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Fire, smoke and soundproof wooden door EI30/Rw40dB installation and maintenance instructions

The fire resistance of these wooden doors has been determined in accordance with test standard EN1634-1: 2014 + A1: 2018, smoke resistance in accordance with EN 1634-3: 2004, self-closing in accordance with standard EN 1191: 2012 and classified according to standard EN13501-2: 2016. The value of the weighted airborne noise insulation index R_w , measured in the laboratory and determined according to ISO 717-1, is $R_w(C;Ctr) = 40 (-2; -5)$ dB. Permitted dimensions and other accessories according to the approved technical specification in the certificate of conformity ANNEX Z.

This is a product designed to ensure human safety, so read this manual carefully before installation. The person responsible for the construction work must ensure that the following requirements are met. The signed installation and maintenance instructions must be available if necessary and will be added to the building's completion documentation at a later date.

Order No. _____

Contracting

entity: _____

Responsible person (name, signature) _____

Door marking: _____

Installation company: _____

Installer (name, signature) _____

Date: _____

Upon receipt of the order:

Check that the specification and quantity of the goods correspond to those indicated in the accompanying documents (invoice). Certified doors have the corresponding markings on the hinge side at the height of approx. 1700 mm. Please submit comments and complaints to the seller within seven days of receipt of the goods.

To protect the products from dirt, and possible mechanical damage during transport and handling, the door sets are always delivered assembled and packed in a polyethylene plastic bag. Corrugated cardboard boxes are attached to the longer sides of the frame for extra protection. One side of the box shall bear the following information:

- production order number;
 - customer ID
 - production order pos. No
 - door set dimensions or module designation, e.g., M10x21
 - the handiness of the door set.
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Transport packaging is not suitable for long-term storage of products on site.

In the event of transport damage, a corresponding note must be made on the consignment note of the transport company upon receipt of the goods. It is not permitted to install a defective or damaged product without the permission of the manufacturer!

The door factory does not reimburse the additional costs caused by the installation of damaged products.

Pre-installation storage

The doors are packed in a transport package that only protects the door set during transport and handling. When moving by hand, it must be taken into account that larger door sets can weigh more than 80 kg, in particular, to avoid falling into a corner. The doors must be stored indoors in a dry and even temperature, outdoor storage is not permitted! The products must be stacked horizontally on a flat and dry base with at least three supports of the same thickness per door height to distribute the weight evenly.

Veneered doors must be protected from direct sunlight to prevent fading and the resulting differences in color.

The doors are made of wooden materials, which tend to swell under the influence of moisture, and in the worst case, this can lead to cracking of the finishing layer and breakage of the adhesive joint.

The manufacturer accepts no liability for moisture damage caused by improper storage or processes in progress or on-site (casting, tiling, finishing, etc.).

Installation of doors

Fire doors are intended to close the passages between the fire compartments of heated work and living quarters. The passage gap of the doors is designed to ensure the required performance characteristics of the fire doors; therefore, special care must be taken with the installation work, and we strongly recommend the use of an experienced installation team.

The manufacturer is not responsible for errors or possible inconveniences during operation due to incorrect installation.

The door leaf or the frames must not be machined or adjusted in any way, and accessories not intended for the doors must not be attached!

When installing the door set, proceed as follows:

1. Carefully remove the door from the package, then remove the door leaf from the frame by lifting the door leaf off the hinge pins. Lean the door leaf stably against the adjacent wall by placing pieces of corrugated cardboard between the lower edge of the door leaf and the floor and between the upper edge and the wall to prevent damage to the door leaf or wall. Make sure that the structural opening in which you want to install the fire door is 20-30 mm larger than the outer dimensions of the frame, the maximum permissible distance between the sides is 20 mm and at the top 30 mm. If the sealing cracks are larger, the opening must be corrected.
 2. Make sure that the surface below the door sill is smooth and level. If necessary, support the gap under the door sill with wedges or wooden blocks to prevent possible deflection when stepping on the sill.
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3. Raise the frame into the opening and fix with wedges from the upper and lower corners at right angles to the vertical position (see **Figure 1**), check the leveling of the top jamb with a spirit level. The opening in which you are going to install the door must be dry!
 4. Start attaching the frames to the lower hinge of the vertical frame on the hinge side, if necessary, drill a hole in the wall through the mounting hole in the frame for the dowel. Place additional wedges or support block above the mounting hole (behind the lower hinge) and secure the frame firmly with the Ø6 * 90/120 mm screws, see **Figure 1A**. Fasteners must be selected according to the type of wall (concrete, brick, lightweight block, wood, etc.), if necessary, consult the seller of fastening accessories. The depth of the screw fastening in the wall must be at least 40 mm. The recommended installation is with special adjustable frame screws Ø6*120 mm (JAMO Schraube Typ 4, AW 30, galvanized steel, manufactured by Adolf Würth GmbH & Co. KG). If the gap between the wall and the frame is 10 mm or less, screws measuring Ø6*90 mm can be used for installation. Plastic or metal dowels with min dimensions Ø8*40 mm according to the wall type can be used.
 5. Then place additional wedges or a support block under the upper mounting hole (behind the upper hinge), double-check the verticality of the hinge-side upright frame with a long spirit level, and fasten, see **Figure 1B**.
 6. Proceed in the same way with the rest of the mounting holes on the hinge-side vertical frame, make sure that the frame is not curved, and is completely vertical, then tighten the screws completely. If special ex-post-adjustable frame screws are used to fasten the frame, the wedges can be omitted in some places behind the mounting holes, but in no case at the outer corners or behind the top/bottom hinge, see **Figure 1**). For safety reasons, the wedges or support block must also be placed behind the lock strike.
 7. Wedge, support, and secure the vertical frame on the lock side of the frame by, from time to time, checking the verticality with a long spirit level. Check that the door opening (light opening) is of the same width if necessary, adjust with screws and wedges. Place the door leaf in the frame. Check that the door leaf opens and closes freely and, if necessary, make ex-post adjustments to the vertical frame on the lock side so that the front surfaces of the door leaf and the frame are flush with the entire height of the frame. (The locking of the latch and the pressure on the seals can be slightly adjusted with a lock strike after final installation and sealing).
 8. Check that the passage gaps between the door frame and door leaf are equal and within the range of 1.5-3 mm. (Fine adjustment of the passage gaps is made after the final installation and sealing of the frame, see "Hinge adjustment" below). Care must also be taken to ensure that there are no cracks between the upright frame and the top jamb/door sill, tighten the corner wedges if necessary.
 9. Check that the diagonals are even, and the upright frames are vertical in both directions, then tighten the locking screws on the lock side completely.
 10. The mounting holes shall be covered with plastic caps (included).
 11. The crack between the door frame and the wall is sealed with stone wool (A2-s1, d0), fireproof polyurethane foam (Soudafoam FR or similar), and from the room side (the warmer room) with fireproof acrylic sealant (Soudal Firecryl or similar), see **Figure 2**. Sealing with a sealant must be careful because even the smallest infiltration degrades the sound insulation, the recommended thickness of the layer is 10-20 mm. When weatherstripping, care must be taken to ensure that the frames do not bend due to excessive use of sealing materials.
 12. The installation gap is covered on both sides with suitable slats, min thickness 12 mm.
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Remember!

Fire and soundproof wooden doors are heavy, and care must be taken when moving or installing them by hand.

A special silicone seal is used in the door leaf, which exerts a back pressure when closing the door; therefore, it may happen that sometimes the door does not close properly.

Check the locking of the tumbler manually.

The use of painting tapes and films on doors

When finishing the surfaces adjacent to the door, it may be necessary to cover the door leaf and frames with painting film.

The following must be taken into account when taping:

- Use tapes recommended by the paint manufacturer.
- Follow the tape manufacturer's instructions.
- In places exposed to direct sunlight, the tape must be UV-resistant.
- The surfaces to be taped must be clean and dry.
- Remove the tape as soon as possible, after 3-4 days at the latest. Softeners added to improve the adhesion of the adhesive layer of the paint tape may damage the finish.

If in doubt about the suitability of the tape, try it on a smaller and less visible surface first.

The paint manufacturer recommends the use of the following tapes:

Tesa Blå 4308, Scotch Blue 2080 60 Day, Scotch Blue 2090 14 Day.

The manufacturer accepts no liability for defects caused by improper use of the tapes - tears in the veneer layer, changes in the color, or removal of the finishing layer.

Maintenance of fire and smoke doors

Fire and smoke doors are frequently used products and play an important role in the fire safety of the entire building, so the building owner is obliged to ensure that all opening fillings are fully operational and to be regularly monitored at least once a year.

Maintenance of fire and smoke doors includes an assessment of the door assembly and surrounding structure, self-closing ability control, automatic closing control in the case of ATS, latching, locking, and other maintenance activities.

Maintenance work must be documented by the owner.

Operation and maintenance of escape doors and locks

Escape doors and fittings must be regularly inspected by a person appointed by the official in charge of the building or establishment. The frequency of inspections shall be determined by the staff member responsible but shall take place at least quarterly. The inspection and, where necessary, maintenance of escape doors and locks must ensure their proper functioning in an emergency.

