



此圖僅供參考，出貨規格詳見尺寸圖面
The picture is just for the reference. Please check the the actual dimensions on the drawing.

最大行程
Maximum Stroke 4800mm

最高速度
Maximum speed 1500mm/s

馬達容量
Motor Output 750W

皮帶寬度
Belt Width 50mm

直線滑軌
Linear Guide 23X18-1 支

型號表示方式 Ordering Method

MK110 - 2000 - LUS - M7B - C4N5 - NL - 10 - 參照右頁 - A0001

本體型號 Model

行程 Stroke

100-4800mm
50間隔 50 mm Pitch

同動軸心^{*1} Synchronous axis

S^{*2} 有同動軸心
With Synchronous axis

原點感應器 Home Sensor

外掛型 Out Side	
C	馬達側 Motor Side
D	反馬達側 Opposite Motor Side
	無 SENSOR No Sensor
E	無 SENSOR No Sensor

馬達固定尺寸 Dimensions

M7	伺服PCD90-M6-軸心19 Servo motor : PCD90-M6-shift Φ19mm	B ^{*3}
P7	伺服PCD90-M5-軸心19 Servo motor : PCD90-M5-shift Φ19mm	

選配 Options

端點極限感應器^{*4} Limit Sensor

外掛型 Out Side	
3	1只 1 Pc
4	2只 2 Pcs
6	3只 3 Pcs
	無 SENSOR No Sensor
5	無 SENSOR No Sensor

輸出方式&線長 Output type & Cable length

N5	NPN+5米線 NPN+5M Cable
P2	PNP+2米線 PNP+2M Cable
P5	PNP+5米線 PNP+5M Cable
-	NPN+2米線 NPN+2M Cable

特注式樣 Customization Order No.

減速機比數 Slide

有動力 With Gearbox ^{*5*}	
10	10比 10:1
15	15比 15:1
20	20比 20:1
N	無動力輔助軸 None powered support 適用LL/RR Suitable for LL/RR

注油嘴位置 Grease Fitting Position

NL	滑座左側 On The Left of The Slider
NR	滑座右側 On The Right of The Slider
NRL	滑座雙邊注油 On both sides of the slider

馬達位置 Motor Position

有動力 With Gearbox			
L	馬達左折 Motor Left Side	R	馬達右折 Motor Right Side
LU	馬達左上折 Motor Left Upper Side	RU	馬達右上折 Motor Right Upper Side
LD	馬達左下折 Motor Left Lower Side	RD	馬達右下折 Motor Right Lower Side
LT	馬達直結左折 Reducer With Motor Left Side	RT	馬達直結右折 Reducer With Motor Right Side
無動力 Without Gearbox			
LL	馬達出軸心左折 Motor Shaft Left Side	RR	馬達出軸心右折 Motor Shaft Right Side

*1 馬達方向LL&RR不適用。Motor direction LL&RR is not available.

*2 若無則不表示。If there is no, it will not be indicated.

*3 若無煞車則不表示。If No Brake, No Description.

*4 感應器由客戶自行安裝，圖面最多示意為3只。

The sensors are installed by customers themselves, and the diagram shows a maximum of 3 sensors.

*5 選用有動力的規格，請務必搭配減速機使用。

Select the motor power specification, be sure to use it with the gearbox.

*6 減速機由TOYO提供，若需使用特殊減速機需提出特注處理。

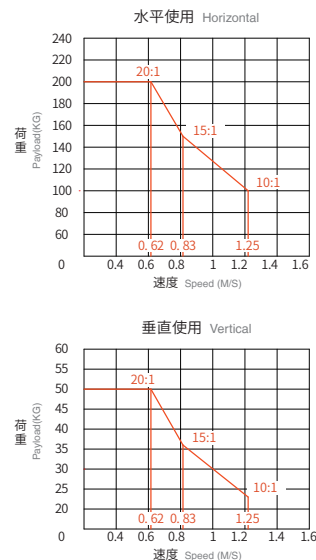
The gearbox is provided by TOYO, other than toyo gearbox required customization.

基本仕様 Specification

規格	減速比 Reduce Ratio ^{※2}	10:1	15:1	20:1
	最高轉速 Motor max. speed (rpm)	3600		
	最高速度 Maximum Speed (mm/s)	1500	1000	750
	最大可搬重量 Maximum Payload	水平使用 Horizontal (kg)	100	150
		垂直使用 Vertical (kg) ^{※1}	23	36
	位置重複精度 Repeatability (mm)	±0.1		
	定格推力 Rated Thrust (N)	576	864	1152
部品	標準行程 Stroke Pitch (mm)	100-4800mm / 50 間隔 50 mm Pitch		
	AC 伺服馬達容量 AC Servo Motor Output (W)	750		
	皮帶寬度 Belt Width (mm)	50		
	高剛性直線滑軌 High Rigidity Linear Guide (mm)	W23XH18		
	原點感應器 Home Sensor	外掛 Outside	T62N2 (NPN+2 米線) (NPN+2M Cable)	

※1 垂直使用時，若皮帶斷裂，承載物會有掉落的危險，請留意。
Notice, if the belt breaks, the moving parts will fall when the application is vertical.
※2 滑台未安裝減速機時，導程為 250。
Lead is 250mm without gearbox.

速度 - 荷重曲線圖 Acceleration-Payload Relationship



滑台固定螺帽數量 Numbers of Fixing Screws

各行程 M6 後裝螺帽數量 M6 nuts Qty.(by stroke)										
有效行程 Stroke	100~500	550~1000	1050~1500	1550~2000	2050~2500	2550~3000	3050~3500	3550~4000	4050~4500	4550~4800
數量 Quantity	4	6	8	10	12	14	16	18	20	22

※ 滑台標準固定方式為下鎖式，使用 M6 後裝螺絲固定。
Standard mounting method is fix from the bottom, using the M6 bolt and nut.
※ 可選配上鎖式固定板，尺寸詳見 P.685。
Mounting feet are optional, refer to page 685 for dimensions.

