



lindab | we simplify construction



## Lindab **Industrial doors**

Solid door solutions



We know that form, function and finish must be part of the solution. It is primarily about protecting goods, production and the employees behind the door, while still looking great from the outside. Lindab industrial doors are made after your measures on our Danish factory. This ensures you that both quality, design and dimensioning will fit your building perfectly.





# Lindab Industrial Doors offer individual solutions for your building

Lindab offers a complete, all-round programme of overhead doors for various use including, agriculture, service industries and sports halls. Our wide range, production on a Danish factory, many years of experience and vast knowledge of door solutions ensures the right choice, whatever the building and requirements are.

## **Advice on safety, environment and design**

We help you with advice, dimensioning and the selection of the door solution. Lindab industrial doors are based on many years of experience and the development is based on the customers' requirements in regards to safety and security, environment, quality and design. The door must complement the facade of your building and have the exact characteristics to secure the goods and workers who are behind it. We help you to identify the requirements that your door solution must fulfil.

## **One solution - one supplier**

Lindab industrial doors are made to measure, and the range includes insulated doors and panorama doors, steel and aluminium surfaces and a wide range of possible colours. You can easily combine them with Lindab's facade panels and facade doors with the same visual appearance. Function, design and finish of high quality. From a single supplier.

## **Get a proper door solution**

Making the correct choice depends first and foremost on knowing what you require. This also applies when selecting a door solution for your building. Here Lindab already enters the process.

We start with assessing the requirements the door needs to satisfy and the conditions offered by the building and its surroundings. For example, in a heated production hall insulation will be decisive in preventing heat loss and condensation.



Lindab simplifies construction. This also applies when choosing the right door solution for your building. With Lindab industrial doors you get:

# 10 ADVANTAGES

- 1** Advice throughout the construction process, from project planning to the choice of design and materials.
- 2** A door solution made to measure at a Danish factory and with a short delivery time.
- 3** Specific features that reduce heat loss and drafts and eliminate thermal bridges.
- 4** Doors with a tough, water repellent, insulating core of extruded polystyrene.
- 5** An environmentally friendly solution that makes the doors 98 % reusable.
- 6** Doors that fit Lindab's facade panels and doors.
- 7** Choose from aluminium or steel sections in 18 different standard colours.
- 8** Optimal safety with finger protection and approved in accordance with the latest regulations.
- 9** Three types of doors
  - The LDI door provides optimal insulation (see page 6).
  - The LDP door has different window types, all of which provide plenty of light and are suitable for exhibitions (see page 10).
  - The LDC door combines the best qualities of the other two solutions (see page 14).
- 10** Advice and prompt delivery, with the option of extended warranty with service agreements.

*At Lindab, we set high standards for ourselves and for the quality of our solutions. But it is in advising you as the customer that we seriously prove our value. We are happy to help throughout the process from the design of the building to mounting your door solution..*





Door Type LDI - insulated

Get optimal  
insulation



Door type LDI - insulated

# Get optimal insulation

If insulation is the most important requirement in your door solution, choose a LDI door. It is built of 46 mm thick, insulated sections of extruded polystyrene, with steel or aluminium surface.

The wide choice of standard colours and option of different windows and a pass door gives many additional possibilities for designing a door that makes your building complete.

Should you have special requirements or requests that fall outside the broad standard range, there are good opportunities for fulfilling them.

We manufacture in our own factory in Denmark, and thus can ensure prompt delivery as well as premium paint and other special requirements.

*LDI doors from Lindab provide optimal insulation and reduce heat loss and drafts around the door to an absolute minimum. Choose between a steel or aluminium surface and a range of colours.*

