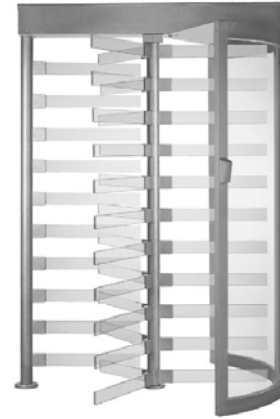


CPSTX Clear Passage Maximum Security Turnstile



Technical Specifications

Dimensions	Unit Height:	91" (2311 mm)
	Unit Width:	62.25" (1581mm)
	Unit Depth:	54.125" (1375 mm)
Materials	Yoke: (Curved Section)	Two piece assembly consisting of 3/16" thick polycarbonate panel contained within an extruded aluminum frame. Each frame consists of two 1 3/4" wide vertical pieces and two 3 3/8" wide horizontal pieces bent to a centerline radius of 29 3/8". The polycarbonate panel section also has a centerline radius of 29 3/8" and is securely contained within the inside perimeter of the frame. Available in #4 satin or powder coated finish.
	Yoke Guard Plate:	Cold rolled steel (or #304 stainless steel). 16-gauge sheet bolted to the top of the channel / yoke assemblies.
	Roto: (Rotating Section)	Formed and welded cold rolled steel (or #304 stainless steel). Comprised of three arm sections positioned 120 degrees apart from one another. The roto contains 11 arms per section for a total of 33 per roto. Each arm is constructed from 1" X 3" clear Lexgard®MP 1000 laminate with a Margard® surface, glued and press fit into a steel "boot" which is welded to a vertical 3" OD x 3/16" wall tube. No external fasteners are used in the construction of the rotos. All exterior welds are ground smooth and polished. Available in #4 satin or powder coated finish.
	OV: (Barrier Section)	Formed and welded cold rolled steel (or #304 stainless steel). Consists of 10 arms constructed from 1" X 3" clear Lexgard®MP 1000 laminate with a Margard® surface, glued and press fit into a steel "boot" which is welded to a vertical 3" OD x 3/16" wall tube. No external fasteners are used in the construction of the OV. All exterior welds are ground smooth and polished. Available in #4 satin or powder coated finish.
	Top Channel:	Formed and welded 304 stainless steel. The "U" channel is composed of 10-gauge steel with a 16-gauge cover. All exterior welds are ground smooth and polished. Available in #4 satin or powder coated finish.
	All tubing and sheet metal materials meet ASTM Standard A513.	
Function	The CPSTX is an electric lock controlled, full height turnstile designed to provide controlled access into and out of high security facilities.	
Available Configurations	The CPSTX is designed to interface with virtually any access control system or reader to provide the electric locking control required in controlled access facilities. The following configurations of the CPSTX are available:	
	CPST-3	Using key lock control, the CPST-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.
	CPSTX-4X	Each turnstile has electric lock control in one direction, no passage in the opposite direction.

