

REMI

'NZ' SERIES GEARED MOTORS

REMI has been pioneering manufacturer of helical in line geared motors in India since last 25 years, under license from VEM as well as STEPHAN both of Germany. During this long period, REMI has collected vast amount of field data regarding application of geared motors under Indian conditions. REMI has utilized this data bank to redesign its existing lines of geared motors, resulting in REMI 'NZ' series helical in line geared motors. REMI 'NZ' series geared motors have following advantages -

- Both the bearings of output shaft are located in housing as in "Block" or 'Unicase' housing concept, thereby eliminating chances of misalignment even under high radial loads on the output shaft.
- For extra high radial and/or axial loads reinforced bearings can be provided if specific application demands.
- In the unlikely event of motor winding burn out, wound stator can be easily removed for rewinding without disturbing the Gearbox. Similarly, Gearbox servicing can be carried out without disturbing the motor.
- Higher power to weight ratio due to compact design.

RANGE: REMI 'NZ' series geared motors are offered in exhaustive range with output from 0.12 kW (0.16 HP) to 30 kW (40 HP) and output speed from 1.5 RPM to 500 RPM. The complete series consists of ten sizes of two stage and eight sizes of three stage gear Boxes for 'NZ' series geared motors.

CONSTRUCTIONAL FEATURES: Gear box housing and cover are of high quality graded cast iron and have sturdy internal ribs. Ample dimensions of gear wheels, shafts and ball bearings ensure long life of the gear box. The gear wheels are made of wear-resistant special alloy. They are case hardened by modern hardening process ensuring practically zero distortion during heat treatment. Gear lapping ensures finer high spot removal. Subsequent phosphating improves wear and corrosion resistance properties as also dampens gear noise.

REMI has in-house gear manufacturing, heat treatment facility backed by full fledged machine shop, with state of art CNC machining centres, assembly, testing line and in house electrical motor manufacturing.

EFFICIENCY & NOISE: In todays competitive scenario, equipment designers are under constant pressure to improve the efficiency of the equipment and reduce noise level.

REMI 'NZ' series geared motors offer ideal solution to the designers to meet these goals. Due to original German (VEM) design of its electric motor complemented by in house manufacturing of all the motor components together with high efficiency of gears, as a result of modern production methods, it is possible to regard motor output and gearbox output as being practically equal, except in case of motors below 0.5 HP, a slight reduction can be observed.

REMI 'NZ' series geared motors have noise levels which are within internationally accepted limits.

ELECTRIC MOTORS: REMI 'NZ' series geared motors are normally offered with electric motors suitable for 415v \pm 10%, 50Hz \pm 5%, ProtectionIP55 and class of Insulation is F. Motors for other operating conditions of voltage, frequency etc. can be offered on request. Motors can also be supplied at additional cost with epoxy encapsulation of winding and epoxy paint to withstand operating environment such as high concentration of corrosive chemical gases and vapors.

SPECIAL VERSIONS: REMI 'NZ' series geared motors can be offered with dual speed, flame proof, brake versions on request. It may be noted that REMI 'NZ' series geared motors are also suitable for operating with inverters for speed variation, however it will be necessary to check with us for right selection of geared motor in case you intend to use with inverter.

SELECTION OF CORRECT SIZE OF GEARED MOTOR:

The catalogue shows the rated H.P., R.P.M.& Torque of the geared motor. Also for the same H.P., R.P.M. and Torque different type of motors are offered with different service factor for ease of selection for various application.

Depending on the application, the geared motor with proper service factor should be selected. The service factor for the given application can be calculated as under.

Minimum Service factor required = C1 x C2 x C3

Where : C1 = Coefficient of operating condition.

This depends on type of load, (See Table No.4) duty hours or total number of working hours per day and number of starts & stops hour (See Table No.1) By referring to these two tables the value of C1 can be determined.

C2 = Coefficient of temperature condition.

C2 = 1.0, Where ambient temperature is maximum 40° C. For higher ambient temperatures, select C2 from table No.2.

C3 = Coefficient of mounting site elevation.

C3 = 1.0, if the motor is used at a site with elevation upto 1000 Meters. For higher elevations, select C3 from table No.3.

If the application is special which is not covered in this catalogue or very severe, then please refer to us with complete application details, to enable us to offer a suitable geared motor.

IMPORTANT NOTE: It is very essential to select a proper gear motor for trouble free long life of the motor. In case of difficulty in selection, please refer the matter to us with full application details, instead of selecting a motor ad - hoc or under ignorance. In case of difficulty in selection, please call for our application data sheet. After receipt of duly filled up application data sheet we will select a proper geared motor for you.

In case Geared Motor is to be used for agitator/mixer application, it is strongly recommended that between the agitator shaft and the geared motor shaft supporting stool be provided with thrust bearing so that excess load is not transfered from agitator shaft to motor shaft and the gear box bearing is protected from over loads.



