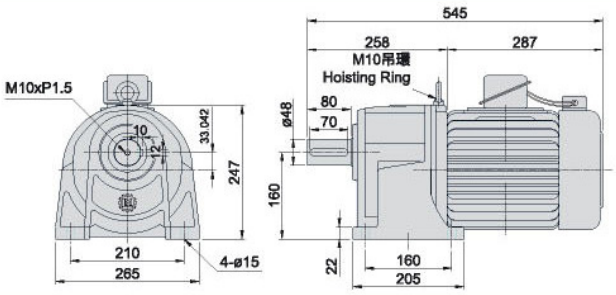
新型減速機系列
NEW STYLE GEAR REDUCER SERIES

停車設備用減速機規格表 SPECIFICATION OF NEW STYLE REDUCER

型號 Model	馬達外殼 Motor Outer Shell	減速比 Ratio	馬力/極數 HP/POLE	頻率Frequency 電壓Voltage	剎車 Brake	重量kg Weight	其它功能 Other Feature
H48B	銑殼 Cast Iron	40 50 60 70 80	3HP/4P	50/60HZ 可選擇: Selection 1.220/440V 2.220/380V	DC Brake	63	
H48C	鋁合金 Aluminum					56	
H48G	鋁合金 Aluminum					57	附機械定位裝置 Mechanical Positioning Devices Are Attached
H310E	銑殼 Cast Iron					63	

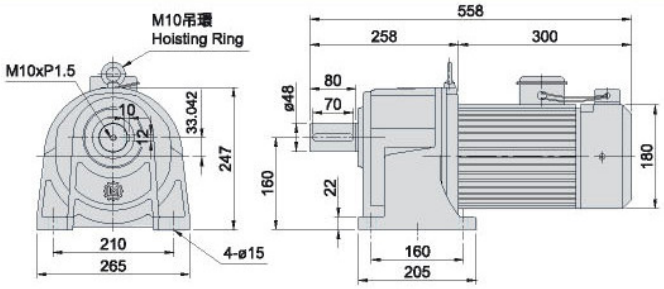
MODEL: LM-H48B



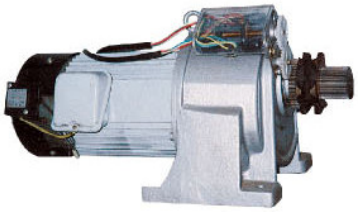


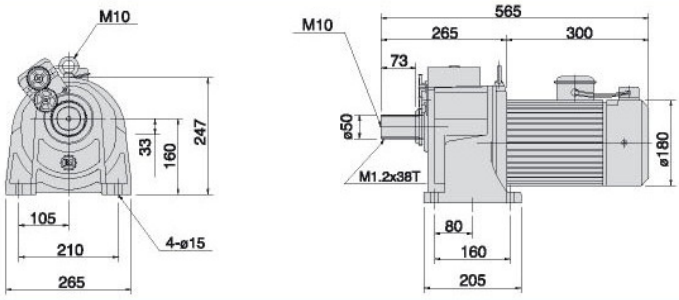
MODEL: LM-H48C





MODEL: LM-H48G





MODEL: HB48



齒輪減速機
GEAR REDUCER

臥式齒輪減速機 HORIZONTAL

B11



STANDARD
標準型H

B15



DOUBLE SHAFT
雙軸型HD

B19



MOTOR PLUG IN
馬達插入式HB

B24



MULTI-STAGE
連結式LSH

B25



MULTI-STAGE DOUBLE SHAFT
連結雙軸式LSHD

B29



NEW STYLE
新樣式

立式齒輪減速機 VERTICAL

B13



STANDARD
標準型V

B17



DOUBLE SHAFT
雙軸型VD

B21



MOTOR PLUG-IN
馬達插入式VB

B26



MULTI-STAGE
連結式LSV

B27



MULTI-STAGE DOUBLE SHAFT
連結雙軸式LSVD

減速機附無段變速
REDUCER WITH VARIATOR

C 2



RCGH

C 3



RCGV

C 4



RCHW

C 6



GRV-H

C 7



GRV-V

C 8



WRV-H

C 9



WRV-V

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- SOLUTIONS AND REASONS FOR THE GENERAL FAULTS OF REDUCTION GEARS.....C11

訂貨須知

- ◆ 機種、型號、馬力
- ◆ 減速比或每分鐘回轉數
- ◆ 回轉方向和出力軸配置
- ◆ 荷重狀況及聯結方式
- ◆ 數量及被安裝的機械名稱
- ◆ 入力方式和入力轉速

Your order shall kindly specify:

- ◆ Type, model and horsepower
- ◆ Reduction gear ratio or rpm
- ◆ Rotating direction and position of output shaft
- ◆ Load and connecting method
- ◆ Quantity and the kind of machine applied
- ◆ Input method and rpm

機種、型式表示
DESCRIPTION OF TYPE & MODEL

LM - H - 205 - I - 20 - A - OH

LM	H	205	I	20	A	OH
公司代號 COMPANY NAME	機型 TYPE	型號 MODEL	馬力 HOUSE POWER	速比 RATIO	馬達 MOTOR	使用方向 OPERATION DIRECTION
		請參閱型號速比一覽表	1/4HP~75HP	二段式 TWO-STAGE 1/3~1/40 三段式 THREE-STAGE 1/40~1/200 連結式 MULTI-STAGE 1/200~1/6000	A 三相 3 PHASE B 煞車 BRAKE C 特殊 SPECIAL S 單相 SINGLE PHASE	

利明牌齒輪減速機馬力型號速比一覽表 Selection Table Of HP & Model

馬力 HP-4P(6P)	型號 MODEL	減速比 RATIO
1/4	201	5 10 15 20 25 30
	203	35 40
	304	50 60 70 80 90 100 110 120 ※150
(1/8)	306	130 140 150 160 170 180 190 200
1/2	202	5 10
	203	10 15 20 25 30
	205	35 40 45 50
	※304	35 40 50 60
	306	60 70 80 90 100 110 120
(1/4)	308	130 140 150 160 170 180 190 200
1	205	5 10 15 20 25 30
	207	35 40
	308	40 50 60 70 80 90 100 110 120
(1/2)	310	130 140 150 160 170 180 190 200
2	206	5 10
	207	15 20 25 30
	209	35 40
	※308	35 40
	310	40 50 60 70 80 90 100 110 120
(1)	312	130 140 150 160 170 180 190 200
3	208	5 10
	209	15 20 25 30
	211	35 40
	※310	40 50 60
	312	50 60 70 80 90 100 110 120
(2)	314	130 140 150 160 170 180 190 200
5	210	5 10
	211	15 20 25 30
	312	40 50※60
	314	60 70 80 90 100 110 120
(3)	315	130 140 150 160 170 180 190 200

馬力 HP-4P(6P)	型號 MODEL	減速比 RATIO
7 1/2	212	5 10
	213	15 20 25 30
	314	35 40 50 ※60
	315	60 70 80 90 100 110 120
(5)	317	130 140 150 160 170 180 190 200
10	212	5 10
	214	15 20 25 30
	315	35 40 50 ※60
	316	60 70 80 90 100 110 120
(7 1/2)	318	130 140 150 160 170 180 190 200
15	213	5 10
	215	15 20 25 30
	316	35 40 50 ※60
	317	60 70 80 90 100 110 120
(10)	318	130 140 150 160 170 180 190 200
20	215	5 10
	216	15 20 25 30
	317	40 50 ※60
	318	60 70 80 90 100 110 120
(15)	319	130 140 150 160 170 180 190 200
25	216	5 10
	217	15 20 25 30
	317	40 50 ※60
	318	60
(20)	319	70 80 90 100 110 120
30	217	5 10 15 20 25 30
	318	40 50 60
	319	70 80 90 100 110 120
40	217	5 10
	218	10 15 20 25 30
(25.30)	319	40 50 60 80 90
50	218	5 10
(40)	219	15 20 25 30
60	218	5 10
(50)	219	10 15 20 30
75	219	5 10
(60)	220	15 20 30

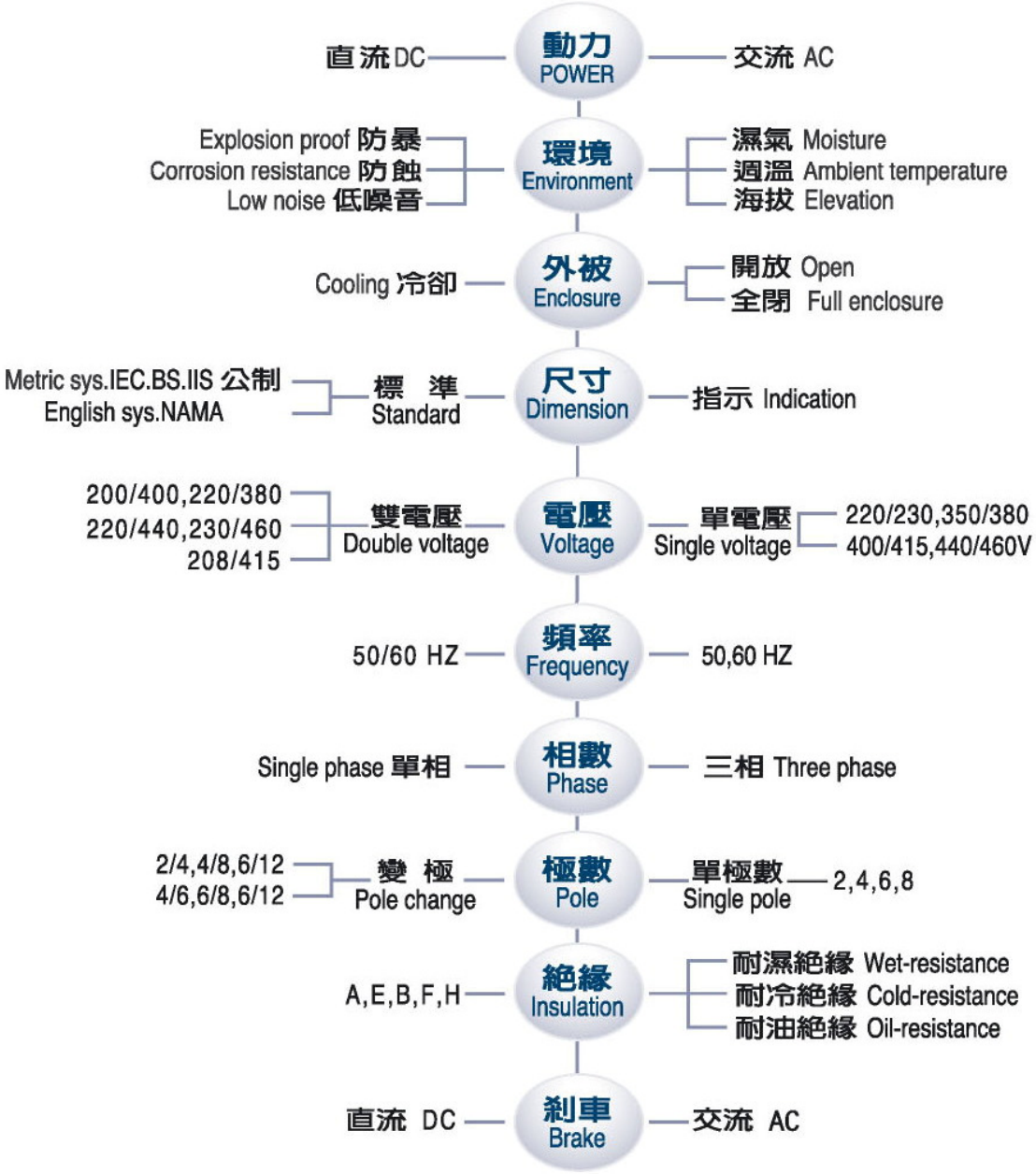
1. 表輕負荷使用 ※Are used for light loading
2. 亦可訂製其他不定速比 Other ratios are available upon request
3. 減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。
   Standard gear ration are 5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200 Others are special specifications.

一般注意事項

- 電源：單相、三相、電壓週率、變壓器容量等。
- 負載機械：所需馬力數，負載轉矩特性。
- 特殊使用條件：
  1.急速逆轉或停止。
  2.起動停止頻繁。
  3.需特別大之起動轉矩。
  4.與往復運動機械連結時。

General Notices

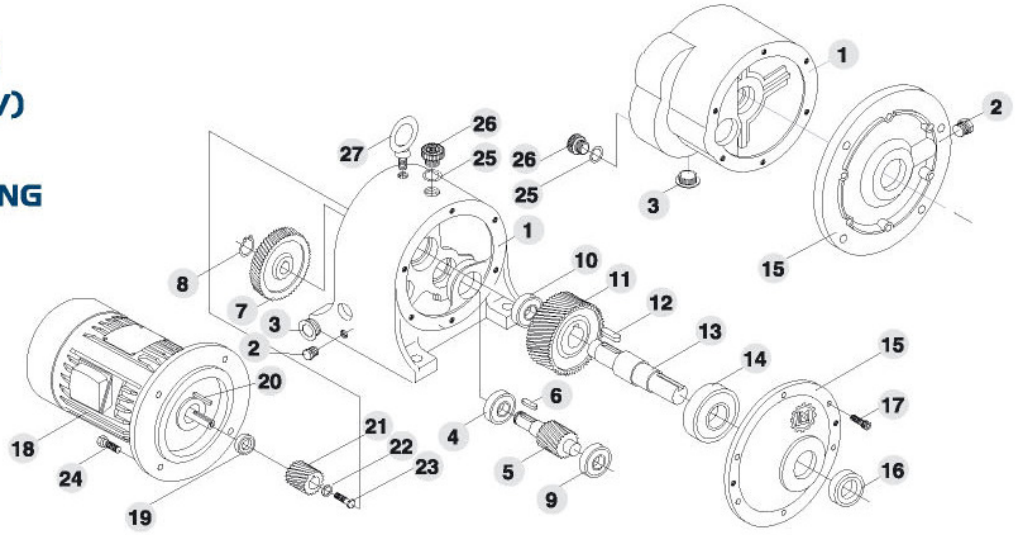
- Electricity: single phase, 3 phase, voltage frequency, capacity of transformer, etc.
- Loading machine: required horse power, load torque characteristics.
- Special Conditions of Use:
  1.Rush reverse or stop.
  2.Frequent start-up or stop.
  3.Specially large start-up torque required.
  4.Where linking with backward traveling machinery.



