

## TWO-WINDING VARIABLE TORQUE PSC TYPE FOR SHAFT MOUNTED FAN APPLICATIONS

These fan and blower duty motors are designed for dependable, *energy saving* performance in applications where the fan is mounted on the shaft of the motor. The permanent split capacitor design does not require a centrifugal switch, resulting in higher reliability than on other types of single phase motors. This design is also more energy efficient and less expensive to operate.



These motors may be operated at listed speed or two speed operation may be achieved by using the proper auxiliary switch. They are suitable for variable speed by adjusting the voltage to the motor using a variable voltage control.<sup>④</sup>

Overload protected with a UL and CSA recognized automatic reset protector. Grounding provisions. Totally enclosed, dust tight design, with resilient mounting for quiet operation. Lubricated with Exxon POLYREX<sup>®</sup> EM high temperature lubricant. Exterior coating on 56-frame motors is two-stage epoxy and on 48-frame motors a baked-on powder coat is applied for extra corrosion resistance in tough applications. Because of the inherently low starting torques of this design, these motors are not suitable for belt driven fan applications. They must be mounted within the air stream of the driven fan.



## TWO-SPEED, TWO-WINDING VARIABLE TORQUE FOR BELT DRIVEN OR SHAFT MOUNTED FAN APPLICATIONS

Variable torque, two-speed motors are suited for belted or fan on shaft applications. They are self ventilated, and may be mounted within or outside of the driven fan's air stream.



Resilient mounted for quiet operation, and lubricated with high temperature Exxon POLYREX<sup>®</sup> EM lubricant.

3/4 HP and larger single phase are capacitor start motors; smaller single phase are split phase start.

- Suitable for single speed operation only.
- ① Has provisions for Bellyband and pedestal fan mounting – no rigid base.
- ② In addition to resilient base, this motor has provisions for Bellyband and pedestal mounting.
- Combination 56H base motors have mounting holes for NEMA 56 and NEMA 143-5T and a standard NEMA 56 shaft.
- ④ These 825 and 1075 RPM motors suitable for single speed operation only.
- \* The shaft of this motor is 3/4" longer to accommodate fan on shaft mountings. 48Z is 1/2" diameter by 2 1/4". 56Z is 5/8" diameter, 2 5/8" long. All have 1" extended through bolts, except Catalog Numbers 100805 and 100806 which are extended 1/4".
- ☆ Capacitor start/capacitor run design for reduced amperage, others are capacitor start/induction run.
- ✓ This split phase start, capacitor run motor is suitable for belt drive within the airflow of the fan.

## SINGLE PHASE • PSC TYPE • RESILIENT BASE TOTALLY ENCLOSED AIR OVER (TEAO)

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 230V	"C" Dim. (Inches)
1/4	1625	48Z*	100803	\$349	A	19	115/230	Auto.	1.4	10.66
	1075	48Z*	100824	411	A	20	115/230	Auto.	1.4	10.66
	1075	S56Z*	100805	441	A	22	115/230	Auto.	1.4	11.06
1/3	1625	48Z*	100804	376	A	21	115/230	Auto.	1.6	10.66
	1625	S56H	100767	406	A	22	115/230	Auto.	1.6	10.31
	1625	56HY	111348②	406	A	29	115/230	Auto.	1.7	12.94
1/2	1075	48Z*	100825	476	A	25	115/230	Auto.	1.8	11.16
	1075	S56HZ*	100806	505	A	27	115/230	Auto.	1.8	11.56
	1625	56HZ*	111323	424	A	30	115/230	Auto.	2.6	12.56
1/2	1625	S56H	100768	432	A	36	115/230	Auto.	2.2	10.81
	1075	48Z*	101645	557	A	27	115/230	Auto.	2.8	11.16
	1075	56HZ*	111321□	547	A	37	115/230	Auto.	3.0	13.56
3/4	825	56HZ*	111919□④	677	A	45	115/230	Auto.	3.2	13.56
	1625	56HZ*	111324	627	A	34	115/230	Auto.	3.5	13.06
	1625	56H	111266	627	A	36	115/230	Auto.	3.5	12.31
1	1075	56HZ*	111322□④	646	A	44	115/230	Auto.	4.0	13.56
	1625	56HZ*	111267	658	A	39	115/230	Auto.	4.4	12.81

These motors have a 1.0 Service Factor.

