



COMPTON COLLEGE – STUDENT HOUSING

Plumbing Cutsheets



www.p2sinc.com

April 10, 2023
P2S Project #J22-0843

KOHLER®

WC-1/WC-2

Kingston™
Top spud flushometer bowl
K-4325

Features

- Elongated bowl offers added room and comfort
- Siphon jet
- 1-1/2" (38 mm) top spud
- 1.28 or 1.6 gpf (4.8 or 6.0 lpf) depending on flushometer specified
- 10-1/2" (267 mm) x 9" (229 mm) water area
- Will replace K-4330 and K-4330-L bowls

Material

- Vitreous china

Installation

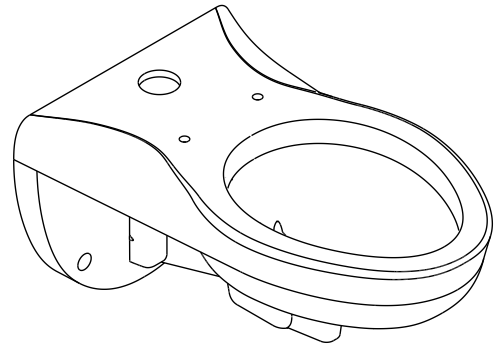
- Wall-mount
- This product is not designed or intended for bariatric use

Recommended Replacements

- This product is replaced by 84325.

Included Components

Additional Components:
Spud



ADA | CSA B651 | OBC



Codes/Standards

ASME A112.19.2/CSA B45.1
DOE - Energy Policy Act 1992
EPA WaterSense®
California Energy Commission (CEC)
ADA
ICC/ANSI A117.1
CSA B651
OBC

KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

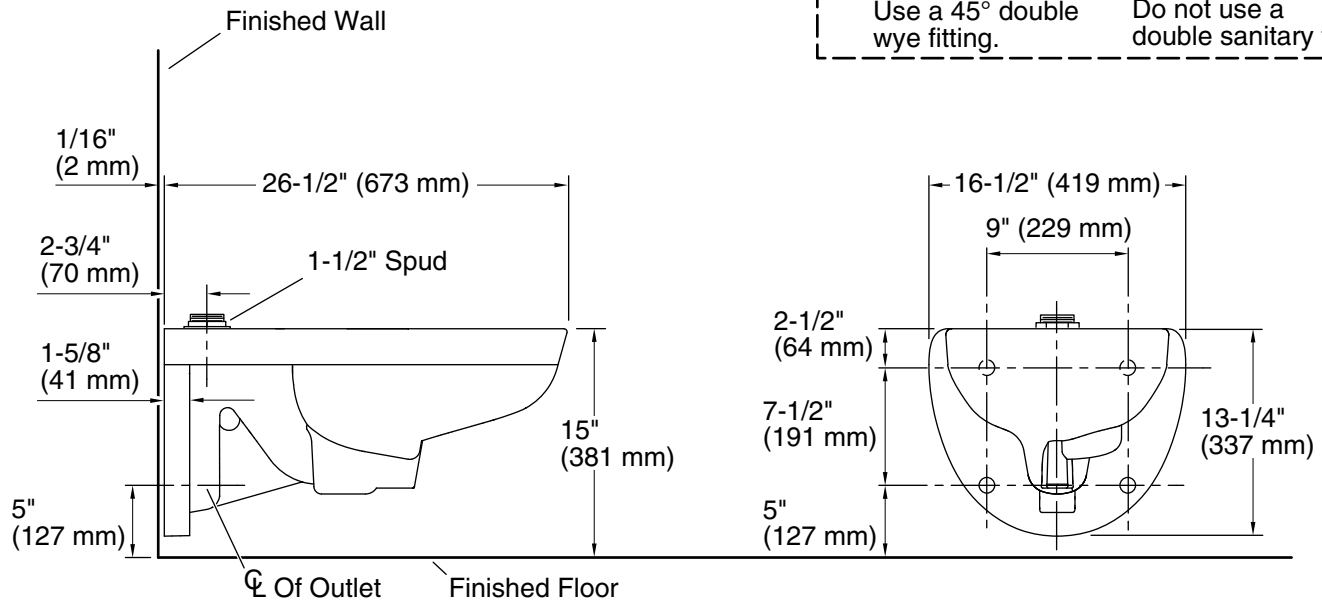
1-800-4KOHLER (1-800-456-4537)

Kohler Co. reserves the right to make revisions without notice to product specifications.

For the most current Specification Sheet, go to www.kohler.com.

2-26-2023 21:59 - US//CA/MX

THE BOLD LOOK
OF **KOHLER®**



Technical Information

All product dimensions are nominal.

Toilet type:	Wall-mount
Waste Outlet:	Wall
Bowl shape:	Elongated
Spud size:	1-1/2", Inlet, Top
Trap passageway:	2-1/8" (54 mm)
Water Consumption	
Full:	1.6 gpf (6 lpf)
Water surface size:	10-1/2" x 9" (267 mm x 229 mm)
Rim to water surface:	5-1/4" (133 mm)
Seat-mounting holes:	5-1/2" (140 mm)

Fixture Supply Requirements

Min static pressure:	35 psi (241.3 kPa)
Max static pressure:	80 psi (551.6 kPa)
Min flowing pressure:	25 psi (172.4 kPa)

Notes

Install this product according to the installation instructions.

Refer to manufacturer's instructions and local codes for flushometer requirements.

For back-to-back toilet installations: Use only a 45° double wye fitting.

Ensure valve is braced properly.

Ensure pressure and flow are correct.

ADA, OBC, CSA B651 compliant when installed to the specific requirements of these regulations.

Plumbing codes may require elongated toilets and elongated, open-front seats in public bathrooms.

Accessibility standards may require controls to be located on the open side of the toilet.

CODE NUMBER

3780115

WC-1/WC-2

DESCRIPTION

1.28 gpf, Dual-Filtered Fixed Bypass Diaphragm, Polished Chrome Finish, Fixture Connection Top Spud, Single Flush, Electrical Override, Battery, Sloan® Exposed Sensor Water Closet Flushometer.

DETAILS

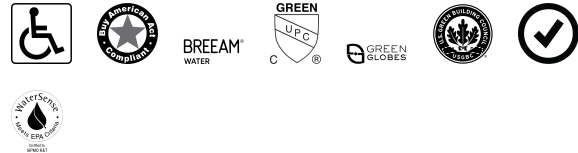
- Flush Volume: 1.28 gpf (4.8 Lpf)
- Finish: Polished Chrome (CP)
- Power Type: Battery ()
- Battery Life: 3 years
- Valve: Diaphragm
- Bypass: Dual-Filtered Fixed Bypass Diaphragm (DFB)
- Valve Body Material: Semi-red Brass
- Fixture Type: Water Closet
- Fixture Connection: Top Spud
- Rough-In Dimension: 11 ½" (292mm)
- Spud Coupling: 1 ½" (38mm)
- Supply Pipe: 1" (25mm)
- Override: Electrical (OR)

FEATURES

- 1" I.P.S. Screwdriver Bak-Chek® Angle Stop with Vandal Resistant Stop Cap
- Spud Coupling and Spud Flange for 11/2" Top Spud
- Sweat Solder Adapter with Cover Tube and Cast Wall Flange
- Vacuum Breaker Flush Connection
- "User in View" Flashing LED
- No External Volume Adjustment to Ensure Water Conservation
- Stop Seat and Vacuum Breaker Molded from PERMEX® Rubber Compound for Chloramine resistance
- Four (4) Size C Batteries included
- Manual Override Flush Button
- "Low Battery" Flashing LED with Optional Audio Tone
- Optional 24-Hour Sentinel Flush
- High Chloramine Resistant PERMEX® Synthetic Rubber DFB Dual Filtered Bypass Diaphragm
- Chrome Plated Metal Infrared Sensor Housing



COMPLIANCES & CERTIFICATIONS



(ADA Compliant, BAA Compliant, BREEAM Water Credit, cUPC Green Certified, Green Globes Water Credit, LEED V4 Water Efficiency Credit, Satisfies LEED Credits, WaterSense Listed)

RECOMMENDED SPECIFICATION

Valve Body, Cover, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi- Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037 and ANSI/ASME 112.19.2.

ELECTRICAL SPECIFICATIONS

- Battery Life: 3 years

VALVE OPERATING PRESSURE (FLOWING)

15–80 PSI (103–552 kPa). Specific fixtures may require greater minimum flowing pressure - consult manufacturer requirements.

DOWNLOADS

- [Sloan Exposed Installation Instructions](#)
- [Sloan Exposed \(Spanish\) Installation Instructions](#)
- [Optima SMO Installation Instructions](#)
- [Control Stop Repair and Maintenance Guide](#)
- [Flush Connections Flanges Repair and Maintenance Guide](#)
- [Tail Piece Repair and Maintenance Guide](#)
- [Sloan Flushometer Repair and Maintenance Guide](#)
- [EBV-89A Side Mount Repair and Maintenance Guide](#)
- [Additional Downloads](#)

NOTES

All information contained within this document subject to change without notice.

Sloan 10500 Seymour Ave, Franklin Park, IL 60131

Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com

Looking for other variations of the SLOAN 111 SMO product?
[View the general spec sheet with all options.](#)

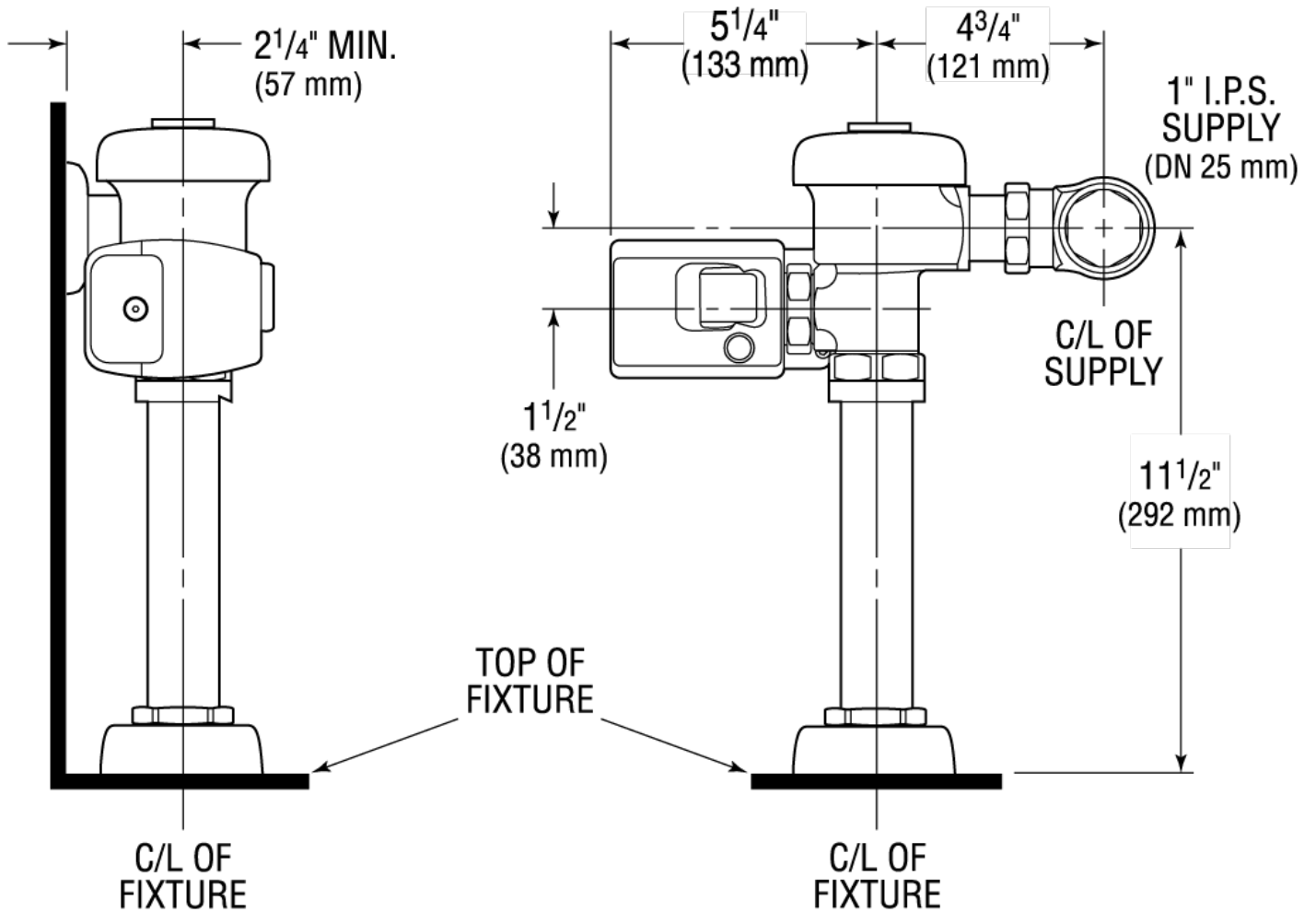
[Find a compatible urinal](#) for this flushometer.

[Find a compatible water closet](#) for this flushometer.

WaterSense compliant when used with a WaterSense compliant fixture

Battery life varies according to actual usage and restroom conditions.

ROUGH-IN



Sloan 10500 Seymour Ave, Franklin Park, IL 60131
Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com

Features

- Washout urinal
- 3/4" (19 mm) top spud
- 0.125 - 1.0 gpf (0.47 - 3.8 lpf)
- Will replace K-4904-ET

Material

- Vitreous china

Installation

- 14" (356 mm) extended rim

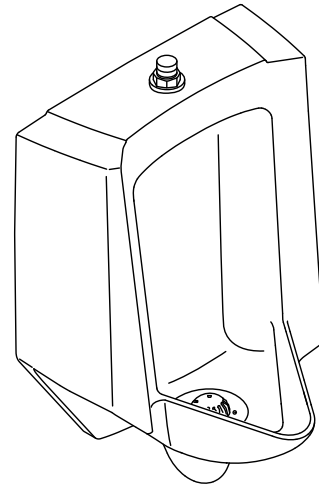
Recommended Products/Accessories

- K-7528 Touchless hybrid 0.125 gpf washdown urinal flushometer
- K-7537 Exposed hybrid 0.5 gpf washdown urinal flushometer
- K-7526 Touchless hybrid 0.5 gpf urinal flushometer
- K-13519 Manual 0.5 GPF Urinal Flushometer
- K-10960 Touchless DC washdown 1.0 gpf urinal flushometer
- K-13518 Manual 1.0 GPF Wshdwn Flushometer
- K-7539 Exposed hybrid 1.0 gpf blowout urinal flushometer
- K-7542 Exposed hybrid 1.0 gpf urinal flushometer
- K-7527 Touchless hybrid 1.0 gpf washdown urinal flushometer
- K-23726 Drain treatment
- K-23725 Cast iron cleaner
- K-4929 Waterless Urinal Maintenance Balls
- K-7546-RF
- K-10668-SV Touchless washdown 0.125 gpf urinal flushometer
- K-10949-SV Touchless DC 0.125 gpf urinal flushometer
- K-76317 Urinal flushometer, 0.125 gpf
- K-7537-RF Exposed hybrid 0.5 gpf urinal flushometer retrofit
- K-10675-SV Touchless washdown 0.5 gpf flushometer
- K-10958-SV Touchless DC 0.5 gpf washdown urinal flushometer
- K-13519-RF Manual 0.5 gpf urinal flushometer
- K-10676-SV Touchless washdown 1.0 gpf urinal flushometer
- K-10960-SV Touchless DC washdown 1.0 gpf urinal flushometer
- K-76319 Urinal flushometer, 1.0 gpf
- K-76318 Urinal flushometer, 0.5 gpf
- K-13518-RF Manual 1.0 gpf washdown flushometer

Included Components

Additional Components:

- 2" outlet spud
- 3/4" inlet spud
- Hanger(s) (Qty 2)
- Strainer



ADA

CSA B651

Codes/Standards




ASME A112.19.2/CSA B45.1
DOE - Energy Policy Act 1992
EPA WaterSense®
California Energy Commission (CEC)
ADA
ICC/ANSI A117.1
CSA B651

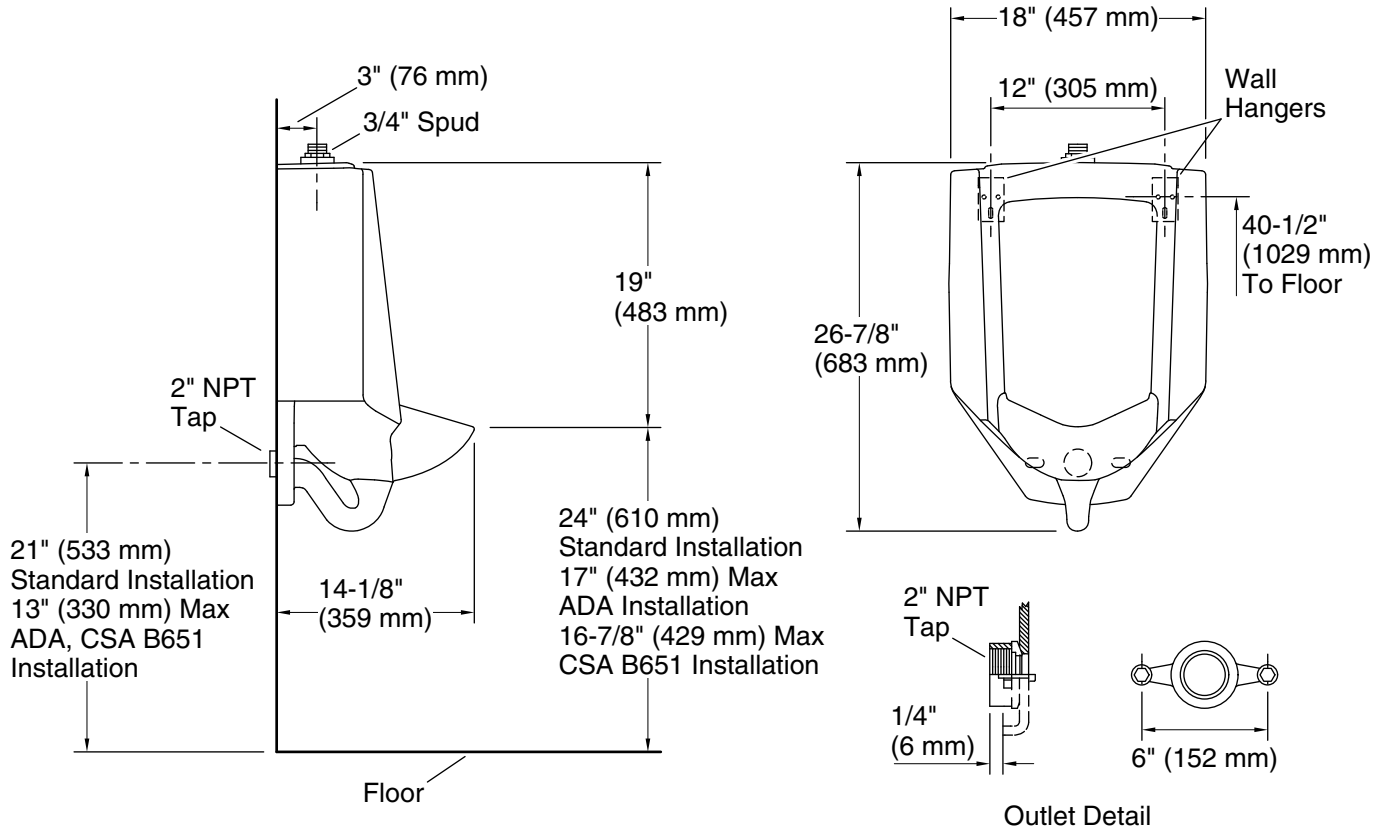
KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	0	White
	96	Biscuit
	7	Black Black™



Technical Information

All product dimensions are nominal.

Flush outlet technology:	Washout
Spud size:	3/4", Inlet, Top
Min. Water per Flush:	0.125 gal (0.5 L)
Max. Water per Flush:	1 gal (3.8 L)

Designed for the above water use when installed with a water-saving flushometer.

Notes

Install this product according to the installation guide.

Refer to manufacturer's instructions and local codes for flushometer requirements.

Recommended ADA outlet spud height will account for normal product variation.

For ADA compliance, measurement must be 17" (432 mm) or less from the floor to the top of the lip. For CSA B651 compliance, measurement must be 16-7/8" (429 mm) or less from the floor to the top of the lip.

ADA, CSA B651 compliant when installed to the specific requirements of these regulations.

U-1/U-2

CODE NUMBER

3912654

DESCRIPTION

0.125 gpf, Dual-Filtered Bypass, Polished Chrome Finish, Fixture Connection Top Spud, Single Flush, Electrical Override, Battery, Royal® Exposed Sensor Urinal Flushometer.

DETAILS

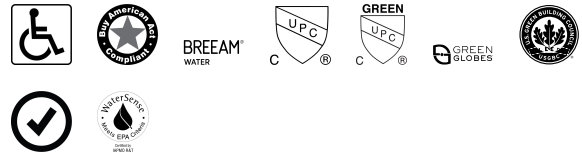
- Flush Volume: 0.125 gpf (0.5 Lpf)
- Finish: Polished Chrome (CP)
- Power Type: Battery ()
- Battery Life: 3 years
- Valve: Diaphragm
- Bypass: Dual-Filtered Bypass (DBP)
- Valve Body Material: Semi-red Brass
- Fixture Type: Urinal
- Fixture Connection: Top Spud
- Rough-In Dimension: 11 ½" (292mm)
- Spud Coupling: ¾" (19mm)
- Supply Pipe: ¾" (19mm)
- Override: Electrical (OR)

FEATURES

- "User in View" Flashing LED
- No External Volume Adjustment to Ensure Water Conservation
- Sweat Solder Adapter w/Cover Tube and Cast Wall Flange w/Set Screw
- Stop Seat and Vacuum Breaker molded from PERMEX® Rubber Compound for Chloramine Resistance
- Four (4) Size C Batteries included
- Manual Override Flush Button
- "Low Battery" Flashing LED with Optional Audio Tone
- Optional 24-Hour Sentinel Flush
- ¾" I.P.S. Screwdriver Bak-Chek® Angle Stop with Vandal Resistant Stop Cap



COMPLIANCES & CERTIFICATIONS



(ADA Compliant, BAA Compliant, BREEAM Water Credit, cUPC Certified, cUPC Green Certified, Green Globes Water Credit, LEED V4 Water Efficiency Credit, Satisfies LEED Credits, WaterSense Listed)

RECOMMENDED SPECIFICATION

Valve Body, Cover, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi- Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037 and ANSI/ASME 112.19.2.

ELECTRICAL SPECIFICATIONS

- Battery Life: 3 years

VALVE OPERATING PRESSURE (FLOWING)

15-80 PSI (103-552 kPa). Specific fixtures may require greater minimum flowing pressure - consult manufacturer requirements.

DOWNLOADS

- [Optima SMO Installation Instructions](#)
- [Royal Exposed Installation Instructions](#)
- [Royal Exposed Spanish Installation Instructions](#)
- [Control Stop Repair and Maintenance Guide](#)
- [Flush Connections Flanges Repair and Maintenance Guide](#)
- [Tail Piece Repair and Maintenance Guide](#)
- [EBV-89A Side Mount Repair and Maintenance Guide](#)
- [Royal Manual Diaphragm Flushometer Repair and Maintenance Guide](#)
- [Additional Downloads](#)

NOTES

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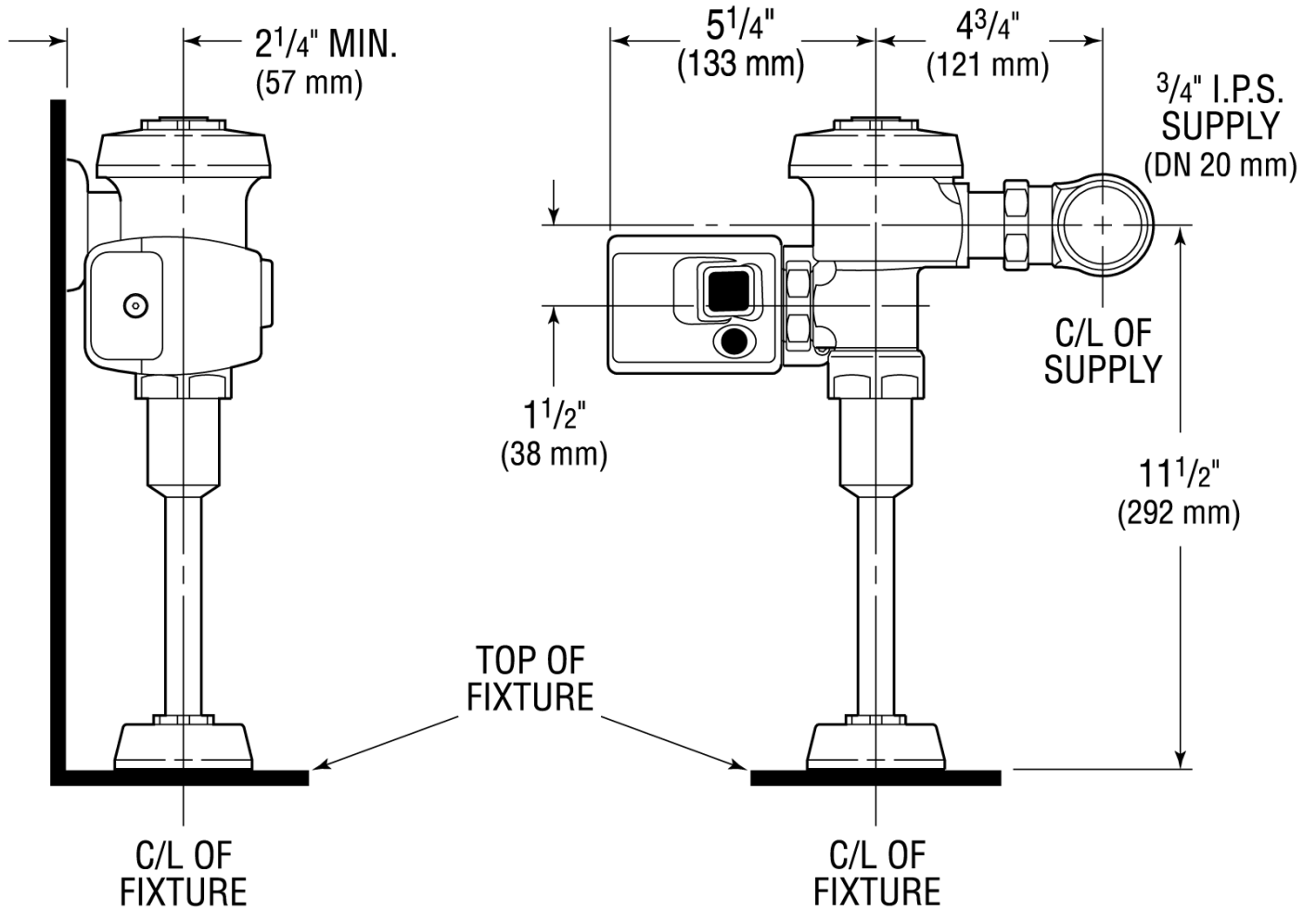
[Find a compatible urinal](#) for this flushometer.

[Find a compatible water closet](#) for this flushometer.

WaterSense compliant when used with a WaterSense compliant fixture

Battery life varies according to actual usage and restroom conditions.

ROUGH-IN



Features

- Vitreous china
- Wall-mount
- With hanger
- With overflow
- Drilled for concealed arm carrier
- Optional soap dispenser hole on left (-L) or right (-R)
- 8" (203 mm) centers, 4" (102 mm), centers or single-hole
- 21-1/4" (540 mm) x 18-1/8" (460 mm)

L-1

WALL-MOUNT BATHROOM SINK

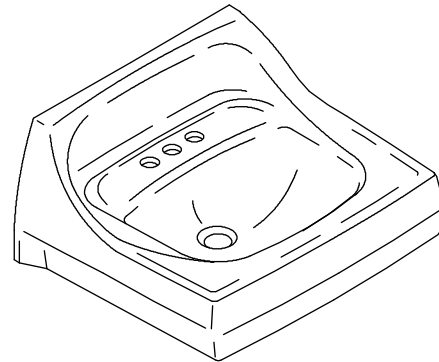
K-2005

ALSO K-2006, K-2007

ADA

CSA B651

OBC



Codes/Standards Applicable

Specified model meets or exceeds the following:

- ADA
- ICC/ANSI A117.1
- CSA B651
- OBC
- ASME A112.19.2/CSA B45.1

Colors/Finishes

- 0: White
- Other: Refer to Price Book for additional colors/finishes

Accessories

- CP: Polished Chrome
- Other: Refer to Price Book for additional colors/finishes

Specified Model

Model	Description	Colors/Finishes	
K-2005	Bathroom sink with 4" (102 mm) centers less soap dispenser hole	<input type="checkbox"/> 0	<input type="checkbox"/> Other_____
K-2005-L	Bathroom sink with 4" (102 mm) centers with soap dispenser hole on left	<input type="checkbox"/> 0	<input type="checkbox"/> Other_____
K-2005-R	Bathroom sink with 4" (102 mm) centers with soap dispenser hole on right	<input type="checkbox"/> 0	<input type="checkbox"/> Other_____
K-2006	Bathroom sink with 8" (203 mm) centers less soap dispenser hole	<input type="checkbox"/> 0	<input type="checkbox"/> Other_____
K-2007	Bathroom sink with single-hole less soap dispenser hole	<input type="checkbox"/> 0	<input type="checkbox"/> Other_____
K-2007-L	Bathroom sink with single-hole with soap dispenser hole on left	<input type="checkbox"/> 0	<input type="checkbox"/> Other_____
K-2007-R	Bathroom sink with single-hole with soap dispenser hole on right	<input type="checkbox"/> 0	<input type="checkbox"/> Other_____

Recommended Accessories

K-8998	P-Trap	<input type="checkbox"/> CP	<input type="checkbox"/> Other_____
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Product Specification

Bathroom sink shall be made of vitreous china. The sink shall be 21-1/4" (540 mm) in length and 18-1/8" (460 mm) in width. Sink shall be wall-mounted with hangers. Sink shall have 8" (203 mm) centers (K-2006), 4" (102 mm) centers (K-2005), or single-hole (K-2007). Sink shall have overflow. Sink shall be drilled for concealed arm carrier. Sink shall have optional soap dispenser hole left (-L) or right (-R). Sink shall be Kohler Model K-_____-_____-_____.

Technical Information

Fixture*:	
Basin area	16" (406 mm) x 10" (254 mm)
Water depth	3-1/8" (79 mm)
Drain hole	Ø 1-3/4" (44 mm)
* Approximate measurements for comparison only.	

Holes	K-2005	K-2006	K-2007
Spout	Ø 1-1/4" (32 mm)	Ø 1-3/8" (35 mm)	Ø 1-3/8" (35 mm)
Faucet	Ø 1-1/4" (32 mm)	Ø 1-3/8" (35 mm)	
Soap dispenser	Ø 1-1/4" (32 mm)		Ø 1-1/4" (32 mm)

Included components:	
Hanger	64839

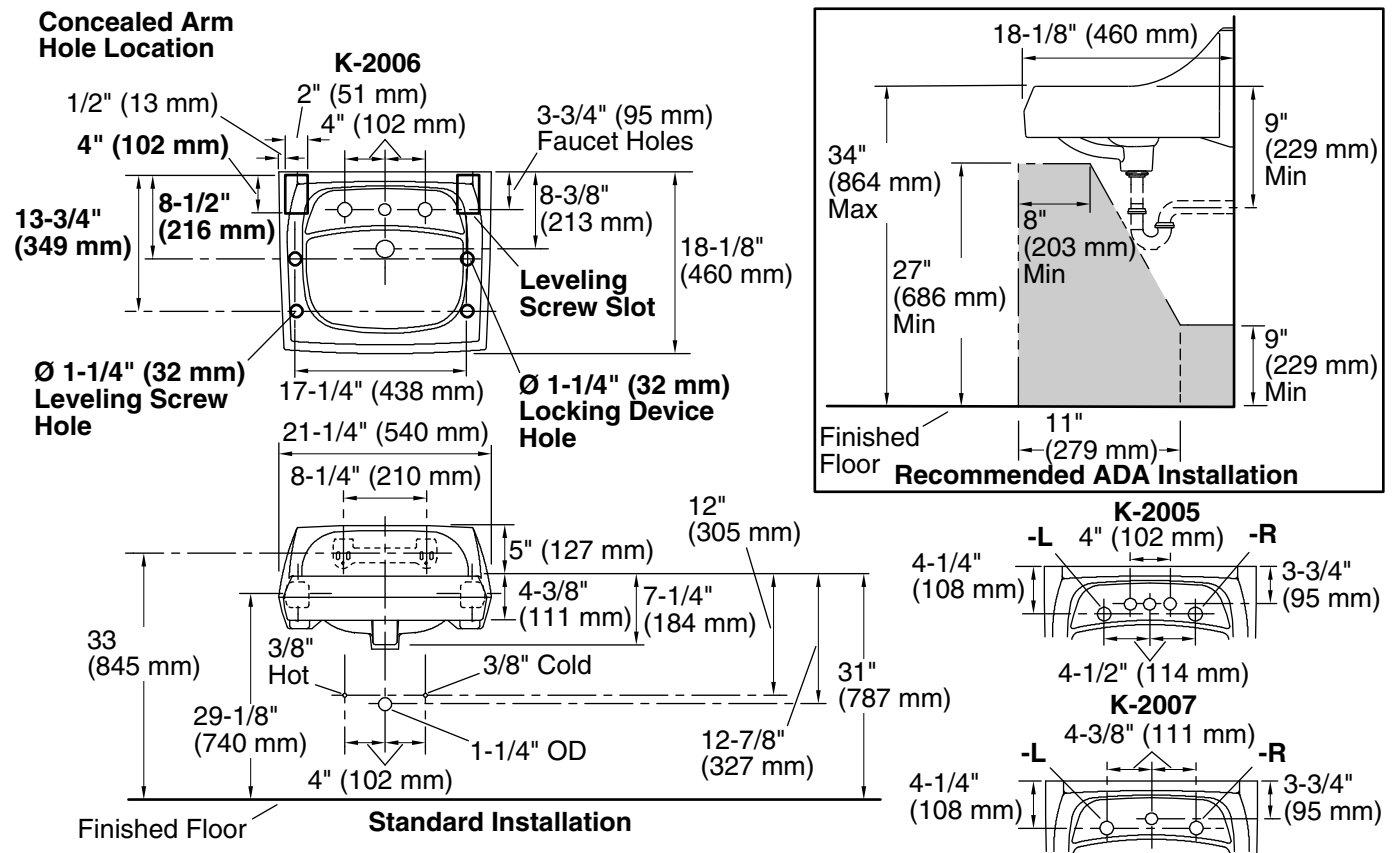
Installation Notes

Install this product according to the installation guide.

Will comply with **ADA** when installed per Section 606 Lavatories of the Act.

Will comply with **CSA B651** when installed per Clause 4.3.3 of the standard.

Will comply with **OBC** when installed per Clause 3.8.3.11.



Product Diagram

Metering Faucets

3600-E2805AB

L-1

Product Type

Deck-mounted metering faucet with 4" centers

Features & Specifications

- 4" fixed centers
- Vandal Proof Pressure compensating Econo-Flo™ non-aerating laminar spray 0.5 GPM
- Actuator assembly for 3600 Series
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.





Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ASME A112.18.1/CSA B125.1
-  ADA ANSI/ICC A117.1
- Complies with CALGreen requirements
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown Submitted with Variations

Date _____

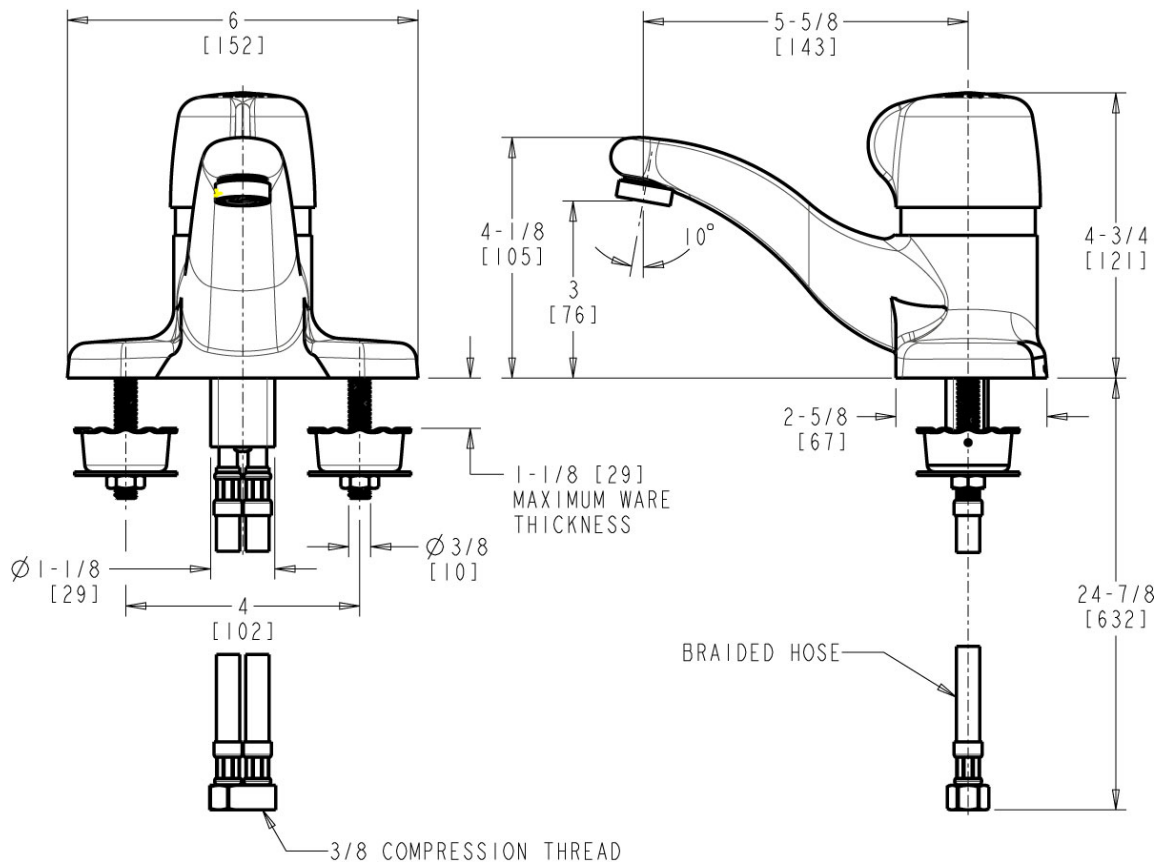


ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

Architect/Engineer Specification

Chicago Faucets No. 3600-E2805AB, Sink Faucet for hot and cold water, metering, deck-mounted with 4" fixed centers, chrome plated. Integral cast brass spout, 5-5/8" center-to-center. 0.5 GPM (1.9 L/min) vandal-proof, pressure compensating, Econo-Flo, non-aerating spray. MVP self-closing, auto-timed metering cartridge, adjustable run time from 2 to 25 seconds, opens with push, 0.20 max gallon/cycle. Flexible supply hoses included. ECAST® construction with less than 0.25% lead content by weighted average.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



Features

- Oval basin with unglazed underside
- Overflow drain
- No faucet holes; requires wall- or counter-mount faucet

Material

- Vitreous china

Installation

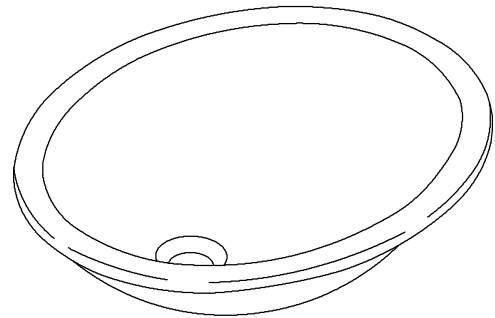
- Undermount

Recommended Products/Accessories

- K-8998 P-Trap
- K-23726 Drain treatment
- K-23725 Cast iron cleaner

Included Components

- Additional Components:
1193643



ADA

CSA B651

Codes/Standards




ASME A112.19.2/CSA B45.1
ADA
ICC/ANSI A117.1
CSA B651

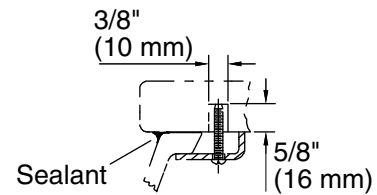
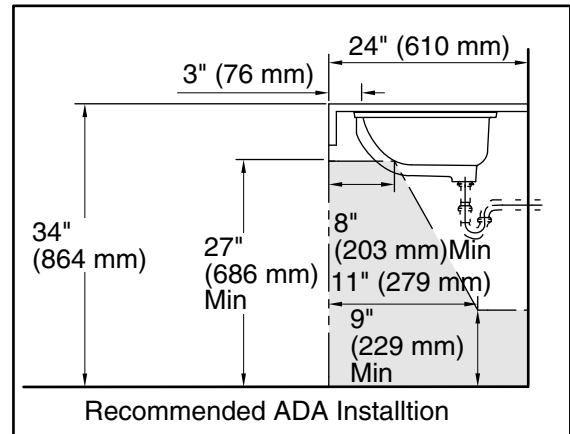
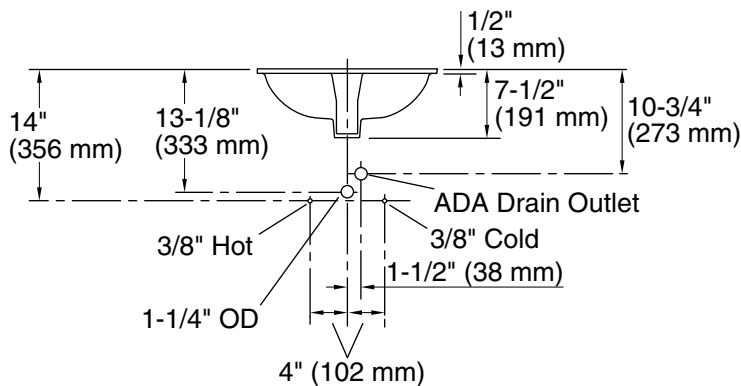
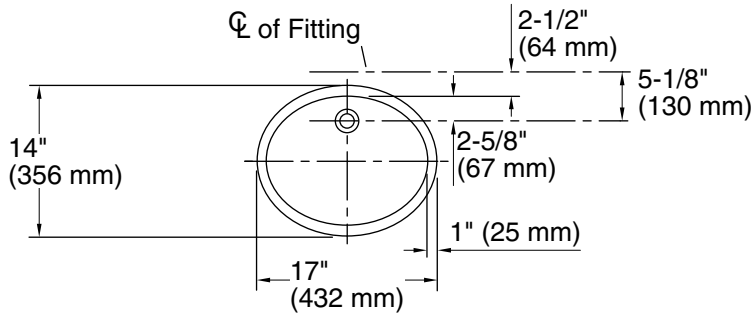
KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

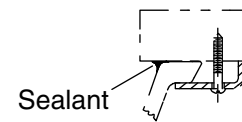
Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	0	White
	96	Biscuit
	7	Black Black™



Marble Installation



Wood Installation

Technical Information

All product dimensions are nominal.

Installation:	Undermount
Bowl area:	Length: 15-1/4" (387 mm) Width: 12-1/4" (311 mm) Bowl depth: 5-3/4" (146 mm) Water depth: 4" (102 mm)
Drain hole:	1-3/4" (44 mm)
Template:	85838-7, required, not included

Notes

Install this product according to the installation instructions.

NOTICE: Countertop manufacturer or cutter must use the current product template available at www.kohler.com, or by calling 1-800-4KOHLER. Kohler Co. is not responsible for cutout errors when the incorrect cutout template is used.

ADA, CSA B651 compliant when installed to the specific requirements of these regulations.

Metering Faucets

3600-E2805AB

L-1

Product Type

Deck-mounted metering faucet with 4" centers

Features & Specifications

- 4" fixed centers
- Vandal Proof Pressure compensating Econo-Flo™ non-aerating laminar spray 0.5 GPM
- Actuator assembly for 3600 Series
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.





Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ASME A112.18.1/CSA B125.1
-  ADA ANSI/ICC A117.1
- Complies with CALGreen requirements
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown Submitted with Variations

Date _____

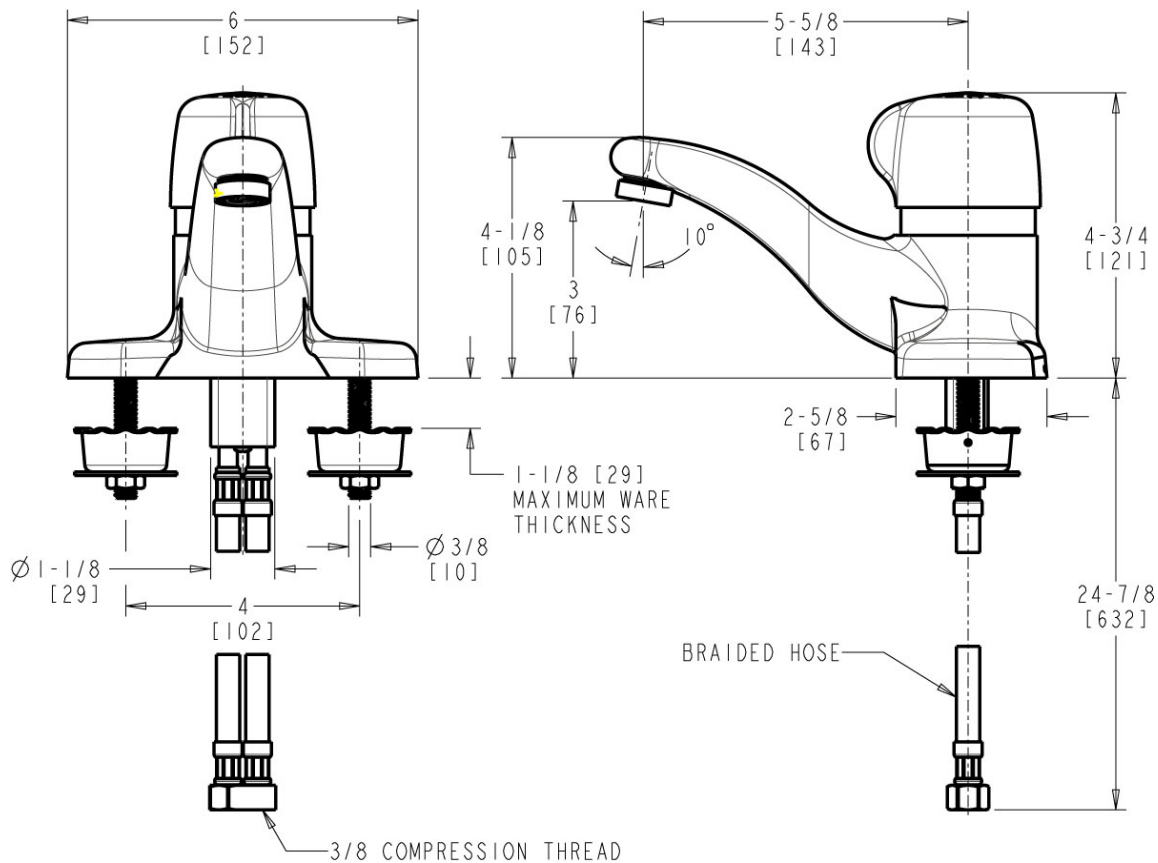


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Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

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Features

- 28"L x 28"W
- Rim guard is not included

Material

- KOHLER® enameled cast iron

Recommended Products/Accessories

- K-9142 Service Sink Strainer
- K-9146 Service Sink Strainer
- K-9147 Service Sink Strainer
- K-23726 Drain treatment
- K-23725 Cast iron cleaner

Optional Products/Accessories

- K-8940 Sink Rim Guard
- K-11352 Disposal Flange with Stopper



Codes/Standards

ASME A112.19.1/CSA B45.2


KOHLER® Enameled Cast Iron Kitchen and Bathroom Sink Lifetime Limited Warranty

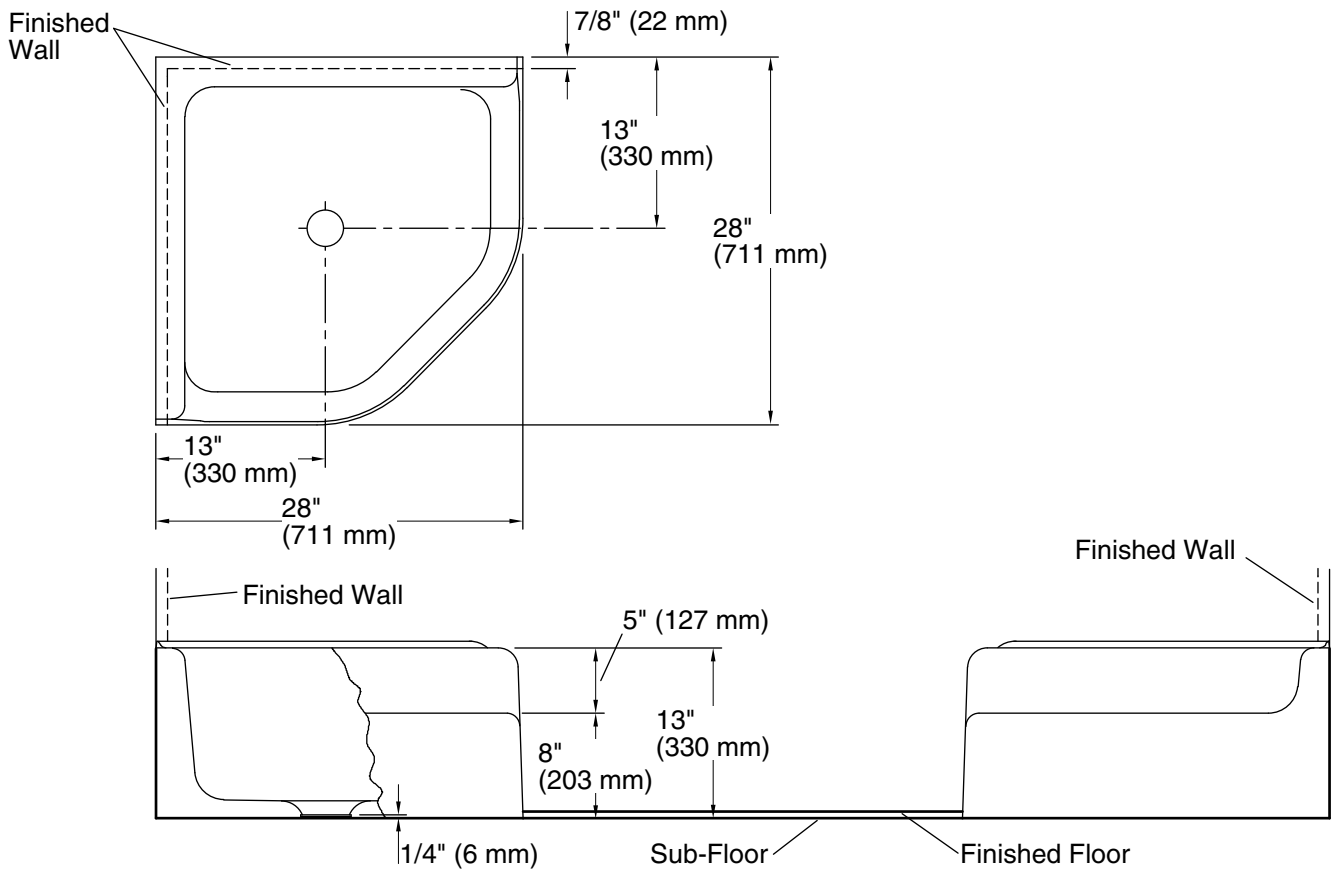
See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
-------	------	-------------

	0	White
---	---	-------



Technical Information

All product dimensions are nominal.

