

# STEEL DOORS



## SEAMLESS STEEL DOORS external and internal

**Intended use:** Seamless steel doors are an excellent solution for multi-family residential buildings, office and healthcare facilities, industrial sites, tourism infrastructure, or technical areas of residential buildings such as boiler rooms or basements. They are perfect for extensively exploited areas, passageways, warehouses, and industrial halls. They can be used both indoors and outdoors.



**WIŚNIEWSKI**

GATES | WINDOWS | DOORS | FENCES

### DURABILITY

With state-of-the-art technological solutions combined with materials of the highest class, we get doors with a rigid and durable structure resistant to physical factors and the weather.

### SOLID STRUCTURE

The structure of the seamless doors includes a solid or glazed leaf, a steel door frame made of formed sections, which guarantees reliable operation for many years to come.

### FUNCTIONALITY

A wide range of colours, multiple applications, and a special design enabling various opening directions make external seamless steel doors a truly versatile solution. When choosing external seamless steel doors you are spoiled for choice with a number of optional accessories.

### UNIVERSAL INSTALLATION

A specially developed design ensures quick and simple installation.



# ECO Tech

## SINGLE-LEAF EXTERNAL SEAMLESS STEEL DOOR



### CHARACTERISTICS

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.

#### Opening 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.

#### Gasket 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, DOOR CROSS-SECTIONS

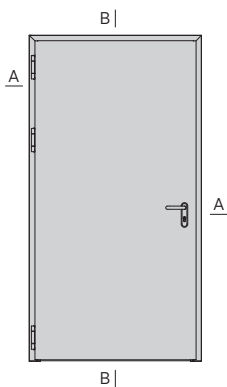


Fig. 1. ECO Tech single-leaf seamless steel door

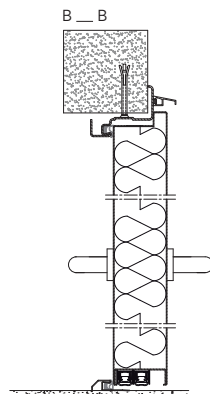


Fig. 2. Vertical cross-section of the ECO Tech external seamless steel door with a corner frame

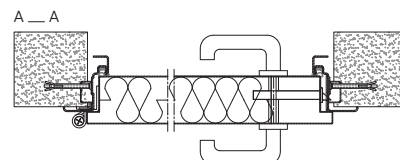


Fig. 3. Horizontal cross-section of the ECO Tech external seamless steel door with a corner frame



## DOOR DIMENSIONS

Limit dimensions of the ECO Tech single-leaf seamless door with a corner frame and a wrap-around frame		
SxH [mm] in the clear opening	610x1,650	Min. dimensions of single-leaf doors
	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.

**Single-leaf doors are also available in non-standard dimensions. Double-leaf steel doors are manufactured to order.**

**Determining the clear wall opening dimensions depending on the opening frame type.**

**Opening frame without a thermal break**

**Corner or wrap-around frame – external single-leaf door**

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

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

**Internal 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	Horizontal installation clearance per each door side	Vertical installation clearance
for single-leaf doors with a corner or wrap-around frame	9 [mm]	5.5 [mm]
for single-leaf doors with an internal frame	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]. Wrap-around 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 dimensions of glazing that can be used per one door leaf:



Glazing dimensions  
450x660 [mm]



Glazing dimensions  
300x700 [mm]



Glazing dimensions  
650x950 [mm]



Glazing dimensions  
550x1,100 [mm]



Glazing dimensions  
250x1,400 [mm]



Glazing dimensions  
Ø 400 [mm]

The standard round glazing is installed at a height of 1,605 [mm] from the leaf bottom to the glazing axis.



### 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 solid doors can optionally be fitted with a three-point automatic lock, 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 lock**

when the leaf closes, additional latches of the drive gear extend to 20 [mm] and the main latch extends to 10 [mm]. The door can be unlocked from the outside with the installed 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 the three-point lock - standard



Fig. 13. Stainless steel pull for the three-point lock





### Door closers



Fig. 14. Link arm door closer



Fig. 15. Rail door closer

### Pull types

The TECH ECO doors can be equipped with a stainless steel pull. Different lengths of the single-sided pulls are available.

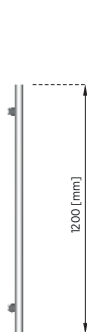
P10 – ø 30,  
colour: inox

Fig. 16. P10 pull models

P10 extended – ø 30,  
colour: inoxQ10 40 x 20,  
colour: inox

Fig. 17. Q10 40 x 20 pull models

Q10 40 x 20 extended,  
colour: inox

### Ventilation grilles

The ECO Tech doors can optionally be fitted with ventilation grilles with a shutter 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. 18. Steel ventilation  
grille 425x125 [mm]Fig. 19. Steel ventilation  
grille 525x225 [mm]Fig. 20. Steel ventilation grille  
525x625 [mm]Fig. 21. Steel ventilation  
grille 625x625 [mm]

Fig. 22. Steel ventilation grille 825x825 [mm]

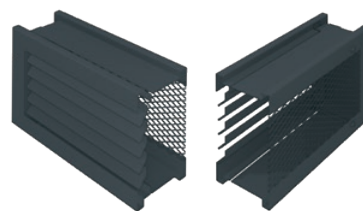


Fig. 23. Steel ventilation grille in the ECO Tech seamless door

### Flow surface of the ECO TECH door ventilation grilles

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



### Steel opening frames

The ECO Tech seamless steel doors feature corner frames as standard. The doors are also available with internal frames and wrap-around frames. The following diagrams show all three door frame types.

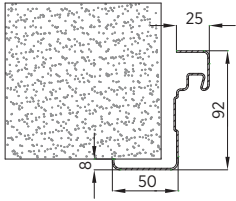


Fig. 24. Corner frame - standard

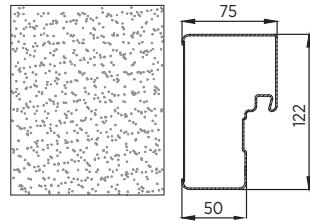


Fig. 25. Internal frame

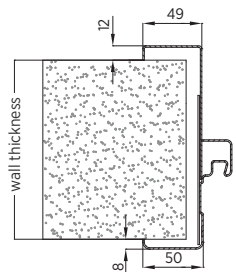


Fig. 26. Wrap-around frame

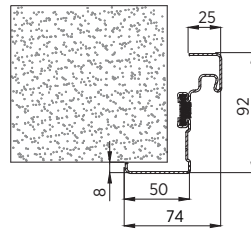


Fig. 27. Corner frame with a thermal break

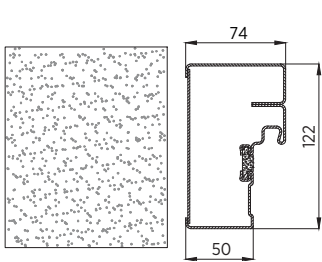


Fig. 28. Internal frame with a thermal break

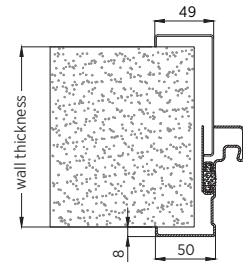


Fig. 29. Wrap-around frame with a thermal break

### 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 fastened to the floor, and the drip cap is bolted to the opening frame.

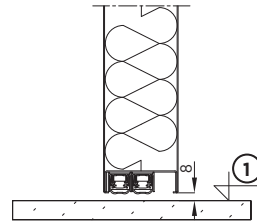


Fig. 30. Solution with a drop-down seal

① - floor level

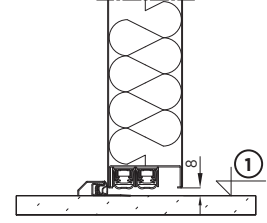


Fig. 31. Solution with a threshold and a drop-down seal

① - floor level



## Installation requirements

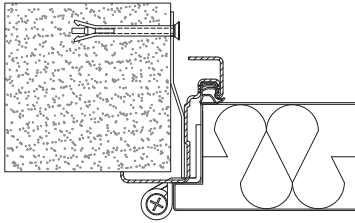


Fig. 32. Indirect installation with steel plates - opening frame without a thermal break

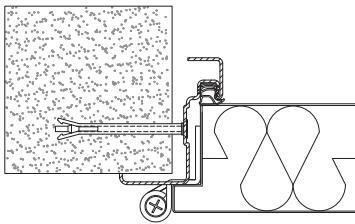


Fig. 33. Installation with anchors directly through the opening frame - opening frame without a thermal break

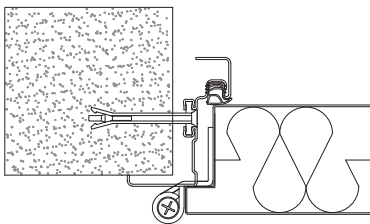


Fig. 34. Installation of an opening frame with a thermal break using anchors directly through the opening frame

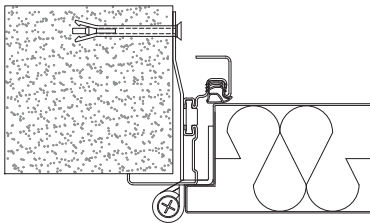


Fig. 35. Installation of an opening frame with a thermal break using steel plates (optional)

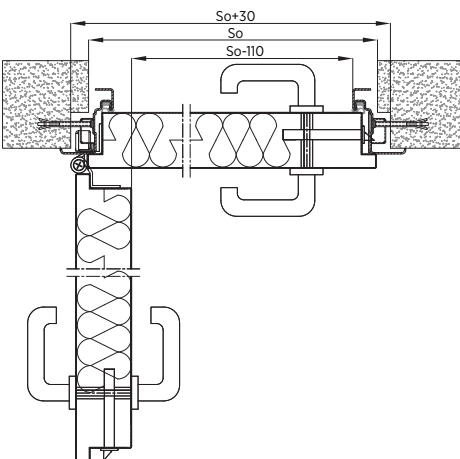


Fig. 36. Installation of the ECO Tech single-leaf seamless door with a corner frame without a thermal break to a masonry wall - horizontal cross-section

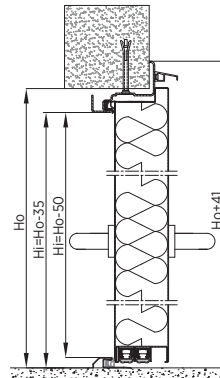


Fig. 37. Installation of the ECO Tech single-leaf seamless door with a corner frame without a thermal break to a masonry wall - vertical cross-section

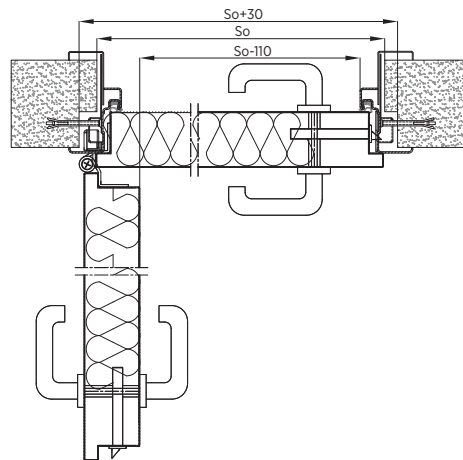


Fig. 38. Installation of the ECO Tech single-leaf seamless door with a wrap-around frame without a thermal break to a masonry wall - horizontal cross-section

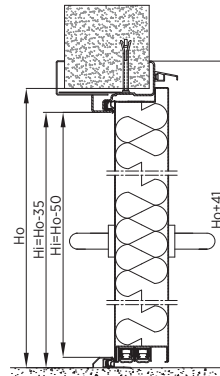


Fig. 39. Installation of the ECO Tech single-leaf seamless door with a wrap-around frame without a thermal break to a masonry wall - vertical cross-section

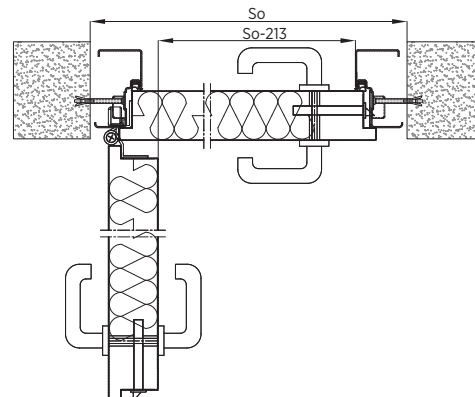


Fig. 40. Installation of the ECO Tech single-leaf seamless door with an internal frame without a thermal break to a masonry wall - horizontal cross-section

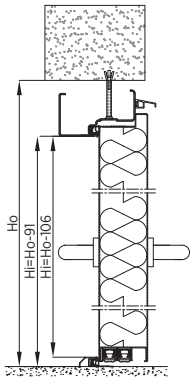


Fig. 41. Installation of the ECO Tech single-leaf seamless door with an internal frame without a thermal break to a masonry wall - vertical cross-section

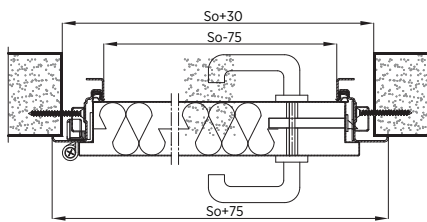


Fig. 42. Installation of the ECO Tech single-leaf seamless door with a corner frame without a thermal break to a steel structure - horizontal cross-section