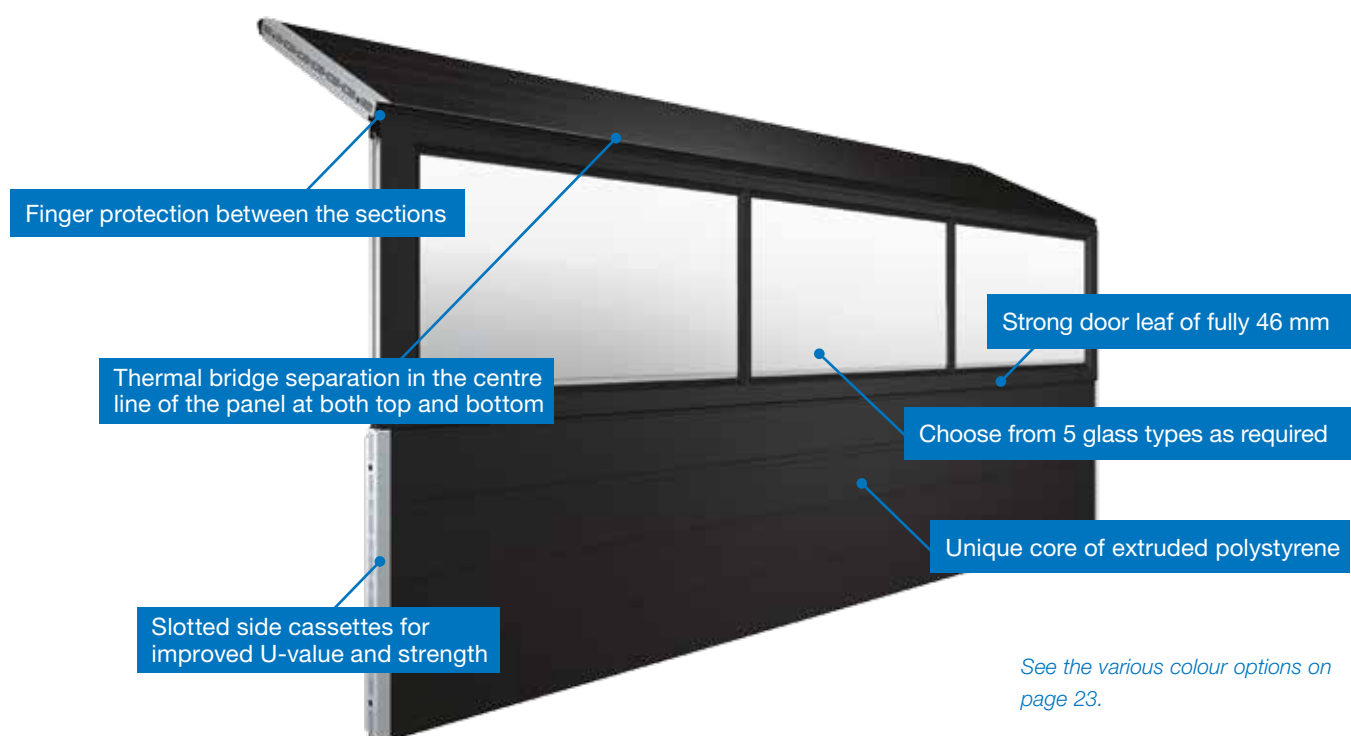




The LDI door provides optimal insulation. The insulated sections are 46 mm thick and retain the heat in the warehouse, workshop, or wherever else you need it. The sections can be combined in many different ways, and thus an LDI door can always be adapted for your particular building. Both in terms of use and appearance.



The insulated sections of the LDI door can be combined in many different ways







Door Type LDP - Panorama

Use natural  
light



## Door type LDP – Panorama

# Use natural light

The door should protect those who are behind it. But that does not mean that things should be completely hidden or that people do not need a view of the world outside. With an LDP door you get a solution that lets light into the building and gives people a view. And you get a great architectural finish to your building, which is also well worth having.

The Panorama door LDP is ideal for buildings where employees or visitors can enjoy natural light, such as for exhibitions. It is made of extruded aluminium profiles and you can choose from our wide range of window types and adjustable section heights. You can also add a pass door and sections with closed, insulated fillings for a solution that is otherwise transparent.

