鋁合金蝸輪減速機 Aluminum Alloy Worm Gear Reducer

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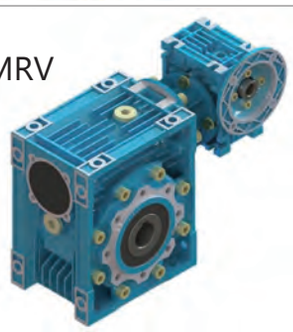
鋁合金蝸輪減速機產品代碼說明
Product Codes of Aluminum Alloy Worm Gear Reducer

PNMRV - 063 - 10 - 90 - B5

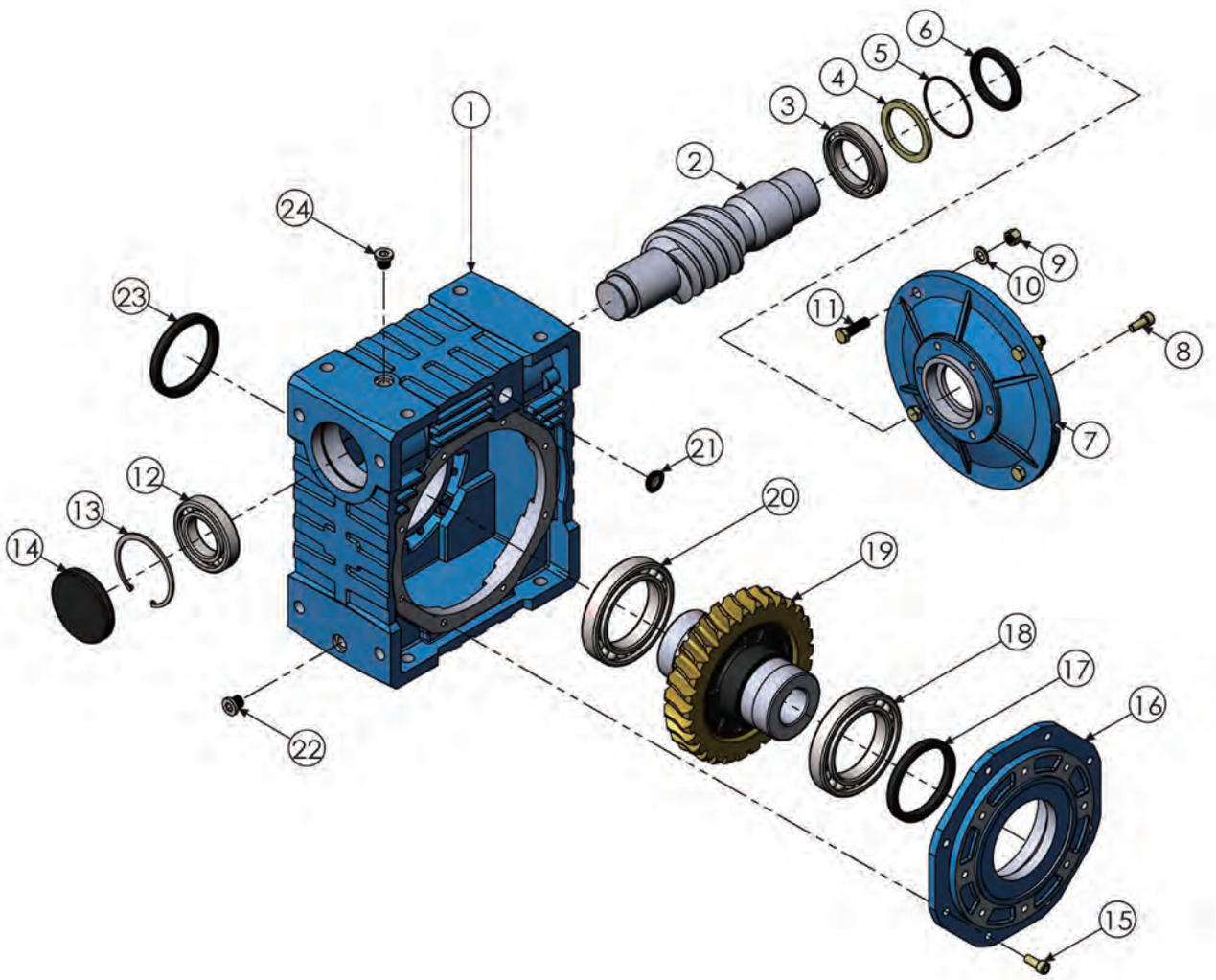
(1) (2) (3) (4) (5)

(1) 機型 Type	(a)PNRV- 輸入軸式 Single shaft (b)PNMRV- 法蘭式 Input flange (c)PNMRV+PNMRV- 雙段式 Double stages (d)PC+PNMRV Extra Stages									
(2) 型號 Model	030	040	050	063	075	090	110	130	150	185
(3) 減速比 Ratio	1/7.5、1/10、1/15、1/20、1/25、1/30、1/40、1/50、1/60、1/80、1/100									
(4) 馬達框號 Motor frame	56	63	71	80	90	100	112	132		
(5) 法蘭框號 Flange frame	B5									
	B14									

鋁合金蝸輪減速機各類產品
Worm gear reducer - various products

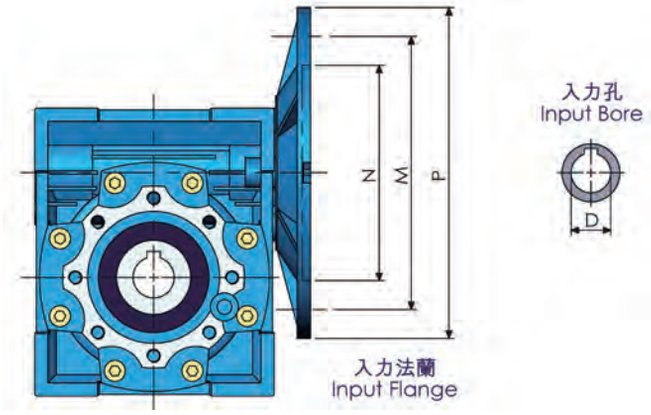
臥式 Horizontal type	
(A) PNRV	(B) PNMRV
(C) PNMRV+PNMRV 	(D) PC+PNMRV

系統分解圖
System Drawing



No.	零件名稱	Name of parts	No.	零件名稱	Name of parts	No.	零件名稱	Name of parts
1	外殼	Case	9	六角螺帽	Hex nut	17	油封	Oil seal
2	入力蝸桿	Input shaft	10	墊片	Washer	18	軸承	Bearing
3	軸承	Bearing	11	外六角螺絲	Hexagon head bolt	19	蝸輪	Worm wheel
4	墊片	Washer	12	軸承	Bearing	20	軸承	Bearing
5	O 型環	O ring	13	孔用扣環	Hole circlip	21	油鏡	Oil gauge
6	油封	Oil seal	14	油封蓋	Oil seal cover	22	油栓	Oil plug
7	入力法蘭	Input flange	15	內六角螺絲	Hex socket cap screw	23	油封	Oil seal
8	內六角螺絲	Hex socket cap screw	16	出力蓋	Output cover	24	油栓	Oil plug

鋁合金蝸輪減速機機型選配表
Application table



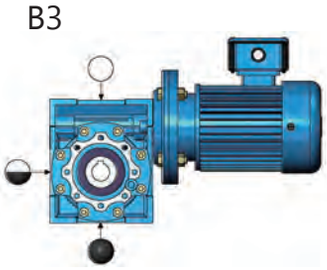
PNMRV	馬力 (HP)	PAM IEC	N	M	P	D										
						7.5	10	15	20	25	30	40	50	60	80	100
030	1/4	63B5	95	115	140	11	11	11	11	11	11	11	11	-	-	-
	1/4	63B14	60	75	90	11	11	11	11	11	11	11	11			
	1/8	56B14	50	65	80	9	9	9	9	9	9	9	9	9	9	-
040	1/2	71B5	110	130	160	14	14	14	14	14	14	14	14	-	-	-
	1/4	63B5	95	115	140	11	11	11	11	11	11	11	11	11	11	11
050	1	80B5	130	165	200	19	19	19	19	19	19	19	-	-	-	-
	1	80B14	80	100	120	19	19	19	19	19	19	19	-	-	-	-
	1/2	71B5	110	130	160	14	14	14	14	14	14	14	14	14	14	-
	1/2	71B14	70	85	105	14	14	14	14	14	14	14	14	14	14	-
	1/4	63B5	95	115	140	11	11	11	11	11	11	11	11	11	11	11
063	2	90B5	130	165	200	24	24	24	24	24	24	24	-	-	-	-
	1	80B5	130	165	200	19	19	19	19	19	19	19	19	19	-	-
	1/2	71B5	110	130	160	14	14	14	14	14	14	14	14	14	14	14
	1/2	71B14	70	85	105	14	14	14	14	14	14	14	14	14	14	14
075	3 ; 5	100/112B5	180	215	250	28	28	28	28	28	28	28	28	-	-	-
	2	90B5	130	165	200	24	24	24	24	24	24	24	24	24	24	-
	2	90B14	95	115	140	24	24	24	24	24	24	24	24	24	24	-
	1	80B5	130	165	200	19	19	19	19	19	19	19	19	19	19	19
	1	80B14	80	100	120	19	19	19	19	19	19	19	19	19	19	19
090	3 ; 5	100/112B5	180	215	250	28	28	28	28	28	28	28	28	-	-	-
	2	90B5	130	165	200	24	24	24	24	24	24	24	24	24	24	-
	2	90B14	95	115	140	24	24	24	24	24	24	24	24	24	24	-
	1	80B5	130	165	200	19	19	19	19	19	19	19	19	19	19	19
	1	80B14	80	100	120	19	19	19	19	19	19	19	19	19	19	19
110	7.5	132B5	230	265	300	38	38	38	38	38	38	38	38	-	-	-
	3 ; 5	100/112B5	180	215	250	28	28	28	28	28	28	28	28	28	28	28
	3 ; 5	100/112B14	110	130	160	28	28	28	28	28	28	28	28	28	28	28
	2	90B5	130	165	200	24	24	24	24	24	24	24	24	24	24	24
	2	90B14	95	115	140	24	24	24	24	24	24	24	24	24	24	24
130	7.5	132B5	230	265	300	38	38	38	38	38	38	38	38	-	-	-
	3 ; 5	100/112B5	180	215	250	28	28	28	28	28	28	28	28	28	28	28
	3 ; 5	100/112B14	110	130	160	28	28	28	28	28	28	28	28	28	28	28
	2	90B5	130	165	200	24	24	24	24	24	24	24	24	24	24	24
	2	90B14	95	115	140	24	24	24	24	24	24	24	24	24	24	24
150	10	160B5	250	300	350	42	42	42	42	-	-	-	-	-	-	-
	7.5	132B5	230	265	300	38	38	38	38	38	38	38	38	-	-	-
	3 ; 5	100/112B5	180	215	250	28	28	28	28	28	28	28	28	28	28	28
185	25;30	180B5	250	300	350	48	48	48	48	-	-	-	-	-	-	-
	10	160B5	250	300	350	42	42	42	42	42	42	42	42	-	-	-
	7.5	132B5	230	265	300	38	38	38	38	38	38	38	38	38	38	38
	3 ; 5	100/112B5	180	215	250	28	28	28	28	28	28	28	28	28	28	28

