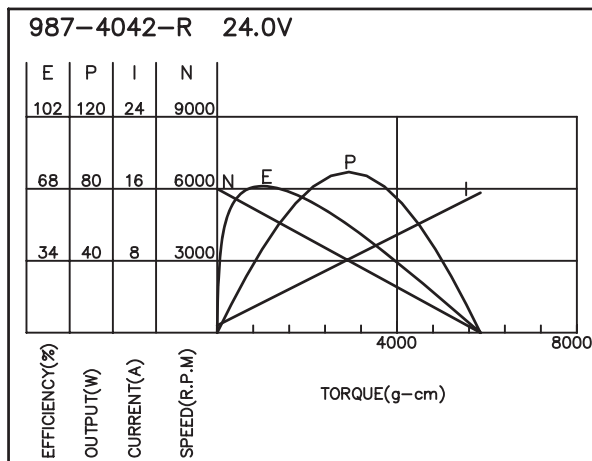
Application : Drill & Screwdriver 、 Electric Gate

用途：電動工具、電動門



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
987-4042-R	12.0 - 36.0	24.0V CONSTANT	6000	0.80	5000	2.46	803	78.73	41.23	69.53	15.55	5855	574
987-7514-R	6.0 - 26.0	24.0V CONSTANT	20000	3.80	17036	15.18	1558	152.75	272.58	76.87	101.63	12754	1250
987-6023-R	12.0 - 40.0	40.0V CONSTANT	20000	2.40	17513	10.43	1760	172.55	316.54	77.07	67.77	13590	1332
987-3750-R	12.0 - 36.0	12.0V CONSTANT	2400	0.74	2076	1.26	503	49.31	10.72	72.28	7.52	3496	343

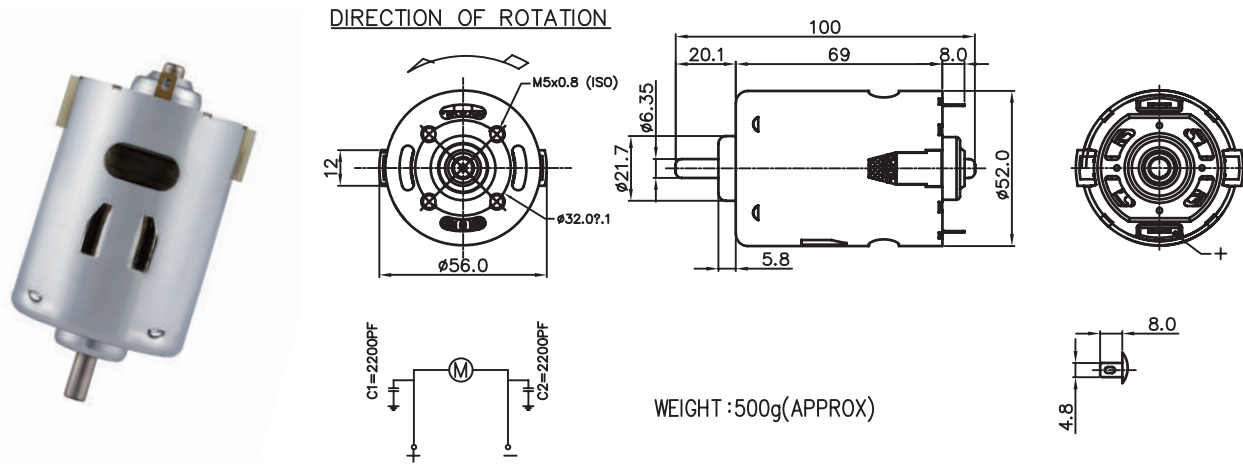
馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



9812/9824

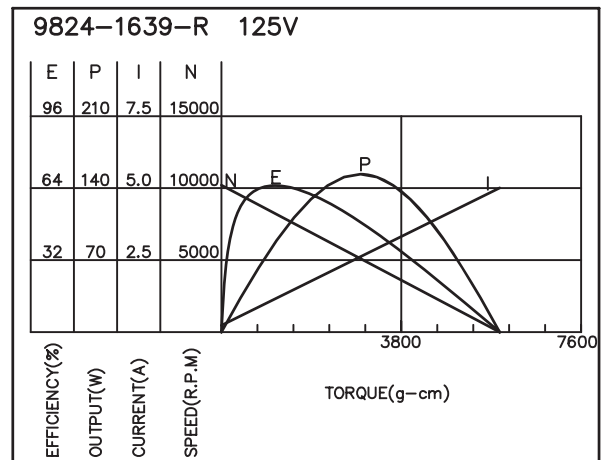
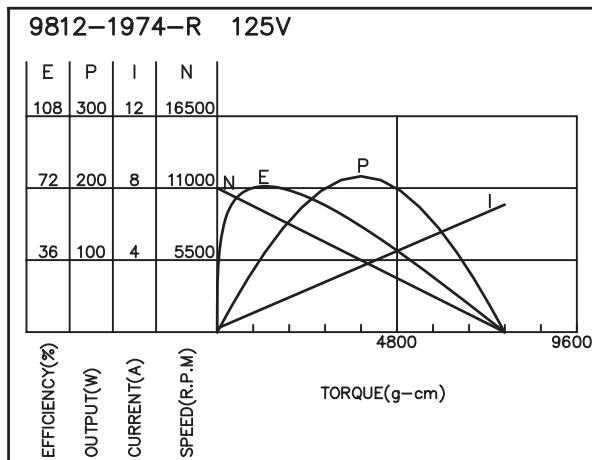
Application : Sewing Machine

用途：縫紉機



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMNAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
9812-1974-R	90 - 150	125V CONSTANT	11000	0.20	9300	1.05	999	97.94	96.24	73	7.08	7670	751.96
9824-1639-R	90 - 150	125V CONSTANT	10200	0.23	8200	1.15	1094	107.25	92.23	65	5.00	5880	576.47

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

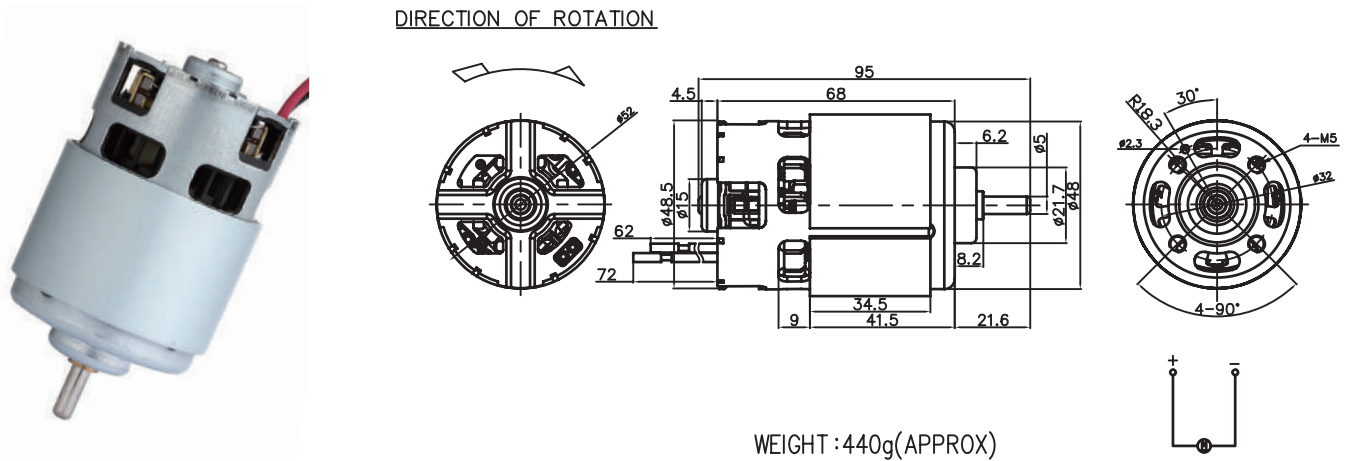


RS-800

Carbon-brush motors

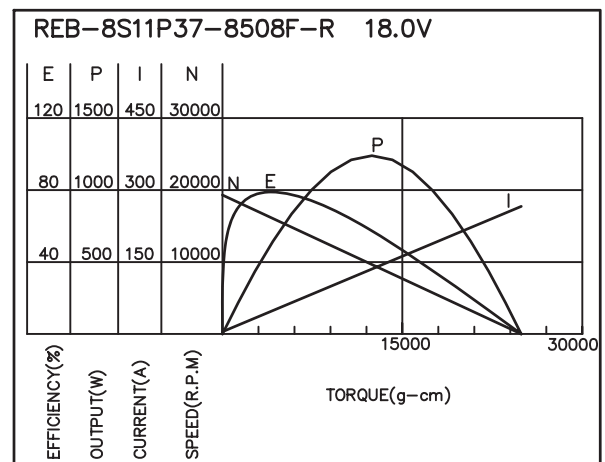
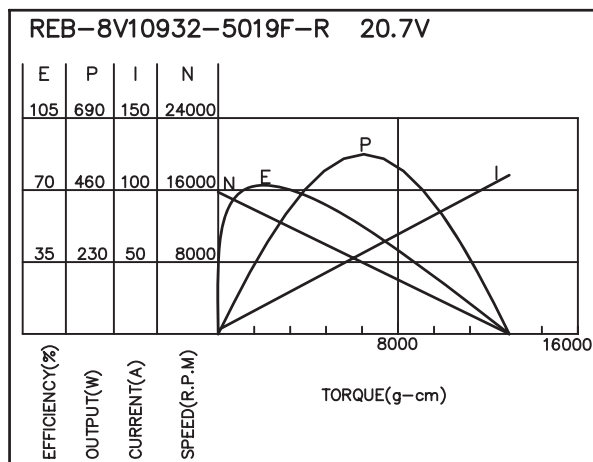
Application : Drill & Screwdriver

用途：電動工具



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
REB-8V10P32-5019F-R	12.0 - 24.0	20.7V CONSTANT	17200	2.83	14184	17.65	1747	171.27	245.47	72	110.36	12999	1274.41
REB-8S11P37-8508F-R	14.0 - 22.0	18.0V CONSTANT	19300	4.80	16694	40.02	3337	327.16	572.09	79	265.90	25000	2450.98

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



NICHIBO

DC MOTOR



Brushless DC Motor

BLDC CODING GUIDELINE

無刷馬達型號說明

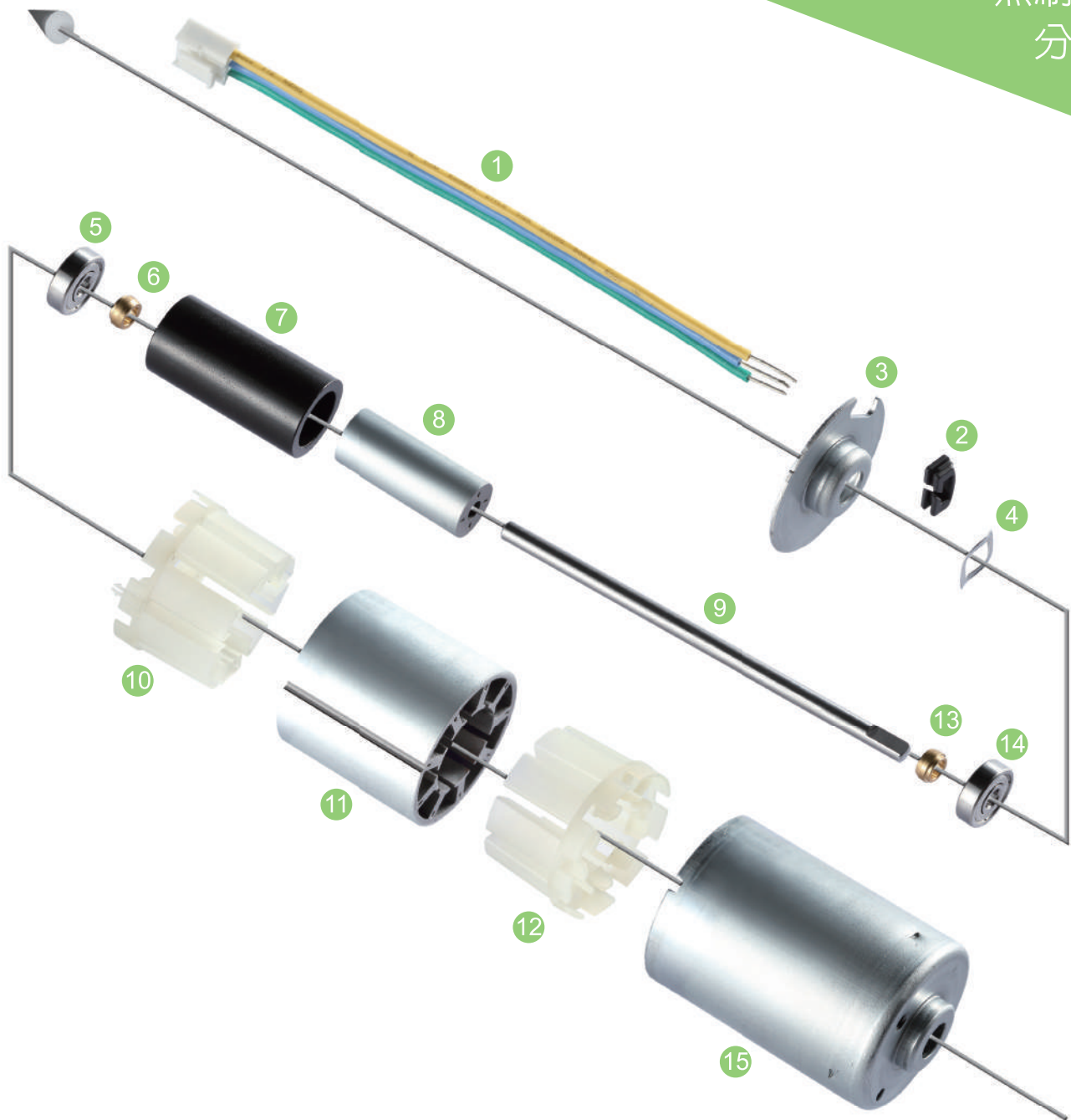
BL XX X XX X - XV XK XW- X X X X X

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)

