

Single Phase AC Induction / Reversible Motor and Gearhead

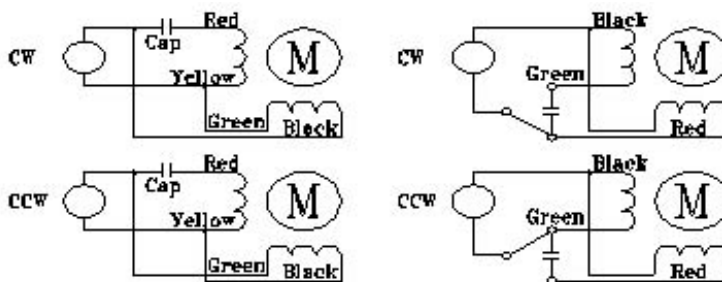
• **General Specification for AC motors**

Under Normal Ambient Temperatures and Humidity

Item	Specifications
Temperature Rise	75°C Max
Ambient Temperature	- 10°C ~ + 40°C
Insulation Resistance	100 MΩ Min., 500 VDC
Dielectric Strength	1500 VAC for one minute
Protection	Built-in thermal protection for all motors



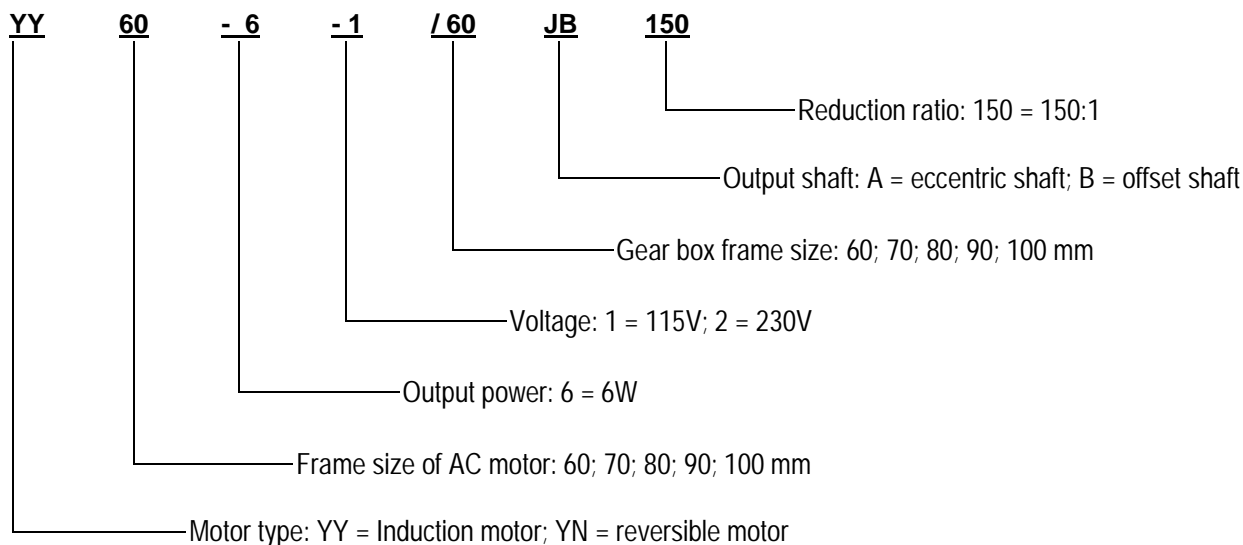
• **Winding Diagram**



Model YY: AC Induction Motor

Model YN: AC Reversible Motor

• **Product Number Code for AC motor and Gearhead**

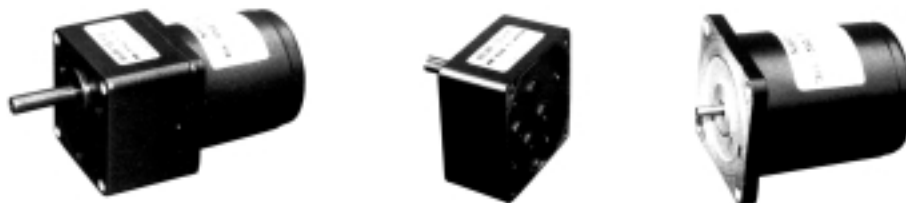


• **Available Options for AC motors**

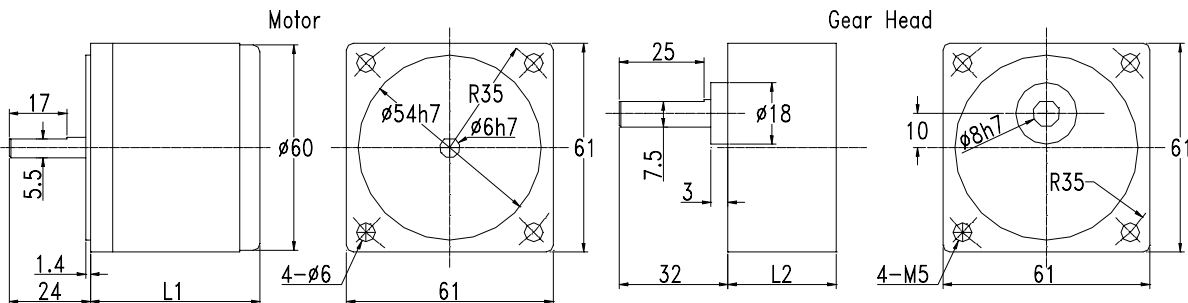
- **Motor Modifications** : Custom Motor, Custom Windings, Special Bearings
- **Shaft Modifications** : Flat, Pinion, Keyway, Length
- **Lead Wire Modifications** : Wire Type, Wire Color, Wire Length, Connector Installation
- **Accessories** : Electronic Brake, Electromagnetic Brake, Mechanical Damper
- **Recognized by** : UL and CE

Single Phase AC Induction / Reversible Motor and Gear Head

60mm
4W (1/180 HP)
6W (1/125HP)



• Dimensions



Gear Head Model Number	Power	Gear Ratio	L1 (mm)	L2 (mm)	Total length (mm)
60JBXXX	4 W	1:3 ~ 1:18	62	32	94
60JBXXX	6 W		75		107
60JBXXX	4 W	1:20 ~ 1:180	62	40	102
60JBXXX	6 W		75		115

• Motor Specifications

