

User Manual and Maintenance Guide

Fire-resistant ventilation grid LKS with supplement

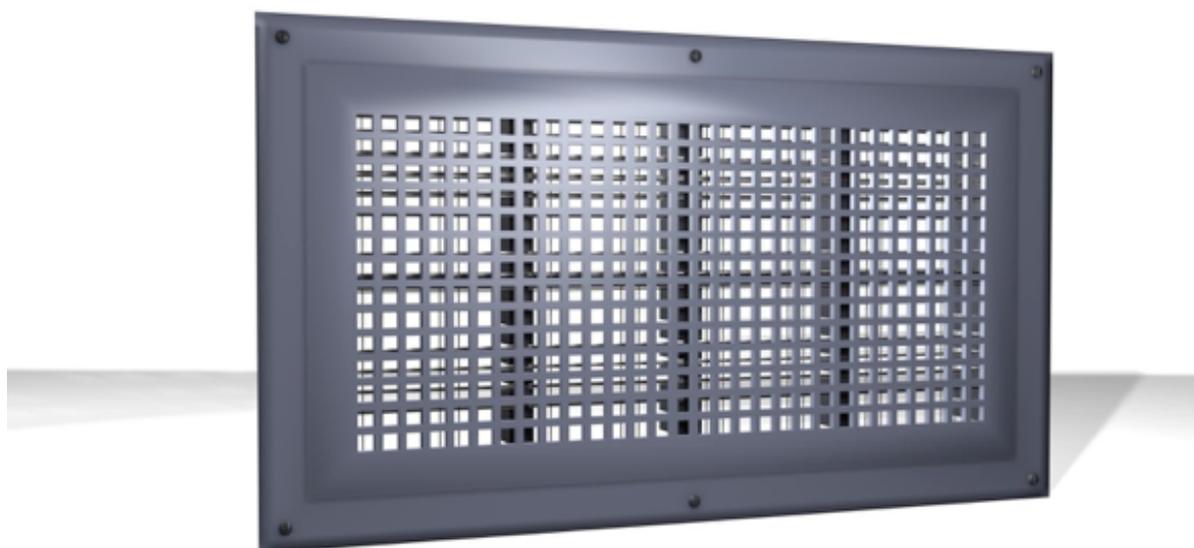


Table of contents

1. General information.....	- 2 -
2. Assembly and inspection.....	- 2 -
3. Construction design.....	- 2 -
4. Supplement.....	- 3 -
5. Commissioning.....	- 3 -
6. Operating conditions, inspection.....	- 3 -
7. Warranty terms.....	- 3 -
8. Storage a logistic data.....	- 4 -
9. Product certificate.....	- 4 -
10. Operating log.....	- 5 -
11. Warranty repairs.....	- 8 -

1. General information

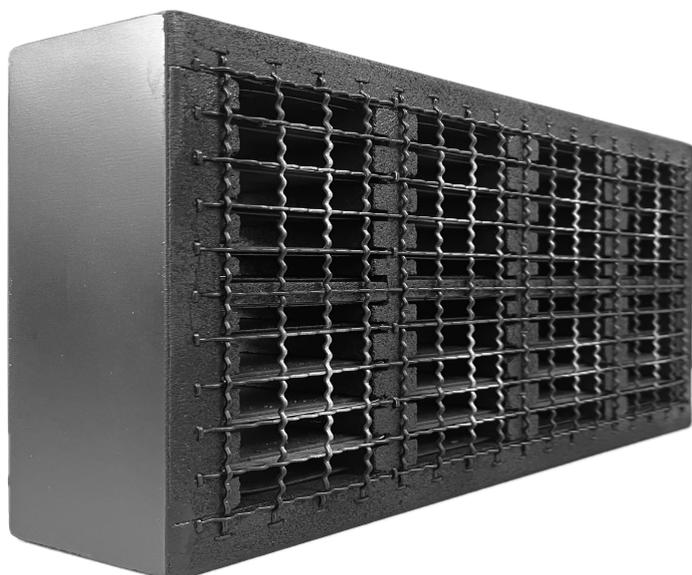
The fire-resistant ventilation grid type LKS serves as a fire barrier to connect two fire sections without additional ducting. It is securely installed in the fire partition structure. In the event of a fire, the slats of the grid will close the vent opening and prevent the spread of fire to the adjacent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

The functional part of the grid consists of horizontal slats equipped with a flexible, intumescent graphite-based seal (brand Flexilodice) on both sides. The seal has a thickness of 2 mm and an expansion activation temperature of 180°C. When exposed to fire, the seal expands at least ten fold, forming a microporous layer that effectively prevents the passage of flames, smoke, and hot gases into the adjacent fire compartment.

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.

3. Construction design



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 perform annual functionality and operational inspections of the LKS grids and LKL covers. If an inspection is conducted by a third party (not authorized by the manufacturer), the manufacturer is not responsible for any damages arising from improper use.

Inspections may be carried out by a qualified professional designated by the user (operator) following the manufacturer's operational guidelines. Inspection results must be recorded in the Operational Log, including:

- ✔ Date of inspection
- ✔ Identified defects or deficiencies
- ✔ Inspector's **full name, signature, and stamp**

During **visual inspections**, the following must be checked:

- ✔ Surface integrity of the slats and grille frame
- ✔ Possible deformations affecting functionality
- ✔ Cleanliness of all components

7. Warranty Terms

The company Likuhas s.r.o. provides a warranty period of 36 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.

In the event of unexpected manufacturing defects, the manufacturer will repair them free of charge under warranty.

A warranty claim must be submitted in writing, and the customer must provide a properly completed and validated warranty certificate.

● The warranty does not cover:

- Damage caused by improper handling, incorrect installation, or failure to follow the installation, operation, and maintenance manual
- Minor pores, cracks, or color variations in the lacquered surface of the vermiculite frame insulation board. These are normal characteristics of this material and do not affect the functionality of the product.

The warranty period is extended by the duration of any reported claim until the repair is completed.

Warranty repairs are performed by the manufacturer, covering all repair costs. If a service technician finds no defects under warranty during an inspection visit, the customer must cover the travel expenses.

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., Czech Republic, authorized person 204, Issued in July 2024, valid until July 2027.
- Technical Construction Certificate No. 080-022037 was issued by the Technical and Testing Institute for Construction Prague, s.p., Czech Republic, authorized person 204, Issued in July 2024, valid until July 2027.
- Fire Classification Certificate of Fire Resistance No. PK2-17-24-901-C-1, was issued by Pavus, a.s., Czech Republic, authorized person 216, , Issued in Jun 2024, valid until Jun 2029.

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)

11. Warranty Repairs

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

Manufacturer and distributor:

Likuhás s.r.o

Osvobození 3548/17

430 03 Chomutov

Czech Republic

Tel.: +420 775 371 570

E-mail: info@likuhas.cz

Web: www.likuhas.cz