- | | |
|--|--|
| (1) 直流無刷 | (1) Brushless motor |
| (2) 電機外徑
(根據設計發生變化, 例: 32.2 為 32mm) | (2) Motor Dia.
(ex: 32mm = 32) |
| (3) F: 為分體式馬達
E: 為外轉子, 機殼式默認省略 | (3) F: Split motor
E: outer rotor, Blank: inner rator |
| (4) 電機長度
(根據設計發生變化, 例: 60.2 為 60mm, A 開始為 100 mm, 每增加一位即加 10mm) | (4) Motor length
(ex: 60mm = 60) |
| (5) 磁石類別:
R: 橡膠磁石
F: 鐵氧體磁石
B: 粘結 NdFeB 磁石
S: 燒結 NdFeB 磁石 (高轉速結構專用) | (5) Magent:
R: Rubber magnet
F: Ferrite magnet
B: Bonded NdFeB
S: Sintered NdFeB |
| (6) 額定電壓
(例: 6V 10.5V 12V 24V 等) | (6) Rated Voltage
(ex: 6V 10.5V 12V 24V...) |
| (7) 空載轉速
(5800rpm 為 5.8K, 15200rpm 為 15.2K) | (7) No-load speed
(ex: 5800rpm=5.8K) |
| (8) 輸出功率
(例: 87W) | (8) Output Watt
(ex: 87W) |
| (9) 電路板:
N: 無電路板
B: 內置電路板
C: 內置控制器
E: 外置控制器 | (9) PCB
N: None
B: Internal Hub PCB
C: Internal driver PCB
E: External driver PCB |
| (10) 霍爾
0: 無霍爾
1: 有霍爾
2: 額外增設霍爾 | (10) Hall sensors
0: None
1: Internal
2: adding extra hall board |
| (11) 控制波形
Z: 正弦波
Y: 方波
X: 無控制 | (11) Control wave
Z: Sine wave
Y: Square wave
X: none |
| (12) 控制器版本
任何一次升級時, 上升一位數 (0 → 1 由此類推) | (12) Driver version
Number increase after upgrading (ex: 0 → 1) |
| (13) 調速
P: PWM 調速
V: 電壓調速
R: 旋扭調速
F: 複合調速
N: 無調速功能 | (13) Speed control
P: PWM wave
V: voltage 0 - 5V
R: resistance knob
F: multiple
N: none |

BRUSHLESS DC MOTOR EXPLOSION VIEW

無刷馬達 分解圖



1. 引線組 / LEAD-GROUP

2. 護線套 / BUSHING

3. 鐵後蓋 / END COVER

4. 波形墊圈 / BEARING SPRING

5. 培林軸承 / BEARING

6. 止推環 / ROTOR RETAINER

7. 磁石 / MAGNET

8. 轉子鐵芯 / INTERLOCKED ROTOR CORE

9. 軸 / SHAFT

10. 前線架 / ISOLATION FRAM

11. 定子鐵芯 / STATOR CORE

12. 後線架 / ISOLATION FRAM

13. 止推環 / ROTOR RETAINER (同 6)

14. 培林軸承 / BEARING (同 5)

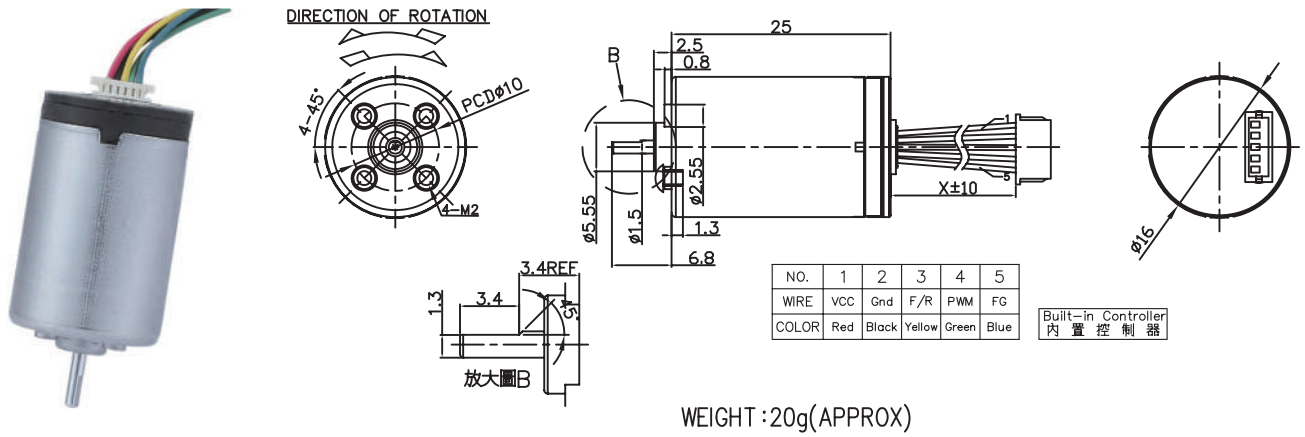
15. 鐵殼 / HOUSING

BL48E23

Brushless DC Motor

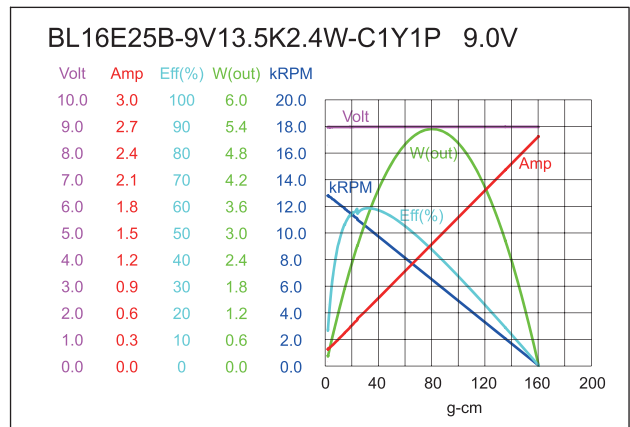
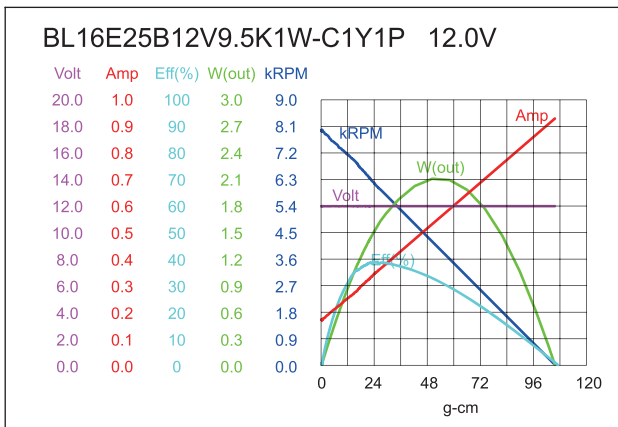
Application : Power Relay Station

用途：電動工具



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMINAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	TORQUE mN-m	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m
BL16E25B-12V9.5K1W-C0Y1P	9.0-12.0V	12.0V CONSTANT	8100	48	6580	0.33	24.8	2.43	1.7	45	0.96	103	10.1
BL16E25B-9V13.5K2.8W-C0Y1P	9.0-12.0V	9.0V CONSTANT	13500	100	11100	0.53	25.0	2.45	2.8	62	3.00	160	15.7

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

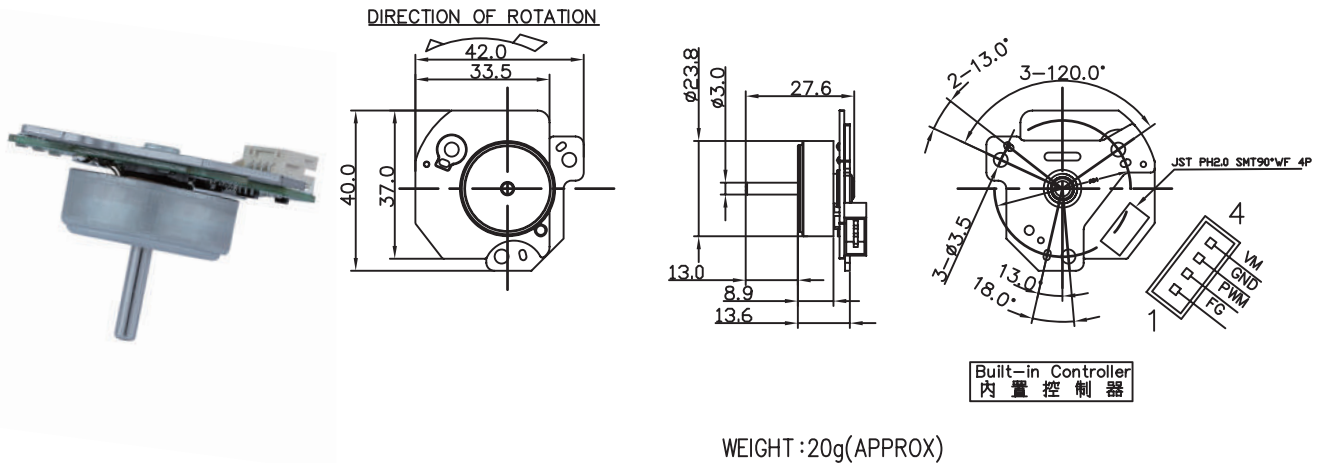


BL24E14

Brushless DC Motor

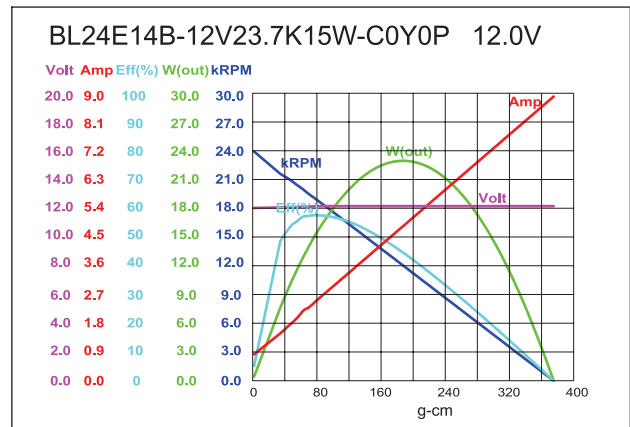
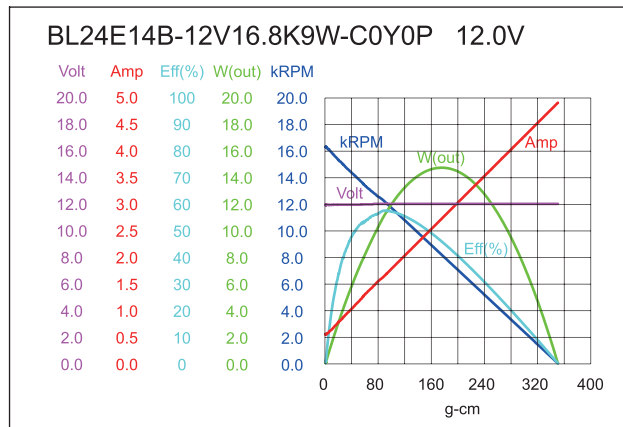
Application : Vacuum Robot 、 Fan