	SELECT		OPERA		ACTOR	C1.	1915		
			MC	TOR ST	ARTING	PER HO	UR		
		1 TO 6			7 TO 12			13 TO 20)
			1	DAILY D	UTY IN	HOURS			
TYPE OF LOAD	0 to 8	9-16	17-24	0 to 8	9-16	17-24	0 to 8	9-16	17-24
Uniform operation, no torque surges, small accelerated mass	1.00	1.12	1.25	1.12	1.25	1.40	1.25	1.40	1.60
Irregular operation, medium torque surges, medium accelerated mass.	1.25	1.40	1.60	1.40	1.60	1.80	1.60	1.80	2.00
 Irregular operation, more severe torque surges, heavier accelerated mass. 	1.60	1.80	2.00	1.80	2.00	2.24	2.00	2.24	2.50

GEARED MOTORS 'NZ' SERIES **ENGAGED TO WORK**

Note: For more than 20 starts per hour, please refer to us.

TABLE NO. 2 SELECTION OF OPERATING FACTOR C2.

AMBIENT TEMPERATURE IN °C

0 to 40	40 to 45	45 to 50
1.0	1.08	1.1

TABLE NO. 3 SELECTION OF OPERATING FACTOR C3.

MOUNTING SITE ELEVATION IN METERS ABOVE SEA LEVEL.

0 to 1000	1000 to 2000	2000 to 3000
1.0	1.05	1.11

TABLE NO. 4 TYPE OF LOAD ACCORDING TO TYPE OF APPLICATION

1. Uniform operation, no torque surges, small accelerated mass.

Drilling machines

Filling machines

Bottle cleaning and filling machines

Flat belt conveyors

Centrifugal pumps

Fans

Assembly belts

Light-weight mixers

Light-weight stirrers

Inclined elevators and conveyor belts

Embroidery machines

Machine tool feeds

Work piece drives

Washing machine

Constant speed Screw conveyors

Lifting platforms

valve controls

Screw conveyors

Container scales

Light elevator

Ventilators

Roller shutter gates

Tube filling machines

Laundry machines

Low capacity lifts

2. Irregular operation, medium torque surges, medium accelerated mass.

Balancing machines

Bending machines

Turning lathes

Rotary table drives

Mixers

Heavy agitators

Packing machines

Winches

Cement mixers

Tumbling barrels

Kneaders

Canning machines

Drives of cranes, crabs and hoists

Freight elevators

Sliding doors

Slewing drives

Brick works machinery

Moulding machines

Mining fans

Gear & Rotary pumps

Flour mill / Dal mill

Brush making machines

Dosing machines

Rotary kilns

Bucket elevators

Furnace doors

Tanning barrels

3. Irregular operation, more severe torque surges, heavier accelerated mass.

Plates shears

Tumbling barrels

Centrifuges

Proof-presses

Moulding machines (Heavy duty)

Piston Pumps

Stamping presses

Paper cutting machines

Crushers

Oscillating belt conveyors

Calenders & rollers for rubber industry

Foundry machines

Folding machines

Briquetting presses

Eccentric presses

Mechanical hammers

Articulated plate conveyors

Concrete work

Rolling mill

Welding rigs

Crushing machines

Separators

Punching machines

Vibrators

Bailing presses

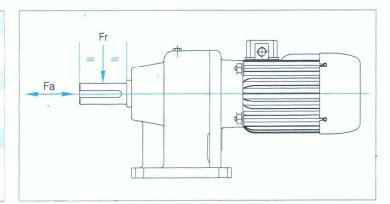


PERMISSIBLE LOADS AT THE OUTPUT-SHAFT:

The permissible radial & axial loads for gear boxes with standard bearing or with reinforced bearings on their output shaft are given in table No.5. The figures are based on bearing life of 8000 hrs. at their corresponding speeds and under the provision that radial loads are applied at half the length of the output shaft. Where only radial or only axial loads are transmitted. The shafts can be subjected to the full amount of Fr or Fa given in the table.

For shafts subjected to radial and axial loads at the same time, Fr is to be reduced by the amount of the thrust load. In case, the permissible figures for gears with standard bearing are exceeded, units with reinforced bearings are to be taken. The double row angular contact ball bearing and the cylindrical roller bearing are capable of transmitting higher loads.

With the load figures of the table and following formula, it is possible to find the minimum permissible diameter of gear wheels, sprocket wheels, or belt pulleys.



FOR GEAR WHEELS & SPROCKET WHEELS.

Dmin = 2000*MFr

FOR V-BELT PULLEYS.

= 4000*MDmin Fr

WHERE:

= Min. Permissible diam...(mm) Dmin = Torque to be transmitted...(Nm) M

= Permissible radial load at the output shaft... (N)

