永坤電機
YONGKUN MOTOR

臺灣永坤電機股份有限公司
TAIWAN YONGKUN MOTOR CO., LTD.

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經銷商

YONGKUN/07-2015/1000

永坤電機
YONGKUN MOTOR

蝸輪減速機/電機/轉向器
WORM GEAR REDUCER / MOTOR / REDIRECTOR

- □ NMRV系列蝸輪蝸杆減速機
- □ VF系列蝸輪減速機
- □ YK系列鋁殼三相异步電動機
- □ SWL系列蝸輪絲杆升降機
- □ T系列螺旋傘齒輪轉向器

- □ NMRV series Worm Gear Speed Reducer
- □ VF series Worm Gear Speed Reducer
- □ YK series Asynchronous Motor
- □ SWL series Worm Gear Screw Lifter
- □ T series Spiral Bevel Redirector

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公司簡介
Company Profile

臺灣永坤電機股份有限公司是一家專業研發，生產，銷售傳動產品爲一體化公司，主要核心產品有：齒輪減速電機，小型調速電機，交流伺服電機，混合式步進電機及驅動器，行星減速機，四大系列硬齒面減速電機，蝸輪蝸杆減速機等傳動產品。

臺灣永坤電機股份有限公司創辦以來，均以提供各種能提升產業自動化的普及率爲目標，十多年來我們一直追求如何將人文與科技融合爲一體，使人類能在輕鬆愉快的工作中又能達到快速高效率的生產目標。

在我們集思廣益秉持着一份執着，最終我們選定了有關提升產業自動化的利器，也就是我們目前研發生產的產品廣泛用于各種機械手、數控機床、機床加工中心、壓力機、電光源設備、自動送料機、印刷機械、食品包裝機械、制藥機械、玻璃陶瓷機械、綉花紡織機、雕刻手臂及普通機械等自動化控制領域。

臺灣永坤電機股份有限公司以ISO9001體系進行流程與質量控管，采用理論與實際相結合，技術加市場的運作模式，進出口等多元化的業務類型，以達到技術創新，產品一流，服務完善，客户滿意，從而保證公司永續經營，企業與客户群的互惠互利。

我們將以穩健的發展，高效益的組織結構，爲廣大客户服務，以質量取勝爲方針，采取企業與社會效益的良性循環，創造一個充滿生命力的組織體。

歡迎來電洽談商務，本公司將竭誠爲您服務。

Taiwan Yongkun Motor Co., Ltd is a professional R&D, production, sales of transmission products for Integrated firm, the main core products are AC servo motor, hybrid stepping motor and actuator, planetary reducer, four series of hardened slowdown motor transmission products.

Taiwan Yongkun Motor Co., Ltd established companies, are to popularize provides various can promote industrial automation rate, 10 years we have been pursuing how humanity and science and technology integration, make the mankind can achieve rapid and effective rate of production targets and in a relaxed and happy work

In our brainstorming with a persistent, we finally selected weapon related to the promotion of industrial automation, is our current R&D and production of the products are widely used in various mechanical hand, CNC machine tools and machining center, machine, electric light source equipment, automatic feeding machine, printing machinery, food packaging machinery, pharmaceutical machinery, glass ceramics embroidered textile machine, engraving machine, arm and general machinery automation control field.

Taiwan Yongkun Motor Co., Ltd for process and quality control in ISO9001 system, by combining theory and practice, the operation mode of technology and market, such as import and export of diversified business type, in order to achieve the innovation of technology, first–class products, perfect service, customer satisfaction, and Surety Company to sustainable management, mutual reciprocity and mutual benefit business and customers.

We will be the steady development, organizational structure and high effectiveness, for the majority of customer service, win with quality as the principle of benign loop to take business and social benefits, creating a vibrant organization.

Welcome to negotiate business, the company will wholeheartedly at your service.

NMRV系列蝸輪蝸杆減速機
NMRV Worm Gear Speed Reducer

1. 產品介紹 General Features

公司生產的RV系列的蝸輪蝸杆減速器包括NMRV和NRV兩大類，這種產品的特點是:
□ 采用ZK型錐面包絡傳動原理
□ 先進的耐磨材料
□ 性能優越、結構緊凑、體積小、效率高;
□ 安裝簡易、易于維護檢修;
□ 傳動比範圍大、扭矩大、承受過載能力高;
□ 運行平穩、噪音低、經久耐用;
□ 適用性强、安全可靠性大。

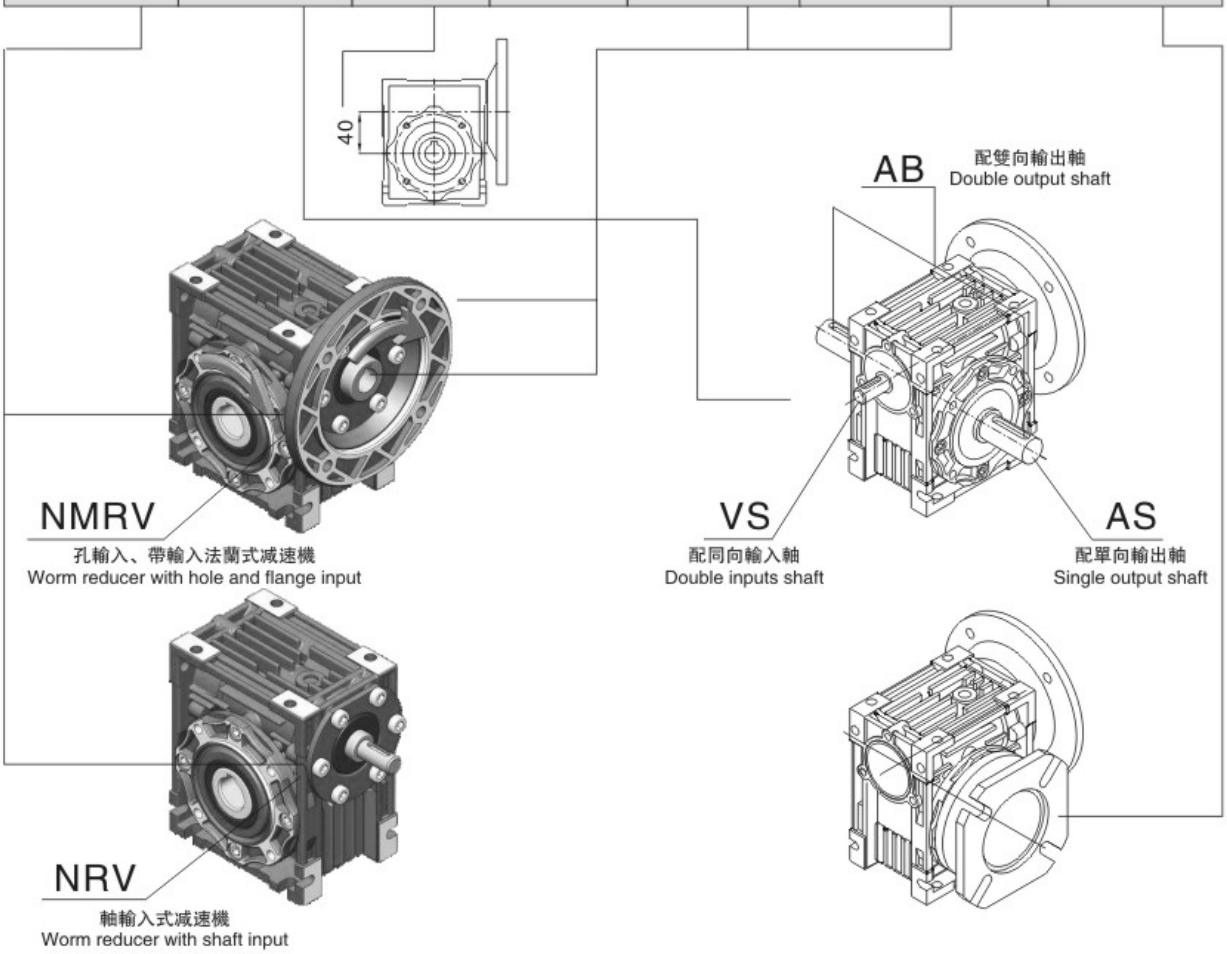
應用範圍:
在您選購本公司產品之前，請認真參考如下的使用範圍:
□ 可以在高慣性條件下運轉;
□ 可以用在高動態張力的情况下;
□ 適用的環境温度範圍-10~60°
□ 用在環境壓力超過大氣壓的環境中;
□ 本減速器避免用于液體環境中。

RV series of worm geared motor that our company produce include NMRV and NRV. Their performance features:
□ ZK worm profile〉high anti-wear material
□ Excellent performance, simply structure, small cubage and high efficiency;
□ Easy to mount and maintain;
□ Wide output Reduction ratio, large torque and good capability of enduring overloads;
□ Running stably,low noise and wearing well;
□ Wlde applicability and enough safe dependability.

Critical applications:
It is also necessary to take in consideration of and carefully assess the following applications by calling our Technical Service:
□ Applications with especially high inertia,
□ Applications with high dynamic strain on the case of the reduction unit,
□ In places with T° under-10℃ or over 60℃,
□ Use in environments pressures other than atmospheric pressure,
□ Avoid applications where even partial immersion of the reduction unit is required.

2. 型號注解 Designation

NMRV	.VS	040	.20	−140	/11	+FA
輸入形式 Input code name	輸出形式 Output code name	中心距 Size	傳動比 Reduction ratio	輸入法蘭尺寸 Input flange diameter	NMRV的輸入孔尺寸 Drive shaft diameter	輸出法蘭 Output flange
NMRV NRV	VS AB AS 默認孔輸出 The default output hole	025 030 040 050 063 075 090 105 110 130 150	5 7.5 10 15 20 25 30 40 50 60 80 100	80 90 105 120 140 160 200 250 300 350	9 11 14 19 24 28 38 42	FA FB FC FD FE
(必要) Necessary	(可選) Optional	(必要) Necessary	(必要) Necessary	(可選) Optional	(可選) Optional	(可選) Optional



示例1: "NMRV. AS063.20−200/24+FB" 表示: NMRV(孔輸入)形式, 帶單向輸出軸，
中心距63mm，傳動比20，輸入法蘭大小爲200mm，輸入孔爲24mm, 配FB輸出法蘭。
Sample 1: "NMRV.AS063.20−200/24+FB" indicates: NMRV (input hole) form.
with single output shaft. Size 63mm. Input flange size is 200mm. input hole is 24mm. matching output flange FB.

示例2: "NRV110.25" 表示: NRV(軸)輸入形式, 中心距110mm, 傳動比25, 默認孔輸出形式，不帶輸出法蘭。
Sample 2: "NRV110.25"indicates: NRV(shaft)input form size 110mm. Reduction ratio is 25.
The default output hole form. Without output flange.

型號注解 Designation

NMRV	帶輸入法蘭式減速器(配合電機使用) Worm geared motor		
NRV	帶輸入軸式減速器 Worm reduction unit		
050	中心距 Size		
FA	輸出法蘭 Output flange		
30	傳動比 Reduction ratio	D or S	輸出法蘭的安裝型式 Output flange mounting position
PAM	帶輸入法蘭式減速器(配合電機使用, 基本型) Fitted for motor coupling		
200	輸入法蘭尺寸 Motor flange diameter	19	NMRV 的輸入孔尺寸 Drive shaft diamete
VS	配同向輸入軸 Double input shaft	AS	配單向輸出軸 Single output shaft
AB	配同雙向輸入軸 Fouble output shaft	B3	安裝型式 Mounting position
0.75KW	電機功率 Electric motor power	4P	電機極數 Electric motor polarity
230/400V	電機電壓 Electriv motor voltage	50HZ	電機頻率 Electric motor frequency

3. 選型參數 Type selection

特性 Performance

加于減速器的負荷性質 Type of load	每日工作時數 Hours/day					
	每小時間斷性操作次數少于10次 Srarts/hour less than times			每小時連續性或間斷性操作次數大于10次 Starts/hour more than ten times		
	<2	2~8	8~24	<2	2~8	8~24
	工作系數 Service factor					
帶均衡負荷 Uniform	0.8	1	1.25	1	1.25	1.75
帶中級震蕩 Moderate	1	1.25	1.5	1.5	1.75	2
帶重級震蕩 Heavy shocks	1.25	1.5	1.75	1.75	2	2.25

轉矩功率參數表(配4級n1=1400r/min電機)
Parameter Schedule (With 4P,n1=1400r/min motor)

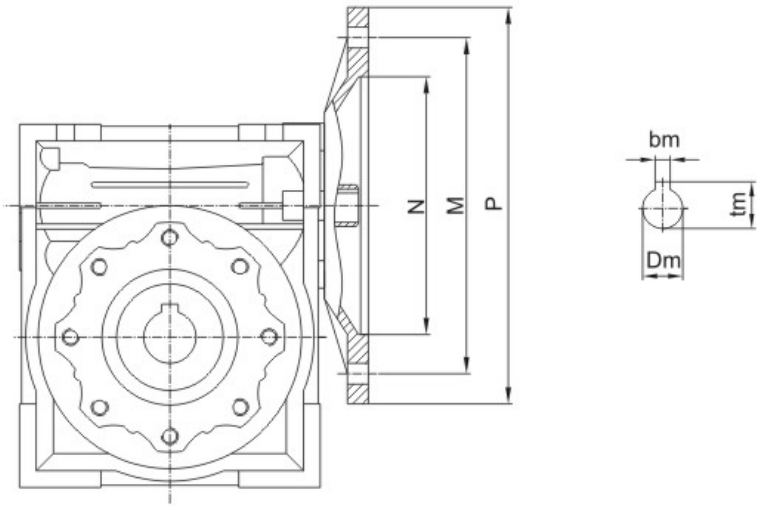
		中心距25 Size			中心距30 Size			中心距40 Size			中心距50 Size		
i	n_2(r/min)	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.
5	280	–	–	–	0.18	5.3	3.4	0.37	11.2	3	0.75	22.8	2.7
7.5	186.7	–	–	–	0.18	7.8	2.3	0.37	16	2.4	0.75	34	2.1
10	140	–	–	–	0.18	10	1.8	0.37	21	1.9	0.75	44	1.6
15	93.3	0.09	7.3	1.6	0.18	14	1.3	0.37	31	0.8	0.75	63	1.2
20	70	0.09	9.2	1.3	0.18	18	1	0.37	39	1	0.75	81	0.9
25	56	0.09	10	1.2	0.18	21	1	0.37	47	0.8	0.55	71	1
30	46.7	0.09	12	1.1	0.18	24	0.8	0.37	53	0.8	0.55	81	1
40	35	0.09	15	0.8	0.12	19	0.9	0.25	44	0.9	0.37	68	1.1
50	28	0.06	12	0.9	0.12	23	0.8	0.22	47	0.8	0.37	80	0.9
60	23.3	0.06	14	0.7	0.09	19	0.9	0.18	43	0.8	0.37	89	0.8
80	17.5	–	–	–	0.06	14	0.9	0.12	34	1	0.25	72	0.9
100	14	–	–	–	–	–	–	0.12	38	0.8	0.18	60	0.9
		中心距63 Size			中心距75 Size			中心距90 Size			中心距105 Size		
i	n_2(r/min)	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.
5	280	1.5	46	2	–	–	–	–	–	–	–	–	–
7.5	186.7	1.5	67.5	1.9	4	182	1	4	184.2	1.6	7.5	345	1.3
10	140	1.5	89	1.5	3	180	1.1	4	243	1.3	7.5	455	1.1
15	93.3	1.5	127	1.1	3	261	0.8	4	352	1	5.5	484	1.2
20	70	1.5	166	0.8	1.5	168	1.3	4	458	0.8	4.8	557	1
25	56	1.1	146	0.9	1.5	205	1	3	420	0.8	4	573	1
30	46.7	1.1	167	1	1.5	233	1	3	479	0.9	4	647	1
40	35	0.92	176	0.8	1.1	216	1	1.84	377	1	3	638	1
50	28	0.55	124	1.1	0.55	129	1.6	1.84	452	0.8	3	767	0.8
60	23.3	0.55	140	0.9	0.55	146	1.4	1.5	424	0.8	2.2	648	0.9
80	17.5	0.37	115	1.1	0.55	180	1.1	0.75	258	1.1	1.5	548	0.9
100	14	0.37	129	0.9	0.55	206	0.9	0.75	302	0.9	1.1	473	1
		中心距110 Size			中心距130 Size			中心距150 Size			注釋 Note		
i	n_2(r/min)	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.	P_1(kw)	M_2(N.m)	s.f.			
5	280	–	–	–	–	–	–	–	–	–			
7.5	186.7	7.5	345	1.3	7.5	349.2	2.1	–	–	–			
10	140	7.5	455	1.1	7.5	455	1.8	15	921	1.3			
15	93.3	5.5	484	1.4	7.5	668	1.4	11	990	1.3			
20	70	5.5	638	0.9	7.5	880	1	11	1291	1			
25	56	4.8	688	0.9	7.5	1074	0.9	7.5	1074	1.1			
30	46.7	4	647	1.1	5.5	900	1.2	7.5	1274	0.9			
40	35	3	638	1	5.5	1171	0.9	5.5	1171	1.3			
50	28	3	767	0.8	4.8	1244	1.1	5.5	1426	1			
60	23.3	2.2	648	0.9	4	1179	0.8	4	1195	1.1			
80	17.5	1.5	548	0.9	2.2	816	1	4	1484	0.8			
100	14	1.1	473	1	2.2	966	1	2.2	960	1			

n_1=輸入速度 (r/min)
n_2=輸出速度 (r/min)
M_2=輸出轉矩 (N.m)
i=傳動比
s.f.=工作系數

n_1=input speed (r/min)
n_2=output speed (r/min)
M_2=input speed (N.m)
i=reduction ratio
s.f.=service factor

4. 尺寸 Dimensions

4.1 輸入尺寸總表 Input size general schedules

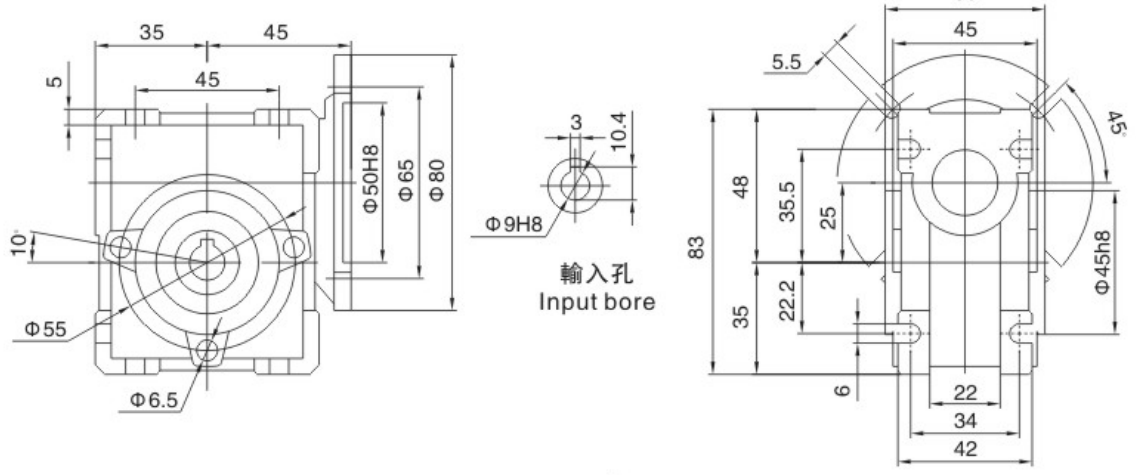


NMRV	Mounting Spec.						Dm											
	PAM–IEC	N	M	P	bm	tm	5	7.5	10	15	20	25	30	40	50	60	80	100
25	56B14	50	65	80	3	10.4	–	–	–	9	9	9	9	9	9	9	–	–
30	63B5	95	115	140	4	12.8	11	11	11	11	11	11	11	11	11	–	–	–
	63B14	60	75	90	4	12.8												
	56B5	80	100	120	3	10.4	9	9	9	9	9	9	9	9	9	9	9	–
	56B14	50	65	80	3	10.4												
40	71B5	110	130	160	5	16.3	14	14	14	14	14	14	14	14	–	–	–	–
	71B14	70	85	105	5	16.3												
	63B5	95	115	140	4	12.8	11	11	11	11	11	11	11	11	11	11	11	11
	63B14	60	75	90	4	12.8												
	56B5	80	100	120	3	10.4	–	–	–	–	–	–	–	–	9	9	9	9
50	80B5	130	165	200	6	21.8	19	19	19	19	19	19	19	–	–	–	–	–
	80B14	80	100	120	6	21.8												
	71B5	110	130	160	5	16.3	14	14	14	14	14	14	14	14	14	14	14	–
	71B14	70	85	105	5	16.3												
	63B5	95	115	140	4	12.8	–	–	–	–	–	–	–	11	11	11	11	11
63	90B5	130	165	200	8	27.3	24	24	24	24	24	24	24	–	–	–	–	–
	90B14	95	115	140	8	27.3												
	80B5	130	165	200	6	21.8	19	19	19	19	19	19	19	19	19	19	–	–
	80B14	80	100	120	6	21.8												
	71B5	110	130	160	5	16.3	–	–	–	–	–	–	–	14	14	14	14	14
	71B14	70	85	105	5	16.3												
75	100/112B5	180	215	250	8	31.3	–	28	28	28	–	–	–	–	–	–	–	–
	100/112B14	110	130	160	8	31.3												
	90B5	130	165	200	8	27.3	–	24	24	24	24	24	24	24	–	–	–	–
	90B14	95	115	140	8	27.3												
	80B5	130	165	200	6	21.8	–	–	–	–	19	19	19	19	19	19	19	19
	80B14	80	100	120	6	21.8												
	71B5	110	130	160	5	16.3	–	–	–	–	–	–	–	–	14	14	14	14
90	100/112B5	180	215	250	8	31.3	–	28	28	28	28	28	28	–	–	–	–	–
	100/112B14	110	130	160	8	31.3												
	90B5	130	165	200	8	27.3	–	24	24	24	24	24	24	24	24	24	–	–
	90B14	95	115	140	8	27.3												
	80B5	130	165	200	6	21.8	–	–	–	–	–	–	–	19	19	19	19	19
	80B14	80	100	120	6	21.8												
105	132B5	230	265	300	10	41.3	–	38*	38*	38*	38*	–	–	–	–	–	–	–
	100/112B5	180	215	250	8	31.3	–	28	28	28	28	28	28	28	28	28	–	–
	90B5	130	165	200	8	27.3	–	–	–	–	–	24	24	24	24	24	24	24
	80B5	130	165	200	6	21.8	–	–	–	–	–	–	–	–	–	–	19	19
110	132B5	230	265	300	10	41.3	–	38*	38*	38*	38*	–	–	–	–	–	–	–
	100/112B5	180	215	250	8	31.3	–	28	28	28	28	28	28	28	28	28	–	–
	90B5	130	165	200	8	27.3	–	–	–	–	–	24	24	24	24	24	24	24
130	80B5	130	165	200	6	21.8	–	–	–	–	–	–	–	–	–	–	19	19
	132B5	230	265	300	10	41.3	–	38*	38*	38*	38*	38*	38*	38*	–	–	–	–
	100/112B5	180	215	250	8	31.3	–	–	–	–	–	28	28	28	28	28	28	28
	90B5	130	165	200	8	27.3	–	–	–	–	–	–	–	–	–	–	24	24
150	160B5	250	300	350	12	45.3	–	42	42	42	42	42	–	–	–	–	–	–
	132B5	230	265	300	10	41.3	–	–	–	–	38	38	38	38	38	38	–	–
	100/112B5	180	215	250	8	31.3	–	–	–	–	–	–	–	–	28	28	28	28

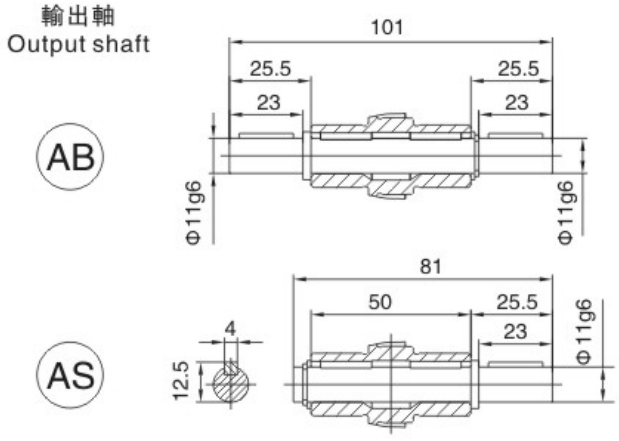
4.2 外型尺寸及輸出尺寸 Boundary dimension and output size

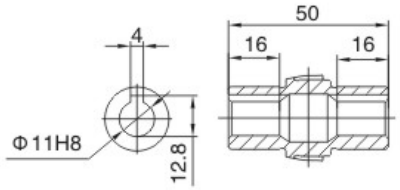
NMRV

025



輸出軸
Output shaft

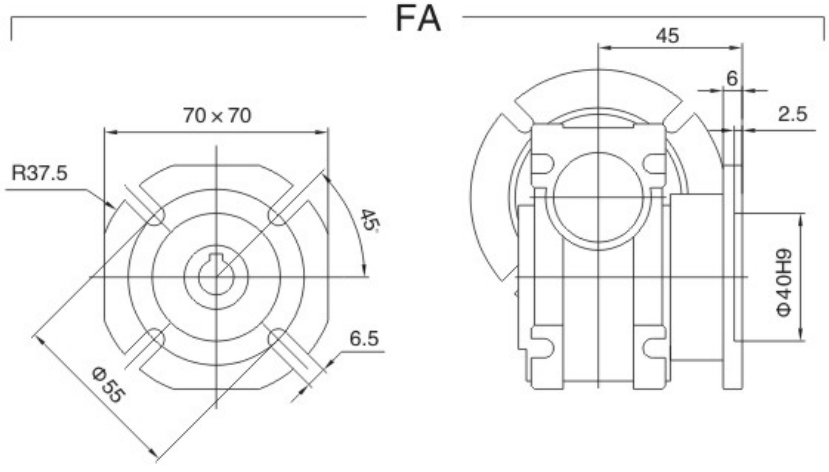




輸出孔
Output bore

輸出法蘭 Output flange

FA

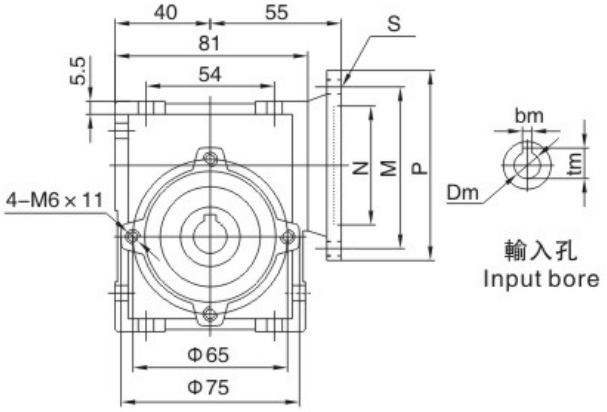


重量: 0.7kg
Weight: 0.7kg

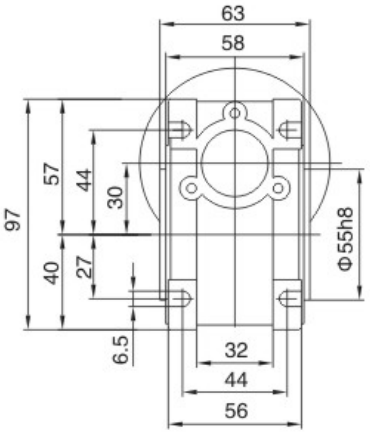
尺寸 Dimensions

030

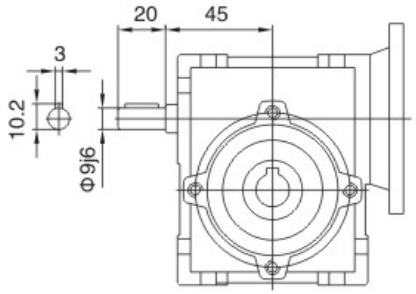
NMRV

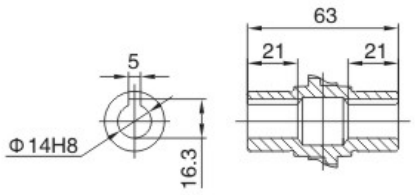


輸入孔
Input bore



NMRV.VS





輸出孔
Output bore

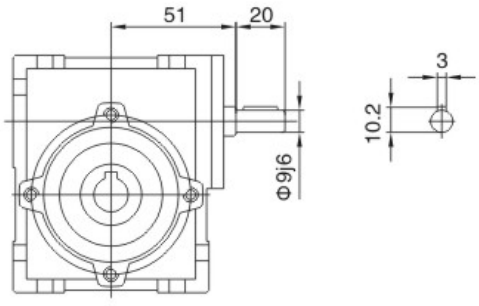
適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)												
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
63B5	Φ95	Φ115	Φ140	4	12.8	Φ9	11	11	11	11	11	11	11	11	11	–	–	–	23
63B14	Φ60	Φ75	Φ90	4	12.8	Φ6													
56B5	Φ80	Φ100	Φ120	3	10.4	Φ7	9	9	9	9	9	9	9	9	9	9	9	–	20
56B14	Φ50	Φ65	Φ80	3	10.4	Φ6													

重量: 1.3kg
Weight: 1.3kg

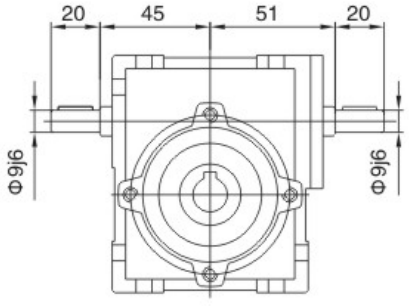
尺寸 Dimensions

030

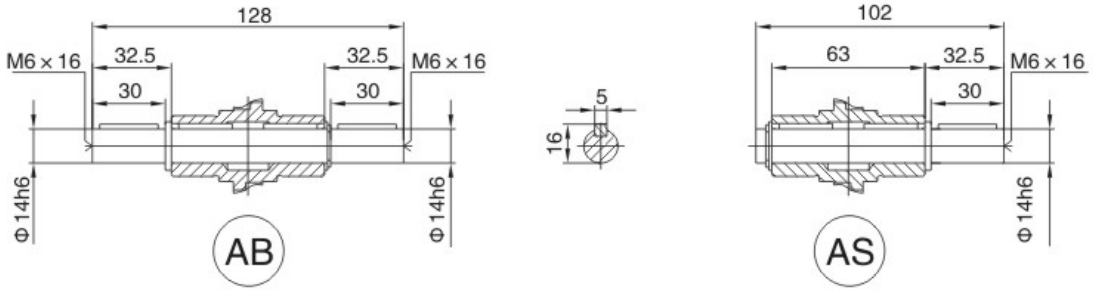
NRV



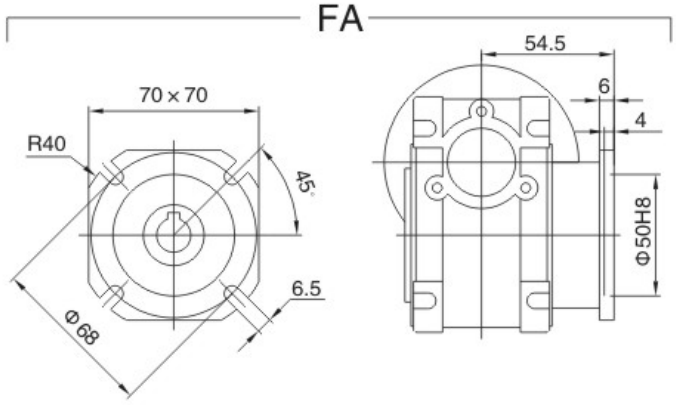
NRV.VS



輸出軸 Output shaft



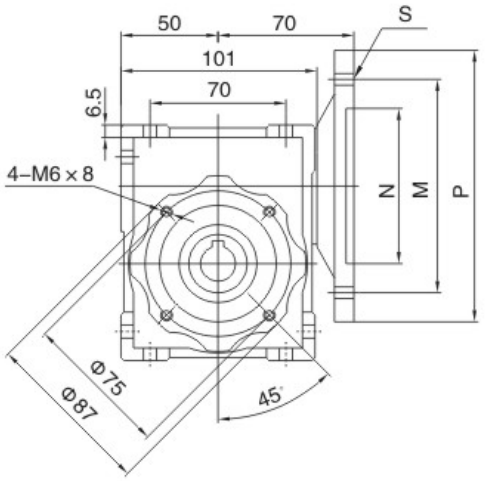
輸出法蘭 Output flange

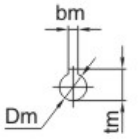


尺寸 Dimensions

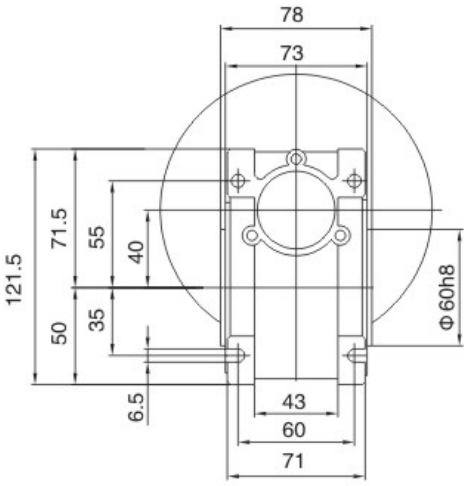
040

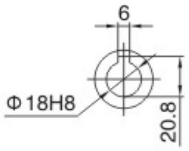
NMRV

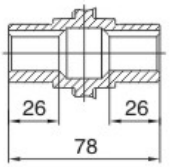




輸入孔
Input bore

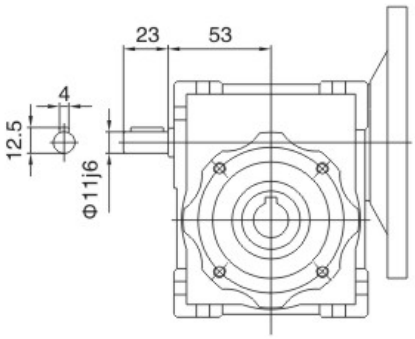






輸出孔
Output bore

NMRV.VS



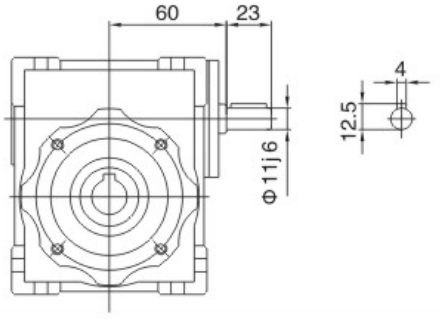
適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)												
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
71B5	Φ110	Φ130	Φ160	5	16.3	Φ11	14	14	14	14	14	14	14	14	–	–	–	–	30
71B14	Φ70	Φ85	Φ105	5	16.3	Φ7													
63B5	Φ95	Φ115	Φ140	4	12.8	Φ9	11	11	11	11	11	11	11	11	11	11	11	11	23
63B14	Φ60	Φ75	Φ90	4	12.8	Φ6													
56B5	Φ80	Φ100	Φ120	3	10.4	Φ7	–	–	–	–	–	–	–	–	9	9	9	9	23

