



9- ATEX FANS

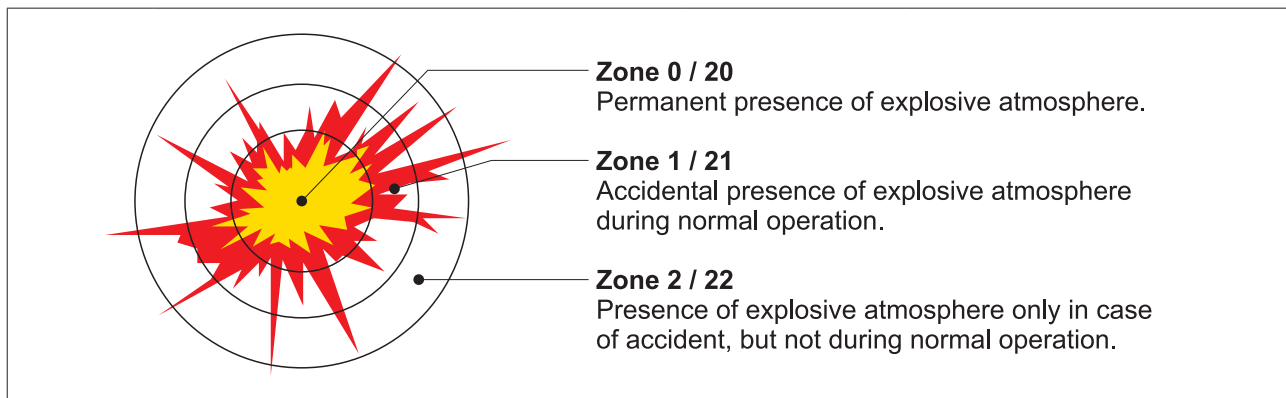
9.1- General warnings (TAB. 28)

⚠ DANGER

CAUTION: THE CHOICE TO INSTALL A FAN COMPLYING OR NOT COMPLYING WITH THE ATEX DIRECTIVE 94/9/EC IS UP TO THE CUSTOMER WHO SHALL BE LIABLE FOR THIS CHOICE.

BEFORE INSTALLING THE FAN, IT IS COMPULSORY TO:

- 1) ASSESS THE RISKS OF THE ENVIRONMENT WHERE IT WILL BE INSTALLED;
- 2) IDENTIFY THE TYPE OF HAZARDOUS ATMOSPHERE PRESENT IN THE ENVIRONMENT (GAS OR POWDER);
- 3) DEFINE THE ZONES (S.TAB. 28):
 - IF THE ATMOSPHERE IS GASEOUS, THE ZONES ARE CLASSIFIED FROM 0 TO 2 (FROM HIGH TO LOW RISK OF EXPLOSION);
 - IF THE ATMOSPHERE IS DUSTY, THE ZONES ARE CLASSIFIED FROM 20 TO 22 (FROM HIGH TO LOW RISK OF EXPLOSION);
- 4) DEFINE THE PRODUCT CATEGORY (1 - 2 - 3) (SEE DIRECTIVE 99/92/EC);
- 5) CHECK THAT THE DATA BORNE ON THE FAN RATING PLATE DO MATCH.



ZONE	ATMOSPHERE	ASSEMBLY	CATEGORY	PROTECTION METHOD	TEMPERATURE CLASS or Tmax
1	Gas	II	2G	c	T1 ÷ T6
2	Gas	II	3G	c	T1 ÷ T6
21	Powders	II	2D	c	T125 or >
22	Powders	II	3D	c	T125 or >

TAB. 28 (ATEX Zones)

9.2- Constructive features

The fan complying with the ATEX Directive 94/9/EC feature construction solutions suitable to avoid the production of sparks caused by friction between the rotating part and the fixed one.

The features that we indicate here below will be subject to verification before assembling the fan:

- 1) Copper bands between nozzle and impeller;
- 2) Copper rings;
 - Between the case and the electric motor shaft;
 - (Only in indirect drive fans) between pulleys and protection case;
- 3) (Only in indirect drive fans) Complying belts,
- 4) (Only in fans kW>11) Welded case;
- 5) Grounding (detached parts);
- 6) (Only in axial fans) Copper bands on drum and smaller aluminum impeller.











N.B. Make sure that the CE marking plate matches the one shown in par. 1.3.













9.3- Fan / electric motor combination (TAB. 29 and TAB. 30)

According to the classification of the environment in which the fan is installed, the Directive 99/92/EC indicates the suitable fan and electric motor (s. TAB. 29 and TAB. 30):

GAS ZONE	FAN	ELECTRIC MOTOR
0		Non applicable
1	  II 2Gc	  II 2G (Ex d/de)   II 2G (Ex e)
2	  II 3Gc	  II 3G (Ex nA)

TAB. 29 (Electric motor by GAS zones)

DUST ZONE	FAN	ELECTRIC MOTOR
20		Non applicable
21	  II 2Dc	  II 2D (DIP - IP65)
22	  II 3Dc	  II 3D* (DIP - IP55/IP65)

(*) In presence of conductive dusts, it is necessary product featuring IP65 (cat. 2D)

TAB. 30 (Electric motor by DUST zones)

9.4- Precautions for ATEX fans

DANGER



CAUTION: SINCE DUSTS ARE A POTENTIAL CAUSE OF EXPLOSION OR FLAMMABILITY AFTER PRIMING, IT IS NECESSARY TO KEEP THE FAN WELL CLEANED. AVOID THE DEPOSIT OF MORE THAN 5 mm OF DUST, PROGRAMMING THE ROUTINE MAINTENANCE OF THE FAN ACCORDING TO THE USE, PLACE OF INSTALLATION AND MATERIAL CONVEYED BY THE FAN. FOR FANS INTENDED TO CONVEY FLUIDS PERIODICALLY CHECK THE DISTANCES BETWEEN MOVING AND FIXED PARTS, KEEPING THEM FREE FROM ANY DEPOSITS THAT MAY CAUSE SPARKS.

9.5- Annexes

Refer to the Annex delivered separately "FANS FOR POTENTIALLY EXPLOSIVE ENVIRONMENTS" for the installation, use, and maintenance of ATEX fans (SAXMI010).