- Bowl configuration: Single
- Installation: Corner
- Bowl area (Only): Length: 23" (584 mm)
Width: 23" (584 mm)
Water depth: 6-3/4" (171 mm)
- Drain hole: 2-7/8" (73 mm)

Notes

Install this product according to the installation instructions.

Manual Sink Faucets

897-RCF

MS-1

**CHICAGO
FAUCETS**
Geberit Group

Product Type

Wall-mounted manual faucet with 8" centers

Features & Specifications

- Handles include color-coded index
- Integral supply stops
- 8" body, adjustable arms 7-5/8" - 8-3/8" centers
- Vandal Proof 2-3/8" lever handle
- Ceramic 1/4-turn operating cartridge, right-hand
- Ceramic 1/4-turn operating cartridge, left-hand
- Arm, 3/16 Offset
- Vacuum breaker assembly
- Complies with the requirements of the Buy American Act of 1933.



Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F (Note: 180°F max. during temporary high-temperature system flush)

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ASME A112.18.1/CSA B125.1
-  ADA ANSI/ICC A117.1

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown Submitted with Variations

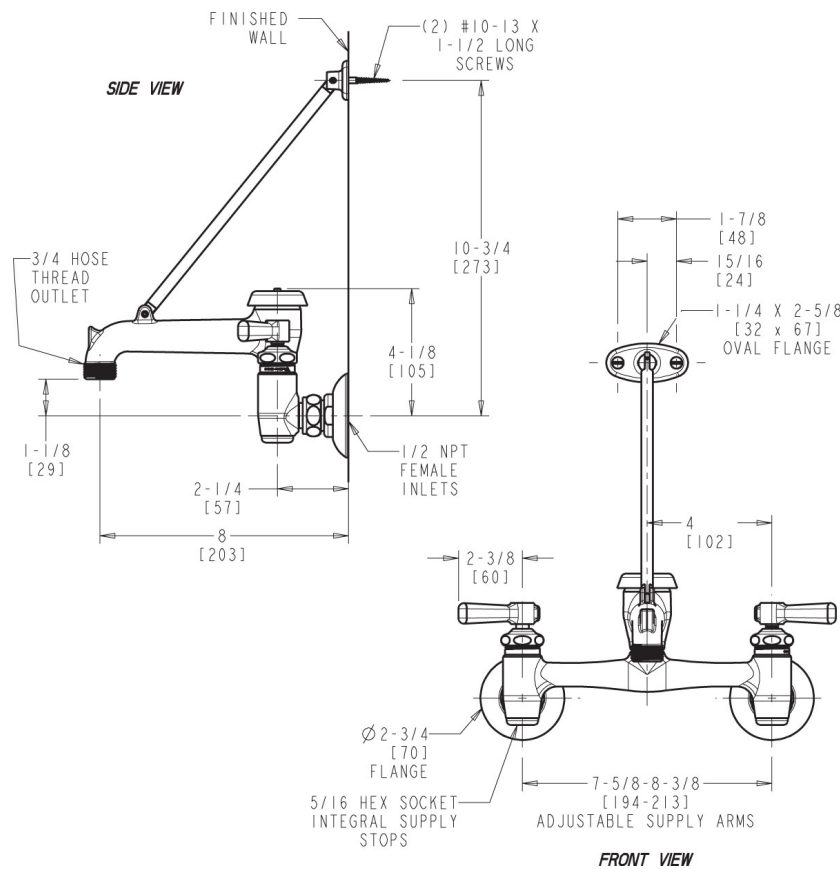
Date _____



2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

Architect/Engineer Specification

Chicago Faucets No. 897-RCF, Sink Faucet for hot and cold water, wall-mounted with 7-5/8" - 8-3/8" adjustable centers. Rough chrome plated. Vacuum breaker spout with pail hook and wall brace. 2-3/8" metal, vandal-proof, lever handles with sixteen-point, tapered broach and secured blue and red index buttons. Quatum™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. Adjustable supply arms include 1/2" NPT female union nut. 3/4" male hose thread outlet. Round wall escutcheons. Integral stop valves for servicing the faucet. NOTE: Atmospheric vacuum breaker is NOT intended for continuous pressure applications. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

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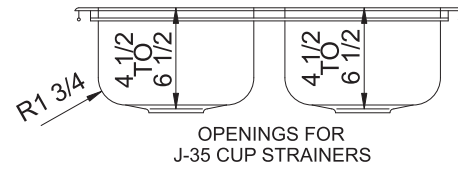
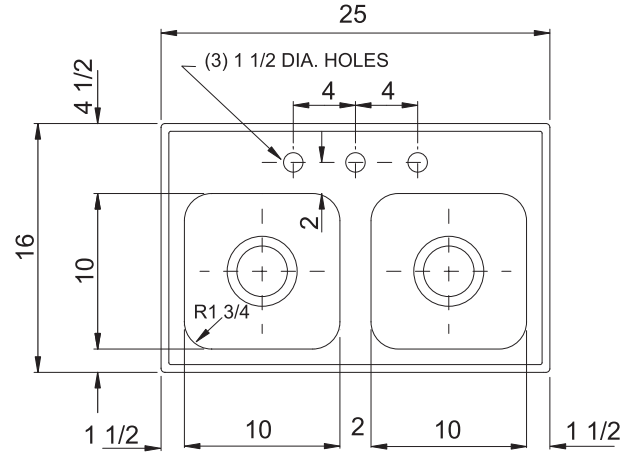
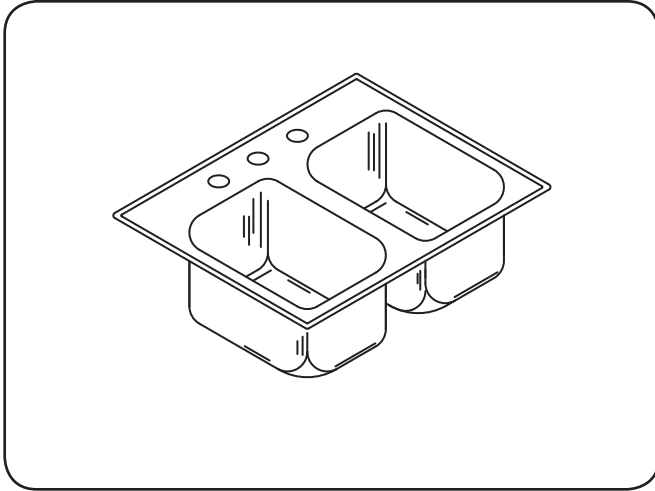
KS-1



DL-ADA-1625-A-GR

STYLIST GROUP
LEDGE TYPE - DOUBLE BOWL
18 GAUGE

SUBMITTAL DATA



SPECIFICATION

Seamless die-drawn construction of Type 304, 18-8 stainless steel. Interior and top surfaces polished to a non-porous Hand-Blended Just Finish with highlighted bowl rim. Fully coated underside insulated for sound and reduces condensation. Straight-sided compartment with radius corners provides greater capacity. Self-rimming top mount Grip-Rim Plus with stainless steel mounting channels. Conforms to ASME/ANSI A112.19.3M. Certified conformance with ASME A112.19.3/CSA B45.4, Canadian Standards (CSA), Uniform Plumbing Code (UPC) and International Plumbing Code (IPC) and Americans with Disabilities Act(ADA). Drain punch 3-1/2" centered for Just J-35 drain.

5.30 **Capacity Matters**
 Gallon Capacity* Max ID sizing with straight sided bowl configuration (non tapered sides). Tight corner radius design.
**Capacity is based on 6-1/2" Depths*

CUTOUT DIMENSIONS		
Model Number	Front-to-Back	Left-to-Right
DL-ADA-1625-A-GR	15-1/4	24-1/4

FAUCET PUNCHING - MUST BE SPECIFIED					
<input type="checkbox"/>	(1) Hole Centered				
<input type="checkbox"/>	(2) Holes on 4" centers				
<input type="checkbox"/>	(3) Holes on 4" centers(illustrated)				
<input type="checkbox"/>	Alternate Punching: Faucet Model:		Punching Required:		
DEPTH - MUST BE SPECIFIED:					
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4 1/2" DEEP	5" DEEP	5-1/2" DEEP	6" DEEP	6-1/2" DEEP	
DRAIN LOCATION:					
<input type="checkbox"/>					
CENTER ONLY					

APPROVED FOR MANUFACTURING

MODEL NO.: DL-ADA-1625-A-GR QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____



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 PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com

Manual Sink Faucets

1100-E35ABCP

KS-1

**CHICAGO
FAUCETS**
Geberit Group

Product Type

Deck-mounted manual faucet with 8" centers

Features & Specifications

- 8" fixed centers
- 8" L-type swing spout
- Pressure compensating Softflo aerator 1.5 GPM
- Vandal Proof 2" canopy single-wing handle
- Quatern™ compression operating cartridge, right-hand
- Quatern™ compression operating cartridge, left-hand
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.






Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ADA ANSI/ICC A117.1
-  ASME A112.18.1/CSA B125.1
- Complies with CALGreen requirements
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9
-  Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown Submitted with Variations

Date _____



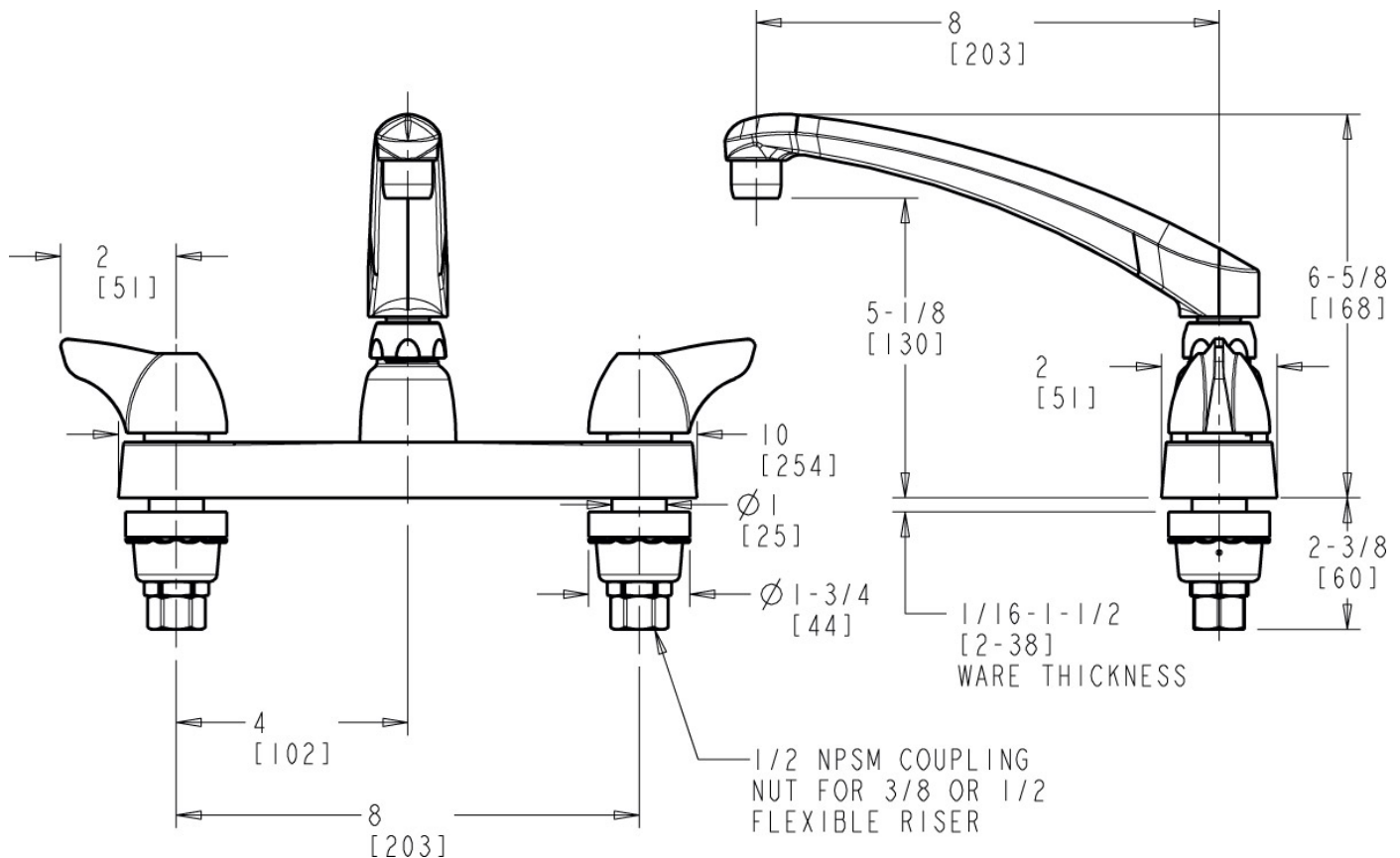
ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

Architect/Engineer Specification

Chicago Faucets No. 1100-E35ABCP, Sink Faucet for hot and cold water, deck-mounted with 8" fixed centers, chrome plated. L-Type swing spout, 8" center-to-center. 1.5 GPM (5.7 L/min) pressure compensating Soffflo aerator. 2" metal, vandal-proof, canopy, single-wing handles with secured blue and red index buttons. Quatum™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. 1/2" NPSM supply inlets and coupling nut for 3/8" or 1/2" flexible riser. ECAST® construction with less than 0.25% lead content by weighted average. CALGreen compliant. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, NSF/ANSI 372 Low Lead Content, and California Green Building Standards Code (CALGreen).



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

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LS-1



SL-ADA-2131-16-GR

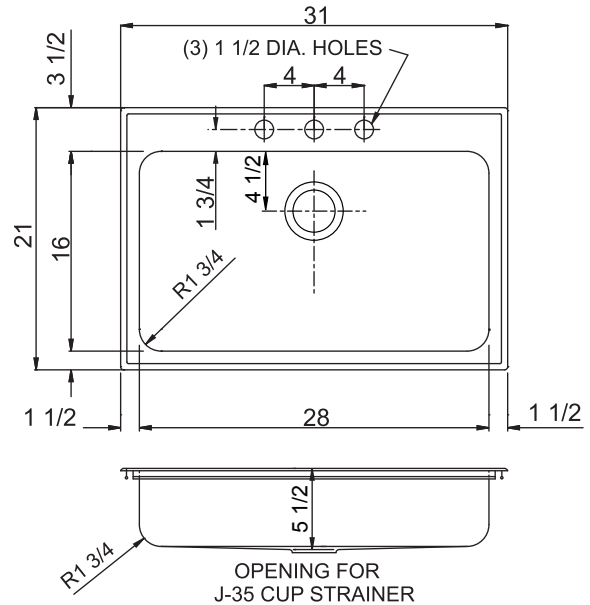
ARMOR GROUP
LEDGE TYPE - SINGLE BOWL
16 GAUGE

SUBMITTAL DATA



10.36 Gallon Capacity*
*CAPACITY MATTERS
Max. I.D. sizing with straight-sided, non -tapered bowl configuration. Tight corner radius design.
Capacity based on 5-1/2" depth.

Seamless die-drawn construction of 16 gauge type 304 stainless steel. Interior and top surfaces polished to a non-porous Hand Blended Just Finish. Smooth, fully coated underside insulate for sound and reduces condensation. Straight sided compartment with 1-3/4" radius corners provides greater capacity. Self-rimming top mount with Grip-Rim Plus with stainless steel mounting channels. Drain punched for Just J-35-SSF drain. Certified to ASME/CSA B45.4; UPC; IPC.



CUTOUT DIMENSIONS		
Model Number	Front-to-Back	Left-to-Right
SL-ADA-2131-16-GR	20-1/4	30-1/4

TYPE 316 STAINLESS STEEL (Check if applicable)



Sink certified to ASME A112.19.3/CSA B45.4; Uniform Plumbing Code (UPC); International Plumbing Code (IPC), by NSF International. Certified with/without overflow, less fittings.

Sink certified compliant with 2010 ADA Standards for Accessible Design and ICC/ANSI A117.1 by NSF International.

APPROVED FOR MANUFACTURING

MODEL NO.: **SL-ADA-2131-16-GR** QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____



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PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com

Manual Sink Faucets

895-317E35ABCP

LS-1

Product Type

Deck-mounted manual faucet with 4" centers

Features & Specifications

- Handles include color-coded index
- 4" fixed centers
- 3-1/2" rigid/swing gooseneck spout
- Pressure compensating Softflo aerator 1.5 GPM
- Vandal Proof 4" wristblade handle
- Quatern™ compression operating cartridge, right-hand
- Quatern™ compression operating cartridge, left-hand
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.






Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ADA ANSI/ICC A117.1
-  ASME A112.18.1/CSA B125.1
- Complies with CALGreen requirements
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9
-  Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown Submitted with Variations

Date _____

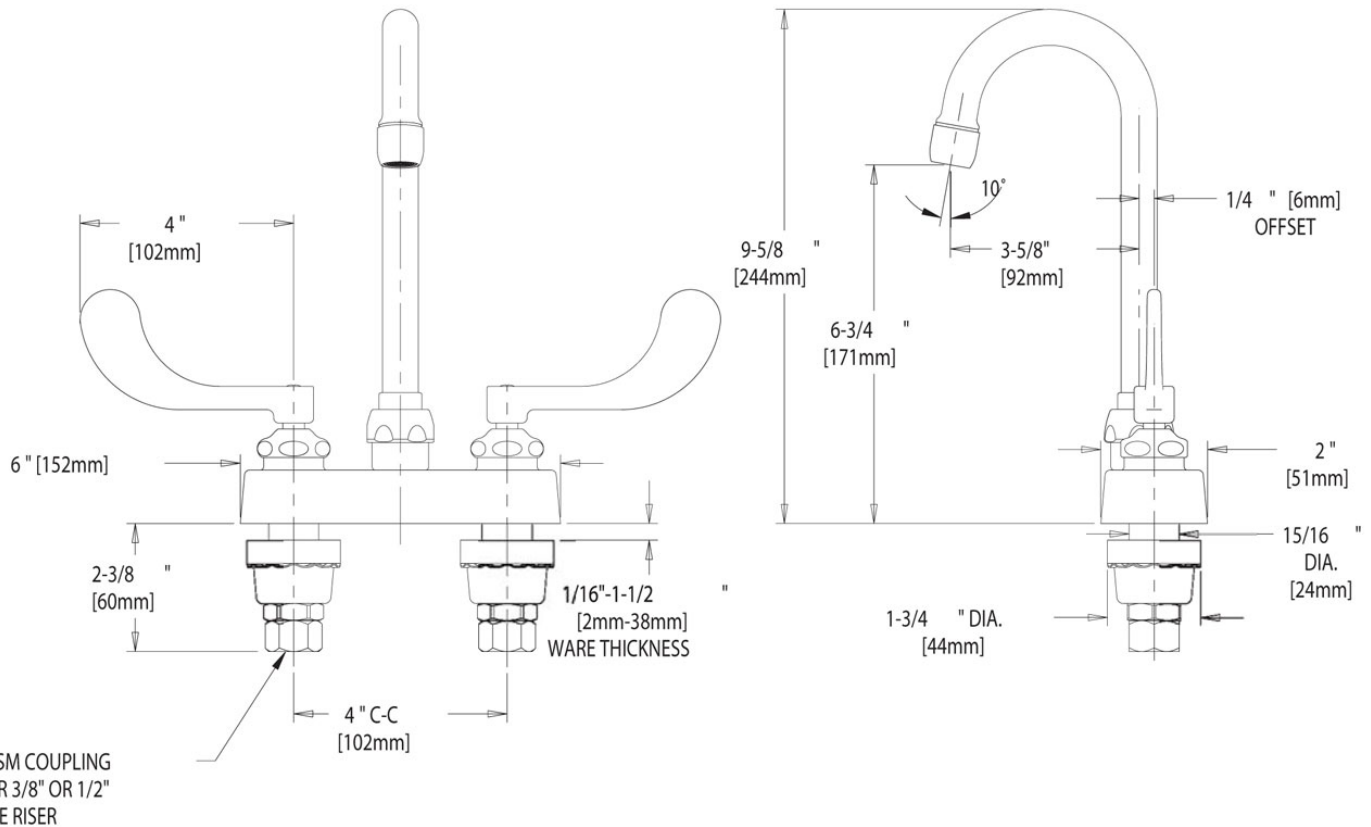


ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

Architect/Engineer Specification

Chicago Faucets No. 895-317E35ABCP, Sink Faucet for hot and cold water, deck-mounted with 4" fixed centers, chrome plated. Rigid/swing gooseneck spout, 3-1/2" center-to-center. 1.5 GPM (5.7 L/min) pressure compensating Soffflo aerator. 4" metal, vandal-proof, wristblade handles with sixteen-point, tapered broach and secured blue and red index buttons. Quatern™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. 1/2" NPSM supply inlets and coupling nut for 3/8" or 1/2" flexible riser. ECAST® construction with less than 0.25% lead content by weighted average. CALGreen compliant. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, NSF/ANSI 372 Low Lead Content, and California Green Building Standards Code (CALGreen).



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

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F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

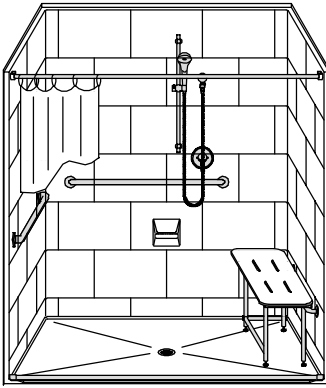
MODEL: LB3S26337A75B*

SH-1

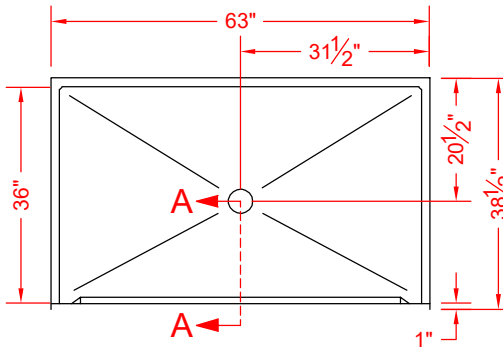
*ALL ACCESSORIES OPTIONAL



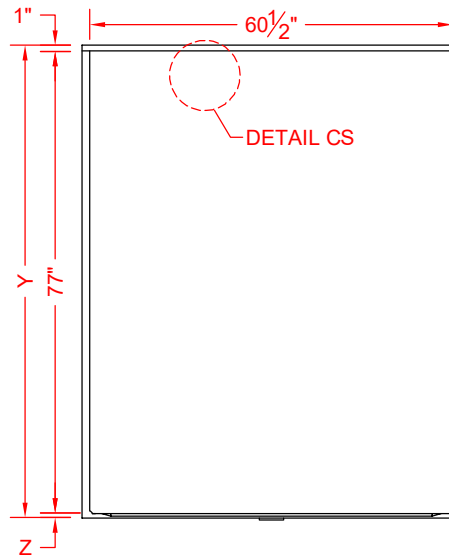
SEE OVER



PERSPECTIVE VIEW - N.T.S.
MODEL SHOWN HERE AS:
RIGHT PLUMBING
RIGHT SEAT



TOP VIEW - SCALE $\frac{3}{8}'' = 1'-0''$



FRONT ELEVATION - SCALE $\frac{3}{8}'' = 1'-0''$

Features:

- ADA compliant single-piece roll-in shower
- Molded one-piece gelcoat/fiberglass shower module
- "Subway Tile", 12" x 18" simulated tile wall finish, white (standard)
- Integral full wood backing for strength and unlimited accessory placement
- Available in various threshold heights
- On all threshold heights 1-1/4" or shorter, no mud set is required, but an adhesive kit is supplied
- On all threshold heights 1-1/2" or taller, no mud set is required

*OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST

MODEL #	UNIT HEIGHT	THRESHOLD HEIGHT
	Y	Z*
LB3S26337A75B	78-3/4"	3/4" MIN.
LB3S26337A2B	80"	2" MAX.

* - SEE BACK FOR DETAIL SECTIONS

PRODUCT SPECIFICATIONS:

- Single-piece module shall be constructed of gelcoat/fiberglass with full integral plywood backing in the walls.
- Rough-In: Stud opening +1/4" – 0" Nominal Dimensions

C.S.I. FORMAT SPECIFICATION TEXT AVAILABLE

PRODUCT INFORMATION:

- Accessories: Factory installed, unless prone to damage during installation/shipping. Polished chrome/satin stainless standard, others available. (not applicable to pans/bases)
- Colors: White as standard, others to match any major fixture manufacturer, also available with sprayable solid surface in many colors
- Custom threshold heights available

OPTIONAL ACCESSORIES:

INSTALLED AT FACTORY:

- Seat, folding
- Grab bar
- Soap dish
- Mixing valve, pressure-balancing, lever handle, pre-plumbed tee to supply elbow
- Curtain rod brackets

INSTALLED BY OTHERS:

- Curtain and Rod
- No-caulk brass drain
- T-shaped WaterStopper kit
- Semi-permanent threshold adapter

CODES:

Designed and manufactured in compliance with the following standards and codes:

- ANSI Z124.2 Standards for Plastic Shower
- ADA Accessibility Guidelines for Buildings and Facilities
- ANSI A117.1 A - Accessible and Usable Buildings and Facilities
- ANSI A117.1 B - Accessible and Usable Buildings and Facilities
- IPC International Plumbing Code
- UPC Uniform Plumbing Code

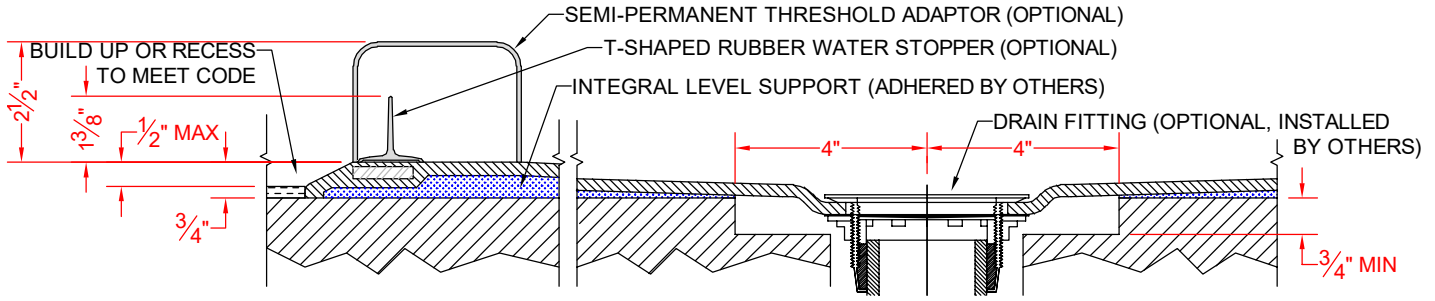
NOTICE OF LIMITATION:

- Recess as needed to meet code
- Adhere to floor as required



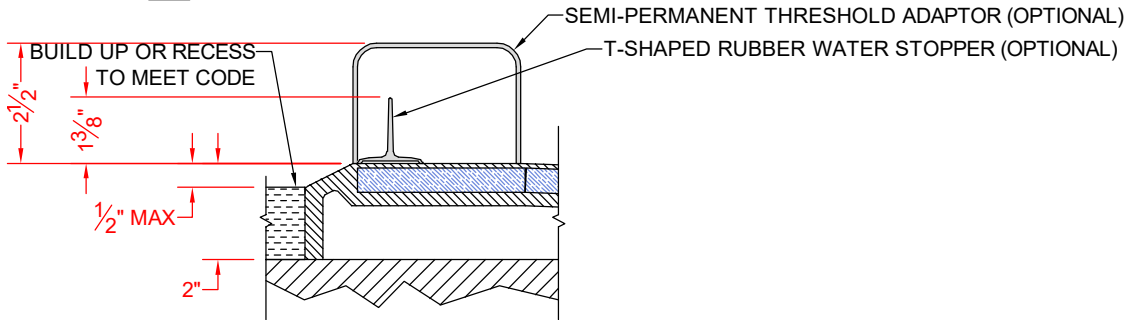
We reserve the right to make revisions without notice in the design of fixtures or in packaging unless this right has specifically been waived at the time the order is accepted.

□ LB3S26337A75B



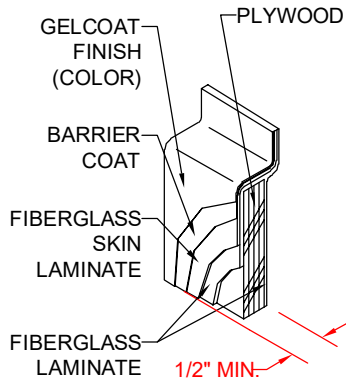
SECTION A-A - SCALE: 3" = 1'-0"

□ LB3S26337A2B

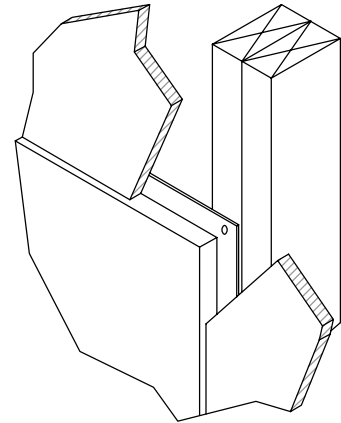


SECTION A-A - SCALE: 3" = 1'-0"

****OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST****



DETAIL CS - SCALE: N.T.S.
 CROSS SECTION DETAIL



DETAIL DD - SCALE: N.T.S.
 DRYWALL DETAIL

DESCRIPTION

- Metal construction with Chrome plated finish
- Pressure balancing cycle valve design with 1/4 turn stops
- 1/2" CC connections
- Contains stationary showerhead, hand-held shower with non-positive pause, 69" metal hose, 30" slide bar, drop ell, mounting hardware, Posi-Temp® valve trim, and Three-Function valve trim

Slide bar is NOT DESIGNED TO BE A GRAB BAR

- Vandal resistant lever handles, shower head, and showerarm flange
- Easy cleaning rubber nozzles
- Red and blue durable plastic temperature indicators

OPERATION

- Temperature and transfer valves both have ADA compliant lever style handles
- Temperature handle operates counterclockwise through a 270° arc with off at 6 o'clock, and the maximum hot at the 9 o'clock position
- Adjustable temperature limit stop
- Pressure balancing mechanism maintains selected discharge temperature to $\pm 2^\circ$
- Handshower contains integrated backflow prevention

FLOW

- **T9342** Showerhead/Handshower: (2.5 gpm/9.5 L/min) maximum at 80 psi - Chrome finish
- **T9342EP15** Showerhead/Handshower: (1.5 gpm/5.7 L/min) maximum at 80 psi - Chrome finish, **WaterSense® certified**

CARTRIDGE

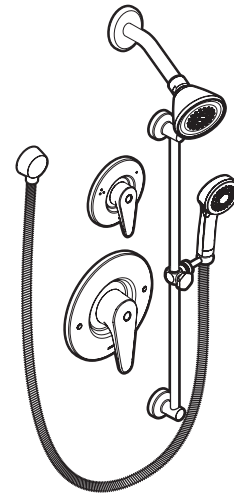
- Pair with a brass Posi-Temp® rough-in valve:
- 8370HD*: 1/2" CC connection without integral stops
- 8371HD*: 1/2" CC connection with integral stops
- 8372HD*: 1/2" IPS connection with integral stops
- 8373HD*: 1/2" PEX connection with integral stops
- 8374HD*: 1/2" CPVC connection with integral stops
- 8375HD*: 1/2" UPONOR connection with integral stops
- * Includes the 1222HD Brass Posi-Temp® Cartridge
- Nonmetallic/nonferrous and stainless steel materials
- Also requires the 3360 3-function transfer rough-in valve; valve operates 3 distinct functions but can be plumbed for 2 distinct functions
- Accommodates back to back installations

STANDARDS

- Third party certified to: WaterSense® (only applies to 1.5 gpm), ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- ADA ♿ for lever handles

WARRANTY

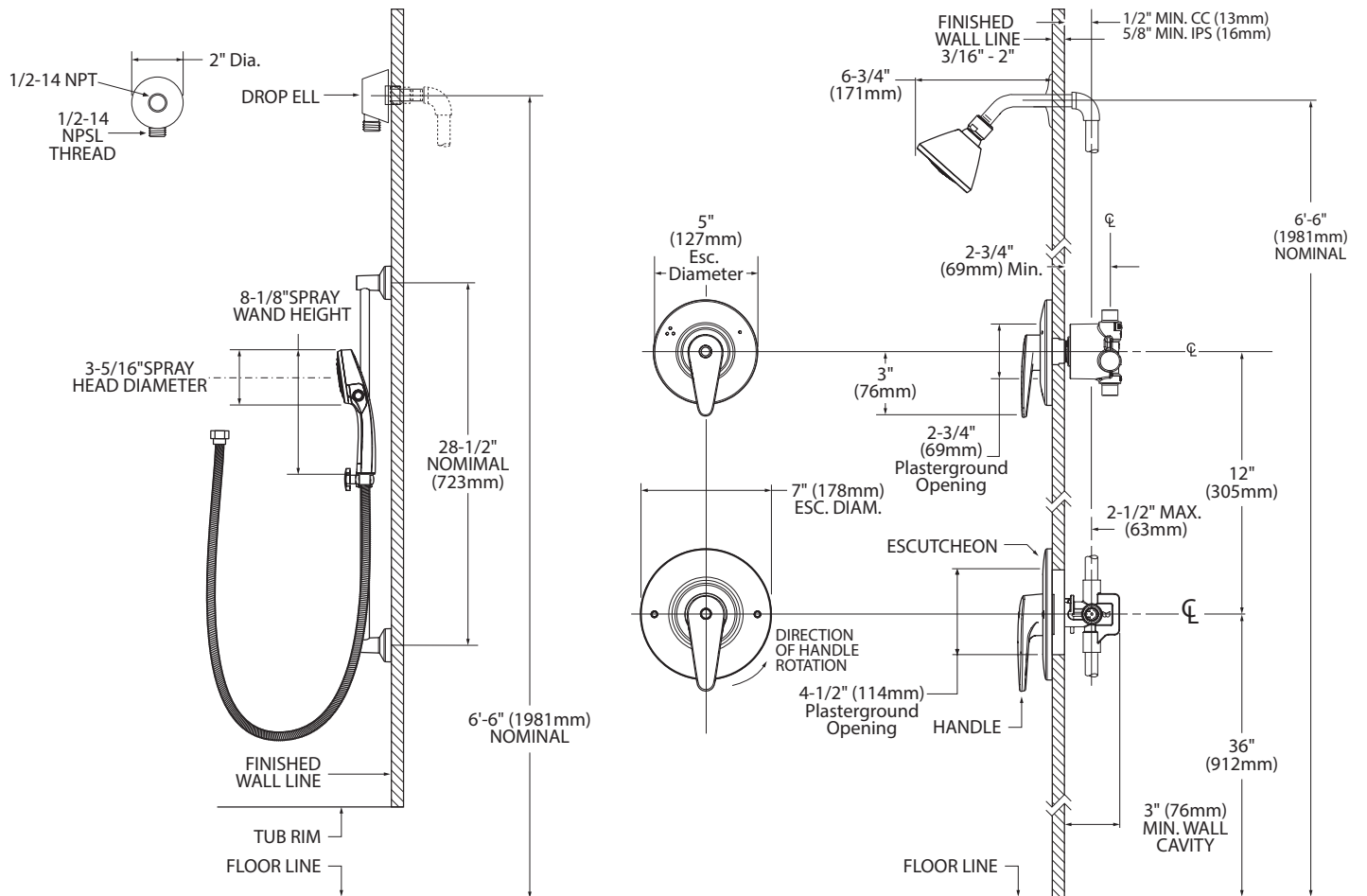
- Warranted for 5 years against material or manufacturing defects



M-Dura™ Commercial Three-Function Shower System

Models: T9342 series

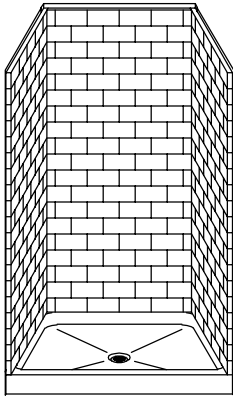




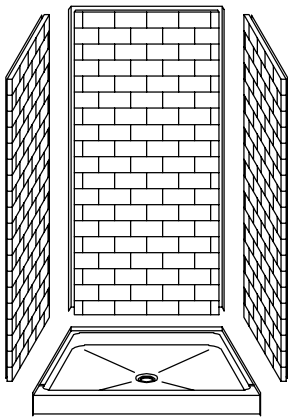
CRITICAL DIMENSIONS

(DO NOT SCALE)

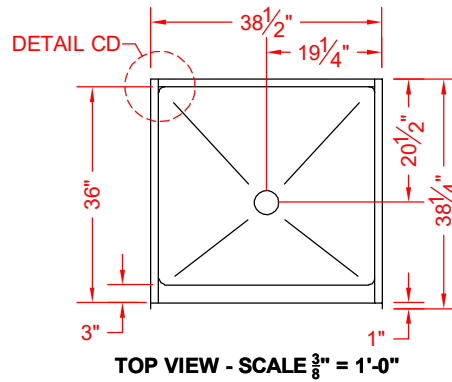
*ALL ACCESSORIES OPTIONAL



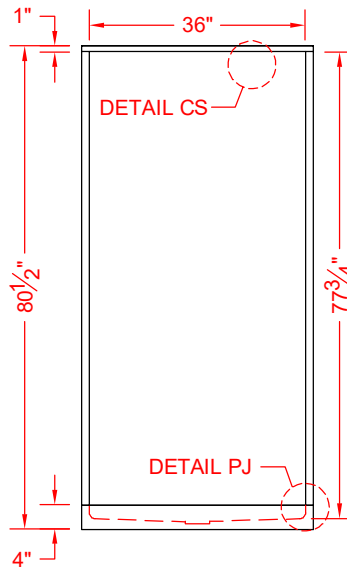
PERSPECTIVE VIEW - N.T.S.
MODEL SHOWN HERE AS:
 LEFT PLUMBING
 RIGHT SEAT



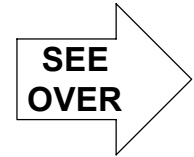
ASSEMBLY VIEW - N.T.S.



TOP VIEW - SCALE $\frac{3}{8}$ " = 1'-0"



FRONT ELEVATION - SCALE: $\frac{3}{8}$ " = 1'-0"



Features:

- Molded, four-piece gelcoat/fiberglass shower module
- "Subway Tile" wall finish, white (standard)
- Integral full wood backing for strength and unlimited accessory placement
- Flat back wall to avoid interference for window trim kits, grab bars, etc.

* - SEE BACK FOR DETAIL SECTIONS

PRODUCT SPECIFICATIONS:

- Multi-piece shower module shall be constructed of gelcoat/fiberglass with full integral plywood backing in the walls
- Door opening: 36" x 75-1/4"
- Rough-In: Stud opening +1/4" -0" Nominal Dimensions.
- C.S.I. FORMAT SPECIFICATION TEXT AVAILABLE

PRODUCT INFORMATION:

- Accessories: Polished chrome/satin stainless standard, others available.
- Colors: White as standard, others to match any major fixture manufacturer, also available with sprayable solid surface in many colors

OPTIONAL ACCESSORIES:

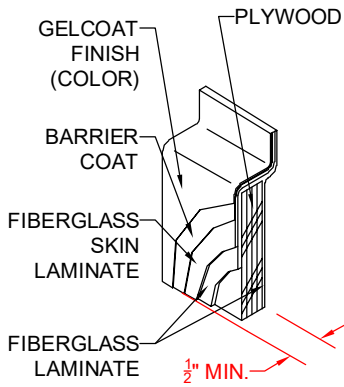
- INSTALLED BY OTHERS:
- Seat, folding
 - Grab bar
 - Soap dish
 - Mixing valve, pressure-balancing, lever handle, pre-plumbed tree to supply elbow
 - Curtain rod brackets
 - Curtain and rod
 - Flange-Window trim kits
 - No-caulk brass drain

CODES:

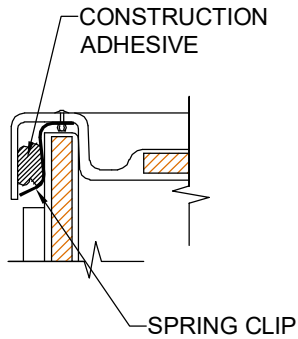
- Designed and manufactured in compliance with the following standards and codes:
- ANSI Z124.2 Standards for Plastic Showers
 - IPC International Plumbing Code
 - UPC Uniform Plumbing Code

NOTICE OF LIMITATION:

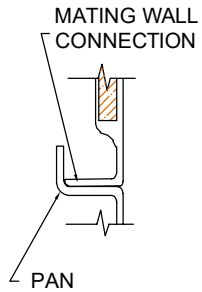
- Adhere to floor as required



**DETAIL CS - SCALE: N.T.S.
CROSS SECTION DETAIL**



**DETAIL CD - SCALE: 3" = 1'-0"
CORNER DETAIL**



**DETAIL PJ - SCALE: 3" = 1'-0"
PAN JOINT DETAIL**



DESCRIPTION

- Metal construction with Chrome plated finish
- Shower arm has 1/2" IPS male threads
- Vandal resistant lever handle, showerhead, shower arm flange
- Easy cleaning rubber nozzles
- Red and blue durable plastic temperature indicators

OPERATION

- Temperature valve has ADA compliant lever style handle
- Temperature handle operates counterclockwise through a 270° arc with off at 6 o'clock, and the maximum hot at the 9 o'clock position
- Adjustable temperature limit stop
- Pressure balancing mechanism maintains selected discharge temperature to ± 2°

FLOW

- T9375 (2.5 gpm/9.5 L/min) maximum at 80 psi - Chrome finish
- T9375EP15 (1.5 gpm/5.7 L/min) maximum at 80 psi - Chrome finish, **WaterSense®** certified

CARTRIDGE

- Pair with a brass Posi-Temp® rough-in valve:
- 8370HD*: 1/2" CC connection without integral stops
- 8371HD*: 1/2" CC connection with integral stops
- 8372HD*: 1/2" IPS connection with integral stops
- 8373HD*: 1/2" PEX connection with integral stops
- 8374HD*: 1/2" CPVC connection with integral stops
- 8375HD*: 1/2" UPONOR connection with integral stops
- * Includes the 1222HD Brass Posi-Temp® Cartridge
- Nonmetallic/nonferrous and stainless steel materials
- Accommodates back to back installations

STANDARDS

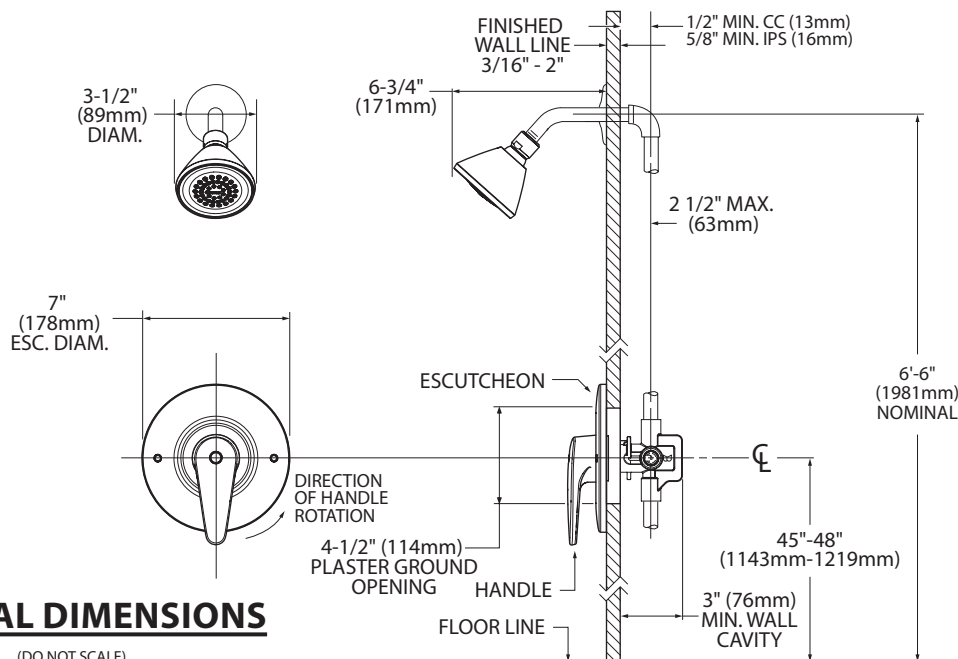
- Third party certified to: WaterSense® (only applies to 1.5 gpm), ASME A112.18.1/CSA B-125.1 and all applicable requirements referenced therein
- ADA ♿ for lever handle

WARRANTY

- Warranted for 5 years against material or manufacturing defects

M•Dura™ Commerical Single-Handle Posi-Temp® Pressure Balancing Shower Trim Only

Models: T9375 series



CRITICAL DIMENSIONS

(DO NOT SCALE)

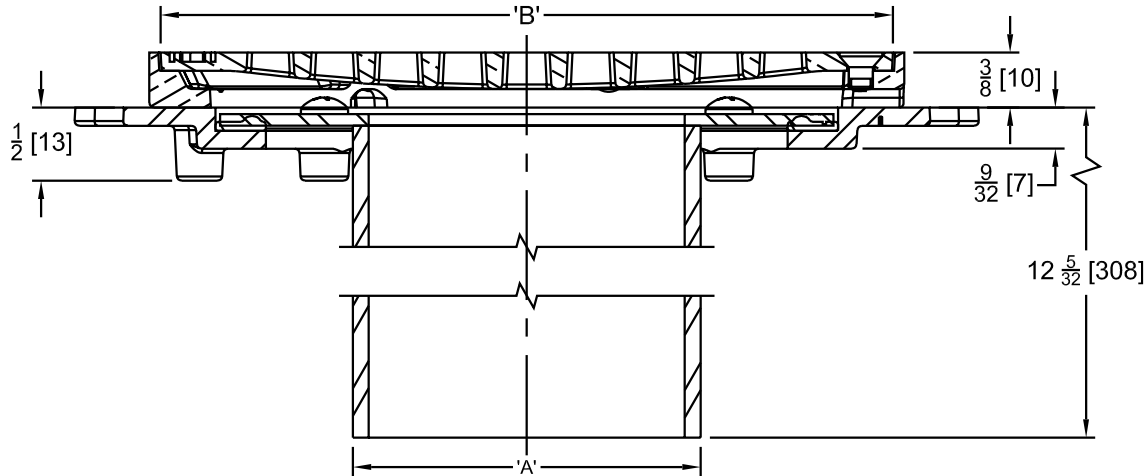


ZPD1
ZURN POD PRO® SHALLOW FLOOR DRAIN
WITH CLAMPING FRAME AND DROP-IN OUTLET

SPECIFICATION SHEET

TAG **FD-1**

Design and Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Strainer Designation (select type)	Dimensions		Strainer Open Area Sq. in [cm ²]	Approx. Wt. lbs [kg]
	'A' (Pipe Size)	'B' (Strainer Size)		
Round				
___ -5B	2-3 [51-76]	5 [127]	6.6 in ² [45.6 cm ²]	5.3 lbs [2.1 kg]
___ -6B	2-3 [51-76]	6 [153]	10.1 in ² [58.7 cm ²]	6.9 lbs [3.1 kg]
Square				
___ -5S	2-3 [51-76]	5 [127]	9.1 in ² [42.6 cm ²]	5.6 lbs [2.5 kg]
___ -6S	2-3 [51-76]	6 [153]	13.5 in ² [87.1 cm ²]	7.2 lbs [3.3 kg]

ENGINEERING SPECIFICATION: ZURN ZPD1

ZPD1 ZURN POD PRO® Shallow Floor and Shower Drain with Clamping Frame and drop-in outlet is engineered to reduce installation time and provide job site flexibility. Zurn's shallowest sanitary Floor Drain comes standard with low-profile, 1/2" [13mm] deep, Type 304, cast stainless steel body with 12" [350mm] long independent, Type 304, stainless steel drop-in bottom outlet, neoprene outlet gasket, combination nickel bronze or stainless steel membrane clamp and frame with integral seepage slots, and polished nickel bronze or stainless steel, heel-proof, round or square light-duty secured strainer with strainer label for protection during tiling or concrete pour. Drain body also includes three securing flanges designed to allow the drain to be quickly and easily mechanically fastened to any flooring surface.

