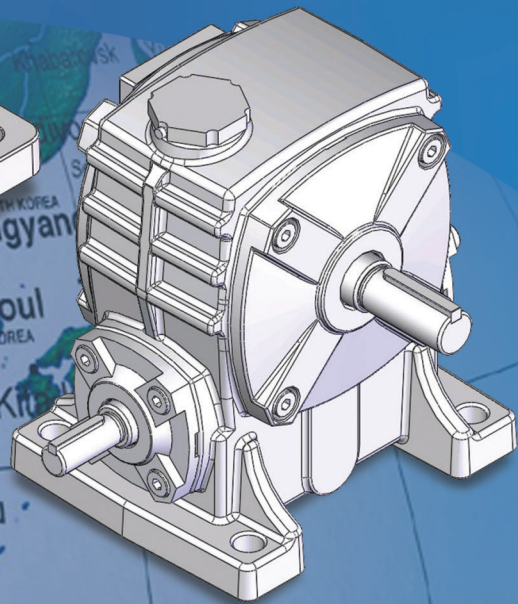
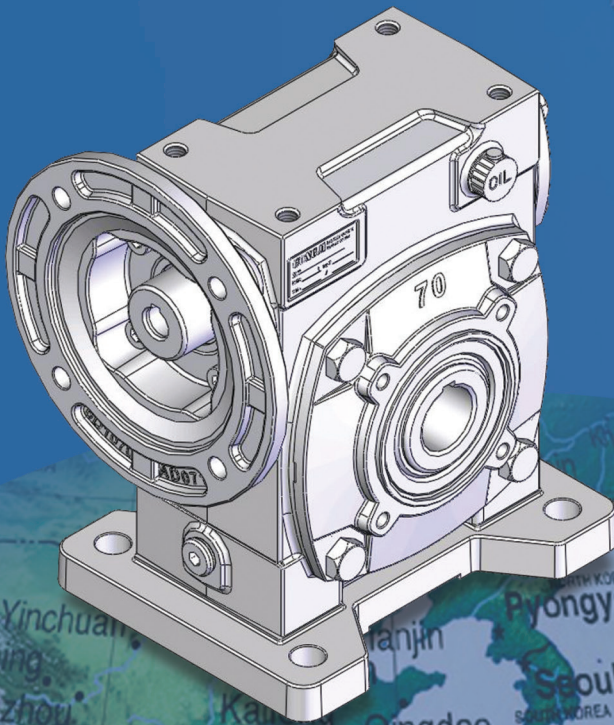


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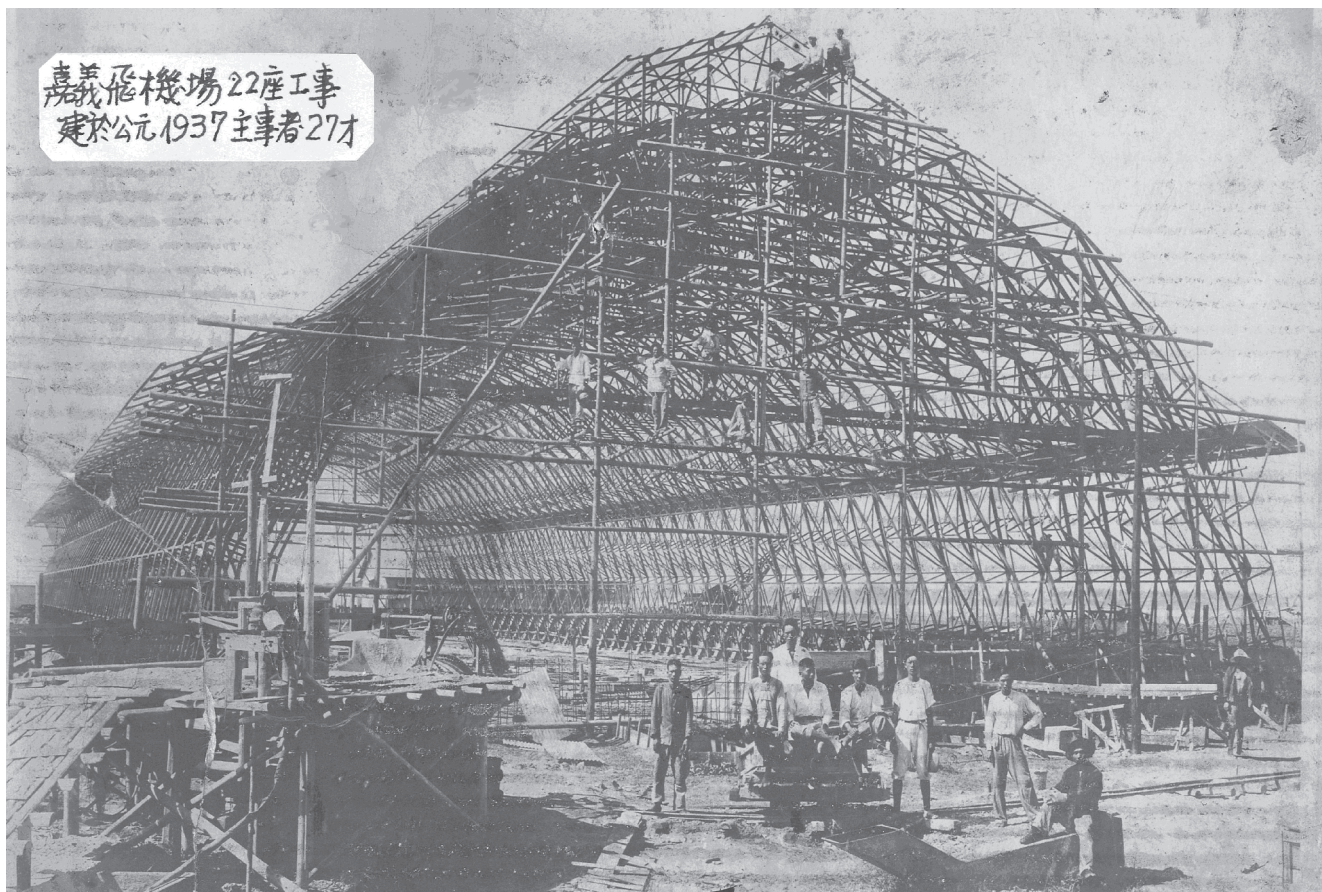
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GEAR
SPEED
REDUCER**

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歷史的軌跡

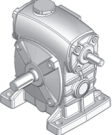
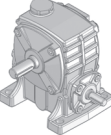
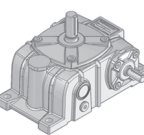
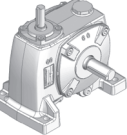
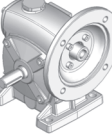
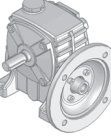
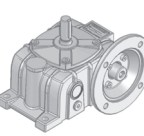
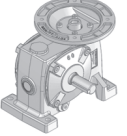
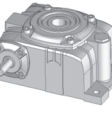
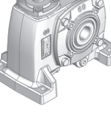
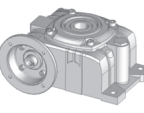
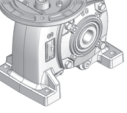
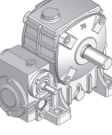
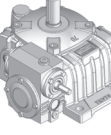
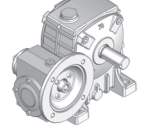
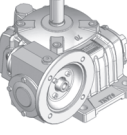
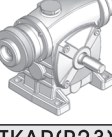
(一) 嘉義機場機棚工程



(二) 水泥輸送機製造



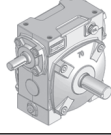
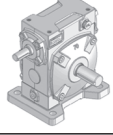
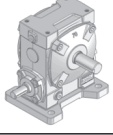
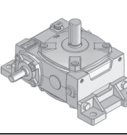
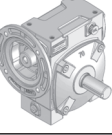
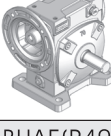
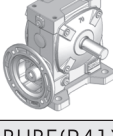
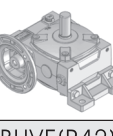
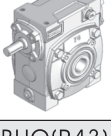
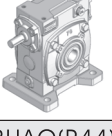
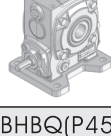
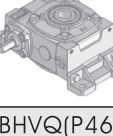


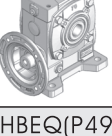
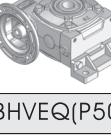


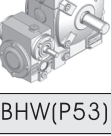
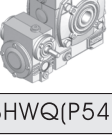
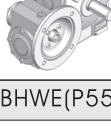

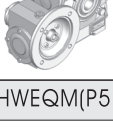

TK/BH 型蝸輪減速機目錄

			
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TKVQ(P15)	TKJQ(P16)	TKVEQ(P17)	TKJEQ(P18)
			
TKBW(P19)	TKVW(P20)	TKBWE(P21)	TKVWE(P22)
			
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BHWE(P55)	BHWEQ(P56)	BHWEQM(P57)	BHWEQF(P58)	

為提供符合各產業傳動的需求,本公司不斷投入大量研發工程師及機械設備,得以研發改良蝸輪減速機以良好的材質加上的熱處理及精細研磨加工而成,能達到最佳圓滑的運轉功能,其外型美觀,高效率,體型小,重量輕,低噪音,壽命長,不易逆轉,等優點,故所製造的蝸輪減速機不論內銷或外銷皆能符合國際水準,相信搭配貴公司機械能做到最大的貢獻。

In order to meet the needs of various industrial applications, Gong Ji has developed a series of worm gear reducers that matched international standards. With quality raw materials, experienced heat treatment as well as state of the art CNC precision grinding of the teeth of worm shafts, we can ensure smooth and efficient turning as well as long service life. Very quiet and compact. Light weight and elegant appearance. We trust it can contribute a lot to your operations.

(A) 重要組件說明

本體:採用一體鑄造成型,有極高的剛性,可承受強大的衝擊力,外部美觀且附散熱片設計,具較佳的散熱效果,內部採自動潤滑油導流槽設計,能充份達到潤滑蝸桿蝸輪及軸承的目的,80型以下採用FC20材質,100型以上採用FC23材質。

蝸桿:採用中碳鋼S45C經高週波熱處理淬火硬化,齒面硬度達HRC45°,再經精密CNC蝸桿磨床精細研磨,品質穩定,精度高,牙面研磨粗度達Ra0.8,有極高的韌性,亦或採用SCM21鉻鉬鋼材質,經滲碳硬化熱處理至RC60°,可大幅增加耐磨性,使用壽命更長。

蝸輪:採用鋁青銅ALBC2材質,再以專用滾齒刀具及精密CNC滾齒機滾製而成,可承受強大衝擊力。

軸承:採用高剛性滾珠軸承及圓錐滾柱軸承,對軸向及徑向的負載,均能充分的發揮。

潤滑油:採用礦物性齒輪潤滑油,可提高傳動效率,延長使用壽命及降低運轉溫度,出廠時所有減速機皆已裝入齒輪潤滑油,亦可視需要選用合成機油(選配件)。

Parts details

Housing : Great rigidity for capable of sustaining severe impacts was obtained by one time casting. Good-looking appearance equipped with cooling fins, which combined with quality lubricating oil, allows good heat dissipation. Material FC20 is used for type 80 and under. Material FC23 is used for type 100 and up.

