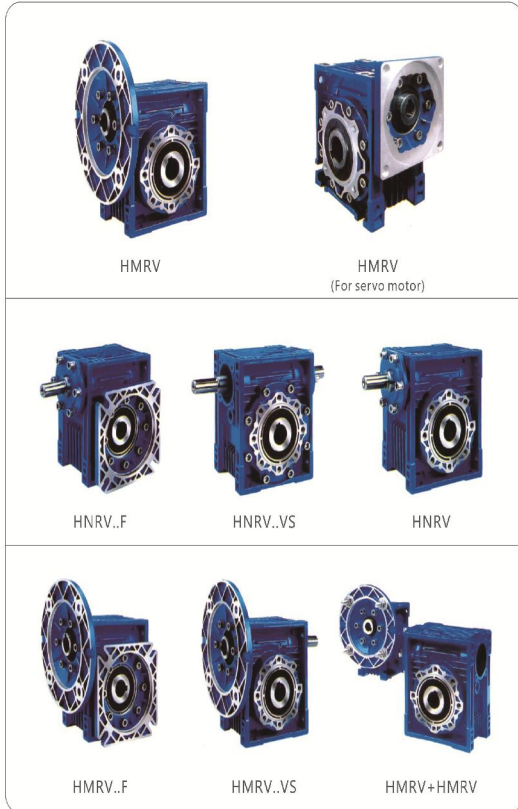




Product picture

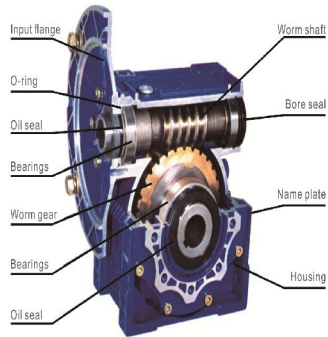


Aluminum casting





Product Structure View



Product summary

1. Single step worm gear reducer

- The reducer which model is among HMRV25 to HMRV90 made of aluminum alloy die-casting box, good looking in appearance, compact in structure, rust proofing on surface and small volume to save mounting space.

- The reducer model among HMRV110 to HMRV150 is made of cast iron which casted with aluminum mould. It's good looking and solid, and can be used through the setting of multi-azimuth.

- Good radiating characteristic leads safe and reliability and high efficiency for using.
- The strong capacity of loading ensure stable transmission, make less vibration and noise.
- Varies of connecting structure for power input and torque output meet different require-merits; the design of box outline and the set of foot hole with good versatility is apt to many kinds of mounting.

2. Double step worm gear reducer

- It is combined by two single step reducers and has all the virtues of them. And you can get bigger ratio with it.

- The models of 25/30, 25/40, 30/40, 30/50, 30/63, 40/75, 40/90, 50/110, 63/130, 63/150 are in common use. You can choose 25, 30, 40, 50, 63, 75, 90, 110, 130, 150 as combination units to combine according to the fact of your special needs.

Service factor

Please understand the following at first in order to select the model of HMRV speed reducer properly:

- Loading condition.
- Speed scope or ratio in application.
- Working condition and environment.
- Installation space.

Define working condition coefficient K1 and revise coefficient K2.

- Ensure machinery load types A, B, C according to table 1.
- Get the working condition coefficient K1 from diagram 1 according to turning time (hour/day) and start frequency (time/hour)
- Inspect working condition and select coefficient K2 from table 2.

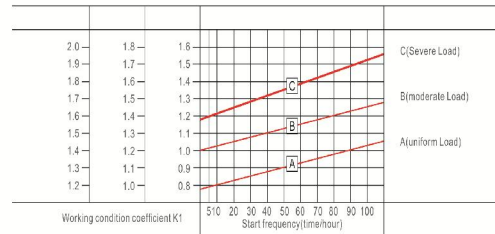
Table 1 machinery load Classification selection

Using Situation	Example	Load Type
Uniform Load	Conveyor Band/Uniform Conveying	A(Uniform Load)
Moderate Load	Speed Changed Conveying	B(moderate Load)
Severe Load	Compressor, Pulverizer, etc.	C(severe Load)

Table 2 working condition coefficient K2

Ambient Temperature	Working Condition Coefficient K2
-10°C-30°C	1
30°C-40°C	1.1-1.2

Diagram 1 working condition coefficient K1



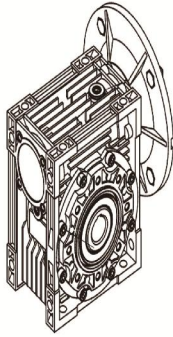
Reducer selected

- At first it is better to make sure the value input machinery load T (torque) and then you can get the output torque through T multiply with work situation coefficient K1 and work situation revise coefficient K2. The required model can be gained by the above and connecting ratio or output speed.

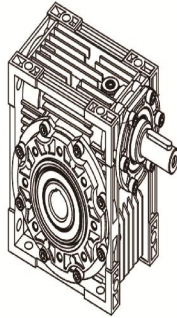
- You can also select the reducer as followings: calculate output torque according to known input power and then select the reducer in accordance with output torque and rotate speed.



HMRV/HNRV

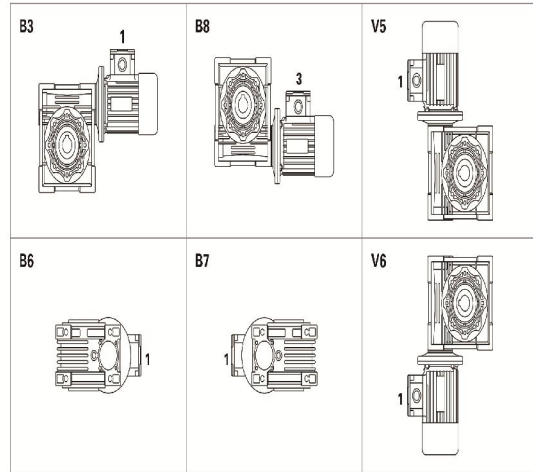


HMRV



HNRV

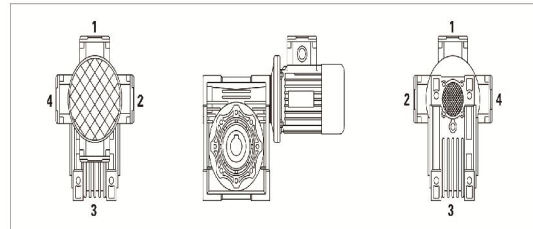
Single step mounting positions



Model notes

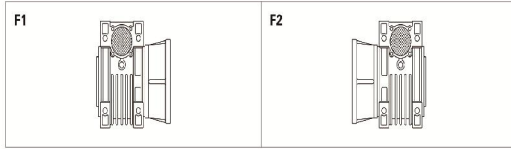
HMRV-063-30-VS-F1(FA)-AS-80B5-0.55kW-B3			
HMRV	Worm gear speed reducer		
HNRV	Worm gear speed reducer(Matching input shaft)		
063	Center distance		
30	Reduction ratio		
VS	Double input shaft	F1(FA)	Output flange
AS	Single output shaft	AB	Double output shaft
PAM	Fitted for motor coupling	80B5	Motor mounting facility
0.55kW	Electric motor power	B3	Mounting position

