恒铭智能

专注研发、国造品牌

恒铭智能

专注研发、国造品牌

Product Reducers

CONTENTS

減速機產品目錄

恒铭造 用心造

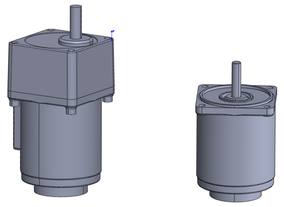
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CONTENTS

微型減速機
COMPACT REDUCERS



06-51

07 **訂購方式** DESIGNATION
微型交流電機 Miniature AC motor
微型直流電機 Miniature DC motor

09 **通用參數** GENERAL PARAMETERS
微型交流電機接綫圖及運行電容外形尺寸
Miniature ac motor wiring diagram dimensions and running capacitor dimensions
微型直流電機接綫圖
Miniature dc motor wiring diagram dimensions

10 **微型交流電機** MINIATURE AC MOTOR
10 6W
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
12 15W
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
14 25W
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
19 40W/60W
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
23 90W/120W
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
28 140W/200W
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions

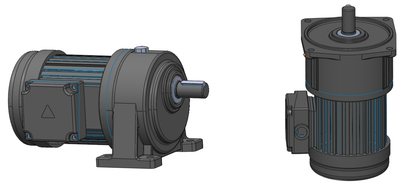
31 **調速電磁制動電機**
VARIABLE SPEED ELECTROMAGNETIC BRAKE MOTOR

33 **微型直流電機** MINIATURE DC MOTOR
33 60DC
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
34 70DC
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
35 80DC
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
37 90DC
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions
45 100DC
各型號電機性能 Motor performance
減速箱減速比性能對照表
Reduction ratio performance chart
外形尺寸（CAD）Dimensions

48 **技術應用帶接綫盒減速電機選購指南**
TECHNICAL APPLICATION
(Description and installation)

49 **技術應用（說明及安裝）**
TECHNICAL APPLICATION
(Description and installation)

中型減速機
MEDIUM REDUCERS



52-75

53 **訂購方式** DESIGNATION
馬達規範 Motor specifica tion
輸出扭矩表 Output topque

56 **減速機之選定範例** THE SELECTED REDUCER EXAMPLES
連結方式 Wiring diagram
單相馬達/剎車器結綫方式 Singel phase motor w/brake unit diagram

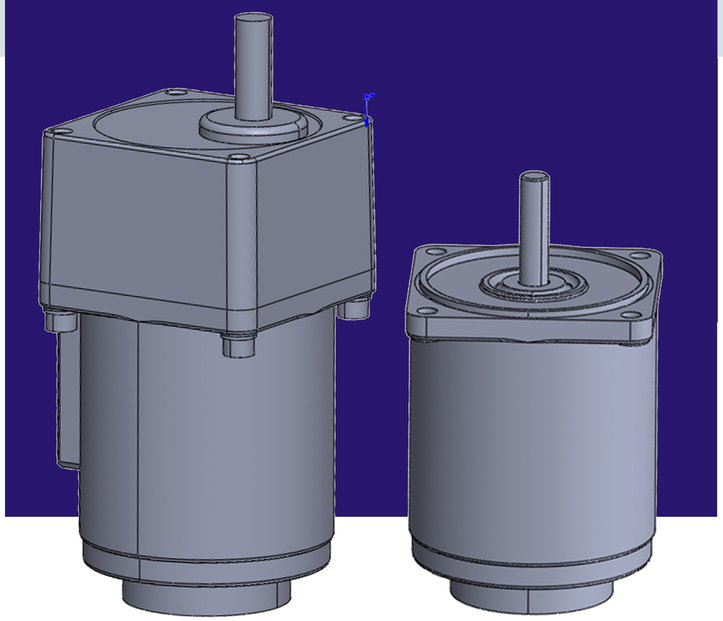
58 **尺寸表** DIMENSIONS
1、立式三相標準IEC鋁殼（剎車）馬達
Vertical three-phase standard IEC aluminum(brake)motor
2、GH卧式附三相、單相鋁殼（剎車）齒輪減速馬達
GH horizontal attached single-phase three-phase, aluminum shell(brake)gear reducer motors
3、GV立式附三相、單相鋁殼（剎車）齒輪減速馬達
GV All cinemas with single-phase three-phase, vertical aluminum shell(brake)grar reducer motors
4、GH卧式高速比附三相、單相鋁殼（剎車）齒輪減速馬達
GH horizontal high-speed opponent single-phase three-phase, aluminum shell(brake)gear reducer motors
5、GV立式高速比附三相、單相鋁殼（剎車）齒輪減速馬達
GV All cinemas vertical high-speed opponent single-phase three-phase, aluminum shell(brake)gear reducer motors
6、GH卧式附三相、單相鋁殼（剎車）縮框型齒輪減速馬達
GH horizontal attached single-phase three-phase, aluminum shell(brake)shrink box type gear reducer motors
7、GV立式附三相、單相鋁殼（剎車）縮框型齒輪減速馬達
GV All cinemas with single-phase three-phase, vertical aluminum shell(brake)sharink box type gear reducer motors
8、GH卧式高速比附三相、單相鋁殼（剎車）縮框型齒輪減速馬達
GH horizontal high-speed opponent single-phase three-pahase, aluminum shell(brake)shrink box type gear reducer motors
9、GV立式高速比附三相、單相鋁殼（剎車）縮框型齒輪減速馬達
GV All cinemas vertical high-speed opponent single-phase three-phase, aluminum shell(brake)shrink box type gear reducer motors
10、GHM卧式直結型齒輪減速機
GHM horizontal straight" type gear
11、GVM立式直結型齒輪減速機
GVM vertical straight" type gear
12、GHD卧式雙軸型齒輪減速機
GHD horizontal type dual axle gear
13、GVD立式雙軸型齒輪減速機
GVD(gnu visual debugger)biaxial vertical type gear

69 **零件剖面圖** DETAILSPARTSLIST

72 **故障排除** TROUBLESHOUTING

74 **齒輪減速馬達使用說明書**
INSTRUCTIONS FOR GEAR REDUCER MOTOR

COMPACT REDUCERS
微型減速機



訂購方式
DESIGNATION

微型交流電機 MINIATURE AC MOTOR

■ 微型交流電機命名 AC MOTOR MODEL NAME

60YS06WG/DV22□
1 2 3 4 5 6

1 機座號 Stand Code
60、70、80、90、100

2 名稱代號 Name Code
YS: 標準電機 STANDARD MOTOR
YT: 調速電機 VARIABLE SPEED MOTOR
YB: 電磁制動電機 ELECTROMAGNETIC BRAKE MOTOR
YF: 調速電磁制動電機 VARIABLE SPEED ELECTROMAGNETIC BRAKE MOTOR
YR: 阻尼電機DAMPING MOTOR

3 功效代號 Efficacy Code
06W、15W、25W、40W、60W、90W、120W、140W、200W

4 轉子軸形式代號 Rotor shaft form Code
G: 齒軸 GEAR SHAFT
D: 圓軸 ROUND SHAFT

5 電壓代號 Voltage Code
V11: 單相SINGLE PHASE 110V
V22: 單相SINGLE PHASE 220V
Y22: 三相THREE PHASE 220V
Y38: 三相THREE PHASE 380V

6 派生代號 Derived Code
X: 引綫式(綫長300MM) LEAD (LINE LENGTH 300 MM)
T: 帶熱保護器 WITH THERMAL PROTECTOR
H: 帶接綫盒 WITH TERMINAL BLOCK

■ 減速箱型號命名 GEARBOX MODEL NAME

60GK100H□
1 2 3 4 5

1 機座號 Stand Code
60、70、80、90、100、L80、L90、L100

2 機型代號 Model Code
GK: 6–25W減速箱GEARBOX
GF: 40–200W減速箱GEARBOX

3 減速比代號 Reduction ratio Code
3、3.6… 200

4 結構代號 Structure Code
H：標準 STANDARD
HE：帶耳型 EARED
RT：直角中實 RIGHT ANGLE SOLID
RC：直角中空 RIGHT ANGLE HOLLOW

5 派生代號 Derived Code
K：通孔 HOLE

■ 微型交流電機通用技術標準 MINIATURE AC MOTOR COMMON TECHNICAL STANDARDS

絕緣電阻	在常温，常濕下電機額定運轉後，以DC500V兆歐表測量組與外殼的絶緣電阻應爲100MΩ以上。
絕緣耐壓	在常温，常濕下電機額定運轉後，在繞組與外殼間施加50Hz或60Hz，1.5KV電機一分鐘，無异常。
溫升	在裝上減速箱或同等散熱板進行額定運轉時，以電阻法測定其繞組温度上升值爲75K以下。
絕緣等級	E級（120℃）
過熱保護裝置	可内藏過熱保護裝置（自動復位型）動作温度 120℃±5℃復位温度 82℃±15℃(此功能需定）
使用環境溫度	–10℃~+40℃(無凍結)
使用環境溫度	85%以下(無結露)

INSULATION RESISTANCE: After running at rated settings under normal temperature and humidity, the insulation resistance between the winding and the shell of the motor measured with a DC500V megger should be more than 100MΩ.

INSULATION VOLTAGE: After running at rated settings under normal temperature and humidity, apply 50Hz or 60Hz, 1.5KV between the winding and the shell for one minute, and the motor is normal.

TEMPERATURE RISE: When running at rated settings with gearbox or equivalent heat radiating plate installed, the temperature rise of the winding measured in resistance method is 75K or less.

INSULATION CLASS: E (120℃)

OVERHEATING PROTECTION DEVICE: With built–in thermal protection device (automatic reset type); operating temperature: 120±5℃; reset temperature: 82±15℃ (this feature should be customized)

OPERATING TEMPERATURE: –10~40℃ (no freezing)

OPERATING HUMIDITY: <85% (no condensation)

微型直流電機 MINIATURE DC MOTOR

■ 微型直流電機命名 DC MOTOR MODEL NAME

60DC20GV24R16□

1 2 3 4 5 6 7

1 機座號
Stand Code
60、70、80、90、100

2 DC直流電機系列
DC motor series
DC

3 功效代號
Efficacy Code
10W、15W、20W、30W、40W、60W、65W、70W、100W、120W、200W、300W

4 轉子軸形式代號
Rotor shaft form Code
G: 齒軸 GEAR SHAFT
D: 圓軸 ROUND SHAFT

5 電壓代號
Voltage Code
V12、V24、V90、V180

6 轉速
Speed
R16: 1600r/min
R18: 1800r/min

7 派生代號
Derived Code
X: 引綫式(綫長300MM) LEAD (LINE LENGTH 300 MM)

■ 微型直流電機通用技術標準 MINIATURE DC MOTOR COMMON TECHNICAL STANDARDS

絕緣電阻 在常温常濕下，運轉電機後，以DC500V的絶緣電阻來測量的金屬綫圈和電機外殼之間的絶緣電阻時，不超過100兆歐。

絕緣電壓 在常温，常濕下，運轉電機後，在電機的金屬綫圈和電機之間，以1500V、50/60Hz，輸于1分鐘時没有任何問題。

温度上升 運轉電機後，用電阻法來測量時，綫圈組温度的上升數值在80℃以下。

絕緣等級 B級（130℃)

使用温度 –10℃~+40℃(冰凍)

使用濕度 85%以下(没有結露的場所)

INSULATION RESISTANCE: After running under normal temperature and humidity, the insulation resistance between the metal coil and the shell of the motor measured with a DC500V megger should be more than 100MΩ.

