

Specification Text

Automatic sliding door system **TORMAX T2 opac hermetic** single leaf and hermetically closing

Dimensions

Passage width mm (800 – 2000 mm)
Clear passage height mm (up to 2500 mm)
Overall width mm (standard approx.: 2 x passage width + 300 mm + 2 x side plate (2 x 17 mm))
Overall height mm (standard approx.: clear passage height + 296 mm)

TORMAX T2 opac hermetic sliding door system

Automatic, hermetically closing TORMAX sliding door system, complete, in the drive-power class corresponding to the leaf weight and/or the customer's option.

TORMAX 2353.HERM:	Door system up to 150 kg Door system up to 300 kg (with force compensator)
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TORMAX 2453.HERM:	Door system up to 300 kg
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The system consists of the following main modules:

- Complete drive unit with integral TORMAX 7501 combi-sensor
- Complete door leaf manufactured to the customer's requirements and with circumferential seal
- Aluminium wall connection profile with customer-specific surface treatment
- Operating components and accessories

Technical characteristics:

- Door leaf weight: max. 300 kg (single leaf)
- Opening direction: left opening (EL) / right opening (ER)
- Passage width: 800 – 2000 mm
- Passage height: up to 2500 mm
- Drive housing dimension: 135 x 280 mm (D x H), with inclined upper side
- Air permeability: up to class 4 to 100 Pa (EN1026 / DIN EN12207)
- Sound absorption: up to sound absorption class 3, $R_w = 37\text{dB}$ (EN ISO 717-1)
- Meets the current directives 2006/42EC, 2014/35/EU, 2014/30/EU
- Meets the current standards DIN 18650, EN 16005, EN13857, EN 60335-1,-2,-103, EN 61000-5-2,-3, EN ISO13849-1:2008, Performance Level "c"
- Approvals: CE, TÜV

Hermetically sealed door leaf (sealing on all 4 door sides)

- (_) **Standard door leaf, hermetic**, sealing on all 4 sides of the door by means of gentle lowering/pressing against the wall connection profile and finished floor.

Organic door leaf core made from 3-layer ply wood composite board. The circumferential aluminium door-frame profile and the surface layer (HPL, stainless steel or glass) are bonded flush with adjacent areas on all sides. Thus cleaning fluids, disinfectants and water sprays cannot penetrate and no protruding or pull-in edges are formed. Specially designed multi-component seal with soft edge and smooth non-stick surface.

50 mm thick door leaf with specific weight of approximately 39 kg/m², air permeability class 4 up to 100 Pa (positive and negative pressure).

- (_) **Standard door leaf with enhanced sound absorption (optional)**, standard door leaf as described above; meets sound absorption requirements up to class 3 (R_w =37 dB) EN ISO 717-1

- (_) **Wet room door leaf, hermetic (optional)**, sealed on 4 sides of the door by means of gentle lowering/pressing against the wall connection profile and finished floor.

Inorganic solid door leaf core made from polystyrene for wet room areas, climates with high atmospheric humidity and similar applications. Internal reinforcement with steel frame and circumferential 100% waterproof polyurethane frame.

The aluminium door-frame profile and the surface layer (HPL, stainless steel or glass) are bonded flush with adjacent areas on all sides. Thus cleaning fluids, disinfectants and water sprays cannot penetrate and protruding or pull-in edges are formed. Specially designed multi-component seal with soft edge and smooth non-stick surface.

50 mm thick door leaf with specific weight of approximately 27 kg/m². Air permeability class 4 up to 100 Pa (positive and negative pressure).

- (_) **Radiation protection (optional):**

Each type of door leaf described above can be equipped for radiation protection with either 1 or 2 or 3 mm lead insert. The thickness of the door leaf increases to 58 mm.