用途：智能吸塵機器人、風扇



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	TORQUE N-m	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE N-m
BL24E14B-12V16.8K9W-C0Y0P	10.0-16.0	12.0V CONSTANT	17200	0.4	12359	1.62	86.9	8.52	11.04	58	4.92	351.5	34.45
BL24E14B-12V23.7K20W-C0Y0P	10.0-16.0	12.0V CONSTANT	24000	0.48	20200	2.05	62.2	6.09	12.90	59	8.90	375.1	36.76

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

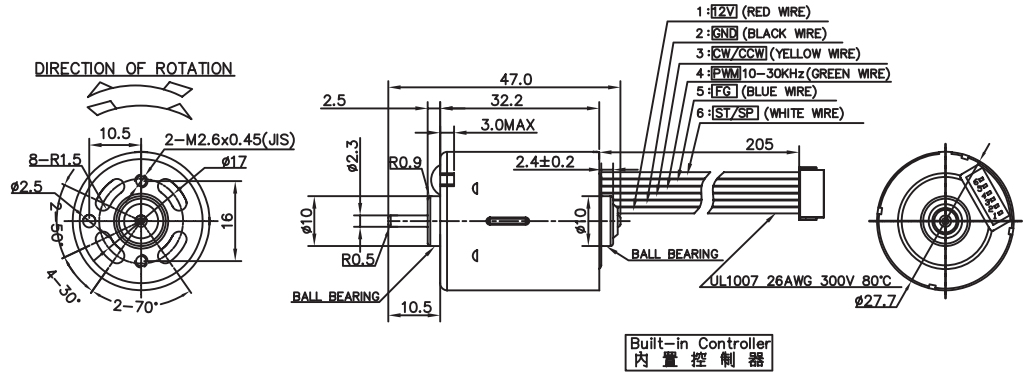


BL2832

Brushless DC Motor

Application : Vacuum Robot

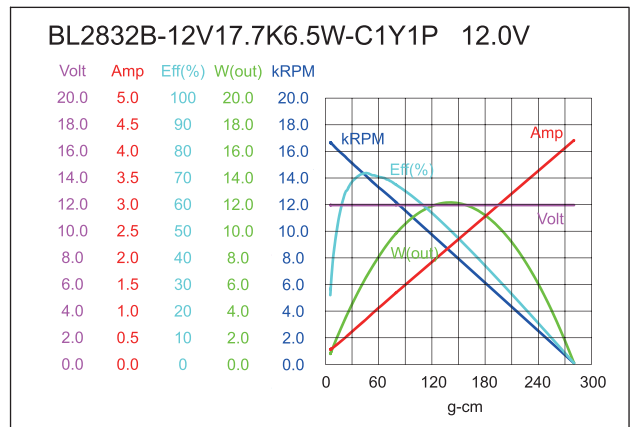
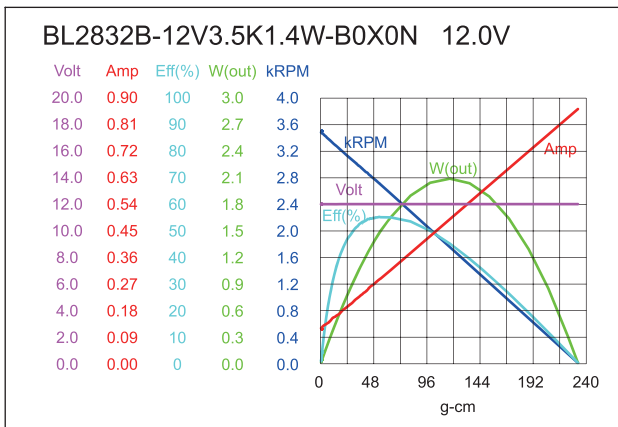
用途：智能吸塵機器人



WEIGHT : 90g(APPROX)

MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL2832B-12V3.5K1.4W-B0X0N	6.0-30.0	12.0V CONSTANT	3500	0.67	2719	0.28	53.11	5.21	1.48	55	0.86	233.20	22.86
BL2832B-12V17.7K6.5W-C1Y1P	6.0-30.0	12.0V CONSTANT	17700	0.17	14144	0.85	46.87	4.60	6.81	73	4.23	281.64	27.61

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
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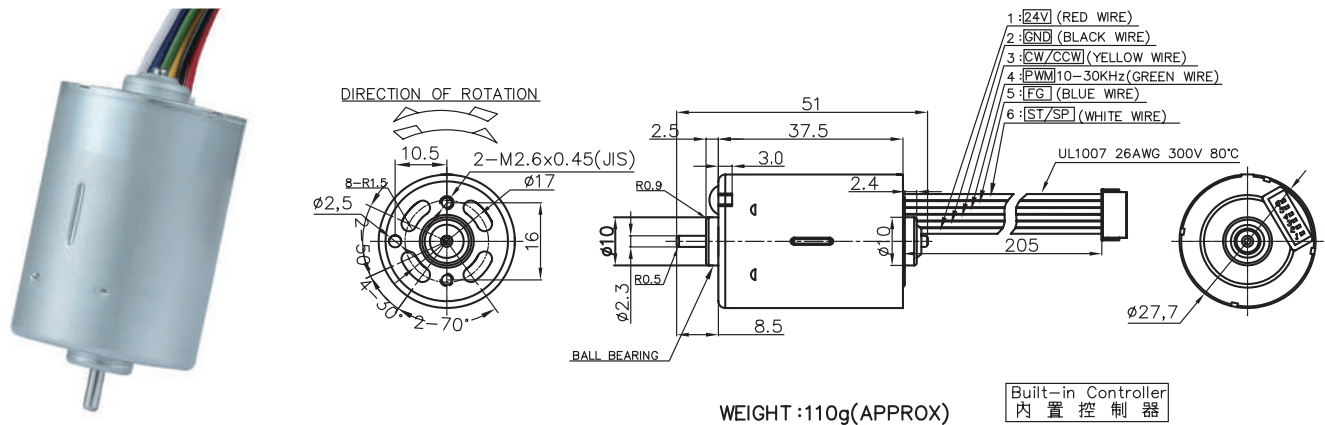


BL2838

Brushless DC Motor

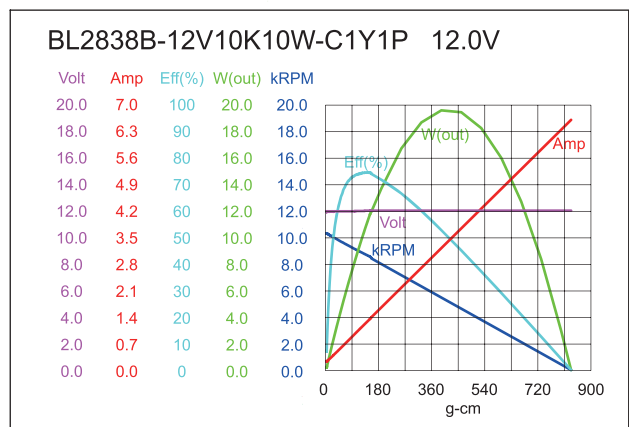
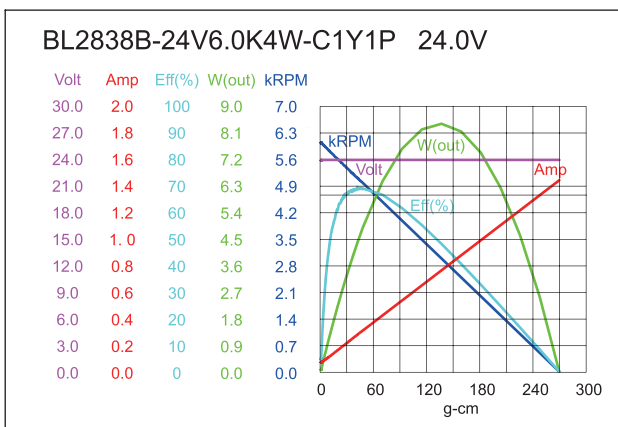
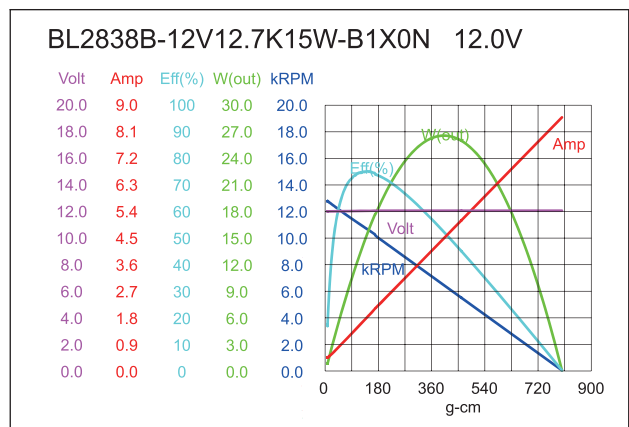
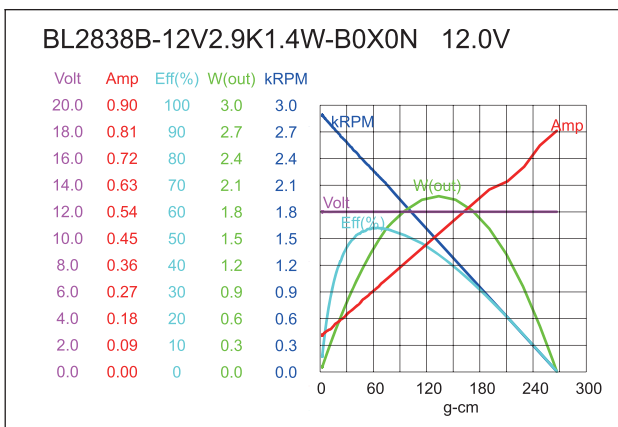
Application : Vacuum Robot

用途：智能吸塵機器人



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL2838B-12V2.9K1.4W-B0X0N	9.0-30.0	12.0V CONSTANT	2900	0.67	2248	0.28	62.55	6.13	1.44	55	0.82	267.59	26.23
BL2838B-12V12.7K15W-B1X0N	9.0-30.0	12.0V CONSTANT	12700	0.31	10730	1.79	140.30	13.75	15.46	76	8.61	803.31	78.76
BL2838B-24V6.0K4W-C1Y1P	9.0-30.0	24.0V CONSTANT	6000	0.05	5139	0.28	82.83	8.12	4.37	70	1.45	541.46	53.08
BL2838B-12V10K10W-C1Y1P	9.0-30.0	12.0V CONSTANT	10380	0.21	8834	1.21	117.20	11.49	10.63	75	6.63	810.00	79.41

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

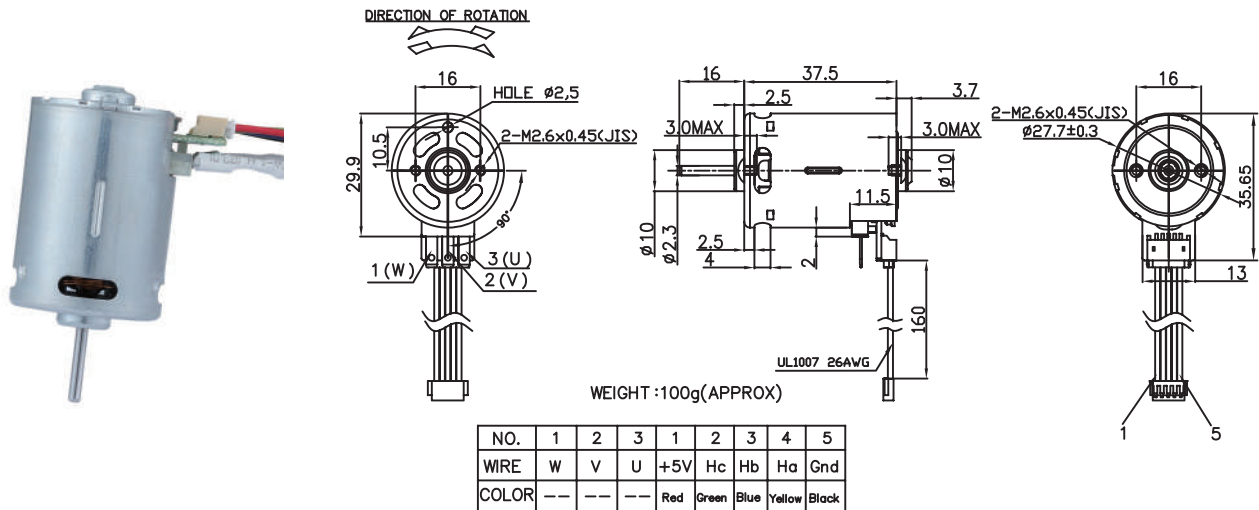


BL2838S

Brushless DC Motor

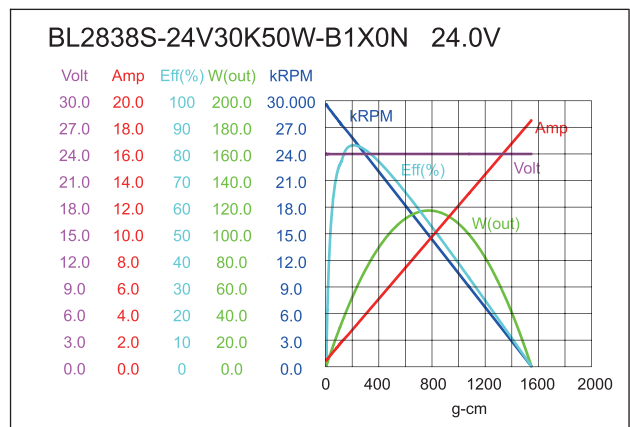
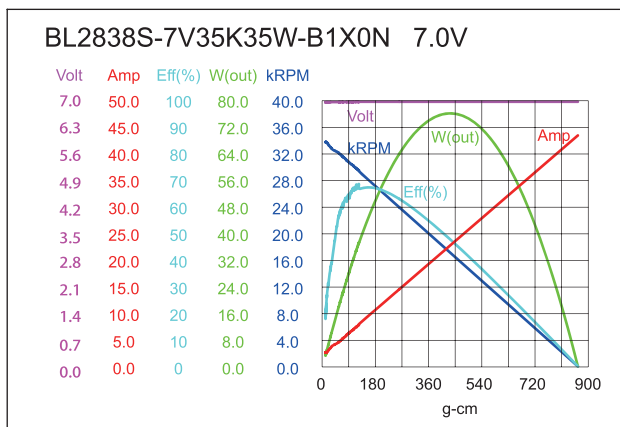
Application : Vacuum Cleaner