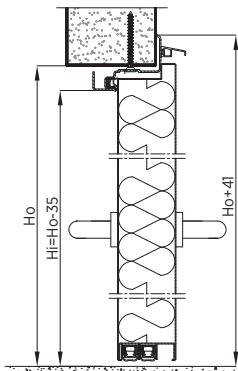


Fig. 43. Installation of the ECO Tech single-leaf seamless door with a corner frame with a thermal break to a steel structure - vertical cross-section

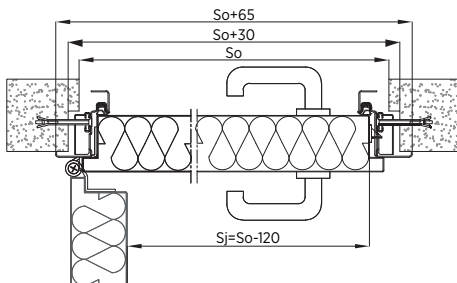


Fig. 44. Installation of a single-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

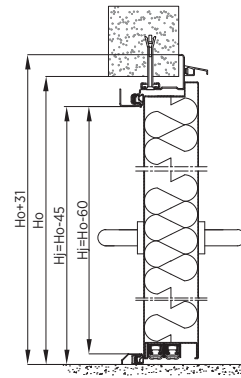


Fig. 45. Installation of a single-leaf door to a masonry wall - corner frame with a thermal break - vertical cross-section

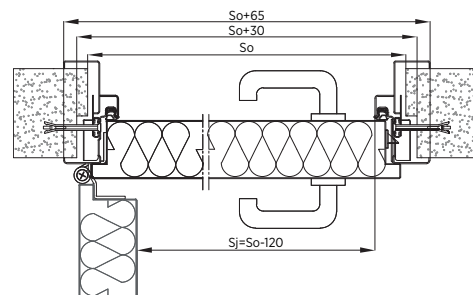


Fig. 46. Installation of a single-leaf door to a masonry wall - wrap-around frame with a thermal break - horizontal cross-section

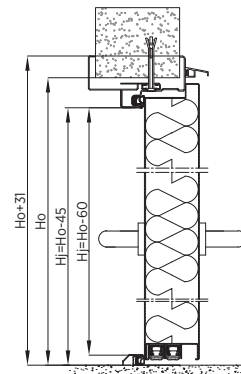


Fig. 47. Installation of a single-leaf door to a masonry wall - wrap-around frame with a thermal break - vertical cross-section

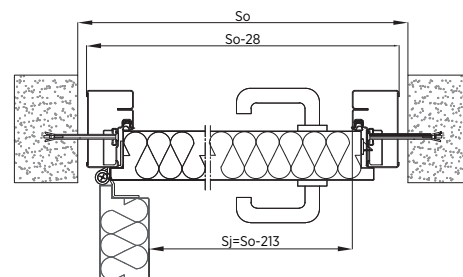


Fig. 48. Installation of a single-leaf door to a masonry wall - internal frame with a thermal break - horizontal cross-section

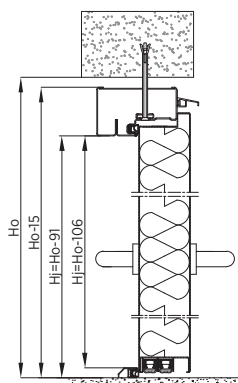


Fig. 49. Installation of a single-leaf door to a masonry wall - internal frame with a thermal break - vertical cross-section

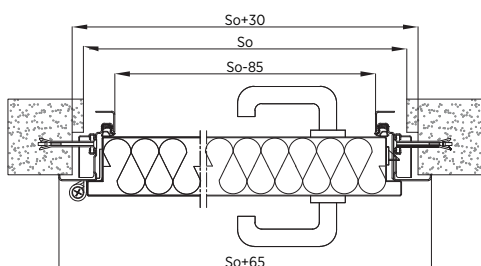


Fig. 50. Installation of a single-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

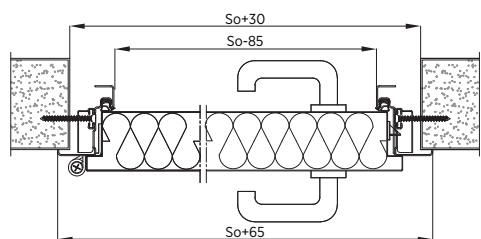


Fig. 51. Installation of a single-leaf door to a steel structure - corner frame with a thermal break - horizontal cross-section

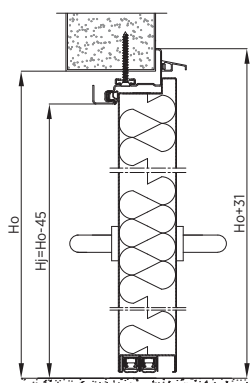


Fig. 52. Installation of a single-leaf door to a steel structure - corner frame with a thermal break - vertical cross-section

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

In the case of doors with an internal frame, the boxes do not overlap 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 Rys. 57 and Rys. 58. External single-leaf door.

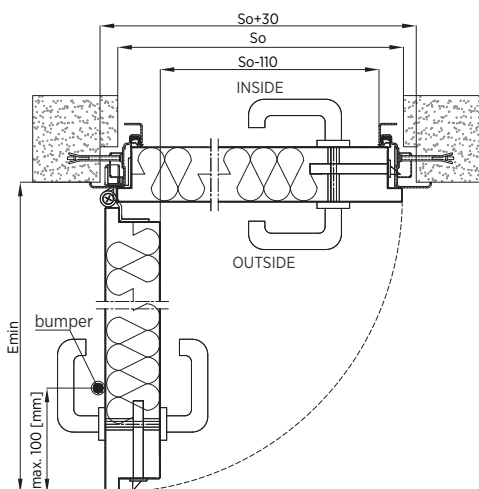


Fig. 53. Installation in front of the opening - horizontal cross-section, opening frame without a thermal break

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

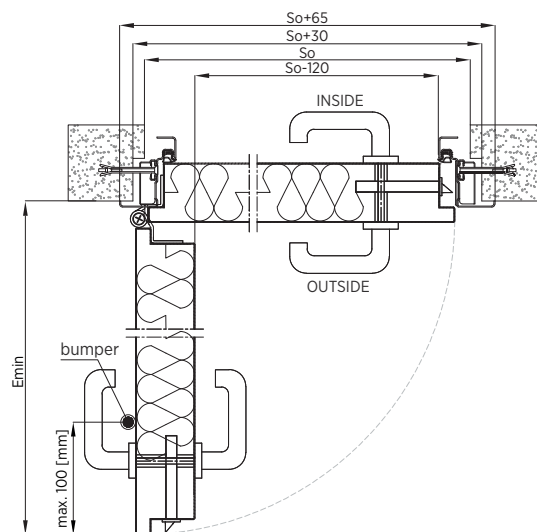


Fig. 54. Installation of a single-leaf door in front of the opening - corner frame with a thermal break - horizontal cross-section

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



## DOCUMENTS CERTIFYING MARKETING APPROVAL

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

## TESTS

- Mechanical strength – **Class 3** according to PN-EN 1192:2001.
- External door resistance to repeated opening and closing, **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 (1,200 Pa)** according to PN-EN 12210:2001.
- Heat transfer coefficient 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 seamless doors can be coated in any RAL palette colour (except for colours with a pearlescent, reflective or metallic finish) or RAL MAT STRUCTURE colours:

Custom colours: Other RAL mat structure colours



### HOME INCLUSIVE 2.0:

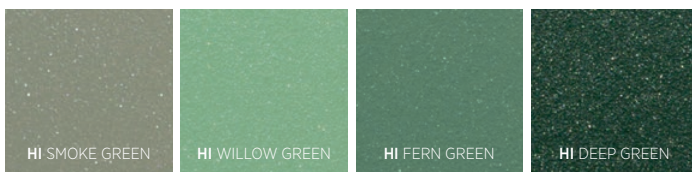
#### HISTONE



#### HISTEEL



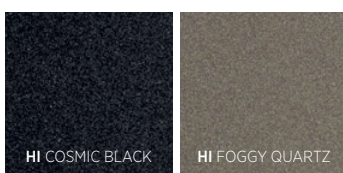
#### HI EARTH



#### HIRUBY



### HI palette special colours for ECO Tech doors:



The colours presented in this publication are for reference only.





# ECO

## EXTERNAL AND INTERNAL, SINGLE- OR DOUBLE-LEAF SEAMLESS STEEL DOORS

### CHARACTERISTICS

#### Description

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

#### Opening 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 an internal frame or a wrap-around frame.

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

#### Gasket system

A 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

As standard, the door features a mortise lever lock with a lock cylinder complete with three keys and a black polypropylene handle.



### VIEWS | DOOR CROSS-SECTIONS

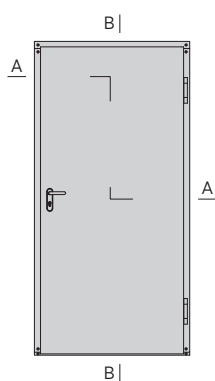


Fig. 55. ECO single-leaf seamless steel door

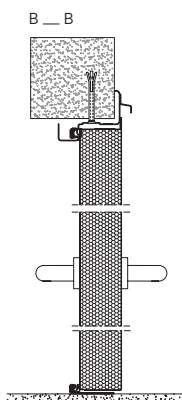


Fig. 56. Vertical cross-section of the ECO external seamless steel door with a corner frame without a thermal break

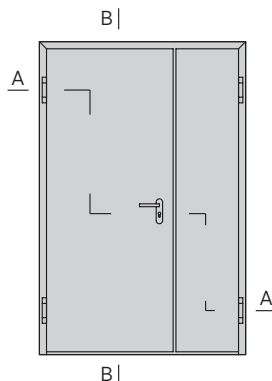


Fig. 58. ECO double-leaf seamless steel door

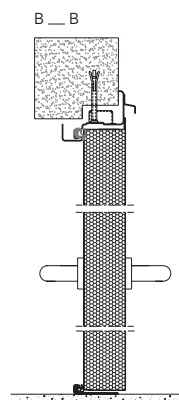


Fig. 59. Vertical cross-section of the ECO double-leaf seamless steel door with a corner frame without a thermal break

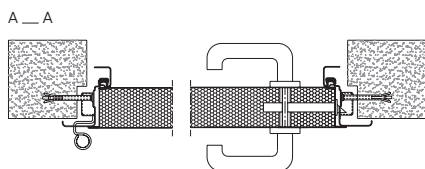


Fig. 57. Horizontal cross-section of ECO external seamless steel door with a corner frame without a thermal break

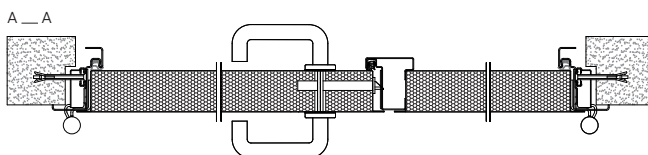


Fig. 60. Horizontal cross-section of the ECO double-leaf solid seamless steel door with a frame at the door lock level



## DOOR DIMENSIONS

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

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

Single-leaf doors are also available in non-standard dimensions.  
Double-leaf steel doors are manufactured to order.

**Determining the clear wall opening dimensions depending on the door frame type**

**Opening frame without a thermal break**

**Corner or wrap-around 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 wrap-around 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.

**Internal 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.

**Internal 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 dimensions apply to the clear wall opening dimensions.

## DIMENSIONING

The ordering size (within the clear wall opening) of the ECO seamless steel doors includes what follows	Horizontal installation clearance per one door side	Vertical installation clearance
for single-leaf doors with a corner or wrap-around frame	9 [mm]	5.5 [mm]
for single-leaf doors with an internal frame:	13.5 [mm]	15 [mm]
for double-leaf doors with a corner or wrap-around frame	7.5 [mm]	5.5 [mm]
for double-leaf doors with an internal frame	12 [mm]	15 [mm]

The installation clearances listed do not include the space required for the covers of the lock latch, anti-burglary bolts, recesses for anchors, pockets for 3D adjustment hinges or electromagnetic strike covers in single-leaf doors – these features 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 for single-leaf doors,
- 30 [mm] in width and 20 [mm] in height for double-leaf doors.

The relationships listed **do not include** the option of electromagnetic strike covers for single-leaf doors or pockets for 3D adjustment hinges in the case of single- and double-leaf doors. In such case, the installation opening must be extended by 15 [mm] in width for single-leaf doors with an electromagnetic strike or single- and double-leaf doors with 3D adjustment hinges. The wrap-around frames include the option of increasing wall thickness by +20 [mm].



## ACCESSORIES

### Glazing

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



Glazing dimensions  
450x660 [mm]

Glazing dimensions  
300x700 [mm]

Glazing dimensions  
650x950 [mm]

Glazing dimensions  
550x1,100 [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 a height of 1,600 [mm] from the leaf bottom to the glazing axis.**

### Steel opening frames

The standard ECO seamless steel doors have corner frames. The doors are also available with an internal frame or a wrap-around frame. The following diagrams show all three door frame types.

