



Aluminium roller shutters  
ROLL-TO 50



Roller door plastic panel  
POLAR PLUS



Roller door wooden panel  
ARBOR PLUS



Roller door aluminium panel  
ALU PLUS

### We are breaking new ground with our latest-generation ROLL-TO 50 roller shutter.

- The ROLL-TO 50 consists of hollow aluminium profiles
- With bright-rolled or anodised finish
- Sealed all round
- Guide rails made of galvanised or stainless steel
- Designed for installation between or behind pillars
- Suitable for side-wall or rear-frame installation
- Roof-stowed, roll-up or combined configuration
- Minimised spring shaft diameter of just 80 mm
- Dimensions

	max.	min.
Width	2800	600
Height	3000	600

- Max. outer-shell surface of 6 m<sup>2</sup>
- Low profile height (just 120 mm for roof-stowed version)
- Small winding diameter (e.g. 300 mm with height of 3 m)
- Variable locking configurations matched to type of use
- Electrical actuation available on request (roof-stowed version only)
- Complies with the lateral protection requirements of European Directive 89/297 EEC and article 32C of the German road traffic regulations (STVZO) for frame width clearances of up to 2500 mm
- ROLL-TO 50 units are supplied pre-cut to the clearance width.
- Weight

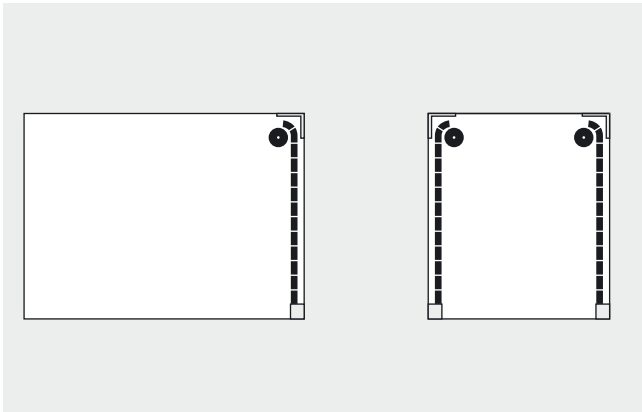
Outer shell surface	approx. 7.5 kg/m <sup>2</sup>
Rails	approx. 1.1 kg/m
Spring shaft assembly	approx. 6.5 kg/m
Pivoting roller bearings	approx.: 1.5 kg/each



# Roller shutters and roller doors

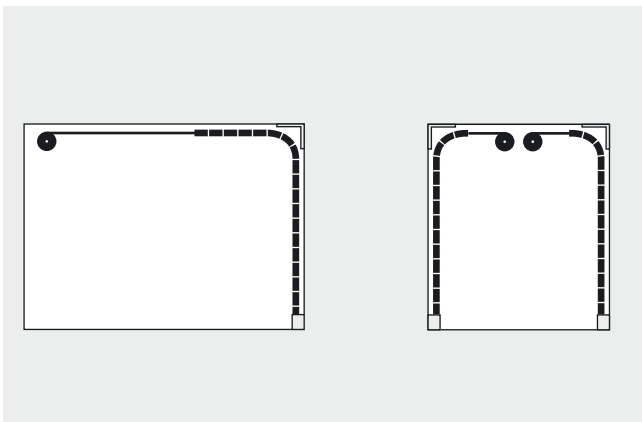
## Aluminium roller shutters

### ROLL-TO 50



#### Roll-up type

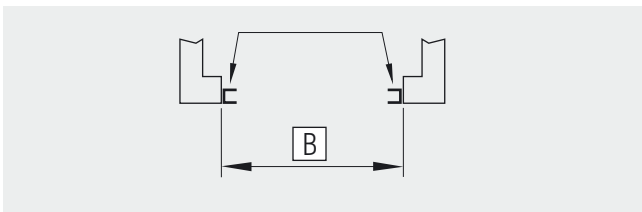
The roller (of approx. 80 mm ø) placed directly above the opening is used to wind up the aluminium slats, each measuring approx. 50 mm in width. The roller is spring-loaded to facilitate opening and closing. If the opening is more than 1500 mm high, a pivoting roller bearing is used to swivel the roller back to compensate for the increasing diameter of the wound-up slats. When the shutter is being closed, the swivelling arm in the roller bearing swings the roller towards the top panel to ensure that the uppermost slats are always perpendicular and in line with the sealed edges.



