



# Sectional doors

## Industrial solutions

Thermo 45 – Prisma 45 ISO – Prisma 45 Stucco – ISO Highspeed



**novoferm**<sup>®</sup>



## Novoferm – your access to industrial buildings

Novoferm has been a specialist in various types of entries and exits for industrial buildings and homes for more than thirty years. Our extensive range with varying types of models and finishing, operation and installation options, means that a solution will be tailored to precisely suit your needs. We will take responsibility for the entire process, from consultancy to development, production and assembly, and even construction management if you so desire. Naturally, we keep a close eye on every aspect of your project, including the relevant standards and regulations, saving you time.

In addition to industrial doors, climate control and fire resistant doors, Novoferm is the perfect partner for products that facilitate loading and unloading applications. As part of the Sanwa Shutter Corporation, the global leader in the production of doors, garage doors and other

products for equipping buildings, Novoferm is guaranteed to provide the newest applications. With the maximum quality, certainty, comfort and design at minimum cost.







## Versatile sectional doors

No other type of door can be modified so easily to suit the relevant situation as a sectional door. This is made possible by the wide variety of track systems, mountings, panel options and infill panels, windows, security options, finishings, operating and power systems, and window models. Novoferm's sectional door also boasts durable quali-

ty. This door technology has proven in thousands of situations to be free of malfunctions, requiring virtually no maintenance. All in all a justifiable investment, in terms of both operational safety and performance.







Sandwich panel with double glazing



## Sandwich panel with double glazing

Energy is the determining factor.

Steel sandwich plate panels, 45 mm thick, with no cold bridge and foam-filled using CFC-free Polyurethane provide excellent insulation.

Therefore sectional door type Thermo 45 is the perfect solution for heated operating areas, and therefore indispensable for a pleasant working environment and an economical energy balance.

## Properties

- finger pinch protection
- sturdy panels with high insulation value
- various glazing options
- available in all RAL and BS colours
- integrated wicket door optional
- aluminium-coated springs and galvanised shaft
- operation by means of pull-cord, hand chain or electrical power
- optimum security.



## Door panel

Finger pinch protection on door interior and exterior. Individual sections consist of sandwich steel panels, 500 or 625 mm in height and 45 mm thick. Top section is sized to fit. Steel plates are galvanised; insulation by means of CFC-free Polyurethane filling. Door panel may be completely solid or partially equipped with light apertures, as desired. Panels are structured and equipped with horizontal strips at equal intervals. The bottom section has a rubber seal strip with double lip; top section has a single lip seal. The individual sections are properly sealed. Rubber seals on the left and right.

## Light openings and window sections

Choose from:

- oval windows with double, acrylic glazing, with a black plastic frame measuring approximately 700 x 300mm.
- rectangular windows with double acrylic glazing, with a black plastic frame measuring approximately 650 x 350mm.
- a Prisma panel measuring 500 or 625 mm in height, consisting of aluminium tube profiles and plastic glazing frames, with a wide assortment of glazing types.

## Wicket doors

The sectional doors can be equipped with an integrated wicket door, including door closer, door hardware, and profile cylinder lock. The wicket door can be equipped with an emergency lock.

## Construction and mounting

The vertical track and the fastener are made from galvanised steel plate. Because the track sections are assembled with flat head bolts, perfect running can be guaranteed through post-adjustment. In accordance with the latest safety standards, the profiles are designed to minimise the risk of fingers getting pinched between moving parts. The horizontal guide track is extremely sturdy. The door hangs on steel cables that are wound on drums when it is opened. The weight of the door is balanced by means of springs mounted above the door.

## Locking

A shoot bolt is a standard feature on manually-operated doors. An exterior lock with profile cylinder is optional, as is locking for electrically-operated doors.

## Operation

Manual operation by means of pull-cord or hand chain drive. Electrical operation is optional using the economic Induport or a GfA drive with push buttons, available as shaft-mounted motor or with chain transmission.