Model number	No. of poles	Output Power		Voltage	Freq.	Current	Starting Torque		Rated Torque		Rated	Capacitor	
		Watts	HP	VAC	Hz	Amp	oz-in	kg-cm	oz-in	kg-cm	RPM	uF	Vac
Yx60-04-1	4	4	1/180	110	60	0.24	3.89	0.28	4.44	0.32	1450	3	250
Yx60-04-2				220	50	0.12	3.89	0.28	4.44	0.32	1250	0.8	450
Yx60-06-1		6	1/125	110	60	0.3	5.55	0.4	6.66	0.48	1450	3	250
Yx60-06-2				220	50	0.15	5.55	0.4	6.66	0.48	1250	0.8	450

• Gear Motor Specifications

Gear Ratio	3	3.6	5	6	7.5	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	
Efficiency	81%	81%	81%	81%	81%	81%	81%	81%	73%	73%	73%	73%	73%	73%	73%	66%	66%	66%	66%	66%	66%	66%	66%
Rated rpm	50 Hz	417	347	250	208	167	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7
Rated rpm	60 Hz	483	403	290	242	193	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8
Rated load 4 W	Kg.cm	0.78	0.93	1.30	1.56	1.94	2.59	3.24	3.89	4.20	4.67	5.84	7.0	8.4	9.3	11.7	12.7	15.8	22.4	22.4	22.4	22.4	22.4
	in-lb	0.67	0.81	1.12	1.35	1.69	2.25	2.81	3.37	3.65	4.05	5.07	6.1	7.3	8.1	10.1	11.0	13.7	19.4	19.4	19.4	19.4	19.4
Rated load 6 W	Kg.cm	1.17	1.40	1.94	2.33	2.92	3.89	4.86	5.83	6.31	7.01	8.76	10.5	12.6	14.0	17.5	19.0	23.8	29.6	29.6	29.6	29.6	29.6
	in-lb	1.01	1.21	1.69	2.02	2.53	3.37	4.22	5.06	5.47	6.08	7.60	9.1	10.9	12.2	15.2	16.5	20.6	25.7	25.7	25.7	25.7	25.7
Rotation Dir.	Same as motor									Reverse						Same as motor							

