

## SECTION 102113 - TOILET & SHOWER COMPARTMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Plastic-laminate-faced toilet compartments configured as toilet enclosures and urinal screens.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. LEED Submittals:
  - 1. Product Data for Credit IEQ 4.4: For particleboard, documentation indicating that product contains no urea formaldehyde.
  - 2. Laboratory Test Reports for Credit IEQ 4: For documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Shop Drawings: For toilet compartments. Include plans, elevations, sections, details, and attachments to other work.
- D. Note:
- E. grab Bars- all must have a diameter of 1-1/4" to 1-1/2" wit a required mounting height of 36" from the center line of the grab bar to the floor. Structural strength of all grab bars and their mounting devices shall withstand more then 250 lbs.
- F. Samples for each exposed product and for each color and texture specified.

#### 1.3 INFORMATIONAL SUBMITTALS

- A. Product certificates.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Maintenance data.

## 1.5 QUALITY ASSURANCE

- A. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84, or another standard acceptable to authorities having jurisdiction, by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Flame-Spread Index: 75 or less.
  - 2. Smoke-Developed Index: 450 or less.
- B. Regulatory Requirements: Comply with applicable provisions in "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities for toilet compartments designated as accessible.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Entrance-Screen Style: Floor Mounted anchored—

### 2.2 PLASTIC-LAMINATE-FACED UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following]:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product name or comparable product by one of the following:
  - 1. American Sanitary Partition Corporation.
  - 2. Bobrick Washroom Equipment, Inc.
  - 3. Bradley Corporation; Mills Partitions.
  - 4. Globe Corporation, Rest room and Shower Partitions-Tel.443-552-9667
- C. Toilet-& Shower Enclosures Style: Floor Mounted
- D. Urinal-Screen Style: Wall hung.
- E. Door, Panel: One-piece, plastic-laminate facing sheets pressure laminated to core material without splices or joints in facings or cores; with laminate stainless-steel edge trim applied to edges before faces to seal edges and prevent laminate from being pried loose. Seal exposed core material at cutouts to protect core from moisture
  - 1. Core Material: Particleboard.
  - 2. Doors and Panels: Finished to not less than Match Existing and 1 inch]] thick.
  - 3. Pilasters: Provide construction to comply with[ one of the following:
    - a. Finished to not less than 1-1/4 inches (32 mm) thick and with internal, nominal 0.134-inch- (3.42-mm-) thick, steel-sheet reinforcement.
    - b. Finished to not less than 1 inch (25 mm) thick and with internal, nominal 0.120-inch- (3.04-mm-) thick, steel-sheet reinforcement.

F. Brackets (Fittings):

1. Stirrup Type: Ear or U-brackets, chrome-plated zamac
2. Full-Height (Continuous) Type: Manufacturer's standard design;

G. Plastic-Laminate Finish: One color and pattern in each room.

1. Color and Pattern: As selected by Architect from manufacturer's full range
2. Full-Height (Continuous) Type: Manufacturer's standard design
  - a. Polymer Color and Pattern: Matching panel, as indicated by manufacturer's designations. panel, as selected by Architect from manufacturer's full range

2.3 ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.

1. Material: Chrome-plated zamac
2. Hinges: Manufacturer's standard paired, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees continuous, cam type that swings to a closed or partially open position
3. Latch and Keeper: Manufacturer's standard surface-mounted latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
5. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors
6. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

B. Floor Mounted: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.

C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel.

2.4 FABRICATION

A. Floor Mounted Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.

## Pohick Bay ADA Renovations

- B. Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at tops and bottoms of posts.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- wide, in-swinging doors for standard toilet compartments and 36-inch- wide, out-swinging doors with a minimum 32-inch- wide, clear opening for compartments designated as accessible.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

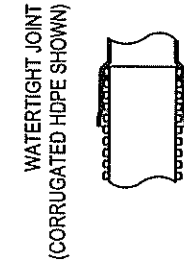
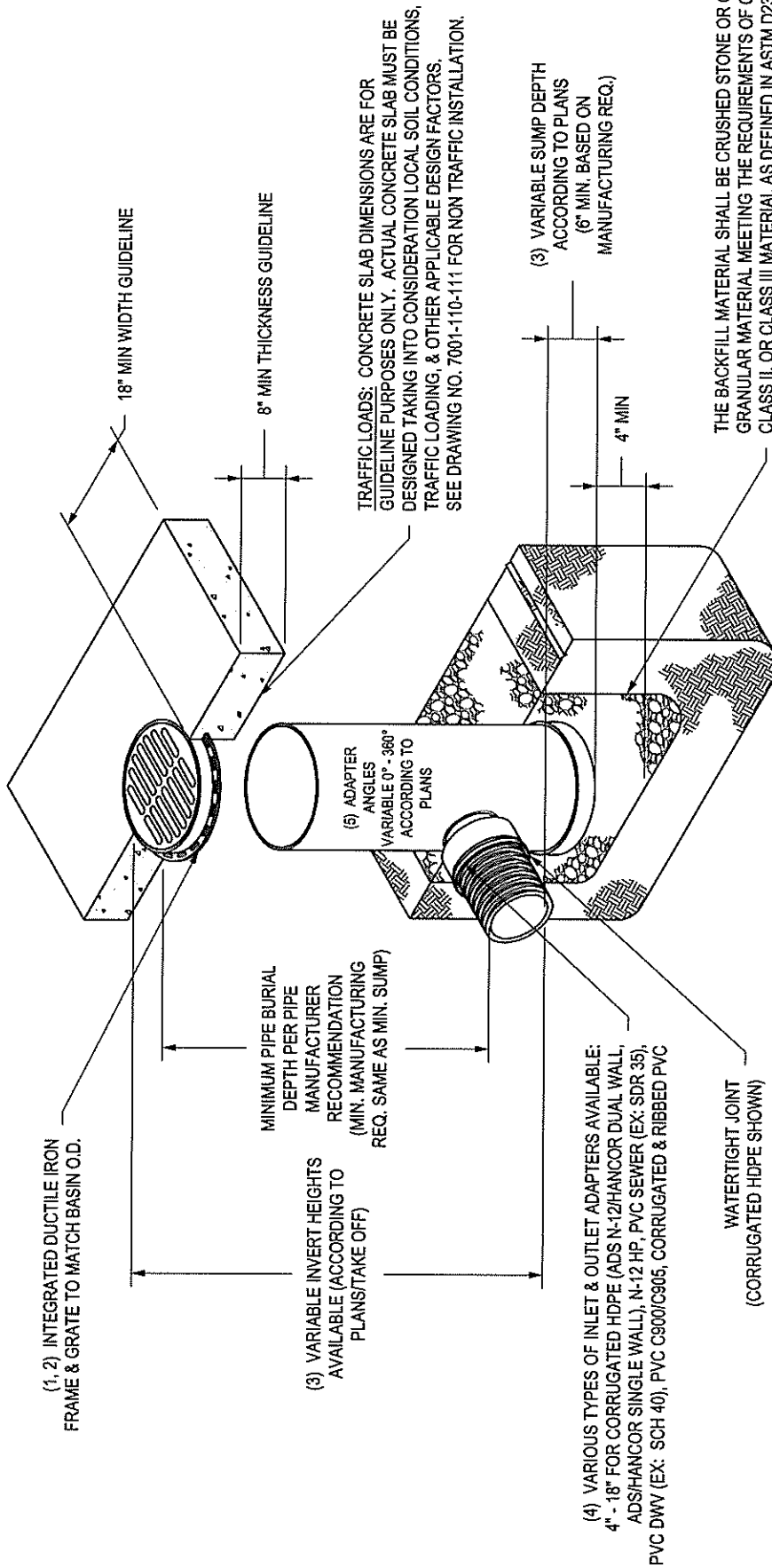
- A. General: Comply with manufacturer's written installation instructions. Install unit's rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
- B. Clearances: Maximum 1/2 inch between pilasters and panels; 1 inch between panels and walls.

#### 3.2 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113

NYLOPLAST 18" DRAIN BASIN: 2818AG \_\_ X



WATERTIGHT JOINT  
(CORRUGATED HDPE SHOWN)

TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS. SEE DRAWING NO. 7001-110-111 FOR NON TRAFFIC INSTALLATION.

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1899CGP	7001-110-212
STANDARD	MEETS H-20	1899CGS	7001-110-213
SOLID COVER	MEETS H-20	1899CGC	7001-110-214
DOMES	N/A	1899CGD	7001-110-215
DROP IN GRATE	LIGHT DUTY	180TDI	7001-110-074

- 1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
- 4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
- 5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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DRAWN BY EBC  
DATE 04-03-06  
REVISED BY NMH  
DATE 03-14-16  
PROJECT NO./NAME  
DWG SIZE A  
SCALE 1:30  
SHEET 1 OF 1

MATERIAL  
NYLOPLAST  
18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL  
TITLE  
3130 VERONA AVE  
BUFORD, GA 30518  
PHN (770) 932-2443  
FAX (770) 932-2499  
www.nyloplast-us.com  
DWG NO. 7001-110-191  
REV E

The following information is provided as a summary of currently available data in the industry. It is *NOT* intended to be an interpretation of ADAAG, rather a reference for further research.

## Reference Sources

- The American with Disabilities Act (ADA)
- ADA-ABA Accessibility Guidelines for Buildings and Facilities
- ANSI A117.1 – American National Standard for Buildings and Facilities
- UFAS – Uniform Federal Accessibility Standards

In order to make the ADAAG enforceable, these Guidelines were subsequently amended and adopted by the U.S. Department of Justice as the ADA Standards for Accessible Design (the *Standards*). Copies of the most updated Standards can be obtained from the Department of Justice and the Access Board in Washington, DC. The law applies to most buildings and facility types nationwide regardless of state or local requirements, but it is not a building code in and of itself.

Authority has been left with each state and local government to adopt and enforce its own building codes, but the office of the U.S. Assistant Attorney General for Civil Rights has the authority under the ADA to certify that a state or local building code meets or exceeds the minimum requirements of ADA, and such certificate of equivalency can be used as rebuttal evidence in any subsequent litigation. To help everyone with legal compliance, the federal government has established Disability and Business Technical Assistance Centers (DBTAC) in each region of the country to provide information and advice on the ADA, including ADAAG requirements.

All building plans should be confirmed with local jurisdictions to ensure job compliance.

ADA Title III requires that all new construction of public accommodations and commercial facilities meet or exceed ADAAG specifications. All additions, and substantial alterations to functional spaces in existing public accommodations and commercial facilities are considered new construction and subject to the same ADAAG requirements.

## General Information

### Doors

All interior doors (including toilet partition doors) must push or pull open with a maximum of five pounds of force. Door handles, pulls, latches, locks, and other opening devices should have a shape that is easy to operate with one hand, without tight grasping, pinching or twisting of the wrist; and they should be mounted no higher than 48" above the finish floor.

### Toilets

"Undercut" bowls are preferred. The height of the toilet seat is perhaps the most critical factor. The height of toilet seats must be 17" to 19" above the finish floor. Moderate heights of 17" to 18" work well in standard compartments, while heights of 18" to 19" work best in the 36" wide walk-in compartments.

### Grab Bars

All must have a diameter of 1¼" to 1½". Required mounting heights are 33" to 36" from the centerline of the grab bar to the finish floor. The structural strength of all grab bars and their mounting devices must withstand more than 250 lbf.

Standard compartments require one grab bar at least 40" long to be mounted on the side wall or partition nearest the toilet, no more than 12" from the back wall. A second grab bar at least 36" long must be mounted on the back wall, no more than 6" from the side wall or partition nearest the toilet.

*Note: Local municipalities may have additional grab bar requirements.*

Toe clearance at least 9" above the finish floor is required under the front partition and one side partition of all accessible compartments. Toe clearance is not required if the depth of the compartment is greater than 60".

## Toilet Compartments

### Standard Compartment (Wheelchair Accessible)

Required for all new construction and alterations with an outswinging door no more than 4" from the corner diagonally from the toilet. The toilet must be offset on the back wall with its centerline 18" from the nearest side wall or partition. Horizontal grab bars must be mounted behind the toilet and on the nearest side wall or partition. Refer to the illustration on page 2 for dimensions and more detailed information.

#### Stall Width

60" Minimum (Inside Clear)

#### Stall Depth

56" Minimum (Inside Clear) with wall-mounted toilets

59" Minimum (Inside Clear) with floor-mounted toilets

### Standard Walk-In (36" Wide) Compartment

Ambulatory-accessible compartment with an outswinging door for washrooms with six or more toilets. The toilet must be centered on the back wall. Horizontal grab bars must be mounted on each side wall or partition. Refer to the illustration on page 2 for dimensions and more detailed information.

*Note: Has unspecified clear opening for door size.*

#### Stall Width

36" Minimum & Maximum (Inside Clear)

#### Stall Depth

60" Minimum (Inside Clear) required by ICC/ANSI A117.1

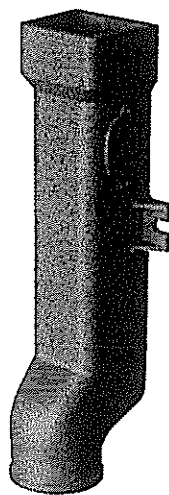
Verify all rough-in dimensions prior to installation.

Consult local and national codes. Conformity and compliance to local and national codes is the responsibility of the installer.

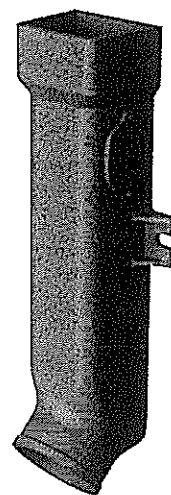
# Need your downspout boots "yesterday"?

Our most popular sizes are in stock and ready to ship.

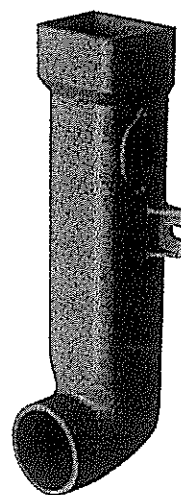
J.R. Hoe consistently outperforms the competition in both pricing and lead times for cast iron downspout boots. Contact us today at **1-800-245-5521** or you can request a quote on our website **[www.downspoutboots.com](http://www.downspoutboots.com)** to receive pricing and availability.



O-Series  
Offset



A-Series  
Angular



N-Series  
Ninety Degree

Top Bell	Ground Size	Available Lengths
3" X 4"	4 1/4", 4 7/8"	
3" X 5"	4 1/4", 4 7/8"	
4" X 4"	4 1/4", 4 7/8"	
4" X 5"	4 7/8", 5 7/8"	16", 20", 24", 28", 32", 36", 40", 44", 48", 52", 56", 60", 64", 68", 72", 76", 80", 84"
4" X 6"	4 7/8", 5 7/8"	
5" X 5"	4 7/8", 5 7/8"	
5" X 6"	5 7/8", 6 7/8"	
5" X 7"	5 7/8", 6 7/8"	
6" X 6"	5 7/8", 6 7/8"	
6" X 8"	6 7/8", 7 1/2"	24", 30", 36", 42", 48", 54", 60", 66", 72", 78", 84", 90"
8" X 8"	8 1/4"	

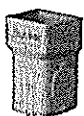
- Product drawings for all sizes are available at **[www.downspoutboots.com](http://www.downspoutboots.com)**
- Custom sizes including round top bell models are available upon request.
- Cleanout option available for all sizes 20" or greater in length

## Coating Options



**No Coating**  
*Plain cast iron finish*

**Primer Coating**  
*Light gray rust inhibitive primer*

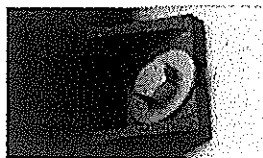


**Powder Coating**  
*To view color options, please visit [downspoutboots.com/colorchart.php](http://downspoutboots.com/colorchart.php)*

## Accessories

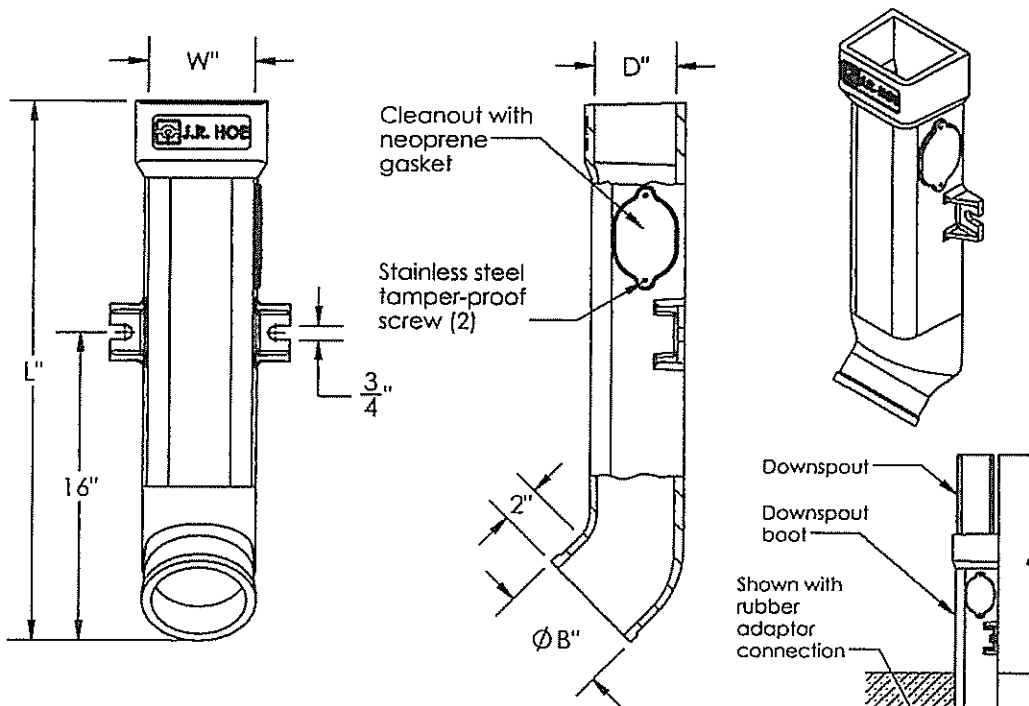


**Rubber Couplings**  
*Flexible couplings for durability and ease of installation*



**Mounting Hardware**  
*For concrete, masonry or brick building walls*

## A-Series: Angular Downspout Boots



### NOTES:

As manufactured by:  
J.R. Hoe & Sons Inc.  
101 Ironwood Rd., Middlesboro, KY 40965  
1-800-245-5521 | [www.downspoutboots.com](http://www.downspoutboots.com)

Manufactured from ASTM A-48 Class 30 Gray Iron

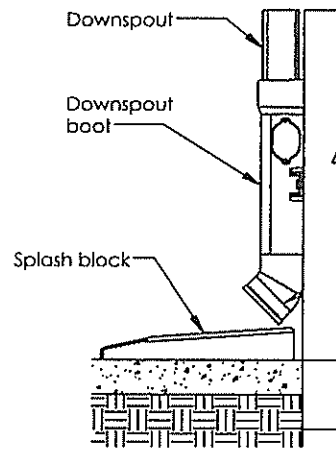
Side cleanout a standard option for all downspout boots 20" or greater in length. Cast iron cover with neoprene gasket is fastened over cleanout window on main body with stainless steel tamper proof screws.

Downspout boots over 40" in length are supplied in 2-piece assemblies for ease of installation.

Install downspout boots with stainless steel expansion anchors where integral lug slots meet the building wall.

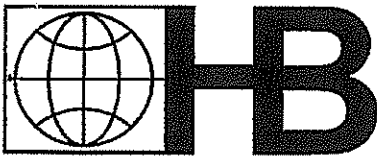
Downspout boots feature contoured, flow-efficient interior design; no boxed corners, weld seams, or choke points that increase risk of clogging.

### Below Ground Discharge



### Above Ground Discharge

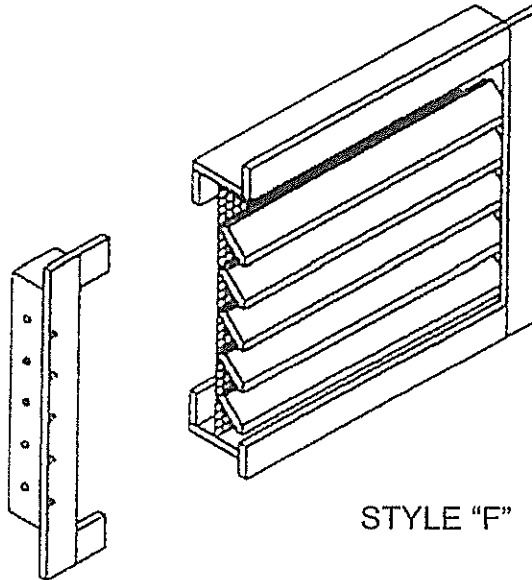




HOHMANN & BARNARD, INC.  
A MITek - BERKSHIRE HATHAWAY COMPANY

## Aluminum Brick Vents

### Extruded Aluminum Brick Vent - Style "F"



STYLE "F"

DRAWINGS FOR ILLUSTRATIVE PURPOSES ONLY

#### Style "F" Brick Vent Description:

- Extruded Aluminum, minimum .125" 6063-T5 alloy
- 1 1/2" deep with 1" flanges
- Extruded stop for screen retention
- Overlapping blades, all at 45°, with storm lip
- Continuous weepage on bottom
- Standard 204-R1 clear anodized finish (Non-standard finishes include medium or dark bronze anodized, kynar or baked enamel.)
- Special custom sizes available
- Lengths up to 8 ft. available without front mullions-continuous blade effect.

Note: Can be equipped with operable damper and ducts

#### Free Area Calculations: (measurements expressed in Square Feet)

	Outside Height (in inches)					
	2 3/4"	4 3/4"	7 3/4"	11 3/4"	15 3/4"	
Width (in inches)	8"	.029	.080	.136	.207	.279
	12"	.044	.120	.204	.310	.418
	15 3/4"	.056	.156	.263	.400	.540
	16 1/2"	.060	.196	.280	.426	.575
	24"	.088	.271	.408	.620	.836
	32"	.117	.321	.543	.816	1.115

H&B manufactures aluminum brick vents from a minimum of 41% pre-consumer and 23% post-consumer recycled material.

#### Model Number

#### W x H (Nominal)

<input type="checkbox"/> F 825	8 1/8" x 2 3/8"
<input type="checkbox"/> F 847	8 1/8" x 4 3/4"
<input type="checkbox"/> F 808	8 1/8" x 7 3/4"
<input type="checkbox"/> F 125	12" x 4 3/4"
<input type="checkbox"/> F 128	12" x 7 3/4"
<input type="checkbox"/> F 1212	12" x 11 3/4"
<input type="checkbox"/> F 157	15 3/4" x 7 3/4"
<input type="checkbox"/> F 1516	15 3/4" x 15 3/4"
<input type="checkbox"/> F 162	16 1/2" x 2 3/8"
<input type="checkbox"/> F 164	16 1/2" x 4 3/4"
<input type="checkbox"/> F 168	16 1/2" x 7 3/4"
<input type="checkbox"/> F 1616	16 1/2" x 15 3/4"
<input type="checkbox"/> F 244	24" x 4 3/4"
<input type="checkbox"/> F 248	24" x 7 3/4"
<input type="checkbox"/> F 3208	32" x 7 3/4"
<input type="checkbox"/> F 4808	48" x 7 3/4"
<input type="checkbox"/> Custom _____	

Note: "F" Vents add 1" face flange on 4 sides to nominal size. Add 1/4" to nominal width for mechanical fastener heads.

Mullions: ☐ YES ☐ NO

\*Vents can be made to any specified height or width WITHOUT exposed mullions.

HOHMANN & BARNARD, Inc.  
30 Rasons Court | Hauppauge, NY 11788  
CORPORATE HEADQUARTERS  
T: 800.645.0616 F: 631.234.0683  
[www.h-b.com](http://www.h-b.com)

Branch/Subsidiary Locations:  
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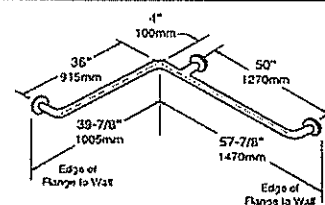
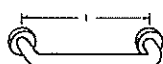
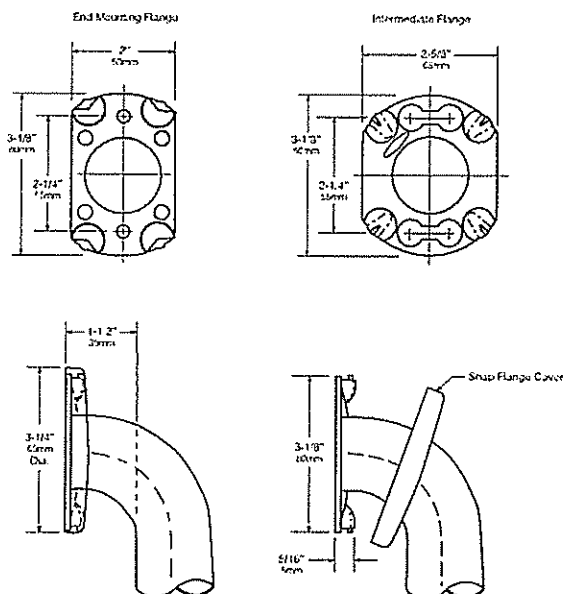
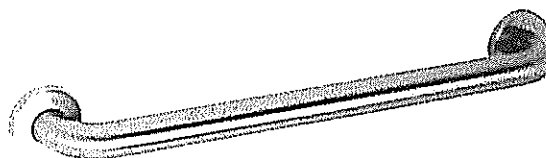


# 1½" (38mm) DIAMETER STAINLESS STEEL GRAB BARS WITH SNAP FLANGE

## B-6806 SERIES

Specify Finish Required:

- ☐ Satin-finish, slip-resistant surface  
☐ Peened surface; add suffix .99 to model number



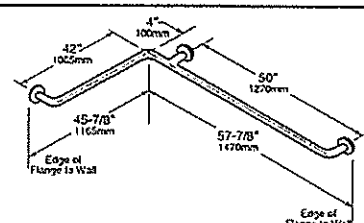
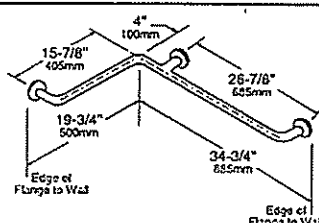
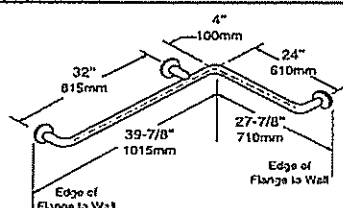
HORIZONTAL

VERTICAL

TWO-WALL WHEELCHAIR  
COMPARTMENT

B-6806 x 12, 18, 24, 30, 36, 42, 48

B-68137



HORIZONTAL TUB / SHOWER  
COMPARTMENT BAR 24 x 36

HORIZONTAL TWO-WALL BAR  
for Shower Stall

TWO-WALL  
TOILET COMPARTMENT BAR 42 x 54

B-68616

B-6861

B-6897

continued ...

## MATERIALS:

**Grab Bar** — 18-8 S, type-304, 18-gauge (1.2mm) stainless steel tubing with satin-finish, slip-resistant surface. 1-1/2" (38mm) outside diameter. Ends are heliarc welded to flanges. Clearance between the grab bar and wall is 1-1/2" (38mm).

**Concealed Mounting Flanges** — 18-8 S, type-304, 11-gauge (3.2mm) thick, stainless steel plate; end flanges 2" x 3-1/8" (50 x 80mm) with holes for attachment to wall. Intermediate flanges 2-5/8" x 3-1/8" (65 x 80mm) wide x 3-1/8" (80mm) diameter.

**Snap Flange Covers** — 18-8 S, type-304, 22-gauge (0.8mm) drawn stainless steel with satin-finish. 3-1/4" (85mm) diameter x 1/2" (13mm) deep. Each cover snaps over mounting flange to conceal mounting screws.

## STRENGTH:

Bobrick grab bars that provide 1-1/2" (38mm) clearance from wall can support loads in excess of 900 pounds (408kg) if properly installed. Other grab bar configurations can support loads in excess of 250 pounds (113kg) if properly installed, complying with accessible design (including ADAAG in the U.S.A.) for structural strength.

**Safety Warning:** Grab bars are no stronger than the anchors and walls to which they are attached and, therefore, must be firmly secured in order to support the loads for which they are intended. To avoid potential injury, the building owner or maintenance personnel should remove the grab bar from service if the grab bar is not adequately secured to wall or if there is any observed damage to the welds.

## INSTALLATION:

Provide concealed anchor device or backing as specified or required in accordance with local building codes before wall is finished. Fasten concealed mounting flanges to anchor device or backing with at least two screws opposing each other in each flange. Snap flange covers over each mounting flange to conceal mounting screws. Concealed anchor devices and mounting screws are not included with Bobrick grab bars and must be specified as an accessory.

For Grab Bars with an Intermediate Flange(s), Pull Snap-Flange Covers away from mounting flanges. Place grab bar in desired mounting location. Use intermediate flange as a template to mark location of mounting screws at intermediate flange only. Mark screw locations at the center of the slot in the middle of the double-keyhole shaped mounting holes (2) in the intermediate flange. Remove grab bar from wall. Drive the intermediate flange mounting screws into wall at marked locations. **Note:** Make sure to leave a space of just over 1/8" (3.17mm) between the underside of the screw head and the wall. Install grab bar on the wall by placing the round ends of the intermediate flange double-keyhole shaped mounting holes over the mounting screws (2) are located in the middle of the flange slots. Install the mounting screws into the wall at the end flanges and secure tightly. Tighten the mounting screws at the intermediate flange. Press all snap-flange covers into place to conceal mounting flanges.

**Note:** Recommend use of 1/4" or #14 sheet metal or wood screws to install Intermediate Flange. #12 screws may also be used.

## Important Notes:

1. **Mounting Kits** — Bobrick offers a mounting kit for installing grab bars; one Bobrick mounting kit is required for each flange.

Mounting Kit No.	Description
252-30	Consists of # (3) 14 x 2 1/2" type-304 stainless steel, Phillips round-head, sheet-metal screws.

2. **Grab Bar Fastener** — Bobrick offers a grab bar fastening system that secures all Bobrick grab bar series; one Bobrick fastener is required for each flange. Install grab bar without backing in wall requires minimum 5/8" (16mm) thick painted or tiled drywall.

WingIt™ Fastener No.	Description
251-4	Consists of 10–32 x 5/16" round-head, Phillips 18/8 stainless steel screws. (1) WingIt grab bar fastener.

3. **Optional Anchor Device** — Bobrick grab bar anchor device includes stainless steel machine screws to be used for attaching grab bars to anchors. one Bobrick concealed anchor device is required for each flange.

Optional Anchor No.	Description
2583	Anchor for 3/4" to 1" (19-25mm) panel 1 anchor required for each flange.
2586	Anchor for 1/2" to 1" (13mm) panel 1 anchor required for each flange.

## SPECIFICATION:

Grab bar shall be type-304 stainless steel with satin-finish, slip-resistant surface. Grab bar shall have 18-gauge (1.2mm) wall thickness and 1-1/2" (38mm) outside diameter. Clearance between the grab bar and wall shall be 1-1/2" (38mm). Concealed mounting flanges shall be 11-gauge (3.2mm) thick stainless steel plate, 2" x 3-1/8" (50 x 80mm), and equipped with at least two screw holes for attachment to wall. Flange covers shall be 22 gauge (0.8mm), 3-1/4" (85mm) diameter x 1/2" (13mm) deep, and shall snap over mounting flange to conceal mounting screws and/or WingIt fasteners. Ends of grab bar shall pass through concealed mounting flanges and be heliarc welded to form one structural unit. Grab bar shall comply with accessible design (including ADAAG in the U.S.A.) for structural strength.

Grab Bar shall be Model \_\_\_\_\_ (insert model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

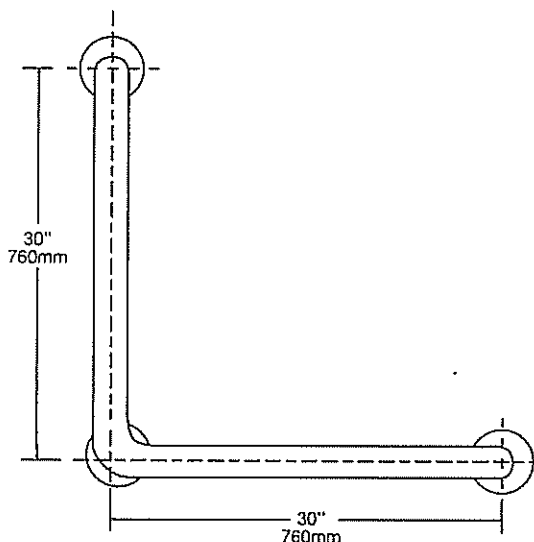
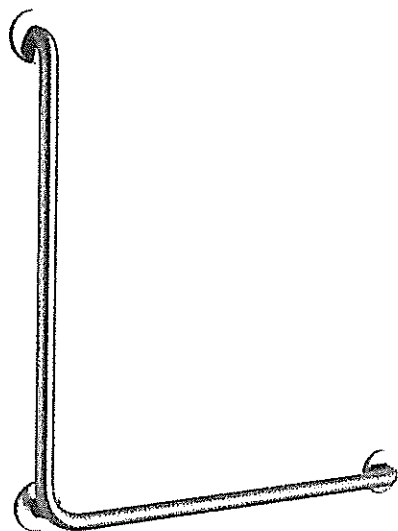


## Technical Data

**1 1/4" (32mm) DIAMETER  
STAINLESS STEEL  
30" x 30" (762 x 762mm)  
90-DEGREE GRAB BAR**

**B-5898  
B-5898.99**

Specify Finish Required: ☐ Satin-finish, slip-resistant surface.  
☐ Peened surface; add suffix .99 to model number



### MATERIALS:

**Grab Bar** — 18-8, type-304, 18-gauge (1.2mm) stainless steel tubing with a satin-finish, slip-resistant surface. 1-1/4" (32mm) outside diameter. Ends are heliarc welded to concealed mounting flanges. Clearance between the grab bar and wall is 1-1/2" (38mm).

**Concealed Mounting Flanges** — 18-8, type-304, 1/8" (3mm) thick, stainless steel plate; end flanges 2" x 3-1/8" (50 x 80mm) with two holes for attachment to wall. Intermediate flanges 2-5/8" x 3-1/8" (65 x 80mm) wide x 3-1/8" (80mm) diameter.

**Snap Flange Covers** — 18-8, type-304, 22-gauge (0.8mm) drawn stainless steel with satin-finish. 3-1/4" (85mm) diameter x 5/8" (16mm) deep. Each cover snaps over mounting flange to conceal mounting screws.

### STRENGTH:

Bobrick grab bars that provide 1-1/2" (38mm) clearance from wall can support loads in excess of 900 pounds (408kg) if properly installed. Other grab bar configurations can support loads in excess of 250 pounds (113kg) if properly installed, complying with accessible design (including ADAAG in the U.S.A.) for structural strength.

**Safety Warning:** Grab bars are no stronger than the anchors and walls to which they are attached and, therefore, must be firmly secured in order to support the loads for which they are intended. To avoid potential injury, the building owner or maintenance personnel should remove the grab bar from service if the grab bar is not adequately secured to wall or if there is any observed damage to the welds.

continued ...

## INSTALLATION:

Provide concealed anchor device or backing as specified or required in accordance with local building codes before wall is finished. Fasten concealed mounting flanges to anchor device or backing with two screws in each flange. Snap flange covers over each mounting flange to conceal mounting screws. Concealed anchor devices and mounting screws are not included with Bobrick grab bars and must be specified as an accessory.

For Grab Bars with an Intermediate Flange(s), Pull Snap-Flange Covers away from mounting flanges. Place grab bar in desired mounting location. Use intermediate flange as a template to mark location of mounting screws at intermediate flange only. Mark screw locations at the center of the slot in the middle of the double-keyhole shaped mounting holes (2) in the intermediate flange. Remove grab bar from wall. Drive the intermediate flange mounting screws into wall at marked locations. **Note:** Make sure to leave a space of just over 1/8" (3.17mm) between the underside of the screw head and the wall. Install grab bar on the wall by placing the round ends of the intermediate flange double-keyhole shaped mounting holes over the mounting screws (2) are located in the middle of the flange slots. Install the mounting screws into the wall at the end flanges and secure tightly. Tighten the mounting screws at the intermediate flange. Press all snap-flange covers into place to conceal mounting flanges.

**Note:** Recommend use of 1/4" or #14 sheet metal or wood screws to install Intermediate Flange. #12 screws may also be used.

### Important Notes:

1. **Mounting Kits** — Bobrick offers a mounting kit for installing grab bars; **one Bobrick mounting kit is required for each flange.**

Mounting Kit No.	Description
252-30	Consists of #14 x 2 1/2" type-304 stainless steel, Phillips round head, sheet-metal screws.

2. **Grab Bar Fastener** — Bobrick offers a grab bar fastening system that secures all Bobrick grab bar series; **one Bobrick fastener is required for each flange.** Install grab bar without backing in wall requires minimum 5/8" (16mm) thick painted or tiled drywall.

WingIt™ Fastener No.	Description
251-4	Consists of 10-32 x 5/16" round-head, Phillips 18/8 stainless steel screws. (1) WingIt grab bar fastener..

3. **Optional Anchor Device** — Bobrick grab bar anchor device includes stainless steel machine screws to be used for attaching grab bars to anchors **one Bobrick concealed anchor device is required for each flange.**

Optional Anchor No.	Description
2583	Anchor for 3/4" to 1" (19-25mm) panel (1) anchor required for each flange.
2586	Anchor for 1/2" to 1" (13mm) panel 1 anchor required for each flange

## SPECIFICATION:

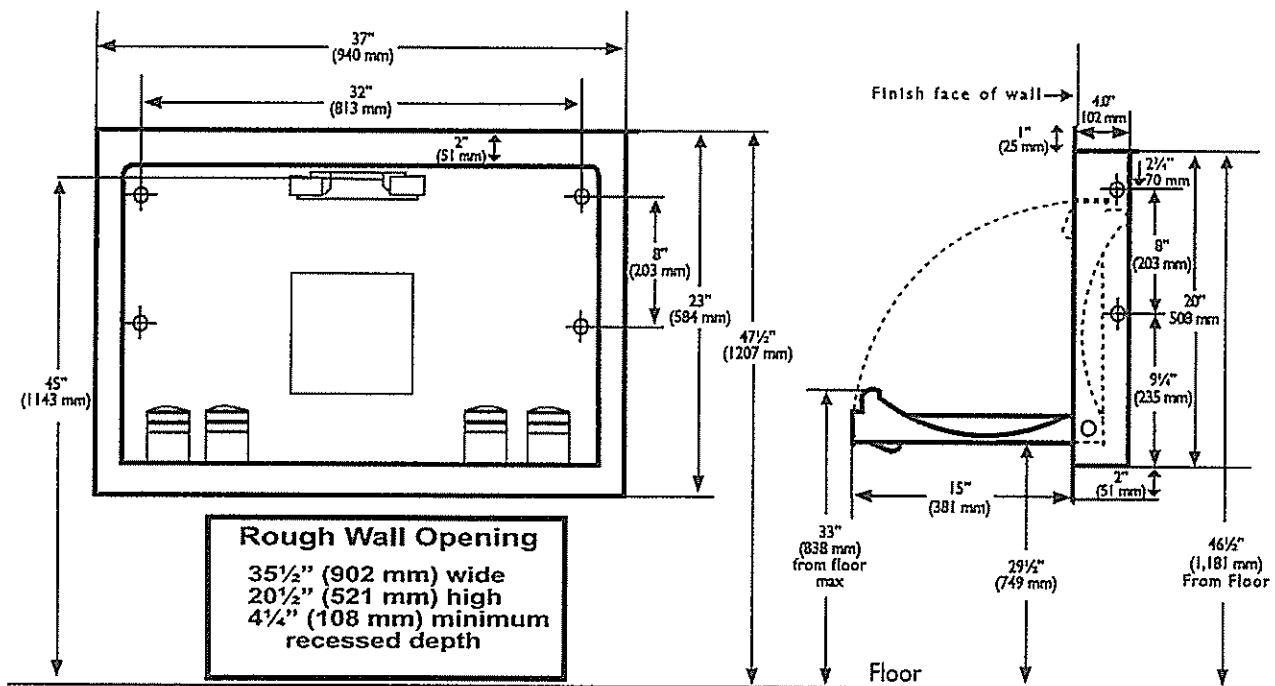
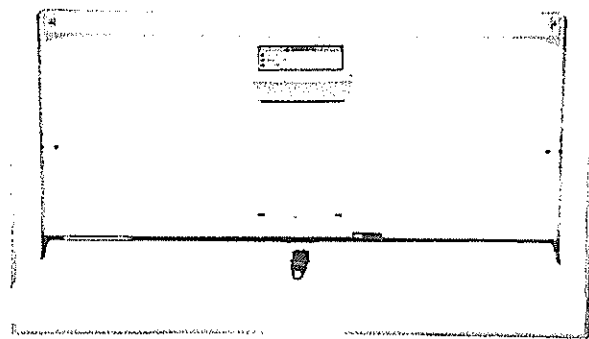
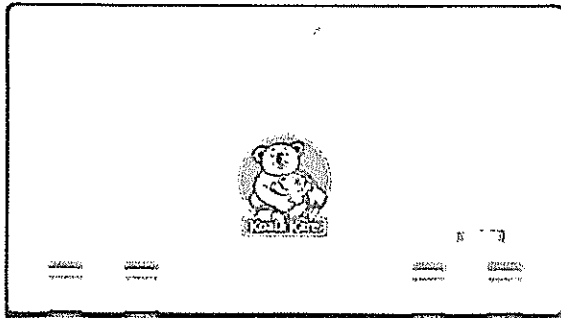
Grab bar shall be type-304 stainless steel with a satin-finish, slip-resistent surface. Grab bar shall have 18-gauge (1.2mm) wall thickness and 1-1/4" (32mm) outside diameter. Clearance between the grab bar and wall shall be 1-1/2" (38mm). Concealed mounting flanges shall be 1/8" (3mm) thick stainless steel plate, 2" x 3-1/8" (50 x 80mm), and equipped with two screw holes for attachment to wall. Flange covers shall be 22-gauge (0.8mm) stainless steel, 3-1/4" (85mm) diameter, and shall snap over mounting flanges to conceal mounting screws and/or WingIt fasteners. Ends of grab bar shall pass through concealed mounting flanges and be heliarc welded to form one structural unit. Grab bar shall comply with accessible design (including ADAAG in the U.S.A.) for structural strength.

Grab Bar shall be Model \_\_\_\_\_ (insert model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; and Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.



# **KOALA KARE PRODUCTS** **KB100-ST HORIZONTAL RECESSED MOUNTED** **WITH STAINLESS STEEL FLANGE** **BABY CHANGING STATION**

KB100-00ST CREAM  
 KB100-01ST GREY  
 KB100-05ST WHITE GRANITE



## **MATERIALS:**

Blow-molded high-density polyethylene with Microban® antimicrobial embedded in the plastic and 18 gauge, type 304 brushed stainless steel finish flange. Reinforced full-length steel-on-steel hinge mechanism, with 11-gauge steel mounting plates and mounting hardware included. Molded-in graphics and safety messages in six languages. Contoured changing surface area is 442 sq in (2852 sq cm) and comes complete with nylon safety straps and bag hooks.

## **OPERATION:**

Concealed pneumatic cylinder and hinge structure provides controlled, slow opening and closing of bed. High-density polyethylene is easy to clean and resists odors and bacterial growth. Complies with ASTM static load performance requirements when properly installed. Built-in liner dispenser holds approximately 25 KB150-99 sanitary liners.

Warning: To ensure that the unit supports the intended loads, baby changing stations must be properly installed according to the manufacturer's instructions.

## **SPECIFICATION:**

Baby changing station body durable high-density polyethylene with Microban® antimicrobial with an 18 gauge, type 304 brushed stainless steel finish flange. Design of unit shall be recess-mounted. Unit shall be equipped with a pneumatic cylinder for controlled opening and closing of bed. Bed shall be secured to back plate with a concealed, full-length steel-on-steel hinge. No hinge structure shall be exposed on interior surfaces. Unit shall have 11-gauge steel mounting plates with mounting hardware included. Unit shall have Microban® antimicrobial embedded into plastic material. Unit shall conform to ASTM F 2285-04 Standard Consumer Safety Performance Specification for Diaper Changing Tables for Commercial Use, ANSI Z535.4 Product Safety Signs and Labels, and ASTM G21 Antifungal Standards or local code if more stringent installation requirements are applicable for barrier-free accessibility. Bed shall have smooth concave changing area with a nylon safety strap and two hooks for bags or purses. Unit shall have a built-in Liner Dispenser for use with 3-ply chemical free biodegradable sanitary liners, universal instruction graphics and safety messages in 6 languages. Unit shall be backed by manufacturer's 5-year limited warranty on materials and workmanship and include a provision for replacement caused by vandalism. Unit shall be manufactured in the U.S.A.



## INSTALLATION:

To ensure proper installation and compliance to building codes, it is recommended that a qualified person or carpenter perform the installation of the unit. The unit must be properly installed onto a permanent wall that is capable of supporting significant weight and can accommodate the supplied installation hardware.

1. Remove changing station from the shipping container and check for any freight damage. Identify the best location for installing the unit. Hold the unit in place and open the bed. Make sure you have taken the operating clearance into consideration.

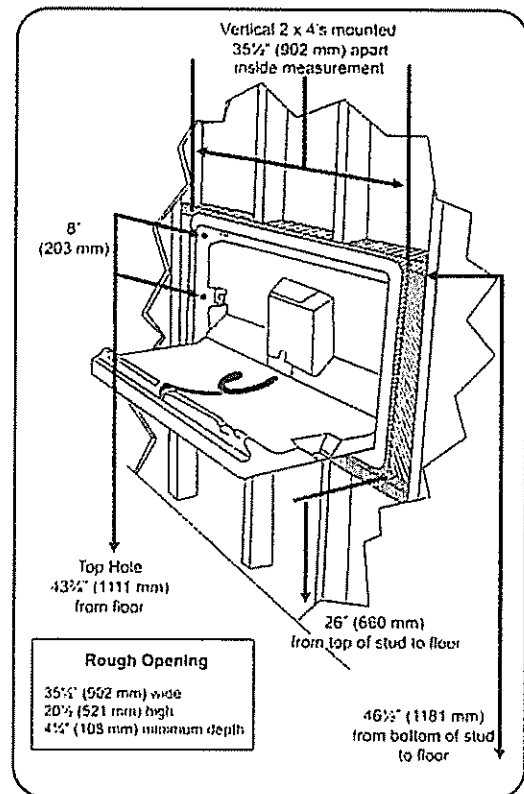
2. Select the wall area where the unit will be installed. Measure from the floor  $46\frac{1}{2}"$  (1118 mm) on stud center and mark the wall. Hold the unit in place to verify the alignment. Mark rough opening  $35\frac{1}{2}"$  W x  $20\frac{1}{2}"$  H (902 mm x 521 mm) and cut a hole in the wall with a minimum depth of  $4\frac{1}{4}"$  (108 mm) as measured from the finished surface of the wall (ie: tile, drywall, etc). Construct mounting frame as indicated in the illustration. If the wall surface is masonry or tile over wood studs, use caution when cutting rough opening.

3. The unit will be mounted using four  $\frac{1}{4}"$  x 3" wood screws through side holes as shown in illustration.

4. Place the unit into the recessed area and insert the screws and flat washers to hold the unit in place. It may be necessary to adjust the level of unit by using a shim on the top right or left side of the unit before tightening securely to the studs.

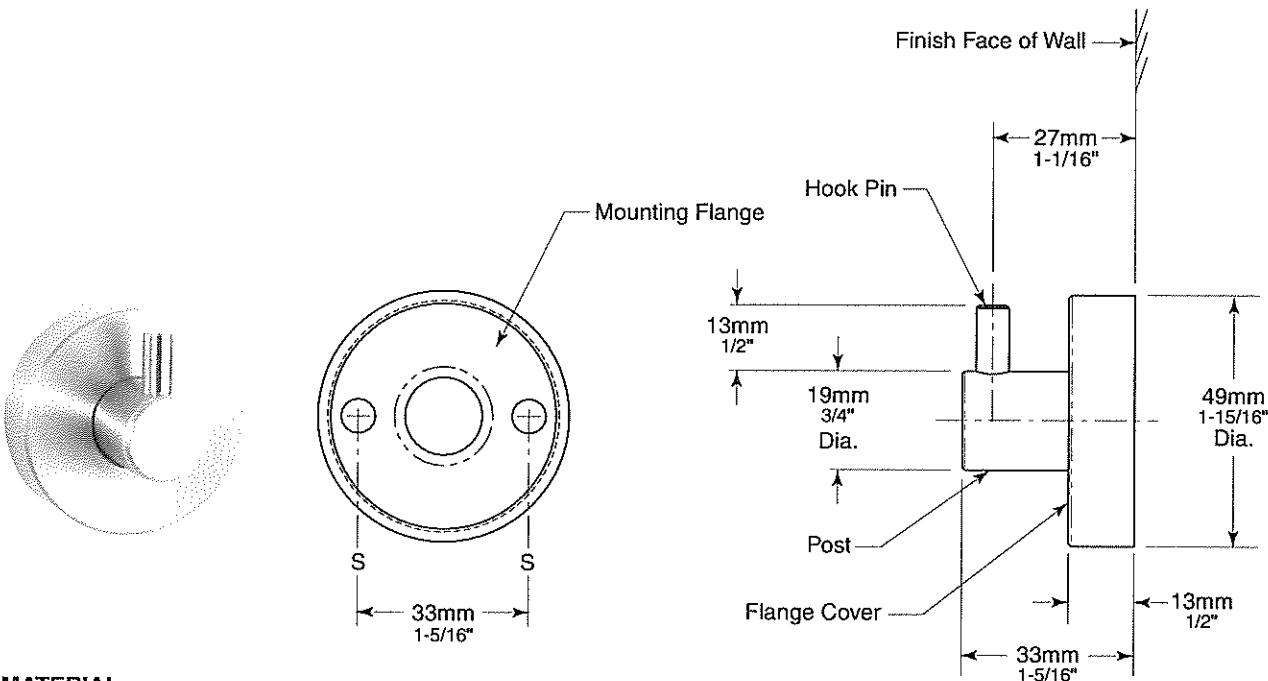
**Replacement Parts:** For a list of replacement parts for this product (such as straps, shocks and labels), please visit [koalabear.com](http://koalabear.com). Replacement parts and additional liners can be purchased from your local distributor or direct from Koala at [koalabear.com](http://koalabear.com).

*The illustrations and descriptions herein are applicable to production as of the date of this Technical Data Sheet. The manufacturer reserves the right to, and does from time to time, make changes and improvements in designs and dimensions without notice.*



**Specify Model Required:**

- ☐ B-542 Satin-finish stainless steel  
☐ B-5426 Bright Polished stainless steel



**MATERIAL:**

**Post** — 18-8, type-304, 19mm (3/4") diameter, solid stainless steel rod. Post and Concealed Mounting Threaded Flange are machined as one piece.

**Hook Pin** — 18-8, type-304, 6.4mm diameter (1/4"), solid stainless steel rod with thread to screw into Post.

**Concealed Mounting Threaded Flange** — 18-8, type-304, 5.6mm (7/32") thick, stainless steel plate with thread on outside edge for fastening cover. 46mm (1-13/16") outside diameter with two holes for attachment to wall.

**Threaded Flange Cover** — 18-8, type-304, 1.4mm (17-gauge), machined stainless steel. 49mm (1-15/16") diameter 13mm (1/2") deep. Cover fastens over mounting flange to conceal mounting screws.

**INSTALLATION:**

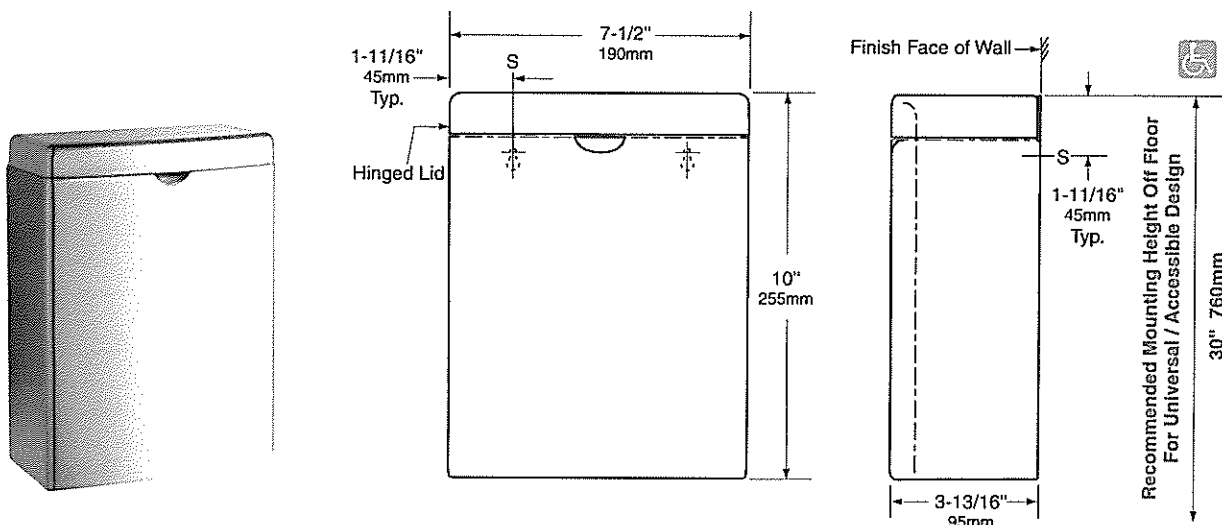
For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure unit with sheet-metal screws (not furnished). For other wall surfaces, provide fiber plugs or expansion shields for use with sheet-metal screws (not furnished), or provide 3mm (1/8") toggle bolts or expansion bolts.

For partitions with particle-board or other solid core, secure with sheet-metal screws (not furnished), or provide through-bolts, nuts, and washers. For hollow-core metal partitions, provide solid backing into which the sheet-metal screws (not furnished) can be secured.

**SPECIFICATION:**

Coat Hook shall be type-304 stainless steel with \_\_\_\_\_ (insert one satin finish or bright polished) finish. Coat Hook shall have 19mm (3/4") diameter Post with 6.4mm (1/4") diameter Hook Pin. Concealed mounting flange shall be 5.6mm (7/32") thick stainless steel plate, 46mm (1-13/16") outside diameter and equipped with two screw holes for attachment and thread on outside edge to fasten cover. Threaded flange cover shall be 1.4mm (17-gauge) stainless steel, 49mm (1-15/16") diameter and shall fasten over mounting flange to conceal mounting screws. Post and mounting flange are to be machined as one piece.

Coat Hook shall be Model \_\_\_\_\_ (insert Model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.



**MATERIALS:**

**Container** — 18-8, type-304, 22-gauge (0.8mm) stainless steel. All-welded construction. Exposed surfaces have satin finish. Integral finger depression for opening cover. Front of container has same degree of arc as front of cover and other Bobrick ConturaSeries washroom accessories. Radius on side edges of container match corners and edges of cover and other ConturaSeries accessories.