## Door hardware and track systems

The sections are connected with hinges and roller shafts. The adjustable nylon rollers are journaled. The track systems available are:

B20	low headroom
B20+	as above, roof angle (max. 40°)
B45	standard lift
B45+	as above, roof angle (max. 45°)
B350	high lift
B350+	as above, roof angle (max. 45°)
B350-S	as above, with lowered spring package (S-package)
B550	vertical lift
B550-S	as above, with lowered spring package (S-package)

## Colours and finishes

The Thermo panels are given a standard RAL 9002 base coat as standard. The exterior is also available in RAL 9006. Other RAL colours optional. The aluminium Prisma sections are anodised in accordance with E6/V1; other RAL and BS colours are optional. The tracks, glazing bates, hardware and runners are not spray-coated. Spray-coated elements partly optional. Torsion springs are aluminium coated.

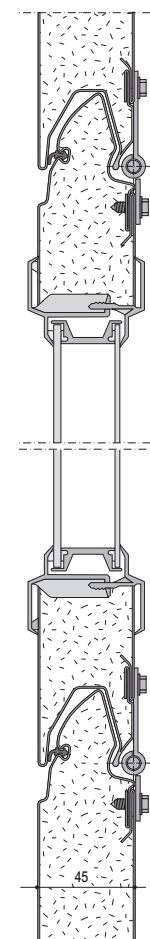
All steel parts are galvanised.

## Options and accessories

- handle
- fixed top panel
- ventilation screens
- integrated wicket door
- wicket door in wall next to sectional door, same appearance as sectional door.
- stainless steel hinges
- various operating elements and electrically-powered controls
- safety features.

## Assembly

In principle, the sectional door is mounted behind the opening on a sturdy brick, steel or concrete base. At the time of assembly, the floor must be completely flat, finished and load-bearing.

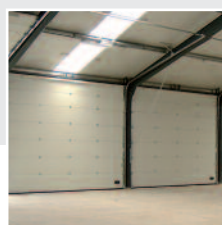
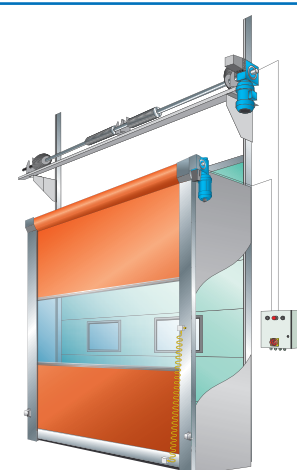


Cross section window

## Combination sectional door - speedroller

Ideal for a day-night combination. During the day the sectional door is open and the speedroller door provides logistical continuity without delays and a minimum loss of energy. In the evening the sectional door secures the building.

Cross section window section







## More light, more vision

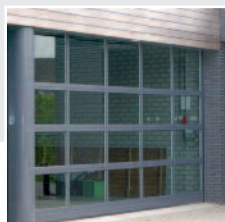
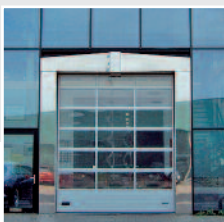
Prisma 45 sectional doors have a large window surface area, providing excellent lighting in your buildings or workshops. The profiling of the Prisma panel also lends a characteristic style to the building's appearance. The high light yield creates a pleasant, transparent working environment. The Prisma 45 sectional door can be a determinant factor in the aesthetic appearance of the building.

## Properties

- finger pinch protection
- extremely sturdy frame structure
- high-quality hardware
- large window surface area
- available in virtually all RAL and BS colours
- integrated wicket door optional
- aluminium coated springs and galvanised shaft
- operation by means of pull-cord or hand chain drive, or electrically-powered
- optimum security

## Sectional door type Prisma 45 ISO

This door was designed for stability, light and vision. The ideal combination for workshops in general, and especially for police, fire department, security services and bus station garages. The bottom panel type Thermo offers stability and protection from damages under severe circumstances. The Prisma panels also offer a large amount of light and vision on both sides of the door.



## PRISMA 45

Finger pinch protection on door interior and exterior. Bottom section is a Thermo 45 panel, 500 or 625 mm in height. Exterior has horizontal profiles every 125 mm; interior is smooth. Steel exterior plates are hot-dip galvanised with a base coat finish. The other sections consist of aluminium tube profiles with glazing. The top section is sized to fit. The sections can also be equally proportioned upon request.