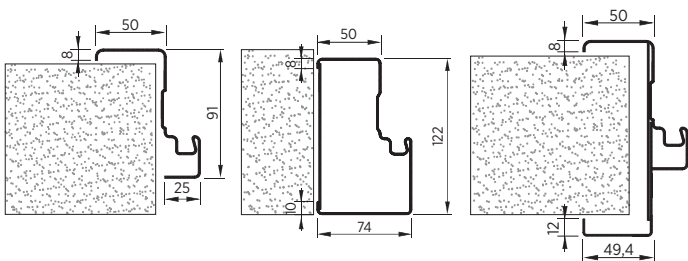


Fig. 61. Corner frame – standard

Fig. 63. Internal frame

Fig. 65. Wrap-around frame

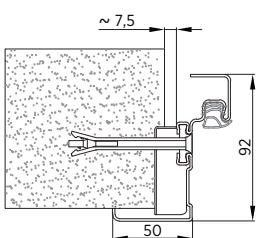


Fig. 62. Corner frame with a thermal break

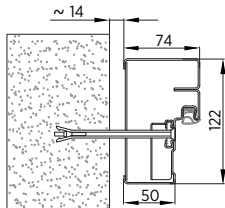


Fig. 64. Internal frame with a thermal break

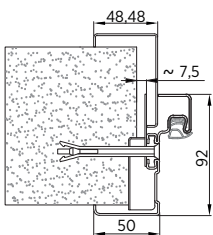


Fig. 66. Wrap-around frame with a thermal break

### Threshold seals

The standard ECO doors are manufactured without a threshold (the bottom ends of the frame sections are connected with a transport safety bar, which can be either removed or embedded in the flooring during installation). The ECO external seamless steel 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.

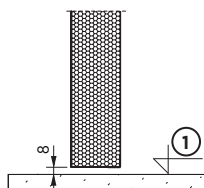


Fig. 67. Bottom gap of doors without a threshold

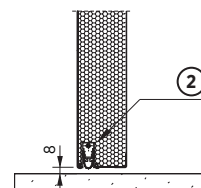


Fig. 68. Cross-section of the drop-down seal

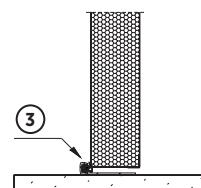


Fig. 69. Cross-section of the threshold

① – floor level

② – drop-down seal

③ – threshold



### 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. 70. Plastic handle – standard



Fig. 71. Plastic fixed knob



Fig. 72. Stainless steel handle



Fig. 73. Stainless steel knob



Fig. 74. Stainless steel handle on a split cover plate



Fig. 75. Stainless steel fixed knob on a split cover plate



Fig. 76. Anti-panic lever – standard



Fig. 77. EPN 900 IV anti-panic lever, black



Fig. 78. EPN 900 IV anti-panic lever, stainless steel



Fig. 79. EPN 2000 II push bar, stainless steel



Fig. 80. Support foot



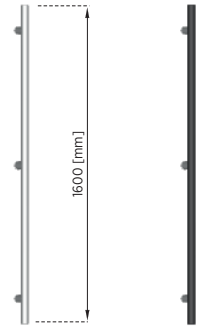
Fig. 81. Door stop

### Pull types

The ECO doors can be fitted with a stainless steel pull or a pull in black colour. Single-sided pulls (in stainless steel) or double-sided pulls (in stainless steel or black), 1,200 [mm] or 1,600 [mm] long, are available.



P10 –  $\varnothing$  30, colour: inox or black mat structure

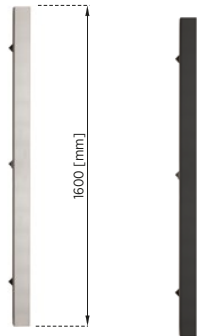


P10 extended –  $\varnothing$  30, colour: inox or black mat structure

Fig. 82. P10 pull models



Q10 40 x 20, colour: inox or black mat structure



Q10 40 x 20 extended, colour: inox or black mat structure

Fig. 83. Q10 40 x 20 pull models

### Door closers



Fig. 84. Link arm door closer



Fig. 85. Rail door closer



Fig. 86. Galvanized sequence selector



Fig. 87. Black sequence selector



Fig. 88. 2 rail door closers with sequence selectors



### Ventilation grilles

The ECO doors can optionally be fitted with ventilation grilles with a shutter 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. 90.** Ventilation holes in the leaf, with a flow surface of 0.022 m<sup>2</sup>



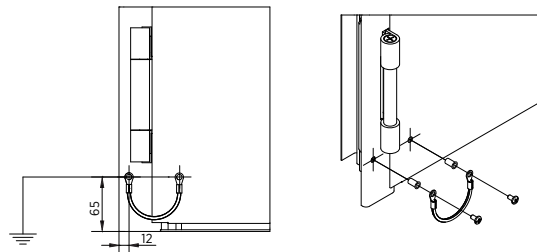
**Fig. 91.** Aluminium ventilation grille 480x80 [mm]



**Fig. 92.** Steel ventilation grille 425x125 [mm]

### 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 [mm<sup>2</sup>] gauge, terminated on both ends with a round terminal.



**Fig. 89.** Method for earthing the ECO doors



**Fig. 93.** Steel ventilation grille 525x225 [mm]



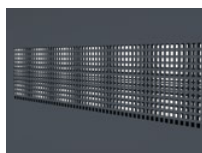
**Fig. 94.** Steel ventilation grille 525x625 [mm]



**Fig. 95.** Steel ventilation grille 625x625 [mm]



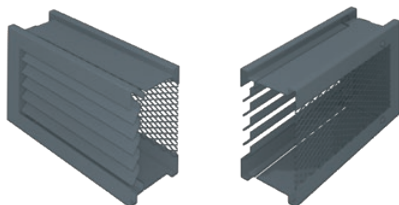
**Fig. 96.** Steel ventilation grille 825 x 825 [mm]



**Fig. 97.** Ventilation holes with a flow surface of 0.022 m<sup>2</sup>



**Fig. 98.** Aluminium ventilation grille in the ECO seamless door



**Fig. 99.** Steel ventilation grille in the ECO seamless door

## DIAGRAMS OF THE ECO DOOR VENTILATION SYSTEM

### Single-leaf doors

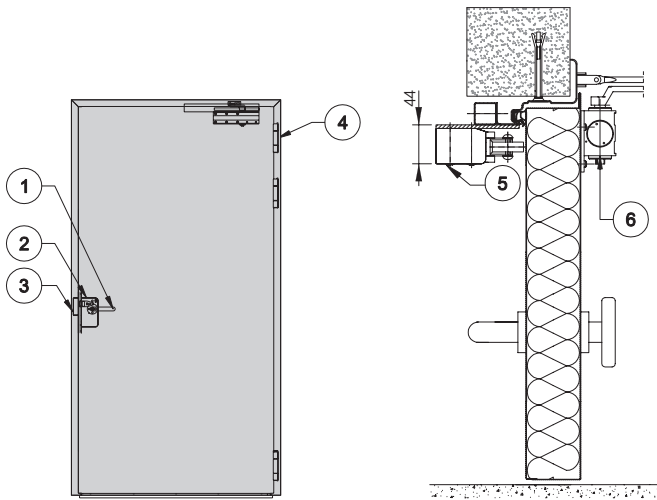


Fig. 100. Diagram of a single-leaf door – vertical cross-section including the ventilation system

### 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 adjustment.
5. Door leaf push cylinder with an auxiliary relay, installed on the side opposite to the hinges. 5-second 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 door closer takes up 44 [mm] of the clear passage height.



**The ventilation system in single-leaf seamless steel doors ventilates the closed off rooms as part of smoke extraction systems and 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 doors

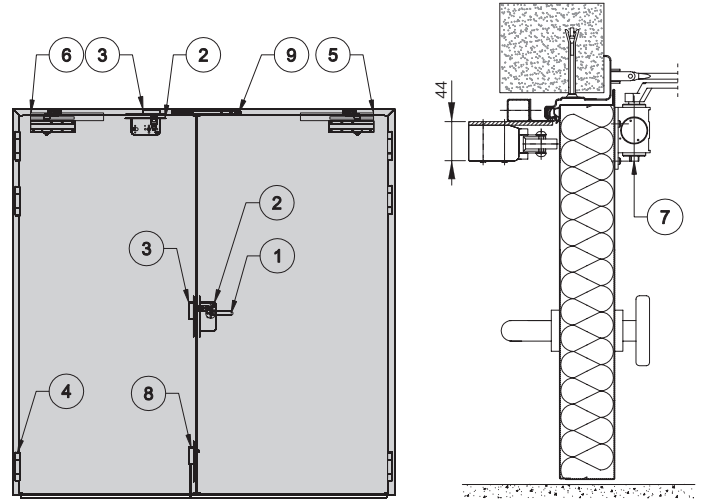


Fig. 101. Diagram of a double-leaf door – vertical cross-section including the ventilation system

### 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 – 2 pcs. The door cannot be locked with a key.
3. Fail secure electromagnetic strike with a stainless steel catch plate – 2 pcs.
4. Stainless steel hinges with 3D adjustment.
5. Door active leaf push cylinder with an auxiliary relay, installed on the side opposite to the hinges. 5-second 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-second 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 – 2 pcs. Door closers 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 double-leaf seamless steel doors ventilates the closed off rooms as a part of smoke extraction systems and normal indoor air exchange. The minimum width of the active leaf is 900 [mm], the minimum width of the passive leaf 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 an anti-panic function

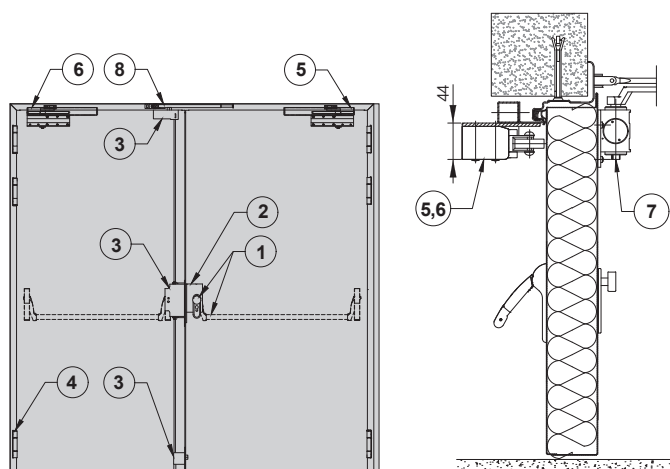


Fig. 102. Ventilation system layout for double-leaf seamless steel doors with an anti-panic function – vertical cross-section

#### Double-leaf door accessories:

1. 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. 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. Actuator pushing out the active leaf with a 5 second delay, installed on the side opposite to the hinges.
6. Actuator pushing out the passive leaf with a 15 second delay, installed on the side opposite to the hinges.
7. Link arm or rail door closer installed on the active leaf and on the passive leaf on the hinge side.
8. Sequence selector installed on the hinge side (integrated with the door closer or a separate element).

The ventilation system in double-leaf seamless steel doors ventilates the closed off rooms as a part of smoke extraction systems and normal indoor air exchange. The minimum width of the active leaf is 900 [mm], the minimum width of the passive leaf is 600 [mm]. The actuators take up 44 [mm] of the clear passage height.

The ventilation system for double-leaf seamless steel doors with an anti-panic function can be fitted with a complete ventilation system comprised of smoke extraction central control unit with batteries and a smoke extraction 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 optional accessories.

The ventilation system for double-leaf seamless steel doors cannot be used in escape routes and emergency 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 extraction 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.
- The 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 multi-purpose wrench is not subject to warranty.**

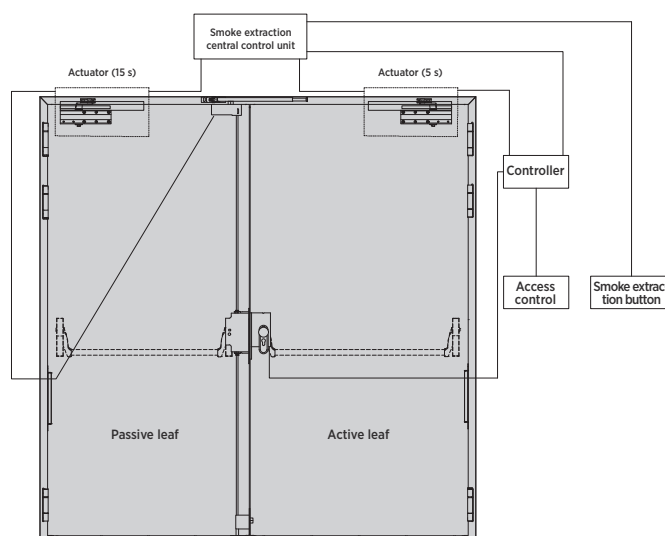
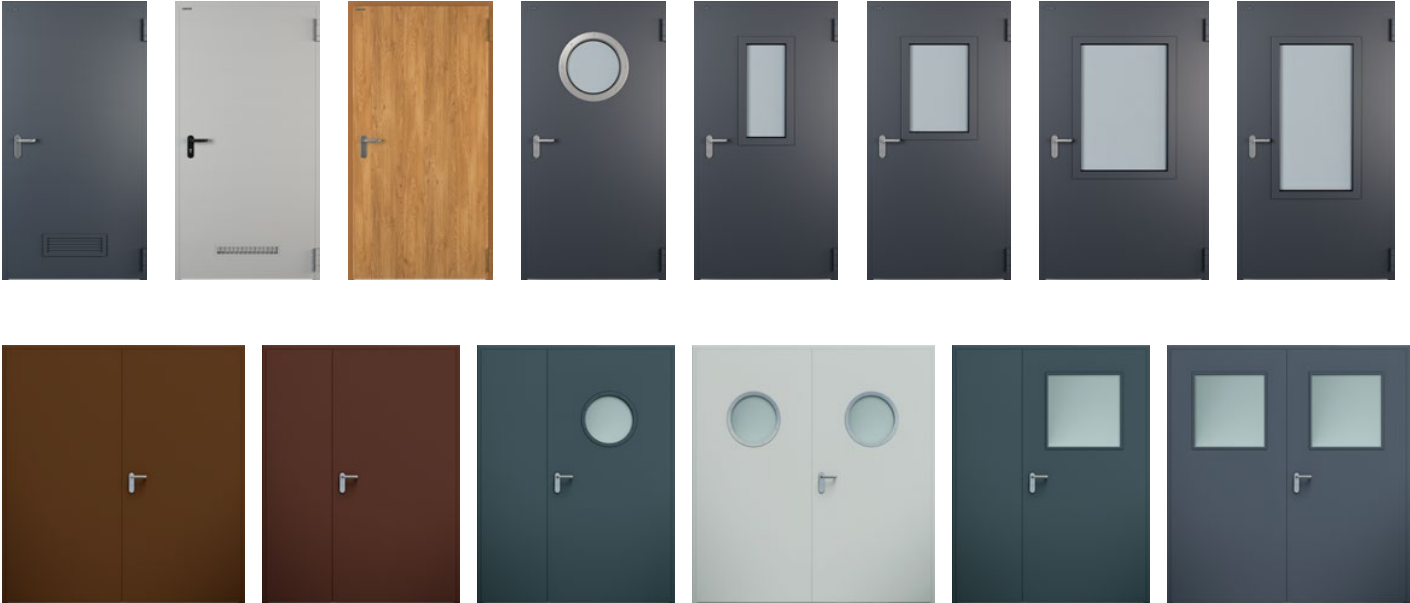


Fig. 103. Wiring diagram for the elements of the ventilation system for double-leaf seamless steel doors with an anti-panic function.



