

# FBJ<sup>®</sup>





FBJ Company has excellent technological strengths and advanced production facilities and processes. It is capable of undertaking the full range of services from transmission system designs, productions to after-sales service. The company is also committed to product reliability, durability and efficiency. The transmission package designed by the company is used in the food, leather, textile, glass, pottery, medical, chemical, and light industries and other machinery facilities; it is especially suitable for all types of automation line transmission.

We endeavor to earn accolades from our users and agencies through adequate supplies, quality assurances, competitive pricing, and doorstep delivery based on order quantity, and being an agency for overseas shipments. We aim to draw alongside the best in the industry within the country and to import advanced foreign technologies in order to enhance our company's local and overseas competitiveness.

The company's current and future development principles hinges on the best talents, technologies, products, services, remunerations, management and company culture. Better than the best is our goal.





## ▶▶▶ General Features

RV Series of worm geared motor that our company produces include NMRV and NRV. Their performance features:

- > Excellent performance, simply structure, small cubage and high efficiency
- > Easy to mount and maintain
- > Wide output Reduction ratio, large torque and good capability of enduring overloads
- > Running stably, low noise and wearing well
- > Wide applicability and enough safe dependability  
Critical applications: It is also necessary to take inconsideration of and carefully assess the following applications by calling our Technical Service
- > Applications with especially high inertia
- > Applications with high dynamic strain on the case of the reduction unit
- > In places with temperature arrange from  $-10^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- > Use in environments pressures other than atmospheric pressure
- > Avoid applications where even partial immersion of the reduction unit is required





## ▶▶▶ Worm geared motor of RV series

### 1. Designation

NMRV	Worm geared motor		
NRV	Worm reduction unit		
050	Size		
FA	Output flange		
030	Reduction ratio	D or S	Output flange mounting position
PAM	Fitted for motor coupling		
200	Motor flange diameter	19	Drive shaft diameter
VS	Double input shaft	AS	Single output shaft
AB	Double output shaft	B3	Mounting position
0,75kW	Electric motor power	4p	Electric motor polarity
230/400V	Electric motor voltage	50Hz	Electric motor frequency

### 2. Performance

Type of load	Hours/day					
	Starts/hour less than ten times			Starts/hour more than ten times		
	<2	2~8	8~16	<2	2~8	8~24
	Service factor					
Uniform	0.8	1	1,25	1	1,25	1,75
Moderate	1	1,25	1,5	1,5	1,75	2
Heavy shocks	1,25	1,5	1,75	1,75	2	2,25



Parameter Schedule (With 4p,  $n_1 = 1400$ r/min motor)

