



Notified Body No. 0370

CERTIFICATE

No.

0370-CPR-5482

CERTIFICATE OF CONSTANCY OF PERFORMANCE

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product:

SMOKE AND HEAT CONTROL SYSTEMS. VENTILATORS (FANS)

PRODUCT RANGE: **FR N4F**

Place on the market under the name of:

FERRARI VENTILATORI INDUSTRIALI, S.P.A.

VIA MARCHETTI, 28
36071 ARZIGNANO – VICENZA (ITALIA)

And produced in the manufacturing plant:

VIA MARCHETTI, 28
36071 ARZIGNANO – VICENZA (ITALIA)

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard

EN 12101-3:2015

under system 1 are applied and that **the product fulfils all the prescribed requirements set out above.**

This certificate was first issued on 25th June 2021 and will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly. It is confirmed on 30th July 2021.

The monitoring assessment will be done before 31st July 2022

Bellaterra, 30th July 2021

p.a.

Applus⁺
LGAI Technological Center, S.A.

Xavier Ruiz Peña
Managing Director, Product Conformity B.U.



This document is not valid without its technical annex; whose number coincides with that of the certificate.

You can check the validity of this certificate on our website: www.appluslaboratories.com/certified_products

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Annex according to **EN 12101-3:2015**

SMOKE AND HEAT CONTROL SYSTEMS. PART 3: SPECIFICATION FOR POWERED SMOKE AND HEAT CONTROL VENTILATORS (FANS)

CERTIFIED PERFORMANCE

Essential characteristics	Clauses in this European Standard	Mandated level(s) or class(es)
Response delay - Opening under wind load within a given time; - Opening under snow load within a given time.	4.1.1	NA
		NA
Operational reliability - Application categories; - Motor rating.	4.2.2	<ul style="list-style-type: none"> • Thermally uninsulated • Dual use • Converter Feed • Horizontal direction of motor shaft. • Installation outside of the smoke reservoir
	4.2.3	NA
Effectiveness of smoke/hot gas extraction: - Gas flow and pressure maintenance during smoke and heat extraction test.	4.3.2	+/-20% (P _s)
Resistance to fire	4.4	F ₄₀₀ (120)
Ability to open under environmental conditions - Opening under wind load within a given time; - Opening under snow load within a given time.	4.5	NA
		NA
Durability of operational reliability	4.6	NA

PASS; NPD = No Performance Determined; NA = Not Applicable

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PRODUCT

1.- Application:

- Fan tested outside the furnace.
- F400 fan tested during 120 minutes.
- Dual purpose ventilator.
- Inlet air flow in horizontal direction and outlet air flow in horizontal and vertical direction.
- Horizontal direction of motor shaft.
- Converter feed.

3.- Accessories:

- Inlet counter flange (CA (CFH1)-CFH2-CFH3).
- Outlet damper (SA).
- Inlet flexible connection (GA/7).
- Inlet and outlet flexible flange connection (ACOPEL F400 N).
- Outlet flexible connection (GP/7).
- Anti-vibration mounts (AM/AZ).
- Inspection door.
- Protection inlet net (RC).
- Outlet protection net (RP).
- Acoustic cabinet (CI).
- Drain.
- Frequency converter reference ATV312H075N4 from Schneider**.

4.- External accessories (not installed either in the fan or inside the smoke reservoir):

- Control box.
- Relay box (Pilotair).
- Differential pressure switch (DPS-BDEZ)
- ON/OFF electrical isolation switch (INTZ-DIJZ).
- Switch for two speed motors with independent windings (DEMZ).

2.- Characteristics:

- Motor*:
 - Rated Voltage: 230/400V ($\pm 10\%$), 400/690V (10%).
 - Motor size: from 71 to 315.
 - Frequency 50 Hz.
 - Power: up to 110 kW.
 - 2, 4, 6, 2/4, 4/6, 4/8, 6/8, 6/12 poles.
 - Efficiency: IE3.
- Fan diameter range: from $\varnothing 250$ mm to $\varnothing 1400$ mm.

* As indicated in clause A.2.1 of EN 12101-3:2015, when the motor is out of the air stream and the impeller is mounted on the motor shaft, motors from a different supplier to the one used in the ventilator test may be used, provided that the tested and alternative motors are of the same construction, i.e. same class of insulation and bearing type and class of fit and same synchronous speed and rating.

** As indicated in clause A.1 n) of EN 12101-3:2015, and taking into account that only one motor was tested with Frequency converter, the fan unit may be assumed to be able to withstand the same maximum peak to peak voltage values and voltage rise at the motor terminals in an installation as during the test independent of the PWM frequency converter. The values recorded in the test are:

- Maximum peak to peak voltage: 1.22 kV
- Maximum voltage rise du/dt : 4.47 GV/s

The complete technical data of the certified product are detailed in the technical file and the range report N° 21/24422-1482.