Gunnebo Compact AFL-C

Automated Boarding and Pre-Security Gate

GUNNEBO®
Entrance Control

The Gunnebo Compact AFL-C Gate range

The Compact AFL (AFL-C) gate is designed for airports applications, but also suitable for ferry terminals, ports, railways or any mass transit environment where there is a need to direct passenger flow in one direction.

AFL-C is the ideal solution to combine space constraints with high performances requirements in terms of ergonomic, detection, possibility to integrate different features and options including biometrics.

Combining different technologies to achieve state of the art performances, AFL-C passage detection algorithms constantly monitor the flow of persons through the lane, detecting tailgating, wrong way and intrusion.

Local and remote connectivity allows advanced gate managing and control. AFL-C design has been optimized for easy maintenance and simplified installation. Optional base mounts are available in case it's not possible to route electrical cables under the floor.

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Technical specifications

Drive

High reliability DC motor with integrated reduction gearbox and electro mechanic brake

Materials

Casework: brushed AISI304 Stainless Steel
Optional: powder paint finishing
Moving panels materials:

- 10 mm security tempered glass (default)
- Transparent Polycarbonate (option)

Exit panels: 10 mm polycarbonate with LED RGB illumination
Passage widths:

- Regular 500 to 700 mm
- Wide 900 mm
- Possibility of Extra Wide passage width up to 1500 mm

Operation principles

AFL-C is controlled by Pre-security or Boarding application running inside the integrated PC through an advanced implementation of ModBus RTU (serial RS232) protocol. Operation of AFL-C is extremely flexible and highly customizable through commands and parameters

- Free, Controlled, Locked, Emergency, de-Boarding modes
- Adjustable tailgating sensitivity
- Adjustable swing panels speed and behavior in case of an obstacle is detected

ModBus protocol allows third party application (e.g. BGR or Pre-security application running on integrated PC) to take full control of gate operation, status, service and fraud alarms, and get real time passage information, up up reception of passage confirmation/ acknowledgment, in compliance to ITPS (formerly AEA) requirements.

Controlling Unit

Gunnebo GC03 platform

- Linux-based powerful SBC
- Graphic onboard display for easy setup and diagnostics
- Single bus communication with gate peripherals (sensors, motor drivers)

Passage and fraud detection

Different sensors analyze the movement of passengers, detect the direction, position of travel and activate the doors and alarms accordingly.

As soon the passage algorithm detects a situation that may represent a security or safety threat, AFL-C gate.

- Emits an acoustic alarm (buzzer @92dB)
- Make the information available regarding the specific event dedicated protocol registers
- Manage the behavior of swing obstacles according to pre-defined settings

The passage management algorithm detects the following fraud scenarios:

- Tailgating
- Wrong way
- Crawl under
- Intrusion
- Zero gap tailgating (Overhead TOF option only)
- Side-by-side tailgating (Overhead option only)

Basic and optional sensor configuration:

- Basic: 27 IR beams for tailgating detection down to 150 mm gap
- Option: additional TOF sensors in entry (big luggage detection)
- Option: overhead TOF camera mounted on integrated arch structure (side-by-side and zero-gap tailgating detection)

User Interface

- ModBus RTU for easy interface implementation
- Configuarable digital 1/0 interface
- Local gate controller basic configuration
- Remote firmware upload
- Windows GUI configuration and test tool

Technical data

Noise rating	<50dB
Power Supply	115/230Vac 50/60Hz
Power Rating	250VA peak / 50VA standby
Operating Temperature	0°C to 50°C 95% RH non-condensing
Flow Rates	PSG and SBG 10 to 12 PPM depending upon passenger speed of travel and IT infrastructure capacity

Advanced features

- Integrated PC for BGR application hosting
- 10.1 display with upper RGB light connected to BGR PC (touch option available)
- Predisposition for Gunnebo Biometric Pod with 10.1′ monitor and different camera options
- De-boarding button at exit

Optional features

- Thermal printer
- Illuminated exit panels
- Integration of several models of barcode/RFID/NFC readers:
  - Desko Penta series
  - Desko BCR 504 serial
  - HID ATOM ATR300
  - HID TripTrick ATR200/210
  - Tensa-belt (with customizable colors and logo)
  - Upper arch with overhead camera for single person detection
  - Customizable for third party biometric pods and peripherals integration
- Arch-integrated structure with TOF overhead camera
- HDMI display on the overhead arch
- Optional mounting base

Benefits

- Reduction in staffing costs
- Space optimization
- Increased security
- Unobtrusive design combined with highly glazed aesthetic
- High visibility of traveler progress
- Modern design

