

9 Cable entry systems

with IFPS fire penetration seals acc. to EN 45545-3

Fire resistance of fire barriers

The European railway standard for fire safety EN 45545-3 regulates the fire resistance of fire barriers. The requirements and measures defined in this part of the standard aim to protect passengers and staff in railway vehicles against onboard fire incidents.

Fire barriers can have different standards:

The lowest standard „E“

Barrier against flames, preventing fissure formation. „E45“, for example, means that the specimen can withstand the test for 45 minutes.

The highest standard „EI“

Barrier against flames, preventing fissure formation and thermal insulation, which means that the temperature on the side facing away from the fire must not exceed 200° C (180° K above room temperature). „EI30“, for example, means that the specimen can withstand the test for 30 minutes.

Based on the standards EN 45545-3 and EN 1363-1 icotek cable entry systems have been tested on „E“ and „EI“ in vertical alignment using mounted IFPS fire penetration seals. All tested products have been successfully certified using only one layer of fire penetration seals.

icotek cable entry systems meet the classifications E45 and EI30!

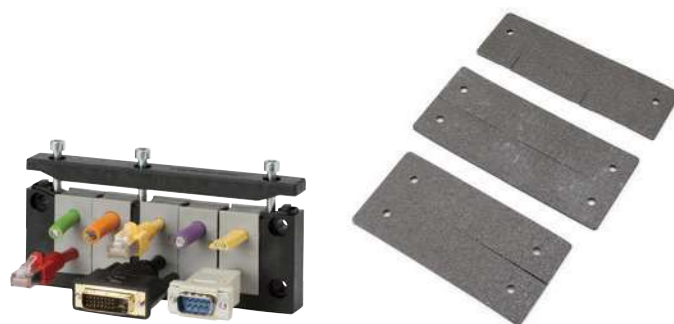


Fire penetration seals facing the fire side:



Cable entry systems with IFPS fire penetration seals according to EN 45545-3

E45
EI30



icotek cable entry frames and plates with fire penetration seals, approved for use in railway technology (meeting the standards EN 45545-2, EN 45545-3 and EN 1363-1).

The intumescent (foaming) IFPS fire penetration seals which are mounted at the backside of the cable entry components consist of expandable graphite and increase their volume by a multiple in case of a fire.

This creates a barrier which prevents a penetration of flames and high heat from one room into another for the longest possible period.

Advantages & benefits

- Approved for use in railway technology (EN 45545-2, EN 45545-3 and EN 1363-1)
- Easy assembly
- High cable density
- Only one fire penetration seal per cable entry component required
- Large product variety
- Ingress protection up to IP66/UL Type 4X
- High classifications E45/EI30

Specifications

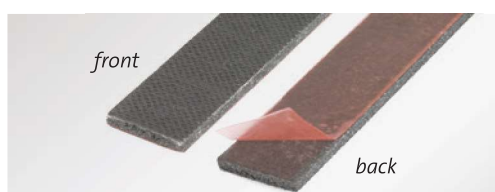
Cable entry comp. See standard products
Fire penetration seal Intumescent (foaming)
Material Graphite (C)

Scope of delivery

Each 1 cable entry frame/plate + suitable fire penetration seal.

Suitable grommets are not included in the shipment and have to be ordered separately.

Type	Order No.	Order No. with V2A screws	Cut-out	Grommets KT small large	IP Ingress protection	PU
KEL-U 24 4-B5	99300.001	99300.201	36 × 112 mm	2 2	IP54	5
KEL-U 24 7-B5	99300.002	99300.202	36 × 112 mm	6 1	IP54	5
KEL-U 24 10-B5	99300.003	99300.203	36 × 112 mm	10 -	IP54	5
KEL-U 16 2-B5	99301.001	99301.201	36 × 86 mm	- 2	IP54	5
KEL-U 16 5-B5	99301.002	99301.202	36 × 86 mm	4 1	IP54	5
KEL-U 16 8-B5	99301.003	99301.203	36 × 86 mm	8 -	IP54	5
KEL-U 10 6-B5	99306.001	99306.201	36 × 65 mm	6 -	IP54	5
KEL-U 10 3-B5	99306.002	99306.202	36 × 65 mm	2 1	IP54	5
KEL-U B1-B5	99305.001	99305.201	46 × 46 mm	- 1	IP54	5
KEL-U B4-B5	99305.002	99305.202	46 × 46 mm	4 -	IP54	5
KEL-ER 24 4-B5	99300.004	99300.204	36 × 112 mm	2 2	IP65 / IP66	5
KEL-ER 24 7-B5	99300.005	99300.205	36 × 112 mm	6 1	IP65 / IP66	5
KEL-ER 24 10-B5	99300.006	99300.206	36 × 112 mm	10 -	IP65 / IP66	5
KEL-ER 16 2-B5	99301.004	99301.204	36 × 86 mm	- 2	IP65 / IP66	5
KEL-ER 16 5-B5	99301.005	99301.205	36 × 86 mm	4 1	IP65 / IP66	5
KEL-ER 16 8-B5	99301.006	99301.206	36 × 86 mm	8 -	IP65 / IP66	5
KEL-ER 10 6-B5	99306.003	99306.203	36 × 65 mm	6 -	IP65 / IP66	5
KEL-ER 10 3-B5	99306.004	99306.204	36 × 65 mm	2 1	IP65 / IP66	5
KEL-ER B1-B5	99305.003	99305.203	46 × 46 mm	- 1	IP65 / IP66	5
KEL-ER B4-B5	99305.004	99305.204	46 × 46 mm	4 -	IP65 / IP66	5
KEL-E5-B5	99302.001	99302.201	24 × 112 mm	5 -	IP54	5
KEL-E4-B5	99309.001	99309.201	24 × 86 mm	4 -	IP54	5
KEL-E3-B5	99308.001	99308.201	24 × 65 mm	3 -	IP54	5
KEL-E2-B5	99307.001	99307.201	24 × 43 mm	2 -	IP54	5
KEL-ER-E5-B5	99302.002	99302.202	24 × 112 mm	5 -	IP65 / IP66	5
KEL-ER-E4-B5	99309.002	99309.202	24 × 86 mm	4 -	IP65 / IP66	5
KEL-ER-E3-B5	99308.002	99308.202	24 × 65 mm	3 -	IP65 / IP66	5
KEL-ER-E2-B5	99307.002	99307.202	24 × 43 mm	2 -	IP65 / IP66	5