Bearings : Applying high rigidity ball bearings and tapered roller bearings enable the unit to sustain both horizontal and vertical (lateral and axial) loads to the highest degree.

Worm shaft : The worm shaft is made by one solid piece of carbon alloyed steel. The worm teeth are cut before induction hardening or carbonized to HRC45° or HRC60°. After heat treatment, the worm teeth are ground by state of the art precision CNC grinder to ensure maximum contact with the worm wheel and to increase load-carrying capacity, both in impact and continuous modes.

Worm wheel : Worm wheel are made by special high strength bronze alloy(ALBC2). The teeth are cut by precision CNC hobbing machines.They are designed to sustain high impact.

(B) 機型選定要件

如欲正確地選擇蝸輪減速機,請參照以下說明:

1. 入力軸回轉速:以聯軸器直結或皮帶輪等傳動時,最高入力轉數為2000 rpm,而600~1800 rpm較適合一般性場合使用。
2. 出力軸回轉速:可依入力回轉速及減速比計算出,出力軸回轉數 = 入力軸回轉數 × 減速比,如入力回轉速特別低時,其效率及扭力均會降低且軸承給油潤滑亦較為困難,需特別注意選擇型號與潤滑油並請直接與本廠業務部聯絡。

How to choose

To choose the right "GONG JI" worm gear speed reducers, please check the following parameters:

1. Input shaft rpm : when driven with shaft coupling or belt, the maximum rpm may be up to 2000. However, rpm from 600-1800 is recommended.
2. Output shaft rpm : it can be calculated by the rpm of the input shaft and the speed reduction ratio. rpm of output shaft = rpm of input shaft × speed reduction ratio Special attention should be given when very low speed is required due to lower efficiency and torque. It is also more difficult for the gear to be properly lubricated. Please contact the manufacturer to choose the right model as well as the right lubrication oil.

(C) 標準生產減速比 Standard Reduction Ratio

1. 單段蝸輪 : 1/5, 1/10, 1/15, 1/20, 1/30, 1/40, 1/50, 1/60.
2. 雙段蝸輪 : 1/100, 1/200, 1/300, 1/400, 1/500, 1/600, 1/800, 1/900.

如有需求特殊減速比時,請與本公司業務部聯絡.

TG'S standard ratio for worm gear reducer.

Single reduction : 1/5, 1/10, 1/15, 1/20, 1/30, 1/40, 1/50, 1/60.

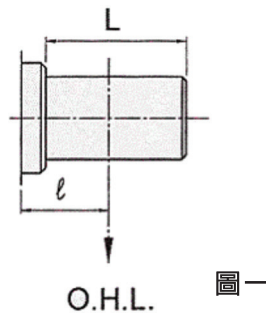
Double reduction (Worm/Worm) : 1/100, 1/200, 1/300, 1/400, 1/500, 1/600, 1/800, 1/900.

Please contact TG's sales department for special ratio requirement .

(D) 懸垂荷重 Over Hung Load.

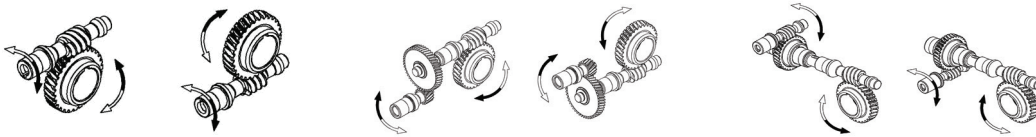
減速機的出力軸彎曲與外殼破裂均與懸垂荷重有關,因此要選定減速機時,必須考慮懸垂荷重容許值依據出力軸L/2處尺寸為計算荷重.(參特性表)

All output shaft bending and housing broken are related with overhung loads . Overhung loads were calculated by middle position of output shaft . (Ref performance above table)



(E) 蝸桿及蝸輪傳動方向Transmission direction of worm set and gear set .

1. 單段蝸輪方向Single reduction
2. 齒輪/蝸輪方向Gear/Worm
3. 雙段蝸輪方向Worm/Worm



說明 : 1. 本公司設計蝸輪及蝸桿皆以右牙為主. Standard design for right hand thread worm set .

2. 若需左牙蝸輪及蝸桿,請洽本公司業務部.

Left hand thread worm set need to contact with sales department .

(F) 潤滑油選定 Lubricant

最初使用300小時後,需更換新潤滑油,其後每2500小時換油一次.採用適當的潤滑油,能充分提供蝸輪與蝸桿表面傳動所需的潤滑性,於高負荷或衝擊負荷時,亦能確保高效率及壽命運轉.

以下為減速機潤滑油之選定表.

Please replacement lubricant After first 300 hrs. operation and do the same for every 2500 hrs. Proper lubricant can sufficient support worm set contact surface lubrication. Ensure longlife running and better efficiency for heavy duty and impact application .

荷重Load	周圍溫度Ambient Temp	中國石油	SHELL OIL	MOBIL OIL	ESSO OIL
普通荷重 Normal load	-20°C ~ 10°C	HD-150	Omala oil R150	Mobil gear 629	Spartan EP 150
	-0°C ~ 25°C	HD-220	Omala oil R220	Mobil gear 630	Spartan EP 220
	10°C ~ 40°C	HD-320	Omala oil R320	Mobil gear 632	Spartan EP 320
	40°C ~ 65°C	HD-460	Omala oil R460	Mobil gear 634	Spartan EP 460
重荷重 Heavy load	-0°C ~ 25°C	HD-320	Omala oil R320	Mobil gear 632	Spartan EP 320
	10°C ~ 40°C	HD-460	Omala oil R460	Mobil gear 634	Spartan EP 460
	40°C ~ 65°C	HD-680	Omala oil R680	Mobil gear 636	Spartan EP 680

在高速,高溫,低速,重荷重及強制潤滑等特殊使用場合時,請與本公司業務部聯絡.

Please contact for sales department for special application . Example : high speed,high temperature,low Speed or heavy load.Please contact TG's sales department for Special lubricant requirement .

(G) 蝸輪組件自鎖功能 Irreversibility for worm set

並非所有蝸輪減速機都有自鎖功能,需依照蝸輪減速機不同的螺旋角度,摩擦角,傳動效率,滑動速度及牙面研磨精度...等因素影響,導致蝸輪組件產生不同程度的自鎖功能.

It's not Irreversibility for all worm reducers , irreversibility function according to different factors as : helix angle , friction angle , efficiency , sliding speed , grinding surfac...etc .

螺旋角度 Helix angle	適用減速比 Ratio	備註 Remark
1° ~ 3°	1/60~1/100	幾乎可完全自鎖Almost non-reversing
3° ~ 8°	1/30 ~ 1/50	依負載及震動情況會些許移動 Return in case of loads or vibration
8° ~ 12°	1/15 ~ 1/25	依負載及震動情況會快速移動 Quick return in case of loads or vibration
12° ~ 25°	1/5 ~ 1/20	完全無自鎖功能Quick return

*以上自鎖功能資料僅供參考,為確實達到停止需求時,請務必加裝剎車器為佳.

For safety reason and precision stopped . Please be assemble brake unit onto your motor .

(H) 計算公式 Formular

計算公式Formular	符號說明Symbol	
$HP1 = HP2 \times Fs / \eta$	HP1 = 入力馬力Input HP (HP1)	η = 傳動效率Efficiency (%)
$HP2 = T2 \times N2 / 716.2$	HP2 = 出力馬力Output HP (HP2)	Fs = 安全(荷重)係數Safety factor
$KW2 = T2 \times N2 / 955$	KW2 = 出力馬力Output KW (KW2)	N2 = 出力軸轉速Output RPM
$l = N2 / 1800$	T2 = 輸出扭矩Output torque (Kgf-m)	V = 速度Speed (m/min)
$N2 = V / \pi D$	R = 半徑Radius (m)	l = 減速比Ratio
$T2 = W \times R$	D = 直徑Diameter (m)	μ = 磨擦係數Friction factor
$W = W1 \times \mu$	K = 連結係數Connecting factor	W1 = 物件重量Weight (Kg)
$(Kgf-m) \times 9.8 = (N-m)$	W = 承受力量Weight (Kgf)	daN-m = 達因牛頓-米 Dyna-Newton-meter
$(daN-m) \times 10 = (N-m)$	N-m = 牛頓-米Newton-meter	1Kgf-m = 7.233FT-LB
$\eta = (HP2 / HP1) \times 100\%$	1KW = 1000W = 1.34HP	1Kgf-m = 86.8IN-LBS

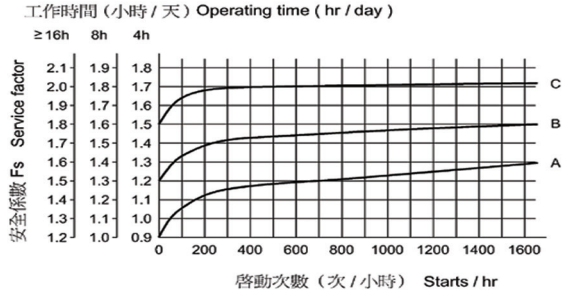
*傳動效率:蝸輪減速機效率是依照齒面角,周節,速度,潤滑方式及周圍溫度決定.

Efficiency : Reducer's efficiency are decided by worm set helix angle, pitch diameter, speed, lubricant And ambience temperature .

(J) 安全(荷重)係數 Safety (Load) factors

運轉衝擊負荷 Impact load grade	等級 Grade	每日運轉時數 Daily operation (Hrs)			
		0.5~1	2~7	8~10	11~24
平順運轉,無衝擊負載 Uniform running load,no shocks	A	0.80	0.90	1.00	1.25
變動運轉,部份衝擊負載 Various running load,medium shocks	B	0.90	1.00	1.25	1.50
運轉環境惡劣,重衝擊負載 Extremely tough application,heavy shocks	C	1.00	1.25	1.50	1.75

安全係數速選表 Service factor selection table



安全係數 $F_s=1.0$: 表示減速機在平順運轉及無衝擊負載使用條件下,每日連續運轉8小時及啓動不超過10次/小時,此減速機壽命可以達到10,000工作小時。

Safety factor $F_s=1.0$: Reducer's daily operation for 8 hrs under smoothly running and normal impact conditions . Max 10 Times/hour starts . Then the reducer can be reach to 10,000 hour's working life .

