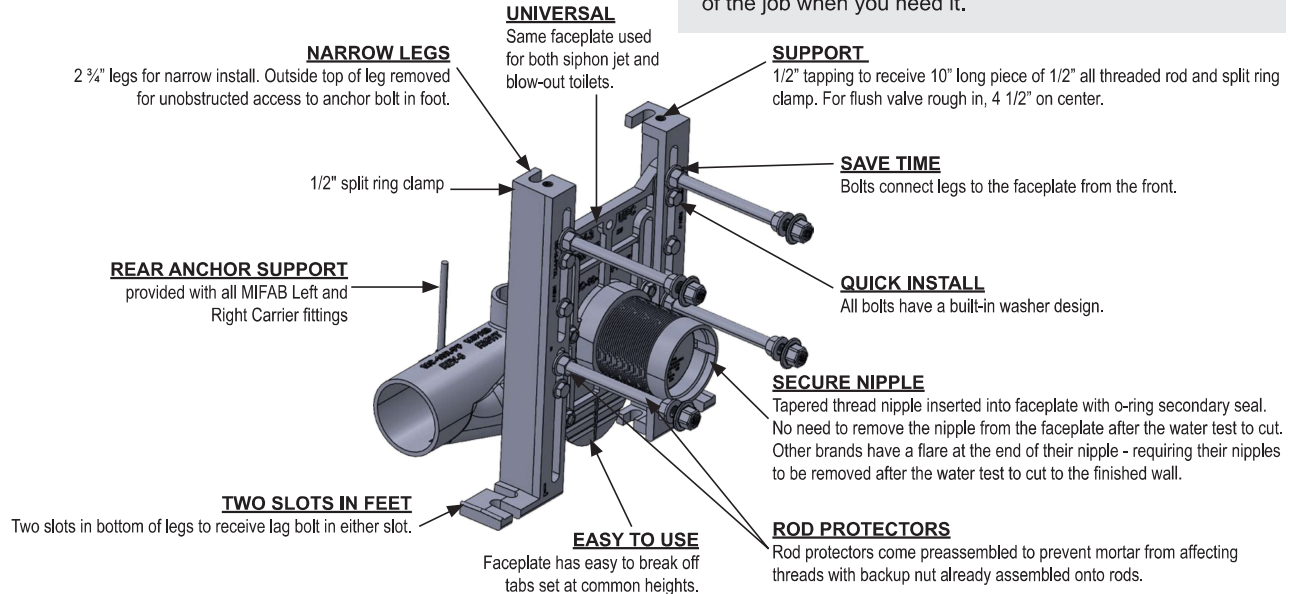


FIXTURE CARRIERS

Horizontal, adjustable fixture carrier. Elevates toilet off floor for easier cleaning.

