



**Rolling shutters and rolling grilles in  
aluminium or steel**

**Synthesis of functionality and flexibility**



# Rolling shutters and rolling grilles

in aluminium or steel

## Individual and universal

Our rolling shutters and grilles can be supplied in standard sizes or special sizes to suit your specific needs. All products supplied conform to the latest directives and standards.

The profile design and high quality clear varnish coating of the aluminium shutters makes your rolling shutter the calling-card of your premises. Painted surfaces are also available on request.



# Rolling shutters and rolling grilles

in aluminium or steel



## Security tested

All our rolling shutters and grilles have the necessary certifications, and have been security tested to most standard sizes.

Included within these tests, are the direct drives with integrated fail-safe devices which is an important section of the standards to which our doors fully comply.



# Rolling shutters and rolling grilles

## Overview and description

### Type summary

#### Rolling shutters and rolling grilles



**Rolling shutter TH80** double skinned thermally insulated profile in natural aluminium, varnished or paint finish, also available with window profiles  
Page 6



**Rolling shutter TH100** double skinned thermally insulated profile in natural aluminium, varnished or paint finish, also available with window profiles  
Page 6



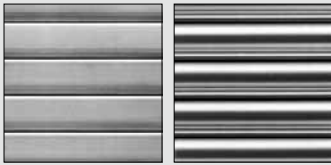
**Rolling shutter V80 and V80 L** single skin profile in natural aluminium or galvanized steel, also available with paint finish.  
Page 7



**Rolling grille RG** in natural aluminium or galvanized steel, also available with paint finish.  
Page 7

### Technical description

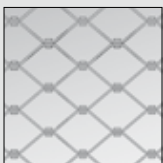
#### Rolling shutter curtain



Double skinned ... or single skinned

The profiles are produced with interconnecting hinge quirk sections (for greater detail see page 6 & 7), these sections have a water-draining performance. The roller shutter curtain is fixed to the drum, the bottom profile for the **V80** and **TH100** is a reinforced aluminium profile with flexible seal while the seal for the **TH80** connects straight to the standard profile. All floor seals have a good degree of flexibility to compensate for irregular floor levels. **TH80** and **TH100** profiles are secured against displacement/lateral movement by the inclusion of end locks, **V80** profiles are secured in the hinge area.

#### Rolling grille curtain



Flat material

In honeycomb form. Wire mesh connected to each other by strong joint connectors. Lower edge of the rolling grille reinforced by an angular closing edge of steel, dimensioned according to the grille width.

#### Guide rails

Made of galvanized steel (see page 8), can be used in welding and bolt on construction installation types, and comes standard with low-wear plastic strips for noise reduction.

#### Drum construction

Primed steel construction, 168mm minimum drum for improved winding of the door curtain, with a 1/500 distortion along its length.

#### Self-aligning ball bearing

Heavy-duty dimensioning for the connection of the drum, placement on brackets.

#### Drum bracket

This can be fixed using anchor bolts, screw through or welding. In the case of welding the bracket is fastened against the on-site steel under-structure or pre-installed anchor plates, according to our alignment plans.



**Direct drive (standard):** Low maintenance, completely oil-sealed, encased worm-drive safety gear – attached directly to the steel shaft of the drum, with clearly reduced installation and maintenance effort compared to other alternatives. Integrated fail-safe device low maintenance, self-checking and independent of position, as well as an encased limit-switch unit flanged directly onto the gear, with precisely adjustable final and safety limit switches. Emergency manual crank or fast-action hand-operated chain-hoist for manual operation in case of power failure. All electric connections can be plugged into the drive. Operating voltage 400 V three-phase a.c. current. Drive TÜV and VDE tested.

#### Sprocket chain wheel drive with fail-safe device (special dimensions):

Low maintenance, completely oil-sealed encased worm-drive safety gear with integrated limit-switch unit, including emergency manual crank or fast-action hand chain-hoist – as described in case of direct drive, however with the necessary sprocket chain wheels of steel and the appropriate roller chain for the power transfer from the drive to the drum roller. For this, the TÜV approved fail-safe device is required; this prevents the door-leaf from dropping down, even in case of failure of the supports.