Position of terminal box

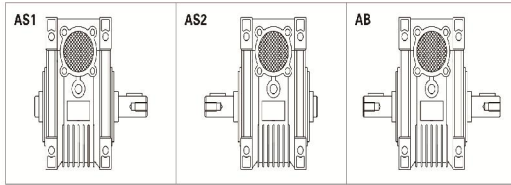




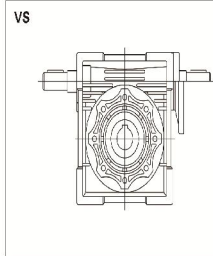
Flange F-F1



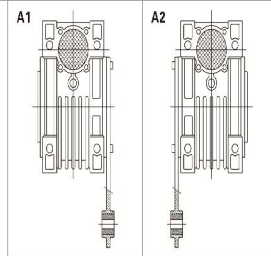
Position of output shaft



Double extension worm shaft

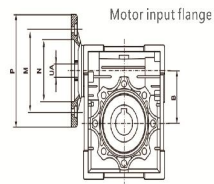


Position of torque arm



Mounting dimensions

Single step worm gear reducer



Center Distance A	Motor Flange				UA The Hole Diameter of Shaft											
	PAM IEC	N	M	P	Transmission ratio											
HMRV025	55B14	50	65	80	5	7.5	10	15	20	25	30	40	50	60	80	100
	63B5	95	115	140	9	9	9	9	9	9	9	9	9	9	-	-
	63B14	60	75	90	11	11	11	11	11	11	11	11	11	-	-	-
HMRV030	56B5	80	100	120	9	9	9	9	9	9	9	9	9	9	9	-
	56B14	50	65	80	-	-	-	-	-	-	-	-	-	-	-	-
	71B5	110	130	160	14	14	14	14	14	14	14	14	14	-	-	-
HMRV040	71B14	70	85	105	11	11	11	11	11	11	11	11	11	11	11	11
	63B5	95	115	140	-	-	-	-	-	-	-	-	-	-	-	-
	63B14	60	75	90	11	11	11	11	11	11	11	11	11	11	11	11
HMRV050	56B5	80	100	120	-	-	-	-	-	-	-	-	9	9	9	9
	80B5	130	165	200	19	19	19	19	19	19	19	19	-	-	-	-
	80B14	80	100	120	14	14	14	14	14	14	14	14	14	14	14	14
HMRV063	71B5	110	130	160	-	-	-	-	-	-	-	-	11	11	11	11
	63B5	95	115	140	24	24	24	24	24	24	24	24	-	-	-	-
	90B5	130	165	200	19	19	19	19	19	19	19	19	19	19	19	19
HMRV075	90B14	95	115	140	-	-	-	-	-	-	-	-	14	14	14	14
	80B5	130	165	200	24	24	24	24	24	24	24	24	24	24	24	24
	80B14	80	100	120	-	-	-	-	-	-	-	-	19	19	19	19
HMRV090	100/112B5	180	215	250	-	-	-	-	-	-	-	-	14	14	14	14
	100/112B14	110	130	160	28	28	28	28	28	28	28	28	-	-	-	-
	90B5	130	165	200	24	24	24	24	24	24	24	24	24	24	24	24
HMRV110	90B14	95	115	140	-	-	-	-	-	-	-	-	19	19	19	19
	80B5	130	165	200	-	-	-	-	-	-	-	-	19	19	19	19
	80B14	80	100	120	-	-	-	-	-	-	-	-	19	19	19	19
HMRV130	132B5	230	265	300	-	-	-	-	-	-	-	-	38	38	38	38
	132B14	130	165	200	28	28	28	28	28	28	28	28	28	28	28	28
	100/112B5	180	215	250	-	-	-	-	-	-	-	-	28	28	28	28
HMRV150	90B5	130	165	200	-	-	-	-	-	-	-	-	24	24	24	24
	90B14	95	115	140	-	-	-	-	-	-	-	-	19	19	19	19
	80B5	130	165	200	-	-	-	-	-	-	-	-	19	19	19	19



Parameter selections

Single step reducer(flange input, input speed is 1400r/min)/(matched with 4 poles motor)

N₂-output speed; M₂-output torque; i-ratio; kN-Output shaft radial force; f.s.-factor of safety

Table with 6 columns: Model, N2 (r/min), M2 (N.m), i, kN, f.s. Rows are grouped by power (0.06kw, 0.09kw, 0.12kw, 0.18kw, 0.25kw, 0.37kw) and model (HMRV25, HMRV30, HMRV40, HMRV50, HMRV63).

Table with 6 columns: Model, N2 (r/min), M2 (N.m), i, kN, f.s. Rows are grouped by power (0.12kw, 0.18kw, 0.25kw, 0.37kw) and model (HMRV40, HMRV50, HMRV63).

Table with 6 columns: Model, N2 (r/min), M2 (N.m), i, kN, f.s. Rows are grouped by power (0.37kw, 0.55kw, 0.75kw, 1.1kw, 1.5kw, 2.2kw) and model (HMRV40, HMRV50, HMRV63, HMRV75, HMRV90).

Table with 6 columns: Model, N2 (r/min), M2 (N.m), i, kN, f.s. Rows are grouped by power (0.75kw, 1.1kw, 1.5kw, 2.2kw) and model (HMRV90, HMRV63, HMRV75, HMRV110).



HMRV Series Worm-Gear Speed Reducer



Model	N ₂ (r/min)	M ₂ (N.m)	i	kN	f.s.	
2.2kw						
HMRV90	70	252	20	4.27	1.4	
	56	308	25	4.60	1.1	
	46.7	351	30	4.89	1.2	
	35	433	40	4.90	1.0	
HMRV110	28	393	50	5.28	0.9	
	70	255	20	5.39	2.5	
	56	315	25	5.61	2.2	
	46.7	356	30	6.18	2.0	
HMRV130	35	468	40	6.8	1.5	
	28	563	50	7.32	1.2	
	23.3	648	60	7.78	1.0	
	35	468	40	8.69	2.2	
HMRV150	28	563	50	9.58	1.7	
	23.3	648	60	10.18	1.4	
	17.5	816	80	11.21	1.0	
	14	869	100	10.62	0.8	
HMRV170	28	570	50	13.10	2.5	
	23.3	657	60	13.92	1.9	
	17.5	816	80	15.32	1.4	
	14	960	100	16.50	1.0	
3kw						
HMRV75	166.7	136	7.5	2.78	1.4	
	140	180	10	3.06	1.1	
	93.3	261	15	3.50	0.8	
	166.7	138	7.5	3.08	2.1	
HMRV90	140	182	10	3.39	1.7	
	93.3	264	15	3.88	1.4	
	70	344	20	4.27	1.0	
	56	420	25	4.60	0.8	
HMRV110	46.7	479	30	4.89	0.9	
	93.3	264	15	4.90	2.5	
	70	348	20	5.39	1.9	
	56	430	25	5.61	1.6	
HMRV130	46.7	485	30	6.18	1.5	
	35	638	40	6.80	1.1	
	28	767	50	7.32	0.9	
	56	429	25	7.60	2.2	
HMRV150	46.7	491	30	8.08	2.1	
	35	638	40	8.69	1.8	
	28	767	50	9.58	1.3	
	23.3	884	60	10.16	1.0	
HMRV170	17.5	1113	80	11.21	0.8	
	28	777	50	13.10	1.8	
	23.3	896	60	13.92	1.4	
	17.5	1113	80	15.32	1.0	
HMRV190	14	1310	100	16.50	0.8	
	4kw					
	HMRV75	166.7	182	7.5	2.44	1.4
		166.7	184	7.5	3.06	1.6
HMRV90	140	243	10	3.39	1.3	
	93.3	352	15	3.88	1.0	
HMRV110	70	458	20	4.27	0.8	
	140	242	10	4.28	2.5	
HMRV130	93.3	352	15	4.90	1.9	
	70	464	20	5.39	1.4	

Model	N ₁ (r/min)	M ₁ (N.m)	i	kN	f.s.	
4kw						
HMRV110	56	573	25	5.81	1.2	
	46.7	647	30	6.18	1.1	
HMRV130	56	573	25	7.50	1.6	
	46.7	655	30	8.08	1.6	
	35	851	40	8.89	1.2	
	28	1023	50	9.58	1.0	
HMRV150	23.3	1179	60	10.18	0.8	
	28	1036	50	13.10	1.4	
	23.3	1195	60	13.92	1.1	
	17.5	1484	80	15.32	0.8	
5.5kw						
HMRV110	166.7	253	7.5	3.89	2.2	
	140	334	10	4.28	1.8	
	93.3	484	15	4.90	1.4	
	70	638	20	5.39	0.9	
HMRV130	56	711	25	5.15	1.0	
	140	333	10	5.60	2.5	
	93.3	490	15	6.41	1.9	
	70	645	20	7.06	1.4	
HMRV150	56	788	25	7.50	1.2	
	46.7	900	30	8.08	1.2	
	35	1171	40	8.89	0.9	
	28	1103	50	8.51	0.8	
HMRV170	70	645	20	9.65	2.0	
	56	788	25	10.40	1.5	
	46.7	934	30	11.05	1.3	
	35	1171	40	12.16	1.3	
HMRV190	28	1426	50	13.10	1.0	
	23.3	1643	60	13.92	0.8	
	7.5kw					
	HMRV110	166.7	345	7.5	3.89	1.8
140		455	10	4.28	1.3	
93.3		660	15	4.90	1.0	
166.7		349	7.5	5.09	2.1	
HMRV130	140	455	10	5.6	1.8	
	93.3	668	15	6.41	1.4	
	70	880	20	7.06	1.0	
	56	1074	25	7.6	0.9	
HMRV150	46.7	1228	30	8.08	0.8	
	35	1566	40	8.89	0.7	
	70	880	20	9.65	1.5	
	56	1074	25	10.4	1.1	
HMRV170	46.7	1274	30	11.05	0.9	
	35	1566	40	12.16	1.0	
	11kw					
	HMRV150	166.7	512	7.5	6.96	2.3
140		675	10	7.66	1.8	
93.3		990	15	8.77	1.3	
70		1291	20	9.65	1.0	
HMRV170	56	1576	25	10.4	0.8	
	15kw					
	HMRV150	166.7	698	7.5	6.96	1.7
		140	921	10	7.66	1.3
93.3		1361	15	8.77	0.9	
70		1760	20	9.65	0.7	