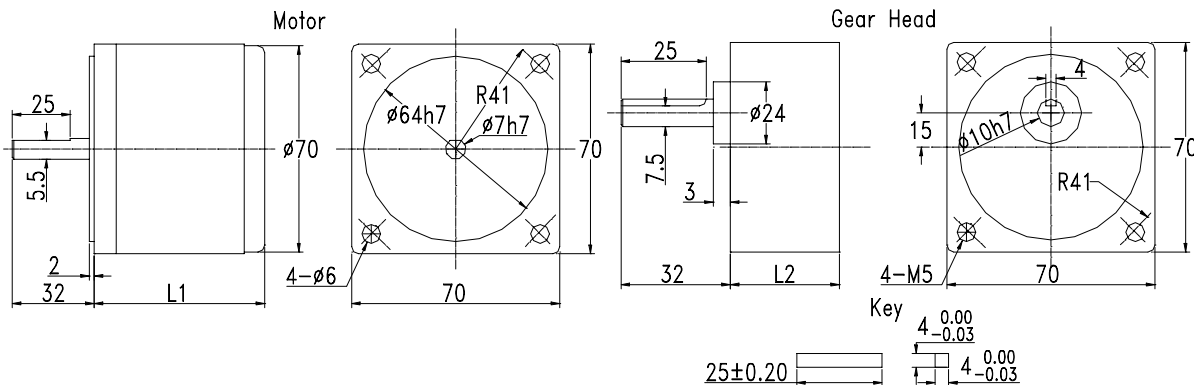
Maximum instant load ≈ 3 times of the rated load

Single Phase AC Induction / Reversible Motor and Gear Head

70mm
10W (1/75HP)
15W (1/50HP)



• Dimensions



Gear Head Model Number	Power	Gear Ratio	L1 (mm)	L2 (mm)	Total length (mm)
70JBXXX	10 W	1:3 ~ 1:18	72	32	104
70JBXXX	15 W		80		112
70JBXXX	10 W	1:20 ~ 1:180	72	42	114
70JBXXX	15 W		80		122

• Motor Specifications

Model number	No. of poles	Output Power		Voltage	Freq.	Current	Starting Torque		Rated Torque		Rated	Capacitor	
		Watts	HP	VAC	Hz	Amp	oz-in	kg-cm	oz-in	kg-cm	RPM	uF	Vac
Yx70-10-1	4	10	1/75	110	60	0.35	9.16	0.66	10.41	0.75	1450	3	250
Yx70-10-2				220	50	0.16	9.16	0.66	10.41	0.75	1250	1	450
Yx70-15-1		15	1/50	110	60	0.42	13.88	1	16.65	1.2	1450	4	250
Yx70-15-2				220	50	0.21	13.88	1	16.65	1.2	1250	1.5	450

• Gear Motor Specifications

Gear Ratio	3	3.6	5	6	7.5	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	
Efficiency	81%	81%	81%	81%	81%	81%	81%	81%	81%	73%	73%	73%	73%	73%	73%	66%	66%	66%	66%	66%	66%	66%	
Rated rpm	50 Hz	417	347	250	208	167	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7
Rated rpm	60 Hz	483	403	290	242	193	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8
Rated load 10W	Kg.cm	1.82	2.19	3.04	3.65	4.56	6.08	7.6	9.1	10.9	11.0	13.7	16.4	19.7	21.9	27.4	29.7	30.7	30.7	30.7	30.7	30.7	30.7
	in-lb	1.58	1.90	2.63	3.16	3.95	5.27	6.6	7.9	9.5	9.5	11.9	14.2	17.1	19.0	23.7	25.8	26.6	26.6	26.6	26.6	26.6	26.6
Rated load 15W	Kg.cm	2.92	3.50	4.86	5.83	7.29	9.72	12.2	14.6	17.5	17.5	21.9	26.3	31.5	35.0	43.8	47.5	50.0	50.0	50.0	50.0	50.0	50.0
	in-lb	2.53	3.03	4.22	5.06	6.32	8.43	10.5	12.6	15.2	15.2	19.0	22.8	27.4	30.4	38.0	41.2	43.4	43.4	43.4	43.4	43.4	43.4
Rotation Dir.	Same as motor										Reverse					Same as motor							

