



**The right door, whatever the property**  
Solutions for application in commerce and industry



# The right solution, whatever the property – attractive doors by Novoferm

Novoferm offers planners and developers a wide-ranging programme of modern fire-resistant and multi-purpose doors. Our strengths include integrated property solutions, for which we offer innovative doors that are proven in practice. Individual or customised designs can, of course, be realised at any time.

As one of Europe's leading system providers of doors, garage doors, frames and drives, our products are manufactured to the latest state of technology. We not only meet very high standards of quality; we also combine extensive functionality with attractive design.





## Contents

|  |           |
|--|-----------|
| <b>Fire-resistant doors</b>                          | <b>4</b>  |
| Technical specifications                             | 6         |
| T30-1 N2/50 flap, T30-1 N2/50, T30-1 H8-5            | 8         |
| T30-2 N22/50, T30-2 N22                              | 10        |
| T90-1 N9, T90-1 N19                                  | 12        |
| T90-2 N29, T90-2 N39                                 | 14        |
| Size tables for T30/T90 standard doors               | 16        |
| <b>Smokeproof doors</b>                              | <b>18</b> |
| Smokeproof steel doors                               | 20        |
| <b>Steel doors</b>                                   | <b>22</b> |
| MZ-1, MZ-2, MZ 53-1, MZ 53-2                         | 24        |
| <b>Special doors</b>                                 | <b>26</b> |
| Transformer doors, soundproof doors, detention doors | 28        |
| <b>Technical specifications, drawings</b>            | <b>30</b> |
| Installation advantages, wall connections            | 30        |
| Sills, anchor plans                                  | 33        |
| <b>Programme table</b>                               | <b>34</b> |

## Tangible installation advantages of Novoferm doors

- 1. Rapid back-filling of the frames**
  - with approved moulded parts made of mineral wool
- 2. Invisible screw assembly**
  - simply screw together instead of welding
  - the top quality appearance of the frame is sustained
  - for fair-faced concrete and masonry
- 3. Dry mortarless construction / F90 mounting walls**
  - T90 doors for DIN walls starting at 100 mm, for virtually all standard firewall systems
  - T30 and multi-purpose doors with concealed screw assembly for flawless door appearance



## Doors by Novoferm – more than just “steel doors”

Attractively designed with a thick rebate that even looks good in living areas, and elaborately finished - Novoferm steel doors are the ideal choice, even for sophisticated properties. And our standard doors are even available from stock in many basic dimensions. In addition to customised standard applications, Novoferm also offers doors that meet the special requirements of industry, energy supply or detention facilities.

## Made-to-measure fire-resistant and multi-purpose doors

Regardless of whether you require fire resistance, smoke or sound protection, glazing or top panel, stainless steel or burglar resistance: The range offered by Novoferm encompasses seals for any required and/or stipulated application. Together with a wide choice of frame shapes, hardware and locking mechanisms.



## T30 / T90 fire-resistant doors – inspiringly good

As a specialist for steel doors, Novoferm offers a wide range of fire-resistant doors that are all approved to general building code standards. Whether T30 or T90, standard version or version with top quality special finish - you will find the perfect solution for practically any application here. Our fire-resistant doors are all fully galvanised and primed. The galvanised and additionally powder-coated corner frames with sealing profile are also standard. Other frame or sill solutions are available to meet the respective statutory requirements. The attractive design of the door is rounded off by a wide choice of ergonomically designed hardware.





### **Standard means more than just “from the rack”**

You can choose just the right fire-resistant doors to match your property from our wide range of available designs, sizes and finishes. We can also provide matching seals for various special applications – just tell us what you need and we will find the solution.

### **The right design to meet any standard**

Our N series of fire-resistant doors is particularly suited for sophisticated properties. The elaborate finish, the design, which is even suitable for living areas, and the versatile range of special finishes make them the door of choice for demanding property developers.



### **The right glazing in case of fire**

Novoferm offers fire-resistant doors with numerous types of standard-compliant glazing. Not only are special types of glazing available, the doors can also be supplied with optional individual window cut-outs. Please let us know your requirements.



Standard design

Special design

**Door leaf:** made of galvanised, mechanically specially aligned thin sheets, with rebate on three sides, therefore with thick rebate to match the front door (type H8-5 thin rebate), together with fire protection insulation.

Thermal insulation in accordance with DIN 52619. Glazed doors with fire-resistant glass in line with statutory requirements for interior use.

**Frame:** galvanised, standard version as corner frame with EPDM sealing profile. Screw fastening with masonry dowels on all single-leaf doors with a width  $\geq 1250$  mm and on all double-leaf doors.

**Hardware:** three-section hinge plates with ball bearings, pins, door closer in accordance with DIN EN 1154 (T30-1 doors with ball bearing hinge plate and spring plate in accordance with DIN 18272, some with upper door closer, dependent on size,

T90-1 doors always with upper door closer, optional spring plate up to 2m<sup>2</sup>. Upper door closer for type H8-5 available at additional charge.

DPC mortise lock with draw-back latch, with black rounded handle set (turn-lock mounted).

Two-leaf doors with two upper door closers and additional automatic retracting bolt with handle for the inactive leaf and lock coordinator (T30-2 doors type N22/50 with rebate retracting bolt).

**Surface:** made of galvanised steel, primed (with environmentally friendly powder-coating in RAL 9016, traffic white).

Other frame designs instead of the standard frame (description, see pages 30/31. Only a 1.5 mm counterframe can be optionally used on T30-1 type H8-5).

Special sill design (description, see pages 32/33).

Fixed upper section on various types of T30.

Sealing profile between the frame and top panel and between the leaves.

Other hardware that complies with the statutory requirements for fire-resistant doors is optionally available, such as handles, slide channel door closers (with integrated lock coordinator on two-leaf doors), panic locks.

ITS96 door closer system integrated into the leaf (T30-1 type N2/50 and T30-2 type N22/50 only, full leaf or glazed in each case).

Electric door opener, monitor contacts or locks, hold-open systems, and much more.

T30 and T90 fire-resistant glazing with UV protection on one side for areas exposed to direct sunlight.

Door leaf and frame made of stainless steel V2A - 1.4301 or V4A - 1.4571.

T30 doors



T30-1 type N2/50  
Page 8



T30-1 type N2/50  
Page 8



T30-1 type H8-5  
Page 8



T30-2 type N22  
Page 10



T30-2 type N22/50  
Page 10

T90 doors



T 90-1 type N9  
Page 12



T90-1 type N19  
Page 12



T90-2 type N29  
Page 14



T90-2 type N39  
Page 14

Glazing

Although Novoferm generally supplies its multi-purpose and fire-resistant doors with various types of standard-compliant glazing, a wide range of special glazing options are also available.

Standard-compliant glazing comes in a choice of different cut-out sizes and shapes - rectangular, round or diamond-shaped. Wire laminated or VSG laminated glass is available, as are several types of ISO glazing up to 19 mm thick.

Anyone considering one of the rectangular types of special glazing can choose from seven different types of glass. The shape and size of the window cut-out can be designed with great flexibility. Your best bet is to talk to us directly.

Technical description

**Definition:** The purpose of self-closing fire-resistant doors is to prevent fire from penetrating wall openings when installed.

**Approval:** Our fire-resistant seals have been officially tested in accordance with DIN 4102 and have been awarded general building code approval by means of certification issued by the Deutsches Institut für Bautechnik, Berlin.

**Quality surveillance:** Compliance with the seal requirements defined in the approval certification is monitored by a recognised quality protection association. Proof of the same is provided on an embossed plate on each fire-resistant seal, indicating the

**mark** with information on design, registration number, quality protection association, manufacturer and year of manufacture.

**Installation:** Both the wall in which the fire-protection seal is to be installed and the fastening of the frame must comply with the approval requirements.

# T30-1 fire-resistant doors

Single-leaf, fire-retarding steel doors and wall flaps, with thick or thin rebate

Single, full-leaf steel doors, fire-retardant in accordance with DIN 4102, with door closer (depending on the model). Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## Hardware

(If standard hardware is used on types N2/50, the profile cylinder must be lengthened by 0/10 mm)

## Frames

Standard: Corner frame with sealing profile, counterframe optional (additional charge for H8-5). Wrap-around or block frames or frames for butt wall connections are optionally available for types N2/50

## Sills

N2/50 flap: B1 standard, B2 optional for N2/50 door: A standard, B1, B2, B3 and RS1 or RS2 optional

## Surfaces

Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## The following can also be supplied on request

- **Fire-resistant glazing** (not for type H8-5)
- **Top panel** (not for type H8-5)
- **Smoke protection** in accordance with DIN 18095
- **Soundproofing** (not for models with top panel)  
Types N2/50: 34 dB or 45 dB, tested to DIN EN ISO 140-3, evaluated in accordance with DIN EN ISO 717-1 (Laboratory value for full-leaf and RS1 sill)  
Type H8-5: SV approx. 39 dB, tested to DIN 52210
- **Burglar resistance** (not for models with top panel and not for type H8-5)  
tested on both sides to DIN ENV 1627 WK2  
N2/50 door: only for floor recess up to > 20 mm. (Burglar resistance for N2/50 doors and flaps not permitted for F90 walls made of gypsum plasterboard or foam mortar)
- **In stainless steel** (not for type H8-5)



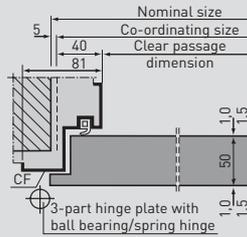
T30-1 type N2/50  
Wall flap with thick rebate



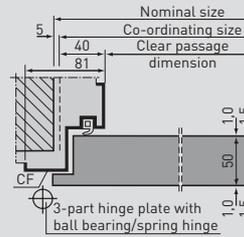
T30-1 type N2/50  
Door with thick rebate



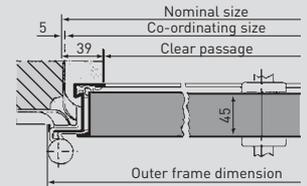
T30-1 type H8-5  
Door with thin rebate



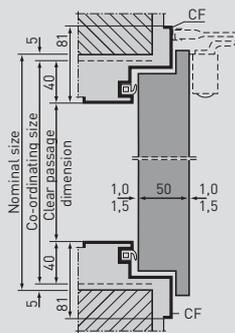
Horizontal section



Horizontal section

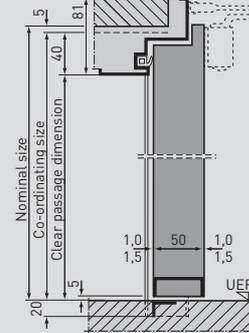


Horizontal section



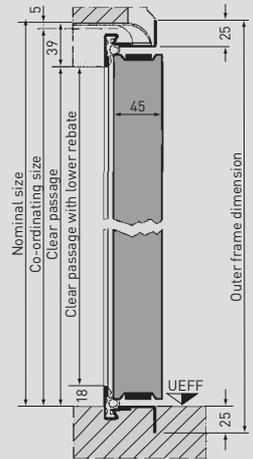
Vertical section

Door closer needed for model with smoke protection or models installed in walls made of foam mortar or gypsum plasterboard.