鋁合金蝸輪減速機安裝方式
Mounting Positions for Aluminum Alloy Worm Gear Reducer

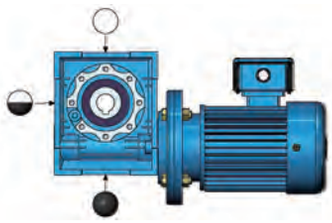
透氣蓋與加油孔 Ventilate plug and Oil filling hole　油鏡 Oil gauge　排油栓 Drain plug

臥式 Horizontal type

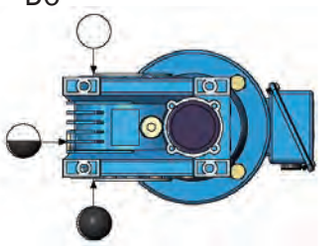
B3



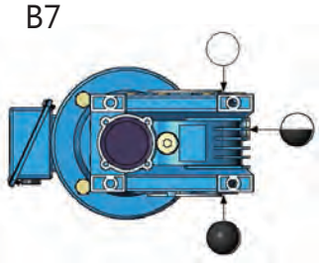
B8



B6

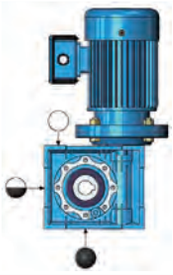


B7

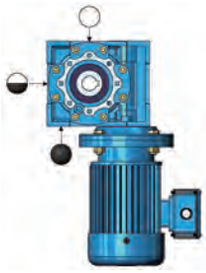


立式 Vertical type

V5



V6



各安裝型式所對應之加油量 Mounting positions against oil capacity

減速機型號 Types of reducer		030#	040#	050#	060#	075#	090#	110#	130#	150#
潤滑用油 Lubricating oil 單位 :(公升)	B3	0.04	0.08	0.15	0.3	0.55	1	3	4.5	5.5
	B6/B7	0.04	0.08	0.15	0.3	0.55	1	2.2	3.5	5
	B8	0.04	0.08	0.15	0.3	0.55	1	2.2	3.3	4.5
	V5	0.04	0.08	0.15	0.3	0.55	1	3	4.5	5.5
	V6	0.04	0.08	0.15	0.3	0.55	1	3	4.5	5.5

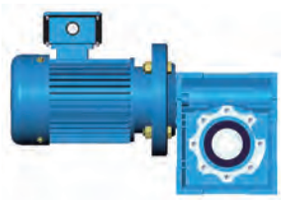
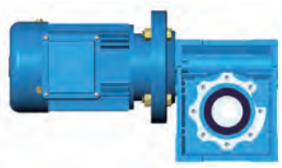
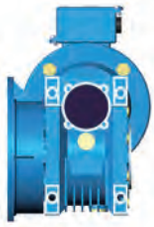
潤滑油種類 Lubricating oil

減速機型號 Types of reducer	PN025、PN040、PN050、PN063、PN075、PN090			
潤滑油 Lubricant	Oil sintetice synthetic oil	Oil sintetice synthetic oil	Oil minerale mineral oil	
環境溫度 Ambient Temperature	-25℃ ~50℃	-25℃ ~50℃	-5℃ ~40℃	-15℃ ~40℃
ISO	VG320	VG320	VG460	VG320
AGIP	TELUM	MELLANAOIL 320	BLASIA 460	BLASIA 220
SHELL	TIVELA OIL SC320	OMALA OIL 320	OMALA OIL 460	OMALA OIL 220
ESSO	S220	S220	SPARTAN EP 460	SPARTAN EP 220
MOBIL	GLYGOYLE 30	MOBIL GEAR 320	MOBIL GEAR 634	MOBIL GEAR 630
CASTROL	ALPHASYN PG 320	ALPHASYN PG 320	ALPHA MAX 460	ALPHA MAX 220
BP	ENERGOL SG-XP 320	ENERGOL SG-XP 320	ENETGOL SG-XP 460	ENETGOL SG-XP 220

鋁合金蝸輪減速機安裝方式
Mounting Positions for Aluminum Alloy Worm Gear Reducer

類別 Type	臥式 Horizontal type			
PNMRV | PNRV	B3 	B8 	B6 	B7
	臥式 Horizontal type			
PC | PNMRV	B3 	B8 	B6 	B7
	立式 Vertical type			
	V5 		V6 	
	馬達臥置 (A) Motor in horizontal (A)		馬達臥置 (B) Motor in horizontal (B)	
PNMRV | PNMRV / PNRV | PNMRV	AS1 	AS2 	BS1 	BS2
	馬達立置 Motor in vertical		馬達倒置 Motor invert	
	VS1 	VS2 	PS1 	PS2

鋁合金蝸輪減速機安裝方式
Mounting Positions for Aluminum Alloy Worm Gear Reducer

馬達接線盒位置 Positions of terminal box				
方位 1 pos.1				
方位 2 pos.2				
方位 3 pos.3				
方位 4 pos.4				
出力法蘭位置 Output Flange positions				
方位 D pos.D				
方位 S pos.S				

參數表
Parameter table

型號 Type	PNMRV-030									
i	7.5	10	15	20	25	30	40	50	60	80
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5
KW1	0.18	0.18	0.18	0.18	0.18	0.18	0.12	0.12	0.09	0.06
M2	7	9	13	17	21	24	19	23	19	14
SF	1.9	1.5	1	0.8	1	0.8	0.9	0.8	0.9	0.9

型號 Type	PNMRV-040										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	0.37	0.37	0.37	0.37	0.37	0.37	0.25	0.22	0.18	0.12	0.12
M2	16	27	28	39	47	53	44	47	43	34	38
SF	1.6	1.3	0.9	1	0.8	0.8	0.9	0.8	0.8	0.1	0.8

型號 Type	PNMRV-050										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	0.75	0.75	0.75	0.75	0.75	0.55	0.55	0.37	0.37	0.25	0.18
M2	33	42	58	81	71	81	101	80	89	72	60
SF	1.7	1.3	1	0.9	1	1	0.8	0.9	0.8	0.9	0.9

型號 Type	PNMRV-063										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	1.5	1.5	1.5	1.5	1.1	1.1	1.1	0.55	0.55	0.37	0.37
M2	68	88	126	166	146	167	207	124	140	115	129
SF	1.5	1.2	0.9	0.8	0.9	1	0.7	1.1	0.9	1.1	0.9

型號 Type	PNMRV-075										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	4	3	3	2.2	1.5	2.2	1.1	1.1	1.1	0.55	0.55
M2	182	180	261	240	205	337	216	264	279	180	206
SF	1	1.1	0.8	0.8	1	0.7	1	0.8	0.7	1	0.9

型號 Type	PNMRV-090										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	4	4	4	4	3	3	2.2	2.2	1.5	1.1	0.75
M2	180	236	342	458	420	479	433	492	424	365	302
SF	1.3	1.1	0.9	0.8	0.8	0.9	0.8	0.6	0.8	0.8	0.9

參數表
Parameter table

型號 Type	PNMRV-110										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	7.5	7.5	5.5	5.5	5.5	4	3	3	2.2	1.5	1.1
M2	345	455	484	638	790	647	638	767	648	548	473
SF	1.4	1.1	1.2	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.9

型號 Type	PNMRV-130										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	7.5	7.5	7.5	7.5	7.5	5.5	5.5	5.5	4	2.2	2.2
M2	343	453	664	864	1074	900	1171	1379	1179	816	966
SF	1.8	1.5	1.1	0.8	0.8	1.1	0.9	0.7	0.8	1	0.8