用途：吸塵器



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL2838S-7V35K35W-B1X0N	7.0-24.0	7.0V CONSTANT	35842	1.40	29586	7.78	126.1	12.36	38.31	71	43.62	867.15	84.98
BL2838S-24V30K50W-B1X0N	7.0-24.0	24.0V CONSTANT	30200	0.28	25613	2.90	211.4	20.72	55.61	84	18.57	1552.6	152.15

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

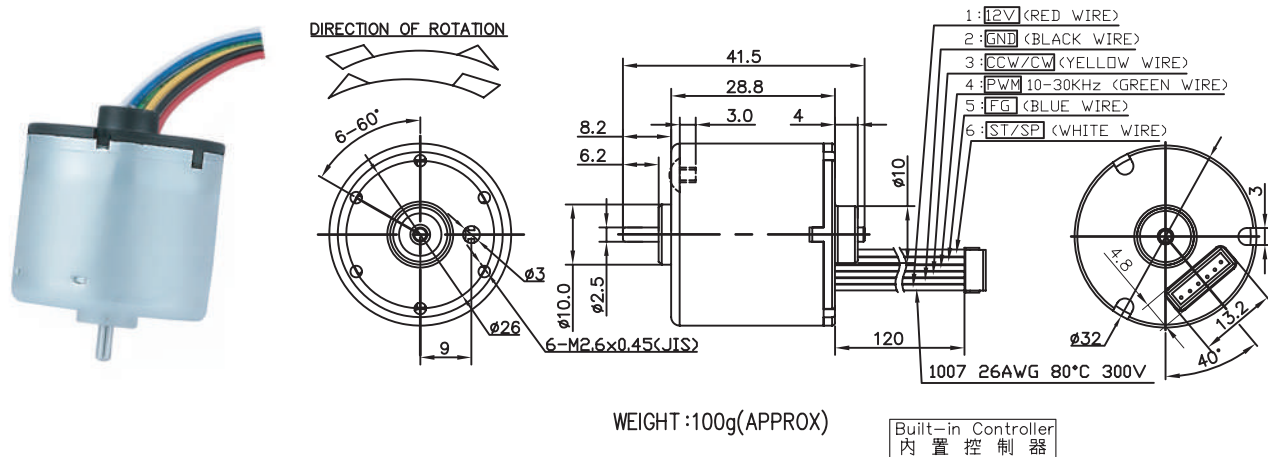


BL3229

Brushless DC Motor

Application : Automatic Feeder 、 Hair Dryer

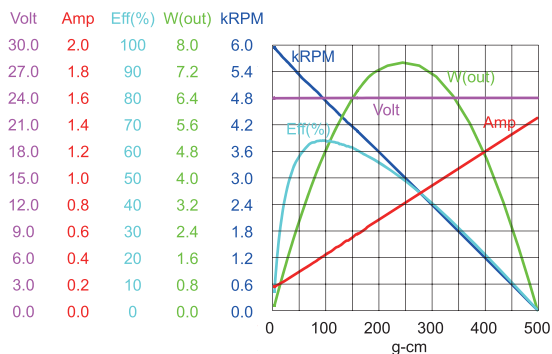
用途：自動餵食器、吹風機



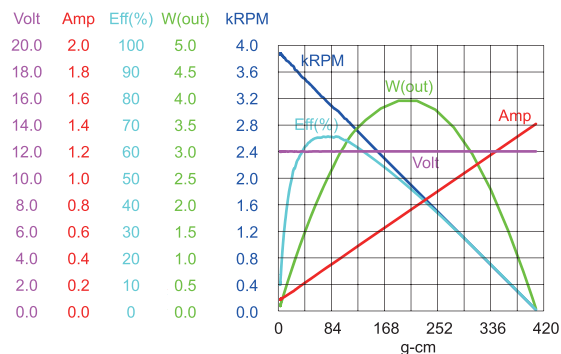
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL3229B-24V6.0K4.0W-B0X0N	9.0-30.0	24.0V CONSTANT	6000	0.72	4864	0.39	90.42	8.86	4.52	65	1.45	499.32	48.95
BL3229B-12V4.0K2.5W-C1Y1P	9.0-30.0	12.0V CONSTANT	4000	0.70	3053	0.36	89.96	8.82	2.82	66	1.42	409.56	40.15
BL3229B-24V4.0K2.0W-B1X0N	9.0-30.0	24.0V CONSTANT	4000	0.05	3126	0.17	66.04	6.04	2.12	56	0.56	290.30	28.46
BL3229B-12V10.0K9W-C1Y1P	9.0-30.0	12.0V CONSTANT	10200	0.18	9107	1.03	98.17	9.62	9.18	76	8.14	916.81	89.88

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

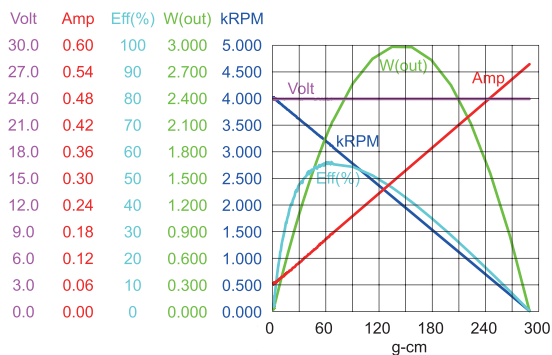
BL3229B-24V6.0K4.0W-B0X0N 24.0V



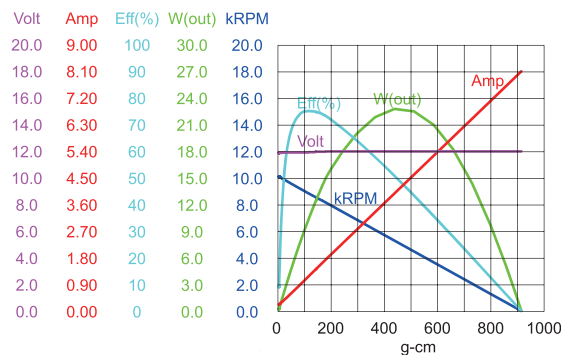
BL3229B-12V4.0K2.5W-C1Y1P 12.0V



BL3229B-24V4.0K2.0W-B1X0N 24.0V



BL3229B-12V10.0K9W-C1Y1P 12.0V

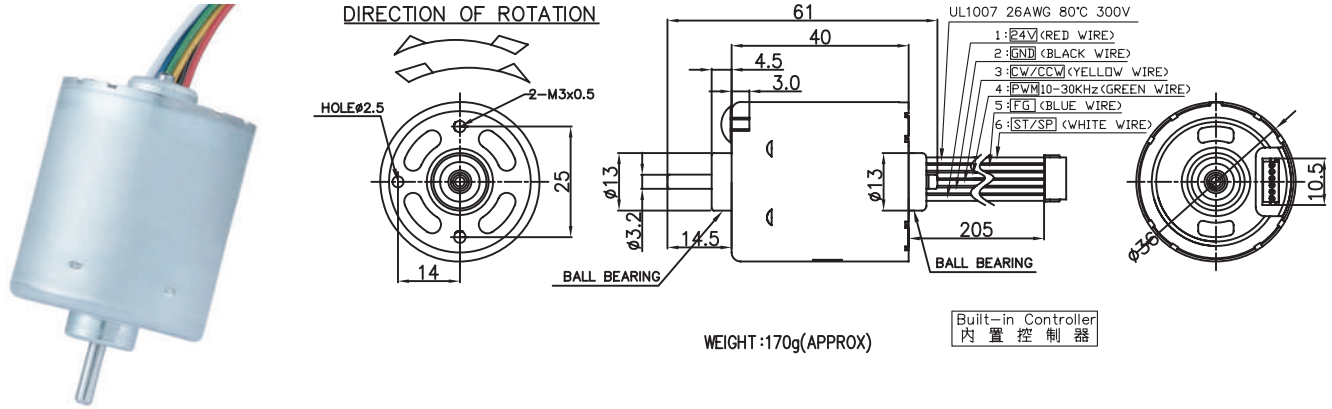


BL3640

Brushless DC Motor

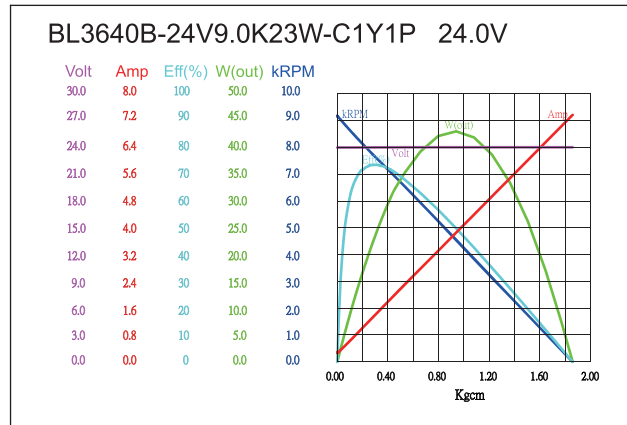
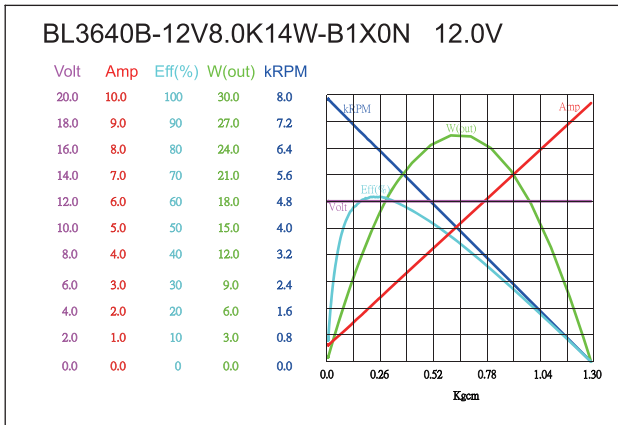
Application : Gear Motor 、 Pump 、 Robot

用途：齒輪箱、泵浦、機器人



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	TORQUE mN-m	OUTPUT W	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m
BL3640B-12V8.0K14W-B1X0N	10.0-30.0	12.0V CONSTANT	8000	0.42	6596	2.05	212	20.78	14.36	62	9.69	1287	126.18
BL3640B-24V9.0K23W-C1Y1P	10.0-30.0	24.0V CONSTANT	9000	0.17	7675	1.38	295	28.92	23.25	74	7.37	1859	182.25

