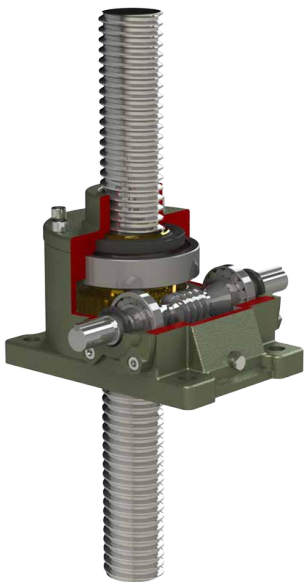


# VJ

## Features of VJ Series

### VJ 系列產品特性



螺旋升降器結構主要為由機身、含內螺紋之銅件、螺桿及其它附件組成。在設計規範上從 35# ~ 80#，有多種規格。螺桿端在應用上又分為全牙式、平頭式、螺牙式、栓孔式、頂板式。螺旋升降器具有體積小、功能多、重量輕、無噪音、結構緊湊、安裝方便、靈活、動力源廣、傳動效率高、使用壽命長等特點。可以頂升、降落、提升、下壓、推進、翻轉等多種安裝使用方式。螺旋升降器可單台或多台組合使用。能按一定的程式準確地控制調整頂升或降落的高度，可以用電機或其他動力直接帶動，也可以手動方式帶動。






The screw jack is composed of a main body, copper articles with interior thread, screw and other accessories. It comes in various specifications from model 35 to 80. In actual application, the screw ends can be divided into various types such as : no end, rod end, threaded end, clevis end, and top plate. The screw jack has a variety of features, such as compact size, multiple functions, light weight, no noise, intensified structure, convenient installation, high maneuverability, wide variety of power sources, high transmission efficiency, and long service life. It is capable of various installation, such as moving upward, moving downward, pushing forward, overturning, etc. The screw jacks can be used independently or in combination of several sets. It can accurately control lifting or lowering height according to programmed setting. It can be driven directly by electrical or other power sources, or by manually.

# Indication of Model Numbers

## 機種型號表示

VJ	50	10	1	A	300	L
減速機型 Type	型號 Model	減速比 Ratio	馬力 Horse Power	螺桿形式 Screw End	長度 Length	軸向 Direction
VJ	35		1/4HP	A: 全牙式 No End	300	
VJM	40		1/2HP	B: 平頭式 Rod End		
VTW	50		1HP	C: 螺牙式 Threaded End		
VTM	60		2HP	D: 栓孔式 Clevis End		
POS	70		3HP	E: 頂板式 Top Plate		
	80					

### 螺桿桿端形式 Type of Screw End

A 型式 Type (全牙式) No End	B 型式 Type (平頭式) Rod End	C 型式 Type (螺牙式) Threaded End	D 型式 Type (栓孔式) Clevis End	E 型式 Type (頂板式) Top End
				

# SCREW JACK REDUCER SERIES

## 螺旋升降器減速機系列

### 容許彎曲負荷值 Permissible Bending Load

關於各種型號及軸端各種負荷方式，有關牙桿長度及容許彎曲負荷可參考以下表格或計算式。

Concerning the variety of models and loading methods at screw end, as well as screw length and permissible bending load, please refer to the following charts or formula.