#### Roof-stowed/combination type

In this variation, the roller is fitted to the opposite wall. Webbing straps secure the armoured roller shutter to the roller.

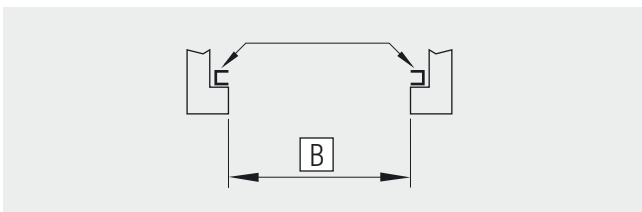
This configuration is ideal for maximising the height of the opening. The height of the cargo area is diminished only slightly by the stowing under the roof of the roller-shutter slats.



#### Installation method:

Method I

Guide rails placed between pillars



Method II

Guide rails placed behind pillars

# Roller shutters and roller doors

Roller door plastic panel

**POLAR PLUS**

## **POLAR PLUS ROLLER DOORS –**

**The effective alternative to hinged doors.**

**Plastic panel roller door for ATP Class IR, also ideal for modern temperature-controlled dry cargo vehicles**

- In comparison to conventional tailgate doors, POLAR PLUS offers a K-value of approx. 95%. This means that surfaces with a K-value of 0.38 W/m<sup>2</sup>K can achieve ATP Class IR K < 0.4 W/m<sup>2</sup>K.
- No cold bridging in the door surface; specially moulded GRP cover layers with a polyurethane foam core offer optimum protection against condensation and freezing
- All-round seals provide maximum protection against the ingress of water and temperature exchange
- Hinge-free design = multifunction plastic profiles perform hinge and sealing functions for each segment, allowing these tough plastic rollers to run both smoothly and quietly.
- Temperature/sound insulated
- Very stable and low weight
- TÜV-tested (test report no. 3218T, K-value 0.40 W/m<sup>2</sup>K, passed Bundesbahntest inspection of the German Federal Railways (carried out at BZA Minden) for swap bodies of up to 13,000 kg payload with a width of 1,160 mm and height of up to 2,500 mm. Conforms to the specifications of fact sheet 592-4.
- Large slat surfaces
- Easy to install; individual sections insert on top of each other in the vertical opening; sections can be aligned to rear frame
- Low-maintenance

## **OPERATION**

- The slatted panels slide under the vehicle's roof along a set of guiderails.
- Adjustable spring-loaded mechanism actuated by two internal stainless-steel cables for easy operation of the door.
- Available with various lock configurations
- Each door is made to measure
- Standard version: manual operation
- Optional version: pneumatically actuated

### Advantages

- Straightforward, reliable operation
- Low-maintenance
- Larger aperture height



## Roller shutters and roller doors

Roller door plastic panel

### POLAR PLUS

<b>Panels</b>	60 mm thick, GRP-encased polyurethane foam core (approx. 44 kg / m <sup>2</sup> ), sealed mating surfaces. Panel heights of 325/350 and 400 mm.
<b>Panel seal</b>	Double rubber/EPDM centre seal over entire width.
<b>Seal between sections</b>	Double EPDM/rubber seals over the entire width, integrated with a rubber hinge fixed with anodised aluminium profiles.
<b>Top seal</b>	Double EPDM seal on top member
<b>Bottom seal</b>	Double EPDM seal
<b>Lateral seal</b>	Double EPDM seal
<b>Hinge design</b>	EPDM/rubber hinge across entire width
<b>Guiderail system</b>	Galvanised steel
<b>Lateral roller holder</b>	Anodised aluminium, with eccentric nylon bushings for adjustment of roller spindle
<b>Rollers</b>	51 mm NYLON, ball-bearing-mounted, with stainless steel shaft
<b>Pull-cables</b>	3 mm stainless steel
<b>Spring and spindle</b>	Galvanised steel
<b>Standard dimensions</b>	Up to 2,478 mm wide
<b>Max. frame dimensions</b>	Up to 3,100 mm high
<b>Min. vertical drop</b>	Manual operation: 200 mm Pneumatically actuated: 120 mm
<b>Min. r/h and l/h lateral space</b>	50 mm on each side
<b>Closure and locking</b>	Galvanised TIR Maximum lock, fitted to floor panel Options: Lifeguard Maximum lock with integrated internal-release mechanism.
<b>Weight</b>	Approx. 140 kg (approx. 2470 x 2600 mm)
<b>Pneumatic operation</b>	Aluminium cylinders, control system in plastic housing, incl. electromagnetic main valve. • Optional: air-actuated main valve.

