



**PAVUS, a.s.**

**Order number:**

Z220180346

**FIRE CLASSIFICATION APPROVAL  
OF FIRE RESISTANCE**

**No. PKO-18-055**

for product

**Trap door JAP 400 in the ceiling construction  
with suspended folding stringer »LUSSO PP or LSF«**

made on the basis of Test report  
No. Pr-06-2.073

**Sponsor:** "J. A. P." spol. s r. o.  
Nivky 67  
750 02 Přerov III-Lověšice  
Czech Republic

**Normative documents:**

ČSN 73 0810 Fire protection of buildings - General requirements

ČSN EN 1634-1+A1 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows

Fire classification approval contains 5 text pages.

**Copies in total** 3  
**Copy number** 2

## 1. TECHNICAL DESCRIPTION OF THE PRODUCT AND ITS IDENTIFICATION

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Assessment of the fire resistance is the subject of fire classification approval for product *Trap door JAP 400 in the ceiling construction with suspended folding stringer »LUSSO PP or LSF«* according to ČSN 73 0810.

External dimension of the fire shutter is 700 x 1200 mm.

Construction of the assembly:

Frame with dimension 1200 x 700 x 260 mm comprises support part of the folding steps. Grate from spruce wood (profiles with dimension 70 x 30 mm), which is part of cover of the trap door, is fitted on the steel frame.

It is used mineral felt ORSIL L thickness 30 mm (density 50 kg/m<sup>3</sup>) as thermal insulation filling. Upper side of the trap door (unexposed side) is panelled using particle board DTD thickness 10 mm. All wooden parts are impregnated with water glass (manufacturer LUKAPOL Lukavec).

Trap door is panelled from visible side (exposed side) with board SIBRAL Standard thickness 16 mm (density 300 kg/m<sup>3</sup>).

All boards are glued to supporting frame with sealant VSK – 120 (manufacturer KERAUNION, a. s. Dubí) and are screwed to supporting frame with 30 pieces of screws 4 x 30 mm.

Whole sandwich construction is panelled using galvanized steel, thickness 0,6 mm, on circumference is glued intumescent tape INTERAM I - 10 2 mm thickness and 10 mm wide (import from Germany).

Whole thickness of the trap door is 56 mm.

Trap door is fitted with two hinges, bolt and door handle from visible side to manipulation. Brace from steel sheet (thickness 0,8 mm) is riveted on the trap door in the place of hinges.

Trap door is suspended into the frame from rolled steel sheet thickness 1,2 mm using two hinges. Steel L profiles 40 x 20 x 3 mm, which fixing folding stringer LUSSO together with fixtures (spring, spring holder and rods), are fixed on upper part of the trap door using 10 pieces of steel screws.

Weight of the complete construction (therefore trap door and folding stringer with fixture) is 61 kg.

Joint between frame of the fire shutter and own opening in the reinforced concrete panel is filled gypsum milk.

Fire shutter is anchored in the panel opening in the corners using steel triangle sheets with opening together with beam of profile U and screws M 10.

Detailed description of the product including drawings is in Test report No. Pr-06-02.073 from 28<sup>th</sup> June 2006.

## 2. OVERVIEW OF THE TECHNICAL STANDARDS AND USED DOCUMENTS FOR PROCESSING FIRE CLASSIFICATION APPROVAL

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Fire classification approval for product *Trap door JAP 400 in the ceiling construction with suspended folding stringer »LUSSO PP or LSF«* was issued on the basis of these technical standards and documents:

- [1] ČSN 73 0810 Fire protection of buildings - General requirements

- [2] ČSN EN 1634-1+A1 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows
- [3] Test report of the fire resistance No. Pr-06-02.073, issued by PAVUS, a.s., ATL Veselí nad Lužnicí, dated 28.6.2006
- [4] Fire classification approval of fire resistance No. PKO-15-065/O, issued by PAVUS, a.s., dated 8.2.2016

### 3. TEST RESULTS

#### 3.1 Test reports

Name of the lab Address Accreditation number	Sponsor of the report	Report number Date of issue	Test method
PAVUS a.s. čtvrť J. Hybeše 879 391 81 Veselí nad Lužnicí ATL No. 1026	"J. A. P." spol. s r. o. Přerov III – Lověšice č. p. 67 750 02 Přerov Czech Republic	Pr-06-02.073 2006-06-28	ČSN EN 1634-1