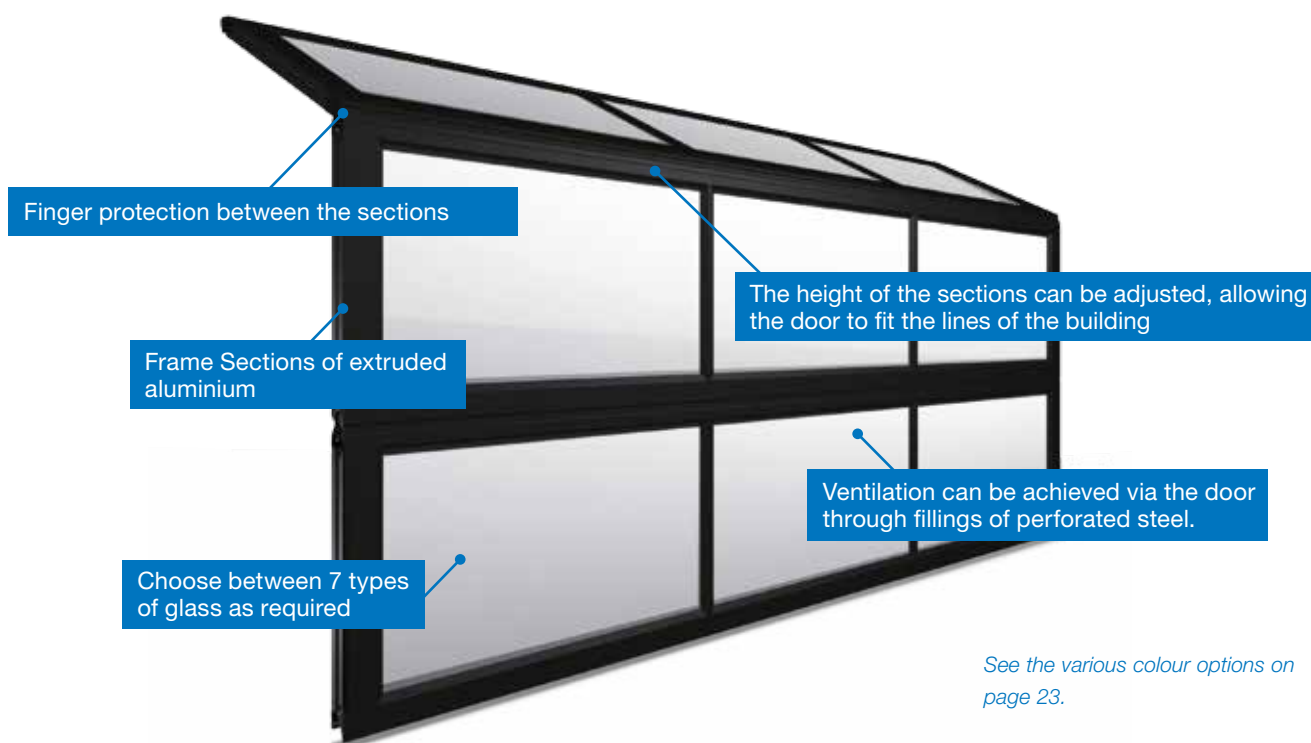
*With LDP doors from Lindab you get an accurate fit and a useful solution if you want daylight indoors. And the LDP solution is a great finish for your facade and building.*





*In many buildings a door shall not only retain heat. It shall also let daylight in for those people who working behind it, perhaps giving others the opportunity to see what is happening inside. The LDP door can be a great architectural finish on any industrial building.*

LDP Door sections can be assembled to satisfy special requirements for daylight.



*See the various colour options on page 23.*





Door type LDC - combined

The best  
combination  
of insulation  
and light



## Door type LDC - combined

# Get the best combination of insulation and light

The LDC door is a combined solution that takes the best of the LDI and LDP types and creates an incredibly harmonious unity. Here you get good insulation, while letting in light.

You can choose between 18 different colours on the insulated sections and 7 different types of panes in the window sections. The way in which you choose to assemble the sections in the completed door is also up to you. The patented finger protection and efficient sealing are standard throughout Lindab's range of industrial doors.

