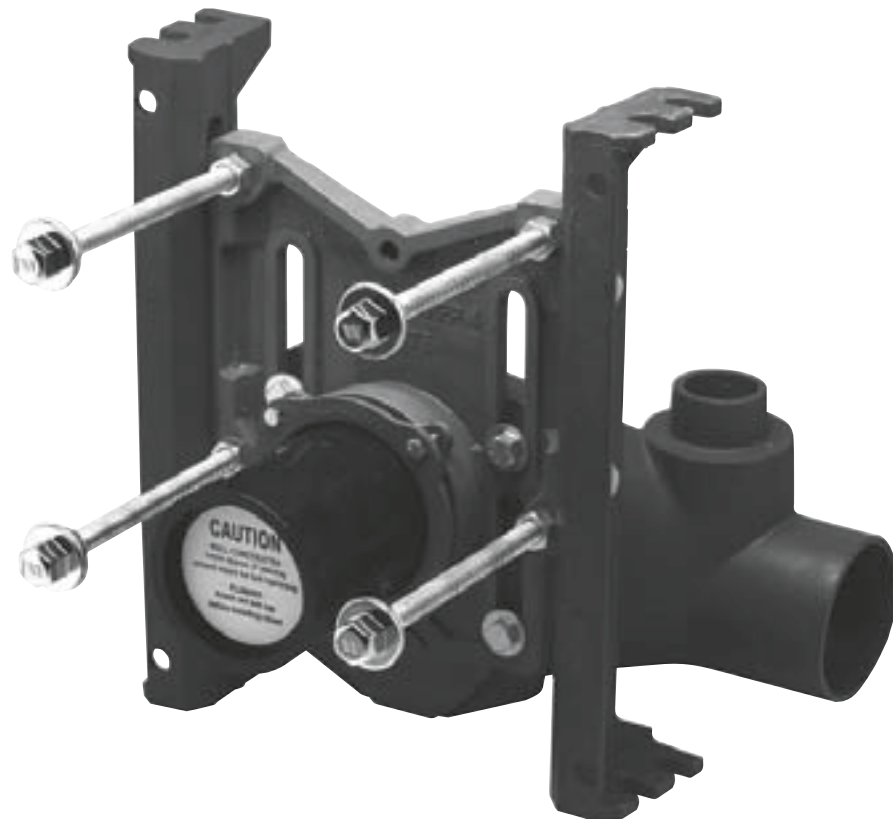
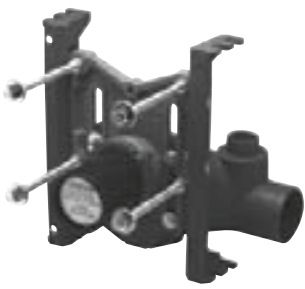


TABLE OF CONTENTS

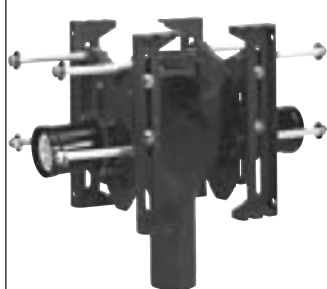
- Pictorial Index
- Product Recommendations
- Water Closet Carriers
 - Matching Water Closet & Carrier
 - Closet Carrier Selection & Battery Set-Up
 - Stud & Nipple Adjustment to Finished Wall
 - Anchoring Carrier to Floor
 - Thin-Wall Carrier Set-Up
 - Commonly Specified Options
 - Typical Installations
- Wall Hung Fixture Carriers
 - Lavatory Carriers
 - Urinal & Water Cooler Carriers
 - Service Sink Carriers
 - Typical Installations



PICTORIAL INDEX



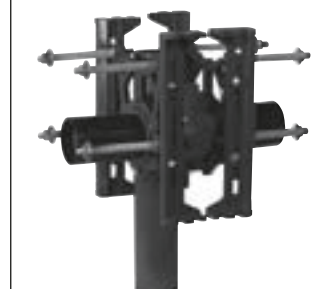
ISCA-101-L/R
Industry Standard
Horizontal Water Closet



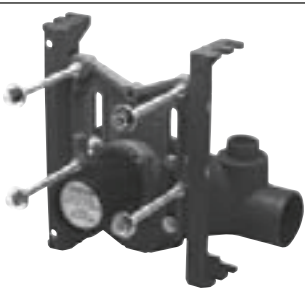
ISCA-121-D
Industry Standard Back-To-
Back Vertical Water Closet



ISCA-560-4
Service Sink



ISCA-151-D
Back-To-Back Offset Thin
Wall Vertical Water Closet



ISCA-101-L/R-AUX
Industry Standard Horizontal
Water Closet w/Aux Inlet



ISCA-131
Industry Standard Vertical
Water Closet w/Side Inlet



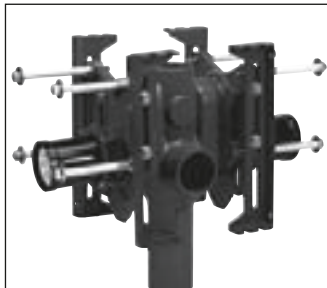
ISCA-141
Thin Wall Vertical
Water Closet



