



**Standard**

**Change-Makers, Inc.**

P.O. Box 36550

Indianapolis, IN 46236-0550

3130 N. Mitthoeffer Road

Indianapolis, IN 46235-2400

1-800-968-6955

Phone: (317) 899-6966

Fax: (317) 899-6977

# MODULAR SERIES

## Installation Instructions

MC, BX, BCX Cabinets

Part #8M00356 Rev. 10

[www.standardchange.com](http://www.standardchange.com)

1-800-968-6955

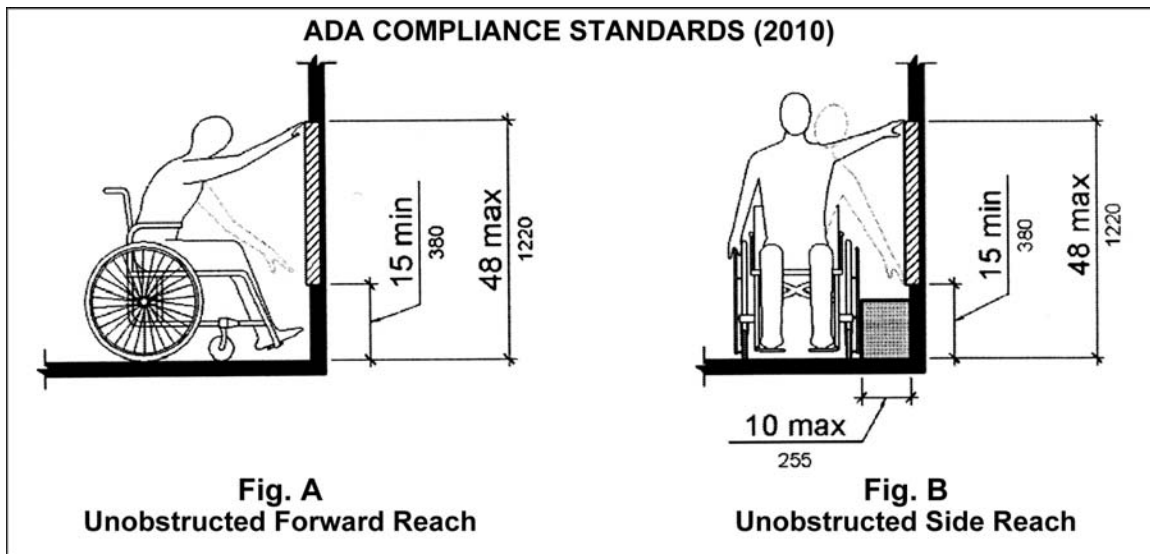
Technical Phone Support is from 8:00AM to 7:30PM E.S.T., Monday-Friday  
Walk-in Service is from 8:00AM to 4:30PM E.S.T., Monday-Friday  
Parts Department is from 8:00AM to 6:00PM E.S.T., :Monday-Friday

## MC CHANGER CABINET INSTALLATION INSTRUCTIONS

Standard Change-Makers manufactures change machines in the following cabinet styles: 1) Free standing consoles, 2) Front loading wall mount, 3) Through-the-wall rear load and 4) Slim-line vending changer. Because physical locations vary, we do not suggest an exact method of installation. To assure proper operation of your Standard bill changer the following general guidelines should be observed:

### Location of the Changer

1. Easily accessible by customers.
2. Proper height from the floor. This will vary depending on the model of the changer. ANSI specifications for accessibility of the handicapped call for all controls, bill and coin insertion slots and coin cups to be no higher than 48 inches (1,220 mm) or no less than 15 inches (380 mm) from the floor.



Below is a chart listing each MC cabinet model and the corresponding **MAX INSTALLATION HEIGHT** necessary to comply with the ADA requirements. The measurement shown is taken from the base (bottom) of the machine to the floor. Additionally, ADA requires a 30" (760mm) by 48" (1220mm) "clear floor space" to provide sufficient clearance for a single wheelchair and occupant.

Cabinet Model	ADA Requirements Maximum Installation Height Floor to Cabinet bottom (inches)		Base Height (inches)	Header Height (inches)
	No Coin Acceptor	With Coin Acceptor		
MC100	27.25	NA	26.50	8.50
MC200 *	32.75	25.00	Bills Only: 30.00 Bills & Coin: 25.00	16.00 21.00
MC300RL	27.00	27.00	NA	NA
MC350RL-TIK	20.00	20.00	NA	NA
MC400RL *	30.50	26.00	NA	NA
MC500RL-DA	25.00	25.00	NA	NA
MC520-RL *	28.00	24.50	NA	NA
MC525/535RL-CC *	28.00	24.50	NA	NA
MC600RL-DA	25.00	25.00	NA	NA
MC700 Series	30.50	30.50	26.625	13.625
MC720-CC	30.50	30.50	26.625	13.625
MC720-CC with printer #	26.625	26.625	26.625	13.625
MC800-DA	26.00	26.00	26.00	NA
MC900-DA	Console	NA	NA	6.030
BX-FRONT (FUJ)	30.00	NA	30.00	14.00
BX-REAR (FUJ)	28.00	NA	NA	NA
BCX-FRONT (FUJ) *	20.50	18.00	18.00	16.00
BCX-REAR (FUJ) *	24.00	22.50	NA	NA