概略傳動效率表 Reference efficiency table

減速比 Ratio	概略傳動效率 Reference efficiency
1/5	90 %
1/10	85 %
1/20	85 %
1/30	80 %
1/40	70 %
1/50	66 %
1/60	63 %
1/80~1/100	52 %

連結係數 Connecting factor (k)

連結元件 Connecting parts	係數 Factor
鏈 輪 Sprocket	1.00
齒 輪 Gear	1.25
三角皮帶 V - Belt	1.50
平皮帶 Flat Belt	2.50

實際減速比 Actual ratio

機型 Type	減速比 Ratio	
	公稱 Normal	實際 Actual
100#	1/100	1/97
200#	1/10	1/9.5
250#	1/7.5	1/7.66
250#	1/10	1/10.5
300#	1/10	1/10.25

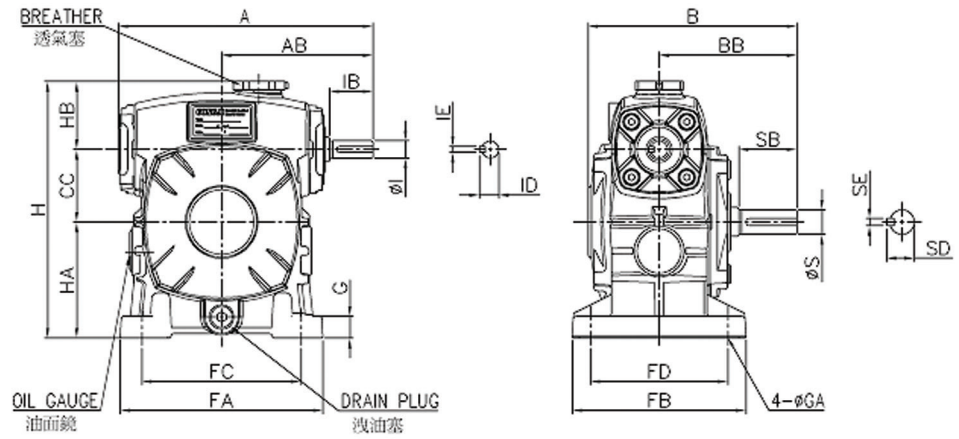
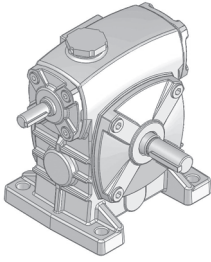
未列出減速比規格皆為正減速比. Only above size for decimal fraction ratio.

減速機安裝位置 Worm reducer assembly application

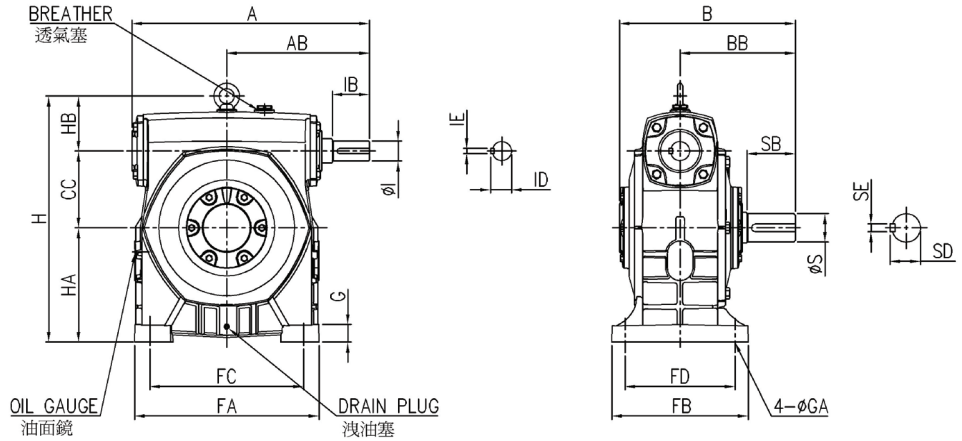
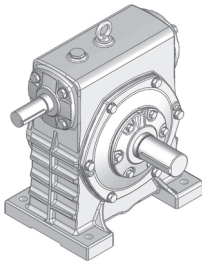
位置 Position	P1	P2	P3	P4	P5	P6
機型 Type						
TKA						
TKB						
TKV						

● 透氣塞 Breather plug ● 油面鏡 Oil gauge ● 洩油塞 Drain oil plug

TKA 50~135



TKA 155~175



尺寸表 Dimension

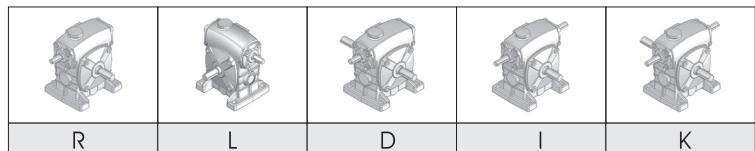
規格 Size	減速比 Ratio	A	AB	B	BB	CC	FA	FB	FC	FD	G	GA	H	HA	HB	實心入力軸 Solid Input Shaft				實心出力軸 Solid Output Shaft				油量 (l)	概重 (kg)
																l(h6)	IB	ID	IE	S(h6)	SB	SD	SE		
50	1:10	175	105	145	95	50	140	120	110	95	15	11	180	80	50	12	30	13.5	4	17	40	19	5	0.33	5.5
60		195	120	165	110	60	150	130	120	105	18	11	210	90	60	15	40	17	5	22	50	25	7	0.40	8.2
70	1:15	234	140	195	130	70	190	150	150	115	20	15	240	105	65	18	40	20	5	28	60	31	7	0.78	12.8
80	1:20	264	160	210	140	80	220	170	180	135	24	15	270	120	70	22	50	25	7	32	65	35	10	1.15	18.0
100	1:30	322	190	260	170	100	270	190	220	155	25	15	340	150	90	25	50	28	7	38	75	41	10	2.35	33.0
120	1:40	385	230	290	190	120	320	230	260	180	30	18	405	180	105	30	65	33	7	45	85	48	12	4.18	55.0
135	1:50	435	260	320	210	135	350	250	290	200	30	18	455	215	105	35	75	38	10	55	95	60	15	5.56	76.0
155	1:60	494	302	387	252	155	390	280	320	220	35	20	490	235	100	40	85	43	10	60	110	65	15	6.95	104
175		550	325	407	262	175	420	310	350	250	40	20	565	260	130	45	85	48	12	65	110	69	18	9.50	148

TKA 60 - 30 R

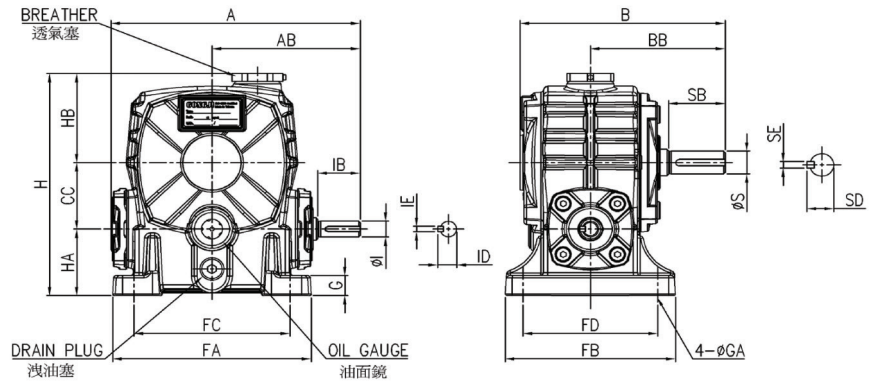
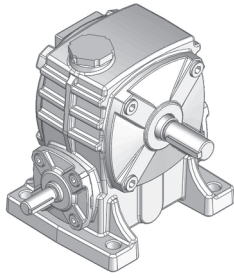
1 2 3 4

- 1.機型 Type 2.規格 Size
3.速比 Ratio 4.軸配置 S. L.

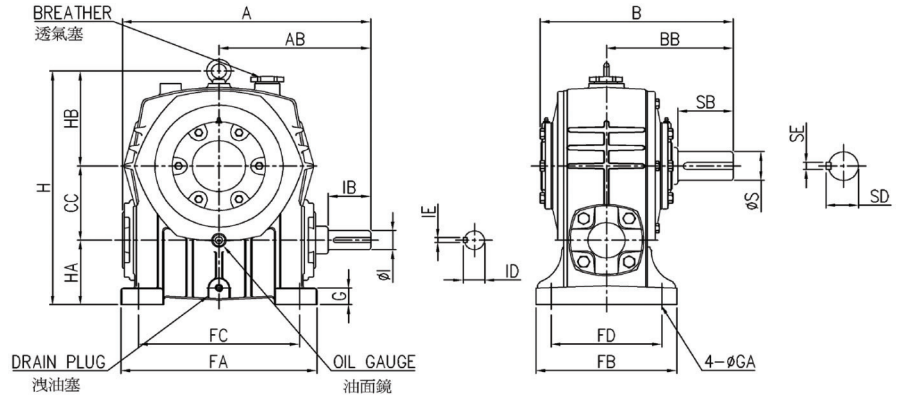
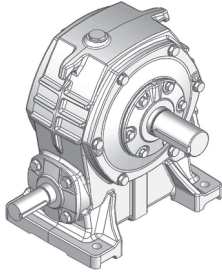
軸配置 Shaft Location



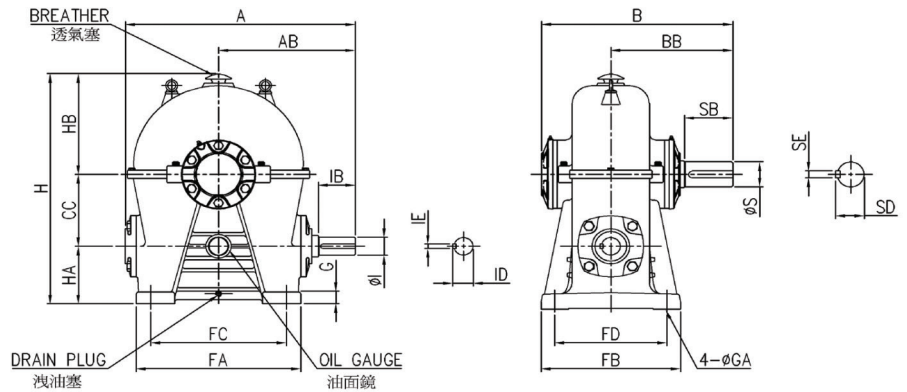
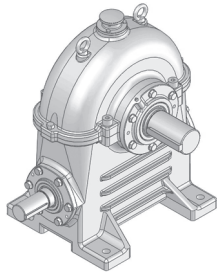
TKB 50~135