CA-311
Urinal



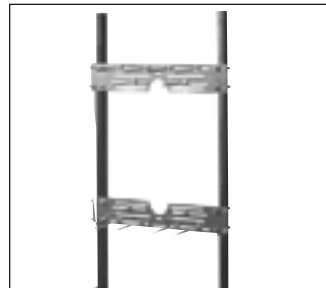
ISCA-101-D
Industry Standard Back-To-
Back Horizontal Water Closet



ISCA-131-D
Industry Standard Back-To-Back
Vertical Water Closet w/Side Inlet



ISCA-141-4-D
Back-To-Back Thin Wall
Vertical Water Closet



CA-321
Urinal w/Bearing Plate



ISCA-121
Industry Standard
Vertical Water Closet



ISCA-550-4
Service Sink



ISCA-151-L/R
Offset Thin Wall Vertical
Water Closet



CA-401
Exposed Arm Lavatory

PICTORIAL INDEX

Photo not available at this time

CA-401-D
Exposed Arm Lavatory



CA-462
Wall Mounted Concealed Arm Lavator



TCA-411-WC
27 x 20 Concealed Arm Lavatory



CA-421
Water Cooler



CA-481
Wall Plate Lavatory



TCA-411-D-WC
Back-to-Back 27 x 20 Concealed Arm Lavatory



CA-431-1
Hi-Lo Water Cooler



TCA-411
Concealed Arm Lavatory



CA-461
Wall Mounted Concealed Arm Lavatory w/Back Plate



TCA-411-D
Back-to-Back Concealed Arm Lavatory

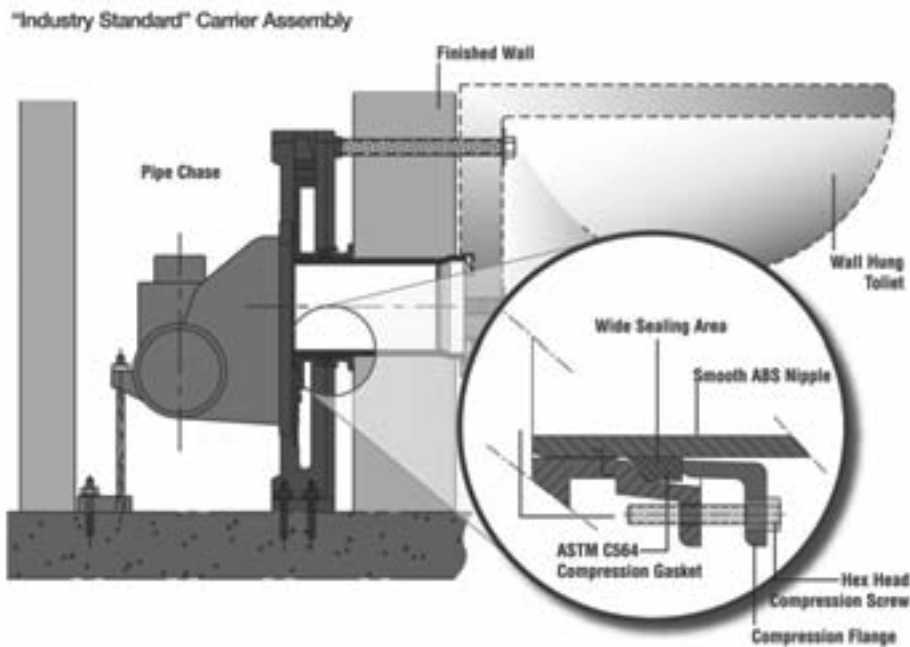
PRODUCT RECOMMENDATIONS

Application	Product	
Wall Hung Closet - Standard Commercial.....	ISCA-101-L/R, ISCA-101-D, ISCA-121, Construction & Batteries.....	ISCA-121-D, ISCA-131-L/R, ISCA-131-D
Wall Hung Closet/Urinal Back-to-Back	ISCA-101-L/R-AUX	
Wall Hung Closet - Thin Wall Construction.....	ISCA-141, ISCA-151	
Urinals.....	CA-311, CA-321	
Lavatories - Exposed Arm.....	CA-401	
Lavatories - Concealed Arm	TCA-411, TCA-411-D, WCA-411, WCA-411-D	
Lavatories - 27x20 Concealed Arm.....	TCA-411-WC, TCA-411-D-WC, WCA-411-WC, WCA-411-D-WC	
Water Coolers, Drinking Fountains	CA-421, CA-431-1	
Service Sinks.....	ISCA-550, ISCA-560	

INDUSTRY STANDARD WATER CLOSET CARRIERS

Watts *Industry Standard* Water Closet Carriers support wall hung "off the floor" water closets, independent of the wall structure. Water closet carriers anchor to the floor behind the finished wall, effectively transferring the load from closet to the structural floor.

