



WIŚNIEWSKI



BR-100 Roller Doors

Overview

The roller industrial doors are intended for use in industrial, warehousing and utility buildings. The door rolling curtain is made of aluminium profiles filled with CFC-free polyurethane core (does not apply to the bottom profile). The curtain is rolled up by a winding shaft installed on steel running consoles. The consoles are fastened to the headroom. The vertical tracks are made of powder coated aluminium. Each door in standard version is equipped with the Elektromat SI Totmann or Elektromat SI Automatik 3-phase 3x400 [V] electric drive unit. The door is installed behind the opening (indoors) in standard version. Due to the anti-corrosion protection the doors can be used as intended for in environments with Corrosivity Categories C1, C2 and C3 according to EN ISO 12944-2 and EN ISO 14713. The heat-transfer coefficient is $U = 3.7$ [W/m²×K] for the door size of 8000 x 6000 [mm].



The BR-100 door are opened in an emergency with a crank located on the installed drive unit level. The emergency opening crank handle is not intended for normal operation of the door. The BR-100 door cannot be equipped with a wicket (a side door or other entrance to the room is required).



Fig. 1. The BR-100 industrial roller door – inner and side views.

Designations

BR-100 – Roller industrial door; the door curtain is made of aluminium sections filled with CFC-free polyurethane foam. Guaranteed no. of operating cycles: 20 000.

Door rolling curtain

The door rolling curtain is made of the AW 100 aluminium profiles with CFC-free PU core (does not apply to the bottom profile). The profiles are coated with a highly abrasion resistant varnish. The profiles are joined by shackles (arresters) which prevent displacement of profiles and protect from scratching. The door curtain is fitted with a reinforced aluminium bottom profile which provides higher door curtain rigidity. In the case of doors with widths $S_0 \leq 7000$ [mm], the profile is painted the same colour as the door, whereas in the case of doors with widths $S_0 > 7000$ [mm], RAL 9005 is used. A three-chamber rubber seal is installed on the bottom profile.



Fig. 2. Door with AW 100 profiles.

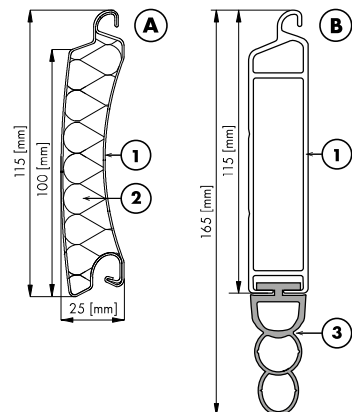


Fig. 3. AW 100 profile (A). Fig. 4. Bottom profile (B).

① – Aluminium profile ② –CFC-free PU foam ③ –Seal



The marks on the profiles which appear during use result from natural wear and are not covered by warranty.

Colours

	BR-100	
Door curtain (AW 100 profiles)	RAL 3000 (Flame red), RAL 5010 (Gentian blue), RAL 5012 (Light blue), RAL 7012 (Basalt grey), RAL 7016 (Anthracite grey),	RAL 8014 (Sepia brown), RAL 8019 (Grey brown), RAL 9006 (White aluminium), RAL 9007 (Grey aluminium), RAL 9010 (Pure white).
Tracks	matching curtain colour	
Winding shaft	colour similar to RAL 7032 (Pebble Grey)	

Tab. 1. Colours of BR-100 door elements.



If multiple doors are ordered in the same colour, partial deliveries (lots) may vary in colour hues.

Tracks, running consoles, winding shaft

The aluminium tracks (without an insulation barrier) are installed indoors along the side edges of the door opening. They feature brush seals and slides. The running consoles are made of hot-dip galvanized steel. The steel winding shaft is installed on the running consoles. The shaft has bearings on both ends and a drive unit, installed either on the left-hand or the right-hand end. As the curtain is wound on the shaft, the latter automatically moves away from the headframe along the running console rails. The winding shaft features rings which clear the rolling curtain from the shaft surface. The rings partially protect the rolling curtain from scratching.

Drive unit

The BR-100 roller doors are equipped with the standard drive unit running on 3x400 [V] mains. The drive unit is operated with a control keypad (with the commands Up, Stop, and Down), and it also features an emergency opening crank lever (which can be optionally replaced with a chain hoist). The drive unit in standard version is installed on the right hand side when viewed from the inside, or – optionally – on the left hand side. This depends on the actual installation conditions on site.

