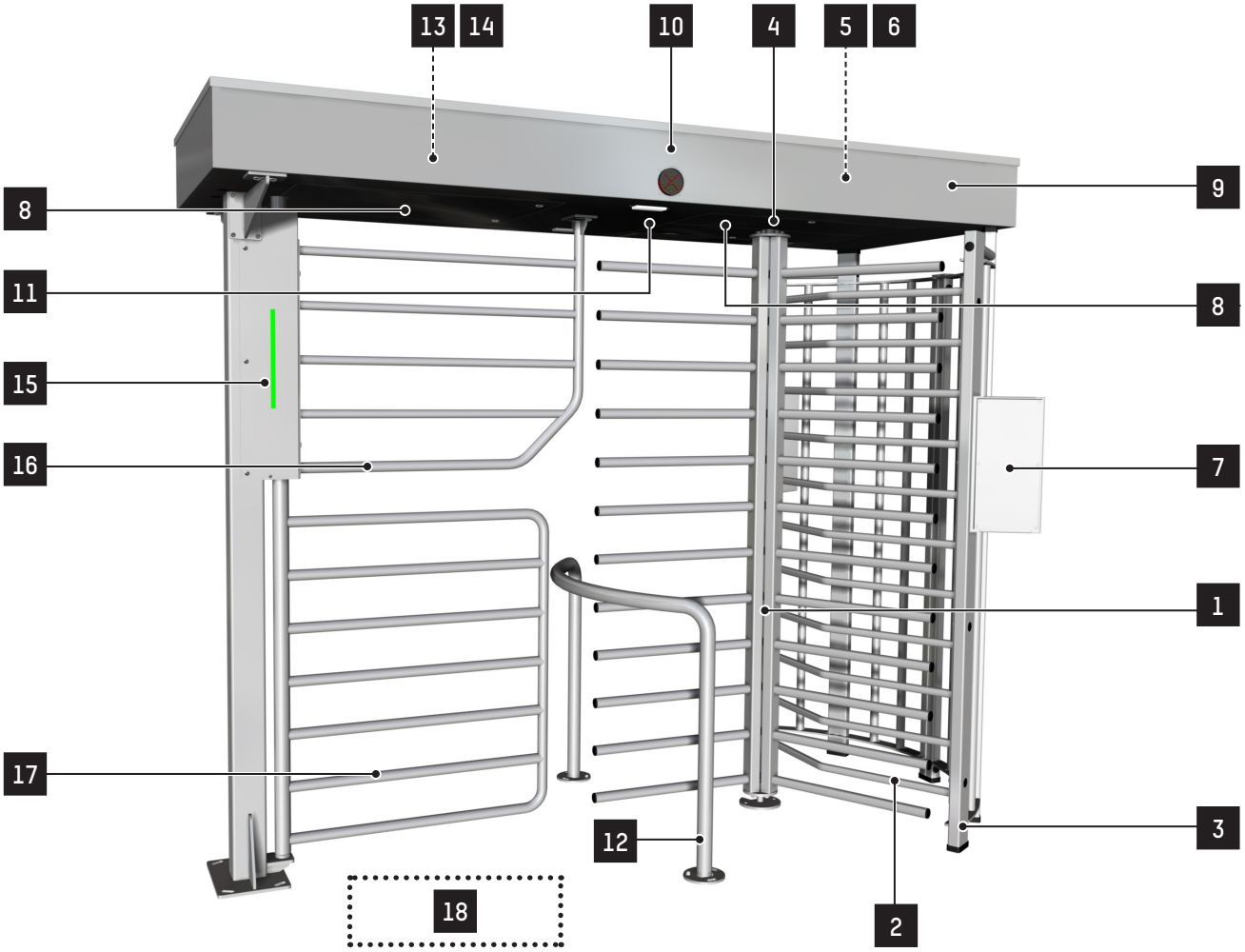
TRS BIKE

Technical datasheet

Rev. 01 • Update 03/2025



TRS BIKE security turnstiles are designed to ensure access control for both pedestrians and cyclists.

Totally autonomous and robust, they are particularly designed for the outdoor security of sensitive, high-traffic sites, such as industrial, sports and commercial complexes, offices, airports, power stations, amusement parks, military bases, car parks, etc.

TRS BIKE turnstiles consist of a **TRS 370 single-lane turnstile with 3 arms** for pedestrian management and **a motorised bi-directional gate** for the passage of a bicycle or any other micro-mobility device.

Its design makes it a perfect match for the TRS 37x turnstile range for side-by-side or remote installation. Since it is completely autonomous, the TRS BIKE turnstile can be installed at the right or left end of an existing TRS 37x turnstile array or inserted in the middle of an array. The operating mode of the equipment does not make it possible to guarantee a single passage after opening the bicycle gate.

