Normstahl

My Door.

INDUSTRIAL DOORS & LOADING SYSTEMS

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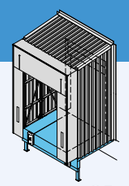


OSF-Door with side door

Normstahl Loadhouse with docking tarpaulins

OUR COMPANY
NORMSTAHL

Founded in 1946 in Moosburg, Germany, **NORMSTAHL** has grown into one of the largest garage and industrial door manufacturers in Europe.

OUR MISSION

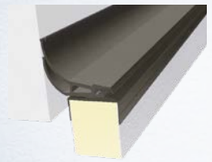
NORMSTAHL is a renowned brand for garage doors and industrial access systems with pioneering technology for private and commercial applications. As specialists in automated entrance solutions, we offer our customers a broad portfolio for every need.

Our qualified specialist dealers will provide you with information about our high-quality products and assist you with consultation, installation and service.

OUR VALUES

- **TRADITION:** Since 1946, our customers have valued us as a renowned brand for premium residential and industrial door solutions.
- **QUALITY**: Normstahl garage and industrial doors are manufactured with the use of high-quality materials and incorporate state-of-the-art technology
- **DESIGNED FOR YOU:** A Normstahl door will always match your requirements, both in terms of dimensions, style, and functionality. We have a broad range of door models and each one can be customized to meet the exact needs, whether you need a sleek and elegant garage door or a performing and robust industrial door.

QUALITY since 1946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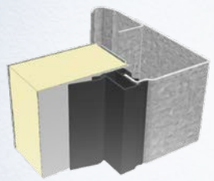
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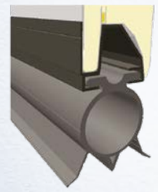
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NORMSTAHL

INDUSTRIAL SECTIONAL DOORS

HARDWARE OPTIONS - EFFICIENT AND STABLE

1 As standard, a double seal is fitted to the top panel to seal the gap between the panel and the wall. The flexible rubber seal creates constant pressure on the lintel for maximum sealing.

2 The default side seal with thermal chamber closes the gap between the wall and the door leaf. To ensure maximum sealing and low friction, the flexible rubber seal follows the profile of the door leaf exactly.

3 The installation of a specifically designed seal on the bottom edge of the lower panel ensures that the seal acts as a barrier and shock absorber. The flexible O-shaped rubber profile ensures maximum sealing.

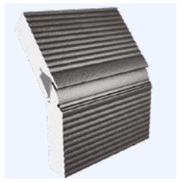
4 Hinges and roller brackets have been given a new, reinforced design. The result is smoother and quieter door operation with improved stability.

5 For manual operation, all Normstahl industrial sectional doors are fitted with a solid, easy-to-grip handle bearing the Normstahl logo.

6 **NEW: THERMALLY SEPARATED PASS DOOR** with low threshold for easy crossing and reduced risk of tripping and a standard width of 900 mm for extra space.

7 Door closer with guide rail & locking device.

FEATURES



SPECIAL SECTION CONNECTIONS

In addition to finger pinch protection, the section connections offer further benefits such as optimum thermal insulation and effective sealing.

OPTIONAL PASS DOOR

The pass door with low threshold makes it easier to cross and reduces the risk of tripping. Thanks to the robust design of the lower profile, the door leaf does not need to be reinforced.

VARIOUS COLOURS

Normstahl industrial doors are available in 13 standard colours with a finished surface. They can also be painted in almost any RAL or NCS colour.

DURABLE SURFACE

The micro surface of the panels is not only attractive, but also offers high stability, especially for wide doors.

COLOURS AND SURFACES

NORMSTAHL OSP-DOORS

NORMSTAHL OSP steel doors are available in 13 standard colours, the standard interior colour is RAL 9002, and painted doors are also available in all RAL and NCS colours.

NORMSTAHL OSF-DOORS

The NORMSTAHL OSF doors are available in 13 and the OSFI doors in 1 pre-painted exterior colours, the standard interior and exterior colour is anodised aluminium. In addition painted doors are also available in all RAL and NCS colours. The frames of Normstahl OSF doors are always anodised aluminium. In combination with the OSP panels, these 13 colours are also used for the aluminium frames. In addition we also paint your doors in all RAL and NCS colours.

Rapeseed yellow (sim. to RAL 1021)	Fire red (sim. to RAL 3000)	Gentian blue (sim. to RAL 5010)	Moss green (sim. to RAL 6005)	Anthracite grey (sim. toRAL 7016)	Black grey (sim. to RAL 7021)
Graphit grey (sim. to RAL 7024)	Chocolate brown (sim. to RAL 8017)	Grey white (sim. to RAL 9002)	Deep black (sim. to RAL 9005)	White aluminium (sim. to RAL 9006)	Grey aluminium (sim. to RAL 9007)	Pure white (sim. to RAL 9010)

NORMSTAHL

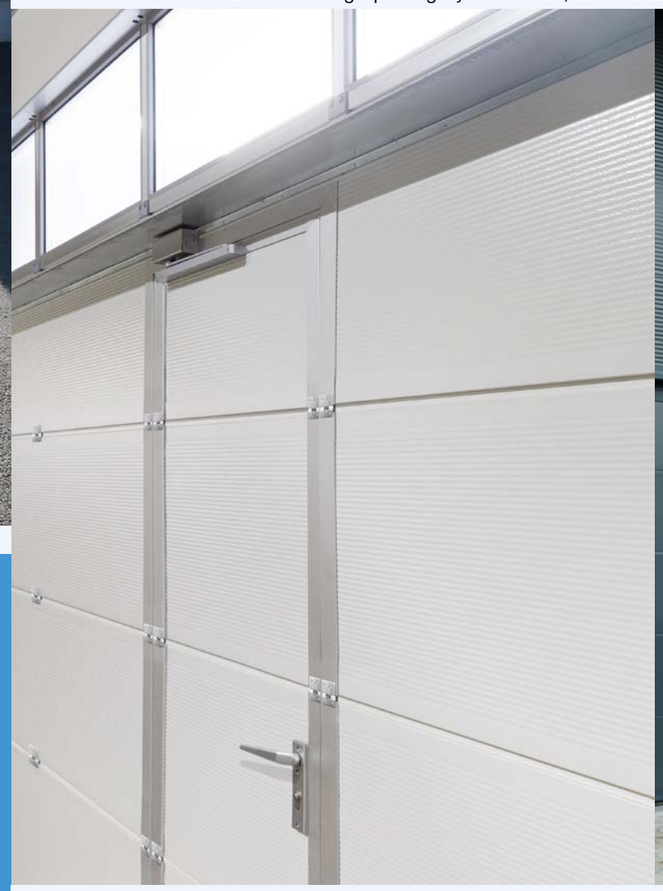
OSP-INDUSTRIAL DOORS

OSP-doors in anthracite grey RAL 7016 with continuous rooflights and pass door profiles in natural aluminium

PERFECT SOLUTIONS FOR THE INDUSTRY

These insulated overhead sectional doors are used in warehouses, logistics centres and production facilities of all kinds. The door design is ideal for customers who require well-insulated and space-saving doors. Ball-bearing rollers and well-designed hinges ensure smooth operation. The continuous micro surface offers high stability and the 42mm panels provide optimum thermal insulation.
The glazing alternatives range from completely transparent sections to single windows in rectangular or oval design made of acrylic glass or toughened glass.

OSP-doors in graphite grey RAL 7024, continuous light strip in natural anodised aluminium



OSP door interior view with light strip and pass door

OSP door in anthracite grey RAL 7016 with light strip

NORMSTAHL
OSP42A

THE ALL-ROUND SECTIONAL DOOR FOR COMMERCIAL AND INDUSTRIAL APPLICATIONS

Modern, robust and flexible - the NORMSTAHL OSP42A is simply unbeatable for a wide range of applications in all weathers. It has excellent insulation and offers you countless options at extremely low operating costs.

The door blade is made with robust 42mm thick panels featuring wind-load resistance (class-2), resistance to water penetration (class-3), and air impermeability (class-3). It's the small innovations that make a big difference when it comes to the protection and safety of your building and your employees.

The perfect choice for all transport & logistics centres and business premises of all kinds.

TECHNICAL DATA

Standard size up to (W x H)[1]	8,000 x 6,000 mm
Panel thickness	42 mm
Windows	optional
Pass door	optional
Access and automation	optional
Wind load, EN 12424[2]	class 2
Thermal transmittance, EN 12428[3] Full panel steel door	from 1,0 W/(m²K)
Water penetration, EN 12425	class 3
Air permeability, EN 12426[4]	class 3

1) Other sizes on request
2) Without pass door. Higher wind load classification on request
3) Door size 5,000 x 5,000 mm
4) Without pass door

ADDITIONAL FEATURES

- Pass door made with thermal-broken metal profiles and with 180 mm threshold (or optional lowered 16mm threshold)
- Single windows in rectangular or oval design with PVC or aluminium frames
- Complete aluminium frame sections with versatile glazing options
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- Complete lock consisting of handle and cylinder for both sides or only available for the inside
- 13 standard colours and other colours on request

RAIL SYSTEMS

THERMAL INSULATION

A 42 mm thick sandwich panel without cold thermal insulation values.

SMOOTH OPERATION

Ball bearing mounted rollers and solid hinges ensure smooth and solid door operation.

FINGER PINCH PROTECTION

The standard finger pinch protection stands for maximum safety.

WINDOWS AND LIGHT STRIPS

Various window and light strips variants are optionally available. Details on page 23.

NORMSTAHL
OSP42S

HIGH SPEED, ENERGY AND COST EFFICIENT

The NORMSTAHL OSP42S sectional door is equipped with a modified control system and has a reinforced construction in order to achieve a higher speed and more advantages for your company. The speed ensures a better working environment, greater safety, lower energy consumption and many other benefits.

For companies with frequently used doors, vehicles of different heights, special requirements in terms of temperature control, frequent risk of door collisions or with the aim of reducing noise and dust generation, speed offers an invaluable advantage. With an operating speed of approximately one metre per second, the OSP42S is the perfect door to meet all your needs.

The speed allows you to better regulate the indoor climate by increasing the closing speed. The door is as watertight, airtight and resistant to wind loads as possible. Better temperature regulation means less heat loss, less energy loss and lower CO^2 emissions.

TECHNICAL DATA

Standard size up to (W x H)[1]	5,000 x 5,000 mm
Panel thickness	42 mm
Windows	optional
Pass door	not possible
Opening speed	≈1,0 m/s
Wind load, EN 12424[2]	from class 2
Thermal transmittance, EN 12428[3] Full panel steel door	1,0 W/(m²K)
Water penetration, EN 12425	class 3
Air permeability, EN 12426	class 3

1) Other sizes on request
2) Higher wind load classification on request
3) Door size 5,000 x 5,000 mm

ADDITIONAL FEATURES

- Increased security thanks to immediate door stop when objects are detected in the doorway by a light curtain
- Optional full vision panels or burglar-resistant windows
- Wide range of customisation options
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- 13 standard colours and other colours on request

RAIL SYSTEMS

HIGH OPENING SPEED

Thanks to improvements in design and technology, the OSP42S achieves an opening speed of approx. 1 metre per second.