Seals

The vertical tracks feature brush seals. The brush seal is also installed at the headroom. The bottom profile is fitted with a three-chamber rubber seal that also levels out small floor surface irregularities.

Safety features

- The drive unit with a self-locking speed reducer transmission gear, integrated safety catch and an electromagnetic brake for door surface areas above 32 [m²].
- The emergency opening crank handle features a contact switch which prevents operating the door with a motor when operated with the crank unit.
- Safety edge strip: the optical sensors of the strip are installed in the door bottom gasket. When the door edge touches an obstacle, it will stop and return to the open position (standard accessory in Elektromat SI Automatik and Automatik S).
- Automatic closing: allows automatic closing of the door after a predefined time. This feature is standard in all Elektromat SI Automatik and Automatik S drive units (requires photocells).
- Wind hooks – increase wind load resistance.

Wind hooks

This solution increases the door's resistance to wind load. Class 3 wind load resistance is ensured by the implementation of special distance brackets fitted with hooks, reinforced door tracks, and additional track mounting brackets. Wind hooks are standard in door widths $S_0 > 5000$ [mm], whereas in door widths $S_0 \leq 5000$ [mm], hooks can be ordered as an option (the door gains class 3 wind load resistance). The hooks are mounted in all door profiles, including the bottom profile.

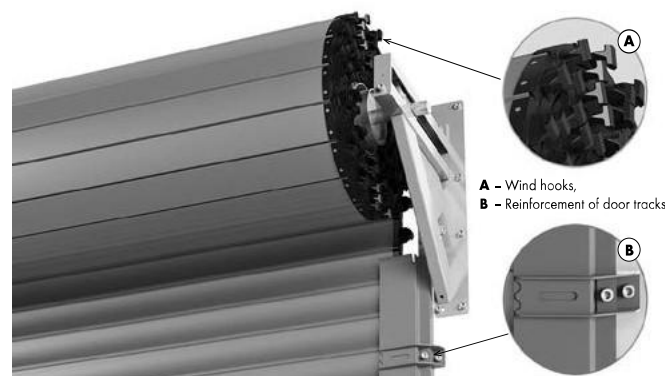


Fig. 5. Hooks in the BR-100 industrial door.

Delivery

The door is delivered in parts ready for on-site assembly and installation. Delivery condition: rolling curtain, wound on the shaft; running consoles; drive unit; installation kit for standard parameters.

Assembly dimensions

Installation requirements

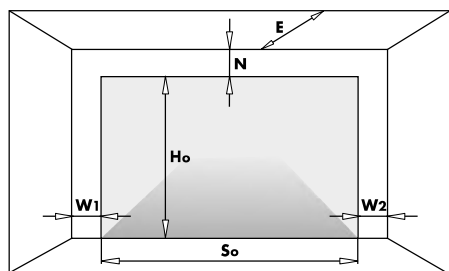


Fig. 6. The assembly dimensions and designations thereof required for correct selection and assembly of the BR-100 industrial roller door.

- So** - opening width, ordering size,
- Sj** - clear width with the door installed,
- Ho** - opening height, ordering size,
- Hj** - clear passage height with the door installed,
- N** - minimum headroom required,
- W₁** - required minimum side space,
- W₂** - required minimum side space,
- E** - minimum indoor depth with clearance under the ceiling.

BR-100 – standard finish	
Sj	So
Hj	Ho - 200 [mm] ⁽³⁾
Nmin	540 [mm] at Ho ≤ 3000 [mm] 560 [mm] at 3000 < Ho ≤ 4000 [mm] 580 [mm] at 4000 < Ho ≤ 5000 [mm] 600 [mm] at 5000 < Ho ≤ 6000 [mm] 660 [mm] at 6000 < Ho ≤ 7200 [mm]
W1min	250 [mm] 280 [mm] ⁽²⁾
W2min ⁽¹⁾	600 [mm] 630 [mm] ⁽²⁾
Emin	Nmin + 300 [mm]

Tab. 2. Installation parameters – standard finish.

