LEESON® EXPLOSION-PROOF MOTORS
SINGLE PHASE

EXPLOSION-PROOF
FOR HAZARDOUS LOCATIONS

Underwriters Laboratories and Canadian Standards Association Listed

General Specifications:

These explosion-proof motors are designed and approved for application in hazardous environments having certain explosive gases or materials present.

Features:

Rugged mechanical construction meeting all requirements for safety. UL and CSA listed.

Double shielded, pre-lubricated ball bearings are standard. All motors have inherent automatic overload protection. NEMA 1.0 Service Factor except as noted.

Explosion-proof conduit box included at no extra cost.

Capacitors on single phase designs are mounted inside the motor frame.

Division I areas are environments where a hazard is present continuously or would be subject to fire or explosion if the hazard was present as a result of an accident or uncommon occurrence.

Division II areas are environments where the threat of fire or explosion is not normally present and not likely to result in the event of an abnormal occurrence.

Application Notes:

These motors must be applied in accordance with the National Electrical Code, Article #500. A partial listing of explosive agents is noted below. Consult NFPA Publication 497M for a complete listing. Please note subheads above each column for qualifications of LEESON motors.

NOTE: No LEESON motors are listed for Class I, Group A or B.

Class I

Group A: Acetylene

Group B: Butadiene, ethylene oxide, hydrogen, propylene oxide, manufactured gases containing more than 30% hydrogen by volume.

Group C: Acetaldehyde, cyclopropane, diethyl ether, ethylene.

Group D: Acetone, acrylonitrile, ammonia, benzene, butane, ethanol, ethylene dichloride, gasoline, hexane, isoprene, methane (natural gas), methanol, naphtha, propane, propylene, styrene, toluene, vinyl acetate, vinyl chloride, xylene.

Class II

Group E: Aluminum, magnesium and other metal dusts with similar characteristics.

Group F: Carbon black, coke or coal dust.

Group G: Flour, starch or grain dust.

SINGLE PHASE • RIGID BASE
DIVISION I, DIVISION II, CLASS I, GROUPS C & D— CLASS II, GROUPS F&G • W/CONDUIT BOX

HP	SYN RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	1800	56	**111074.00●**	35	115/208-230	Auto.	2.9	63.0	12.97
1/2	1800	56H	**111084.00□**	41	115/208-230	Auto.	4.4	65.0	13.58
3/4	1800	56H	**110934.00□**	46	115/208-230	Auto.	5.5	70.0	14.08
1	1800	56H	**110961.00□**	47	115/208-230	Auto.	6.7	75.0	14.08

SINGLE PHASE • C FACE LESS BASE
DIVISION I, DIVISION II, CLASS I, GROUPS C & D— CLASS II, GROUPS F&G • W/CONDUIT BOX

HP	SYN RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	3600	56C	**111095.00**	38	115/208-230	Auto.	2.2	65.0	13.44
	1800	56C	**111075.00●**	41	115/208-230	Auto.	2.9	70.0	12.97
1/2	3600	56C	**111098.00**	35	115/208-230	Auto.	4.2	63.0	13.44
	3600	56J	**116188.00 A**	35	115/208-230	Auto.	3.8	63.0	13.96
	1800	56C	**111085.00**	45	115/208-230	Auto.	4.4	65.0	13.94
3/4	3600	56C	**111097.00**	40	115/208-230	Auto.	5.0	64.0	13.96
	3600	56J	**116186.00 A**	40	115/208-230	Auto.	5.0	64.0	14.46
	1800	56C	**111086.00**	50	115/208-230	Auto.	5.5	70.0	14.44
1	3600	56C	**111096.00**	49	115/208-230	Auto.	6.2	70.0	14.44
	3600	56J	**116185.00**	49	115/208-230	Auto.	6.0	70.0	14.96
	1800	56C	**110852.00**	53	115/208-230	Auto.	6.7	75.0	14.44
1½	3600	56C	**114424.00**	44	115/208-230	Auto.	8.5	72.0	14.96
	3600	56J	**116183.00 A**	54	115/208-230	Auto.	8.5	72.0	14.95
2	3600	56C	**114425.00**	54	115/208-230	Auto.	10.5	74.0	14.94
	3600	56J	**116181.00**	54	115/208-230	Auto.	10.5	74.0	15.45

