

STEEL DOOR



STANDARD DOORS
AVAILABLE IN STOCK

FIRE-RATED STEEL SEAMLESS DOORS

Intended use: Fire-rated steel joinery meets the requirements of both public and private buildings. Fire-rated steel doors are offered in the following two fire ratings: EI₂30 and EI₂60, as well as the S_a and S_m smoke control classes. Fire-rated steel joinery can be used indoors and outdoors for closing rooms such as boiler rooms, back-up facilities, staircases doubling as fire escapes in industrial plants, offices, schools, cinemas, hospitals, and in underground passageways, e.g. car parks.



WIŚNIEWSKI

GATES | WINDOWS | DOORS | FENCES



SOLID STRUCTURE

The reliable operation of our doors and their unmatched resistance to damage is ensured by a rigid steel structure and welded connections. It is particularly important in the case of frequently used doors that are installed in public buildings.



FIRE PROTECTION

Fire-rated WIŚNIEWSKI doors, windows, and walls provide maximum safety and durability in extreme conditions. They can be manufactured with the following fire ratings: EI₃0 and EI₆0, as well as the S_a and S_m smoke control classes.



SEAMLESS STEEL DOOR

EXTERNAL AND INTERNAL, SINGLE- OR DOUBLE-LEAF, FIRE-RATED, ANTI-BURGLARY, REBATED, LARGE SIZE SEAMLESS STEEL DOOR



CHARACTERISTIC FEATURES

Description

The leaf of seamless steel doors is made of two 0.7 – 0.75 [mm] thick galvanized sheets finished with polyester coating, powder coating or film coating. The passive leaf of double-leaf doors is locked with an automatic latch. The opening frames of doors are made of powder coated steel sections formed from 1.5 [mm] thick sheets. The frame posts are braze welded. The door leafs are installed in the frame using at least two hinges with vertical adjustment, including one self-closing hinge. The thickness of the door leaf is 62.5 ± 1 [mm].

Leaf infill

The infill for the EI₂30 and EI₂60 fire-rated products is mineral wool of a suitable density.

Gaskets system

The rebate gasket is made of modified EPDM and set around the opening frame circumference, i.e. along the posts and the lintel. An additional 2x20 [mm] intumescent gasket is provided.

Hardware and locks

As standard, **small size doors** are fitted with a single mortise lever lock with a lock cylinder complete with three keys, two anti-burglary bolts preventing unhinging or forcing the door open, and a polypropylene door handle with a steel core. The doors are fitted with two hinges with vertical adjustment per leaf, including one self-closing hinge. Small size steel doors meet the requirements for smoke control classes S_a and S_m.

As standard, **large size doors** are fitted with a single mortise lever lock with a lock cylinder complete with three keys, three anti-burglary bolts, and a polypropylene door handle with a steel core. The doors are fitted with three hinges with vertical adjustment, including one self-closing hinge and a link arm door closer.

RC2 | RC3

Fire-rated seamless steel doors are also available with the RC2 or RC3 anti-burglary class in accordance with PN-EN 1627:2011

RC2 class – two locks with class C lock cylinders, tamper-proof lock plate on the additional lock, and a door handle on a long cover plate, extra door reinforcement, three anti-burglary bolts per leaf, three hinges with vertical adjustment per leaf, including a self-closing one.

RC3 class – three locks with class C lock cylinders, tamper-proof lock plates on additional locks, and a door handle on a long cover plate, extra door reinforcement, three anti-burglary bolts per leaf, three hinges with vertical adjustment per leaf, including a self-closing one.



VIEWS | CROSS-SECTIONS OF THE DOORS

Single-leaf door

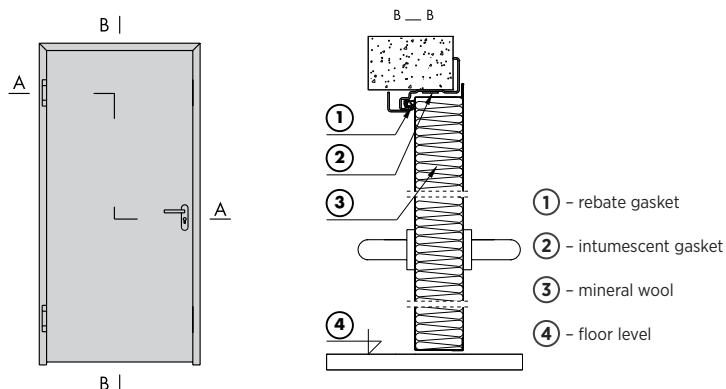


Fig. 1. Fire-rated single-leaf steel seamless door

Fig. 2. Vertical cross-section of the fire-rated steel seamless door with a corner frame