Vertical section

Door closer needed for 1.5 mm sheet thickness and CS > 1000 x 2125 mm or when installed in walls made of foam mortar or gypsum plasterboard or for smoke protection in accordance with DIN 18095.



Vertical section

Door closer in accordance with DIN 18263 part 2 additionally possible.



Vertical section of top panel

# T30-1 fire-resistant doors

Technical data

| Resistance class/Type<br>Designation |   | T30-1 N2/50<br>Wall flap  | T30-1 N2/50<br>Door   | T30-1 H8-5<br>Door (wall flap on request)   |   |
|--------------------------------------|---|---|---|---|---|
| Models                               |   |  |    |    |   |
|                                      |   |   |   |   |   |
| Approved dimensions                  | Co-ordinating size (CS)   | Width min. – max.   | 500 - 1250  | 625 - 1350  |   |
|                                      |   | Height min. – max.  | 500 - 1500  | 1500 - 2500   |   |
|                                      | with top panel  | Max. height   | -   | 3500  |   |
|                                      | of which: Door  | Max. height   | -   | 2450  |   |
|                                      | Smoke protection with top panel   | Max. CS   | -   | 3000  |   |
| Door leaf                            | Approx. leaf thickness  |   | 53  | 53  |   |
|                                      | Approx. sheet thickness   | up to CS 500 x 1750   | 1.0 (optionally 1.5)  | 1.0 (optionally 1.5)  |   |
|                                      | Active leaf   |   | -   | -   |   |
|                                      | Inactive leaf   |   | -   | -   |   |
|                                      | Type of opening   | in accordance with DIN  | Left or right   | Left or right   | Left or right   |
| Walls                                | Masonry   |   | ≥ 115   | ≥ 115   |   |
|                                      | Concrete  |   | ≥ 100   | ≥ 100   |   |
|                                      | Foam mortar block/precision blocks  |   | ≥ 115   | ≥ 115   |   |
|                                      | Reinforced foam mortar wall panels  |   | ≥ 100   | ≥ 100   |   |
|                                      | F90 walls made of gypsum plasterboard<br>(in accordance with DIN 4102 part 4, table 48)   |   | ≥ 100   | ≥ 100   |   |
|                                      |   |   |   |   |   |
| Versions                             | Fire-retardant in accordance with DIN 4102  |   | •   | •   |   |
|                                      | With fire-resistant glazing   |   | -   | •   |   |
|                                      | With additional top panel   |   | -   | •   |   |
|                                      | With additional smoke protection  |   | •   | •   |   |
|                                      | With additional soundproofing   |   | •   | •   |   |
|                                      | With additional burglar resistance  |   | •   | • (extra charge)  |   |
|                                      | In stainless steel  |   | •   | -   |   |
| F30 types of glazing                 | Standard rectangular types of glazing<br>with glazing profiles made of steel or, optionally,<br>aluminium or stainless steel CS 2500 x 2500<br>or more pedestal moulding height ≥ 625 needed              | -   |  |  |  |
|                                      | Standard round types of glazing<br>with glazing profiles made of steel<br>or, optionally, stainless steel   | -   |  |  |  |
|                                      | Special optional glazing, 150 x 150 to 913 x 1921,<br>also available as multi-pane glazing,<br>frieze widths ≥ 155 with glazing profiles<br>made of steel or, optionally,<br>aluminium or stainless steel | -   |  |  |   |
| Approval number                      |   | Z-6.12-1482   | Z-6.12-1482   | Z-6.12-1604   |   |

• possible – not possible

All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

# T30-2 fire-resistant doors

Two-leaf, fire-retarding steel doors with thick rebate

Double, full-leaf steel doors, fire-retardant in accordance with DIN 4102, with door closer. Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## Hardware

Type N22/50: standard 3 hinges on each leaf on CS 2500 x 2500 or more (if standard hardware is used, the profile cylinder must be lengthened by 0/10 mm for type N22/50 and by 5/15 mm for type N22)

## Frames

Standard: Corner frame with sealing profile, counterframe, wrap-around or block frame or frame for butt wall connection optionally available

## Sills

Standard: A floor level, B1, B2, B3 with four-sided continuous frame or C with lower rebate or RS1 sealing sills with lowerable floor seal and/or RS2 hump sill optionally available

## Surfaces

Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

The following can also be supplied on request

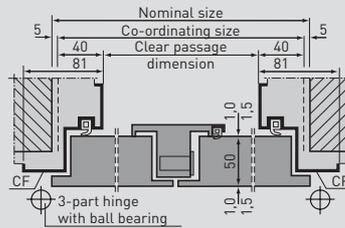
- **Fire-resistant glazing**
- **Top panel**
- **Smoke protection** in accordance with DIN 18095 (Type N22/50 tested for RS1 sill, type N22 for RS1 sill and centre rebate seal)
- **Soundproofing** (not for models with top panel) Type N22/50: 35 dB, tested to DIN EN ISO 140-3, evaluated in accordance with DIN EN ISO 717-1 (laboratory value for full-leaf and RS1 sill) Type N22: 38 dB, tested to DIN 52210 (laboratory value for full-leaf, RS1 sill and centre rebate seal)
- **Burglar resistance** (not for versions with top panel and not for type N22) tested on both sides to DIN ENV 1627 WK2 (full-leaf up to 2500 x 2500 mm, only versions with floor recess > 20 mm. Not permitted for F90 walls made of gypsum plasterboard or foam mortar)
- **In stainless steel** (not for type N22)



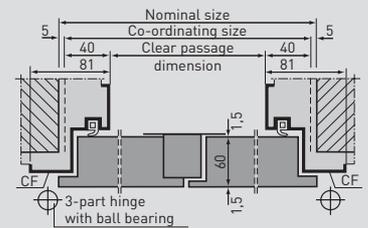
T30-2 type N22 / 50  
Door with thick rebate



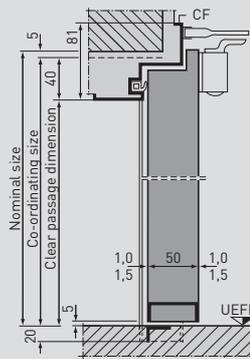
T30-2 type N22  
Door with thick rebate



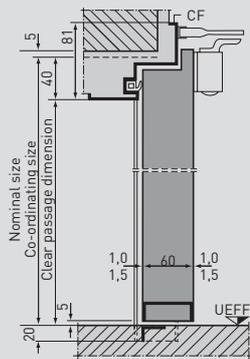
Horizontal section



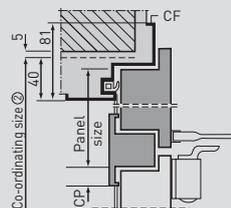
Horizontal section



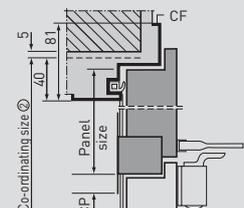
Vertical section



Vertical section



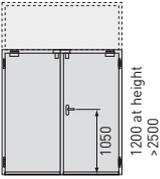
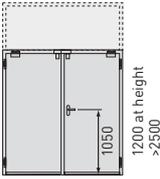
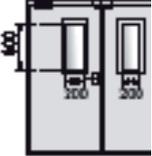
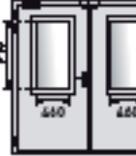
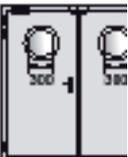
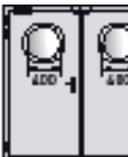
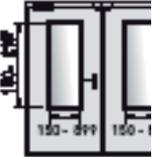
Vertical section of top panel



Vertical section of top panel

# T30-2 fire-resistant doors

Technical data

| Resistance class/Type<br>Designation |  | T30-2 type N22/50<br>Door   | T30-2 type N22<br>Door   |
|--------------------------------------|--|---|--|
| Models                               |  |   |   |
|                                      |  |   |  |
| Approved dimensions                  | Co-ordinating size (CS)  | Width min. - max.   | 1375 - 3000  |
|                                      |  | Height min. - max.  | 1750 - 3000  |
|                                      | with top panel   | Max. height   | 3500   |
|                                      | of which: Door   | Max. height   | 2450   |
|                                      | Smoke protection with top panel  | Max. CS   | 3500   |
| Door leaf                            | Approx. leaf thickness   |   | 53   |
|                                      | Approx. sheet thickness  | up to CS 2500 x 2500  | 1.0 (optionally 1.5)   |
|                                      |  | CS 2500 x 2500 mm or more   | 1.5  |
|                                      | Active leaf  | Width min. - max.   | 709 - 1418   |
|                                      | Inactive leaf  | Width min. - max.   | 545 - 1500   |
|                                      | Type of opening  | in accordance with DIN  | Left or right  |
| Walls                                | Masonry  | Door size < 2500 x 2500   | ≥ 115  |
|                                      |  | Door size > 2500 x 2500   | ≥ 175  |
|                                      | Concrete   | Door size < 2500 x 2500   | ≥ 100  |
|                                      |  | Door size > 2500 x 2500   | ≥ 140  |
|                                      | Foam mortar block/precision blocks   | Door size < 2500 x 2500   | ≥ 175  |
|                                      |  | Door size > 2500 x 2500   | ≥ 240  |
|                                      | Reinforced foam mortar wall panels   |   | ≥ 175  |
|                                      | F90 walls made of gypsum plasterboard (in accordance with DIN 4102 part 4, table 48)   | Door size < 2500 x 2500   | ≥ 100  |
| Door size > 2500 x 2500              |  | ≥ 125   |  |
| Versions                             | Fire-retardant in accordance with DIN 4102   | •   | •  |
|                                      | With fire-resistant glazing  | •   | •  |
|                                      | With additional top panel  | •   | •  |
|                                      | With additional smoke protection   | •   | •  |
|                                      | With additional soundproofing  | •   | •  |
|                                      | With additional burglar resistance   | •   | -  |
|                                      | In stainless steel   | •   | -  |
| F30 types of glazing                 | Standard rectangular types of glazing with glazing profiles made of steel or, optionally, aluminium or stainless steel<br>CS 2500 x 2500 or more pedestal moulding height ≥ 625 needed                                   |  |  |
|                                      | Standard round types of glazing with glazing profiles made of steel or, optionally, stainless steel  |  |  |
|                                      | Special optional glazing, 150 x 150 to 899 x 2167   200 x 300 to 1100 x 2186, also available as multi-pane glazing, frieze widths ≥ 155 with glazing profiles made of steel or, optionally, aluminium or stainless steel |  |  |
| Approval number                      | Z-6.14-1511  | Z-6.14-1204   |  |

• possible – not possible

All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

# T90-1 fire-resistant doors

Single leaf, fire-resistant steel doors and wall flaps with thick rebate

Single, full-leaf steel doors and/or flaps, fire-retardant in accordance with DIN 4102, with door closer. Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## Hardware

(if standard hardware is used, the profile cylinder must be lengthened by 5/15 mm)

## Frames

Standard: Corner frame with sealing profile, counterframe, wrap-around or block frame or frame for butt wall connection optionally available

## Sills

Type N9: Standard: B1, B2, B3 with four-sided continuous frame, A, C, RS1 or RS2 optionally available

Type N19: Standard: A floor level, B1, B2, B3 with four-sided continuous frame or C with lower rebate or RS1 sealing sills with lowerable floor seal and/or RS2 hump sill optionally available

## Surfaces

Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

The following can also be supplied on request

- **Fire-resistant glazing**

(Type N9: min. frieze widths, 4-sided 237 mm)

- **Smoke protection** in accordance with DIN 18095

- **Soundproofing**

Type N9: to 800 x 800 mm 40 dB, 800 x 800 mm or more 43 dB (tested for full-leaf and sill, B1 and B2)

Type N19: 35 dB (tested for full-leaf and RS1 sill)

both types tested to DIN EN ISO 140-3 evaluated in accordance with DIN EN ISO 717-1 (laboratory values)

- **Burglar resistance**

both sides tested to DIN ENV 1627 WK2 on full-leaf version, to CS 1250 x 2500 mm with floor recess > 20 mm on type N19.