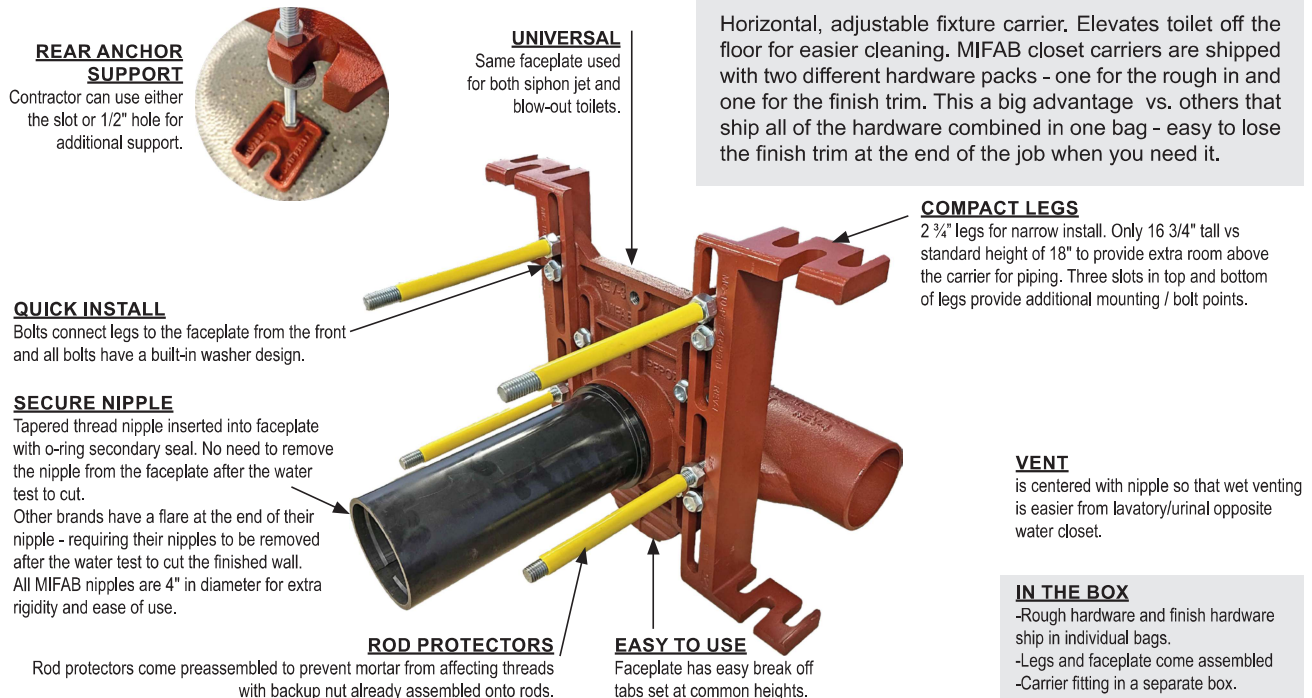
MC-10 WATER CLOSET CARRIERS



Note: Consult with your MIFAB service representative to order the proper "right" and "left" products.

MC-10-PFAB

WATER CLOSET CARRIERS FOR PRE-FAB SYSTEMS



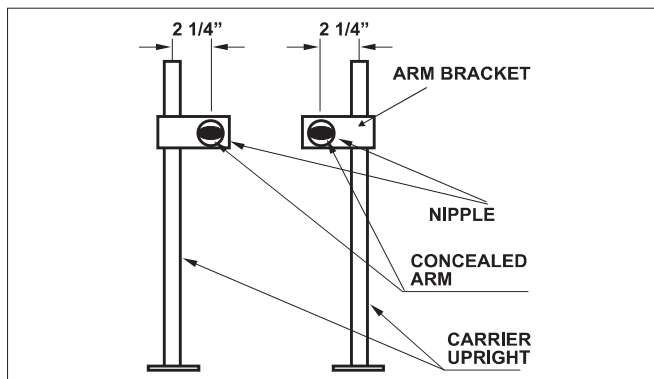
Note: Consult with your MIFAB service representative to order the proper "right" and "left" products.

FIXTURE CARRIER SELECTION AND CONSIDERATION INFORMATION

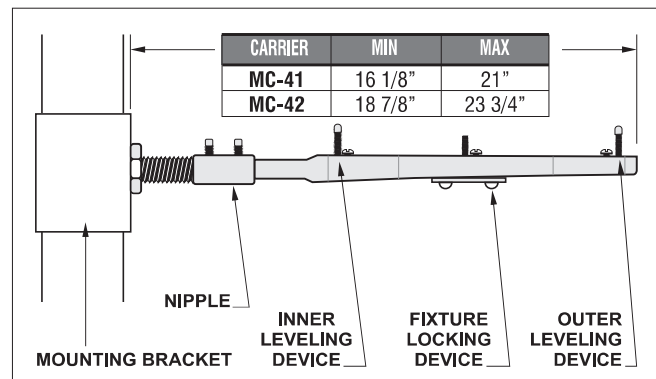
APPLICATION	TYPES	RECOMMENDED CARRIER
Commercial construction Off the floor Water Closet	Horizontal or vertical Fixed or Adjustable	MC-10, MC-10-EXT, MC-12, MC-13 MC-14, MC-15.
Light commercial or residential Off the floor Water Closet	Fixed Vertical	MC-14-3, MC-21, MC-25
Off the floor lavatories (mounted on structural support legs constructed behind the finished wall)	Plate type Exposed Arm Concealed Arm Wheelchair	MC-30, MC-31, MC-32, MC-33 MC-40, MC-56, MC-41, MC-51, MC-53, MC-53, MC-54MC-42 MC-60
Wash Sinks, Surgical Scrub Sinks Off the Floor Urinals		MC-30
Off the Floor Drinking Fountains and Water Coolers		MC-30, MC-31, MC-33
Penal Fixtures	Stack mounted fixtures	MC-26, MC-27, MC-28

CLOSET CARRIER NIPPLE VARIATIONS

(STANDARD) TAPERED THREAD	ROLLED STRAIGHT THREAD (suffix -OR)	TAPERED THREAD TWO PIECE NIPPLE WITH ADJUSTABLE HORN (suffix -AH)	12" TAPERED THREAD NIPPLE WITH SEALING FLANGE
			
MC-10-PN8-31 (12" also available)	MC-10-PN8R-31 (12" also available)	MC-10-PN8AH-31 (12" also available)	MC-10-PN12-31

CONCEALED ARM CARRIERS


The center of the concealed arm nipple is 2 1/4" offset from center line of the uprights. It is imperative that this offset be accommodated when locating the position of the upright before it is lag bolted to the floor slab !



