

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
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Date: 1/17/2024

Return Request: 1/27/2024

Project: Academies of Math & Science Little Rock

Supplier: Sanders Supply

Manufacturer: Various

Submittal: Plumbing (Fixtures, Equipment, & Specialties)

Submittal Number: 22 01 00-07

Drawing # and Installation: Plumbing Drawings

ARCHITECT

Lewis Architects Engineers
11225 Huron Lane, Suite 104
Little Rock, AR 72211
501-223-9302

ENGINEER

Lewis Architects Engineers
11225 Huron Lane, Suite 104
Little Rock, AR 72211
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GENERAL CONTRACTOR

Clark Contractors
15825 Cantrell Rd.
Little Rock, AR 72223
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MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.

23-1028

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9924 Landers Rd.
No. Little Rock, AR 72117

AMS Charter School

Little Rock, AR

Comfort Systems USA

North Little Rock, AR

Plumbing Submittals

Sanders Supply



Hot Springs, AR

January 12, 2024

AMS Charter School

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Supplies	Supplies

WC-1



MADERA YOUTH™ FloWise® 14" HEIGHT ELONGATED FLUSHOMETER TOILET

VITREOUS CHINA

MADERA YOUTH™ FloWise® 14" HEIGHT ELONGATED FLUSHOMETER TOILET

- Floor mount flushometer valve toilet
- Vitreous china
- High Efficiency, Low Consumption. Operates in the range of 1.28 gpf to 1.6 gpf (4.8 Lpf to 6.0 Lpf)
- Meets definition of HET (High Efficiency Toilet) when used with a high efficiency flush valve (1.28 gpf)
- Fully glazed 2-1/8" trapway
- Elongated bowl
- 10" or 12" roughing-in
- 14" rim height
- Condensation channel
- Powerful direct-fed siphon jet action
- 10" x 12" water surface area
- 1-1/2" inlet spud
- 2 bolt caps
- 100% factory flush tested
- TAS Compliant



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

➔ **2599.001** Elongated bowl only, top spud

Component Parts:

- 047007-0070A** Inlet Spud (furnished with bowl)
- 481310-0200A** Bolt caps with retainers (furnished with bowl)

Nominal Dimensions:

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

Fixture only, less seat and flush valve

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

Compliance Certifications -

Meets or Exceeds the Following Specifications:

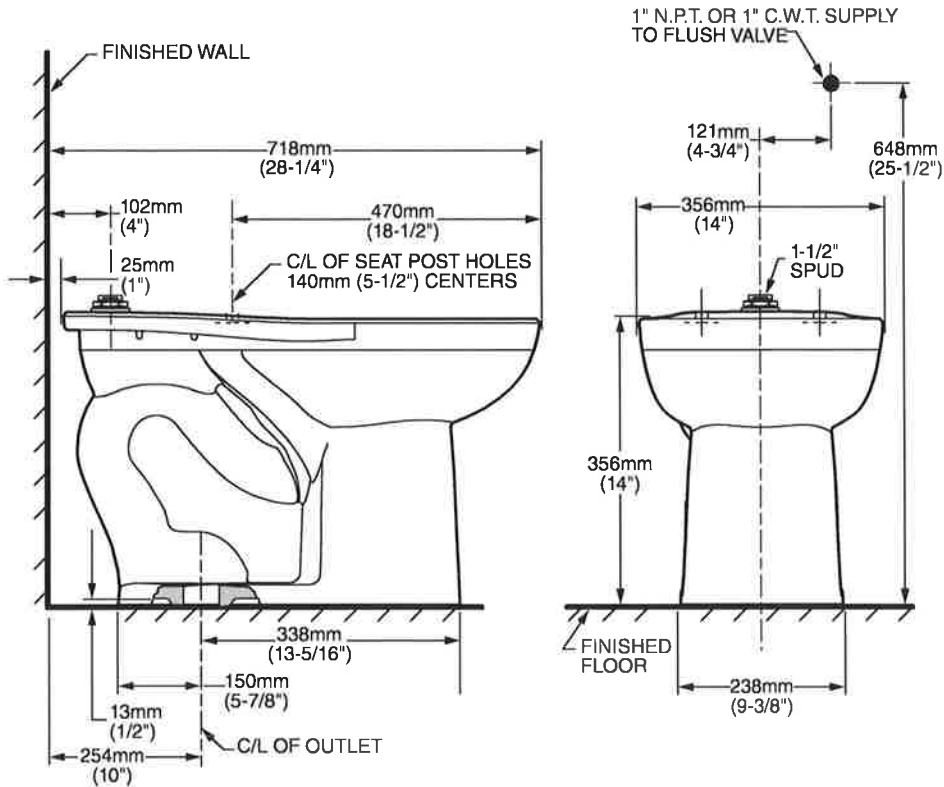
- ASME A112.19.2-2008 / CSA B45.1-08 for Vitreous China Fixtures