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

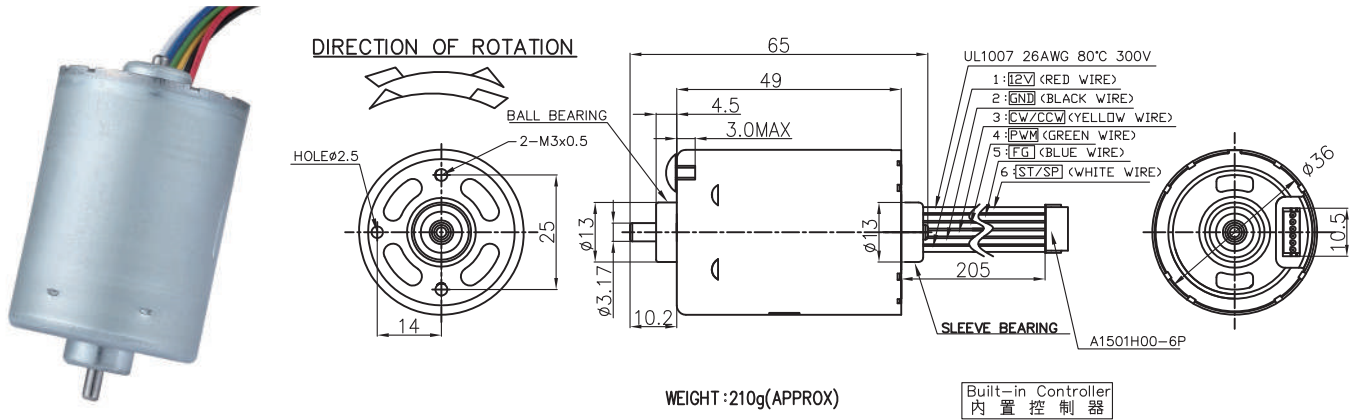


BL3649

Brushless DC Motor

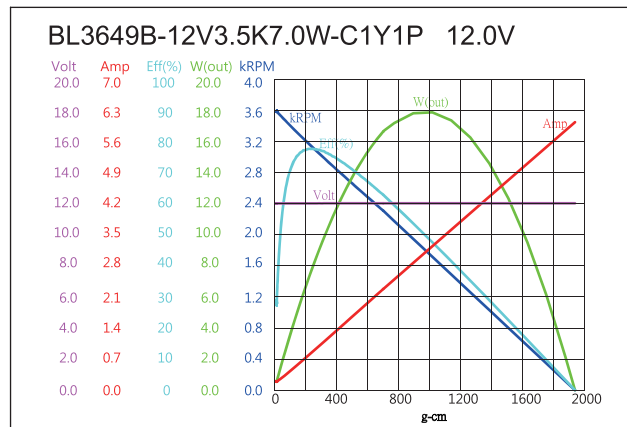
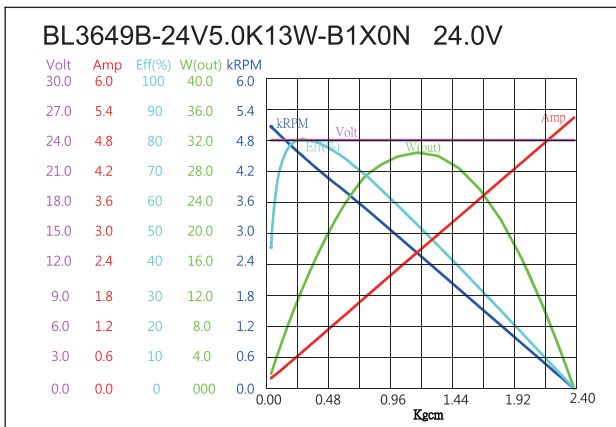
Application : Gear Motor 、 Pump 、 Robot

用途：齒輪箱、泵浦、機器人



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED rpm	CURRENT A	SPEED rpm	CURRENT A	TORQUE g-cm	OUTPUT mN-m	EFF %	CURRENT A	TORQUE g-cm	TORQUE mN-m	
BL3649B-24V5.0K13W-B1X0N	10.0-30.0	24.0V CONSTANT	5000	0.16	4484	0.72	286	28.04	13.17	81	5.23	2379	233.24
BL3649B-12V3.5K7.0W-C1Y1P	10.0-30.0	12.0V CONSTANT	3500	0.16	3135	0.85	242	23.73	7.79	78	6.04	1936	189.80

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

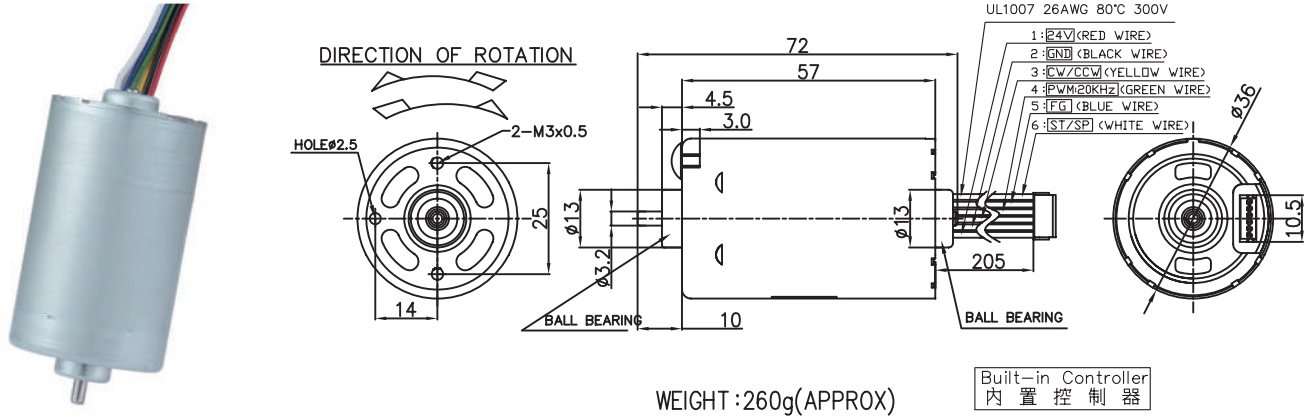


BL3657

Brushless DC Motor

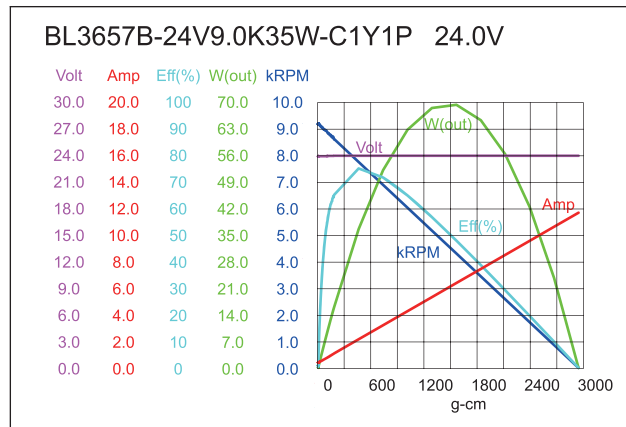
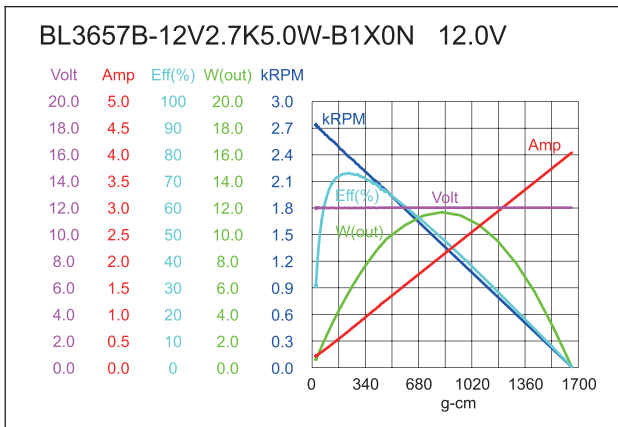
Application : Gear Motor 、 Pump 、 Electric Fan 、 Bubble Wrap Machine

用途：齒輪箱、泵浦、風扇、氣泡布製造機



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL3657B-12V2.7K5.0W-B1X0N	10.0-30.0	12.0V CONSTANT	2700	0.15	2408	0.65	217.6	21.33	5.38	74	4.05	1662.2	162.96
BL3657B-24V9.0K35W-C1Y1P	10.0-30.0	24.0V CONSTANT	9000	0.35	7786	2.16	458.9	44.99	36.69	76	11.78	2952.1	289.42

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

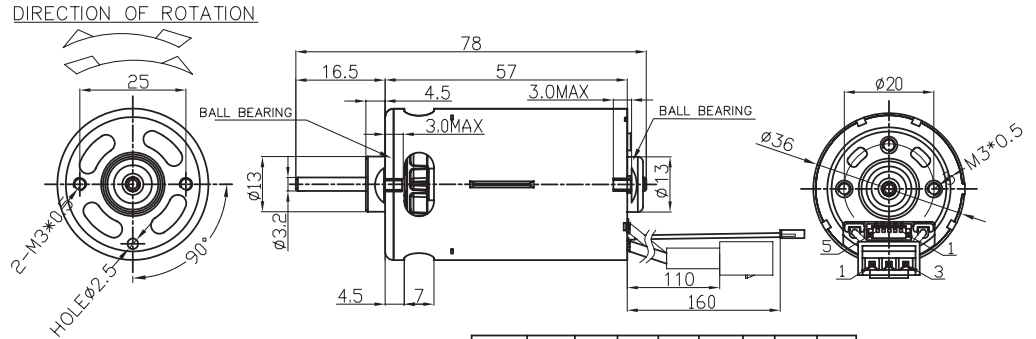


BL3657S

Brushless DC Motor

Application : Vacuum Cleaner 、 Medical Respirator

用途：吸塵器、呼吸機



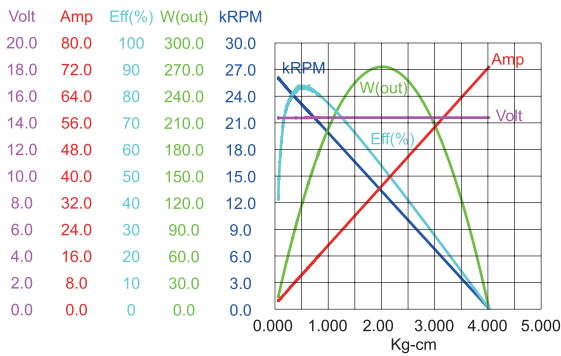
WEIGHT : 260g(APPROX)

NO.	1	2	3	1	2	3	4	5
WIRE	U	V	W	+5V	Hc	Hb	Ha	Gnd
COLOR	Grey	Brown	White	Red	Green	Blue	Yellow	Black
Type	UL3135	18AWG		UL1007	26AWG			

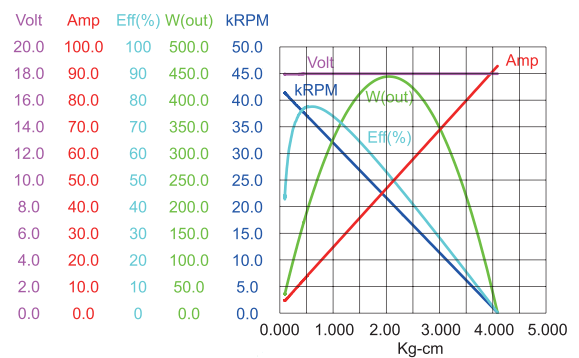
MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	Kg-cm	N-m	W	%	A	Kg-cm	N-m
BL3657S-14.4V26.8K140W-B1X0N	12.0-36.0	14.0V CONSTANT	26400	1.26	22321	12.45	0.63	0.06	144.18	84	73.03	4.04	0.40
BL3657S-18V43K190W-B1X0N	12.0-36.0	18.0V CONSTANT	42300	2.00	37037	14.13	0.52	0.05	197.78	78	93.06	4.10	0.40
BL3657S-24V15K60W-B1X0N	12.0-36.0	24.0V CONSTANT	15000	0.24	13423	2.89	0.41	0.04	56.24	83	23.32	3.53	0.35
BL3657S-36V19K100W-B1X0N	12.0-36.0	36.0V CONSTANT	19300	0.30	17391	3.01	0.54	0.05	96.26	90	24.25	4.88	0.48

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

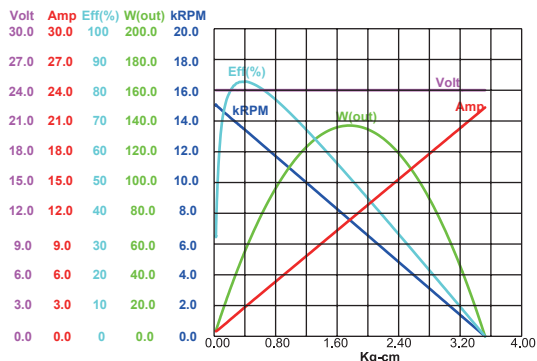
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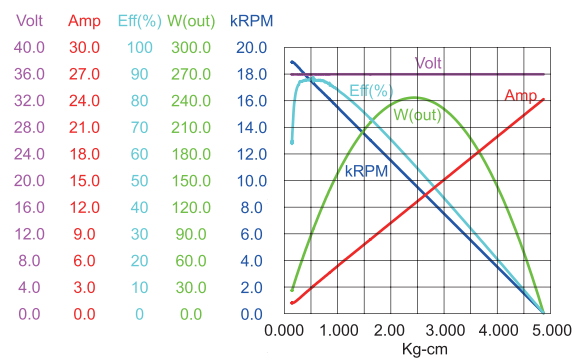
BL3657S-18V43K190W-B1X0N 18.0V