## EXAMPLE DESIGNS



## SIDELIGHTS AND TOPLIGHTS <sup>(1)</sup>

Sidelights and toplight viewed from the outside.



Variant I – right sidelight (PD)

Variant II – left sidelight (LD)

Variant III – right + left sidelight (PD + LD)



Variant IV – toplight (GD)

Variant V – right sidelight + toplight (PD + GD)

Variant VI – left sidelight + toplight (LD + GD)

Variant VII – right + left sidelight + toplight (PD + LD + GD)

<sup>(1)</sup> – Maximum sidelight width: 1,000 [mm]. Minimum sidelight width: 300 [mm]. Maximum toplight height: 1,000 [mm]. Minimum toplight height: 300 [mm].



### Cross-sections of the ECO doors with sidelights and toplights

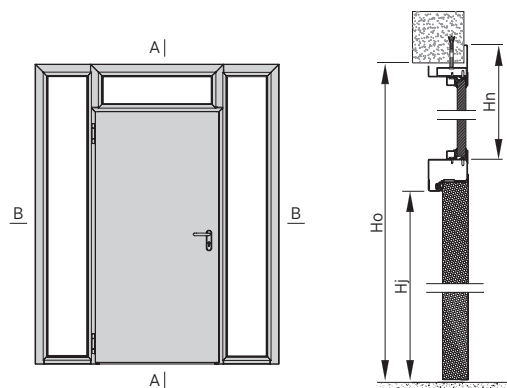


Fig. 104. The ECO single-leaf door with sidelights and a toplight

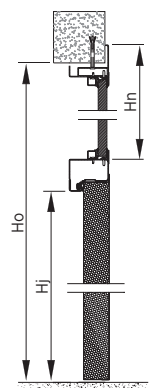


Fig. 105. Toplight - vertical cross-section

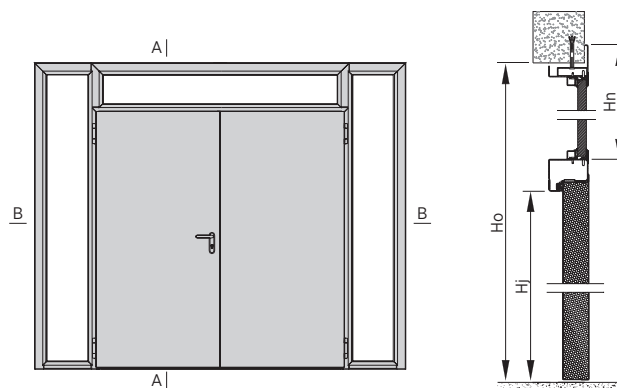


Fig. 107. The ECO double-leaf door with sidelights and a toplight

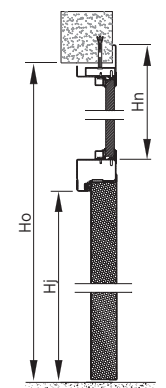


Fig. 108. Toplight - vertical cross-section

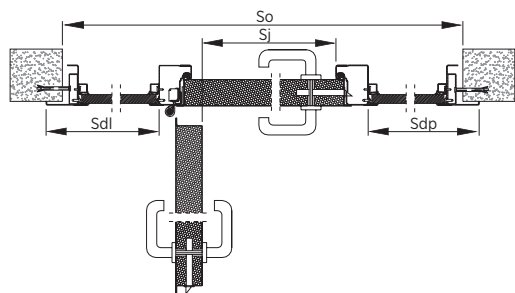


Fig. 106. Sidelights - horizontal cross-section

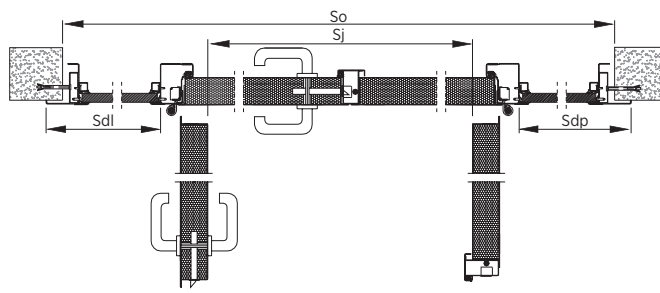


Fig. 109. Sidelights - horizontal cross-section

- Sj - clear passage width,
- So - total opening width,
- Sdl - left sidelight width,
- Sdp - right sidelight width,
- Hj - clear passage height,
- Ho - total opening height,
- Hn - topline height.

Maximum total dimensions of the wall opening for:	single-leaf doors with sidelights	double-leaf doors with sidelights
corner and wrap-around frame	2,440x2,950 [mm] (SoxHo)	3,690x2,950 [mm] (SoxHo)
internal frame	2,543x3,006 [mm] (SoxHo)	3,796x3,006 [mm] (SoxHo)



## Ordering and installation dimensions

### Installation to a wall

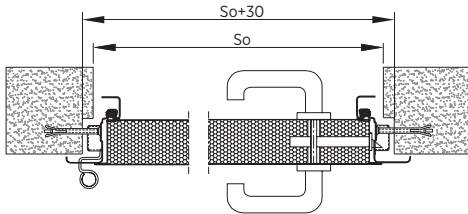


Fig. 110. Installation of a single-leaf door with a corner frame without a thermal break to a masonry wall – horizontal cross-section

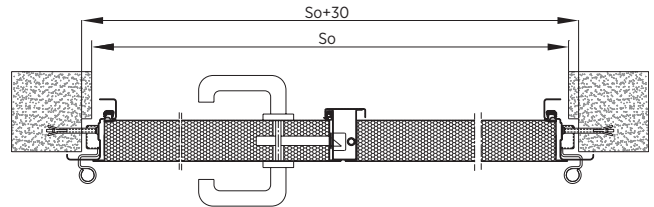


Fig. 111. Installation of a double-leaf door with a corner frame without a thermal break to a masonry wall – horizontal cross-section

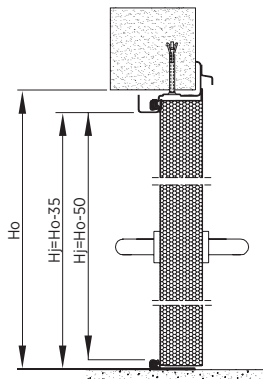


Fig. 112. Installation of a single-leaf door with a corner frame without a thermal break to a masonry wall – vertical cross-section

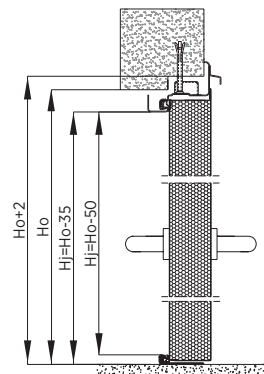


Fig. 113. Installation of a double-leaf door with a corner frame without a thermal break to a masonry wall – vertical cross-section

### Installation to a steel structure

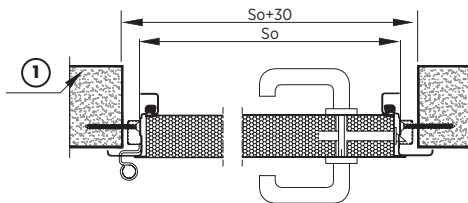


Fig. 114. Installation of a single-leaf door with a corner frame without a thermal break to a steel structure – horizontal cross-section

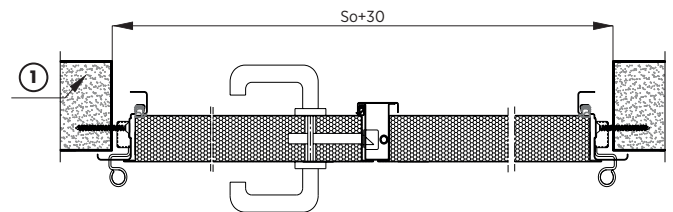


Fig. 115. Installation of a double-leaf door with a corner frame without a thermal break to a steel structure – horizontal cross-section

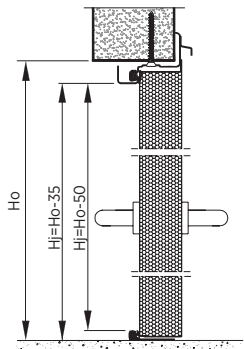


Fig. 116. Installation of a single-leaf door with a corner frame without a thermal break to a steel structure – vertical cross-section

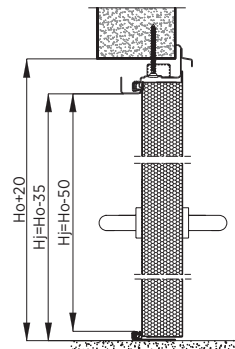


Fig. 117. Installation of a double-leaf door with a corner frame without a thermal break to a steel structure – vertical cross-section

① – Steel structure

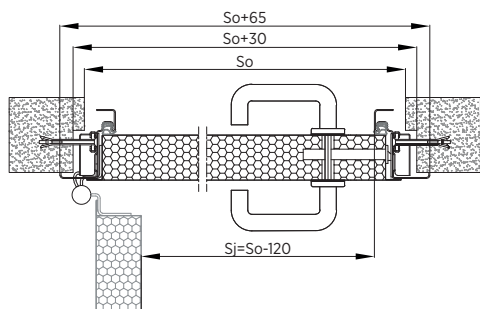


Fig. 118. Installation of a single-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

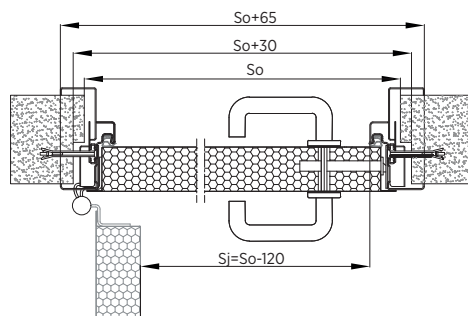


Fig. 122. Installation of a single-leaf door to a masonry wall - wrap-around frame with a thermal break - horizontal cross-section

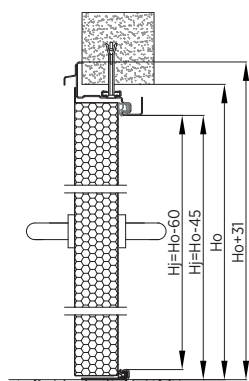


Fig. 119. Installation of a single-leaf door to a masonry wall - corner frame with a thermal break - vertical cross-section

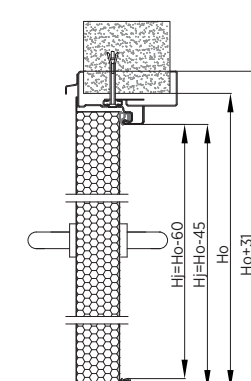


Fig. 123. Installation of a single-leaf door to a masonry wall - wrap-around frame with a thermal break - vertical cross-section

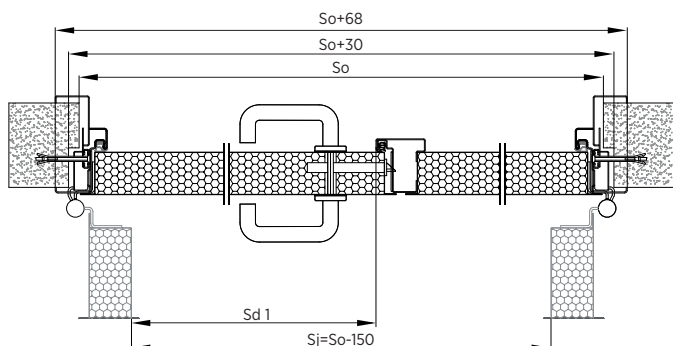


Fig. 120. Installation of a double-leaf door to a masonry wall - corner frame with a thermal break - horizontal cross-section