(Burglar resistance not permitted on both types for fire-resistant mounting walls or foam mortar walls or for glazing on type N9)

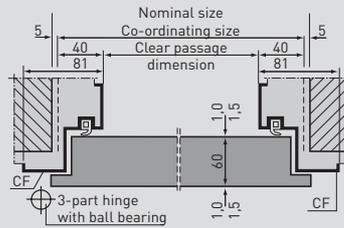
- **In stainless steel** (not for type N19)



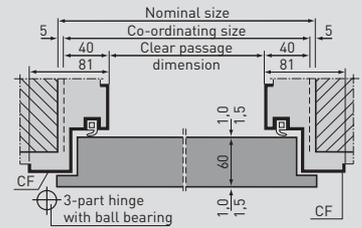
T90-1 type N9  
Wall flap with thick rebate



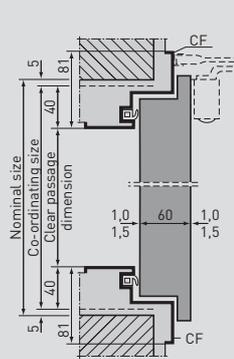
T90-1 type N19  
Door with thick rebate



Horizontal section

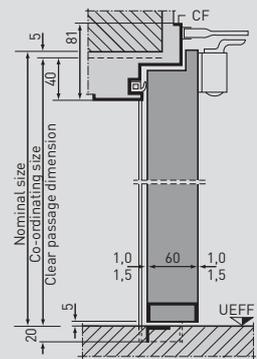


Horizontal section



Vertical section

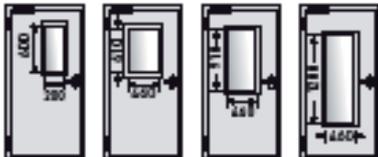
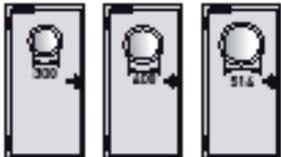
Door closer needed if CS surface > 1 m<sup>2</sup> or for smoke protection version or when installed in foam mortar or mounting walls.



Vertical section

# T90-1 fire-resistant doors

Technical data

| Resistance class/Type<br>Designation |   | T90-1 type N9<br>Wall flap  | T90-1 type N19<br>Door  |
|--------------------------------------|---|---|---|
| Models                               |   |  |    |
|                                      |   |   |   |
| Approved dimensions                  | Co-ordinating size (CS)   | Width min. – max.   | 500 - 1250  |
|                                      |   | Height min. – max.  | 500 - 1750  |
|                                      | with top panel  | Max. height   | -   |
|                                      | of which: Door  | Max. height   | -   |
|                                      | Smoke protection with top panel   | Max. CS   | -   |
| Door leaf                            | Approx. leaf thickness  |   | 63  |
|                                      | Approx. sheet thickness   | up to CS 500 x 1750   | 1.0 (optionally 1.5)  |
|                                      | Active leaf   |   | -   |
|                                      | Inactive leaf   |   | -   |
|                                      | Type of opening   | in accordance with DIN  | Left or right   |
| Walls                                | Masonry   |   | > 175   |
|                                      | Concrete  |   | ≥ 140   |
|                                      | Foam mortar block/precision blocks  |   | ≥ 175   |
|                                      | Reinforced foam mortar wall panels  |   | ≥ 150   |
|                                      | F90 walls made of gypsum plasterboard<br>(in accordance with DIN 4102 part 4, table 48)   |   | ≥ 95  |
|                                      |   |   |   |
| Versions                             | Fire-retardant in accordance with DIN 4102  | •   | •   |
|                                      | With fire-resistant glazing   | •   | •   |
|                                      | With additional top panel   | -   | -   |
|                                      | With additional smoke protection  | •   | •   |
|                                      | With additional soundproofing   | •   | •   |
|                                      | With additional burglar resistance  | •   | •   |
|                                      | In stainless steel  | •   | -   |
| F90 types of glazing                 | Standard rectangular types of glazing<br>with glazing profiles made of steel or, optionally,<br>aluminium or stainless steel CS 2500 x 2500<br>or more pedestal moulding height ≥ 625 needed              | -   |  |
|                                      | Standard round types of glazing<br>with glazing profiles made of steel<br>or, optionally, stainless steel + A9  | -   |  |
|                                      | Special optional glazing, 130 x 150 to 770 x 1759,<br>also available as multi-pane glazing,<br>frieze widths > 237 with glazing profiles<br>made of steel or, optionally, aluminium<br>or stainless steel | -   |  |
| Approval number                      |   | Z-6.20-1919   | Z-6.20-1919   |

• possible – not possible

All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

# T90-2 fire-resistant doors

Two-leaf, fire-resistant steel doors with thick rebate

Double, full-leaf steel doors, fire-resistant in accordance with DIN 4102, with door closer. Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## Hardware

(if standard hardware is used, the profile cylinder must be lengthened by 10/10 mm for type N29 and 10/15 mm for type N39)

## Frames

Standard: Corner frame with sealing profile, counterframe, wrap-around or block frame or frame for butt wall connection optionally available

## Sills

Standard: A floor level, B1, B2, B3 with four-sided continuous frame or C with lower rebate or RS1 sealing sills with lowerable floor seal or RS2 hump sill for type N29 optionally available

## Surfaces

Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## The following can also be supplied on request

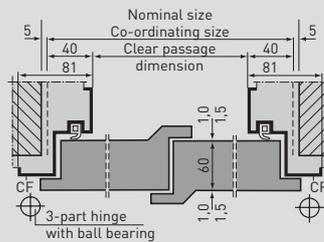
- **Fire-resistant glazing** (not for type N39)
- **Smoke protection** in accordance with DIN 18095 (Type N39 tested with RS1 sill and centre rebate seal)
- **Soundproofing** 32 dB, tested to DIN EN ISO 140-3, evaluated in accordance with DIN EN ISO 717-1 (laboratory value for full-leaf, RS1 sill and centre rebate seal)
- **In stainless steel** (not for type N39)



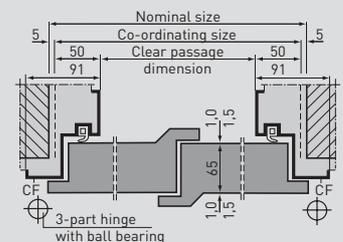
T90-2 type N29  
Door with thick rebate



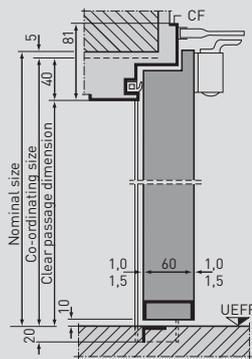
T90-2 type N39  
Door with thick rebate



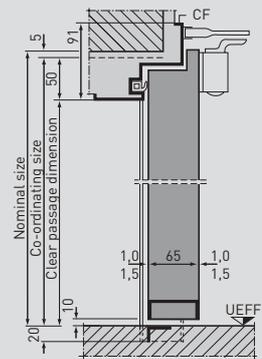
Horizontal section



Horizontal section



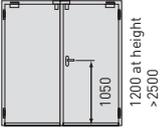
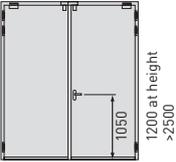
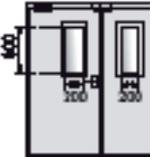
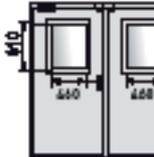
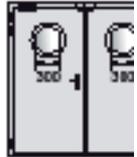
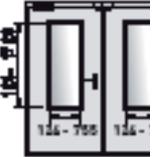
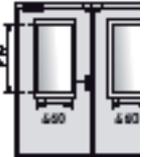
Vertical section



Vertical section

# T90-2 fire-resistant doors

Technical data

| Resistance class/Type<br>Designation |   | T90-2 type N29<br>Door  | T90-2 type N39<br>Door  |
|--------------------------------------|---|---|---|
| Models                               |   |   |    |
|                                      |   |   |   |
| Approved dimensions                  | Co-ordinating size (CS)   | Width min. - max.   | 1375 - 2500   |
|                                      |   | Height min. - max.  | 1750 - 2500   |
|                                      | with top panel  | Max. height   | -   |
|                                      | of which: Door  | Max. height   | -   |
|                                      | Smoke protection with top panel   | Max. CS   | -   |
| Door leaf                            | Approx. leaf thickness  |   | 63  |
|                                      | Approx. sheet thickness   |   | 1.0 (optionally 1.5)  |
|                                      | Active leaf   | Width min. - max.   | 729 - 1229  |
|                                      | Inactive leaf   | Width min. - max.   | 500 - 1229  |
|                                      | Type of opening   | in accordance with DIN  | Left or right   |
| Walls                                | Masonry   |   | ≥ 175   |
|                                      | Concrete  |   | ≥ 140   |
|                                      | Foam mortar block/precision blocks  |   | ≥ 175   |
|                                      | Reinforced foam mortar wall panels  |   | ≥ 150   |
|                                      | F90 walls made of gypsum plasterboard (in accordance with DIN 4102 part 4, table 48)  |   | ≥ 95  |
|                                      |   |   | On request  |
| Versions                             | Fire-retardant in accordance with DIN 4102  |   | •   |
|                                      | With fire-resistant glazing   |   | •   |
|                                      | With additional top panel   |   | -   |
|                                      | With additional smoke protection  |   | •   |
|                                      | With additional soundproofing   |   | •   |
|                                      | With additional burglar resistance  |   | -   |
|                                      | In stainless steel  |   | •   |
| F90 types of glazing                 | Standard rectangular types of glazing with glazing profiles made of steel or, optionally, aluminium or stainless steel CS 2500 x 2500 or more pedestal moulding height ≥ 625 needed           |  |   |
|                                      | Standard round types of glazing with glazing profiles made of steel or, optionally, stainless steel + A9  |  |   |
|                                      | Special optional glazing, 124 x 124 to 755 x 1728, also available as multi-pane glazing, frieze widths > 237 with glazing profiles made of steel or, optionally, aluminium or stainless steel |  |   |
|                                      |   |   |  |
|                                      |   |   |  |
|                                      |   |   | Caution:<br>Glazing only possible for type T90-2 N29!                                 |
| Approval number                      |   | Z-6.20-1919   | Z-6.13-1987   |

