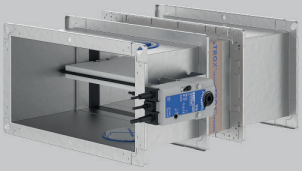
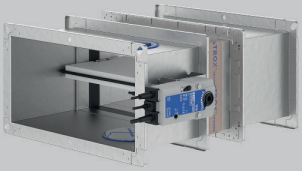
Declaration of performance

DoP/FK2-EU/DE/001

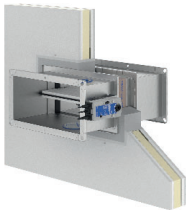


TROX® TECHNIK
The art of handling air

1	**Product** Unique identification code of the product type	**FK2-EU**
2	**Intended use**	Used in conjunction with walls and ceilings to maintain the integrity of fire compartments in HVAC systems.
3	**Manufacturer**	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.troxtechnik.com 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
5	**System of assessment and verification of constancy of performance**	System 1
6	**Harmonised standard** **Notified body/ies**	EN 15650:2010 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-74135/01 1322-CPR-61977/01



7 Declared performances

200 x 100 to 800 x 200 mm				
Supporting construction	**Construction details**	**Installation location**	**Installation type**	**Class of performance (EI TT)**
 solid wall	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 ≥ 100 mm, flexible ceiling joint with installation kit GM, 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, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the wall	Mortar-based installation (partially with mineral wool)	EI 90 (v_e i↔o) S
	d ≥ 100 mm, Installation kit ES	remote from the wall	Dry mortarless installation	EI 90 (v_e i↔o) S
	d ≥ 100 mm, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 120 (v_e i↔o) S
 Lightweight partition wall	Metal support structure (steel support structure also), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 94 mm, with or without mineral wool, 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
	Metal support structure (steel support structure also), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 94 mm, with or without mineral wool, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 120 (v_e i↔o) S
	Metal support structure (steel support structure also), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 80 mm, with or without mineral wool, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 60 (v_e i↔o) S
	Metal support structure (steel support structure also), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 75 mm, with or without mineral wool, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 30 (v_e i↔o) S
	Metal support structure (steel support structure also), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 94 mm, with or without mineral wool, 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 (steel support structure also), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 94 mm, with or without mineral wool, Installation kit ES, wall penetration	remote from the wall	Dry mortarless installation	EI 90 (v_e i↔o) S
	Metal support structure with sheet steel, used as a compartment wall, safety partition wall or to provide radiation protection, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 100 mm, with or without mineral wool, 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

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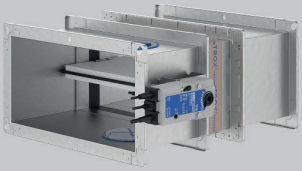

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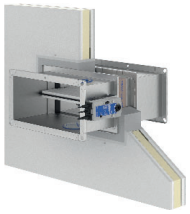
200 x 100 to 800 x 200 mm				
Supporting construction	**Construction details**	**Installation location**	**Installation type**	**Class of performance (EI TT)**
 Lightweight partition wall	Metal support structure with sheet steel, used as a compartment wall, safety partition wall or to provide radiation protection, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 100 mm, with or without mineral wool, 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 with sheet steel, used as a compartment wall, safety partition wall or to provide radiation protection, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 100 mm, with or without mineral wool, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 120 (v_e i↔o) S
	Timber studs, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 130 mm, with or without mineral wool, 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
	Timber studs, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 130 mm, with or without mineral wool, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 90 (v_e i↔o) S
	Timber studs, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 130 mm, with or without mineral wool, 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), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 105 mm, with or without mineral wool, 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
	Timber studs (also timber panel constructions and timber frames), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 105 mm, with or without mineral wool, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 30 (v_e i↔o) S
	Timber studs (also timber panel constructions and timber frames), gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 105 mm, with or without mineral wool, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 30 (v_e i↔o) S
	Half-timbered wall, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 140 mm, with or without mineral wool, 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
	Half-timbered wall, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 140 mm, with or without mineral wool, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 90 (v_e i↔o) S

Declaration of performance

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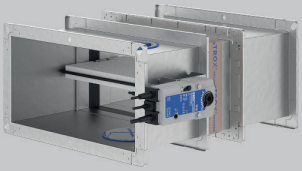