INSULATION VOLTAGE: After running under normal temperature and humidity, apply 1500V, 50/60Hz between the metal coil and the shell for one minute, and the motor is normal.

TEMPERATURE RISE: After running the motor, the temperature rise of the coil winding measured in resistance method is 80℃ or less.

INSULATION CLASS: B (130℃)

OPERATING TEMPERATURE: –10~40℃ (no freezing)

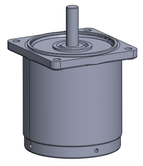
OPERATING HUMIDITY: <85% (no condensation)

通用參數
GENERAL PARAMETERS

■ 微型交流電機接綫圖及運行電容外形尺寸 MINIATURE AC MOTOR WIRING DIAGRAM DIMENSIONS AND RUNNING CAPACITOR DIMENSIONS

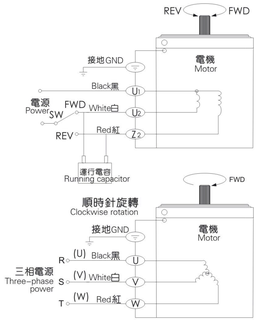


齒輪軸
GEAR SHAFT



圓軸
ROUND SHAFT

接綫圖
Wiring diagram dimensions



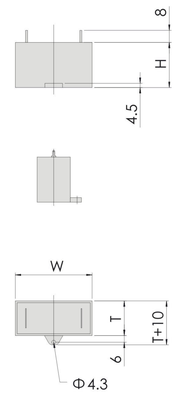
●順時針旋轉 CLOCKWISE ROTATION
將開關(SW)切換至FWD側，則電機做順時針旋轉。
Turn the switch (SW) to FWD and the motor rotates clockwise.

●逆時針旋轉 COUNTERCLOCKWISE ROTATION
將開關(SW)切換至REV側，則電機做逆時針旋轉；
若兑換U、V、W中任意兩條，則電機做逆時針旋轉。
Turn the switch (SW) to REV and the motor rotates counterclockwise; If any two of U, V and W are exchanged, the motor will rotate counterclockwise.

⚠注意NOTE

- 旋轉方向是指面對電機輸出端，順時針旋轉爲FWD，逆時針旋轉爲REV。
- 單相電機旋轉方向的切換作業應在電機停止後進行。
- 切換旋轉方向時，須等電機完全停止後進行，否則將可能無法切換旋轉方向或是須花較長時間方可切換。
- Rotation direction is facing the motor output terminal. The clockwise direction is FWD, and the counterclockwise direction is REV.
- The rotation direction of single phase motor should be switched when the motor is stopped.
- Switch the rotation direction only when the motor has stopped, or else it may be impossible to change or take longer time.

運行電容(單相電機附件)外形尺寸
Running capacitor (single phase motor accessories)dimensions



型號 MODEL	電容/電壓 CAPACITANCE VOLTAGE	外形尺寸 DIMENSIONS W	T	H
6W	0.8 μ f/450V	37	11	25
	2.5 μ f/250V	37	16	30
15W	1.5 μ f/450V	37	11	25
	4 μ f/250V	47	18	35
25W	2 μ f/450V	37	16	30
	6 μ f/250V	47	20	37
40W	3 μ f/450V	48	20	31
	10 μ f/250V	59	27	38
60W	4 μ f/450V	48	20	32
	14 μ f/250V	58	28	50
90W	5 μ f/450V	47	20	37
	20 μ f/250V	59	30	50
120W	6 μ f/450V	47	20	37
	24 μ f/250V	59	30	50
140W	8 μ f/450V	47	23	41
	28 μ f/250V	60	30	50
200W	10 μ f/450V	59	27	38
	32 μ f/250V	70	40	55

■ 微型直流電機接綫圖 MINIATURE DC MOTOR WIRING DIAGRAM DIMENSIONS

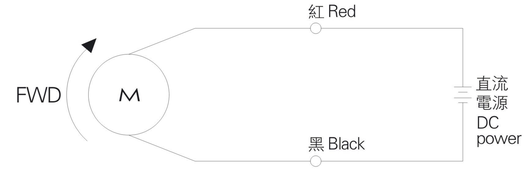


齒輪軸
GEAR SHAFT



圓軸
ROUND SHAFT

接綫圖 Wiring diagram dimensions



- 電機給引綫長度爲300mm
- FWD爲正轉
- The length of motor lead is about 300mm
- FWD indicates forward rotation

微型交流電機
MINIATURE AC MOTOR

6W

□60 × 60mm

各型號電機性能 MOTOR PERFORMANCE

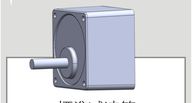
型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	60YS06GV11 60YR06GV11 60YT06GV11 60YB06GV11	6	Single phase 單相 110	50Hz	0.23	90–1300	38	47	30	2.5 μ f/250V
圓軸 ROUND SHAFT	60YS06DV11 60YR06DV11 60YT06DV11 60YB06DV11			60Hz	0.21	90–1600	40	50	30	
齒輪軸 GEAR SHAFT	60YS06GV22 60YR06GV22 60YT06GV22 60YB06GV22	6	Single phase 單相 220	50Hz	0.11	90–1300	38	47	32	0.8 μ f/450V
圓軸 ROUND SHAFT	60YS06DV22 60YR06DV22 60YT06DV22 60YB06DV22			60Hz	0.10	90–1600	40	50	32	

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
- 在斷開電源的同時，電機會瞬間停止關保持負載。
- 電機的起動、制動特性與電機的負載慣性量成正比。
- Although the speed range of the motor is 50Hz, 90~1300r/min, 60Hz, 90~1600r/min, it easily causes overload and the cooling effect of the motor fan is poor if the speed is too low (<400r/min) and the motor torque decreases too much; therefore, please keep sufficient power margin and avoid operating in low speed section frequently. The optimal speed range of the motor is 50Hz, 400~1300r/min, 60Hz, 400~1600r/min.
- When the power is cut off, the motor will stop immediately and hold the load.
- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

減速箱減速比性能對照表 REDUCTION RATIO PERFORMANCE CHART

減速比 REDUCTION RATIO		3	3.6	5	6	7.5	10	12.5	15	18	20	25	30
50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
	額定轉矩N・m Rated torque	0.13	0.15	0.22	0.26	0.33	0.44	0.55	0.66	0.79	0.88	1.10	1.32
60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
	額定轉矩N・m Rated torque	0.11	0.13	0.18	0.22	0.28	0.37	0.46	0.55	0.66	0.73	0.92	1.10
減速比 REDUCTION RATIO		36	40	50	60	75	90	100	120	150	180	200	
50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
	額定轉矩N・m Rated torque	1.59	1.76	2.06	2.18	2.42	3	3	3	3	3	3	
60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
	額定轉矩N・m Rated torque	1.33	1.47	1.71	1.82	2.02	2.42	2.65	3	3	3	3	

- 表中轉速是以電機的平均轉速(50Hz:1300r/min、60Hz:1600r/min)爲基數除以減速比而算出的數值。
- 實際轉速將隨負載大小而少量變化，變化範圍爲±8%左右。
- The speed in the table is the value of average motor speed (50Hz: 1300r/min, 60Hz: 1600r/min) divided by the reduction ratio.
- The actual speed changes according to the load (±8%).



標準減速箱
STANDARD GEARBOX
60GK □H

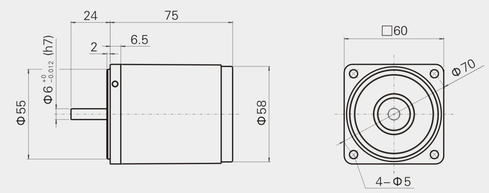
減速箱型號中的□爲減速比的數值
速比：1:3~200
□ in gearbox model indicates the reduction ratio (1:3~200)

外形尺寸(CAD) DIMENSIONS

6YS/YR01

圓軸電機　質量：0.8kg

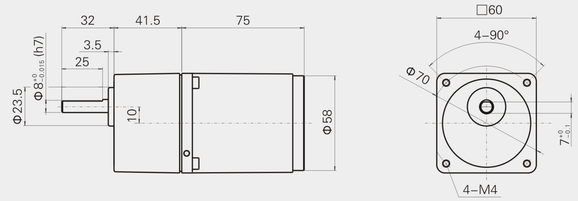
Round–axis motor, mass: 0.8kg



6YS/YR02

組合：電機+標準減速機(減速比：1:3~200)質量：1.1kg

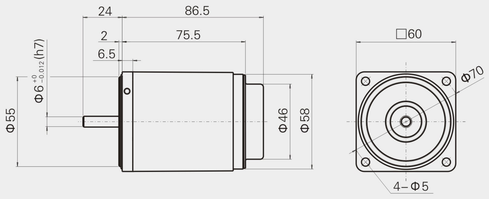
Portfolio: motor + standard reducer (reduction ratio: 1:3~200) mass: 1.1kg



6YT01

圓軸電機　質量：0.9kg

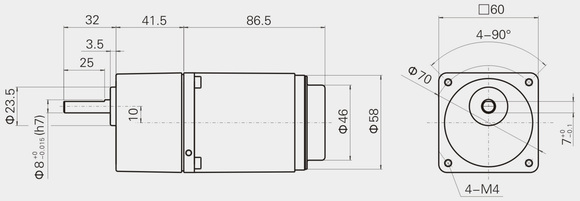
Round–axis motor, mass: 0.9kg



6YT02

組合：電機+標準減速箱(減速比：1:3~200)質量：1.1kg

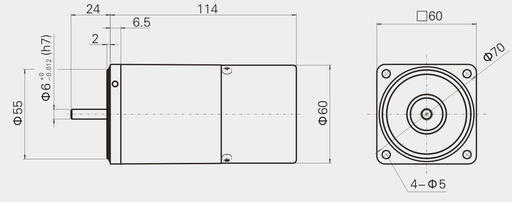
Portfolio: motor + standard reducer (reduction ratio: 1:3~200) mass: 1.1kg



