## Declaration of Performance DoP/BVREH-F400/003



Product Unique identification code of the product type	BVREH-F400  Machine-based smoke exhaust and heat extraction unit (smoke exhaust fan)		
Intended use	Part of a machine-based smoke and heat extraction unit in buildings		
Manufacturer	TROX X-FANS GmbH  Heinz Trox Straße 1 D-36251 Bad Hersfeld Germany	Phone Fax E-Mail Internet	+49 (0)6621 9500 +49 (0)6621 950100 info-xfans@trox.de www.trox-xfans.de
System of assessment and verification of constancy of performance	System 1		
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-0495		
	Unique identification code of the product type  Intended use  Manufacturer  System of assessment and verification of constancy of performance  Harmonised standard	Unique identification code of the product type  Machine-based smoke exhaust fan)  Intended use  Part of a machine-based smok  Manufacturer  TROX X-FANS GmbH  Heinz Trox Straße 1  D-36251 Bad Hersfeld  Germany  System of assessment and verification of constancy of performance  Harmonised standard  EN 12101-3:2015  The notified product certificat - carried out a type test (inclutype, an initial inspection of the production control as well as and evaluation of factory production control as well as and evaluation of factory production constancy of the product:	Unique identification code of the product type  Machine-based smoke exhaust and heat (smoke exhaust fan)  Intended use  Part of a machine-based smoke and heat (smoke exhaust fan)  TROX X-FANS GmbH Phone Fax Heinz Trox Straße 1 D-36251 Bad Hersfeld Internet Germany  System of assessment and verification of constancy of performance  Harmonised standard  EN 12101-3:2015  The notified product certification body not carried out a type test (including samplitype, an initial inspection of the manufact production control as well as the continuand evaluation of factory production conformance of constancy of the product:

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

Key features - BVREH-F400	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	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	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. Fait Ware

## Declaration of Performance DoP/BVREH-F400/003



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

BVREH-F400	
Fire resistance	
	Ff300 (120)
Free classification for purely informative purposes  Motor manufacturer	Zhejiang-Jinlong-Electric-
wotor manufacturer	Motors
Location of the extraction device and thermal insulation, if available	IVIOLOIS
Outside of the building without thermal insulation	1
	X
Outside of the building with thermal insulation  Inside the building, outside of the smoke compartment, without thermal insulation	X
1 ,	1
Inside the building, outside of the smoke compartment, with thermal insulation  In the smoke compartment	X
Installation	
Fan upright, motor shaft horizontal  Fan parallel to the wall, motor shaft horizontal	X
·	
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	х
Flexible inlet duct on the outlet side	х
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 CAir,e depends on the fan's nominal size and nominal power (see	
operating manual) Maximum cooling air temperature $\theta = 40  ^{\circ}\text{C}$	
Application	
Direct online	х
With frequency inverter type	
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	х
Not thermally insulated	Х
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	Х
Spring travel limiter	Х
Flexible connecting piece, F300/F400	Х
Flexible connecting piece, F600	Х
Mounting bracket	
Mounting feet	
Brackets	
Anti-vibration element	X
Deflector	
Diffuser	
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## Declaration of Performance DoP/BVREH-F400/003



