

Declaration of Performance

DoP/BVD-F400/006

1 Product Unique identification code of the product type	BVD-F400 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-0007

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

Key features - BVD-F400	Performance
Response delay/response time	
• Opening under wind load within a specified time	NPD
• Opening under snow load within a specified time	SL0, SL1000 (Deflektor)
Operational reliability	
• Application categories	See Table 7 b)
• Motor rating	H, 100 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	F400 (120), 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	SL0, SL1000 (Deflektor)
Operational reliability resistance	H, 100 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:



Bad Hersfeld, 5/17/2021

Frank Wahl • Head of Research and Development

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

BVD-F400	
Fire resistance	
• Free classification for purely informative purposes	Ff300 (120)
Motor manufacturer	EMOD / AC-Motoren
Location of the extraction device and thermal insulation, if available	
Outside of the building without thermal insulation	x
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	
In the smoke compartment	
Installation	
Fan upright, motor shaft horizontal	
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	x
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	x
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	
Flexible inlet duct on the intake and outlet side	
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 $\theta = 40\text{ °C}$	x
Application	
Direct online	x
With frequency inverter type	
• Peak / peak value U in [V]	
• Voltage increase speed dU/dt in [V/ μ s]	
With dual function	x
As emergency extraction unit only	x
Thermally insulated	
Not thermally insulated	x
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	x
Wall box, insulated with motor drive shutter	
Wall box, insulated with automatic shutter	
Roof base, soundproofed	x
Inlet	x
Spring travel limiter	
Flexible connecting piece, F300/F400	x
Flexible connecting piece, F600	x
Mounting bracket	
Mounting feet	
Brackets	
Anti-vibration element	
Deflector	x
Diffuser	
Inspection hatch	

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BVD-F400	
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)	x
Flow redresser	x
Thermally insulated casing DAX with motor-powered shut-off dampers	
Frequency inverter	
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	
Inspection switch, with circuit integrity maintenance, F400	x
TROX-FANS fan diagnosis system VD	x
TROX-FANS bypass case, F300	
Tunnel damper	x
Ventilation grille TR-AG	x
Weather louvre WG	
Weather louvre WGK	
Weather hood	
First attachment of CE marking	12
Notified body	0761 - MPA Braunschweig