Pipe Size
 2,3 [51,76]

Outlet (specify size)
 ___ NH No-Hub

MATERIAL SPECIFICATION

- ___ ZPD1-NB Stainless Steel Body Assembly with Nickel Bronze Top
- ___ ZPD1-SS Stainless Steel Body Assembly with Stainless Steel Top

SUFFIXES

- ___ -CL Custom Length Outlet - Per Inch (Specify Length Required)
- ___ -E Static Extension Kit (1/16 [2] to 1/2 [13] in 1/16 [2] increments)
- ___ -F Polished Nickel Bronze Strainer with 4" Diameter Funnel
- ___ -VP Vandal-Proof Strainer
- ___ -Y Sediment Bucket

- ⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov
- ⚠ **ADVERTENCIA:** Cáncer y daño reproductivo - www.P65Warnings.ca.gov
- ⚠ **AVERTISSEMENT:** Cancer et effets néfastes sur la reproduction - www.P65Warnings.ca.gov

Zurn Industries, LLC | Specification Drainage Operation
 1801 Pittsburgh Avenue, Erie, PA 16502, Ph. 855.663.9876

In Canada | Zurn Industries Limited
 7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 877.892.5216

www.zurn.com

Rev. B
 Date: 11/25/2022
 C.N. No. 144898
 Patent zurn.com/patents
 Prod. | Dwg. No. ZPD1

Engineering Specification

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____
 Tag **FS-1** _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

FS-740 12" Square x 8" Deep Sanitary Floor Sink

Specification

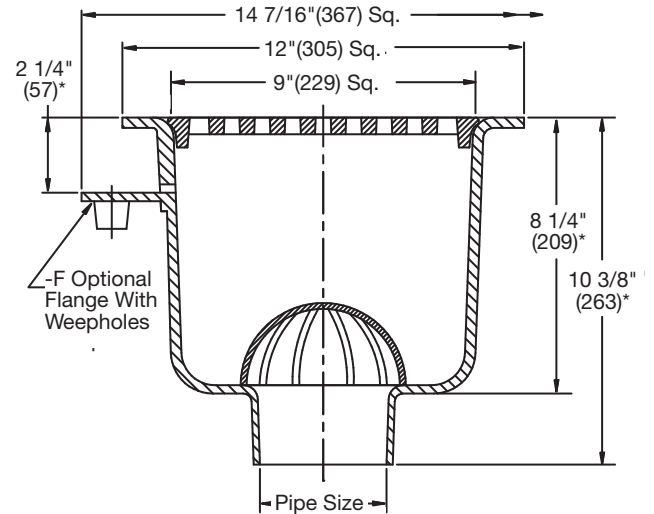
Watts FS-740 12"(305) square x 8"(203) deep sanitary floor sink with white acid resistant porcelain enamel coated interior, loose set porcelain enamel coated cast iron grate, polypropylene dome bottom strainer, and no hub (standard) outlet.



Pipe Sizing		
Suffix	Description	
2	2"(51) Pipe Size	<input type="checkbox"/>
3	3"(76) Pipe Size	<input type="checkbox"/>
4	4"(102) Pipe Size	<input type="checkbox"/>

Outlet Type		
Suffix	Description	
NH	No Hub (MJ)	<input type="checkbox"/>
P	Push-On	<input type="checkbox"/>

Options		
Suffix	Description	
-F	Flange with Weepholes	<input type="checkbox"/>
-FC	Flange w/Weepholes & Flashing Clamp	<input type="checkbox"/>
-1	Nickel Bronze Top	<input type="checkbox"/>
-3	Stainless Steel Rim & Grate	<input type="checkbox"/>
-5	Sediment Bucket	<input type="checkbox"/>
-6	Vandal Proof (-1, -3 Only)	<input type="checkbox"/>
-7	Trap Primer Tapping	<input type="checkbox"/>
-9	Hinged Grate (-1 Only)	<input type="checkbox"/>
-21	Secondary Strainer	<input type="checkbox"/>
-33	Less Grate	<input type="checkbox"/>
-128	Grate w/2 1/2"(64) Center Opening	<input type="checkbox"/>
-150	1/2 Grate	<input type="checkbox"/>
-175	3/4 Grate	<input type="checkbox"/>
-F4-1	4" Round Nickel Bronze Funnel	<input type="checkbox"/>
-F6-1	6" Round Nickel Bronze Funnel	<input type="checkbox"/>
-G-1	4x9" Oval Nickel Bronze Funnel	<input type="checkbox"/>



*Add 5/8"(16) for -1 Nickel Bronze Top or -3 Stainless Steel Top

Please refer to watts.com for BAA information on specific models.

Free Area Sq. In.	
Standard Grate	With -1/-3 Rim & Grate
31	47

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



USA: T: (800) 338-2581 • F: (828) 248-3929 • Watts.com
Canada: T: (888) 208-8927 • F: (905) 481-2316 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Tag **SHD-1** _____

FD-1100-A Floor Drain with Round Stainless Steel Strainer

Specification

Watts FD-1100-A epoxy coated cast iron floor drain with anchor flange, reversible clamping collar with primary & secondary weepholes, adjustable round heel proof stainless steel strainer, and no hub (standard) outlet.

Pipe Sizing		
Suffix	Description	
2	2"(51) Pipe Size	<input type="checkbox"/>
3	3"(76) Pipe Size	<input type="checkbox"/>
4	4"(102) Pipe Size	<input type="checkbox"/>
6	6"(152) Pipe Size (NH Only)	<input type="checkbox"/>

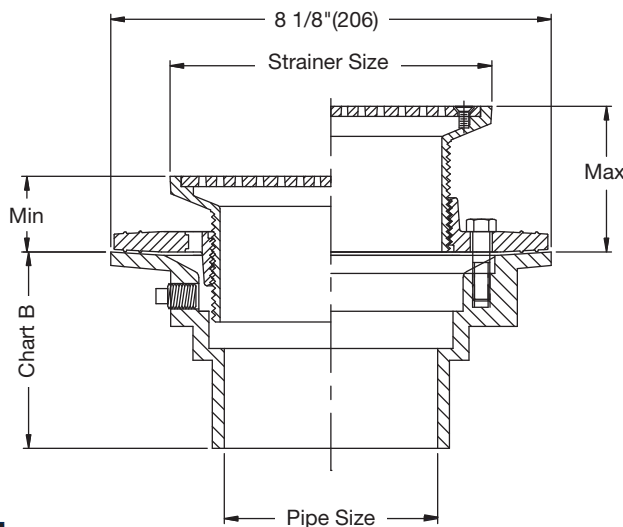
Optional Body Material (NH Only)		
Suffix	Description	
-60	PVC Body w/Socket Outlet	<input type="checkbox"/>
-61	ABS Body w/Socket Outlet	<input type="checkbox"/>

Outlet Type		
Suffix	Description	
NH	No Hub (M.J.)	<input type="checkbox"/>
P	Push On	<input type="checkbox"/>
T	Threaded Outlet	<input type="checkbox"/>
X	Inside Caulk	<input type="checkbox"/>

Options		
Suffix	Description	
-5	Sediment Bucket	<input type="checkbox"/>
-6	Vandal Proof	<input type="checkbox"/>
-7	Trap Primer Tapping	<input type="checkbox"/>
-8	Backwater Valve (2, 3, 4" Only)	<input type="checkbox"/>
-13	Galvanized Body	<input type="checkbox"/>
-15	Strainer Extension (DD-50)	<input type="checkbox"/>
-28	304 SS Body & Collar	<input type="checkbox"/>
-F4-50	4" Round Cast Iron Funnel	<input type="checkbox"/>
-F4-1	4" Round Nickel Bronze Funnel	<input type="checkbox"/>
-F4-3	4" Round SS Funnel	<input type="checkbox"/>
-F6-1	6" Round Nickel Bronze Funnel	<input type="checkbox"/>
-G-50	4x9" Oval Cast Iron Funnel	<input type="checkbox"/>
-G-1	4x9" Oval Nickel Bronze Funnel	<input type="checkbox"/>
-G-3	4x9" Oval SS Funnel	<input type="checkbox"/>
-S0	Side Outlet	<input type="checkbox"/>

Strainer Size		
Suffix	Description	
A5	5"(127) Dia. Stainless Steel	<input type="checkbox"/>
A6	6"(152) Dia. Stainless Steel	<input type="checkbox"/>
A8	8"(203) Dia. Stainless Steel	<input type="checkbox"/>

Load Rating
HD



Strainer Size

Size	Min.	Max.	Load Rating	Free Area Sq. In.
5"(127)	13/16"(21)	3 1/4"(83)	*HD	8
6"(152)	7/8"(22)	3 3/8"(86)	*HD	9
8"(203)	7/8"(22)	3 1/4"(83)	*HD	18

Chart B

Pipe Size	Std.	P	T	X	60/61
	No Hub	Push On	Female Thread	Inside Caulk	PVC/ABS
2"(51)	3-5/8"(92)	4-1/4"(108)	4-1/4"(108)	4-1/2"(114)	4"(102)
3"(76)	3-5/8"(92)	4-1/4"(108)	4-1/4"(108)	4-1/2"(114)	4"(102)
4"(102)	3-5/8"(92)	4-1/4"(108)	4-1/4"(108)	4-1/2"(114)	4"(102)
6"(152)	3-1/2"(89)				

NOTICE

The load classifications are in accordance with the American National Standards A112.21.1M ASME Ratings are as follows:
 HD - Safe Live Load 5000-7499 lbs. (2250-3375 kg)
 These categories are given as a guide only.
 Please consult factory.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

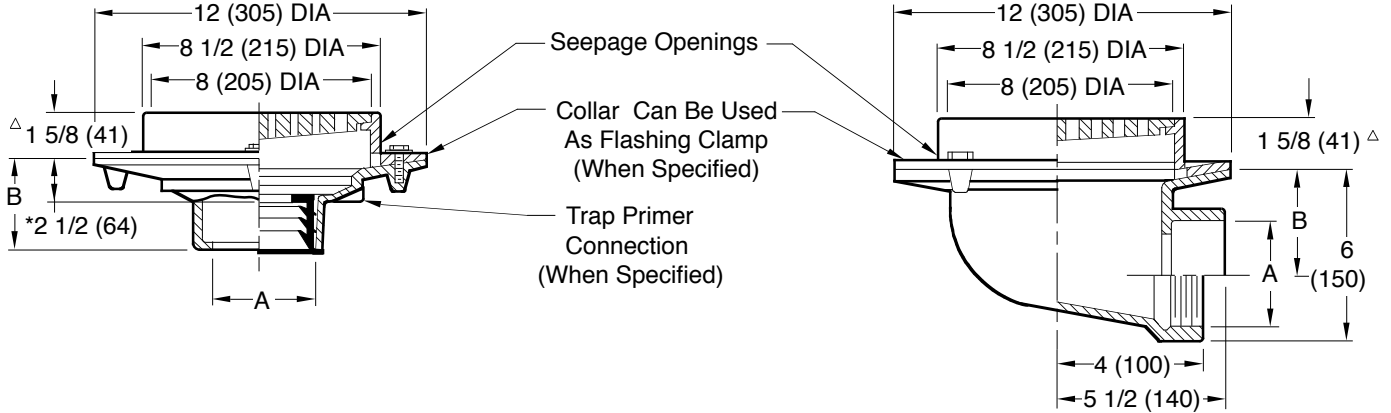


FLOOR DRAINS
WITH 8 1/2" (215) ROUND TOPS

MEDIUM DUTY DRAINS

Load Rating: Medium Duty having a Safe Live (Static) Load between 2,000 lbs. (900 kg) and 4,999 lbs. (2,250 kg) per ASME A112.6.3 Floor Drain Standard. For the specific Safe Live Load rating of any grate, contact the Smith representative or factory direct.

Free Area
 14.25 SQ. IN
 (92) SQ. CM



** Fig. 2110C . . . CAULK OUTLET
 Fig. 2110Y . . . NO-HUB OUTLET

Fig. 2115C . . . CAULK OUTLET
 Fig. 2115T . . . THREADED OUTLET

A SIZE	02 (50)	03 (75)	04 (100)	06 (150)
B	3 3/4 (95) for Caulk, NO-HUB, and Speedi-Set,		3 3/4 (95) NO-HUB Only	
	2 (51) for Threaded			

A SIZE	02 (50)	03 (75)	04 (100)
B	4 1/4 (110)	3 3/4 (95)	3 1/4 (83)

REGULARLY FURNISHED:

Duco Cast Iron Body and Flashing Collar with Cast Iron Slotted ADA Grate.

VARIATIONS:

- Closure Plug -XP (Fig. 2110 only)
- Dome Grate -D
- Flat Bottom Strainer -FBS (Fig. 2110 only)
- L Speedi-Set Service Weight (Fig. 2110 only)
- LXH Speedi-Set Extra Heavy (Fig. 2110 only)
- NO-HUB Adaptor (Specify Fig. 2646Y) (Fig. 2115 only)
- Sediment Bucket -B
- Square Top -S
- Trap Primer Connection -P050 1/2"(13) & -P075 3/4"(19)
- Vandal Proof Grate -U
- Wide Flange Deck Drain (Specify Fig. DX2565)
- T Threaded Outlet
- Quad Close Trap Seal (Specify Fig. 2692) (Fig. 2110 Only)
- Heel Proof Grate -Q45

OPTIONAL MATERIALS:

- Ductile Iron Grate -M
- Galvanized Cast Iron -G
- Nickel Bronze Top -NB
- Polished Bronze Top -PB
- Stainless Steel (Specify Fig. 9710)

△ Add 3/16" (5) when bronze top is specified.

*This dimension to internal stop of Speedi-Set gasket.

**Meets U.S. Gov't Spec. per WW-P-541-b, Type 220, 02 (50) and 03" (75) sizes only. See Fig. 2130 for 04" (100) size.

Meets ANSI Spec A112.6.3-2001 02(50), 03(75) or 04"(100) sizes only.

▲ Not available on Fig. 2110T threaded outlet drain.

NOTE: Dimensions shown in parentheses are in millimeters.

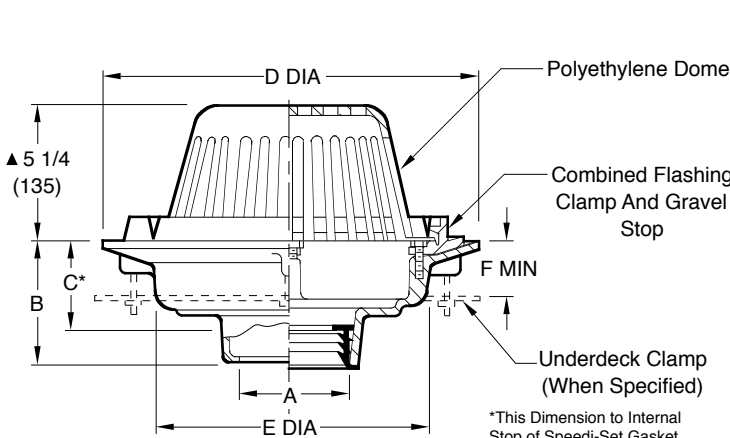
DRAWING NUMBER S2110
 SIZE A
 SCALE: NONE
 DATE: 5-17-85
 APPROVED BY: TD
 CHECKED BY: TD
 DRAWN BY: PJ
2110, 2115
 DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE
 WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
							2110, 2115

LARGE GENERAL PURPOSE ROOF DRAINS

LOW PROFILE DOME

FUNCTION: Used in flat roof of any construction. Large low profile dome provides sufficient free area for quick drainage of rain water and protects the drain sump and connected piping from the intrusion of debris. Wide clamping surface holds flashing and roofing materials without puncturing.



- Fig. 1010C CAULK OUTLET
- Fig. 1010Y NO-HUB OUTLET

*This Dimension to Internal Stop of Speedi-Set Gasket.
 **NOTE: 08(200) & 10(250) outlet sizes are regularly furnished with 20(510) dia. flange, see back sheet. If 16(405) dia. flange is required -16 MUST be specified.
 Ex: 1010Y08-16 or 1010Y10-16

recommended deck opening

outlet size	with suffix-R	less suffix-R
02(50),03(75),04(100) 05(125),06(150)	17(430) DIA	14(355) DIA
**08(200)-16, **10(250)-16	17(430) DIA	14 3/4 (375) DIA

A SIZE	B (BOTTOM OUTLET)			SIDE OUTLET			FREE AREA SQ IN (SQ CM)			
	CAULK, NO-HUB, & SPEEDI-SET	THREADED	C	D DIA	E DIA	F MIN				
02(50),03(75), 04(100)	5 (125)	3 3/4 (95)	3 3/4 (95)	15 1/4 (390)	11 (280)	1 1/8 (29)	4 3/4 (120)	6 (150)	7 3/4 (195)	102.5 (661)
05(125), 06(150)	5 (125)	3 3/4 (95)	--	15 1/4 (390)	11 (280)	1 1/8 (29)	6 1/4 (160)	6 7/8 (175)	7 3/4 (195)	102.5 (661)
**08(200)-16, **10(250)-16	6 (150)	5 (125)	--	16 (405)	12 1/2 (320)	1 1/8 (29)	--	--	--	102.5(661) ▲122.5(790)

REGULARLY FURNISHED:

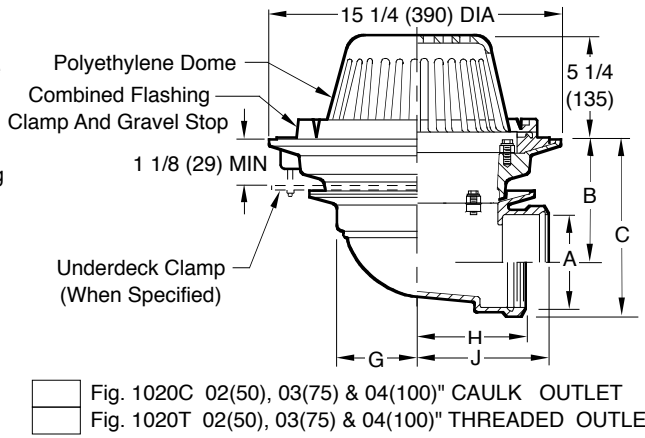
Duco Cast Iron Body with Combined Flashing Clamp and Gravel Stop with Polyethylene Dome.

▲ NOTE: The dome height is 8 1/4" (210) for the 122.5 SQ IN free area dome and is regularly furnished in Cast Iron and is not available in polyethylene.

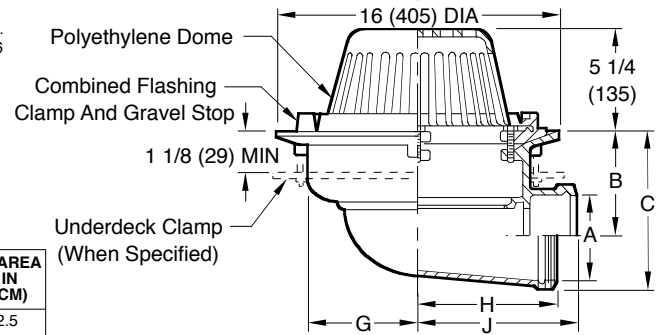
NOTE: Dimensions shown in parentheses are in millimeters.

VARIATIONS:

- Expansion Joint (Specify Fig. 1710) (Fig. 1010 only)
- Extension (Specify Height) -E
- "L" Shaped Underdeck Clamp -CL
- L Speedi-Set Service Weight 02(50), 03(75) and 04(100)" sizes only (Fig. 1010 Only)
- LXH Speedi-Set Extra Heavy 02(50), 03(75) and 04(100)" sizes only (Fig. 1010 only)
- NO-HUB Adaptor (Specify Fig. 2646Y) (Fig. 1020 only)
- Secondary Flashing Clamp -C2
- Sump Receiver -R
- Underdeck Clamp -C
- Vandal Proof Dome -U
- T Threaded Outlet



- Fig. 1020C 02(50), 03(75) & 04(100)" CAULK OUTLET
- Fig. 1020T 02(50), 03(75) & 04(100)" THREADED OUTLET



- Fig. 1020C 05(125) & 06"(150) CAULK OUTLET
- Fig. 1020T 05(125) & 06"(150) THREADED OUTLET

(SIDE OUTLET)

A SIZE	02 (50)	03 (75)	04 (100)	05 (125)	06 (150)
B	6 7/8 (175)	6 3/8 (162)	5 7/8 (149)	5 (125)	4 1/2 (115)
C	8 5/8 (219)	8 3/4 (220)	8 3/4 (220)	8 1/2 (215)	8 1/2 (215)

OPTIONAL MATERIALS:

- All Aluminum -AA (Fig. 1010 only)
- ▲ Aluminum Dome -AD
- ▲ Cast Iron Dome -CID
- ▲ Galvanized Cast Iron Dome -CIDG
- Galvanized Cast Iron Body & Collar -G
- ▲ Rough Bronze Dome -RBD
- Stainless Steel (Specify Fig. 9780)

▲▲ Optional Domes' free area are as follows:

Dome Mat'l	02-06 & 08-16 Outlets
Aluminum	98 (632)
Cast Iron	80 (516)
Bronze	95 (613)

DRAWING NUMBER S1010

SIZE A

SCALE: NONE

DATE: 5-24-85

APPROVED BY: TD

CHECKED BY: TD

DRAWN BY: CR

1010, 1020

FIGURE NUMBER

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

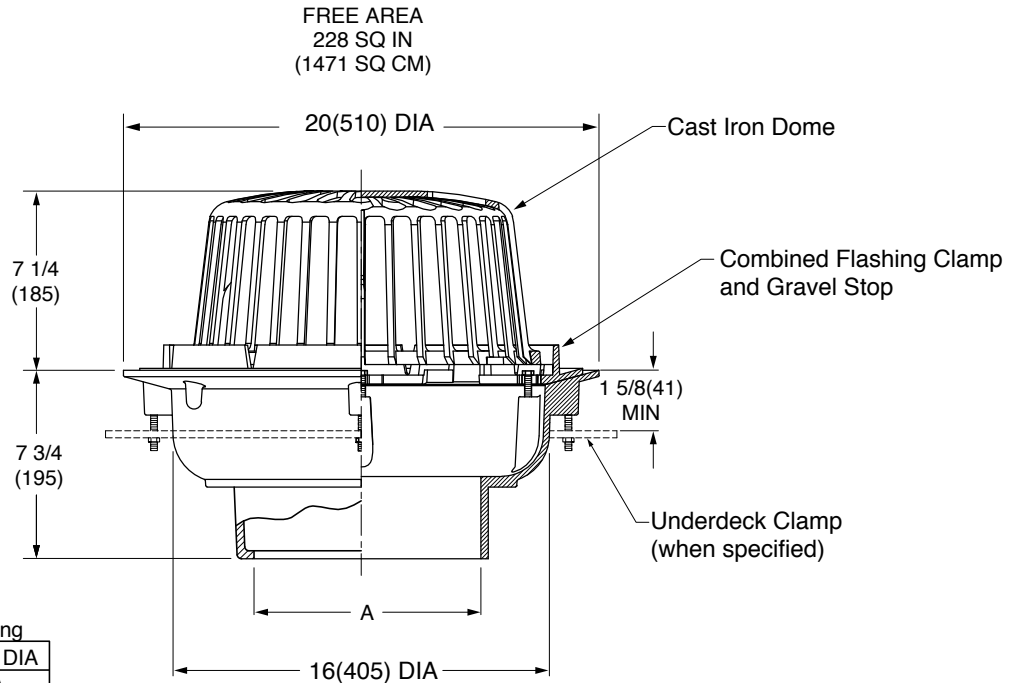
DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

REV.	DATE	DESCRIPTION	BY	CKD. BY
V	7-30-19	Removed NOTE	MW	CL
U	8-3-15	Added Flow Rate Note	TBW	BW
T	3-12-13	Rev. Tables, Notes	TBW	CL
S	06/01/09	Added Optional Dome free areas	JJ	CL

WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
		1010, 1020

LARGE GENERAL PURPOSE ROOF DRAIN

FUNCTION: Used in flat roof construction. Large dome provides sufficient free area for quick drainage of rain water and protects the drain sump and connected piping from the intrusion of debris. Wide clamping surface holds flashing and roofing materials without puncturing.



A (PIPE SIZE) = 08(200), 10(250) or *12(305)
 *12(305) outlet size available in No-Hub only.

- FIG.1010CCAULK OUTLET
- FIG.1010YNO-HUB OUTLET
- FIG.1010TTHREADED OUTLET

REGULARLY FURNISHED:

Duco Cast Iron Body with Combined Flashing Clamp and Gravel Stop and Cast Iron Dome.

VARIATIONS:

- Extension (Specify Height) -E
- Secondary Flashing Clamp -C2
- Sump Receiver -R
- Underdeck Clamp -C
- "L" Shaped Underdeck Clamp -CL
- Vandal Proof Dome -U
- Stainless Steel Mesh Over Dome -SSM

OPTIONAL MATERIALS:

- Aluminum Dome -AD
- Galvanized Cast Iron -G
- Galvanized Cast Iron Dome Only -CIDG

NOTE: Dimensions shown in parentheses are in millimeters.

B
 DRAWING NUMBER S1010BS
 SIZE A
 SCALE: NONE
 DATE: 3-13-13
 APPROVED BY: CL
 CHECKED BY: CL
 DRAWN BY: TBW
 1010BS
 DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
B A	7-30-19 8-3-15	Removed NOTE Added Flow Rate Note	MW TBW	CL BW			1010BS

M

SMITH® JAY R. SMITH MFG. CO.®
 MEMBER OF MORRIS GROUP INTERNATIONAL
 POST OFFICE BOX 3237
 MONTGOMERY, ALABAMA 36109-0237 (USA)
 TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com



LOCATION

OD-1

DRAWING NUMBER
S1080

SIZE
A

SCALE:
NONE

DATE:
8-19-83

APPROVED BY:
JD

CHECKED BY:
JD

DRAWN BY:
CR

1080

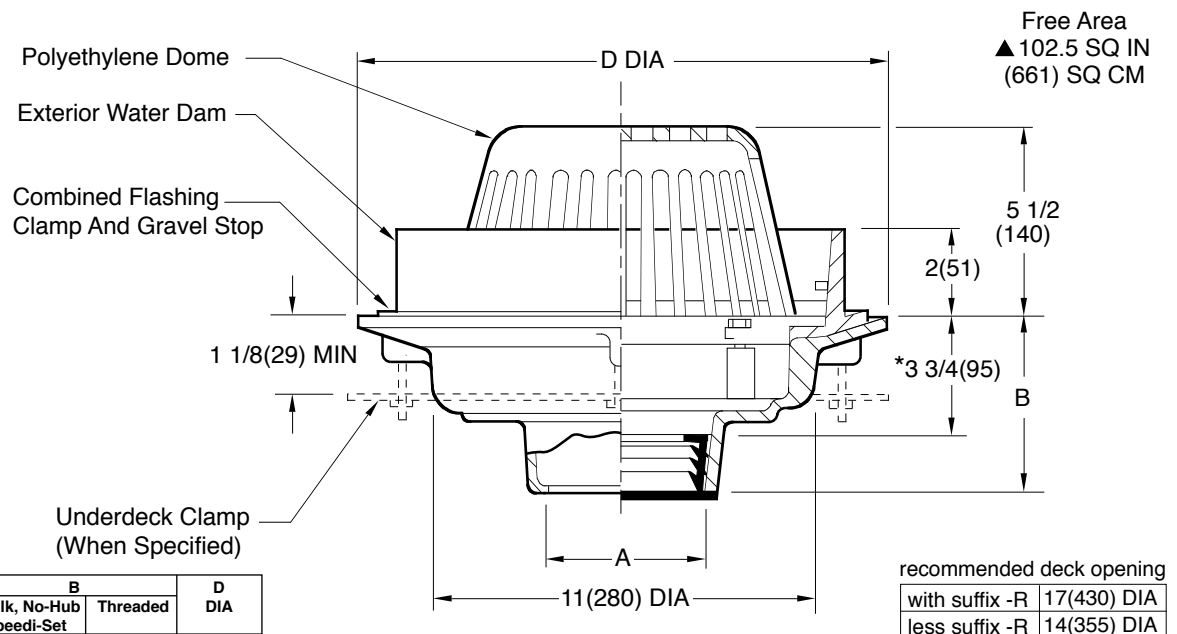
FIGURE NUMBER

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

SPECIAL PURPOSE ROOF DRAINS

WATER DAM TYPE

FUNCTION: Used in flat roofs of any construction where a constant height of water is desired on the roof. It may also be used as an emergency overflow for conventional roofs, draining rain water when the depth of the water on the roof reaches the water dam height.



A SIZE	B		D DIA
	Caulk, No-Hub Speedi-Set	Threaded	
02(50), 03(75) 04(100)	5(125)	3 3/4(95)	15 1/4(390)
05(125), 06(150)	5(125)	3 3/4(95)	15 1/4(390)
08(200)-16 10(250)-16	6(150)	5(125)	16(405)

A (Pipe Size) 02(50), 03(75), 04(100), 05(125), 06(150), 08(200)-16 or ▲10(250)-16

recommended deck opening	
with suffix -R	17(430) DIA
less suffix -R	14(355) DIA

*This Dimension to Internal Stop of Speedi-Set Gasket
NOTE: 08(200) & 10(250) outlet sizes are regularly furnished with a 20(510) dia. flange see back sheet. For 16(405) dia. flange it must be specified as -16. Ex: 1010Y08-16

- Fig. 1080C CAULK OUTLET
- Fig. 1080Y NO-HUB OUTLET
- Fig. 1080T THREADED OUTLET

REGULARLY FURNISHED:
 Duco Cast Iron Body, Flashing Clamp and Gravel Stop with Polyethylene Dome, and Cast Iron Water Dam.

- VARIATIONS:**
- Adjustable Extension(Specify Fig. 1045)
 - Expansion Joint (Specify Fig. 1710)
 - Extension -E (Specify Height)
 - "L" Shaped Underdeck Clamp -CL
 - L Speedi-Set Service Weight
02(50), 03(75) & 04(100)" sizes only
 - LXH Speedi-Set Extra Heavy
02(50), 03(75) & 04(100)" sizes only
 - Secondary Flashing Clamp -C2
 - Sump Receiver -R
 - Underdeck Clamp -C
 - Vandal Proof Dome -U
 - 2 1/2(64), 3(76) or 4"(100) Water Dams
Available -WD025, -WD03, -WD04

- OPTIONAL MATERIALS:**
- ▲▲ Aluminum Dome -AD
 - ▲▲ Cast Iron Dome -CID
 - Galvanized Cast Iron -G
 - ▲▲ Galvanized Cast Iron Dome -CIDG
 - ▲▲ Rough Bronze Dome -RBD

NOTE: Dimensions shown in parentheses are in millimeters.

▲When 10(250)-16 outlet size is specified dome height becomes 8 1/4(210) and free area of 122.5 SQ IN (790 SQ CM), furnished in cast iron and is not available in polyethylene.

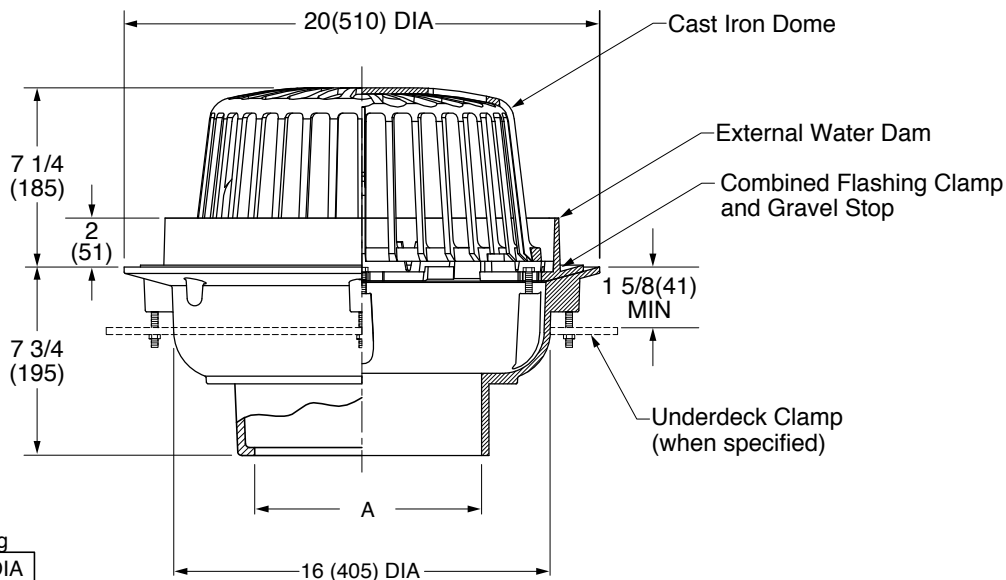
▲▲Optional domes' free area are as follows:
 Aluminum 98 (632)
 Cast Iron 80 (516)
 Bronze 95 (613)

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
M	7-30-19	Removed NOTE	MW	CL			1080
L	10-28-15	Added Flow Rate Note	TBW	BW			
K	3-13-13	Rev. Notes	JJ	CL			
J	06/04/09	Added Optional Dome Notes	JJ	CL			

OVERFLOW ROOF DRAIN

FUNCTION: Used in flat roof construction as an emergency overflow, draining water when the depth of water on the roof reaches the water dam height. The Large dome provides sufficient free area for quick drainage of rain water and protects the drain sump and connected piping from the intrusion of debris. Wide clamping surface holds flashing and roofing materials without puncturing.

FREE AREA
 228 SQ IN
 (1471 SQ CM)



recommended deck opening	
less suffix -R	18 3/4(475) DIA
with suffix -R	21(535) DIA

A (PIPE SIZE) = 08(200), 10(250) or *12(305)
 *12(305) outlet size available in No-Hub only.

- FIG.1080CCAULK OUTLET
- FIG.1080YNO-HUB OUTLET
- FIG.1080TTHREADED OUTLET

REGULARLY FURNISHED:
 Duco Cast Iron Body with External Water Dam, Combined Flashing Clamp and Gravel Stop and Cast Iron Dome.

VARIATIONS:

- Extension (Specify Height) -E
- Secondary Flashing Clamp -C2
- Sump Receiver -R
- Underdeck Clamp -C
- "L" Shaped Underdeck Clamp -CL
- Vandal Proof Dome -U
- Stainless Steel Mesh Over Dome-SSM

OPTIONAL MATERIALS:

- Aluminum Dome -AD
- Galvanized Cast Iron -G
- Galvanized Cast Iron Dome Only -CIDG

DRAWING NUMBER
S1080BS

SIZE
A

SCALE:
NONE

DATE:
3-13-13

APPROVED BY:
CL

CHECKED BY:
CL

DRAWN BY:
TBW

1080BS

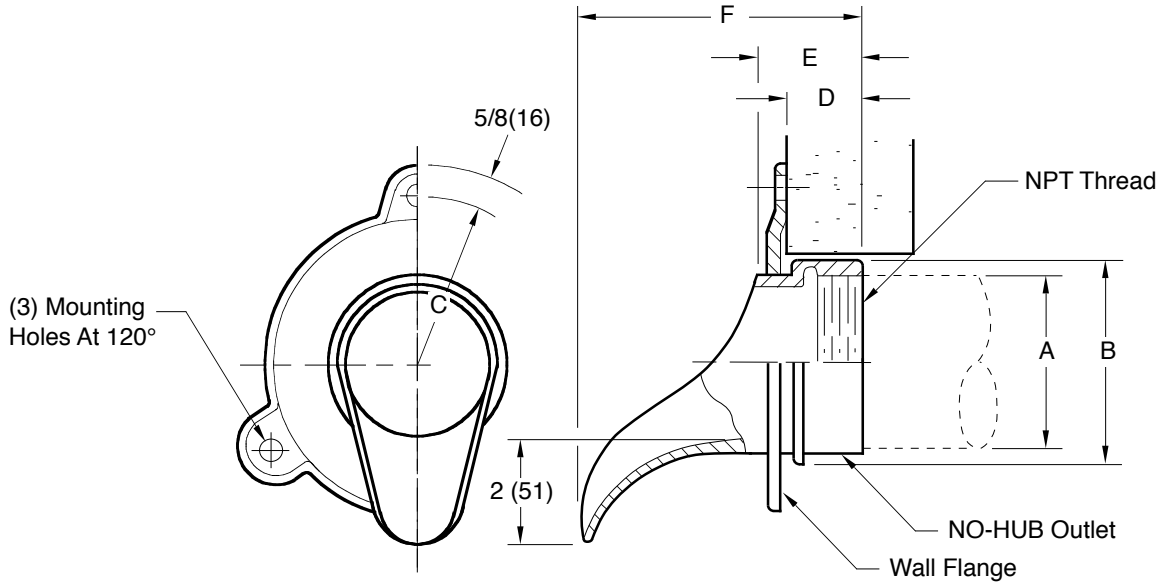
WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

FIGURE NUMBER	B A	7-30-19 10-28-15	Removed NOTE Added Flow Rate Note	MW TBW	CL BW	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER 1080BS
REV.	DATE	DESCRIPTION	BY	CKD. BY				

ROOF ACCESSORY

DOWNSPOUT NOZZLE



NOTE: For ADA Compliant
See Fig. 1770-ADA

Fig. 1770T.....Threaded Outlet
 Fig. 1770Y.....NO-HUB Outlet 02(50), 03(75), 04(100) and 06(150)
 ** When -NB is specified with NO-HUB outlet, ALL SIZES will be supplied with a 2646Y NO-HUB adaptor.

A=PIPE	02(50)	03(75)	04(100)	05(125)	06T(150)	06Y(150)	08(200)	10(255)	12(305)
B=DIA	2 3/4 (70)	4 (100)	5 (125)	6 (150)	7 1/4 (185)	7 1/4 (185)	9 1/4 (235)	11 1/8 (283)	13 1/4 (335)
C=RAD	2 3/4 (70)	3 1/2 (89)	3 7/8 (98)	4 3/8 (111)	5 (125)	5 (125)	5 7/8 (149)	7 1/4 (185)	8 (205)
D	1 3/8 (35)	1 3/8 (35)	1 3/8 (35)	1 3/8 (35)	1 3/8 (35)	1 13/16 (46)	1 5/8 (41)	1 3/4 (44)	2 (51)
E	2 1/16 (52)	2 1/16 (52)	2 1/16 (52)	2 1/16 (52)	2 1/16 (52)	2 1/2 (64)	2 3/8 (60)	2 3/4 (70)	2 15/16 (75)
F	5 5/8 (143)	5 5/8 (143)	5 5/8 (143)	5 5/8 (143)	5 5/8 (143)	6 1/4 (160)	5 15/16 (149)	5 3/8 (138)	7 9/16 (192)

REGULARLY FURNISHED:
Cast Bronze Nozzle and Flange.

VARIATIONS:
 Bird Screen -BS
 * NO-HUB Adaptor (specify Fig. 2646Y)
 [5"(125), 8"(200), 10"(255) and 12"(305) only]

OPTIONAL MATERIALS:
 ** Nickel Bronze -NB
 Polished Bronze -PB
 Chrome Plated -CP

NOTE: Dimensions shown in parentheses are in millimeters.

DRAWING NUMBER S1770
 SIZE A
 SCALE: NONE
 DATE: 2-25-85
 APPROVED BY: JD
 CHECKED BY: JD
 DRAWN BY: CR
 DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
	2-11-21 8-30-19 10-18-18 5-26-16	Removed Function Rev. Opt. Mat./Added Note ** Added Note ADA Compliant Rev. Optional Materials	KK MW TBW TBW	AM CL TK			1770



M-500

PRESSURE DROP ACTIVATED TRAP SEAL PRIMER

REPLACEABLE STAINLESS STEEL FILTER SCREEN



3 P.S.I PRESSURE DROP

Only a three p.s.i. line pressure drop is required to activate the primer, compared to five or ten p.s.i. by others. Lower water volume fixtures and faucets has resulted in lower line pressure drops. A three p.s.i. performance point ensures reliable water delivery to maintain the trap seal.

NO PRECHARGE

MIFAB's trap seal primers can be disassembled in the field for easy cleaning and repair, without risk of losing a precharge.

VIEW HOLES

Four view holes permit easy inspection of water delivery. The holes are across from each other, enabling light at the opposite end to illuminate the performance of the primer.

SEDIMENT FILTER

A replacement stainless steel sediment filter prevents line debris from entering the primer. This can be replaced after wear and build up of debris to ensure maximum life and performance of the primer.

NO ADJUSTMENTS (except for M3-500-NPB)

The replaceable and repairable cartridge tubes inside of the body are factory engineered to deliver enough water to service three, six or ten floor drain traps without adjustment. This eliminates confusion during field installation.

The M-500 Series of trap seal primers are tested and third party listed to the A.S.S.E. 1018 Standard.

FUNCTION AND DESCRIPTION: MIFAB's M-500 Series of pressure activated trap seal primers (MR-500-NPB, M1-500-NPB and M2-500-NPB, M3-500-NPB) can be connected to any cold water line, and will be automatically activated when a valve or faucet, that is on the line, is opened. A pressure drop of three p.s.i. will activate all of the trap seal primers. MIFAB's M-500 Series of trap seal primers can be disassembled in the field. Their unique design permits filter replacement without affecting the performance of the primer. The "O" ring seals are tested for reliability at a temperature range of -40 degrees to 450 degrees F. The M-500 Series of trap seal primers do not require adjustment. The opening range for all of MIFAB's M-500 Series of trap seal primers is 20 to 80 p.s.i. All three models are listed with I.A.P.M.O. and C.S.A. and are tested and certified to the A.S.S.E. Standard 1018 and are so marked. U.S. Patent # 6,152,164.



*The wetted surface of the -NPB Series of trap seal primers contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.

M-500 SERIES					
MODEL NO.	A	B	PIPE FLATS	DRAINS SERVED	WATER OUTPUT
MR-500-NPB	4-1/8"	1-1/4"	1-1/8"	6	1/2 ounce
M1-500-NPB	4-1/8"	1-1/4"	1-1/8"	10	1 ounce
M2-500-NPB	4-1/8"	1-1/4"	1-1/8"	3	1/4 ounce
M3-500-NPB	4-1/8"	1-1/4"	1-1/8"	10	Adjustable
MR-500-SS (Stainless Steel)	4-1/8"	1-1/4"	1-1/8"	6	1/2 ounce

OPTIONAL VARIATIONS

- RC REPLACEMENT CARTRIDGE
- RF REPLACEMENT FILTER SCREEN

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Job Name: _____ Page No: _____
 Section No: _____ Contractor: _____
 Schedule No: _____ Purchase Order No: _____

TRAP SEAL PRIMER TROUBLESHOOTING

Following are some things to trouble shoot when it comes to our M-500-NPB Series of Trap Seal Primers (M1-500-NPB, M2-500-NPB, MR-500-NPB, M3-500-NPB):

1) WHAT IS THE LINE PRESSURE FOR THE INSTALLATION?

The M-500-NPB Series of trap seal primers will work within a line pressure range of 35 – 80 psi. Do not subject the trap seal primer to pressure in excess of 80 psi. The trap seal primer must be installed on a cold fresh water line of 1 1/2" diameter or less.

2) HOW FAR AWAY IS THE TRAP PRIMER FROM THE SOURCE OF THE PRESSURE DROP?

Anything farther away than 20 feet is an issue, as the farther the primer is away from the source of the pressure drop, the less likely it will sense it and work.

3) WHAT IS THE PRESSURE DROP WHERE THE PRIMER IS?

MIFAB's M-500-NPB Series of primers will work with as little as 3 psi in pressure drop. With today's low flow and consumption faucets, there is less pressure drop being created when the faucets and toilets are used. Therefore, it is recommended to install the trap seal primer as close to the low flow fixture as possible.

4) WATER HAMMER ARRESTORS ON THE LINE CAN ALSO AFFECT PRESSURE DROP IN THE LINE.

It would be best to get a pressure reading where the trap primer is installed. The M-500-NPB series needs a fast, sharp pressure drop to activate. The long pipe run to the trap primer and the water hammer arrestor may not be allowing the trap primer to function properly.

5) LOOK AT THE GAUGE FLUCTUATION

Is it a quick and sharp pressure drop? Or did it gradually drop? The trap primers need a quick pressure drop to activate. A slow gradual pressure drop may not be enough to activate the M-500-NPB. That is why we state that they should be as close to the pressure drop source as possible. The M1-500-NPB has the most buoyant cartridge and should perform the best. If the trap primer looked good and was filled with water then it is the rate of the pressure drop that is causing the issue.

6) WATER HEATERS

Do not install the trap seal primer on a water heater line due to insufficient pressure drop.

7) NOT WORKING

In some cases, the installation conditions cannot deliver the required 3 psi pressure drop to activate MIFAB's MR-500-NPB, M1-500-NPB and / or M2-500-NPB trap seal primers. In such cases, MIFAB® recommends the use of the M3-500-NPB (page 4) adjustable trap seal primer which does not require a pressure drop to activate or the MI-100 (page 8) Series of electronic trap seal primers which also do not require a pressure drop and are electronically programmed to deliver a specific amount of water at specific time intervals.

Also refer to the copy in the Trap Seal Primer section (Pages 1-4).

M-500-NPB SERIES INSTALLATION INSTRUCTIONS

Use a 1 1/8" open end wrench to install the M-500-NPB Series of trap seal primers to the line by using the flats on the top of the trap seal primer. Water lines must be flushed before installing MIFAB's MR-500-NPB Series of trap seal primers. The leading cause of trap seal primer performance problems is interference from foreign debris. The trap seal primers should be cycled at least six times to reduce problems of interference from foreign debris. The following steps are highly recommended:

- Ensure that all flux and other debris is removed from supply line to the primer.
- Use only teflon tape around threads, NEVER use pipe dope.
- Do not solder fittings directly onto the inlet or outlet of the primer, as the primer uses a PE (polyethylene) cartridge.

Failure to follow these instructions will negatively affect performance of the product. MIFAB's primers have a unique design which allows the primer to be taken apart and cleaned before re-assembly. Do this in the event of excess water discharge.

Trap seal primers should be mounted one foot above the finished floor for every twenty feet of floor drain trap make-up water line. For easy access to the trap seal primer, install a union connection above it. Install a line shut off valve upstream of the trap seal primer in order to shut off the water supply when performing maintenance on the trap seal primer.

INSPECTION INSTRUCTIONS

After installing and pre-cycling the trap seal primer, use any of the four holes to view water discharge from the orifice. A light can be placed opposite the viewing hole to improve clarity in this inspection.

MAINTENANCE INSTRUCTIONS

In order to replace the filter screen, remove the trap seal primer by using an open end wrench on the top set of flats. Grasp the top of the filter screen with fingers, squeeze and remove the filter. Insert the new filter screen by squeezing and pushing it firmly down into the top of the trap seal primer. Re-install the trap seal primer using the top set of flats. In regions that experience heavy residual deposits such as calcium in the water supply, MIFAB's M-500-NPB Series of trap seal primers can be field refurbished by removing the bottom end of the primer, and replacing the cartridge.

Go to www.mifab.com for more information on maintenance of trap seal primers.

CALIFORNIA PROPOSITION 65 WARNING. This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Design and dimensions are subject to modification. Prices do not include applicable taxes.

Visit www.mifab.com for the most recent product information.

MIFAB®, Inc., 1321 West 119th Street, Chicago, Illinois 60643-5109, USA

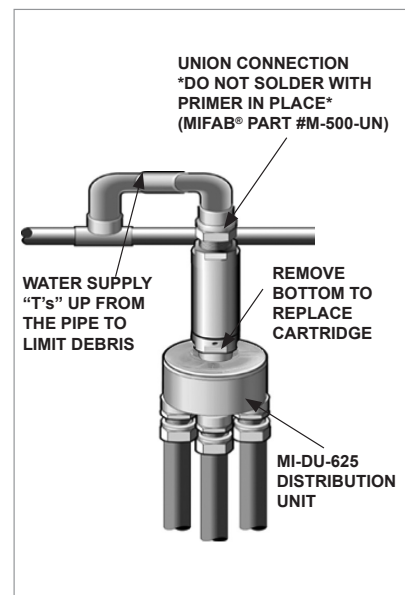
Toll Free: 1-800-465-2736, Fax: 1-773-341-3049

All sales subject to MIFAB's® Terms and Warranties. Please refer to page 32.

sales@mifab.com Canada Toll Free: 1-800-387-3880

"The MIFAB® MR-500-NPB is a well proven product. We have sold many for many years and I don't recall any ever coming back or a customer being unsatisfied. The distribution boxes are a well thought out item also. Good job MIFAB®!"