Single step reducer (shaft extend input, input speed is 1400r/min)

kw-motor power, N₂-output speed, M₂-output torque; i-ratio, kN1-output radial force, kN2-input radial force

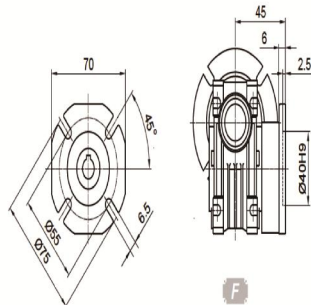
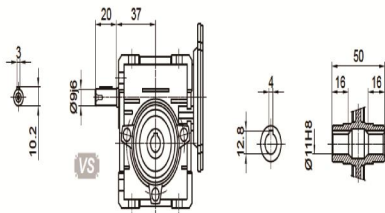
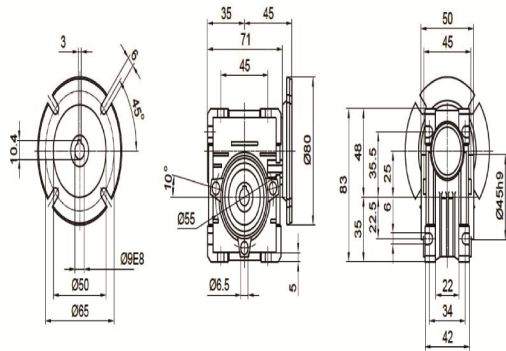
Model	kw	N ₂ (r/min)	M ₂ (N.m)	i	kN1	kN2
HNRV30	0.4	166.7	18	7.5	0.68	0.15
	0.3	140	18	10	0.75	0.16
	0.2	93.3	18	15	0.86	0.16
	0.2	70	18	20	0.94	0.19
	0.2	56	21	25	1.02	0.21
	0.2	46.7	20	30	1.08	0.21
	0.1	35	18	40	1.19	0.21
	0.1	28	17	50	1.28	0.21
	0.1	23.3	16	60	1.36	0.21
	0.1	17.5	13	80	1.50	0.21
	0.9	166.7	40	7.5	1.31	0.29
	0.7	140	40	10	1.44	0.33
HNRV40	0.5	93.3	40	15	1.65	0.33
	0.4	70	39	20	1.82	0.35
	0.3	56	38	25	1.96	0.35
	0.3	46.7	45	30	2.08	0.35
	0.2	35	41	40	2.29	0.35
	0.2	28	39	50	2.47	0.35
	0.2	23.3	36	60	2.63	0.35
	0.1	17.5	33	80	2.89	0.35
	0.1	14	29	100	3.11	0.35
	1.6	166.7	71	7.5	1.80	0.4
	1.2	140	72	10	1.98	0.49
	0.9	93.3	74	15	2.27	0.49
HNRV50	0.7	70	73	20	2.50	0.49
	0.5	56	70	25	2.69	0.49
	0.6	46.7	84	30	2.86	0.49
	0.4	35	76	40	3.15	0.49
	0.3	28	73	50	3.39	0.49
	0.3	23.3	68	60	3.61	0.49
	0.2	17.5	65	80	3.97	0.49
	0.2	14	55	100	4.28	0.49
	2.8	166.7	128	7.5	2.35	0.5
	2.2	140	130	10	2.59	0.57
	1.6	93.3	140	15	2.97	0.61
	1.2	70	135	20	3.27	0.66
1.0	56	130	25	3.52	0.70	
HNRV63	1.1	46.7	160	30	3.74	0.70
	0.8	35	145	40	4.12	0.70
	0.6	28	135	50	4.44	0.70
	0.5	23.3	130	60	4.71	0.70
	0.4	17.5	122	80	5.19	0.70
	0.3	14	118	100	5.59	0.70
	4.1	166.7	185	7.5	2.78	0.70
	3.2	140	185	10	3.06	0.83
	2.3	93.3	200	15	3.50	0.85
	1.9	70	210	20	3.86	0.98
	1.5	56	200	25	4.16	0.98
	1.5	46.7	230	30	4.42	0.98

Model	kw	N ₂ (r/min)	M ₂ (N.m)	i	kN1	kN2
HNRV75	1.1	35	220	40	4.86	0.98
	0.9	28	210	50	5.24	0.98
	0.8	23.3	200	60	5.56	0.98
	0.6	17.5	190	80	6.13	0.98
HNRV90	0.5	14	190	100	6.60	0.98
	6.3	166.7	290	7.5	3.08	0.90
	5.1	140	310	10	3.39	1.08
	4.1	93.3	360	15	3.88	1.25
	2.4	56	340	25	4.60	1.27
	2.6	46.7	410	30	4.89	1.27
	1.8	35	360	40	5.38	1.27
	1.4	28	340	50	5.79	1.27
	1.1	23.3	320	60	6.16	1.27
	0.8	17.5	285	80	6.78	1.27
	0.7	14	270	100	7.30	1.27
	12	166.7	552	7.5	3.89	1.20
HNRV110	9.8	140	598	10	4.28	1.46
	7.5	93.3	656	15	4.90	1.60
	5.6	70	644	20	5.39	1.70
	4.7	56	679	25	5.81	1.70
	4.5	46.7	725	30	6.18	1.70
	3.3	35	702	40	6.80	1.70
	2.6	28	660	50	7.32	1.70
	2.1	23.3	616	60	7.78	1.70
	1.4	17.5	515	80	8.57	1.70
	1.1	14	483	100	9.23	1.70
	16.1	166.7	750	7.5	5.09	1.50
	13.5	140	820	10	5.60	1.84
10.3	93.3	920	15	6.41	2.07	
7.8	70	910	20	7.06	2.10	
HNRV130	6.5	56	930	25	7.60	2.10
	6.4	46.7	1040	30	8.08	2.10
	4.9	35	1050	40	8.89	2.10
	3.8	28	980	50	9.58	2.10
	3.1	23.3	900	60	10.18	2.10
	2.3	17.5	840	80	11.21	2.10
	1.7	14	740	100	12.07	2.10
	25.6	166.7	1200	7.5	6.96	1.95



Dimensions

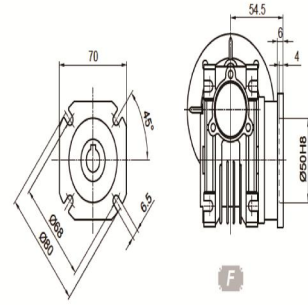
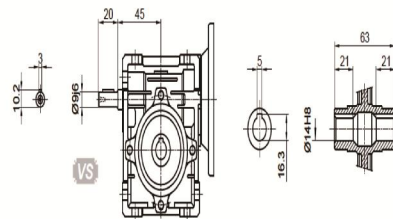
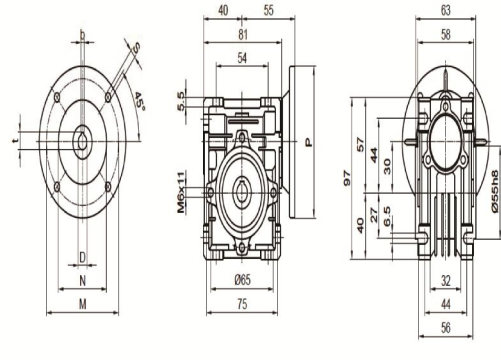
HMRV 025