To Be Specified:

- Color: White
- Seat: TAS compliant seat recommendation
 - For ages 5 through 8: American Standard #5901.100 Heavy duty open front less cover
 - For ages 9 through 12: American Standard #5905.100 Extra heavy duty open front less cover or #5910.100 Extra Heavy Duty Plus open front less cover
- Flushometer Valve:
 - 1.6 gpf:
 - Sensor-Operated: American Standard Selectronic® DC Power #6065.161.002 (Top Spud)
 - Manual: American Standard #6047.161.002 (Top Spud)
 - 1.28 gpf:
 - Sensor-Operated: American Standard Selectronic® DC Power #6065.121.002 (Top Spud)
 - Manual: American Standard #6047.121.002 (Top Spud)



MADERA YOUTH™ FloWise® 14" HEIGHT ELONGATED FLUSHOMETER TOILET LESS EVERCLEAN®
VITREOUS CHINA



NOTES:

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

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



Z6000

Exposed Flush Valve for Water Closets

TAG WC-1

Architectural/Engineering Specification:

Exposed, quiet diaphragm-type, chrome plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature. Internal seals are made of chloramine resistant materials.

Product Features:

- Control Stop has internal siphon-guard protection, sweat solder kit, wall flange with set screw.
- High back pressure vacuum breaker with one piece hex coupling nut
- Chloramine resistant Internal seals
- Adjustable tailpiece
- Spud coupling and flange for top spud connection

Valve Height Options:

	Product No.	A
<input checked="" type="checkbox"/>	Z6000	11 1/2" [292]
<input type="checkbox"/>	Z6000-1	16" [406]
<input type="checkbox"/>	Z6000-2	24" [610]
<input type="checkbox"/>	Z6000-3	27" [686]

Compliance and Certification:

- ADA Compliant



*This product should be used with a WaterSense labeled counterpart with a compatible flow volume to ensure that the entire system meets the requirements for water efficiency and performance.



Flow Options:

	Flush Volume	Dual Flush	WaterSense* Labeled
<input type="checkbox"/> -ONE**	1.1 gpf		✓
<input type="checkbox"/> -HET**	1.28 gpf		✓
<input checked="" type="checkbox"/> -WS1	1.6 gpf	1.6/1.1 gpf	
<input type="checkbox"/> -Standard	3.5 gpf	3.5/2.4 gpf	

Suffix Options:

- BG BioCare Handle
- DF Dual Flush Handle (See Chart Above)
- H Handle on Front of Flush Valve
- L 1" [25] Metal Push Button
- VC Vandal Resistant Stop Cover
- YJ Split Ring Pipe Support
- YK Solid Ring Pipe Support

Upgrade Options:

- PL **Aquaflush Plus** - includes Vandal Resistant Stop Cover and Proprietary Dezincification resistant low lead brass alloy body.
- TFB Triple Filter By-pass

