

SGF15直交軸減速馬達性能表

Performance table of SGF15 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (μ F)	絕緣等級 Insulation Classification	保護方式 Protective system
15框	单相	15W	220	50	0.18	1350	1.3	F	IP54
		25W	220	50	0.27	1350	2		
	三相	15W	220	50	0.22	1380	/		
			380	50	0.13	1380	/		
		25W	220	50	0.34	1380	/		
			380	50	0.20	1380	/		

減速機扭力表(Speed reducer torque meter)

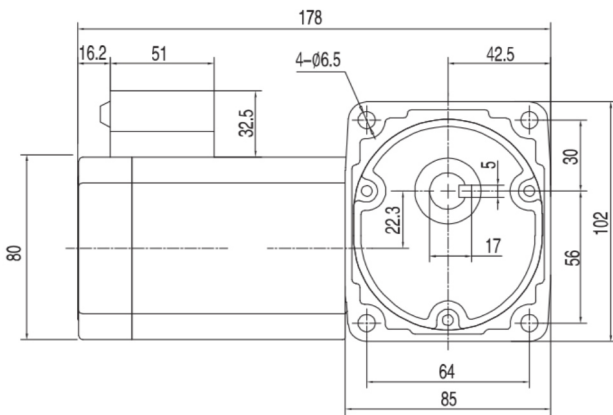
框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque				輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		15W		25W		15框	
		N.m	Kgf.m	N.m	Kgf.m	N	Kgf
15框 (出力軸) 實(15) 空(10)	1/5	0.43	0.04	0.72	0.073	245	25
	1/10	0.65	0.07	1.08	0.11	343	35
	1/15	1.00	0.10	1.67	0.17	441	45
	1/20	1.35	0.14	2.25	0.23	539	55
	1/25	1.64	0.17	2.74	0.28	588	60
	1/30	2.00	0.20	3.33	0.34	686	70
	1/40	2.65	0.27	4.41	0.45	784	80
	1/50	3.29	0.34	5.49	0.56	882	90
	1/60	4.00	0.41	6.66	0.68	882	90
	1/80	5.06	0.52	8.43	0.86	980	100
	1/100	6.48	0.66	10.8	1.1	980	100
	1/120	7.62	0.78	12.7	1.3	1080	110
	* 1/160	10.02	1.02	16.7	1.7	1080	110
	* 1/200	12.36	1.26	20.6	2.1	1080	110
	* 1/240	15.30	1.56	25.5	2.6	1080	110

- Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.
 2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)
 3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.
 4. * mark means compact model, pls pay attention to the allowable torque value in above table.

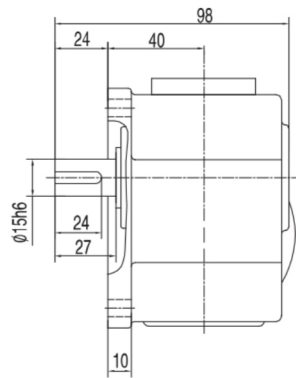
SGF15直交軸減速馬達尺寸圖

Dimension Diagram of SGF15 Right Angle AC Gear Motor

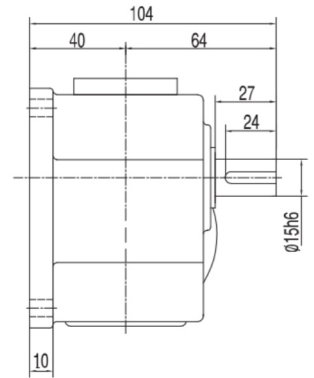
SGF15-SR-(15W-25W)-(5-240)



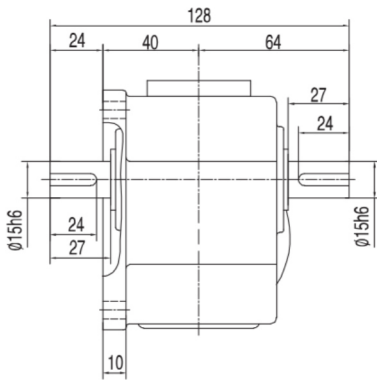
右法蘭-右出軸(SR)



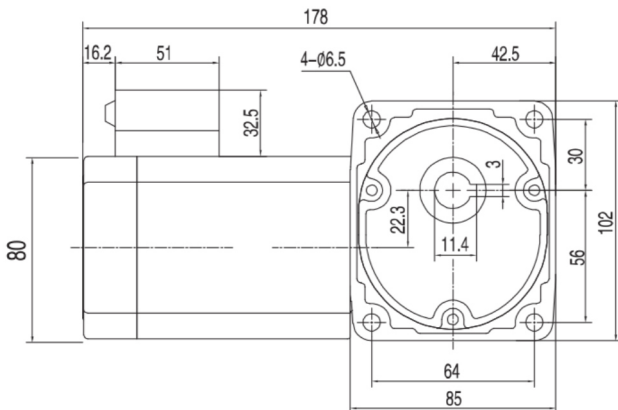
右法蘭-左出軸(SL)



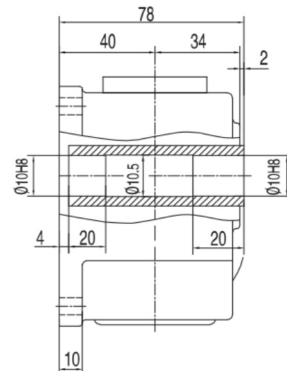
右法蘭-雙出軸(ST)



SGF15-HR-(15W-25W)-(5-240)



空心軸-出力孔為通孔型(HR)



SGF18直交軸減速馬達性能表

Performance table of SGF18 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (μF)	絕緣等級 Insulation Classification	保護方式 Protective system
18 框	单相	40W	220	50	0.39	1350	3	F	IP54
		60W	220	50	0.53	1350	4		
		90W	220	50	0.6	1350	6		
	三相	40W	220	50	0.6	1380	/		
			380	50	0.38	1380	/		
		60W	220	50	0.76	1380	/		
			380	50	0.47	1380	/		
		90W	220	50	0.92	1380	/		
			380	50	0.56	1380	/		

減速機扭力表 (Speed reducer torque meter)

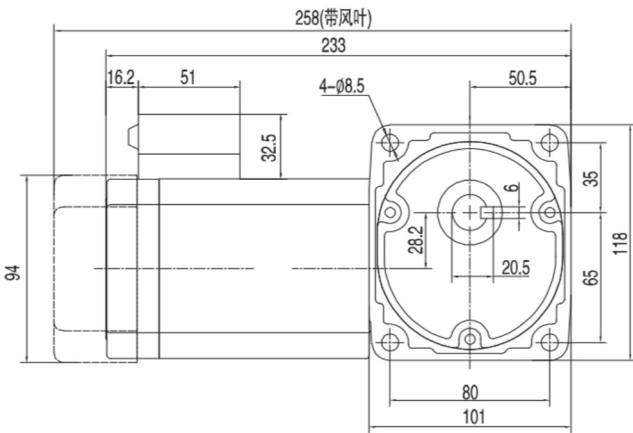
框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque						輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		40W		60W		90W		18框	
		N.m	Kgf.m	N.m	Kgf.m	N.m	Kgf.m	N	Kgf
18 框 【出力軸】 實(18) 空(18)	1/5	1.14	0.12	1.72	0.18	2.58	0.26	343	35
	1/10	1.76	0.18	2.74	0.28	4.12	0.42	441	45
	1/15	2.65	0.27	4.12	0.42	6.17	0.63	588	60
	1/20	3.53	0.36	5.49	0.56	8.33	0.85	735	75
	1/25	4.41	0.45	6.96	0.71	10.8	1.1	882	90
	1/30	5.29	0.54	8.33	0.85	12.7	1.3	980	100
	1/40	7.06	0.72	10.8	1.1	16.7	1.7	1080	110
	1/50	8.82	0.9	13.7	1.4	20.6	2.1	1180	120
	1/60	10.8	1.1	16.7	1.7	24.5	2.5	1180	120
	1/80	13.7	1.4	20.6	2.1	31.4	3.2	1270	130
	1/100	16.7	1.7	26.5	2.7	39.2	4	1270	130
	1/120	20.6	2.1	31.4	3.2	47	4.8	1370	140
	* 1/160	26.5	2.7	42.1	4.3	*53.9	5.5	1370	140
	* 1/200	33.3	3.4	52.9	5.4	*53.9	5.5	1370	140
	* 1/240	40.2	4.1	*53.9	5.5	*53.9	5.5	1370	140

- Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.
 2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)
 3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.
 4. * mark means compact model, pls pay attention to the allowable torque value in above table.