	CPSTX-5X	Electric lock control in one direction, free passage in the opposite direction. This model includes self-centering roto operation.
	CPSTX-6X	Each turnstile has separate electric lock controls in both directions.
Control Mechanism Components	<u>Cam and Shaft Assemblies</u>	The lobed cam is precision investment cast stainless steel welded to a splined shaft. The splined shaft fits into a reciprocal splined coupling in the top of the roto, creating a solid non-slip connection between the parts.
	<u>Top Bearing Assemblies</u>	Each cam and shaft assembly rotates in a bearing assembly consisting of two fully protected precision bearings.
	<u>Friction Brake Assemblies</u>	The braking mechanism consists of a precision investment cast steel circular disc brake that rotates and maintains contact with two disc brake pads to provide friction braking during the rotation of the turnstile. The friction braking tension is adjustable.
	<u>Mechanical Turnstile Control</u>	The locking and unlocking of the unit is controlled with stainless steel lock arms that are moved into the appropriate locked or unlocked position by continuous duty rated solenoids and spring assemblies. There is one solenoid and spring assembly per lock arm, and one lock arm per direction, allowing for independent control of each rotational direction.
	<u>Opto Interrupter Rotation Wheel Assembly</u>	This assembly consists of two opto-interrupters (small, industrial grade, transmit and receive LEDs), and a rotation wheel. As the turnstile arm is rotated, the rotation wheel passes between the two opto interrupters, signaling the Alvarado Turnstile Controller (ATC) that a turnstile rotation has occurred. The ATC uses this information to re-lock and provide access control functionality without the need for mechanical microswitches.
Electrical Components and Functionality		The following are the electrical requirements and standard functionality of the CPSTX:
	Power Supply	110 VAC, 60 Hz Low voltage primary power of 10 VAC or 12 VDC may also be supplied by connecting power directly to each ATC.
	Power Rating	Maximum power consumption is 75 W per turnstile.
	Operational Voltage	Primary power is stepped down and rectified for low voltage 12 VDC operation.
	On/Off Switch	An on/off switch is located on each power junction box inside the CPSTX top channel. A visible green LED is illuminated on the ATC when the power is "on".
	Power Receptacles	The power junction box inside the CPSTX top channel includes two 110 VAC power receptacles providing a convenient way for installers or technicians to power tools or equipment they may need as they test or maintain the CPSTX in the field.
	Surge Protection	Each ATC has line to line surge protection for single-phase low voltage AC input to 125 amps. Each ATC also contains a varister that switches to a high impedance state to protect the circuit in the event of a power surge.
	Bi-directional Solenoid Drivers	Each ATC provides one solenoid driver per rotation direction.
	Activation	Activation for either direction of operation is achieved by supplying a momentary dry contact of any duration to the ATC. A terminal strip connection is provided on the ATC for this purpose.
	Timed Delay Auto Re-Lock	An activation signal unlocks the turnstile for one entry. Once the turnstile is unlocked, the user is allowed a maximum of 20 seconds to pass through the turnstile. If the turnstile arms are not rotated within the 20-second time frame allowed, the turnstile automatically relocks.

Field Activation Testing	Each ATC provides a field activation testing button, for each electrically controlled direction. This feature provides a simple way for installers to test the functionality of the CPSTX and isolate problems in the field.
Remote Unlocking	Each ATC accepts inputs from a continuous dry contact emitting device to bypass the access control system and allow the CPSTX to be remotely unlocked or “opened” in the electrically controlled direction(s). A terminal strip connection is provided on the ATC for this purpose.

Outputs Terminal strip connections are provided for the following output signals:

Feedback / Turnstile Rotation Count The ATC provides a double pole, single throw, relay in each direction of operation. This allows the ATC to provide a “feedback” signal in the form of a relay output to the access control provider or an external counting system. A terminal strip connection is provided on the ATC for this purpose.

Available Finishes	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 CPSTX turnstiles are shipped in six main sections: the Top Channel, the Yoke section (shipped as 2 half yokes), the Roto, the OV, and the Yoke Guard Plate. Each section is fully fabricated as a sub-assembly for easy installation. Each CPSTX unit includes mounting hardware (anchors, bolts, washers, etc.) to mount the unit to a standard concrete pad. Alvarado ships products throughout the world.

Installation Details All CPSTX units must be installed on a firm foundation in a manner that allows the required power and activation signal cabling to be pulled into the top channel. 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 Approximately 950 lb. (431 Kg) per turnstile.

Options

Failsafe Operation

The electrically controlled direction(s) will unlock upon power loss and provide free passage. The CPSTX unit is supplied in a fail-lock mode as standard. If power is interrupted to a standard fail-lock CPSTX, it will remain locked in the electrically controlled direction(s). Failsafe operation can be specified for one or both electrically controlled directions.

Card Reader Mounting Plate

One or more mounting plate(s) can be provided to allow the access control reader and/or key pad to be mounted on the yoke of the CPSTX turnstile if desired.

Push Button Assembly

This option allows the user to unlock the turnstile for one passage with a stainless steel push button assembly. This option is most commonly used in the exit directions of Model CPSTX-6X units.