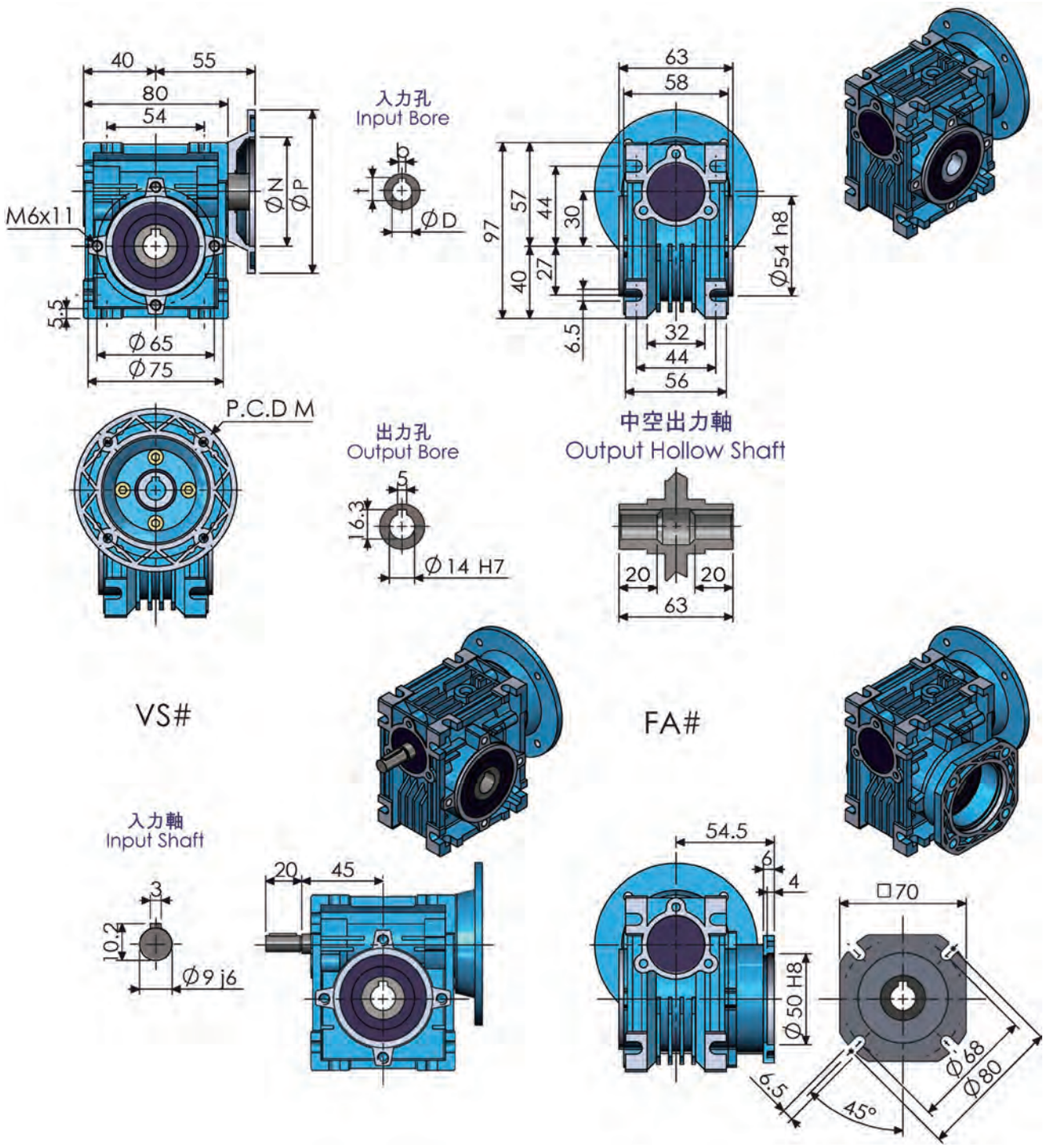
型號 Type	PNMRV-150										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	15	15	15	15	11	7.5	7.5	5.5	5.5	4	2.2
M2	698.3	921	1351	1760	1576	1274	1596	1426	1643	1484	960
SF	1.7	1.3	0.9	0.7	0.8	0.9	1	1	0.8	0.8	1

型號 Type	PNMRV-185										
i	7.5	10	15	20	25	30	40	50	60	80	100
N2	186.7	140	93.3	70	56	46.7	35	28	23.3	17.5	14
KW1	22	22	18.5	18.5	11	11	11	7.5	7.5	5.5	4
M2	980	1320	1550	2140	1560	1760	2320	1920	2210	2070	1760
SF	1.75	1.35	1.1	1	1.25	1.3	1.1	1.2	1	1	1

i= 減速比	i=Ratio
N1= 輸入轉速 (rpm)	N1=Input rpm
N2= 輸出轉速 (rpm)	N2=Output rpm
KW1= 輸入馬力	KW1=Input HP
M2= 輸出扭力	M2=Output torque
SF= 安全係數	SF=Safe Factor

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

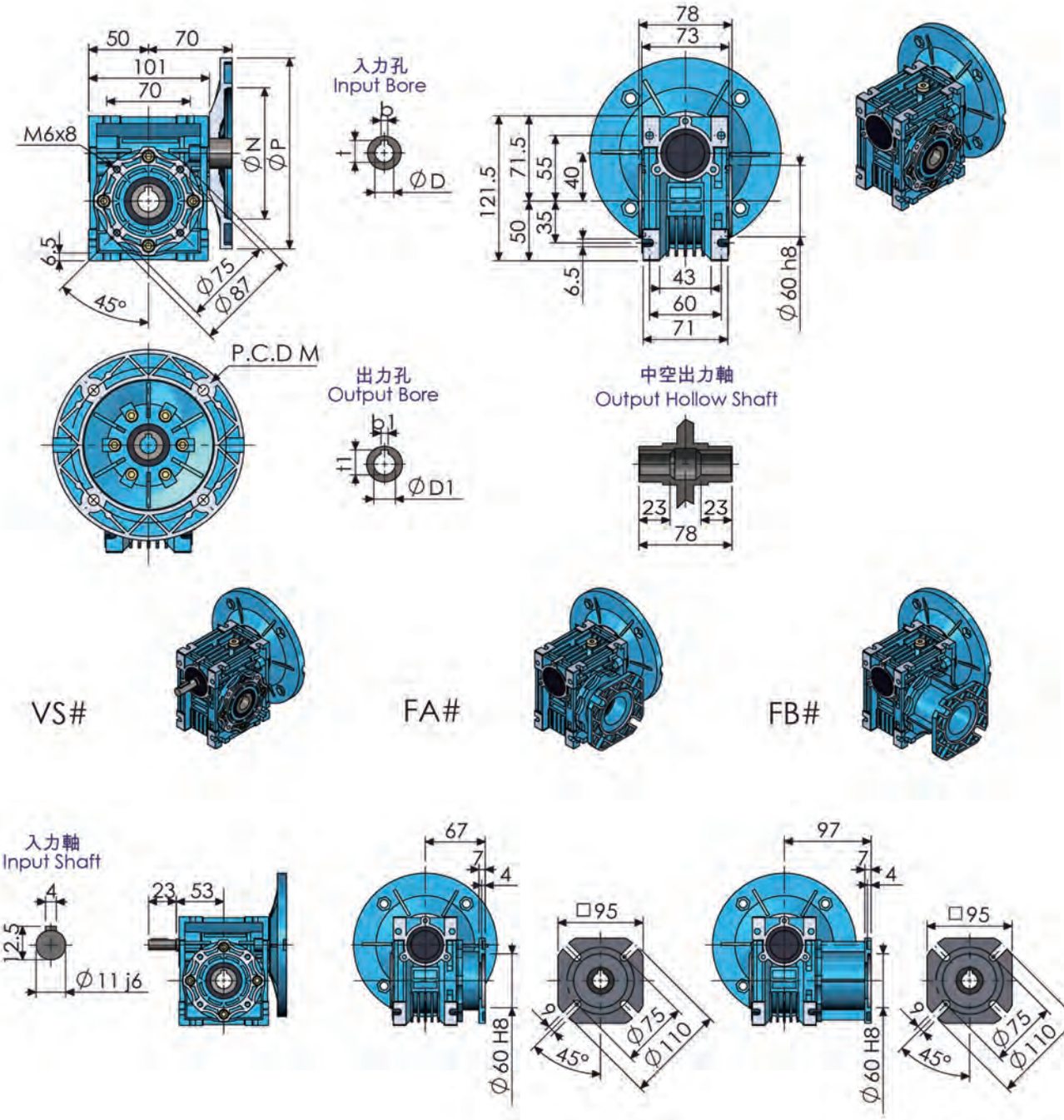
MODEL:PNMRV-030



重量（不含馬達），約 1.2KG。
Weight without motor，approximately 1.2KG.

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

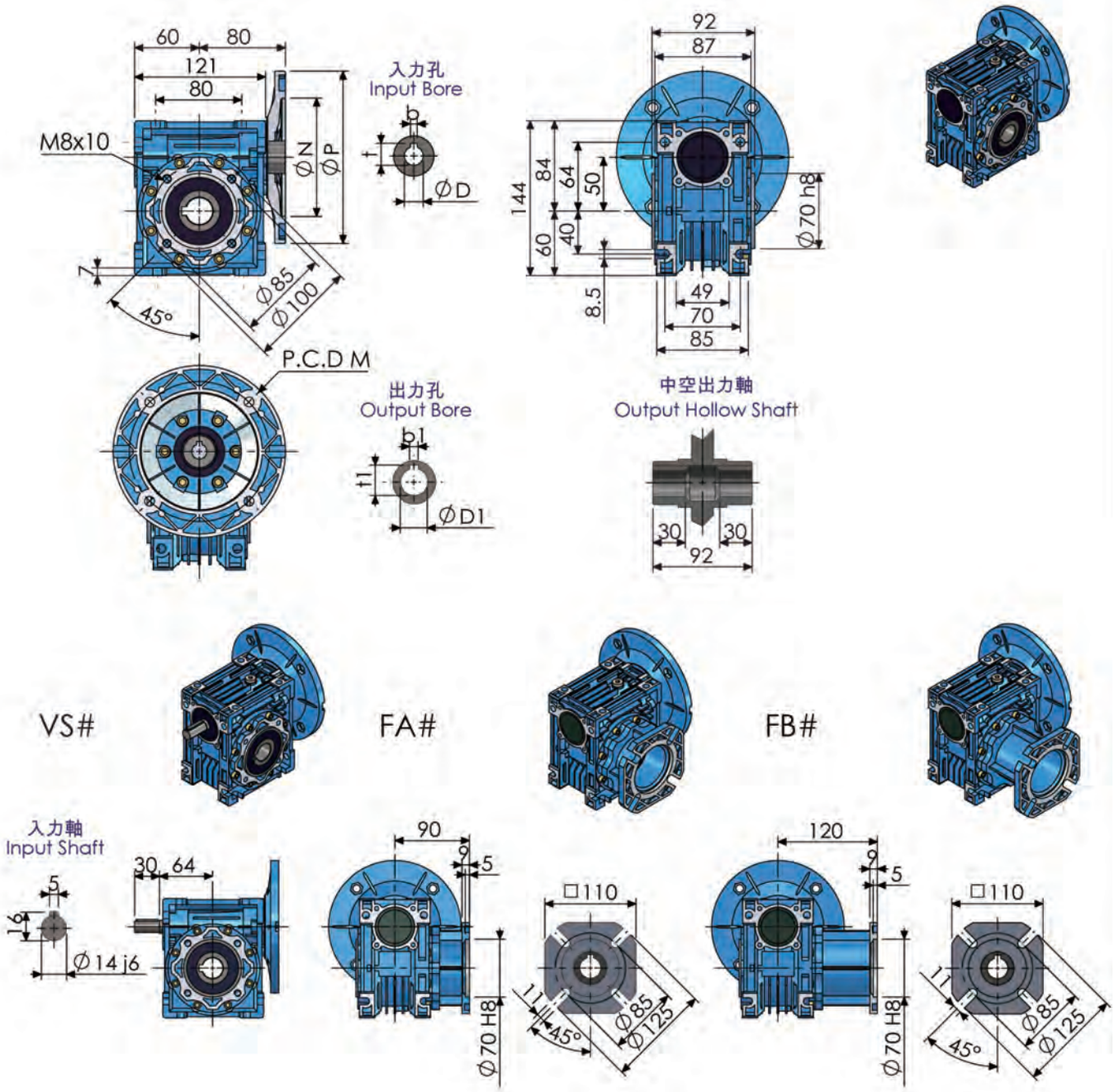
MODEL:PNMRV-040



重量（不含馬達），約 2.3KG。 Weight without motor，approximately 2.3KG. （ ）括號內尺寸為訂製規格。 ( )is customized diameter.	輸出尺寸 Output diameter		
	ΦD1 H7	b1	t1
	Φ18	6	20.8
	(Φ19)	(6)	(21.8)