Permissible Radial (Fr) and Axial (Fa) Loads on Output Shaft Tables No. 5

Gear Box	Speed	Std. B	earing	Reinford	ced Bg.
Туре	. 61	Fr	Fa	Fr	Fa
NZA	≤ 17	650	220		
	19 - 29	650	200	-	-
	30 - 49	600	200	-	-
	50 - 80	500	170	-	
DIS S	81 - 145	400	140	-	-
	> 150	300	110	-	-
NZB	≤ 19	1150	380	2100	750
	20 - 29	1100	350	2050	700
	30 - 53	1050	350	2000	700
	54 - 86	950	320	1600	550
67. Ch 2	87 - 135	750	250	1400	500
	> 140	650	220	1300	450
NZO	< 14	1700	560	3200	1150
NZOA	15 - 19	1600	540	3150	1120
	20 - 30	1500	540	3100	1100
	31 - 53	1500	540	3000	1080
175	54 - 80	1250	450	2400	860
	85 - 125	1000	360	2000	720
	> 130	760	270	800	650
NZ1	< 18	2900	1000	5250	1900
	19 - 25	2700	960	5150	1860
	26 - 39	2600	930	5100	1830
	40 - 62	2500	900	5000	1800
	63 - 85	2100	760	3800	1360
2.46-17	90 - 132	1650	600	3200	1150
	> 140	1150	400	2700	970
NZ2	≤ 14	3500	1200	6300	2300
NZ2B	15 - 19	3300	1150	6200	2250
The Marie	20 - 29	3000	1080	6100	2180
	30 - 48	3000	1080	6000	2150
	49 - 75	2500	900	4700	1700
	80 - 130	2000	720	4000	1450
NZ3	> 135 ≤ 14	1500 4000	540	3500 7300	1250 2650
NZ3 NZ30		3700	1400	7300	2600
14230			1350		
	20 - 29	3500	1300	7100	2550

Gear Box	Speed	Std. B	earing	Reinfor	ced Bg.
Туре		Fr	Fa	Fr	Fa
NZ3	30 - 49	3400	1250	7000	2500
	50 - 80	2700	970	5400	1950
	82 - 135	2200	800	4500	1630
	> 140	1700	620	4000	1430
NZ4	≤ 14	4500	1650	8400	3050
NZ40	15 - 19	4300	1620	8200	2950
	20 - 29	4100	1580	8100	2880
	30 - 48	4000	1540	8000	2850
	50 - 78	3000	1080	6000	2150
	80 - 120	2500	900	5000	1800
	> 130	2000	720	4500	1600
NZ6	< 13	6600	2200	9700	3700
NZ62	14 - 18.5	6400	2120	9450	3600
	19 - 28	6200	2060	9200	3550
	29 - 50	6000	2000	9000	3500
	52 - 80	5000	1600	8000	3100
- 411	81 - 125	4000	1300	7000	2800
	> 130	3000	1000	6000	2500
NZ7	≤ 14	7600	2600	10800	4800
NZ73	15 - 19.5	7400	2520	10500	4700
L L	20 - 29	7200	2450	10200	4600
	30 - 49	7000	2400	10000	4500
	50 - 79	6000	2000	9000	4000
	80 - 122	5000	1650	8000	3500
	> 125	4000	1300	7000	3000
NZ8	≤ 14	8800	3100	14000	6400
NZ84	15 - 20	8500	3000	13600	6250
	21 - 30	8300	2900	13300	6100
. 4.9	31 - 50	8000	2800	13000	6000
	51 - 75	7000	2400	11000	5000
3 12	76 - 114	6000	2000	9500	4500
	> 115	5000	1500	8500	4000
NZ10	≤ 50	50000	-	-	-
	51 - 80	40000	-	-	
the same of the same	> 80	35000			



LUBRICATION:

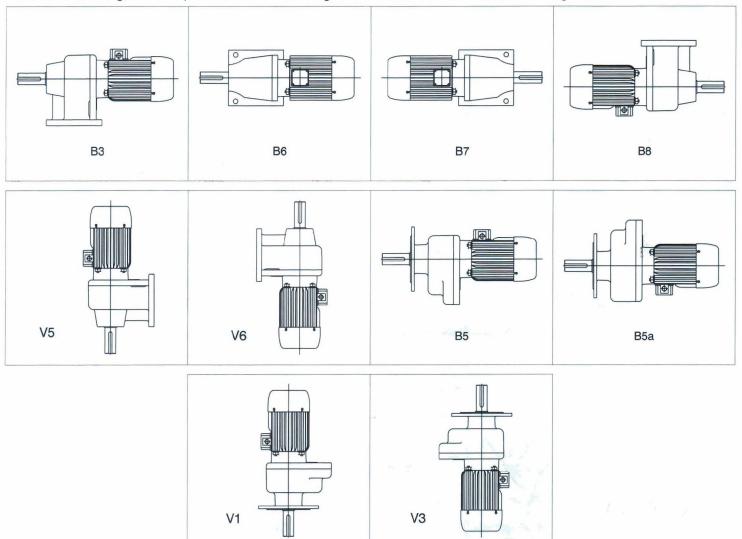
Gears are splash lubricated by oil. It may be noted that **Geared motors are delivered without oil and before starting oil must be filled up to oil level indicator.**

First oil change must be done after operating 400 hours. Consequent oil changes after every 5000 hours of operation are recommended.

1000	RECOMMENDE	D OIL GRADES BASED ON AM	IBIENT TEMPERATURE (OF 10-45°C :
Output RPM	Oil Grade	Indian Oil	Hindustan Petroleum	Bharat Petroleum
>225	ISO VG 150	SERVOMESH SP 150	PARTHAN EP 150	AMOCAM 150
225-25	ISO VG 220	SERVOMESH SP 220	PARTHAN EP 220	AMOCAM 220
25-5	ISO VG 320	SERVOMESH SP 320	PARTHAN EP 320	AMOCAM 320
<5	ISO VG 460	SERVOMESH SP 460	PARTHAN EP 460	AMOCAM 460

MOUNTING POSITIONS

Position of Oil level indicator, Breathing Plug and Drain plug change depending on mounting position. It is therefore very important to specify mounting position as per chart given below at the time of ordering. In absence of any indication at the time of ordering, it will be presumed that mounting is B3 for foot mounted and B5 for flange mounted.