計算方法：Formula

$$Per = n \cdot \pi^2 \cdot E \cdot (k/\ell)^2 \cdot A \cdot \alpha$$

n: 軸端支撐因數

Shaft End Support Factor

E: 縱向彈性模速

Longitudinal Elasticity Modulus

$$2.1 \times 10 \text{ kgf/mm}^2$$

K: 最小輔助半徑

Minimum Auxiliary Modulus

$$K = \frac{d_1}{4}$$

d<sub>1</sub>: 最小輔助半徑

Minor Diam

ℓ: 軸支撐長度

Shaft Support Length

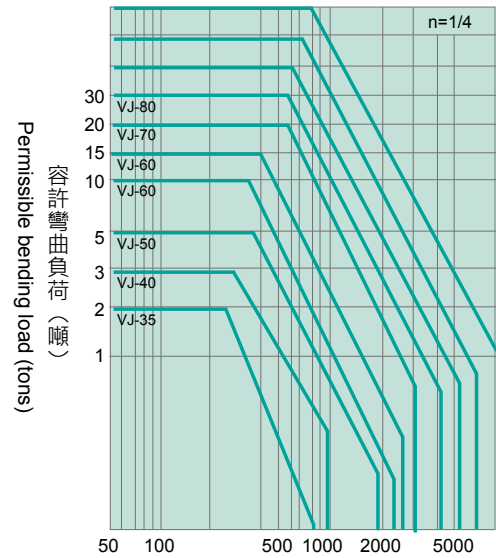
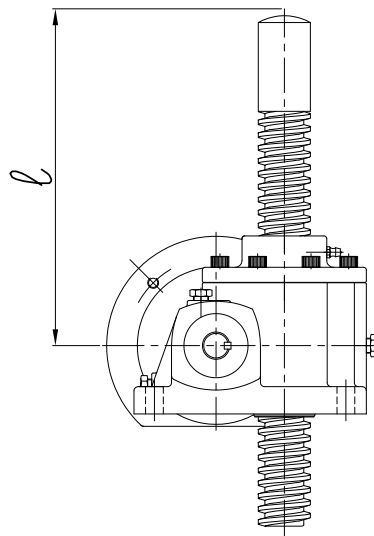
$$A = \frac{\pi \cdot (d_1)^2}{4}$$

A: 舉升螺桿之螺紋底直徑的斷面積  
Thread of lift screw section area of minor diam.

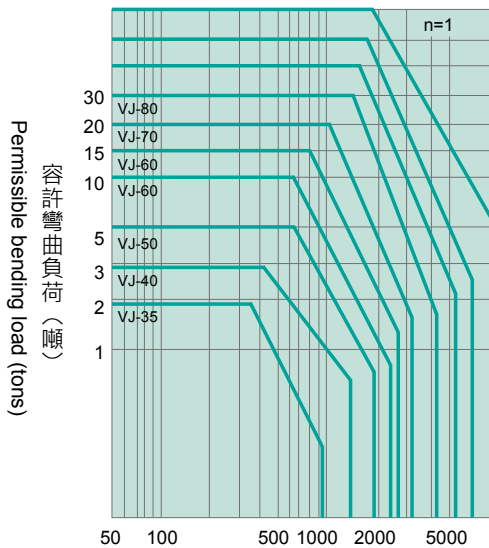
α: 安全係數

$$\alpha = 0.25$$

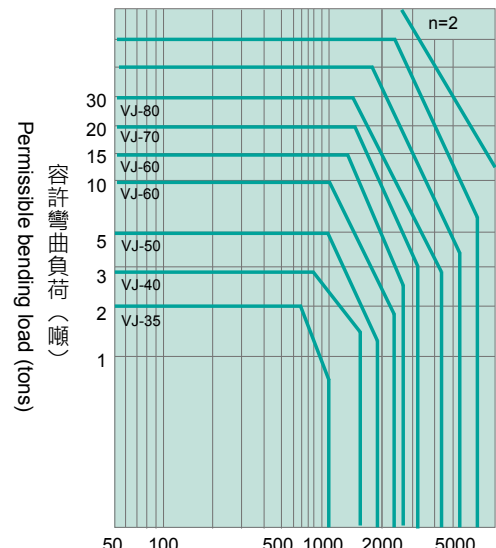
Safety Factor



軸支撐長度 (mm)  
Shaft support length (mm)  
千斤頂固定-軸端游離  
Jack fixed - shaft end free



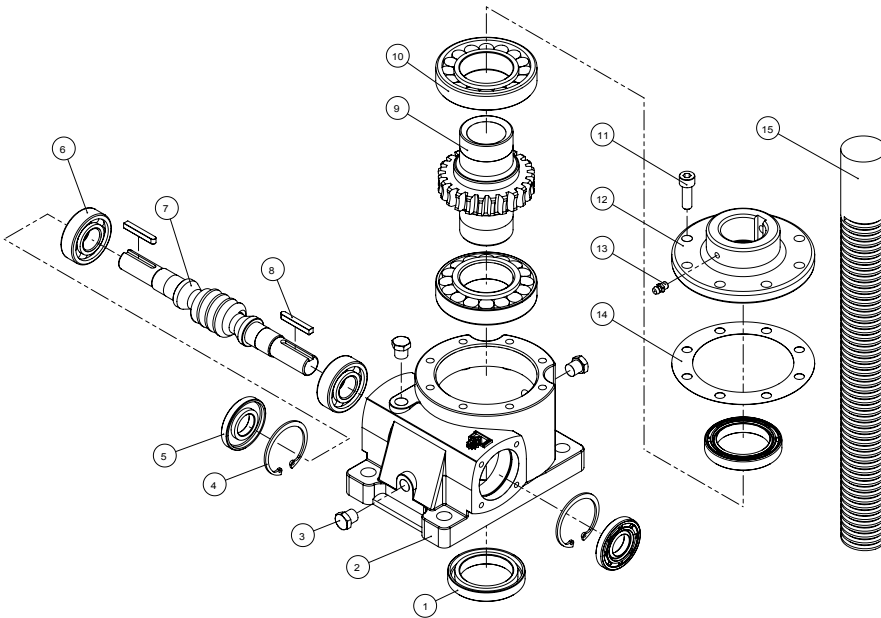
軸支撐長度 (mm)  
Shaft support length (mm)  
千斤頂固定-軸端支撐  
Jack fixed - shaft support



