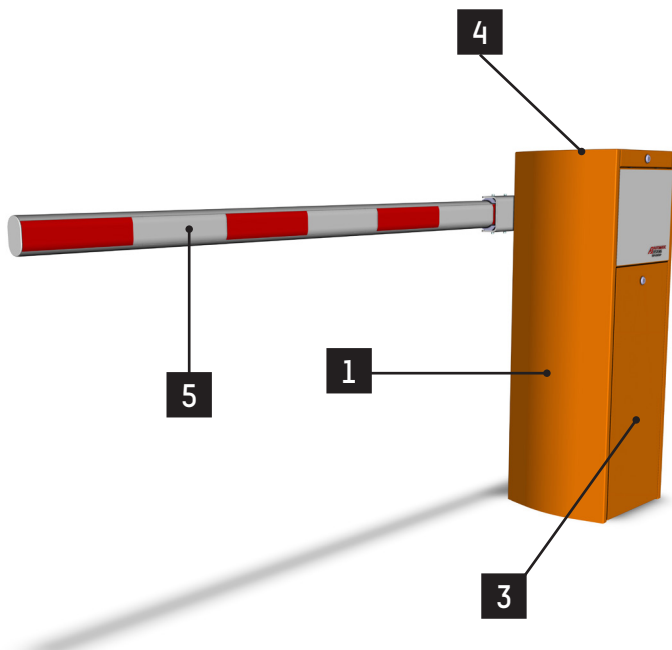


# BL 229 Toll Datasheet

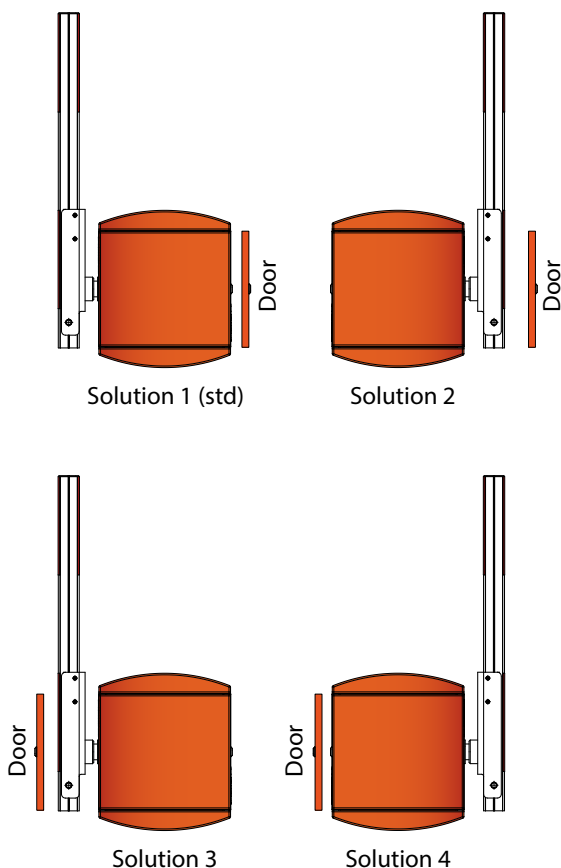
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**AUTOMATIC**  
SYSTEMS



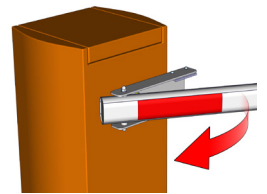
The **BL 229 Toll** barriers are designed for highway toll booths and meet numerous requirements in terms of performance, reliability, robustness, adaptability and reduced maintenance.