REMI 'NZ' SERIES GEARED MOTOR RATING CHART

No. No.	MOTOR	OUTPUT	GEARED MOTOR	OUTPUT	SE	RVICE FACT	OR.		MOTOR	OUTPUT	GEARED MOTOR	OUTPUT	SE	RVICE FACT	OR			
19				TORQUE (Nm)								TORQUE (Nm)						
290 NZA 63M-4	0.18 (0.25)	217	N7A 63M-4	A Committee of the Comm	2 2 4	7 - X	21		0.25 (0.33)	153	N7A 71S-4	-	1.3	A E				
1.5 NZ26 80M-8 1540 1.1 159 NZA71S-4 12.8 2.9 1.5 NZ7 80M-8 1403 1.6 1.5 NZ7 80M-8 1403 1.6 1.5 NZ7 80M-8 1403 1.6 1.5 NZ2 80M-8 1403 1.6 1.5 NZ2 80M-8 1403 1.6 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8 1.7 1.8	0.10 (0.20)								0.00)						2.9			
0.25 0.38 1.4		300	1427 00101-4	7.1			2.7							1.4				
1.5 NZT-180M-0 1403	0.25 (0.33)	1.4	N762 80M-8	1540	1 1									200.0	2.9			
18	0.25 (0.55)													1.4				
1.5										1.000					3.1			
A5														1.5				
17		1,197.0070	CONTRACTOR PROPERTY OF												3.2			
5.3 NZZB 718-4 405 1.1 226 NZB 718-4 9.5														1.5				
S1 NZA 715-4 410															3.2			
7.8 NZ28 715-4 274 1.3											NZA 71S-4	9.8		1.6				
7.4 NZ20715-4 233 18.8 24 267 NZ2715-4 7.7 1.7 3.4 NZ40715-4 279 2.4 267 NZ20715-4 263 1.3 200 NZ20715-4 7.4 7.4 3.5 8.2 NZ20715-4 243 1.3 200 NZ20715-4 7.4 7.5 3.5 8.2 NZ20715-4 245 1.3 24 3.42 NZ20715-4 6.4 7.4 3.5 8.4 NZ20715-4 247 2.4 3.42 NZ20715-4 6.4 3.8 8.4 NZ20715-4 204 1.5 3.0 326 NZ20715-4 5.6 1.8 3.0 NZ20Z15-4 5.6 1.8 3.0 NZ20Z15-4 5.4 3.9 3.0 NZ20Z15-4 5.4 3.9 3.0 NZ20Z15-4 5.4 3.9 3.0 NZ20Z15-4 5.4 3.9 3.9 3.3 NZ20715-4 5.4 3.9 3.9 3.1 NZ20715-4 5.4 3.9		1555									NZB 71S-4	8.7			3.4			
7.4 NZ40 71S-4 279														1.7				
8.8 NZ2871S-4															3.4			
82 NZ20 71S-4		1.7.0	1000												3.5			
8.4 NZ20 715.4 247 1.5 2.4 342 NZB 715.4 6.4 38					1000000									1.7				
10 NZ2B 71S-4 204 3.0 371 NZA 71S-4 5.6 1.8 3.9															3.8			
10														1.8				
17 NZ080M-8 132 1.3 3 3 0.37 (0.5) 1.5 NZ7390S2-8 2138 1.1 1 1.7 1.5 3.3 NZ290S4-8 112 1.5 3.9 3.3 NZ6290S-6 971 1.7 1.8 1.7 1.8 1.7 1.8 1			71 11 11 11 11 11 11 11								The second secon							
16 NZ2 90N-8 138 3.3 0.37 (0.5) 1.5 NZ73 90S2-8 2188 1.1 20 NZ2 90S-6A 112 3.9 3.3 NZ62 90S-6 971 1.7 20 NZ2 90S-6A 112 3.9 3.3 NZ62 90S-6 971 1.7 26 NZ6 90S-6A 87.0 1.0 4.6 NZ60 90S-6 971 1.7 26 NZ6 90S-6A 87.0 1.0 2.0 4.6 NZ60 90S-6 971 1.7 2.0 1.0 2.0 4.5 NZ40 90S-6 971 1.7 2.0 1.0 2.0 4.5 NZ62 90S-6 971 1.7 2.0 4.6 NZ62 90S-6 971 1.7 2.0 1.0 2.0 4.5 NZ62 90S-6 971 1.7 2.0 1.0 2.0 4.5 NZ62 90S-6 971 1.7 2.0 4.6 NZ62 90S-6 971 1.0 2.0 NZ62 90S-6 971 1.0 2.0 NZ62 90S-6 971 2.0 4.0 NZ62 90S-6 971 1.0 2.0 NZ62 90S-6 971															3+5			