HIGH ENERGY EFFICIENCY

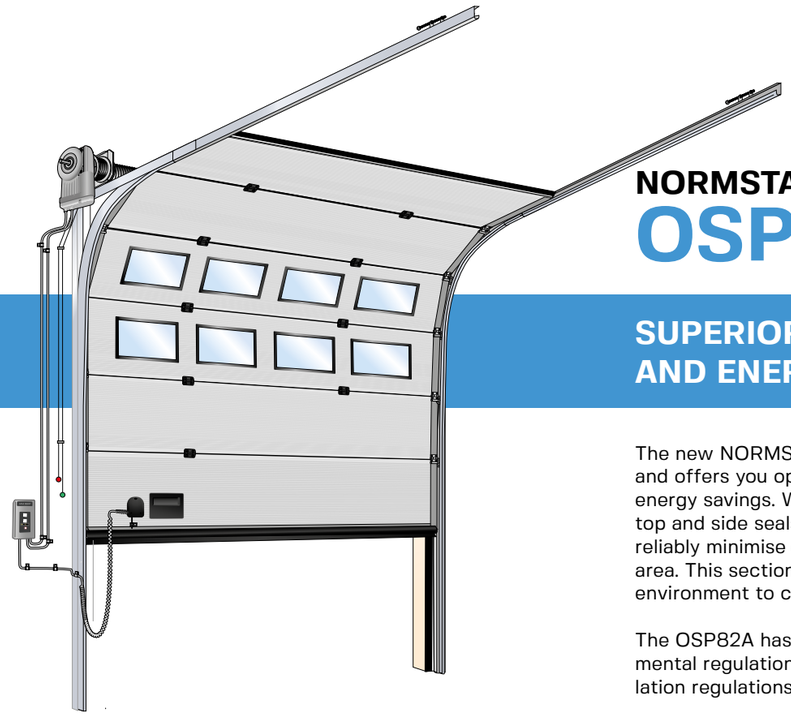
Less heat and energy loss and therefore lower CO^2 emissions thanks to high opening speed and excellent insulation.

HIGH SAFETY THANKS TO LIGHT CURTAIN

Objects in the door area are detected by the light grid and initiate an immediate stop of the door.

VERSATILE CUSTOMISATION

The door can be customised in a variety of ways, e.g. through rail systems, door colour, shape, number and positions of the panes, to suit the respective work processes.



NORMSTAHL

OSP82A

SUPERIOR THERMAL INSULATION AND ENERGY EFFICIENT

The new NORMSTAHL OSP82A has an 82 mm thick door leaf and offers you optimum thermal sealing and comprehensive energy savings. With innovative features such as close-fitting top and side seals and a water-resistant bottom seal, you can reliably minimise draughts and condensation in your work area. This sectional door gives you control over your indoor environment to create optimal working conditions.

The OSP82A has been designed to meet the strictest environmental regulations. Its special features exceed current insulation regulations with **an outstanding U-value of 0.46 W/m²K.**

The OSP82A can be configured to your exact specifications. You can choose for windows, choose from 13 standard colours, request your own factory paint finish and choose from a wide range of track sets, hardware types and dimensions.

TECHNICAL DATA

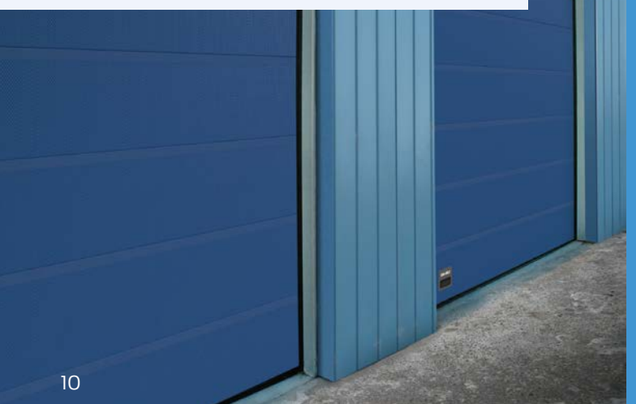
Standard size up to (W x H)[1]	8,000 x 6,000 mm
Panel thickness	82 mm
Windows	optional
Pass door	not possible
Access and automation	optional
Wind load, EN 12424[2]	from class 2
Thermal transmittance, EN 12428[3] Full panel steel door	from 0,46 W/(m²K)
Water penetration, EN 12425	class 3
Air permeability, EN 12426	class 3

1) Other sizes on request, size limited by doorweight
2) Higher wind load classification on request
3) Door size 5,000 x 5,000 mm

ADDITIONAL FEATURES

- Outstanding thermal resistance of 0.46 W/(m²K)
- Optional burglar-resistant windows
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- Complete lock consisting of handle and cylinder for both sides or only available for the inside
- 13 standard colours and other colours on request

RAIL SYSTEMS



THERMAL INSULATION

82 mm

A 82 mm thick sandwich panel without cold thermal insulation values.

SMOOTH OPERATION

BALL BEARING MOUNTED ROLLERS

Ball bearing mounted rollers and solid hinges ensure smooth and solid door operation.

FINGER PINCH PROTECTION

The standard finger pinch protection stands for maximum safety.

VERSATILE CUSTOMISATION

The door can be customised in a variety of ways, e.g. through rail systems, door colour, shape, number and positions of the panes, to suit the respective work processes.

NORMSTAHL

OSP42DD

THE SECTIONAL DOOR WITH DIRECT DRIVE

Keep your business running with the NORMSTAHL OSP42DD, the door with innovative direct drive, perfect for many applications and weather conditions. Modern, robust and flexible, with stainless steel panels, the OSP42DD offers great thermal insulation and a wide range of options with the lowest possible running costs. This model is the ideal choice for wash bays, clean rooms, food applications or other doors installed outdoor and used in humid environments, such as a car wash.

The OSP42DD works in the same way as other simpler standard doors. However, the normal spring-based system has been replaced by a more powerful optimised motor and a better control system. This increases the reliability of opening and closing, while reducing the risk of wear and tear, maintenance and the need for complete shutdowns. So your operation never stands still.

ADDITIONAL FEATURES

- Pass door with 180 mm threshold (or optional lowered 16mm threshold)
- Full vision panels or burglar-resistant windows optional
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- Complete lock consisting of handle and cylinder for both sides or only available for the inside
- 13 standard colours and other colours on request

TECHNICAL DATA

Standard size up to (W x H)[1]	4,050 x 4,250 mm
Panel thickness	42 mm
Windows	optional
Pass door	optional
Opening speed	0,17 m/s
Wind load, EN 12424[2]	class 3
Thermal transmittance, EN 12428[3] Full panel steel door	from 1,0 W/(m²K)
Water penetration, EN 12425	class 3
Air permeability, EN 12426	class 3

1) Other sizes on request
2) Higher wind load classification on request
3) Door size 4,050 x 4,250 mm

RAIL SYSTEMS

OSF door with on-site foiling

MORE ROBUST TECHNOLOGY

More powerful motor and improved control system for intensive use with reduced risk of wear and tear.

CORROSION-RESISTANT MATERIAL

Stainless steel panels, ideal for difficult climatic conditions such as car washes, clean rooms or food applications.

HIGH SAFETY THANKS TO LIGHT CURTAIN

Objects in the door area are detected by the light grid and initiate an immediate stop of the door.

VERSATILE CUSTOMISATION

The door can be customised in a variety of ways, e.g. through rail systems, door colour, shape, number and positions of the panes, to suit the respective work processes.

NORMSTAHL OSP-DOORS

EXAMPLES & REALISATIONS

OSP doors in anthracite grey RAL 7016 with light section in natural aluminium

OSP door inside with lift fitting and side release

OSP door with lift and roof follower fitting

OSP doors in graphite grey RAL 7024 with continuous rooflights and pass door profiles in natural aluminium

OSP door in anthracite grey RAL 7016 with light section and side entrance door

NORMSTAHL

OSF-INDUSTRIAL DOORS

OSF doors in deep black RAL 9005

GREAT INSIDE BRIGHTNESS AND VISIBILITY

Normstahl OSF industrial sectional doors are glazed aluminium framed doors designed for applications where light or visibility is required or which are used for presentation purposes.
Typical areas of application are showrooms, fire stations, car dealers or other applications where optimum daylight incidence and/or presentation options are required.

OSF doors in fire red RAL 3000 with side entrance door

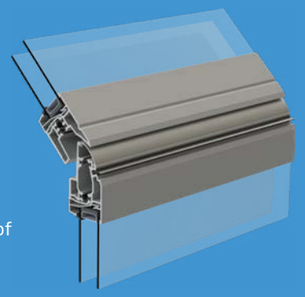
OSF doors in fire red RAL 3000

OSF doors interior view

INSULATION + WITH OSFI42

THERMALLY SEPARATED ALUMINIUM FRAME SECTIONS

With thermally separated frame sections, we offer the functionality and aesthetics of a glazed door with the excellent insulation of our doors.



NORMSTAHL

OSF42A

MORE LIGHT FOR YOUR BUSINESS

The NORMSTAHL OSF42A is modern, robust and flexible and has been developed to maximise the diffusion of light inside the building with enhanced visibility both from outside to inside and vice-versa. Full of innovation and with excellent insulation, this attractive sectional door offers you countless options at extremely low operating costs.

Every single part of the sectional door fulfils the highest quality standards. Wind-reinforced panels, connecting profiles for optimised load distribution and butyl seals with rounded corners for maximum tightness combine to create a high-performance door with an extended service life.

The modular design of the sectional door offers complete freedom in the special configuration for every situation. The aluminium frame sections can be supplied either fully glazed, with panel infills or painted. The lower sections are optionally available as OSP42A panels. An optional pass door with a low threshold makes crossing easier and reduces the risk of tripping. The frame sections also continue over the pass door.

TECHNICAL DATA

Standard size up to (W x H)[1]	to 7.250 x 6.050 mm on request
Frame thickness	44 mm
Filling thickness	27 mm
Bottom section thickness	42 mm
Windows	various options
Pass door	optional
Access and automation	optional
Wind load, EN 12424[2]	from class 2
Thermal transmittance, EN 12428[3]	from 2,3 W/m²K
Water penetration, EN 12425[4]	class 3
Air permeability, EN 12426[4]	class 2

1) Other sizes on request
2) Without pass door. Higher wind load classification on request
3) Door size 5,000 x 5,000 mm and glazing, U-value depending on number of ISO panels
4) Without pass door

ADDITIONAL FEATURES

- Corrosion-resistant aluminium frame
- Pass door with normal and low threshold
- Various window types with single or double glazing
- Frame transom door with closed cassette in the floor area or completely glazed
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- Cylinder lock with key available for both sides or for inside only
- 13 standard colours and other colours on request

RAIL SYSTEMS

HIGH DIFFUSION OF DAYLIGHT

Developed for areas of application where light, daylight or transparency are required.

WINDOW OR SANDWICH PANELS

The modular design of the OSF42A allows installation in any area of application.

HIGH SAFETY THANKS TO LIGHT CURTAIN

Objects in the door area are detected by the light grid and initiate an immediate stop of the door.