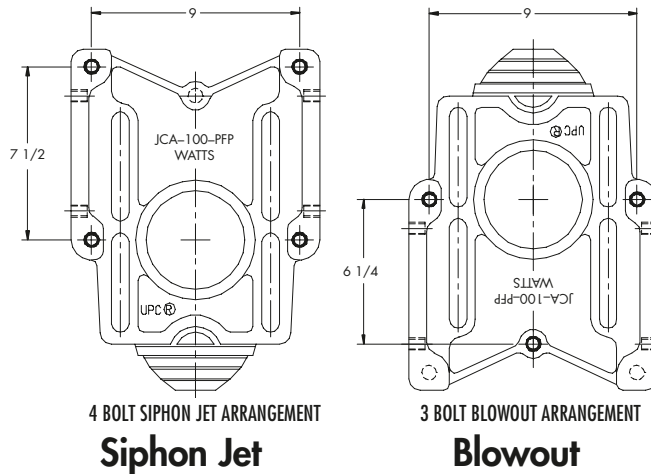
Watts patent pending *Industry Standard* Carriers incorporate a trusted compression sealing mechanism that replaces leak prone threaded and o-ring seals. Behind the wall leaks can cause significant damage, and trigger mold formation problems. *Industry Standard* Carriers adjust easily with a standard socket extension, and hold test first time, eliminating expensive leak plugging and re-test procedures.



WATER CLOSET CARRIERS

Matching Water Closet & Carrier

Wall hung water closets are mounted with either 4-bolt (siphon jet) or 3-bolt (blow-out) patterns. Watts ISCA-101, ISCA-121, & ISCA-131 Series carriers will accommodate either siphon jet or blow-out wall hung bowls. Faceplates are supplied in the siphon jet (4-bolt) position, but may be inverted and re-configured at the jobsite to mount blow-out (3-bolt) bowls. ISCA-141 & ISCA-151 thin wall carriers are for installation only with 4-bolt siphon jet bowls. All commercial wall hung bowls have similar bolt patterns, and can be accommodated with any standard Watts closet carrier.



Closet Carrier Selection & Battery Set-Up (ISCA-101, ISCA-121, ISCA-131 Series)

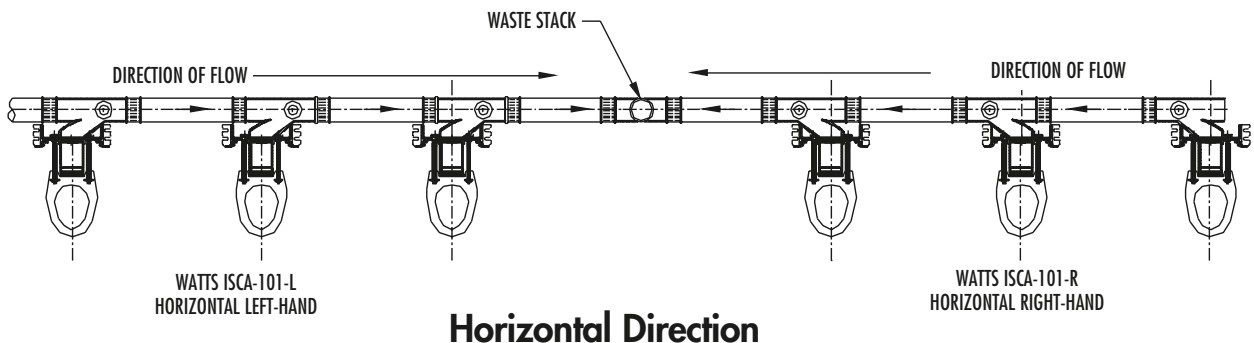
Closet carriers are often installed in groups (batteries) to accommodate multiple fixture, or back-to-back bathroom groups. These factors should be considered in the specification and construction of ISCA-101/ISCA-121/ISCA-131 Series batteries:

1.) Location of the Waste Stack

The waste stack may be located directly behind a water closet, or a midpoint or end of the closet battery. Position of the stack will determine the type of carriers required, as all waste flows towards the stack.

