

## HUECK DEVELOPS THE FIRST SMOKE PROTECTION DOOR WITH CE MARKING FOR EXTERNAL USE

With the upgrade of the tried-and-tested HUECK Lava 77-S aluminium smoke protection door, the Lüdenscheid-based systems provider now offers a CE-certified solution for external applications. The new HUECK Lava 77-S CE smoke protection door is unique on the market and adds a pioneering solution to the product family of HUECK System GmbH & Co. KG. In addition, the product portfolio now also incorporates an external fire door with a CE mark in the form of the HUECK Lava 77-30 CE, which has undergone further development.

HUECK is the first systems provider to develop a CE-tested, thermally insulated aluminium smoke protection door for external use. In keeping with HUECK's tried-and-tested component-sharing principle, HUECK Lava 77-S CE extends the HUECK Lava modular system with an innovative new construction. HUECK Lava therefore brings together all the possibilities for indoor and external use, as well as for fire and smoke protection, in one profile system. The new external smoke protection door is available as a single- and double-leaf door and is fully suitable for inward- and outward-opening use.

“As a CE-certified product, the thermally insulated smoke protection construction is classified according to the requirements of product standard DIN EN 16034 for fire protection in doors, windows and industrial doors, as well as product standard DIN EN 14351-1 on the external use of doors and windows. These requirements are enshrined in the Model Building Code and in the Model Administrative Provisions – Technical Building Rules,” explains Sebastian Manka, who played a substantial role in the development of the new smoke protection construction as HUECK product manager.

**CE marking:** With the CE mark, a manufacturer declares at their own responsibility that the marked product meets the essential legal requirements of the product category. This serves to document compliance with fundamental safety standards, which are defined by the applicable EU regulations and corresponding test procedures.

Sources: ift Rosenheim GmbH (2020), TÜV Rheinland AG (2020)



Figure 1: HUECK Lava 77-S CE external smoke protection door (source: HUECK)

Thanks to its highly insulated composite system, the door satisfies even the most stringent thermal insulation requirements. With a thermal insulation value of  $U_f \leq 1.6$  to  $2.4 \text{ W}/(\text{m}^2\text{K})$ , the innovative smoke protection door from HUECK comfortably satisfies the stipulated maximum value of  $U_f \leq 2.9 \text{ W}/(\text{m}^2\text{K})$  and thus excludes the possibility of condensation and mould. Moreover, the aluminium construction meets the requirements of the German Energy Saving Ordinance (EnEV 2016) in terms of the minimal reference value for doors and windows. With a maximum value of up to  $U_d \leq 1.0 \text{ W}/(\text{m}^2\text{K})$ , it satisfies the required reference values of  $U_d \leq 1.4 \text{ W}/(\text{m}^2\text{K})$  for new constructions and  $U_d \leq 1.8 \text{ W}/(\text{m}^2\text{K})$  for renovations.

The upgraded HUECK Lava 77-S CE can be coupled with the tried-and-tested HUECK Lava 77-S glazing, and it is also possible to implement doors with side lights and fanlights as a wall construction. Furthermore, the aluminium construction offers maximum flexibility when it comes to the incorporation of glazing, so that a wide range of customer requirements can be met. It is therefore possible to install everything from single-glazed or laminated safety glass with a thickness of 6 mm to triple glazing with a thickness of up to 54 mm. Triple glazing with a thermal insulation value of  $U_g \leq 0.5 \text{ W}/(\text{m}^2\text{K})$  represents an exceptionally energy-efficient solution.

In addition, the new external smoke protection door from HUECK is available as a single- and double-leaf construction and is fully compatible with installation for inward- and outward-opening use. The single-leaf variant can be implemented with maximum frame dimensions of  $2,000 \times 2,895 \text{ mm}$  (width x height), while the double-leaf version allows a maximum width of  $3,401 \text{ mm}$  with the same maximum height. This translates into leaf sizes of up to  $1,496 \times 2,609 \text{ mm}$  (width x height).

The construction can be installed with aluminium or stainless steel barrel hinges, which are not only particularly beneficial in terms of aesthetics but also allow smaller leaf widths in double-leaf escape doors. Another advantage lies in the high weight discharge of up to 250 kg. HUECK Lava 77-S CE comes with three-piece screw-on type hinges as standard, but a cheaper version is also available with two-piece hinges.

Furthermore, the new smoke protection door is compatible with single- and multi-point locking. As well as escape-door locks for external applications, it is also possible to implement a motorised espagnolette lock for double-leaf external doors, especially for revolving door drives. Moreover, the innovative external door provides burglar-resistant characteristics up to resistance class RC2 in accordance with DIN EN 1627. In the new HUECK Lava 77-S CE, this characteristic can be combined with a panic function according to DIN EN 179 and DIN EN 1125.

The new HUECK Lava 77-S CE smoke protection door offers a range of benefits on the assembly side and can, for example, be attached to bare steel and aluminium supporting structures, which can also be installed in front of a wall. In addition, it is suitable for covering with thermal insulation composite systems. Planners and architects in particular will welcome the fact that, in the case of double-leaf doors, it is now possible to incorporate a concealed door co-ordinator in the upgraded version instead of the visible screw-on door co-ordinator. It is also possible to attach a revolving door drive, as well as roller blind-style finger protection to prevent a risk of crushing.