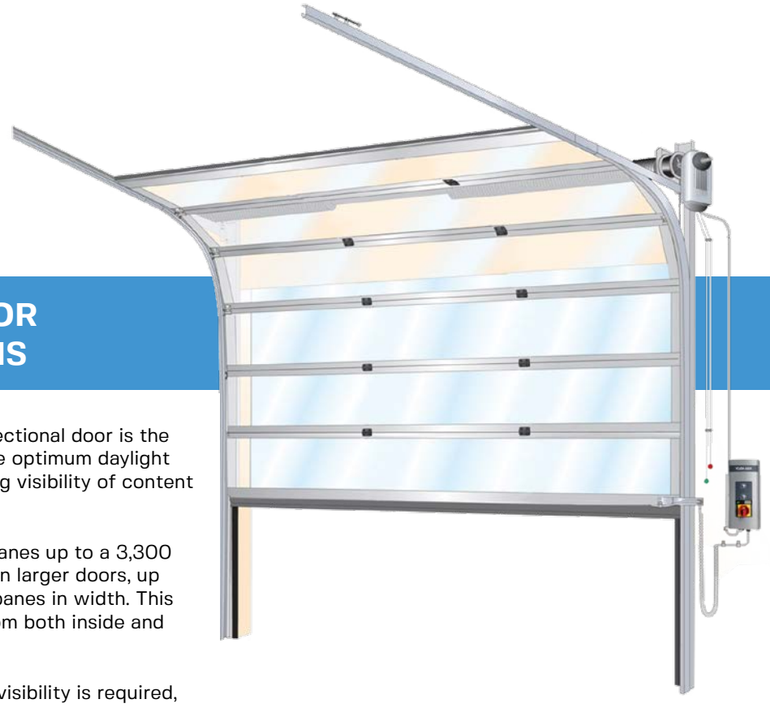
VERSATILE CUSTOMISATION

The door can be customised in a variety of ways, e.g. through rail systems, door colour, shape, number and positions of the panes, to suit the respective work processes.

NORMSTAHL

OSF42FG

FULLY GLAZED DOOR FOR BEST LIGHT CONDITIONS



The fully glazed NORMSTAHL OSF42FG sectional door is the ideal door for all areas of application where optimum daylight diffusion and/or the possibility of enhancing visibility of content of building.

The door can be supplied with full-width panes up to a 3,300 mm width (depending on the glass type). On larger doors, up to 5,500 mm, panels are divided into two panes in width. This ensures maximum daylight and visibility from both inside and outside.

Showrooms in particular, where maximum visibility is required, benefit from these product advantages. The elegant design of the OSF42FG enables first-class presentation options in addition to granting exceptional natural brightness in the building. All in all, the sectional door fits perfectly into all modern building façades and exhibition halls.

The OSF42FG is made of anodised aluminium inside and out as standard. Painting or powder coating in all RAL colours is also possible.

TECHNICAL DATA

Standard size up to (W x H)[1]	5,500 x 4,250 mm
Frame thickness	44 mm
Windows **W ≤ 3,300 mm** **W > 3,300 mm**	 1 pane 2 panes
Pass door	not available
Access and automation	optional
Wind load, EN 12424[2] **Class 3** **Class 2**	 W ≤ 3,650 W > 3,650
Thermal transmittance, EN 12428	4,8 W/m²K
Water penetration, EN 12425	 class 3
Air permeability, EN 12426	class 3

1) Other sizes on request
2) Higher wind load classification on request
* = 4,000 x 4,250 mm with DE4D glass

ADDITIONAL FEATURES

Corrosion-resistant aluminium frame

- Window single or double glazing in tempered glass
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- Cylinder lock with key available for both sides or for inside only
- Standard colour aluminium and other colours on request

RAIL SYSTEMS

MAXIMUM DAYLIGHT DIFFUSION

The door with maximum daylight diffusion, therefore ideal for showrooms, fire stations or similar applications.

HIGH-QUALITY DESIGN

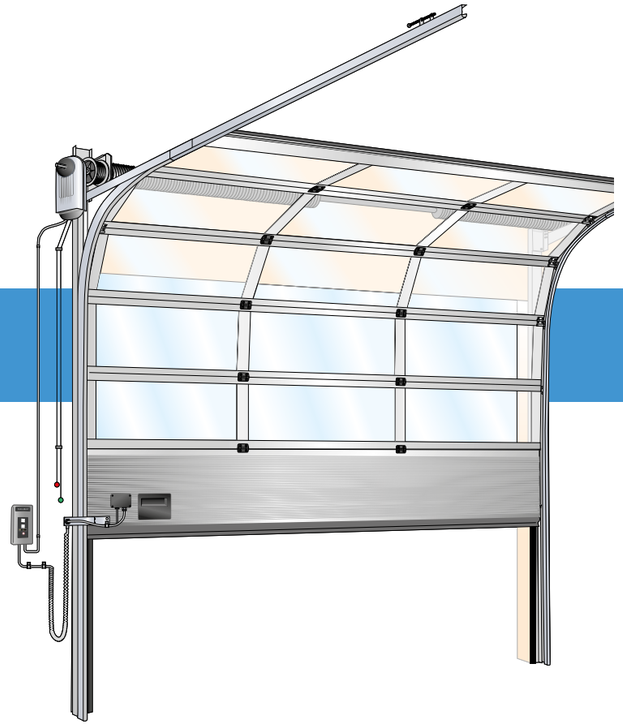
Perfect for use in all modern building façades and exhibition halls.

HIGH SAFETY THANKS TO LIGHT CURTAIN

Objects in the door area are detected by the light grid and initiate an immediate stop of the door.

SMOOTH OPERATION

Ball bearing mounted rollers and solid hinges ensure smooth and solid door operation.



NORMSTAHL

OSFI42A

HIGH DIFFUSION OF LIGHT, HIGH-QUALITY INSULATION

The NORMSTAHL OSFI42A comes with all the features and advantages of the OSF42A model, maximizing the diffusion of light inside the building with enhanced visibility both from outside to inside and vice-versa. In addition it brings excellent insulation, protecting the comfort of people operating inside the building and granting energy savings.

Every single part of the OSFI42A is designed and manufactured according to the strictest standards. Thermally separated aluminium profiles without thermal bridges, energy-efficient, continuous butyl seals between windows and frame for maximum sealing combine to create an attractive door with low heat transfer.

The OSFI42A is available in wide range of sizes, and choice of panels, windows, locks, handles and pass doors, making it perfect for all industrial requirements. 13 colors are available as standard but, upon request, any colour can be requested for inside and outside of your new door.

TECHNICAL DATA

Standard size up to (W x H)[1]	7,250 x 6,050 mm
Frame thickness	42 mm
Filling thickness	27 mm
Bottom section thickness	42 mm
Windows	various options
Pass door	optional
Access and automation	optional
Wind load, EN 12424[2]	from class 2
Thermal transmittance, EN 12428[3]	from 1,7 W/m²K[5]
Water penetration, EN 12425[4]	class 3
Air permeability, EN 12426[4]	class 3

1) Other sizes on request
2) Higher wind load classification on request
3) Door size 4,500 x 4,250 mm, U-value depending on the number of ISO panels
4) Without pass door
5) The value may vary depending on the weight, with DE4D glass

ADDITIONAL FEATURES

- Thermally separated, corrosion-resistant aluminium frame sections
- Pass door with normal and low threshold
- Various window types with single or double glazing
- Frame transom door with closed cassette in the floor area or fully glazed
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- Cylinder lock with key available for both sides or for inside only
- 13 standard colours and other colours on request

RAIL SYSTEMS

INSULATION +

Thanks to thermally-broken frame frame sections, we offer the functionality and aesthetics of a glazed door with the outstanding insulation of our doors.

HIGH DIFFUSION OF DAYLIGHT

Developed for areas of application where light, daylight or transparency are required.

WINDOW OR SANDWICH PANELS

The modular design of the OSFI42A allows installation in any area of application.

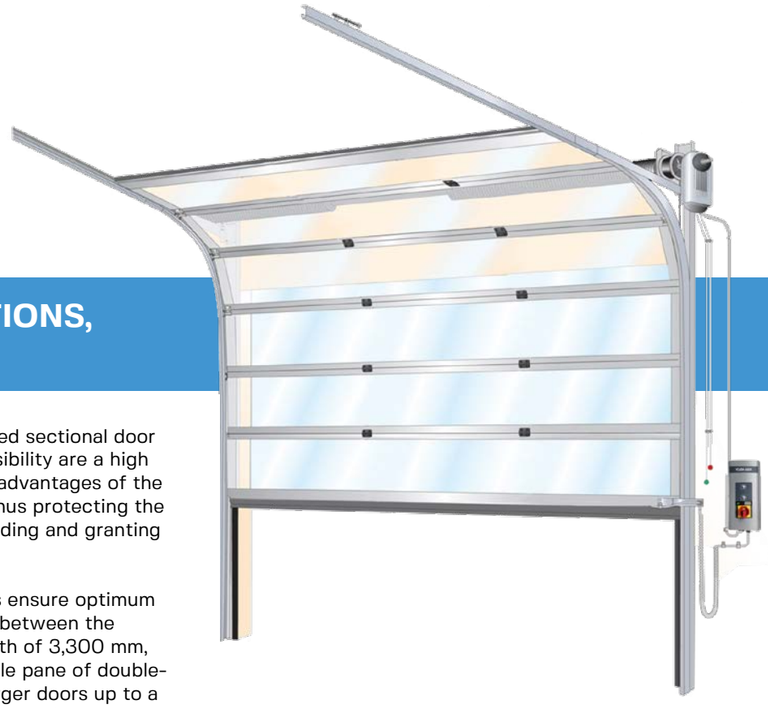
VERSATILE CUSTOMISATION

The door can be customised in a variety of ways, e.g. through rail systems, door colour, shape, number and positions of the panes, to suit the respective work processes.

NORMSTAHL

OSFI42FG

BEST LIGHTING CONDITIONS, MAXIMUM INSULATION



The NORMSTAHL OSFI42FG is a fully glazed sectional door designed for applications where light or visibility are a high priority. It comes with all the features and advantages of the OSF42FG model, adding extra insulation, thus protecting the comfort of people operating inside the building and granting energy savings.

The thermally separated aluminium profiles ensure optimum thermal insulation and create a separation between the inside and outside of the door. Up to a width of 3,300 mm, all aluminium frames are glazed with a single pane of double-strengthened or energy-efficient glass. Larger doors up to a width of 5,500 mm are divided into two panes of toughened or energy-efficient glass. For maximum daylight and visibility from the inside and outside and excellent insulation at the same time.

Exhibition spaces in particular, where maximum transparency is required, benefit from these product advantages. The elegant design of the OSFI42FG thus enables first-class presentation and design options in addition to the high incidence of light and reduced condensation. All in all, the sectional door fits perfectly into all modern building façades and exhibition halls.

The OSFI42FG is made of anodised aluminium inside and out as standard. Painting or powder coating in all RAL colours is also possible.