軸支撐長度 (mm)  
Shaft support length (mm)  
千斤頂固定-頂板固定  
Jack fixed - top plate fixed

分解系統圖 System Drawing

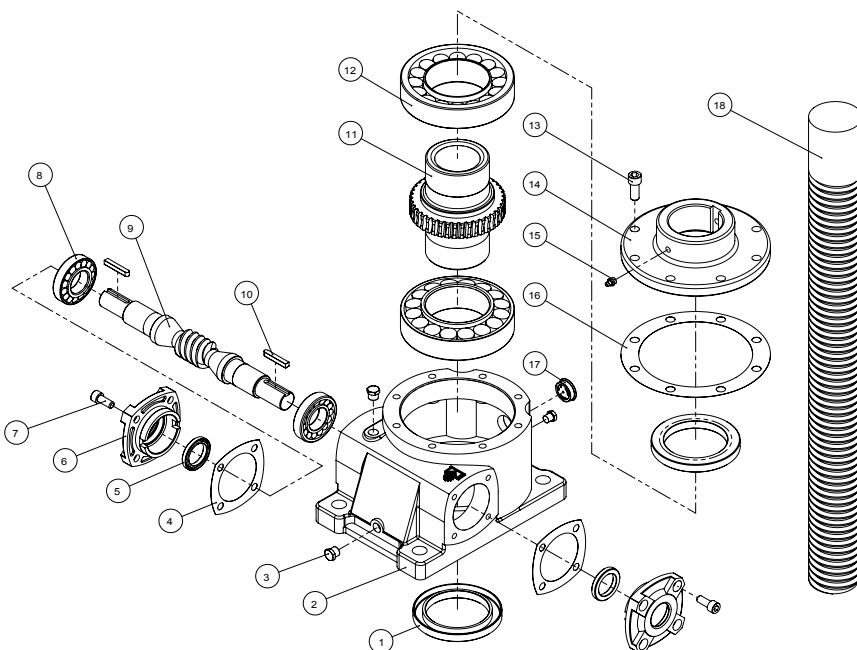
MODEL : VJ(35# ~ 50#)



NO.	零件名稱	Name of Parts
1	油封 TC	Oil Seal TC
2	蝸輪箱	Outer Shell
3	油栓	Oil Plug
4	R 扣環	R Snap Ring
5	油封 SC	Oil Seal SC
6	單圓鍵	Key
7	蝸桿	Worm Shaft
8	滾珠軸承	Ball Bearing
9	蝸輪	Worm Wheel
10	滾錐軸承	Taper Roller Bearing
11	六角承窩頭螺絲	Hex Screw
12	出力軸蓋	Output Shaft Cover
13	牛油嘴	Fittings
14	非石棉墊片	Asbestos Free Gasket
15	螺桿	Screw

分解系統圖 System Drawing

MODEL : VJ(60# ~ 80#)



NO.	零件名稱	Name of Parts
1	油封 TC	Ball Bearing
2	蝸輪箱	Worm Shaft
3	油栓	Key
4	非石棉墊片	Asbestos Free Gasket
5	油封 SC	Oil Seal TC
6	入力軸蓋	Outer Shell
7	六角承窩頭螺絲	Oil Plug
8	滾珠軸承 (60#、70#)	Ball Bearing (60#、70#)
9	滾錐軸承 (80#)	Taper Roller Bearing (80#)
9	蝸桿	R Snap Ring
10	單圓鍵	Oil Seal SC
11	蝸輪	Worm Wheel
12	滾錐軸承	Taper Roller Bearing
13	六角承窩頭螺絲	Hex Screw
14	出力軸蓋	Output Shaft Cover
15	牛油嘴	Fittings
16	非石棉墊片	Asbestos Free Gasket
17	油鏡	Oil Gauge
18	螺桿	Screw