重量: 2.4kg
Weight: 2.4kg

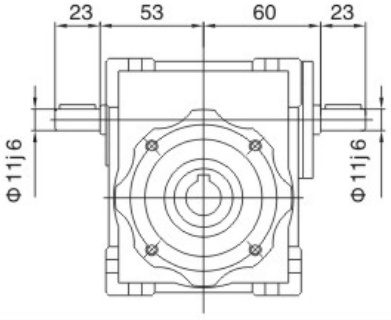
尺寸 Dimensions

040

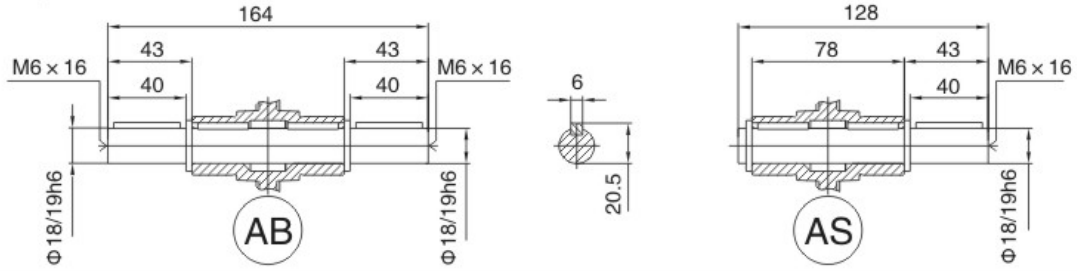
NRV



NRV.VS

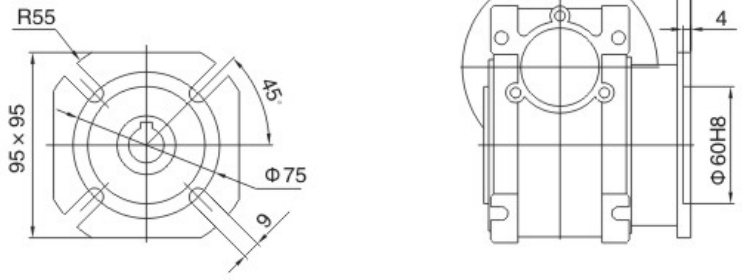


輸出軸 Output shaft

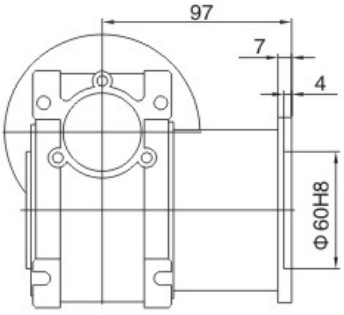


輸出法蘭 Output flange

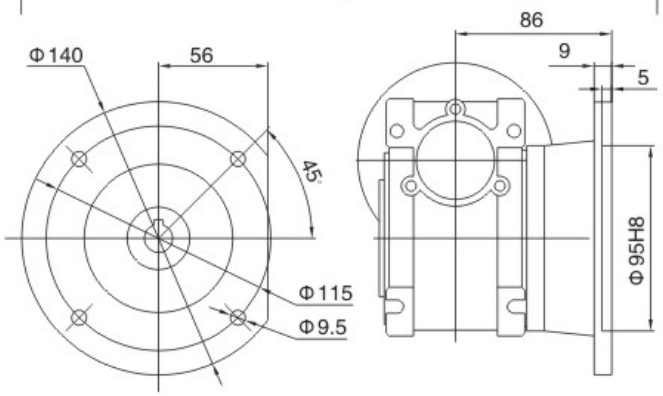
FA



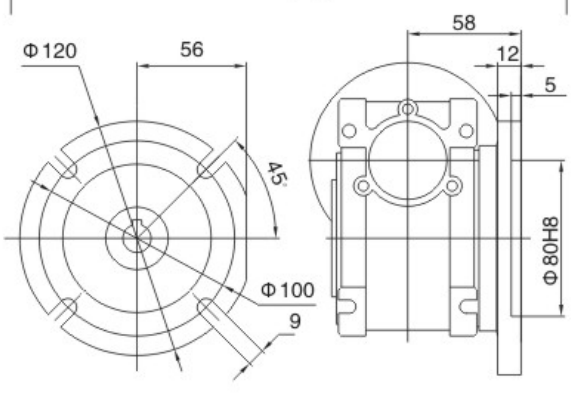
FB



FC



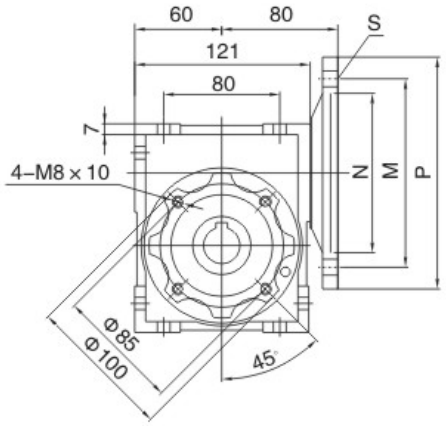
FD

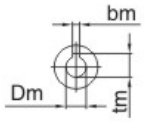


尺寸 Dimensions

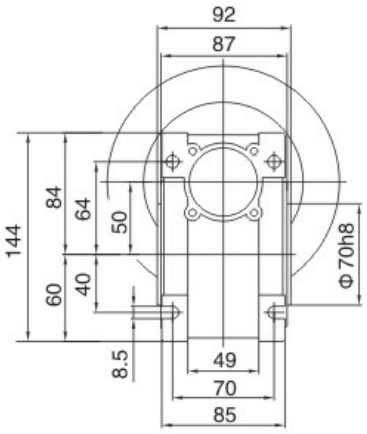
050

NMRV

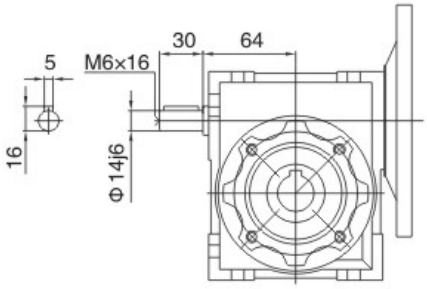


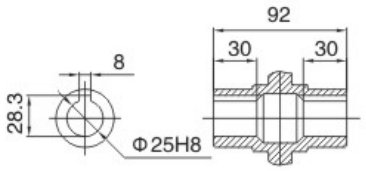


輸入孔
Input bore



NMRV.VS





輸出孔
Output bore

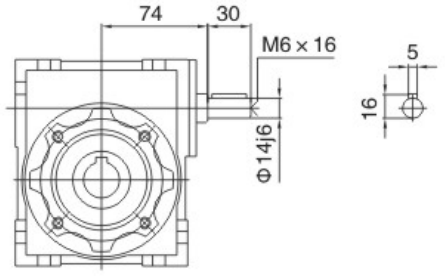
適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)											
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
80B5	Φ130	Φ165	Φ200	6	21.8	Φ11	19	19	19	19	19	19	19	–	–	–	–	–	40
80B14	Φ80	Φ100	Φ120	6	21.8	Φ7													
71B5	Φ110	Φ130	Φ160	5	16.3	Φ11	14	14	14	14	14	14	14	14	14	14	14	–	30
71B14	Φ70	Φ85	Φ105	5	16.3	Φ7													
63B5	Φ96	Φ115	Φ140	4	12.8	Φ9	–	–	–	–	–	–	-	11	11	11	11	11	23

重量: 3.6kg
Weight: 3.6kg

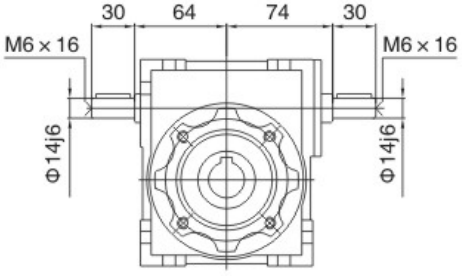
尺寸 Dimensions

050

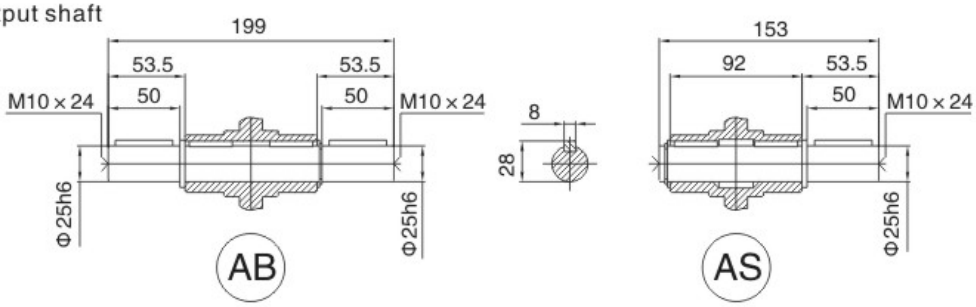
NRV



NRV.VS

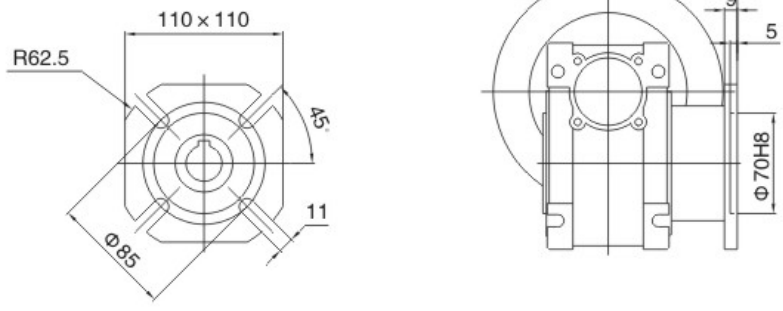


輸出軸 Output shaft

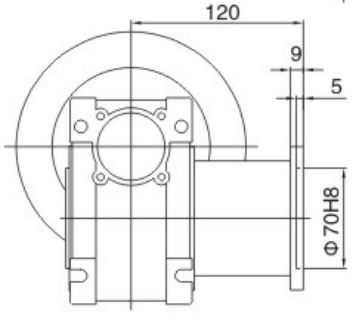


輸出法蘭 Output flange

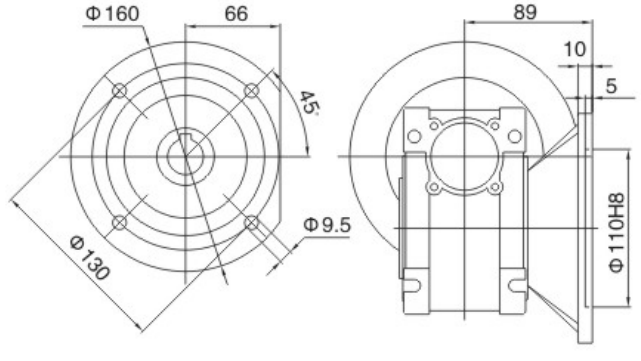
FA



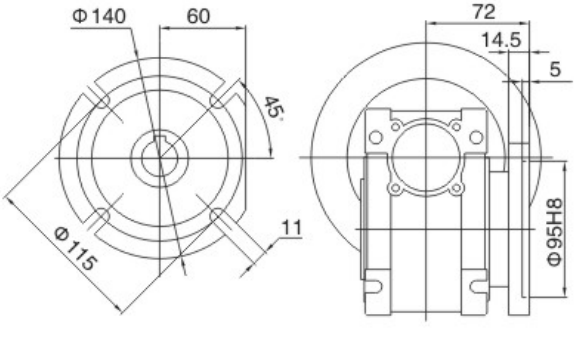
FB



FC



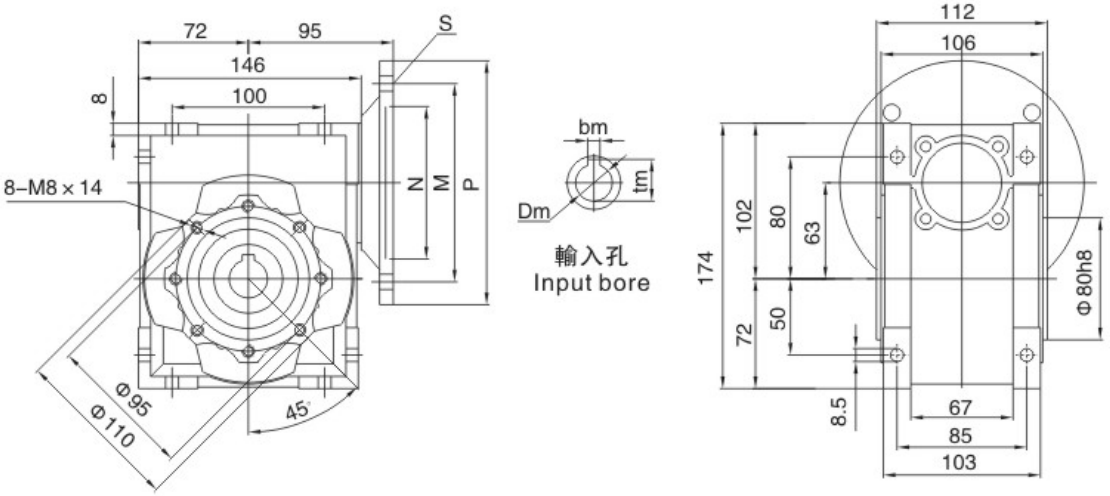
FD



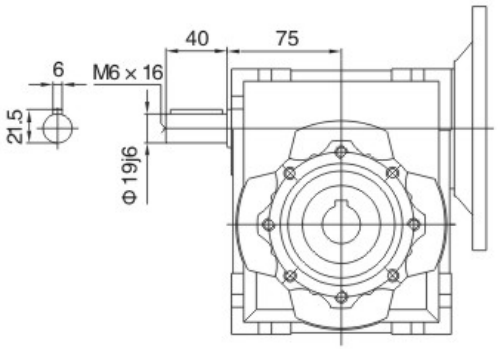
尺寸 Dimensions

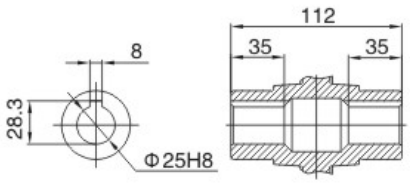
063

NMRV



NMRV.VS





輸出孔
Output bore

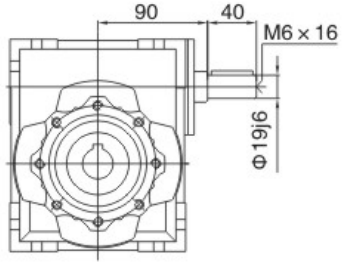
適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)											
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
90B5	Φ130	Φ165	Φ200	8	27.3	Φ11	24	24	24	24	24	24	24	–	–	–	–	–	50
90B14	Φ95	Φ115	Φ140	8	27.3	Φ9													
80B5	Φ130	Φ165	Φ200	6	21.8	Φ11	19	19	19	19	19	19	19	19	19	19	–	–	40
80B14	Φ80	Φ100	Φ120	6	21.8	Φ7													
71B5	Φ110	Φ130	Φ160	5	16.3	Φ11	–	–	–	–	–	–	–	14	14	14	14	14	30
71B14	Φ70	Φ85	Φ105	5	16.3	Φ7													

重量: 6.3kg
Weight: 6.3kg

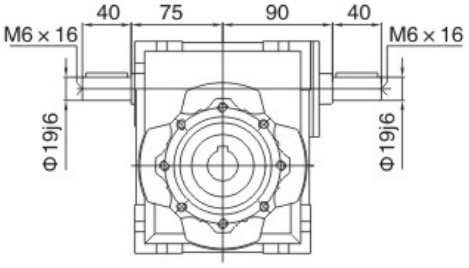
尺寸 Dimensions

063

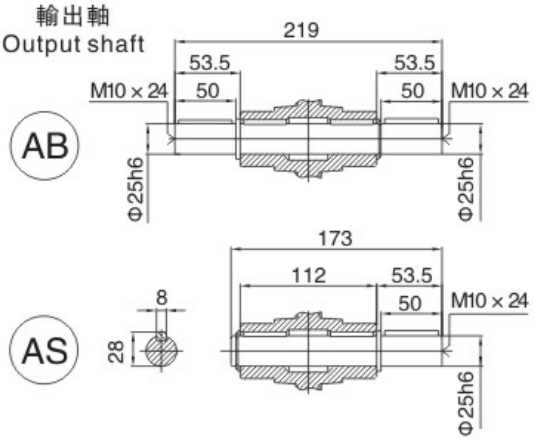
NRV



NRV.VS

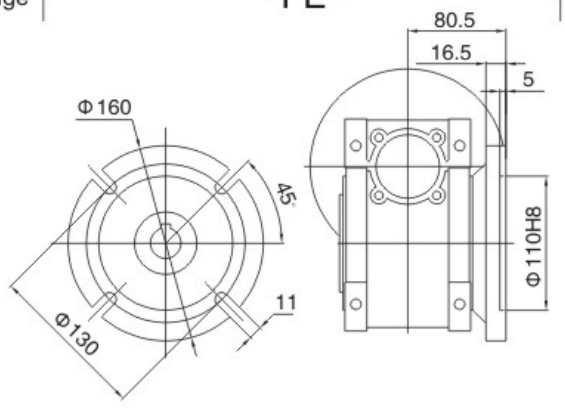


輸出軸
Output shaft

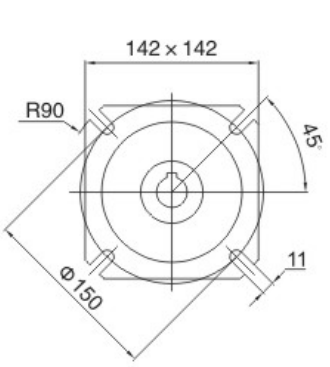


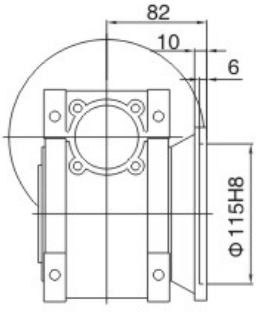
輸出法蘭
Output flange

FE

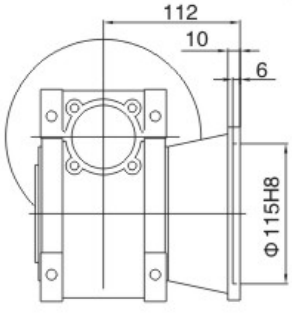


FA

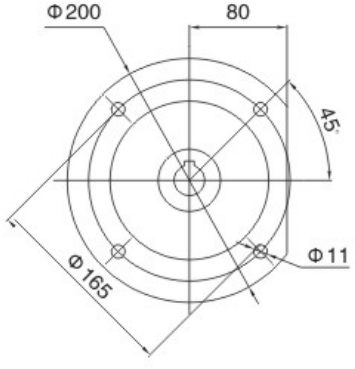


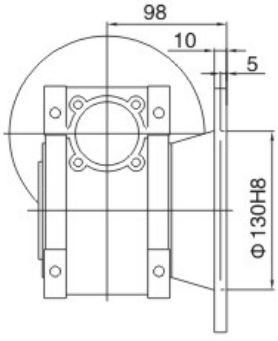


FB

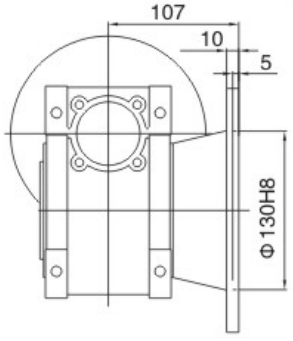


FC





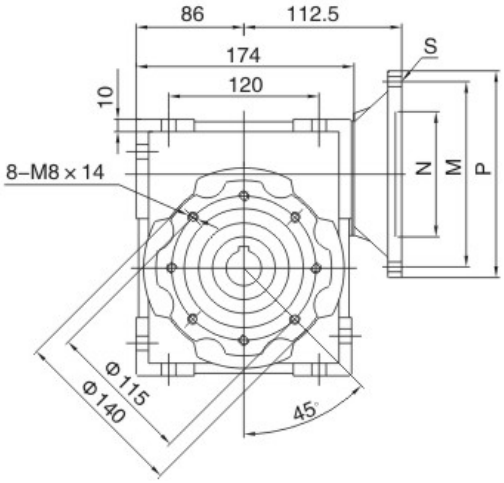
FD

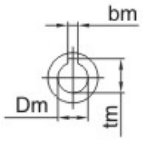


尺寸 Dimensions

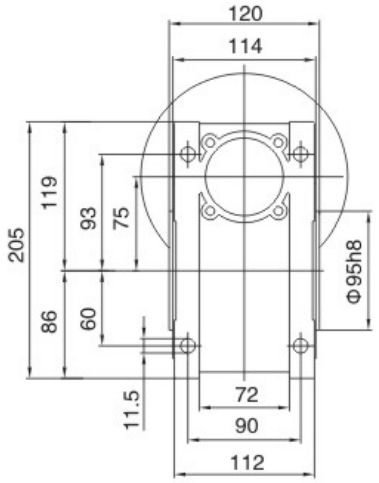
075

NMRV

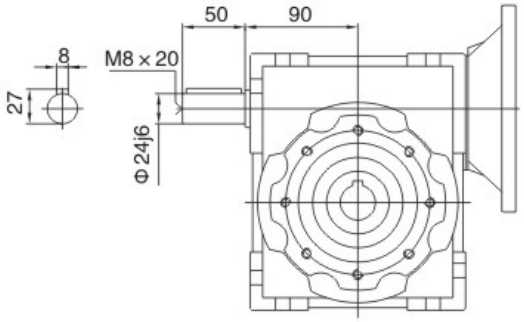


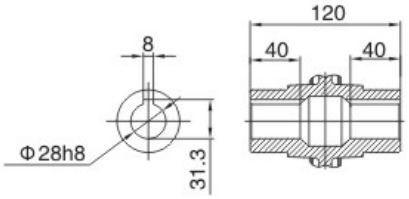


輸入孔
Input bore



NMRV.VS





輸出孔
Output bore

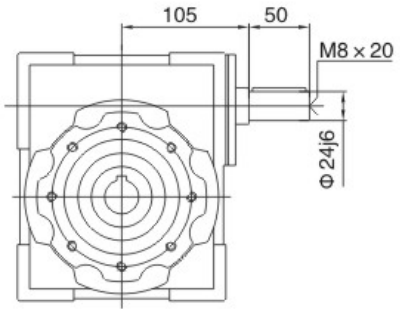
適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)												
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
100/112B5	Φ180	Φ215	Φ250	8	31.3	Φ15	–	28	28	28	–	–	–	–	–	–	–	–	60
100/112B14	Φ110	Φ130	Φ160	8	31.3	Φ9													
90B5	Φ130	Φ165	Φ200	8	27.3	Φ11	–	24	24	24	24	24	24	24	–	–	–	–	50
90B14	Φ95	Φ115	Φ140	8	27.3	Φ9													
80B5	Φ130	Φ165	Φ200	6	21.8	Φ11	–	–	–	–	19	19	19	19	19	19	19	19	40
80B14	Φ80	Φ100	Φ120	6	21.8	Φ7													
71B5	Φ110	Φ130	Φ160	5	16.3	Φ11	–	–	–	–	–	–	–	–	14	14	14	14	30

重量: 9kg
Weight: 9kg

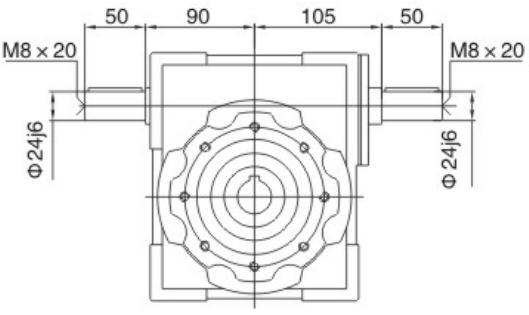
尺寸 Dimensions

075

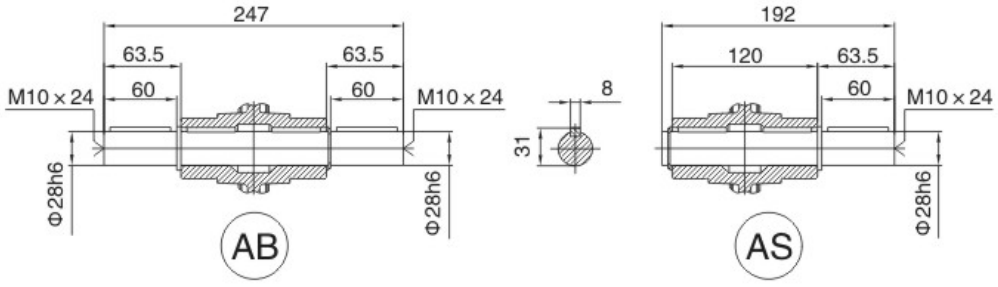
NRV



NRV.VS

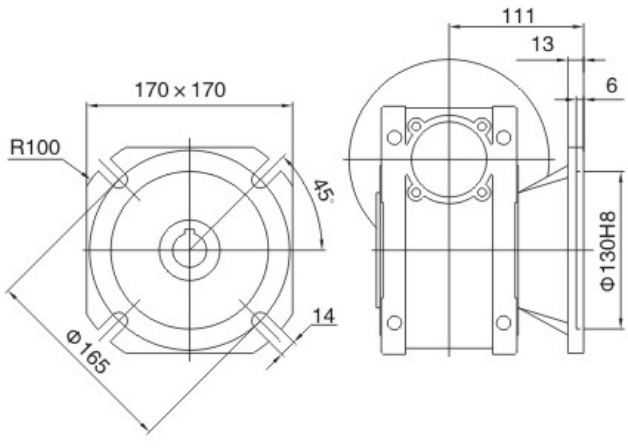


輸出軸 Output shaft

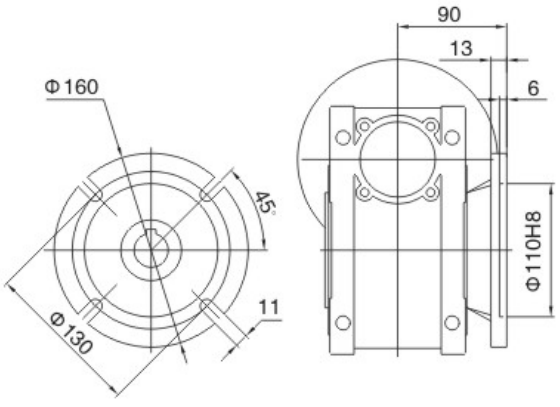


輸出法蘭 Output flange

FA



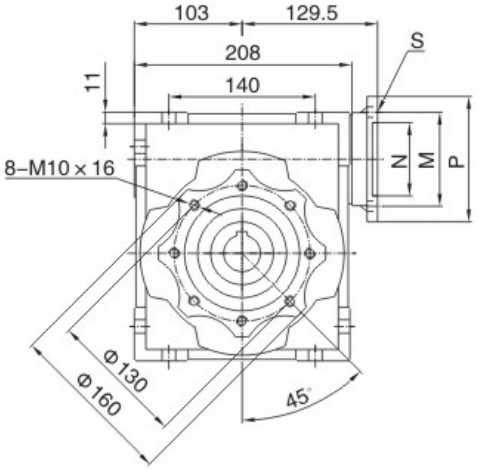
FB

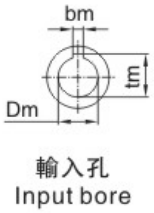


尺寸 Dimensions

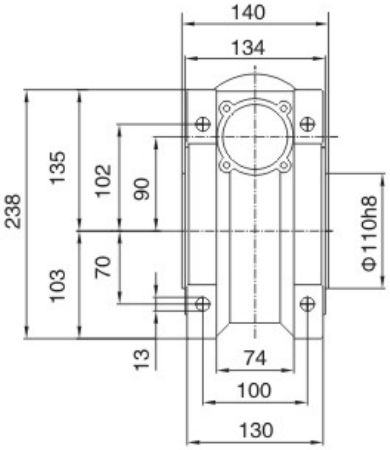
090

NMRV

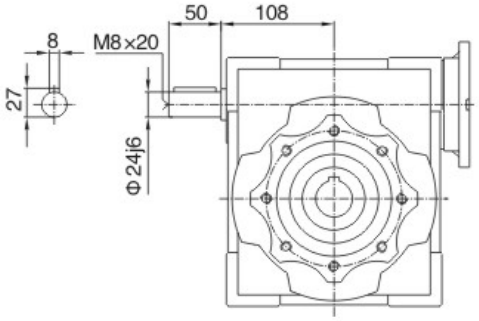


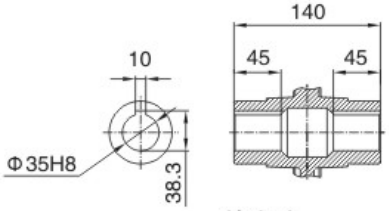


輸入孔
Input bore



NMRV.VS





輸出孔
Output bore

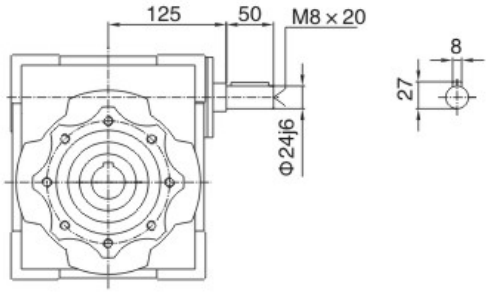
適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)												
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
100/112B5	Φ180	Φ215	Φ250	8	31.3	Φ15	28	28	28	28	28	28	28	–	–	–	–	–	60
100/112B14	Φ110	Φ130	Φ160	8	31.3	Φ9													
90B5	Φ130	Φ165	Φ200	8	27.3	Φ11	24	24	24	24	24	24	24	24	24	24	–	–	50
90B14	Φ95	Φ115	Φ140	8	27.3	Φ9													
30B5	Φ130	Φ165	Φ200	6	21.8	Φ11	–	–	–	–	–	–	–	19	19	19	19	19	40
80B14	Φ80	Φ100	Φ120	6	21.8	Φ7													

