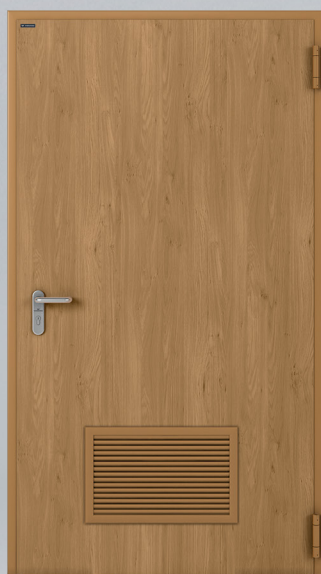


STEEL DOOR



STANDARD DOORS
AVAILABLE IN STOCK



WIŚNIOWSKI

GATES | WINDOWS | DOORS | FENCES

EXTERNAL AND INDOOR STEEL SEAMLESS DOORS

Intended use: Seamless steel door is a perfect solution for multi-family housing, offices and healthcare facilities, industry, tourism or in technical sections of residential buildings, e.g. boiler rooms or basements. They will be perfect for extensively exploited places, in passageways, warehouses or industrial halls. They can be used indoors or outdoors.



DURABLE

Using modern technological solutions and top-class materials, we are able to provide stable and durable structure of the door, resistant to physical agents and weather.



SOLID STRUCTURE

The structure of a seamless door consists of a solid or glazed leaf and steel frame made of profiled sections. It guarantees many years of reliable operation.



FUNCTIONAL

Due to the wide variety of available colours and applications, and a special structure that enables different opening directions the seamless steel door is a all-purpose solution. With seamless steel door, you can choose from a wide range of additional equipment.



EASY INSTALLATION

Specially developed structure guarantees quick and easy installation.



ECO Tech

SINGLE-LEAF EXTERNAL SEAMLESS STEEL DOOR



CHARACTERISTIC FEATURES

The ECO Tech seamless steel door is a single-leaf, swing, rebate door (“with a thick rebate”). The door features a solid leaf or partially glazed leaf and a steel opening frame with a drop-down seal or with a fixed threshold and a drop-down seal. The external door features three anti-burglary bolts per leaf.

Description

The leaves of the ECO Tech single-leaf seamless steel solid or glazed doors are made of two galvanized sheets 1.0 [mm] thick with powder coating. Optionally, the leaf can be made of galvanized sheet 1.25 [mm] thick. The thickness of the leaf is 78 [mm].

The opening frames are made of powder coated steel sections formed from 1.5 [mm] thick galvanized sheets. The frame posts are braze welded. The door leaves are installed in the opening frame on three 3D hinges with adjustment in three planes.

Door frame

The ECO Tech seamless steel doors are intended for unheated areas and feature a corner frame without a thermal break as standard. The doors are also available with internal frames and wrap-around frames.

The ECO Tech external seamless steel doors feature a steel corner frame with a thermal break. The doors are also available with internal frames and wrap-around frames with a thermal break.

Leaf infill

The external door version for unheated areas is infilled with mineral wool. The external door version is infilled with a PU board.

Gaskets system

The rebate gasket is made of EPDM and set around the circumference of the opening frame in the grooves in the posts and lintel. A drop-down seal is installed in the bottom section of the leaf.

Hardware and handles

As standard, the door features a mortise lever lock with a lock cylinder complete with three keys and a black polypropylene handle. Optionally, the ECO Tech door can be fitted with multi-point locks, other types of handles or access control features.

VIEWS | CROSS-SECTIONS OF THE DOORS

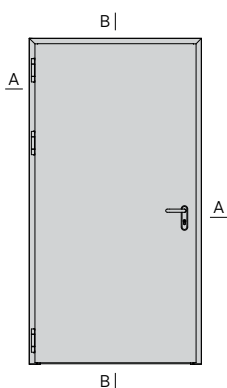


Fig. 1. ECO Tech single-leaf seamless steel door

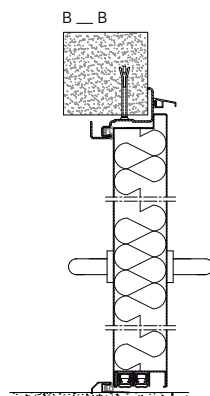


Fig. 2. Vertical cross-section of the ECO Tech external seamless steel door with a corner frame

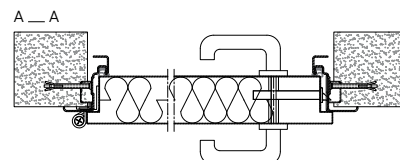


Fig. 3. Horizontal cross-section of the ECO Tech external seamless steel door with a corner frame



DOOR DIMENSIONS

Limit dimensions of single- and double-leaf ECO Tech doors with a corner or wrap-around frame		
S x H [mm]	610x1,650	Min. dimensions of single-leaf doors
in clear opening	1,300x2,550	Max. dimensions of single-leaf doors

The listed maximum dimensions are the clear opening dimensions in the wall. The ordering dimensions are the dimensions in the clear wall opening.

The single-leaf doors are also available in non-standard dimensions. The double-leaf steel doors are manufactured to order.

Selection of the clear wall opening dimensions vs. the opening frame type.

Opening frame without a thermal break

Corner or wrap-around frame – internal single-leaf doors

Width: clear passage dimension + 110 [mm] = clear wall opening dimension,

Height: clear passage dimension + 35 [mm] = clear wall opening dimension.

Inner frame – external single-leaf door

Width: clear passage dimension + 213 [mm] = clear wall opening dimension,

Height: clear passage dimension + 91 [mm] = clear wall opening dimension.

Please add 15 [mm] to the height for doors with a fixed threshold.

DIMENSIONING

The ordering dimensions (within the clear wall opening) of the ECO Tech seamless steel doors includes what follows	Installation width clearance per each door side	Installation height clearance
for single-leaf doors with corner or embracing frames	9 [mm]	5.5 [mm]
for single-leaf doors with internal frames	13.5 [mm]	15 [mm]

The listed installation clearances do not include the space required for the covers of the lock latch, anti-burglary bolts, recesses for anchors, and pockets of hinges, and other hardware elements which require spot recesses to be cut out in the wall.

If spot recesses cannot be cut out (e.g. the door is installed in a steel structure), increase the installation opening width by:

- 30 [mm] in width and 0 [mm] in height.

The relationships provided above **do not account for** the electromagnetic strike covers, which require the installation opening to be widened by 15 [mm]; and in the case of a concealed door closer – heightened by 15 [mm]. The embracing frames include the option of increasing the wall thickness dimension by +20 [mm].

ACCESSORIES

Glazing

The ECO Tech seamless steel doors can be ordered with glazing comprising safety glass units – 33.1 (2B2) safety glass. Standard glazing dimensions per one door leaf:



Glazing dimensions
450x660 [mm]



Glazing dimensions
300x700 [mm]



Glazing dimensions
650x950 [mm]



Glazing dimensions
550x1100 [mm]



Glazing dimensions
250x1400 [mm]



Glazing dimensions
Ø 400 [mm]

The standard round glazing is installed at 1,600 [mm] of height from the leaf bottom to the glazing centre.



Decorative motifs

The ECO Tech solid doors can optionally be fitted with stainless steel decorative motifs.



MS1 model



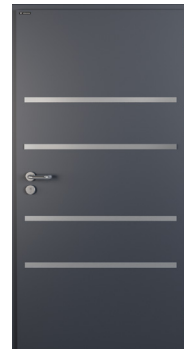
MS2 model



MS3 model



MS4 model



MS5 model

Three-point locks

The ECO Tech doors can optionally be fitted with a three-point automatic lock with latching deadbolts, an automatic panic lock type “B” or “E” or the autotronic motorized lock with latching deadbolts. The autotronic motorized lock is available in two versions:

• **Autotronic with a child safety feature**

each time the leaf is closed, additional latching deadbolts extend by 20 [mm] and the main latching deadbolt extends by 10 [mm]. The door can be unlocked from the outside with the access control system or a key. The key can be used to fully lock down the door leaf by extending the deadbolt to 20 [mm], which completely locks the deadbolt, the handle, and the access control system.

• **Autotronic P**

each time the door leaf is closed shut, additional latching deadbolts of the locking system extend to 20 [mm], the main latching deadbolt extends to 10 [mm], and the latching deadbolt extends to 20 [mm]. The door can be unlocked from the outside with the access control system, a key or by pressing the door handle or lever from the inside. In this lock version, the door leaf cannot be fully locked down with a key, which can only be used for emergency unlocking.

The minimum height of the Eco Tech door with a motorized lock:

- with a corner and wrap-around frame: 1,965 [mm],
- with an internal frame 2,020 [mm].

Handles

The standard handle has a polypropylene body on a steel core. Standard handles are available in black. The door can be fitted with stainless steel handles on the customer’s request. Knob-handle kits and anti-panic levers are also available.



Fig. 4. Plastic handle - standard



Fig. 5. Plastic fixed knob



Fig. 6. Stainless steel handle



Fig. 7. Stainless steel knob



Fig. 8. Stainless steel handle on a split cover plate



Fig. 9. Stainless steel fixed knob on a split cover plate



Fig. 10. EPN 900 IV anti-panic lever, black



Fig. 11. EPN 900 IV anti-panic lever, stainless steel



Fig. 12. Stainless steel handle for three-point lock - standard



Fig. 13. Stainless steel pull for three-point locks



C-lever Pro electronic handle

The C-lever Pro is a piece of electronic hardware with an integrated clutch used with a standard three-point lock. The lock can be opened with an authorized medium (e.g. proximity card, fob, app). The information about access being granted is indicated visually and with a sound signal. With an NFC-enabled phone, the customer can manage individual users and record events (paid option). The customer can activate the handle with a virtual key installed and as-signed to a specific phone (paid option). The handle is not integrated with the lock cylinder mechanism and can-not be used to open the lock when the door is locked with a key. The kit includes 4 user cards and 1 Master Legic card. More user cards and fobs are available for optional purchase.



Fig. 14. C-lever electronic lever

Door closers



Fig. 15. Arm type door closer



Fig. 16. Rail type door closer

DoorLock Overview

DoorLock is intended for unlocking and locking doors fitted with a stand-ard single-point or three-point automatic lock. It can be configured and operated with the Somfy Keys application available for Android and iOS. Communication between the smartphone and Door-Lock takes place via the Bluetooth technology. Thanks to the use of an Internet gateway and the possibility to configure it with a home router, the lock can be con-trolled from any place in the world. Door-Lock supports the Connexoon and TaHoma Premium routers, while the communication between the el-ements of the system is carried out in the cloud.

Design and principle of operation

DoorLock is a device comprising two elements: a lock cylinder (Europe-an profile) unlocked with a key from the outside and a housing with an electric motor fitted from the inside. The lock cylinder can be locked/unlocked with a conventional key or a smartphone. With the Bluetooth technology, the lock can be unlocked or locked even from 10 metres away. When DoorLock is connected to a gateway, the lock can be controlled from any place in the world. Moreover, the gateway can push notifications about unlocking/locking the lock regardless of wheth-er it was locked with a phone or manually with a knob from the inside.

DoorLock is intended for fitting ONLY on the side opposite the edges (from the inside).

• DoorLock accessory kit

The kit includes: motor, mounting plate, gasket, aluminium housing, lock cylinder, Internet gateway, 3 keys + registration card, mounting screws, lithium batteries (4xAAA).

• DoorLock scope of supply

The basic kit is supplied in one box.

• Extended kit

The extended kit includes an RFID card reader, code keypad, RFID card, bracelet, key fob, 3xAAA batteries, and mounting screws and is supplied in a separate box.



Fig. 17. DoorLock - motor



Fig. 18. Wireless RFID card reader with a code keypad



Fig. 19. Bracelet for RFID reader



Fig. 20. Key fob for RFID reader



Fig. 21. Magnetic card for RFID reader



Ventilation grilles

The ECO Tech doors can optionally be fitted with ventilation grilles with a shut-ter from the outside and a mesh from the inside. The available grilles are limited depending on door dimensions, so that the minimum distance from the side edges of the leaf to the edge of the grille is not lower than 200 [mm].



Fig. 22. Steel ventilation grille 425x125 [mm]

Fig. 23. Steel ventilation grille 525x225 [mm]

Fig. 24. Steel ventilation grille 525x625 [mm]



Fig. 25. Steel ventilation grille 625x625 [mm]

Fig. 26. Steel ventilation grille 825x825 [mm]

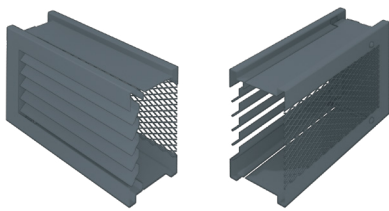


Fig. 27. Steel ventilation grille in the ECO Tech seamless door

Flow surface of the ECO Tech door ventilation grilles

Ventilation grilles for seamless steel doors			
	L [mm]	H [mm]	Ventilation area [m ²]
Steel grille	425	125	0.012
	525	225	0.028
	525	625	0.080
	625	625	0.095
	825	825	0.170

Steel frames

The standard ECO Tech steel seamless doors have corner frames. The doors are also available with internal frames or embracing frames. The following diagrams show all three opening frame types.

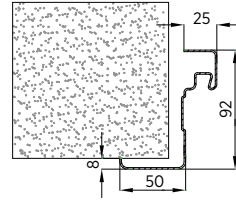


Fig. 28. Corner frame – standard

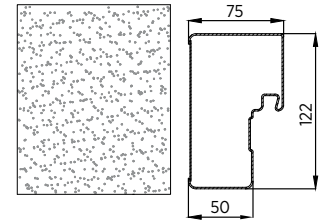


Fig. 29. Inner frame

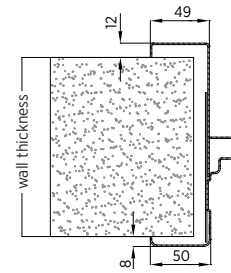


Fig. 30. Wrap around frame

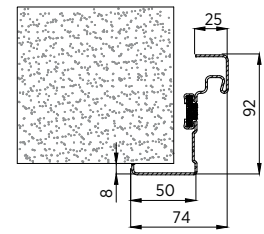


Fig. 31. Corner frame with a thermal break

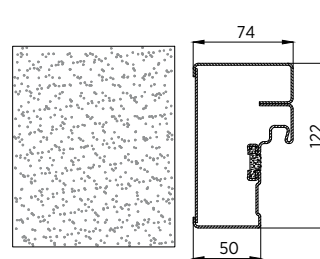


Fig. 32. Internal frame with a thermal break

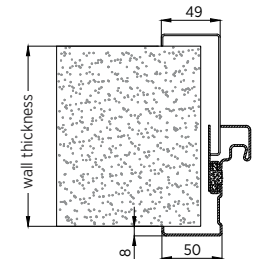


Fig. 33. Wrap-around frame with a thermal break

Threshold seals

External ECO Tech seamless steel doors are available with a drop-down seal and a drip cap. ECO Tech doors can also be ordered with a fixed threshold and a drop-down seal. The threshold is fixed to the floor, the drip cap should be screwed to the opening frame.