BR-100 – internal shaft guard included	
Sj	So
Hj	Ho - 200 [mm] ⁽³⁾
Nmin	690 [mm] at Ho ≤ 3000 [mm] 710 [mm] at 3000 < Ho ≤ 4000 [mm] 730 [mm] at 4000 < Ho ≤ 5000 [mm] 750 [mm] at 5000 < Ho ≤ 6000 [mm]
W1min	250 [mm] 280 [mm] ⁽²⁾
W2min ⁽¹⁾	600 [mm] 630 [mm] ⁽²⁾
Emin	Nmin + 300 [mm]

Tab. 3. Installation parameters – internal shaft guard included.

BR-100 – outdoor (case) installation version	
Sj	So
Hj	Ho - 200 [mm]
Nmin	675 [mm]
W1min	330 [mm] 360 [mm] ⁽²⁾
W2min ⁽¹⁾	600 [mm] 630 [mm] ⁽²⁾
Emin	Nmin + 300 [mm]

Tab. 4. Installation parameters – outdoor (case) installation version.



Clear passage height Hj = door opening height Ho - 200 [mm]. The full passage width cannot be obtained when the "box - external installation" option is selected in the Automatik and Automatik S door series.

⁽¹⁾ - The minimum side distance taking into account the margin for collision-free mounting and dismounting of the drive.
⁽²⁾ - Door fitted with wind hooks.
⁽³⁾ - The full clear passage of the doors with the Automatik and Automatik S drive units is unavailable with the optional outdoor (case) installation version.
⁽⁴⁾ - Ordering size.

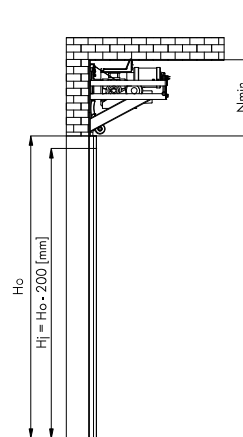


Fig. 7. Installation of the BR-100 door - standard version.

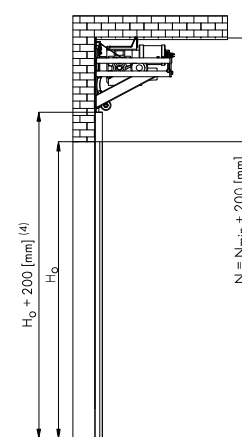


Fig. 8. Installation of the BR-100 door selected to the parameters for a full clear passage (Hj).

Achieving the full clear passage Hj requires a headroom that is 200 [mm] larger from the listed in the table ⁽³⁾. When ordering, specify Ho + 200 [mm] = ordering size in the Opening height Ho field.

Replacement of the aluminium profile with the glazed aluminium profile

The windows in the glazed profiles are placed symmetrically along the profile width. The profiles cannot be installed as the first 6 from the top or the first one from the bottom. The glazed profiles are made of aluminium with no thermal insulation and coated in colours approximate to those of the doors. The profiles can be installed in the doors at So ≤ 7000 [mm] and Ho ≤ 6000 [mm]. Specify the dimension R [mm] when ordering (see Fig. 9).

The possible number of the panels installed in a door (when combined with the glazed panels, this is the total number of panels):

- at So ≤ 2000 - max. 5 panels;
- at Ho ≤ 3000 - max. 10 panels;
- at 3001 ≤ Ho ≤ 4000 - max. 15 panels;
- at 4001 ≤ Ho ≤ 6000 - max. 20 panels.



The colour of glazed profiles may differ in texture and shade from other parts of the rolling curtain.



Fig. 9. The BR-100 door with glazed aluminium profiles - outer view.

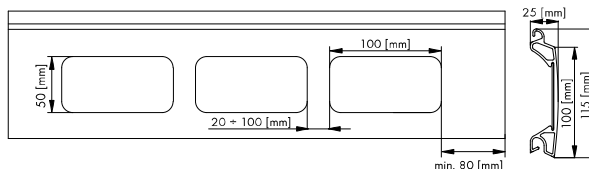


Fig. 10. Glazed AW 100 profile.

Replacement of the aluminium profile with the vented aluminium profile

The vented profiles are filled with perforated aluminium sheets with the hole diameter of ca. 7 [mm]. The profiles are made of aluminium with no thermal insulation, coated in colours approximate to those of the doors, and installed just like the glazed profiles. The profiles cannot be installed as the first 6 from the top or the first one from the bottom. The profiles can be installed in the doors at So ≤ 7000 [mm] and Ho ≤ 6000 [mm]. Specify the dimension R [mm] when ordering.