BL3657S-24V15K60W-B1X0N 24.0V



BL3657S-36V19K100W-B1X0N 36.0V

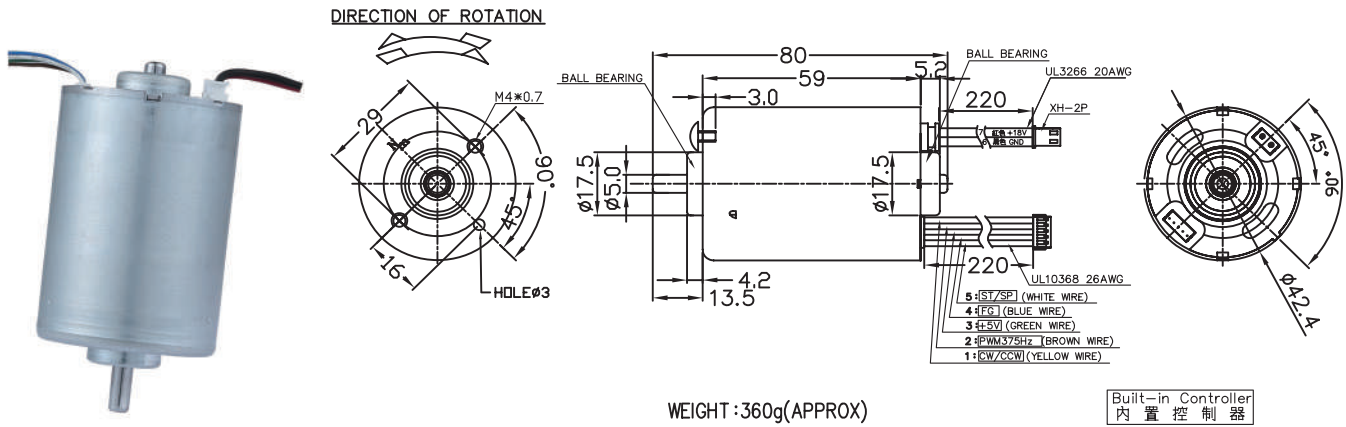


BL4259

Brushless DC Motor

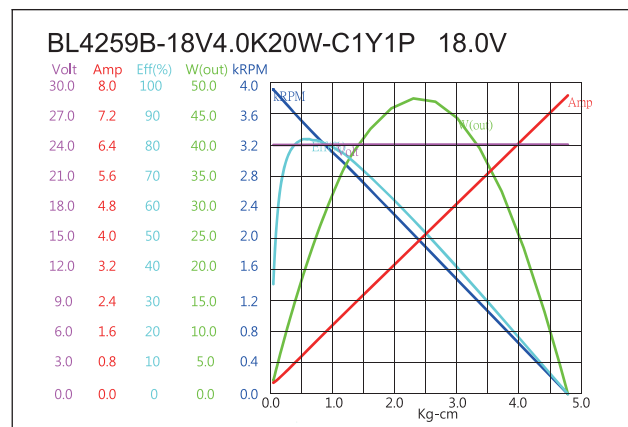
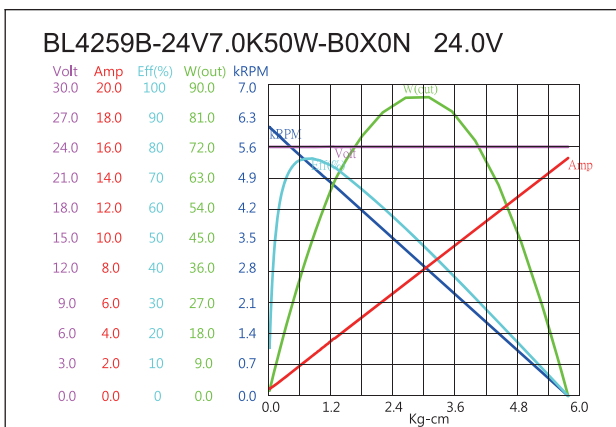
Application : Water Pump

用途：水泵



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL4259B-24V6.0K30W-B1X0N	10.0-26.0	24.0V CONSTANT	6100	0.25	5211	2.45	802	78.63	42.92	76	15.28	5783	566.96
BL4259B-18V4.0K20W-C1Y1P	10.0-26.0	18.0V CONSTANT	4000	0.19	3413	1.16	627	61.47	21.97	82	7.67	4786	469.22

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

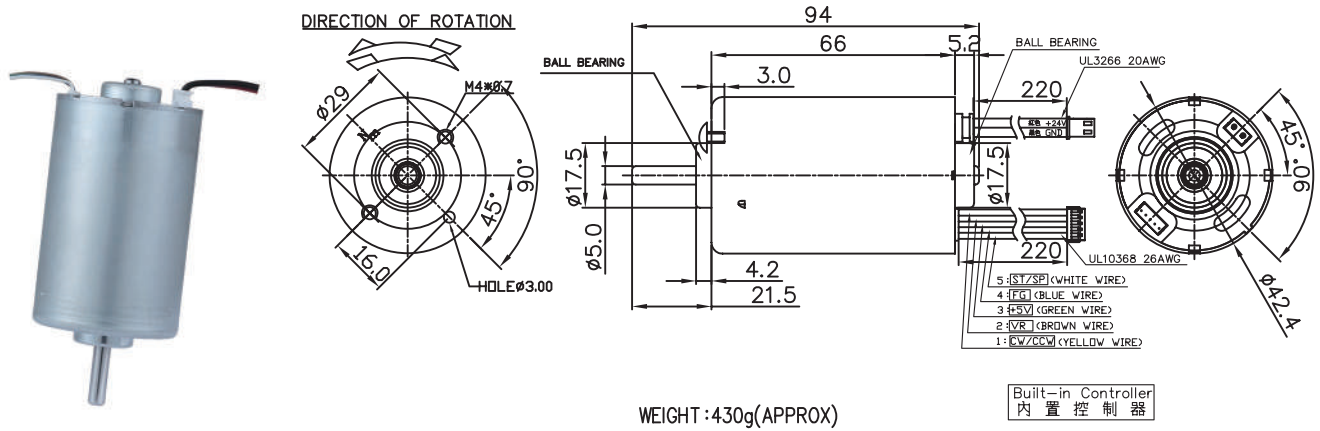


BL4266

Brushless DC Motor

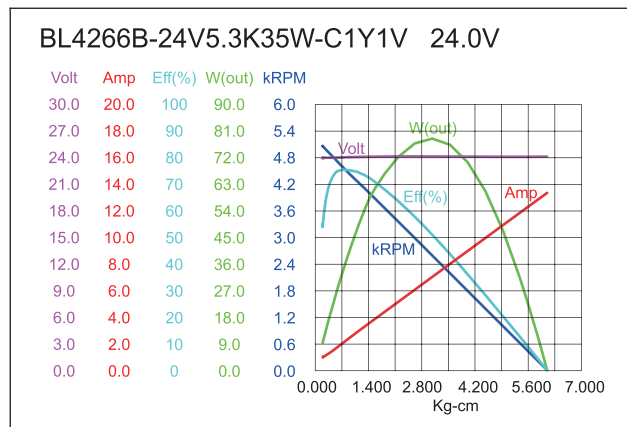
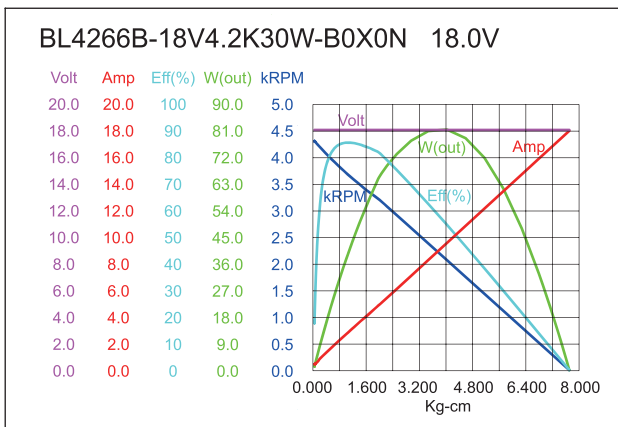
Application : Water Pump 、Lawn Mower

用途：水泵、智能割草機



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL4266B-18V4.2K30W-B0X0N	10.0-26.0	18.0V CONSTANT	4300	0.31	3648	3.03	1128	110.59	42.26	86	18.08	7727	757.55
BL4266B-24V5.3K35W-C1Y1V	10.0-26.0	24.0V CONSTANT	5200	0.39	4570	2.11	747	73.24	35.06	76	13.42	6115	559.51

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

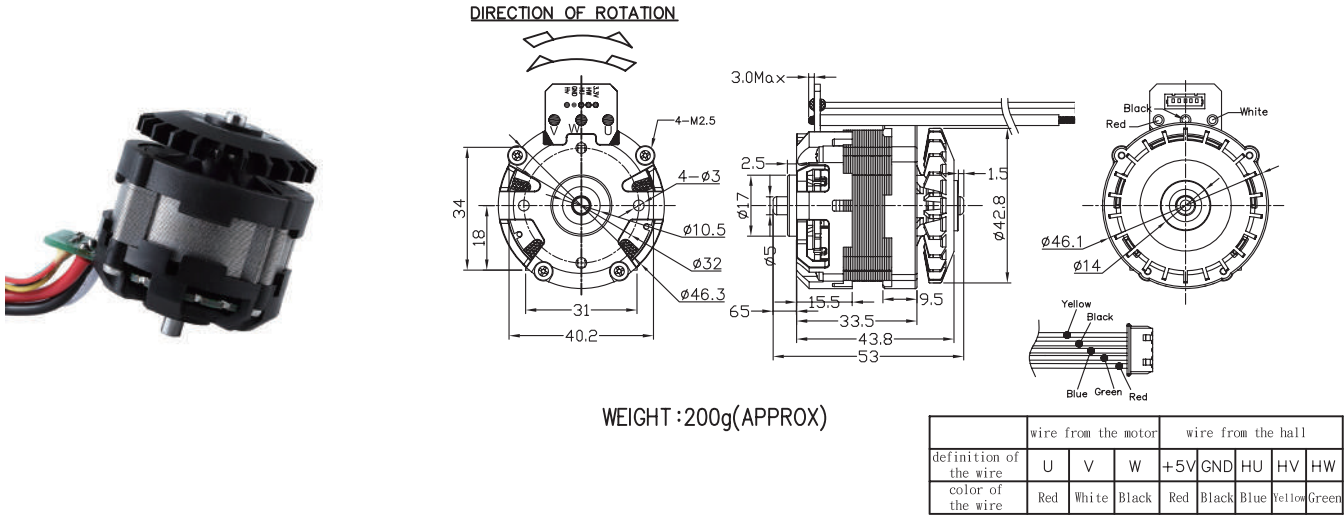


BL4244

Brushless DC Motor

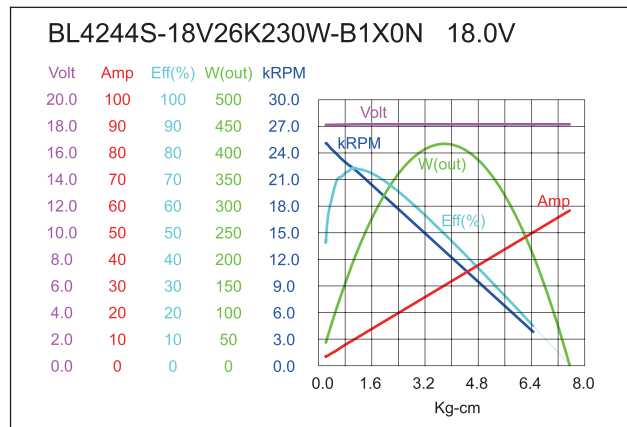
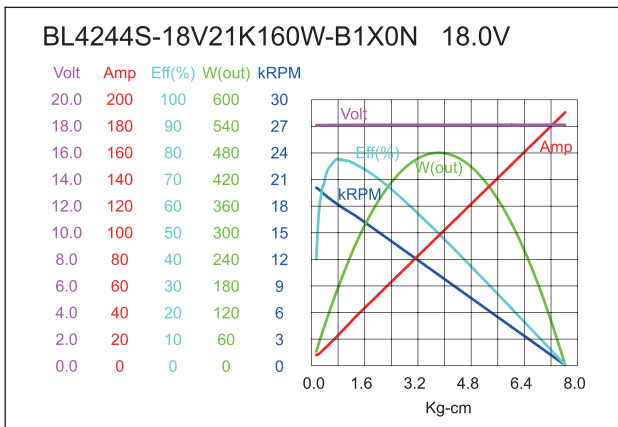
Application : Power Tools