# SCREW JACK REDUCER SERIES

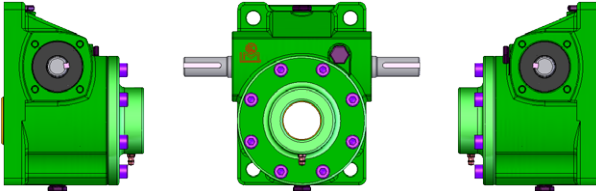
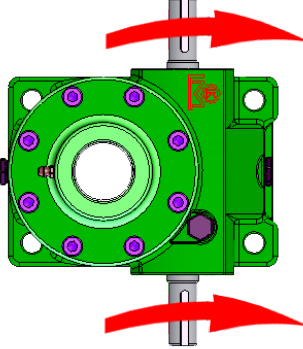
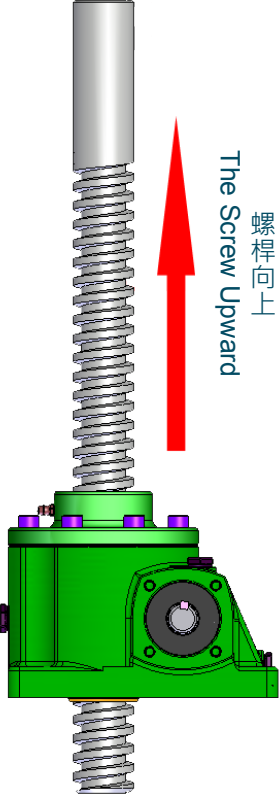
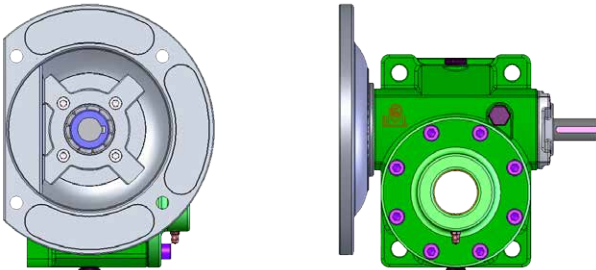
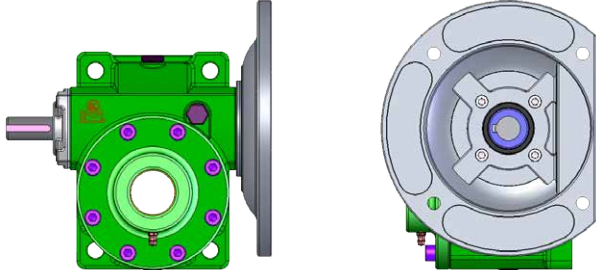
## 螺旋升降器減速機系列

