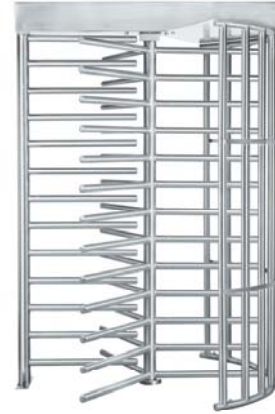


ALVARADO

MST Maximum Security Turnstile



Technical Specifications

Dimensions	<u>Unit Height:</u>	MST-1,2 85.75" (2178 mm) MST-3 91" (2311 mm)
	<u>Unit Width:</u>	62.25" (1581 mm)
	<u>Unit Depth:</u>	54.125" (1375 mm)
Components	<u>Yoke:</u> (Curved Section)	Formed and welded cold rolled steel (or #304 stainless steel). A fully welded and continuous assembly consisting of 10 pieces of vertically aligned 1 3/4" x 16-gauge tubing notched and welded to two curved, horizontal tubes bent to an inside radius of 28 3/4". Two 3/16" x 1" carbon steel straps are welded to the outside of the ten tubes for additional support. No external fasteners are used in the construction of the yoke.
	<u>Yoke Guard Plate:</u>	Cold rolled steel (or #304 stainless steel). 16-gauge sheet bolted to the top of the channel / yoke assemblies.
	<u>Roto:</u> (Rotating Section)	Formed and welded cold rolled steel (or #304 stainless steel). A fully welded and continuous assembly comprised of three arm sections positioned 120 degrees apart from one another. Each arm section contains 13 arms for a total of 39 arms per roto. Each arm is constructed from 1-3/4" OD x 14-gauge tubing, notched and welded to a vertical 3" OD x 3/16" wall tube, and capped with a 1-3/4" OD x 10-gauge cap. No external fasteners are used in the construction of the rotos. All exterior welds are ground smooth and polished.
	<u>OV:</u> (Barrier Section)	Formed and welded cold rolled steel (or #304 stainless steel). Consists of 13 1-3/4" OD x 14-gauge tubing notched and welded at one end to a vertical 3" OD x 3/16" wall tubes, and capped with a 1 3/4" OD x 10-gauge cap (stainless steel or powder coat units) or a force fit, ribbed plastic cap (galvanized finish units). No external fasteners are used in the construction of the OV. All exterior welds are ground smooth and polished.
	<u>Top Channel:</u>	Formed and welded 304 stainless steel. Houses the control mechanism components. The "U" channel for the MST-1,2 units are composed of 4" wide 11-gauge steel with a 16-gauge cover capped at each end with a 1 3/4" x 4" 11-gauge steel plate. The MST-3 unit is constructed with a 7" wide 10-gauge sheet metal. All exterior welds are ground smooth and polished.
	<u>Control Mechanism:</u>	One way clutch (Model MST-1 and MST-2 units) or a lobed cam and splined shaft rotation mechanism assembly that engages the stainless steel lock arm(s) (Model MST-3 units).

All tubing and sheet metal materials meet ASTM Standard A513.

Function	The MST is a manual, full height security turnstile designed to provide efficient throughput in perimeter security environments. An electric locking control version of the MST, the MSTX, is also available for controlled access applications.	
Available Configurations	The following configurations of the MST are available:	
	MST-1	Free passage in one direction; locked in the opposite direction.
	MST-2	Free passage in both directions.
	MST-3	Using key lock control, the MST-3 can be configured to provide free passage in both directions; free passage in one direction and restricted passage (locked) in the opposite direction; or restricted passage (locked) in both directions.
Available Finishes	Galvanized	All exterior tubing and sheet metal surfaces receive a coating of hot molten zinc meeting ASTM Standards A123 through A153.
	Powder Coated	Available in a wide variety of colors. Sub-assemblies are sand blasted to prepare for the powder coating finish. The powder is electrostatically applied, then baked to assure proper curing and adhesion.
	Stainless Steel	All external fabricated materials are composed of #304 stainless steel (noted in the descriptions above as #304 SS) and polished to a #4 satin finish.
Shipping Details	MST turnstiles are shipped in five main sections: the Top Channel, the Yoke, the Roto, the OV, and the Yoke Guard Plate. Each section is fully fabricated and welded as a sub-assembly for easy installation. Each MST unit includes mounting hardware (anchors, bolts, washers, etc.) to mount the unit to a standard concrete pad. Alvarado ships product throughout the world.	
Installation Details	All MST units must be installed on a firm foundation. The recommended platform is 72" square by 4" deep, level concrete. No embedded fasteners are needed for installation. Installation should be performed by a skilled installer following the manufacturer's directions and instructions (supplied with the turnstile).	
Approximate Weight	MST-1, MST-2: Approximately 650 lb. (295 Kg) per turnstile. MST-3: Approximately 720 lb. (327 Kg) per turnstile.	

