



Hazardous Environment Safety Qualifications

Air motors are inherently safe for most hazardous duty use since they are non-sparking and run cool. They are well suited for non-hazardous environments as well.

In order to comply with ATEX directives, air motors are listed with letters/numbers that specify the exact criteria the product meets in relation to the directives and so determines the type of environments that they are safe to operate in.

The air motors used in Fawcett equipment are suited for use in ATEX zones 1 and 2 where explosive atmospheres are likely to occur and are marked according to Directive 2014/34/EU.

Here we explain the markings specific to the motors used on Fawcett equipment:

ATEX Marking



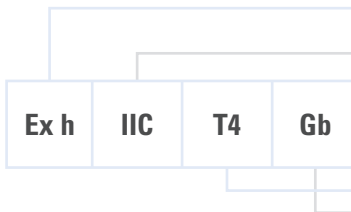
Explosion Protection Marking

Equipment Group: "II" is for anyplace other than mines

Equipment Category: "2" is for Zone 1 gases and Zone 21 dusts

Environment: "G" is for gas, vapor, mist and "D" is for dust

Gas Environment



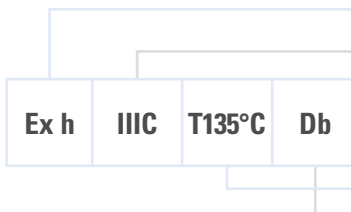
Explosion Protection Principle: "Ex h" is for protection by constructional safety – non-electrical device

Gas Group: "IIC" is for Hydrogen/Acetylene

Temperature Class: "T4" is for 135°C/275°F max. surface temperature of equipment

Equipment Protection Level in Gas: "Gb" is for high level of ignition protection

Dust Environment



Explosion Protection Principle: "Ex h" is for protection by constructional safety – non-electrical device

Gas Group: "IIIC" is for conductive dusts

Temperature Class: "T135°C" is for 135°C/275°F max. surface temperature of equipment

Equipment Protection Level in Dust: "Db" is for high level of ignition protection

Ambient Operating Range Under Hazardous Conditions

(+1°C <Ta< +40°C)

Ambient Temperature is (+1°C <Ta< +40°C) or (+34°F <Ta< +104°F)

*under non-hazardous conditions the ambient range is

(+1°C <Ta< +120°C) or (+34°F <Ta< +248°F)



We do not guarantee the safety of any application, but to ensure the safe operation of an air motor in your application, always follow the product operation manual, follow appropriate regulatory body regulations and requirements when operating in a hazardous atmosphere and consult with qualified personnel.

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DESCRIPTION	VALUE	DEFINITION
Equipment Group	I	Mining applications
	II	Surface/Non-mining applications
Equipment Group (only those within equip. group II listed)	1	Very High Level of Ignition Protection (environment presents continuous risk) • Zone 0 (gas) • Zone 20 (dust) • Zone 1 (gas) • Zone 21 (dust) • Zone 2 (gas) • Zone 22 (dust)
	2	High Level of Ignition Protection (environment presents frequent risk) • Zone 1 (gas) • Zone 21 (dust) • Zone 2 (gas) • Zone 22 (dust)
	3	Normal Level of Ignition Protection (environment presents infrequent risk) • Zone 2 (gas) • Zone 22 (gas)
	Note: category 1 is the highest possible so also covers all others above (and so on for each)	
Environment	G	Atmosphere containing Gas, Vapors or Mist
	D	Atmosphere containing Dust
Principle of Explosion Protection	Ex h	Constructional safety – non-electrical device
Gas Group (only those within equip. group II listed)	IIA	Propane/Acetone/Ammonia (least dangerous/highest ignition temp.)
	IIB	Ethylene
	IIC	Hydrogen/Acetylene (most dangerous/lowest ignition temp.)
Note: IIC is the highest possible so also covers all others above (and so on for each)		
Temperature Class in Gas (equipment max. surface temp.)	T1	450°C
	T2	300°C
	T3	200°C
	T4	135°C
	T5	100°C
	T6	85°C
Note: T6 is the highest possible so covers all others above (and so on for each)		
Equipment Protection Level in Gas	Ga	Very High
	Gb	High
	Gc	Normal
Note: Ga is the highest possible so covers all others above (and so on for each)		
Dust Group (only those within equip. group II listed)	IIIA	Combustible Flyings
	IIIB	Non-conductive Dust
	IIIC	Conductive Dust
Note: IIIC is the highest possible so also covers all others above (and so on for each)		
Temperature Class in Dust (equipment max. surface temp.)	T450°C	
	T300°C	
	T200°C	
	T135°C	
	T100°C	
	T85°C	
Note: T85°C is the highest possible so covers all other above (and so on for each)		
Equipment Protection Level in Dust	Da	Very High
	Db	High
	Dc	Normal
Note: Da is the highest possible so covers all others above (and so on for each)		

