Declaration of Performance

DoP/BVRA-1400-F300/004

TROX® TECHNIK
The art of handling air

1	**Product** Unique identification code of the product type	**BVRA-1400-F300** Machine-based smoke exhaust and heat extraction unit (smoke exhaust fan)
2	**Intended use**	Part of a machine-based smoke and heat extraction unit in buildings
3	**Manufacturer**	TROX X-FANS GmbH Heinz Trox Straße 1 D-36251 Bad Hersfeld Germany Phone +49 (0)6621 9500 Fax +49 (0)6621 950100 E-Mail info-xfans@trox.de Internet www.trox-xfans.de
5	**System of assessment and verification of constancy of performance**	System 1
6	**Harmonised standard**	EN 12101-3:2015
	Notified body/ies	The notified product certification body no. 0761 - MPA Braunschweig - carried out a type test (including sampling) to determine the product type, an initial inspection of the manufacturing plant and of the factory production control as well as the continuous surveillance, assessment and evaluation of factory production control, and issued the certificate of constancy of the product: 0761-CPR-0225

7 a) Declared performance as per EN 12101-3:2015

Key features - BVRA-1400-F300	Performance
Response delay/response time	
• Opening under wind load within a specified time	NPD
• Opening under snow load within a specified time	NPD
Operational reliability	
• Application categories	See Table 7 b)
• Motor rating	F, 80 K
Effectiveness in removing smoke / hot gas	
• Maintenance of the gas volume while checking the removal of smoke and hot gas.	+/- 10%
• Maintenance of the static pressure while checking the removal of smoke and hot gas.	+/- 20%
Fire resistance	
• Classification to EN 13501-4	F300 (60), F200 (120)
Ability to open under ambient conditions	
• Opening under wind load within a specified time	NPD
• Opening under snow load within a specified time	NPD
Operational reliability resistance	F, 80 K

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with regulation (EU) no. 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of TROX X-FANS GmbH:

i.V. Frank Wahl

Bad Hersfeld, 5/17/2021

Frank Wahl • Head of Research and Development

7 b) Appendix: Additional information about the installation process and the application as per Table F.8, EN 12101-3:2015

BVRA-1400-F300	
Fire resistance	
• Free classification for purely informative purposes	Ff300 (120)
Motor manufacturer	VEM
Location of the extraction device and thermal insulation, if available	
Outside of the building without thermal insulation	
Outside of the building with thermal insulation	
Inside the building, outside of the smoke compartment, without thermal insulation	
Inside the building, outside of the smoke compartment, with thermal insulation	x
In the smoke compartment	
Installation	
Fan upright, motor shaft horizontal	x
Fan parallel to the wall, motor shaft horizontal	
Fan perpendicular to the wall, motor shaft horizontal	
Fan hanging, motor shaft horizontal	
Fan upright, motor shaft vertical	
Fan parallel to the wall, motor shaft vertical	
Fan perpendicular to the wall, motor shaft vertical	
Fan hanging, motor shaft vertical	
Motor shaft vertical, impeller under motor	
Motor shaft vertical, impeller above motor	
Motor upstream	
Motor downstream	
Flexible connecting pieces, tested on the extraction unit	
Flexible inlet duct on the intake side	x
Flexible inlet duct on the outlet side	x
Flexible inlet duct on the intake and outlet side	x
Flexible inlet duct for the cooling air connection	
Cooling air	
The minimum cooling air volume flow rate $C_{Air,\theta}$ depends on the fan's nominal size and nominal power (see operating manual) Maximum cooling air temperature θ = 40 °C	
Application	
Direct online	x
With frequency inverter type	ABB ACH 550 / 580
• Peak / peak value U in [V]]	500
• Voltage increase speed dU/dt in [V/µs]	550
With dual function	x
As emergency extraction unit only	x
Thermally insulated	x
Not thermally insulated	
Original TROX X-FANS accessories	
Adapter plate for flange connection, horizontal	
Adapter plate for flange connection, vertical	
Roof base, with/without bypass gate, manually/motor drive	
Wall box, insulated with motor drive shutter	
Wall box, insulated with automatic shutter	
Roof base, soundproofed	
Inlet	x
Spring travel limiter	x
Flexible connecting piece, F300/F400	x
Flexible connecting piece, F600	x
Mounting bracket	
Mounting feet	
Brackets	
Anti-vibration element	x
Deflector	
Diffuser	
Inspection hatch	x

BVRA-1400-F300	
Circular silencer TSR, with/without core	x
Splitter silencer TMKA	x
Cover grille	x
Baffle plate	
Shut-off damper, circular, automatic	x
Shut-off damper, circular, automatic, insulated	x
Shut-off damper, rectangular, automatic	
Shut-off damper, rectangular, automatic, insulated	
Volume flow rate measuring system (VME)	
Flow redresser	x
Thermally insulated casing DAX with motor-powered shut-off dampers	
Frequency inverter	x
Sinusoidal filter	
Terminal box, with circuit integrity maintenance (ceramic junction plate)	
Terminal box, without circuit integrity maintenance (insulated mounting)	x
Terminal box, calcium silicate (cooling air passed)	
Inspection switch, without circuit integrity maintenance (insulated mounting)	x
Inspection switch, with circuit integrity maintenance, F300	x
Inspection switch, with circuit integrity maintenance, F400	x
TROX-FANS fan diagnosis system VD	
TROX-FANS bypass case, F300	x
Tunnel damper	x
Ventilation grille TR-AG	x
Weather louvre WG	x
Weather louvre WGK	x
Weather hood	
First attachment of CE marking	12
Notified body	0761 - MPA Braunschweig