*Weight without motor=0.7kg

Dimensions

HMRV 030



*Weight without motor=1.2kg

PAM IEC	D _{2a}	b	t	P	M	N	S
63B5	11	4	12.8	140	115	95	9
63B14	11	4	12.8	90	75	60	5.5
56B5	9	3	10.4	120	100	80	6.5
56B14	9	3	10.4	80	65	50	5.5

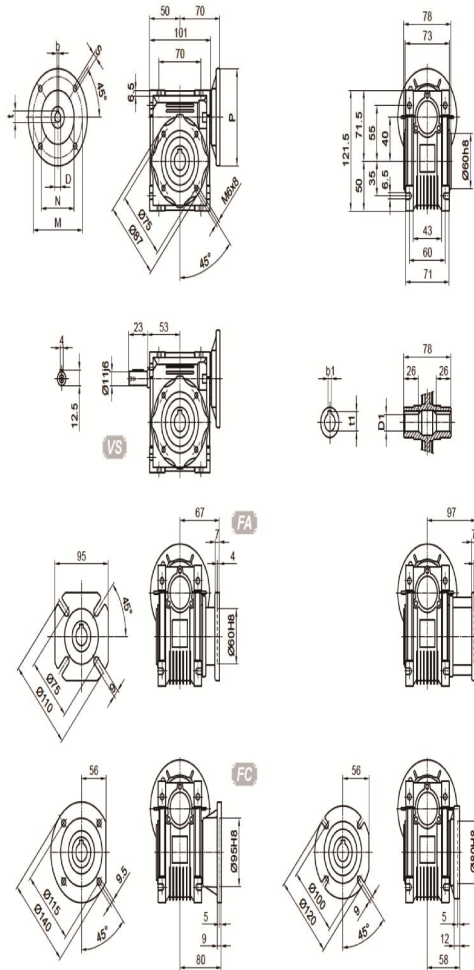


HMRV Series Worm-Gear Speed Reducer



Dimensions

HMRV 040

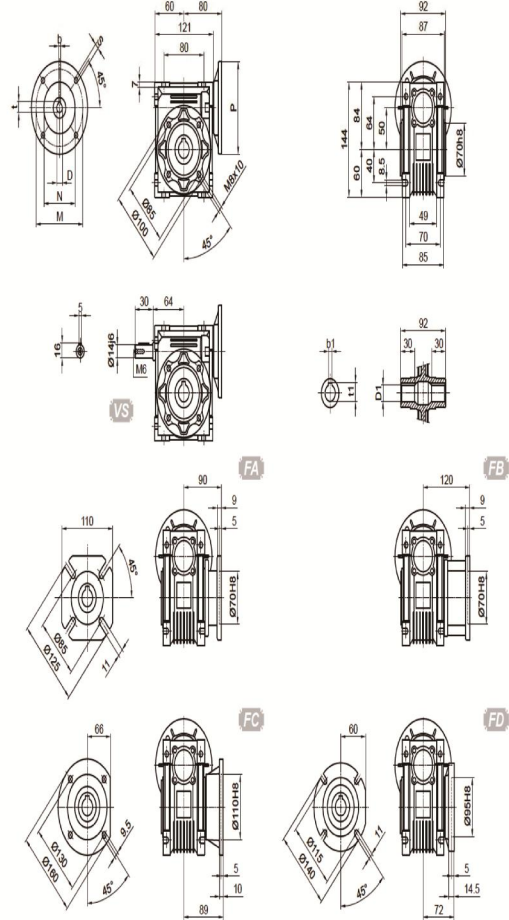


PAM IEC	D ₅₃	b	t	P	M	N	S	D _{1H8}	b ₁	t ₁
71B5	14	5	16.3	160	130	110	8.5	18	6	20.8
71B14	14	5	16.3	105	85	70	6.5	(19)	(6)	(21.8)
63B5	11	4	12.8	140	115	95	9	Output		
63B14	11	4	12.8	90	75	60	6			
56B5	9	3	10.4	120	100	80	6.5) Only on request		

*Weight without motor=2.3kg

Dimensions

HMRV 050



PAM IEC	D ₅₃	b	t	P	M	N	S	D _{1H8}	b ₁	t ₁
80B5	19	6	21.8	200	165	130	11	25	8	28.3
80B14	19	6	21.8	120	100	80	6.5	(24)	(8)	(27.3)
71B5	14	5	16.3	160	130	110	8.5	Output		
71B14	14	5	16.3	105	85	70	7			
63B5	11	4	12.8	140	115	95	8.5) Only on request		

*Weight without motor=3.5kg

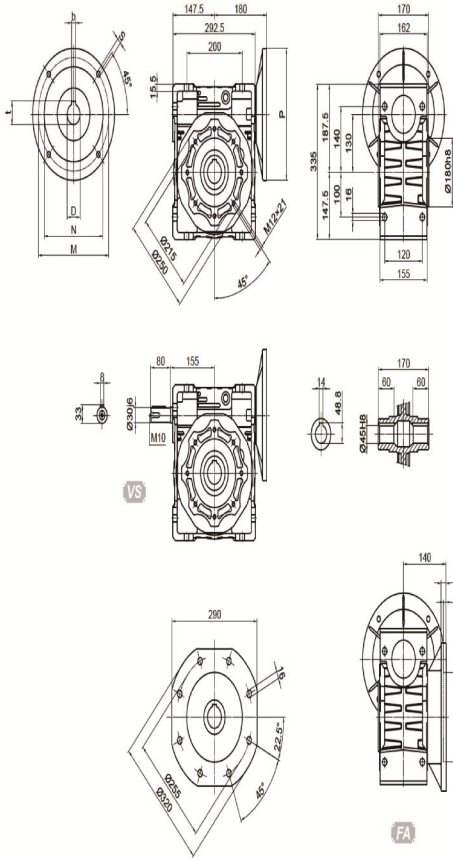


HMRV Series Worm-Gear Speed Reducer



Dimensions

HMRV 130

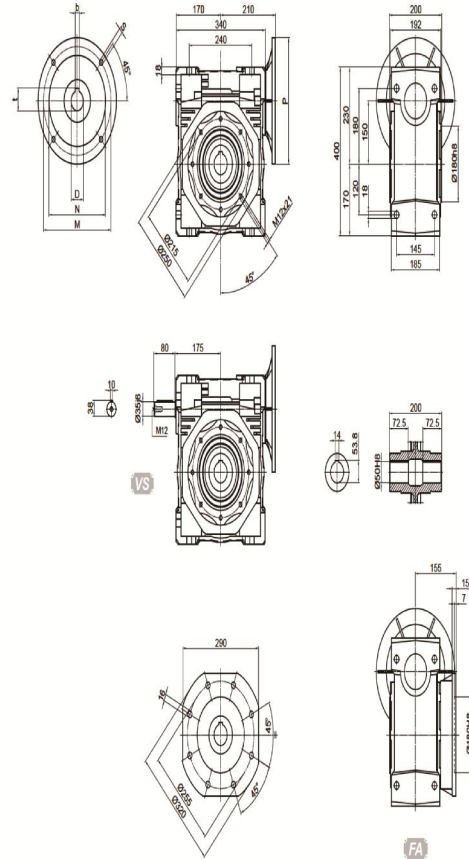


PAM IEC	D _{Et}	b	t	P	M	N	S
132B5	38	10	41.3	300	285	230	M12
100/112B5	28	8	31.3	250	215	180	13
90B5	24	8	27.3	200	165	130	11

*Weight without motor=50kg

Dimensions

HMRV 150



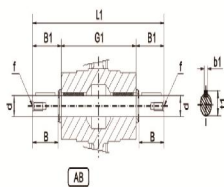
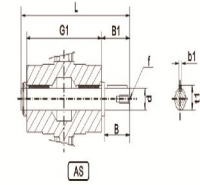
PAM IEC	D _{Et}	b	t	P	M	N	S
160B5	42	12	45.3	350	300	250	19
132B5	38	10	41.3	300	265	230	M12
100/112B5	28	8	31.3	250	215	180	M12

