



2018

利明牌 LIMING REDUCERS



傳動裝置的解決方案，
減速機的領導品牌

The Art Of Transmission

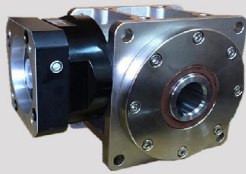




<http://www.li-ming.com>



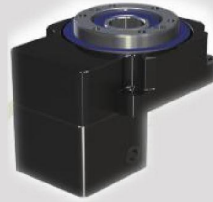
Li Ming Machinery
Presents



戟齿轮减速机
Hypoid Gear Reducer



高精度中空旋转平台减速机
Hollow Rotary Reducer



高精度中空旋转平台减速机
Hollow Rotary Reducer



伞齿轮减速机
Spiral Bevel Gear Reducer



小型齿轮减速机
Small Gear Reducer
(0.1kw ~ 2.2kw)



低背隙铝合金蜗轮减速机
Low Backlash Worm Reducer
(100w ~ 1.5kw)



轴上型蜗轮减速机
Shaft-Mount Worm Reducer
(0.1kw ~ 0.75kw)



大型齿轮箱式减速机
GearBox (55kw ~ 110kw)



电梯主机升降机
Reducer for Elevator Machine



法兰式蜗轮减速机
Flange Mounted Worm Reducer



减速调速马达
Compact Gear Motor
(6w ~ 120w)



轴上型蜗轮减速机
Shaft-Mount Reducer



斜齿轮减速机
Helical Gear Reducer
(2.2kw ~ 30kw)



蜗轮减速机
Worm Reducer (100w ~ 55kw)



齿轮减速机
Gear Reducer (0.1kw ~ 75kw)



齿蜗轮减速机
Gear-Worm Reducer
(0.4kw ~ 7.5kw)



升降機
Screw Jack



鋁合金蜗轮减速机
Aluminum Alloy Worm Reducer
(40w ~ 1.5kw)



轉向器
Bevel Gear Reducer



M90#C

产品展示 PRODUCT DISPLAY

精密行星减速机 Planetary Reducer



• SB



• SBL



• SE



• SEL



• SD



• SD 雙段



• SDL



• SDL 雙段



• PB



• PB-A 雙段



• PBL



• PBL-A 雙段



• FA



• SN



• FB



• FE





鋁合金蝸輪減速機

ALUMINUM ALLOY WORM REDUCERS

鋁合金蝸輪減速機

ALUMINUM ALLOY WORM REDUCERS

CE系列 Sseries

特點 Features:

CE系列鋁合金蝸輪減速機，是本廠原有的NE系列的基礎上開發而成的新一代產品，機體用優質的鋁合金壓鑄成形，體積小、散熱快、表面經皮膜處理不生銹，美觀耐用。蝸杆使用鉻鋁合金鋼（SCM415），經滲碳熱處理及研磨，傳動平穩，噪音小、輸出扭矩大，可適應全方位安裝。

The CE series aluminum alloy worm reducers are a new generation of products launched on the basis of the NE Series products available in this plant. The compact aluminum alloy extruded body features good dissipation. The surface undergoing electrotype is aesthetic and stainless. The worm screw is made of aluminum molybdenum alloy (SCM415). After acieration and polishing, the worm screw delivers smooth transmission in minimum noise and maximum torque. Making it apt for allpurpose installations.



機種型號表示DESCRIPTION OF TYPE & MODEL

LM	CE	50	10	I	L	F
公司代號	機型	型號	速比	馬力	軸向	輸出法蘭
Company Name	Type	Model	Ratio	Horse Power	Shaft Dircction	Output Flange
	CE	30	1/5	40W	R: 右軸	F: 短法蘭
	CEO	40	1/10	60W	Right Shaft	FB: 長法蘭
	CEM	50	1/15	90W	L: 左軸	
	CEOM	63	1/20	1/4HP	Left Shaft	
	CEOEM	75	1/30	1/2HP	V: 雙入軸	
	CEV	90	1/40	1HP	Double Output Shaft	
	CEOV		1/50	2HP	W: 雙出軸	
	CEOVM		1/60	3HP	Double loutput Shaft	
			1/25特殊		WV: 雙入雙出軸	
			1/45特殊		Double loutput Shaft Double OutputShafta	
			1/80特殊		S: 特殊品	
			1/100特殊		Customized design	

1. 選型相關參數

1.1 功率P

$$P_1 = P_2 / \eta \text{ [kW]}$$

$$P_{1n} \geq P_1 \cdot [f_s \text{ kW}]$$

P1 輸入功率

P2 輸出功率

P1n 輸入電機額定功率

f_s 使用係數

η 傳動效率

在CE蝸輪選型表中，這個功率P1n是指在輸入轉速為n1並且對應的使用係數f_s=1時，蝸輪安全的輸入功率，單位kW。

傳動效率η值是蝸輪經過足夠長時間的跑合後計算得到的。跑合後在運轉過程中，表面溫度下降並最終穩定。需要特別強調的是樣本中給定的額定轉矩值M2n應該考慮到傳動效率η的關係。

1.2 轉速n

n1 減速器輸入轉速

n2 減速器輸出轉速

若是齒輪箱外部傳動裝置驅動，為了優化工作條件提高使用壽命，建議使用1400r/min或更低轉速。

1.3 轉動比i

$$i = n_1 / n_2$$

1.4 扭矩M

$$M_2 = 9550 \cdot P_1 \cdot \eta / n_2 \text{ [Nm]}$$

$$M_{2n} \geq M_2 \cdot f_s \text{ [Nm]}$$

M2 輸出扭矩

M2n 額定輸出扭矩

P1 輸入功率

η 傳動效率

f_s 使用係數

1. RELEVANT PARAMETER

1.1 Power P

$$P_1 = P_2 / \eta \text{ [kW]}$$

$$P_{1n} \geq P_1 \cdot f_s \text{ [kW]}$$

P1 Input power

P2 Output power

P1n Rated input motor power

f_s Service factor

η Transmission efficiency

The parameter can be found in the CE gear-box rating charts and represents the kW that can be safely transmitted to the gearbox, based on input speed n1 and service factor f_s=1.

Values of η_d are calculated for gearboxes after a sufficiently long running-in period. After the running-in period the surface temperature in operation reduces and finally stabilises. It may be worth highlighting that values of rated torque M2n given in the catalogue take the transmission efficiency η_d into consideration.

1.2 Rotation speed n

n1 Gear units input speed

n2 Gear units output speed

If driven by the external gearing, 1400r/min or lower rotation speed is suggested so as to optimize the working conditions and prolong the service life.

1.3 Transmission ratio i

$$i = n_1 / n_2$$

1.4 Torque M

$$M_2 = 9550 \cdot P_1 \cdot \eta / n_2 \text{ [Nm]}$$

$$M_{2n} \geq M_2 \cdot f_s \text{ [Nm]}$$

M2 Output torque

M2n Rated output torque

P1 Input power

η Transmission efficiency

f_s Service factor

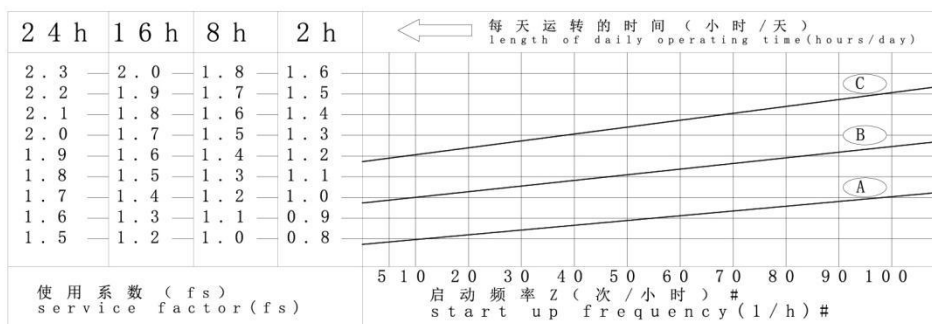


鋁合金蝸輪減速機

ALUMINUM ALLOY WORM REDUCERS

1.5 使用係數 f_s

減速器上的從動機構的受驅動效果是用使用係數 f_s 這個係數來衡量的。該使用係數根據每天的運轉時間和啟動頻率 Z 而定的。三種負載分類取決於慣性加速係數，在下圖中可以讀取實際應用的使用係數，按這圖表選取的使用係數必須小於或者等於性能參數表中提供的使用係數。



啟動頻率 Z : 週期包括所有啟動、制動的次數以及變速電機高低速變化時的次數。

1.5 Service factor f_s

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor f_s . The service factor is determined according to the daily operating time and the starting frequency Z . Three load classifications are considered depending on the mass acceleration factor. You can read off the service factor applicable to your application in following figure. The service factor selected using this diagram must be less than or equal to the service factor as given in the performance parameter table.