For maximum mounting height the cabinet without a coin acceptor or printer can sometimes be mounted higher and meet ADA requirements. (See Chart Above)

\* If a mounting height with no coin acceptor is used and a coin acceptor is added at a later date then the machine would no longer meet ADA Requirements.

# If a mounting height with no printer is used and a printer is added at a later date then the machine would no longer meet ADA Requirements.

3. Full swing of the door when open.
4. Wall construction: For maximum security, it is recommended that the changer be installed on a wall made of cement block, brick or other type of masonry.

**Warning:** We do not recommend welding the cabinet to any kind of mounting. Welding can cause unwanted warping of the cabinet as well as damaged, to the internal components. This could very well void your warranty.

5. Rear loading changers (through the wall mountings) should always open into a secure location that has a locked door and no windows.
6. Good overhead lighting is highly recommended in the area that your changer is located not only for your customers but for additional security.
7. **Accessibility of power supply.** (120 Volt/ 60 Hertz on it's own grounded circuit – 10 amp minimum required.)
8. Carwash locations will want to locate their changers out of reach of high-pressure hoses.
9. The changer should be located so that any water runoff from the roof of the building does not run down the face of the changer. A protective awning or shelter is highly recommended for all outdoor installation sites.

## Mounting the Changer Cabinet

Note: If the floor is uneven, the stand can be warped when the mounting bolts are tightened to the floor. It may be necessary to shim one or more corners of the stand. If this condition is not corrected, distortion of the cabinet can occur when it is attached to the stand.

1. After the site for your changer has been determined and prepared, open the cabinet door and:
  - a. Your machine was shipped with the hoppers installed. The shipping clips and straps must be removed. Remove the hoppers from the inside the cabinet. Use 1/4 inch diameter bolts for mounting the cabinet.
  - b. **Use 1/4 inch diameter bolts for mounting the cabinet.**
  - c. Make sure the cabinet is level and the mounting surface is flat.

**CAUTION:** Even the slightest uneven surface can cause cabinet distortion when mounting bolts are tightened. This can cause the doors to fit unevenly when closed. This distortion can occur even more easily on large cabinets. Should this occur, it may be necessary to shim one or more of the cabinet corners.

2. Be sure the inside of the cabinet as well as the changer components are free of metal shavings.
3. After mounting the cabinet, replace any components that were removed.
4. Remove all packing material and straps from inside the cabinet. Some items have yellow tags with removal instructions.

## Outdoor Installations All Cabinets

This machine can be used in protected outdoor locations. Standard Change-Makers, Inc. recommends the use of an awning, canopy, marquee, or other protective screen to prevent machine damage from exposure to weather. **Caution/ Important - Any open mounting holes in the top or sides of the cabinet must be plugged with an appropriately sized bolt or screw. The threads of the screws and bolts should be coated with a silicone or RTV sealer to prevent water intrusion. Failure to do this will allow water to enter the cabinet and pose a possible electrical shock hazard.** Any holes in the bottom of the cabinet should be left open to allow for drainage if water enters the cabinet. **Machines to be installed in outdoor locations require watertight electrical conduit to be used if the power cord would be exposed to the weather. Follow the instructions for converting to a permanently wired machine to connect the conduit and supply lines to the unit.** (See page 4)

Hardware that will be required:

6 – 6/32 self tapping (used on the top of the cabinet if a cap kit is not installed)  
4 – 1/4” bolts (used on the back of the cabinet if mounted on an open stand)  
4 – 1/4” nuts  
8 – 1/4” washers  
Watertight electrical conduit and fittings, (Note: cabinet is sized for 1” conduit fittings.)

## Installing Wall mount Changers

Type of wall construction: For maximum security, it is recommended that the changer be installed on a wall made of cement block, brick or other type of masonry, not a stud wall covered by plaster board. The mounting holes on the back of the changer will accommodate four 1/4-inch diameter bolts.

**WARNING:** CHANGERS MOUNTED ON THE BASES ARE TOP HEAVY. The changer must be secured to a rigid vertical surface, as well as to the stand to provide appropriate security, stability, and safety.