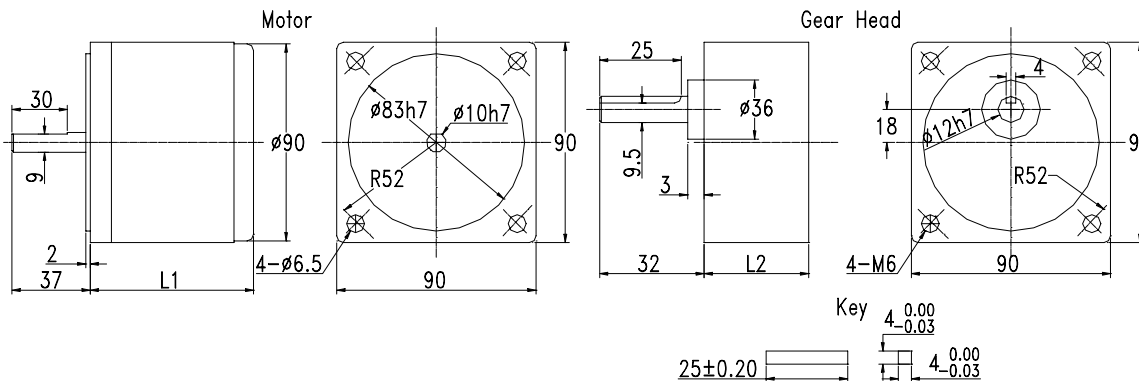
Maximum instant load ≈ 3 times of the rated load

Single Phase AC Induction / Reversible Motor and Gear Head

90mm
40W (1/18HP)
60W (1/12HP)



• Dimensions



Model Number	Power	Gear Ratio	L1 (mm)	L2 (mm)	Total length (mm)
90JBXXX	40 W	1:3 ~ 1:15	147	42	189
90JBXXX	60 W		162		204
90JBXXX	40 W	1:18 ~ 1:180	147	60	207
90JBXXX	60 W		162		222

• Motor Specifications

Model number	No. of poles	Output Power		Voltage VAC	Freq. Hz	Current Amp	Starting Torque		Rated Torque		Rated RPM	Capacitor	
		Watts	HP				oz-in	kg-cm	oz-in	kg-cm		uF	Vac
Yx90-40-1	4	40	1/18	110	60	0.9	30.53	2.2	41.63	3	1450	10	250
Yx90-40-2				220	50	0.45	30.53	2.2	41.63	3	1250	2.5	450
Yx90-60-1		60	1/12	110	60	1.2	48.57	3.5	62.45	4.5	1450	15	250
Yx90-60-2				220	50	0.6	48.57	3.5	62.45	4.5	1250	3.5	450

• Gear Motor Specifications

Gear Ratio	3	3.6	5	6	7.5	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	
Efficiency	81%	81%	81%	81%	81%	81%	81%	81%	73%	73%	73%	73%	73%	73%	73%	66%	66%	66%	66%	66%	66%	66%	
Rated rpm	50 Hz	417	347	250	208	167	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7
Rated rpm	60 Hz	483	403	290	242	193	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8
Rated load 40W	Kg.cm	7.3	8.7	12.2	14.6	18.2	24.3	30.4	36.5	39.4	43.8	54.8	65.7	79	88	110	110	110	110	110	110	110	110
	in-lb	6.3	7.6	10.5	12.6	15.8	21.1	26.3	31.6	34.2	38.0	47.5	57.0	68	76	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4
Rated load 60W	Kg.cm	10.9	13.1	18.2	21.9	27.3	36.5	45.6	54.7	59.1	65.7	82.1	98.6	118	131	164	178	200	200	200	200	200	200
	in-lb	9.5	11.4	15.8	19.0	23.7	31.6	39.5	47.4	51.3	57.0	71.2	85.5	103	114	142	155	173	173	173	173	173	173
Rotation Dir.	Same as motor									Reverse						Same as motor							