The possible number of the panels installed in a door (when combined with the glazed panels, this is the total number of panels):

- at Ho ≤ 3000 - max. 10 panels;
- at 3001 ≤ Ho ≤ 4000 - max. 15 panels;
- at 4001 ≤ Ho ≤ 6000 - max. 20 panels.

! The colour of vented profiles may differ in texture and shade from other parts of the rolling curtain.

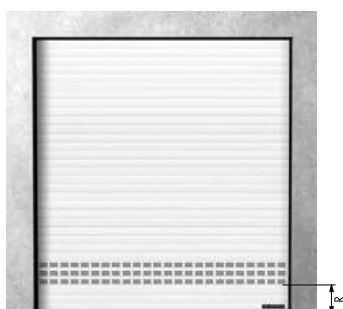


Fig. 11. The BR-100 door with vented aluminium profiles – outer view.

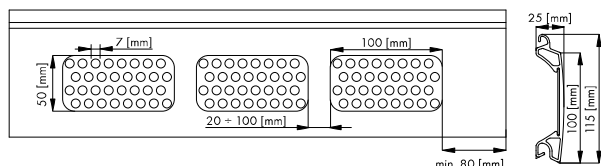


Fig. 12. Vented AW 100 profile.

Inner shaft guard

A partial guard of the door curtain winding shaft, formed by the top and bottom aluminium covers finished in RAL 8019 or RAL 9010. The covers are fastened to galvanized steel brackets. The guard can be optionally painted in the door rolling curtain colour. The feature is available with the doors at $So \leq 6000$ [mm] and $Ho \leq 6000$ [mm].

! Other door installation parameters required.



Fig. 13. Inner shaft guard.

Outdoor (case) installation version

The case covers the entire circumference of the winding shaft. The structure includes: the aluminium top and bottom covers in RAL 8019 or RAL 9010 with steel side covers powder coated in RAL 8019 or RAL 9010. The covers are fastened to galvanized steel brackets. The case is available for the doors at $So \leq 7500$ [mm] and $Ho \leq 6000$ [mm] (on request).

IP 65 rated drive units required.
Other door installation parameters required – see the installation parameters.

! The profile concave side is the outer (exposed) side visible from the outdoor. The power supply, the control unit and the spiral cable (with the safety edge strip) are installed indoors.

The emergency door opening function on the SI 17, SI 25 and SI 40 actuators is available with the emergency opening crank only, whereas on the SI 55 and SI 75 actuators, it is available with the chain hoist or the emergency crank.



Fig. 14. Outer case for the doors with the SI 17, 25 and 40 actuators. Emergency opening is only possible with the crank.



Fig. 15. Outer case for the doors with the SI 55 and 75 actuators. Emergency opening is possible with the crank or the chain hoist.

Shaft case / inner shaft guard – in the door rolling curtain colour

The shaft case or the inner shaft guard can optionally be painted in the door rolling curtain colour. Contact the Sales Department for production availability. The standard versions of the inner shaft guard and the shaft case for outdoor installation are in RAL 8019 or RAL 9010.

Emergency opening crank security protection

In case of external installation of the roller garage door – this security feature comprises a special grip and a padlock to prevent unauthorized access to the room.



Fig. 16. Emergency opening crank security protection

Other RAL colours

The door curtain can be optionally coated in any (non-standard) RAL colour (except for colours with the pearl, reflective, signal or metallic finish or woodlike colours. See NOTE p. 3, item 1.

The BR-100 door rolling curtain is painted on both sides. Contact the Sales Department for production availability. The lead time may be longer.

! If multiple doors are ordered in the same colour, partial deliveries (lots) may vary in colour hues.

Painted consoles

The steel consoles can be optionally painted in the door rolling curtain colour (the standard consoles are galvanized only).

Sliding bolt

Recommended for small doors. The kit includes: padlock bolt, certified padlock, closing sensor, blocking element. Installation on the concave door curtain, always on the power supply side.



Fig. 17. Sliding bolt.

Lock

Makes it possible to lock the door from both sides. Applies to doors without wind locks with widths up to $S_o \leq 5,000$. Fitted on the power supply side. Deadbolts are steel, galvanized bars connected with rods to the lock (installed inside the profile). The lock is fitted with a microswitch securing it against opening when the door is locked. Plastic pull inside, rotating aluminium pull outside. Lock cylinder with three keys.



Fig. 18. Lock