重量: 13kg
Weight: 13kg

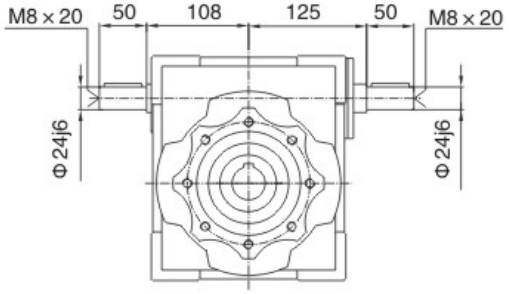
尺寸 Dimensions

090

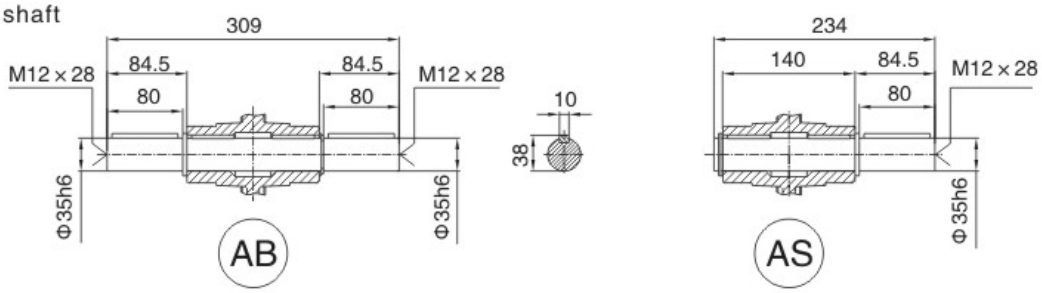
NRV



NRV.VS

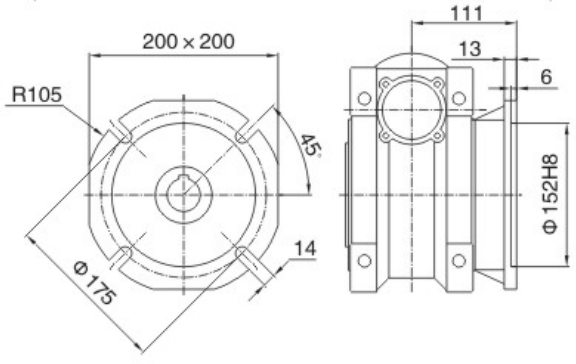


輸出軸 Output shaft

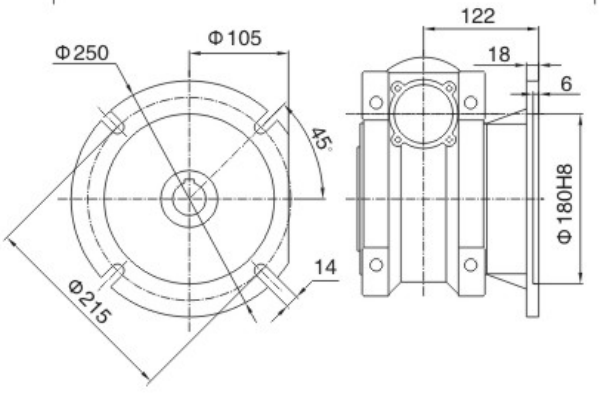


輸出法蘭 Output flange

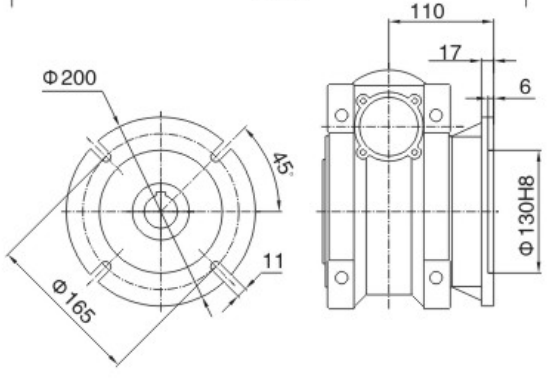
FA



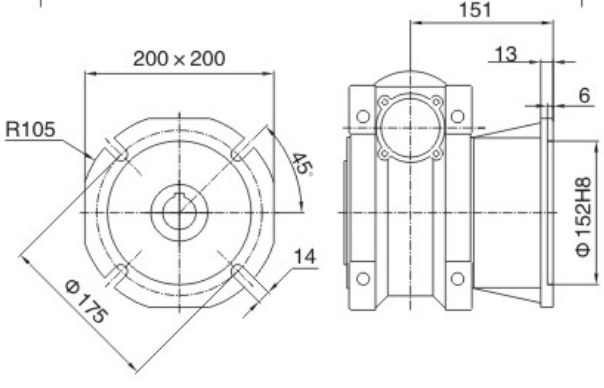
FB



FC



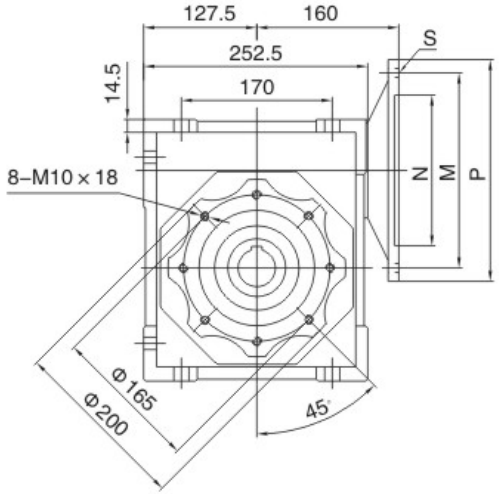
FD

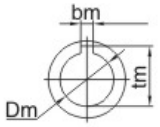


尺寸 Dimensions

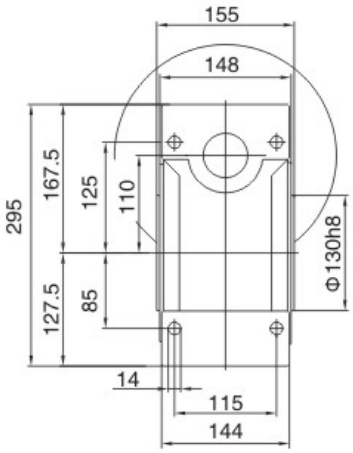
NMRV

110

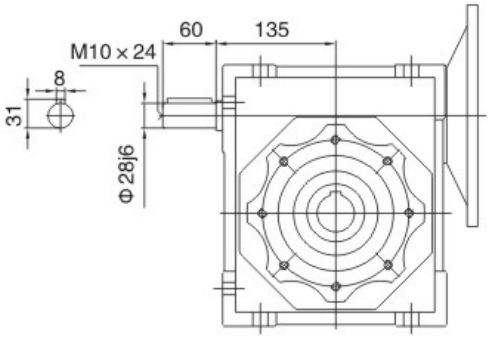


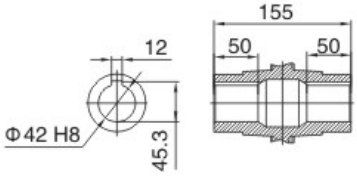


輸入孔
Input bore



NMRV.VS





輸出孔
Output bore

適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)												
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
132B5	Φ230	Φ265	Φ300	10	41.3	Φ15	–	38*	38*	38*	38*	–	–	–	–	–	–	–	80
100/112B5	Φ180	Φ215	Φ250	8	31.3	Φ15	–	28	28	28	28	28	28	28	28	28	–	–	60
90B5	Φ130	Φ165	Φ200	8	27.3	Φ11	–	–	–	–	–	24	24	24	24	24	24	24	50
80B5	Φ130	Φ165	Φ200	8	21.8	Φ11	–	–	–	–	–	–	–	–	–	–	19	19	40

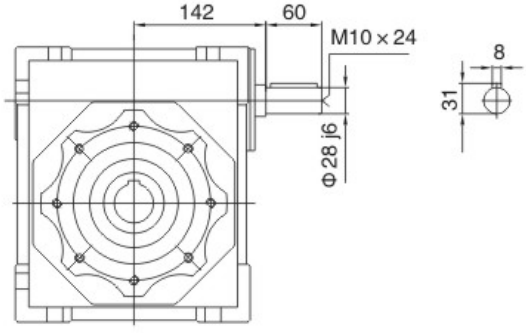
重量: 40kg
Weight: 40kg

注釋: 薄鍵由DAIFUSI提供。
Note: (*)Low profile key supplied by DAIFUSI.

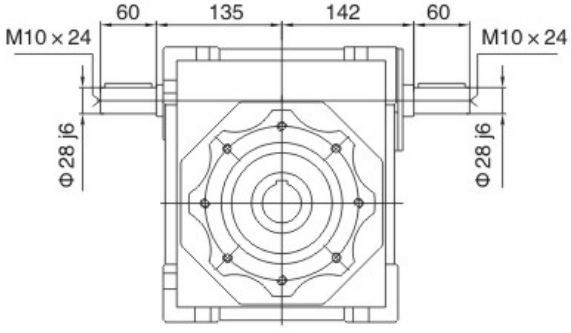
尺寸 Dimensions

110

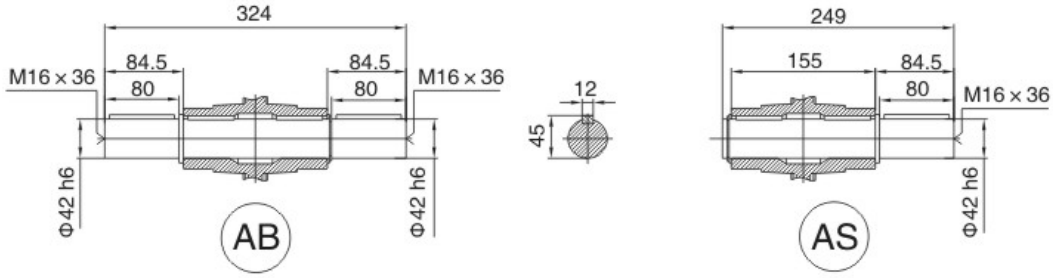
NRV



NRV.VS

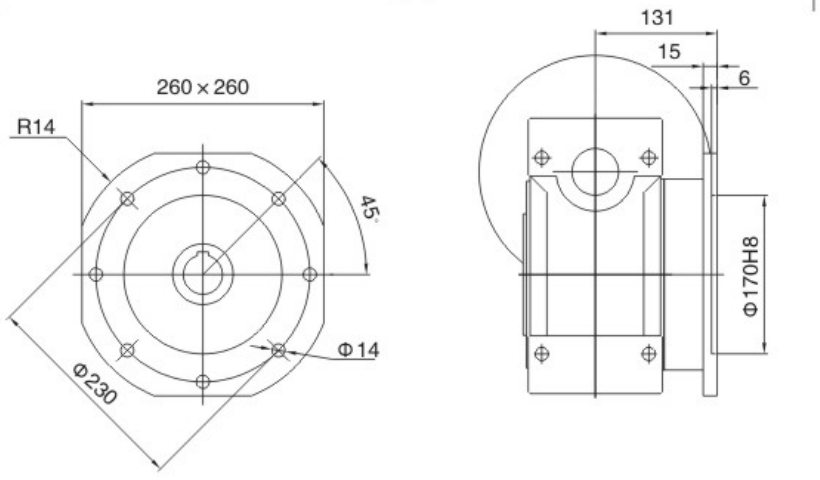


輸出軸 Output shaft



輸出法蘭 Output flange

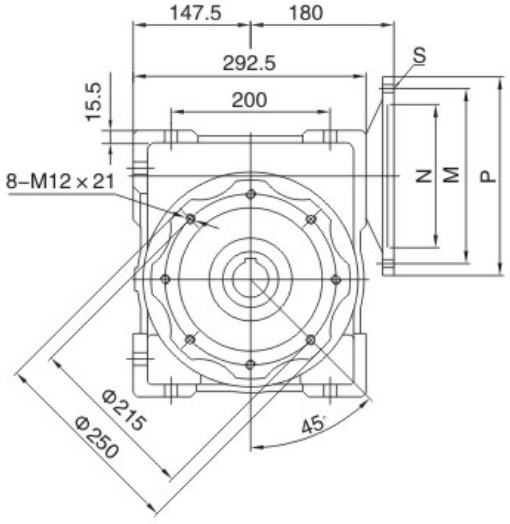
FA

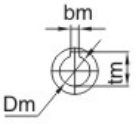


尺寸 Dimensions

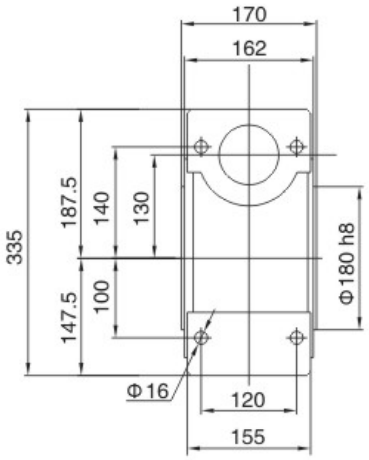
NMRV

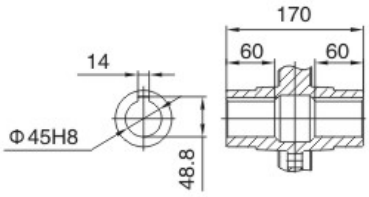
130





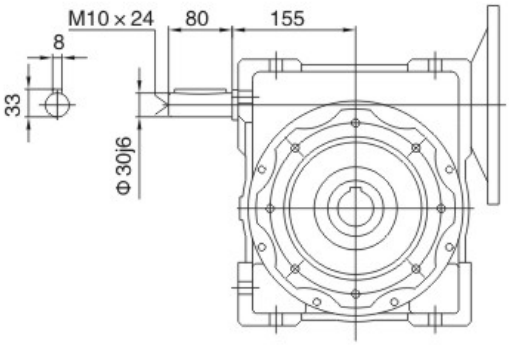
輸入孔
Input bore

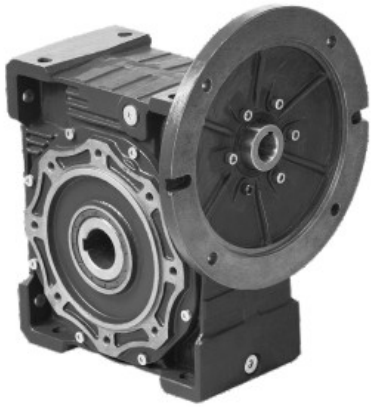




輸出孔
Output bore

NMRV.VS





適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)												
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
132B5	Φ230	Φ265	Φ300	10	41.3	Φ15	–	38*	38*	38*	38*	38*	38*	38*	–	–	–	–	80
100/112B5	Φ180	Φ215	Φ250	8	31.3	Φ15	–	–	–	–	–	28	28	28	28	28	28	28	60
90B5	Φ130	Φ165	Φ200	8	27.3	Φ11	–	–	–	–	–	–	–	–	–	–	24	24	50

重量: 50kg
Weight: 50kg

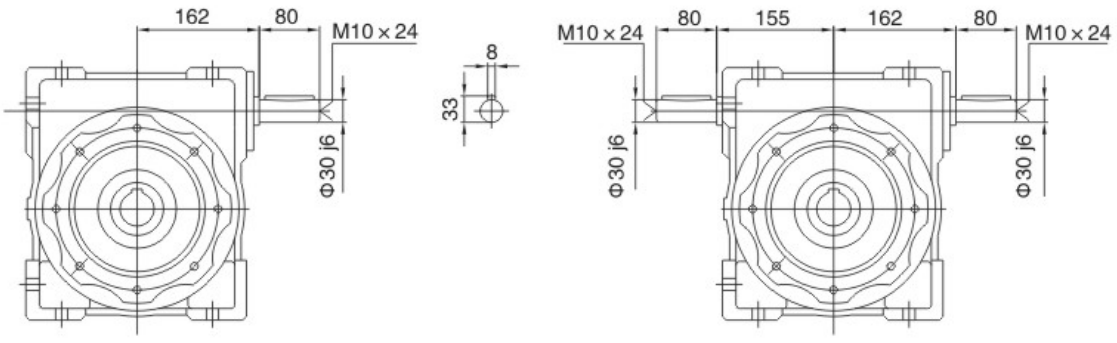
注釋: 薄鍵由DAIFUSI提供。
Note: (*)Low profile key supplied by DAIFUSI.

尺寸 Dimensions

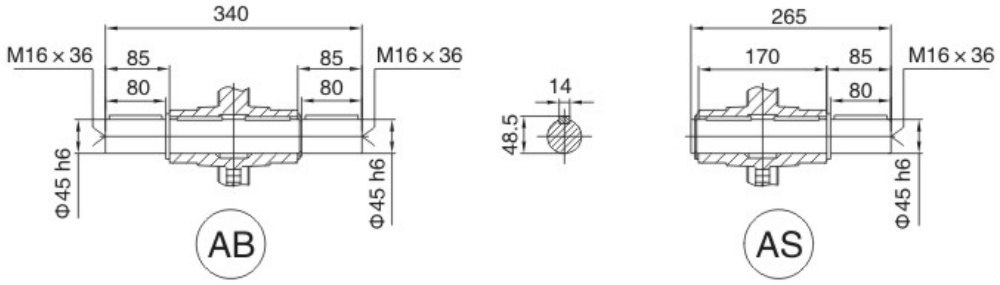
130

NRV

NRV.VS

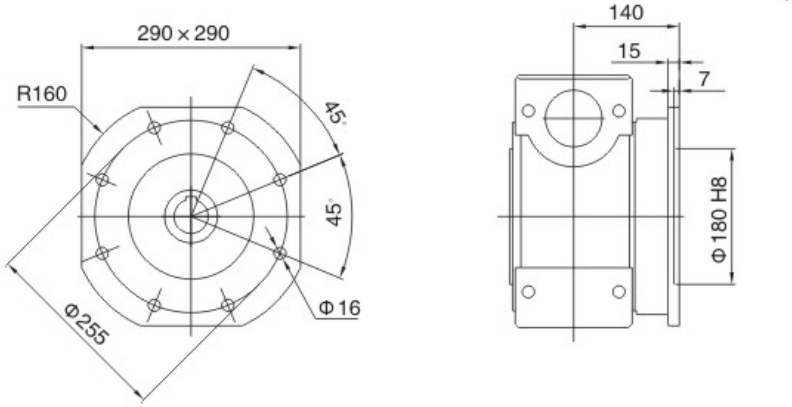


輸出軸 Output shaft



輸出法蘭 Output flange

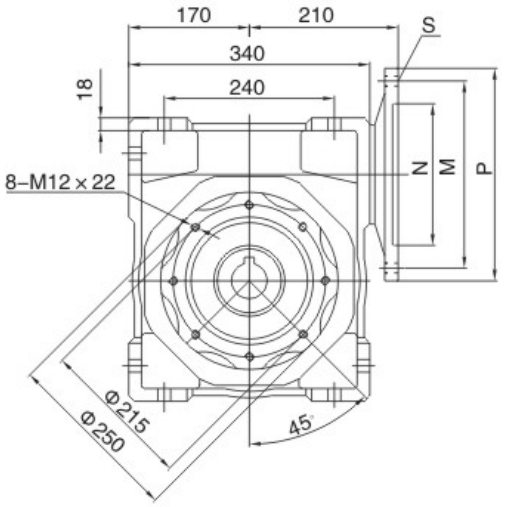
FA

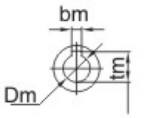


尺寸 Dimensions

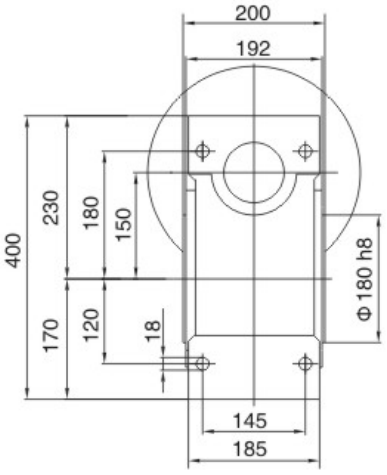
NMRV

150

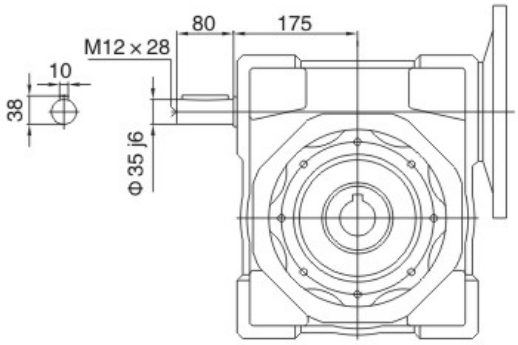


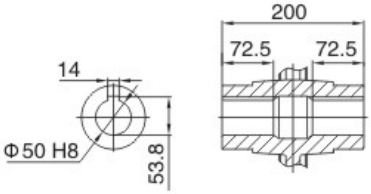


輸入孔
Input bore



NMRV.VS





輸出孔
Output bore

適用電機 PAM–IEC	N (H8)	M	P	bm	tm	S	Dm(H7)												
							5	7.5	10	15	20	25	30	40	50	60	80	100	Depth 深
160B5	Φ250	Φ300	Φ350	12	45.3	Φ15	–	42*	42*	42*	42*	42*	42*	42*	–	–	–	–	110
132B5	Φ230	Φ265	Φ300	10	41.3	Φ15	–	–	–	–	–	38	38	38	38	38	–	–	80
100/112B5	Φ180	Φ215	Φ250	8	31.3	Φ15	–	–	–	–	–	–	–	–	28	28	28	28	60

重量: 84kg
Weight: 84kg

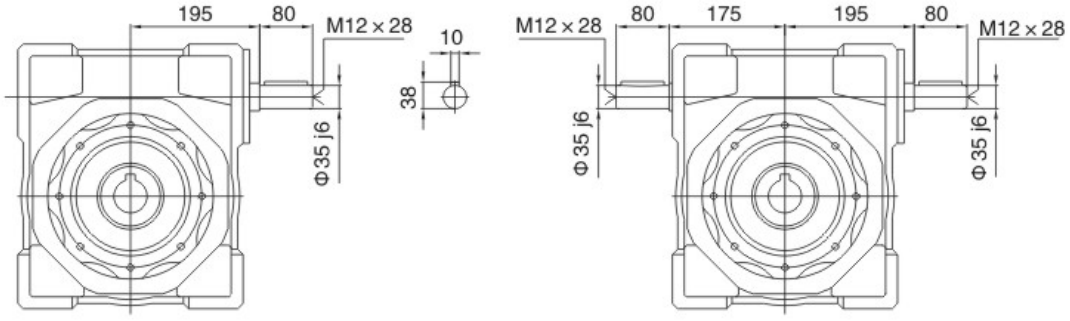
注釋: 薄鍵由DAIFUSI提供。
Note: (*)Low profile key supplied by DAIFUSI.

尺寸 Dimensions

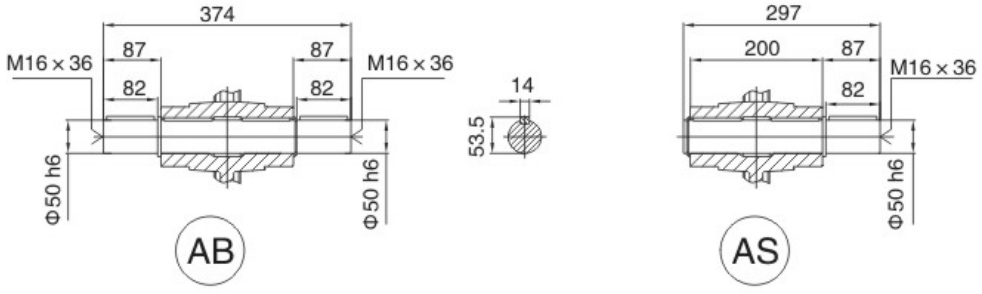
150

NRV

NRV.VS

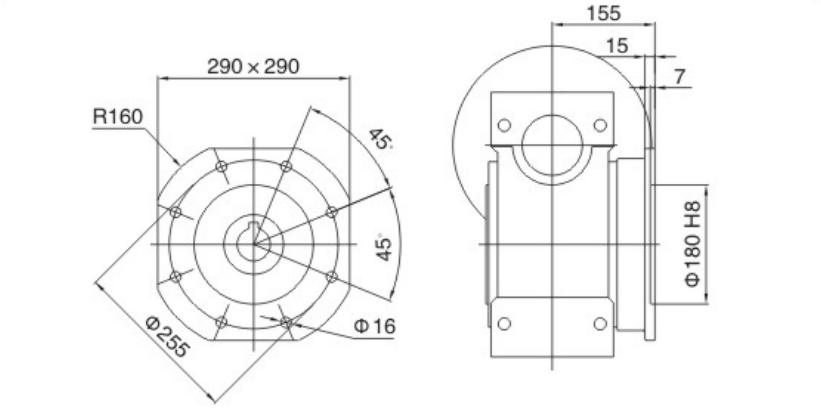


輸出軸 Output shaft

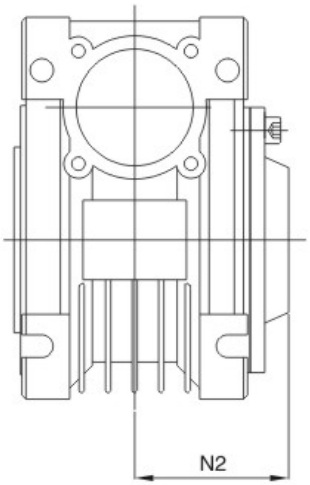


輸出法蘭 Output flange

FA

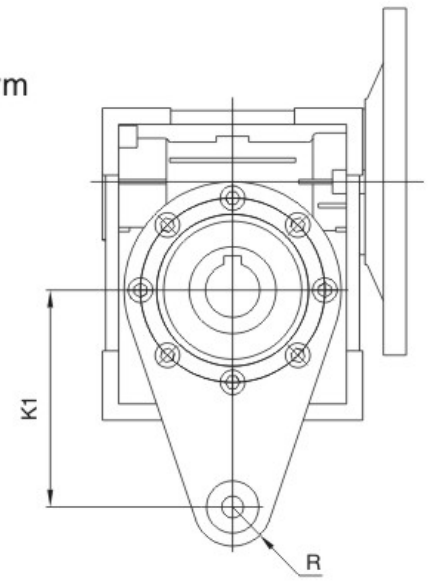


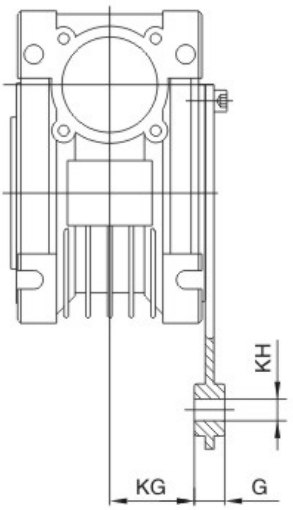
4.3 防護蓋 Cover



	N2
030	42
040	50
050	58
063	69
075	71
090	86
105	94
110	94
130	102
150	113

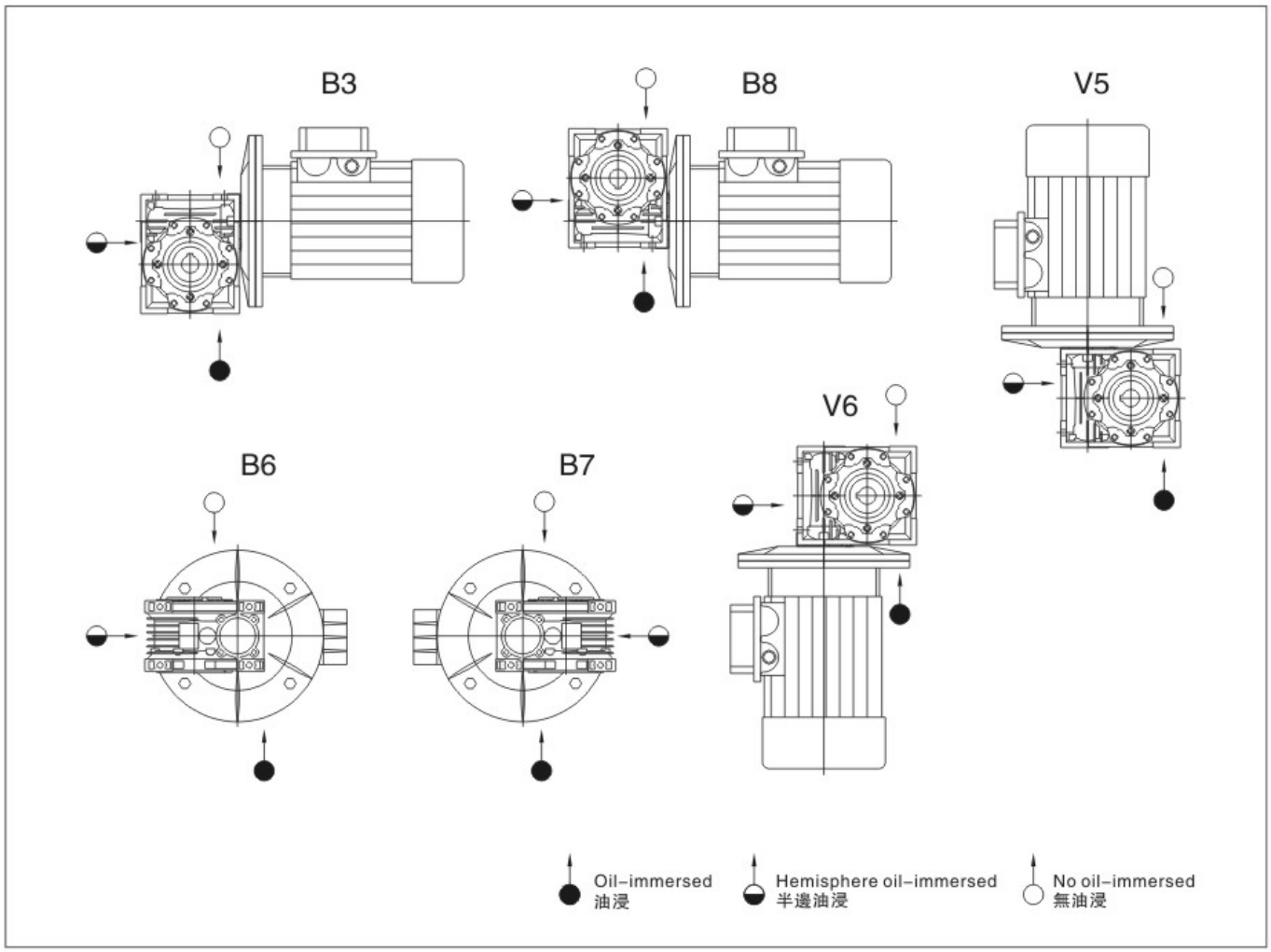
4.4 轉矩臂 Torque arm



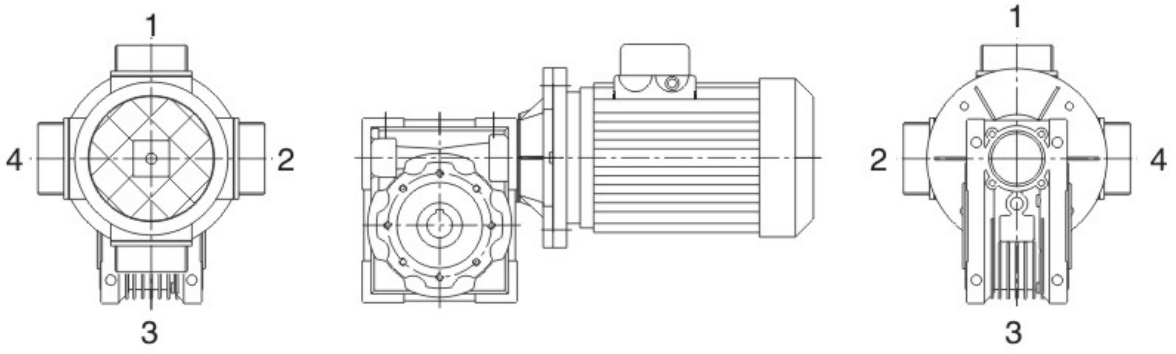


NMRV	K1	G	KG	KH	R
025	70	14	17.5	8	15
030	85	14	24	8	15
040	100	14	31.5	10	18
050	110	14	38.5	10	18
063	150	14	49	10	18
075	200	25	47.5	20	30
090	200	25	57.5	20	30
105	250	30	62	25	35
110	250	30	62	25	35
130	250	30	69	25	35
150	250	30	84	25	35

5. NMRV與電機的安裝型式 NMRV Mounting positions with motor



接綫盒位置 POS.of terminal box

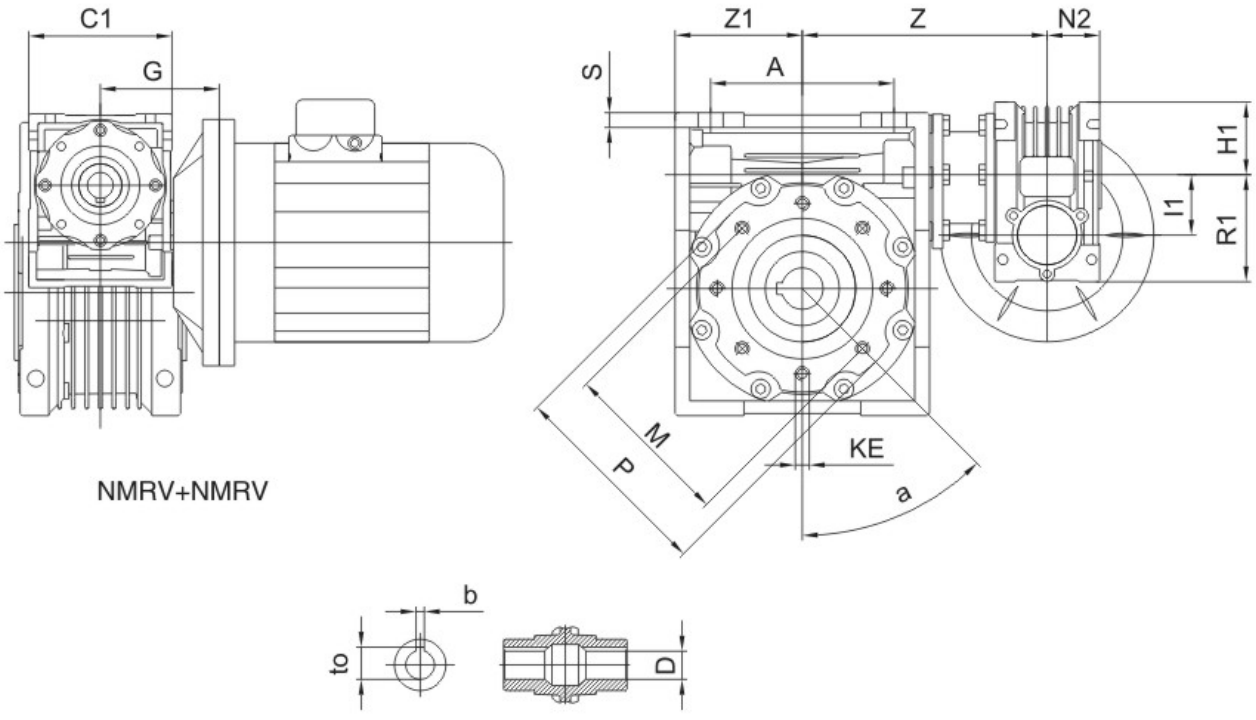


6. 雙級機型參數 Combine worm geared motor performance

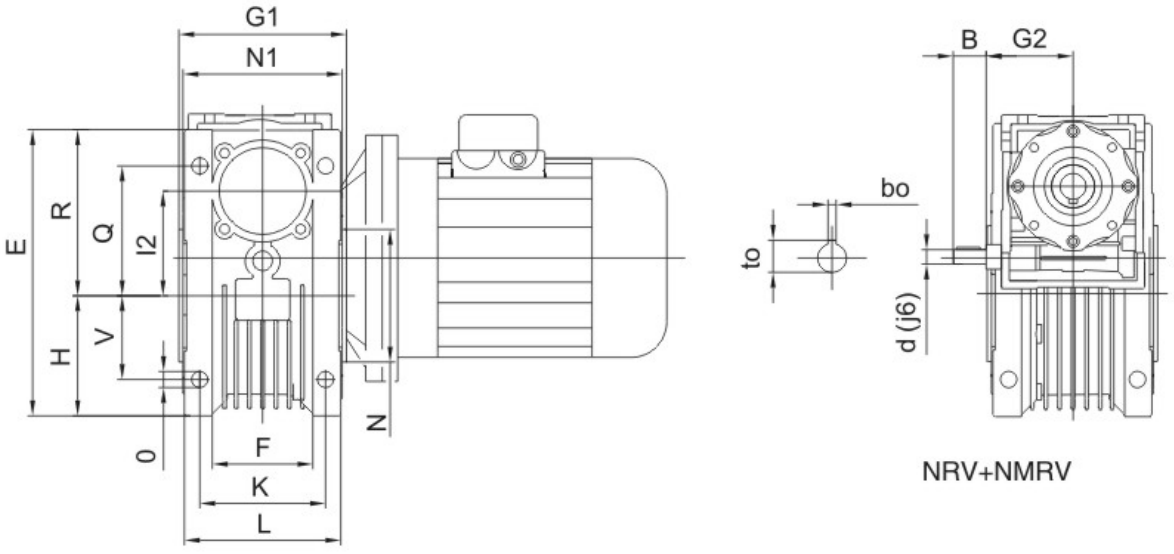
NRV/NMRV(n_1=1400r/min)									
Model	M_2	i	P_1(KW)	n_2(r/min)	Model	M_2	i	P_1(KW)	n_2(r/min)
NRV030/040	73	300	0.08	4.7	NRV050/105	1100	300	0.9	4.7
	65	400	0.06	3.5		1030	400	0.7	3.5
	61	500	0.04	2.8		1000	500	0.6	2.8
	73	600	0.04	2.3		1030	600	0.5	2.3
	73	750	0.04	1.9		1100	750	0.4	1.9
	73	900	0.03	1.6		1100	900	0.4	1.6
	65	1200	0.02	1.2		1030	1200	0.3	1.2
	73	1500	0.02	0.9		1100	1500	0.3	0.93
	73	1800	0.02	0.8		1100	1800	0.2	0.78
	65	2400	0.01	0.58		1030	2400	0.2	0.58
	65	3200	0.01	0.4		1000	3000	0.1	0.47
	33	4000	0.01	0.4		780	4000	0.1	0.35
	29	5000	0.01	0.28		710	5000	0.1	0.28
NRV030/050	145	300	0.15	4.7	NRV050/110	1265	300	1.1	4.7
	124	400	0.1	3.5		1185	400	0.8	3.5
	120	500	0.09	2.8		1100	500	0.6	2.8
	145	600	0.08	2.3		1185	600	0.6	2.3
	145	750	0.07	1.9		1265	750	0.5	1.9
	145	900	0.06	1.6		1265	900	0.4	1.6
	124	1200	0.04	1.2		1185	1200	0.3	1.2
	145	1500	0.04	0.93		1265	1500	0.3	0.93
	145	1800	0.04	0.78		1265	1800	0.3	0.78
	124	2400	0.03	0.6		1185	2400	0.2	0.58
	120	3000	0.02	0.5		1100	3000	0.1	0.47
	82	4000	0.02	0.35		819	4000	0.1	0.35
	82	4800	0.02	0.29		746	5000	0.1	0.28