• possible – not possible

All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

# Standard sizes

## T30 fire-resistant doors, single-leaf

## T30 fire-resistant doors, two-leaf

| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T30-1 type N2/50 wall flap</b>  |   |   |   |
| 750 x 750                          | 760 x 760   | 670 x 670   | 832 x 832   |
| 750 x 875                          | 760 x 885   | 670 x 795   | 832 x 957   |
| 800 x 800                          | 810 x 810   | 720 x 720   | 882 x 882   |
| 875 x 875                          | 885 x 885   | 795 x 795   | 957 x 957   |
| 875 x 1000                         | 885 x 1010  | 795 x 920   | 957 x 1082  |
| 875 x 1250                         | 885 x 1260  | 795 x 1170  | 957 x 1332  |
| 1000 x 1000                        | 1010 x 1010   | 920 x 920   | 1082 x 1082   |
| 1000 x 1250                        | 1010 x 1260   | 920 x 1170  | 1082 x 1332   |
| 1250 x 1250                        | 1260 x 1260   | 1170 x 1170   | 1332 x 1332   |

| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T30-1 type N2/50 door</b>       |   |   |   |
| 750 x 2000                         | 760 x 2005  | 670 x 1959  | 832 x 2060  |
| 750 x 2125                         | 760 x 2130  | 670 x 2084  | 832 x 2185  |
| 875 x 1875                         | 885 x 1880  | 795 x 1834  | 957 x 1935  |
| 875 x 2000                         | 885 x 2005  | 795 x 1959  | 957 x 2060  |
| 875 x 2125                         | 885 x 2130  | 795 x 2084  | 957 x 2185  |
| 1000 x 2000                        | 1010 x 2005   | 920 x 1959  | 1082 x 2060   |
| 1000 x 2125                        | 1010 x 2130   | 920 x 2084  | 1082 x 2185   |
| 1125 x 2000                        | 1135 x 2005   | 1045 x 1959   | 1207 x 2060   |
| 1125 x 2125                        | 1135 x 2130   | 1045 x 2084   | 1207 x 2185   |
| 1250 x 2000                        | 1260 x 2005   | 1170 x 1959   | 1332 x 2060   |
| 1250 x 2125                        | 1260 x 2130   | 1170 x 2084   | 1332 x 2185   |
| 1250 x 2250                        | 1260 x 2255   | 1170 x 2209   | 1332 x 2310   |
| 1250 x 2500                        | 1260 x 2505   | 1170 x 2459   | 1332 x 2560   |

Outer frame dimensions all incl. 20 mm floor recess

| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T30-1 type H8-5 wall flap</b>   |   |   |   |
| 750 x 875                          | 760 x 885   | 682 x 807   | 792 x 893   |
| 800 x 800                          | 810 x 810   | 732 x 732   | 842 x 818   |
| 875 x 875                          | 885 x 885   | 807 x 807   | 917 x 893   |
| 875 x 1000                         | 885 x 1010  | 807 x 932   | 917 x 1018  |
| 875 x 1250                         | 885 x 1260  | 807 x 1182  | 917 x 1268  |

| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T30-1 type H8-5 door</b>        |   |   |   |
| 750 x 1750                         | 760 x 1755  | 682 x 1716  | 792 x 1784  |
| 750 x 1875                         | 760 x 1880  | 682 x 1841  | 792 x 1909  |
| 750 x 2000                         | 760 x 2005  | 682 x 1966  | 792 x 2034  |
| 800 x 1800                         | 810 x 1805  | 732 x 1766  | 842 x 1834  |
| 800 x 1875                         | 810 x 1880  | 732 x 1841  | 842 x 1909  |
| 800 x 2000                         | 810 x 2005  | 732 x 1966  | 842 x 2034  |
| 875 x 1750                         | 885 x 1755  | 807 x 1716  | 917 x 1784  |
| 875 x 1800                         | 885 x 1805  | 807 x 1766  | 917 x 1834  |
| 875 x 1875                         | 885 x 1880  | 807 x 1841  | 917 x 1909  |
| 875 x 2000                         | 885 x 2005  | 807 x 1966  | 917 x 2034  |
| 875 x 2125                         | 885 x 2130  | 807 x 2091  | 917 x 2159  |
| 1000 x 1875                        | 1010 x 1880   | 932 x 1841  | 1042 x 1909   |
| 1000 x 2000                        | 1010 x 2005   | 932 x 1966  | 1042 x 2034   |
| 1000 x 2125                        | 1010 x 2130   | 932 x 2091  | 1042 x 2159   |

Outer frame dimensions all incl. 25 mm floor recess

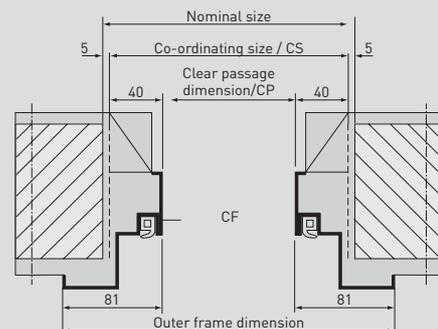
| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T30-2 type N22/50 door</b>      |   |   |   |
| 1500 x 2000***)                    | 1510 x 2005   | 1420 x 1959   | 1582 x 2060   |
| 1500 x 2125****)                   | 1510 x 2130   | 1420 x 2084   | 1582 x 2185   |
| 1750 x 2000****)                   | 1760 x 2005   | 1670 x 1959   | 1832 x 2060   |
| 1750 x 2125****)                   | 1760 x 2130   | 1670 x 2084   | 1832 x 2185   |
| 2000 x 2000                        | 2010 x 2005   | 1920 x 1959   | 2082 x 2060   |
| 2000 x 2125                        | 2010 x 2130   | 1920 x 2084   | 2082 x 2185   |
| 2000 x 2500                        | 2010 x 2505   | 1920 x 2459   | 2082 x 2560   |
| 2125 x 2125                        | 2135 x 2130   | 2045 x 2084   | 2207 x 2185   |
| 2250 x 2250                        | 2260 x 2255   | 2170 x 2209   | 2332 x 2310   |
| 2500 x 2500                        | 2510 x 2505   | 2420 x 2459   | 2582 x 2560   |

Outer frame dimensions all incl. 20 mm floor recess

\*\*\*) Leaf division (instead of 1/2 : 1/2) approx. 1/3 : 2/3, active leaf CS 918

\*\*\*\*) Leaf division (instead of 1/2 : 1/2) approx. 1/3 : 2/3, active leaf CS 959

### Calculation of clear passage and outer frame dimensions (not for T90-2 type N39)



All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

# Standard sizes

## Fire-resistant doors T90, single-leaf

## Fire-resistant doors T90, two-leaf

| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T90-1 type N9 wall flap</b>     |   |   |   |
| 750 x 875                          | 760 x 885   | 670 x 795   | 832 x 957   |
| 800 x 800                          | 810 x 810   | 720 x 720   | 882 x 882   |
| 875 x 875                          | 885 x 885   | 795 x 795   | 957 x 957   |
| 875 x 1000 <sup>*)</sup>           | 885 x 1010  | 795 x 920   | 957 x 1082  |
| 875 x 1250                         | 885 x 1260  | 795 x 1170  | 957 x 1332  |
| 1000 x 1000 <sup>*)</sup>          | 1010 x 1010   | 920 x 920   | 1082 x 1082   |
| 1000 x 1250                        | 1010 x 1260   | 920 x 1170  | 1082 x 1332   |

<sup>\*)</sup> Incl. door closer

| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T90-1 type N19 door</b>         |   |   |   |
| 750 x 2000 <sup>**)</sup>          | 760 x 2005  | 670 x 1960  | 832 x 2061  |
| 750 x 2125 <sup>**)</sup>          | 760 x 2130  | 670 x 2085  | 832 x 2186  |
| 875 x 1875 <sup>**)</sup>          | 885 x 1880  | 795 x 1835  | 957 x 1936  |
| 875 x 2000 <sup>**)</sup>          | 885 x 2005  | 795 x 1960  | 957 x 2061  |
| 875 x 2125 <sup>**)</sup>          | 885 x 2130  | 795 x 2085  | 957 x 2186  |
| 1000 x 2000 <sup>**)</sup>         | 1010 x 2005   | 920 x 1960  | 1082 x 2061   |
| 1000 x 2125                        | 1010 x 2130   | 920 x 2085  | 1082 x 2186   |
| 1125 x 2000                        | 1135 x 2005   | 1045 x 1960   | 1207 x 2061   |
| 1125 x 2125                        | 1135 x 2130   | 1045 x 2085   | 1207 x 2186   |
| 1250 x 2000                        | 1260 x 2005   | 1170 x 1960   | 1332 x 2061   |
| 1250 x 2125                        | 1260 x 2130   | 1170 x 2085   | 1332 x 2186   |
| 1250 x 2250                        | 1260 x 2255   | 1170 x 2210   | 1332 x 2312   |
| 1250 x 2500                        | 1260 x 2505   | 1170 x 2460   | 1332 x 2561   |

Outer frame dimensions all incl. 20 mm floor recess

<sup>\*\*)</sup> Also available with spring hinge in accordance with DIN 18272

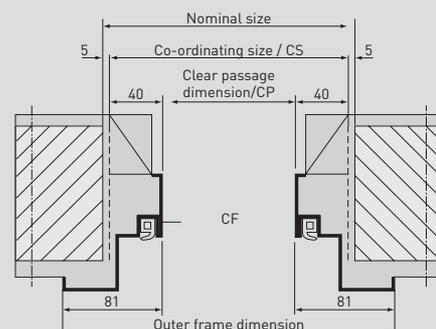
| Co-ordinating size<br>(Order size) | Nominal size<br>(see below for calculation details) | Clear passage dimensions<br>(see below for calculation details) | Outer frame dimensions<br>(see below for calculation details) |
|------------------------------------|---|---|---|
| <b>T90-2 type N29 door</b>         |   |   |   |
| 1500 x 2000 <sup>***)</sup>        | 1510 x 2005   | 1420 x 1960   | 1582 x 2061   |
| 1500 x 2125 <sup>***)</sup>        | 1510 x 2130   | 1420 x 2085   | 1582 x 2186   |
| 1750 x 2000 <sup>****)</sup>       | 1760 x 2005   | 1670 x 1960   | 1832 x 2061   |
| 1750 x 2125 <sup>****)</sup>       | 1760 x 2130   | 1670 x 2085   | 1832 x 2186   |
| 2000 x 2000                        | 2010 x 2005   | 1920 x 1960   | 2082 x 2061   |
| 2000 x 2125                        | 2010 x 2130   | 1920 x 2085   | 2082 x 2186   |
| 2000 x 2500                        | 2010 x 2505   | 1920 x 2460   | 2082 x 2561   |
| 2125 x 2125                        | 2135 x 2130   | 2045 x 2085   | 2207 x 2186   |
| 2250 x 2250                        | 2260 x 2255   | 2170 x 2210   | 2332 x 2311   |
| 2500 x 2500                        | 2510 x 2505   | 2420 x 2460   | 2582 x 2561   |

Outer frame dimensions all incl. 20 mm floor recess

<sup>\*\*\*)</sup> Leaf division (instead of 1/2 : 1/2) approx. 1/3 : 2/3, active leaf CS 956

<sup>\*\*\*\*)</sup> Leaf division (instead of 1/2 : 1/2) approx. 1/3 : 2/3, active leaf CS 978

### Calculation of clear passage and outer frame dimensions (not for T90-2 type N39)



All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension



## Smokeproof doors – keeping the air safe to breathe

Fire insurance companies have known for a long time: Smoke damage is usually much more extensive than the damage caused purely by fire. So smokeproof seals are extremely important. Novoferm offers an entire range of smokeproof doors. These are substantially based on standard multi-purpose or fire-resistant T30 or T90 doors which are enhanced with special sealing systems and sills to guarantee optimal protection against smoke fumes.