6YB01

圓軸電機　質量：1.2kg

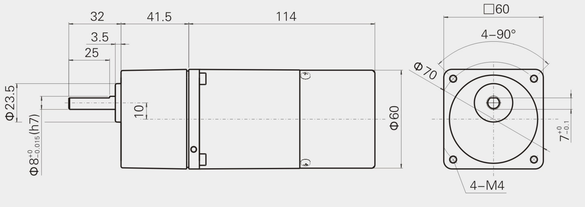
Round–axis motor, mass: 1.2kg



6YB02

組合：電機+標準減速箱(減速比：1:3~200)質量：1.5kg

Portfolio: motor + standard reducer (reduction ratio: 1:3~200) mass: 1.5kg



15W

□70 × 70mm

各型號電機性能 MOTOR PERFORMANCE

型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	70YS15GV11 70YR15GV11 70YT15GV11 70YB15GV11	15	Single phase 單相 110	50Hz	0.39	90–1300	70	125	45	4 μ f/250V
圓軸 ROUND SHAFT	70YS15DV11 70YR15DV11 70YT15DV11 70YB15DV11			60Hz	0.35	90–1600	65	125	45	
齒輪軸 GEAR SHAFT	70YS15GV22 70YR15GV22 70YT15GV22 70YB15GV22	15	Single phase 單相 220	50Hz	0.20	90–1300	70	125	40	1.5 μ f/450V
圓軸 ROUND SHAFT	70YS15DV22 70YR15DV22 70YT15DV22 70YB15DV22			60Hz	0.17	90–1600	65	125	40	

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
- 在斷開電源的同時，電機會瞬間停止關保持負載。
- 電機的起動、制動特性與電機的負載慣性量成正比。
- Although the speed range of the motor is 50Hz, 90~1300r/min, 60Hz, 90~1600r/min, it easily causes overload and the cooling effect of the motor fan is poor if the speed is too low (<400r/min) and the motor torque decreases too much; therefore, please keep sufficient power margin and avoid operating in low speed section frequently. The optimal speed range of the motor is 50Hz, 400~1300r/min, 60Hz, 400~1600r/min.
- When the power is cut off, the motor will stop immediately and hold the load.
- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

減速箱減速比性能對照表 REDUCTION RATIO PERFORMANCE CHART

減速比 REDUCTION RATIO		3	3.6	5	6	7.5	10	12.5	15	18	20	25	30
50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
	額定轉矩N・m Rated torque	0.30	0.36	0.50	0.60	0.74	0.99	1.24	1.49	1.79	1.98	2.31	2.78
60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
	額定轉矩N・m Rated torque	0.25	0.30	0.41	0.50	0.62	0.83	1.03	1.24	1.49	1.65	1.93	2.31
減速比 REDUCTION RATIO		36	40	50	60	75	90	100	120	150	180	200	
50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
	額定轉矩N・m Rated torque	3.33	3.70	4.63	5	5	5	5	5	5	5	5	
60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
	額定轉矩N・m Rated torque	2.78	3.09	3.86	4.35	5	5	5	5	5	5	5	

- 表中轉速是以電機的平均轉速(50Hz:1300r/min、60Hz:1600r/min)爲基數除以減速比而算出的數值。
- 實際轉速將隨負載大小而少量變化，變化範圍爲±8%左右。
- The speed in the table is the value of average motor speed (50Hz: 1300r/min, 60Hz: 1600r/min) divided by the reduction ratio.
- The actual speed changes according to the load (±8%).



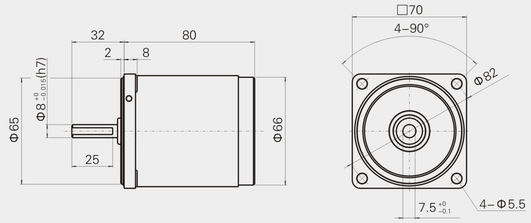
減速箱型號中的□爲減速比的數值
速比：1:3~200
□ in gearbox model indicates the reduction ratio (1:3~200)

外形尺寸(CAD) DIMENSIONS

15YS/YR01

圓軸電機　質量：1.1kg

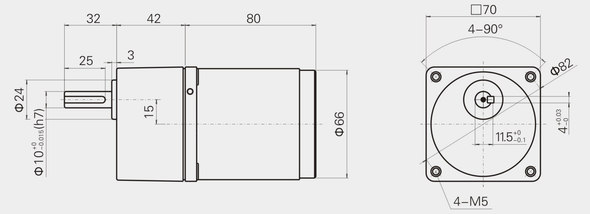
Round–axis motor, mass: 1.1kg



15YS/YR02

組合：電機+標準減速機(減速比：1:3~200)質量：1.6kg

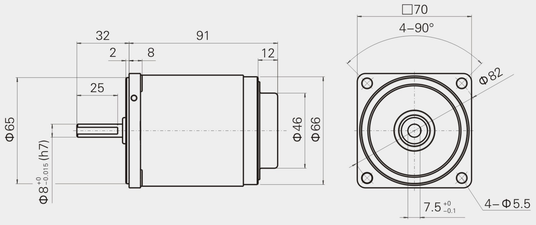
Portfolio: motor + standard reducer(reduction ratio:1:3~200)mass:1.6kg



15YT01

圓軸電機　質量：0.9kg

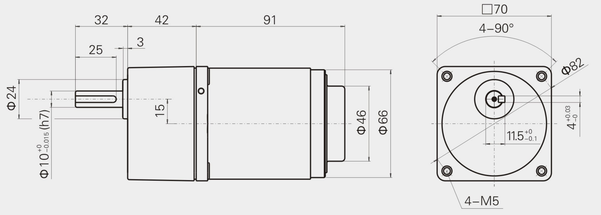
Round–axis motor, mass: 0.9kg



15YT02

組合：電機+標準減速箱(減速比：1:3~200)質量：1.2kg

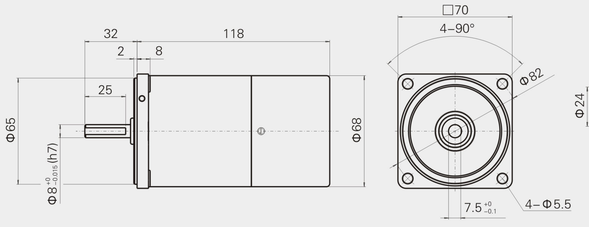
Portfolio: motor + standard reducer(reduction ratio: 1:3~200)mass: 1.2kg



15YB01

圓軸電機　質量：1.1kg

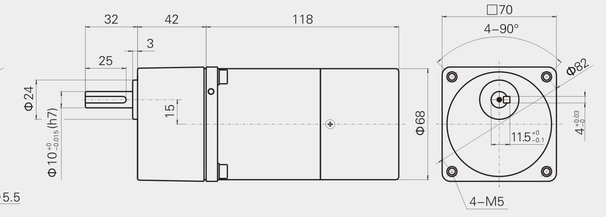
Round–axis motor, mass: 1.1kg



15YB02

組合：電機+標準減速箱(減速比：1:3~200)質量：2kg

Portfolio: motor + standard reducer(reduction ratio: 1:3~200)mass: 2kg



25W

□80×80mm

各型號電機性能 MOTOR PERFORMANCE

型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	80YS25GV11 80YR25GV11 80YT25GV11 80YB25GV11	25	Single phase 單相 110	50Hz	0.53	90–1300	145	170	45	6μf/250V
圓軸 ROUND SHAFT	80YS25DV11 80YR25DV11 80YT25DV11 80YB25DV11			60Hz	0.48	90–1600	120	170	45	
齒輪軸 GEAR SHAFT	80YS25GV22 80YR25GV22 80YT25GV22 80YB25GV22	25	Single phase 單相 220	50Hz	0.25	90–1300	145	205	50	2μf/450V
圓軸 ROUND SHAFT	80YS25DV22 80YR25DV22 80YT25DV22 80YB25DV22			60Hz	0.23	90–1600	120	205	50	
齒輪軸 GEAR SHAFT	80YS25GY22 80YT25GY22 80YB25GY22	25	Three phase 三相 220	50Hz	0.25	90–1300	250	195		
圓軸 ROUND SHAFT	80YS25DY22 80YT25DY22 80YB25DY22			60Hz	0.23	90–1600	205	160		
齒輪軸 GEAR SHAFT	80YS25GY38 80YT25GY38 80YB25GY38	25	Three phase 三相 380	50Hz	0.14	90–1300	250	195		
圓軸 ROUND SHAFT	80YS25DY38 80YT25DY38 80YB25DY38			60Hz	0.13	90–1600	205	160		

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
- 在斷開電源的同時，電機會瞬間停止關保持負載。
- 電機的起動、制動特性與電機的負載慣性量成正比。
- Although the speed range of the motor is 50Hz, 90~1300r/min, 60Hz, 90~1600r/min, it easily causes overload and the cooling effect of the motor fan is poor if the speed is too low (<400r/min) and the motor torque decreases too much; therefore, please keep sufficient power margin and avoid operating in low speed section frequently. The optimal speed range of the motor is 50Hz, 400~1300r/min, 60Hz, 400~1600r/min.
- When the power is cut off, the motor will stop immediately and hold the load.
- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

減速箱減速比性能對照表 REDUCTION RATIO PERFORMANCE CHART

減速比 REDUCTION RATIO		3	3.6	5	6	7.5	10	12.5	15	18	20	25	30
50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
	額定轉矩N・m Rated torque	0.50	0.60	0.83	0.99	1.24	1.65	1.95	2.34	2.81	3.12	3.90	4.68
60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
	額定轉矩N・m Rated torque	0.41	0.50	0.69	0.83	1.03	1.38	1.63	1.95	2.34	2.60	3.25	3.90
減速比 REDUCTION RATIO		36	40	50	60	75	90	100	120	150	180	200	
50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
	額定轉矩N・m Rated torque	5.62	6.24	6.89	8	8	8	8	8	8	8	8	
60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
	額定轉矩N・m Rated torque	4.68	5.20	5.74	6.88	8	8	8	8	8	8	8	

- 表中轉速是以電機的平均轉速(50Hz:1300r/min、60Hz:1600r/min)爲基數除以減速比而算出的數值。
- 實際轉速將隨負載大小而少量變化，變化範圍爲±8%左右。
- The speed in the table is the value of average motor speed (50Hz: 1300r/min, 60Hz: 1600r/min) divided by the reduction ratio.
- The actual speed changes according to the load (±8%).