*Weight without motor=84kg



HMRV-HMRV

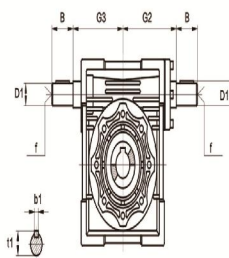
Size of extension output shaft



	d	B	B1	G1	L	L1	f	b1	t1
025	11 (9)	23 (25)	25.5 30	50	81 (85.5)	101	-	4 (3)	12.5 (10.2)
030	14	30	32.5	63	102	128	M6	5	16
040	18	40	43	78	128	164	M6	6	20.5
050	25	50	53.5	92	153	199	M10	8	28
063	25	50	53.5	112	173	219	M10	8	28
075	28	60	63.5	120	192	247	M10	8	31
090	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
150	50	80	82	187	287	374	M16	14	53.5

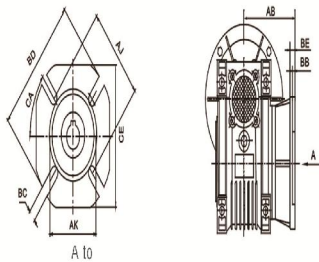
© Only on request

Size of double extension worm shaft

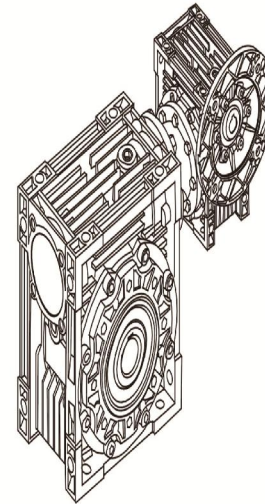


	G2	G3	D1(φ)	B	f	b1	t1
025	38	37	9	20	-	3	10.2
030	51	45	9	20	-	3	10.2
040	60	53	11	23	-	4	12.5
050	74	64	14	30	M6	5	16
063	90	75	19	40	M6	6	21.5
075	105	90	24	50	M8	8	27
090	125	108	24	50	M8	8	27
110	142	135	28	60	M10	8	31
130	162	155	30	80	M10	8	33
150	195	175	35	80	M12	10	38

Output flange mounting dimensions



	025	030	040	050	063	075	090	110	130	150
AB	45	54.5	67	90	82	111	111	131	140	155
AJ	55	68	80	85	150	165	175	230	255	255
AK	40	50	60	70	115	130	152	170	180	180
BB	3	4	4	5	6	6	6	6	6	7
BD	75	80	110	125	160	200	210	280	320	320
BE	6	6	7	9	10	13	13	15	15	15
BC	6.5(n.4)	6.5(n.4)	9(n.4)	11(n.4)	11(n.4)	14(n.4)	14(n.4)	Φ14(n.8)	Φ16(n.8)	Φ16(n.8)
CA	45°	45°	45°	45°	45°	45°	45°	45°	22.5°	22.5°
CE	70	70	95	110	142	170	200	260	290	290

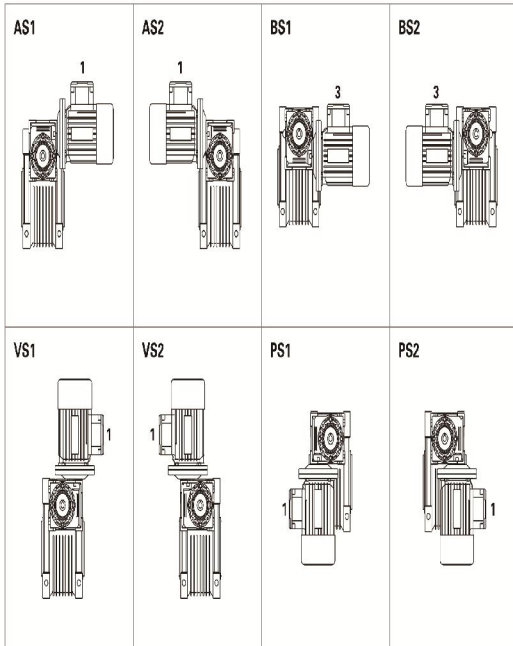


Model notes

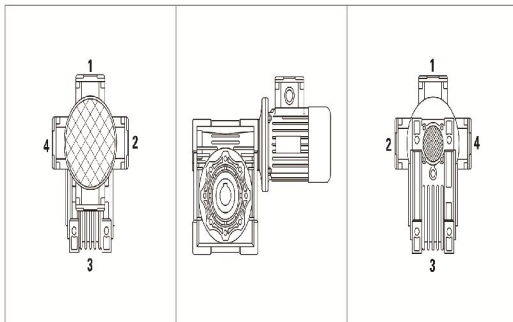
HMRV-063/130-600-VS-F1(FA)-AS-80B5-0.75kW-AS1			
HMRV-HMRV	Combined worm geared motor		
HNRV-HMRV	Worm gear speed reducer(Matching input shaft)		
063/130	Center distance		
600	Reduction ratio		
VS	Double input shaft	F1(FA)	Output flange
AS	Single output shaft	AB	Double output shaft
PAM	Fitted for motor coupling	80B5	Motor mounting facility
0.75kW	Electric motor power	As1	Mounting position



HMRV-HMRV Mounting positions



Position of terminal box



Parameter selections

Double step reducer(flange input, input speed is 1400r/min)/(matched with 4 poles motor)

N_2 -output speed, M_2 -output torque, i -total ratio, i_1 -high speed ratio, i_2 -low speed ratio, kN -output radial force, $f.s.$ -factor of safety

Model	N_2 (r/min)	M_2 (N.m)	i	i_1	i_2	kN	$f.s.$	
0.06kw								
25/30	14	25	100	10	10	1.62	1.3	
	9.3	32	150	10	15	1.83	0.9	
	7.0	41	200	10	20	1.83	0.7	
	5.6	44	250	10	25	1.83	0.8	
	4.7	59	300	10	30	3.49	1.2	
40/75	3.5	71	400	10	40	3.49	0.9	
	2.8	82	500	20	25	3.49	0.7	
	2.3	101	600	20	30	3.49	0.6	
	1.9	116	750	25	30	3.49	0.5	
	1.6	143	900	30	30	3.49	0.5	
25/40	1.2	171	1200	30	40	3.49	0.4	
	0.9	197	1500	50	30	3.49	0.3	
	0.8	217	1800	60	30	3.49	0.3	
	0.6	268	2400	60	40	3.49	0.2	
	0.5	324	3000	60	50	3.49	0.2	
30/40	0.4	294	4000	50	80	3.49	0.1	
	0.3	356	5000	50	100	3.49	0.1	
	4.7	57	300	10	30	3.49	1.3	
	3.5	70	400	10	40	3.49	0.9	
	2.8	96	500	20	25	3.49	0.6	
30/50	2.3	104	600	20	30	3.49	0.7	
	1.9	121	750	25	30	3.49	0.6	
	1.6	139	900	30	30	3.49	0.5	
	1.2	166	1200	30	40	3.49	0.4	
	0.9	196	1500	50	30	3.49	0.4	
30/63	0.8	218	1800	60	30	3.49	0.3	
	0.58	261	2400	60	40	3.49	0.2	
	0.4	300	3200	80	40	3.49	0.2	
	0.4	279	4000	50	80	3.49	0.1	
	0.28	338	5000	50	100	3.49	0.1	
30/75	1.6	141	900	30	30	4.84	1.0	
	1.2	169	1200	30	40	4.84	0.7	
	0.93	199	1500	50	30	4.84	0.7	
	0.78	222	1800	60	30	4.84	0.7	
	0.6	266	2400	60	40	4.84	0.5	
40/75	0.5	307	3000	60	50	4.84	0.4	
	0.35	288	4000	50	80	4.84	0.3	
	0.29	311	4800	60	80	4.84	0.3	
	0.9	203	1500	30	50	6.27	1.1	
	0.78	225	1800	30	60	6.27	0.9	
40/90	0.58	276	2400	60	40	6.27	0.8	
	0.47	319	3000	60	50	6.27	0.7	
	0.35	306	4000	50	80	6.27	0.6	
	0.28	360	5000	50	100	6.27	0.4	
	0.09kw							
40/75	0.6	330	2400	60	40	7.38	1.1	
	0.47	377	3000	60	50	7.38	0.8	
	0.35	355	4000	50	80	7.38	0.7	
	0.28	419	5000	50	100	7.38	0.5	
	0.5	405	3000	60	50	8.18	1.4	
40/90	0.35	365	4000	50	80	8.18	1.3	
	0.28	431	5000	50	100	8.18	1.0	
	0.12kw							
	30/50	4.7	118	300	10	30	4.84	1.2
		3.5	142	400	10	40	4.84	0.9
2.8		164	500	10	50	4.84	0.7	
2.8		171	500	10	50	6.27	1.3	
30/63		2.3	208	600	15	40	6.27	1.1
1.9	241	750	15	50	6.27	0.9		