NRV/NMRV(n1=1400r/min)									
Model	M_2	i	P_1(KW)	n_2(r/min)	Model	M_2	i	P_1(KW)	n_2(r/min)
NRV030/063	230	300	0.24	4.7	NRV063/130	1760	300	1.5	4.7
	230	400	0.19	3.5		1650	400	1.1	3.5
	216	500	0.15	2.8		1550	500	0.9	2.8
	230	600	0.13	2.3		1650	600	0.8	2.3
	216	750	0.11	1.9		1760	750	0.7	1.9
	198	900	0.09	1.6		1760	900	0.6	1.6
	230	1200	0.08	1.2		1650	1200	0.4	1.2
	216	1500	0.06	0.93		1760	1500	0.4	0.93
	198	1800	0.05	0.78		1760	1800	0.3	0.78
	230	2400	0.05	0.58		1650	2400	0.3	0.58
	216	3000	0.04	0.47		1550	3000	0.2	0.47
	172	4000	0.03	0.35		1220	4000	0.1	0.35
	150	5000	0.02	0.28		1100	5000	0.1	0.28
NRV040/075	390	300	0.36	4.7	NRV063/150	2340	150	3.4	9.3
	360	400	0.27	3.5		2340	200	2.7	7
	320	500	0.21	2.8		2050	250	1.9	5.6
	390	600	0.19	2.3		2340	300	1.9	4.7
	390	750	0.16	1.9		2670	400	1.8	3.5
	390	900	0.14	1.6		2330	500	1.4	2.8
	390	1200	0.11	1.2		2670	600	1.3	2.3
	390	1500	0.1	0.93		2330	750	1.0	1.9
	390	1800	0.09	0.78		2100	900	0.7	1.6
	360	2400	0.07	0.58		2670	1200	0.7	1.2
	320	3000	0.05	0.47		2100	1800	0.4	0.8
	250	4000	0.04	0.35		2670	2400	0.5	0.6
	230	5000	0.03	0.28		2330	3000	0.3	0.5
						1880	4000	0.2	0.4
						16450	5000	0.2	0.3
NRV040/090	610	300	0.6	14					
	610	400	0.4	14					
	560	500	0.3	14					
	610	600	0.3	14					
	560	750	0.2	14					
	505	900	0.2	25					
	610	1200	0.2	25					
	560	1500	0.1	30					
	505	1800	0.1	30					
	610	2400	0.1	30					
	5690	3000	0.1	30					
	460	4000	0.1						
	410	5000	0.1						

7. 雙級機型尺寸 Combine worm geared motor size



NMRV+NMRV



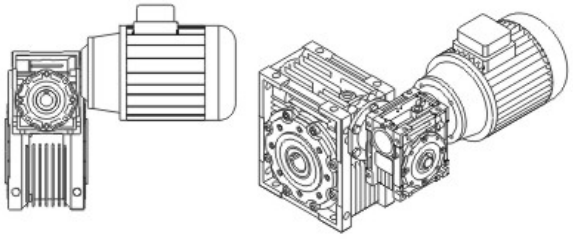
NRV+NMRV

NMRV + NMRV	尺寸 Dimensions																	
	A	B	C1	D(H8)	d(j6)	E	F	G	G1	G2	H	H1	I	I1	I2	L	M	N(H3)	N1
025–030	54	–	70	14	–	97	32	45	63	–	40	35	–	25	30	56	65	55	58
025–040	70	–	70	18	–	121.5	43	45	78	–	50	35	–	25	40	71	75	60	73
030–040	70	20	80	18	9	121.5	43	55	78	51	50	40	10	30	40	71	75	60	73
030–050	80	20	80	25	9	144	49	55	92	51	60	40	20	30	50	85	85	70	87
030–063	100	20	80	25	9	174	67	55	112	51	72	40	33	30	63	103	95	80	106
040–075	120	23	100	28	11	205	72	70	130	60	86	50	35	40	75	112	115	95	114
040–090	140	23	100	35	11	238	74	70	140	60	103	50	50	40	90	130	130	110	134
050–105	170	30	120	42	14	295	–	80	155	74	127.5	60	60	50	110	144	165	130	148
050–110	170	30	120	42	14	295	–	80	155	74	127.5	60	60	50	110	144	165	130	148
063–130	200	40	144	45	19	335	–	95	170	90	147.5	72	67	63	130	155	215	180	162
063–150	240	40	144	50	19	400	–	95	200	90	170	72	67	63	150	185	215	180	192

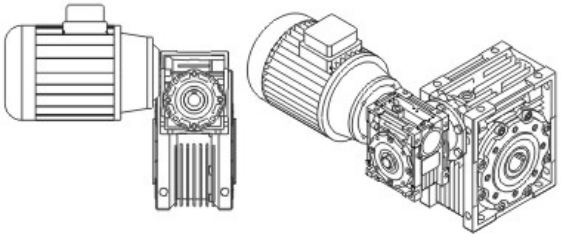
NMRV + NMRV	尺寸 Dimensions																	
	N2	O	P	Q	R	R1	S	V	Z	Z1	K	KE	a	b	t	bo	to	F
025–030	22.5	6.5	75	44	57	48	5.5	27	100	40	44	M6×11	0°	5	16.3	–	–	–
025–040	22.5	6.5	87	55	71.5	48	6.5	35	115	50	60	M6×8	45°	6	20.8	–	–	–
030–040	29	6.5	87	55	71.5	57	6.5	35	122	50	60	M6×8	45°	6	20.8	3	10.2	–
030–050	29	8.5	100	64	84	57	7	40	132	60	70	M8×10	45°	8	28.3	3	10.2	–
030–063	29	8.5	110	80	102	57	8	50	145	72	85	M8×14	45°	8	28.3	3	10.2	–
040–075	36.5	11.5	140	93	119	71.5	10	60	167.5	86	90	M8×14	45°	8	31.3	4	12.5	–
040–090	36.5	13	160	102	135	71.5	11	70	184.5	103	100	M10×18	45°	10	38.3	4	12.5	–
050–105	43.5	14	200	125	167.5	84	14.5	85	226	127.5	115	M10×18	45°	12	45.3	5	16	M6
050–110	43.5	14	200	125	167.5	84	14.5	85	226	127.5	115	M10×18	45°	12	45.3	5	16	M6
063–130	53	16	250	140	187.5	102	15.5	100	245	147.5	120	M12×21	45°	14	48.8	6	21.5	M6
063–150	53	18	250	180	230	102	18	120	275	170	145	M12×21	45°	14	53.8	6	21.5	M6

8. 雙級機型帶電機安裝型式 Combine mounting positions with motor

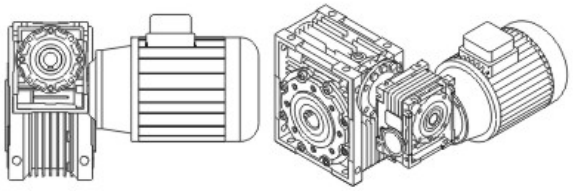
AS1



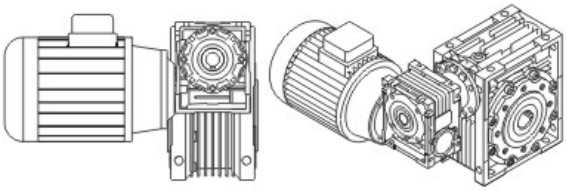
AS2



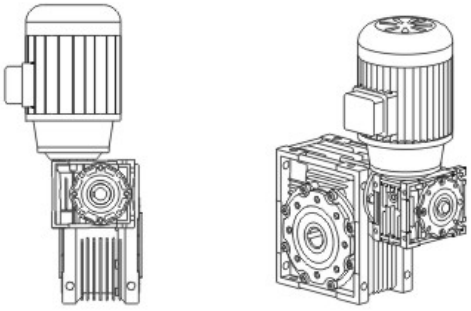
BS1



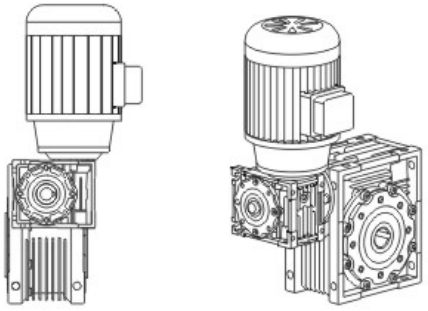
BS2



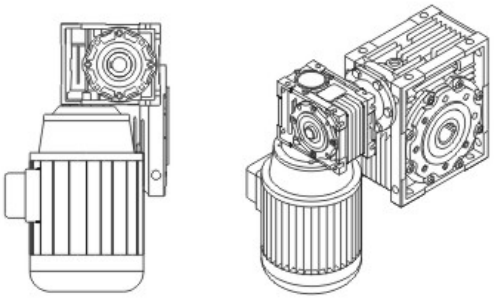
VS1



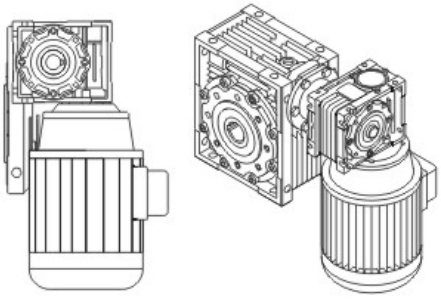
VS2



PS1



PS2



9. 使用説明書

十分感謝您選用了本公司産品。在使用之前，請詳細參閱以下説明，以確保正確使用。

型式説明:

1、蝸輪蝸杆减速器按輸入方式可分爲孔式輸入和軸式輸入，按輸出方式可分爲孔輸出、單向軸輸出、雙向軸輸出等軸型。
2、按中心距分有: 25、30、40、50、63、75、90、105、110、130、150系列。
單級傳動比系列: 5、7.5、10、15、20、25、30、40、50、60、80、100。

一、安裝

1、蝸杆轉速建議小于1500 r/min。
2、安裝應避免任何振動，保持平穩。
3、安裝之前，應復核其輸入功率、轉速及輸出軸扭矩與銘牌相符，并檢查减速器輸出軸的旋轉方同，并與工作機一致。
4、對于减速器輸出軸的安裝，應保證軸向自由無約束并能相對于减速器軸向自由移動。
5、各種與减速器輸出端相聯接的零部件（滑輪、齒輪、聯軸器、軸等）可采用螺紋孔或其它方式聯接，以確保元件正確運行。潤滑面應避免接觸和防止氧化。
6、安裝後用手轉動軸，必須保證靈活、無卡滯現象。
7、起動應逐漸加載，避免過大的衝擊載荷，并保證轉動平穩、無异響、不鬆動、無漏油等。

二、潤滑

1、减速器的環境温度爲-10℃~60℃，在環境温度低于0℃時，起動前潤滑油必須加熱到0℃以上或采用低凝固點的潤滑油。
2、减速器剛開始運轉時，可能會出現潤滑油粘度高而産生的問題，建議進行幾分鐘的空載跑合。
3、存放了一段時間（4~6月）的减速器，如果油封和箱體之間没有潤滑劑，應該建議更換油封，因爲這會由于油封橡膠老化粘于軸或失去彈性而導致性能下降。
4、如果有油量指示器，應定期檢查油量使其在正確的範圍内。
5、經過累計10000小時工作後應更換潤滑油。在有效工作時間内，應使减速器處于正常的工作環境和對其進行正確保養。
6、對于没有油塞的减速器，是長久潤滑設計，免維修。

三、維護

1、不得重力捶擊减速器外殼，以免損壞。
2、定期檢查安裝基礎、密封件、傳動軸等是否正常。若産生不正常現象，應立即停機檢查，排除故障，方可繼續使用。
3、應盡量避免减速器受陽光直射和處于惡劣氣候條件下。
4、應提供良好的通風條件確保减速器正常散熱。

推薦潤滑油:

	NMRV110~150		NMRV025~105
	礦物油		合成油
T℃ ISO VG	(-5)~(+40) ISO VG460	(-15)~(+25) ISO VG220	(-25)~(+50) ISO VG320
AGIP	BLASIA460	BLASIA220	TELIUM VSF320
SHELL	OMALA OIL 460	OMALA OIL 220	TIVEKA OIL Sc320
ESSO	SPARTAN EP460	SPARTAN EP220	S220
MOBIL	MOBIL GEAR634	MOBIL GEAR630	GLYGOYLE320
CASTROL	ALPHA MAX460	ALPHA MAX230	ALPHASYN Pg320
BP	ENERGOL GR-XP460	ENERGOL GR-XP220	ENEPGOL SG-XP320

油量: (單位升)

NMRV	025	030	040	050	063	075	090	105	110	130	150
B3	0.02	0.04	0.08	0.15	0.3	0.55	1	1.6	3	4.5	7
B8									2.2	3.3	5.1
B6-B7									2.5	3.5	5.4
V5									3	4.5	7
V6									2.2	3.3	5.1

9. Use's Manual

Thank you very much to chose our company's products. Before usiong, please carefully read the following instructions, and ensure the right operations about it.

Types:

1. Worm gear reducer can be classified as flange input and shaft input by input way, and be classified as hollow shaft output, single shaft output, double shaft output and so by output way.
2. Size series: 25、30、40、50、63、75、90、105、110、130、150.
   Reduction ratio series(Single):5、7.5、10、15、20、25、30、40、50、60、80、100.

Installation

1. Suggest the rotate soeed of worm less than 1500r/min.
2. The mounting on the machine must be stable and aviud any vibration.
3. Check the correct input efficiency, speed of rotation and output torque according to unit nameplate, and the same direction of rotation of the reduction unit outputshaft before fitting the unit to the machine.
4. For a shaft mounting, for reduction unit with a hollow output shaft, make sure that the cinstraint is axially free and with such play as to ensure free movement for the reduction unit.
5. The various parts (pulleys, gear wheels, couplings, shafts, etc.) must be mounted on the solid or hollow surfaces in contact to avoid seixure or oxidation.
6. After mounting, rotating shaft by hand must be agility and no lock.
7. Staring must take place geadually, without immediately applying the maximum load, and ensure stanble, no noise, no loosen, no leaking oil and so on in rotation.

Lubrication:

1. Enviroment tenperature of unit is −10℃~60℃. In the case og temperatures under 0℃, It is necessary to heat up iubrication over 0℃ or use low freezing oil before operation.
2. During the early stages of service, problem of lubrication may arise due to the high level of viscosity taken on by the oil and so it is wise to have a few minutes of rotation under no load.
3. In the case of particularly lengthy period of storage (4~6 months), if there is one.
4. Check the correct level of the lubricant throuth the indicator, if there is one.
5. The oll needs to be changed after approximately 10000 hours. This period depends on the type of service and the environment where this reduction unit works.
6. For units supplied without oil pluges, lubrication is permanent and so they need no servicing.

Maintain:

1. Avoid to hit the shell of the reduction unit by gravitational hammer to protect it.
2. Check the correct state of installation basis, oil seals, input/output shaft and so on in the same period. Othe rvise, it is necessary to stop reduction unit and get rid of matter, then go on work.
3. Whenever possible, protect the reduction unit against solar radiation and bad weather.
4. Ensure the motor cools correctly by assuring good passage of air from the fan side.

Recommendation of lubricant brand:

	NMRV110~150 Mineral oil		NMRV025~105 Synthetic oil
T℃ ISO VG	(−5)~(+40) ISO VG460	(−15)~(+25) ISO VG220	(−25)~(+50) ISO VG320
AGIP	BLASIA460	BLASIA220	TELIUM VSF320
SHELL	OMALA OIL 460	OMALA OIL 220	TIVEKA OIL Sc320
ESSO	SPARTAN EP460	SPARTAN EP220	S220
MOBIL	MOBIL GEAR634	MOBIL GEAR630	GLYGOYLE320
CASTROL	ALPHA MAX460	ALPHA MAX230	ALPHASYN Pg320
BP	ENERGOL GR−XP460	ENERGOL GR−XP220	ENEPGOL SG−XP320

The quantity of oil:(liter)

NMRV	025	030	040	050	063	075	090	105	110	130	150
B3	0.02	0.04	0.08	0.15	0.3	0.55	1	1.6	3	4.5	7
B8									2.2	3.3	5.1
B6−B7									2.5	3.5	5.4
V5									3	4.5	7
V6									2.2	3.3	5.1

VF系列蝸輪減速機
VF Worm Gear Speed Reducer

1. 產品圖片 Picture of Products

◎ 蝸輪減速機
◎ Worm Gear Speed Reducer
◎ 速比1/7–1/2700

VF..A..

VF..A..E..

VF..N..

VF..V..

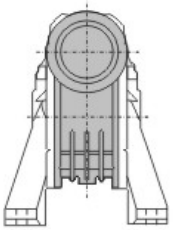
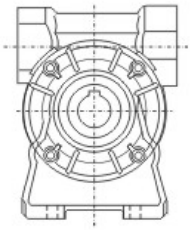
VF..F(FA)..

VF..P..

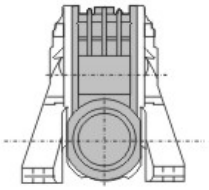
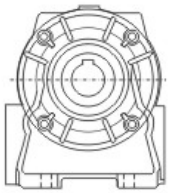
VF..HS..

VF..P..E..HS..

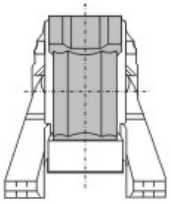
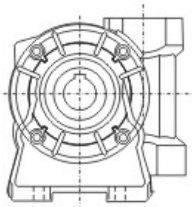
2. 設計方案 Model illuminate

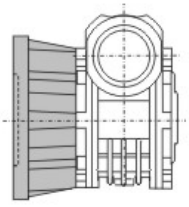
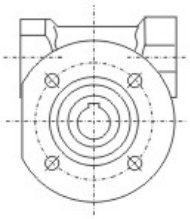
VF..A..
Foot mounted,overdriven

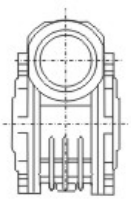
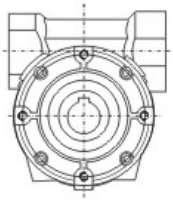
VF..N..
Foot mounted,underdriven

VF..V..
Foot mounted,wormshaft vertical

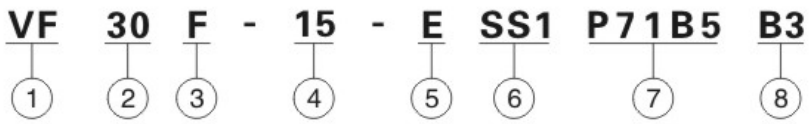
VF..F..
Standard output flange
VF..FA..
Extended output flange

VF..P..
Side cover for shaft mounting

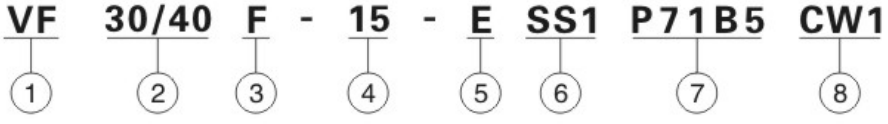
3. 型號説明 Model Illuminate

3.1 VF蝸杆減速機型號説明 Worm gear units model illuminate



NO	説 明	Comments
1	蝸輪減速器代號	Code of worm gear units
2	蝸輪減速器中心距(規格)	Central distance of worm gear units(spec)
3	結構型式 1). A: 底脚安裝，輸入軸置上 2). N: 底脚安裝，輸入軸置下 3). V: 底脚安裝，蝸杆竪直 4). F(1/2): 標準輸出法蘭 5). FA(1/2): 加長輸出法蘭 6). P: 端蓋用于軸裝式	Central distance of worm gear units(spec) 1). A: Foot mounted over driven 2). N: Foot mounted under driven 3). V:Foot mounted worm shaft vertical 4). F(1/2): Standard output flange 5). FA(1/2): Extended output flange 6). P: Side cover for shaft mounting
4	減速器速比…… (i=7;10;14;……80;100)	Speed ratio of reducer (i=7;10;14;……80;100)
5	1). 無代號表示不帶蝸杆同向輸出軸 2). E: 帶蝸杆同向輸出軸	1). No mark means single extension worm shaft 2). E: Double extension worm shaft
6	1). 無代號表示孔輸出 2). SS(1/2): 單向輸出軸和位置 3). DS: 雙向輸出軸	1). No mark means hole output 2). SS(1/2): Single output shaft and position 3). DS: Double output shaft
7	1). IEC 輸入法蘭 2). HS: 軸輸入	1). IEC Output flange 2). HS: Shaft input
8	安裝方位代號	Installation position code

3.2 VF/VF雙級蝸杆減速機型號説明 Combination worm gear units model illuminate



NO	説 明	Comments
1	蝸輪減速器代號	Code of worm gear units
2	蝸輪減速器中心距(規格)	Central distance of worm gear units(spec)
3	結構型式 1). A: 底脚安裝，輸入軸置上 2). F(1/2): 標準輸出法蘭 3). FA(1/2): 加長輸出法蘭 4). P: 端蓋用于軸裝式	Central distance of worm gear units(spec) 1).A:Foot mounted overdriven 2).F(1/2):Standard output flange 3).FA(1/2):Extended output flange 4).P:Side cover for shaft mounting
4	減速器速比…… (i=240;245;315;……)	Speed ratio of reducer (i=240;245;315……)
5	1). 無代號表示不帶蝸杆同向輸出軸 2). E: 帶蝸杆同向輸出軸	1).No mark means single extension worm shaft 2).E:Double extension worm shaft
6	1). 無代號表示孔輸出 2). SS(1/2): 單向輸出軸和位置 3). DS: 雙向輸出軸	1).No mark means hole output 2).SS(1/2):Single output shaft and position 3).DS:Double output shaft
7	1). IEC 輸入法蘭 2). HS: 軸輸入	1).IEC Output flange 2).HS:Shaft input
8	安裝方位代號	Installation position code

4. 減速機選型表 Gear Unit Selection Tables

4.1 VF..P(IEC)..性能參數 Performance parameter

VF..P(IEC)

P_{1N} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	fs			Page
0.06	19.3	14	70	1600	1.1	**VF30**	**56B5/B14**	**5614**	47
	22.5	13	60	1600	1.5				
	34	10	40	1650	1.9				
	45	8	30	1340	2.5				
	68	6	20	1180	2.9				
	90	5	15	1080	3.7				
	135	3	10	950	4.7				
	193	2	7	840	6.4				
	2.4	74	560	2500	0.8	**VF30/44**	**56B5/B14**	**5614**	53
	3.2	62	420	2500	1.0				
	3.9	53	350	2500	1.1				
	5.5	42	245	2500	1.4				
	2	116	720	3450	0.8	**VF30/49**	**56B5/B14**	**5614**	54
	2.5	85	540	3450	1.1				
	3.2	73	420	3450	1.3				
	4.3	53	315	3450	1.8				
	5.6	45	240	3450	2.1				
0.09	22.5	19	60	1600	1.0	**VF30**	**56B5/B14**	**5624**	47
	34	15	40	1410	1.3				
	45	12	30	1290	1.6				
	68	9	20	1140	2.0				
	90	7	15	1050	2.5				
	135	5	10	920	3.1				
	193	4	7	820	4.3				
	22	22	40	1560	0.9	**VF30**	**63B5/B14**	**6316**	47
	29.3	18	30	1440	1.2				
	44	14	20	1230	1.5				
	59	11	15	1170	1.9				
	88	8	10	1050	2.3				
	126	6	7	920	3.2				
	3.9	80	350	2500	0.7	**VF30/44**	**56B5/B14**	**5624**	53
	5.5	62	245	2500	1.0				
	12.6	38	70	2300	0.8	**VF44**	**63B5/B14**	**6316**	49
	14.7	33	60	2300	1.2				
	19.1	28	46	2300	1.4				
	25.1	23	35	2300	1.7				
	31	19	28	2300	2.0				
	44	15	20	2300	2.6				
	3.2	110	420	3450	0.9	**VF30/49**	**56B5/B14**	**5624**	54
	4.3	80	315	3450	1.2				
	5.6	69	240	3450	1.4				
	8.8	41	100	3300	1.3	**VF49**	**63B5/B14**	**6316**	51
	11.0	37	80	3300	1.6				
	12.6	34	70	3300	1.8				
	14.7	31	60	3300	2.1				
	19.6	26	45	3300	2.7				
	24.4	22	36	3300	3.4				
0.12	138	7	20	840	2.1	**VF30**	**56B5/B14**	**5622**	47
	275	4	10	740	3.4				
	393	3	7	660	4.7				
	33	21	40	1360	0.9	**VF30**	**63B5/B14**	**6314**	47
	44	17	30	1250	1.2				
	66	13	20	1110	1.4				

P_{1N} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	fs				Page
0.12	87	10	15	1020	1.8	**VF30**	**63B5/B14**	**6314**	47
	131	7	10	900	2.3				
	187	5	7	810	3.1				
	29	24	30	1360	0.9	**VF30**	**63B5/B14**	**6326**	47
	44	18	20	1250	1.1				
	58	15	15	1130	1.4				
	87	10	10	1020	1.7				
	124	8	7	900	2.4				
	18.7	34	70	3300	0.9	**VF44**	**63B5/B14**	**6314**	49
	21.8	30	60	2300	1.3				
	28.5	25	46	2300	1.6				
	37	21	35	2300	1.9				
	47	17	28	2300	2.2				
	66	13	20	2100	2.9				
	94	10	14	1870	2.9				
	14.5	42	60	2300	1.1	**VF44**	**63B5/B14**	**6326**	49
	19	36	46	2300	1.4				
	25	30	35	2300	1.7				
	31	25	28	2300	2.0				
	44	19	20	2300	2.3				
	62	14	14	2150	2.7				
	4.2	110	315	3450	0.9	VF**30/49**	**63B5/B14**	**6314**	53
	5.5	94	240	3450	1.0				
	13.1	42	100	3150	1.2	**VF49**	**63B5/B14**	**6314**	51
	16.4	36	80	3150	1.5				
	18.7	34	70	3150	1.6				
	21.8	30	60	3150	1.9				
	29.1	25	45	3040	2.6				
	36	21	36	2830	3.3				
	8.7	55	100	3300	0.9	**VF49**	**63B5/B14**	**6326**	51
	10.9	50	80	3300	1.2				
0.18	90	13	30	1020	1.1	**VF30**	**63B5/B14**	**6312**	47
	135	10	20	900	1.4				
	180	8	15	800	1.8				
	270	5	10	710	2.2				
	386	4	7	640	3.1				
	66	19	20	1040	1.0	**VF30**	**63B5/B14**	**6324**	47
	88	15	15	960	1.2				
	132	11	10	860	1.5				
	189	8	7	770	2.1				
	45	24	60	2300	1.2	**VF44**	**63B5/B14**	**6312**	49
	59	20	46	2190	1.4				
	77	16	35	1970	1.8				
	96	14	28	1770	2.1				
	135	10	20	1590	2.8				
	193	7	14	1470	2.9				
	22	45	60	2300	0.9	**VF44**	**63B5/B14**	**6324**	49
	29	37	46	2500	1.1				
	38	31	35	2430	1.3				
	47	26	28	2270	1.5				
	66	20	20	2040	1.9				
	94	15	14	1830	2.0				
	132	11	10	1640	2.7				
	26	43	35	2340	1.1	**VF44**	**71B5/B14**	**7116**	49
	32	36	28	2290	1.4				
	45	28	20	2050	1.6				
	64	21	14	1830	1.9				
	90	16	10	1650	2.5				

P_{1N} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	fs			Page
0.18	16.5	54	80	3150	1.0	**VF49**	**63B5/B14**	**6324**	51
	18.9	50	70	3150	1.1			
	22	45	60	3150	1.3			
	29.3	37	45	2300	1.8			
	37	31	36	2760	2.2			
	47	26	28	2560	2.9			
	55	23	24	2430	2.7			
	73	19	18	2230	3.2			
	15	61	60	3000	1.1	**VF49**	**71B5/B14**	**7116**	51
	20	52	45	2790	1.4			
	25	43	36	2650	1.7			
	32	36	28	2450	2.3			
0.25	135	14	20	840		**VF30**	**63B5/B14**	**6322**	47
	180	11	15	780				
	270	7	10	690				
	77	23	35	1930	1.3	**VF44**	**63B5/B14**	**6322**	49
	96	19	28	1730	1.5			
	135	14	20	1550	2.0			
	193	10	14	1400	2.1			
	270	8	10	1300	2.9			
	38	43	35	2300	0.9	**VF44**	**71B5/B14**	**7126**	49
	47	36	28	2190	1.1			
	66	28	20	1970	1.4			
	94	21	14	1770	1.4			
	132	15	10	1590	1.9			
	189	11	7	1420	2.7			
	32	50	28	2300	1.0	**VF44**	**71B5/B14**	**7126**	49
	45	39	20	2190	1.1			
	64	29	14	1980	1.3			
	90	22	10	1780	1.8			
	129	16	7	1590	2.5			
	39	38	70	2650	1.1	**VF49**	**63B5/B14**	**6322**	51
	45	34	60	2500	1.3			
	60	28	45	2350	1.8			
	75	23	36	2230	2.2			
	96	19	28	2070	2.9			
	113	17	24	1930	2.8			
	22	63	60	3100	0.9	**VF49**	**71B5/B14**	**7114**	51
	29	51	45	2810	1.3			
	37	44	36	2670	1.6			
	47	36	28	2480	2.1			
	55	33	24	2360	1.9			
	73	26	18	2170	2.3			
	94	21	14	2010	3.2			
	20	72	45	3150	1.0	**VF49**	**71B5/B14**	**7126**	51
	25	60	36	3150	1.2			
	32	51	28	3150	1.6			
	38	46	24	2600	1.5			
	50	36	18	2460	1.9			
	64	29	14	2260	2.4			
	90	22	10	2040	2.9			
0.37	79	33	35	2860	0.9	**VF44**	**63B5/B14**	**7112**	49
	98	27	28	2720	1.1			
	138	21	20	1570	1.4			
	196	15	14	1400	1.5			
	275	11	10	1260	2.0			
	393	8	7	1120	2.7			

P_{1N} [kW]	n_2 [r/min]	M_{2n} [Nm]	i	F_{r2} [N]	fs				Page
0.37	69	40	20	1870	1.0	VF44	63B5/B14	7124	49
	98	29	14	1690	1.0				
	137	22	10	1500	1.3				
	196	16	7	1360	1.9				
	61	40	45	2270	1.2	VF49	63B5/B14	7112	51
	76	34	36	2180	1.5				
	98	28	28	2020	2.0				
	115	25	24	1880	1.9				
	153	19	18	1720	2.3				
	30	73	45	2680	0.9	VF49	63B5/B14	7124	51
	38	62	36	2530	1.1				
	49	51	28	2360	1.4				
	57	46	24	2250	1.4				
	76	37	18	2080	1.6				
	98	29	14	1940	2.2				
	137	22	10	1750	2.7				
	196	16	7	1570	3.4				
	38	67	24	2350	1.0	VF49	63B5/B14	8016	51
	51	53	18	2240	1.3				
	65	43	14	2070	1.7				
	91	32	10	1930	2.0				
	130	23	7	1740	2.6				
0.55	141	30	20	1490	1.0	VF44	71B5/B14	7122	49
	201	22	14	1350	1.0				
	281	16	10	1210	1.4				
	401	12	7	1080	1.9				
	78	49	36	2090	1.1	VF49	71B5/B14	7122	51
	100	40	28	1960	1.4				
	117	36	24	1800	1.3				
	156	28	18	1650	1.6				
	201	22	14	1420	2.2				
	281	16	10	1390	2.7				
	401	12	7	1250	3.5				
	49	76	28	2170	1.0	VF49	80B5/B14	8014	51
	58	69	24	2080	0.9				
	77	54	18	1930	1.1				
	99	43	14	1810	1.5				
	138	32	10	1650	1.8				
	197	23	7	1480	2.3				
	66	63	14	1960	1.1	VF49	80B5/B14	8026	51
	92	47	10	1800	1.4				
	131	34	7	1660	1.8				
0.75	117	49	24	1710	1.0	VF49	80B5/B14	8012	51
	156	38	18	1580	1.2				
	200	30	14	1480	1.6				
	280	22	10	1340	2.0				
	400	16	7	1200	2.6				
	100	58	14	1690	1.1	VF49	80B5/B14	8024	51
	140	43	10	1540	1.4				
	200	31	7	1400	1.7				
1.1	200	45	14	1370	1.1	VF49	80B5/B14	8022	51
	280	33	10	1250	1.3				
	400	23	7	1130	1.8				

4.2 VF..HS.. 性能參數 Performance parameter

VF..HS..