Starting frequency Z : The cycles include all starting and braking procedures as well as change overs from low to high

1.5.1 負載類型

負載性質:

- A 均勻衝擊負載，允許慣性加速係數 $f_a \leq 0.3$
- B 中等衝擊負載，允許慣性加速係數 $f_a \leq 3$
- C 重衝擊負載，允許慣性加速係數 $f_a \leq 10$

負載類型:

輕負載的螺桿輸送，風扇，裝備線，輸送帶，小型攪拌器，電梯，清洗機器，篩檢程式，控制驅動。

捲揚機，木工機器進料器，貨物起重機，平衡器，絞螺紋機器，中型攪拌器，重型輸送帶，絞盤，滑動閘門，刮料機，包裝機械，混凝土攪拌機，行車驅動裝置，銑床，齒輪泵。

大型攪拌器，剪床，壓機，離心機，旋轉支撐裝置，重型絞盤和起重機，磨床，石材打磨機，翻鬥機，鑽床，衝床，凸軸壓機，摺床，機床轉盤，翻桶裝置，振盪裝置，破碎機。

1.5.1 Load classifications

Type of load:

- A Uniform, permitted mass acceleration factor $f_a \leq 0.3$
- B Moderate shock load, permitted mass acceleration factor $f_a \leq 3$
- C Heavy shock load, permitted mass acceleration factor $f_a \leq 10$

load classifications:

Screw feeders for light materials, fans, assembly lines, conveyor belts for light materials, small mixers, lifts, cleaning machines, fillers, control machines.

Winding devices, woodworking machine feeders, goods lifts, balancers, threading machines, medium mixers, conveyor belts for heavy materials, winches, sliding doors, fertilizer scrapers, packing machines, concrete mixers, crane mechanisms, milling cutters, folding machines, gear pumps.

Mixers for heavy materials, shears, presses, centrifuges, rotating supports, winches and lifts for heavy materials, grinding lathes, stone mills, bucket elevators, drilling machines, hammer mills, cam presses, folding machines, hammer mills, cam presses, folding machines, turntables, tumbling barrels, vibrators, shredders.

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1.5.2 慣性加速係數

慣性加速係數計算如下：

$$fa = Jc / Jm$$

fa 慣性加速係數

Jc 所有外部傳動慣量[kgm₂]

Jm 驅動電機的傳動慣量[kgm₂]

如果慣性加速係數fa > 10，請與我們技術部聯繫。

受環境溫度影響，使用係數fs仍須按以下調整：

- 1). 環境溫度30~40℃: fs × (1.1~1.2)
- 2). 環境溫度40~50℃: fs × (1.3~1.4)
- 3). 環境溫度50~60℃: fs × (1.5~1.6)
- 4). 環境溫度 > 60℃，請與我們技術服務人員聯繫。

為了保持減速器的使用壽命，從產品樣本中所選擇的使用係數fs應等於或略高於計算出的使用係數fs。

1.6 徑向載荷Fr

在決定影響徑向載荷時，安裝在軸端上的傳動件類型必須考慮在內，不同類型的傳動件對應不同傳動附加係數fz，列表如下：

傳動件 Transmission element	傳動附加係數Fz Transmission element factor Fz	注釋 Comments
齒輪 Gears	1.00	≥17齒teeth
	1.15	<17齒teeth
鏈輪 Chain sprockets	1.00	≥20齒teeth
	1.25	<20齒teeth
	1.40	<13齒teeth
V帶輪 Narrow V-belt pulleys	1.75	有預緊力作用 Influence of the tensile force
平帶輪 Flat belt pulleys	2.50	有預緊力作用 Influence of the tensile force
齒帶輪 Toothed belt pulleys	2.50	有預緊力作用 Influence of the tensile force

作用在軸上的徑向載荷按如下公式計算：

$$Fr = M \cdot 2000 \cdot fz / d_0 [N]$$

Fr 作用在軸上載荷[N]

M 作用在軸上的扭矩[Nm]

d₀ 安裝在軸上傳動件的平均直徑[mm]

fz 傳動附加係數

1.5.2 Mass acceleration factor

$$fa = Jc / Jm$$

The mass acceleration factor is calculated as follows:

fa Mass acceleration factor

Jc All external mass moments of inertia [kgm²]

Jm Mass moment of inertia on the motor end [kgm²]

If mass acceleration factors fa > 10, please call our Technical Service.

Service factor fs should be adjusted as followings:

- 1). ambient temperature is 30~40℃: fs × (1.1~1.2)
- 2). ambient temperature is 40~50℃: fs × (1.3~1.4)
- 3). ambient temperature is 50~60℃: fs × (1.5~1.6)
- 4). ambient temperature > 60℃, please call our Technical Service.

To keep the service-life of gear units the use factor fs selected from the catalogue must be equal or slightly higher than the calculated use factor fs.

1.6 Radial loads Fr

When determining the resulting radial loads, the type of transmission elements, mounted on the shaft end must be considered. Various transmission elements are corresponding with following transmission element factors fz:

The overhung loads exerted on the motor or gear shaft is then calculated as follows:

$$Fr = M \cdot 2000 \cdot fz / d_0 [N]$$

Fr Resulting radial load [N]

M Torque on the shaft [Nm]

d₀ Mean diameter of the mounted transmission element in [mm]

fz Transmission element factor



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當徑向負荷不作用在軸中點時，按以下公式計算有效負荷：

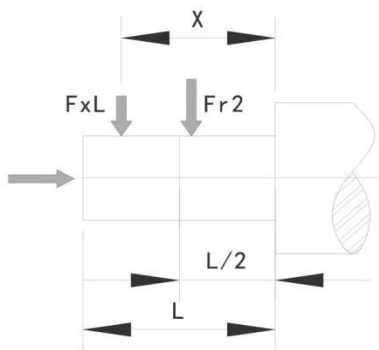
$$F \times L \leq Fr_2 \cdot a / (b+x) \text{ [N]}$$

Fr₂ 依據下麵表格給出底腳安裝式齒輪減速器的許可徑向載荷 ($x=L/2$) [N]

a, b 齒輪減速器徑向換算常量 [mm]

x 軸肩到實際作用點的距離 [mm]

a, b, Fr₂的數值在下面表格給出：



The allowed radial load force on the shaft is calculated with the following formula:

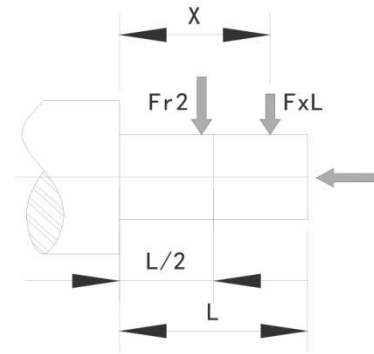
$$F \times L \leq Fr_2 \cdot a / (b+x) \text{ [N]}$$

Fr₂ Permitted overhung load ($x=L/2$) for footmounted gear units according to the selection tables in [N]

a, b Gear unit constant for overhung load conversion [mm]

x Distance from the shaft shoulder to the force application point in [mm]

The values of a, b, Fr₂ are given in the following tables:



輸出軸徑向載荷 Output shafts radial loads

CEOM	030	040	050	063	075	090
a	65	84	101	120	131	162
b	50	64	76	95	101	122
Fr ₂ max	1830	3490	4740	6270	7380	8180

輸入軸徑向載荷 Input shafts radial loads

CE	030	040	050	063	075	090
a	86	106	129	159	192	227
b	76	94.5	114	139	167	202
Fr ₂ max	210	350	490	700	980	1270

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1.7 選型表注釋/Selection tables comments

P1n	n2	M2n	i	M2n	fs
P1n	輸入電機額定功率[kW];	P1n	Rated power driving motor [kW];		
n2	輸出轉速[r/min];	n2	Output speed [r/min];		
M2n	額定輸出扭矩[Nm];	M2n	Rated output torque [Nm];		
M2max	最大允許輸出扭矩[Nm];	M2max	Permissible output torque [Nm];		
i	減速器傳動比;	i	Gear unit ratio;		
fs	使用係數;	fs	Service factor;		
	減速器型號;		Gear unit type;		
	電機型號;		Motor type;		

2. 選型舉例/SELECTION EXAMPLE

2.1 減速電機

例：被驅動設備所需功率0.5kW, n1=1400r/min, 均勻衝擊負載, 啟動頻率20次/小時, 24小時連續運行, 環境溫度32℃, 輸出轉速n2=93.3r/min, 減速電機要求A3安裝方位, 則:

$$i=n1/n2=1400/93.3=15$$

查B9頁啮合參數表, 估算當i=15時, $\eta_d \approx 0.82$

查圖調整使用係數得

$$fs=1.53 \times 1.12=1.714$$

$$P1n \geq P2/\eta_d \cdot fs=0.5/0.82 \times 1.714=1.045[kW]$$

查CEOM系列性能參數表可確定減速電機型號為:

CE075-15-B3-1.1-4

輸出扭矩M2計算:

$$M2=9550 \cdot P2/n2=9550 \times 0.5/93.3=51.18[Nm]$$

$$M2n=95 \geq M2 \cdot fs=51.18 \times 1.714=87.72[Nm]$$

2.1 Gear motor

Example: The input power of driver machine is 0.5KW, n1=1400r/min, uniform, start up frequency 20(1/h), continuous running for 24 hours, the ambient temperature is +32℃, n2=93.3r/min, B3 mounted so:

$$i=n1/n2=1400/93.3=15$$

Check mesh table on P14, estimate when the i=15, $\eta_d \approx 0.82$

Check and adjust the service factor, will get

$$fs=1.53 \times 1.12=1.714$$

$$P1n \geq P2/\eta_d \cdot fs=0.5/0.82 \times 1.714=1.045[kW]$$

Choose type:

CEOM075-15-B3-1.1-4

Count output torque:

$$M2=9550 \cdot P2/n2=9550 \times 0.5/93.3=51.18[Nm]$$

$$M2n=95 \geq M2 \cdot fs=51.18 \times 1.714=87.72[Nm]$$

2.2 減速器

例：被驅動設備所需扭矩為300Nm, 工作8小時連續運行, 均勻衝擊負載, 啟動頻率5次/小時, 環境溫度30℃, 即可選使用係數fs=1.2×1.1=1.32, 減速機輸入轉速n1=900r/min, 輸出轉速n2=22.5r/min。

$$M2n \geq M2 \cdot fs=300 \times 1.32=396[Nm]$$

$$i=n1/n2=900/22.5=40$$

查CE系列性能參數表可確定減速器型號為:

CE090-40

2.2 Gear units

Example: Required torque 300Nm on driven machine, continuous running for 8 hours, uniform load, the ambient temperature is 30℃, then choose the service factor $fs=1.2 \times 1.1=1.32$, n1=900r/min, n2=22.5r/min.

$$M2n \geq M2 \cdot fs=300 \times 1.32=396[Nm]$$

$$i=n1/n2=900/22.5=40$$

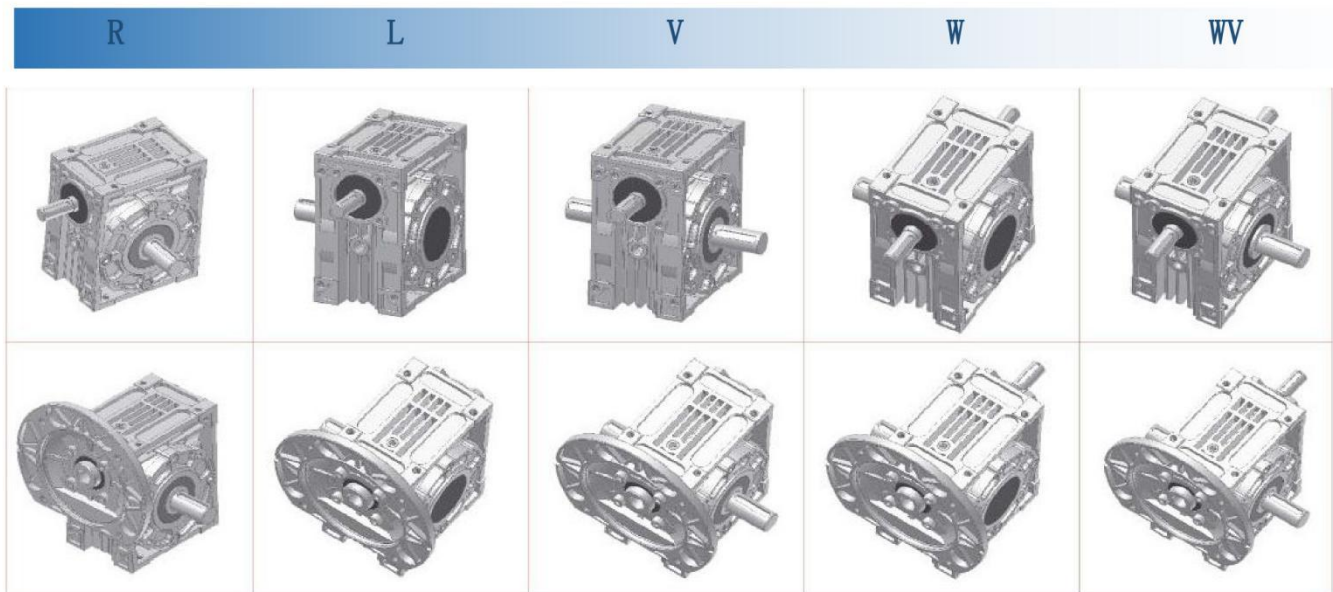
Choose type:

CE090-40



鋁合金蝸輪減速機

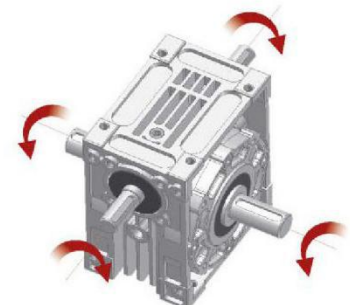
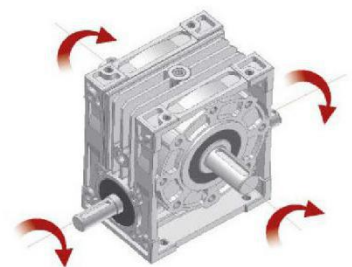
ALUMINUM ALLOY WORM REDUCERS



軸向 SHAFT DIRECTION:

- R : 右軸 (入力軸面對自己, 出力軸在右方)
 L : 左軸 (入力軸面對自己, 出力軸在左方)
 V : 單入力軸雙出力軸
 W : 雙入力軸單出力軸
 WV: 雙入力軸和雙出力軸
 S : 特殊軸 (訂貨時請注明或附圖面)

- R : Right Shaft (input shaft to the face; output shaft to the right)
 L : Left Shaft (input shaft to the face; output shaft to the left)
 V : Single Input Shaft & Double Output Shaft
 W : Double Input Shaft & Single Output Shaft
 WV : Double Input Shaft & Single Output Shaft
 S : Special shaft (for any order, please specify your need clearly or drawings)



旋轉方向

Rotation Direction

旋向 ROTARY DIRECTION:

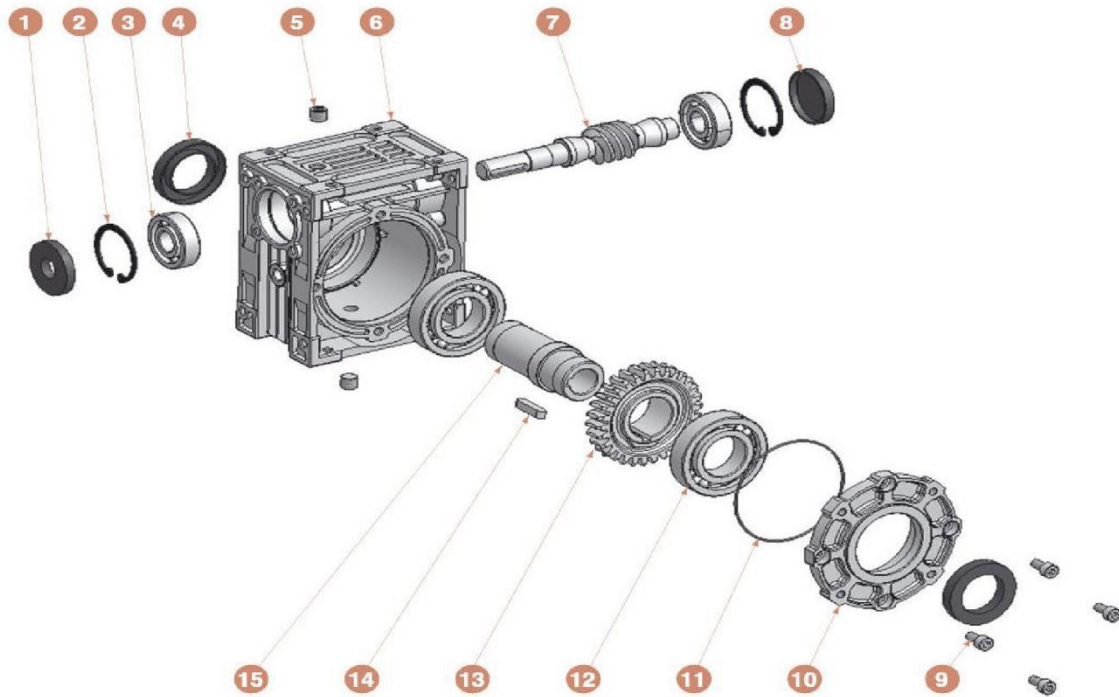
設計上蝸杆使用右旋牙, 故入力軸以順時針方向旋轉時, 出力軸以逆時針方向旋轉, 如需特殊旋向時請注明。

Upper worm for right-handed thread, so the input shaft is rotating clockwise and the output shaft counterclockwise; for any rotating direction required, be sure to specify it.

鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS

CEO 分解系統圖

SYSTEM DRAWING OF MODEL CEO



NO.	名稱	NAME OF PARTS	NO.	名稱	NAME OF PARTS
1	油封SC	Oil Seal SC	9	六角承窩頭螺絲	HEX. Screw
2	R扣環	Snap Ring	10	出力軸	Output Shaft Cover
3	滾珠軸承ZZ	Ball Bearing ZZ	11	O形環	O-Ring
4	油封TC	Oil Seal TC	12	滾珠軸承	Ball Bearing
5	油栓PT	Plug PT	13	蝸輪	Worm Wheel
6	蝸輪箱	Outer Shell	14	雙圓鍵	Key
7	蝸杆	Worm Shaft	15	出力軸	Output Shaft
8	密式油封	Seal	16		

材質說明:

※蝸輪箱、出力軸殼：壓鑄鋁ALADC-12，本體一體壓鑄、強度強、重量輕、外型美觀、散熱好。
 ※出力軸：S45C中碳鋼，CNC車床精密加工研磨。
 ※蝸輪：鋁青銅ALBC3，CNC車床精密加工，成形專用刀具切削磨擦係數小、壽命長。
 ※蝸杆：SCM415綠十字，CNC車床精密加工，精密滾齒機切削，滲碳後經齒形研磨，齒形正確齒面平滑，無雜音、壽命長。

Material

※Outer shell & Output shaft cover: Cast aluminum ALADC-12, alone-piece cast, rigid, lightweight, aesthetic and sound dissipation
 ※Output shaft: S45C medium carbon steel, CNC lathe machining
 ※Worm wheel: ALBC3, CNC precision lathe machining, shaping cutting blade of minimum cutting coefficient and extended service life.
 ※Worm shaft: SCM415 green cross, CNC precision lathe machining, gear grinding after cutting and carburizing with precision gear grinding, for sound gear shape of smooth surface, free of noise and extended service life.