### 減速機參數 Reducers Parameter

型號 Model	螺桿 Screw Ø	螺距 Pitch mm	減速比 Ratio	1800 RPM 入力轉速 Input Speed				1500 RPM 入力轉速 Input Speed				1200 RPM 入力轉速 Input Speed			
				最大 輸入馬力 MAX. Input HP	輸出轉速 Output Speed R.P.M.	荷重 Load (kg)	每分鐘升 (降) mm/min	最大 輸入馬力 MAX. Input HP	輸出轉速 Output Speed R.P.M.	荷重 Load (kg)	每分鐘升 (降) mm/min	最大 輸入馬力 MAX. Input HP	輸出轉速 Output Speed R.P.M.	荷重 LOAD (kg)	每分鐘升 (降) mm/min
35	1"	P=5	5	0.93	360	500	1800	0.86	300	550	1500	0.87	240	700	1200
			10	0.50	180	500	900	0.50	150	550	750	0.50	120	700	600
			20	0.50	90	600	450	0.50	75	700	375	0.50	60	900	300
40	1 1/4"	P=6	6	1.31	300	700	1800	1.25	250	800	1500	1.18	200	950	1200
			12	0.89	150	950	900	0.86	125	1100	750	0.81	100	1300	600
			24	0.50	75	950	450	0.50	63	1100	375	0.50	50	1300	300
50	1 1/2"	P=6	6	1.86	300	900	1800	1.72	250	1000	1500	1.66	200	1200	1200
			12	1.47	150	1350	900	1.36	125	1500	750	1.31	100	1800	600
			24	1.04	75	1800	450	0.96	63	2000	375	0.92	50	2400	300
60	2"	P=8	8	2.84	225	1300	1800	2.64	188	1450	1500	2.48	150	1700	1200
			16	1.50	113	1300	900	1.40	94	1450	750	1.31	75	1700	600
			32	1.07	56	1750	450	1.00	47	1950	375	0.92	37	2250	300
70	2 1/2"	P=10	10	3.57	180	1400	1800	3.24	150	1850	1500	3.01	120	1950	1200
			20	1.90	90	1600	900	1.97	75	1850	750	1.84	60	2250	600
			40	1.53	45	2400	450	1.57	38	2800	375	1.46	30	3350	300
80	75mm	P=12	12	4.86	150	1850	1800	4.71	125	2150	1500	4.55	100	2600	1200
			18	3.56	100	1900	1200	3.59	83	2300	1000	3.44	66	2750	800
			36	2.22	50	2200	600	2.19	42	2600	500	2.15	33	3200	400

型號 Model	螺桿 Screw Ø	螺距 Pitch mm	減速比 Ratio	900 RPM 入力轉速 Input Speed				600 RPM 入力轉速 Input Speed				300 RPM 入力轉速 Input Speed			
				最大 輸入馬力 MAX. Input HP	輸出轉速 Output Speed R.P.M.	荷重 Load (kg)	每分鐘升 (降) mm/min	最大 輸入馬力 MAX. Input HP	輸出轉速 Output Speed R.P.M.	荷重 Load (kg)	每分鐘升 (降) mm/min	最大 輸入馬力 MAX. Input HP	輸出轉速 Output Speed R.P.M.	荷重 LOAD (kg)	每分鐘升 (降) mm/min
35	1"	P=5	5	0.84	180	900	900	0.62	120	1000	600	0.50	60	1000	300
			10	0.50	90	750	450	0.50	60	1000	300	0.25	30	1350	150
			20	0.50	45	1200	225	0.25	30	1350	150	0.25	15	1350	75
40	1 1/4"	P=6	6	1.22	150	1300	900	1.12	100	1800	600	0.56	20	1800	300
			12	0.77	75	1650	450	0.62	50	2000	300	0.50	25	2000	150
			24	0.50	38	1650	225	0.50	25	2000	150	0.25	13	2000	75
50	1 1/2"	P=6	6	1.55	150	1500	900	1.17	100	1700	600	0.72	50	2100	300
			12	1.17	75	2150	450	0.78	50	2150	300	0.50	25	2500	150
			24	0.73	38	2550	225	0.56	25	2850	150	0.50	13	2900	75
60	2"	P=8	8	2.30	113	2100	900	2.22	75	3050	600	1.75	38	4800	300
			16	1.27	56	2200	450	1.17	38	3050	300	0.92	19	4800	150
			32	0.86	28	2800	225	0.84	19	4100	150	0.65	9	6400	75
70	2 1/2"	P=10	10	2.84	90	2450	900	2.59	60	3350	600	1.89	30	4900	300
			20	1.72	45	2800	450	1.58	30	3850	300	1.15	15	5600	150
			40	1.44	23	4400	225	1.25	15	5750	150	0.92	8	8400	75
80	75mm	P=12	12	4.27	75	3250	900	3.94	30	4500	600	2.80	25	6400	300
			18	3.28	50	3500	600	2.94	33	4700	400	2.09	17	6700	200
			36	1.97	25	3900	300	1.82	17	5400	200	1.61	8	9600	100

## ■ 入力傳動型式 Variety of Input Transmission

雙入力 (VJ 標準型) Double Input Shaft (VJ Standard Type)	入力轉向與螺桿上下運動關係 Rotation Direction & Movement
	 <p>旋轉方向 Rotation Direction</p>
直結雙入 (VJM 標準型) With Motor Flange (VJM Standard Type)	 <p>螺桿向上 The Screw Upward</p>
<p>軸向 Shaft Direction: R</p> 	
<p>軸向 Shaft Direction: L</p> 	

## ■ 潤滑油使用 Lubricant

適當的潤滑油使用，可以發揮升降器的效率，並提高其運轉的壽命。本產品出廠採用中國石油極壓機油 HD-150。  
 To use appropriate lubricant will enhance the efficiency of the jack, and increase its service life. LI MING screw jacks use CPC E.P. lubricant HD-150.