HMRV Series Worm-Gear Speed Reducer



Model	N ₁ (r/min)	M ₂ (N.m)	i	i1	i2	kN	f.s.
0.12kw							
40/75	1.6	324	900	30	30	7.38	1.2
	1.2	399	1200	30	40	7.38	0.9
40/90	0.78	546	1800	30	60	8.18	0.9
	0.58	695	2400	60	40	8.18	0.9
50/110	0.5	883	3000	60	50	10.32	1.2
	0.35	784	4000	50	80	10.32	1.0
	0.28	928	5000	50	100	10.32	0.8
0.18kw							
30/63	3.5	221	400	10	40	6.27	1.0
	2.8	257	500	10	50	6.27	0.8
40/75	2.3	362	600	20	30	7.38	1.1
	1.9	435	750	25	30	7.38	0.9
	1.6	487	900	30	30	7.38	0.8
40/90	1.2	629	1200	30	40	8.18	1.0
	0.93	735	1500	30	50	8.18	0.8
50/110	0.8	860	1800	60	30	10.32	1.5
	0.58	1113	2400	60	40	10.32	1.1
0.25kw							
30/63	3.5	159	400	10	40	6.27	1.4
	2.8	185	500	10	50	6.27	1.2
40/75	3.5	336	400	10	40	7.38	1.1
	2.8	394	500	10	50	7.38	0.8
40/90	2.3	511	600	15	40	8.18	1.2
	1.9	598	750	15	50	8.18	0.9
	1.6	667	900	15	60	8.18	0.8
50/110	1.2	843	1200	30	40	10.32	1.3
	0.93	1064	1500	30	50	10.32	1.2
	0.78	1195	1800	60	30	10.32	1.1
63/130	0.6	1624	2400	60	40	13.5	1.0
	0.47	1935	3000	60	50	13.5	0.8
	0.35	2046	4000	50	80	13.5	0.6
	0.28	2430	5000	50	100	13.5	0.5
63/150	0.8	1199	1800	60	30	18	1.8
	0.8	1199	1800	60	30	18	1.8
	0.6	1446	2400	60	40	18	1.8
	0.5	1713	3000	60	50	18	1.4
	0.4	2026	4000	50	80	18	0.9
	0.3	2251	5000	50	100	18	0.7
0.37kw							
40/75	4.7	405	300	10	30	7.38	1.0
	3.5	496	400	10	40	7.38	0.7
40/90	4.7	401	300	7.5	40	8.18	1.5
	3.5	523	400	10	40	8.18	1.2
50/110	2.8	611	500	10	50	8.18	0.9
	2.3	757	600	15	40	8.18	0.8
63/130	1.9	949	750	25	30	10.32	1.3
	1.6	1079	900	30	30	10.32	1.2
	1.2	1396	1200	30	40	10.32	0.8
	0.9	1674	1500	50	30	13.5	1.1

Model	N ₂ (r/min)	M ₂ (N.m)	i	i1	i2	kN	f.s.
0.37kw							
63/130	0.78	1887	1800	60	30	13.5	0.9
	0.78	1774	1800	60	30	18	1.2
63/150	0.6	2141	2400	60	40	18	1.2
	0.5	2535	3000	60	50	18	0.9
0.55kw							
50/110	4.7	638	300	10	30	10.32	2.0
	3.5	826	400	10	40	10.32	1.4
	2.8	984	500	10	50	10.32	1.1
	2.3	1181	600	15	40	10.32	1.0
63/130	1.9	1411	750	25	30	10.32	0.9
	2.8	995	500	10	50	13.5	1.6
63/150	1.9	1471	750	25	30	13.5	1.2
	1.2	2132	1200	30	40	13.5	0.8
63/150	0.78	2637	1800	60	30	18	0.8
	0.6	3182	2400	60	40	18	0.8
0.75kw							
50/110	4.7	871	300	10	30	10.32	1.5
	3.5	1126	400	10	40	10.32	1.1
63/130	2.8	1357	500	10	50	13.5	1.1
	2.3	1631	600	15	40	13.5	1.0
	1.9	2005	750	25	30	13.5	0.9
	1.6	2283	900	30	30	13.5	0.8
63/150	2.8	1290	500	10	50	18	1.8
	2.3	1529	600	15	40	18	1.7
	1.9	1783	750	25	30	18	1.3
	1.6	2215	900	30	30	18	0.9
	1.2	2680	1200	30	40	18	1.0
1.1kw							
63/130	4.7	1312	300	10	30	13.5	1.3
	3.5	1671	400	10	40	13.5	1.0
63/150	2.8	1991	500	10	50	13.5	0.8
	9.3	752	150	10	15	18	3.1
63/150	7.0	966	200	10	20	18	2.4
	5.6	1175	250	10	25	18	1.7
	4.7	1364	300	10	30	18	1.7
	3.5	1619	400	10	40	18	1.6
63/150	2.8	1893	500	10	50	18	1.2
	2.3	2242	600	15	40	18	1.2
	1.9	2616	750	25	30	18	0.9
	1.5kw						
63/130	4.7	1789	300	10	30	13.5	1.0
	3.5	2279	400	10	40	13.5	0.7
63/150	9.3	1026	150	10	15	18	2.3
	7	1317	200	10	20	18	1.8
	5.6	1602	250	10	25	18	1.3
	4.7	1860	300	10	30	18	1.3
63/150	3.5	2208	400	10	40	18	1.2
	2.8	2582	500	10	50	18	0.9
	2.3	3057	600	15	40	18	0.9

Double step reducer (shaft extend input, input speed is 1400r/min)

kw-motor power, N2-output speed, M2-output torque, i-ratio, kN1-output radial force, kN2-input radial force

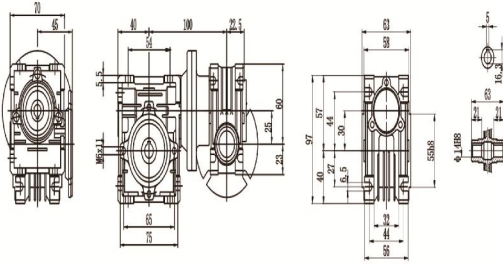
Model	kw	N ₂ (r/min)	M ₂ (N.m)	i	kN1	kN2
30/40	0.1	4.7	73	300	3.49	0.21
	0.1	3.5	65	400	3.49	0.21
	0.08	2.8	61	500	3.49	0.21
	0.06	2.3	73	600	3.49	0.21
	0.04	1.9	73	750	3.49	0.21
	0.03	0.6	73	900	3.49	0.21
	0.02	1.2	65	1200	3.49	0.21
	0.02	0.9	73	1500	3.49	0.21
	0.02	0.8	73	1800	3.49	0.21
	0.01	0.58	65	2400	3.49	0.21
	0.01	0.4	65	3200	3.49	0.21
	0.01	0.35	33	4000	3.49	0.21
30/50	0.1	0.28	29	5000	3.49	0.21
	0.15	4.7	145	300	4.84	0.21
	0.1	3.5	124	400	4.84	0.21
	0.1	2.8	120	500	4.84	0.21
	0.1	2.3	145	600	4.84	0.21
	0.1	1.9	145	750	4.84	0.21
	0.1	1.6	145	900	4.84	0.21
	0.08	1.2	124	1200	4.84	0.21
	0.06	0.93	145	1500	4.84	0.21
	0.04	0.78	145	1800	4.84	0.21
	0.03	0.6	124	2400	4.84	0.21
	0.02	0.5	120	3000	4.84	0.21
30/63	0.02	0.35	82	4000	4.84	0.21
	0.02	0.29	82	4800	4.84	0.21
	0.24	4.7	230	300	6.27	0.21
	0.2	3.5	230	400	6.27	0.21
	0.2	2.8	216	500	6.27	0.21
	0.13	2.3	230	600	6.27	0.21
	0.11	1.9	216	750	6.27	0.21
	0.1	1.6	198	900	6.27	0.21
	0.1	1.2	230	1200	6.27	0.21
	0.1	0.93	216	1500	6.27	0.21
	0.1	0.78	198	1800	6.27	0.21
	0.1	0.58	230	2400	6.27	0.21
40/75	0.08	0.47	216	3000	6.27	0.21
	0.06	0.35	172	4000	6.27	0.21
	0.04	0.28	150	5000	6.27	0.21
	0.4	4.7	390	300	7.38	0.35
	0.3	3.5	360	400	7.38	0.35
	0.21	2.8	320	500	7.38	0.35
	0.2	2.3	390	600	7.38	0.35
	0.2	1.9	390	750	7.38	0.35
	0.14	1.6	390	900	7.38	0.35
	0.11	1.2	360	1200	7.38	0.35
	0.1	0.93	390	1500	7.38	0.35
	0.1	0.78	390	1800	7.38	0.35
63/150	0.1	0.58	360	2400	7.38	0.35
	0.1	0.47	320	3000	7.38	0.35
	0.08	0.35	250	4000	7.38	0.35
	0.06	0.28	230	5000	7.38	0.35