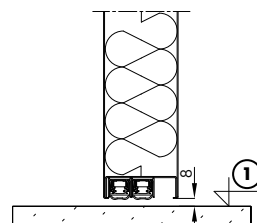


Fig. 34. Solution with a drop-down seal

① – floor level

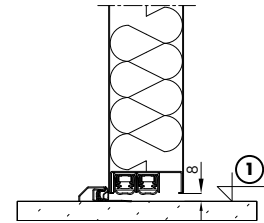


Fig. 35. Solution with a threshold and a drop-down seal.

① – floor level



Installation requirements

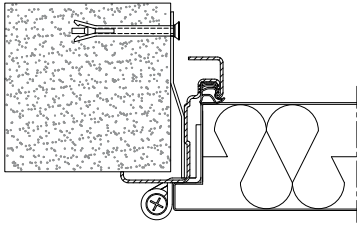


Fig. 36. Indirect installation with steel plates - opening frame without a thermal break

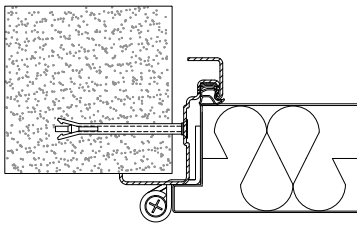


Fig. 37. Installation with anchors directly through the opening frame - opening frame without a thermal break

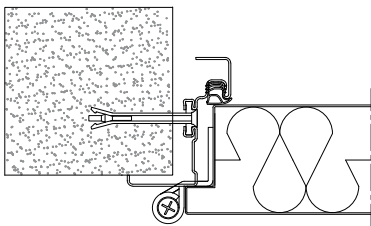


Fig. 38. Installation of an opening frame with a thermal break using anchors directly through the opening frame

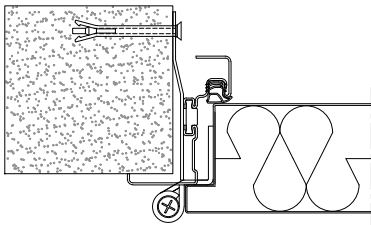


Fig. 39. Installation of an opening frame with a thermal break using steel plates (optional)

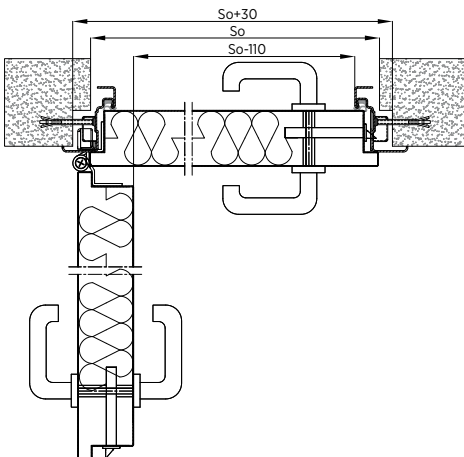


Fig. 40. Installation of the ECO Tech single-leaf seamless door with a corner frame without a thermal break to a masonry wall - horizontal cross-section

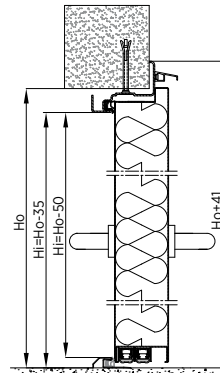


Fig. 41. Installation of the ECO Tech single-leaf seamless door with a corner frame without a thermal break to a masonry wall - vertical cross-section

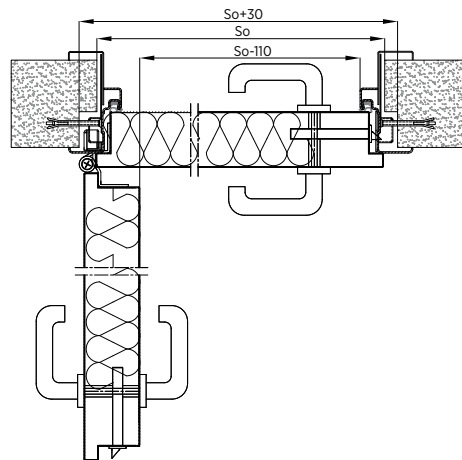


Fig. 42. Installation of the ECO Tech single-leaf seamless door with a wrap-around frame without a thermal break to a masonry wall - horizontal cross-section

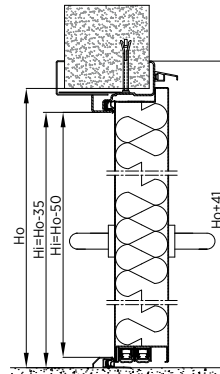


Fig. 43. Installation of the ECO Tech single-leaf seamless door with a wrap-around frame without a thermal break to a masonry wall - vertical cross-section

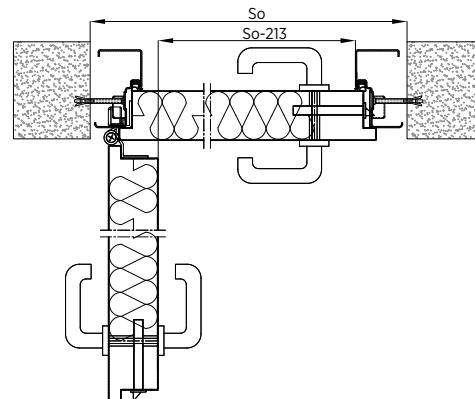


Fig. 44. Installation of the ECO Tech single-leaf seamless door with an internal frame without a thermal break to a masonry wall - horizontal cross-section

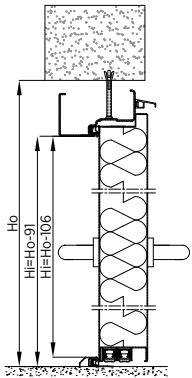


Fig. 45. Installation of the ECO Tech single-leaf seamless door with an internal frame without a thermal break to a masonry wall - vertical cross-section

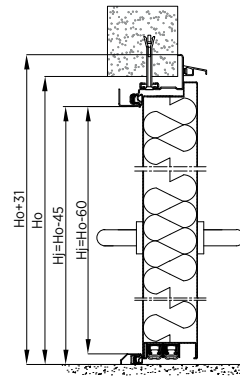


Fig. 49. Installation of the single-leaf door to a masonry wall - corner frame with a thermal break - vertical cross-section

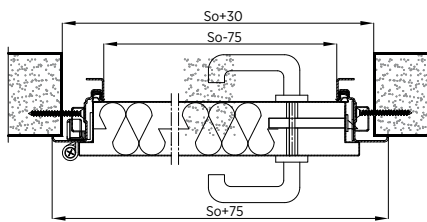


Fig. 46. Installation of the ECO Tech single-leaf seamless door with a corner frame without a thermal break to a steel structure - horizontal cross-section

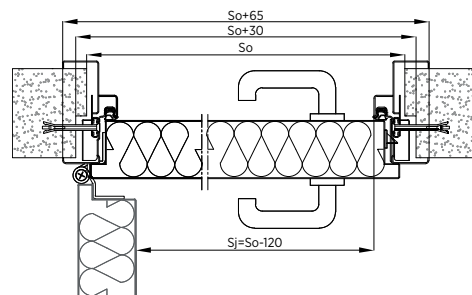


Fig. 50. Installation of the single-leaf door to a masonry wall - wrap-around frame with a thermal break - horizontal cross-section

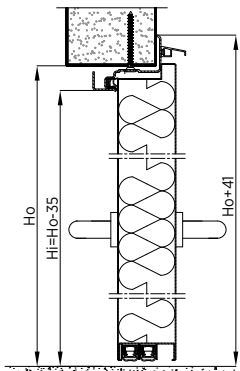


Fig. 47. Installation of the ECO Tech single-leaf seamless door with a corner frame without a thermal break to a steel structure - vertical cross-section

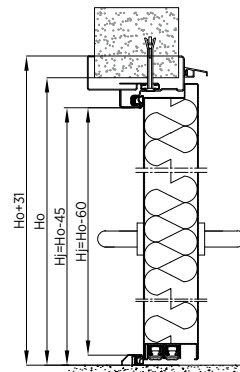


Fig. 51. Installation of the single-leaf door to a masonry wall - wrap-around frame with a thermal break - vertical cross-section

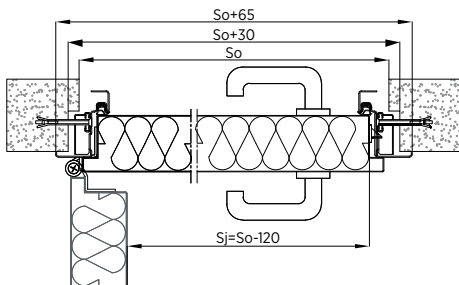


Fig. 48. Installation of the single-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

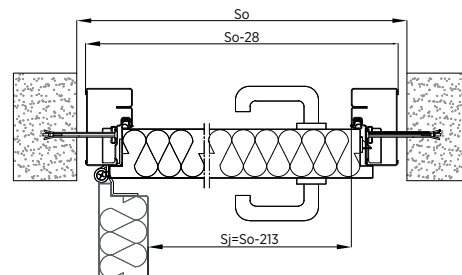


Fig. 52. Installation of the single-leaf door to a masonry wall - internal frame with a thermal break - horizontal cross-section

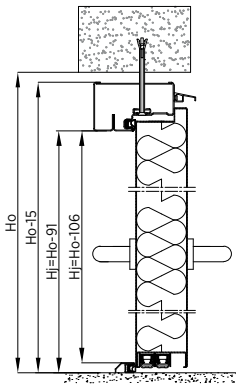


Fig. 53. Installation of the single-leaf door to a masonry wall - internal frame with a thermal break - vertical cross-section

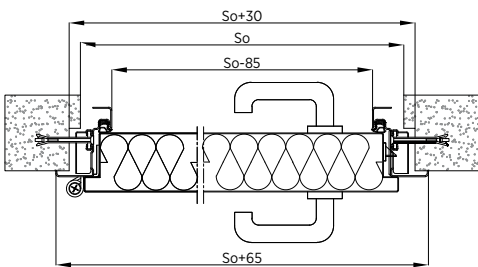


Fig. 54. Installation of the single-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

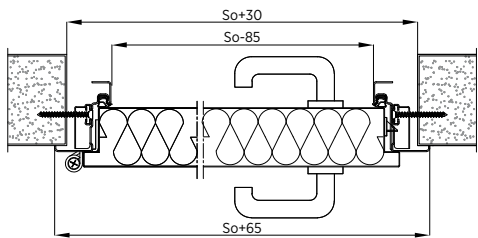


Fig. 55. Installation of the single-leaf door to a steel structure - corner frame with a thermal break - horizontal cross-section

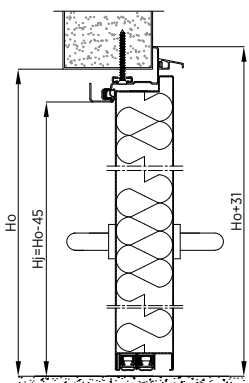


Fig. 56. Installation of the single-leaf door to a steel structure - corner frame with a thermal break - vertical cross-section

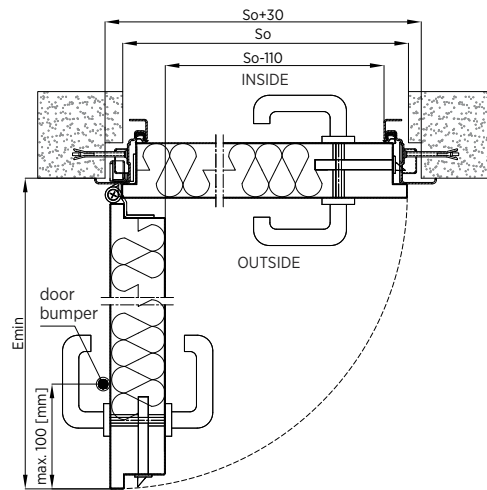


Fig. 57. Installation in front of the opening - horizontal cross-section, opening frame without a thermal break

- So - opening width,
- Sj - clear passage width, $S_j = S_o - 110$ [mm],
- Ho - opening height,
- Hj - clear passage height $H_j = H_o - 35$, $H_j = H_o - 50$ [mm] for doors with a threshold,
- E_{min} - space required for opening the leaf at a 90° angle, $E_{min} = S_j + 140$ [mm].

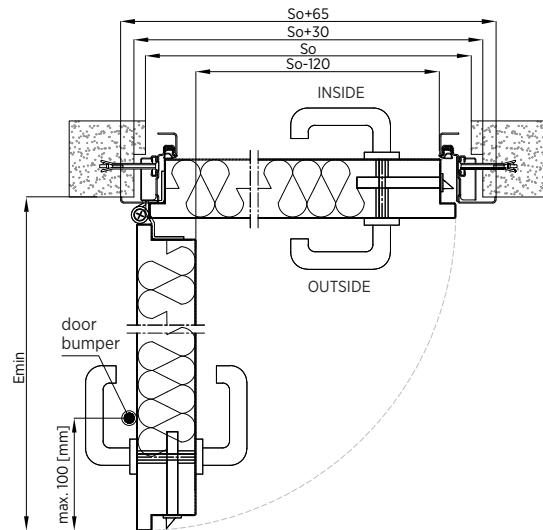


Fig. 58. Installation of the single-leaf door in front of the opening - corner frame with a thermal break - horizontal cross-section

- So - opening width,
- Sj - clear passage width, $S_j = S_o - 120$ [mm],
- Ho - opening height,
- Hj - clear passage height $H_j = H_o - 45$, $H_j = H_o - 60$ [mm] for doors with a threshold,
- E_{min} - space required for opening the leaf at a 90° angle, $E_{min} = S_j + 140$ [mm].