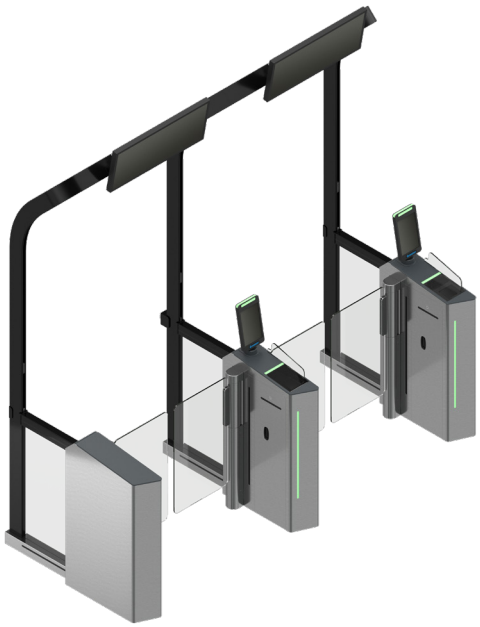
Applications

- Airports
- Seaports and Ferry terminals
- Mass Transit applications in general

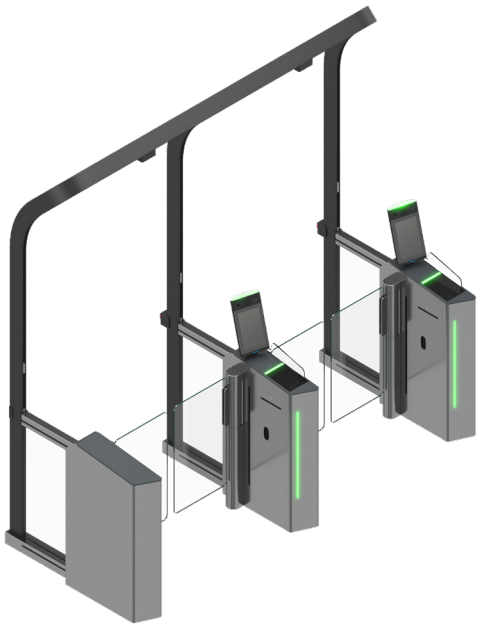
C-AFL with overhead detection

The overhead detection option includes an integrated structural arch that supports an IR TOF camera working in parallel with standard passage detection to deliver state-of-the-art fraud recognition and prevention.
AI-trained models with the edge TOF camera system work seamlessly in any light condition and detect scenarios like side-by-side multiple passage attempts that are impossible to handle with standard sensing.

Stretch display option
When Overhead TOF detection is selected, an optional stretch HDMI industrial monitor can be added to show gate information, boarding sequence information, or any other graphical content.



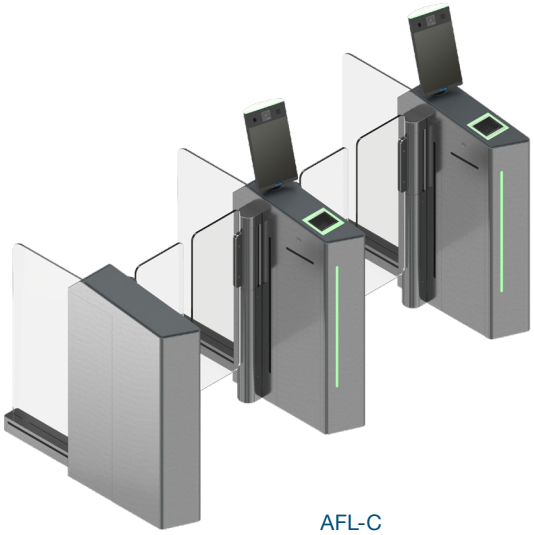
AFL-C With HDMI display on overhead arch



AFL-C With overhead camera

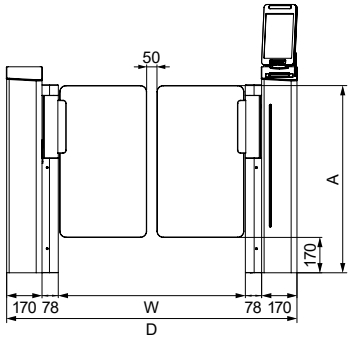
Aesthetics

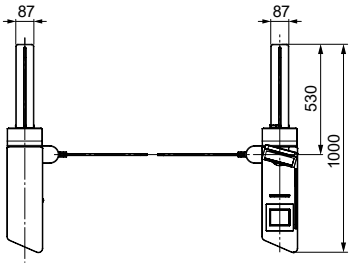
Minimalistic profile for reduced visual impact and AFL-C can be made in a sleek stainless steel or powder coated to blend seamlessly into the space.