2.) Horizontal Carrier Direction

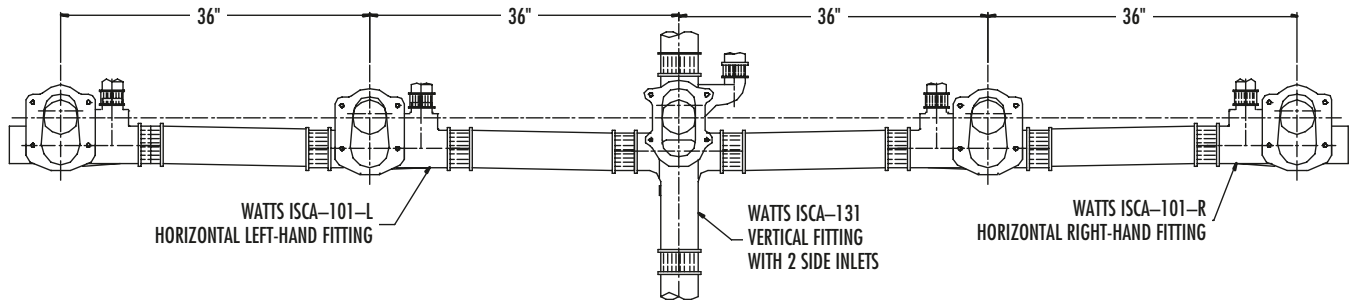
Horizontal carriers are specified either left hand or right hand (L or R). With your back to the wall (sitting on the bowl), point in the direction of flow. If the flow is to the left, a left hand carrier is required (ISCA-101-L). Back-to-back carriers are reversible, and do not require a flow direction specification.



WATER CLOSET CARRIERS

3.) Vertical Carriers with Side Inlets (Stack Fittings)

ISCA-131 Series carriers are specified in batteries with a waste stack located directly behind one of the bowls. The inlet direction (L or R) is determined by pointing in the direction of flow while facing the wall. If the flow comes in from the right, a right hand inlet is required (ISCA-131-R). For stack carriers receiving flow from both directions, specify dual side inlets. Back-to-back carriers are reversible, and do not require a flow direction specification.



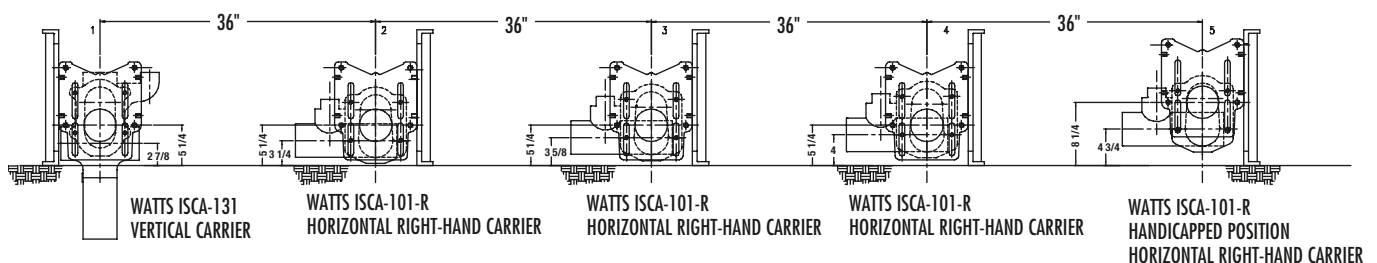
4.) Battery Pitch & Rough-In Requirements*

Standard bowl installations are 15" from floor to rim of the bowl, and "Physically Handicapped" (ANSI A-112.19.2) installations 18" to the rim of the bowl. Assuming standard rough-in specifications of 1/8" pitch on the horizontal waste line, and 36" between fixtures, batteries may be constructed with up to 10 fixtures, provided a stack fitting (see ISCA-131 Series) is used in one of the center positions (fig. 1). Handicapped fixtures can be incorporated into batteries, and should be placed at the high end of the fixture run. The table below indicates minimum and maximum horizontal waste line positions, dependent upon the specified rough-in height for the bowl outlet.

*Siphon jet closet installations only - consult factory for blowout closet batteries

C/L Bowl Outlet From Floor	Min. C/L Horiz. Waste from Floor	Max. C/L Horiz. Waste from Floor
4-1/2"	3"	4-1/2"
5"	3"	5"
5-1/2"	3"	5-1/2"
6"	3"	6"
6-1/2"	3-1/4"	6-1/2"
7"	3-5/8"	7"
7-1/2"	4-1/8"	7-1/2"
8"	4-5/8"	8"
8-1/2"	5"	8-1/2"
9"	5-3/8"	9"
9-3/8"	5-3/4"	9-3/8"

Figure 1



WATER CLOSET CARRIERS

Stud & Nipple Adjustment to Finished Wall

Closet horn depths and flange thicknesses may vary slightly, dependent upon the manufacturer of the fixture. The closet nipple is usually set 5/16" beyond the face of the finished wall, allowing for sufficient closet gasket compression, which ensures a gas and water tight seal (fig. 2). Fixture studs generally extend 2-1/4" beyond the finished wall, with the back-up nut set flush with the wall, and a 1/16" back-up washer between the wall and the fixture. Cap nuts must tighten fully to properly load the carrier (fig. 3).