NOTE: Minimum and maximum dimensions are front of mounting bracket to the end of the concealed arm. The outermost leveler position is 3/4" from the end of the arm

Fixture Carrier Selection Guide

ADVANTAGES OF OFF-THE-FLOOR PLUMBING FIXTURES

Off-the-floor plumbing fixtures are easily the most widely used plumbing fixture in commercial building today. As the name implies, no part of the fixture touches the floor of the installation. The fixture is mounted to steel studs protruding through the wall from a carrier support in the pipe chase. This carrier support is anchored to the chase floor and receives the fixture load. The advantages of off-the-floor fixtures, as opposed to floor mounted fixtures, are numerous. The most obvious advantages - installation, maintenance, sanitation and aesthetics - are presented here.

1. INSTALLATION

The installation of floor mounted fixtures can be costly and time-consuming to the job. Floor mounted fixtures require slab penetration and sleeving at each location. The resulting waste piping is run under the slab, thus creating a need in multi-story buildings to provide a false ceiling for concealment purposes. The piping assembly also requires special consideration as it is usually accomplished piece by piece during installation. By comparison, the off the floor fixture installation does not involve slab penetration in the toilet room. Since all piping is behind the wall, there is no need for ceiling modification. And off-the-floor support systems are fairly modular in design, allowing for prefabrication, on or off site, before installation. All this contributes to substantial savings in time and cost.

2. MAINTENANCE

Both floor mounted and off-the-floor plumbing installations may have similar mechanical service requirements. However, due to their inherent characteristics, the off-the-floor installations are generally considered easier to service and maintain.

3. SANITATION

The most important consideration of toilet room design is sanitation, the ability to maintain a clean environment. The floor mounted fixture installation directly opposes this consideration. The base of the fixture magnetically attracts dirt that is difficult, if not impossible, to remove. Floor deterioration in the area of fixture contact also contributes to unsanitary conditions. The clearance that the off-the-floor fixture installation provides immediately resolves the problems of floor mounted design. Complete sanitation is easily maintained with normal cleaning.

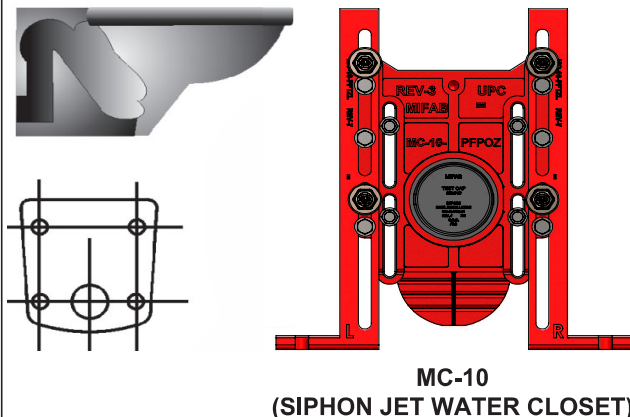
4. AESTHETICS

Aesthetic appeal is an important consideration in deciding upon fixtures. The clean, smooth lines of off-the-floor fixtures complement today's contemporary toilet room designs.

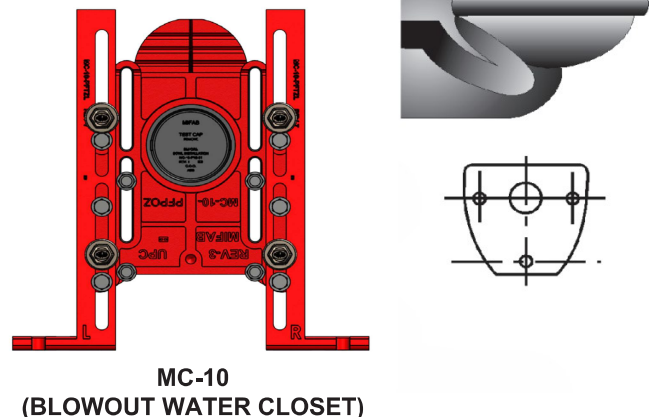
TYPES OF WATER CLOSETS

There are two types of water closets commonly used in commercial installations: siphon jet and blowout. The MIFAB closet carrier can be used to mount either type.

