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 inter connecting hinge quick 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 co-ordinated 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.

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.

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.

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

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

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.
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 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.

**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 8,000 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 (clear), 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 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**

<table>
<thead>
<tr>
<th>V80 aluminium or steel</th>
<th>Rolling grille RG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single-skinned 80 mm lath</strong> 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.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>V80 aluminium or steel</strong></td>
<td><strong>Rolling grille RG steel or aluminium</strong></td>
</tr>
</tbody>
</table>
| 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. | 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). |
| **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 4000mm 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 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, facia panel double-walled with insulation lining, galvanised and primed.
- Configuration b) personnel entrance door and facia panel filled with rolling shutter louvres, galvanised steel frame, primed.
- Configuration c) special dimensions available at additional cost.

Vertical facia 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 facia 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
- Warning lights
- Traffic lights
- Photocells
- 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 connection, 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)

<table>
<thead>
<tr>
<th>Pushbutton No. 2</th>
<th>Surface mounted key-switch No. 4</th>
<th>Flush mounted key-switch No. 5</th>
<th>Column No. 9 with built-in key-switch No. 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface mounted, function “Open-Stop-Close” (“Stop” pushbutton in dead man’s mode without function), Protection Type IP65.</td>
<td>Surface mounted in light-metal cast housing with mechanical cover lock, with half cylinder lock, function “On-Off”, Protection Type IP54.</td>
<td>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.</td>
<td>Column 1000 mm high, galvanized.</td>
</tr>
<tr>
<td>Surface mounted key-switch No. 10</td>
<td>Surface mounted in light-metal cast housing with mechanical cover lock, with half cylinder lock, function “Open-Stop-Close”, Protection Type IP54.</td>
<td>Flush mounted key-switch No. 6</td>
<td></td>
</tr>
<tr>
<td>Surface mounted key-switch No. 7</td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flush mounted key-switch No. 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>
# Rolling shutters and rolling grilles

## Lintel height / floor space requirements

### Minimum lintel height S

<table>
<thead>
<tr>
<th>Vertical section</th>
<th>V80 and rolling grilles according to table, TH80 according to table + 50 mm, TH100 according to table + 150 mm</th>
<th>Thermorix according to table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gate-width</td>
<td>Height to</td>
<td>2</td>
</tr>
<tr>
<td>2000</td>
<td>500</td>
<td>500</td>
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<td>2500</td>
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<tr>
<td>3000</td>
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<td>3500</td>
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<td>7500</td>
<td>660</td>
<td>740</td>
</tr>
<tr>
<td>8000</td>
<td>670</td>
<td>740</td>
</tr>
</tbody>
</table>

### Standard design with direct drive

<table>
<thead>
<tr>
<th>Side floor space required in case of standard design with direct drive (with shutter height up to 5000 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The necessary side floor space required (dimension L) can be reduced through on-site recess for the bearing block.</td>
</tr>
<tr>
<td>A = Minimum dimension for guide rail and direct drive, right or left (drive side)</td>
</tr>
<tr>
<td>L = Minimum dimension for guide rail and bearing block (non-drive side)</td>
</tr>
<tr>
<td>S = Minimum dimension for lintel height (in separate table above)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Side floor space required with custom-built design with sprocket chain wheel drive (with shutter height up to 5000 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The necessary side floor space required (dimension L) can be reduced through on-site recess for the bearing block.</td>
</tr>
<tr>
<td>A = Minimum dimension for guide rail and sprocket chain wheel drive, right or left (drive side)</td>
</tr>
<tr>
<td>L = Minimum dimension for guide rail and bearing block (non-drive side)</td>
</tr>
<tr>
<td>S = Minimum dimension for lintel height (in separate table above)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Width up to 2000</th>
<th>3000</th>
<th>4000</th>
<th>5000</th>
<th>6000</th>
<th>7000</th>
<th>8000</th>
<th>10000</th>
<th>12000</th>
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<tbody>
<tr>
<td>A</td>
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<td>280</td>
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<td>300</td>
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</tr>
<tr>
<td>L</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>165</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>290</td>
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</table>

<table>
<thead>
<tr>
<th>Width up to 4000</th>
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<th>7000</th>
<th>8000</th>
<th>10000</th>
<th>12000</th>
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<tbody>
<tr>
<td>A</td>
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<td>240</td>
<td>250</td>
<td>300</td>
<td>300</td>
<td>350</td>
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<tr>
<td>L</td>
<td>165</td>
<td>165</td>
<td>200</td>
<td>200</td>
<td>270</td>
<td>290</td>
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</table>

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

<table>
<thead>
<tr>
<th>Shutter Type</th>
<th>Description</th>
<th>Speed (approx. m/sec.)</th>
<th>Viewing window</th>
<th>Sealed against draught</th>
<th>Side-up protection</th>
<th>Ventilation elements</th>
<th>Galvanized surface</th>
<th>Painted surface</th>
<th>Manual operation</th>
<th>Electromechanical drive</th>
<th>Safety device acc. to Acc.</th>
<th>Periodic tests required</th>
<th>Personnel entrance door</th>
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<tbody>
<tr>
<td>TH80 aluminium</td>
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<td>TH100 aluminium</td>
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<td><img src="image87.png" alt="Image" /></td>
<td><img src="image88.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Equipment:**
- • = Standard
- • = Option (combinable in some cases)

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!

Your Novoferm sales partner

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