用途：電動工具



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	g-cm	mN-m	W	%	A	g-cm	mN-m
BL4244S-18V21K160W-B1X0N	12.0-24.0	18.0V CONSTANT	20500	1.74	17986	12.55	906	88.82	167.35	80	95.54	7645	749.51
BL4244S-18V26K230W-B1X0N	12.0-24.0	18.0V CONSTANT	26200	3.30	22371	18.75	1208	118.43	236.17	75	117.33	7570	742.16

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

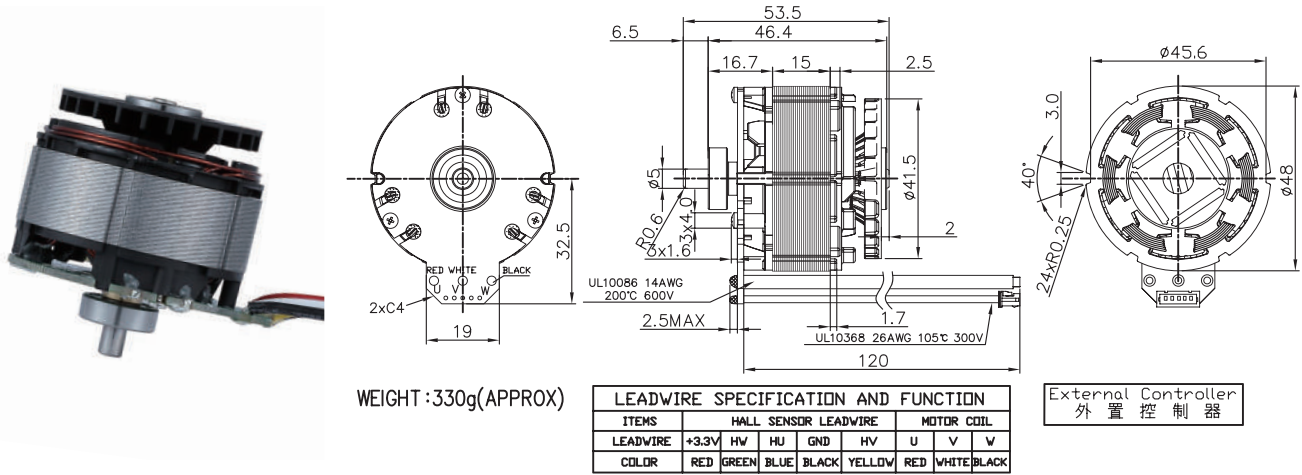


BL48F15

Brushless DC Motor

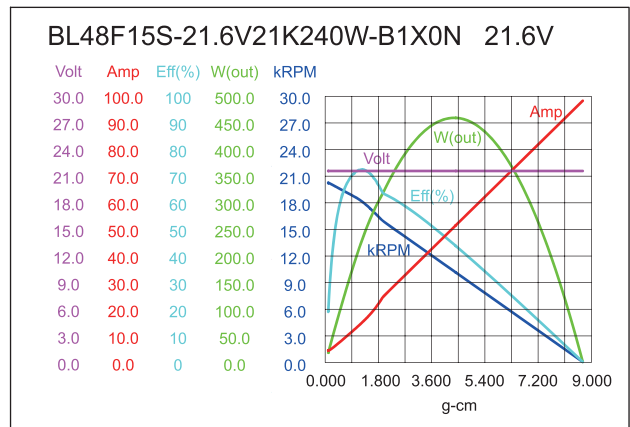
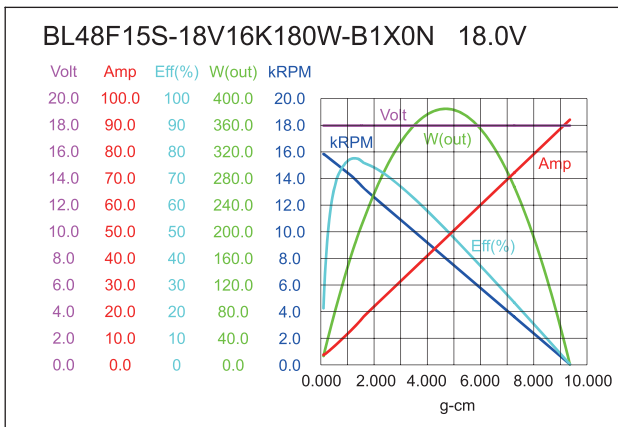
Application : Power Tools

用途：電動工具



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE		OUTPUT	EFF	CURRENT	TORQUE	
			rpm	A	rpm	A	Kg-cm	N-m	W	%	A	Kg-cm	N-m
BL48F15S-18V16K180W-B1X0N	14.4-21.6V	18.0V CONSTANT	16150	2.13	13966	14.37	1.28	0.13	183.73	78	92.37	9.38	0.92
BL48F15S-21.6V21K240W-B1X0N	14.4-21.6V	21.6V CONSTANT	20500	2.40	18051	15.42	1.30	0.13	240.99	73	98.59	8.73	0.86

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

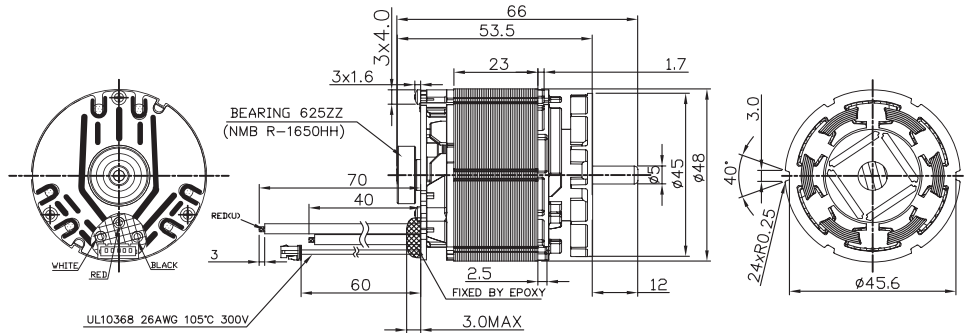
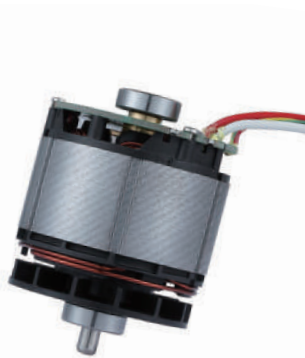


BL48F23

Brushless DC Motor

Application : Power Tools

用途：電動工具



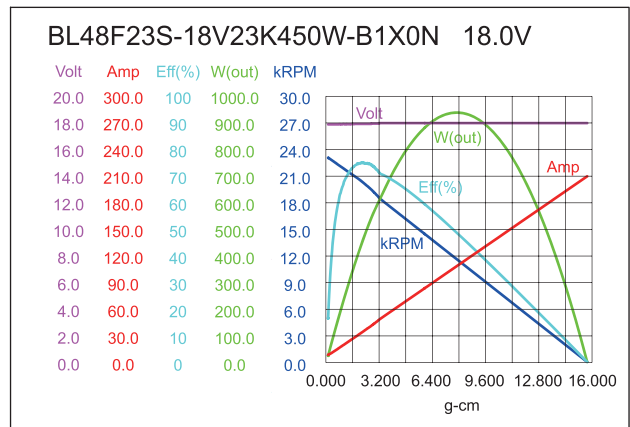
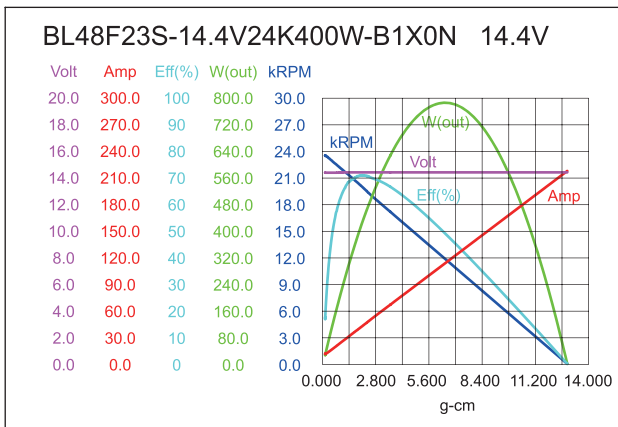
WEIGHT : 330g(APPROX)

LEADWIRE SPECIFICATION AND FUNCTION									
ITEMS	HALL SENSOR LEADWIRE				MOTOR COIL				
LEADWIRE	+3.3V	HW	HU	GND	HV	U	V	W	
COLOR	RED	GREEN	BLUE	BLACK	YELLOW	RED	WHITE	BLACK	

External Controller
外置控制器

MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE		OUTPUT	EFF	CURRENT	TORQUE	
			rpm	A	rpm	A	Kg-cm	N-m	W	%	A	Kg-cm	N-m
BL48F23S-14.4V24K400W-B1X0N	14.4-21.6V	14.4V CONSTANT	24000	7.80	20243	41.37	2.01	0.20	417.44	72	218.85	12.91	1.27
BL48F23S-18V23K450W-B1X0N	14.4-21.6V	18.0V CONSTANT	23000	4.70	20450	33.50	2.16	0.21	453.84	76	210.75	15.75	1.54

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

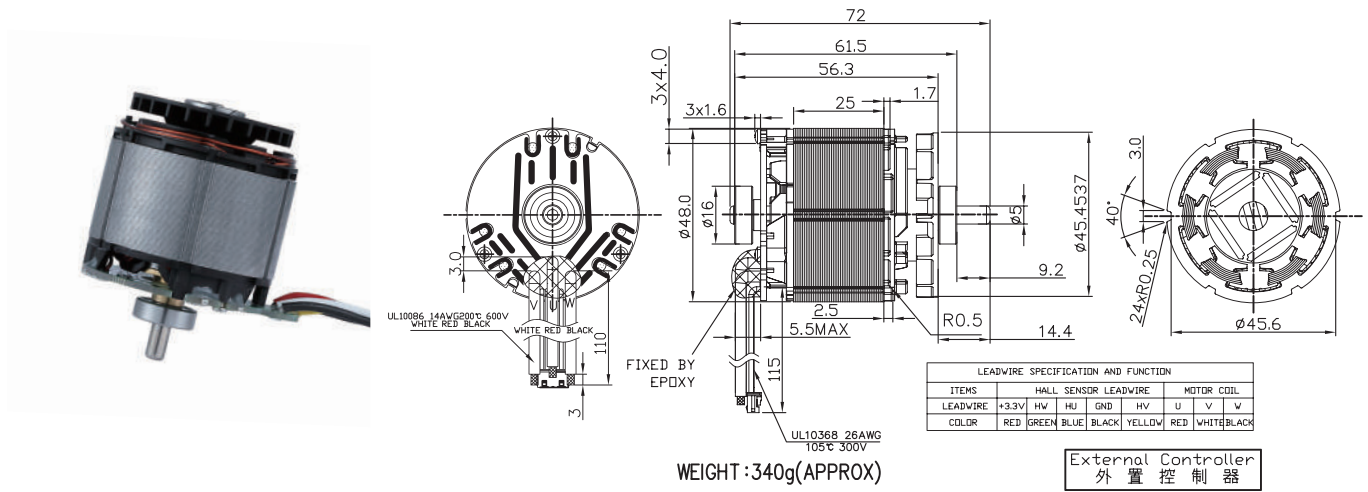


BL48F25

Brushless DC Motor

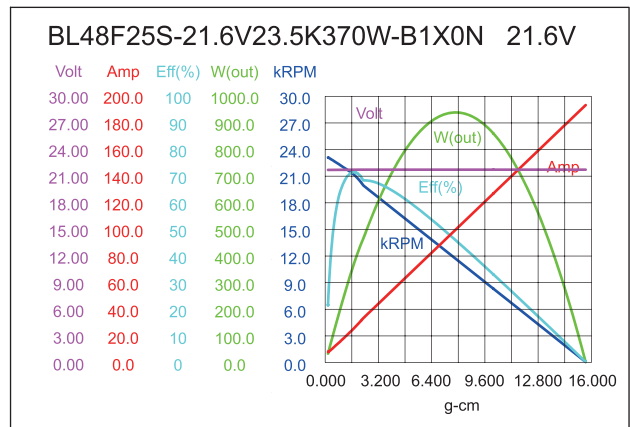
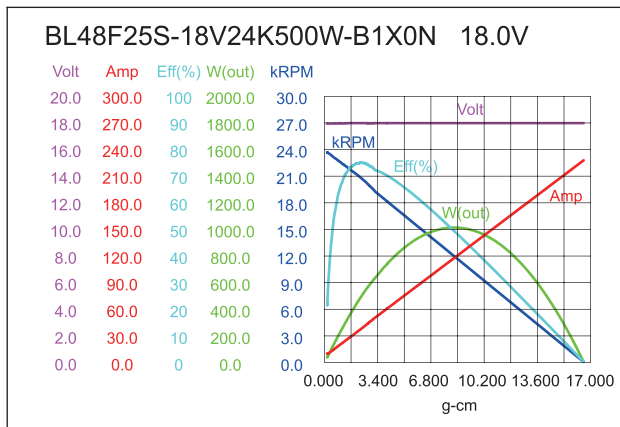
Application : Power Tools