Also available: IFPS fire penetration seal stripe,
900 × 17 × 2.7 mm, self-adhesive
Order No. 99303



Cable entry systems with IFPS fire penetration seals according to EN 45545-3

E45
EI30

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Specifications

Cable entry comp. See standard products
Fire penetration seal Intumescent (foaming)
Material Graphite (C)

Scope of delivery

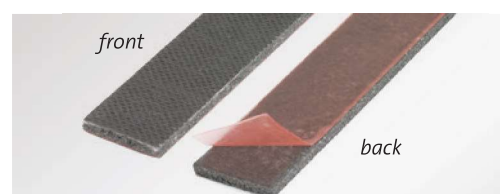
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Type	Order No.	Cut-out	IP Ingress protection	PU
KEL-DPU 24 13-B5 gy	99300.010	36 × 112 mm	IP66 / IP68	5
KEL-DPU 24 14-B5 gy	99300.011	36 × 112 mm	IP66 / IP68	5
KEL-DPU 24 16-B5 gy	99300.012	36 × 112 mm	IP66 / IP68	5
KEL-DPU 24 16-1-B5 gy	99300.013	36 × 112 mm	IP66 / IP68	5
KEL-DPU 24 17-B5 gy	99300.014	36 × 112 mm	IP66 / IP68	5
KEL-DPU 24 20-B5 gy	99300.015	36 × 112 mm	IP66 / IP68	5
KEL-DPU 24 21-B5 gy	99300.016	36 × 112 mm	IP66 / IP68	5
KEL-DPU 24 32-B5 gy	99300.017	36 × 112 mm	IP66 / IP68	5
KEL-DPZ 16 11-B5 gy	99301.007	36 × 86 mm	IP65 / IP66	5
KEL-DPZ 16 14-B5 gy	99301.008	36 × 86 mm	IP65 / IP66	5
KEL-DPZ 16 20-B5 gy	99301.009	36 × 86 mm	IP65 / IP66	5
KEL-DPZ 16 25-B5 gy	99301.010	36 × 86 mm	IP65 / IP66	5
KEL-DPZ 16 34-B5 gy	99301.011	36 × 86 mm	IP65 / IP66	5
KEL-DPZ 24 14-B5 gy	99300.018	36 × 112 mm	IP65 / IP66	5
KEL-DPZ 24 15-B5 gy	99300.019	36 × 112 mm	IP65 / IP66	5
KEL-DPZ 24 16-B5 gy	99300.020	36 × 112 mm	IP65 / IP66	5
KEL-DPZ 24 17-B5 gy	99300.021	36 × 112 mm	IP65 / IP66	5
KEL-DPZ 24 25-B5 gy	99300.022	36 × 112 mm	IP65 / IP66	5
KEL-DPZ 24 32-B5 gy	99300.023	36 × 112 mm	IP65 / IP66	5
KEL-DPZ 24 42-B5 gy	99300.024	36 × 112 mm	IP65 / IP66	5

Type	Order No.	Cut-out	PU
Fire penetration seal size 24	99300	36 × 112 mm	1
Fire penetration seal size 16	99301	36 × 86 mm	1
Fire penetration seal size 10	99306	36 × 65 mm	1
Fire penetration seal size B	99305	46 × 46 mm	1
Fire penetration seal size E5	99302	24 × 112 mm	1
Fire penetration seal size E4	99309	24 × 86 mm	1
Fire penetration seal size E3	99308	24 × 65 mm	1
Fire penetration seal size E2	99307	24 × 43 mm	1
Fire penetration seal size KEL 183 *	99311	180 × 80 mm	1
Fire penetration seal size 24-MT *	99312	82 × 112 mm	1
Fire penetration seal size 16-MT *	99314	82 × 86 mm	1
Fire penetration seal for KEL-DPZ-KX/KL72 *	99315	62 × 192 mm	1

* At the time of certification, these sizes were not yet part of our product portfolio.



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Order No. 99303

*4X for indoor use only