- 利明牌齒輪減速機之標準品使用低壓、三相感應馬達、IEC尺寸、全封閉外扇鼠籠型轉子。
  LIMING standard gear reducers use low voltage, 3 phase induction motor, IEC dimension, full-enclosed outer fan cage rotor.
- 馬達尺寸請參考「IEC標準馬達尺寸參考表」（第W1頁）

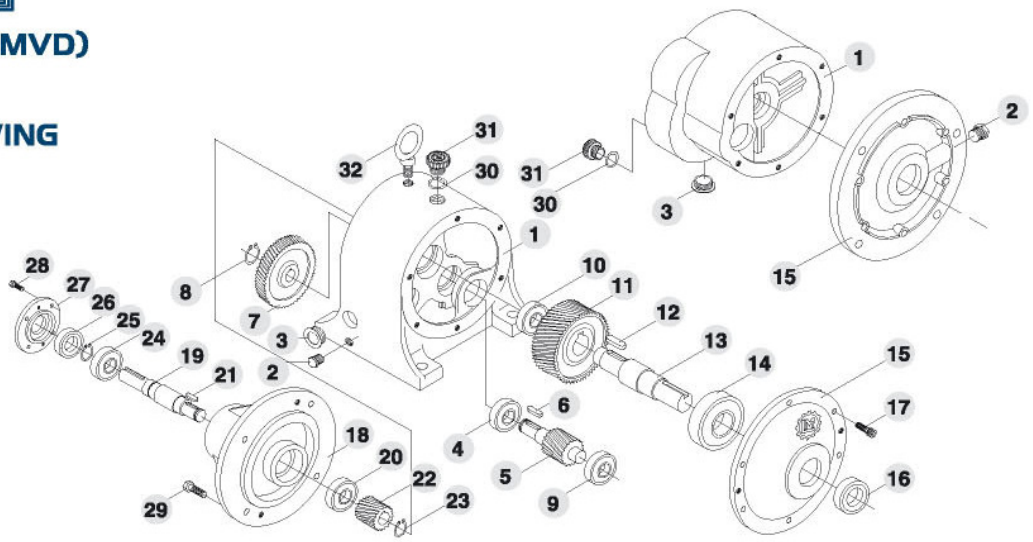
分解系統圖
SYSTEM DRAWING

■ 二段式分解系統圖
■ MODEL:LMH(LMV)
2-STAGE
SYSTEM DRAWING



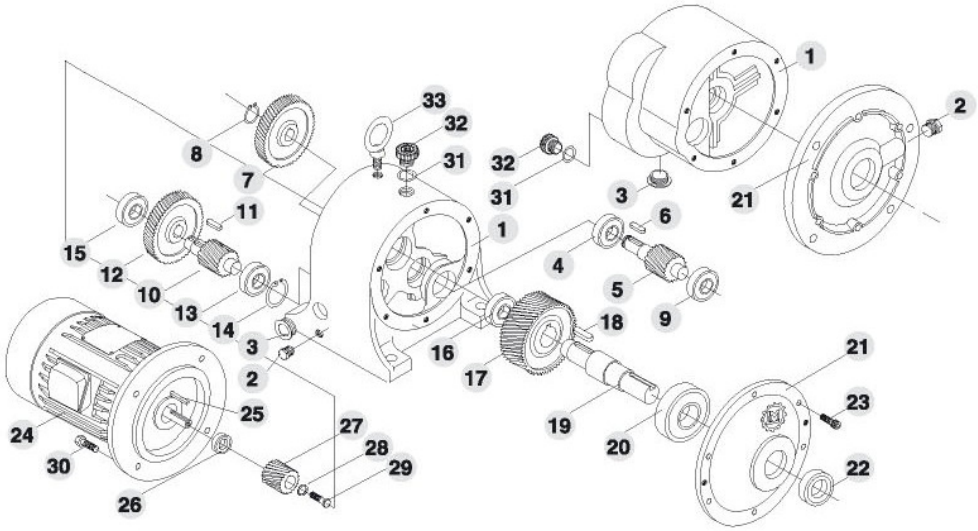
NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS
1	本體 Outer shell	11	D齒輪 Gear	21	A齒輪 Gear
2	排油栓 Drain plug	12	鍵 Key	22	華司(or扣環) Washer or Snap ring
3	油鏡 Oil gauge	13	出力軸 Output Shaft	23	六角螺絲 Hexagon head bolt
4	軸承 Bearing	14	軸承 Bearing	24	六角螺絲 Hexagon head bolt
5	C齒輪軸 Gear shaft	15	前蓋 Front Cover	25	O型環 O ring
6	鍵 Key	16	油封 Oil Seal	26	加油蓋 Oil Plug
7	B齒輪 Gear	17	立式：內六角螺絲 臥式：外六角螺絲 Hex. screw	27	吊環 Hoisting ring
8	扣環 Snap ring	18	馬達 Motor		
9	軸承 Bearing	19	油封 Oil Seal		
10	軸承 Bearing	20	鍵 Key		

■ 二段式分解系統圖
■ MODEL:LMHD(LMVD)
2-STAGE
SYSTEM DRAWING



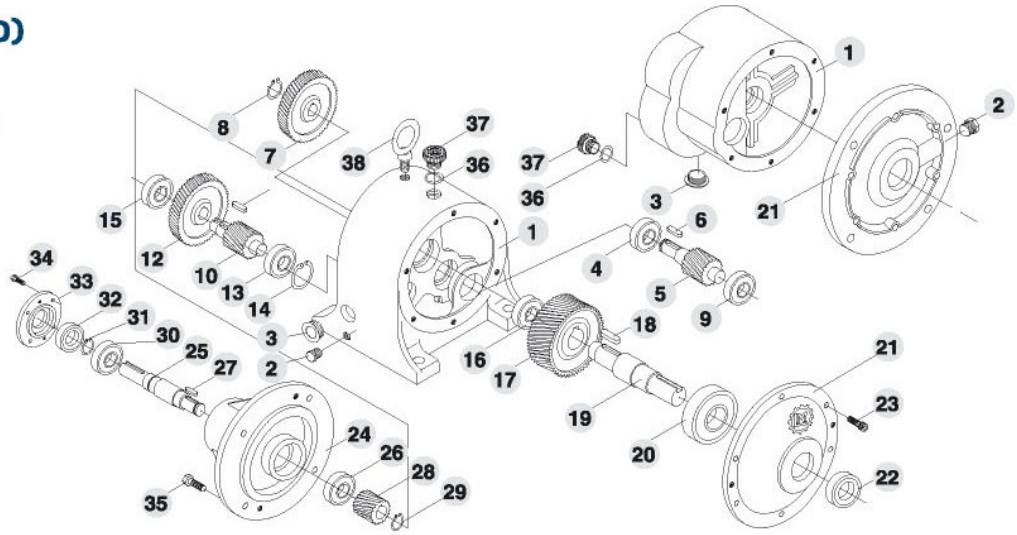
NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS
1	本體 Outer shell	12	鍵 Key	23	扣環 Snap ring
2	排油栓 Drain plug	13	出力軸 Output Shaft	24	軸承 Bearing
3	油鏡 Oil gauge	14	軸承 Bearing	25	扣環 Snap ring
4	軸承 Bearing	15	前蓋 Front Cover	26	油封 Oil Seal
5	C齒輪軸 Gear Shaft	16	油封 Oil Seal	27	小蓋 Small Cover (71/2HP以上使用)
6	鍵 Key	17	立式：內六角螺絲 臥式：外六角螺絲 Hex. screw	28	六角螺絲 Hexagon head bolt
7	B齒輪 Gear	18	入力軸大蓋 Big Cover	29	六角螺絲 Hexagon head bolt
8	扣環 Snap ring	19	入力軸 Input Shaft	30	O型環 O ring
9	軸承 Bearing	20	軸承 Bearing	31	加油蓋 Oil Plug
10	軸承 Bearing	21	鍵 Key	32	吊環 Hoisting ring
11	D齒輪 Gear	22	A齒輪 Gear		

■ 三段式分解系統圖
■ MODEL:LMH(LMV)
3-STAGE
SYSTEM DRAWING



NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS
1	本體 Outer shell	13	軸承 Bearing	25	鍵 Key
2	排油栓 Drain plug	14	R扣環 R Snap ring	26	油封 Oil Seal
3	油鏡 Oil gauge	15	軸承 Bearing	27	A齒輪 Gear
4	軸承 Bearing	16	軸承 Bearing	28	華司(or扣環) Washer or Snap ring
5	C齒輪軸 Gear Shaft	17	D齒輪 Gear	29	六角螺絲 Hexagon head bolt
6	鍵 Key	18	鍵 Key	30	六角螺絲 Hexagon head bolt
7	B'(F)齒輪 Gear	19	出力軸 Output Shaft	31	O型環 O ring
8	扣環 Snap ring	20	軸承 Bearing	32	加油蓋 Oil Plug
9	軸承 Bearing	21	前蓋 Front Cover	33	吊環 Hoisting ring
10	A'(E)齒輪軸 Gear Shaft	22	油封 Oil Seal		
11	鍵 Key	23	立式：內六角螺絲 臥式：外六角螺絲 Hex. screw		
12	B齒輪 Gear	24	馬達 Motor		

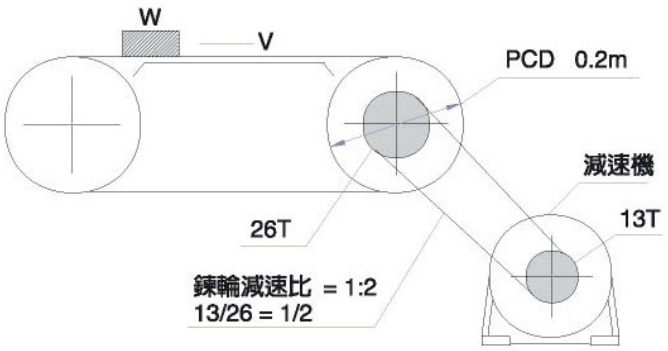
■ 三段式分解系統圖
■ MODEL:LMHD(LMVD)
3-STAGE
SYSTEM DRAWING



NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS	NO.	零件名稱 NAME OF PARTS
1	本體 Outer shell	14	R扣環 R Snap ring	27	鍵 Key
2	排油栓 Drain plug	15	軸承 Bearing	28	A齒輪 Gear
3	油鏡 Oil gauge	16	軸承 Bearing	29	扣環 Snap ring
4	軸承 Bearing	17	D齒輪 Gear	30	軸承 Bearing
5	C齒輪軸 Gear Shaft	18	鍵 Key	31	扣環 Snap ring
6	鍵 Key	19	出力軸 Output Shaft	32	油封 Oil Seal
7	B'(F)齒輪 Gear	20	軸承 Bearing	33	小蓋 Small Cover (71/2HP以上使用)
8	扣環 Snap ring	21	前蓋 Front Cover	34	六角螺絲 Hexagon head bolt
9	軸承 Bearing	22	油封 Oil Seal	35	六角螺絲 Hexagon head bolt
10	A'(E)齒輪軸 Gear Shaft	23	立式：內六角螺絲 臥式：外六角螺絲 Hex. screw	36	O型環 O ring
11	鍵 Key	24	入力軸大蓋 Big Cover	37	加油蓋 Oil Plug
12	B齒輪 Gear	25	入力軸 Input Shaft	38	吊環 Hoisting ring
13	軸承 Bearing	26	軸承 Bearing		

減速機之選定範例
EXAMPLE OF SELECTION

例一：Example I



- 搬運物總重量：W=600kg
- 搬送速度：V=9.5m/min
- 與導軌之摩擦係數：μ=0.15
- 鍊輪傳動效率：η_1=0.95
- 減速機傳動效率：η_2=0.9
- 運轉時間：8小時／日
- 起動次數：1回／分，中衝擊
- 使用電源：三相220V, 60Hz

- Total weight of cargo:W=600kg
- Carrying speed:V=9.5m/min
- Friction coefficient to guiding rail: μ=0.15
- Chain pulley transmission coefficient: η 1=0.95
- Gear reducer transmission coefficient: η 2=0.9
- Operation time: 8 hour/day
- Start frequency:1 time/min.,medium shock
- Power: 3 phase 220V, 60Hz

減速比 Ratio

選定之注意事項 Notices Calculation Example

藉由必要的入力軸回轉數及出力軸回轉數來選定減速比
1.先求出輸送帶滾輪回轉數(N1)
N1＝搬送速度／（滾輪直徑×π）
2.再求出減速機出力軸回轉數(N2)
N2＝N1×（鍊輪齒數／減速機齒數）
3.以3ø,60Hz之馬達計算減速比(τ)
τ＝出力軸回轉數／入力軸回轉數（馬達轉速N）

Reduction Ratio Notices Calculation Example The reduction ratio is based on input/output shaft revolutions.
1.Find the revolution of conveyer pulley (N1) first N1=carrying speed/(pulley D x π)
2.Find the output shaft revolution of gear reducer (N2) N2= N1 x (chain pulley speed/gear number of reducer)
3.Calculate reduction ratio(τ) based on 3ø,60Hz motor τ=output shaft revolution/input shaft revolution motor rpm N)

計算範例 Load Condition Notices Calculation Example

1. N1 = V / (D x π) = 9.5 / (0.2 x 3.14) = 15 r/min (RPM)

2. N2 = N1 x (26 / 13) = 15 x 2/1 = 30 r / min (RPM)

3. τ = N2 / N = 30 / 1800 = 1 / 60
（馬達轉速，motor RPM , input rpm ）

扭力 Torque

選定之注意事項 Notices Calculation Example

決定減速比後，由使用機械之條件換算其扭力
1.先算出輸送帶滾輪之扭力(T1) T1＝(μ×荷重×滾輪半徑)／η 1
2.再換算成減速機出力軸所須扭力(T2) T2＝(T1×鍊輪減速比)／η 2

Torque Notices Calculation Example
After reduction ratio is decided, calculate the torque by the pulley reducers radius condition of the machine used.
1. Find the torque of conveyer pulley (T1) T1= (μ x load x pulley radius) / η 1
2. Find the torque needed from the output shaft of reducer (T2) T2= (T1 x reduction ratio of chain pulley) η 2

計算範例 Load Condition Notices Calculation Example

1.T1 = μ x W (D / 2) / η 1
= 0.15 x 600 x (0.2 / 2) / 0.95 = 9.5 kgf-m

2.T2 = (T1 x 1/2) / η 2
=(9.5 x 1/2) / 0.9 = 5.28 kgf-m

負荷條件 Load conditions

選定之注意事項 Notices Calculation Example

原動機 Prime Mover	傳動機負荷等級 Driven machine Load Classification	每日使用時間 Duration of Service per day 0.50 hr	2 hrs	8-10 hr	10-24 hr
電動機 Electric Motor	均一負荷 Uniform	0.80	0.90	1.00	1.25
	中衝擊 Medium Shock	0.90	1.00	1.25	1.50
	重衝擊 Heavy Shock	1.00	1.25	1.50	1.75

補正扭力＝減速機出力軸扭力×系數
Corrective torque = reducer shaft torque x coefficient

計算範例 Load Condition Notices Calculation Example

$T_3 = T_2 \times K$
= 5.28 x 1.25 = 6.6 kgf-m

馬力 Horse Power

選定之注意事項 Notices Calculation Example

1.最後換算成馬力(Hp) Hp＝(補正扭力×出力軸轉數)／716.2
1. Find horse power (Hp) Hp=(corrective torque x revolution of utput shaft) / 716.2

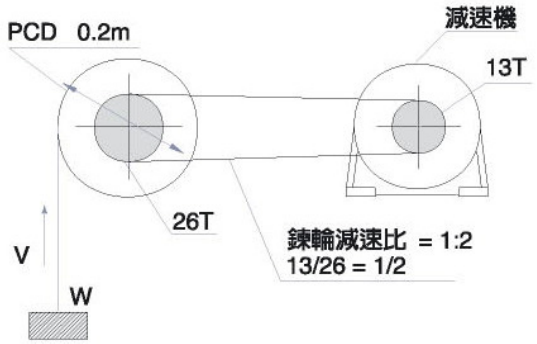
計算範例 Load Condition Notices Calculation Example

Hp = (T3 x N2) / 716.2 = (6.6 x 35) / 716.2 = 0.3
1/2Hp 馬達適用(For 1/2 Hp motor)

型號選定 Model Selected

根據本目錄之型號速比對照表1/2Hp、減速比1/60，型號306適用。
According to the model-reduction ratio reference table,model 306, 1/2 Hp, reduction ratio 1/60 are selected.

例二：Example 2



- 搬運物總重量：W=600kg
- 搬送速度：V=9.5m/min
- 鍊輪傳動效率：η_1=0.95
- 減速機傳動效率：η_2=0.9
- 運轉時間：8小時／日
- 起動次數：1回／分，中衝擊
- 使用電源：三相220V, 60Hz
- Total weight of cargo:W=600kg
- Carrying speed:V=9.5m/min
- Chain pulley transmission coefficient: η 1=0.95
- Gear reducer transmission coefficient: η 2=0.9
- Operation time: 8 hour/day
- Start frequency:1 time/min.,medium shock
- Power: 3 phase 220V, 60Hz

減速比 Ratio	選定之注意事項 Notices Calculation Example	計算範例 Load Condition Notices Calculation Example
	藉由必要的入力軸回轉數及出力軸回轉數來選定減速比 1.先求出輸送帶滾輪回轉數(N1) N1＝搬送速度／（滾輪直徑×π） 2.再求出減速機出力軸回轉數(N2) N2＝N1×鍊輪齒數減速比 3.以3ø,60Hz之馬達計算減速比(τ) τ＝出力軸回轉數／入力軸回轉數（馬達轉速N） Reduction Ratio Notices Calculation Example The reduction ratio is based on input/output shaft revolutions. 1.Find the revolution of conveyer pulley (N1) first N1=carrying speed/ (pulley D xπ) 2.Find the output shaft revolution of gear reducer (N2) N2= N1 x (chain pulley speed/gear number of reducer) 3.Calculate reduction ratio(τ)based on 3ø,60Hz motor τ=output shaft revolution/input shaft revolution motor rpm N)	1. N1 = V / (D xπ) =9.5 / (0.2 x 3.14) = 15 r/min 2. N2 = N1 / i = 15 / (2/1) = 30 r / min 3. τ = 出力軸回轉數／入力軸回轉數 = 30 / 1800 = 1 / 60 （馬達轉速）
扭力 Torque	**選定之注意事項 Notices Calculation Example**	**計算範例 Load Condition Notices Calculation Example**
	決定減速比後，由使用機械之條件換算其扭力 1.先算出輸送帶滾輪之扭力(T_1) T_1＝(μ×荷重×滾輪半徑)／η 1 2.再換算成減速機出力軸所須扭力(T_2) T_2＝(T_1×鍊輪減速比)／η 2 Torque Notices Calculation Example After reduction ratio is decided, calculate the torque by the condition of the machine used. 1. Find the torque of conveyer pulley (T_1) T_1= (μ x load x pulley radius) / η 1 2. Find the torque needed from the output shaft of reduce(T_2) T_2= (T_1x reduction ratio of chain pulley) η 2	1. T_1 = W (D/2) x (1/η 1) = 600 x (0.2/2) = 60 kg-m 2. T_2 = T_1 x 1/2 x 1/η 2 = 60 x 1/2 x 1/0.9 = 33.3 kg-m
負荷條件 Load conditions	**選定之注意事項 Notices Calculation Example**	**計算範例 Load Condition Notices Calculation Example**
	1.根據運轉條件算出補正扭力(T3) T3＝T2×運轉條件（系數K） 1. Find corrective torque (T3) according to operation condition T3=T2 x operation condition (coefficient K)	T_3 = T2 x K = 33.3 x 1 = 33.3 kgf-m
馬力 Horse Power	**選定之注意事項 Notices Calculation Example**	**計算範例 Load Condition Notices Calculation Example**
	1.最後換算成馬力(Hp) Hp=(T x N) / 716.2 1.Find horse power (Hp) Hp=(T x N) / 716.2	Hp = (T x N) / 716.2 = (33.3 x 30) / 716.2 = 1.39 .....(2HP)
型號選定 Model Selected	根據本目錄之型號速比對照表2HP、減速比1/60，型號310適用。 According to the model-reduction ratio reference table,model 310, 2 HP, reduction ratio 1/60 are selected.	