**Control (standard):** Modular assembly shutter control with 24 V operating voltage, TÜV and VDE tested, prewired with motor and control circuits for the drive, as well as power cable with CE plug, including touch-sensitive keypad with "Open-Stop-Close" function for the operation of the shutter, without any external pushbutton having to be connected. In the basic version, the dead man's mode is standard, with which, for safety reasons, a shutter movement is implemented only as long as the operating pushbutton is pressed. The control can be retrofitted with additional modules through to automatic system function. Of course all operating and safety equipment usual in the roller door sector can be connected in addition, such as e.g. key-operated switch, pull switch, remote control, induction loop, photocells etc.

#### Installation / Electrical installation:

Our installation conditions are coordinated to the main existing standards. According to these, the installation and connection of all electric parts, in accordance with our circuit diagrams, as well as the power supply and wiring system of the parts with respect to each other with the necessary lines, are services provided on-site. Main fusing and lockable main power switch normally provided by the customer, can also be installed.

**Note:** The following alternatives are also available:

- Electrical drives for alternating current, 230 V operating voltage
- Manual operation through spring shaft as self-roller (for shutters up to 3000 x 2800 mm)

# Rolling shutters and rolling grilles

Surface treatments, installation examples and applications

## Surface treatments

### TH80 rolling shutter

Natural aluminium with clear varnish finish as standard or with a painted coat finish on request.

### TH100 rolling shutter

Natural aluminium with clear varnish finish as standard up to approx. 12000mm widths or with a painted coat finish on request.

Aluminium end profile natural-untreated

### V80 Rolling shutter

Natural aluminium or galvanized steel as standard, or with a painted coat finish on request.

### V80 Ventilation profile

Galvanized steel as standard, or with a painted coat finish on request.

### RG Rolling grille

Natural aluminium or galvanized steel as standard, or with a painted coat finish on request.

## Installation examples and applications



Extreme dimensions – we offer the optimum solution for almost every logistics challenge.



A side door in the fixed or pivoting side section can also be filled with profile sections, with visual similarity to the rolling shutter.



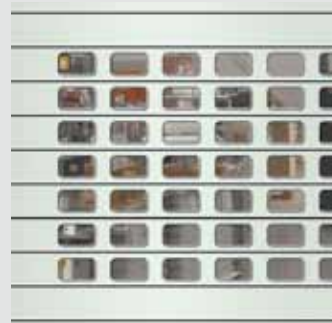
Also rolling shutters or rolling grilles offer solutions for a large variety of applications.



In case of internal lack of space, external rollers can be used. The weather-proof cladding can be architecturally appealing at the same time.



Rolling shutters traditionally guarantee secure and smooth work sequences in logistics companies.



Light cut-out sections with double-glazing combine transparency, light and visual contact with thermal-insulating properties and thus energy savings.



With our expertise, we also offer diverse and individual special solutions for unusual situations and special customer preferences.



Rolling grilles offer unobstructed ventilation with secure closure – ideal for underground garages.



Standard with our rolling shutters and rolling grilles is a control with touch-sensitive keypad "Open-Stop-Close" in dead man's mode – expandable with the usual control systems.



Profile sections are also available painted in a wide range of RAL colours.

# Rolling shutters

## Type summary and description

### TH80 Natural aluminium with clear varnish



**80mm, double skinned**, aluminium lath, approximately 20mm thick. With thermal-insulating polyurethane, non-plasticized foam core with adhesive-free connection to the shell, thus providing the highest level of surface stability. The especially developed profile section formed in high-quality optics, enables significantly tighter winding of the door curtain, allowing lower headroom requirements.

#### TH80 Natural aluminium with clear varnish



**Aluminium lath** with optimized profile section, winding and guide properties, resulting in low-noise and low abrasion running. Plastic side locks help prevent lateral displacement of the lath, also aiding the smooth-running operation. Manufacture dimensions max. 5,000 x 5,000 mm. TH80 ECO Speed max. 5,000 x 8,000 mm. End profile natural aluminium (untreated) as standard.

#### TH80 with paint coat (special surface)

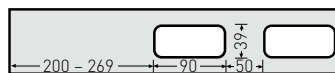


Specification as above, however there is an additional cost for this option. End profile natural aluminium (untreated) as standard.

#### THGL80 Aluminium glazed



Aluminium lath with double glazed windows, double-walled plastic inserts (opaque), a maximum of 5 lath sections with windows per rolling shutter, Surfaces as TH80.



