

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.

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	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	FL Amps 230V	% FL Eff.	"C" Dim. (Inches)
1/3	1725	56	111932●	A	33	208-230/460	Auto.	1.3	76.0	10.88
		1140	56H	111940●	A	39	208-230/460	Auto.	1.5	70.0
1/2	3450	56	111934●	A	39	208-230/460	Auto.	1.6	82.5	12.38
	1725	56	111929▲●	A	32	208-230/460	Auto.	1.7	75.0	11.38
		1140	56H	111938□	A	44	208-230/460	Auto.	2.0	71.0
3/4	3450	56	111937	A	37	208-230/460	Auto.	3.2	75.5	13.94
	1725	56	111923	A	38	208-230/460	Auto.	3.0	75.0	13.94
1	3450	56	111942	A	34	208-230/460	Auto.	3.6	77.0	13.94
	1725	56H	111922□	A	45	208-230/460	Auto.	3.6	78.0	13.94
1½	3450	143T	G120489	B	46	208-230/460	Auto.	4.0	82.5	14.41
	1725	145T	G120490	B	56	208-230/460	Auto.	4.4	84.0	14.41
2	3450	145T	G120491	B	51	208-230/460	Auto.	5.2	84.0	15.41
	1725	145T	G120391	B	56	208-230/460	Auto.	5.6	84.0	15.41
3	3450	145T	G120387	B	51	208-230/460	Auto.	7.4	85.5	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	RPM 60 Hz ▲	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	FL Amps 230V	% FL Eff.	"C" Dim. (Inches)
1/3	3450	56C	111944●+	A	36	208-230/460	Auto.	1.2	77.0	11.88
		1725	56C	111931▲●	A	29	208-230/460	Auto.	1.2	76.0
1/2	3450	56C	111933+●❖	A	33	208-230/460	Auto.	1.6	82.5	12.38
	1725	56C	111930▲●	A	34	208-230/460	Auto.	1.7	75.0	11.37
		56J	116187●+	A	33	208-230/460	Auto.	1.6	82.5	12.87
3/4	3450	56C	111936+	A	27	208-230/460	Auto.	2.4	75.5	12.96
	1725	56C	111935	A	36	208-230/460	Auto.	3.0	75.0	13.94
1	3450	56C	111943+	A	30	208-230/460	Auto.	3.2	77.0	12.96
	1725	56J	116184+	A	33	208-230/460	Auto.	3.2	77.0	13.46
		56C	111926	A	46	208-230/460	Auto.	3.6	78.0	13.94
1½	3450	56C	111939+	A	48	208-230/460	Auto.	4.2	81.5	13.96
	1725	56J	116182+	A	48	208-230/460	Auto.	4.2	81.5	14.46
		56C	111941	A	46	208-230/460	Auto.	4.4	80.0	13.96
2	3450	56C	113971+	A	50	208-230/460	Auto.	5.6	82.5	14.46
	1725	56J	116180+	A	50	208-230/460	Auto.	5.6	82.5	14.96
		145TC	121178	B	50	208-230/460	Auto.	5.6	84.0	15.02
3	3450	56C	114419③	A	54	208-230/460	Auto.	7.6	84.0	14.96
	1740	182TC	158003④	C	91	230/460	T-Stat	8.8	80.0	15.62
5	1740	184TC	158005④	C	110	230/460	T-Stat	13.4	82.5	16.12

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

④ 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.

SHADED FRAME INDICATES CAST IRON CONSTRUCTION

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

Catalog numbers in green are EPACT motors.



EXPLOSION-PROOF MOTORS

THREE PHASE • C FACE

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.