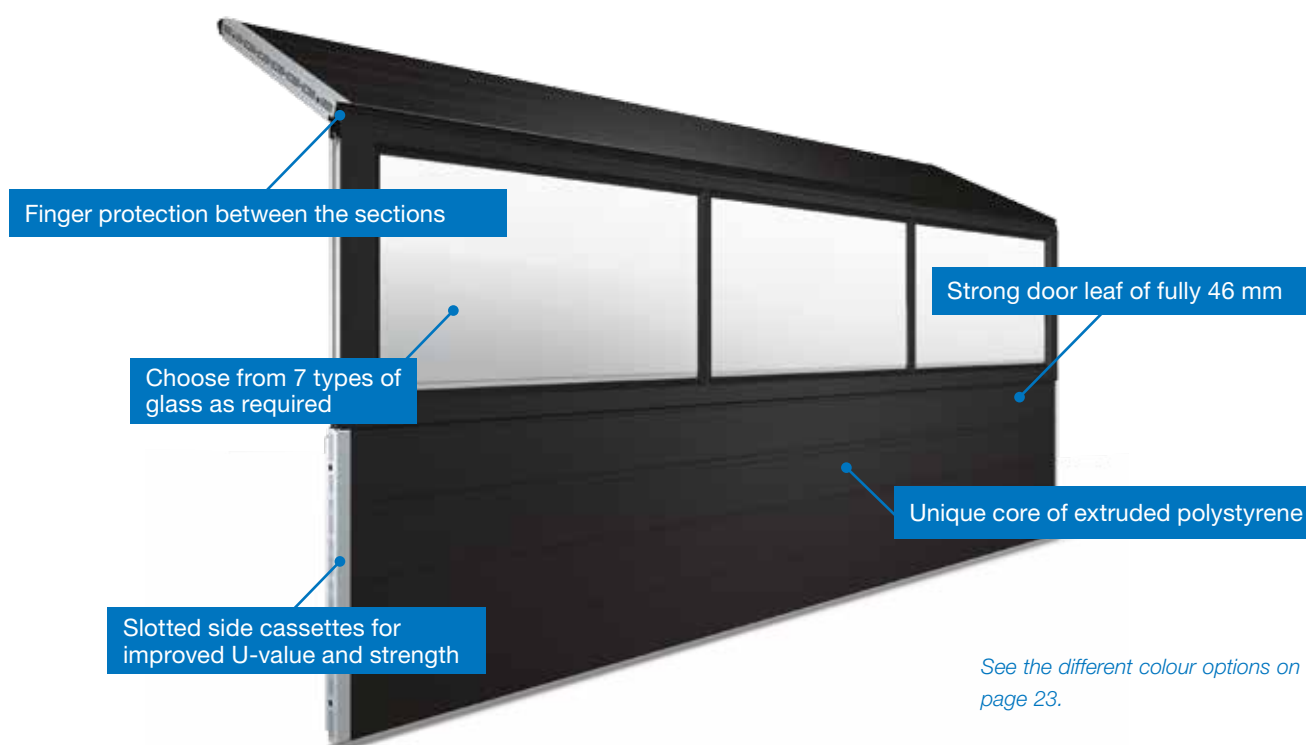


*If you need both optimal insulation and daylight in the building, LDC doors are the right solution. In short: the best of both.*



*When insulation and daylight are equally important, the LDC door is the right choice. Here you combine the insulated sections with window sections, to optimally satisfy both requirements. There are plenty of colour options for the insulated sections and pane types in the window sections, so with the LDC door you can really tailor the door to your particular building.*

The LDC door combines insulated LDI sections with LDP sections.



*See the different colour options on page 23.*

# Maximum density and highly efficient insulation

Your door shall complement the facade and be in harmony with the rest of the building. But above all it should fit tightly and protect what is behind it.

## Maximum tightness

A broad, flexible top seal, four flexible sealing lips at the bottom and efficient middle and side seals, break the thermal bridges, reduce heat loss and prevent drafts.

## Highly efficient insulation

LDI panels retain heat inside and keep the cold out with a thermal transmittance value (U-value) of 0.6 W/m<sup>2</sup> K. The panels and seals withstand high winds and protect against drafts.

## Strong construction

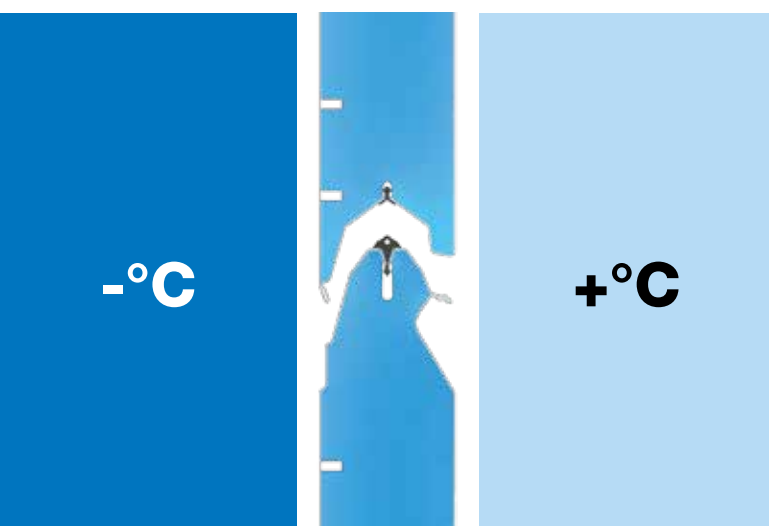
The core of extruded polystyrene makes Lindab industrial doors 40 percent stronger than doors with a core of polyurethane. The polystyrene core is water-repellent and therefore the doors are secure against frost. The attachments between the core and cladding plates are twice as good as earlier, which increases the durability of the door.