TKB 155~175



TKB 200~500



尺寸表 Dimension

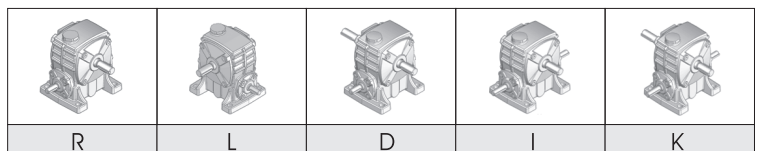
規格 Size	減速比 Ratio	A	AB	B	BB	CC	FA	FB	FC	FD	G	GA	H	HA	HB	實心入力軸 Solid Input Shaft				實心出力軸 Solid Output Shaft				油量 (l)	概重 (kg)
																I(h6)	IB	ID	IE	S(h6)	SB	SD	SE		
50	1:10	175	105	145	95	50	140	120	110	95	15	11	180	50	80	12	30	13.5	4	17	40	19	5	0.17	5.3
60		195	120	165	110	60	150	130	120	105	18	11	210	60	90	15	40	17	5	22	50	25	7	0.27	8.1
70		234	140	195	130	70	190	150	150	115	20	15	240	70	100	18	40	20	5	28	60	31	7	0.55	13.4
80		264	160	210	140	80	220	170	180	135	24	15	270	80	110	22	50	25	7	32	65	35	10	0.73	18.0
100		322	190	260	170	100	270	190	220	155	25	15	340	100	140	25	50	28	7	38	75	41	10	1.24	30.0
120	1:15	385	230	290	190	120	320	230	260	180	30	18	405	120	165	30	65	33	7	45	85	48	12	2.08	52.0
135		435	260	320	210	135	350	250	290	200	30	18	455	135	185	35	75	38	10	55	95	60	15	2.75	74.0
155	1:30	494	302	387	252	155	390	280	320	220	35	20	490	135	200	40	85	43	10	60	110	65	15	3.90	101
175		550	325	407	262	175	420	310	350	250	40	20	565	160	230	45	85	48	12	65	110	69	18	5.20	143
200	1:40	592	352	495	315	200	410	360	350	290	35	22	650	160	290	50	95	53	12	70	125	74.5	20	6.60	175
225	1:50	645	375	520	335	225	470	410	390	330	40	27	705	180	300	55	95	60	15	80	140	84.5	20	9.63	205
250		742	425	555	360	250	520	460	440	380	42	27	780	200	330	60	110	65	15	90	155	98	24	12.8	296
300	1:60	827	470	610	410	300	580	450	480	340	50	36	855	200	355	70	125	74	18	95	170	101	28	14.6	380
350		980	570	750	480	350	700	520	597	432	50	43	995	215	430	80	145	84.5	20	115	190	122	32	25.2	560
400		1100	620	775	500	400	812	580	660	470	50	43	1105	250	455	85	150	93	24	130	200	138	36	52.0	850
500		1410	810	950	610	500	1040	710	889	584	60	48	1390	290	600	95	205	103	24	170	240	179	40	78.0	1500

TKB 135 - 60 R

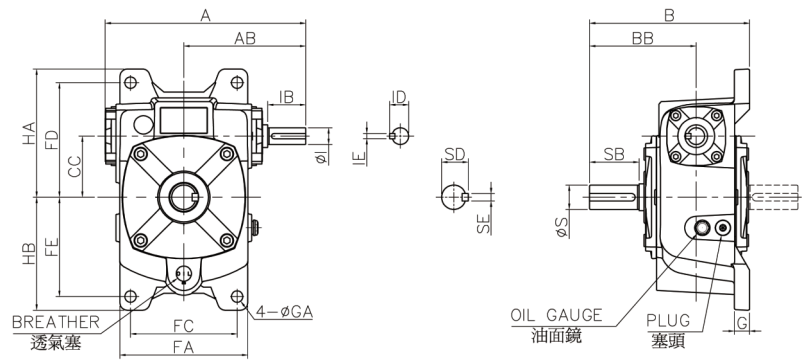
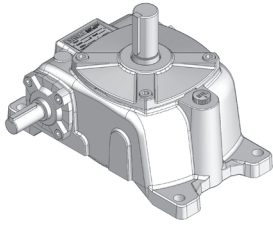
1 2 3 4

1. 機型 Type
2. 規格 Size
3. 速比 Ratio
4. 軸配置 S. L.

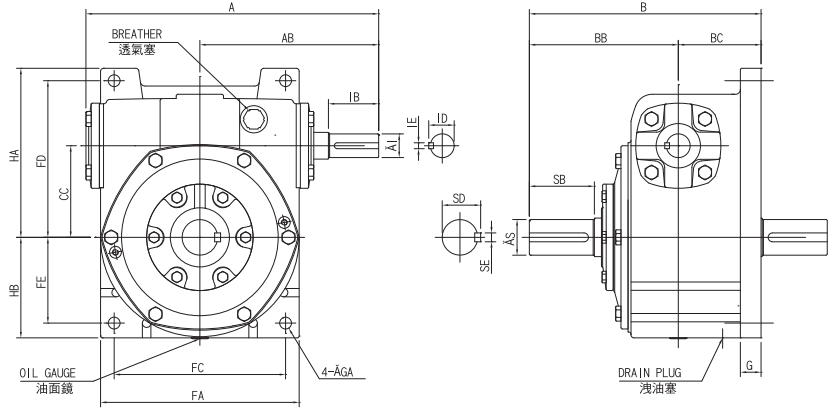
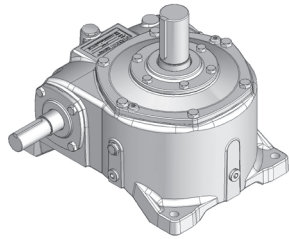
軸配置 Shaft Location



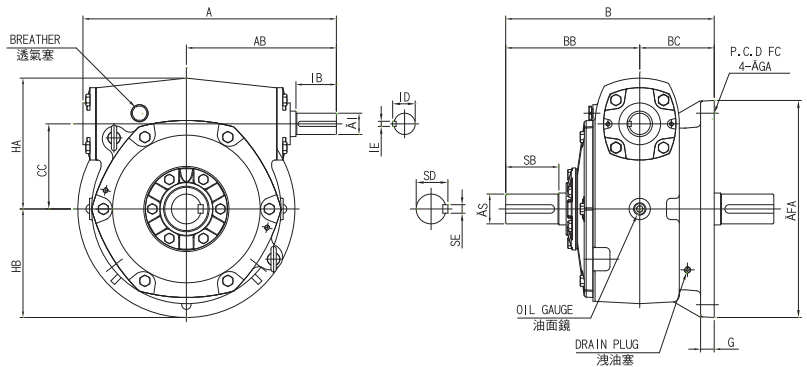
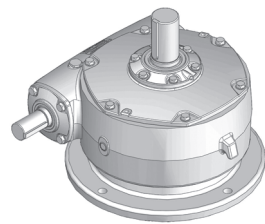
TKV 50~135



TKV 155~175



TKV 200~500



尺寸表 Dimension

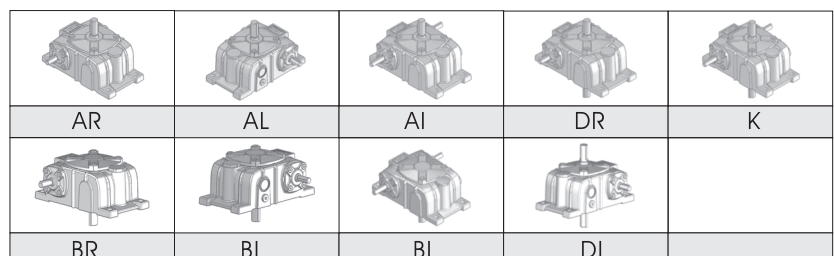
規格 Size	減速比 Ratio	A	AB	B	BB	BC	CC	FA	FC	FD	FE	G	GA	HA	HB	實心入力軸 Solid Input Shaft			實心出力軸 Solid Output Shaft			油量 (l)	概重 (kg)		
																l(h6)	IB	ID	IE	S(h6)	SB			SD	SE
50	1:10	175	105	145	95	50	50	116	90	102	93	15	11	114	106	12	30	13.5	4	17	40	19	5	0.48	5.9
60		195	120	165	110	55	60	126	100	120	105	15	11	137	123	15	40	17	5	22	50	25	7	0.70	8.8
70		234	140	195	130	65	70	156	120	135	120	20	15	155	140	18	40	20	5	28	60	31	7	0.95	14.2
80		264	160	210	140	70	80	176	140	150	130	20	15	170	150	22	50	25	7	32	65	35	10	1.45	18.0
100		322	190	260	170	90	100	226	190	180	155	30	15	200	175	25	50	28	7	38	75	41	10	2.50	33.0
120		385	230	290	190	100	120	268	220	215	185	30	18	240	210	30	65	33	7	45	85	48	12	5.07	57.0
135		435	260	320	210	110	135	306	260	235	210	35	18	260	235	35	75	38	10	55	95	60	15	7.13	81.0
155		494	302	392	252	140	155	336	290	265	145	35	20	286	170	40	85	43	10	60	110	65	15	6.80	111
175		550	325	412	262	150	175	380	320	293	167	40	20	324	196	45	85	48	12	65	110	69	18	11.0	140
200		592	352	490	315	175	200	510	450	-	-	40	22	308	255	50	95	53	12	70	125	74.5	20	14.4	201
225	645	375	525	335	190	225	580	510	-	-	40	27	370	290	55	95	60	15	80	140	84.5	20	19.5	225	
250	742	425	560	360	200	250	640	570	-	-	42	27	368	320	60	110	65	15	90	155	98	24	23.8	333	
300	1:60	827	470	645	410	235	300	750	660	-	-	42	36	493	375	70	125	74	18	95	170	101	28	33.5	490
350		980	570	770	480	290	350	880	780	-	-	45	43	642	440	80	145	84.5	20	115	190	122	32	63.0	700
400		1100	620	795	500	295	400	960	860	-	-	50	43	722	480	85	150	93	24	130	200	138	36	105	950
500		1410	810	980	610	370	500	1160	1080	-	-	55	48	890	580	95	205	103	24	170	240	179	40	175	1650