標準減速箱
STANDARD GEARBOX
80GK □H



直角中空減速箱
RIGHT ANGLE HOLLOW GEARBOX
L80GK □RC



直角中實減速箱
RIGHT ANGLE SOLID GEARBOX
L80GK □RT

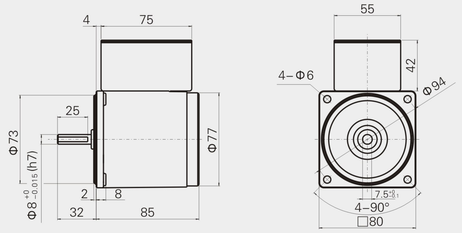
減速箱型號中的□爲減速比的數值
速比：1:3~200
□ in gearbox model indicates the reduction ratio (1:3~200)

外形尺寸(CAD) DIMENSIONS

25YS/YR01

圓軸電機　質量：1.6kg

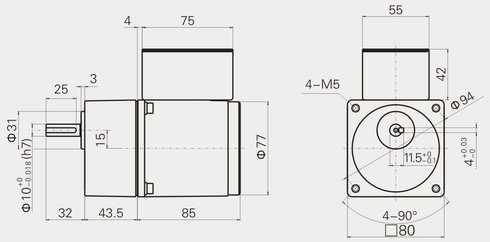
Round-axis motor, mass: 1.6kg



25YS/YR02

組合：電機+標準減速機(減速比：1:3~200)質量：2.3kg

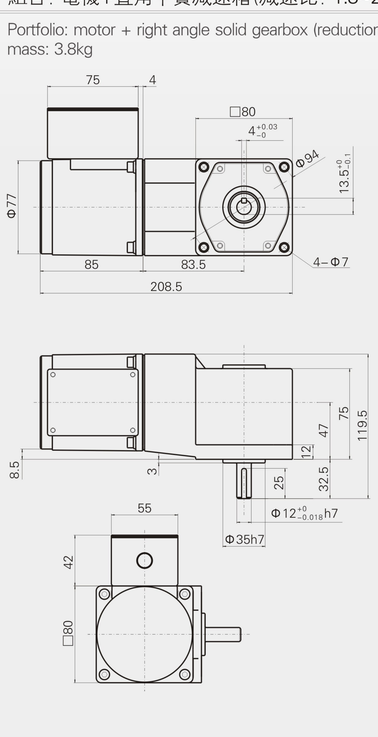
Portfolio: motor + standard reducer(reduction ratio: 1:3~200)mass: 2.3kg



25YS/YR03

組合：電機+直角中實減速箱(減速比：1:3~200)質量：3.8kg

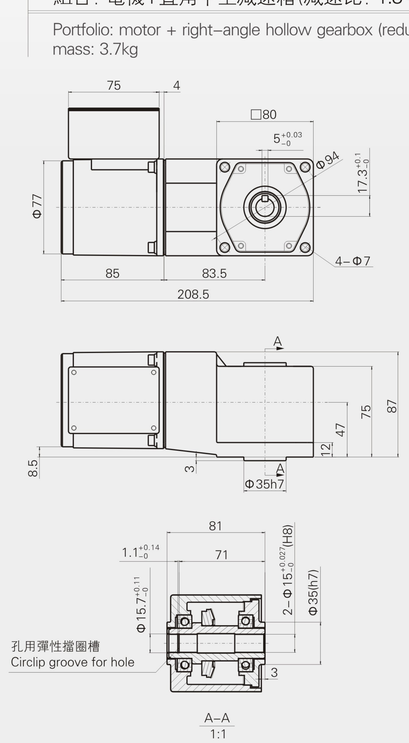
Portfolio: motor + right angle solid gearbox (reduction ratio: 1:3~200) mass: 3.8kg



25YS/YR04

組合：電機+直角中空減速箱(減速比：1:3~200)質量：3.7kg

Portfolio: motor + right-angle hollow gearbox (reduction ratio: 1:3~200) mass: 3.7kg

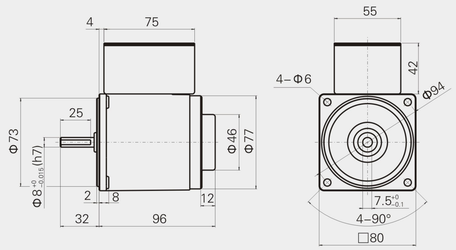


外形尺寸(CAD) DIMENSIONS

25YT01

圓軸電機　質量：1.7kg

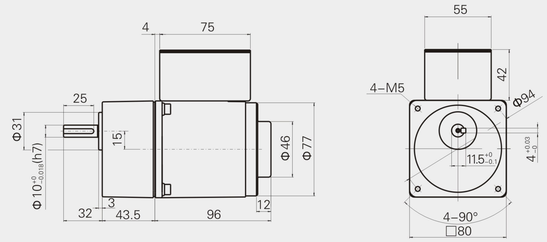
Round-axis motor, mass: 1.7kg



25YT02

組合：電機+標準減速箱 (減速比：1:3~200)質量：2.4kg

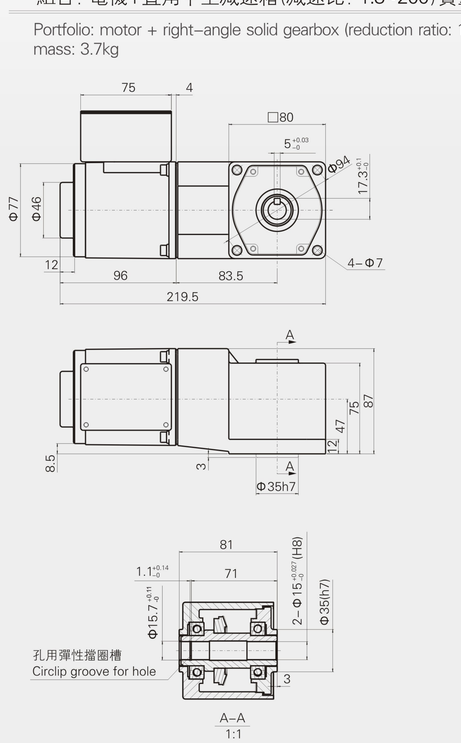
Portfolio: motor + standard reducer(reduction ratio: 1:3~200)mass: 2.4kg



25YT03

組合：電機+直角中空減速箱(減速比：1:3~200)質量：3.7kg

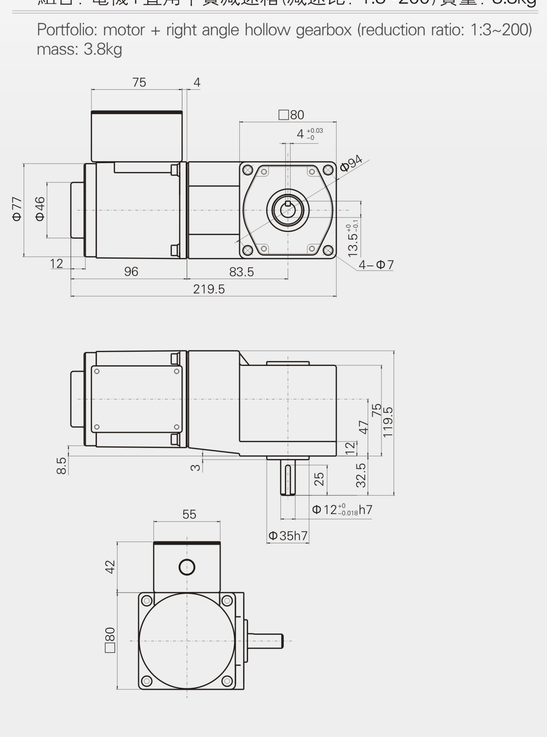
Portfolio: motor + right-angle solid gearbox (reduction ratio: 1:3~200) mass: 3.7kg



25YT04

組合：電機+直角中實減速箱(減速比：1:3~200)質量：3.8kg

Portfolio: motor + right angle hollow gearbox (reduction ratio: 1:3~200) mass: 3.8kg

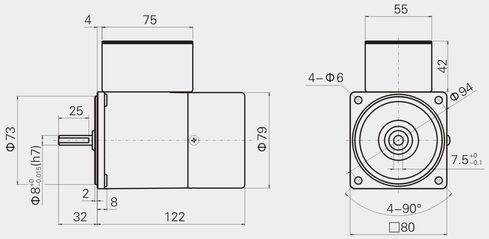


外形尺寸(CAD) DIMENSIONS

25YB01

圓軸電機　質量：2kg

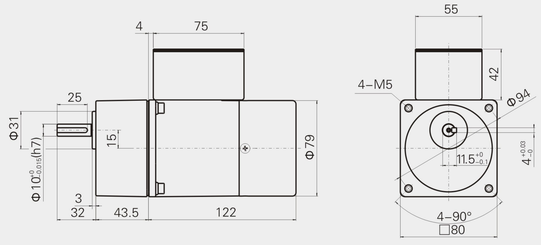
Round-axis motor, mass: 2kg



25YB02

組合：電機+標準減速箱(減速比：1:3~200)質量：2.7kg

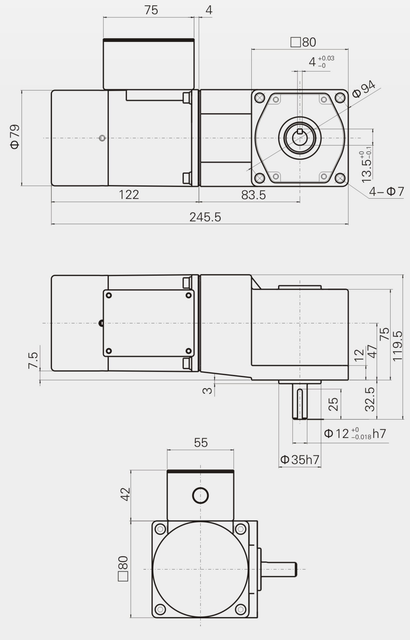
Portfolio: motor + standard reducer(reduction ratio: 1:3~200)mass: 2.7kg



25YB03

組合：電機+直角中實減速箱(減速比：1:3~200)質量：3.8kg

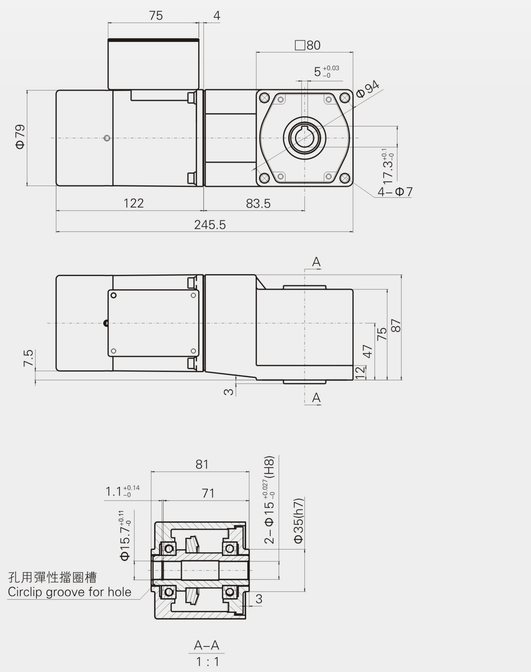
Portfolio: motor + right angle solid gearbox (reduction ratio: 1:3~200)
mass: 3.8kg



25YB04

組合：電機+直角中空減速箱(減速比：1:3~200)質量：3.7kg

Portfolio: motor + right-angle hollow gearbox (reduction ratio: 1:3~200)
mass: 3.7kg