SIPHON JET WATER CLOSETS use siphonic flushing action to evacuate the bowl. This is a quiet and economical type of flushing action that provides quick, efficient results. The large water surface area of the bowl, for better sanitation, is another desirable feature of the siphon jet water closet. The siphon jet closet mounts to the carrier with four mounting studs.



BLOWOUT WATER CLOSETS use a direct jet stream for bowl evacuation. This type of flushing action is rapid and forceful and primarily used in heavy duty installations such as stadiums and terminals. Due to this powerful flushing, the blowout water closet is noisier in operation than the siphon jet. The blowout closet mounts to the wall with three mounting studs. **NOTE: It is highly inadvisable to mount Blow-out type water closets in a "Back to Back" type installation.**



Fixture Carrier Suggested Specifications

FIXTURE CARRIERS

PLATE TYPE CARRIERS

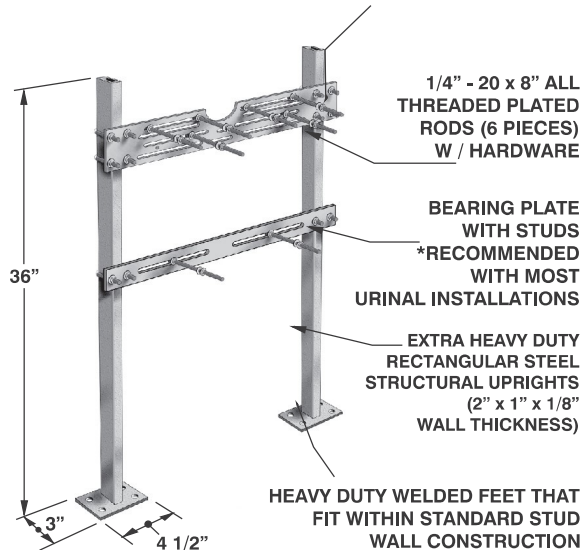
The MIFAB plate type floor mounted fixture carriers have been developed to accommodate the majority of hanger plate supported fixtures such as urinals, plate type lavatories and water coolers for support independent of the wall. The MIFAB universal backing plate provides adjustment for a wide variety of fixtures from most manufacturers.

CONCEALED ARM CARRIERS

MIFAB concealed arm lavatory carriers can be used with any lavatory fixture that has been drilled for concealed arm supports. This concealed arm support consists of ductile iron arms with leveling and locking hardware. These arm assemblies are available in two lengths to accommodate standard and wheelchair fixtures. After carrier installation and completion of wall construction, final adjustment can be made to the arm and sleeve assembly. Then the fixture is slid over the arms. Level and locking are accomplished through openings in the fixture itself. Installation is then complete.

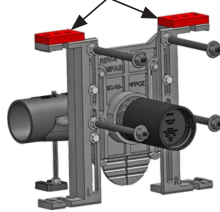
MC-32

UNIVERSAL PLATE ASSEMBLY
SECURED TO UPRIGHTS WITH
"U" BOLTS TO PROVIDE EASE OF
ROUGH-IN ADJUSTMENT



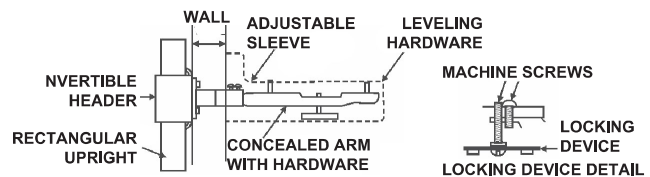
Carriers are provided with complete installation instructions for customer convenience.

MC-100-PFTZ-EXT
extension pieces illustrated
(carrier not included)



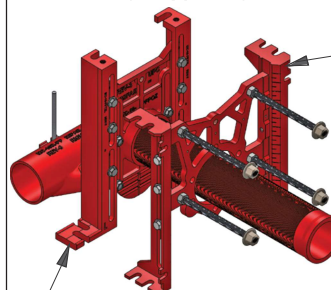
Cast iron leg extensions available in either 1/2" or 3/4" height. They are designed to be installed on the top of the MC-10-PFAB carrier legs. They allow the contractor to raise the Unistrut secured to the top of the legs to clear any prefab piping.