Model	kw	N ₂ (r/min)	M ₂ (N.m)	i	kN1	kN2
40/90	0.6	4.7	610	300	8.18	0.35
	0.43	3.5	610	400	8.18	0.35
	0.34	2.8	560	500	8.18	0.35
	0.3	2.3	610	600	8.18	0.35
	0.23	1.9	560	750	8.18	0.35
	0.2	1.6	505	900	8.18	0.35
	0.3	1.2	610	1200	8.18	0.35
	0.14	0.93	560	1500	8.18	0.35
	0.11	0.78	505	1800	8.18	0.35
	0.11	0.58	610	2400	8.18	0.35
	0.1	0.47	560	3000	8.18	0.35
	0.1	0.35	460	4000	8.18	0.35
50/110	0.1	0.28	410	5000	8.18	0.35
	1.1	4.7	1285	300	10.32	0.49
	0.8	3.5	1185	400	10.32	0.49
	0.61	2.8	1100	500	10.32	0.49
	0.6	2.3	1185	600	10.32	0.49
	0.5	1.9	1285	750	10.32	0.49
	0.43	1.6	1285	900	10.32	0.49
	0.31	1.2	1186	1200	10.32	0.49
	0.3	0.93	1285	1500	10.32	0.49
	0.3	0.78	1285	1800	10.32	0.49
	0.2	0.58	1185	2400	10.32	0.49
	0.15	0.47	1100	3000	10.32	0.49
63/130	0.13	0.35	819	4000	10.32	0.49
	0.1	0.28	746	5000	10.32	0.49
	0.8	2.3	1650	600	13.5	0.7
	0.7	1.9	1790	750	13.5	0.7
	0.6	1.6	1760	900	13.5	0.7
	0.4	1.2	1650	1200	13.5	0.7
	0.4	0.93	1780	1500	13.5	0.7
	0.4	0.93	1780	1500	13.5	0.7
	0.3	0.78	1790	1800	13.5	0.7
	0.3	0.58	1650	2400	13.5	0.7
	0.2	0.47	1550	3000	13.5	0.7
	0.1	0.35	1220	4000	13.5	0.7
63/150	0.1	0.28	1100	5000	13.5	0.7
	3.4	9.3	2340	150	18	0.7
	2.7	7.0	2340	200	18	0.7
	1.9	5.6	2050	250	18	0.7
	1.9	4.7	2340	300	18	0.7
	1.8	3.5	2670			



