**User Manual and Maintenance Guide**

Fire-resistant ventilation grid LKS with supplement

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A picture containing indoor, monitor, window, table

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# **1. General information**

The fire-rated ventilation grid type LKS serves as a fire barrier to connect two fire sections without additional ducting. It is securely installed in the fire partition structure. In the event of a fire, the slats of the grid will close the vent opening and prevent the spread of fire to the adjacent fire section.

# **2. Assembly and Inspection**

Assembly, operation, maintenance, and operational checks of the products may only be carried out by persons competent for these activities, i.e., 'AUTHORIZED PERSONS' trained by the manufacturer. Training is provided by the Likuhas s.r.o. company, and it issues a 'CERTIFICATE (Record)' of training for the assembly company, which is valid for 2 years, and its extension is arranged by the 'AUTHORIZED PERSON' themselves, directly with the trainer.

Fire closures are subject to regular inspections according to the decree of the Ministry of Interior No. 246/2001 Coll.

# **3. Construction design** A screen shot of a building Description automatically generated

The frame is made of non-flammable material.

Intumescent slats.

Protective steel mesh

# 

# **4. Supplement**

Certified supplement for the fire-rated ventilation grid type LKS are double-sided inspection covers type LKL with a lacquered surface. They are installed according to the installation manual on both sides of the fire partition structure, covering the installation opening with the installed fire-rated ventilation grid type LKS. The LKL cover is equipped with a label showing the production number, marked fire resistance, and year of manufacture.

# **5. Commissioning**

Before putting the fire grid into operation after its installation (and also during subsequent inspections), a visual inspection of the integrity of the frame and the functional slats of the grid must be carried out. After performing the visual inspection, a written record of putting the grid into operation is made. During the installation of the grid, all safety standards and regulations must be adhered to.

# **6. Operating Conditions, Inspection**

**6.1 Operating Conditions**

The operator maintains the fire-rated grids in functional and undamaged condition throughout their entire lifespan according to the manufacturer's instructions. No alterations or modifications are allowed on the fire-rated grid type LKS and the mounting opening cover type LKL, nor should any of their parts be removed.

**6.2 Inspection**

The user (operator) of the fire-rated grids ensures that their regular inspections are carried out at least **once every 12 months**, unless the manufacturer or operator specifies a shorter period due to environmental factors.

The manufacturer reserves the right to conduct annual checks of the functionality and operability of fire-rated grids and supplements of types LKS and LKL. In the event of inspections being carried out by a person other than those authorized by the manufacturer, the manufacturer waives all liability for any damages incurred on the product in connection with its use.

After written authorization from the manufacturer, inspections of fire-rated ventilation grids can be carried out by a professionally competent individual designated by the user (operator) according to the manufacturer's operating instructions. The condition of the fire-rated ventilation grids identified during the inspection is recorded in the operational logbook along with the date of inspection, legible name, surname, and signature of the person who conducted the inspection, along with proposals for corrective actions to remedy any deficiencies found.

During the visual inspection, the surface of the blades and the integrity of the grid frame are checked. Attention should be paid to the presence of possible deformations that could impede proper functioning. Additionally, the cleanliness of individual parts is evaluated.

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# **7. Warranty Terms**

The company Likuhas s.r.o. provides a warranty period of 24 months for all supplied fire-rated ventilation grilles of type LKS and mounting opening covers LKL.

The product is inspected at the manufacturing plant before shipment and is subsequently delivered in perfect condition only. The manufacturer guarantees that the product will have the properties specified by the relevant technical standards throughout the warranty period, provided that the purchaser uses it in the manner specified in the operating instructions and installs it according to the Installation Manual. If unforeseen manufacturing defects occur on the product, the manufacturer will ensure their free removal within the warranty period.

The purchaser may only claim warranty repairs in writing, and before the repair is carried out, they must submit a properly completed and endorsed warranty certificate.

The warranty does not cover defects arising from unprofessional handling, incorrect installation into the wall, and failure to comply with the instructions provided in the Installation Manual and the Operating and Maintenance Manual.

The warranty does not cover minor pores, cracks, and colour instability of the lacquered surface of the frame insulation board based on Vermiculite with binders. The integrity and properties of the frame board are not affected by these phenomena. These visual deviations are a common characteristic of this type of material and do not affect the functionality of the product.

The warranty period is extended by the time from when the purchaser claimed the warranty repair until the repair is completed.

The warranty repair is carried out at the manufacturer's premises, and the manufacturer bears all the costs necessary for the repair.

The costs associated with sending a service technician or specialist in case no defects covered by the warranty are found will be borne by the customer who requested the repair.

# **8. Storage a Logistic Data**

The LKS grids are stored in dry and covered warehouses. During storage, it is necessary to protect the fire rated grids of type LKS from mechanical damage, ingress of dirt, and they must not be exposed to moisture, especially dripping or leaking water. The temperature in storage facilities must be maintained in the range of 0 to +40 °C, and the relative humidity should not exceed 70%.

The LKS grids with LKL covers are intended for environments protected against weather conditions with a classification of climatic category 3K5, without condensation, frost, ice formation, and without water from sources other than rain according to EN 60 721-3-3 A2 amendment. The LKL covers are supplied in a lacquered finish, and it is necessary to protect the lacquer surface from mechanical damage and the effects of a humid environment.

# **9. Product Certificate**

* Certificate No. 204/C5/2018/080-022039, was issued by the Technical and Testing Institute for Construction Prague, s.p., authorized person 204.
* Technical Construction Certificate No. 080-022037 was issued by the Technical and Testing Institute for Construction Prague, s.p., authorized person 204.
* Fire Classification Certificate of Fire Resistance No. PKO-18-022, was issued by Pavus, a.s.

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Fire resistance of products type LKS

**E90/EI30-EI90/EW90**

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# **10. Operating Log**

|  |  |  |
| --- | --- | --- |
| **Operating Log** | | |
| **commissioning the fire-rated LKS grid with its supplement** | | |
| date of commissioning | identified defects and failures | checked by  (signature and stamp) |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Professional Inspections** | | |
| date of inspection | identified defects and failures | checked by  (signature and stamp) |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Operating Log** | | |
| subject to regular inspection at least once every 12 months | | |
| date of inspection | identified defects and failures | checked by  (signature and stamp) |
|  |  |  |

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# **11. Warranty Repairs**

|  |  |  |  |
| --- | --- | --- | --- |
| reported repair date | repair execution  date | task description | service technician  (signature and stamp) |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

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