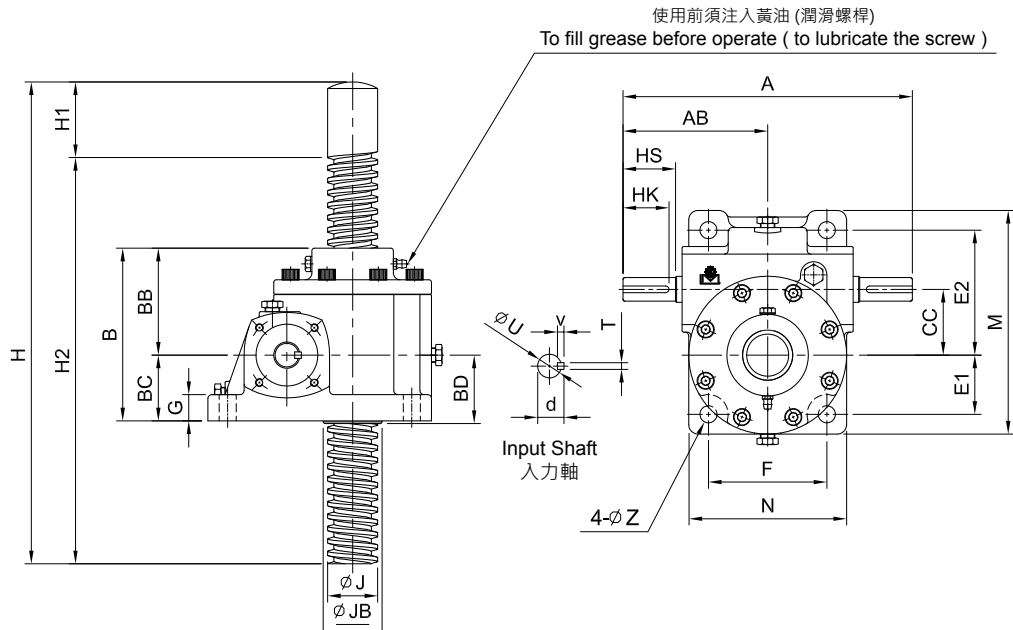
# SCREW JACK REDUCER SERIES

## 螺旋升降器減速機系列

### MODEL : VJ

Note:

- 請參考螺桿桿端尺寸表。  
Please refer to dimension of screw end.
- 行程 Route = H-H1-B



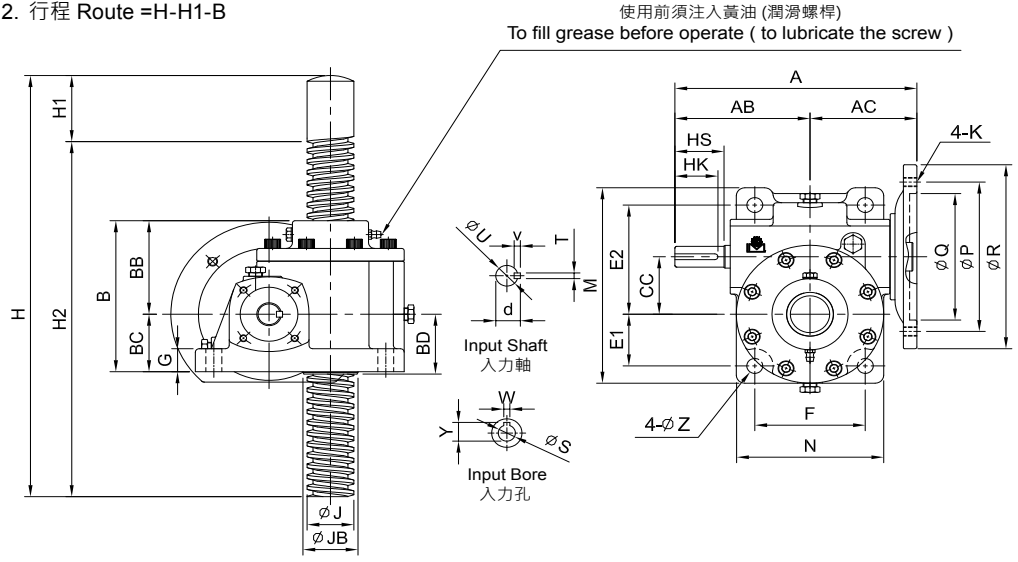
unit: mm

型號 Model	減速比 Ratio	馬力 HP	A	AB	B	BB	BC	BD	CC	腳座 Foot Stock						入力軸 Input Shaft				ØJ 螺桿 Screw	JB	螺距 Pitch	H1 Note 1	重量 Weight (kg)	油量 Oil (C.C.)	
										E1	E2	F	M	N	G	Z	HS	U	d							TxVxHK
35	5	1/4	170	85	110	70	40	42	35	38	73	66	135	90	16	11	30	15	17	5x5x25	1"	30	P=5	50	4.1	205
	10																									
	20																									
40	6	1/4	220	110	130	80	50	52	40	42	83	80	155	110	18	11	40	18	20	5x5x35	1 1/4"	40	P=6	60	7.5	350
	12																									
	24																									
50	6	1/2	220	110	130	80	50	52	50	45	95	90	170	120	20	13	40	18	20	5x5x35	1 1/2"	45	P=6	70	9	580
	12																									
	24																									
60	8	1	278	139	160	100	60	62	60	70	120	110	230	148	22	17	45	25	28	7x7x40	2"	60	P=8	70	16	640
	16																									
	32																									
70	10	1	318	159	180	110	70	72	70	75	135	140	250	178	25	17	50	28	31	7x7x45	2 1/2"	75	P=10	80	26	980
	20																									
	40																									
80	12	2	360	180	210	130	80	82.5	80	90	155	160	295	210	28	21	50	28	31	7x7x45	75mm	90	P=12	80	45	1,200
	18																									
	36																									

**MODEL : VJM**



- Note:
- 請參考螺桿端尺寸表。  
Please refer to dimension of screw end.
  - 行程 Route =H-H1-B



unit: mm

型號 Model	減速比 Ratio	馬力 HP	A	AB	AC	B	BB	BC	BD	CC	馬達盤 Motor Flang				腳座 Foot Stock						
											P	Q	R	K	E1	E2	F	M	N	G	Z
35	5	1/4 1/2	167	95.3	72	110	70	40	42	35	130	110	160	M8	38	73	66	135	90	16	11
	10										130	110	160	M8	42	83	80	155	110	18	11
	20										130	110	160	M8	42	83	80	155	110	18	11
40	6	1/4 1/2	196	110	86	130	80	50	52	40	130	110	160	M8	42	83	80	155	110	18	11
	12										130	110	160	M8	42	83	80	155	110	18	11
	24										130	110	160	M8	42	83	80	155	110	18	11
50	6	1/2 1	197 203	110 110	87 93	130	80	50	52	50	130 165	110 130	160 200	M8 M10	45	95	90	170	120	20	13
	12										130	110	160	M8	45	95	90	170	120	20	13
	24										130	110	160	M8	45	95	90	170	120	20	13
60	8	1 2	242	139	103	160	100	60	62	60	165	130	200	M10	70	120	110	230	148	22	17
	16										165	130	200	M10	70	120	110	230	148	22	17
	32										165	130	200	M10	70	120	110	230	148	22	17
70	10	1 2	277	159	118	180	110	70	72	70	165	130	200	M10	75	135	140	250	178	25	17
	20										165	130	200	M10	75	135	140	250	178	25	17
	40										165	130	200	M10	75	135	140	250	178	25	17
80	12	2 3	319	180	139	210	130	80	82.5	80	165 215	130 180	200 250	M10 M12	90	155	160	295	210	28	21
	18										165	130	200	M10	90	155	160	295	210	28	21
	36										165	130	200	M10	90	155	160	295	210	28	21

