

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.



SINGLE PHASE • DRIP-PROOF • RIGID BASE • IP22

HP	RPM 50 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 220V	"C" Dim. (Inches)
1/3	2850	...	...	...	...	...	...	...	...	...
	1425	56	110394	\$246	A	22	110/220	None	3.2	9.88
	1425	...	...	...	...	...	...	...	...	...
1/2	2850	56	113901	220	A	25	110/220	None	3.2	10.38
	1425	56	110395	311	A	25	110/220	None	4.1	10.38
	1425	...	...	...	...	...	...	...	...	...
3/4	2850	56	113902	275	A	27	110/220	None	5.6	10.38
	1425	56	110396	373	A	30	110/220	None	5.9	10.88
	1425	...	...	...	...	...	...	...	...	...
1	2850	56	113903	305	A	31	110/220	None	6.6	10.88
	1425	56H	110397 □	412	A	35	110/220	None	6.4	11.88
	1425	...	...	...	...	...	...	...	...	...
1½	2850	56H	113904	393	A	37	110/220	None	8.6	11.88
	1425	56H	110398 ☆□	464	A	43	110/220	None	8.4	12.35
	1425	...	...	...	...	...	...	...	...	...
2	2850	56H	113905	480	A	42	110/220	None	10.7	12.38
	1440	182T	131553 †	561	B	70	220	None	11.8	13.69
	1440	...	...	...	...	...	...	...	...	...
3	2850	56H	113937 †	569	A	47	220	None	13.4	12.88
	2850	...	...	...	...	...	...	...	...	...
	1440	184T	131554 †	640	B	80	220	None	16.8	14.69
5	2850	...	...	...	...	...	...	...	...	...
	1440	184T	131555 †☆	1310	B	95	220	None	23.2	15.69
	1440	...	...	...	...	...	...	...	...	...

SINGLE PHASE • TEFC • RIGID BASE • IP54

NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 220V	"C" Dim. (Inches)
56	113916	\$226	A	25	110/220	None	3.2	10.81
56	110423	286	A	24	110/220	None	3.2	10.81
56	113908	289	A	26	110/220	Man.	3.2	10.81
56	113917	241	A	27	110/220	None	3.8	11.31
56	110064	329	A	25	110/220	None	4.1	11.31
56	113909	329	A	29	110/220	Man.	4.1	11.31
56	113918	275	A	29	110/220	None	5.6	11.31
56	110065 †	377	A	32	110/220	None	5.9	11.81
56	113910	390	A	32	110/220	Man.	5.9	11.81
56	113919	320	A	32	110/220	None	6.6	11.81
56H	110066 □	452	A	38	110/220	None	6.4	12.81
56	113911 †	452	A	34	110/220	Man.	6.4	12.31
56H	113920	420	A	44	110/220	None	8.2	13.31
56H	110424 †☆□	512	A	47	110/220	None	8.6	13.31
56H	113929 †☆	468	A	49	110/220	Man.	8.6	13.31
56HZ	113928 †■	508	A	44	110/220	None	10.7	13.75
182T	131556 †	772	B	95	220	None	11.2	15.96
182T	131600 †	762	B	71	220	Man.	12.0	14.96
145T	121070 †☆	625	B	50	220	None	13.4	13.75
56H	113936 †☆	625	A	48	220	None	13.4	13.81
184T	131557 †	1103	B	98	220	None	15.9	16.96
184T	131601 †	1086	B	98	220	Man.	15.9	16.96
184T	131638 †☆	727	B	98	220	None	20.5	17.46
184T	131578 †☆	1400	B	103	220	None	21.0	17.46
213TZ	140475 †☆	1405	B	163	220	Man.	24.5	18.71