常用的公式集 Frequently Used Formula

欲知的條件 Intended Conditions		已知的條件 Known Conditions	公式 Formula	
扭力(Torque)	T	動力(F)與半徑(R) / 馬力(Hp)與回轉數(N)(r.p.m.)	T = F x R	(kgf-m)
扭力(Torque)	T	動力(Kw)與回轉數(N)(r.p.m.) / 扭力(T)與回轉數(N)(r.p.m.)	T = (716 x Hp) / N	(kgf-m)
扭力(Torque)	T	扭力(T)與回轉數(N)(r.p.m.) / 重力(F)與速度(V)(m/sec)	T = (974 x Kw) / N	(kgf-m)
馬力(Horse Power)	Hp	重力(F)與速度(V)(m/sec) / 齒輪、皮帶輪等的直徑(D)與回轉速(N)(r.p.m)	Hp = (T x N) / 716.2	（馬力）
動力(Power)	Kw	入力回轉數(N1)與出力回轉數(N2)	Kw = (T x N) / 974	（千瓦）
馬力(Horse)	Hp	Power(F) & Radius (R) Horse power(Hp) & Revolution(N)(r.p.m.)	Hp = (F x V) / 75	（馬力）
動力(Power)	Kw	Power (Kw) & Revolution(N)(r.p.m.) / Torque (T) & Revolution(N)(r.p.m.)	Kw = (F x V) / 102	（千瓦）
速度(Velocity)	V	Torque (T) & Revolution(N)(r.p.m.) / Gravity (F) & Velocity (V) (m/sec)	V = (π x D x N) / 60	(m/sec)
減速比(Reduction Ratio)	i	Gravity (F) & Velocity (V) (m/sec)	i = N1 / N2	
		Diameter (D)of gear and belt pulley & revolution (N) (r.p.m.) Input shaft revolution (N1) & Output / shaft revolution (N2)		

■ 減速機安裝
Usage and Installation

使用前檢查

◆檢查機種、型號、馬力、軸方向、減速比回轉方向及入力軸出力軸回轉數是否符合。
◆注意檢查注油情況，先確定是否有油，並保持油量在油面計一半以上。

場所

◆須裝置於平且堅固的底部。
◆安裝之環境須乾燥且通風良好，周圍溫度0°C～40°C異常高溫或低溫時請註明。
◆使用前請拔掉加油蓋上的插梢。

連結方式

◆當聯接器用以聯接入力或出力軸時，須確實固定並務使兩軸平行，底座須以適當螺栓，確保固鎖緊密。
◆所有配備均應輕裝於軸上，勿使用鐵鎚，並避免裝配過緊而引起軸承損壞。
◆滑輪、鏈輪或齒輪在裝配時應盡量靠近軸承以減少彎曲應力。使用適當大小（在出力軸徑的6倍以內）與出力軸連接之鍊輪，皮帶輪等請配合H7公差使用，可避免發出異聲與軸面受損。
◆VB、HB型入力孔可加添適當黃油，避免孔徑過度磨損及發出異聲。
◆軸面可塗上防鏽塗料避免生鏽。

馬達

◆電源電壓變動大於10%時，馬達會有燒燬之虞，並使出力軸扭力降低或異常。
◆馬達超負荷使用有燒燬之虞。
◆馬達結線錯誤會導致馬達燒燬。
◆濕氣過重的環境會使煞車馬達的煞車器產生鏽蝕，失去煞車功能。
◆搭配變頻器使用時，如常使用於低頻，請使用變頻專用馬達。

CHECK BEFORE OPERATING

◆ Check if the model, model No., horse power, shaft direction, reduction ratio, revolution direction and input/output shaft revolutions are in accordance with the standard.
◆ Check carefully the oil level to make sure that the oil volume is sufficient and maintains above the middle of oil gauge.

PLACE

◆ A flat and solid base is one of the requirements for installation.
◆ The environment for installation shall be dry and well ventilated, with ambient temperature at 0°C to 40°C. Abnormal high or low temperature shall be dedicated.
◆ Please pull the pin out of the oil lid before use.

CONNECTING METHOD

◆ If coupler is used to connect input or output shaft, make sure they are firmly fixed and paralleled. The base seat shall be anchored with proper bolts.
◆ All of the components shall be properly assembled to the shaft. Avoid hammering and over-tight assembly which could damage the bearing.
◆ The pulley, chain pulley and gear shall be assembled as close to the bearing as possible to minimize the curving stress. The chain pulley and belt pulley used to connect the output shaft shall be properly chosen (within 6 times as large as the diameter of output shaft) and used in accordance with H7 tolerance so as to keep out of abnormal noise and harm to the shaft surface.
◆ Proper amount of grease can be applied to VB and HB input hole to ensure the hole against over-wearing and making abnormal noise.
◆ The application of anti-rust paint can keep the shaft from rusting.

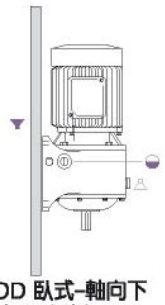
MOTOR

◆ The voltage variation over 10% could cause motor to burn out and reduce the torque of output shaft.
◆ Motor is subject to damage due to overload.
◆ Improper connection could cause motor to burn out.
◆ High-moisture environment could cause the brake of motor rusted and disabled.
◆ An appropriate motor shall be applied with the frequency converter while the low frequency is required in usual condition.

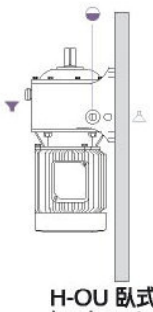
■ 減速機使用方向 Application of Gear Reducer

正常的使用方向可使減速機保持較高的壽命，非不得已的情況下盡量不要採用H-OU或V-OU的方式，因入力軸端的油封在高速運轉下，較出力軸端的油封容易損壞，而導致潤滑油由油封滲出，如須採用請註明，以特別處理。

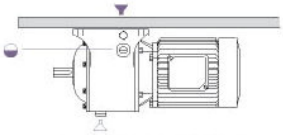
The life time of gear reducer can be prolong with proper operation. Unless otherwise specified, H-OU or V-OU types of operation shall be avoid as much as possible, because the oil seal of input shaft could damage more easily than output shaft and thus result in leakage of lubricant.



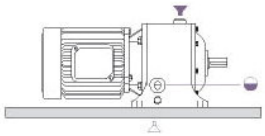
H-OD 臥式-軸向下
horizontal type-
shaft downward



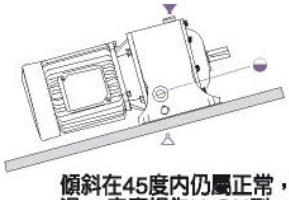
H-OU 臥式-軸向上
horizontal type-
shaft upward



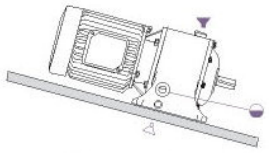
H-R 臥式-反向安裝
horizontal type -
inverse installation



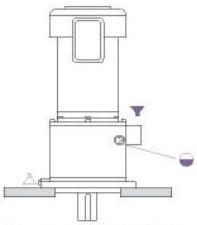
H-OH 臥式-軸水平
horizontal type -
shaft horizontal



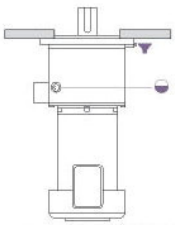
傾斜在45度內仍屬正常，超過45度應視為H-OU型。
Slope over 45° is regarded as H-OU type.



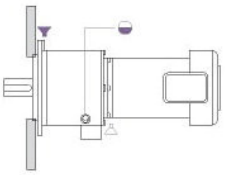
傾斜在45度內仍屬正常，超過45度應視為H-OD型。
Slope over 45° is regarded as H-OD type.



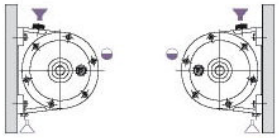
V-OD 立式-軸向下
vertical type -
shaft downward



V-OU 立式-軸向上
vertical type -
shaft upward



V-OH 立式-軸水平
vertical type -shaft horizontal



側壁安裝
install on side wall

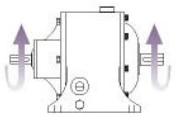
▼ 加油 Oil plug　● 油鏡 Oil gauge　△ 洩油 Oil drain

出力軸迴轉方向

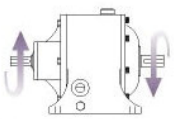
二段式齒輪減速機的迴轉方向與入力的方向相同，三段式齒輪減速機的迴轉方向與入力的方向相反。

Revolving Direction of Output Shaft

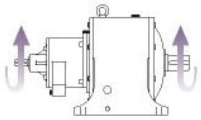
2-stage gear reducer revolves in the same direction as the input shaft, while 3-stage gear reducer does in the opposite direction.



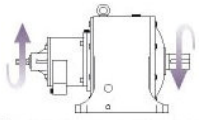
二段式 (2-STAGE) 1/5~1/30



三段式 (3-STAGE) 1/40~1/200



連結式 (LINK STAGE) 1/210~1/600



連結式 (LINK STAGE) 1/610~1/6000

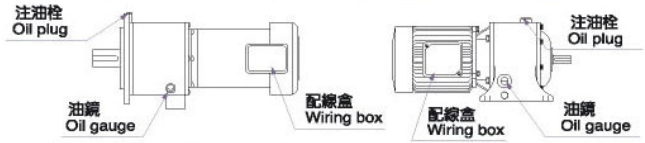
馬達配線盒位置

安裝方向注意潤滑油加油便利，油量計可看見且配線容易，正常情況下，附馬達之減速機其配線盒位置和油鏡，油蓋位置如下圖，如有不同時，請註明。

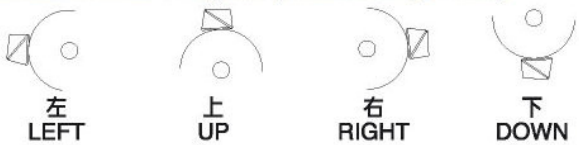
Position of Motor Wiring Box

Be aware that the installation direction of wiring box shall facilitate the filling of lubricant, the visibility of oil level and wiring. In normal condition, the positions of motor wiring box, oil gauge and oil lid is as shown below, unless otherwise specified.

■標準配線盒及油鏡，加油口位置
Standard positions of wiring box, oil gauge, and oil fillingentrance.



■馬達配線盒之選擇（以出力軸為準）
Selection of motor wiring box (based on output shaft)



潤滑油之選定

適當潤滑油的黏度，須使齒輪磨擦容易，遇高負荷及衝擊負荷時，減速機才能充分發揮其機能。下表即"利明牌"減速機潤滑油的選定：

SELECTION OF LUBRICANT OIL

Proper viscosity of lubricant is contributive to ease the friction of gears, so the speed reducer can fully apply its function in the case of high load or impact load. The table below shows the selection of lubricants for LI-MING speed reducers:

荷重 (LOAD)	周圍溫度 Ambient Temperature	中國石油 KUO-KUANG BRAND	SHELL OIL	MOBIL OIL	ISO VG
普通荷重 COMMON LOAD	- 5°C ～ 20°C	國光牌極壓機油 HD-150	OMALA OIL 150	MOBIL GEAR 629	ISO VG EP 150
	20°C ～ 40°C	國光牌極壓機油 HD-320	OMALA OIL 320	MOBIL GEAR 632	ISO VG EP 320
	40°C ～ 80°C	國光牌極壓機油 HD-460	OMALA OIL 460	MOBIL GEAR 634	ISO VG EP 460
超荷重 HEAVY LOAD	- 3°C ～ 20°C	國光牌極壓機油 HD-320	OMALA OIL 320	MOBIL GEAR 632	ISO VG EP 320
	20°C ～ 40°C	國光牌極壓機油 HD-460	OMALA OIL 460	MOBIL GEAR 634	ISO VG EP 460
	40°C ～ 80°C	國光牌極壓機油 HD-680	OMALA OIL 680	MOBIL GEAR 636	ISO VG EP 680

注意事項：

1. 本公司出廠減速機，使用國光牌極壓機油 HD-460。
2. 最初使用100小時後，洗淨內部、換上新油以後每2500小時換油。
3. 在高速、高溫、低速、重荷重、強制潤滑等特殊情況下使用場合，請與本公司洽商。
4. 潤滑油不足可能導致噪音和齒輪快速磨損。
5. 潤滑油過多可能導致漏油。
6. 請加入適當潤滑油至油量計一半以上（請參考下一頁油量表）。

NOTICE:

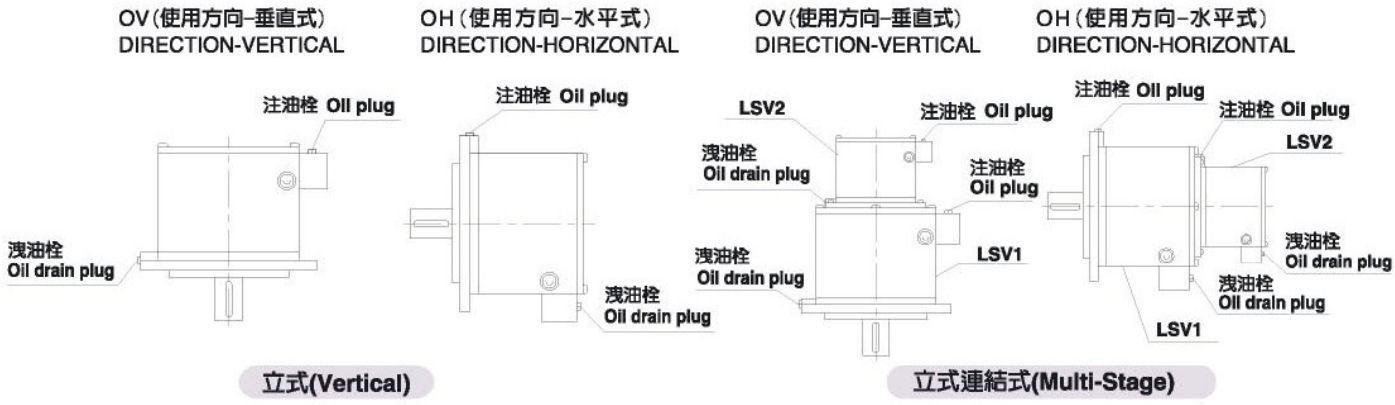
1. LI-MING gear reducers use Kuo-Kuang Brand engine oil HD-460.
2. After initial 100 hours of usage, replace with new lubricant; then, do it every 2500 hours.
3. If to use in the special conditions, such as high speed, high temperature, low speed, heavy load, and forced lubrication, please contact our company.
4. Insufficiency of lubricant could cause noise and fast abrasion of gears.
5. Excessive of lubricant could lead to oil leakage.
6. Please fill proper lubricant above half position of the oil gauge. (see "OIL CAPACITIES" next page)

油量表：

立式減速機依使用方向的不同而使用不同的油量，而油鏡及洩油孔位置亦不同，訂貨時請註明使用方向。臥式減速機之油量請參考尺寸表。

OIL CAPACITIES:

The capacity of lubricant oil and the positions of oil gauge and drain hole for the vertical speed reducers are based on use direction.
Please indicate the intended use direction when ordering.
Please refer to the table below for the lubricant oil



立式(Vertical)　　立式連結式(Multi-Stage)

油量表(Oil capacities)　單位：公升(UNIT: ℓ)