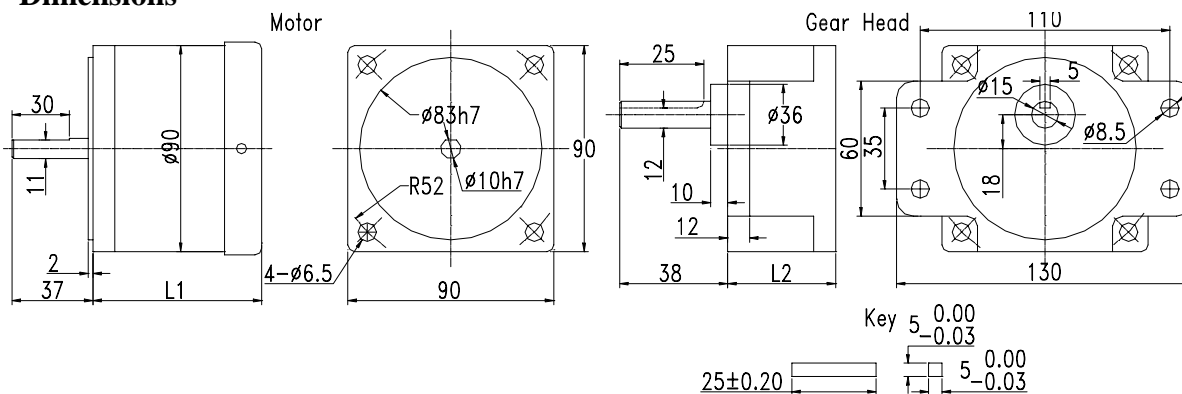
Maximum instant load ≈ 3 times of the rated load

Single Phase AC Induction / Reversible Motor and Gear Head

90mm
90W (1/8HP)
120W (1/6HP)



• Dimensions



Gear Head Model Number	Power	Gear Ratio	L1 (mm)	L2 (mm)	Total length (mm)
90JBXXX	90 W	1:3 - 1:15	138	65	203
90JBXXX	120 W		138		203
90JBXXX	90 W	1:18 - 1:180	138	65	203
90JBXXX	120 W		138		203

• Motor Specifications

Model number	No. of poles	Output Power		Voltage		Freq.	Current	Starting Torque		Rated Torque		Rated RPM	Capacitor	
		Watts	HP	VAC	Hz			Amp	oz-in	kg-cm	oz-in		kg-cm	uF
Yx90-90-1	4	90	1/8	110	60	1.9	69.39	5	93.67	6.75	1450	25	250	
Yx90-90-2				220	50	1	69.39	5	93.67	6.75	1250	6	450	
Yx90-120-1		120	1/6	110	60	2.3	90.20	6.5	124.89	9	1450	30	250	
Yx90-120-2				220	50	1.2	90.20	6.5	124.89	9	1250	8	450	

• Gear Motor Specifications

Gear Ratio	3	3.6	5	6	7.5	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	
Efficiency	81%	81%	81%	81%	81%	73%	73%	73%	73%	73%	66%	66%	66%	66%	66%	66%	66%	66%	66%	66%	66%	66%	
Rated rpm	50 Hz	417	347	250	208	167	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7
Rated rpm	60 Hz	483	403	290	242	193	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8
Rated load 90W	Kg.cm	16	20	27	33	41	49	62	74	89	99	111	134	160	178	200	200	200	200	200	200	200	200
	in-lb	14	17	24	28	36	43	53	64	77	85	97	116	139	155	173	173	173	173	173	173	173	173
Rated load 120W	Kg.cm	22	26	36	44	55	66	82	99	118	131	149	178	214	238	260	260	260	260	260	260	260	260
	in-lb	19	23	32	38	47	57	71	85	103	114	129	155	185	206	226	226	226	226	226	226	226	226
Rotation Dir.	Same as motor					Reverse					Same as motor												