The method of installation of doors with a wrap-around frame to the steel structure is identical to that for the corner frame.

In the case of doors with an internal frame, the boxes do not over-lap with the clear wall opening.



Space E is measured on the side towards which the door opens. The doors are installed in front of the opening.

Use a door bumper to prevent door leaf damage by collision with the wall lining.

Door bumper installation method, see Fig. 57 and Fig. 58. External single-leaf door.



CERTIFICATION DOCUMENTS

- PN-EN 14351-1+A2:2016-10 Windows and doors. Product standard. Part 1: Windows and external doors.
- Hygienic Attestation 381/322/387/2021.

TESTS

- Door mechanical strength – **Class 3** according to PN-EN 1192:2001.
- Resistance to repeated opening and closing of external doors, **Class 6 (200,000 cycles)** according to PN-EN 12400:2002.
- Shock resistance – **Class 3 (300 cycles)** according to PN-B-06079:1988.
- Air permeability – **Class 4** according to PN-EN 12207:2001, PN-EN 12207:2017-01.
- Watertightness – **Class 3A/3B** according to PN-EN 12208:2001.
- Resistance to wind load – **Class C3/B3 (1,200Pa)** according to PN-EN 12210:2001.
- Thermal transmittance factor for external single-leaf solid doors with a PU board infill, with an opening frame featuring a thermal break, for an opening of 1,020x2,045 [mm] **1.3 [W/m²K]** according to PN-EN ISO 10077-1:2017-10.

COLOURS

Standard colours of ECO Tech doors:



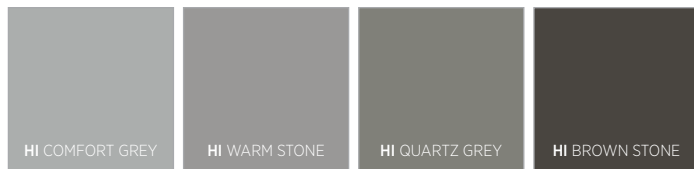
The ECO Tech steel seamless doors can be coated in any RAL colour (except for colours with the pearl, reflective or metallic finish) or RAL MAT STRUCTURE colours:

Non-standard colours:
Other RAL, mat structure colour

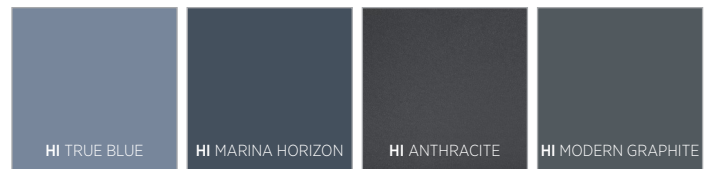


HOME INCLUSIVE 2.0:

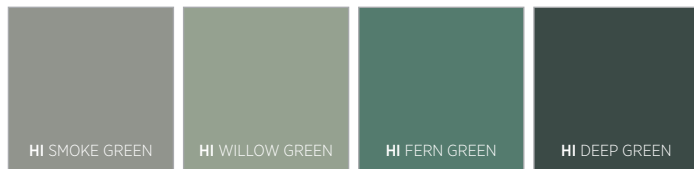
HISTONE



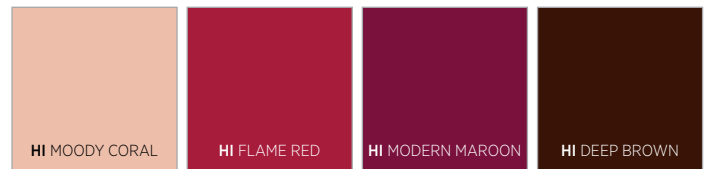
HISTEEL



HI EARTH



HIRUBY



Colours shown in the materials shall be treated as illustrative only.



ECO

SEAMLESS STEEL DOOR, EXTERNAL AND INTERNAL, SINGLE-LEAF OR DOUBLE-LEAF

CHARACTERISTIC FEATURES



Description

The leaf is made of galvanised steel sheet 0.5 to 1.5 [mm] thick with polyester coating or powder coated. The passive leaf of the double-leaf door is locked with an automatic latch. The frames are made of powder coated steel sections formed from 1.2 [mm] thick galvanized sheets of top quality. The frame posts are braze welded. The door leaves hang within the opening frame on two hinges with vertical adjustment, and one of the hinges per frame side features a pull spring.

Door frame

The ECO seamless steel doors are intended as internal or external doors for unheated areas and feature a corner frame without a thermal break as standard. The doors are also available with internal frames and wrap-around frames.

The ECO external seamless steel doors feature a steel corner frame with a thermal break. The doors are also available with internal frames and wrap-around frames with a thermal break.

Leaf infill

The external door leaf is infilled with expanded polystyrene or a PU board; the internal door leaf is infilled with cellular cardboard. In a non-standard version, the external door is infilled with mineral wool.

Gaskets system

The rebate gasket made of EPDM is set around the frame circumference in the post and lintel grooves, within the lip of the double-leaf door cover strip, and in the sealing threshold.

Hardware and handles

The standard door features a single mortise lever lock with a lock cylinder and three keys, and a black polypropylene door handle.

VIEWS | CROSS-SECTIONS OF THE DOORS

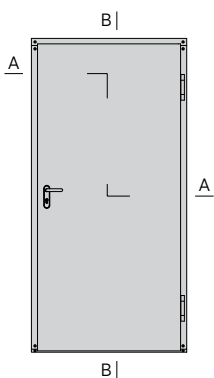


Fig. 59. ECO single-leaf steel seamless door

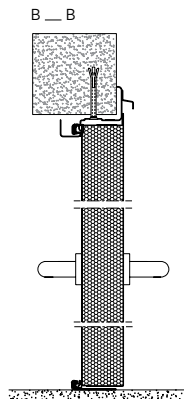


Fig. 60. Vertical cross-section of the ECO external seamless steel door with a corner frame without a thermal break

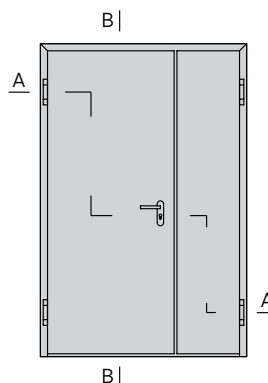


Fig. 62. ECO double-leaf steel seamless door

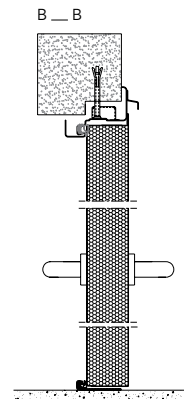


Fig. 63. Vertical cross-section of the ECO double-leaf steel seamless door with a corner frame without a thermal break

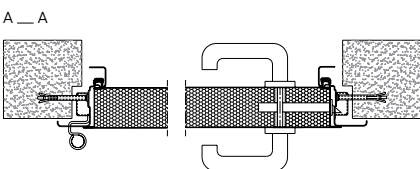


Fig. 61. Horizontal cross-section of ECO external seamless steel door with a corner frame without a thermal break

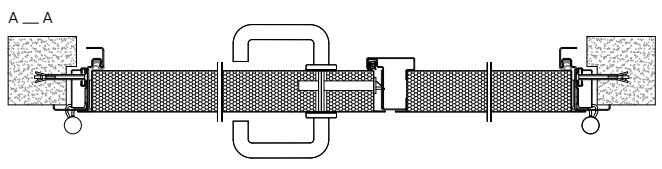


Fig. 64. Horizontal cross-section at the door lock level of the ECO double-leaf solid steel seamless door with a frame



DOOR DIMENSIONS

Dimensions of single-leaf ECO doors in a standard version for an opening frame without a thermal break	
Clear passage dimension (SjxHj), [mm]	Clear wall opening dimension (SoxHo), [mm]
800x2,015	910x2,050
900x2,015	1,010x2,050
1,000x2,015	1,110x2,050

Dimensions of single-leaf ECO doors in a standard version for an opening frame with a thermal break	
Clear passage dimension (SjxHj), [mm]	Clear wall opening dimension (SoxHo), [mm]
800x2,000	920x2,060
900x2,000	1,020x2,060
1,000x2,000	1,120x2,060

Maximum single-leaf ECO door dimensions	
Clear passage width, [mm]	Clear passage height, [mm]
1,250	2,500

Maximum double-leaf ECO door dimensions	
Clear passage width, [mm]	Clear passage height, [mm]
2,500	2,500

Non-standard single-leaf doors are also manufactured. Double-leaf steel doors are manufactured on custom order.

DIMENSIONING

The ordering size (within the clear wall opening) of the ECO steel seamless doors includes what follows	Installation width clearance per each door side	Installation height clearance
for single-leaf doors with corner or embracing frames	9 [mm]	5.5 [mm]
for single-leaf doors with internal frames	13.5 [mm]	15 [mm]
double-leaf doors with corner or embracing frames	7.5 [mm]	5.5 [mm]
double-leaf doors with internal frames	12 [mm]	15 [mm]

The installation clearances listed do not include the clearances required for the lock bolt guards, anti-burglary bolt guards, wall plug bosses of 3-directional adjustment hinge recesses or electromagnetic strike guards in single-leaf doors; these features require breaking located recesses in the opening walls.

If located recesses cannot be made (e.g. the door is installed within a steel open work structures), increase the installation opening size by:

- 30 [mm] in width and 0 [mm] in height for single-leaf doors,
- 30 [mm] in width and 20 [mm] in height for double-leaf doors.

The relationships listed **do not include** these options: electromagnetic strike guards in single-leaf doors and 3-directional adjustment hinge recesses in single and double-leaf doors. In the case of either option, the installation opening must be made larger by: 15 [mm] in width for single-leaf doors with electromagnetic strikes or single or double-leaf doors with 3-directional adjustment hinges. The embracing frames include the option for increasing the wall thickness dimension by +20 [mm].

Selection of the clear wall opening dimensions vs. the opening frame type

Opening frame without a thermal break

Corner or embracing frame, internal single-leaf door

Width: clear passage dimension + 110 [mm] = clear wall opening dimension,
Height: clear passage dimension + 35 [mm] = clear wall opening dimension.

Corner or embracing frame, internal double-leaf door

Width: clear passage dimension + 140 [mm] = clear wall opening dimension,
Height: clear passage dimension + 35 [mm] = clear wall opening dimension.

Inner frame, internal single-leaf door

Width: clear passage dimension + 213 [mm] = clear wall opening dimension,
Height: clear passage dimension + 91 [mm] = clear wall opening dimension.

Inner frame, internal double-leaf door

Width: clear passage dimension + 246 [mm] = clear wall opening dimension,
Height: clear passage dimension + 91 [mm] = clear wall opening dimension.

For external doors for unheated areas please add 15 [mm] to the height (threshold).

The listed maximum dimensions are the clear passage dimensions; the ordering sizes/dimensions apply to a clear wall opening.



ACCESSORIES

Glazing

The ECO steel seamless doors can be glazed with safety glazing units, 33.1 (2B2) safety glass. Standard glazing dimensions per one door leaf:



Glazing dimensions
450x660 [mm]

Glazing dimensions
300x700 [mm]

Glazing dimensions
650x950 [mm]

Glazing dimensions
550x1100 [mm]

Glazing dimensions
Ø 400 [mm]

Non-standard glazing is available in dimensions up to 850x1,100 [mm]. Glazing with a width of 850 [mm] is available for leaves with a width of min. 1,250 [mm] clear passage.

The standard round glazing is installed at 1,600 [mm] of height from the leaf bottom to the glazing centre.

Steel frames

The standard ECO steel seamless doors have corner frames. The doors are also available with internal frames or embracing frames.

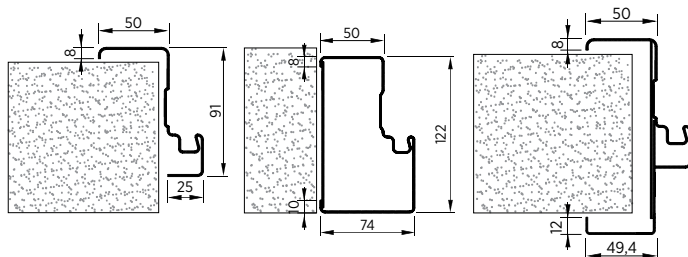


Fig. 65. Corner frame - standard

Fig. 67. Internal frame

Fig. 69. Wrap-around frame

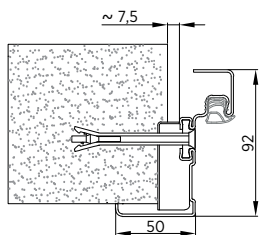


Fig. 66. Corner frame with a thermal break

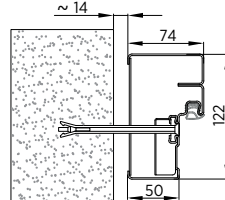


Fig. 68. Internal frame with a thermal break

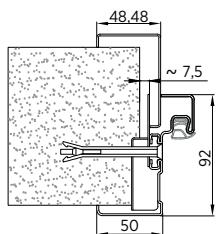


Fig. 70. Wrap-around frame with a thermal break

Threshold seals

The standard ECO doors are manufactured without a threshold (the bottom ends of the frame sections are connected with a transport safety channel bar, which can be either removed or embedded in the flooring during installation). The ECO external steel seamless doors are manufactured with a threshold and a drip cap. The threshold is fastened to the floor, and the drip cap is bolted to the opening frame. The ECO doors are also available with a drop-down seal which replaces the threshold.

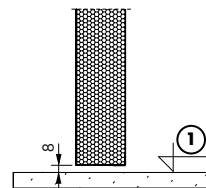


Fig. 71. Leaf bottom gap without a threshold

① - floor level

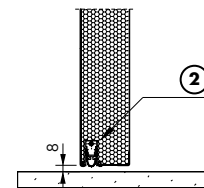


Fig. 72. Cross-section of the drop-down seal

② - drop-down seal

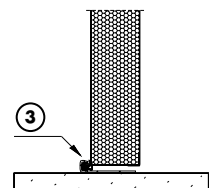


Fig. 73. Cross-section of the threshold

③ - threshold



Handles

The standard handle has a polypropylene body on a steel shank. The standard handles are available in black. The doors can be fitted with stainless steel handles on customer's request. Knob-handle kits and antipanic levers are also available.



