



## F100C Series Turnstiles



### General Description

F100C Series Full - Height Turnstiles are the unique solution for unmanned entrances with high level of security requirements. Only one person is permitted to pass on each turn of the turnstile. This is achieved by three/four group of wings, standing 120/90 degrees apart on the square/triangular cross sectioned rotor beam. Frames have a width of 100mm and a thickness of 2mm. Advanced micro processor controlled electronics; fine mechanics processed on CNC machines; contactless position sensing technology; hydraulic damper with adjustable damping ratio; self-centring mechanism design and rust preventing precautions are some of the main factors resulting F 100 Series Full Height Turnstiles' trouble-free, long operation life. A locking sub-mechanism inhibits rotor's turning backwards after 30 degrees of rotation, forcing the passage to be completed. No vibrations and noise occur during operation, with the help of the strong hydraulic damper.

### ROTOR, WINGS, BODY AND ROOF

Rotor, arms, body and the top lid are either AISI 304/316 Quality Mirror/Satin Polished/Brushed Stainless Steel or A1 Quality Carbon Steel (hot dip galvanized + RAL 7032 emboss flint stone gray polyester powder coated +furnaced) or any combination of them. On F100-004/D, F100-014/D models tempered glass is Smoked Scratch Resistance Anti-Static Polycarbonate utilized in between the frames of the body. There are three/four group of arms, standing 120/90 degrees apart on the square cross-sectioned rotor beam. Arms have 48mm outer diameter and a thickness of 2mm. Open end of the arms are not closed by plastic caps, instead AISI 304/316 Quality Stainless Steel convex piece is welded. Stainless steel sheet metals used for top lid and ceiling may be pre-formed or brushed upon request. Operation without vibrations is achieved by anchoring the turnstile with the help of an anchoring plate at the floor level. Anchoring plate is fixed to the floor by 5 bolts. Smooth operation of the rotor is achieved with the help of 2 ball bearings (single row, radial contact) and 1 thrust ball bearing (double direction, washers with grooved raceways, flat seats). On stainless steel models, the weld at the end of the arms is hidden under a ring shaped chrome-nickel plated part; therefore every little detail for aesthetic appearance is completed.

### CONTROL ELECTRONICS

Optima full-height turnstiles are controlled by a PLC (programmable logic control). The time that the turnstile waits open after the reader input is 30 seconds and can be arranged in 6 steps as multiplies of 5 seconds. Turnstile can be supplied either fail-locked or fail-open at. In other words, when electricity is off, turnstile will stay locked or will freely rotate according to the requirements. As a solution for the applications where there is "high" flow in "both" directions, the electronics has the ability to remember 10 readings with respect to the reader side and give permission respectively. Control electronics has trigger inputs, position sensor inputs, alarm inputs/outputs,

solenoid outputs, led way-mode indicator outputs, 'cycle(one turn) completed' outputs, counter outputs and buzzer outputs. Every kind of readers either for security or ticketing systems applications can be integrated very easily. Position sensors are contactless; consequently preventing problems arising from long period applications of micro switches with mechanical legs. For safety reasons, only 24V and 5V are running through the control electronics and the whole turnstile.

### MECHANISM

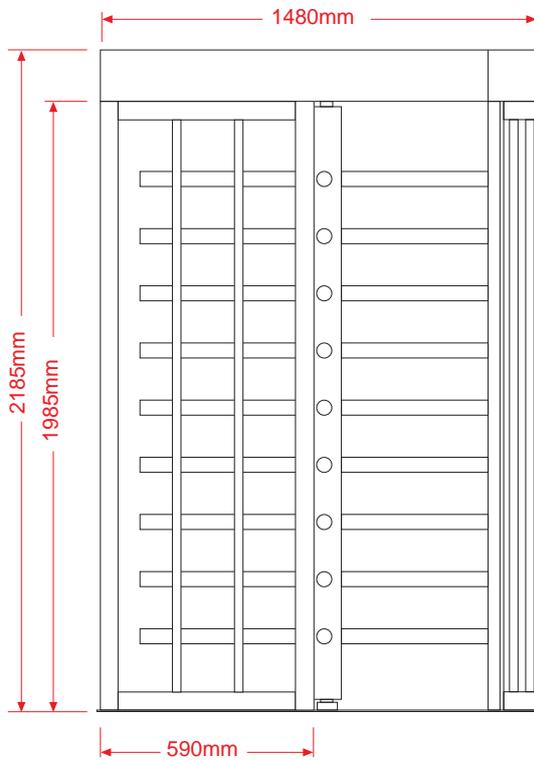
All the mechanical parts of the mechanism are manufactured on CNC machines with high precision. Rusting is prevented as the steel parts are all galvanized, others being aluminium, plastics, etc. Sophisticated self-centering design enables the arms stand at the correct position at every turn. A heavy duty and adjustable damping ratio hydraulic damper is utilized in the mechanism, which enables smooth and vibration less operation; resulting long and trouble free operation life. All the necessary parts (especially the ones with dynamic loads) are heat treated to prevent wear. A locking sub-mechanism prevents rotor's turning backwards after 30 degrees of rotation, forcing the passage to be completed. High level of vandalism is taken into account while designing the mechanism, for example, face plate is 12mm. Some stadium installations corroborated that the mechanism is strong enough for highest level of vandalism. Locking arms are manufactured from steel. All the bearings and fasteners utilized in the mechanism fit ISO Standards.

### ENVIRONMENTAL CONDITIONS AND POWER REQUIREMENT

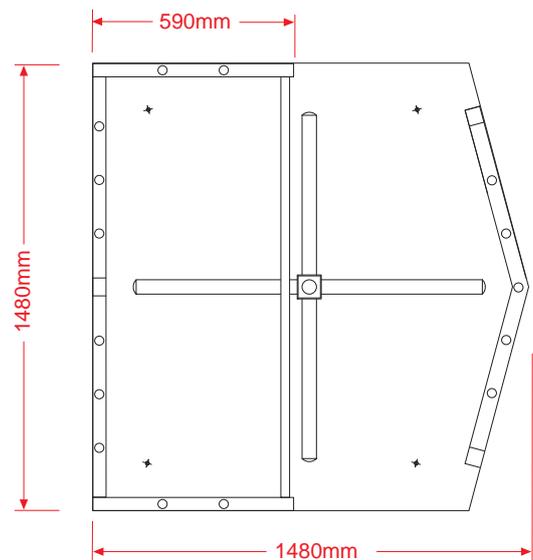
Between -15°C and +75°C, % 95 non-condensing humidity; 220V 50Hz

### OPTIONAL ACCESSORIES

1. Ceiling lamps
2. Stainless steel base plate with anti-slip rubber mat



FRONT VIEW



TOP VIEW