**Cover** — 18-8, type-304, 22-gauge (0.8mm) stainless steel with satin finish. Drawn, one-piece, seamless construction. Front of cover has same degree of arc as front of container and other Bobrick Contura Series washroom accessories. Radius on corners and edges of cover match side edges of container and other Contura Series accessories. Secured to container with a full-length stainless steel piano-hinge.

**OPERATION:**

Cover flips up for disposal of sanitary napkins and for servicing container.

**INSTALLATION:**

For partitions with particle-board or other solid core, secure with two #8 x 3/4" (4.2 x 19mm) sheet-metal screws (not furnished) at all points indicated by an S, or provide through-bolts, nuts, and washers.

For hollow-core metal partitions, provide solid backing into which sheet-metal screws can be secured. If two units are installed back-to-back, then provide threaded sleeves and machine screws for the full thickness of partition.

For masonry walls, provide fiber plugs or expansion shields for use with sheet-metal screws, or provide 3/16" (5mm) toggle bolts or expansion bolts.

For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure unit with sheet-metal screws.

**SPECIFICATION:**

Surface-mounted sanitary napkin disposal shall be type-304 stainless steel with all-welded construction; exposed surfaces shall have satin finish. Front of sanitary napkin disposal shall have same degree of arc and match other Bobrick ConturaSeries accessories in the washroom. Radius on corners and edges of sanitary napkin disposal shall complement other Bobrick ConturaSeries washroom accessories. Cover shall be drawn, one-piece, seamless construction and secured to container with a full-length stainless steel piano-hinge. Container shall have integral finger depression for opening cover.

Surface-Mounted Sanitary Napkin Disposal shall be Model B-270 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

## MATERIALS:

**Frame** — 18-8, Type-304, heavy-gauge stainless steel, 3/4" x 3/4" (19 x 19mm) angle with satin finish. One-piece, roll-formed construction forms continuous integral stiffener on all sides. Bevel design on front of angle holds frame tightly against mirror. Corners of mirror frame are heliarc welded, ground, and polished smooth. Galvanized steel back is fastened to frame with concealed screws and equipped with integral horizontal hanging brackets near the top for hanging the mirror and near the bottom to prevent the mirror from pulling away from the wall. Locking devices secure mirror to concealed wall hanger.

**Shelf** — 18-8, Type-304, 18-gauge (1.2mm) stainless steel with satin finish, 3/4" (19mm) return edge on front. Front and side return edges hemmed for additional strength and safety. Front corners of shelf are welded, ground, and polished smooth. Shelf is welded to mirror frame. No exposed rivet-heads, screws, or fasteners of any type on frame or shelf.

**Mirror** — No. 1 quality, 1/4" (6mm) select float glass (standard glass): selected for silvering, electrolytically copper-plated by the galvanic process, and guaranteed for 15 years against silver spoilage. All edges protected by plastic filler strips; back is protected by full-size, shock-absorbing, water-resistant, nonabrasive, 3/16" (5mm) thick polyethylene padding.

**Concealed Wall Hanger** — 16 gauge cold roll steel construction. Incorporates upper and lower support members, which engage backplate louvers to keep mirror against wall.

## INSTALLATION:

Mount wall hanger on wall with screws (not furnished) at points indicated by an S. For plaster or dry wall construction, provide backing to comply with local building codes, then secure wall hanger with screws (not furnished). When providing a concealed backing, allow backing to cover minimum range of mounting hole locations shown on drawing. For other wall surfaces, provide fiber plugs or expansion shields for use with screws (not furnished), or provide 1/8" (3mm) toggle bolts or expansion bolts. Hang mirror on wall hanger with all four backplate louvers engaged behind horizontal wall hanger members. To do this, mirror must be centered in front of the wall hanger horizontally, pressed flat against the wall approximately 1" (25mm) above final position and then lowered into final position.

**Snap Locking Design** — Locking devices automatically secure mirror to concealed wall hanger when it is lowered into final position (see figure 3). Locking devices may be unlocked by inserting two flat blade screwdrivers behind each side of mirror near the bottom or under the bottom of the mirror and pulling mirror bottom forward and then up.

**Lock Tab Design** — Locking devices automatically secure mirror to concealed wall hanger when it is lowered into final position (see figure 4). Locking device may be unlocked by sliding a flat-blade screwdriver or Key between mirror and wall at center of mirror and depressing tab on back panel. If key is required, please contact the factory.

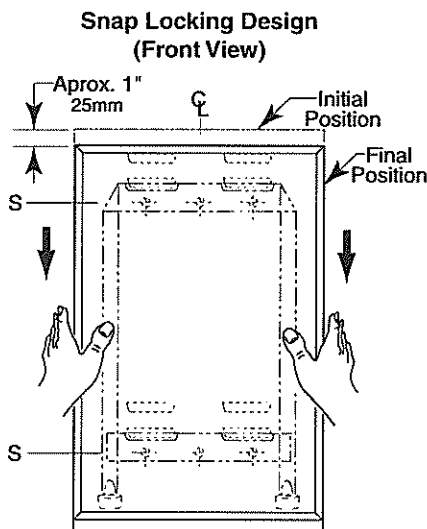


Figure: 3

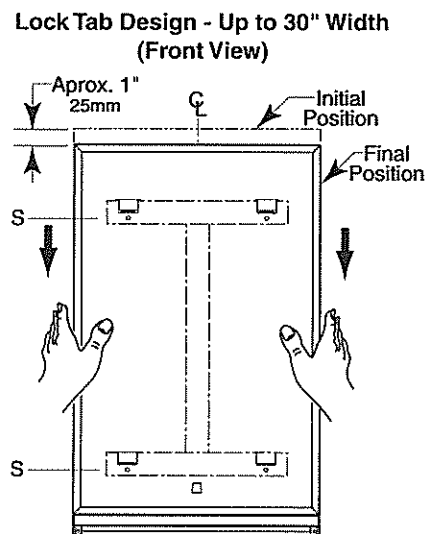
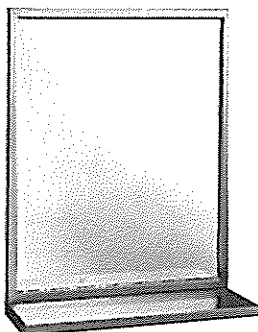


Figure: 4

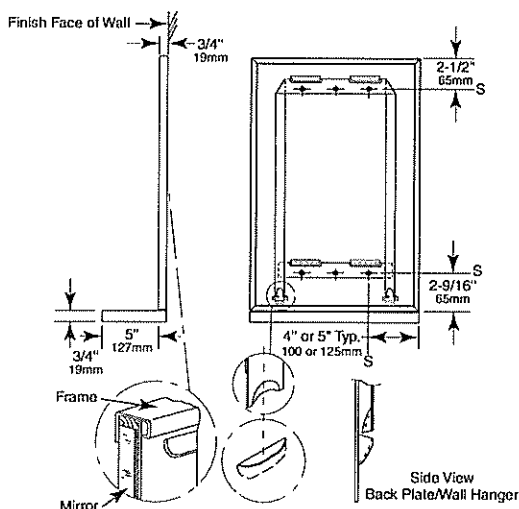
## SPECIFICATION:

Mirror shall have a one-piece, Type-304 stainless steel angle frame, 3/4" x 3/4" (19 x 19mm) with continuous integral stiffener on all sides and beveled front to hold frame tightly against mirror; corners shall be heliarc welded, ground, and polished smooth; all exposed surfaces shall have satin finish. Shelf shall be Type-304, 18-gauge (0.8mm) stainless steel with satin finish. Shelf shall have a 3/4" (19mm) return edge on front. Front and side return edges hemmed and corners welded, ground, and polished smooth. Shelf shall be welded to mirror frame. No rivet-heads, screws, or fasteners of any type shall be exposed on frame or shelf. Select float glass mirror shall be guaranteed for 15 years against silver spoilage. All edges shall be protected by plastic filler strips and the back shall be protected by full-size, shock-absorbing, water-resistant, nonabrasive, 3/16" (5mm) thick polyethylene padding. Galvanized steel back shall have integral horizontal hanging brackets located at top and bottom for mounting on concealed wall hanger and to prevent the bottom of the mirror from pulling away from the wall. Locking devices secure mirror to concealed wall hanger. Mirror shall be removable from wall hanger for reglazing mirror.

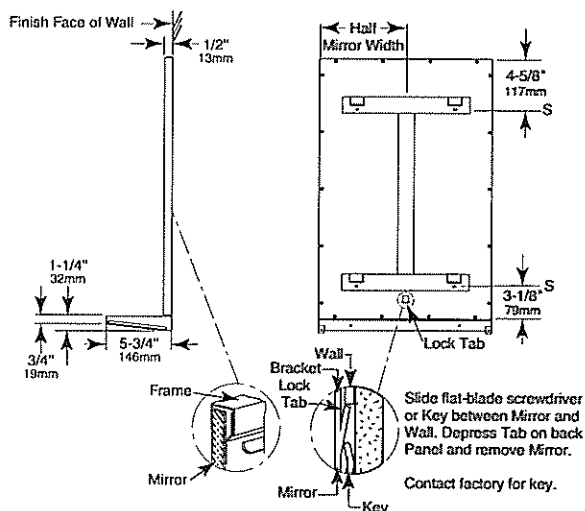
**Framed Mirror With Shelf** shall be Model B-292 \_\_\_\_\_ (insert width and height) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

**BOBRICK****Technical Data****MIRROR WITH  
STAINLESS STEEL  
ANGLE FRAME  
AND SHELF****B-292  
SERIES****Designer's Notes:**

1. Special-order sizes available on request.
2. Maximum size one-piece angle-frame mirror, 96" x 72" (244 x 183cm); minimum size, 12" x 12" (30 x 30cm).
3. All Bobrick framed mirror/shelf models are manufactured to overall width and height dimensions of mirror, not including shelf. EXAMPLE: For Lock Tab Design B-292 2436 (61 x 95cm) mirror will be furnished 24" x 37-1/4" (61 x 94cm) outside-of-frame to outside-of-frame including shelf.
4. To specify special sizes use Series Number followed by width x height in inches. EXAMPLE: B-292 2024 20" x 24" (51 x 61cm).
5. Bobrick framed mirror/shelf models are manufactured to a tolerance  $\pm 1/8"$  (3.2mm).
6. For sufficient space to lift mirror onto wall hanger(s), provide 1" (25mm) minimum clearance above top of mirror frame.
7. Provide 1" (25mm) minimum clearance at bottom of mirror for unlocking mirror from wall and 1/2" (12.7mm) clearance on each side.

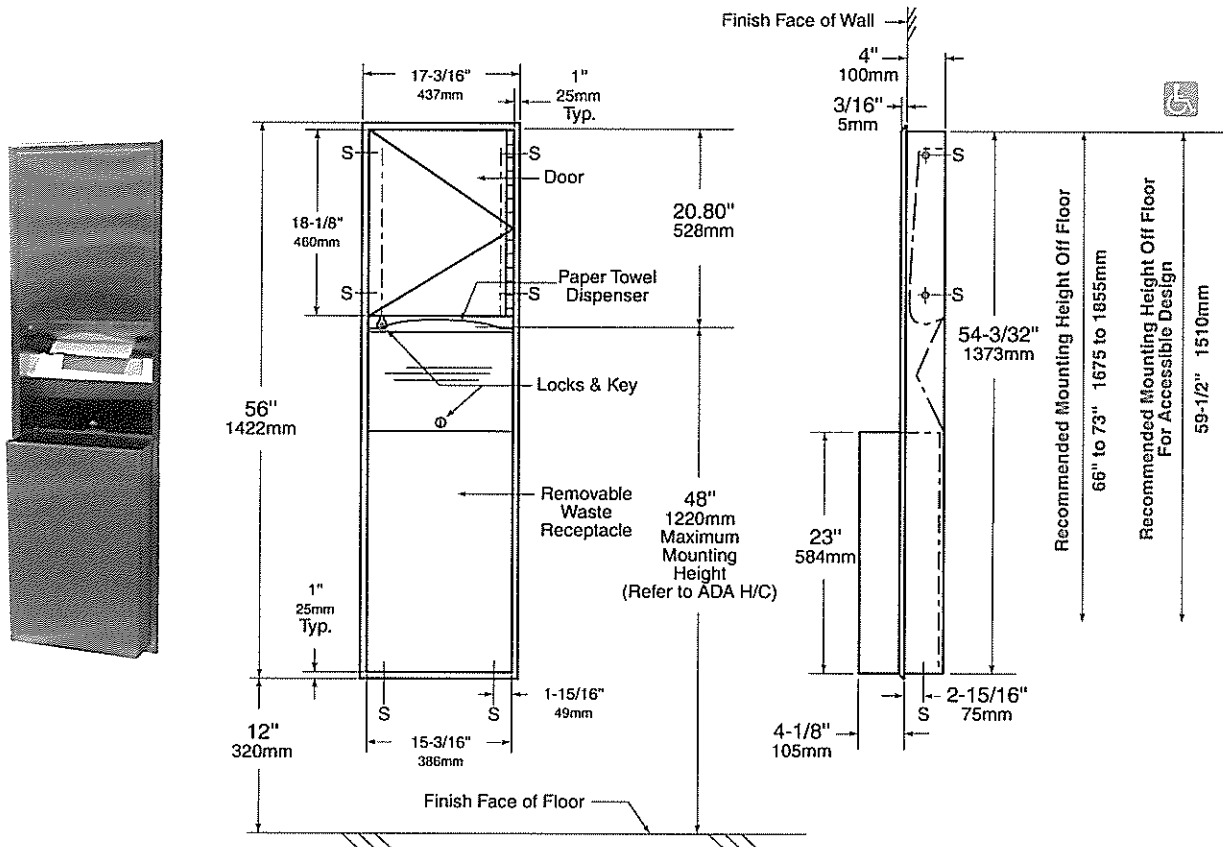
**Snap Locking Design  
(Rear View)***Figure: 1***STANDARD B-292 SERIES MIRRORS**

MODEL NO.	OVERALL SIZE	
	W	H
B-292 1836	18" (46cm)	36" (91cm)

**Lock Tab Design  
(Rear View)***Figure: 2***All Other Size Mirrors**

**Note:** Mirrors greater than 30" in width will have multiple hanger bracket pockets with a typical 8" off each edge.

continued ...



**MATERIALS:**

**Cabinet** — 18-8, Type-304, heavy-gauge stainless steel. Welded construction. Exposed surfaces have satin-finish.

**Flange** — 18-8, Type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Drawn and beveled, one-piece, seamless construction.

**Door** — 18-8, Type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Double-pan-back construction. Secured to cabinet with a full-length stainless steel piano-hinge. Equipped with a semi-concealed tumbler lock keyed like other Bobrick washroom accessories.

**Paper Towel Dispenser** — 18-8, Type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Rounded towel tray has hemmed opening to dispense paper towels without tearing. Capacity: 600 C-fold or 800 multifold paper towels.

**Optional:** Order Bobrick Model No. 3944-130 TowelMate® available as an optional accessory. TowelMate accessory allows for paper towels to dispense one at a time without bulging or sagging, or falling through the towel tray opening. The 90 degree return on the towel guide prevents papers from falling forward and out when door is opened for servicing. TowelMate fits Gamco and most other manufacturers'.

continued . . .

**Waste Receptacle** — 18-8 S, Type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Front and sides of bottom and all top edges are hemmed for safe handling. Secured to cabinet with a tumbler lock keyed like other Bobrick washroom accessories. Capacity: 12-gal. (45.5-L).

#### **OPERATION:**

Paper towel dispenser accommodates C-fold or multifold paper towels without adjustment or use of adapters. To adapt to changing needs of washrooms, this unit is field convertible with the Universal, Touch-Free Roll Towel Dispenser or Universal, Automatic Roll Towel Dispenser. To order convertible modules, reference part numbers below under Options.

To empty waste receptacle, unlock with key provided.

**NOTE:** To accommodate disposable trash liners, order LinerMate®, sold as an optional accessory item. LinerMate eliminates unsightly trash liner overhang and facilitates installation and removal of disposable trash liners in the 12-gallon waste receptacle.

#### **Options:**

- Universal Touch-Free Roll Towel Dispenser Module convertible in field: order Bobrick Part No. 3961-50.
- Automatic, Universal Roll Towel Dispenser Module convertible in field: order Bobrick Part No. 3974-250.
- LinerMate for 12-gal waste only: order Bobrick Part No. 3944-134.
- 18-gallon Waste Receptacle: order Bobrick Part No. 368-60, with reusable vinyl liner Part No. 368-16.

#### **INSTALLATION:**

Provide framed rough wall opening 16" wide x 54-3/4" high (406 x 1390mm). Minimum recessed depth required to finish face of wall is 4" (102mm). Allow clearance for construction features that may protrude into rough wall opening from opposite wall. Coordinate with mechanical engineer to avoid pipes, vents, and conduits. If unit projects above top of wainscot, provide aluminum channel or other filler to eliminate gap between flange and finish face of wall. Mount unit in wall opening with shims between framing and cabinet at all points indicated by an S, then secure unit with #8 x 1-1/4" (4.2 x 32mm) sheet-metal screws (not furnished).

#### **SPECIFICATION:**

Recessed convertible paper towel dispenser and waste receptacle shall be Type-304 stainless steel with welded construction; exposed surfaces shall have satin finish. Flange shall be drawn and beveled, one-piece, seamless construction. Door shall be secured to cabinet with a full-length stainless steel piano-hinge and equipped with a semi-concealed tumbler lock keyed like other Bobrick washroom accessories. Paper towel dispenser shall dispense 600 C-fold or 800 multifold paper towels. Removable waste receptacle shall be secured to cabinet with a tumbler lock, have front and side edges of bottom and all top edges hemmed for safe handling, and shall have a minimum capacity of 12-gal. (45.5-L).

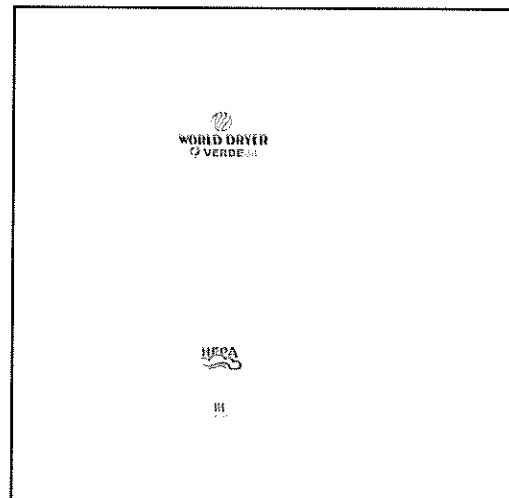
**Recessed Convertible Paper Towel Dispenser And Waste Receptacle shall be Model B-3944 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.**



VERDEdri™ is a high speed, surface-mounted ADA compliant hand dryer featuring HEPA filtration system and antimicrobial technology. VERDEdri is extremely energy efficient utilizing only 950 watts of power. The adjustable two speed motor controls and global universal voltage features accommodate any commercial washroom environment.

### Product Benefits

- 12 second dry time
- Automatic surface-mounted ADA compliant simplifies installation and reduces installation costs
- High intensity single port nozzle
- Energy efficient utilizing only 950 watts of power
- HEPA\* filter reduces contaminants in the air when hand drying
- Adjustable two speed controls to customize drying time, sound level and energy savings
- Universal voltage – accepts 110-120 / 208 / 220-240 VAC input
- Incorporates SteriTouch® antimicrobial technology inhibiting the growth of bacteria, mold and fungus extending the dryer's service life
- IP24 rating - protection against harmful water ingress
- Replaceable motor brushes extends product life
- Optional adapter kit<sup>1</sup> for top-entry surface-mounted conduit
- Durable and vandal resistant



### Architecture & Engineering Specifications

VERDEdri™ hand dryer shall be manufactured by World Dryer Corporation to include a cover constructed of either die-cast aluminum finished with epoxy paint or stainless steel. The wall mounting plate shall be constructed of die-cast aluminum finished with chrome plating. Epoxy painted covers and molded plastic components shall incorporate SteriTouch® antimicrobial technology inhibiting the growth of bacteria, mold and fungus extending the dryer's service life. The cover shall be attached to the wall mounting plate with tamper-proof screws. Motor shall be a thermally-protected universal brush type motor operating at 31,000 RPM and delivering 64 CFM air flow at a velocity of 225 MPH (19,800 LFM). Motor shall have replaceable brushes for extending service life. Dryer shall incorporate universal controls accepting 115 / 208 / 230VAC input. Dryer will incorporate a nichrome wire heating element protected by an automatic resetting thermal cutoff. Dryer will include a replaceable HEPA (high efficiency particulate air) filter. Dryer shall be activated by an automatic infrared sensor with a 30 second vandal shut-off. Control board shall contain a HI / LOW speed control switch. Dryer shall provide an exit air temperature of 130°F at an ambient temperature of 70°F. Dryer shall have an ingress protection rating of IP24. Hand dryer shall be surface-mounted ADA (Americans with Disabilities Act) compliant and certified to standards of safety by Underwriters Laboratories, Inc. and Canadian Standards Association.

### Electrical specifications:

	110-120 V	208 V / 220-240 V
Amps	8.3	4.1
Watts	950	950
Hz	50/60	50/60

### Cover options:

**Cast Aluminum** - with epoxy paint (white or black).  
**Stainless Steel** - with polished or brushed finish

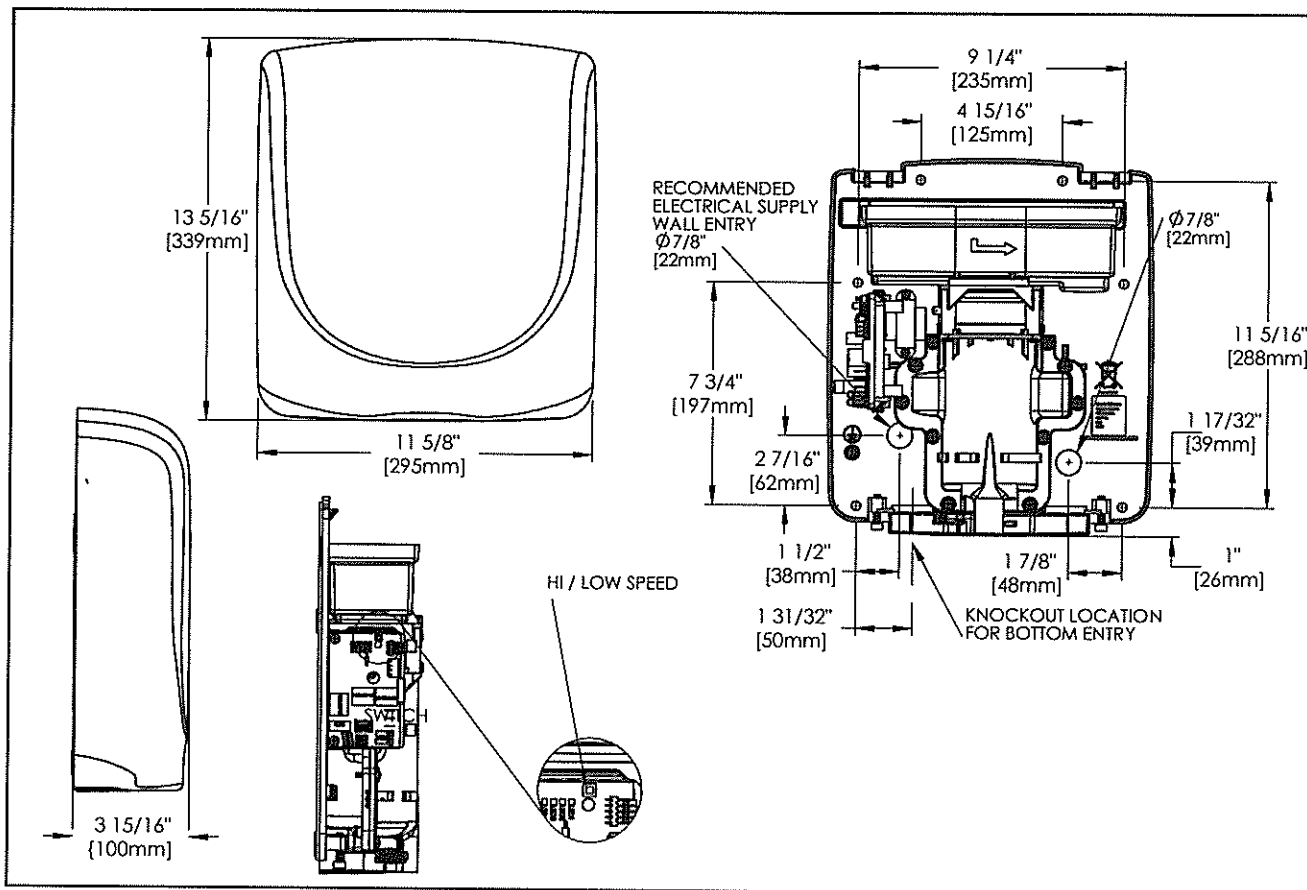
\* HEPA filter removes a minimum of 99.97% of contaminants 0.3 microns in size or larger.



<sup>1</sup> The top entry adapter is used in conjunction with the VERDEdri hand dryer where top entry surface mounted electrical conduit connections are required.

Cover Material	Cover Finish / Kit	110-120 / 208 / 220-240 V	Unit Weight	Shipping Weight	Unit Size (HxWxD) inch / mm	Shipping Size (HxWxD) inch / mm
Aluminum	White	Q-974A	9.8 lbs / 4.4 kgs	11.9 lbs / 5.4 kgs	13.3" x 11.6" x 3.9" 339 x 295 x 100	14.2" x 16" x 6.7" 360 x 405 x 170
Aluminum	Black	Q-162A	9.8 lbs / 4.4 kgs	11.9 lbs / 5.4 kgs	13.3" x 11.6" x 3.9" 339 x 295 x 100	14.2" x 16" x 6.7" 360 x 405 x 170
Stainless Steel	Polished	Q-972A	11.3 lbs / 5.1 kgs	13.4 lbs / 6.1 kgs	13.3" x 11.6" x 3.9" 339 x 295 x 100	14.2" x 16" x 6.7" 360 x 405 x 170
Stainless Steel	Brushed	Q-973A	11.3 lbs / 5.1 kgs	13.4 lbs / 6.1 kgs	13.3" x 11.6" x 3.9" 339 x 295 x 100	14.2" x 16" x 6.7" 360 x 405 x 170
Optional Top Entry Adapter Kit		17-10310	3.8 lbs / 1.7 kgs	5.2 lbs / 2.3 kgs	13.4" x 14.3" x 1.2" 339 x 364 x 30	14.8" x 16" x 4.5" 375 x 405 x 114
HEPA Filter		93-10292K	0.4 lbs / 0.9 kgs	0.7 lbs / 1.5 kgs	9" x 3.3" x 3" 229 x 84 x 76	9.4" x 3.5" x 3.5" 240 x 90 x 90





#### Placement Instruction

- Hand dryers should be spaced at least 2 feet apart, near but not over the wash basin
- In congested areas, dryers should be located to create a flow from wash basin to dryer to exit
- VERDEdri should be mounted at least 18" above or away from reflective surfaces which may interfere with the automatic sensor operation.
- Dryer Quantity Recommendation:  
Average Traffic: 1 dryer per 2 wash basins  
Heavy Traffic: 1 dryer per wash basin  
Industrial 54" Circular wash fountains: 4 dryers per sink
- Recommended mounting heights from floor to dryer bottom edge

Men's washrooms	46" (117 cm)
Women's washrooms	44" (112 cm)
Children's washrooms, ages 4-7	32" (81 cm)
Children's washrooms, ages 7-10	36" (91 cm)
Children's washrooms, ages 10-13	40" (102 cm)
Children's washrooms, ages 13-17	44" (112 cm)
Handicap Mounting Height	37" (94 cm)

#### Installation Guide

- VERDEdri hand dryers require a dedicated circuit with a minimum rating of 15 amps and must be properly grounded
- GFI circuit protection is recommended.
- One side of dryer should be mounted to a stud

#### Certifications



**IP24**



#### Warranty



5 year limited warranty



**WORLD DRYER**

5700 McDermott Drive  
Berkeley, IL 60163 U.S.A.  
800-323-0701  
www.worlddryer.com

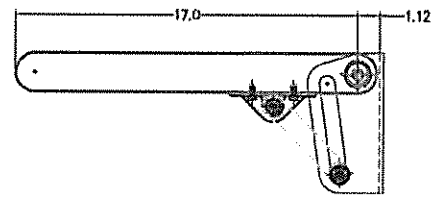
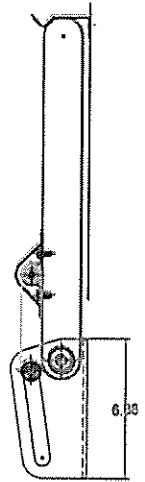
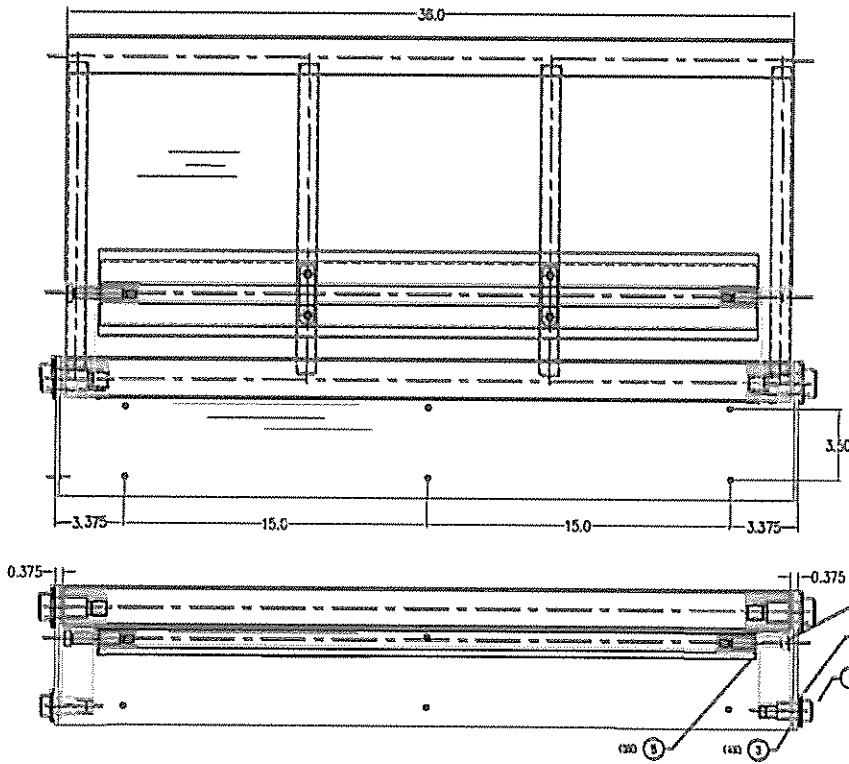


NOTE: UNLESS OTHERWISE SPECIFIED

1. INSTALL 0.75" SHOULDER SCREW AND WASHERS TO SECURE LINKAGE TO WALL BRACKET.
2. INSTALL 0.5" SHOULDER SCREW AND WASHERS TO SECURE LINKAGE TO TABLE CENTER BRACE.
3. ROTATE TABLE TOP TO VERIFY SMOOTH MOVEMENT.

TABLE ASSEMBLY - FT

REVISIONS				
REV	DESCRIPTION	DATE	BY	CHK APP
1	NEW DESIGN	01/01/00	DA	DA



CUSTOMER APPROVAL: \_\_\_\_\_  
DATE: \_\_\_\_\_

REV		DATE		BY		CHK		APP	
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Automated Technologies

MATERIAL		FINISH		NOTES	
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102

4 OF 4

3. ROUTINE TABLE TOP TO VERIFY SMOOTH MOUNTING.

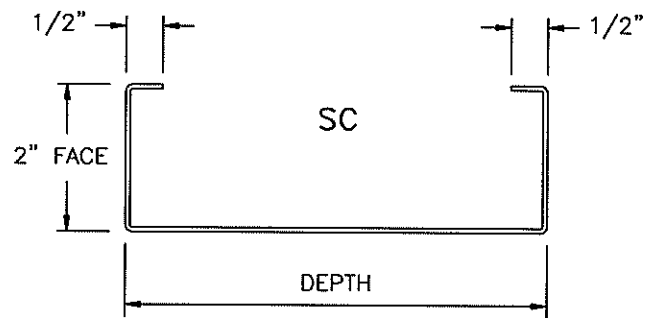
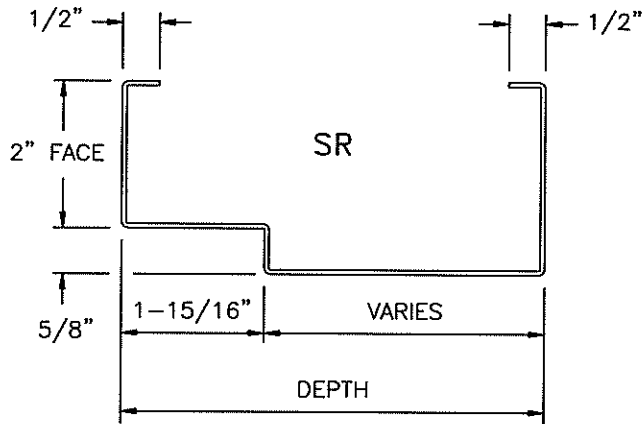
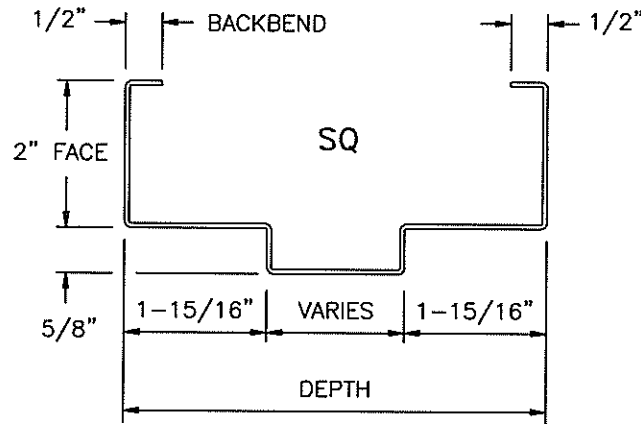


## SERIES SQ, SR, AND SC STEEL FRAMES

FOR 1-3/4" DOORS

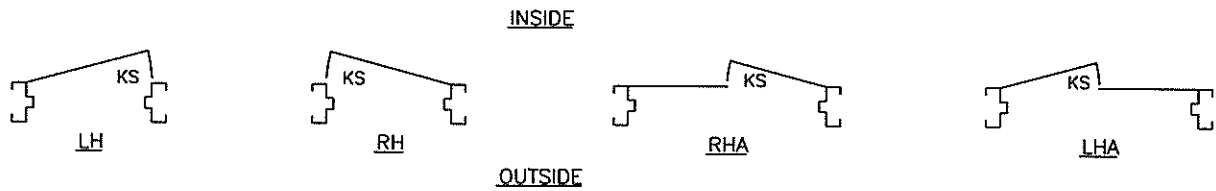
STANDARD WALL APPLICATION, HANDED

\* BASIC PROFILES



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

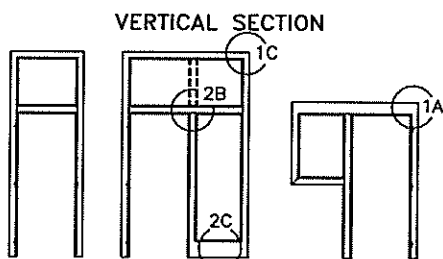
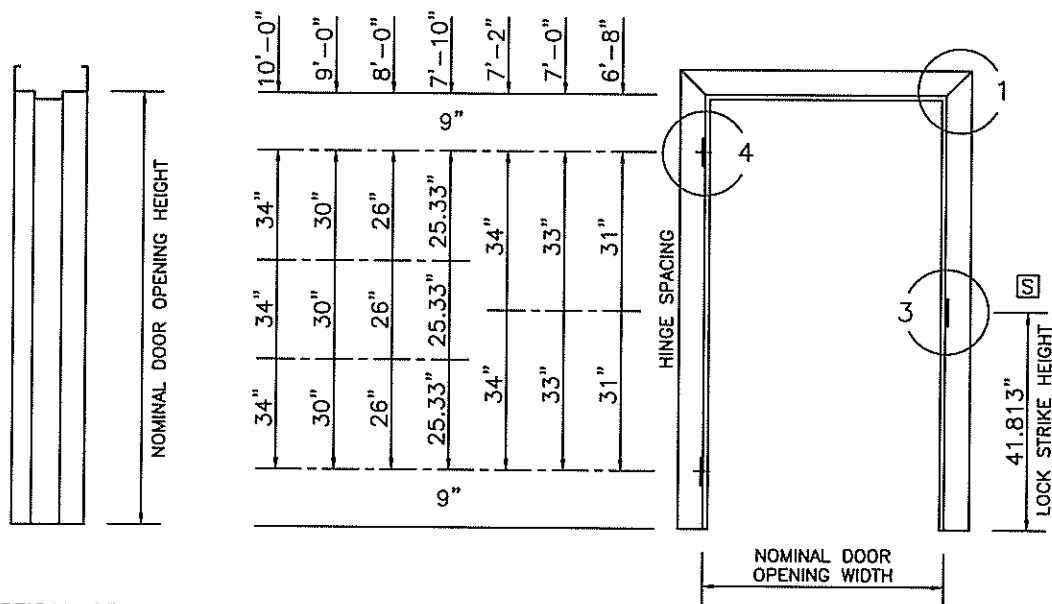
\* Depth, face, soffit, and backbend dimensions are variable (made to order) within limits of material and tooling. Hardware preparations are for 1-3/4" thick doors. Rabbet dimensions and hardware preparations to suit other door thicknesses are also available. Backbends need not be the same on opposite faces of basic profile, but limits of material and/or tooling may restrict certain combinations of backbends and other profile variations. Profiles are not limited to those shown ...many other designs and combinations are available.



"KS" = KEY SIDE

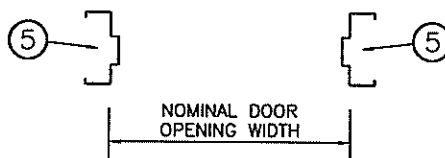
F2-2

Hardware locations shown match Ceco standard doors. Basic double rabbit profile shown ...profile variations similar.



ELEVATION EXAMPLES

TYPICAL ELEVATION



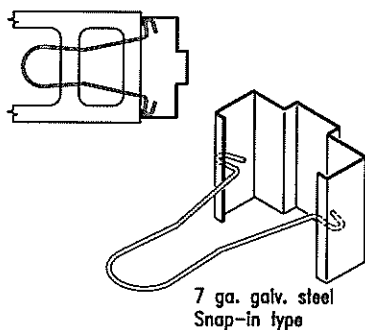
HORIZONTAL SECTION

(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

### JAMB ANCHOR QUANTITIES

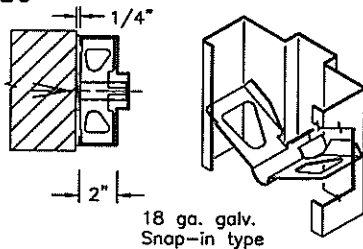
2 PER JAMB FOR HEIGHTS >3'6" THRU 5'0" AND ONE FLOOR ANCHOR  
3 PER JAMB FOR HEIGHTS >5'0" THRU 7'2" AND ONE FLOOR ANCHOR  
4 PER JAMB FOR HEIGHTS >7'2" THRU 7'6" AND ONE FLOOR ANCHOR  
5 PER JAMB FOR HEIGHTS >7'6" THRU 10'0" AND ONE FLOOR ANCHOR  
ONE ADDITIONAL JAMB ANCHOR FOR EACH ADDITIONAL TWO FEET IN HEIGHT OR FRACTION THEREOF  
ONE ADDITIONAL JAMB ANCHOR IN LIEU OF FLOOR ANCHOR FOR EXISTING STUDS AND/OR WALL CONDITIONS.

### WIRE MASONRY ANCHOR WMA



(For 3" thru 8-3/4" Depths)

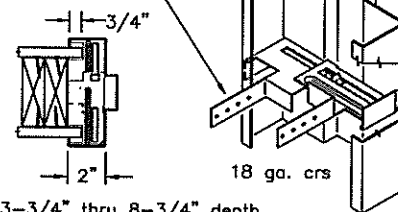
### EXISTING OPENING ANCHOR EO



SQ EO/S6: 5-1/8" thru 6-3/4" depth  
PROFILE EO/S8: 6-7/8" thru 8-3/4" depth

### ADJUSTABLE ANCHOR FOR STUD WALLS ADJ/STUD

SETUP ANCHORS AND BEND TAILPIECES TO GRIP METAL OR WOOD STUD.



3-3/4" thru 8-3/4" depth

**CecoDoor**

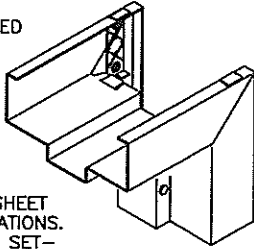
**ASSA ABLOY**

Experience a safer  
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10/18/19

### 1 KNOCKED DOWN (KD) CORNERS

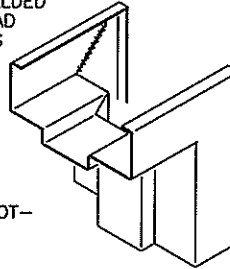
NORMALLY LIMITED TO 3 PIECE FRAMES. CORNERS ARE DIECUT. HEAD AND 2 JAMBS ARE SHIPPED KD FOR FIELD ASSEMBLY. SEE BACK OF SHEET FOR FACE LIMITATIONS. ALSO AVAILABLE SET-UP AND WELDED.



### 10 WELDED CORNERS

MITERED AND WELDED CORNER — HEAD AND JAMB FACES MUST BE EQUAL

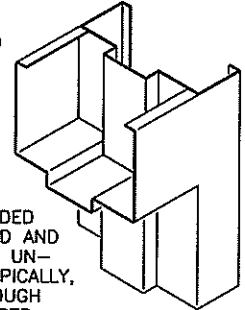
MITER SEAM IS WELDED AND FACE IS GROUND SMOOTH AND SPOT-PRIMERED.



### 1A WELDED CORNERS

FACE SEAM IS WELDED, GROUND SMOOTH, AND SPOT PRIMERED.

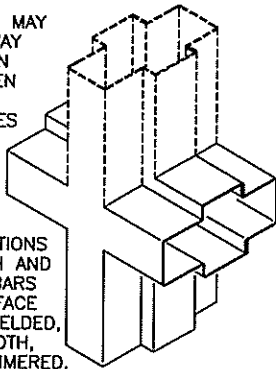
BUTTED AND WELDED CORNER — HEAD AND JAMBS MAY HAVE UNEQUAL FACES. TYPICALLY, JAMB RUNS THROUGH AND HEAD IS COPED.



### 2B INTERSECTIONS

INTERSECTIONS MAY BE 3 OR 4-WAY (4-WAY SHOWN DOTTED) ...OPEN OR CLOSED FRAME PROFILES MAY BE USED.

TYPICALLY, VERTICAL SECTIONS RUN THROUGH AND HORIZONTAL BARS ARE COPED. FACE SEAMS ARE WELDED, GROUND SMOOTH, AND SPOT PRIMERED.

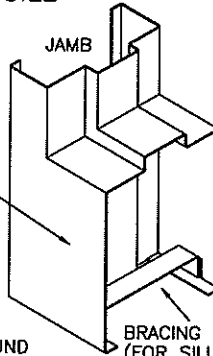


### 2C SIDELITE SILL

SILL

FACE SEAM IS WELDED, GROUND SMOOTH, AND SPOT PRIMERED.

BRACING STRAP (FOR SILLS OVER 4" HIGH ONLY)

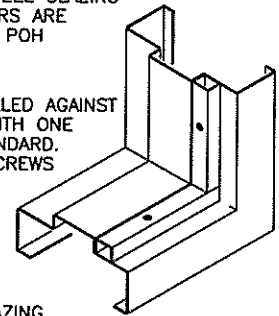


### 2 GLAZING PROVISIONS

SIDELITES, TRANSOMS, AND BORROWED LITES ARE PROVIDED WITH 5/8" HIGH 18ga. GALV. STEEL GLAZING BEAD. FASTENERS ARE #8x18x1-1/2" POH TEK SCREWS.

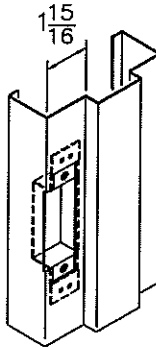
BEAD IS INSTALLED AGAINST FRAME STOP WITH ONE SCREW AS STANDARD. BALANCE OF SCREWS ARE SHIPPED LOOSE.

GLASS AND GLAZING ARE BY GLAZING CONTRACTOR



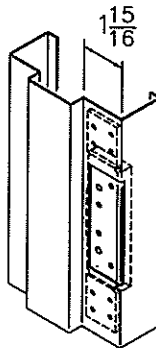
### 3 LOCK STRIKE PREPARATION

**S** UNIVERSAL (4-7/8") ANSI A115.1 & 2 TEMPLATE. 16 GAGE STEEL REINFORCING WITH EXTRUDED THREADS EQUAL TO 14 GAGE. PREPARATIONS FOR OTHER MECHANICAL OR ELECTRONIC LOCKS, EXIT, OR SECURITY DEVICES ARE ALSO AVAILABLE. ASK FOR DETAILS.



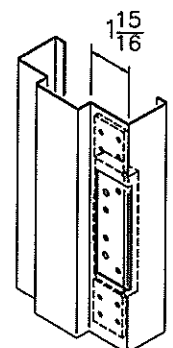
### 4 HINGE PREPARATION

4-1/2" x .134" or 4-1/2" x .180" ANSI A156.7 TEMPLATE. 7 GAGE STEEL REINFORCEMENT. PLASTER GUARD IS 26 GAGE STEEL. BACKSET: 5/16"

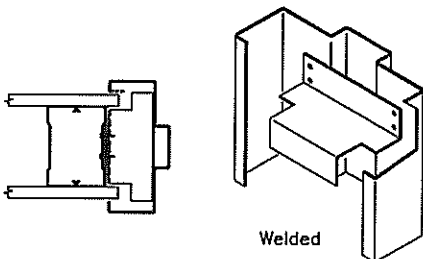


### 4 HINGE PREPARATION

5" x .146" or 5" x .190" ANSI A156.7 TEMPLATE. 7 GAGE STEEL REINFORCEMENT. PLASTER GUARD IS 26 GAGE STEEL. BACKSET: 5/16"

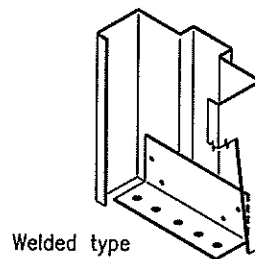


### 5 METAL STUD "Z" ANCHOR MSZ2



Welded

### 5 SPECIAL SIZE FLOOR ANCHOR SA

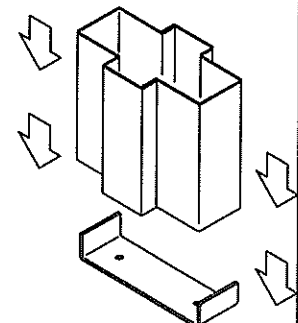


Welded type

ONE PIECE

### 5A SIDELITE FLOOR ANCHOR SLFA

IN-FIELD: FASTEN ANCHOR TO FLOOR. SLIP-FIT MULLION OVER ANCHOR



(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

**Ceco Door**  
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F2-4

### STANDARD SIZES NOMINAL DOOR OPENING

WIDTH		HEIGHT
SINGLE	DOUBLE	
2'-0"	4'-0"	6'-8"
2'-4"	4'-8"	
2'-6"	5'-0"	
2'-8"	5'-4"	
2'-10"	5'-8"	7'-2"
3'-0"	6'-0"	7'-10"
3'-4"	6'-8"	8'-0"
3'-6"	7'-0"	9'-0"
3'-8"	7'-4"	10'-0"
3'-10"	7'-8"	
4'-0"	8'-0"	
5'-0"	10'-0"	

### FIRE DOOR FRAMES

#### LABELING AGENCIES:

- UNDERWRITERS LABORATORY
- WARNOCK HERSEY
- FACTORY MUTUAL

TEST: UL 10C, UL 10B,  
UL 1784, & NFPA 252

• RATING: 20 MIN, 3/4 HR,  
1 HR, 1-1/2 HR, OR 3 HR

• MAX. SIZE: 4'0" x 10'0" SINGLE  
8'0" x 10'0" PAIR

Not all ratings are available  
in all sizes, elevations, and  
materials.  
Hourly ratings are not  
shown on label unless rating  
is less than 3 hours.

### PRODUCT SPECIFICATIONS:

Steel door frames shall be as manufactured by Ceco Door Products, Milan, TN or Mason City, IA, USA. They shall conform to the Steel Door Institute guide specification, ANSI A250.8. See chart below for performance classifications.

**Series SQ, SR, and SC** frames for 1-3/4" doors are formed from commercial quality cold rolled steel conforming to ASTM A1008 ...or (optional) hot-dipped galvanized or galvanized steel conforming to ASTM A924 and A653 - see chart below.

3 piece door frames are shipped knocked down or welded. Transoms, sidelites and borrowed lites are welded unit type with all exposed welds ground smooth. Oversize frames are shipped in multiple units for field splicing. Integral door stops are 5/8" high. Double rabbet (SQ), single rabbet (SR), or cased opening (SC) profiles are sized to suit wall applications. Elevations conform with approved Ceco shop drawings. Jamb anchors are available for new masonry, wood stud, metal stud or existing opening wall conditions (indicate which). Floor anchors or extra jamb anchors are provided to anchor sill.

**Hardware Provisions:** Frames are handed. Hinge jambs are mortised for 4-1/2" or 5" high, standard or heavy weight hinges (specify which). 7 gage steel reinforcements are welded in place and are drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is prepared for 4-7/8" universal strike in accordance with ANSI A 115.1 & 2. Plaster guards are 26 gage steel. Preparations for various other mechanical and electronic locks and strikes are also available. Optional hardware reinforcement (e.g. closer/holder) is 14 gage minimum steel welded in place (designate hardware). 3 mute holes are provided per strike jamb and 2 for double swing heads.

**Paint:** Steel door frames are provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is a preparatory base for necessary finish painting. "Colorstyle" finish coat is also available on K.D. frames from a selection of standard colors (optional). Colorstyle finish is electrostatically applied, oven-cured urethane enamel, and shall conform to ANSI A250.3. For accurate color selectors ask for a Ceco Colorstyle chart.

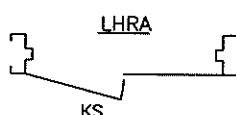
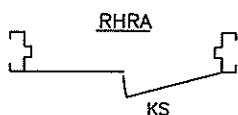
### MATERIAL

DOOR FRAME MATERIAL	LEVEL	C.R.	GALV	
			A60	G90
16 Gage Steel	Heavy or Extra Heavy Duty	STD	OPT	OPT
14 Gage Steel	Maximum Duty	STD	OPT	OPT

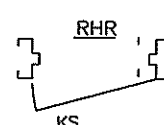
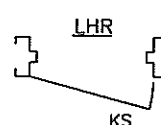
(Conversion: 1" = 25.4 mm, e.g., 1-3/4" = 44.45 mm)

### PERFORMANCE

Physical Endurance Level:	Meets ANSI A250.4 Performance Test -- 16 & 14 gage steel: Level A (1,000,000 Cycles)
---------------------------	--



INSIDE



OUTSIDE

"SUFFIX A" = ACTIVE LEAF OF PAIRS

"KS" = KEY SIDE

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## "EPT8R5" Stainless Steel Prep Table w/ Sink

w/ 18 Gauge Stainless Steel Work Top  
w/ Stainless Base & Adjustable Undershef



Item #	_____	Qty	_____
Model #	_____		
Project	_____		

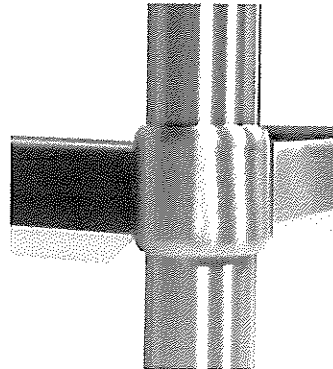
AUTOQUOTES



18 GAUGE TOP w/ ADJUSTABLE UNDERSHELF

### FEATURES:

- \* 18 Gauge Stainless Steel Top with 5" Riser & turndown  
Type 300 stainless steel with # 4 polish, satin finish
- \* 1 1/2" **Stallion Edge** on front with  
side edges 90 degree bend down for table line-up
- \* (1) 16"x 20"x12" Bowl
- \* Stainless Steel Base with **Adjustable** Undershef
- \* Adjustable bullet feet
- \* Shipped knocked-down, easy - to - assemble
- \* NSF Approved



30"WIDE	Qty
EPT8R5-3060SSK-L	
EPT8R5-3060SSK-R	
EPT8R5-3072SSK-L	
EPT8R5-3072SSK-R	

L = Left Bowl  
R = Right Bowl

### CONSTRUCTION:

Top: Stainless Steel Tops are TIG welded, Exposed welds are polished to match adjacent surface.

### MATERIAL:

Top: 18 gauge stainless steel  
Type 300 stainless steel with # 4 polish, satin finish

Shelf: 18 gauge stainless steel

Legs: 1 5/8" Round O.D., 16 gauge tubular stainless steel

Gussets: Stainless Steel

Feet: 1" adjustable stainless steel bullet feet

## John Boos & Co

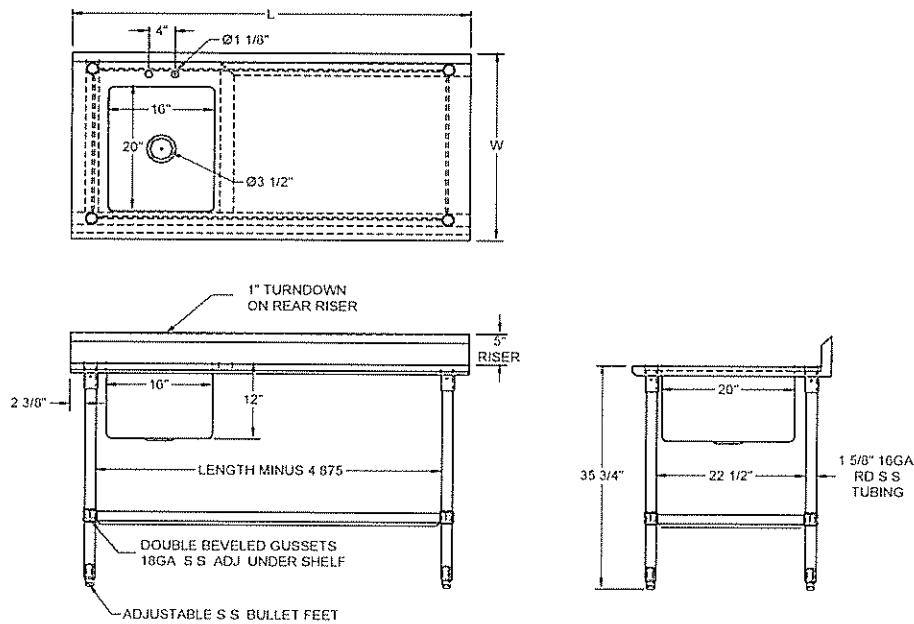
3601 S. Banker Street - Effingham, IL 62401

Phone: 217-347-7701 - Fax: 217-347-7705

Email: sales@johnboos.com - Web-site: www.johnboos.com



## DETAILED SPECIFICATIONS



All units ship unassembled for reduced shipping cost.  
All dimensions are typical.  
Tolerance +/- .500".