Fig. 74. Standard plastic door handle



Fig. 75. Solid plastic doorknob



Fig. 76. Stainless steel handle



Fig. 77. Stainless steel doorknob



Fig. 78. Stainless steel door handle, split cover plate



Fig. 79. Stainless steel doorknob, split cover plate



Fig. 80. Anti-panic lever - standard



Fig. 81. EPN 900 IV anti-panic lever, black



Fig. 82. EPN 900 IV anti-panic lever, stainless steel

Door closers



Fig. 83. Arm type door closer



Fig. 84. Rail type door closer



Fig. 85. Galvanized sequence selector



Fig. 86. Black sequence selector



Fig. 87. 2 door closers with a rail and Sequence selector

Ventilation grilles

The ECO doors can optionally be fitted with ventilation grilles with a shut-ter from the outside and a mesh from the inside. The available grilles are limited depending on door dimensions, so that the minimum distance from the side edges of the leaf to the edge of the grille is not lower than 200 [mm].

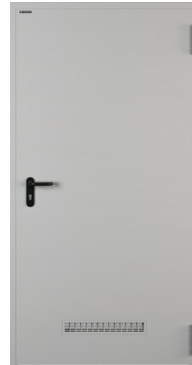


Fig. 88. Aluminium ventilation grille 480x80 [mm]

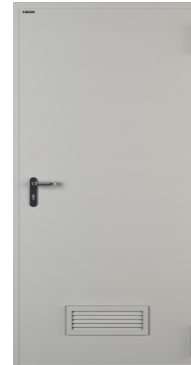


Fig. 89. Steel ventilation grille 425x125 [mm]



Fig. 90. Steel ventilation grille 525x225 [mm]

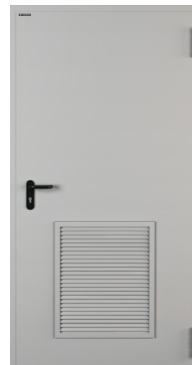


Fig. 91. Steel ventilation grille 525x625 [mm]

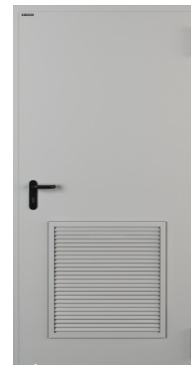


Fig. 92. Steel ventilation grille 625x625 [mm]



Fig. 93. Steel ventilation grille 825x825 [mm]



Fig. 94. Aluminium ventilation grille in the ECO seamless door

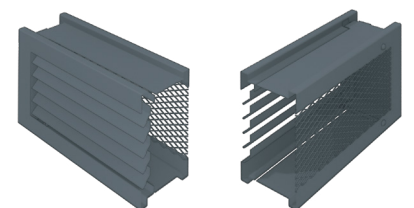


Fig. 95. Steel ventilation grille in the ECO seamless door

Door earthing

The Eco seamless steel doors can be earthed. Earthing is provided by connecting the leaf with the opening frame with a yellow and green cable, 6 [mm²] gauge, terminated on both ends with a round terminal.

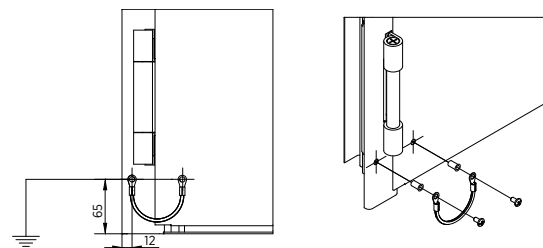


Fig. 96. Method for earthing the ECO doors



DIAGRAMS OF THE ECO DOOR VENTILATION SYSTEM

Single-leaf door

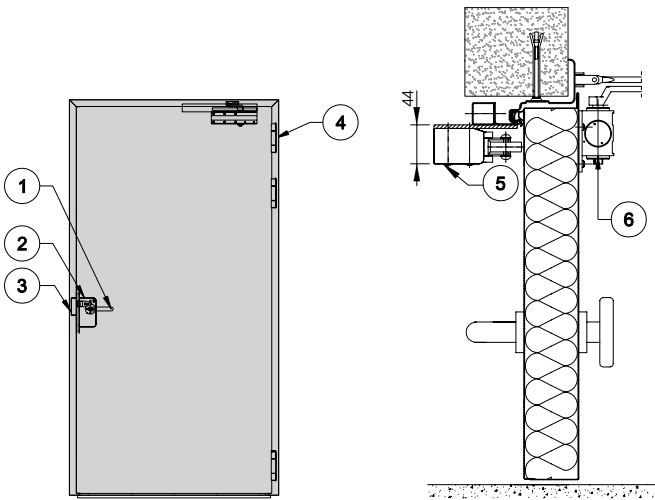


Fig. 97. Diagram of the single-leaf door, vertical cross-section including the ventilation system

Single-leaf door accessories:

1. The handle-knob hardware set on a round stainless steel cover plate.
NOTE: The lock cylinder and its cover plate are not supplied!
2. Mortise lever lock without a latch. The door cannot be locked with a key.
3. Fail secure electromagnetic strike with a stainless steel catch plate.
4. Stainless steel hinges with 3D.
5. Door leaf push cylinder with an auxiliary relay, installed on the side opposite to the hinges. 5-seconds delayed action. The actuator connection cable length is 2 m.
6. Link arm or rail door closer with door shutting motion, installed on the hinge side. The actuator takes up 44 [mm] of the clear passage height.



The ventilation system in the single-leaf steel seamless doors ventilates the closed off rooms as a part of smoke venting systems and for normal indoor air exchange. The minimum leaf width is 900 [mm]. The steel door ventilation system is not compliant with the requirements of PN-EN 1125 or PN-EN 179.

Double-leaf door

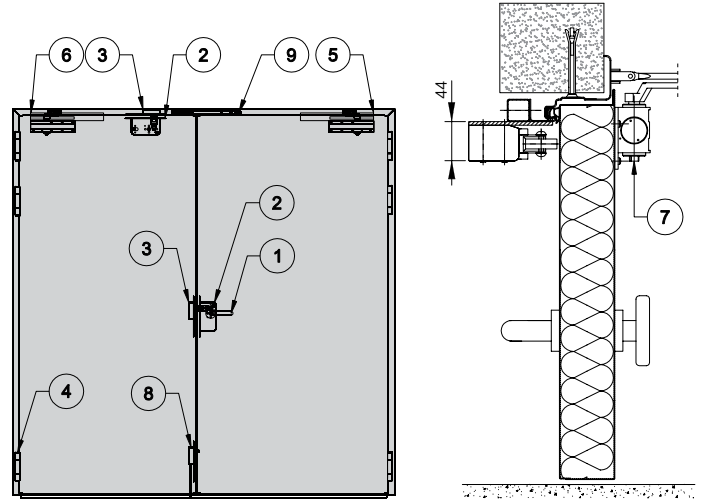


Fig. 98. Diagram of the double-leaf door, vertical cross-section including the ventilation system

Double-leaf door accessories:

1. The handle-knob hardware set on a round stainless steel cover plate.
NOTE: The lock cylinder and its cover plate are not supplied!
2. Mortise lever lock without a latch, set of 2. The door cannot be locked with a key.
3. Fail secure electromagnetic strike with a stainless steel catch plate, set of 2.
4. Stainless steel hinges with 3D.
5. Door active leaf push cylinder with an auxiliary relay, installed on the side opposite to the hinges. 5-seconds delayed action. The actuator connection cable length is 2 m.
6. Door passive leaf push cylinder with an auxiliary relay, installed on the side opposite to the hinges. 15-seconds delayed action. The actuator connection cable length is 2 m.
7. Link arm or rail door closer with door shutting motion, installed on the hinge side, set of 2. The actuators take up 44 [mm] of the clear passage height.
8. Automatic mechanical latch.
9. Door leaf closing sequence controller, installed on the hinge side.



The ventilation system in the double-leaf steel seamless doors ventilates the closed off rooms as a part of smoke venting systems and for normal indoor air exchange. The minimum active leaf width is 900 [mm]. The minimum passive leaf width is 600 [mm]. The steel door ventilation system is not compliant with the requirements of PN-EN 1125 or PN-EN 179.



Double-leaf door with anti-panic function

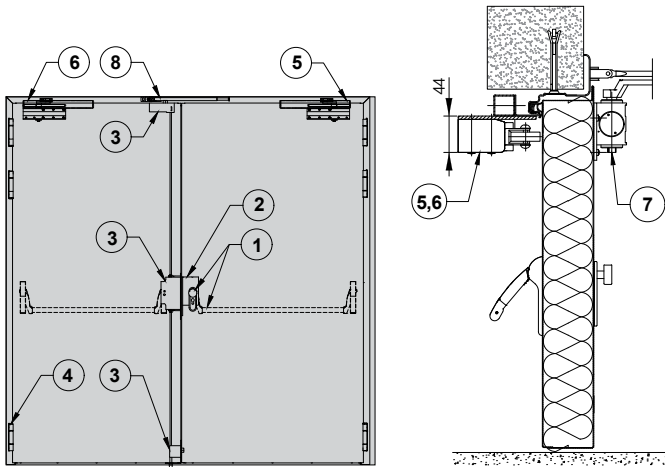


Fig. 99. Ventilation system layout of the double-leaf seamless steel door with anti-panic function - vertical section

Double-leaf door accessories:

1. An anti-panic lever installed on the active and passive leaf on the side opposite to the hinges (the lever can optionally be replaced with a handle). A knob with an oblong or round cover plate is installed on the active leaf on the hinge side.
2. An electric motor lock with a lock cylinder installed on the active leaf.
3. A set of electric motor locks for locking the passive leaf.
4. Stainless steel hinges with 3D adjustment.
5. An actuator pushing out the active leaf with a 5 second delay, installed on the side opposite to the hinges.
6. An actuator pushing out the passive leaf with a 15 second delay, in-stalled on the side opposite to the hinges.
7. A link arm or rail door closer installed on the active leaf and on the passive leaf on the hinge side.
8. A sequence selector installed on the hinge side (integrated with the door closer or a separate element).

The double-leaf seamless steel door ventilation system is intended for ventilating rooms with smoke venting systems, as well as for everyday indoor air exchange.

The minimum active leaf width is 900 [mm], the minimum pas-sive leaf width is 600 [mm].

The actuators take up 44 [mm] of the clear passage height.



The ventilation system for the double-leaf seamless steel door with anti-panic function can be fitted with a complete ventilation system comprised of smoke venting central control unit with bat-teries and a smoke venting button. The kit does not include fire detectors. Standard accessories of the ventilation system do not include the elements listed above. These elements can be ordered as option-al accessories.

The ventilation system for double-leaf seamless steel doors can-not be used in escape routes and emergen-cy exits, even if EN 1125 and EN 179 compliant hardware and locks are used.

Operating principle

Normal operation:

- Passage from the inside is possible through the active and passive leaf by mechanically pressing the anti-panic lever (handle as an option).
- Passage from the outside is possible using the access control system or a key.

Ventilation mode operation:

- The smoke venting central control unit sends a signal which is transferred by actuators to electric motor driven locks which unlock the leaves once they receive the signal.
- Actuators feature delayed action opening (5 seconds for the active leaf, 15 seconds for the passive leaf), once the time elapses, the leaves open in sequence.
- When the ventilation ends, the actuators return to the initial state and both leaves close in the appropriate sequence.

Set the latch range on the door closers to ensure proper shutting of the door.



Do not use a multi-purpose wrench, because it can cause serious damage to the lock. Any damage caused by the use of a mul-ti-purpose wrench is not subject to warranty.

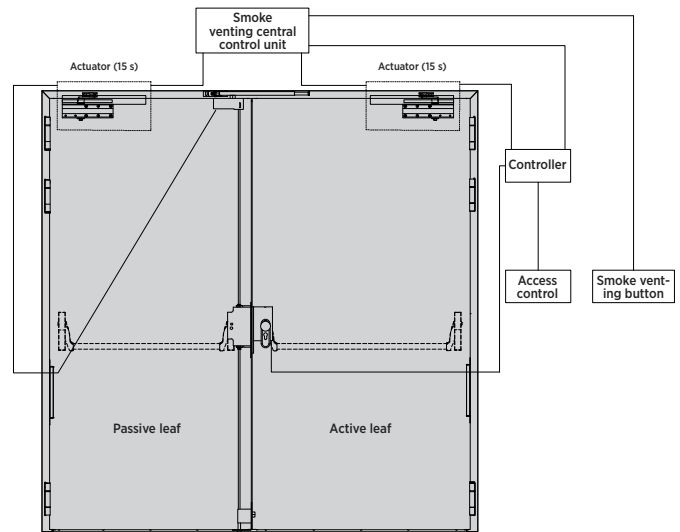


Fig. 100. Wiring diagram of the elements of the ventilation system for double-leaf seamless steel doors with anti-panic function



FINAL PRODUCT EXAMPLES



SIDE AND TOP DAYLIGHTS ⁽¹⁾

Outside view of side and top daylight.



Right daylight (PD)

Left daylight (LD)

Right and left daylight (PD+LD)



Right daylight + top daylight (PD+GD)

Left daylight + top daylight (LD+GD)

Right daylight + Left daylight + top daylight (PD+LD+GD)

Top daylight (GD)

⁽¹⁾ - Maximum daylight width 1,000 [mm]. Minimum daylight width 300 [mm]. Maximum daylight height 1,000 [mm]. Minimum daylight height 300 [mm].



