



Up to  
**49%\***  
better  
thermal insulation

# Function Doors for Construction Projects

Multi-purpose door with thermal break MZ Thermo65

**HÖRMANN**





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\* Up to 49 % better thermal insulation with the MZ Thermo65 compared to a conventional multi-purpose / security door

Image on left:  
Internal doors OIT 40 with beech surface finish and stainless steel frame

The colours and surface finishes shown are subject to the limitations of the printing process and cannot be regarded as binding.

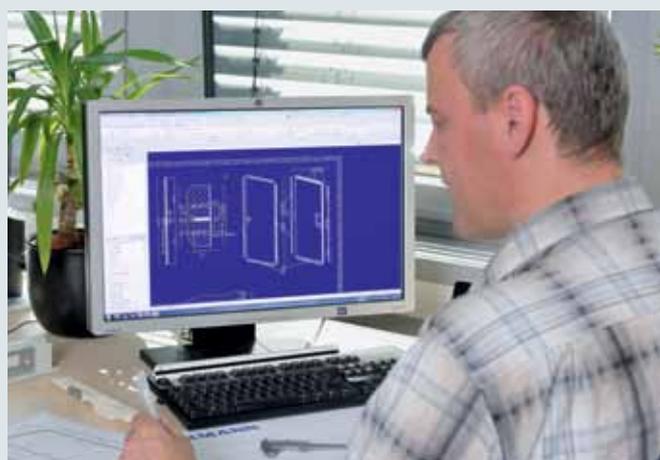
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Subject to changes.

# Hörmann Brand Quality

Top safety and reliability



Keller & Kalmbach GmbH, Hilpoltstein with Hörmann products



## In-house product development

Growing and constantly changing functional and safety requirements necessitate continuous new construction / equipment developments and improvements, especially when it comes to moveable construction components such as doors. In this area, our qualified development teams time and again prove their great specialised expertise.



## Highly sophisticated production methods

We at Hörmann rely on the latest production technology at our specialised factories. Computer-controlled operations ensure dimensionally accurate elements with perfectly fitted fittings and functional parts.



As Europe's leading manufacturer of doors, hinged doors, frames and operators, we are committed to high product and service quality. This is how we set standards on an international scale.

Highly-specialised factories develop and manufacture construction components that are characterised by excellent quality, functional safety and a long service life.

Our presence in the global economy's key regions makes us a strong, future-oriented partner for industrial and public construction projects.



### **Sustainable product tests**

In test centres belonging to Hörmann, all construction project doors are sustainably tested with regard to climate properties, air permeability, driving rain leaktightness and long-term functionality. These comprehensive tests give you safety as they guarantee the trouble-free function of the doors over many years, provided that they are maintained every year.



### **Expert building support**

Experienced specialists within our customer-oriented sales organisation accompany you from the planning stage, through technical clarification up to the final building inspection.

Expert fitting is guaranteed by experienced Hörmann fitters and the specialised trained staff of Hörmann partners.

# Sustainable Production for Trend-Setting Construction

Internal doors ZK / OIT 40 and apartment entrance door WAT 40



## Sustainability documented and approved by the ift in Rosenheim

Hörmann has already received confirmation of the sustainability of its ZK / OIT 40 steel internal doors and its apartment entrance door WAT 40 through an environmental product declaration (EPD)\* in accordance with ISO 14025 from the Institut für Fenstertechnik (ift – Institute of window technology) in Rosenheim. The inspection was based on the Product Category Rules (PCR) Doors and Gates from ift Rosenheim GmbH, issue PCR-TT-0.1. Environmentally-friendly production was confirmed by a life-cycle analysis in accordance with DIN ISO 14040/14044 for all doors.

## Sustainably produced function doors from Hörmann

- **Environmentally-friendly production**  
E.g. solvent-free powder coating at the factory, which can be fully finished on-site with a variety of limited-VOC paints or primers.
- **Regional raw materials**  
The majority of applied raw materials is purchased from Germany and Central Europe.
- **Durable, low maintenance products**  
Approved in a functional test.

## Sustainable construction with Hörmann's expertise

Hörmann has been able to gain great expertise in sustainable construction through various projects. We also apply this know-how to support your projects. Another advantage: For every project order, the required data for LEED certification are automatically generated.

breeam



DGNB®

Deutsche Gesellschaft für Nachhaltiges Bauen e.V.  
German Sustainable Building Council



# Hörmann Internal and External Doors

Variety is our strength



## Sturdy internal doors

The ZK internal doors have been used for decades in offices and administrative buildings on account of their numerous benefits. They are robust, retain their shape and are highly durable. OIT 40 internal doors have been developed for tough everyday use in industrial and commercial buildings, workshops, administrative buildings, schools and barracks. We offer different infills depending on the field of application and your requirements.



## Secure apartment entrance doors

With the WAT 40 fire-rated security door from Hörmann, you're making the right choice for e.g. entrance doors in apartment buildings. As standard, the heavy-duty steel door is equipped with security as well as fire protection features and therefore gives the residents of the building a safe feeling. In addition, the door fulfils every individual requirement thanks to the colour and equipment versions.



## Fully glazed office doors

The elegant and sophisticated as well as stable aluminium internal doors AZ 40 and ES 50 are recommended for superior high-quality interior construction, such as in offices and administrative buildings. The door style can be harmoniously matched to the interior design scheme. The large areas of glazing create a bright, friendly atmosphere. In terms of both equipment and quality, these aluminium doors meet the high standards required of high-grade internal doors in a modern-day environment.



## External doors with thermal break

Today, the reduction of energy costs is more important than ever. Considering this, the MZ Thermo65 external door is our recommendation. This multi-purpose door with its thermally separated elements – door leaf, frame and all-round floor seal – allows an improvement in thermal insulation by up to 49 %, compared with conventional multi-purpose doors. For an especially secure external door, you can obtain the KSI Thermo46 in an RC 2 version. For light and representative entrance areas, we recommend the fully glazed TC 80 frame door.

# Internal Door ZK

## Proven as a competitively-priced solution Single and double-leaf

### As a door leaf or door set

ZK doors are available as a ready-to-hang door leaf or as a complete ready-to-fit door set.

### Door leaf

The door leaf is delivered with fitted lock and bright-galvanized hinge top parts V 0020 firmly screwed into the reinforced sections, but without lever handle set.

### Door set

The door leaf is equipped with a lever handle set and a special corner frame made from 1.5-mm-thick galvanized sheet steel with powder-coated primer in Traffic white (similar to RAL 9016) as standard.

### Frame

The frame is fitted with a UPVC sealing profile on 3 sides, with welded frame parts and grouting lugs.

ZK doors can also be fitted into existing standard frames and of course into any Hörmann steel door frame (prepared for hinges of the V 8000 series).

### Height adjustment of up to 20 mm

The door leaf can be shortened at the bottom using a suitable saw, e.g. for modernisations.

### 1 The durable door leaf: dimensionally stable with no warping

The close-meshed honeycomb insert is glued to the two galvanized steel sheets over the entire surface, giving the door greater stability.

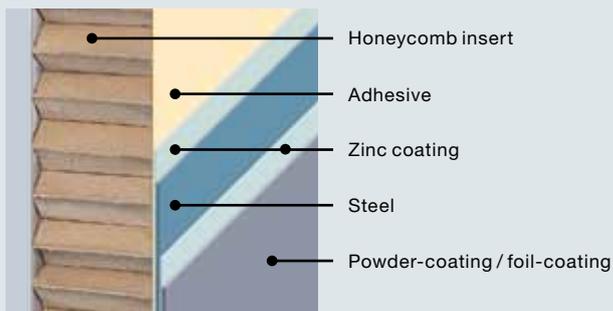
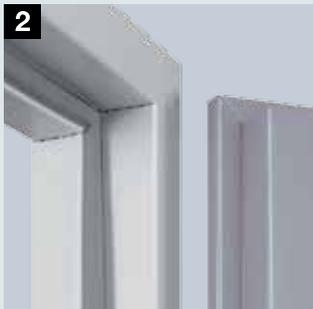


Illustration:  
ZK door with powder-coated primer in Window grey (similar to RAL 7040) with white rose escutcheon (special equipment)



### 2 Frame seal

Due to the design of the door leaf and frame seal, Hörmann ZK doors also help to keep out noise and the cold.



### 3 Top hinge parts

They are firmly screwed in the reinforced sections of the door leaves and can be used on the left / right side.



### 4 Mortice lever / knob lock

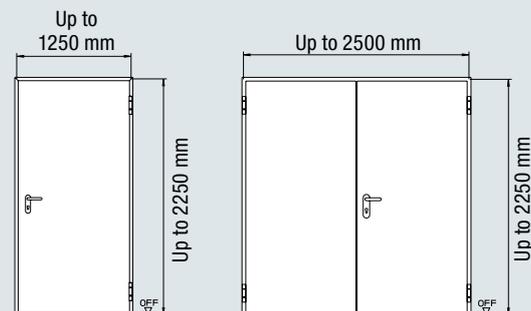
The lock is prepared for a profile cylinder (backset 55 mm) and fulfils all DIN 18251 requirements. The equipment includes a plastic latch and steel bolt, deadlock insert as well as a key. The lock is also supplied with a profile cylinder on request.



**Thick rebate**  
Door leaf thickness 40 mm



**Main function**  
Internal door



#### Internal door

	ZK
Door leaf	40 mm
Sheet thickness	0.6 mm
Rebate type	Thick rebate

#### Performance characteristics

Duty category	S
Climatic class	III
Thermal insulation $U_D$	2.1 W/(m <sup>2</sup> ·K)*
Acoustic insulation	25 dB*

\* For single-leaf doors in conjunction with corner frame and without glazing

#### Optional extras

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Size range	ZK single-leaf	
	Width	Height
Nominal size (ordering size)	500 – 1250	1500 – 2250
Clear passage*	434 – 1184	1468 – 2218
Size range	ZK double-leaf	
	Width	Height
Nominal size (ordering size)	1500 – 2500	1500 – 2250
Clear passage*	1434 – 2434	1468 – 2218

\* With an opening angle of 90° and without handles and levers

# Internal Door OIT 40

The heavy-duty and reinforced internal doors that retain their shape  
Single and double-leaf

## As a door leaf or door set

OIT 40 doors are available as a ready-to-hang door leaf or as a complete ready-to-fit door set.

## Door leaf

The door leaf is delivered with fitted lock and bright-galvanized hinge top parts V 0026 WF firmly screwed into the reinforced sections, but without lever handle set.

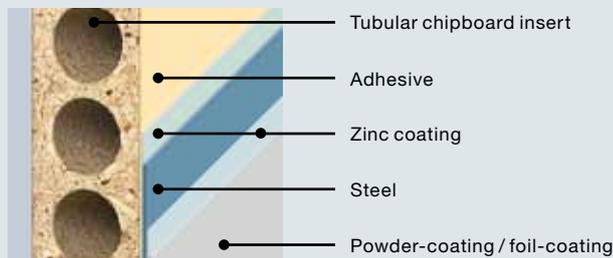
## Door set

The door leaf is equipped with a lever handle set and a special corner frame made from 1.5-mm-thick galvanized sheet steel with powder-coated primer in Traffic white (similar to RAL 9016) as standard.

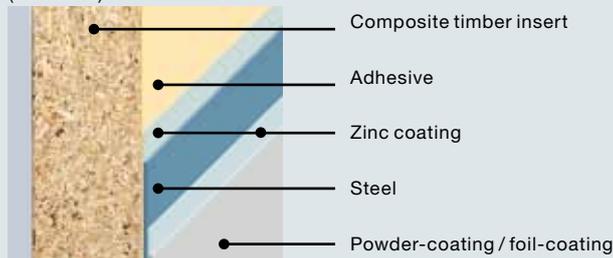
## Frame

The frame is fitted with an EPDM seal on 3 sides, with welded frame parts and grouting lugs. The door is delivered with corner and profile frame as well as block frame; you can also insert it into an existing standard frame or in every Hörmann steel frame.

## 1 Steel and timber well combined: especially heavy-duty door leaves in three infill versions



### Tubular chipboard insert (Standard)



### Composite timber insert (on request) for improved acoustic insulation



### Mineral wool insert (on request) for better thermal insulation



Illustration:  
OIT 40 door with powder-coated primer in Traffic white (similar to RAL 9016) with aluminium handle set (special equipment)



3-part hinges, galvanized (standard)



Three-way adjustable hinges, matt chrome (optional)

### Door hinges selectable in the building system

The door is equipped with maintenance-free 3-part hinges as standard; as an option, you can obtain three-way adjustable VX hinges.



### Mortice lever / knob lock

The lock is prepared for a profile cylinder (backset 55 mm) and fulfils all DIN 18251 requirements. The equipment includes a plastic latch and steel bolt, deadlock insert as well as a key. The lock is also supplied with a profile cylinder on request.



**Thick rebate**  
Door leaf thickness 40 mm



**Main function**  
Internal door

**dB**

### Additional functions

**Acoustic-rated**  
DIN EN 20140 without glazing, with retractable bottom seal

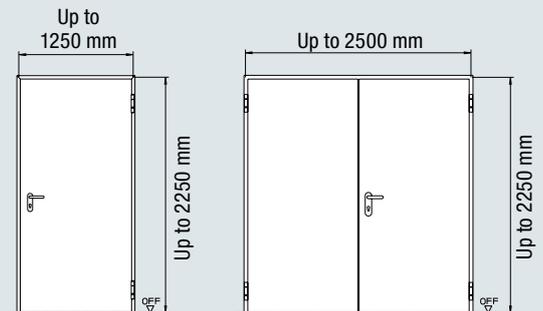
**RC 2**

### Break-in-resistant RC 2

- DIN EN 1627  
Up to 1250 x 2250 mm
- Multiple-point locking with 2 additional steel bolts
  - Profile cylinder, drill-proof acc. to DIN 18254, PZ-3-BS with 3 keys and security certificate for spare keys
  - Aluminium lever/knob handle set acc. to DIN 18257 with short escutcheon (class ES 1) and pull-off protection
  - 1 steel security bolt

### Optional extras

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### Internal door

<b>Door leaf</b>	40 mm
<b>Sheet thickness</b>	0.8 mm
<b>Rebate type</b>	Thick rebate

### OIT 40

### Additional functions / performance characteristics

<b>Duty category</b>	S
<b>Climatic class</b>	III
<b>Thermal insulation <math>U_D</math></b>	
with tubular chipboard	2.5 W/(m <sup>2</sup> ·K)*
with solid chipboard	2.5 W/(m <sup>2</sup> ·K)*
with mineral wool insert	1.7 W/(m <sup>2</sup> ·K)*
<b>Acoustic insulation</b>	
(in conjunction with retractable bottom seal)	
with tubular chipboard	32 dB*
with solid chipboard	38 dB*
with mineral wool insert	32 dB*

\* For single-leaf doors in conjunction with corner frame and without glazing

OIT 40, single-leaf		
Size range	Width	Height
<b>Nominal size</b> (ordering size)	500 – 1250	1500 – 2250
Clear passage**	434 – 1184	1468 – 2218
OIT 40, double-leaf		
Size range	Width	Height
<b>Nominal size</b> (ordering size)	1500 – 2500	1500 – 2250
Clear passage**	1434 – 2434	1468 – 2218

\*\* With an opening angle of 90° and without handles and levers

# Fire-Rated Security Door WAT 40

## The safe apartment entrance door Single-leaf

### Door set

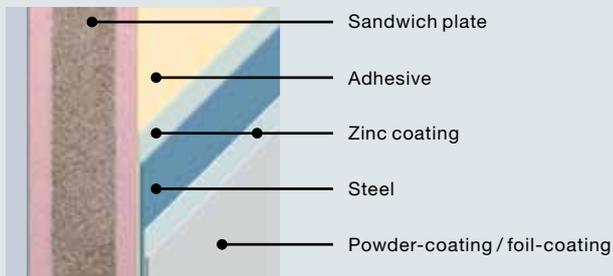
We supply WAT 40 doors as a complete ready-to-fit door set. The door leaf with sandwich plate on the inside comprises 0.6-mm-thick galvanized sheet steel with powder-coated primer and is delivered in Traffic white (similar to RAL 9016) as standard. Thanks to the standard retractable bottom seal, the WAT 40 achieves acoustic rating category II.

### Frame

The frame is equipped with a profile with fire-proof seal on all 3 sides, hinge pockets for 3-way adjustable hinges and grouting lugs.

The fire-rated security door WAT 40 is offered with corner and profile frame for fitting in brickwork as well as a block frame for fitting in the opening.

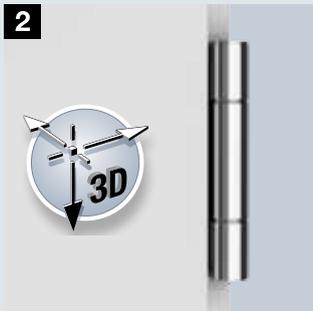
### 1 The heavy-duty door leaf: For reliable security and fire protection



Sandwich plate

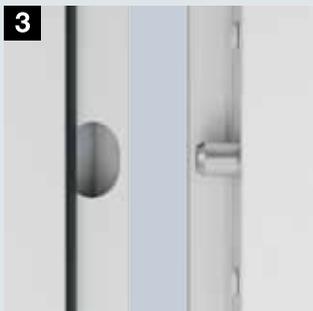


## Acoustic rating category II thanks to retractable bottom seal as standard



### 3-way adjustable hinges

The door is equipped with 3-way adjustable hinges (1 spring hinge, 1 construction hinge).



**3 solid steel bolts** on the hinge side make it practically impossible to force the door open.



### Multiple-point locking

The lock is equipped with an aluminium security lever / knob handle set (according to DIN 18257, Class ES 1). On request, it is also available in brushed stainless steel and with drill-resistant profile cylinder (DIN 182522 PZ-2-BS) including 3 steel latches and 2 hook bolts.



**Thick rebate**  
Door leaf thickness 40 mm

### Main functions

**T30**

Fire-retarding

**RC 2**

**Break-in-resistant RC 2**  
(tested at hinge and opposite hinge side)



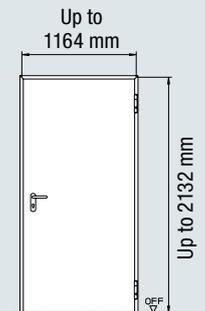
Internal door

### Additional function

(with corresponding equipment)

**RS**

Smoke-tight



### Fire-rated security door

**WAT 40**

Door leaf	40 mm
Sheet thickness	0.6 mm
Rebate type	Thick rebate

### Performance characteristics

Duty category	S
Climatic class	III
Thermal insulation $U_D$	1.8 W/(m <sup>2</sup> ·K)
Acoustic insulation	38 dB
Acoustic rating category	II
Resistance to repeated opening and closing	Class C5

### Optional extras

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Size range	WAT 40	
	Width	Height
Nominal size (ordering size)	625 – 1164	1964 – 2132
Clear passage*	561 – 1100	1932 – 2100

\* With an opening angle of 90° and without handles and levers

All dimensions in mm

# Internal Door AZ 40

The fully glazed office door made of aluminium for modern architecture  
Single-leaf

## As a door leaf or door set

AZ 40 doors are available as a ready-to-hang door leaf or as a complete ready-to-fit door set.

## Door leaf

The door leaf is delivered with fitted lock and bright-galvanized hinge top parts.

## Door set

For new buildings we recommend using the complete door set together with a frame of your choice selected from Hörmann's wide range of door frames acc. to DIN 18111.

## Frame

The frame is made from 1.5-mm-thick galvanized sheet metal and is primed in Light grey (similar to RAL 7035). The sealing profile on 3 sides and fixing material are included in the scope of delivery.

The frame can be delivered as a corner frame for brickwork, concrete and gas concrete, or as a profile frame for brickwork, concrete, gas concrete, gypsum plasterboard and partition walls.



### The elegant, sturdy door leaf

The slimline tubular frame construction made of aluminium extrusions has an elegant appearance. Solid corner joints in the frame give the AZ doors a high degree of stability. The precision mitres and the Softline glazing beads make for attractive aesthetics.



### The quality lock

Mortice lever / knob lock acc. to DIN 18251, Class 3, prepared for profile cylinder (backset 55 mm). With plastic latch, steel bolt and brass-coloured painted lock cover, deadlock insert and key. Also with profile cylinder on request (stainless steel lock cover shown).



Illustration:

High-gloss door leaf with powder-coated primer and frame painted in the same colour of Anthracite grey (similar to RAL 7016) on-site, with aluminium lever handle set (special equipment)



**High-grade seals**  
As standard, the AZ 40 is fitted with all-round EPDM glass rebate seals with Softline glazing beads in the leaf infills. The door set is also equipped with an EPDM frame seal on 3 sides, optionally with a retractable bottom seal.



Galvanized steel    Stainless steel V2 A

**Hinge systems to choose**  
The door leaf is equipped as standard with galvanized hinge parts V 0026 WF, which are firmly screwed in. The door leaf and frame are prepared for the hinge systems V 8000 WF / V 9000 WF. Further hinge systems are available on request.



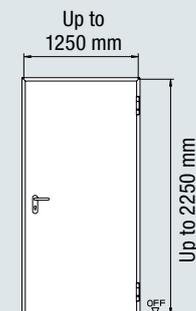
**Attractive design**  
With the round-style frame and Globus hinges, AZ doors have a particularly attractive appearance.



**Tubular frame construction**  
Door leaf thickness 40 mm



**Main function**  
Internal door



Internal door	AZ 40
<b>Profile system</b>	Aluminium
<b>Door leaf</b>	40 mm
<b>Viewed width</b>	
Opposite hinge side	105 mm
Hinge side	130 mm
<b>Depth</b>	40 mm
<b>Bottom section height</b>	150 mm

**Optional extras**

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AZ 40		
Size range	Width	Height
<b>Nominal size</b> (ordering size)	750 – 1250	1875 – 2250
Clear passage*	671 – 1171	1843 – 2218

\* With an opening angle of 90° and without handles and levers

# Internal Door ES 50

The fully glazed office door – can also be used as a completely glazed partition wall  
Single and double-leaf, side elements, transom lights

## As a complete door set

The ES 50 doors are available as complete ready-to-fit door sets or in combination with side elements and transom lights as individual glazing sets.

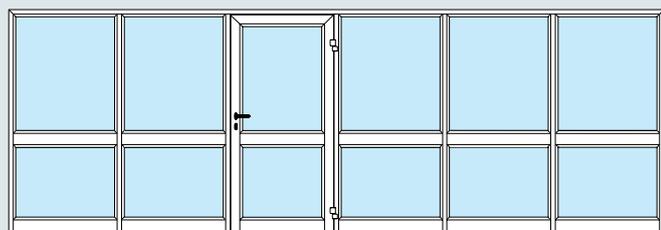


### Sturdy and elegant door leaf

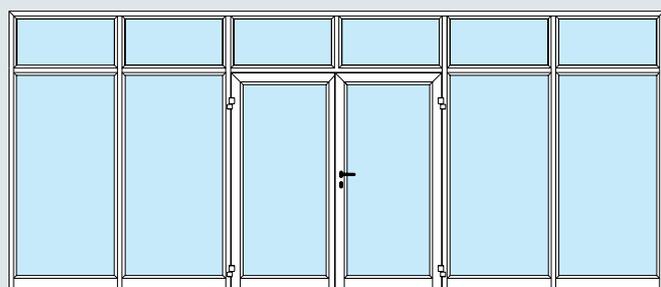
The slimline tubular frame construction made from aluminium extrusions with flush-fitting transitions has an elegant appearance. Solid corner joints in the frame give the ES 50 doors a high degree of stability.

## Can be extended to form a partition wall

You can combine the door with any side elements and transom lights. This provides you with e.g. a complete glazing set as partition wall for individual offices.



Style 101 with horizontal rail and side elements

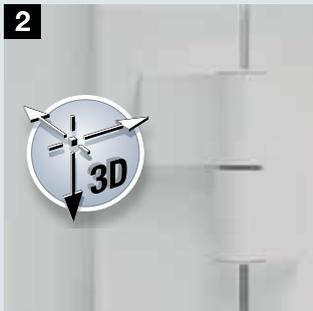


Style 102 with side elements and transom lights



Illustration:  
Door leaf and frame with high-gloss powder-coating in Light grey (similar to RAL 7035), with lever handle set in the same colour (special equipment)

# As fully glazed partition wall with side elements and transom lights



### Adjustable hinges

The ES 50 can be adjusted optimally using the three-way adjustable hinges and falls into the lock easily and quietly.



### Quality lock

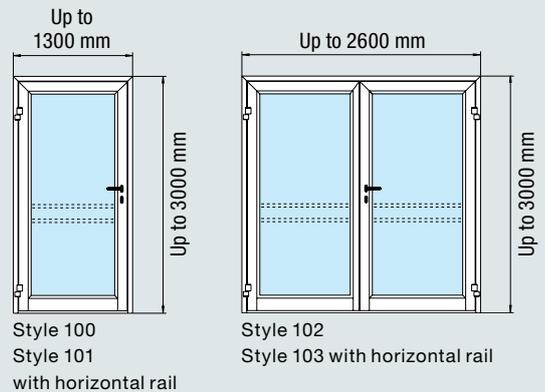
The door is equipped with a mortice lever / knob according to DIN 18251, Class 3, prepared for a profile cylinder (backset 40 mm), a plastic latch, steel bolt and lock cover painted in brass colour, deadlock insert and key. On request, it can also be supplied with a profile cylinder.



**Tubular frame construction**  
Door leaf thickness 50 mm



**Main function**  
Internal door



### Internal door

	ES 50
<b>Profile system</b>	Aluminium
<b>Door leaf</b>	50 mm
<b>Viewed width</b>	
Frame	70 mm
Leaf	75 mm
<b>Depth</b>	50 mm
<b>Bottom section height</b>	150 mm

### Optional extras

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Styles 100/101		
Size range	Width	Height
<b>Overall frame dimension</b> (ordering size)	605 – 1300	1740 – 3000
Clear passage*	421 – 1116	1670 – 2930

Styles 102/103		
	Width	Height
<b>Overall frame dimension</b> (ordering size)	1335 – 2600	1740 – 3000
Traffic leaf	500 – 1500	
Fixed leaf	500 – 1500	
Clear passage*	1107 – 2372	1670 – 2930

\* With an opening angle of 90° and without handles and levers

All dimensions in mm

# External Door TC 80

The fully glazed external door for light and representative building entrances  
Single and double-leaf, side elements, transom lights

## As a complete door set

The TC 80 doors are available as complete ready-to-fit door sets or in combination with side elements and transom lights as individual glazing sets.



### Door construction with thermal break

The door leaf and frame with thermal break, as well as the triple thermal insulation glazing, offer a high thermal insulation.



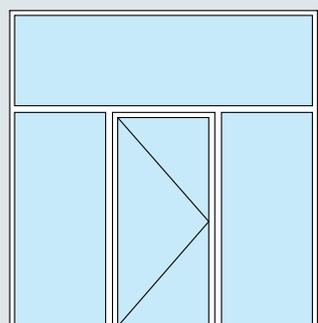
### Threshold with thermal break

The 80-mm-wide and sturdy threshold with thermal break (in EV 1 silver) with concealed bolting to the bottom ensures optimum thermal insulation.



### Adjustable hinges

The door can be adjusted optimally using the three-way adjustable hinges and falls into the lock easily and quietly. Concealed hinges are also optionally available.



Vertical/horizontal profile construction as a complete element



Illustration:  
Door leaf and frame with high-gloss powder-coating in Traffic white (similar to RAL 9016), with lever handle set in Traffic white RAL 9016



**5 Secured fittings outside**  
The knob handle and the security rose escutcheon that protect the profile cylinder from being drilled open and twisted off are standard equipment.



**5-point security lock**  
With this multiple lock, 3 steel swing bolts with 2 additional bolt locks pivot into the lock plates. This locking makes it more difficult for the door to be pulled apart or forced open.



**Tubular frame construction**  
Door leaf thickness 80 mm with thermal break



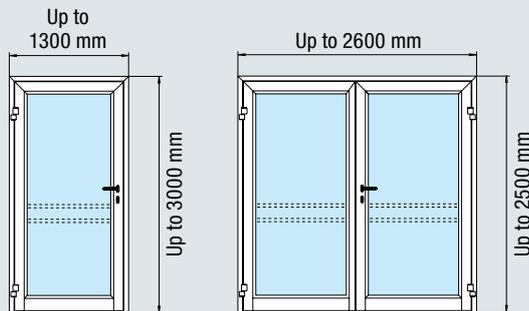
**Main function**  
External door



**Additional function**  
Break-in-resistant RC 2

**Optional extras**

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Style 100  
Style 101 with horizontal rail

Style 102  
Style 103 with horizontal rail

**External door**

**Profile system**

**Door leaf**

**Viewed width**

Frame

Leaf

**Depth**

**Bottom section height**

**TC 80**

Aluminium

80 mm

With thermal break

**Performance characteristics**

**Thermal insulation  $U_D$**  1.4 – 1.7 W/(m<sup>2</sup>·K)

**Water tightness under heavy rain** Class 2A

**Air permeability** Class 1

**Mechanical strength** Class 3

**Differential climate behaviour** Class 1(d)/2(e)

**Resistance to repeated opening and closing** Class 5

Styles 100/101		
Size range	Width	Height
<b>Overall frame dimension</b> (ordering size)	605 – 1300	1740 – 2500
Clear passage*	391 – 1086	1670 – 2430

Styles 102/103		
	Width	Height
<b>Overall frame dimension</b> (ordering size)	1335 – 2600	1740 – 2500
Traffic leaf	500 – 1500	
Fixed leaf	500 – 1500	
Clear passage*	1047 – 2312	1670 – 2430

\* With an opening angle of 90° and without handles and levers

# External Multi-Purpose Door MZ Thermo46 / MZ Thermo65

With 7-point security and thermal break on door leaf and frame

Single-leaf



## MZ Thermo65

The multi-purpose door offers first class insulation with a 65-mm-thick door leaf and a particularly high  $U_D$ -value of up to  $0.87 \text{ W}/(\text{m}^2\cdot\text{K})$ .



## MZ Thermo46

This version features a 46-mm-thick door leaf and a thermal insulation value of up to  $1.1 \text{ W}/(\text{m}^2\cdot\text{K})$ .



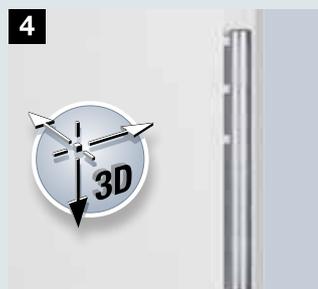
## Aluminium frame with thermal break

The aluminium block frame with thermal break can be fitted opening inwards as well as opening outwards.



## Threshold with thermal break

The 20-mm-high aluminium plastic threshold rail with thermal break, **double all-round seals** and additional brush seals (only MZ Thermo46) at the bottom ensure a high tightness and thermal insulation.



## 3-way adjustable guide rollers

Secured two-part three-way adjustable hinges with stainless steel decorative caps guarantee smooth door function.



Illustration:  
MZ Thermo46 TPS 021 painted in Traffic white (similar to RAL 9016) with sand-blasted glazing and stainless steel lever handle set (special equipment)



### 7-point security

1 lock bolt engages with the frame's lock plates pulls the door tightly shut. Another 3 security bolts on the hinge side and 3 further hinges (guide rollers) make it practically impossible to force the door open.



#### Thick rebate

Door leaf thickness  
MZ Thermo46: 46 mm  
MZ Thermo65: 65 mm  
With thermal break

#### Main functions

**Multi-purpose door**

**MZ**



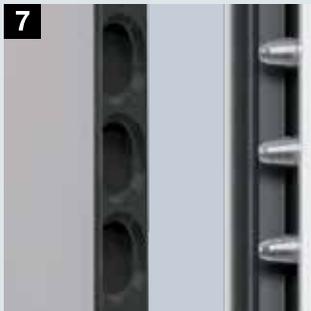
**External door**  
Labelled according to DIN EN 14351-1



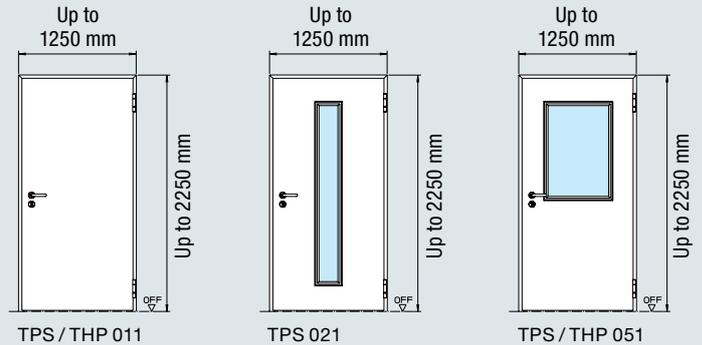
Lock latch



Locking rod



Security bolts



#### Multi-purpose door

#### MZ Thermo46 / MZ Thermo65

#### Door leaf

46/65 mm  
With thermal break

#### Sheet thickness

0.8 mm

#### Rebate type

Thick rebate

#### Performance characteristics

#### Thermal insulation $U_D$

##### MZ Thermo46

TPS 011	1.1 W/(m <sup>2</sup> ·K)
TPS 021	1.4 W/(m <sup>2</sup> ·K)
TPS 051	1.6 W/(m <sup>2</sup> ·K)

#### Thermal insulation $U_D$

##### MZ Thermo65

THP 011	0.87 W/(m <sup>2</sup> ·K)
THP 051	1.0 W/(m <sup>2</sup> ·K)

#### Wind load

Class C3

#### Water tightness under heavy rain

TPS 011 / THP 011	Class 4A
TPS 021	Class 2A
TPS 051 / THP 051	Class 2A

#### Air permeability

Class 3

#### Mechanical strength

Class 4

#### Differential climate behaviour

Class 3(c)

#### Resistance to repeated opening and closing

Class 5

#### Impact resistance

Class 2

\* Up to 49 % better thermal insulation with the MZ Thermo65 compared to a conventional multi-purpose / security door

#### Optional extras

Colours and decor surfaces Page 24

Optional equipment Page 27

Dimensional references / standard sizes Page 33

#### MZ Thermo46 / MZ Thermo65

Size range	MZ Thermo46 / MZ Thermo65	
	Width	Height
<b>Overall frame dimension</b> (ordering size)	700 – 1250 (TPS / THP 011, TPS 021)	1750 – 2250 (TPS / THP 011)
	875 – 1250 (TPS / THP 051)	1875 – 2250 (TPS 021, TPS / THP 051)
<b>MZ Thermo46</b> Clear passage**	572 – 1122 (TPS 011 / 021)	1666 – 2166 (TPS 011)
	747 – 1122 (TPS 051)	1791 – 2166 (TPS 021 / 051)
<b>MZ Thermo65</b> Clear passage**	550 – 1100 (THP 011)	1655 – 2155 (THP 011)
	725 – 1100 (THP 051)	1780 – 2155 (THP 051)

\*\* With an opening angle of 90° and without handles and levers

# External Security Door KSI Thermo46

With 11-point security and all-round thermal break

Single-leaf



1

## Door leaf with thermal break

The door leaf with thermal break completely filled with PU rigid foam allows an improvement in thermal insulation by up to 30 %, compared to a conventional security door.



2

## Aluminium frame with thermal break

The aluminium block frame with thermal break is fitted opening inwards.



3

## Threshold with thermal break

The 20-mm-high aluminium plastic threshold rail with thermal break, **double all-round seals** and additional brush seals at the bottom ensure a high tightness and thermal insulation.



4

## 3-way adjustable guide rollers

Two-part three-way adjustable hinges with securing pin and stainless steel decorative caps guarantee smooth door function.





### 11-point security

2 conical swing bolts engage with 2 additional security bolts and 1 lock bolt in the frame's lock plates and pull the door tightly shut.

Another 3 security bolts on the hinge side and 3 further hinges (guide rollers) make it practically impossible to force the door open. Another advantage: the door closes especially quietly due to the soft-lock latch.



#### Thick rebate

Door leaf thickness 46 mm with thermal break



#### Main functions

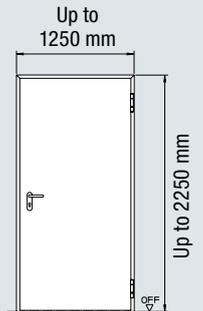
##### Break-in-resistant RC 2

(tested at opposite hinge side)



#### External door

Labelled according to DIN EN 14351-1



### Security door

#### Door leaf

46 mm  
With thermal break

#### Sheet thickness

0.8 mm

#### Rebate type

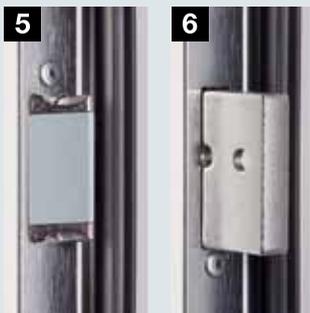
Thick rebate

### KSI Thermo46

#### Performance characteristics

Thermal insulation $U_D$	1.1 W/(m <sup>2</sup> ·K)
Wind load	Class C3
Water tightness under heavy rain	Class 4A
Air permeability	Class 3
Mechanical strength	Class 4
Differential climate behaviour	Class 3(c)
Resistance to repeated opening and closing	Class 5
Impact resistance	Class 2

\* Up to 30 % better thermal insulation with the KSI Thermo46 compared to a conventional multi-purpose / security door



5 Soft-lock latch    6 Locking rod



7 Swing bolt with security bolts



8 Security bolts

#### Optional extras

Colours and decor surfaces	Page 24
Optional equipment	Page 27
Dimensional references / standard sizes	Page 33

Size range	KSI Thermo46	
	Width	Height
Overall frame dimension (ordering size)	832 – 1250	1875 – 2250
Clear passage**	704 – 1122	1791 – 2166

\*\* With an opening angle of 90° and without handles and levers

# Colours and Decor Surfaces

Whatever you want!

## RAL to choose\*\*\*

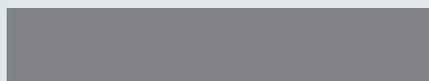
On request, all doors are available in the colours of the RAL colour chart.



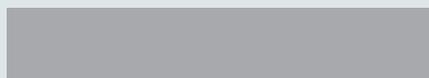
### Preferred colours\*

Hörmann function doors come in 16 inexpensive preferred colours\* and all RAL colours\*\*\*. Surfaces are powder-coated with a high-quality primer (painted for external doors) which makes them especially resistant and durable. The internal doors ZK and OIT 40 are also supplied only with a galvanized surface finish.

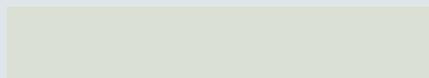
All colours based on RAL.



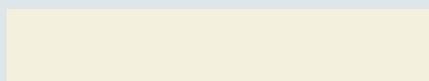
Grey aluminium\*\* RAL 9007



White aluminium RAL 9006



Grey white\*\* RAL 9002



Cream\*\* RAL 9001



Terra brown RAL 8028



Clay brown RAL 8003



Window grey RAL 7040



Light grey RAL 7035



Anthracite grey RAL 7016



Moss green RAL 6005



Pigeon blue RAL 5014



Gentian blue\*\* RAL 5010



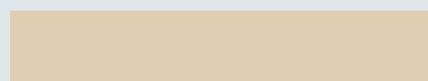
Purple red RAL 3004



Ruby red RAL 3003



Flame red\*\* RAL 3000



Light ivory RAL 1015

### Decor surfaces\*

For a natural or exclusive door style, we offer high-quality decor surfaces in 7 authentic timber looks as well as the especially elegant Titanium Metallic surface finish.



Golden Oak



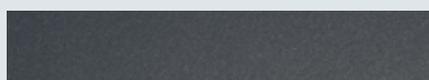
Dark Oak



Night Oak



Winchester Oak



Titan Metallic CH 703 (only MZ Thermo46/  
MZ Thermo65)

### Only for internal doors



White Ash



Light Oak



Beech

\* Except for AZ 40, ES 50, TC 80

\*\* Except for ZK, OIT 40, KSI 40, WAT 40

\*\*\*Except for WAT 40, MZ Thermo46, MZ Thermo65, KSI Thermo46

# Optional Equipment

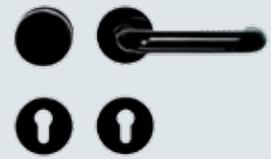
## Internal doors ZK, OIT 40

### Plastic lever handle sets

The lever handle or the lever / knob handle set are delivered in black as standard, as well as optionally in white.



Plastic lever handle set, short escutcheon, prepared for profile cylinder / deadlock, black plastic



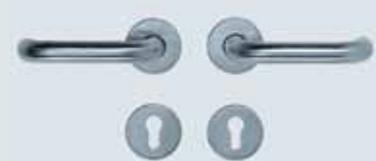
Lever/knob handle set, rose escutcheon, prepared for profile cylinder, black plastic

### Aluminium / stainless steel lever handle sets

Available in the same versions as the plastic handle sets, in aluminium anodised in natural finish (F1) or stainless steel.



Lever/knob handle set, short escutcheon, prepared for profile cylinder, aluminium



Lever handle set, rose escutcheon, prepared for profile cylinder, stainless steel

### Glazings

- Single-pane safety glass (6 mm)
- Laminated safety glass (6 mm)
- Ornamental glass (6 mm)
  - Mastercarré
  - Masterpoint
  - Masterligne

### Glazing frames

- Anodised aluminium E6 / EV 1
- Stainless steel (for round glazing)



Round glazing (Ø 300/400 mm)



Glazing view 5



Glazing view 6



Glazing view 7

### Additional equipment

- Wide-angle spyhole
- Letter drop flap
- Plastic ventilation grille, positioned at the bottom or at the bottom and top (435 × 85 mm)



Glazing view 8



Spyhole



Ventilation grilles

# Optional Equipment

Internal doors AZ 40, ES 50

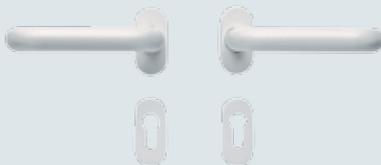
External door TC 80

## Plastic lever handle sets

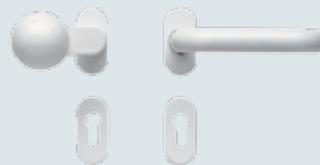
The doors can be offered optionally with lever handle sets or the lever / knob handle sets in black, red or white as well as all HEWI colours.

## Aluminium / stainless steel lever handle sets

Can be delivered in the same versions as the plastic handle sets, in aluminium anodised in natural finish (F1) or stainless steel.



Lever handle set, rose escutcheon, prepared for profile cylinder, white plastic



Lever/knob handle set, rose escutcheon, prepared for profile cylinder, white plastic



Lever handle set, rose escutcheon, prepared for profile cylinder, aluminium



Lever/knob handle set, rose escutcheon, prepared for profile cylinder, stainless steel

## Glazings

- Ornamental glass (4 mm)
  - Mastercarré
  - Masterpoint
  - Masterligne
  - Royal Flash
  - Royal Trio
  - Silk
- Wired ornamental glass (7 mm)
- Single-pane safety glass (6 mm)
- Laminated safety glass (6 mm)
- Insulated glass (18 mm)
- Aluminium panel infill (10 mm)



Mastercarré



Masterpoint



Masterligne



Royal Flash



Royal Trio



Silk

## Additional equipment

- Anti-panic locks
- Slide rail overhead door closer HDC 35



Slide rail overhead door closer HDC 35

# Optional Equipment

## Fire-rated security door WAT 40

### External multi-purpose door MZ Thermo46 / MZ Thermo65, external security door KSI Thermo46

#### Fire-rated security door WAT 40

##### Aluminium / stainless steel lever handle sets

As standard, the doors are available with a lever handle set or lever / knob handle set in aluminium anodised in natural finish (F1) or optionally in stainless steel.



Lever/knob handle set, short escutcheon, prepared for profile cylinder, aluminium



Lever handle set, short escutcheon, prepared for profile cylinder, stainless steel

##### Additional equipment

- Spyhole
- Slide rail overhead door closer HDC 35



Slide rail overhead door closer HDC 35

#### External multi-purpose door MZ Thermo46 / MZ Thermo65

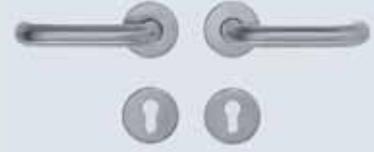
#### External security door KSI Thermo46

##### Lever handle sets MZ Thermo46

As standard, the doors are available with a lever handle or lever/knob handle set in black plastic, as well as optionally in aluminium anodised in natural finish (F1) or in stainless steel.



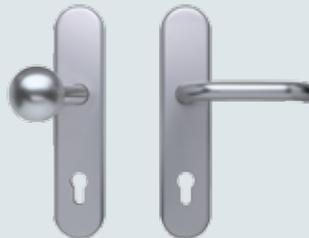
Lever/knob handle set, rose escutcheon, prepared for profile cylinder, black



Lever handle set, rose escutcheon, prepared for profile cylinder, aluminium

##### Lever handle sets KSI Thermo46

The doors are equipped with a lever handle or lever / knob handle set ES 1 in stainless steel.



Lever/knob handle set, ES 1, long escutcheon, prepared for profile cylinder, stainless steel



Lever handle set, ES 1, long escutcheon, prepared for profile cylinder, stainless steel

##### Additional equipment MZ Thermo46

- Anti-panic locks
- Slide rail overhead door closer HDC 35
- Retractable bottom seal

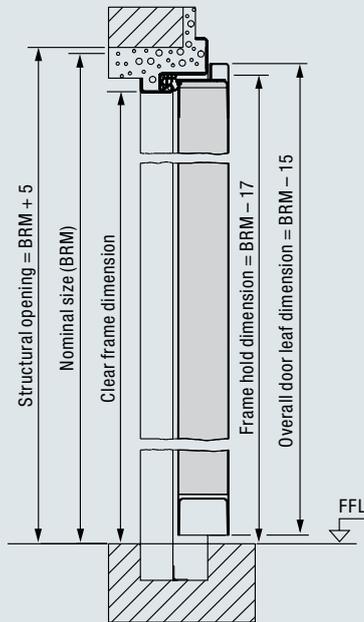


Slide rail overhead door closer HDC 35

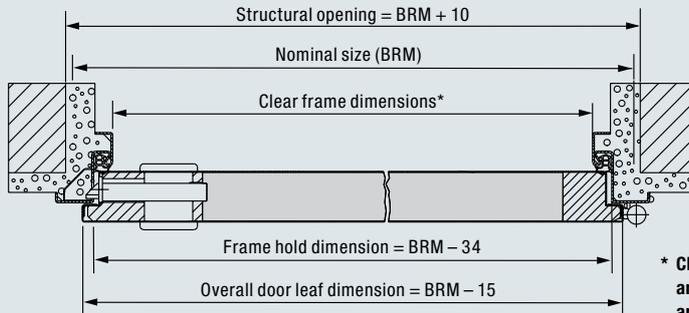
# Dimensional References / Standard Sizes

## Internal doors ZK, OIT 40

### Vertical view

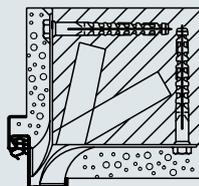


### Horizontal view

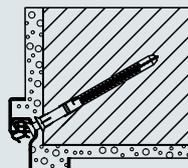


\* Clear passage with an opening angle of 90° and without handles and levers corresponds to the clear frame dimensions - 2 mm (for double-leaf doors - 4 mm)

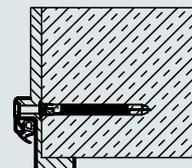
### Fitting versions



**Corner frame**  
Fitting to brickwork  
Grouting lugs



**Special corner frame**  
Plug-and-screw  
fitting through  
the groove bottom



**Special corner frame**  
Plug-and-screw fitting  
through the reveal

Ordering size Nominal size Width x height	Structural opening Width x height	Clear frame dimensions* Width x height	Frame hold dimension Width x height	Overall door leaf dimension Width x height	Clear views** Width x height			
					View 5	View 6	View 7	View 8
<b>Standard sizes ZK / OIT 40, single-leaf</b>								
625 x 2000	635 x 2005	561 x 1968	591 x 1983	610 x 1985	200 x 375	200 x 950	200 x 1305	245 x 1620
625 x 2125	635 x 2130	561 x 2093	591 x 2108	610 x 2110	200 x 375	200 x 950	200 x 1305	245 x 1745
750 x 1875	760 x 1880	686 x 1843	716 x 1858	735 x 1860	325 x 375	325 x 950	325 x 1305	370 x 1495
750 x 2000	760 x 2005	686 x 1968	716 x 1983	735 x 1985	325 x 375	325 x 950	325 x 1305	370 x 1620
750 x 2125	760 x 2130	686 x 2093	716 x 2108	735 x 2110	325 x 375	325 x 950	325 x 1305	370 x 1745
875 x 1875	885 x 1880	811 x 1843	841 x 1858	860 x 1860	450 x 375	450 x 950	450 x 1305	495 x 1495
875 x 2000	885 x 2005	811 x 1968	841 x 1983	860 x 1985	450 x 375	450 x 950	450 x 1305	495 x 1620
875 x 2125	885 x 2130	811 x 2093	841 x 2108	860 x 2110	450 x 375	450 x 950	450 x 1305	495 x 1745
1000 x 1875	1010 x 1880	936 x 1843	966 x 1858	985 x 1860	575 x 375	575 x 950	575 x 1305	620 x 1495
1000 x 2000	1010 x 2005	936 x 1968	966 x 1983	985 x 1985	575 x 375	575 x 950	575 x 1305	620 x 1620
1000 x 2125	1010 x 2130	936 x 2093	966 x 2108	985 x 2110	575 x 375	575 x 950	575 x 1305	620 x 1745
<b>Standard sizes ZK / OIT40, double-leaf</b>								
1500 x 2000	1510 x 2005	1436 x 1968	1466 x 1983	1485 x 1985	325 x 375	325 x 950	325 x 1305	370 x 1620
1750 x 2000	1760 x 2005	1686 x 1968	1716 x 1983	1735 x 1985	450 x 375	450 x 950	450 x 1305	495 x 1620
2000 x 2000	2010 x 2005	1936 x 1968	1966 x 1983	1985 x 1985	575 x 375	575 x 950	575 x 1305	620 x 1620
2000 x 2125	2010 x 2130	1936 x 2093	1966 x 2108	1985 x 2110	575 x 375	575 x 950	575 x 1305	620 x 1745

\*\* Glazing cut-outs in special sizes on request

**Special sizes, single-leaf**  
Width: 500 - 1250  
Height: 1500 - 2250

**Special sizes, double-leaf**  
Width: 1500 - 2500  
Height: 1500 - 2250

Please state handing on order!



Left-hand hinged



Right-hand hinged



Traffic leaf left-hand hinged

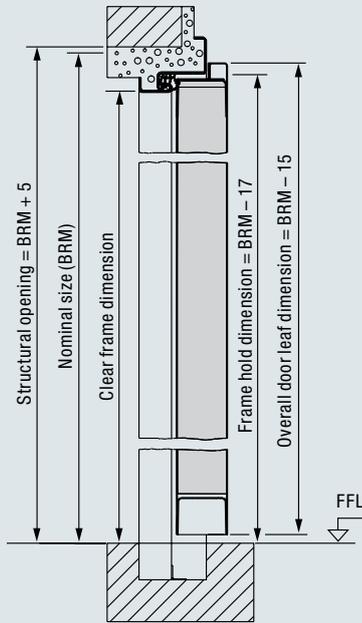


Traffic leaf right-hand hinged

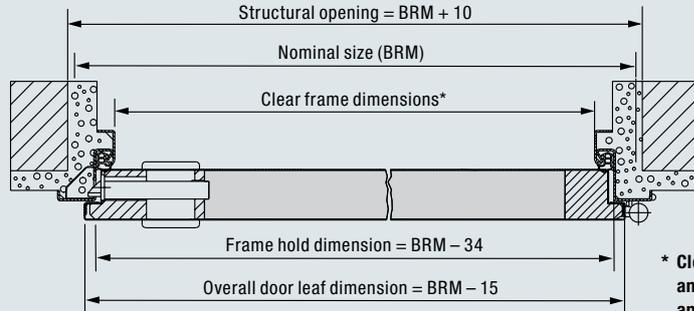
# Dimensional References / Standard Sizes

## Fire-rated security door WAT 40

### Vertical view

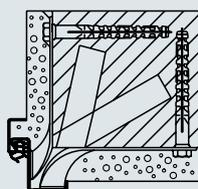


### Horizontal view

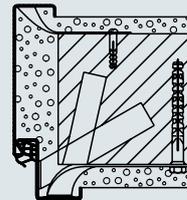


\* Clear passage with an opening angle of 90° and without handles and levers corresponds to the clear frame dimensions - 2 mm

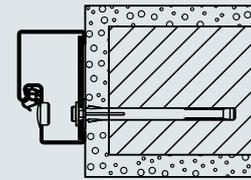
### Fitting versions



**Corner frame**  
Fitting to brickwork  
Grouting lugs



**Profile frame**  
Fitting to brickwork  
Grouting lugs



**Block frame**  
Fitting to brickwork  
Plug-and-screw fitting

Ordering size Nominal size Width x height	Structural opening Width x height	Clear frame dimensions* Width x height	Frame hold dimension Width x height	Overall door leaf dimension Width x height
<b>Standard sizes WAT 40 (with corner frame), single-leaf</b>				
750 x 2000	760 x 2005	686 x 1968	716 x 1983	735 x 1985
750 x 2125	760 x 2130	686 x 2093	716 x 2108	735 x 2110
875 x 2000	885 x 2005	811 x 1968	841 x 1983	860 x 1985
875 x 2125	885 x 2130	811 x 2093	841 x 2108	860 x 2110
1000 x 2000	1010 x 2005	936 x 1968	966 x 1983	985 x 1985
1000 x 2125	1010 x 2130	936 x 2093	966 x 2108	985 x 2110

### Special sizes, single-leaf

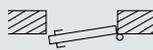
Width: 625 - 1164

Height: 1964 - 2132

Please state handing on order!



Left-hand hinged

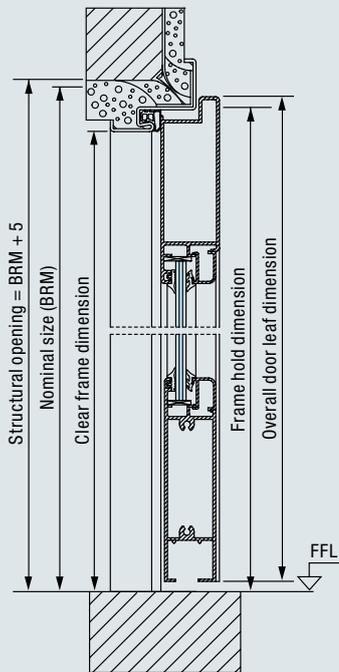


Right-hand hinged

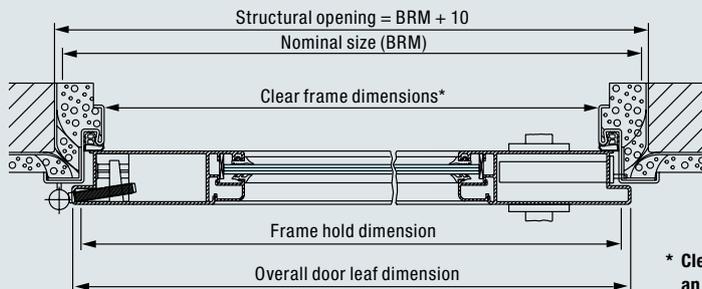
# Dimensional References / Standard Sizes

## Internal door AZ 40

### Vertical view



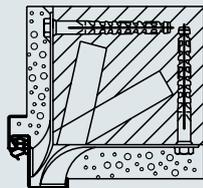
### Horizontal view



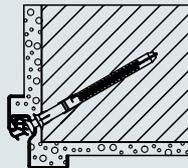
With corner frame

\* Clear passage with an opening angle of 90° and without handles and levers corresponds to the clear frame dimensions – 15 mm

### Fitting versions



**Corner frame**  
Fitting to brickwork  
Grouting lugs



**Special corner frame**  
Plug-and-screw fitting  
through the groove bottom

Ordering size Nominal size Width × height	Structural opening Width × height	Clear frame dimensions* Width × height	Frame hold dimension Width × height	Overall door leaf dimension Width × height	Glass dimensions Width × height
<b>Standard sizes AZ 40**, single-leaf</b>					
750 × 2000	760 × 2005	686 × 1968	716 × 1983	735 × 1985	508 × 1746
750 × 2125	760 × 2130	686 × 2093	716 × 2108	735 × 2110	508 × 1871
875 × 2000	885 × 2005	811 × 1968	841 × 1983	860 × 1985	633 × 1746
875 × 2125	885 × 2130	811 × 2093	841 × 2108	860 × 2110	633 × 1871
1000 × 2000	1010 × 2005	936 × 1968	966 × 1983	985 × 1985	758 × 1746
1000 × 2125	1010 × 2130	936 × 2093	966 × 2108	985 × 2110	758 × 1871

\*\* Refers to door sets with steel frames according to DIN 18111

### Special sizes, single-leaf

Width: 750 – 1250  
Height: 1875 – 2250

Please state handing on order!



Left-hand hinged

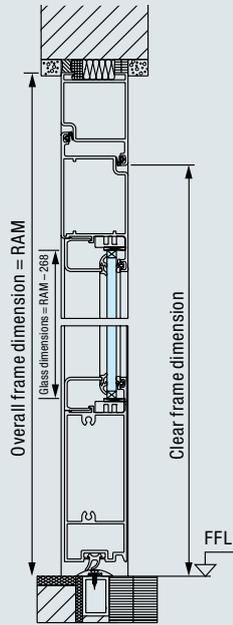


Right-hand hinged

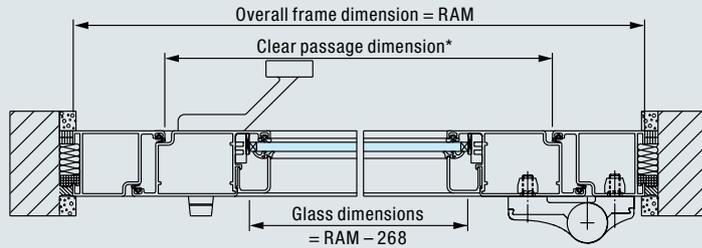
# Dimensional References / Sizes

## Internal door ES 50

### Vertical view

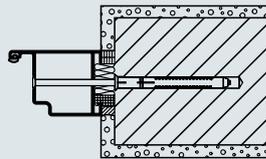


### Horizontal view



\* Clear passage with an opening angle of 90° and without handles and levers corresponds to the clear passage dimension - 44 mm (- 88 mm for double-leaf doors)

### Fitting Versions



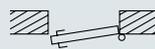
**Frames**  
Fitting to brickwork  
Plug-and-screw fitting

	Ordering size Overall frame dimension	Clear passage dimension*	Traffic leaf	Fixed leaf
<b>Sizes ES 50, single-leaf (style 100 / 101)</b>				
Width	605 – 1300	465 – 1160		
Height	1740 – 3000	1670 – 2930		
<b>Sizes ES 50, double-leaf (style 102 / 103)</b>				
Width	1335 – 2600	1195 – 2460	500 – 1500	500 – 1500
Height	1740 – 3000	1670 – 2930		

Please state handing on order!



Left-hand hinged



Right-hand hinged



Traffic leaf left-hand hinged

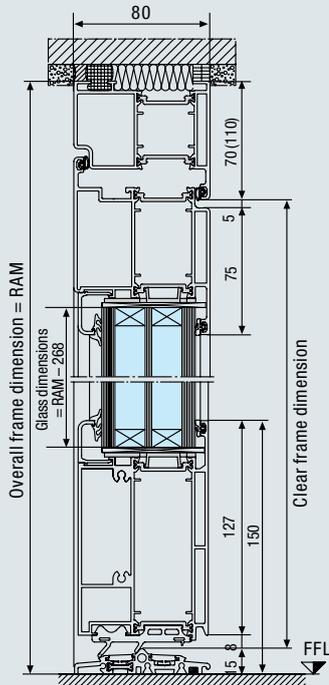


Traffic leaf right-hand hinged

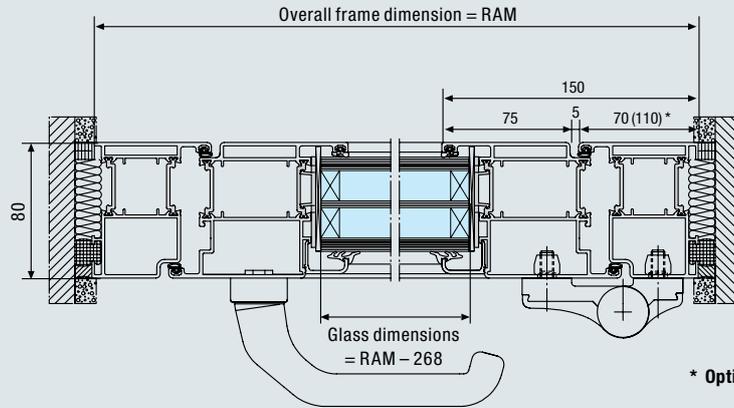
# Dimensional References / Sizes

## External door TC 80

### Vertical view

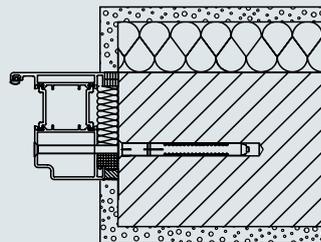


### Horizontal view



\* Optional frame width

### Fitting Versions



**Frames**  
Fitting to brickwork  
Plug-and-screw fitting

	Ordering size for overall frame dimension	Clear passage dimension*	Traffic leaf	Fixed leaf
<b>Sizes TC 80, single-leaf (style 100 / 101)</b>				
Width	605 – 1300	465 – 1160		
Height	1740 – 2500	1670 – 2430		
<b>Sizes TC 80, double-leaf (style 102 / 103)</b>				
Width	1335 – 2600	1195 – 2460	500 – 1500	500 – 1500
Height	1740 – 2500	1670 – 2430		

Please state handing on order!



Left-hand hinged



Right-hand hinged



Traffic leaf left-hand hinged

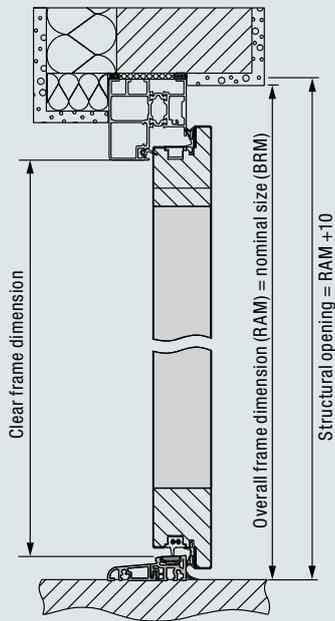


Traffic leaf right-hand hinged

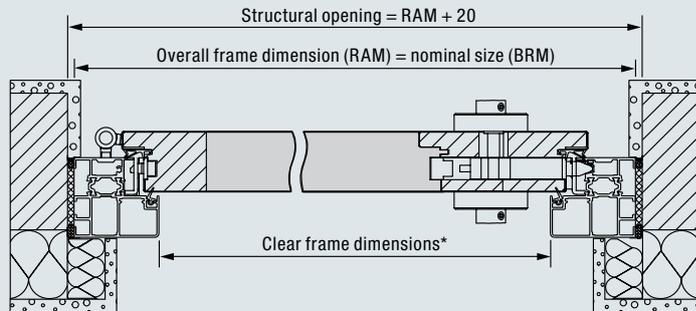
# Dimensional References / Standard Sizes

External multi-purpose door MZ Thermo46 / MZ Thermo65,  
external security door KSI Thermo46

## Vertical view

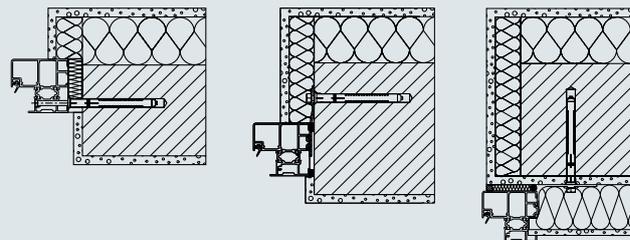


## Horizontal view



\* Clear passage with an opening angle of 90° and without handles and levers corresponds to the clear frame dimensions – 2 mm

## Fitting versions



### Block frame

Fitting to brickwork  
Countersunk fitting

### Block frame

Anchor fitting

### Block frame

Fitting behind the reveal (only MZ Thermo46)

All drawings are of the MZ Thermo46 or KSI Thermo46

Ordering size Nominal size Width × height	Structural opening Width × height	Clear frame dimensions* Width × height	Frame hold dimension Width × height	Overall door leaf dimension Width × height	Glass dimensions TPS 021 Width × height	Glass dimensions TPS 051 Width × height
<b>Standard sizes MZ Thermo46, KSI Thermo46, single-leaf</b>						
875 × 2000	895 × 2010	747 × 1916	785 × 1935	803 × 1955	172 × 1562	
875 × 2125	895 × 2135	747 × 2041	785 × 2060	803 × 2080	172 × 1562	531 × 887
1000 × 2000	1020 × 2010	872 × 1916	910 × 1935	928 × 1955	172 × 1562	531 × 887
1000 × 2125	1020 × 2135	872 × 2041	910 × 2060	928 × 2080	172 × 1562	531 × 887
1000 × 2100	1020 × 2110	872 × 2016	910 × 2035	928 × 2055	172 × 1562	531 × 887
1100 × 2100	1120 × 2110	972 × 2016	1010 × 2035	1028 × 2055	172 × 1562	531 × 887
<b>Standard sizes MZ Thermo65, single-leaf</b>						
875 × 2000	895 × 2010	725 × 1850	785 × 1935	803 × 1955		531 × 887
875 × 2125	895 × 2135	725 × 1875	785 × 2060	803 × 2080		531 × 887
1000 × 2000	1020 × 2010	850 × 1850	910 × 1935	928 × 1955		531 × 887
1000 × 2125	1020 × 2135	850 × 1875	910 × 2060	928 × 2080		531 × 887
1000 × 2100	1020 × 2110	850 × 1950	910 × 2035	928 × 2055		531 × 887
1100 × 2100	1120 × 2110	950 × 1950	1010 × 2035	1028 × 2055		531 × 887

### Special sizes MZ Thermo46, MZ Thermo65, KSI Thermo46

Width: 875–1250

Height: 1875–2250

Please state handing on order!



Left-hand hinged



Right-hand hinged



Traffic leaf left-hand hinged



Traffic leaf right-hand hinged

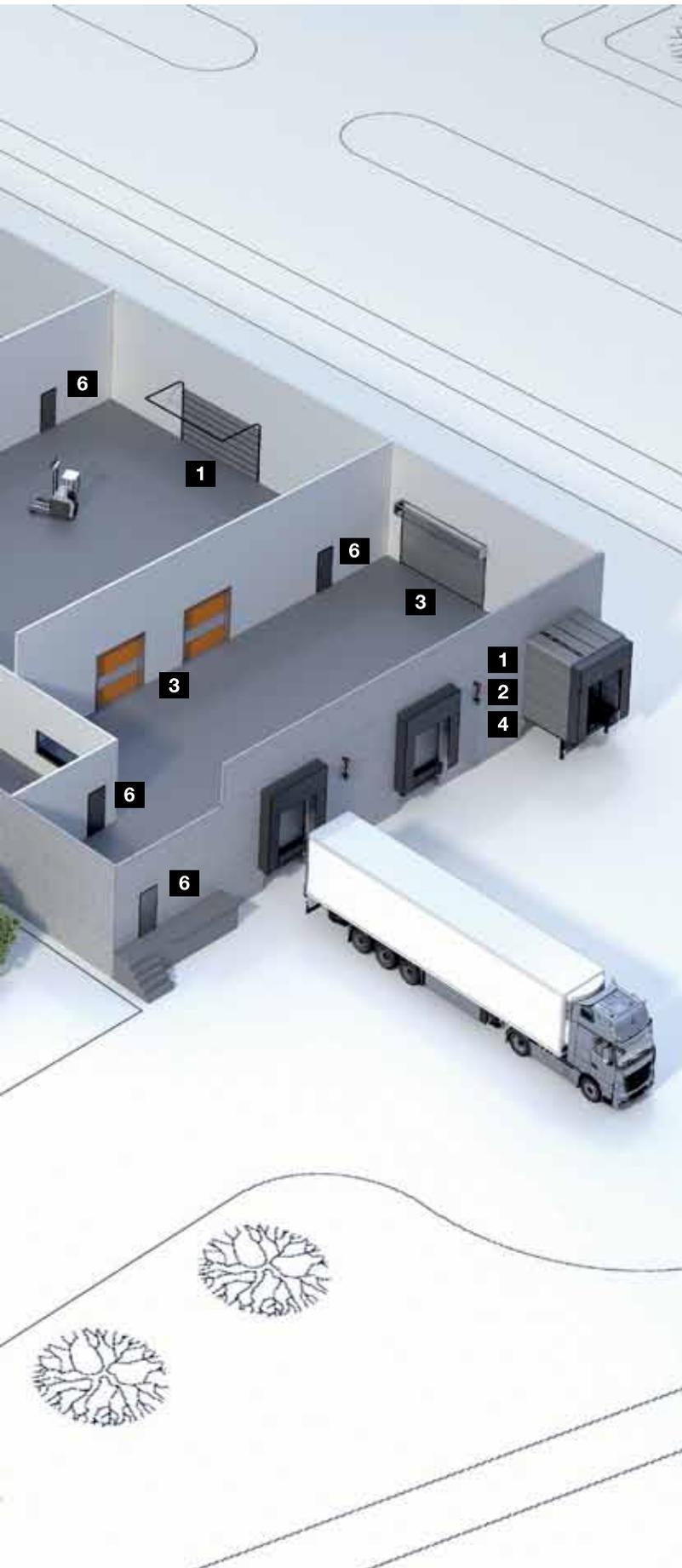
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