

THE CERTIFICATE OF COMPLIANCE VALIDATES AS FOLLOW:

In compliance with the Efectis Certification Rules: **DAP 21 REV. F - CERTIFICATION RULES FOR APPLICATION OUTSIDE THE EUROPEAN ECONOMIC AREA**, it was established that the fire protective construction product(s):

Name of the manufacturer:	CVS HAVALANDIRMA SİSTEMLERİ SAN VE TİC A.Ş	Name of the brand:	CVS AIR
Factory address/region:	Fatih Mah 103 sk No :48 Bayirköy Bilecik - Turkey	Model/N°:	Axial Smoke Exhaust Fan F400

is submitted by the manufacturer to a factory production control, and that EFECTIS France has performed the initial type-testing for the relevant characteristics of this product, the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of factory production control.

This certificate attests that all provisions concerning the evaluation of the performance are applied, and that the product(s) fulfill(s) all the prescribed requirements set out above.

	TEST REPORT	INSPECTION REPORT	CERTIFICATE OF COMPLIANCE
Number:	EEA-17-067 RFTR17032 RFTR17091 RFTR17092	EEA-19-000734	EFR-2001-0223_20-0
Date of issue:	June 14 th , 2017 February 14 th , 2017 April 4 th , 2017 April 24 th , 2017	October 10 th , 2019	17 th April 2020
Date of 1st issue:	-		
Expiry date:	Valid as long as the product, the test standard and the production process are not modified	Valid up to the issuance of the surveillance inspection report (no later than the expiry date of the Certificate)	17 th October 2021

1. DESCRIPTION OF THE PRODUCT

Smoke and heat exhaust axial ventilator with a size range from 315 mm to 1250 mm in diameter.

Ventilator frames: Galvanized steel ST37

Impellers: Aluminium alloy (ETIAL 145)

Motors: AEHBYH-401

- Ball bearings ZZ
- Class of fit: C3
- Bearing clearance: H6
- Arrangement: Not locked
- Lubricant: Barrieta L55/2
- Insulation class: H
- Protection index: IP55
- Thermal class: F



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- Three- phase : 380 V - 415 V , 50 Hz ,
400-480 V , 60Hz providing the rated power at 60Hz correspond to maximum 1,15 times the power for 50 Hz as the fans were tested at maximum speed

Technical specification of the ventilators in the range:

Fan diameter	315	355	400	450	500	560	630	710	800	900	1000	1120	1250
Maximum speed (rpm)	3000	3000	3000	3000	3000	3000	3000	1500	1500	1500	1500	1500	1500
Hub diameter (mm)	160	160	160	280	280	280	280	380	380	380	380	430	430
Nominal tip gap (mm)	5	5	4	5	6	6	4	8	8	8	8	12	12
Nominal blade length (mm)	72,5	92,5	105	80	102,5	132,5	155	157,5	200	250	295	335	400
Maximum number of blades	5	5	4	5	6	6	4	8	8	8	8	12	12
Largest motor frame	100	100	100	112	112	132	132	160	160	160	200	200	200
Smallest motor frame	90	90	90	90	90	100	100	100	100	112	132	132	132
Motor Power (smallest)	0,8	0,8	0,8	1,1	1,5	2,2	4	1,1	1,5	3	4	5,5	7,5
Motor Power (largest)	0,8	1,1	0,8	3	5,5	7,5	5,5	5,5	7,5	15	30	30	30

2. TEST STANDARD

EN 12101-3: 2015: Smoke and heat control systems. Specification for powered smoke and heat control ventilators (Fans)

3. TEST DESCRIPTION
a) Warm up period

In the first phase of test the fan works at ambient temperature for at least 60 minutes in order to obtain on the motor frame a temperature rise in 10 minutes lower than 2°C. During this period, the working point of the fan is adjusted so that the fan absorbs at least at 80 % of the rated power of the motor.

The measures are stabilized, in particular volume flow and pressures, before beginning the heat up period.

b) Heat up period

The burners of furnace are monitored to reach the hot temperature, (400°C), in a time specified in the standard : between 5 minutes and 10 minutes.

c) High temperature period

The duration of the high temperature period is 120 min.

After 15 minutes of functioning at high temperature the fan is stopped for 2 minutes and restarted.

Criteria of performance: the volume flow determined during the test at high temperature shall not change by more than 10 % of the volume flow determined at the end of the warm up period.

4. SPECIFICATION OF TEST SPECIMEN

The following ventilators have been tested to validate the range:

- CVS- Ø400-0,8/2P-F400
- CVS- Ø630-5,5kW-F400
- CVS--Ø1000-30kW-F400

5. TEST RESULT

Test class	F400
Test temperature	400C°
Test time (min)	120

6. NAME AND ADDRESS/REGION OF TEST FACILITIES

EFFECTIS ERA AVRASYA TEST VE BELGELENDİRME A.Ş.
Dilovası Organize Sanayi Bölgesi
5.Kısım Fırat Cad. No:18 Dilovası
Kocaeli - Turkey

7. PRODUCT APPLICATION GUIDE LINE (END USE)

Application classes	Uninsulated Outside the smoke reservoir Motor upstream direction No performance for wind load and snow load No duct air cooling requested
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Signed by delegation of the Technical Certification Director,

The above certificate is valid only when the product is installed in accordance with the 'product application guideline' (End use). To verify the validity of the product, logon to our website www.efectis.com and type in the COMPLIANCE CERTIFICATE NUMBER.

Yannick LE TALLEC
Certification Director