#### **Model Building Code and Model Administrative Provisions – Technical Building Rules:**

The Model Building Code (MBO), as revised in 2016, serves as a guideline for Germany's 16 state building codes, which regulate the planning, design and construction of buildings and the use of construction products. The Model Administrative Provisions – Technical Building Rules (MVV TB) provide a clearer delimitation of requirements and further differentiation of construction products.

Sources: Deutsches Institut für Bautechnik (2020), FeuerTrutz Network GmbH (2019)

#### **German Energy Saving Ordinance:**

The German Energy Saving Ordinance (EnEV) defines energy-efficiency requirements with regard to the thermal insulation status of heated or air-conditioned buildings, for example. A distinction is drawn between new buildings and renovation projects.

Sources: Heinze (2016), Verbraucherzentrale (2020)

In parallel to the new smoke protection door, HUECK has also been working to optimize the tried-and-tested HUECK Lava 77-30 CE external fire door. This upgraded aluminium construction also meets the legal requirements according to DIN EN 16034 and DIN EN 14351-1, as well as the requirements of the German Energy Saving Ordinance (EnEV 2016) in terms of the reference value for doors in new buildings and renovation projects. The thermally insulated HUECK Lava 77-30 CE also comfortably satisfies the minimum values of  $U_f \leq 2.9 \text{ W}/(\text{m}^2\text{K})$  required in DIN ISO 10077-1 to prevent condensation and the resulting mould. It can also be integrated into the tried-and-tested HUECK Trigon 50 FP 30 fire protection façade. With the upgrade, the external fire door has also gained additional burglar resistance characteristics up to resistance class RC2, and these can also be combined with a panic function. "This combination sets it apart in the market for aluminium constructions," explains product manager Sebastian Manka.

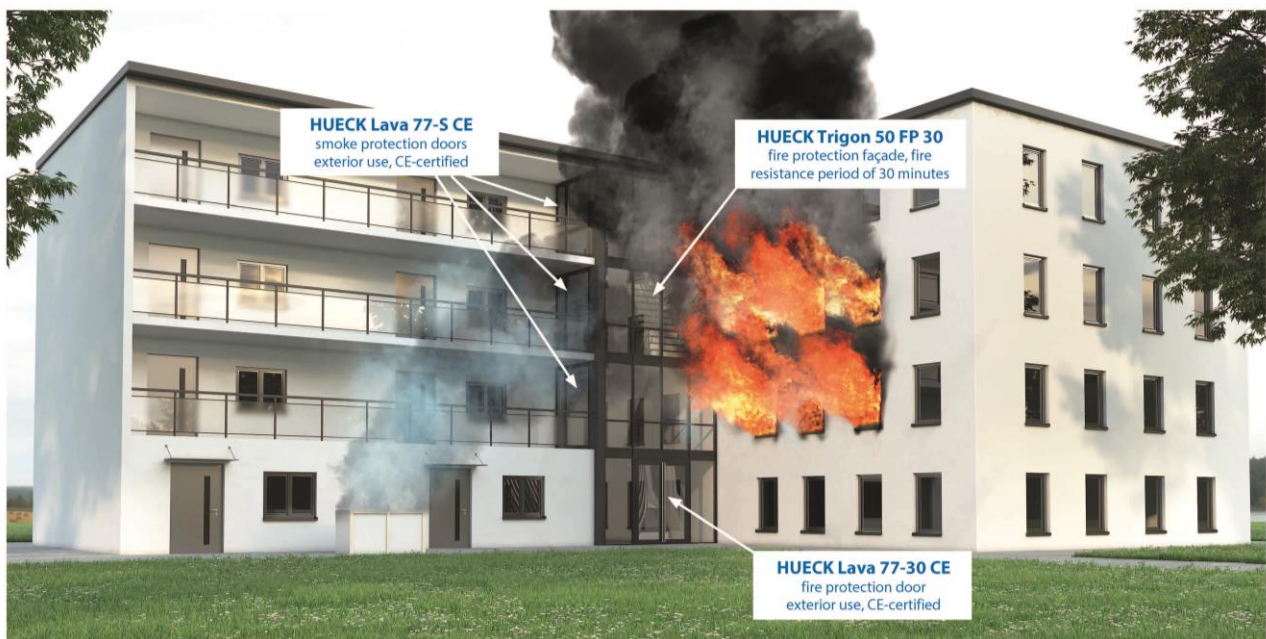


Figure 2: HUECK Lava 77-S CE, HUECK Trigon 50 FP 30 and HUECK Lava 77-30 CE in situ (source: HUECK)

Further information on the fire and smoke protection constructions from the HUECK Lava series is available at: [www.hueck.com](http://www.hueck.com).

The HUECK Group is a family company with operations worldwide. Founded in 1814, the company now employs over 500 skilled members of staff and can look back on more than 100 years of experience in aluminium processing. This, combined with an enduring innovative spirit, forms the bedrock of the company's outstanding international reputation. It is one of the leading European manufacturers of aluminium profile systems for windows, doors and façades as well as of aluminium profiles for the processing industry.