

# Declaration of performance

DoP/EK-EU/001

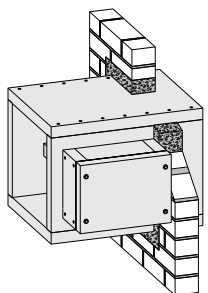
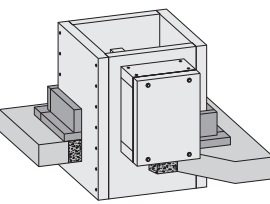


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<b>1 Product</b>	<b>EK-EU</b>
Unique identification code of the product type	
<b>2 Intended use</b>	Smoke control damper for multi compartments
<b>3 Manufacturer</b>	<p>TROX GmbH Phone +49 (0)2845 2020          Fax +49 (0)2845 202265          Heinrich-Trox-Platz E-mail trox@trox.de          47504 Neukirchen-Vluyn, Germany Internet www.troxtechnik.com</p>
<b>5 System of assessment and verification of constancy of performance</b>	System 1
<b>6 Harmonised standard</b>	EN 12101-8:2011
<b>Notified body/ies</b>	<p>The notified body 1322 - IBS carried out the 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 according to System 1 of the Construction Products Regulation and issued the certificate of constancy of performance:          1322-CPR-74135/03</p>

## 7 Declared performances

Table 1

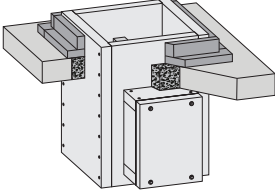
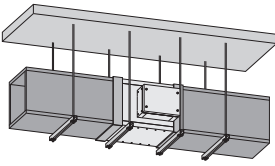
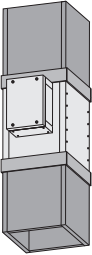
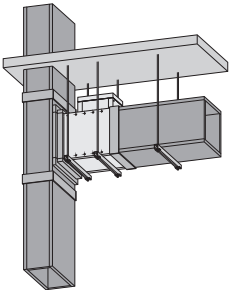
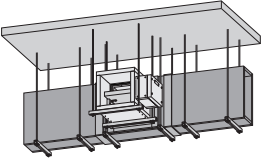
Essential characteristics: fire resistance for nominal sizes [mm]: 200 × 200 to 1500 × 800				
Supporting construction	Construction details	Installation location	Installation type	Performance level
 Solid wall	<ul style="list-style-type: none"> <li>d ≥ 100 mm</li> <li>ρ ≥ 500 kg/m<sup>3</sup></li> <li>Minimum distance to load-bearing structural elements ≥ 75 mm</li> <li>Distance between casings ≥ 200 mm</li> </ul>	in the wall	Mortar-based installation	EI 90 (v <sub>ew</sub> , i↔o) S 1500 C <sub>mod</sub> MA multi
 Solid ceiling slab	<ul style="list-style-type: none"> <li>d ≥ 100 mm</li> <li>ρ ≥ 600 kg/m<sup>3</sup></li> <li>Distance between casings ≥ 200 mm</li> </ul>	in the ceiling	Mortar-based installation	EI 90 (h <sub>ow</sub> , i↔o) S 1500 C <sub>mod</sub> MA multi

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**Essential characteristics: fire resistance for nominal sizes [mm]: 200 × 200 to 1500 × 800**