Finished size of undershelf.  
Shelf length = length minus 4.875"  
Shelf width = width minus 4.25"

### 16 GAUGE TOP & UNDERSHELF

L	30" WIDE	W
60	EPT8R5-3060SSK-L	145
60	EPT8R5-3060SSK-R	145
72	EPT8R5-3072SSK-L	195
72	EPT8R5-3072SSK-R	195

5 = Height of Riser w/ turndown

R = Riser Top Work Table

8 = 18. ga Work Surface

EPT = Economy Prep Table

Width

Length

SS = Stainless Legs & Shelf

K = K.D. w/ Adjustable Shelf

Bowl Location

**EPT8R5-3060SSK-L**

### John Boos & Co

3601 S. Banker - Effingham, IL 62401 Phone: 217-347-7701 - Fax: 217-347-7705

Email: sales@johnboos.com - Web-site: www.johnboos.com



OCT 2014

John Boos is constantly engaged in a program of improving products and therefore reserves the right to change specification without prior notice



# UF-5000

## UNIVERSAL FLUSH

### Application

- Installation in Drywall, Plaster, Masonry, Tile or any flush surface

### Product Features

- Door panel has rounded safety corners providing an architecturally pleasing appearance
- One piece trim flange will not rack, sag or distortion
- Unique continuous concealed hinge will not bind

### UF-5000 Access Door Specifications:

**Material:** Up to 16" X 16" - 16 gauge, 18 gauge mounting frame,

over 16" X 16" - 14 gauge door, 16 gauge mounting frame

**Door:** Flush to frame with rounded safety corners

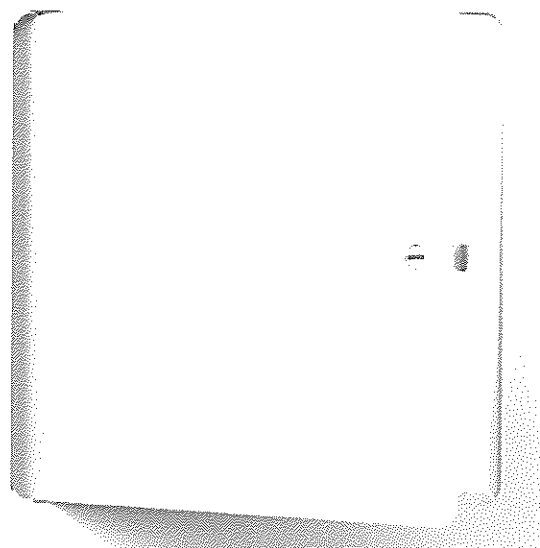
**Mounting Frame:** One piece outer flange welded to mounting frame

**Hinge:** Continuous, concealed

**Latch:** Stainless Steel screwdriver operated cam latch

**Optional Latches/Locks:** Cylinder lock and key, allen head cam latch, spanner head cam latch

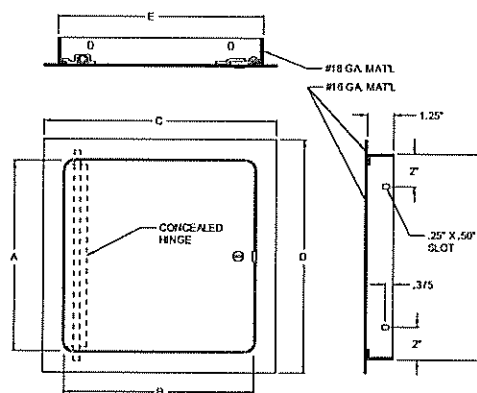
**Finish:** Steel: 5-stage iron phosphate preparation with prime coat of White alkyd baking enamel OR Stainless Steel: Type 304 - #4 satin polish



### UF-5000 STANDARD SIZES

(other sizes available upon request)

Nominal Door Size W&H		Latches	Weight per Door	
Inches	mm		lbs.	kg.
6 X 6	152 X 152	1	2	.9
8 X 8	203 X 203	1	2.7	1.2
8 X 12	203 X 305	1	3.6	1.6
10 X 10	254 X 254	1	3.6	1.6
12 X 12	305 X 305	1	4.7	2.1
12 X 16	305 X 406	2	6	2.7
12 X 18	305 X 457	2	7	3.1
12 X 24	305 X 610	2	8.5	3.9
14 X 14	356 X 356	1	6.2	2.7
16 X 16	406 X 406	2	7.6	3.4
16 X 24	406 X 610	2	12.5	5.7
18 X 18	457 X 457	2	11.2	5.1
18 X 24	457 X 610	2	15	6.7
22 X 22	560 X 560	4	16.3	7.2
22 X 30	560 X 762	5	21	9.5
22 X 36	560 X 914	5	26	12
24 X 24	610 X 610	4	18	8.2
24 X 30	610 X 762	5	22.5	10.2



### UF-5000 STANDARD SIZES

(other sizes available upon request)

Nominal Door Size W&H		Latches	Weight per Door	
Inches	mm		lbs.	kg.
24 X 36	610 X 914	5	26.6	12.1
24 X 48	610 X 1220	5	38	18.1
30 X 30	762 X 762	5	27.5	12.5
36 X 36	914 X 914	5	39	17.7

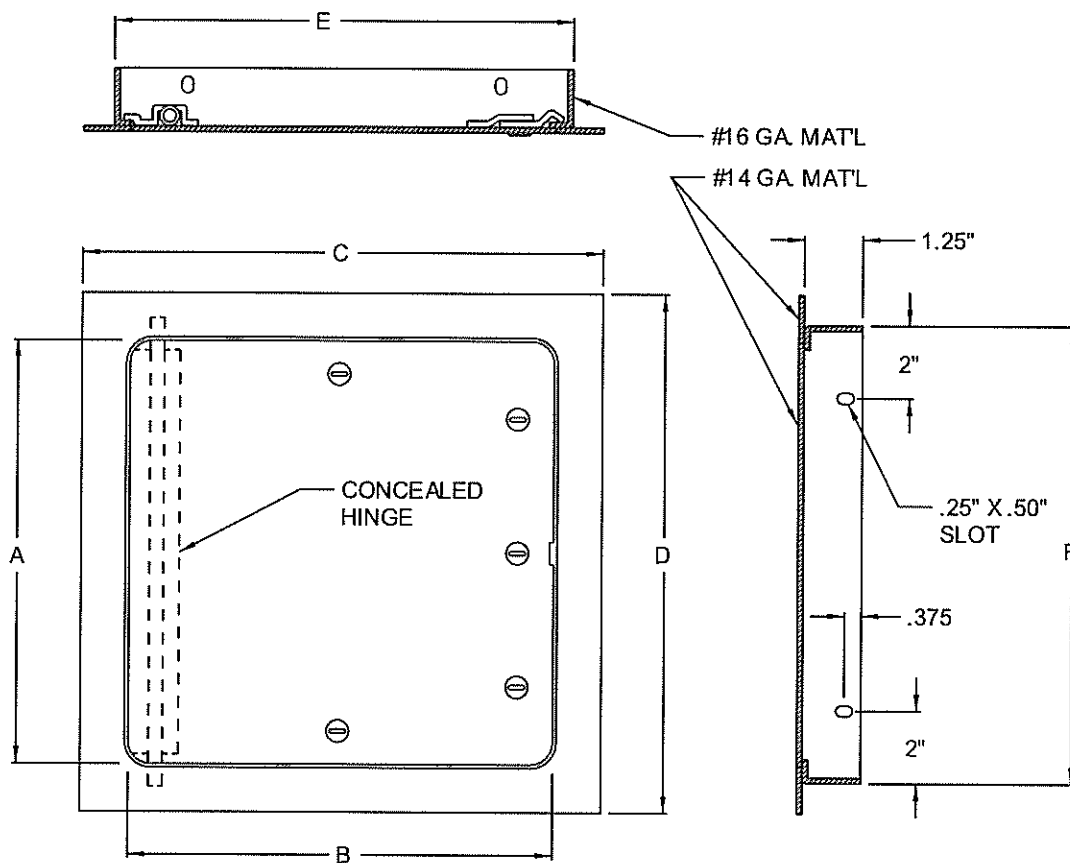
Wall or ceiling opening is nominal door size + 3/8" (9 mm)  
For detailed specifications see submittal sheet

**ACUDOR**

www.acudor.com  
 U.S.A.: info@acudor.com / 800.722.0501  
 CANADA: info@acudor.ca / 844.228.3671  
 INTERNATIONAL: info@acudorintl.com  
 (905) 428.2240

**UF-5000****UNIVERSAL FLUSH**

QTY.	NOMINAL SIZE	A	B	C	D	E	F	LOCK
	16 x 24 (406 x 610)	23.45 (596)	15.45 (392)	17.62 (448)	25.62 (651)	16.25 (413)	24.25 (616)	2
	18 x 18 (457 x 457)	17.45 (443)	17.45 (443)	19.62 (498)	19.62 (498)	18.25 (464)	18.25 (464)	2
	18 x 24 (457 x 610)	23.45 (596)	17.45 (443)	19.62 (498)	25.62 (651)	18.25 (464)	24.25 (616)	2
	22 x 22 (560 x 560)	21.45 (545)	21.45 (545)	23.62 (600)	23.62 (600)	22.25 (565)	22.25 (565)	4
	22 x 30 (560 x 762)	29.45 (748)	21.45 (545)	23.62 (600)	31.62 (803)	22.25 (565)	30.25 (768)	5
	22 x 36 (560 x 914)	35.45 (900)	21.45 (545)	23.62 (600)	37.62 (956)	22.25 (565)	36.25 (921)	5
	24 x 24 (610 x 610)	23.45 (596)	23.45 (596)	25.62 (651)	25.62 (651)	24.25 (616)	24.25 (616)	4
	24 x 30 (610 x 762)	29.45 (748)	23.45 (596)	25.62 (651)	31.62 (803)	24.25 (616)	30.25 (768)	5
	24 x 36 (610 x 914)	35.45 (900)	23.45 (596)	25.62 (651)	37.62 (956)	24.25 (616)	36.25 (921)	5
	24 x 48 (610 x 1220)	47.45 (1205)	23.45 (596)	25.62 (651)	49.62 (1260)	24.25 (616)	48.25 (1225)	5
	30 x 30 (762 x 762)	29.45 (748)	29.45 (748)	31.62 (803)	31.62 (803)	30.25 (768)	30.25 (768)	5
	36 x 36 (914 x 914)	35.45 (900)	35.45 (900)	37.62 (956)	37.62 (956)	36.25 (921)	36.25 (921)	5



STANDARD FEATURES: SLOTTED SCREW CAM LATCH, CARBON STEEL, PRIME COAT BAKED ENAMEL FINISH

OPTIONS:

- LOCK TYPE**
- ☐ CYLINDER LOCK AND KEY
  - ☐ ALLEN HEAD CAM LATCH
  - ☐ SPANNER HEAD CAM LATCH
  - ☐ OTHER

- MATERIAL**
- ☐ STAINLESS STEEL
  - ☐ OTHER

- FINISH**
- ☐ #4 SATIN POLISH
  - ☐ OTHER

JOB NAME:

APPROVED BY:

CUSTOMER:

DATE:

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## Submittal Data Sheet

3.0 Ton VRV-IVS Heat Pump - RXTQ36TAVJ9A

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

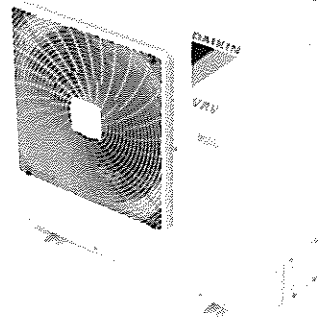
Submitted to: No Engineer Name Specified

## FEATURES

- Variable Refrigerant Temperature (VRT) technology allows VRV IV S series to deliver improved efficiencies and year round comfort
- Improved efficiencies with SEER values up to 18.0 and HSPF values up to 10.0
- Engineered with highly reliable Daikin Swing compressors
- All inverter compressors to increase efficiency and avoid starting current rush
- Can provide heating down to -4°F
- Added safety with optional auto changeover to auxiliary heat
- Easier installation with over 60% weight reduction compared to VRV III S

## BENEFITS

- Single-phase technology enables installation in light commercial and residential applications
- Broader diversity with up to 9 indoor units connectivity
- Space saving compact design
- Design flexibility with long piping lengths up to 984ft total and 49ft vertical separation between indoor units
- Designed with reduced MOP to optimize installation costs
- Backed by best in class 10-years Parts Limited Warranty and 10-years Replacement Compressor Limited Warranty\*



VRV IV





## Submittal Data Sheet

### 3.0 Ton VRV-IVS Heat Pump - RXTQ36TAVJ9A

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

Submitted to: No Engineer Name Specified

#### PERFORMANCE

Outdoor Unit Model No.	RXTQ36TAVJ9A	Outdoor Unit Name:	3.0 Ton VRV-IVS Heat Pump
Type:	Heat Pump		
Rated Cooling Conditions:	Indoor (*F DB/DB): 80 / 67 Ambient (*F DB/WB): 95 / 75	Rated Heating Conditions:	Indoor (*F DB/WB): 70 / 60 Ambient (*F DB/WB): 47 / 43
Rated Piping Length(ft):	25		
Rated Height Difference (ft):			
Rated Cooling Capacity (Btu/hr):	34,200	Rated Heating Capacity (Btu/hr):	37,000
Cooling Input Power (kW):	3.13	Heating Input Power (kW):	3.12
EER (Non-Ducted/Ducted):	12.00 / 10.00	Heating COP (Non-Ducted/Ducted):	/
SEER (Non-Ducted/Ducted):	18.00 / 16.00	HSPF (Non-Ducted/Ducted):	10.3 / 9.0
Max/Min Cooling Capacity (Btu/hr):	/	Max/Min Heating Capacity (Btu/hr):	

#### OUTDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Compressor Stage:	Inverter
Power Supply Connections:		Capacity Control Range (%):	14 - 100
Min. Circuit Amps MCA (A):	16.5	Airflow Rate (H) (CFM):	2682
Max Overcurrent Protection (MOP) (A):	25	Gas Pipe Connection (inch):	5/8
Max Starting Current MSC(A):		Liquid Pipe Connection (inch):	3/8
Rated Load Amps RLA(A):	15.3	Sound Pressure (H) (dBA):	58
Dimensions (HxWxD) (in):	39 x 37 x 12-5/8	Sound Power Level (dBA):	75
Net Weight (lb):	172		





## Submittal Data Sheet

### 0.6-Ton DC-Ducted Concealed Ceiling Unit - FXMQ07PBVJU

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

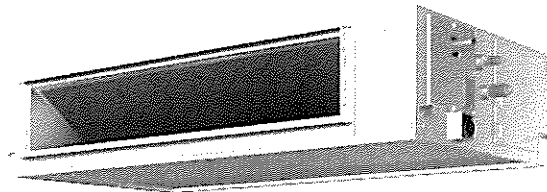
Submitted to: No Engineer Name Specified

## FEATURES

- ⊗ Increased capacity range for increased flexibility
- ⊗ Improved efficiency with DC fan motor
- ⊗ Ease of installation with auto adjusting airflow at commissioning based on external static pressure
- ⊗ Easy maintenance with service access from below
- ⊗ Installation flexibility with a low profile, compact design at less than 12" in height
- ⊗ Integral condensate pump with up to 18-3/8" lift
- ⊗ Standard Limited Warranty: 10-year warranty on compressor and all parts

## BENEFITS

- ⊗ Enhanced indoor air quality and LEED ready with MERV 13 filter options
- ⊗ Flexible ductwork design with ESP capabilities up to 0.40" W.G.
- ⊗ New economizer control logic
- ⊗ New configurable auxiliary heater control logic
- ⊗ Design allows it to be completely concealed - perfect for retail, classrooms, offices, banks, restaurants, and hotels.





## Submittal Data Sheet

### 0.6-Ton DC-Ducted Concealed Ceiling Unit - FXMQ07PBVJU

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

Submitted to: No Engineer Name Specified

#### PERFORMANCE

Indoor Unit Model No.	FXMQ07PBVJU	Indoor Unit Name:	0.6-Ton DC-Ducted Concealed Ceiling Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor ("F DB/WB): 80 / 67 Ambient ("F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	7,200	Rated Heating Conditions:	Indoor ("F DB/WB): 70 / 60 Ambient ("F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	6,400	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.080	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	8,500		
Heating Input Power (kW):	0.07		

#### INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (HH/H/L) (CFM):	317/264/229
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	0.6	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-13/16 x 21-5/8 x 27-9/16	Condensate Connection (inch):	1-1/4
Net Weight (lb):	55	Sound Pressure (H/L) (dBA):	31/29
Ext. Static Pressure (Rated/Max) (inWg):	0.2" / 0.4"	Sound Power Level (dBA):	56





## Submittal Data Sheet

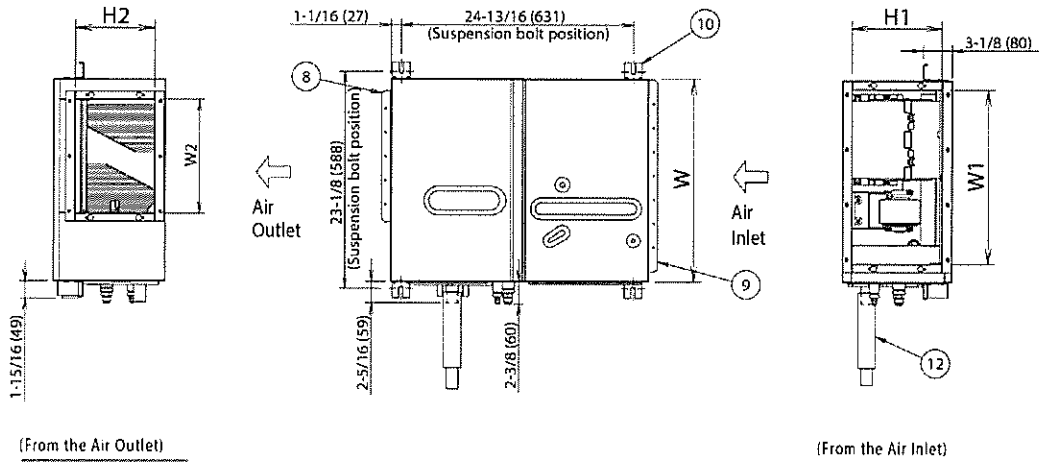
### 0.6-Ton DC-Ducted Concealed Ceiling Unit - FXMQ07PBVJU

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

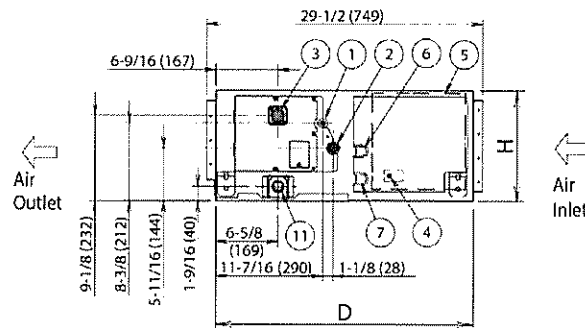
Submitted to: No Engineer Name Specified

## DIMENSIONAL DRAWING



(From the Air Outlet)

(From the Air Inlet)



H	11-13/16 (300)
W	21-5/8 (550)
D	27-9/16 (700)
Air Inlet	H1 9-3/4 (247)
	W1 18-11/16 (475)
Air Outlet	H2 8-7/16 (215)
	W2 12-3/16 (310)

1 2	Drain hose(Accessory)	O.D.φ1-1/4(φ32)(Outlet)
1 1	Socket(For maintenance)	VP25(O.D.φ1-1/4(φ32),I.D.φ1(φ25))
1 0	Hanger	For M10
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply connection	
6	Transmission wiring connection	
5	Control box(Inside)	
4	Ground terminal(Terminal in Control box)	M4
3	Drain pipe connection	VP25(O.D.φ1-1/4(φ32),I.D.φ1(φ25))
2	Gas pipe connection	φ1/2(φ12.7) flare connection
1	Liquid pipe connection	φ1/4(φ6.4) flare connection
ITEM	PART NAME	REMARK

Note: For additional dimensional data and clearance information, refer to Engineering Data



## Submittal Data Sheet

### 1.0-Ton DC-Ducted Concealed Ceiling Unit - FXMQ12PBVJU

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

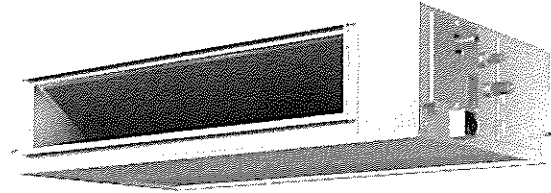
Submitted to: No Engineer Name Specified

## FEATURES

- Increased capacity range for increased flexibility
- Improved efficiency with DC fan motor
- Ease of installation with auto adjusting airflow at commissioning based on external static pressure
- Easy maintenance with service access from below
- Installation flexibility with a low profile, compact design at less than 12" in height
- Integral condensate pump with up to 18-3/8" lift
- Standard Limited Warranty: 10-year warranty on compressor and all parts

## BENEFITS

- Enhanced indoor air quality and LEED ready with MERV 13 filter options
- Flexible ductwork design with ESP capabilities up to 0.40" W.G.
- New economizer control logic
- New configurable auxiliary heater control logic
- Design allows it to be completely concealed - perfect for retail, classrooms, offices, banks, restaurants, and hotels.





## Submittal Data Sheet

### 1.0-Ton DC-Ducted Concealed Ceiling Unit - FXMQ12PBVJU

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

Submitted to: No Engineer Name Specified

#### PERFORMANCE

Indoor Unit Model No.	FXMQ12PBVJU	Indoor Unit Name:	1.0-Ton DC-Ducted Concealed Ceiling Unit
Type:	Concealed Ducted	Rated Cooling Conditions:	Indoor (*F DB/WB): 80 / 67 Ambient (*F DB/WB): 95 / 75
Rated Cooling Capacity (Btu/hr):	12,000	Rated Heating Conditions:	Indoor (*F DB/WB): 70 / 60 Ambient (*F DB/WB): 47 / 43
Sensible Capacity (Btu/hr):	9,700	Rated Piping Length(ft):	
Cooling Input Power (kW):	0.190	Rated Height Separation (ft):	
Rated Heating Capacity (Btu/hr):	13,500		
Heating Input Power (kW):	0.18		

#### INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / 60 / 1	Airflow Rate (HH/H/L) (CFM):	450/410/388
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	1.4	Gas Pipe Connection (inch):	1/2
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	1/4
Dimensions (HxWxD) (in):	11-13/16 x 27-9/16 x 27-9/16	Condensate Connection (inch):	1-1/4
Net Weight (lb):	62	Sound Pressure (H/L) (dBA):	37/35
Ext. Static Pressure (Rated/Max) (inWg):	0.2" / 0.4"	Sound Power Level (dBA):	65



## Submittal Data Sheet

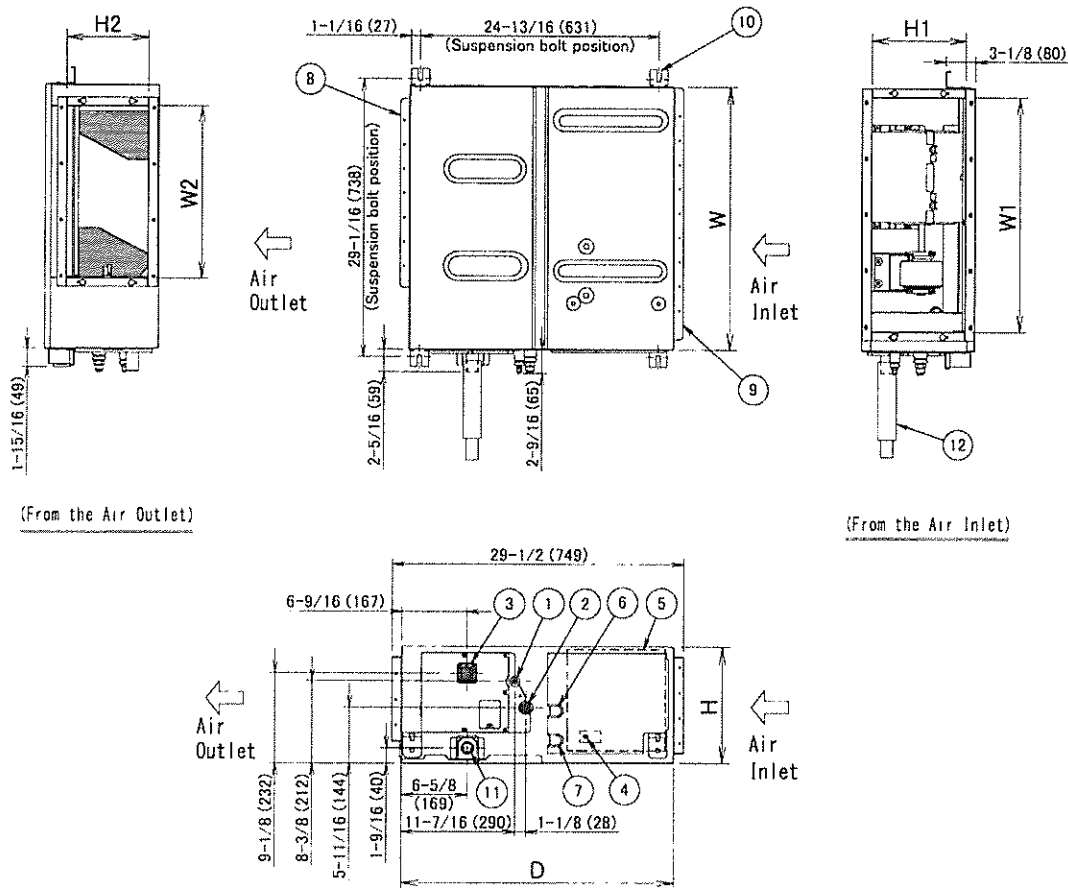
### 1.0-Ton DC-Ducted Concealed Ceiling Unit - FXMQ12PBVJU

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

Submitted to: No Engineer Name Specified

## DIMENSIONAL DRAWING



12	Drain hose (Accessory)	Ø D $\phi$ 1-1/4 (Ø 32) (Outlet)
11	Socket (For maintenance)	VP25 (Ø D $\phi$ 1-1/4 (Ø 32), I D $\phi$ 1 (Ø 25))
10	Hanger	For M10
9	Air Inlet flange	
8	Air Outlet flange	
7	Power supply connection	
6	Transmission wiring connection	
5	Control box (Inside)	
4	Ground terminal (Terminal in Control box)	M4
3	Drain pipe connection	VP25 (Ø D $\phi$ 1-1/4 (Ø 32), I D $\phi$ 1 (Ø 25))
2	Gas pipe connection	$\phi$ 1/2 (Ø 12.7) flare connection
1	Liquid pipe connection	$\phi$ 1/4 (Ø 6.4) flare connection
ITEM	PART NAME	REMARK

H	11-13/16 (300)
W	27-9/16 (700)
D	27-9/16 (700)
Air Inlet H1	9-3/4 (247)
W1	24-5/8 (625)
Air Outlet H2	8-7/16 (215)
W2	18-1/8 (460)

Note: For additional dimensional data and clearance information, refer to Engineering Data



## Submittal Data Sheet

### Energy Recovery Ventilator - VAM1200GVJU

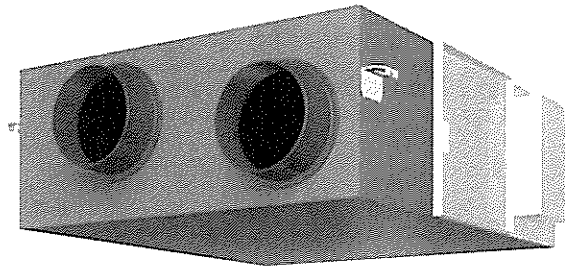
Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

Submitted to: No Engineer Name Specified

## FEATURES

- Superior performance with a high efficiency fan and the capability for use in a wide range of climates (5 to 122°FDB and 80% RH or less)
- Interlocked simultaneous operation with VRV indoor units
- Pre-cooling/heating control function to delay the start of ventilation during air conditioner start-up for higher energy savings
- Unique functions such as independent operation, interlock with other HVAC systems and automatic night purge to reduce cooling loads and increase energy savings
- Standard Limited Warranty: 10-year warranty on compressor and all parts





## Submittal Data Sheet

### Energy Recovery Ventilator - VAM1200GVJU

Project: Pohick Bay - Bath House, VA

Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

Submitted to: No Engineer Name Specified

#### PERFORMANCE

Indoor Unit Model No.	VAM1200GVJU	Indoor Unit Name:	Energy Recovery Ventilator
Type:		Rated Cooling Conditions:	Indoor (°F DB/WB): / Ambient (°F DB/WB): 5 / 122
Rated Cooling Capacity (Btu/hr):		Rated Heating Conditions:	Indoor (°F DB/WB): / Ambient (°F DB/WB): 5 / 122
Sensible Capacity (Btu/hr):		Rated Piping Length(ft):	
Cooling Input Power (kW):	1.720	Rated Height Separation (ft):	
Heating Input Power (kW):	1.72		

#### INDOOR UNIT DETAILS

Power Supply (V/Hz/Ph):	208-230 / / 1	Airflow Rate (H/M/L) (CFM):	1200/1,200/930
Power Supply Connections:	L1, L2, Ground	Moisture Removal (Gal/hr):	
Min. Circuit Amps MCA (A):	8.1	Gas Pipe Connection (inch):	
Max Overcurrent Protection (MOP) (A):	15	Liquid Pipe Connection (inch):	
Dimensions (HxWxD) (in):	30-7/8 x 63-3/4 x 47-13/16	Condensate Connection (inch):	
Net Weight (lb):	346	Sound Pressure (H/L) (dBA):	44/42
Ext. Static Pressure (Rated/Max) (inWg):	0.5 / 0.56	Sound Power Level (dBA):	38



## Submittal Data Sheet

### Energy Recovery Ventilator - VAM1200GVJU

Project: Pohick Bay - Bath House, VA

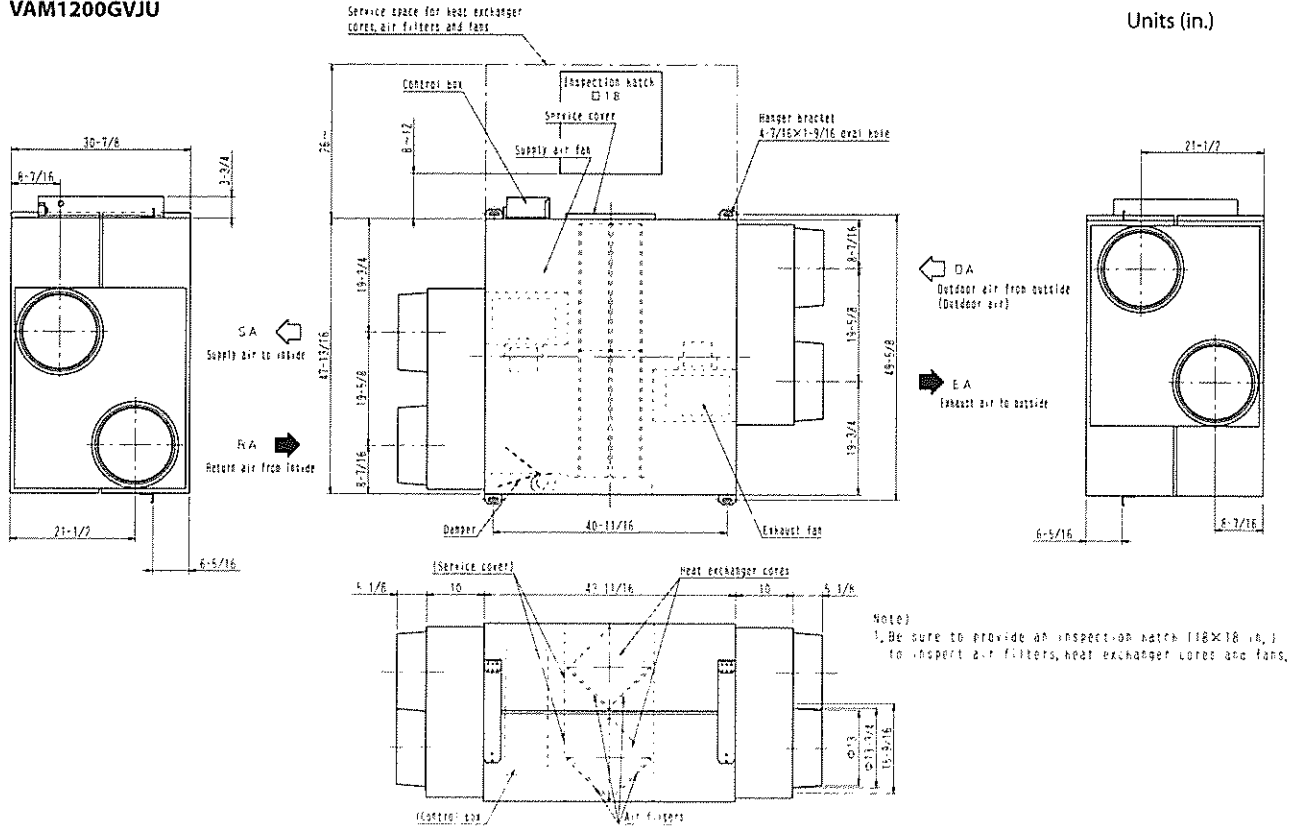
Submitted by: Josh Feshari of HAVTECH INC on 11/2/2020

Submitted to: No Engineer Name Specified

## DIMENSIONAL DRAWING

### VAM1200GVJU

Units (in.)





## Submittal Data Sheet

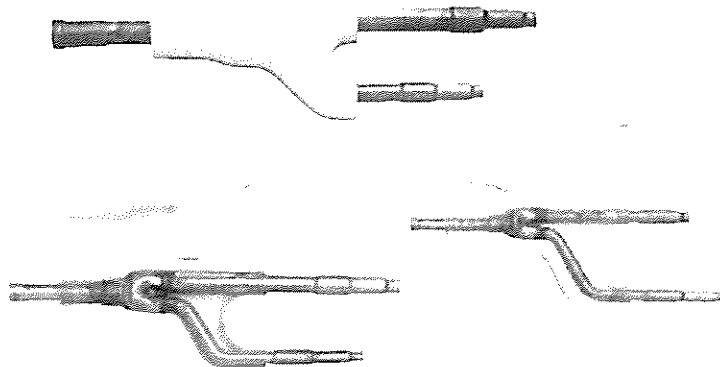
2 PIPE REFNET JOINT  
KHRP26A22T9

## DESCRIPTION

REFNET Joints provide a factory designed option for the branching within the refrigerant piping network.

## FEATURES

- Engineered for uniform refrigerant flow and refrigerant distribution.
- Designed to help smoother oil return.
- Flexible installation; vertical or  $\pm 30^\circ$  from horizontal.
- Designed with tube diameters (I.D. and O.D.) required for VRV system installations.
- Pre-formed clamshell style insulation<sup>1,2</sup> for cleaner and reliable application.
- Accounts for 1.5 ft equivalent pipe length calculation.



Picture for REFERENCE ONLY



## SPECIFICATIONS

Piping Material:	ACR Copper Alloy C12200	
Ports / Branches:	2	
Included in Branch Kit:	1 pcs. – Gas Side	
	1 pcs. - Liquid Side	
Kit Name:	GAS SIDE	LIQUID SIDE
Reducer Fittings:	1 pcs – I.D. Ø 3/4 1 pcs – I.D. Ø 7/8	-
Insulation Material:	Polypropylene	Expandable Polystyrene (EPS)
Insulation Quantity (per Joint):	1 pcs.	1 pcs.
Indoor Unit Capacity Index:	< 72	
Pipe Connection Size:	Refer to Dimensional Drawing and VRV Express Calculations	

### Notes:

- 1) In applications where the REFNET kits are installed in an environment requiring fire-rated materials to be used, it is necessary for the installer to obtain from a third party supplier and to utilize, for insulation, fire-rated materials that meet all applicable building codes and other requirements. The Factory-provided insulation that is supplied with the REFNET kit should be discarded in a manner meeting all applicable laws.
- 2) The insulation of the refrigerant piping must be reinforced based on the environment of the installation. Otherwise dew may condensate on the surface of insulation.

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056  
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## Submittal Data Sheet

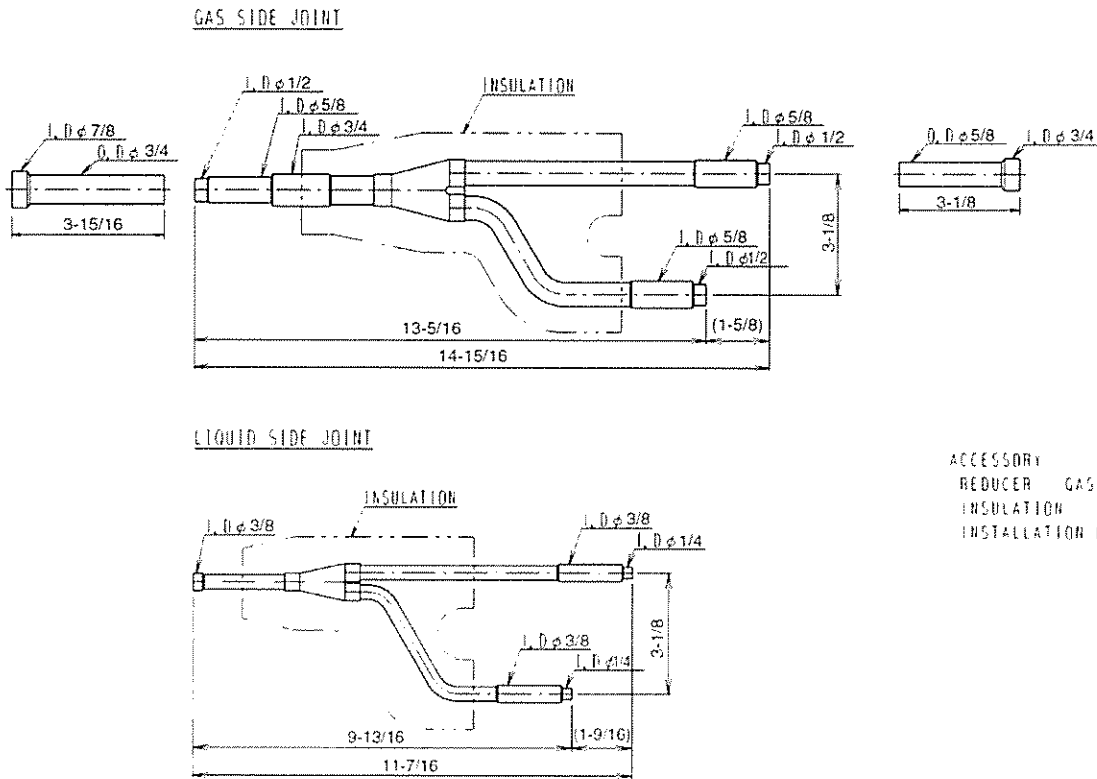
2 PIPE REFNET JOINT

KHRP26A22T9

## DIMENSIONAL DRAWING

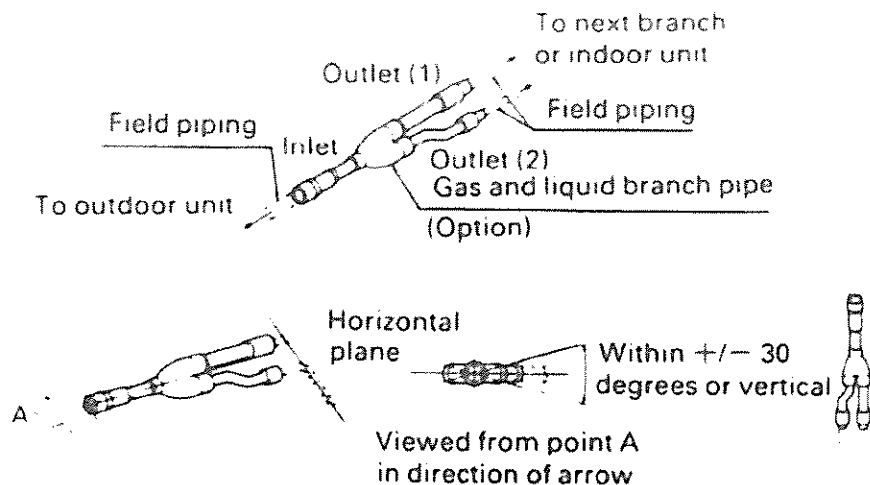
KHRP26A22T9

Unit: in



C D3K05234A

## TYPICAL INSTALLATION DRAWING



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# Submittal Data Sheet

## BRC1E73 – Navigation Remote Controller

Project Name:		Approval:	
Location:		Date:	
Engineer:		Construction:	
Submitted to:		Unit #:	
Submitted by:		Drawing #:	
Reference:			

### MODEL COMPATIBILITY:

Compatible with VRV and VRV Life™ indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ\_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, VAM, CXTQ

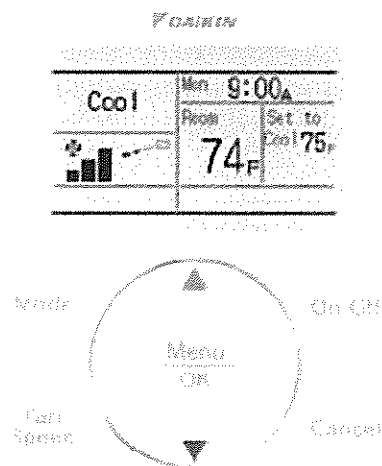
Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ

Compatible with Single and Multi-zone system indoor unit model: FFQ, FDMQ

### SPECIFICATIONS:

Model	BRC1E73
Description	Navigation Remote Controller
Maximum Connections	16 indoor units
Communication Wire	18AWG-2, No polarity Stranded, Non-shielded
Total Wiring Length	1,640 ft. (500 m)
Communication Protocol	Daikin proprietary P1P2 protocol
Power	16VDC supplied by indoor unit (1.58VA maximum)
Comfort Setpoint Range	60 to 90 °F (16 to 32 °C)
Setback Setpoint Range	40 to 95 °F (5 to 35°C)
Operating Temp Range	14 to 122°F (-10 to 50°C)
Operating Humidity Range	75% or less (RH) (without condensation)
Dimensions (WxHxD)	4.72x4.72x0.75 inch (120x120x19 mm)
Weight (Mass)	0.42 lbs. (0.19 kg)

### PRODUCT IMAGE:



#### Notes:

- (1) 1 of 3 display options – Detailed display shown

### FEATURES:

- Up to 16 indoor units are controllable within one group
- Within one group, up to 2 Navigation Remote Controllers can be used, one as a main and one as a sub
- Backlit LCD displays in English, Spanish or French
- Temperature sensor built-in with configurable offset
- Display of Temperature and Setpoint in 1°F / °C increments
- Three configurable display options: Detailed, Standard and Simple
- Dual setpoints (independent cooling and heating setpoints) with configurable minimum setpoint differential or Single Setpoint (occupied period)
- Setpoint range limit for cooling and heating modes

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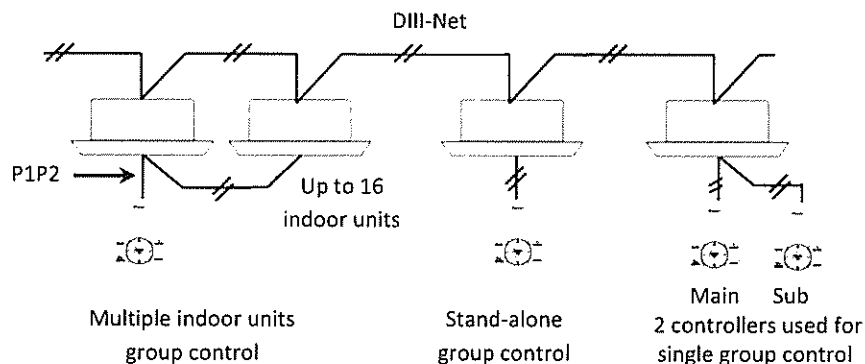
Project Name:		Approval:	
Location:		Date:	
Engineer:		Construction:	
Submitted to:		Unit #:	
Submitted by:		Drawing #:	
Reference:			

9. Independent cooling and heating setback setpoints (unoccupied period)
10. Auto changeover control with configurable primary and secondary changeover dead bands and guard timer
11. Airflow – Individual air flow direction, dual airflow and auto draft prevention (prevents air blowing directly on occupants)\*
12. Built-in 7 days, weekdays+weekend, weekdays+Sat+Sun, and Everyday schedules with up to 5 actions per day with independent cooling and heating or setback setpoints
13. Automatic Setback by occupancy sensor\*
14. Automatic Off by occupancy sensor\*
15. Configuration for Self-cleaning filter panel\*\*
16. Automatic adjustment for Daylight Savings Time (DST)
17. 48 hour clock/calendar battery backup (protects schedule timing in cases of short term power loss from indoor unit)
18. Real-time monitoring of system malfunctions with immediate display of unit in error and error code
19. The buttons on the remote controller are selectable by locking out the unwanted buttons
20. The operation modes can be restricted to provide only the desired mode(s) of operation
21. Display can be configured to show "Off" and room temperature only when indoor unit is turned off
22. To prevent unwanted changes, fan speed selection and display may be hidden
23. Auto off timer configurable in 10 minute increments (range 30-180 minutes)
24. Can be used to replace earlier versions of remote controllers

\* Available for FXFQ\_TVJU, FXUQ\_PVJU, and FXZQ\_TA indoor units

\*\*Available for FXFQ\_TVJU indoor units

### SYSTEM DIAGRAM



### FACE DECAL OPTIONS:

Face decal options are used to hide unnecessary buttons:

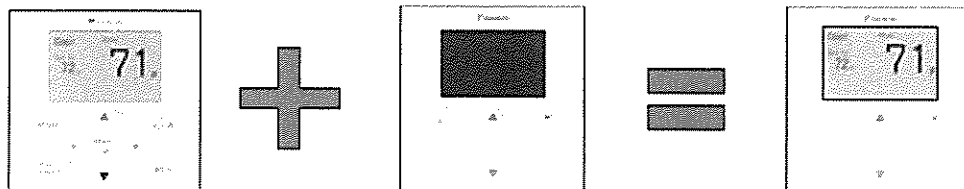
1. The face decal is designed to adhere to the faceplate
2. Hidden buttons can be accessed by service personnel without removing the face decal due to its flexibility



# Submittal Data Sheet

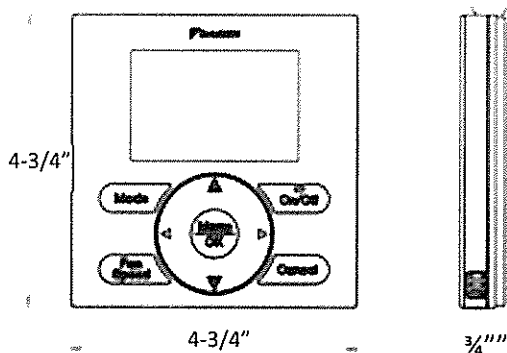
BRC1E73 – Navigation Remote Controller

Project Name:	Approval:
Location:	Date:
Engineer:	Construction:
Submitted to:	Unit #:
Submitted by:	Drawing #:
Reference:	



Used with	Single Setpoint mode			Dual Setpoint mode		
	BRC1E72RM	BRC1E72RF	BRC1E72RMF	BRC1E72RM2	BRC1E72RF2	BRC1E72RMF2
Model						
On/Off	X	X	X	X	X	X
Mode	X		X	X		X
Fan		X	X		X	X
Up, Down	X	X	X	X	X	X
Left, Right				X	X	X
Menu/Ok						
Cancel						

## Dimensions



## Documentation:

Documentation available on [www.daikincity.com](http://www.daikincity.com) and/or [www.daikinac.com](http://www.daikinac.com):

- Installation Manual
- Operation Manual

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# Submittal Data Sheet

BRC1E73 – Navigation Remote Controller

Project Name: \_\_\_\_\_

Location: \_\_\_\_\_

Engineer: \_\_\_\_\_

Submitted to: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Reference: \_\_\_\_\_

Approval: \_\_\_\_\_

Date: \_\_\_\_\_

Construction: \_\_\_\_\_

Unit #: \_\_\_\_\_

Drawing #: \_\_\_\_\_

- Submittal
- Guide Specifications
- Quick User Guide
- Field Setting Table

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# Submittal Data Sheet

DCM601A71 – intelligent Touch Manager

Project Name:		Approval:	
Location:		Date:	
Engineer:		Construction:	
Submitted to:		Unit #:	
Submitted by:		Drawing #:	
Reference:			

## MODEL COMPATIBILITY

Compatible with VRV and VRV Life™ indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ\_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, CXTQ, VAM\*

Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ

Compatible with Single Zone/Multi Zone/SkyAir system indoor unit models:

- FDMQ, FFQ\_Q
- FFQ\_LVJU with the use of the Interface Adaptor DTA112BA51
- FTXS, CTXS, CTXG, FTXG, FDXS, CDXS, FVXS with the use of the DIII-Net Adapter KRP928BB2S
- FTK\_N, FTX\_N, FTX\_U, FTXN, and FTKN with the use of the DIII-Net Adapter KRP928BB2S and an Interface adaptor KRP067A41E/KRP980B1/KRP980B2E

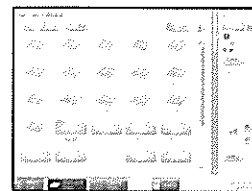
\* iTM BACnet Server Gateway Option is not compatible with VAM unit

\* The outdoor operational data is available for the following VRV IV outdoor unit models only: RXYQ\_TATJU, RXYQ\_TAYDU, REYQ\_TATJU, REYQ\_TAYDU, RXLQ\_TATJU, RXLQ\_TAYCU, RXLQ\_TAYDU, RELQ\_TATJU, RELQ\_TAYCU, RELQ\_TAYDU, REYQ\_X, and RXYQ\_X

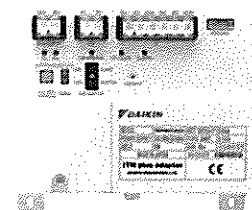
## SPECIFICATIONS

Model	DCM601A71	DCM601A72
Description	intelligent Touch Manager (iTM)	iTM Plus Adaptor
Maximum Indoor Unit Groups	64	64
Max Indoor Units	128	128
Max Outdoor Units	10	10
Max BACnet Servers	50	-
System Total	512 Indoor Unit Groups (1024 Indoor Units)	
Power Supply	24 VAC, 60 Hz	24 VAC, 60 Hz
Power Consumption	23 Watts	23 Watts
Operating Temp Range	32-104 F	14 - 122 F
Operating Humidity Range	85% or less (w/o condensation)	85% or less (w/o condensation)
Dimensions (W x H x D)	11.42 x 9.57 x 1.97 in.	6.30 x 5.87 x 2.41 in.
Weight (Mass)	5.3 lbs. (2.4 kg)	1.1 lbs. (0.5 kg)
Certifications	FCC Part 15 Class B	
DIII-NET Systems	1	1
RJ-45 (Ethernet) 100Base-TX or 10Base-T	2	N/A
USB Port-USB2.0 (2GB to 32GB)	1	N/A
RS485 (19 - 22 AWG)	1	1
Digital Input forced shutdown of all indoor unit systems	1	N/A
Digital Input and/or Pulse Input Terminals	3 x 10 mA @ 16 VDC/ 3 x 1 pulse at 1 or 10 kWh	4 x 10 mA @ 16 VDC/ 4 x 1 pulse at 1 or 10 kWh

## PRODUCT IMAGE



iTM



iTM Plus Adaptor  
(Optional)

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	at 100 ms interval	at 100 ms interval
--	--------------------	--------------------

## OPTIONS

- Software Options:
  - Power Proportional Distribution (PPD) Option (DCM002A71)<sup>(1)</sup>
  - BACnet Client Option Software (DCM009A51)
  - BACnet/IP Server Gateway Option (DCM014A51)<sup>(2)(3)</sup>
- Hardware Options:
  - iTM Plus Adapter (DCM601A72) for expanding indoor unit groups up to 512 groups (1024 indoor units)
  - WAGO I/O basic kit (60359653) and I/O modules for controlling/ monitoring of external equipment via Di, Do, Ai, Ao and Pi
  - Digital Input (DEC101A51-US2) for monitoring of external equipment
  - Digital Input/Output (DEC102A51-US2) for controlling / monitoring of external equipment

### Notes:

- (1) The Power Proportional Distribution (PPD) option supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin air-conditioning system to individual units on the system. Because input to the PPD includes measured pulses in the refrigerant system and because the air-conditioning system includes a number of variables, to include operating temperatures and pressures, piping lengths, heat exchange rates and others, no meter-type apportionment of individual user's consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology as applied to the many variables in the air-conditioning system.
- (2) The BACnet Server Gateway option cannot use together with the BACnet Client software option and the PPD option.
- (3) BACnet/IP Server Gateway option is not compatible with the VAM unit.

## FEATURES

1. **Management size** - up to 512 indoor unit groups (1024 indoor units).
  - a. The iTM can manage one (1) DIII-Net system which can have up to 64 indoor unit groups (128 indoor units).
  - b. The iTM can manage up to eight (8) DIII-Net systems with the addition of the iTM Plus Adapter which can manage one (1) DIII-Net system each. This means up to seven (7) iTM adapters can be daisy chained to the iTM.
2. **Control / Monitoring**
  - a. Independent Cool and Heat setpoints
    - i. Setpoint tracking for full range of setpoint differentials
  - b. Independent Cool and Heat Setback setpoints (unoccupied)
    - i. Adjustable timed override
  - c. Room temperature displayed in 0.1°F
  - d. Scheduling: 7, 5+2, 5+1+1, 1 (Everyday) weekly patterns
    - i. Optimum Start
  - e. Auto-changeover: Fixed, Individual, Average, and Vote
    - i. Weighted demand (0-3) configurable for Average and Vote methods
    - ii. Adjustable (1-4°F) Primary and Secondary changeover bands
3. **Web Accessibility**
  - a. Web and Alert Email function standard with iTM

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DCM601A71 – intelligent Touch Manager

Project Name: \_\_\_\_\_

Location: \_\_\_\_\_

Engineer: \_\_\_\_\_

Submitted to: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Reference: \_\_\_\_\_

Approval: \_\_\_\_\_

Date: \_\_\_\_\_

Construction: \_\_\_\_\_

Unit #: \_\_\_\_\_

Drawing #: \_\_\_\_\_

- b. All iTM configuration/setup can be done through Web Option or touch screen

#### 4. Visual Navigation Screen

- a. Floor plan layout view is available
- b. Graphical User Interface (GUI) for BACnet IP Client management points

#### 5. Easy installation

- a. Wall mount and flush mount installation.
- b. Automatic indoor unit registration and indoor unit model detection.