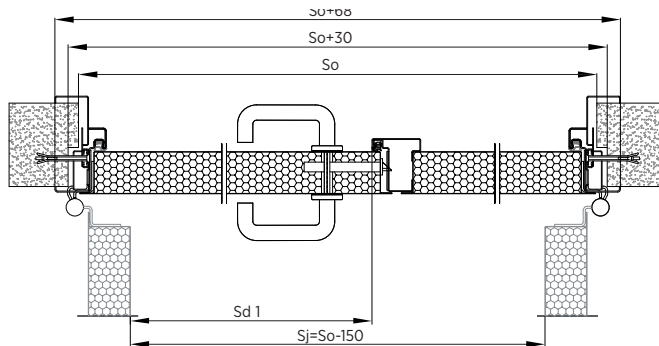


Fig. 124. Installation of a double-leaf door to a masonry wall - wrap-around frame with a thermal break - horizontal cross-section

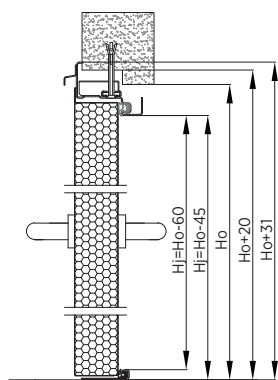


Fig. 121. Installation of a double-leaf door to a masonry wall - corner frame with a thermal break - vertical cross-section

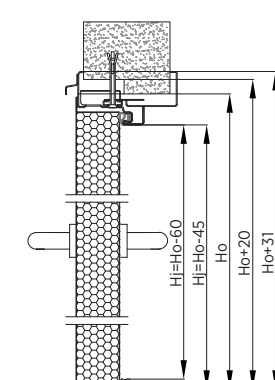


Fig. 125. Installation of a double-leaf door to a masonry wall - wrap-around frame with a thermal break - vertical cross-section

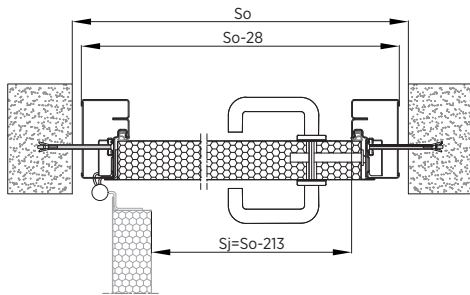


Fig. 126. Installation of a single-leaf door to a masonry wall – internal frame with a thermal break – horizontal cross-section

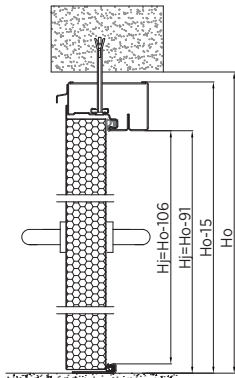


Fig. 127. Installation of a single-leaf door to a masonry wall – internal frame with a thermal break – vertical cross-section

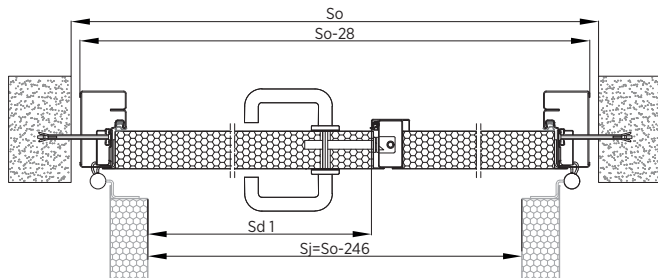


Fig. 128. Installation of a double-leaf door to a masonry wall – internal frame with a thermal break – horizontal cross-section

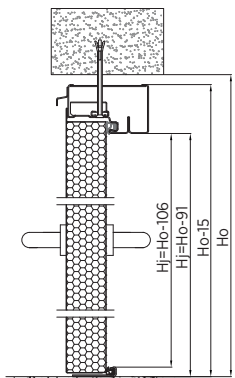


Fig. 129. Installation of a double-leaf door to a masonry wall – internal frame with a thermal break – vertical cross-section

- 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<sub>min</sub>** - space required for opening the leaf at a 90° angle,  $E_{min} = Sj + 140$  [mm].





### External single-leaf door

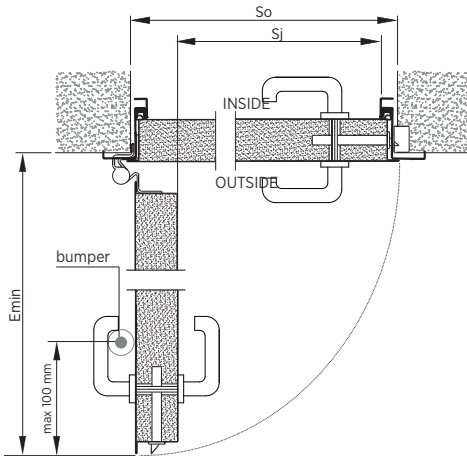


Fig. 130. Installation in front of the opening - corner frame without a thermal break - horizontal cross-section

- 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<sub>min</sub>** - space required for opening the leaf at a 90° angle,  
 $E_{min} = S_j + 140$  [mm].

### External double-leaf door

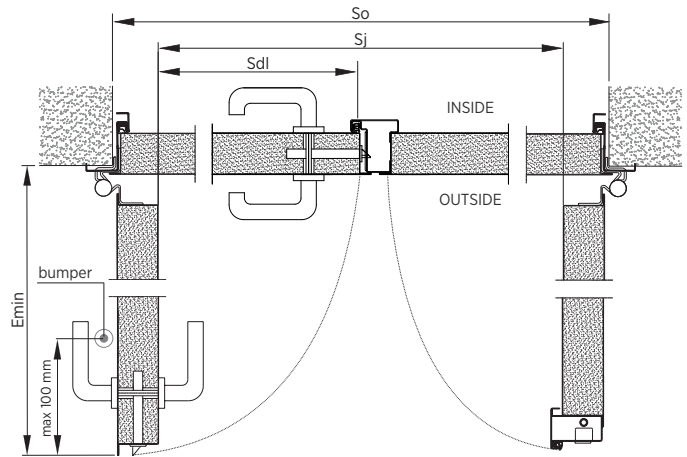


Fig. 131. Installation of a double-leaf door in front of the opening - corner frame without a thermal break - horizontal cross-section

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

## DOCUMENTS CERTIFYING MARKETING APPROVAL

- 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.
- Hygiene Certificate 225/322/242/2016.

## TESTS

- Mechanical strength of the door - **Class 3** according to PN-EN 1192:2001.
- External door resistance to repeated opening and closing - **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 insulation of external single-leaf doors **Rw 30dB** according to PN-EN ISO 10140-2 (2011).
- Heat transfer coefficient for external single-leaf solid doors for unheated areas (opening frame without a thermal break, with an expanded polystyrene infill) **1.4 [W/m²K]** according to PN-EN ISO 10077-1:2007.
- Heat transfer coefficient for external double-leaf solid doors for unheated areas (opening frame without a thermal break, with an expanded polystyrene infill) **1.7 [W/m²K]** according to PN-EN ISO 10077-1:2007.
- Heat transfer coefficient for external single-leaf solid doors (opening frame with a thermal break, with a mineral wool infill) **1.3 [W/m²K]** according to PN-EN ISO 10077-1:2007.
- Heat transfer coefficient for external single-leaf solid doors (opening frame with a thermal break, with a PU board infill) **1.2 [W/m²K]** according to PN-EN ISO 10077-1:2007.



## COLOURS

## Standard colours of ECO doors:



\* - applies only to internal ECO doors.

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



## HOME INCLUSIVE 2.0:

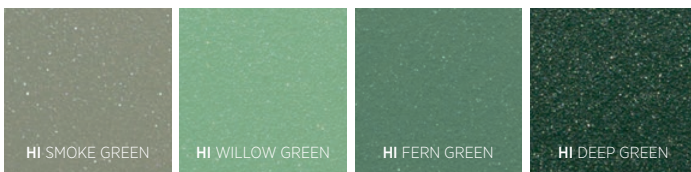
## HISTONE



## HISTEEL



## HIEARTH



## HIRUBY



The leaves of the ECO seamless doors are also available with wood-effect film coatings:



Custom colours: Other RAL mat structure colours



The colours presented in this publication are for reference only.



# ECO BASIC

## EXTERNAL AND INTERNAL SINGLE-LEAF SEAMLESS STEEL DOOR

### CHARACTERISTICS

#### Description

The leaf is made of galvanized sheet 0.5 [mm] thick with polyester coating or powder coating. The door features a thick rebate lip. The opening frame is made of the highest quality powder-coated steel sections formed from 1.2 [mm] thick galvanized sheet. The frame posts are braze welded. The door leaves are installed in the frame on two hinges placed in the door leaf rebate.

#### Leaf infill

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

#### Gasket 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

As standard, the door is equipped with one mortise lever lock and a black plastic handle with a universal multi-purpose tool.



### VIEWS | DOOR CROSS-SECTIONS DOOR DIMENSIONS

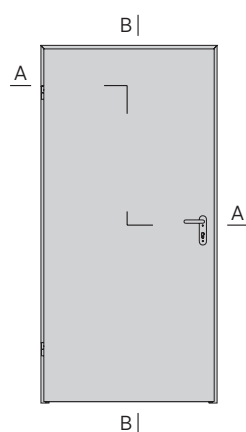


Fig. 132. ECO BASIC seamless steel door

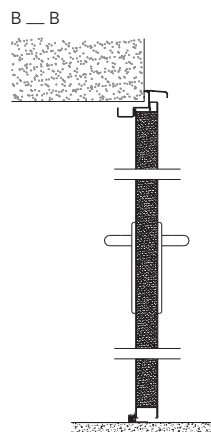


Fig. 133. Vertical cross-section of the ECO BASIC external seamless steel door with a corner frame

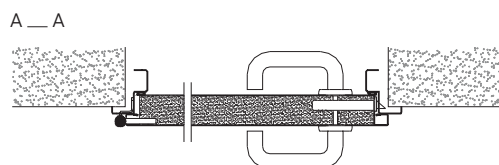


Fig. 134. Horizontal cross-section of the ECO BASIC external seamless steel door with a corner frame

Dimensions of the ECO BASIC single-leaf doors in a standard version with a corner or wrap-around frame	
Clear passage dimension (SjxHj) [mm]	Clear wall opening dimension (SoxHo) [mm]
800x2,015	860x2,045
900x2,015	960x2,045
1,000x2,015	1,060x2,045

Dimensions of the ECO BASIC single-leaf doors in a standard version with an internal frame	
Clear passage dimension (SjxHj) [mm]	Clear wall opening dimension (SoxHo) [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 dimensions apply to the clear wall opening dimensions.

#### Determining the clear wall opening dimensions depending on the opening frame type. Corner or wrap-around 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.

#### Internal 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 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 made of polypropylene. The standard door handles are available in black and come with a universal multi-purpose tool. 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. 135. Plastic handle – standard



Fig. 136. Stainless steel handle on a split cover plate

### Steel opening frames

The standard ECO BASIC seamless steel doors have corner frames. The doors are also available with an internal frame or a wrap-around frame.

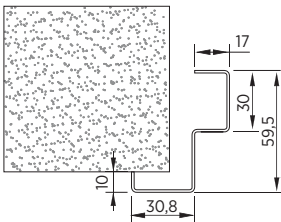


Fig. 137. Corner frame – standard

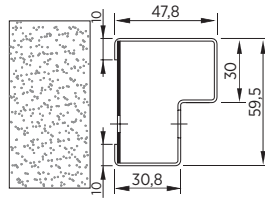


Fig. 138. Internal frame

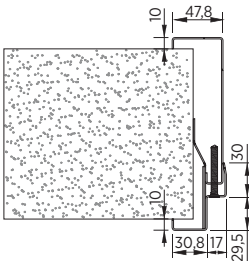


Fig. 139. Internal frame

### Ventilation grilles

The ECO BASIC doors can optionally be fitted with an aluminium ventilation grille installed on both sides of the door leaf.



Fig. 140. Aluminium ventilation grille 480x80 [mm]



Fig. 141. Aluminium ventilation grille 480x80 [mm]

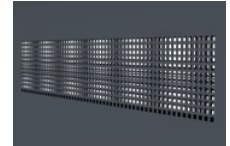


Fig. 142. Ventilation holes with a flow surface of 0.022 m<sup>2</sup>



Fig. 143. Aluminium ventilation grille in the ECO BASIC seamless door

Fig. 144. Aluminium ventilation grille 480x80 [mm]

### Flow surface of the ECO BASIC door ventilation grille

Ventilation grille of a seamless steel door			
Aluminium grille	L [mm]	H [mm]	Ventilation area [m <sup>2</sup> ]
	480	80	0.014

### Flow surface of the ventilation area of a door with an undercut

Example flow surface of the ventilation area of a door with an undercut		
clear passage width of the door	X undercut height in [mm] <sup>(1)</sup>	Ventilation area [m <sup>2</sup> ]
800 [mm]	40	0.04
900 [mm]	30	0.036
1,000 [mm]	20	0.03

In the case of other door dimensions, the flow surface of the ventilation area can be calculated according to the following formula:

$$\text{Ventilation area} = S_j * (X + 10) / 1,000,000 \text{ [m}^2\text{]}$$

**S<sub>j</sub>** – clear passage width of the door in [mm],

**X** – leaf shortening value in [mm].



### Glazing

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

- **model 1** – porthole ø 320 [mm] with a brushed or polished stainless steel frame,
- **model 2** – 3 portholes ø 240 [mm] with a brushed or polished stainless steel frame,
- **model 3** – stainless steel decorative motif and two glass panes.