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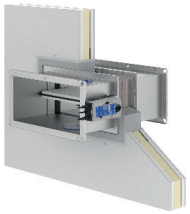
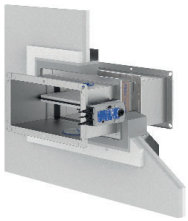
200 x 100 to 800 x 200 mm				
Supporting construction	**Construction details**	**Installation location**	**Installation type**	**Class of performance (EI TT)**
 Lightweight partition wall	Half-timbered wall, gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards, d ≥ 140 mm, with or without mineral wool, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 90 (v_e i↔o) S
	Solid wood wall / CLT wall, d ≥ 95 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
	Solid wood wall / CLT wall, d ≥ 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 wall / CLT wall, d ≥ 95 mm, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Fire batt	EI 90 (v_e i↔o) S
 Shaft wall	Metal support structure (also steel support structure and facings), cladding on one side, d ≥ 90 mm, ≥ 2 x 20 mm, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum or fire-rated calcium silicate boards, 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 (construction with cladding on the inside), cladding on one side, d ≥ 80 mm, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum or fire-rated calcium silicate boards, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Mortar-based installation	EI 90 (v_e i↔o) S
	Metal support structure (also steel support structure and facings), cladding on one side, d ≥ 75 mm, ≥ 2 x 12.5 mm with reinforcing board to achieve d ≥ 90 mm, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum or fire-rated calcium silicate boards, Distance to load-bearing structural elements ≥ 40 mm	in the wall	Mortar-based installation	EI 30 (v_e i↔o) S
	Metal support structure (also steel support structure and facings), cladding on one side, d ≥ 90 mm, 2 x 20 mm, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum or fire-rated calcium silicate boards, 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 (construction with cladding on the inside), cladding on one side, d ≥ 80 mm, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum or fire-rated calcium silicate boards, 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), cladding on one side, d ≥ 75 mm, 2 x 12.5 mm with reinforcing board to achieve d ≥ 90 mm, gypsum bonded or cement bonded panel materials, fibre-reinforced gypsum or fire-rated calcium silicate boards, Installation kit ES, Distance to load-bearing structural elements ≥ 65 mm	in the wall	Dry mortarless installation	EI 30 (v_e i↔o) S

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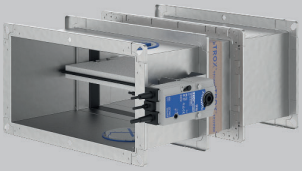

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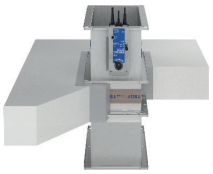
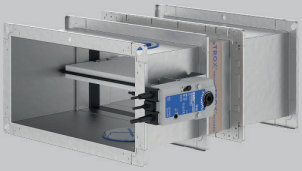
200 x 100 to 800 x 200 mm				
Supporting construction	**Construction details**	**Installation location**	**Installation type**	**Class of performance (EI TT)**
 Solid ceiling slab	d ≥ 100 mm, Distance to load-bearing structural elements ≥ 40 mm, Distance between casings ≥ 60 mm	in the ceiling	Mortar-based installation	EI 120 (h_o i↔o) S
	d ≥ 125 mm, below the ceiling, with horizontal duct, Installation kit ES	remote from the ceiling	Dry mortarless installation	EI 90 (h_o i↔o) S
	d ≥ 125 mm, combined with wooden beam ceilings (glued laminated timber also), 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 ≥ 125 mm, combined with suspended ceiling systems (Cadolto system), 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 ≥ 125 mm, combined with solid wood ceilings, 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



7 Declared performances

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 response delay • Sensing element response to temperature and load-bearing capacity	ISO 10294-4:2001	Pass
Durability of operational reliability • Testing of the open and closing cycle, 10,000 cycles – B(L)F 230-T(N)-(ST) TR – B(L)F 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 – ExMax-15-BF TR – RedMax-15-BF TR – GGA126.1E/T../GGA326.1E/T… – GRA126.1E/T../GRA326.1E/T… – GNA126.1E/T../GNA326.1E/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 classification of the fire damper is reduced to the certified classification of the wall/ceiling slab.

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, 28 October 2019

i.V. Heymann

Jan Heymann • Authorised Representative • CE-marked products