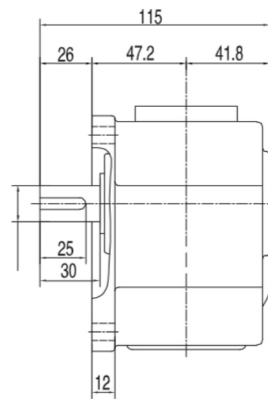
SGF18直交軸減速馬達尺寸圖

Dimension Diagram of SGF18 Right Angle AC Gear Motor

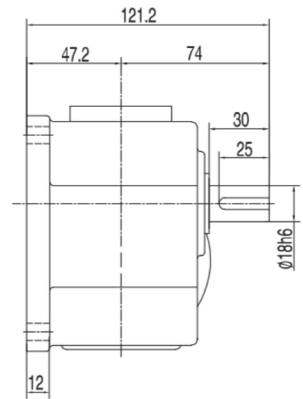
SGF18-SR-(40W-90W)-(5-240)



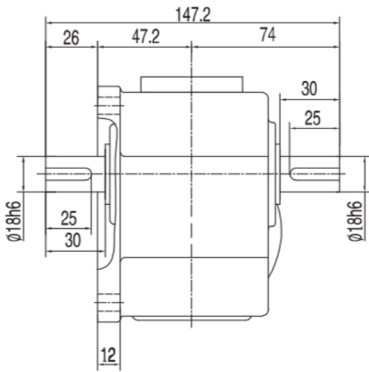
右法蘭-右出軸(SR)



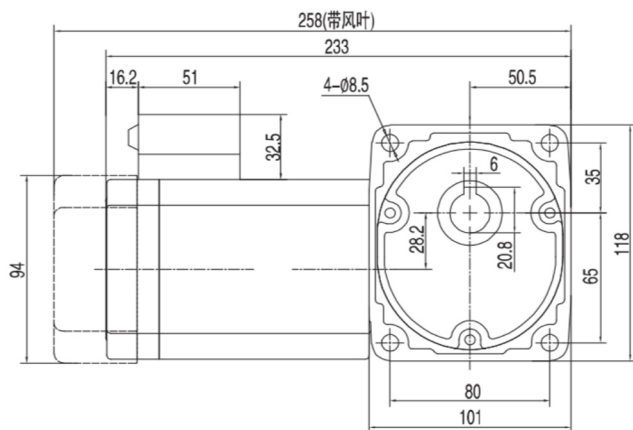
右法蘭-左出軸(SL)



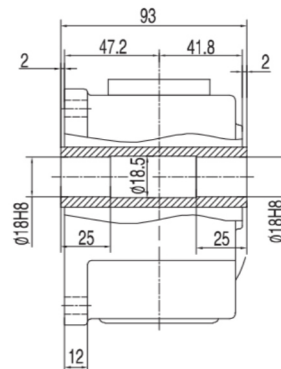
右法蘭-雙出軸(ST)



SGF18-HR-(40W-90W)-(5-240)



空心軸-出力孔為通孔型(HR)



SGF22直交軸減速馬達性能表

Performance table of SGF22 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (uF)	絕緣等級 Insulation Classification	保護方式 Protective system
22框	單相	0.1kW	220	50	1.1	1410	8	F	IP54
		0.2kW	220	50	1.5	1410	12		
	三相	0.1kW	220	50	0.6	1410	/		
			380	50	0.4	1410	/		
		0.2kW	220	50	1.2	1410	/		
			380	50	0.7	1410	/		

減速機扭力表 (Speed reducer torque meter)

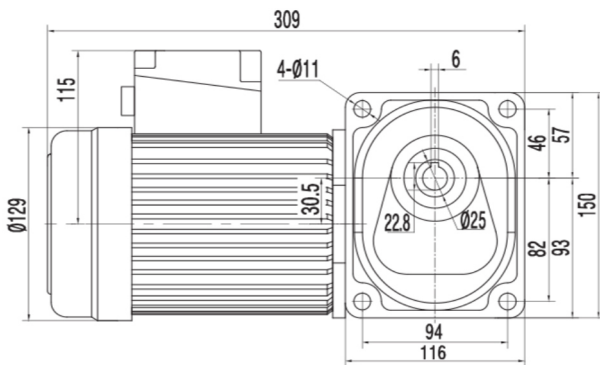
框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque				輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		0.1kW		0.2kW		22框	
		N·m	Kgf·m	N·m	Kgf·m	N	Kgf
22框 【出力軸】 實(22) 空(20)	1/5	1.6	0.16	3.2	0.33	882	90
	1/10	3.25	0.32	6.5	0.67	1180	120
	1/15	4.9	0.49	9.8	1.0	1370	140
	1/20	6.5	0.65	13	1.3	1470	150
	1/25	8	0.8	16	1.6	1670	170
	1/30	9.5	0.95	19	2.0	1760	180
	1/40	13	1.3	26	2.6	1860	190
	1/50	16	1.6	32	3.3	1960	200
	1/60	19.5	1.95	39	4.0	2160	220
	1/80	26	2.6	52	5.3	2450	250
	1/100	32.5	3.25	65	6.6	2450	250
	1/120	39	3.9	78	8.0	2450	250
	* 1/160	92	9.2	104	10.6	2450	250
	* 1/200	108	10.8	130	13.3	2450	250
* 1/240	130	13	157	16	2450	250	

- Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.
 2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)
 3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.
 4. * mark means compact model, pls pay attention to the allowable torque value in above table.

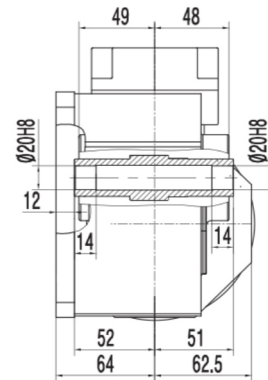
SGF22直交軸減速馬達尺寸圖

Dimension Diagram of SGF22 Right Angle AC Gear Motor

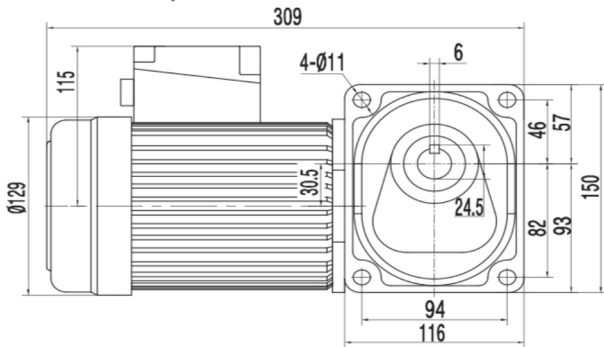
SGF22-HR-0.1kW
0.2kW (5-240) 空心軸



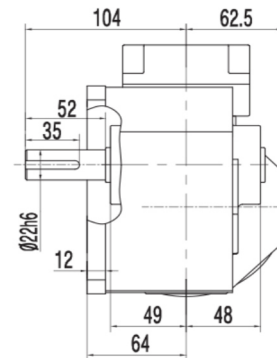
空心軸-出力孔為通孔型 (HR)



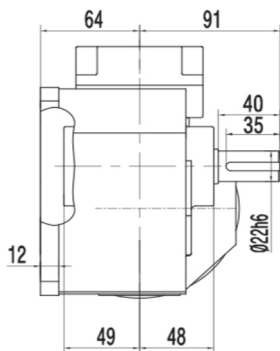
SGF22-SR-0.1kW
0.2kW (5-240) 實心軸



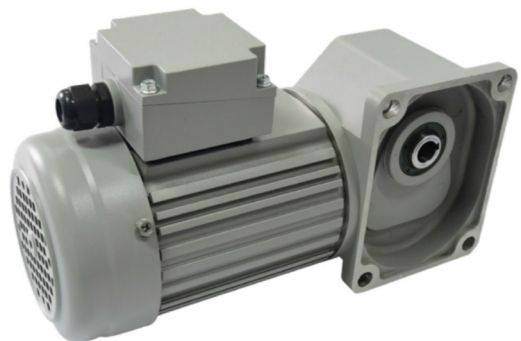
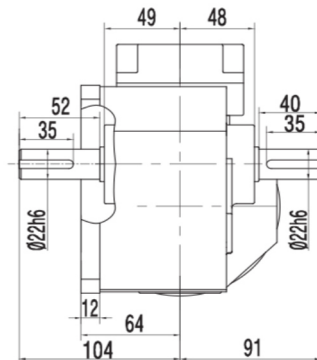
右法蘭-右出軸 (SR)



右法蘭-左出軸 (SL)



右法蘭-雙出軸 (ST)



SGF25直交軸減速馬達性能表

Performance table of SGF25 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (μ F)	絕緣等級 Insulation Classification	保護方式 Protective system
25框	三相	0.2kW	220	50	1.2	1410	/	F	IP54
			380	50	0.7	1410	/		

減速機扭力表 (Speed reducer torque meter)

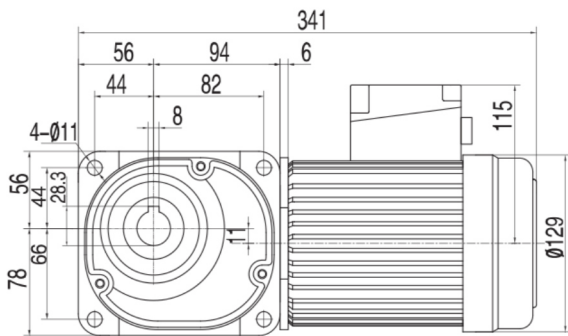
框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque		輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		0.2kW		25框	
		N·m	Kgf·m	N	Kgf
25框 【出力軸】 實(25) 空(25)	1/5	5.5	0.56	1300	135
	1/10	11	1.1	1520	135
	1/15	17	1.7	1720	175
	1/20	23	2.3	1860	190
	1/25	27	2.8	2010	205
	1/30	33	3.4	2110	215
	1/40	44	4.5	2300	235
	1/50	55	5.6	2450	250
	1/60	67	6.8	2550	260
	1/80	84	8.6	2550	260
	1/100	105	10.7	2550	260
	1/120	126	12.9	2550	260
	* 1/160	169	17.2	2550	260
	* 1/200	184	18.8	2550	260
* 1/240	213	21.7	2550	260	

- Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.
 2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)
 3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.
 4. * mark means compact model, pls pay attention to the allowable torque value in above table.