Fig. 145. Glazing – model 1



Fig. 146. Glazing – model 2



Fig. 147. Glazing – model 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 bar, which can be either removed or embedded in the flooring during installation). The ECO BASIC external seamless steel 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.

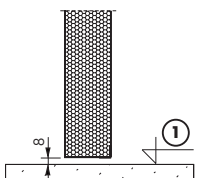


Fig. 148. Bottom gap of doors without a threshold

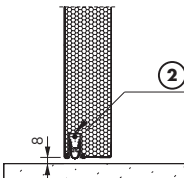


Fig. 149. Cross-section of the drop-down seal

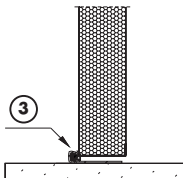


Fig. 150. Cross-section of the threshold

① – floor level  
Door closer

② – drop-down seal

③ – threshold



Fig. 151. Rail door closer

## Ordering and installation dimensions

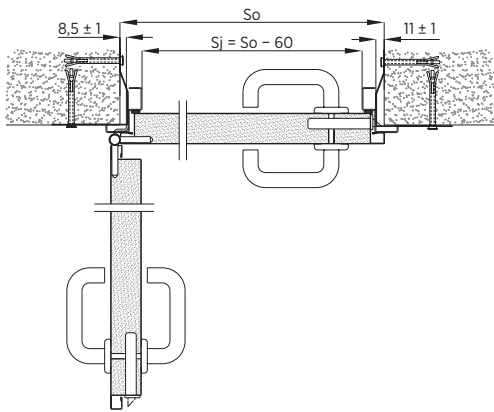


Fig. 152. Installation of a single-leaf door with a corner frame - horizontal cross-section

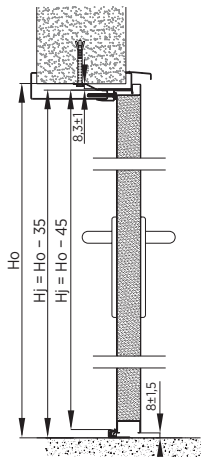


Fig. 153. Installation of a single-leaf door with a wrap-around frame to a masonry wall - vertical cross-section

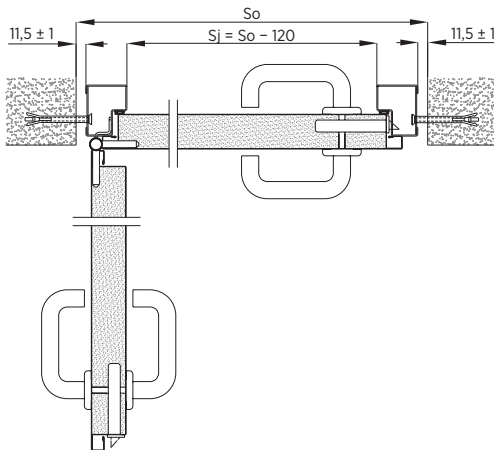


Fig. 154. Installation of a single-leaf door with an internal frame - horizontal cross-section

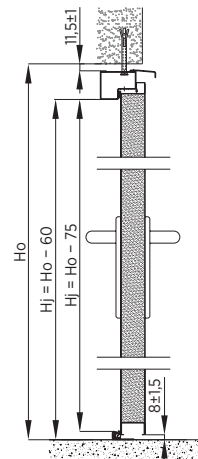


Fig. 155. Installation of a single-leaf door with an internal frame to a masonry wall - vertical cross-section

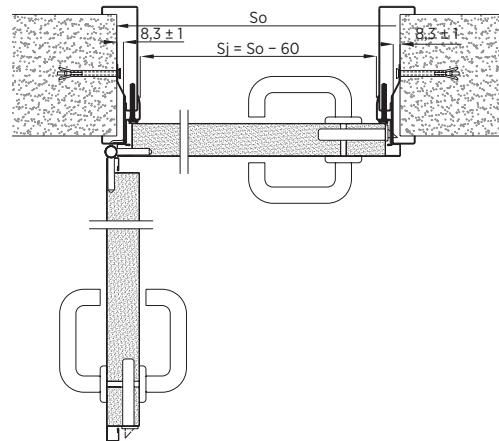


Fig. 156. Installation of a single-leaf door with a wrap-around frame - horizontal cross-section

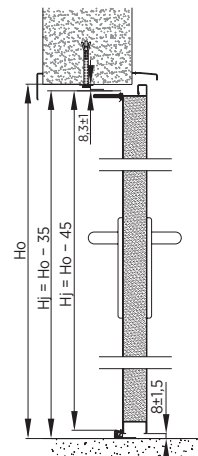


Fig. 157. Installation of a single-leaf door with a wrap-around frame to a masonry wall - vertical cross-section

## DOCUMENTS CERTIFYING MARKETING APPROVAL

- 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.
- Hygiene Certificate 225/322/242/2016.

## TESTS

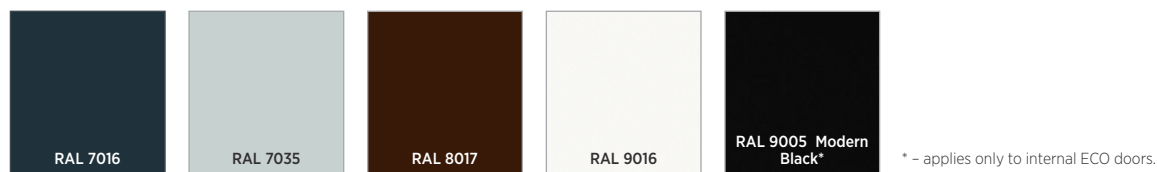
- Internal door resistance to repeated opening and closing - **Class 6** according to PN-EN 12400:2002.
- Heat transfer coefficient for external single-leaf doors **1.7 [W/m²K]** according to PN-EN ISO 10077-1:2007.





## COLOURS

### Standard colours of ECO BASIC doors:



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

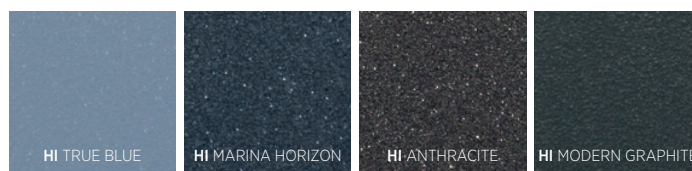


### HOME INCLUSIVE 2.0:

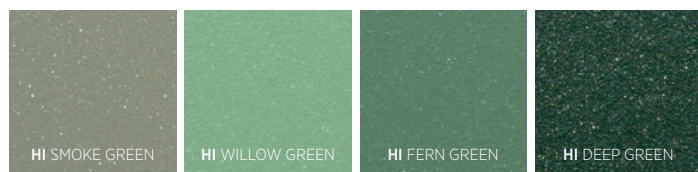
#### HISTONE



#### HISTEEL



#### HIEARTH



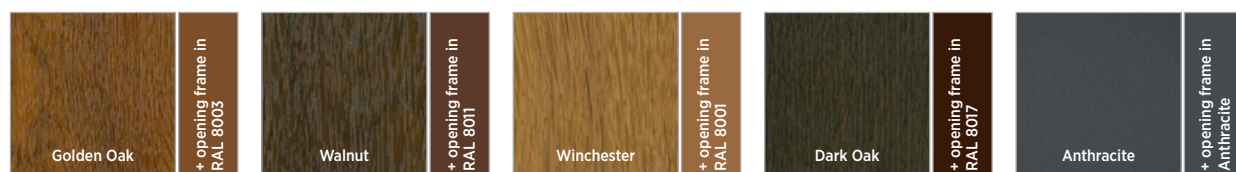
#### HIRUBY



### HI palette special colours for ECO BASIC doors:



The leaves of the ECO BASIC seamless doors are also available with wood-effect film coatings:



Custom colours: Other RAL mat structure colours



The colours presented in this publication are for reference only.



# ECO BASIC UNI 40

## SINGLE-LEAF EXTERNAL SEAMLESS STEEL DOOR



### CHARACTERISTICS

#### Description

The leaf is made of galvanized sheet 0.5 [mm] thick with polyester coating. The leaf features a thick four-sided rebate. The opening frame is made of the highest quality powder-coated steel sections formed from 1.2 [mm] thick galvanized sheet. The frame posts are braze welded. The door leafs are installed in the frame on two hinges placed in the door leaf rebate.

#### Leaf infill

The external door leaf is infilled with expanded polystyrene.

#### Gasket 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

As standard, the door is equipped with one mortise lever lock and a black plastic handle with a universal multi-purpose tool.

### VIEWS, DOOR CROSS-SECTIONS

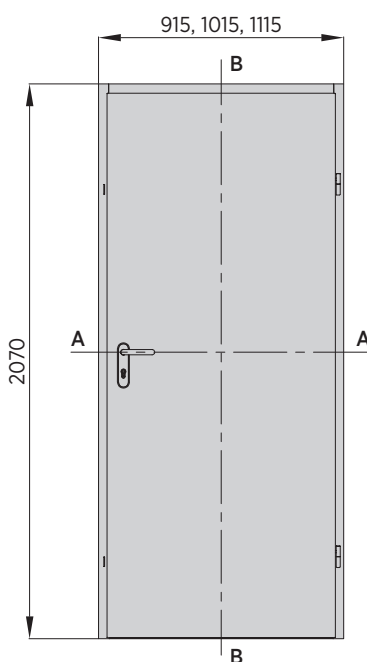


Fig. 158. ECO BASIC UNI 40 seamless steel door.

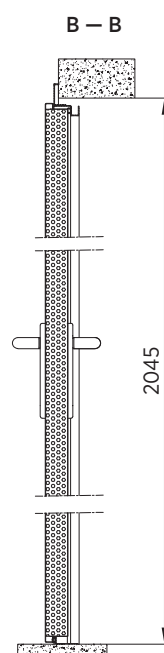


Fig. 159. Vertical cross-section of the ECO BASIC UNI 40 external seamless steel door.

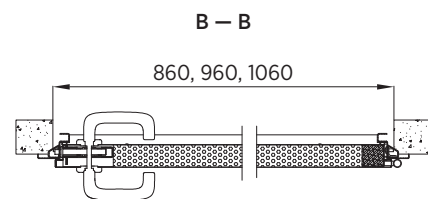


Fig. 160. Horizontal cross-section of the ECO BASIC UNI 40 external seamless steel door with a corner frame.



## DOOR DIMENSIONS

Dimensions of standard single-leaf doors with a corner frame

Clear passage dimension (Sj x Hj), [mm]	Clear wall opening dimension (So x Ho), [mm]
800 x 2,015	860 x 2,045
900 x 2,015	960 x 2,045
1,000 x 2,015	1,060 x 2,045

The listed maximum dimensions are the clear passage dimensions. The ordering dimensions apply to the clear wall opening dimensions.

## DIMENSIONING

### Ordering and installation dimensions

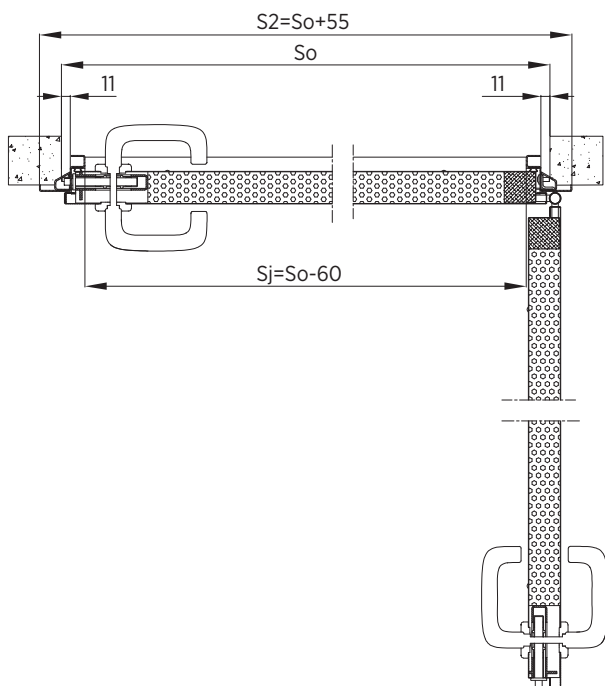


Fig. 161. Installation of the ECO BASIC UNI 40 door with a corner frame – horizontal cross-section.

### Determining the clear wall opening dimensions depending on the opening frame type.

#### Corner frame – external single-leaf door

Width: clear passage dimension + 60 [mm] = clear wall opening dimension  
Height: clear passage dimension + 45 [mm] = clear wall opening dimension  
The installation clearances listed 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].