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 • C FACE WITH BASE

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

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	3450	56C	114625▲●	A	33	208-230/460	Auto.	1.2	77.0	11.88
	1725	56C	114626▲●	A	38	208-230/460	Auto.	1.3	76.0	10.87
1/2	3450	56C	114627●★	A	35	208-230/460	Auto.	1.6	82.5	12.38
	1725	56C	114628▲●	A	35	208-230/460	Auto.	1.7	75.0	11.37
	1725	56C	116190◆	A	34	208-230/460	T-Stat	2.4	68.0	13.44
3/4	3450	56C	114629	A	33	208-230/460	Auto.	2.4	75.5	12.96
	1725	56C	114630	A	42	208-230/460	Auto.	2.6	75.0	12.46
	1725	56C	116191◆	A	38	208-230/460	T-Stat	3.0	75.5	13.44
1	3450	56C	114631	A	34	208-230/460	Auto.	3.2	77.0	12.96
	1725	56C	114632	A	47	208-230/460	Auto.	3.4	78.0	13.96
	1725	143TC	G121541◆	B	44	208-230/460	T-Stat	3.0	82.5	14.50
1½	3450	56C	114633	A	42	208-230/460	Auto.	4.2	81.5	13.96
	1725	56C	114634	A	45	208-230/460	Auto.	4.4	80.0	13.96
	1725	145TC	G121542◆	B	54	208-230/460	T-Stat	4.4	84.0	16.00
2	3450	56C	114635	A	51	208-230/460	Auto.	5.6	78.8	14.46
	1740	145TC	G121182	B	58	208-230/460	Auto.	5.6	84.0	15.02
	1725	145TC	G121543◆	B	65	208-230/460	T-Stat	5.6	84.0	16.50
3	3450	56C	114636③	A	62	208-230/460	Auto.	7.6	84.0	14.96

③ Catalog #114636 is approved for Class I, Group C & D – Class II, Group F service only.

▲ 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.

◆ These motors are inverter-rated and suitable for use with an inverter. Others are not!

C FACE WITH RIGID BASE • THREE PHASE CAST IRON FRAME

DIVISION I, DIVISION II, CLASS I, GROUP D—CLASS II, GROUPS F & G WITH CONDUIT BOX AND NORMALLY-CLOSED THERMOSTATS

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc Sym.	App. Wgt. (lbs.)	Voltage	F.L. Amps 460 V.	% F.L. Eff.	"C" Dim. (Inches)
3	3450	182TC	G850587★	C	90	230/460	3.8	85.5	17.12
	1750	182TC	G850617★	C	91	230/460	4.0	87.5	17.12
5	3450	184TC	G850588★	C	125	230/460	6.2	87.5	17.12
	1750	184TC	G850618★	C	125	230/460	6.3	87.5	17.12
7½	3450	213TC	G850589★	C	138	230/460	9.5	88.5	20.18
	1750	213TC	G850619★	C	138	230/460	10.0	89.5	20.18
10	3450	215TC	G850590★	C	155	230/460	12.0	89.5	20.18
	1750	215TC	G850620★	C	155	230/460	13.0	91.0	20.18
15	3450	254TC	G850591★	C	238	230/460	18.0	90.2	23.52
	1750	254TC	G850621★ [H]	C	238	230/460	19.5	91.0	23.52
20	3450	256TC	G850592★ [H]	C	263	230/460	23.0	90.2	25.27
	1750	256TC	G850622★ [H]	C	263	230/460	25.0	91.0	25.27
25	3450	284TSC	G850593★ [H]	C	365	230/460	29.0	91.0	24.94
	1750	284TC	G850623★ [H]	C	366	230/460	31.5	92.4	26.30
30	1750	286TC	G850624★ [H]	C	385	230/460	37.0	92.4	27.80
40	1750	324TC	G850625★ [H]	C	550	230/460	51.5	93.0	28.87
50	1750	326TC	G850626 [H]	C	570	230/460	61.5	93.0	30.37

★ These motors have 1.15 Service Factors.

[H] Explosion-proof motors are Class I, Groups C & D—Class II, Groups F & G.

SHADED FRAME INDICATES CAST IRON CONSTRUCTION

Catalog numbers in green are EPACKT motors.