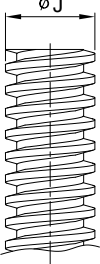
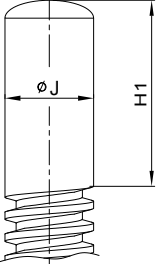
型號 Model	減速比 Ratio	馬力 HP	入力軸 Input Shaft				入力孔 Input Bore			φJ 螺桿 Screw	JB	螺距 Pitch	H1 Note 1	重量 Weight (kg)	油量 Oil (C.C.)
			HS	U	d	TxVxHK	W	Y	S						
35	5	1/4 1/2	30	15	17	5x5x25	4	12.7	11	1"	30	P=5	50	4.1	205
	5						16.3	14							
	10						16.3	14							
40	6	1/4 1/2	40	18	20	5x5x35	4	12.7	11	1 1/4"	40	P=6	60	7.5	350
	4						16.3	14							
	12						16.3	14							
50	6	1/2 1	40	18	20	5x5x35	5	16.3	14	1 1/2"	45	P=6	70	9	580
	5						21.8	19							
	12						21.8	19							
60	8	1 2	45	25	28	7x7x40	6	21.8	19	2"	60	P=8	70	16	640
	6						27.2	24							
	16						27.2	24							
70	10	1 2	50	28	31	7x7x45	6	21.8	19	2 1/2"	75	P=10	80	26	980
	8						27.2	24							
	20						27.2	24							
80	12	2 3	50	28	31	7x7x45	8	27.3	24	75mm	90	P=12	80	45	1,200
	8						31.3	28							
	18						31.3	28							



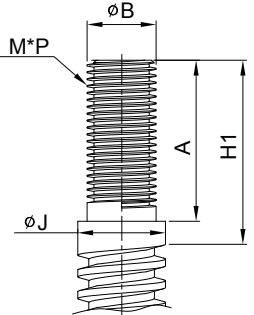
# SCREW JACK REDUCER SERIES

## 螺旋升降器減速機系列

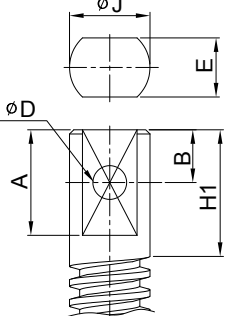
### ■ 螺桿桿端尺寸 Dimension of Screw End

A 型式 Type		B 型式 Type		型號 Model	ØJ	H1
				35	1"	50
				40	1 1/4"	60
				50	1 1/2"	70
				60	2"	70
				70	2 1/2"	80
				80	75mm	80

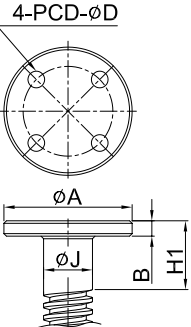
  

C 型式 Type		型號 Model	ØJ	A	ØB	H1	M*P
		35	1"	40	20	50	M20*P1.0
		40	1 1/4"	50	25	60	M25*P1.5
		50	1 1/2"	50	30	70	M30*P1.5
		60	2"	60	40	70	M40*P1.5
		70	2 1/2"	70	50	80	M50*P1.5
		80	75mm	75	60	80	M60*P2.0

D 型式 Type		型號 Model	ØJ	A	B	H1	E	ØD
		35	1"	40	20	50	18	12
		40	1 1/4"	50	25	60	24	14
		50	1 1/2"	50	25	70	28	16
		60	2"	60	30	70	38	20
		70	2 1/2"	70	35	80	50	25
		80	75mm	76	38	80	60	30

E 型式 Type		型號 Model	ØJ	A	B	H1	ØD	PCD
		35	1"	84	10	50	11	60
		40	1 1/4"	84	10	60	11	60
		50	1 1/2"	99	13	70	13	75
		60	2"	118	15	70	15	90
		70	2 1/2"	138	21	80	17	105
		80	75mm	158	25	80	21	120

### ■ 螺桿長度 Length of The Screw

螺桿直徑 Screw Dia. ØJ	螺桿牙距 Pitch P(mm)	螺桿長度 Length of the Screw mm H (標準螺桿長度·亦可訂製其他尺寸) (Standard length of the screw, other dimensions also available)							
		此尺寸須另訂購							
1"	5	400	-	600	800	1000	1200	1500	2000
1 1/4"	6	400	-	600	800	1000	1200	1500	2000
1 1/2"	6	400	-	600	800	1000	1200	1500	2000
2"	8	-	500	600	800	1000	1200	1500	2000
2 1/2"	10	-	-	600	800	1000	1200	1500	2000
75m/m	12	-	-	600	800	1000	1200	1500	2000