Fig. 3. Horizontal cross-section of the fire-rated steel seamless door with a corner frame

Double-leaf door

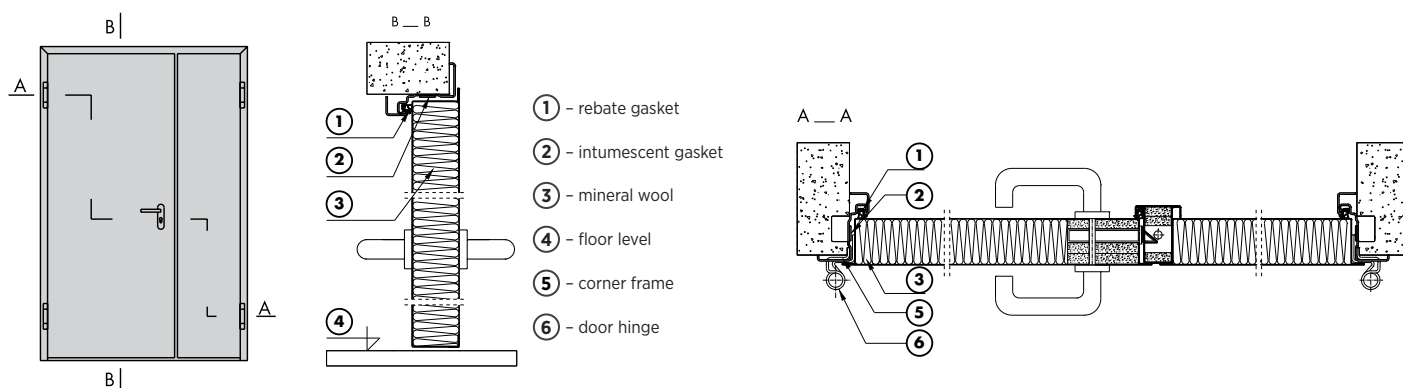


Fig. 4. Fire-rated double-leaf steel seamless door

Fig. 5. Vertical cross-section of the fire-rated double-leaf steel seamless door with a corner frame

Fig. 6. Horizontal cross-section of the fire-rated double-leaf steel seamless door with a corner frame

DOOR DIMENSIONS

Door dimensions | SMALL SIZE DOORS

Single-leaf door dimensions	
clear passage width 500 ÷ 1,000 [mm]	clear passage height 1,615 ÷ 2,200 [mm]

Double-leaf door dimensions	
clear passage width 1,000 ÷ 2,000 [mm]	clear passage height 1,615 ÷ 2,200 [mm]

In **small size double-leaf doors**, the clear passage dimensions of the active leaf are 500 – 1,000 [mm]. The listed maximum dimensions are the clear passage dimensions. The ordering dimensions apply to the clear wall opening dimensions. Double-leaf door with symmetrical or asymmetrical leaf division.

Door dimensions | LARGE SIZE DOORS

Large-size single-leaf door dimensions	
clear passage width 625 ÷ 1,250 [mm]	clear passage height 1,875 ÷ 2,500 [mm]

Large-size double-leaf door dimensions	
clear passage width 1,250 ÷ 2,500 [mm]	clear passage height 1,875 ÷ 2,500 [mm]

In large size doors, the clear passage dimensions of the active leaf are 625 – 1,250 [mm].

Door dimensions | ANTI-BURGLARY DOORS

Min. and max. dimensions of single-leaf doors.
$S_{min} = 810$ [mm], $S_{max} = 1,110$ [mm], $H_{min} = 1,750$ [mm], $H_{max} = 2,235$ [mm].

Min. and max. dimensions of double-leaf doors.
$S_{min} = 1,340$ [mm], $S_{max} = 2,140$ [mm], $H_{min} = 1,750$ [mm], $H_{max} = 2,235$ [mm].