TYPE / 方向 / MODEL	LM-V		LM-VD		LM-VB	
	OH	OV	OH	OV	OH	OV
201	0.3	0.5	0.3	0.5	0.3	0.5
202	0.3	0.5	0.3	0.5	0.3	0.5
203	0.5	1.0	0.5	1.0	0.5	1.0
205	1.0	2.0	1.0	2.0	1.0	2.0
206	1.0	2.0	1.0	2.0	1.0	2.0
207	1.5	3.0	1.5	3.0	1.5	3.0
208	1.5	3.0	1.5	3.0	1.5	3.0
209	2.0	4.0	2.0	4.0	2.0	4.0
210	2.0	4.0	2.0	4.0	2.0	4.0
211	3.0	8.0	3.0	8.0	3.0	8.0
212	3.0	8.0	3.0	8.0	3.0	8.0
213	5.0	12	5.0	12	5.0	12
214	5.0	12	5.0	12	5.0	12
215	8.0	20	8.0	20	8.0	20
216	8.0	20	8.0	20	8.0	20
217	10	24	10	24	10	24
218	12	30	12	30	12	30
304	0.5	1.0	0.5	1.0	0.5	1.0
306	1.0	2.0	1.0	2.0	1.0	2.0
308	1.5	3.0	1.5	3.0	1.5	3.0
310	2.0	4.0	2.0	4.0	2.0	4.0
312	3.0	8.0	3.0	8.0	3.0	8.0
314	5.0	12	5.0	12	5.0	12
315	8.0	20	8.0	20	8.0	20
316	8.0	20	8.0	20	8.0	20
317	10	24	10	24	10	24
318	12	30	12	30	12	30

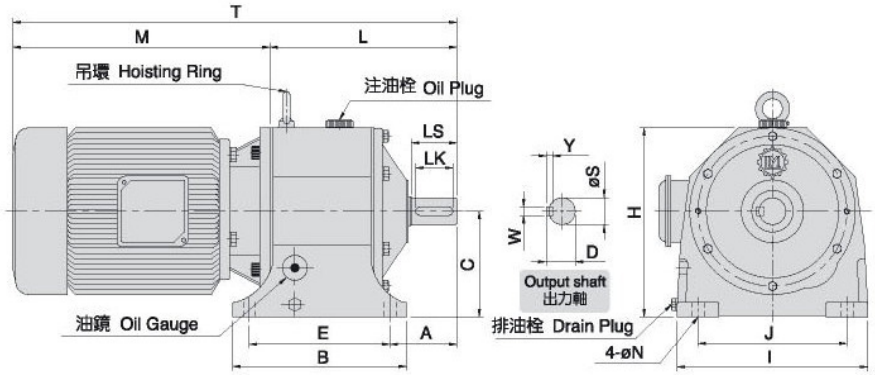
油量表(Oil capacities)　單位：公升(UNIT: ℓ)

TYPE / 方向 / MODEL	LM-LSV				LM-LSVD			
	OH		OV		OH		OV	
	LSV1	LSV2	LSV1	LSV2	LSV1	LSV2	LSV1	LSV2
406	0.8	0.3	2.0	0.5	1.0	0.3	2.0	0.5
408	1.5	0.5	3.0	1.0	1.5	0.5	3.0	1.0
410	2.0	1.0	4.0	2.0	2.0	1.0	4.0	2.0
412	3.0	1.0	8.0	2.0	3.0	1.0	8.0	2.0
414	5.0	2.0	12	4.0	5.0	2.0	12	4.0
416	8.0	2.0	20	4.0	8.0	2.0	20	4.0
417	10	3.0	24	8.0	10	3.0	24	8.0
418	12	3.0	30	8.0	12	3.0	30	8.0
508	1.5	0.5	3.0	1.0	1.5	0.5	3.0	1.0
510	2.0	1.0	4.0	2.0	2.0	1.0	4.0	2.0
512	3.0	1.0	8.0	2.0	3.0	1.0	8.0	2.0
514	5.0	1.0	12	3.0	5.0	1.0	12	3.0
516	8.0	2.0	20	4.0	8.0	2.0	20	4.0
517	10	3.0	24	8.0	10	3.0	24	8.0
518	12	3.0	30	8.0	12	3.0	30	8.0
610	2.0	1.0	4.0	1.0	2.0	1.0	4.0	1.0
612	3.0	1.0	8.0	2.0	3.0	1.0	8.0	2.0
614	5.0	1.0	12	3.0	5.0	1.0	12	3.0
616	8.0	2.0	20	4.0	8.0	2.0	20	4.0
617	10	3.0	24	8.0	10	3.0	24	8.0
618	12	3.0	30	8.0	12	3.0	30	8.0

■ 臥式減速機 HORIZONTAL TYPE REDUCER

■ MODEL： H





■ 二段式 2 - STAGE

■ 減速比 RATIO 1/3~1/30

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	M	L	T	H	C	A	腳座 FOOT STOCK					出力軸 OUTPUT SHAFT				重量 Weight (KG)	油量 Oil (l)
									E	J	B	I	N	D	LS	S	W x Y x LK		
★H-201	1/4	3~30	225	165	390	170	90	53	125	140	155	180	10	21	38	19	5x5x30	9	0.5
★H-202	1/2	3~10	248	172	420	170	90	60	125	140	155	180	10	27	45	24	7x7x35	9	0.5
H-203	1/4 1/2	31~50 11~30	225 248	180	405 428	190	110	62	135	145	167	190	13	27	45	24	7x7x35	12	0.7
H-205	1/2 1	31~50 3~30	248 242	231 222	479 464	227	127	77	170	180	210	230	15	31	50	28	7x7x40	22	1
H-206	2	3~10	322	226	548	227	127	80	170	180	210	230	15	35	55	32	10x8x45	22	1
H-207	1 2	31~40 11~30	242 322	254	496 579	253	145	80	205	195	245	255	15	35	55	32	10x8x45	28	1.4
H-208	3	3~10	315	262	577	265	145	87	205	195	245	255	15	41	60	38	10x8x50	29	1.4
H-209	2 3	31~40 11~30	322 315	290 279	612 594	289	164	88	215	215	265	295	19	41	60	38	10x8x50	42	2
H-210	5	3~10	371	283	654	289	164	92	215	215	265	295	19	45	65	42	12x8x55	42	2
H-211	3 5	31~40 11~30	315 371	325	640 696	332	192	109	250	270	310	340	19	51	75	48	12x8x65	63	3
H-212	7 1/2 10	3~10 3~10	374 412	325	699 737	332	192	109	250	270	310	340	19	51	75	48	12x8x65	63	3
H-213	7 1/2 15	11~30 3~10	374 498	385	759 883	385	210	126	310	310	380	410	22	60	80	56	15x10x70	100	6.5
H-214	10	11~30	412	390	802	385	210	131	310	310	380	410	22	66	85	62	15x10x75	100	6.5
H-215	15 20	11~30 3~10	498 542	468	966 1010	445	245	151	360	360	440	455	25	76.5	100	72	20x12x90	166	10
H-216	20 25	11~30 5~10	542 562	469	1011 1031	445	245	151	360	360	440	455	25	80.5	100	76	20x12x90	168	10
H-217	25 30 40	11~30 4~30 4~10	562 562 600	508	1070 1070 1108	505	280	172	380	420	460	530	25	84.5	110	80	20x12x100	217	15
H-218	40 50	11~30 5~10	600 660	608	1208 1268	575	310	196	480	480	570	600	28	106.5	130	100	24x16x120	336	24
H-219	50 60 75	11~30 11~30 5~10	660 660 676	676	1336 1336 1352	680	380	214	540	500	635	680	28	124	150	115	32x20x140	537	32
★H-220	75	11~30	676	779	1502	800	430	272	600	680	700	840	38	139	180	130	35x22x170	750	45

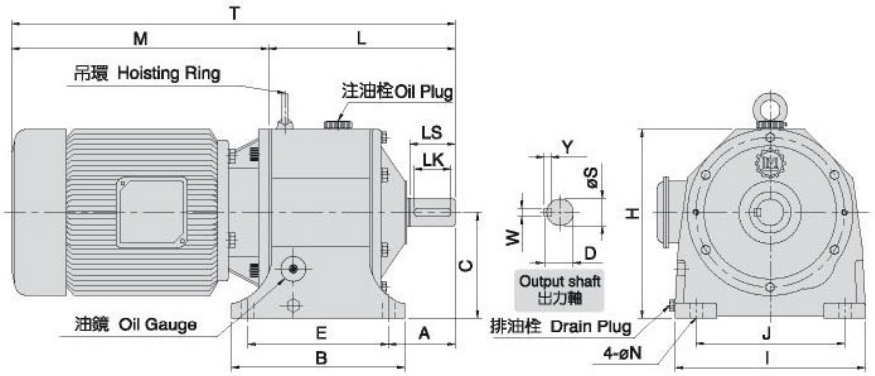
※重量不含馬達 Motor weight exclusive ★表使用圓形外殼

※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 臥式減速機 HORIZONTAL TYPE REDUCER

■ MODEL： H





■ 三段式 3 - STAGE

■ 減速比 RATIO 1/31~1/200

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	M	L	T	H	C	A	腳座 FOOT STOCK					出力軸 OUTPUT SHAFT				重量 Weight (KG)	油量 Oil (l)
									E	J	B	I	N	D	LS	S	W x Y x LK		
H-304	1/4	51~120	225	197	422	190	110	66	135	145	167	190	13	31	50	28	7x7x40	13	0.7
H-306	1/4	121~200	225	236	461	227	127	80	170	180	210	230	15	35	55	32	10x8x45	23	1
	1/2	51~120	248	244	492														
H-308	1/2	121~200	248	268	516	253	145	85	205	195	245	255	15	41	60	38	10x8x50	30	1.4
	1	40~120	242	259	501														
	2	31~40	322	259	581														
H-310	1	121~200	242	306	548	289	164	92	215	215	265	295	19	45	65	42	12x8x55	46	2
	2	51~120	322	306	628														
	3	31~50	315	295	610														
H-312	2	121~200	322	348	670	332	192	109	250	270	310	340	19	51	75	48	12x8x65	70	3
	3	41~120	315	337	652														
	5	31~50	371	337	708														
H-314	3	121~200	315	413	728	385	210	131	310	310	380	410	22	66	85	62	15x10x75	115	6.5
	5	51~120	371	413	784														
	7 1/2	31~50	374	402	776														
H-315	5	121~200	371	485	856	445	245	151	360	360	440	455	25	76.5	100	72	20x12x90	181	10
	7 1/2	35~120	374	484	858														
	10	31~60	412	484	896														
H-316	10	35~120	412	485	897	445	245	151	360	360	440	455	25	80.5	100	76	20x12x90	183	10
	15	31~60	498	485	983														
H-317	7 1/2	125~200	374	539	913	505	280	172	380	420	460	530	25	84.5	110	80	20x12x100	245	15
	15	40~120	498	523	1021														
	20	40~50	542	523	1065														
	25	40~50	562	523	1085														
H-318	10	121~200	412	628	1040	575	310	196	480	480	570	600	28	106.5	130	100	24x16x120	460	24
	15	121~200	498	628	1126														
	20	60~120	542	628	1170														
	25	60	562	628	1190														
	30	40~50	562	628	1190														
H-319	20	121~200	542	699	1241	670	380	214	540	500	635	680	28	124	150	115	32x20x140	590	32
	25	70~90	562	699	1261														
	30	70~90	562	699	1261														
	40	40~60	600	699	1299														

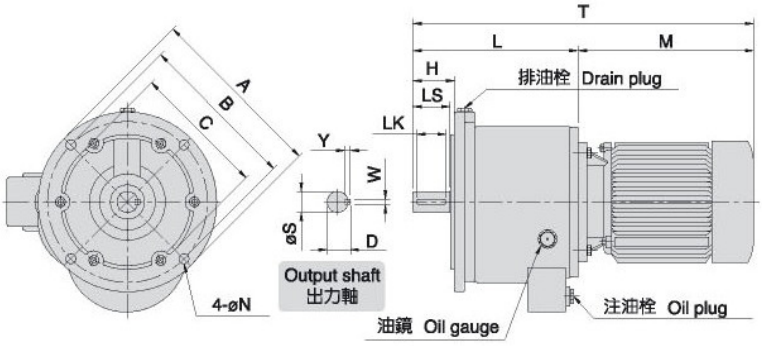
※重量不含馬達 Motor weight exclusive ★表使用圓形外殼

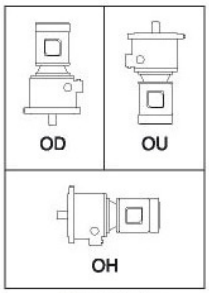
※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 立式減速機 VERTICAL TYPE REDUCER

■ MODEL：V







使用方向
Direction of Installation

■ 二段式 2 - STAGE　■ 減速比 RATIO 1/3~1/40

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	M	L	T	H	法蘭面 FLANGE				出力軸 OUTPUT SHAFT				重量 Weight (KG)
							A	B	C	N	D	LS	S	WxYxLK	
V-201	1/4	3~30	225	145	370	43	178	155	130	10	21	38	19	5x5x30	8
V-202	1/2	3~10	248	153	401	50	178	155	130	10	27	45	24	7x7x35	8
V-203	1/4 1/2	31~50 11~30	255 248	201	426 449	50	200	175	150	12	27	45	24	7x7x35	12
V-205	1/2 1	31~50 3~30	248 242	217 209	465 451	55	240	215	180	14	31	50	28	7x7x40	20
V-206	2	3~10	322	214	536	60	240	215	180	14	35	55	32	10x8x45	20
V-207	1 2	31~40 11~30	242 322	233	475 555	60	280	245	210	14	35	55	32	10x8x45	26
V-208	3	3~10	315	238	553	65	280	245	210	14	41	60	38	10x8x50	26
V-209	2 3	31~40 11~30	322 315	271 261	593 576	65	330	300	250	18	41	60	38	10x8x50	39
V-210	5	3~10	371	266	637	70	330	300	250	18	45	65	42	12x8x55	39
V-211	3 5	31~40 11~30	315 371	305	620 676	80	380	335	290	18	51	75	48	12x8x65	59
V-212	7 1/2 10	3~10 3~10	374 412	305	679 717	80	380	335	290	18	51	75	48	12x8x65	59
V-213	7 1/2 15	11~30 4~10	374 498	358	732 856	85	450	400	350	22	60	80	56	15x10x70	93
V-214	10	11~30	412	363	775	90	450	400	350	22	66	85	62	15x10x75	93
V-215	15 20	11~30 4~10	498 542	437	935 979	105	500	450	400	24	76.5	100	72	20x12x90	138
V-216	20 25	11~30 5~10	542 562	437	979 999	105	500	450	400	24	80.5	100	76	20x12x90	140
V-217	25 30 40	11~30 4~30 4~10	562 562 600	479	1041 1041 1079	115	590	540	480	24	84.5	110	80	20x12x100	216
V-218	40 50 60	11~30 5~10 5~10	600 660 660	577	1177 1237 1237	135	660	610	560	24x6	106.5	130	100	24x16x120	329
V-219	50 60 75	11~30 11~30 5~10	660 660 676	654	1314 1314 1330	155	700	650	600	24x6	124	150	115	32x20x140	563

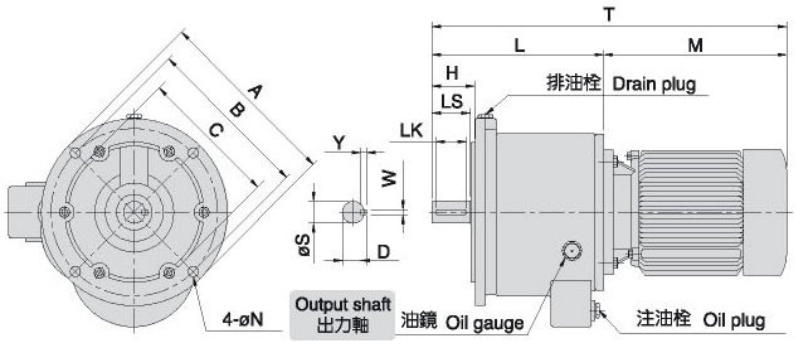
※重量不含馬達 Motor weight exclusive　※V-219立臥兩用請看外觀圖或內洽

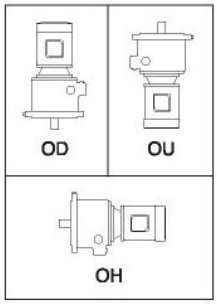
※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 立式減速機 VERTICAL TYPE REDUCER