The rotation control mechanism for the TRS 37x part and for the control of the bike gate are the result of many years' experience in the development and manufacture of access control equipment and the marketing of tens of thousands of units worldwide.

A large number of options are available to cover all cases likely to be encountered in pedestrian access control: Twilight switch to operate the lighting, heating element, functional pictograms coupled with reader operation, canopies, reader housing.

DESCRIPTION

TRS 370 PART

1. **Rotating obstacle with 3 combs** positioned at 120° to one another. Each comb consists of steel tubes welded to a vertical upright. The assembly is fixed to the upper rotor and the lower central wheel disc.
2. **Fixed comb** limiting passage to half of the turnstile, consisting of steel tubes bolted to the vertical uprights of the fixed panel 3.
3. **Fixed panel** limiting passage, made up of vertical tubular steel profiles (rectangular and round), welded to a curved plate.
   These structures also support the upper box section 9.
4. **Dust-free seal** between the central axis of the obstacle and the upper box section.
5. **Drive mechanism** consisting of:
   - Compensating arms with tension springs to maintain the rotating barrier in the at-rest position after passage.
   - Hydraulic damper slowing movements at the end of the cycle for greater ease of use.
   - Anti-return mechanism after 60° rotation, preventing fraudulent passage in the opposite direction.
   - Electromagnet(s) and cams ensuring mechanical locking of the obstacle in the at-rest position (only if at least one direction of passage is controlled).
6. **Control board** (only if at least one direction of passage is controlled), the main functions of which are:
   - Parameters set using an integrated keypad and LCD screen or a Modbus link with remote control.
   - Connection block for various commands (readers, unlocking, etc.) and information retrieval (position, counting, etc.).
   - Configuration of controlled operating mode.
   - Time delay management (absence of passage for instance).
   - Memorization of passage requests.
7. **Aluminum reader box**, equipped with a front panel in Trespa®, mounted on the TRS upright. If door opening is controlled in both directions, this type of box can be fixed in direction A and direction B (available as an option).

COMMON PART

9. **Upper box section** housing the drive mechanism 5 - 13 and the control board 6 - 14, in sheet steel, with double door locked by key 8.
   Diamond point roof for evacuation of water.
10. **Orientation pictogram** built into the upper box section. It indicates the status of the lane and allows good visibility from a distance, thus ensuring high throughput.
11. **LED lighting** of the lane in the upper box section.
12. **Railing** separating pedestrian and bicycle access.

BICYCLE PASSAGE GATE PART

13. **Drive mechanism** consisting of:
    - Brushless 24 V motor assembly.
    - Pulley and belt movement transmission.
      The belt is tensioned by a tensioning roller.
    - Solenoid and cams for mechanically locking the obstacle in the at-rest position.
14. **Control board** with the following main functions:
    - Parameter setting via built-in web interface or via XML/RPC link with remote controller.
    - Terminal block for various commands (readers, unlocking, etc.).
    - Configuration of controlled operating mode.
    - Time delay management (delay after passage in particular).
15. **Functional pictogram** built into the upper box section of the bicycle gate. It indicates the user's access authorisation and operates independently in both directions.
16. **High fixed obstacle** (bicycle passage) preventing pedestrian passage.
17. **Mobile obstacle** (bicycle passage) in steel or brushed stainless steel (available as an option). After passage, the obstacle closes automatically after a time delay.
18. **Bicycle detection** (available as an option) comprising a presence detector and loops, used as an opening or closing element.

OPERATING MODES

For each direction of passage, these **2 configurations** are possible (to be specified when ordering):

- Electrically controlled (free, locked, passage subject to authorisation) and mechanically locked in the event of a power failure.
- (Standard) Electrically controlled (free, locked, passage subject to authorisation) and unlocked in the event of a power failure.

STANDARD TECHNICAL CHARACTERISTICS

Power supply	110 - 240 V single-phase 50/60 Hz [1]	
Consumption *	At rest: 54 W In operation: 111 W	
	USE OF THE TRS 370 ALONE	**USE WITH THE BICYCLE PART**
Flow per lane	15 to 20 passages per minute [2]	5 passages per minute [2]
MCBF (Mean number of cycles between failures)	**500,000** cycles, in compliance with recommended maintenance	
MTTR (mean time to repair)	20 minutes	
Weight	370 kg (without the canopies)	
Ambient temperature during use	From -10 to +50°C	
Ambient relative humidity	95%, without condensation	
Protection rating	IP43	
CE	Complies with European standards	

[1] Not to be connected to a floating network or to a high-impedance earthed industrial distribution network.

[2] Depending on the reader's reaction time.