鋁合金蝸輪減速機

ALUMINUM ALLOY WORM REDUCERS

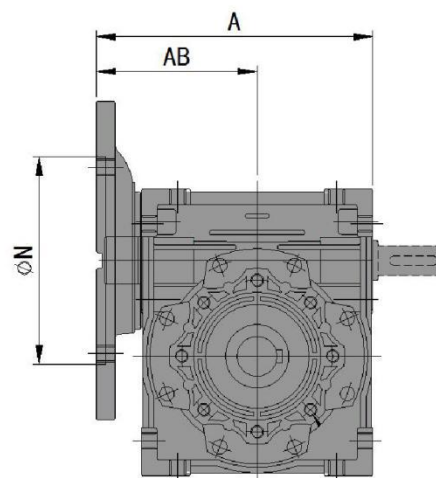
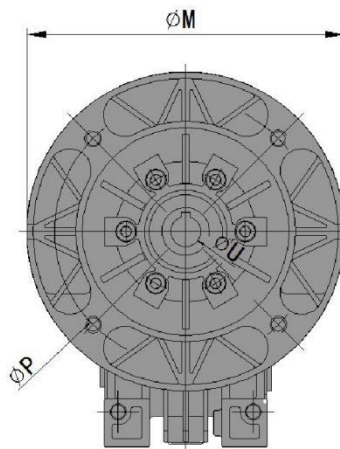
減速機參數 REDUCERS PARAMETER

馬達Motor: 4P/50Hz 輸出轉速Input RPM=1420rpm

單位: m/m																					
型號 MODEL	減速比RATIO	5		7.5		10		15		20		25		30		40		50		60	
	OR	284		189		142		118		71		56.8		47		35.5		28.4		23.6	
	1H	OT	SF	OT	SF	OT	SF	OT	SF	OT	SF	OT	SF	OT	SF	OT	SF	OT	SF	OT	SF
30	0.06	1.8	10.2	2.6	6.9	3.4	5.4	4.7	3.8	6	3.1	7	3.1	8	2.5	9.7	2	11	1.6	13	1.4
	0.09	2.7	6.8	3.9	4.7	5	3.7	7.1	2.6	9	2.2	10	2.2	12	1.8	14	1.2	17	1	19	0.9
	0.12	3.6	5	5.2	4.1	6.7	3.3	9.5	2.3	12	1.8	14	1.7	16	1.6	19	1	23	0.9	19	0.8
	0.18	5.3	4	7.8	3.2	10	2.6	14	2.4	1.8	1.6	21	1	24	1.4	19	0.9	23	0.8	19	0.7
40	0.09	2.3	8.9	3.3	8.2	4.1	7	6.1	5.6	7.9	4.8	9.1	4.3	10.9	3.6	14.2	2.6	17.3	2	22.2	1.8
	0.12	3.1	7.5	4.3	6.3	5.5	5.1	8.2	4.2	10.5	3.6	12.5	3.3	14.7	2.8	19	2.3	23.1	1.9	27	1.5
	0.18	4.8	4.4	7.1	4.1	8.5	3.5	12.8	2.8	16.4	2.4	19.5	2.2	22.8	1.8	29.6	1.3	36	1	42	0.9
	0.37	9.5	2.5	13.5	2.1	17	1.7	25.5	1.4	32.8	1.2	39	1.1	45.6	0.9	-	-	-	-	-	-
50	0.12	3.1	11.1	5.3	9.2	5.5	7.7	8.2	3.8	10.5	5.4	12.5	4.5	14.7	4	19	3.7	23.1	3	27	2.5
	0.18	5.2	7.2	6.8	6.1	8.5	5.1	12.8	2.5	16.4	3.5	19.5	3	22.8	2.6	29.6	2.2	36	2	42	1.6
	0.37	9.5	3.7	13.5	3.1	17	2.6	25.5	2.3	32.8	1.8	39	1.5	45.6	1.3	59.2	1.1	72	1	84	0.8
	0.75	19	1.8	27	1.5	34	1.3	51	1.1	65.6	0.9	-	-	-	-	-	-	-	-	-	-
63	0.37	-	-	13.8	5.9	17.4	5.2	26.1	4	33.6	3.7	40	3.2	46.7	3.7	66.7	2.9	73.8	2.5	86	1.9
	0.75	-	-	28	2.9	35	2.6	52.5	2	67	1.8	80	1.6	93	1.8	133	1.5	147	1.2	172	0.9
	1.5	-	-	55.3	1.5	71	1.3	106	1	133	0.9	161	0.8	185	0.9	-	-	-	-	-	-
75	0.37	-	-	14.2	13.7	17.8	9.2	26.8	7.2	34.4	6	41	5.2	47.9	6	62.2	4.8	75.6	4	88.2	3.6
	0.75	-	-	31.6	6.8	37.8	4.6	53.6	3.6	68.9	3	81.9	2.6	95.8	3	124	2.4	151	2	176	1.8
	1.5	-	-	93	3.4	76	2.3	107	1.8	138	1.5	164	1.3	192	1.5	248	1.2	302	1	350	0.9
	2.2	-	-	99	1.7	131	1.1	189	0.9	-	-	-	-	-	-	-	-	-	-	-	-
90	0.75	-	-	27	7.2	34	6.8	51	6	56.6	4.1	78	3.3	91.2	5.2	118	2.8	182	1.8	209	1.5
	1.5	-	-	57	3.6	76	3.4	107	3	138	2.1	164	1.6	192	1.7	249	1.2	303	0.9	353	0.8
	2.2	-	-	100	2.9	132	2.3	191	1.9	249	1.4	304	1.1	351	1.3	-	-	-	-	-	-

OR=輸出轉速Output RPM(rpm) 1H=輸入馬力Input HP(KW) OT=輸出扭力Output Torque(Nm) SF=安全係數S. F.

鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS



馬達規格選配 SELECTION OF MOTOR SIZE

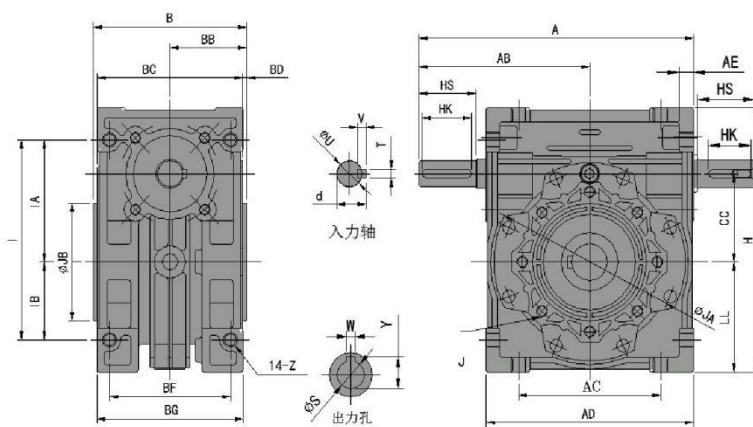
單位: mm

型號 MODEL	安裝規格 SIZE							減速比RATIO									
	法蘭型號	馬力	N	P	M	A	AB	5	7.5	10	15	20	25	30	40	50	60
	FLANGE MODEL	HP						馬達軸心尺寸 MOTOR SHAFT DIMENSION ϕ U									
30	40、60w		83	104	□90	95	55	11	—	11	11	11	11	11	11	11	11
	90W	0.125	83	104	□90	95	55	11	—	11	11	11	11	11	11	11	11
	63B	0.25	95	115	140	95	55	11	—	11	11	11	11	11	11	11	—
40	40、60w		90	104	□90	120	70	11	—	11	11	11	11	11	11	11	11
	90W	0.125	90	104	□90	120	70	11	—	11	11	11	11	11	11	11	11
	63	0.25	110	130	160	120	70	11	—	11	11	11	11	11	11	11	11
	71	0.5	110	130	160	120	70	14	—	14	14	14	14	14	—	—	—
50	63B	0.25	110	130	160	141	80	—	—	—	—	—	—	—	11	11	11
	71	0.5	110	130	160	141	80	14	—	14	14	14	14	14	14	14	14
	80	1	130	165	200	141	81	19	—	19	19	19	19	—	—	—	—
63	71	0.5	110	130	160	165	95	—	—	—	—	—	—	—	14	14	14
	80L	1	130	165	199	165	95	—	19	19	19	19	19	19	19	19	19
	90L	2	130	165	199	165	95	—	24	24	24	24	24	24	—	—	—
75	80L	1	130	165	199	199	113	—	—	—	—	19	19	19	19	19	19
	90L	2	130	165	199	199	113	—	24	24	24	24	24	24	24	24	24
	100L	3	180	215	250	199	113	—	28	28	28	28	—	—	—	—	—
90	80L	1	130	165	199	233	130	—	—	—	—	—	—	—	19	19	19
	90L	2	130	165	199	233	130	—	24	24	24	24	24	24	24	24	24
	100L	3	180	215	250	234	131	—	28	28	28	28	28	28	—	—	—