■ MODEL：V







使用方向
Direction of Installation

■ 三段式 3 - STAGE　　■ 減速比 RATIO 1/31~1/200

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	M	L	T	H	法蘭面 FLANGE				出力軸 OUTPUT SHAFT				重量 Weight (KG)
							A	B	C	N	D	LS	S	WxYxLK	
V-304	1/4	51~120	225	187	412	55	200	175	150	12	31	50	28	7x7x40	14
V-306	1/4	121~200	225	222	447	60	240	215	180	14	35	55	32	10x8x45	24
	1/2	51~120	248	234	482										
V-308	1/2	121~200	248	246	494	65	280	245	210	14	41	60	38	10x8x50	27
	1	40~120	242	238	480										
	2	31~40	322		560										
V-310	1	121~200	242	279	521	70	330	300	250	18	45	65	42	12x8x55	40
	2	51~120	322		601										
	3	31~50	315	269	584										
V-312	2	121~200	322	325	647	80	380	335	290	18	51	75	48	12x8x65	66
	3	41~120	315	315	630										
	5	31~50	371		686										
V-314	3	121~200	315	378	693	90	450	400	350	22	66	85	62	15x10x75	106
	5	51~120	371		749										
	7 1/2	31~50	374	366	740										
V-315	5	121~200	371	452	823	105	500	450	400	24	76.5	100	72	20x12x90	162
	7 1/2	60~120	374		826										
	10	31~50	412		864										
V-316	10	60~120	412	452	864	105	500	450	400	24	80.5	100	76	20x12x90	163
	15	31~50	498		950										
V-317	7 1/2	125~200	374	479	853	115	590	540	480	24	84.5	110	80	20x12x100	230
	15	40~120	498		977										
	20	40~50	542		1021										
	25	40~50	562		1041										
V-318	10	121~200	412	597	1009	135	660	610	560	24x6	106.5	130	100	24x16x120	386
	15	121~200	498		1095										
	20	60~120	542		1139										
	25	60	562		1159										
	30	40~50	562		1159										
V-319	20	121~200	542	674	1216	155	700	650	600	24x6	124	150	115	32x20x140	615
	25	70~90	562		1236										
	30	70~90	562		1236										
	40	40~60	600		1274										

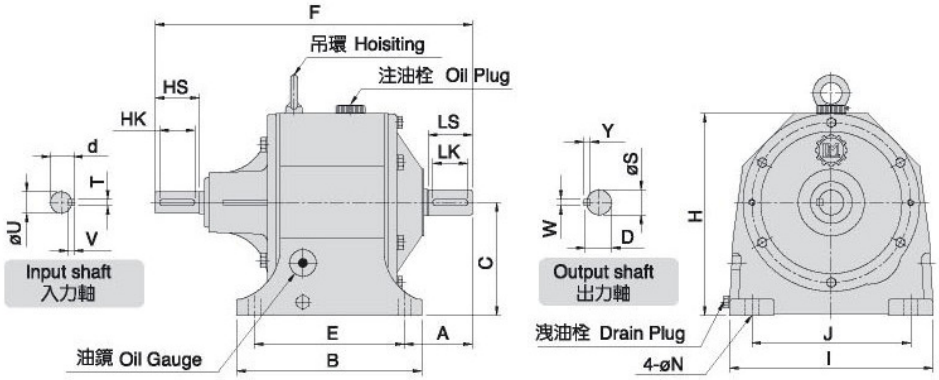
※重量不含馬達 Motor weight exclusive　　※V-319立臥兩用請看外觀圖或內洽

※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 臥式雙軸減速機 HORIZONTAL DOUBLE SHAFT TYPE REDUCER

■ MODEL：HD





■ 二段式 2 - STAGE

■ 減速比 RATIO 1/3~1/40

尺寸表 Dimension

單位：m/m

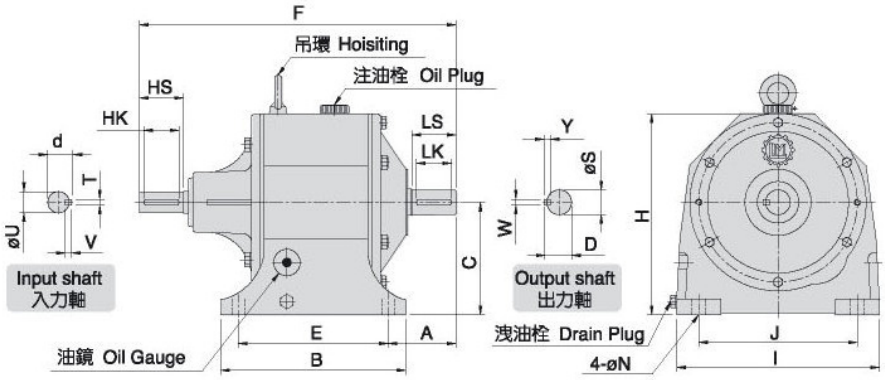
型號 MODEL	馬力 HP (4P)	減速比 RATIO	F	A	C	H	入力軸 INPUT SHAFT				腳座 FOOT STOCK					出力軸 OUTPUT SHAFT				重量 Weight (KG)	油量 Oil (l)
							d	HS	TxVxHK	U	E	J	B	I	N	D	LS	S	W x Y x LK		
★HD-201	1/4	3~30	252	53	90	170	18	35	5x5x25	16	125	140	155	180	10	21	38	19	5x5x30	12	0.5
★HD-202	1/2	3~10	264	60	90	170	21	40	5x5x30	19	125	140	155	180	10	27	45	24	7x7x35	12	0.5
HD-203	1/4 1/2	31~50 11~30	267 272	62	110	190	18 21	35 40	5x5x30	16 19	135	145	167	190	13	27	45	24	7x7x35	15	0.7
HD-205	1/2 1	31~50 3~30	360	77	127	227	27	50	7x7x40	24	170	180	210	230	15	31	50	28	7x7x40	25 28	1
HD-206	2	3~10	365	80	127	227	27	50	7x7x40	24	170	180	210	230	15	35	55	32	10x8x45	28	1
HD-207	1 2	31~40 11~30	392	80	145	253	27	50	7x7x40	24	205	195	245	255	15	35	55	32	10x8x45	34	1.4
HD-208	3	3~10	397	87	145	253	27	50	7x7x40	24	205	195	245	255	15	41	60	38	10x8x50	35	1.4
HD-209	2 3	31~40 11~30	419	88	164	289	31	55	7x7x45	28	215	215	265	295	19	41	60	38	10x8x50	50	2
HD-210	5	3~10	423	92	164	289	31	55	7x7x45	28	215	215	265	295	19	45	65	42	12x8x55	50	2
HD-211	3 5	31~40 11~30	465 479	109	192	332	31 35	55 60	7x7x45 10x8x50	28 32	250	270	310	340	19	51	75	48	12x8x65	72	3
HD-212	7 1/2 10	3~10 3~10	484	109	192	332	35	60	10x8x50	32	250	270	310	340	19	51	75	48	12x8x65	72	3
HD-213	7 1/2 15	11~30 4~10	564	126	210	385	41	65	10x8x55	38	310	310	380	410	22	60	80	56	15x10x70	120	6.5
HD-214	10	11~30	569	131	210	385	41	65	10x8x55	38	310	310	380	410	22	66	85	62	15x10x75	120	6.5
HD-215	15 20	11~30 4~10	692	151	245	445	51	80	12x8x70	48	360	360	440	455	25	76.5	100	72	20x12x90	201	10
HD-216	20 25	11~30 4~10	693	151	245	445	51	80	12x8x70	48	360	360	440	455	25	80.5	100	76	20x12x90	203	10
HD-217	25 30 40	11~30 4~30 4~10	734	172	280	505	51	80	12x8x70	48	380	420	460	530	25	84.5	110	80	20x12x100	255	15
HD-218	40 50	11~30 5~10	881	196	310	575	59	90	15x10x80	55	480	480	570	600	28	106.5	130	100	24x16x120	386	24
HD-219	50 60 75	10~30 10~30 5~10	970	214	380	680	69	100	15x10x90	65	540	500	635	680	28	124	150	115	32x20x140	617	32
★HD-220	75	11~30	1093	272	430	800	79.5	110	20x12x100	75	600	680	700	840	38	139	180	130	35x22x170	852	45

★表使用圓形外殼　※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 臥式雙軸減速機 HORIZONTAL DOUBLE SHAFT TYPE REDUCER

■ MODEL：HD





■ 三段式 3 - STAGE

■ 減速比 RATIO 1/31~1/200

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	F	A	C	H	入力軸 INPUT SHAFT				腳座 FOOT STOCK					出力軸 OUTPUT SHAFT				重量 Weight (KG)	油量 Oil (l)
							d	HS	TxVxHK	U	E	J	B	I	N	D	LS	S	WxYxLK		
HD-304	1/4	51~120	284	66	110	190	18	35	5x5x25	16	135	145	167	190	13	31	50	28	7x7x40	16	0.7
HD-306	1/4 1/2	121~200 51~120	329 338	80	127	227	18 21	35 40	5x5x30	16 19	170	180	210	230	15	35	55	32	10x8x45	26	1
HD-308	1/2 1 2	121~200 40~120 31~40	361 397 397	85	145	253	21 27 27	40 50 50	5x5x30 7x7x40 7x7x40	19 24 24	205	195	245	255	15	41	60	38	10x8x50	36	1.4
HD-310	1 2 3	121~200 51~120 31~40	444	92	164	289	27	50	7x7x40	24	215	215	265	295	19	45	65	42	12x8x55	52	2
HD-312	2 3 5	121~200 41~120 31~50	477	109	192	332	31	55	7x7x45	28	250	270	310	340	19	51	75	48	12x8x65	78	3
HD-314	3 5 7 1/2	121~200 51~120 31~50	572	131	210	385	35	60	10x8x45	32	310	310	380	410	22	66	85	62	15x10x75	124	6.5
HD-315	5 7 1/2 10	121~200 35~120 31~60	666	151	245	445	35 41 41	60 65 65	10x8x45 10x8x55 10x8x55	32 38 38	360	360	440	455	25	76.5	100	72	20x12x90	201	10
HD-316	10 15	35~120 31~60	667	151	245	445	41	65	10x8x55	38	360	360	440	455	25	80.5	100	76	20x12x90	203	10
HD-317	7 1/2 15 20 25	125~200 40~120 40~50 40~50	718 747 747 747	172	280	505	41 51 51 51	65 80 80 80	10x8x55 12x8x70 12x8x70 12x8x70	38 48 48 48	380	420	460	530	25	84.5	110	80	20x12x100	280	15
HD-318	10 15 20 25 30	121~200 121~200 51~120 60 31~50	852	196	310	575	41 51 51 51 51	65 80 80 80 80	10x8x55 12x8x70 12x8x70 12x8x70 12x8x70	38 48 48 48 48	480	480	570	600	28	106.5	130	100	24x16x120	498	24
HD-319	20 25 30 40	121~200 70~90 70~90 40~60	923 923 923 972	214	380	680	51 51 51 59	80 80 80 90	12x8x70 12x8x70 12x8x70 15x10x80	48 48 48 55	540	500	635	680	28	124	150	115	32x20x140	640	32

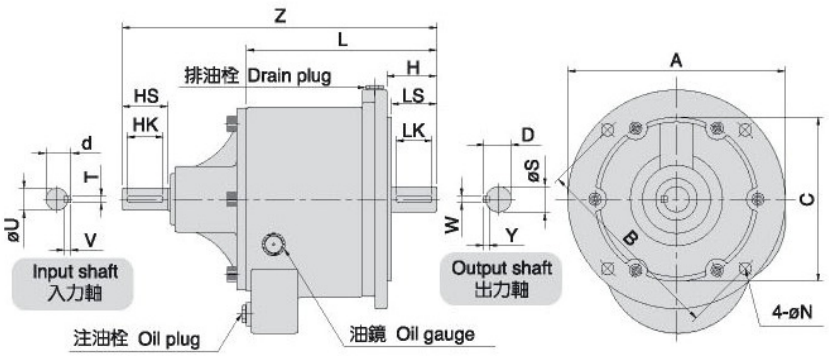
★表使用圓形外殼 ※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

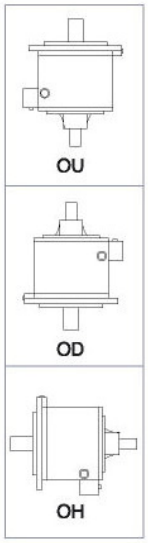
■ 立式雙軸減速機 VERTICAL DOUBLE SHAFT TYPE REDUCER

■ MODEL：VD

使用方向
Direction of Installation







■ 二段式 2-STAGE

■ 減速比 RATIO 1/3~1/40

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	L	Z	入力軸 INPUT SHAFT				法蘭面 FLANGE				出力軸 OUTPUT SHAFT					重量 Weight (KG)
					d	HS	TxVxHK	U	A	B	C	N	D	LS	S	H	WxYxLK	
VD-201	1/4	3~30	145	232	18	35	5x5x25	16	178	155	130	10	21	38	19	43	5x5x30	12
VD-202	1/2	3~10	153	245	21	40	5x5x30	19	178	155	130	10	27	45	24	50	7x7x35	12
VD-203	1/4 1/2	31~40 11~30	201	293	18 21	35 40	5x5x30	16 19	200	175	150	12	27	45	24	50	7x7x35	15
VD-205	1/2 1	31~40 3~30	209	346	27	50	7x7x40	24	240	215	180	14	31	50	28	55	7x7x40	26
VD-206	2	3~10	214	351	27	50	7x7x40	24	240	215	180	14	35	55	32	60	10x8x45	26
VD-207	1 2	31~40 11~30	233	370	27	50	7x7x40	24	280	245	210	14	35	55	32	60	10x8x45	33
VD-208	3	3~10	238	375	27	50	7x7x40	24	280	245	210	14	41	60	38	65	10x8x50	33
VD-209	2 3	31~40 11~30	261	401	31	55	7x7x45	28	330	300	250	18	41	60	38	65	10x8x50	47
VD-210	5	3~10	266	406	31	55	7x7x45	28	330	300	250	18	45	65	42	70	12x8x55	47
VD-211	3 5	31~40 11~30	305	459	31 35	55 60	7x7x45 10x8x50	28 32	380	335	290	18	51	75	48	80	12x8x65	68
VD-212	7 1/2 10	3~10 3~10	305	459	35	60	10x8x50	32	380	335	290	18	51	75	48	80	12x8x65	68
VD-213	7 1/2 15	11~30 4~10	358	542	41	65	10x8x55	38	450	400	350	22	60	80	56	85	15x10x70	113
VD-214	10	11~30	363	547	41	65	10x8x55	38	450	400	350	22	66	85	62	90	15x10x75	113
VD-215	15 20	11~30 4~10	437	661	51	80	12x8x70	48	500	450	400	24	76.5	100	72	105	20x12x90	173
VD-216	20 25	11~30 4~10	437	661	51	80	12x8x70	48	500	450	400	24	80.5	100	76	105	20x12x90	175
VD-217	25 30 40	11~30 4~30 4~10	479	705	51	80	12x8x70	48	590	540	480	24	84.5	110	80	115	20x12x100	254
VD-218	40 50	11~30 5~10	577	856	59	90	15x10x80	55	660	610	560	24x6	106.5	130	100	135	24x16x120	379
VD-219	50 60	10~30	654	953	69	100	15x10x90	65	700	650	600	24x6	124	150	115	155	32x20x140	642

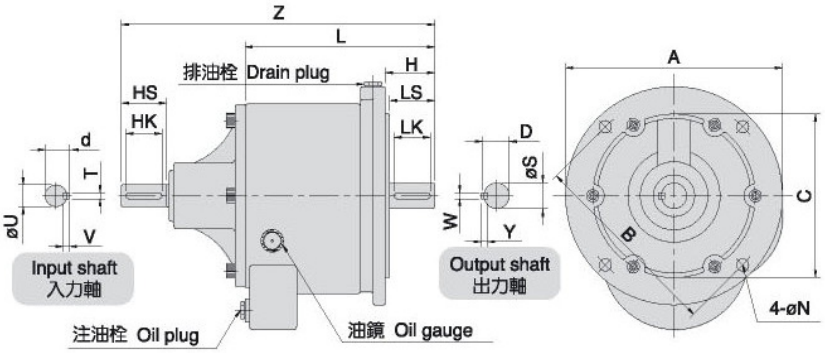
※VD-219立臥兩用請看外觀圖或內洽　※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

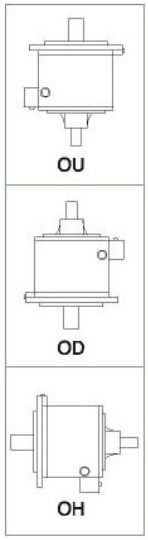
■ 立式雙軸減速機 VERTICAL DOUBLE SHAFT TYPE REDUCER

