

Declaration of Performance

DoP/FK-EU/DE/003



TROX[®] TECHNIK
The art of handling air

1 Product

FK-EU

Unique identification code of the product type

2 Intended use

Fire damper

3 Manufacturer

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5 System of assessment and verification of constancy of performance

System 1

6 Harmonised standard


EN 15650:2010

Notified body/ies

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

Essential characteristic: fire resistance – size [mm]: 200 × 200 to 1500 × 800				
Supporting construction	Construction	Installation location	Installation type	Class of performance (EI TT)
 Solid wall	<ul style="list-style-type: none"> d ≥ 100 mm Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Mortar-based installation	EI 120 (v _e i↔o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Distance between casings ≥ 70 mm 	in the wall	Mortar-based installation (partially with mineral wool)	EI 90 (v _e i↔o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Installation kit E1/E2 	in the wall	Dry mortarless installation	EI 90 (v _e i↔o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Installation kit WA 	on the face of the wall	Dry mortarless installation	EI 90 (v _e i↔o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Installation kit WV 	adjacent to the wall	Dry mortarless installation	EI 90 (v _e i↔o) S



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Supporting construction	Construction	Installation location	Installation type	Class of performance (EI TT)
 Solid wall	<ul style="list-style-type: none"> d ≥ 100 mm Installation kit WE 	remote from the wall	Dry mortarless installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Fire batt	EI 120 (v _e i→o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Fire batt	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Flexible ceiling joint Distance to load-bearing structural elements ≥ 40 mm Installation kit GM With and without reinforcing strips made of calcium silicate or mineral wool ≤ 20 mm Distance between casings ≥ 100 mm 	in the wall	Mortar-based installation (and installation kit)	EI 90 (v _e i→o) S
 Lightweight partition wall	<ul style="list-style-type: none"> Metal support structure (steel support structure also) Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 98 mm With or without mineral wool Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Mortar-based installation	EI 120 (v _e i→o) S
	<ul style="list-style-type: none"> Metal support structure (steel support structure also) Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 98 mm With or without mineral wool Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Mortar-based installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> Metal support structure (steel support structure also) Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 98 mm With or without mineral wool Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Fire batt	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> Metal support structure Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 80 mm With or without mineral wool Reinforcing board on d ≥ 98 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Fire batt	EI 60 (v _e i→o) S
	<ul style="list-style-type: none"> Metal support structure Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 75 mm With or without mineral wool Reinforcing board on d ≥ 98 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Fire batt	EI 30 (v _e i→o) S

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Supporting construction	Construction	Installation location	Installation type	Class of performance (EI TT)
 <p>Lightweight partition wall</p>	<ul style="list-style-type: none"> • Metal support structure (steel support structure also) • Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards • d ≥ 98 mm • With or without mineral wool • Installation kit ES • Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Dry mortarless installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> • 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 • Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Mortar-based installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> • 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 • Installation kit ES • Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Dry mortarless installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> • Metal support structure (steel support structure also) • Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards • d ≥ 98 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
	<ul style="list-style-type: none"> • Metal support structure • Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards • d ≥ 75 mm • With or without mineral wool • Reinforcing board on d ≥ 98 mm • Distance to load-bearing structural elements ≥ 40 mm • Distance between casings ≥ 70 mm 	in the wall	Mortar-based installation	EI 30 (v _e i→o) S
	<ul style="list-style-type: none"> • Metal support structure • Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards • d ≥ 75 mm • With or without mineral wool • Reinforcing board on d ≥ 98 mm • Installation kit ES • Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Dry mortarless installation	EI 30 (v _e i→o) S
	<ul style="list-style-type: none"> • Metal support structure • Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards • d ≥ 100 mm • With or without mineral wool • Flexible ceiling joint • Installation kit GL • Distance to load-bearing structural elements = 40 mm 	in the wall	Dry mortarless installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> • Timber studs • Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards • d ≥ 130 mm • Distance between casings ≥ 70 mm • Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Mortar-based installation	EI 90 (v _e i→o) S


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Supporting construction	Construction	Installation location	Installation type	Class of performance (EI TT)
 Lightweight partition wall	<ul style="list-style-type: none"> Timber studs Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 130 mm Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Fire batt	EI 120 (v _e i↔o) S
	<ul style="list-style-type: none"> Timber studs Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 130 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Fire batt	EI 90 (v _e i↔o) S
	<ul style="list-style-type: none"> Timber studs Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 130 mm Installation kit ES Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Dry mortarless installation	EI 120 (v _e i↔o) S
	<ul style="list-style-type: none"> Timber studs (also timber panel constructions and timber frames) Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 105 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Mortar-based installation	EI 30 (v _e i↔o) S
	<ul style="list-style-type: none"> Timber studs (also timber panel constructions and timber frames) Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 105 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Fire batt	EI 30 (v _e i↔o) S
	<ul style="list-style-type: none"> Timber studs (also timber panel constructions and timber frames) Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 105 mm Installation kit ES Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Dry mortarless installation	EI 30 (v _e i↔o) S
	<ul style="list-style-type: none"> Half-timbered construction Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 140 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Mortar-based installation	EI 90 (v _e i↔o) S
	<ul style="list-style-type: none"> Half-timbered construction Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 140 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the wall	Fire batt	EI 90 (v _e i↔o) S
	<ul style="list-style-type: none"> Half-timbered construction Gypsum bonded or cement bonded panel materials or fibre-reinforced gypsum boards d ≥ 140 mm Installation kit ES Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Dry mortarless installation	EI 90 (v _e i↔o) S