Cross-sections of the ECO doors with side and toplights

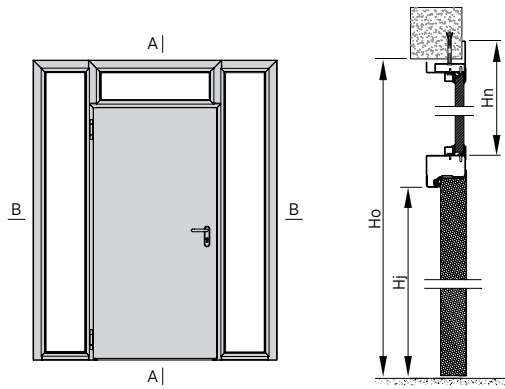


Fig. 101. The ECO single-leaf door with side and toplights

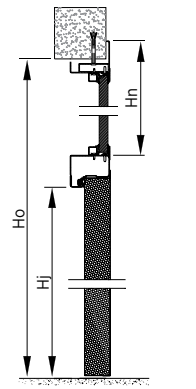


Fig. 102. Toplight, vertical cross-section

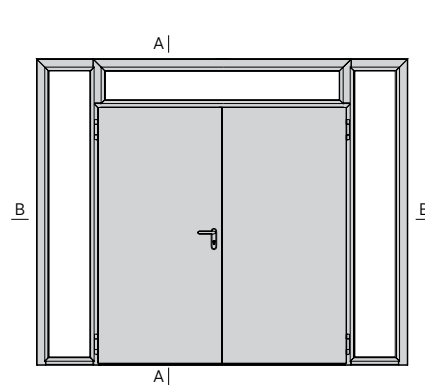


Fig. 104. The ECO double-leaf door with side and toplights

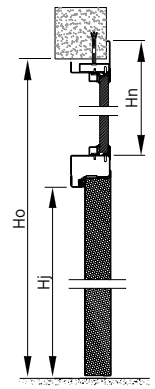


Fig. 105. Toplight, vertical cross-section

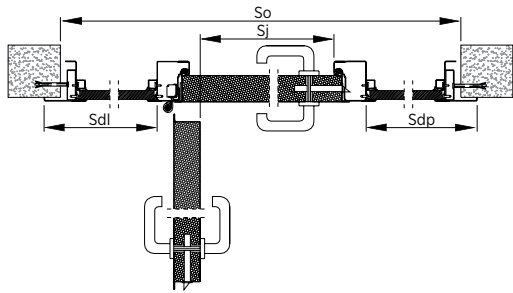


Fig. 103. Sidelights, horizontal cross-section

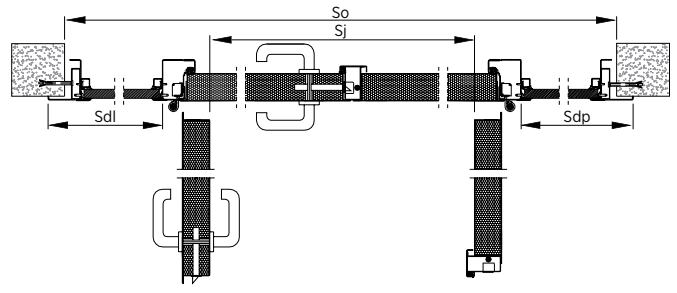


Fig. 106. Sidelights, horizontal cross-section

- Sj - clear passage width,
- So - verall opening width,
- Sdl - left-hand sidelight width,
- Sdp - right-hand sidelight width,
- Hj - clear passage height,
- Ho - overall opening height,
- Hn - toplight height.

The maximum overall dimensions of the wall opening in the case of:	single-leaf door with daylight	double-leaf door with daylight
corner and embracing frame	2,440x2,950 [mm] (SoxHo)	3,690x2,950 [mm] (SoxHo)
internal frame	2,543x3,006 [mm] (SoxHo)	3,796x3,006 [mm] (SoxHo)



Ordering dimensions and installation dimensions

Wall mounting

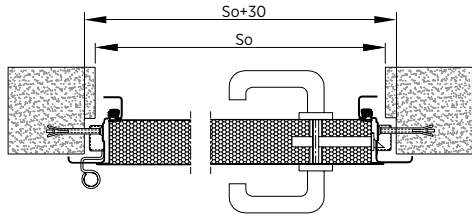


Fig. 107. Installation of the single-leaf door with a corner frame without a thermal break to a masonry wall - horizontal cross-section

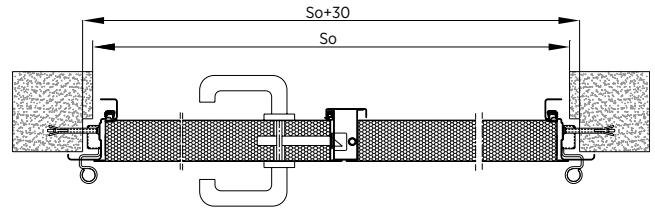


Fig. 108. Installation of the double-leaf door with a corner frame without a thermal break to a masonry wall - horizontal cross-section

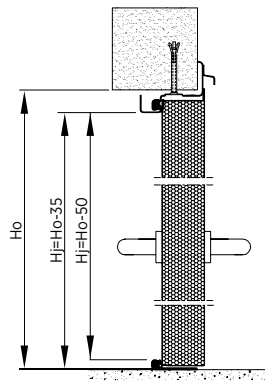


Fig. 109. Installation of the single-leaf door with a corner frame without a thermal break to a masonry wall - vertical cross-section

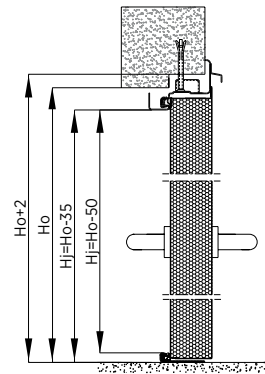


Fig. 110. Installation of the double-leaf door with a corner frame without a thermal break to a masonry wall - vertical cross-section

Installation on steel structures

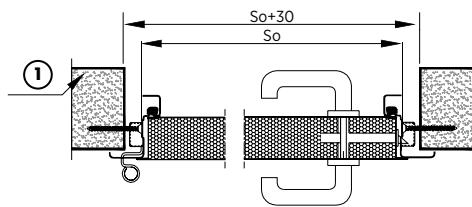


Fig. 111. Installation of the single-leaf door with a corner frame without a thermal break to a steel structure - horizontal cross-section

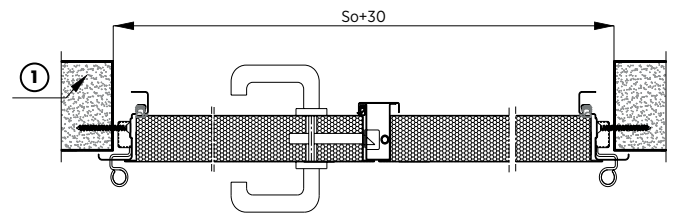


Fig. 112. Installation of the double-leaf door with a corner frame without a thermal break to a steel structure - horizontal cross-section

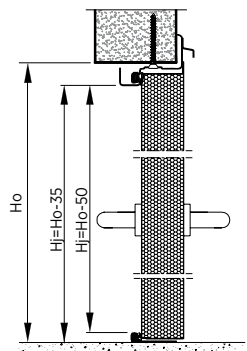


Fig. 113. Installation of the single-leaf door with a corner frame without a thermal break to a steel structure - vertical cross-section

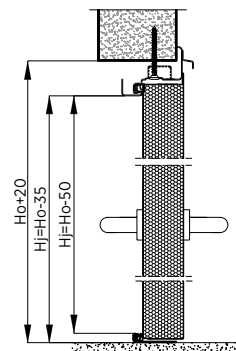


Fig. 114. Installation of the double-leaf door with a corner frame without a thermal break to a steel structure - vertical cross-section

① - Steel framework structure

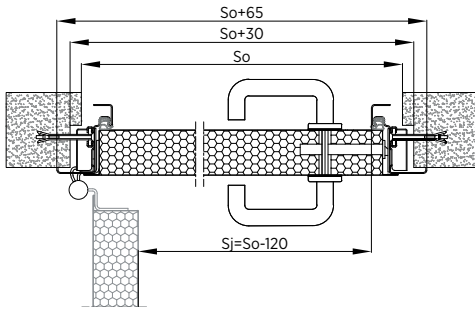


Fig. 115. Installation of the single-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

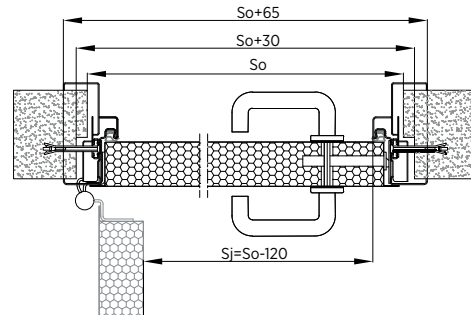


Fig. 119. Installation of the single-leaf door to a masonry wall - wrap-around frame with a thermal break - horizontal cross-section

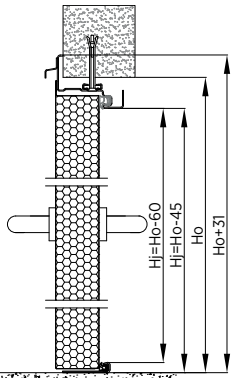


Fig. 116. Installation of the single-leaf door to a masonry wall - corner frame with a thermal break - vertical cross-section

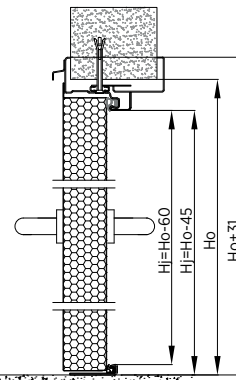


Fig. 120. Installation of the single-leaf door to a masonry wall - wrap-around frame with a thermal break - vertical cross-section

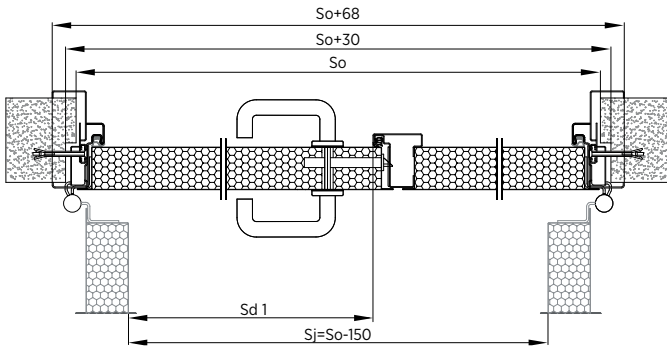


Fig. 117. Installation of the double-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

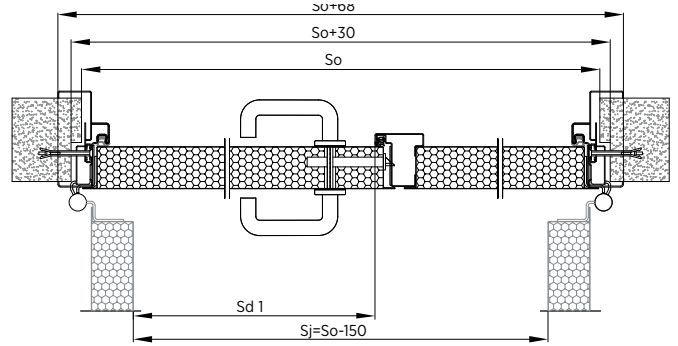


Fig. 121. Installation of the double-leaf door to a masonry wall - wrap-around frame with a thermal break - horizontal cross-section

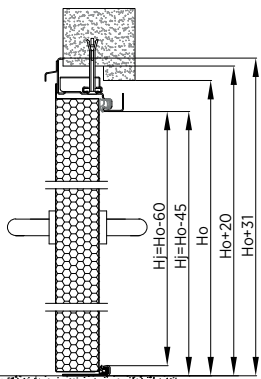


Fig. 118. Installation of the double-leaf door to a masonry wall - corner frame with a thermal break - vertical cross-section

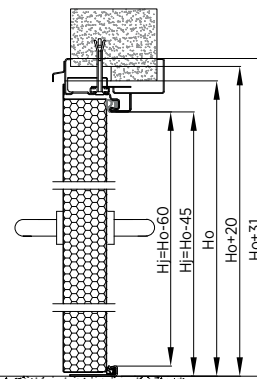


Fig. 122. Installation of the double-leaf door to a masonry wall - wrap-around frame with a thermal break - vertical cross-section

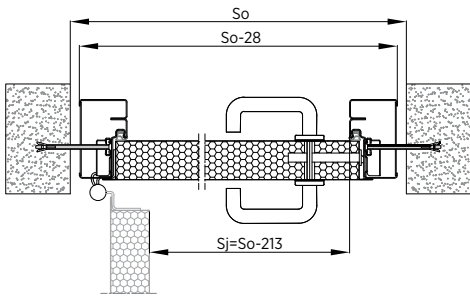


Fig. 123. Installation of the single-leaf door to a masonry wall - internal frame with a thermal break - horizontal cross-section

- So - opening width,
- Sj - clear passage width, $Sj = So - 110$ [mm],
- Ho - opening height,
- Hj - clear passage height, $Hj = Ho - 50$ [mm] for doors with a threshold,
- E_{min} - space required for opening the leaf at a 90° angle, $E_{min} = Sj + 140$ [mm].

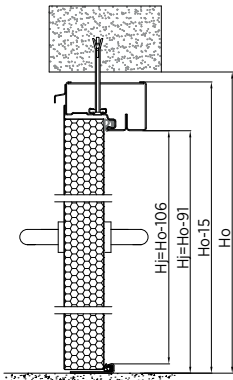


Fig. 124. Installation of the single-leaf door to a masonry wall - internal frame with a thermal break - vertical cross-section

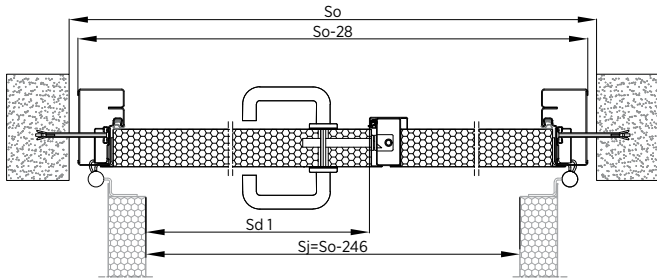


Fig. 125. Installation of the double-leaf door to a masonry wall - internal frame with a thermal break - horizontal cross-section

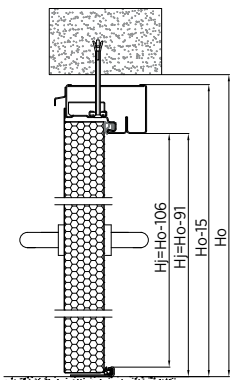


Fig. 126. Installation of the double-leaf door to a masonry wall - internal frame with a thermal break - vertical cross-section



External single-leaf door

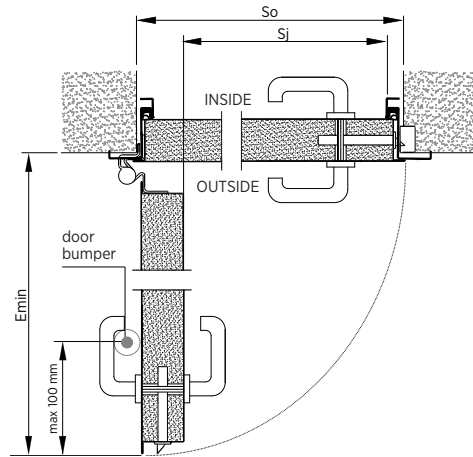


Fig. 127. Installation in front of the opening – corner frame without a thermal break – horizontal cross-section

- So** - opening width,
- Sj** - clear passage width, $S_j = S_o - 110$ [mm],
- Ho** - opening height,
- Hj** - clear passage height,
- Hj** = $H_o - 50$ [mm] for doors with a threshold,
- E_{min}** - space required for opening the leaf at a 90° angle,
 $E_{min} = S_j + 140$ [mm].

