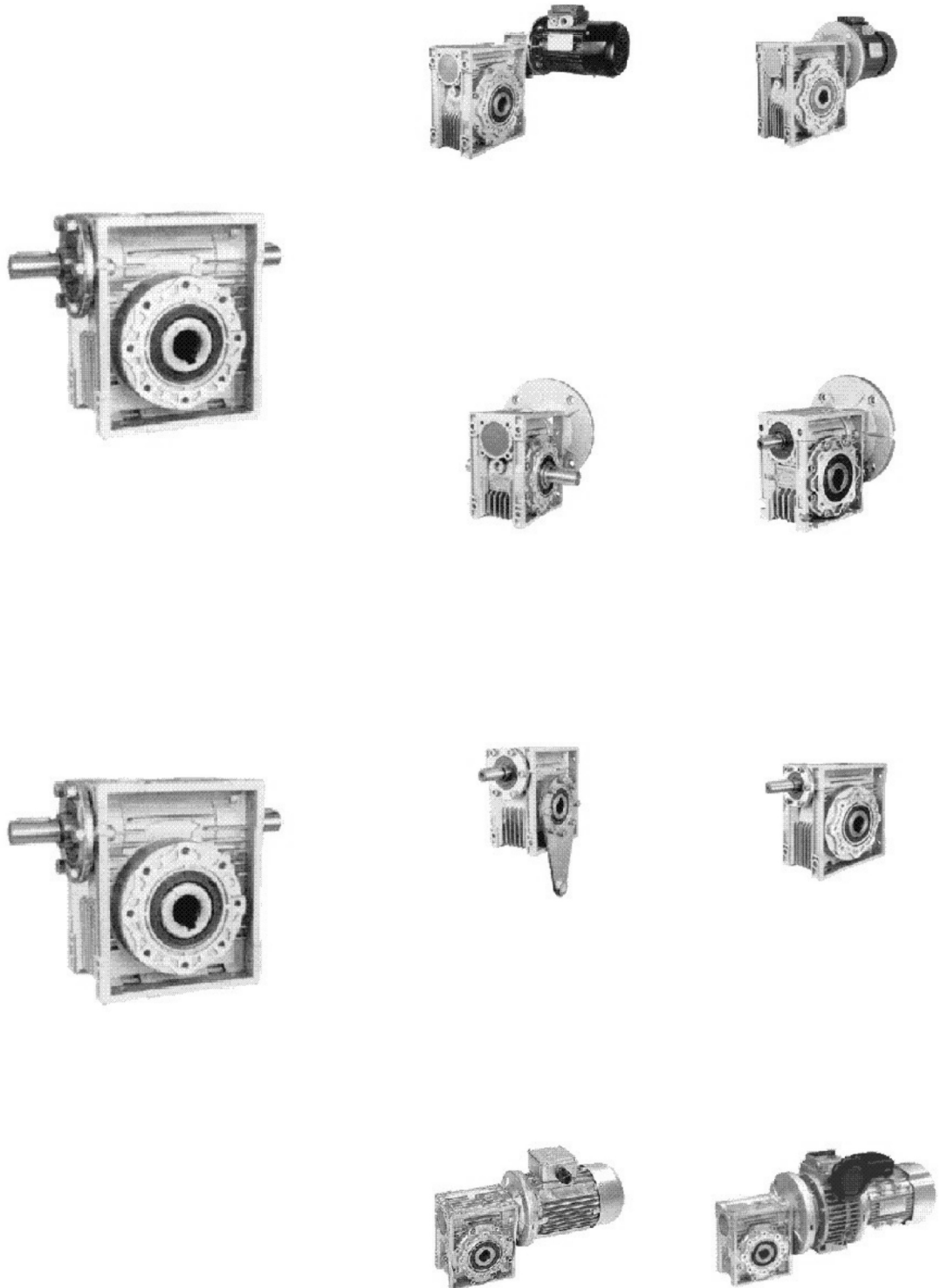




6 RV 系列 铝合金蜗轮蜗杆减速机

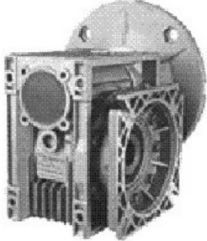
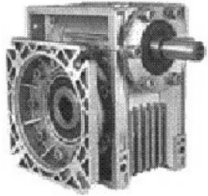
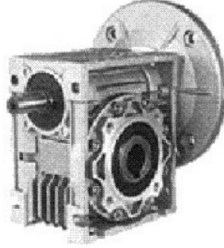
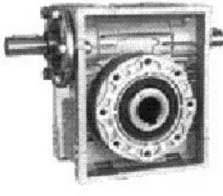
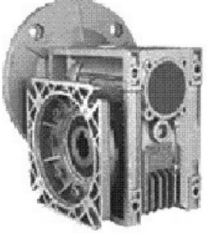
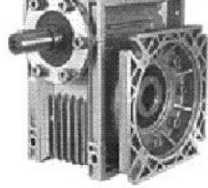
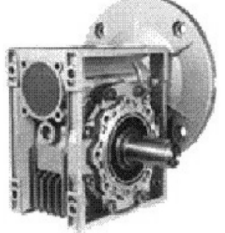
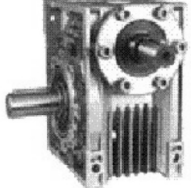
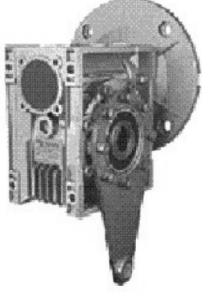
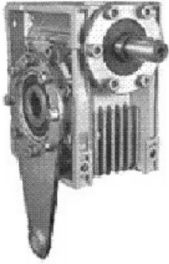
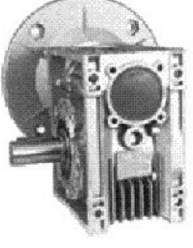
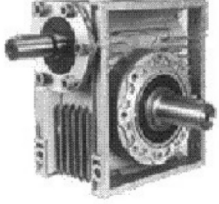
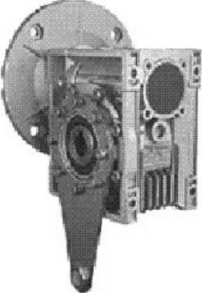
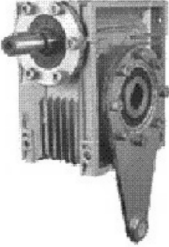
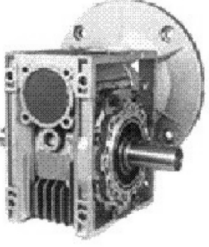
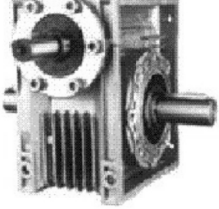
RV series Aluminium box worm gear units