#### 3.2 Stress conditions and test results

Test method, Report number Date of issue	Parameter	
ČSN EN 1634-1 Pr-08-2.136 2008-10-15	Fire scenario	Standard temperature / time curve
	Direction of fire exposure	From visible side of the specimen, i.e. from below from the side with hinges
	Number of exposed faces	1
	Applied load	0
	Supporting construction	Reinforced concrete panel 2000 x 2500 x 150 mm with opening for specimen fitting
	<b>Integrity (E)</b>	
	- cotton pad ignition	70 minutes, no failure
	- cracks or opening exceeding the given limits	70 minutes, no failure
	- sustained flaming on the unexposed face	70 minutes, no failure
	<b>Insulation I<sub>1</sub></b>	
	- average temperature	70 minutes, not attained
	- maximum temperature	68 minutes, TS 26
	- maximum temperature – supporting process	23 minutes, TS 30
	- maximum temperature on door frame 180 °C	70 minutes, not attained



Test method, Report number Date of issue	Parameter	
	<b>Insulation I<sub>2</sub></b> - average temperature - maximum temperature - maximum temperature on the door frame 360 °C	70 minutes, not attained 68 minutes, TS 26 70 minutes, not attained
	<b>Radiation (W)</b> (was not measured) - heat flux 15 kW.m <sup>-2</sup>	70 minutes, not attained <sup>1)</sup>

<sup>1)</sup> Calculated radiation value is 2,84 kW/m<sup>2</sup>; calculation by maximum attained temperature 360 °C (TS 29) on the unexposed face side in the time 70 minutes; calculation is conservative because it is thought with maximum attained temperature on the whole unexposed trap door face

#### 4. CLASSIFICATION OF THE TEST RESULTS

This classification was carried out in conformity with ČSN 73 0810.

Trap door JAP 400 in the ceiling construction with suspended folding stringer »LUSSO PP or LSF «, fire exposure from visible side, i.e. from below from the side with hinges has been classified according to following combination of performance characteristics and of the fire resistance classes:

**EI<sub>1</sub> 20 / EI<sub>2</sub> 60 / EW 60**

#### 5. DIRECT FIELD OF APPLICATION

ČSN EN 1634-1+A1: 2018 is not valid either for shutter built-in in horizontally construction (ceiling, roof, nonloadbearing ceilings, and like) or rules for direct field of application of the test results for shutter built-in in the horizontally construction was not specified in the previous versions. In this time rules don't exist for these shutters as extended application of the test results.

- trap door construction have to be the same and control method may not be changed.
- Conditions for dimension variants of the trap door were specified on basis of test specimen behaviour, attained value of the fire resistance, construction design of the trap door and material composition in conformity with allowable dimension variants for shutter built-in in the vertically construction.
- increase of the test dimensions is not allowed, it is allowed decrease of the dimensions to 50 % from shorter dimension and to 75 % longer dimension; it is not allowed either decrease or increase of the trap door thickness.
- It have to be keep by products with shorter decrease dimensions number of the fixings for trap door fitting to supporting constructions and number of locks and hinges identically with tested for trap door with dimensions 700 mm x 1200 mm.
- number of movement restrictors (locks, latch, hinges) can be increase
- number of fixing used to cover ⇔ manhole (frame) can be increase, distance between fixing may be reduced.
- using for fitting in the other ceiling construction is allowed provided that thickness of the reinforced concrete panel is the same or greater than ceiling construction in which shutter was tested

## 6. VALIDITY OF THE FIRE CLASSIFICATION APPROVAL

Time validity of this Fire classification approval is until **2021-10-15**.

This Fire classification approval supersedes and cancels Fire classification approval No. PKO-15-065/O, dated 8.2.2016 (see [4], chap. 2 of this document).

*This fire classification approval is valid only as a whole; each page has to be provided with the identification number of fire classification approval and page number of the total number of pages. This fire classification approval does not substitute either the type of approval or the certification of products.*


Elaborated by:

Checked by:

Approved by:

  
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Managing director of PAVUS, a.s.

Prague, 15<sup>th</sup> October 2018



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