## SINGLE PHASE • PSC TYPE • RIGID BASE TOTALLY ENCLOSED AIR OVER (TEAO)

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 230V	"C" Dim. (Inches)
1/4	1625	48Y	100699	\$341	A	19	115/230	Auto.	1.4	10.65
	1750	48Y	101252•	344	A	19	115/208-230	Auto.	1.5	10.40
1/3	1625	48Y	100700	395	A	21	115/230	Auto.	1.6	10.65
	1625	56Y	111202①	395	A	27	115/230	Auto.	1.7	12.00
	1750	48Y	101253•	398	A	22	115/208-230	Auto.	1.9	10.65
1/2	1140	S56Z	100604	496	A	23	115/230	Auto.	1.8	11.40
	1625	48Y	100701	418	A	25	115/230	Auto.	2.5	12.15
	1750	S56Y	101176•✓	421	A	24	115/230	Auto.	3.5	10.40

## SINGLE PHASE • DRIP-PROOF • RESILIENT BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps High/Low	"C" Dim. (Inches)
1/4-1/12	1725/1140	48Z*	101020	\$305	A	20	115	None	4.2-3.2	11.64
1/3-0.15	1725/1140	S56H	101021	386	A	26	115	None	5.0-4.6	12.27
1/2-1/4	1725/1140	56H	111953	483	A	33	115	None	7.8-4.6	12.31
	1725/1140	56H	113643	483	A	33	230	None	3.9-2.3	12.31
3/4-1/3	1725/1140	56H	111954□	701	A	38	115	None	11.6-7.4	12.81
	1725/1140	56H	113672□	701	A	39	230	None	5.8-3.7	12.81
1-0.44	1725/1140	56H	111955□☆	826	A	41	115	None	13.2-9.5	12.81
	1725/1140	56H	113373□☆	826	A	39	230	None	6.5-4.6	12.81

## THREE PHASE • DRIP-PROOF • RESILIENT BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps High/Low	"C" Dim. (Inches)
1/2-.22	1725/1140	56H	111956	\$729	A	32	208-230	None	1.8-1.1	12.31
	1725/1140	56H	111957	729	A	32	460	None	0.9-0.5	12.31
3/4-1/3	1725/1140	56H	111958□	768	A	36	208-230	None	2.8-1.6	12.81
	1725/1140	56H	111959□	768	A	36	460	None	1.4-0.8	12.81
1-0.44	1725/1140	56H	111960□	826	A	40	208-230	None	4.0-2.4	12.81
	1725/1140	56H	111961□	826	A	40	460	None	1.8-1.0	12.81
1 1/2-.67	1725/1140	56H	111962□	1002	A	40	208-230	None	5.0-2.6	12.81
	1725/1140	56H	111963□	1002	A	40	460	None	2.5-1.3	12.81

These motors have a 1.0 Service Factor.

**AERATION FAN MOTORS**

**Totally Enclosed Air Over Motors,** dust tight, suitable for shaft mounted fans or belt driven fans. Capacitor start designs.

Designed to be used within the airflow of the driven fan, these motors offer protection from the environment and are finished in epoxy enamel to resist corrosion in tough atmospheres.

Lubricated with high temperature Exxon POLYREX® EM lubricant. Grounding provisions. Fully gasketed.



**SINGLE PHASE • CAPACITOR START • RIGID BASE**

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 230V	"C" Dim. (Inches)
3/4	3450	56Z	111332⑦	\$353	A	27	115/230	None	5.0	10.90
1	3450	56Z	111333⑦	418	A	29	115/230	None	6.0	10.90
1½	3450	56Z	111949⑦	541	A	32	115/230	None	8.5	11.40
	3450	143TZ	120374⑧	581	B	32	115/230	None	8.5	11.84
2	3450	145TZ	120375⑧	708	B	41	230	None	10.0	13.34
3	3450	145T	120376☆	745	B	45	230	None	12.8	13.84