ADDITIONAL FEATURES

- Thermally separated, corrosion-resistant aluminium frame sections
- Single or double glazed windows in toughened glass
- Automatic and manual operation
- Automatic operation via push button, pull switch, remote control, magnetic loops, light barrier and radar
- Standard colour aluminium and other colours on request

TECHNICAL DATA

Standard size up to (W x H)[1]	5,500 x 4,250 mm
Frame thickness	44 mm
Windows **W ≤ ,3300 mm** **W > 3,300 mm**	 1 pane 2 panes
Pass door	not available
Access and automation	optional
Wind load, EN 12424[2] **Class 3** **Class 2**	 W ≤ 3,650 W > 3,650
Thermal transmittance, EN 12428	from 1,9 W/m²K*
Water penetration, EN 12425	class 3
Air permeability, EN 12426	class 3

1) Other sizes on request
2) Higher wind load classification on request
* = 4.000 x 4.255 mm door with DE4D

RAIL SYSTEMS

INSULATION +

Thanks to thermally separated frame sections, we offer the functionality and aesthetics of a glazed door with the outstanding insulation of our doors.

MAXIMUM DAYLIGHT DIFFUSION

The door with maximum daylight incidence, therefore ideal for showrooms, fire stations or similar applications.

HIGH-QUALITY DESIGN

Perfect for use in all modern building façades and exhibition halls.

HIGH SAFETY THANKS TO LIGHT CURTAIN

Objects in the door area are detected by the light grid and initiate an immediate stop of the door.

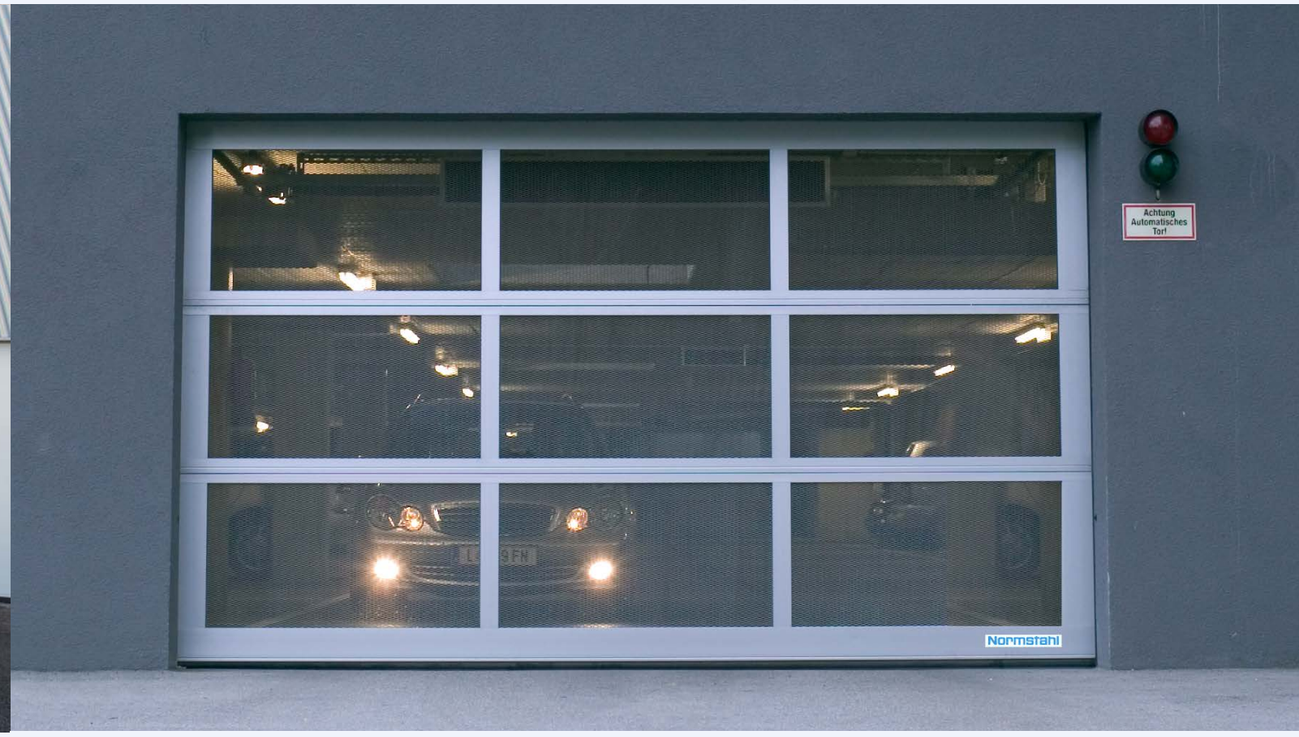
NORMSTAHL OSF-DOORS

EXAMPLES & REALISATIONS

OSF door with floor panel in white aluminium RAL 9006 and side entrance door, upper door section with panel infill

OSF frame sections with DAS glazing

OSF doors with floor panels in white aluminium RAL 9006 and pedestrian door with high threshold



Aluminium framed door with stainless steel expanded metal

NORMSTAHL OSP- AND OSF-DOORS

OPERATING & CONTROL SYSTEMS

Normstahl IDO7 (incl. 230V CE plug)
with Normstahl C700 door control system

IDO7 DOOR OPERATOR WITH C700 DOOR CONTROL UNIT

NORMSTAHL IDO7

The Normstahl ID07 operator is a combination of the Normstahl IDO7 door operator and and a Normstahl C700 series control unit. The system is available in 3 versions, for doors weighing up to 400 kg and for doors weighing over 400 kg, as well as a high-speed version for doors weighing up to 250 kg.

C700 CONTROL UNIT

The C700 door control unit offers a range of control options, from simple buttons for opening and closing to technically sophisticated automatic functions. The design of the control unit is based on modules. Safety upgrades and additional automatic functions are available. Additional functions such as magnetic loops, light barriers, radar, radio remote control and restricted door opening can be easily added. The restricted door opening function is available as standard at the touch of a button.

- 230V supply voltage
- Temperature range
  -20° C to +55° C
- Operating speed 25cm/s
- Soft start & soft stop
- Force limitation to both sides
  Reverse in case of blockage

IDO7 DOOR OPERATOR

The heart of the drive system is the electro-mechanical motor, that drives the equalising shaft with the cable drums and the torsion springs. The operator is mounted directly on the equalising shaft and does not require any special wall reinforcement. Already installed doors can be retrofitted with IDO7.

Thanks to a built-in frequency converter, the IDO7 drive unit features a soft-start and soft-stop even under the most demanding conditions. The gentle acceleration and braking reduces wear and tear, extending door lifetime, and the noise level of the door.

Manual operation using a reel chain

MANUAL OPERATION

Normstahl industrial sectional doors can be operated manually with a pull rope. The pull system is connected directly to the door blade. For heavier doors, a reel chain facilitates door operation. The gear chain drive (ratio 1:4) is directly connected to the shaft and is suitable for doors with a maximum weight of up to 250 kg.

EMERGENCY MANUAL CHAIN HOIST

Normstahl IDO7 door operator can be equipped with an integrated manual chain hoist (ratio 1:3.5), which enables rapid emergency opening/closing in the event of a power failure.

Optional fast emergency hand chain for the IDO7

TECHNICAL DATA

Normstahl IDO7	Quick release < 400 kg
Normstahl IDO7 HD	Quick release Doors < 400 kg Speed up to 0,25 m/s
Normstahl IDO7 2H	Quick release Doors up to 250 kg Speed up to 0,50 m/s (opening) / 0,25 m/s (closing)

Power supply	230V AC +/- 10%, 1-phase 50/60 Hz
Power	IDO7/IDO7-2H 0,37 kW / IDO7HD 0,6 kW
Protection class	230V AC +/- 10%, 1-phase 50/60 Hz
Operating temperature range	from -20 °C to +55 °C
Operating factor	ED = 30%, S3 10 Min. intermittent

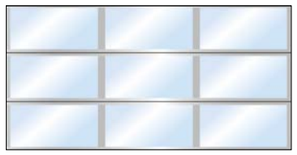
NORMSTAHL OSP- AND OSF-DOORS

ACCESSORIES

WINDOWS AND FRAME SECTIONS

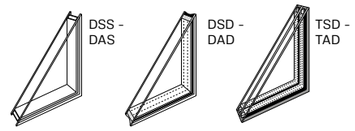
DAOP-glazing (610 x 292 mm)

DARP/TARP-glazing (604 x 292 mm)



WINDOWS

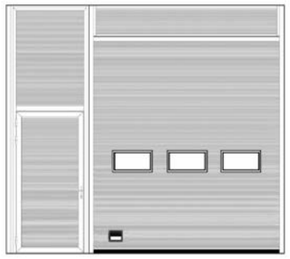
The door sections can be fitted with windows. The number of windows per section depends directly on the clear width of the door. The windows are available with double or triple glazing as well as class 2 burglary protection and scratch-resistant versions are available.



FRAME SECTIONS

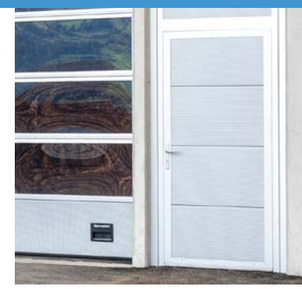
Normstahl OSP industrial sectional doors with 42 mm panels can be fitted with one or more Normstahl OSF42A frame sections. The height of the section is 545 mm. The height of the section for Normstahl OSF doors is variable (425-704 mm). Further glazing on request.

SIDE ENTRANCE DOORS WITH FIXED PANELS



SIDE ENTRANCE DOORS WITH FIXED PANELS

If the building opening is larger than the installed door, the space around the door can be filled with fixed panels or additionally fitted with a side entrance door. Fixed panels are available as top and side panels in the same colours and designs as the door leaf.



ACCESS AND AUTOMATIC SYSTEMS

AUTOMATIC SYSTEMS

In addition to push and pull switches, Normstahl offers a a range of automatic systems that enable extended opening and opening and safety control:

REMOTE CONTROL

A hand-held transmitter allows the door to be operated from a vehicle.

MAGNETIC LOOP

A sensor in the floor detects metallic objects (forklift trucks, pallet trucks) and opens the door automatically.

RADAR

An infrared sensor above the door detects objects (people, vehicles) within a defined distance of the door, and the door opens automatically.

LIGHT GRID

A light grid, mounted on both sides of the door frame, offers the best possible safety for people, goods, and vehicles.