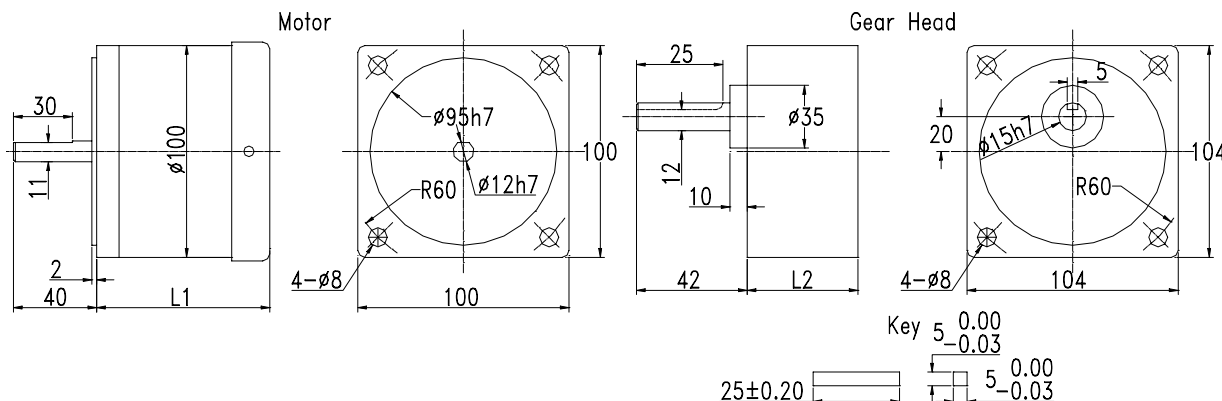
Maximum instant load ≈ 3 times of the rated load

Single Phase AC Induction / Reversible Motor and Gear Head

100mm
120W (1/6HP)
140W (1/5HP)



• Dimensions



Gear Head Model Number	Power	Gear Ratio	L1 (mm)	L2 (mm)	Total length (mm)
100JBXXX	120 W	1:3 - 1:180	195	65	260
100JBXXX	140 W		195		260

• Motor Specifications

Model number	No. of poles	Output Power		Voltage	Freq.	Current	Starting Torque		Rated Torque		Rated	Capacitor	
		Watts	HP	VAC	Hz	Amp	oz-in	kg-cm	oz-in	kg-cm	RPM	uF	Vac
Yx100-120-1	4	120	1/6	110	60	1.2	97.14	7	124.89	9	1450	30	250
Yx100-120-2				220	50	2.3	97.14	7	124.89	9	1250	8	450
Yx100-140-1		140	1/5	110	60	1.4	111.02	8	14.57	1.05	1450	30	250
Yx100-140-2				220	50	2.6	111.02	8	14.57	1.05	1250	8	450

• Gear Motor Specifications

Gear Ratio	3	3.6	5	6	7.5	10	12.5	15	18	20	25	30	36	40	50	60	75	90	100	120	150	180	
Efficiency	81%	81%	81%	81%	81%	73%	73%	73%	73%	73%	73%	73%	73%	73%	66%	66%	66%	66%	66%	66%	66%	66%	
Rated rpm	50 Hz	417	347	250	208	167	125	100	83	69	63	50	42	35	31	25	21	17	14	13	10	8	7
Rated rpm	60 Hz	483	403	290	242	193	145	116	97	81	73	58	48	40	36	29	24	19	16	15	12	10	8
Rated load 120W	Kg.cm	22	26	36	44	55	66	82	99	118	131	164	197	237	263	297	356	400	400	400	400	400	400
	in-lb	19	23	32	38	47	57	71	85	103	114	142	171	205	228	258	309	347	347	347	347	347	347
Rated load 140W	Kg.cm	26	31	43	51	64	77	96	115	138	153	192	230	276	307	347	416	450	450	450	450	450	450
	in-lb	22	27	37	44	55	66	83	100	120	133	166	199	239	266	301	361	390	390	390	390	390	390
Rotation Dir.	Same as motor					Reverse					Same as motor												

Maximum instant load ≈ 3 times of the rated load