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Supporting construction	Construction	Installation location	Installation type	Class of performance (EI TT)
 Lightweight partition wall	<ul style="list-style-type: none"> Solid wood wall/CLT wall d ≥ 95 mm Installation kit ES Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Dry mortarless installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> Solid wood wall/CLT wall d ≥ 95 mm Distance to load-bearing structural elements ≥ 40 mm 	in the wall	Mortar-based installation	EI 90 (v _e i→o) S
 Lightweight partition wall	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 ≥ 40 mm 	in the wall	Dry mortarless installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> Metal support structure (also steel support structure and facings) Cladding on one side d ≥ 90 mm ≥ 2 x 12.5 mm with reinforcing board 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
	<ul style="list-style-type: none"> 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 	in the wall	Mortar-based installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> Shaft wall without metal support structure d ≥ 40 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 	in the wall	Mortar-based installation	EI 90 (v _e i→o) S
	<ul style="list-style-type: none"> Shaft wall without metal support structure d ≥ 40 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 ≥ 40 mm 	in the wall	Dry mortarless installation	EI 90 (v _e i→o) S
 Solid ceiling slab	<ul style="list-style-type: none"> d ≥ 100 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the ceiling	Mortar-based installation	EI 90 (h _o i→o) S


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Supporting construction	Construction	Installation location	Installation type	Class of performance (EI TT)
 Solid ceiling slab	<ul style="list-style-type: none"> d ≥ 100 mm Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the ceiling	Fire batt	EI 90 (h ₀ i↔o) S
	<ul style="list-style-type: none"> d ≥ 100 mm Distance to load-bearing structural elements ≥ 40 mm 	in the ceiling	Fire batt	EI120S (h ₀ i↔o) S
	<ul style="list-style-type: none"> d ≥ 150 mm Hensomastik fire batt system Distance to load-bearing structural elements ≥ 40 mm 	in the ceiling	Fire batt	EI 180 (h ₀ i↔o) S
	<ul style="list-style-type: none"> d ≥ 125 mm Below the ceiling, with horizontal duct Installation kit WE 	remote from the ceiling	Dry mortarless installation	EI 90 (h ₀ i↔o) S
	<ul style="list-style-type: none"> d ≥ 125 mm Combined with wooden beam ceilings (glued laminated timber also) Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the ceiling	Mortar-based installation	EI 90 (h ₀ i↔o) S
	<ul style="list-style-type: none"> d ≥ 125 mm Combined with suspended ceiling systems (Cadolto system) Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the ceiling	Mortar-based installation	EI 90 (h ₀ i↔o) S
	<ul style="list-style-type: none"> d ≥ 125 mm Combined with solid wood ceilings Distance to load-bearing structural elements ≥ 40 mm Distance between casings ≥ 70 mm 	in the ceiling	Mortar-based installation	EI 90 (h ₀ i↔o) S

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7 Declared performances

Essential characteristics	Technical specification	Performance
Nominal activation conditions/sensitivity <ul style="list-style-type: none"> Sensing element load-bearing capacity Sensing element response temperature 72 °C, 95 °C 	ISO 10294-4:2001	Pass
Response delay/response time <ul style="list-style-type: none"> Closure time 	EN 1366-2:2015	Pass
Operational reliability <ul style="list-style-type: none"> Open and closing cycle, 50 cycles 	EN 15650:2010 EN 1366-2:2015	Pass
Durability of response delay <ul style="list-style-type: none"> Sensing element response to temperature and load-bearing capacity 	ISO 10294-4:2001	Pass
Durability of operational reliability <ul style="list-style-type: none"> Testing of the open and closing cycle, 10,000 cycles <ul style="list-style-type: none"> – BLF 230-T(N)-(ST) TR – BLF 24-T(N)-(ST) TR – BF230-T(N)-(ST) TR – BF24-T(N)-(ST) TR – BF24TL-T(N)-(ST)(-2) 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... – SFR 1.90 T SLC – SFR 1.90 T – 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 identified above.

Signed for and on behalf of TROX GmbH:

Neukirchen-Vluyn, 01.06.2018

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