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

Corner or embracing frame, internal single-leaf door

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

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

Corner or embracing frame, internal double-leaf door

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

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

Inner frame, internal single-leaf door

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

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

Inner frame, internal double-leaf door

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

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

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

DIMENSIONING

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

The installation clearances specified above do not include the clearances required for the lock bolt covers, anti-burglary bolt covers, 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 chipping the pockets in the walls cannot be made (e.g. the door is in-stalled within a steel open work lined with type F dry plasterboards), in-crease the installation opening size by:

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

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

ACCESSORIES

Infill

The infill for the EI₂30 and EI₂60 fire-rated products is mineral wool of a suitable density.

Door frame

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

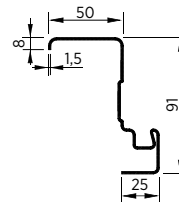


Fig. 7. Corner frame (standard)

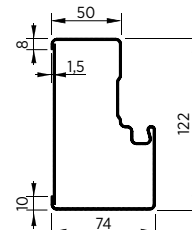


Fig. 8. Inner frame

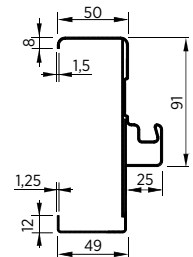


Fig. 9. Wrap around frame

Threshold seals

The fire-rated steel seamless doors are manufactured with a threshold and a drip cap. The threshold is bolted to the floor, and the drip cap is bolted to the opening frame above the door. The fire-rated doors are also available with a drop-down seal which replaces the threshold (in smoke control doors). The standard internal 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).

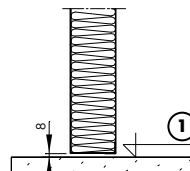


Fig. 10. Leaf bottom gap without a threshold

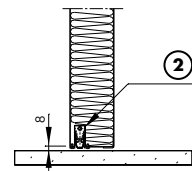


Fig. 11. Cross-section of the drop-down seal (1)

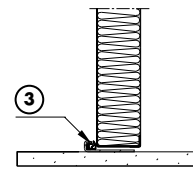


Fig. 12. Cross-section of the threshold

① - floor level

② - drop-down seal

③ - threshold

(1) - This option is not available with the anti-burglary version.



Handles and pulls

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



Fig. 13. Plastic handle - standard



Fig. 14. Stainless steel handle



Fig. 15. Stainless steel knob



Fig. 16. Stainless steel handle on a split cover plate ⁽¹⁾



Fig. 17. Stainless steel fixed knob on a split cover plate ⁽¹⁾



Fig. 18. EPN 2000 II push bar, stainless steel ⁽¹⁾



Fig. 19. EPN 900 IV anti-panic lever, black ⁽¹⁾



Fig. 20. EPN 900 IV anti-panic lever, stainless steel

Door closers



Fig. 21. Arm type door closer



Fig. 22. Rail type door closer



Fig. 23. Sequence selector for large size doors



Fig. 24. 2 rail door closers with sequence selectors



Fig. 25. Sequence selector for small size doors, without maglocks

Optional accessories



Fig. 26. Electromagnetic holder ⁽¹⁾



Fig. 27. Maglock ⁽¹⁾



Fig. 28. Door bumper



Fig. 29. Class C lock cylinder



Fig. 30. Reed switch ⁽¹⁾



Fig. 31. EFF 118F.13 fail secure electromagnetic strike ⁽¹⁾

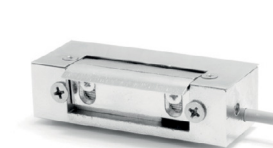


Fig. 32. HARTTE fail-secure electro-magnetic strike ⁽¹⁾



Fig. 33. The floor-mounted door bumper is made of stainless-steel



Fig. 34. Single-channel code keypad



Fig. 35. Single-channel fingerprint scanner



Fig. 36. Spy hole



Fig. 37. Anti-burglary bolts (standard)



Fig. 38. 3D hinge ⁽¹⁾

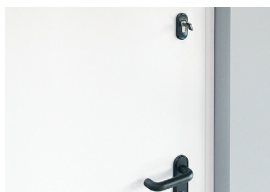


Fig. 39. Auxiliary lock

⁽¹⁾ - This option is not available with the anti-burglary version.



