

Declaration of performance

DoP/EK-JZ/001

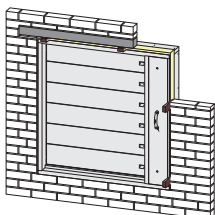
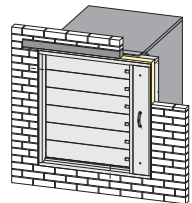


TROX[®] TECHNIK
The art of handling air

1 Product	EK-JZ
Unique identification code of the product type	
2 Intended use	Smoke control damper for multi compartments
3 Manufacturer	<p>TROX GmbH Heinrich-Trox-Platz 47504 Neukirchen-Vluyn, Germany</p> <p>Phone +49 (0)2845 2020 Fax +49 (0)2845 202265 E-mail trox@trox.de Internet www.troxtechnik.com</p>
5 System of assessment and verification of constancy of performance	System 1
6 Harmonised standard	EN 12101-8:2011
Notified body/ies	<p>The notified body 1322 - IBS carried out the initial inspection of the plant and of the factory production control as well as the continuous surveillance, assessment and evaluation of factory production control according to System 1 of the Construction Products Regulation and issued the certificate of constancy of performance:</p> <p>1322-CPR-74135/10</p>

7 Declared performances

Table 1

Essential characteristics: fire resistance for nominal sizes [mm]: 200 × 430 to 1200 × 2030				
Supporting construction	Construction	Installation location	Installation type	Performance level
 Solid wall	<ul style="list-style-type: none"> Concrete, aerated concrete, bricks d ≥ 100 mm ρ ≥ 500 kg/m³ Distance to load-bearing structural elements ≥ 40 mm Distance between dampers ≥ 200 mm 	in solid walls (if the wall is not part of a smoke gas extraction duct)	T, one-sided N possible	EI 90 (V _{ew} , i↔o) S 1000 C _{10,000} MA multi
 Solid wall	<ul style="list-style-type: none"> Concrete, aerated concrete, bricks d ≥ 100 mm ρ ≥ 500 kg/m³ Distance to load-bearing structural elements ≥ 40 mm Distance between dampers ≥ 200 mm 	in solid walls (if the wall is not part of a smoke gas extraction duct)	T, one-sided N possible duct connection (LE)	EI 90 (V _{ew} , i↔o) S 1000 C _{10,000} MA multi

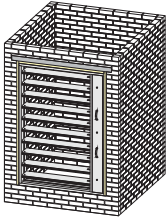
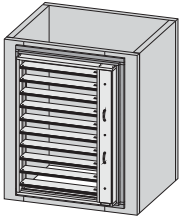

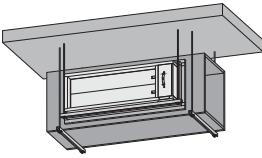
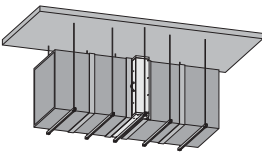
Legend: T = Dry mortarless installation • N = Mortar-based installation • LE = As specified for the duct

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Essential characteristics: fire resistance for nominal sizes [mm]: 200 × 430 to 1200 × 2030

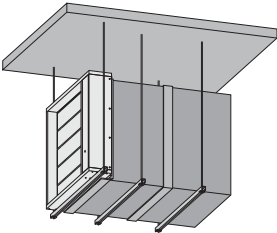
Supporting construction	Construction	Installation location	Installation type	Performance level
 <p>Solid wall as shaft wall</p>	<ul style="list-style-type: none"> • Concrete, aerated concrete, bricks • $d \geq 100 \text{ mm}$ • $\rho \geq 500 \text{ kg/m}^3$ • Distance to load-bearing structural elements $\geq 40 \text{ mm}$ • Distance between dampers $\geq 200 \text{ mm}$ 	in the shaft wall	T, one-sided N possible	EI 120 (V _{ed} , i \leftrightarrow o) S 1000 C _{10,000} MA multi
 <p>Solid wall as shaft wall</p>	<ul style="list-style-type: none"> • Concrete, aerated concrete, bricks • $d \geq 100 \text{ mm}$ • $\rho \geq 500 \text{ kg/m}^3$ • Distance to load-bearing structural elements $\geq 40 \text{ mm}$ • Distance between dampers $\geq 200 \text{ mm}$ 	on the shaft wall	(T)	EI 120 (V _{ed} , i \leftrightarrow o) S 1000 C _{10,000} MA multi
 <p>fire-resistant vertical smoke extract duct</p>	<ul style="list-style-type: none"> • $d \geq 35 \text{ mm}$ • $\rho \approx 550 \text{ kg/m}^3$ (490 kg/m³ to 605 kg/m³) • four-sided peripheral bolt or sleeve 	on vertical duct	(LE)	EI 120 (V _{ed} , i \leftrightarrow o) S 1000 C _{10,000} MA multi
 <p>Fire-resistant horizontal smoke extract duct</p>	<ul style="list-style-type: none"> • $d \geq 35 \text{ mm}$ • $\rho \approx 550 \text{ kg/m}^3$ (490 kg/m³ to 605 kg/m³) • four-sided peripheral bolt or sleeve 	on a horizontal duct	(LE)	EI 120 (V _{ed} , i \leftrightarrow o) S 1000 C _{10,000} MA multi
 <p>Fire-resistant horizontal smoke extract duct</p>	<ul style="list-style-type: none"> • $d \geq 35 \text{ mm}$ • $\rho \approx 550 \text{ kg/m}^3$ (490 kg/m³ to 605 kg/m³) 	in a horizontal duct	(LE)	EI 120 (V _{ed} , i \leftrightarrow o) S 1000 C _{10,000} MA multi