用途：電動工具



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	Kg-cm	N-m	W	%	A	Kg-cm	N-m
BL48F25S-18V24K500W-B1X0N	14.4-21.6V	18.0V CONSTANT	24000	6.40	20747	38.34	2.39	0.23	510.07	76	228.74	16.60	1.63
BL48F25S-21.6V23.5K370W-B1X0N	14.4-21.6V	21.6V CONSTANT	23500	4.60	21186	25.60	1.73	0.17	376.40	72	193.89	15.70	1.54

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

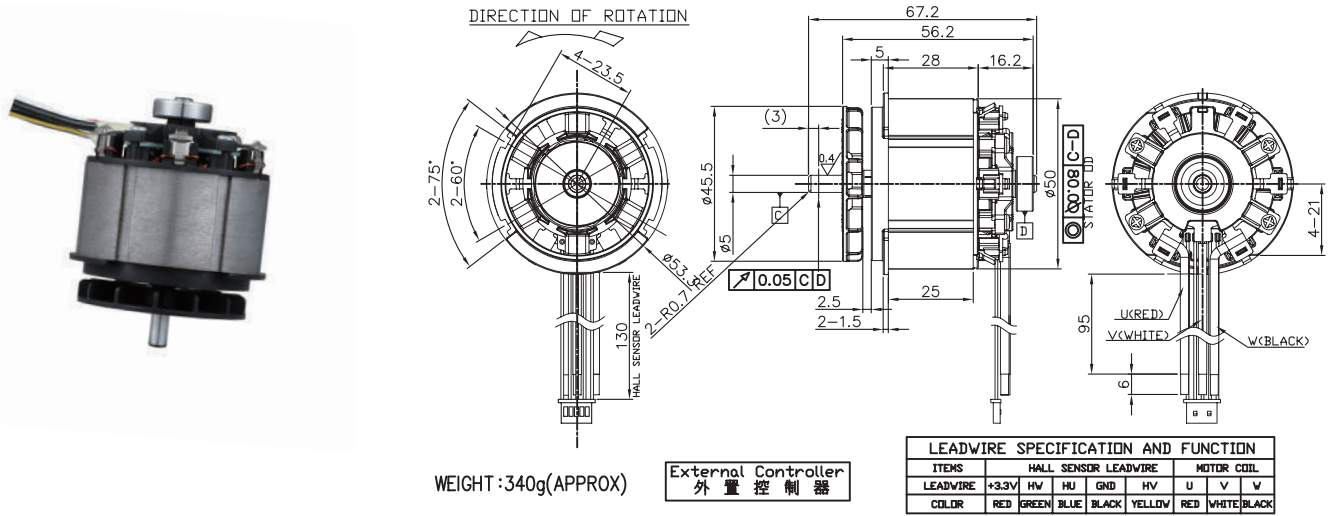


BL50F25

Brushless DC Motor

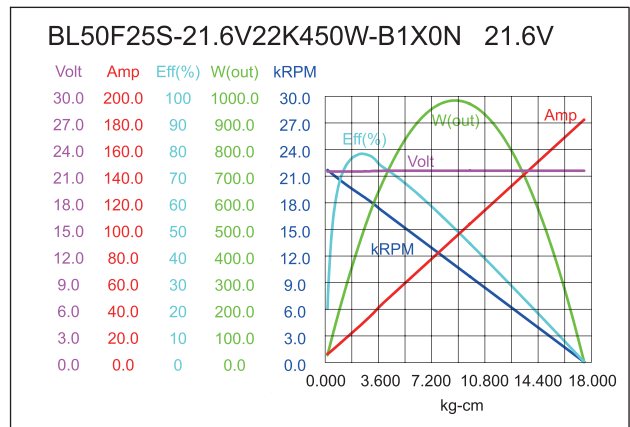
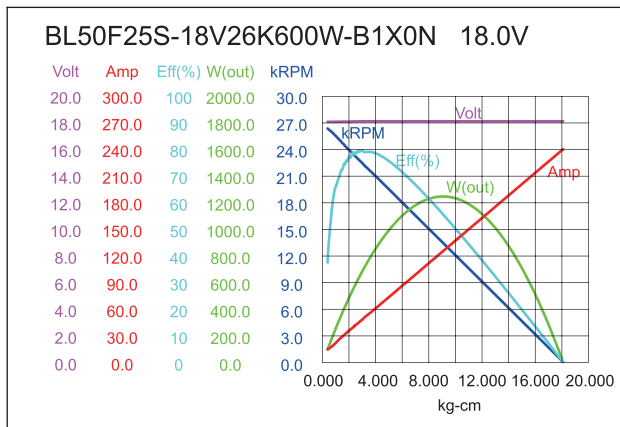
Application : Electric Drill 、 Electric Hammer 、 Impact Wrench

用途：電鑽、電錘、衝擊扳手



MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY						STALL		
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	Kg-cm	mN-m	W	%	A	Kg-cm	mN-m
BL50F25S-18V26K600W-B1X0N	18.0-21.6V	18.0V CONSTANT	26000	6.20	22520	48.0	3.00	294	704	82	240	18.0	176
BL50F25S-21.6V22K450W-B1X0N	18.0-21.6V	21.6V CONSTANT	22000	5.20	19120	26.6	2.20	215	446	79	182	17.5	171

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.

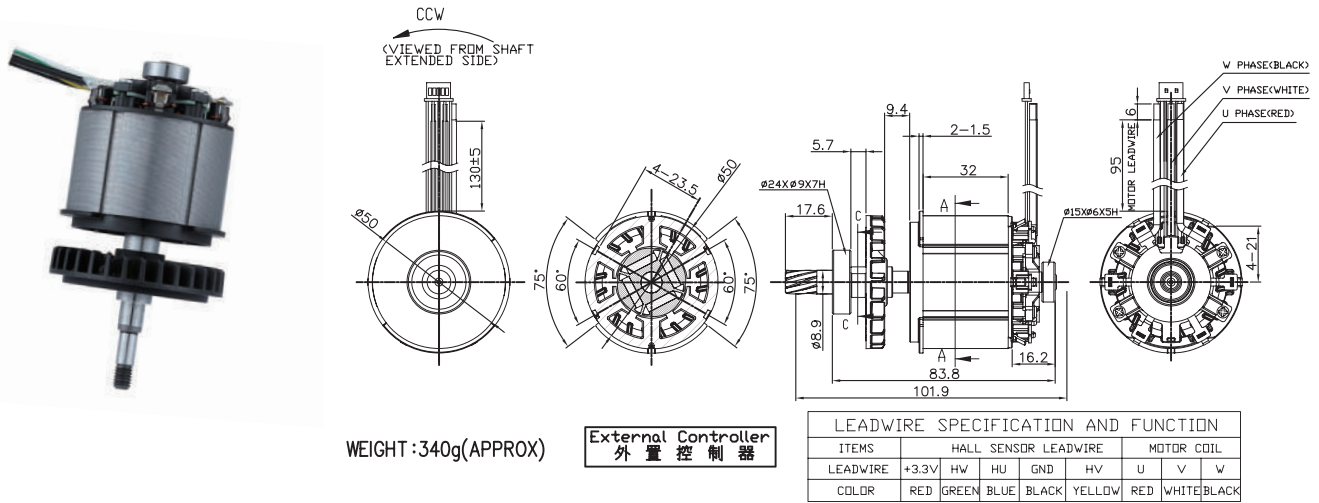


BL50F32

Brushless DC Motor

Application : Electric Hammer 、 Electric Drill 、 Angle Grinder 、 Circular Saw

用途：電錘、電鑽、角磨機、圓鋸

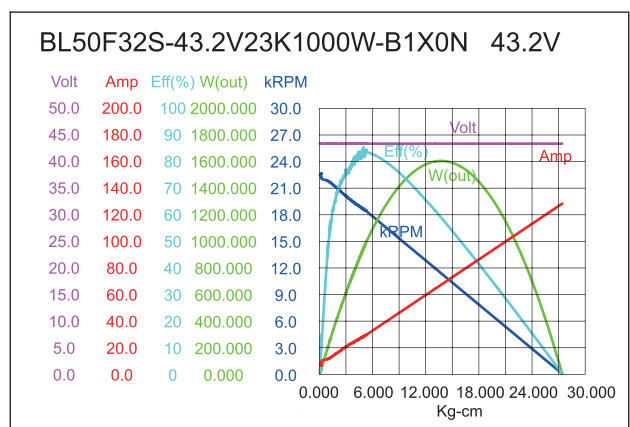
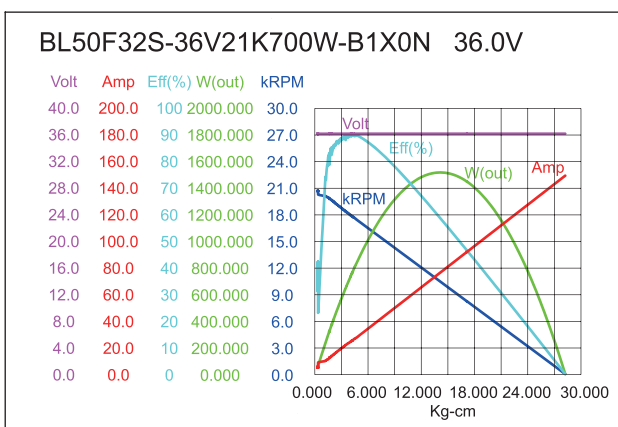
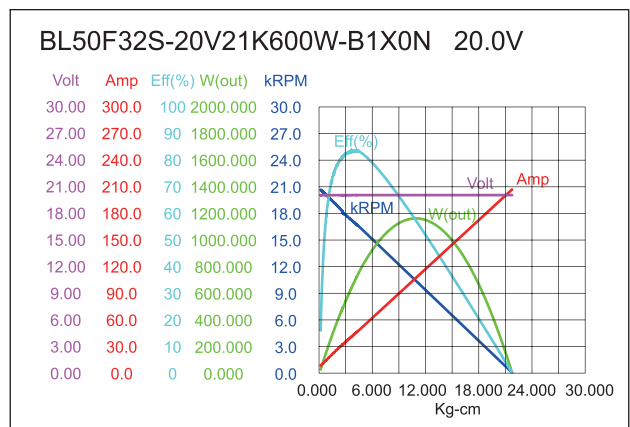
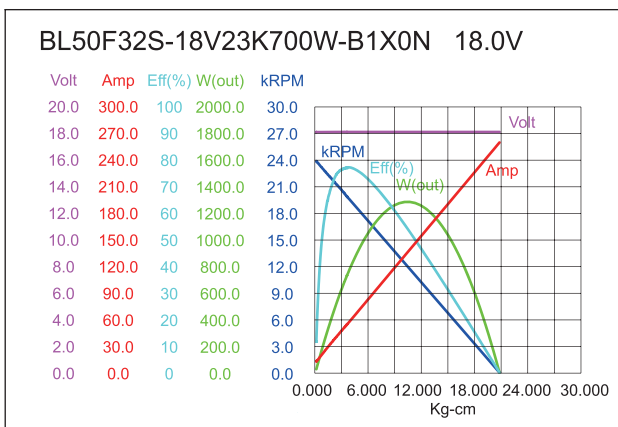


WEIGHT : 340g(APPROX)

External Controller
外置控制器

MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL			
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE	OUTPUT	EFF	CURRENT	TORQUE		
			rpm	A	rpm	A	Kg-cm	mN-m	W	%	A	Kg-cm	mN-m
BL50F32S-18V23K700W-B1X0N	18.0-43.2V	18.0V CONSTANT	23000	9.40	19960	54	3.6	353	742	78	260	20.9	204
BL50F32S-20V21K600W-B1X0N	18.0-43.2V	20.0V CONSTANT	21000	7.60	17330	40	3.6	353	642	84	207	21.8	213
BL50F32S-36V21K700W-B1X0N	18.0-43.2V	36.0V CONSTANT	21000	2.50	18050	24	4.0	392	740	91	150	28.3	277
BL50F32S-43.2V23K1000W-B1X0N	18.0-43.2V	43.2V CONSTANT	23000	5.10	18760	28	4.9	480	958	86	128	27.4	268

馬達的出軸長度及性能參數，EMC 對策可依客人要求做調整，詳情可詢問相關業務人員。
Please inquire your sales representative for output, performance and EMC solution.



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