TKV 135 - 60 AR

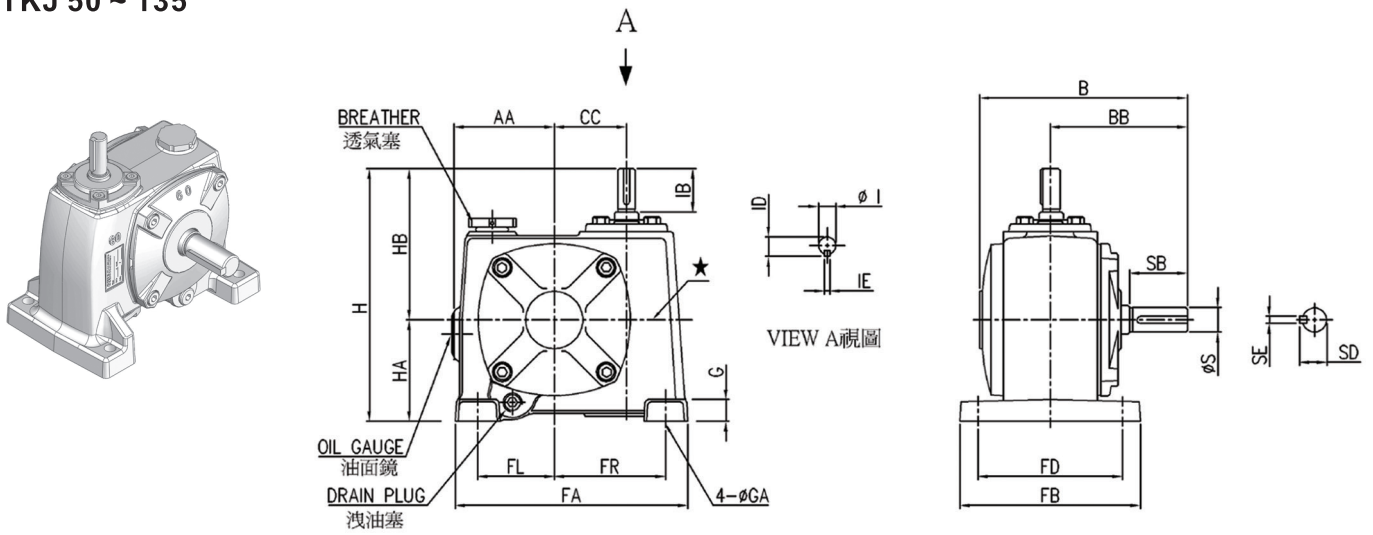
1 2 3 4

- 1.機型 Type 2.規格 Size
3.速比 Ratio 4.軸配置 S. L.

軸配置 Shaft Location



TKJ 50 ~ 135



尺寸表 Dimension

規格 Size	減速比 Ratio	AA	B	BB	CC	FA	FB	FD	FL	FR	G	GA	H
50	1:10 1:15 1:20 1:30 1:40 1:50 1:60	71	144	95	50	161	125	100	53	77	15	11	175
60		74	164	110	60	205	130	105	67	98	20	11	210
70		87	195	130	70	230	150	120	75	115	20	15	236
80		104	213	140	80	264	160	125	90	125	20	15	265
100		119	255	170	100	310	195	155	100	150	25	15	325
120		147	288	190	120	360	230	180	120	180	32	18	390
135		156	315	210	135	390	250	200	130	200	33	18	430

*120型及135型油面鏡在★位置. Oil gauge location on mark ★ for Size 120 & 135

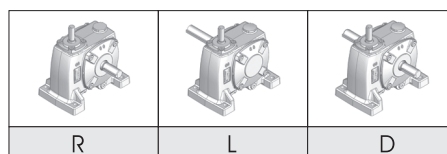
規格 Size	減速比 Ratio	HA	HB	實心輸入軸 Solid Input Shaft				實心輸出軸 Solid Output Shaft				油量 (l)	概重 (kg)
				φ I(h6)	IB	ID	IE	φ S(h6)	SB	SD	SE		
50	1:10 1:15 1:20 1:30 1:40 1:50 1:60	70	105	12	30	13.5	4	17	40	19	5	0.35	5.7
60		90	120	15	40	17	5	22	50	25	7	0.45	8.2
70		95	140	18	40	20	5	28	60	31	7	0.77	12.6
80		105	160	22	50	25	7	32	65	35	10	1.08	16.2
100		135	190	25	50	28	7	38	75	41	10	1.88	33.9
120		160	230	30	65	33	7	45	85	48	12	3.83	56.7
135		170	260	35	75	38	10	55	95	60	15	4.10	75.5

TKJ 60 - 60 R -1/2HP

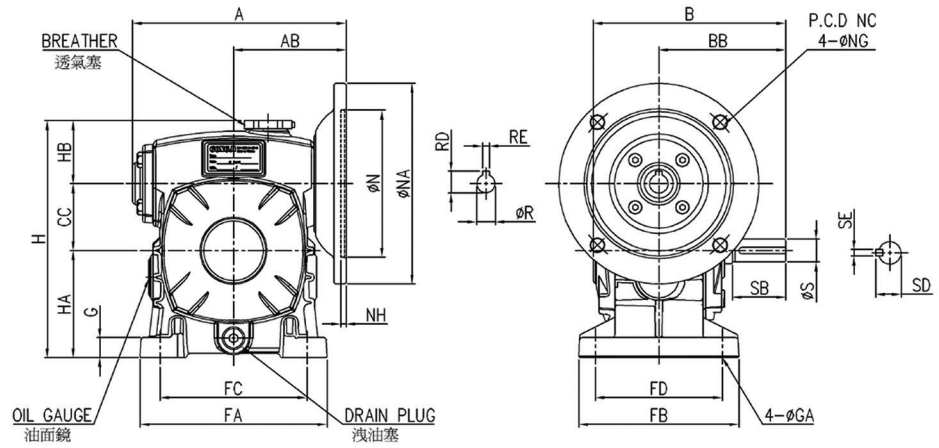
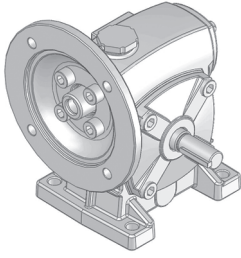
1 2 3 4 5

- 機型 Type
- 規格 Size
- 速比 Ratio
- 軸配置 S. L.
- 馬力 Power

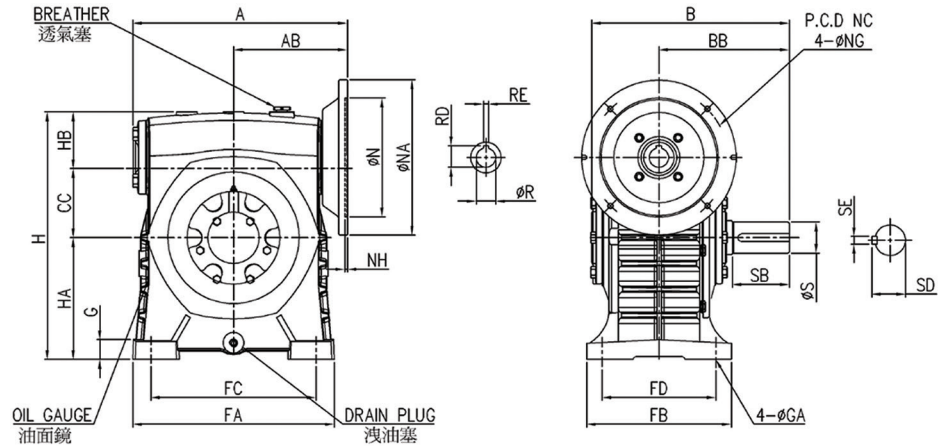
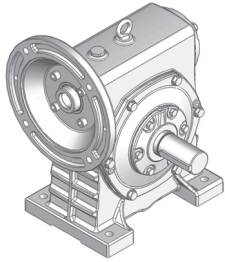
軸配置 Shaft Location



TKAE 50~135



TKAE 155~175



尺寸表 Dimension

規格 Size	減速比 Ratio	A	AB	B	BB	CC	FA	FB	FC	FD	G	GA
50	1:10	163	85	145	95	50	140	120	110	95	15	11
60		177	90	165	110	60	150	130	120	105	18	11
70	1:15	211	117	195	130	70	190	150	150	115	20	15
80	1:20	233	129	210	140	80	220	170	180	135	24	15
100	1:30	286	160	260	170	100	270	190	220	155	25	15
120	1:40	349	180	290	190	120	320	230	260	180	30	18
135	1:50	373	201	320	210	135	350	250	290	200	30	18
155	1:60	413	221	387	252	155	390	280	320	220	35	20
175		456	240	407	262	175	420	310	350	250	40	20

規格 Size	減速比 Ratio	H	HA	HB	實心出力軸 Solid Output Shaft				油量 (l)	概重 (kg)
					φ S(h6)	SB	SD	SE		
50	1:10	180	80	50	17	40	19	5	0.33	6.6
60		210	90	60	22	50	25	7	0.40	8.4
70	1:15	240	105	65	28	60	31	7	0.78	13.9
80	1:20	270	120	70	32	65	35	10	1.15	20.0
100	1:30	340	150	90	38	75	41	10	2.35	35.0
120	1:40	405	180	105	45	85	48	12	4.18	58.0
135	1:50	455	215	105	55	95	60	15	5.56	79.0
155	1:60	490	235	100	60	110	65	15	5.95	112.0
175		565	260	130	65	110	69	18	9.50	164.0

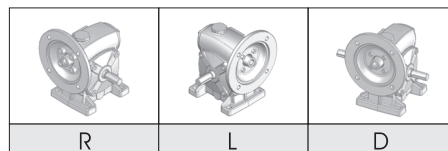
*入力法蘭界面尺寸請參考D-24頁。 Please reference page D-24 for input flange dimensions.