** Not available w/-TFB

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

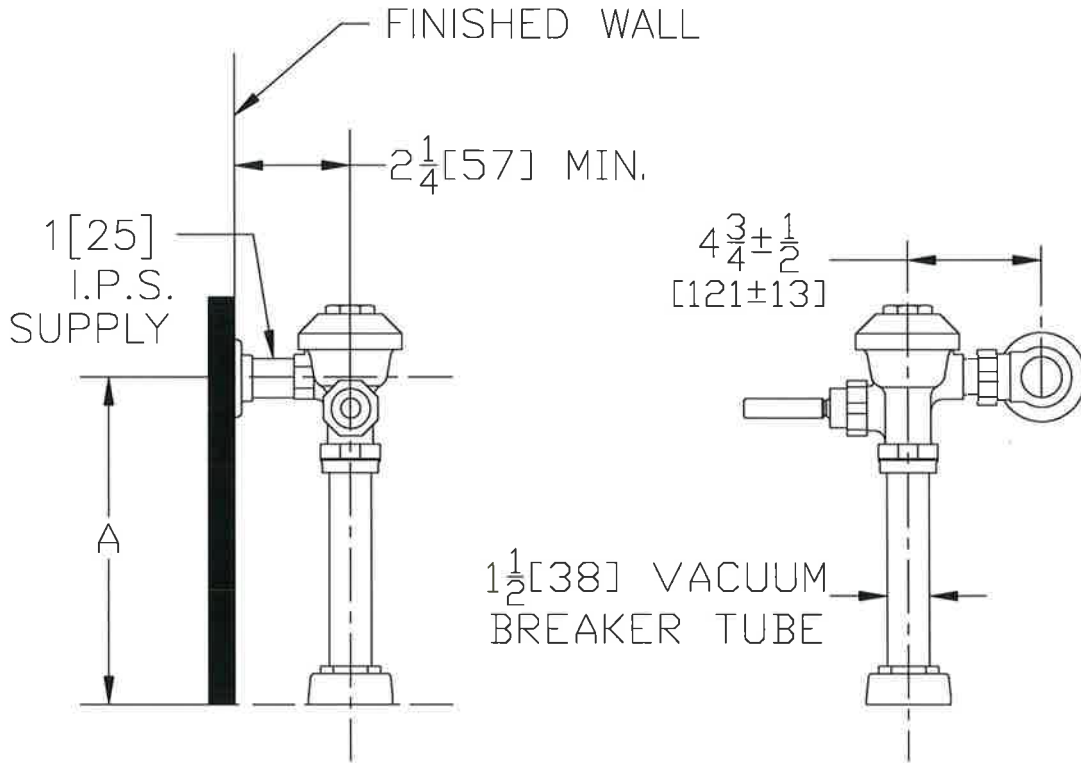


Z6000

Exposed Flush Valve for Water Closets

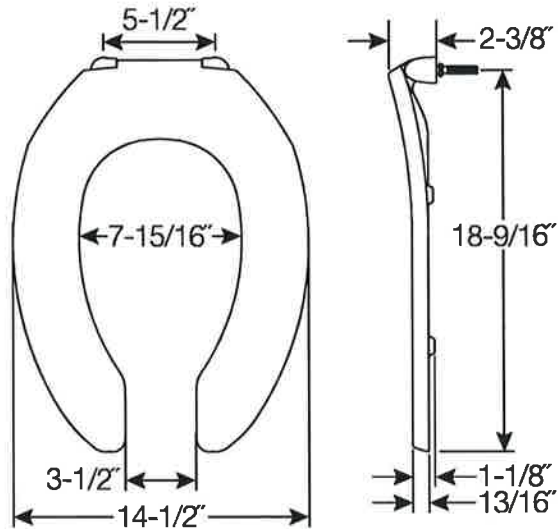
TAG _____

Rough-in/Overview dimensions



295CT / 295SSCT

COMMERCIAL HEAVY-DUTY
PLASTIC TOILET SEAT



FEATURES:

- **STA-TITE® Commercial Fastening System™**
Eliminates callbacks for loosened seats

SPECIFICATIONS:

Size: Elongated

Material: Plastic

Style: Open Front less Cover

Ring Bumpers: Four

Hinges: Plastic Non Self-Sustaining Check Hinges (295CT) or Self-Sustaining Check Hinges (295SSCT) with Non-Corroding 300 Series Stainless Steel Posts and Pintles

Hardware: STA-TITE® Commercial Fastening System™

Codes & Standards:



Complies with
IAPMO/ANSI Z124.5
Performance Standards
Heavy-Duty Commercial

WC-2



Madera™ FloWise® 15" Height Elongated Flushometer Toilet

VITREOUS CHINA LESS EVERCLEAN®

Madera™ FloWise® 15" Height Elongated LESS EverClean®

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



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

System MaP* Score:

- 1,000 grams of miso @ 1.1 gpf, 1.28 gpf or 1.6 gpf when used with an American Standard flush valve
- * Maximum Performance (MaP) testing performed by IAPMO R&T Lab. MaP Report conducted by Veritec Consulting, Inc. and Koeller and Company.