These formulas may be used to calculate exact nipple and stud positions:

Nipple Position: Where:
 $A = B - 7/16"$ $A =$ Distance nipple should extend beyond finished wall
 $B =$ Depth of closet horn

Stud Position: Where:
 $X = Y + 5/8"$ $X =$ Distance stud should extend beyond finished wall
 $Y =$ Thickness of fixture flange

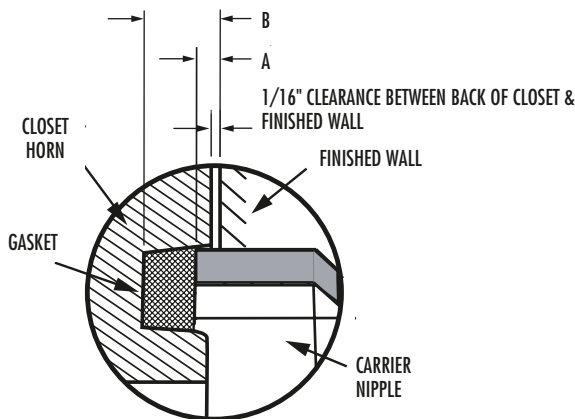


FIGURE 2

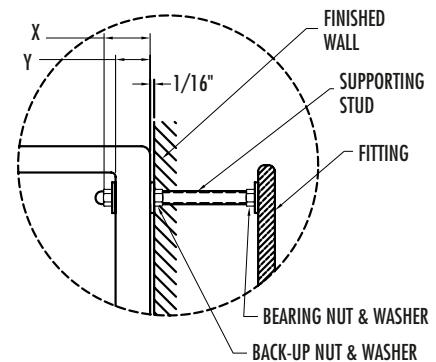


FIGURE 3

Stud/Nipple Adj.

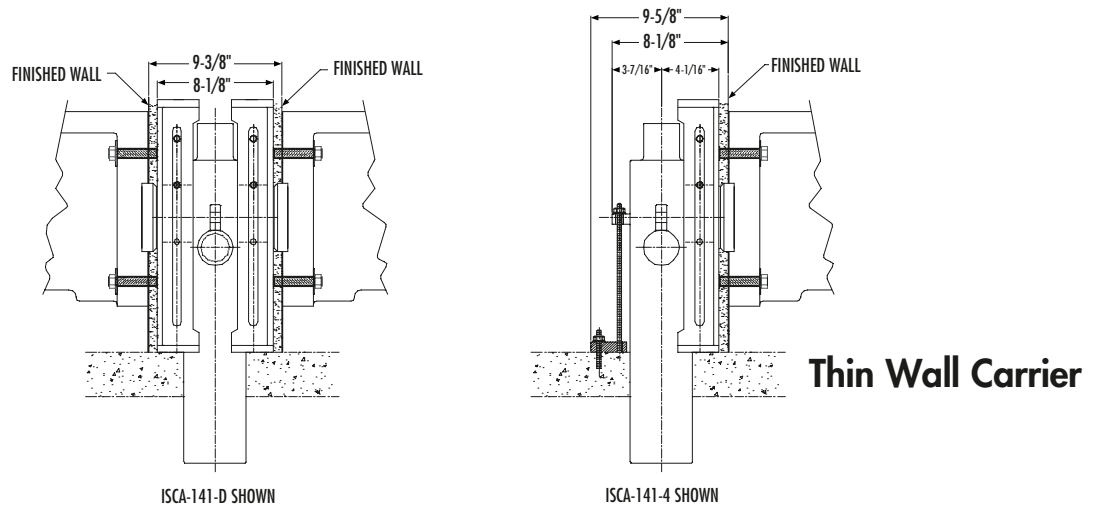
Anchoring Carrier To Floor

Closet carriers must be securely anchored to the structural floor with min. 1/2" dia. lag bolts (supplied by others). Watts unique dual slot foot design speeds anchoring, eliminating the problem of lag bolts conflicting with concrete support bars.

WATER CLOSET CARRIERS

Thin Wall Carrier Set-Up (ISCA-141, ISCA-151 Series)

ISCA-141 & ISCA-151 Series vertical carriers are specified in single or multiple story buildings with thin pipe chases. The ISCA-141 Series vents directly off the top of the waste stack, and is generally used in single story installations. ISCA-151 Series carriers are commonly specified in multi-story and retrofit applications. An offset waste fitting facilitates installation with absolute minimum pipe space allowances. See fig. 4 for minimum pipe space requirements.



Commonly Specified Options

Auxiliary Support System (CA-100-EXT) - Additional support at the finished wall for wide pipe chases. Should be used when 'X' dimension exceeds 18". Supplied with extended coupling (specify length).