Glazing

The fire-rated steel seamless doors may feature glazing made with glass at the fire rating of the door. Standard glazing dimensions per one door leaf:



Glazing dimensions
450x660 [mm]



Glazing dimensions
300x700 [mm]

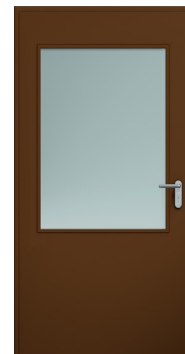


Glazing dimensions
Ø 400 [mm]⁽¹⁾

Custom glazing dimensions



The maximum dimensions of glazing in small size doors are (width x height) 600x700 [mm]. The dimensions of glazing in double-leaf doors are specified separately for each leaf⁽²⁾



Large size doors are also available with glazing dimension 650x950 [mm], whereas the maximum dimensions of glazing are 800x950 [mm]

Fire-rated ventilation grille

Small size fire-rated stainless steel doors are available with the following ventilation grilles:



Fig. 40. Ventilation grille,
fire-rated, 300x160 [mm]
– ventilation area 0.0192 [m²]



Fig. 41. Ventilation grille,
fire-rated, 300x300 [mm]
– ventilation area 0.036 [m²]

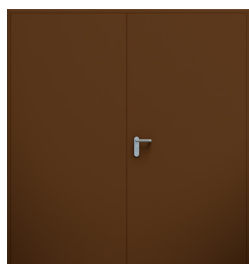


Fig. 42. Ventilation grille,
fire-rated, 500x160 [mm]
– ventilation area 0.032 [m²]



Fig. 43. Ventilation grille,
fire-rated, 500x300 [mm]
– ventilation area 0.06 [m²]

FINAL PRODUCT EXAMPLES



⁽¹⁾ – This option is not available with the anti-burglary version.

⁽²⁾ – Glazing – clear glass pane dimensions.



Ordering dimensions and installation dimensions

Installation requirements

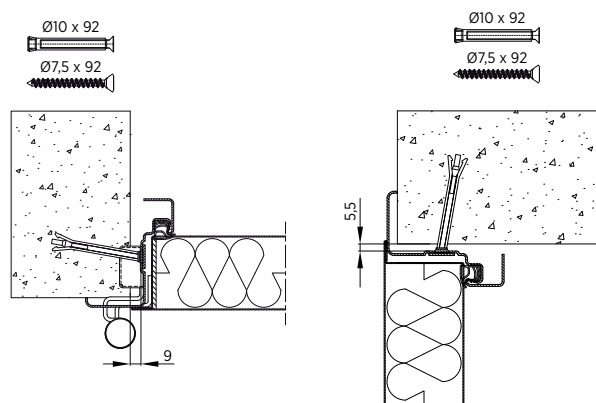


Fig. 44. Installation of the embracing frame, single-leaf door sides and lintel

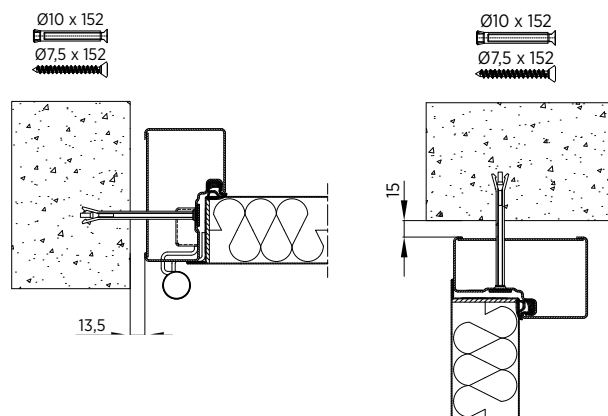


Fig. 45. Installation of the internal frame, single-leaf door sides and lintel

Wall mounting

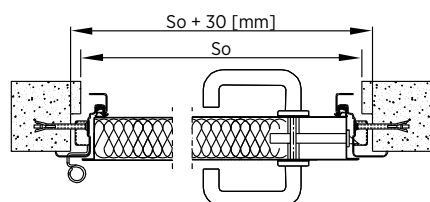


Fig. 46. Installation of the single-leaf door with the corner frame in a masonry wall, horizontal cross-section