## Eco-friendly material

Lindab doors are designed to last for many years, but when the door is eventually removed, you can do it with a clear conscience. Our production methods and materials are environmentally friendly - the core material of extruded polystyrene will melt into liquid when burned. Unlike polyurethane foam, the core does not emit deadly hydrogen cyanide gas. 98 % of the components can be reused, providing balance in the environmental equation.

## Maximum security

We have also thought about the working environment. Finger Protection is a profile feature that prevents anyone getting their fingers caught when the door is closed and makes the joints between the sections extra tight. All doors from Lindab are equipped with Finger Protection, which satisfies EU standards and the Norwegian Labour Inspection Authority's requirements.



### LDI steel door leaf without windows and pass doors

Before	Now
1,07 W/m <sup>2</sup> K	<b>0,95 W/m<sup>2</sup>K</b>

### LDI steel door 4 x 4 m without windows and pass doors

Before	Now
1,4 W/m <sup>2</sup> K	<b>1,2 W/m<sup>2</sup>K</b>

### LDI steel door 4 x 4 m without windows and pass doors Including thermal bridge separation side sealing

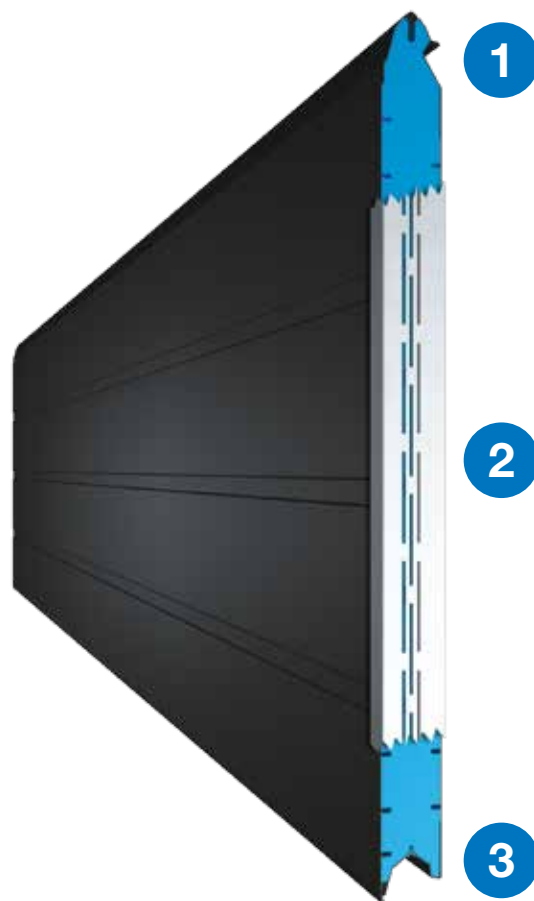
Before	Now
1,4 W/m <sup>2</sup> K	<b>1,15 W/m<sup>2</sup> K</b>

*The thermal bridge separation in the top and bottom of the panel is placed optimally in the panel's centre line.*



# Effective thermal bridge separation

- 1 The LDI panel's upper thermal bridge is separated with an efficient, stable seal.
- 2 The LDI section's side cassettes are slotted, which reduces the transmission of cold from the exterior to the interior side.
- 3 The LDI panel's lower thermal bridges are separated by a "Y" shaped seal.



# Withstands extreme loads day after day

Water, chemicals and temperature fluctuations have an impact on a door. Take a car wash business for example. If the door does not work, there are no earnings, so operational reliability and minimal maintenance are crucial in these, often unattended, facilities.

Lindab has specially developed a solution made of environmentally friendly materials, which also protect the door against the aggressive environment. The carefully selected materials include a unique core that does not absorb water, and the design allows less downtime, minimal maintenance and longer service life.

Lindab's springs are placed in covers and designed for multiple openings, with extra strong flange bearings. Rails, frames, shafts, consoles and bearing plates are all made of galvanised steel. Moreover, the door panel comes with stainless fittings. Lindab's specially developed car wash controls are equipped with built-in thermostat-controlled heating elements and a terminal block for connection to the washing unit, which minimises connection errors. The motor and controls are supplied as IP65. The door comes with scratch and chemical resistant DTHD windows.

*In car wash facilities the door is exposed to extreme loads from water and chemicals for example, which is very demanding on the materials; Lindab industrial doors completely satisfy these challenges.*



# Intelligent door control with a high level of comfort

Lindab's EHC door control is a unique and future-proof control, which can easily be updated and keep up with the times and needs. The control has two programmable inputs, as well as a programmable output that can, for example, be used to signal that the door is closed or to signal if the door is open.