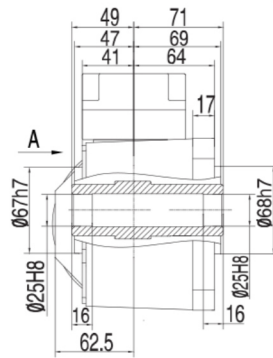
SGF25直交軸減速馬達尺寸圖

Dimension Diagram of SGF25 Right Angle AC Gear Motor

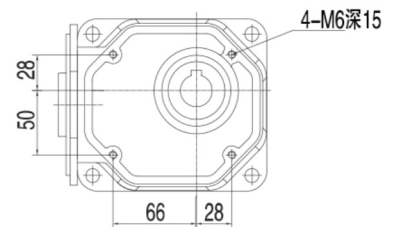
SGF25-HL-0.2kW-(5-240)空心軸



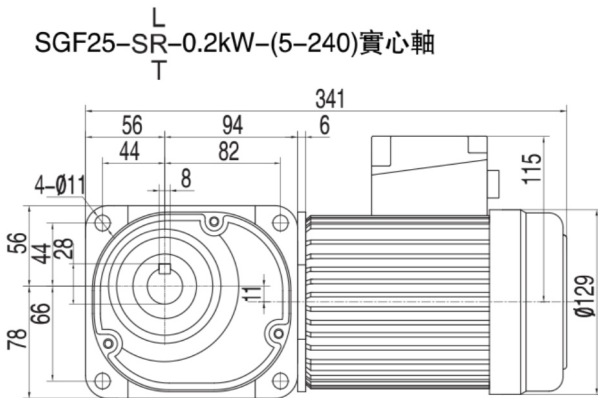
空心軸-出力孔為通孔型 (HL)



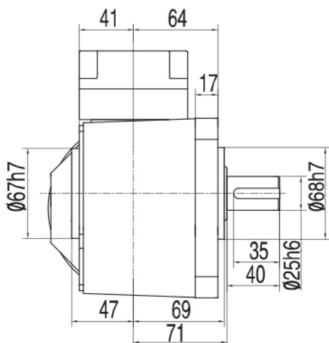
A向



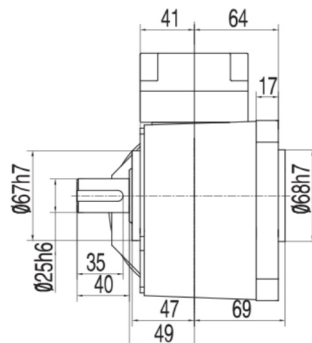
SGF25-SR-0.2kW-(5-240)實心軸



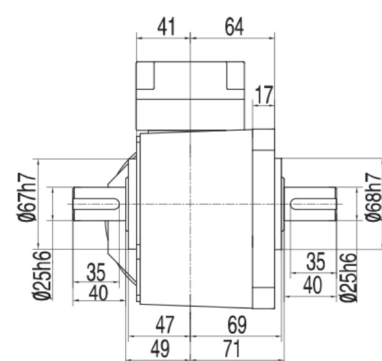
左法蘭-左出軸 (SL)



左法蘭-右出軸 (SR)



左法蘭-雙出軸 (ST)



SGF30直交軸減速馬達性能表

Performance table of SGF30 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (μF)	絕緣等級 Insulation Classification	保護方式 Protective system
30框	三相	0.4kW	220	50	2.0	1420	/	F	IP54
			380	50	1.1	1420	/		

減速機扭力表 (Speed reducer torque meter)

框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque		輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		0.4kW		30框	
		N·m	Kgf·m	N	Kgf
30框 【出力軸】 實(30) 空(30)	1/5	11	1.1	1520	155
	1/10	23	2.3	1910	195
	1/15	33	3.4	2160	220
	1/20	44	4.5	2400	245
	1/25	55	5.6	2550	260
	1/30	67	6.8	2650	270
	1/40	88	9	2840	290
	1/50	111	11.3	2990	305
	1/60	133	13.6	3090	315
	1/80	169	17.2	3090	315
	1/100	211	21.5	3140	320
	1/120	253	25.8	3140	320
	* 1/160	270	27.6	3140	320
	* 1/200	329	33.5	3140	320
	* 1/240	386	39.3	3140	320

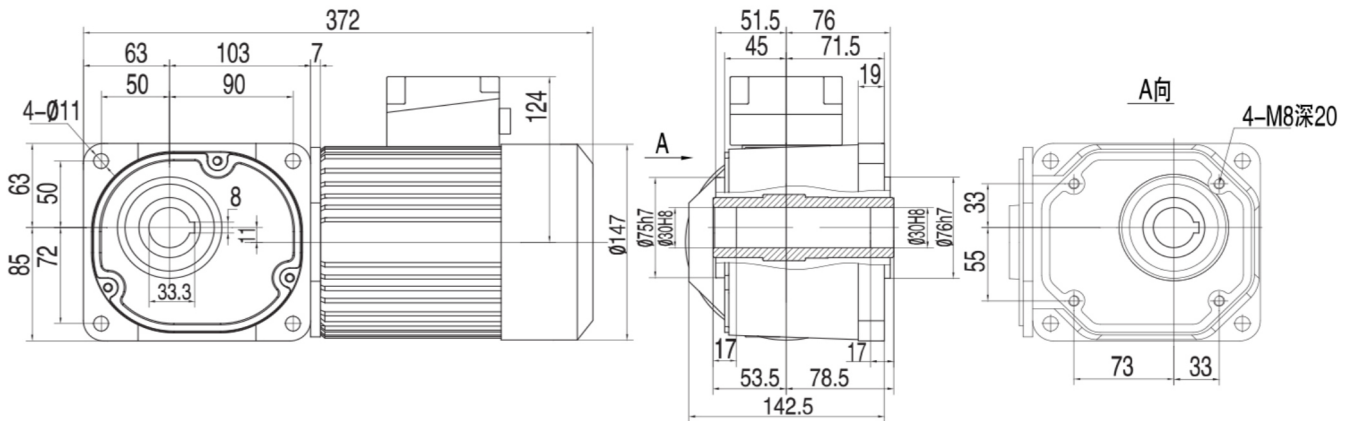
- Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.
 2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)
 3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.
 4. * mark means compact model, pls pay attention to the allowable torque value in above table.

SGF30直交軸減速馬達尺寸圖

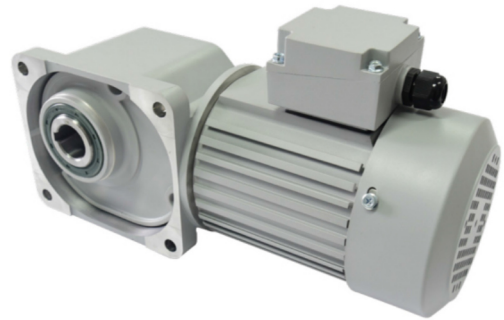
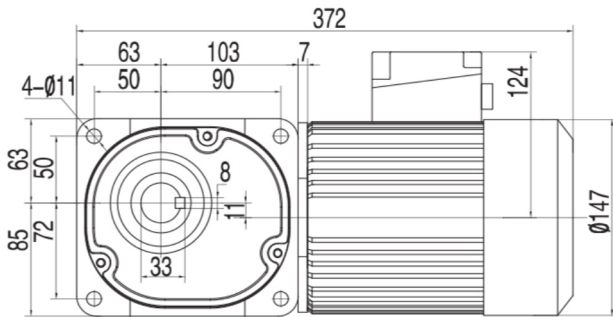
Dimension Diagram of SGF30 Right Angle AC Gear Motor

SGF30-HL-0.4kW-(5-240)空心軸

空心軸-出力孔為通孔型(HL)