TKAE 135 60 R - 5HP

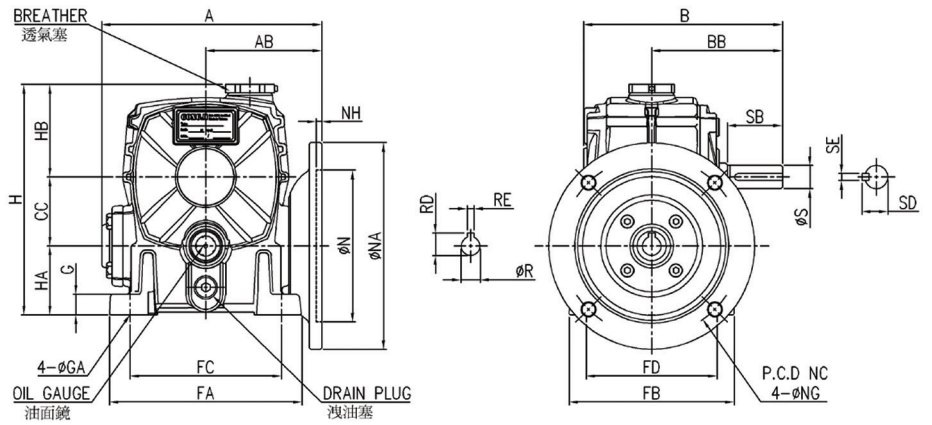
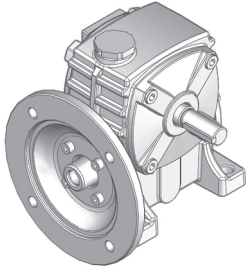
1 2 3 4 5

- 機型 Type
- 規格 Size
- 速比 Ratio
- 軸配置 S. L.
- 馬力 Power

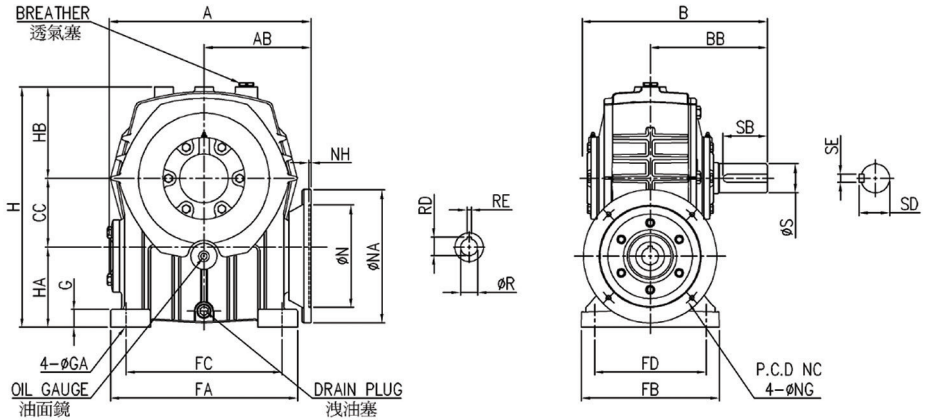
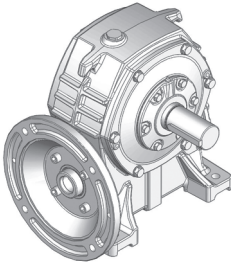
軸配置 Shaft Location



TKBE 50~135



TKBE 155~175



尺寸表 Dimension

規格 Size	減速比 Ratio	A	AB	B	BB	CC	FA	FB	FC	FD	G	GA
50	1:10	163	85	145	95	50	140	120	110	95	15	11
60		177	90	165	110	60	150	130	120	105	18	11
70	1:15	211	117	195	130	70	190	150	150	115	20	15
80	1:20	233	129	210	140	80	220	170	180	135	24	15
100	1:30	286	160	260	170	100	270	190	220	155	25	15
120	1:40	349	180	290	190	120	320	230	260	180	30	18
135	1:50	373	201	320	210	135	350	250	290	200	30	18
155	1:60	413	221	387	252	155	390	280	320	220	35	20
175		456	240	407	262	175	420	310	350	250	40	20

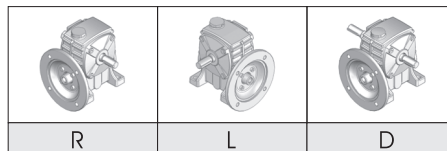
規格 Size	減速比 Ratio	H	HA	HB	實心出力軸 Solid Output Shaft				油量 (l)	概重 (kg)
					φ S(h6)	SB	SD	SE		
50	1:10	180	50	80	17	40	19	5	0.17	6.4
60		210	60	90	22	50	25	7	0.27	8.3
70	1:15	240	70	100	28	60	31	7	0.55	14.5
80	1:20	270	80	110	32	65	35	10	0.73	20.0
100	1:30	340	100	140	38	75	41	10	1.24	31.0
120	1:40	405	120	165	45	85	48	12	2.08	56.0
135	1:50	455	135	185	55	95	60	15	2.75	77.0
155	1:60	490	135	200	60	110	65	15	3.90	109.0
175		565	160	230	65	110	69	18	5.20	159.0

TKBE 80 - 60 R - 1HP

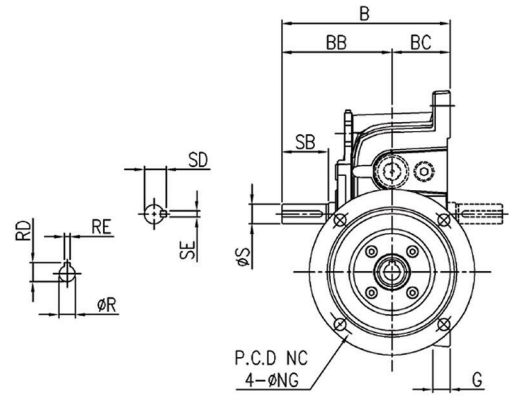
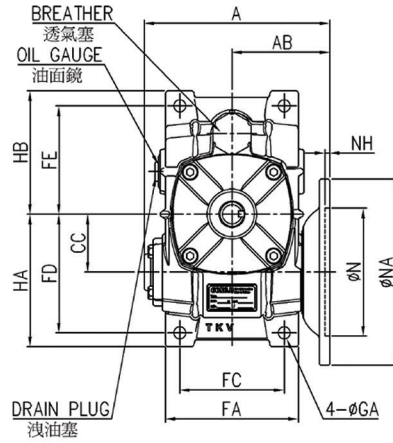
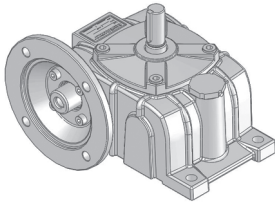
1 2 3 4 5

1. 機型 Type
2. 規格 Size
3. 速比 Ratio
4. 軸配置 S. L.
5. 馬力 Power

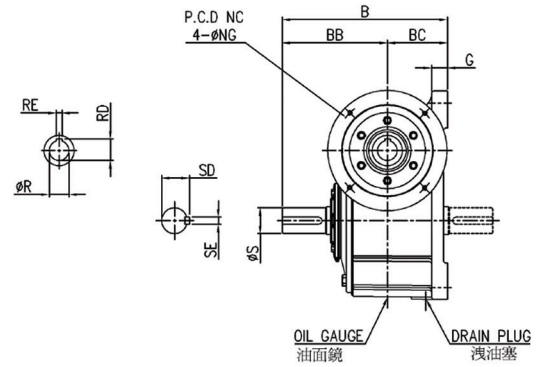
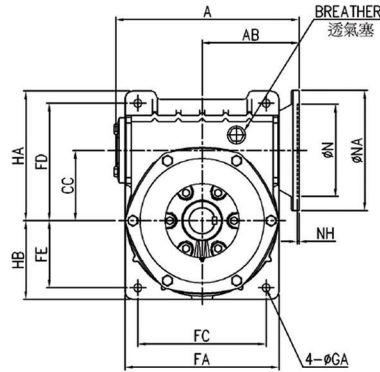
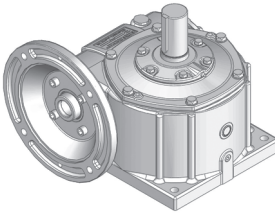
軸配置 Shaft Location



TKVE 50~135



TKVE 155~175



尺寸表 Dimension

規格 Size	減速比 Ratio	A	AB	B	BB	BC	CC	FA	FC	FD	FE	G
50	1:10	163	85	145	95	50	50	116	90	102	93	15
60		177	90	165	110	55	60	126	100	120	105	15
70	1:15	211	117	195	130	65	70	156	120	135	120	20
80	1:20	233	129	210	140	70	80	176	140	150	130	20
100	1:30	286	160	260	170	90	100	226	190	180	155	30
120	1:40	349	180	290	190	100	120	268	220	215	185	30
135	1:50	373	201	320	210	110	135	306	260	235	210	35
155	1:60	413	221	392	252	140	155	336	290	265	145	35
175		456	240	412	262	150	175	380	320	293	167	40

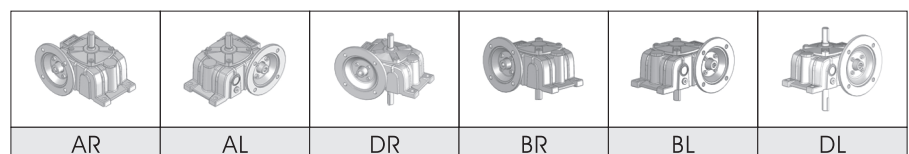
規格 Size	減速比 Ratio	GA	HA	HB	實心出力軸 Solid Output Shaft				油量 (l)	概重 (kg)
					φ S(h6)	SB	SD	SE		
50	1:10	11	114	106	17	40	19	5	0.48	7.0
60		11	137	123	22	50	25	7	0.70	8.9
70	1:15	15	155	140	28	60	31	7	0.95	15.0
80	1:20	15	170	150	32	65	35	10	1.45	20.0
100	1:30	15	200	175	38	75	41	10	2.50	35.0
120	1:40	18	240	210	45	85	48	12	5.07	61.0
135	1:50	18	260	235	55	95	60	15	7.13	84.0
155	1:60	20	286	170	60	110	65	15	6.80	119.0
175		20	324	196	65	110	69	18	11.00	156.0