各型號電機性能 MOTOR PERFORMANCE

型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	90YS40GV11 90YR40GV11 90YT40GV11 90YF40GV11 90YB40GV11	40	Single phase 單相 110	50Hz	0.79	90–1300	235	300	65	10 μ f/250V
圓軸 ROUND SHAFT	90YS40DV11 90YR40DV11 90YT40DV11 90YF40DV11 90YB40DV11			60Hz	0.71	90–1600	180	260	70	
齒輪軸 GEAR SHAFT	90YS40GV22 90YR40GV22 90YT40GV22 90YF40GV22 90YB40GV22	40	Single phase 單相 220	50Hz	0.40	90–1300	235	320	65	3 μ f/450V
圓軸 ROUND SHAFT	90YS40DV22 90YR40DV22 90YT40DV22 90YF40DV22 90YB40DV22			60Hz	0.37	90–1600	180	260	70	
齒輪軸 GEAR SHAFT	90YS40GY22 90YB40GY22	40	Three phase 三相 220	50Hz	0.35	90–1300	403	310		
圓軸 ROUND SHAFT	90YS40DY22 90YB40DY22			60Hz	0.32	90–1600	338	260		
齒輪軸 GEAR SHAFT	90YS40GY38 90YB40GY38	40	Three phase 三相 380	50Hz	0.21	90–1300	403	310		
圓軸 ROUND SHAFT	90YS40DY38 90YB40DY38			60Hz	0.19	90–1600	338	260		

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
- 在斷開電源的同時，電機會瞬間停止關保持負載。
- 電機的起動、制動特性與電機的負載慣性量成正比。
- Although the speed range of the motor is 50Hz, 90~1300r/min, 60Hz, 90~1600r/min, it easily causes overload and the cooling effect of the motor fan is poor if the speed is too low (<400r/min) and the motor torque decreases too much; therefore, please keep sufficient power margin and avoid operating in low speed section frequently. The optimal speed range of the motor is 50Hz, 400~1300r/min, 60Hz, 400~1600r/min.
- When the power is cut off, the motor will stop immediately and hold the load.
- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

40W
60W

□90 × 90mm

各型號電機性能 MOTOR PERFORMANCE

型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	90YS60GV11 90YR60GV11 90YT60GV11 90YF60GV11 90YB60GV11	60	Single phase 單相 110	50Hz	1.26	90–1300	350	490	200	14 μ f/250V
圓軸 ROUND SHAFT	90YS60DV11 90YR60DV11 90YT60DV11 90YF60DV11 90YB60DV11			60Hz	1.14	90–1600	280	490	220	
齒輪軸 GEAR SHAFT	90YS60GV22 90YR60GV22 90YT60GV22 90YF60GV22 90YB60GV22	60	Single phase 單相 220	50Hz	0.62	90–1300	350	490	200	4 μ f/450V
圓軸 ROUND SHAFT	90YS60DV22 90YR60DV22 90YT60DV22 90YF60DV22 90YB60DV22			60Hz	0.57	90–1600	280	490	220	
齒輪軸 GEAR SHAFT	90YS60GY22 90YB60GY22	60	Three phase 三相 220	50Hz	0.53	90–1300	600	460		
圓軸 ROUND SHAFT	90YS60DY22 90YB60DY22			60Hz	0.48	90–1600	490	375		
齒輪軸 GEAR SHAFT	90YS60GY38 90YB60GY38	60	Three phase 三相 380	50Hz	0.32	90–1300	600	460		
圓軸 ROUND SHAFT	90YS60DY38 90YB60DY38			60Hz	0.29	90–1600	490	375		

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
- 在斷開電源的同時，電機會瞬間停止關保持負載。
- 電機的起動、制動特性與電機的負載慣性量成正比。
- Although the speed range of the motor is 50Hz, 90~1300r/min, 60Hz, 90~1600r/min, it easily causes overload and the cooling effect of the motor fan is poor if the speed is too low (<400r/min) and the motor torque decreases too much; therefore, please keep sufficient power margin and avoid operating in low speed section frequently. The optimal speed range of the motor is 50Hz, 400~1300r/min, 60Hz, 400~1600r/min.
- When the power is cut off, the motor will stop immediately and hold the load.
- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

減速箱減速比性能對照表 REDUCTION RATIO PERFORMANCE CHART

減速比 REDUCTION RATIO			3	3.6	5	6	7.5	10	12.5	15	18	20	25	30
40W	50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
		額定轉矩N・m Rated torque	0.77	0.92	1.28	1.53	1.92	2.56	3.20	3.83	4.60	5.11	5.73	6.88
	60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
		額定轉矩N・m Rated torque	0.64	0.77	1.07	1.28	1.60	2.13	2.66	3.20	3.83	4.26	4.78	5.73
60W	50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
		額定轉矩N・m Rated torque	1.19	1.43	1.98	2.38	2.98	3.97	4.35	5.22	6.27	6.96	8.26	9.92
	60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
		額定轉矩N・m Rated torque	0.99	1.19	1.65	1.98	2.48	3.31	3.63	4.35	5.22	5.80	6.89	8.26

減速比 REDUCTION RATIO			36	40	50	60	75	90	100	120	150	180	200	
40W	50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
		額定轉矩N・m Rated torque	8.25	9.17	10	10	10	10	10	10	10	10	10	
	60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
		額定轉矩N・m Rated torque	6.88	7.64	9.16	10	10	10	10	10	10	10	10	
60W	50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
		額定轉矩N・m Rated torque	11.90	13.22	16.53	19.83	20	20	20	20	20	20	20	
	60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
		額定轉矩N・m Rated torque	9.92	11.02	13.77	16.53	20	20	20	20	20	20	20	

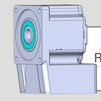
- 表中轉速是以電機的平均轉速(50Hz:1300r/min、60Hz:1600r/min)爲基數除以減速比而算出的數值。
- 實際轉速將隨負載大小而少量變化，變化範圍爲±8%左右。
- The speed in the table is the value of average motor speed (50Hz: 1300r/min, 60Hz: 1600r/min) divided by the reduction ratio.
- The actual speed changes according to the load (±8%).



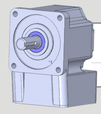
標準减速箱
STANDARD GEARBOX
90GF □H



帶耳减速箱
EARED GEARBOX
90GF □HE



直角中空减速箱
RIGHT ANGLE HOLLOW GEARBOX
L90GF □RC



直角中實减速箱
RIGHT ANGLE SOLID GEARBOX
L90GF □RT

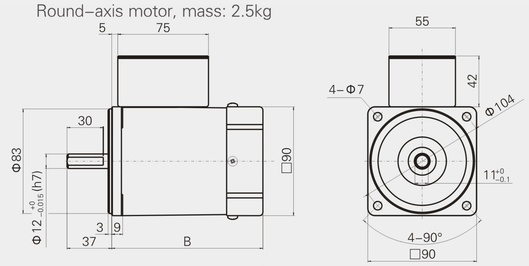
減速箱型號中的□爲減速比的數值
速比：1:3~200
□ in gearbox model indicates the reduction ratio (1:3~200)

外形尺寸(CAD) DIMENSIONS

40/60YS/YR/YT/YB/YF01

圓軸電機　質量：2.5kg

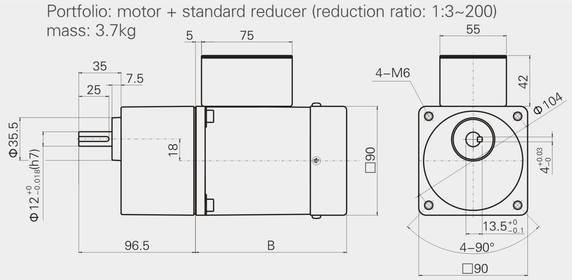
Round-axis motor, mass: 2.5kg



40/60YS/YR/YT/YB/YF02

組合：電機+標準減速機(減速比：1:3~200)質量：3.7kg

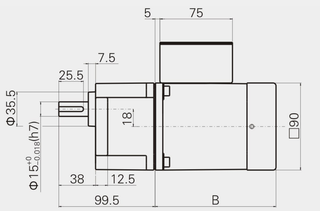
Portfolio: motor + standard reducer (reduction ratio: 1:3~200)
mass: 3.7kg

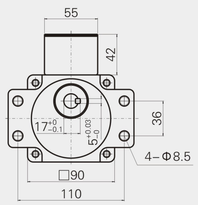


40/60YS/YR/YT/YB/YF03

組合：電機+帶耳減速機
減速比：1:3~200
質量：3.7kg

Portfolio: motor + eared gear
Reduction ratio: 1:3~200
Mass: 3.7kg



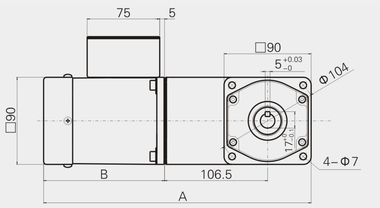


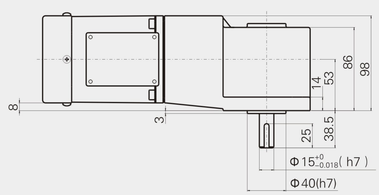
序號 No.	電機類型 Motor type	A	B
1	YS/YR	276.5	125
2	YT	287.5	136
3	YB	311.5	160
4	YF	323.5	172

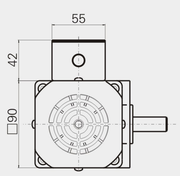
40/60YS/YR/YT/YB/YF04

組合：電機+直角中實減速箱
減速比：1:3~200
質量：5.4kg

Portfolio: motor + right-angle solid gearbox
Reduction ratio: 1:3~200
Mass: 5.4kg



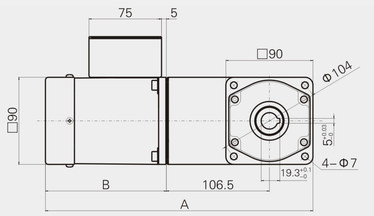


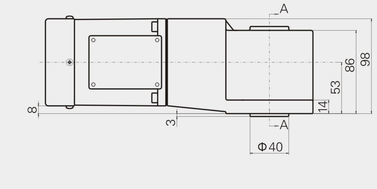


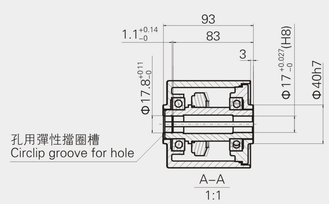
40/60YS/YR/YT/YB/YF05

組合：電機+直角中空減速箱
減速比：1:3~200
質量：5.3kg

Portfolio: motor + right angle hollow gearbox
Reduction ratio: 1:3~200
Mass: 5.3kg







各型號電機性能 MOTOR PERFORMANCE

型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	90YS90GV11 90YR90GV11 90YT90GV11 90YB90GV11 90YF90GV11	90	Single phase 單相 110	50Hz	0.70	90–1300	525	710	200	20 μ f/250V
圓軸 ROUND SHAFT	90YS90DV11 90YR90DV11 90YT90DV11 90YB90DV11 90YF90DV11			60Hz	0.50	90–1600	420	710	200	
齒輪軸 GEAR SHAFT	90YS90GV22 90YR90GV22 90YT90GV22 90YB90GV22 90YF90GV22	90	Single phase 單相 220	50Hz	0.95	90–1300	525	710	200	5 μ f/450V
圓軸 ROUND SHAFT	90YS90DV22 90YR90DV22 90YT90DV22 90YB90DV22 90YF90DV22			60Hz	0.86	90–1600	420	710	200	
齒輪軸 GEAR SHAFT	90YS90GY22 90YB90GY22	90	Three phase 三相 220	50Hz	0.69	90–1300	910	700		
圓軸 ROUND SHAFT	90YS90DY22 90YB90DY22			60Hz	0.63	90–1600	730	560		
齒輪軸 GEAR SHAFT	90YS90GY38 90YB90GY38	90	Three phase 三相 380	50Hz	0.41	90–1300	910	700		
圓軸 ROUND SHAFT	90YS90DY38 90YB90DY38			60Hz	0.38	90–1600	730	560		