### Prisma 45 panel fillings (+ options)

- double, acrylic glazing, 2 x 2.5 mm thick (total thickness 16 mm); transparent, coloured or structured, as desired. Alternative glazing / fillings also available:
- polycarbonate, single or double (anti-burglary)
- expanded metal made from stainless steel
- perforated aluminium plate
- Polyurethane aluminium stucco sandwich panel.

### Wicket doors

The sectional doors can be equipped with an integrated wicket door, including door closer, door hardware, and profile cylinder lock. The wicket door can be equipped with an emergency lock.

### Construction and mounting

The vertical track and the fastener are made from galvanised steel plate. In accordance with the latest safety standards, the profiles are designed to minimise the risk of fingers getting pinched between moving parts. The horizontal guide track is extremely sturdy. The door hangs on steel cables that are wound on drums when it is opened. The weight of the door is balanced by means of springs mounted above the door.

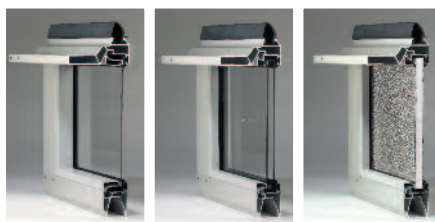
### Door hardware and track systems

The sections are connected with hinges and runners. The adjustable nylon rollers have bearings. The track systems available are:

- |        |                                                   |
|--------|---------------------------------------------------|
| B20    | low headroom                                      |
| B20+   | as above, roof angle (max. 40°)                   |
| B45    | standard lift                                     |
| B45+   | as above, roof angle (max. 45°)                   |
| B350   | high lift                                         |
| B350+  | as above, roof angle (max. 45°)                   |
| B350-S | as above, with lowered spring package (S-package) |
| B550   | vertical lift                                     |
| B550-S | as above, with lowered spring package             |

### Locking

A shoot bolt is a standard feature on manually-operated doors. An outside lock with profile cylinder is optional, as is locking for electrically-operated doors.

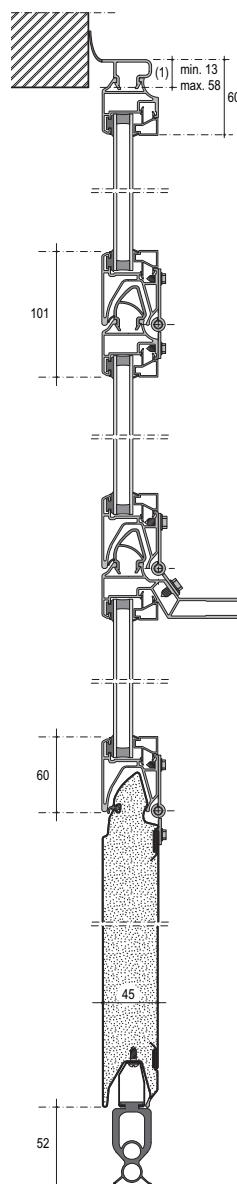


single glazing

double glazing

stucco

### Prisma 45 ISO



## Operation

Manual operation by means of pull-cord or hand chain drive. Electrical operation is optional using the economic Induport or a GfA drive with push buttons, available as shaft-mounted motor or with chain transmission.

## Colours and finishing

The framework and perforated plating are anodised in accordance with E6/EV1 or spray-coated in RAL 9002. Other RAL and BS colours are optional. Acrylic glazing frames in grey. The tracks, glass slats, hardware and runners are not spray-coated. Spray-coated elements partly optional. Torsion springs are aluminium coated. All steel parts are galvanised.

## Options and accessories

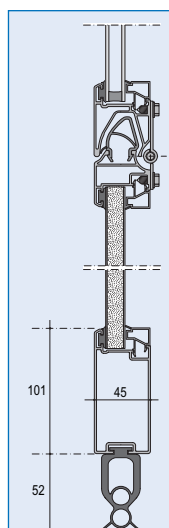
- handle, fixed top panel, ventilation screens and integrated wicket door.
- wicket door in wall next to sectional door, same appearance as sectional door.
- stainless steel hinges
- various operating elements and electrically-powered controls
- dead-man safety
- all types of safety systems.