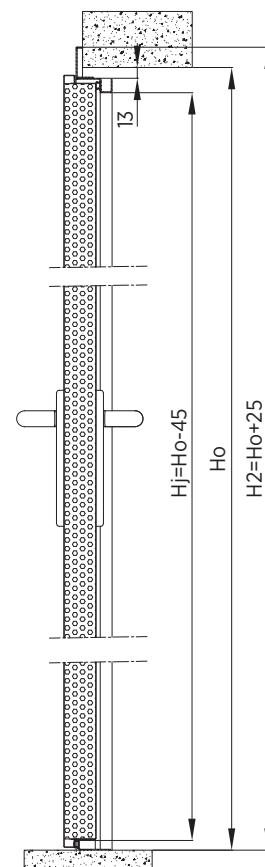


Fig. 162. Installation of the ECO BASIC UNI 40 door with a corner frame – vertical cross-section.

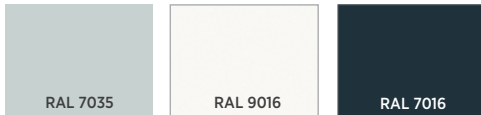


## DOCUMENTS CERTIFYING MARKETING APPROVAL

PN-EN 14351-1+A1:2010 Windows and doors. Product standard. Part 1: Products without fire resistance or smoke control characteristics – external doors.  
Declaration no.: 1433/CPR/2023.

## COLOURS

ECO BASIC UNI 40 door colours:



**Note:** The colours presented in this publication are for reference only.

## ACCESSORIES

### Handles

The standard handles are made of plastic and without a reinforced cover plate. The handle grip and the cover plate are made of polypropylene. The standard door handles are available in black and come with a universal multi-purpose tool.



Fig. 163. Plastic handle – standard.

### Steel opening frames

The standard ECO BASIC UNI 40 seamless steel doors have corner frames.

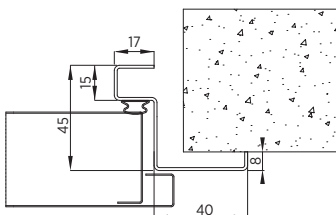


Fig. 165. Corner frame – standard.

### Threshold seals

The ECO BASIC UNI 40 external seamless steel 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.

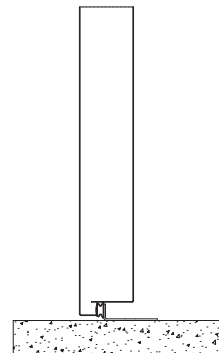


Fig. 164. Cross-section of the threshold.



# ANTI-BURGLARY RC2, RC3

INTERNAL, SINGLE- OR DOUBLE-LEAF SEAMLESS STEEL DOORS

## CHARACTERISTICS

### Description

The door leaf is made of 0.7-0.75 [mm] thick galvanized sheet finished with polyester coating, powder coating or wood-effect film coating. The passive leaf of double-leaf doors 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 braze welded. The door leaves are installed in the opening frame using three hinges with vertical adjustment, including one self-closing hinge.

### Leaf infill

The internal door leaf is infilled with cellular cardboard. In the case of EI30 and EI60 fire-rated RC2 and RC3 class doors, the infill is mineral wool.

### Gasket system

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

### Hardware and handles

**RC 2 class** – two locks with class C lock cylinders, tamper-proof lock plates on the auxiliary lock and a door handle on a long cover plate, extra door reinforcement, three anti-burglary bolts per door leaf.

**RC 3 class** – three locks with class C lock cylinders, tamper-proof lock plates on auxiliary locks and a door handle on a long cover plate, extra door reinforcement, three anti-burglary bolts per door leaf.



## VIEWS | DOOR CROSS-SECTIONS

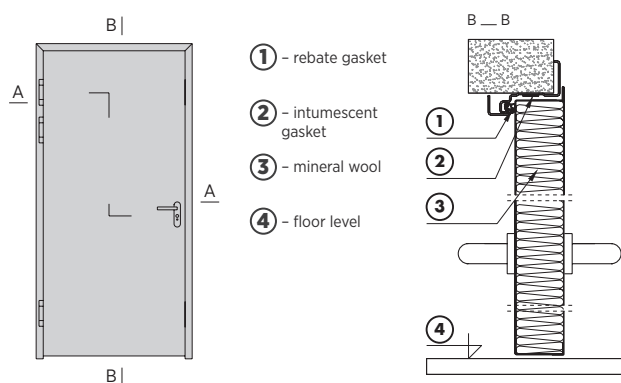


Fig. 166. Single-leaf seamless steel door

Fig. 167. Vertical cross-section of a seamless steel door with a corner frame

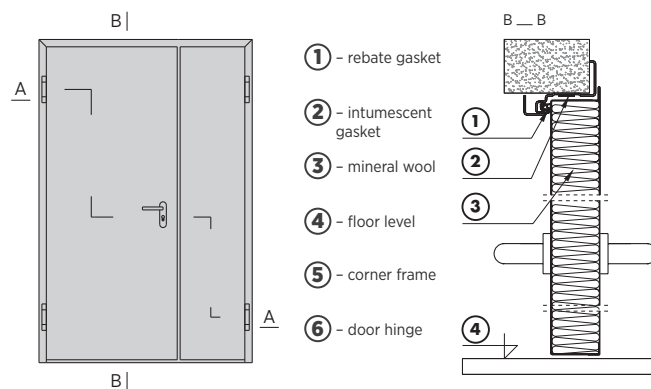


Fig. 169. Large-size double-leaf seamless steel door

Fig. 170. Vertical cross-section of a large-size double-leaf seamless steel door with a corner frame

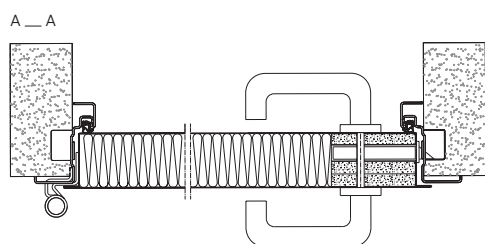


Fig. 168. Horizontal cross-section of a large-size seamless steel door with a corner frame

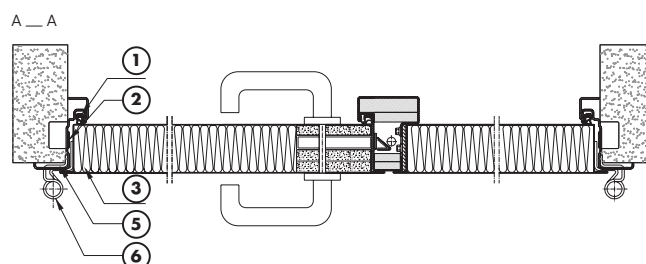


Fig. 171. Horizontal cross-section of a large-size double-leaf seamless steel door with a corner frame



## DOOR DIMENSIONS

Min. and max. clear wall opening dimensions of single-leaf doors
$S_{min} = 810 \text{ [mm]}, S_{max} = 1,110 \text{ [mm]}$
$H_{min} = 1,750 \text{ [mm]}, H_{max} = 2,135 \text{ [mm]}$
Min. and max. dimensions of double-leaf doors
$S_{min} = 1,340 \text{ [mm]}, S_{max} = 2,140 \text{ [mm]}$
$H_{min} = 1,750 \text{ [mm]}, H_{max} = 2,135 \text{ [mm]}$

### Determining the clear wall opening dimensions depending on the opening frame type.

#### Corner or wrap-around 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 wrap-around 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.

#### Internal 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.

#### Internal 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 seamless steel doors includes what follows	Horizontal installation clearance per each door side	Vertical installation clearance
for single-leaf doors with a corner or wrap-around frame	9 [mm]	5.5 [mm]
for single-leaf doors with an internal frame	13.5 [mm]	15 [mm]
for double-leaf doors with a corner or wrap-around frame	7.5 [mm]	5.5 [mm]
for double-leaf doors with an internal frame	12 [mm]	15 [mm]

The installation clearances listed do not include the space required for the covers of the lock latch, anti-burglary bolts, recesses for anchors, pockets for 3D adjustment hinges or electromagnetic strike covers in single-leaf doors – these features 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 for single-leaf doors,
- 30 [mm] in width and 20 [mm] in height for double-leaf doors.

The relationships listed **do not include** the option of electromagnetic strike covers for single-leaf doors or pockets for 3D adjustment hinges in the case of single- and double-leaf doors. In such case, the installation opening must be extended by 15 [mm] in width for single-leaf doors with an electromagnetic strike or single- and double-leaf doors with 3D adjustment hinges. The wrap-around frames include the option of increasing wall thickness by +20 [mm].

## ACCESSORIES

### Steel opening frames

Standard seamless steel doors have corner frames. The doors are also available with an internal frame or a wrap-around frame.

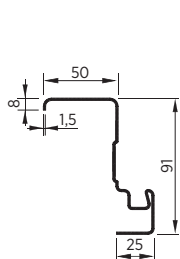


Fig. 172. Corner frame – standard

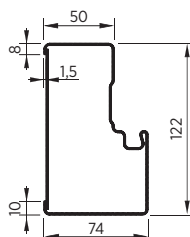


Fig. 173. Internal frame

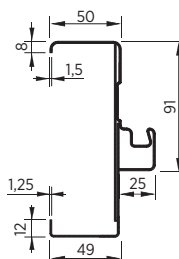


Fig. 174. Wrap-around frame

### Handles

The standard handle has a polypropylene body on a steel core. Standard handles are available in black.



Fig. 175. Plastic handle – standard



Fig. 176. Stainless steel handle



## Door closers



Fig. 179. Link arm door closer



Fig. 180. Rail door closer



Fig. 181. Sequenceselector

## Threshold seals

The standard doors are manufactured without a threshold (the bottom ends of the frame sections are connected with a transport safety bar, which can be either removed or embedded in the flooring during installation) or as fire-rated external seamless steel doors made 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.

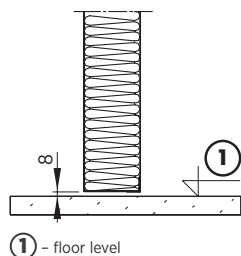


Fig. 177. Bottom gap of doors without a threshold

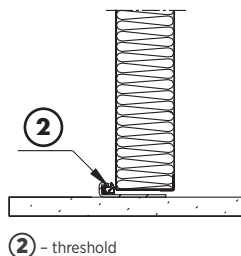


Fig. 178. Cross-section of the threshold

## Glazing

In seamless steel doors, glazing made of class P4 glass for the RC2 class and class P5 glass for the RC3 class can be used.

Standard dimensions of glazing that can be used per one door leaf:



Fig. 182. Glazing 300 x 700 [mm]



Fig. 183. Glazing 450 x 660 [mm]



Fig. 184. Glazing Ø 400 [mm]





### Ordering and installation dimensions

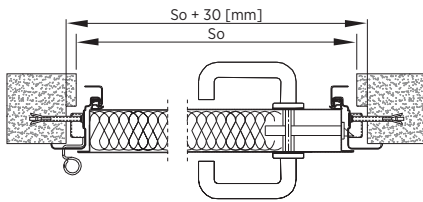


Fig. 185. Installation of a single-leaf door with a corner frame to a masonry wall - horizontal cross-section

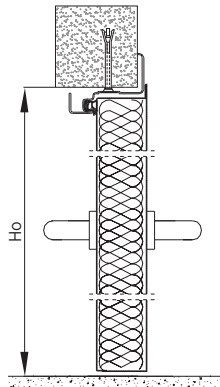


Fig. 186. Installation of a single-leaf door with a corner frame to a masonry wall - vertical cross-section

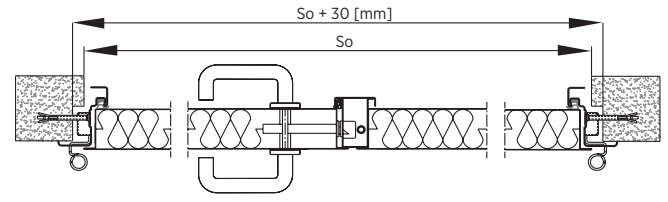


Fig. 189. Installation of a double-leaf door with a corner frame to a masonry wall - horizontal cross-section

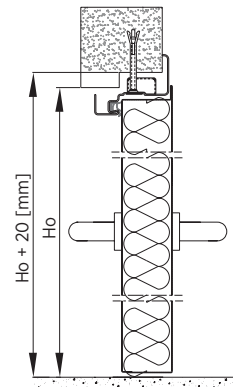


Fig. 190. Installation of a double-leaf door with a corner frame to a masonry wall - vertical cross-section

### Installation to a steel structure

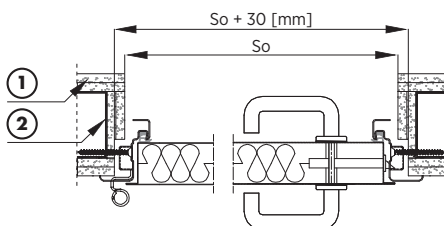


Fig. 187. Installation of a single door with a corner frame to a masonry wall - horizontal cross-section

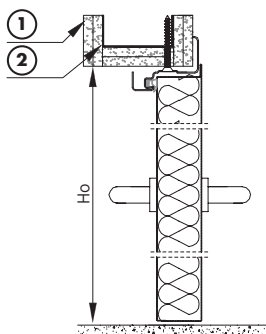


Fig. 188. Installation of a single-leaf door with a corner frame to a masonry wall - vertical cross-section