— Rick Sharp, Sales Manager, Lion Plumbing Supply, Miami, FL





Precision Plumbing Products
"Specify with Confidence - Install with Pride"

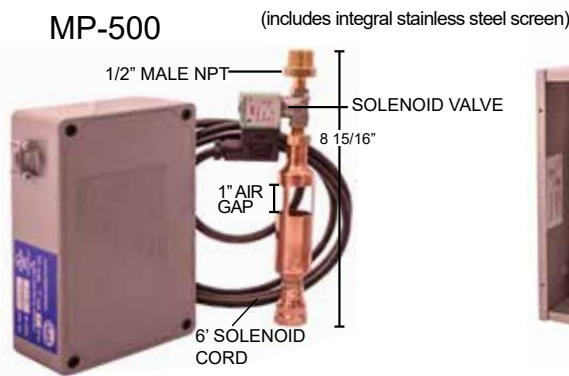
TP-2

MINI-PRIME SERIES ELECTRONIC TRAP PRIMING MANIFOLDS

MINI-PRIME
 MP-500-115V
 MP-500-24V
 MP-500-240V
 * MP-EMS-24V



OPTIONAL DISTRIBUTION UNIT (DU SERIES) PURCHASED SEPARATELY.
Use only PPP DU-U or DU-4 as distribution system.



MPB-500 www.pppinc.net



A
 (cover not shown in photo).

B

PLEASE NOTE:

Designed for use with 1 to 4 floor drains. Must be installed above finished floor. (Consult Local Authority). Must have a minimum 12" from bottom of outlet before 90 degree elbow can be used. The furthest recommended distance of makeup line is approximately 20' to floor drain. Trap primer make up line must have a continuous slope to the floor drain (consult local code requirements).

* **EMS option is built without a timer**, it will supply potable water through your Buildings Energy Management System. This model must be installed in connection with your buildings Energy Management System.

RECYCLE TIMER BOX:

Pre-set timer opens once for 12 seconds every 24 hrs.
 Dimensions - (L) 7 5/8" x (W) 4 5/8" x (D) 2 3/8"
INLET: 1/2" NPT Male. ANSI/ASME B1.20.1
OUTLET: 1/2" NPT Female. ANSI/ASME B1.20.1

MINI-PRIME W/BOX

MPB-500-115V
 MPB-500-24V
 MPB-500-220V
 * MPB-EMS-24V

ROUGH-IN DIMENSIONS

A. 12 INCHES
 B. 12 INCHES
 Depth 4 INCHES



NEMA Type 1, UL 50, 12" x 12" x 4" - 16 gauge steel w/ screw on cover ANSI 61 gray polyester powder paint.

DISTRIBUTION UNITS:

(DU Series) Drain Outlet: 5/8" and 1/2" Compression Fittings SAEJ512 -1/2" female NPT ANSI/ASME B1.20.1.

SOLDER JOINTS:

95-5 lead free. Containing lead not in the excess of 0.2%.

ELECTRICAL COMPONENTS:

2 Amp Circuit Breaker, Test Switch, Timer, Solenoid Valve UL Listed. Electrical assembly listed per UL #73.

TEMPERATURE/PRESSURE:

32°-125° F, 20 PSI-150 PSI. Minimum 8 oz. water at 60 PSI for up to 4 drains.

ACCESS DOOR FOR MP-500 Model:

D-814PC, D-814SS, F-814PC, F-814SS.

PROJECT SUBMITTAL MODEL # _____

Project: _____

Contractor: _____

Engineer: _____

Date Submitted: _____

Prepared By: _____

24 Volt MP/MPB/*-EMS

24/60 6.3 Watts
 8.8 VA Holding
 12.1 VA In Rush

120 Volt MP/MPB

120/60 6.3 Watts
 110/50 8.8 VA Holding
 12.1 VA In Rush

220/240 Volt MP/MPB

240/60 6.3 Watts
 220/50 8.8 VA Holding
 12.1 VA In Rush

***NOTE: THE EMS MODEL MUST BE INSTALLED IN CONNECTION WITH YOUR BUILDINGS ENERGY MANAGEMENT SYSTEM.**

Precision Plumbing Products

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 Portland, Oregon 97233

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 F (503) 253-8165

www.pppinc.net



US PATENT NUMBER 5,797,419 CANADIAN PATENT NUMBER 2,174,578



Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Tag **WHA-1** _____

SS Series Stainless Steel Shock Arrestors

Specification

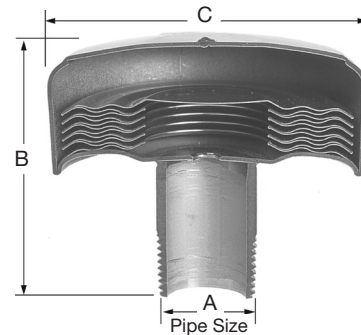
Watts SS Series pre-charged all stainless steel shock arrestor with stainless steel bellows, and male IPS threaded connection.

Operating Pressure: Designed to operate on all domestic and commercial lines up to 150 psi working pressure, 250 psi static pressure.

Temperature Range: 100°F to 300°F (-73°C to 149°C)

Installation

May be installed in new or existing plumbing systems with a standard pipe tee vertically, horizontally or at any angle. SS Series are factory air charged and permanently sealed. They may be installed in concealed locations without access panels and are not rechargeable in the field.



Pipe Size		
Suffix	Description	
A	3/4"(19) Connection	<input type="checkbox"/>
B	1"(25) Connection	<input type="checkbox"/>
C	1"(25) Connection	<input type="checkbox"/>
D	1"(25) Connection	<input type="checkbox"/>
E	1"(25) Connection	<input type="checkbox"/>
F	1"(25) Connection	<input type="checkbox"/>

Technical Data

Description	SS-A	SS-B	SS-C	SS-D	SS-E	SS-F
Fixture Unit	1-11	12-32	33-60	61-113	114-154	155-330
"A" Connection	3/4"(19)	1"(25)	1"(25)	1"(25)	1"(25)	1"(25)
"B" Height	3 3/16"(81)	4"(102)	4 5/16"(110)	5 1/4"(133)	7"(178)	7"(178)
"C" Diameter	3 1/4"(83)	3 1/4"(83)	3 1/4"(83)	3 1/4"(83)	3 1/4"(83)	3 1/4"(83)

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Approvals



Note: Complies with PDI WH201



Note: Complies with ASSE 1010

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.





Hose & Supply Boxes 8140 Series

Stainless Steel Recessed Hose Box with Wall Flange (Single Temperature)



HB-1

8151

Fixture May Show Some Available Options

Please visit www.acorneng.com for most current specifications.

Stainless Steel Recessed Hose Box with Wall Flange (Single Temperature)

These Acorn Stainless Steel Recessed Hose Boxes are CUPC® by IAPMO certified for U.S. and Canada. Boxes are designed for attractive service in both interior and exterior walls not subject to freezing. Recessed design prevents accidents which are common to surface-mounted or protruding hose valves.

Hose Box is seamless construction, fabricated from 18 gage, type 304 stainless steel and is furnished with four stainless steel clips for anchoring to the wall construction. Wall flange is 16 gage stainless steel polished to a satin finish. Flange is furnished with four corner tappings and screws for anchoring to box.

Door is provided with Cam Cylinder Lock with two keys. Hinges are concealed type. Door can be easily removed after opening by releasing hinge pins with a screwdriver.

Valve and Stop Body is cast bronze with exposed parts chrome-plated. Valve and Stop feature tamper-resistant lockshield bonnets and replaceable cartridges containing all wearing parts including the seat. The body casting is gasketed where it joins the box and is securely anchored with stainless steel tamper-resistant screws. Supply inlet is 3/4" NPT female. Outlet is 3/4" male hose thread.

-SSLF stainless steel lead free option provides a rough finish, cast stainless steel valve body, stainless steel stop assembly, stainless steel lockshield cartridge and meets the lead free requirements where the wetted surface of this product contacted by water contains less than 0.25% lead. On models that include vacuum breakers, a lead-free brass vacuum breaker is provided.

Screwdriver Stop in supply permits servicing the control valve without shutting down the water supply. Vacuum breaker models prevent contamination of the potable water supply. Vacuum breakers are atmospheric type and conform to the requirements of ASSE Standard 1011. Check local code authority for vacuum breaker requirements.

GUIDE SPECIFICATION

Provide and install Acorn Recessed Hose Box model (specify model number) with Wall Flange. Box shall be fabricated from 18 gage, type 304 stainless steel with satin finish exterior. Flange shall be 16 gage stainless steel and be polished to a satin finish. Valve shall be cartridge-operated type with vandal-resistant lockshield, removable loose key wheel handle and screwdriver operated Stop. Door shall be 16 gage satin finish with removable hinge and Cylinder Lock.

Hose & Supply Boxes 8140 Stainless Steel Recessed Hose Box with Wall Flange (Single Temperature)



BASE MODEL NUMBER (Must Specify)

HOSE BOX WITH WALL FLANGE LESS DOOR

- 8140 Single Temperature Less Vacuum Breaker
- 8141 Single Temperature With Vacuum Breaker

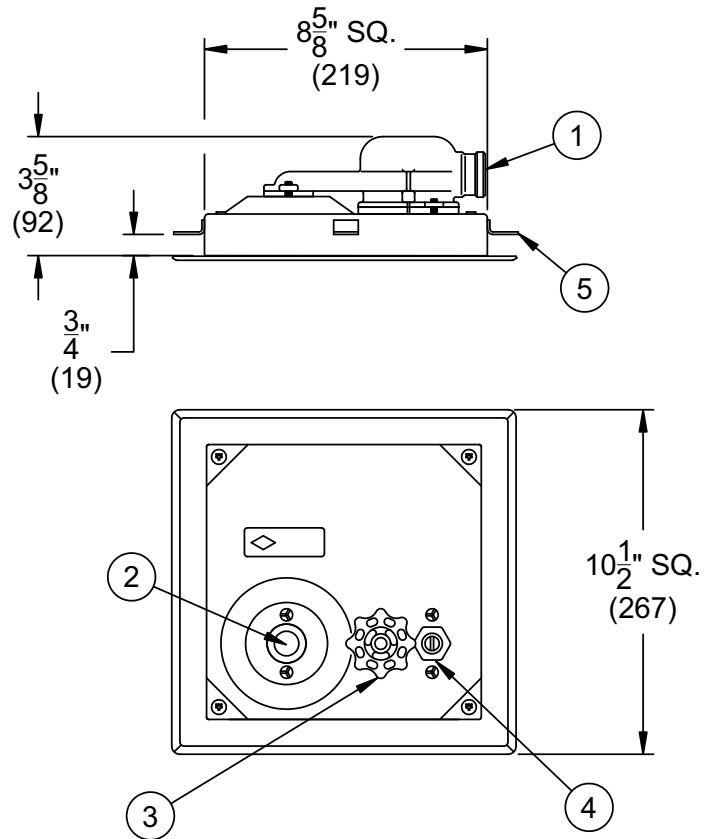
HOSE BOX WITH WALL FLANGE AND DOOR

- 8150 Single Temperature Less Vacuum Breaker
- 8151 Single Temperature With Vacuum Breaker

PRODUCT OPTIONS (Must Specify)

- SSLF Stainless Steel Lead Free

Please visit www.acorneng.com
for most current specifications.



NOTES:

1. Supply Connection.
2. Hose Connection.
3. Wheel Handle (removable).
4. Screwdriver Stop.
5. Anchor Clips.

MODEL# 8140

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

<p>Important: Installation instructions and current rough-in are furnished with each fixture. Do not rough in without certified dimensions. Dimensions are subject to manufacturer's tolerance of plus or minus 1/4" and change without notice. Acorn assumes no responsibility for use of void or superseded data. © Copyright 2009 Acorn Engineering Company</p>	
<p style="text-align: center;">Selection Summary</p> <p>Model No. & Option _____</p> <p>Quantity _____</p>	<p style="text-align: center;">Approved for Manufacturing</p> <p>Company _____ Title _____</p> <p>Signature _____ Date _____</p>

The Woodford, ASSE 1057 listed, SRH Roof Hydrant is intended for irrigation purposes and to provide water, in any weather condition, on commercial building roofs. Applications include window washing, cleaning of condenser coils, cooling towers, green roofs and other types of roof top equipment. The SRH is backflow protected with a field testable ASSE 1052 double check backflow preventer.

The SRH does not require 1) a drain line from the valve body located inside the building or 2) the removal of vacuum breaker or use of a diverter to protect from freezing.

The SRH-MS with Mounting System allows for installation flexibility. It is not necessary to install hydrant when hydrant support is mounted to the roof. The hydrant support utilizes a 3" diameter opening that allows the hydrant to be installed or easily removed at a later time. All necessary mounting hardware for proper installation on a commercial roof is supplied, including a 2 degree shim for pitch adjustment.

Hydrant Features:

- ASSE 1057 Listed
- No Drain Line Required - *With the hose removed, a venturi action draws water out of the internal reservoir and discharges out the backflow preventer.*
- Superior reservoir evacuation times without removing the backflow preventer.
- Variable flow plunger for longer life is not easily damaged and assures proper shut-off.
- Large easy to open lift handle.
- Adjustable link for easy adjustment and positive lever lock tension.
- All hydrant repairs can be made from top without removing hydrant.

Specifications:

- Hose Connection Backflow Preventer:
 - Model 50H with 3/4" hose connection
 - ASSE 1052 Listed
 - Field Testable Dual Check holds against 125 psi backflow pressure
- 3/4" NPT female inlet connection.
- 1 1/2" U.S. made galvanized pipe.
- **Maximum Working Pressure:** 100 p.s.i.
- **Maximum Temperature:** 120° F

SRH WARNING	Supply PSI	Run Time
After each use, run hydrant without a hose to ensure proper evacuation.	60	5 seconds
	25	15 seconds

Mounting System: *(Can be ordered Separately)*

- Cast iron Hydrant Support
- Cast iron Under Deck Flange
 - 4 bolts draw tight against the roof decking and the hydrant support.
 - 3 clamp screws tighten against the hydrant pipe to secure the hydrant's vertical position through the roof.
- Well Seal seals tight between the hydrant support and hydrant pipe.
- EPDM Boot covers well seal and top of hydrant support.
- 2° Shim is supplied, if needed, for installation on pitched roofs.

Patent Information: <https://www.woodfordmfg.com/patents/>

For Installation / Troubleshooting Instructions go to www.woodfordmfg.com or call 1-800-621-6032

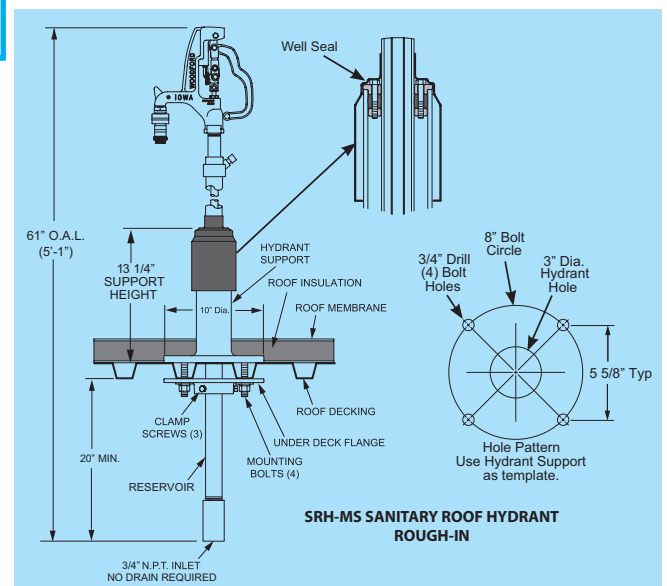
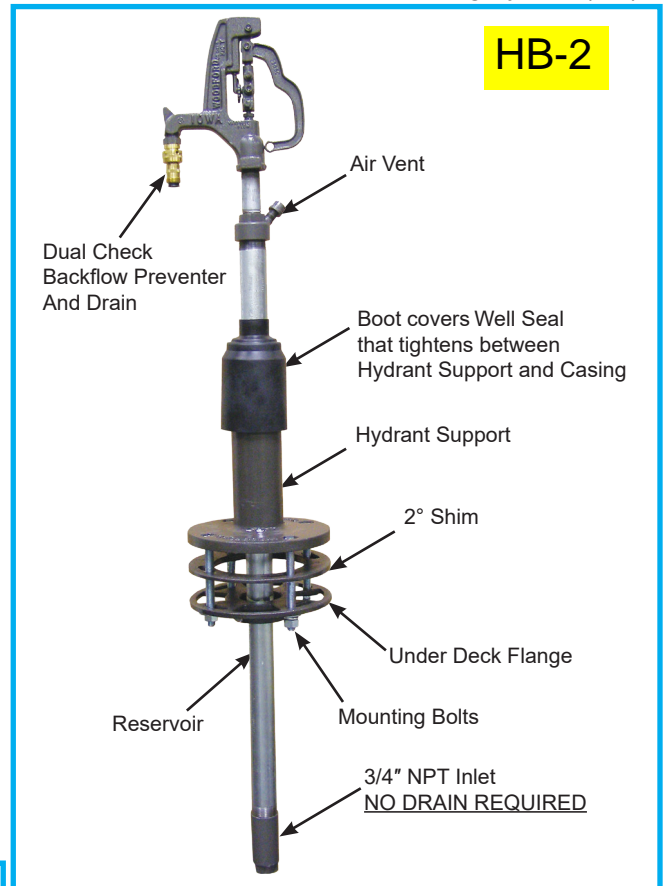


Freezeless Sanitary Roof Hydrant

No Drain Line Required!

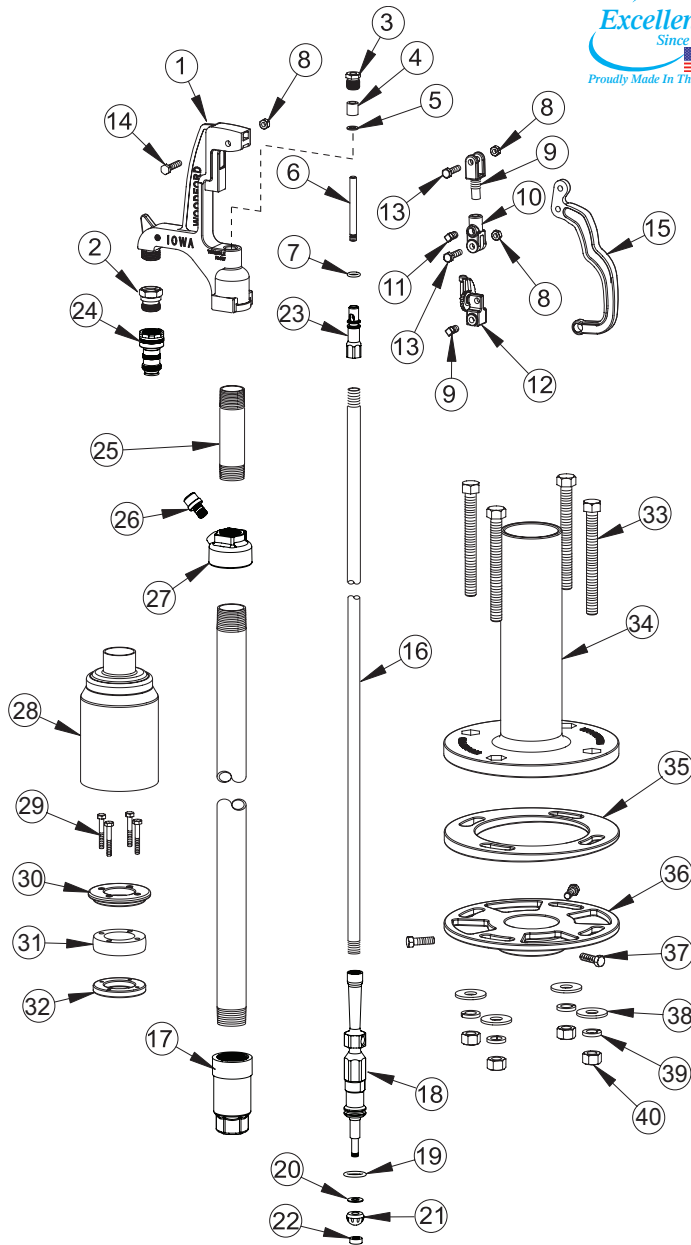
Model SRH-MS

Can be ordered with or without Mounting System (MS).



MODEL SRH-MS PARTS LIST

ITEM	PART#	DESCRIPTION
	15126	SRH Head Assembly (Includes Items 1-15, 23 & 24)
1	10632	SRH Head
2	10004	3/4" Brass Hose Nozzle
3	10100	Packing Nut
4	10101	Packing
5	10102	Packing Support Washer
6	15121	Brass Rod Stem
7	10117	O-Ring - 206
8	10206	Hex Nut (3)
9	10614	RH Upper Link
10	15242	RH Lower Link (Includes Item 11)
11	10019	Set Screw (2)
12	15243	RH Cam & Clevis Assembly
13	10020	Link Bolt (2)
14	10021	Lever Bolt
15	10613	RH Lever
16	10024	Operating Pipe
17	15122	Valve Body (3/4" NPT Inlet)
18	15123	Venturi Assembly
19	10118	Valve Body O-Ring
20	50027	Support Washer
21	51013	Ball Valve Rubber
22	50028	Round Brass Nut
23	10116	Sealing Head Coupling
24	50H-BR	50H Backflow Preventer
25	15120	Upper Pipe Assembly
26	15124	SRH Vent Assembly
27	15125	SRH Casing Cover
28	10608	RH Boot, EPDM
29	10625	Bolt, Allen Head 1/4-20 X 1 3/4" (4)
30	10626	Well Seal-1 1/2", Top
31	10119	Well Seal-1 1/2", EPDM
32	10627	Well Seal-1 1/2", Bottom
33	10584	Bolt, Hex Head 5/8-11 X 6" (4)
34	10579	Hydrant Support, Casting
35	10581	2" Shim, Casting
36	10580	Under Deck Flange
37	10607	Screw, Clamp 3/8-16 Hex Head X 1 3/4" (3)
38	10604	Washer, Plain 5/8 (4)
39	10605	Washer, Lock 5/8 (4)
40	10585	Nut, Hex 5/8-11 UNC (4)
	RK-SRH	Repair Kit (Includes items 3-7, 19-22)
	RK-RHL	Repair Kit (Includes items 8-15)



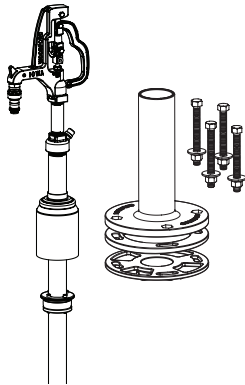
When ordering, specify SRH part number option listed below.

Part# SRH-MS Consists of the complete Roof Hydrant system:

Qty. 1 SRH Hydrant shipped in 1 carton.

Qty. 1 RH-MS Mounting System shipped in 1 carton.

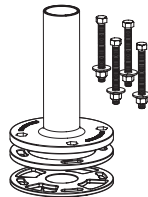
Total Shipping Wt. 2 cartons: 50 lbs



Part# RH-MS

Carton contents consists of:
 Mounting System/
 Rough-In Components (Parts 33-40 above)
 • Hydrant Support
 • 2" Shim,
 • Under Deck Flange
 • Mounting Bolts, Nuts, Washers.

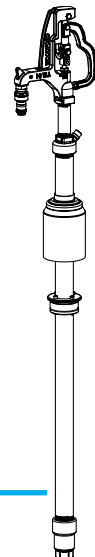
Shipped in 1 Carton.
 Shipping Wt. - 30 lbs



Part# SRH

Carton contents consists of:
 • Hydrant Assembly (Parts 1-32 above)
 • Well Seal (Parts 28-32 above)
 • Boot (Part 28 above)

Shipped in 1 Carton.
 Shipping Wt. - 20 lbs



For more information contact...

WOODFORD MANUFACTURING COMPANY, LLC.

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115
 To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com



Hose & Supply Boxes 8145 Series

Stainless Steel Recessed Hose Box with Wall Flange (Hot and Cold)



HB-3

8156

Fixture May Show Some Available Options

Please visit www.acorneng.com for most current specifications.

Stainless Steel Recessed Hose Box with Wall Flange (Hot and Cold)

These Acorn Stainless Steel Recessed Hose Boxes are CUPC® certified by IAPMO for U.S. and Canada. Boxes are designed for attractive service in both interior and exterior walls not subject to freezing. Recessed design prevents accidents which are common to surface-mounted or protruding hose valves.

Hose Box is seamless construction, fabricated from 18 gage, type 304 stainless steel and is furnished with four stainless steel clips for anchoring to the wall construction. Wall flange is 16 gage stainless steel polished to a satin finish. Flange is furnished with four corner tappings and screws for anchoring to box.

Door is provided with Cam Cylinder Lock with two keys. Hinges are concealed type. Door can be easily removed after opening by releasing hinge pins with a screwdriver.

Valve and Stop Body is cast bronze with exposed parts chrome-plated. Valve and Stop feature tamper-resistant lockshield bonnets and replaceable cartridges containing all wearing parts including the seat. The body casting is gasketed where it joins the box and is securely anchored with stainless steel tamper-resistant screws. Supply inlet is 3/4" NPT female. Outlet is 3/4" male hose thread.

-SSLF stainless steel lead free option provides a rough finish, cast stainless steel valve body, stainless steel stop assembly, stainless steel lockshield cartridge and meets the lead free requirements where the wetted surface of this product contacted by water contains less than 0.25% lead. On models that include vacuum breakers, a lead-free brass vacuum breaker is provided.

Screwdriver Stop in supply permits servicing the control valve without shutting down the water supply. Vacuum breaker models prevent contamination of the potable water supply. Vacuum breakers are atmospheric type and conform to the requirements of ASSE Standard 1011. Check local code authority for vacuum breaker requirements.

GUIDE SPECIFICATION

Provide and install Acorn Recessed Hose Box model (specify model number) with Wall Flange. Box shall be fabricated from 18 gage, type 304 stainless steel with satin finish exterior. Flange shall be 16 gage stainless steel and be polished to a satin finish. Valve shall be cartridge-operated type with vandal-resistant lockshield, removable loose key wheel handle and screwdriver operated Stop. Door shall be 16 gage satin finish with removable hinge and Cylinder Lock.

Hose & Supply Boxes 8145 Stainless Steel Recessed Hose Box with Wall Flange (Hot and Cold)



BASE MODEL NUMBER (Must Specify)

PRODUCT OPTIONS (Must Specify)

HOSE BOX WITH WALL FLANGE LESS DOOR

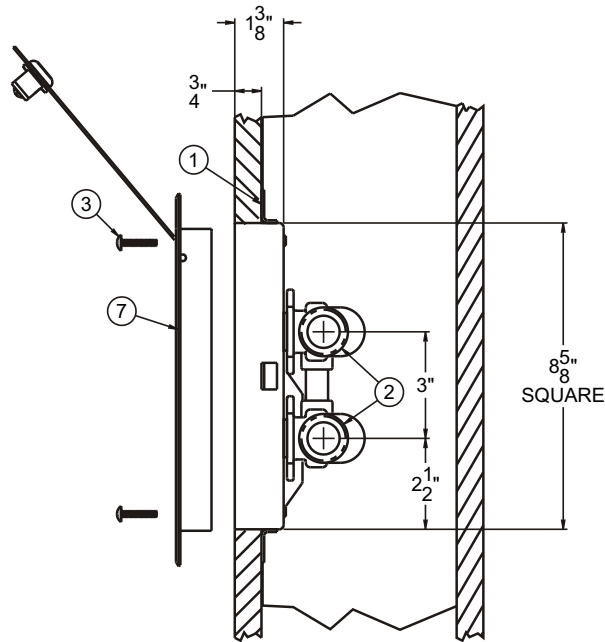
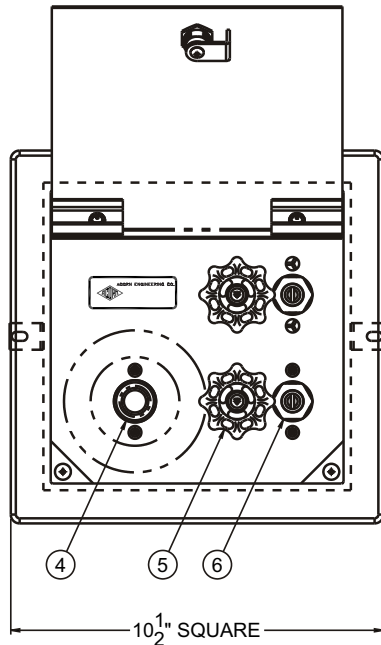
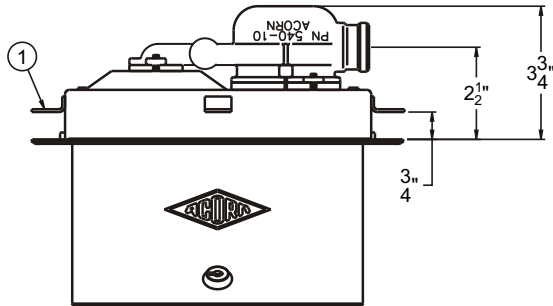
-SSLF Stainless Steel Lead Free

- 8145 Hot & Cold Less Vacuum Breaker
- 8146 Hot & Cold With Vacuum Breaker

HOSE BOX WITH WALL FLANGE AND DOOR

- 8155 Hot & Cold Less Vacuum Breaker
- 8156 Hot & Cold With Vacuum Breaker

Please visit www.acorneng.com
for most current specifications.



MODEL #8155

NOTES:

- 1. ANCHOR CLIPS
- 2. 3/4" NPT FEMALE VALVE INLET CONNECTIONS
- 3. DOOR FRAME ANCHORING SCREWS
- 4. 3/4" MALE HOSE THREAD
- 5. REMOVABLE WHEEL HANDLE
- 6. LOCKSHIELD SCREWDRIVER STOP
- 7. DOOR FRAME

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Important: Installation instructions and current rough-in are furnished with each fixture. Do not rough in without certified dimensions. Dimensions are subject to manufacturer's tolerance of plus or minus 1/4" and change without notice. Acorn assumes no responsibility for use of void or superseded data. © Copyright 2009 Acorn Engineering Company

<p style="text-align: center;">Selection Summary</p> <p>Model No. & Option _____</p> <p>Quantity _____</p>	<p style="text-align: center;">Approved for Manufacturing</p> <p>Company _____ Title _____</p> <p>Signature _____ Date _____</p>
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ThermoSetter™ Recirculation thermal balancing valve

BV-1



1161 Series 1/2" - 3/4"

Submittal Data 03301 NA — Issue Date 10/2021

Application

The ThermoSetter™ adjustable thermal balancing valve is used for automatic balancing of recirculation loops in domestic hot water systems, to speed hot water delivery, reduce water waste and save energy. The internal thermostatic balancing cartridge automatically modulates flow to ensure a constant temperature in the recirculation piping system. The 116 Series has an adjustment knob with 95°F to 140°F (35°C to 60°C) temperature scale indication. An integral dry-well holds a slide-in temperature gauge for local indication, or a sensor for remote temperature sensing. The optional check valve protects against circuit thermo-syphoning.

The ThermoSetter 116A series is also available pre-assembled with the Caleffi NA108 series low-lead brass full-port ball valve for isolation. This can be ordered complete with two of these ball valves plus low-lead close nipples by adding a suffix "001" to the order code number.

Typical Specification

Furnish and install on the plans and describing herein, a Caleffi recirculation thermal balancing valve, as manufactured by Caleffi. Each balancing valve must be designed with a DZR low-lead brass body that complies with NSF/ANSI 372, as certified by ICC-ES, file PMG-1360. Complies with NSF/ANSI/CAN 61 (180°F/82°C Commercial Hot) as certified by ICC-ES, file PMG-1512. Stainless steel & copper adjustable cartridge, peroxide-cured EPDM seals, ABS adjustment knob. The balancing valve must include 1/2" or 3/4" NPT female connections. Each valve has 230 psi (16 bar) maximum working pressure and 95-140°F (35-60°C) adjustable temperature range. Provide with optional outlet temperature gauge with 30-180°F (0-80°C) temperature scale, optional check valve, and optional pre-formed insulation shell. Provide with optional inlet and outlet low-lead brass full-port ball valves, NPT female x NPT female, for isolation, factory-assembled, or separately-sourced, Code NA108 series, with separately-sourced low-lead close nipples. Each valve shall be Caleffi model 1161 or approved equal. (See product instructions for specific installation information.)

Technical specifications

NSF/ANSI/CAN 61



Materials

Body: DZR low-lead brass
 Adjustable cartridge: stainless steel & copper
 Springs: stainless steel AISI 302 (EN 10270-3)
 Hydraulic seals: peroxide-cured EPDM
 Adjustment knob: ABS

Performance:

Suitable fluid: water
 Max. working pressure: 230 psi (16 bar)
 Max. differential pressure: 15 psi (1 bar)
 Max. inlet temperature: 195°F (90°C)
 Adjustment temperature range: 95-140°F (35-60°C)
 Flow Cv (Kv) max: 2.1 (1.8)
 Flow Cv (Kv) min: 0.23 (0.2)
 Flow Cv (Kv) design: 0.52 (0.45)

Connections:

Main connections: 1/2" NPT female
 3/4" NPT female
 Temperature gauge/sensor dry-well: Ø 10 mm metric

Temperature gauge code 116010

Scale: 30 - 180°F (0-80°C)
 Diameter: 1 1/2" (40 mm)
 Stem diameter: 0.35" (9 mm)

Technical specifications of insulation, code CBN116140

Materials: closed cell expanded PE-X
 Thickness: 1/2 inch (13 mm)
 Density: -internal part: 1.9 lb/ft³ (30 kg/m³)
 -external part: 5.0 lb/ft³ (80 kg/m³)
 Thermal conductivity (DIN52612):
 - at 32°F (0°C): 0.82 BTU · in/hr · ft² · °F (0.0345 W/(m · K))
 - at 105°F (40°C): 0.94 BTU · in/hr · ft² · °F (0.0398 W/(m · K))
 Coefficient of resistance to the diffusion of vapor: > 1,300
 Working temperature range: 32-212°F (0-100°C)
 Flammability (ASTM D 635): Class VO

Certifications:

- Complies with codes IPC and UPC and standard NSF/ANSI/CAN 61 (180°F/82°C Commercial Hot), as certified by ICC-ES, file PMG-1512.
- Complies with NSF/ANSI 372, low lead, as certified by ICC-ES, file PMG-1360.

Technical specifications of isolation ball valves

Materials

Body and end connection: high tensile strength forged low-lead brass C28500
 Ball and stem: low-lead brass C28500
 Stem nut: steel (CLO4)
 Seats (2): PTFE
 90° stop: hot rolled steel (DD11)
 O-ring stem seals (2): nitrile butadiene rubber (NBR) & fluoro-elastomer (FKM)
 Thrust washer and packing ring: PTFE
 Black T-handle: polyamide thermal plastic (PA6.6)
 Handle top cap: acrylonitrile butadiene styrene (ABS)

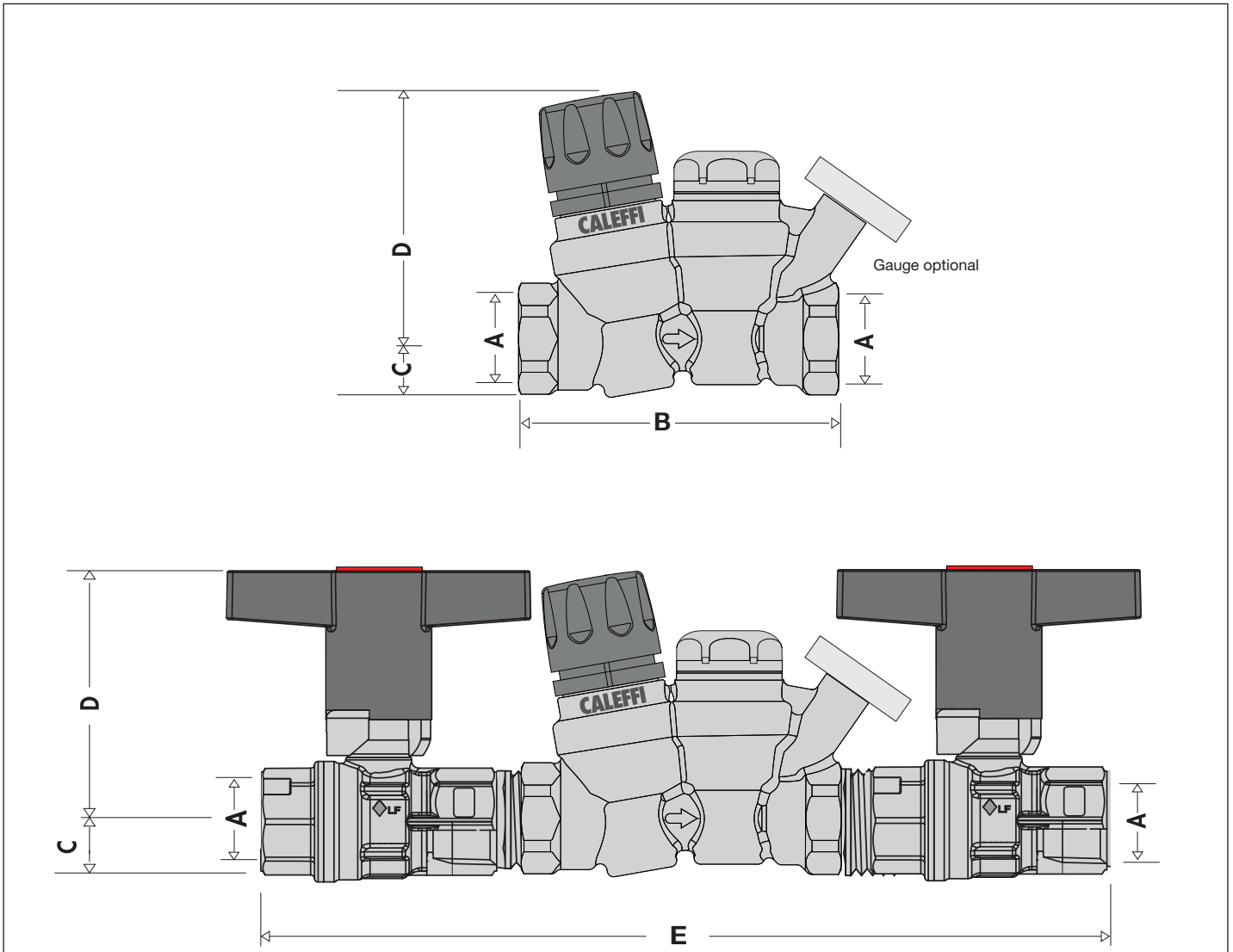
Performance

Suitable Fluids: water, glycol solutions
 Max. percentage of glycol: 50%
 Pressure rating: 600 WOG-150WSP
 Working temperature range: -4 - 366°F (-20 - 186°C)
 Shutoff performance: bubble tight

Connections:

Main connections: 1/2", 3/4" NPT female inlet and outlet

Dimensions



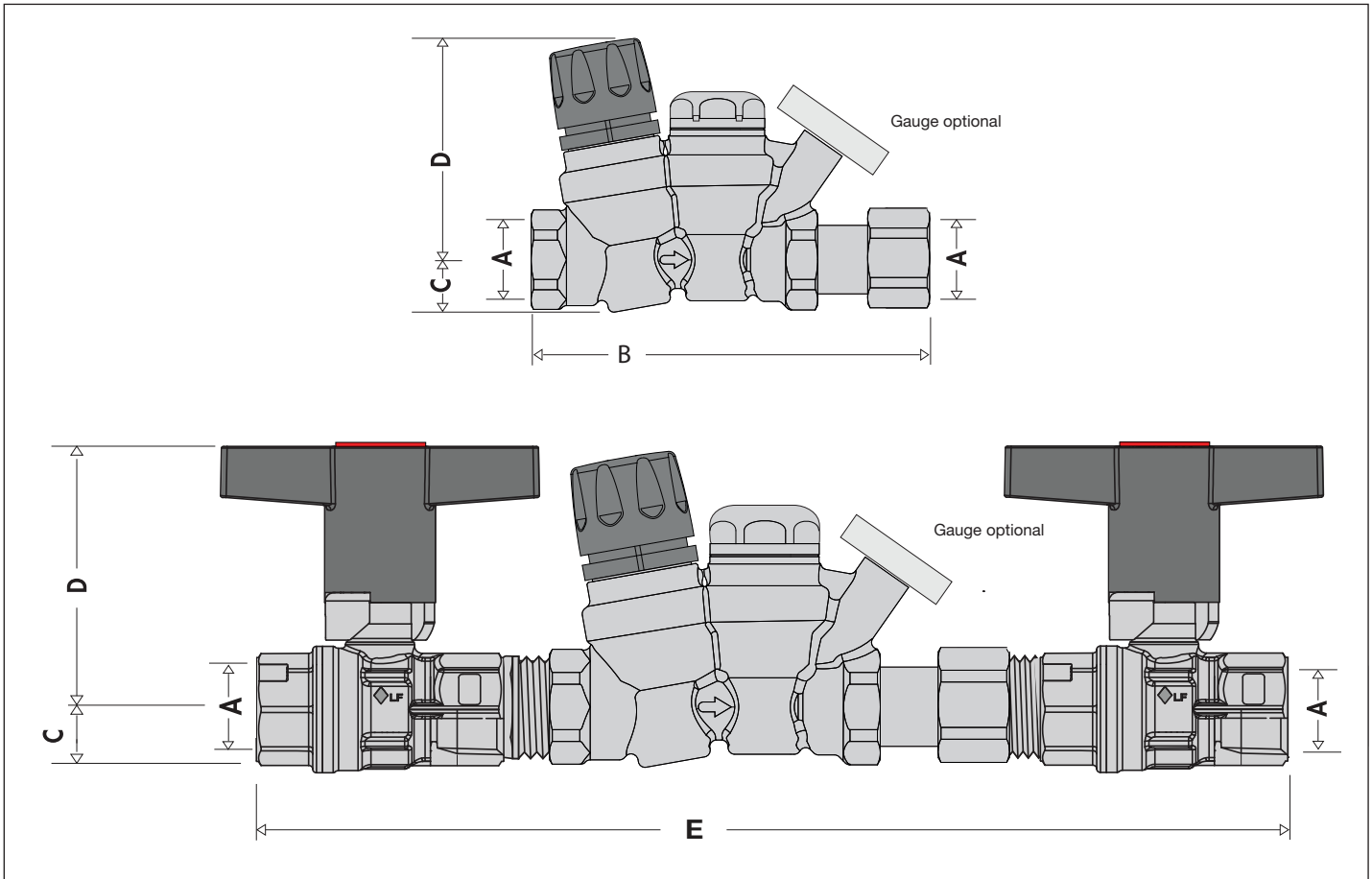
ThermoSetter 116A series without check valves

Code (1)	A	B	C	D	E	Wt w/o ball valves (lb/kg)	Wt with ball valves (lb/kg)
116140A	½" NPT F	4"	¾"	3"	--	1.6 / (0.7)	--
116140A 001	½" NPT F	--	¾"	3"	11¼"	--	2.6 (1.1)
116141A*	½" NPT F	4"	¾"	3"	--	1.7 / (0.8)	--
116141A 001*	½" NPT F	--	¾"	3"	11¼"	--	2.7 (1.2)
116150A	¾" NPT F	4"	¾"	3"	--	1.6 / (0.7)	--
116150A 001	¾" NPT F	--	¾"	3"	10 9/16"	--	3.1 (1.4)
116151A*	¾" NPT F	4"	¾"	3"	--	1.7 / (0.8)	--
116151A 001*	¾" NPT F	--	¾"	3"	10 9/16"	--	3.2 (1.5)

Codes with suffix '001' come assembled with NA108 ball valves on the inlet and outlet.

* Models with integral outlet temperature gauge.

Dimensions



ThermoSetter 116A series with check valves

Code	A	B	C	D	E	Wt w/o ball valves (lb/kg)	Wt with ball valves (lb/kg)
116140AC	1/2" NPT F	5 7/16"	3/4"	3"	--	1.8 / 0.8	--
116140AC 001	1/2" NPT F	--	3/4"	3"	12 15/16"	--	2.8 (1.3)
116141AC*	1/2" NPT F	5 7/16"	3/4"	3"	--	1.9 / 0.9	
116141AC 001*	1/2" NPT F	--	3/4"	3"	12 15/16"	--	2.9 (1.3)
116150AC	3/4" NPT F	5 5/8"	3/4"	3"	--	1.8/ 0.8	--
116150AC 001	3/4" NPT F	--	3/4"	3"	13 1/8"	--	3.1 (1.4)
116151AC*	3/4" NPT F	5 5/8"	3/4"	3"	--	1.9 / 0.9	--
116151AC 001*	3/4" NPT F	--	3/4"	3"	13 1/8"	--	3.2 (1.5)

Codes with suffix '001' come assembled with NA108 ball valves on the inlet and outlet.

* Models with integral outlet temperature gauge.

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice. Contractors should request production drawings if prefabricating the system

Job name _____
 Job location _____
 Engineer _____
 Mechanical contractor _____
 Contractor's P. O. No. _____
 Representative _____

Size _____
 Quantity _____
 Approval _____
 Service _____
 Tag No. _____
 Notes _____

ThermoSetter™ Recirculation thermal balancing valve



1161 Series 1" - 1¼"

Submittal Data 03301.02 NA — Issue Date 10/2021

Application

The ThermoSetter™ adjustable thermal balancing valve is used for automatic balancing of recirculation loops in domestic hot water systems, to speed hot water delivery, reduce water waste and save energy. The internal thermostatic balancing cartridge automatically modulates flow to ensure a constant temperature in the recirculation piping system. The 116A Series has an adjustment knob with 95°F to 150°F (35°C to 65°C) temperature scale indication. An integral dry-well holds a slide-in temperature gauge for local indication, or a sensor for remote temperature sensing. The optional check valve protects against circuit thermo-syphoning.

The ThermoSetter 116A series is also available pre-assembled with the Caleffi NA108 series low-lead brass full-port ball valve for isolation. This can be ordered complete with two of these ball valves plus low-lead close nipples by adding a suffix "001" to the order code number.

Typical Specification

Furnish and install on the plans and describing herein, a ThermoSetter recirculation thermal balancing valve, as manufactured by Caleffi. Each balancing valve must be designed with a DZR low-lead brass body that complies with NSF/ANSI 372, as certified by ICC-ES, file PMG-1360. Complies with NSF/ANSI/CAN 61 (180°F/82°C Commercial Hot) as certified by ICC-ES, file PMG-1512. Stainless steel & copper adjustable cartridge; peroxide-cured EPDM seals, ABS adjustment knob. The balancing valve must include 1" or 1¼" NPT female connections. Each valve has 230 psi (16 bar) maximum working pressure and 95-150°F (35-65°C) adjustable temperature range. Provide with optional outlet temperature gauge with 30-180°F (0-80°C) temperature scale, optional check valve, and optional pre-formed insulation shell. Provide with optional inlet and outlet low-lead brass full-port ball valves, NPT female x NPT female, for isolation, factory-assembled, or separately-sourced, Code NA108 series, with separately-sourced low-lead close nipples. Each valve shall be Caleffi model 1161 or approved equal. (See product instructions for specific installation information.)

NSF/ANSI/CAN 61



Technical specifications

Materials

Body: DZR low-lead brass
Adjustable cartridge: stainless steel & copper
Springs: stainless steel AISI 302 (EN 10270-3)
Hydraulic seals: peroxide-cured EPDM
Adjustment knob: ABS

Performance:

Suitable fluid: water
Max. working pressure: 230 psi (16 bar)
Max. differential pressure: 15 psi (1 bar)
Max. inlet temperature: 195°F (90°C)
Adjustment temperature range: 95-150°F (35-65°C)
Flow Cv (Kv) max: 4.4 (3.8)
Flow Cv (Kv) min: 1.0 (0.9)
Flow Cv (Kv) design: 1.9 (1.6)

Connections:

Main connections: 1" and 1¼" NPT female
Temperature gauge/sensor dry-well: Ø 10 mm metric

Temperature gauge code 116010

Scale: 30 - 180°F (0-80°C)
Diameter: 1½" (40 mm)
Stem diameter: 0.35" (9 mm)

Technical specifications of insulation, code CBN116140

Materials: closed cell expanded PE-X
Thickness: ½ inch (13 mm)
Density: -internal part: 1.9 lb/ft³ (30 kg/m³)
-external part: 5.0 lb/ft³ (80 kg/m³)
Thermal conductivity (DIN52612):
- at 32°F (0°C): 0.82 BTU · in/hr · ft² · °F (0.0345 W/(m · K))
- at 105°F (40°C): 0.94 BTU · in/hr · ft² · °F (0.0398 W/(m · K))
Coefficient of resistance to the diffusion of vapor: > 1,300
Working temperature range: 32-212°F (0-100°C)
Flammability (ASTM D 635): Class VO

Certifications:

- Complies with codes IPC and UPC and standard NSF/ANSI/CAN 61(180°F/82°C Commercial Hot), as certified by ICC-ES, file PMG-1512.
- Complies with NSF/ANSI 372, low lead, as certified by ICC-ES, file PMG-1360.