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76 NZB 71S-4 29.3 1.6 40 NZB 71M-4 82.0 1.0 76 NZO 71S-4 29.3 3.8 40 NZO 71M-4 82.0 1.8 82 NZA 71S-4 27.0 1.0 40 NZ1 71M-4 82.0 2.9 84 NZB 71S-4 26.6 1.7 45 NZB 71M-4 73.0 1.0 2.9 86 NZO 71S-4 25.6 4.3 45 NZO 71M-4 73.0 1.0 90 NZA 71S-4 24.6 1.0 46 NZ1 71M-4 70.0 1.9 99 NZA 71S-4 25.4 1.8 51 NZB 71M-4 65.0 1.0 99 NZA 71S-4 23.0 2.0 55 NZB 71M-4 65.0 1.0													201 44-	1.7				
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99 NZA 71S-4 22.3 1.0 51 NZO 71M-4 65.0 2.2 97 NZB 71S-4 23.0 2.0 55 NZB 71M-4 60.7 1.0 108 NZA 71S-4 20.5 1.0 54 NZO 71M-4 61.0 2.3 107 NZB 71S-4 20.7 2.0 62 NZB 71M-4 53.8 1.0 118 NZA 71S-4 18.8 1.0 61 NZO 71M-4 54.0 2.4 118 NZB 71S-4 18.8 2.1 69 NZB 71M-4 48.3 1.0 129 NZA 71S-4 17.2 1.1 2.2 76 NZB 71M-4 43.8 1.1 139 NZA 71S-4 16.0 1.1 76 NZO 71M-4 43.8 2.6										100000000000000000000000000000000000000	NZB 71M-4	65.0	1.0					
97 NZB 71S-4 23.0 2.0 55 NZB 71M-4 60.7 1.0 2.3 108 NZA 71S-4 20.5 1.0 2.0 54 NZO 71M-4 61.0 2.3 107 NZB 71S-4 20.7 2.0 62 NZB 71M-4 53.8 1.0 2.4 118 NZA 71S-4 18.8 1.0 2.1 69 NZB 71M-4 48.3 1.0 2.4 129 NZA 71S-4 17.2 1.1 68 NZO 71M-4 48.5 2.5 129 NZB 71S-4 17.2 2.2 76 NZB 71M-4 43.8 1.1 139 NZA 71S-4 16.0 1.1 76 NZO 71M-4 43.8 2.6					1.0					51	NZ0 71M-4	65.0			2.2			
108 NZA 71S-4 20.5 1.0 54 NZO 71M-4 61.0 2.3 107 NZB 71S-4 20.7 2.0 62 NZB 71M-4 53.8 1.0 118 NZA 71S-4 18.8 1.0 61 NZO 71M-4 54.0 2.4 118 NZB 71S-4 18.8 2.1 69 NZB 71M-4 48.3 1.0 129 NZA 71S-4 17.2 1.1 2.2 76 NZB 71M-4 43.8 1.1 139 NZA 71S-4 16.0 1.1 76 NZO 71M-4 43.8 2.6					100000		2.0			4	NZB 71M-4	60.7	1.0					
107 NZB 71S-4 20.7 2.0 62 NZB 71M-4 53.8 1.0 118 NZA 71S-4 18.8 1.0 61 NZO 71M-4 54.0 2.4 118 NZB 71S-4 18.8 2.1 69 NZB 71M-4 48.3 1.0 129 NZA 71S-4 17.2 1.1 68 NZO 71M-4 43.8 1.1 139 NZA 71S-4 16.0 1.1 76 NZO 71M-4 43.8 2.6				Chestron (CCC)							and the second s	61.0			2.3			
118 NZA 71S-4 18.8 1.0 61 NZO 71M-4 54.0 2.4 118 NZB 71S-4 18.8 2.1 69 NZB 71M-4 48.3 1.0 129 NZA 71S-4 17.2 1.1 68 NZO 71M-4 48.5 2.5 139 NZA 71S-4 16.0 1.1 76 NZO 71M-4 43.8 2.6					10.000					1000			1.0					
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129 NZA 71S-4 17.2 1.1 68 NZO 71M-4 48.5 2.5 129 NZB 71S-4 17.2 2.2 76 NZB 71M-4 43.8 1.1 139 NZA 71S-4 16.0 1.1 76 NZO 71M-4 43.8 2.6					50000					69	NZB 71M-4	48.3	1.0					
129 NZB 71S-4 17.2 2.2 76 NZB 71M-4 43.8 1.1 2.6 139 NZA 71S-4 16.0 1.1 2.6										1000	NZ0 71M-4	48.5		2.	2.5			
139 NZA 71S-4 16.0 1.1 76 NZO 71M-4 43.8 2.6										76	NZB 71M-4	43.8	1.1					
142 NZB 71S-4 15.6 2.7 88 NZB 71M-4 38.0 1.3	92				1.1					76	NZ0 71M-4	43.8			2.6			
		142	NZB 71S-4	15.6			2.7			88	NZB 71M-4	38.0	1.3		<u></u>			