鋁合金蝸輪減速機

ALUMINUM ALLOY WORM REDUCERS

MODEL : CEO



尺寸表Dimension

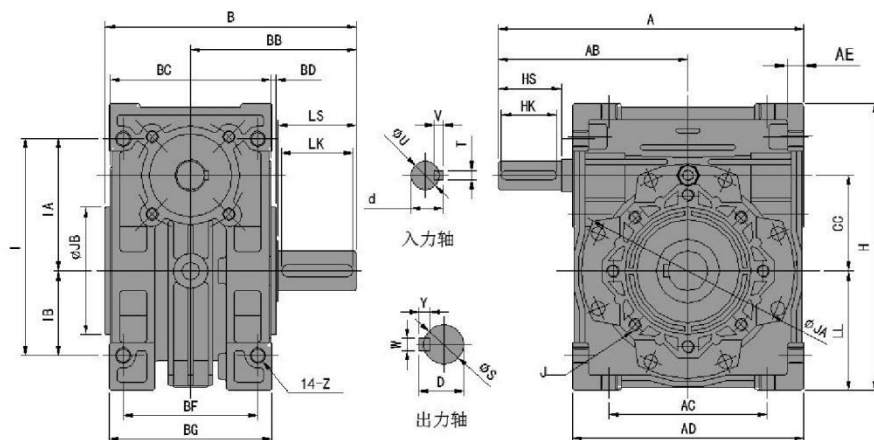
單位: m/m

型號	減速比	馬力	A	AB	AC	AD	AE	B	BB	BC	BD	BF	BG	CC	LL	H	I	IA	IB	Z
MODEL	RATIO	HP																		
30	5~60	40.60W	111	71	54	80	5.5	63	31.5	58	2.5	44	56	30	40	97	71	44	27	6.5
	5~60	90W																		
	5~60	0.25																		
40	5~60	0.25	133	83	70	100	6.5	78	39	73	2.5	60	71	40	50	121.5	90	55	35	6.5
	5~40	0.5																		
50	5~60	0.25	165	104	80	120.5	7	92	46	87	2.5	70	85	50	60	144	104	64	40	9
	5~60	0.5																		
	5~20	1																		
63	7.5~60	0.5	202	130	100	144	8	112	56	106	3	85	103	63	72	174	130	80	50	8.5
	7.5~50	1																		
	7.5~30	2																		
75	7.5~60	0.5	241	155	120	172	10	120	60	114	3	90	112	75	86	205	153	93	60	11.5
	7.5~60	1																		
	7.5~60	2																		
	7.5~20	3																		
	7.5~60	1																		
90	7.5~60	2	278	175	140	206	11	140	70	134	3	100	130	90	103	238	172	102	70	13
	7.5~60	3																		
	7.5~30	3																		

型號	減速比	馬力	入力軸 INPUT SHAFT				出力孔 OUTPUT BORE						重量
MODEL	RATIO	HP	HS	U	d	TxVxHK	W	S	Y	JA	JB	J	Weight (KG)
30	5〜60	40, 60W	20	9	10.2	3x3x15	5	14	16.3	65	55	M6x8	1.1
	5〜60	90W											
	5〜60	0.25											
40	5〜60	0.25	23	11	12.5	4x4x18	6	18	20.8	75	60	M6x8	2.1
	5〜40	0.5											
50	5〜60	0.25	30	14	16	5x5x25	8	25	28.3	85	70	M8x8	3.4
	5〜60	0.5											
	5〜20	1											
63	7.5〜60	0.5	40	19	21.5	6x6x30	8	25	28.3	95	80	M8x16	5.4
	7.5〜50	1											
	7.5〜30	2											
75	7.5〜60	0.5	50	24	27	8x7x40	8	28	31.3	115	95	M8x16	8.5
	7.5〜60	1											
	7.5〜60	2											
	7.5〜20	3											
90	7.5〜60	1	50	24	27	8x7x45	10	35	38.3	130	110	M10x16	12.5
	7.5〜60	2											
	7.5〜30	3											

鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS

MODEL: CE



尺寸表Dimension

單位: m/m

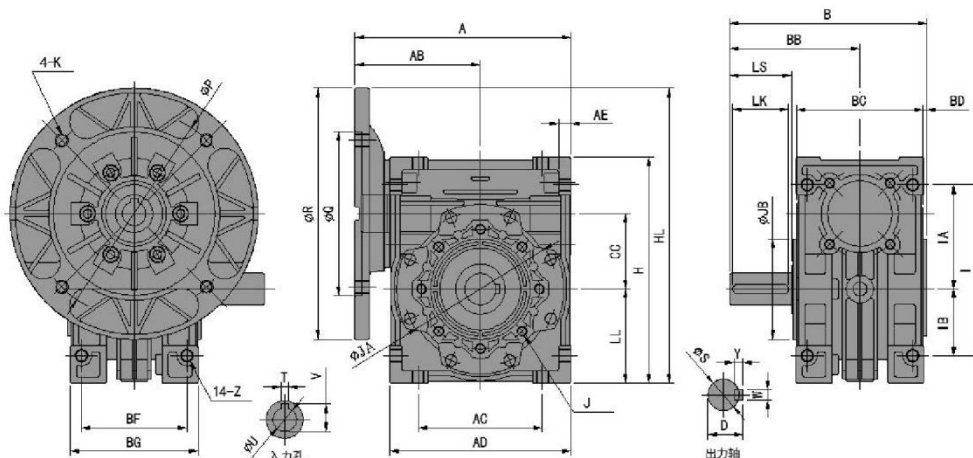
型號 MODEL	減速比 RATIO	馬力 HP	A	AB	AC	AD	AE	AK	B	BB	BC	BD	BF	BG	CC	LL	H	I	IA	IB	Z
30	5〜60	40. 60W	111	71	54	80	5. 5	65	95. 5	64	58	2. 5	44	56	30	40	97	71	44	27	6. 5
	5〜60	90W																			
	5〜60	0. 25																			
40	5〜60	0. 25	133	83	70	100	6. 5	76	121	82	73	2. 5	60	71	40	50	121. 5	90	55	35	6. 5
	5〜40	0. 5																			
50	5〜60	0. 25	165	104	80	120. 5	7	94	145. 5	99. 5	87	2. 5	70	85	50	60	144	104	64	40	9
	5〜60	0. 5																			
	5〜20	1																			
63	7. 5〜60	0. 5	202	130	100	146	8	115	165. 5	109. 5	106	3	85	103	63	72	174	130	80	50	8. 5
	7. 5〜50	1																			
	7. 5〜30	2																			
75	7. 5〜60	0. 5	241	155	120	172	10	140	183. 5	123. 5	114	3	90	112	75	86	205	153	93	60	11. 5
	7. 5〜60	1																			
	7. 5〜60	2																			
	7. 5〜20	3																			
90	7. 5〜60	1	278	175	140	206	11	158	225	155	134	3	100	130	90	103	238	172	102	70	13
	7. 5〜60	2																			
	7. 5〜30	3																			
型號	減速比	馬力	入力軸 INPUT SHAFT								出力軸 OUTPUT SHAFT							重量			
MODEL	RATIO	HP	HS	U	d	TxVxHK		LS	S	D	WxYxLK		JA	JB	J	Weight (KG)					
30	5〜60	40. 60W	20	9	10. 2	3x3x15		32. 5	14	16. 3	5x5x25		65	55	8×M6		1. 3				
	5〜60	90W																			
	5〜60	0. 25																			
40	5〜60	0. 25	23	11	12. 5	4x4x18		43	18	20. 8	6x6x35		75	60	8×M6		2. 4				
	5〜40	0. 5																			
50	5〜60	0. 25	30	14	16	5x5x25		53. 5	25	28. 3	8x7x45		85	70	8×M8		4				
	5〜60	0. 5																			
	5〜20	1																			
63	7. 5〜60	0. 5	40	19	21. 5	6x6x30		53. 5	25	28. 3	8x7x45		95	80	16×M8		5. 8				
	7. 5〜50	1																			
	7. 5〜30	2																			
75	7. 5〜60	0. 5	50	24	27	8x7x40		63. 5	28	31. 3	8x7x50		115	95	16×M8		9. 2				
	7. 5〜60	1																			
	7. 5〜60	2																			
	7. 5〜20	3																			
90	7. 5〜60	1	50	24	27	8x7x45		84. 5	35	38. 3	10x8x65		130	110	16×M10		13				
	7. 5〜60	2																			
	7. 5〜30	3																			