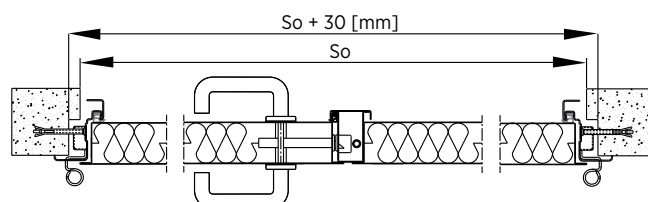


Fig. 47. Installation of the double-leaf door with the corner frame in a masonry wall, horizontal cross-section

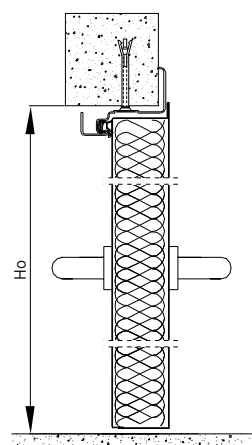


Fig. 48. Installation of the single-leaf door with the corner frame in a masonry wall, vertical cross-section

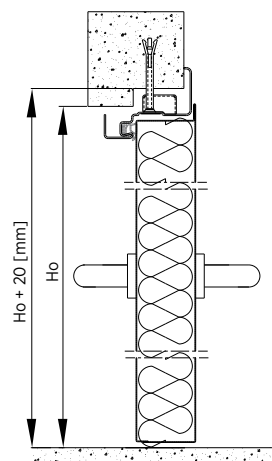
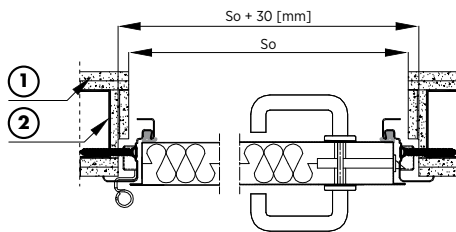


Fig. 49. Installation of the double-leaf door with the corner frame in a masonry wall, vertical cross-section

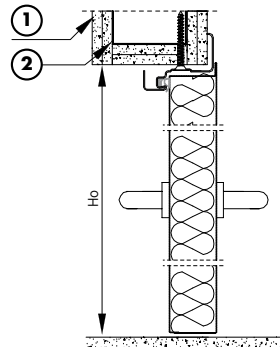


Installation on steel structures



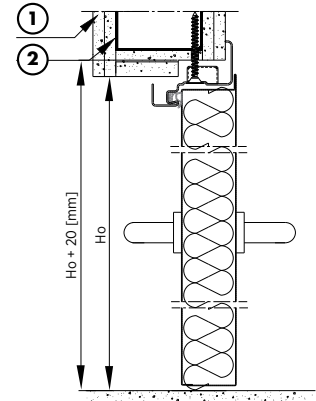
- ① - type F dry plaster-boards, two layers
② - Steel framework structure

Fig. 50. Installation of the single-leaf door with the corner frame in a steel framework structure, horizontal cross-section



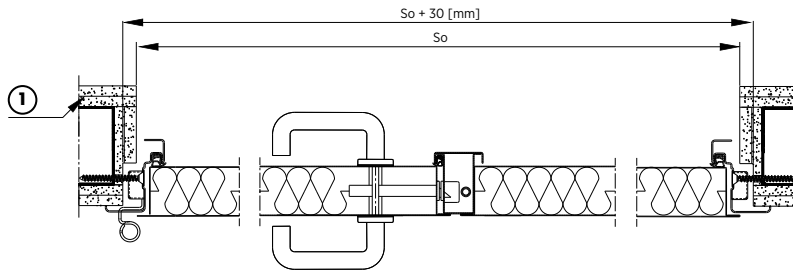
- ① - type F dry plaster-boards, two layers
② - Steel framework structure

Fig. 51. Installation of the single-leaf door with the corner frame in a steel framework structure, vertical cross-section



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

Fig. 52. Installation of the double-leaf door with the corner frame in a steel framework structure, vertical cross-section



- ① - type F dry plaster-boards, two layers

Fig. 53. Installation of the double-leaf door with the corner frame in a steel framework structure, horizontal cross-section