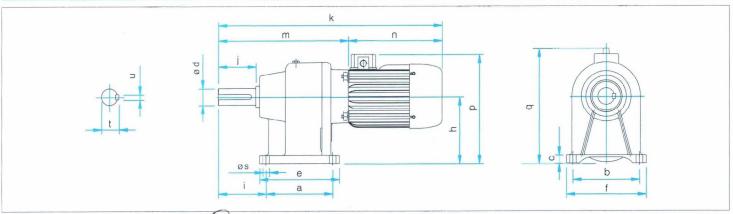


REMI 'NZ' SERIES GEARED MOTOR RATING CHART

MOTOR k.W (H.P.)	OUTPUT R.P.M.	GEARED MOTOR FRAME SIZE	OUTPUT TORQUE (Nm)	SE AGMA I	RVICE FACT	FOR AGMA III	MOTOR k.W (H.P.)	OUTPUT R.P.M.	GEARED MOTOR FRAME SIZE	OUTPUT TORQUE (Nm)	SE AGMA I	RVICE FACT AGMA II	OR AGMA III
0.37 (0.5)	87	NZ0 71M-4	38.2			2.6	0.55 (0.75)	41	NZ1 80S-4	127		1.9	
	98	NZB 71M-4	34.0	1.3				39	NZ2 80S-4	136			3.2
	97	NZ0 71M-4	34.2			3.0		46	NZ0 80S-4	114	1.3		
	108	NZB 71M-4	30.9		1.4			47	NZ1 80S-4	112			2.1
	108	NZ0 71M-4	30.9			3.2		52	NZ0 80S-4	101		1.4	
	117	NZA 71M-4	30.0	1.0				53	NZ1 80S-4	99.0			2.3
	119	NZB 71M-4	28.0		1.4			55	NZ0 80S-4	95.6		1.6	
	119	NZ0 71M-4	28.0			3.4		60	NZ1 80S-4	87.6			2.4
	130	NZA 71M-4	25.6	1.0				63	NZB 80S-4	83.3	1.0		
	130	NZB 71M-4	25.6		1.5			62	NZ0 80S-4	85.0		1.6	
	140	NZA 71M-4	23.7	1.0				63	NZ1 80S-4	83.3			2.5
	143	NZB 71M-4	22.8		1.8			70	NZB 80S-4	75.0	1.0		
	159	NZA 71M-4	21.0	1.0				70	NZ0 80S-4	75.0		1.7	
	159	NZB 71M-4	21.0			2.0	-	72	NZ1 80S-4	73.0			2.6
	175	NZA 71M-4	19.0	1.0				78	NZB 80S-4	64.5	1.0		
	177	NZB 71M-4	18.9			2.0		78	NZ0 80S-4	64.5		1.8	1
	191	NZA 71M-4	17.5	1.0				81	NZ1 80S-4	65.0			2.8
	195	NZB 71M-4	17.2			2.1		90	NZB 80S-4	58.0	1.0		
	209	NZA 71M-4	15.9	1.0	_			89	NZ0 80S-4	59.1		1.9	
	214	NZB 71M-4	15.5			2.2		92	NZ1 80S-4	57.2			3.1
	227	NZA 71M-4	14.6	1.0				100	NZB 80S-4	52.5	1.0		
	234	NZB 71M-4	14.1			2.2		99	NZ0 80S-4	53.0	1-1-1		2,1
	246	NZA 71M-4	13.5	1.1				110	NZB 80S-4	47.7	1.0		
	256	NZB 71M-4	13.0	1.1		2.3		110	NZ0 80S-4	47.7	1.0		2.1
						2.3		121	NZB 80S-4	43.4	1.1		
	277	NZB 71M-4	12.0						NZ0 80S-4				2.3
	288	NZA 71M-4	11.5	1.1				121	The second secon	43.4			
	300	NZB 71M-4	11.0			2.4		145	NZB 80S-4	36.3	1.2		0.0
	335	NZA 71M-4	9.9	1.1				141	NZ0 80S-4	37.2	4.0		2.8
	350	NZB 71M-4	9.5			2.6		162	NZB 80S-4	32.3	1.3		
	379	NZA 71M-4	8.5	1.1				157	NZ0 80S-4	33.4	4.0		2.9
	400	NZB 71M-4	8.0			2.6		179	NZB 80S-4	29.3	1.3		0.0
								174	NZ0 80S-4	30.2	-		3.0
0.55 (0.75)	3.4	NZ62 80S-4	1393	1.1	**		4	198	NZB 80S-4	26.5		1.4	
	. 3.5	NZ73 80S-4	1334		1.6		4	193	NZ0 80S-4	27.0			3.1
	4.5	NZ40 80S-4	1069	1.0				217	NZB 80S-4	24.2		1.4	
	4.6	NZ62 80S-4	1030		1.4			216	NZ0 80S-4	24.3			3.5
	4.7	NZ73 80S-4	991			2.1		237	NZB 80S-4	22.0		1.5	
	5.2	NZ40 80S-4	930	1.0				259	NZB 80S-4	20.3		1.5	
	5.0	NZ62 80S-4	947		1.7			256	NZ0 80S-4	20.5			3.5
	5.3	NZ73 80S-4	873			2.6		281	NZB 80S-4	18.7		1.6	
	7.5	NZ30 80S-4	638	1.0				304	NZB 80S-4	17.2		1.6	
	7.4	NZ62 80S-4	637		1.8			306	NZ0 80S-4	17.1		5 "	3.8
	7.6	NZ73 80S-4	608			2.8		356	NZB 80S-4	14.8		1.7	
	8.4	NZ30 80S-4	576	1.0				360	NZ0 80S-4	14.5	1		4.0
	8.3	NZ62 80S-4	569		1.8			415	NZB 80S-4	12.6		1.8	
	8.4	NZ73 80S-4	549			2.8		428	NZ0 80S-4	12.2		F	4.2
	10	NZ30 80S-4	460	1.3									
	10	NZ40 80S-4	460		1.8		0.75 (1.0)	3.5	NZ73 90S2-6	1854	1.1	1 - 3	
	10	NZ62 80S-4	460			3.0	(1.0)	3.4	NZ84 90S2-6	1923		1.4	
	16	NZ2 90L-8	325		1.5			4.6	NZ62 80M-4	1422	1.0	b	
	16	NZ3 90L-8	325			2.1		4.7	NZ73 80M-4	1373		1.6	
	20	NZ2 80M-6	270	11/24	1.8			5.0	NZ62 80M-4	1305	1.3		7
	20	NZ3 80M-6	270			2.8		5.3	NZ73 80M-4	1216		1.9	
	26	NZ0 80M-6	202	1.0			-	7.6	NZ40 80M-4	877	1.0		
	26	NZ1 80M-6	202		1.4			7.4	NZ62 80M-4	883		1.4	
		NZ2 80M-6	212		1,4	2.3		7.6	NZ73 80M-4	843			2.1
	25	NZ2 80M-6 NZ0 80S-4						8.6	NZ40 80M-4	775	1.0		2.1
	31		169	1.0		2.7				785	1.0		
	30	NZ2 80S-4	174	1.0		2.7		8.3	NZ62 80M-4			1.5	
	36	NZ0 80S-4	146	1.2		2.0		8.4	NZ73 80M-4	765 637	1.0	-	2.2
	34	NZ2 80S-4	154			2.9		10	NZ30 80M-4	637	1.0	1.4	4 /
	41	NZ0 80S-4	127	1.3				10	NZ40 80M-4	637		1.4	