容許負載力距表 Allowable Overhang Moment

(單位 Unit: mm)				(單位 Unit: mm)				(單位 Unit: mm)			
水平安裝 Horizontal Installation	A	B	C	壁掛安裝 Wall Installation	A	B	C	垂直安裝 Vertical Installation	A	C	
10:1	60kg	1110	195	25	20kg	25	195	1110	12kg	1300	1300
	80kg	750	126	16	30kg	16	126	750	18kg	870	870
	100kg	550	85	11	40kg	11	85	550	23kg	680	680
15:1	90kg	1400	160	20	40kg	20	160	1400	14kg	1480	1480
	120kg	940	100	13	50kg	13	100	940	25kg	830	830
	150kg	650	63	8	60kg	8	63	650	36kg	575	575
20:1	120kg	1400	115	15	60kg	15	115	1400	30kg	750	750
	160kg	900	65	8	80kg	8	65	900	40kg	560	560
	200kg	550	35	5	100kg	5	35	550	50kg	450	450

靜額定扭矩 Static Loading Moment

A 3D perspective diagram of a rectangular beam. Three green curved arrows represent moments: MY is at the top left end, MR is at the bottom left end, and MP is at the right end. The beam is oriented diagonally from the bottom-left towards the top-right.

(單位 Unit: N.m)

MY

1479

MP

1479

MR

190

* 力矩表所表示的數據，代表荷重的重心位置於單一方向容許懸出的長度。
The data represented by the moment table is the center of gravity of the load.
The length of the overhang is allowed in a single direction.
* 符合型錄規範的正常使用下，保證壽命為 10000 公里。
Operation life is 10,000km when the product is using under the specified conditions.
* 總長超過 1500mm 以上，鋼帶有變形風險，避免壁掛使用。
The steel stripe cover may deformed when the actuator length is over 1500mm.
Horizontal application is recommend.
* 倒吊使用無法套用標準規範，如有需求請洽詢我司業務。
Data information is not for ceiling-mount inverse use.
* 壽命及力矩是以馬達加減速設定 0.4 秒計算。
The life and torque are calculated by setting the motor acceleration and deceleration for 0.4 seconds.

選配 Options

MM

指定馬達出線方向
Selectable Cable Leading Direction

代號 Code	說明 Instructions	需參照 Refer to
MW	朝上 Upper side	P.679 ~ P.680
MM	朝下 Bottom side	
ML	朝左 Left side	
MR	朝右 Right side	

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GC

減速機由客戶提供
Gear Box provided by customer

代號 Code	說明 Instructions	需參照 Refer to
GC	客供減速機尺寸需與標準固定尺寸相同 The size of the customer-supplied gearbox must be the same as the standard fixed size as page 683.	P.683