### TH100 Natural aluminium with clear varnish



**100mm, double skinned**, aluminium lath. A more conventional profile section, approximately 23mm thick. With thermal-insulating polyurethane, non-plasticized foam core with adhesive-free connection with the shell, thus providing a high level of surface stability.

#### TH100 Aluminium natural with clear varnish



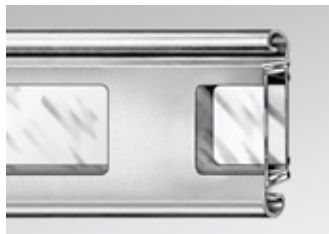
**Aluminium lath** with plastic side locks help prevent lateral displacement of the lath. Low-noise and smooth running operation. Natural aluminium surface with clear varnish. The maximum manufacture dimension is approximately 12000mm wide. All doors will have the bottom lath supplied in natural aluminium (untreated) as a standard.

#### TH100 with paint coat (special surface)

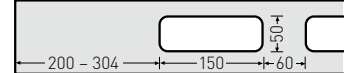


Specification as above, however there is an additional cost for this option, available on one or both sides. Maximum door size 6000mm x 5000mm. All doors will have the bottom lath supplied in natural aluminium (untreated) as a standard.

#### THGL100 Aluminium glazed



Aluminium lath with double glazed windows, double-walled plastic inserts (clear), a maximum of 10 lath sections with windows per rolling shutter, surfaces as TH100.

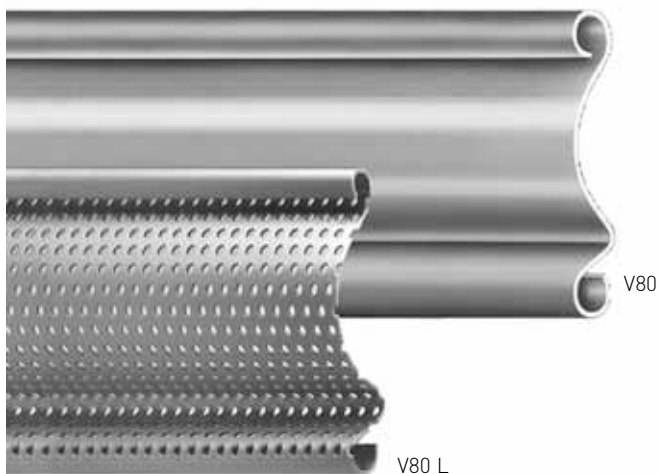


All of the rolling shutters presented here comply with the requirements of DIN EN 13241-1.

# Rolling shutters and rolling grilles

## Type summary and description

### V80 aluminium or steel



**Single-skinned 80 mm lath** with classic profile, available in two different metal structures: 1mm or 1.25 mm thick, weather-resistant, natural aluminium, or alternatively in, 0.75mm or 1 mm thick, steel with galvanized surface.

### V80 aluminium or steel



Lath available as above, the profile section thickness will change in accordance with the shutter size. Secured against lateral displacement with metal end pieces.

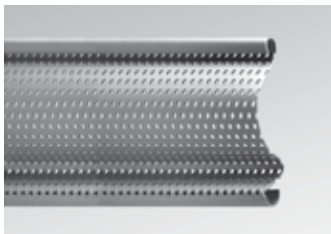
Standard surfaces natural aluminium or galvanized steel

### V80 with paint coat (special surface)



Specification as above, however there is an additional cost for this option, available on one or both sides. Maximum door size 6000mm x 5000mm (aluminium) and 4500mm x 4000mm (steel). End profile natural aluminium (untreated) as standard.

### V80 L steel



Single-skinned ventilation lath, available in steel only, 1 mm thick, with 5 mm perforations, allows approximately 25 % air passage.

Standard finish galvanized.

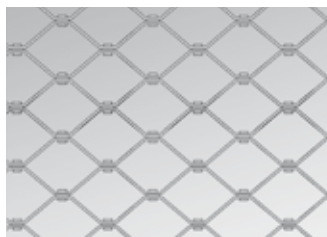
Paint coat option on both sides at additional cost. End profile natural aluminium (untreated) as standard.

### Rolling grille RG



Rolling grilles offer a secure barrier while simultaneously giving optimum ventilation. For this reason they are ideal, for example, for underground garages. Two types of grille are available in well-proven honeycomb design: Both are made from flat material, and available in steel or aluminium.

