

Hazardous Location

For pumps, fans, compressors, blowers, conveyors and general industrial equipment in hazardous locations as defined by class and group.

Horsepower: 1/4 through 200 HP, Single and Dual Label

Phase: Single and Three Phase

RPM: 1200, 1800 and 3600

Voltage: 115/208 - 230, 115/230, 230/460, 208-230/460 and 460

Efficiency: Premium, Energy and Standard Efficient

Mounting: Footed, Footless C-Face

Agency: UL^{®†} Recognized and CSA^{®†} Certified

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Hazardous Location Specifications

Certain locations may be classified as hazardous because the atmosphere 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 which may be present. Examples of these agents are shown below. For a complete list, see NFPA (National Fire Protection Association) publication 487M.

Underwriters' Laboratories (UL^{®†}) tests motors and other devices for use in explosive atmospheres and publishes a list of those meeting its standards for each Class and Group. Use of UL^{®†} listed devices does not necessarily make an installation conform to the NEC^{®†} or local codes. Consult Chapter 5 of the NEC^{®†}, local building codes, OSHA requirements and insurance inspectors for detailed data as to proper procedures.

Class I - Flammable Gases or Vapors: Gases and vapors are grouped by severity of expected explosion pressure and extent of flame propagation between parts. For Class I applications, Nidec Motor Corp. offers hazardous location products for:

- Group C - ethyl-ether, ethylene and propane
- Group D - gasoline, hexane, naphtha, benzene, butane, propane, alcohol, lacquer solvent vapors and natural gas

Class II - Combustible Dusts: Dusts are grouped by combustibility, penetrability between parts, blanketing effect, ignition temperature and ability to contribute to creation of an ignition source through abrasiveness or electrical conductivity. For Class II applications, Nidec Motor Corp. offers hazardous location products for:

- Group E - aluminum, magnesium similar metal dusts
- Group F - carbon black, coal or coke
- Group G - flour, starch or grain

Temperature: In addition to the identification of the class, group and division, it is necessary to obtain the temperature code or maximum surface temperature for the hazardous location motor. This code or temperature indicates the maximum surface temperature for all conditions, including burnout, overload, single phasing and locked rotor. The maximum surface temperature, or "T" code, must be identified on the nameplate.

All hazardous location motors have a temperature code that defines the maximum allowable frame temperature. These codes are as follows:

Temperature Identification Numbers		
Maximum Temperature (For All Conditions)		T-Code
Celsius	Fahrenheit	
280*	536	T2A***
260*	500	T2B***
230*	446	T2C***
215*	419	T2D***
200*	392	T3
180*	356	T3A
165*	329	T3B
160*	320	T3C
135*	275	T4
120*	248	T4A
100*	212	T5

*Class I, Group D only, requires caution statement

**Requires thermostats

***Not allowable for use with Class II locations

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