鋁合金蝸輪減速機

ALUMINUM ALLOY WORM REDUCERS

MODEL: CEM



尺寸表Dimension

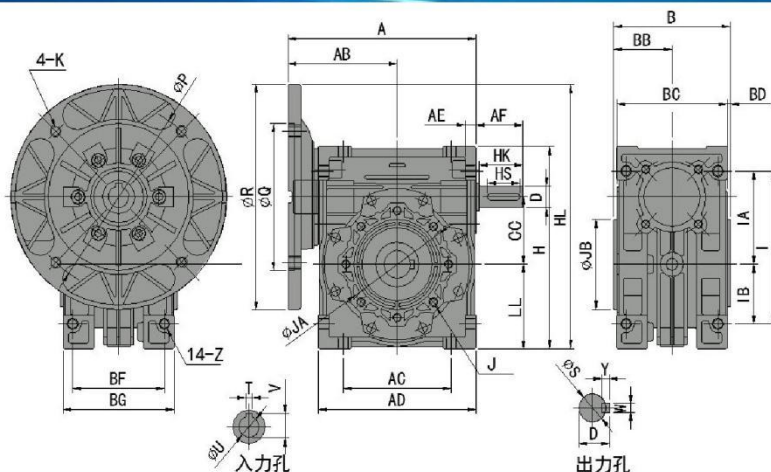
單位: m/m

型號 MODEL	減速比 RATIO	馬力 HP	A	AB	AC	AD	AE	AF	B	BB	BC	BD	BF	BG	CC	LL	H	HL	HK	HS	I	IA	IB	Z
30	5~60	40, 60W	95	55	54	80	5.5	25	95.5	64	58	2.5	44	56	30	40	97	115	15	20	71	44	27	6.5
	5~60	90W																115						
	5~60	0.25																140						
40	5~60	0.25	120	70	70	100	6.5	26	121	82	73	2.5	60	71	40	50	121.5	170	20	23	90	55	35	6.5
	5~40	0.5																						
50	5~60	0.25	141	81	80	120.5	7	34	145.5	99.5	87	2.5	70	85	50	60	144	191	25	30	104	64	40	9
	5~60	0.5																191						
	5~20	1																210						
63	7.5~60	0.5	165	95	100	144	8	43	165.5	109.5	106	3	85	103	63	72	174	215	30	40	130	80	50	10
	7.5~50	1																235						
	7.5~30	2																235						
75	7.5~60	0.5	199	120	120	172	10	54	183.5	123.5	114	3	90	112	75	86	205	241	40	50	153	93	60	12
	7.5~60	1																261						
	7.5~60	2																261						
	7.5~20	3																286						
	7.5~60	1																293						
90	7.5~60	2	234	131	140	206	11	55	225	155	134	3	100	130	90	103	238	293	40	50	172	102	70	13
	7.5~60	2																293						
	7.5~30	3																318						

型號 MODEL	減速比 RATIO	馬力 HP	馬達盤及入力孔 MOTOR FLANGE & INPUT BORE							出力軸 OUTPUT SHAFT							重量 Weight (KG)
30	5~60	40, 60W	P	Q	R	K	V	T	U	LS	S	D	W×Y×LK	JA	JB	J	1.4
	5~60	90W	104	83	90	8.8	12.8	4	11	32.5	14	16.3	5×5×25	65	55	8×M6	
	5~60	0.25	104	83	90	8.8	12.8	4	11	32.5	14	16.3	5×5×25	65	55	8×M6	
40	5~60	0.25	115	95	140	8.8	12.8	4	11	43	18	20.8	6×6×35	75	60	8×M6	2.6
	5~40	0.5	130	110	160	9	16.3	5	14								
50	5~60	0.25	130	110	160	9	12.8	4	11	53.5	25	28.3	8×7×45	85	70	8×M6	4
	5~60	0.5	130	110	160	9	16.3	5	14								
	5~20	1	165	130	199	11	21.8	6	19								
63	7.5~60	0.5	165	110	160	9	16.3	5	14	53.5	25	28.3	8×7×45	95	80	16×M8	6.1
	7.5~50	1	165	130	199	11	21.8	6	19								
	7.5~30	2	165	130	199	11	27.3	8	24								
75	7.5~60	0.5	130	110	160	9	16.3	5	14	63.5	28	31.3	8×7×50	115	95	16×M8	9.6
	7.5~60	1	165	130	199	11	21.8	6	19								
	7.5~60	2	165	130	199	11	27.3	8	24								
	7.5~20	3	215	180	250	11	31.3	8	28								
	7.5~60	1	165	130	199	11	21.8	6	19								
90	7.5~60	2	165	130	199	11	27.3	8	24	84.5	35	38.3	10×8×65	130	110	16×M10	13.2
	7.5~30	3	215	180	250	11	31.3	8	28								

鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS

MODEL:CEOM



尺寸表Dimension

單位: m/m

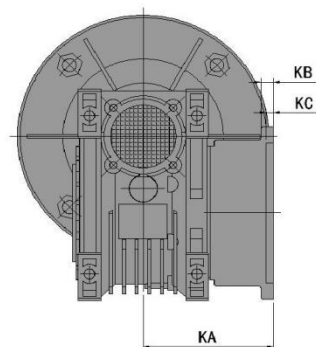
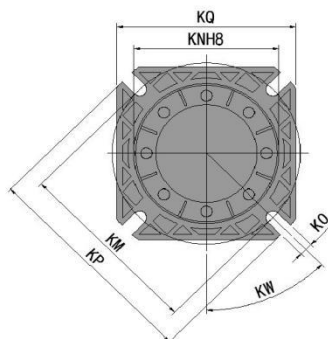
型號	減速比	馬力	A	AB	AC	AD	AE	AF	B	BB	BC	BD	BF	BG	CC	D	LL	H	HL	HK	HS	I	IA	IB	Z
MODEL	RATIO	HP																							
30	5〜60	40, 60W	95	55	54	80	5.5	25	63	31.5	58	2.5	44	56	30	9	40	97	115	15	20	71	44	27	6.5
	5〜60	90W																	140						
	5〜60	0.25																	140						
40	5〜60	0.25	120	78	70	100	6.5	26	78	39	73	2.5	60	71	40	11	50	121.5	170	20	23	90	55	35	6.5
	5〜40	0.5																							
50	5〜60	0.25	141	81	80	121	7	34	92	46	87	2.5	70	85	50	14	60	144	191	25	30	104	64	40	9
	5〜60	0.5																	191						
	5〜20	1																	210						
63	7.5〜60	0.5	165	95	100	144	8	43	112	56	106	3	85	103	63	19	72	174	215	30	40	130	80	50	10
	7.5〜50	1																	235						
	7.5〜30	2																	235						
75	7.5〜60	0.5	199	120	120	172	10	54	120	60	114	3	90	112	75	24	86	205	214	40	50	153	93	60	12
	7.5〜60	1																	261						
	7.5〜60	2																	261						
	7.5〜20	3																	286						
90	7.5〜60	1	234	131	140	206	11	55	140	70	134	3	100	130	90	24	103	238	292.5	40	50	172	102	70	13
	7.5〜60	2																	293						
	7.5〜30	3																	318						
型號	減速比	馬力	馬達盤及入力孔MOTORFLANGE& INPUT BORE										出力孔 OUTPUT BORE					重量							
MODEL	RATIO	HP	P	Q	R	K	V	T	U	W	S	Y	JA	JB	J	Weight (KG)									
30	5〜60	40, 60W	104	83	90	8.8	12.8	4	11	5	14	16.3	65	55	8xM6	1.3									
	5〜60	90W	104	83	90	8.8			11																
	5〜60	0.25	115	95	140	8.8			11																
40	5〜60	0.25	130	110	160	9	12.8	4	11	6	18	20.8	75	60	8xM6	2.4									
	5〜40	0.5	130	110	160	9	16.3	5	14																
50	5〜60	0.25	130	110	160	9	12.8	4	11	8	25	28.3	85	70	8xM8	3.5									
	5〜60	0.5	130	110	160	9	16.3	5	14																
	5〜20	1	165	130	199	11	21.8	6	19																
63	7.5〜60	0.5	130	110	160	9	16.3	5	14	8	25	28.3	95	80	16xM8	5.8									
	7.5〜50	1	165	130	199	11	21.8	6	19																
	7.5〜30	2	165	130	199	11	27.3	8	24																
75	7.5〜60	0.5	130	110	160	9	16.3	5	14	8	28	31.3	115	95	16xM8	9									
	7.5〜60	1	165	130	199	11	21.8	6	19																
	7.5〜60	2	165	130	199	11	27.3	8	24																
	7.5〜20	3	215	180	199	11	31.3	8	28																
90	7.5〜60	1	165	130	199	11	21.8	6	19	10	35	38.3	130	110	16xM10	13									
	7.5〜60	2	165	130	199	11	27.3	8	24																
	7.5〜30	3	215	180	250	11	31.3	8	28																