Technical specifications of isolation ball valves

Materials

Body and end connection: high tensile strength forged low-lead brass C28500
Ball and stem: low-lead brass C28500
Stem nut: steel (CL04)
Seats (2): PTFE
90° stop: hot rolled steel (DD11)
O-ring stem seals (2): nitrile butadiene rubber (NBR) & fluoro-elastomer (FKM)
Thrust washer and packing ring: PTFE
Black T-handle: polyamide thermal plastic (PA6.6)
Handle top cap: acrylonitrile butadiene styrene (ABS)

Performance

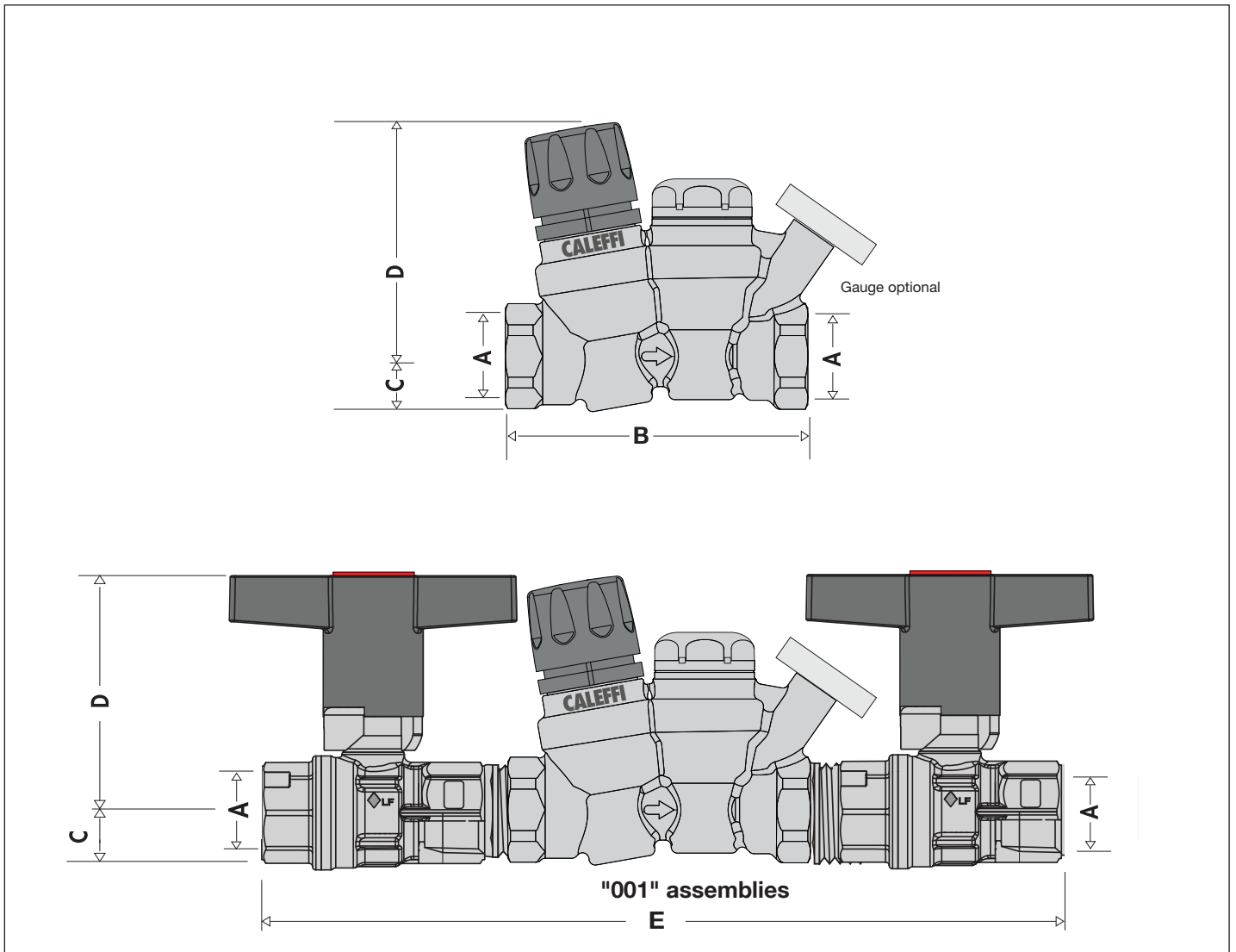
Suitable Fluids: water, glycol solutions
Max. percentage of glycol: 50%
Pressure rating: 600 WOG-150WSP
Working temperature range: -4 - 366°F (-20 - 186°C)
Shutoff performance: bubble tight

Connections:

Main connections: 1", 1-1/4" NPT female inlet and outlet

Dimensions

ThermoSetter 116A series without check valves



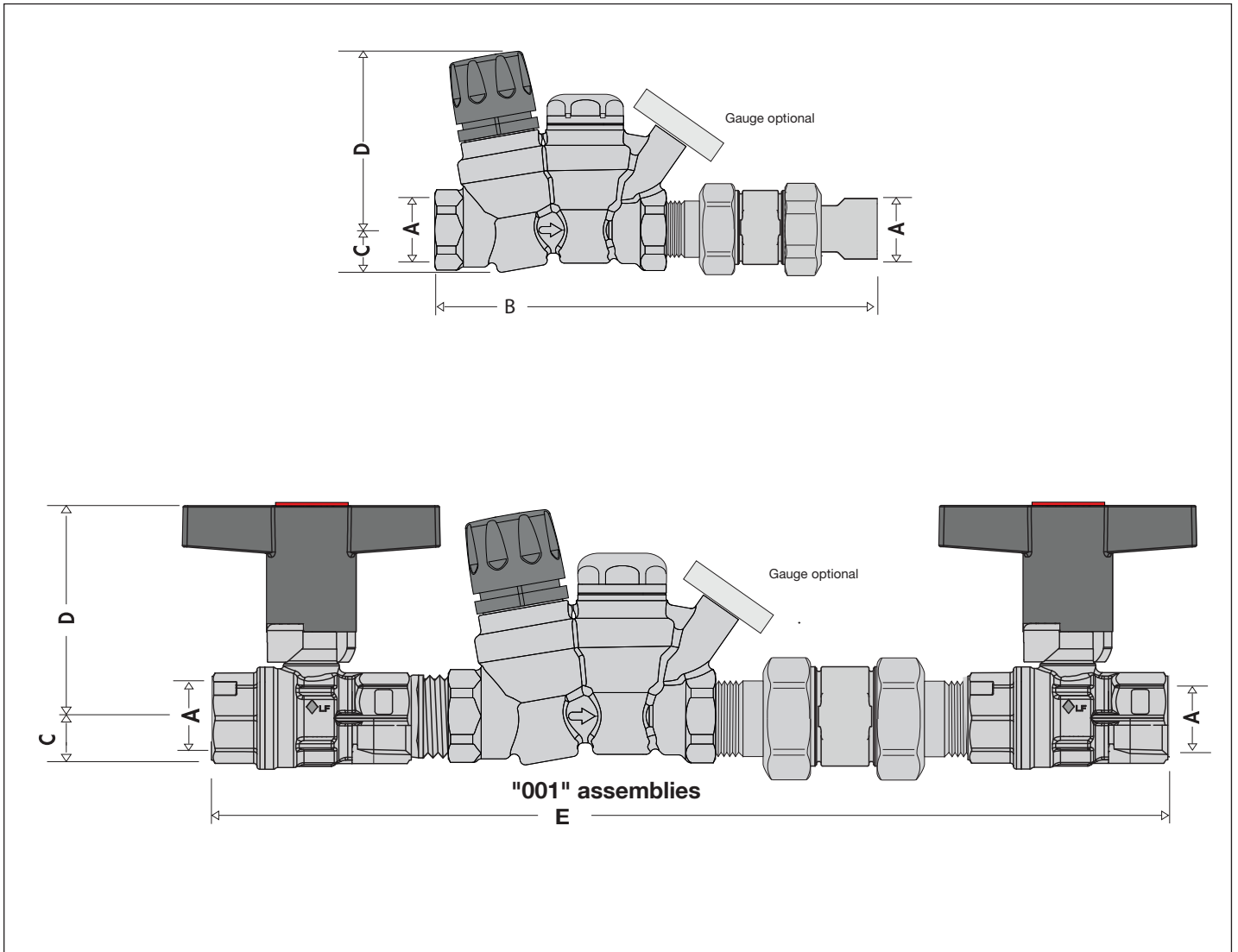
Code	A	B	C	D	E	Wt w/o ball valves (lb/kg)	Wt with ball valves (lb/kg)
116160A	1" NPT F	4½"	1"	4 ¾"	--	2.1 / (0.95)	--
116160A 001	1" NPT F	--	1"	4 ¾"	12"	--	4.1 (1.8)
116161A*	1" NPT F	4½"	1"	4 ¾"	--	2.2 / (1.00)	--
116161A 001*	1" NPT F	--	1"	4 ¾"	12"	--	4.2 (1.9)
116170A	1¼" NPT F	4½"	1"	4 ¾"	--	2.1 / (0.95)	--
116170A 001	1¼" NPT F	--	1"	4 ¾"	13 7/8"	--	5.6 (2.5)
116171A*	1¼" NPT F	4½"	1"	4 ¾"	--	2.2 / (1.00)	--
116171A 001*	1¼" NPT F	--	1"	4 ¾"	13 7/8"	--	5.7 (2.6)

Codes with suffix '001' come assembled with NA108 ball valves on the inlet and outlet.

* Models with integral outlet temperature gauge.

Dimensions

ThermoSetter 116A series with check valves



Code (1)	A	B	C	D	E	Wt w/o ball valves (lb/kg)	Wt with ball valves (lb/kg)
116160AC	1" NPT F	9 1/2"	1"	4 3/8"	--	2.3 / 1.00	--
116160AC 001	1" NPT F	--	1"	4 3/8"	15 3/4"	--	4.3 (1.9)
116161AC*	1" NPT F	9 1/2"	1"	4 3/8"	--	2.4 / 1.1	--
116161AC 001*	1" NPT F	--	1"	4 3/8"	15 3/4"	--	4.4 (2.0)
116170AC	1 1/4" NPT F	9 3/4"	1"	4 3/8"	--	2.3 / 1.00	--
116170AC 001	1 1/4" NPT F	--	1"	4 3/8"	17 3/8"	--	4.1 (1.8)
116171AC*	1 1/4" NPT F	9 3/4"	1"	4 3/8"	--	2.4 / 1.1	--
116171AC 001*	1 1/4" NPT F	--	1"	4 3/8"	17 3/8"	--	4.2 (1.9)

Codes with suffix '001' come assembled with NA108 ball valves on the inlet and outlet.

* Models with integral outlet temperature gauge.

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice. Contractors should request production drawings if prefabricating the system

Job name _____	Size _____
Job location _____	Quantity _____
Engineer _____	Approval _____
Mechanical contractor _____	Service _____
Contractor's P.O. No. _____	Tag No. _____
Representative _____	Notes _____

F

SMITH® JAY R. SMITH MFG. CO.®
 MEMBER OF MORRIS GROUP INTERNATIONAL
 POST OFFICE BOX 3237
 MONTGOMERY, ALABAMA 36109-0237 (USA)
 TEL: 334-277-8520 FAX: 334-272-7396 www.jrsmith.com



MEMBER OF:

LOCATION

VC-1

DRAWING NUMBER
S1748

SIZE
A

SCALE:
NONE

DATE:
5-24-85

APPROVED BY:
TD

CHECKED BY:
TD

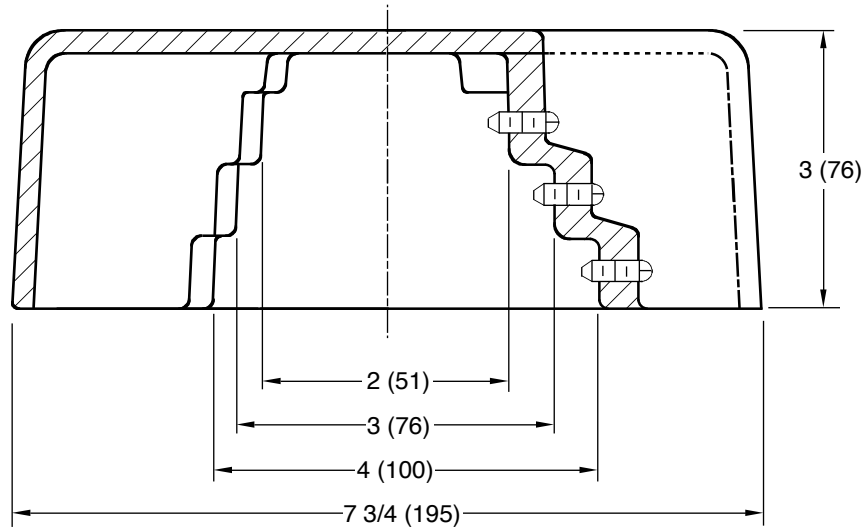
DRAWN BY:
VGD

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

ROOF ACCESSORY

VENT CAP VANDAL PROOF HOODED TYPE COUNTER FLASHING

FUNCTION: Recommended for all plumbing vents which terminate above the roof level. Unique vandal proof design eliminates the possibility of sticks or other materials being either carelessly or maliciously placed in the vent openings, thus causing stoppage of the drainage system.



NOTE: Dimensions shown in parentheses are in millimeters.

(Pipe Sizes) = 02(50), 03(75) or 04(100)

Fig. 1748. . . VENT CAP

REGULARLY FURNISHED:
 Duco Cast Iron Dome Secured with Recessed Allen Socket Set Screws.

OPTIONAL MATERIALS:
 Galvanized Cast Iron -G

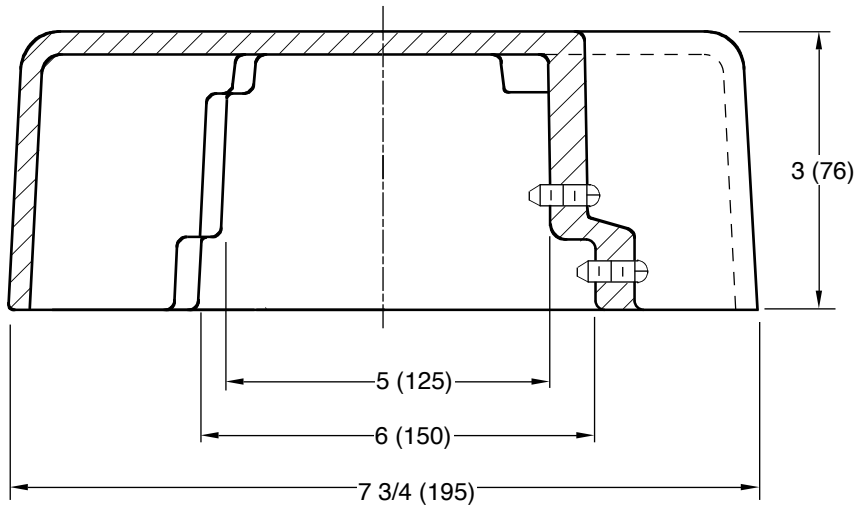
1748

FIGURE NUMBER	F	03/01/02	Deleted 1 1/2" optional pipe size Revised Millimeters	JJ	BS	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER 1748
	REV.	DATE		DESCRIPTION				

ROOF ACCESSORY

VENT CAP VANDAL PROOF HOODED TYPE COUNTER FLASHING

FUNCTION: Recommended for all plumbing vents which terminate above the roof level. Unique vandal proof design eliminates the possibility of sticks or other materials being either carelessly or maliciously placed in the vent openings, thus causing stoppage of the drainage system.



NOTE: Dimensions shown in parentheses are in millimeters.

(Pipe Size) = 05 (125) or 06 (150)

Fig. 1748. . . VENT CAP

REGULARLY FURNISHED:
 Duco Cast Iron Dome Secured with Recessed Allen Socket Set Screws.

OPTIONAL MATERIALS:
 Galvanized Cast Iron -G

DRAWING NUMBER **S1748BS**
 SIZE **A**
 SCALE: **NONE**
 DATE: **5-24-85**
 APPROVED BY: **TD**
 CHECKED BY: **TD**
 DRAWN BY: **VGD**

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

1748BS	C B A	6-26-96 7-1-94 10-91	Revised Submittal Update Revised drawing	EMB EMB CMB	BS SB	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER 1748BS
FIGURE NUMBER	REV.	DATE	DESCRIPTION	BY	CKD. BY			

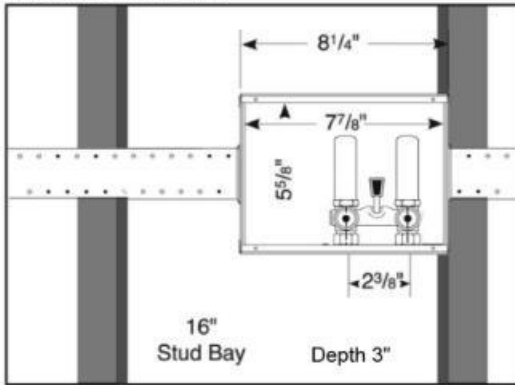
SPECIFICATION SUBMITTAL SHEET



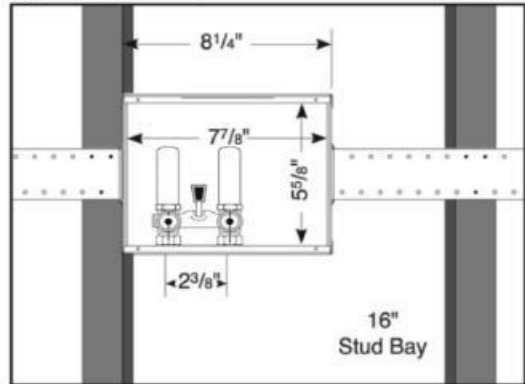
REVERSIBLE DRAIN WHITE POWDER COATED WMOB with Single Lever Arrester Valve

CWB-1

Left Hand Drain Option



Right Hand Drain Option



Specifications:

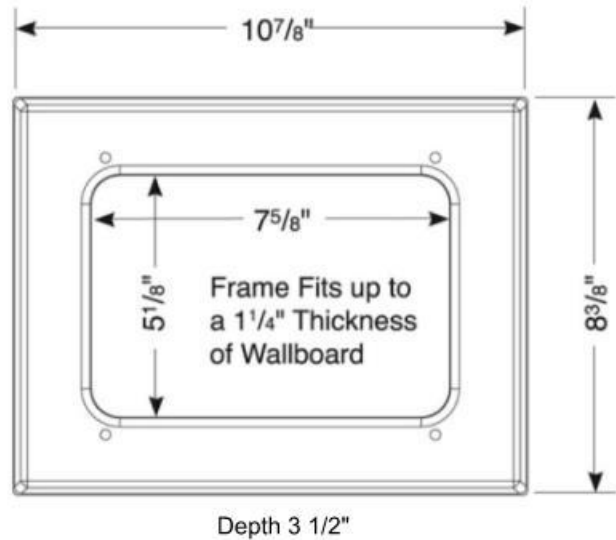
Furnish and install reversible drain white powder coated econo metal washing machine outlet box. Unit shall be Guy Gray product code checked below as manufactured by IPS Corporation.

Box Material:

White Powder Coat on Cold Rolled Steel Finish
20 gauge box with 20 gauge faceplate

Valve & Drain Options:

Single Lever Hammer Arrester Valve with 1/2" MIP/Sweat connection with or without hammer arresters. Kit includes valves, locknuts, and o-rings. 2" Slipnut drain kit included.

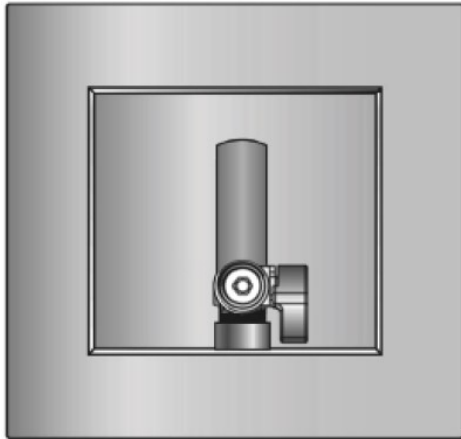


Item #	Product Description	Model #	Quantity
82157	Reversible Single Lever Valve w/Hammer Arrester, Unassembled	MWB-20	5

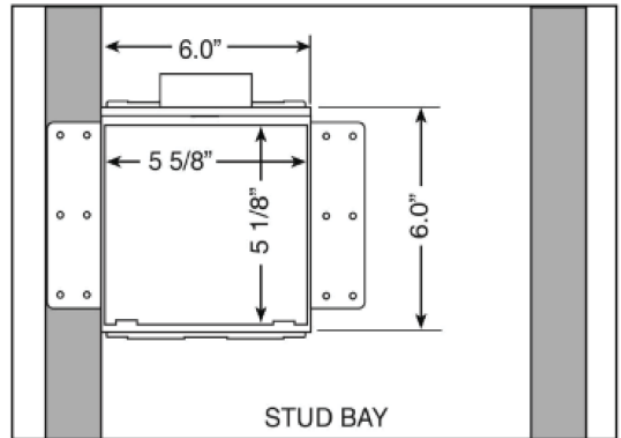




FR-12 PLASTIC ICE MAKER OUTLET BOX
 With Lead Free, Quarter Turn Hammer Arrester Valves



IMB-1



Specification:

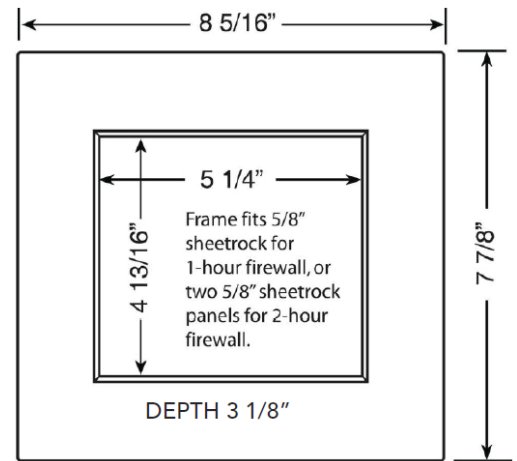
Furnish and install Guy Gray fire rated recessed ice maker outlet box. Unit shall have a lead free brass plated quarter-turn ball valve and integral hammer arrester. Unit shall be Guy Gray product code checked below as manufactured by IPS Corporation.

Box Material:

PVC Resin with Intumescent Pad attached.

Valve & Drain Options:

Lead free Qtr Turn Arrester Valve with 1/2" MIP/Sweat, CPVC, Pex, Wirsbo®, or REHAU EVERLOC+™ connection and a 1/4" compression outlet. Valve complies with NSF/ANSI 372 (annex G) and the U.S. Safe Drinking Water Act.



Product Code #	Product Description	Model Number	Units/Case
82417	Lead Free Qtr Turn Arrester Valve, 1/2" Sweat Conx.	FRIB12ABSHA	5
82419	Lead Free Qtr Turn Arrester Valve, 1/2" CPVC Conx.	FRIB12ABCHA	5
82421	Lead Free Qtr Turn Arrester Valve, 1/2" PEX Conx.	FRI12ABPHA	5
82423	Lead Free Qtr Turn Arrester Valve, 1/2" Wirsbo® Conx.	FRIB12ABWHA	5
CONTRACTOR PACKS			
82418	Lead Free Qtr Turn Arrester Valve, 1/2" Sweat Conx.	FRIB12ABSHACP	10
82420	Lead Free Qtr Turn Arrester Valve, 1/2" CPVC Conx.	FRIB12ABCHACP	10
82422	Lead Free Qtr Turn Arrester Valve, 1/2" PEX Conx.	FRIB12ABPHACP	10
82424	Lead Free Qtr Turn Arrester Valve, 1/2" Wirsbo® Conx.	FRIB12ABWHACP	10
83375	Lead Free Qtr Turn Arrester Valve, 1/2" REHAU EVERLOC+™ Conx.	FRIB12ABRHACP	10



WM-1/WM-2/WM-3

OMNI+ Compound Stainless (C²S) Water Meter

1-1/2", 2", and 3"



The OMNI™+ C²S meter operation is based on advanced Floating Ball Technology (FBT).

Performance

The patented measurement principles of the OMNI+ C²S meter assure enhanced accuracy ranges, an overall greater accuracy, and a longer service life than any other comparable class meter produced. The OMNI+ C²S meter has no restrictions as to sustained flow rates within its continuous operating range. The floating ball measurement technology allows for flows up to its rated maximum capacity without undue wear or accuracy degradation when installed in any orientation.

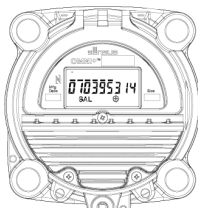
Construction

The OMNI+ C²S meter consists of two basic assemblies; the maincase and the measuring chamber. The measuring chamber assembly includes the "floating ball" impeller with a coated titanium shaft, hybrid axial bearings, integral flow straightener and an all electronic programmable register with protective bonnet. The maincase is made from industry proven 304 Stainless Steel. Maincase features are; easily removable measuring chamber, unique chamber seal to the maincase using a high pressure o-ring, testing port and an AWWA compliant strainer.

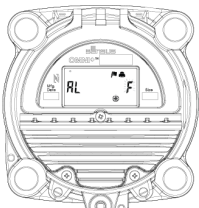
OMNI™+ REGISTER DISPLAY



Segment Test View



Totalizer View



Notification View



Flow Rate View

Conformance to Standards

The OMNI+ C²S meter meets and far exceeds the most recent revision of AWWA Standard C701 and C702 class II. Additionally, the meter does not require a valve to meet these standards. Each meter is performance tested to ensure compliance. All OMNI meters are NSF/ANSI Standard 61, Annex F and G approved latest standards.

OMNI+ Electronic Register

The OMNI+ electronic register is hermetically sealed with an electronic pickup containing no mechanical gearing. The OMNI+ register features a programmable totalizer registration, an optional digital pulse signal, AMI/ AMR reading digits, and a resettable test totalizer. The large, easy-to-read LCD also displays both forward and reverse flow directions. The OMNI+ tamper-proof security cover can be positioned in any of 270 degrees of rotation, with indexing points at each of the 90-degree customary register viewing positions.

Magnetic Drive

Meter registration is achieved by utilizing a fully magnetic pickup system. This is accomplished by the magnetic actions of the embedded rotor magnets and the ultra sensitive register pickup probe. The only moving component in water is the "floating ball" impeller.

Measuring Element

The revolutionary thermoplastic, hydrodynamically balanced impeller floats between the bearings. The Floating Ball Technology (FBT) allows the measuring element to operate virtually without friction or wear, thus creating the extended upper and lower flow ranges capable on only the OMNI+ C²S meter.

OMNI+ Compound Stainless (C²S) Water Meter

1-1/2", 2", and 3"

Strainer

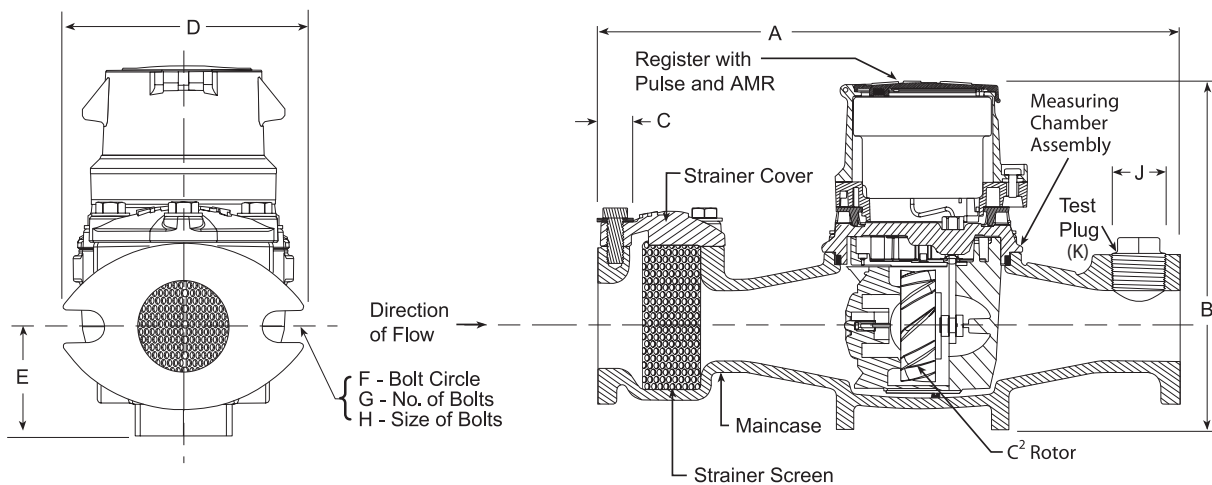
The OMNI+ C²S with the AWWA compliant "V" shaped strainer using a stainless steel screen along with Floating Ball Technology (FBT) create a design that gives far improved accuracy even in those once thought questionable settings. A removable strainer cover permits easy access to the screen for routine maintenance.

AMR / AMI Systems

Meters and encoders are compatible with current Sensus AMR/AMI systems.

Maintenance

The OMNI+ C²S meter is designed for easy maintenance. Should any maintenance be required, the measuring chamber and / or strainer cover can be removed independently. Parts and or a replacement measuring chamber may be utilized in the event repairs are needed. Replacement Measuring Chambers are available for the OMNI+ C²S meters and may also be utilized for retrofitting to competitive meters to achieve increased accuracy and extended service life.



DIMENSIONS AND NET WEIGHTS

Meter and Pipe Size	A	B	C	D	E	F	G	H	J	K	Net Weight	Shipping Weight
1-1/2" DN 40mm	13" 330mm	7-7/8" 200mm	15/16" 24mm	5-1/8" 130mm	2-5/16" 59mm	4" 102mm	2	5/8" 16mm	1" 25mm	3/8" 10mm	18.5 lbs. 8.4 kg.	23.1 lbs. 10.4 kg.
2" DN 50mm	15-1/4" 387mm	7-7/8" 200mm	1" 25mm	5-3/4" 146mm	2-5/16" 59mm	4-1/2" 114mm	2	3/4" 19mm	1" 25mm	1/2" 13mm	25 lbs. 11.3 kg.	29.5 lbs. 13.4 kg.
3" DN 80mm	17" 432mm	8-3/4" 225mm	3/4" 19mm	7-7/8" 200mm	4-1/8" 105mm	6" 152mm	4	5/8" 16mm	1" 25mm	1/2" 13mm	52.5 lbs. 22.8 kg.	57.0 lbs. 25.9 kg.

OMNI+ Compound Stainless (C²S) Water Meter

1-1/2", 2", and 3"

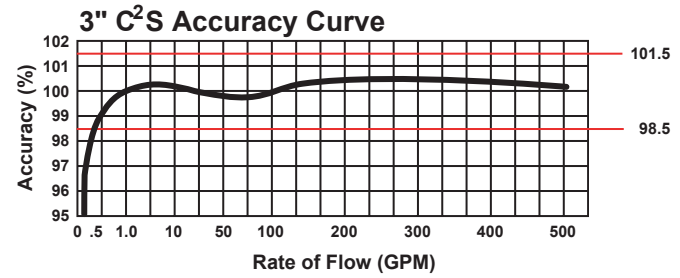
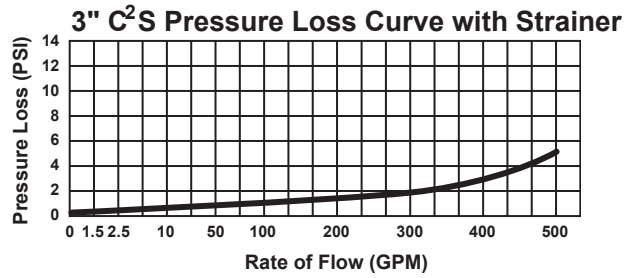
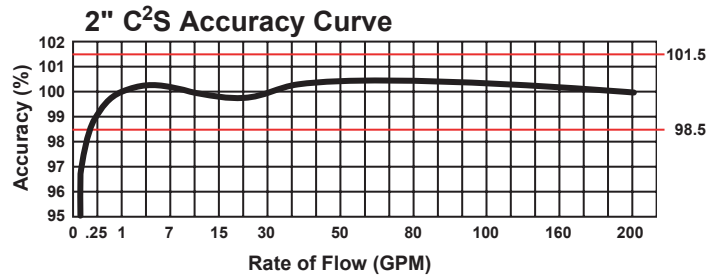
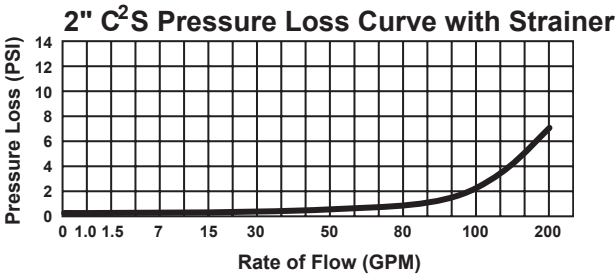
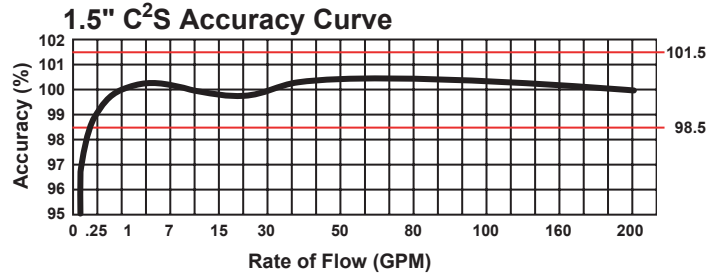
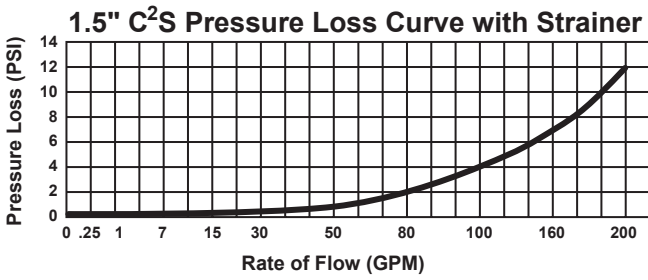
SPECIFICATIONS

Service	Measurement of potable and reclaim water.	Operating temperature range of 33 °F (56 °C) - 150 °F (65.6 °C)
Operating Range (100% ± 1.5%)	1-1/2": 0.5 - 200 GPM (0.11 - 45 m3/hr) 2": 0.5 - 200 GPM (0.11 - 45 m3/hr) 3": 1.0 - 500 GPM (0.23 - 114 m3/hr)	
Low flow (95% - 101.5%)	1-1/2": 0.25 GPM (.06 m3/hr) 2": 0.25 GPM (.06 m3/hr) 3": 0.5 GPM (0.11 m3/hr)	
Maximum Continuous Operation	1-1/2": 160 GPM (36 m3/hr) 2": 160 GPM (36 m3/hr) 3": 400 GPM (91 m3/hr)	
Maximum Intermittent Operation	1-1/2": 200 GPM (45 m3/hr) 2": 200 GPM (45 m3/hr) 3": 500 GPM (114 m3/hr)	
Pressure Loss	1-1/2": 6.9 psi @ 160 GPM (0.48 bar @ 36 m3/hr) 2": 4.3 psi @ 160 GPM (0.30 bar @ 36 m3/hr) 3": 3.2 psi @ 400 GPM (0.22 bar @ 91 m3/hr)	
Maximum Operating Pressure	200 PSI (13.8 bar)	
Flange Connections	U.S. ANSI B16.1 / AWWA Class 125	
Test Ports	NPT	
Register	Fully electronic sealed register with programmable registration (Gal. /Cu.Ft./ Cu. Mtr. / Imp. Gal. / Acre Ft.)	Programmable AMR/AMI reading and pulse outputs Guaranteed 10-year battery life
NSF Approved Materials	Maincase: 304 Stainless Steel Measuring Chamber: Thermoplastic Rotor "Floating Ball": Thermoplastic Radial Bearings: Hybrid Thermoplastic Thrust Bearings: Sapphire/Ceramic Jewel	Magnets: Ceramic Strainer Screen: Stainless Steel Strainer Cover: 304 Stainless Steel Test Plug: 304 Stainless Steel

OMNI+ Compound Stainless (C²S) Water Meter

1-1/2", 2", and 3"

Headloss Curves



SENSUS | 637 Davis Drive | Morrisville, NC 27560 | 800.638.3748

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KOHLER®

Cimarron®
ContinuousClean ST two-piece elongated toilet, 1.28
gpf
K-31624

WC-1R

Features

- Two-piece design
- Elongated bowl offers added room and comfort
- Comfort Height® feature offers chair-height seating that makes sitting down and standing up easier for most adults
- 1.28 gpf (4.8 lpf)
- Left-hand Polished Chrome trip lever
- 2-1/8" (54 mm) fully glazed trapway
- Revolution 360® flushing technology generates a forceful swirling motion to keep the bowl clean longer
- Sanitary guard where bowl and tank meet for ease of cleaning
- CleanCoat™ surface treatment inhibits the growth of water scale and mineral stains for improved ease of cleaning
- ContinuousClean system automatically dispenses cleaning solution with every flush
- Works with any white toilet bowl cleaner tablet. Tablets last for more than one year in ContinuousClean system
- Combination of ContinuousClean technology with CleanCoat™ surface and Revolution 360® flushing technology keeps the bowl cleaner 5x longer than conventional KOHLER toilets. (Based on 2019 consumer perception study and bacterial counts)

Technology

- AquaPiston® canister optimizes the flow out of the tank, harnessing gravity and the natural powerful reducing cascade of water to increase the power and effectiveness of the flush
- Adjustment dial lets you set how much cleaning solution is dispensed with every flush

Installation

- Standard 12" (305 mm) rough-in

Recommended Products/Accessories

K-4636 Cachet® Quiet-Close™ elongated toilet seat
K-4108 C³®-230 Elongated bidet toilet seat with remote control
K-5420 Low-Profile Bolt Caps
K-25986-L Left-hand trip lever

Included Components

Product consists of:

31588
31618

Additional Components:

Hardware kit
Tank cover
Trip lever



ADA

CSA B651

OBC

Codes/Standards

ASME A112.19.2/CSA B45.1
DOE - Energy Policy Act 1992
EPA WaterSense®
California Energy Commission (CEC)
ADA
ICC/ANSI A117.1
CSA B651
OBC



KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color Code Description

	0	White
	96	Biscuit

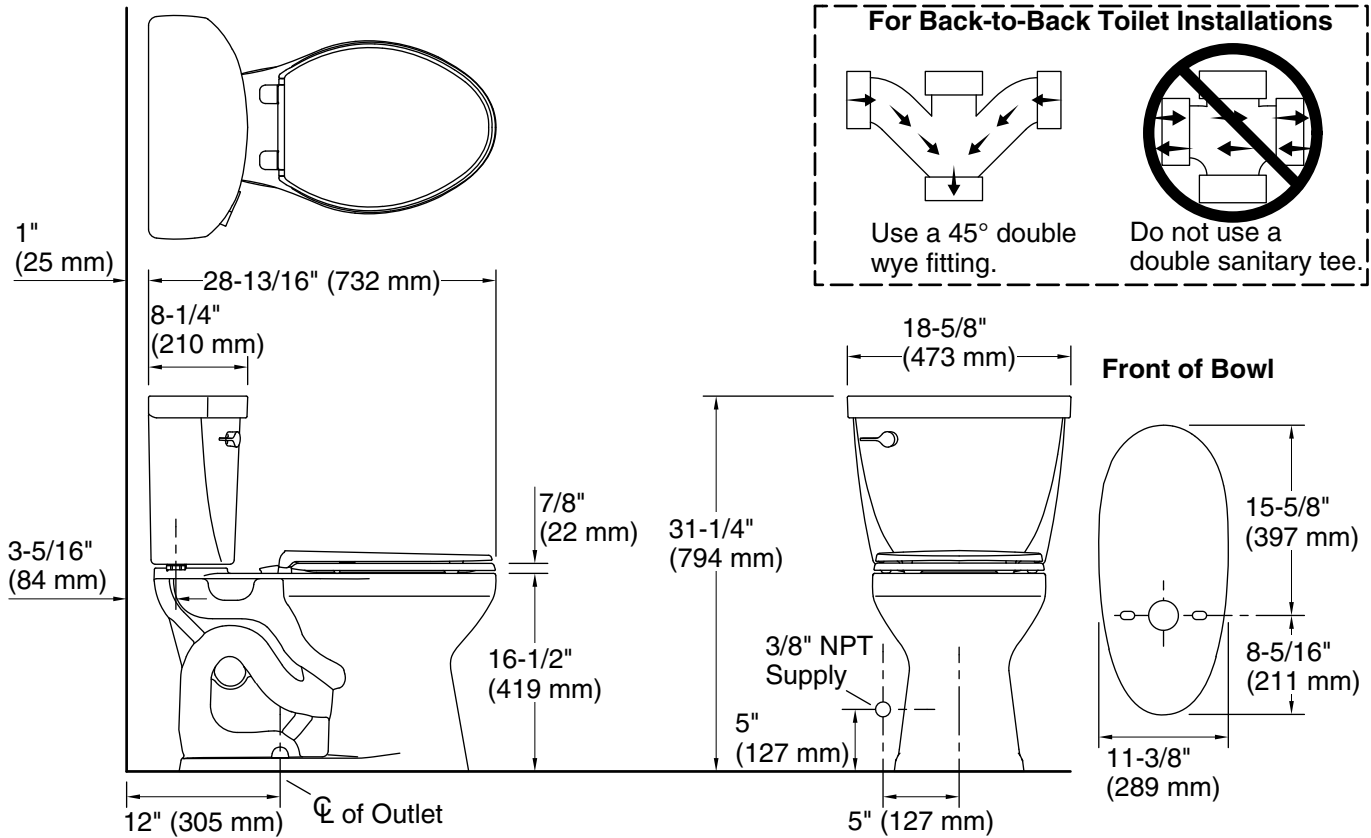
1-800-4KOHLER (1-800-456-4537)

Kohler Co. reserves the right to make revisions without notice to product specifications.

For the most current Specification Sheet, go to www.kohler.com.

1-8-2023 23:28 - US/CA

THE BOLD LOOK
OF **KOHLER®**



Technical Information

All product dimensions are nominal.

Toilet type:	Floor-mount
Waste Outlet:	Floor
Bowl shape:	Elongated
Flush type:	AquaPiston®, Revolution 360®
Trap passageway:	2-1/8" (54 mm)
Water Consumption	
Full:	1.28 gpf (4.8 lpf)
Water surface size:	10-3/8" x 8-1/8" (264 mm x 206 mm)
Rim to water surface:	6-5/8" (168 mm)
Rough-in:	12" (305 mm)
Seat-mounting holes:	5-1/2" (140 mm)

Notes

Install this product according to the installation instructions.

Install this product according to the installation instructions.

ADA, OBC, CSA B651 compliant when installed to the specific requirements of these regulations.

Plumbing codes may require elongated toilets and elongated, open-front seats in public bathrooms.

Accessibility standards may require controls to be located on the open side of the toilet.

KOHLER®

WC-2R

Wellworth®

Two-piece elongated toilet, 1.28 gpf
K-3998

Features

- Two-piece design
- Elongated bowl offers added room and comfort
- 1.28 gpf (4.8 lpf)
- 2-1/8" (54 mm) fully glazed trapway
- Left-hand Polished Chrome trip lever
- Combination consists of the K-4467 tank and the K-4198 bowl
- Coordinates with other products in the Wellworth collection

Technology

- Single-flush gravity uses the force of gravity and a precision-engineered tank, bowl, and trapway to create a strong siphon during flushing
- KOHLER's canister flush valve harnesses the natural force of gravity and optimizes flushing performance
- Class Five® flushing technology offers virtually plug-free performance and rinsing power for a clean bowl

Installation

- Standard 12" (305 mm) rough-in
- Three-bolt quick-connect installation
- Seat and supply line sold separately

Water Conservation & Rebates

- Eligible for consumer rebates in some municipalities

Recommended Products/Accessories

K-4636 Cachet® Quiet-Close™ elongated toilet seat
K-5588 Purefresh® Elongated toilet seat
K-4108 C³®-230 Elongated bidet toilet seat with remote control
K-5420 Low-Profile Bolt Caps
K-9379 Trip Lever
1023457
1265114
K-23726 Drain treatment

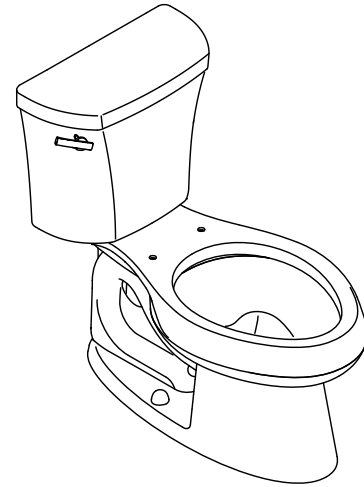
Included Components

Product consists of:

4198
4467

Additional Components:

Bolt cap accessory pack
Tank accessory pack
Tank cover
Trip lever



Codes/Standards




ASME A112.19.2/CSA B45.1
DOE - Energy Policy Act 1992
EPA WaterSense®

KOHLER® Toilets and Seats Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	0	White
	96	Biscuit
	7	Black Black™

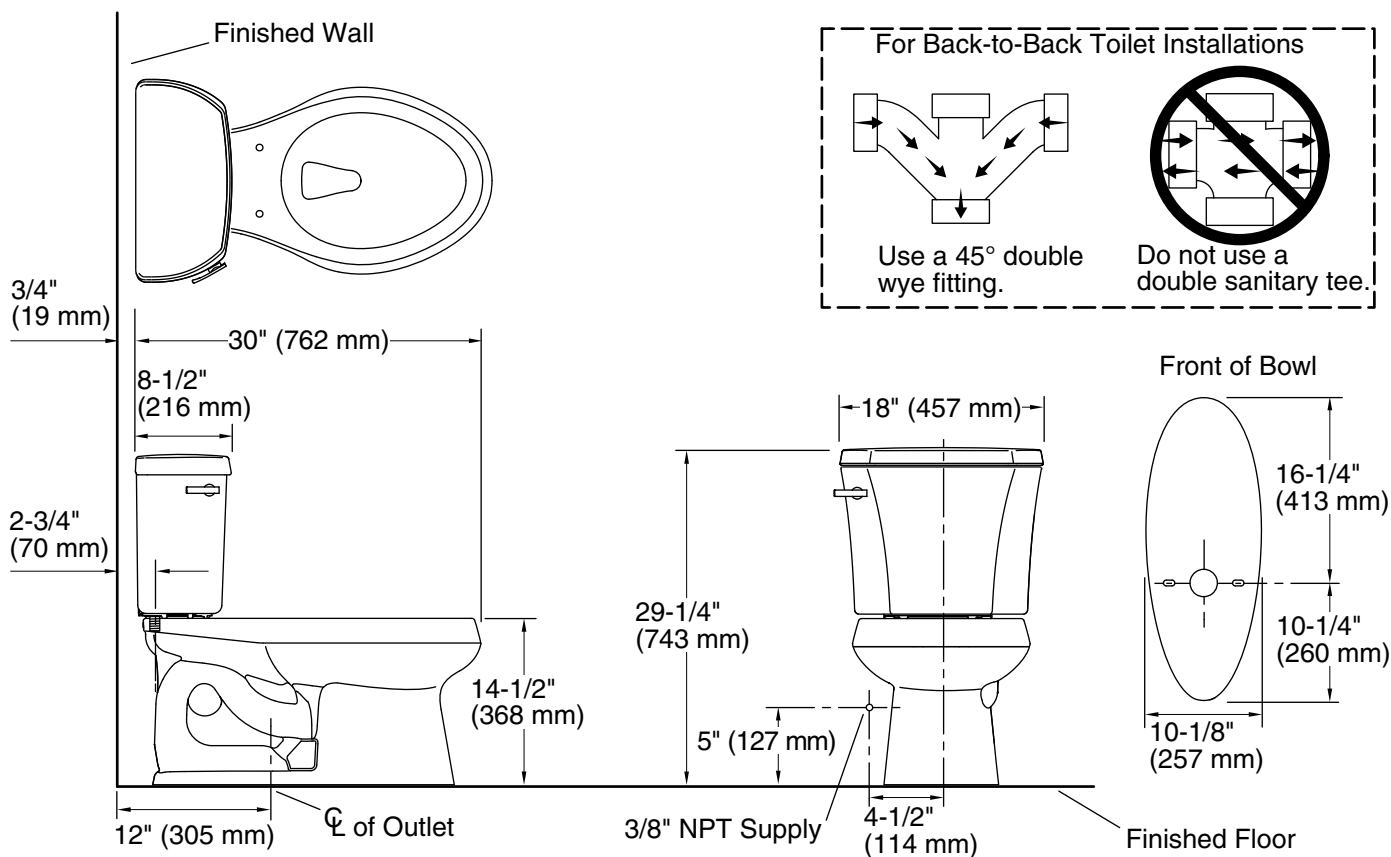
1-800-4KOHLER (1-800-456-4537)

Kohler Co. reserves the right to make revisions without notice to product specifications.

For the most current Specification Sheet, go to www.kohler.com.

2-26-2023 21:36 - US/CA

THE BOLD LOOK
OF **KOHLER**®



Technical Information

All product dimensions are nominal.

Toilet type:	Floor-mount
Waste Outlet:	Floor
Bowl shape:	Elongated
Flush type:	Class Five®
Trap passageway:	2-1/8" (54 mm)
Water Consumption	
Full:	1.28 gpf (4.8 lpf)
Water surface size:	11-1/4" x 8-1/4" (286 mm x 210 mm)
Rim to water surface:	5-1/4" (133 mm)
Rough-in:	12" (305 mm)
Seat-mounting holes:	5-1/2" (140 mm)

Notes

Install this product according to the installation instructions.

For back-to-back toilet installations: Use only a 45° double wye fitting.