Options

Out of Service Lock Bracket

Enables the turnstile to be secured with a padlock when out of service.

Heel Guards

Padded sleeves for the lower roto arms. Heel guards are packaged three to a set.

Arm Guards

Padded sleeves for the roto arms. Arm guards are packaged three to a set.

Electric Lock Control Upgrade (Model MST-3 units only)

All Model MST-3 units are convertible to electric lock control units with the addition of electrical components. The required brackets and insertion holes are included to allow for easy field retro fitting.

Top Channel Stabilizer (Model MST-3 units only)

A top channel stabilizer can be provided to increase rigidity between the OV and top channel assemblies.

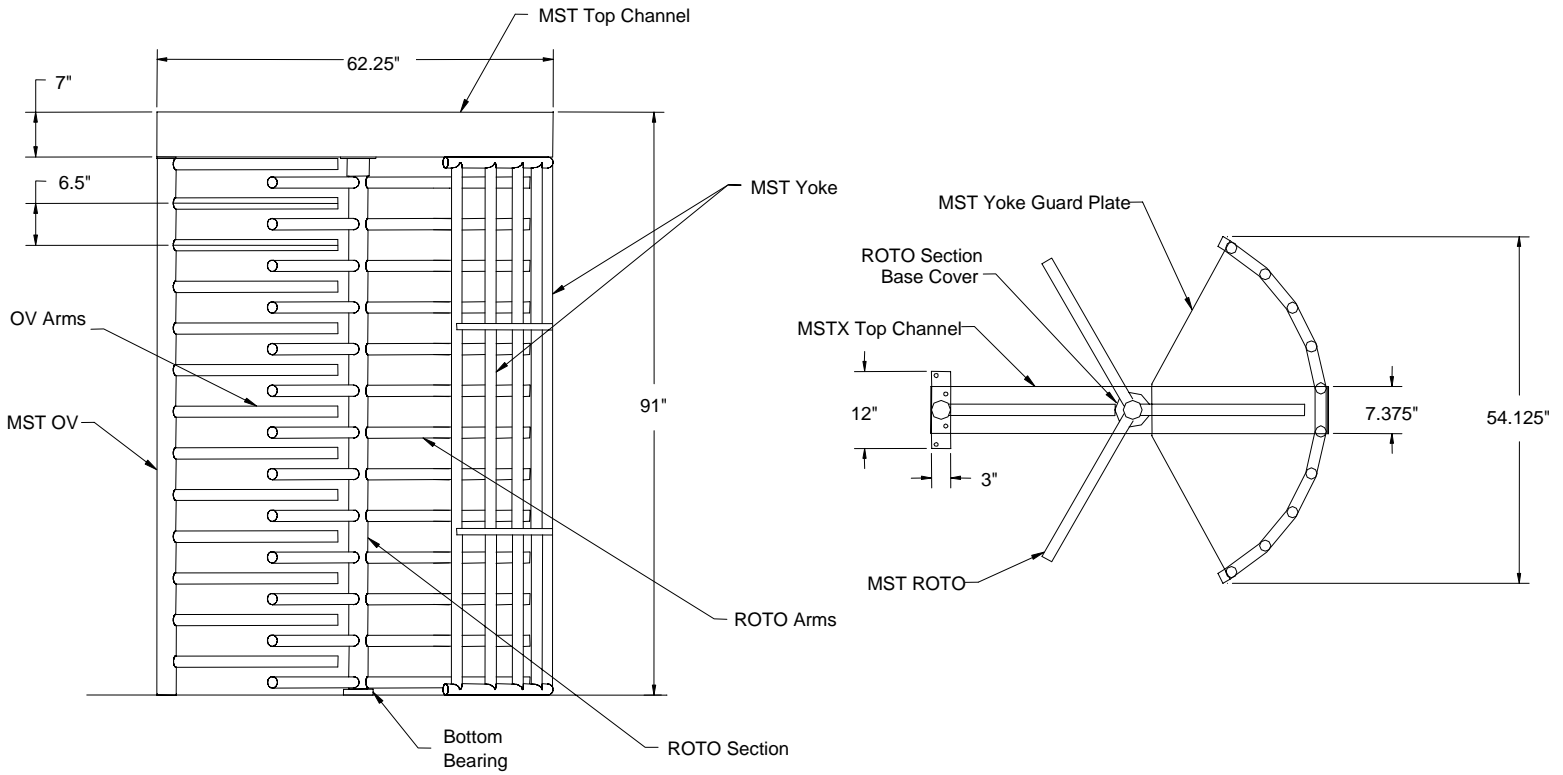
Self-Centering Mechanism (Model MST-3 units only)

The self-centering mechanism corrects under (less than 120°) or over (more than 120°) rotation of the turnstile arms following completion of a passage cycle. The turnstile arms automatically return to the "home" position (with one set of arms pointing directly at the center of the yoke) when this option is installed.