Comfort features included as standard. ½ open and auto close are good as regards conserving heat. For example, a high door does not need to be fully open for pedestrians. The potential-free opening and closing signals make the door ready for connection to an alarm, for example.

## **Control**

Lindab's EHC door control has a clear plain text display, as well as up/stop/down buttons and of course an emergency stop. Replacement air controls can be purchased for the building's automatic fire ventilation.

## **Safety features**

Extra stop circuit + deadman feature + DW system  
+ photoelectric sensors + power monitoring.

## **Comfort functions**

With Lindab's half-open feature and auto close, you save energy. In addition, an alarm function can be connected to the control.



# What is your requirement? – We have the right solution

An electrically operated door can make the daily work much easier, but it requires the right control.

## Operation according to requirements

If, for example, there is a requirement that the door opens automatically when a vehicle drives towards it, then a road detector or radar can be an obvious solution. If the door has public access, for instance, a car wash, then it places special demands on the safety requirements. If there are restrictions on access to the warehouse where the door is, then a remote keypad is the right solution.



### Electric operation type EHC

High-end electrical operation with plain text display and emergency stop. Available with a frequency converter with soft start/stop and speed optimized. The control software can be updated when there are new features.



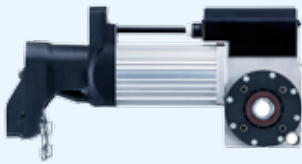
### Electric operation EHS30

Basic electrical operation that can be used for projects that do not require extra features.



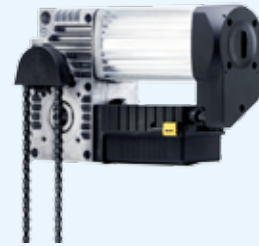
A remote controlled door can increase both operating comfort and efficiency. There are many different control options for your electrically operated Lindab Industrial Doors. We will help you to find the controller that makes the working day more effective.

# Accessories for electric power



**BK** motor

Standard motor with chain drive for emergency opening in case of power failure.



**BF** motor

Standard motor with decoupling in case of power failure. Suitable for solutions with an escape route.



Push Button Box **BT1**  
External pressure UP-STOP-DOWN.



Key switch **BN4**  
Key contact ON-OFF.  
Supplied with 2 keys.



Marantec remote control **DIG572**  
2 channel. 868 MHz  
remote control.



Marantec remote control **DIG564**  
4 channel. 868 MHz  
remote control.



Radar **RA1**  
Can distinguish between walking, driving and transverse traffic.



Photocells **FS1**  
Photocell safety in door apertures.  
A requirement for public access.

# Rail systems

A correct rail system is important for the functionality, safety, operation and maintenance of your door solution. For Lindab industrial doors, there are a number of different rail systems which take into account both space conditions, load and other building constructions.

Naturally, we advise you in the possibilities and limitations of the different systems and in co-operation to find the optimal solution for your building. As a rule we always recommend getting the door to run as high as possible to fully exploit the height in the room.

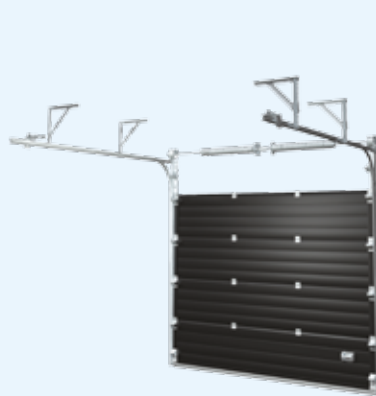
*Selection of the correct rail system depends on the height above the door i.e. OH. This is measured from the upper edge of the door aperture and up to the first obstacle, for example, ceiling, ventilation ducts and the like.*

*Lindab's standard, high lift and low lift rail systems, can be supplied with roof pitch for optimal utilisation of the height in the room.*

*The vertical rails is mounted on the inside of the wall..*

*It is therefore important to pay attention to the required side room. As a general rule, the side room for manually operated doors is 130 mm on both sides. When the door is electrically operated, the side room of 350 mm is required on the side on which the motor is situated.*

*If challenges regarding the space should occur, Lindab can advise you in this regard.*