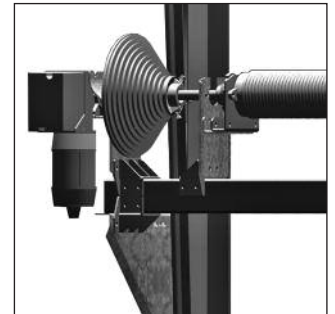
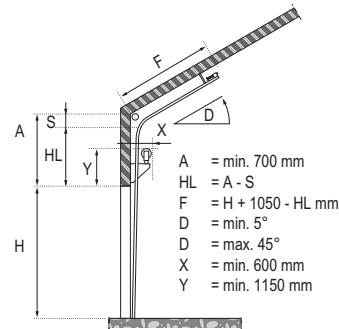
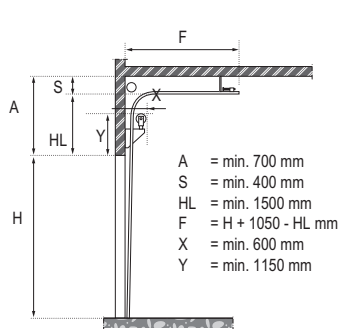
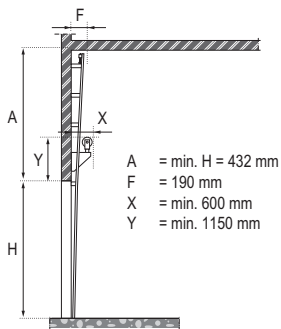
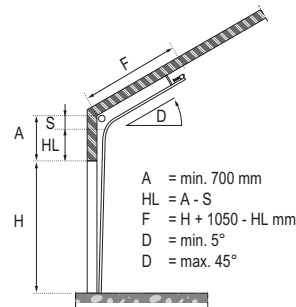
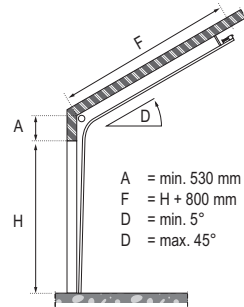
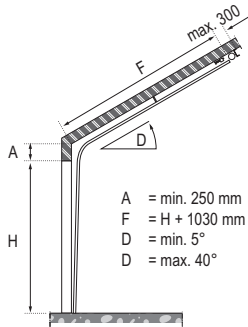
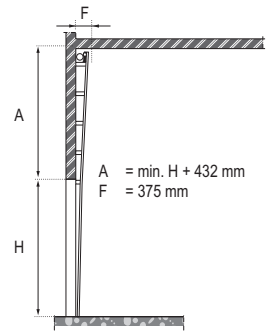
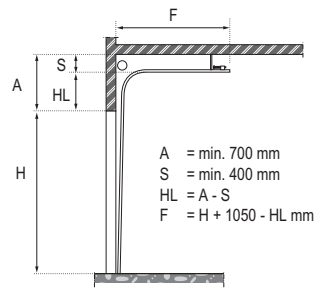
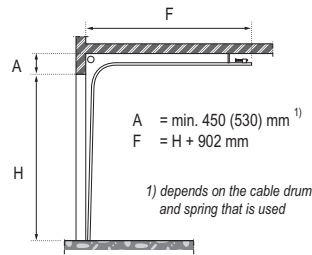
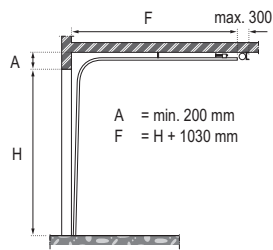
## Assembly

In principle, the sectional door is mounted behind the opening on a sturdy brick, steel or concrete base. At the time of assembly, the floor must be completely flat, finished and load-bearing.

### Prisma 45 Stucco

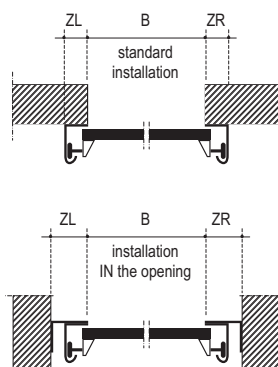
Finger pinch protection on inside and outside. Section heights 500 or 625 mm. The top section is sized to fit. The panels consist of a window frame made of aluminium profiles. The bottom section has a 16 mm-thick aluminium sandwich panel, stucco surface structure, equipped with draught-seal strip with double lip. The top section has a single-lip seal. The individual sections are well-sealed, with no cold bridge. Rubber seals on the left and right.





