



Radiation-Protection-Doors Content

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Radiation-Protection-Function

According to DIN 6834

Regulations and requirements

DIN 6834 Radiation-Protection-Doors

Radiation-Protection-Door sets with lead (Pb) inlay are used in order to block x-rays, gamma rays and thermionic rays, preferably in medically used rooms, e.g. rooms for diagnostics and therapies.

The Radiation-Protection is achieved by including a lead inlay in the door leaf structure. The thickness of the lead inlay (in mm) is defined by the so called lead equivalent value according to DIN 6845. The lead equivalent value of a door is determined by the sum of the thickness of the two lead inlays in the door leaf.

The required lead equivalent value of a Radiation-Protection-Door is determined by the radiation protection plan according to DIN 6812, 6846 or 6847 for the construction of an according complex. The Radiation-Protection value of the door has to match the lead equivalent value required to shield the radiation on site.

Function

Neither the fittings nor the special equipment must interfere with the doors function or lower the lead equivalent value. The use of lead glazings as vision panel and intercommunication glazing is according to DIN 6841 possible. According to DIN 6834 surface defects of the lead inlay, in the area of the handles and the keyhole drilling, are allowed as long as they are less than 2 mm of the lead equivalent. If the lead equivalent value is 2 mm or more every Radiation-Protection-Door must be equipped with a special lock with shifted follower and cylinder drilling. In general Radiation-Protection-Doors are requested with a lead equivalent value of up to 4 mm.

The radiation barrier of the door must not be disrupted by any angular radiation in the area of the door rebate and the wall connection.

The radiation protection function of the door has to be verified by the manufacturer by attaching an official label on the edge of the door leaf.

Installation

The cavities between the steel frame and the wall has to be filled either dry, by padding with wooden bars and lead strips or by filling the cavities with radiation protection mortar.



Radiation-Protection-Doors

Configuration options

PB Solid door

1-leaf door

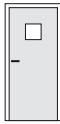


1-leaf door, with top panel



PB Door with vision panel

1-leaf door



1-leaf door, with top panel



Radiation-Protection-Doors



3 N

1-leaf door Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door
Model 3.00 / 3.10

● Radiation-Protection
Lead equivalent value

- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function

- Sound-Insulation $R_{w,P} = 32$ dB
- Burglar-Protection WK 2

Dimensions

- ✍ BR-width x BR-height
- ✍ Throat opening

Walls

- Solid wall (M)
- Gasblock concrete wall (M)
- Gypsum plasterboard wall (L)
- Wooden elements $\geq F 60B$
- Steel elements $\geq F 60A$

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm,
3-sided circumferential special gasket grey
(optional in black, white or brown)

- Solid wall: Gypsum plasterboard wall:
- Backbend 9 mm – Backbend 15 mm
- Floor recess 30 mm – without floor recess

- Steel wrap-around frame, for solid wall
- Steel wrap-around frame,
for gypsum plasterboard wall
- Corner frame, sheet thickness 2 mm, 32/15 mm
- Steel block frame
- Standard installation
- Installation in hallways
- Round-shaped frame
- Face expansion / mm
- Decorative rebated frame, rebate depth mm
- Quirk frame
- Expansion joint frame
- Frame for installation in existing walls
- Face screw fastening
- Adapter fastening
- Trapezoid anchor fastening
- Required face width / mm
- Frame for reconstruction
- Configuration in stainless steel
- 4-sided frame
- Sheet thickness 2 mm
- Backbend up to 25 mm
- Lead inlay in frame, max. of 4 mm
- ✍

Aluminium frames

Anodized or colour powder-coated,
3-sided special gasket black

- Wrap-around frame
- Block frame with quirk
- Round-shaped frame

Door leaf

- Door leaf thickness about 50 mm
- Rebated (F)
- Unrebated (S)
- Solid door, climate category II
- Stress group S (3)
- Stress group E (4)
- Door with holohedral additional wood panelling,
one-/two-sided
- Style door
- with profile beads
- with frame-like and/or fielded additional
wood panelling
- Door with vision panel

Edges

- Solid wood batten, white/red wood, 3-sided
- Veneer edge
- Plastic material edge
- Colour-coated edge
- ✍

Vision panel

Type of glass

- Radiation protection glass (clear glass)

Configuration

- Vision panel, 215/1015 mm
- Porthole \varnothing 350 mm
- LA 300 x 300 mm
- LA 400 x 400 mm
- Special vision panel size mm

Glazing beads

- Solid wood veneered
- Solid wood
- Aluminium untreated/anodized
- Stainless steel (porthole \varnothing 350 mm)

Surfaces

Door leaf

- Veneer
- Transparently coated
- Stained/transparently coated
- Untreated
- High pressure laminate (HPL), 0,8 mm
- On site coating/undercoating foil
- Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm,
hinge base 3D adjustable

Rebated

- VSX 7939/160, 3-d.
- VX 7939/160, 3-d.
- BSW 060-21 VX, 3-d.
- VIELER ER.TB.160.335.F, 3-d.
- HEWI B8107.160 VX, 3-d.
- Additional 3rd hinge
- ✍

Unrebated

- VSX 7729/160, 3-d.
- VX 7729/160, 3-d.
- BSW 060-22 VX, 3-d.
- VIELER ER.TB.160.331.S, 3-d.
- Concealed hinges
- HEWI B9107.160 VX, 3-d.
- Additional 3rd hinge
- ✍

Hinge surface

- Galvanised – Plastic material
- Matt nickel-plated – Brass-coloured
- Stainless steel – Colour-coated

Locks

- Lock according to DIN 18251,
with latch function, backset 65 mm,
prepared for profile cylinder
- Special lock with shifted handles
backset 40/80 mm
prepared for profile cylinders
from lead equivalent value ≥ 2 mm