#### 6. Easy Engineering

- a. iTM can be configured off site via Pre-setting Tool.
- b. All data can be uploaded and downloaded by USB flash drive.

#### 7. Building facilities management

- a. The iTM is equipped with 3 digital/pulse inputs and the iTM Plus Adapter comes equipped with 4 digital/pulse inputs.
- b. Building ancillary equipment can be connected by using the WAGO I/O system (optional).
  - i. I/O configuration for Digital Input, Digital Output, Analog Input, Analog Output and Pulse Input.
- c. BACnet IP Client management points with BACnet Client option (optional).
  - i. AI, AO, AV, BI, BO, BV, MI, MO and MV
- d. Tenant billing with PPD option (optional).

#### 8. BACnet Client (Optional)

- a. Monitor and control equipment and sensors connected to a BACnet server via BACnet IP.
  - i. Up to 50 BACnet IP servers can be connected

#### 9. BACnet Server Gateway (Optional)

- 1. Provide function to monitor outdoor units and control indoor units by BMS via BACnet IP.
  - i. Up to 128 BACnet Device IDs (including indoor unit groups and outdoor units)
  - ii. Up to 4000 BACnet objects
  - iii. Virtual BACnet router function embedded
    - i. Individual and configurable Device ID for each indoor unit group and/or outdoor unit system.

#### 10. History

- a. All errors, operations, automatic controls and status changes are stored in history (up to 500,000 items).

#### 11. D-Net compatible (Service option)

- a. Remote monitoring of VRV equipment status and reporting

#### 12. Operation Data

- a. Operation data are stored in the iTM every minute for the last 5 days.
  - i. Indoor and outdoor unit operation data.
  - ii. BACnet Client management data points (AI, AO, AV, BI, BO, BV, MI, MO and MV).
  - iii. WAGO IO system data points (External DI, DIO, PI, AI and AO).
- b. The operation data can be exported through the iTM web browser or a USB drive based on a specified period.  
(See iTM BACnet Server points list below for IDU/ODU operational data list)

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DCM601A71 – intelligent Touch Manager

Project Name:		Approval:	
Location:		Date:	
Engineer:		Construction:	
Submitted to:		Unit #:	
Submitted by:		Drawing #:	
Reference:			

## WIRING SPECIFICATION:

Specifications of Communication Cabling	
DIII-Net	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.
iTM Plus Adapter	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
RS485 Length	Maximum distance between iTM and furthest iTM Plus Adapter 150 ft.
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.
WAGO	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket (CPEV or FCPEV)
Size	2 Wire AWG 24 - 18 stranded
Total Length	Maximum wiring distance between iTM and Bus Coupler 1640 ft.

## BACNET CLIENT OPTION ON MANAGER BOARD

- The following BACnet object types can be monitored and controlled by iTM through BACnet Client Option (DCM009A51) via the BACnet/IP protocol:

Object Type #	Object Name	Description
0	Analog Input	Analog input value such as a temperature and measurement value.
1	Analog Output	Analog output value such as a setting value (For example, can be used as the analog input value of a setting value).
2	Analog Value	Analog input value such as a temperature and measurement value or analog output value such as a setting value.
3	Binary Input	Digital input value such as an On/Off status and error status.
4	Binary Output	Digital output value such as an On/Off operation (For example, can be used as the digital input value of an On/Off operation).
5	Binary Value	Digital input value such as an On/Off status and error status or digital output value such as an On/Off operation.
13	Multi-state Input	Digital input value such as an operation mode
14	Multi-state Output	Digital output value such as an operation mode (For example, can be used as the digital input value of an operation mode).
19	Multi-state Value	Digital input value such as an operation mode or digital output value such as an operation mode.

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DCM601A71 – intelligent Touch Manager

Project Name:		Approval:	
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Engineer:		Construction:	
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Reference:			

## BACNET/IP SERVER GATEWAY OPTION POINTS LIST:

- System configuration points linked to iTM control logic (one set of points per iTM):

Point Name	Point Description
Enable ITM Schedule Operation	Enable or Disable iTM Schedule operation
Enable ITM Auto Changeover Operation	Enable or disable iTM Auto changeover logic.
Timed Override Minutes	Set override time in minutes
System Forced Off	The Forced System Stop command will force the indoor unit to stop running. Remote controllers will be locked out from restarting indoor units during the forced system stop event.

- Indoor unit monitoring points (one set of points per indoor unit group):

Point Name	Point Description
Unit On_Off Status	Monitors if the indoor unit fan is On or Off
Alarm Status	Monitors whether or not the indoor unit is operating normally, and issues an alarm if the indoor unit has a malfunction. Error Code is shown in the description.
Room Temperature	Monitors and displays the room temperature.
Unit On Details	Indoor unit details operation Off - Normal (ON) - Override - Setback
Filter Sign Status	Monitors filter run time and provides service alert.
Indoor Fan Status	Monitors if the indoor unit fan is On or Off
Communication Status	Monitor if the communication is Normal or in Alarm
Thermo-on Status	Monitors whether or not the indoor unit is actively cooling or heating.
Compressor Status	Monitors if the compressor of the outdoor unit is On/Off/Defrost
Aux Heater Status	Monitors if the external heater controlled by the indoor unit is operating.
Changeover Option	Monitor if iTM changeover logic is Active.
Return Air Temperature	Monitors and displays the return air temperature.
Discharge Air Temperature	Monitors and displays the discharge air temperature of the FXMQ_PB indoor unit only.
Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature.
Gas Pipe Temperature	Monitors and displays the gas pipe temperature.
EV Position	Monitors and displays the expansion valve position.
Freeze Protection	Monitors if the freeze protection is active (For FXEQ_P, FXFQ_T, FXTQ_TA, FXUQ_P, FXZQ_TA, FXSQ_TA, CXTQ_TA indoor unit only).

- Indoor unit monitoring and control points (one set of points per indoor unit group):

Point Name	Point Description
Occupancy Mode	Set the occupancy of the indoor unit Occupied , Unoccupied or Standby
Operation mode	Set Cool - Heat -Fan -Dry operation mode. for the indoor unit and monitors the latest mode

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Occ Cooling Setpoint	Sets the occupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Occ Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Cooling Setpoint	Sets the unoccupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Max Cooling Setpoint	Sets the maximum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Min Cooling Setpoint	Sets the minimum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Max Heating Setpoint	Sets the maximum Heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Heating Setpoint	Sets the minimum heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Setpoint Differential (Cooling & Heating)	Set the minimum differential value between cooling and heating setpoint and monitor the latest differential value.
Cooling & Heating Setpoint Tracking Mode	Enable or disable iTM setpoint tracking mode.
Fan speed	Sets the indoor unit fan speed and monitors the latest setting
Timed Override Operation	Enable or disable iTM override timer
Remote Controller Prohibit (On/Off)	Permits or prohibits the remote controller to control the indoor unit's On/Off.
Remote Controller Prohibit (Operation Mode)	Permits or prohibits the remote controller to control the indoor unit's Operation mode.
Remote Controller Prohibit (Setpoint)	Permits or prohibits the remote controller to control the indoor unit's Setpoint.
Filter Sign Reset	Clears the filter sign status.
Forced Thermo-off	Force the indoor unit to stop actively cooling or heating.

• Outdoor unit monitoring points\*:

Point Name	Point Description
Communication Status	Monitors and displays the communication status <i>(General)</i>
Operation Mode	Monitors and displays the operation mode (Cool, Heat, Fan or Heat &Cool) <i>(General)</i>
Outdoor Unit Alarm Status	Monitors whether or not the outdoor unit is operating normally. <i>(General)</i>
Defrost Mode	Monitors if the defrost mode is active. <i>(General)</i>
Oil Return Mode	Monitors whether or not the outdoor unit is in oil return operation. <i>(General)</i>
Electric Power	Monitors and displays the electric power (calculated). <i>(General)</i>
Electric Current	Monitors and displays the electric current (calculated). <i>(General)</i>
System Capacity Code	Monitors and displays the system capacity code. <i>(General)</i>
Outdoor Air Temperature	Monitors and displays the outdoor air temperature. <i>(General)</i>
M_Condensing Pressure	Monitors and displays the condensing pressure <i>(Master Module)</i>
M_Evaporating Pressure	Monitors and displays the evaporating pressure <i>(Master Module)</i>
M_Condensing Temperature	Monitors and displays the condensing temperature <i>(Master Module)</i>

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# Submittal Data Sheet

DCM601A71 – intelligent Touch Manager

Project Name:

Location:

Engineer:

Submitted to:

Submitted by:

Reference:

Approval:

Date:

Construction:

Unit #:

Drawing #:

M_Evaporating Temperature	Monitors and displays the evaporating temperature ( <i>Master Module</i> )
M_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ( <i>Master Module</i> )
M_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ( <i>Master Module</i> )
M_Fan Step	Monitors and displays the fan step ( <i>Master Module</i> )
M_EV Position 1	Monitors and displays the position of the expansion valve1 ( <i>Master Module</i> )
M_EV position 2	Monitors and displays the position of the expansion valve2 ( <i>Master Module</i> )
M_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ( <i>Master Module</i> )
M_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ( <i>Master Module</i> )
M_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ( <i>Master Module</i> )
M_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ( <i>Master Module</i> )
M_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ( <i>Master Module</i> )
M_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ( <i>Master Module</i> )
M_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ( <i>Master Module</i> )
M_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX ( <i>Master Module</i> )
M_Suction Temperature	Monitors and displays the suction temperature ( <i>Master Module</i> )
M_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ( <i>Master Module</i> )
M_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ( <i>Master Module</i> )
M_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ( <i>Master Module</i> )
M_Subcool EV Position	Monitors and displays the subcool expansion valve position ( <i>Master Module</i> )
S1_Condensing Pressure	Monitors and displays the condensing pressure ( <i>Sub Module1</i> )
S1_Evaporating Pressure	Monitors and displays the evaporating pressure ( <i>Sub Module1</i> )
S1_Condensing Temperature	Monitors and displays the condensing temperature ( <i>Sub Module1</i> )
S1_Evaporating Temperature	Monitors and displays the evaporating temperature ( <i>Sub Module1</i> )
S1_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ( <i>Sub Module1</i> )
S1_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ( <i>Sub Module1</i> )
S1_Fan Step	Monitors and displays the fan step ( <i>Sub Module1</i> )
S1_EV Position 1	Monitors and displays the position of the expansion valve1 ( <i>Sub Module1</i> )
S1_EV position 2	Monitors and displays the position of the expansion valve2 ( <i>Sub Module1</i> )
S1_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ( <i>Sub Module1</i> )
S1_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ( <i>Sub Module1</i> )

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# Submittal Data Sheet

DCM601A71 – intelligent Touch Manager

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Location:		Date:	
Engineer:		Construction:	
Submitted to:		Unit #:	
Submitted by:		Drawing #:	
Reference:			

S1_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ( <i>Sub Module1</i> )
S1_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX( <i>Sub Module1</i> )
S1_Suction Temperature	Monitors and displays the suction temperature ( <i>Sub Module1</i> )
S1_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ( <i>Sub Module1</i> )
S1_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ( <i>Sub Module1</i> )
S1_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ( <i>Sub Module1</i> )
S1_Subcool EV Position	Monitors and displays the subcool expansion valve position ( <i>Sub Module1</i> )
S2_Condensing Pressure	Monitors and displays the condensing pressure ( <i>Sub Module2</i> )
S2_Evaporating Pressure	Monitors and displays the evaporating pressure ( <i>Sub Module2</i> )
S2_Condensing Temperature	Monitors and displays the condensing temperature ( <i>Sub Module2</i> )
S2_Evaporating Temperature	Monitors and displays the evaporating temperature ( <i>Sub Module2</i> )
S2_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ( <i>Sub Module2</i> )
S2_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ( <i>Sub Module2</i> )
S2_Fan Step	Monitors and displays the fan step ( <i>Sub Module2</i> )
S2_EV Position 1	Monitors and displays the position of the expansion valve1 ( <i>Sub Module2</i> )
S2_EV position 2	Monitors and displays the position of the expansion valve2 ( <i>Sub Module2</i> )
S2_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ( <i>Sub Module2</i> )
S2_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ( <i>Sub Module2</i> )
S2_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ( <i>Sub Module2</i> )
S2_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX( <i>Sub Module2</i> )
S2_Suction Temperature	Monitors and displays the suction temperature ( <i>Sub Module2</i> )
S2_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ( <i>Sub Module2</i> )
S2_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ( <i>Sub Module2</i> )
S2_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ( <i>Sub Module2</i> )
S2_Subcool EV Position	Monitors and displays the subcool expansion valve position ( <i>Sub Module2</i> )

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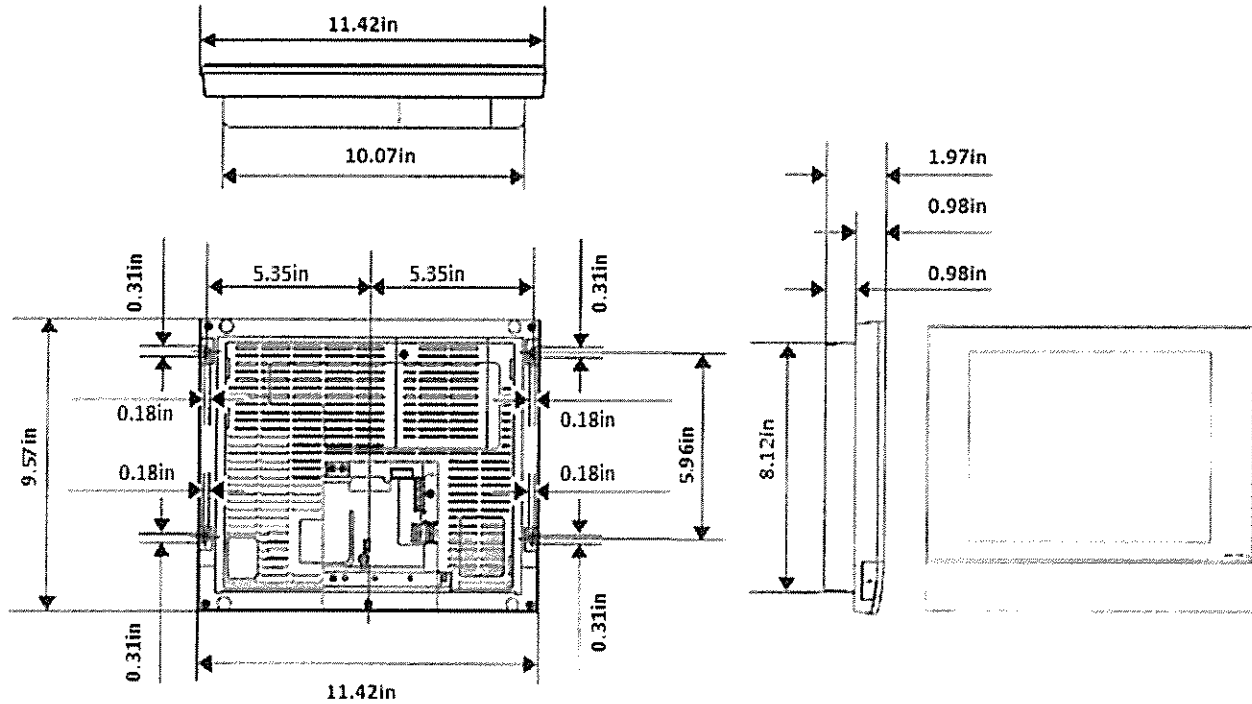
Construction:

Unit #:

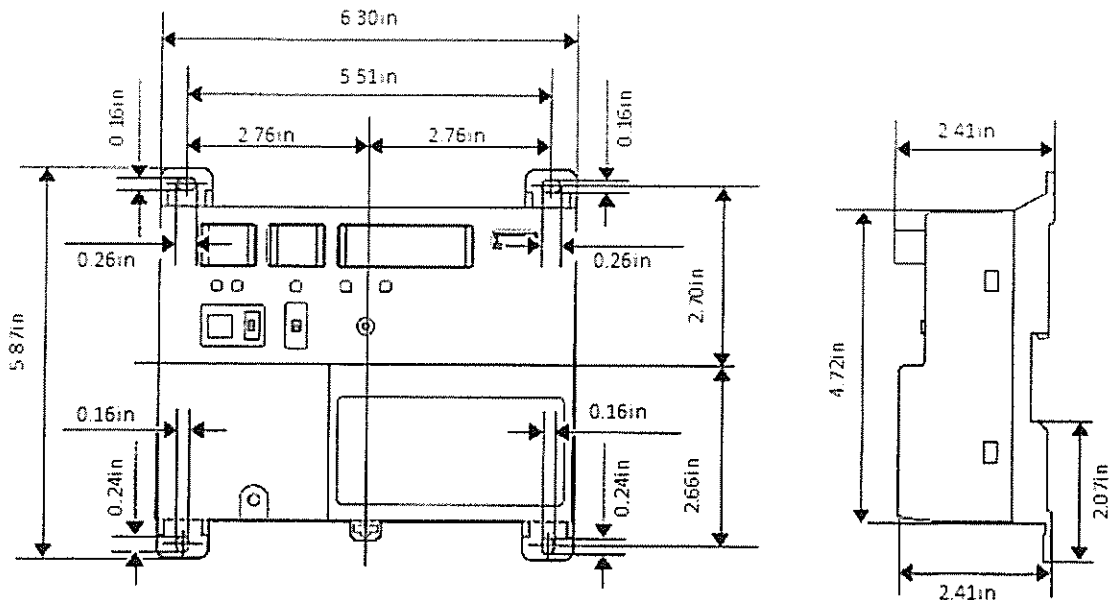
Drawing #:

## DIMENSIONS:

iTM:



iTM Plus Adaptor:



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## DOCUMENTATION:

Documentation available on [www.daikincity.com](http://www.daikincity.com) and/or [www.daikinac.com](http://www.daikinac.com):

- Submittal
- Sales Brochure
- Guide Specs
- Installation Manual
- Operation Manual
- iTM D3 Operation Data Analysis Tool
- iTM BACnet Server Gateway
  - Design Guide
  - Sales Flyer
  - Quick User Guide
- iTM BACnet Client
  - Sales Flyer
  - iTM BACnet Client macro tools
- WAGO I/O Basic Kit and Modules
  - Submittal
  - Installation Manual
  - Sales Flyer

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## MODEL COMPATIBILITY:

Compatible with VRV and VRV Life™ indoor unit models: FXAQ, FXDQ, FXEQ, FXFQ, FXHQ, FXLQ, FXMQ, FXMQ\_MF, FXNQ, FXSQ, FXTQ, FXUQ, FXZQ, CXTQ, VAM\*

Compatible with SkyAir indoor unit models: FAQ, FBQ, FCQ, FHQ, FTQ

Compatible with Single Zone/Multi Zone/SkyAir system indoor unit models:

- FDMQ, FFQ\_Q
- FFQ\_LVJU with the use of the Interface Adaptor DTA112BA51
- FTXS, CTXS, CTXG, FTXG, FDXS, CDXS, FVXS with the use of the DIII-Net Adapter KRP928BB2S
- FTK\_N, FTX\_N, FTX\_U, FTXN, and FTKN with the use of the DIII-Net Adapter KRP928BB2S and an Interface adaptor KRP067A41E/KRP980B1/KRP980B2E

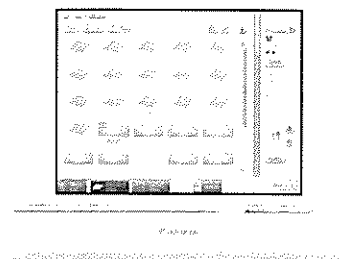
\* iTM BACnet Server Gateway Option is not compatible with VAM unit

\* The outdoor operational data is available for the following VRV IV outdoor unit models only: RXYQ\_TATJU, RXYQ\_TAYDU, REYQ\_TATJU, REYQ\_TAYDU, RXLQ\_TATJU, RXLQ\_TAYCU, RXLQ\_TAYDU, RELQ\_TATJU, RELQ\_TAYCU, RELQ\_TAYDU, REYQ\_X, and RXYQ\_X

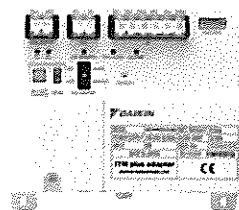
## SPECIFICATIONS

Model	DCM601A71	DCM601A72
Description	intelligent Touch Manager (iTM)	iTM Plus Adaptor
Maximum Indoor Unit Groups	64	64
Max Indoor Units	128	128
Max Outdoor Units	10	10
Max BACnet Servers	50	-
System Total	512 Indoor Unit Groups (1024 Indoor Units)	
Power Supply	24 VAC, 60 Hz	24 VAC, 60 Hz
Power Consumption	23 Watts	23 Watts
Operating Temp Range	32-104 F	14 - 122 F
Operating Humidity Range	85% or less (w/o condensation)	85% or less (w/o condensation)
Dimensions (W x H x D)	11.42 x 9.57 x 1.97 in.	6.30 x 5.87 x 2.41 in.
Weight (Mass)	5.3 lbs. (2.4 kg)	1.1 lbs. (0.5 kg)
Certifications	FCC Part 15 Class B	
DIII-NET Systems	1	1
RJ-45 (Ethernet) 100Base-TX or 10Base-T	2	N/A
USB Port-USB2.0 (2GB to 32GB)	1	N/A
RS485 (19 - 22 AWG)	1	1
Digital Input forced shutdown of all indoor unit systems	1	N/A
Digital Input and/or Pulse Input Terminals	3 x 10 mA @ 16 VDC/ 3 x 1 pulse at 1 or 10 kWh	4 x 10 mA @ 16 VDC/ 4 x 1 pulse at 1 or 10 kWh

## PRODUCT IMAGE



iTM



iTM Plus Adaptor  
(Optional)

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	at 100 ms interval	at 100 ms interval
--	--------------------	--------------------

## OPTIONS:

- Software Options:
  - Power Proportional Distribution (PPD) Option (DCM002A71)<sup>(1)</sup>
  - BACnet Client Option Software (DCM009A51)
  - BACnet/IP Server Gateway Option (DCM014A51)<sup>(2)(3)</sup>
- Hardware Options:
  - iTM Plus Adapter (DCM601A72) for expanding indoor unit groups up to 512 groups (1024 indoor units)
  - WAGO I/O basic kit (60359653) and I/O modules for controlling/ monitoring of external equipment via Di, Do, Ai, Ao and Pi
  - Digital Input (DEC101A51-US2) for monitoring of external equipment
  - Digital Input/Output (DEC102A51-US2) for controlling / monitoring of external equipment

### Notes:

- (1) The Power Proportional Distribution (PPD) option supplies the user with a reasonably calculated apportionment of the total power consumption by the Daikin air-conditioning system to individual units on the system. Because input to the PPD includes measured pulses in the refrigerant system and because the air-conditioning system includes a number of variables, to include operating temperatures and pressures, piping lengths, heat exchange rates and others, no meter-type apportionment of individual user's consumption can be made. However, the PPD feature provides an apportionment methodology that uses highly advanced technology as applied to the many variables in the air-conditioning system.
- (2) The BACnet Server Gateway option cannot use together with the BACnet Client software option and the PPD option.
- (3) BACnet/IP Server Gateway option is not compatible with the VAM unit.

## FEATURES

1. **Management size** - up to 512 indoor unit groups (1024 indoor units).
  - a. The iTM can manage one (1) DIII-Net system which can have up to 64 indoor unit groups (128 indoor units).
  - b. The iTM can manage up to eight (8) DIII-Net systems with the addition of the iTM Plus Adapter which can manage one (1) DIII-Net system each. This means up to seven (7) iTM adapters can be daisy chained to the iTM.
2. **Control / Monitoring**
  - a. Independent Cool and Heat setpoints
    - i. Setpoint tracking for full range of setpoint differentials
  - b. Independent Cool and Heat Setback setpoints (unoccupied)
    - i. Adjustable timed override
  - c. Room temperature displayed in 0.1°F
  - d. Scheduling: 7, 5+2, 5+1+1, 1 (Everyday) weekly patterns
    - i. Optimum Start
  - e. Auto-changeover: Fixed, Individual, Average, and Vote
    - i. Weighted demand (0-3) configurable for Average and Vote methods
    - ii. Adjustable (1-4°F) Primary and Secondary changeover bands
3. **Web Accessibility**
  - a. Web and Alert Email function standard with iTM

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- b. All iTM configuration/setup can be done through Web Option or touch screen

#### 4. Visual Navigation Screen

- a. Floor plan layout view is available
- b. Graphical User Interface (GUI) for BACnet IP Client management points

#### 5. Easy installation

- a. Wall mount and flush mount installation.
- b. Automatic indoor unit registration and indoor unit model detection.

#### 6. Easy Engineering

- a. iTM can be configured off site via Pre-setting Tool.
- b. All data can be uploaded and downloaded by USB flash drive.

#### 7. Building facilities management

- a. The iTM is equipped with 3 digital/pulse inputs and the iTM Plus Adapter comes equipped with 4 digital/pulse inputs.
- b. Building ancillary equipment can be connected by using the WAGO I/O system (optional).
  - i. I/O configuration for Digital Input, Digital Output, Analog Input, Analog Output and Pulse Input.
- c. BACnet IP Client management points with BACnet Client option (optional).
  - i. AI, AO, AV, BI, BO, BV, MI, MO and MV
- d. Tenant billing with PPD option (optional).

#### 8. BACnet Client (Optional)

- a. Monitor and control equipment and sensors connected to a BACnet server via BACnet IP.
  - i. Up to 50 BACnet IP servers can be connected

#### 9. BACnet Server Gateway (Optional)

- 1. Provide function to monitor outdoor units and control indoor units by BMS via BACnet IP.
  - i. Up to 128 BACnet Device IDs (including indoor unit groups and outdoor units)
  - ii. Up to 4000 BACnet objects
  - iii. Virtual BACnet router function embedded
    - i. Individual and configurable Device ID for each indoor unit group and/or outdoor unit system.

#### 10. History

- a. All errors, operations, automatic controls and status changes are stored in history (up to 500,000 items).

#### 11. D-Net compatible (Service option)

- a. Remote monitoring of VRV equipment status and reporting

#### 12. Operation Data

- a. Operation data are stored in the iTM every minute for the last 5 days.
  - i. Indoor and outdoor unit operation data.
  - ii. BACnet Client management data points (AI, AO, AV, BI, BO, BV, MI, MO and MV).
  - iii. WAGO IO system data points (External DI, DIO, PI, AI and AO).
- b. The operation data can be exported through the iTM web browser or a USB drive based on a specified period.  
(See iTM BACnet Server points list below for IDU/ODU operational data list)



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## WIRING SPECIFICATION

Specifications of Communication Cabling	
DIII-Net	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.
iTM Plus Adapter	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket
Size	AWG 18-2
RS485 Length	Maximum distance between iTM and furthest iTM Plus Adapter 150 ft.
Total Length	Maximum wiring distance between units 3,280 ft. Total wire length 6,560 ft.
WAGO	
Type	2-conductor, stranded, non-shielded copper cable / PVC of vinyl jacket (CPEV or FCPEV)
Size	2 Wire AWG 24 - 18 stranded
Total Length	Maximum wiring distance between iTM and Bus Coupler 1640 ft.

## BACNET CLIENT AND MANAGEMENT PORTS

- The following BACnet object types can be monitored and controlled by iTM through BACnet Client Option (DCM009A51) via the BACnet/IP protocol:

Object Type #	Object Name	Description
0	Analog Input	Analog input value such as a temperature and measurement value.
1	Analog Output	Analog output value such as a setting value (For example, can be used as the analog input value of a setting value).
2	Analog Value	Analog input value such as a temperature and measurement value or analog output value such as a setting value.
3	Binary Input	Digital input value such as an On/Off status and error status.
4	Binary Output	Digital output value such as an On/Off operation (For example, can be used as the digital input value of an On/Off operation).
5	Binary Value	Digital input value such as an On/Off status and error status or digital output value such as an On/Off operation.
13	Multi-state Input	Digital input value such as an operation mode
14	Multi-state Output	Digital output value such as an operation mode (For example, can be used as the digital input value of an operation mode).
19	Multi-state Value	Digital input value such as an operation mode or digital output value such as an operation mode.

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## BACNET/IP SERVER GATEWAY OPTION POINTS LIST:

- System configuration points linked to iTM control logic (one set of points per iTM):

Point Name	Point Description
Enable ITM Schedule Operation	Enable or Disable iTM Schedule operation
Enable ITM Auto Changeover Operation	Enable or disable iTM Auto changeover logic.
Timed Override Minutes	Set override time in minutes
System Forced Off	The Forced System Stop command will force the indoor unit to stop running. Remote controllers will be locked out from restarting indoor units during the forced system stop event.

- Indoor unit monitoring points (one set of points per indoor unit group):

Point Name	Point Description
Unit On_Off Status	Monitors if the indoor unit fan is On or Off
Alarm Status	Monitors whether or not the indoor unit is operating normally, and issues an alarm if the indoor unit has a malfunction. Error Code is shown in the description.
Room Temperature	Monitors and displays the room temperature.
Unit On Details	Indoor unit details operation Off - Normal (ON) - Override - Setback
Filter Sign Status	Monitors filter run time and provides service alert.
Indoor Fan Status	Monitors if the indoor unit fan is On or Off
Communication Status	Monitor if the communication is Normal or in Alarm
Thermo-on Status	Monitors whether or not the indoor unit is actively cooling or heating.
Compressor Status	Monitors if the compressor of the outdoor unit is On/Off/Defrost
Aux Heater Status	Monitors if the external heater controlled by the indoor unit is operating.
Changeover Option	Monitor if iTM changeover logic is Active.
Return Air Temperature	Monitors and displays the return air temperature.
Discharge Air Temperature	Monitors and displays the discharge air temperature of the FXMQ_PB indoor unit only.
Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature.
Gas Pipe Temperature	Monitors and displays the gas pipe temperature.
EV Position	Monitors and displays the expansion valve position.
Freeze Protection	Monitors if the freeze protection is active (For FXEQ_P, FXFQ_T, FXTQ_TA, FXUQ_P, FXZQ_TA, FXSQ_TA, CXTQ_TA indoor unit only).

- Indoor unit monitoring and control points (one set of points per indoor unit group):

Point Name	Point Description
Occupancy Mode	Set the occupancy of the indoor unit Occupied , Unoccupied or Standby
Operation mode	Set Cool - Heat -Fan -Dry operation mode. for the indoor unit and monitors the latest mode

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Occ Cooling Setpoint	Sets the occupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Occ Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Cooling Setpoint	Sets the unoccupied cooling setpoint of the indoor unit and monitors the latest setpoint value.
Unocc Heating Setpoint	Sets the occupied heating setpoint of the indoor unit and monitors the latest setpoint value.
Max Cooling Setpoint	Sets the maximum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Min Cooling Setpoint	Sets the minimum cooling setpoint of the indoor unit and monitors the latest setpoint value.
Max Heating Setpoint	Sets the maximum Heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Heating Setpoint	Sets the minimum heating setpoint of the indoor unit and monitors the latest setpoint value.
Min Setpoint Differential (Cooling & Heating)	Set the minimum differential value between cooling and heating setpoint and monitor the latest differential value.
Cooling & Heating Setpoint Tracking Mode	Enable or disable iTM setpoint tracking mode.
Fan speed	Sets the indoor unit fan speed and monitors the latest setting
Timed Override Operation	Enable or disable iTM override timer
Remote Controller Prohibit (On_Off)	Permits or prohibits the remote controller to control the indoor unit's On/Off.
Remote Controller Prohibit (Operation Mode)	Permits or prohibits the remote controller to control the indoor unit's Operation mode.
Remote Controller Prohibit (Setpoint)	Permits or prohibits the remote controller to control the indoor unit's Setpoint.
Filter Sign Reset	Clears the filter sign status.
Forced Thermo-off	Force the indoor unit to stop actively cooling or heating.

• Outdoor unit monitoring points\*:

Point Name	Point Description
Communication Status	Monitors and displays the communication status <i>(General)</i>
Operation Mode	Monitors and displays the operation mode (Cool, Heat, Fan or Heat &Cool) <i>(General)</i>
Outdoor Unit Alarm Status	Monitors whether or not the outdoor unit is operating normally. <i>(General)</i>
Defrost Mode	Monitors if the defrost mode is active. <i>(General)</i>
Oil Return Mode	Monitors whether or not the outdoor unit is in oil return operation. <i>(General)</i>
Electric Power	Monitors and displays the electric power (calculated). <i>(General)</i>
Electric Current	Monitors and displays the electric current (calculated). <i>(General)</i>
System Capacity Code	Monitors and displays the system capacity code. <i>(General)</i>
Outdoor Air Temperature	Monitors and displays the outdoor air temperature. <i>(General)</i>
M_Condensing Pressure	Monitors and displays the condensing pressure <i>(Master Module)</i>
M_Evaporating Pressure	Monitors and displays the evaporating pressure <i>(Master Module)</i>
M_Condensing Temperature	Monitors and displays the condensing temperature <i>(Master Module)</i>

Daikin North America LLC, 5151 San Felipe, Suite 500, Houston TX, 77056

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# Submittal Data Sheet

DCM601A71 – intelligent Touch Manager

Project Name:		Approval:	
Location:		Date:	
Engineer:		Construction:	
Submitted to:		Unit #:	
Submitted by:		Drawing #:	
Reference:			

M_Evaporating Temperature	Monitors and displays the evaporating temperature ( <i>Master Module</i> )
M_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ( <i>Master Module</i> )
M_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ( <i>Master Module</i> )
M_Fan Step	Monitors and displays the fan step ( <i>Master Module</i> )
M_EV Position 1	Monitors and displays the position of the expansion valve1 ( <i>Master Module</i> )
M_EV position 2	Monitors and displays the position of the expansion valve2 ( <i>Master Module</i> )
M_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ( <i>Master Module</i> )
M_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ( <i>Master Module</i> )
M_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ( <i>Master Module</i> )
M_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ( <i>Master Module</i> )
M_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ( <i>Master Module</i> )
M_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ( <i>Master Module</i> )
M_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ( <i>Master Module</i> )
M_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX ( <i>Master Module</i> )
M_Suction Temperature	Monitors and displays the suction temperature ( <i>Master Module</i> )
M_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ( <i>Master Module</i> )
M_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ( <i>Master Module</i> )
M_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ( <i>Master Module</i> )
M_Subcool EV Position	Monitors and displays the subcool expansion valve position ( <i>Master Module</i> )
S1_Condensing Pressure	Monitors and displays the condensing pressure ( <i>Sub Module1</i> )
S1_Evaporating Pressure	Monitors and displays the evaporating pressure ( <i>Sub Module1</i> )
S1_Condensing Temperature	Monitors and displays the condensing temperature ( <i>Sub Module1</i> )
S1_Evaporating Temperature	Monitors and displays the evaporating temperature ( <i>Sub Module1</i> )
S1_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ( <i>Sub Module1</i> )
S1_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ( <i>Sub Module1</i> )
S1_Fan Step	Monitors and displays the fan step ( <i>Sub Module1</i> )
S1_EV Position 1	Monitors and displays the position of the expansion valve1 ( <i>Sub Module1</i> )
S1_EV position 2	Monitors and displays the position of the expansion valve2 ( <i>Sub Module1</i> )
S1_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ( <i>Sub Module1</i> )
S1_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ( <i>Sub Module1</i> )
S1_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ( <i>Sub Module1</i> )

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# Submittal Data Sheet

DCM601A71 – intelligent Touch Manager

Project Name:

Location:

Engineer:

Submitted to:

Submitted by:

Reference:

Approval:

Date:

Construction:

Unit #:

Drawing #:

S1_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ( <i>Sub Module1</i> )
S1_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX( <i>Sub Module1</i> )
S1_Suction Temperature	Monitors and displays the suction temperature ( <i>Sub Module1</i> )
S1_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ( <i>Sub Module1</i> )
S1_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ( <i>Sub Module1</i> )
S1_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ( <i>Sub Module1</i> )
S1_Subcool EV Position	Monitors and displays the subcool expansion valve position ( <i>Sub Module1</i> )
S2_Condensing Pressure	Monitors and displays the condensing pressure ( <i>Sub Module2</i> )
S2_Evaporating Pressure	Monitors and displays the evaporating pressure ( <i>Sub Module2</i> )
S2_Condensing Temperature	Monitors and displays the condensing temperature ( <i>Sub Module2</i> )
S2_Evaporating Temperature	Monitors and displays the evaporating temperature ( <i>Sub Module2</i> )
S2_Inverter Compressor 1 Speed	Monitors and displays the speed of the inverter compressor1 ( <i>Sub Module2</i> )
S2_Inverter Compressor 2 Speed	Monitors and displays the speed of the inverter compressor2 ( <i>Sub Module2</i> )
S2_Fan Step	Monitors and displays the fan step ( <i>Sub Module2</i> )
S2_EV Position 1	Monitors and displays the position of the expansion valve1 ( <i>Sub Module2</i> )
S2_EV position 2	Monitors and displays the position of the expansion valve2 ( <i>Sub Module2</i> )
S2_Hot Gas Temperature (Compressor 1)	Monitors and displays the hot gas temperature of the compressor1 ( <i>Sub Module2</i> )
S2_Hot Gas Temperature (Compressor 2)	Monitors and displays the hot gas temperature of the compressor2 ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature	Monitors and displays the liquid pipe temperature ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature (HX Upper)	Monitors and displays the liquid pipe temperature for the upper HX ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature (HX Lower)	Monitors and displays the liquid pipe temperature for the lower HX ( <i>Sub Module2</i> )
S2_Liquid Pipe Temperature (De-Icer)	Monitors and displays the liquid pipe temperature for the de-icer ( <i>Sub Module2</i> )
S2_Gas Pipe Temperature (HX Upper)	Monitors and displays the gas pipe temperature for the upper HX ( <i>Sub Module2</i> )
S2_Gas Pipe Temperature (HX Lower)	Monitors and displays the gas pipe temperature for the lower HX( <i>Sub Module2</i> )
S2_Suction Temperature	Monitors and displays the suction temperature ( <i>Sub Module2</i> )
S2_Compressor Suction Temperature	Monitors and displays the compressor's suction temperature ( <i>Sub Module2</i> )
S2_Subcool Inlet Temperature	Monitors and displays the subcool inlet temperature ( <i>Sub Module2</i> )
S2_Subcool Outlet temperature	Monitors and displays the subcool outlet temperature ( <i>Sub Module2</i> )
S2_Subcool EV Position	Monitors and displays the subcool expansion valve position ( <i>Sub Module2</i> )

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# Submittal Data Sheet

DCM601A71 – intelligent Touch Manager

Project Name:

Location:

Engineer:

Submitted to:

Submitted by:

Reference:

Approval:

Date:

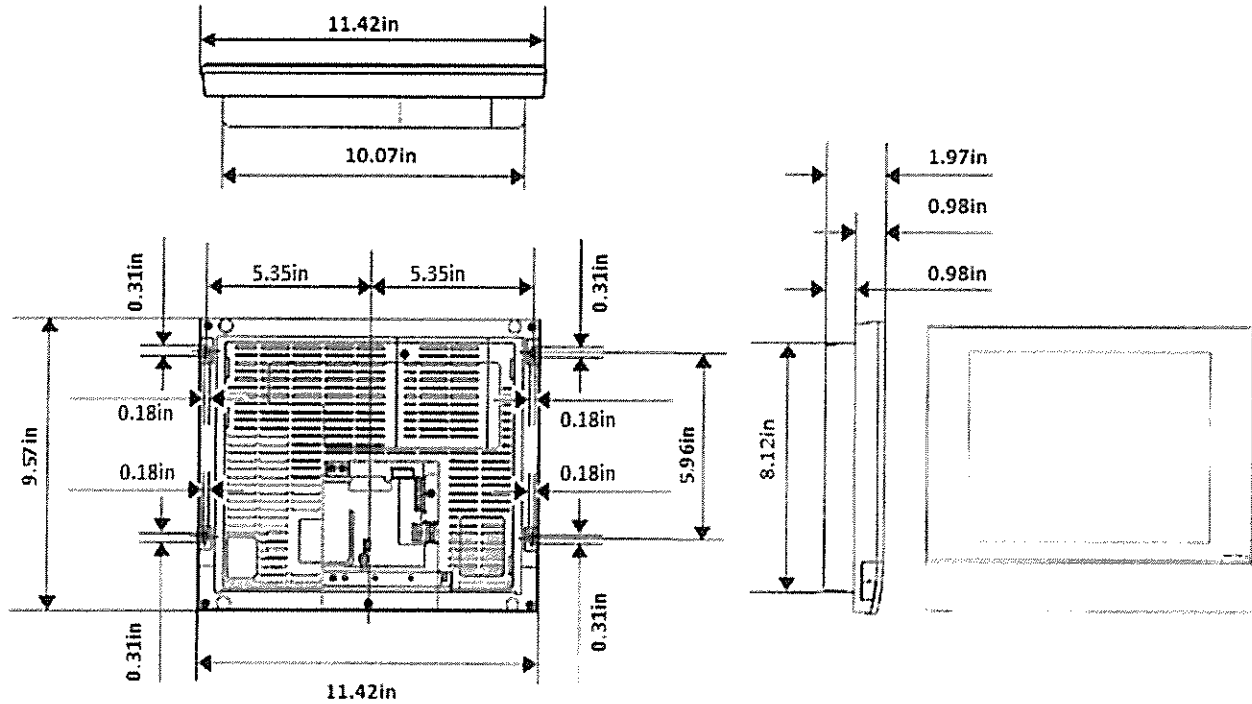
Construction:

Unit #:

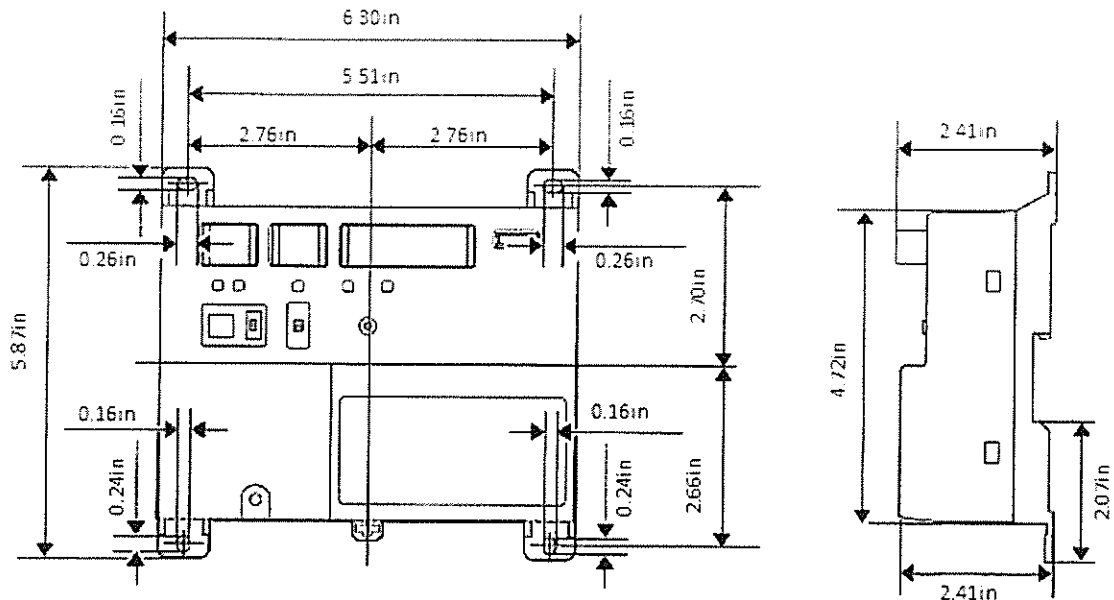
Drawing #:

## DIMENSIONS:

iTM:



iTM Plus Adaptor:



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# Submittal Data Sheet

DCM601A71 – intelligent Touch Manager

Project Name:		Approval:	
Location:		Date:	
Engineer:		Construction:	
Submitted to:		Unit #:	
Submitted by:		Drawing #:	
Reference:			

## DOCUMENTATION:

Documentation available on [www.daikincity.com](http://www.daikincity.com) and/or [www.daikinac.com](http://www.daikinac.com):

- Submittal
- Sales Brochure
- Guide Specs
- Installation Manual
- Operation Manual
- iTM D3 Operation Data Analysis Tool
- iTM BACnet Server Gateway
  - Design Guide
  - Sales Flyer
  - Quick User Guide
- iTM BACnet Client
  - Sales Flyer
  - iTM BACnet Client macro tools
- WAGO I/O Basic Kit and Modules
  - Submittal
  - Installation Manual
  - Sales Flyer

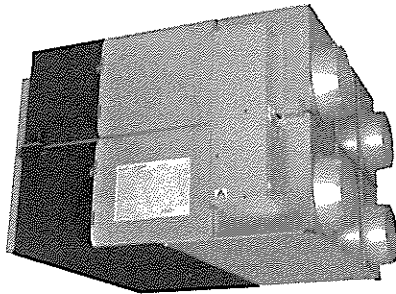


## SUBMITTAL DATA: TLGHF1200RVX01A ENERGY RECOVERY VENTILATOR

Job Name:

System Reference:

Date:



### GENERAL FEATURES

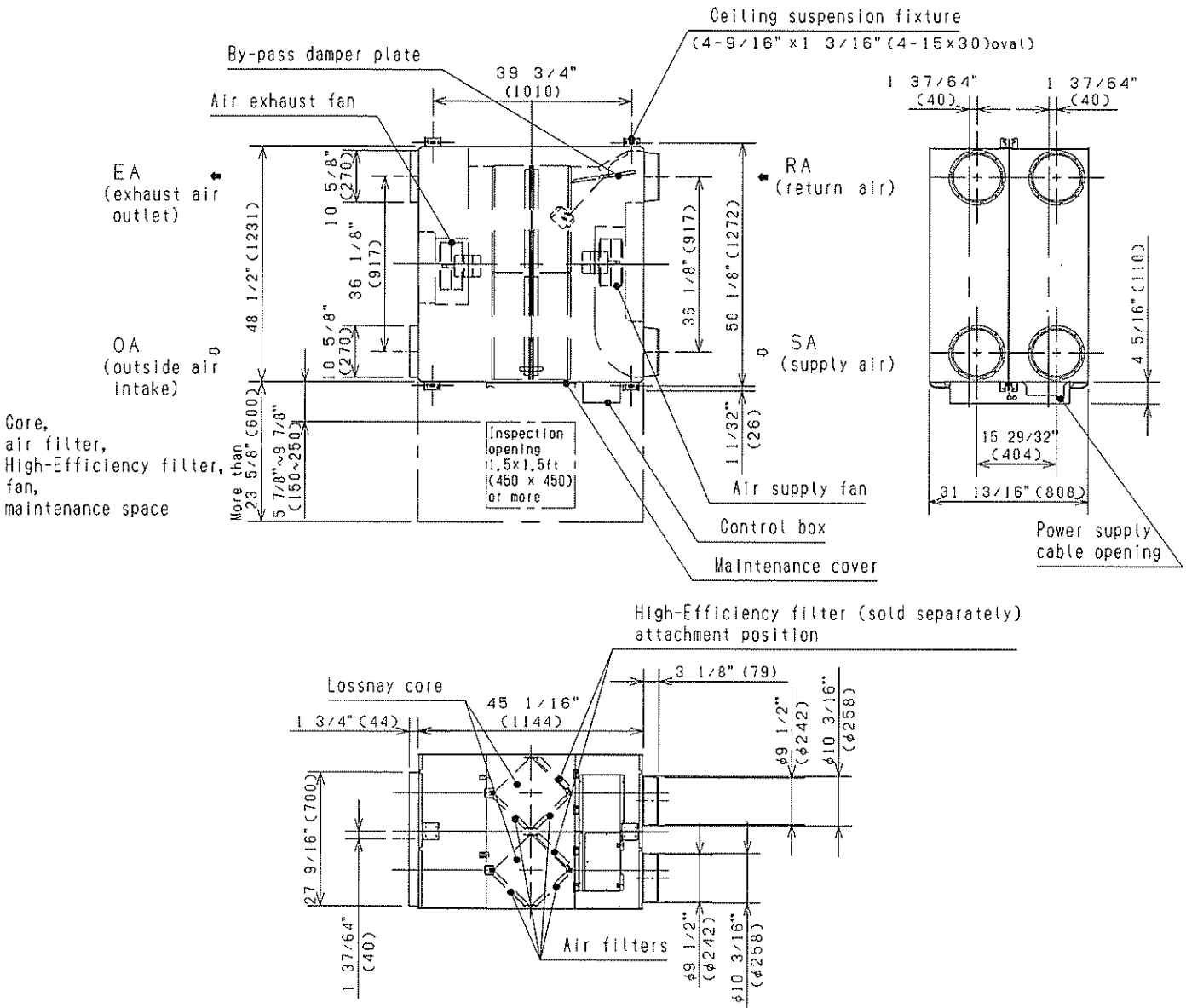
- Lossnay<sup>®</sup> cross-flow energy recovery core
- Minimal cross contamination (<1% overall) between entering and leaving air streams
- Stand-alone remote controller (TZ-61DR-E)
- M-NET Connectivity
- External input bypass damper control
- Stand alone or interlocks connects with all Trane<sup>®</sup> /Mitsubishi Electric products
- Four fan speeds
- High-efficiency DC Motor
- Standard non-woven fabric filter, washable fiber
- Optional high-efficiency MERV 16 filter

### SPECIFICATIONS:

Capacity	CFM (m <sup>3</sup> /h)	1,200 (2,039)
Power Source		1-phase 208/230V 60Hz
Power Consumption	kW	0.08 - 0.88
Current	A	0.60 - 5.40
Starting Current	A	12.2
Minimum Circuit Ampacity (MCA)	A	6.4
Maximum Overcurrent Protection (MOCP)	A	15
Fan	Air Volume	CFM (m <sup>3</sup> /h)
	External Static Pressure	In. W.G.
	Temperature	%
Exchange Efficiency	Enthalpy Cooling	%
	Enthalpy Heating	%
External Finish		Galvanized steel sheet
External Dimensions (H x W x D)	In.	31-13/16 x 50-1/8 x 51-5/16
	mm	808 x 1,272 x 1,302
Net Weight	lbs	251
	kg	114
Energy Transfer Mechanism		Lossnay <sup>®</sup> Core
Heat Exchange Material		Partition, spacing plate-cellulose fiber membrane
Heat Exchange System		Air-to-air total heat (sensible heat + latent heat) exchange, no moving parts
Blower Type		9-5/8 In. diameter centrifugal fan
Motor Type		EC Motor
Included: Standard Filter (PZ-100RF8-E) <sup>1</sup>	Dimensions (H x W x L)	19/32 x 9-9/16 x 22-1/4
Optional: High-Efficiency MERV 16 Filter (PZ-100RFP2-E) <sup>1</sup>	In.	1 x 9-5/16 x 22
Entering Air Temperature Operation Range		14° F to 104° F (-10° C to 40° C), RH 80% or less
Sound Pressure Level	dB(A)	19.5-28.0-36.0-41.0

<sup>1</sup> Requires two filter sets (two filters included per set)

DIMENSIONS: TLGHF1200RVX01A



	UNIT	SCALE
	inch(mm)	N.T.S



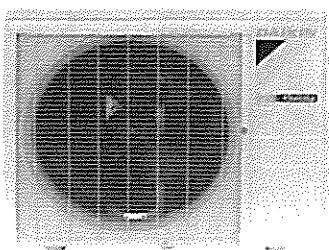
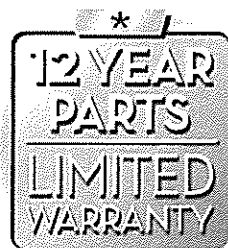
Job Name:	
Tag#	



## Submittal Data Sheet

FTX09AXVJU / RX09AXVJU

0.75-Ton Wall Mounted Heat Pump System



Complete warranty details available from your local dealer or at [www.daikincomfort.com](http://www.daikincomfort.com). To receive the 12-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Quebec. If product is installed in a commercial application, limited warranty period is 5 years.