### Rolling grille RG steel or aluminium



The rolling grille honeycomb design dimensions are approximately 185mm x 120 mm, available in **steel or aluminium**, flat material 16mm x 4mm, 20mm x 4mm and 23mm x 4 mm.

Surface finishes: galvanized steel or natural aluminium (untreated).

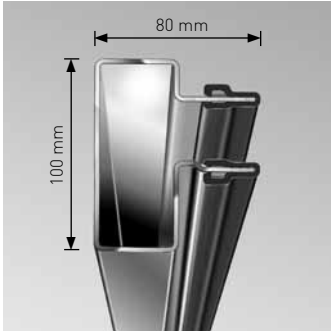
Special surface available for aluminium:

Anodized E6/EV1 or with paint coat (6000mm maximum width).

# Rolling shutters and rolling grilles

## Guide rail / end profile

### Guide rails



#### FS2 guide rail

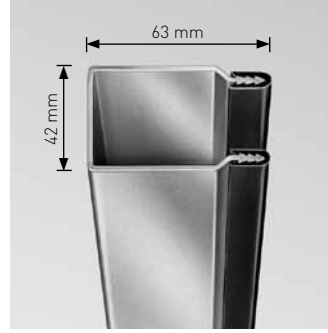
for all our rolling shutters

Guide rail of galvanized steel, with attached plastic strips, also with side sealing, possible installation methods: welding and also without welding using steel connectors.



#### Side seal for FS2 guide rail

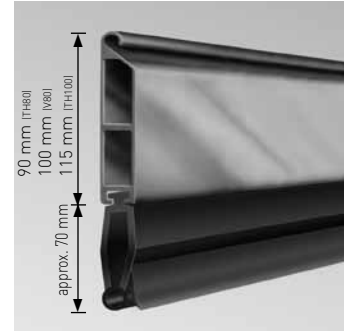
Countering heat loss and draught, plastic strips provided on shutter inner side with brush seal



#### FS1 guide rail

for rolling shutters V80 and rolling grilles RG  
Guide rail galvanized, with plastic strips.

### Closure profiles



#### RH End profile

for rolling shutters V80, TH80 and TH100 made of light metal, extruded, with permanently elastic weather seal.





# Rolling shutters and rolling grilles

Custom-built design / supplementary equipment

## Custom-built designs and supplementary equipment



### Burglary protection

Protects against the lifting of the shutter curtain, with lock cylinder, hand-grip, side locking bars and electronic safety switch included for on-site installation.



### Emergency control

from floor level, with emergency hand-operated chain-hoist.



### Accident prevention contact strip

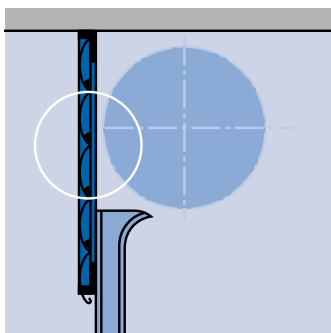
A contact strip is fitted within the bottom rubber profile of the curtain, this causes an instant stop if the closing shutter encounters an obstacle; then the shutter door opens to relieve the impact pressure. This is generally included in case of automatically operated shutters, otherwise on request.



### Personnel entrance door

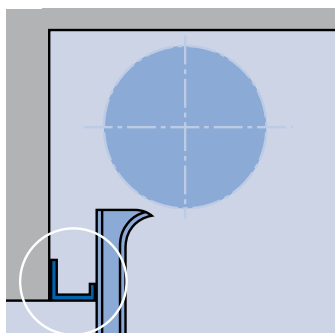
Standard size 875 x 2000 mm, for personnel traffic in case of closed shutter, pivoting or fixed side section (approx. 1050 mm total width).

- **Configuration a)** personnel entrance door as a double walled, single-leaf, multi-function door, fascia panel double-walled with insulation lining, galvanised and primed.
- **Configuration b)** personnel entrance door and fascia panel filled with rolling shutter louvres, galvanised steel frame, primed.
- **Configuration c)** special dimensions available at additional cost.