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

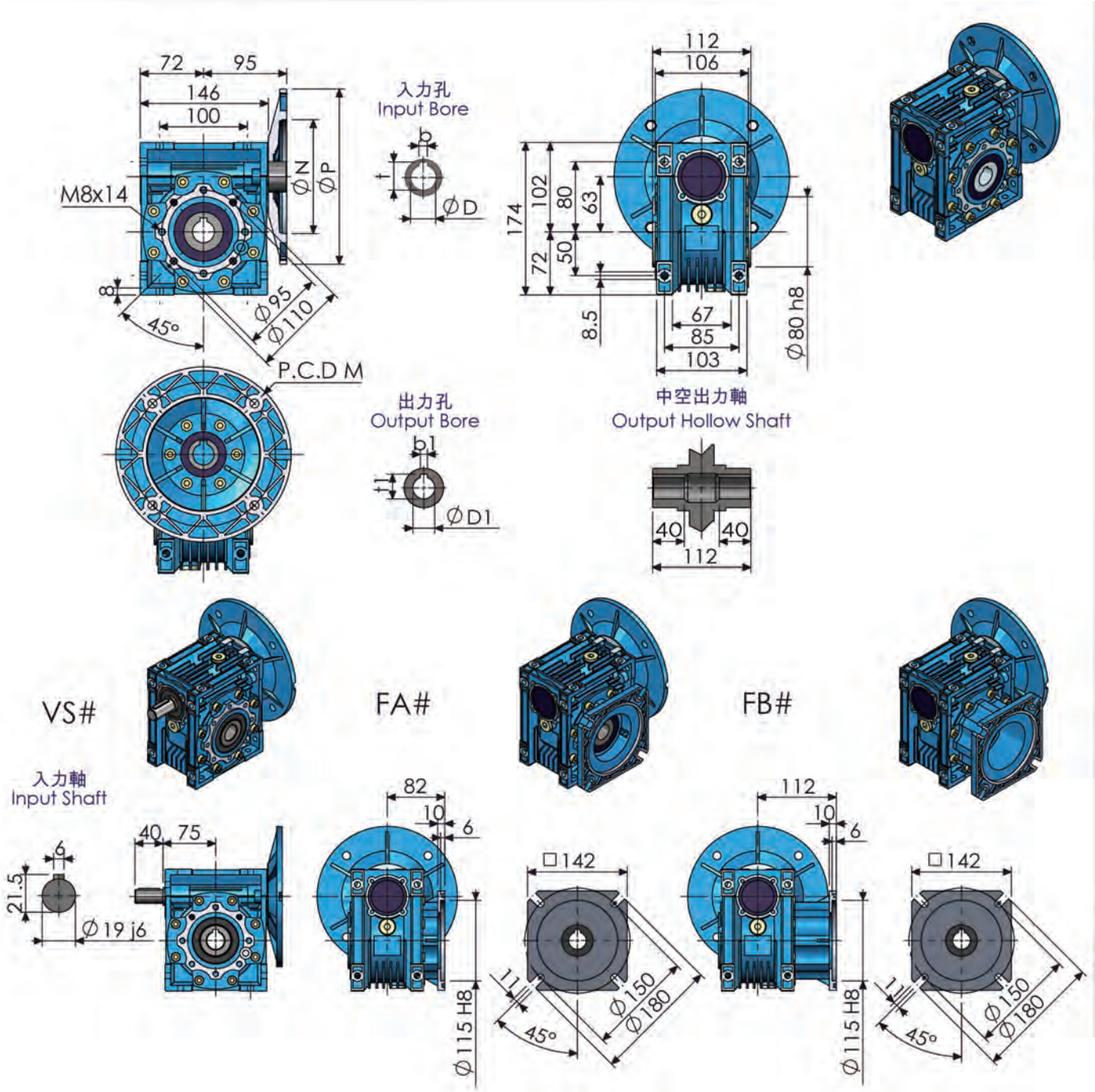
MODEL:PNMRV-050



重量（不含馬達），約 3.5KG。 Weight without motor，approximately 3.5KG. （ ）括號內尺寸為訂製規格。 ( )is customized diameter.	輸出尺寸 Output diameter		
	ΦD1 H7	b1	t1
	Φ25	8	28.3
	(Φ24)	(8)	(27.3)

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

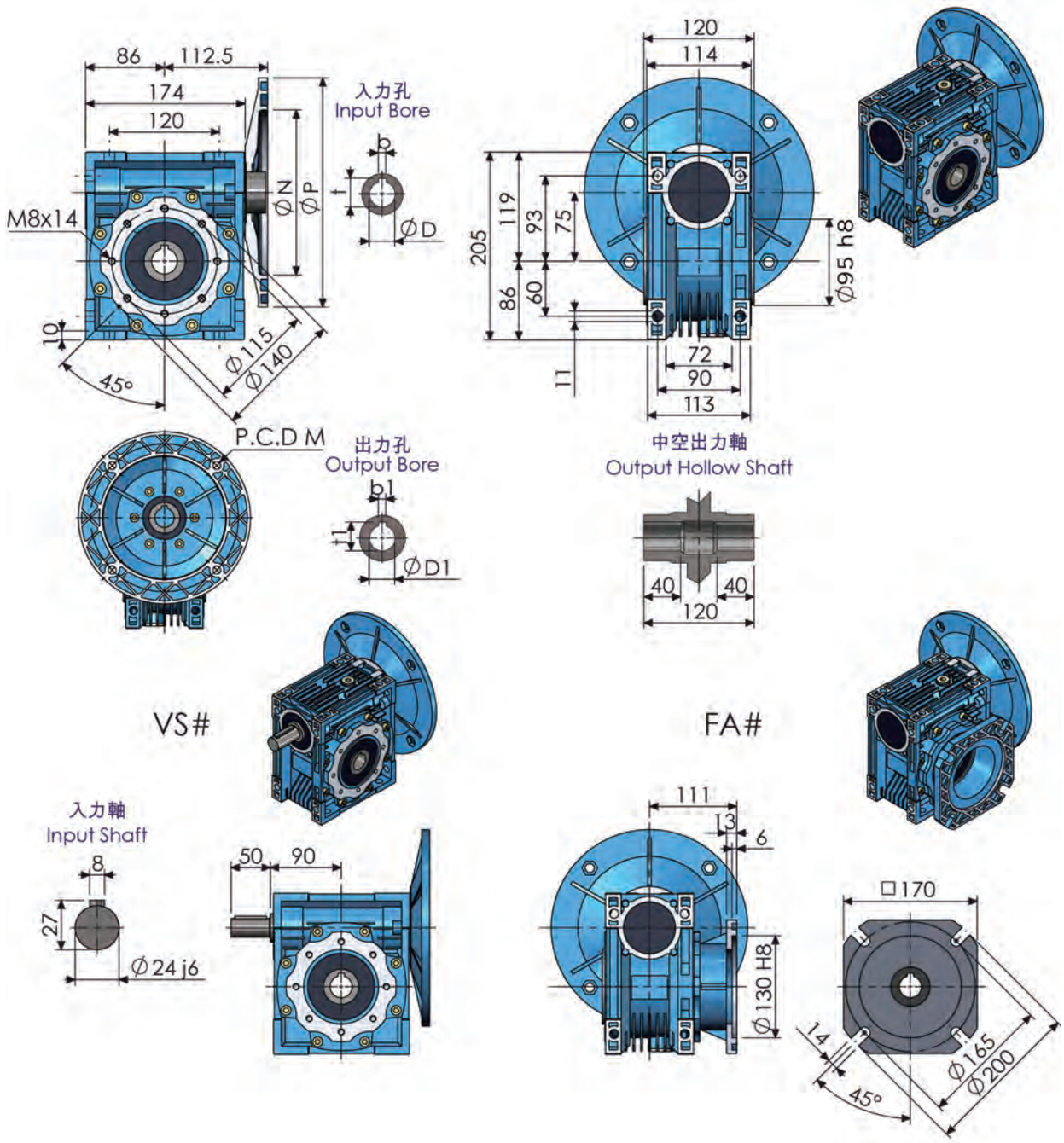
MODEL:PNMRV-063



重量（不含馬達），約 6.2KG。 Weight without motor，approximately 6.2KG. （ ）括號內尺寸為訂製規格。 ( )is customized diameter.	輸出尺寸 Output diameter		
	ΦD1 H7	b1	t1
	Φ25	8	28.3
	(Φ24)	(8)	(27.3)