Supporting construction	Construction details	Installation location	Installation type	Performance level
 <p>Solid ceiling slab</p>	<ul style="list-style-type: none"> <li>• <math>d \geq 100 \text{ mm}</math></li> <li>• <math>\rho \geq 600 \text{ kg/m}^3</math></li> <li>• Distance between casings <math>\geq 200 \text{ mm}</math></li> </ul>	in the ceiling	Mortar-based installation	EI 90 ( $h_{ow}$ , $i \leftrightarrow o$ ) S 1500 C <sub>mod</sub> MA multi
 <p>Fire-resistant smoke extract duct</p>	<ul style="list-style-type: none"> <li>• <math>\rho \geq 520 \text{ kg/m}^3</math></li> <li>• Wall thickness <math>W \geq 35 \text{ mm}</math></li> </ul>	in a horizontal duct	Dry mortarless installation	EI 90 ( $v_{ed}$ , $i \leftrightarrow o$ ) S 1500 C <sub>mod</sub> MA multi
 <p>Fire-resistant smoke extract duct</p>	<ul style="list-style-type: none"> <li>• <math>\rho \geq 520 \text{ kg/m}^3</math></li> <li>• Wall thickness <math>W \geq 35 \text{ mm}</math></li> </ul>	in a vertical duct	Dry mortarless installation	EI 90 ( $h_{od}$ , $i \leftrightarrow o$ ) S 1500 C <sub>mod</sub> MA multi
 <p>Fire-resistant smoke extract duct</p>	<ul style="list-style-type: none"> <li>• <math>\rho \geq 520 \text{ kg/m}^3</math></li> <li>• Wall thickness <math>W \geq 35 \text{ mm}</math></li> </ul>	in a horizontal and on a vertical duct	Dry mortarless installation	EI 90 ( $v_{ed}$ , $i \leftrightarrow o$ ) S 1500 C <sub>mod</sub> MA multi
 <p>Fire-resistant smoke extract duct</p>	<ul style="list-style-type: none"> <li>• <math>\rho \geq 520 \text{ kg/m}^3</math></li> <li>• Wall thickness <math>W \geq 35 \text{ mm}</math></li> </ul>	on a horizontal duct	Dry mortarless installation	EI 90 ( $v_{ed}$ , $i \leftrightarrow o$ ) S 1500 C <sub>mod</sub> MA multi

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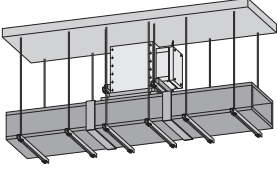
Essential characteristics: fire resistance for nominal sizes [mm]: 200 × 200 to 1500 × 800				
Supporting construction	Construction details	Installation location	Installation type	Performance level
 <p>Fire-resistant smoke extract duct</p>	<ul style="list-style-type: none"> <li>• <math>\rho \geq 520 \text{ kg/m}^3</math></li> <li>• Wall thickness <math>W \geq 35 \text{ mm}</math></li> </ul>	on top of a horizontal duct	Dry mortarless installation	EI 90 ( $h_{od}, i \leftrightarrow o$ ) S 1500 $C_{mod}$ MA multi

Table 2

Essential characteristics	Technical specification EN 12101 8: clause	Performance level	Notes
<b>Nominal activation conditions/sensitivity</b>	4.2.1.3		Pass
<b>Response delay</b>	4.2.1.4	MA	Opening/closure within 25 minutes at fire temperature has been proven. Duration < 60 s.
<b>Operational reliability</b>	4.4.2.2	$C_{mod}$	20,000 cycles, duration per cycle < 120 s
<b>Fire resistance</b>			
• Integrity	4.1.1 a)	E90	Details: Table 1
• Insulation	4.1.1 b)	EI90	Details: Table 1
• Smoke leakage	4.1.1 c)	S 1500	Meets pressure level 3; differential pressure: 1500 to +500 Pa
• Mechanical stability (under E)	4.1.1 d)	E90	Details: Table 1
• Maintenance of cross section (under E)	4.1.1 e)	E90	Details: Table 1
<b>Durability of response delay</b>			
<ul style="list-style-type: none"> <li>• In connection with actuators and interface control units               <ul style="list-style-type: none"> <li>– BE24 / BE230</li> <li>– BE24 + AS-EM module</li> <li>– BE24 + AS-EM/SIL2 module</li> </ul> </li> </ul>	4.4.2.1	MA	Opening/closure within 25 minutes at fire temperature has been proven. Duration < 60 s.
<b>Durability of operational reliability</b>			
<ul style="list-style-type: none"> <li>• In connection with actuators and interface control units               <ul style="list-style-type: none"> <li>– BE24 / BE230</li> <li>– BE24 + AS-EM module</li> <li>– BE24 + AS-EM/SIL2 module</li> </ul> </li> </ul>	4.4.2.2	$C_{mod}$	20,000 cycles, duration per cycle < 120 s

The essential characteristics have been proven for vertical installation with both vertical and horizontal position of the shaft.

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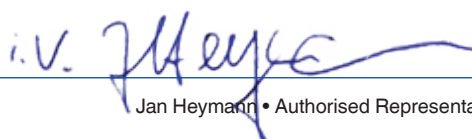
Table 3

Essential characteristics	Technical specification	Performance level	Notes
Damper with cover grille	EN 1366-10, 5.2.3		Pass
Damper blade leakage	EN 1751	At least class 2	
Damper casing leakage	EN 1751	Class C	

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 January 2015



Jan Heymann • Authorised Representative • CE-marked products