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
- 在斷開電源的同時，電機會瞬間停止關保持負載。
- 電機的起動、制動特性與電機的負載慣性量成正比。
- Although the speed range of the motor is 50Hz, 90~1300r/min, 60Hz, 90~1600r/min, it easily causes overload and the cooling effect of the motor fan is poor if the speed is too low (<400r/min) and the motor torque decreases too much; therefore, please keep sufficient power margin and avoid operating in low speed section frequently. The optimal speed range of the motor is 50Hz, 400~1300r/min, 60Hz, 400~1600r/min.
- When the power is cut off, the motor will stop immediately and hold the load.
- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

90W
120W

□90 × 90mm

各型號電機性能 MOTOR PERFORMANCE

型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	90YS120GV11 90YR120GV11 90YT120GV11 90YB120GV11 90YF120GV11	120	Single phase 單相 110	50Hz	2.04	90–1300	720	840	300	24 μ f/250V
圓軸 ROUND SHAFT	90YS120DV11 90YR120DV11 90YT120DV11 90YB120DV11 90YF120DV11			60Hz	1.84	90–1600	600	840	300	
齒輪軸 GEAR SHAFT	90YS120GV22 90YR120GV22 90YT120GV22 90YB120GV22 90YF120GV22	120	Single phase 單相 220	50Hz	1.02	90–1300	720	840	300	6 μ f/450V
圓軸 ROUND SHAFT	90YS120DV22 90YR120DV22 90YT120DV22 90YB120DV22 90YF120DV22			60Hz	0.92	90–1600	600	840	300	
齒輪軸 GEAR SHAFT	90YS120GY22 90YB120GY22	120	Three phase 三相 220	50Hz	0.89	90–1300	1195	924		
圓軸 ROUND SHAFT	90YS120DY22 90YB120DY22			60Hz	0.81	90–1600	1014	750		
齒輪軸 GEAR SHAFT	90YS120GY38 90YB120GY38	120	Three phase 三相 380	50Hz	0.51	90–1300	1195	924		
圓軸 ROUND SHAFT	90YS120GY38 90YB120GY38			60Hz	0.45	90–1600	1014	750		

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
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- 電機的起動、制動特性與電機的負載慣性量成正比。
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- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

減速箱減速比性能對照表 REDUCTION RATIO PERFORMANCE CHART

減速比 REDUCTION RATIO			3	3.6	5	6	7.5	10	12.5	15	18	20	25	30
90W	50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
		額定轉矩N・m Rated torque	1.79	2.14	2.98	3.57	4.46	5.29	6.61	7.93	9.52	10.58	12.07	14.48
	60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
		額定轉矩N・m Rated torque	1.49	1.79	2.48	2.98	3.72	4.41	5.51	6.61	7.93	8.82	10.06	12.07
120W	50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
		額定轉矩N・m Rated torque	2.25	2.70	3.75	4.50	5.62	6.88	8.60	10.31	12.38	13.75	15.43	18.51
	60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
		額定轉矩N・m Rated torque	1.87	2.25	3.12	3.75	4.68	5.73	7.16	8.60	10.31	11.46	12.86	15.43

減速比 REDUCTION RATIO			36	40	50	60	75	90	100	120	150	180	200	
90W	50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
		額定轉矩N・m Rated torque	17.38	19.31	20	20	20	20	20	20	20	20	20	
	60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
		額定轉矩N・m Rated torque	14.48	16.09	20	20	20	20	20	20	20	20	20	
120W	50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
		額定轉矩N・m Rated torque	20	20	20	20	20	20	20	20	20	20	20	
	60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
		額定轉矩N・m Rated torque	18.51	20	20	20	20	20	20	20	20	20	20	

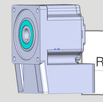
- 表中轉速是以電機的平均轉速(50Hz:1300r/min、60Hz:1600r/min)爲基數除以減速比而算出的數值。
- 實際轉速將隨負載大小而少量變化，變化範圍爲±8%左右。
- The speed in the table is the value of average motor speed (50Hz: 1300r/min, 60Hz: 1600r/min) divided by the reduction ratio.
- The actual speed changes according to the load (±8%).



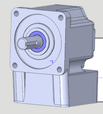
標準减速箱
STANDARD GEARBOX
90GF □H



帶耳减速箱
EARED GEARBOX
90GF □HE



直角中空减速箱
RIGHT ANGLE HOLLOW GEARBOX
L90GF □RC



直角中實减速箱
RIGHT ANGLE SOLID GEARBOX
L90GF □RT

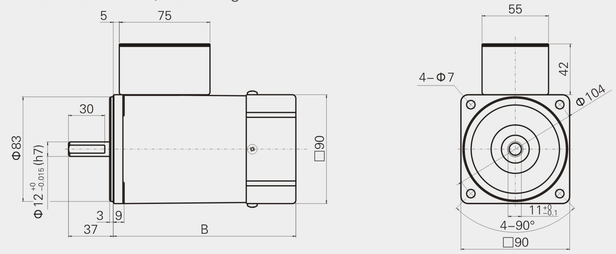
減速箱型號中的□爲减速比的數值
速比：1:3~200
□ in gearbox model indicates the reduction ratio (1:3~200)

外形尺寸(CAD) DIMENSIONS

90/120YS/YR/YT/YB/YF01

圓軸電箱　質量：3kg

Round–axis motor, mass: 3kg

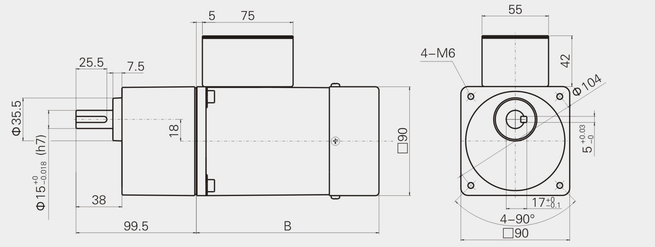


序號 No.	電機類型 Motor type	B
1	YS/YR	140
2	YT	151
3	YB	175
4	YF	187

90/120YS/YR/YT/YB/YF02

組合：電機+標準減速箱（減速比：1:3~200）質量：4.2kg

Portfolio: motor + standard reducer (reduction ratio: 1:3~200) mass: 4.2kg

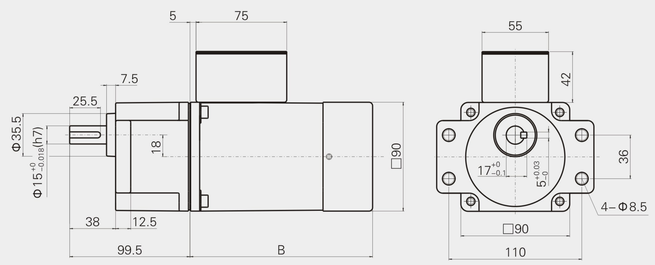


序號 No.	電機類型 Motor type	B
1	YS/YR	140
2	YT	151
3	YB	175
4	YF	187

90/120YS/YR/YT/YB/YF03

組合：電機+帶耳減速箱（減速比：1:3~200）質量：4.2kg

Portfolio: motor + eared gear (reduction ratio: 1:3~200) mass: 4.2kg

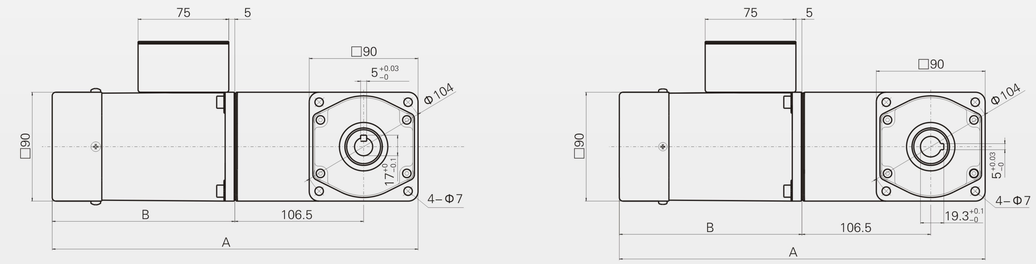


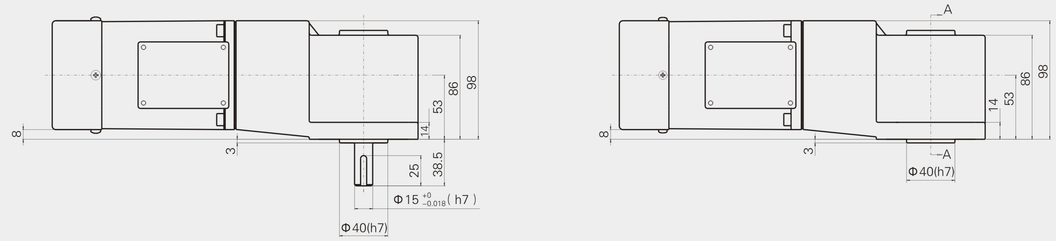
序號 No.	電機類型 Motor type	B
1	YS/YR	140
2	YT	151
3	YB	175
4	YF	187

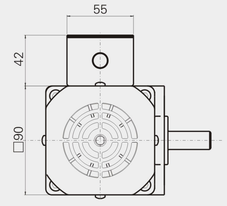
90/120YS/YR/YT/YB/YF04

組合：電機+直角中實減速箱
減速比：1:3~200
質量：6.2kg

Portfolio: motor + right–angle solid gearbox
Reduction ratio: 1:3~200
Mass: 2kg





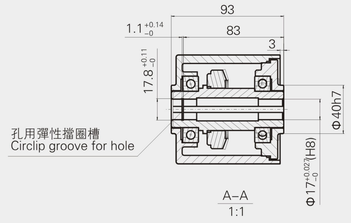


序號 No.	電機類型 Motor type	A	B
1	YS/YR	291.5	140
2	YT	302.5	151
3	YB	326.5	175
4	YF	338.5	187