MODEL #	DIM.	LIST PRICE
MC-100-PFTZ-EXT-.50	1/2" high	\$100.00
MC-100-PFTZ-EXT-.75	3/4" high	\$125.00



CONCEALED ARM INSTALLATION DETAIL

Auxiliary Support System



Typical MC-10 carrier
(not included) with -10 system

Suffix (-10) for wide
chases (MC-10-AFS)
Nipple not included.



(-10) Auxiliary Support
System only

MC-41

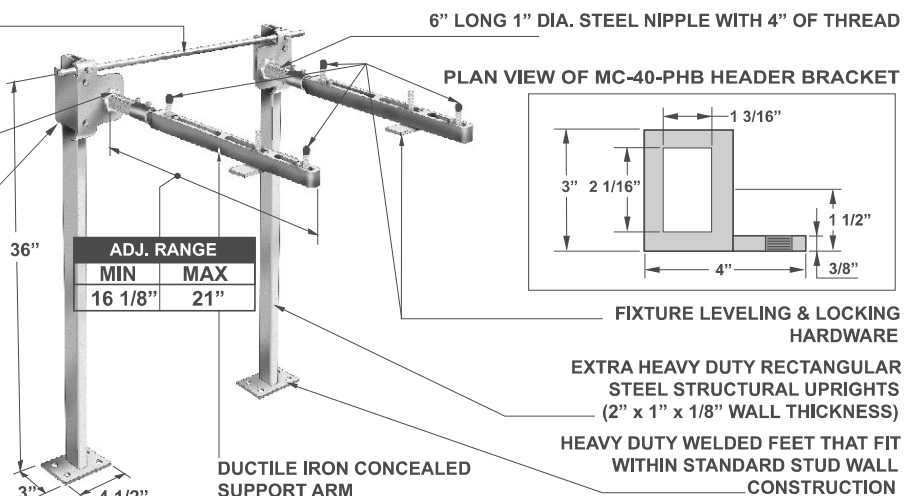
ALIGNMENT ROD (FOR LATERAL
ADJUSTMENT BETWEEN UPRIGHTS)

LOCKNUT

INVERTIBLE, ADJUSTABLE CAST IRON
ARM SUPPORTING BRACKET

OPTIONAL PAIR OF CHROME PLATED
ESCUTCHEONS (2" x 3 3/8") FOR SLAB

BACK LAVATORIES:
SUFFIX: -E2 (MC-41-PE2) \$ 280.00



Fixture Carrier Suggested Specifications (Contd.)

WALL HUNG CLOSET CARRIERS

Wall Hung Water Closets shall be supported independently of the wall by MIFAB Series MC-1(*) carrier fittings with ductile iron adjustable foot supports. Where space permits, waste piping shall be run horizontally above the floor and MIFAB Series MC-10 single or double carrier fittings shall be used. Connection to the stack in a horizontal run shall be a TY or a MC-13 carrier fitting. Where pipe space is limited, or where single fixtures are installed use MIFAB MC-14 Series. Where fixtures are located on common waste/vent stacks use MIFAB Series MC-15 Series carrier fittings. * Series number denotes horizontal, vertical adjustable or vertical fixed water closet carrier.

WALL HUNG URINALS

Wall hung urinals shall be supported independently of the wall by MIFAB Series MC-32 Series Urinal Carrier with two supporting plates, heavy-duty rectangular steel uprights with integral welded feet.

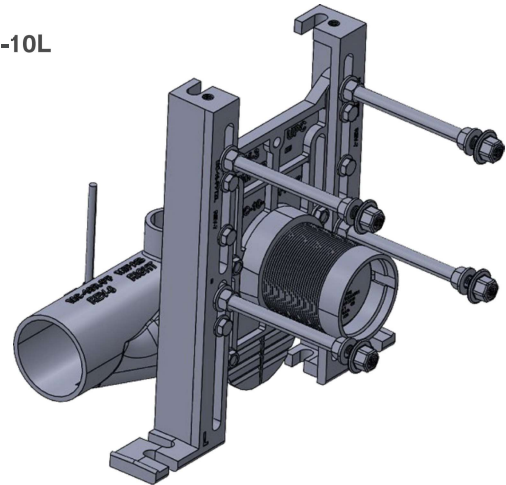
WALL HUNG LAVATORIES

Wall Hung Lavatories shall be supported independently of the wall by MIFAB Series MC -40 Series Lavatory Carrier with heavy duty rectangular steel uprights with integral welded feet. Wherever possible, fixtures shall be supplied with access for concealed arm supports and MIFAB Series MC-41 with cast ductile iron arms shall be used. Supply chrome plated escutcheons on slab type lavatories. Where fixtures are not available with access for concealed arms, fixtures shall be supported by MIFAB Series MC-31 or MC-32 for plate supported lavatories, or MC-40 for exposed arms.