鋁合金蝸輪減速機

ALUMINUM ALLOY WORM REDUCERS

MODEL: 出力法蘭 Output Flange



尺寸表Dimension

單位: m/m

型号		30	40	50	63	75	90		
F	KA	54	67	90	103	111	111		
	KB	6	7	9	10	13	13		
	KC	4	4.5	5	6	6	6		
	KN	55	60	70	115	130	152		
	KM	68	68.5	84	149	163	175		
	KO	6.5	9	10	11	14	14		
	KP	79	110	125	178	178	210		
	KQ	70	95	110	142	169	200		
	KW	45°	45°	45°	45°	45°	45°		
FB	KA	—	97	120	—	—	—		
	KB	—	7	9	—	—	—		
	KC	—	4.5	5	—	—	—		
	KN	—	60	70	—	—	—		
	KM	—	68.5	84	—	—	—		
	KO	—	9	10	—	—	—		
	KP	—	110	125	—	—	—		
	KQ	—	95	110	—	—	—		
	KW	—	45°	45°	—	—	—		

MODEL: 出力軸 Output Shaft

尺寸表Dimension (m/m)

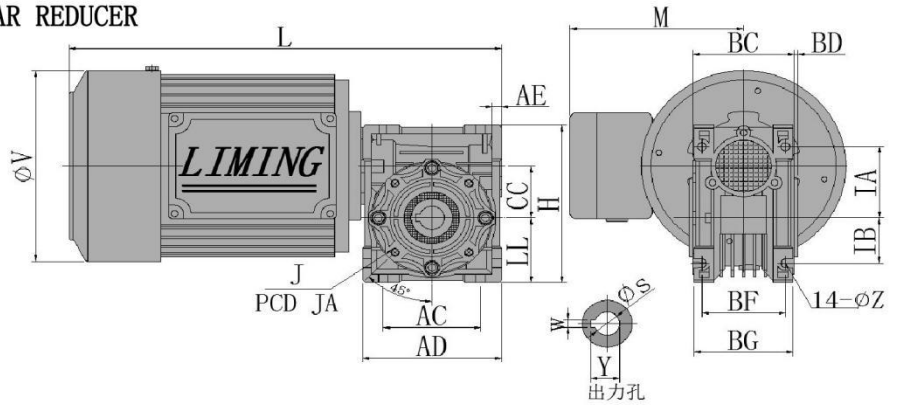
型號 MODEL	S	LS	L	B	A	A1	J	W	D	Y
30	14h6	30	32.5	63	102	128	M6	5	16.5	5
40	18h6	40	43	78	128	164	M6	6	20.5	6
50	25h6	50	53.5	92	153	199	M10	8	28	7
63	25h6	50	53.5	112	173	219	M10	8	28	7
75	28h6	60	63.5	120	192	247	M10	8	31	7
90	35h6	80	84.5	140	234	309	M12	10	38	8

鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS

中空軸蝸輪減速機

HOLLOW OUTPUT SHAFT WORM GEAR REDUCER

MODEL: LK-SCEOM



尺寸表Dimension

單位: m/m

馬達容量	型號	減速比																		出力軸				重量
Motor	MODEL	Gear	AC	AD	AE	M	BC	BD	BF	BG	CC	H	IA	IB	J	JA	LL	L	V	Z	output Bore			Weight
Capacity	NO.	RATIO																			W	Y	S	(kg) 約
60W	30	5~60	54	80	5.5	95	58	2.5	44	56	30	97	44	27	8xM6	65	40	205	90	6.5	5	16.3	14	4.5
90W		5~60				95												236	90					4.8
1/4HPx4P		5~60				107												220	133					5
60W	40	5~60	70	100	6.5	95	73	2.5	60	71	40	121.5	55	35	8xM6	75	50	246	90	6.5	6	20.8	18	6
90W		5~60				95												262	90					6.5
1/4HPx4P		5~60				107												301	133					8
1/2HPx4P		5~60				125												311	147					9
1/4HPx4P	50	5~60	80	120.5	7	107	87	2.5	70	85	50	144	64	40	8xM8	85	61	324	133	8	8	28.3	25	9.5
1/2HPx4P		5~60				125												333	147					10.5
1HPx4P		5~30				135												350	161					13.5
1/2HPx4P	63	7.5~60	100	144	8	125	106	3	85	103	63	174	80	50	16xM8	95	72	357	147	8	8	28.3	25	12.5
1HPx4P		7.5~50				135												369	161					15.5
2HPx4P		7.5~40				144												102	181					21
1HPx4P	75	7.5~60	120	172	10	135	114	3	90	112	75	205	93	60	16xM8	115	86	102	161	8	8	31.3	28	17
2HPx4P		7.5~60				144												436	181					20
3HPx4P		7.5~20				144												436	181					25
1HPx4P	90	7.5~60	140	206	11	135	134	3	100	130	90	238	102	70	16xM10	130	103	437	161	10	10	38.3	35	18
2HPx4P		7.5~60				144												470	181					22
3HPx4P		7.5~30				144												470	181					30

注:

- 表中 () 內數字系表示輕荷重使用。
- 表示重量以配合三相馬達為主，其他單相、剎車、直流、特殊等馬達重量另訂。
- 表中L內數字以三相為主，剎車及其他馬達另訂。
- 馬達單頻，單雙電壓依設計另訂。
- 以上數值若有變更，恕不另行通知。

NOTES:

- Values shown in paranthesis() are used for light loading.
- Weights shown in the above chart are based on 3-phase, motors ,weights for single phase,brake DC,or special motor shall be referred to specific values.
- Values shown in L column are based on 3-hase,brake for other special motor refer to specific values.
- When the need arises to determine the special voltage frequency for single phase,please contact the li-ming application engineering team.
- above specifications are subject to change without prior notice.



鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS

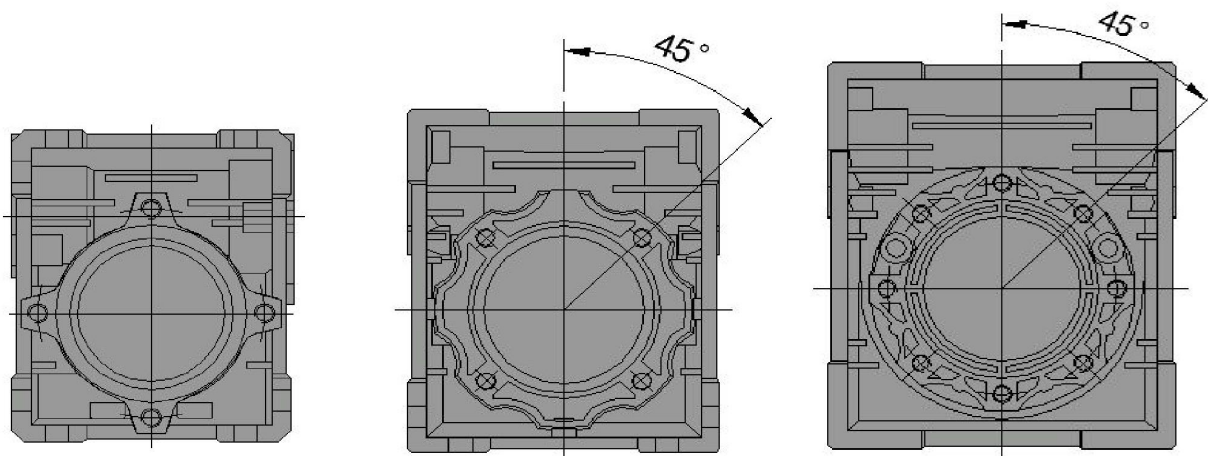
■ 鋁合金蝸輪側法蘭螺絲孔位置圖

Worm Gear Reducer Output; Flange Mounting Dimencion

30型

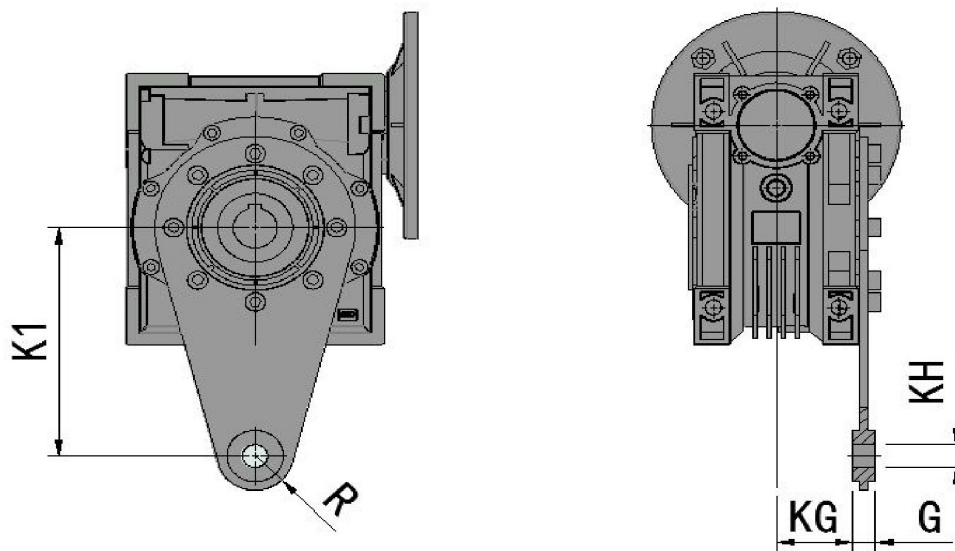
40型 50型

63型 75型 90型



■ 扭力臂-尺寸圖

Torque Arm - Product Dimencion



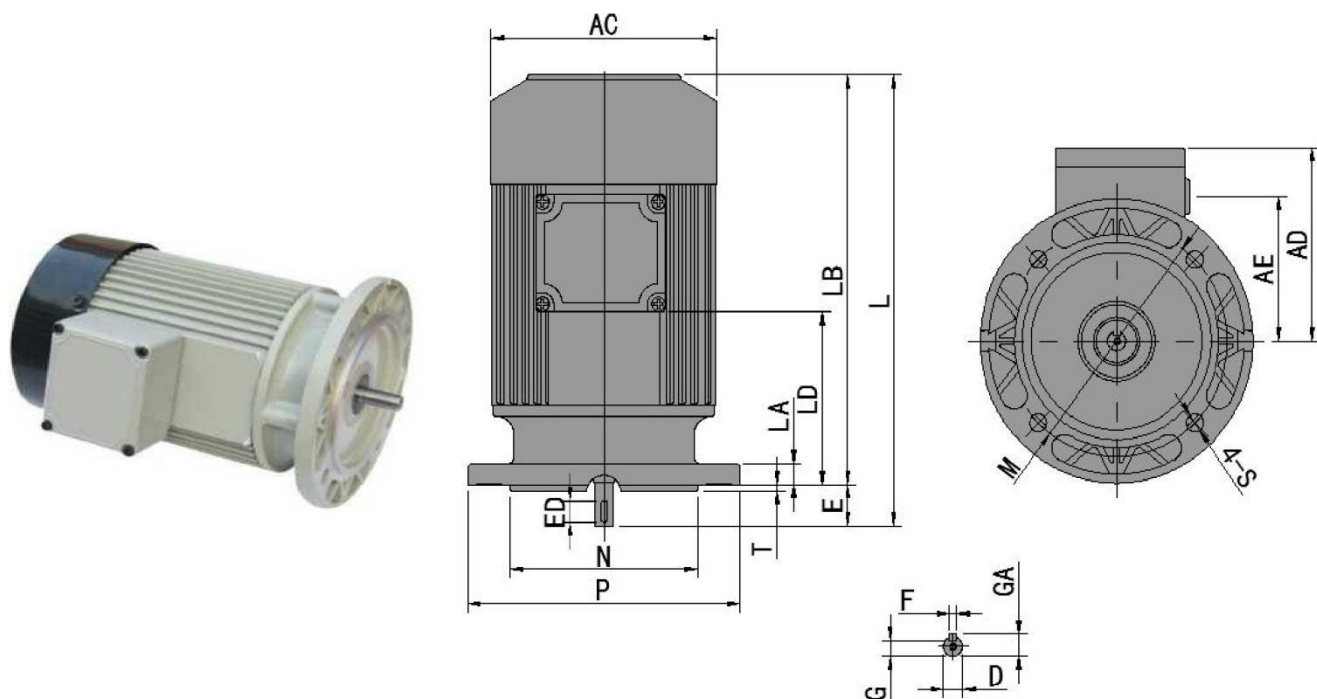
扭力臂 Torque Arm

MODEL	K1	G	KG	KH	R
30	85	12.5	25.5	8	15
40	100	14	35	10	18
50	100	14	38.5	10	18
63	150	14	49	10	18
75	200	25	47.5	20	30
90	200	25	57.5	20	30

鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS

IEC标准B5法兰电机 尺寸参考表

IEC 3-Phase Motor Dimensions For Reference



尺寸表Dimension

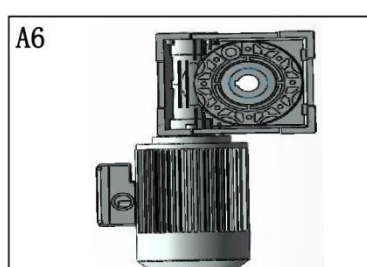
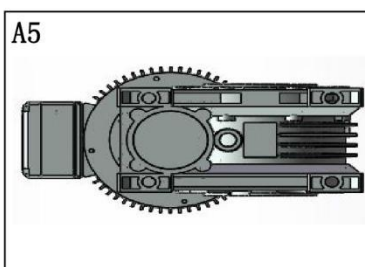
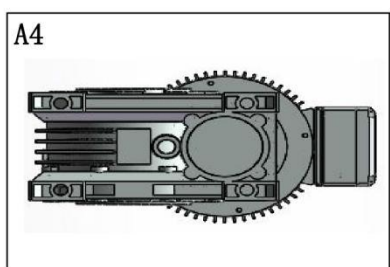
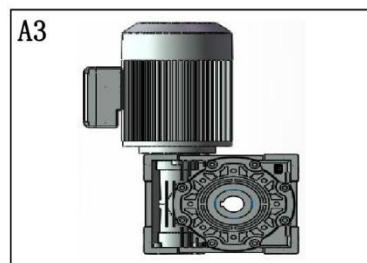
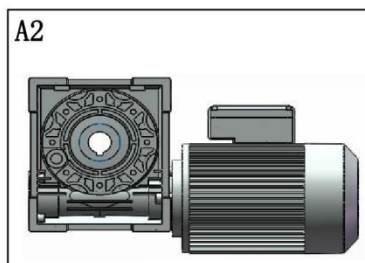
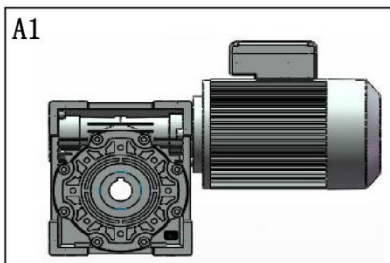
單位: mm

Out Power輸出馬力				AC	AD	AE	KK	L	LA	LB	LD	M	N	P	S	T	Ens Of Shaft軸端					
2P	4P	6P	8P														D	E	ED	F	G	GA
100	100	—	—	132	109	91	20	229	12	206	71	130	110	160	Φ 10	3.5	11	23	12	4	8.5	12.5
200	200	100	—	132	109	91	20	254	12	231	96	130	110	160	Φ 10	3.5	11	23	12	4	8.5	12.5
400	400	200	100	144	117	94	20	270	12	240	45	165	110	160	Φ 10	3.5	14	30	20	5	11	16
750	750	400	200	161	124	101	20	280	12	240	55	165	130	200	Φ 12	3.5	19	40	25	6	15.5	21.5
1500	1500	750	400	180	134	111	20	334	12	284	87	165	130	200	Φ 12	3.5	24	50	32	8	20	27
—	2200	1500	750	180	134	111	20	334	12	284	87	165	130	200	Φ 12	3.5	24	50	32	8	20	27

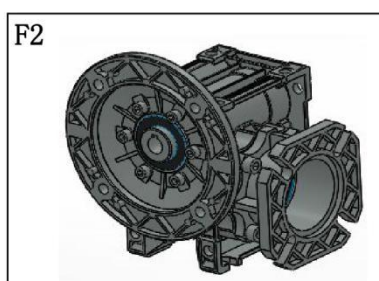
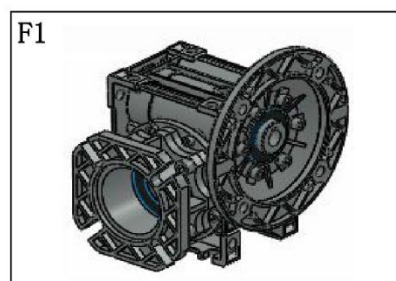


鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCERS

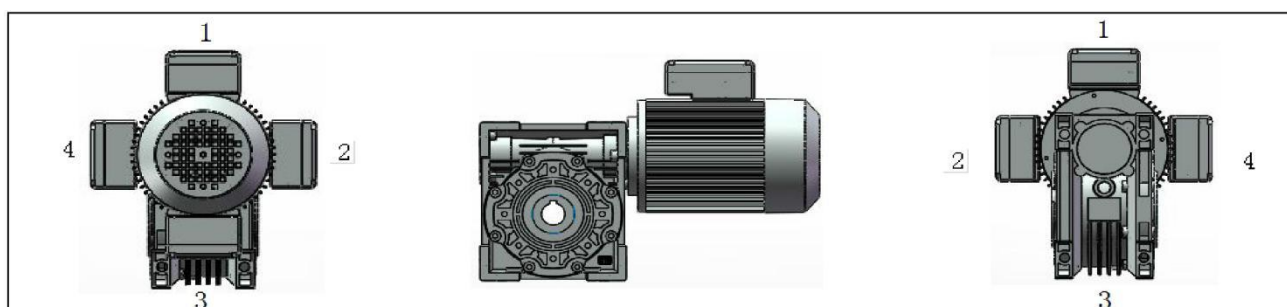
安裝方式 Mounting positions



法蘭位置 Flange F-FL



接線盒安裝方向 Pos. of terminal box



鋁合金蝸輪減速機 ALUMINUM ALLOY WORM REDUCER



CE



CEO



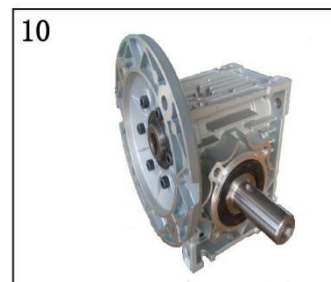
CEOV



CEV



CEVM



CEM



CEOM



CEOVM



CEGOM-30
(40~90微型馬達)



SCEOM



CEGM-30
(40~90微型馬達)



CEGVM-30
(40~90微型馬達)

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