SINGLE PHASE • C FACE WITH BASE
DIVISION I, DIVISION II, CLASS I, GROUPS C & D— CLASS II, GROUPS F&G • W/CONDUIT BOX

HP	SYN RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	3600	56C	**116605.00**	39	115/208-230	Auto.	2.6	65.0	13.44
	1800	56C	**116606.00**	42	115/208-230	Auto.	3.3	62.0	13.44
	1200	56C	**116607.00□**	45	115/208-230	Auto.	3.9	58.0	13.94
1/2	3600	56C	**116608.00□**	36	115/208-230	Auto.	3.8	63.0	13.44
	1800	56C	**116609.00□**	46	115/208-230	Auto.	4.4	66.0	13.94
	1200	56HC	**116610.00□**	56	115/208-230	Auto.	4.7	64.0	14.94
3/4	3600	56C	**116611.00□**	41	115/208-230	Auto.	5.3	65.0	13.94
	1800	56C	**116612.00□**	51	115/208-230	Auto.	5.5	70.0	14.44
1	3600	56C	**116613.00□**	50	115/208-230	Auto.	6.3	70.0	14.44
	1800	56C	**116614.00□**	54	115/208-230	Auto.	6.7	75.0	14.44
1½	3600	56C	**116615.00□**	45	115/208-230	Auto.	8.5	72.0	14.44
2	3600	56C	**116616.00□**	58	115/208-230	Auto.	10.5	74.0	14.94

● These motors are totally enclosed, non-ventilated—others are fan cooled.
□ 56H & 56HC motors have bases with mounting holes for NEMA 56 and NEMA 143-5T and a standard NEMA 56C face and 5/8" shaft.
A Subject to Availability.

EXPLOSION-PROOF
FOR HAZARDOUS LOCATIONS

Underwriters Laboratories and Canadian Standards Association Listed

General Specifications:

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Features:

Rugged mechanical construction meeting all requirements for safety. UL and CSA listed.

Double shielded, pre-lubricated ball bearings are standard. All motors have inherent automatic overload protection. NEMA 1.0 Service Factor except as noted.

Explosion-proof conduit box included at no extra cost.

Normally-closed thermostats are standard on cast iron motors.

Division I areas are environments where a hazard is present continuously or would be subject to fire or explosion if the hazard was present as a result of an accident or uncommon occurrence.

Division II areas are environments where the threat of fire or explosion is not normally present and not likely to result in the event of an abnormal occurrence.

Application Notes:

These motors must be applied in accordance with the National Electrical Code, Article #500. A partial listing of explosive agents is noted below. Consult NFPA Publication 497M for a complete listing. Please note subheads above each column for qualifications of LEESON motors.

NOTE: No LEESON motors are listed for Class I, Group A or B.

Class I
Group A: Acetylene

Group B: Butadiene, ethylene oxide, hydrogen, propylene oxide, manufactured gases containing more than 30% hydrogen by volume.

Group C: Acetaldehyde, cyclopropane, diethyl ether, ethylene.

Group D: Acetone, acrylonitrile, ammonia, benzene, butane, ethanol, ethylene dichloride, gasoline, hexane, isoprene, methane (natural gas), methanol, naphtha, propane, propylene, styrene, toluene, vinyl acetate, vinyl chloride, xylene.

Class II
Group E: Aluminum, magnesium and other metal dusts with similar characteristics.

Group F: Carbon black, coke or coal dust.

Group G: Flour, starch or grain dust.