WHEEL CHAIR LAVATORIES

Wheel chair lavatories shall be supported independently of the wall by MIFAB Series MC-42 Lavatory Carrier with extended cast ductile iron concealed arms and heavy duty rectangular steel uprights with integral welded feet.

MC-10L



MC-32



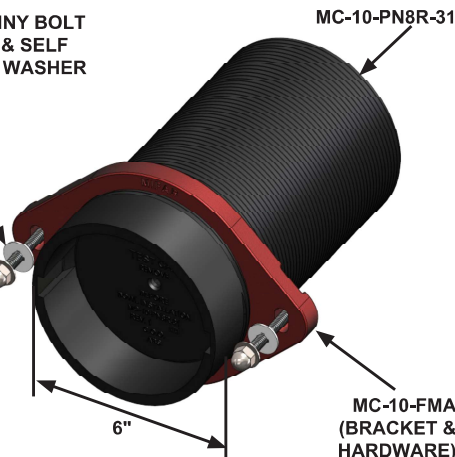
MC-41 & MC-42 with cast ductile iron arms.



THE -FMA KIT IS USED WITH FLOOR MOUNTED BACK OUTLET WATER CLOSET

1/4"-20 X 1-5/8" JOHNNY BOLT
W/ 1/4" SS. WASHER & SELF
RETAINING PLASTIC WASHER

1/4"-20 ACORN NUT



MC-10-PN8R-31

MC-10-FMA
(BRACKET &
HARDWARE)

TYPICAL CLOSET CARRIER LAYOUT

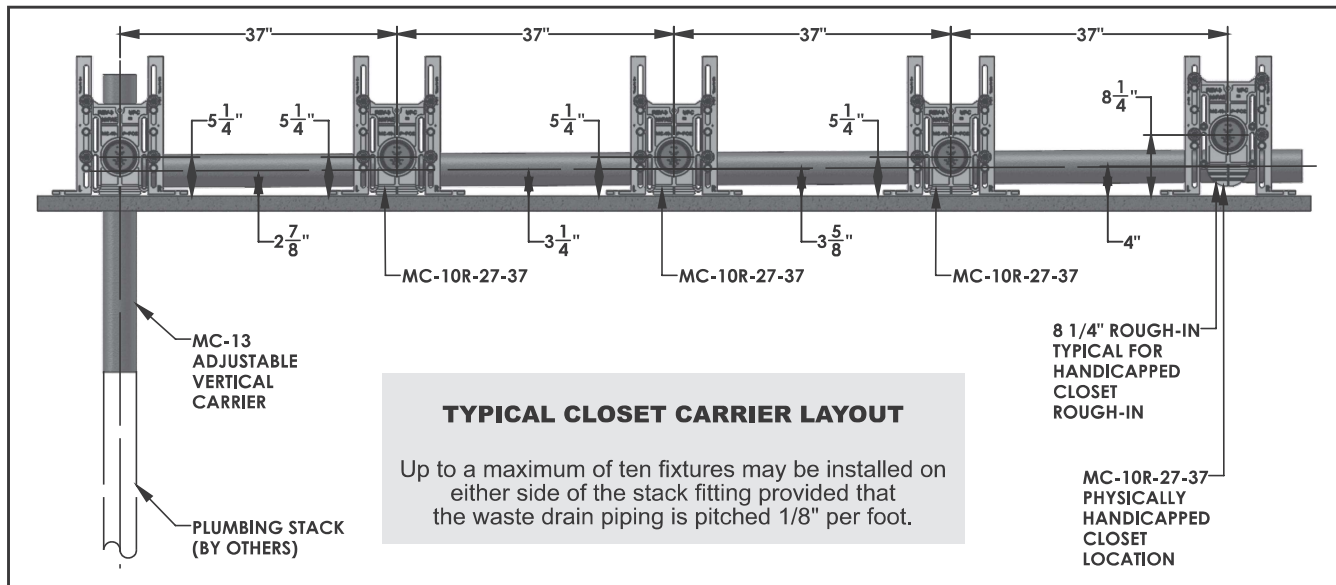
ANSI Standard A-112.19.2, Vitreous China Plumbing Fixtures, paragraph 5.1.3.3 states that a "Physically Handicapped" water closet is a siphon jet design that is positioned 18" from the finished floor to the top of the rim.