TKVE 80 - 60 AR - 1HP

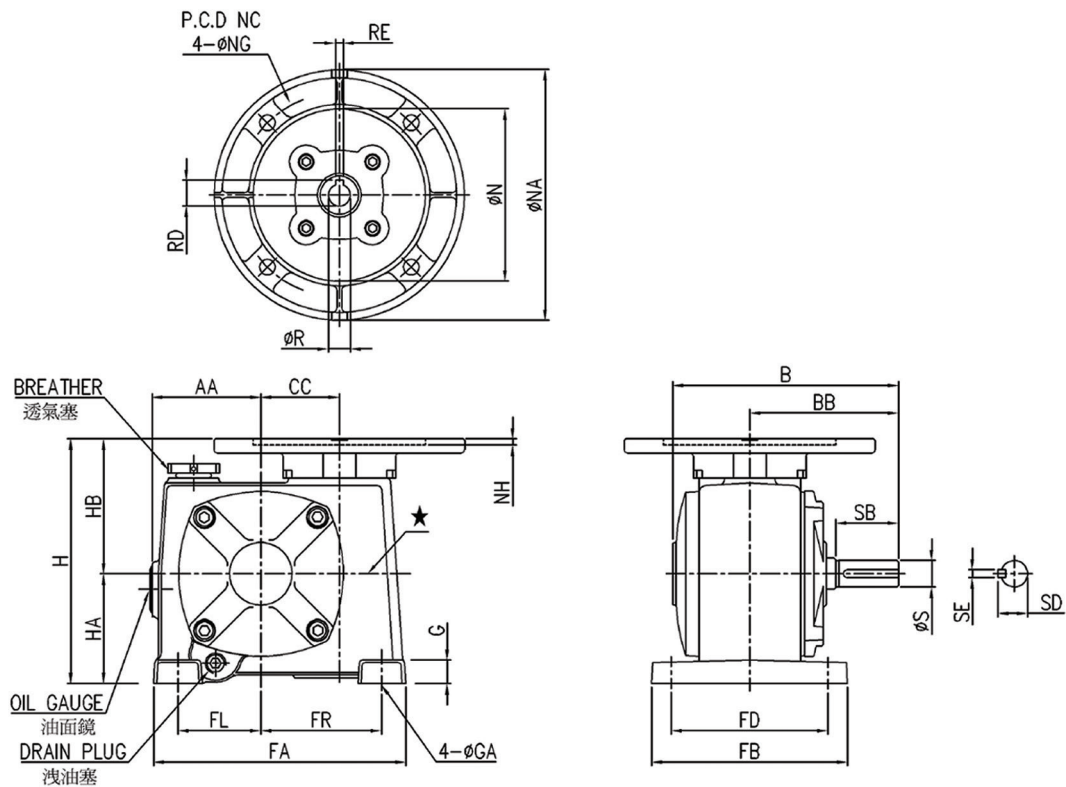
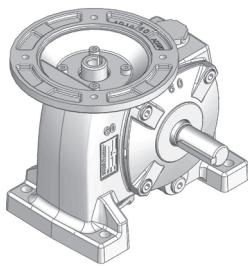
1 2 3 4 5

- 機型 Type
- 規格 Size
- 速比 Ratio
- 軸配置 S. L.
- 馬力 Power

軸配置 Shaft Location



TKJE 50~135



尺寸表 Dimension

規格 Size	減速比 Ratio	AA	B	BB	CC	FA	FB	FD	FL	FR	G	GA
50	1:10	71	144	95	50	161	125	100	53	77	15	11
60		74	164	110	60	205	130	105	67	98	20	11
70	1:15	87	195	130	70	230	150	120	75	115	20	15
80	1:20	104	213	140	80	264	160	125	90	125	20	15
100	1:30	119	255	170	100	310	195	155	100	150	25	15
120	1:40	147	288	190	120	360	230	180	120	180	28	18
135	1:50	156	315	210	135	390	250	200	130	200	33	18

*120型及135型油面鏡在★位置.Oil gauge location on mark ★ for Size120&135

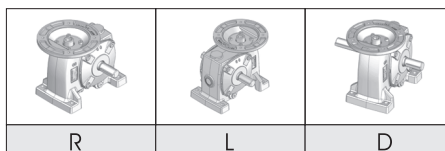
規格 Size	減速比 Ratio	H	HA	HB	實心出力軸 Solid Output Shaft				油量 (l)	概重 (kg)
					ϕ S(h6)	SB	SD	SE		
50	1:10	156	70	86	17	40	19	5	0.35	6.8
60	1:15	180	90	90	22	50	25	7	0.45	8.4
70	1:20	216	95	121	28	60	31	7	0.77	13.7
80	1:30	234	105	129	32	65	35	10	1.08	17.7
100	1:40	295	135	160	38	75	41	10	1.88	35.9
120	1:50	338	160	178	45	85	48	12	3.83	56.3
135	1:60	365	170	195	55	95	60	15	4.10	78.5

TKJE 120 - 60 R - 3HP

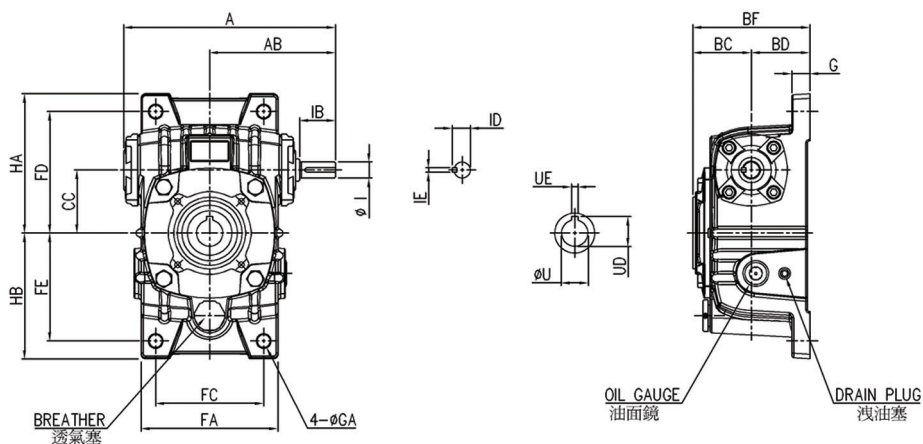
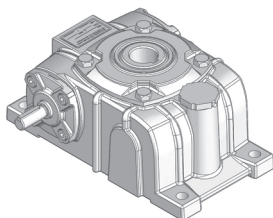
1 2 3 4 5

- 機型 Type
- 規格 Size
- 速比 Ratio
- 軸配置 S. L.
- 馬力 Power

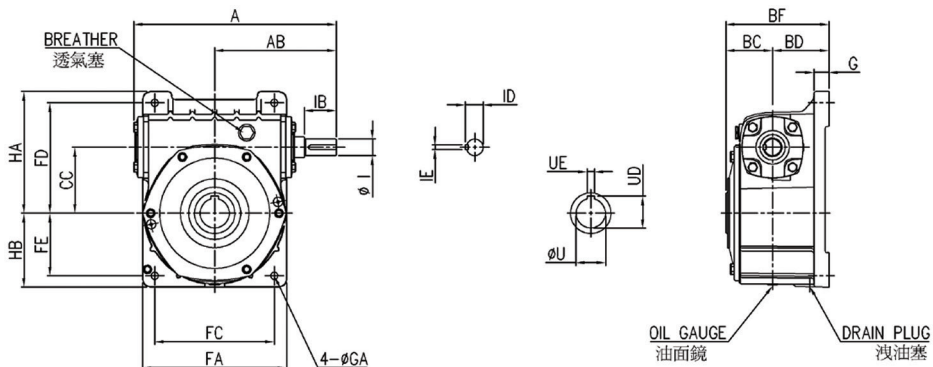
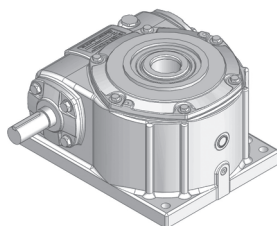
軸配置 Shaft Location



TKVQ 70 ~ 135



TKVQ 155~175



尺寸表 Dimension

規格 Size	減速比 Ratio	A	AB	BC	BD	BF	CC	FA	FC	FD	FE	G	GA
70	1:10	234	140	65.5	65	130.5	70	156	120	135	120	20	15
80		264	160	72	70	142	80	176	140	150	130	20	15
100	1:20	322	190	87.5	90	177.5	100	226	190	180	155	30	15
120	1:30	385	230	100	100	200	120	268	220	215	185	30	18
135	1:40	435	260	108	110	218	135	306	260	235	210	35	18
155	1:50	494	302	115	140	255	155	336	290	265	145	35	20
175	1:60	550	325	125	150	275	175	380	320	293	167	40	20

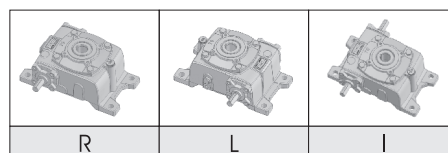
規格 Size	減速比 Ratio	HA	HB	實心入力軸 Solid Input Shaft				出力中空軸 Hollow Output Shaft			油量 (l)	概重 (kg)
				φ I(h6)	IB	ID	IE	φ U(H7)	UD	UE		
70	1:10	155	140	18	40	20	5	30	33	7	0.95	13.6
80		170	150	22	50	25	7	35	38	10	1.45	18.5
100	1:20	200	175	25	50	28	7	40	43	12	2.50	32.2
120	1:30	240	210	30	65	33	7	45	48.5	14	5.07	56.8
135	1:40	260	235	35	75	38	10	55	60	15	7.13	81.5
155	1:50	286	170	40	85	43	10	65	69.4	18	6.80	107.0
175	1:60	324	196	45	85	48	12	80	84.9	20	11.00	132.0

TKVQ 60 - 60 R - 1/2HP

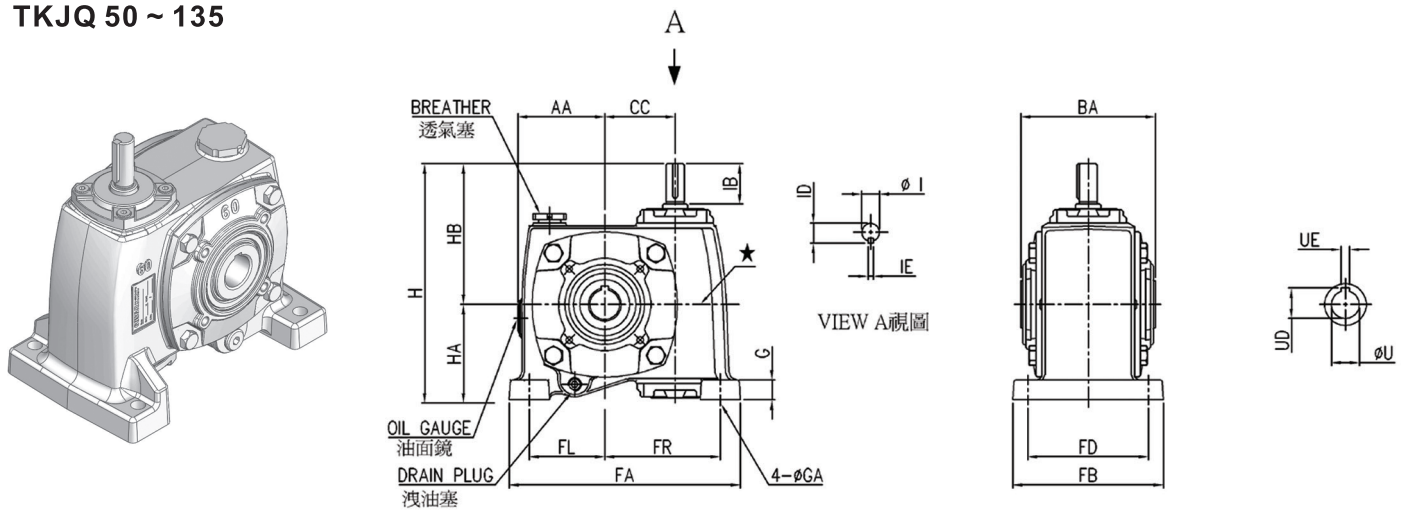
1 2 3 4 5

1. 機型 Type
2. 規格 Size
3. 速比 Ratio
4. 軸配置 S. L.
5. 馬力 Power

軸配置 Shaft Location



TKJQ 50 ~ 135



尺寸表 Dimension

規格 Size	減速比 Ratio	AA	BA	CC	FA	FB	FD	FL	FR	G	GA	H	HA	HB
50	1:10 1:15 1:20 1:30 1:40 1:50 1:60	71	99	50	161	125	100	53	77	15	11	175	70	105
60		74	112	60	205	130	105	67	98	20	11	210	90	120
70		87	131	70	230	150	120	75	115	20	15	236	95	140
80		104	144	80	264	160	125	90	125	20	15	265	105	160
100		119	175	100	310	195	155	100	150	25	15	325	135	190
120		147	200	120	360	230	180	120	180	28	18	390	160	230
135		156	216	135	390	250	200	130	200	33	18	430	170	260

