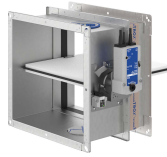


Declaration of performance

DoP/FKA2-EU/DE/002



1. Product	Fire damper FKA2-EU
2. Intended use	In conjunction with walls and ceilings for maintaining fire compartments in heating, ventilation and air conditioning installations
3. Manufacturer	<p>TROX GmbH Heinrich-Trox-Platz • 47504 Neukirchen-Vluyn • Germany Phone +49 (0)2845 2020 • Fax +49 (0)2845 202265 E-mail trox@trox.de • Internet www.trox.de</p> <p>TROX HESCO Schweiz AG Walderstrasse 125 • 8630 Rüti ZH • Switzerland Phone +41 (0)55250 7111 • Fax +41 (0)55250 7310 E-Mail info@troxhesco.ch • Internet www.troxhesco.ch</p>
5. System of assessment and verification of constancy of performance	System 1
6. Harmonised standard	EN 15650:2010
Notified body/ies	<p>The notified body 1322 - IBS - carried out the initial inspection of the manufacturing plants 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-74135/11 1322-CPR-61977/05</p>

7 Declared performances

200 x 100 to 1500 x 800 mm				
Supporting construction	Construction	Installation location	Installation type	Class of performance for
<p>Solid wall</p>	d ≥ 100 mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Mortar-based installation	EI 120 (v _e i↔o) S
	d ≥ 80 mm, Gypsum wall boards, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	d ≥ 100 mm, mixed assembly, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm, Distance to FKRS-EU ≥ 50 mm, Distance to FKR-EU ≥ 70 mm	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	d ≥ 100 mm, Multiple occupancy up to 4.8 m ² total fire damper area, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	d ≥ 100 mm, 4-fold arrangement up to 4.8 m ² total fire damper area, common air duct, with mineral wool covering, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings = 60 mm	in the wall	Mortar-based installation	EI 120 (v _e i↔o) S



Declaration of performance


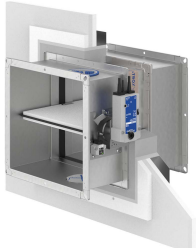
load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm			
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 130$ mm, 4-fold arrangement up to 4.8 m^2 total fire damper area, common air duct, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings = 60 mm	in the wall	Mortar-based installation	EI 90 ($v_e i \leftrightarrow o$) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 140$ mm, 4-fold arrangement up to 4.8 m^2 total fire damper area, common air duct, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings = 60 mm	in the wall	Mortar-based installation	EI 90 ($v_e i \leftrightarrow o$) S
Timber studs (also timber panel constructions and timber frames), gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, with or without mineral wool, $d \geq 130$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 120 ($v_e i \leftrightarrow o$) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 130$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 90 ($v_e i \leftrightarrow o$) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 110$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 60 ($v_e i \leftrightarrow o$) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 105$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 30 ($v_e i \leftrightarrow o$) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 140$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 120 ($v_e i \leftrightarrow o$) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 140$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 90 ($v_e i \leftrightarrow o$) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 110$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 30 ($v_e i \leftrightarrow o$) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 130$ mm, Dry mortarless installation with mineral wool, Distance to load-bearing structural elements ≥ 80 mm	in the wall	Dry mortarless installation	EI 60 ($v_e i \leftrightarrow o$) S



Declaration of performance

Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 140$ mm, Dry mortarless installation with mineral wool, Distance to load-bearing structural elements ≥ 80 mm	in the wall	Dry mortarless installation	EI 60 (v _e i↔o) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 130$ mm, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 120 (v _e i↔o) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 130$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Fire batt	EI 90 (v _e i↔o) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 110$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Fire batt	EI 60 (v _e i↔o) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 105$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Fire batt	EI 30 (v _e i↔o) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 140$ mm, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 120 (v _e i↔o) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 140$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Fire batt	EI 90 (v _e i↔o) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 110$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Fire batt	EI 30 (v _e i↔o) S
Timber studs (also timber panel constructions and timber frames), with or without mineral wool, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 130$ mm, Multiple installation up to 2.4m ² fire damper area, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Fire batt	EI 90 (v _e i↔o) S
Half-timbered construction, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, $d \geq 140$ mm, Multiple installation up to 2.4m ² fire damper area, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Fire batt	EI 90 (v _e i↔o) S

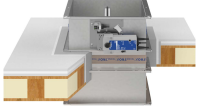
Declaration of performance

 <p>Solid wood wall</p>	Solid wood / cross laminated timber wall (also with additional fire-rated plasterboard planking), $d \geq 95$ mm, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	Solid wood / cross laminated timber wall (also with additional fire-rated plasterboard planking), $d \geq 95$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 90 (v _e i↔o) S
	Solid wood / cross laminated timber wall (also with additional fire-rated plasterboard planking), $d \geq 100$ mm, Dry mortarless installation with mineral wool, Distance to load-bearing structural elements ≥ 80 mm	in the wall	Dry mortarless installation	EI 60 (v _e i↔o) S
	Solid wood / cross laminated timber wall (also with additional fire-rated plasterboard planking), $d \geq 95$ mm, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 90 (v _e i↔o) S
 <p>Shaft wall</p>	Metal support structure (also with steel support structure and facings), gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side, $d \geq 90$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	Metal support structure, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side (construction with adjusted cladding), $d \geq 80$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	Metal support structure (also with steel support structure and facings), gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side, $d \geq 75$ mm, $\geq 2 \times 12,5$ mm with reinforcing board, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Mortar-based installation	EI 30 (v _e i↔o) S
	Metal support structure (also steel support structure and facings), gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side, $d \geq 90$ mm, combined assembly, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm, Distance to FKRS-EU ≥ 50 mm, Distance to FKR-EU ≥ 70 mm	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	Metal support structure (also steel support structure and facings), gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side, $d \geq 90$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 90 (v _e i↔o) S
	Metal support structure, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side (construction with adjusted cladding), $d \geq 80$ mm, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 90 (v _e i↔o) S
	Metal support structure (also steel support structure and facings), gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side, $d \geq 75$ mm, $\geq 2 \times 12,5$ mm with reinforcing board, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 30 (v _e i↔o) S
	without metal support structure, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum boards or firestop boards of calcium silicate, cladding on one side, $d \geq$	in the wall	Dry mortarless installation	EI 90 (v _e i↔o) S