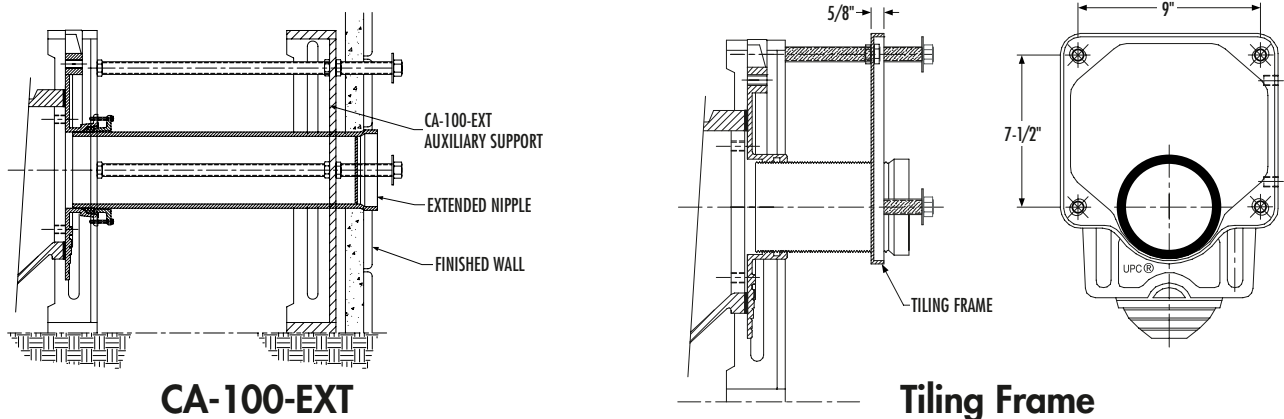
Extended Coupling (-M1) - Longer coupling to accommodate wide pipe chases. Supplied 24" standard, field cut to suit application.

Tiling Frame (-M11) - Creates flat, even surface at finished wall for tile application. Aluminum construction supplied standard.

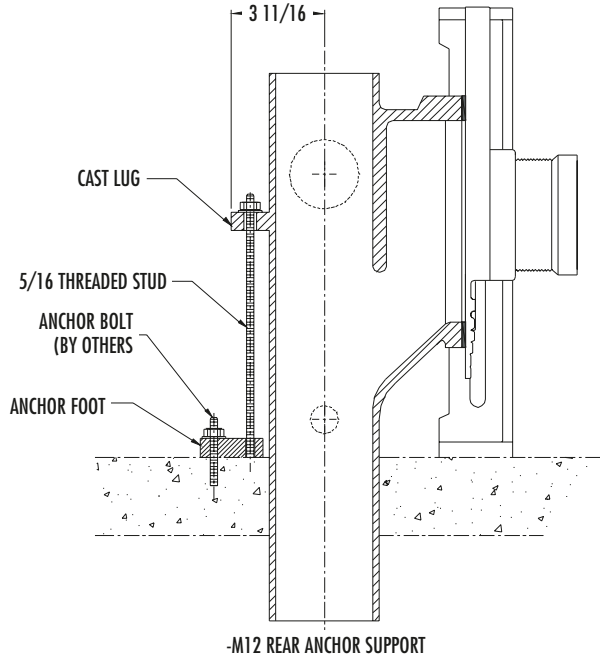
Rear Anchor Support (-M12) - Attaches to back of single carrier fitting, increases carrier strength & stability.

Flush Valve Support (-M20) - Supports and aligns exposed flush valve supply pipe.

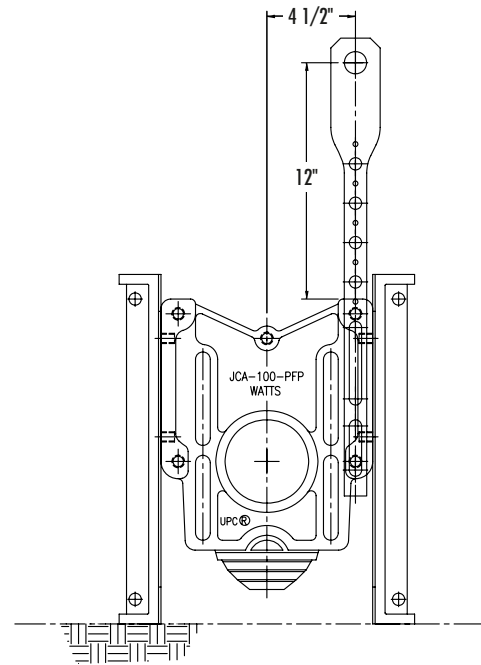
Long Barrel Horizontal (-M36) - For ISCA-101 Series, 36" fitting barrel for quick battery set up. Supplied standard with welded barrel extension.