OPTIONS

Light sensitive switch.*
Heating for operation up to -35°C - Per passage.
Power supply 120V 60Hz (compliant with UL standard) - Per passage.
Non standard RAL colour.
Treatment for aggressive saline environment. ⓘ
Rotating arms and bike gate made of stainless steel - 3 arms at 120° - Single passage.
Rotating arms with antibacterial cover - 3 arms at 120° - Single passage.
Heel protector on the lowest arms of the rotor - Single passage.
Canopy - TRS BK.
Two big boxes for integration of access control features - Single passage - A & B directions.*
LED pictograms on boxes (single lane) - A & B directions.
Fixing frame - TRS BK.
Bike detection solution (presence detector + induction loops).
Radar sensors bike detection solution.

ⓘ Recommended when the turnstile is installed within 10 km of the coast: sandblasting + Alu Zinc plating 40 µm inside/ 80 µm outside + polyzinc 80 µm + powder paint 80)

* Requires a TRS managed by a logic board.

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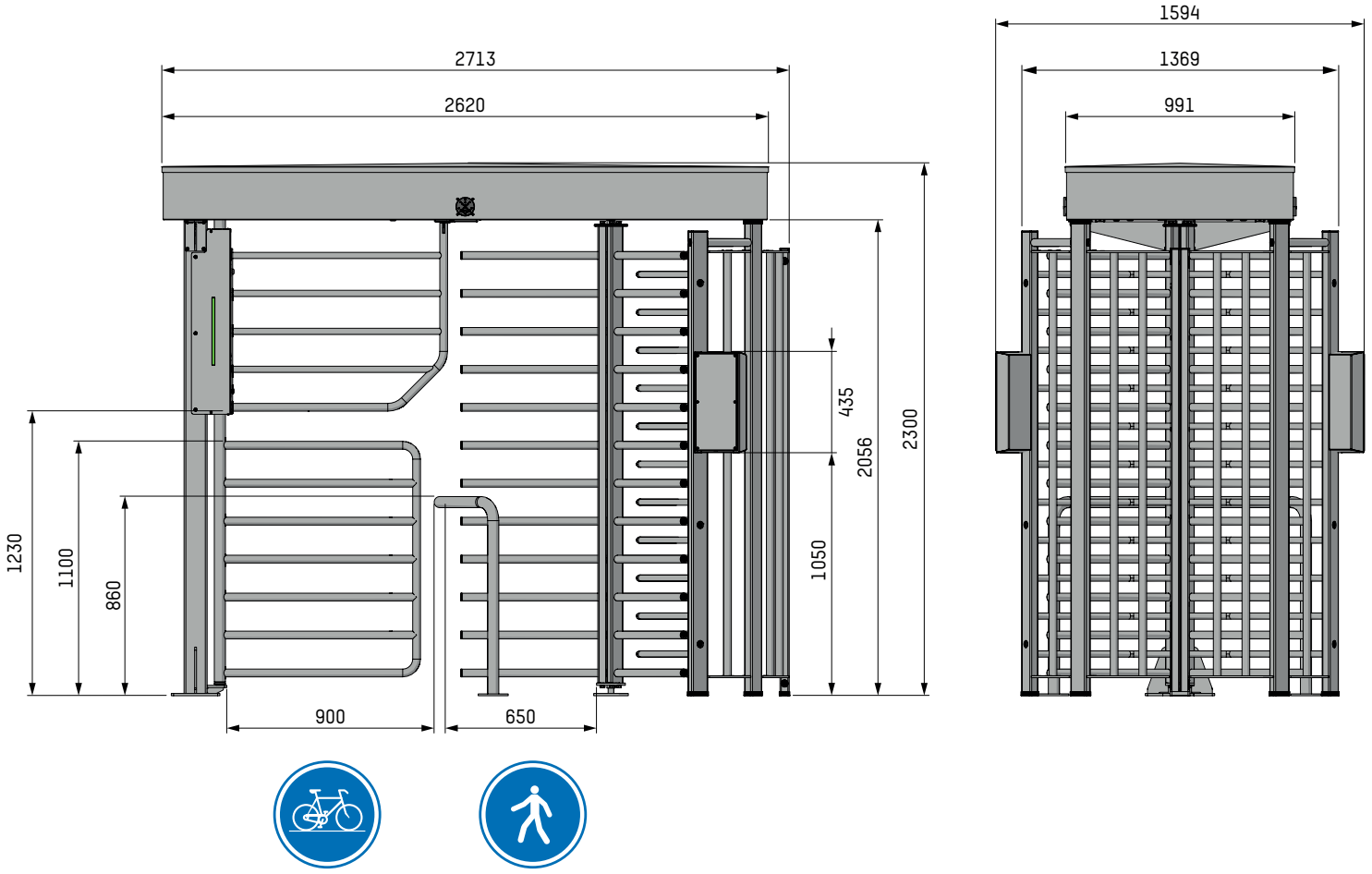
WORKS TO BE PROVIDED BY THE CUSTOMER

- Masonry effects according to the installation drawings.
- Power supply.
- Floor mounting.
- Access control system connections

Note: please follow the installation plan

STANDARD DIMENSIONS (MM)



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