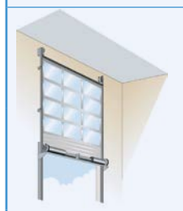
CODE SWITCH

- Glass design code switch
- 3 commands with relay box

NORMSTAHL OSP42A AND OSF42A

TECHNICAL DATA

Installation dimensions and track systems

TYPE OF TRACK	DOOR-TYPE	MAX LW [MM]	MAX LH [MM]	REQUIRED LINTEL	LATERAL CLEARANCE					DEPTH
					Manual	Manual chain hoist		Electric drive IDO7		
					auto-matical	Model „T“ up to 250 kg	Model „U“ over 250 kg	Quick release	Emergen-cy hand chain	
 Standard-fitting SL*	OSP42A	≤ 8000	≤ 4500 > 4500	485 510	132 mm	+80 mm	+146 mm	+138 mm	+178 mm	LH +600 mm
	OSF42A	8000								
 Standard-fitting low SLL	OSP42A	≤ 5500	≤ 4250	400	132 mm	+80 mm	+146 mm	+138 mm	+178 mm	LH +900 mm
	OSF42A									
 Standard-fitting low LL	OSP42A	≤ 8000	≤ 6000	265/300*	132 mm	+96 mm	+146 mm	+172 mm	+212 mm	LH +1250 mm wenn IDO7
	OSF42A	≤ 8000								
	* Door weight > 250kg and/or wicket door. **With pedestrian door -100 mm loss of clearance in height.**									
 Lever fitting HL	OSP42A	≤ 8000	≤ 6000	HL+ 320/370*	132 mm	+80 mm	+146 mm	+138 mm	+178 mm	LH - HL +950 mm
	OSF42A	≤ 8000								
	* if HL > 3321 mm HL as VL mounted on bracket LB < 6000 mm, HL min. 1500 mm									
 Vertical fitting VL	OSP42A	≤ 8000	≤ 5500	LH +365 mm	VLA 110 mm VLT 106mm	+106 mm	VLA +168 mm VLT +172 mm	VLA +201 mm VLT +206 mm	VLA +241 mm VLT +246 mm	VLA 500 mm VLT* min. 525 mm
	OSF42A	≤ 8000								
	* VLA = LB ≤ 3000 mm; LH ≤ 3350 mm * VLT = LB ≤ 3000 mm or LH > 3350 mm									

Normstahl high-speed door HSC903AG

NORMSTAHL

HIGH-SPEED DOORS

WE KEEP YOUR BUSINESS RUNNING

High opening and closing speeds offer a significant advantage for businesses with high-traffic doors, vehicles of varying heights, special temperature control needs and hard-to-avoid door collisions. They improve traffic flow, increase employee comfort, save energy and protect the premises from draughts, moisture, dust and dirt.

VERSATILE APPLICATION OPTIONS

Normstahl high-speed doors can be installed in a variety of indoor and outdoor areas and adapted to a wide range of opening requirements. An optional insulated door curtain ensures reliable temperature regulation in sensitive areas, like work processes under cleanroom conditions, where air exchange can be further reduced with additional side seals.

- Bottom profile without rigid parts to prevent injuries or damage
- Motor with frequency inverter for smooth starting and stopping
- Door curtain in up to 16 RAL colours and individually printable
- Various window options for more visibility and light diffusion

SAFETY FIRST AS A STANDARD

Normstahl high-speed doors are equipped as standard with the following safety features to prevent injuries to your employees, damage to goods, machines and the door itself, and thus ensure a smooth workflow without interruptions:

SELF-RESET SYSTEM

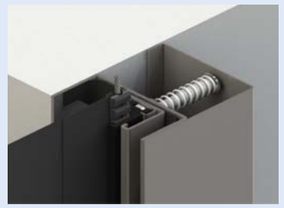
The high speed doors are equipped with an automatic reset system. If it hits an obstacle or is hit by a vehicle during operation, the door curtain absorbs the impact and automatically releases itself from its side guides without causing any damage or damaging the door itself. The door reinserts itself automatically within the next open and close cycle. This unique feature makes the door crash-resistant, reducing damage, production downtime and repair costs.

INTELLIGENT OBJECT DETECTION SYSTEM

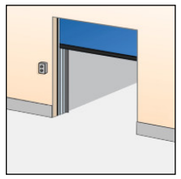
All doors have an intelligent object detection system in the soft bottom beam that recognises whether there is an object in the door opening or whether wind or draughts are exerting pressure on the door curtain. If there is resistance from fixed objects, the door opens again, whereas if there is resistance from draughts, the door actively closes again.

HEAVY-DUTY APPLICATIONS

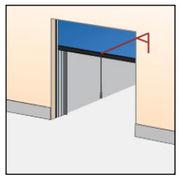
A wind reinforcement is installed around the side guides to increase the wind load resistance of the door. Wind load on the door curtain is transferred to the flexible (spring-installed) side guides. This reinforcement increases the stiffness of the side columns, preventing that the curtain will be pulled out of the side guides at very high wind loads.



ACCESS AND AUTOMATIC SYSTEMS

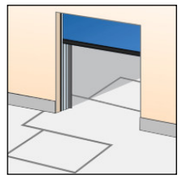


PUSH BUTTON
Installed inside and outside the building, pushing opens the door.

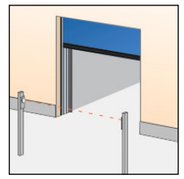


PULL-ROPE
Installed inside and outside the building pulling opens the door, for oparation from a vehicle.

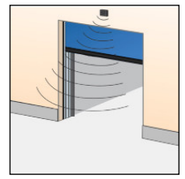
REMOTE CONTROL
A hand-held transmitter allows the door to be operated from a vehicle.



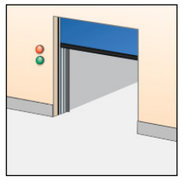
MAGNETIC LOOP
A sensor in the floor detects metallic objects and opens the door automatically.



PHOTOCELLS
Installed on pillars, inside and outside the building, passing opens the door.

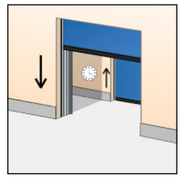


RADAR
An infrared sensor detects objects within a defined distance and the door opens automatically.

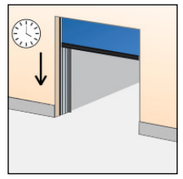


TRAFFICLIGHT
Traffic light indicates whether the gate can be passed or not.

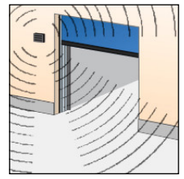
INTERLOCKING
If door A is open, door B cannot be opened and vice versa.



AIRLOCKING
If door A is closed, door B opens automatically and vice versa.



AUTOMATIC CLOSING
Door closes automatically with a programmable timer.



ACOUSTIC SIGNAL
A signal announces the closing of the door.

SPOT ON
For a contactless opening of the door.

AVAILABLE STANDARD COLOURS

Signal yellow RAL 1003	Rapeseed yellow RAL 1021*	Pure Orange RAL 2004*	Flame red RAL 3000*	Light blue RAL 5012*	Ultramarine blue RAL 5002	Gentien blue RAL 5010*	Moss green RAL 6005	Other colors on request
Opal green RAL 6026*	Anthracite grey RAL 7016	Agate grey RAL 7038*	Light grey RAL 7035	Traffic grey B RAL 7043	Jet black RAL 9005*	White RAL 9010*	Ivory RAL 1014*	

*Colors for High-speed doors HSC704A

HSC704A in Gentian blue RAL 5010

- Medium-sized, max. 4,500 x 4,600 mm
- For indoor use
- Galvanised steel construction
- Frequency converter control for smooth door movements
- Sustainability Plus: Insulated door curtains and sealed side panels are also available on request
- Opening speed of up to 2,3 m/s
  Closing speed 0,8 m/s

NORMSTAHL
HSC704A

MEDIUM-SIZED INTERIOR DOOR FOR VERSATILE APPLICATIONS

TECHNICAL DATA

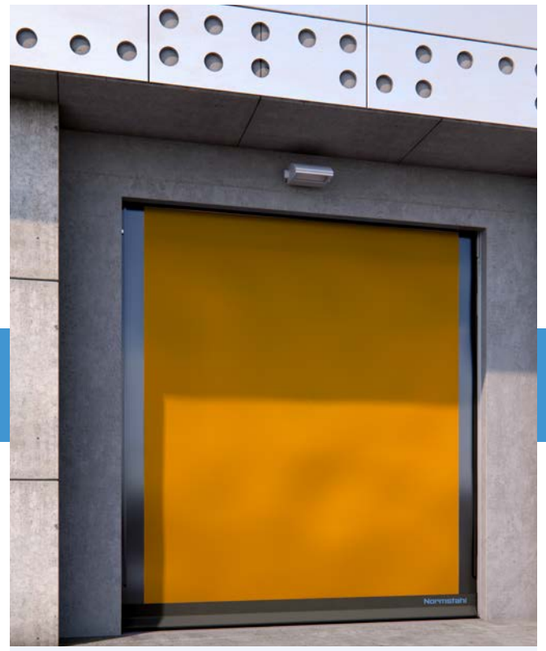
Min size (W x H)	900 x 1,000 mm
Max size (W x H)[1]	4,500 x 4,600 mm[2]
Operating speed[3]	Opening: up to 2,3 m/s Closing: 0,8 m/s
Wind load resistance, EN 12424	Class 2: B ≤ 3,000 mm Class 1: B > 3,000 mm
Curtain material **Thermal resistance coefficient** **Noise reduction**	PVC coated polyester fabric 0,7 mm - 900 g/m² 5,8 W/(m²K) 900 g/m2: ~12 dB
Insulated curtain[1] **Thermal resistance coefficient** **Noise reduction**	3,5mm - 1,300 g/m² 4,0 W/(m²K) 1,300 g/m²: ~17,5 dB
1) Other sizes available on request 2) Depending on door width 3) Depending on door size	

NORMSTAHL
HSC801AP

MEDIUM-SIZED EXTERIOR DOOR FOR HEAVY-DUTY APPLICATIONS

TECHNICAL DATA

Min size (W x H)	1,000 x 2,000 mm
Max size (W x H)[1]	5,500 x 5,500 mm
Operating speed[2]	Opening: up to 2,4 m/s Closing: 1,2 m/s
Wind load resistance[3], **EN 12424**	Class 3 (700 N/m²) Class 4 (1,000 N/m²) for doors up to 4,000 x 5,500 mm
Water penetration[3], **EN 12425**	Class 2 (50 N/m²)
Air permeability[3], **EN 12426**	Class 1 (24 m³/m²/h at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles
1) Other sizes available on request 2) Depending on door size 3) Not applicable for insect screens	



HSC801AP in Signal Yellow RAL 1003

- Medium-sized, max. 5,500 x 5,500 mm
- For outdoor use
- For heavy-duty use
- Galvanised steel construction
- Unique direct door drive (with gear wheel)
- Opening speed of up to 2,4 m/s
  Closing speed 1,2 m/s

HSC801APL in Rapaseed Yellow RAL 1021

NORMSTAHL

HSC801APL

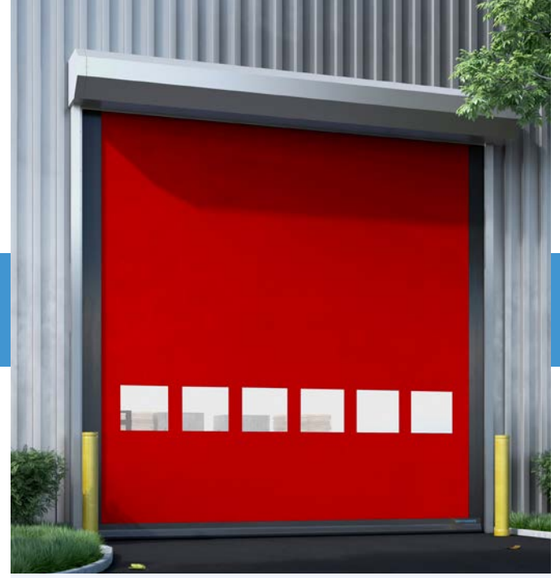
VERY LARGE-SIZED EXTERIOR DOOR FOR EXTREME WIND LOADS

- Large-sized, max. 9,000 x 6,500 mm
- For outdoor use
- For heavy-duty use
- Galvanised steel construction
- Opening speed of up to 1,4 m/s
  Closing speed 0,6 m/s