### Indoor Specifications

Airflow Rate (cfm)	Cooling		Heating	
	H	M	H	M
	431	322	402	322
	L	SL	L	SL
	249	219	249	219
Sound (dBA) H / M / L / SL	43 / 36 / 30 / 25		43 / 36 / 29 / 25	
Dimensions (H × W × D) (in)		11-1/3 × 30-29/32 × 9-27/32		
Weight (Lbs)		20		

### Outdoor Specifications

Compressor	Hermetically Sealed Swing Type			
Refrigerant	R-410A			
Factory Charge (Lbs)	1.54			
Refrigerant Oil	PVE (FVC50K)			
Airflow Rate (cfm)	Cooling		Heating	
	H	1,083	H	1,103
Sound Pressure Level (dBA)	46		48	
Dimensions (H x W x D) (in)	21-11/16 x 26-1/2 x 11-3/16			
Weight (Lbs)	57			

### Efficiency

Cooling		Heating	
SEER	19	HSPF	10.0
EER	12.5	COP	4.06

### Performance

Cooling (Btu/hr)	
Rated (Min/Max)	8,900 (4,400 / 10,200)
Sensible @ AHRI	8,040
Moisture Removal gal/h	.08
Standard Operating Range	50°F – 115°F
Extended Operating Range*	-4°F – 115°F

Rated Cooling Conditions: Indoor: 80°F DB/67°F WB  
Outdoor: 95°F DB/75°F WB

\*With field settings and wind baffle

Heating (Btu/hr)	
1: @ 47° Rated (Min/Max)	10,000 (4,400 / 13,000)
2: @ 17° Rated	5,700
Operating Range	5°F – 65°F

1: Rated Heating Conditions: Indoor: 70°F DB/60°F WB  
Outdoor: 47°F DB/43°F WB  
2: Rated Heating Conditions: Indoor: 70°F DB/60°F WB  
Outdoor: 17°F DB/15°F WB

### Electrical

	208/60/1	230/60/1
System MCA	8.7	8.7
System MFA	15.0	15.0
Compressor RLA	8.5	8.5
Outdoor fan motor FLA	0.36	0.36
Outdoor fan motor W	41	41
Indoor fan motor FLA	0.30	0.30
Indoor fan motor W	38	38

MFA: Max. fuse amps MCA: Min. circuit amps (A) FLA: Full load amps (A)  
RLA: Rated load amps (A) W: Fan motor rated output (W)

### Piping

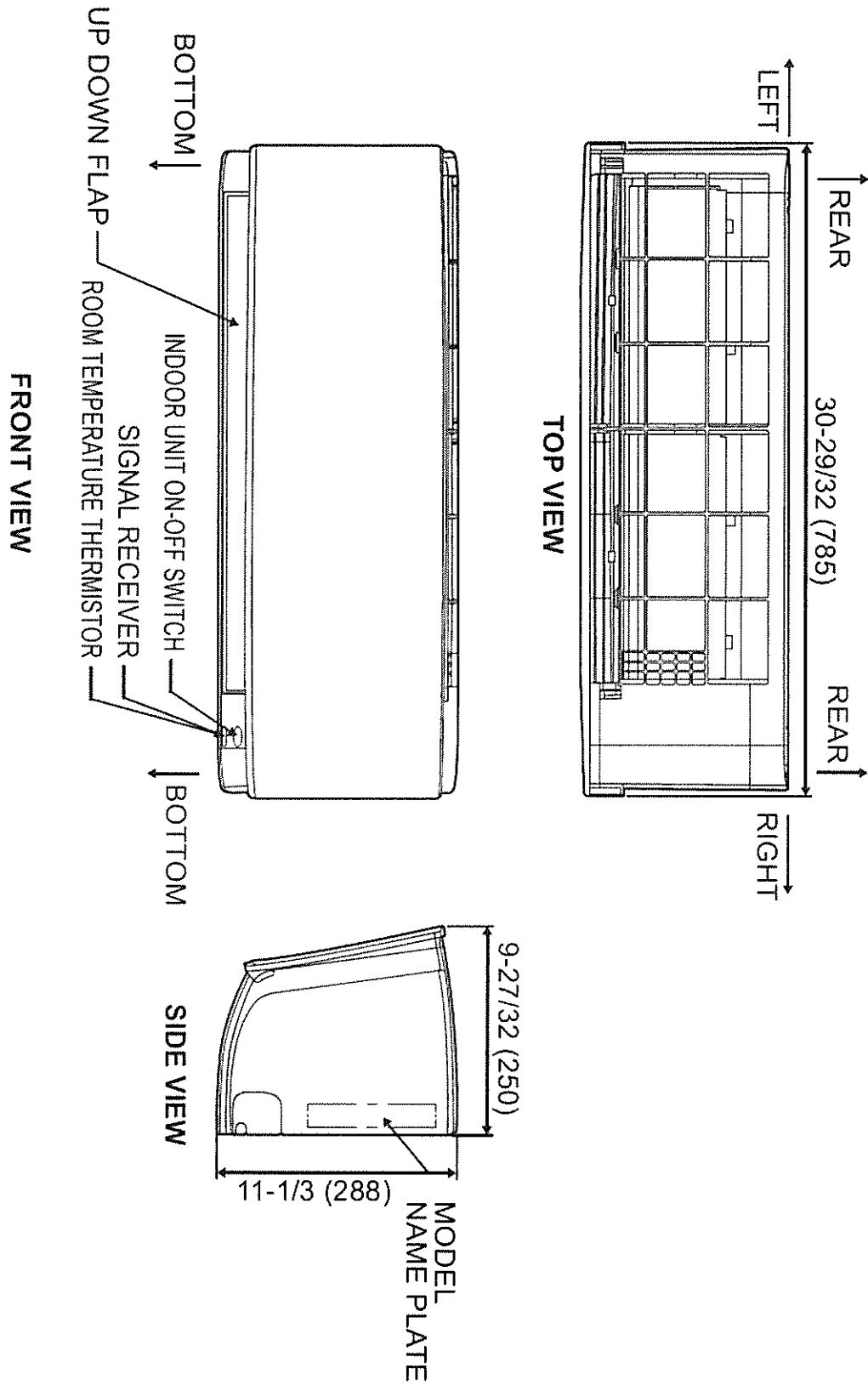
Liquid (in)	1/4
Gas (in)	3/8
Drain (in)	3/4
Max. Interunit Piping Length (ft)	65.625
Max. Interunit Height Difference (ft)	49.25
Chargeless (ft)	32.8
Additional Charge of Refrigerant (oz/ft)	.21

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Submittal Revision Date: August 2020

Page 1 of 4



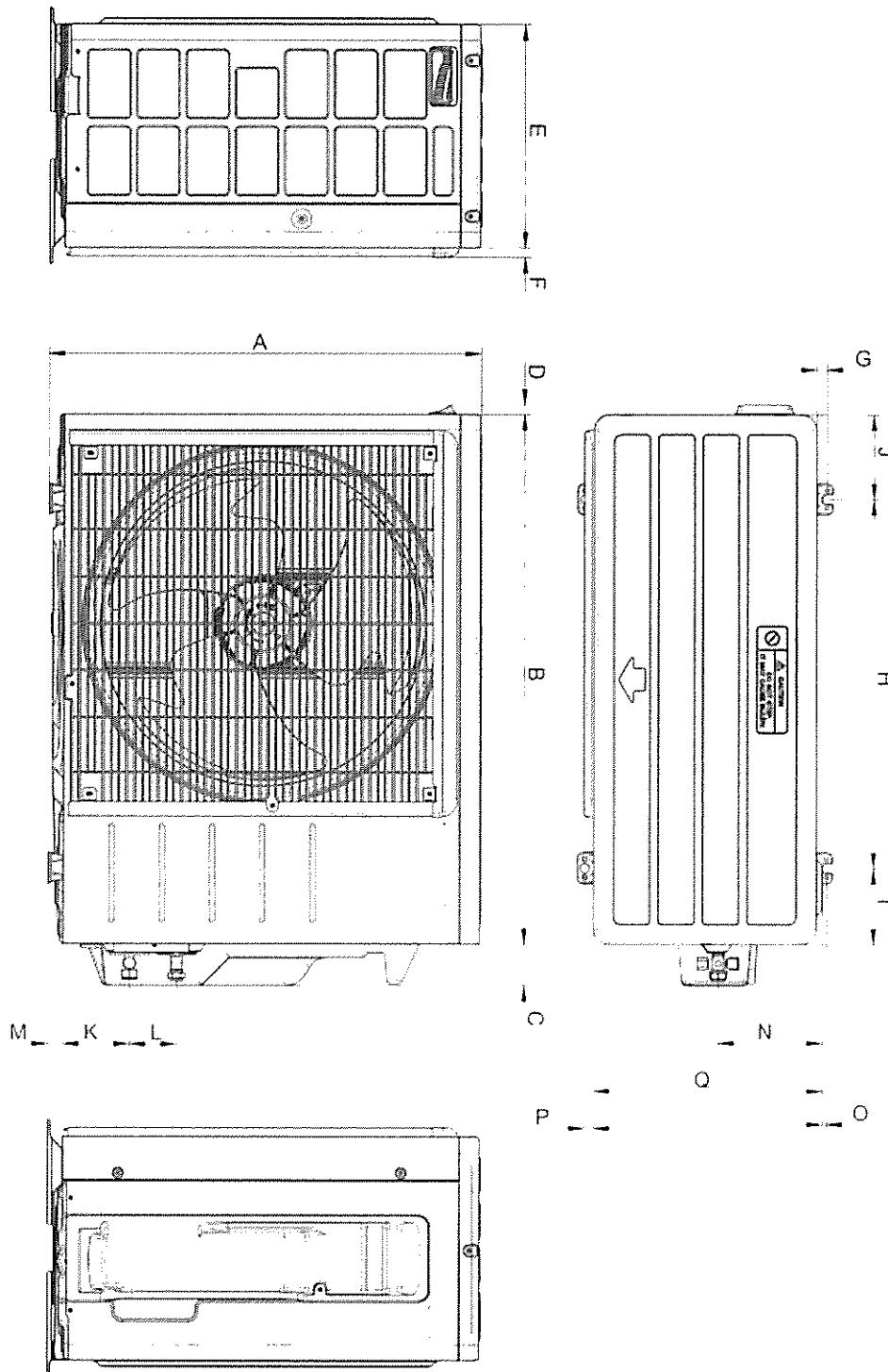
All dimensions are in inch (mm)

# RX09AXVJU Dimensional Data



Dimension		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Model																		
09/12		21-11/16 (550)	26-1/2 (675)	2-1/16 (53)	15/32 (12)	11-3/16 (284)	15/32 (12)	1/2 (13)	18-1/2 (470)	3-13/16 (97)	4-1/4 (108)	3-3/8 (86)	2-3/8 (60)	25/32 (20)	5-1/4 (133)	3/16 (5)	7/16 (11)	11-1/2 (292)

All dimensions are in inch (mm)



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Page 3 of 4

Indoor Unit		
Included	Part Number	Description
	BRP072A43	Wireless Interface Adaptor
	AZAI6WSCDKB	DKN Residential Cloud Wi-Fi Adaptor for Single- and Multi-Zone System (S21)
	BRC944B2-A08	Wired Remote Controller kit
	BRCW901A08	Wired Remote Controller Cable – 25ft (Included in above kit)
	BRCW901A03	Wired Remote Controller Cable – 10ft
	DACA-CP1-1	Inline Condensate Pump (Fits inside all Daikin wall & floor mount units)
	DACA-CP4-1	External Condensate Pump

Outdoor Unit		
Included	Part Number	Description
	DACA-WB-1	Powder-Coated Wall-Mounted Bracket
	KPW937F4	Air direction adjustment grille (09 & 12)
	KEH067A41E	Daikin BMS Drain Pan Heater Small RX09,12 & RXN09,12
	KKG067A41	Back protection wire net (09 & 12)

# PRODUCT SUBMITTAL SHEET



Capacities
1500, 1800, 2000, 3000, 3600 4000 or 4800 Watts 120, 208, 240, 277, 347 or 600V 1 or 3 Phase Thermostat Range: 40° - 90° F Air Movement: 100 CFM

## CWH3000 SERIES FAN-FORCED WALL HEATERS

Job Name: \_\_\_\_\_

Location: \_\_\_\_\_

Architect: \_\_\_\_\_

Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

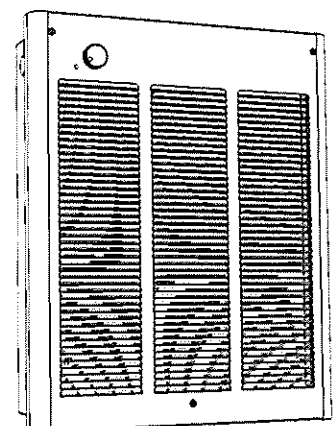
Submitted By: \_\_\_\_\_

Date: \_\_\_\_\_

Submitted By: _____		Date: _____	
Approved By: _____		Date: _____	

Item	QTY	Catalog Number	Tag	Watts	Volts	PH	AMPS	Weight

ACCESSORIES			
Item	QTY	Part Number	Tag

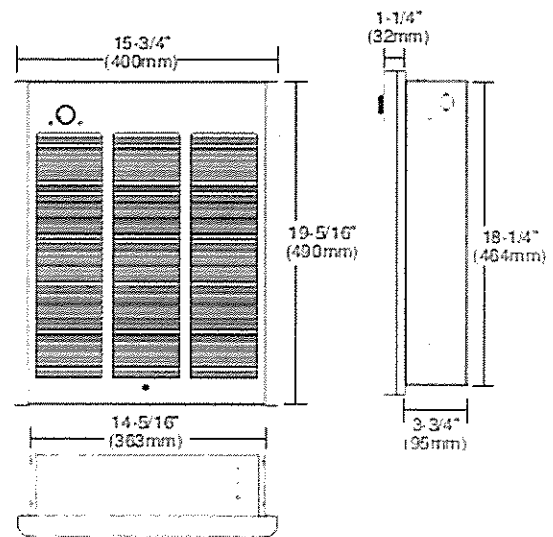


470 Beauty Spot Road East  
Bennettsville, South Carolina 29512  
www.marleymep.com





Catalog Number	Volts	Amps	Watts	Phase	BTU/HR
CWH3150F	120	12.5	1500	1	5115
CWH3180F	120	15.0	1800	1	6138
CWH3404F	240/208	16.7/8.3 - 14.5/7.2	4000/2000 - 3000/1500	1	13,640/6820 - 10,230/5115
CWH3407F	277/240	16.7/8.3 - 14.5/7.2	4000/2000 - 3000/1500	1	13,640/6820 - 10,230/5115
CWH3307F	277	10.8/5.4	3000/1500	1	10230/5115
CWH3408F	208	19.2/9.6	4000/2000	1	13,640/6820
CWH34083F	208	11.1	4000	3	13,640
CWH34043F	240	9.7	4000	3	13,640
CWH3504F	240/208	20/17.3	4800/3600	1	16375/12280
CWH3507F	277/240	20/17.3	4800/3600	1	16375/12280
CWH3508F	208	23.1	4800	1	16,375
CWH35083F	208	13.4	4800	3	16,375
CWH35043F	240	11.6	4800	3	16,375
CWH3203F	347	5.8	2000	1	6820
CWH3206F	600	3.3	2000	1	6820
CWH3153F	347	4.3	1500	1	5115
CWH3156F	600	2.5	1500	1	5115
CWH3303F	347	8.6	3000	1	10,230
CWH3306F	600	5	3000	1	10,230
CWH3403F	347	11.5	4000	1	13,640
CWH3406F	600	6.7	4000	1	13,640
CWH3503F	347	13.8	4800	1	16,375
CWH3506F	600	8	4800	1	16,375
<b>Accessories</b>					
CWH3SM	Surface mounting frame for surface installations				
CWH3S1	1" deep surface mounting frame for semi-recessed installation				
CWH3S2	2" deep surface mounting frame for semi-recessed installation				
LFK5FC	14 gauge security front cover				



## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS\*

The heating equipment shall include an electric automatic fan forced air heater suitable for small area heating, as manufactured by QMark®, a Marley Engineered Products® Brand, Bennettsville, SC. The heater shall be designed for wall mounting, recess or surface. Heaters shall be cETLus listed.

**BACK BOX:** The back box shall be designed as a recessed rough-in box in either masonry or frame installations and is also used when surface mounting frames are used in surface mounting installations. The back box shall be heavy gauge galvanized steel and shall contain knockouts through which power leads enter.

**INNER FRAME ASSEMBLY:** The heater assembly, which fits into the back box, shall consist of a heavy gauge steel fan panel to which all of the operational parts of the heater are mounted. The inner frame assembly shall be completely pre-wired.

**HEATING ELEMENT:** The heating element shall be of the non-glowing design consisting of an 80/20 nickel-chromium resistance wire enclosed in a steel sheath to which plate fins are copper brazed. The element shall cover the entire air discharge area to ensure uniform heating of all discharged air. It shall be warrantied for 5 years.

**ON/OFF SWITCH:** A double-pole, single throw on/off switch shall be mounted on the back box for positive disconnect of power supply. It will be completely concealed behind the front cover.

**MOTOR AND CONTROLS:** The fan motor shall be totally enclosed, impedance protected, permanently lubricated and with a totally enclosed rotor. Fan control shall be of the bi-metallic, snap-action type and shall activate fan after heating element reaches operating temperature, and continue to operate the fan after the thermostat is satisfied and until all heated air has been discharged. The thermostat shall be single-pole type on all models. Thermal cutout shall be bi-metallic, snap-action type designed to shut off heat in the event of overheating. The fan shall be five-bladed aluminum.

**SURFACE MOUNTING FRAME:** The surface mounting frame shall be of heavy gauge steel designed to mount around the back box for a finished surface installation. Slot knock outs shall be provided for power supply conduit.

**FRONT COVER:** The louvered front cover shall be of heavy gauge steel with a powder paint finish. A plug button will be provided to replace the thermostat knob and render the unit tamper-resistant.

**FINISH:** All sheet metal parts, except the galvanized steel back box, shall be phosphatized, then completely painted by a powder paint process.

*\*In the interest of continual improvements in product and performance, Marley Engineered Products reserves the right to change specifications without notice.*

## Dura-Power™

**Designed for use as a recovery heater having its own storage tank. Available in upright standard models (DEN) and lowboy models (DEL).**

**GLASSLINED TANK** - Thirteen sizes; 6 thru 119 gallon capacity. Tank interior is coated with glass specially designed by A. O. Smith for water heater use.

**ELEMENTS** - Zinc plated copper sheaths for longer life. Medium watt density means lower surface temperature to minimize scale build-up and more surface to heat water. Element sizes from 1.5 to 6 KW. Maximum input 12 KW (see chart on back).

**STANDARD VOLTAGES** - 120, 277 single phase and 208, 240 and 480V unbalanced three-phase delta; easily converted to single-phase at terminal block (except 208V with 6000 watt elements). Single element heater, single-phase only.

**TERMINAL BLOCK** - Factory-installed. Just bring the service to heater and connect to block. Terminal block not supplied on 120V & 277 volt models. (No junction box on DEL6-20)

**CONTROLS** - Temperature control (adjustable through range of 110° to 170°F on single element and 120° to 180°F on dual element) and manual reset high temperature cutoff per element (dual element models). Factory-wired for non-simultaneous operation; easily converted to simultaneous element operation (three phase models only).

**CSA CERTIFIED AND ASME RATED T&P RELIEF VALVE**

**SIMPLIFIED CIRCUITRY, COLOR CODED FOR EASE OF SERVICE**

**ANODE ROD FOR MAXIMUM CORROSION PROTECTION**

**CABINET HAS BONDERIZED UNDERCOAT WITH BAKED ENAMEL FINISH**

**TOP INLET AND OUTLET OPENINGS**

**DRAIN VALVE (EXCLUDES DEL 6-20)**

**UL APPROVED FIELD CONVERSION PROGRAM** - The 6 through 20 models are UL listed to UL 174 and the 30 through 120 models are listed to UL 1453.

**COMPLIANCE** - Meets the standby loss Requirements of the U.S. Department of Energy and current edition of ASHRAE/IESNA 90.1.

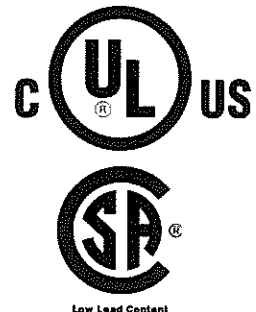
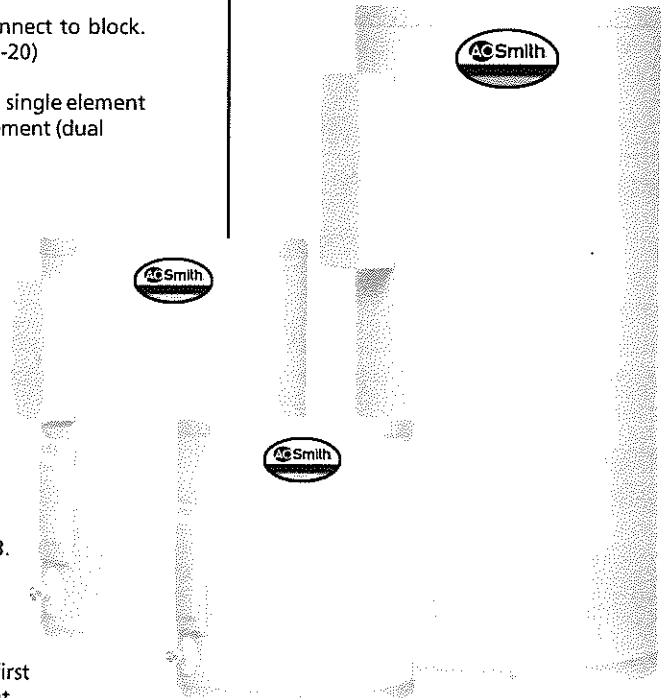
**LIMITED WARRANTY OUTLINE** - If the tank should leak any time during the first three years, under the terms of the warranty, A. O. Smith will furnish a replacement heater; installation, labor, handling and local delivery extra. THIS OUTLINE IS NOT A WARRANTY. For complete information consult the written warranty or A. O. Smith Water Products Company.

Element availability Chart (light Duty Commercial Electric)

Input	120 V	208V	240V	277V	480V
1500	Yes	Yes	Yes	Yes	--
2000	Yes	Yes	Yes	Yes	Yes
2500	Yes	Yes	Yes	Yes	Yes
3000	Yes	Yes	Yes	Yes	Yes
3500	-	-	Yes	-	-
4000	-	Yes	Yes	Yes	Yes
4500	-	Yes	Yes	Yes	Yes
5000	-	(Yes)	Yes	Yes	Yes
5500	-	(Yes)	Yes	-	Yes
6000	-	Yes <sup>1</sup>	(Yes)	Yes	Yes

6 gallon model not available above 3.0 Kw  
 5/10/15/20 gallon model all A6 circuit (2 wire) only  
<sup>1</sup> Non simultaneous circuit only  
 ( ) Simultaneous only in 3 Ph

## DEN/DEL MODELS

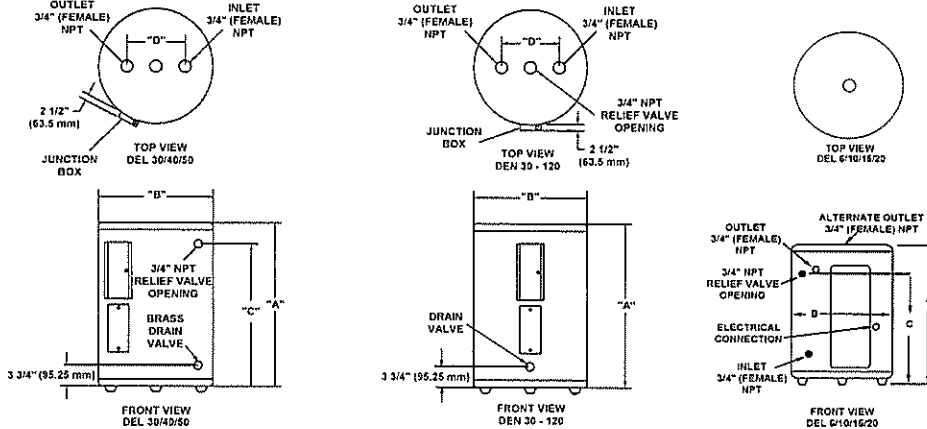




# Commercial Electric Water Heaters

## Dura-Power™

### PRODUCT SPECIFICATIONS



#### ROUGH-IN DIMENSIONS

Models Dimensions	No. of Elements	Tank Capacity		A		B		C		D		Shipping Weight.	
		US Gals.	Litres	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Lbs.	Kg.
DEL-6	1	6	23	15 1/2	394	14 1/4	362	11	279	-	-	35	15.9
DEL-10	1	10	38	18 1/4	464	18	457	12 1/2	318	-	-	54	24.5
DEL-15	1	15	57	26	660	18	457	20 1/2	521	-	-	58	26.3
DEL-20	1	20	76	22 1/4	565	21 3/4	552	15 3/8	391	-	-	73	33.1
DEL-30	2	30	114	30 7/8	784	21 3/4	552	24 1/8	613	8	203	100	45.4
DEL-40	2	40	151	32 1/4	819	24	610	25 9/16	649	8	203	125	56.7
DEL-50	2	50	189	34 1/2	876	26 1/2	673	25 1/8	638	8	203	165	75.3
DEN-30	2	30	114	34 1/2	876	20 1/2	521	-	-	8	203	98	44.5
DEN-40	2	40	151	45 1/8	1146	20 1/2	521	-	-	8	203	113	51.3
DEN-50	2	50	189	54 7/8	1394	20 1/2	521	-	-	8	203	131	59.4
DEN-60	2	60	227	60 3/4	1543	21 3/4	552	-	-	8	203	176	79.8
DEN-80	2	80	303	59 3/8	1508	24	610	-	-	8	203	211	95.7
DEN-120	2	119	450	62 7/16	1586	28 3/8	746	-	-	8	203	326	147.9

#### RECOVERY CAPACITIES

Eloment Wattage (Upper/Lower)	INPUT KW	U.S. Gallons/Hr and Litres/Hr at TEMPERATURE RISE INDICATED													
		F° C°	36F° 20C°	40F° 22.2C°	54F° 30C°	60F° 33.3C°	72F° 40C°	80F° 44.4C°	90F° 50C°	100F° 55.5C°	108F° 60C°	120F° 66.6C°	126F° 70C°		
		NON-SIMULTANEOUS OPERATION													
1500	1.5	GPH	17	15	11	10	8	8	7	6	6	5	5		
		LPH	64	58	43	38	32	29	26	23	21	19	18		
2000	2.0	GPH	23	20	15	14	11	10	9	8	8	7	6		
		LPH	85	77	57	51	43	38	34	31	28	26	24		
2500	2.5	GPH	28	25	19	17	14	13	11	10	9	8	8		
		LPH	107	96	71	64	53	48	43	38	36	32	30		
3000/3000	3.0	GPH	34	30	23	20	17	15	14	12	11	10	10		
		LPH	128	115	85	77	64	58	51	46	43	38	37		
4000/4000	4.0	GPH	45	41	30	27	23	20	18	16	15	14	13		
		LPH	170	153	114	102	85	77	68	61	57	51	49		
4500/4500	4.5	GPH	51	46	34	30	25	23	20	18	17	15	14		
		LPH	192	173	128	115	96	86	77	69	64	58	55		
5000/5000	5.0	GPH	56	51	38	34	28	25	23	20	19	17	16		
		LPH	213	192	142	128	107	96	85	77	71	64	61		
6000/6000	6.0	GPH	68	61	45	41	34	30	27	24	23	20	19		
		LPH	256	230	170	153	128	115	102	92	85	77	73		
SIMULTANEOUS OPERATION															
3000/3000	3	GPH	68	61	45	41	34	30	27	24	23	20	19		
		LPH	256	230	170	153	128	115	102	92	85	77	73		
4000/4000	4	GPH	90	81	60	54	45	41	36	32	30	27	26		
		LPH	341	307	227	205	170	153	136	123	114	102	97		
4500/4500	5	GPH	101	91	68	61	51	46	41	36	34	30	29		
		LPH	384	345	256	230	192	173	153	138	128	115	110		
5000/5000	6	GPH	113	101	75	68	56	51	45	41	38	34	32		
		LPH	426	384	284	256	213	192	170	153	142	128	122		
6000/6000	8	GPH	135	122	90	81	68	61	54	49	45	41	39		
		LPH	511	460	341	307	256	230	205	184	170	153	146		

Recovery capacities at 100° F rise equal: for non-simultaneous element operation = 4.1 gal. x kW of one element; for simultaneous element operation = 4.1 gal. x 2/3 kW of both elements. For other rises multiply element kW as previously explained by 410 and divide by temperature rise. Full load current for single phase = total watts ÷ voltage.

#### SUGGESTED SPECS

The water heater(s) shall be Dura-Power™ Model(s) No. \_\_\_\_\_ as manufactured by A. O. SMITH or an approved equal. Heater(s) shall be rated at \_\_\_\_\_ kW, \_\_\_\_\_ volts, \_\_\_\_\_ phase, 60 cycle AC, and listed by Underwriters' Laboratories. Models shall meet the standby loss requirements of the U.S. Department of energy and current edition of ASHRAE/IESNA 90.1. Tank(s) shall be \_\_\_\_\_ gallon capacity. Heater(s) shall have 150 psi working pressure and be equipped with extruded high density anode rod. All steel by firing at a temperature range of 1600°F. Electric heating elements shall be medium watt density with zinc plated copper sheath. Each element shall be controlled by an individually mounted thermostat and high temperature cutoff switch. The outer jacket shall be of backed enamel finish and shall enclose the tank with foam insulation. Electrical junction box with heavy duty terminal block shall be provided (except on 120V & 277V (no junction box on DEL-6 thru 20)). The drain valve shall be located in the front for ease of servicing. Heater tank shall have a three year limited warranty as outlined in the written warranty. Fully illustrated instruction manual to be included.



## Madera™ FloWise® 15" Height Elongated Flushometer Toilet

VITREOUS CHINA LESS EVERCLEAN®

### Madera™ FloWise® 15" Height Elongated LESS EverClean®

- Floor mount flushometer valve toilet
- Vitreous china
- High Efficiency, Low Consumption. Operates in the range of 1.1 gpf to 1.6 gpf (4.2 Lpf to 6.0 Lpf)
- Meets definition of HET (High Efficiency Toilet) when used with a high efficiency flush valve (1.28 gpf or 1.6 / 1.1 gpf dual flush)
- Fully glazed 2-1/8" trapway
- Elongated bowl
- 10" or 12" roughing-in
- 15" rim height
- Condensation channel
- Powerful direct-fed siphon jet action
- 10" x 12" water surface area
- 1-1/2" inlet spud
- 2 bolt caps

- ☐ **2234.001** Elongated bowl only, top spud
- ☐ **2623.001** Elongated bowl only, top spud with slotted rim for bedpan holding
- ☐ **2624.001** Elongated bowl only, back spud

#### System MaP\* Score:

- 1,000 grams of miso @ 1.1 gpf, 1.28 gpf or 1.6 gpf when used with an American Standard flush valve

\* Maximum Performance (MaP) testing performed by IAPMO R&T Lab. MaP Report conducted by Veritec Consulting, Inc. and Koeller and Company.

#### Component Parts:

- ☐ **047007-0070A** Inlet Spud (furnished with bowl)
- ☐ **481310-100** Bolt caps with retainers (furnished with bowl)

#### Nominal Dimensions:

718 x 356 x 381mm  
(28-1/4" x 14" x 15")

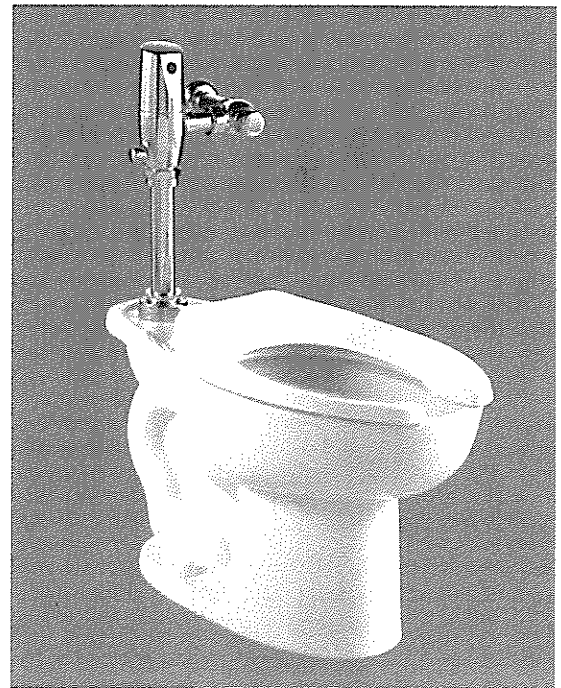
Fixture only, less seat and flush valve

Recommended working pressure—between  
25 psi at valve when flushing and 80 psi static

#### Compliance Certifications -

##### Meets or Exceeds the Following Specifications:

- ASME A112.19.2 / CSA B45.1 for Vitreous China Fixtures



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

#### To Be Specified:

- ☐ Color: ☐ White
- ☐ Seat:
  - ☐ American Standard #5901.100 Heavy duty open front less cover
  - ☐ American Standard #5905.100 Extra heavy duty open front less cover
- ☐ Flushometer Valve:
  - ☐ 1.6 gpf:
    - ☐ Sensor-Operated: American Standard Selectronic® DC Power #6065.161.002 (Top Spud)
    - ☐ Sensor-Operated: American Standard Selectronic® AC Power #6067.261.002 (Back Spud)
    - ☐ Manual: American Standard #6047.161.002 (Top Spud)
  - ☐ 1.28 gpf:
    - ☐ Sensor-Operated: American Standard Selectronic® DC Power #6065.121.002 (Top Spud)
    - ☐ Sensor-Operated: American Standard Selectronic® AC Power #6067.221.002 (Back Spud)
    - ☐ Manual: American Standard #6047.121.002 (Top Spud)
  - ☐ 1.6 / 1.1 gpf Dual Flush:
    - ☐ Sensor-Operated: American Standard Selectronic® DC Power #6065.761.002 (Top Spud)



ENVIRONMENTAL  
PRODUCT  
DECLARATION

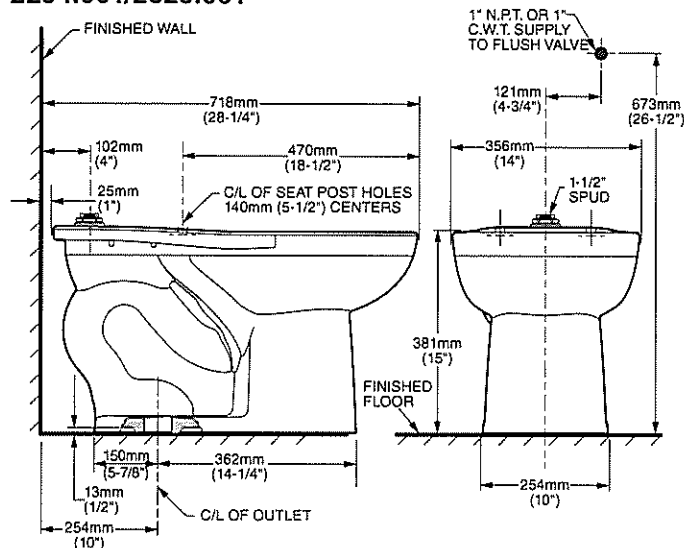


When used with  
1.1 or 1.28 gpf  
toilet flush valves

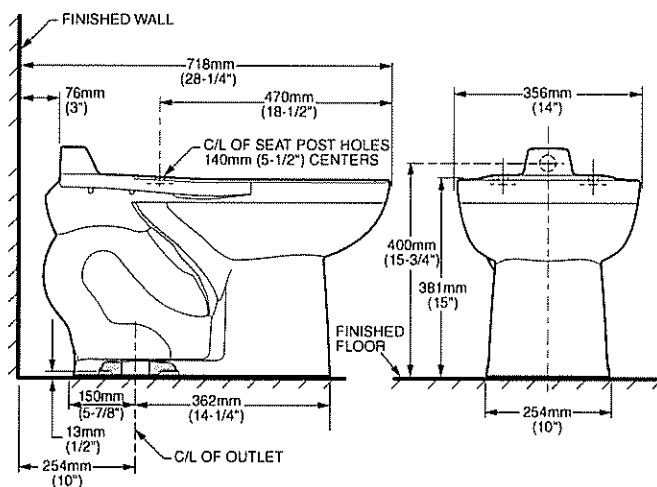


WATER  
EFFICIENT

2234.001/2623.001



2624.001



NOTES:

PRODUCT 2234 SHOWN, 2623 SAME EXCEPT WITH SLOTTED RIM FOR BED PAN HOLDING.  
TO COMPLY WITH AREA CODE GOVERNING THE HEIGHT OF VACUUM BREAKER ON THE FLUSHOMETER VALVE, THE PLUMBER MUST VERIFY DIMENSIONS SHOWN FOR SUPPLY ROUGHING.  
THIS TOILET DESIGNED TO ROUGH-IN AT A MINIMUM DIMENSION OF 254MM (10") AND A MAXIMUM DIMENSION OF 305MM (12") FROM FINISHED WALL TO C/L OF OUTLET.  
FLUSHOMETER VALVE NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY. FLUSHOMETER VALVE REQUIREMENTS FOR 12" (305MM) ROUGH-IN: SWEAT EXTENSION NIPPLE IS REQUIRED. REFER TO VALVE MANUFACTURER AND LOCAL CODES.

**IMPORTANT:** Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.



# AFWALL® MILLENIUM™ FloWise® 1.28 GPF FLUSHOMETER TOILET SYSTEM

with EVERCLEAN®  
MANUAL FLUSH VALVE

BARRIER FREE

## AFWALL® MILLENIUM™ FloWise® 1.28 GPF FLUSHOMETER TOILET SYSTEM with EVERCLEAN®

- ☐ **2856.128** 1.28 gpf Exposed Top Spud Bowl  
and Manual Flush Valve

### BOWL:

- Wall-mount elongated flushometer valve toilet
- Vitreous china
- High Efficiency. Operates in the range of 1.1 gpf to 1.6 gpf (4.2 Lpf to 6.0 Lpf)
- Permanent EverClean® surface inhibits the growth of stain- and odor-causing bacteria, mold, and mildew on the surface
- Condensation channel
- Direct-fed siphon jet action
- 1-1/2" inlet spud
- Fully-glazed 2-1/8" trapway
- 10" x 12" water surface area
- 100% factory flush tested
- Bolt caps and seat not included
- Model 3351.101

### MANUAL FLUSH VALVE:

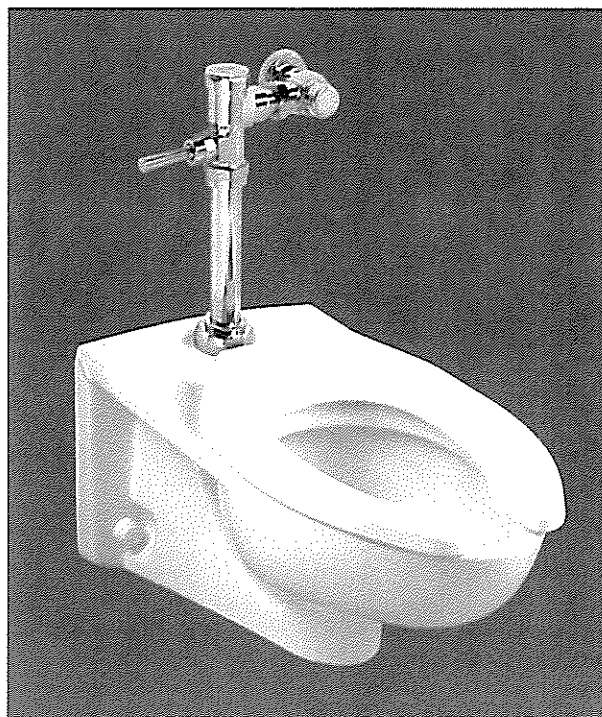
- Manual Piston-Type Water Closet Flush Valve for floor-mounted or wall-hung 1-1/2" top spud bowls
- Self-cleaning brass piston with integral wiper spring prevents clogging and reduces maintenance
- Piston operation delivers superior flush accuracy and repeatability
- Piston valve remains closed and does not need to be reset after loss of water pressure
- ADA compliant non-hold open handle provides automatic shut-off after every flush
- Positive seal ensures leak-free performance
- No external volume adjustment
- Durable chrome-plated cast brass construction is ideal for commercial applications
- Chloramine-resistant EPDM seals
- Adjustable tailpiece for rough-in flexibility
- Can be installed left or right handed
- Model 6047.121.002

### Includes:

- 047007-0070A Inlet spud (furnished with bowl)
- 1" I.P.S. angle stop with back-flow prevention and vandal-resistant cap
- Sweat solder kit including cover tube and wall flange
- High back pressure vacuum breaker with down tube
- Spud coupling & flange for 1-1/2" top spud

### To Be Specified:

- ☐ Color: ☐ White
- ☐ Seat: 5901.100 American Standard Seat
- ☐ 5901.110 American Standard Seat with EverClean®
- ☐ Alternate Seat: 5905.100 Heavy Duty American Standard Seat
- ☐ 5905.110 Heavy Duty American Standard Seat with EverClean
- ☐ Carrier Fitting (by others):



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

### High-Efficiency Toilet Systems:

- 20% water savings when compared to a 1.6 gpf toilet system

### System MaP\* Score:

- 1,000 grams of miso @ 1.28 gpf

\* Maximum Performance (MaP) testing performed by IAPMO R&T Lab. MaP Report conducted by Veritec Consulting, Inc. and Koeller and Company.

### Operating Pressure:

25 psi (flowing) - 80 psi (static)

### Flow Requirement:

25gpm (94.6 L/min.)

### Nominal Fixture Dimensions:

660 x 356 x 381mm (26" x 14" x 15")

EVERCLEAN®  
Surface

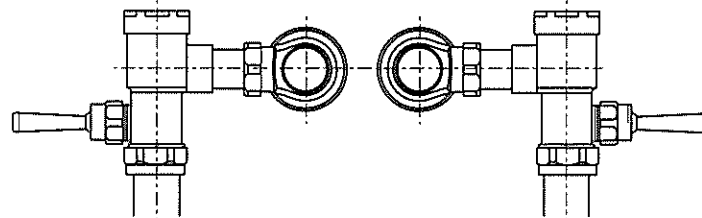
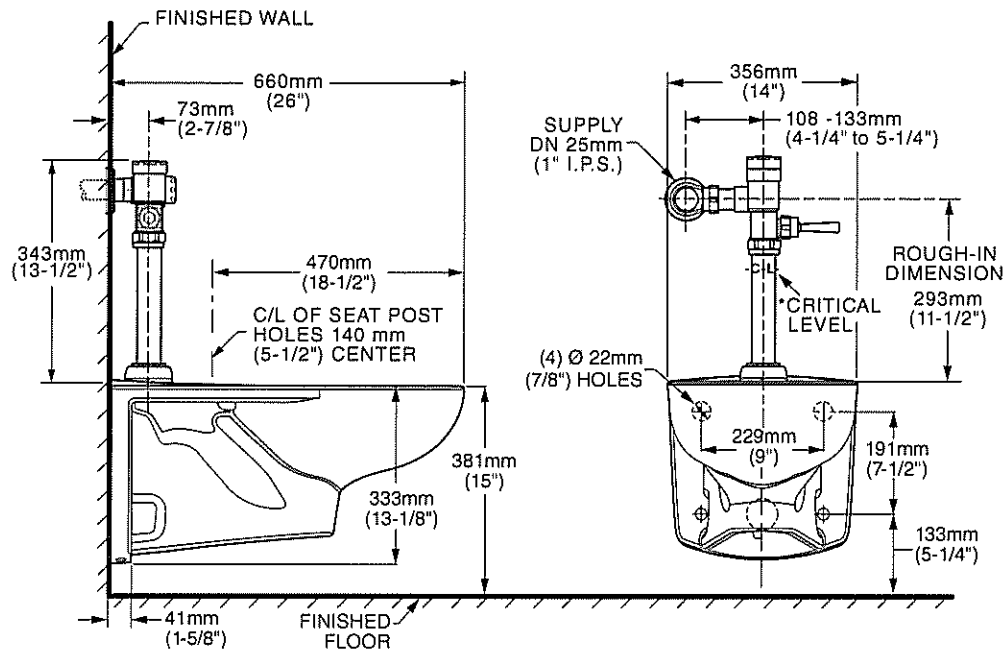


**Fixture Compliance Certifications -  
Meets or Exceeds the Following  
Specifications:**

- ASME A112.19.2-2008 / CSA B45.1-08  
for Vitreous China Fixtures

**Valve Listings:**

- ASSE 1037
- ANSI/ASME A112.19.2
- ADA Compliant



VALVE LEFT or RIGHT HAND INSTALLATION



**MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES  
AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND  
FACILITIES - CHECK LOCAL CODES.**

- When installed so that top of seat is 432 to 483mm (17\" to 19\") from the finished floor.

**NOTES:**

**WASTE OUTLET SEAL RING MUST BE NEOPRENE OR GRAPHITE-FELT (WAX RING  
NOT RECOMMENDED).**

**SUGGESTED 2mm (1/16) CLEARANCE BETWEEN FACE OF WALL AND BACK OF BOWL.  
TO COMPLY WITH AREA CODE GOVERNING THE HEIGHT OF VACUUM BREAKER ON  
THE FLUSHOMETER VALVE, THE PLUMBER MUST VERIFY DIMENSIONS SHOWN FOR  
SUPPLY ROUGHING.**

**CARRIER FITTING AS REQUIRED TO BE FURNISHED BY OTHERS.  
PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORT.**

**IMPORTANT:** Dimensions of fixtures are nominal and may vary within the range of  
tolerances established by ANSI Standard A112.19.2.  
These measurements are subject to change or cancellation. No responsibility is assumed for  
use of superseded or voided pages

**LUCERNE™ WALL-HUNG LAVATORY**

- Wall-hung sink
- Vitreous china
- Front overflow
- D-shaped bowl
- Self-draining deck area with contoured back and side splash shields
- Faucet ledge
- Compliant with Texas accessibility standard (TAS) for children age group 13 and up

**Faucet holes on 203mm (8") centers (Illus.):**

- ☐ **0356.028** For exposed bracket support  
Shown with 4801.862 Amarilis Heritage faucet with Triune Cross handles (not included)
- ☐ **0356.015** For wall hanger (included) or concealed arms support
- ☐ **0356.915** For wall hanger (included) or concealed arms support
  - Less overflow

**Faucet holes on 102mm (4") centers:**

- ☐ **0355.027** For exposed bracket support
- ☐ **0355.012** For wall hanger (included) or concealed arms support
- ☐ **0355.912** For wall hanger (included) or concealed arms support
  - Less overflow

**Single center faucet hole (Illus.):**

- ☐ **0356.041** For exposed bracket support  
Shown with 1340.000 metering faucet (not included)
- ☐ **0356.421** For wall hanger (included) or concealed arms support
- ☐ **0356.921** For wall hanger (included) or concealed arms support
  - Less overflow
- ☐ **0356.439** For wall hanger (included) or concealed arms support
  - Single faucet hole on right
- ☐ **0356.066** For exposed bracket support
  - Single faucet hole on right

**Nominal Dimensions:**

521 x 464mm  
(20-1/2" x 18-1/4")

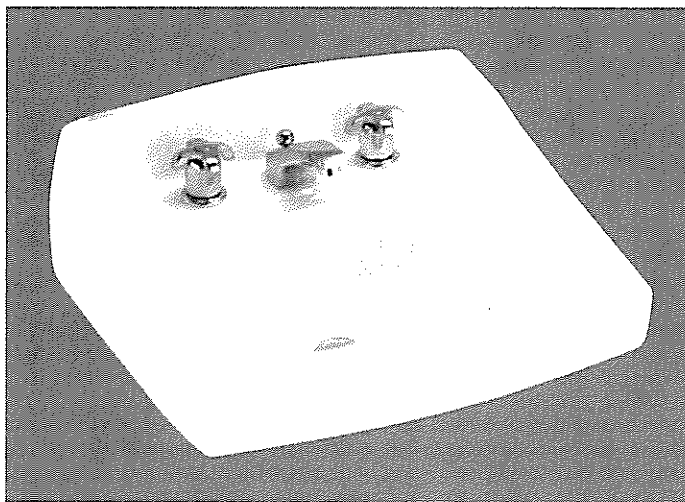
**Bowl sizes:**

381mm (15") wide  
254mm (10") front to back  
165mm (6-1/2") deep

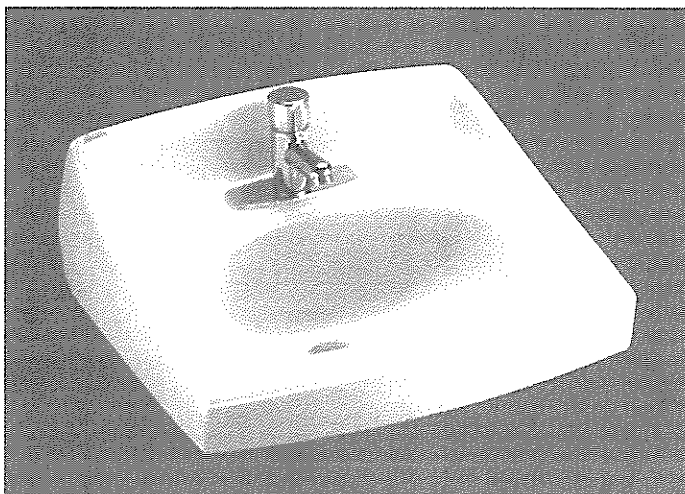
**Compliance Certifications -**

**Meets or Exceeds the Following Specifications:**

- ASME A112.19.2 / CSA B45.1 for Vitreous China Fixtures



**0356.028**



**0356.041**

SEE FOLLOWING PAGES FOR ROUGHING-IN DIMENSIONS

**To Be Specified:**

- ☐ Color: ☐ White
- ☐ Faucet\*:
- ☐ Faucet Finish:
- ☐ Supplies:
- ☐ 1-1/4" Trap:
- ☐ Nipple:
- ☐ Bracket Support (by others):
- ☐ Concealed Arms Support (by others):

\* See faucet section for additional models available

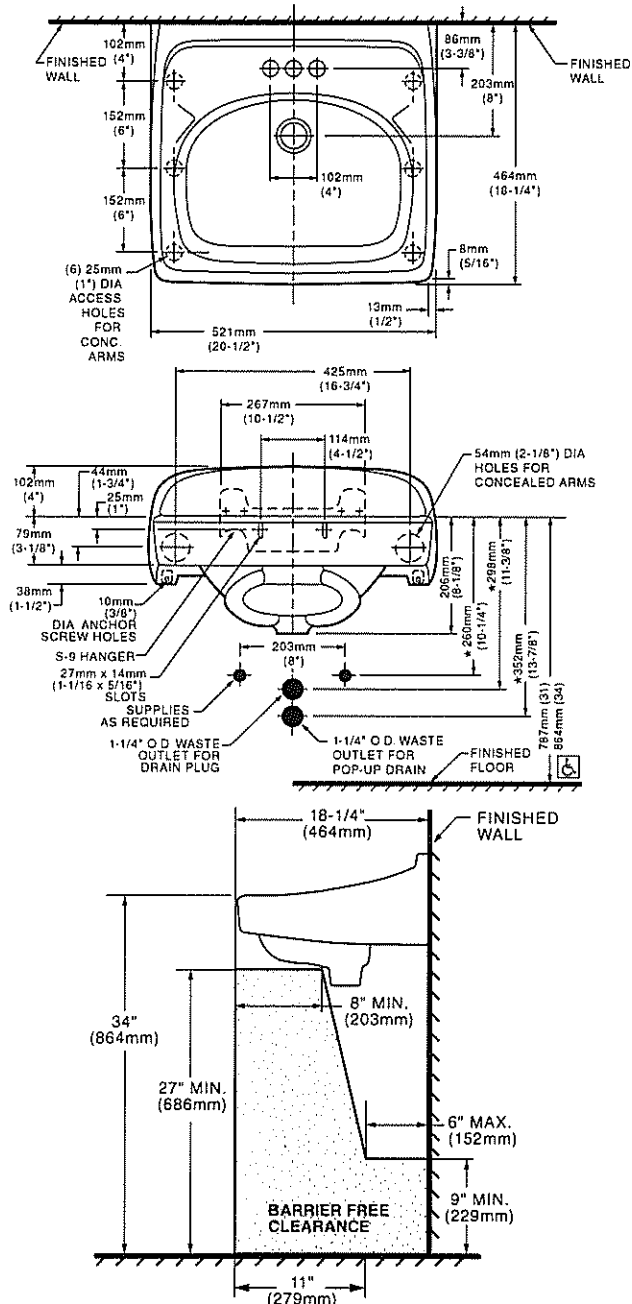
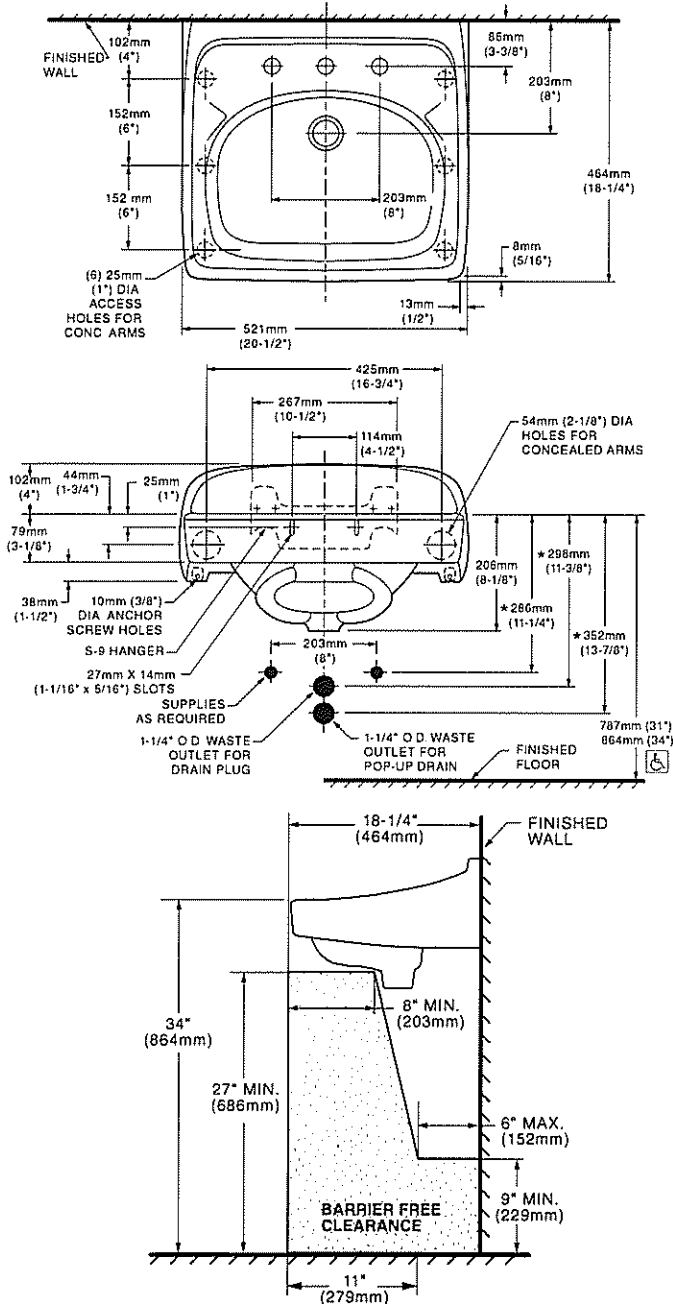


**MEETS THE AMERICANS WITH DISABILITIES ACT GUIDE-  
LINES AND ANSI A117.1 ACCESSIBLE AND USABLE  
BUILDINGS AND FACILITIES - CHECK LOCAL CODES.**  
Top of front rim mounted 864mm (34") from finished floor.



**0356.028** 8" CTRS FOR EXPOSED BRACKET SUPPORT  
**0356.015** 8" CTRS FOR WALL HANGER  
OR CONCEALED ARMS  
**0356.915** LESS OVERFLOW

0355.027 4" CTRS FOR EXPOSED BRACKET SUPPORT  
0355.012 4" CTRS FOR WALL HANGER OR  
CONCEALED ARMS  
0355.912 LESS OVERFLOW



**NOTES:**  
 \* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.  
 PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.  
 FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.  
 CONCEALED ARM SUPPORT AS REQUIRED TO BE FURNISHED BY OTHERS.

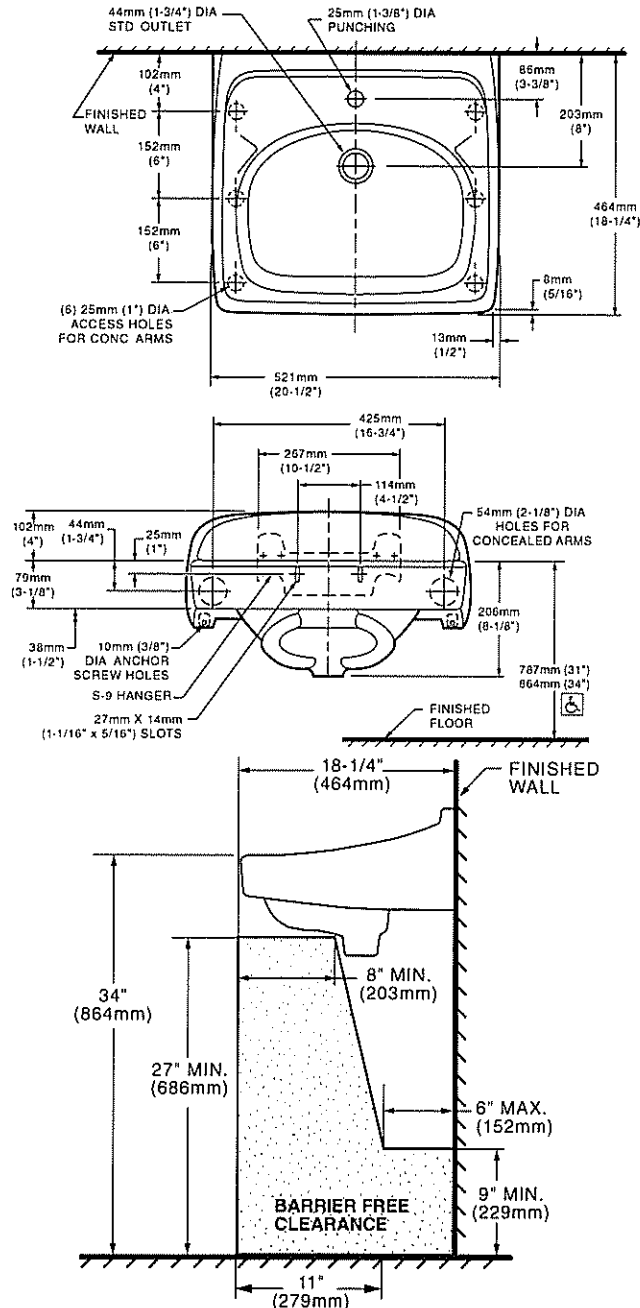
**IMPORTANT:** Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

 LAVATORY DESIGNED TO MEET ADA HANDICAPPED GUIDELINES WITH MOUNTING HEIGHT SET AT 864MM (34") ABOVE FINISHED FLOOR.