WATER CLOSET CARRIERS

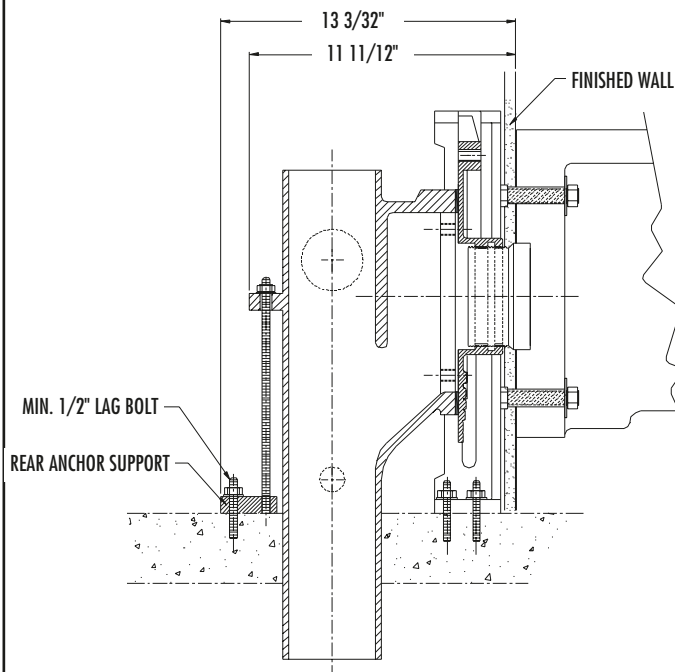


Anchor Foot

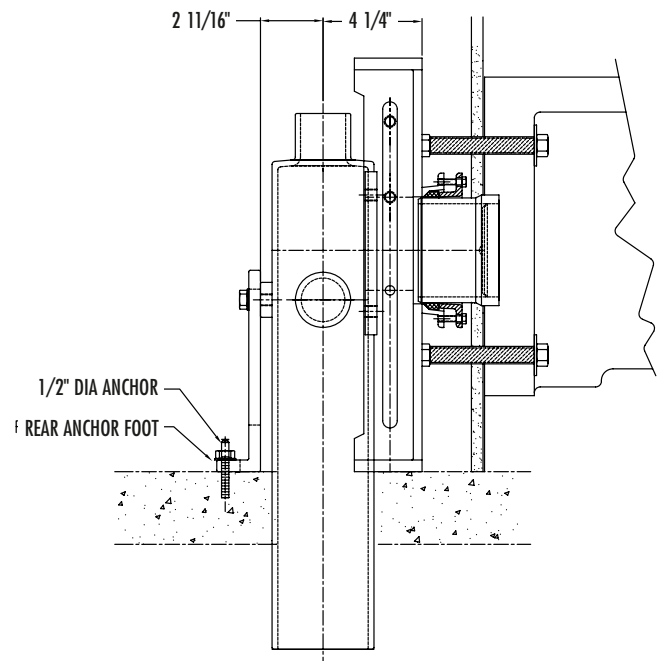


Flush Valve Support

TYPICAL WATER CLOSET CARRIER INSTALLATIONS



ISCA-121



ISCA-141-4

WALL HUNG FIXTURE CARRIERS

Watts wall hung fixture carriers provide structural support for off-the-floor lavatories, urinals, water coolers, and service sinks. Floor mounted carriers work independently of the finished wall structure, and are generally specified in commercial applications. Wall mounted carriers attach to the structural wall, and are typically used with block wall construction, or in light duty or residential applications.

Lavatory Carriers

A carrier should be used for installation of all wall hung lavatories. Lavatories attached to the wall with only a fixture mounting bracket will eventually become unstable, causing damage to the wall, and creating a potentially hazardous condition.

Lavatories are commonly designed for installation with concealed arm carriers, whose supporting arms extend through cavities in the back of the fixture. A concealed arm carrier is entirely hidden by the lavatory and the wall, providing support without aesthetic degradation.

Exposed arm carriers are designed with L-shaped support brackets, which extend from the carrier, and bolt to the underside of the fixture.

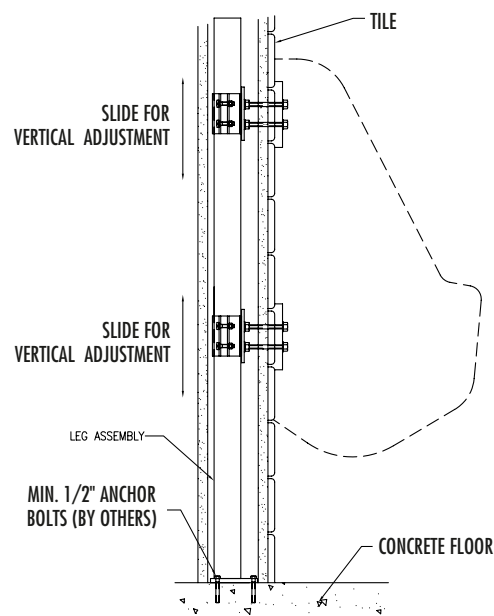
Plate type carriers bolt directly to the fixture mounting bracket. As there is minimal cantilever strength, plate carriers provide somewhat less support than concealed or exposed arm carriers.