■ MODEL：VD

使用方向
Direction of Installation







■ 三段式 3-STAGE

■ 減速比 RATIO 1/31~1/200

尺寸表 Dimension

單位：m/m

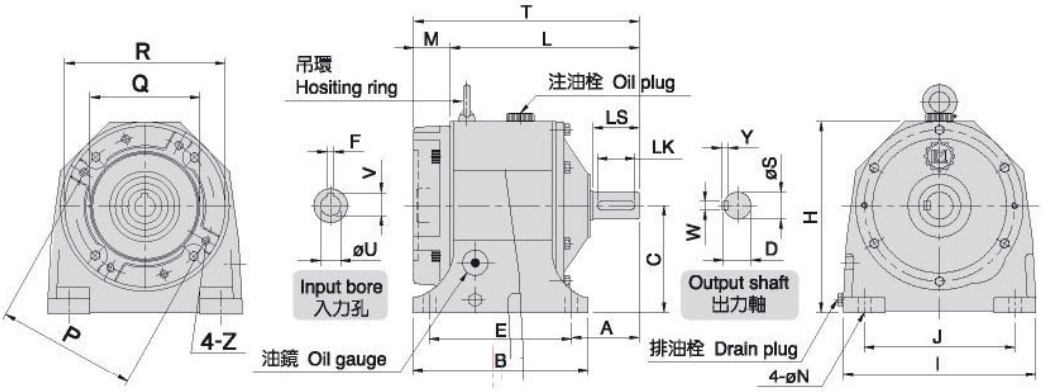
型號 MODEL	馬力 HP (4P)	減速比 RATIO	L	Z	入力軸 INPUT SHAFT				法蘭面 FLANGE				出力軸 OUTPUT SHAFT					重量 Weight (KG)
					d	HS	TxVxHK	U	A	B	C	N	D	LS	S	H	WxYxLK	
VD-304	1/4	51~120	187	274	18	35	5x5x25	16	200	175	150	12	31	50	28	55	7x7x40	17
VD-306	1/4	121~200	222	309	18	35	5x5x25	16	242	215	180	14	35	55	32	60	10x8x45	30
	1/2	51~120	234	326	21	40		19										
VD-308	1/2	121~200	246	333	21	40	5x5x30	19	280	245	210	14	41	60	38	65	10x8x50	33.5
	1	40~120	238	375	27	50	7x7x40	24										
	2	31~40	238	375	27	50	7x7x40	24										
VD-310	1	121~200	279	416	27	50	7x7x40	24	330	300	250	18	45	65	42	70	12x8x55	51
	2	51~120																
	3	31~50																
VD-312	2	121~200	315	455	31	55	7x7x45	28	380	335	290	18	51	75	48	80	12x8x65	75
	3	41~120																
	5	31~50																
VD-314	3	121~200	378	523	35	60	10x8x50	32	450	400	350	22	66	85	62	90	15x10x75	115
	5	51~120																
	7 1/2	31~50																
VD-315	5	121~200	452	636	35	60	10x8x45	32	550	450	400	24	76.5	100	72	105	20x12x90	182
	7 1/2	35~120			41	65	10x8x55	38										
	10	31~60			41	65	10x8x55	38										
VD-316	10	125~200	452	636	41	65	10x8x55	38	550	450	400	24	80.5	100	76	105	20x12x90	183
	15	31~60																
VD-317	7 1/2	125~200	479	703	41	65	10x8x55	38	590	540	480	24	84.5	110	80	115	20x12x100	265
	15	40~120			51	80	12x8x70	48										
	20	40~50			51	80	12x8x70	48										
	25	40~50			51	80	12x8x70	48										
VD-318	10	121~200	597	823	41	65	10x8x55	38	660	610	560	24x6	106.5	130	100	135	24x16x120	424
	15	121~200			51	80	12x8x70	48										
	20	51~120			51	80	12x8x70	48										
	25	60			51	80	12x8x70	48										
	30	31~50			51	80	12x8x70	48										
VD-319	20	121~200	674	962	51	80	12x8x70	48	700	650	600	24x6	124	150	115	155	32x20x140	665
	25	70~90			51	80	12x8x70	48										
	30	70~90			51	80	12x8x70	48										
	40	40~60			59	90	15x10x80	55										

※VD-319 立臥兩用請看外觀圖或內洽。 ※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 馬達插入式臥式減速機 HORIZONTAL TYPE REDUCER MOTOR PLUG-IN

■ MODEL：HB





■ 二段式 2 - STAGE

■ 減速比 RATIO 1/3~1/40

尺寸表 Dimension

單位：m/m

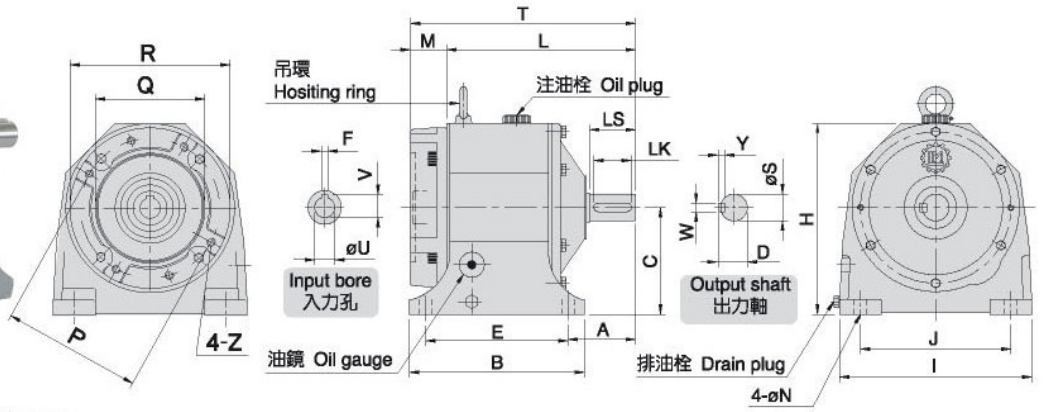
型號 MODEL	馬力 HP (4P)	減速比 RATIO	T	H	L	C	A	腳座 FOOT STOCK					馬達盤 IEC MOTOR FLANGE					入力孔 INPUT BORE			出力軸 OUTPUT SHAFT				重量 Weight (KG)
								E	J	B	I	N	M	P	Q	R	Z	U	F	V	D	LS	S	WxYxLK	
★HB-201	1/4	3~30	192	170	165	90	53	125	140	155	180	10	27	130	110	160	M8	11	4	12.7	21	38	19	5x5x30	12
★HB-202	1/2	3~10	199	170	172	90	60	125	140	155	180	10	27	130	110	160	M8	14	5	16.3	27	45	24	7x7x35	12
HB-203	1/4 1/2	31~50 11~30	207	190	180	110	62	135	145	167	190	13	27	130	110	160	M8	11 14	4 5	12.7 16.3	27	45	24	7x7x35	15
HB-205	1/2 1	31~50 3~30	251 255	227	222 222	127	77	170	180	210	230	15	26 33	130 165	110 130	200	M8 M10	14 19	5 6	16.3 21.8	31	50	28	7x7x40	27
HB-206	2	3~10	270	227	226	127	80	170	180	210	230	15	44	165	130	200	M10	24	8	27.3	35	55	32	10x8x45	27
HB-207	1 2	31~40 11~30	298 298	253 253	254	145	80	205	195	245	255	15	44 44	165	130	200	M10	19 24	6 8	21.8 27.3	35	55	32	10x8x45	33
HB-208	3	3~10	315	265	262	145	87	205	195	245	255	15	57	215	180	250	M12	28	8	31.3	41	60	38	10x8x50	38
HB-209	2 3	31~40 11~30	323 322	289	279 279	164	88	215	215	265	295	19	57 57	165 215	130 180	250	M10 M12	24 28	8 8	27.3 31.3	41	60	38	10x8x50	51
HB-210	5	3~10	327	289	283	164	92	215	215	265	295	19	57	215	180	250	M12	28	8	31.3	45	65	42	12x8x55	51
HB-211	3 5	31~40 11~30	369	332	325	192	109	250	270	310	340	19	57	215	180	250	M12	28	8	31.3	51	75	48	12x8x65	72
HB-212	7 1/2 10	3~10 3~10	390	332	325	192	109	250	270	310	340	19	65	265	230	300	M12	38	10	41.3	51	75	48	12x8x65	77
HB-213	7 1/2 15	11~30 4~10	450 470	385	385	210	126	310	310	380	410	22	65 85	265 300	230 250	300 350	M12 M16	38 42	10 12	41.3 45.3	60	80	56	15x10x70	114 122
HB-214	10	11~30	455	385	390	210	131	310	310	380	410	22	65	265	230	300	M12	38	10	41.3	66	85	62	15x10x75	114
HB-215	15 20	11~30 4~10	553	445	468	245	151	360	360	440	455	25	85	300	250	350	M16	42	12	45.3	76.5	100	72	20x12x90	180
HB-216	20 25	11~30 5~10	554 556	445	469	245	151	360	360	440	455	25	85 87	300 350	250 300	350 400	M16	42 48	12 14	45.3 51.8	80.5	100	76	20x12x90	182 206
HB-217	25 30 40	11~30 4~30 4~10	595	505	508	280	172	380	420	460	530	25	87	350	300	400	M16	48 48 55	14 14 16	51.8 51.8 59.3	84.5	110	80	20x12x100	255
HB-218	40 50	11~30 5~10	695	575	608	310	196	480	480	570	600	28	87	350 400	300 350	400 450	M16	55 60	16 18	59.3 64.3	106.5	130	100	24x16x120	374
HB-219	50 60	10~30	772	680	685	380	214	540	500	635	680	28		400	350	450	M16	60	18	64.3	124	150	115	32x20x140	597

★表使用圓形外殼 ※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 馬達插入式臥式減速機 HORIZONTAL TYPE REDUCER MOTOR PLUG-IN

■ MODEL： HB





■ 三段式 3 - STAGE

■ 減速比 RATIO 1/31~1/200

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	T	H	L	C	A	腳座 FOOT STOCK					馬達盤 IEC MOTOR FLANGE					入力孔 INPUT BORE			出力軸 OUTPUT SHAFT				重量 Weight (KG)
								E	J	B	I	N	M	P	Q	R	Z	U	F	V	D	LS	S	WxYxLK	
HB-304	1/4	51~120	225	190	197	110	66	135	145	167	190	13	28	130	110	160	M8	11	4	12.7	31	50	28	7x7x40	16
HB-306	1/4	121~200	266	227	236	127	80	170	180	210	230	15	30	130	110	200	M8	11	4	12.7	35	55	32	10x8x45	18
	1/2	51~120			236													14	5	16.3					
HB-308	1/2	121~200	288	253	259	145	85	205	195	245	255	15	29	130	110	200	M8	14	5	16.3	41	60	38	10x8x50	35
	1	40~120	292		259								33	165	130		M10	19	6	21.8					
	2	31~40	303										44	165	130		M10	24	8	27.3					
HB-310	1	121~200	339	289	295	164	92	215	215	265	295	19	44	165	130	250	M10	19	6	21.8	45	65	42	12x8x55	53
	2	51~120	339										44	165	130		M10	24	8	27.3					
	3	31~40	349										54	215	180		M12	28	8	31.3					
HB-312	2	121~200	381	332	337	192	109	250	270	310	340	19	44	165	130	250	M10	24	8	27.3	51	75	48	12x8x65	79
	3	41~120	390										53	215	180		M12	28	8	31.3					
	5	31~50	390										53	215	180		M12	28	8	31.3					
HB-314	3	121~200	457	385	413	210	131	310	310	380	410	22	57	215	180	250		28	8	31.3	66	85	62	15x10x75	122
	5	51~120	457		413								57	215	180	250	M12	28	8	31.3					
	7 1/2	31~50	467		402								65	265	230	300		38	10	41.3					129
HB-315	5	121~200	526	445	485	245	151	360	360	440	455	25	41	215	180	250		28	8	31.3	76.5	100	72	20x12x90	195
	7 1/2	35~120	552		484								68	265	230	300	M12	38	10	41.3					
	10	31~60	552		484								68	265	230	300		38	10	41.3					
HB-316	10	35~120	553	445	485	245	151	360	360	440	455	25	68	265	230	300	M12	38	10	41.3	80.5	100	76	20x12x90	197
	15	31~60	573										88	300	250	350	M16	42	12	45.3					
HB-317	7 1/2	125~200	604	505	539	280	172	380	420	460	530	25	65	265	230	300	M12	38	10	41.3	84.5	110	80	20x12x100	259
	15	40~120	608		523								85	300	250	350	M16	42	12	45.3					267
	20	40~50	608		523								85	300	250	350	M16	42	12	45.3					
	25	40~50	632		545								87	350	300	400	M16	48	14	51.8					283
HB-318	10	121~200	693	575	628	310	196	480	480	570	600	28	65	265	230	300	M12	38	10	41.3	106.5	130	100	24x16x120	474
	15	121~200	713										85	300	250	350	M16	42	12	45.3					
	20	51~120	713										85	300	250	350	M16	42	12	45.3					482
	25	60	734										106	350	300	400	M16	48	14	51.8					498
	30	31~50	734										106	350	300	400	M16	48	14	51.8					
HB-319	20	121~200	781	680	696	380	214	540	500	635	680	28	85	300	250	350	M16	42	12	45.3	103	150	115	32x20x140	612
	25	70~90	783										87	350	300	400	M16	48	14	51.8					
	30	70~90	783										87	350	300	400	M16	48	14	51.8					628
	40	40~60	783										87	350	300	400	M16	55	16	59.3					

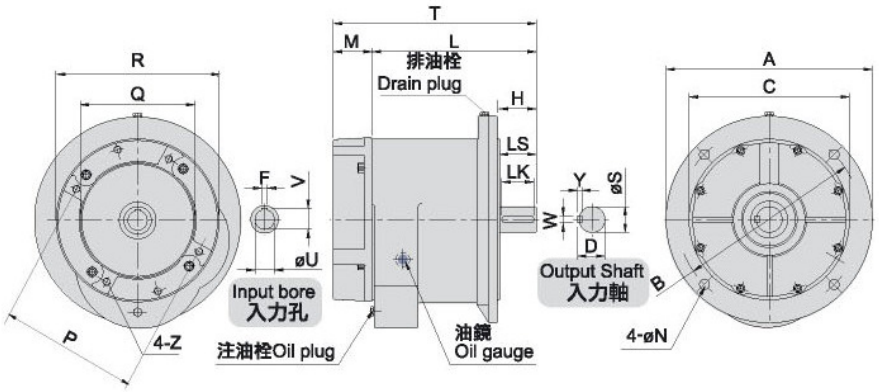
※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

■ 馬達插入式立式減速機

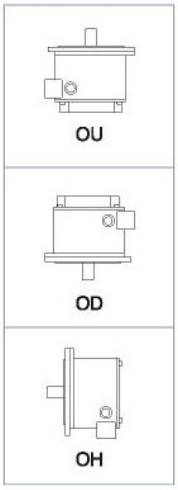
VERTICAL TYPE REDUCER MOTOR PLUG-IN

■ MODEL : VB





使用方向
Direction of Installation



■ 二段式 2 - STAGE

■ 減速比 RATIO 1/3~1/40

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	T	L	H	法蘭面 FLANGE				馬達盤 IEC MOTOR FLANGE					入力孔 INPUT BORE			出力軸 OUTPUT SHAFT				重量 Weight (KG)
						A	B	C	N	M	P	Q	R	Z	U	F	V	D	LS	S	WxYxLK	
VB-201	1/4	3~30	172	145	43	180	155	130	10	27	130	110	160	M8	11	4	12.7	21	38	19	5x5x30	11
VB-202	1/2	3~10	180	153	50	180	155	130	10	27	130	110	160	M8	14	5	16.3	27	45	24	7x7x35	11
VB-203	1/4 1/2	31~50 11~30	228	201	50	200	175	150	12	27	130	110	160	M8	11 14	4 5	12.7 16.3	27	45	24	7x7x35	15
VB-205	1/2 1	31~50 3~30	237 242	209	55	240	215	180	14	28 33	130 165	110 130	200 200	M8 M10	14 19	5 6	16.3 21.8	31	50	28	7x7x40	25
VB-206	2	3~10	257	214	60	240	215	180	14	43	165	130	200	M10	24	8	27.3	35	55	32	10x8x45	25
VB-207	1 2	31~40 11~30	266 276	233	60	280	245	210	14	33 43	165	130	200	M10	19 24	6 8	21.8 27.3	35	55	32	10x8x45	31
VB-208	3	3~10	291	238	65	280	245	210	14	53	215	180	250	M12	28	8	31.3	41	60	38	10x8x50	35
VB-209	2 3	31~40 11~30	305 304	261	65	330	300	250	18	44 43	165 215	130 180	250	M10 M12	24 28	8	27.3 31.3	41	60	38	10x8x50	48
VB-210	5	3~10	309	266	70	330	300	250	18	43	215	180	250	M12	28	8	31.3	45	65	42	12x8x55	48
VB-211	3 5	31~40 11~30	348	305	80	380	335	290	18	43	215	180	250	M12	28	8	31.3	51	75	48	12x8x65	68
VB-212	7 1/2 10	3~10 3~10	370	305	80	380	335	290	18	65	265	230	300	M12	38	10	41.3	51	75	48	12x8x65	73
VB-213	7 1/2 15	11~30 4~10	423 443	358	85	450	400	350	22	65 85	265 300	230 250	300 350	M12 M16	38 42	10 12	41.3 45.3	60	80	56	15x10x70	107 115
VB-214	10	11~30	428	363	90	450	400	350	22	65	265	230	300	M12	38	10	41.3	66	85	62	15x10x75	107
VB-215	15 20	11~30 4~10	522	437	105	500	450	400	24	85 85	300	250	350	M16	42	12	45.3	76.5	100	72	20x12x90	160
VB-216	20 25	11~30 5~10	520 522	437	105	500	450	400	24	85 87	300 350	250 300	350 400	M16	42 48	12 14	45.3 51.8	80.5	100	76	20x12x90	162
VB-217	25 30 40	11~30 4~30 4~10	566	479	115	590	540	480	24	87	350	300	400	M16	48 48 55	14 14 16	51.8 51.8 59.3	84.5	110	80	20x12x100	254
VB-218	40 50	11~30 5~10	664	577	135	660	610	560	24	87	350 400	300 350	400 450	M16	55 60	16 18	59.3 64.3	106.5	130	100	24x16x120	424 446
VB-219	50 60	10~30	-	654	155	700	650	600	24	-	400	350	450	M16	60	18	64.3	124	150	115	32x20x140	675