Component Parts:

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

Nominal Dimensions:

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

Fixture only, less seat and flush valve

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

Compliance Certifications -

Meets or Exceeds the Following Specifications:

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



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

To Be Specified:

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



ENVIRONMENTAL
PRODUCT
DECLARATION

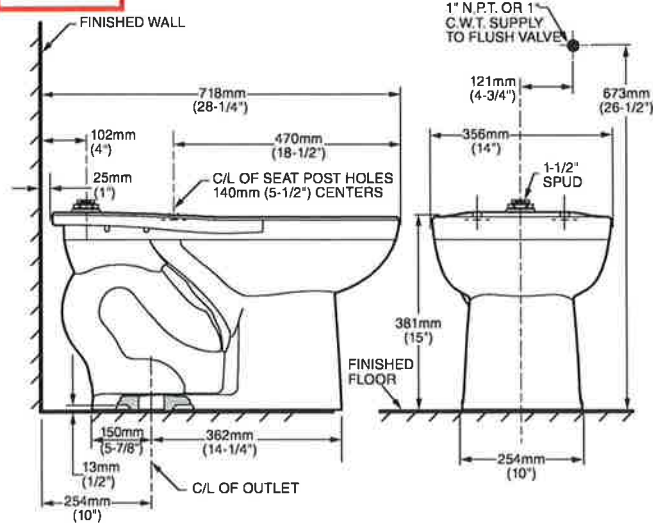


When used with
1.1 or 1.28 gpf
toilet flush valves

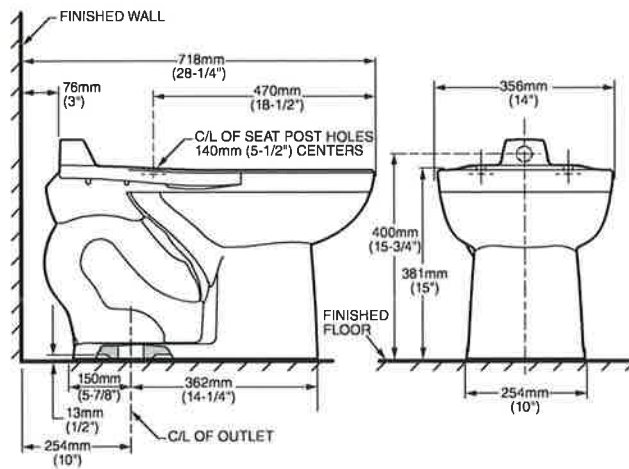


WATER
EFFICIENT

2234.001 2623.001



2624.001



NOTES:

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

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



Z6000

Exposed Flush Valve for Water Closets

TAG WC-2

Architectural/Engineering Specification:

Exposed, quiet diaphragm-type, chrome plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature. Internal seals are made of chloramine resistant materials.

Product Features:

- Control Stop has internal siphon-guard protection, sweat solder kit, wall flange with set screw.
- High back pressure vacuum breaker with one piece hex coupling nut
- Chloramine resistant Internal seals
- Adjustable tailpiece
- Spud coupling and flange for top spud connection

Valve Height Options:

	Product No.	A
<input checked="" type="checkbox"/>	Z6000	11 1/2" [292]
<input type="checkbox"/>	Z6000-1	16" [406]
<input type="checkbox"/>	Z6000-2	24" [610]
<input type="checkbox"/>	Z6000-3	27" [686]

Compliance and Certification:

- ADA Compliant



*This product should be used with a WaterSense labeled counterpart with a compatible flow volume to ensure that the entire system meets the requirements for water efficiency and performance.