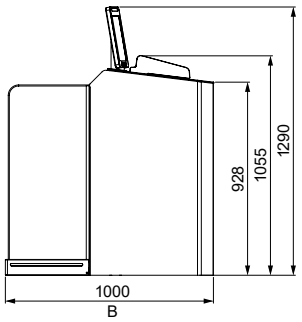


AFL-C

Dimensions and weight







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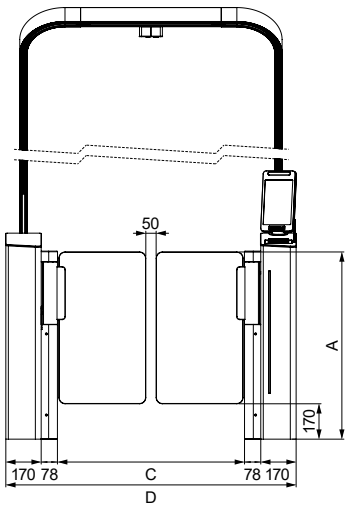

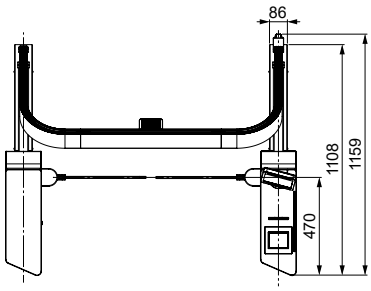

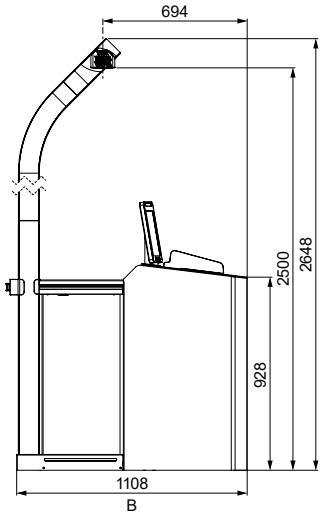

Gunnebo Compact with overhead camera
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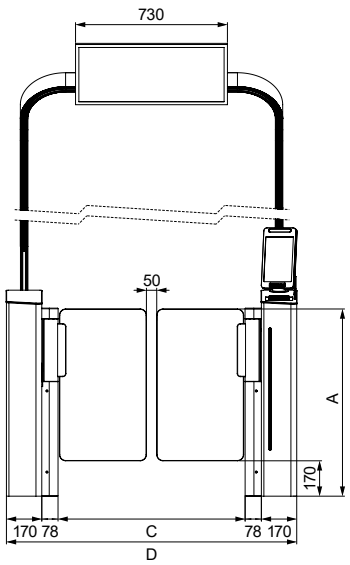

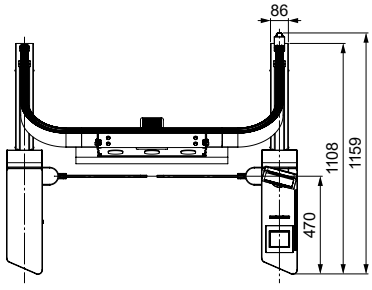

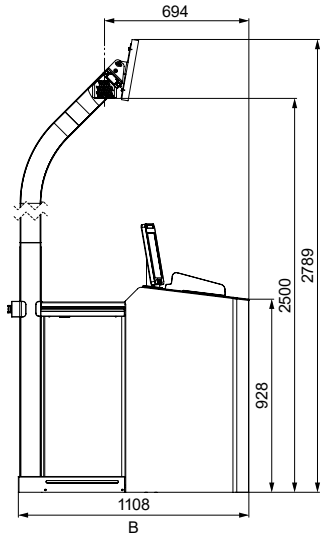

Gunnebo Compact with overhead detection AFL-C
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Height (A)	Depth (B)	Passage Width (C)	Structural Width (D)	Weight
928 mm	1105 up to 1108 mm	500 up to 1500 mm	1000 up to 2000 mm	<150 kg/lane

It is the customer's responsibility to ensure that the installation site meets all structural integrity and strength requirements.
The information provided is for reference only. For assistance in preparing the installation site, please contact your Gunnebo Entrance Control sales representative.

International Standards

CE Compliance meeting the following directives:

- 2006/42/EC Machine Directive
- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC Directive
- 2011/65/EU RoHS Directive
- 2021/19/EU WEEE Directive

Norms

- EN 61000-6-2 (2005) Electromagnetic compatibility (EMC). Generic standards
- EN 61000-6-3 (2007) Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential commercial and light industrial environments.
- EN 61000-3-2 (2014) Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current ≤16A per phase)
- EN 61000-3-3 (2013) Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection
- EN 60335-1 (2012) + A11 (2014) Household and similar electrical appliances. Safety. General requirements
- EN ISO 12100 (2010) Safety of Machinery – general principle for design
- EN 17352:2022 (2023) Power operated pedestrian entrance control equipment - Safety in use - Requirements and test methods

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