6.1 RV输出形式:

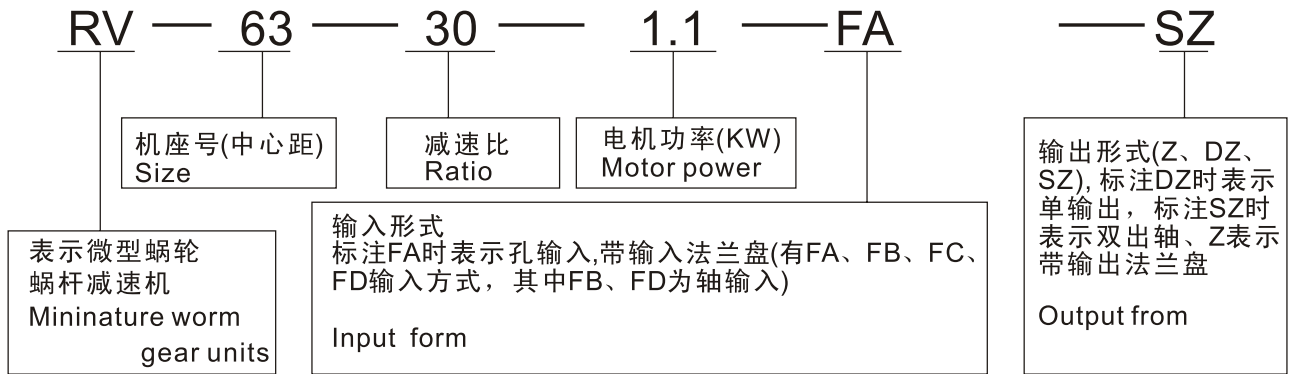
Outline and mounting dimension:

<p>RV...FC</p>  <p>表示蜗杆尾部输出 Worm end output</p>	<p>RV...FD</p>  <p>表示轴输入,蜗杆尾部输出 Shaft input, worm end output</p>	<p>RV...DZ1</p>  <p>表示配单轴输出,输出为左方向 Single shaft output, left output</p>	<p>RV...FB...DZ1</p>  <p>表示轴输入,单向轴左方向输出 Shaft input, single shaft output from left</p>
<p>RV...DZ2</p>  <p>表示单轴右方向输出 single shaft output from right</p>	<p>RV...FB...DZ2</p>  <p>表示轴输入,单轴右方向输出 Shaft input, single shaft output from right</p>	<p>RV...SZ</p>  <p>表示配双轴,左右方向输出 Left and right output with double shaft</p>	<p>RV...FB...SZ1</p>  <p>表示轴输入,单轴右方向输出 Shaft input, single shaft output from right</p>
<p>RV...F4</p> 	<p>RV...F4</p> 	<p>RV...F5</p> 	<p>RV...F5</p> 
<p>RV...A1</p> 	<p>RV...A1</p> 	<p>RV...A2</p> 	<p>RV...A2</p> 



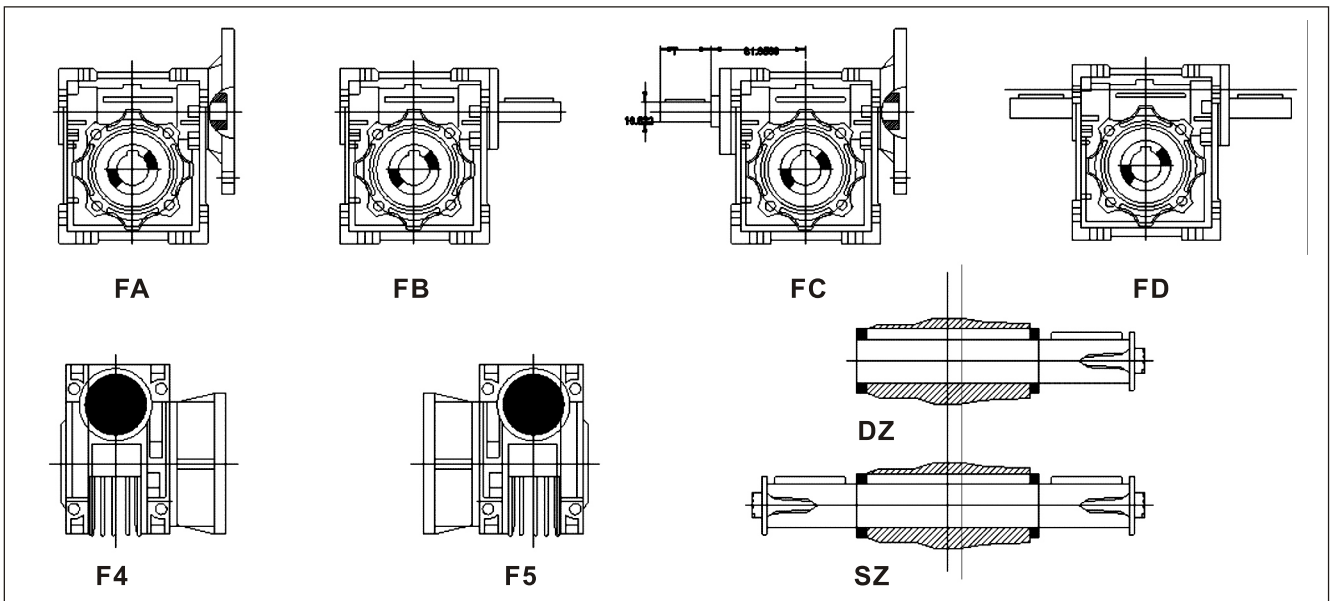
6.2 RV系列减速机形式表示方法:

6.2 RV serie model expressing example:



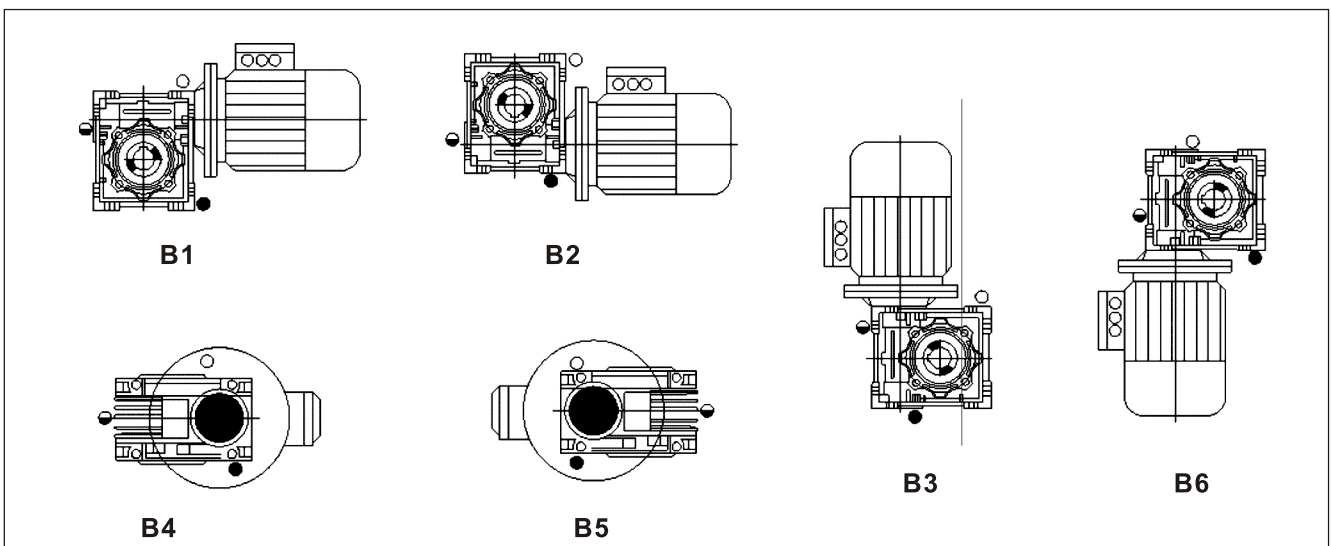
6.3 输入输出图表

Output nand input drawing



6.3 安装形式:

Mounting position:





6.4 转距功率参数表 (配4极1400RPM电机) Torque power parameter table (1400RPM motor with 4-pole)

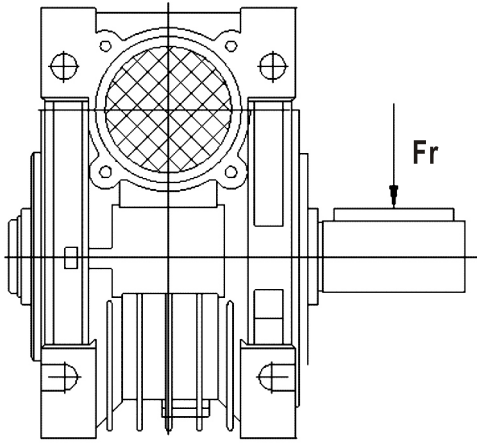
中心距	i	n2	KW ₁	M ₂	中心距	i	n2	KW ₁	M ₂	中心距	i	n2	KW ₁	M ₂
25	7.5	186.7	0.09	4	30	7.5	186.7	0.18	7	40	7.5	186.7	0.37	16
	10	140	0.09	5		10	140	0.18	9		10	140	0.37	27
	15	93.3	0.09	7		15	93.3	0.18	13		15	93.3	0.37	28
	20	70	0.09	9		20	70	0.18	17		20	70	0.37	39
	30	46.7	0.09	12		25	56	0.18	21		25	56	0.37	47
	40	35	0.09	15		30	46.7	0.18	24		30	46.7	0.37	53
	50	28	0.06	12		40	35	0.12	19		40	35	0.25	44
	60	23.3	0.06	14		50	28	0.12	23		50	28	0.25	47
						60	23.3	0.09	19		60	23.3	0.18	43
				80	17.5	0.06	14	80	17.5	0.12	34			
								100	14	0.12	38			
50	7.5	186.7	0.75	33	63	7.5	186.7	1.50	68	75	7.5	186.7	4	182
	10	140	0.75	42		10	140	1.50	88		10	140	3	180
	15	93.3	0.75	58		15	93.3	1.50	126		15	93.3	3	261
	20	70	0.75	81		20	70	1.50	166		20	70	2.2	240
	25	56	0.55	71		25	56	1.10	146		25	56	1.5	205
	30	46.7	0.55	81		30	46.7	1.10	167		30	46.7	2.2	337
	40	35	0.55	101		40	35	1.10	207		40	35	1.1	216
	50	28	0.37	80		50	28	0.55*	124		50	28	1.1	264
	60	23.3	0.37	89		60	23.3	0.55*	140		60	23.3	1.1	279
	80	17.5	0.25	72		80	17.5	0.37	115		80	17.5	0.55	180
	100	14	0.18	60		100	14	0.37	129		100	14	0.55	206
90	7.5	186.7	4	180	110	7.5	186.7	7.5	345	130	7.5	186.7	7.5	343
	10	140	4	236		10	140	7.5	455		10	140	7.5	453
	15	93.3	4	342		15	93.3	5.5	484		15	93.3	7.5	664
	20	70	4	458		20	70	5.5	638		20	70	7.5	864
	25	56	3	420		25	56	5.5	790		25	56	7.5	1074
	30	46.7	3	479		30	46.7	4	647		30	46.7	5.5	900
	40	35	2.2	433		40	35	3	638		40	35	5.5	1171
	50	28	2.2	492		50	28	3	767		50	28	5.5	1379
	60	23.3	1.5	424		60	23.3	2.2	648		60	23.3	4	1179
	80	17.5	1.1	365		80	17.5	1.5	548		80	17.5	2.2	816
	100	14	0.75	302		100	14	1.1	473		100	14	2.2	966

注: n₁=输入速度 n₁=input
M₂=输出扭距 n₂=output

n₂=输入速度 n₂=output
i=传动比



6.5 减速机出力轴的许可径向加载力 (N) Permissible radial forces on output shaft (N)



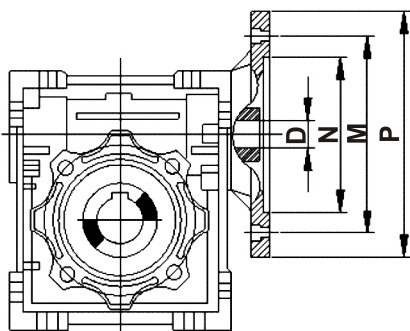
减速比	输出转速	RV30	RV40	Rv50	Rv63	Rv75	Rv90	Rv110	Rv130
5	280	599	1149	1586	2062	2428	2687	3389	4433
7.5	186	691	1325	1829	2378	2799	3098	3908	5112
10	140	758	1454	2007	2609	3072	3400	4288	5610
15	94	868	1665	2298	2988	3518	3893	4910	6424
20	70	954	1829	2525	3283	3865	4277	5395	7057
25	56	1033	1981	2735	3556	4187	4633	5844	7645
30	47	1088	2087	2661	3745	4410	4880	6155	8052
40	35	1204	2309	3188	4145	4880	5401	6812	8912
50	28	1296	2485	3431	4461	5252	5812	7331	9590
60	24	1381	2649	3658	4756	5599	6169	7815	10224
80	18	1516	2907	4014	5218	6144	6799	8578	11219
100	14	1638	3142	4338	5639	6639	7348	8268	12124

*表中的数值为作用于出力轴中点的许可加载力。
 *当减速机为双出力轴时，折算到轴端的径向全力不能超过表中的数值。
 *当径向力和轴向力同时施加时，最大许可的轴向推力为径向力的1/5。

*Values indicate permissible radial forces with application of force on the center of the output shaft.
 *When the reducer is double output shaft, the values of radial forces on shaft end are lower than the values in the table.
 *When the radial force and axial force are applied at the same time, the radial force is 5 times as large as the maximum axial force.