Standard rail system

OH = 430-700 mm



High lift rail system

OH = >700 mm



Low lift rail system

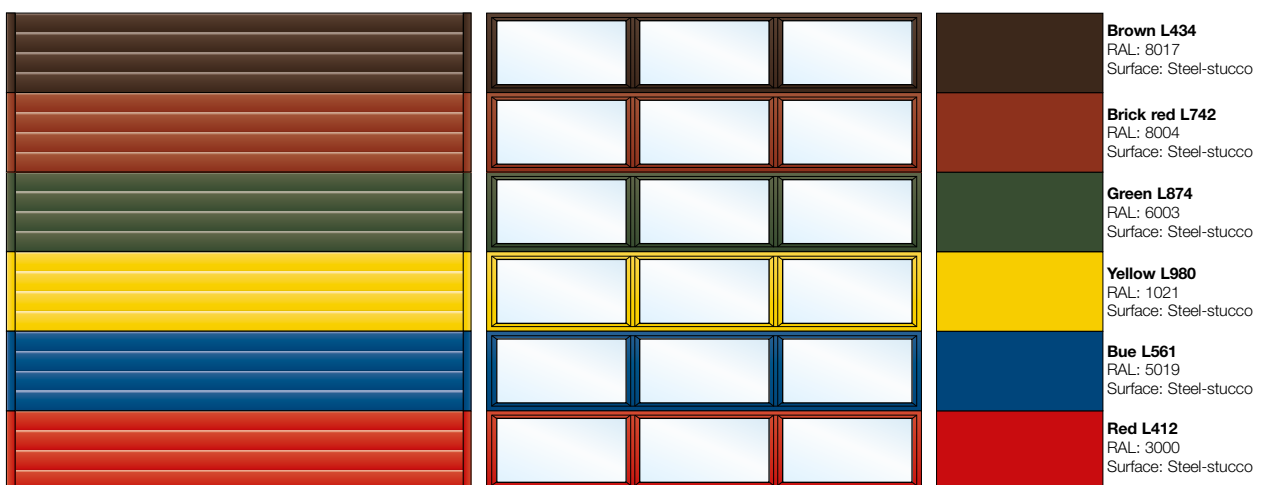
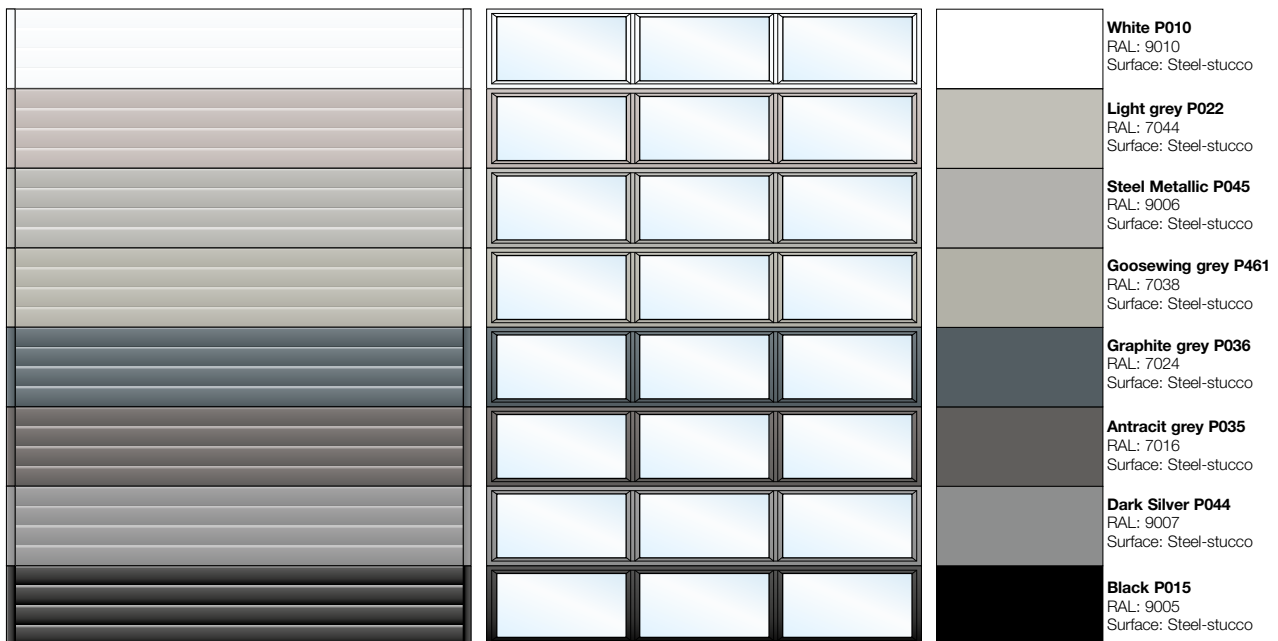
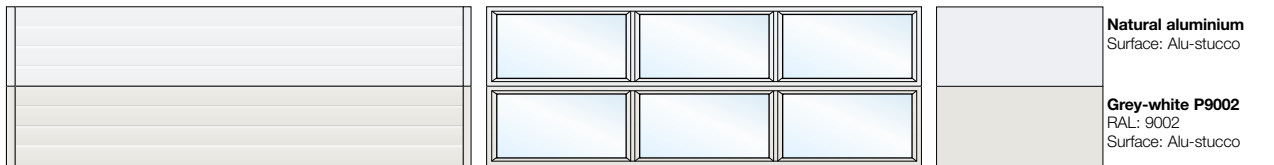
OH = 220-430 mm