M_{2n} [Nm]	n_1 [r/min]	i	P_{1n} [kW]	n_2 [r/min]	F_{r2} [N]	F_{r1} [N]		Page
12	2800	7	0.58	400	510	120	**VF30**	55
12	2800	10	0.41	280	620	70		
14	2800	15	0.34	187	720	–		
14	2800	20	0.26	140	820	–		
15	2800	30	0.21	93	960	–		
14	2800	40	0.16	70	1090	–		
14	2800	60	0.12	47	1270	–		
11	2800	70	0.08	40	1380	–		
16	1400	7	0.41	200	630	140	**VF30**	55
16	1400	10	0.30	140	770	80		
18	1400	15	0.24	93	910	–		
18	1400	20	0.19	70	1030	–		
20	1400	30	0.15	47	1200	–		
19	1400	40	0.12	35	1360	–		
19	1400	60	0.09	23.3	1590	–		
15	1400	70	0.07	20	1600	–		
18	900	7	0.30	129	730	150	**VF30**	55
18	900	10	0.22	90	900	150		
20	900	15	0.17	60	1060	–		
20	900	20	0.14	45	1200	–		
22	900	30	0.12	30	1400	–		
20	900	40	0.09	23	1590	–		
20	900	60	0.07	15	1650	–		
17	900	70	0.05	13	1700	–		
20	500	7	0.19	71	920	150	**VF30**	55
20	500	10	0.14	50	1120	150		
22	500	15	0.11	33	1320	150		
22	500	20	0.09	25	1490	150		
24	500	30	0.07	16.7	1700	–		
22	500	40	0.06	12.5	1700	–		
22	500	60	0.05	8.3	1700	–		
19	500	70	0.04	7	1700	–		
22	2800	7	1.1	400	950	220	**VF44**	55
22	2800	10	0.74	280	1150	220		
22	2800	14	0.55	200	1340	220		
29	2800	20	0.52	140	1490	220		
29	2800	28	0.40	100	1710	220		
29	2800	35	0.33	80	1870	220		
29	2800	46	0.27	61	2080	220		
29	2800	60	0.22	47	2290	220		
22	2800	70	0.15	40	2300	220		
21	2800	100	0.11	28	2300	220		
29	1400	7	0.71	200	1180	220	**VF44**	55
29	1400	10	0.51	140	1430	220		
29	1400	14	0.37	100	1680	220		
39	1400	20	0.37	70	1860	220		
39	1400	28	0.29	50	2140	220		
39	1400	35	0.25	40	2300	220		
39	1400	46	0.19	30	2300	220		
39	1400	60	0.16	23.3	2300	220		
29	1400	70	0.11	20	2300	220		
28	1400	100	0.09	14	2300	220		
39	900	7	0.63	129	1300	220	**VF44**	55
39	900	10	0.45	90	1610	220		
39	900	14	0.34	64	1890	220		
45	900	20	0.29	45	2160	220		
49	900	28	0.24	32	2300	220		
49	900	35	0.20	25.7	2300	220		
49	900	46	0.17	19.6	2300	220		
45	900	60	0.13	15	2300	220		
39	900	70	0.10	12.9	2300	220		
30	900	100	0.06	9	2300	220		

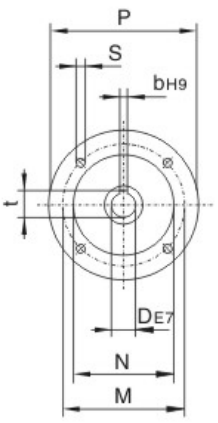
M_{2n} [Nm]	n_1 [r/min]	i	P_{1n} [kW]	n_2 [r/min]	F_{r2} [N]	F_{r1} [N]		Page
41	2800	7	2	400	950	400	**VF49**	55
44	2800	10	1.5	280	1140	400		
49	2800	14	1.2	200	1310	400		
44	2800	18	0.87	156	1520	400		
47	2800	24	0.73	117	1670	400		
56	2800	28	0.78	100	1740	400		
52	2800	36	0.59	78	1970	400		
49	2800	45	0.46	62	2180	400		
44	2800	60	0.34	47	2480	400		
41	2800	70	0.28	40	2650	400		
41	2800	80	0.25	35	2780	400		
37	2800	100	0.20	28	3050	400		
54	1400	7	1.3	200	1170	400	**VF49**	55
59	1400	10	1.0	140	1410	400		
65	1400	14	0.90	100	1630	400		
59	1400	18	0.60	78	1890	400		
63	1400	24	0.50	58	2110	400		
74	1400	28	0.55	50	2170	400	**VF49**	55
69	1400	36	0.42	39	2460	400		
65	1400	45	0.33	31	2725	400		
59	1400	60	0.25	23.3	3100	400		
55	1400	70	0.21	20	3150	400		
54	14000	80	0.19	17.5	3150	400		
49	1400	100	0.13	14	3150	400		
61	900	7	0.97	129	1370	400	**VF49**	55
64	900	10	0.75	90	1670	400		
71	900	14	0.61	64	1920	400		
68	900	18	0.47	50	2190	400		
68	900	24	0.36	38	2480	400		
82	900	28	0.41	32	2540	400		
75	900	36	0.31	25	2880	400		
71	900	45	0.25	20	3190	400		
64	900	60	0.19	15	3300	400		
60	900	70	0.16	12.9	3300	400		
58	900	80	0.14	11.3	3300	400		
52	900	100	0.11	9	3300	400		
74	500	7	0.67	71	1670	400	**VF49**	55
74	500	10	0.49	50	2060	400		
78	500	14	0.39	36	2400	400		
74	500	18	0.30	27.8	2730	400		
74	500	24	0.24	20.8	3090	400		
88	500	28	0.26	17.9	3180	400		
80	500	36	0.20	13.9	3450	400		
78	500	45	0.17	11.1	3450	400		
69	500	60	0.12	8.3	3450	400		
69	500	70	0.11	7.1	3450	400		
59	500	80	0.09	6.3	3450	400		
59	500	100	0.08	5	3450	400		
45	500	7	0.41	71	1610	220	**VF44**	55
45	500	10	0.29	50	1980	220		
50	500	14	0.25	36	2280	220		
50	500	20	0.18	25	2500	220		
55	500	28	0.16	17.9	2500	220		
55	500	35	0.14	14.3	2500	220		
50	500	46	0.10	10.9	2500	220		
50	500	60	0.09	8.3	2500	220		
45	500	70	0.07	7.1	2500	220		
32	500	100	0.04	5	2500	220		

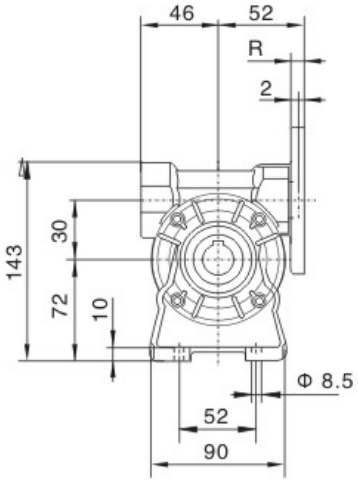
5. 外形尺寸圖 Outline Dimension Sheet

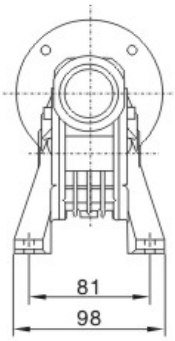
5.1 VF..外形尺寸 Outline dimension

VF30A..P(IEC)

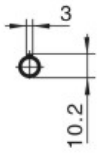
輸入接口 Input adapters

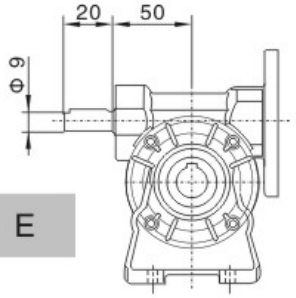




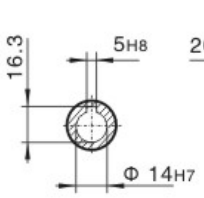


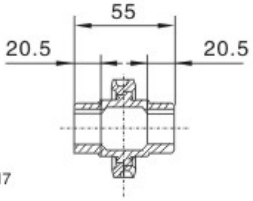
蝸杆輸出軸 Worm output shaft



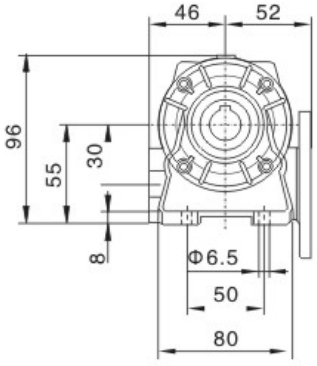


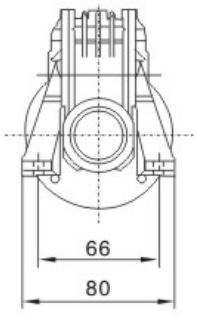
E



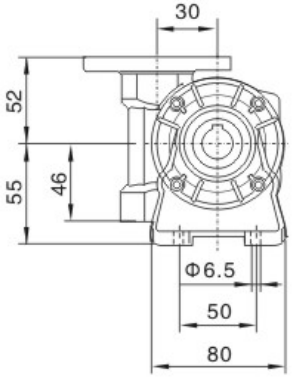


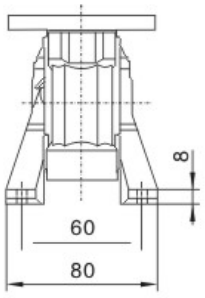
VF30N..





VF30V..

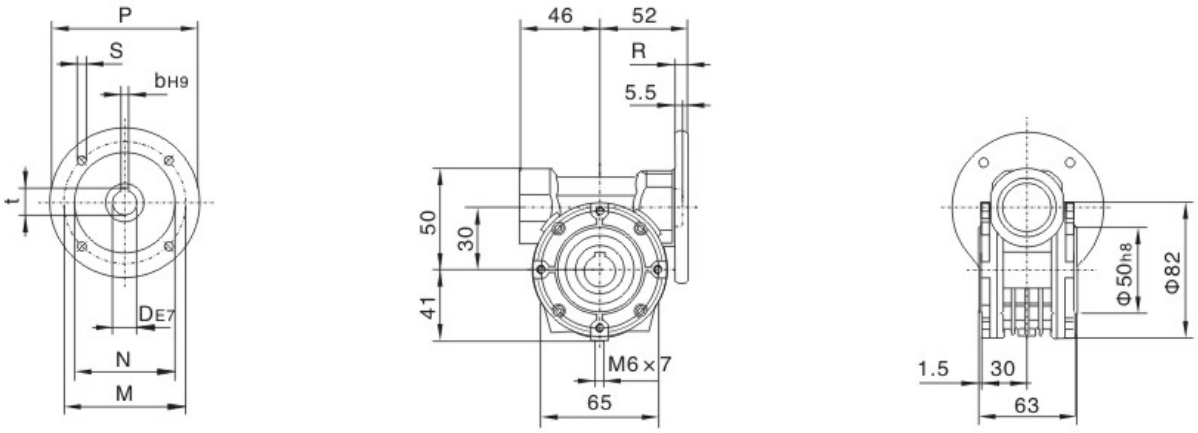




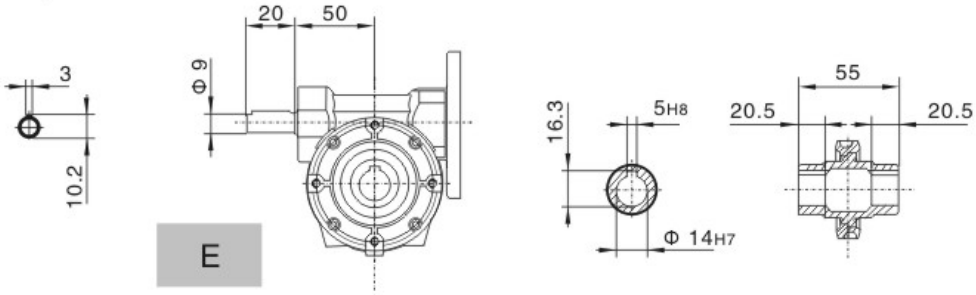
IEC	D_{E7}	b	t	P	M	N	R	S
56B5	9	3	10.4	120	100	80	7	7
56B14	9	3	10.4	80	65	50	7	5.5
63B5	11	4	12.8	140	115	95	8	9.5
63B14	11	4	12.8	90	75	60	7	5.5

VF30P..P(IEC)

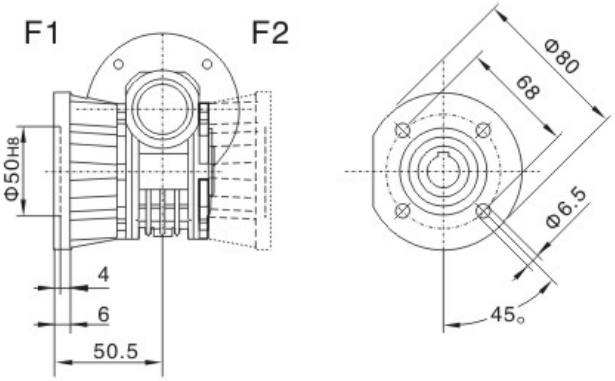
輸入接口 Input adapters



蝸杆輸出軸 Worm output shaft



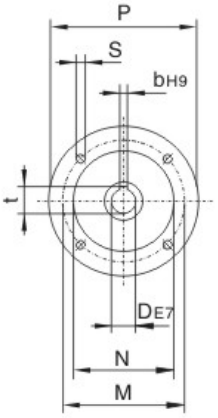
VF30F..

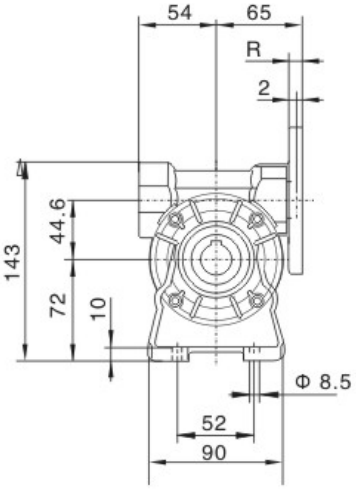


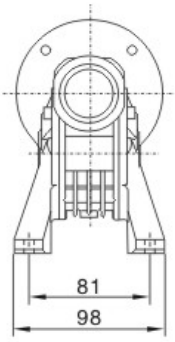
IEC	D_{E7}	b	t	P	M	N	R	S
56B5	9	3	10.4	120	100	80	7	7
56B14	9	3	10.4	80	65	50	7	5.5
63B5	11	4	12.8	140	115	95	8	9.5
63B14	11	4	12.8	90	75	60	7	5.5

VF44A..P(IEC)

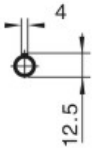
輸入接口 Input adapters

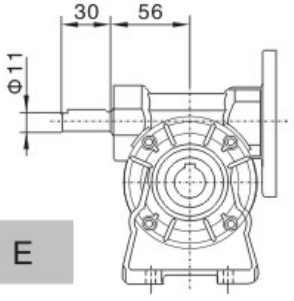






蝸杆輸出軸 Worm output shaft





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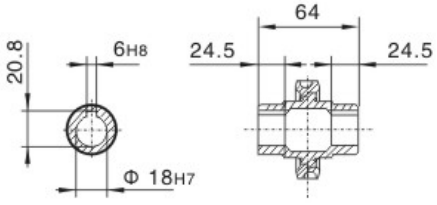
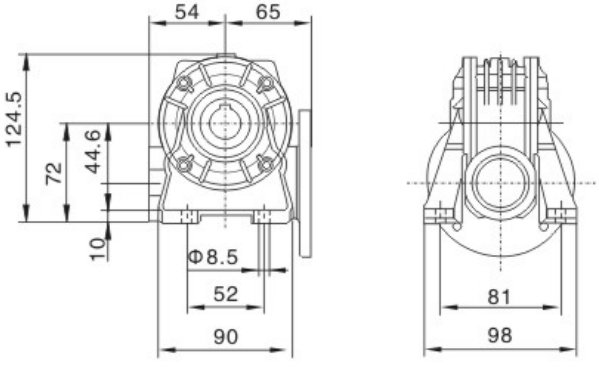
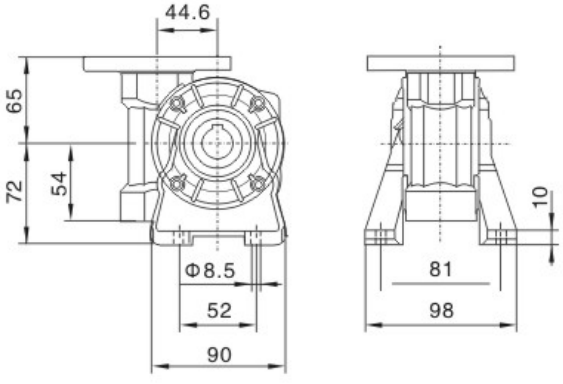


VF44N..



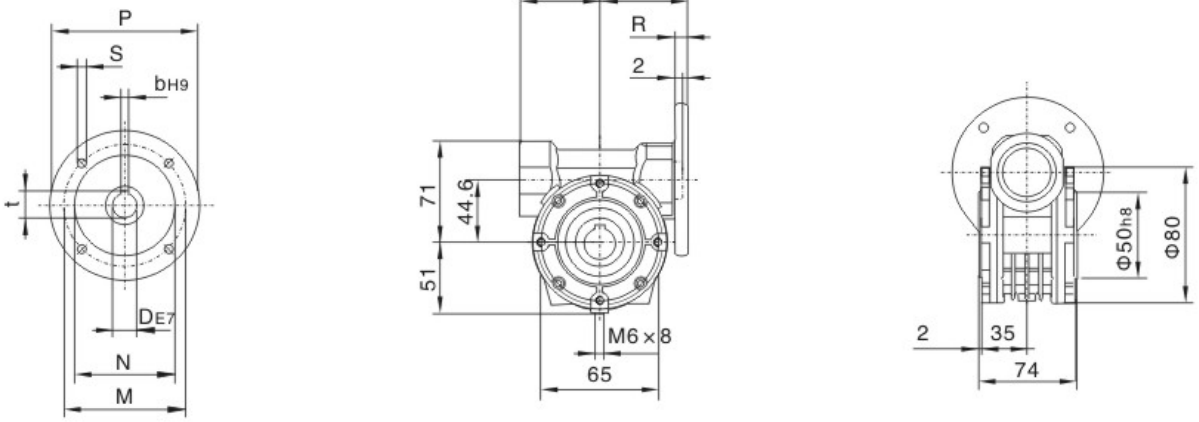
VF44V..



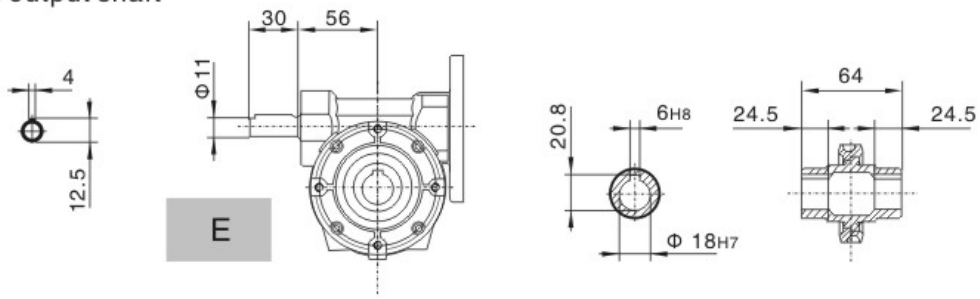
IEC	D_{E7}	b	t	P	M	N	R	S
63B5	11	4	12.8	140	115	95	10	9.5
63B14	11	4	12.8	90	75	60	8	5.5
71B5	14	5	16.3	160	130	110	10	9.5
71B14	14	5	16.3	105	85	70	10	7

VF44P..P(IEC)

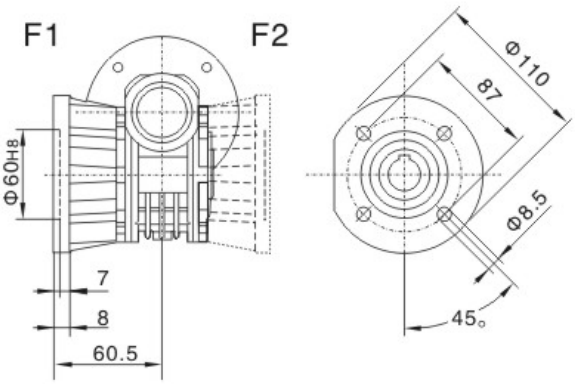
輸入接口 Input adapters



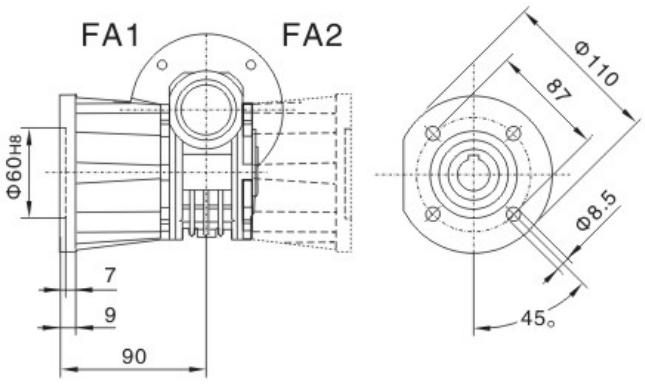
蝸杆輸出軸 Worm output shaft



VF44F..



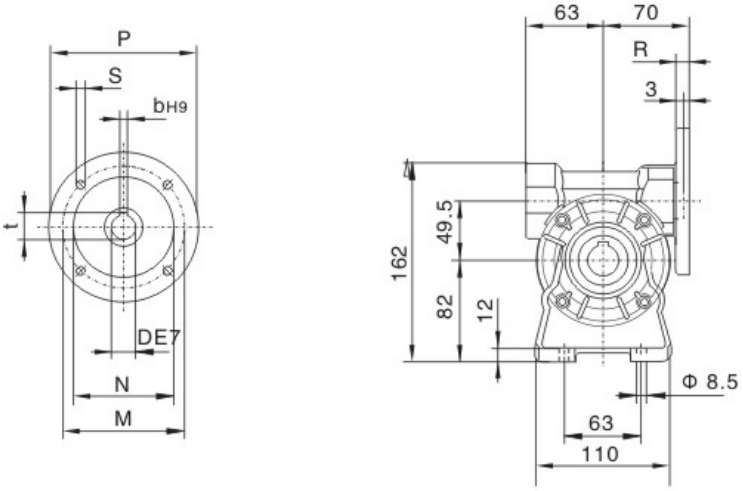
VF44FA..



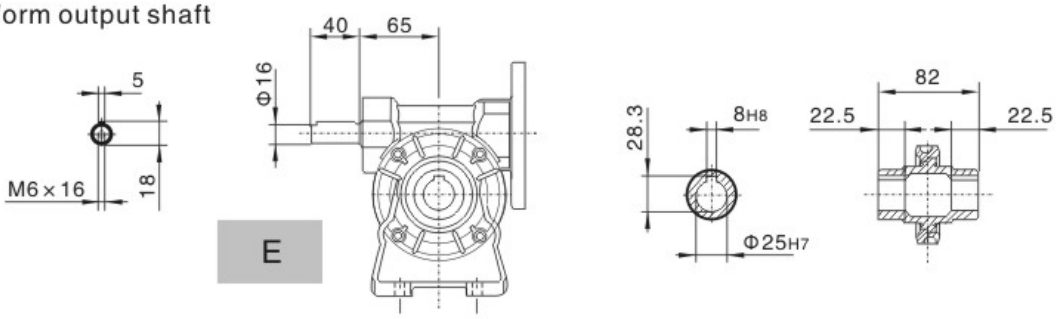
IEC	D_{E7}	b	t	P	M	N	R	S
63B5	11	4	12.8	140	115	95	10	9.5
63B14	11	4	12.8	90	75	60	8	5.5
71B5	14	5	16.3	160	130	110	10	9.5
71B14	14	5	16.3	105	85	70	10	7

VF49A..P(IEC)

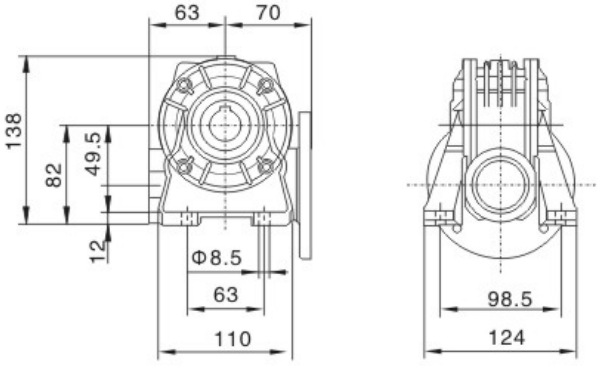
輸入接口 Input adapters



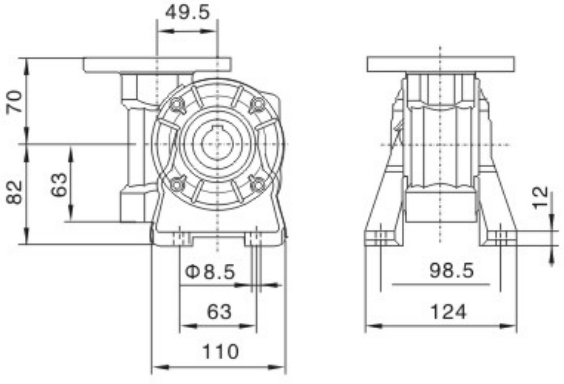
蝸杆輸出軸 Worm output shaft



VF49N..



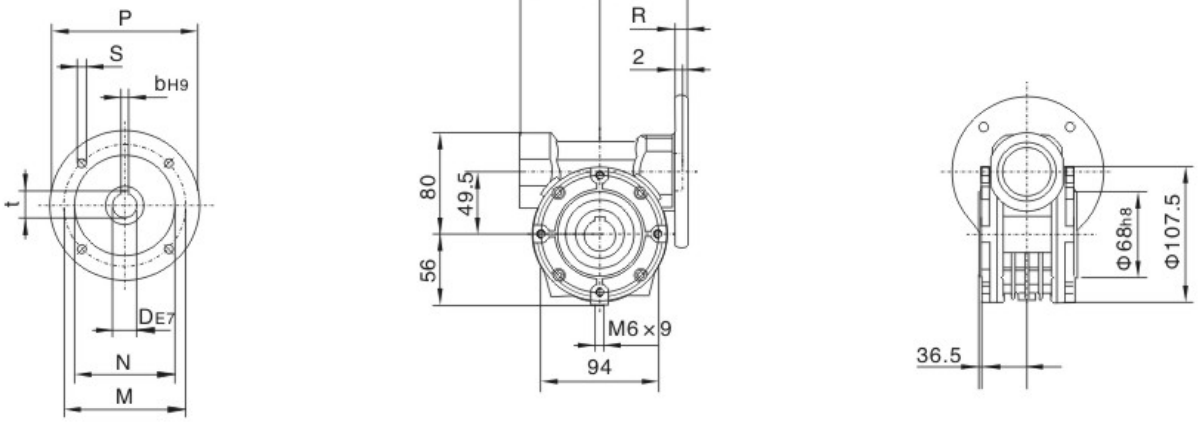
VF49V..



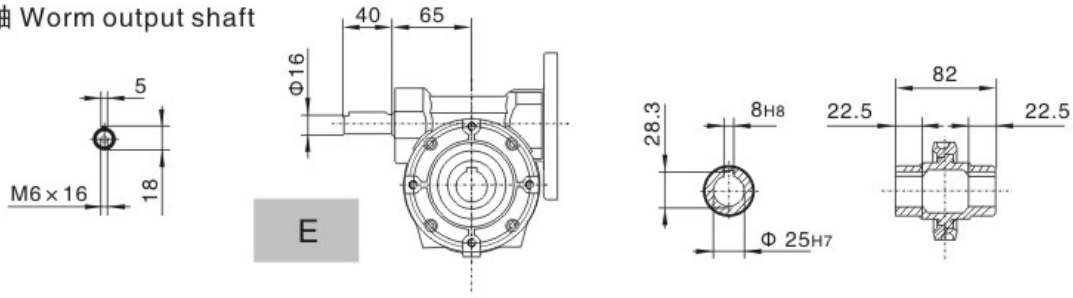
IEC	D_{E7}	b	t	P	M	N	R	S
63B5	11	4	12.8	140	115	95	10.5	9.5
63B14	11	4	12.8	90	75	60	7	6
71B5	14	5	16.3	160	130	110	10.5	9.5
71B14	14	5	16.3	105	85	70	10.58	6.5
80B5	19	6	21.8	200	165	130	10	11.5
80B14	19	6	21.8	120	100	80	10	7

VF49P..P(IEC)

輸入接口 Input adapters

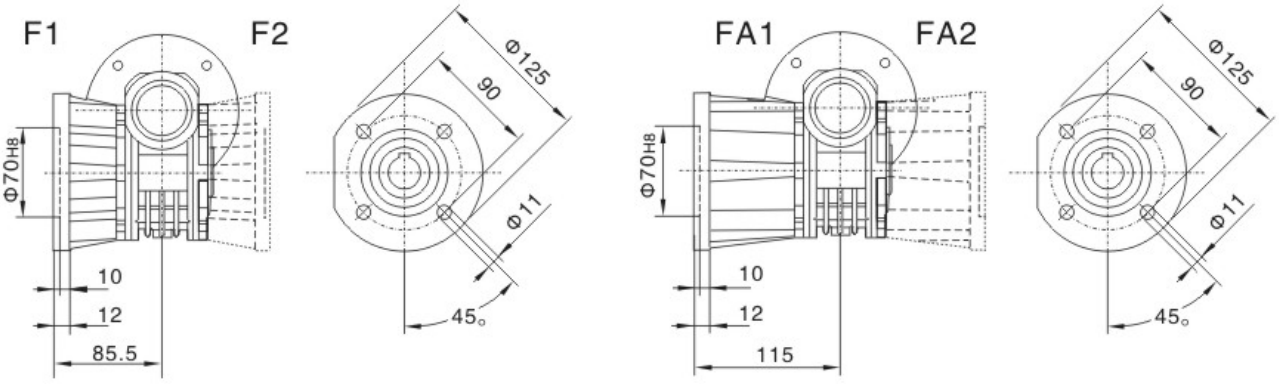


蝸杆輸出軸 Worm output shaft



VF49F..

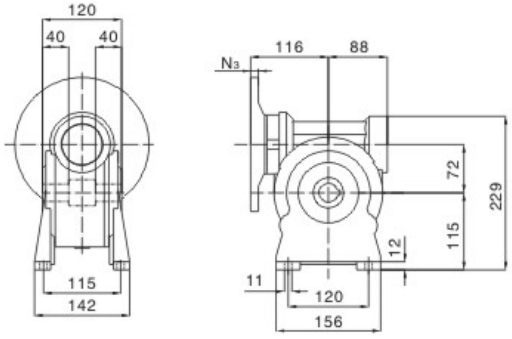
VF49FA..