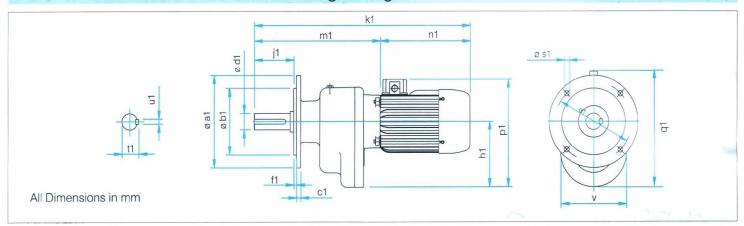
Dimensions of Two Stage Foot Mounted Geared Motors



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Dimensions of Two Stage Flange Mounted Geared Motors



G.M.	SIZE	d1	h1	j1	k1	m1	n1	p1	. q1	t1	u1	V	a1	b1 -	c1	e1	ff ff	: s1 :
NZA NZA NZA NZA	63S 63M 71S 71M	14	79	32	316 330 328 349	164 164 166 166	152 166 162 183	164 164 179 179	-	16	5	90	120	80	8	100	3	7
NZB NZB NZB NZB NZB NZB NZB	63S 63M 71S 71M 80S 80M 63S	19	98	42	338 352 353 374 400 420 387	186 186 191 191 204 204 235	152 166 162 183 196 216	183 183 198 198 206 206 198	-	21.5	6	106	140	95	10	115	3	9.5
NZ0 NZ0 NZ0 NZ0 NZ0 NZ0 NZ0	63M 71S 71M 80S 80M 90S2	24	113	55	401 404 425 442 462 485 510	235 242 242 246 246 251	166 162 183 196 216 234 259	198 213 213 221 221 221 227 227	-	27	8	120	160	110	10	130	3.5	9.5
NZ0 NZ1 NZ1 NZ1 NZ1 NZ1 NZ1 NZ1	90L 71M 80S 80M 90S2 90L 100L2	34	135	75	461 485 505 530 555 575	251 278 289 289 296 296 307	183 196 216 234 259 268	235 243 243 249 249 258	-	37	10	145	160	110	12	130	3.5	9.5
NZ2 NZ2 NZ2 NZ2 NZ2 NZ2 NZ2	80S 80M 90S2 90L 100L2 112M	38	152	86.5	493 513 533 558 572 640	297 297 299 299 304 323	196 216 234 259 268 317	260 260 266 266 275 286	-	41	12	163	200	130	12	165	3.5	11.5
NZ3 NZ3 NZ3 NZ3 NZ3 NZ3 NZ3 NZ3	80S 80M 90S2 90L 100L2 100L 112M 132S	44	177	94	527 547 569 594 603 635 677 708 746	331 331 335 335 335 335 360 386	196 216 234 259 268 300 317 322 360	285 285 291 291 300 300 311 353 353	330	47.5	14	185	250	180	12	215	4	14
NZ3 NZ4 NZ4 NZ4 NZ4 NZ4 NZ4 NZ4 NZ4	132M 90S2 90L 100L2 100L 112M 132S 132M	48	195	104	598 623 637 669 691 732 770	364 369 369 374 410 410	234 259 268 300 317 322 360	309 309 318 318 329 371 371	360	51.5	14	203	300	230	16	265	4	14
NZ6 NZ6 NZ6 NZ6 NZ6 NZ6	100L2 112M 132S 132M 160M 160L	58	230	125	708 768 781 819 886 936	440 451 459 459 475 475	268 317 322 360 411 461	450 450	420 —	62	18	243	350	250	20	300	4	18
NZ7 NZ7 NZ7 NZ7 NZ7 NZ7 NZ7	112M 132S 132M 160M1 160M 160L 180M	68	270	144	832 849 887 886 918 968 1004	515 527 527 507 507 507 527	317 322 360 379 411 461 477		489 —	73	20	284	350	250	24	300	5	18
NZ7 NZ8 NZ8 NZ8 NZ8 NZ8 NZ8 NZ8 NZ8	180L 132S 132M 160M1 160M 160L 180M 180L	78	308	167	1069 907 945 971 1003 1053 1075 1140	527 585 585 592 592 592 598 598	542 322 360 379 411 461 477 542	504 — — — — — —	560	83	22	323	350	250	24	300	5	18