# Roller shutters and roller doors

Roller door wooden panel

## ARBOR PLUS

### ARBOR PLUS ROLLER DOORS —

The effective alternative to doors.

Wooden panel roller doors, ideal for dry-cargo vehicles

#### OPERATION

- Very stable and low weight
- Large slat surfaces
- Easy to install; individual sections insert on top of each other in the vertical opening
- Low-maintenance
- All-round seals provide maximum protection against the ingress of water. Full-length rubber/EPDM hinge (optional extra) for optimum seal
- The slatted panels slide under the vehicle's roof along a set of guiderails
- Plastic rollers for smooth, quiet operation
- Adjustable spring-loaded mechanism actuated for easy door operation
- Available with various lock configurations
- Each door is made to measure
- Standard: Manual operation
- Option: pneumatic operation
- Straightforward, reliable operation
- Low-maintenance
- Larger aperture height



## Roller shutters and roller doors

Roller door wooden panel

### ARBOR PLUS

<b>Panels</b>	18 mm bonded waterproof plywood with varnished outer surface; Sealed mating surfaces. Panel heights of 279 mm and 381 mm, with top panel cut to size.
<b>Panel seal</b>	Rubber/EPDM centre seals
<b>Top / bottom seal</b>	Rubber/EPDM
<b>Lateral seal</b>	Double-lip seal made of PVC
<b>Hinge design</b>	Lateral hinges: ZYTEL nylon with stainless-steel mandrel; centre hinges: ZYTEL nylon with stainless-steel mandrel. • Option: EPDM/rubber multifunction seal (full-length hinge strip)
<b>Rollers</b>	51 mm NYLON with galvanised spindle • Option: Stainless-steel spindle
<b>Pull-cables</b>	3 mm stainless steel
<b>Spring-loaded shaft</b>	Galvanised steel, with spiral torsion spring
<b>Standard dimensions, maximum clear frame size</b>	Up to 2,470 mm wide, up to 2,655 mm high
<b>Min. vertical drop</b>	Manual, spring-assisted: 180 mm Pneumatic: 90 mm
<b>Min. r/h and l/h lateral space</b>	50 mm on each side
<b>Closure and locking</b>	<ul style="list-style-type: none"><li>• Standard TIR Maximum lock, galvanised, fitted to floor panel</li><li>• Options:</li><li>• Integrated lock in bottom slat, with spring-loaded, hook-shaped catch and large hand lever on outside</li><li>• Lifeguard Maximum lock with integrated internal-release mechanism.</li><li>• Slam-type hooked lock with guide mandrel on bottom member, attached to inside of bottom slat; operable by means of small hand lever on outside.</li><li>• Spring-latch strip fastening mechanism can be positioned as desired</li></ul>
<b>Weight</b>	Approx. 97 kg (approx. 2460 x 2840 mm)
<b>Pneumatic operation</b>	Aluminium cylinders, control system in plastic housing, incl. electromagnetic main valve • Optional: air-actuated main valve.