TECHNICAL DATA

Min size (W x H)	2,000 x 2,000 mm
Max size (W x H)[1]	9,000 x 6,500 mm[2]
Operating speed[3]	Opening: up to 1,4 m/s Closing: 0,6 m/s
Wind load resistance, EN 12424	Class 2 (450 Pa (N/m²) Class 3 (700 Pa (N/m²)[4] Class 4 (1,000 Pa (N/m²)[5]
Water penetration, EN 12425	Class 1 (30 Pa (N/m²)
Air permeability, EN 12426	Class 1 (24m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	750,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) For doors up to W 6,000 mm x H 5,500 mm
5) For doors up to W 4,000 mm x H 5,500 mm



HSC802APL in Flame red RAL 3000

- Large, max. 8,000 x 6,500 mm
- For heavy-duty applications
- For outdoor applications
- Galvanised steel construction
- Opening speed up to 1.4 m/s,
  closing speed up to 0.6 m/s

NORMSTAHL

HSC802APL

LARGE EXTERNAL DOOR FOR EXTREME WIND LOADS

TECHNICAL DATA

Min size (W x H)	2,000 x 2,000 mm
Max size (W x H)[1]	8,000 x 6,500 mm[2]
Operating speed[3]	Opening: up to 1,4 m/s Closing: 0,6 m/s
Wind load resistance, EN 12424	Class 3 (700 Pa (N/m²) Class 4 (1,000 Pa (N/m²)[4]
Water penetration, EN 12425	Class 1 (30 Pa (N/m²)
Air permeability, EN 12426	Class 1 (24m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	750,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size
4) For doors up to W 6,000 mm x H 5,500 mm

NORMSTAHL

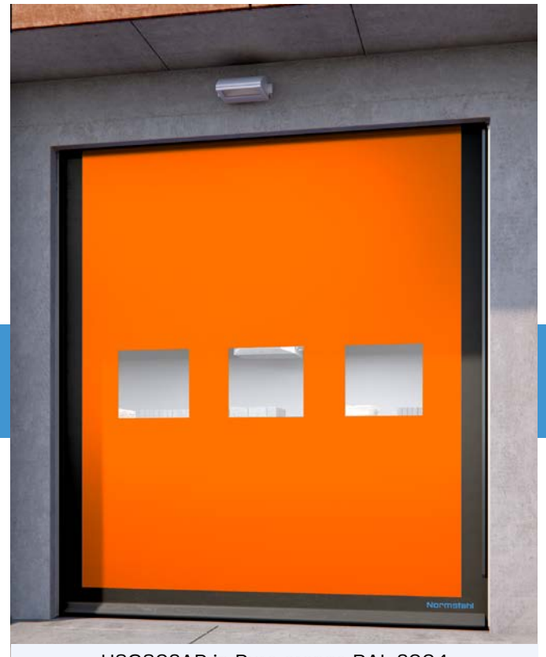
HSC802AP

MEDIUM-SIZED EXTERIOR DOOR FOR HEAVY DUTY OPERATIONS

TECHNICAL DATA

Min size (W x H)	1,000 x 2,000 mm
Max size (W x H)[1]	5,500 x 5,500 mm[2]
Operating speed[3]	Opening: up to 2,4 m/s Closing: 1,2 m/s
Wind load resistance, EN 12424[4]	Class 4 (1,000 Pa (N/m²)) Class 5 (>1,000 Pa (N/m²)) for doors up to W 5,000 mm x H 5,500 mm
Water penetration, EN 12425[4]	Class 3 (>50 Pa (N/m²))
Air permeability, EN 12426[4]	Class 1 (24m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) Not applicable for insect screens



HSC802AP in Pure orange RAL 2004

- Medium-sized, max. 5,500 x 5,500 mm
- For outdoor applications
- For heavy-duty applications
- Hot-dip galvanised steel construction
- Windows/Vision panels/Insect screens available as option
- Opening up to 2,4 m/s, closing 1,2 m/s

NORMSTAHL

HSC901AP

MEDIUM-SIZED INTERIOR DOOR FOR HEAVY DUTY OPERATIONS

TECHNICAL DATA

Min size (W x H)	1,000 x 2,200 mm
Max size (W x H)[1]	5,500 x 5,500 mm[2]
Operating speed[3]	Opening: up to 2,4 m/s Closing: 1,2 m/s
Wind load resistance, EN 12424[4]	Class 1 (300 Pa (N/m²)
Water penetration, EN 12425[4]	Class 1 (30 Pa (N/m²)
Air permeability, EN 12426[4]	Class 1 (24m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) Not applicable for insect screens

HSC901AP in Light blue RAL 5012

- Medium-sized, max. 5,500 x 5,500 mm
- For indoor applications
- For heavy-duty applications
- Galvanised steel construction
- Windows/Vision panels/Insect screens available as option
- Opening up to 2,4 m/s, closing 1,2 m/s

HSC903AG in Ultramarine blue RAL 5002

NORMSTAHL
HSC903AG

AESTHETIC INTERIOR DOOR WITH HIGHEST SPACE EFFICIENCY

- Small-sized, max. 4,000 x 4,000 mm
- For indoor use
- Most space-efficient high speed door
- Galvanised steel construction
- Windows/Vision panels/Insect screens available as option
- Opening speed of up to 2,7 m/s, closing speed 0,5 m/s

TECHNICAL DATA

Min size (W x H)	1,000 x 2,200 mm
Max size (W x H)[1]	4,000 x 4,000 mm[2]
Operating speed[3]	Opening: up to 2,7 m/s Closing: 0,5 m/s
Wind load resistance, EN 12424[4]	Class 1 (300 Pa (N/m²) Maximum wind load while closing 50 Pa (N/m²)
Water penetration, EN 12425[4]	Class 3 (>50 Pa (N/m²)
Air permeability, EN 12426[4]	Class 2 (12m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) Not applicable for insect screens

HSC903AGHY in Moss green RAL 6005

NORMSTAHL
HSC903AGHY

HIGHLY SEALED INTERIOR DOOR FOR HIGH HYGIENICAL DEMANDS

- Small-sized, max. 4,000 x 4,000 mm
- For indoor use
- For use in humid or corrosive environments or environments with a high hygienical demand
- Opening speed of up to 2,7 m/s, closing speed 0,5 m/s

TECHNICAL DATA

Min size (W x H)	1,000 x 2,200 mm
Max size (W x H)[1]	4,000 x 4,000 mm[2]
Operating speed[3]	Opening: up to 2,7 m/s Closing: 0,5 m/s
Wind load resistance, EN 12424[4]	Class 1 (300 Pa (N/m²) Maximum wind load while closing
Water penetration, EN 12425[4]	Class 3 (>50 Pa (N/m²)
Air permeability, EN 12426[4]	Class 2 (12m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) Not applicable for insect screens

NORMSTAHL
HSC903AGAT

VERY COMPACT, AIRTIGHT DOOR FOR CLEANROOM ENVIRONMENT

TECHNICAL DATA

Min size (W x H)	1,000 x 2,000 mm
Max size (W x H)[1]	4,000 x 4,000 mm[2]
Operating speed[3]	Opening: up to 2,7 m/s Closing: 0,5 m/s
Wind load resistance, EN 12424	Class 1 (300 Pa (N/m²)) Maximum wind load while closing 50 Pa (N/m²)
Water penetration, EN 12425	Class 3 (50 Pa (N/m²)
Air permeability, EN 12426	Class 4 (3m³/(m²·h) at 50 Pa) overpressure Class 3 (6m³/(m²·h) at 50 Pa) underpressure
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size

HSC903AGAT in Gentian blue RAL 5010

- Small-sized, max. 4,000 x 4,000 mm
- For indoor use
- Airtight door for use in cleanrooms
- Galvanised steel construction
- Opening speed of up to 2,7 m/s, closing speed 0,5 m/s

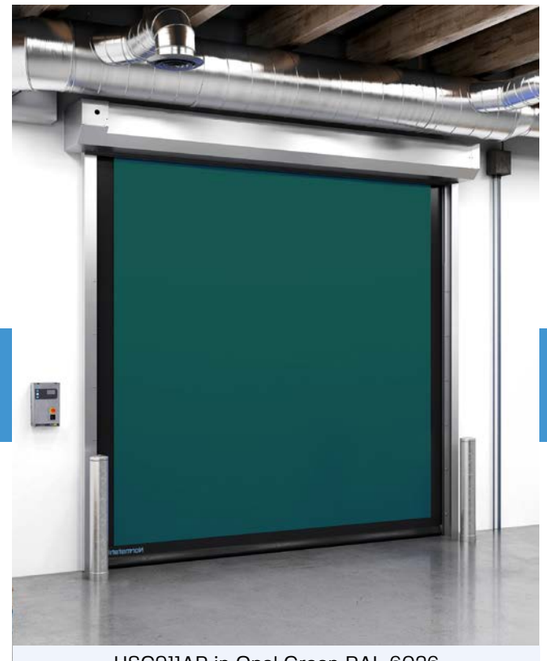
NORMSTAHL
HSC911AP

MEDIUM-SIZED INTERIOR DOOR FOR HEAVY DUTY OPERATIONS

TECHNICAL DATA

Min size (W x H)	1,000 x 2,200 mm
Max size (W x H)[1]	5,500 x 5,500 mm[2]
Operating speed[3]	Opening: up to 2,4 m/s Closing: 1,2 m/s
Wind load resistance, EN 12424[4]	Class 1 (300 Pa (N/m²)
Water penetration, EN 12425[4]	Class 2 (50 Pa (N/m²)
Air permeability, EN 12426[4]	Class 1 (24m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) Not applicable for insect screens



HSC911AP in Opal Green RAL 6026

- Medium-sized, max. 5,500 x 5,500 mm
- For indoor use
- For heavy-duty use
- Galvanised steel construction
- Windows/Vision panels/Insect screens available as option
- Opening speed of up to 2,4 m/s, closing speed 1,2 m/s

HSC912AG in Anthracite grey RAL 7016

NORMSTAHL
HSC912AG

PERFECT SEALED INTERIOR DOOR WITH HIGH SPACE EFFICIENCY

- Small-sized, max. 4,000 x 4,000 mm
- For indoor use
- Perfect sealing
- Light courtain in side columns
- Galvanised steel construction
- Windows/Vision panels/Insect screens available as option
- Opening of up to 1,2 m/s (optional: 2,0 m/s), closing 0,5 m/s

TECHNICAL DATA

Min size (W x H)	1,000 x 2,000 mm
Max size (W x H)[1]	4,000 x 4,000 mm[2]
Operating speed[3]	Opening: up to 1,2 m/s[4] Closing: 0,5 m/s
Wind load resistance, EN 12424[5]	Class 1 (300 Pa (N/m²) Maximum wind load while closing 50 N/m²
Water penetration, EN 12425[5]	Class 2 (50 N/m²)
Air permeability, EN 12426[5]	Class 1 (24m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) Optional 2,0 m/s
5) Not applicable for insect screens