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

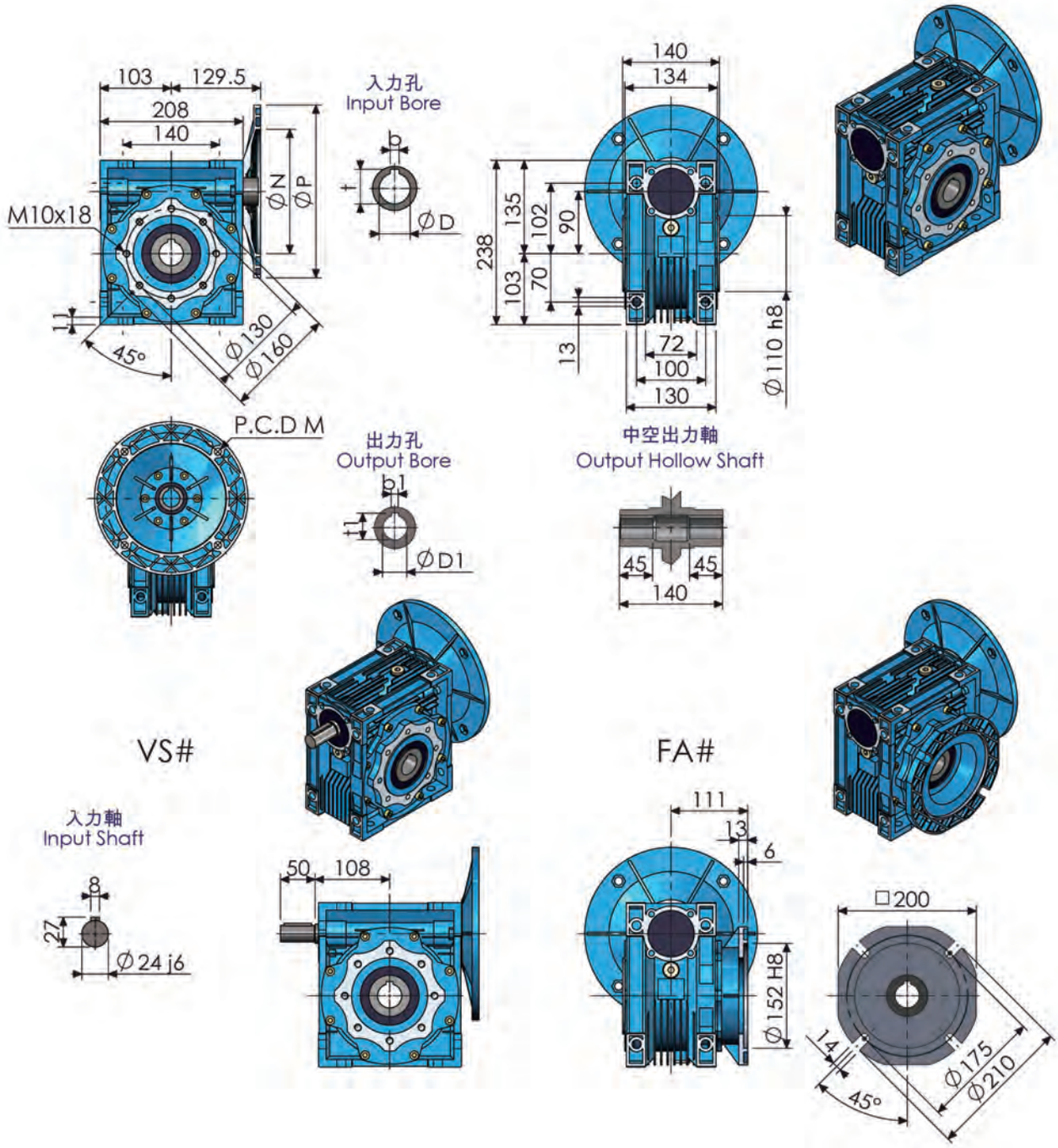
MODEL:PNMRV-075



重量（不含馬達），約 9KG。 Weight without motor，approximately 9KG. （）括號內尺寸為訂製規格。 （)is customized diameter.	輸出尺寸 Output diameter		
	ΦD1 H7	b1	t1
	Φ28	8	31.3
	(Φ35)	(10)	(38.3)

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

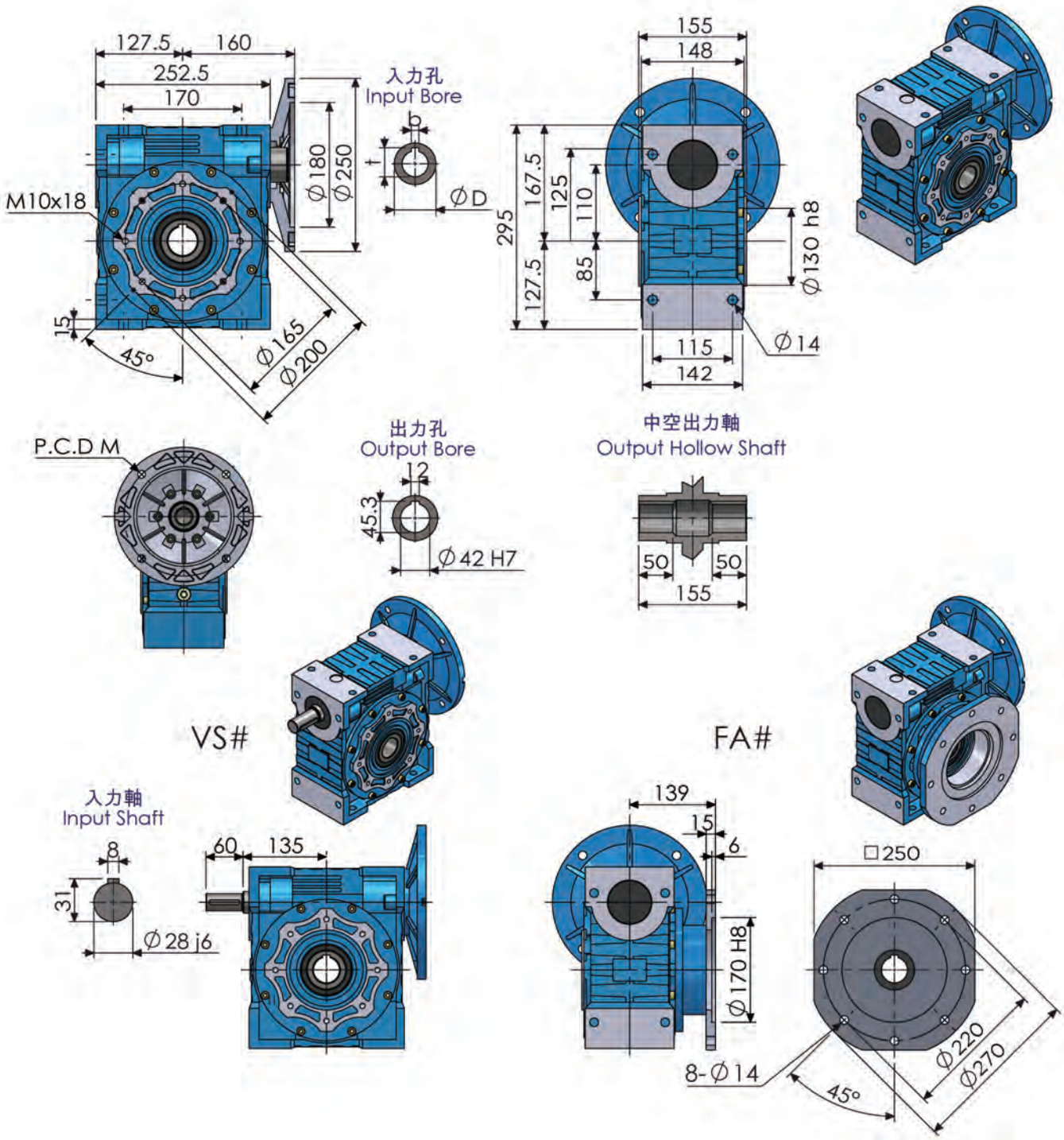
MODEL:PNMRV-090



重量（不含馬達），約 13KG。 Weight without motor，approximately 13KG. （ ）括號內尺寸為訂製規格。 ( )is customized diameter.	輸出尺寸 Output diameter		
	ΦD1 H7	b1	t1
	Φ35	10	38.3
	(Φ38)	(10)	(41.3)