## Abbreviations

- A = headroom
- B = clear opening width
- D = roof slope
- F = overall depth
- H = clear opening height
- HL = high lift
- ZR/ZL = sideroom required (left and right)
- X = over-all depth S-package
- Y = min. headroom for S-package



## Sideroom required

- track system B45, B45+
- track system B350, B350+
- track system B20, B20+
- track system B550

- ZL/ZR = min. 130 mm
- ZL/ZR = min. 130 mm
- ZL/ZR = min. 130 mm
- ZL/ZR = min. 110 mm

## Sideroom driven side

(left or right)

- chain host
- electric shaft drive
- electric chain drive

- ZL/ZR = 225 mm
- ZL/ZR = 366 mm
- ZL/ZR = 174 mm





## Good insulation is better than high heating bills

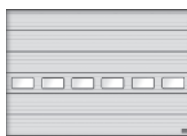
Thermo 45 type sectional doors are made with sandwich steel panels. The core consists of an insulation layer of 45 mm-thick CFC-free Polyurethane. The core provides excellent heat and sound insulating properties. The panels are also available in (double) glazed model. Prisma 45 panels offer a high level of light and vision. This is achieved with aluminium profile frames and single or double acrylic glazing. The characteristic appearance of the Prisma 45 panels, certainly when combined with Thermo 45 panels, enables architects to attune to the building's exterior. The range of available options guarantees a fitting, individualised solution.

The advantages of steel and aluminium are perfectly combined in the Prisma Stucco. A wide variety of glazing, power and operating system options are available, as well as an integrated or adjacent wicket door, and colour options in the RAL and BS ranges.

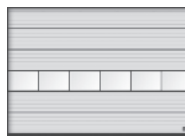
All Thermo and Prisma panels can be supplied in any RAL or BS colour.



## Thermo 45 sectional doors with insulating sandwich panels (see page 4)



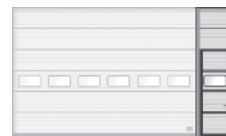
Section with windows (rectangular or oval), with acrylic glazing



Section of a Prisma 45 panel

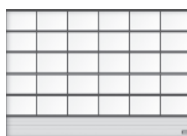


Sectional door Thermo 45 with window section and integrated wicket door



Sectional door Thermo 45 with window section and adjacent wicket door with same sectional division

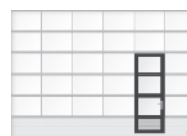
## Prisma 45 ISO – combinations of Thermo 45 and Prisma 45 (see page 7)



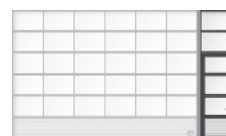
The bottom section is a Thermo 45 panel, the rest are Prisma 45 panels.



The top and the bottom two sections are Thermo 45 panels

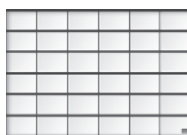


Door with integrated wicket door

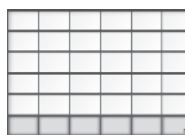


Door with adjacent integrated wicket door with same division as sectional door

## Prisma 45 Stucco – framework of aluminium profiles with acrylic glazing (see page 7)



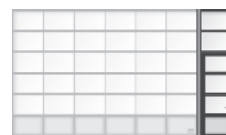
Light and vision down to the floor



Bottom section filled with alu-stucco



Bottom section filled with alu-stucco, equipped with wicket door

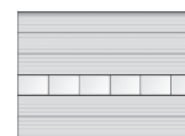


Bottom section filled with alu-stucco and adjacent wicket door with same division as sectional door

## ISO-Highspeed sectional door with highspeed opening (see page 12)



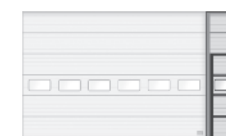
Section with windows (rectangular or oval), with acrylic glazing



Section of a Prisma 45 panel



Sectional door Thermo 45 with window section and integrated wicket door



Sectional door Thermo 45 with window section and adjacent wicket door with same sectional division.



## Light and vision as desired

A variety of glazing options are available to satisfy your individual needs with reference to light ingress, insulation and outward appearance. The Thermo sections, for example, can be equipped with oval or rectangular windows with clear acrylic double glazing. What is more, complete Prisma vision sections can be built into the Thermo doors. The Prisma doors can be equipped with single or double acrylic glazing, clear or structured as desired, or with single or double Polycarbonate glazing.