#### Different sill design

Smokeproof doors approved in accordance with DIN 18095 must be fitted with a smokeproof seal to the floor. Depending on the application, Novoferm offers a choice of two approved sill designs: the "Athmer Stadi BS fire-resistant" (RS1) lowerable floor seal or a hump sill (RS2).

#### Door leaves can also be fitted with glazing

Even smokeproof doors can be supplied with glazing. F30 or F90 fire-resistant glazing is used, depending on whether the doors need to incorporate a fire protection function. Both types of glazing are available with single-sided UV protection for use in areas exposed to direct sunlight. Wire or ornamental wire glazing is, of course, also available, as is a wide range of ISO and laminated glass in various thicknesses.

#### Additional optional features

Smokeproof doors by Novoferm can also be supplied with top panel, soundproofing, burglar resistance or in stainless steel, depending on the type of door.



# Smokeproof doors

Single-leaf, smokeproof steel doors, some with fire protection function.

| Resistance class/Type Designation    |                                    | RS-1 type MZ 53-1 Door  | T30-1 type N 2/50 Wall flap   | T30-1 type N2/50 Door   |             |
|--------------------------------------|------------------------------------|---|---|---|-------------|
| Models                               |                                    |  |  |  |             |
|                                      |                                    |   |   |   |             |
| Approved dimensions                  | Co-ordinating size (CS)            | Width min. – max.   | 625 - 1350  | 500 - 1250  | 625 - 1350  |
|                                      |                                    | Height min. – max.  | 1750 - 2500   | 500 - 1500  | 1500 - 2500 |
|                                      | with top panel                     | Max. height   | 3000  | -   | 3000        |
|                                      | of which: Door                     | Max. height   | 2450  | -   | 2450        |
|                                      | Approx. leaf thickness             |   | 53  | 53  | 53          |
| Approx. sheet thickness              |                                    | 1 or 1.5/2  | 1 or 1.5  | 1 or 1.5  |             |
| Versions                             | Standard design                    | thermally insulated   | thermally insulated   | thermally insulated   |             |
|                                      | With glazing                       | •   | -   | •   |             |
|                                      | With additional top panel          | •   | -   | •   |             |
|                                      | With additional fire retardancy    | -   | •   | •   |             |
|                                      | With additional soundproofing      | 35 dB   | 45 dB   | 34 dB   |             |
|                                      | With additional burglar resistance | •   | •   | •   |             |
|                                      | In stainless steel                 | •   | •   | •   |             |
| Test certificate/Registration number |                                    | P-120002238-11  | Z-6.12-1482   | Z-6.12-1482   |             |

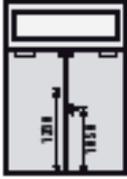
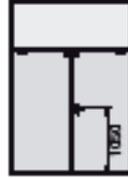
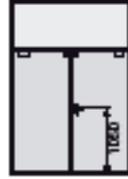
| Resistance class/Type Designation    |  | T30-1 type H8-5 Door  | T90-1 type N9 Wall flap   | T90-1 type N19 Door   |             |
|--------------------------------------|--|---|---|---|-------------|
| Models                               |  |  |  |  |             |
|                                      |  |   |   |   |             |
| Approved dimensions                  | Co-ordinating size (CS)                                  | Width min. – max.   | 625 - 1000  | 500 - 1250  | 625 - 1375  |
|                                      |  | Height min. – max.  | 1750 - 2125   | 500 - 1750  | 1750 - 2500 |
|                                      | with top panel   | Max. height   | -   | -   | -           |
|                                      | of which: Door   | Max. height   | -   | -   | -           |
|                                      | Approx. leaf thickness                                   |   | 45  | 63  | 63          |
| Approx. sheet thickness              |  | 0.88  | 1 or 1.5  | 1 or 1.5  |             |
| Versions                             | Standard design  | thermally insulated   | thermally insulated   | thermally insulated   |             |
|                                      | With glazing   | -   | •   | •   |             |
|                                      | With additional top panel                                | -   | -   | -   |             |
|                                      | With additional fire retardancy or fire resistance (T90) | •   | •   | •   |             |
|                                      | With additional soundproofing                            | 39 dB   | 43 dB   | 35 dB   |             |
|                                      | With additional burglar resistance                       | -   | •   | •   |             |
|                                      | In stainless steel                                       | -   | •   | -   |             |
| Test certificate/Registration number |  | Z-6.12-1604   | Z-6.20-1919   | Z-6.20-1919   |             |

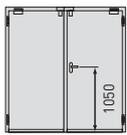
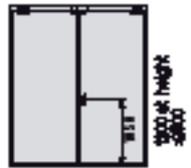
• possible – not possible

All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

# Smokeproof doors

Double-leaf, smokeproof steel doors, some with fire protection function

| Resistance class/Type Designation |                                      | RS2 type MZ 53-2 Door   | T30-2 type N22/50 Door  | T30-2 type N22 Door   |                            |
|-----------------------------------|--------------------------------------|---|---|---|----------------------------|
| Models                            |                                      |  |  |  |                            |
|                                   | Co-ordinating size (CS)              | Width min. – max.<br>Height min. – max.   | 1375 - 2500<br>1750 - 2500  | 1375 - 3000<br>1750 - 3000  | 1375 - 3000<br>1750 - 3000 |
| Approved dimensions               | with top panel                       | Height max.   | 3000  | 3500  | 3500                       |
|                                   | of which: Door                       | Height max.   | 2450  | 2450  | 2450                       |
|                                   | Approx. leaf thickness               |   | 53  | 53  | 63                         |
|                                   | Approx. sheet thickness              |   | 1 or 1.5/2  | 1 or 1.5  | 1 or 1.5                   |
| Versions                          | Standard design                      | thermally insulated   | thermally insulated   | thermally insulated   |                            |
|                                   | With glazing                         | •   | •   | •   |                            |
|                                   | With additional top panel            | •   | •   | •   |                            |
|                                   | With additional fire retardancy      | –   | •   | •   |                            |
|                                   | With additional soundproofing        | 34 dB   | 35 dB   | 38 dB   |                            |
|                                   | With additional burglar resistance   | •   | •   | –   |                            |
|                                   | In stainless steel                   | •   | •   | –   |                            |
|                                   | Test certificate/Registration number | P-120002238-22  | Z-6.14-1511   | Z-6.14-1204   |                            |

| Resistance class/Type Designation |                                      | T90-2 type N29 Door   | T90-2 type N39 Door   |
|-----------------------------------|--------------------------------------|---|---|
| Models                            |                                      |  |  |
|                                   | Co-ordinating size (CS)              | Width min. – max.<br>Height min. – max.   | 1375 - 2500<br>1750 - 2500  |
| Approved dimensions               | Approx. leaf thickness               | 63  | 68  |
|                                   | Approx. sheet thickness              | 1 or 1.5  | 1.5   |
| Versions                          | Standard design                      | thermally insulated   | thermally insulated   |
|                                   | With glazing                         | •   | –   |
|                                   | With additional top panel            | –   | –   |
|                                   | With additional fire retardancy      | •   | •   |
|                                   | With additional soundproofing        | 32 dB   | 32 dB   |
|                                   | With additional burglar resistance   | –   | –   |
|                                   | In stainless steel                   | •   | –   |
|                                   | Test certificate/Registration number | Z-6.20-1919   | Z-6.20-1987   |

• possible – not possible

All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension



## Multi-purpose steel doors – diversity for warehouse and office

Novoferm has designed its steel doors to meet a multitude of requirements. Sturdy and solid, they are perfectly able to cope with the harsh everyday life of a door, e.g. in the workshop or warehouse. Our multi-purpose doors are, however, also fitted with a rebate cover – similar to front doors – which makes them equally suitable for use in public areas, such as office or administrative environments. The diverse choice of glazing and a wide range of special models offer interesting options for adapting the doors to your individual needs. By the way: many of the standard sizes can be supplied at short notice.



### Choice of features

Not just the shape and size of the glazing, but also the type of glass used in Novoferm multi-purpose doors can be matched to the widest range of different applications. Combinations with fanlight, smoke protection and soundproofing are equally possible.

### Special requests? Talk to us

Our multi-purpose doors can be individually modified, depending on the structural requirements. One example of a more unusual solution is the use as an inspection opening with special activation.



### Multi-purpose doors: Description

**Door/door leaf:** double-walled, made of galvanised sheet steel, filled with mineral wool for thermal insulation

**Type MZ 53:** rebate on three sides, the thick rebate, similar to front doors, is a special quality feature

**Type MZ-1:** rebate on two sides, thin rebate

**Sill:** Standard: floor level (A), sills with four-sided continuous frame (B1, B2, B3), with lower rebate (C) and sealing sills with lowerable floor seal (RS1) or hump sills (RS2) optionally available

#### Special features/Special doors

- Door closer
- Panic lock
- Butt wall connection
- Ventilation grating (incorporated into the leaf)
- Top panel/Fanlight
- Ventilation louvres/Special doors

### Standard sizes

| Single-leaf multi-purpose doors |                | Two-leaf multi-purpose doors |                |
|---------------------------------|----------------|------------------------------|----------------|
| CS 750 x 2000                   | CP 670 x 1959  | CS 1500 x 2000*              | CP 1420 x 1959 |
| CS 875 x 1875                   | CP 795 x 1834  | CS 1500 x 2125*              | CP 1420 x 2084 |
| CS 875 x 2000                   | CP 795 x 1959  | CS 1750 x 2000*              | CP 1670 x 1959 |
| CS 875 x 2125                   | CP 795 x 2084  | CS 1750 x 2125*              | CP 1670 x 2084 |
| CS 1000 x 2000                  | CP 920 x 1959  | CS 2000 x 2000               | CP 1920 x 1959 |
| CS 1000 x 2125                  | CP 920 x 2084  | CS 2000 x 2125               | CP 1920 x 2084 |
| CS 1125 x 2000                  | CP 1045 x 1959 | CS 2000 x 2500               | CP 1920 x 2459 |
| CS 1125 x 2125                  | CP 1045 x 2084 | CS 2125 x 2125               | CP 2045 x 2084 |
| CS 1250 x 2000                  | CP 1170 x 1959 | CS 2250 x 2250               | CP 2170 x 2209 |
| CS 1250 x 2125                  | CP 1170 x 2084 | CS 2500 x 2500               | CP 2420 x 2459 |
| CS 1250 x 2250                  | CP 1170 x 2209 |                              |                |

\* up to CS width 1750 leaf division approx. 1/3 : 2/3, larger CSs symmetrical 1/2 : 1/2  
All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

**Full-leaf MZ 53** can be supplied immediately (longer lead time if **glazing** is required)  
**Sheet thickness** 1 mm  
**Active leaf** DIN left or DIN right

**CS** = Co-ordinating size (order size)  
**CP** = Clear passage dimensions, whole door and/or both leaves

# Multi-purpose doors

Single-leaf and two-leaf steel multi-purpose doors with thick or thin rebate

Single and double full-leaf doors made of steel, with double-walled thermal insulation, glazing optionally available. Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## Hardware

MZ-1 and MZ-2: Per leaf: 1 hinge plate and 1 spring hinge in accordance with DIN 18272. DPC mortise lock with drawback latch incl. tumbler lock insert with key, with black rounded handle set, turn lock mounted.

