Roof fans

Series VRR

Special designs





Version ET for increased temperature of medium conveyed (VRR / 702 und VRR / 701)

Fans of plastic material urgently require the permissible temperature range to be observed. Heavy plastic deformation may otherwise lead to capacity decrease and even to averages.

The version ET is made of synthetic materials with increased strength and better temperature resistivity. Certain components have larger dimensions. This means that the following conditions of use are permissible:

	nominal	permissible ten	e temperature of medium conveyed		
fan type	speed	standard	version ET		
	rpm		short-time	permanent	
VRR 160/701	up to 1450	50 °C	80 °C	70 °C	
VRR 200/702	2900	50 °C	70 °C	60 °C	
VRR 315/702	up to 950	50 °C	80 °C	70 °C	
	1450	50 °C	70 °C	60 °C	
VRR 400/701	up to 1450	50 °C	upon inquiry		
VRR 500/702	up to 1450	40 °C			

Ambient temperature must no exceed 40 °C to warrant motor cooling. The manufacturers should be consulted if higher temperatures of use are desired.

Explosion proof EX (VRR / 702 and VRR / 701)



Guideline 2014/34/EU (**ATEX**) newly regulates explosion protection for non-electrical devices from March 29, 2014. In addition to observation of design and safety instructions according to DIN EN 14986 and DIN EN 13463, the fan has to be assigned exactly to the relevant degree of protection and labelled accordingly. The manufacturers have to prove conformity.

Protection demands on a fan depend on the probability of occurrence of explosible atmosphere in the medium conveyed or/and in the surrounding. Hazard is classified in three zones:

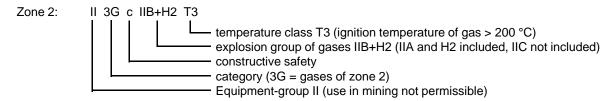
Explosions	Hazard	Avoidance of	Category
hazard	zone	ignition sources	acc. to ATEX
continuous	zone 0	even in the event of	1
long periods		rare incidents	
likely	zone 1	even in the event of	2
to occur		frequent disturbances/faults	
infrequently	zone 2	during normal operation	3
short period			

The plant operator or the relevant board of control has to decide which protection is necessary and which additional regulations have to be considered. This means that the customer has to specify in the order which kind of protection the fan has to have.

The design has to ensure that the ignition probability of the fan, along with the corresponding explosion risk of the atmosphere, warrants a sufficient safety level.

Fans of type VRR / 702 and of version EX are equipped with motors increased safety EEx e II. They can be used in zone 2 for gases of temperature class T 3 (ignition temperature > 200 °C). Gases of explosion group IIA, IIB and hydrogen are allowed.

The type of protection is for the roof fan:



On principle, application in zone 0 and zone 1 is not possible. Gases of explosion group IIC (hydrogen excluded), gases with ignition temperature below 200 °C, and combustible dusts are likewise impermissible.

Hazard zone		MIETZSCH	Motor		Impeller/casing
internal	external	Designation	without converter	with converter	material
Zone 2	Zone 2	<u> 7272</u>	EEx e II	EEx de	conductive 1)
Zone 2	Zone 2	Z2Z2	EEx e II	EEx de	not conductive 2)

- 1) in case of danger of flammable discharge during normal operation
- 2) during normal operation