Dimensional relationships

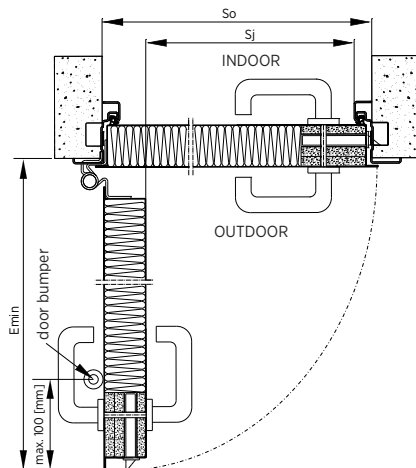


Fig. 54. Installation with the corner frame, horizontal cross-section

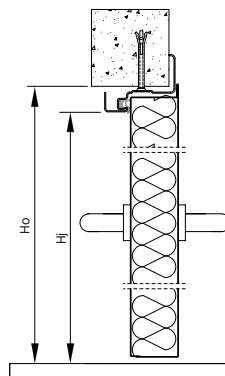


Fig. 55. Installation with the corner frame, vertical cross-section

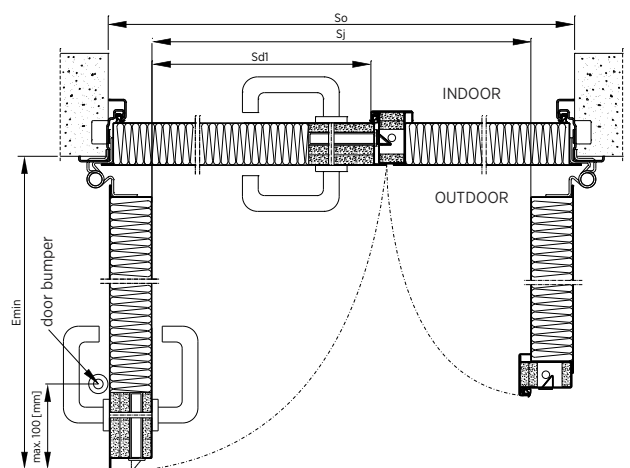


Fig. 56. Installation of the double-leaf door with the corner frame, horizontal cross-section

- S_o - opening width,
 S_j - clear passage width,
 $S_j = S_o - 110$ [mm],
clear passage width for both leaves (double-leaf door) $S_j = S_o - 140$ [mm],
 H_o - opening height,
 H_j - clear passage height,
 $H_j = H_o - 35$ [mm] with the door installed without a threshold,
 E_{min} - space required for opening the leaf at 90° ,
 $E_{min} = S_j + 140$ [mm].



CERTIFICATION DOCUMENTS

- National Technical Assessment ITB-KOT-2017/0079.
- Small size steel doors type EI₂30 and EI₂60, meet the requirements specified in the PN-EN 13501-2+A1:2010 standard for smoke control classes S_a and S_m.

TESTS

Fire rating PN-EN 13501-2+A1:2010 EI₂30, EI₂60

- Door mechanical strength PN-EN 1192:2001 **Class 4/3**⁽¹⁾.
- Resistance to repeated opening and closing of external doors **cycles** PN-EN 12400:2002 **Class 6 (200,000 cycles)**.
- Resistance to wind load EN 14351-1:2006+A2:2016, section 4.2 **Class C1**⁽¹⁾.
- Air permeability PN-EN 12207:2001 **Class 2**⁽²⁾.
- Watertightness PN-EN 12208:2001 **Class 3A**⁽²⁾.
- Thermal transmittance factor PN-EN ISO 10077-1:2007 **EI30 – UD=1.4/1.7 [W/(m²K)]**⁽³⁾, **EI60 – UD=1.5/1.8 [W/(m²K)]**⁽³⁾.
- Sound insulation PN-EN ISO 10140-2:2011 **Rw=33 (-1,-4) dB**⁽⁴⁾.
- Smoke control class PN-EN 1634-2:2006 **S_m, S_a**.
- Burglar resistance PN-EN 1627:2012 **Class RC2, RC3**⁽⁵⁾.