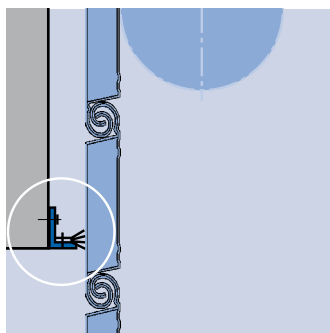
### Vertical fascia panel

required when no lintel exists. Panel from same profile sections as the shutter door leaf, stationary, mounted in steel frame, alternatively bent galvanised steel plate.



### Horizontal fascia panel

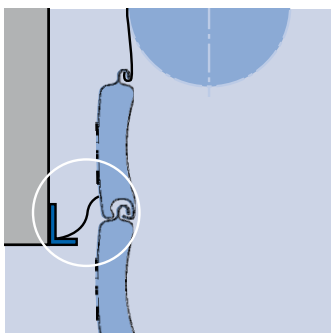
required when lintel is set back. Stationary panel, made of bent galvanised steel plate, according to shutter type either single-walled or insulated.



### Lintel seal for V80 / TH100

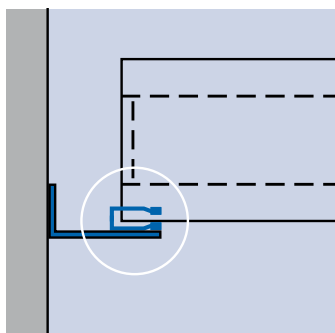
countering heat loss and draught:
 

- V80 with perlon brushes
- TH100 up to 5 m width with rubber lip seal, 5 m and wider with perlon brushes.



### Lintel seal for TH80

countering heat loss and draught: through TH80 louvre with fixed integrated plastic seal.



### Side mounting profile section

required when the necessary floor space required for installing the rolling shutter is non-existent or insufficient. Steel profile dimensioned in accordance with the shutter weight.



### Special structures

available at additional cost.



### Automatic servo lock

Bolts engage automatically on both sides every time the door is closed. The rolling shutter curtain is securely locked into the door frame by laterally extending steel bolts. (Not possible on rolling grilles.)

### Key-switch

(see next page)

### Other actuators:

- Pull switches
- Remote controls
- Photocells
- Warning lights
- Traffic lights
- Timers

# Rolling shutters and rolling grilles

## Operation

### Control with touch-sensitive keypad – standard for all our rolling shutters and rolling grilles



#### BoxControl D400 control unit

Standard for our rolling shutters and rolling grilles, plug-in-ready for 400/230V currents only, including 1.5 m connection wire with 16 A CEE moulded plug, as well as 2 x 5 m customized connecting wire for motor/limit switch con-

nection, operation through touch-sensitive keypad "Open-Stop-Close" in dead man's mode, expandable with additional controls e.g. through below-listed pushbutton switches and key-operated switches (at additional cost).



### Available pushbuttons and switches (at additional cost)

#### Pushbutton No. 2

Surface mounted, function "Open-Stop-Close" ("Stop" pushbutton in dead man's mode without function), Protection Type IP65.



#### Surface mounted key-switch No. 10

Surface mounted in light-metal cast housing with mechanical cover lock, with half cylinder lock, function "On-Off", Protection Type IP54.



#### Surface mounted key-switch No. 4

Surface mounted in light-metal cast housing with mechanical cover lock, with half cylinder lock, function "Open-Stop-Close", Protection Type IP54.



#### Surface mounted key-switch No. 5

Surface mounted in light-metal cast housing with mechanical cover lock, with half cylinder lock, function "On-Off" and "Open-Stop-Close", Protection Type IP54.



#### Flush mounted key-switch No. 7

Flush mounted in light-metal cast housing with mechanical cover lock, anodized front plate with half cylinder lock, function "Open-Stop-Close", Protection Type IP54, necessary cutout W 80 x H 140 x D 75 mm.



#### Flush mounted key-switch No. 6

Flush mounted in light-metal cast housing with mechanical cover lock, anodized front plate with half cylinder lock, function "On-Off" and "Open-Stop-Close", Protection Type IP54, necessary cutout W 80 x H 200 x D 75 mm.



#### Column No. 9 with built-in key-switch No. 7

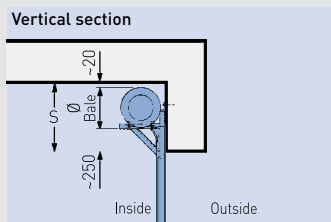
Column 1000 mm high, galvanized.