## CONVENTIONS




## DESCRIPTION

1. Housing made of folded and welded sheet steel, from 2 to 6 mm thick, protected by cataphoresis and two coats of structured paint (standard color: orange RAL2000).
2. Internal mechanical elements treated by electrogalvanisation.
3. Side door giving access to the mechanism, with security lock.
4. Removable cover, locked by key.
5. Aluminium tube boom arm, varnished white with red reflecting stripes and end-sealing. Boom arm swing-off, avoiding damage to the barrier in case of impact on the boom arm.
6. Arm shaft mounted on two life-lubricated ball bearings. The protrusion of the shaft, centred on the housing side, allows it to be easily reversed from one side of the housing to the other: arm on the left or on the right of the framework housing.
7. Arm balancing by springs.
8. Electro-mechanical assembly including:
  - An asynchronous three-phase geared motor.
  - Movement transmission by crankshaft-rod device insuring mechanical locking of the boom arm in end positions.
  - Automatic barrier unlocking device in case of power failure, opening then being possible by hand.
  - Frequency converter ensuring progressive accelerations and controlled decelerations, for a vibration-free movement and enhanced protection of the mechanism.
  - Analogue inductive limit switch that detects the extreme positions (open/close) and informs at any time of the exact position of the arm for a better control of the movement.
9. Lever for manual unlocking (if not automatic mode set up).
10. Control board enabling various additional commands and/or accessory options
11. Adjustable information contacts:
  - State of the barrier's position (open or closed),
  - State of the presence detectors,
  - Command for master-slave barriers (movement of one barrier controlled by the other barrier),
  - ...
12. Fixing frame to be fixed in a concrete base to be provided by the customer.



## STANDARD TECHNICAL SPECIFICATIONS

Power supply	Single phase 230VAC, 50/60Hz + Ground <sup>(1)</sup>
Consumption	335 W (at maximum speed and without options)
Motor	Three-phase asynchronous 250W motor
Gearbox	Life-lubricated worm-screw speed reduction unit
Type of arm	Aluminium tube boom arm, with oval section of 80 x 53 mm
Minimum operation time	From 0.6 to 1.7 seconds
Ambient operating temperature	Between -20 and +50°C (without optional heating)
Undisturbed operation by winds up to 120 km/h	
Free passage (L)	From 2,5 to 4 m
MCBF (mean cycles between failures)	<b>10.000.000</b> cycles, in compliance with recommended maintenance
Operating frequency	Up to 20,000 movements per day
Net weight	83 kg (Excluding arm)
IP rating	IP44
Sound level	<70db(A) <sup>(2)</sup>
	Complies with European standards

<sup>(1)</sup> Do not connect to an isolated ground network or a high impedance earthed industrial network.

<sup>(2)</sup> Measured at 1 m from the machine surface and at a height of 1.60 m above the floor according to ISO3744. No hearing protection equipment required.

## WORKS TO BE SUPPLIED BY THE CUSTOMER

- Ground installation.
- Power supply.
- Wiring to any external devices.

**Note:** Follow the installation plan.

## OPTIONS

### ARMS

- Carbon Protecta® arm - Lg. 2,5 m ; 3 m ; 3,5 m. <sup>(3)</sup>
- Carbon Protecta® arm with automatic re-hinging device - Lg. 2,5 m; 3 m; 3,5 m. <sup>(3)</sup>

### SECURITY & SAFETY

- Opening protection of both cover & door - Switch-off of the frequency inverter.

### CONTROL & COMMAND

- Push button box - 2 buttons (opening / closing).
- Key switch on the housing (automatic / locked open / locked closed).
- Inductive loop for vehicle detection.
- Presence sensor on rail - Single or Double channel.
- Photo-electric cell (T/R or Reflex).
- Support post for photo-electric cell (H = 0.7 m).
- Cell mounting (T/R or Reflex).
- Ultrasonic detector with protective cover included. <sup>(4)</sup>
- Human Machine Interface colour screen with keypad for logic board.
- Ethernet interface.
- SD memory card for Ethernet board - Industrial grade
- Input / output (I/O) extension card for logic board.
- Totalling counter (without or with resetting).

### SIGNALISATION

- Traffic lights (Ø 200 mm - LEDs) - Red/Green - Supply or Fixed on a support post on the barrier.
- Traffic lights (Ø 200 mm - LEDs) - Orange - Supply or Fixed on a support post on the barrier.
- Support post for traffic lights (H: 2,70 m).
- Extension board (electronic board for third-party traffic lights).

### AESTHETIC

- Non standard RAL colour.
- Treatment for aggressive saline environment. <sup>(5)</sup>
- Raised steel base.

### POWER SUPPLY

- Power supply 120 V - 50/60 Hz.

### ENVIRONMENT

- Thermostatic heating - Heating for operation until -35°C.
- Cooling kit (frequency inverter & housing door).