90/120YS/YR/YT/YB/YF05

組合：電機+直角中空減速箱
減速比：1:3~200
質量：6kg

Portfolio: motor + right angle hollow gearbox
Reduction ratio: 1:3~200
Mass: 2kg



140W
200W

□100×100mm

各型號電機性能 MOTOR PERFORMANCE

型號 MODEL		最大輸出功率(W) MAXIMUM OUTPUT POWER	電壓V VOLTAGE	頻率Hz FREQUENCY	電流A CURRENT	調速範圍 r/min SPEED RANGE	起動轉矩 N・mm START TORQUE	額定轉矩(N・mm) RATED TORQUE 1200r/min	額定轉矩(N・mm) RATED TORQUE 90r/min	運行電容 RUNNING CAPACITOR
齒輪軸 GEAR SHAFT	100YS140GV11 100YT140GV11 100YB140GV11 100YF140GV11	140	Single phase 單相 110	50Hz	2.26	90–1300	840	1050	350	28μf/250V
圓軸 ROUND SHAFT	100YS140DV11 100YT140DV11 100YB140DV11 100YF140DV11			60Hz	2.10	90–1600	680	1050	350	
齒輪軸 GEAR SHAFT	100YS140GV22 100YT140GV22 100YB140GV22 100YF140GV22	140	Single phase 單相 220	50Hz	1.13	90–1300	840	1050	350	8μf/450V
圓軸 ROUND SHAFT	100YS140DV22 100YT140DV22 100YB140DV22 100YF140DV22			60Hz	1.05	90–1600	680	1050	350	
齒輪軸 GEAR SHAFT	100YS140GY22 100YB140GY22	140	Three phase 三相 220	50Hz	0.95	90–1300	1393	1078		
圓軸 ROUND SHAFT	100YS140DY22 100YB140DY22			60Hz	0.88	90–1600	1183	875		
齒輪軸 GEAR SHAFT	100YS140GY38 100YB140GY38	140	Three phase 三相 380	50Hz	0.55	90–1300	1393	1078		
圓軸 ROUND SHAFT	100YS140DY38 100YB140DY38			60Hz	0.48	90–1600	1183	875		
齒輪軸 GEAR SHAFT	100YS200GV11 100YT200GV11 100YB200GV11 100YF200GV11	200	Single phase 單相 110	50Hz	3.38	90–1300	1150	1650		32μf/250V
圓軸 ROUND SHAFT	100YS200DV11 100YT200DV11 100YB200DV11 100YF200DV11			60Hz	3.08	90–1600	930	1330		
齒輪軸 GEAR SHAFT	100YS200GV22 100YT200GV22 100YB200GV22 100YF200GV22	200	Single phase 單相 220	50Hz	1.69	90–1300	1150	1650		10μf/450V
圓軸 ROUND SHAFT	100YS200DV22 100YT200DV22 100YB200DV22 100YF200DV22			60Hz	1.54	90–1600	930	1330		
齒輪軸 GEAR SHAFT	100YS200GY22 100YB200GY22	200	Three phase 三相 220	50Hz	1.82	90–1300	1990	1540		
圓軸 ROUND SHAFT	100YS200DY22 100YB200DY22			60Hz	1.64	90–1600	1690	1250		
齒輪軸 GEAR SHAFT	100YS200GY38 100YB200GY38	200	Three phase 三相 380	50Hz	1.05	90–1300	1990	1540		
圓軸 ROUND SHAFT	100YS200DY38 100YB200DY38			60Hz	0.95	90–1600	1690	1250		

- 雖然調速電機的調速範圍爲：50Hz…90~1300r/min；60Hz…90~1600r/min。但由于低速時(＜400r/min)，電機轉矩下降較多，易發生過載，且電機直連風扇冷却效果差，易發熱，因此必須預留足够的功率餘量，并且不要經常工作在低速區。因此電機最佳調速範圍爲：50Hz…400~1300r/min；60Hz…400~1600r/min。
- 在斷開電源的同時，電機會瞬間停止關保持負載。
- 電機的起動、制動特性與電機的負載慣性量成正比。
- Although the speed range of the motor is 50Hz, 90~1300r/min, 60Hz, 90~1600r/min, it easily causes overload and the cooling effect of the motor fan is poor if the speed is too low (<400r/min) and the motor torque decreases too much; therefore, please keep sufficient power margin and avoid operating in low speed section frequently. The optimal speed range of the motor is 50Hz, 400~1300r/min, 60Hz, 400~1600r/min.
- When the power is cut off, the motor will stop immediately and hold the load.
- The start and braking characteristics of the motor are proportional to the load inertia of the motor.

減速箱減速比性能對照表 REDUCTION RATIO PERFORMANCE CHART

減速比 REDUCTION RATIO			3	3.6	5	6	7.5	10	12.5	15	18	20	25	30
140W	50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
		額定轉矩N・m Rated torque	2.62	3.15	4.37	5.25	6.56	7.51	9.38	11.26	13.51	15.02	18.77	21.91
	60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
		額定轉矩N・m Rated torque	2.19	2.62	3.64	4.37	5.46	6.26	7.82	9.38	11.26	12.51	15.64	18.26
200W	50Hz	最高轉速r/min Output bearing speed	433	361	260	217	173	130	104	87	72	65	52	43
		額定轉矩N・m Rated torque	3.44	4.13	5.73	6.88	8.60	11.46	14.33	17.19	18.51	20.57	25.71	30.85
	60Hz	最高轉速r/min Output bearing speed	533	444	320	267	213	160	128	107	89	80	64	53
		額定轉矩N・m Rated torque	2.87	3.44	4.78	5.73	7.16	9.55	11.94	14.33	15.43	17.14	21.43	25.71

減速比 REDUCTION RATIO			36	40	50	60	75	90	100	120	150	180	200	
140W	50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
		額定轉矩N・m Rated torque	26.29	29.21	33.94	40.73	44	44	44	44	44	44	44	
	60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
		額定轉矩N・m Rated torque	21.91	24.34	28.28	33.94	40.73	44	44	44	44	44	44	
200W	50Hz	最高轉速r/min Output bearing speed	36	33	26	22	17	14	13	11	9	7	7	
		額定轉矩N・m Rated torque	37.02	41.14	44	44	44	44	44	44	44	44	44	
	60Hz	最高轉速r/min Output bearing speed	44	40	32	27	21	18	16	13	11	9	8	
		額定轉矩N・m Rated torque	30.85	34.28	42.85	44	44	44	44	44	44	44	44	

- 表中轉速是以電機的平均轉速(50Hz:1300r/min、60Hz:1600r/min)爲基數除以減速比而算出的數值。
- 實際轉速將隨負載大小而少量變化，變化範圍爲±8%左右。
- The speed in the table is the value of average motor speed (50Hz: 1300r/min, 60Hz: 1600r/min) divided by the reduction ratio.
- The actual speed changes according to the load (±8%).



標準減速箱
STANDARD GEARBOX
100GF □H



直角中空減速箱
RIGHT ANGLE HOLLOW GEARBOX
L100GF □RC



直角中實減速箱
RIGHT ANGLE SOLID GEARBOX
L100GF □RT

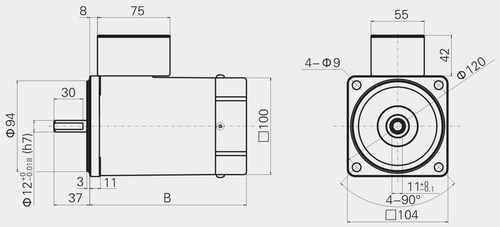
減速箱型號中的□爲減速比的數值
速比：1:3~200
□ in gearbox model indicates the reduction ratio (1:3~200)

外形尺寸(CAD) DIMENSIONS

140/200YS/YT/YB/YF01

圓軸電箱　質量：4.6kg

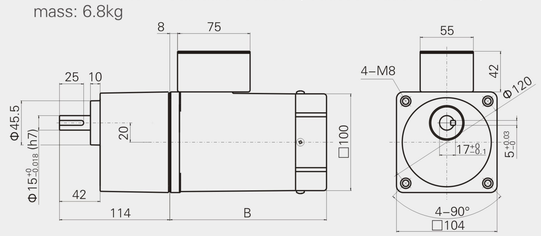
Round-axis motor, mass: 4.6kg



140/200YS/YT/YB/YF02

組合：電機+標準減速箱(減速比：1:3~200)質量：6.8kg

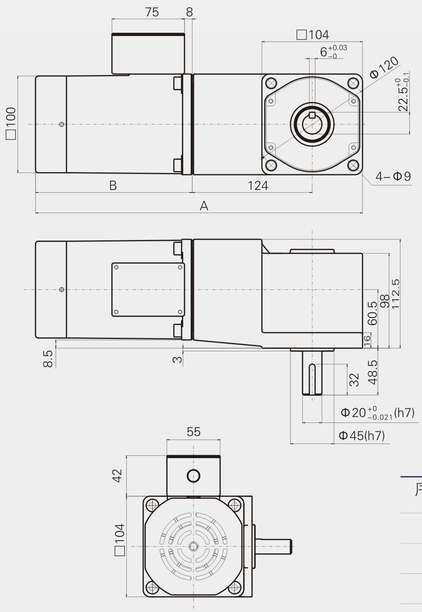
Portfolio: motor + standard reducer (reduction ratio: 1:3~200)
mass: 6.8kg



140/200YS/YT/YB/YF03

組合：電機+直角中實減速箱
減速比：1:3~200
質量：8.8kg

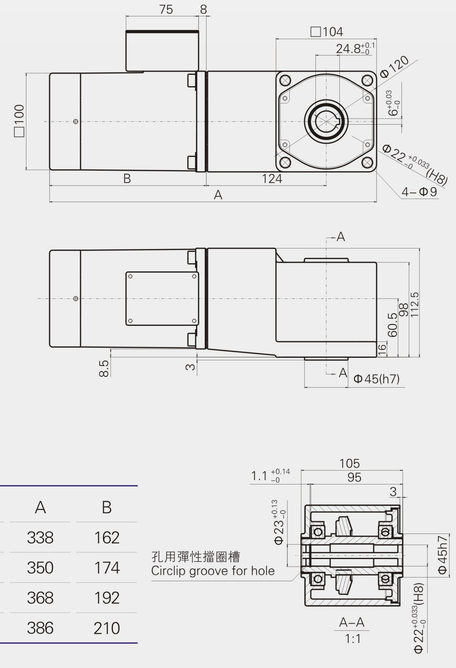
Portfolio: motor + right-angle solid gearbox
Reduction ratio: 1:3~200
Mass: 8.8kg



140/200YS/YT/YB/YF04

組合：電機+直角中空減速箱
減速比：1:3~200
質量：8.6kg

Portfolio: motor + right angle hollow gearbox
Reduction ratio: 1:3~200
Mass: 8.6kg



序號 No.	電機類型 Motor type	A	B
1	YS	338	162
2	YT	350	174
3	YB	368	192
4	YF	386	210

調速電磁制動電機

VARIABLE SPEED ELECTROMAGNETIC BRAKE MOTOR

調速器
SPEED GOVERNOR

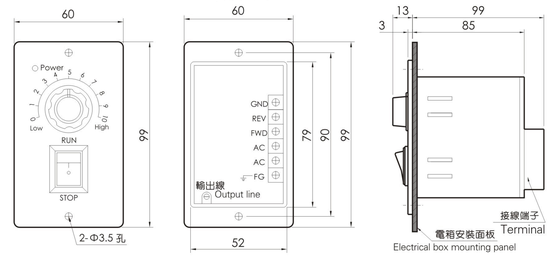


■ 特點 FEATURES

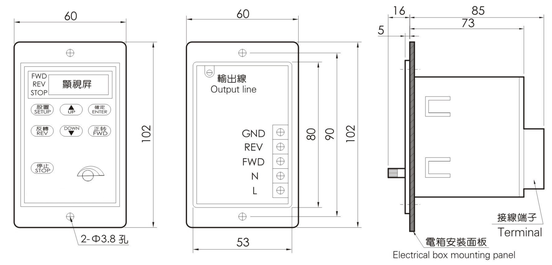
- 與調速電機組合實現寬範圍的無級變速。
  Achieve continuously variable transmission in a wide range combined with variable speed motor
- 功能豐富，可實現緩慢加速，緩慢減速及電機堵轉保護。
  Feature-rich, enabling slow acceleration, slow deceleration and motor stall protection.
- 調速器運行電容直接安裝于調速器內部，布綫整齊、方便。
  The capacitor for speed governor running is mounted directly inside the governor, featuring neat and convenient wiring.
- 調速穩定，功率高達200W。
  Stable speed regulation, power up to 200W.