Features

- Oval basin with unglazed underside
- Overflow drain
- No faucet holes; requires wall- or counter-mount faucet

Material

- Vitreous china

Installation

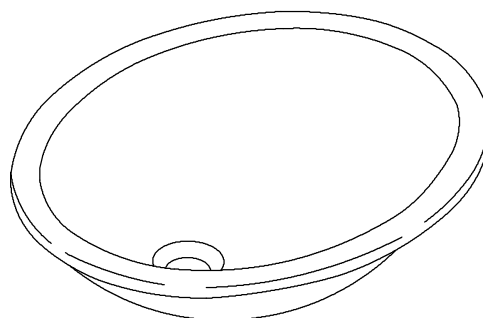
- Undermount

Recommended Products/Accessories

K-8998 P-Trap
K-23726 Drain treatment
K-23725 Cast iron cleaner

Included Components

Additional Components:
1193643



ADA

CSA B651

Codes/Standards




ASME A112.19.2/CSA B45.1
ADA
ICC/ANSI A117.1
CSA B651

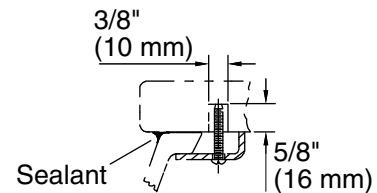
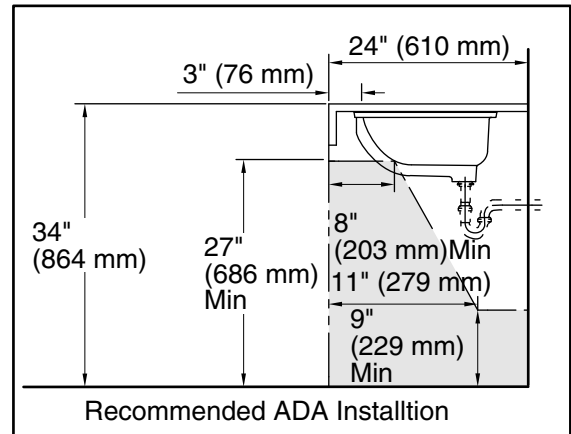
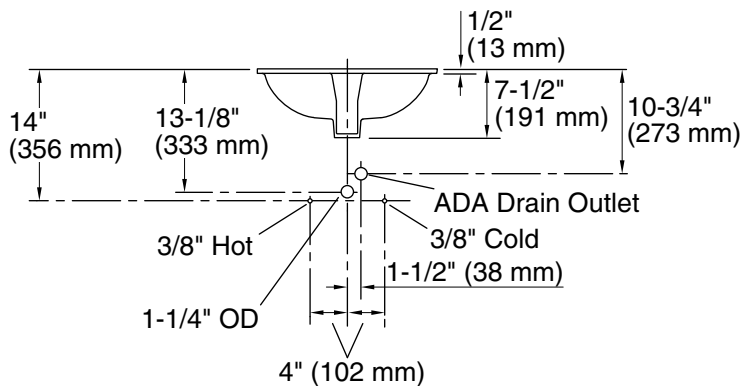
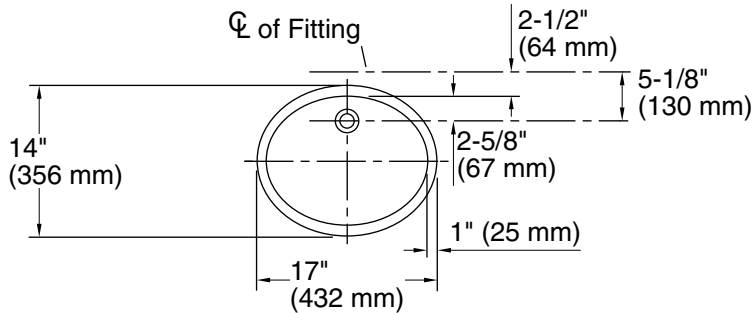
KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	0	White
	96	Biscuit
	7	Black Black™



Marble Installation



Wood Installation

Technical Information

All product dimensions are nominal.

Installation:	Undermount
Bowl area:	Length: 15-1/4" (387 mm) Width: 12-1/4" (311 mm) Bowl depth: 5-3/4" (146 mm) Water depth: 4" (102 mm)
Drain hole:	1-3/4" (44 mm)
Template:	85838-7, required, not included

Notes

Install this product according to the installation instructions.

NOTICE: Countertop manufacturer or cutter must use the current product template available at www.kohler.com, or by calling 1-800-4KOHLER. Kohler Co. is not responsible for cutout errors when the incorrect cutout template is used.

ADA, CSA B651 compliant when installed to the specific requirements of these regulations.

Manual Sink Faucets 405-E64VP369AB

L-1R

**CHICAGO
FAUCETS**
Geberit Group

Product Type

Deck-mounted manual faucet with 8" centers

Features & Specifications

- Handles include color-coded index
- 8" fixed centers
- Vandal Proof Pressure compensating laminar flow non-aerating outlet 1.0 GPM
- Vandal Proof 2-3/8" lever handle
- Quatern™ compression operating cartridge, left-hand
- Quatern™ compression operating cartridge, right-hand






Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ADA ANSI/ICC A117.1
-  ASME A112.18.1/CSA B125.1
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9
-  Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown Submitted with Variations

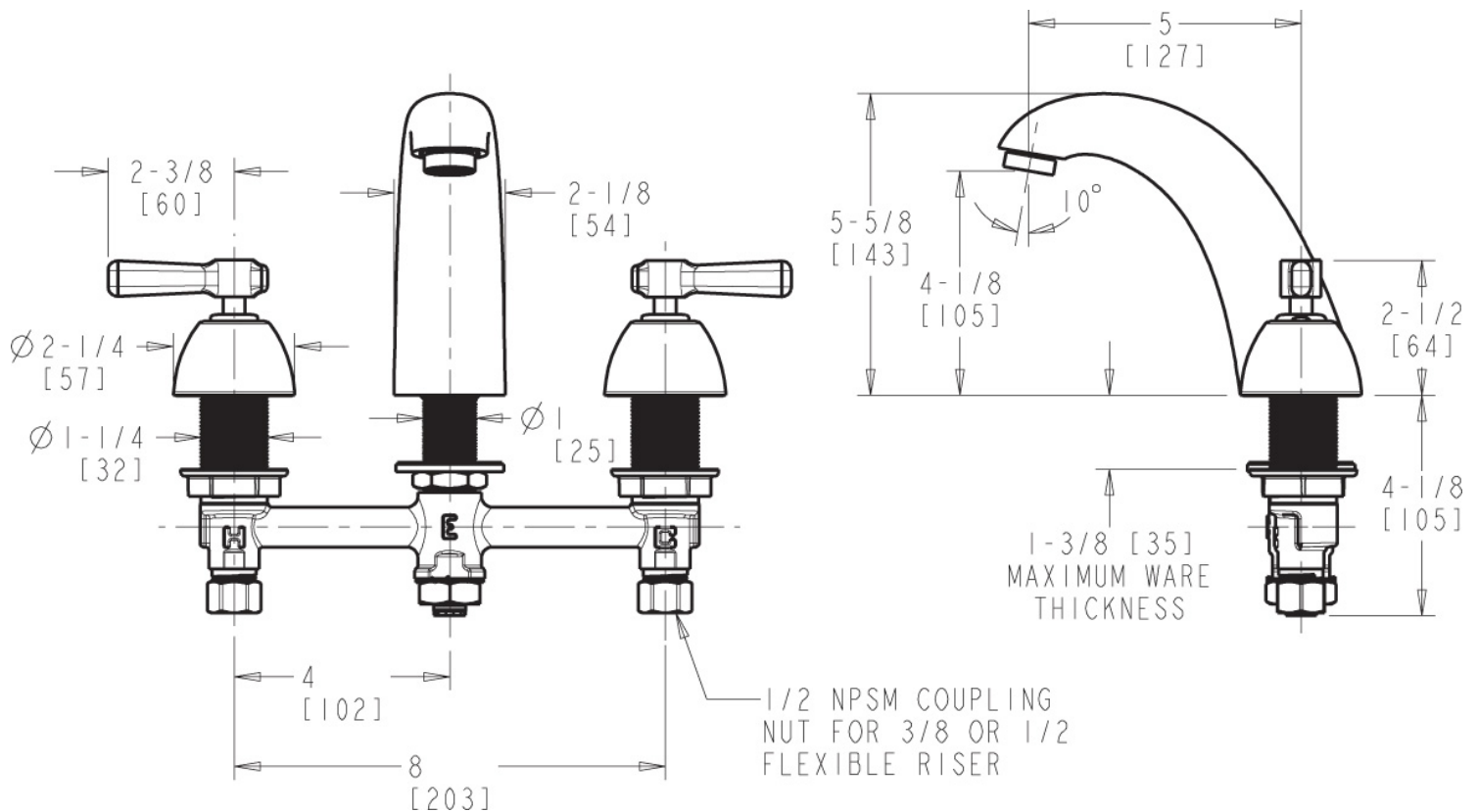
Date _____



2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

Architect/Engineer Specification

Chicago Faucets No. 405-E64VP369AB, Sink Faucet for hot and cold water, concealed deck-mount with 8" fixed centers, chrome plated. Rigid, cast brass spout, 5" center-to-center. 1.0 GPM (3.8 L/min) vandal-proof, pressure compensating, laminar flow non-aerating outlet. 2-3/8" metal, vandal-proof, lever handles with sixteen-point, tapered broach and secured blue and red index buttons. Quatern™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. 1/2" NPSM supply inlets and coupling nut for 3/8" or 1/2" flexible riser. ECAST® construction with less than 0.25% lead content by weighted average. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, and Certified to NSF/ANSI 61, Section 9.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



Features

- Made from premium materials that withstand high-volume usage
- 21-1/4" (540 mm) x 18-1/8" (460 mm)
- Faucet sold separately
- Includes wall hanger

Material

- Vitreous china

Installation

- Wall-mount
- Drilled for concealed arm carrier installation

Recommended Products/Accessories

K-8998 P-Trap
K-23726 Drain treatment
K-23725 Cast iron cleaner

Included Components

Additional Components:
Hanger(s)



ADA CSA B651 OBC

Codes/Standards




ASME A112.19.2/CSA B45.1
ADA
ICC/ANSI A117.1
CSA B651
OBC

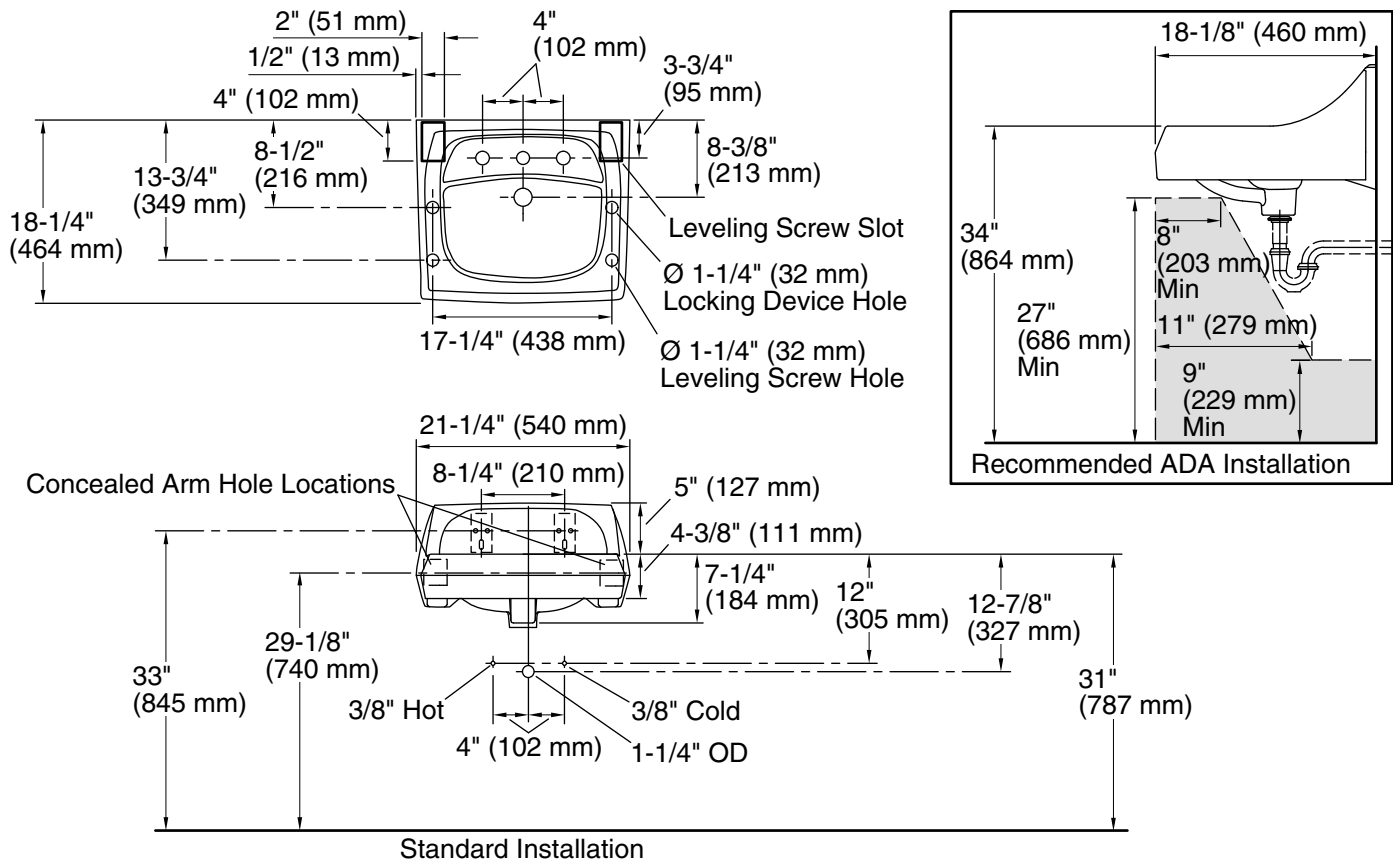
KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	0	White
	96	Biscuit
	7	Black Black™



Technical Information

All product dimensions are nominal.

Bowl configuration:	Single
Installation:	Wall-mount
Center(s):	8
Bowl area (Center):	Length: 16" (406 mm) Width: 10" (254 mm) With overflow: Yes Water depth: 3-1/8" (79 mm)
With overflow:	Yes
Number of deck holes:	3
Faucet hole spacing:	8" (203 mm)
Faucet hole(s):	1-3/8" (35 mm)
Soap/Lotion hole:	1-1/4" (32 mm)
Drain hole:	1-3/4" (44 mm)

Notes

Install this product according to the installation instructions.

ADA, OBC, CSA B651 compliant when installed to the specific requirements of these regulations.

Manual Sink Faucets 405-E64VP369AB

L-2R

**CHICAGO
FAUCETS**
Geberit Group

Product Type

Deck-mounted manual faucet with 8" centers

Features & Specifications

- Handles include color-coded index
- 8" fixed centers
- Vandal Proof Pressure compensating laminar flow non-aerating outlet 1.0 GPM
- Vandal Proof 2-3/8" lever handle
- Quatern™ compression operating cartridge, left-hand
- Quatern™ compression operating cartridge, right-hand






Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ADA ANSI/ICC A117.1
-  ASME A112.18.1/CSA B125.1
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9
-  Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown

Submitted with Variations

Date _____



2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com



SLN-ADA-2131-A-GR



KS-1R

INTEGRA GROUP
ADA COMPLIANT
INTEGRA DRAIN - SINGLE BOWL
LEDGE TYPE - 18 GA.

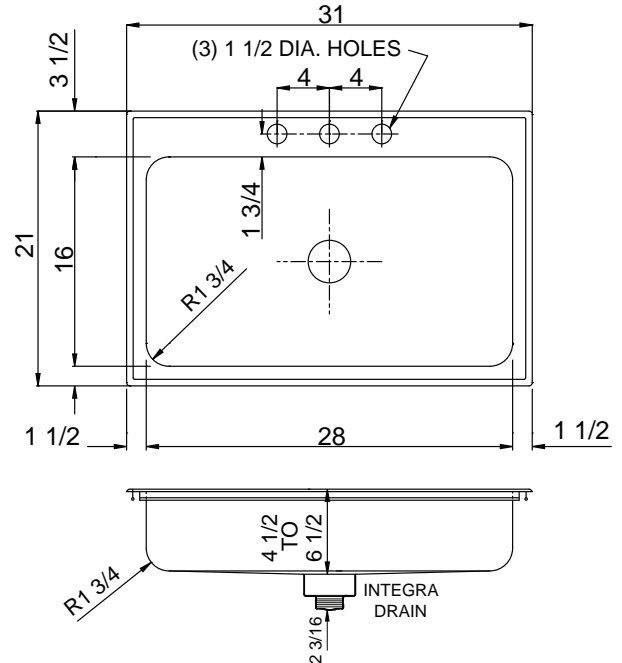


12.29
 Gallon Capacity*
***CAPACITY MATTERS**
 Max I.D. sizing with straight sided, non-tapered bowl configuration. Tight corner radius design. Capacity based on 6-1/2" bowl depth.

Seamless die-drawn construction of 18 gauge type 304 stainless steel. Interior and top surfaces satin blended No. 4 finish. Fully coated under-side insulates for sound and reduces condensation. Straight sided compartment with 1-3/4" radius corners provides greater capacity. Self-rimming top mount with Grip-Rim Plus with stainless steel mounting channels. DIntegra Drain integral drain system.



Integra Drain - seamlessly die drawn; eliminating seam in sink bottom, resulting in a hygienic surface. No additional parts or rings. Reduces installation issues and leak potential. Includes basket strainer and tailpiece. Flat grid available in place of basket, specify I-SSF option.



To Be Specified:				
■ Faucet Hole Punching:				
<input type="checkbox"/>	(1) Hole Centered			
<input type="checkbox"/>	(2) Holes on 4" centers			
<input type="checkbox"/>	(3) Holes on 4" centers (illustrated)			
<input type="checkbox"/>	Alternate Punching: Faucet Model:	Punching required:		
DEPTH - MUST BE SPECIFIED:				
<input type="checkbox"/>	4-1/2" DEEP	<input type="checkbox"/>	5" DEEP	<input type="checkbox"/>
<input type="checkbox"/>	5-1/2" DEEP	<input type="checkbox"/>	6" DEEP	<input type="checkbox"/>
<input type="checkbox"/>	6-1/2" DEEP			

CUTOUT DIMENSIONS		
Model Number	Front-to-Back	Left-to-Right
SLN-ADA-2131-A-GR	20-1/4	30-1/4

* Cutout dimensions shown (Front-to-Back) x (Left-to-Right) - corners may be square or up to 1/2" radius.

Product Options	
I-SSF	Integra St. Stl. Flat Grid
-GB	Garbage disposal outlet ¹

APPROVED FOR MANUFACTURING

MODEL NO.: **SLN-ADA-2131-A-GR** QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____

¹DISPOSER SINKS DISCLAIMER NOTE:
 Just Integra Drain sinks are designed for compatible disposers manufactured by InSinkErator® which utilizes the Quick Lock® mounting system. Use of other disposers may void the Just warranty.
 InSinkErator® and Quick Lock® are trademarks of Emerson Electric Co.



JUST MFG. COMPANY CONTINUES TO MAKE QUALITY AND FUNCTIONALITY A MARK OF THE JUST PRODUCT LINE. WE RESERVE THE RIGHT TO CHANGE PRODUCT INFORMATION WITHOUT NOTICE. DIMENSIONS MAY CHANGE AND MAY BE SUBJECT TO CHANGE WITHOUT NOTICE. NO RESPONSIBILITY IS ASSUMED FOR USE OF SUPERCEDED OR VOIDED DATA. JUST MFG. CO. SINKS ARE MADE IN THE U.S.A. ALONG WITH FEATURES AND DIMENSIONS.

JUST MANUFACTURING COMPANY 9233 KING STREET . FRANKLIN PARK . ILLINOIS . 60131-2111
 PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com

SUBMITTAL DATA

Manual Sink Faucets

1100-E35ABCP

KS-1R

**CHICAGO
FAUCETS**
Geberit Group

Product Type

Deck-mounted manual faucet with 8" centers

Features & Specifications

- 8" fixed centers
- 8" L-type swing spout
- Pressure compensating Softflo aerator 1.5 GPM
- Vandal Proof 2" canopy single-wing handle
- Quatern™ compression operating cartridge, right-hand
- Quatern™ compression operating cartridge, left-hand
- ECAST® design provides durable cast brass construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.






Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 5-Year Limited Cartridge Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

-  ADA ANSI/ICC A117.1
-  ASME A112.18.1/CSA B125.1
- Complies with CALGreen requirements
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9
-  Certified to WaterSense by ICC-ES

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown

Submitted with Variations

Date _____



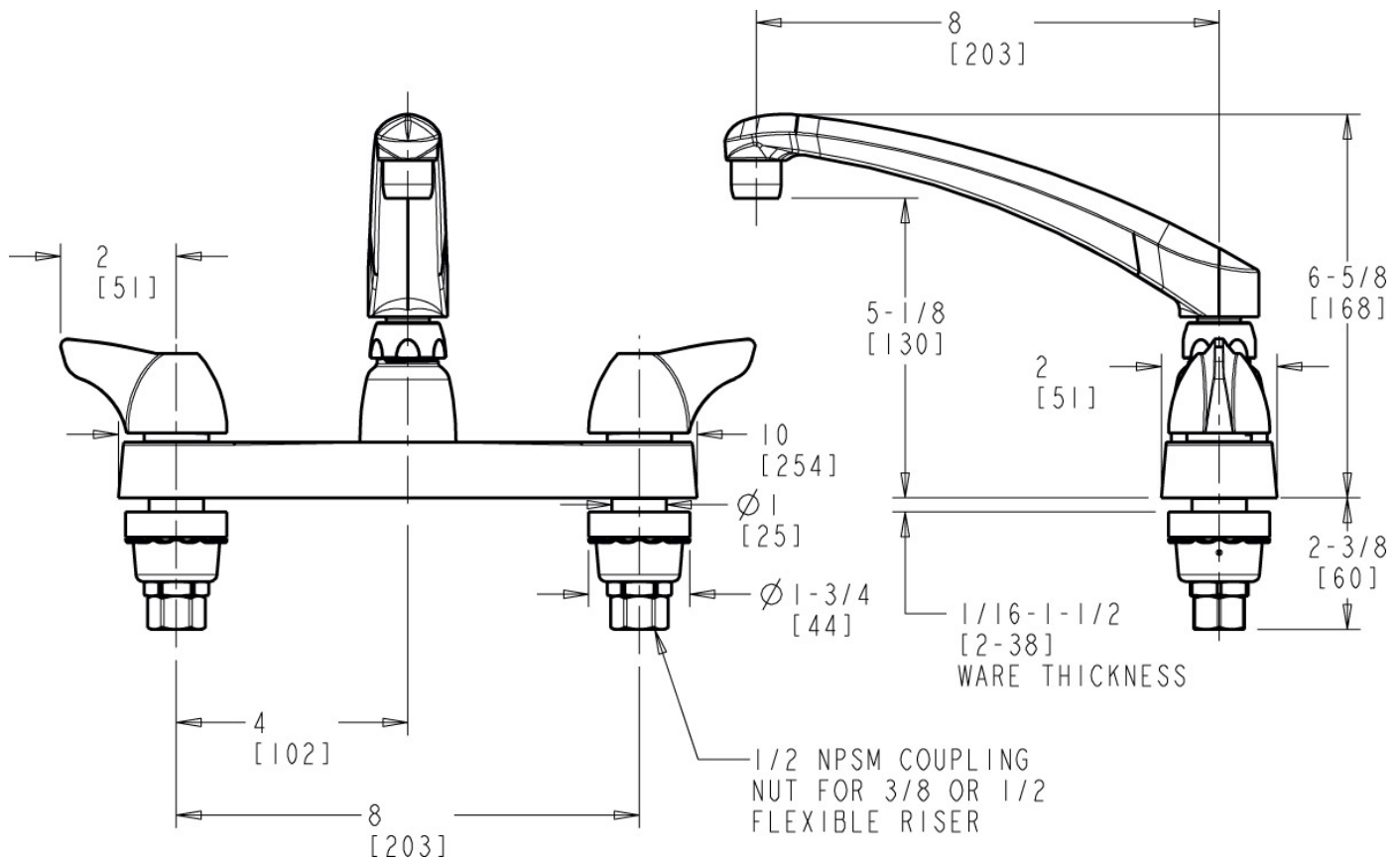
ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

Architect/Engineer Specification

Chicago Faucets No. 1100-E35ABCP, Sink Faucet for hot and cold water, deck-mounted with 8" fixed centers, chrome plated. L-Type swing spout, 8" center-to-center. 1.5 GPM (5.7 L/min) pressure compensating Soffflo aerator. 2" metal, vandal-proof, canopy, single-wing handles with secured blue and red index buttons. Quatum™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. 1/2" NPSM supply inlets and coupling nut for 3/8" or 1/2" flexible riser. ECAST® construction with less than 0.25% lead content by weighted average. CALGreen compliant. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, NSF/ANSI 372 Low Lead Content, and California Green Building Standards Code (CALGreen).



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



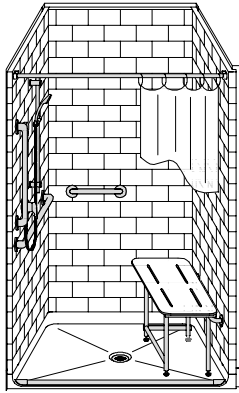
2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

MODEL: 4LBS4038A5T* SH-1R

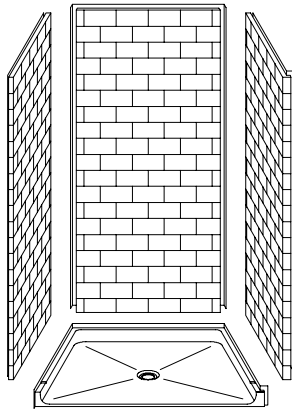
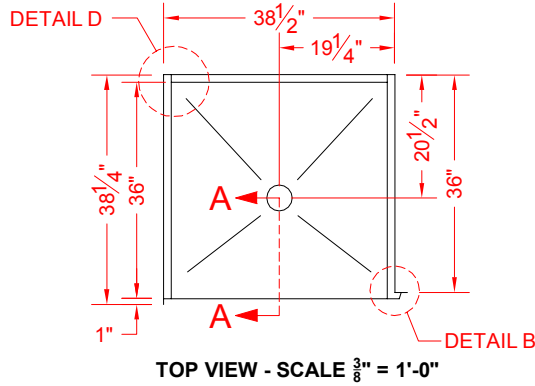


SEE OVER

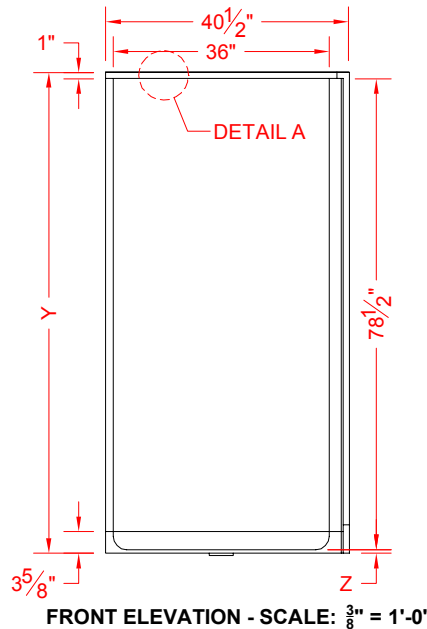
ALL ACCESSORIES OPTIONAL



PERSPECTIVE VIEW - N.T.S.
MODEL SHOWN HERE AS:
LEFT PLUMBING
RIGHT SEAT
RIGHT REVEAL



ASSEMBLY VIEW - N.T.S.



Features:

- ADA compliant multi-piece transfer shower
- Available in various threshold heights
- Molded, four-piece gelcoat/fiberglass shower module
- "Subway Tile" wall finish, white (standard)
- Integral full wood backing for strength and unlimited accessory placement
- On all threshold heights 1-1/2" or taller, no mud set is required
- On all threshold heights 1-1/4" or shorter, no mud set is required and an anchoring adhesive kit is supplied

*OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST

MODEL #	UNIT HEIGHT	THRESHOLD HEIGHT
	Y	Z*
4LBS4038A5T	80-1/8"	5/8" MIN.
4LBS4038A2T	81-1/2"	2" MAX.

* - SEE BACK FOR DETAIL SECTIONS

PRODUCT SPECIFICATIONS:

- Multi-piece shower module shall be constructed of gelcoat/fiberglass with full integral plywood backing
- Rough-In: Stud opening +1/4" -0" Nominal Dimensions.

C.S.I. FORMAT SPECIFICATION TEXT AVAILABLE

PRODUCT INFORMATION:

- Accessories: Factory installed, unless prone to damage during installation/shipping. Polished chrome/satin stainless standard, others available.
- Colors: White as standard, others to match any major fixture manufacturer, also available with sprayable solid surface in many colors
- Custom curb heights, other than shown, are available (between min. and max.)

ACCESSORIES:

INSTALLED BY OTHERS:

- Grab bar
- Seat, folding
- Mixing valve, pressure-balancing, lever handle, pre-plumbed tee to supply elbow
- Curtain and rod
- T-shaped rubber WaterStopper kit
- Semi-permanent threshold adaptor
- No-caulk brass drain

CODES:

- Designed and manufactured in compliance with the following standards and codes:
- A.N.S.I. Z124.2 Standards for Plastic Showers
 - I.P.C. International Plumbing Code
 - U.P.C. Uniform Plumbing Code
 - A.D.A. Accessibility Guidelines for Buildings and Facilities
 - A.N.S.I. A117.1 Accessible and Usable Buildings and Facilities

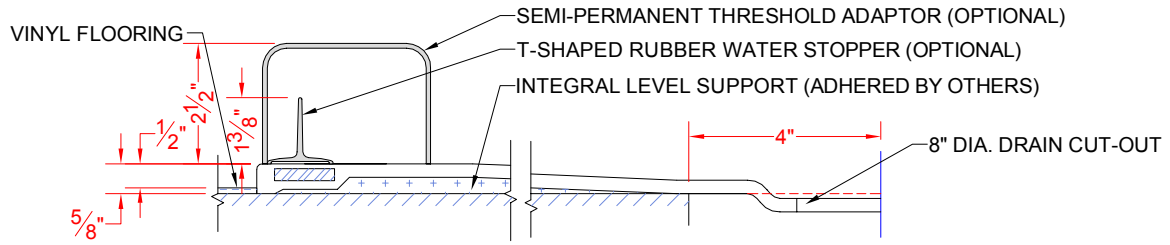
NOTICE OF LIMITATION:

- Adhere to floor as required



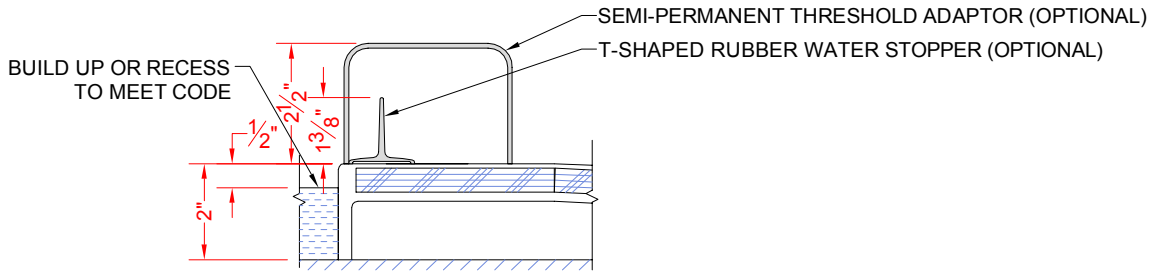
We reserve the right to make revisions without notice in the design of fixtures or in packaging unless this right has specifically been waived at the time the order is accepted.

4LBS4038A5T



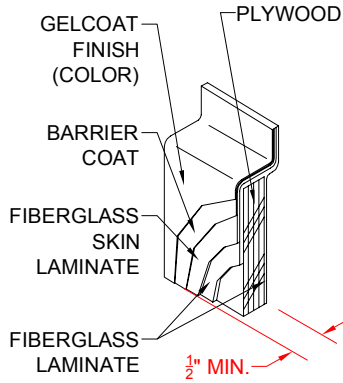
SECTION A-A - SCALE: 3" = 1'-0"

4LBS4038A2T

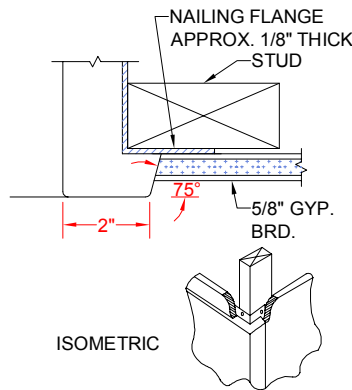


SECTION A-A - SCALE: 3" = 1'-0"

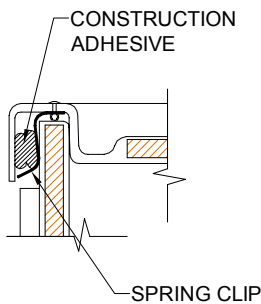
****OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST****



**DETAIL A - SCALE: N.T.S.
WALL SECTION DETAIL**



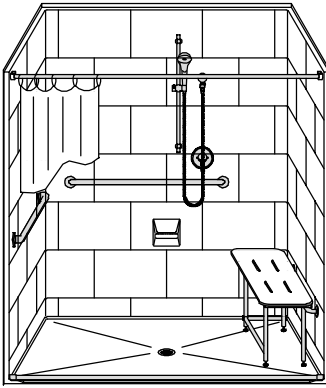
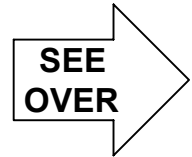
**DETAIL B - SCALE: N.T.S.
REVEAL DETAIL**



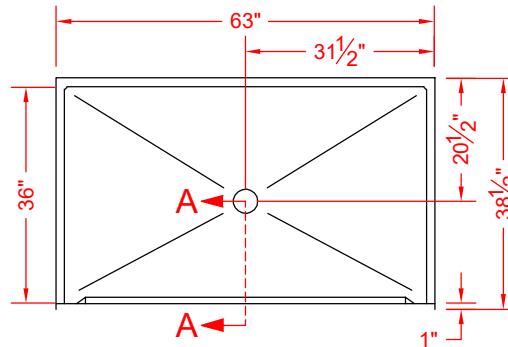
**DETAIL D - SCALE: N.T.S.
WALL JOINT DETAIL**

MODEL: LB3S26337A75B* SH-2R

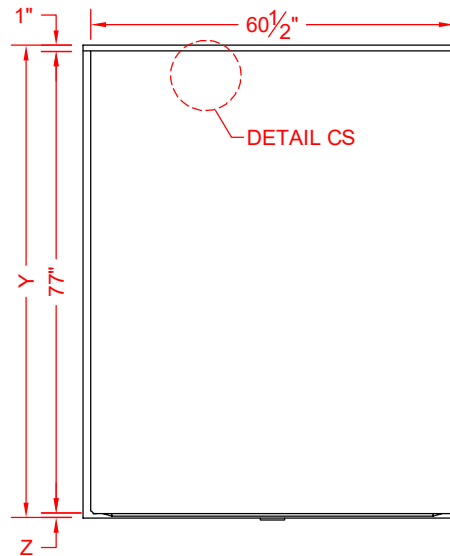
*ALL ACCESSORIES OPTIONAL



PERSPECTIVE VIEW - N.T.S.
MODEL SHOWN HERE AS:
 RIGHT PLUMBING
 RIGHT SEAT



TOP VIEW - SCALE $\frac{3}{8}'' = 1'-0''$



FRONT ELEVATION - SCALE: $\frac{3}{8}'' = 1'-0''$

Features:

- ADA compliant single-piece roll-in shower
- Molded one-piece gelcoat/fiberglass shower module
- "Subway Tile", 12" x 18" simulated tile wall finish, white (standard)
- Integral full wood backing for strength and unlimited accessory placement
- Available in various threshold heights
- On all threshold heights 1-1/4" or shorter, no mud set is required, but an adhesive kit is supplied
- On all threshold heights 1-1/2" or taller, no mud set is required

*OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST

MODEL #	UNIT HEIGHT	THRESHOLD HEIGHT
	Y	Z*
LB3S26337A75B	78-3/4"	3/4" MIN.
LB3S26337A2B	80"	2" MAX.

* - SEE BACK FOR DETAIL SECTIONS

PRODUCT SPECIFICATIONS:

- Single-piece module shall be constructed of gelcoat/fiberglass with full integral plywood backing in the walls.
- Rough-In: Stud opening +1/4" – 0" Nominal Dimensions

C.S.I. FORMAT SPECIFICATION TEXT AVAILABLE

PRODUCT INFORMATION:

- Accessories: Factory installed, unless prone to damage during installation/shipping. Polished chrome/satin stainless standard, others available. (not applicable to pans/bases)
- Colors: White as standard, others to match any major fixture manufacturer, also available with sprayable solid surface in many colors
- Custom threshold heights available

OPTIONAL ACCESSORIES:

INSTALLED AT FACTORY:

- Seat, folding
- Grab bar
- Soap dish
- Mixing valve, pressure-balancing, lever handle, pre-plumbed tree to supply elbow
- Curtain rod brackets

INSTALLED BY OTHERS:

- Curtain and Rod
- No-caulk brass drain
- T-shaped WaterStopper kit
- Semi-permanent threshold adapter

CODES:

Designed and manufactured in compliance with the following standards and codes:

- ANSI Z124.2 Standards for Plastic Shower
- ADA Accessibility Guidelines for Buildings and Facilities
- ANSI A117.1 A - Accessible and Usable Buildings and Facilities
- ANSI A117.1 B - Accessible and Usable Buildings and Facilities
- IPC International Plumbing Code
- UPC Uniform Plumbing Code

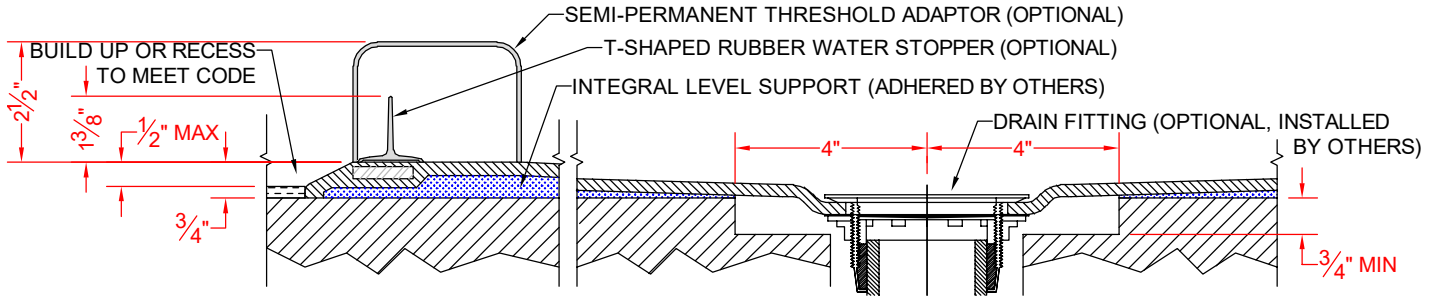
NOTICE OF LIMITATION:

- Recess as needed to meet code
- Adhere to floor as required



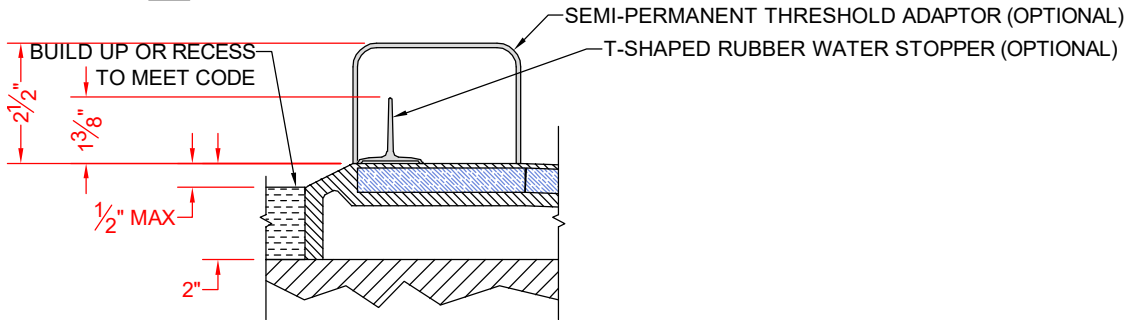
We reserve the right to make revisions without notice in the design of fixtures or in packaging unless this right has specifically been waived at the time the order is accepted.

□ LB3S26337A75B



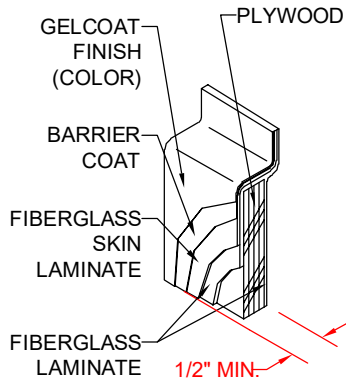
SECTION A-A - SCALE: 3" = 1'-0"

□ LB3S26337A2B

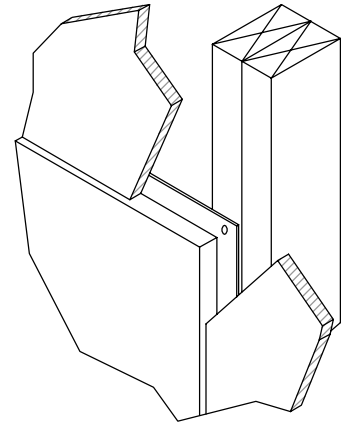


SECTION A-A - SCALE: 3" = 1'-0"

****OTHER THRESHOLD HEIGHTS AVAILABLE UPON REQUEST****



DETAIL CS - SCALE: N.T.S.
 CROSS SECTION DETAIL



DETAIL DD - SCALE: N.T.S.
 DRYWALL DETAIL

DESCRIPTION

- Metal construction with Chrome plated finish
- Pressure balancing cycle valve design with 1/4 turn stops
- 1/2" CC connections
- Contains stationary showerhead, hand-held shower with non-positive pause, 69" metal hose, 30" slide bar, drop ell, mounting hardware, Posi-Temp® valve trim, and Three-Function valve trim

Slide bar is NOT DESIGNED TO BE A GRAB BAR

- Vandal resistant lever handles, shower head, and showerarm flange
- Easy cleaning rubber nozzles
- Red and blue durable plastic temperature indicators

OPERATION

- Temperature and transfer valves both have ADA compliant lever style handles
- Temperature handle operates counterclockwise through a 270° arc with off at 6 o'clock, and the maximum hot at the 9 o'clock position
- Adjustable temperature limit stop
- Pressure balancing mechanism maintains selected discharge temperature to $\pm 2^\circ$
- Handshower contains integrated backflow prevention

FLOW

- **T9342** Showerhead/Handshower: (2.5 gpm/9.5 L/min) maximum at 80 psi - Chrome finish
- **T9342EP15** Showerhead/Handshower: (1.5 gpm/5.7 L/min) maximum at 80 psi - Chrome finish, **WaterSense® certified**

CARTRIDGE

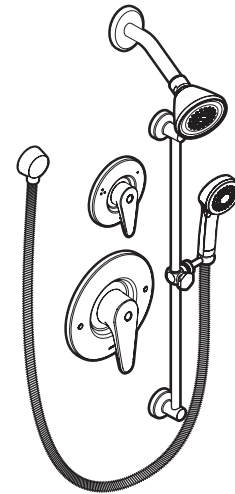
- Pair with a brass Posi-Temp® rough-in valve:
- 8370HD*: 1/2" CC connection without integral stops
- 8371HD*: 1/2" CC connection with integral stops
- 8372HD*: 1/2" IPS connection with integral stops
- 8373HD*: 1/2" PEX connection with integral stops
- 8374HD*: 1/2" CPVC connection with integral stops
- 8375HD*: 1/2" UPONOR connection with integral stops
- * Includes the 1222HD Brass Posi-Temp® Cartridge
- Nonmetallic/nonferrous and stainless steel materials
- Also requires the 3360 3-function transfer rough-in valve; valve operates 3 distinct functions but can be plumbed for 2 distinct functions
- Accommodates back to back installations

STANDARDS

- Third party certified to: WaterSense® (only applies to 1.5 gpm), ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- ADA ♿ for lever handles

WARRANTY

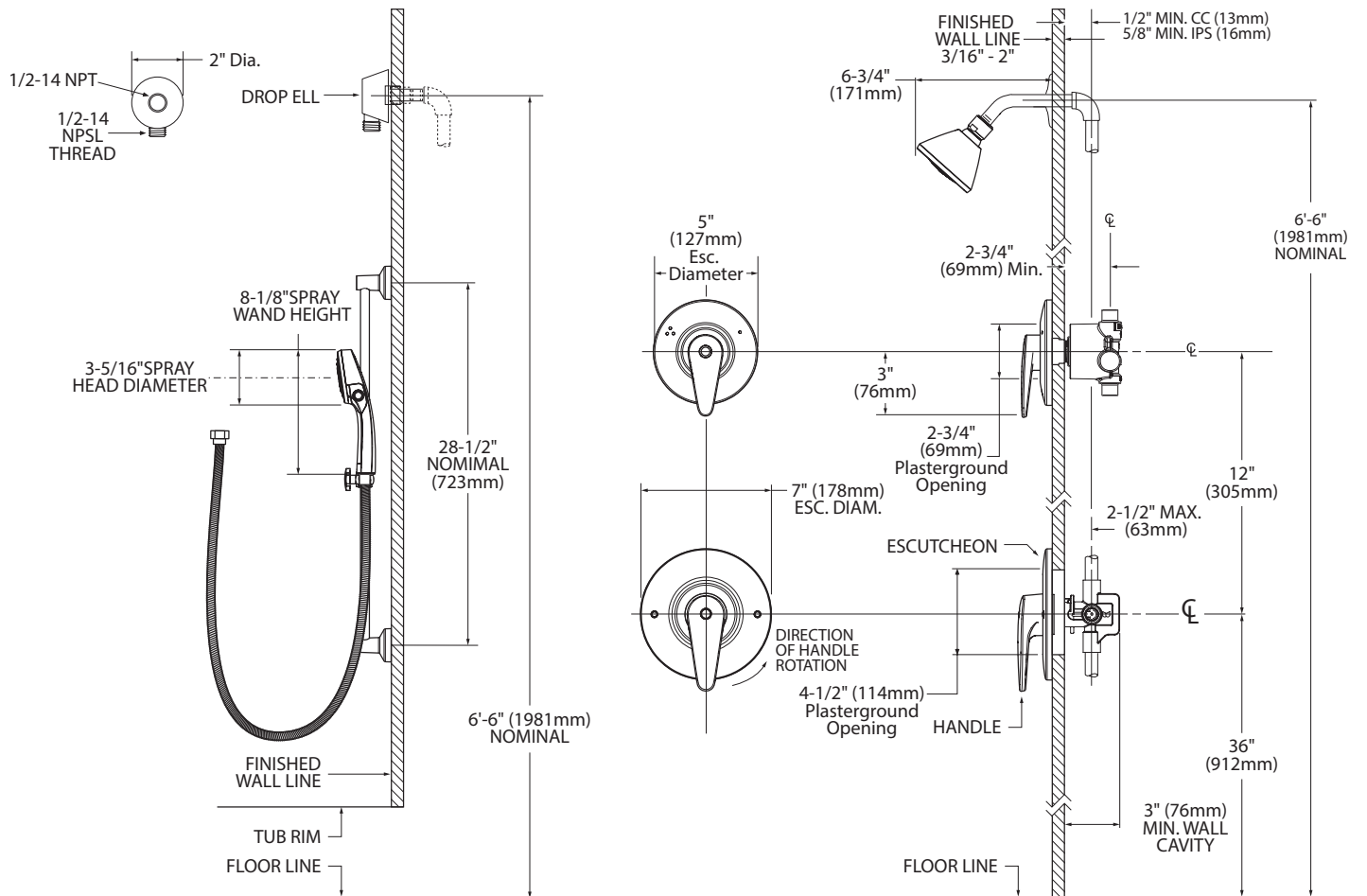
- Warranted for 5 years against material or manufacturing defects



M-Dura™ Commercial Three-Function Shower System

Models: T9342 series

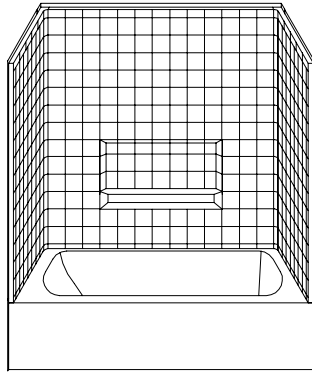




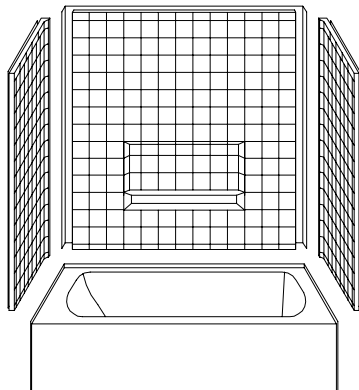
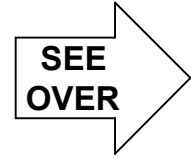
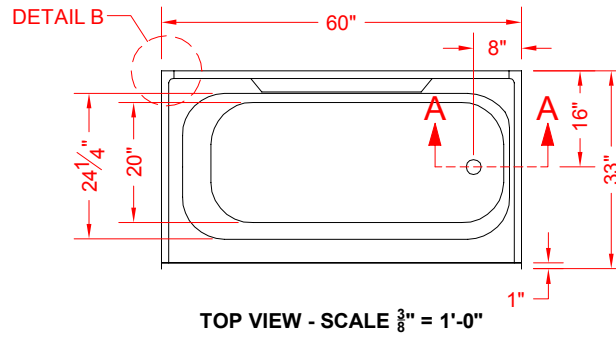
CRITICAL DIMENSIONS

(DO NOT SCALE)

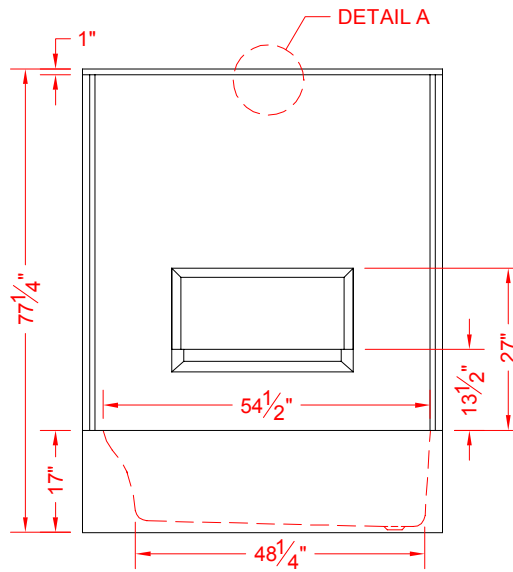
ALL ACCESSORIES OPTIONAL



PERSPECTIVE VIEW - N.T.S.
MODEL SHOWN HERE AS:
RIGHT HAND



ASSEMBLY VIEW - N.T.S.