MK110 單軸 /1-axis

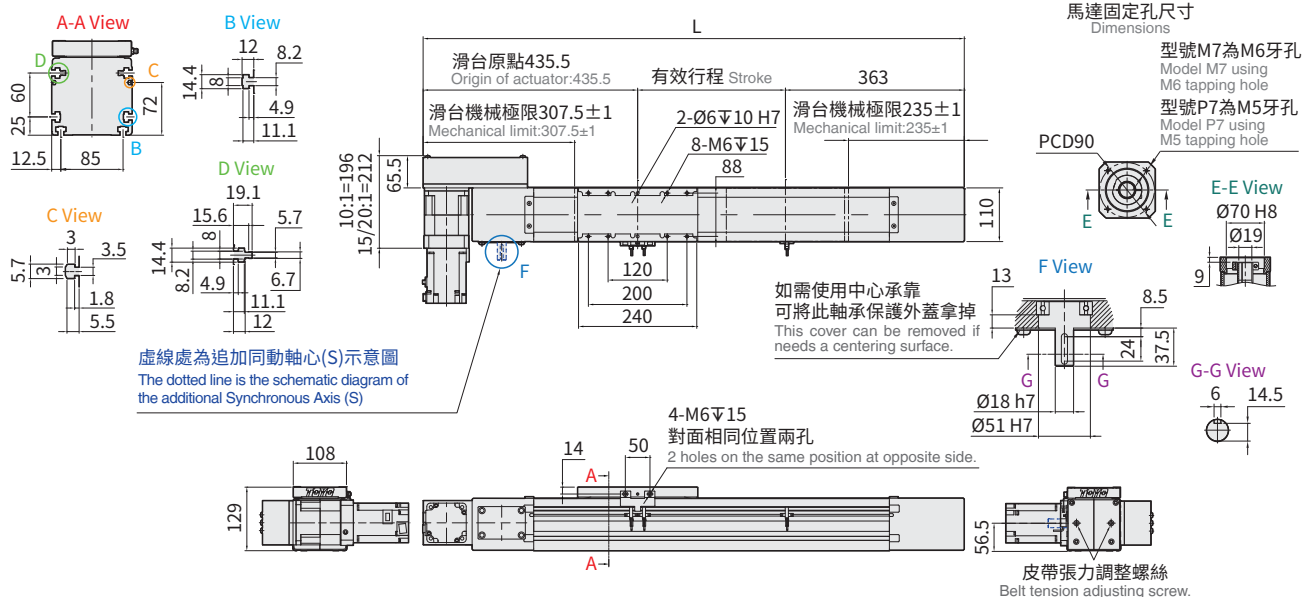


Download at www.toyorobot.com

單位 Unit : mm

L 馬達左折 Motor Left Side

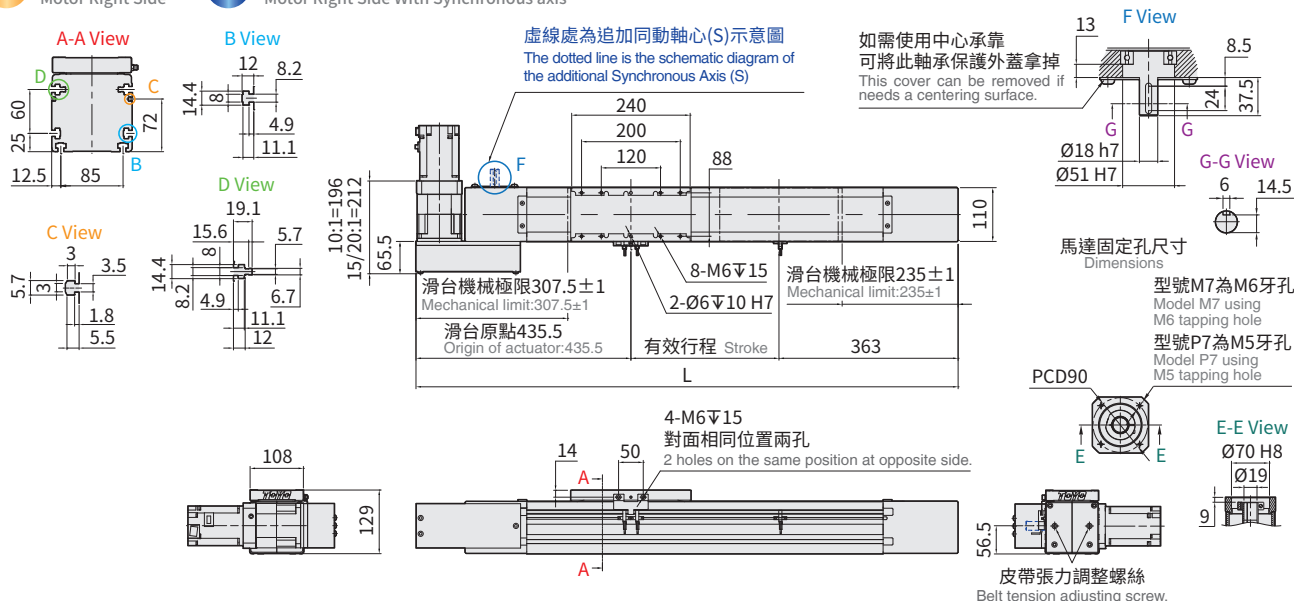
LS 馬達左折 + 同動軸心 Motor Left Side With Synchronous axis



單位 Unit : mm

R 馬達右折 Motor Right Side

RS 馬達右折 + 同動軸心 Motor Right Side With Synchronous axis



有效行程 Stroke		100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
極限行程 Limit stroke(±1)		114	214	314	414	514	614	714	814	914	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414
L		898.5	998.5	1098.5	1198.5	1298.5	1398.5	1498.5	1598.5	1698.5	1798.5	1898.5	1998.5	2098.5	2198.5	2298.5	2398.5	2498.5	2598.5	2698.5	2798.5	2898.5	2998.5	3098.5	3198.5
KG		24.09	25.33	26.57	27.81	29.05	30.29	31.53	32.77	34.01	35.25	36.49	37.73	38.97	40.21	41.45	42.69	43.93	45.17	46.41	47.65	48.89	50.13	51.37	52.61
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

有效行程 Stroke		2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800
極限行程 Limit stroke(±1)		2514	2614	2714	2814	2914	3014	3114	3214	3314	3414	3514	3614	3714	3814	3914	4014	4114	4214	4314	4414	4514	4614	4714	4814
L		3298.5	3398.5	3498.5	3598.5	3698.5	3798.5	3898.5	3998.5	4098.5	4198.5	4298.5	4398.5	4498.5	4598.5	4698.5	4798.5	4898.5	4998.5	5098.5	5198.5	5298.5	5398.5	5498.5	5598.5
KG		53.85	55.09	56.33	57.57	58.81	60.05	61.29	62.53	63.77	65.01	66.25	67.49	68.73	69.97	71.21	72.45	73.69	74.93	76.17	77.41	78.65	79.89	81.13	82.37
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

※ 由於版面限制，無法列出所有行程資訊，總長 L=行程+798.5; 極限行程為有效行程+14。

Due to the limitation of the layout, it's not able to list out full information of the stroke. Total Length of L = Stroke+798.5 and the stroke limit is +14 of the stroke range.