SINGLE PHASE • DRIP-PROOF • RESILIENT BASE • IP22

HP	RPM 50 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 220V	"C" Dim. (Inches)
1/3	2850	56	114222	\$192	A	24	110/220	None	3.2	10.81
	1425	56	114223	250	A	24	110/220	None	3.2	10.81
	1425	...	...	...	...	...	...	...	...	...
1/2	2850	56	114224	223	A	26	110/220	None	3.8	11.31
	1425	56	114225	313	A	27	110/220	None	4.1	11.31
	1425	...	...	...	...	...	...	...	...	...
3/4	2850	56	114226	272	A	28	110/220	None	5.6	11.31
	1425	56	114227	374	A	31	110/220	None	5.9	11.81
	1425	...	...	...	...	...	...	...	...	...
1	2850	56	114228	309	A	31	110/220	None	6.6	11.81
	1425	56	114229	413	A	35	110/220	None	6.4	12.31
	1425	...	...	...	...	...	...	...	...	...
1½	2850	...	...	...	...	...	...	...	...	...
	1425	56H	114231 ☆	463	A	42	110/220	None	8.4	13.32
	1425	...	...	...	...	...	...	...	...	...
2	2850	...	...	...	...	...	...	...	...	...
	1440	56H	114233 †	563	A	49	220	None	9.6	13.82
	1440	...	...	...	...	...	...	...	...	...

SINGLE PHASE • TEFC • C FACE LESS BASE • IP54

NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 220V	"C" Dim. (Inches)
...
56C	113921	\$295	A	22	110/220	Man.	3.2	10.81
56C	113912	254	A	25	110/220	None	3.8	11.31
56C	...	...	...	...	...	...	...	...
56C	113922	337	A	29	110/220	Man.	4.1	11.31
56C	113913	282	A	28	110/220	None	5.6	11.31
...
56C	113923	386	A	31	110/220	Man.	5.9	11.81
56C	113914	347	A	32	110/220	None	6.6	11.81
...
56C	113924 †	406	A	34	110/220	Man.	6.4	12.31
56C	113915	451	A	43	110/220	None	8.2	13.31
...
56C	113925 †☆	492	A	42	110/220	Man.	8.6	13.31
145TC	120990 †☆	522	B	47	110/220	None	9.2	14.25
...
182TC	131599 †	782	B	70	220	Man.	12.0	14.97

■ 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.

50 HZ • THREE PHASE • CAST IRON **THREE PHASE • RIGID BASE • TEFC • IP54**

General Specifications:

Heavy-duty industrial motors ideal for "tough to handle" applications. Cast iron frame, mounting feet, endplates, and conduit box.

Using available LEESON kits, these motors are field convertible to severe duty, F2 mounting, C face with rigid base, or D flange with base.



Features:

Standard features include 12-lead Wye start/Delta run windings (15 HP and higher) and Class F insulation system. Also includes condensate drains, lubrication fittings, non-sparking fan and locked shaft-end bearing (254T and larger). Suitable for outdoor and high altitude applications. Stainless steel nameplate. For CE marking see the L24 in the Mod-Squad section.

INQUIRES/ORDERS FOR ABOVE LISTED MOTORS SHOULD BE DIRECTED TO CUSTOMER SERVICE/ATTENTION-MOD.