Fire rating PN-EN 13501-2+A1:2010 EI₂30, EI₂60. LARGE SIZE DOORS

- Door mechanical strength PN-EN 1192:2001 **Class 4/3**⁽¹⁾.
- Resistance to repeated opening and closing of external doors PN-EN 12400:2002 **Class 6 (200,000 cycles)**.
- Resistance to wind load PN-EN 12210:2001 **Class C1**.
- Air permeability PN-EN 12207:2001 **Class 2**⁽²⁾.
- Watertightness PN-EN 12208:2001 **Class 3A**⁽²⁾.
- Sound insulation PN-EN ISO 10140-2:2011 **Rw=31 (-1,-4) dB**⁽⁴⁾.

⁽¹⁾ – class 4 for solid doors, class 2 or 3 for glazed doors.

⁽²⁾ – for doors without a drop-down seal – “0”.

⁽³⁾ – EI30 – 1.4 EI60 – 1.5 for single-leaf solid doors, EI30 – 1.7 EI60 – 1.8 for double-leaf solid doors.

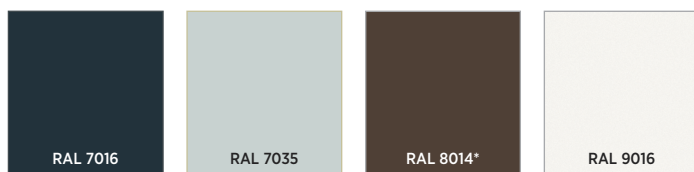
⁽⁴⁾ – for doors with glazing and/or a ventilation grille – “NA”.

⁽⁵⁾ – for doors in accordance with the nameplate.



COLOURS

Standard colours of fire-rated doors



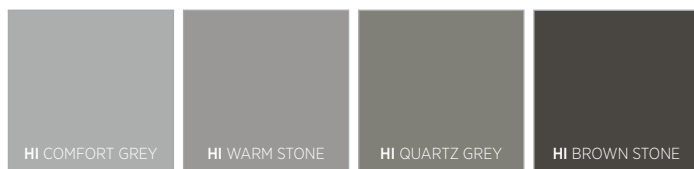
*Does not apply to the RC2 and RC3, as well as large size doors.

Fire-rated seamless doors can be coated in any RAL palette colour (excluding a pearlescent, reflective or metallic finish) or RAL MAT STRUCTURE and HOME INCLUSIVE 2.0 colours:

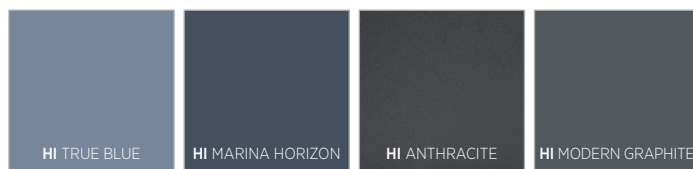


HOME INCLUSIVE 2.0:

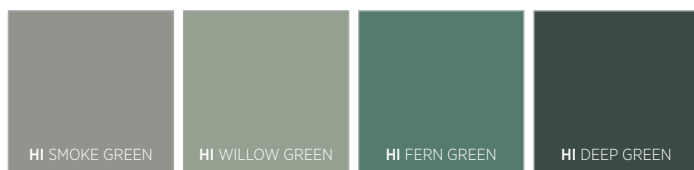
HISTONE



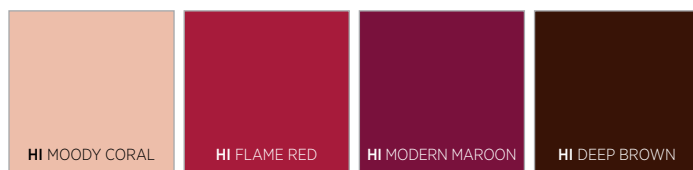
HISTEEL



HIEARTH



HIRUBY



The leafs of fire-rated seamless doors are also available with film coatings:



Non-standard colours:
Other RAL, mat structure colour



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



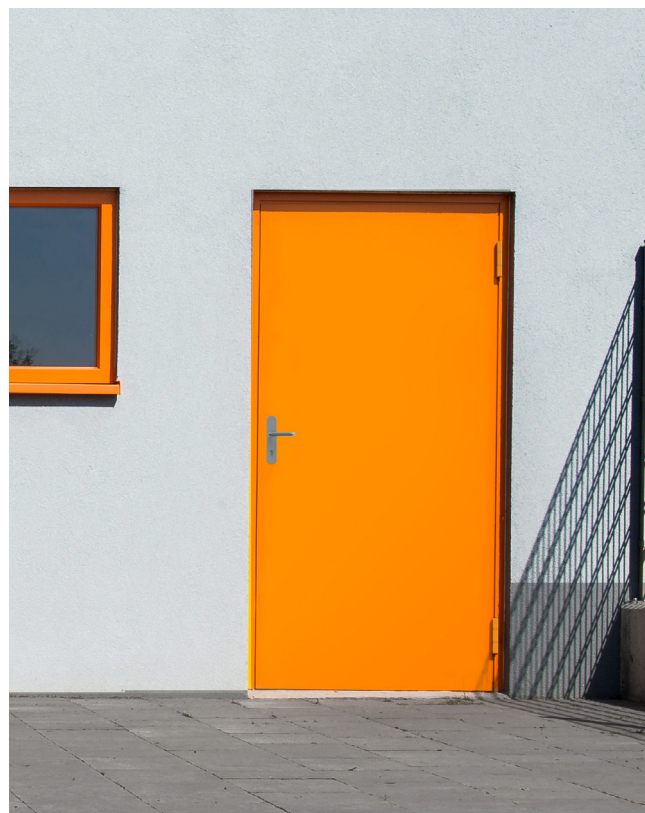
REFERENCE BUILDINGS



Fire-rated steel seamless doors



Fire-rated large-size seamless steel doors with an anti-panic lever



Fire-rated steel seamless doors



TECHNICAL DATA

	Fire-rated steel seamless doors
Leaf	Single- or double-leaf, solid or glazed, made of two 0.7 – 0.75 [mm] thick galvanized sheets with polyester coating, powder coating or wood effect film coating
Opening frame	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 frame using at least two hinges with vertical adjustment, including one with a pull spring
Rebate gasket	Made of modified EPDM and set around the opening frame circumference, i.e. along the posts and the lintel. An additional intumescent gasket with a cross-section of 2x20 [mm] is fitted
Fire resistance	class: EI30 and EI60
Smoke control	class S _a and S _m in accordance with PN-EN 1634-2:2006
Sound reduction index R _w [dB]	R _w = 33 (-1,-4) dB in accordance with PN-EN ISO 10140-2:2011
Thermal transmittance factor	in accordance with the PN-EN ISO 10077-1:2007 standard EI30 – UD=1.4/1.7 [W/(m²K)], EI60 – UD=1.5/1.8 [W/(m²K)]
Watertightness class	Class 3A in accordance with PN-EN 12208:2001
Wind load resistance class	Class C1 in accordance with EN 14351-1:2006+A2:2016 p. 4.2
Air permeability class	Class 2 in accordance with PN-EN 12207:2001
Burglar resistance	Class RC2, RC3 in accordance with PN-EN 1627:2012
Mechanical strength of the door	Class 4/3 in accordance with PN-EN 1192:2001
Resistance to repeated opening and closing	Class 6 (200,000 cycles) in accordance with PN-EN 12400:2002
Optional accessories	Door closer, glazings, spy hole, wrap-around frame, internal frame, sequence selector; doors in RAL mat structure, can be powder-coated in any RAL palette colour; door leaves available with film coatings
Maximum width / height of the door [mm]	Single-leaf door with a corner or wrap-around frame: 1,360x2,550 [mm] Double-leaf door with a corner or wrap-around frame: 2,640x2,550 [mm] Single-leaf door with an internal frame: 1,463x2,606 [mm] Single-leaf door with an internal frame: 2,746x2,606 [mm]
Glazing	Fire-rated seamless steel doors are available with glazing made with glass with the same fire rating as the door. Standard dimensions of glazing that can be used per one door leaf: 450x660 [mm], 300x700 [mm], Ø 400 [mm].
Standard RAL colours	RAL 7016, RAL 7035, RAL 8014, RAL 9016
Custom colours	other RAL, RAL mat structure colours, Home Inclusive 2.0 colour collection


WIŚNIEWSKI

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