External double-leaf door

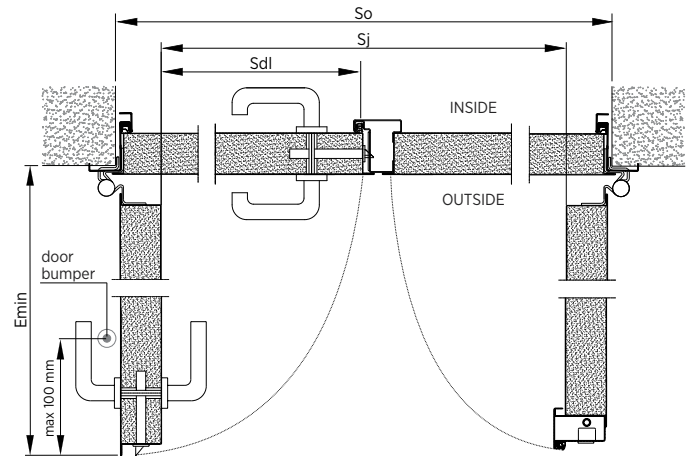


Fig. 128. Installation in front of the opening of the double-leaf door – corner frame with-out a thermal break – horizontal cross-section

- So** - opening width,
- Sdl** - clear passage width of the active leaf,
- Sj** - clear passage width for both leafs (double-leaf door),
 $S_j = S_o - 140$ [mm],
- Ho** - opening height,
- Hj** = clear passage height, $H_j = H_o - 50$ [mm] for doors with a threshold,
- E_{min}** - space required for opening the active leaf at 90°,
 $E_{min} = S_j + 140$ [mm].

CERTIFICATION DOCUMENTS

- PN-EN 14351-2:2018-12.
- EN 14351-1:2006+A2:2016. Windows and doors. Product standard. Part 1: Products without fire resistance or smoke control characteristics – external doors.
- Hygienic Attestation 225/322/242/2016.

TESTS

- Door mechanical strength – **Class 3** according to PN-EN 1192:2001.
- Resistance to repeated opening and closing of external doors – **Class 7 (500,000 cycles)** for solid doors, **Class 6 (200,000 cycles)** for glazed doors, for internal doors – **Class 5** according to PN-EN 12400:2002.
- Sound resistance for single-leaf doors **Rw 30dB** according to PN-EN ISO 10140-2 (2011).
- Thermal transmittance factor for external single-leaf solid doors for unheated areas (opening frame without a thermal break, with a polystyrene infill) **1.4 [W/m²K]** according to PN-EN ISO 10077-1:2007.
- Thermal transmittance factor for external double-leaf solid doors for unheated areas (opening frame without a thermal break, with a polystyrene infill) **1.7 [W/m²K]** according to PN-EN ISO 10077-1:2007.
- Thermal transmittance factor for external single-leaf solid doors (opening frame with a thermal break and a mineral wool infill) **1.3 [W/m²K]** according to PN-EN ISO 10077-1:2007.
- Thermal transmittance factor for external single-leaf solid doors (opening frame with a thermal break and a PU board infill) **1.2 [W/m²K]** according to PN-EN ISO 10077-1:2007.



COLOURS

Standard colours of ECO doors:



The ECO steel seamless doors can be coated in any RAL colour (except for colours with the pearl, reflective or metallic finish) or RAL MAT STRUCTURE colours:

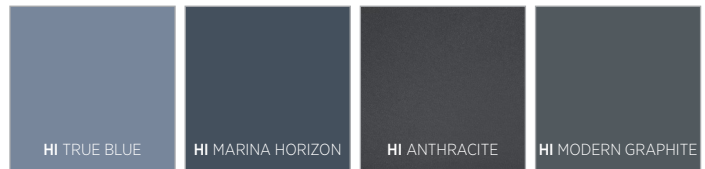


HOME INCLUSIVE 2.0:

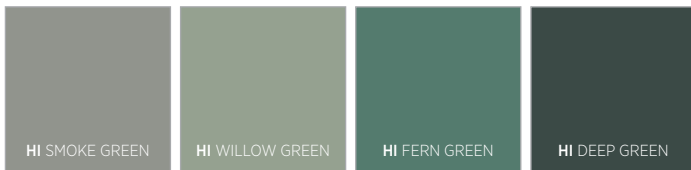
HISTONE



HISTEEL



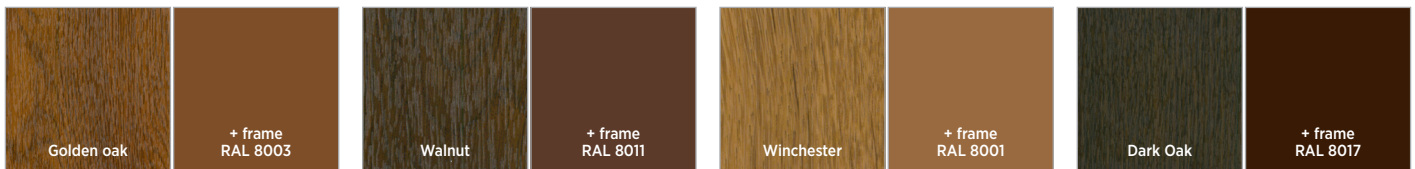
HI EARTH



HIRUBY



ECO seamless door leaves are also available with wood effect film coatings:



Non-standard colours:
Other RAL, mat structure colour



Colours shown in the materials shall be treated as illustrative only.



ECO BASIC

SEAMLESS STEEL DOOR, EXTERNAL AND INTERNAL, SINGLE-LEAF

CHARACTERISTIC FEATURES



Description

The leaf is made of galvanised steel sheet 0.5 [mm] thick with polyester coating or powder coated. The door features a thick rebate lip. The frames are made of powder coated steel sections formed from 1.2 [mm] thick galvanized sheets of top quality. The frame posts are braze welded. The door leaves hang within the opening frame on two hinges located within the door rebate lip.

Leaf infill

The leaf of the external door is infilled with the core made of expanded polystyrene (EPS), and the internal doors have a core made of cellular cardboard. The custom finishes of the door feature infill cores of mineral wool for the external doors.

Gaskets system

The rebate gasket is made of EPDM and set around the frame circumference in the post and lintel grooves, and in the sealing threshold.

Hardware and handles

The standard door features a single mortise lever lock, and a black plastic door handle with a construction access key.

VIEWS | CROSS-SECTIONS OF THE DOORS

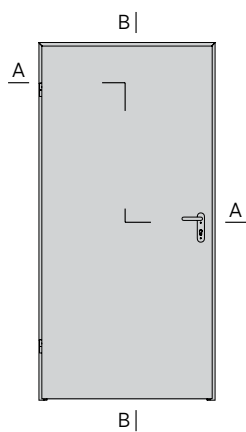


Fig. 129. ECO BASIC steel seamless door

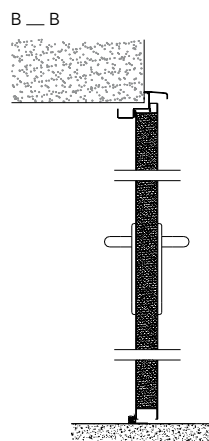


Fig. 130. Vertical cross-section of the ECO BASIC external steel seamless door with a corner frame

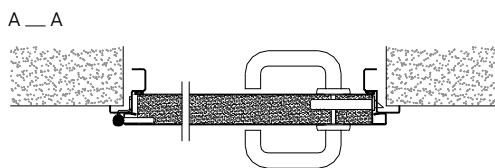


Fig. 131. Horizontal cross-section of the ECO BASIC external steel seamless door with a corner frame

DOOR DIMENSIONS

Standard single-leaf ECO BASIC door dimensions with with a corner/embracing frame	
Clear passage dimension (SjxHj) in [mm]	Clear wall opening dimension (SoxHo) in [mm]
800x2,015	860x2,045
900x2,015	960x2,045
1,000x2,015	1,060x2,045

Standard single-leaf ECO BASIC door dimensions with an internal frame	
Clear passage dimension (SjxHj) in [mm]	Clear wall opening dimension (SoxHo) in [mm]
800x2,015	920x2,075
900x2,015	1,020x2,075
1,000x2,015	1,120x2,075

The listed maximum dimensions are the clear passage dimensions; the ordering sizes/dimensions apply to a clear wall opening.

Selection of the clear wall opening dimensions vs. the opening frame type. Corner or embracing frame, internal single-leaf door

Width: clear passage dimension + 60 [mm] = clear wall opening dimension, Height: clear passage dimension + 30 [mm] = clear wall opening dimension.

Inner frame, internal single-leaf door

Width: clear passage dimension + 120 [mm] = clear wall opening dimension, Height: clear passage dimension + 60 [mm] = clear wall opening dimension.

Add 15 [mm] to the height (for the threshold) of the external doors.

Wrap-around frame adjustment range: -5 [mm] to +5 [mm].

The installation clearances listed above do not include the space required for the covers of the lock latch, anti-burglary bolts, recesses for anchors, and pockets of hinges, and other elements which require spot recesses to be cut out in the wall.

If spot recesses cannot be cut out (e.g. the door is fixed to a steel structure), increase the installation opening width by 15 [mm].



ACCESSORIES

Handles

The standard handles are made of plastic and without a reinforced cover plate. The handle grip and the cover plate are polypropylene. The standard door handles are available in black with a construction access key. The doors can be fitted with stainless steel split cover plates on customer's request. The stainless steel handle-handle hardware is available with a 26/36 lock cylinder.



Fig. 132. Standard plastic door handle



Fig. 133. Stainless steel door handle, split cover plate

Steel frames

The standard ECO BASIC steel seamless doors have corner frames. The doors are also available with internal frames or embracing frames.

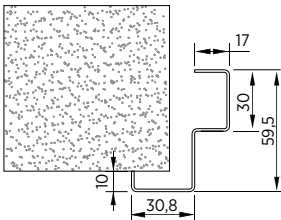


Fig. 134. Corner frame - standard

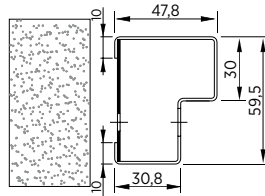


Fig. 135. Inner frame

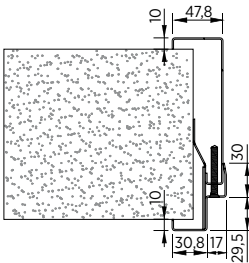


Fig. 136. Inner frame

Ventilation grilles



View from the outside

Fig. 137. Aluminium ventilation grille 480x80 [mm]

Glazing

The ECO BASIC steel seamless doors can be glazed with safety glazing units, 33.1 (2B2). Standard glazing dimensions per one door leaf:

- **Design 1** - porthole, \varnothing 320 [mm], with brushed or polished stainless steel frame,
- **Design 2** - 3 portholes, \varnothing 240 [mm], with brushed or polished stainless steel frame,
- **Design 3** - stainless steel decorative motif and two glass panes.

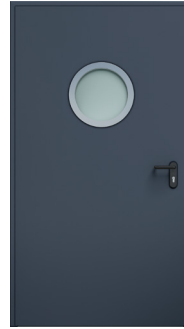


Fig. 138. Glazing - design 1



Fig. 139. Glazing - design 2



Fig. 140. Glazing - design 3

Threshold seals

The standard ECO BASIC doors are manufactured without a threshold (the bottom ends of the frame sections are connected with a transport safety channel bar, which can be either removed or embedded in the flooring during installation). The ECO BASIC external steel seamless doors are manufactured with a threshold and a drip cap. The threshold is fastened to the floor, and the drip cap is bolted to the opening frame above the door. The ECO BASIC doors are also available with a drop-down seal which replaces the threshold.