HP	RPM 50 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	F.L. Amps 380 V.	% F.L. Eff.	"C" Dim. (Inches)
5	980	254T	151451	\$1074	C	250	190/380	8.5	89.5	23.19
7½	2930	215T	151452	796	C	167	220/380-440	10.8	88.8	19.61
	1450	213T	151453	637	C	153	220/380-440	11.0	89.5	18.19
	975	254T	151454	1074	C	250	220/440	11.0♦	89.5	23.19
	975	256T	151455	1320	C	277	190/380	12.0	89.5	24.92
10	2900	215T	151456	796	C	167	220/380-440	14.5	89.5	19.60
	1455	215T	151457	770	C	176	220/380-440	15.0	89.5	19.60
	975	256T	151458	1320	C	277	220/440	14.5♦	89.5	24.92
	950	284T	151459	1784	C	359	190/380	17.0	88.9	26.26
15	2920	254T	151460	1037	C	260	220/380-440	20.8	90.2	23.19
	1460	254T	151461	1064	C	284	220/380-440	22.0	91.0	23.19
	985	284T	151462	1784	C	359	220/440	23.0♦	90.2	25.26
20	2930	256T	151463	1378	C	296	220/380-440	28.0	90.2	24.92
	1450	256T	151464	1289	C	321	220/380-440	29.0	91.0	24.92
	980	286T	151465	2115	C	408	220/380-440	31.0	90.2	27.83
25	2940	284TS	151466	1646	C	349	220/380-440	34.5	91.0	24.88
	2950	286TS	151467	1805	C	375	220/380-440	34.5	91.0	26.46
	1470	284T	151468	1502	C	370	220/380-440	35.0	92.4	26.26
	980	324T	151469	2547	C	494	220/380-440	38.0	91.7	29.53
	980	326T	151470	2751	C	528	190/380	37.0	91.7	31.02
30	2850	324TS	151471	2339	C	496	220/380-440	42.0	91.7	28.03
	1470	286T	151472	1807	C	428	220/380-440	42.0	92.4	27.83
	980	326T	151473	2751	C	528	220/440	44.0♦	91.7	31.02
	980	364T	151474	3926	C	638	190/380	42.5	93.0	32.64
40	2945	324TS	151475	2339	C	496	220/380-440	56.0	91.7	28.03
	1470	324T	151476	2339	C	528	220/380-440	57.5	90.8	29.53
	985	364T	151477	3926	C	638	220/440	55.5♦	93.0	32.64
	985	365T	151478	4570	C	686	220/380-440	59.0	93.0	33.62
50	2955	326TS	151479	3524	C	554	220/380-440	67.0	89.5	29.53
	1480	326T	151480	3481	C	587	220/380-440	69.5	90.7	31.02
	990	404T	151481	5267	C	888	220/380-440	73.0	93.6	36.42
60	2965	364TS	151482	4394	C	695	220/380-440	83.0	93.0	30.51
	1480	364T	151483	4912	C	666	220/380-440	82.0	95.0	32.64
	1450	365T	151484	4704	C	723	220/380-440	81.3	94.1	33.62
	985	404T	151485	5267	C	888	220/380-440	87.0	93.6	36.42
	985	405T	151486	6187	C	973	190/380	84.0	93.6	37.91
75	2970	365TS	151487	5162	C	850	220/380-440	100.0	93.0	31.50
	1485	405T	151488	6287	C	1050	220/380-440	105.0	94.5	37.91
	990	444T	151489	8847	C	1900	380-440	105.0	89.0	42.87
	990	444T	151490	8847	C	1900	440	114.5♦	89.0	42.87
100	2980	444TS	151492	9132	C	1282	380	130.0	94.5	39.10
	1490	444T	151493	8320	C	1920	380-440	134.0	94.5	42.87
	990	444T	151494	8847	C	1900	380	137.5	93.6	42.87
125	2980	444TS	151495	9132	C	1282	440	142.0♦	94.5	39.10
	1490	444T	151496	8320	C	1920	380-440	166.0	94.5	42.87
	990	445T	151497	10106	C	2179	380	176.0	94.1	44.88
150	1485	445T	151498	9324	C	1900	380-440	201.0	95.0	44.88
	1490	447T	151499	11863	C	2053	380-440	200.0	95.0	48.00

♦Full Load Amps 440 volt

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.



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

LEESON THREE PHASE 60 Hz WATTSAYER® 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 5/6ths of the 60 Hz speed noted in this catalog.