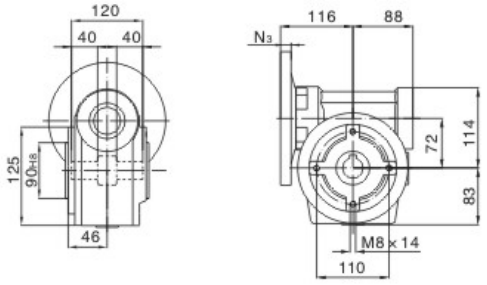
IEC	D_{E7}	b	t	P	M	N	R	S
63B5	11	4	12.8	140	115	95	10.5	9.5
63B14	11	4	12.8	90	75	60	7	6
71B5	14	5	16.3	160	130	110	10.5	9.5
71B14	14	5	16.3	105	85	70	10.5	6.5
80B5	19	6	21.8	200	165	130	10	11.5
80B14	19	6	21.8	120	100	80	10	7

VF72A..P(IEC)

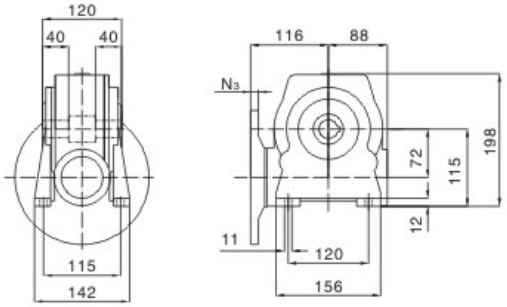
VF72A..P



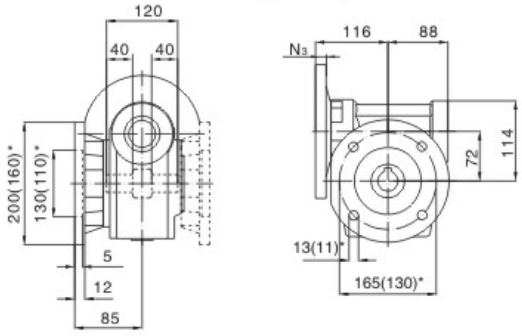
VF72P..P



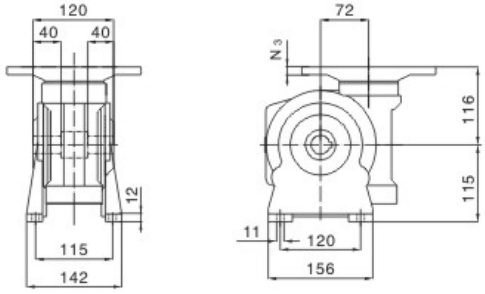
VF72N..P



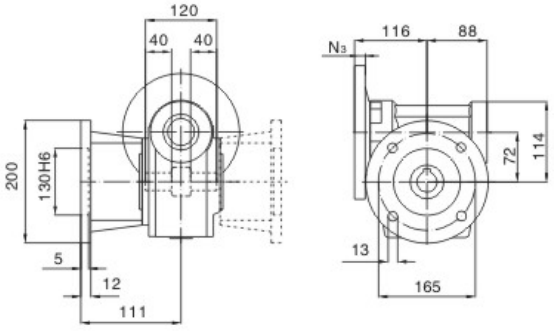
VF72FC(FCR*)..P

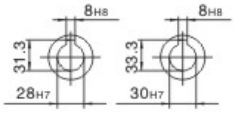


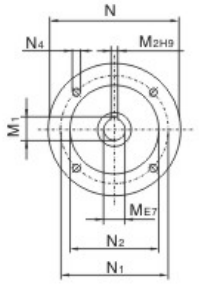
VF72V..P



VF72F..P



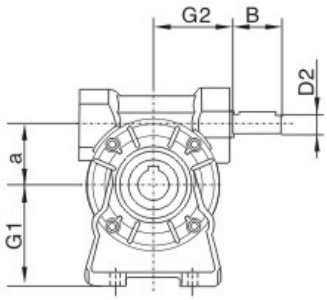




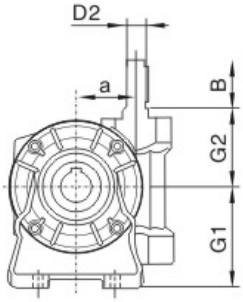
A.N.V.F FC.FCR.P	M	M1	M2	N	N1	N2	N3	N4
VF72P71B5	14	16.3	5	160	130	110	12	9
VF72P80B5	19	21.8	6	200	165	130	12	11.5
VF72P90B5	24	27.3	8	200	165	130	12	11.5
VF72P100B5	28	31.3	8	250	215	180	13	13.5
VF72P80B14	19	21.8	6	120	100	80	10	7
VF72P90B14	24	27.3	8	140	115	95	10	9
VF72P100B14	28	31.3	8	160	130	110	12	9

5.2 VF..HS..外形尺寸 Outline dimension

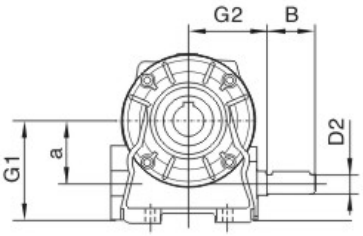
VF..HS..



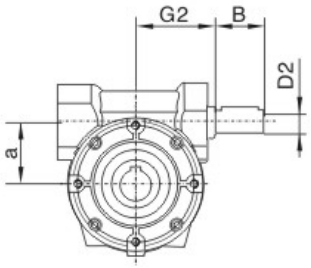
VF_A..HS..



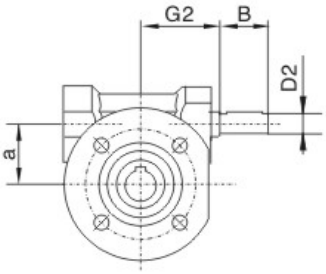
VF_V..HS..



VF_N..HS..

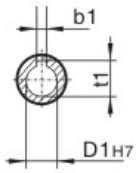


VF_P..HS..

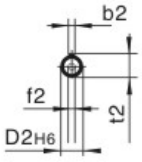


VF_F..HS..
VF_FA..HS..

輸出軸
Worm output shaft



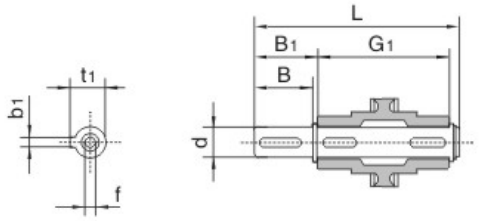
輸入軸
Input adapters



	a	D1H7	t1	b1	D2h6	t2	b2	B	G2	G1	f2
VF30_HS	30	14	16.3	5	9	10.2	3	20	50	47	—
VF44_HS	44.6	18	20.8	6	11	12.5	4	30	54	55	—
VF49_HS	49.5	25	28.3	8	16	18	5	40	65	64.5	M6×16

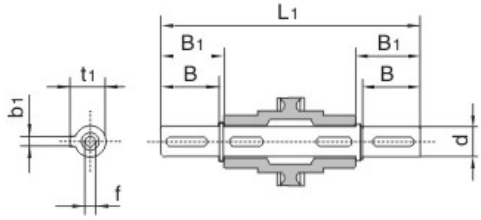
6. 附件尺寸表 Accessories Outline Dimension Sheet

6.1 輸出軸 Output Shafts



SS

	dh6	B	B1	t1	L	f	G	b1
VF 30	14	30	32.5	16	120	M5×13	55	5
VF 44	18	40	42.7	20.5	149.4	M6×16	64	6
VF 49	25	60	63.2	28	208.4	M8×19	82	8

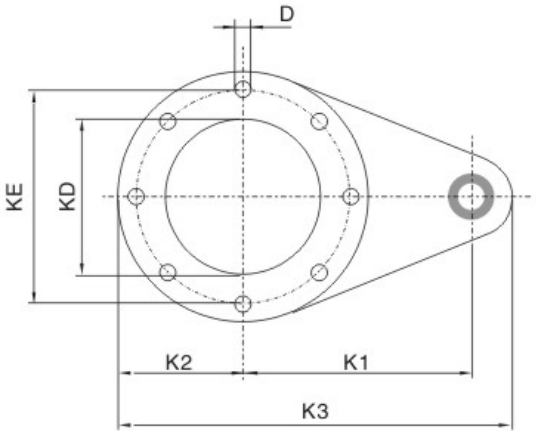


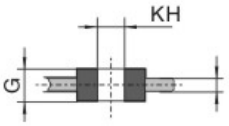
DS

	dh6	B	B1	t1	L	f	G	b1
VF 30	14	30	32.5	16	120	M5×13	55	5
VF 44	18	40	42.7	20.5	149.4	M6×16	64	6
VF 49	25	60	63.2	28	208.4	M8×19	82	8

*非標產品，訂單時請說明。Only on request

6.2 扭力臂 Torque arm



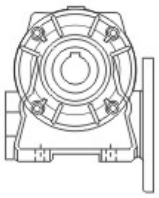
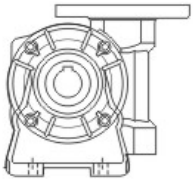
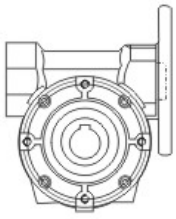
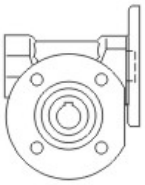
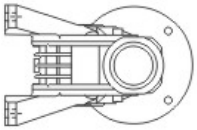
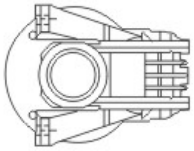
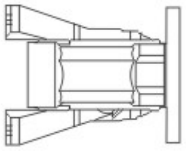
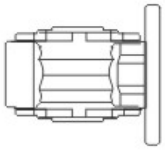
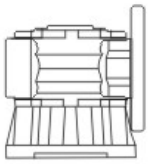
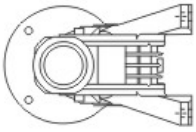
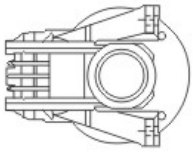
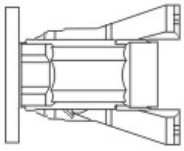
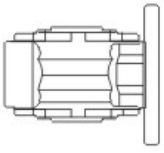
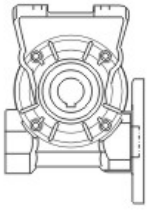
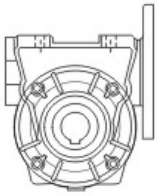
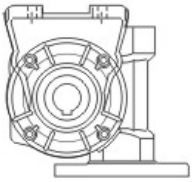
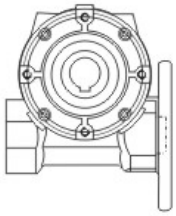
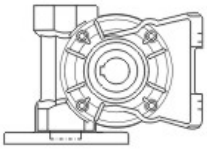
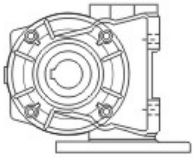
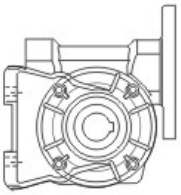
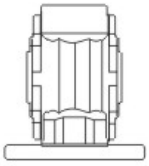
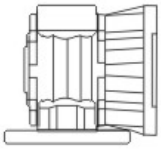
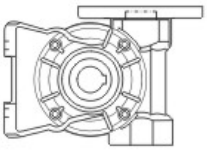
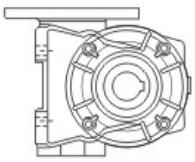
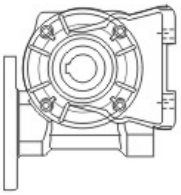
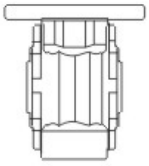
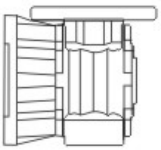


無振動--無阻尼
Without vibration-dampening bushing

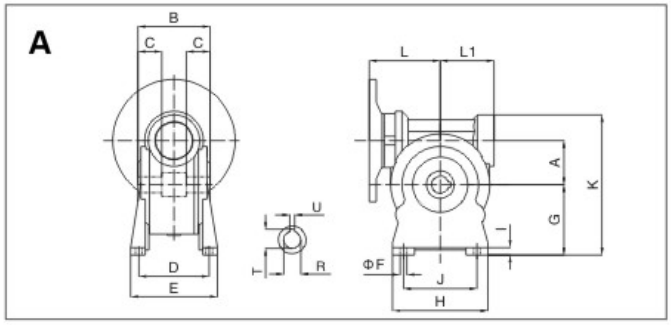
	K1	K2	K3	KD	KE	D	G	KH	I
VF30	100	40	157.5	50	65	7	14	8	4
VF44	100	40	157.5	50	65	7	14	8	4
VF49	100	55	172.5	68	94	7	14	8	4

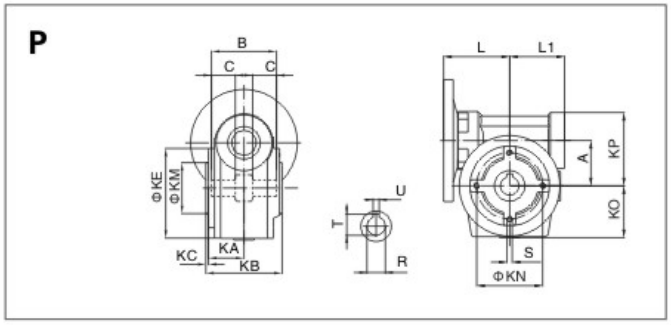
7. 安裝方位 Arrangements

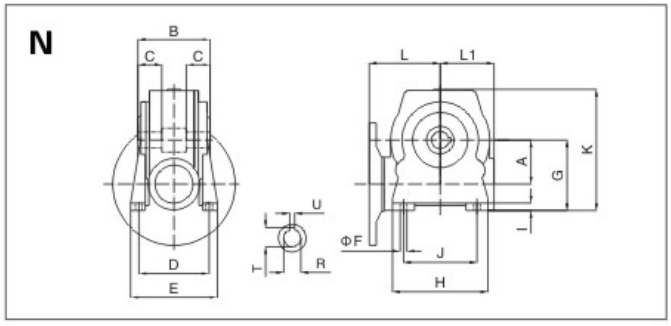
7.1 VF..安裝方位圖 Installation Positions Diagram

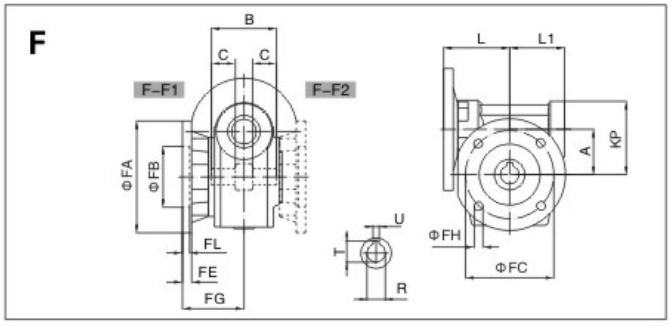
	VF..A	VF..N	VF..V	VF..P	VF..F
B3					
B6					
B7					
B8					
V5					
V6					

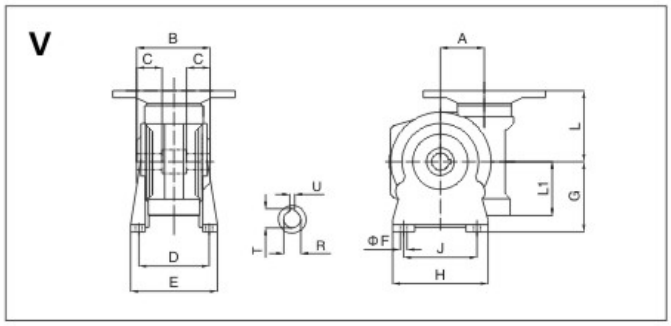
7.2 VF..外型及安裝尺寸 Outline & installation sizes

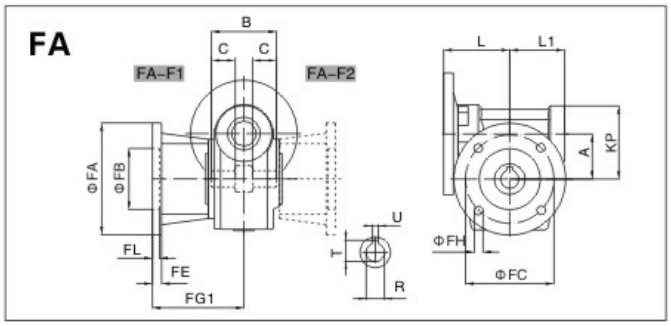








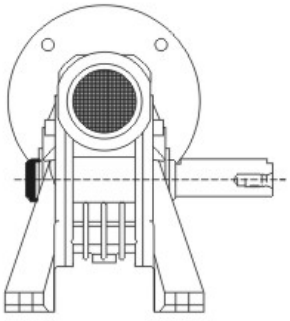
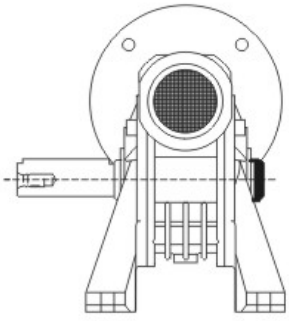




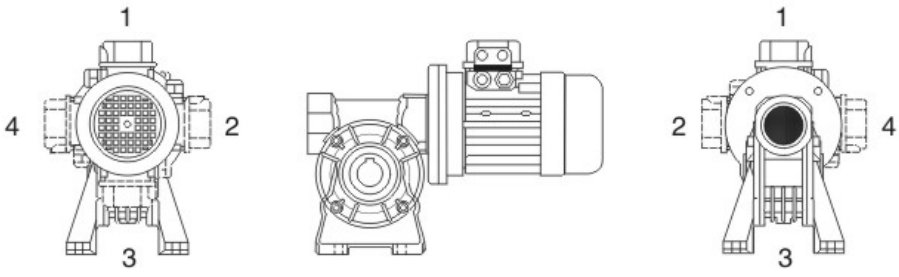
型號Type	A	B	C	D	E	ΦF	G	H	I	J	K	L	L1	ΦKE	ΦKM	ΦKN	KA
Vf30	30	55	20.5	66	80	6.5	55	80	8	50	105	52	46	82	50	65	30
VF44	44.6	64	24.5	81	98	8.5	72	90	10	52	143	65	54	99	50	65	35
VF49	49.5	82	22.5	98.5	124	8.5	82	110	12	63	162	70	63	107.5	68	94	37
VF63	62.17	120	40	111	143	10.5	100	140	12	95	199	95	80	110	75	90	45
VF72	72	120	40	115	142	11	115	156	12	120	229	116	88	125	90	110	46
VF86	86.9	140	45	146	186	11	142	220	14	140	280	126	110	160	110	130	66.5
VF110	110	155	45	181	220	12.5	170	270	15	200	339	153	138	200	130	165	74
VF130	130	165	52.5	191	245	16	195	310	18	220	390	185	154	250	180	215	78.5
VF150	150	175	55	211	260	18	220	330	20	240	438	190	179	250	180	215	83.5

型號Type	KB	KO	KP	S	ΦFA	ΦFB	ΦFC	ΦFH	FE	FL	FG	FG1	U	T	R	WT(KG)
VF30	63	41	50	M6x7	80	50	68	6.5	6	4	50.5		5	16.3	14	1.1
VF44	74	51	71	M6x8	110	60	87	8.5	9	7	60.5	90	6	20.8	18	2
VF49	79	56	80	M6x8	125	70	90	10	12	10	85.5	115	8	28.3	25	3
VF63	115	73	98.5	M8x14	180	115	150	10.5	11	4	86	116	8	28.3	25	6
VF72	118	83	114	M8x14	200	130	165	13	12	5	85	111	8(8)	31.3(33.3)	28(30)	8.2
VF86	140	106	138	M10x17	210	152	176	12.5	15	4	151	110.5	10	38.3	35	16.3
VF110	155	142	161	M12x21	280	170	230	13.5	20	10	50.5	172.5	12	45.3	42	32.5
VF130	165	153	195	M12x23	320	180	255	16	20	12	137.5	197.5	14	48.8	45	49
VF150	175	180	218	M14x23	350	200	290	18	22	12	145.5	220	14	53.8	50	60

7.3 單向輸出軸位置 Position diagram for single output shaft

SS1	SS2
	

7.4 接綫盒位置 Position of terminal box



如對接綫盒位置有特殊要求，請在下單時如圖所示來指定接綫盒安裝方位。
In the case of specific requirements, when ordering, specify the position of the terminal box as shown in the diagram.

YK系列鋁殼三相异步電動機
YK series Asynchronous Motor

YK系列電動機是最新設計的全封閉式微型三相异步電動機，具有結構簡單、運行可靠、維護方便、技術經濟指標優异等特點，廣泛適用于各種小型機床，醫療器械，電子儀器及家用電器等。YK系列電動機防護等級爲E級，冷却方法爲ICO141。

His motor is a miniature three-phase asynchronous motor which designed newly and closed. It is simple in structure, reliable in running, convenient in characteristic such as being excellent of technical and economic index to safeguard, is extensively suitable for various kinds of small-scale lathes, medical equipment, electron tube instrument and household appliances IP44, E, ICO141.

使用條件

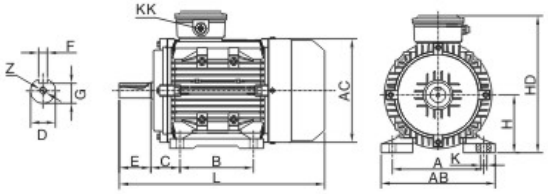
環境温度: 隨季節而變化，但不超過40℃
海拔: 不超過1000m
額定頻率: 50Hz
額定電壓: 380V/220V
接法: Y/△

Service condition

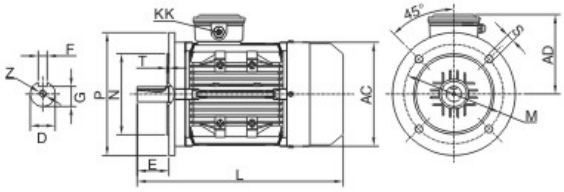
Environment temperature:
vary with season, Below 40℃
Eievation: not above 1000m
Rated frequency: 50Hz
Voltage: 380V/220V
Connection: Y/△

YE2/Y2铝壳系列电机安装及外形尺寸
YE2/Y2 Aluminium series motor instruction and overall dimension

IM B3



IM B5



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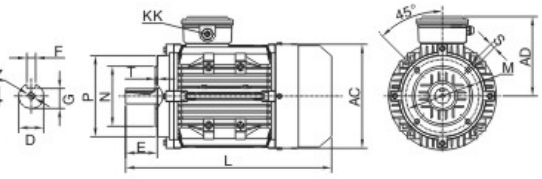
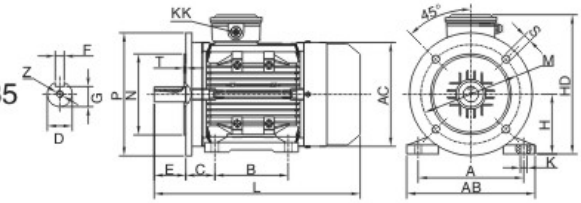
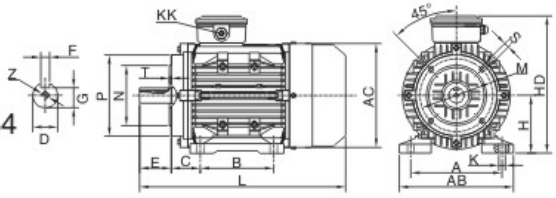


IM B35



IM B34



YE2/Y2铝壳B3、B5、B35电机安装及外形尺寸 Aluminium B3、B5、B35 motor instruction and overall dimension

机座号 Frame No.	安装尺寸 Mounting Dimensions																外形尺寸 Overall Dimensions						
	A	B	C	D	E	F	G	H	K	Z	KK	P	M	N	S	T	AB	AC	AD	HD	L	制动电机长度	变频电机长度
56	90	71	36	9	20	3	7.2	56	6	M4×12	1–M20×1.5	120	100	80	7	3	110	112	78	134	200		
63	100	80	40	11	23	4	8.5	63	7	M4×12	1–M20×1.5	140	115	95	9	3	125	125	100	167	230	280	295
71	112	90	45	14	30	5	11	71	7	M5×12	1–M20×1.5	160	130	110	9	3.5	140	142	110	184	260	305	317
80M	125	100	50	19	40	6	15.5	80	10	M6×16	1–M20×1.5	200	165	130	12	3.5	158	163	123	205	300	355	355
90S	140	100	56	24	50	8	20	90	10	M8×19	1–M20×1.5	200	165	130	12	3.5	175	175	130	220	310	380	377
90L	140	125	56	24	50	8	20	90	10	M8×19	1–M20×1.5	200	165	130	12	3.5	175	175	130	220	335	405	402
100L	160	140	63	28	60	8	24	100	12	M10×22	2–M20×1.5	250	215	180	15	4	200	203	157	260	380	435	435
112M	190	140	70	28	60	8	24	112	12	M10×22	2–M20×1.5	250	215	180	15	4	225	225	168	282	410	470	465
132S	216	140	89	38	80	10	33	132	12	M12×28	2–M20×1.5	300	265	230	15	4	255	268	190	323	470	540	522
132M	216	178	89	38	80	10	33	132	12	M12×28	2–M20×1.5	300	265	230	15	4	255	268	190	323	510	580	562
160M	254	210	108	42	110	12	37	160	15	M12×28	2–M30×1.5	350	300	250	19	5	315	330	240	400	605		
160L	254	254	108	42	110	12	37	160	15	M12×28	2–M30×1.5	350	300	250	19	5	315	330	240	400	650		

YE2/Y2铝壳B14、B34电机安装及外形尺寸 Aluminium B14、B34 motor instruction and overall dimension

机座号 Frame No.	安装尺寸 Mounting Dimensions																外形尺寸 Overall Dimensions						
	A	B	C	D	E	F	G	H	K	Z	KK	P	M	N	S	T	AB	AC	AD	HD	L	制动电机长度	变频电机长度
56	90	71	36	9	20	3	7.2	56	6	M4×12	1–M20×1.5	80	65	50	M5	2.5	110	112	78	134	200		
63	100	80	40	11	23	4	8.5	63	7	M4×12	1–M20×1.5	90	75	60	M5	2.5	125	125	100	167	230	280	295
71	112	90	45	14	30	5	11	71	7	M5×12	1–M20×1.5	105	85	70	M6	2.5	140	142	110	184	260	305	317
80M	125	100	50	19	40	6	15.5	80	10	M6×16	1–M20×1.5	120	100	80	M6	3	158	163	123	205	300	355	355
90S	140	100	56	24	50	8	20	90	10	M8×19	1–M20×1.5	140	115	95	M8	3	175	175	130	220	310	380	377
90L	140	125	56	24	50	8	20	90	10	M8×19	1–M20×1.5	140	115	95	M8	3	175	175	130	220	335	405	402
100L	160	140	63	28	60	8	24	100	12	M10×22	2–M20×1.5	160	130	110	M8	3.5	200	203	157	260	380	435	435
112M	190	140	70	28	60	8	24	112	12	M10×22	2–M20×1.5	160	130	110	M8	3.5	225	225	168	282	410	470	465
132S	216	140	89	38	80	10	33	132	12	M12×28	2–M20×1.5	200	165	130	M10	3.5	255	268	190	323	470	540	522
132M	216	178	89	38	80	10	33	132	12	M12×28	2–M20×1.5	200	165	130	M10	3.5	255	268	190	323	510	580	562
160M	254	210	108	42	110	12	37	160	15	M12×28	2–M30×1.5	250	215	180	M12	4	315	330	240	400	605		
160L	254	254	108	42	110	12	37	160	15	M12×28	2–M30×1.5	250	215	180	M12	4	315	330	240	400	650		

SWL系列蝸輪絲杆升降機
SWL Worm Gear Screw Lifter

1. 產品圖片 Picture of Products

◎ 蝸輪絲杆升降機
◎ Worm gear screw lifter
◎ 速比1/5–1/36

SWL–R

SWL–T

SWL–S

SWL–H

2. 產品説明 Product Introduction

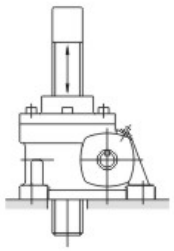
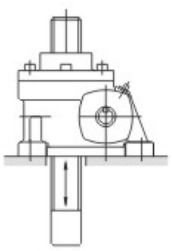
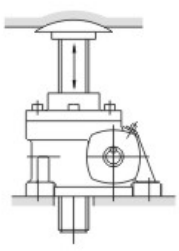
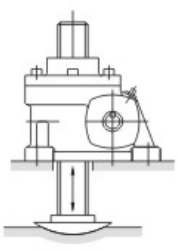
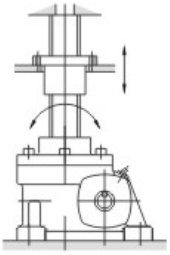
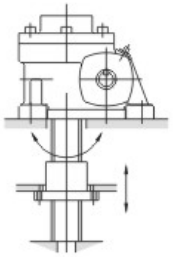
2.1 SWL 系列蝸輪絲杆升降機（又名千斤頂）；
2.2 具有結構緊凑、體積小的特點；
2.3 安裝方便、形式多；
2.4 可靠性高、壽命長；
2.5 具有起升、下降及借助輔件推進、翻轉等多種功能；
2.6 可單臺使用，也可多臺組成使用；
2.7 動力源廣泛，可用電動機或其它動力直接帶動，也可以用手動；
2.8 通常用于低速重載的場合。廣泛應用于冶金、機械、建築、水利、醫療、化工等各個行業。

2.1 SWL series worm gear screw lifter (other name is Jack);
2.2 Compact structure, small size;
2.3 Easy mounting, varied types;
2.4 High reliability. Long service life;
2.5 With the function of ascending, descending, thrusting, overturning;
2.6 Can be applied in one unit or multiple units;
2.7 Wide motivity. It can be drive by electrical motor and manual force;
2.8 It is usually used in low speed situation, widely used in the fields of metallurgy, mechanical, construction, chemical, irrigation works, mediat treatment.

3. 型號説明 Model Introduction

SWL D 100 – 12 – A R – 300 – B – P	
SWL	產品代碼: SWL–蝸輪絲杆升降機 Products code: SWL–worm gear linear actuator
D	輸入軸聯接方式: D–帶電機法蘭, 無代碼–基本型 Connector of input shaft: D–With motor frange, Non–code–basic
100	規格用蝸輪副中心距: 100 Specification expressed by the center distance of two pair worm gear 100
12	傳動比: 12 Ratio: 12
A	安裝方式代碼: A、B–基本型, C、D–止旋構造型, E、F–活動螺母構造型。詳見“安裝方式” Mounting option code: A、B–Basic Model, C、D–Screw fluctuate without rotation, E、F– Screw rotate without fluctuation. More information from mounting option
R	絲杆頭部型式代碼: R 型(圓柱式)、H 型(栓孔式)、S 型(螺紋式)、 T 型(頂板式)。詳見“產品圖片” Code of screw head: R–Column type、H–Bolt hole type、S–Screw type、T–Copinhg type
300	絲杆行程: 共有100、200、300、400、500、600、800、1000mm8種規格, 根據使用情况選擇, 如需要其它長度行程，也可定做 Tetal 8 species model: 100、200、300、400、500、 600、700、800、1000mm. Choose according to using situation. If other model needed, canbe made to order
B	軸指向: SWL系列共有A、B、C三種, SWLD系列共有A、B、C、D四種。詳見“軸指向表示” Shaft directionB: SWL series have A、B and C three species, SWLD series have A、B、C and D four species
P	護管: P帶護管, 無代碼不帶護管 Safeguard pipe: With safeguard pipe, Without safeguard pipe

4. 安裝方式 Mounting Option

基本型 Basic Model		止旋構造型 Screw fluctuate without rotation		活動螺母構造型 Screw rotate without fluctuation	
A	B	C	D	E	F
					

說明:

1、基本形式：螺母(蝸輪)轉動絲杆上下移動，此爲普通型升降機安裝方式。
※注意：絲杆在升降時，會產生旋轉力，所以必須做好防止旋轉的措施。

2、止旋構造型：適用于頂端無連接下運轉等各種不能實現防止旋轉的場合。

3、若想在有限的空間增長行程，可選用活動螺母構造型。此構造爲絲杆旋轉，活動螺母移動。若行程較長時，軸端應采用支撐方式，可得到很好的傳動效果。

Explain:

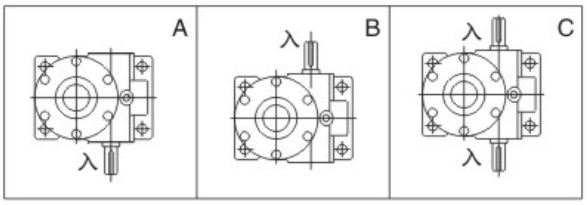
1、 Basic Model：Screw fluctuate with rotation. This is the installation for basic screw lifter.
※Notice：There will be rotation force when screw is ascending and decending. So it's need to prevent rotation.

2、 Screw fluctuate without rotation：work under the situation than the shofe and hav't connection and the life can't rotate.

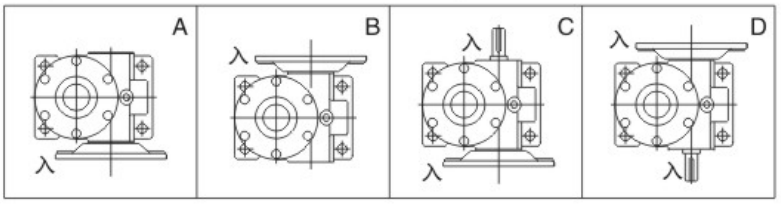
3、 Screw rotate without fluctuation: To get the longer travel, this prodel screw rotate without fluctuation is an option, which screw rotate and nut move. If longer travel shaft and with bracket will archien high efficing.