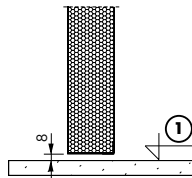


Fig. 141. Leaf bottom gap without a threshold

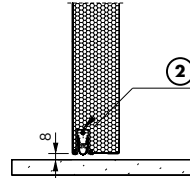


Fig. 142. Cross-section of the drop-down seal

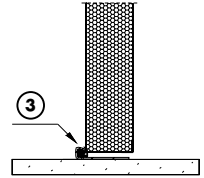


Fig. 143. Cross-section of the threshold

① - floor level

② - drop-down seal

③ - threshold

Door closers



Fig. 144. Rail type door closer



Ordering dimensions and installation dimensions

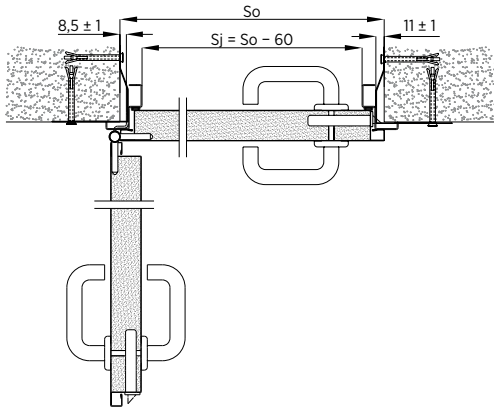


Fig. 145. Installation of the single-leaf door with the corner frame, horizontal cross-section

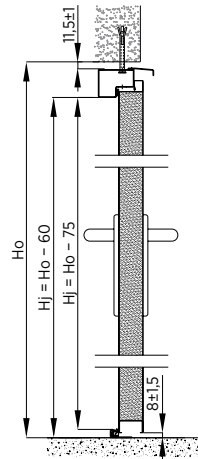


Fig. 148. Installation of the single-leaf door with an internal frame in a masonry wall, vertical cross-section

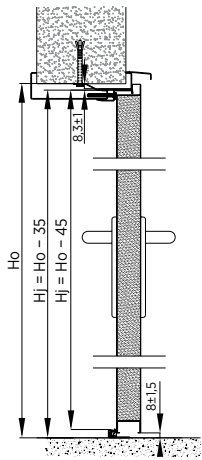


Fig. 146. Installation of the single-leaf door with a wrap-around frame in a masonry wall, vertical cross-section

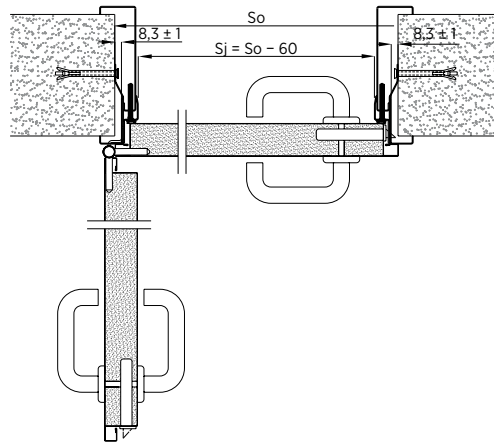


Fig. 149. Installation of the single-leaf door with a wrap-around frame, horizontal cross-section

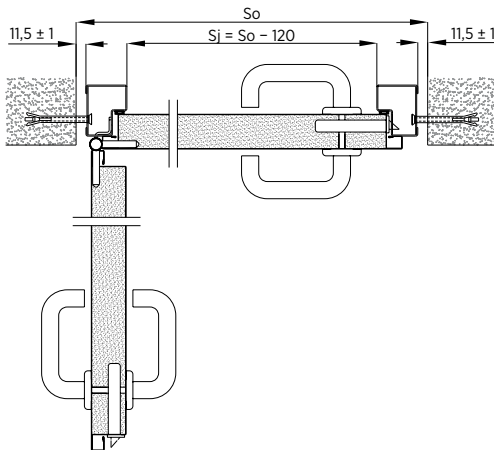


Fig. 147. Installation of the single-leaf door with an internal frame, horizontal cross-section

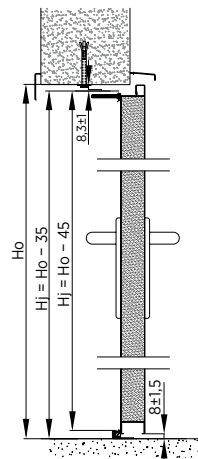


Fig. 150. Installation of the single-leaf door with a wrap-around frame in a masonry wall, vertical cross-section

CERTIFICATION DOCUMENTS

- PN-EN 14351-2:2018-12.
- EN 14351-1:2006+A2:2016. Windows and doors. Product standard. Part 1: Products without fire resistance or smoke control characteristics – external doors.
- Hygienic Attestation 225/322/242/2016.

TESTS

- Resistance to repeated opening and closing of internal doors – **Class 6** according to PN-EN 12400:2002.
- Heat transfer coefficient for single-leaf external doors **1.7 [W/m²K]** according to PN-EN ISO 10077-1:2007.



COLOURS

Standard colours of ECO BASIC doors:



The ECO BASIC steel seamless doors can be coated in any RAL colour (except for colours with the pearl, reflective or metallic finish) or RAL MAT STRUCTURE colours:

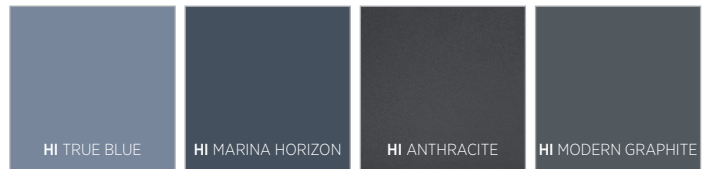


HOME INCLUSIVE 2.0:

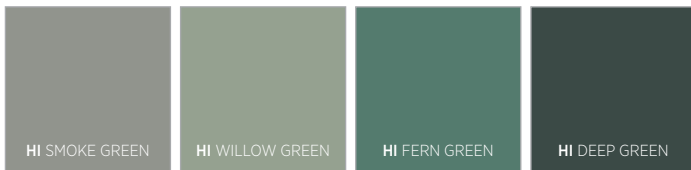
HISTONE



HISTEEL



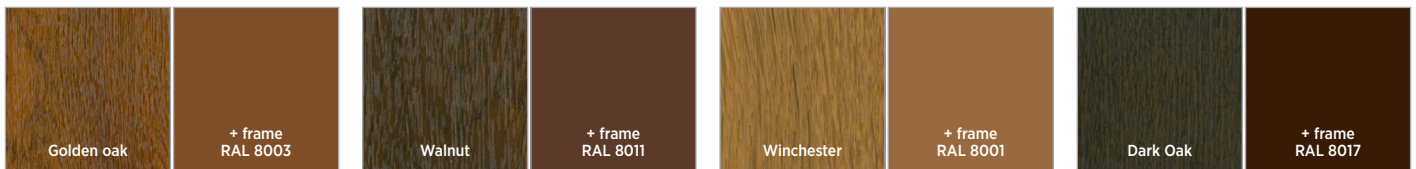
HI EARTH



HIRUBY



ECO BASIC seamless door leaves are also available with wood effect film coatings:



Non-standard colours:
Other RAL, mat structure colour



Colours shown in the materials shall be treated as illustrative only.



ANTI-BURGLARY RC2 AND RC3

SEAMLESS STEEL DOOR, EXTERNAL AND INTERNAL, SINGLE-LEAF OR DOUBLE-LEAF

CHARACTERISTIC FEATURES



Description

The leaf is made of galvanised steel sheet 0.7 to 0.75 [mm] thick with polyester coating, powder coated or with wood effect film coatings. The passive leaf of the double-leaf door is locked with an automatic latch. The opening frames are made of powder coated steel sections formed from 1.5 [mm] thick sheets. The frame posts are brazed and fusion welded. The door leaves hang within the opening frame on three hinges with vertical adjustment, including one self-closing hinge.

Leaf infill

The internal door leaves are infilled with cellular cardboard. In the case of fire-rated doors EI30 and EI60 in RC2 i RC3 Class, they are infilled with mineral wool.

Gaskets system

The rebate gasket is made made of modified EPDM and set around the opening frame circumference, i.e. along the posts and the lintel.

Hardware and handles

RC2 Class - dtwo locks with class C lock cylinders, a tamper-proof lock plate on the additional lock, and a door handle on a long cover plate, extra leaf reinforcement and three anti-burglary bolts per door leaf.

RC3 Class - three locks with class C lock cylinders, tamper-proof lock plates on the additional locks, and a door handle on a long cover plate, extra leaf reinforcement and three anti-burglary bolts per door leaf.

VIEWS | CROSS-SECTIONS OF THE DOORS

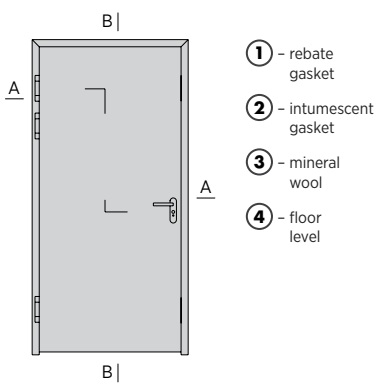


Fig. 151. Fire-rated single-leaf steel seamless door

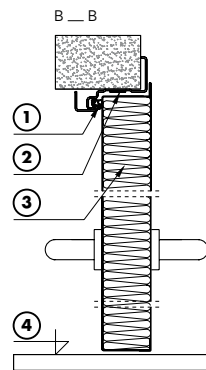


Fig. 152. Vertical cross-section of the fire-rated steel seamless door with a corner frame

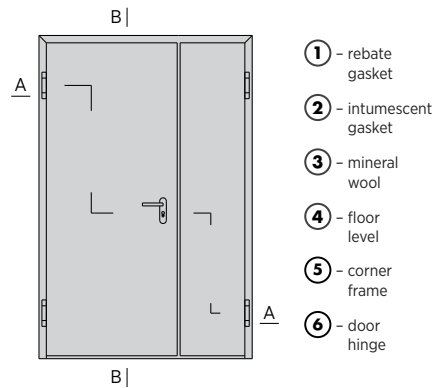


Fig. 154. Fire-rated large-size double-leaf steel seamless door

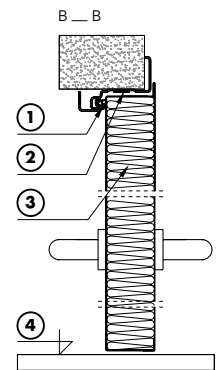


Fig. 155. Vertical cross-section of the fire-rated large-size double-leaf steel seamless door with a corner frame

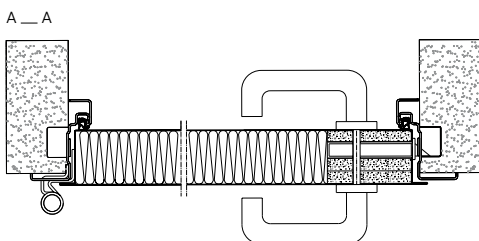


Fig. 153. Horizontal cross-section of the fire-rated large-size steel seamless door with a corner frame

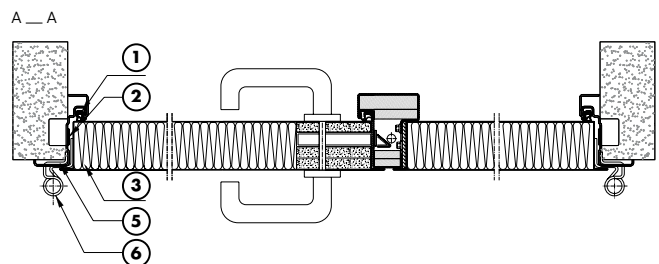


Fig. 156. Horizontal cross-section of the fire-rated large-size double-leaf steel seamless door with a corner frame



DOOR DIMENSIONS

Max. and min. dimensions of single-leaf door within the clear wall opening
Smin = 810 [mm], Smax = 1,110 [mm],
Hmin = 1,750 [mm], Hmax = 2,135 [mm]

Max. and min. dimensions of double-leaf door
Smin = 1,340 [mm], Smax = 2,140 [mm]
Hmin = 1,750 [mm], Hmax = 2,135 [mm]

Selection of the clear wall opening dimensions vs. the opening frame type.

Corner or embracing frame, internal single-leaf door

Width: clear passage dimension + 110 [mm] = clear wall opening dimension, Height: clear passage dimension + 35 [mm] = clear wall opening dimension.

Corner or embracing frame, internal double-leaf door

Width: clear passage dimension + 140 [mm] = clear wall opening dimension, Height: clear passage dimension + 35 [mm] = clear wall opening dimension.

Inner frame, internal single-leaf door

Width: clear passage dimension + 213 [mm] = clear wall opening dimension, Height: clear passage dimension + 91 [mm] = clear wall opening dimension.

Inner frame, internal double-leaf door

Width: clear passage dimension + 246 [mm] = clear wall opening dimension, Height: clear passage dimension + 91 [mm] = clear wall opening dimension.

DIMENSIONING

The ordering size (within the clear wall opening) of the steel seamless doors includes what follows:	Installation width clearance per each door side	Installation height clearance
for single-leaf doors with corner or embracing frames	9 [mm]	5.5 [mm]
for single-leaf doors with internal frames	13.5 [mm]	15 [mm]
double-leaf doors with corner or embracing frames	7.5 [mm]	5.5 [mm]
double-leaf doors with internal frames	12 [mm]	15 [mm]

The installation clearances listed do not include the clearances required for the lock bolt guards, anti-burglary bolt guards, wall plug bosses of 3-directional adjustment hinge recesses or electromagnetic strike guards in single-leaf doors; these features require breaking located recesses in the opening walls.

If chipping the pockets in the walls cannot be made (e.g. the door is installed within a steel open work structures), increase the installation opening size by:

- 30 [mm] in width and 0 [mm] in height for single-leaf doors
- 30 [mm] in width and 20 [mm] in height for double-leaf doors.

The relationships listed **do not include** these options: electromagnetic strike covers in single-leaf doors and 3D hinge recesses in single and double-leaf doors. In such case, the installation opening must be extended by: 15 [mm] in width for single-leaf doors with electromagnetic strikes or single- and double-leaf doors with 3D adjustment hinges. Additionally, with sin-gle-leaf doors fitted with a concealed door closer, the opening must be extended by 15 [mm] in height. The embracing frames include the option for increasing the wall thickness dimension by +20 [mm].

ACCESSORIES

Steel frames

The standard steel seamless doors have corner frames. The doors are also available with internal frames or embracing frames.

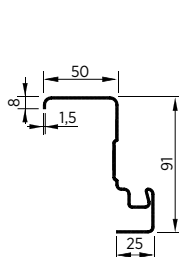


Fig. 157. Corner frame - standard

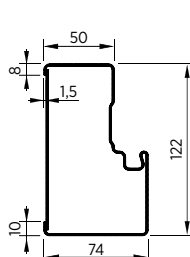


Fig. 158. Internal frame

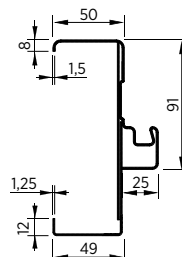


Fig. 159. Wrap-around frame

Handles

The standard handle has a polypropylene body on a steel shank. The standard handles are available in black. The doors can be fitted with stainless steel handles on customer's request.



Fig. 160. Standard plastic door handle



Fig. 161. Stainless steel handle



Door closers



Fig. 164. Arm type door closer



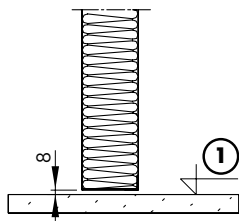
Fig. 165. Rail type door closer



Fig. 166. Sequence selector

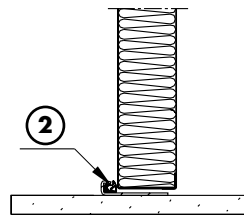
Threshold seals

The standard doors are manufactured without a threshold (the bottom ends of the frame sections are connected with a transport safety channel bar, which can be either removed or embedded in the flooring during installation) or the fire-rated steel seamless doors manufactured with a threshold and a drip cap. The threshold is bolted to the floor, and the drip cap is bolted to the opening frame above the door.



① - floor level

Fig. 162. Leaf bottom gap without a threshold



② - threshold

Fig. 163. Cross-section of the threshold

Glazing

The steel seamless doors can be glazed with P4 class glass for class RC 2 and P5 for class RC3.