Forend surface

- Galvanised
- Stainless steel
- Brass-plated

Special equipment

- Lead inlay
- Electrical strike
- Door viewer
- Retractable bottom seal
(standard for Sound-Insulation function)
- Sill seal with aluminium threshold
- Block lock
- Bolt contact
- Magnetic contact
- Cable channel
- Concealed cable transition
- Security bolts
- Kick plate (aluminium/stainless steel)
- ✍



3 N

1-leaf door

Performance overview

PB

Radiation-Protection-Doors

Main function



- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 32$ dB

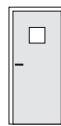


- Burglar-Protection WK 2

Models



3.00



3.10



Performance profile

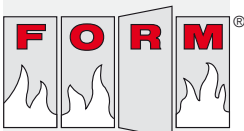
Dimensions (mm)	Basic dimension	BR-width	500-1375
	Basic dimension	BR-height	625-2750
	Clear passage	LD-width	436-1311
	Clear passage	LD-height	593-2718
	Door leaf thickness		50
Configuration	Solid door		○
	Door with vision panel		○
	Style door (profile beads)		○
	Climate category II		●
	Stress group S (3)		●
	Stress group E (4)		○

Edge	Rebated	○
	Unrebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	Aluminium frame	○
	4-sided frame	○

Information

For additional technical information please see appendix, indicated with

● Standard ○ On request



Schörghuber



13 N

1-leaf door Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door

Model 13.00 / 13.10

● Radiation-Protection

Lead equivalent value

● 1,0 mm

○ 1,5 mm

○ 2,0 mm

○ 3,0 mm

○ 4,0 mm

Optional function

○ Sound-Insulation $R_{w,P} = 37$ dB

○ Sound-Insulation $R_{w,P} = 42$ dB

○ Burglar-Protection WK 2

Dimensions

. BR-width x BR-height

. Throat opening

Walls

○ Solid wall

(M)

○ Gasblock concrete wall

(M)

○ Gypsum plasterboard wall

(L)

○ Wooden elements $\geq F 60B$

○ Steel elements $\geq F 60A$

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm, 3-sided circumferential special gasket grey (optional in black, white or brown)

Solid wall: Gypsum plasterboard wall:

– Backbend 9 mm

– Backbend 15 mm

– Floor recess 30 mm

– without floor recess

○ Steel wrap-around frame, for solid wall

○ Steel wrap-around frame,

for gypsum plasterboard wall

○ Corner frame, sheet thickness 2 mm, 32/15 mm

○ Steel block frame

– Standard installation

– Installation in hallways

○ Round-shaped frame

○ Face expansion / mm

○ Decorative rebated frame, rebate depth mm

○ Quirk frame

○ Expansion joint frame

○ Frame for installation in existing walls

– Face screw fastening

– Adapter fastening

– Trapezoid anchor fastening

○ Required face width / mm

○ Frame for reconstruction

○ Configuration in stainless steel

○ 4-sided frame

○ Sheet thickness 2 mm

○ Backbend up to 25 mm

○ Lead inlay in frame, max. of 4 mm

○

Aluminium frames

Anodized or colour powder-coated,

3-sided special gasket black

○ Wrap-around frame

○ Block frame with quirk

○ Round-shaped frame

Door leaf

Door leaf thickness about 50 mm

– Rebated (F)

– Unrebated (S)

● Solid door, climate category II

● Stress group S (3)

○ Stress group E (4)

○ Door with holohedral additional wood panelling,

one-/two-sided

○ Style door

– with profile beads

– with frame-like and/or fielded additional

wood panelling

○ Door with vision panel

Edges

● Solid wood batten, white/red wood, 3-sided

○ Veneer edge

○ Plastic material edge

○ Colour-coated edge

○

Vision panel

Type of glass

● Radiation protection glass (clear glass)

Configuration

○ Vision panel, 215/1015 mm

○ Porthole \varnothing 350 mm

○ LA 300 x 300 mm

○ LA 400 x 400 mm

○ Special vision panel size mm

Glazing beads

○ Solid wood veneered

○ Solid wood

○ Aluminium untreated/anodized

○ Stainless steel (porthole \varnothing 350 mm)

Surfaces

Door leaf

○ Veneer

– Transparently coated

– Stained/transparently coated

– Untreated

○ High pressure laminate (HPL), 0,8 mm

○ On site coating/undercoating foil

○ Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm,

hinge base 3D adjustable

Rebated

● VSX 7939/160, 3-d.

○ VX 7939/160, 3-d.

○ BSW 060-21 VX, 3-d.

○ VIELER ER.TB.160.335.F, 3-d.

○ HEWI B8107.160 VX, 3-d.

○ Additional 3rd hinge

○

Unrebated

● VSX 7729/160, 3-d.

○ VX 7729/160, 3-d.

○ BSW 060-22 VX, 3-d.

○ VIELER ER.TB.160.331.S, 3-d.

○ Concealed hinges

○ HEWI B9107.160 VX, 3-d.

○ Additional 3rd hinge

○

Hinge surface

– Galvanised

– Plastic material

– Matt nickel-plated

– Brass-coloured

– Stainless steel

– Colour-coated

Locks

● Lock according to DIN 18251,

with latch function, backset 65 mm,

prepared for profile cylinder

○ Special lock with shifted handles

backset 40/80 mm

prepared for profile cylinders

from lead equivalent value ≥ 2 mm

Forend surface

– Galvanised

– Stainless steel

– Brass-plated

Special equipment

● Lead inlay

○ Electrical strike

○ Door viewer

○ Retractable bottom seal

(standard for Sound-Insulation function)

○ Sill seal with aluminium threshold

○ Block lock

○ Bolt contact

○ Magnetic contact

○ Cable channel

○ Concealed cable transition

○ Security bolts

○ Kick plate (aluminium/stainless steel)

○



13 N

1-leaf door

Performance overview

PB

Radiation-Protection-Doors

Main function



- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 37$ dB
- Sound-Insulation $R_{w,P} = 42$ dB

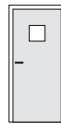


- Burglar-Protection WK 2

Models



13.00



13.10



Performance profile

Dimensions (mm)	Basic dimension	BR-width	500-1375
	Basic dimension	BR-height	1750-2750
	Clear passage	LD-width	436-1311
	Clear passage	LD-height	1718-2718
	Door leaf thickness		50
Configuration	Solid door		○
	Door with vision panel		○
	Style door (profile beads)		○
	Climate category II		●
	Stress group S (3)		●
	Stress group E (4)		○

Edge	Rebated	○
	Unrebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	Aluminium frame	○
	4-sided frame	○

Information

For additional technical information please see appendix, indicated with

● Standard ○ On request



16 N

1-leaf door Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door

Model 16.00 / 16.10

● Radiation-Protection

Lead equivalent value

● 1,0 mm

○ 1,5 mm

○ 2,0 mm

○ 3,0 mm

○ 4,0 mm

Optional function

○ Sound-Insulation $R_{w,P} = 32$ dB

○ Burglar-Protection WK 2

○ Burglar-Protection WK 3

Dimensions

✂ BR-width x BR-height

✂ Throat opening

Walls

○ Solid wall

(M)

○ Gasblock concrete wall

(M)

○ Gypsum plasterboard wall

(L)

○ Wooden elements $\geq F 60B$

○ Steel elements $\geq F 60A$

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm, 3-sided circumferential special gasket grey (optional in black, white or brown)

Solid wall: Gypsum plasterboard wall:

– Backbend 9 mm

– Backbend 15 mm

– Floor recess 30 mm

– without floor recess

○ Steel wrap-around frame, for solid wall

○ Steel wrap-around frame, for gypsum plasterboard wall

○ Corner frame, sheet thickness 2 mm, 32/15 mm

○ Steel block frame

– Standard installation

– Installation in hallways

○ Round-shaped frame

○ Face expansion / mm

○ Decorative rebated frame, rebate depth mm

○ Quirk frame

○ Expansion joint frame

○ Frame for installation in existing walls

– Adapter fastening

– Trapezoid anchor fastening

○ Required face width / mm

○ Frame for reconstruction

○ Configuration in stainless steel

○ 4-sided frame

○ Sheet thickness 2 mm

○ Backbend up to 25 mm

○ Lead inlay in frame, max. of 4 mm

○ ✂

Aluminium frames

Anodized or colour powder-coated, 3-sided special gasket black

○ Wrap-around frame

○ Block frame with quirk

○ Round-shaped frame

Door leaf

Door leaf thickness about 70 mm

– Rebated (F)

– Unrebated with jamb rebate (S)

– Double-rebated (D)

● Solid door, climate category III

● Stress group S (3)

○ Stress group E (4)

○ Door with holohedral additional wood panelling,

one-/two-sided

○ Style door

– with profile beads

– with frame-like and/or fielded additional

wood panelling

○ Door with vision panel

Edges

● Solid wood batten, white/red wood, 3-sided

○ Veneer edge

○ Plastic material edge

○ Colour-coated edge

○ ✂

Vision panel

Type of glass

● Radiation protection glass (clear glass)

Configuration

○ Vision panel, 215/1015 mm

○ Porthole \varnothing 350 mm

○ LA 300 x 300 mm

○ LA 400 x 400 mm

○ Special vision panel size mm

Glazing beads

○ Solid wood veneered

○ Solid wood

○ Aluminium untreated/anodized

○ Stainless steel (porthole \varnothing 350 mm)

Surfaces

Door leaf

○ Veneer

– Transparently coated

– Stained/transparently coated

– Untreated

○ High pressure laminate (HPL), 0,8 mm

○ On site coating/undercoating foil

○ Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm,

hinge base 3D adjustable

Rebated

● VSX 7939/160, 3-d.

○ VX 7939/160, 3-d.

○ BSW 060-21 VX, 3-d.

○ VIELER ER.TB.160.335.F, 3-d.

○ HEWI B8107.160 VX, 3-d.

○ Additional 3rd hinge

○ ✂

Unrebated

● VSX 7729/160, 3-d.

○ VX 7729/160, 3-d.

○ BSW 060-22 VX, 3-d.

○ VIELER ER.TB.160.331.S, 3-d.

○ Concealed hinges

○ HEWI B9107.160 VX, 3-d.

○ Additional 3rd hinge

○ ✂

Hinge surface

– Galvanised

– Plastic material

– Matt nickel-plated

– Brass-coloured

– Stainless steel

– Colour-coated

Locks

● Lock according to DIN 18251,

with latch function, backset 65 mm,

prepared for profile cylinder

○ Special lock with shifted handles

backset 40/80 mm

prepared for profile cylinders

from lead equivalent value ≥ 2 mm

Forend surface

– Galvanised

– Stainless steel

– Brass-plated

Special equipment

● Lead inlay

○ Electrical strike

○ Door viewer

○ Retractable bottom seal (standard with Smoke-

Protection and Sound-Insulation function)

○ Sill seal with aluminium threshold

○ Block lock

○ Bolt contact

○ Magnetic contact

○ Cable channel

○ Concealed cable transition

○ Security bolts

○ Kick plate (aluminium/stainless steel)

○ ✂



16 N

1-leaf door

Performance overview

PB

Radiation-Protection-Doors

Main function



- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 32$ dB

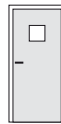


- Burglar-Protection WK 2
- Burglar-Protection WK 3

Models



16.00



16.10



Performance profile

Dimensions (mm)	Basic dimension	BR-width	625-1500
	Basic dimension	BR-height	625-3500
	Clear passage	LD-width	561-1436
	Clear passage	LD-height	593-3468
	Door leaf thickness		70
Configuration	Solid door		○
	Door with vision panel		○
	Style door (profile beads)		○
	Climate category III		●
	Stress group S (3)		●
	Stress group E (4)		○

Edge	Rebated	○
	Unrebated with jamb rebate	○
	Double-rebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	Aluminium frame	○
	4-sided frame	○

Information

For additional technical information please see appendix, indicated with

● Standard ○ On request



5 N

1-leaf door Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door
Model 5.00 / 5.10

● Radiation-Protection

Lead equivalent value

● 1,0 mm

○ 1,5 mm

○ 2,0 mm

○ 3,0 mm

○ 4,0 mm

Optional function

○ Sound-Insulation $R_{w,P} = 45$ dB

○ Sound-Insulation $R_{w,P} = 42$ dB

○ Sound-Insulation $R_{w,P} = 37$ dB

○ Burglar-Protection WK 2

○ Burglar-Protection WK 3

Dimensions

..... BR-width x BR-height

..... Throat opening

Walls

○ Solid wall (M)

○ Gasblock concrete wall (M)

○ Gypsum plasterboard wall (L)

○ Wooden elements $\geq F 60B$

○ Steel elements $\geq F 60A$

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm,
3-sided circumferential special gasket grey
(optional in black, white or brown)

Solid wall: Gypsum plasterboard wall:

– Backbend 9 mm – Backbend 15 mm

– Floor recess 30 mm – without floor recess

○ Steel wrap-around frame, for solid wall

○ Steel wrap-around frame,
for gypsum plasterboard wall

○ Corner frame, sheet thickness 2 mm, 32/15 mm

○ Steel block frame

– Standard installation

– Installation in hallways

○ Round-shaped frame

○ Face expansion / mm

○ Decorative rebated frame, rebate depth mm

○ Quirk frame

○ Expansion joint frame

○ Frame for installation in existing walls

– Adapter fastening

– Trapezoid anchor fastening

○ Required face width / mm

○ Frame for reconstruction

○ Configuration in stainless steel

○ 4-sided frame

○ Sheet thickness 2 mm

○ Backbend up to 25 mm

○ Lead inlay in frame, max. of 4 mm

○ Please fill in

Aluminium frames

Anodized or colour powder-coated,

3-sided special gasket black

○ Wrap-around frame

○ Block frame with quirk

○ Round-shaped frame

Door leaf

Door leaf thickness about 70 mm

– Rebated (F)

– Unrebated with jamb rebate (S)

– Double-rebated

● Solid door, climate category II

● Stress group S (3)

○ Stress group E (4)

○ Door with holohedral additional wood panelling,
one-/two-sided

○ Style door

– with profile beads

– with panel up to $R_{w,P} = 37$ dB

– with coffer up to $R_{w,P} = 37$ dB

– with frame-like and/or fielded additional
wood panelling

○ Door with vision panel

Edges

● Solid wood batten, white/red wood, 3-sided

○ Veneer edge

○ Plastic material edge

○ Colour-coated edge

○ Please fill in

Vision panel

Type of glass

● Radiation protection glass (clear glass)

Configuration

○ Vision panel, 215/1015 mm

○ Porthole $\varnothing 350$ mm

○ LA 300 x 300 mm

○ LA 400 x 400 mm

○ Special vision panel size mm

Glazing beads

○ Solid wood veneered

○ Solid wood

○ Aluminium untreated/anodized

○ Stainless steel (porthole $\varnothing 350$ mm)

Surfaces

Door leaf

○ Veneer

– Transparently coated

– Stained/transparently coated

– Untreated

○ High pressure laminate (HPL), 0,8 mm

○ On site coating/undercoating foil

○ Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm,

hinge base 3D adjustable

Rebated / Double-rebated Unrebated

for $R_{w,P} = 42$ dB

● VX 7939/160 FD, 3-d.

○ BSW 060-21 VX FD, 3-d.

for $R_{w,P} = 37$ dB

● VSX 7939/160, 3-d.

○ VX 7939/160, 3-d.

○ BSW 060-21 VX, 3-d.

○ VIELER ER.TB.160.335.F., 3-d.

○ SIMONS Globus FUG 160.4.xx VX, 3-d.

○ HEWI B8107.160 VX, 3-d.

○ Additional 3rd hinge

○ Please fill in

Hinge surface

– Galvanised

– Matt nickel-plated

– Stainless steel

– Plastic material

– Brass-coloured

– Colour-coated

Locks

● Lock according to DIN 18251,

with latch function, backset 65 mm,

prepared for profile cylinder

○ Special lock with shifted handles

backset 40/80 mm

prepared for profile cylinders

from lead equivalent value ≥ 2 mm

Forend surface

– Galvanised

– Stainless steel

– Brass-plated

Special equipment

● Lead inlay

○ Electrical strike

○ Door viewer

○ Retractable bottom seal (standard with Smoke-
Protection and Sound-Insulation function)

○ Sill seal with aluminium threshold

○ Block lock

○ Bolt contact

○ Magnetic contact

○ Cable channel

○ Concealed cable transition

○ Security bolts

○ Kick plate (aluminium/stainless steel)

○ Please fill in



Radiation-Protection-Doors

5 N

1-leaf door

Performance overview

PB

Main function



- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 45$ dB
- Sound-Insulation $R_{w,P} = 42$ dB
- Sound-Insulation $R_{w,P} = 37$ dB



- Burglar-Protection WK 2
- Burglar-Protection WK 3

Models



5.00



5.10



Performance profile

Dimensions (mm)	Basic dimension BR-width	625-1500
	Basic dimension BR-height	625-3000
	Clear passage LD-width	561-1436
	Clear passage LD-height	593-2968
	Door leaf thickness	70
Configuration	Solid door	○
	Door with vision panel	○
	Style door (profile beads)	○
	Climate category II	●
	Climate category III	○
	Stress group S (3)	●
	Stress group E (4)	○

Edge	Rebated	○
	Unrebated with jamb rebate	○
	Double-rebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	Aluminium frame	○
	4-sided frame	○



3 N

1-leaf door, with top panel Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door
Model 3.01 / 3.11

● Radiation-Protection
Lead equivalent value

- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function

- Sound-Insulation $R_{w,P} = 32$ dB

Dimensions

- ✎ BR-width x BR-height
- ✎ Throat opening

Walls

- Solid wall (M)
- Gasblock concrete wall (M)
- Gypsum plasterboard wall (L)
- Wooden elements \geq F 60B
- Steel elements \geq F 60A

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm, 3-sided circumferential special gasket grey (optional in black, white or brown)

- Solid wall: Gypsum plasterboard wall:
- Backbend 9 mm - Backbend 15 mm
- Floor recess 30 mm - without floor recess

- Steel wrap-around frame, for solid wall
- Steel wrap-around frame, for gypsum plasterboard wall
- Corner frame, sheet thickness 2 mm, 32/15 mm
- Steel block frame
- Standard installation
- Installation in hallways
- Round-shaped frame
- Face expansion / mm
- Decorative rebated frame, rebate depth mm
- Quirk frame
- Expansion joint frame
- Frame for installation in existing walls
- Adapter fastening
- Trapezoid anchor fastening (top panel)
- Required face width / mm
- Frame for reconstruction
- Configuration in stainless steel
- 4-sided frame
- Sheet thickness 2 mm
- Backbend up to 25 mm
- Lead inlay in frame, max. of 4 mm
- ✎

Door leaf

- Door leaf thickness about 50 mm
- Rebated (F)
- Unrebated (S)
- Solid door, climate category II
- Stress group S (3)
- Stress group E (4)
- Door with holohedral additional wood panelling, one-/two-sided
- Style door
- with profile beads
- with frame-like and/or fielded additional wood panelling
- Door with vision panel

Edges

- Solid wood batten, white/red wood, 3-sided
- Veneer edge
- Plastic material edge
- Colour-coated edge
- ✎

Vision panel

Type of glass

- Radiation protection glass (clear glass)

Configuration

- Vision panel, 215/1015 mm
- Porthole \varnothing 350 mm
- LA 300 x 300 mm
- LA 400 x 400 mm
- Special vision panel size mm

Glazing beads

- Solid wood veneered
- Solid wood
- Aluminium untreated/anodized
- Stainless steel (porthole \varnothing 350 mm)

Top panel

- Top panel
- Counter-rebated

Surfaces

Door leaf/Top panel

- Veneer
- Transparently coated
- Stained/transparently coated
- Untreated
- High pressure laminate (HPL), 0,8 mm
- On site coating/undercoating foil
- Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm, hinge base 3D adjustable

Rebated

- VSX 7939/160, 3-d.
- VX 7939/160, 3-d.
- BSW 060-21 VX, 3-d.
- VIELER ER.TB.160.335.F, 3-d.
- HEWI B8107.160 VX, 3-d.
- Additional 3rd hinge
- ✎

Unrebated

- VSX 7729/160, 3-d.
- VX 7729/160, 3-d.
- BSW 060-22 VX, 3-d.
- VIELER ER.TB.160.331.S, 3-d.
- Concealed hinges
- HEWI B9107.160 VX, 3-d.
- Additional 3rd hinge
- ✎

Hinge surface

- Galvanised
- Matt nickel-plated
- Stainless steel
- Plastic material
- Brass-coloured
- Colour-coated

Locks

- Lock according to DIN 18251, with latch function, backset 65 mm, prepared for profile cylinder
- Special lock with shifted handles backset 40/80 mm prepared for profile cylinders from lead equivalent value \geq 2 mm

Forend surface

- Galvanised
- Stainless steel
- Brass-plated

Special equipment

- Lead inlay
- Electrical strike
- Door viewer
- Retractable bottom seal (standard for Sound-Insulation function)
- Sill seal with aluminium threshold
- Block lock
- Bolt contact
- Magnetic contact
- Cable channel
- Concealed cable transition
- Security bolts
- Kick plate (aluminium/stainless steel)
- ✎



3 N

1-leaf door, with top panel Performance overview

PB

Radiation-Protection-Doors

Main function



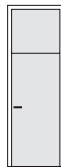
- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 32$

Models



3.01



3.11



Performance profile

Dimensions (mm)	Basic dimension BR-width	625-1375
	Basic dimension BR-height	2000-3500
	Clear passage LD-width	561-1311
	Clear passage LD-height	1968-2968
	Clear passage (door) height	1718-2718
	Door leaf thickness	50
Configuration	Solid door	○
	Door with vision panel	○
	Style door (profile beads)	○
	Climate category II	●
	Stress group S (3)	●
	Stress group E (4)	○

Edge	Rebated	○
	Unrebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	4-sided frame	○

Information

For additional technical information please see appendix, indicated with

● Standard ○ On request



13 N

1-leaf door, with top panel Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door

Model 13.01 / 13.11

● Radiation-Protection

Lead equivalent value

● 1,0 mm

○ 1,5 mm

○ 2,0 mm

○ 3,0 mm

○ 4,0 mm

Optional function

○ Sound-Insulation $R_{w,P} = 37$ dB

Dimensions

✂ BR-width x BR-height

✂ Throat opening

Walls

○ Solid wall (M)

○ Gasblock concrete wall (M)

○ Gypsum plasterboard wall (L)

○ Wooden elements \geq F 60B

○ Steel elements \geq F 60A

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm, 3-sided circumferential special gasket grey (optional in black, white or brown)

Solid wall: Gypsum plasterboard wall:

– Backbend 9 mm – Backbend 15 mm

– Floor recess 30 mm – without floor recess

○ Steel wrap-around frame, for solid wall

○ Steel wrap-around frame, for gypsum plasterboard wall

○ Corner frame, sheet thickness 2 mm, 32/15 mm

○ Steel block frame

– Standard installation

– Installation in hallways

○ Round-shaped frame

○ Face expansion / mm

○ Decorative rebated frame, rebate depth mm

○ Quirk frame

○ Expansion joint frame

○ Frame for installation in existing walls

– Adapter fastening

– Trapezoid anchor fastening (top panel)

○ Required face width / mm

○ Frame for reconstruction

○ Configuration in stainless steel

○ 4-sided frame

○ Sheet thickness 2 mm

○ Backbend up to 25 mm

○ Lead inlay in frame, max. of 4 mm

○ ✂

Door leaf

Door leaf thickness about 50 mm

– Rebated (F)

– Unrebated (S)

● Solid door, climate category II

● Stress group S (3)

○ Stress group E (4)

○ Door with holohedral additional wood panelling, one-/two-sided

○ Style door

– with profile beads

– with frame-like and/or fielded additional wood panelling

○ Door with vision panel

Edges

● Solid wood batten, white/red wood, 3-sided

○ Veneer edge

○ Plastic material edge

○ Colour-coated edge

○ ✂

Vision panel

Type of glass

● Radiation protection glass (clear glass)

Configuration

○ Vision panel, 215/1015 mm

○ Porthole \varnothing 350 mm

○ LA 300 x 300 mm

○ LA 400 x 400 mm

○ Special vision panel size mm

Glazing beads

○ Solid wood veneered

○ Solid wood

○ Aluminium untreated/anodized

○ Stainless steel (porthole \varnothing 350 mm)

Top panel

○ Top panel

– Counter-rebated

Surfaces

Door leaf/Top panel

○ Veneer

– Transparently coated

– Stained/transparently coated

– Untreated

○ High pressure laminate (HPL), 0,8 mm

○ On site coating/undercoating foil

○ Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm, hinge base 3D adjustable

Rebated

● VSX 7939/160, 3-d.

○ VX 7939/160, 3-d.

○ BSW 060-21 VX, 3-d.

○ VIELER ER.TB.160.335.F, 3-d.

○ HEWI B8107.160 VX, 3-d.

○ Additional 3rd hinge

○ ✂

Unrebated

● VSX 7729/160, 3-d.

○ VX 7729/160, 3-d.

○ BSW 060-22 VX, 3-d.

○ VIELER ER.TB.160.331.S, 3-d.

○ Concealed hinges

○ HEWI B9107.160 VX, 3-d.

○ Additional 3rd hinge

○ ✂

Hinge surface

– Galvanised

– Matt nickel-plated

– Stainless steel

– Plastic material

– Brass-coloured

– Colour-coated

Locks

● Lock according to DIN 18251,

with latch function, backset 65 mm,

prepared for profile cylinder

○ Special lock with shifted handles

backset 40/80 mm

prepared for profile cylinders

from lead equivalent value \geq 2 mm

Forend surface

– Galvanised

– Stainless steel

– Brass-plated

Special equipment

● Lead inlay

○ Electrical strike

○ Door viewer

○ Retractable bottom seal

(standard for Sound-Insulation function)

○ Sill seal with aluminium threshold

○ Block lock

○ Bolt contact

○ Magnetic contact

○ Cable channel

○ Concealed cable transition

○ Security bolts

○ Kick plate (aluminium/stainless steel)

○ ✂



Radiation-Protection-Doors

13 N

1-leaf door, with top panel Performance overview

PB

Main function



- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 37$ dB

Models



13.01



13.11



Performance profile

Dimensions (mm)	Basic dimension BR-width	500-1375
	Basic dimension BR-height	2000-3500
	Clear passage LD-width	436-1311
	Clear passage LD-height	1968-3468
	Clear passage (door) height	1718-2718
	Door leaf thickness	50
Configuration	Solid door	○
	Door with vision panel	○
	Style door (profile beads)	○
	Climate category II	●
	Stress group S (3)	●
	Stress group E (4)	○

Edge	Rebated	○
	Unrebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	4-sided frame	○

Information

For additional technical information
please see appendix, indicated with

● Standard ○ On request



16 N

1-leaf door, with top panel Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door

Model 16.01 / 16.11

● Radiation-Protection

Lead equivalent value

● 1,0 mm

○ 1,5 mm

○ 2,0 mm

○ 3,0 mm

○ 4,0 mm

Optional function

○ Sound-Insulation $R_{w,P} = 32$ dB

Dimensions

✂ BR-width x BR-height

✂ Throat opening

Walls

○ Solid wall (M)

○ Gasblock concrete wall (M)

○ Gypsum plasterboard wall (L)

○ Wooden elements \geq F 60B

○ Steel elements \geq F 60A

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm, 3-sided circumferential special gasket grey (optional in black, white or brown)

Solid wall: Gypsum plasterboard wall:

– Backbend 9 mm – Backbend 15 mm

– Floor recess 30 mm – without floor recess

○ Steel wrap-around frame, for solid wall

○ Steel wrap-around frame, for gypsum plasterboard wall

○ Corner frame, sheet thickness 2 mm, 32/15 mm

○ Steel block frame

– Standard installation

– Installation in hallways

○ Round-shaped frame

○ Face expansion / mm

○ Decorative rebated frame, rebate depth mm

○ Quirk frame

○ Expansion joint frame

○ Frame for installation in existing walls

– Adapter fastening

– Trapezoid anchor fastening (top panel)

○ Required face width / mm

○ Frame for reconstruction

○ Configuration in stainless steel

○ 4-sided frame

○ Sheet thickness 2 mm

○ Backbend up to 25 mm

○ Lead inlay in frame, max. of 4 mm

○ ✂

Door leaf

Door leaf thickness about 70 mm

– Rebated (F)

– Unrebated with jamb rebate (S)

– Double-rebated (D)

● Solid door, climate category III

● Stress group S (3)

○ Stress group E (4)

○ Door with holohedral additional wood panelling,

one-/two-sided

○ Style door

– with profile beads

– with frame-like and/or fielded additional

wood panelling

○ Door with vision panel

Edges

● Solid wood batten, white/red wood, 3-sided

○ Veneer edge

○ Plastic material edge

○ Colour-coated edge

○ ✂

Vision panel

Type of glass

● Radiation protection glass (clear glass)

Configuration

○ Vision panel, 215/1015 mm

○ Porthole \varnothing 350 mm

○ LA 300 x 300 mm

○ LA 400 x 400 mm

○ Special vision panel size mm

Glazing beads

○ Solid wood veneered

○ Solid wood

○ Aluminium untreated/anodized

○ Stainless steel (porthole \varnothing 350 mm)

Top panel

○ Top panel

– Counter-rebated and double-rebated

Surfaces

Door leaf / Top panel

○ Veneer

– Transparently coated

– Stained/transparently coated

– Untreated

○ High pressure laminate (HPL), 0,8 mm

○ On site coating/undercoating foil

○ Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm, hinge base 3D adjustable

Rebated

● VSX 7939/160, 3-d.

○ VX 7939/160, 3-d.

○ BSW 060-21 VX, 3-d.

○ VIELER ER.TB.160.335.F, 3-d.

○ HEWI B8107.160 VX, 3-d.

○ Additional 3rd hinge

○ ✂

Unrebated

● VSX 7729/160, 3-d.

○ VX 7729/160, 3-d.

○ BSW 060-22 VX, 3-d.

○ VIELER ER.TB.160.331.S, 3-d.

○ Concealed hinges

○ HEWI B9107.160 VX, 3-d.

○ Additional 3rd hinge

○ ✂

Hinge surface

– Galvanised

– Matt nickel-plated

– Stainless steel

– Plastic material

– Brass-coloured

– Colour-coated

Locks

○ Lock according to DIN 18251,

with latch function, backset 65 mm, prepared for profile cylinder

○ Special lock with shifted handles

backset 40/80 mm

prepared for profile cylinders

from lead equivalent value \geq 2 mm

Forend surface

– Galvanised

– Stainless steel

– Brass-plated

Special equipment

● Lead inlay

○ Electrical strike

○ Door viewer

○ Retractable bottom seal

(standard for Sound-Insulation function)

○ Sill seal with aluminium threshold

○ Block lock

○ Bolt contact

○ Magnetic contact

○ Cable channel

○ Concealed cable transition

○ Security bolts

○ Kick plate (aluminium/stainless steel)

○ ✂



16 N

1-leaf door, with top panel Performance overview

PB

Radiation-Protection-Doors

Main function



- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 32$ dB

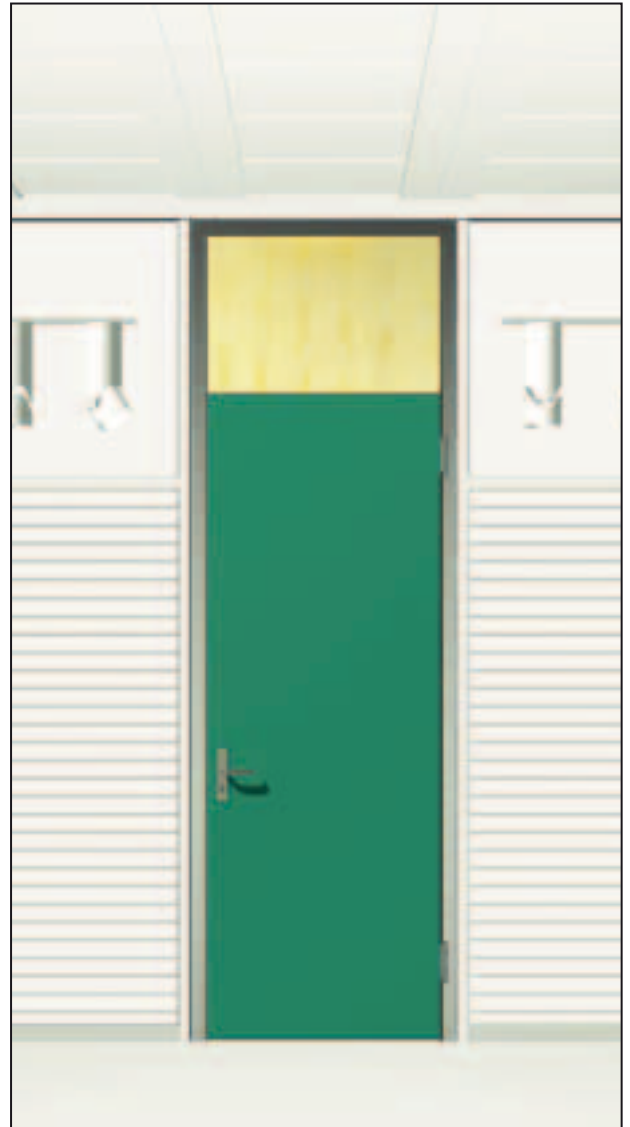
Models



16.01



16.11



Performance profile

Dimensions (mm)	Basic dimension BR-width	625-1500
	Basic dimension BR-height	2000-4000
	Clear passage LD-width	561-1436
	Clear passage LD-height	1968-3968
	Clear passage (door) height	1718-3468
	Door leaf thickness	70
Configuration	Solid door	○
	Door with vision panel	○
	Style door (profile beads)	○
	Climate category III	●
	Stress group S (3)	●
	Stress group E (4)	○

Edge	Rebated	○
	Unrebated with jamb rebate	○
	Double-rebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	4-sided frame	○

Information

For additional technical information please see appendix, indicated with

● Standard ○ On request



5 N

1-leaf door, with top panel Tender specifications

PB

Information

For additional technical information please see appendix, indicated with

Models

PB-1 FORM-Radiation-Protection-Door
Model 5.01 / 5.11

● Radiation-Protection

Lead equivalent value

● 1,0 mm

○ 1,5 mm

○ 2,0 mm

○ 3,0 mm

○ 4,0 mm

Optional function

○ Sound-Insulation $R_{w,P} = 45$ dB

○ Sound-Insulation $R_{w,P} = 42$ dB

○ Sound-Insulation $R_{w,P} = 37$ dB

Dimensions

✂ BR-width x BR-height

✂ Throat opening

Walls

○ Solid wall (M)

○ Gasblock concrete wall (M)

○ Gypsum plasterboard wall (L)

○ Wooden elements $\geq F 60B$

○ Steel elements $\geq F 60A$

Steel frames

Galvanised and undercoated, sheet thickness 1,5 mm,
3-sided circumferential special gasket grey
(optional in black, white or brown)

Solid wall: Gypsum plasterboard wall:

– Backbend 9 mm

– Backbend 15 mm

– Floor recess 30 mm

– without floor recess

○ Steel wrap-around frame, for solid wall

○ Steel wrap-around frame,
for gypsum plasterboard wall

○ Corner frame, sheet thickness 2 mm, 32/15 mm

○ Steel block frame

– Standard installation

– Installation in hallways

○ Round-shaped frame

○ Face expansion / mm

○ Decorative rebated frame, rebate depth mm

○ Quirk frame

○ Expansion joint frame

○ Frame for installation in existing walls

– Adapter fastening

– Trapezoid anchor fastening

○ Required face width / mm

○ Frame for reconstruction

○ Configuration in stainless steel

○ 4-sided frame

○ Sheet thickness 2 mm

○ Backbend up to 25 mm

○ Lead inlay in frame, max. of 4 mm

○ ✂

Door leaf

Door leaf thickness about 70 mm

– Rebated (F)

– Unrebated with jamb rebate (S)

– Double-rebated

● Solid door, climate category II

● Stress group S (3)

○ Stress group E (4)

○ Door with holohedral additional wood panelling,
one-/two-sided

○ Style door

– with profile beads

– with panel up to $R_{w,P} = 37$ dB

– with coffer up to $R_{w,P} = 37$ dB

– with frame-like and/or fielded additional
wood panelling

○ Door with vision panel

Edges

● Solid wood batten, white/red wood, 3-sided

○ Veneer edge

○ Plastic material edge

○ Colour-coated edge

○ ✂

Vision panel

Type of glass

● Radiation protection glass (clear glass)

Configuration

○ Vision panel, 215/1015 mm

○ Porthole $\varnothing 350$ mm

○ LA 300 x 300 mm

○ LA 400 x 400 mm

○ Special vision panel size mm

Glazing beads

○ Solid wood veneered

○ Solid wood

○ Aluminium untreated/anodized

○ Stainless steel (porthole $\varnothing 350$ mm)

Top panel

○ Top panel

– Counter-rebated and double-rebated

Surfaces

Door leaf / Top panel

○ Veneer

– Transparently coated

– Stained/transparently coated

– Untreated

○ High pressure laminate (HPL), 0,8 mm

○ On site coating/undercoating foil

○ Colour-coated

Hinges

Steel frames

Three-roll-hinges, 2 pieces, 160 mm,

hinge base 3D adjustable

Rebated / Double-rebated Unrebated

for $R_{w,P} = 42$ dB

● VX 7939/160 FD, 3-d.

● VSX 7729/160, 3-d.

○ BSW 060-21 VX FD, 3-d.

○ VX 7729/160, 3-d.

for $R_{w,P} = 37$ dB

● VSX 7939/160, 3-d.

○ VIELER ER.TB.160.331.S, 3-d.

○ VX 7939/160, 3-d.

○ SIMONS Globus STUG 160.4.xx VX, 3-d.

○ BSW 060-21 VX, 3-d.

○ Concealed hinges

○ VIELER ER.TB.160.335.F, 3-d.

○ HEWI B9107.160 VX, 3-d.

○ SIMONS Globus FUG 160.4.xx VX, 3-d.

○ Additional 3rd hinge

○ HEWI B8107.160 VX, 3-d.

○ Additional 3rd hinge

○ ✂

Hinge surface

– Galvanised

– Plastic material

– Matt nickel-plated

– Brass-coloured

– Stainless steel

– Colour-coated

Locks

● Lock according to DIN 18251,

with latch function, backset 65 mm,

prepared for profile cylinder

○ Special lock with shifted handles

backset 40/80 mm

prepared for profile cylinders

from lead equivalent value ≥ 2 mm

Forend surface

– Galvanised

– Stainless steel

– Brass-plated

Special equipment

● Lead inlay

○ Electrical strike

○ Door viewer

○ Retractable bottom seal (standard with Smoke-

Protection and Sound-Insulation function)

○ Sill seal with aluminium threshold

○ Block lock

○ Bolt contact

○ Magnetic contact

○ Cable channel

○ Concealed cable transition

○ Security bolts

○ Kick plate (aluminium/stainless steel)

○ ✂



5 N

1-leaf door, with top panel Performance overview

PB

Radiation-Protection-Doors

Main function



- Radiation-Protection
Lead equivalent value
- 1,0 mm
- 1,5 mm
- 2,0 mm
- 3,0 mm
- 4,0 mm

Optional function



- Sound-Insulation $R_{w,P} = 45$ dB
- Sound-Insulation $R_{w,P} = 42$ dB
- Sound-Insulation $R_{w,P} = 37$ dB

Models



5.01



5.11



Performance profile

Dimensions (mm)	Basic dimension BR-width	625-1500
	Basic dimension BR-height	1750-3500
	Clear passage LD-width	561-1436
	Clear passage LD-height	1968-3468
	Clear passage (door) height	1718-2968
Door leaf thickness	70	
Configuration	Solid door	○
	Door with vision panel	○
	Style door (profile beads)	○
	Climate category II	●
	Climate category III	○
	Stress group S (3)	●
Stress group E (4)	○	

Edge	Rebated	○
	Unrebated with jamb rebate	○
	Double-rebated	○
Walls	Solid wall	○
	Gasblock concrete wall	○
	Gypsum plasterboard wall	○
Frames	Steel frame	○
	4-sided frame	○

Information

For additional technical information please see appendix, indicated with

● Standard ○ On request