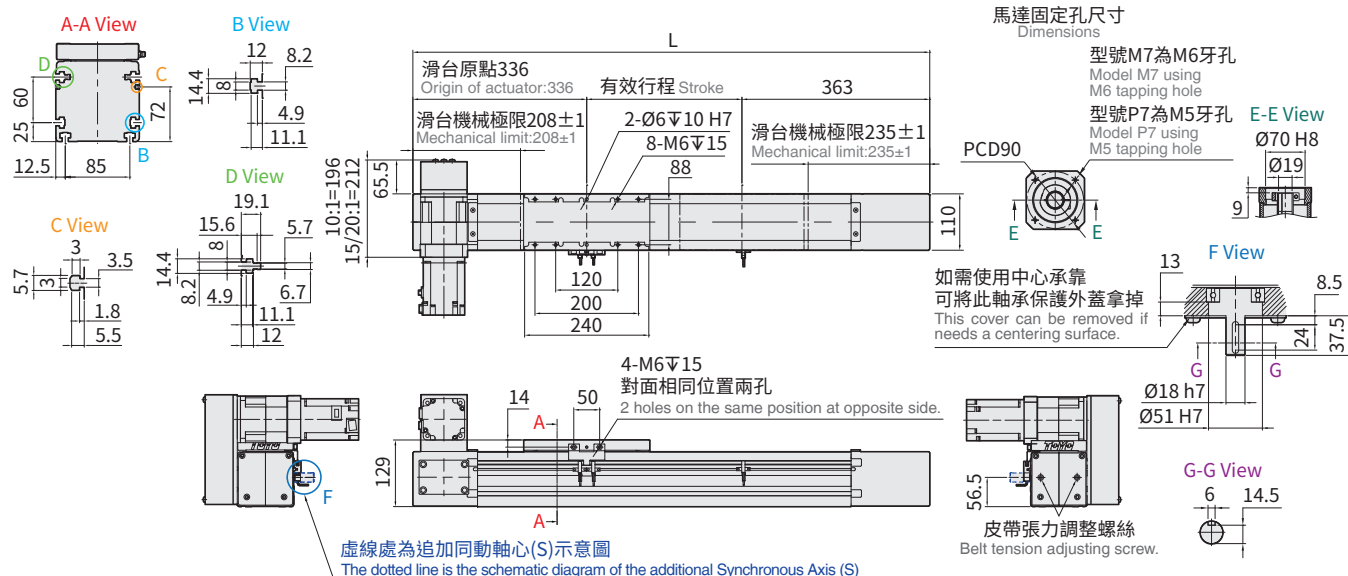


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單位 Unit : mm

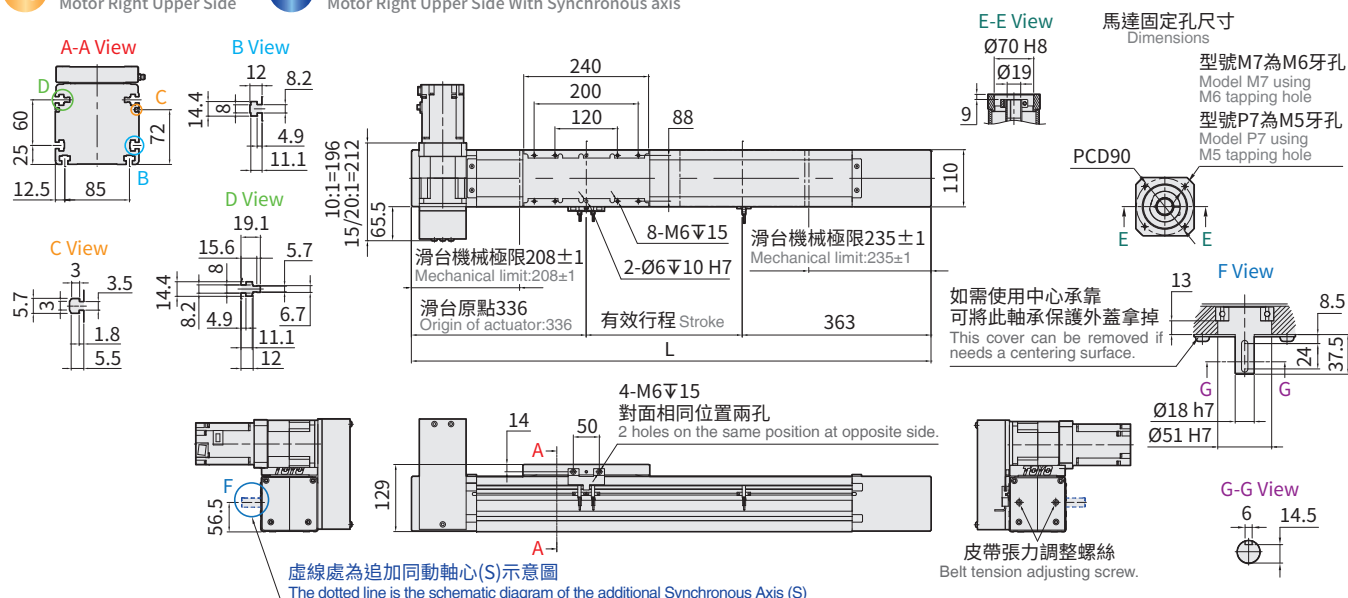
LU 馬達左上折
Motor Left Upper Side

LUS 馬達左上折 + 同動軸心
Motor Left Upper Side With Synchronous axis



RU 馬達右上折
Motor Right Upper Side

RUS 馬達右上折 + 同動軸心
Motor Right Upper Side With Synchronous axis



有效行程 Stroke		100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
極限行程 Limit stroke(±1)		114	214	314	414	514	614	714	814	914	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414
L		799	899	999	1099	1199	1299	1399	1499	1599	1699	1799	1899	1999	2099	2199	2299	2399	2499	2599	2699	2799	2899	2999	3099
KG		24.09	25.33	26.57	27.81	29.05	30.29	31.53	32.77	34.01	35.25	36.49	37.73	38.97	40.21	41.45	42.69	43.93	45.17	46.41	47.65	48.89	50.13	51.37	52.61
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

有效行程 Stroke		2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800
極限行程 Limit stroke(±1)		2514	2614	2714	2814	2914	3014	3114	3214	3314	3414	3514	3614	3714	3814	3914	4014	4114	4214	4314	4414	4514	4614	4714	4814
L		3199	3299	3399	3499	3599	3699	3799	3899	3999	4099	4199	4299	4399	4499	4599	4699	4799	4899	4999	5099	5199	5299	5399	5499
KG		53.85	55.09	56.33	57.57	58.81	60.05	61.29	62.53	63.77	65.01	66.25	67.49	68.73	69.97	71.21	72.45	73.69	74.93	76.17	77.41	78.65	79.89	81.13	82.37
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

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Due to the limitation of the layout, it's not able to list out full information of the stroke. Total Length of L = Stroke+699 and the stroke limit is +14 of the stroke range.