※VB-219立式臥式兩用請洽外觀圖或內洽 ※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

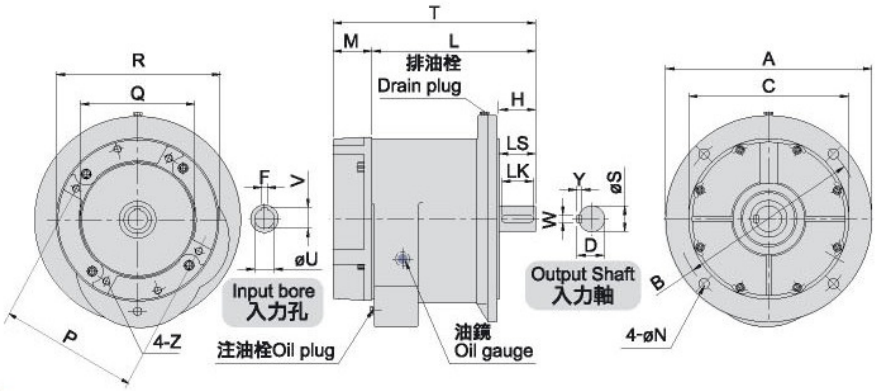
■ 馬達插入式立式減速機

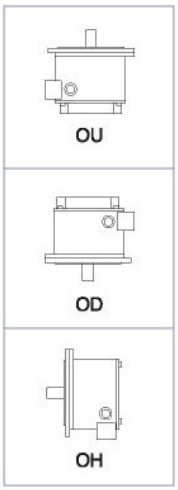
VERTICAL TYPE REDUCER MOTOR PLUG-IN

■ MODEL : VB

使用方向
Direction of Installation







■ 三段式 3 - STAGE

■ 減速比 RATIO 1/31~1/200

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	減速比 RATIO	T	L	H	法蘭面 FLANGE				馬達盤 IEC MOTOR FLANGE					入力孔 INPUT BORE			出力軸 OUTPUT SHAFT				重量 Weight (KG)
						A	B	C	N	M	P	Q	R	Z	U	F	V	D	LS	S	WxYxLK	
VB-304	1/4	51~120	214	187	55	200	175	150	12	27	130	110	160	M8	11	4	12.7	31	50	28	7x7x40	17
VB-306	1/4 1/2	121~200 51~120	250 262	222 234	60	240	215	180	14	28	130	110	160	M8	11 14	4 5	12.7 16.3	35	55	32	10x8x45	27
VB-308	1/2 1 2	121~200 40~120 31~40	274 271 282	246 238	65	280	245	210	14	28 33 44	130 165 165	110 130 130	200 200 200	M8 M10 M10	14 19 24	5 6 8	16.3 21.8 27.3	41	60	38	10x8x50	32
VB-310	1 2 3	121~200 51~120 31~40	313 322	269	70	330	300	250	18	44 44 53	165 165 215	130 130 180	200 250	M10 M10 M12	19 24 28	6 8 8	21.8 27.3 31.3	45	65	42	12x8x55	53
VB-312	2 3 5	121~200 41~120 31~50	359 368 368	315	80	380	335	290	18	44 53 53	165 215 215	130 180 180	200 250 250	M10 M12 M12	24 28 28	8 8 8	27.3 31.3 31.3	51	75	48	12x8x65	75
VB-314	3 5 7 1/2	121~200 51~120 31~50	421 421 431	378 366	90	450	400	350	22	43 43 65	215 215 265	180 180 230	250 250 300	M12	28 28 38	8 8 10	31.3 31.3 41.3	66	85	62	15x10x75	115 120
VB-315	5 7 1/2 10	121~200 35~120 35~60	495 517 517	452	105	500	450	400	24	43 65 65	215 265 265	180 230 230	250 300 300	M12	28 38 38	8 10 10	31.3 41.3 41.3	76.5	100	72	20x12x90	171 184
VB-316	10 15	35~120 31~60	517 537	452	105	500	450	400	24	65 85	265 300	230 250	300 350	M12 M16	38 42	10 12	41.3 45.3	80.5	100	76	20x12x90	172 185
VB-317	7 1/2 15 20 25	125~200 40~120 40~50 40~50	544 564 564 566	479	115	590	540	480	24	65 85 85 87	265 300 300 350	230 250 250 300	300 350 350 400	M12 M16 M16 M16	38 42 42 48	10 12 12 14	41.3 45.3 45.3 51.8	84.5	110	80	20x12x100	244 252 268
VB-318	10 15 20 25 30	121~200 121~200 51~120 60 31~50	662 682 682 684 684	597	135	660	610	560	24	65 85 85 87 87	265 300 300 350 350	230 250 250 300 300	300 350 350 400 400	M12 M16 M16 M16 M16	38 42 42 48 48	10 12 12 14 14	41.3 45.3 45.3 51.8 51.8	106.5	130	100	24x16x120	400 408 424 424
VB-319	20 25 30 40	121~200 70~90 70~90 40~60	759 761 761 761	674	155	700	650	600	24	85 87 87 87	300 350 350 350	250 300 300 300	350 400 400 400	M16 M16 M16 M16	42 48 48 55	12 14 14 16	45.3 51.8 51.8 59.3	124	150	115	32x20x140	637 653

※VB-319立臥兩用請看外觀圖或內洽 ※減速比5,10,15,20,25,30,35,40,50,60,70,80,90,100,120,150,200屬於標準品，其餘皆屬於特殊品。

多速比多段齒輪減速機系列
VERTICAL REDUCER SERIES

特點：

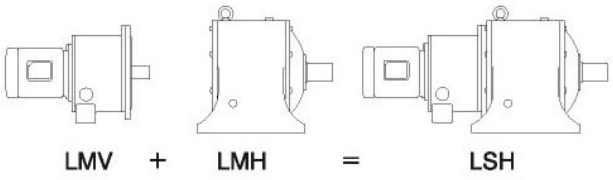
高減速比，從1/210～1/6000

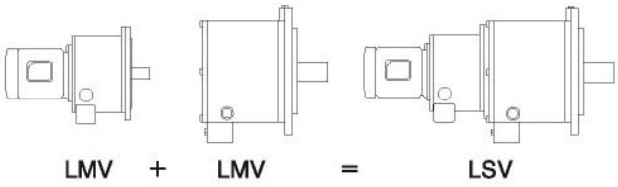
Specifications:

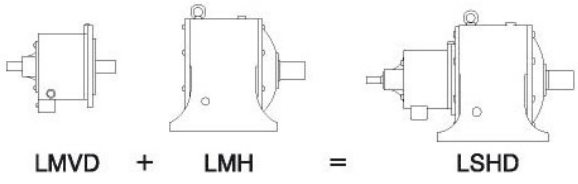
High gear ratio from 1/210 to 1/6000.

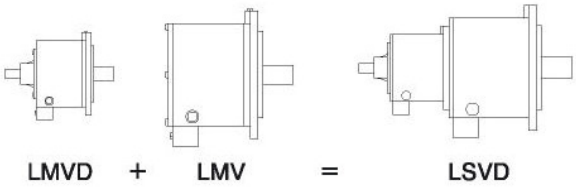
多速比減速機－連結規格一表
Multi-stage reducer-Link Specification Table

型號 MODEL NO. / 機型 TYPE	LSH, LSHD	LSV, LSVD
406	201V+206H	201V+206V
408	203V+208H	203V+208V
508	203V+308H	203V+308V
410	205V+210H	205V+210V
510	306V+210H	306V+210V
610	306V+310H	306V+310V
412	205V+212H	205V+212V
512	205V+312H	205V+312V
612	306V+312H	306V+312V
414	209V+214H	209V+214V
514	207V+314H	207V+314V
614	308V+314H	308V+314V
416	209V+216H	209V+216V
516	209V+316H	209V+316V
616	310V+316H	310V+316V
417	211V+217H	211V+217V
517	312V+217H	312V+217V
617	310V+317H	310V+317V
418	212V+218H	212V+218V
518	212V+318H	212V+318V
618	312V+318H	312V+318V
419	213V+219H	213V+219V
519	314V+219H	
420	215V+220H	
520	315V+220H	









多速比減速機型號速比一覽表（速比超過1/6000以上請另議）
Model/Speed Ratio Table for Multi-stage Reducer (speed ratio above 1/6000 excluded)

馬力 HorsePower	型號 MODEL	減速比 RATIO					
		1/210~1/600		1/610~1/1200		1/1210~1/6000	
4P	6P	型號（扭距）Model(Torque)	型號（扭距）Model(Torque)	型號（扭距）Model(Torque)	型號（扭距）Model(Torque)	型號（扭距）Model(Torque)	型號（扭距）Model(Torque)
1/4		406 (25kg-m)	408 (45kg-m)	508 (45kg-m)	512 (90kg-m)	610 (72kg-m)	614 (140kg-m))
1/2	1/4	408 (45kg-m)	412 (90kg-m)	510 (72kg-m)	514 (140kg-m)	612 (90kg-m)	617 (360kg-m)
1	1/2	410 (72kg-m)	414 (140kg-m)	512 (90kg-m)	516 (250kg-m)	614 (140kg-m)	618 (720kg-m)
2	1	412 (90kg-m)	416 (250kg-m)	514 (140kg-m)	517 (360kg-m)	616 (250kg-m)	619 (1200kg-m)
3	2	414 (140kg-m)	417 (360kg-m)	516 (250kg-m)	518 (720kg-m)	617 (360kg-m)	
5	3	416 (250kg-m)	418 (720kg-m)	517 (360kg-m)	519 (1200kg-m)	618 (720kg-m)	
7.5	5	417 (360kg-m)	419 (1200kg-m)	518 (720kg-m)	520 (1800kg-m)	619 (1200kg-m)	
10	7.5	418 (720kg-m)	420 (1800kg-m)	519 (1200kg-m)			
15	10	419 (1200kg-m)		520 (1800kg-m)			
20	15	420 (1800kg-m)					

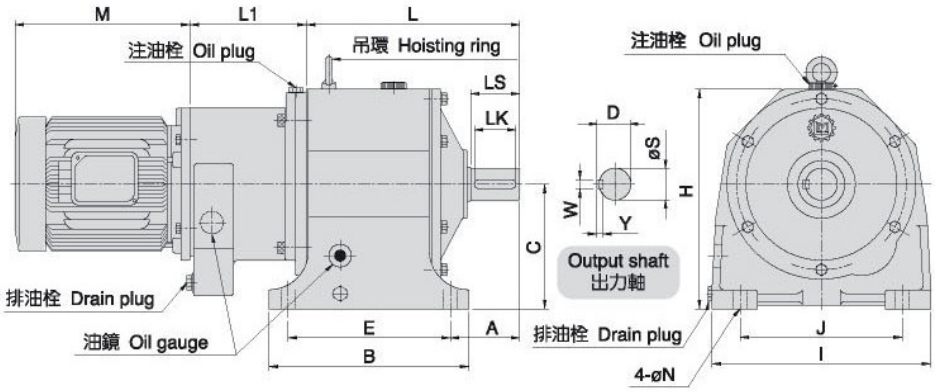
- (kg-m)出力軸扭距容許值 Remissible torque for output shaft
- 速比超過1/6000以上請另議

■ 臥式多速比減速機

HORIZONTAL MULTI-STAGE REDUCER

■ MODEL : LSH





■ 減速比 RATIO 1/200~1/6000

尺寸表 Dimension

單位：m/m

型號 MODEL	L	L1	M	A	C	H	腳座 FOOT STOCK					出力軸 OUTPUT SHAFT				重量 Weight (KG)
							E	J	B	I	N	D	LS	S	WxYxLK	
LSH-406	226	103	215	81	127	227	170	180	210	230	15	35	55	32	10x8x45	30
LSH-408	259	151	236	87	145	253	205	195	240	255	15	41	60	38	10x8x50	41
LSH-508	259	103	215	87	145	253	205	195	240	255	15	41	60	38	10x8x50	42
LSH-410	284	155	232	92	164	289	215	215	265	295	19	45	65	42	12x8x55	62
LSH-510	294	166	236	92	164	289	215	215	265	295	19	45	65	42	12x8x55	66
LSH-610	306	132	215	92	164	289	215	215	265	295	19	45	65	42	12x8x55	70
LSH-412	325	155	322	109	192	332	250	270	310	340	19	51	75	48	12x8x65	83
LSH-512	337	155	232	109	192	332	250	270	310	340	19	51	75	48	12x8x65	87
LSH-612	337	166	236	109	192	332	250	270	310	340	19	51	75	48	12x8x65	94
LSH-414	390	196	303	130	210	385	310	310	380	410	22	66	85	62	15x10x75	139
LSH-514	390	173	322	130	210	385	310	310	380	410	22	66	85	62	15x10x75	145
LSH-614	417	173	232	131	210	385	310	310	380	410	22	66	85	62	15x10x75	149
LSH-416	468	196	362	151	245	445	360	360	440	455	25	80.5	100	76	20x12x90	207
LSH-516	486	196	303	151	245	445	360	360	440	455	25	80.5	100	76	20x12x90	222
LSH-616	486	219	322	151	245	445	360	360	440	455	25	80.5	100	76	20x12x90	228
LSH-417	511	225	366	172	280	505	380	420	460	530	25	84.5	110	80	20x12x100	276
LSH-517	511	235	362	172	280	505	380	420	460	530	25	84.5	110	80	20x12x100	283
LSH-617	526	209	303	178	280	505	380	420	460	530	25	84.5	110	80	20x12x100	290
LSH-418	607	225	404	196	310	575	480	480	570	600	28	84.5	130	100	24x16x120	395
LSH-518	628	225	366	196	310	575	480	480	570	600	28	106.5	130	100	24x16x120	519
LSH-618	628	235	362	196	310	575	480	480	570	600	28	106.5	130	100	24x16x120	526
LSH-419	685	273	494	214	380	670	540	500	635	680	28	124	150	115	32x20x140	630
LSH-519	685	282	404	214	380	670	540	500	635	680	28	124	150	115	32x20x140	643
★LSH-420	801	329	538	272	430	800	600	680	700	850	38	139	180	130	35x22x170	
★LSH-520	801	347	494	272	430	800	600	680	700	850	38	139	180	130	35x22x170	

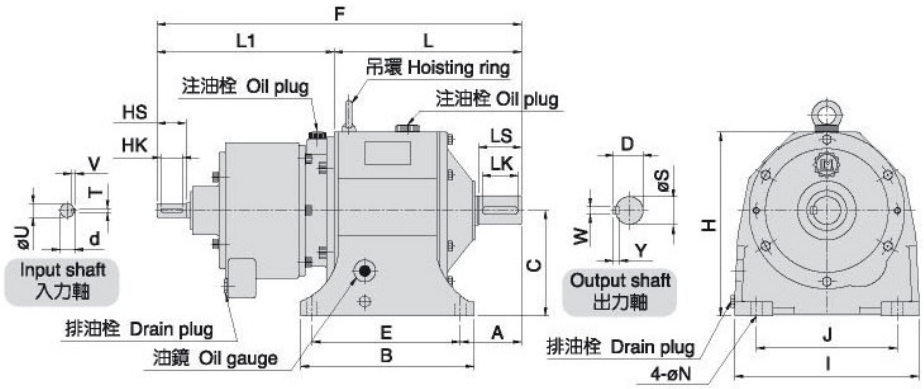
※重量不含馬達 Motor weight exclusive　　★表使用圓形外殼