Inspection hatch x Circular silencer TSR, with/without core x Splitter silencer TSR, with/without core x Splitter silencer TMKA x X Cover grille x Baffle plate x Shut-off damper, circular, automatic x Shut-off damper, circular, automatic, insulated x Shut-off damper, rectangular, automatic x Shut-off damper x Terminal box, with circuit integrity maintenance (recamic junction plate) x Terminal box, with out circuit integrity maintenance (insulated mounting) x Terminal box, without circuit integrity maintenance (insulated mounting) x Terminal box, calcium silicate (cooling air passed) Inspection switch, with circuit integrity maintenance (insulated mounting) x Terminal box, without circuit integrity maintenance (insulated mounting) x Terminal box, without circuit integrity maintenance, F300 x Terminal box, without circuit integrity maintenance, F300 x TROX-FANS fan diagnosis system VD x TROX-FANS fan diagnosis system VD x TROX-FANS bypass case, F300 x Tunnel damper x Ventilation grille TR-AG x Ventilation grille	BVREH-F400	
Circular silencer TSR, with/without core  Splitter silencer TMKA  X  Cover grille  Shut-off damper, circular, automatic  Shut-off damper, circular, automatic, insulated  X  Shut-off damper, rectangular, automatic, insulated  X  Shut-off damper, rectangular, automatic, insulated  X  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  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, F300  Inspection switch, with circuit integrity maintenance, F400  X  TROX-FANS fan diagnosis system VD  TROX-FANS fan diagnosis system VD  TUNNER SHANG  TUNNER SHANG  X  Weather louvre WG  Weather louvre WG  Weather louvre WG  Weather hood  First attachment of CE marking	Inspection hatch	x
Splitter silencer TMKA x  Cover grille x  Baffle plate	•	
Cover grille x Baffle plate	, , , , , , , , , , , , , , , , , , ,	
Baffle plate Shut-off damper, circular, automatic Shut-off damper, circular, automatic, insulated X Shut-off damper, rectangular, automatic 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 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, with circuit integrity maintenance, F300 Inspection switch, with circuit integrity maintenance, F400 TROX-FANS fan diagnosis system VD X TROX-FANS fan diagnosis system VD Tunnel damper X Ventilation grille TR-AG X Weather louvre WG X Weather louvre WGK X First attachment of CE marking	1	
Shut-off damper, circular, automatic x Shut-off damper, rectangular, automatic, insulated x Shut-off damper, rectangular, automatic insulated Shut-off damper, rectangular, automatic, insulated 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) x Terminal box, with circuit integrity maintenance (insulated mounting) x Terminal box, calcium silicate (cooling air passed) x Inspection switch, with 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 x TROX-FANS fan diagnosis system VD x TROX-FANS bypass case, F300 Tunnel damper x Ventilation grille TR-AG x Weather louvre WG x Weather louvre WGK x Weather louvre WGK x Weather hood First attachment of CE marking 17		^
Shut-off damper, circular, automatic, insulated  Shut-off damper, rectangular, automatic  Shut-off damper, rectangular, automatic, insulated  Volume flow rate measuring system (VME)  Flow redresser  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, with circuit integrity maintenance (insulated mounting)  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  x  Weather louvre WGK  x  Weather hood  First attachment of CE marking	·	Y
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 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) 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 x Weather louvre WGK x Weather hood First attachment of CE marking	• , , ,	
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  Sinusoidal filter  Terminal box, with circuit integrity maintenance (ceramic junction plate)  Terminal box, without circuit integrity maintenance (insulated mounting)  Inspection switch, without circuit integrity maintenance (insulated mounting)  Inspection switch, with circuit integrity maintenance, F300  Inspection switch, with circuit integrity maintenance, F400  X  TROX-FANS fan diagnosis system VD  Tunnel damper  X  Ventilation grille TR-AG  Weather louvre WG  Weather louvre WG  Weather louvre WGK  Weather hood  First attachment of CE marking		^
Volume flow rate measuring system (VME)  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)  Inspection switch, without circuit integrity maintenance (insulated mounting)  Inspection switch, with circuit integrity maintenance (insulated mounting)  Inspection switch, with circuit integrity maintenance (insulated mounting)  Inspection switch, with circuit integrity maintenance, F300  Inspection switch, with circuit integrity maintenance, F400  X  TROX-FANS fan diagnosis system VD  TROX-FANS bypass case, F300  Tunnel damper  X  Ventilation grille TR-AG  Weather louvre WG  Weather louvre WG  Weather louvre WGK  X  Weather hood  First attachment of CE marking	1 / 3 /	
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) 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 x Weather louvre WG x Weather hood First attachment of CE marking	1 / 3 /	