M Series

MH65

MH80

MK65

MK85

MK110

MG50

MG65

MG85

MK110 單軸 /1-axis

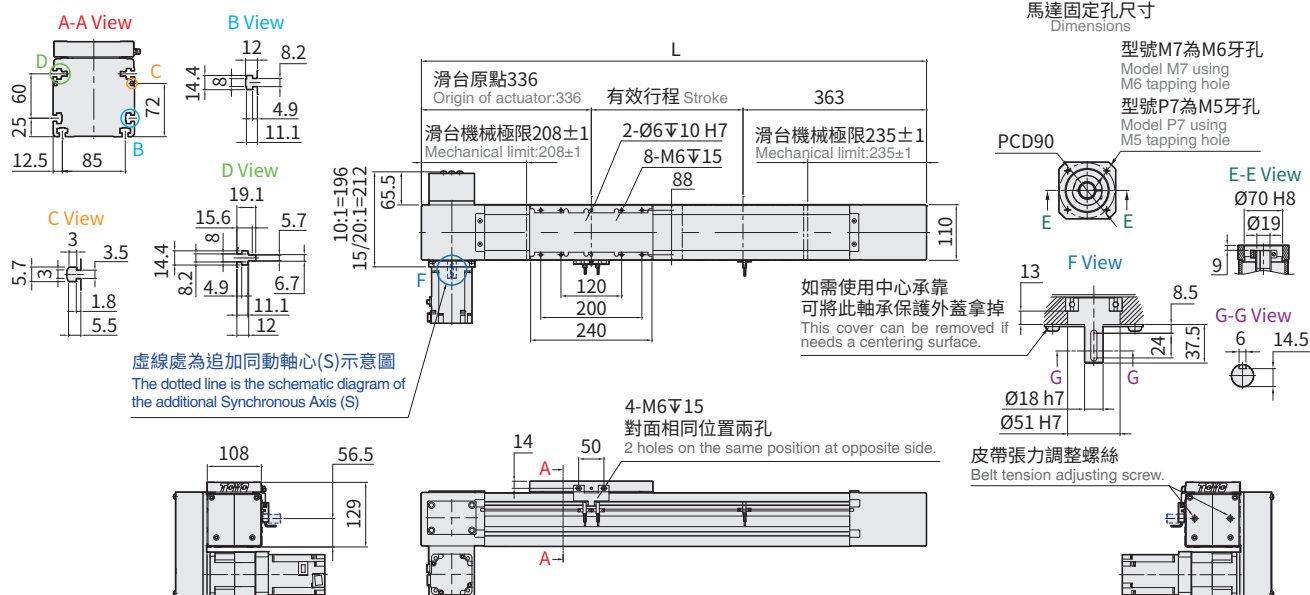


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單位 Unit : mm

LD 馬達左下折 Motor Left Lower Side

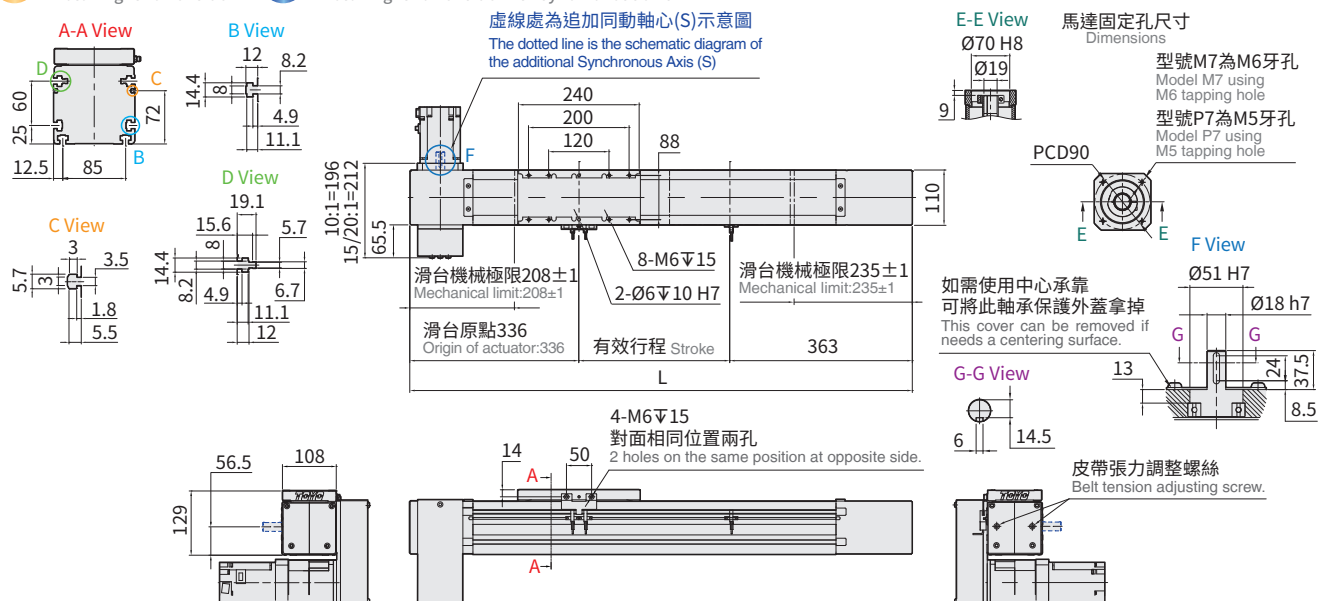
LDS 馬達左下折 + 同動軸心 Motor Left Side With Synchronous axis



單位 Unit : mm

RD 馬達右下折 Motor Right Lower Side

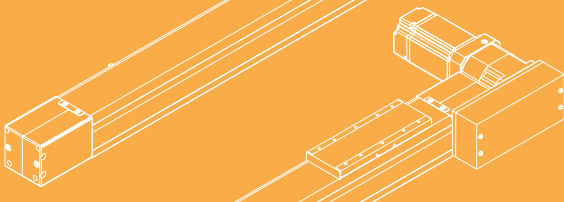
RDS 馬達右下折 + 同動軸心 Motor Right Lower Side With Synchronous axis