5. 軸指向表示 Express of Shaft Orientation

5.1 SWL系列軸指向表示
5.1 Express of SWL series bearing orientation



5.2 SWLD系列軸指向表示
5.2 Express of SWLD series bearing orientation

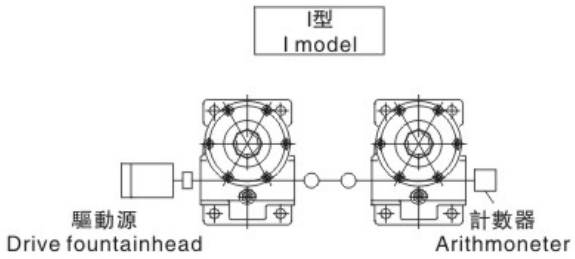


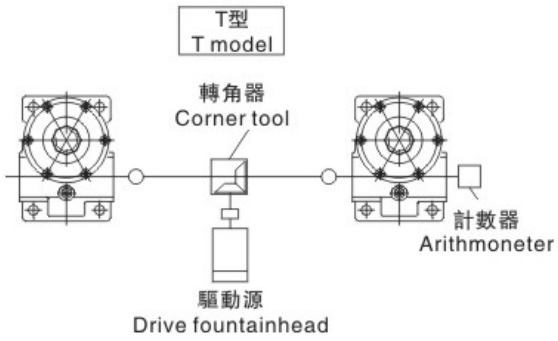
6. 承載能力及選型參數 Capacity and Model Selection

型號規格 Model size	傳動比 Ratio	入力軸轉速 1800r/min Input shaft revolution speed 1800r/min			入力軸轉速 1500r/min Input shaft revolution speed 1500r/min			入力軸轉速 1200r/min Input shaft revolution speed 1200r/min			入力軸轉速 900r/min Input shaft revolution speed 900r/min			入力軸轉速 600r/min Input shaft revolution speed 600r/min			入力軸轉速 300r/min Input shaft revolution speed 300r/min		
		入功率 (kw) Model size (kw)	起升力 (kg) Lifter froce (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kw) Model size (kw)	起升力 (kg) Lifter froce (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kw) Model size (kw)	起升力 (kg) Lifter froce (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kw) Model size (kw)	起升力 (kg) Lifter froce (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kw) Model size (kw)	起升力 (kg) Lifter froce (kg)	起升速度 (m/min) Hoist speed (m/min)	入功率 (kw) Model size (kw)	起升力 (kg) Lifter froce (kg)	起升速度 (m/min) Hoist speed (m/min)
SWL35	1/5	0.69	500	1.80	0.64	550	1.50	0.65	700	1.20	0.63	900	0.90	0.46	1000	0.60	0.37	1000	0.30
	1/10	0.37	500	0.90	0.37	550	0.75	0.37	700	0.60	0.37	950	0.45	0.37	1000	0.30	0.19	1350	0.15
	1/20	0.37	600	0.45	0.37	700	0.38	0.37	900	0.30	0.37	1200	0.23	0.19	1350	0.15	0.19	1350	0.08
SWL40	1/6	0.98	700	1.80	0.93	800	1.50	0.88	950	1.20	0.91	1300	0.90	0.84	1800	0.60	0.42	1800	0.30
	1/12	0.66	950	0.90	0.64	1100	0.75	0.61	1300	0.60	0.57	1650	0.45	0.46	2000	0.30	0.37	2000	0.15
	1/24	0.37	950	0.45	0.37	1100	0.38	0.37	1300	0.30	0.37	1650	0.23	0.37	2000	0.15	0.19	2000	0.08
SWL50	1/6	1.39	900	1.80	1.28	1000	1.50	1.24	1200	1.20	1.16	1500	0.90	0.87	1700	0.60	0.54	2100	0.30
	1/12	1.10	1350	0.90	1.01	1500	0.75	0.98	1800	0.60	0.87	2150	0.45	0.58	2150	0.30	0.37	2500	0.15
	1/24	0.78	1800	0.45	0.72	2000	0.38	0.69	2400	0.30	0.55	2550	0.23	0.42	2900	0.15	0.37	2850	0.08
SWL60	1/8	2.12	1300	1.80	1.97	1450	1.50	1.85	1700	1.20	1.72	2100	0.90	1.66	3050	0.60	1.31	4800	0.30
	1/16	1.12	1300	0.90	1.04	1450	0.75	0.98	1700	0.60	0.95	2200	0.45	0.87	3050	0.30	0.69	4800	0.15
	1/32	0.80	1750	0.45	0.75	1950	0.38	0.69	2250	0.30	0.64	2800	0.23	0.63	4100	0.15	0.48	6400	0.08
SWL60B	1/8	2.00	1300	1.80	1.86	1450	1.50	1.75	1700	1.20	1.62	2100	0.90	1.57	3050	0.60	1.24	4800	0.30
	1/16	1.06	1300	0.90	0.98	1450	0.75	0.93	1700	0.60	0.89	2200	0.45	0.83	3050	0.30	0.65	4800	0.15
	1/32	0.75	1750	0.45	0.70	1950	0.38	0.65	2250	0.30	0.61	2800	0.23	0.59	4100	0.15	0.46	6400	0.08
SWL70	1/10	2.66	1400	1.80	2.42	1850	1.50	2.25	1950	1.20	2.12	2450	0.90	1.93	3350	0.60	1.41	4900	0.30
	1/20	1.42	1600	0.90	1.47	1850	0.75	1.37	2250	0.60	1.28	2800	0.45	1.18	3850	0.30	0.86	5600	0.15
	1/40	1.14	2400	0.45	1.17	2800	0.38	1.09	3350	0.30	1.07	4400	0.23	0.93	5750	0.15	0.69	8400	0.08
SWL100	1/12	3.62	1850	1.80	3.51	2150	1.50	3.39	2600	1.20	3.18	3250	0.90	2.94	4500	0.60	2.09	6400	0.30
	1/18	2.65	1900	1.20	2.68	2300	1.00	2.57	2750	0.80	2.45	3500	0.60	2.19	4700	0.40	1.56	6700	0.20
	1/36	1.66	2200	0.60	1.63	2600	0.50	1.60	3200	0.40	1.47	3900	0.30	1.36	5400	0.20	1.20	9600	0.10
SWL120	1/12	4.15	1975	1.80	4.02	2300	1.50	3.81	2725	1.20	3.80	3625	0.90	3.48	4975	0.60	2.48	7050	0.30
	1/18	3.20	2125	1.20	3.20	2550	1.00	3.04	3025	0.80	3.03	4025	0.60	2.74	5450	0.40	1.94	7725	0.20
	1/36	2.14	2625	0.60	2.07	3050	0.50	1.98	3650	0.40	1.99	4875	0.30	1.80	6600	0.20	1.40	10300	0.10
SWL130	1/7	9.47	2100	3.60	9.17	2450	3.00	9.02	2850	2.40	8.58	4000	1.80	8.20	5450	1.20	5.84	7750	0.60
	1/14	5.76	2350	1.80	5.71	2800	1.50	5.57	3300	1.20	5.39	4550	0.90	5.06	6200	0.60	3.57	8750	0.30
	1/28	4.07	3050	0.90	3.89	3500	0.75	3.91	4100	0.60	3.65	5850	0.45	3.48	7800	0.30	2.45	11000	0.15
SWL150	1/8	16.3	3500	3.60	16.1	4000	3.00	15.8	5400	2.40	15.1	7100	1.80	14.8	9850	1.20	9.70	12950	0.60
	1/16	11.7	4300	1.80	11.6	5400	1.50	10.5	7200	1.20	11.00	9450	0.90	9.62	11800	0.60	7.08	17350	0.30
	1/32	8.65	5500	0.90	9.55	6800	0.75	7.35	10000	0.60	7.53	14300	0.45	7.02	15750	0.30	5.80	26050	0.15

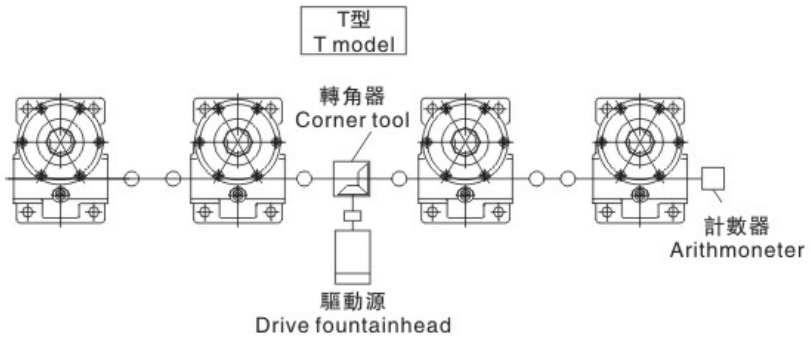
7. 應用示例 Application Example

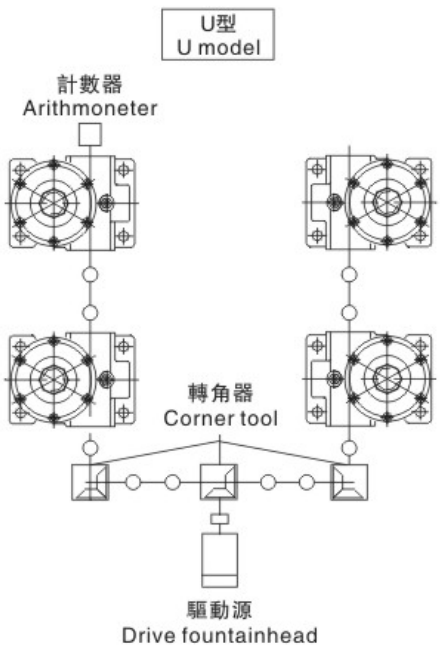
7.1 兩臺聯動 Two sets linkage

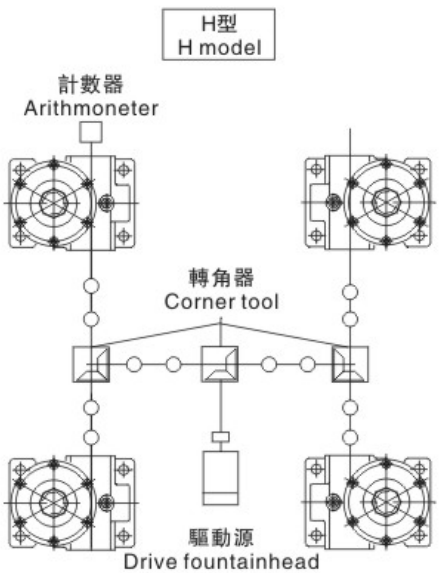




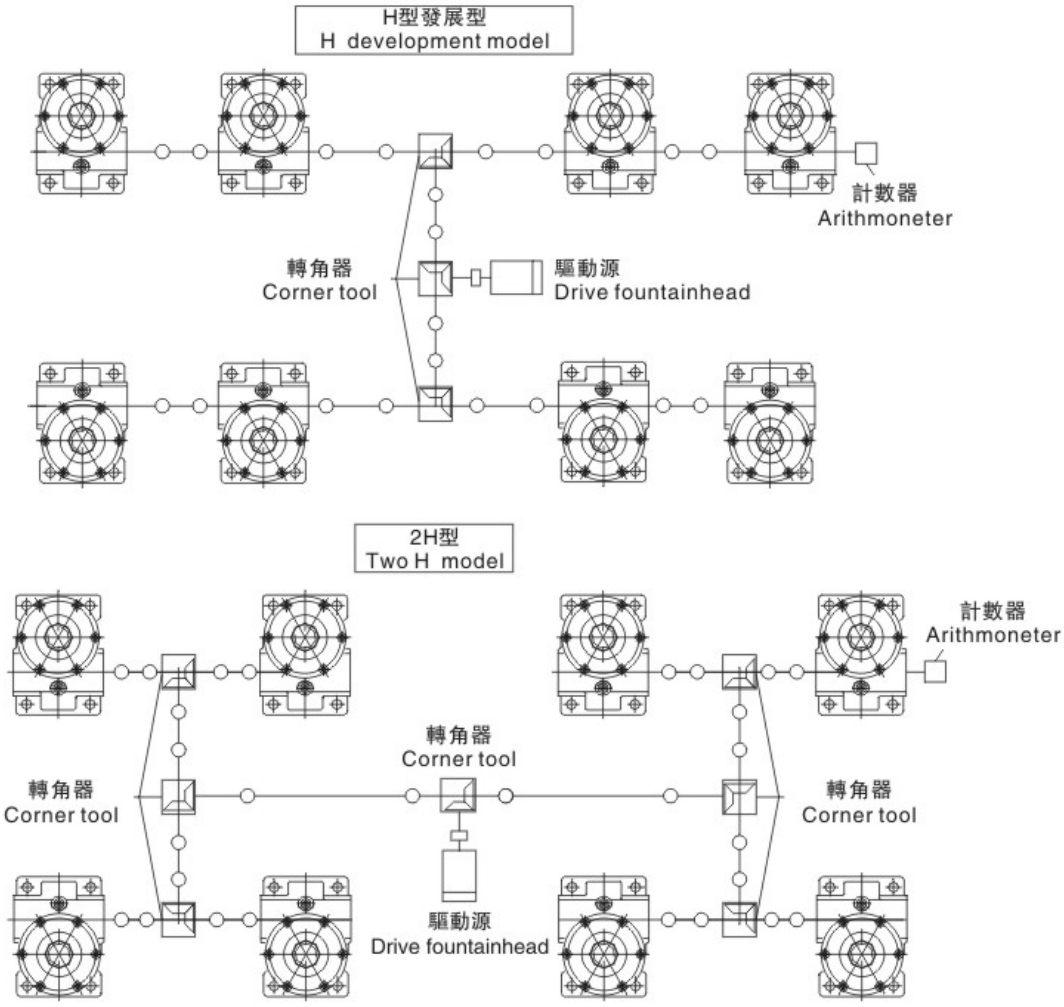
7.2 四臺聯動 Four sets linkage







7.3 八臺聯動 Eight sets linkage



8. 升降機選型

8.1 總當量載荷計算

Ws=Wmax×fs

Ws--當量載荷 Wmax--最大載荷 fs--使用系數（詳見附表1）

表1 使用系數 fs Table 1 using coefficient(fs)

使用工况 using situation	平穩載荷，負荷慣性小 Smooth load;light load inertia	輕微衝擊載荷，負荷慣性中等 light shock load; mid load inertia	强衝擊負荷，負荷慣性大 strong shock load; heavy load inertia
使用系數 using coefficient	1.0~1.3	1.3~1.5	1.5~3.0

8.2 單臺升降機的當量載荷的計算

W=Ws/(S×fd)

W--單臺當量載荷 Ws--當量載荷 S --聯動臺數 fd--聯動系數（詳見附表2）

表2 聯動系數 fd Table 2 linkage coefficient(fd)

聯動臺數 Linkage quantity	1	2	3	4	5~8
使用系數 Using coeffient	1	0.95	0.9	0.85	0.8

8.3 絲杆行程選定

在充分考慮絲杆運動慣性、各種頂端輸出部件等各種情況，選擇有充分餘量的絲杆行程。

8.4 暫定升降機型號

根據載重、升降速度、行程、驅動源暫時選定升降機型號(詳情可參考“6、承載能力與選型參數”)。

8.5 絲杆計算 (詳見表3，絲杆行程用L表示，單位(unit)：mm)

表3 絲杆計算 Table 3 screw calculate

型號 Model	絲杆直徑 Screw dia	護管長 length of protect pipe	絲杆頭部S型 "S"type screw end		絲杆頭部H型 "H"type screw end		絲杆頭部R型 "R"type screw end		絲杆頭部T型 "T"type screw end	
			總長=L+SC	牙長=總長-SD	總長=L+HB+HD	牙長=總長-HB-HE	總長=L+RB	牙長=總長-RC	總長=L+TE	牙長=總長-TF
SWL35	Tr26×5	L+55	L+150	總長-40	L+20+165	總長-55-20	L+165	總長-55	L+135	總長-25
SWL40	Tr32×6	L+60	L+180	總長-50	L+25+195	總長-65-25	L+195	總長-65	L+160	總長-30
SWL50	Tr38×6	L+60	L+180	總長-50	L+25+195	總長-65-25	L+195	總長-65	L+160	總長-30
SWL60	Tr46×8	L+65	L+220	總長-60	L+32+255	總長-95-32	L+225	總長-65	L+200	總長-40
SWL60B	Tr52×8	L+65	L+220	總長-60	L+32+255	總長-95-32	L+225	總長-65	L+210	總長-50
SWL70	Tr65×10	L+75	L+260	總長-80	L+35+295	總長-115-35	L+250	總長-70	L+235	總長-55
SWL100	Tr75×12		L+300	總長-80	L+44+355	總長-135-44	L+295	總長-75	L+285	總長-65
SWL120	Tr80×12		L+360	總長-100	L+54+410	總長-150-54	L+355	總長-95	L+330	總長-70
SWL130	Tr90×14		L+435	總長-120	L+64+480	總長-165-64	L+430	總長-115	L+390	總長-75
SWL150	Tr100×16		L+495	總長-150	L+70+545	總長-200-70	L+485	總長-140	L+445	總長-100

8.6 絲杆穩定性校核

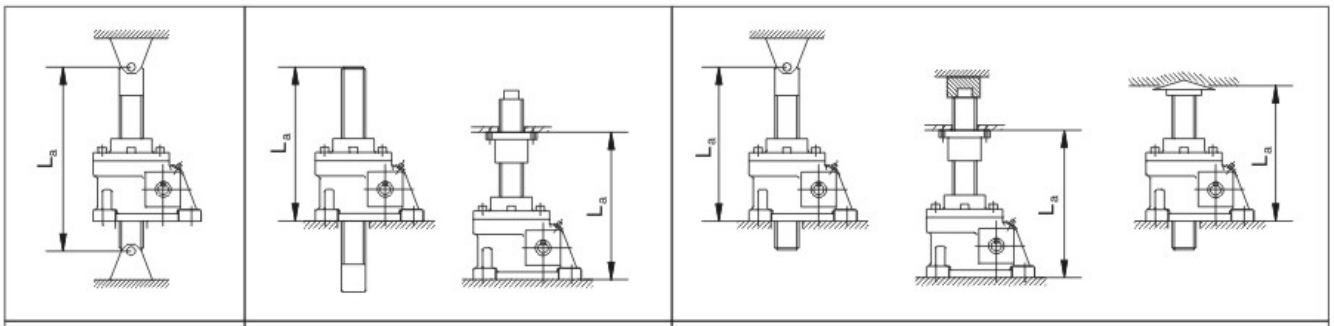
$P_{cr}=fm\times(d^2/L_a)^2$

應確保$P_{cr}>W\times S_f$(一般$S_f=4$)

Pcr--絲杆臨界載荷(N)　fm--長度系數(詳見附表4)　d--絲杆底徑(mm)(詳見附表5)

L_a--作用點間距離(mm)　W--單臺升降機當量載荷(N)　Sf--安全系數(一般取4)

表4 長度系數(fm) Table 4 Length coefficient



兩端支撐 $fm=10X10^4$ Two ends sustation	底座固定軸端自由 $fm=2.5X10^4$ One shaft end fixed the other free	底座固定軸端支撐或固定 $fm=20X10^4$ Base shaft end fixed the other side uphold or fixed

8.7 絲杆轉速校核

$nc=96\times10^6\times fn\times d/L_b^2$

ns=nl/i 應確保nc>ns

nc--絲杆許用轉速(r/min)　ns--絲杆回轉轉速(r/min)　d--絲杆底徑(mm)　i--減速比

nl--輸入軸回轉轉速(r/min)　fn--支撐系數(詳見附表6)　L_b--支撐間距離(mm)

8.8 輸入功率校核

$p=n_1 \times p_1 \times w \times 10^{-3}/(60 \times i \times \eta)$ 應確保P＜P額

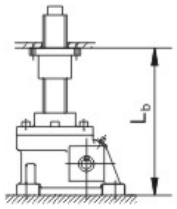
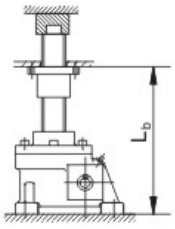
p--所需輸入功率(KW) p_1--絲杆螺距(mm) n_1--輸入軸回轉轉速(r/min)

W--當量載荷(KN) i--減速比 η--綜合效率

表5 絲杆底徑D Table 5 Diameter of screw bottom

型號 Model	SWL35	SWL40	SWL50	SWL60	SWL60B	SWL70	SWL100	SWL120	SWL130	SWL150
絲杆底徑 Diameter of screwing bottom	20.5	25	31	37	43	54	62	67	74	82

表6 支撑系數 fn Table 6 Sustaion coefficient(fn)

	
兩端自由 fn=0.36 Two shaft end free	兩端支撑 fn=1.56 Two shaft end fixed

8. Model Selection for Screw Lifter

8.1 Total current load calculate

Ws=Wmax×fs

Ws--current load Wmax--max load fs--using coefficient (more information from table1)

8.2 Current load calculate of unit screw lifter

W=Ws/(S×fd)

W--unit current load Ws--current load S --linkage quantity

fd--linkage coefficient(more information from table 2)

8.3 Stroke of screw option

Choose adequate stroke of screw with concerning enough screw movement inertia...

8.4 Choose screw model

Choose screw model according to capacity, lifting speed, stroke and driveing fountainhead.

8.5 Screw calculate(more information from table 3)

8.6 Screw stability check

$P_{cr}=f_m \times (d^2/L_a)^2$ Should insure $P_{cr} > W \times S_f$(usual S_f=4)

P_{cr}--Screw critical loading(N) fm-- Length coefficient(more information from table 4)

d--diameter of screw bottom(mm)(more information from table 5) L_a--working length(mm)

W--Current load of unit screw lifter(N) Sf--security coefficient(usual S_f=4)

8.7 Screw speed check

$n_c=96 \times 10^6 \times fn \times d/L_b^2$

$n_s=nl/i$ should insure $n_c > n_s$

n_c--screw allowed speed(r/min) ; n_s--screw screwing speed(r/min);

d--diameter of screw bottom(mm); i--ratio; nl--input shaft screwing speed(r/min);
f_n--Sustation coefficient (more information from table 6); L_b--the distance between sustation(mm).

8.8 Input power check

$P=n_1 \times p_1 \times w \times 10^{-3}/(60 \times i \times \eta)$ should insure $p < p_{rated}$

P--needed input power(KW); p_1--axial pitch distance(mm) n_1--input shaft screwing speed(r/min);
w--current load(KN); i--ratio η--general efficiency

9. 注意事項

9.1 請嚴格按承載能力表選擇合適的速比和與之對應的具有充分裕度的載荷的升降機；
9.2 升降機工作時應控制減速機表面和升降螺母表面温度在-15℃~80℃；
9.3 升降機不得連續運轉，單臺升降機的負荷時間率(T%)以30分鐘爲單位計算，不得超過20%；

$$\text{負荷率 T\%} = \frac{\text{1動作周期的工作時間}}{\text{1動作周期的工作時間+1動作周期的停歇時間}} \times 100\%$$

9.4 必須保證有充足的驅動源動力；
9.5 升降機理論上有自鎖功能，但在振動衝擊較大的場合會造成自鎖功能失靈，請務必加制動裝置；
9.6 升降機使用環境：

使用環境 Usingsituation	室内無雨水侵入的場所 Norain and water
周圍空氣 Ambient air	灰塵爲一般工廠狀况 Dust: usual condition for mill
環境温度 Ambient temperature	-15℃~40℃
相對濕度 Comparatively humidity	85%以下 Below 85%

9.7 升降機工作時一般不允許有横向載荷，若有横向載荷時，請加導向裝置。

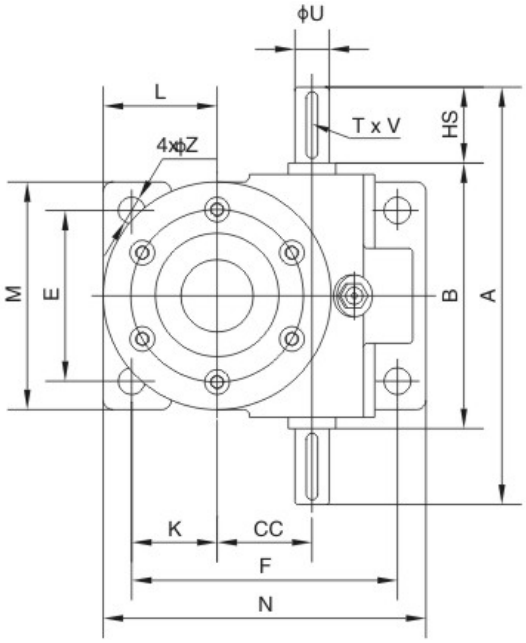
9. Notes

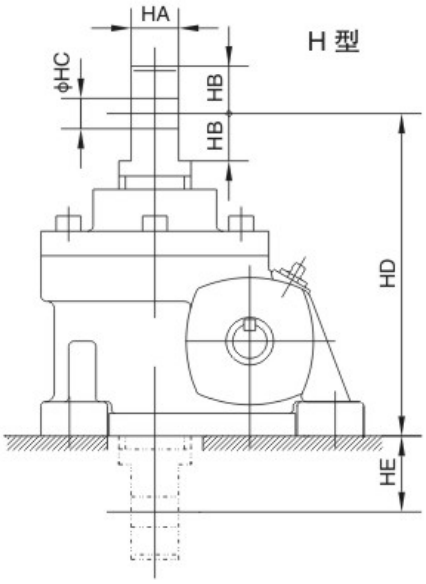
9.1 Select the model with proper ratio and load;
9.2 The surface temperation of speed reducer and nut should be controlled in -15℃~80℃, when the screw lifter is working;
9.3 The screw lifter cannot work all the time. The unit is thirty mins for duty ratio of unit one and can not exceed 20%;

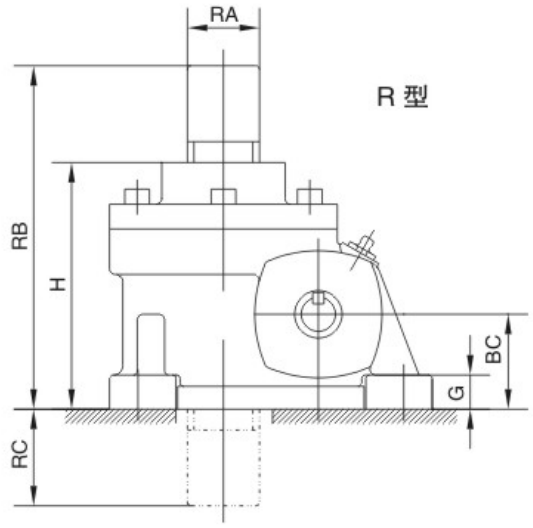
$$\text{Duty ratio (T\%)} = \frac{\text{Time under working/cycle}}{\text{Time under working/cycle + interval/cycle}} \times 100\%$$

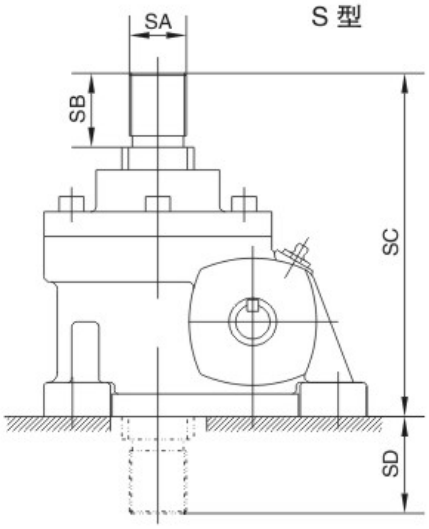
9.4 Insure adequate drive fountainhead;
9.5 Theoretically screw has self-lock function, but the self-lock function may not work in heavy shock condition;
9.6 Using situation for screw lifter;
9.7 Transverse load is not allowed when screw lifter is working. If transverse load occured, pls add direction setting.

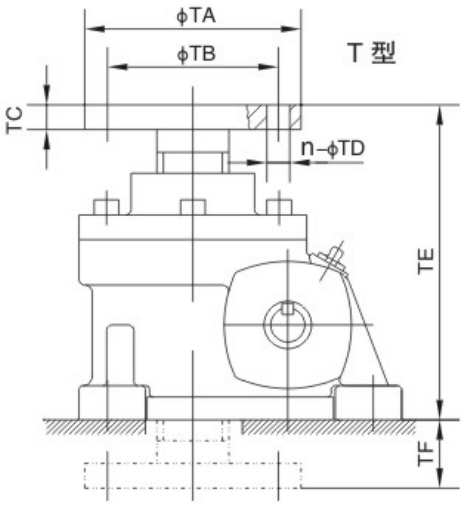
10. SWL系列蝸輪絲杆升降機外形安裝尺寸
Mounting Dimensions of SWL Series Worm Gear Screw Lifter



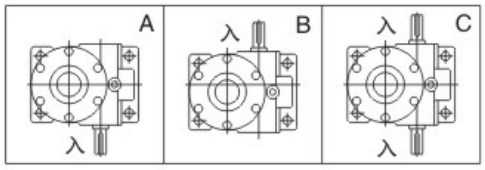






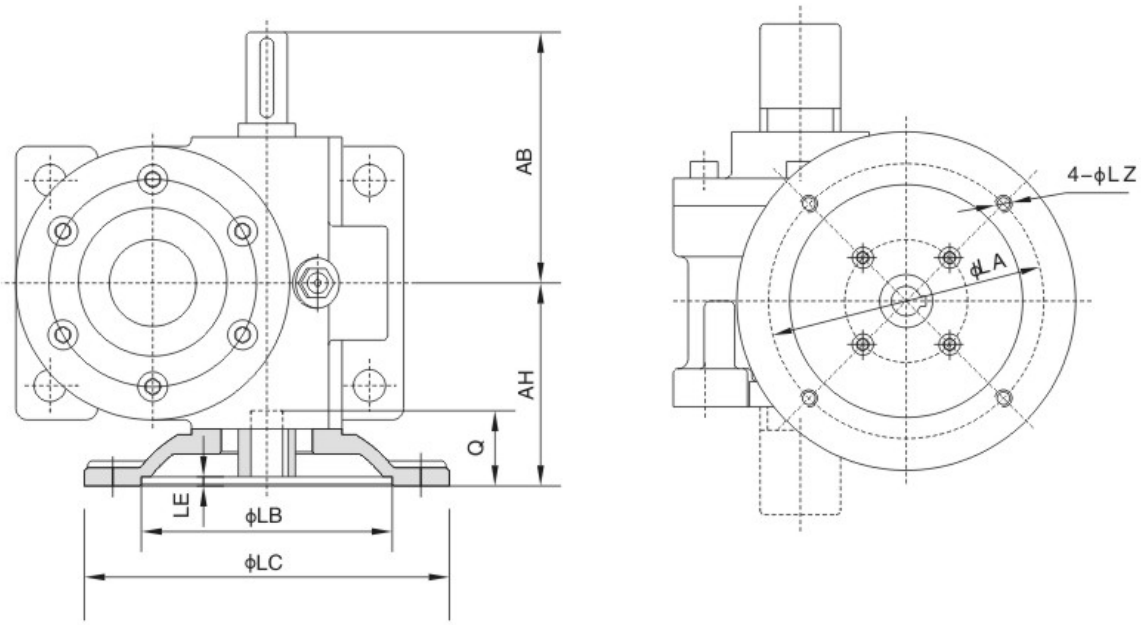


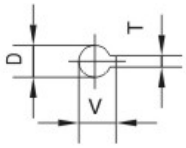
軸指向表示 SHAFT DIRECTION



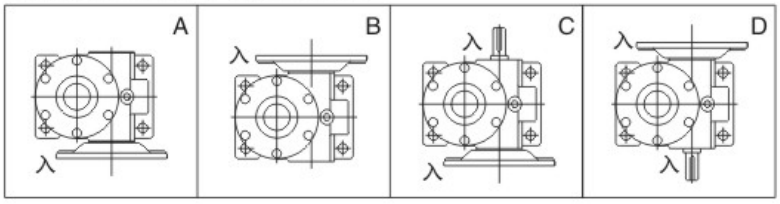
型號規格 Model size	A B HS	E F Z	BC G H	CC K	Tr	L M N	U T x V	絲杆頭部型式 Type of screw head						
								R 型	H 型		S 型		T 型	
								RA RB RC	HA HB HC	HD HE	SA	SB SC SD	TA TB TC	n–TD TE TF
SWL35	170 110 30	66 111 12	40 15 110	35 38	Tr26x5	50 90 135	15 5 x 3	26 165 55	16 20 12	165 55	M16x1.5	28 150 40	88 70 10	4–ϕ10 135 25
SWL40	220 140 40	80 125 12	50 18 130	40 42	Tr32x6	57 110 155	18 6 x 3.5	32 195 65	20 25 14	195 65	M22x1.5	32 180 50	98 80 13	4–ϕ10 160 30
SWL50	220 140 40	90 140 14	50 18 130	50 45	Tr38x6	60 120 170	22 6 x 3.5	38 195 65	25 25 16	195 65	M30x1.5	35 180 50	114 90 13	4–ϕ12 160 30
SWL60	256 176 40	100 190 18	60 20 160	60 70	Tr46x8	90 140 230	25 8 x 4	46 225 65	32 32 20	255 95	M33x1.5	40 220 60	138 100 16	4–ϕ14 200 40
SWL60B	264 184 40	110 190 18	60 20 160	60 70	Tr52x8	90 150 230	25 8 x 4	52 225 65	36 32 24	255 95	M39x1.5	45 220 60	148 110 20	4–ϕ18 210 50
SWL70	316 216 50	140 210 18	70 25 180	70 75	Tr65x10	95 180 250	28 8 x 4	65 250 70	44 35 26	295 115	M45x1.5	55 260 80	178 125 25	4–ϕ21 235 55
SWL100	390 260 65	190 260 22	85 30 220	100 85	Tr75x12	110 230 310	32 10 x 5	75 295 75	56 44 35	355 135	M60x2	65 300 80	188 140 28	4–ϕ21 285 65
SWL120	420 290 65	210 305 22	100 30 260	120 105	Tr80x12	130 260 355	35 10 x 5	80 355 95	60 54 38	410 150	M64x2	70 360 100	218 170 30	4–ϕ25 330 70
SWL130	480 340 70	240 355 22	120 30 315	130 130	Tr90x14	160 300 415	45 14 x 5.5	90 430 115	70 64 45	480 165	M76x2	75 435 120	248 200 32	4–ϕ27 390 75
SWL150	550 360 95	250 385 27	125 35 345	150 135	Tr100x16	170 320 455	50 14 x 5.5	100 485 140	80 70 55	545 200	M90x2	100 495 150	358 280 35	6–ϕ27 445 100

11. SWLD系列蝸輪絲杆升降機外形安裝尺寸
Mounting Dimensions of SWLD Series Worm Gear Screw Lifter





軸指向表示 SHAFT DIRECTION



型號規格 Model size	法蘭規格 Flange size	AB	AH	LA	LB	LC	LE	LZ	D	Q	TxV
SWLD40	71B5	110	72	130	110	160	4	M8	ϕ14	33	5x16.3
SWLD50	71B5	110	80	130	110	160	4	M8	ϕ14	33	5x16.3
SWLD60	80B5	128	100	165	130	200	4.5	M10	ϕ19	43	6x21.8
	90B5								ϕ24	53	8x27.3
SWLD60B	80B5	132	100	165	130	200	4.5	M10	ϕ19	43	6x21.8
	90B5								ϕ24	53	8x27.3
SWLD70	90B5	158	120	165	130	200	4.5	M10	ϕ24	53	8x27.3
SWLD100	100/112B5	195	150	215	180	250	5	M12	ϕ28	63	8x31.3
SWLD120	100/112B5	210	165	215	180	250	5	M12	ϕ28	63	8x31.3
SWLD130	132B5	240	194	265	230	300	5	M16	ϕ38	83	10x41.3
SWLD150	132B5	275	218	265	230	300	5	M16	ϕ38	83	10x41.3

T系列螺旋傘齒輪轉向器
T Series Spiral Bevel Redirector

1. 產品圖片 Picture of Products

◎ 螺旋傘齒輪轉向器
◎ Spiral bevel gear cenits
◎ 速比1/1–5/1

T..–I–LR(O)

T..–D–LR(O)

T..–I–UD(O)

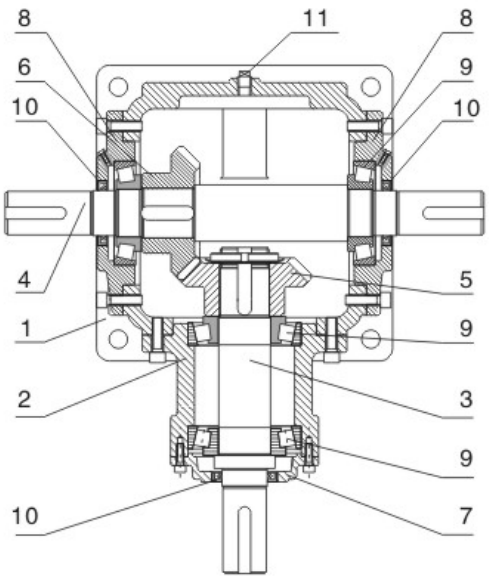
T..–U–LR(O)

2. 產品概述 Product Overview

1. T系列螺旋傘齒輪轉向器，標準化、多品種，速比1:1、1.5:1、2:1、2.5:1、3:1、4:1、5:1全部爲實際傳動比。平均率98%。
2. 有單軸、雙橫軸、單縱軸、雙縱軸可選。
3. 螺旋錐齒輪可以正反運轉，低速或高速傳動平穩，而且噪聲低、振動小、承受力大。
4. 當速比不爲1:1時，橫軸輸入、縱軸輸出爲減速，縱軸輸入、橫軸輸出爲增速。

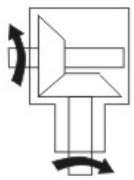
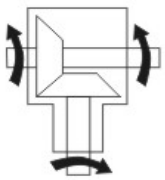
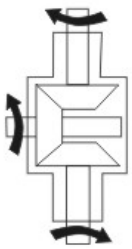
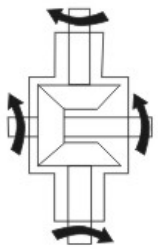
1. T Series spiral bevel redirector with various types are standardized, all ratios of 1:1, 1.5:1, 2:1, 2.5:1, 3:1, 4:1 and 5:1 are actual ones. Average efficiency is 98%.
2. There are one input shaft, two input shafts, unilateral output shaft and double side output shaft.
3. Spiral bevel gear can rotate in both directions and transmit smoothly, low noise, light vibration, high performance.
4. If ratio is not 1:1, if input speed on single–extendalbe shaft, output speed will be reduced; if input speed on double – exfendable shaft, output speed will be reduced.