6.6 减速机的电机配合接口

Matching joint of motor

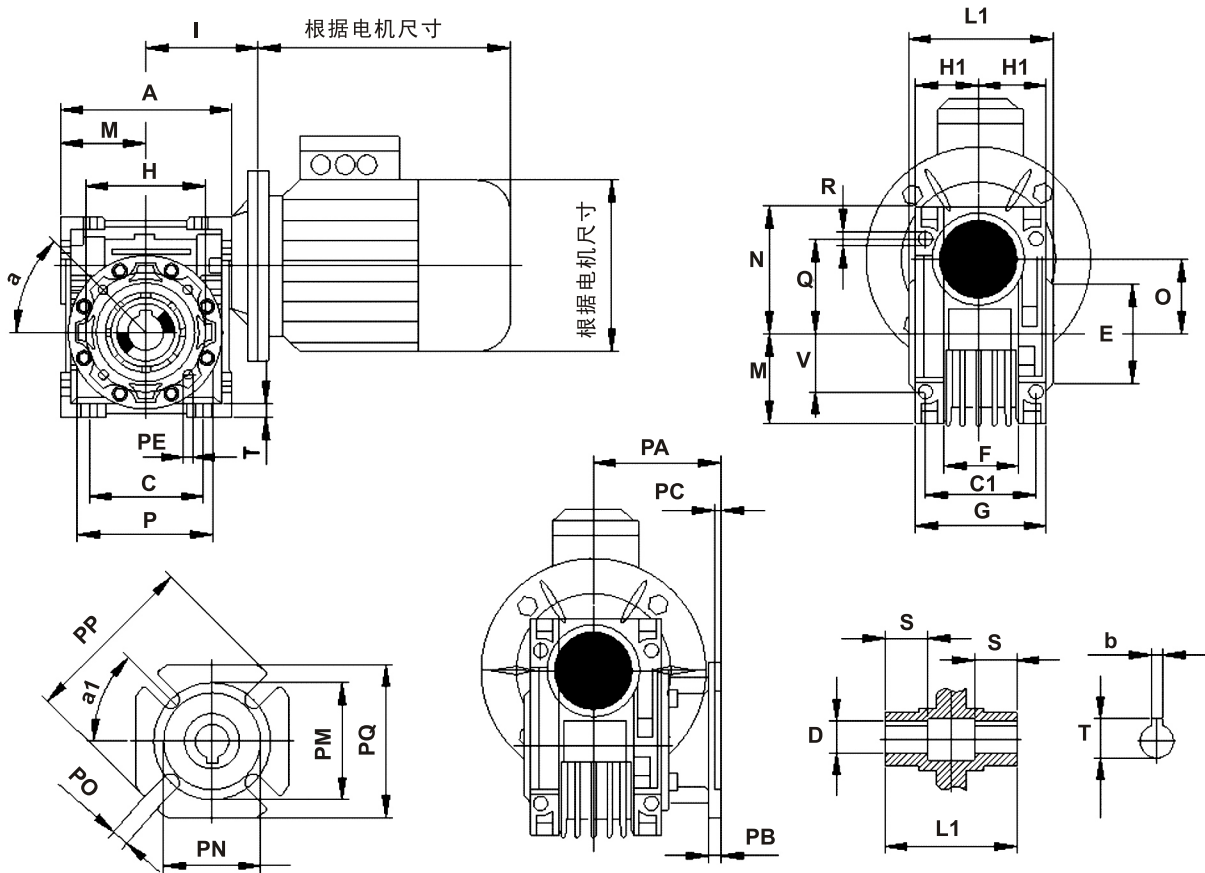


	法兰规格	N		M		P		5	7.5	10	15	20	25	30	40	50	60	80	100	
		B5	B14	B5	B14	B5	B14													
RV30	56B5/B14	80	50	100	65	120	80	9	9	9	9	9	9	9	9	9	9	9	9	-
	63B5/B14	95	60	115	75	140	90	11	11	11	11	11	11	11	11	11	11	11	11	-
RV40	56B5	80	-	100	-	120	-	-	-	-	-	-	-	-	-	-	9	9	9	9
	63B5/B14	95	60	115	75	140	60	11	11	11	11	11	11	11	11	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	14	14	14	14	14	14	14	14	14	14	14	14	14
	80B5/B14	130	80	165	100	200	120	19	19	19	19	19	19	19	19	19	-	-	-	-
RV50	63B5	95	-	115	-	140	-	-	-	-	-	-	-	-	-	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	14	14	14	14	14	14	14	14	14	14	14	14	-
RV63	80B5/B14	130	80	165	100	200	120	19	19	19	19	19	19	19	19	19	19	19	19	19
	71B5/B14	110	70	130	85	160	105	-	-	-	-	-	-	-	-	14	14	14	14	14
	90B5/B14	130	95	165	115	200	140	-	24	24	24	24	24	24	24	-	-	-	-	-
RV75	80B5/B14	130	80	165	100	200	120	-	-	-	-	-	-	-	19	19	19	19	19	19
	90B5/B14	130	95	165	115	200	140	-	24	24	24	24	24	24	24	24	-	-	-	-
	100B5/B14	180	110	215	130	250	180	-	28	28	28	-	-	-	-	-	-	-	-	-
RV90	112B5/B14	180	110	215	130	250	180	-	28	-	-	-	-	-	-	-	-	-	-	-
	80B5/B14	130	80	165	100	200	120	-	-	-	-	-	-	-	-	-	19	19	19	19
	90B5/B14	130	95	165	115	200	140	-	-	-	-	-	24	24	24	24	24	24	-	-
RV110	100B5/B14	180	110	215	130	250	160	-	28	28	28	28	28	28	28	-	-	-	-	-
	112B5/B14	180	110	215	130	250	160	-	28	28	28	28	28	28	28	-	-	-	-	-
	90B5	130	-	165	-	200	-	-	-	-	-	-	-	-	-	-	24	24	24	24
	100B5	180	-	215	-	250	-	-	28	28	28	28	28	28	28	28	28	28	28	28
RV130	112B5	180	-	215	-	250	-	-	28	28	28	28	28	28	28	28	28	28	28	28
	132B5	230	-	265	-	300	-	-	38	38	38	38	38	38	-	-	-	-	-	-
	90B5	130	-	165	-	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	100B5	180	-	215	-	250	-	-	-	-	-	-	-	-	-	-	28	28	28	28



6.7 外形安装尺寸

6.7 Outline and mounting dimension:



中心距	A	B	C	C1	D(H7)	E(h8)	F	G	H	H1	I	L1	M	N	O	P	Q	R
30	80	97	54	44	14	55	32	56	65	29	55	63	40	57	30	75	44	6.5
40	100	121.5	70	60	18	60	43	71	75	36.5	70	78	50	71.5	40	87	55	6.5
50	120	144	80	70	25	70	49	85	85	43.5	80	92	60	84	50	100	64	8.5
63	144	174	100	85	25	80	67	103	95	53	95	112	72	102	63	110	80	8.5
75	172	205	120	90	28	95	72	112	115	57	112.5	120	86	119	75	140	93	11
90	206	238	140	100	35	110	74	130	130	67	129.5	140	103	135	90	160	102	13
110	252.5	295	170	115	42	130	-	144	165	74	160	155	127.5	167.5	110	200	125	14
130	292.5	335	200	120	45	180	-	155	215	81	180	170	147.5	187.5	130	250	140	16

注:带轴输出请参照DZ、SZ1

Note: To shaft output, please refer to DZ、SZ1.