MZ 53-1 and MZ 53-2: Per leaf: 2x 3-part standard hinge plates (3 if CS height exceeds 2500 mm) with ball bearings; also available with 3D hinges on request.

Spring hinge per leaf up to CS 1250 x 2250 mm 1 securing pin (2 if height exceeds 2125 mm).

Reinforcement for door closer on hinge side. DPC mortise lock with drawback latch, with black rounded handle set (turn-lock mounted). MZ 53-2: Central transom profile on inactive leaf with concealed forend edge bolt (bolting upwards and downwards), incl. centre rebate seal

## Profile cylinder

must be lengthened by 0/10 mm on MZ 53-1 and MZ 53-2 (if standard hardware is used)

## Frames

MZ-1 and MZ-2: Corner frame with four-sided EPDM rubber seal, with masonry dowel

MZ 53-1 and MZ 53-2: Standard corner frame with four-sided EPDM rubber seal, with masonry dowel. Wrap-around frame, counter-frame, block frame or frame for lightweight partition walls optionally available

## Surfaces

Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

The following can also be supplied on request

- Glazing
- Top panel/fanlight
- Soundproofing (not for type MZ-2)
- Smoke protection in accordance with DIN 18095

MZ 53-1: 625 x 1750 to 1350 x 2500 CS, with door closer and lowerable floor seal or hump sill

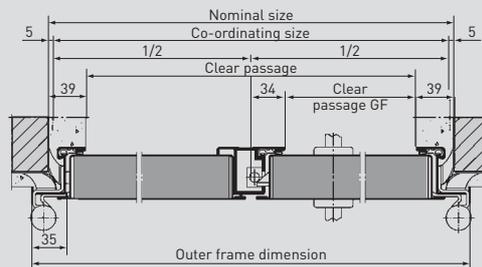
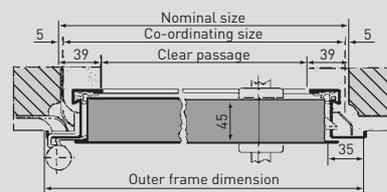
MZ 53-2: 1375 x 1750 to 2500 x 2500 CS, with door closer, lock coordinator, rebate retracting bolt, centre rebate seal, lowerable floor seal or hump sill



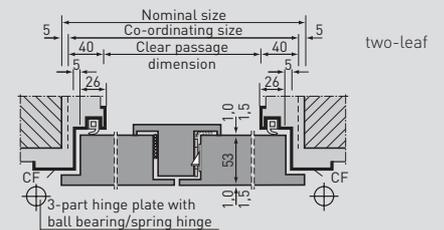
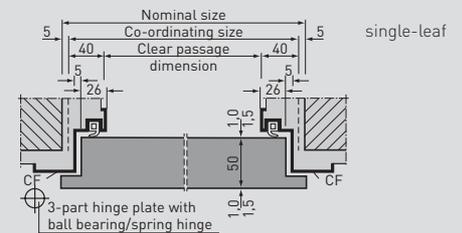
MZ-1 / MZ-2  
Multi-purpose door with thin rebate



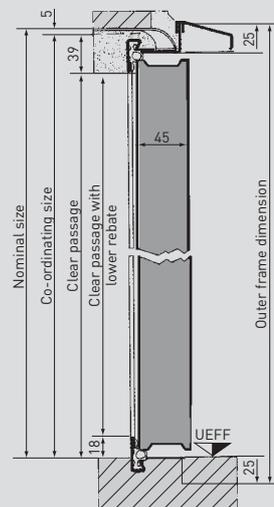
MZ 53-1 / MZ 53-2  
Multi-purpose door with thick rebate



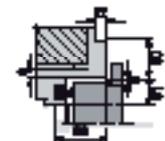
Horizontal section



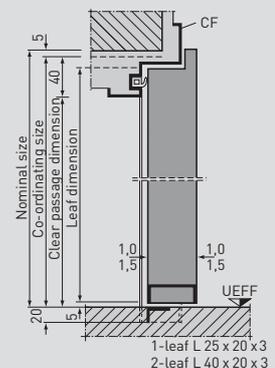
Horizontal section



Vertical section



Header



Door



sill A

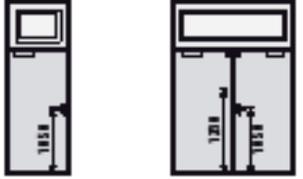


sill C

Vertical section

# Multi-purpose doors

## Technical data

| Resistance class/Type<br>Designation   |  | MZ-1 / MZ-2<br>Single and two-leaf multi-purpose door                               |   | MZ 53-1 / MZ 53-2<br>Single and two-leaf multi-purpose door                         |   |             |
|--|--|---|---|---|---|-------------|
| Models   |  |   |   |  |   |             |
|  | Co-ordinating size (CS)  | Width min. – max.   | 650 - 1250                                      | 1500 - 2250   | 500 - 1500  | 1000 - 3000 |
| Leaf dimensions  |  | Height min. – max.  | 1750 - 2125                                     | 2000 - 2125   | 1000 - 3500   | 1000 - 3500 |
|  | Approx. leaf thickness   |   | 45  | 45  | 53  | 53          |
|  |  | Sheet thickness   | 0.88  | 0.88  | 1 or 1.5 / 2  |             |
|  | Type of opening  | in accordance with DIN  |   | Left or right   |   |             |
| Versions   | With thermal insulation (w/m <sup>2</sup> K, w/o Glas) <sup>1)</sup> |   | 1.7   | –   | 0.8   | 0.8         |
|  | With additional glazing  |   | •   | •   | •   | •           |
|  | With additional top panel/fanlight                                   |   | –   | –   | •   | •           |
|  | With additional smoke protection                                     |   | –   | –   | •   | •           |
|  | With additional soundproofing <sup>2)</sup>                          |   | approx. 39 dB                                   | –   | 35 dB   | 34 dB       |
| <sup>1)</sup> MZ-1 in acc. with EN ISO 12567-1, MZ 53-1 and MZ 53-2 in acc. with DIN 52619   |  |   |   |   |   |             |
| <sup>2)</sup> MZ-1 = RWp on full-leaf, MZ 53-1 and MZ 53-2 soundproofing in acc. with DIN 52210, laboratory value for version with centre seal rebate and lowerable floor seal |  |   |   |   |   |             |
| Available types of glazing   | Standard rectangular types of glazing                                |   | Standard glass dimension for MZ-1<br>230 x 1360 |   | Available standard glass dimensions:<br>200 x 600<br>500 x 400<br>460 x 910<br>460 x 1500   |             |
|  | Standard diamond-shaped glazing                                      |  | –   |   | Available standard glass dimensions:<br>300 x 300<br>400 x 400<br>500 x 500   |             |
|  | Standard round glazing   |  | –   |   | Available standard glass dimensions:<br>Ø 300<br>Ø 400<br>Ø 514   |             |
|  | Special glazing  |  | –   |   | From 150 x 150 to 1000 x 1500 mm<br>Frieze width ≥155<br>Also available as multi-pane glazing with vertical and horizontal transoms |             |
| Types of glass / Holding strips  | Standard rectangular / diamond-shaped / round glazing                |   |   |   | Glass holding strips  |             |
|  | Wire glass 6 – 7 mm  |   | –   |   | •  angular                                     |             |
|  | VSG laminated glass 6 mm   |   | –   |   | •  Steel                                       |             |
|  | ISO wire glass/VSG (laminated glass) 19 mm                           |   | –   |   | •  Steel + aluminium                           |             |
|  | ISO-glass VSG (laminated glass)/VSG 19 mm                            |   | –   |   | •  Steel / stainless steel                     |             |
|  | Special rectangular glazing  |   |   |   | • Glass holding strips  |             |
|  | Wire glass 6 – 7 mm  |   | –   |   | • for angular special glazing   |             |
|  | Wire ornamental glass 6 -7 mm  |   | •   |   | •    |             |
|  | ESG single pane security glass 6 mm                                  |   | –   |   | •    |             |
|  | VSG laminated glass 6 mm   |   | –   |   | •    |             |
| ISO wire glass/VSG (laminated glass) 19 mm   |  | –   |   | • Steel / stainless steel   |   |             |
| ISO wire ornamental glass/VSG (laminated glass) 19 mm  |  | •   |   | • with aluminium cover  |   |             |
| ISO-glass VSG (laminated glass)/VSG 19 mm  |  | –   |   | •   |   |             |

• possible – not possible All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

The secured window strip on glazed doors is standard fitted on the hinge side (opposite hinge side is also possible on request). All glazing dimensions listed above refer to the clear look-through per door leaf (sketch shows an example for door size 1000 x 2000 mm)

The standard steel glazing frames (powder-coated in RAL 9016) for rectangular glazing can additionally be fitted with cover profiles made from aluminium E6/EV1 anodised. Glazing profiles for round and rectangular glazing can also be supplied in polished stainless steel.



## Special doors – for very special requirements

Novoferm offers a range of special doors to meet very specific requirements in property construction. Transformer doors guarantee sufficient air exchange in critical areas, whereas special doors for prisons or detention facilities are designed specifically to prevent any exchange. Soundproof doors also prevent exchange, since they ensure acoustic separation up to SV 48 dB.





### **Transformer doors guarantee optimal air flow**

Our ventilation louvres are designed with a free geometrical cross-section of approx. 50% of the clear dimension to guarantee comprehensive air flow. On request, we can also integrate special supply air gratings into the door leaf, together with additional air extraction above the door if an even faster air flow is required.

### **A new definition of “one-way doors”**

The use of detention doors is nowadays by no means restricted to prisons. We therefore manufacture steel doors with the typical features for even smallest-size series.

### **Time for peace and quiet**

The environmental impact of noise is increasingly becoming a focus of awareness. Specially designed soundproof doors by Novoferm guarantee effective soundproofing up to SV 48 dB.



# Special doors

Transformer doors, soundproof doors, detention/cell doors

Steel doors for special industrial, energy management or detention (prison) requirements. Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.