If the wall to which the changer will be mounted does not meet the construction standards above, we recommend the Standard Change-Makers stand. Mounting holes are provided on the bottom for mounting the stand to the floor. Cabinets are provided with mounting holes on the top surface for mounting the changer to the stand. A drill template is included with the stand. When utilizing the stand, we recommend that the machine be bolted to the wall as well as to the stand.

If the changer is to be mounted to a post, the post should be sunk in concrete for stability. It is also recommended that the post be filled with concrete for strength. A steel plate approximately the same dimensions, as the changer should be welded to the post. Bolt the changer to the steel plate through the four 1/4-inch mounting holes drilled into the plate. Tack weld the heads of the mounting bolts to prevent their removal. Four nuts and washers inside the changer can then secure the changer. If this method is not feasible the bolts can be bent after installation to prevent removal.

**CAUTION:** We do not recommend welding the cabinet to any kind of mounting. This can cause unwanted warping of the cabinet as well as internal component damages.

## Installing Rear Load Changers

The rear load changer cabinet must slide through the hole in the wall. The stainless front plate, which extends 2 inches beyond the cabinet on both sides and top and bottom, must be tight against the wall surface. The cabinet is 13-18 inches deep. Its protrusion into the back room will be the difference between this depth and the thickness of your wall. Allow for proper door swing. Angle iron should be used for securing the changer in place. One side of the angle iron should be secured to the side of the cabinet while the other side of the angle iron secures against the inside of your wall.

For rear load changers it may be necessary to temporarily remove the power cord to make installation of the cabinet easier. Cover or remove the hoppers to prevent debris or metal shavings from falling into the hopper mechanisms. To remove the cord, locate the cord retaining plate on the inside of the changer cabinet. Remove the two nuts securing the cord to the inside of the changer. Pull the cord into the inside of the changer. After installing the cabinet reverse the directions above to return the cord to its correct location.

## For Outdoor locations

Use either silicone or RTV caulking for a watertight fitting. Place a large continuous bead of caulking on the backside of the front plate around the changer cabinet so that when the changer is slid through the wall opening a tight weather poof seal is formed.

Any deviation of these guidelines will void the machine's warranty.

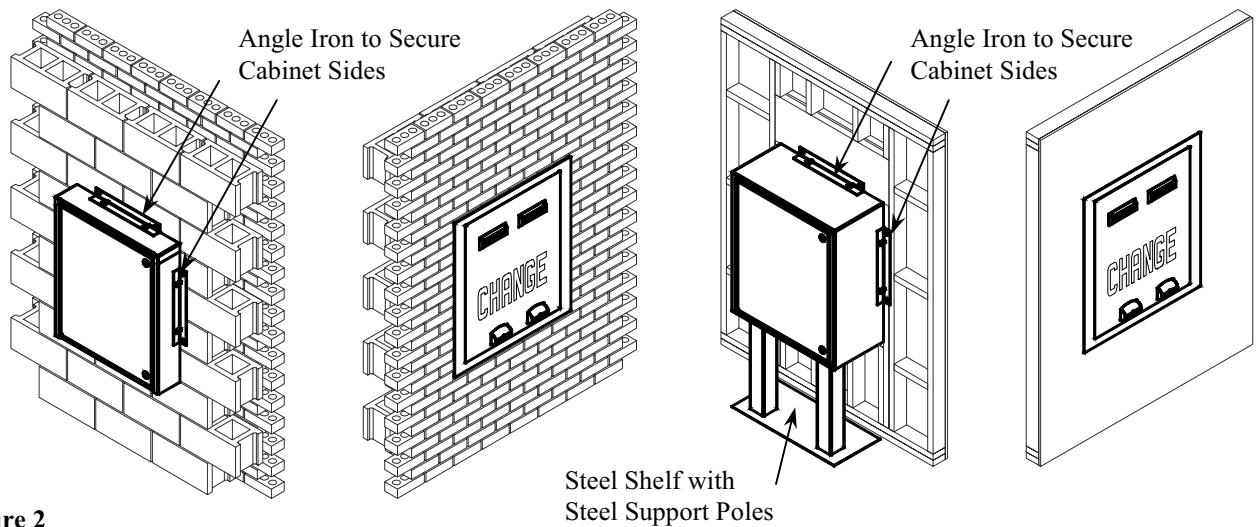


Figure 2

CINDER BLOCK WALL

2 x 4 WALL

**CAUTION**

We do not recommend welding the cabinet to any kind of mounting. This can cause unwanted warping of the cabinet as well as internal component damage.