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

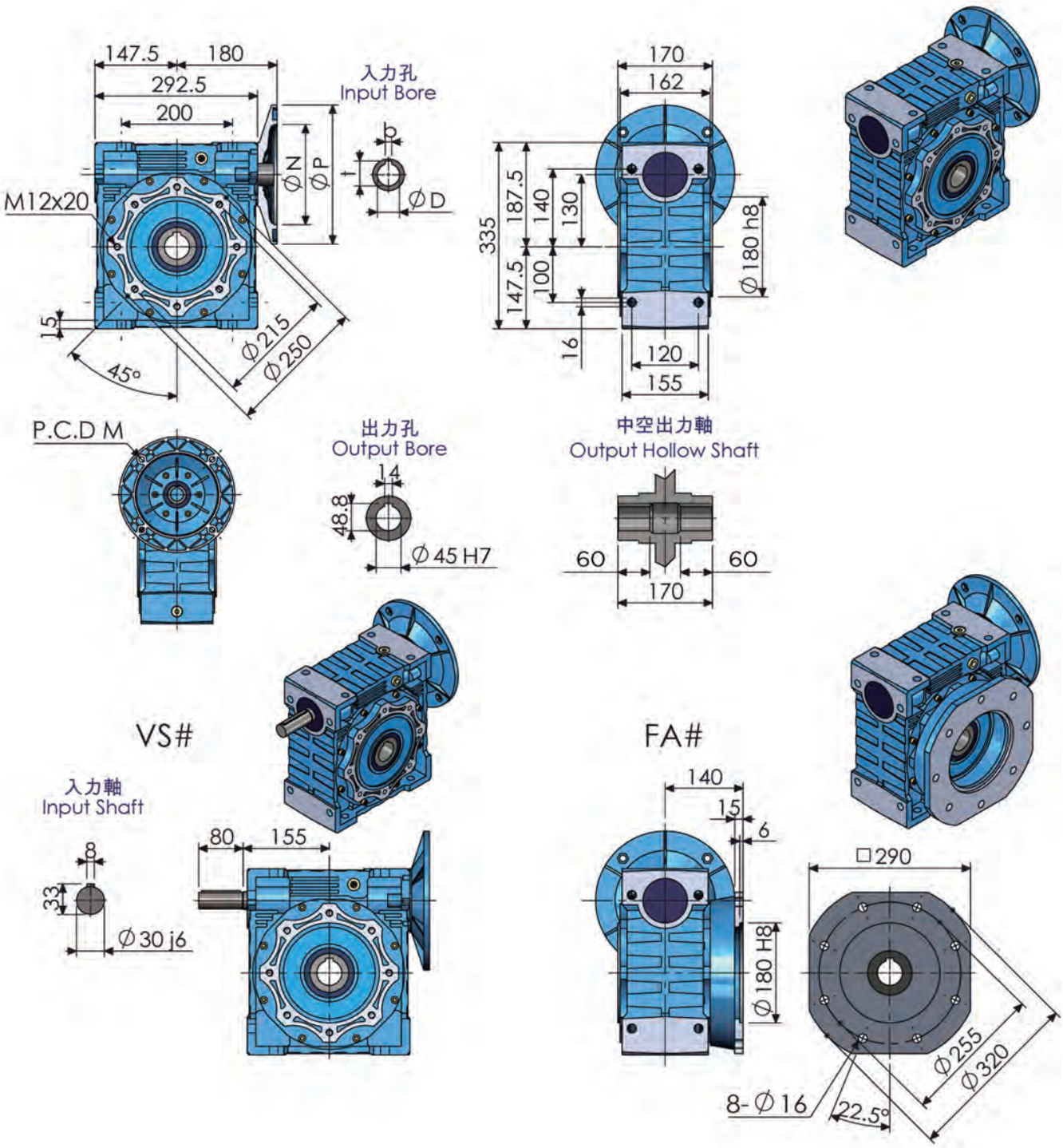
MODEL:PNMRV-110



重重量（不含馬達），約 35KG。
Weight without motor，approximately 35KG.

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

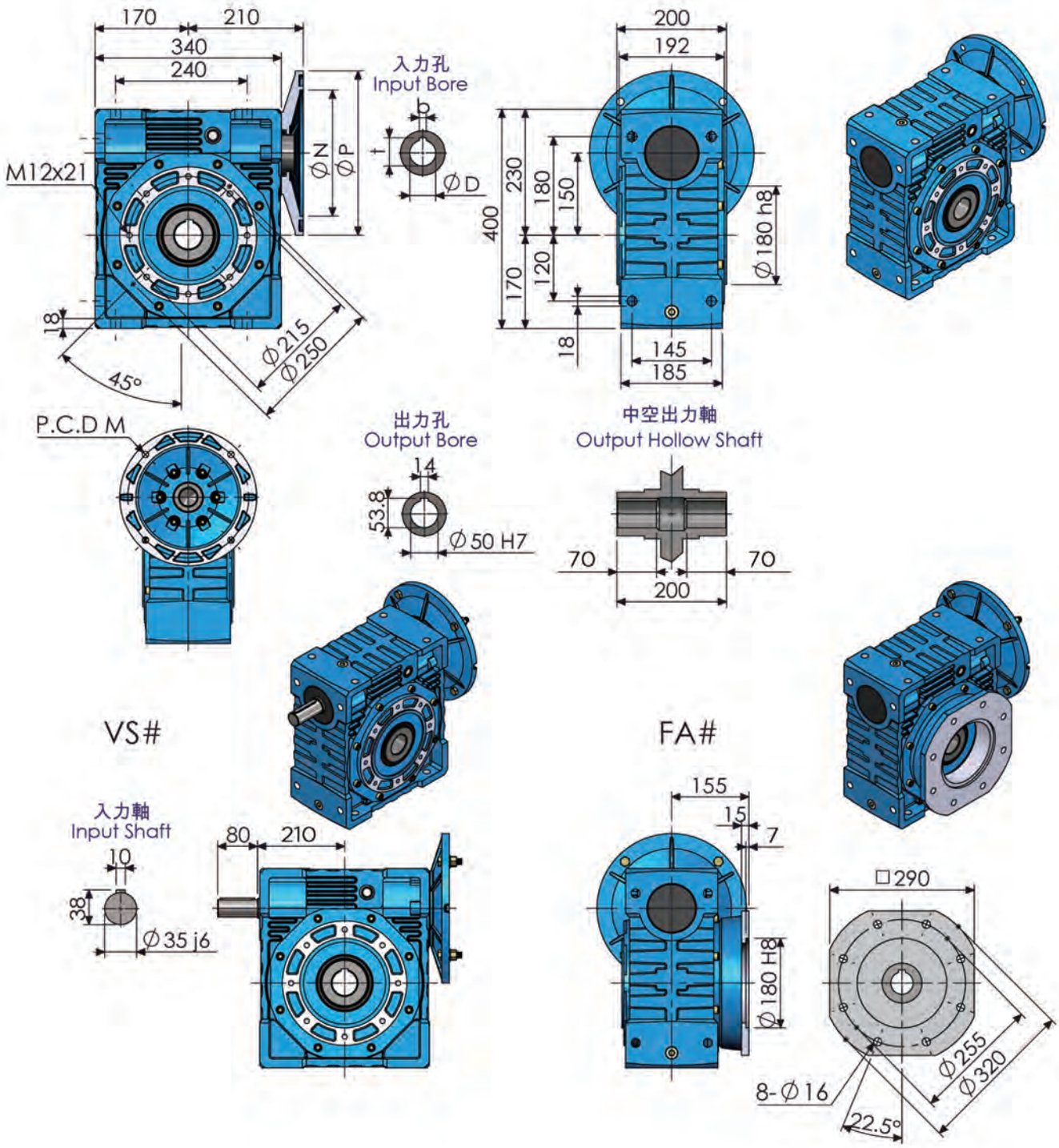
MODEL:PNMRV-130



重量（不含馬達），約 48KG。
Weight without motor，approximately 48KG.

鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

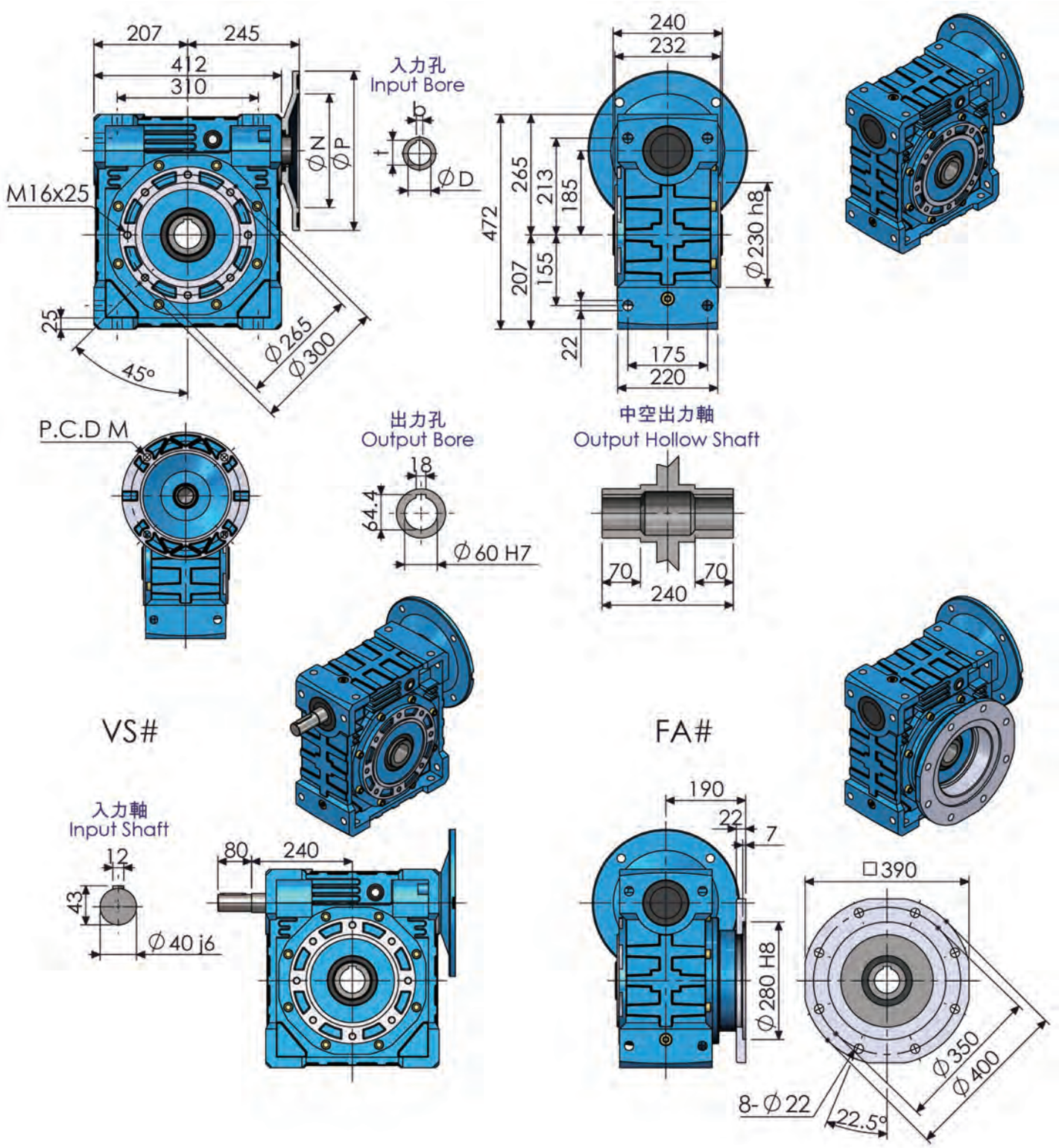
MODEL:PNMRV-150



重量（不含馬達），約 84KG。
Weight without motor，approximately 84KG.