中心距	S	T	V	PA	PB	PC	PE	PM	PN(H8)	P0	PP	PQ	b	t	a	a1	Kg
30	21	5.5	27	54.5	6	4	M6X11(n=4)	68	50	6.5(n=4)	80	70	5	16.3	0°	45°	1.2
40	26	6.5	35	87	7	4	M6X8(n=4)	75	60	9(n=4)	110	95	6	20.8	45°	45°	2.3
50	30	7	40	90	9	5	M8X10(n=4)	85	70	11(n=4)	125	110	8	28.3	45°	45°	3.5
63	36	8	50	82	10	6	M8X14(n=4)	150	115	11(n=4)	180	142	8	28.3	45°	45°	6.2
75	40	10	60	111	13	6	M8X14(n=4)	165	130	14(n=4)	200	170	8	31.3	45°	45°	9
90	45	11	70	111	13	6	M10X18(n=8)	175	152	14(n=8)	210	200	10	38.3	45°	45°	13
110	50	14	85	131	15	6	M10X18(n=8)	230	170	14(n=8)	280	260	12	45.3	45°	45°	35
130	60	15	100	140	15	6	M12X31(n=8)	255	180	16(n=8)	320	290	14	48.8	45°	22.5°	48

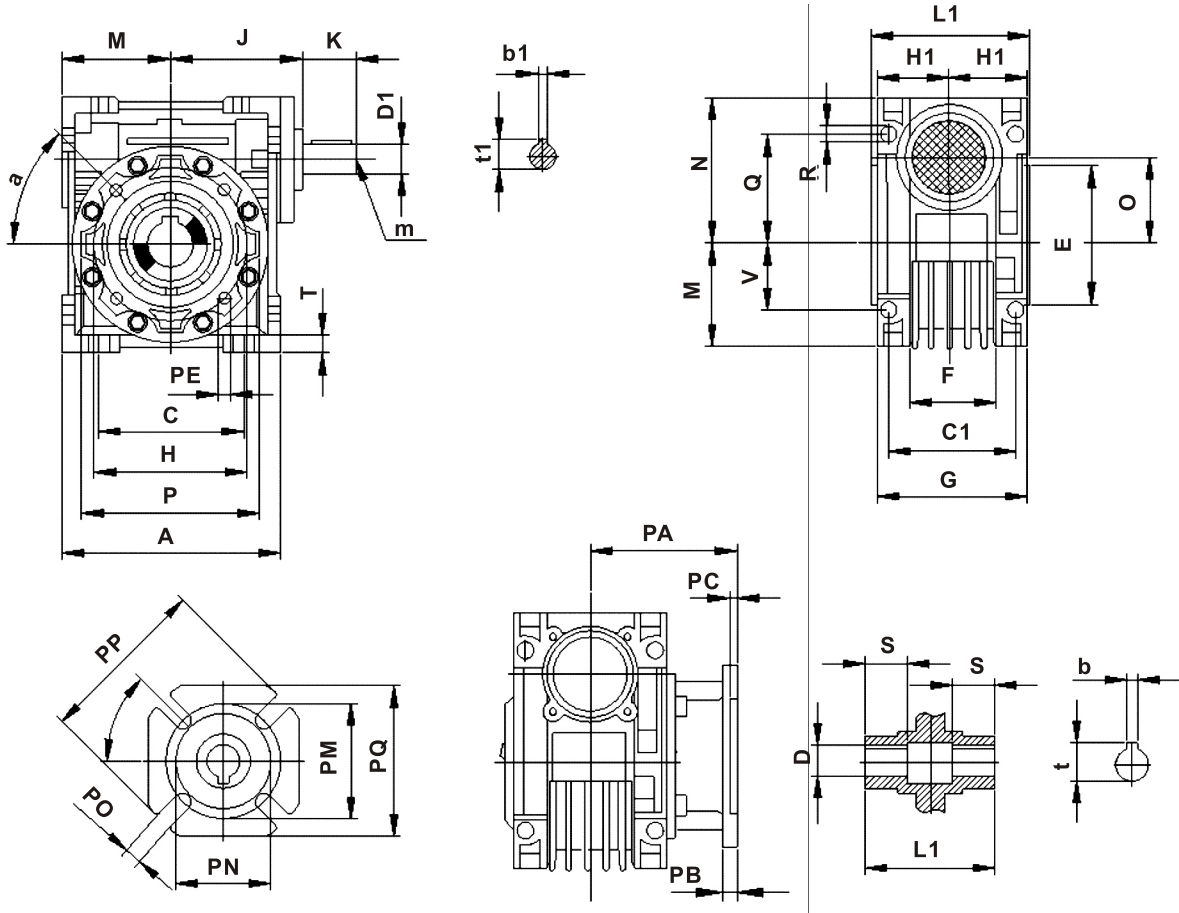
注:重量(Kg)不包含电机的重量。

Note: Weight(Kg),exclusive of motor weight.



外形安装尺寸

Outline and mounting dimension:



带轴输出请参照DZ、SZ尺寸
To shaft output, please refer to DZ、SZ size

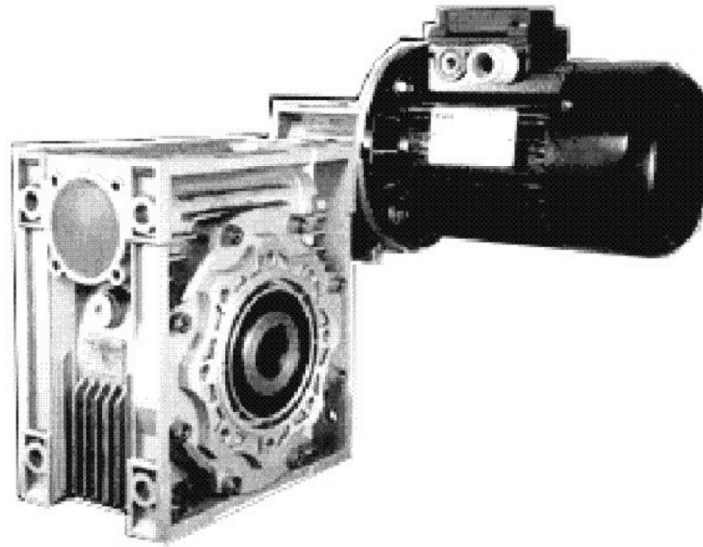
中心距	A	B	C	C1	D	D1	E(h8)	F	G	H	H1	J	K	L1	M	N	O	P	Q	R
30	80	97	54	44	14	9	55	32	56	65	29	51	20	63	40	57	30	75	44	6.5
40	100	121.5	70	60	18	11	60	43	71	75	36.5	60	23	78	50	71.5	40	87	55	6.5
50	120	144	80	70	25	14	70	49	85	85	43.5	74	30	92	60	84	50	100	64	8.5
63	144	174	100	85	25	19	80	67	103	95	53	90	40	112	72	102	63	110	80	8.5
75	172	205	120	90	28	24	95	72	112	115	57	105	50	120	86	119	75	140	93	11
90	206	238	140	100	35	24	110	74	130	130	67	125	50	140	103	135	90	160	102	13
110	252.5	295	170	115	42	28	130	-	144	165	74	142	60	155	127.5	167.5	110	200	125	14
130	292.5	335	200	120	45	30	180	-	155	215	81	162	80	170	147.5	187.5	130	250	140	16