**0356.041** SINGLE CENTER HOLE FOR EXPOSED  
BRACKET SUPPORT

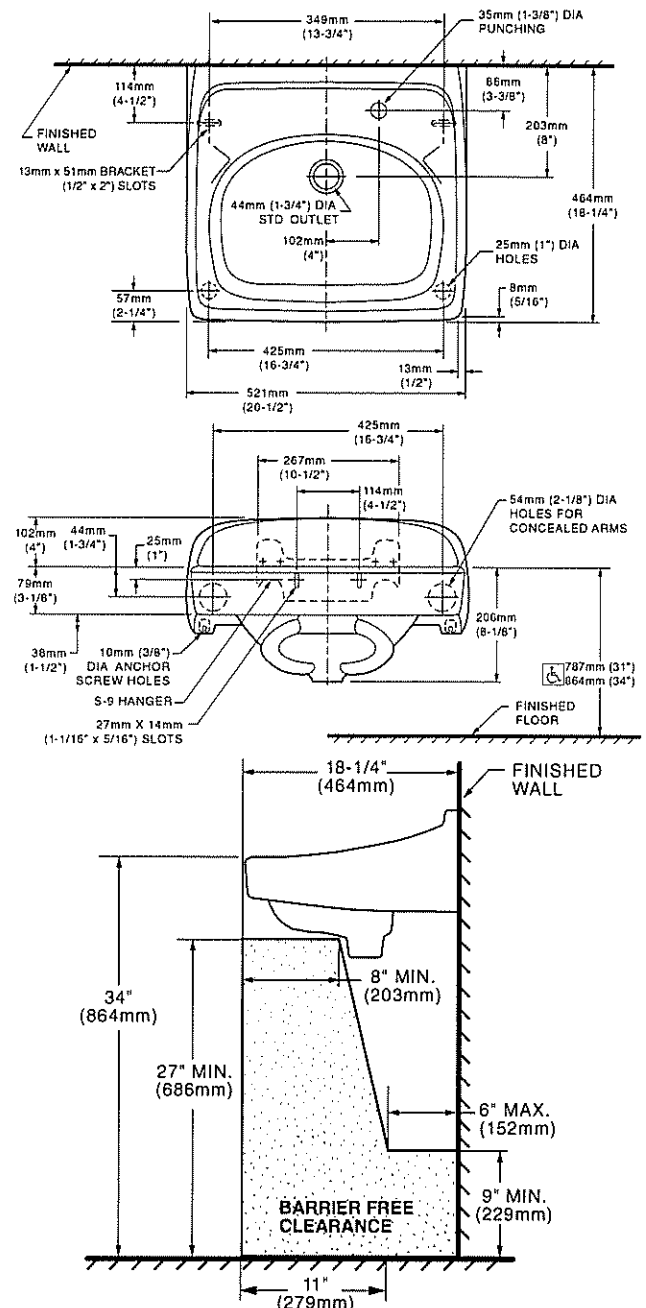
**0356.421** SINGLE CENTER HOLE FOR WALL  
HANGER OR CONCEALED ARMS

**0356.921** LESS OVERFLOW



**0356.439** SINGLE CENTER HOLE ON RIGHT FOR WALL  
HANGER OR CONCEALED ARMS

**0356.066** SINGLE CENTER HOLE ON RIGHT FOR  
EXPOSED BRACKET SUPPORT



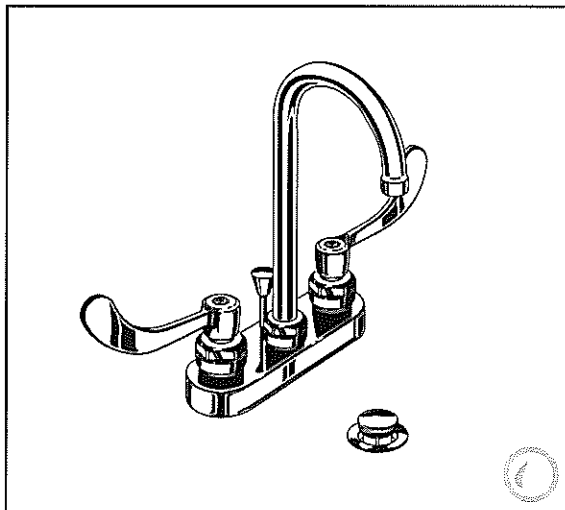
**NOTES:**

\* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.  
PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.  
FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.  
CONCEALED ARM SUPPORT AS REQUIRED TO BE FURNISHED BY OTHERS.

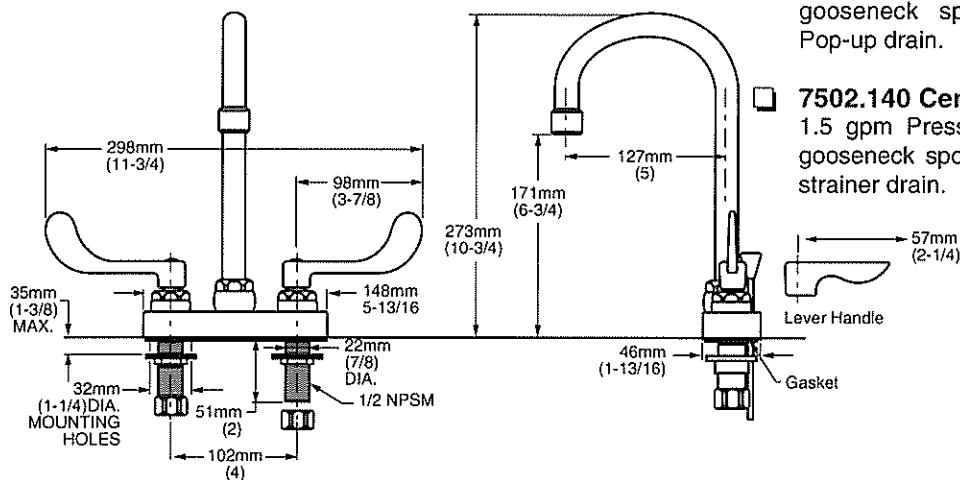
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LAVATORY DESIGNED TO MEET ADA HANDICAPPED GUIDELINES WITH MOUNTING HEIGHT  
SET AT 864MM (34") ABOVE FINISHED FLOOR.



7501.170 Shown



## GENERAL DESCRIPTION:

Durable cast brass construction. 1/2" male threaded inlet shanks with brass shank nuts and coupling nuts. 1/4 turn ceramic disc valve cartridges. Convertible swivel/rigid spout. Choice of Vandal-Resistant Wrist Blade or Lever handles with blue & red color indexes. All brass drain bodies with 1 1/4" (32mm) tailpieces (on applicable models). 1.5 gpm/5.7L/min. maximum flow rate. Vandal-Resistant and Laminar Flow aerators are available.

## MODEL NUMBER:\*

- ☐ **7500.170 Centerset Lavatory**  
1.5 gpm Pressure Compensating Aerator. Rigid/swivel gooseneck spout. Vandal-Resistant Wrist Blade handles. Less drain and pop-up hole.
- ☐ **7501.170 Centerset Lavatory**  
1.5 gpm Pressure Compensating Aerator. Rigid/swivel gooseneck spout. Vandal-Resistant Wrist Blade handles. Pop-up drain.
- ☐ **7502.170 Centerset Lavatory**  
1.5 gpm Pressure Compensating Aerator. Rigid/swivel gooseneck spout. Vandal-Resistant Wrist Blade handles. Grid strainer drain.
- ☐ **7500.140 Centerset Lavatory**  
1.5 gpm Pressure Compensating Aerator. Rigid/swivel gooseneck spout. Vandal-Resistant Lever handles. Less drain and pop-up hole.
- ☐ **7501.140 Centerset Lavatory**  
1.5 gpm Pressure Compensating Aerator. Rigid/swivel gooseneck spout. Vandal-Resistant Lever handles. Pop-up drain.
- ☐ **7502.140 Centerset Lavatory**  
1.5 gpm Pressure Compensating Aerator. Rigid/swivel gooseneck spout. Vandal-Resistant Lever handles. Grid strainer drain.

## PRODUCT FEATURES:

**Pressure Compensating Aerator:** Provides a constant water flow of 1.5 gpm throughout the pressure range

**Solid Brass Construction:** Durable - Excellent in high use applications. Ideal for prolonged contact with water.

**Ceramic Disc Valve Cartridge:** Assures a lifetime of drip-free performance.

**Convertible Swivel/Rigid Spout:** Easily adjusted in the field.

**Low Lead:** Meets NSF Standard 61/Section 9 & Prop 65 lead requirements.

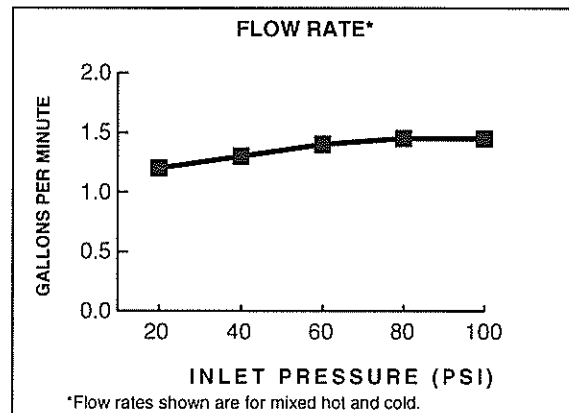
## SUGGESTED SPECIFICATION:

4" centerset lavatory faucet shall be cast brass construction with all brass shank nuts and coupling nuts. Shall feature water-conserving 1.5 gpm/5.7L/min. pressure compensating aerator. Vandal-Resistant handles. Shall also feature 1/4 turn washerless ceramic disc valve cartridges. Fitting shall be American Standard Model # 750\_.\_.002.

## CODES AND STANDARDS

These products meet or exceed the following codes and standards:


**ASME A112.18.1**  
**CSA B 125**  
**NSF 61/Section 9**



Product Number	Description	Finish
		Polished Chrome
		002
7500.170	Centerset Lavatory with rigid/swivel gooseneck spout. 1.5 gpm/5.7L/min pressure compensating aerator. Vandal-Resistant Wrist Blade Handles. Less drain and pop-up hole.	
7501.170	Centerset Lavatory with rigid/swivel gooseneck spout. 1.5 gpm/5.7L/min pressure compensating aerator. Vandal-Resistant Wrist Blade Handles. Pop-up drain.	
7502.170	Centerset Lavatory with rigid/swivel gooseneck spout. 1.5 gpm/5.7L/min pressure compensating aerator. Vandal-Resistant Wrist Blade Handles. Grid strainer drain.	
7500.140	Centerset Lavatory with rigid/swivel gooseneck spout. 1.5 gpm/5.7L/min pressure compensating aerator. Vandal-Resistant Lever Handles. Less drain and pop-up hole.	
7501.140	Centerset Lavatory with rigid/swivel gooseneck spout. 1.5 gpm/5.7L/min pressure compensating aerator. Vandal-Resistant Lever Handles. Pop-up drain.	
7502.140	Centerset Lavatory with rigid/swivel gooseneck spout. 1.5 gpm/5.7L/min pressure compensating aerator. Vandal-Resistant Lever Handles. Grid strainer drain.	

**Note:** For Vandal-Resistant models add "VP" following the product number.

Example - 7500.170VP = Centerset Lavatory. Vandal-Resistant Wrist Blade Handles. Less drain and pop-up hole.

 Meets the American Disabilities Act Guidelines and **ANSI A117.1** Requirements for the physically challenged.

### Other Aerators Available:

Part Suffix	Description
V15	1.5 gpm Pressure Compensating Vandal-Resistant Aerator
L15	1.5 gpm Pressure Compensating Laminar Flow Outlet
LV15	1.5 gpm Pressure Compensating Vandal-Resistant Laminar Flow Outlet
V05	0.5 gpm Pressure Compensating Vandal-Resistant Spray

## "EPT8R5" Stainless Steel Prep Table w/ Sink

w/ 18 Gauge Stainless Steel Work Top  
w/ Stainless Base & Adjustable Undershef



Item #	_____	Qty	_____
Model #	_____		
Project	_____		

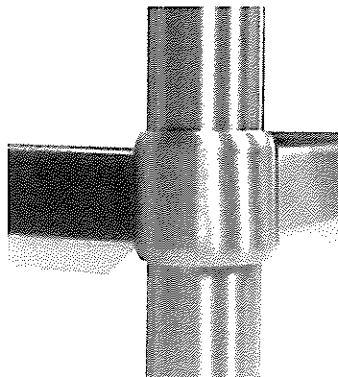
AUTOQUOTES



18 GAUGE TOP w/ ADJUSTABLE UNDERSHELF

### FEATURES:

- \* 18 Gauge Stainless Steel Top with 5" Riser & turndown  
Type 300 stainless steel with # 4 polish, satin finish
- \* 1 1/2" **Stallion Edge** on front with  
side edges 90 degree bend down for table line-up
- \* (1) 16"x 20"x12" Bowl
- \* Stainless Steel Base with **Adjustable** Undershef
- \* Adjustable bullet feet
- \* Shipped knocked-down, easy - to - assemble
- \* NSF Approved



30"WIDE	Qty
EPT8R5-3060SSK-L	
EPT8R5-3060SSK-R	
EPT8R5-3072SSK-L	
EPT8R5-3072SSK-R	

L = Left Bowl  
R = Right Bowl

### CONSTRUCTION:

Top: Stainless Steel Tops are TIG welded, Exposed welds are polished to match adjacent surface.

### MATERIAL:

Top: 18 gauge stainless steel  
Type 300 stainless steel with # 4 polish, satin finish

Shelf: 18 gauge stainless steel

Legs: 1 5/8" Round O.D., 16 gauge tubular stainless steel

Gussets: Stainless Steel

Feet: 1" adjustable stainless steel bullet feet

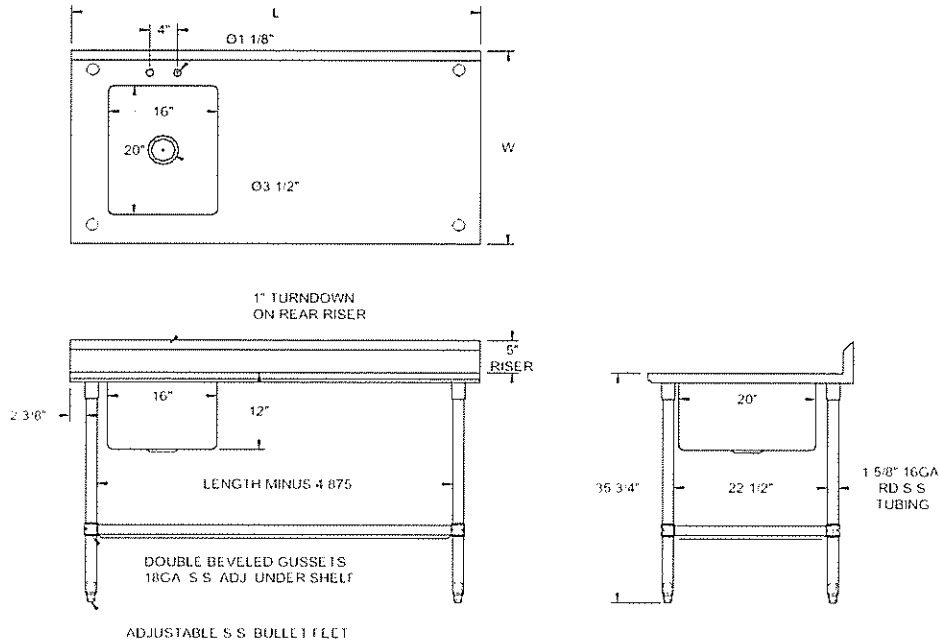
## John Boos & Co

3601 S. Banker Street - Effingham, IL 62401

Phone: 217-347-7701 - Fax: 217-347-7705

Email: sales@johnboos.com - Web-site: www.johnboos.com

## DETAILED SPECIFICATIONS



All units ship unassembled for reduced shipping cost.  
All dimensions are typical.  
Tolerance +/- .500".

Finished size of undershelf.  
Shelf length = length minus 4.875"  
Shelf width = width minus 4.25"

### 16 GAUGE TOP & UNDERSHELF

L	30" WIDE	W
60	EPT8R5-3060SSK-L	145
60	EPT8R5-3060SSK-R	145
72	EPT8R5-3072SSK-L	195
72	EPT8R5-3072SSK-R	195

5 = Height of Riser w/ turndown

R = Riser Top Work Table

8 = 18. ga Work Surface

EPT = Economy Prep Table

Width

Length

SS = Stainless Legs & Shelf

K = K.D. w/ Adjustable Shelf

Bowl Location

**EPT8R5-3060SSK-L**

### John Boos & Co

3601 S. Banker - Effingham, IL 62401 Phone: 217-347-7701 - Fax: 217-347-7705

Email: sales@johnboos.com - Web-site: www.johnboos.com



OCT 2014

John Boos is constantly engaged in a program of improving products and therefore reserves the right to change specification without prior notice



# WASHBROOK® FloWise® UNIVERSAL URINAL VITREOUS CHINA

## WASHBROOK® FloWise® UNIVERSAL URINAL

- Vitreous china
- Ultra High Efficiency, Low Consumption. Operates in the range of 0.125gpf to 1.0gpf (0.5 Lpf to 3.8 Lpf)
- Flushing rim
- Elongated 14" rim from finished wall
- Washout flush action
- Extended sides for privacy
- 3/4" inlet spud
- Outlet connection threaded 2" inside (NPTF)
- 2 wall hangers
- Fixture only
- Strainer included
- Meets ASME flush requirements at 0.125 to 1.0 gpf

☐ **6590.001** Universal Top spud

☐ **6515.001** Universal Back spud

### Nominal Dimensions:

360 x 480 x 664mm

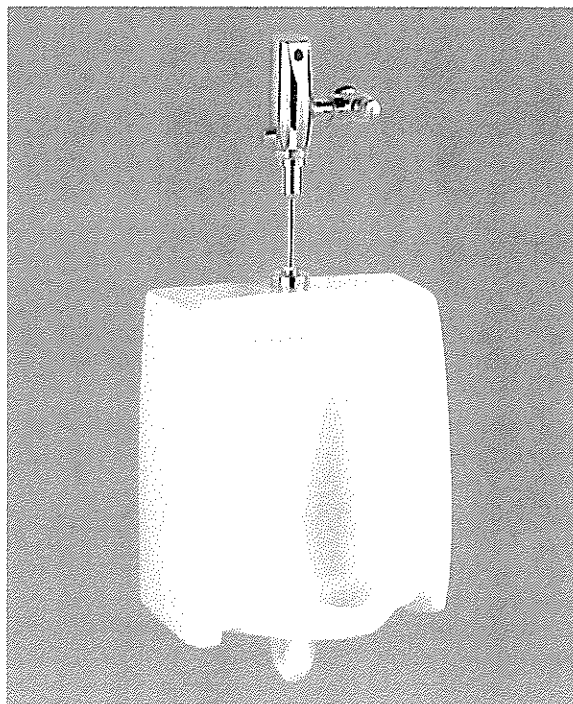
(14-1/8" x 18-7/8" x 26-1/8")

Recommended working pressure – between  
20 psi at valve when flushing and 80 psi static

### Compliance Certifications -

#### Meets or Exceeds the Following Specifications:

- ASME A112.19.2-2008/CSA B45.1-08 for Vitreous China Fixtures



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

#### To Be Specified:

☐ Color: ☐ White

☐ Flush Valve:

1.0 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.101.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.101.002  
AC Power (Back Spud)

1.0 gpf Flush Valve: Manual-Operated:

☐ American Standard # 6045.101.002

0.5 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.051.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.051.002  
AC Power (Back Spud)

0.5 gpf Flush Valve: Manual-Operated:

☐ American Standard #6045.051.002

0.125 gpf Flush Valve: Sensor-Operated:

☐ American Standard Selectronic® #6063.013.002  
DC Power (Top Spud)

☐ American Standard Selectronic® #6062.013.002  
AC Power (Back Spud)

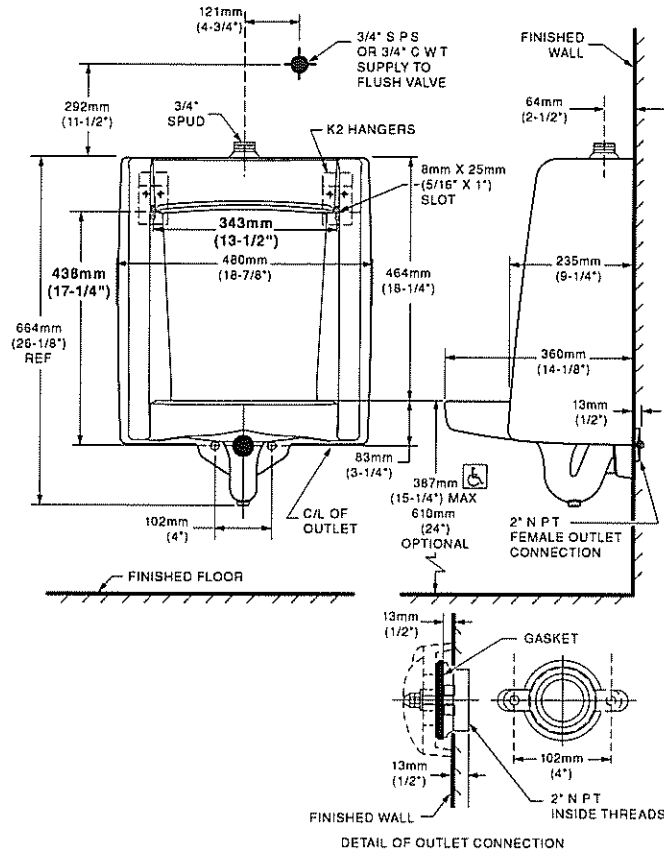
0.125 gpf Flush Valve: Manual-Operated:

☐ American Standard #6045.013.002

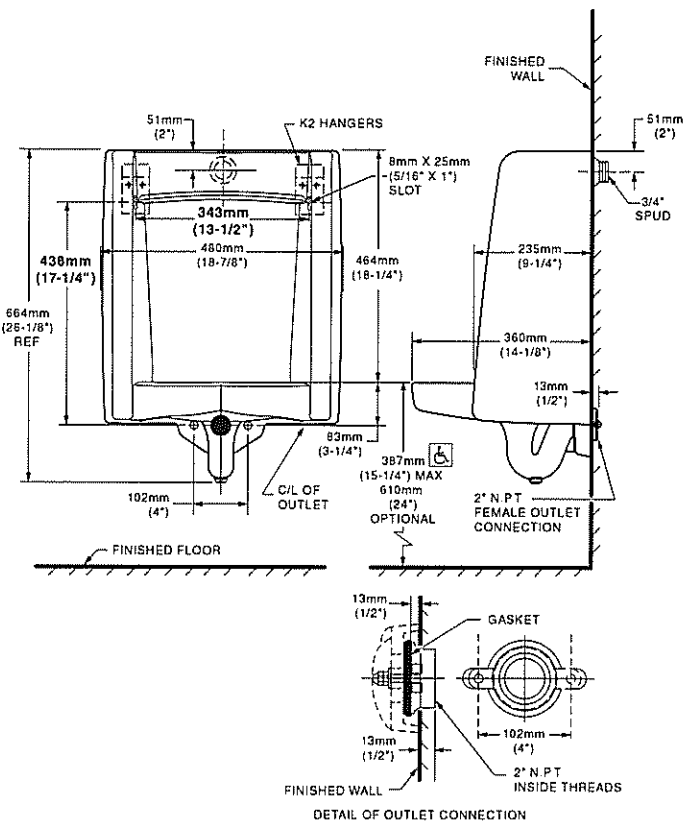


Certified by  
APMD RST  
When used with  
0.125 gpf or 0.5 gpf  
urinal flush valves

**6590.001 TOP SPUD**



**6515.001 BACK SPUD**



MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.

- When installed so top of rim is 387mm (15-1/4") from finished floor.

**NOTES:**

FLUSH VALVE NOT INCLUDED AND MUST BE ORDERED SEPARATELY. PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.

**IMPORTANT:** Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.



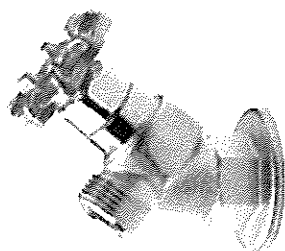
# Wall and Standpipe Hose Valves



## HOSE VALVES

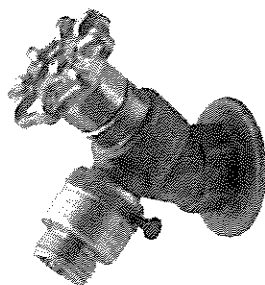
### FIG. # 5670

Bent Nose with Flange



### FIG. # 5670 (-H)

Bent Nose with Flange and Vacuum Breaker



#### FUNCTION:

For installation in interior and exterior wall locations of buildings that are not subject to freezing. Valves close with pressure and feature a replaceable cartridge which contains all wearing parts including the seat. Optional vacuum breaker prevents contamination of potable water supply and complies with ASSE Standard 1011

#### PRODUCT FEATURES:

- 3/4" (19) NPT female inlet, cartridge operated and furnished with a lock shield bonnet and removable loose key handle
- Horizontal supply valves have integral wall flange and are used both inside and outside
- Regularly furnished in rough bronze
- Optional finishes are rough chrome plate for exterior walls and polished chrome plate for interior walls
- Vertical standpipe supplied valves are normally used for outside planting areas
- Lead-free

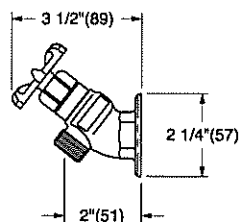


Fig. 5670  
(Less Vacuum Breaker)

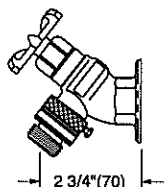


Fig. 5670-H  
(With Vacuum Breaker)

#### Regularly Furnished:

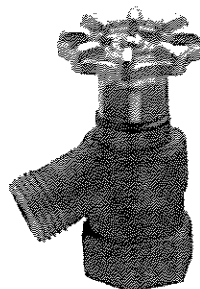
Hose Valves have a Rough Finish Brass Body with Machined Brass Vandal-Resistant Lock Shield Bonnet, Removable Wheel Handle, 3/4" (19) NPT Female Threaded Inlet and 3/4" (19) Hose Connection.

NOTE: Dimensions shown in parentheses are in millimeters.

## HOSE VALVES

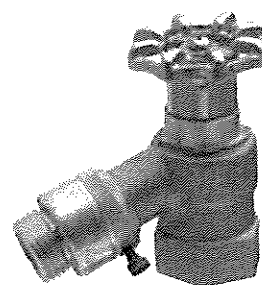
### FIG. # 5675

Bent Nose



### FIG. # 5675 (-H)

Bent Nose with Vacuum Breaker



#### FUNCTION:

For installation on supply pipes 6" (150) to 36" (915) high in interior and exterior locations that are not subject to freezing. Valves close with the pressure and feature a replaceable cartridge which contains all wearing parts including the seat. Optional vacuum breaker prevents contamination of potable water supply and complies with ASSE Standard 1011

#### PRODUCT FEATURES:

- 3/4" (19) NPT female inlet, cartridge operated and furnished with a lock shield bonnet and removable loose key handle
- Horizontal supply valves have integral wall flange and are used both inside and outside
- Regularly furnished in rough bronze
- Optional finishes are rough chrome plate for exterior walls and polished chrome plate for interior walls
- Vertical standpipe supplied valves are normally used for outside planting areas
- Lead-free

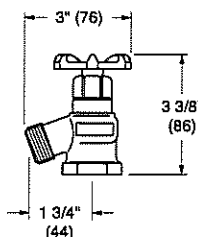


Fig. 5675  
(Less Vacuum Breaker)

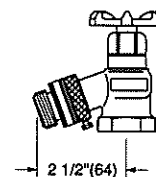


Fig. 5675-H  
(With Vacuum Breaker)

#### Regularly Furnished:

Hose Valves have a Rough Finish Brass Body with Machined Brass Vandal-Resistant Lock Shield Bonnet, Removable Wheel Handle, 3/4" (19) NPT Female Threaded Inlet and 3/4" (19) Hose Connection.

NOTE: Dimensions shown in parentheses are in millimeters.

#### Optional Materials:

- Polished Chrome Plated -CP
- Rough Chrome Plated -CR

## SPECIFICATION:

JOSAM SERIES 71300 CHROME-PLATED 1/4-TURN HYDRANT/SILL-COCK, STAINLESS STEEL BOX, HINGED LATCHING COVER, 3/4" HPT OUTLET, INTEGRAL VACUUM BREAKER - BACKFLOW PREVENTER, AND 1/2" OR 3/4" INLET CONNECTION.

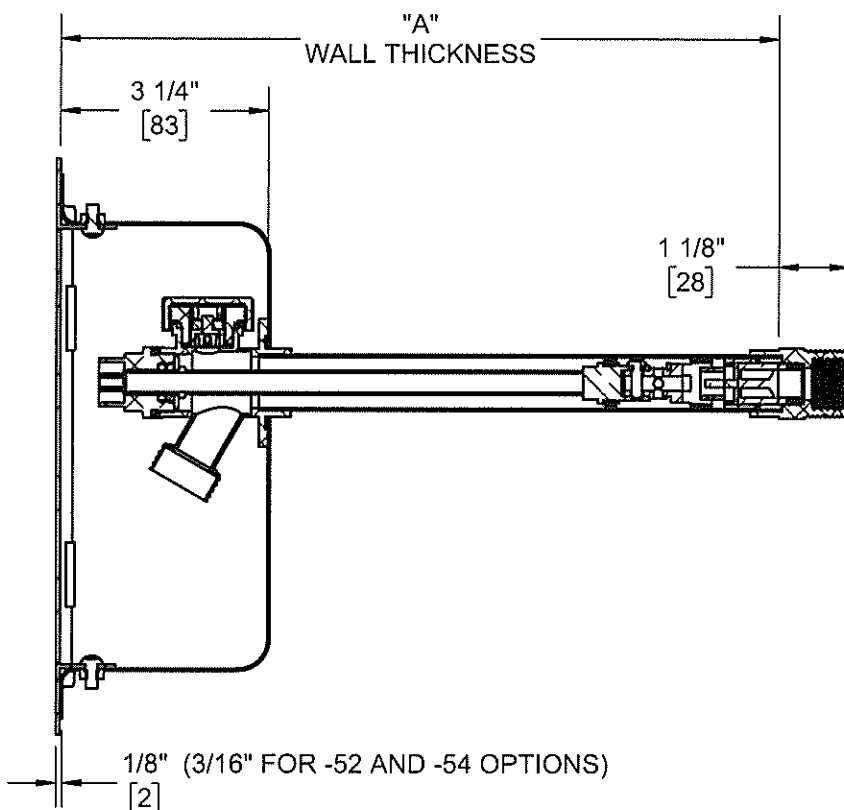
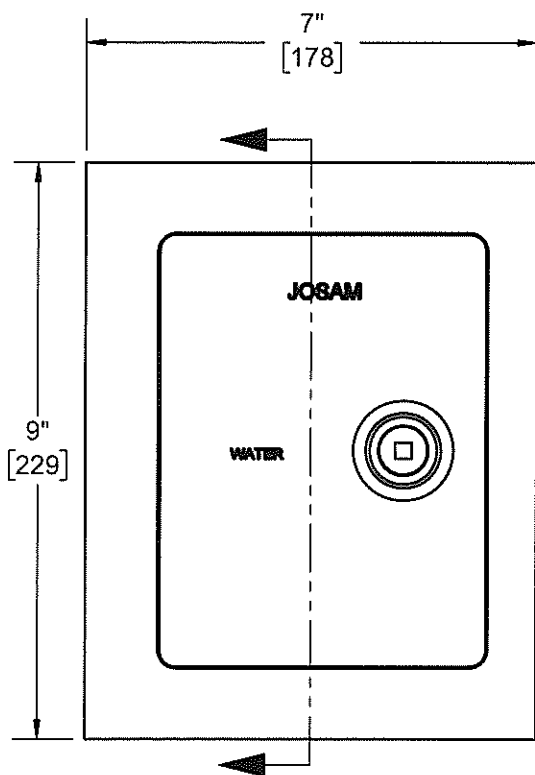
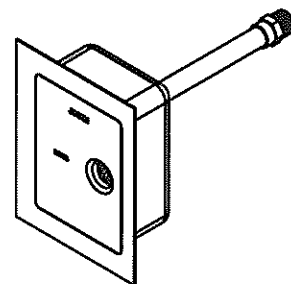
## HYDRANT 1/4 TURN, NON-FREEZE WITH BOX

SERIES **71300**

HYDRANT APPROVED TO NSF/ANSI 61 FOR USE IN POTABLE WATER SYSTEMS.

RECOMMENDED MIN. WALL OPENING: 5-1/2" X 7-3/4"

STANDARDS:  
NSF/ANSI 61  
NSF/ANSI 372  
ASSE 1019  
ASME A112.18.1



### OPTIONS:

	MODEL	A
	71300-6-QTR	6-1/4 [159]
	71300-7-QTR	7-1/4 [184]
	71300-9-QTR	9-1/4 [235]
	71300-11-QTR	11-1/4 [286]
	71300-13-QTR	13-1/4 [337]
	71300-15-QTR	15-1/4 [387]
	71300-17-QTR	17-1/4 [438]

	-52	CAST SATIN FINISH BR FACE
	-54	CAST SATIN FINISH NIKALOY FACE
	-72	WALL CLAMP
	-74	UNION ELBOW ASSY
	-81*	HOSE BIBB VACUUM BREAKER
	-91*	1" HOSE PIPE THREADED OUTLET
	-95	CYLINDER SECURED LOCK
	-HD	HEAVY-DUTY NIKALOY BOX BODY

\* -81 AND -91 CANNOT BE ORDERED TOGETHER

DATE OF LAST CHANGE: 01/03/19

DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES AND CHANGE WITHOUT NOTICE. WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA.

**JOSAM**  
MICHIGAN CITY, INDIANA

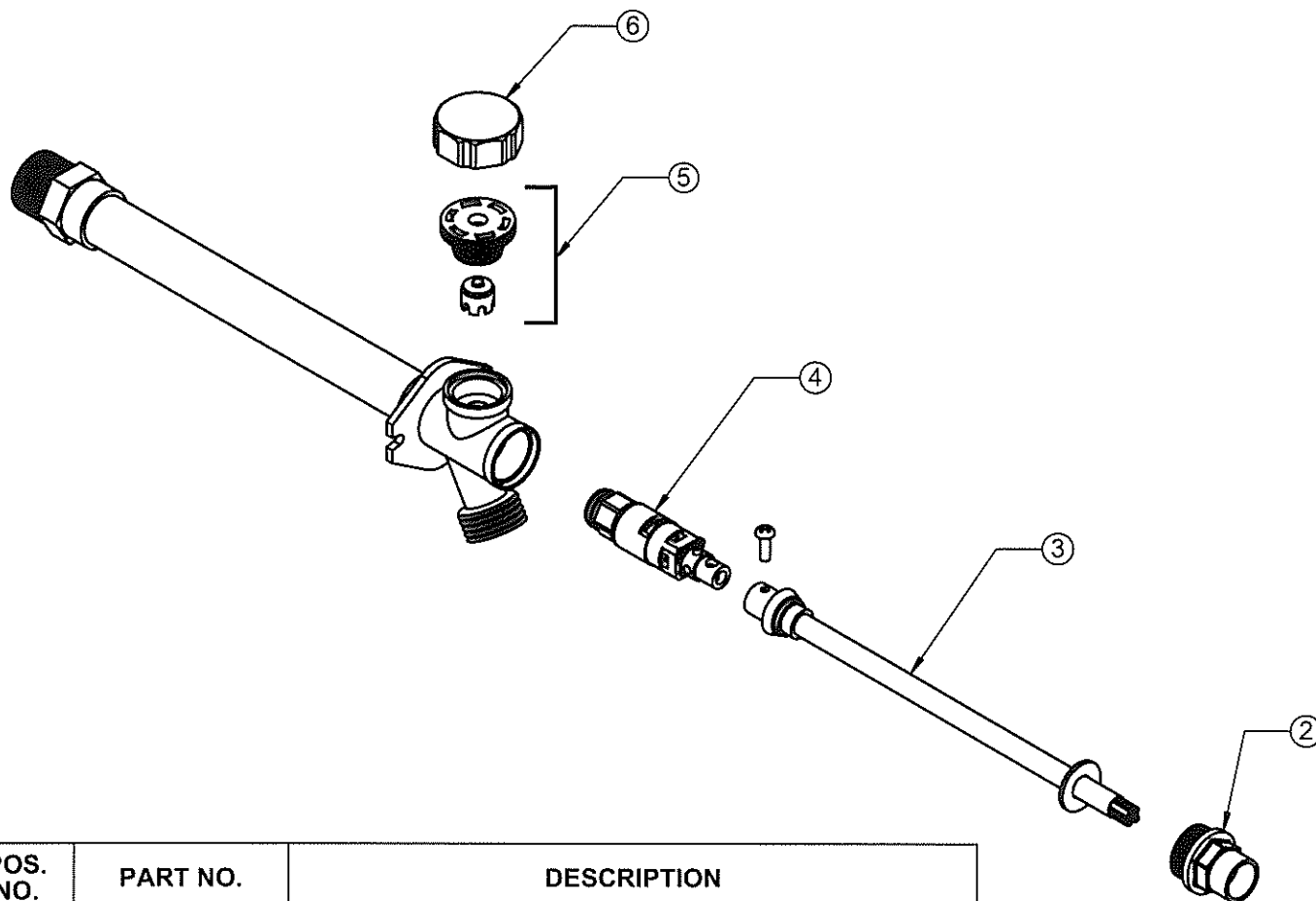
NOTES

# SPECIFICATION:

JOSAM SERIES 71350 REPLACEMENT PARTS GUIDE.

# HYDRANT REPLACEMENT PARTS

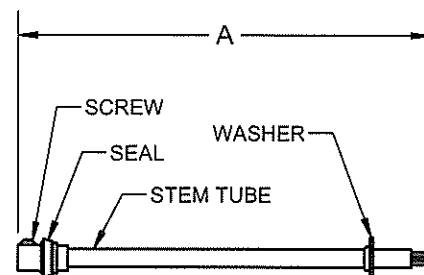
SERIES **71350**



POS. NO.	PART NO.	DESCRIPTION
1	71350P01U	KEY (1/4")
2	71350P02U	BONNET ASSY (INCL. 3 O-RINGS)
3	SEE TABLE	STEM TUBE ASSY (INCL. WASHER, SEAL, SCREW)
4	71350P04U	VALVE ASSY (INCL. 2 O-RINGS)
5	71350P05U	VACUUM BREAKER ASSY
6	71350P06U	VACUUM BREAKER CAP

## POS. NO. 3 - STEM TUBE ASSY - PART NOS.

71350 MODEL	71300 MODEL	A DIM. [mm]	PART NO.
71350-MC-QTR	71300-6-QTR	3-5/8" [92]	09600B
71350-4-QTR	71300-7-QTR	4-5/8" [117]	09600C
71350-6-QTR	71300-9-QTR	6-5/8" [168]	09600D
71350-8-QTR	71300-11-QTR	8-5/8" [219]	09600E
71350-10-QTR	71300-13-QTR	10-5/8" [270]	09600F
71350-12-QTR	71300-15-QTR	12-5/8" [321]	09600G
71350-14-QTR	71300-17-QTR	14-5/8" [371]	09600H

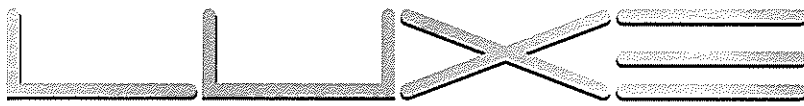


DATE OF LAST CHANGE: 05/23/18

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**JOSAM**  
MICHIGAN CITY, INDIANA

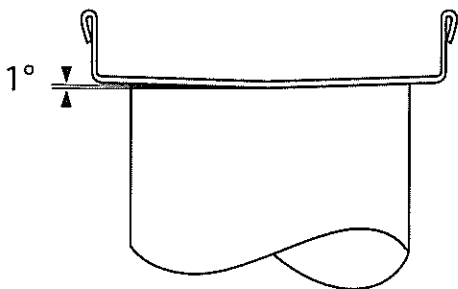
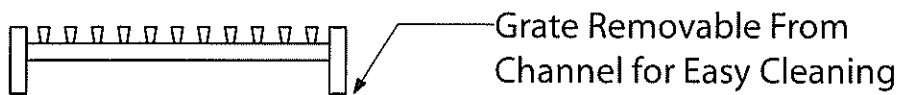
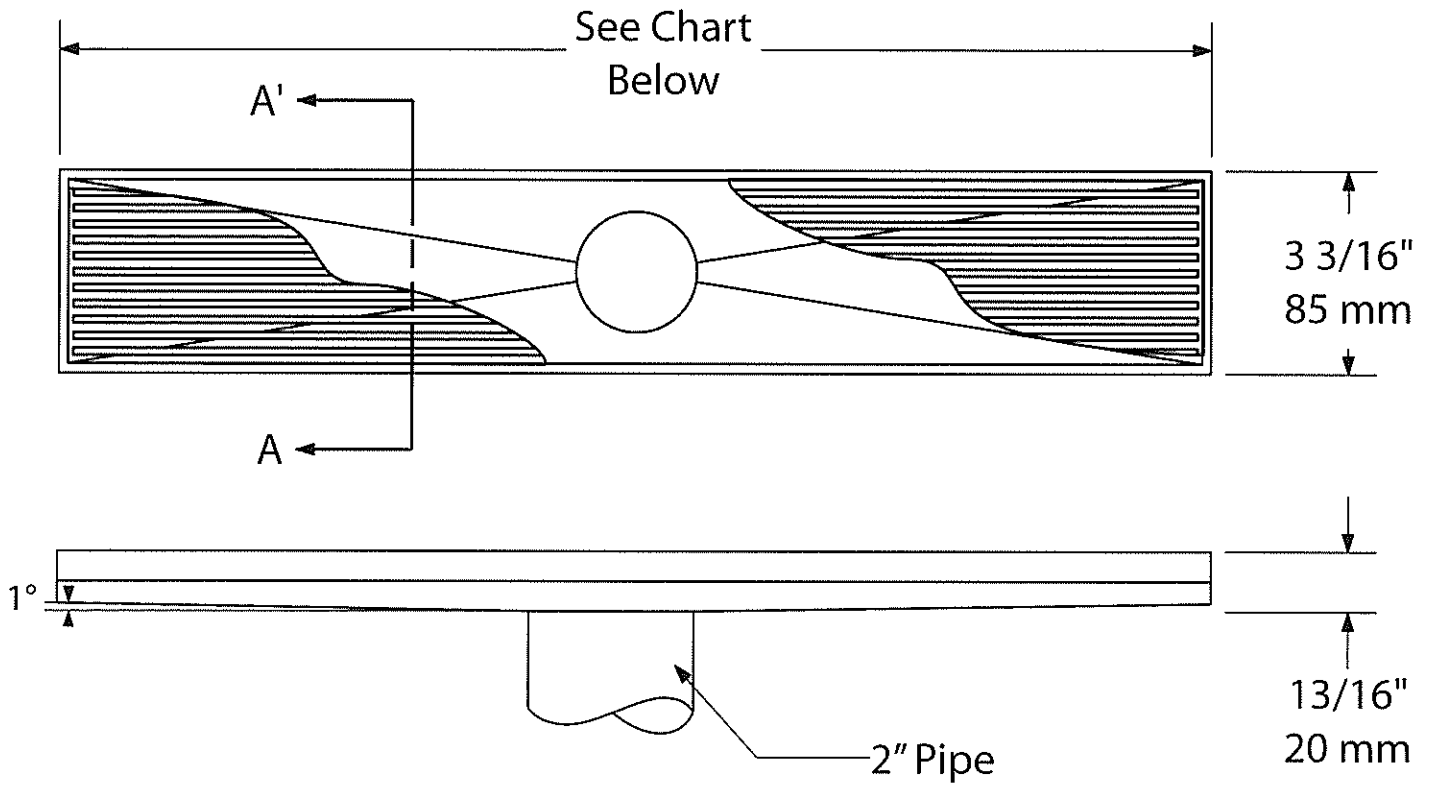
NOTES



MODERN DESIGN LINEAR DRAINS

## ▶ Linear Shower Drain - Wedgewire

P.O. Box 8064, Atlanta, GA 31106  
 p: 877.398.8110 f: 877.388.1239  
 e: support@luxelineardrains.com  
 www.lineardrains.com



Section A-A'

### Standard Linear Drain Lengths

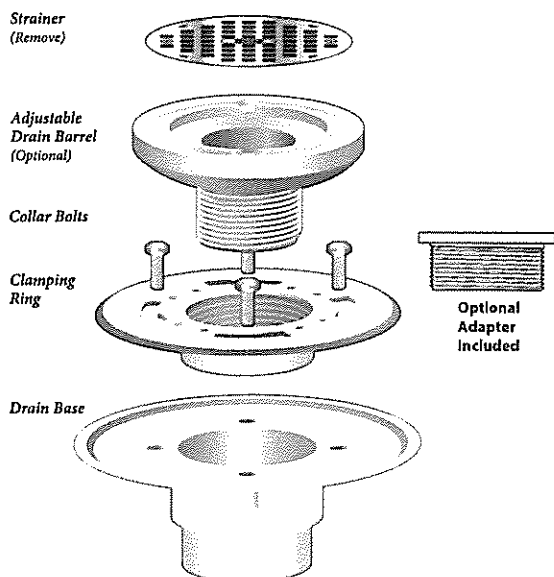
Length (Inches)	26"	30"	36"	40"	48"	60"
Finish = Satin Stainless Part No.	WW-26	WW-30	WW-36	WW-40	WW-48	WW-60



## MODERN DESIGN LINEAR DRAINS

### ▶ Linear Drain Installation Overview

#### Typical Shower Drain



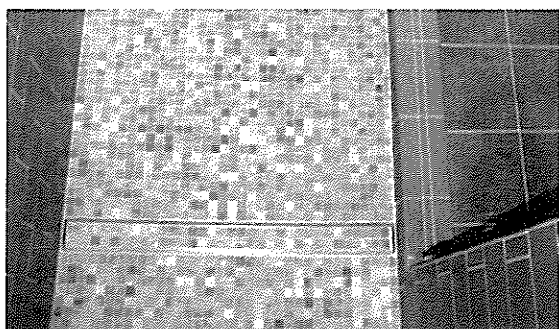
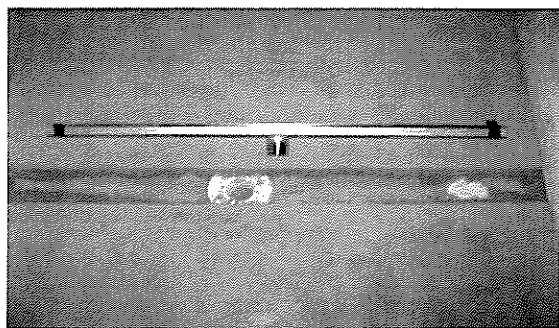
An exploded view of a typical shower flanged drain assembly is shown on the left for your reference. This assembly can be made from PVC, cast iron or other composite materials.

- STEP 1: Pre-slope shower pan and install waterproofing per manufacturer's instructions; any waterproofing material or procedure can be utilized (i.e. vinyl, CPE membrane, roll/paint on, metal pan, hot mop, surface sheet membrane, etc.). Perform leak test as required.
- STEP 2: LUXE Linear Drains standard channel width is  $3 \frac{3}{16}$ " (85mm). Confirm rough opening is approximately 2" wider than drain length to accommodate backer board and wall tile thickness (e.g. a 38" rough opening will close to near 36" finish opening based on thicknesses of materials.)
- STEP 3: Cut any 2x4 to length for use as a linear drain placeholder; this allows for about an  $\frac{1}{8}$ " (3mm) gap around the channel's perimeter to apply a bead of flexible sealant. Note: Channel depths are 1.25" (30mm) for the LUXE tile insert linear drain and 0.78" (20mm) for all other LUXE Linear Drains.
- STEP 4: Build mortar bed and install tile to create a 1-2% grade towards drain.
- STEP 5: Install tile into tile insert tray. (Tile Insert Drains only)
- STEP 6: Remove 2x4, clean out void and install LUXE Linear Drain channel as you would any tile building up and supporting as necessary with mortar. Ensure drain channel is level and just slightly below ( $\frac{1}{16}$ " or less) adjacent tile.
- STEP 7: Line perimeter of linear drain channel with a color-matched flexible waterproof sealant; this will allow the stainless steel to expand and contract without cracking the grout or tiles.

#### LUXE INSTALLATION ADVANTAGES AND BENEFITS:

- LUXE drains install independent of any waterproofing method, material or procedure.
- All LUXE drains fit atop any standard clampdown floor drains of any construction, PVC, ABS, cast iron, etc. Remove threaded strainer assembly and replace with your LUXE Linear Drain. Installs into tile bed just like tile.
- LUXE Linear Drain outlet sets uncoupled into the drain body providing a path for moisture to pass from the tile bed down and out the drain which will preserve the quality and longevity of your tile installation. (This serves the same purpose as the weep holes in the drain body.)
- Tiling installation and daily construction progress is not delayed by waiting for your standard or custom fabricated LUXE Linear Drain.
- A single slope floor is simpler and provides for use of curbless entry designs and large format floor tiles.

\*\*\* Ensure compliance with all local codes and requirements \*\*\*



*American Standard*

# **Installation Instructions** **Instrucciones de instalación** **Mode d'installation** **R121; R121SS** **R125; R125SS**

## **ROUGH VALVE KIT** **JUEGO DE VÁVULA** **SIN ACABADO** **ENSEMBLE DE ROBINET** **ROBUSTE**

Thank you for selecting American-Standard...  
the benchmark of fine quality for over 100 years.  
*Gracias por elegir American-Standard...*  
*el parámetro de excelente calidad por más de 100 años.*  
*Merci d'avoir choisi American Standard...*  
*la référence en matière de qualité depuis plus de 100 ans.*

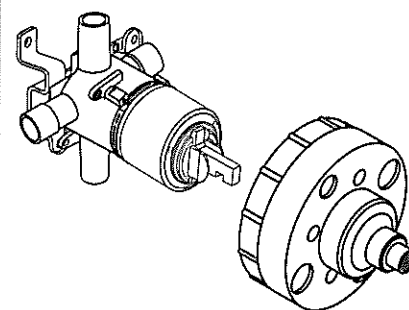
To ensure that your installation proceeds smoothly-please read these instructions carefully before you begin.

*Para asegurarse de realizar una instalación sin problemas, lea estas instrucciones cuidadosamente antes de comenzar.*

*Afin de garantir une installation sans problème, veuillez lire ces instructions attentivement avant de commencer.*

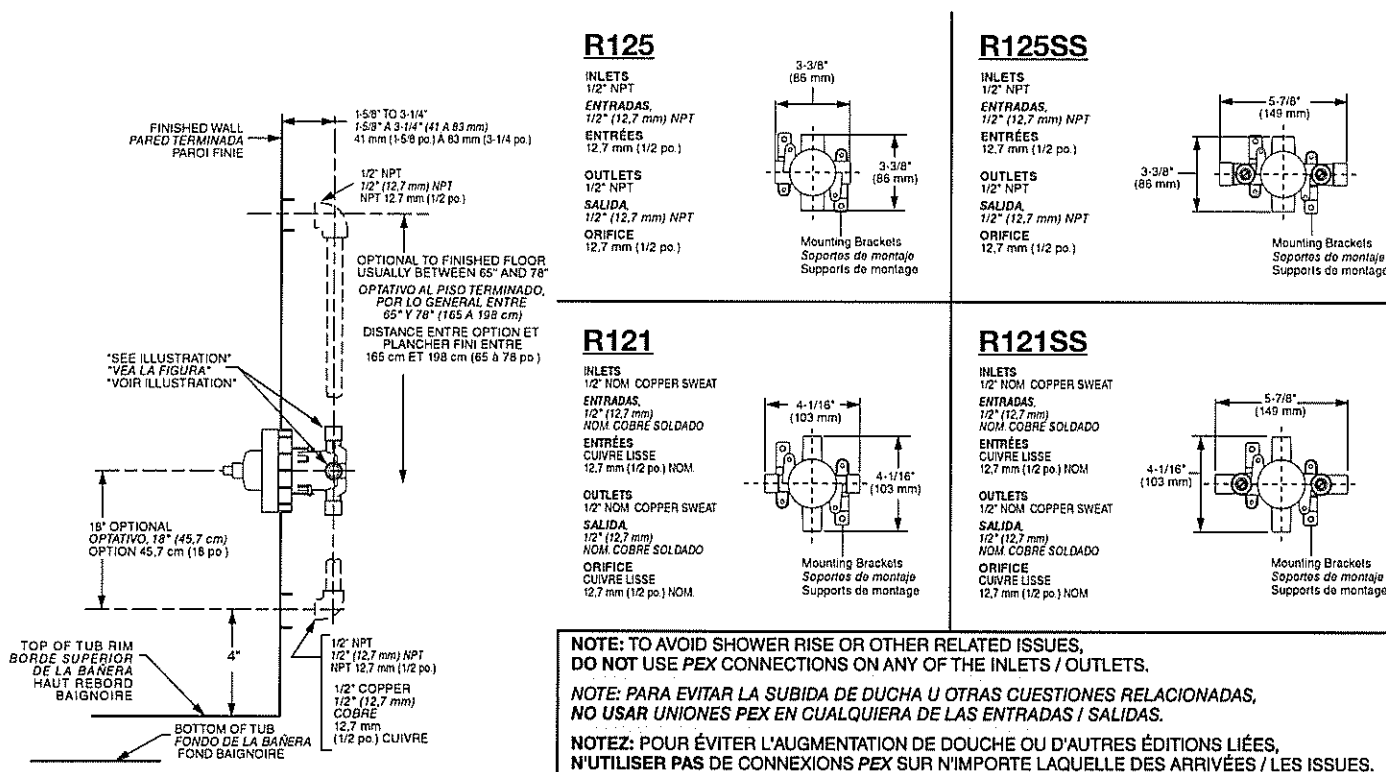
Certified to comply with ANSI A112.18.1  
Cumplimiento certificado de los requisitos  
de la norma ANSI A112.18.1  
Certifié conforme à ANSI A112.18.1

U.S. Patent No. D403,750  
Patente estadounidense D403,750  
Brevet U.S.A. no. D403,750



## **ROUGHING-IN DIMENSIONS**    **DIMENSIONES DE DESBASTADO**    **DIMENSIONS DE PRÉPARATION**

- To assure proper positioning in relation to wall, note roughing-in dimensions.
- Tome nota de las dimensiones de desbastado para asegurar la posición correcta respecto de la pared.
- Pour garantir un bon positionnement par rapport au mur, tenir compte des dimensions de préparation.