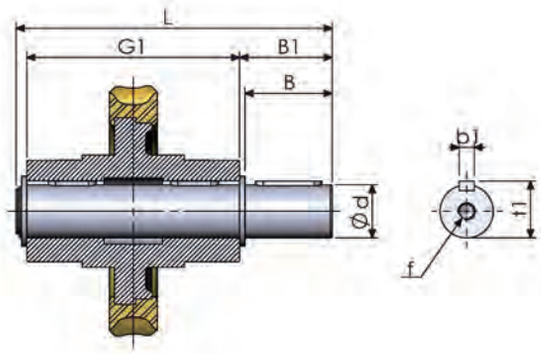
鋁合金蝸輪減速機尺寸規範 Aluminum Alloy Worm Gear Reducer series dimension

MODEL:PNMRV-185

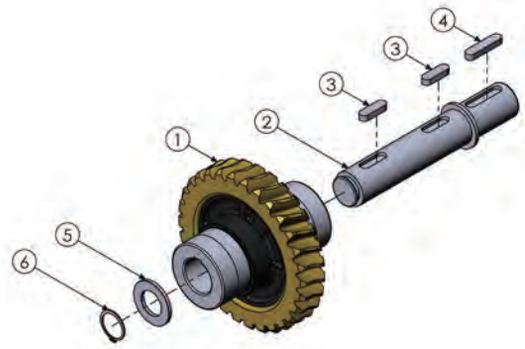


零配件尺寸圖
Dimension of Other Spare parts

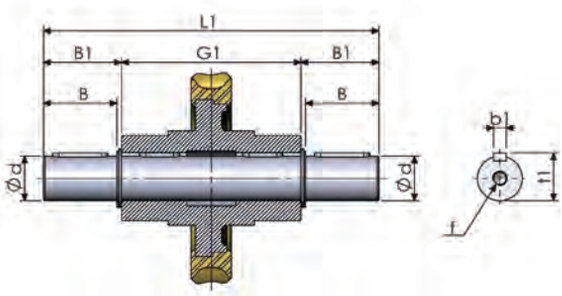
單出力軸
Single output shaft



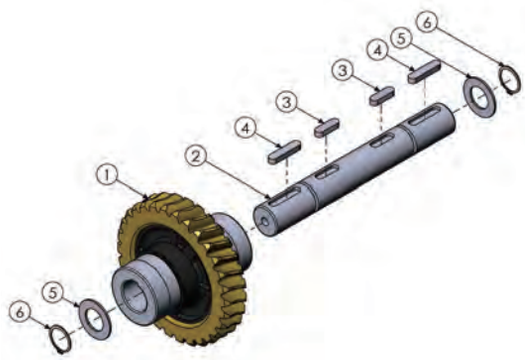
編號 NO	名稱 Name
1	蝸輪 Worm wheel
2	單出力軸 Single output shaft
3	鍵 Key
4	鍵 Key
5	平墊片 Spacer
6	S 扣環 Shaft circlip



雙出力軸
Double output shafts



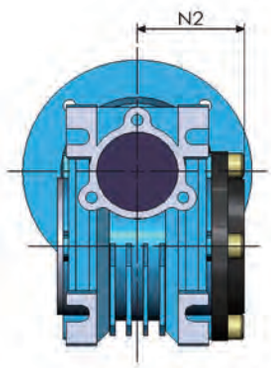
編號 NO	名稱 Name
1	蝸輪 Worm wheel
2	雙出力軸 Double output shaft
3	鍵 Key
4	鍵 Key
5	平墊片 Spacer
6	S 扣環 Shaft circlip

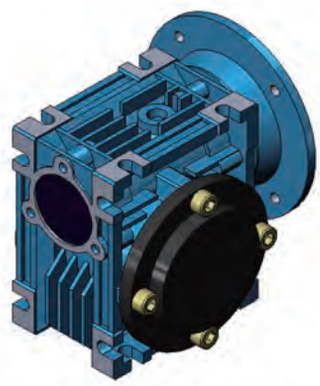


型號 Type	d	B	B1	G1	L	L1	f	b1	t1
030	14 h6	30	32.5	63	102	128	M6	5	16
040	18 h6	40	43	78	128	164	M6	6	20.5
050	25 h6	50	53.5	92	153	199	M10	8	28
063	25 h6	50	53.5	112	173	219	M10	8	28
075	28 h6	60	63.5	120	192	247	M10	8	31
090	35 h6	80	84	140	234	308	M12	10	38
110	42 h6	80	84.5	155	249	324	M16	12	45
130	45 h6	80	85	170	265	340	M16	14	48.5
150	50 h6	102	110	200	324	420	M20	14	53.5
185	60 h6	112	120	240	374	480	M20	18	64

( ) 括號內之尺寸為訂製規格。
( ) is customized diameter.

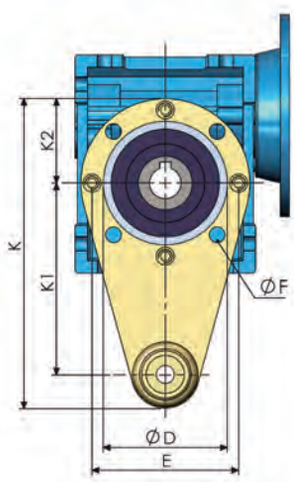
出力保護蓋
Output protect cover

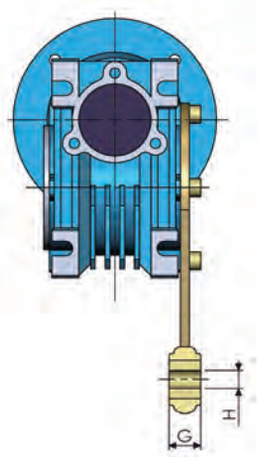


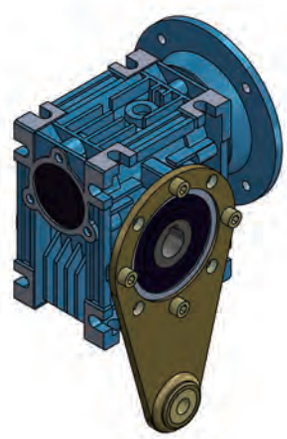


型號 Type	030	040	050	063	075	090	110	130	150	185
N2	42	50	58	69	74	86	94	102	113	113

扭力臂
Torque arm

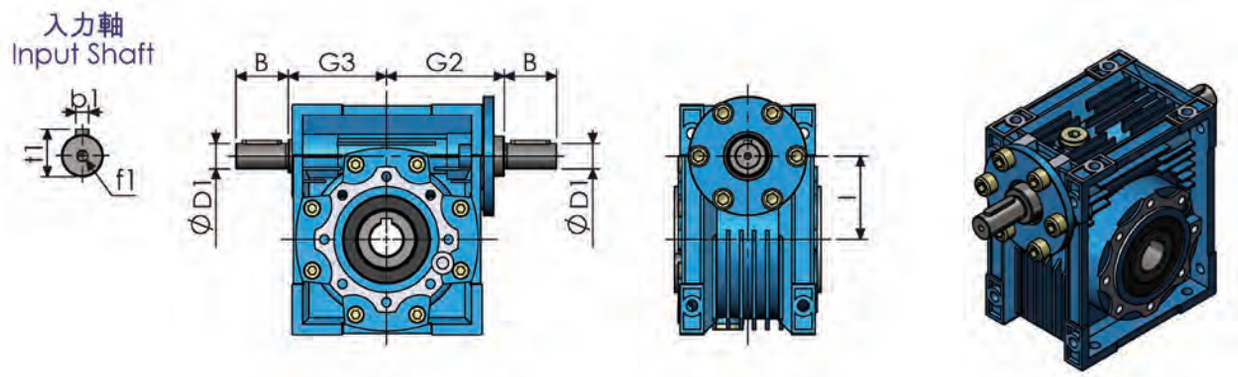






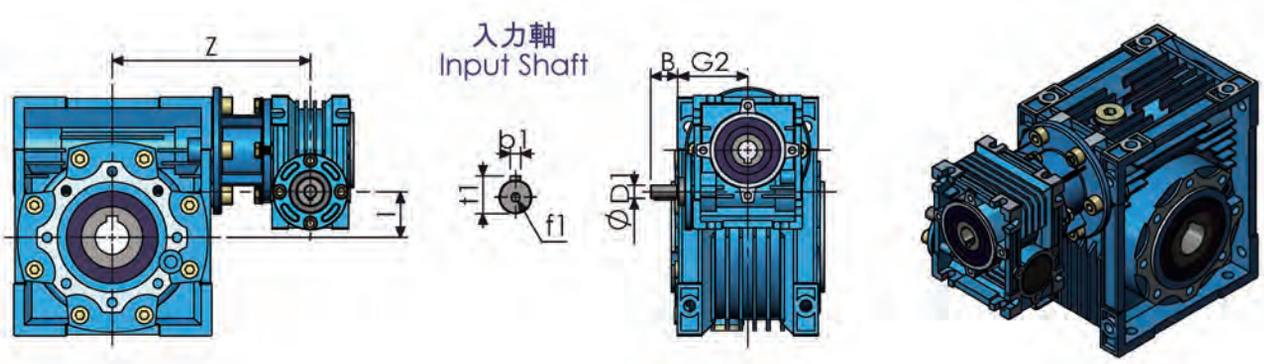
型號 Type	030	040	050	063	075	090	110	130	150	185
D	54	60	70	80	95	110	130	180	180	230
E	65	75	85	95	115	130	165	215	215	265
F	7	7	9	9	9	11	11	14	14	18
G	14	14	14	14	25	25	30	30	30	30
H	8	10	10	10	20	20	25	25	25	25
K	138	162	168	223	300	310	385	410	410	495
K1	85	100	100	150	200	200	250	250	250	300
K2	38	44	50	55	70	80	100	125	125	150