Urinal & Water Cooler Carriers

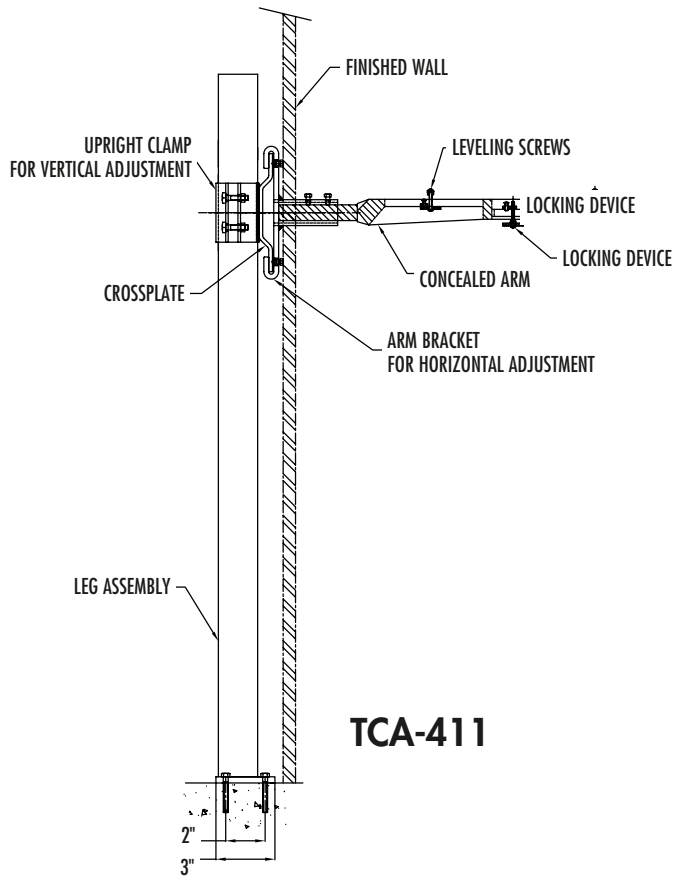
Urinal and water cooler carriers use support plates, which bolt directly to fixture mounting bracket(s), transferring the fixture load to the structural floor. These carriers are entirely concealed by the fixture and the wall.

Service Sink Carriers

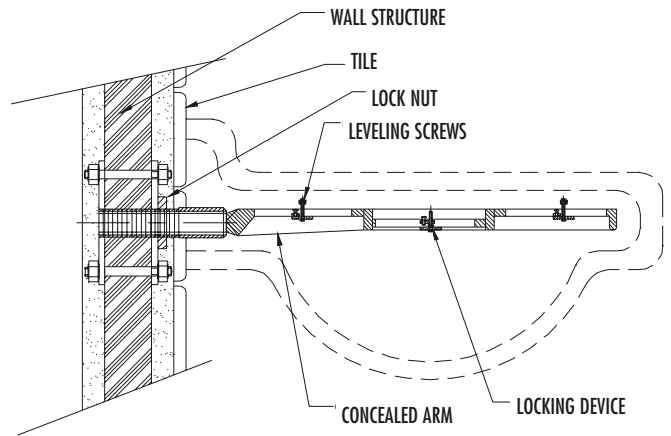
Service sink carriers are commonly used in clinical applications, to support surgical scrub or flushing rim sinks. Similar in function to water closet carriers, service sink carriers provide structural support, and facilitate waste line connection.

TYPICAL WALL HUNG FIXTURE CARRIER INSTALLATIONS**CA-321**

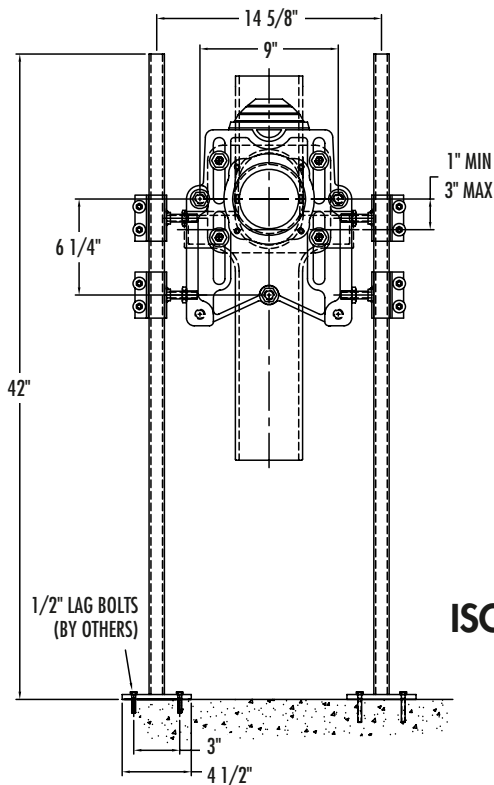
TYPICAL WALL HUNG FIXTURE CARRIER INSTALLATIONS



TCA-411



CA-461



ISCA-550-4-V4

