



**Explosion Proof** motors meet Underwriters Laboratories or CSA standards for use in the hazardous (explosive) locations shown by the UL/CSA label on the motor. The motor user must specify the explosion proof motor required. Locations are considered hazardous because the atmosphere contains or may contain gas, vapor, or dust in explosive quantities.

The National Electrical Code (NEC) divides these locations into classes and groups according to the type of explosive agent. The following list has some of the agents in each classification. For a complete list, see Article 500 of the National Electrical Code.

### ***Class I (Gases, Vapors)***

Group A	Acetylene
Group B	Butadiene, ethylene oxide, hydrogen, propylene oxide
Group C	Acetaldehyde, cyclopropane, diethlether, ethylene, isoprene
Group D	Acetone, acrylonitrile, ammonia, benzene, butane, ethylene dichloride, gasoline, hexane, methane, methanol, naphtha, propane, propylene, styrene, toluene, vinyl acetate, vinyl chloride, xylene

### ***Class II (Combustible Dusts)***

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

The motor ambient temperature is not to exceed +40°C or -25°C unless the motor nameplate specifically permits another value. Marathon Motors explosion proof motors are approved for all classes noted except Class I, Groups A & B .

## Hazardous Duty Motor Area Classification Chart

Class I Area Classification (Flammable Gases, Vapors or Mists)				Class II Area Classification (Combustible Dusts)			
North America		Europe - ATEX (Category G - Gases)		North America		Europe - ATEX (Category D - Dusts)	
Division 1 Explosion Proof	Division 2 TEFC & TENV	Zone 1 Flameproof	Zone 2 Non-Sparking	Division 1 Explosion Proof	Division 2	Zone 21 Flameproof	Zone 22 Non-Sparking
Group A <sup>①</sup>	Group A	Group IIC, Category G	Group IIC, Category G	-	-	-	-
Group B <sup>②</sup>	Group B	Group IIC, Category G	Group IIC, Category G	-	-	-	-
Group C	Group C	Group IIB, Category G	Group IIB, Category G	-	-	-	-
Group D	Group D	Group IIA, Category G	Group IIA, Category G	-	-	-	-
-	-	-	-	Group E	-	Category D	Category D
-	-	-	-	Group F	Group F <sup>①</sup>	Category D	Category D
-	-	-	-	Group G	Group G <sup>①</sup>	Category D	Category D

- Group is not applicable to that Division or Zone, or is not defined.

<sup>①</sup> Group is not available from Marathon Motors.

<sup>②</sup> Contact factory representative for availability.

# Hazardous Duty Motor Temperature Code Chart

Temp.	TEMPERATURE CODES		Division 1 Explosion Proof/Zone 1 Flameproof		Division 2/Zone 2 Non-Sparking	
	UL/CSA	ATEX	Class I Area Classification (Flammable Gases, Vapors or Mists)	Class II Area Classification* (Combustible Dusts)	Class I Area Classification (Flammable Gases, Vapors or Mists)	Class II Area Classification (Combustible Dusts)
280°C	T2A	T2(280)	Division 1/Zone 1 Explosion Proof - Class I, Group D (Group C as noted)	Division 1/Zone 21	Division 2/Zone 2	
260°C	T2B	T2(260)				XRI <sup>®</sup> Severe Duty & IEEE-841 @ 1.15 S.F., Class I, Groups A,B,C,D (Sine wave power)
215°C	T2D	T2(215)				Available through Marathon's Mod Central on Totally Enclosed EPAct, XRI <sup>®</sup> , XRI <sup>®</sup> Severe Duty or IEEE-841 @ 1.0 S.F., on PWM VFD, Class I, Groups A, B, C, D
200°C	T3	T3				Available through Marathon's Mod Central on Totally Enclosed EPAct, XRI <sup>®</sup> , XRI <sup>®</sup> Severe Duty or IEEE-841 @ 1.0 S.F., Sine wave power Class I, Groups A, B, C, D
165°C	T3B	T3(165)	Explosion Proof - Class I, Group D (Group C as noted), Sine wave or PWM power	Explosion Proof - Class II, Groups F & G, Sine wave or PWM power		
160°C	T3C	T3(160)	Available through Marathon's Mod Central on Explosion Proof - Class I, Group C & D @ 1.0 S.F., - Contact Factory	Available through Marathon's Mod Central on Explosion Proof - Class II, Group F & G @ 1.0 S.F., - Contact Factory		
135°C	T4	T4	ATEX compliant motors	ATEX compliant motors		

\* Class II, Division 2 motors are not available from Marathon Motors, Zone 22 groups are not defined by ATEX.