HSC912AGHY in Traffic grey B RAL 7043

NORMSTAHL
HSC912AGHY

PERFECT SEALED INTERIOR DOOR MADE OF STAINLESS STEEL

- Small-sized, max. 4,000 x 4,000 mm
- For indoor use
- Perfect sealing
- Light courtain in side columns
- Stainless steel construction
- Windows/Vision panels/Insect screens available as option
- Opening of up to 1,2 m/s (optional: 2,0 m/s), closing 0,5 m/s

TECHNICAL DATA

Min size (W x H)	1,000 x 2,000 mm
Max size (W x H)[1]	4,000 x 4,000 mm[2]
Operating speed[3]	Opening: up to 1,2 m/s[4] Closing: 0,5 m/s
Wind load resistance, EN 12424[5]	Class 1 (300 Pa (N/m²) Maximum wind load while closing 50 N/m²
Water penetration, EN 12425[5]	Class 2 (50 N/m²)
Air permeability, EN 12426[5]	Class 1 (24m³/(m²·h) at 50 Pa)
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width 3) Depending on door size 4) Optional 2,0 m/s 5) Not applicable for insect screens

NORMSTAHL
HSC912AGAT

SMALL-SIZED INTERIOR DOOR WITH HIGH PARTICLE PROTECTION

TECHNICAL DATA

Min size (W x H)	1,000 x 2,000 mm
Max size (W x H)[1]	4,000 x 4,000 mm[2]
Operating speed[3]	Opening: up to 1,2 m/s[4] Closing: 0,5 m/s
Wind load resistance, EN 12424	Class 1 (300 Pa (N/m²) Maximum wind load while closing 50 N/m²
Water penetration, EN 12425	Class 2 (50 N/m²)
Air permeability, EN 12426	Class 1 (24m³/(m²·h) at 50 Pa) underpressure Class 3 (6m³/(m²·h)) overpressure
Thermal transmittance	6,02 W/(m²K)
Performance Test	1,000,000 cycles

1) Other sizes available on request 2) Depending on door width
3) Depending on door size 4) Optional 2,3 m/s

HSC912AGAT in Agate grey RAL 7038

- Small-sized, max. 4,000 x 4,000 mm
- For indoor use
- For environment with large and constant pressure differences
- Light courtain in side columns
- Stainless steel construction
- Opening up to 1,2 m/s (optional 2,3 m/s), closing speed 0,5 m/s

NORMSTAHL
HSR300AISO

HIGH SPEED AND EXCELLENT THERMAL INSULATION

TECHNICAL DATA

Min size (W x H)	1,250 x 2,500 mm
Max size (W x H)[1]	7,000 x 6,000 mm[2]
Operating speed[3]	Opening: up to 2,2 m/s Closing: 0,7 m/s
Wind load resistance, EN 12424	Class 4 Class 3 DW > 3,500 mm Class 2 DW > 5,000 mm
Water penetration, EN 12425	Class 0
Air permeability, EN 12426	Class 0
Thermal transmittance	1,4 W/(m²K)min. 2,0 W/(m²K)
Performance Test	1,000,000 cycles

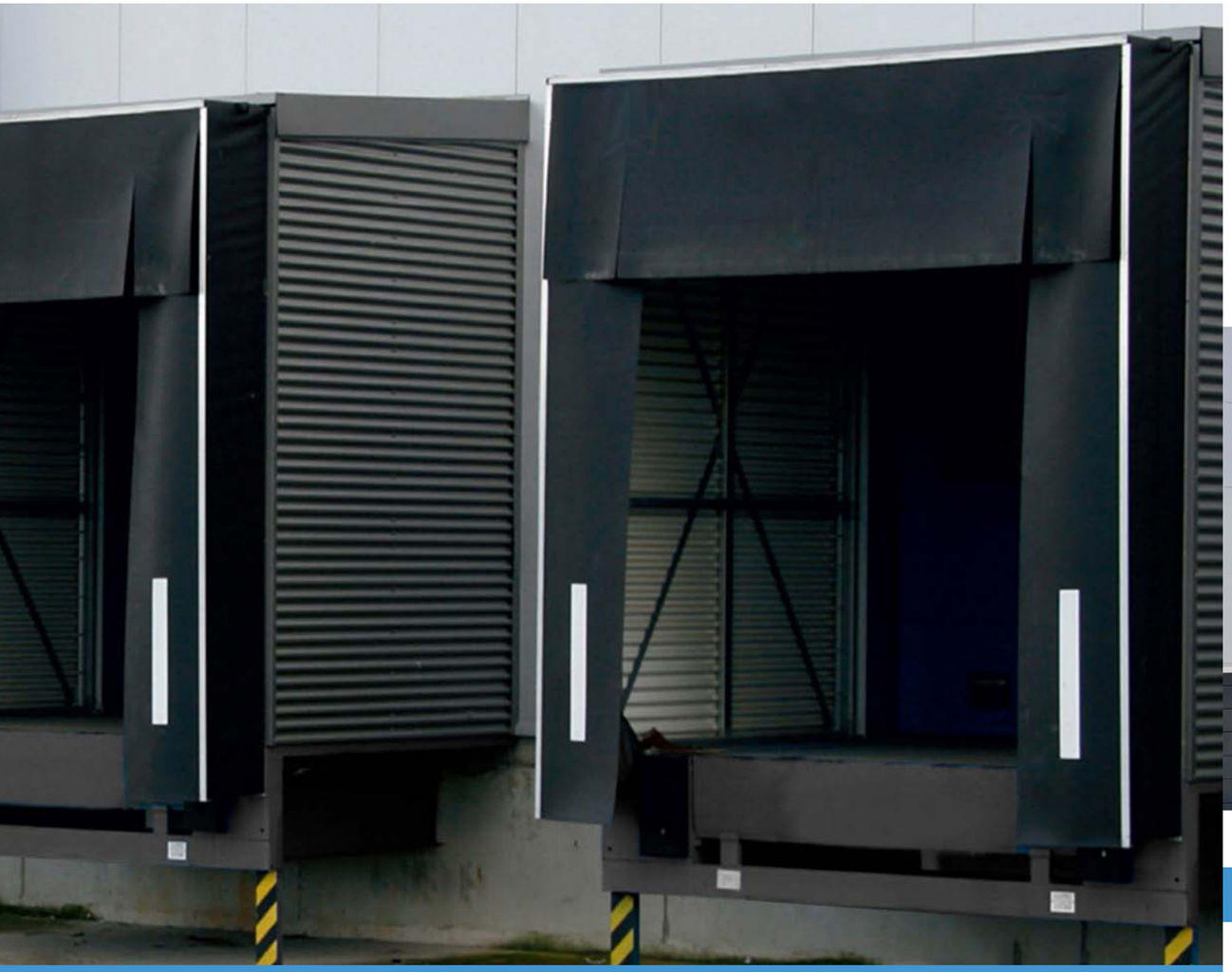
1) Other sizes available on request 2) Depending on door width
3) Depending on door size

HSR300AISO in White aluminium RAL 9006

- Large, max. 7,000 x 6,000 mm
- For outdoor applications
- 50 mm thick sandwich slats
- High security
- Light grid in the side columns
- Galvanised steel construction
- Opening up to 2.2 m/s, closing 0.7 m/s

NORMSTAHL

LOADING SYSTEMS



NORMSTAHL

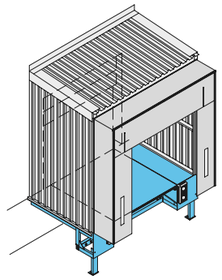
LOADHOUSES

Normstahl loadhouses are loading systems supplied as complete and stand-alone units, to be installed on the outside of an industrial or commercial building. They include all components of a docking system: an Autodock leveler, a dock shelter and a door. Normstahl loadhouses are ideal both for new buildings or existing buildings not originally equipped with loading bays. Thanks to the sturdy design and advanced features, they are ideal for all types of businesses.

LH608AHL

HEAVY DUTY STAND-ALONE LOADHOUSE

Since it is installed outside the building directly in front of the door opening, it has great advantages over a conventional internal ramp for both new buildings as well as for existing buildings that are to be upgraded without any major modifications to the construction of the building.



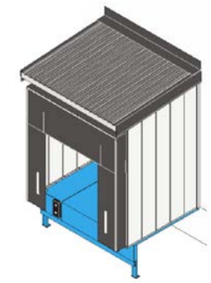
As a standard the entire steel frame construction of the Normstahl LH608AHL loadhouse is hot dip galvanised. Recommended options are a roof drainage system and flashing, adapted to your building.

LH608AIL

EXCLUSIVE AND INNOVATIVE INSULATED STAND-ALONE LOADHOUSE

This new insulated version is developed to meet all requirements of architects, builders and operators. The walls are made of insulated panels without a steel frame inside the loadhouse. The smooth wall surfaces are washable and meet the requirements for cleanliness e.g. from the food industry.

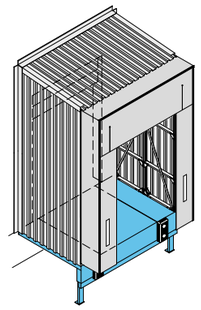
Underneath the roof section made of a steel frame with sheet cladding, a horizontal panel provides a smooth ceiling. The inside surfaces of the loadhouses create a closed box with no open spaces or protruding fixtures which can cause damage or injuries.



LH608AL

LIGHT VERSION STAND-ALONE LOADHOUSE

Since it is installed outside the building directly in front of the door opening it has great advantages over a conventional internal ramp for both new buildings as well as for existing buildings that are to be upgraded without any major modifications to the construction of the building.

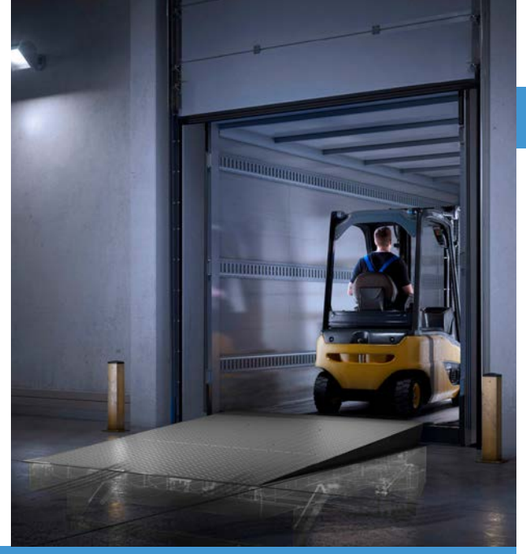


As a standard the entire steel frame construction of the Normstahl LH608AL loadhouse is hot dip galvanised. Recommended options are a roof drainage system and flashing, adapted to your building. The system is very versatile and designed for high loads.

NORMSTAHL

DOCK LEVELERS

A dock leveler safely bridges the gap between the ramp and the lorry bed. By manually pulling the rod, the dock leveler is raised and the lip swings out. Then the leveler can be lowered gently onto the lorry bed. After loading or unloading, pulling the rod raises the leveler again, the lip swings down and the platform returns to its parking position, i.e. to ramp level.

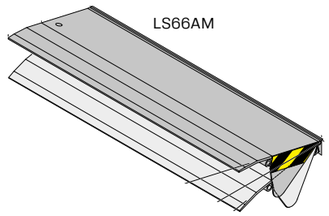


LS60AM

MANUALLY OPERATED DOCK LEVELER

The LS60AM mini dock leveler is a full docking system especially developed for a limited working range, the ideal solution for a standardized fleet of vehicles. It is available both in ramp or pit models. The advantage of the ramp model is the quick installation which also can be done as add-on to existing ramps.