The closet carrier layout detailed below has the following common installation dimensions:

- * Waste piping is pitched at 1/4" per foot
- * Centerline of the regular water closet outlets to the finished floor is 5 1/4"
- * Regular water closet rim to the finished floor is 15 1/4"
- * Centerline of the physically handicapped water closet outlet to the finished floor is 8 1/4"
- * Physically handicapped water closet rim to the finished floor is 18"

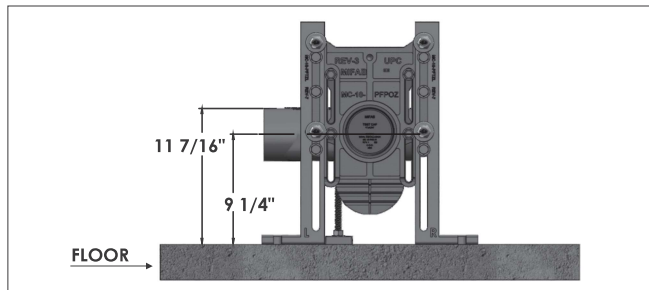
The regular water closets are supported by MIFAB's MC-10-27-37 long barrel carrier fittings that are produced with a 37" long barrel. This can save the installer time and material by not having to purchase and cut waste pipe to install between standard "short barrel" carrier fittings (MC-10 Series) that are 13" long.

Note that physically handicapped water closets can also be installed onto the MC-13, vertical, adjustable carrier by positioning the centerline of the 4" female threaded nipple connection in the faceplate 8-1/4" from the finished floor.

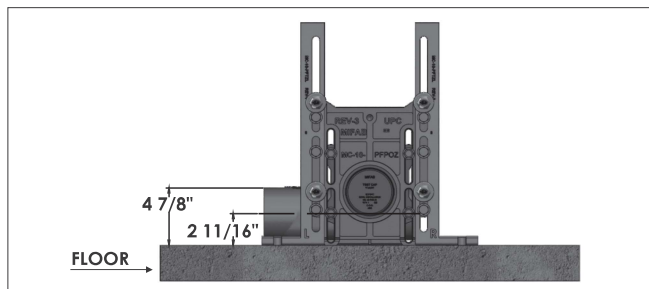


ADJUSTMENT RANGE OF MIFAB'S MC-10 AND MC-13 SERIES CARRIER FITTINGS

Lowest fixture outlet and drain line position



Highest fixture outlet and drain line position



CENTER LINE OF FIXTURE OUTLET HEIGHT FROM FINISHED FLOOR	CENTER LINE OF DRAIN LINE POSITION FROM THE FINISHED FLOOR	
	MINIMUM	MAXIMUM
4 1/2"	4 1/2"	1/4"
4 3/4"	4 1/2"	1/2"
5"	4 3/4"	3/4"
5 1/2"	5 1/4"	1 1/4"
6"	5 3/4"	1 3/4"
6 1/2"	6 1/4"	2 1/4"
7"	6 3/4"	2 3/4"
7 1/2"	7 1/4"	3 1/4"
8"	7 3/4"	3 3/4"
8 1/4"	8"	4"
8 1/2"	8 1/4"	4 1/4"
8 3/4"	8 1/2"	4 1/2"
9"	8 3/4"	4 3/4"
9 1/2"	9 1/4"	5 1/4"

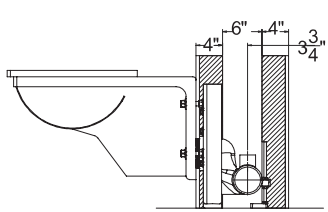
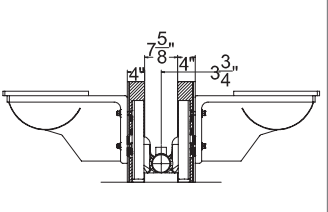
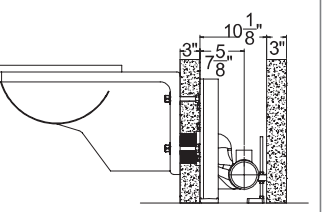
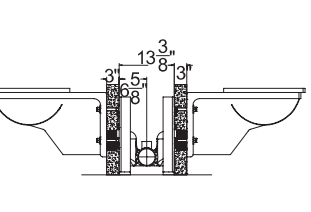
Note: For all rough-in heights, the closet carrier fitting has a 4" vertical adjustment range. This is to ensure that there is enough drainage pitch on long runs.