Declaration of performance

	40 mm, 2 x 20 mm, with reinforcing board, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm			
 <p>Solid ceiling slab</p>	$d \geq 100$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 120 (h _o i↔o) S
	$d \geq 100$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 100$ mm, Multiple occupancy up to 4.8 m ² total fire damper area, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 100$ mm, combined assembly, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm, Distance to FKRS-EU ≥ 50 mm, Distance to FKR-EU ≥ 70 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 100$ mm, Concrete base ≤ 750 mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 120 (h _o i↔o) S
	$d \geq 100$ mm, Concrete base ≤ 750 mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 100$ mm, Concrete base ≤ 750 mm, Multiple occupancy up to 4.8 m ² total fire damper area, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 100$ mm, Concrete base, combined assembly, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm, Distance to FKRS-EU ≥ 50 mm, Distance to FKR-EU ≥ 70 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	combined with wooden beam ceilings (glued laminated timber and solid wood ceilings also), $d \geq 125$ mm, partial concrete ceiling, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 125$ mm, combined with solid wood ceilings, partial concrete ceiling, $d \geq 125$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 125$ mm, on the ceiling with installation kit WA, Distance to load-bearing structural elements ≥ 150 mm, Distance between casings ≥ 300 mm	in the ceiling	Dry mortarless installation	EI 90 (h _o i↔o) S
	$d \geq 125$ mm, below the ceiling, with horizontal duct, Installation kit WE, Distance to load-bearing structural elements ≥ 155 mm, Distance between casings ≥ 310 mm	remote from the ceiling	Dry mortarless installation	EI 90 (h _o i↔o) S
	$d \geq 150$ mm, Distance to load-bearing structural elements ≥ 40 mm	in the ceiling	Fire batt	EI 120 (h _o i↔o) S
$d \geq 100$ mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Fire batt	EI 90 (h _o i↔o) S	
$d \geq 100$ mm, Multiple installation up to 2.4m ² fire damper area, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Fire batt	EI 90 (h _o i↔o) S	
 <p>Solid wood ceiling</p>	$d \geq 140$ mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 112.5$ mm, additional cladding	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	$d \geq 140$ mm, Installation kit ES	in the ceiling	Dry mortarless installation	EI 90 (h _o i↔o) S
	$d \geq 112.5$ mm, additional cladding, Installation kit ES	in the ceiling	Dry mortarless installation	EI 90 (h _o i↔o) S

Declaration of performance

 Wooden beam ceiling	d ≥ 167.5 mm	in the ceiling	Mortar-based installation	EI 90 (h _o i↔o) S
	d ≥ 155 mm	in the ceiling	Mortar-based installation	EI 60 (h _o i↔o) S
	d ≥ 142.5 mm	in the ceiling	Mortar-based installation	EI 30 (h _o i↔o) S
	d ≥ 167.5 mm, Installation kit ES	in the ceiling	Dry mortarless installation	EI 90 (h _o i↔o) S
	d ≥ 155 mm, Installation kit ES	in the ceiling	Dry mortarless installation	EI 60 (h _o i↔o) S
	d ≥ 142.5 mm, Installation kit ES	in the ceiling	Dry mortarless installation	EI 30 (h _o i↔o) S

Declaration of performance

Essential characteristics	Technical specification	Performance
Nominal activation conditions/ sensitivity Sensing element load-bearing capacity Sensing element response temperature 72 °C, 95 °C	ISO 10294-4:2001	Pass
Response delay/response time Closure time	EN 1366-2:2015	Pass
Operational reliability Open and closing cycle, 50 cycles	EN 15650:2010 EN 1366-2:2015	Pass
Durability of operational reliability Testing of the open and closing cycle, 10,000 cycles B(L)F230-T(N)-(ST) TR BLF 24-T(N)-(ST) TR BFN 230-T(N)-(ST) TR BFN 24-T(N)-(ST) TR BFL 230-T(N)-(ST) TR BFL 24-T(N)-(ST) TR BF ExMax-15-TR BF 24TL-T(N)-(ST) TR BF RedMax-15-TR GGA126.1E/T../GGA326.1E/T... GRA126.1E/T../GRA326.1E/T... GNA126.1E/T../GNA326.1E/T... SFR 1.90 T (SLC) SFR 2.90 T	EN 15650:2010	Pass
Protection against corrosion	EN 15650:2010	Pass
Damper blade leakage	EN 1751:2014	At least class 2
Damper casing leakage	EN 1751:2014	At least class B

The classification of the fire damper must not be higher than the classification of the wall or ceiling slab it is installed in. In this case the class of performance of the wall or ceiling slab applies also to the fire damper.

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 identify

Signed for and on behalf of TROX GmbH:

Neukirchen-Vluyn, 01.12.2020



Jan Heymann • CE-Beauftragter Authorised Representative • CE-marked products