* 120型及135型油面鏡在★位置. Oil gauge location on mark ★ for Size120&135

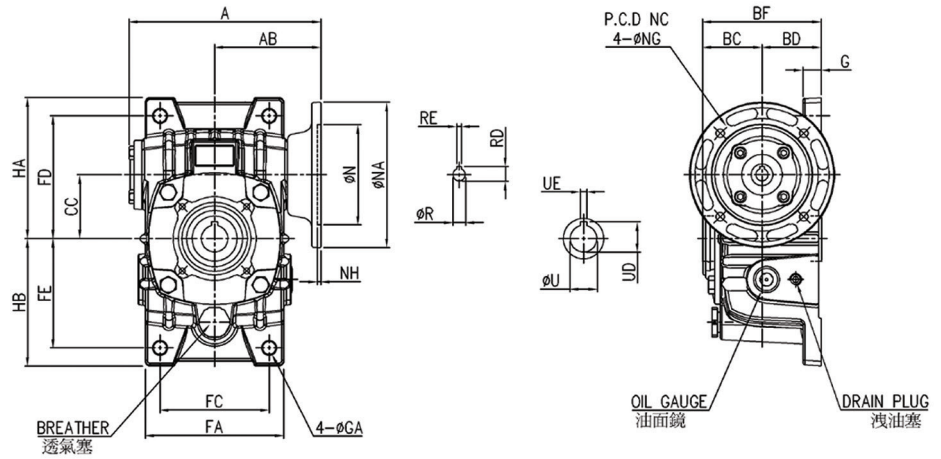
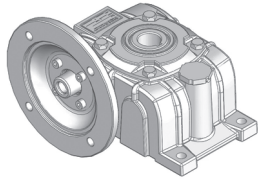
規格 Size	減速比 Ratio	實心輸入軸 Solid Input Shaft				中空輸出軸 Hollow Output Shaft			油量 (l)	概重 (kg)
		φ I(h6)	IB	ID	IE	φ U(H7)	UD	UE		
50	1:10 1:15 1:20 1:30 1:40 1:50 1:60	12	30	13.5	4	25	28	7	0.35	6.0
60		15	40	17	5	25	28	7	0.45	8.7
70		18	40	20	5	30	33	7	0.77	12.0
80		22	50	25	7	35	38	10	1.08	16.7
100		25	50	28	7	40	43	12	1.88	33.1
120		30	65	33	7	45	48.5	14	3.83	56.4
135		35	75	38	10	55	60	15	4.10	76.0

TKJQ 60 - 60 R - 1/2HP

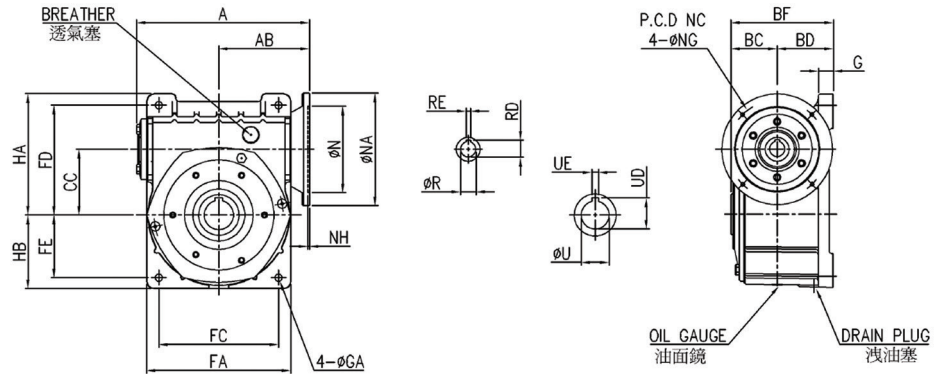
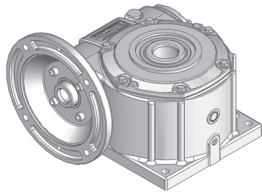
1 2 3 4 5

- 1. 機型 Type
- 2. 規格 Size
- 3. 速比 Ratio
- 4. 軸配置 S. L.
- 5. 馬力 Power

TKVEQ 70 ~ 135



TKVEQ 155 ~ 175



尺寸表 Dimension

規格 Size	減速比 Ratio	A	AB	BC	BD	BF	CC	FA	FC	FD	FE	G	GA
70	1:10	211	117	65.5	65	135.5	70	156	120	135	120	20	15
80		233	129	72	70	142	80	176	140	150	130	20	15
100	1:20	286	160	87.5	90	177.5	100	226	190	180	155	30	15
120	1:30	349	180	100	100	200	120	268	220	215	185	30	18
135	1:40	373	201	108	110	218	135	306	260	235	210	35	18
155	1:50	413	221	115	140	255	155	336	290	265	145	35	20
175	1:60	456	240	125	150	275	175	380	320	293	167	40	20

規格 Size	減速比 Ratio	HA	HB	出力中空軸 Output Shaft			油量 (l)	概重 (kg)
				φ U(H7)	UD	UE		
70	1:10	155	140	30	33	7	0.95	14.4
80		170	150	35	38	10	1.45	20.5
100	1:20	200	175	40	43	12	2.50	34.2
120	1:30	240	210	45	48.5	14	5.07	60.7
135	1:40	260	235	55	60	15	7.13	84.4
155	1:50	286	170	65	69.4	18	6.80	114.5
175	1:60	324	196	80	84.9	20	11.00	148.0

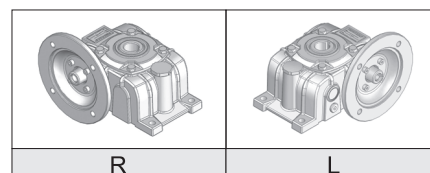
*入力法蘭界面尺寸請參考D-24頁. Please reference page D-24 for input flange dimensions .

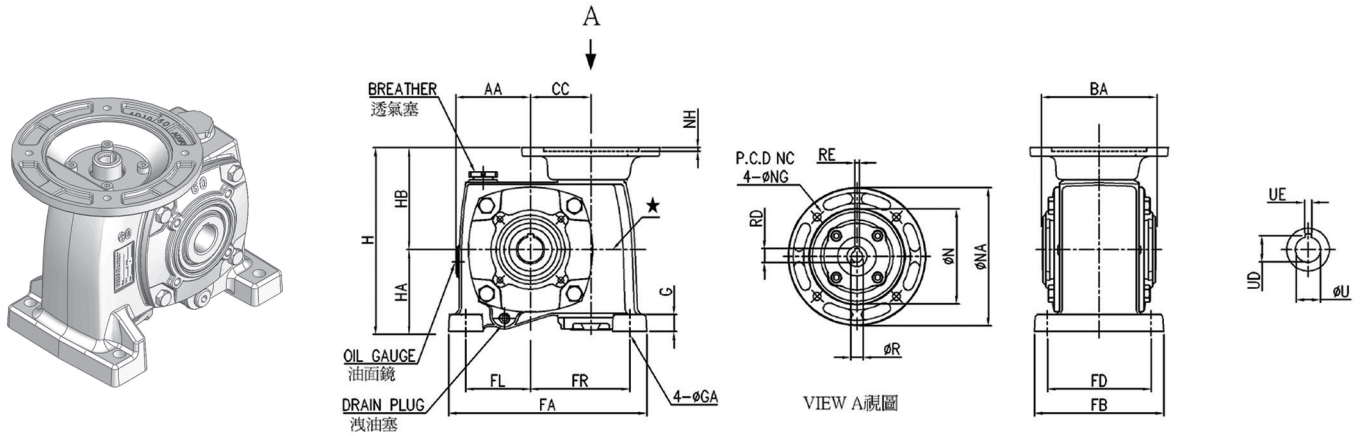
TKVEQ 60 - 60 R - 1/2HP

1 2 3 4 5

1. 機型 Type
2. 規格 Size
3. 速比 Ratio
4. 軸配置 S. L.
5. 馬力 Power

軸配置 Shaft Location





尺寸表 Dimension

規格 Size	減速比 Ratio	AA	BA	CC	FA	FB	FD	FL	FR	G	GA
50	1:10 1:15 1:20 1:30 1:40 1:50 1:60	71	99	50	161	125	100	53	77	15	11
60		74	112	60	205	130	105	67	98	20	11
70		87	131	70	230	150	120	75	115	20	15
80		104	144	80	264	160	125	90	125	20	15
100		119	175	100	310	195	155	100	150	25	15
120		147	200	120	360	230	180	120	180	28	18
135		156	216	135	390	250	200	130	200	33	18

* 120型及135型油面鏡在★位置。 Oil gauge location on mark ★ for Size 120 & 135

規格 Size	減速比 Ratio	H	HA	HB	中空出力軸 Hollow Output Shaft			油量 (l)	概重 (kg)
					φ U(H7)	UD	UE		
50	1:10 1:15 1:20 1:30 1:40 1:50 1:60	156	70	86	25	28	7	0.35	7.0
60		180	90	90	25	28	7	0.45	8.9
70		216	95	121	30	33	7	0.77	13.2
80		234	105	129	35	38	10	1.08	18.3
100		295	135	160	40	43	12	1.88	35.0
120		338	160	178	45	48.5	14	3.83	56.0
135		365	170	195	55	60	15	4.10	82.0

* 入力法蘭界面尺寸請參考D-24頁。 Please reference page D-24 for input flange dimensions .

TKJEQ 60 - 60 R - 1/2HP

1 2 3 4 5

- 1. 機型 Type
- 2. 規格 Size
- 3. 速比 Ratio
- 4. 軸配置 S. L.
- 5. 馬力 Power

TK系列尺寸表