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

THREE PHASE • TEFC • RIGID BASE • IP54

KW/HP	RPM 50 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	F.L. Amps 380 V.	% F.L. Eff.	"C" Dim. (Inches)
0.18/1/4	1425	48	102685	\$239	A	19	220/380/440	1.00	56.0	9.06
0.25/1/3	2850	48	102686	238	A	19	220/380/440	0.80	60.0	9.93
	1425	48	102688	286	A	19	220/380/440	1.10	65.0	9.31
	1425	S56	102183	268	A	19	220/380/440	1.10	65.0	9.69
0.37/1/2	2850	48	102690	275	A	20	220/380/440	1.00	69.0	10.43
	1425	48	102692	323	A	20	220/380/440	1.40	72.0	9.81
	1425	S56	102693	299	A	20	220/380/440	1.40	72.0	10.19
0.55/3/4	2850	56	114304	322	A	25	220/380/440	1.02	78.0	10.38
	1425	56	114306	292	A	24	220/380/440	1.70	70.0	10.81
	1425	56	114307	344	A	27	220/380/440	1.85	74.0	11.31
0.75/1	2850	56	114308	349	A	26	220/380/440	2.00	77.0	11.31
	1425	56	114888	346	A	28	220/380/440	2.00	77.0	11.31
	1425	143T	121096	346	B	35	220/380/440	2.00	77.0	12.75
1.1/1 1/2	2850	145T	121097	359	B	34	220/380/440	2.90	78.0	12.75
	1425	145T	121093	359	B	40	220/380/440	3.30	75.5	12.75
1.5/2	2850	145T	121094	388	B	42	220/380/440	3.60	79.0	12.75
	1425	145T	121095	406	B	40	220/380/440	3.65	81.5	13.25
2.2/3	2850	182T	131480	504	B	58	220/380/440	4.80	82.5	13.46
	1425	182T	131459	481	B	64	220/380/440	4.70	84.0	13.46
3.7/5	2850	184T	131481	595	B	76	220/380/440	7.40	84.0	14.46
	1425	184T	131454	549	B	82	220/380/440	8.10	85.0	15.46

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



THREE PHASE • TEFC • C FACE LESS BASE • IP54

KW/HP	RPM 50 Hz	NEMA Frame	Catalog Number	List Price	Disc. Sym.	App. Wgt. (lbs.)	Voltage	F.L. Amps 380 V.	% F.L. Eff.	"C" Dim. (Inches)
0.18/1/4	1425	S56C	102184	\$254	A	18	220/380/440	1.00	56.0	9.44
0.25/1/3	2850	S56C	102687	249	A	19	220/380/440	0.80	60.0	10.31
	1425	S56C	102689	274	A	19	220/380/440	1.10	65.0	9.69
	1425	56C	114889	294	A	18	220/380/440	1.10	68.0	10.31
0.37/1/2	2850	S56C	102691	290	A	20	220/380/440	1.00	69.0	10.81
	1425	S56C	102694	322	A	20	220/380/440	1.40	72.0	10.19
	1425	56C	114891	324	A	20	220/380/440	1.15	73.0	10.81
	950	56C	114892	359	A	28	220/380/440	1.50	68.0	11.31
0.55/3/4	2850	56C	114893	292	A	24	220/380/440	1.70	70.0	10.81
	1425	56C	114894	347	A	27	220/380/440	1.85	74.0	11.31
0.75/1	2850	56C	114895	351	A	26	220/380/440	2.40	71.0	10.81
	1425	56C	114896	361	A	28	220/380/440	2.00	77.0	11.31
	1425	143TC	121272	361	B	31	220/380/440	2.00	77.0	11.75
	950	145TC	121273	416	B	39	220/380/440	2.65	73.0	13.25
1.1/1 1/2	2850	143TC	121274	373	B	33	220/380/440	2.90	78.0	12.25
	1440	145TC	121275	379	B	37	220/380/440	3.30	75.5	12.75
1.5/2	2850	145TC	121276	374	B	41	220/380/440	3.60	79.0	13.25
	1440	145TC	121277	407	B	40	220/380/440	3.65	81.5	13.75
2.2/3	2850	182TC	131505	513	B	59	220/380/440	4.80	82.5	13.97
	1440	182TC	131506	476	B	63	220/380/440	4.70	84.0	13.97
3.7/5	2850	184TC	131507	607	B	75	220/380/440	7.40	84.0	14.47
	1440	184TC	131508	544	B	82	220/380/440	8.10	85.0	15.47