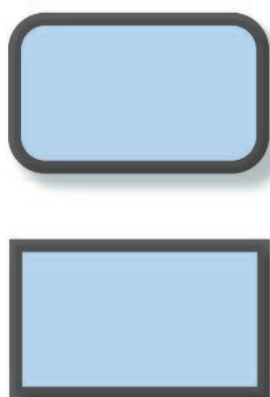
Prisma panel with single glazing



Prisma panel with double glazing



Oval or rectangular double-glazed window for Thermo panels



## The over-all outer seal will pay for itself.

The high insulation value of  $k = 0.51 \text{ W/m}^2\text{K}^*$  provided by the Thermo door is not only achieved through the door panel's excellent insulation using a 45-mm PUR foam, but also by the surrounding. The seals between the various Thermo panels ensure that the door surface is optimally sealed.

The outer edges of the door's vertical span and the top of the door are equipped with special strips providing an excellent draught-proof seal.

The bottom seal made of flexible rubber compensates for any bumps and dips in the floor, and the two flexible lips prevent heat loss and rainwater penetration.

\* k-value pertains to the panel. The value for the entire door depends on its size and the type of glazing used.



Rubber seal



Seal between panels



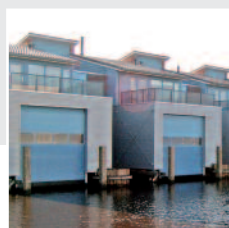
Top wheel block with roller



Wheel block with roller



Track system rubber seal





## Safety in capital letters!

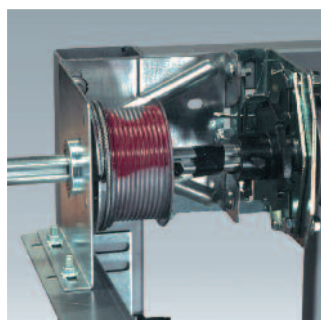
Applying the highest safety standards as well as permanent quality control in every production phase makes it possible for us to exclude as many risks as possible. Special safety features ensure that use of the door will be durable and worry-free. With manual operation, the spring-break safety holds the door in its current position if a spring should ever break. The connection between the panels is designed to ensure that fingers can never be pinched. The vertical guide track on both sides of the door is designed in such a way that the moving parts and the cable on which the door hangs are covered as much as possible. Thus accidentally coming between the fastener and the runner is prevented.



Finger pinch protection



Track covered by the angle strip



Spring-break protection for manual operation



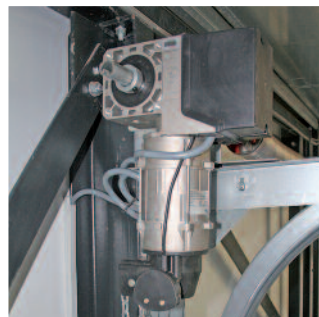
Bottom console with cable-break protection

## Advanced drive technology

The available power and control systems offer the perfect solution for every door. Their flexibility ensures that individual needs can be satisfied. The power and control system ISO Highspeed make it possible to open the door at speed of up to 1 m / sec. Our doors satisfy the highest safety standards and are produced based on state-of-the-art technology. Sensors for power constraint, electronic side-seal safety features, self-testing underpass safety, and dead-man safety edges are among the available options.

The economical Induport system automatically switches to dead-man operation if the seal edge safety should ever malfunction or if the service interval as defined is exceeded.

A display shows what the problem is and indicates that servicing is required. The integrated diagnosis program makes it easy to quickly remedy malfunctions.