■ 臥式多速比雙軸減速機

HORIZONTAL MULTI-STAGE & DOUBLE REDUCER

■ MODEL : LSHD





■ 減速比 RATIO 1/200~1/6000

尺寸表 Dimension

單位：m/m

型號 MODEL	L	L1	F	A	C	H	入力軸 INPUT SHAFT				腳座 FOOT STOCK					出力軸 OUTPUT SHAFT				重量 Weight (KG)
							U	HS	TxVxHK	d	E	J	B	I	N	S	LS	D	WxYxLK	
LSHD-406	226	190	416	81	127	227	16	35	5x5x25	18	170	180	210	230	15	32	55	35	10x8x45	34
LSHD-408	259	243	502	87	145	253	19	40	5x5x30	21	205	195	240	255	15	38	60	41	10x8x50	42
LSHD-508	259	190	449	87	145	253	16	35	5x5x25	18	205	195	240	255	15	38	60	41	10x8x50	44
LSHD-410	283	292	575	92	164	289	24	50	7x7x40	27	215	215	265	295	19	42	65	45	12x8x55	68
LSHD-510	283	268	551	92	164	289	19	40	5x5x30	21	215	215	265	295	19	42	65	45	12x8x55	72
LSHD-610	306	215	521	92	164	289	16	35	5x5x25	18	215	215	265	290	19	42	65	45	12x8x55	76
LSHD-412	325	292	617	109	192	332	24	50	7x7x40	27	250	270	310	340	19	48	75	51	12x8x65	89
LSHD-512	337	292	629	109	192	332	24	50	7x7x40	27	250	270	310	340	19	48	75	51	12x8x65	96
LSHD-612	337	268	605	109	192	332	19	40	5x5x30	21	250	270	310	340	19	48	75	51	12x8x65	100
LSHD-414	390	336	726	130	210	385	28	55	7x7x45	31	310	310	380	410	22	62	85	66	15x10x75	147
LSHD-514	400	310	710	130	210	385	24	50	7x7x40	27	310	310	380	410	22	62	85	66	15x10x75	141
LSHD-614	400	310	710	131	210	385	19 24	40 50	5x5x30 7x7x45	21 27	310	310	380	410	22	62	85	66	15x10x75	145
LSHD-416	468	336	804	151	245	445	28	55	7x7x45	31	360	360	440	455	25	76	100	80.5	20x12x90	215
LSHD-516	486	336	822	151	245	445	28	55	7x7x45	31	360	360	440	455	25	76	100	80.5	20x12x90	230
LSHD-616	486	353	839	151	245	445	24	50	7x7x40	27	360	360	440	455	25	76	100	80.5	20x12x90	234
LSHD-417	511	379	890	178	280	505	32	55	10x8x45	35	380	420	460	530	25	80	110	84.5	20x12x100	285
LSHD-517	511	370	881	178	280	505	28 32	55 60	7x7x45 10x8x50	31 35	380	420	460	530	25	80	110	84.5	20x12x100	292
LSHD-617	526	353	879	178	280	505	28	55	7x7x45	31	380	420	460	530	25	80	110	84.5	20x12x100	296
★LSHD-418	607	386	993	196	310	575	32	60	10x8x50	35	480	480	570	600	28	100	130	106.5	24x16x120	404
★LSHD-518	628	386	1014	196	310	575	28 32	55 60	7x7x45 10x8x50	31 35	480	480	570	600	28	100	130	106.5	24x16x120	528
★LSHD-618	628	370	998	196	310	565	28	55	7x7x45	31	480	480	570	600	28	100	130	106.5	24x16x120	535
★LSHD-419	676	451	949	214	380	670	38	65	10x8x55	41	540	500	635	680	28	115	150	124	32x20x140	650
★LSHD-519	676	431	1107	214	380	670	32	55	10x8x45	35	540	500	635	680	28	115	150	124	32x20x140	652
★LSHD-420	801	555	1337	272	430	800	48	80	12x8x70	51	600	680	700	850	38	130	180	139	35x22x170	
★LSHD-520	801	522	1304	272	430	800	38	65	10x8x55	41	600	680	700	850	38	130	180	139	35x22x170	

★表使用圓形外殼

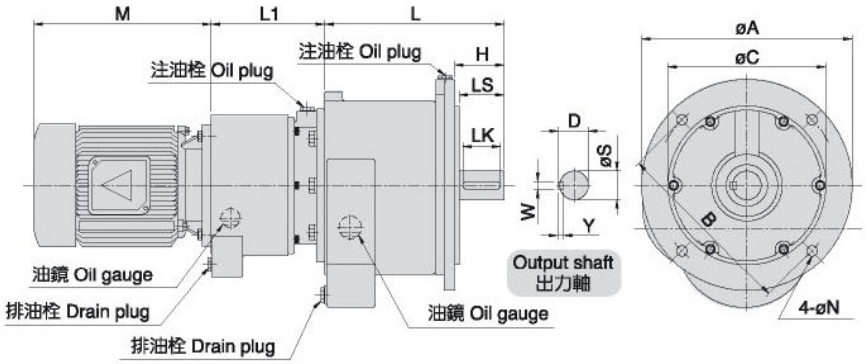
■ 立式多速比減速機

VERTICAL MULTI-STAGE REDUCER

■ MODEL：LSV

使用方向
Direction of Installation





■ 減速比 RATIO 1/200~1/6000

尺寸表 Dimension

單位：m/m

型號 MODEL	馬力 HP (4P)	L	L1	M	法蘭面 FLANGE				出力軸 OUTPUT SHAFT					重量 Weight (KG)
					A	B	C	N	D	LS	S	WxYxLK	H	
LSV-406	1/4	216	103	225	240	215	180	14	35	55	32	10x8x45	60	28
LSV-408	1/2	239	151	248	280	245	210	14	41	60	38	10x8x50	66	35
LSV-508	1/4	239	103	225	280	245	210	14	41	60	38	10x8x50	65	38
LSV-410	1	266	155	242	330	300	250	18	45	65	42	12x8x55	70	59
LSV-510	1/2	266	166	248	330	300	250	18	45	65	42	12x8x55	70	63
LSV-610	1/4	289	132	225	330	300	250	18	45	65	42	12x8x55	70	64
LSV-412	2	305	155	322	380	335	290	18	51	75	48	12x8x65	80	79
LSV-512	1	315	155	242	380	335	290	18	51	75	48	12x8x65	80	86
LSV-612	1/2	315	166	248	380	335	290	18	51	75	48	12x8x65	80	90
LSV-414	3	363	196	315	450	400	350	22	66	85	62	15x10x75	90	132
LSV-514	2	363	156	322	450	400	350	22	66	85	62	15x10x75	90	132
LSV-614	1	372	166	242	450	400	350	22	66	85	62	15x10x75	90	133
LSV-416	5	434	196	371	500	450	400	24	80.5	100	76	20x12x90	105	179
LSV-516	3	452	196	315	500	450	400	24	80.5	100	76	20x12x90	105	202
LSV-616	2	452	219	322	500	450	400	24	80.5	100	76	20x12x90	105	203
LSV-417	7 1/2	479	225	374	590	540	480	24	84.5	110	80	20x12x100	115	275
LSV-517	5	479	235	371	590	540	480	24	84.5	110	80	20x12x100	115	282
LSV-617	3	484	209	315	590	540	480	24	84.5	110	80	20x12x100	115	270
LSV-418	10	565	225	412	660	610	560	24x6	106.5	130	100	24x16x120	135	388
LSV-518	7 1/2	599	225	374	660	610	560	24x6	106.5	130	100	24x16x120	135	445
LSV-618	5	599	235	371	660	610	560	24x6	106.5	130	100	24x16x120	135	452

※重量不含馬達 Motor weight exclusive

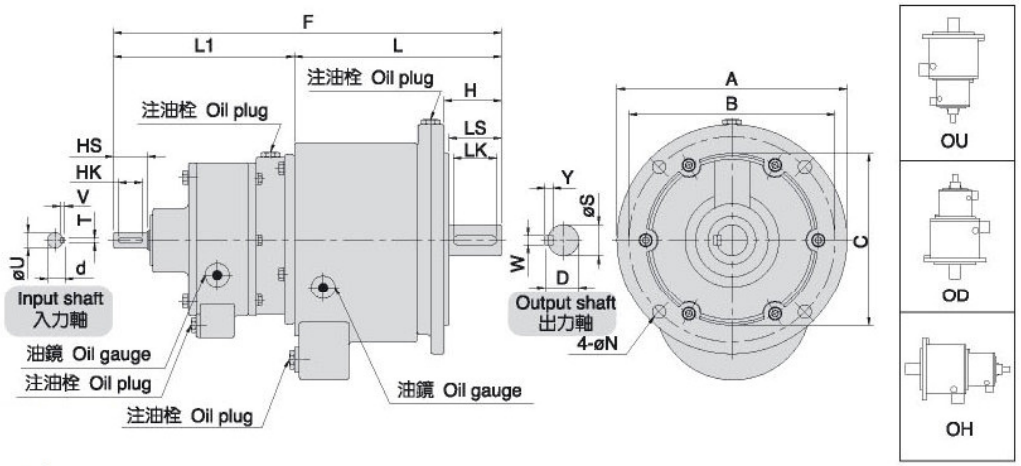
■ 立式多速比減速機

VERTICAL MULTI-STAGE & DOUBLE SHAFT REDUCER

■ MODEL : LSVD

使用方向
Direction
of Installation





■ 減速比 RATIO 1/200~ 1/6000

尺寸表 Dimension

單位：m/m

型號 MODEL	L	L1	F	法蘭面 FLANGE				入力軸 INPUT SHAFT				出力軸 OUTPUT SHAFT					重量 Weight (KG)
				A	B	C	N	d	HS	TxVxHK	U	D	LS	S	WxYxLK	H	
LSVD-406	216	190	406	240	215	180	14	18	35	5x5x25	16	35	55	32	10x8x45	60	32
LSVD-408	239	243	482	280	245	210	14	21	40	5x5x30	19	41	60	38	10x8x50	66	41
LSVD-508	239	190	429	280	245	210	14	18	35	5x5x25	16	41	60	38	10x8x50	65	39
LSVD-410	266	292	558	330	300	250	18	27	50	7x7x40	24	45	65	42	12x8x55	70	65
LSVD-510	266	268	534	330	300	250	18	21	40	5x5x30	19	45	65	42	12x8x55	70	69
LSVD-610	289	215	504	330	300	250	18	18	35	5x5x25	16	45	65	42	12x8x55	70	75
LSVD-412	305	292	597	380	335	290	18	27	50	7x7x40	24	51	75	48	12x8x65	80	85
LSVD-512	315	292	607	380	335	290	18	27	50	7x7x40	24	51	75	48	12x8x65	80	89
LSVD-612	315	268	583	380	335	290	18	21	40	5x5x30	19	51	75	48	12x8x65	80	96
LSVD-414	363	336	699	450	400	350	22	31	55	7x7x45	28	66	85	62	15x10x75	90	110
LSVD-514	378	293	656	450	400	350	22	27	50	7x7x40	24	66	85	62	15x10x75	90	132
LSVD-614	378	268	640	450	400	350	22	21 27	40 50	5x5x30 7x7x45	19 24	66	85	62	15x10x75	90	136
LSVD-416	434	336	770	500	450	400	24	31	55	7x7x45	28	80.5	100	76	20x12x90	105	187
LSVD-516	452	336	788	500	450	400	24	31	55	7x7x45	28	80.5	100	76	20x12x90	105	210
LSVD-616	452	353	805	500	450	400	24	27	50	7x7x40	24	80.5	100	76	20x12x90	105	214
LSVD-417	479	379	858	590	540	480	24	35	55	10x8x45	32	84.5	110	80	20x12x100	115	284
LSVD-517	479	370	849	590	540	480	24	31 35	55 60	7x7x45 10x8x50	28 32	84.5	110	80	20x12x100	115	282
LSVD-617	484	353	825	590	540	480	24	31	55	7x7x45	28	84.5	110	80	20x12x100	115	281
LSVD-418	565	386	951	660	610	560	24x6	35	60	10x8x50	32	106.5	130	100	24x16x120	135	397
LSVD-518	599	386	986	660	610	560	24x6	31 35	55 60	7x7x45 10x8x50	28 32	106.5	130	100	24x16x120	135	454
LSVD-618	599	370	969	660	610	560	24x6	31	55	7x7x45	28	106.5	130	100	24x16x120	135	461

● 運轉靜音

在圓滑滾動接觸的負載傳動機構造部份，全部使用高精密度研磨處理加工齒型，所以運轉圓滑而肅靜。

● 扭力大，效率高

高速的A齒輪採用Skiving加工，B齒輪經研磨。

● 體積小，省空間

體積更小，但性能更好，是產品另一項優異的特色之一，其目的在於節省不必要的空間，以因應時代的需求。

● 耐久性強，壽命長

能同時囓合數齒大連續曲線齒型，能耐強大的衝擊在主要的減速機構造，採用耐磨耗性和耐疲勞性之鋼材，所以耐久性強壽命長，適用於停車場設備等。

● Silent Operation

The rolling contact part of the load driven mechanism are made of high-precision milled gear which ensures a smooth and silent operation.

● High Torque and High Efficiency

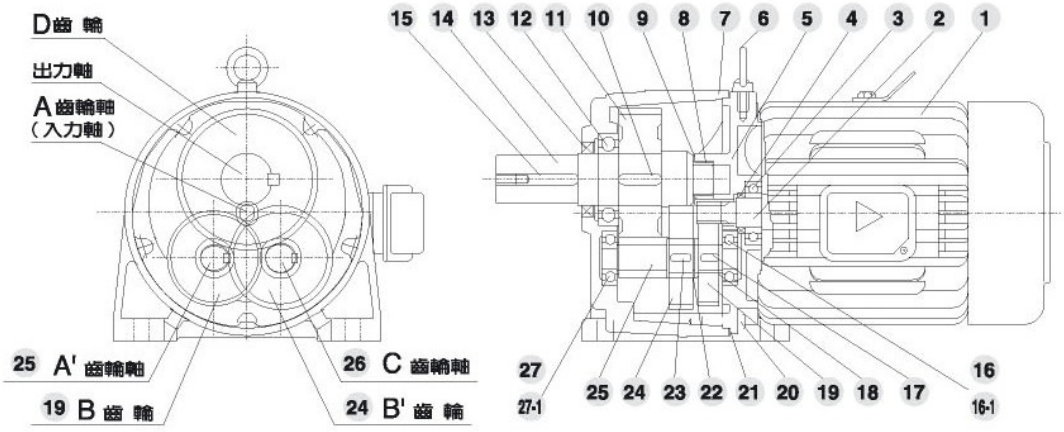
High speed gear A is treated by skiving and gear B by milling.

● Compactness and Space Saving

Another excellent feature of this product is compactness as well as superior performance for meeting the modern demand for space.

● Strong Durability and Long Lifetime

The product can fit multiple continuous curving gears at the same time and endure heavy shock. The main parts of gear reducer are made of steel materials which resistant high to abrasion and fatigue so that strong durability and long lifetime are obtained. The product is suitable for parking lot facility.



編號 No.	零件名稱 Parts Name	編號 No.	零件名稱 Parts Name	編號 No.	零件名稱 Parts Name
1	馬達 Motor	11	D齒輪 D Gear	20	六角承窩頭螺絲 Hex.Screw
2	A齒輪軸 A Gear Shaft	12	滾珠軸承 Ball Bearing	21	油封 Oil Seal
3	滾珠軸承 Ball Bearing	13	油封 Oil Seal	22	扣環 Snap Ring
4	油封 Oil Seal	14	出力軸 Output Shaft	23	雙圓鍵 Key
5	後蓋 Rear Cover	15	單圓鍵 Key	24	B' 齒輪 B' Gear
6	吊環 Hoisting Ring	16	滾珠軸承 Ball Bearing	25	A' 齒輪軸 A' Gear Shaft
7	齒輪箱 Gear Shell	16-1	滾珠軸承 Ball Bearing	26	C 齒輪軸 C Gear Shaft
8	滾針軸承 Needle Bearing	17	雙圓鍵 Key	27	滾珠軸承 Ball Bearing
9	銅墊圈 Washer	18	扣環 Snap Ring	27-1	滾珠軸承 Ball Bearing
10	雙圓鍵 Key	19	B齒輪 B Gear		