The weight per m² increases:

With 1 mm lead by 16 kg/m², with 2 mm lead by 25 kg/m² and with 3 mm lead by 34 kg/m²

(_) **Fire and smoke protection (optional):**

Tested according to EN1634-1 and EN1634-3. Classification achieved: EI₁30-C Sa/S200 and EI₂30-C Sa/S200 in accordance with EN 13501-1. Each type of organic hermetic door leaf described above (with HPL only) can be fitted with a choice of 1 or 2 or 3 mm lead inserts for fire protection. The thickness of the door leaf is 58 mm. The door leaf size is limited to (W x H) 1800 mm x 2290 mm. Door leaf reductions are permitted. Door leaf enlargements must be agreed with product management. A lightweight construction with steel tube reinforcement or timber studs in accordance with the direct area of application EN1634-1 is used as the wall support structure. The national fire protection regulations must be observed.

Airtight door leaf, sealing on 3 door sides

(_) **Standard door leaf airtight**, Sealing on 3 door sides, achieved by gently pressing against the wall connection profile. Organic door leaf core made of 3-layer wood-based panel. The all-round aluminium door frame profile and the cover layer (HPL, stainless steel, glass) are glued all the way round and flush with the surface. This prevents the ingress of hygienic liquids or splash water and there are no bump or pull-in edges. Specially designed multi-component seal with soft edge and smooth non-stick surface. Door leaf with specific weight of approx. 39 kg/m² and 50 mm thickness.

(_) **Wet room door leaf airtight (optional)**, sealing on 3 door sides, achieved by gently pressing against the wall connection profile. Non-organic solid plastic door leaf core made of polystyrene for wet room areas, climates with high humidity and similar applications. Internal reinforcement with steel frame and all-round, 100 % waterproof PUR frame. The aluminium door frame profile and the cover layer (HPL, stainless steel, glass) are bonded all the way round and flush with the surface. This prevents the ingress of hygienic liquids or splash water and there are no impact or pull-in edges. Specially designed multi-component seal with soft edge and smooth non-stick surface.

Door leaf with a specific weight of approx. 27 kg/m² and 50 mm thickness.

(_) **Radiation protection (optional):**

Each type of door leaf described above can be equipped with a choice of 1 or 2 or 3 mm lead insert for radiation protection. This increases the thickness of the door leaf to 58 mm. The weight per m² increases:

With 1 mm lead by 16 kg/ m², with 2 mm lead by 25 kg/ m², and with 3 mm lead by 34 kg/ m².

Door surface

- HPL: Surface layer both sides with 2 mm HPL
 - HPL antibacterial: Both sides 2 mm HPL, HPL – joint at 1250 mm
 - Stainless steel: Both sides with 1.5 mm brushed stainless steel 1.4301
 - Glass, anti-bacterial: Both sides 4 mm anti-bacterial glass
- HPL – colour: NCS:
- Anti-bacterial glass, colour: NCS:

Frame profile, door leaf

- Aluminium, naturally anodised
- Aluminium, powder coated RAL: / NCS:
- Aluminium, powder coated, anti-bacterial RAL: / NCS:

Wall connection profile (architrave)

- Aluminium, anodised
- Aluminium, powder coated RAL: / NCS:
- Aluminium, powder coated, anti-bacterial RAL: / NCS:
- Profile on door side only
- Profile on both sides

Window

The window insert is bonded flush on all sides with adjacent surfaces, without protruding or pull-in edges.

Standard glass package, triple glazed (laminated glass),

Ug value to DIN EN 673 in W (m²K) = 0.7

- 400 x 400 mm standard window
 - 300 x 600 mm standard window
 - 600 x 600 mm standard window
 - Ø 300 mm standard window, round
 - Ø 500 mm standard window, round
- Customer-specific window
- Size (W x H):
- Glass type:

Window options

- () Anti-bacterial glass
- () Sound absorbent glass
- () Radiation protection glass
- () Fire-resistant glass (maximum glass size, (W x H) 1005 mm x 900 mm)

Blinds

The blind is installed in the space between the glass panes and is not available for round windows or for fire protection. The blind control and the power supply unit are located inside the drive housing. The power supply is concealed and realised via a spiral cable.

- () Manual blind with drawstring (Operation from the drive side)
- () Electric blind incl. switch, power supply unit, control system and power feed via a spiral cable.