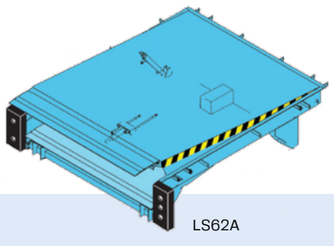
The operation of the LS60AM mini dock leveler is mechanically and supported by a gas spring. You need only one person to lift the platform, swing out, and put the lip on the vehicle bed in one movement.

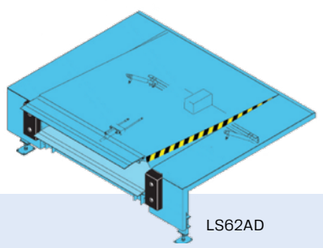


LS62A / LS62AD / LS62AR

DEVELOPED FOR THE TOUGHEST CONDITIONS

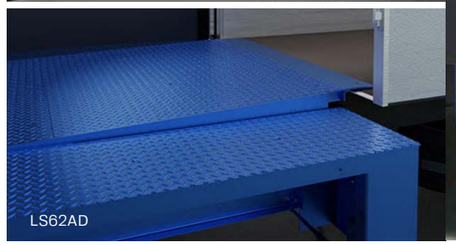
The LS62A swingdock and LS62AD swingdock autodock are dock levelers based on a smarter design with less single steel components to secure highest quality and performance. The outstanding feature is that all steel parts are made of the high-strength steel grade S355 providing a solid construction without compromises. It is designed for the toughest loading operation with high frequency.

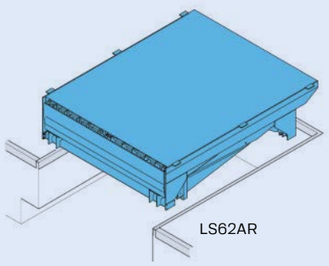


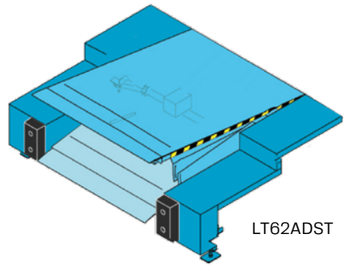


LS62AR SWINGDOCK REPLACEMENT

The LS62AR is an efficient upgrade solution to replace obsolete dock levelers. Based on the existing pit there is a choice of various replacement options that suits the situation best. The replacement F-frame system is designed to weld the leveler directly to the old existing leveler a frame on all three sides in an open pit.





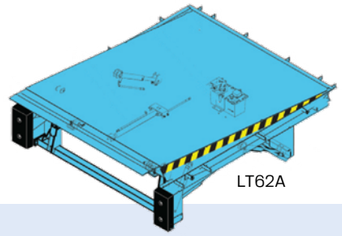


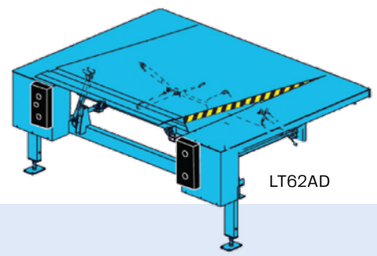
LT62A / LT62AD / LT62AR

TELESCOPIC DOCK LEVELERS DESIGNED FOR HEAVY LOADS

The LT62A swingdock and LT62AD swingdock autodock are telescopic-lip dock levelers that feature a smarter design with less single steel components to secure highest quality and performance. All steel parts are made of the high-strength steel grade S355, a solid construction for the toughest loading operation with high frequency.

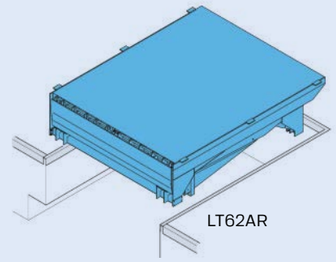
The LT62A teledock is the optimal efficiency solution in general industry and logistics applications. The telescopic lip precisely bridges the gap between the ramp and the lorry bed.
The LT62AD teledock autodock is an externally installed and self-supporting dock leveler that is ideal for applications where there is insufficient installation space within the building. This model is equipped with a telescopic lip system.





LT62AR SWINGDOCK REPLACEMENT

The LT62AR is an efficient upgrade solution to replace obsolete dock levelers. Based on the existing pit there is a choice of various replacement options that suits the situation best. The replacement F-frame system is designed to weld the leveler directly to the old existing leveler a frame on all three sides in an open pit.



LT62ADST

THE EFFICIENT AND SAFE DOCKING PROCESS

The LT62ADST stepdock autodock is a dock leveler based on a smarter design with less single steel components to secure highest quality and performance. All steel parts are made of the high-strength steel grade S355, a solid construction for the toughest loading operation with high frequency.

The LT62ADST stepdock autodock is an externally installed and self-supporting dock leveler that is ideal for applications where there are insufficient installation possibilities within the building. This model is equipped with a telescopic lip system. The telescopic lip precisely bridges the gap between the ramp and the lorry bed.

The LT62ADST stepdock autodock is designed to let a truck dock to the ramp with closed tail-gate. Only when the truck is in position the tail-gate should be opened thus ensuring that the temperature chain is not broken. It is as well possible to position a closed container in front of the loading bay any time. The loading/ unloading can happen any time afterwards without the need to move the container.

The LT62ADST stepdock autodock provides benefits in terms of:
saving energy, increasing safety of people/goods and improving the efficiency of the docking process.

NORMSTAHL

DOCK SHELTERS

CURTAIN DOCK SHELTERS

The Normstahl curtain dock shelters are the ideal solution solution for energy saving oriented operators. The vehicles are sealed off with flexible side and top curtains, giving weather protection during the loading and unloading process for an improved working environment and goods protection. The curtain material has a very high wear and tear resistance.

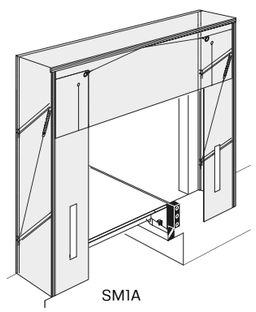
INFLATABLE DOCK SHELTERS

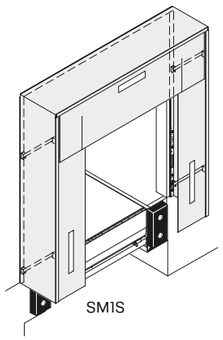
The handling of cooled or frozen food put high demands on the temperature chain. Inflatable dock shelter bags provides the optimal sealing of temperature controlled premises during the loading and unloading process. The shelter is air inflated around the docked vehicle, providing complete sealing.

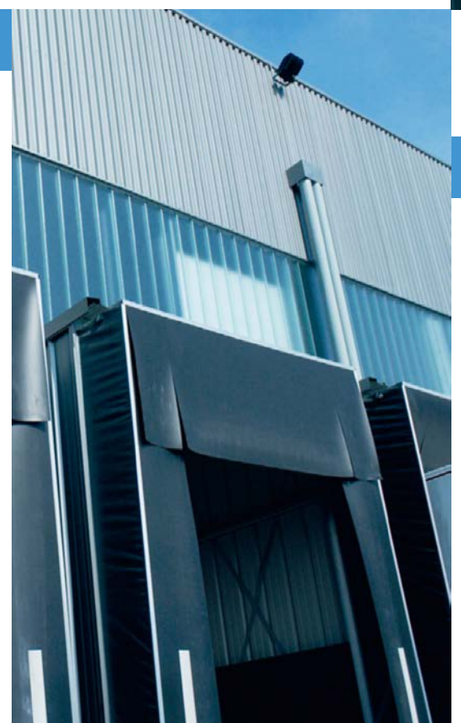
SM1A / SM1S CURTAIN DOCK SHELTERS

STANDARD CURTAIN DOCK SHELTER WITH ALUMINIUM FRAME

The sides and the roof push back under impact when vehicles dock inaccurately, whereby the roof rises automatically. Damages to vehicles and to the shelter are virtually eliminated. The front frame holds the curtain material which has a double woven textile reinforcement.
The top curtain has a slit in the main wear area. At small additional cost the top curtain is partly splitted with a double overlapping layer of material. The profile of the SM1A is made of aluminium and the one of the SM1S is made of steel.


SM1A

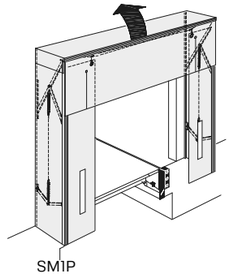

SM1S



SM1P CURTAIN DOCK SHELTER

CURTAIN DOCK SHELTER IN A LARGE VARIETY OF DIMENSIONS

The Normstahl SM1P curtain dock shelter parallel comprises a front and rear extruded aluminium section frame connected by parallel bracing arms. Should the vehicle be parked inaccurately, both sides of the shelter will spring back automatically reducing damage to both the vehicle and the dock shelter to the bare minimum.


SM1P

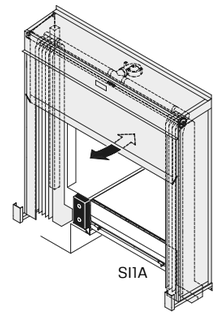
The self-adjusting roof frame rises automatically independent of the side frames, in case of very high vehicles.This construction also allows the dock shelter to be installed a short distance above external ground level. The Normstahl SM1P curtain dock shelter parallel is available in a wide range of dimensions to meet the customer‘s individual demand.

SI1A INFLATABLE DOCK SHELTER

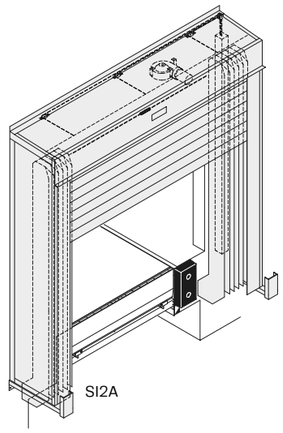
OPTIMAL SEALING AND COMFORTABLE APPLICATION

The top seal of the SI1A inflatable shelter is a roller design – automatically activated for low or high vehicles. In addition, it follows all vertical movements of the docked vehicle, continuously providing high tightness.

In rest position, the SI1A inflatable shelter is completely retracted behind the side structures, giving the vehicle driver the possibility to use the complete width of the loading bay when reversing into it. In addition, yellow front line indicators further facilitate the dock-in navigation. Stable collision protectors at the ramp height prevent shelter damages.


SI1A

SI2A INFLATABLE DOCK SHELTER


SI2A

MOST VERSATILE DOCK SHELTER WITH HIGHEST SEALING

The vehicle does not push towards the shelter. Instead the shelter is inflated around the docked vehicle, providing best possible sealing.

During loading/unloading the vehicle moves up and down and the bags of the Normstahl SI2A inflatable dock shelter bags automatically follows these movements, with constant pressure on the vehicle structure. In rest position the bags are held in place mechanically.

Normstahl

NORMSTAHL
Residential and Industrial Doors

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www.normstahl.com

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