If the door in the escape route is a fire door, the fire door must also be checked once a quarter.

Hinge adjustment

The used door hinge N3248-110 TMKSS allows vertical and horizontal adjustment

Door leaf adjustment up/down, see Figure 3.

Remove the protective cap **1** (5 mm hex key) on one door hinge.

By turning the hexagon bolt below it **2** (with a 5 mm hex key) clockwise, the door leaf moves upwards (one full turn raises the door leaf 1 mm), when turning the bolt counterclockwise, it moves downwards. When the door leaf has risen to the desired height, adjust the other hinges in the same way so that the weight of the door leaf is evenly distributed between the hinges. Slightly tighten the upper protective caps **1**.

Adjusting the lateral passage gaps, see. Figure 3

Open the door leaf so that the frame-side hinge mounting screws can be accessed without hindrance. Loosen the middle hinge mounting screws **3** with a crosshead (Phillips) screwdriver by approx. 1.5 turns. Turn the adjusting bolts **4** (4 mm hex key) clockwise to increase the passage gap on the hinge side (one full turn moves the door leaf by approx. 2 mm). Turn the adjusting bolts **4** to the same depth, carefully tighten the fastening screws **3**. If necessary, make the same adjustments at the upper hinge. It is important that the axis of the middle hinge is in line with the axis of the upper and lower hinges. Finally, retighten the fastening screws **3** of all hinges.

Remember! The adjustment of the hinges corrects the position of the door leaf in relation to the frame (passage gaps), it cannot be used to eliminate the curvature of incorrectly installed frames. Regular lubrication of the door hinges twice a year improves their performance and prolongs their service life.

Lock maintenance

For proper operation of the lock, lubricate all moving parts with lock oil at least once a year. Check that the bolts on the handle, lock frame and keyhole are properly tightened. Remember that the locks only work if the doors are properly closed. As a special silicone seal is used in the door leaf, which exerts a back pressure when closing the door, the locking of the tumbler must be checked manually by pulling or pushing the door leaf.

Surface care

Varnished, painted, and oil-impregnated surfaces must be kept dry. Any stains must be removed immediately to prevent them from drying or absorbing. Clean the surface of a painted, varnished, or laminated door with a soft cloth, if necessary, use a general cleaning agent in the prescribed ratio with water. The cleaning agent should be sprayed on the cloth, not on the surface to be cleaned. If, after cleaning, the surface remains wet for more than 30 seconds, the surface should be dried, not allowed to dry.

We recommend cleaning the door glass with a standard glass cleaner using a soft cleaning cloth. Do not use soluble organic compounds such as acetone, alcohol, benzene, nail polish remover, etc., to clean the surfaces of doors and frames. Also, pastes and liquids containing bleaching and abrasive substances, scouring powders, brushes, and other mechanical aids must not be used.

When using disinfectants containing alcohol, never spray them on a painted or varnished surface, but pour or spray them on a soft cleaning cloth and then clean the handles, key sockets, rosettes, and other surface-mounted fittings.

Closing device

The fire door must be equipped with a closing device which, according to the manufacturer's specifications, corresponds to the place of use and door parameters (width, mass) of the given door in terms of its closing force and other characteristics and ensures complete closing of the door. Door latches shall comply with the harmonized standard EN 1154 "Window and door accessories."

Controlled door closing devices. Requirements and test methods "and bear the corresponding CE marking.

The **third** digit of the door latch number code indicates the force of the door latch according to the weight of the door leaf and should be at least **4**, i.e., it is suitable for closing a door leaf **weighing up to 80 kg**.

The **fourth** digit of the door latch number code characterizes the fire resistance of the door:

- class **0**: not suitable for use in fire doors;
- class **1**: suitable for use on fire doors.

The closing device must not be adjustable so that the door can be fixed in the open position, or the closing device can be detached from the door leaf without the use of tools.

In the case of a hinged double door, of which only one side is opened daily, and the other side is kept latched, the closing device must only be on the first-mentioned (active) door leaf.

The closing device does not have to be used on the exterior doors of apartments and on technical rooms and maintenance rooms that are kept locked in normal use.

If the use of the room requires the door to be kept open at all times, the door must be fitted with a closing device which closes the door automatically in the event of a fire.

For double doors with a closing device on both door leaves, a door damper must be used to close the door leaves in the correct order. Both leaves of the door set must automatically latch when closing.

A high-speed or automatic latch must be used to lock the passive door leaf of a double door. By way of exception, the edge latch can be used only on the exterior doors of apartments, on the doors of accommodation rooms, and on technical rooms and maintenance rooms that are kept locked in normal use.

The manufacturer reserves the right to make changes.