# 1 ROUGHING-IN

**CAUTION** Turn off hot and cold water supplies before beginning.

**NOTE:** When soldering, remove PLASTER GUARD, CARTRIDGE and CHECK STOPS (IF PRESENT). When finished soldering, flush valve body, replace cartridges, check stops (if present) and plaster guard to continue installation. Use thread sealant or Teflon tape on threaded connections.

**NOTE:** TO AVOID SHOWER RISE OR OTHER RELATED ISSUES, DO NOT USE PEX CONNECTIONS ON ANY OF THE INLETS / OUTLETS.

■ See Roughing-in diagram before starting.

Connections are:

- 1/2" copper sweat for sweat inlets
- 1/2" female NPT for threaded inlets

■ Secure MOUNTING BRACKET (8) to wall brace with wood screws.

■ Connect RISER PIPE (1) to MANIFOLD (2) top outlet marked "SHR".

■ Connect TUB FILLER PIPE (3) at bottom outlet marked "TUB".

■ For proper positioning the finished wall must be within side wall of PLASTER GUARD (4).

■ If the valve is installed on a fiberglass or other thin wall application, the PLASTER GUARD (4) can be used as a support.

— Cut a 3" dia. hole in the shower stall.

— If STOPS are used, drill two additional 1" holes to allow access to the stops.

— Remove PLASTER GUARD (4), rotate 180° so that indicated screw holes fit MANIFOLD (2).

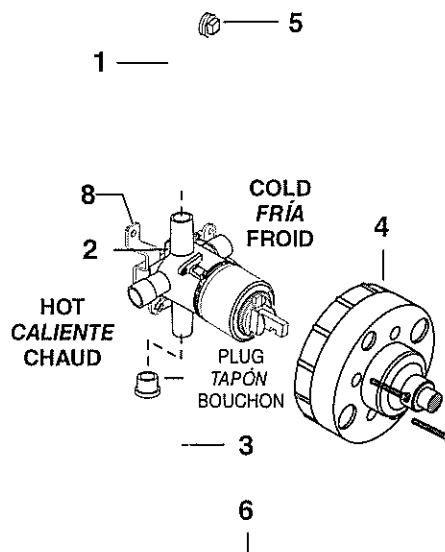
— Push CAP on valve, place ESCUTCHEON on and attach with screws.

■ Connect hot and cold water supplies.

■ Cap off shower pipe (5) and tub filler pipe (6).

■ For support, use pipe braces secured to wooden braces.

■ With valve turned off, turn on water supplies. Check for leaks. Finish wall construction.



## PREPARACIÓN

**PRECAUCIÓN** Apague los suministros de agua caliente y fría antes de comenzar.

**NOTA:** Al soldar, quite el PROTECTOR DE YESO, los CARTUCHOS y los LIMITADORES (SI ESTÁN PRESENTES). Al terminar de soldar, enjuague el cuerpo de la válvula, vuelva a colocar los cartuchos y revise los limitadores (si están presentes) y el protector de yeso antes de continuar con la instalación. Utilice sellador para roscas o cinta de Teflon en las conexiones roscadas.

■ Consulte el diagrama de desbastado antes de continuar.

■ Las conexiones de suministro son las siguientes:

- 1/2" (12,7 mm) cobre soldado, para las entradas soldadas
- 1/2" (12,7 mm) NPT hembra, para las entradas roscadas

■ Instale el SOPORTE DE MONTAJE (8) a la madera con los tornillos proporcionados.

■ Conecte el TUBO ELEVADOR (1) a la salida superior "SHR" (ducha) del MÚLTIPLE (2).

■ Conecte el TUBO DE LLENADO DE LA BAÑERA (3) a la salida inferior "TUB" (bañera).

■ Para lograr la posición correcta, la pared terminada debe quedar dentro de la pared lateral del PROTECTOR DE YESO (4).

■ Si instala la válvula en una pared delgada o de fibra de vidrio, puede utilizar el PROTECTOR DE YESO (4) como soporte.

— Corte un agujero de 3" (76 mm) de diámetro en el recinto de la ducha.

— Si utilizará LIMITADORES, taladre dos agujeros adicionales de 1" (25 mm) de diámetro para el acceso a los limitadores.

— Quite el PROTECTOR DE YESO (4) y gírelo 180 grados para que los agujeros para tornillo indicados correspondan al MÚLTIPLE (2).

— Coloque el CAPUCHÓN de la válvula, monte el ESCUDETE y sujételo con tornillos.

■ Conecte el suministro de agua fría y caliente.

■ Tapone la tubería de la ducha (5) y la tubería de llenado de la bañera (6).

■ Para tener más apoyo, utilice abrazaderas para tubería sujetas a soportes de madera.

■ Cierre la válvula, abra el suministro de agua y revise si hay fugas.

## PRÉPARATION

**MISE EN GARDE** Fermez l'alimentation en eau chaude et en eau froide avant de commencer.

**REMARQUE :** Lorsqu'on soude, enlever la PROTECTION CONTRE LE PLÂTRE, les CARTOUCHES et LES BUTÉES DE RETENUE (S'IL Y EN A). Lorsqu'on a fini de souder, rincer le corps du robinet, remettre les cartouches, les butées d'arrêt (s'il y en a) et la protection contre le plâtre avant de continuer l'installation. Utiliser un produit d'étanchéité pour filetage ou du ruban Téflon sur les connexions filetées.

■ Le SUPPORT DE FIXATION sûr (8) au mur fortifié avec les vis de bois.

■ Consulter le diagramme de préparation avant de commencer.

■ Les connexions pour l'alimentation sont :

- Cuivre lisse 12,7 mm (1/2 po.) pour les entrées lisses
- NPT femelle 12,7 mm (1/2 po.) pour les entrées filetées

■ Connecter le TUYAU MONTANT (1) à la sortie supérieure du MANIFOLD (2) marquée "SHR".

■ Connecter le TUYAU DE REMPLISSAGE DE BAIGNOIRE (3) à la sortie inférieure marquée "TUB".

■ Pour obtenir un bon positionnement, le mur fini doit être à l'intérieur du trou latéral de la PROTECTION CONTRE LE PLÂTRE (4).

■ Si le robinet est installé sur de la fibre de verre ou une autre paroi de faible épaisseur, la PROTECTION CONTRE LE PLÂTRE (4) peut être utilisée comme support.

— Découper un trou de 76 mm (3 po.) de diamètre dans la cabine de douche.

— Si des BUTÉES sont utilisées, percer deux trous supplémentaires de 25 mm (1 po.) pour permettre l'accès aux butées.

— Enlever la PROTECTION CONTRE LE PLÂTRE (4), effectuer une rotation de 180 degrés de façon que les trous de vis indiqués correspondent au MANIFOLD (2).

— Pousser le CAPUCHON sur le robinet, placer l'ÉCUSSEON par dessus et l'attacher avec les vis.

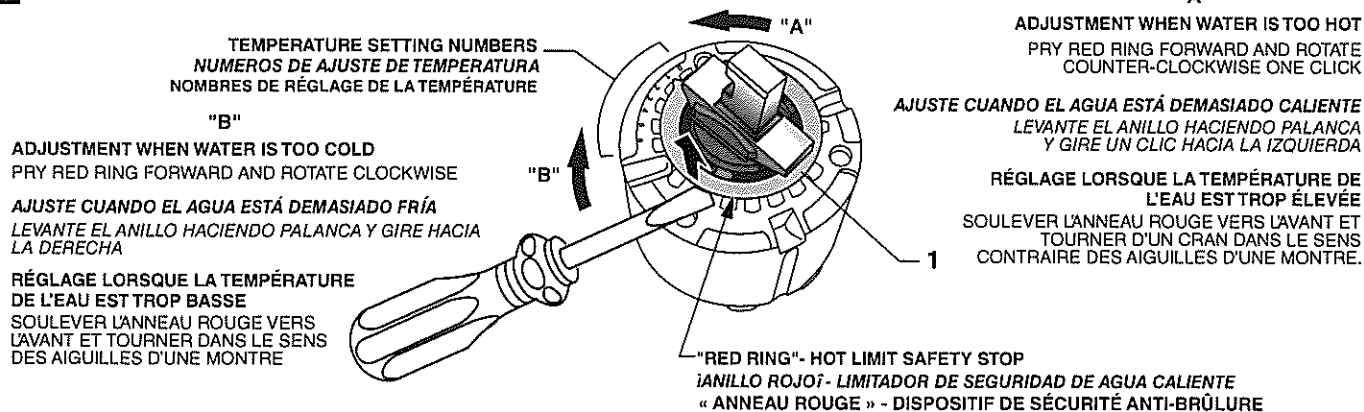
■ Connecter les alimentations d'eau chaude et d'eau froide.

■ Boucher le tuyau de douche (5) et le tuyau de remplissage de baignoire (6).

■ Pour les maintenir, utiliser des attaches de tuyau fixées sur des pièces de bois.

■ Le robinet étant fermé, ouvrir les alimentations en eau et vérifier qu'il n'y a pas de fuite.

## 2 ADJUST HOT LIMIT STOP



### HOT LIMIT SAFETY STOP ADJUSTMENT

By restricting handle rotation and limiting the amount of hot water allowed to mix with the cold, the HOT LIMIT SAFETY STOP reduces risk of accidental scalding. To set the maximum hot water temperature of your faucets, all you need to do is adjust the setting on the HOT LIMIT SAFETY STOP.

- Use a flat blade screwdriver or your fingers to pull up and rotate red HOT LIMIT SAFETY STOP (1). Follow Step "A" or "B" to adjust min./max. discharge temperature. "0" being the hottest to "7" the coldest temperature setting. Factory set at "0".

### AJUSTE DEL LIMITADOR DE SEGURIDAD DE AGUA CALIENTE

El LIMITADOR DE SEGURIDAD DE AGUA CALIENTE restringe la rotación de la manija y limita la cantidad de agua caliente que puede mezclarse con el agua fría, con el fin de evitar el riesgo de quemaduras accidentales. Para definir la temperatura máxima del agua caliente de los grifos, sólo debe ajustar el LIMITADOR DE SEGURIDAD DE AGUA CALIENTE.

- Con un destornillador de punta plana o con los dedos, jale y gire el LIMITADOR DE SEGURIDAD DE AGUA CALIENTE (1). Siga el paso "A" o "B" para ajustar la temperatura de descarga mínima y máxima. El ajuste de temperatura más caliente es "0" y el más frío es "7". El ajuste de fábrica es "0".

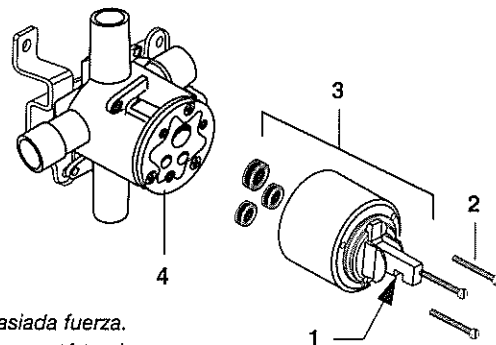
### RÉGLAGE DE LA BUTÉE DE SÉCURITÉ DU LIMITEUR D'EAU CHAUDE

En limitant la rotation de la poignée et en contrôlant la quantité d'eau chaude qui se mélange à l'eau froide, la BUTÉE DU LIMITEUR D'EAU CHAUDE réduit les risques de brûlure accidentelle. Pour régler la température maximale de l'eau chaude dispensée par le robinet, ajuster le réglage de la BUTÉE DU LIMITEUR D'EAU CHAUDE.

- Utiliser un tournevis à tête plate ou vos doigts pour tirer et tourner la BUTÉE DU LIMITEUR D'EAU CHAUDE (1) de couleur rouge. Suivre les étapes « A » ou « B » pour régler la température minimale/maximale. « 0 » est la température la plus chaude et « 7 », la plus froide. Le réglage par défaut à l'usine est « 0 ».

## 3 SERVICE

- If faucet drips, operate CARTRIDGE PIVOT (1) handle several times from "off" to "on". Do not apply excessive force.
- Clogged CARTRIDGE (3) inlets may cause reduced flow in "full on" hot or cold. To clean inlets, first turn off water supply, then:
  - Remove and CARTRIDGE (3). Clean inlets and MANIFOLD (4).
  - Reassemble CARTRIDGE (3), alternately tightening SCREWS (2).



### SERVICIO

- Si la llave gotea, abra y cierre varias veces la PIVOTE DE CARTUCHO (1), sin aplicar demasiada fuerza.
- Las obstrucciones en las entradas del CARTUCHO (3) pueden reducir el flujo cuando la llave está totalmente abierta en la posición de agua fría o caliente. Para limpiar las entradas, primero cierre el suministro de agua y luego:
  - Quite el CARTUCHO (3). Limpie las entradas y el MÚLTIPLE (4).
  - Vuelva a armar el CARTUCHO (3), apretando los TORNILLOS (2) en forma alternada.

### ENTRETIEN

- Si le robinet fuit, actionner la PIVOT DE CARTOUCHE (1) à plusieurs reprises entre les positions « OFF » (FERMÉE) et « ON » (OUVERTE). Ne pas faire preuve de force excessive.
- Si les entrées de la CARTOUCHE (3) sont colmatées, le débit peut s'en trouver diminué dans les positions extrêmes de chaud ou de froid. Pour nettoyer les entrées, d'abord couper l'alimentation en eau, puis :
  - Enlever la CARTOUCHE (3). Nettoyer les entrées et le MANIFOLD (4).
  - Réassembler la CARTOUCHE (3) en serrant les VIS (2) en alternance.

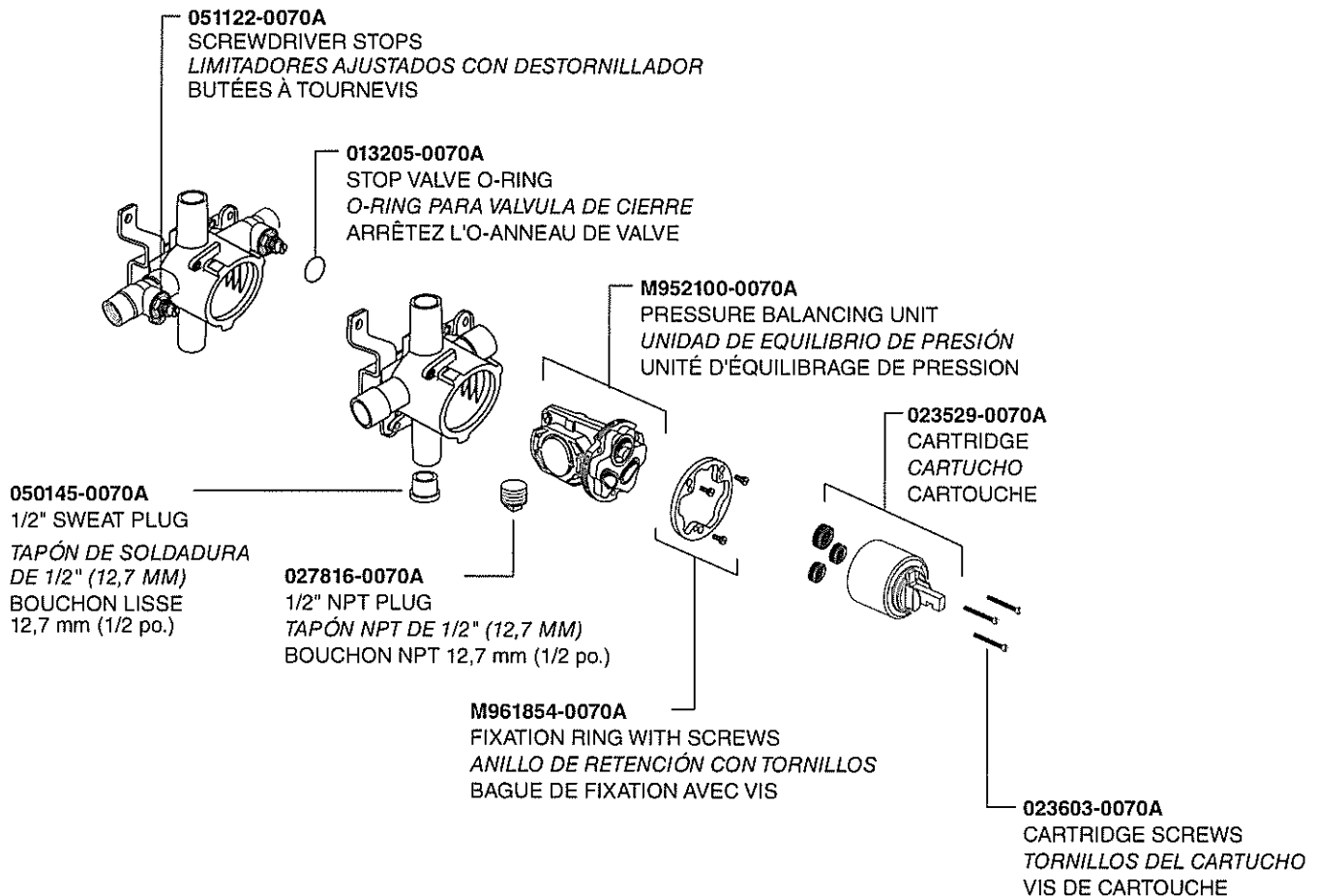


# American Standard

**PRESSURE BALANCE  
TEMPERATURE CONTROL VALVE  
VÁLVULA DE CONTROL DE VOLUMEN Y  
TEMPERATURA CON EQUILIBRIO DE PRESIÓN  
ROBINET MITIGEUR THERMOSTATIQUE**

**MODEL NUMBER  
NÚMERO DE MODELO  
NUMÉRO DE MODÈLE**

<b>R121</b>	<b>R121SS</b>
<b>R125</b>	<b>R125SS</b>



**HOT LINE FOR HELP LÍNEA DE AYUDA DIRECTA SERVICE D'ASSISTANCE TÉLÉPHONIQUE**

For toll-free information and answers to your questions, call:

*Si desea obtener información o tiene preguntas, llame sin cargo al:*

Pour obtenir de l'information et des réponses à vos questions, composez sans frais le :

1 (800) 442-1902

Mon. - Fri. 8:00 a.m. to 8:00 p.m. EST

Saturday 10:00 a.m. to 4:00 p.m. EST

Los días de semana de 8:00 a.m. a 8:00 p.m. Hora normal del este

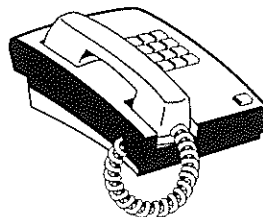
Sabado 10:00 a.m. a 4:00 p.m. Hora normal del este

Du lundi au vendredi de 8 h à 20 h, Samedi 8 h à 16 h, HNE

**IN CANADA EN CANADÁ AU CANADA**

1-800-387-0369 (TORONTO 1-905-306-1093)

**IN MEXICO EN MÉXICO AU MEXIQUE** 01-800-839-1200



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Les noms des produits indiqués dans ce document sont des marques de commerce de American Standard Inc.

**PART OF LIXIL**

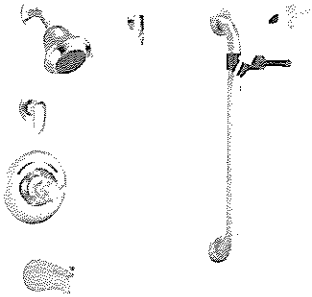
# MultiChoice™ Universal Pressure Balance Tub and Shower with Diverter Valve for Dual Showers

**TECK®**  
COMMERCIAL



## Specification: (example)

- ☐ **R10700-UNWS** ROUGH-IN only
    - Concealed in-wall MultiChoice™ universal valve
    - Back-to-back capability, Integral screwdriver stops
    - **Heavy Duty forged brass** valve body,
    - 1/2" Universal inlets to accept 1/2" copper, 1/2" iron pipe, PEX or CPVC adaptors
    - 1/2" Male thread inlets/outlets
    - In-wall diverter valve
  - ☐ **FINISH TRIM ONLY:**
    - Pressure Balancing cartridge with checks
    - Polished chrome plated finish
    - ADA Compliant diverter handle
    - Non-removeable red/blue temperature markings
- and ... with ... (add product variation)  
with ... (add shower)  
with ... (add valve handle)



**T13H923**

## Engineer/Architect Approval

Model Specified:

Approval:

Date:

TUB AND SHOWER DESCRIPTION	PRODUCT NO.
<b>ROUGH-IN with Diverter Valve &amp; Stops</b>	<b>R10700-UNWS</b>
<b>FINISH TRIM only</b>	<b>T13H</b>



PRODUCT VARIATION	SHOWER	HANDLE
<b>0</b> <input type="checkbox"/>	<b>0</b> Specify "0" When No Shower Outlet Required <input type="checkbox"/>	<b>0</b> <input type="checkbox"/>
<b>1</b> <input type="checkbox"/>	<b>1</b> Standard Brass Fixed Spray Showerhead Arm & Flange 2.2 USGPM (8.4 L/min.) <input type="checkbox"/>	<b>1</b> <input type="checkbox"/>
<b>2</b> <input type="checkbox"/>	<b>2</b> 3-Function Touch-Clean Showerhead, Arm & Flange 2.5 USGPM (9.5 L/min.) <input type="checkbox"/>	<b>2</b> 85mm (3.33") Metal Lever Handle <input type="checkbox"/>
<b>3</b> Shower, Handshower, Diverter Valve, 610mm (24") S/S Grab Bar with ADA Slide 1.5 USGPM (5.7 L/min.) (1) (2) <input type="checkbox"/>	<b>3</b> Showerhead Arm & Flange 1.5 USGPM (5.7 L/min.) <input type="checkbox"/>	<b>3</b> 57mm (2.24") Lever Blade Handle <input type="checkbox"/>
<b>4</b> <input type="checkbox"/>	<b>4</b> <input type="checkbox"/>	<b>4</b> <input type="checkbox"/>
<b>5</b> <input type="checkbox"/>	<b>5</b> <input type="checkbox"/>	<b>5</b> <input type="checkbox"/>
<b>6</b> <input type="checkbox"/>	<b>6</b> 30° Vandal Resistant Cast Wallmount Showerhead 1.5 USGPM (5.7 L/min.) <input type="checkbox"/>	<b>6</b> <input type="checkbox"/>
<b>7</b> <input type="checkbox"/>	<b>7</b> <input type="checkbox"/>	<b>7</b> <input type="checkbox"/>
<b>8</b> <input type="checkbox"/>	<b>8</b> H <sub>2</sub> Okinetic Technology® Showerhead, Arm & Flange, 1.5 USGPM (5.7 L/min.) <input type="checkbox"/>	<b>8</b> <input type="checkbox"/>
<b>9</b> Tub & Shower (Same as No. 3 above) but with Diverter Spout (1) (2) <input type="checkbox"/>	<b>9</b> <input type="checkbox"/>	<b>9</b> <input type="checkbox"/>

(1) Product Variations 3 and 9 require selection of the second showerhead from Shower Option No. 1, 2, 3, 6 or 8 (2) Two check valves in handshower. Flowrates are at 80 PSI. Set screw shower arm flange supplied on Shower Option No. 1, 2, 3 and 8. See **DSP-SHWA Rev. C** for Add-On options available. Refer to [www.specselect.com](http://www.specselect.com) for individual models. See **DSP-B-10000-HDF** for additional Rough-In options. Note: Use this page front and back as a product submittal sheet. Delta reserves the right (1) to make changes in specifications and materials, and (2) to change or discontinue models, both without notice or obligation. Dimensions are for reference only. See current full-line price book or [www.specselect.com](http://www.specselect.com) for finish options and product availability.

**DSP-T13H3 Rev. C**



**TECK<sup>®</sup>**  
COMMERCIAL

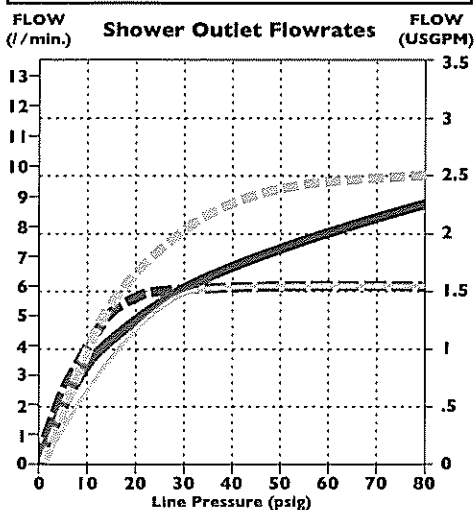
## MultiChoice™ Universal Pressure Balance Tub and Shower with Diverter Valve for Dual Showers

### Approvals:

- CSA certified
- Complies to ASME A112.18.1
- P/B and Diverter Lever Handles ADA Compliant and meet Handicapped Accessibility Standard ASME A117.1 of less than 5 lbs. operating force.
- Pressure Balance Valve ASSE 1016
- Handshower back flow protection provided by two integral certified check valves in series, which operate independently, ASME A112.18.3 and ASME A112.18.1 / CSA B125.1.
- IAPMO listed

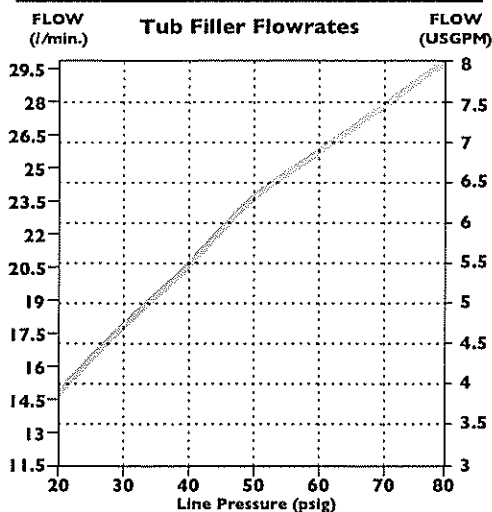
(Contact Delta Representative for State and/or Local Approvals.)

### FLOWRATE vs PRESSURE

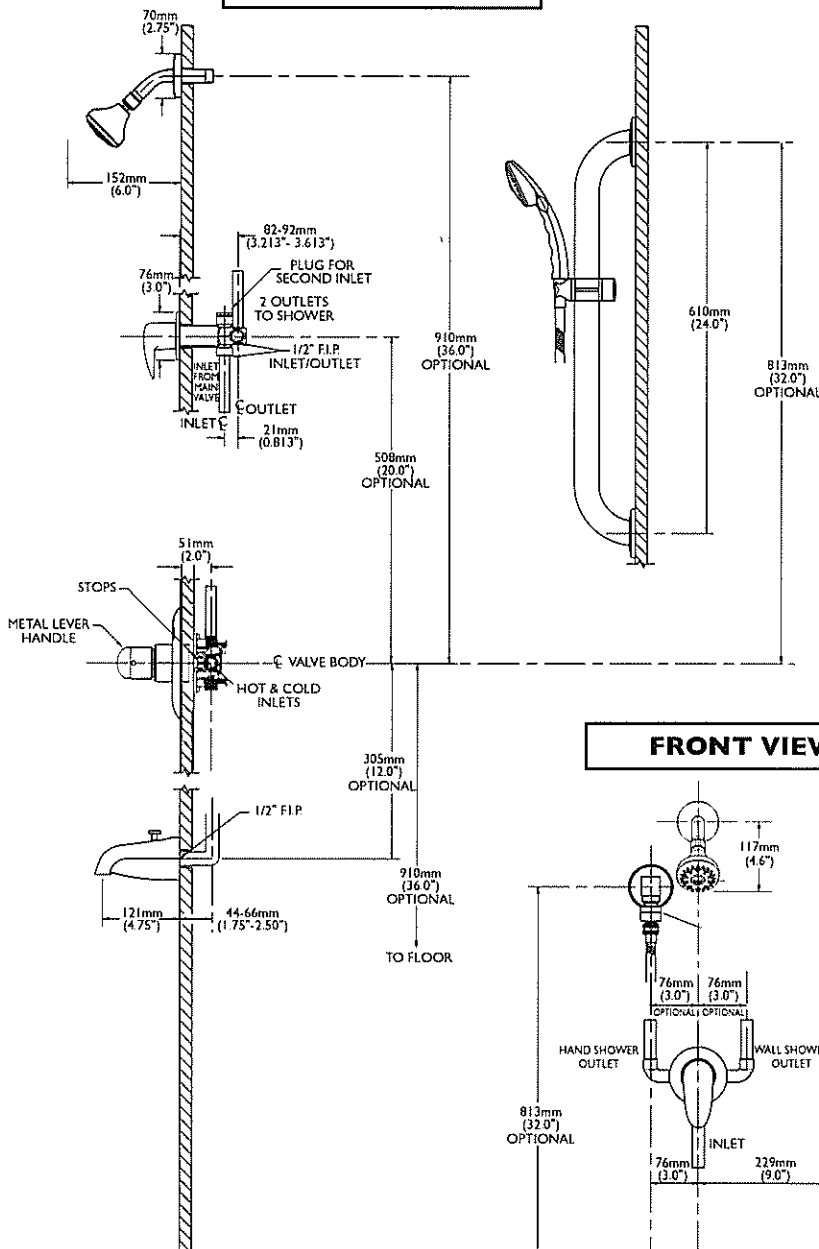


Shower Outlets	
No. 1 (060890A)	No. 2 (RP43381)
No. 3 & 6 (061048A & 061011A)	No. 8 (RP46384)
Product Variations	
No. 3 & 9 (061049A)	

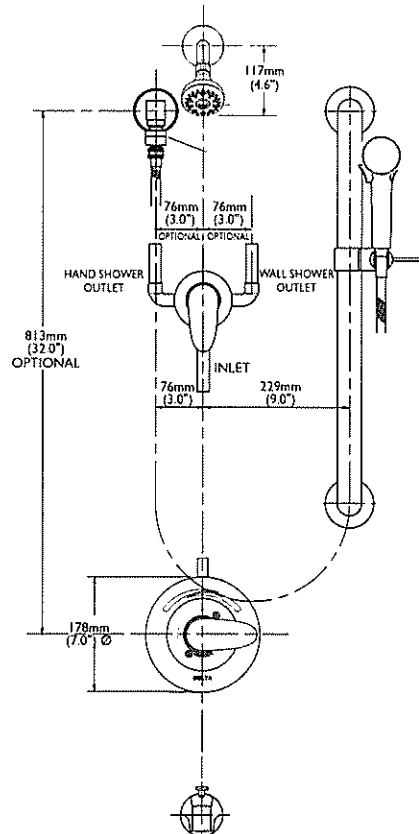
### FLOWRATE vs PRESSURE



### SIDE VIEW



### FRONT VIEW



### R10700-UNWS Rough-In with T13H932 Trim

#### P/B VALVE INLETS:

- 1/2" Universal inlets accept 1/2" copper, 1/2" iron pipe, PEX or CPVC adaptors
- 1/2" Male thread inlets/outlets

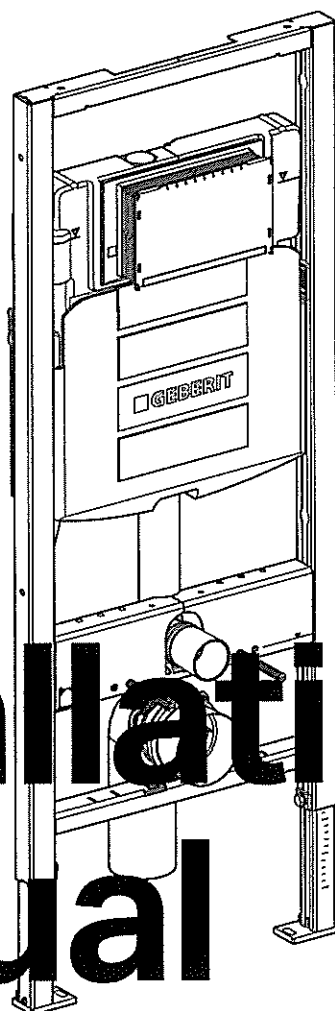
#### DIVERTER VALVE:

- 1/2" FIP inlets/outlets

Note: Measurements may vary  $\pm 6\text{mm}$  (0.25")

Refer to [www.specselect.com](http://www.specselect.com) for individual models.

Note: Use this page front and back as a product submittal sheet.



# Installation Manual

Montageanleitung  
Instructions de montage  
Istruzioni per il montaggio

**KNOW  
HOW**  
INSTALLED

## Installation

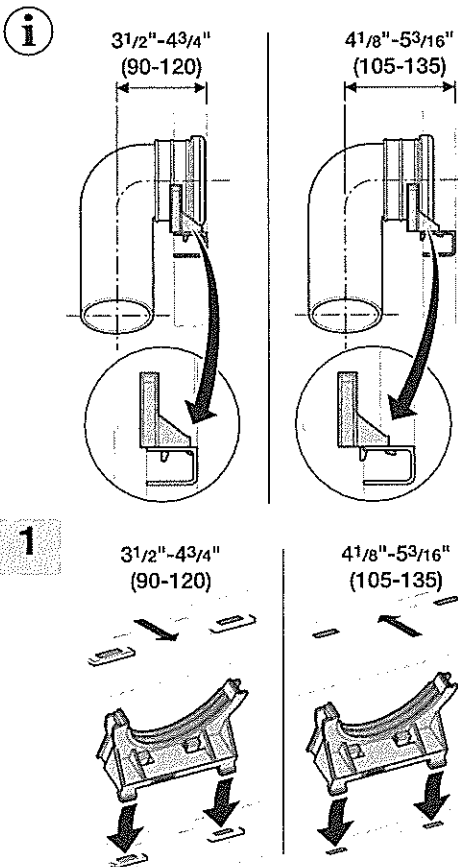
### Installation Requirements

To install tank and carrier, a 2 x 6" wood frame or metal frame construction is required. Studs must be placed 19 3/4" apart (clearance) where carrier will be positioned inside the wall.

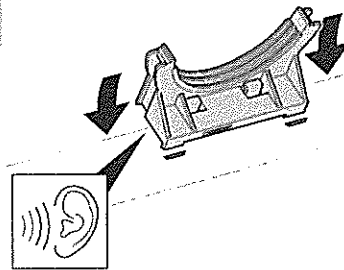
### Bowl Finished Rim Height (FRH)

Remove carrier and installation hardware from its box. Determine FRH for wall-hung bowl and adjust carrier height in accordance with requirement. Dimensions can be taken from bowl or carrier specification sheet. Be sure to allow for finished floor and sole plate height.

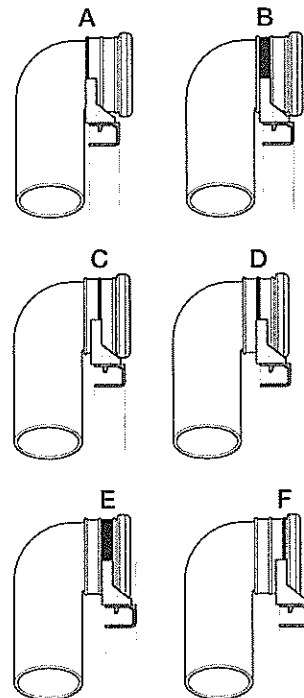
### Discharge elbow installation



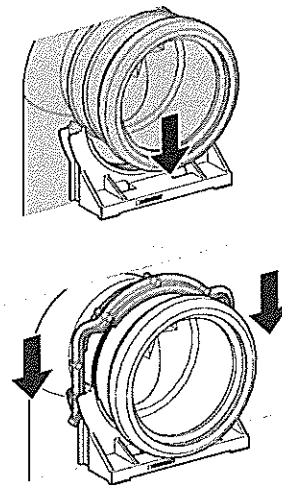
**2**



**3**

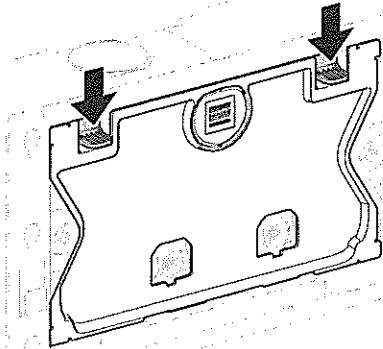


**4**

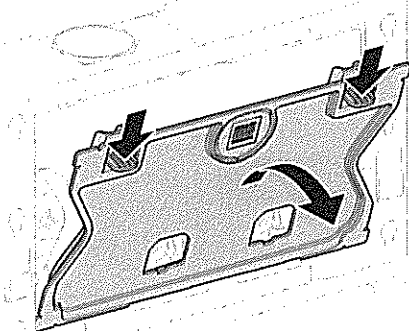


Water supply installation

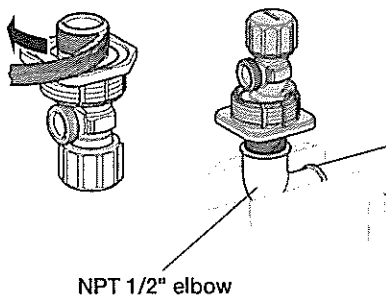
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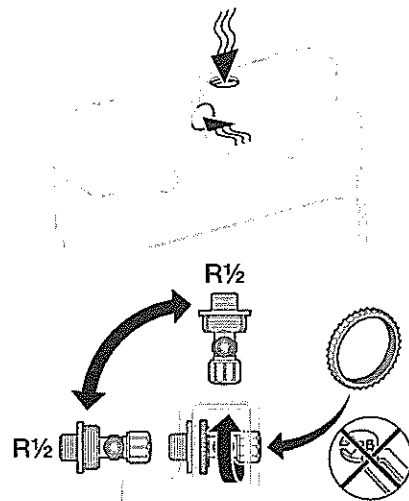
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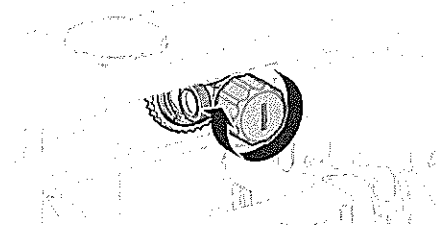
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4

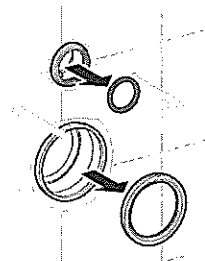


5

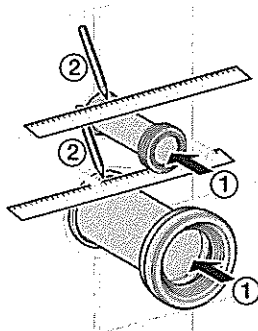


## **Bowl installation**

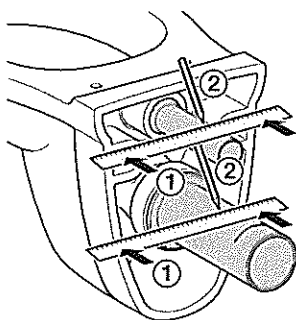
- 1 Remove yellow protection plugs and seals from pipes.



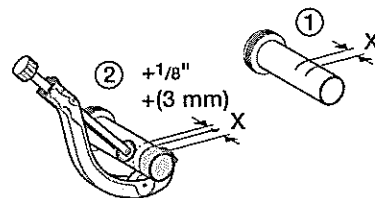
- 2 Insert discharge pipe into the pipe hub in the wall. Place a straight edge flush against the wall and mark a line on the pipe. Fit finned rubber seal onto flush pipe. Repeat same procedure for discharge pipe.



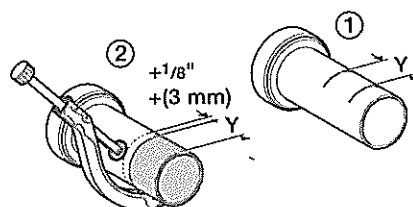
- 3 Place discharge pipe with gasket into waste outlet of bowl. Also place flush pipe with fin gasket into inlet of bowl. Then mark a second line on both pipes.



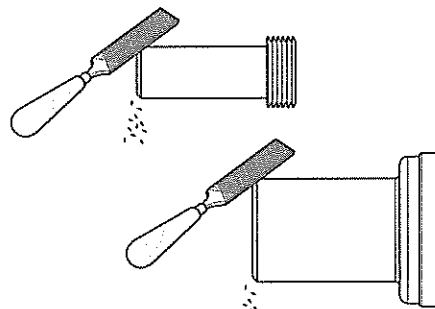
- 4 Add dimension X and 1/8". Using that dimension, mark a line on the pipe measuring from the hub side. Cut off the pipe at the line with a pipe cutter.



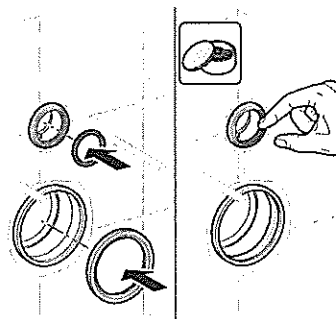
- 5 Add dimension Y and 1/8". Using that dimension, mark a line on the pipe measuring from the hub side. Cut off the pipe at the line with a pipe cutter.



- 6 Bevel the sharp edges as shown to assure a smooth insertion into the pipe hubs in the wall.



- 7 Install both seals into the pipes in the wall. Lubricate seals with appropriate rubber seal lubricant.



## FEATURES & SPECIFICATIONS

**INTENDED USE** — The AL series surface mount combines clean, fine lines with a unique design that complements any space. The completely luminous optical system provides a concave visual appearance while providing high fixture performance and even illumination. AL is also available with a number of control options thus providing the ability to dim or control the lighting providing the ability to save energy and operate with multiple control systems including daylight or occupancy sensors.

**CONSTRUCTION** — Rugged, prepainted one-piece cold-rolled steel reflector assembly with embossed steel for increased structural integrity and strength. Polyester powder-paint after fabrication option available. Hinged door/frame assembly retains optical assembly and easy access to electrical components.

**OPTICS** — Luminous optical system consists of a high performance transmittance diffuser coupled with a concave, clear, ribbed refractor for and unique multi-step appearance. To improve fixture performance and eliminate pixilation the diffuser uses a unique blend of high molecular weight polymer beads with unrelated refractive index.

**ELECTRICAL** — Long-life LEDs, coupled with high-efficiency drivers, provide superior quantity and quality of illumination for extended service life. 90% LED lumen maintenance at 60,000 hours (L90/60,000).

nLight® embedded controls make each luminaire addressable - allowing it to digitally communicate with other nLight enabled controls such as dimmers, switches, occupancy sensors and photocontrols. Simply connect all the nLight enabled control devices and the AL luminaires using standard Cat-5 cabling. Unique plug-and-play convenience as devices and luminaires automatically discover each other and self-commission. Lumen Management: Unique lumen management system (option N80) provides onboard intelligence that actively manages the LED light source so that constant lumen output is maintained over the system life, preventing the energy waste created by the traditional practice of over-lighting.

Step-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.

eldoLED driver options deliver choice of dimming range, and choices for control, while assuring flicker-free, low-current inrush, 89% efficiency and low EMI.

Driver disconnect provided where required to comply with US and Canadian codes.

**INSTALLATION** — Surface mounting. Suitable for damp location.

Maintenance: LED boards include plug-in connectors for easy replacement or servicing.

**LISTINGS** — CSA Certified to meet U.S. and Canadian standards. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/resources/terms-and-conditions](http://www.acuitybrands.com/resources/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

Catalog Number
Notes
Type A



# ALLS4

1' X 4'  
Surface LED

Patents Pending

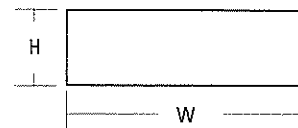


### Specifications

Length: 48 (121.9)

Width: 12-1/4 (31.1)

Height: 4-3/4 (12.1)



All dimensions are inches (centimeters) unless otherwise indicated.

### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** ALLS4 48L EZ1 LP835 N100

ALLS4						
Series	Lumens <sup>1</sup>	Voltage	Driver	Color temperature	Control	Options
ALLS4 Surface LED 1x4	20L 2000 lumens	(blank) MVOLT (120 - 277V)	EZ1 eldoLED dims to 1% (0-10 volt dimming)	LP830 3000 K	(blank) No controls	EL7L 700 nominal lumen battery pack <sup>6</sup>
	30L 3000 lumens	347 347V <sup>2</sup>	EZB eldoLED dims to dark (0-10 volt dimming)	LP835 3500 K	N80 nLight with 80% (L80) lumen management	EL14L 1400 nominal lumen battery pack <sup>6</sup>
	40L 4000 lumens		GZ1 Dims to 1% (0-10V dimming) <sup>3</sup>	LP840 4000 K	N80EMG nLight with 80% (L80) lumen management for use with generator supply EM power	PAF Paint after fabrication
	48L 4800 lumens		GZ10 Dims to 10% (0-10V dimming) <sup>3</sup>	LP850 5000 K	N100 nLight without lumen management	
	60L 6000 lumens		EDB eldoLED DALI <sup>4</sup>		N100EMG nLight without lumen management for use with generator supply EM power	
			EXB eldoLED DMX/RDM <sup>3</sup>			
			EXA1 Dims to 1%, XPoint wireless enabled <sup>4,5</sup>			
			EXAB Dims to dark, XPoint wireless enabled <sup>4,5</sup>			
			SLO Step-level dimming <sup>4</sup>			

### Notes

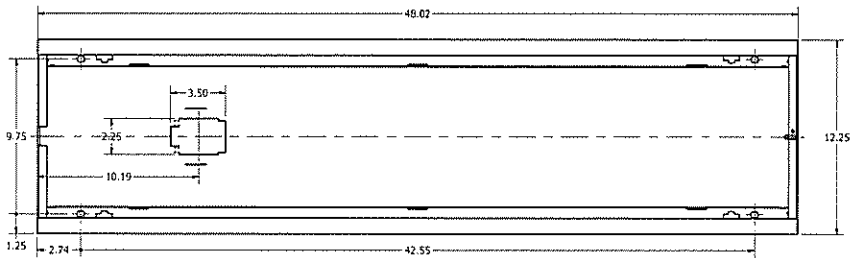
- 1 Approximate lumen output.
- 2 Not available with EL7L or EL14L battery packs or SLD driver.
- 3 GZ1, GZ10 not available with any Controls options.
- 4 Not available with N80, N80EMG, N100, or N100EMG.
- 5 Gateway not included. Requires on-site commissioning. Visit [www.lightingcontrols.com/XPointWireless](http://www.lightingcontrols.com/XPointWireless) for more information.
- 6 Not available with 48L or 60L options.



# ALLS4 Architectural Lighting 1'x4'

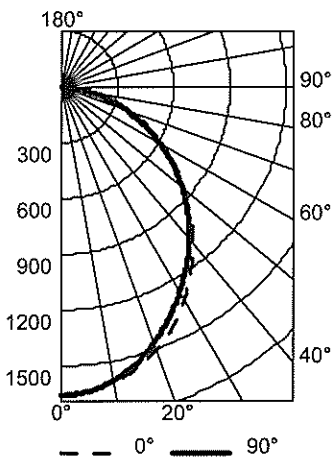
Performance Data				
Lumen	Package	Lumens	Input Watts	LPW
20L	LP830	2,216.7	21	105.6
20L	LP835	2,264.3	21	107.8
20L	LP840	2,280.1	21	108.6
20L	LP850	2,359.4	21	112.4
30L	LP830	3,158.6	30	105.3
30L	LP835	3,226.6	30	107.6
30L	LP840	3,249.2	30	108.3
30L	LP850	3,362.4	30	112.1
40L	LP830	4,066.6	39	104.3
40L	LP835	4,154.9	39	106.5
40L	LP840	4,184.3	39	107.3
40L	LP850	4,331.5	39	111.1
48L	LP830	4,818.3	47	102.5
48L	LP835	4,922.5	47	104.7
48L	LP840	4,956.4	47	105.5
48L	LP850	5,130.8	47	109.2
60L	LP830	5,454.6	55	99.2
60L	LP835	5,572.3	55	101.3
60L	LP840	5,610.8	55	102.0
60L	LP850	5,807.8	55	105.6

## MOUNTING DATA



## PHOTOMETRICS

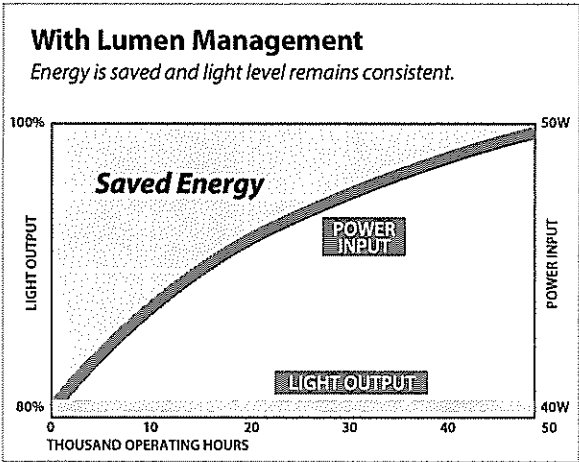
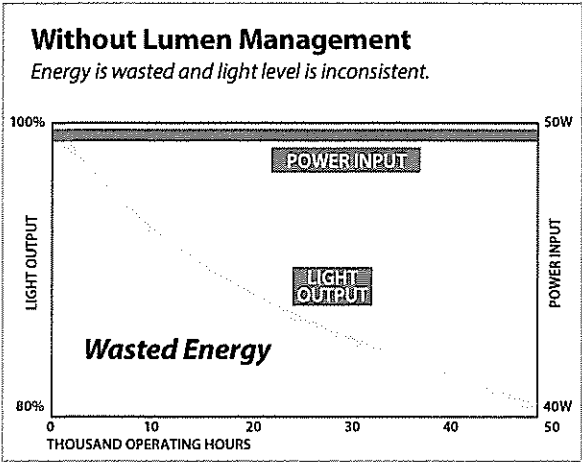
ALLS4 40L EZ1 LP835, 4154.9 delivered lumens, test no. LTL26928P29, tested in accordance to IESNA LM-79.

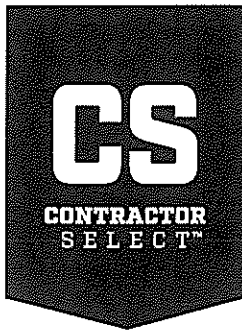


CP Summary		Coefficients of Utilization											Zonal Lumen Summary				
		pf	80%			20%			50%								
		pc	70%	50%	30%	70%	50%	30%	10%	50%	30%	10%	Zone	Lumens	% Lamp	% Fixture	
0°	1655	1655	ROR	0	119	119	119	116	116	116	111	111	111	0° - 30°	1230	29.6	29.6
5°	1639	1644		1	109	104	100	102	98	95	98	95	92	0° - 40°	1968	47.4	47.4
15°	1567	1541		2	99	91	85	89	83	78	86	81	76	0° - 60°	3348	80.6	80.6
25°	1422	1369		3	91	81	73	79	72	66	76	70	64	0° - 90°	4155	100.0	100.0
35°	1213	1171		4	83	72	63	70	62	56	68	61	55	90° - 120°	0	0.0	0.0
45°	974	958		5	77	64	55	63	55	48	61	54	48	90° - 130°	0	0.0	0.0
55°	719	732		6	71	58	49	57	49	43	55	48	42	90° - 150°	0	0.0	0.0
65°	468	497		7	66	53	44	52	44	38	50	43	37	90° - 180°	0	0.0	0.0
75°	246	253		8	61	48	40	47	39	34	46	39	34	0° - 180°	4155	100.0	100.0
85°	68	48		9	57	44	36	44	36	31	42	35	30				
90°	0	0	10	54	41	33	40	33	28	39	32	28					

Constant Lumen Management

Enabled by the embedded nLight control, the ALLED actively tracks its run-time and manages its light source such that constant lumen output is maintained over the system life. Referred to as lumen management, this feature eliminates the energy waste created by the traditional practice of over-lighting.



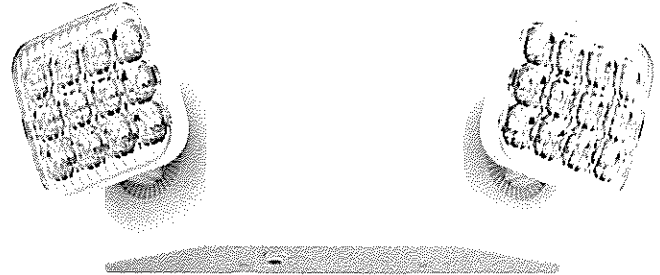


Catalog Number
Notes
Type EMERGENCY BATTERY PACK

Contractor Select™

# EU2C

Lithonia Lighting Basics™  
LED Emergency Light



The Lithonia Lighting® EU2C Emergency Light is suitable for emergency lighting applications such as stairways and hallways. It's dual LED lamp heads makes the EU2C ideal for safely illuminating the path of egress in small spaces at lower mounting heights. It can be wall mounted and will provide 90 minutes of emergency power in the case of power loss.

#### FEATURES:

- Test switch and status indicator
- UL indoor damp location 50°F to 104°F (10°C to 40°C) listed standard
- For use with dual voltage 120/277VAC



† Small Battery Chargers Certified in the CA Title 20 Appliance Efficiency Database.

Catalog Number	UPC	Description	Supply Voltage	Input Wattage		Input Amps		Pallet Qty	Carton Qty
				120	277	120	277		
EU2C M6	191848037188	Emergency lighting unit, ivory white housing	120/277, 60Hz	.56W	.70W	.072	.072	288	6

**Accessories:** Order as separate catalog number.

ELA WG1 Wireguard 15-1/4" W x 13-3/4" H x 6" D (back mount only). See spec sheet [ELA-WG](#).



## Specifications

### INTENDED USE:

Provides a minimum of 90 minutes illumination for the rated wattage upon loss of AC power to meet code required emergency lighting. Ideal for applications requiring low profile, emergency unit for lower mounting heights.

### CONSTRUCTION:

Injection-molded, flame-retardant, high-impact, thermoplastic housing with snap-fit design components with LED lamps for easy installation. Universal J-box pattern (j-box not included). Track and swivel arrangement permits full range of lamp adjustment.

### OPTICS:

The typical life of the LED is 10 years. Two 1W LED Lamps.

### ELECTRICAL:

Dual voltage input 120V or 277V AC, 60hz. Emergency unit provided with test switch, status indicator and rechargeable battery. Maintenance-free 3.6V nickel-cadmium battery provides 90 minutes of emergency power.

### INSTALLATION:

Wall mount only (not suitable for ceiling mount).

