

ARCHITECTURAL SPECIFICATION
MSTT-3 Full Height Manual Tandem Turnstile

AVAILABLE FINISHES
MSTT-3SS – Stainless Steel
MSTT-3PF – Powder Coat
MSTT-3GL – Galvanized

SECTION 08 71 00 – Door Hardware

PART I – GENERAL

1.01 SECTION INCLUDES

- A. This section covers the furnishing and installation of a full height manual tandem turnstile. The tandem turnstile is generally used in locations where two turnstiles are not required, but space for two separate units is not available. A tandem turnstile saves approximately 9” in width contrasted with the installation of two single MST turnstiles.
- B. For further information, call the factory at +1 909.591.8431 and ask for the technical support department; or email information@alvaradomfg.com.

1.02 RELATED SECTIONS

- A. Section 11 14 00 – Pedestrian Control Equipment

1.03 QUALITY ASSURANCE

- A. Manufacturer shall be a company specializing in the supply of security turnstiles with a minimum of 10 years’ experience.
- B. Installer shall have a minimum of one year experience installing similar equipment, or shall supply a factory representative during installation of the turnstile.

1.04 SUBMITTALS

- A. Submit manufacturer’s descriptive literature for specified equipment, including options.
- B. Provide dimensional layout, installation instructions, electrical and communication connections and anchoring instructions.
- C. Provide shop drawings, if required.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to job site in manufacturer’s packaging undamaged, complete with installation instructions.
- B. Store off ground, under cover, protected from weather, construction activities and debris.
- C. Use forklift and pallet jack equipment as required for moving.

1.06 PROJECT/SITE CONDITIONS

Install the MSTT-3 on a level concrete pad.

1.07 WARRANTY

Alvarado warranties its products against defects in material and workmanship for a period of one (1) year from the date of invoicing. The warranty covers defects in materials and workmanship and does not cover freight, labor or incidental costs. Obtain full warranty terms from Alvarado.

PART II – PRODUCTS

2.01 MANUFACTURER

Alvarado Mfg. Co., Inc. 12660 Colony Street, Chino, CA 91710.

2.03 PRODUCT

MSTT-3 Full Height Tandem Turnstile, no substitutions. Features of the turnstile shall include: horizontal opening inspection cover; key lock control to allow field configurable rotation; self-adjusting speed control with self-centering. *Note:* A roto that self-centers through spinning and settling is not acceptable. When lock arms are disengaged, the turnstile shall rotate only once and shall self-center when the roto is spun with up to 250lbs of force.

2.04 CONSTRUCTION

A. Top Channel:

1. The top channel frame shall be a 7" wide, 4-gauge, steel U-channel powder coated in a zinc-rich powdercoat.
2. The top channel cover system shall slide apart horizontally, providing access to the interior of the top channel without having to lift the cover vertically when removing. The top channel cover shall be fabricated from 16-gauge, #304 stainless steel, polished to a satin (#4) finish.

B. Yokes (Curved Sections):

1. The two yokes (curved sections) shall be all welded single assemblies, not multiple assemblies bolted together. Each yoke shall consist of 10 pieces of vertically aligned 1 3/4" OD 16-gauge stainless steel tubing notched and welded to two curved, horizontal tubes. Two 3/16" x 1" stainless steel straps shall be welded to the outside of the ten tubes for support. No external fasteners shall be used in the fabrication of the yoke section.

C. Roto (Rotating Section):

1. The two rotos (rotating sections) shall be all welded single assemblies, not multiple assemblies bolted together. Each roto shall consist of three vertical groupings of arms, with each arm notched and welded vertically to a vertical 3" x 3/16" wall tube. Each grouping of arms shall be positioned 120 degrees apart from one another. One roto shall consist of 13 arms per section (39 total arms per roto) and the other shall consist of 12 arms per section (36 total arms per roto). Each arm shall be 14-gauge, 1 3/4" OD steel (or 16-gauge #304 stainless steel) tubing. Arms shall have either welded metal caps (powder coated or stainless steel models) or ribbed, force-fit plastic caps (galvanized models). No external fasteners shall be used in the fabrication of the roto section.

D. Bottom Bearing Assembly:

1. The two bottom bearing assemblies shall consist of a sealed inter-ring bearing, a bearing shaft which fits into the underside of the roto, and bottom bearing housing and cover.

E. OV (Barrier)

1. The OV (barrier section) shall be an all welded single assembly which prevents passage in the reverse direction. It shall consist of 25 arms bent and notched and then welded to a 3"OD x 3/16" wall stainless steel vertical tubes. The OV arms are off set to provide rotation clearance for the respective roto sections. The arms shall be constructed from 1 3/4" OD x 14-gauge stainless steel tubing. No external fasteners shall be used in the fabrication of the OV section.

F. Yoke guard plate

1. The two yoke guard plates are a single piece 16-gauge stainless steel that bolts to the underside of the top channel assembly and the top of the yoke.

2.05 EQUIPMENT

A. General: Each turnstile shall have key lock control to allow field configurable rotation. The turnstile shall have the ability to provide free passage in both directions; free passage in one direction and no passage in the opposite direction.

B. Mechanical Operation:

1. Roto / Top Channel Connection: The connection between the roto and the top channel shall be accomplished through the use of a multiple grooved splined shaft and coupling.
2. Top Bearings: The top bearings shall be fully concealed from view by a cover fabricated from #304 stainless steel.
3. Self-Adjusting Speed Control / Self-Centering: The turnstile shall have self-adjusting speed control which automatically increases or decreases resistance depending on the pushing force of the user. The turnstile shall also self-center, automatically returning to the "home" position after rotation. Self-centering shall be controlled. When lockarms are disengaged, the turnstile shall rotate only once when the roto is spun with up to 250lbs of force. A roto that self-centers through spinning and settling is not acceptable.

2.06 FACTORY TESTING

- A. Product shall be fully tested at the factory prior to shipment.
- B. Check all mechanical connections.
- C. Inspect product finish. Touch up prior to shipment.

2.07 FINISH

- A. Stainless Steel: All exterior components, including top and bottom bearing covers are to be fabricated from #304 stainless steel, polished to a satin (#4) finish.

2.08 OTHER AVAILABLE OPTIONS

- A. Padded Heel/Arm Guards: Snug fitting padded arm guards for arms at pushing level, or lower arms at heel level.
- B. Full Guard Plate: The standard guard plate is replaced with a guard plate that covers a larger area at the top of the turnstile.
- C. Out of Service Lock Bracket: Enables the turnstile to be secured with a padlock.
- D. Top Channel Stabilizer: Increases the rigidity between the OV and top channel assemblies.
- E. Computerized Counting: Each turnstile rotation outputs a count GateWatch, Alvarado's Windows based facility counting software program.

PART III – EXECUTION

3.01 SITE EXAMINATION

- A. Inspection: Installer must examine the installation location and advise the Contractor of any site conditions inconsistent with proper installation of the product. These conditions include but are not limited to the following:
 - 1. Turnstile must be installed on a level concrete pad.
 - 2. Installation shall not begin until unacceptable conditions are rectified.
- B. Installation: Install turnstiles in accordance with manufacturer's instructions.
- C. Adjustment: Installer shall adjust turnstiles for proper performance after installation.
- D. Instruction: A factory trained installer shall demonstrate to the owner's maintenance crew the proper operation and the necessary service requirements of the equipment, including exterior maintenance.
- E. Cleaning: Clean turnstile and area carefully after installation to remove excess caulk, dirt and labels.

Note: this specification includes recommended options. Alvarado Mfg. Co., Inc. reserves the right to change this specification at any time without notice.