鋁合金蝸輪減速機 - 雙入力軸尺寸表
Double input shafts dimension



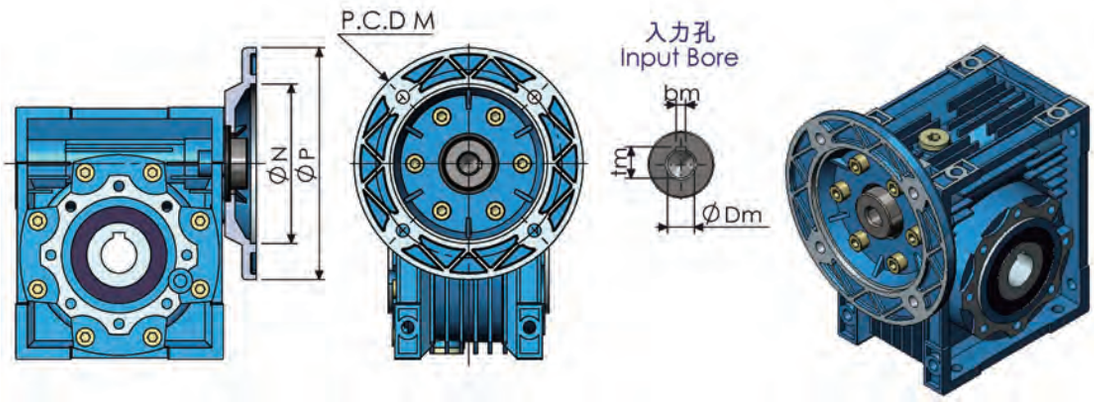
PNRV	030	040	050	063	075	090	110	130	150
B	20	23	30	40	50	50	60	80	80
D1	9 j6	11 j6	14 j6	19 j6	24 j6	24 j6	28 j6	30 j6	35 j6
G2	51	60	74	90	105	125	142	162	195
G3	45	53	64	75	90	108	135	155	175
I	30	40	50	63	75	90	110	130	150
b1	3	4	5	6	8	8	8	8	10
f1	-	-	M6	M6	M8	M8	M10	M10	M12
t1	10.2	12.5	16	21.5	27	27	31	33	38

鋁合金蝸輪減速機 - 雙段系統尺寸表
Double stages system dimension



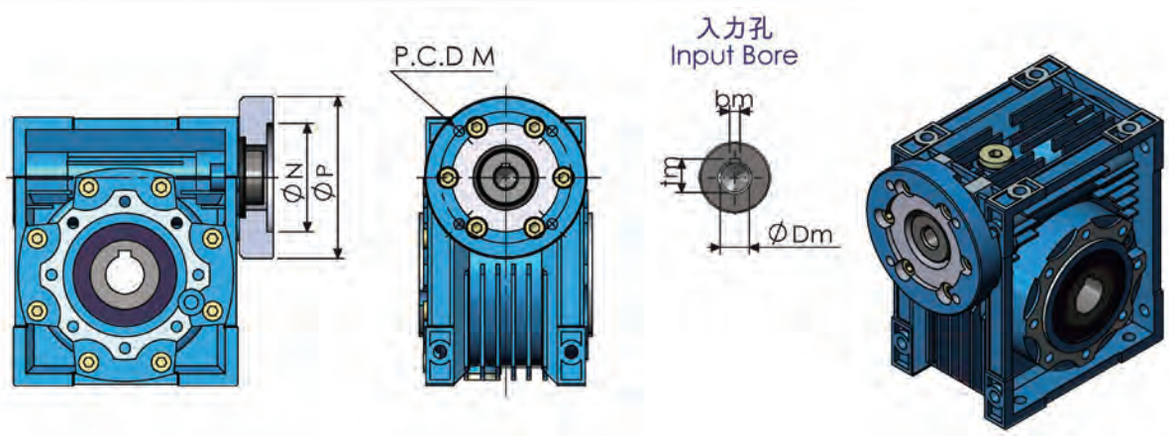
PNRV-PNMRV	030-040	030-050	030-063	040-075	040-090	050-110	063-130	063-150
B	20	20	20	23	23	30	40	40
D1	9 j6	9 j6	9 j6	11 j6	11 j6	14 j6	19 j6	19 j6
G2	51	51	51	60	60	74	90	90
I	10	20	33	35	50	60	67	87
b1	3	3	3	4	4	5	6	6
f1	-	-	-	-	-	M6	M6	M6
t1	10.2	10.2	10.2	12.5	12.5	16	21.5	21.5
Z	120	130	145	165	182	225	245	270

標準入力法蘭尺寸表 PAM-B5 & PAM-B14
Input flange for PAM-B5 & PAM-B14



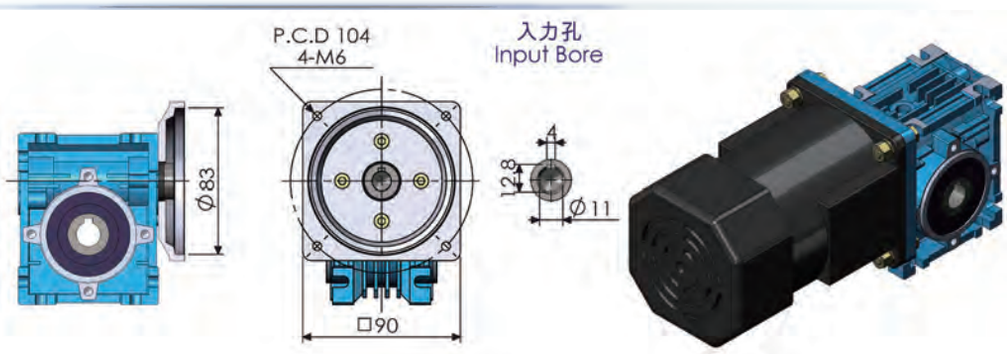
B5		IEC									
		056	063	071	080	090	100	112	132	160	180
P		120	140	160	200	200	250	250	300	350	350
N		80	95	110	130	130	180	180	230	250	250
M		100	115	130	165	165	215	215	265	300	300
入力孔 Input Bore	bm	3	4	5	6	8	8	8	10	12	14
	tm	10.4	12.8	16.3	21.8	27.3	31.3	31.3	41.3	45.3	51.8
	Dm	9	11	14	19	24	28	28	38	42	48

PNMRV 入力法蘭 (PAM B14)
PNMRV Input flange

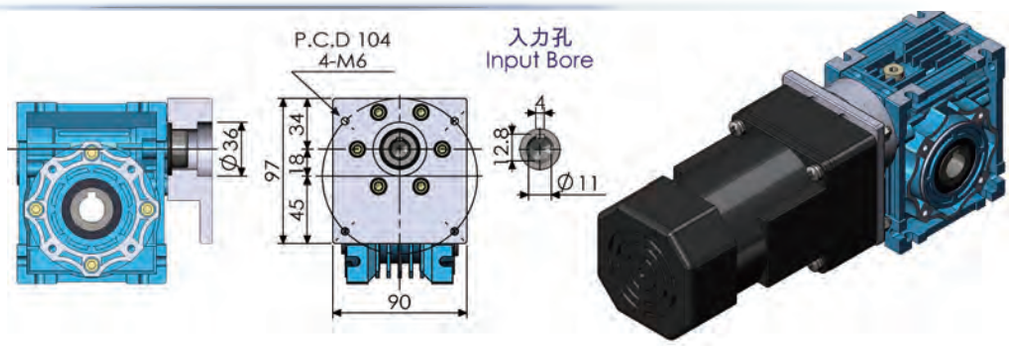


B14		IEC						
		056	063	071	080	090	100	112
P		80	90	105	120	140	160	160
N		50	60	70	80	95	110	110
M		65	75	85	100	115	130	130
入力孔 Input Bore	bm	3	4	5	6	8	8	8
	tm	10.4	12.8	16.3	21.8	27.3	31.3	31.3
	Dm	9	11	14	19	24	28	28

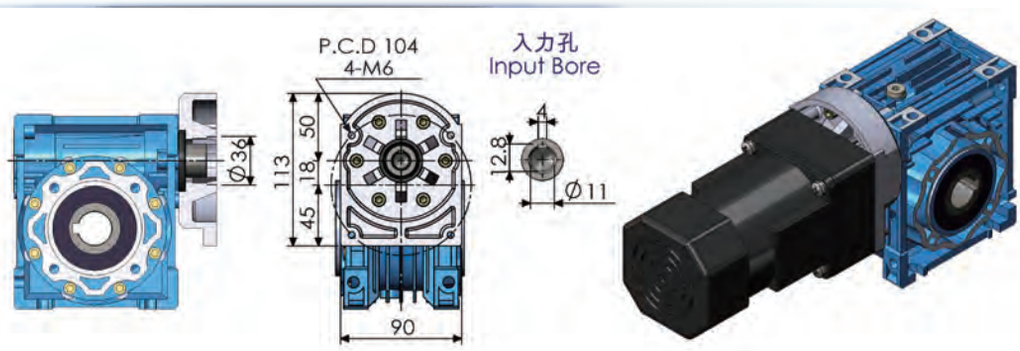
特殊入力法蘭尺寸表 Special input flange (PNMRV30,40+5IK)
Special input flange of PNMRV



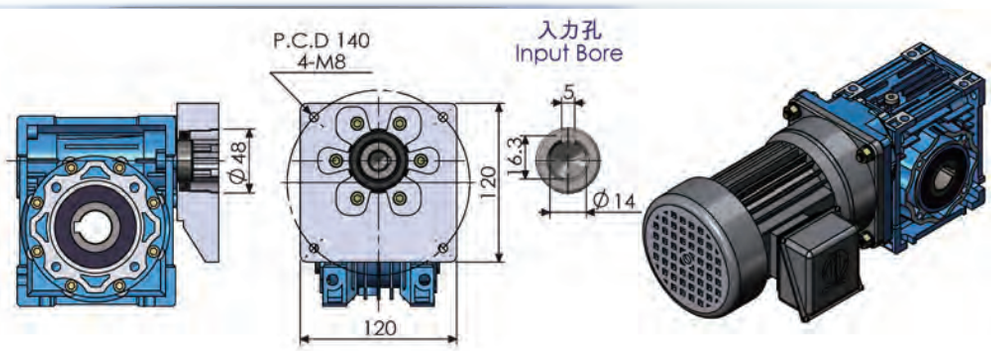
特殊入力法蘭 Special input flange (PNMRV30,40+5GN)
外型尺寸圖 Series dimensions



特殊入力法蘭 Special input flange (PNMRV50,63+5GN)
外型尺寸圖 Series dimensions



特殊入力法蘭 Special input flange (PNMRV50+GV18)
外型尺寸圖 Series dimensions



NOTE:

NOTE: