50 HERTZ MOTORS
SINGLE PHASE

50 HZ • SINGLE PHASE

General Specifications:
50 Hz single phase designs produce full rated HP on 50 Hz power supply. Designed for general purpose application.

Electrical Features:
High efficiency energy saving designs. Centrifugal switch specifically designed for 50 Hz service. Conduit box with leads. Torque at rated HP on 50 Hz power supply is 20% greater than the running torque of a 60 Hz motor.

CE CONFORMITE EUROPEENE

SINGLE PHASE • DRIP-PROOF • RIGID BASE • IP22✱

HP	RPM 50 Hz	NEMA Frame	Catalogue Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 220V	"C" Dim. (in.)
1/3	2850	…	…	…	…	…	…	…	…	…
	1425	56	**110394**	$342	A	22	110/220	None	3.5	9.88
	1425	…	…	…	…	…	…	…	…	…
1/2	2850	56	**113901**	363	A	21	110/220	None	3.8	10.34
	1425	56	**110395**	363	A	27	110/220	None	4.4	10.38
	1425	…	…	…	…	…	…	…	…	…
3/4	2850	56	**113902**	379	A	25	110/220	None	5.6	10.34
	1425	56	**110396**	379	A	29	110/220	None	5.9	10.88
	1425	…	…	…	…	…	…	…	…	…
1	2850	56	**113903**	402	A	30	110/220	None	6.6	11.84
	1425	56H	**110397**□	449	A	38	110/220	None	8.0	12.38
	1425	…	…	…	…	…	…	…	…	…
1½	2850	56H	**113904**	441	A	32	110/220	None	8.6	11.84
	1425	56H	**110398**☆□	518	A	48	110/220	None	8.4	12.88
	1425	…	…	…	…	…	…	…	…	…
2	2850	56H	**113905**	465	A	35	110/220	None	10.7	12.34
	1440	182T	**131553**†	702	B	69	220	None	11.8	13.69
	1440	…	…	…	…	…	…	…	…	…
3	2850	56H	**113937**†	568	A	38	220	None	13.4	12.84
	2850	…	…	…	…	…	…	…	…	…
	1440	184T	**131554**†	788	B	84	220	None	16.8	14.69
	1440	…	…	…	…	…	…	…	…	…
5	2850	…	…	…	…	…	…	…	…	…
	1440	184T	**131555**†☆	1011	B	99	220	None	23.2	15.69

SINGLE PHASE • TEFC • RIGID BASE • IP54✱

NEMA Frame	Catalogue Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 220V	"C" Dim. (in.)
56	**113916**	$368	A	23	110/220	None	3.2	10.81
56	**110423**	368	A	25	110/220	None	3.5	10.81
56	**113908**	406	A	26	110/220	Man.	3.2	10.81
56	**113917**	387	A	26	110/220	None	3.8	11.31
56	**110064**	387	A	27	110/220	None	4.1	11.31
56	**113909**	431	A	28	110/220	Man.	3.6	11.31
56	**113918**	395	A	28	110/220	None	5.6	11.31
56	**110065**†	409	A	35	110/220	None	5.9	11.81
56	**113910**	457	A	30	110/220	Man.	5.9	11.81
56	**113919**	421	A	32	110/220	None	6.6	11.81
56H	**110066**□	480	A	43	110/220	None	7.0	12.81
56	**113911**†	495	A	34	110/220	Man.	6.4	12.31
56H	**113920**	490	A	34	110/220	None	8.2	13.31
56H	**110424**†☆□	541	A	49	110/220	None	8.4	13.31
56H	**113929**†☆	568	A	49	110/220	Man.	8.6	13.31
56HZ	**113928**†■	499	A	42	110/220	None	11.2	13.31
182T	**131556**†	814	B	85	220	None	11.2	15.96
182T	**131600**†	822	B	85	220	Man.	12.0	14.96
145T	**121070**†☆	603	B	41	220	None	13.4	12.84
56H	**113936**†☆	563	A	48	220	None	13.4	13.81
184T	**131557**†	908	B	100	220	None	15.9	16.96
184T	**131601**†	949	B	100	220	Man.	15.9	16.96
184T	**131638**†☆	1300	B	81	220	None	23.0	17.46
184T	**131578**†☆	1039	B	105	220	None	21.0	17.46

These motors have NEMA Service Factors. See page 119 for details.

SINGLE PHASE • DRIP-PROOF • RESILIENT BASE • IP22✱

HP	RPM 50 Hz	NEMA Frame	Catalogue Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 220V	"C" Dim. (in.)
1/3	2850	56	**114222**	$393	A	18	110/220	None	3.2	10.81
	1425	56	**114223**	376	A	19	110/220	None	3.2	10.81
1/2	2850	56	**114224**	408	A	20	110/220	None	3.8	11.31
	1425	56	**114225**	422	A	21	110/220	None	4.1	11.31
3/4	2850	56	**114226**	412	A	23	110/220	None	5.6	11.31
	1425	56	**114227**	454	A	29	110/220	None	5.9	11.81
1	2850	56	**114228**	440	A	33	110/220	None	6.6	11.82
	1425	56	**114229**	448	A	36	110/220	None	6.4	12.31
1½	1425	56H	**114231**☆	591	A	42	110/220	None	8.6	13.32
2	1440	56H	**114233**†	595	A	48	220	None	9.6	13.82

■ Combination 56HZ base has mounting holes for NEMA 56 and 143-5T and a standard NEMA 145T frame shaft of 7/8" diameter.
□ Combination 56H base motors have mounting holes for NEMA 56 and NEMA 143-5T and a standard NEMA 56 shaft.
☆ Capacitor start/capacitor run design for reduced amperage, others are capacitor start/induction run.
† Class F insulated.
✱ By way of comparison, IP23 relates to Open Drip-Proof and IP54 to TEFC.

50 HERTZ MOTORS
THREE PHASE

50 HZ • THREE PHASE

General Specifications:

Totally enclosed fan cooled, 12-lead motors designed specifically for 50 Hz service. These motors are intended for equipment built in North America and destined for use in 50 Hz service areas of the world.

Features:

These NEMA frame motors are designed to North American performance standards, but for 50 Hz service. Suitable for 220/380 volt, 50 Hz, or 440 volt, 50 Hz, three phase power. Torques exceed NEMA performance standards for Design B motors and produce the full rated horsepower at 50 Hz speeds.

Construction meets IEC, IP54 degree of protection standards and utilizes external fan cooling (IEC cooling method IC41). Gasketed conduit box is in the North American standardized F1 location, with leads.

CE CONFORMITE EUROPEENE

THREE PHASE • TEFC • RIGID BASE • IP54

KW/HP	RPM 50 Hz	NEMA Frame	Catalogue Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	F.L. Amps 380 V.	% F.L. Eff.	"C" Dim. (Inches)
0.25/1/3	1425	S56	**102183**	$350	A	18	220/380-440	1.10	65.0	10.31
0.37/1/2	1425	56	**114304●**	395	A	25	220/380-440	1.02	78.0	10.38
0.55/3/4	2850	56	**114306**	391	A	22	220/380-440	1.70	70.0	10.81
	1425	56	**114307**	412	A	32	220/380-440	1.85	77.0	11.31
0.75/1	2850	56	**114308**	446	A	27	220/380-440	2.40	71.0	11.31
	1425	56	**114888**	425	A	28	220/380-440	2.00	77.0	11.31
	1425	143T	**121096**	457	B	35	220/380-440	2.00	78.0	12.75
1.1/1 1/2	2850	145T	**121097**	490	B	36	220/380-440	2.90	78.0	12.75
	1425	145T	**121093**	490	B	40	220/380-440	3.30	75.5	12.75
1.5/2	2850	145T	**121094**	525	B	42	220/380-440	3.60	79.0	12.75
	1425	145T	**121095**	508	B	43	220/380-440	3.65	81.5	13.25
2.2/3	2850	182T	**131480**	781	B	59	220/380-440	8.40	82.5	13.46
	1425	182T	**131459**	779	B	68	220/380-440	4.70	84.0	13.47
3.7/5	2850	184T	**131481**	897	B	80	220/380-440	12.80	84.0	14.46
	1425	184T	**131454**	890	B	87	220/380-440	8.10	85.0	15.47

● These motors are totally enclosed, non-ventilated, IEC cooling method IC40.

50 HZ POWER SERVICE • THREE PHASE RE-RATE LABELS FOR 60 HZ MOTORS

LEESON THREE PHASE 60 Hz WATTSAVER® motors are satisfactory for operation on 50 Hz power supplies at full rated horsepower with no derating required. Durable self-adhesive labels are available from your LEESON District Office for affixing to the motors, if desired. These labels state the motor is satisfactory for operation on 50 Hz. The speed of the motors on 50 Hz will be approximately 5/6 of the 60 Hz speed noted in this catalogue.

Request label #004060. This label signifies the motor is satisfactory for 50 Hz voltages of 190-200-208-220 volts when the "low voltage" connection is made. For the "high voltage"connection the motor is satisfactory for operation on 380-400-416-440 volts, 50 Hz.

Other three phase motors may be operable at 50 Hz at 5/6ths of 60 Hz horsepower and speed. Check with LEESON to verify that the motor is satisfactory for derated operation on 190-200-208 volts using the "low voltage" connection or 380-400-416 volts using the "high voltage" connection as shown on label #004158.

Applies only to steel frame motors.

LEESON
50 Hz Voltages On
50/60 Designs

60 Hz	50 Hz	
230V	190V	200V
	208V	220V
460V	380V	400V
	416V	440V

Request label No. 004060

LEESON
Three Phase Motor — 50 Hz Operation
This motor will operate at 60 Hz torque on 50 Hz, 1.0 service factor at the following voltages:

60 Hz Nameplate Voltage	50 Hz Voltage
230V	190-200-208V
460V	380-400-416V

Request label No. 004158