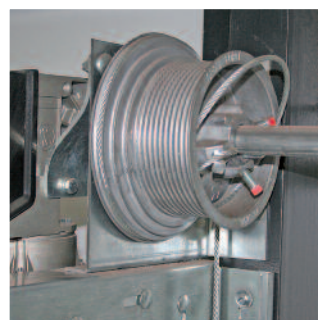
GfA drive with emergency unlocking and protection against unwinding



Standard control unit and/or operating unit

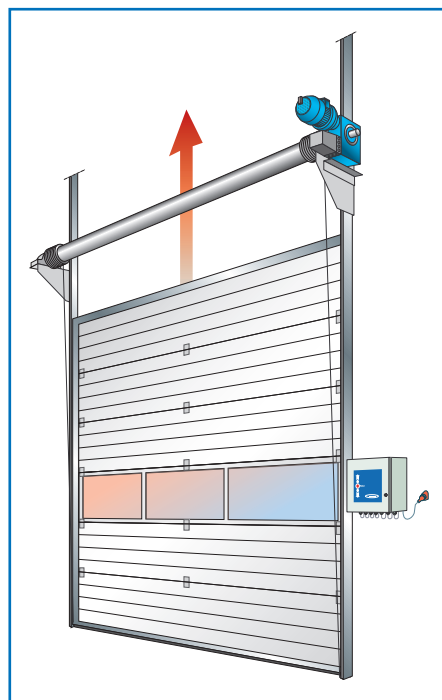


Induport, the drive integrated into the track system, offers many extras



Cable drum





## Drive and controls

The ISO Highspeed is characterised by the drive directly above the opening, and controls include a frequency control. Depending on the size of the door and the selected track system, opening speeds of up to 0.8 m/sec can be achieved. The frequency control ensures that movements are smooth, preventing electrical and mechanical peak loads.

The position and motion of the door are continually checked, thus offering optimum safety. The standard controls offer:

- simple pushbuttons 'open door' / 'close door', or timer-controlled opening and closing
- a service setting for maintenance and repairs
- a switch for permanently opening or closing the door.

## Safety features

The ISO Highspeed is equipped with steel cables as standard with a safety factor of at least 6, a loose-cable safety and integrated fall protection.

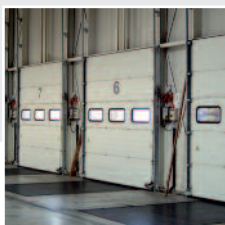
The bottom safety edgel has a rubber strip with a self-testing underpass safety. A light curtain up to a height of 2000 mm is available as option.

## Track systems

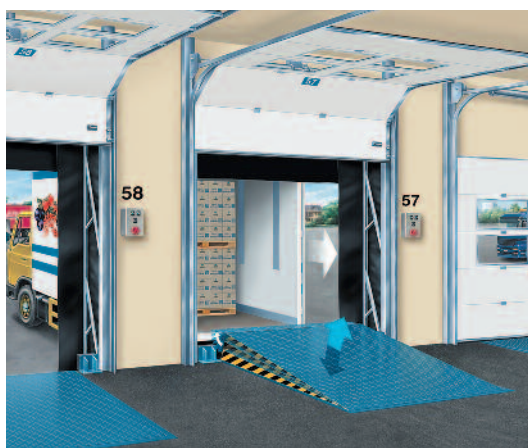
- B350+ high lift, roof angle (min. 10°, max. 45°)
- B350-S as above, with lowered spring package (S-package)
- B550 vertical lift
- B550-S as above, with lowered spring package (S-package).

## Properties

- a reliable and exceptionally fast sectional door
- an electric shaft-mounted motor
- controls with frequency control
- wide variety of operating options
- self-testing underpass safety (optical sensor technology)
- well-insulated door panel
- available in virtually all RAL and BS colours
- high quality hardware
- optimum safety.







## Complete logistical solutions

A Novoferm dock unit consists of a combination of the products needed for loading and unloading goods. Products that make loading and unloading fast, safe and efficient, and thus more pleasant for the personnel involved.

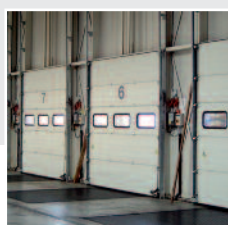
## The combined parts are:

- a leveller to bridge the difference in level between the operations floor and the vehicle's loading level
- shelters or seals to seal the opening between the vehicle and the building while loading and unloading
- an overhead door to seal off the building after loading and unloading
- visual and/or acoustic systems that are activated if and when safety is endangered
- bumpers, consoles and wheel guides.

## Continuity in loading and unloading

Levellers are the ideal bridge between the operations floor and the vehicle. Goods can be driven in or out of the vehicle in a single flow, without interruptions. Turnaround speeds are maximised.