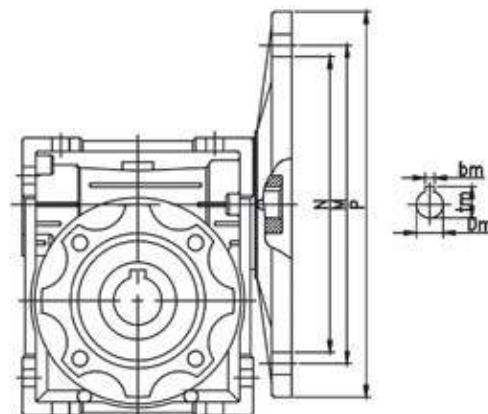
		Size <sub>25</sub>			Size <sub>30</sub>			Size <sub>40</sub>			Size <sub>50</sub>		
i	$n_2$ (r/min)	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.
7.5	186.7	0,09	3,9	2,8	0,18	7,8	2,3	0,37	16	2,4	0,75	34	2,1
10	140	0,09	5,1	2,4	0,18	10	1,8	0,37	21	1,9	0,75	44	1,6
15	93,3	0,09	7,3	1,6	0,18	14	1,3	0,37	31	0,8	0,75	63	1,2
20	70	0,09	9,2	1,3	0,18	18	1,0	0,37	39	1,0	0,75	81	0,9
25	56	-	-	-	0,18	21	1,0	0,37	47	0,8	0,55	71	1,0
30	46,7	0,09	12	1,1	0,18	24	0,8	0,37	53	0,8	0,55	81	1,0
40	35	0,09	15	0,8	0,12	19	0,9	0,25	44	0,9	0,37	68	1,1
50	28	0,06	12	0,9	0,12	23	0,8	0,22	47	0,8	0,37	80	0,9
60	23,3	0,06	14	0,7	0,09	19	0,9	0,18	43	0,8	0,37	89	0,8
80	17,5	-	-	-	0,06	14	0,9	0,12	34	1,0	0,25	72	0,9
100	14	-	-	-	-	-	-	0,12	38	0,8	0,18	60	0,9
		Size <sub>63</sub>			Size <sub>75</sub>			Size <sub>90</sub>			Size <sub>105</sub>		
i	$n_2$ (r/min)	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.
7.5	186.7	1,50	67,5	1,9	4	182	1,0	4	184,2	1,6	-	-	-
10	140	1,50	89	1,5	3	180	1,1	4	243	1,3	7,5	455	1,1
15	93,3	1,50	127	1,1	3	261	0,8	4	352	1,0	5,5	484	1,2
20	70	1,50	166	0,8	1,50	168	1,3	4	458	0,8	4,8	557	1,0
25	56	1,10	146	0,9	1,50	205	1,0	3	420	0,8	4	573	1,0
30	46,7	1,10	167	1,0	1,50	233	1,0	3	479	0,9	4	647	1,0
40	35	0,92	176	0,8	1,10	216	1,0	1,84	377	1,0	3	638	1,0
50	28	0,55	124	1,1	0,55	129	1,6	1,84	452	0,8	3	767	0,8
60	23,3	0,55	140	0,9	0,55	146	1,4	1,50	424	0,8	2,2	648	0,9
80	17,5	0,37	115	1,1	0,55	180	1,1	0,75	258	1,1	1,5	548	0,9
100	14	0,37	129	0,9	0,55	206	0,9	0,75	302	0,9	1,1	473	1,0
		Size <sub>110</sub>			Size <sub>130</sub>			Size <sub>150</sub>			NOTE		
i	$n_2$ (r/min)	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.	$P_1$ (kW)	$M_2$ (Nm)	s.f.	UNIT		
7.5	186.7	7,50	345	1,3	7,50	349,2	2,1	-	-	-	$n_1$ = input speed r/min $n_2$ = output speed r/min $M_2$ = output torque Nm <i>i</i> = reduction ratio s.f. = service factor		
10	140	7,50	455	1,1	7,50	455	1,8	15	921	1,3			
15	93,3	5,50	484	1,4	7,50	668	1,4	11	990	1,3			
20	70	5,50	638	0,9	7,50	880	1,0	11	1291	1,0			
25	56	4,80	688	0,9	7,50	1074	0,9	7,5	1074	1,1			
30	46,7	4	647	1,1	5,50	900	1,2	7,5	1274	0,9			
40	35	3	638	1,0	5,50	1171	0,9	5,5	1171	1,3			
50	28	3	767	0,8	4,80	1244	1,1	5,5	1426	1,0			
60	23,3	2,20	648	0,9	4	1179	0,8	4,0	1195	1,1			
80	17,5	1,50	548	0,9	2,20	816	1,0	4,0	1484	0,8			
100	14	1,10	473	1,0	2,20	966	1,0	2,2	960	1,0			



When s.f. = 1, for the dimensions concerning (P1, M2) please refer to the table shown at table 04:

i	n <sub>2</sub>		n <sub>1</sub> =1400r/min										
			25	30	40	50	63	75	90	105	110	130	150
7.5	187	P <sub>1</sub> (kW)	0,25	0,49	0,9	1,58	2,85	4,00	6,4	-	9,75	15,75	-
		M <sub>2</sub> (Nm)	11	19	39	71	128	182	295	-	449	733	-
10	140	P <sub>1</sub> (kW)	0,21	0,32	0,7	1,2	2,25	3,30	5,20	8,25	8,25	13,5	19,50
		M <sub>2</sub> (Nm)	12	16	40	70	111	198	316	500	501	819	1197
15	93	P <sub>1</sub> (kW)	0,14	0,25	0,3	0,90	1,65	2,4	4,00	6,60	7,70	10,5	14,30
		M <sub>2</sub> (Nm)	11	18	25	76	140	209	352	580	678	935	1287
20	70	P <sub>1</sub> (kW)	0,12	0,18	0,37	0,68	1,20	1,95	3,2	4,80	4,95	7,50	11,00
		M <sub>2</sub> (Nm)	12	17	35	73	133	218	366	557	574	880	1291
25	56	P <sub>1</sub> (kW)	-	0,14	0,3	0,55	0,99	1,50	2,40	4,00	4,32	6,75	8,25
		M <sub>2</sub> (Nm)	-	20	38	71	131	205	336	573	619	967	1184
30	47	P <sub>1</sub> (kW)	0,09	0,18	0,30	0,55	1,10	1,50	2,70	4,00	4,4	6,60	6,75
		M <sub>2</sub> (Nm)	12	24	42	81	167	233	430	647	712	1080	1147
40	35	P <sub>1</sub> (kW)	0,08	0,10	0,23	0,41	0,74	1,10	1,84	3,00	3,00	4,95	7,15
		M <sub>2</sub> (Nm)	12	15	40	75	141	216	377	638	638	1054	1522
50	28	P <sub>1</sub> (kW)	0,06	0,11	0,18	0,33	0,61	0,88	1,47	2,40	2,40	5,28	5,50
		M <sub>2</sub> (Nm)	11	21	38	72	136	206	362	613	614	1368	1426
60	23	P <sub>1</sub> (kW)	0,05	0,07	0,14	0,30	0,50	0,77	1,20	1,98	1,98	3,20	4,40
		M <sub>2</sub> (Nm)	11	15	34	71	126	204	339	583	583	943	1315
80	18	P <sub>1</sub> (kW)	-	0,05	0,11	0,23	0,41	0,61	0,83	1,35	1,35	2,20	3,20
		M <sub>2</sub> (Nm)	-	14	33	65	127	198	284	493	493	816	1187
100	14	P <sub>1</sub> (kW)	-	-	0,10	0,16	0,33	0,50	0,68	1,10	1,10	2,2	2,20
		M <sub>2</sub> (Nm)	-	-	30	54	116	185	272	473	473	966	960

### 3. Motor mounting specification and NMRV input hollow shafts dimensions





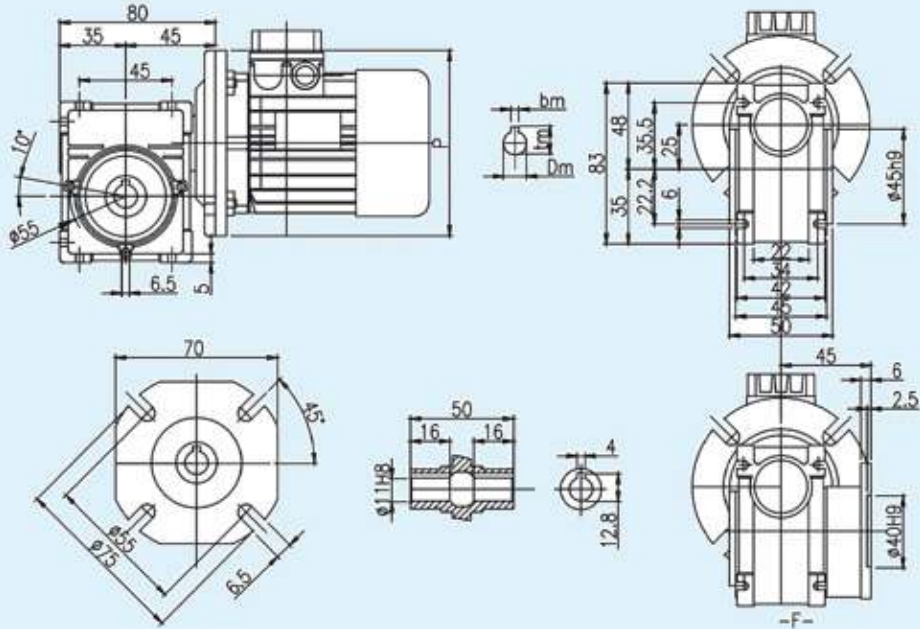
NMRV	Mounting Spec.						Dm											
	PAM-IEC	N	M	P	Bm	tm	5	7,5	10	15	20	25	30	40	50	60	80	100
025	56B14	50	65	80	3	10,4	9	9	9	9	9	-	9	9	9	9	-	-
030	63B5	95	115	140	4	12,8	11	11	11	11	11	11	11	11	11	-	-	-
	63B14	60	75	90	4	12,8												
	56B5	80	100	120	3	10,4	9	9	9	9	9	9	9	9	9	9	9	-
	56B14	50	65	80	3	10,4												
040	71B5	110	130	160	5	16,3	14	14	14	14	14	14	14	14	-	-	-	-
	71B14	70	85	105	5	16,3												
	63B5	95	115	140	4	12,8	11	11	11	11	11	11	11	11	11	11	11	11
	63B14	60	75	90	4	12,8												
	56B5	80	100	120	3	10,4	-	-	-	-	-	-	-	-	9	9	9	9
050	80B5	130	165	200	6	21,8	19	19	19	19	19	19	19	-	-	-	-	-
	80B14	80	100	120	6	21,8												
	71B5	110	130	160	5	16,3	14	14	14	14	14	14	14	14	14	14	14	-
	71B14	70	85	105	5	16,3												
	63B5	95	115	140	4	12,8	-	-	-	-	-	-	-	11	11	11	11	11
063	90B5	130	165	200	8	27,3	-	24	24	24	24	24	24	-	-	-	-	-
	90B14	95	115	140	8	27,3												
	80B5	130	165	200	6	21,8	-	19	19	19	19	19	19	19	19	19	-	-
	80B14	80	100	120	6	21,8												
	71B5	110	130	160	5	16,3	-	-	-	-	-	-	-	-	14	14	14	14
	71B14	70	85	105	5	16,3												
075	100/112B5	180	215	250	8	31,3	-	28	28	28	-	-	-	-	-	-	-	-
	100/112B14	110	130	160	8	31,3												
	90B5	130	165	200	8	27,3	-	24	24	24	24	24	24	24	-	-	-	-
	90B14	95	115	140	8	27,3												
	80B5	130	165	200	6	21,8	-	-	-	-	19	19	19	19	19	19	19	19
	80B14	80	100	120	6	21,8												
	71B5	110	130	160	5	16,3	-	-	-	-	-	-	-	-	14	14	14	14
090	100/112B5	180	215	250	8	31,3	-	28	28	28	28	28	28	-	-	-	-	-
	100/112B14	110	130	160	8	31,3												
	90B5	130	165	200	8	27,3	-	24	24	24	24	24	24	24	24	24	-	-
	90B14	95	115	140	8	27,3												
	80B5	130	165	200	6	21,8	-	-	-	-	-	-	-	19	19	19	19	19
	80B14	80	100	120	6	21,8												
105	132B5	230	265	300	10	41,3	-	38*	38*	38*	38*	-	-	-	-	-	-	-
	100/112B5	180	215	250	8	31,3	-	28	28	28	28	28	28	28	28	28	-	-
	90B5	130	165	200	8	27,3	-	-	-	-	-	24	24	24	24	24	24	24
	80B5	130	165	200	6	21,8	-	-	-	-	-	-	-	-	-	-	19	19
110	132B5	230	265	300	10	41,3	-	38*	38*	38*	38*	-	-	-	-	-	-	-
	100/112B5	180	215	250	8	31,3	-	28	28	28	28	28	28	28	28	28	-	-
	90B5	130	165	200	8	27,3	-	-	-	-	-	24	24	24	24	24	24	24
	80B5	130	165	200	6	21,8	-	-	-	-	-	-	-	-	-	-	19	19
130	132B5	230	265	300	10	41,3	-	38*	38*	38*	38*	38*	38*	38*	-	-	-	-
	100/112B5	180	215	250	8	31,3	-	-	-	-	-	28	28	28	28	28	28	28
	90B5	130	165	200	8	27,3	-	-	-	-	-	-	-	-	-	-	24	24
150	160B5	250	300	350	12	45,3	-	42	42	42	42	42	-	-	-	-	-	-
	132B5	230	265	300	10	41,3	-	-	-	-	38	38	38	38	38	38	-	-
	100/112B5	180	215	250	8	31,3	-	-	-	-	-	-	-	-	28	28	28	28

Note:(\*)Low profile key supplied by Haitec.



## 4.Dimension

25 Type



30~150 Type