## Installing Stand Mounted Changers

Stand mounted changers can be mounted in between or with other vending machines. Optional cap kits are available to make the changer the same height as other vending machines. The changer is bolted to the stand (four mounting holes) and the stand can be bolted to the floor (four mounting holes) or to the wall for maximum security and safety. A floor template is included with the stand.

**WARNING:** CHANGERS MOUNTED ON THE BASES ARE TOP HEAVY. The changer must be secured to a rigid vertical surface, as well as to the stand to provide appropriate security, stability, and safety.

## Electrical Hook-up

**WARNING:** Never Connect or disconnect electrical cables with power on.

**CAUTION:** It is recommended that electrical connections be performed by a qualified electrician and that you should check local building codes for compliance.

The MC Changer cabinet comes pre-wired\*. The changer need only be connected to a properly grounded electrical outlet. (3<sup>rd</sup> wire ground back to main service panel) We also recommend that the changer be wired on a dedicated line. A dedicated line is a circuit which has no other equipment connected on the

same circuit breaker or fuse. The purpose of a dedicated line is to reduce the possibility of line interference, which may cause the changer to malfunction. Some models have several cut outs allowing alternate wiring inlets. For outdoor locations permanent wiring is required. (See instructions below.)

### **Important Note:**

**NOTE:** TEMPORARY HOOKUPS: never allow access to the power plugs. Power cable feed should not exceed 100 Feet in length.

**NOTE:** An improperly connected machine may void your warranty.

**\*NOTE:** Permanent outdoor installations require the use of watertight conduit if the supply line would be exposed to the weather.

### **Instructions for Converting to a Permanently Wired Machine**

**CAUTION:** The following instructions are intended to be used by a qualified electrician. Local building codes should be checked for compliance.

1. Disconnect power to the changer.
2. Remove hoppers from change machines.
3. Remove the two nuts holding cord retaining plate to the cabinet.
4. Pull the cord through the cabinet.
5. The hole in the cabinet is sized for 1-inch conduit fittings. Some models have several cutouts allowing alternate wiring inlets.
6. Install conduit and supply lines (**NOTE:** for outdoor locations use water tight conduit and fittings). It is important to the operation of your changer that wiring be in properly grounded electrical conduit. (3<sup>rd</sup> wire ground back to the main service panel) We also recommend that the changer be wired on a dedicated line. A dedicated line is a circuit which has no other equipment connected on the same circuit breaker or fuse. The purpose of a dedicated line is to reduce the possibility of interference, which may cause the changer to malfunction.
7. The cord to the system controller should be cut off allowing sufficient length for the cable to be stripped back to make electrical connections and to allow for movement in rear load models.
8. The electrical connections should be as follows.  
The white wire from the system controller should be connected to the white supply line wire.  
The black wire from the system controller should be connected to the black supply line wire.  
The green wire from the system controller should be connected to the bare/green supply line wire.  
The connections should be made using wire nuts or insulated crimp nuts.
9. With power OFF use an ohmmeter to check the connections making sure there are no shorts to the cabinet except for the ground connection and that hot and neutral are not shorted together.

### **IMPORTANT NOTE:**

#### **A WORD ABOUT GROUNDING**

Please insure your changer has a good ground. Improper grounding of the changer will cause erratic operation and is unsafe for the people using the changer.

## **Test the Machine Operation**

When installation is complete, test each machine function for proper payout and operation.

1. Fill the hoppers until the black area at the bottom is covered.
2. Insert monetary bills in the bill acceptor.
3. Count the coins dispensed.





***Standard***

Change-Makers, Inc.

**Standard Change-Makers, Inc.**

3130 N. Mitthoeffer Road

Indianapolis, IN 46235

Toll Free: 1-800-968-6955

Phone: 317-899-6966

Fax: 317-899-6977

Web Site: [www.standardchange.com](http://www.standardchange.com)

**FOR SERVICE OR TECHNICAL SUPPORT:**

Call: 1-800-968-6955

E-Mail: [service@standardchange.com](mailto:service@standardchange.com)

**SALES REPRESENTATIVES:**

**Eastern U.S.:** Dan Wagner

PH: 610.942.4215 EM: [dwagner@standardchange.com](mailto:dwagner@standardchange.com)

**East-Central U.S.:** Mike Enz

PH: 937.679.6090 EM: [menz@standardchange.com](mailto:menz@standardchange.com)

**West-Central U.S.:** Dale Hughson

PH: 319.239.2481 EM: [dhughson@standardchange.com](mailto:dhughson@standardchange.com)

**Western U.S.:** Mike Coons & Barb McColly

PH: 800.968.6955 x111 EM: [mcoons@standardchange.com](mailto:mcoons@standardchange.com)

PH: 800.968.6955 x110 EM: [bmccolly@standardchange.com](mailto:bmccolly@standardchange.com)