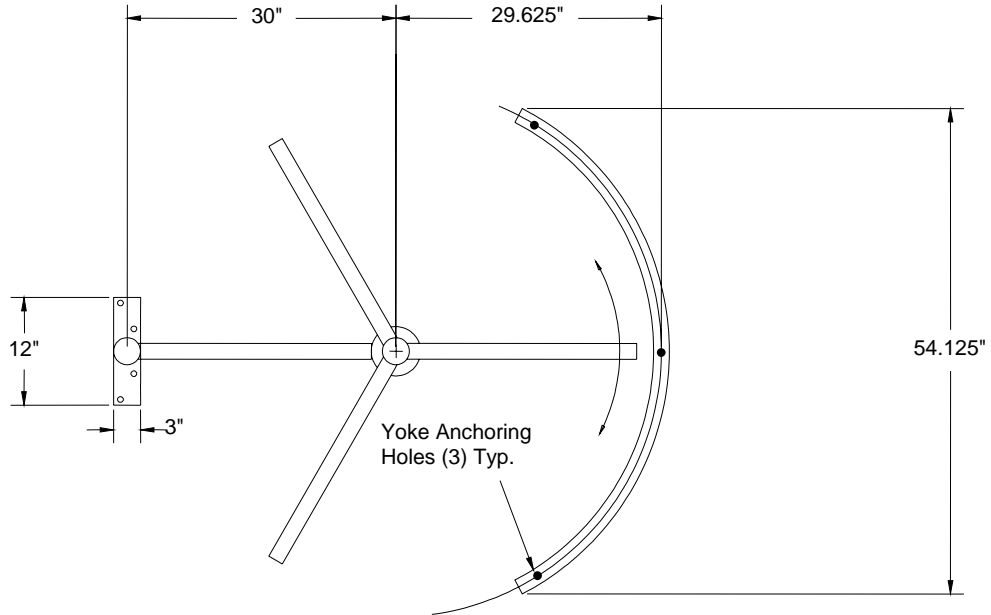
Computerized Counting (Model MST-3 units only)

Each turnstile rotation outputs a count to GateWatch, Alvarado's Windows based software program that monitors and records real time patron counts. Counts can be transmitted from the turnstile in several ways, including over a standard, in facility, Ethernet network or using wireless RF devices. This option should only be used in units equipped with self-centering mechanisms.

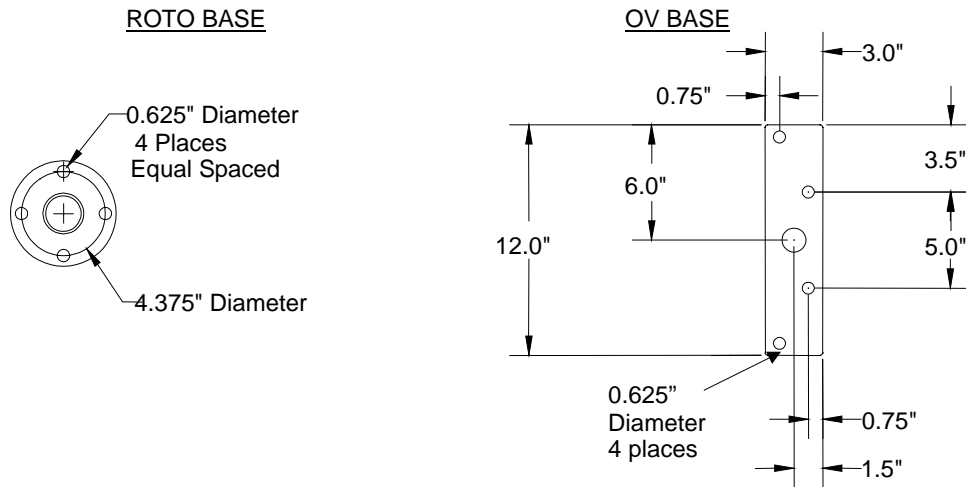
MST Site Preparation (Model MST-3 unit shown)



MST Footprint Drawing



Anchor Pattern



Slab Requirements

- Minimum 72" square by 4" deep, level solid concrete pad

Warranty

Alvarado Manufacturing Co., Inc. warrants the MST, from defects in material or workmanship, for the period of ONE YEAR from date of shipment. Complete details of the warranty are available from Alvarado by request.

Technical Services

Technical information is available from Alvarado Manufacturing Co., Inc., and its representatives, distributors, and dealers.

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