■ 面板式調速器 PANEL SPEED GOVERNOR

WS-P外形尺寸 WS-P dimensions



WS-L外形尺寸 WS-L dimensions

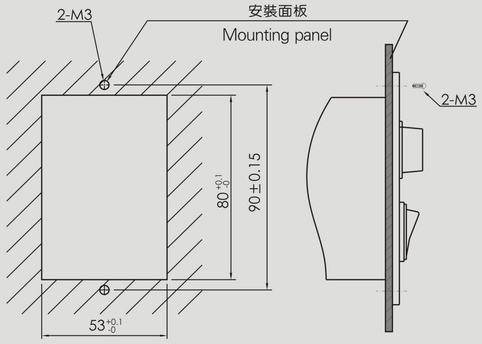


■ 型號參數表 MODEL PARAMETERS

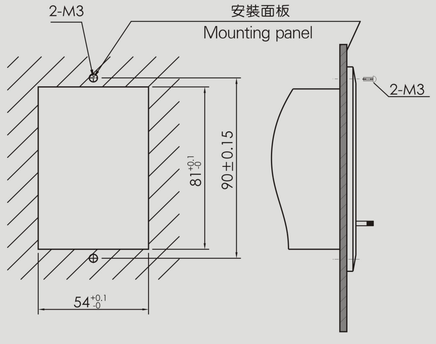
型號 MODEL	WS-P	WS-L
安裝方式 INSTALLATION METHOD	面板式 Panel	數顯面板式 Digital panel
調速方法 SPEED REGULATION	面板電位器 Panel potentiometer	數顯 Digital
電源電壓 SUPPLY VOLTAGE	單相220V Single phase 220V	單相220V Single phase 220V
控制功能 CONTROL FEATURES	速度控制、緩慢加速、緩慢減速、電子制動 Speed control, slow acceleration, slow deceleration, electronic brake	速度控制、緩慢加速、緩慢減速、電子制動、堵轉保護、面板控制正反轉、轉速顯示、百分比顯示(顯示轉速與實際轉速相差5r/min) Speed control, slow acceleration, slow deceleration, electronic brake, stall protection, panel control forward and reverse rotation, speed display, percentage display (the difference between displayed speed and actual speed is 5r/min)
適用電機功率範圍 APPLICABLE MOTOR POWER RANGE	6W~200W	
運行電容 RUNNING CAPACITOR	內置Built-in	
電源頻率 POWER FREQUENCY	50/60Hz	
調速範圍 SPEED RANGE	50Hz:90~1300r/min　60Hz:90~1600r/min	
速度變化率 RATE OF SPEED CHANGE	5%	
電子制 ELECTRONIC BRAKING TIME	0.4秒sec	
動時間使用環境 ENVIRONMENT OF USE	-10℃~+40℃無凍結No freezing,<85%(無結露No condensation)	

■ 面板式調速器的安裝 INSTALLATION OF PANEL SPEED GOVERNOR

WS–P控制面板開孔尺寸
Hole size of WS–P control panel



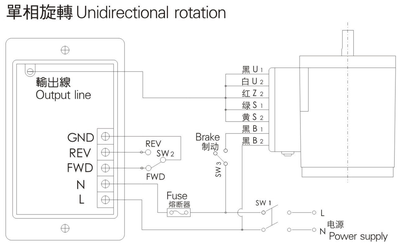
WS–L控制面板開孔尺寸
Hole size of WS–L control panel



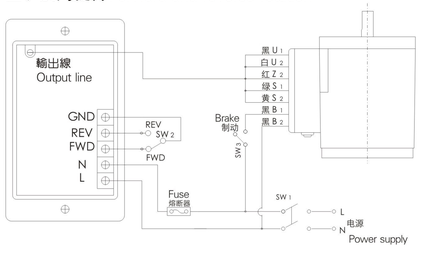
將調速器按圖示方向放入開孔，緊定螺釘。Put the governor into the hole in the direction shown, and tighten the screws.

■ 接綫方法 WIRING METHOD

單相旋轉 Unidirectional rotation



正、反向旋轉 Forward and reverse rotation



■ 旋轉方向 DIRECTION OF ROTATION

調速器出廠時，旋轉方向選擇軟綫連接于L與FWD端，電機順時針旋轉，若需使電機逆時針旋轉，僅需將軟綫連接于REV端。若需正、反向旋轉，則在FWD、REV連接旋轉方向選擇開關SW2。

When the governor is delivered, the cord of rotation direction selection has been connected to the L and FWD terminal, and the motor rotates clockwise; to make the motor rotate counterclockwise, just connect the cord to the REV terminal. For forward and reverse rotation, connect FWD and REV terminals to the rotation direction selector switch Sw2.

注：型號WS–L可選擇面板按鍵控制正反轉，或是手動接後面板接綫控制。

Note: Model WS–L allows controlling forward and reverse rotation with the panel button, or manually connect rear panel wiring.

■ 電機制動停止 MOTOR BRAKE STOPS

當電機停止運轉時，斷開SW3，電機內失電電磁制動器剎車，電機電磁制動，保持負載。在電機正常運轉中，不允許斷開SW3，否則電機及電機內的失電電磁制動器將燒壞。

When the motor stops running, disconnect SW3, the de–energized electromagnetic brake in the motor brakes, and the motor brakes and maintains the load. In the normal operation of the motor, it is not allowed to disconnect SW3, or else the motor and the de–energized electromagnetic brake in the motor will burn.

●特別注意 Special Note

B1、B2通電，失電電磁制動器不剎車；B1、B2斷電，失電電磁制動器剎車。剎車電源開關必須與電機調速開關同步。

When B1 and B2 are energized, the de–energized electromagnetic brake won't brake; when B1 and B2 are de–energized, the de–energized electromagnetic brake brakes. Brake power switch must be synchronized with the motor speed control switch.

■ 運轉操作 RUNNING OPERATION

將調速器與電機按圖連接，然後打開AC電源。閉合SW3，電機內失電電磁制動器通電，電磁制動失效，此時將面板上的開關切換到RUN，電機開始旋轉。

Connect the speed governor to the motor as shown in the figure, and then turn on the AC power. Close SW3, the de–energized electromagnetic brake in the motor is energized, and the electromagnetic brake fails; the switch on the panel turns to RUN, and the motor starts to rotate.

■ 轉速調整 SPEED ADJUSTMENT

順時針旋轉面板上的調速器旋鈕，電機轉速增加，電機調整範圍： 50Hz:90~1300r/min
60Hz:90~1600r/min

Rotate the speed control knob clockwise on the panel, and the motor speed increases; the range of adjustment: 50Hz: 90 ~ 1300r/min; 60Hz: 90~1600r/min

●特別注意 Special Note

嚴禁使用SW1電源開關作爲運行/制動開關開/停産調速器，并使用電機停止制動保持負載，否則易造成調速器損壞。現時由于調速器每次開電源時其內部電路有充電時間，故無法立即起動電機，動作亦會不正常。

Do not use SW1 power switch as the start/stop speed governor of running/brake switch and stop braking with the motor and hold the load, or else it will damage the speed governor easily. At present, internal circuit needs time to charge when the speed governor is turned on every time, the motor won't be started immediately, and the action will be abnormal.

■ 停止 STOP

將調速器面板上的開關切換到STOP，電機停止。

Turn the switch on the governor panel to STOP, and the motor stops.

注：此開關并非電源開關，若電機長期停止運轉，則請另設電源開關。

NOTE: This switch is not a power switch. If the motor stops running for a long time, please equip a separate power switch.

微型直流電機

MINIATURE DC MOTOR

60DC

10W/15W/20W

各型號電機性能 MOTOR PERFORMANCE

機座號 MODEL	電壓V VOLTAGE	功率W POWER	負載參數 LOAD PARAMETERS 轉速SPEED r/min	力矩TORQUE kg•cm	電流A≤ CURRENT	電刷壽命h BRUSH LIFE	電機重量kg MOTOR WEIGHT
60DC10GV12R16	12	10	1600	0.62	1.24	2000	0.7
60DC10GV24R16	24	10	1600	0.62	0.62	2000	0.7
60DC15GV12R16	12	15	1600	0.93	1.87	2000	0.9
60DC15GV24R16	24	15	1600	0.93	0.93	2000	0.9
60DC20GV12R16	12	20	1600	1.24	2.49	2000	0.9
60DC20GV24R16	24	20	1600	1.24	1.24	2000	0.9

減速箱減速比性能對照表 REDUCTION RATIO PERFORMANCE CHART

轉速 r/min SPEED	減速比 REDUCTION RATIO	3	3.6	5	6	7.5	10	12.5	15	18	20	25	30
1600	出力軸轉速r/min OUTPUT BEARING SPEED	533	444	320	267	213	160	128	107	89	80	64	53
	額定轉矩N・m RATED TORQUE	0.129	0.154	0.215	0.259	0.324	0.43	0.53	0.64	0.769	0.77	0.97	1.16
轉速 r/min SPEED	減速比 REDUCTION RATIO	36	40	50	60	75	90	100	120	150	180	200	
1600	出力軸轉速r/min OUTPUT BEARING SPEED	44	40	32	27	21	18	16	13	11	9	8	
	額定轉矩N・m RATED TORQUE	1.39	1.55	1.93	2.32	3	3	3	3	3	3	3	

標準減速箱
STANDARD GEARBOX
60GK □H

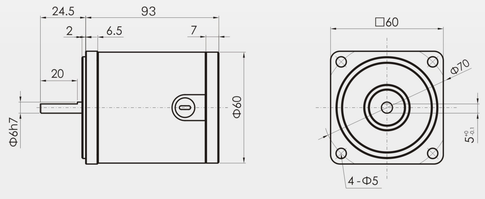
減速箱型號中的□爲減速比的數值
速比：1:3~200
□ in gearbox model indicates the reduction ratio (1:3~200)

外形尺寸(CAD) DIMENSIONS

60DC(10W/15W)

圓軸電機

Round–axis motor



60DC(10W/15W)

組合：電機+標準減速箱（減速比：1:3~200）

Portfolio: motor + standard gearbox (reduction ratio: 1:3~200)