**These TEAO motors have a 1.0 Service Factor.  
 Built-in terminal panel for quick easy connections.**

**THREE PHASE • RIGID BASE**

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
3/4	3450	56Z	111334⑦	\$360	A	21	208-230/460	2.4	75.5	9.88
1	3450	56Z	111335⑦	392	A	22	208-230/460	3.2	77.0	9.90
1½	3450	143TZ	120377⑧	450	B	31	208-230/460	4.2	82.5	11.34
2	3450	145TZ	120378⑧	532	B	34	208-230/460	5.6	82.5	11.84
3	3450	145T	120379⑧	598	B	38	208-230/460	7.6	84.0	12.34

**These TEAO motors have a 1.0 Service Factor.**

**CONDENSER FAN MOTORS**

**For Shaft Mounted Fan Applications**

**Belly Band Mount Fan Motors** designed for operating vertical shaft-up on condenser fan, air over applications.

Enclosed endshield on shaft-end prevents contaminants from entering motor when mounted vertical shaft-up. Designed for belly band mount with three support screws located at 120° increments in motor frame. Shaft flingers located both internally and externally.

Double sealed ball bearings with Exxon POLYREX® EM grease having operating temperature range of -20°F to +350°F and special formulation to provide extra long life and moisture resistance. Phosphatized shaft for corrosion resistance. Gasketed conduit box. Ground screw accommodations.

1.15 Service Factor. Automatic overload protector also guards against primary single phasing—UL component recognized (File E57955).



**THREE PHASE • DRIP-PROOF ★  
 AUTOMATIC OVERLOAD • BELLY BAND & RIGID MOUNT**

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/2	1140	56Y	116772Δ	\$516	A	25	208-230/460	2.8	66.0	12.56
3/4	1140	56Y	116773Δ	559	A	31	208-230/460	3.4	75.5	13.06
1	1140	56Y	111147Δ	635	A	37	208-230/460	3.6	77.0	14.06
	1140	56Y	115778+	589	A	37	208-230/460	4.0	77.0	14.05
1½	1140	56Y	111148Δ	693	A	42	208-230/460	5.2	78.0	15.06
	1140	56HY	115779+	641	A	39	208-230/460	5.6	79.0	15.55

- ⑦ Standard 5/8" diameter shaft with keyway plus 3/4" deep hole drilled and tapped to 1/4-20 UNC in end of shaft to facilitate mounting of some fan blades.
- ⑧ Standard 7/8" diameter shaft with keyway plus 3/4" deep hole drilled and tapped to 1/4-20 UNC in end of shaft to facilitate mounting of some fan blades.
- ☆ Capacitor start/capacitor run design for reduced amperage, others are capacitor start/induction run.
- + Rigid base.
- Δ Belly band mount.
- ★ Do Not use with AC Inverters.

# FAN & BLOWER MOTORS

## SINGLE PHASE • COMMERCIAL DUTY



### INDUSTRIAL SPLIT PHASE MOTORS

**LEESON FHP Commercial Duty**, split phase motors with moderate starting torque, designed for continuous duty on ventilation fans, blowers and other belt driven or fan on shaft applications.



Resilient base for quiet operation. Pre-lubricated ball bearings for long life in commercial and industrial environments. Has automatic thermal overload and built-in terminal panel style connection provisions.

### DRIP-PROOF • RESILIENT BASE • AUTOMATIC OVERLOAD

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 115V	Service Factor	"L" Dim. (Inches)	"C" Dim. (Inches)
1/4	1725	48	191868①	\$207	A	15	115/230	Auto.	4.6	1.35	4.00	9.37
1/3	1725	48	191869①	222	A	17	115/230	Auto.	5.8	1.35	4.51	9.88
1/2	1725	48	191870①	257	A	19	115/230	Auto.	8.4	1.25	5.02	10.39

Dimensions on Page 316

① Motors built after December 01, 2005 will have terminal boards.

### RESIDENTIAL/INDUSTRIAL BELTED FAN MOTORS SPLIT PHASE

Designed for use in residential and commercial fans and blowers where low starting torque is required. (Air conditioners, roof ventilators and exhaust fans.)



Sleeve or ball bearings. NEMA Service factors. Resilient "cradle" style base.

### OPEN DRIP-PROOF • RESILIENT BASE • AUTOMATIC OVERLOAD

HP	RPM 60 Hz	NEMA Frame	Bearing Type	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 115V	"C" Dim. (Inches)
1/4	1725	48YZ☆	Ball	M900195	\$189	A	13	115	Auto.	5.0	9.72
1/3	1725/1140	56	Ball	M900277	363	A	20	115	Auto.	5.3/2.9	10.78
	1725	48YZ☆	Ball	M900196	221	A	15	115	Auto.	6.1	9.72
1/2	1725/1140	56	Ball	M900599	455	A	30	115	Auto.	8.4/4.5	11.85
	1725	48YZ☆	Ball	M900197	290	A	20	115	Auto.	7.2	10.72

☆ 48YZ motors have std. 48-frame base with 1/2" dia. x 1 7/8" long shaft ext. with flat. Also includes sleeve to convert shaft to 5/8" dia. with 3/16" square key.

### PREMIUM EFFICIENCY INDUSTRIAL/RESIDENTIAL BELTED FAN MOTORS

High-efficiency motors for residential or industrial belted fan application.

Features include quiet ball bearings, resilient cradle base and "Super-Hush" flow-through ventilation.

Rotors are specially balanced for smooth and quiet operation.

Spade connectors on terminal board in standard wiring format along with industry standard mounting allow for quick and easy interchange with other makes.



### OPEN DRIP-PROOF • 115V • SINGLE PHASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 115V	% F.L. Eff.	"C" Dim. (Inches)
1/4	1725	48	M090602*	\$245	A	15	115	Auto.	2.5	71.0	9.88
1/3	1725	48	M090405*	257	A	19	115	Auto.	3.2	75.0	9.88
1/2	1725	48	M090585**	316	A	22	115	Auto.	4.6	76.0	10.50

\* Split-phase start, capacitor run

\*\* Capacitor start, capacitor run



#### Features:

- Drop-in replacement for most standard belted-fan motors
- Extremely quiet running compared to standard fan motors
- Consumes approximately half of the power of a standard fan motor

### PEDESTAL FAN MOTORS

**LEESON FHP Commercial Duty** totally enclosed, air over fan motors for air circulators where motor is mounted directly to fan column.

Energy efficient, permanent split capacitor type design eliminates the centrifugal switch for "three phase" reliability. Totally enclosed ball bearing design for commercial and industrial environments. Automatic thermal overload protection, reversible.

Heavy-gauge steel yoke is welded to the motor frame. Four 10-32 mounting studs are extended 1.0" on 5.14" bolt circle for mounting of fan shroud.

Motors are UL and CSA Recognized for both the U.S. and Canadian markets.



### SINGLE PHASE • PSC TYPE • TEAO • YOKE MOUNTED AUTOMATIC OVERLOAD • 1.0 S.F.

HP	RPM 60 Hz*	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 115V	"U" Dim. (Inches)	"C" Dim. (Inches)
1/4	1625	48Y	191872	\$207	A	14	115/230	Auto.	2.6	0.500	10.95
	1625	48Y	191908	207	A	14	115/230	Auto.	2.6	0.625	10.95
	1075	48Y	191891	229	A	22	115/230	Auto.	2.4	0.500	10.95
1/3	1075	48Y	191909	229	A	25	115/230	Auto.	2.4	0.625	10.95
	1625	48Y	191871	226	A	15	115/230	Auto.	3.4	0.500	10.95
	1625	48Y	191910	226	A	15	115/230	Auto.	3.4	0.625	10.95
1/2	1075	48Y	191892	256	A	23	115/230	Auto.	3.0	0.500	11.46
	1075	48Y	191911	256	A	26	115/230	Auto.	3.0	0.625	11.46
	1625	48Y	191873	261	A	24	115/230	Auto.	4.6	0.500	10.95
1/2	1625	48Y	191875	261	A	24	115/230	Auto.	4.6	0.625	10.95
	1075	48Y	191893	297	A	26	115/230	Auto.	5.0	0.500	11.93
	1075	48Y	191912	297	A	26	115/230	Auto.	5.0	0.625	11.93

\*Two speed operation possible by connecting 115V power to 230V connections. Actual speed (approx. 67% of rated speed) will depend on fan blade design.