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 1.15 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 headings and footnotes for qualifications of specific 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.

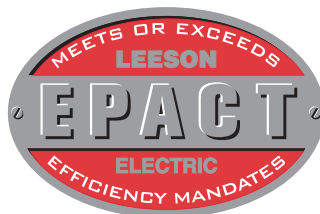
THREE PHASE • CAST IRON FRAME • RIGID BASE
DIVISION I, DIVISION II, WITH CONDUIT BOX AND NORMALLY
CLOSED THERMOSTATS

EXPLOSION-PROOF MOTORS ARE CLASS I, GROUPS C & D—
CLASS II, GROUPS F & G • ALL RATINGS ARE INVERTER RATED

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	FL. Amps 460V	% FL. Eff.	"C" Dim. (Inches)
3	1760	182T	G158362	C	100	230/460	4.2	87.5	17.12
5	3475	184T	G158319	C	110	230/460	6.2	87.5	17.12
	1745	184T	G158366	C	120	230/460	6.5	87.5	17.12
7½	3530	213T	G158158	C	175	230/460	9.5	88.5	20.91
	1760	213T	G158157	C	138	230/460	10.0	89.5	19.66
10	3535	215T	G158159	C	190	230/460	12.0	89.5	20.91
	1765	215T	G158140	C	155	230/460	12.5	89.5	20.91
15	3520	254T	G158000	C	325	230/460	18.0	90.2	23.52
	1765	254T	G158001	C	375	230/460	19.5	91.0	23.52
20	3525	256T	G825039	C	375	230/460	23.5	90.2	25.27
	1765	256T	G158010	C	263	230/460	25.0	91.0	25.27
25	3525	284TS	G825046	C	400	230/460	29.0	91.0	24.94
	1770	284T	G825047	C	366	230/460	31.5	92.4	26.30
30	3515	286TS	G825040	C	450	230/460	35.0	91.0	26.44
	1760	286T	G825041	C	450	230/460	37.0	92.4	27.80
40	3550	324TS	G825042	C	500	230/460	45.5	91.7	27.37
	1770	324T	G825043♣	C	525	230/460	51.5	93.0	28.87
50	3550	326TS	G825044	C	570	230/460	57.0	92.4	28.87
	1765	326T	G825045♣	C	570	230/460	61.5	93.0	30.37
60	3560	364TS	G825001♣	C	875	230/460	70.5	93.0	29.38
	1775	364T	G825002♣	C	975	230/460	72.0	93.6	31.50
75	3555	365TS	G825004	C	1000	230/460	84.0	93.6	30.38
	1780	365T	G825005	C	1025	230/460	86.0	94.1	32.50
100	3565	405TS	G825007	C	1150	230/460	112.0	94.1	34.12
	1780	405T	G825008	C	1300	230/460	114.0	94.5	37.12
125	3565	444TS	G825010	C	1750	230/460	136.0	94.5	37.50
	1780	444T	G825011	C	1800	460	143.0	94.5	41.25
150	3570	445TS	G825013	C	2050	460	167.0	95.0	37.50
	1785	445T	G825014	C	2050	460	172.0	95.0	43.19
200	3570	445TS	G825016♣	C	2300	460	222.0	95.0	37.50
	1785	445T	G825017	C	2250	460	225.0	95.0	43.19
250	3570	449TS	825019.99 ⓐ♣	C	2450	460	280.0	95.0	47.97
	1785	449T	825020.99 ⓐ♣	C	2600	460	290.0	95.0	51.69

These explosion-proof motors are not designed for vertical mounting.

ⓐ Explosion-proof motors are Class I, Group D—Class II, Groups F & G.
♣ 1.0 Service Factor



QUICK REFERENCE

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EXPLOSION-PROOF G-SERIES DIMENSIONS	313
EXPLOSION-PROOF 158 SERIES DIMENSIONS	312

SHADED FRAME INDICATES CAST IRON CONSTRUCTION

Catalog numbers in green are EPACT motors.