Blind - colour: NCS:

Door handles

- () Hand lever L 535 mm on both sides, stainless steel
- () Bow-type handle L 350 mm, anodised aluminium Internal: External:
- () Bow-type handle L 350 mm, stainless steel: Internal: External:
- () Bow-type handle L 500 mm, anodised aluminium Internal: External:
- () Bow-type handle L 500 mm, stainless steel: Internal: External:
- () Recessed grip, anodised aluminium: Internal: External:
- () Recessed grip, stainless steel: Internal: External:

Drive unit and additional modules

- () **TORMAX 2303.HB** Electromechanical sliding door drive with programmable microprocessor control and DC motor with temperature monitoring and holding brake
 - Suitable for max. 150 kg door weight
 - With force compensator up to 300 kg door weight
 - Door speed max. 68 cm/s, depending on the door weight
 - Noise absorbed guide rail with lowering unit
- () **TORMAX 2403.HB** Electromechanical sliding door drive with programmable microprocessor control and 2 DC motors with temperature monitoring, of which 1 motor with holding brake
 - Suitable for max. 300 kg door weight
 - Door speed max. 45 cm/s, depending on the door weight
 - Noise absorbed guide rail with lowering unit

Technical characteristics of the drive versions

- Sliding door drive modular expandable
- Supply voltage: 230 VAC / 50 Hz, 115VAC / 60Hz
- Power supply for external loads: 24 VDC, max. 1.5 A
- Protection class: IP20
- Ambient temperature: -20°C to +50°C

Integrated functionality and connection options to the basic control system

- Connection for lock module (LIN-BUS)
- Connection for monitored battery module (LIN-BUS)
- Connection for Skipper configuration tool (RS232)
- Connection for 4 testable safety features complying with EN 16005
- Connection for multi-functional user interface with 5 selectable operating modes and detailed status and error display (LIN-BUS).
- Connection for operating mode switch (3 operating modes)
- 2 freely programmable outputs
- 4 freely programmable inputs
- Operating modes: OFF, AUTO, EXIT, OPEN and MANUAL
- Push & Go function with programmable opening width
- Pull & Close function
- Separate functions for partial and full opening and for step control
- Opening width and hold-open selectable for each function
- Automatic recording of system-specific data (door mass and friction)
- Error detection and logging
- Electronic obstruction detection in closing and opening direction with adjustable reverse sensitivity

- Easy manual operation in the event of a power failure with automatic speed restriction
- Simple commissioning
- Silent when motionless as motor switches off, programmable
- Power switch with integral status LED

(_) **Additional module MDM:** Additional functionality and connection options

- Air lock function (networked with CAN-BUS)
- 4 freely programmable inputs (2x potential-free)
- 4 freely programmable outputs (4x potential-free)
- Networked to building management system, RS485 (MOD-BUS)

(_) **Monitored battery unit MCU42-BMU-B**

Includes the batteries MCU32-ACCU-7-A and the battery module MCU32-MBAT-24-A

(_) **Lock unit with manual unlocking**

Drive housing

Drive housing made from aluminium profiles with dirt-repellent included upper side and hinged, automatically repositioning front for rapid and simple service access.

(_) Aluminium, naturally anodised

(_) Aluminium, powder coated RAL/NCS – colour:

(_) Aluminium, powder coated, anti-bacterial RAL/NCS – colour:

Potential equalisation set

(_) Spiral cable (cable connection (4 mm²) between drive and door leaf) complying with NIN 2015 (SN 411000: 2015)

Sensors

(_) TORMAX 7501 combi-sensor with movement direction recognition and presence detection The presence detection field can be projected into the door opening to cover the entire passage area.

Accessories

(_) Multifunctional user interface with 7 segment display and 2 button operation with 5 operating modes (AUTO, EXIT, PERMANENTLY OPEN, CLOSED, MANUAL, compatible with the 45 x 45 mm Legrand System

(_) Operating mode switch (AUTO, PERMANENTLY OPEN, CLOSED) compatible with the 45 x 45 mm Legrand System

(_) Elbow switch, white, 81 x 223 mm (W x H)

(_) Elbow switch, stainless steel look, 81 x 223 mm (W x H)

(_) Foot switch, stainless steel, 250 x 75 x 15 m (W x H x TD)

(_) ClearWave touch-less switch