### LISTINGS:

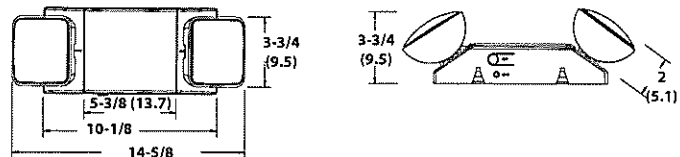
UL Listed. Meets all applicable requirements for UL 924, NFPA 101 (current Life Safety Code), NFPA 70 (NEC), California Energy Commission Title 20 section 1605.3 (W)(4), FCC and OSHA. Indoor damp location 50°F to 104°F (10°C to 40°C) listed standard.

### WARRANTY:

2-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/support/customer-support/terms-and-conditions](http://www.acuitybrands.com/support/customer-support/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

## Dimensions



Weight (shipping): 1.7 lbs. (0.77 kgs.)

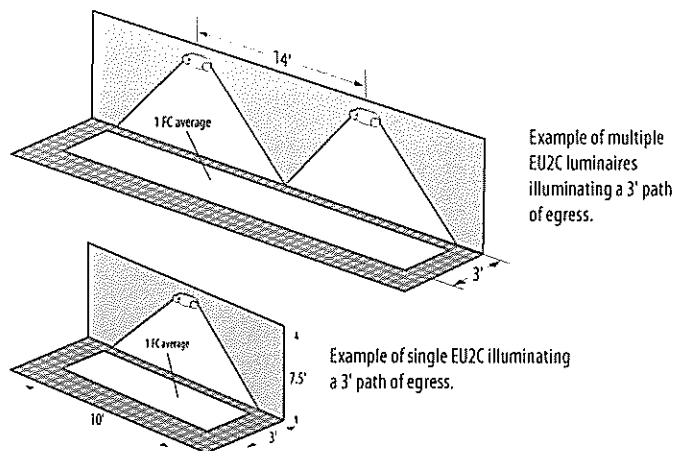
All dimensions are inches (centimeters) unless otherwise indicated

## Spacing guidelines

Maximum Spacing Guidelines - EU2C <sup>1</sup>						
Mounting Height	Illumination Level	Single Luminaire		Multiple Luminaires		Application Notes
		3' Path of Egress	6' Path of Egress	3' Path of Egress	6' Path of Egress	
7.5'	1FC Avg	10'	6'	14'	11'	100' Corridor 8' wide, and 9' high with 80/50/20 reflectances

### Notes:

- Also meets the additional illumination requirements of NFPA 101: 1FC minimum and max/min ratio of 40:1.





## FEATURES & SPECIFICATIONS

### INTENDED USE

Provides an LED lighting platform to deliver general or task lighting for residential and light commercial applications. Light engine delivers long life and excellent color to ensure a quality, low-maintenance light installation. Ideal for use in bathrooms, lavatories, hallways, corridors, stairways, utility areas and more.

### CONSTRUCTION

The Contemporary Cylinder is constructed of an acrylic diffuser with brushed nickel housing. The included canopy/junction box cover is removable for a more low-profile look (2' only). The white acrylic diffuser provides even illumination and softens the appearance of the LEDs for improved aesthetics.

### OPTICS

2' produces 1300 lumens and 3' produces 1900 lumens at 3000K with 50,000 hours of life.

Extruded acrylic diffuser is of highly transmissive material to minimize LED image and provides high-angle brightness control.

### ELECTRICAL

Long-life LEDs, coupled with a multivolt driver, provide extended service life. Standard input = 18 watts, (2'); 26 watts, (3'). Fixture is rated to deliver L70 performance at 50,000 hours and operates at 120-277 volts.

Use with non-dimmable switches only.

### LISTINGS

UL Listed to US and Canadian safety standards. Listed for damp locations. ENERGY STAR® certified.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at:

[www.aquitybrands.com/support/warranty/terms-and-conditions](http://www.aquitybrands.com/support/warranty/terms-and-conditions)

**NOTE:** Actual performance may differ as a result of end-user environment and application.

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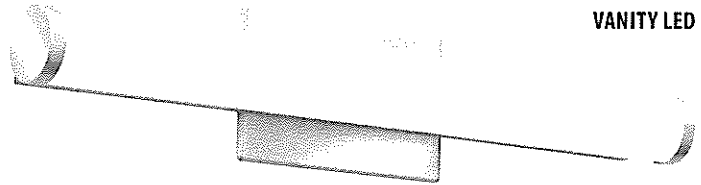
Specifications subject to change without notice.

Catalog Number
Notes
Type C & C1

Decorative Indoor

# Contemporary Cylinder Vanity

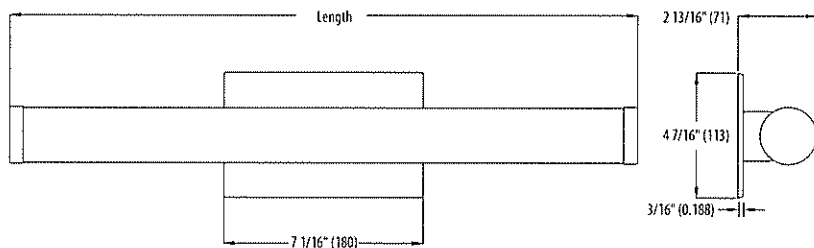
VANITY LED



ADA  
U.S. PATENT PENDING

SPECIFICATIONS	2FT	3FT
Length:	22-3/8 (568)	34-3/16 (868)
Weight:	2.1 (.95)	2.5 (1.13)
3000K Lumens (LPW)	1391 (77)	2050 (78)
4000K Lumens (LPW)	1467 (81)	2062 (79)

All dimensions are inches (millimeters) unless otherwise indicated.  
Weights are pounds (kilograms).



## ORDERING INFORMATION

For shortest lead times, configure product using **bolded options**.

Example: FMVCCL 36IN MVOLT 30K 90CRI BN

Series	Length	Voltage	Color temperature	CRI	Finish
FMVCCL Contemporary Cylinder Vanity	<b>24IN</b> 2' Nominal <b>36IN</b> 3' Nominal	<b>MVOLT</b> MVOLT (120V-277V)	<b>30K</b> 3000 K	<b>90CRI</b> >90	<b>BN</b> Brushed Nickel

LIGHTING FACTS

LEDlighting facts®  
A Program of the U.S. DOE

Light Output (Lumens)

Watts

Lumens per Watt (Efficacy)

1391

17.68

78.68

Color Accuracy

Color Rendering Index (CRI)

94

Light Color

Correlated Color Temperature (CCT)

3000 (Bright White)

Warm White

Bright White

Daylight

2700K

3000K

4500K

6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid State Lighting. Third U.S. Department of Energy (DOE) verified product data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide

Product Name: LED Vanity Contemporary Cylinder

Model Number: FMVCCCL-24" x 6" x 6" (600 mm)

Light Output: 1391 lm

LEDlighting facts®  
A Program of the U.S. DOE

Light Output (Lumens)

Watts

Lumens per Watt (Efficacy)

2050

25.27

81.12

Color Accuracy

Color Rendering Index (CRI)

94

Light Color

Correlated Color Temperature (CCT)

3000 (Bright White)

Warm White

Bright White

Daylight

2700K

3000K

4500K

6500K

All results are according to IESNA LM-79-2008. Approved Method for the Electrical and Photometric Testing of Solid State Lighting. Third U.S. Department of Energy (DOE) verified product data and results.

Visit [www.lightingfacts.com](http://www.lightingfacts.com) for the Label Reference Guide

Product Name: LED Vanity Contemporary Cylinder

Model Number: FMVCCCL-24" x 6" x 6" (600 mm)

Light Output: 2050 lm

## FEATURES & SPECIFICATIONS

**INTENDED USE** — A general purpose and energy-efficient surface-mounted or suspended LED fixture, suitable for wet, damp and/or cold locations. For vapor-tight demanding environments where moisture or dust is a concern and where relatively low fixture mounting heights and wide fixture spacing are common. Typical applications include industrial facilities, parking garages, retail malls, multi-purpose rooms, garden centers, and food processing. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate. Click here for Acrylic-Polycarbonate Compatibility table for suitable use.**

**Certain airborne contaminants may adversely affect the functioning of LEDs and other electronic components, depending on various factors such as concentrations of the contaminants, ventilation, and temperature at the end-user location. Click here for a list of substances that may not be suitable for interaction with LEDs and other electronic components.**

**CONSTRUCTION** — One-piece SVA fiberglass housing with integral perimeter channel utilizing continuous poured-in-place NEMA 4X gasket. Approved as a wireway and for through wiring. Captive polymeric latches are standard. Stainless steel latches (#316) available as an option for food processing or more demanding applications.

Power connection is easily accomplished through pre-drilled holes. Fixture easily mounts to ceilings and other solid structures, or can be suspended with chain, cable or rod using stainless steel mounting brackets (included).

**OPTICS** — Injection molded, acrylic lens (.080" thick) provides high impact-resistance comparable to 100% DR. A UV stabilized polycarbonate diffuser is available (.080" thick) in clear or frosted for additional impact strength where vandal protection is desired.

Expected service life of 60,000 hours at 80% lumen maintenance (L80); predicted life of more than 100,000 hours.

**ELECTRICAL** — Utilizes high-efficiency LEDs mounted to core circuit boards. High-efficiency drivers operate 120-277 (MVOLT) and 347-480 (HVOLT) offered with 0-10 volt dimming. Standard Luminaire Surge Protection Level: 6kV/3kA Surge Rated per ANSI C82.77-5-2015.

**INSTALLATION** — Fixture can be surface or suspended mounted. Pre-punched stainless steel mounting brackets are included (two per luminaire) for easy field-attachment of bolts, screws and other mounting hardware. A covered ceiling is not required to maintain wet location listing or IP rating.

**LISTINGS** — CSA Certified to UL and C-UL Standards. Suitable for wet location. Covered ceiling not required to maintain wet location listing or IP ratings. IP65, IP66, IP67 rated and certified to meet NSF Splash Zone 2. NEMA 4X rated. Sensors maintain IP65 and IP66 only. See chart on page 5 for Ambient Temperatures. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/support/customer-support/terms-and-conditions](http://www.acuitybrands.com/support/customer-support/terms-and-conditions)

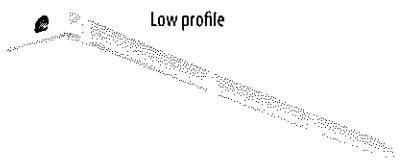
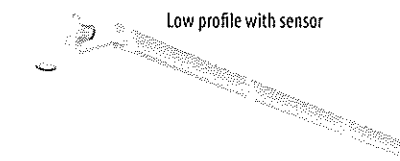
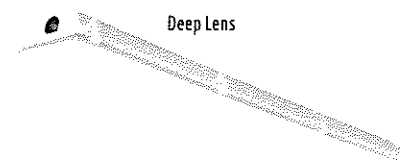
**NOTE:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

Catalog Number
Notes
Type

### Low-Profile Enclosed and Gasketed Industrial

## FEM LED

### SURFACE/SUSPENDED MOUNT



### Stock configurations are offered for shorter lead times:

#### Standard Part Number

FEM L48 4000LM LPAFL MD MVOLT GZ10 40K 80CRI

FEM L48 4000LM LPAFL MD MVOLT GZ10 50K 80CRI

#### Stock Part Number

FEM L48 4L MVOLT

FEM L48 4L MVOLT 5K

### A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or XPoint™ Wireless control networks marked by a shaded background\*

To learn more about A+, visit [www.acuitybrands.com/aplus](http://www.acuitybrands.com/aplus).

\*See ordering tree for details

# FEM LED Low-Profile Enclosed and Gasketed



A+ Capable options indicated by this color background.

## ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: FEM L48 4000LM IMAFL WD MVOLT GZ10 40K 80CRI

Series	Length	Nominal Lumens	Diffuser	Distribution	Voltage	Driver	Color temperature	CRI
FEM	L24 24" ‡	2000LM 2,000 lumens	IMAFL Acrylic, linear ribbed frosted lens	MD Medium	MVOLT MVOLT	GZ10 0-10V dimming	30K 3000K	80CRI 80 CRI
		3000LM 3,000 lumens	IMACD Acrylic, clear deep lens	WD Wide	HVOLT 347-480 ‡		35K 3500K	90CRI 90 CRI
		4000LM 4,000 lumens	IMAFD Acrylic, deep frosted lens	PGD Parking garage	120 120V		40K 4000K	
		6000LM 6,000 lumens	LPAFL Acrylic, low profile frosted lens		277 277V		50K 5000K	
			LPAFL Acrylic, low profile clear lens		347 347V			
	L48 48" ‡	3000LM 3,000 lumens	LPPCL Polycarbonate, low profile clear lens		480 480V			
		4000LM 4,000 lumens	LPPFL Polycarbonate, low profile frosted lens					
		6000LM 6,000 lumens						
		8000LM 8,000 lumens						
		10000LM 10,000 lumens						
		12000LM 12,000 lumens						
	L96 96" ‡	9000LM 9,000 lumens						
		12000LM 12,000 lumens						
		15000LM 15,000 lumens						
		18000LM 18,000 lumens						
		20000LM 20,000 lumens						
		24000LM 24,000 lumens						

## Options

E10WMC	EM Self-diagnostics battery pack, MVOLT, 10W, Constant Power Certified in the California Title 20 Modernized Appliance Efficiency Database (MAEDBS) ‡	CPSB16YWL	6' Brad Harrison 16/3 cord and straight blade plug set ‡	Individual Controls:	
BE6WCP	Cold Weather EM battery pack, 120/277V, 6W, Constant Power Certified in the California Title 20 Modernized Appliance Efficiency Database (MAEDBS) ‡	CPSB16YWL12FTBH	12' Brad Harrison 16/3 cord and straight blade plug set ‡	SBOR10	Low mount 360° integral motion sensor, wet location, On/Off operation
BGTD	Generator transfer device	CRSB16YWL	Brad Harrison receptacle ‡	SBOR10 HL 3V	Low mount 360° integral motion sensor, wet location, High/Low operation (bi-level)
SPD	Surge protection device, additional 10kV/6kA	CNP16WWL	6' white cord, 16/3, no plug, wet location	SBOR10 P	Low mount 360° integral motion sensor, wet location, On/Off operation for motion sensing, override Off due to daylight
WLF	Wet location fitting (two outboard, top (L24 - 20 inches off-center, L48 - 48 inches off-center, L96 - 95.7 inches off-center))	CNP16WWL12FT	12' white cord, 16/3, no plug, wet location	Xpoint Wireless:	
WLFEND	Wet location fitting (one end)	CNP16CWWL	6' white cord, 16/4, no plug, wet location (for use when unswitched circuit is required for battery pack)	XPA SBOR10	Xpoint wireless integral motion sensor, On/Off operation for motion sensing, override Off due to daylight ‡
WLFEND2	Wet location fitting (both ends) ‡	TRS	Tamper Resistant Torx® T10 screws	XAD	XPoint™ wireless controller, 0-10V dimming ‡
WLFPM	Wet location pendant monopoint ‡	DPMB	Dual pendant mounting bracket	nLight Air:	
ANGBKT	Angle bracket shipped with fixture	STSL	Stainless steel latches	NLTAIR2 RSBOR10	nLight AIR generation 2 enabled 306 low mount motion sensor
				NLTAIR2 RIO	nLight (wireless) gen 2 dimming & switching module

NOTE: ‡ indicates option chosen has ordering restrictions. Please reference ordering restrictions chart, page 3. Options are sorted alphanumerically.

See Accessories and ordering restrictions on next page.

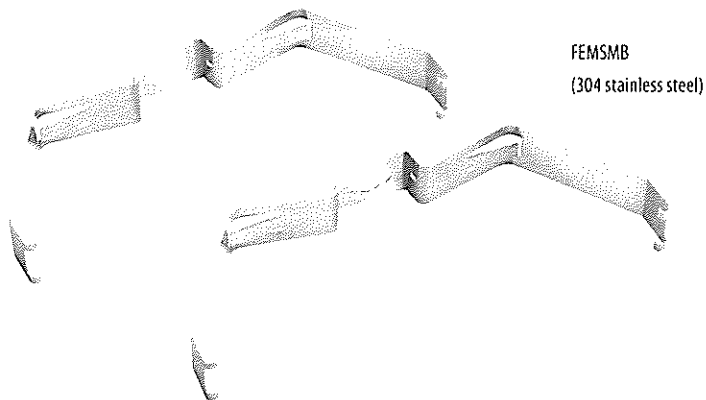


# FEM LED Low-Profile Enclosed and Gasketed

* Option Value Ordering Restrictions	
Option value	Restriction
L24	Not available with BE6WCP.
L48	Not available with WLFPMF.
L96	Not available with WLFPMF.
HVOLT	When ordered with L24 available with 6000LM only. When ordered with L48 not available with 3000LM or 4000LM. Not available with XAD or XPA SBOR10.
BE6WCP	Not available with L24 length. Order with CNP164CWWL when unswitched hot is required for battery.
E10WMCP	Order with CNP164CWWL when unswitched hot is required for battery.
WLFEND	Available with cord or sensor option. Choose only one.
WLFEND2	Not available with sensor or cord options.
WLFPMF	Available only with L24.
CNP16WWL	Not available with BE6WCP or E10WMCP.
CNP16WWL12FT	Not available with BE6WCP or E10WMCP.
CPSB16YWL BH	Not available with BE6WCP or E10WMCP.
CPSB16YWL12FT BH	Not available with BE6WCP or E10WMCP.
CRSB16YWL BH	Not available with BE6WCP or E10WMCP.
XPA SBOR6	Not available with HVOLT.
XAD	Not available with HVOLT.

Accessories: Order as separate catalog number.	
MHCH 36	Jack chain 36" (pair)
MHHK120	10' single leg air craft cable (ships as pair)
MHHK120SS	10' single leg air craft cable, stainless steel (ships as pair)
RK1 T10BIT W/PIN U	Hex-base driver bit, Torx TX10, for tamper resistant screws with center reject pin
FEMDPMB	Dual pendant mounting bracket (ships as a pair)
FEMANGBKT	Angle bracket (ships as pair)
FEMSMB	Surface mount bracket (ships as pair)

## MOUNTING OPTIONS



# FEM LED Low-Profile Enclosed and Gasketed

## OPERATIONAL DATA (80 CRI\*, MD\*\*, MVOLT\*\*\*)

Length	Package	Input Wattage	CCT	Frosted Lens' Lumens (LPW)				Clear Lens' Lumens (LPW)		
				IMAFI	IMAFD	LPAFL	LPPFL	IMACD	LPACL	LPPCL
L24	2000LM	13.4	30K	1962 (147)	2083 (156)	2076 (155)	1861 (139)	2112 (158)	2105 (158)	1890 (142)
			35K	2002 (150)	2126 (159)	2118 (159)	1899 (142)	2155 (161)	2147 (161)	1929 (144)
			40K	2099 (157)	2228 (167)	2220 (166)	1991 (149)	2259 (169)	2251 (169)	2022 (151)
			50K	2122 (159)	2252 (169)	2244 (168)	2013 (151)	2284 (171)	2276 (170)	2044 (153)
	3000LM	19.9	30K	2869 (144)	3046 (153)	3035 (153)	2721 (137)	3088 (155)	3077 (155)	2764 (139)
			35K	2927 (147)	3108 (156)	3096 (156)	2777 (140)	3151 (158)	3139 (158)	2820 (142)
			40K	3069 (154)	3258 (164)	3246 (163)	2911 (146)	3303 (166)	3291 (166)	2956 (149)
			50K	3102 (156)	3293 (166)	3281 (165)	2942 (148)	3339 (168)	3327 (167)	2988 (150)
	4000LM	26.0	30K	3676 (142)	3903 (150)	3889 (150)	3487 (134)	3957 (152)	3943 (152)	3541 (136)
			35K	3751 (145)	3982 (153)	3968 (153)	3558 (137)	4037 (156)	4023 (155)	3613 (139)
			40K	3932 (152)	4174 (161)	4159 (160)	3730 (144)	4232 (163)	4217 (162)	3788 (146)
			50K	3975 (153)	4219 (163)	4204 (162)	3770 (145)	4278 (165)	4263 (164)	3829 (148)
	6000LM	39.2	30K	5287 (135)	5613 (143)	5593 (143)	5015 (128)	5691 (145)	5671 (145)	5093 (130)
			35K	5395 (138)	5727 (146)	5707 (145)	5117 (130)	5806 (148)	5786 (147)	5196 (132)
			40K	5655 (144)	6004 (153)	5982 (153)	5364 (137)	6087 (155)	6065 (155)	5447 (139)
			50K	5717 (146)	6069 (155)	6047 (154)	5422 (138)	6153 (157)	6131 (156)	5506 (140)
L48	3000LM	18.0	30K	2689 (149)	2855 (158)	2844 (158)	2551 (141)	2894 (160)	2884 (160)	2590 (144)
			35K	2743 (152)	2912 (161)	2902 (161)	2602 (144)	2953 (164)	2942 (163)	2643 (146)
			40K	2876 (159)	3053 (169)	3042 (169)	2728 (151)	3095 (172)	3084 (171)	2770 (154)
			50K	2907 (161)	3086 (171)	3075 (170)	2758 (153)	3129 (173)	3118 (173)	2800 (155)
	4000LM	23.8	30K	3543 (149)	3762 (158)	3748 (157)	3361 (141)	3814 (160)	3800 (160)	3413 (143)
			35K	3615 (152)	3838 (161)	3824 (161)	3429 (144)	3891 (163)	3877 (163)	3482 (146)
			40K	3790 (159)	4023 (169)	4009 (168)	3595 (151)	4079 (171)	4064 (171)	3650 (153)
			50K	3831 (161)	4067 (171)	4052 (170)	3634 (153)	4123 (173)	4109 (173)	3690 (155)
	6000LM	37.8	30K	5284 (140)	5609 (149)	5589 (148)	5012 (133)	5687 (151)	5667 (150)	5090 (135)
			35K	5391 (143)	5723 (152)	5703 (151)	5114 (135)	5802 (154)	5782 (153)	5193 (138)
			40K	5651 (150)	6000 (159)	5978 (158)	5361 (142)	6083 (161)	6061 (161)	5444 (144)
			50K	5713 (151)	6065 (161)	6043 (160)	5419 (144)	6149 (163)	6127 (162)	5503 (146)
	8000LM	50.5	30K	6952 (138)	7380 (146)	7354 (146)	6594 (131)	7482 (148)	7456 (148)	6696 (133)
			35K	7093 (141)	7530 (149)	7503 (149)	6728 (133)	7634 (151)	7607 (151)	6832 (135)
			40K	7435 (147)	7894 (156)	7865 (156)	7053 (140)	8003 (159)	7975 (158)	7162 (142)
			50K	7516 (149)	7979 (158)	7950 (158)	7129 (141)	8090 (160)	8061 (160)	7240 (144)
	10000LM	62.0	30K	8646 (140)	9179 (148)	9146 (148)	8201 (132)	9306 (150)	9273 (150)	8328 (134)
			35K	8822 (142)	9365 (151)	9332 (151)	8368 (135)	9495 (153)	9461 (153)	8497 (137)
			40K	9248 (149)	9817 (158)	9782 (158)	8772 (142)	9953 (161)	9918 (160)	8908 (144)
			50K	9348 (151)	9924 (160)	9888 (160)	8867 (143)	10061 (162)	10026 (162)	9004 (145)
	12000LM	75.0	30K	10406 (139)	11047 (147)	11007 (147)	9871 (132)	11200 (149)	11160 (149)	10024 (134)
			35K	10617 (141)	11271 (150)	11231 (150)	10071 (134)	11427 (152)	11387 (152)	10227 (136)
			40K	11130 (148)	11816 (157)	11773 (157)	10557 (141)	11979 (160)	11937 (159)	10721 (143)
			50K	11251 (150)	11944 (159)	11901 (159)	10672 (142)	12109 (161)	12066 (161)	10837 (144)
L96	9000LM	53.4	30K	7962 (149)	8452 (158)	8422 (158)	7552 (141)	8570 (160)	8539 (160)	7669 (144)
			35K	8124 (152)	8624 (161)	8593 (161)	7706 (144)	8743 (164)	8713 (163)	7825 (146)
			40K	8516 (159)	9040 (169)	9008 (169)	8078 (151)	9166 (172)	9133 (171)	8203 (154)
			50K	8608 (161)	9138 (171)	9106 (170)	8165 (153)	9265 (173)	9232 (173)	8292 (155)
	12000LM	75.5	30K	10570 (140)	11221 (149)	11181 (148)	10026 (133)	11377 (151)	11337 (150)	10182 (135)
			35K	10785 (143)	11449 (152)	11408 (151)	10230 (135)	11608 (154)	11567 (153)	10388 (138)
			40K	11306 (150)	12002 (159)	11959 (158)	10724 (142)	12168 (161)	12125 (161)	10890 (144)
			50K	11428 (151)	12132 (161)	12089 (160)	10840 (144)	12300 (163)	12257 (162)	11008 (146)
	15000LM	94.3	30K	13399 (142)	14225 (151)	14174 (150)	12710 (135)	14422 (153)	14371 (152)	12907 (137)
			35K	13671 (145)	14513 (154)	14461 (153)	12968 (138)	14714 (156)	14662 (156)	13169 (140)
			40K	14331 (152)	15214 (161)	15160 (161)	13594 (144)	15425 (164)	15370 (163)	13805 (146)
			50K	14487 (154)	15379 (163)	15324 (163)	13741 (146)	15592 (165)	15537 (165)	13954 (148)
	18000LM	103.4	30K	15901 (154)	16881 (163)	16820 (163)	15083 (146)	17114 (165)	17054 (165)	15317 (148)
			35K	16224 (157)	17223 (167)	17161 (166)	15389 (149)	17462 (169)	17400 (168)	15627 (151)
			40K	17007 (164)	18055 (175)	17990 (174)	16132 (156)	18305 (177)	18240 (176)	16382 (158)
			50K	17192 (166)	18251 (176)	18185 (176)	16307 (158)	18503 (179)	18438 (178)	16560 (160)
	20000LM	125.5	30K	17549 (140)	18630 (148)	18564 (148)	16646 (133)	18888 (150)	18822 (150)	16904 (135)
			35K	17906 (143)	19008 (151)	18940 (151)	16984 (135)	19272 (154)	19204 (153)	17247 (137)
			40K	18770 (150)	19927 (159)	19855 (158)	17804 (142)	20202 (161)	20131 (160)	18080 (144)
			50K	18974 (151)	20143 (160)	20070 (160)	17997 (143)	20421 (163)	20349 (162)	18276 (146)
	24000LM	149.5	30K	21142 (141)	22445 (150)	22364 (150)	20055 (134)	22756 (152)	22675 (152)	20365 (136)
			35K	21571 (144)	22900 (153)	22818 (153)	20461 (137)	23217 (155)	23135 (155)	20779 (139)
			40K	22613 (151)	24006 (161)	23920 (160)	21450 (143)	24339 (163)	24253 (162)	21782 (146)
			50K	22858 (153)	24266 (162)	24179 (162)	21682 (145)	24602 (165)	24516 (164)	22018 (147)

\* For 90CRI, reduce lumen output by 17.1%

\*\* For WD reduce output by 4.7%, PGD reduce output by 5.4%

\*\*\* For HVOLT use scale factor in HVOLT SCALE FACTOR TABLE

# FEM LED Low-Profile Enclosed and Gasketed

## CSA LISTED AMBIENT RATING\*

		Standard** (surface)	Standard** (suspended)	E10WMCP (surface)	E10WMCP (suspended)	BE6WCP (surface)	BE6WCP (suspended)	XAD (surface)	XAD (suspended)
L24	2000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	3000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	4000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	6000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
L48	3000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	4000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	6000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	8000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	10000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	12000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
L96	9000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	12000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	15000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	18000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	20000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C
	24000LM	35°C	50°C	5°C - 25°C	5°C - 35°C	-20°C - 25°C	-20°C - 35°C	30°C	45°C

\*Minimum Ambient is -30°C unless noted,

\*\*All options not specifically listed in this table are considered standard

## HVOLT SCALE FACTOR

	Factor
2000LM	0.814
3000LM	0.814
4000LM	0.814
6000LM	0.835
8000LM	0.845
9000LM	0.850
10000LM	0.850
12000LM	0.845
15000LM	0.860
18000LM	0.880
20000LM	0.845
24000LM	0.865

## CONFIGURATION WEIGHTS

	Standard	w/ Sensor	w/ Battery
L24	8	9	9
L48	11	12	12
L96	23	24	24

## NUMBER OF BOARDS AND DRIVERS

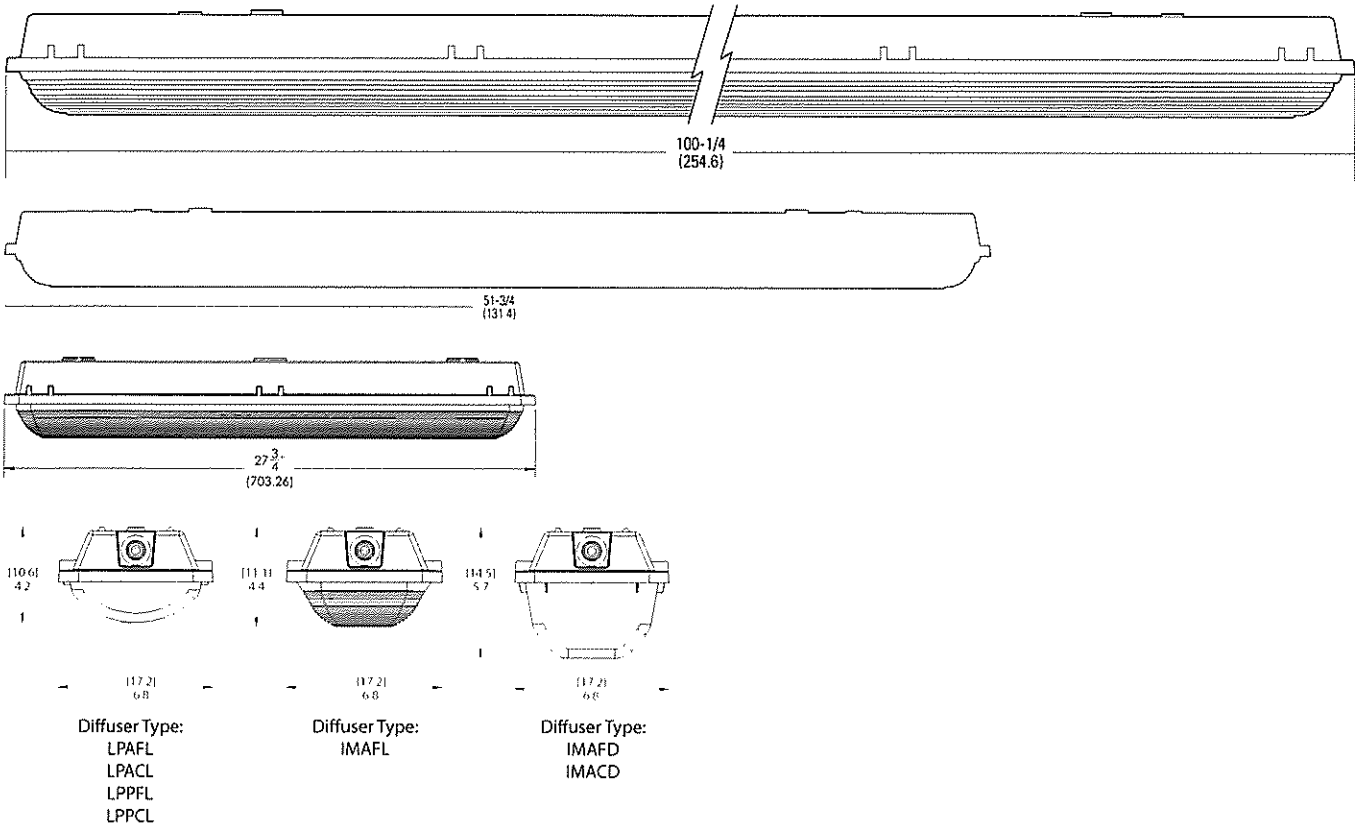
Lumen package	Fixture length	Number of boards	Number of drivers
2000LM	L24	1	1
3000LM		1	1
4000LM		1	1
6000LM		1	1
3000LM	L48	2	1
4000LM		2	1
6000LM		2	1
8000LM		2	1
10000LM		2	1
12000LM		2	1
9000LM	L96	4	1
12000LM		4	2
15000LM		4	2
18000LM		4	2
20000LM		4	2
24000LM		4	2

# FEM LED Low-Profile Enclosed and Gasketed

## DIMENSIONS

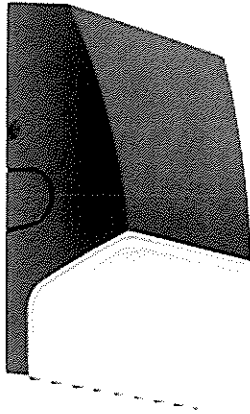
Specifications subject to change without notice.  
All dimensions are inches (centimeters) unless otherwise indicated.

Weight (may vary with options or accessories)  
FEM L48: 11.9 lbs (5.397kg)  
FEM L96: 24.3 lbs (11.022kg)



## PHOTOMETRICS

See [www.lithonia.com](http://www.lithonia.com) for photometry reports.



Project:

Type:

Prepared By:

Date:

The versatile, low-cost, low-profile wall pack. BRISK™ - efficient and affordable LED light.

Color: Bronze

Weight: 2.0 lbs

**Driver Info**

Type	Constant Current
120V	0.11A
208V	0.07A
240V	0.06A
277V	0.05A
Input Watts 13.7W	

**LED Info**

Watts	14W
Color Temp	4000K (Neutral)
Color Accuracy	72 CRI
L70 Lifespan	60,000 Hours
Lumens	1,729
Efficacy	126.2 lm/W

**Technical Specifications****Listings****UL Listed:**

Suitable for wet locations

**IESNA LM-79 & LM-80 Testing:**

RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

**DLC Listed:**

This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. DLC Product Code: PV155JYR

**Performance****Lifespan:**

60,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations

**LED Characteristics****LEDs:**

Long-life, high-efficacy, surface-mount LEDs

**Color Uniformity:**

RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

**Electrical****Driver:**

Constant Current, Class 2, 50/60Hz, 120V: 0.11A, 208V: 0.07A, 240V: 0.06A, 277V: 0.05A

**THD:**

11.8% at 120V, 17.8% at 277V

**Power Factor:**

99.3% at 120V, 91% at 277V

**Surge Protection:**

2.5kV

**Construction****IP Rating:**

Ingress Protection rating of IP66 for dust and water

**Maximum Ambient Temperature:**

Suitable for use in up to 40°C (104°F)

**Cold Weather Starting:**

The minimum starting temperature is -30°C (-22°F)

**Housing:**

Precision die-cast aluminum

## Technical Specifications (continued)

## Construction

## Reflector:

Specular

## Lens:

Diffused acrylic

## Mounting:

Heavy duty, die-cast junction box with four (4) conduit entries (one top, two side, one back)

## Gasket:

Silicone foam

## Finish:

Formulated for high durability and long-lasting color

## Green Technology:

Mercury and UV free. RoHS-compliant components.

## Optical

## BUG Rating:

B0 U3 G2

## Other

## Equivalency:

Equivalent to 70W Metal Halide/50W HPS

## 5 Yr Limited Warranty:

The RAB 5-year, limited warranty covers light output, driver performance and paint finish. RAB's warranty is subject to all terms and conditions found at [rablighting.com/warranty](http://rablighting.com/warranty).

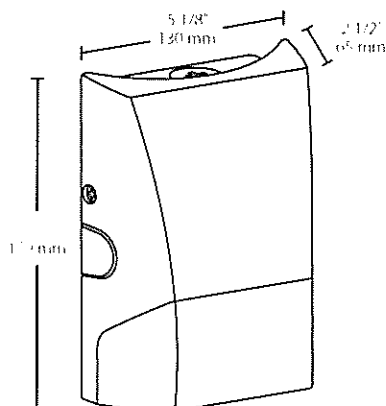
## Replacement:

Replaces 100A/IF incandescent Inside Frost, 100W T5 Halogen incandescent or 26W CFL

## Buy American Act Compliance:

RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

## Dimensions



## Features

Economical

Traditional non-cutoff design

60,000-hour LED lifespan

5-Year, Limited Warranty

## Ordering Matrix

Family	Lumen Package/Wattage	CCT/CRI	Finish	Options
BRISK	S17L	740		
	S11L = 1100 lumens / 9W S17L = 1700 lumens / 14W M32L = 3200 lumens / 22W M48L = 4800 lumens / 35W	Blank = 5000K Cool / 70 CRI 740 = 4000K Neutral / 70 CRI 730 = 3000K Warm / 70 CRI	Blank = Bronze W = White	Blank = No Option /PCU = 120-277V Photocell

## FEATURES & SPECIFICATIONS

**INTENDED USE** — The 4" Wafer™ LED Downlight with Switchable White provides high-quality light output and efficiency featuring a switch for easy color temperature adjustment - while eliminating the need for recessed housings. The innovative, slim design allows for easy retrofit, remodel or new construction installation from below the ceiling. The Wafer LED downlight is wet location listed - making it ideal for use in a breadth of outdoor residential, hospitality, commercial and multifamily applications. The LED module maintains at least 70% light output for 50,000 hours.

**CONSTRUCTION** — Aluminum die cast outer frame. Durable, powder coat paint to prevent rust. FT4 plenum rated cable connector to connect from module to remote driver box. IC rated driver with convenience and value of two remote selectable color temperature options, each with a setting choice to choose either 2700K, 3000K, and 3500K or 3000K, 4000K, and 5000K using the switch. The isolated driver integrated inside steel remote box with four 7/8" knockouts with slots for pryout. Suitable for pulling wires with the 12 cubic-inch wiring compartment to accommodate up to (6) 14 gauge insulated conductors; making the Wafer LED Downlights much easier to wire in 2in/2out (plus ground) daisy-chain applications and contractor friendly.

**INSTALLATION** — Ideal for shallow ceiling plenum; no housing required. Steel spring clip for easy installation. 4" cut out template is provided to ensure a correct sized hole is cut into ceiling for proper installation of the trim. Size of hole should not exceed 4 1/4 inches for this product. Suitable for installation in t-grid and drop ceiling applications. 3" plenum space required for installation of the remote driver box.

**OPTICS** — Edge-lit LED technology uses light guided plate to distribute light. Polycarbonate lens provides even illumination throughout the space.

**ELECTRICAL** — Connect directly to 120V Class-2 (CAN ICES-005 (B) / NMB-005 (B)) LED driver. High efficient driver with power factor > 0.9. Ambient operating temperature: -40°F (-40°C) to +104°F (+40°C). Dimming down to 10% with most standard incandescent dimers (see list of approved dimmers). Replaces 65W incandescent for 750 lumens.

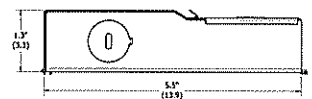
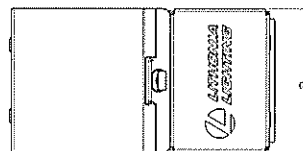
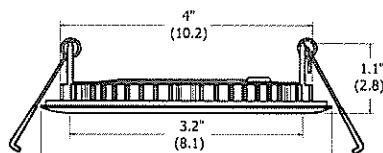
**LISTINGS** — CSA certified to US and Canadian safety standards. ENERGY STAR® certified. Wet location. Air Tight certified in accordance with ASTM E283-2004. NOM Certified. Can be used to comply with California Title 24 Part 6 High Efficacy LED light Source Requirements.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at: [www.acuitybrands.com/support/customer-support/terms-and-conditions](http://www.acuitybrands.com/support/customer-support/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

### Specifications

Aperture:	3.2 (8.1)
Ceiling opening:	4.2 (10.7)
Overlap trim:	4.7 (12.0)
Height:	1.1 (2.8)



All dimensions are inches (centimeters) unless otherwise indicated.

### ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

**Example:** WF4 LED 30K40K50K 90CRI MW

WF4	LED			
Series	Lamp	CCT/W/Lumens <sup>1</sup>	CRI	Finish
WF4 4" wafer-thin LED downlight	LED LED	<b>27K30K35K</b> 2700K/10.5W/730L 3000K/10.5W/800L 3500K/10.5W/780L <b>30K40K50K</b> 3000K/10.5W/750L 4000K/10.5W/810L 5000K/10.5W/790L	90CRI 90CRI	<b>MW</b> Matte White <b>MB</b> Matte Black <b>BN</b> Brush Nickel <b>ORB</b> Oil-Rubbed Bronze

### Accessories: Order as separate catalog number.

WF8643 Pan U	Universal new construction pan
WFJB U	Remodel joist bar
WFEXC6 SW3PIN FT4	3-Pin 6ft Cable
WFEXC10 SW3PIN FT4	3-Pin 10ft Cable
WFEXC20 SW3PIN FT4	3-Pin 20ft Cable
WF4GR MW JZ	4" round oversized trim ring



### Notes

<sup>1</sup> Total system delivered lumens.

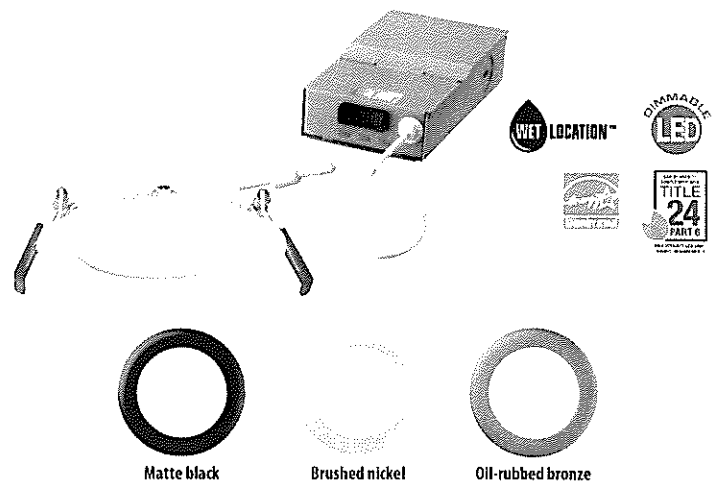
Catalog Number	
Notes	
Type	F

Wafer LED Recessed Downlight

# WF4

## 4" LED Switchable White Color Temperature

IC/Non-IC  
New Construction/Remodel

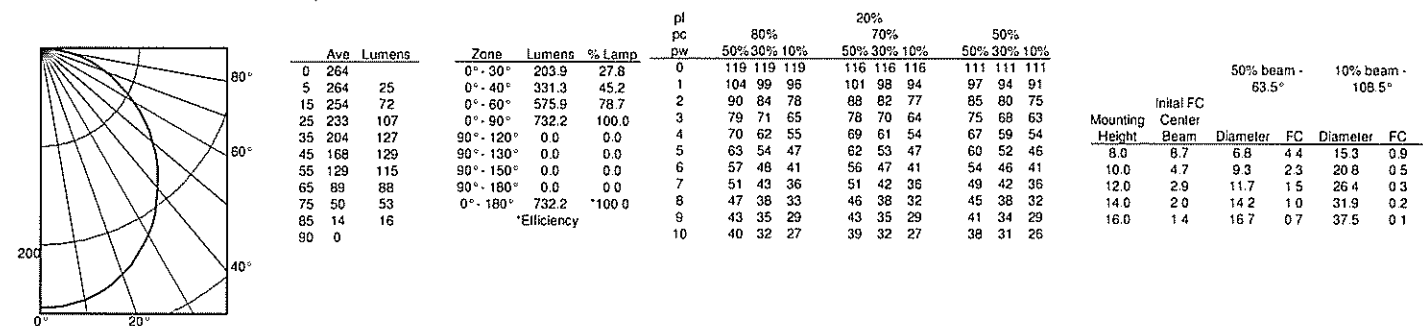


# WF4 Switchable White 4" LED Wafer Module

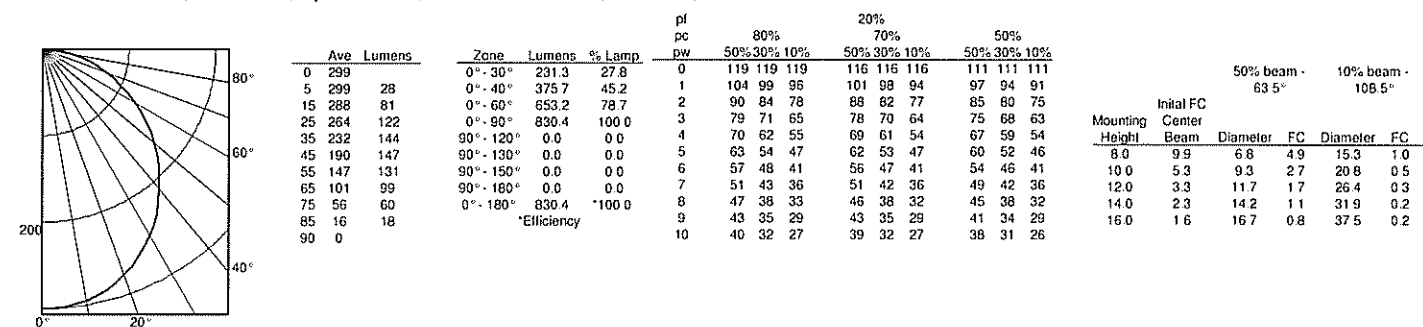
## PHOTOMETRICS

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance Data at 30" Above Floor for a Single Luminaire
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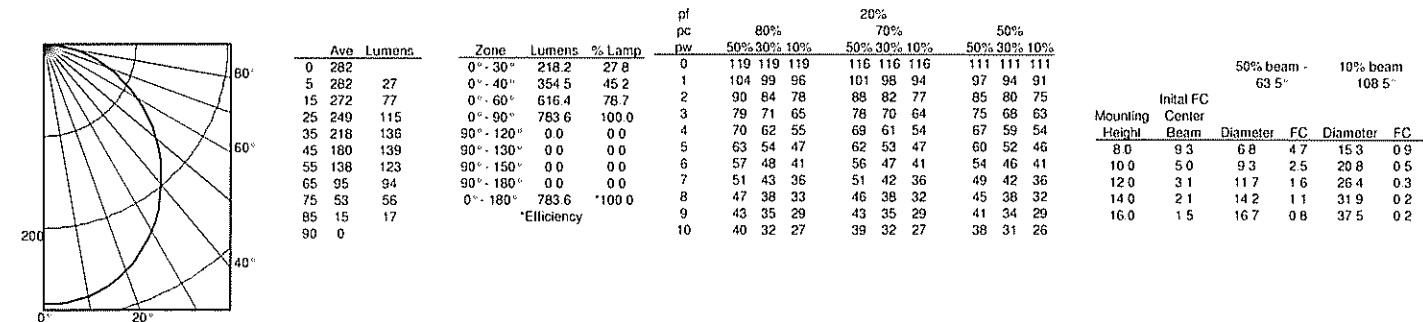
WF4 LED 27K30K35K, 2700 K LEDs, input watts: 11, delivered lumens: 732, LM/W=67, test no. ISF 36826P1



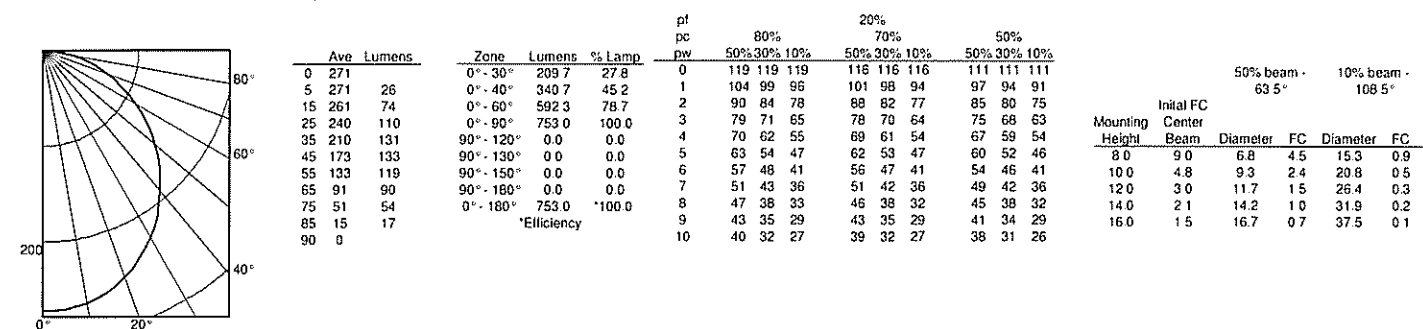
WF4 LED 27K30K35K, 3000 K LEDs, input watts: 10, delivered lumens: 830, LM/W=83, test no. ISF 36826P2



WF4 LED 27K30K35K, 3500 K LEDs, input watts: 10, delivered lumens: 784, LM/W=78, test no. ISF 36826P3



WF4 LED 30K40K50K, 3000 K LEDs, input watts: 11, delivered lumens: 753, LM/W=68, test no. ISF 36826P4



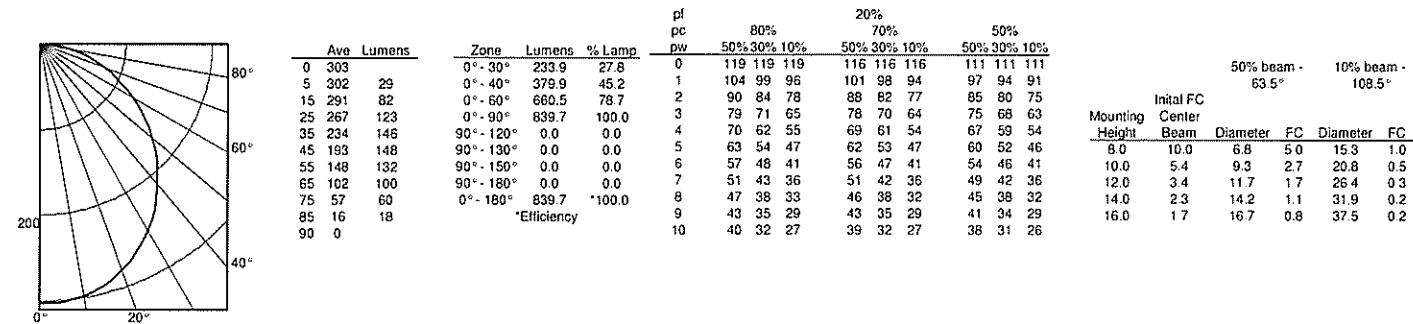


# WF4 Switchable White 4" LED Wafer Module

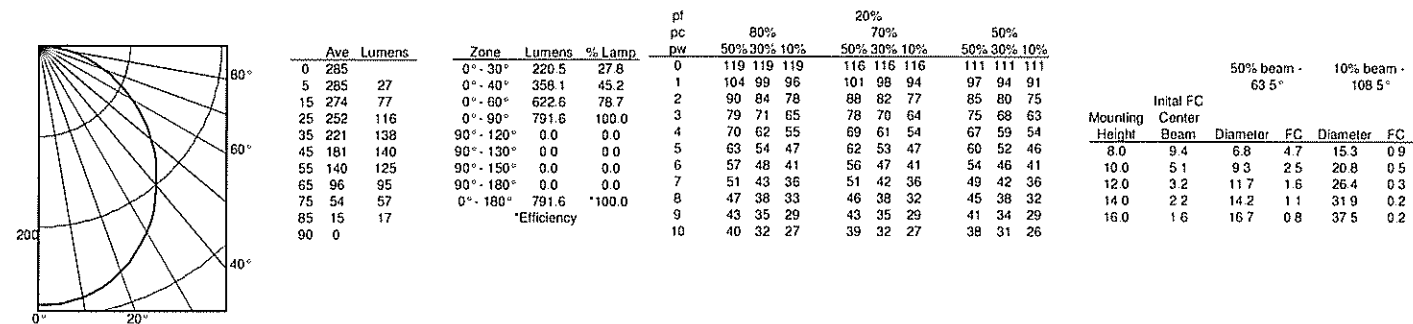
## PHOTOMETRICS

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance Data at 30" Above Floor for a Single Luminaire
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WF4 LED 30K40K50K, 4000 K LEDs, input watts: 11, delivered lumens: 840, LM/W=76, test no. ISF 36826P5



WF4 LED 30K40K50K, 5000 K LEDs, input watts: 10, delivered lumens: 791, LM/W=79, test no. ISF 36826P6



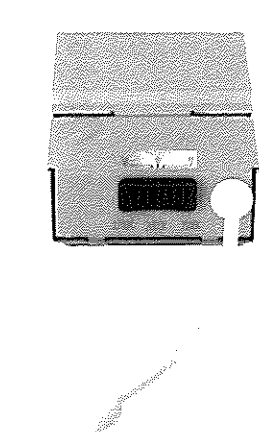
## ENERGY DATA

WF4 LED 27K30K35K			
Color Temperature	2700K	3000K	3500K
Lumens	730	800	780
CRI	90	90	90
Rated wattage	10.7	10.1	10.4
Lu/Watts	68.2	79.2	75.0
Min. starting temp	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A Standards	Class A Standards	Class A Standards
Input voltage	120V	120V	120V
Min. power factor	0.97	0.97	0.97
Input frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input power	120V	120V	120V
Input current	0.09A	0.09A	0.09A

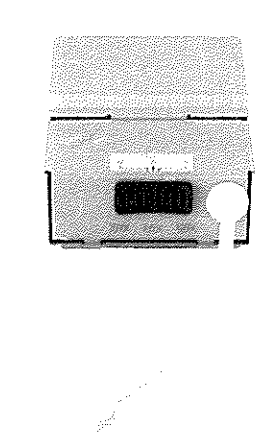
WF4 LED 30K40K50K			
Color Temperature	3000K	4000K	5000K
Lumens	750	810	790
CRI	90	90	90
Rated wattage	10.6	10.6	10.1
Lu/Watts	70.8	76.4	78.2
Min. starting temp	-40°C (-40°F)	-40°C (-40°F)	-40°C (-40°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A Standards	Class A Standards	Class A Standards
Input voltage	120V	120V	120V
Min. power factor	0.97	0.97	0.97
Input frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input power	120V	120V	120V
Input current	0.09A	0.09A	0.09A

# WF4 Switchable White 4" LED Wafer Module

## LIGHTING PERFORMANCE DATA



LIGHTING PERFORMANCE DATA DONNÉES SUR LE RENDEMENT DE L'ÉCLAIRAGE	
Light Appearance (CCT) Aspect de la lumière (CCT)	
2700K	soft white   blanc doux
730 lumens	70 lumens per watt
3000K	warm white   blanc chaud
800 lumens	76 lumens per watt
3500K	neutral white   blanc neutre
780 lumens	74 lumens per watt
Watts	10.5
Color Accuracy (CRI)	90
Précision des couleurs (CRI)	



LIGHTING PERFORMANCE DATA DONNÉES SUR LE RENDEMENT DE L'ÉCLAIRAGE	
Light Appearance (CCT) Aspect de la lumière (CCT)	
3000K	warm white   blanc chaud
750 lumens	71 lumens per watt
4000K	cool white   blanc froid
810 lumens	77 lumens per watt
5000K	daylight   lumière du jour
790 lumens	75 lumens per watt
Watts	10.5
Color Accuracy (CRI)	90
Précision des couleurs (CRI)	