有效行程 Stroke		100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
極限行程 Limit stroke(±1)		114	214	314	414	514	614	714	814	914	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414
L		799	899	999	1099	1199	1299	1399	1499	1599	1699	1799	1899	1999	2099	2199	2299	2399	2499	2599	2699	2799	2899	2999	3099
KG		24.09	25.33	26.57	27.81	29.05	30.29	31.53	32.77	34.01	35.25	36.49	37.73	38.97	40.21	41.45	42.69	43.93	45.17	46.41	47.65	48.89	50.13	51.37	52.61
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

有效行程 Stroke		2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800
極限行程 Limit stroke(±1)		2514	2614	2714	2814	2914	3014	3114	3214	3314	3414	3514	3614	3714	3814	3914	4014	4114	4214	4314	4414	4514	4614	4714	4814
L		3199	3299	3399	3499	3599	3699	3799	3899	3999	4099	4199	4299	4399	4499	4599	4699	4799	4899	4999	5099	5199	5299	5399	5499
KG		53.85	55.09	56.33	57.57	58.81	60.05	61.29	62.53	63.77	65.01	66.25	67.49	68.73	69.97	71.21	72.45	73.69	74.93	76.17	77.41	78.65	79.89	81.13	82.37
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	減速比 Reduce Ratio 20:1	750																							

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Due to the limitation of the layout, it's not able to list out full information of the stroke. Total Length of L = Stroke+699 and the stroke limit is +14 of the stroke range.



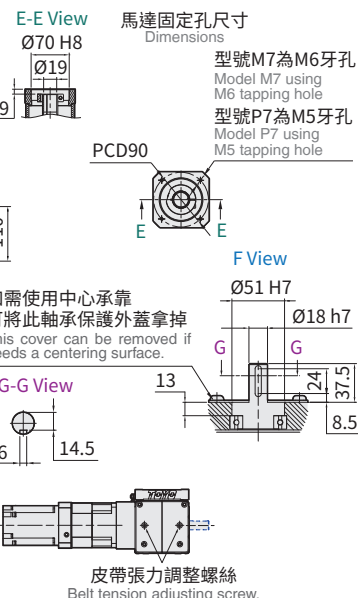
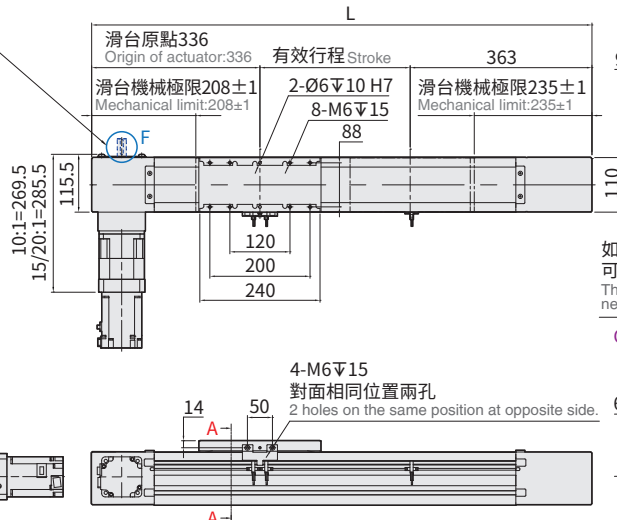
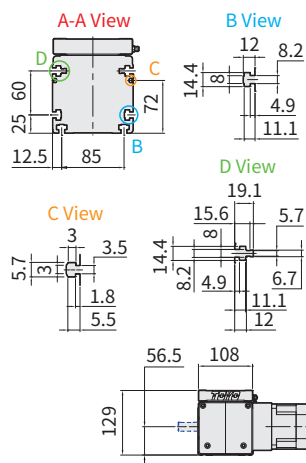
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單位 Unit : mm

LT 馬達直結左折
Motor Left Side

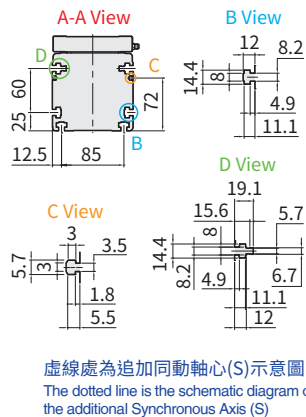
LTS 馬達直結左折 + 同動軸心
Motor Left Side With Synchronous axis

虛線處為追加同動軸心(S)示意圖
The dotted line is the schematic diagram of the additional Synchronous Axis (S)

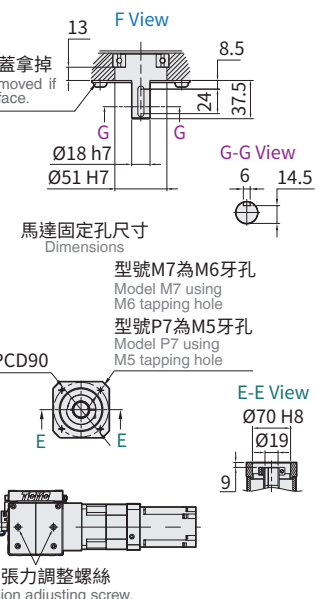
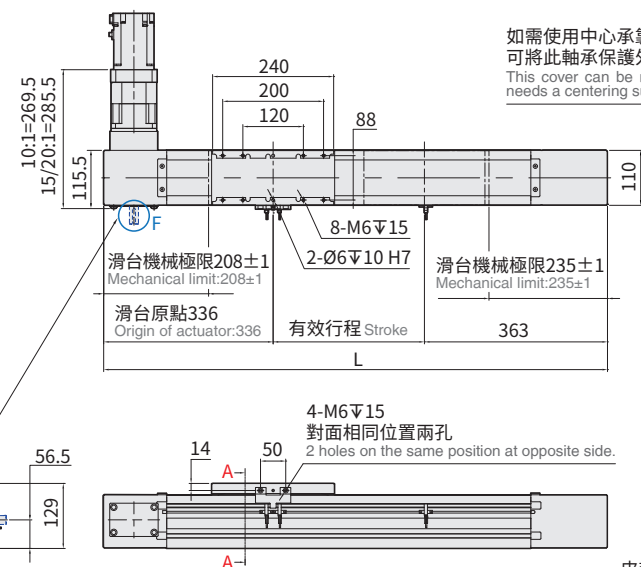