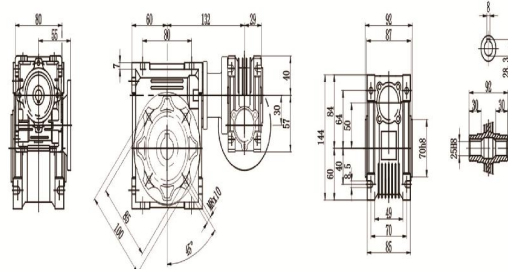
HMRV-HMRV Dimensions

HMRV025-HMRV030

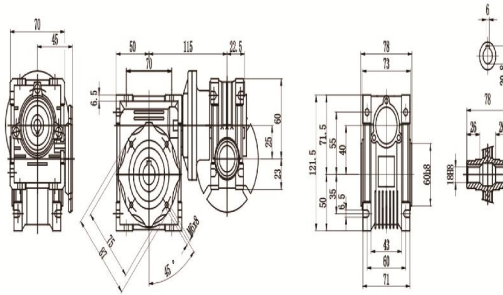


HMRV-HMRV Dimensions

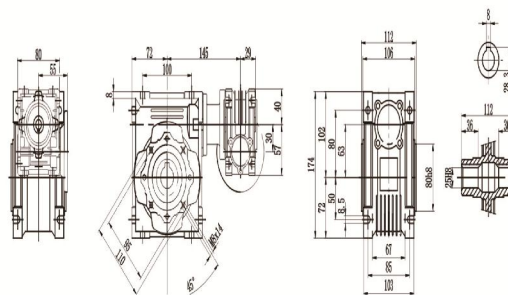
HMRV030-HMRV050



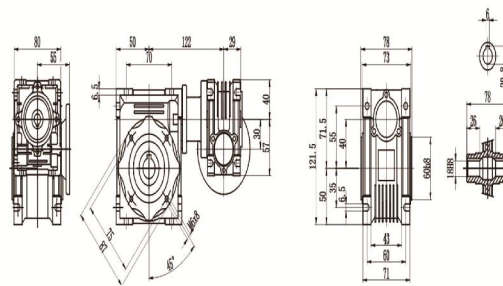
HMRV025-HMRV040



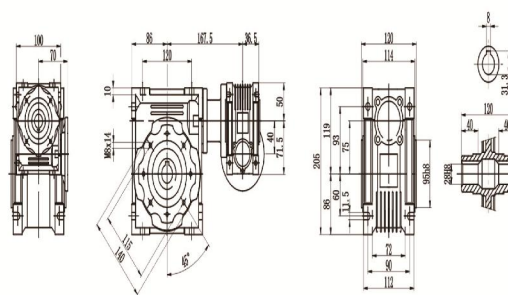
HMRV030-HMRV063



HMRV030-HMRV040



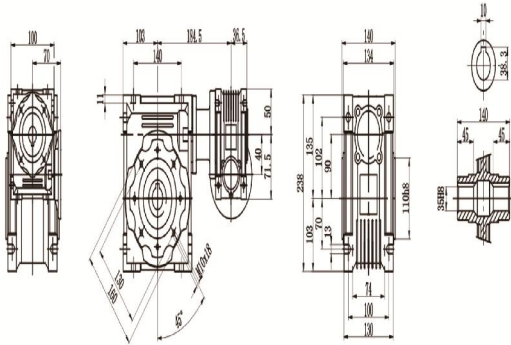
HMRV040-HMRV075



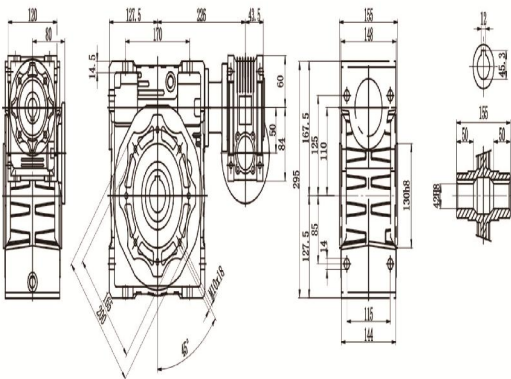


HMRV-HMRV Dimensions

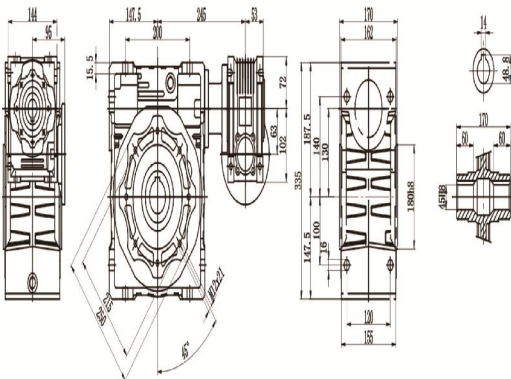
HMRV040-HMRV090



HMRV050-HMRV110

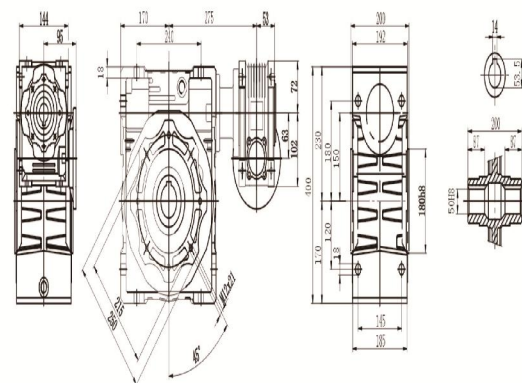


HMRV063-HMRV130

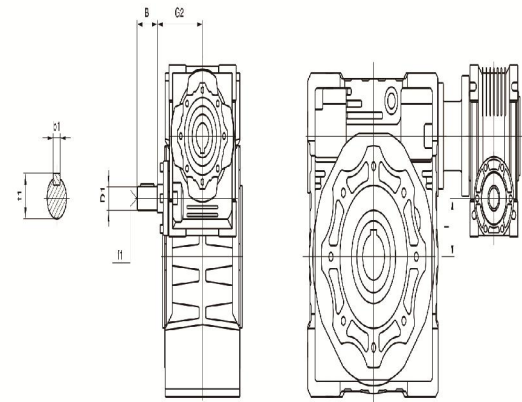


HMRV-HMRV Dimensions

HMRV063-HMRV150



HMRV-HMRV Dimensions



HMRV-HMRV	025-030	025-040	030-040	030-050	030-063	040-075	040-090	050-110	063-130	063-150
B	20	20	20	20	20	23	23	30	40	40
D1	9 j6	9 j6	9 j6	9 j6	9 j6	11 j6	11 j6	14 j6	19 j6	19 j6
G2	42	42	51	51	51	60	60	74	90	90
l	5	15	10	20	33	35	50	60	67	87
b1	3	3	3	3	3	4	4	5	6	6
f1	-	-	-	-	-	-	-	M6	M6	M6
l1	10.2	10.2	10.2	10.2	10.2	12.5	12.5	16	21.5	21.5



Lubricant

Lubrication of chosen table

Reducer size	25-80	110-150	
Type of lubrication oil	Complex lubrication oil	Mineral lubrication oil	
Ambient temperature	-20 ~ +10	-5 ~ +10	-10 ~ +20
ISO VG	ISO VG 220	ISO VG 100	ISO VG 220
AGP	TELOM 68 P10	BLARIA 68	BLARIA 220
SHSL	TYVELA OIL S100	OWILA OIL 400	OWILA OIL 220
CGO	GLT	SPARTAN (P10)	SPARTAN (P20)
MOBL	GLYCOLIC 100	MOBL OIL 68	MOBL OIL 100
CASTROL	ALPHARUN P100	ALPHA MAX 68	ALPHA MAX 220
BP	ENERCOL 68 SP100	ENERCOL DR 68P60	ENERCOL OIL 68/220

Adding capacity of lubrication oil

Type Installation	Capacity (liters)									
	025	030	040	050	063	075	090	110	130	150
B3								3	4.5	7
B5 B7								2.5	3.5	5.4
B8	0.02	0.04	0.08	0.15	0.3	0.55	1	2.2	3.3	5.1
V5								3	4.5	7
V8								2.2	3.3	5.1

Malfunctions Analysis

Fault Description	Reasons	Solutions
Overheating	Improper connection among prime motor, reducer and the operation device	Adjust to proper position
	Overloading	Adjust to proper load
	Over Friction of oil seals	Strip lubricant at the lip of oil seal
	1. Lubricant oil overmuch or shortage 2. Much impurity in oil or lubricant oil	Adjust to proper oil quantity as lubricant capacity table Build proper oil
Wobble	Prime motor, reducer and the operation device mount badly	Find out the fault place, tighten
	Tooth surface of worm gear set worn-out or damaged	Replace worm gear set when will avoid you when necessary
	Bearing worn-out	Replace bearing
Noise	Oil leak	Tighten screw
	Improper connection among prime motor, reducer and the operation device	Adjust to proper position
	Bearing damaged or too large backlash	Replace bearing
	Worm gear set worn badly	Check tooth surface or replace worm gear set (please contact with us)
Oil leakage	1. Lubricant oil shortage	Fill adequate oil as lubricant oil capacity table
	Oil seal lip worn-out	Replace oil seal
	Shell of oil seal area worn-out	Replace input shaft or output worm gear
	Oil screw plug loose	Tighten oil screw plug
Tooth surface of worm gear set is abraded Extra quickly	Oil pump damaged	Replace oil pump
	Overload	Adjust to proper loading
	1. Lubricant oil not according with requirement	Replace proper lubricant oil
	2. Lubricant oil shortage	Fill adequate oil as indication
	Not replacing lubricant oil in time according to requirement, oil deterioration	Replacing oil in time according to requirement
Overheating while working	1. Deal with "Oil Overheating" 2. Adopting proper measures to make environment temperature fall	

Annotation: 1. Avoid after the lubricant changed.
2. After the oil level above occur, please contact with a store nearest, our company will supply lubrication and service.



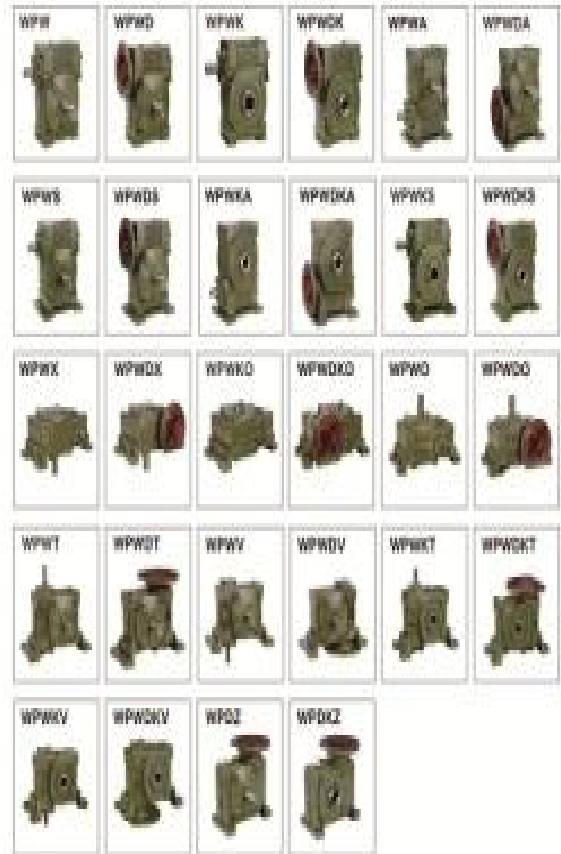
Single Speed Reducer

Speed ratio: 1/10-1/80



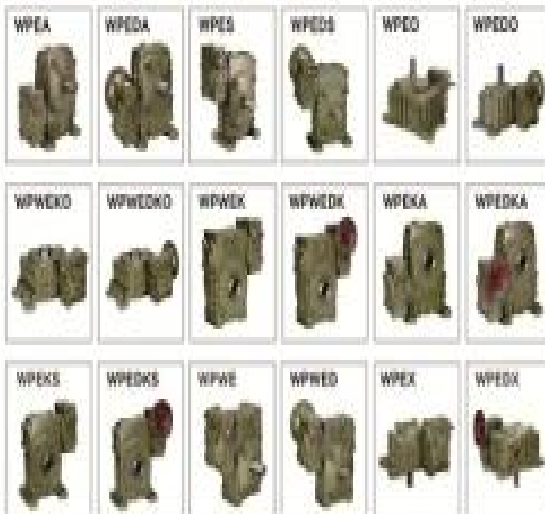
Single Speed Reducer

Speed ratio: 1/10-1/80



Double Speed Reducer

Speed ratio: 1/100-1/3000



Multistage Speed Reducer

Speed ratio: 1/1000-1/216000