Features:

- Four-piece gelcoat/fiberglass tub/shower module
- "Real Tile" wall finish, white (standard)
- Integral full wood backing for strength and unlimited accessory placement
- The authentic look of ceramic tile without the grout

* - SEE BACK FOR DETAIL SECTIONS

PRODUCT SPECIFICATIONS:

- Multi-piece tub/shower module shall be constructed of gelcoat/fiberglass with full integral plywood backing in the walls
- Rough-In: Stud opening +1/4" -0" Nominal Dimensions.

C.S.I. FORMAT SPECIFICATION TEXT AVAILABLE

PRODUCT INFORMATION:

- Accessories: Factory installed, unless prone to damage during installation/shipping. Polished chrome/satin stainless standard, others available.
- Colors: White as standard, others to match any major fixture manufacturer, also available with sprayable solid surface in many colors

ACCESSORIES:

INSTALLED BY OTHERS:

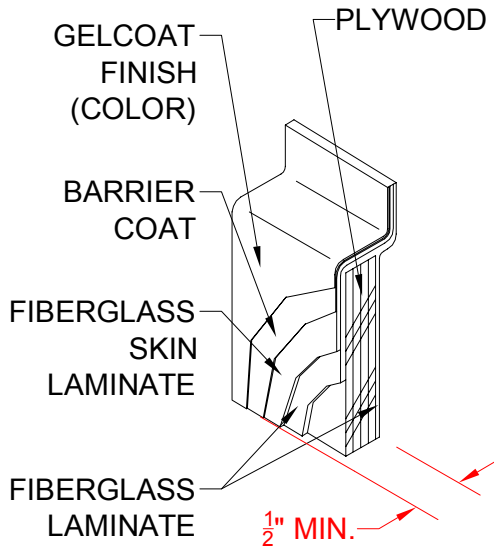
- Grab bar
- Seat, folding
- Mixing valve, pressure-balancing, lever handle, pre-plumbed tree to supply elbow
- Curtain and rod

CODES:

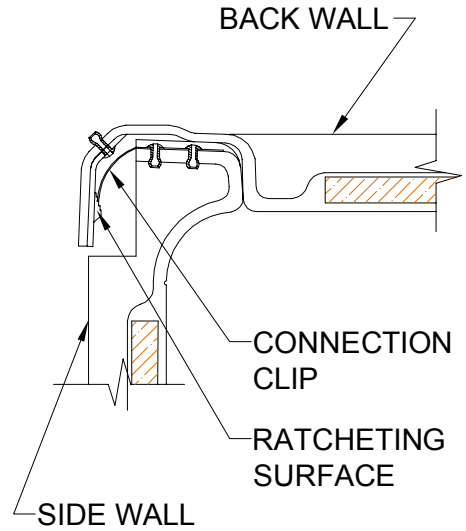
- Designed and manufactured in compliance with the following standards and codes:
- A.N.S.I. Z1241.2 Standards for plastic Bathtubs and Showers
 - I.P.C. International Plumbing Code
 - U.P.C. Uniform Plumbing Code

NOTICE OF LIMITATION:

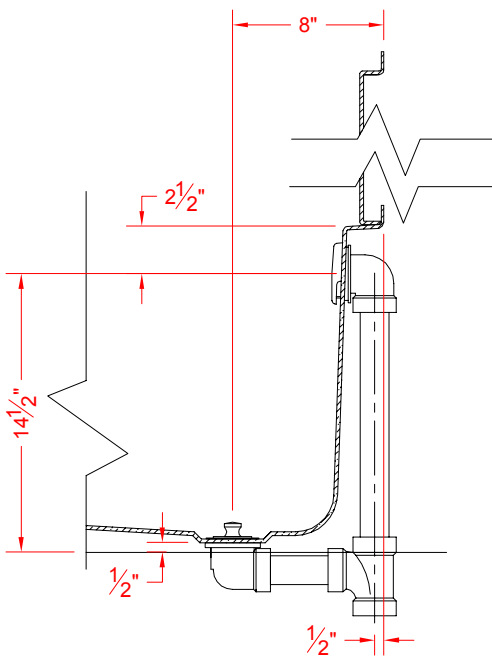
REMODELER



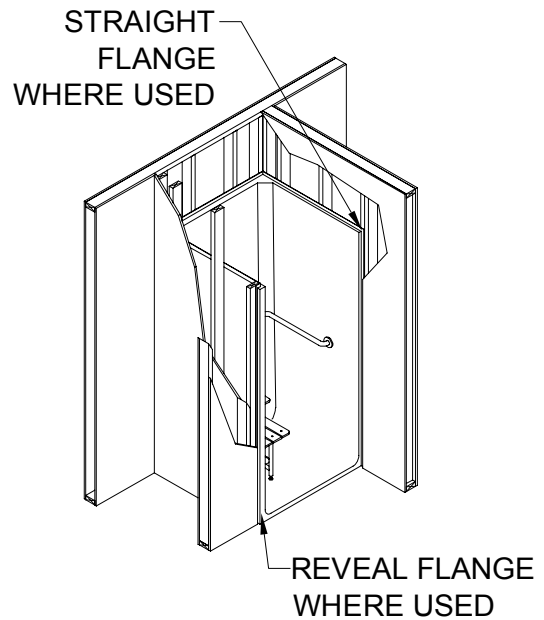
DETAIL A - SCALE N.T.S.
WALL SECTION DETAIL



DETAIL B - SCALE N.T.S.
WALL JOINT DETAIL



SECTION A-A - SCALE N.T.S.
TUB DRAIN/OVERFLOW DETAIL



DETAIL C - SCALE N.T.S.
TYPICAL FRAMING DETAIL

DESCRIPTION

- Metal construction with Chrome plated or Classic Brushed Nickel (CBN) finish
- Pressure balancing cycle valve design with 1/4 turn stops
- 3 function transfer valve
- 1/2" CC connections
- Contains: stationary showerhead, hand-held shower with non-positive pause, 69" metal hose, 30" slide bar, drop ell, and tub filler

Slide bar is NOT DESIGNED TO BE A GRAB BAR

- Applicable components are supplied with vandal resistant screws

OPERATION

- Temperature and transfer valves both have ADA compliant lever style handles
- Temperature handle operates counterclockwise through a 270° arc with off at 6 o'clock, and the maximum hot at the 9 o'clock position
- Adjustable temperature limit stop
- Pressure balancing mechanism maintains selected discharge temperature to ± 2°
- Transfer valve operates 3 distinct functions

FLOW


- T8343** (2.5 gpm/9.5 L/min) - Chrome finish
- T8343CBN** (2.5 gpm/9.5 L/min) - Classic Brushed Nickel finish
- T8343EP15** (1.5 gpm/5.7 L/min) - Chrome finish, **WaterSense® certified**
- T8343EP15CBN** (1.5 gpm/5.7 L/min) - Classic Brushed Nickel finish, **WaterSense® certified**

CARTRIDGE

- Pair with a brass Posi-Temp rough-in valve:
- 8370HD*: 1/2" CC connection without integral stops
- 8371HD*: 1/2" CC connection with integral stops
- 8372HD*: 1/2" IPS connection with integral stops
- 8373HD*: 1/2" PEX connection with integral stops
- 8374HD*: 1/2" CPVC connection with integral stops
- 8375HD*: 1/2" UPONOR connection with integral stops
- *Includes the 1222HD Brass Posi-Temp Cartridge
- Nonmetallic/nonferrous and stainless steel materials
- Also requires the 3360 3 function transfer rough-in valve
- Accommodates back to back installations

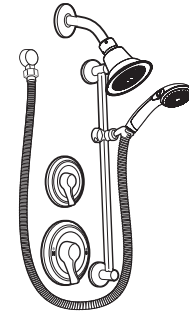
STANDARDS

- Third party certified to: WaterSense® (only applies to 1.5 gpm), ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- Backflow prevention compliance through ASME A112.18.3

- **ADA**  for lever handles

WARRANTY

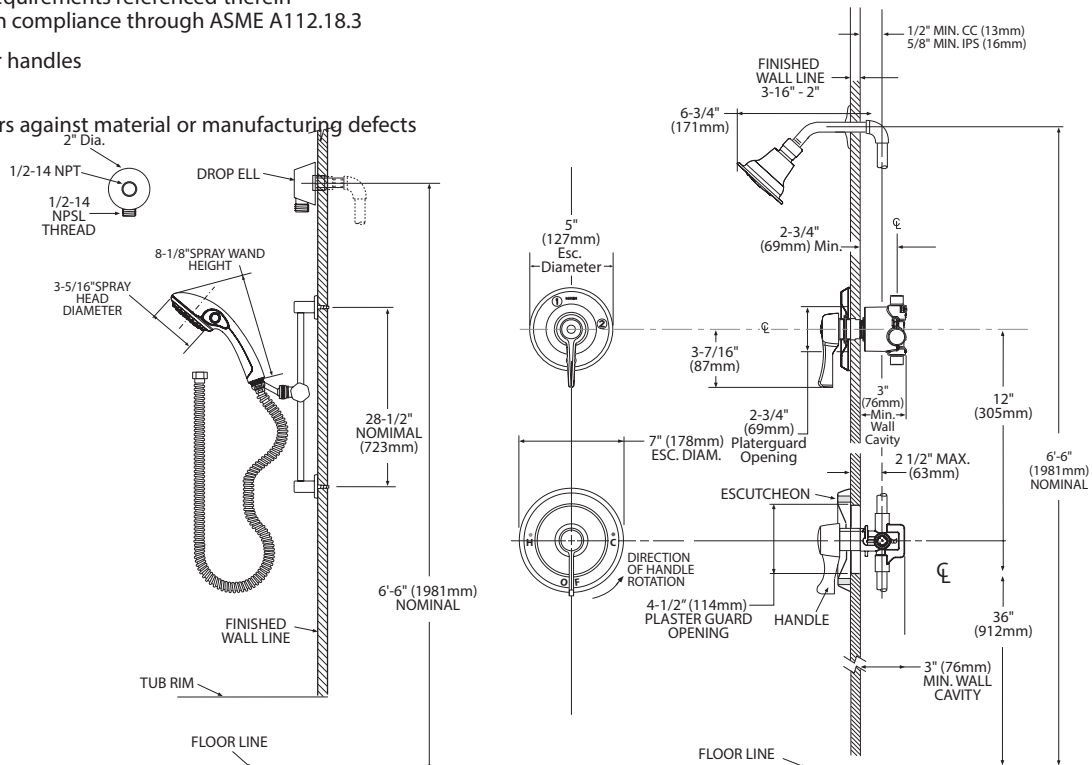
- Warranted for 5 years against material or manufacturing defects



Three-Function Commercial Tub/Shower System



Certified by IAPMO R&T
EP Models Only



NOTE: This valve is not intended to be used as a shut-off valve. To prevent the potential of cross flow, check valves must be integral to the supply valve or installed in both hot and cold water supply lines.

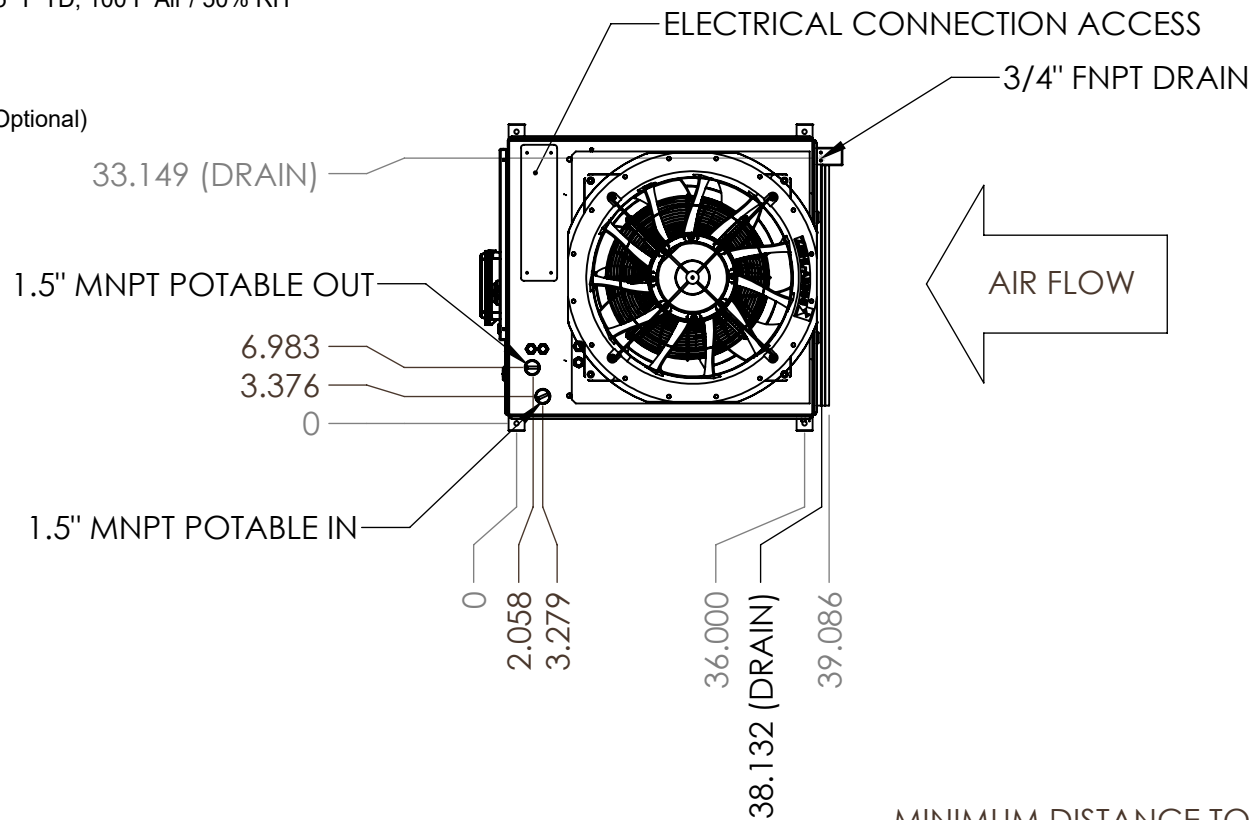
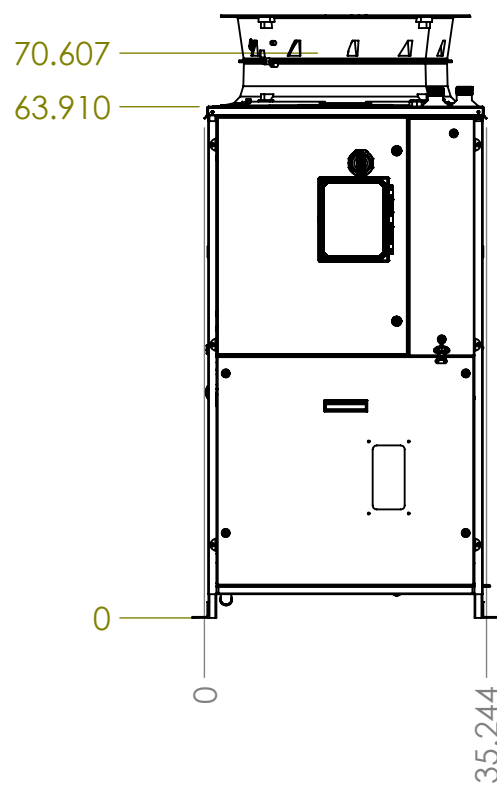
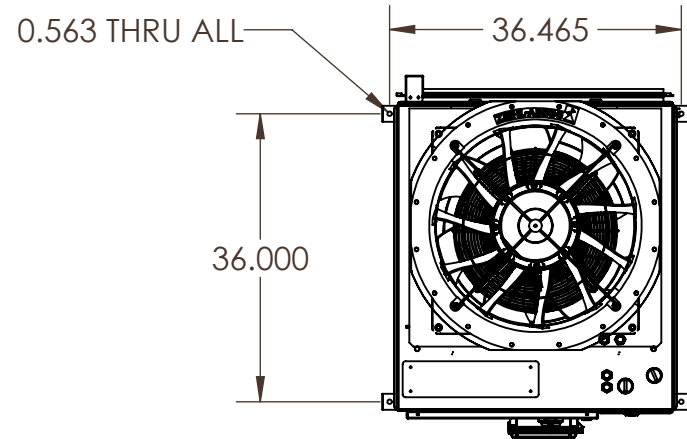
CRITICAL DIMENSIONS

(DO NOT SCALE)

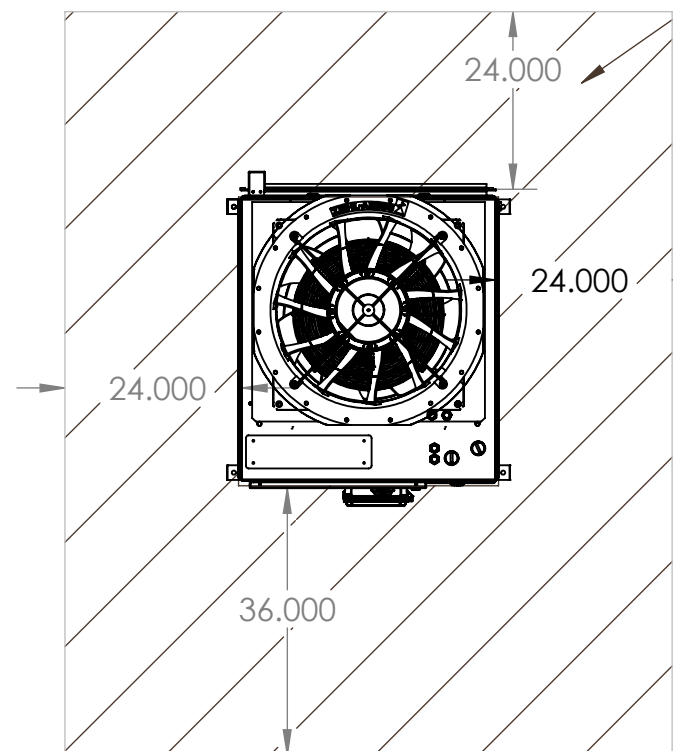
Unit Specifications:

- Compressor: (1) Scroll, Copeland or Equivalent
- Condensers: (1) Copper Brazed with 316L plates
- Evaporators: (1) Aluminum Micro Channel (Electrocoating Optional)
- Potable Water Pump: (1) 1/2 HP SST Volute, Standard, 150 PSI Max Working Pressure
- Design Flow Rate: 18.7 GPM (10 HP), 24 GPM (15 HP) @ 15 °F TD, 100 F Air / 50% RH
- Max External Head @ Design: 24.5 ft (10 HP), 14.8 ft (15 HP)
- Source Air Fan: 1.34 HP Axial ECM, 1550 RPM
- Minimum Required Airflow: 4,700 CFM, 0.0" H2O Available
- Control: Microprocessor (PLC)
- Frame: 304 SST with Cabinet (316 SST Cabinet Optional)
- Refrigerant Type: 134a, 450 PSI Max Working Pressure
- Refrigerant Charge: 11.5 lbs (10 HP), 11 lbs (15 HP)
- Dry Weight: 885 lbs (10 HP), 895 lbs (15 HP)
- Crated Weight: 1155 lbs (10 HP), 1165 lbs (15 HP)
- Crated Dimensions: 51" x 44" x 83" (L x W x H)
- Average Sound Pressure @ 1M: 76 dB(A)

*VALUES ARE APPROXIMATE AND FOR REFERENCE ONLY

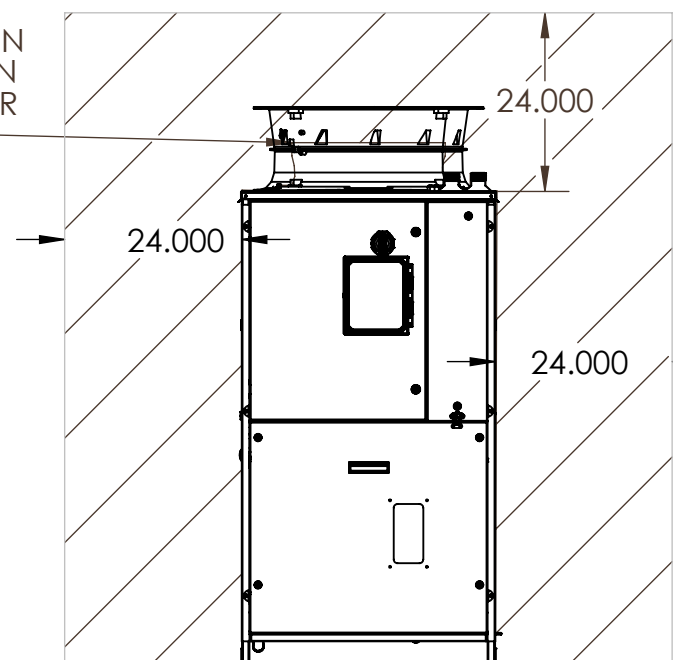


MINIMUM DISTANCE TO OBSTRUCTION FROM EVAPORATOR INLET;
RECOMMENDED 36" CLEARANCE FOR BEST PERFORMANCE



RECOMMENDED SERVICE CLEARANCE FOR SINGLE UNIT

MINIMUM DISTANCE TO OBSTRUCTION FROM AXIAL OUTLET IS 30". LESS THAN THIS MAY REDUCE PERFORMANCE OR INCREASE NOISE LEVELS



HP-1 / HP-2 / HP-3 / HP-4/HP-5

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THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF COLMAC INDUSTRIES. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF COLMAC INDUSTRIES IS PROHIBITED.

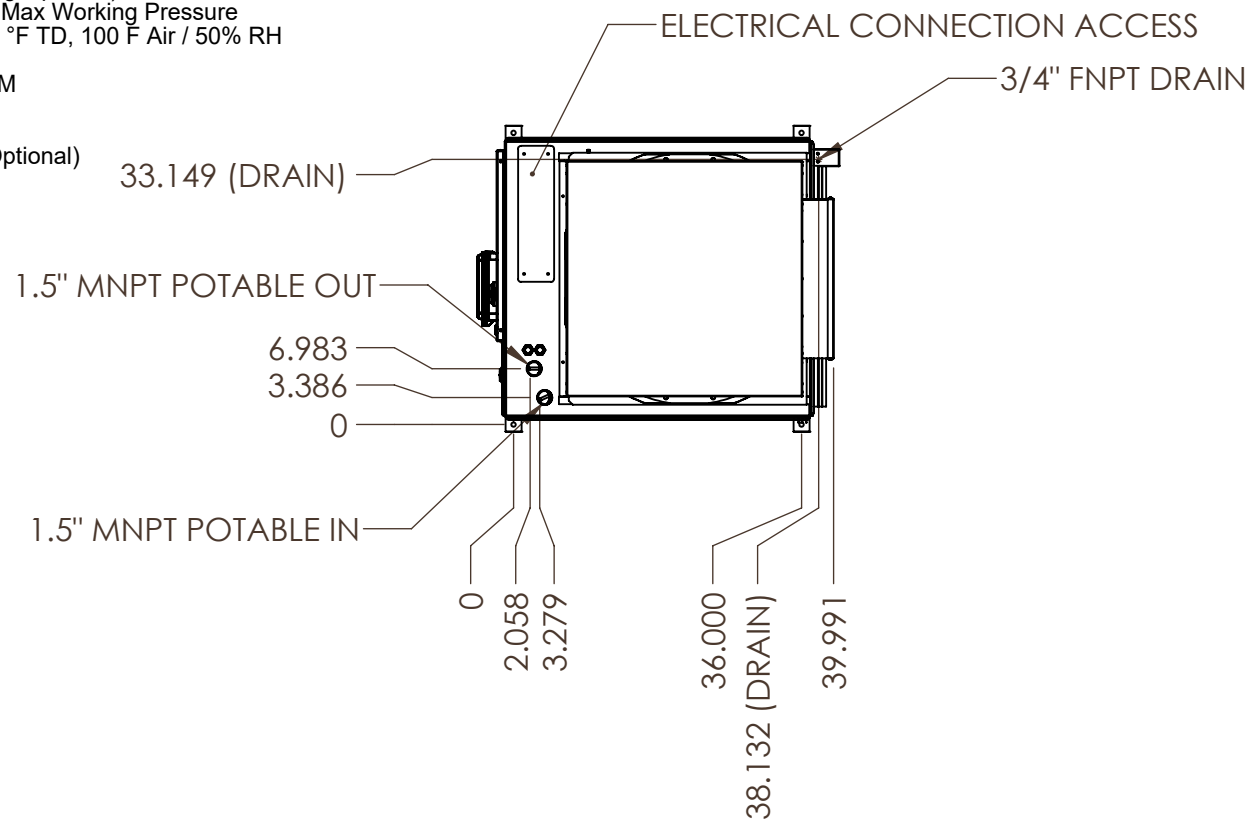
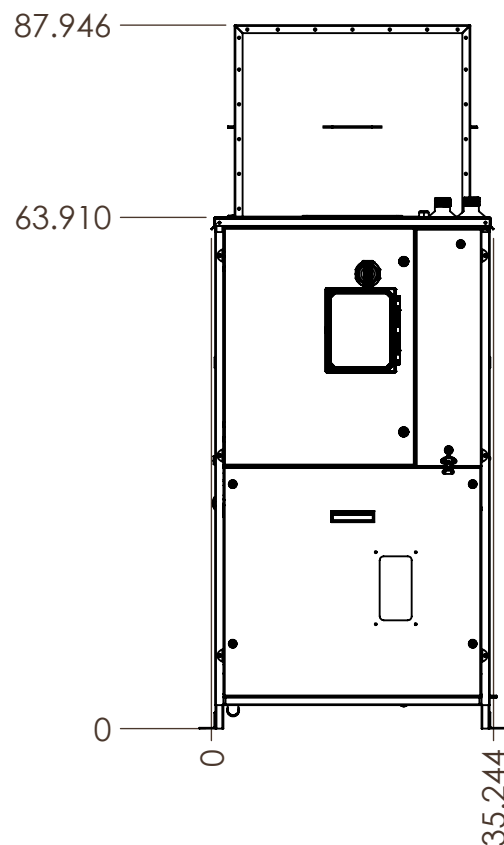
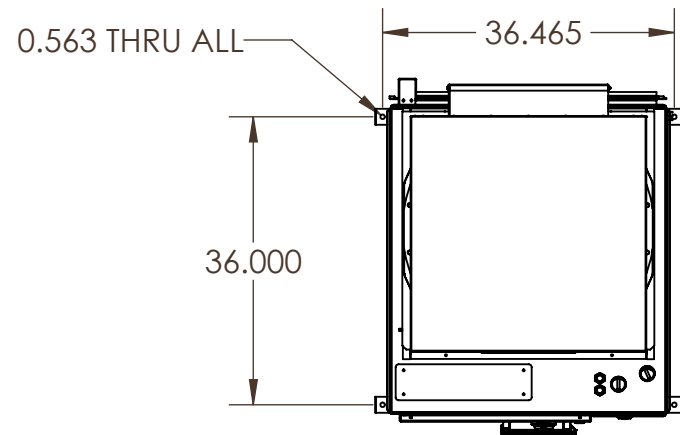
REV. No.	REV STATUS
SHT. No.	OF SHEET

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±0.03 THREE PLACE DECIMAL ±0.031		CONTRACT NO.	COLMAC INDUSTRIES 401 N. Lincoln, Colville, Washington 99114 (509)684-4505	
DRAWN BY KLR		DATE	TITLE: CXA 10-15 SUBMITTAL DRAWING WITH AXIAL FAN	
ENGINEER		DATE	SIZE B	DWG. NO. 1010CXA-0015
NEXT ASSY		USED ON	REV	
APPLICATIONS		DO NOT SCALE DRAWING	SCALE: 1:24	UNIT WT.
			SHEET 1 OF 3	

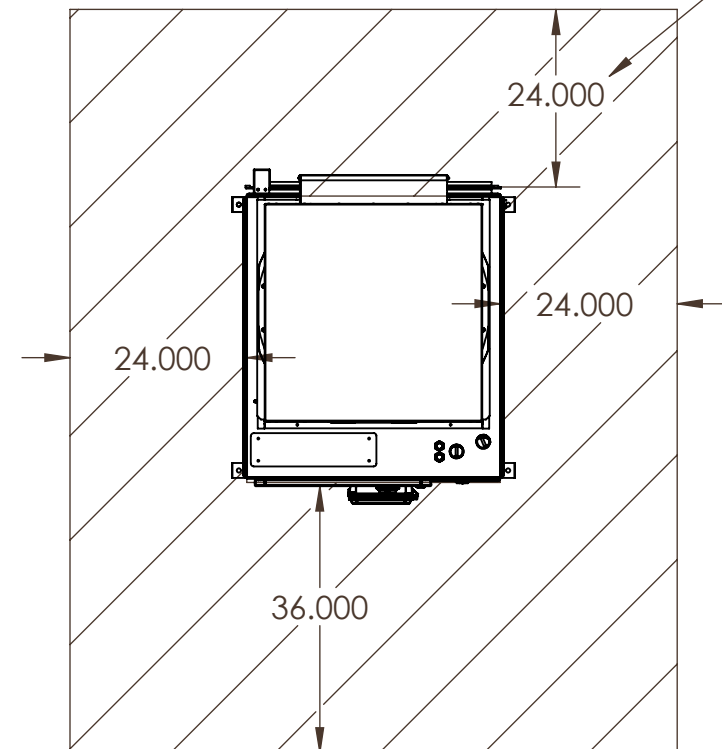
Unit Specifications:

- Compressor: (1) Scroll, Copeland or Equivalent
- Condensers: (1) Copper Brazed with 316L plates
- Evaporators: (1) Aluminum Micro Channel (Electrocoating Optional)
- Potable Water Pump: (1) 1/2 HP SST Volute, Standard, 150 PSI Max Working Pressure
- Design Flow Rate: 18.7 GPM (10 HP), 24 GPM (15 HP) @ 15 °F TD, 100 F Air / 50% RH
- Max External Head @ Design: 24.5 ft (10 HP), 14.8 ft (15 HP)
- Source Air Fan: 4.8 HP Backwards Curved ECM, 1550 RPM
- Minimum Required Airflow: 5,000 CFM, 2.7" H2O Available
- Control: Microprocessor (PLC)
- Frame: 304 SST with Cabinet (316 SST Cabinet Optional)
- Refrigerant Type: 134a, 450 PSI Max Working Pressure
- Refrigerant Charge: 11.5 lbs (10 HP), 11 lbs (15 HP)
- Dry Weight: 980 lbs (10 HP), 990 lbs (15 HP)
- Crated Weight: 1350 lbs (10 HP), 1370 lbs (15 HP)
- Crated Dimensions: 51" x 44" x 96" (L x W x H)
- Average Sound Pressure @ 1M: 76 dB(A)

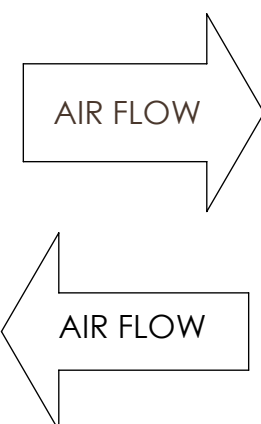
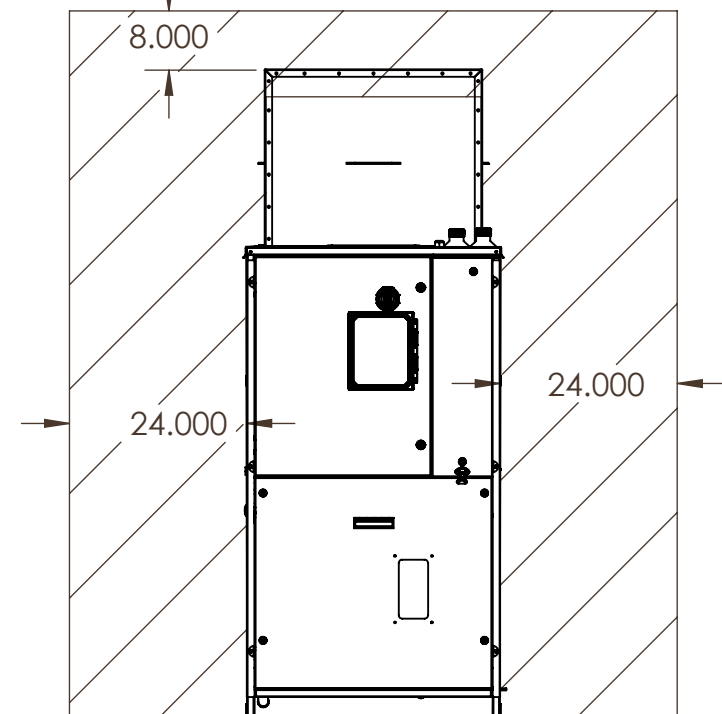
*VALUES ARE APPROXIMATE AND FOR REFERENCE ONLY



MINIMUM DISTANCE TO OBSTRUCTION FROM EVAPORATOR INLET;
RECOMMENDED 36" CLEARANCE FOR BEST PERFORMANCE



RECOMMENDED SERVICE CLEARANCE FOR SINGLE UNIT



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REV. No.	REV STATUS
SHT. No.	OF SHEET

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DRAWN BY KLR	DATE	TITLE: CXA 10-15 SUBMITTAL DRAWING WITH CENTRIFUGAL FAN		
ENGINEER	DATE	SIZE	DWG. NO.	REV
NEXT ASSY	USED ON	B 1010CXA-0015		
APPLICATIONS		DO NOT SCALE DRAWING	SCALE: 1:24	UNIT WT.
				SHEET 2 OF 3

8 7 6 5 4 3 2 1

F

E

D

C

B

A

F

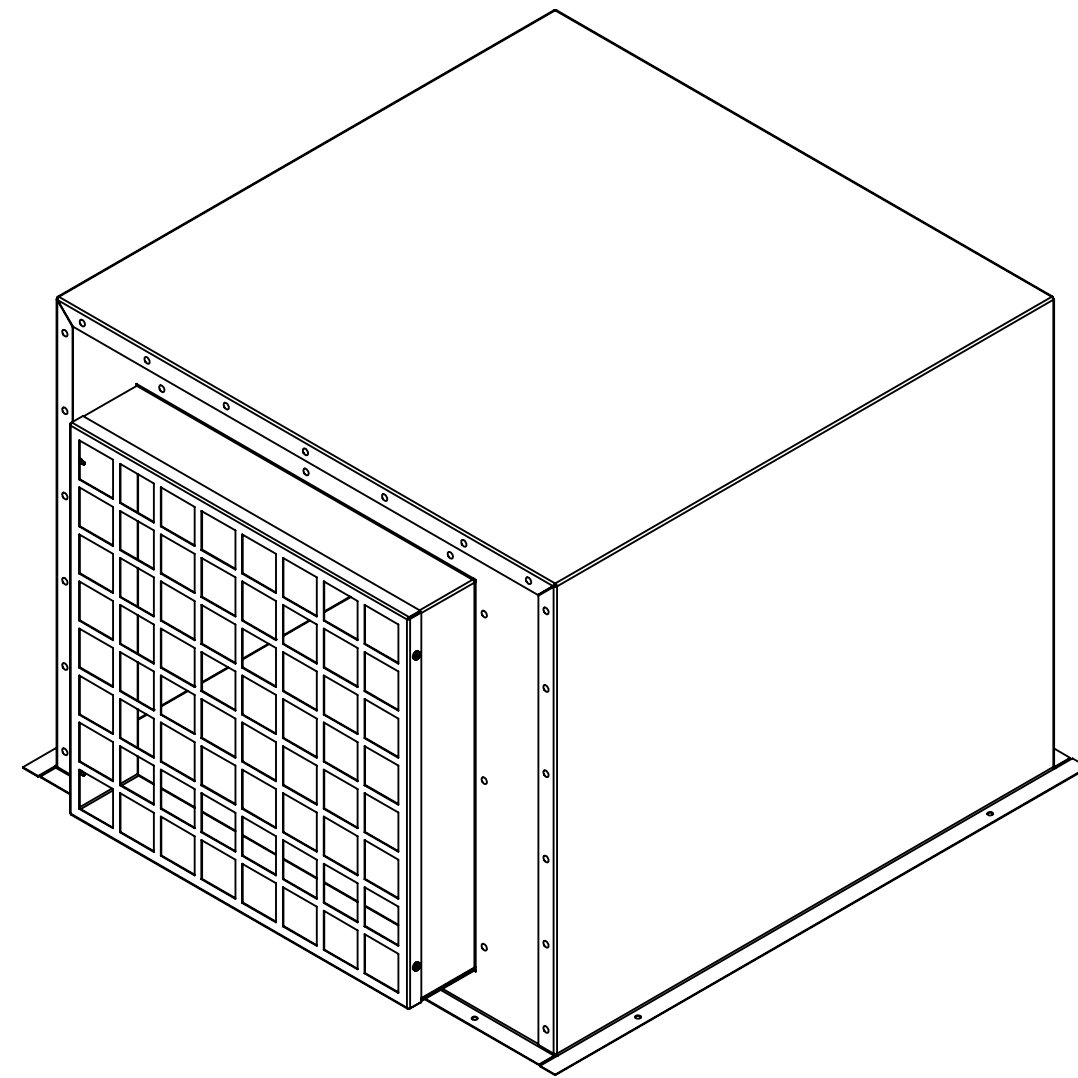
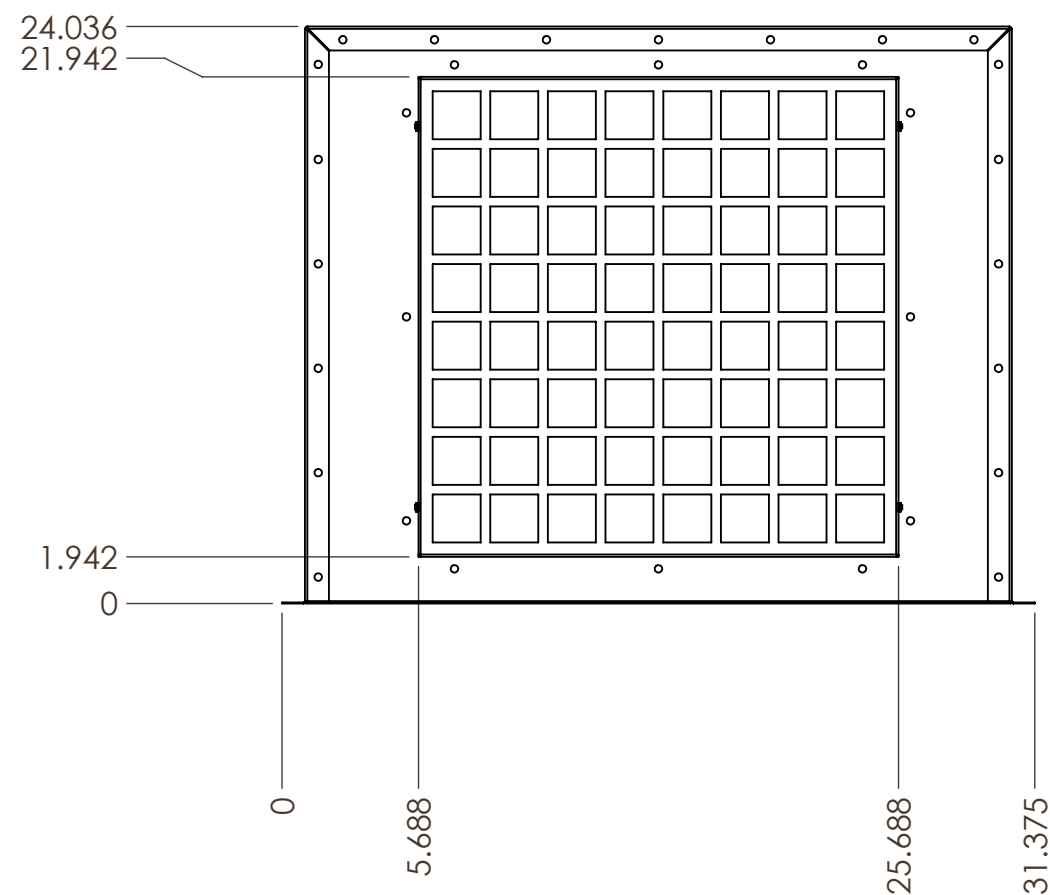
E

D

C

B

A



NOTE: PLENUM CAN BE ROTATED IN 90° INCREMENTS TO EXHAUST AIR IN ANY HORIZONTAL DIRECTION

EXHAUST GRILLE TO BE REMOVED BEFORE CONNECTING DUCTING

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UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±1/16
ANGULAR: MACH ±1° BEND ±1°
TWO PLACE DECIMAL ±0.03
THREE PLACE DECIMAL ±0.031

CONTRACT NO.	
DRAWN BY	DATE
ENGINEER	DATE
SOLIDWORKS	AUTOCAD
DO NOT SCALE DRAWING	

COLMAC INDUSTRIES 401 N. Lincoln, Colville, Washington 99114 (509)684-4505		
TITLE: ASSY, CXA PLENUM SHROUD "C" FRAME		
SIZE	DWG. NO.	REV
B	1010CXA-0015	
SCALE: 1:12	UNIT WT.	SHEET 3 OF 3

REV. No.	REV STATUS OF SHEET

8 7 6 5 4 3 2 1

1010CXA-0015

9/22/2021



ST-1/ST-2/ST-3/ST-4/ST-5

Insulated ASME Storage Tanks

Lochinvar's Bare ASME Glass-Lined Storage Tanks are now available with optional spray-on polyurethane closed cell foam insulation. The durable foam insulation is specifically designed to withstand the rigors of an **outdoor** installation, with a top coat that provides protection from ultraviolet rays and external moisture. This insulated outdoor tank meets all ASHRAE requirements and provides an excellent alternative when limited space prohibits the placement of a tank indoors.

Rigid polyurethane foam is sprayed onto the tank to create a thick, strong layer of heat retaining insulation. The cured foam is then sealed with a weatherproof acrylic resin block filler top coat to provide protection from ultraviolet rays and inclement weather.

After the tank has been insulated and top-coated, it is skid mounted for shipment. The closed cell polyurethane foam insulation has a density of 3 pounds per cubic foot with a compressive strength of 30 psi and can withstand temperatures of up to 250°F.

Outstanding Features:

- Lock-Temp® Baffle
- Magnesium Anode Rods
- Glass-Lined Steel Tank
- ASME 125 psi Working Pressure - Standard
- ASME 150 psi Working Pressure - Optional
- Temperature and Pressure Gauge
- Manway - Optional on 34" and 40" diameter only
- Outdoor Foam Insulation
- Lifting Lugs
- Seismic Attachment Points - Optional
(must provide seismic zone or city/state of install)
- 5 Year Limited Tank Warranty
(see warranty for details)

Insulated Outdoor Lock-Temp® Storage Tanks



*Horizontal or Vertical construction is available.
Consult factory for specific options.*

All models meet or exceed the NAECA and ASHRAE Energy Efficiency Standards

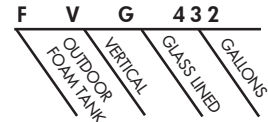
Outdoor Insulated Tank Dimensions and Specifications

MODEL NUMBER	GAL. CAP.	AREA SQ. FT.	DIA*	H HORIZ. LENGTH*	V VERT. HEIGHT*	GLASS-LINED WEIGHT (LBS)*	TAPPINGS		
							A	B	C
FVG147	147	36	34"	52"	54"	418	15-3/4"	23-3/4"	31-3/4"
FVG184	184	44	34"	64"	66"	490	15-3/4"	23-3/4"	31-3/4"
FVG220	220	52	34"	76"	78"	574	15-3/4"	23-3/4"	31-3/4"
FVG257	257	60	34"	88"	90"	657	15-3/4"	23-3/4"	31-3/4"
FVG294	294	68	34"	100"	102"	735	15-3/4"	23-3/4"	31-3/4"
FVG367	367	83	34"	124"	126"	909	15-3/4"	23-3/4"	31-3/4"
FVG265	265	53	40"	64"	66"	604	17-1/2"	25-1/2"	33-1/2"
FVG318	318	63	40"	76"	78"	704	17-1/2"	25-1/2"	33-1/2"
FVG370	370	72	40"	88"	90"	806	17-1/2"	25-1/2"	33-1/2"
FVG423	423	82	40"	100"	102"	907	17-1/2"	25-1/2"	33-1/2"
FVG528	528	100	40"	124"	126"	1,108	17-1/2"	25-1/2"	33-1/2"
FVG432	432	75	46"	76"	80"	832	18-3/4"	26-3/4"	34-3/4"
FVG504	504	86	46"	88"	90"	951	18-3/4"	26-3/4"	34-3/4"
FVG576	576	97	46"	100"	102"	1,068	18-3/4"	26-3/4"	34-3/4"
FVG720	720	119	46"	124"	126"	1,303	18-3/4"	26-3/4"	34-3/4"
FVG864	864	141	46"	148"	150"	1,540	18-3/4"	26-3/4"	34-3/4"
FVG1008	1,008	163	46"	172"	174"	1,776	18-3/4"	26-3/4"	34-3/4"
FVG658	658	100	52"	88"	90"	1,395	20-3/4"	28-3/4"	36-3/4"
FVG752	752	112	52"	100"	102"	1,563	20-3/4"	28-3/4"	36-3/4"
FVG940	940	138	52"	124"	126"	1,896	20-3/4"	28-3/4"	36-3/4"
FVG1128	1,128	163	52"	148"	150"	2,231	20-3/4"	28-3/4"	36-3/4"
FVG1315	1,315	188	52"	172"	174"	2,564	20-3/4"	28-3/4"	36-3/4"
FVG951	951	128	58"	100"	102"	1,784	22-3/4"	30-3/4"	38-3/4"
FVG1189	1,189	156	58"	124"	126"	2,160	22-3/4"	30-3/4"	38-3/4"
FVG1427	1,427	185	58"	148"	150"	2,542	22-3/4"	30-3/4"	38-3/4"
FVG1665	1,665	213	58"	172"	174"	2,913	22-3/4"	30-3/4"	38-3/4"
FVG1469	1,469	174	64"	124"	126"	2,870	24-3/4"	32-3/4"	40-3/4"
FVG1763	1,763	206	64"	148"	150"	3,369	24-3/4"	32-3/4"	40-3/4"

ST-1/
ST-2/
ST-5

ST-3/
ST-4

FOR EASE IN ORDERING BY MODEL NUMBER

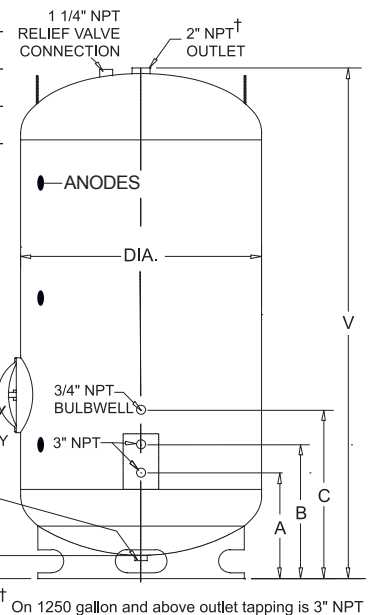


This is a vertical, glass lined tank with a 432 gallon capacity and outdoor foam insulation.

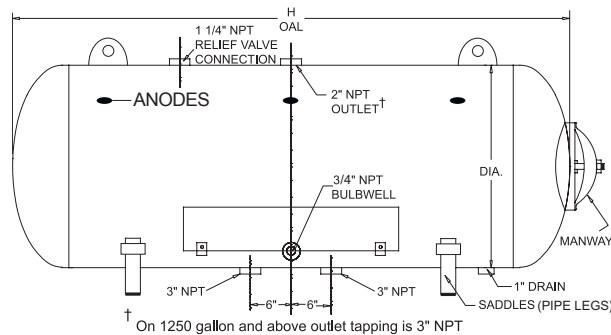
Optional Equipment

R16 Insulation
Manway - 34" and 40"
Diameter Only

G = Glass lined
H = Horizontal
V = Vertical
F = Outdoor Foam Tank



*Dimensions and weights include outdoor foam. (all approx.)



Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615.889.8900 / F: 615.547.1000
Lochinvar.com



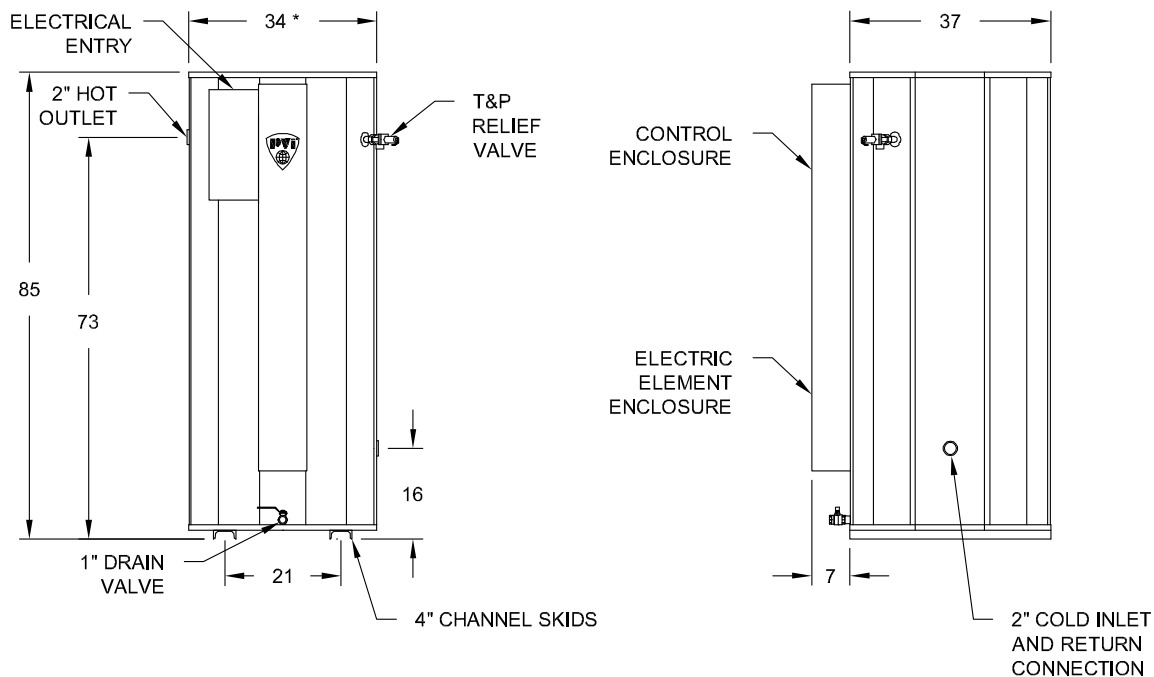
SWT-1/SWT-2/SWT-3

DURAWATT® ELECTRIC • PACKAGED WATER HEATER AquaPLEX® - STORAGE TANK (UNLINED DUPLEX ALLOY)

TANK SERIES 250 GALLONS - 208V, 3Ø

	MODEL NUMBER	RECOVERY RATE GPH		INPUT kW	ELEMENT AMPS **	SHIPPING WEIGHT lbs
		40°-120°F	40°-140°F		208V, 3Ø	
SWT-3	45 L 250A-VE	45	37	9	25	1145
SWT-1	90 L 250A-VE	90	70	18	50	1145
SWT-2	140 L 250A-VE	140	111	27	75	1145
	180 L 250A-VE	180	150	36	100	1145
	230 L 250A-VE	230	184	45	125	1155
	270 L 250A-VE	270	220	54	150	1155
	320 L 250A-VE	320	256	63	175	1155
	370 L 250A-VE	370	300	72	200	1155
	410 L 250A-VE	410	325	80	222	1165
	460 L 250A-VE	460	368	90	251	1165
	510 L 250A-VE	510	405	99	276	1185
	540 L 250A-VE	540	430	105	292	1185
	610 L 250A-VE	610	491	120	334	1195
	690 L 250A-VE	690	552	135	376	1205
	770 L 250A-VE	770	614	150	417	1215
	840 L 250A-VE	840	675	165	459	1225
	920 L 250A-VE	920	736	180	501	1235

ASHRAE 90.1 compliant.
For standard and optional equipment, see form #PV 8130.
Dimensions in inches, unless otherwise noted.
Contact PVI representative for higher inputs.
** For other voltages, see PV 8448.



STANDARD ELECTRICAL REQUIREMENTS:

CONTROL CIRCUIT TRANSFORMER SUPPLIED ON 480V ONLY. TAPPED CONTROL CIRCUIT INTERNALLY WIRED FOR 208V AND 240V.
208V AND 240V MODELS REQUIRE AC NEUTRAL CONDUCTOR FOR GROUNDING OF CONTROL CIRCUIT.
ALTERNATE VOLTAGES: FOR 230/460V, MULTIPLY kW AND RECOVERY BY .92. MULTIPLY AMPS BY .96.
FOR 220/440V, MULTIPLY kW AND RECOVERY BY .84. MULTIPLY AMPS BY .92.



THERM-X-TROL®

Thermal Expansion Tanks: Diaphragm ST-C Series ASME

DET-1/DET-2/DET-3

150 PSIG Working Pressure

Construction

Shell	ST-5C through ST-42VC: Deep Drawn Steel ST-60VC through ST-210VC: Steel Head & Shell
Diaphragm	Heavy Duty Butyl NSF/ANSI 61
Liner	Antimicrobial Polypropylene w/Anti-Legionella Protection
System Connection	Stainless Steel
Finish	Red Oxide Primer
Water Circulator	Turbulator® (Deep Drawn Models)
Air Valve	Schrader Valve w/ EPDM Seat
Factory Precharge	55 PSIG (3.8 bar)

Performance

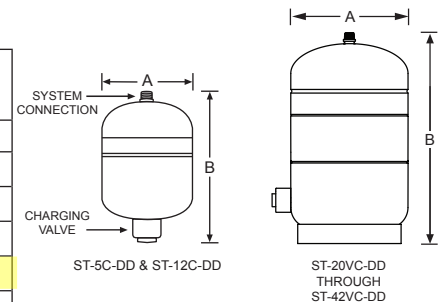
Maximum Operating Temperature	200°F (93°C)
Maximum Working Pressure	150 PSIG (10.3 bar)
Warranty	1-Year

Application

- For use in closed, domestic hot water systems to control pressure buildup.
- Fixed diaphragm construction.
- Designed and constructed per ASME Code Section VIII, Division 1.
- Tested to JIS Z 2801 for reduction of Legionella, Staphylococcus and E. coli.
- Follows ASHRAE 188 Anti-Legionella guidelines.
- All models available with optional sight glass.
- Seismic restraints available on stand models only.
- Deep drawn models are lighter, stronger and more compact than traditional head and shell construction.

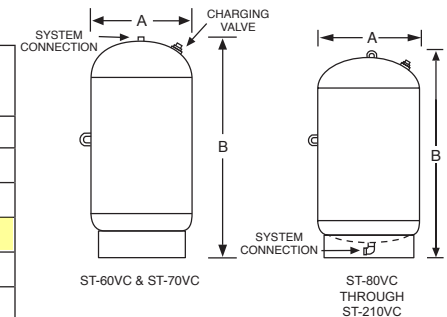
Deep Drawn In-Line & Stand Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Diameter		B Tank Height		System Conn. (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm		Lbs	Kg
ST-5C-DD	2.0	8	.45	8	203	14	356	3/4	10	5
ST-12C-DD	6.4	24	.50	12	305	18	457	3/4	26	12
ST-20VC-DD	8.6	33	.37	12	305	22	559	3/4	36	16
DET-3 ST-30VC-DD	16.5	63	.68	15	381	25	636	3/4	48	22
ST-42VC-DD	23.0	88	.49	15	381	33	838	3/4	68	31



Head & Shell Stand Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Diameter		B Tank Height		System Conn. (NPTF)	Shipping Weight	
	Gal	Lit		In	mm	In	mm		Lbs	Kg
ST-60VC	25.0	95	.44	16	406	32	813	3/4	85	39
ST-70VC	34.0	129	.32	16	406	45	1143	3/4	99	45
DET-1/DET-2 ST-80VC	53.0	201	.66	24	610	37	940	1 1/4	224	102
ST-120VC	68.0	257	.51	24	610	44	1118	1 1/4	266	121
ST-180VC	77.0	291	.45	24	610	49	1245	1 1/4	285	129
ST-210VC	90.0	341	.39	24	610	57	1448	1 1/4	319	145



All dimensions and weights are approximate.

Job Name _____	Notes _____
Engineer _____	_____
Contractor _____	_____
P.O. No. _____	_____
Sales Rep. _____	_____
Model No. _____	_____

188
AntiLegionella. Antimicrobial



Certified to NSF/ANSI CAN 61



Turbulator
DEEP DRAWN
MODELS



ISO 9001:2015
CERTIFIED



LEAD FREE
IAPMO P&T

PROJECT:	Criculators	UNIT TAG:	_____	QUANTITY:	1
REPRESENTATIVE:	Hurley Engineering	TYPE OF SERVICE:	Recirculation	DATE:	_____
ENGINEER:	TBD	SUBMITTED BY:	Devin Carle	DATE:	_____
CONTRACTOR:	TBD	APPROVED BY:	_____	DATE:	_____
		ORDER NO.:	_____	DATE:	_____



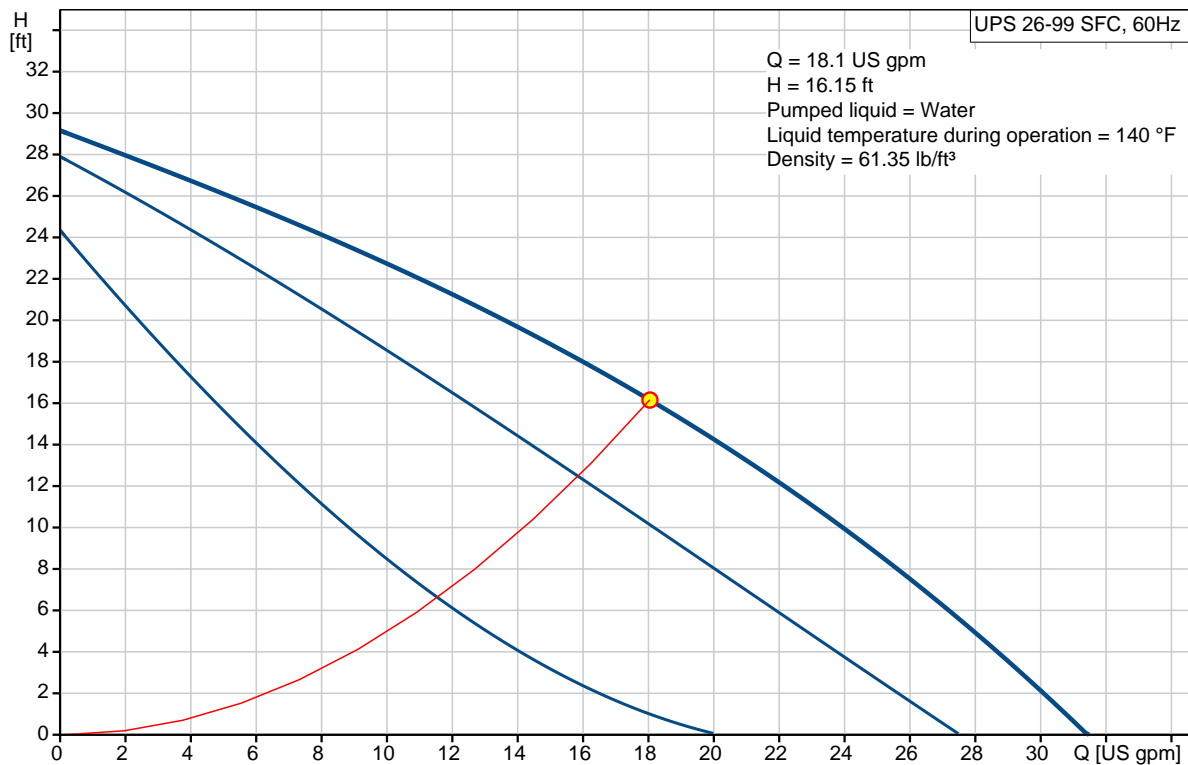
UPS 26-99 SFC

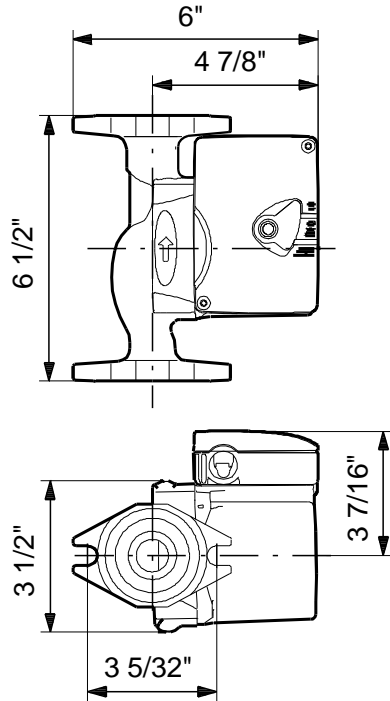
Circulator pumps

CP-1/CP-2/CP-3

Product photo could vary from the actual product

Conditions of Service		Pump Data		Motor Data	
Flow:	18.1 US gpm	Maximum operating pressure:	145.04 psi	Max. power input:	197 W
Head:	16.15 ft	Liquid temperature range:	35.6 .. 230 °F	Rated voltage:	115 V
Efficiency:	_____	Maximum ambient temperature:	104 °F	Main frequency:	60 Hz
Liquid:	Water	Approvals:	UL, CSA	Insulation class:	F
Temperature:	140 °F	Type of connection:	S.S. Flange	Motor protection:	CONTACT
NPSH required:	ft	Flange standard:	USA Oval	Thermal protection:	internal
Viscosity:	_____	Pipe connection:	2 - Bolt Flange		
Specific Gravity:	0.985	Product number:	98961763		





Materials:

Pump housing: Stainless steel
EN 1.4301

Impeller: Composite, PES

Count	Description
-------	-------------

1	UPS 26-99 SFC
---	---------------



Product photo could vary from the actual product

Product No.: [98961763](#)

The pump is of the canned rotor type, i.e. pump and motor form an integral unit without shaft seal and with only two gaskets for sealing. The bearings are lubricated by the pumped liquid. The pump is characterized by:

- * Ceramic shaft and radial bearings.
- * Carbon axial bearing.
- * Stainless steel rotor can and bearing plate.
- * Corrosion-resistant impeller, Composite, PES.
- * Stainless steel pump housing.

The motor is a 1-phase motor.
 No additional motor protection is required.

Liquid:

Pumped liquid:	Water
Liquid temperature range:	35.6 .. 230 °F
Selected liquid temperature:	140 °F
Density:	61.35 lb/ft³

Technical:

Actual calculated flow:	18.1 US gpm
Resulting head of the pump:	16.15 ft
Approvals on nameplate:	UL, CSA

Materials:

Pump housing:	Stainless steel EN 1.4301
Impeller:	Composite, PES

Installation:

Maximum ambient temperature:	104 °F
Ambient max at 176°F liquid:	176 °F
Maximum operating pressure:	145.04 psi
Flange standard:	USA Oval
Type of connection:	S.S. Flange
Pipe connection:	2 - Bolt Flange
Pressure stage:	10
Port-to-port length:	6 1/2 in

Electrical data:



Company name: Hurley Engineering
Created by:
Phone:

Date: 3/23/2020

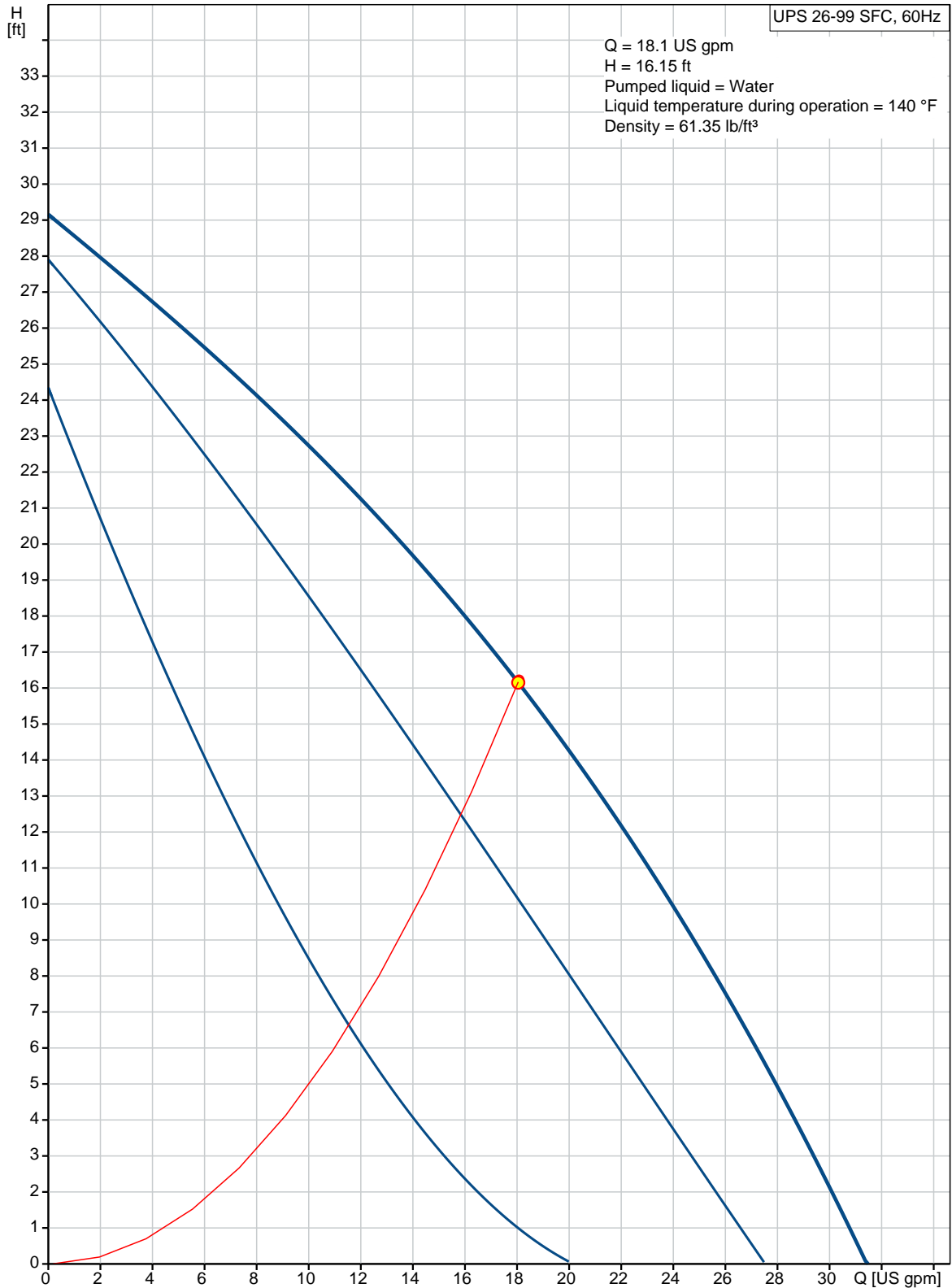
Count	Description
	Power input in speed 1: 0.2012 HP
	Power input in speed 2: 179 W
	Max. power input: 197 W
	Main frequency: 60 Hz
	Rated voltage: 1 x 115 V
	Current in speed 1: 1.3 A
	Current in speed 2: 1.5 A
	Current in speed 3: 1.8 A
	Capacitor size - run: 20 μ F/180 V
	Number of poles: 2
	Insulation class (IEC 85): F
	Others:
	Gross weight: 10.3 lb
	Country of origin: US
	Custom tariff no.: 8413.70.2005



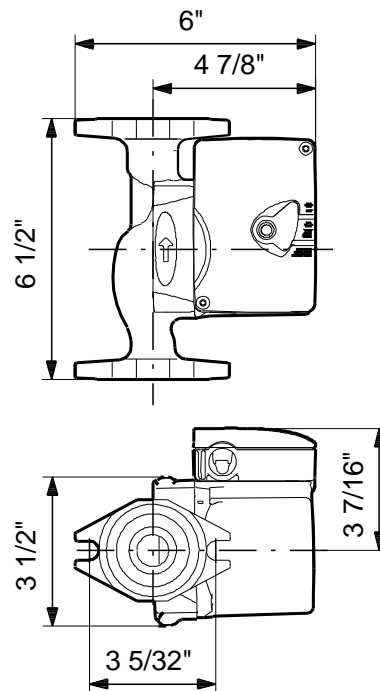
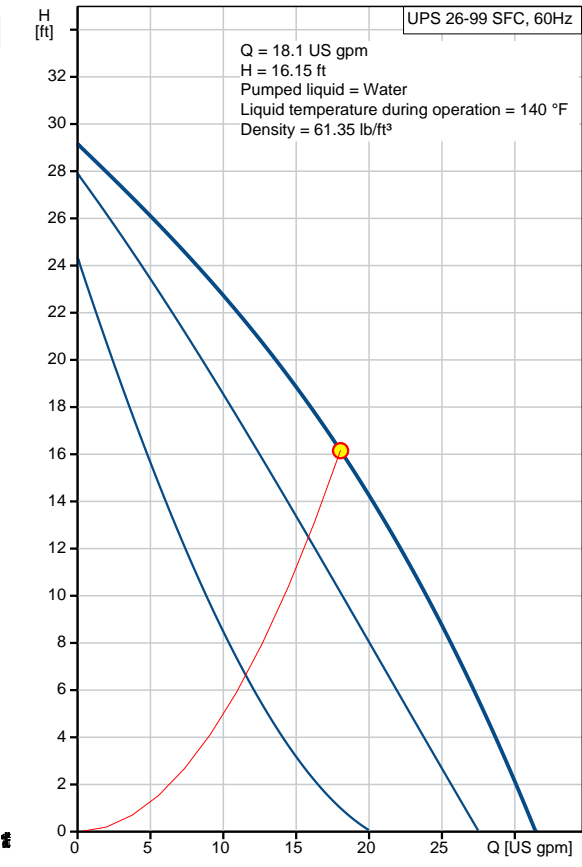
Company name: Hurley Engineering
Created by:
Phone:

Date: 3/23/2020

98961763 UPS 26-99 SFC 60 Hz



Description	Value
General information:	
Product name:	UPS 26-99 SFC
Product No.:	98961763
EAN:	5712604305751 5712604305751
Technical:	
Speed Number:	3
Actual calculated flow:	18.1 US gpm
Max flow:	33 US gpm
Resulting head of the pump:	16.15 ft
Head max:	28.87 ft
Approvals on nameplate:	UL, CSA
Valve:	pump with built-in isolating and non-return valves
Materials:	
Pump housing:	Stainless steel EN 1.4301
Impeller:	Composite, PES
Installation:	
Maximum ambient temperature:	104 °F
Ambient max at 176°F liquid:	176 °F
Maximum operating pressure:	145.04 psi
Flange standard:	USA Oval
Type of connection:	S.S. Flange
Pipe connection:	2 - Bolt Flange
Pressure stage:	10
Port-to-port length:	6 1/2 in
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	35.6 .. 230 °F
Selected liquid temperature:	140 °F
Density:	61.35 lb/ft³
Electrical data:	
Power input in speed 1:	0.2012 HP
Power input in speed 2:	179 W
Max. power input:	197 W
Main frequency:	60 Hz
Rated voltage:	1 x 115 V
Current in speed 1:	1.3 A
Current in speed 2:	1.5 A
Current in speed 3:	1.8 A
Capacitor size - run:	20 µF/180 V
Number of poles:	2
Insulation class (IEC 85):	F
Motor protection:	CONTACT
Thermal protec:	internal
Controls:	
Pos term box:	9H
Others:	
Gross weight:	10.3 lb
Country of origin:	US



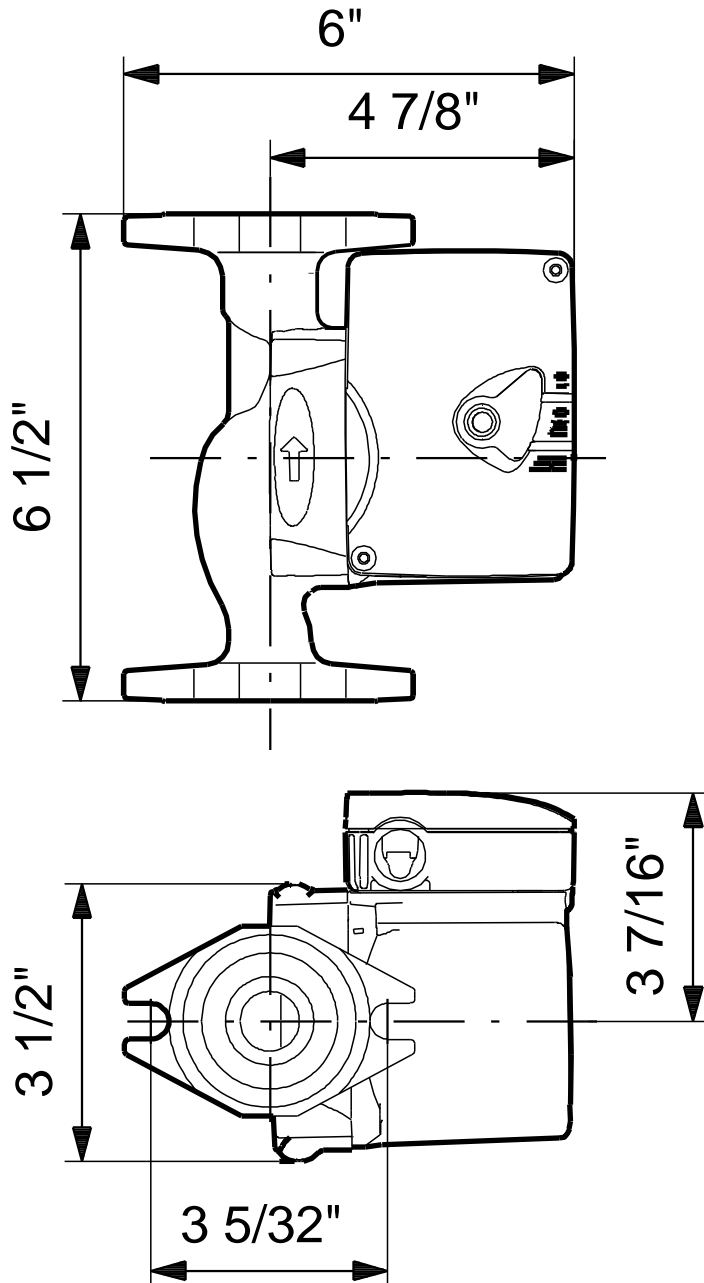


Company name: Hurley Engineering
Created by:
Phone:

Date: 3/23/2020

Description	Value
Custom tariff no.:	8413.70.2005

98961763 UPS 26-99 SFC 60 Hz



Note! All units are in [in] unless otherwise stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Product Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

TMV-1/TMV-2/TMV-3

LEAD FREE*

IntelliStation® Digital Water Tempering and Recirculating System

Capacity up to 858 gpm @ 45psi

Features

- Configurable on location. Does not require factory pre-programming or special software and laptop
- Controls water temperature to +/- 2°F in accordance with ASSE 1017
- Control +/- 2°F during periods of low/zero demand
- 3.5" full-color, user-selectable touch screen display
- User programmable high-temperature sanitization mode
- In case of power or cold water failure, valve flows full cold for safety with manual override feature to set mixed outlet temperature
- Settings can be adjusted/monitored at the controller or remotely through BAS (Building Automation System)
- Displays pressure, temperature and flow/BTU data
- Pass code protected for security
- User programmable high temperature alarm

Specifications

Maximum Operating Pressure	200psi (1379kPa)
Maximum Hot Water Temperature	200°F (93°C)
Minimum Hot Water Supply Temperature**	2°F (1°C) above set point
Hot Water Inlet Temperature Range	120-180°F (49-82°C)
Cold Water Inlet Range	39-80°F (4-27°C)
Minimum Flow ***	0.5gpm (1.89lpm)
Temperature Adjustment Range****	80-180°F (27-82°C)
Power.....	115/230V (ac) ±10% 50/60HZ, 30VA, 1180VA fully loaded
Listing /Compliance.....	ASSE 1017^, cUPC^, NSF^, CSA 24/UL873, Bacnet Testing Laboratories (BTL)
Ambient Temperature	32°F (0°C) to 104°F (40°C)
Ambient Humidity	0 - 90 RH non-condensing

SUITABLE FOR INDOOR USE ONLY

Relay Specification

Pump relay	16A @ 250 VAC
Alert relay	5A @ 250 VAC, 5A @ 30 VDC



WARNING
User is responsible for determining safe and appropriate temperatures and pressures for system users, guests and facility.

NOTICE

- * The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.
- ** With equal pressure
- *** Minimum flow when IntelliStation is installed at or near hot water source recirculating tempered water with a properly sized continuously operating recirculating pump.
- **** Low limit cannot be less than the cold water temperature. For best operation, hot water should be at least 2°F above desired set point.

^ Listed without pump

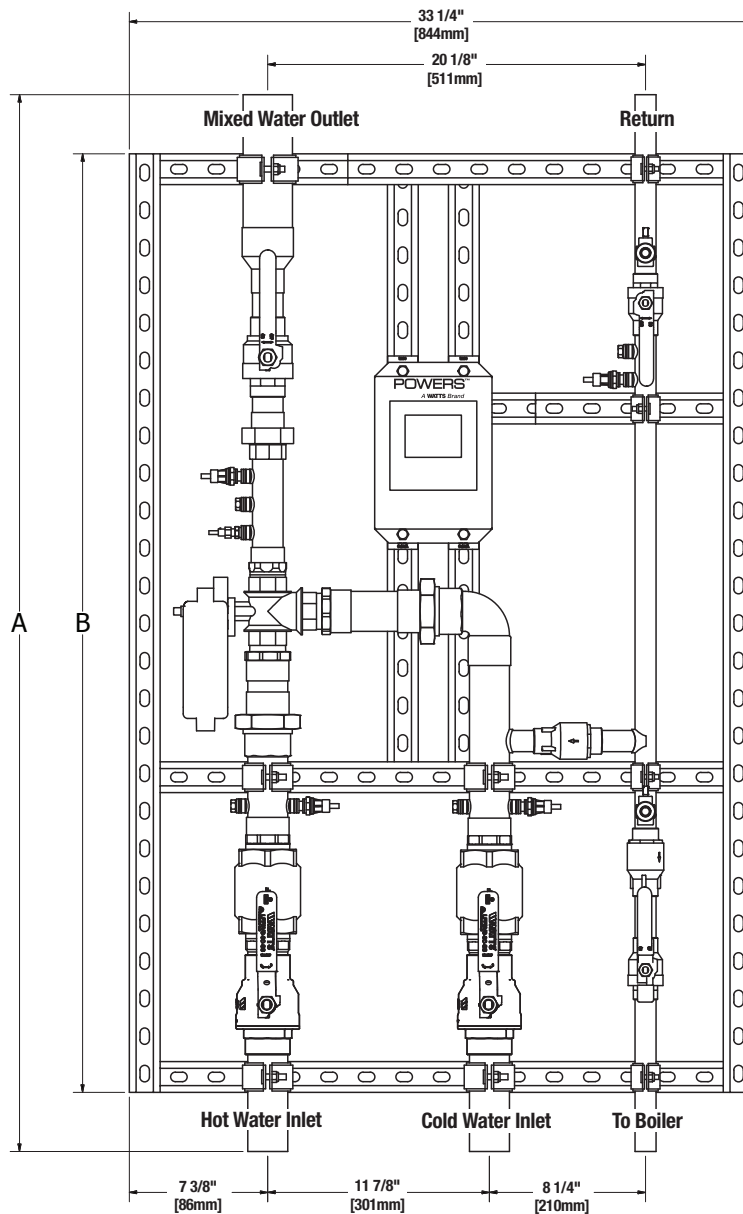
Powers product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Powers Technical Service. Powers reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Powers products previously or subsequently sold.

Capacity

Flow Capacity at 50-50 Mixed Ratio								
Model	Min. System Draw+	C _v	Pressure Drop Across Valve					
			5psi (34 kPa)	10psi (69 kPa)	20psi (138 kPa)	30psi (207 kPa)	45psi (310 kPa)	50psi (345 kPa)
LFIS150	0.5	26.88	60 gpm 227 lpm	85 gpm 322 lpm	120 gpm 454 lpm	147 gpm 556 lpm	180 gpm 681 lpm	190 gpm 719 lpm
LFIS200	0.5	42.70	96 gpm 363 lpm	135 gpm 511 lpm	191 gpm 723 lpm	234 gpm 886 lpm	286 gpm 1083 lpm	302 gpm 1143 lpm
LFIS150DV	0.5	53.57	120 gpm 454 lpm	170 gpm 644 lpm	240 gpm 908 lpm	294 gpm 1113 lpm	360 gpm 1363 lpm	380 gpm 1439 lpm
LFIS200DV	0.5	85.27	192 gpm 727 lpm	270 gpm 1022 lpm	382 gpm 1446 lpm	468 gpm 1772 lpm	572 gpm 2165 lpm	604 gpm 2286 lpm
LFIS200TV	0.5	127.90	288 gpm 1090 lpm	405 gpm 1533 lpm	573 gpm 2169 lpm	702 gpm 2657 lpm	858 gpm 3248 lpm	906 gpm 3430 lpm

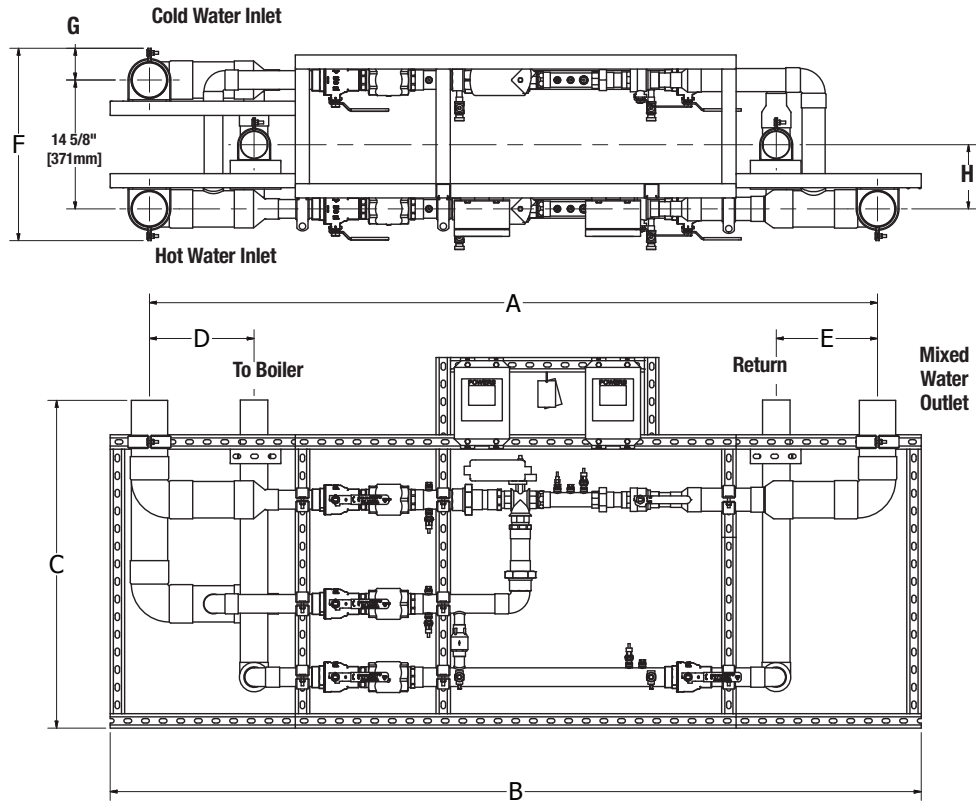
Dimensions

Single Valve IntelliStation

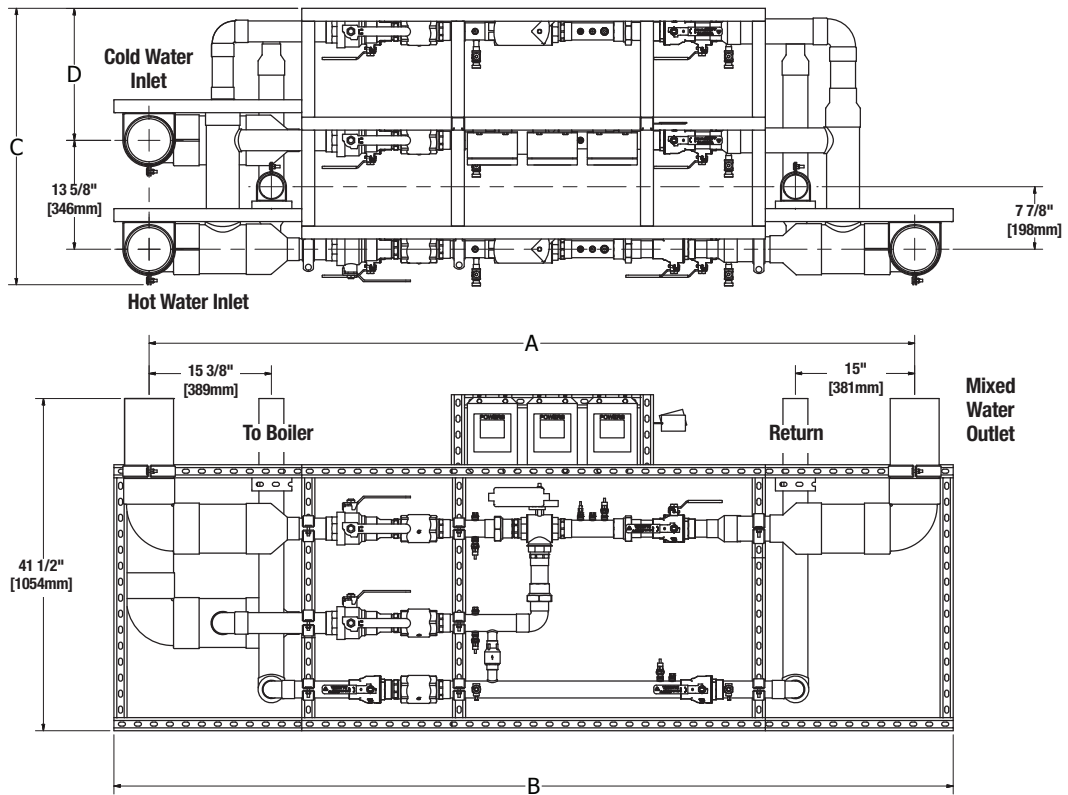


Dimensions

Dual Valve IntelliStation



Triple Valve IntelliStation



Dimensions are shown $\pm 1/2''$

Single Valve

Model	Inlets	Outlet	Return	A	B
LFIS150C00LP	2" (50mm)	2½" (63mm)	1" (25mm)	56¾" (1431mm)	50" (1270mm)
LFIS150C0SLP+	2" (50mm)	2½" (63mm)	1" (25mm)	56 ⅜" (1431mm)	50" (1270mm)
LFIS150CF0LP	2" (50mm)	2½" (63mm)	1" (25mm)	78¼" (1988mm)	72" (1829mm)
LFIS150CFSLP+	2" (50mm)	2½" (63mm)	1" (25mm)	78¼" (1988mm)	72" (1829mm)
LFIS150F00LP	2" (50mm)	2½" (63mm)	2" (50mm)	56¾" (1431mm)	50" (1270mm)
LFIS150F0SLP+	2" (50mm)	2½" (63mm)	2" (50mm)	56¾" (1431mm)	50" (1270mm)
LFIS150FF0LP	2" (50mm)	2½" (63mm)	2" (50mm)	78¼" (1988mm)	72" (1829mm)
LFIS150FFSLP+	2" (50mm)	2½" (63mm)	2" (50mm)	78¼" (1988mm)	72" (1829mm)
LFIS200C00LP	2½" (63mm)	3" (75mm)	1" (25mm)	63⅝" (1615mm)	57" (1448mm)
LFIS200C0SLP+	2½" (63mm)	3" (75mm)	1" (25mm)	63⅝" (1615mm)	57" (1448mm)
LFIS200CF0LP	2½" (63mm)	3" (75mm)	1" (25mm)	80¾" (2038mm)	74" (1880mm)
LFIS200CFSLP+	2½" (63mm)	3" (75mm)	1" (25mm)	80¾" (2038mm)	74" (1880mm)
LFIS200F00LP	2½" (63mm)	3" (75mm)	2" (50mm)	63⅝" (1615mm)	57" (1448mm)
LFIS200F0SLP+	2½" (63mm)	3" (75mm)	2" (50mm)	63⅝" (1615mm)	57" (1448mm)
LFIS200FF0LP	2½" (63mm)	3" (75mm)	2" (50mm)	80¾" (2038mm)	74" (1880mm)
LFIS200FFSLP+	2½" (63mm)	3" (75mm)	2" (50mm)	80¾" (2038mm)	74" (1880mm)

*Strainers ship loose and must be installed by a plumber at the job site

Dual Valve

Model	Inlets	Outlet	Return	A	B	C	D	E	F	G	H
LFIS150DVH00LP	4" (100mm)	4" (100mm)	3" (75mm)	82⅝" (2099mm)	92" (2337mm)	37⅞" (943mm)	11⅞" (301mm)	11½" (292mm)	21⅞" (555mm)	3⅝" (92mm)	7¼" (184mm)
LFIS150DVH0SLP	4" (100mm)	4" (100mm)	3" (75mm)	90⅝" (2302mm)	100" (2540mm)	37⅞" (943mm)	11⅞" (301mm)	11½" (292mm)	21⅞" (555mm)	3⅝" (92mm)	¼" (184mm)
LFIS150DVHF0LP	4" (100mm)	4" (100mm)	3" (75mm)	104⅜" (2651mm)	113¼" (2889mm)	37⅞" (943mm)	11⅞" (301mm)	11½" (292mm)	21⅞" (555mm)	3⅝" (92mm)	7¼" (184mm)
LFIS150DVHFSLP	4" (100mm)	4" (100mm)	3" (75mm)	112⅜" (2854mm)	121¾" (3092mm)	37⅞" (943mm)	11⅞" (301mm)	11½" (292mm)	21⅞" (555mm)	3⅝" (92mm)	7¼" (184mm)
LFIS200DVH00LP	6" (150mm)	6" (150mm)	3" (75mm)	91¾" (2330mm)	100" (2540mm)	41¾" (1060mm)	13" (330mm)	13½" (344mm)	23½" (597mm)	4½" (114mm)	7⅝" (187mm)
LFIS200DVH0SLP	6" (150mm)	6" (150mm)	3" (75mm)	103" (2616mm)	111¼" (2838mm)	41¾" (1060mm)	13" (330mm)	13½" (344mm)	23½" (597mm)	4½" (114mm)	7⅝" (187mm)
LFIS200DVHF0LP	6" (150mm)	6" (150mm)	3" (75mm)	107¾" (2737mm)	116" (2946mm)	41¾" (1060mm)	13" (330mm)	13½" (344mm)	23½" (597mm)	4½" (114mm)	7⅝" (187mm)
LFIS200DVHFSLP	6" (150mm)	6" (150mm)	3" (75mm)	121⅜" (3083mm)	130" (3302mm)	41¾" (1060mm)	13" (330mm)	13½" (344mm)	23½" (597mm)	4½" (114mm)	7⅝" (187mm)

Triple Valve

Model	Inlets	Outlet	Return	A	B	C	D
LFIS200TVH00LP	6" (150mm)	6" (150mm)	3" (75mm)	95¾" (2432mm)	105" (2667mm)	36¼" (921mm)	18⅝" (460mm)
LFIS200TVH0SLP	6" (150mm)	6" (150mm)	3" (75mm)	107" (22718mm)	116 1/4" (2953mm)	36¼" (921mm)	18⅝" (460mm)
LFIS200TVHF0LP	6" (150mm)	6" (150mm)	3" (75mm)	111¼" (2838mm)	121" (3073mm)	36¼" (921mm)	18⅝" (460mm)
LFIS200TVHFSLP	6" (150mm)	6" (150mm)	3" (75mm)	123¾" (2143mm)	133" (3143mm)	36¼" (921mm)	18⅝" (460mm)

Ordering Information

Standard Capacity

Valve	Inlets (in)	Outlet (in)	Order Code
LFIS150	2" (50mm)	2½" (63mm)	LFIS150
LFIS200	2½" (63mm)	3" (75mm)	LFIS200

Return Pipe Size

1"	C
2"	F

Flow/BTU Package

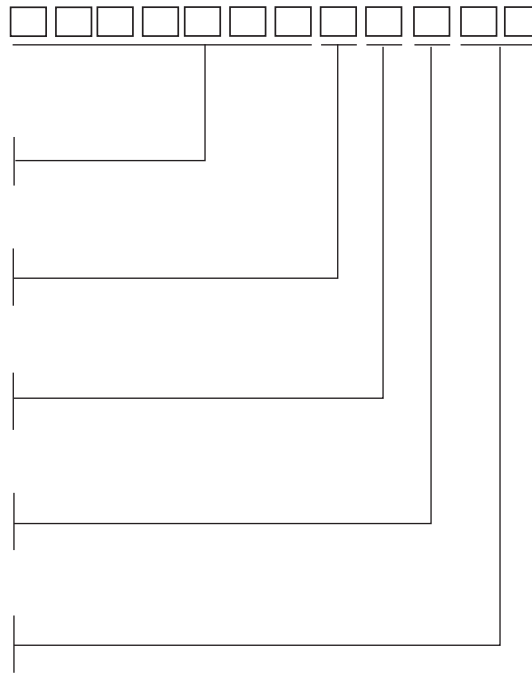
None	O
Flow/BTU Package	F

Strainers⁺

None	O
On inlets	S

Pump

Less Pump	LP
Pump Assigned by Factory	--



Must Provide Following Pump Information to Factory to Select the Pump:

Pump Manufacturer: _____

Their Part/Model # _____

System Head Loss _____

Required Flow to Maintain Recirculating Temperature _____

⁺Strainers ship loose and must be installed by a plumber at the job site

High Capacity

Valve	Inlets	Outlet	Order Code
LFIS150/LFIS150	4" (100mm)	4" (100mm)	LFIS150DV
LFIS200/LFIS200	6" (150mm)	6" (150mm)	LFIS200DV
LFIS200/LFIS200/LFIS200	6" (150mm)	6" (150mm)	LFIS200TV

Return Pipe Size

3"	H
----	---

Flow/BTU Package

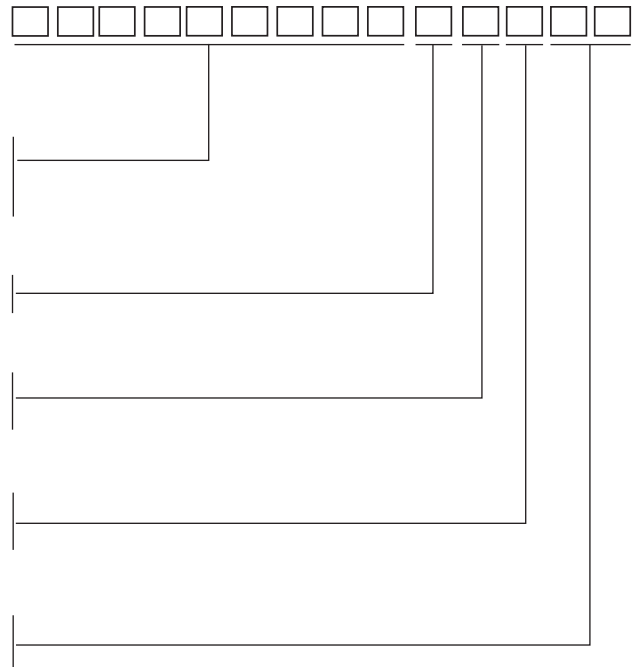
None	O
Flow/BTU Package	F

Strainers

None	O
On inlets	S

Pump

Less Pump	LP
Pump Assigned by Factory	--



Must Provide Following Pump Information to Factory to Select the Pump:

Pump Manufacturer: _____

Their Part/Model # _____

System Head Loss _____

Required Flow to Maintain Recirculating Temperature _____

Typical Specification

Lead free* digital water temperature control and monitoring system shall feature full-color touchscreen interface which is configurable on location and does not require factory pre-programming. System shall control water temperature to +/- 2°F in accordance with ASSE 1017 and during periods of low/zero demand and feature a user-programmable high temperature alarm. Unit shall feature Feed Forward or Predictive Control which anticipates changes in system demand and adjusts valve pre-emptively to maintain mixed set point. Controller shall be password protected and feature a user-adjustable outlet temperature range of 80 - 180°F and an approach temperature of 2°F.

System shall digitally monitor inlet pressure and temperature, mixed outlet temperature, mixed outlet set point, pressure and flow/BTUs (optional), as well as return temperature without the use of an external module. System shall control an engineer specified recirculation pump based on user-set return temperature limits. Controller shall integrate with building automation systems through Bacnet and Modbus protocols and feature local and remote temperature alarms. System will also feature a user-set and controlled, high-temperature sanitization mode for use as part of user's safe and properly designed thermal bacteria eradication protocol. In the event of a power failure or loss of cold water, system will close the hot water supply. System shall be listed/approved to ASSE 1017, cUPC, NSF, CSA 24/UL873 and BTL (Bacnet Testing Laboratories) and should be mounted on a heavy-duty welded strut with corrosion resistance coating and factory tested as a complete unit.

System shall be a Powers LFISXXXXXXXX.

⚠ WARNING

IntelliStation provides user-directed control and monitoring of water distribution systems. It is the user's responsibility to select and maintain water temperatures that are safe and appropriate for the water system users and facility. IntelliStation's Sanitization mode is intended for use as part of a user-directed, controlled and supervised protocol that has been safely and properly designed.

It is recommended to install IntelliStation® as part of a ASSE compliant water distribution system, including point-of-use mixings valves

Installation and adjustment of the IntelliStation® are the responsibility of the owner and installer and must be done by qualified personnel in accordance with the manufacturer's instructions, and complying with all governmental requirements, building and construction codes and standards. The owner and user of the IntelliStation® is responsible for selecting and installing the product in an appropriate water distribution system, proper sizing, maintaining proper water quality/condition, and deciding what temperature is safe and appropriate for the water distribution users and facility.

Always read and follow User Guide & Instruction Manual and all product warnings and labels, and comply with all governmental and safety requirements.

NOTICE

A copy of the applicable limited warranty and disclaimers is available by request to www.PowersControls.com.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

ENGINEERING APPROVAL

Project: _____
Contractor: _____
Architect/Engineer: _____

POWERS™

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