3. 產品結構圖 Product Structural View



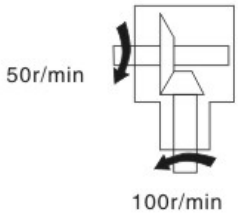
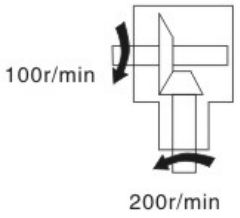
1. 機座 Housing
2. 橫軸座 Housing of input shaft
3. 橫軸 Input shaft
4. 縱軸 Output shaft
5. 橫軸錐齒輪 Drive spiral bevel gear
6. 縱軸錐齒輪 Driven spiral bevel gear
7. 端蓋 Bearing seat of input shaft
8. 端蓋 Bearing seat of output shaft
9. 軸承 Bearing
10. 油封 Seal
11. 油鏡 Oil gauge

4. 轉向功能 Function of Rotation

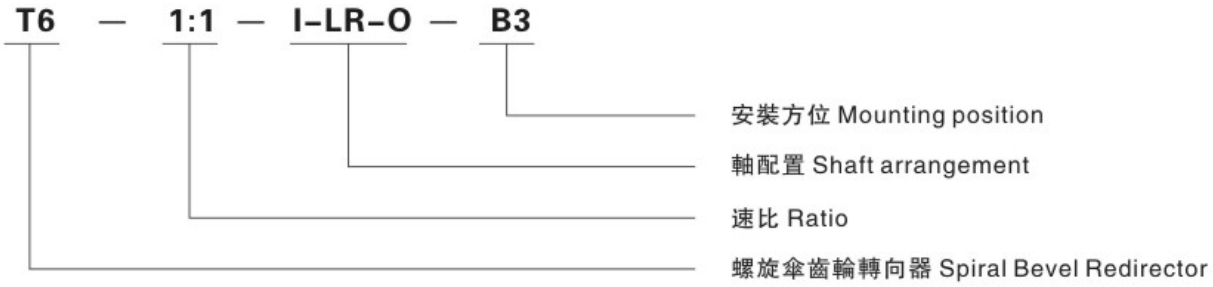
1 橫軸 One single–extendable shaft		2 橫軸 2 single–extendable shafts	
2軸 2–extended shaft	3軸 3–extended shaft	3軸 3–extended shaft	4軸 4–extended shaft
			

說明：當輸入軸旋轉方向改變，輸出軸相應改變。 Specification: Direction of rotation of output shaft varies with that of input shaft.

5. 選定輸入軸時應注意轉速關系 (1:1傳動比時無關系)
Please pay attention to speed relationship when selecting input shaft (there is nothing in case of ratio of 1:1)

減速 Reducing	增速 Increasing
 當横軸輸入100r/min時 縱軸輸出50r/min Out put speed is 50rpm when input speed is 100rpm	 当纵轴输入100r/min时 横轴输出200r/min Out put speed is 200rpm when input speed is 100rpm

6. 型號表示方法 Expressed method of Model



7. 重量表 Weight Table

型號Type	T2	T4	T6	T7	T8	T10	T12	T16	T20	T25
m(kg)	2	10	21	32	49	78	124	188	297	488

8. 轉向器Fr (N)表 Redirector Fr(N) Table

i N	n1 (r/min)	T2		T4		T6		T7		T8		T10		T12		T16		T20		T25	
		横軸	縦軸	横軸	縦軸	横軸	縦軸	横軸	縦軸	横軸	縦軸	横軸	縦軸	横軸	縦軸	横軸	縦軸	横軸	縦軸	横軸	縦軸
1:1	1450	265	216	833	951	1911	2450	2450	3136	3234	3381	4165	4508	5096	5586	10633	10976				
	1150	323	235	882	1029	2058	2597	2744	3234	3479	3626	4459	4851	5488	6076	11368	11760	15386	15608		
	870	402	255	960	1127	2205	2842	2989	3381	3773	3969	4851	5292	5880	6566	12446	12740	16660	17150	24794	25480
	580	549	314	1078	1323	2499	3185	3381	3822	4263	4459	5488	5880	6713	7301	14014	14504	18816	19404	28028	28910
	400	637	353	1372	1715	3185	3528	4018	4900	4851	5978	6272	7056	7742	8134	15680	16170	21070	21756	31360	32340
	300	696	392	1519	1960	3430	3528	4410	5537	5243	6958	6713	7987	8232	9065	17150	17640	23422	24108	34300	35280
	200	784	441	1911	1960	3430	3528	5096	6272	7889	8820	8575	9604	9261	10290	19600	19894	25970	26754	38612	39788
	100	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11368	12593	22540	22540	28420	32928	39200	49000
	10	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000
1.5:1 2:1 2.5:1 3:1	1450			1078	1960	2548	2842	3430	5390	4361	7987	5194	9212	5978	10486	5978	12152	7693	14602		
	1150			1078	1960	3038	3087	4067	5978	5096	8820	6174	10486	7252	12152	6419	13083	8771	17934	12985	24647
	870			1078	1960	3430	3332	4753	6076	6076	8820	7448	11760	8869	14504	6958	14210	9506	19453	13573	29400
	580			1078	1960	3430	3528	5096	6174	7644	8820	9555	11760	11466	14504	7840	16072	10780	22001	15680	33222
	400			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	8820	17934	12005	24598	17542	37142
	300			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	9604	19600	13132	27342	19159	40474
	200			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	10829	22148	14798	30282	21658	45766
	100			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	13328	22540	18228	33320	26656	49000
	10			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000

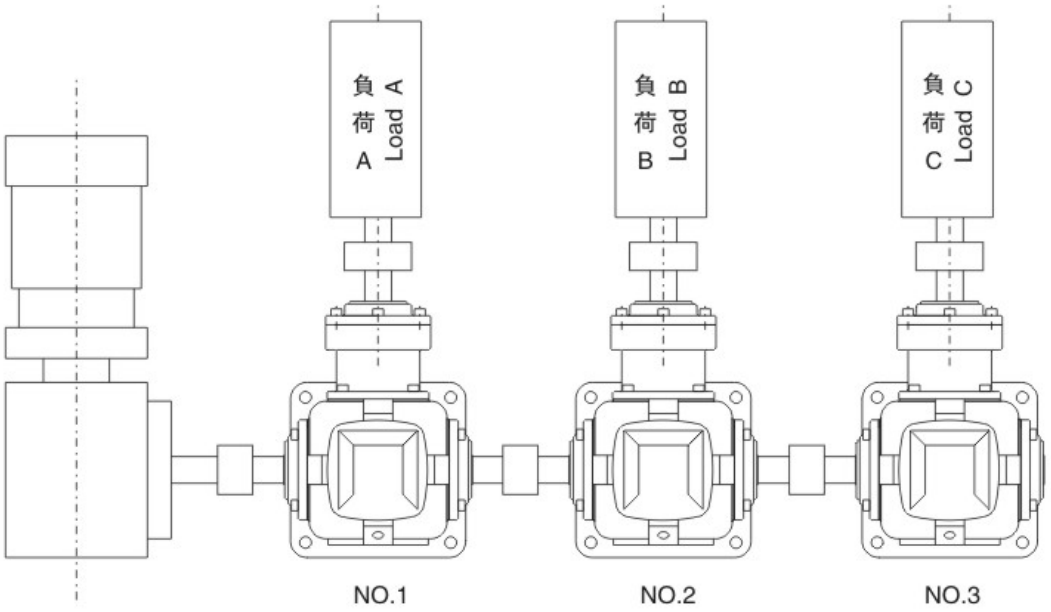
備注：各規格更低的輸出轉速按以上最大的Fr值。
Notes：If there is lower output speed,please choose the maximum Fr in above table.

9. 被驅動設備系數f1 Service Factor f1

負荷性質 Load characteristic	每天使用時間（小時） Operating time/day (hour)		
	≤2	2~10	10~24
均匀負載Uniform	1.00(1.00)	1.00(1.25)	1.25(1.50)
一般衝擊Moderate	1.00(1.25)	1.25(1.50)	1.50(1.75)
强烈衝擊Heavy	1.25(1.50)	1.50(1.75)	1.75(2.00)

備注：當每個小時起動、停止次数在10次以上，請使用括號内数值。
Note：Please use these data inside the bracket when number of starts and stops/hour is greater than ten times.

10. 選型舉例 Selection for Example



3臺負載全部爲196N.m，一般衝擊，每天連續工作8小時，即使用系數fs=1.25，斜齒輪輸入軸轉速300r/min，速比全部爲1:1。

根據公式：

每臺轉向器本身所需的負載MN2≥M2Xfs=196X1.25=245N.m

※1號轉向器　因1號轉向器本身的負載爲245N.m，而2號、3號轉向器需通過1號齒輪箱體傳遞扭矩。所以1號轉向器應承擔的負載爲：245N.m+245N.m+245N.m=735N.m，依據傳動能力表，應選T12。

※2號轉向器　除本身的負載245N.m，還需傳遞3號轉向器的扭矩。所以總負載應爲245N.m+245N.m=490N.m，依據傳動能力表，應選T10。

※3號轉向器　由于僅一個負載C進行運轉，即所需負載在245N.m以上即可，依據傳動能力表可選T8。

Torque values of three gear reducer are 196Nm, uniform, operate continuous for 8 hour per day, that is, useful factor fs=1.25, input speed of 300 rpm, ratio of 1:1.

Calculate according to formula:

Required torque of any of gearbox MN2 is equal to 245N.m or larger.

No.1 gear reducer　No.1 gear reducer carry torque 245N.m, but No.2 and No.3 gear reducer need transfer torque through No.1, Consequently No.1 gear reducer should carry torque 735N.m (245N.m+245N.m+245N.m), select T12. according to transmission capacity table.

No.2 gear reducer　No.3 gear reducer still transfers torque of No.3 gear reducer besides torque of 245N.m, so, the total torque is 490N.m(245N.m+245N.m), select T10 according to transmission capacity table.

No.3 gear reducer　Required torque is more than 245N.m because of only load C according to transmission capacity Table select T8.

11. 傳動能力表 Transmission Capacity Table

i	N1 (r/min)	T2		T4		T6		T7		T8	
		T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)
1:1	1450	11.6	1.79	31.9	4.94	96.0	14.9	142	22.0	294	45.6
	1150	11.7	1.43	34.1	4.19	103	12.7	150	18.4	305	37.5
	870	12.1	1.12	37.2	3.46	113	10.5	164	15.2	312	29.0
	580	12.1	0.747	39.5	2.45	119	7.35	184	11.4	319	19.8
	400	12.3	0.524	40.2	1.72	122	5.20	195	8.34	326	14.0
	300	12.3	0.396	40.5	1.30	123	3.93	198	6.35	331	10.6
	200	12.4	0.226	41.2	0.880	124	2.66	201	4.30	338	7.23
	100	12.7	0.136	41.9	0.448	127	1.36	206	2.20	346	3.70
	10	13.0	0.014	43.0	0.046	132	0.141	214	0.228	361	0.386
1.5:1	1450					117	12.1	145	15.0	185	19.1
	1150					122	9.96	147	12.0	188	15.4
	870					123	7.66	150	9.30	191	11.8
	580					126	5.23	153	6.32	197	8.14
	400					128	3.66	155	4.41	200	5.70
	300					129	2.77	157	3.35	203	4.34
	200					131	1.87	160	2.28	204	2.91
	100					134	0.957	163	1.16	210	1.49
	10					139	0.099	169	0.12	218	0.155
2:1	1450	12.1	0.94	42.8	3.32	102	7.90	137	10.6	180	14.0
	1150	12	0.74	43.4	2.67	104	6.39	139	8.55	183	11.3
	870	12	0.56	43.8	2.04	105	4.88	141	6.56	187	8.70
	580	11.9	0.37	44.4	1.38	108	3.34	144	4.47	191	5.92
	400	12.2	0.26	45.1	0.96	109	2.33	146	3.12	194	4.15
	300	11.9	0.19	45.5	0.73	110	1.76	148	2.37	196	3.14
	200	12.2	0.13	46.1	0.49	111	1.18	149	1.59	198	2.12
	100	11.2	0.06	46.6	0.25	114	0.608	152	0.812	202	1.08
	10	28.1	0.015	48.5	0.026	116	0.062	157	0.084	209	0.112
2.5:1	1450					96.2	5.97	113	6.99	184	11.4
	1150					97.2	4.78	115	5.64	185	9.11
	870					99.0	3.68	116	4.30	188	7.00
	580					100.0	2.48	118	2.92	192	4.76
	400					100.9	1.73	120	2.05	195	3.34
	300					102.9	1.32	121	1.55	197	2.53
	200					103.9	0.888	123	1.05	200	1.71
	100					104.9	0.448	123	0.528	203	0.867
	10					107.8	0.046	126	0.054	208	0.089
3:1	1450					93.6	4.84	105	5.42	159	8.20
	1150					94.8	3.88	106	4.34	160	6.55
	870					95.9	2.97	108	3.34	163	5.04
	580					97.6	2.02	109	2.25	166	3.42
	400					99.0	1.41	111	1.58	168	2.39
	300					100	1.07	111	1.18	169	1.80
	200					100	0.712	113	0.803	171	1.22
	100					102	0.363	115	0.409	173	0.618
	10					104	0.037	118	0.042	179	0.064
4:1	1450					80.6	3.12	93.4	3.62	124	4.80
	1150					81.5	2.50	94.3	2.90	125	3.83
	870					82.4	1.92	95.9	2.23	127	2.95
	580					84.1	1.30	96.9	1.50	129	2.00
	400					85.1	0.91	98.7	1.05	131	1.40
	300					86.1	0.69	98.3	0.79	131	1.05
	200					86.0	0.46	101	0.54	134	0.71
	100					87.7	0.23	101	0.27	135	0.36
	10					89.3	0.02	101	0.03	140	0.04
5:1	1450					52.0	1.61	57.4	1.78	68.7	2.13
	1150					52.5	1.29	58.0	1.43	69.2	1.70
	870					53.2	0.99	59.0	1.10	70.4	1.31
	580					54.2	0.67	59.6	0.74	71.7	0.89
	400					54.9	0.47	60.7	0.52	72.6	0.62
	300					55.5	0.36	60.4	0.39	72.9	0.47
	200					55.4	0.24	61.7	0.26	74.1	0.32
	100					56.5	0.12	62.9	0.13	75.1	0.16
	10					57.6	0.01	64.5	0.01	77.8	0.02

1、橫軸轉速未達到10r/min時，請使用10r/min的數據。
2、▭ 以上有灰色標識的規格定貨時必須咨詢，橫軸輸入轉速超過1450r/min時，向本公司咨詢。

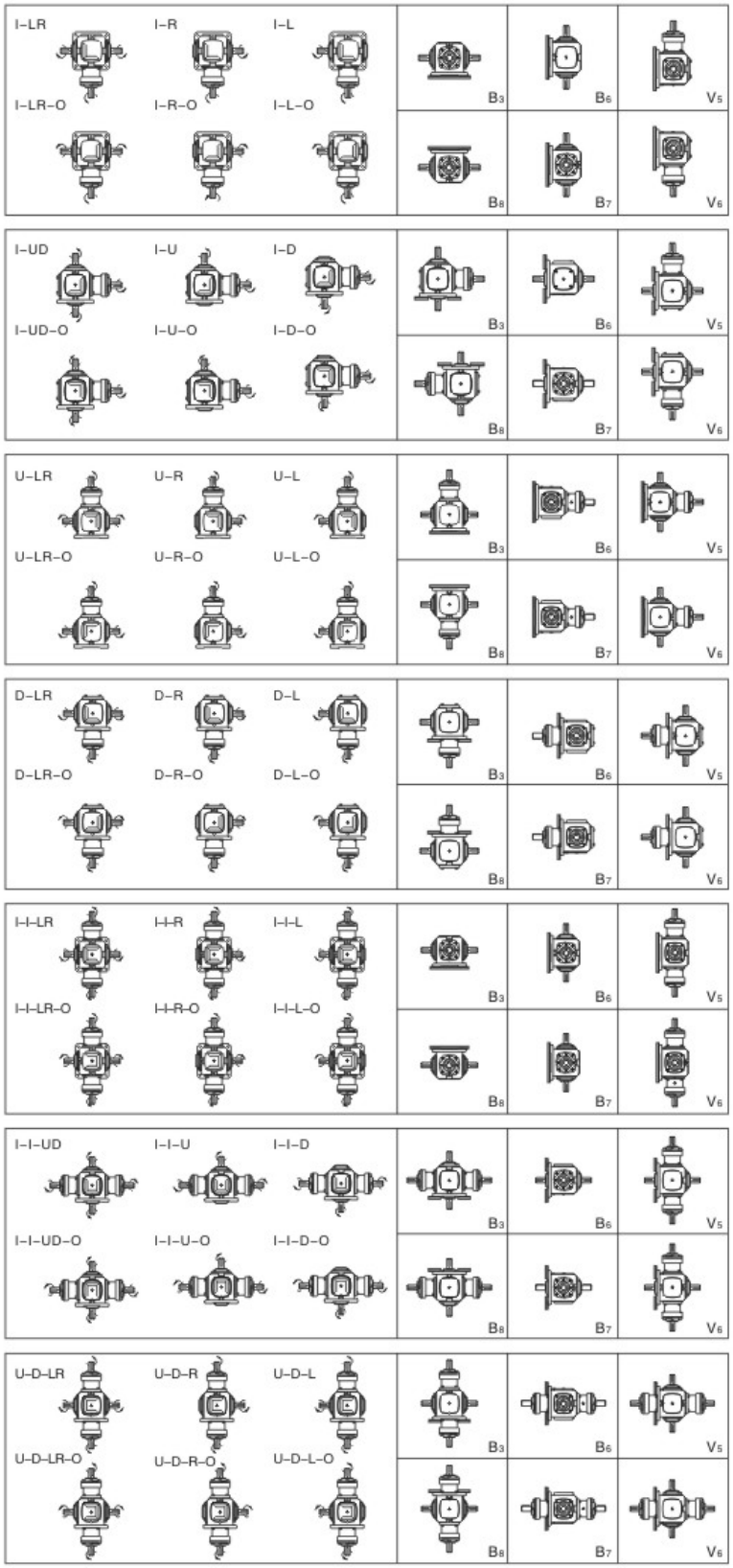
i	N1 (r/min)	T10		T12		T16		T20		T25	
		T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)	T2N(N·m)	P1N(kw)
1:1	1450	421	65.3	619	96.0	1019	163				
	1150	453	55.7	665	81.1	1098	139	1842	234		
	870	479	44.6	726	67.5	1186	114	2009	193	3489	335
	580	493	30.6	802	49.7	1343	85.9	2274	145	3940	252
	400	504	21.5	821	35.1	1499	66.1	2538	112	4410	195
	300	513	16.4	835	26.8	1637	54.1	2744	90.8	4792	159
	200	521	11.1	852	18.2	1784	39.3	3126	69.0	5390	119
	100	535	5.72	875	9.36	1842	20.3	3205	35.3	5439	60.0
	10	561	0.599	919	0.983	1940	2.14	3205	3.53	5713	6.30
1.5:1	1450	374	38.7	564	58.3						
	1150	380	31.2	601	49.2						
	870	389	24.1	656	40.7						
	580	396	16.4	699	28.9						
	400	406	11.6	711	20.3						
	300	411	8.78	724	15.5						
	200	417	5.95	736	10.5						
	100	426	3.04	754	5.37						
	10	443	0.316	785	0.56						
2:1	1450	305	23.6	516	40.0	921	73.7	1578	126		
	1150	309	19.0	516	31.7	938	59.5	1607	102	3146	199
	870	315	14.6	516	24.0	958	46.0	1646	79.0	3224	155
	580	322	10.0	524	16.3	980	31.3	1695	54.2	3332	107
	400	328	7.02	538	11.5	1000	22.0	1725	38.0	3420	75.4
	300	332	5.33	543	8.71	1009	16.7	1754	29.0	3479	57.5
	200	338	3.61	551	5.89	1029	11.3	1784	19.7	3557	39.2
	100	344	1.84	563	3.01	1058	5.84	1833	10.1	3646	20.1
	10	357	0.191	586	0.313	1098	0.605	1921	1.06	3822	2.11
2.5:1	1450	293	18.2	507	31.4						
	1150	298	14.7	514	25.3						
	870	302	11.2	523	19.5						
	580	310	7.68	535	13.3						
	400	315	5.38	545	9.32						
	300	317	4.06	552	7.08						
	200	321	2.75	560	4.79						
	100	326	1.40	568	2.43						
	10	336	0.144	588	0.251						
3:1	1450	270	14.0	458	23.6	904	48.2	1529	82.3	2935	158
	1150	275	11.3	464	19.0	920	38.9	1561	66.6	3045	130
	870	279	8.66	469	14.6	940	30.1	1598	51.6	3135	101
	580	285	5.89	480	9.92	960	20.4	1644	35.4	3246	69.9
	400	288	4.11	490	6.98	978	14.4	1672	24.8	3317	49.3
	300	291	3.11	495	5.29	990	10.9	1701	18.9	3372	37.6
	200	294	2.10	501	3.57	1005	7.38	1733	12.9	3449	25.6
	100	300	1.07	510	1.82	1038	3.82	1777	6.60	3537	13.1
	10	308	0.110	527	0.188	1076	0.40	1865	0.69	3713	1.4
4:1	1450	241	9.35	434	16.8	850	34.3	1452	58.7	2798	113
	1150	246	7.54	441	13.5	865	27.7	1483	47.5	2892	92.6
	870	249	5.78	448	10.4	884	21.4	1518	36.8	2978	72.2
	580	254	3.93	456	7.07	902	14.6	1562	25.2	3084	49.8
	400	257	2.74	465	4.97	919	10.2	1588	17.7	3151	35.1
	300	259	2.08	470	3.77	930	7.8	1616	13.5	3204	26.8
	200	262	1.40	476	2.54	944	5.3	1646	9.17	3276	18.2
	100	267	0.71	485	1.30	976	2.7	1688	4.70	3360	9.36
	10	275	0.07	501	0.13	1011	0.3	1772	0.49	3527	0.98
5:1	1450	136	4.21	296	9.18	814	26.3	1391	44.9	2631	85.0
	1150	138	3.39	301	7.39	828	21.2	1420	36.4	2771	71.0
	870	140	2.60	305	5.68	847	16.4	1454	28.2	2853	55.3
	580	143	1.77	311	3.86	864	11.2	1496	19.3	2954	38.2
	400	144	1.23	318	2.72	881	7.85	1521	13.6	3018	26.9
	300	146	0.93	321	2.06	891	5.96	1548	10.3	3069	20.5
	200	148	0.63	325	1.39	905	4.03	1577	7.03	3138	14.0
	100	150	0.32	331	0.71	935	2.08	1617	3.60	3218	7.17
	10	155	0.03	342	0.07	969	0.22	1697	0.38	3378	0.75

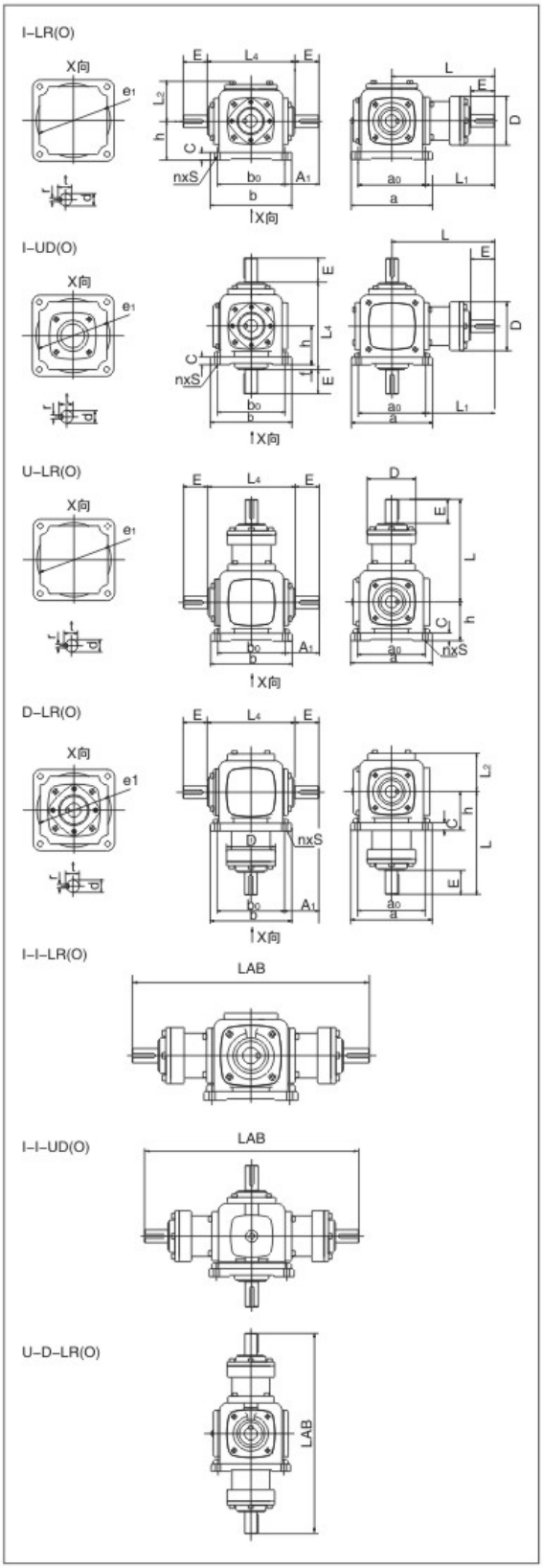
1、If speed is less than 10rpm,please choose 10rpm.
2、▭ Plese contact us, when order the model with ash sign or that input speed is more than 1450rpm

12. 軸配置及軸旋轉方向的關系、安裝方位及尺寸圖表

The relationship between shaft arrangements and direction of shaft rotation, Mounting position and dimension sheets

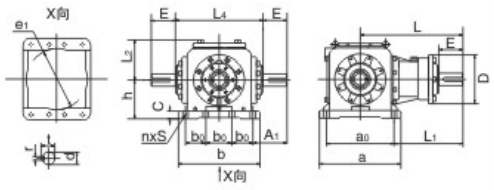
T2–T16



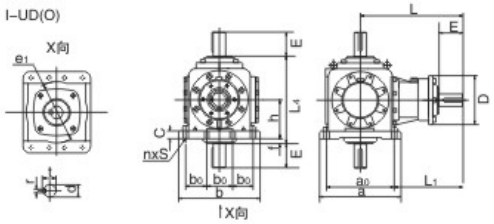


T20–T25

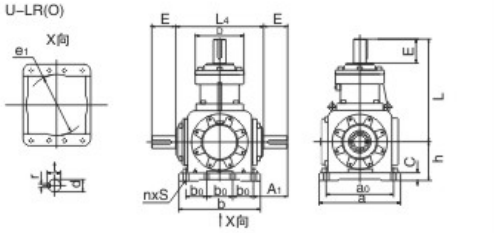
I–LR(O)



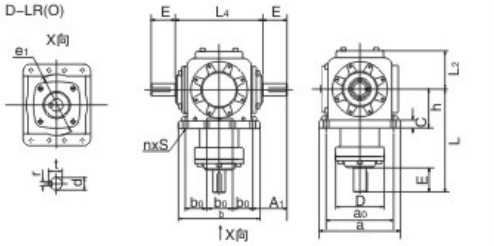
I–UD(O)



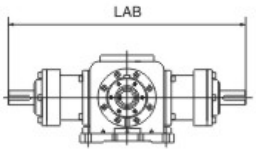
U–LR(O)



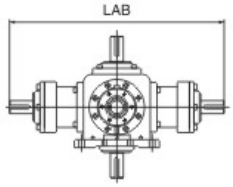
D–LR(O)



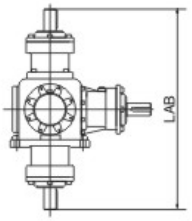
I–I–LR(O)



I–I–UD(O)



U–D–LR(O)



	T2	T4	T6	T7	T8	T10	T12	T16	T20	T25
A1	48	53.5	81	88	110.5	120	130	150	195	235
a	100	155	190	210	235	285	340	390	490	580
a0	84	125	152	174	195	240	290	330	430	520
b	100	155	190	210	235	285	340	390	410	480
b0	84	125	152	174	195	240	290	330	110	130
C	10	17	17	20	23	25	32	40	32	35
D	58	76	115	125	159	155	168	193	220	270
d(h7)	15	19	25	32	40	45	50	60	72	85
E	33	38	50	62	75	90	100	105	105	130
e1(h8)x深	94x3	155x5	190x5	220x5	250x5	305x5	370x5	420x7	360x10	430x10
f	5	2	17	13	18	10	0	10	10	10
h	52	76	90	100	115	140	175	200	245	290
L	124	180	222	265	308	360	415	455	545	660
L1	82	117.5	146	178	210.5	240	270	290	330	400
L2	52	76	87	97	114.5	133	160	186	217	255
L4	114	156	214	226	266	300	350	420	510	600
LAB	248	360	444	530	616	720	830	910	1090	1324
n	4	4	4	4	4	4	4	4	8	8
r	5	6	8	10	12	14	14	18	20	22
s	9	10.5	14	14	14	16	21	25	21	24
t	17	21.5	28	35	43	48.5	53.5	64	76.5	90

注意：當速比是4:1和5:1時，縱軸尺寸不變，橫軸尺寸更改如下:
Note: When ratio is 4:1 and 5:1, dimenssion of output shaft is changeless, but that of input is changed as follows:

		T6	T7	T8	T10	T12	T16	T20	T25
4:1	d(h7)	19	22	28	32	36	50	55	70
	E	38	50	62	62	75	100	105	105
	L	210	253	295	332	390	450	545	637
	L_1	134	178	212.5	242	270	300	345	400
	L_{AB}	420	566	590	664	780	900	1090	1274
	r	6	6	8	10	10	14	16	20
	t	21.5	24.5	31	35	39	53.5	59	74.5
5:1	d(h7)	19	22	28	32	36	42	50	60
	E	38	50	62	62	75	90	100	105
	L	210	253	295	332	390	440	540	637
	L_1	134	178	212.5	242	270	300	340	410
	L_{AB}	420	566	590	664	780	880	1080	1262
	r	6	6	8	10	10	12	14	18
	t	21.5	24.5	31	35	39	45	53.5	64