Standard glazing dimensions per one door leaf:



Glazing dimensions
450x660 [mm]



Glazing dimensions
300x700 [mm]



Ordering dimensions and installation dimensions

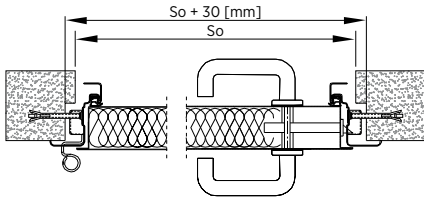


Fig. 167. Installation of the single-leaf door with the corner frame in a masonry wall, horizontal cross-section

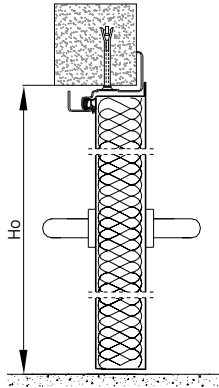


Fig. 168. Installation of the single-leaf door with the corner frame in a masonry wall, vertical cross-section

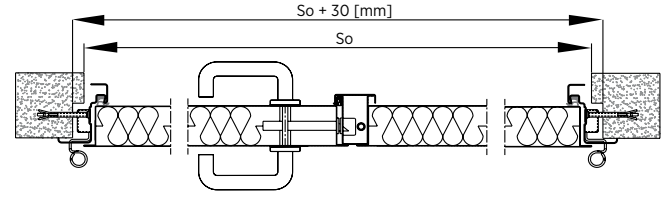


Fig. 171. Installation of the double-leaf door with the corner frame in a masonry wall, horizontal cross-section

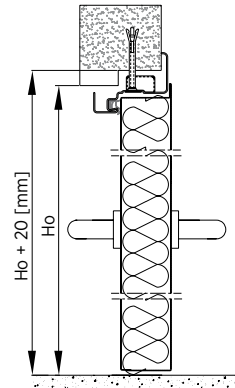


Fig. 172. Installation of the double-leaf door with the corner frame in a masonry wall, vertical cross-section

Installation on steel structures

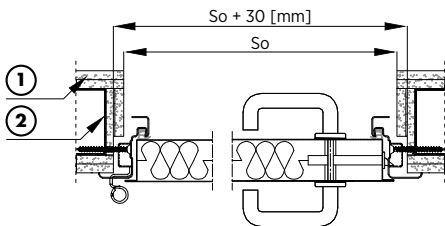


Fig. 169. Installation of the single-leaf door with the corner frame in a masonry wall, horizontal cross-section

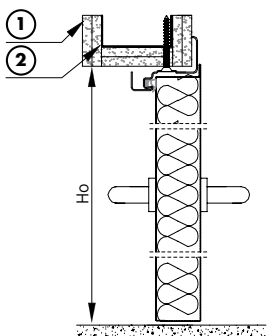


Fig. 170. Installation of the single-leaf door with the corner frame in a masonry wall, vertical cross-section

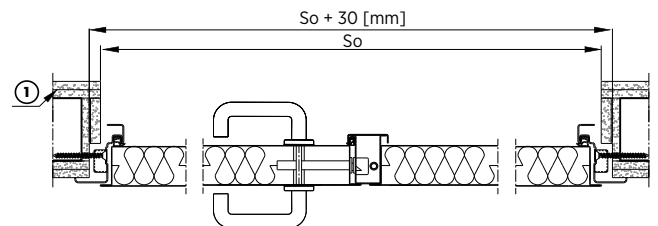


Fig. 173. Installation of the double-leaf door with the corner frame in a masonry wall, horizontal cross-section

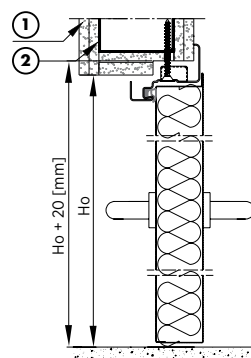


Fig. 174. Installation of the double-leaf door with the corner frame in a masonry wall, vertical cross-section

① - type F dry plaster-boards - two layers ② - steel framework structure



Single-leaf door

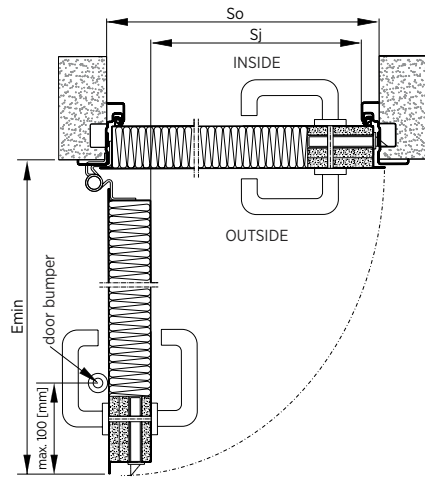


Fig. 176. Installation with the corner frame, horizontal cross-section

- So - opening width,
- Sj - clear passage width, $S_j = S_o - 110$ [mm],
- Ho - opening height,
- Hj - clear passage height,
- Hj = Ho - 35 [mm] for doors with a threshold,
- E_{min} - space required for opening the leaf at a 90° angle, $E_{min} = S_j + 140$ [mm].

Double-leaf door

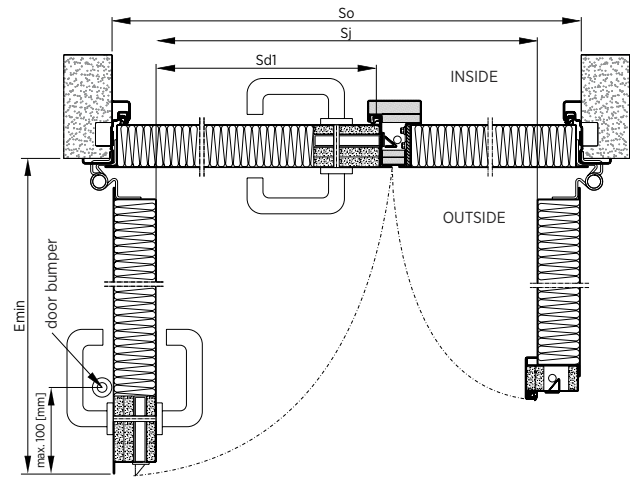


Fig. 177. Installation of the double-leaf door with the corner frame, horizontal cross-section

- So - opening width,
- Sd1 - clear passage width of the active leaf,
- Sj - clear passage width for both leaves (double-leaf door), $S_j = S_o - 140$ [mm],
- Ho - opening height,
- Hj = clear passage height, $H_j = H_o - 35$ [mm] for doors with a threshold,
- E_{min} - space required for opening the active leaf at 90°, $E_{min} = S_j + 140$ [mm].

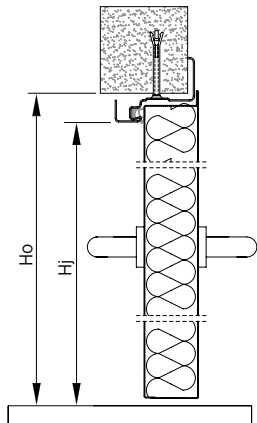


Fig. 175. Installation with the corner frame, vertical cross-section

CERTIFICATION DOCUMENTS

- National Technical Assessment ITB-KOT-2017/0079.
- Hygienic Attestation 61/322/62/2022.
- PN-EN 1627:2012.

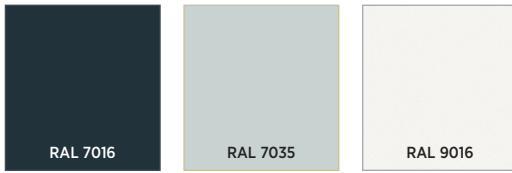
TESTS

- Resistance to repeated opening and closing of external doors - **Class 6 (200,000 cycles)** according to PN-EN 12400:2004.
- Door mechanical strength - **Class 4 solid/ 2 glazed** according to PN-EN 1192:2001.
- Anti-burglary classification **RC2 and RC3** according to PN-EN 1627:2011.



COLOURS

Standard colours of seamless doors:



The steel seamless doors can be coated in any RAL colour (except for colours with the pearl, reflective or metallic finish) or RAL MAT STRUCTURE colours:

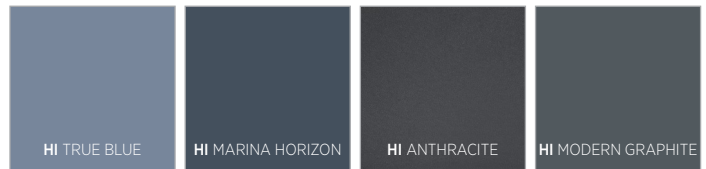


HOME INCLUSIVE 2.0:

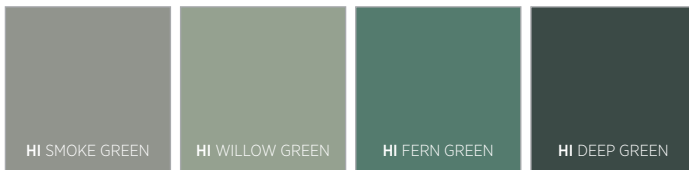
HISTONE



HISTEEL



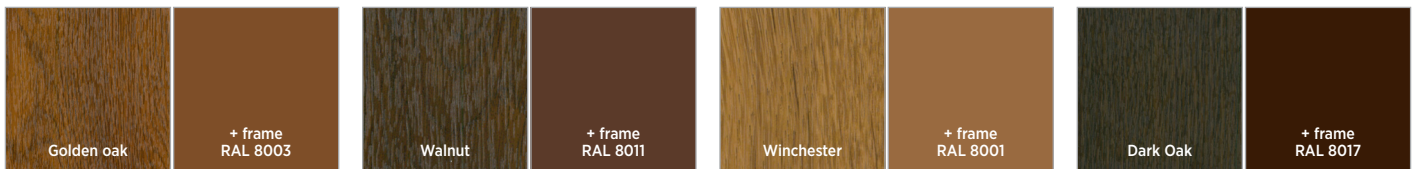
HI EARTH



HIRUBY



Seamless door leaves are also available with wood effect film coatings.



Non-standard colours:
Other RAL, mat structure colour

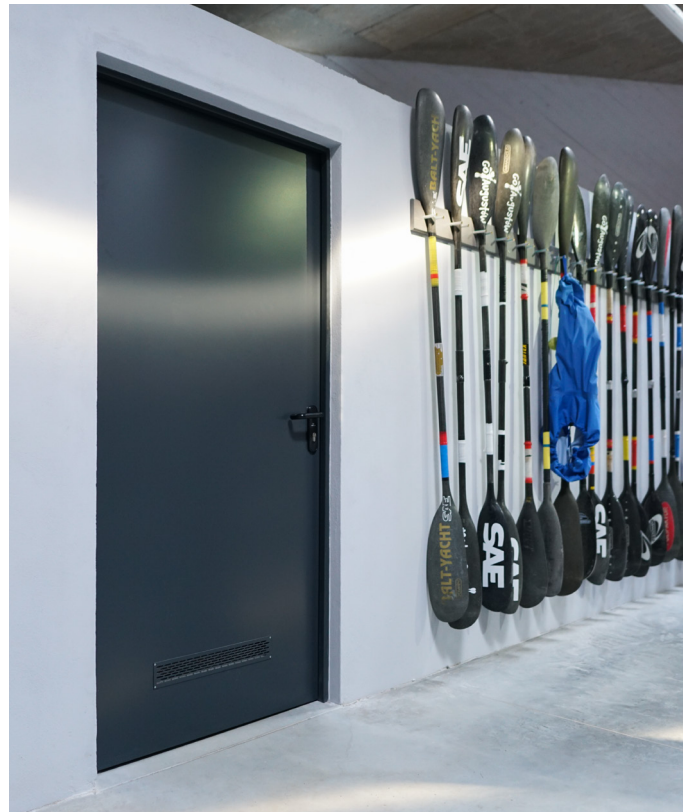


Colours shown in the materials shall be treated as illustrative only.



REFERENCE BUILDINGS







TECHNICAL DATA

	ECO Tech door	ECO	ECO BASIC	Anti-burglary RC2 and RC3
Door frame made of steel sections powder coated, thickness	1.5 [mm]	1.2 [mm]	1.2 [mm]	1.5 [mm]
Total leaf thickness	78 [mm]	62.5 ± 1 [mm]	40 ± 1 [mm]	62.5 ± 1 [mm]
Leaf sheet thickness	1.0 or 1.25 [mm]	0.5 - 1.5 [mm]	0.5 [mm]	0.7 - 0.75 [mm]
Internal doors	—	yes	yes	yes
External doors	yes	yes	yes	—
No. of leaves	single-leaf	single-leaf and double-leaf	single-leaf	single-leaf and double-leaf
Standard sizes	—	●	●	—
Special dimensions	■	■	—	●
Leaf with a thin rebate strip	—	●	—	●
Leaf with a thick rebate strip	●	—	●	—
Infill	mineral wool, PU board	foamed polystyrene, cellular cardboard, mineral wool, PU board	foamed polystyrene, cellular cardboard, mineral wool	cellular cardboard, mineral wool
Rebate gaskets	●	●	●	●
Drop-down seal	●	■	■	—
Mortise lever lock	●	●	●	●
Additional lock	■	■	■	●
Hinges with vertical adjustment	—	●	—	●
3-directional hinge	●	■	—	—
Spring-action hinge for self-closing of the door	—	●	—	●
Plastic-coated handle	●	●	●	●
Stainless steel handle	■	■	■	—
Door closer	■	■	■	■
Glazing	■	■	■	■
Ventilation grilles	■	■	■	—
Spyhole	■	■	—	■
Anti-burglary bolt in internal doors	—	—	—	●
Door lower kick plate, stainless steel	■	■	—	—
Circumferential door leaf reinforcement	■	■	—	●
Door push pad on the lock level, stainless steel	■	■	—	—
Corner frame	●	●	●	●
Embracing frame	■	■	■	■
Internal frame	■	■	■	■
Opening frame with a thermal break (corner, internal, wrap-around)	■	■	—	—
Top and side daylighters	—	■	—	—
Electromagnetic strike	■	■	—	—
Sequence selector (closing sequence controller)	—	■	—	■
RAL mat structure colour of the door	■	■	■	■
Optional powder coating in any RAL colour	■	■	■	■
Optional film coatings	—	■	■	■
Ventilation system	—	■	—	—
Anti-panic hardware	■	■	—	—

● Standard equipment ■ Optional equipment — None



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