Vertical rail system

OH = Aperture height + 300 mm

# Colour Programme



The six colours above have an additional charge plus one week longer delivery time.

*Note: The printed colours and RAL numbers are only indicative. Contact Lindab A/S for a swatch with the correct colour before ordering. Subject to change. For a higher price the frame sections can be coloured.*

# Technical form



		LDI	LDP	LDC
<b>Size:</b>	Width in mm (min. - max.)	950-8000	950-6000	950-8000
	Height in mm (min. - max.)	1250-7850	1250-7850	1250-7850
<b>Material (door leaf):</b>	Aluminium	•	•	•
	Steel	•	-	•
<b>Section height:</b>	Height in mm	600	600	600
	Thickness in mm	46	46	46
U value W/m2K (Steel)		0,95		
U value W/m2K (Alu.)		1,11		
Wind resistance (Steel)	Acc EN 13241-1/EN 12424 (class)	4	4	4
Wind resistance (Alu.)	Acc EN 13241-1/EN 12428 (class)	3	4	3
Insulation properties (Steel)	Acc. EN 13241-1/EN 12428 (W/m2K)	1,2	-	1,6
Insulation properties (Alu.)	Acc EN 13241-1/EN 12428 (W/m2K)	1,4	3,6	1,8
Waterproofing	Acc EN 13241-1/EN 12424 (class)	3	3	3
Airtightness	Acc EN 13241-1/EN 12424 (class)	3	3	3
<b>Pass door:</b>	Normal step height	•	•	•
	Low threshold (escape route)	◦	-	◦
<b>Colours / surfaces:</b>	Pre-coated standard colour	•	-	•
	Anodised aluminium (frame section)	-	•	•
	All RAL colours	◦	◦	◦
<b>Safety equipment:</b>	Finger protection	•	•	•
	Cable break device	◦	◦	◦
	Spring break device	•	•	•
	Safety screen at rollers	•	•	•
	Photocells at electrically operated doors	◦	◦	◦
	Light curtain	◦	◦	◦
	Windows / fillings	◦	◦	◦
<b>Seals:</b>	Side seal	•	•	•
	Side seal with thermal breaks	◦	◦	◦
	Sectional intermediate seals	•	•	•
	Top seal	•	•	•
	Bottom Rubber	•	•	•
	Thermal breaks	•	-	-*

• Standard    ◦ Optional    - Not possible

\* Not applicable to frame section

# Doors



## Door with Low Threshold

Lindab now offers doors with pass doors with a low threshold. The door comes with a light curtain, which monitors the door aperture, which is one of the most reliable solutions.

The solution is of great interest architecturally and provides increased user comfort. The solution is also approved as an escape way door, as the threshold does not exceed 25 mm.



## Pass Doors

If there is no door for pedestrians, a door with a pass door can be an ideal solution. We can offer pass doors for all types of door and many combinations, both in terms of design and colours..



## Facade Doors

If you want a uniform facade appearance, a facade door from Lindab is the right solution. The door can be designed so that it follows the lines of the main door. And the facade doors are also CE marked.



## Good Thinking

**At Lindab,** good thinking is a philosophy that guides us in everything we do. We have made it our mission to create a healthy indoor climate – and to simplify the construction of sustainable buildings. We do this by designing innovative products and solutions that are easy to use, as well as offering efficient availability and logistics. We are also working on ways to reduce our impact on our environment and climate. We do this by developing methods to produce our solutions using a minimum of energy and natural resources, and by reducing negative effects on the environment. We use steel in our products. It's one of few materials that can be recycled an infinite number of times without losing any of its properties. This means less carbon emissions in nature and less energy wasted.

**We simplify construction**