## Ventilation louvres for transformer doors

Special feature for multi-purpose doors, galvanised, free geometrical cross-section approx. 50% of the clear dimension:  
 a) fixed installation in the door, with bolstered, galvanised insect screen  
 b) fixed installation above the door, with L frame and transom (please indicate ceiling or header connection)  
 c) free-standing installation: with Z frame, continuous on four sides for installation in masonry or concrete

**Soundproof doors** (special design) SV 48 dB soundproofing (laboratory value) and thermally insulated, tested to DIN EN ISO 140-3 by officially recognised testing agency, evaluated in accordance with DIN EN ISO 717-1

## Detention doors/Cell doors (prisons)

Single-leaf steel cell doors that meet the special requirements of detention facilities

## Door leaf

Rebate on three sides, double-walled, completely filled with gypsum plasterboard and mineral fibre panels (soundproof doors) and/or mineral wool mats (detention doors), overlap thickness of min. 20 mm on detention doors

## Hardware

Soundproof doors: 2x three-part hinges with ball bearings, 1 E-65-24 DIN 18250 lock with catch and bolt, pre-assembled for on-site profile cylinder (profile cylinder must be lengthened by 5/15 mm if standard hardware is used), 1 handle set with short plate.

Detention doors: 2x three-part hinges with fixed pin and ball bearing baffle rings, 1x hinge lock, 1x 200° spy-hole with security rosette plates.

Leaf and frame are prepared for on-site cell mortise lock without espagnolette function (e.g. STUV 8.13.0101.3 or 4)

## Frames

Corner frame with continuous rubber seal on three sides, complete with anchors, detention doors with floor parting angle

## Sills

Soundproof doors with lowerable floor seal and B3 sill with continuous four-sided frame

## Surfaces

Door leaf and frame galvanised and primed (powder-coated) in RAL 9016.



Transformer doors  
Ventilation louvres



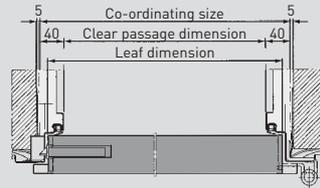
Soundproof doors  
DB-1 type 48



Detention doors  
Prison cell doors



... integrated into the leaf

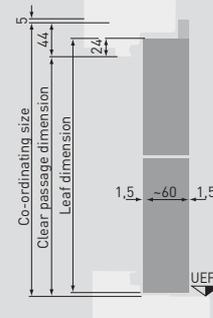
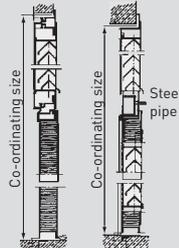


Horizontal section

Property-specific

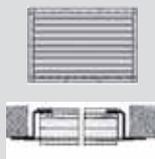


... integrated into the leaf



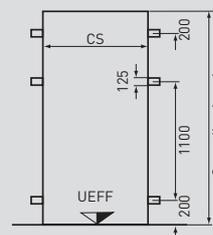
Vertical section

Property-specific



... free-standing installation

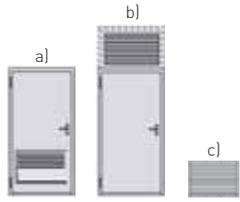
## Anchor plan



Property-specific

# Special doors

## Technical data

| Designation |  | Transformer doors<br>Ventilation louvres   | Soundproof doors<br>DB-1 type 48  | Detention doors<br>Prison cell doors   |
|-------------|--|--|---|--|
| Models      |  |                         |  |   |
| Dimensions  | Dimensions                             | a) 4-sided frieze $\geq 150$<br>b) Height min. 250<br>max. 1250<br>c) min. 250 x 250<br>max. 2500 x 1500 | CS min. 875 x 2000<br>max. 1250 x 2500<br>(750 x 2000 46 dB only)                   | CS min. 750 x 1875<br>max. 1250 x 2250   |
|             | Approx. weight                         | 42 kg / m <sup>2</sup>   | -   | -  |
|             | Approx. leaf thickness                 | -  | 63  | 54   |
|             | Approx. sheet thickness                | -  | 1.5   | 2  |
| Door leaf   | Type of opening in accordance with DIN | Left or right  | Left or right   | Left or right  |
| Version     | With thermal insulation                | -  | •   | •  |
|             | With soundproofing                     | -  | •   | •  |
|             | Optional special features              | -  | -   | <ul style="list-style-type: none"> <li>• Leaf and frame are prepared for on-site cell mortise lock with espagnolette function (e.g. STUV 8.13.0002.3 or 4)</li> <li>• Food flap, flush with the door leaf, standard size: 270 x 225 mm or available in special sizes, prepared for on-site food flap lock (e.g. STUV 8.13.0201.9)</li> <li>• Wrap-around frame</li> <li>• Steel security chain (padlock chain)</li> <li>• Additional locking bolt, 200 mm long (attached sliding bolt)</li> <li>• Integrated special sliding bolt with position-locking function</li> <li>• Special rubber seal for the frame</li> <li>• Special sill versions</li> <li>• Protective door plate in stainless steel</li> <li>• Noise reduction coating</li> <li>• Third door hinge</li> <li>• Door leaf with fire-resistant inlay</li> <li>• Can also be supplied complete with specified STUV locks, other types of lock optionally possible</li> <li>• Special features to meet your needs and/or prison requirements (on request)</li> </ul> |

• possible – not possible

All dimensions indicated in mm, CS = Co-ordinating size, OFD = Outer frame dimension, CP = Clear passage dimension

# Installation advantages

of Novoferm steel doors

## Invisible screw mounting in fair-faced concrete and fair-faced masonry

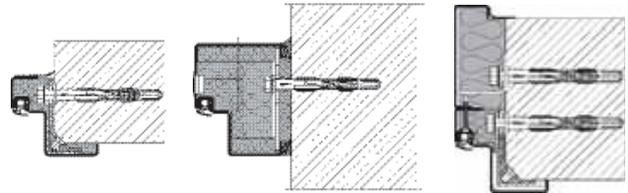
- Rapid installation of corner, block and add-on frames
- Easy installation: quickly and easily screwed
- Top quality appearance of the frame and door is sustained
- Choice of: Back-filling with mortar compound or approved mineral wool moulded sections from Novoferm
- up to CS 1250 x 2500 mm (1-leaf) or 2500 x 2500 mm (2-leaf)

suitable for following types of doors<sup>1)</sup>:

|                  |                                      |
|------------------|--------------------------------------|
| <b>T30 doors</b> | T30-1 N2/50, T30-2 N22/50, T30-2 N22 |
| <b>T90 doors</b> | T90-1 N9, T90-1 N19, T90-1 N29       |
| <b>MZ-doors</b>  | MZ 53-1, MZ 53-2                     |

<sup>1)</sup> not available for doors with burglar resistance or top panel/fanlight

Corner frame      Block frame      Corner frame with add-on frame

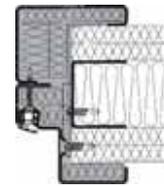


Novoferm screw-mounting frames are supplied together with the **approved installation kit**. The installation parts are already pre-assembled in the case of block frames.

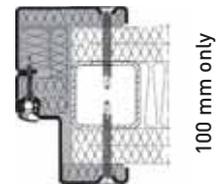
## Innovative installation solution, even for F90 mounting walls

- **T30 and MZ doors:** Frames can now be invisibly screw-mounted on all mounting walls specified in DIN 4102, part 4, table 48.
- New concealed installation technique for flawless door appearance
- Not a single visible screw on the frame facing
- Installation requires no more effort than conventional frames
- Ideal for installation in existing walls
- Suitable for standard wall thicknesses of 100, 125 and 150 mm
- Suitable for following types of doors: T30-1 N2/50, T30-2 N22/50, MZ 53-1, MZ 53-2
- **T90 doors** can now even be installed in 100 mm DIN walls
- And in virtually any standard F90 firewall system
- Any dimension between 500 x 500 mm (wall flap) and 2500 x 2500 mm (2-leaf door) is possible
- Suitable for following types of doors: T90-1 N9, T90-1 N19, T90-2 N29

**T30 now with concealed screw mounting** for a flawless door appearance



**T90 for DIN walls starting at 100 mm, for virtually any mounting wall system**



100 mm only

## Quick back-filling of the frame with approved moulded mineral wool sections

- Marked reduction in thermal bridges compared with mortar filling
- Easy-to-mount cover strip creates a neat frame edge (on corner frame / corner frame with add-on frame for installation in masonry / concrete)
- Very simple handling generates cost benefits
- Can be combined with screw, plug and welded installation
- Approved for all T30 corner, block and add-on / overlapping counterframes, single or double leaf (except T30-2 type N22)
- up to CS 1350 x 2500 mm (1-leaf) or 2500 x 2500 mm (2-leaf)

suitable for following types of doors<sup>1)</sup>:

|                  |                           |
|------------------|---------------------------|
| <b>T30 doors</b> | T30-1 N2/50, T30-2 N22/50 |
| <b>MZ doors</b>  | MZ 53-1, MZ 53-2          |

<sup>1)</sup> not available for doors with burglar resistance or top panel/fanlight

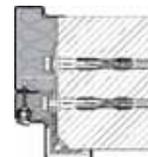
**Corner frame**

for installation in masonry, concrete or foam mortar, with mineral wool back-filling



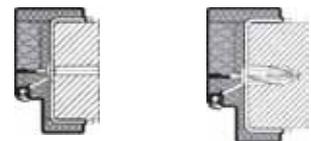
**Corner frame with add-on frame**

consisting of corner frame and add-on frame, for installation in masonry or concrete, with mineral wool back-filling



**Corner and overlapping counterframe**

for installation in masonry, concrete or foam mortar, with mineral wool back-filling



**Block frame**

for installation in masonry or concrete, with mineral wool back-filling



### Our frame back-filling – nothing could be easier!

Perfectly made-to-measure and approved moulded mineral wool sections made by Novoferm are supplied for back-filling the types of frames shown on the right.



