

# Declaration of performance

DoP/BVREH-1250-R-F300/002



<b>1 Product</b>	<p>Unique identification code of the product type</p>	<p><b>BVREH-1250-R-F300</b></p> <p>Machine-based smoke exhaust and heat extraction unit (smoke exhaust fan)</p>
<b>2 Intended use</b>		<p>Part of a machine-based smoke and heat extraction unit in buildings</p>
<b>3 Manufacturer</b>	<p>TROX X-Fans GmbH</p> <p>Heinz Trox Straße 1 36251 Bad Hersfeld Germany</p>	<p>Phone +49 (0)6621 9500 Fax +49 (0)6621 950100 E-mail info-xfans@trox.de Internet www.trox-xfans.de</p>
<b>5 System of assessment and verification of constancy of performance</b>		<p>System 1</p>
<b>6 Harmonised standard</b>	<p><b>Notified body/ies</b></p>	<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-0438</p>

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

Key features - BVREH-1250-R-F300	Performance
<b>Response delay/response time</b>	
• Opening under wind load within a specified time	NPD
• Opening under snow load within a specified time	NPD
<b>Operational reliability</b>	
• Application categories	See Table 7b)
• Motor rating	H, 100 K
<b>Effectiveness in removing smoke / hot gas</b>	
• 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%
<b>Fire resistance</b>	
• Classification to EN 13501-4	F <sub>300</sub> (60) F <sub>200</sub> (120)
<b>Ability to open under ambient conditions</b>	
• Opening under wind load within a specified time	NPD
• Opening under snow load within a specified time	NPD
<b>Operational reliability resistance</b>	H, 100 K

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

<b>BVREH-1250-R-F300</b>	
<b>Fire resistance</b>	F <sub>f300</sub> (120)
<ul style="list-style-type: none"> <li>Free classification for purely informative purposes</li> </ul>	
<b>Motor manufacturer</b>	VEM
<b>Location of the extraction device and thermal insulation, if available</b>	
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	
<b>Installation</b>	
Horizontal motor shaft, standing on the floor	X
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	
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	
Vertical motor shaft, impeller above the motor	
Motor upstream	
Motor downstream	
<b>Flexible connecting pieces, tested on the extraction unit</b>	
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	
<b>Cooling air</b>	
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 $\theta = 40\text{ °C}$	
<b>Application</b>	
Direct switch-on only	X
With frequency inverter type	Siemens Sinamics G120 PM240
<ul style="list-style-type: none"> <li>Peak / peak value U in [V]</li> </ul>	500
<ul style="list-style-type: none"> <li>Voltage increase speed dU/dt in [V/μs]</li> </ul>	550
With dual function	X
As emergency extraction unit only	X
Thermally insulated	X
Not thermally insulated	
<b>Original TROX X-Fans accessories</b>	
Adapter plate for flange connection, horizontal	
Adapter plate for flange connection, vertical	
Roof base	
Roof base, soundproofed	
Inlet	

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Spring travel limiter	
Flexible connecting piece	X
Mounting bracket	
Mounting feet, brackets	
Anti-vibration element	X
Deflector	
Diffuser	
Inspection hatch	X
Sound attenuators	
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	X
Terminal box	
Isolator	X
Isolator with functional integrity as per fan classification	
TROX X-Fans fan diagnosis system VD	X
First attachment of CE marking	16
Notified body	- the Braunschweig Civil Engineering Materials Testing Institute -
Part Number CE-sticker	1907637

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  
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