RT 馬達直結右折
Motor Right Side

RTS 馬達直結右折 + 同動軸心
Motor Right Side With Synchronous axis



虛線處為追加同動軸心(S)示意圖
The dotted line is the schematic diagram of the additional Synchronous Axis (S)



有效行程 Stroke		100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
極限行程 Limit stroke(±1)		114	214	314	414	514	614	714	814	914	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414
L		799	899	999	1099	1199	1299	1399	1499	1599	1699	1799	1899	1999	2099	2199	2299	2399	2499	2599	2699	2799	2899	2999	3099
KG		21.33	22.57	23.81	25.05	26.29	27.53	28.77	30.01	31.25	32.49	33.73	34.97	36.21	37.45	38.69	39.93	41.17	42.41	43.65	44.89	46.13	47.37	48.61	49.85
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

有效行程 Stroke		2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800
極限行程 Limit stroke(±1)		2514	2614	2714	2814	2914	3014	3114	3214	3314	3414	3514	3614	3714	3814	3914	4014	4114	4214	4314	4414	4514	4614	4714	4814
L		3199	3299	3399	3499	3599	3699	3799	3899	3999	4099	4199	4299	4399	4499	4599	4699	4799	4899	4999	5099	5199	5299	5399	5499
KG		51.09	52.33	53.57	54.81	56.05	57.29	58.53	59.77	61.01	62.25	63.49	64.73	65.97	67.21	68.45	69.69	70.93	72.17	73.41	74.65	75.89	77.13	78.37	79.61
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

※ 由於版面限制，無法列出所有行程資訊，總長 L= 行程 +699；極限行程為有效行程 +14。
Due to the limitation of the layout, it's not able to list out full information of the stroke. Total Length of L = Stroke+699 and the stroke limit is +14 of the stroke range.

應用例
Application
高剛性微型滑台
TSG
一般 / 螺桿仕様
GLTH/GH/ETH/ET/HT
一般 / 皮帶仕様
M
一般 / 齒排仕様
ETK/ENK
無塵 / 螺桿仕様
GLCH/EC/CH2
無塵 / 皮帶仕様
ECB
直交連結
XYGT/XYTB/XYTB
參考資料
Reference