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)  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  x  Weather louvre WGK  x  Weather hood  First attachment of CE marking		
Frequency inverter  Sinusoidal filter  Terminal box, with circuit integrity maintenance (ceramic junction plate)  Terminal box, without circuit integrity maintenance (insulated mounting)  Inspection switch, without circuit integrity maintenance (insulated mounting)  Inspection switch, with circuit integrity maintenance (insulated mounting)  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  X  Weather louvre WGK  X  Weather hood  First attachment of CE marking		X
Sinusoidal filter  Terminal box, with circuit integrity maintenance (ceramic junction plate)  Terminal box, without circuit integrity maintenance (insulated mounting)  Terminal box, calcium silicate (cooling air passed)  Inspection switch, without circuit integrity maintenance (insulated mounting)  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  X  Weather louvre WGK  X  Weather hood  First attachment of CE marking	, ,	
Terminal box, with circuit integrity maintenance (ceramic junction plate)  Terminal box, without circuit integrity maintenance (insulated mounting)  Terminal box, calcium silicate (cooling air passed)  Inspection switch, without circuit integrity maintenance (insulated mounting)  Inspection switch, with circuit integrity maintenance, F300  Inspection switch, with circuit integrity maintenance, F400  TROX-FANS fan diagnosis system VD  TROX-FANS bypass case, F300  Tunnel damper  X  Ventilation grille TR-AG  Weather louvre WG  Weather louvre WGK  Weather louvre WGK  Weather hood  First attachment of CE marking		
Terminal box, without circuit integrity maintenance (insulated mounting)  Terminal box, calcium silicate (cooling air passed)  Inspection switch, without circuit integrity maintenance (insulated mounting)  Inspection switch, with circuit integrity maintenance, F300  Inspection switch, with circuit integrity maintenance, F400  TROX-FANS fan diagnosis system VD  TROX-FANS bypass case, F300  Tunnel damper  Ventilation grille TR-AG  Weather louvre WG  Weather louvre WGK  Weather hood  First attachment of CE marking		
Terminal box, calcium silicate (cooling air passed) Inspection switch, without circuit integrity maintenance (insulated mounting) Inspection switch, with circuit integrity maintenance, F300 Inspection switch, with circuit integrity maintenance, F400 TROX-FANS fan diagnosis system VD x TROX-FANS bypass case, F300 Tunnel damper x Ventilation grille TR-AG x Weather louvre WG x Weather louvre WGK x Weather hood First attachment of CE marking		
Inspection switch, without circuit integrity maintenance (insulated mounting) Inspection switch, with circuit integrity maintenance, F300 Inspection switch, with circuit integrity maintenance, F400 TROX-FANS fan diagnosis system VD x TROX-FANS bypass case, F300 Tunnel damper x Ventilation grille TR-AG x Weather louvre WG x Weather louvre WGK x First attachment of CE marking 17		x
Inspection switch, with circuit integrity maintenance, F300 Inspection switch, with circuit integrity maintenance, F400 TROX-FANS fan diagnosis system VD TROX-FANS bypass case, F300 Tunnel damper  Ventilation grille TR-AG  Weather louvre WG  Weather louvre WGK  Weather hood  First attachment of CE marking  Inspection switch, with circuit integrity maintenance, F300  X  X  X  Inspection switch, with circuit integrity maintenance, F300  X  X  Inspection switch, with circuit integrity maintenance, F300  X  Inspection switch, with circuit integrity maintenance, F400  Inspection switch integrity maintenance, F400  Inspection s		
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 x  Weather louvre WGK x  Weather hood 17  First attachment of CE marking 17		
TROX-FANS fan diagnosis system VD  TROX-FANS bypass case, F300  Tunnel damper  ventilation grille TR-AG  Weather louvre WG  Weather louvre WGK  Weather hood  First attachment of CE marking	Inspection switch, with circuit integrity maintenance, F300	
TROX-FANS bypass case, F300  Tunnel damper  Ventilation grille TR-AG  Weather louvre WG  X  Weather louvre WGK  X  Weather hood  First attachment of CE marking	Inspection switch, with circuit integrity maintenance, F400	х
Tunnel damper x  Ventilation grille TR-AG x  Weather louvre WG x  Weather louvre WGK x  Weather hood   First attachment of CE marking 17	TROX-FANS fan diagnosis system VD	х
Ventilation grille TR-AG  Weather louvre WG  Weather louvre WGK  X  Weather hood  First attachment of CE marking	TROX-FANS bypass case, F300	
Weather louvre WG x Weather louvre WGK x Weather hood First attachment of CE marking 17	Tunnel damper	х
Weather louvre WGK x Weather hood First attachment of CE marking 17	Ventilation grille TR-AG	х
Weather hood  First attachment of CE marking 17	Weather louvre WG	х
First attachment of CE marking 17	Weather louvre WGK	Х
-	Weather hood	
-		
-	First attachment of CE marking	17
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