EXCEPT AS NOTED, STEEL FRAME EXPLOSION-PROOF MOTORS ARE *NOT* INVERTER-RATED AND MUST *NOT* BE USED WITH AN INVERTER

THREE PHASE • RIGID BASE
DIVISION I, DIVISION II, CLASS I, GROUPS C & D— CLASS II, GROUPS F & G • W/CONDUIT BOX

HP	SYN RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	1800	56	111932.00●	33	208-230/460	Auto.	1.3	76.0	10.97
	1200	56H	111940.00●	39	208-230/460	Auto.	1.5	70.0	13.97
1/2	3600	56	111934.00●A	39	208-230/460	Auto.	1.6	82.5	12.47
	1800	56	111929.00▲●	32	208-230/460	Auto.	1.7	75.0	12.47
	1200	56H	111938.00●□	44	208-230/460	Auto.	2.0	71.0	13.47
3/4	3600	56	111937.00	37	208-230/460	Auto.	3.2	75.5	13.44
	1800	56	111923.00	38	208-230/460	Auto.	3.0	75.0	13.94
1	3600	56	111942.00 A	34	208-230/460	Auto.	3.6	77.0	13.44
	1800	56H	111922.00□	45	208-230/460	Auto.	3.6	78.0	13.94
1½	3600	143T	121914.00 A	49	208-230/460	Auto.	4.0	77.0	14.41
	1800	145T	121915.00	59	208-230/460	Auto.	4.8	85.5	14.41
2	3600	145T	121916.00 A	55	208-230/460	Auto.	4.8	84.0	15.41
	1800	145T	121917.00	60	208-230/460	Auto.	5.8	86.5	15.41
3	3600	145T	121918.00	56	208-230/460	Auto.	4.8	86.5	15.91

▲ These motors are satisfactory for operation on 50 Hz power supply at full rated horsepower.
● These motors are totally enclosed, non-ventilated—Others are fan cooled.
□ Combination 56H base motors have mounting holes for NEMA 56 and NEMA 143-5T and a standard NEMA 56 shaft.

THREE PHASE • C FACE LESS BASE
DIVISION I, DIVISION II, CLASS I, GROUPS C & D— CLASS II, GROUPS F & G • W/CONDUIT BOX

HP	SYN RPM 60Hz▲	NEMA Frame	Catalog. Number	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	3600	56C	111944.00●+	36	208-230/460	Auto.	1.2	77.0	11.97
	1800	56C	111931.00▲●	29	208-230/460	Auto.	1.2	76.0	11.97
1/2	3600	56C	111933.00+●✣	33	208-230/460	Auto.	1.6	82.5	12.47
	3600	56J	116187.00●+A	33	208-230/460	Auto.	1.6	82.5	12.98
	1800	56C	111930.00▲●	34	208-230/460	Auto.	1.7	75.0	12.47
3/4	3600	56C	111936.00+	27	208-230/460	Auto.	2.4	75.5	13.44
	1800	56C	111935.00	36	208-230/460	Auto.	3.0	75.0	13.94
1	3600	56C	111943.00+	30	208-230/460	Auto.	3.2	77.0	13.44
	3600	56J	116184.00+	33	208-230/460	Auto.	3.2	77.0	13.95
	1800	56C	111926.00	46	208-230/460	Auto.	3.6	78.0	13.94
1½	3600	56C	111939.00+	48	208-230/460	Auto.	4.2	81.5	13.94
	3600	56J	116182.00+	48	208-230/460	Auto.	4.2	81.5	14.46
	1800	56C	111941.00	46	208-230/460	Auto.	4.4	80.0	15.94
2	3600	56C	113971.00+	50	208-230/460	Auto.	5.6	82.5	13.94
	3600	56J	116180.00+	50	208-230/460	Auto.	5.6	82.5	14.45
	1800	145TC	G121178.00	55	208-230/460	Auto.	5.6	84.0	15.03
3	3600	56C	114419.00③	54	208-230/460	Auto.	7.6	84.0	15.44
	1800	182TC	G825116.00 G	96	230/460	T-Stat	8.5	87.5	17.87
5	1800	184TC	G825128.00 G	116	230/460	T-Stat	13.8	87.5	17.87

③ **Catalog #114419 is approved for Class I, Group C & D – Class II, Group F service only.**

G **Explosion-proof motors are Class I, Group D—Class II, Groups F & G.**

▲ These motors are satisfactory for operation on 50 Hz power supply at full rated horsepower.
● These motors are totally enclosed, non-ventilated—Others are fan cooled.
✣ These motors have 1.15 Service Factors.
\+ Consult factory for 50 Hz derate.
A Subject to Availability.

Catalog numbers in green are EPACT motors.

SHADED FRAME INDICATES CAST IRON CONSTRUCTION

SEE PAGE 42 FOR INVERTER-RATED STEEL FRAME EXPLOSION-PROOF MOTORS

WATTSAVERe Motors Meet NEMA MG1 part 30 & 31.

Specifications are subject to change without notice