M Series
MH65
MH80
MK65
MK85
MK110
MG50
MG65
MG85

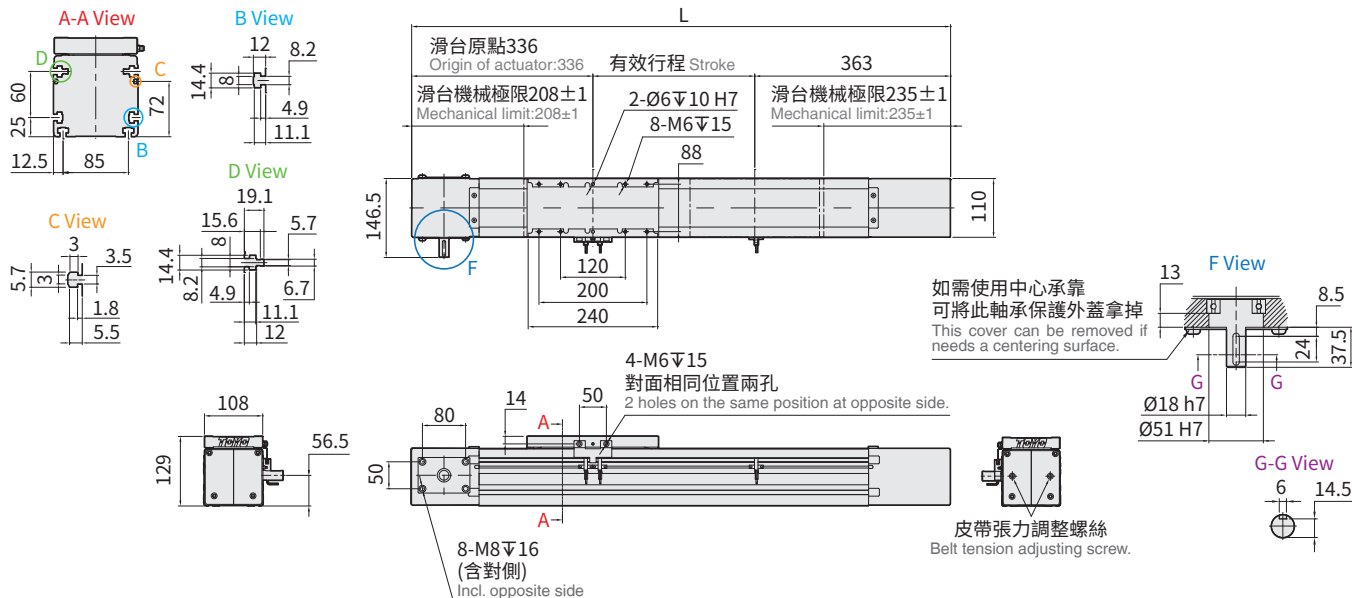
MK110 單軸 /1-axis



Download at www.toyorobot.com

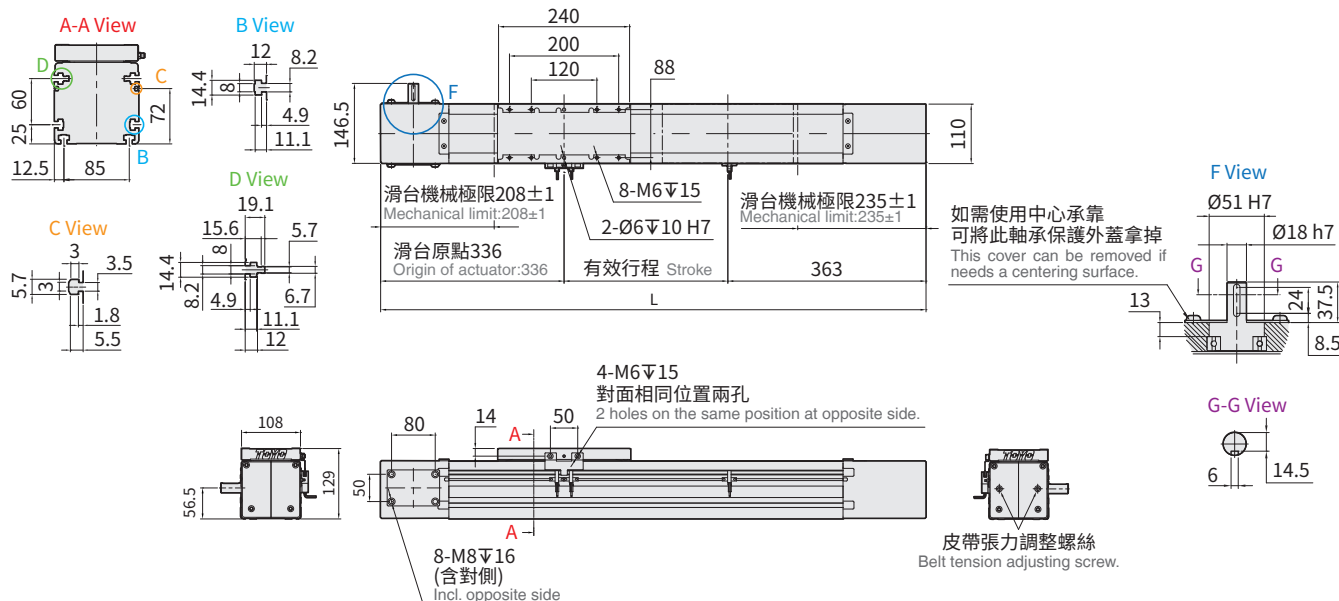
馬達出軸心左折 Motor Shaft Left Side

單位 Unit : mm



馬達出軸心右折 Motor Shaft Right Side

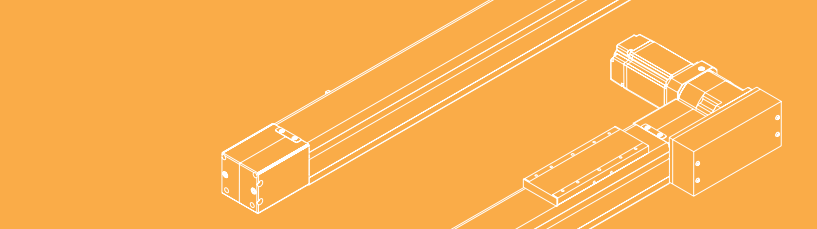
單位 Unit : mm



有效行程 Stroke		100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
極限行程 Limit stroke(±1)		114	214	314	414	514	614	714	814	914	1014	1114	1214	1314	1414	1514	1614	1714	1814	1914	2014	2114	2214	2314	2414
L		799	899	999	1099	1199	1299	1399	1499	1599	1699	1799	1899	1999	2099	2199	2299	2399	2499	2599	2699	2799	2899	2999	3099
KG		18.86	20.1	21.34	22.58	23.82	25.06	26.3	27.54	28.78	30.02	31.26	32.5	33.74	34.98	36.22	37.46	38.7	39.94	41.18	42.42	43.66	44.9	46.14	47.38
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

有效行程 Stroke		2500	2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500	4600	4700	4800
極限行程 Limit stroke(±1)		2514	2614	2714	2814	2914	3014	3114	3214	3314	3414	3514	3614	3714	3814	3914	4014	4114	4214	4314	4414	4514	4614	4714	4814
L		3199	3299	3399	3499	3599	3699	3799	3899	3999	4099	4199	4299	4399	4499	4599	4699	4799	4899	4999	5099	5199	5299	5399	5499
KG		48.62	49.86	51.1	52.34	53.58	54.82	56.06	57.3	58.54	59.78	61.02	62.26	63.5	64.74	65.98	67.22	68.46	69.7	70.94	72.18	73.42	74.66	75.9	77.14
線速度 Linear Speed mm/s	減速比 Reduce Ratio 10:1	1500																							
	減速比 Reduce Ratio 15:1	1000																							
	減速比 Reduce Ratio 20:1	750																							

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Due to the limitation of the layout, it's not able to list out full information of the stroke. Total Length of L = Stroke+699 and the stroke limit is +14 of the stroke range.



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Toll-Free Number China Taiwan

Memo

應用例 Application
高剛性微型滑台 TSG
一般 / 螺桿仕様 GLTH/GIH/ETH/ETH/Y
一般 / 皮帶仕様 M
一般 / 齒排仕様 ETK/ENK
無塵 / 螺桿仕様 GLCH/ECH2
無塵 / 皮帶仕様 ECB
直交連結 XYGT/XYTH/XYTB
參考資料 Reference

M Series

MH65
MH80
MK65
MK85
MK110
MG50
MG65
MG85