中心距	S	T	V	PA	PB	PC	PE	PM	PN(H8)	P0	PP	PQ	b	b1	t	t1	m	a	a1	Kg
30	21	5.5	27	54.5	6	4	M6X11(n=4)	68	50	6.5(n=4)	80	70	5	3	16.3	10.2	-	0°	45°	1.2
40	26	6.5	35	67	7	4	M6X8(n=4)	75	60	9(n=4)	110	95	6	4	20.8	12.5	-	45°	45°	2.3
50	30	7	40	90	9	5	M8X10(n=4)	85	70	11(n=4)	125	110	8	5	28.3	16.0	M6	45°	45°	3.5
63	36	8	50	82	10	6	M8X14(n=4)	150	115	11(n=4)	180	142	8	6	28.3	21.5	M6	45°	45°	6.2
75	40	10	60	111	13	6	M8X14(n=4)	165	130	14(n=4)	200	170	8	8	31.3	27.0	M8	45°	45°	9
90	45	11	70	111	13	6	M10X18(n=8)	175	152	14(n=8)	210	200	10	8	38.3	27.0	M8	45°	45°	13
110	50	14	85	131	15	6	M10X18(n=8)	230	170	14(n=8)	280	260	12	8	45.3	31.0	M10	45°	45°	35
130	60	15	100	140	15	6	M12X21(n=8)	255	180	16(n=8)	320	290	14	8	48.8	33.0	M10	45°	22.5°	48



6.8 双级RV系列蜗轮蜗杆减速机

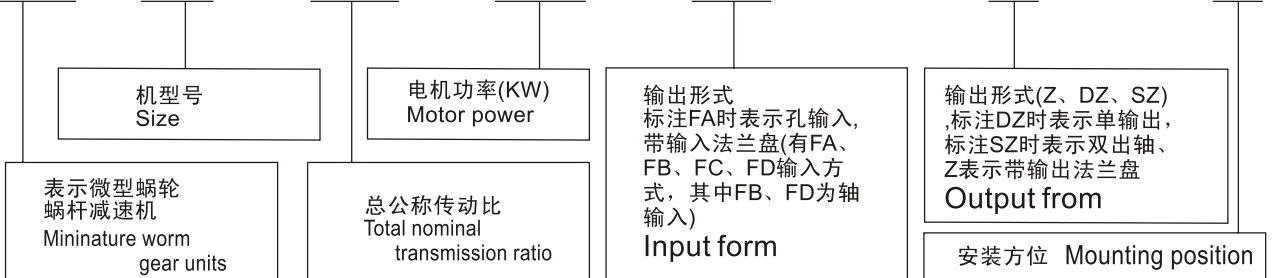
2-stage RV series worm gear units



6.8.1 双级RV系列减速机形式表示方法：

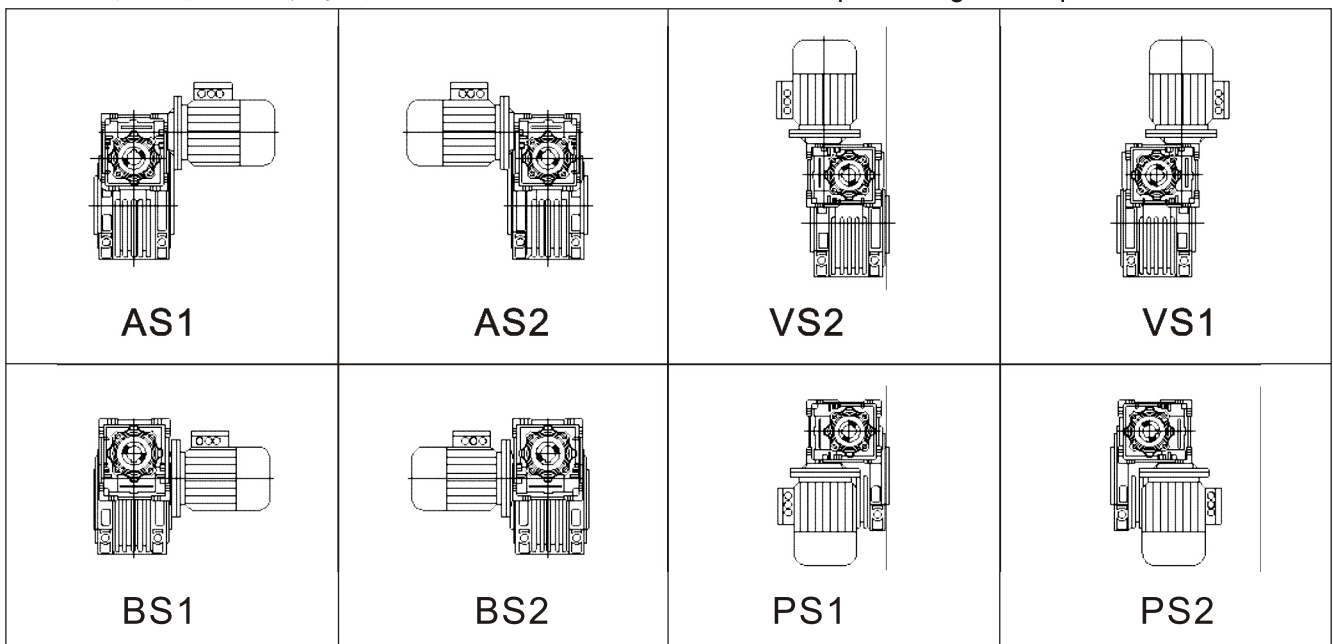
RV/RV Model expressing example:

RV-40/63-1800-1.1-FA-Z-ASI



6.8.2 减速机形式表示方法：

Model expressing example:





6.8.3 性能参数 (n1=1400r/min)

Capacity parameter table (n1=1400r/min)

KW	RV+RV	I	n2(r/min)	M2(N.M)	I1	I2
0.06KW	RV30/40	300	4.7	68.7	10	30
	RV30/40	400	3.5	90.7	10	40
	RV30/40	500	2.8	101.6	20	25
	RV30/40	600	2.3	111.5	20	30
	RV30/40	750	1.9	145.0	25	30
	RV30/40	900	1.6	165.8	30	30
	RV30/50			174.7	30	30
	RV30/40	1200	1.2	218.8	30	40
	RV30/50			227.0	30	40
	RV30/40	1500	0.9	234.9	50	30
	RV30/50			247.5	50	30
	RV30/63			270.2	30	50
	RV30/40	1800	0.8	258.6	60	30
	RV30/50			272.3	60	30
	RV30/63			280.6	30	60
	RV30/40	2400	0.6	341.2	60	40
	RV30/50			353.9	60	40
	RV30/63			365.7	60	40
	RV30/75			388.7	60	40
	RV30/40	3000	0.5	385.6	60	50
RV30/50	404.8			60	50	
RV30/63	421.4			60	50	
RV30/75	485.3			60	50	
RV30/40	3200	0.4	369.2	80	40	
0.09KW	RV30/40	300	4.7	103.1	10	30
	RV30/50	400	3.5	141.1	10	40
	RV30/50	600	2.8	161.3	10	50
	RV30/50	600	2.3	176.2	20	30
	RV30/50	750	1.9	229.1	25	30
	RV30/63	900	1.6	272.7	30	30
	RV30/63	1200	1.2	351.8	30	40
	RV40/75	1500	0.9	450.5	50	30
	RV40/75	1800	0.8	460.0	60	30
	RV40/90	2400	0.6	579.0	60	40
	RV40/90	3000	0.5	686.2	60	50
	0.12KW	RV30/50	300	4.7	144.7	10
RV30/50		400	3.5	186.1	10	40
RV30/63		500	2.8	223.9	10	50
RV30/63		600	2.3	275.0	15	40
RV30/63		750	1.9	316.8	15	50
RV40/75		900	1.6	402.8	30	30
RV30/63		1200	1.2	469.1	30	40
RV40/75				510.5	30	40
RV40/90		1500	0.9	60.5	30	50
RV40/90		1800	0.8	686.2	30	60
RV40/90		2400	0.6	772.4	60	40
RV50/110		3000	0.5	1003.2	60	50
0.18KW	RV30/50	300	4.7	217.1	10	30
	RV30/63	400	3.5	291.5	10	40
	RV30/63	500	2.8	335.9	10	50
	RV40/75	600	2.3	472.6	20	30