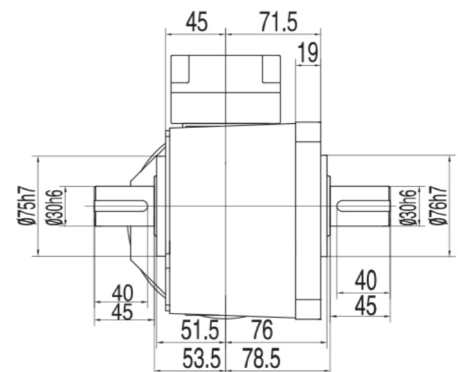
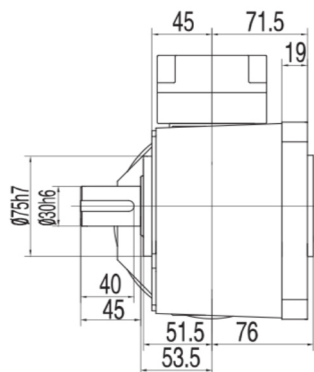
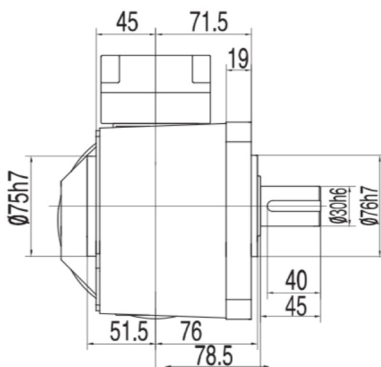
SGF30-SR-0.4kW-(5-240)實心軸



左法蘭-左出軸(SL)

左法蘭-右出軸(SR)

左法蘭-雙出軸(ST)



SGF35直交軸減速馬達性能表

Performance table of SGF35 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (μF)	絕緣等級 Insulation Classification	保護方式 Protective system
35框	三相	0.75kW	220	50	3.5	1420	/	F	IP54
			380	50	2.0	1420	/		

減速機扭力表 (Speed reducer torque meter)

框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque		輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		0.75kW		35框	
		N·m	Kgf·m	N	Kgf
35框 【出力軸】 實(35) 空(35)	1/5	21	2.1	1960	200
	1/10	41	4.2	2450	250
	1/15	63	6.4	2740	280
	1/20	83	8.5	2990	305
	1/25	104	10.6	3190	325
	1/30	124	12.7	3280	335
	1/40	166	16.9	3480	355
	1/50	208	21.2	3480	355
	1/60	249	25.4	3480	355
	1/80	316	32.2	3480	355
	1/100	395	40.3	3530	360
	1/120	473	48.3	3530	360
	* 1/160	554	56.5	3630	370
	* 1/200	650	66.3	3630	370
* 1/240	735	75	3630	370	

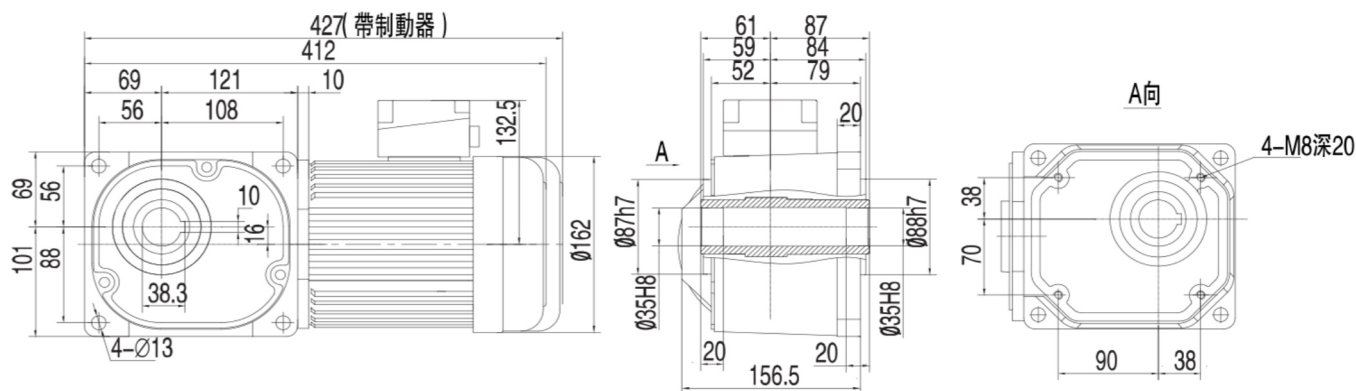
- Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.
 2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)
 3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.
 4. * mark means compact model, pls pay attention to the allowable torque value in above table.

SGF35直交軸減速馬達尺寸圖

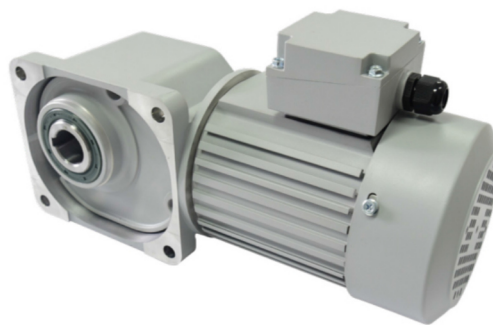
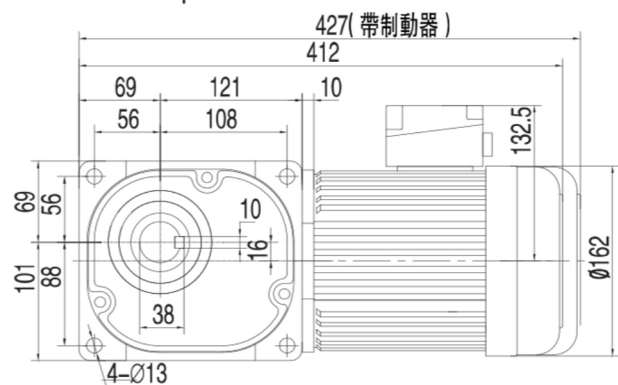
Dimension Diagram of SGF35 Right Angle AC Gear Motor

SGF35-HL-0.75kW-(5-240)空心軸

空心軸-出力孔為通孔型(HL)



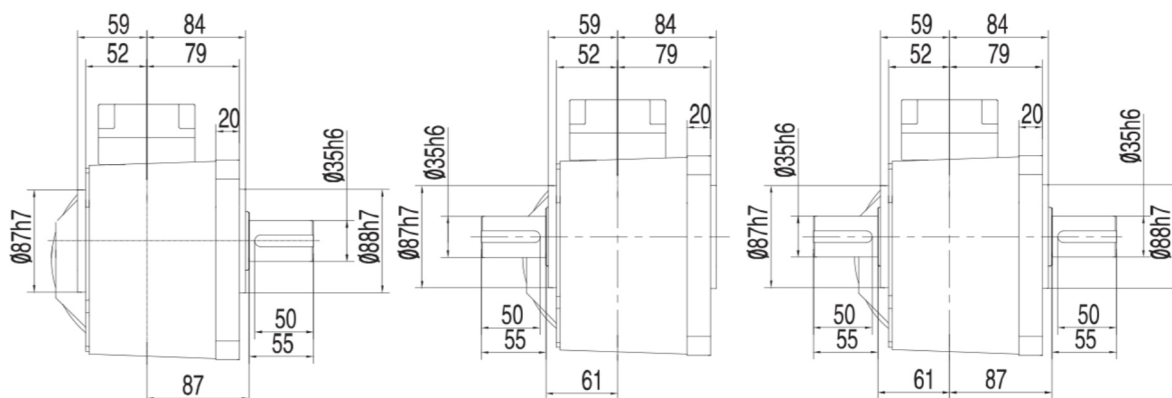
SGF35-SR-0.75kW-(5-240)實心軸



左法蘭-左出軸(SL)

左法蘭-右出軸(SR)

左法蘭-雙出軸(ST)



SGF45直交軸減速馬達性能表

Performance table of SGF45 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (μ F)	絕緣等級 Insulation Classification	保護方式 Protective system
45框	三相	1.5kW	220	50	6.3	1430	/	F	IP54
			380	50	3.64	1430	/		

減速機扭力表 (Speed reducer torque meter)

框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque		輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		1.5kW		45框	
		N·m	Kgf·m	N	Kgf
45框 【出力軸】 實(45) 空(45)	1/5	40.8	4.16	3940	300
	1/10	81.6	8.32	3630	370
	1/15	124	12.7	4070	415
	1/20	166	16.9	4460	455
	1/25	208	21.2	4700	480
	1/30	249	25.4	4750	485
	1/40	332	33.9	4750	485
	1/50	146	42.4	4750	485
	1/60	498	50.8	4750	485
	1/80	631	64.4	4750	485
	1/100	789	80.5	4750	485
	1/120	947	96.6	4750	485
	* 1/160	947	96.6	5190	530
	* 1/200	947	96.6	5190	530
* 1/240	947	96.6	5190	530	

Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.

2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)

3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.

4. * mark means compact model, pls pay attention to the allowable torque value in above table.

SGF55直交軸減速馬達性能表

Performance table of SGF55 Right Angle AC Gear Motor

電機參數 (Electrical parameter)

框號 Frame Number	電機規格 Type	容量 Capacity (W)	電壓 voltage (V)	頻率 Frequency (Hz)	額定電流 Rated Current (A)	額定運轉速度 Rated Rotation Speed(rmp)	電容 Capacitors (μF)	絕緣等級 Insulation Classification	保護方式 Protective system
55 框	三相	2.2kW	220	50	9.1	1430	/	F	IP54
			380	50	5.3	1430	/		
		3.7kW	220	50	13.7	1440	/		
			380	50	7.9	1440	/		

減速機扭力表 (Speed reducer torque meter)

框號 Frame Number	減速比 Ratio	輸出軸容許轉矩力 Output Shaft Allowable Torque				輸出軸容許O.H.L Output Shaft Allowable O.H.L	
		2.2kW		3.7kW		60框	
		N·m	Kgf·m	N·m	Kgf·m	N	Kgf
55 框 【出力軸】 空 (55)	1/5	61	6.2	432	44.1	4700	480
	1/10	122	12.4	540	55.1	5780	590
	1/15	182	18.6	648	66.1	6320	645
	1/20	258	26	864	88.2	6320	645
	1/25	322	33	1080	110.2	6320	645
	1/30	387	39	1296	132.2	6320	645
	1/40	516	52	1728	176.3	6320	645
	1/50	645	66			6320	645
	1/60	774	79			6320	645
	1/80	1304	133.1			6420	655
	1/100	1630	166.3			6420	655
	1/120	1548	158			7500	765
	* 1/160	1988	202.9			8330	850
	* 1/200	1988	202.9			9020	920
	* 1/240	1988	202.9			9800	1000

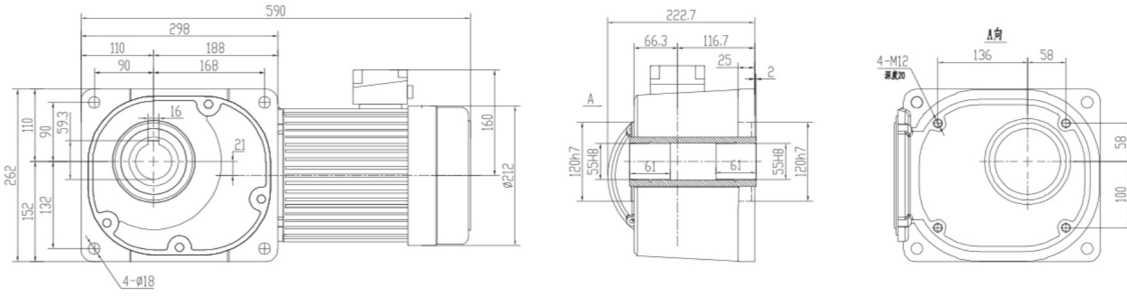
- Note: 1. Pls consider the allowable O.H.L on the output shaft when using sprockets, conveyor belts, and gears.
 2. Load position of O.H.L value allowed in the list (solid shaft: the middle of the output shaft; hollow shaft: 20MM from the end surface of the output shaft)
 3. The inertia of the load is not greater 2 times than the allowable torque for 1:15 below model.
 4. * mark means compact model, pls pay attention to the allowable torque value in above table.

SGF55直交軸減速馬達尺寸圖

Dimension Diagram of SGF55 Right Angle AC Gear Motor

SGF55-H-2.2kW-(5-240)空心軸

左法蘭-空心軸(HL)

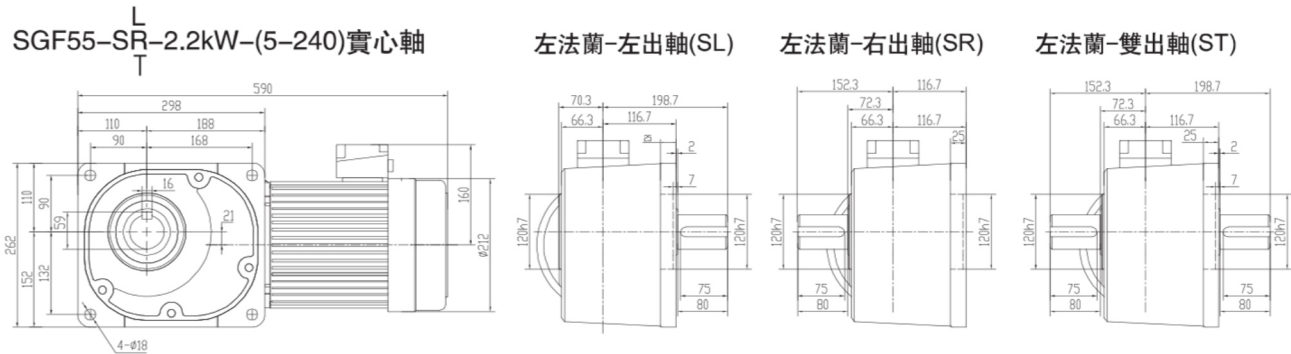


SGF55-SR-2.2kW-(5-240)實心軸

左法蘭-左出軸(SL)

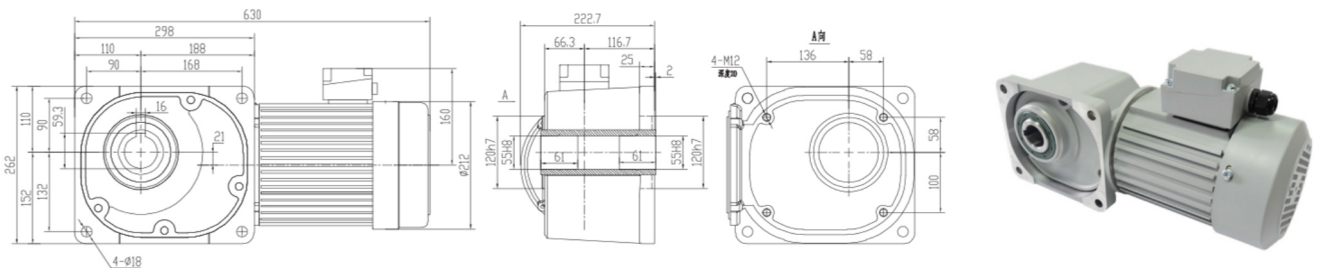
左法蘭-右出軸(SR)

左法蘭-雙出軸(ST)



SGF55-HL-3.7kW-(5-240)空心軸

左法蘭-空心軸(HL)

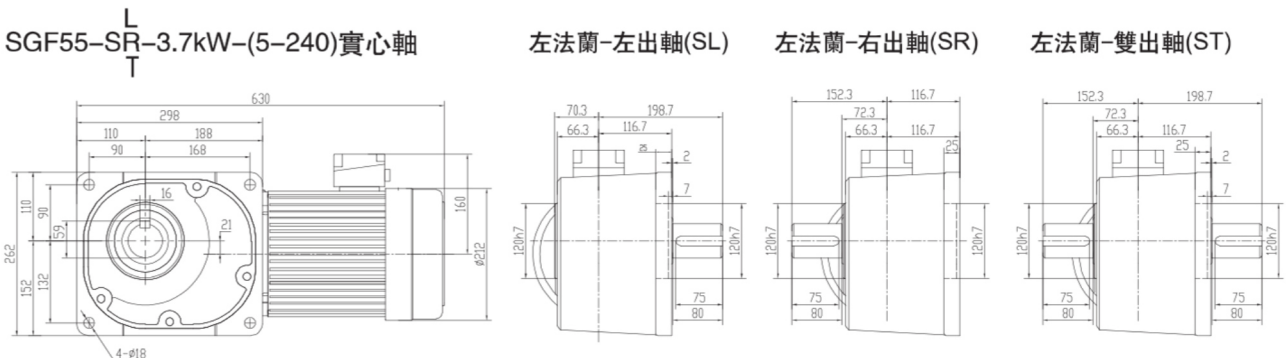


SGF55-SR-3.7kW-(5-240)實心軸

左法蘭-左出軸(SL)

左法蘭-右出軸(SR)

左法蘭-雙出軸(ST)



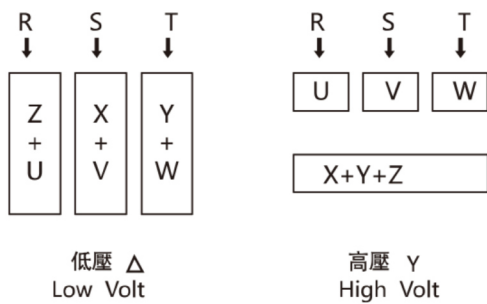
技術資料 *Technical data*

標準馬達規範表 (Standard Motor Specification)

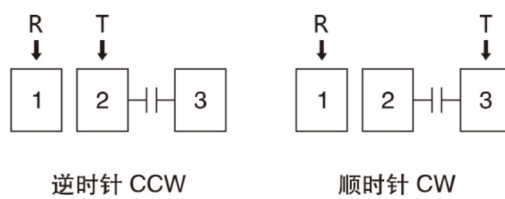
項目 Item	三相交流馬達 3-Phase Motor		單相交流馬達 1-Phase Motor	
防護等級 Protection	全密閉外扇形 IP-54 Totally Enclosed Fan Cooled Type		半密閉外扇形 Semi-Enclosed Fan Cooled Type	
外殼材質 Housing Material	0.1KW-3.7KW 1/8HP-5HP	鋁合金 Alumatloy	0.1KW-0.75KW 1/8HP-1HP	鋁合金 Alumatloy
啓動方式 Starting	全壓啓動 Direct Start		0.1KW-0.2KW 1/8HP-1/4HP	運轉電容啓動 Capacitor
			0.4KW-0.75KW 1/2HP-1HP	啓動電容 + 離心開關
工作方式 Timerating	連續運轉 Continuous Running		連續運轉 Continuous Running	
絕緣等級 Insulation	F - 絕緣 F-Class		F - 絕緣 F-Class	
適用環境 Environment	溫度：-10 ~ +40℃ Temperature Between -10℃ To + 40℃ 濕度：90%以下 Humidity Less Than 90%			
適用電壓 Voltage	50Hz	220V, 230V, 240V, 380V, 400V, 415V, 440V	50Hz	110V, 115V, 200V, 220V, 230V
	60Hz	220V, 240V, 380V, 415V, 440V, 460V, 480V, 600V	60Hz	110V, 220V, 240V
適用極數 Pole	4P, 6P, 8P		4P	
輸出轉速(4p) Output Speed	50Hz	1350-1450rpm	50Hz	1350-1450rpm
	60Hz	1650-1740rpm	60Hz	1650-1740rpm
依據標準 Standard	國標 / 國家標準 IEC-34, CNS-10919			
海拔 Sealevel	1000米 Under 1000m			
接線盒 Terminal Box	採用 IP55 級防水型鋁合金接線盒 With IP-55 Class Water-proof Aluminum Terminal Box			

接綫圖 *Wiring Diagram*

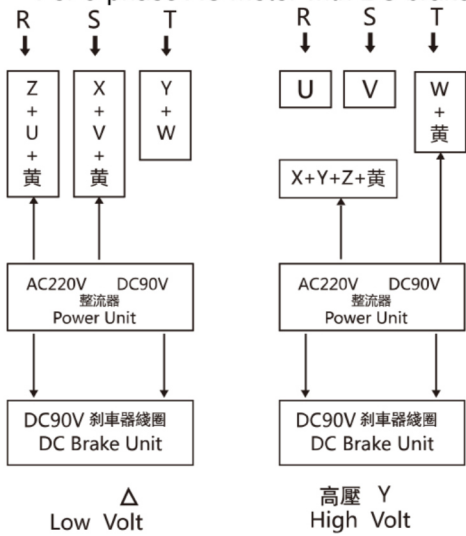
(a) 三相馬達接綫圖 For 3-phase AC motor



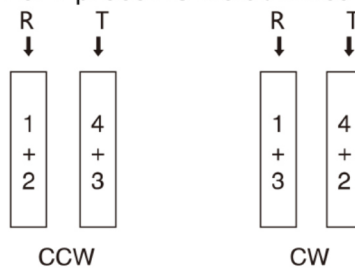
(d) 單相三條綫馬達接綫圖 For 1-phase AC motor/3wires



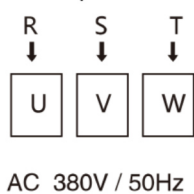
(b) 三相馬達附直流剎車器接綫圖
For 3-phase AC motor with DC brake



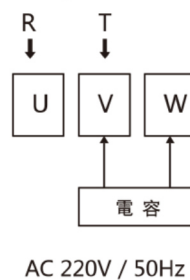
(e) 單相四條綫馬達接綫圖
For 1-phase AC motor/4wires



(c) 三相輪流風機接綫圖
For 3-phase forced fan



(f) 單相輪流風機接綫圖
For 1-phase forced fan



連接圖 CONNECTION DIAGRAM

與變頻器的組合 Combined With Frequency Converter

可以使用頻率範圍 Frequency range can be used

一般請在5~120Hz範圍內使用。

(注：當頻率低於30Hz時，電機表面溫度會較高。)

- 超過60Hz高速運轉時的注意事項
在超過60Hz的高速運轉中，振動、噪音將會增加。
另外轉速加快會降低油封的使用壽命。
- 低速運轉時注意事項
低速運轉中，由於電動機的冷卻效果低下經常會引起溫度的異常上升，請格外注意。
(請將電動機表面溫度控制在80℃以下。)

In general, please use the 5~120Hz range.

Note: when the frequency is lower than 30Hz, the surface temperature will be higher

- More attention than the 60Hz high speed operation
Vibration and noise will be increased in the high speed operation of more than 60Hz. In addition, the speed will be accelerated to reduce the life of the oil seal.
- Low speed operation matters needing attention
Low speed operation, due to the cooling effect of the motor is often caused by the abnormal temperature rise, please pay extra attention to.
(Please control the motor surface temperature below 80℃).

電動機的轉矩力特征(使用限度) Torque characteristics of the motor (Limit)

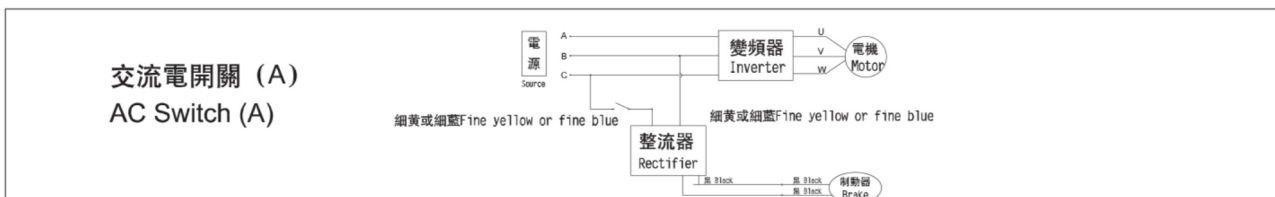
電動機的轉矩力特征(使用限度)根據所使用的變頻器的種類及控制方法的不同而產生巨大差異。Torque characteristics of the motor (Use limit) caused great differences according to the types and controlling methods used by different frequency converter.

帶電磁制動時 With electromagnetic brake

制動部配線請與變頻器(變頻器的輸入側供電)並聯。(輸出側電壓變動可能會引起制動部的運行不穩定狀況。)

連接圖標記如下，請加以參照。

The wiring of the brake unit is in parallel with the input side of the converter (inverter). (The output side voltage fluctuation may cause the brake part to run unstable.) Connection icon in mind as follows, please refer to,



用變頻器驅動380V電動機時 When the 380V motor is driven by frequency converter

電動機端子間會發生浪涌電壓，可能會導致電動機絕緣性能的劣化。為防止浪涌電壓，一般采用抑制電壓增強（輸出電抗器）和抑制波高值（輸出濾波器）兩種方法。

- 輸出電抗器 配線較短時，可在變頻器的輸出側設置AC電抗器，通過抑制電壓的增強從而減弱浪涌電壓。如果配線過長則難以抑制電壓的高波值。
- 輸出濾波器
在變頻器的輸出側設置濾波器，可以抑制電動機端子電壓的高波值。

Surge voltage can occur between the motor terminals, which may lead to deterioration of the insulation performance of the motor. In order to prevent the surge voltage, by suppressing voltage enhancement (output reactor) and suppress the peak value (output filter) two methods.

· Output reactor

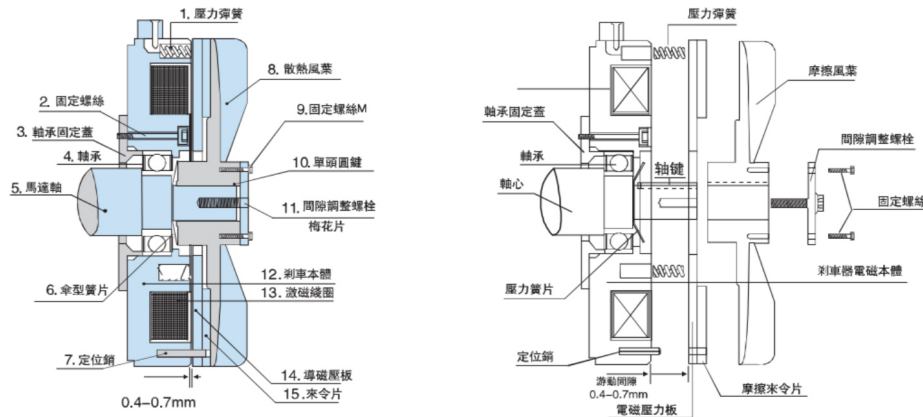
Wiring shorter, can be set at the output side of the inverter AC reactor, through the suppression of voltage enhancement to reduce the surge voltage.

If the wiring is too long, it is difficult to suppress the high wave value of voltage.

· Output filter

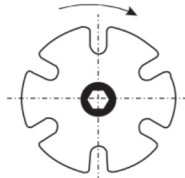
The filter can be arranged at the output side of the frequency converter, which can restrain the high wave value of the terminal voltage of the motor.

剎車零件分解圖 Brake Unit Section Diagram



1	壓力彈簧 Pressure Spring	9	固定螺絲 Fixed Screw
2	固定螺絲 Fixed Screw	10	固定鍵 Key
3	軸承固定蓋 Fixed Bearing Plate	11	調整螺栓 Gap Adjustment Bolt
4	軸承 Bearing	12	剎車本體 Brake Housing
5	馬達軸 Motor Shaft	13	激磁線圈 Brake Coil
6	傘型簧片 Disc Spring	14	導磁壓板 Friction Plate
7	定位銷 Fixed Pin	15	來令片 Friction Brake Disc
8	散熱風葉 Fan		

剎車間隙調整 Adjust Brake Clearance



- 請先移除固定螺絲。
Please Remove Two Pieces Fixed Screws In Advance.
- 每向右調整一格其間距縮小0.07-0.10mm。
Every Single Position Adjustment. Brake Clearance Will Reduce 0.07-0.10mm.

直流安全式剎車器規格 (Ac Brake Unit Specification)

輸出功率 CAPACITY (HP)	剎車制動力 TORQUE (KG-M)	剎車間隙 CLEARANCE (MM)	剎車時間 BRAKE (SEC)	釋放時間 RELEASE (SEC)	剎車線圈			重量 WEIGHT (KG)
					電壓 VOLTAGE (DC-V)	電流 AMP (A)	阻抗OHM (Ω)	
1/4HP4P	0.20	0.2-0.60	0.22	0.12	95±10%	0.17	565	3.5
1/2HP4P	0.40	0.2-0.60	0.24	0.13	95±10%	0.28	336	4.0
1HP4P	0.80	0.3-0.65	0.22	0.12	95±10%	0.41	233	5.0
2HP4P	1.50	0.3-0.65	0.28	0.15	95±10%	0.57	167	6.0
3HP4P	2.20	0.4-0.70	0.28	0.18	95±10%	0.73	130	8.0
5HP4P	4.50	0.4-0.70	0.28	0.18	95±10%	0.73	130	10.0
7.5HP4P	5.60	0.5-0.90	0.38	0.21	95±10%	1.02	93	12.5

備注 REMARK

- 直流剎車器安裝尺寸相同于原有標準馬達 DC BRAKE UNIT LENGTH SAME ORIGINAL STANDARD MOTOR
- 採用非石棉剎車來令片材質 ADOPT MATERIAL WITH NON-ASBESTOS BRAKE DISC
- 適用電壓AVAILABLE VOLTAGE 220V, 380V, 400V, 440V, 460V
- 剎車電壓為DC90V BRAKE COIL VOLTAGE:DC90V
- 適用配件OPTINAL DESIGN
 - 可附加手動釋放剎車裝置
AVAILABLE FOR MANUAL RELEASE BRAKE SYSTEM
 - 可接受特殊訂制DC剎車器及專用剎車機型
AVAILABLE FOR SPECIAL BRAKE DESIGN

實現裝置小型化，節約開發成本

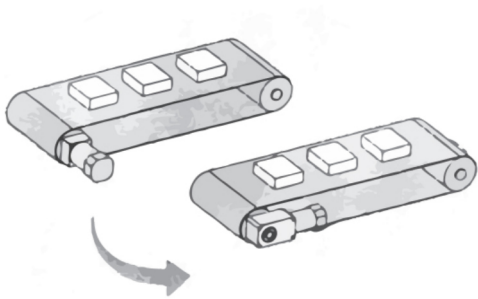
To achieve miniaturization, saving development costs

(直交軸減速電動機)

(Right angle speed reducer motor)

※最適于節省空間 The Most Suitable To Save Space

負載軸與電動機部分成直角，故可節省作業空間。
The load shaft and the electric motor are at right angles, so the working space can be saved.



圖為輸出功率200W，減速比5的平行軸減速電動機與直交軸減速電動機的比較。

The figure is the comparison of the output power 200W, the reduction ratio of 5 parallel shaft motor and the speed reduction motor.

安裝自由度高的設計

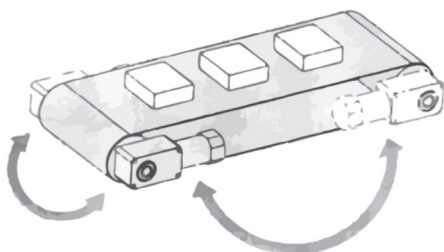
High degree of freedom of the design

(直交軸減速電動機) (Direct axis speed reducer motor)

左右同心軸構造 Left And Right Concentric Axis Structure

減速機的輸出軸位于安裝面上下方向的中心處的構造。安裝在輸送的等裝置的時候，不管安裝方向是向左還是向右，都不需要改變安裝孔的位置。

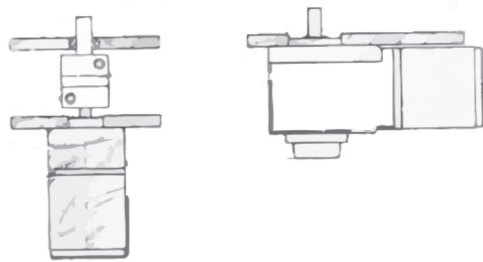
The output shaft of the speed reducer is arranged at the center of the upper and the lower direction of the mounting surface. When installed in the conveyor and other devices, whether the installation direction is to the left or right, do not need to change the location of the installation hole.



節約成本 Cost Savings

中空軸減速電動機還簡化了連結零件，從而可減少零件成本和組裝工時。

The hollow shaft reduction motor also simplifies the connecting parts, thereby reducing the cost of parts and assembling working hours.



適合用于與變頻器組合使用

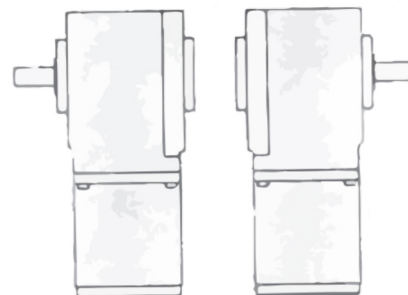
Suitable for use in combination with frequency converter

可實現低速至高速的廣泛速度控制，而且速度受負載影響較小，速度控制更加穩定。

Can achieve low speed to high speed of the extensive speed control. And the speed is less affected by the load, the speed control is more stable.

中空軸減速電動機還簡化了連結零件，從而可減少零件成本和組裝工時。

The hollow shaft reduction motor also simplifies the connecting parts, thereby reducing the cost of parts and assembling working hours.



相關計算 Calculate Data

1) 連結系數 (CONNECTION FACTOR) 2) 荷重系數 (SERVICE FACTOR)

連結方式 MODE	鏈接系數 FACTOR	減速機負載等級 LOAD GRADE	每日運轉時間 (HRS) DAILY OPERATION HOURS			
			1-2	3-8	9-15	16-24
鏈輪 SPROCKET	1.00	均一負載 UNIFORM LOAD	0.80	0.90	1.20	1.30
齒輪 GEAR	1.25	中級衝擊負載 MEDIUM IMPACT LOAD	1.00	1.20	1.30	1.50
三角皮帶 BELT	1.50	重級衝擊負載 HEAVY IMPACT LOAD	1.20	1.50	1.75	2.00
平皮帶 FLAT BELT	2.50					

3) 符號說明 (CODE)

V=速度 SPEED (M/MIN)	E=效率 EFFICIENCY (%)	1 INCH = 2.54 CM
I= 減速比 RATIO	N2= 減速比 (RPM) OUTPUT SHAFT SPEED	1 FOOT = 12 INCH
T= 輸出扭矩 (KG-M) OUTPUT TORQUE	D= 滾軸直徑 (MM) ROLLER DIAMETER	1 KW = 1000 W 1 KW = 1.34 HP
K= 連結系數 CONNECTING FACTOR	R= 滾軸半徑 (MM) ROLLER RADIUS	1 KG-M = 7.233 FT-LB 1 KG-M = 86.8 IN-LB
F= 荷重系數 SERVICE FACTOR	KW1(HP1)= 輸入馬力 INPUT CAPACITY	1 KG = 2.2 LB 1 LB = 0.4536 KG
W= 荷重 (KG) LOAD	KW2(HP2)= 輸出馬力 OUTPUT CAPACITY	N1 = 輸入轉速 (r/min) INPUT SHAFT ROTATION SPEED

4) 基本傳動公式 (BASIC FORMULAR)

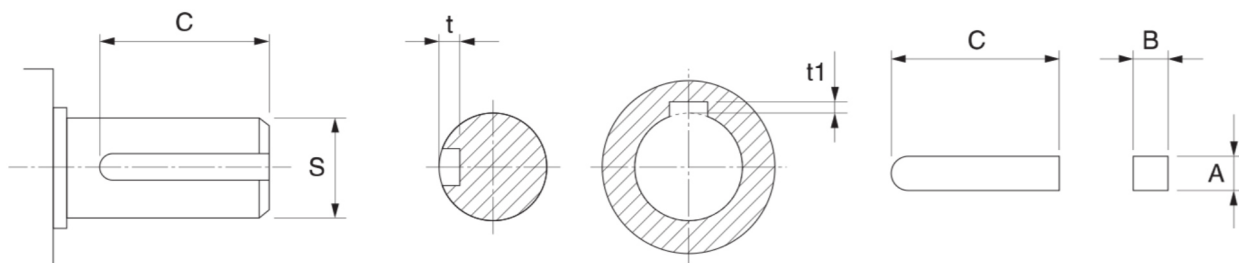
減速比 RATIO	$I = N2 / N1$
回轉速度 ROTATION SPEED (r/min)	$N1 = V / \pi D$
輸出扭矩 OUTPUT TORQUE (KG-M)	$T = W \times R \times K$
輸入馬力 INPUT HORSE POWER (公制 METRIC)	$KW1 = N \times T \times 974$
公制/英制 INPUT HORSE POWER (英制 INCH)	$HP1 = N \times T / 716$
輸出馬力 OUTPUT HORSE POWER (公制 METRIC)	$KW2 = KW1 \times F / E$
公制/英制 OUTPUT HORSE POWER (英制 INCH)	$HP2 = HP1 \times F / E$

5) 減速機水平輸送場合符合說明及傳動公式 (DESCRIPTION AND TRANSMISSON)

輸送速度 (r/min) TRANSMISSION SPEED	V	減速比 BELT FRICTION COEFFICIENT	μ
滾軸直徑 (MM) ROLLER DIAMETER	D	減速比 (%) CHAIN DRIVE EFFICIENCY	$\eta1$
載重量 (KG) LOAD	W	減速比 (%) REDUCER TRANSMISSION EFFICIENCY	$\eta2=0.9$
出力軸主動鏈輪齒數 OUTPUT SHAFT TEETH	t1	減速比 CONVEYOR PASSIVE SPROCKET TEETH	t2
輸送帶所需扭矩 (KG-M) BELT TORQUE	T1	減速比 REDUCER RATIO	I
減速機扭矩 (KG-M) REDUCER TORQUE	T2	減速比 (r/min) REDUCER OUTPUT SHAFT ROTATION SPEED	N2
荷重系數 SERVICE FACTOR	F (查表2) F (FIND TABLE 2)		

輸送機回轉速 (r/min) TRANSMISSION SPEED	$N1 = V / \pi D$
減速機出力軸回轉速 (r/min) REDUCER OUTPUT SHAFT ROTATION SPEED	$N2 = N1 \times (t2 / t1)$
減速機減速比 (I) REDUCER RATIO	50Hz: $I = 1500 / N2$ 60Hz: $I = 1800 / N2$
輸送帶所需扭矩 (KG-M) BELT TORQUE	$T1 = W \times D/2 \times \mu / \eta1$
減速機所需扭矩 (KG-M) REDUCER TORQUE	$T2 = T1 \times (t1 / t2) / \eta2$
考慮荷重系數減速馬達扭矩 GEAR MOTOR TORQUE (SERVICE FACTOR BE CONSIDER)	$T3 = T2 \times F$
功率 (HP) CAPACITY	$HP = T3 \times N2 / 716.2$

鍵/鍵槽加工尺寸 Key/Keyway Dimension



軸徑 SHAFT DIAMETER	鍵 KEY		鍵槽 KEYWAY			
	新JIS規範 NEW JIS SPEC	舊JIS規範 OLD JIS SPEC	新JIS規範 NEW JIS SPEC (SHAFT / HOLE)		舊JIS規範 OLD JIS SPEC (SHAFT / HOLE)	
S	A×B×C	A×B×C	t	t1	t	t1
Φ11	4×4×C	4×4×C	2.5 ^{+0.1} ₀	1.8 ^{+0.1} ₀	2.5 ^{+0.1} ₀	2.0 ^{+0.1} ₀
Φ14	5×5×C	5×5×C	3.0 ^{+0.1} ₀	2.3 ^{+0.1} ₀	3.0 ^{+0.1} ₀	2.5 ^{+0.1} ₀
Φ18	6×6×C	6×6×C	3.5 ^{+0.1} ₀	2.8 ^{+0.1} ₀	3.5 ^{+0.1} ₀	3.0 ^{+0.1} ₀
Φ19	6×6×C	6×6×C	3.5 ^{+0.1} ₀	2.8 ^{+0.1} ₀	3.5 ^{+0.1} ₀	3.0 ^{+0.1} ₀
Φ20	6×6×C	6×6×C	3.5 ^{+0.1} ₀	2.8 ^{+0.1} ₀	3.5 ^{+0.1} ₀	3.0 ^{+0.1} ₀
Φ22	8×7×C	7×7×C	4.0 ^{+0.2} ₀	3.3 ^{+0.2} ₀	4.0 ^{+0.2} ₀	3.5 ^{+0.2} ₀
Φ24	8×7×C	8×7×C	4.0 ^{+0.2} ₀	3.3 ^{+0.2} ₀	4.0 ^{+0.2} ₀	3.5 ^{+0.2} ₀
Φ28	8×7×C	8×7×C	4.0 ^{+0.2} ₀	3.3 ^{+0.2} ₀	4.0 ^{+0.2} ₀	3.5 ^{+0.2} ₀
Φ30	8×7×C	8×7×C	4.0 ^{+0.2} ₀	3.3 ^{+0.2} ₀	4.0 ^{+0.2} ₀	3.5 ^{+0.2} ₀
Φ32	10×8×C	10×8×C	5.0 ^{+0.2} ₀	3.3 ^{+0.2} ₀	4.5 ^{+0.2} ₀	4.0 ^{+0.2} ₀
Φ35	10×8×C	10×8×C	5.0 ^{+0.2} ₀	3.3 ^{+0.2} ₀	4.5 ^{+0.2} ₀	4.0 ^{+0.2} ₀
Φ40	12×8×C	12×8×C	5.0 ^{+0.2} ₀	3.3 ^{+0.2} ₀	4.5 ^{+0.2} ₀	4.0 ^{+0.2} ₀
Φ45	14×9×C	12×8×C	5.5 ^{+0.2} ₀	3.8 ^{+0.2} ₀	4.5 ^{+0.2} ₀	4.0 ^{+0.2} ₀
Φ50	14×9×C	15×10×C	5.5 ^{+0.2} ₀	3.8 ^{+0.2} ₀	5.0 ^{+0.2} ₀	5.5 ^{+0.2} ₀
Φ55	16×10×C	15×10×C	6.0 ^{+0.2} ₀	4.3 ^{+0.2} ₀	5.0 ^{+0.2} ₀	5.5 ^{+0.2} ₀
Φ60	18×11×C	18×12×C	7.0 ^{+0.2} ₀	4.4 ^{+0.2} ₀	6.0 ^{+0.2} ₀	6.5 ^{+0.2} ₀
Φ75	20×12×C	20×13×C	7.5 ^{+0.2} ₀	4.9 ^{+0.2} ₀	7.0 ^{+0.2} ₀	6.5 ^{+0.2} ₀
Φ90	25×14×C	24×16×C	9.0 ^{+0.2} ₀	5.4 ^{+0.2} ₀	8.0 ^{+0.2} ₀	8.5 ^{+0.2} ₀
C尺寸推薦長度	6, 8, 10, 12, 14, 16, 18, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 70, 80, 90, 100, 110, 125, 140, 160, 180, 200, 220					

各國電壓表 *Countries Voltage*

阿根廷 Argentina	50	220	220/380	日本 Japan	50/60	100/200	200
澳洲 Australia	50	240	240/415	科威特 Kuwait	50	100/200	200
奧地利 Austria	50	220	220/380	黎巴嫩 Lebanon	50	110/220	220/380
孟加拉 Bangladesh	50	230	230/400	馬來西亞 Malaysia	50	115/240	240/415 400/440
比利時 Belgium	50	127/220	220/380	荷蘭 Netherlands	50	110/220	220/230
巴西 Brazil	50	110/220	220/380	紐西蘭 New Zealand	50	230	230/400
	60	127					
緬甸 Burma	50	230	230/440	巴列斯坦 Pakistan	50	230	220/380 230/400
高棉 Cambodia	50	120	220/380	沙烏地阿拉伯 Saudi-arabi	50	127/220	220/380
					60		230/400
智利 Chile	50	220	220/380	敘利亞 Syria	50	115/200	220/380
中國 China	50	220	220/380	新加坡 Singapore	50	115/230	230/400
捷克 Czechoslovakia	50	120/220	220/380	南非 South-africa	50	220/230	220/380
							230/400
丹麥 Denmark	50	220	220/380	西班牙 Spain	50	127/220	220/380
埃及 Egypt	50	220	220/380	瑞士 Switzerland	50	220	220/380
芬蘭 Finland	50	220	220/380	泰國 Thailand	50	110/220	220/380
法國 France	50	115/127/ 220	220/380	土耳其 Turkey	50	127/220/230	220/380
德國 Germany	50	110/220	220/380	英國 U.K.	50	240	240/416
希臘 Greece	50	220	220/380	越南 Viet-Num	50	127/220	220/380
香港 Hong Kong	50	110/200/ 230	220/380	加拿大 Canada	60	110/120	220/240/480
匈牙利 Hungary	50	220	220/380	哥倫比亞 Colombia	60	110/220	220/380
冰島 Iceland	50	220	220/380	古巴 Cuba	60	115/120	240
印度 India	50	230	220/380 230/400	厄瓜多爾 Ecuador	60	120/127	208/220
印尼 Indonesia	50	127/200	220/380	韓國 Korea	60	100/200	200
伊拉克 Iraq	50	220	220/380	秘魯 Peru	60	110/220	220
以色列 Israel	50	230	230/400	菲律賓 Philippines	60	110/220	220/440
意大利 Italy	50	127/220	220/380	美國 U.S.A.	60	120/240	240/480

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