# Rolling shutters and rolling grilles

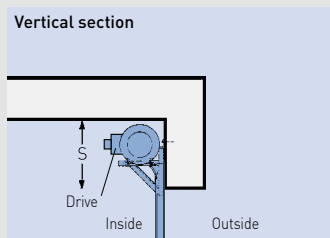
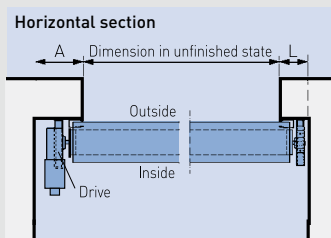
## Lintel height / floor space requirements

### Minimum lintel height S

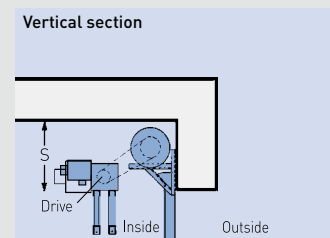
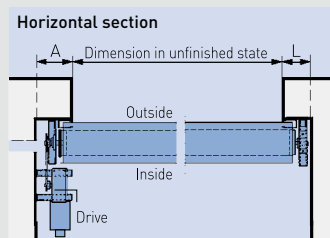


V80 and rolling grilles according to table, TH80 according to table + 50 mm, TH100 according to table + 150 mm				Thermorix according to table							
Gate-width to	4000	5000	< 6000	≥ 6000	7000	8000	9000	10000	11000	12000	
-Height to											
2000	500	500	550	700	720	780	780	800	800	800	
2500	530	530	580	730	760	810	810	810	840	870	
3000	550	580	630	780	780	810	810	830	840	870	
3500	570	600	650	800	810	810	830	890	890	890	
4000	590	600	650	800	840	870	870	890	890	910	
4500	600	680	730	880	880	890	890	910	910	930	
5000	610	700	750	900	900	900	900	960	960	960	
6000	670	720	770	920	920	920	960	960	970	990	
7000	810	810	860	1010	1060	1060	1080	1080	1090	1090	
8000	810	810	860	1010	1100	1120	1120	1130	1150	1150	

### Standard design with direct drive



### Custom-built design with sprocket chain wheel drive



#### Side floor space required in case of standard design with direct drive (with shutter height up to 5000 mm)

The necessary side floor space required (dimension L) can be reduced through on-site recess for the bearing block.

A = Minimum dimension for guide rail and direct drive, right or left (drive side)

L = Minimum dimension for guide rail and bearing block (non-drive side)

S = Minimum dimension for lintel height (in separate table above)

Width up to	2000	3000	4000	5000	6000	7000
A	260	260	260	280	280	300
L	165	165	165	165	200	200

Side floor space required for roller doors with servo locks at least 20 mm left and right

#### Side floor space required with custom-built design with sprocket chain wheel drive (with shutter height up to 5000 mm)

The necessary side floor space required (dimension L) can be reduced through on-site recess for the bearing block.

A = Minimum dimension for guide rail and sprocket chain wheel drive, right or left (drive side)









L = Minimum dimension for guide rail and bearing block (non-drive side)

S = Minimum dimension for lintel height (in separate table above)

Width up to	4000	5000	6000	7000	8000	10000	12000
A	200	240	250	300	300	350	500
L	165	165	200	200	270	290	320