KW	RV+RV	I	n2(r/min)	M2(N.M)	I1	I2	
0.18KW	RV40/75	750	1.9	550.4	25	30	
	RV40/90	900	1.6	599.7	30	30	
	RV40/90	1200	1.2	760.8	30	40	
	RV40/90	1500	0.9	903.7	30	50	
	RV50/110	1800	0.8	932.3	60	30	
	RV50/110	2400	0.6	1216.4	60	40	
	0.25KW	RV40/75	300	4.7	347.6	10	30
RV40/75		400	3.5	440.6	10	40	
RV40/75		500	2.8	550.1	10	50	
RV40/90		600	2.3	639.0	15	40	
RV40/90		750	1.9	790.7	15	50	
RV40/90		900	1.6	900.6	15	60	
RV50/110		1200	1.2	1129.0	30	40	
RV50/110		1500	0.9	1285.9	50	30	
RV50/110		1800	0.8	1294.9	60	30	
RV63/130		2400	0.6	1820.3	60	40	
RV63/130		3000	0.5	2214.1	60	50	
0.37KW		RV40/75	300	4.7	514.5	10	30
	RV40/90	499.3			7.5	40	
	RV40/90	400	3.5	647.9	10	40	
	RV40/90	500	2.8	769.7	10	50	
	RV40/90	600	2.3	932.5	15	40	
	RV50/110	750	1.9	1157.2	25	30	
	RV50/110	900	1.6	1230.6	30	30	
	RV63/130	1200	1.2	1741.2	40	30	
	RV63/130	1500	0.9	2006.2	50	30	
	RV63/130	1800	0.8	2082.8	60	30	
	0.55KW	RV50/110	300	4.7	760.4	10	30
		RV50/110	400	3.5	992.1	10	40
RV50/110		500	2.8	1227.3	10	50	
RV50/110		600	2.3	1411.3	15	40	
RV50/110		750	1.9	1720.2	25	30	
RV63/130		1200	1.6	2595.0	30	40	
0.75KW		RV50/110	300	4.7	1036.9	10	30
	RV50/110	400	3.5	1352.9	10	40	
	RV63/130	500	2.8	1686.7	10	50	
	RV63/130	600	2.3	1984.5	15	40	
	RV63/130	750	1.9	2403.0	25	30	
	RV63/130	900	1.6	2735.8	30	30	
1.1KW	RV63/130	300	4.7	1572.5	10	30	
	RV63/130	400	3.5	2033.9	10	40	
1.5KW	RV63/130	300	4.7	2144.3	10	30	

注: KW:功率
n2:输出转速

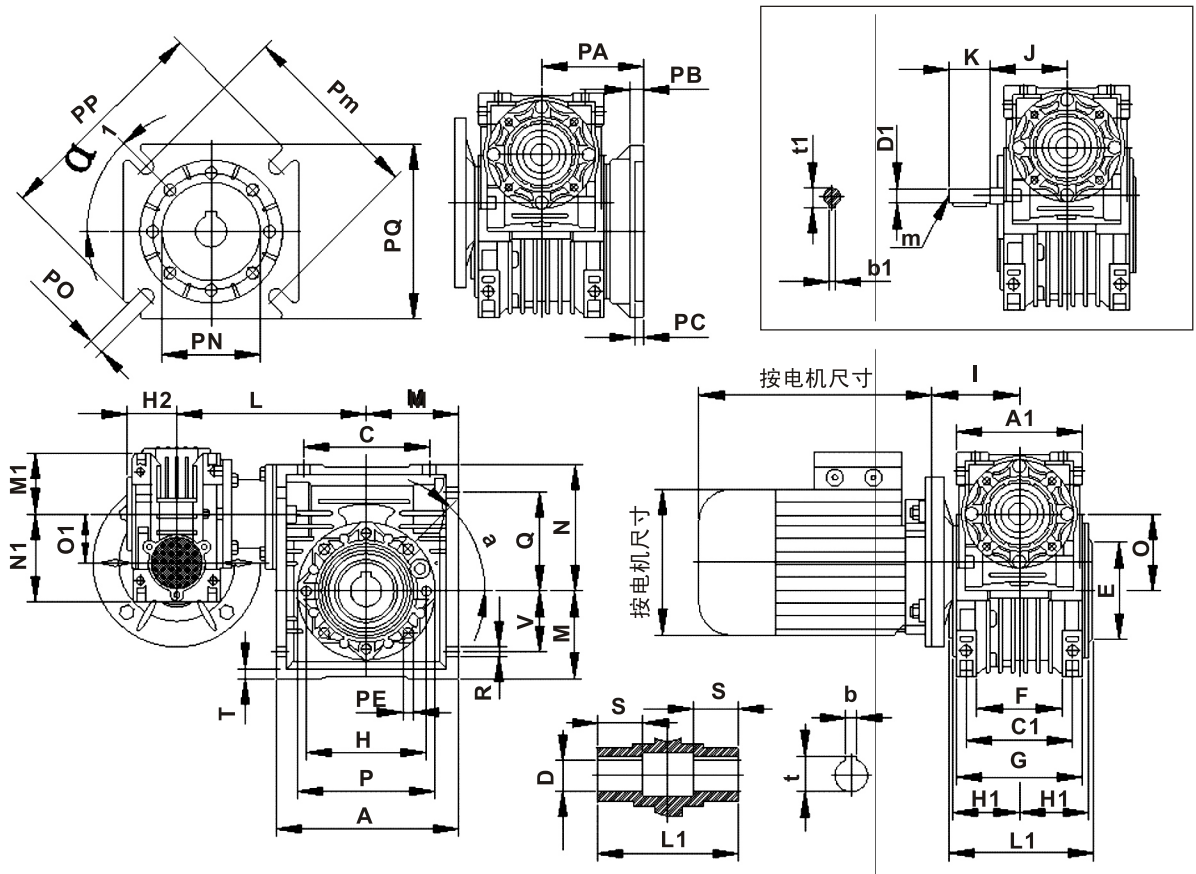
I、I1、I2:传动比
M2:输出扭矩

Note: KW:Transmission ratio
I、I1、I2:Transmission ratio
n2:Output speed
M2:Output torque