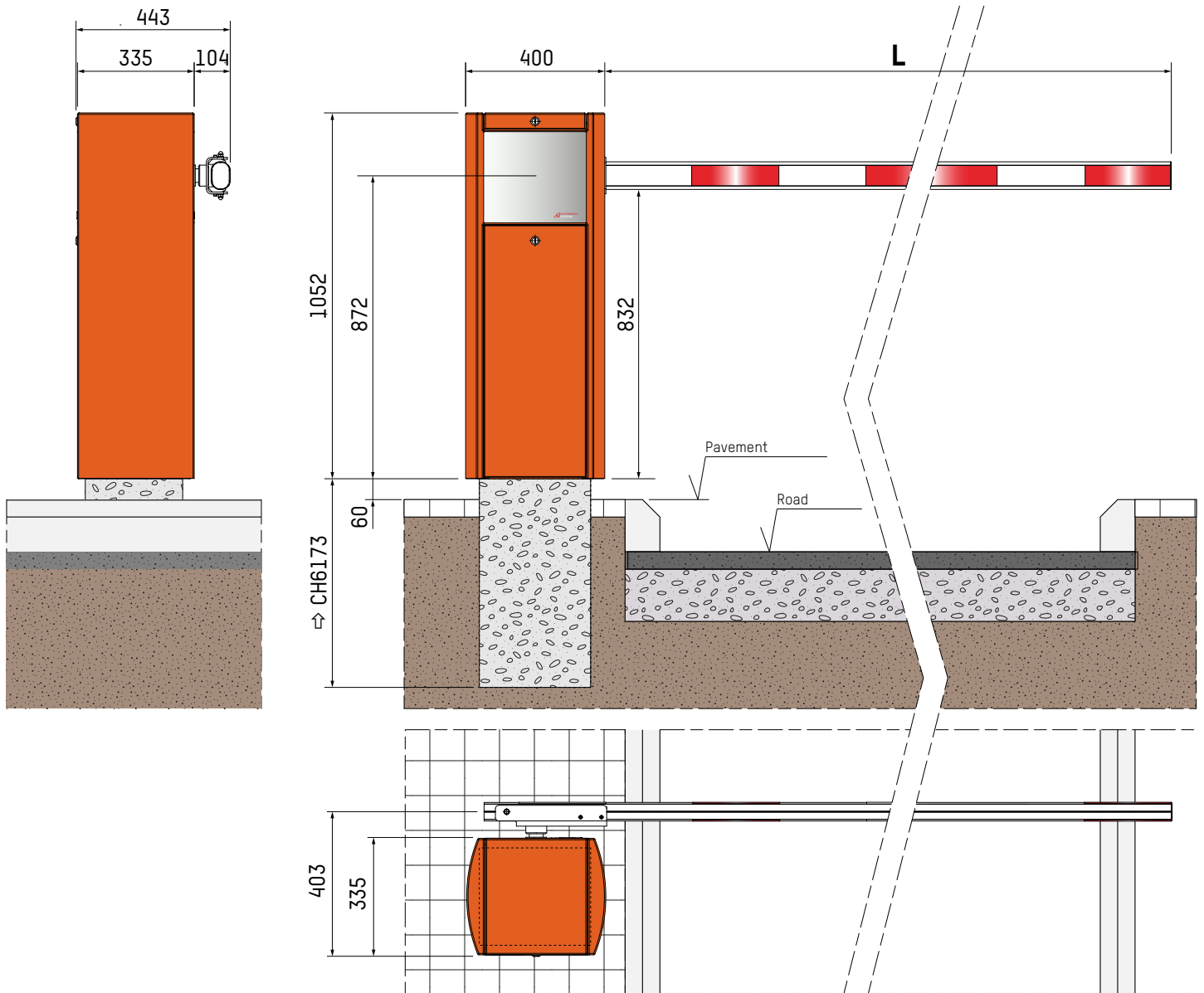
<sup>(3)</sup> Polyurethane sheath and sleeve in marine-variety fibre fabric.

<sup>(4)</sup> Not considered as a safety device if used alone.

<sup>(5)</sup> Recommended for an installation within 10 km of the coast: sandblasting + Alu Zinc plating 80µm outside (40µm inside) + polyzinc 80µm + 80µm powder coat.

**Note:** For restrictions on options, please contact us.

## STANDARD DIMENSIONS (MM)



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