## Roller shutters and roller doors

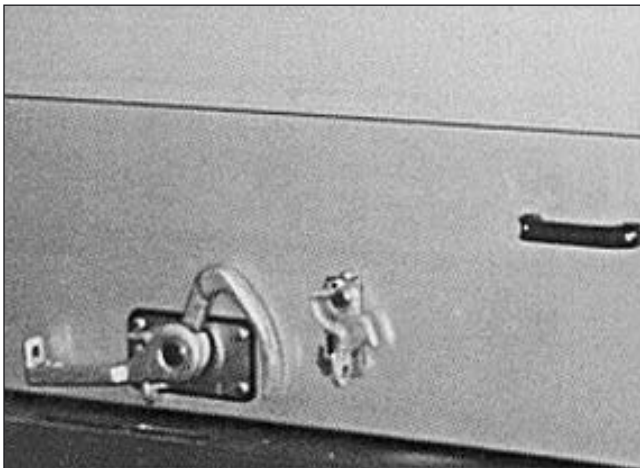
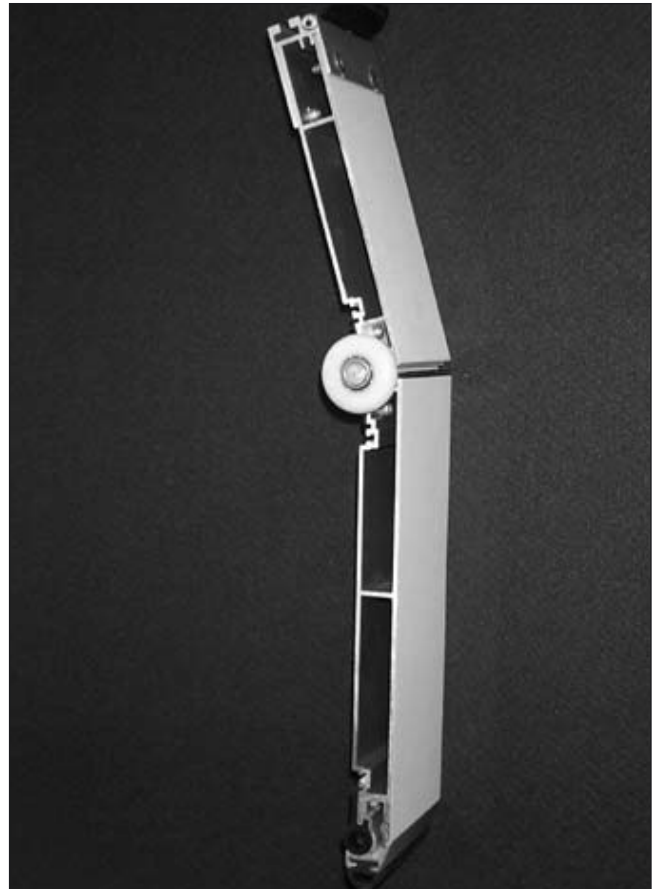
Roller door aluminium panel

**ALU PLUS**

**ALU PLUS ROLLER DOORS** — the effective alternative to doors. Ideal for dry-cargo vehicles.

### OPERATION

- Maximum stability and low weight
- Large, smooth slat surfaces
- Bright-pressed or powder-coated aluminium panels
- Easy to install; individual sections insert on top of each other in the vertical opening
- All-round seals provide maximum protection against the ingress of water.
- Optional extra:
  - Full-length rubber/EPDM for optimum seal
- The slatted panels slide under the vehicle's roof along a set of guiderails
- Plastic rollers for smooth, quiet operation
- Adjustable spring-loaded mechanism for easy door operation
- Available with various lock configurations
- Each door is made to measure
- Standard: Manual operation
- Option: Pneumatic operation
- Straightforward, reliable operation
- Low-maintenance
- Larger aperture height



## Roller shutters and roller doors

Roller door aluminium panel

### ALU PLUS

<b>Aluminium panels</b>	25 x 279 mm and 25 x 381 mm hollow aluminium profiles, with trimmed top profile. Standard: bright-pressed aluminium • Option: powder-coated in RAL 9010 (pure white). Further RAL colours available on request
<b>Panel seal</b>	Rubber/EPDM intermediate seals • Option: EPDM multifunction seal for optimum water drainage between panels towards right and left, even during operation
<b>Top / bottom seal</b>	Rubber/EPDM
<b>Lateral seal</b>	Double-lipped PVC
<b>Hinge design</b>	Aluminium bush, with roller spindle acting as hinge pin
<b>Guiderail system</b>	Galvanised steel
<b>Rollers</b>	51 mm NYLON with stainless-steel spindle
<b>Pull-cables</b>	3 mm stainless steel
<b>Spring and spindle</b>	Galvanised steel
<b>Standard dimensions, maximum clear frame size</b>	Up to 2,460 mm wide, up to 2,844 mm high
<b>Min. r/h and l/h lateral space</b>	Min. 50 mm on each side
<b>Min. vertical drop</b>	Manual operation: 180 mm Pneumatic: 120 mm
<b>Closure and locking</b>	Galvanised TIR Maximum lock, fitted to floor panel • Option: Spring-latch strip fastening mechanism can be positioned as desired
<b>Weight</b>	Approx. 130 kg (approx. 2460 x 2840 mm)
<b>Pneumatic operation</b>	Aluminium cylinders, control system in plastic housing, incl. electromagnetic main valve. • Optional air-actuated main valve.