

Declaration of performance

DoP/BVD-F400/002



1	Product	BVD-F400				
	Unique identification code of the product type	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	<table border="0"> <tr> <td data-bbox="842 573 1027 595">TROX X-Fans GmbH</td> <td data-bbox="1137 573 1378 595">Phone +49 (0)6621 9500</td> </tr> <tr> <td data-bbox="842 636 1018 719">Heinz Trox Straße 1 36251 Bad Hersfeld Germany</td> <td data-bbox="1137 607 1401 689">Fax +49 (0)6621 950100 E-mail info-xfans@trox.de Internet www.trox-xfans.de</td> </tr> </table>	TROX X-Fans GmbH	Phone +49 (0)6621 9500	Heinz Trox Straße 1 36251 Bad Hersfeld Germany	Fax +49 (0)6621 950100 E-mail info-xfans@trox.de Internet www.trox-xfans.de
TROX X-Fans GmbH	Phone +49 (0)6621 9500					
Heinz Trox Straße 1 36251 Bad Hersfeld Germany	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 Notified body/ies	<p>EN 12101-3:2015</p> <p>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:</p> <p>0761-CPR-0007</p>				

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	NPD, SL 1000 (with deflector)
Operational reliability	
• Application categories	See Table 7b)
• 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	F ₄₀₀ (120)
• Classification to EN 13501-4	F ₃₀₀ (60) F ₂₀₀ (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, SL 1000 (with deflector)
Operational reliability resistance	H, 100 K

Declaration of performance

DoP/BVD-F400/002



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

BVD-F400	
Fire resistance	Ff ₃₀₀ (120)
<ul style="list-style-type: none"> Free classification for purely informative purposes 	
Motor manufacturer	EMOD ATB
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	
Horizontal motor shaft, standing on the floor	
Horizontal motor shaft, assembled parallel to the wall	
Horizontal motor shaft, assembled vertically on the wall	
Horizontal motor shaft, hanging from the ceiling	
Vertical motor shaft, standing on the floor	X
Vertical motor shaft, assembled parallel to the wall	
Vertical motor shaft, assembled vertically on the wall	
Vertical motor shaft, hanging from the ceiling	
Vertical motor shaft, impeller under the motor	X
Vertical motor shaft, impeller above the 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 switch-on only	X
With frequency inverter type	
<ul style="list-style-type: none"> Peak / peak value U in [V] Voltage increase speed dU/dt in [V/μs] 	
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	X
Roof base, soundproofed	X

Declaration of performance

DoP/BVD-F400/002



BVD-F400	
Inlet	X
Spring travel limiter	
Flexible connecting piece	X
Mounting bracket	
Mounting feet, brackets	
Anti-vibration element	
Deflector	X
Diffuser	
Inspection hatch	
Sound attenuators	X
Cover grille	X
Shut-off damper, air-actuated	X
Volume flow rate measuring system (VME)	X
Flow redresser	X
Thermally insulated casing DAX with motor-powered shut-off dampers	
Frequency inverter	
Terminal box	X
Isolator	X
Isolator with functional integrity as per fan classification	X
TROX X-Fans fan diagnosis system VD	X
First attachment of CE marking	12
Notified body	- the Braunschweig Civil Engineering Materials Testing Institute -
Part Number CE-sticker	1907630

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 GmbH:

Bad Hersfeld, 05.03.2018

Frank Wahl • Head of Research and Development
Page 3/3