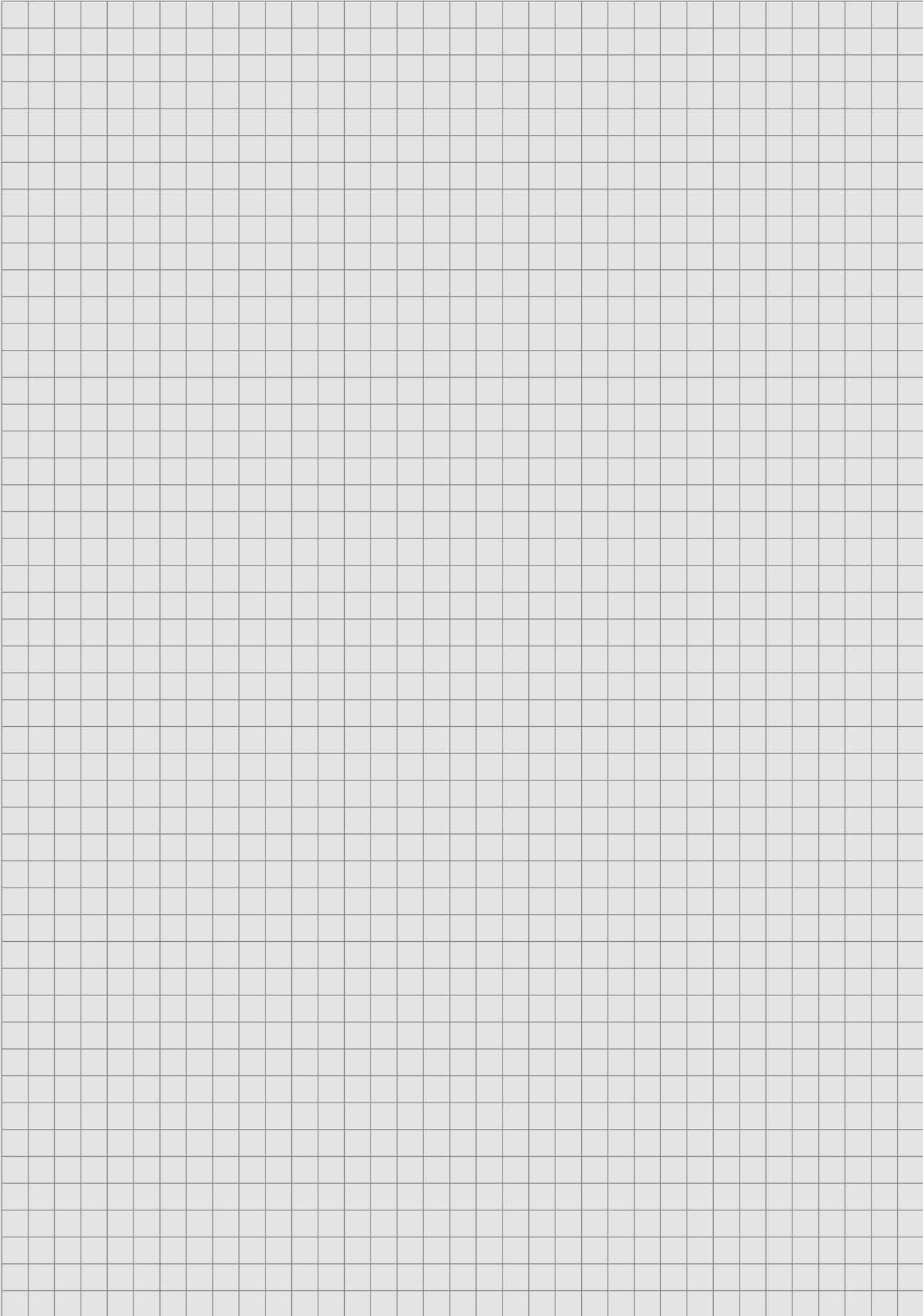
Measurement information for special designs and separate wall connections – in case of too little space – at additional cost.

# Overview

Shutter type / Description		Speed (approx. m/sec.)	Viewing window	Sealed against draught	Slide-up protection	Ventilation elements	Galvanized surface	Painted surface	Manual operation	Electromechanical drive	Safety device acc. to Acc. Prev.	Periodic tests required	Personnel entrance door in the side section
Standard rolling shutters and rolling grilles	 TH80 aluminium	0.20	◆	●	◆		◆		●	●	●	◆	
	 TH100 aluminium	0.20	◆	●	◆		◆	◆	●	●	●	◆	
	 V80 aluminium	0.20		●	◆		◆	◆	●	●	●	◆	
	 V80 steel	0.20		●	◆	◆	●	◆	●	●	●	◆	
	 Rolling grille RG steel	0.20			◆		●		●	●	●	◆	
	 Rolling grille RG aluminium	0.20			◆			◆	●	●	●	◆	
Quick-action roller shutters	 Novo Speed aluminium	2.0	◆	●	◆		◆		●	●	●	◆	
	 Eco Speed aluminium	0,45	◆	●	◆		◆		●	●	●	◆	

Equipment: ● = Standard  
◆ = Option (combinable in some cases)

# Sketches and notes



## **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. At the same time, we integrate maximum functionality and innovative design. We manufacture our products in various international locations and with our Europe-wide network we are always able to deal with you – wherever you are!

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