Legend: T = Dry mortarless installation • N = Mortar-based installation • LE = As specified for the duct

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Essential characteristics: fire resistance for nominal sizes [mm]: 200 × 430 to 1200 × 2030

Supporting construction	Construction	Installation location	Installation type	Performance level
 <p>Fire-resistant horizontal smoke extract duct</p>	<ul style="list-style-type: none"> • $d \geq 35 \text{ mm}$ • $\rho \approx 550 \text{ kg/m}^3$ (490 kg/m^3 to 605 kg/m^3) 	on the end horizontal duct	(LE)	EI 120 (V_{ed} , $i \leftrightarrow o$) S 1000 $C_{10,000}$ MA multi

Legend: T = Dry mortarless installation • N = Mortar-based installation • LE = As specified for the duct

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Table 2

Essential characteristics	Technical specification EN 12101 8: clause	Performance level	(●) Requirements met/ Note
Design and operation			
Nominal activation conditions/sensitivity	4.2.1.3		● / Heating ventilation system or smoke and heat extraction system
Response delay / closing time	4.2.1.4	MA	● / Opening / closure within 25 minutes at fire temperature has been proven. Duration < 60 s.
Durability (multiple sections)			
Durability of operational reliability	4.4.2.2	C _{10,000}	● / 10,000 cycles, duration per cycle < 120 s
Fire resistance classified according to EN 13501-4			
• Fire integrity (E)	4.1.1 a)	E... (details: Table 1)	● / Testing to EN 1366-2 and -10
• Insulation (I)	4.1.1 b)	EI... (details: Table 1)	● / Testing to EN 1366-2 and -10
• Smoke leakage (S)	4.1.1 c)	S 1000	Pressure level 2: -1,000 Pa to 500 Pa
• Mechanical stability (with E)	4.1.1 d)	E... (details: Table 1)	● / Testing to EN 1366-2 and -10
• Maintenance of cross section (with E)	4.1.1 e)	E... (details: Table 1)	● / Testing to EN 1366-2 and -10
Durability (multiple sections)			
Durability of response delay			
• In connection with actuators and interface control units			
– [BE24 / BE230] BE24 (BLE24) / BE230 (BLE230) – [B24A] BE24 (BLE24) + AS-EM/EK – [B24AS] BE24 (BLE24) + AS-EM/SIL2 – [B24BKNE] BE24 (BLE24) + BKNE230-24 – [B24C] BE24 (BLE24) + BC24 – [B24D] BE24 (BLE24) + BRM-10-F-ST – [B230D] BE230 (BLE230) + BRM-10-F	4.4.2.1	MA	● / Opening / closure within 25 minutes at fire temperature has been proven. Duration < 60 s
Durability (multiple sections)			
Durability of operational reliability			
• In connection with actuators and interface control units			
– [BE24 / BE230] BE24 (BLE24) / BE230 (BLE230) – [B24A] BE24 (BLE24) + AS-EM/EK – [B24AS] BE24 (BLE24) + AS-EM/SIL2 – [B24BKNE] BE24 (BLE24) + BKNE230-24 – [B24C] BE24 (BLE24) + BC24 – [B24D] BE24 (BLE24) + BRM-10-F-ST – [B230D] BE230 (BLE230) + BRM-10-F	4.4.2.2	C _{10,000}	● / 10,000 cycles, duration per cycle < 120 s

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Table 3

Essential characteristics	Technical specification	Performance level	(●) Requirements met/ Note
Cover grille on the damper or the duct	EN 1366-10, 5.2.3		● / necessary, can also be used as separating element on openings and ducts

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:

Neukirchen-Vluyn, 1 February 2017

J. Heymann
Jan Heymann • Authorised Representative • CE-marked products