Shelters protect both goods and personnel from poor weather conditions: the heat stays inside. The dock unit is part of the building itself. The dock sluice is erected as a complete loading and unloading station against the wall of the building, saving costly space inside the building.



Novoform products can be seen in numerous situations both inside and outside of Europe



## Industry - general



## Food and drinks industry



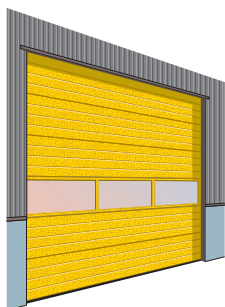
## Distribution centres



## Automotive

... satisfied customers who have preceded you





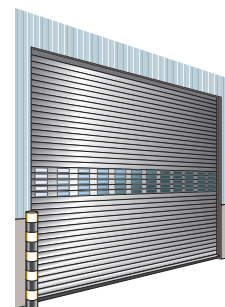
**Thermo**



**Prisma**



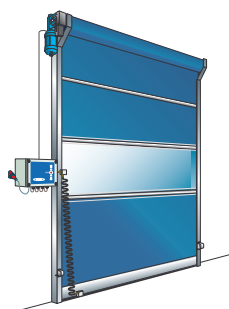
**ISO Highspeed**



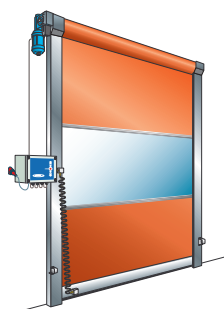
**Aluminium roller doors**



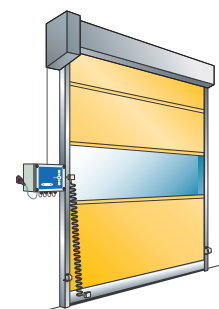
**Speedroller Economic**



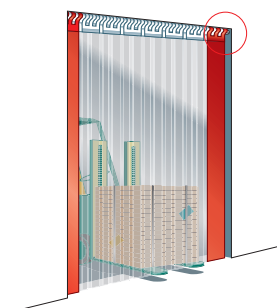
**Speedroller**



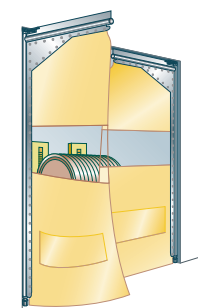
**Speedroller Heavy**



**Speedroller Food (Specials)**



**Strip curtain**



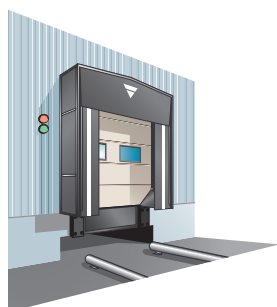
**Swing doors**



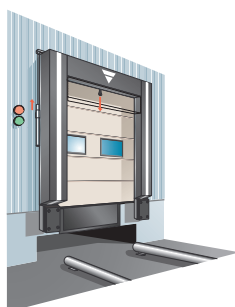
**Levellers with rotating lip**



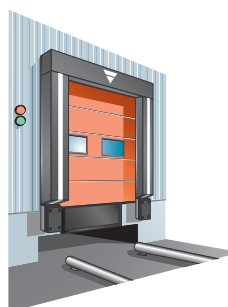
**Levellers with sliding lip**



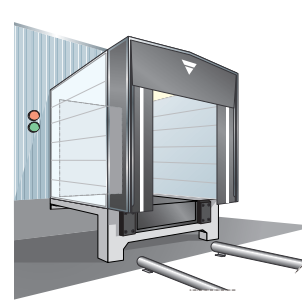
**Shelters**



**Seals**



**Dock Unit**



**Loading pod**

**.. a solution for every situation**



**Novoferm Nederland BV**

Industrieweg 9  
4181 CA Waardenburg, the Netherlands  
P.O. Box 33  
4180 BA Waardenburg, the Netherlands  
T +31 (0)418 - 654 700  
F +31 (0)88 8888 520  
[www.novoferm.nl](http://www.novoferm.nl)

Novoferm Nederland BV is a manufacturer and supplier of doors of superior quality for the industrial and residential sectors. Novoferm is a subsidiary of Sanwa Shutter Corporation, a company active internationally in the field in of industrial doors and dock equipment.

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