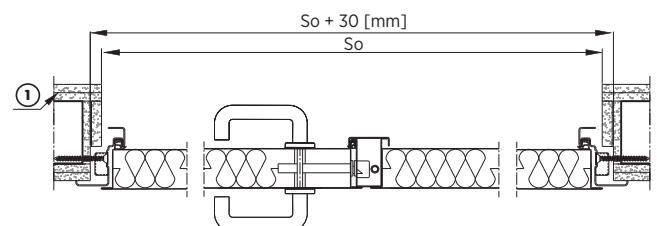


Fig. 191. Installation of a double-leaf door with a corner frame to a masonry wall - horizontal cross-section

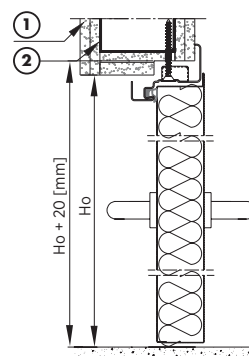


Fig. 192. Installation of a double-leaf door with a corner frame to a masonry wall - vertical cross-section



### Single-leaf doors

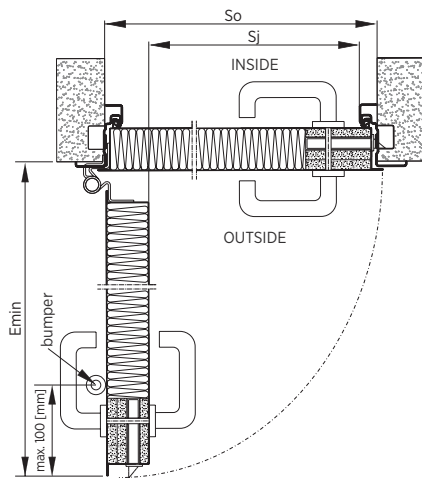


Fig. 194. Installation in a corner frame – horizontal cross-section

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

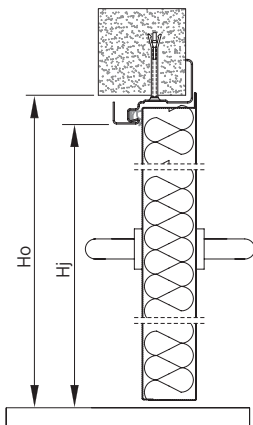


Fig. 193. Installation in a corner frame – vertical cross-section.

### Double-leaf doors

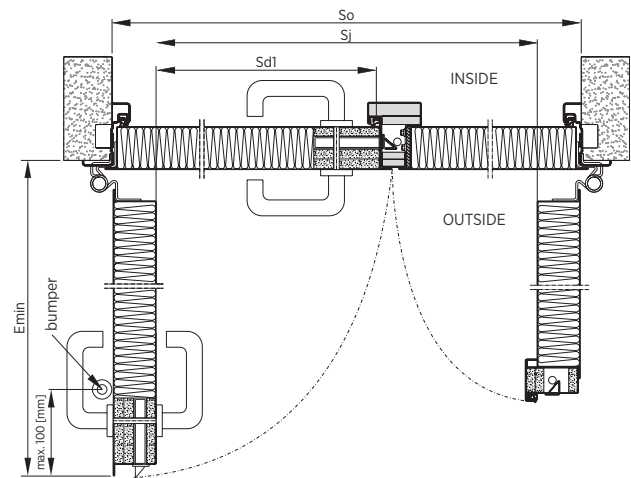


Fig. 195. Installation of a double-leaf door in a corner frame – horizontal cross-section

- So** - opening width,
- Sd1** - clear passage width for the active leaf,
- Sj** - clear passage width for both leaves of double-leaf doors,  $Sj = So - 140$  [mm],
- Ho** - opening height,
- Hj** = clear passage height,  $Hj = Ho - 35$  [mm] for doors with a threshold,
- E<sub>min</sub>** - space required for opening the active leaf at a 90° angle,  $E_{min} = Sj + 140$  [mm].

## DOCUMENTS CERTIFYING MARKETING APPROVAL

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

## TESTS

- Resistance to repeated opening and closing – **Class 6 (200,000 cycles)** according to PN-EN 12400:2004.
- Mechanical strength – **Class 4 for solid doors / Class 2 for glazed doors** according to PN-EN 1192:2001.
- Burglar resistance class – **RC2 and RC3** according to PN-EN 1627:2011.



## COLOURS

### Standard colours of seamless doors:



Seamless steel doors can be coated in any RAL palette colour (except for colours with a pearlescent, reflective or metallic finish) or RAL MAT STRUCTURE colours:



### HOME INCLUSIVE 2.0:

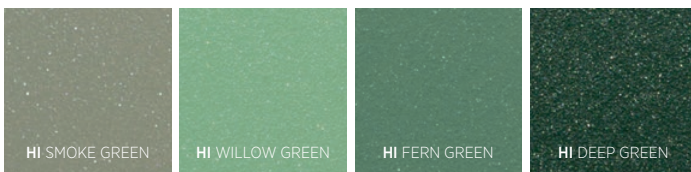
#### HISTONE



#### HISTEEL



#### HIEARTH



#### HIRUBY



### HI palette special colours:



The leaves of seamless doors are also available with wood-effect film coatings:



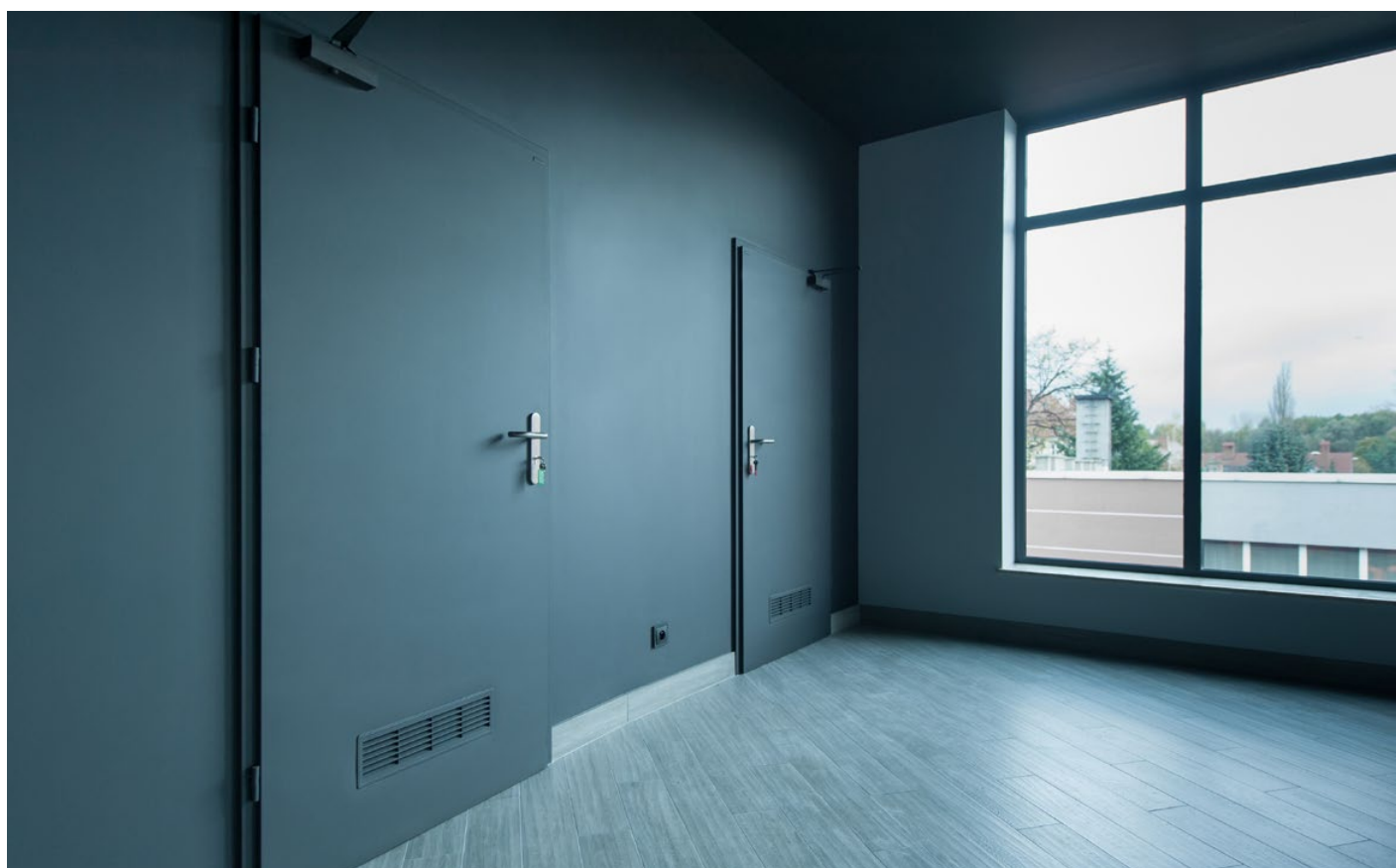
Custom colours: Other  
RAL mat structure  
colours



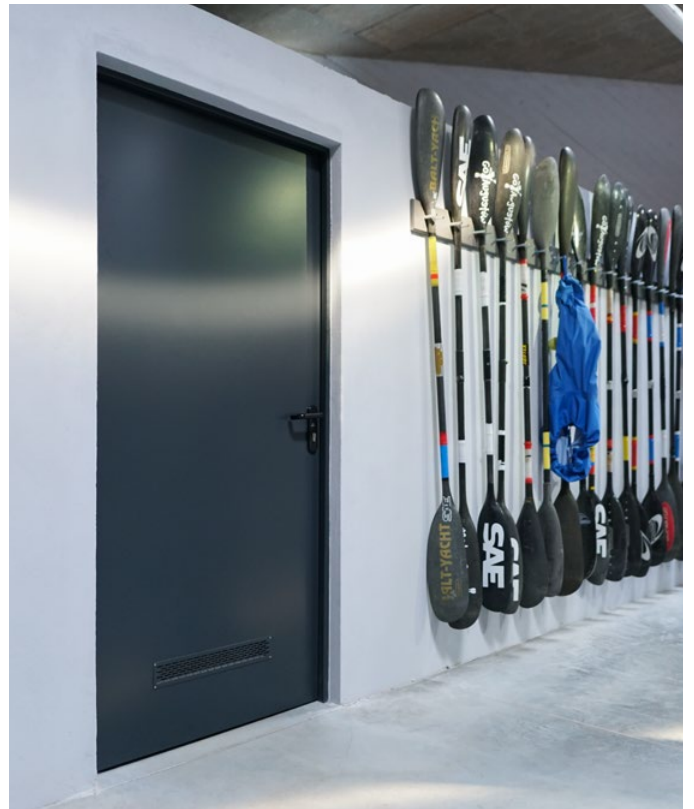
The colours presented in this publication are for reference only.



## REFERENCE BUILDINGS











## TECHNICAL DATA

	ECO Tech	ECO	ECO BASIC	ECO BASIC UNI	Anti-burglary RC2 and RC3
Opening frame made of powder-coated steel sections with the following thickness	1.5 [mm]	1.2 [mm]	1.2 [mm]	1.2 [mm]	1.5 [mm]
Total leaf thickness	78 [mm]	62.5 ± 1 [mm]	40 ± 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]	0.5 [mm]	0.7 – 0.75 [mm]
Internal doors	—	yes	yes	—	yes
External doors	yes	yes	yes	yes	—
Number of leaves	single-leaf	single- and double-leaf	single-leaf	single-leaf	single- and double-leaf
Standard dimensions	—	●	●	●	—
Special dimensions	■	■	—	—	●
Leaf with a thin rebate	—	●	—	—	●
Leaf with a thick rebate	●	—	●	●	—
Infill	mineral wool, PU board	expanded polystyrene, cellular cardboard, mineral wool, PU board	expanded polystyrene, cellular cardboard, mineral wool	expanded polystyrene, cellular cardboard, mineral wool	cellular cardboard, mineral wool
Rebate gaskets	●	●	●	●	●
Drop-down seal	●	■	■	■	—
Mortise lever lock	●	●	●	●	●
Auxiliary lock	■	■	■	■	●
Hinges with vertical adjustment	—	●	—	—	●
3D hinge	●	■	—	—	—
Spring hinge enabling self-closing of the door	—	●	—	—	●
Handle coated with plastic	●	●	●	●	●
Stainless steel handle	■	■	■	■	—
Door closer	■	■	■	■	■
Glazing	■	■	■	■	■
Ventilation grilles	■	■	■	■	—
Spyhole	■	■	—	—	■
Anti-burglary bolt in internal doors	—	—	—	—	●
INOX kick plate at the bottom of the door	■	■	—	—	—
Circumferential leaf reinforcement	■	■	—	—	●
INOX push pad at the lock level	■	■	—	—	—
Corner frame	●	●	●	●	●
Wrap-around frame	■	■	■	■	■
Internal frame	■	■	■	■	■
Opening frame with a thermal break (corner, internal, wrap-around)	■	■	—	—	—
Toplights and sidelights	—	■	—	—	—
Electromagnetic strike	■	■	—	—	—
Sequence selector	—	■	—	—	■
Doors in a RAL mat structure colour	■	■	■	■	■
Option of powder-coating in any RAL palette colour	■	■	■	■	■
Door leaf can be manufactured in film coatings	—	■	■	■	■
Ventilation system	—	■	—	—	—
Anti-panic hardware	■	■	—	—	—

● Standard accessories   ■ Optional accessories   — No



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