HORIZONTAL AND VERTICAL ADJUSTABLE / FIXED CLOSET CARRIER MINIMUM SPACE REQUIREMENTS

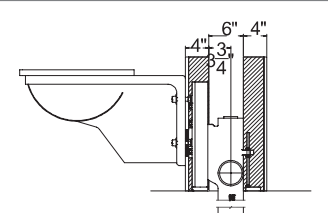
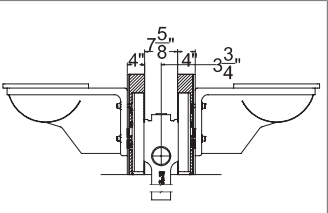
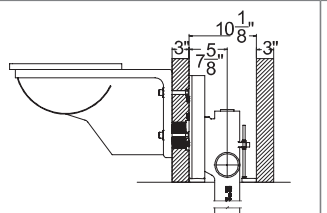
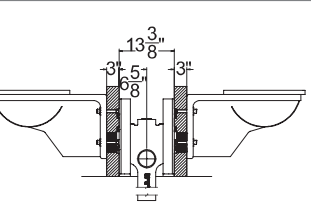
Dimensions shown are minimum assuming carrier face plate and foot are built in wall and minimum length shortened coupling is used.

Dimensions shown are minimum assuming carrier fitting, face plate foot and rear anchor foot are located in pipe chase.

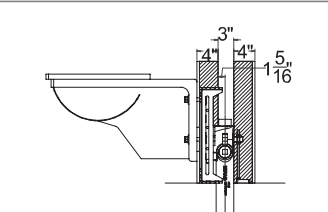
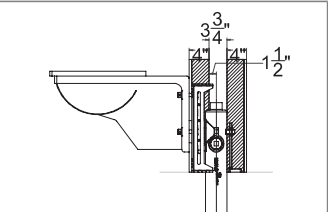
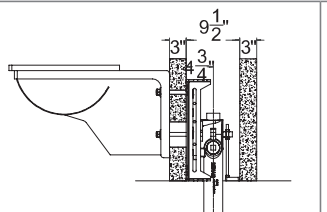
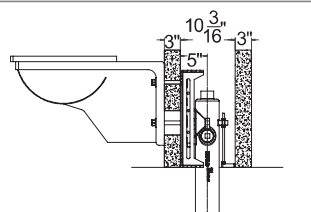
HORIZONTAL ADJUSTABLE CARRIERS

IN WALL		IN PIPE CHASE	
			
MC-10R/L	MC-10D	MC-10R/L	MC-10D

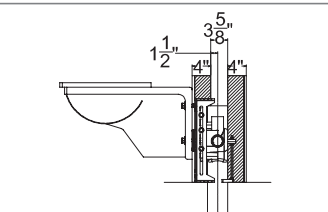
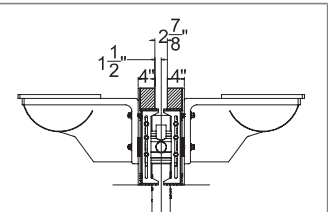
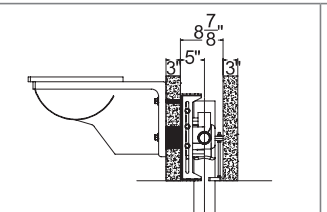
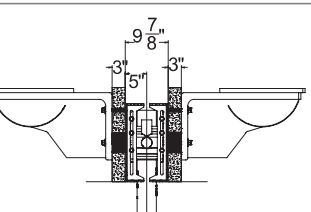
VERTICAL ADJUSTABLE CARRIERS

IN WALL		IN PIPE CHASE	
			
MC-12/MC-13	MC-12D/MC-13D	MC-12/MC-13	MC-12D/MC-13D

VERTICAL FIXED ON-STACK CARRIERS

IN WALL		IN PIPE CHASE	
			
MC-14-3	MC-14-4	MC-14-3	MC-14-4

VERTICAL FIXED OFFSET CARRIERS

IN WALL		IN PIPE CHASE	
			
MC-15R_L	MC-15D	MC-15R_L	MC-15D