# Frame mounting hardware

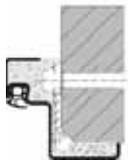
for T30 and T90 fire-resistant doors and steel multi-purpose doors

in masonry or concrete

in approved foam mortar walls

## N series

(please also refer to the anchor plans overleaf)



**T30 Corner frame**  
Screw mounting in fair-faced concrete/fair-faced masonry



**T90 Corner frame**  
Screw mounting in fair-faced concrete/fair-faced masonry



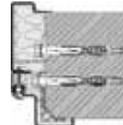
**Corner frame**  
Dowel mounting in plaster-coated wall surfaces



**Corner frame**  
Dowel mounting in fair-faced concrete/fair-faced masonry



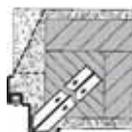
**Wrap-around frame**  
Dowel mounting



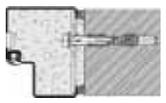
**Corner frame with add-on frame**  
T30-1 type N2/50  
T30-2 type N22/50  
T30-2 type N22  
Invisible screw mounting in fair-faced concrete/fair-faced masonry



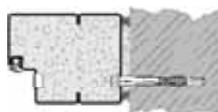
**Corner frame**  
Weld-on installation in fair-faced concrete/fair-faced masonry



**Corner frame**  
Wall anchor mounting on plaster-coated walls



**T30 BlockFrame**  
Screw mounting in fair-faced concrete/fair-faced masonry



**T30 BlockFrame with trimming profile**  
Screw mounting with butt wall connection in fair-faced concrete/fair-faced masonry



**T90 BlockFrame**  
Screw mounting in fair-faced concrete/fair-faced masonry



**T90 BlockFrame with trimming profile**  
Screw mounting with butt wall connection in fair-faced concrete/fair-faced masonry

## H series



**Corner frame T30 type H8-5**  
corner frame with combined masonry dowels

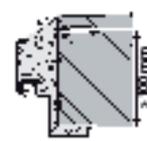
## N series

for wall thickness  $\geq 200$  mm

(frames as approved, a door closer is always needed on T30-1 doors)



**T30 Corner frame**  
Dowel mounting ①



**T90 Corner frame**  
Dowel mounting ①

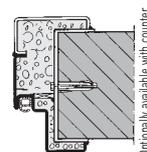


**T30/T90 Corner frame**  
Wall anchor mounting ②

for wall thickness  $< 200$  mm



**T30 Corner frame with counterframe, dowel mounting ①**  
(for wall thickness  $< 200$  mm)



**T90 Corner frame with counterframe, dowel mounting ①**  
(for wall thickness  $< 200$  mm)

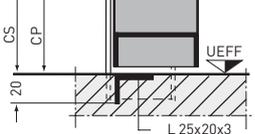
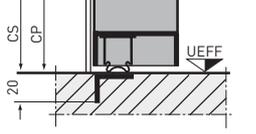
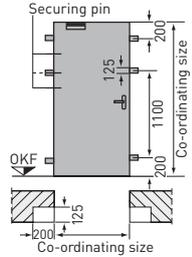
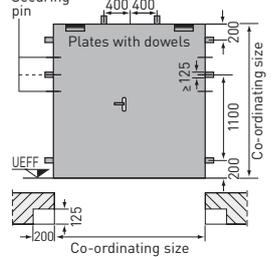
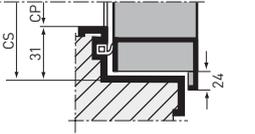
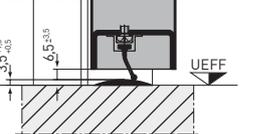
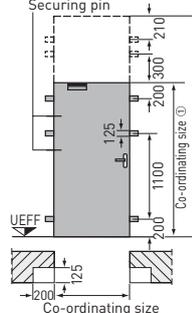
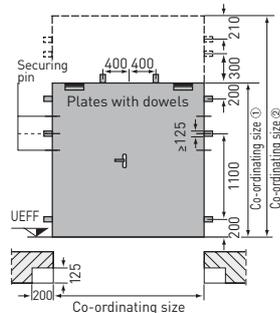
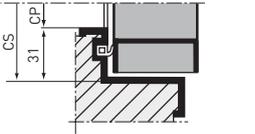
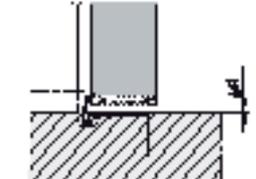
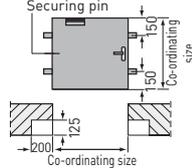
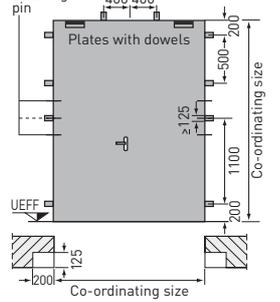
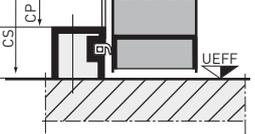
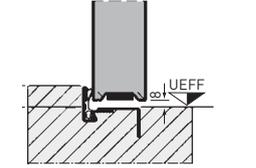
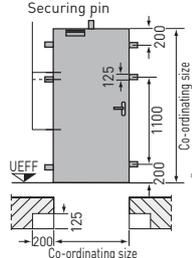
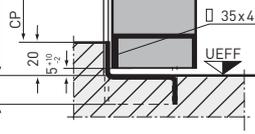
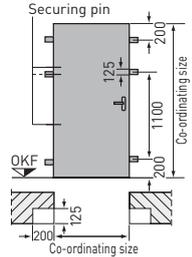
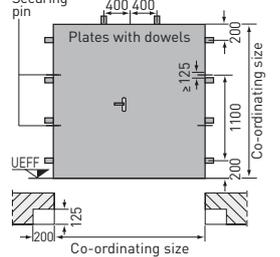
① Frame welded to pre-dowelled stirrup anchor. Building code-compliant foam mortar dowels needed.

② Frame fastened with frame anchors in cement mortar.

Please refer to the respective types of door for information on requisite minimum wall thicknesses

# Sills, anchor plans

for T30 and T90 fire-resistant doors and steel multi-purpose doors

| Sills   |  | Anchor plans   |  |
|---|--|--|--|
| <p><b>A sill floor level</b></p>   | <p><b>RS1 lowerable floor seal</b><br/>"Athmer Stadi BS<br/>fire-resistant"</p>   | <p><b>T30-1 type N2/50</b><br/><b>T90-1 type N19</b></p>                       | <p><b>T30-2 type N22/50</b><br/><b>T30-2 type N22 ≤ 2500 x 2500 mm</b><br/><b>T90-2 type N29</b></p>  |
| <p><b>B1 sill with continuous frame on 4 sides</b></p>                                 | <p><b>RS2 sealing sill II</b><br/>(hump sill)</p>                                 | <p><b>T30-1 type N2/50</b></p>    | <p><b>T30-2 type N22/50</b><br/><b>T30-2 type N22 ≤ 2500 x 2500 mm</b></p>                           |
| <p><b>B2 sill with continuous frame on 4 sides</b></p>                               | <p><b>T30 standard sill type H8-5</b><br/>with continuous frame on 4 sides</p>  | <p><b>T30-1 type N2/50 wall flap</b><br/><b>T90-1 type N9 wall flap</b></p>  | <p><b>T30-2 type N22 &gt; 2500 x 2500 mm</b><br/><b>T90-2 type N39</b></p>                          |
| <p><b>B3 sill with continuous frame on 4 sides, door leaf rebate on 3 sides</b></p>  | <p><b>T30 sill type H8-5</b><br/>with lower rebate</p>                          | <p><b>T30 type H8-5</b></p>  <p>*Anchor plate for CS ≥ 875</p>               |   |
| <p><b>C sill with lower rebate</b></p>   | <p><b>T30 sill type H8-5</b><br/>rebate sill with floor seal</p>                | <p><b>MZ-1</b></p>   | <p><b>MZ-2</b></p>    |

If mounted without floor recess, an additional anchor must be fitted to both longitudinal posts at a height of 60 + 20 mm from the upper edge of the finished floor (UEFF).

# Programme overview

Fire-resistant doors, smokeproof doors, multi-purpose doors and special doors

|                      | Designation       | Type | Version     | Fire-resistance<br>in accordance with DIN 4102-5                                    | Smoke protection<br>in accordance with DIN 18095                                     | Sound insulation  | Burglar-resistant<br>RC class  |
|----------------------|-------------------|------|-------------|---|--|---|--|
| Fire-resistant doors | H8-5              | Door | 1-leaf      |    |    |    | No   |
|                      | T 30-1 N2/50      | Flap | 1-leaf      |    |    |    |   |
|                      | T 30-1 N2/50      | Door | 1-leaf      |    |    |    |   |
|                      | T30-2 N22/50      | Door | 2-leaf      |    |    |    |   |
|                      | T30-2 N22         | Door | 2-leaf      |    |    |    | No   |
|                      | T90-1 N9          | Flap | 1-leaf      |    |    |    |   |
|                      | T90-1 N19         | Door | 1-leaf      |   |   |   |  |
|                      | T90-2 N29         | Door | 2-leaf      |  |  |  | No   |
|                      | T90-2 N39         | Door | 2-leaf      |  |  |  | No   |
| Smokeproof doors     | MZ 53 RS-1        | Door | 1-leaf      | No  |  |  | No   |
|                      | MZ 53 RS-2        | Door | 2-leaf      | No  |  |  | No   |
| Multi-purpose doors  | MZ-1              | Door | 1-leaf      | No  | No   |  | No   |
|                      | MZ-2              | Door | 2-leaf      | No  | No   | No  | No   |
|                      | MZ 53-1           | Door | 1-leaf      | No  |  |  | No   |
|                      | MZ 53-2           | Door | 2-leaf      | No  |  |  | No   |
| Special doors        | Transformer doors | Door | 1 or 2 leaf | No  | No   | No  | No   |
|                      | Soundproof doors  | Door | 1 or 2 leaf | No  | No   |  | No   |
|                      | Detention doors   | Door | 1-leaf      | No  | No   |  | Special request  |

# Programme overview

Fire-resistant doors, smokeproof doors, multi-purpose doors and special doors

| Thermal insulation<br>(documented)  | Glazing | Top panel possible | Type of rebate | Co-ordinating size (in mm) |                   |
|---|---------|--------------------|----------------|----------------------------|-------------------|
|   |         |                    |                | min.                       | max.              |
|    | No      | No                 | Thin rebate    | 625 x 1750                 | 1000 x 2125       |
|    | No      | No                 | Thick rebate   | 500 x 500                  | 1250 x 1500       |
|    | Yes     | Yes                | Thick rebate   | 625 x 1500                 | 1350 x 2500       |
|    | Yes     | Yes                | Thick rebate   | 1375 x 1750                | 3000 x 3000       |
|    | Yes     | Yes                | Thick rebate   | 1375 x 1750                | 3000 x 3000       |
|    | Yes     | No                 | Thick rebate   | 500 x 500                  | 1250 x 1750       |
|   | Yes     | No                 | Thick rebate   | 625 x 1750                 | 1375 x 2500       |
|  | Yes     | No                 | Thick rebate   | 1375 x 1750                | 2500 x 2500       |
|  | No      | No                 | Thick rebate   | 1375 x 1750                | 3000 x 3000       |
|  | Yes     | Yes                | Thick rebate   | 625 x 1350                 | 1350 x 2500       |
|  | Yes     | Yes                | Thick rebate   | 1375 x 1750                | 2500 x 2500       |
|  | Yes     | No                 | Thin rebate    | 650 x 1750                 | 1250 x 2125       |
| No  | Yes     | No                 | Thin rebate    | 1500 x 2000                | 2250 x 2125       |
|  | Yes     | Yes                | Thick rebate   | 500 x 1000                 | 1500 x 3500       |
|  | Yes     | Yes                | Thick rebate   | 1000 x 2000                | 3000 x 3500       |
| No  | No      | Yes                | Thick rebate   | Property-specific          | Property-specific |
|  | No      | No                 | Thick rebate   | 875 x 2000                 | 1250 x 2500       |
|  | No      | No                 | Thick rebate   | 750 x 1875                 | 1250 x 2250       |

## **Novoferm. On-site. Direct. Europe-wide.**

The Novoferm Group is one of the leading European system suppliers of doors, garage doors, frames and operators. We offer a large range of products and services for private, commercial and industrial applications. All our products are manufactured according to state-of-the-art technology and highest quality standards. We therefore integrate maximum functionality and innovative design. We manufacture our products in various international locations and with our Europe-wide sales network we are always able to deal with you - wherever you are!

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