6.8.4 外形尺寸

6.8.4 Outline and mounting dimension:



中心距	A	A1	B	C	C1	D(H7)	D1(j6)	E(h8)	F	G	H	H1	H2	I	J	K	L	L1	M	M1	N	N1	O	O1	P
30/40	100	80	121.5	70	60	18	9	60	43	71	75	36.5	29	55	51	20	120	78	50	40	71.5	57	40	30	87
30/50	120	80	144	80	70	25	9	70	49	85	85	43.5	29	55	51	20	130	92	60	40	84	57	50	30	100
30/63	144	80	174	100	85	25	9	80	67	103	95	53	29	55	51	20	145	112	72	40	102	57	63	30	110
40/75	172	100	205	120	90	28	11	95	72	112	115	57	36.5	70	60	23	165	120	86	50	118	71.5	75	40	140
40/90	206	100	238	140	100	35	11	110	74	130	130	67	36.5	70	60	23	182	140	103	50	135	71.5	90	40	160
50/110	252.5	120	295	170	115	42	14	130	-	144	165	74	43.5	80	74	30	225	155	127.5	60	167.5	84	110	50	200
63/130	292.5	144	335	200	120	45	19	160	-	155	215	81	53	95	90	40	245	170	147.5	72	187.5	102	130	63	250

中心距	Q	R	S	T	V	PA	PB	PC	PE	PM	PN(H8)	PO	PP	PQ	a	a1	b	b1	t	t1	M	Kg
30/40	55	6.5	26	6.5	35	67	7	4	M6X8(n=4)	75	60	9(n=4)	110	110	45°	45°	6	3	20.8	10.2	-	3.9
30/50	64	8.5	30	7	40	90	9	5	M8X10(n=4)	85	70	11(n=4)	125	110	45°	45°	8	3	28.3	10.2	-	5.0
30/63	80	8.5	36	8	50	82	10	6	M8X14(n=8)	150	115	11(n=4)	180	142	45°	45°	8	3	28.3	10.2	-	7.8
40/75	93	11	40	10	60	111	13	6	M6X14(n=8)	165	130	14(n=4)	200	170	45°	45°	8	4	31.3	12.5	-	12.0
40/90	102	13	45	11	70	111	13	6	M10X18(n=8)	175	152	14(n=8)	210	200	45°	45°	10	4	38.3	12.5	-	16.0
50/110	125	14	50	14	85	131	15	6	M10X18(n=8)	230	170	14(n=8)	280	260	45°	45°	12	5	45.3	16.0	M6	39.2
63/130	140	16	60	15	100	140	15	6	M12X21(n=8)	255	180	16(n=8)	320	290	45°	22.5°	14	6	48.8	21.5	M6	55.0

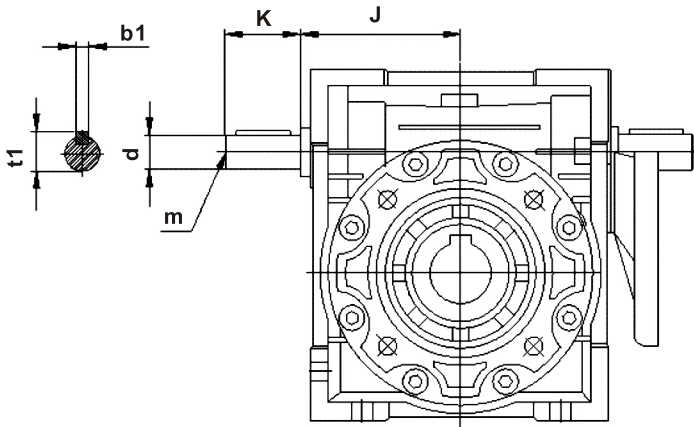
注:重量(Kg)不包含电机的重量。

Note: Weight(Kg), exclusive of motor weight.



蜗轮尾出轴 (E) 尺寸

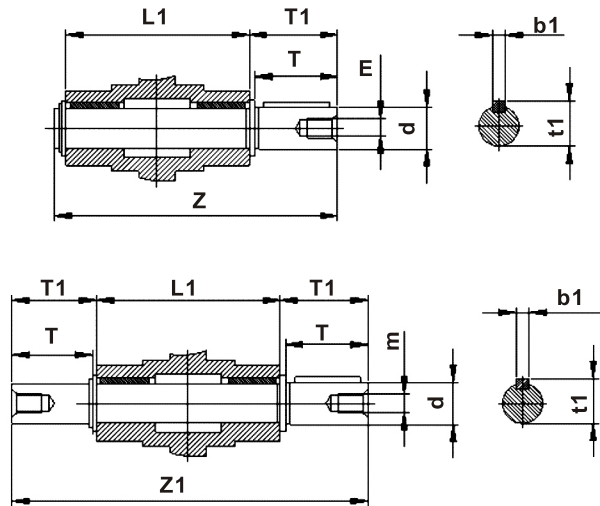
Dimension of worm end output shaft (E)



中心距	J	d(j6)	K	m	b1	t1
30	45	9	20	-	3	10.2
40	53	11	23	-	4	12.5
50	64	14	30	M6	5	16
63	75	19	40	M6	6	21.5
75	90	24	50	M8	8	27
90	108	24	50	M8	8	27
110	135	28	60	M10	8	31
130	155	30	80	M10	8	33

蜗轮输出轴 (DZ, Sz) 尺寸

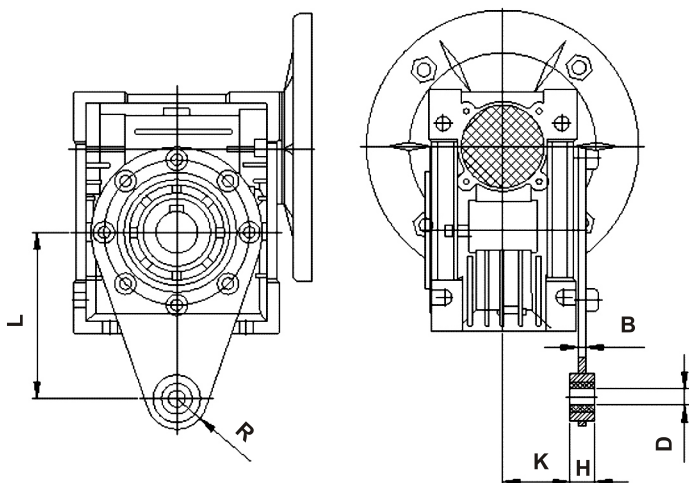
Dimension of worm output shaft (DZ、SZ)



中心距 d(h6)	T	T1	L1	Z	Z1	m	b1	t1	
30	14	30	32.5	63	102	128	M6	5	16
40	18	40	43	78	128	164	M6	6	20.5
50	25	50	53.5	92	153	199	M10	8	28
63	25	50	53.5	112	173	219	M10	8	28
75	28	60	63.5	120	192	247	M10	8	31
90	35	80	84.5	140	234	309	M12	10	38
110	42	80	84.5	155	249	324	M16	12	45
130	45	80	85	170	265	340	M16	14	48.5

扭力臂 (A) 尺寸

Dimension of torque arm (A)



中心距	L	H	K	D	R	B
30	85	14	24	8	15	4
40	100	14	31.5	10	18	4
50	100	14	38.5	10	18	4
63	150	14	49	10	18	6
75	200	25	47.5	20	30	6
90	200	25	57.5	20	30	6
110	250	30	62	25	35	6
130	250	30	69	25	35	6