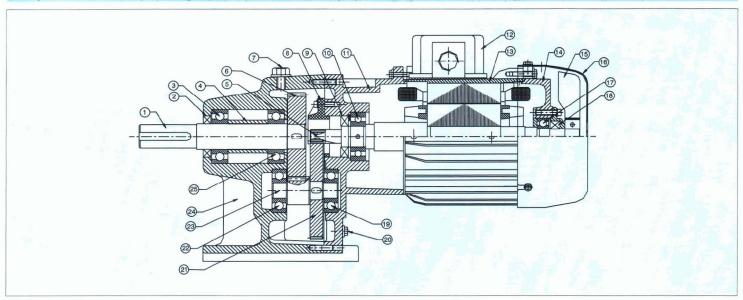


SPARES:

Ensure to give complete details of data available on the name plate when ordering the spares.

To ensure correct supplies give correct nomenclature of the part and the part number shown in illustrations, below.

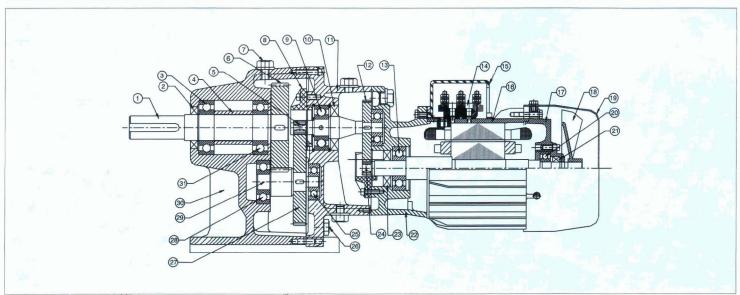
NZ Series Two Stage Geared Motor Sectional View



- 1. OUT PUT SHAFT
- 2. OIL SEAL
- 3. BALL BEARING
- 4. SPACER SLEEVE
- 5. TOOTHED SHAFT/PINION WHEEL
- 6. OUT PUT WHEEL

- 7. BREATHER PLUG
- 8. SUPPORTING COLLAR
- 9. OIL SEAL
- 10. BALL BEARING
- 11. COVER
- 12. TERMINAL BOX
- 13. CASING
- 14. END SHIELD
- 15. FAN BLADE
- 16. FAN COWL
- 17. BALL BEARING
- 18. OIL SEAL
- 20. DRAIN PLUG
- 21. INTERMEDIATE WHEEL
- 22. BALL BEARING
- 23. INTERMEDIATE SHAFT
- 24. FOOT (FLANGE) MOUNTED HOUSING
- 25. BALL BEARING

NZ Series Three Stage Geared Motor Sectional View



- 1. OUTPUT SHAFT
- 2. OIL SEAL
- 3. BALL BEARING
- 4. SPACER SLEEVE
- 5. II STAGE INPUT PINION
- 6. OUTPUT WHEEL
- 7. BREATHER PLUG
- 8. SUPPORTING COLLAR
- 9. BALL BEARING
- 10. OIL SEAL
- 11. COMBINATION COVER
- 12. I STAGE INERMEDIATE WHEEL
- 13. BALL BEARING
- 14. TERMINAL BLOCK
- 15. TERMINAL BOX
- 16. CASING

- 17. END SHIELD
- 18. FAN BLADE
- 19. FAN COWL
- 20. BALL BEARING
- 21. OIL SEAL
- 22. COVER
- 23. OIL SEAL
- 24. TOOTHED SHAFT
- 25. BALL BEARING
- 26. DRAIN PLUG
- 27. II STAGE INTERMEDIATE WHEEL
- 28. BALL BEARING
- 29. III STAGE INTERMEDIATE SHAFT
- 30. FOOT (FLANGE) MOUNTED HOUSING
- 31. BALL BEARING