Flow Options:

	Flush Volume	Dual Flush	WaterSense* Labeled
<input type="checkbox"/> -ONE**	1.1 gpf		✓
<input type="checkbox"/> -HET**	1.28 gpf		✓
<input checked="" type="checkbox"/> -WS1	1.6 gpf	1.6/1.1 gpf	
<input type="checkbox"/> -Standard	3.5 gpf	3.5/2.4 gpf	

Suffix Options:

- BG BioCare Handle
- DF Dual Flush Handle (See Chart Above)
- H Handle on Front of Flush Valve
- L 1" [25] Metal Push Button
- VC Vandal Resistant Stop Cover
- YJ Split Ring Pipe Support
- YK Solid Ring Pipe Support

Upgrade Options:

- PL **Aquafush Plus** - includes Vandal Resistant Stop Cover and Proprietary Dezincification resistant low lead brass alloy body.
- TFB Triple Filter By-pass

** Not available w/-TFB

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

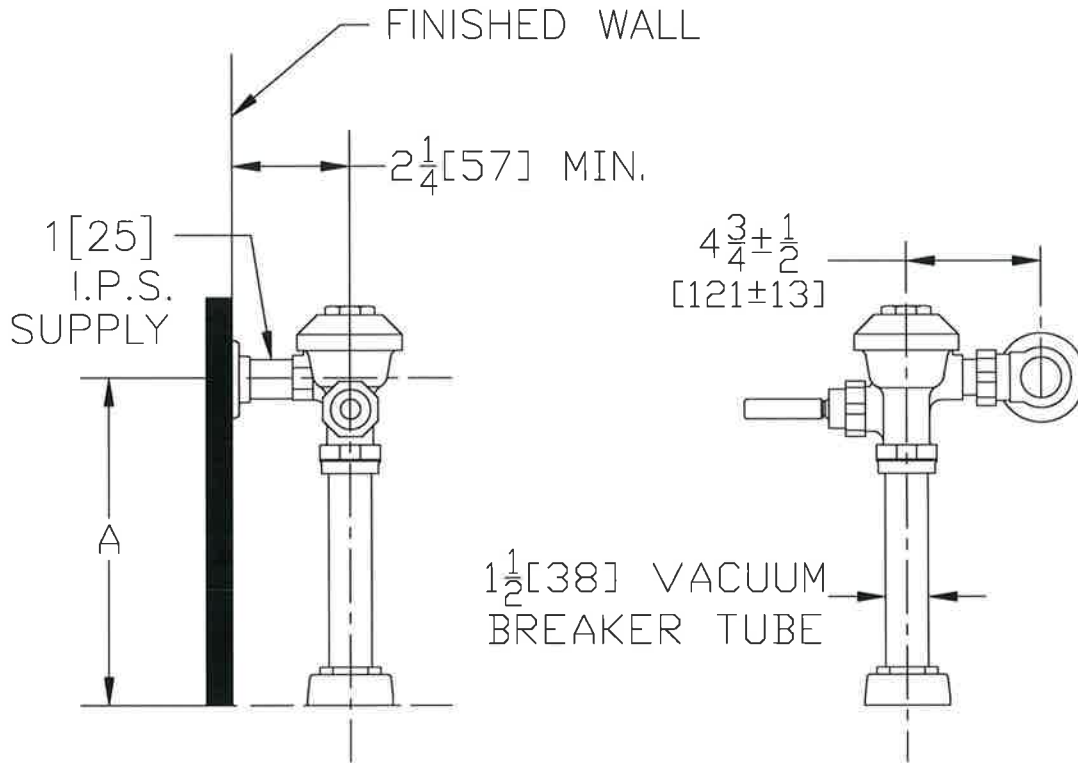


Z6000

Exposed Flush Valve for Water Closets

TAG _____

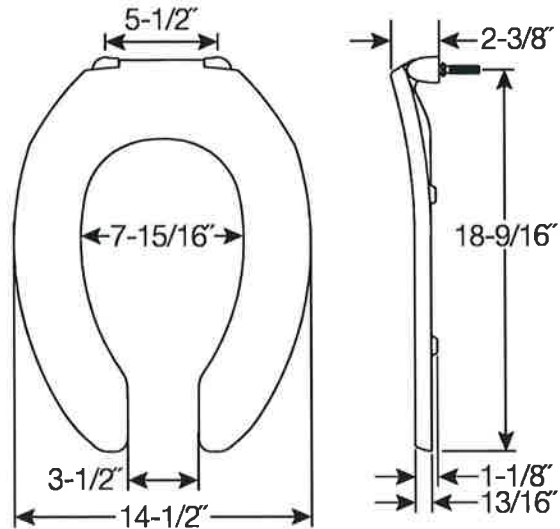
Rough-in/Overview dimensions





295CT / 295SSCT

COMMERCIAL HEAVY-DUTY
PLASTIC TOILET SEAT



FEATURES:

- **STA-TITE® Commercial Fastening System™**
Eliminates callbacks for loosened seats

SPECIFICATIONS:

Size: Elongated

Material: Plastic

Style: Open Front less Cover

Ring Bumpers: Four

Hinges: Plastic Non Self-Sustaining Check Hinges (295CT) or Self-Sustaining Check Hinges (295SSCT) with Non-Corroding 300 Series Stainless Steel Posts and Pintles

Hardware: STA-TITE® Commercial Fastening System™

Codes & Standards:



Complies with
IAPMO/ANSI Z124.5
Performance Standards
Heavy-Duty Commercial



Proudly Made in the USA

Eco-Friendly



WC-3



Madera™ FloWise® 16-1/2" Height Elongated Flushometer Toilet

VITREOUS CHINA LESS EVERCLEAN®

BARRIER FREE

Madera™ FloWise® 16-1/2" Height Elongated LESS EverClean®

- Floor mount flushometer valve toilet
- Vitreous china
- High Efficiency, Low Consumption. Operates in the range of 1.1 gpf to 1.6 gpf (4.2 Lpf to 6.0 Lpf)
- Meets definition of HET (High Efficiency Toilet) when used with a high efficiency flush valve (1.1, 1.28 gpf or 1.6 / 1.1 gpf dual flush)
- Fully glazed 2-1/8" trapway
- Elongated bowl
- 10" or 12" roughing-in
- 16-1/2" rim height for accessible application
- Condensation channel
- Powerful direct-fed siphon jet action
- 10" x 12" water surface area
- 1-1/2" inlet spud
- 2 bolt caps included
- Tested to support static weight load of 2,500 lbs. (1,134 kg)



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

System MaP* Score:

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

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

OPERATING PRESSURE:

25 psi (flowing) - 80 psi (static)

FLOW REQUIREMENT:

25 gpm (94.6 L/min.)

- 3043.001 Elongated bowl only, top spud
- ~~3248.001 Elongated bowl only, top spud with slotted rim for bedpan holding~~
- 3249.001 Elongated bowl only, back spud

Component Parts:

- 047007-0070A Inlet Spud (furnished with bowl)
- 034783-0200A Bolt caps with retainers (furnished with bowl)

Nominal Dimensions:

718 x 356 x 419mm
(28-1/4" x 14" x 16-1/2")

Fixture only, less seat and flush valve

Compliance Certifications -

Meets or Exceeds the Following Specifications:

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

To Be Specified:

- Color: White
- Seat:
 - American Standard #5901.100 Heavy duty open front less cover
 - American Standard #5901.100SS Extra heavy duty open front less cover with EverClean®
- Flushometer Valve:

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



ENVIRONMENTAL PRODUCT DECLARATION



When used with 1.1 or 1.28 gpf toilet flush valves

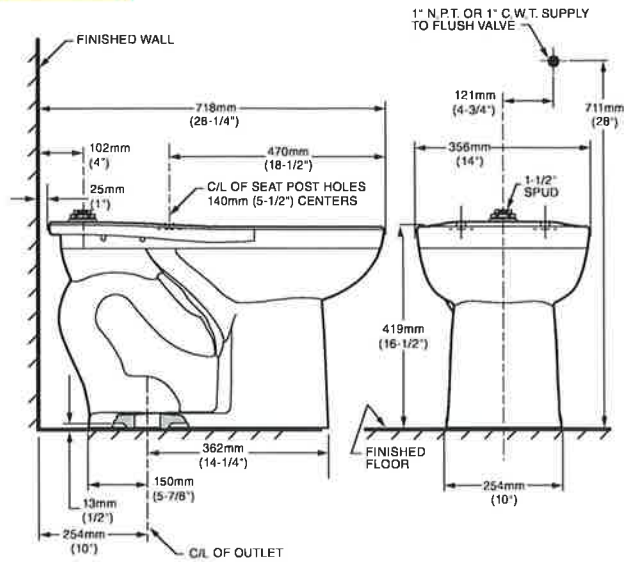


EVERCLEAN

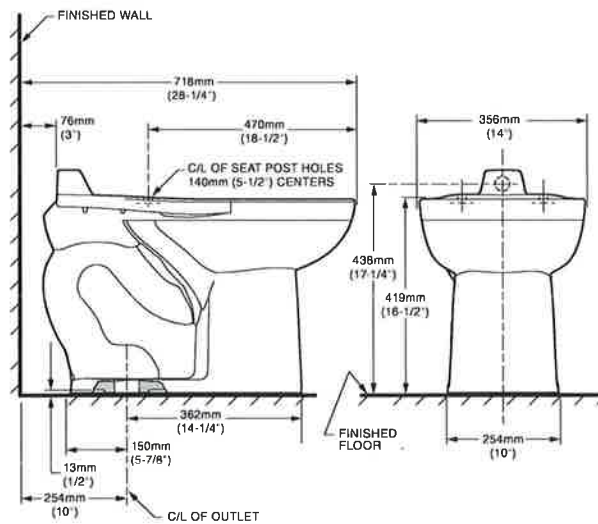


WATER EFFICIENT

3043.001/3248.001



3249.001



NOTES:
 PRODUCT 3043 SHOWN, 3248 SAME EXCEPT WITH SLOTTED RIM FOR BED PAN HOLDING.
 TO COMPLY WITH AREA CODE GOVERNING THE HEIGHT OF VACUUM BREAKER ON THE FLUSHOMETER VALVE, THE PLUMBER MUST VERIFY DIMENSIONS SHOWN FOR SUPPLY ROUGHING.
 THIS TOILET DESIGNED TO ROUGH-IN AT A MINIMUM DIMENSION OF 254MM (10") AND A MAXIMUM DIMENSION OF 305MM (12") FROM FINISHED WALL TO C/L OF OUTLET.
 FLUSHOMETER VALVE NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY. FLUSHOMETER VALVE REQUIREMENTS FOR 12" (305MM) ROUGH-IN: SWEAT EXTENSION NIPPLE IS REQUIRED. REFER TO VALVE MANUFACTURER AND LOCAL CODES.

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



Z6000

Exposed Flush Valve for Water Closets

TAG WC-3

Architectural/Engineering Specification:

Exposed, quiet diaphragm-type, chrome plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature. Internal seals are made of chloramine resistant materials.

Product Features:

- Control Stop has internal siphon-guard protection, sweat solder kit, wall flange with set screw.
- High back pressure vacuum breaker with one piece hex coupling nut
- Chloramine resistant Internal seals
- Adjustable tailpiece
- Spud coupling and flange for top spud connection

Valve Height Options:

	Product No.	A
<input checked="" type="checkbox"/>	Z6000	11 1/2" [292]
<input type="checkbox"/>	Z6000-1	16" [406]
<input type="checkbox"/>	Z6000-2	24" [610]
<input type="checkbox"/>	Z6000-3	27" [686]

Compliance and Certification:

- ADA Compliant



*This product should be used with a WaterSense labeled counterpart with a compatible flow volume to ensure that the entire system meets the requirements for water efficiency and performance.



Flow Options:

	Flush Volume	Dual Flush	WaterSense* Labeled
<input type="checkbox"/> -ONE**	1.1 gpf		✓
<input type="checkbox"/> -HET**	1.28 gpf		✓
<input checked="" type="checkbox"/> -WS1	1.6 gpf	1.6/1.1 gpf	
<input type="checkbox"/> -Standard	3.5 gpf	3.5/2.4 gpf	

Suffix Options:

- BG BioCare Handle
- DF Dual Flush Handle (See Chart Above)
- H Handle on Front of Flush Valve
- L 1" [25] Metal Push Button
- VC Vandal Resistant Stop Cover
- YJ Split Ring Pipe Support
- YK Solid Ring Pipe Support

Upgrade Options:

- PL **Aquaflush Plus** - includes Vandal Resistant Stop Cover and Proprietary Dezincification resistant low lead brass alloy body.
- TFB Triple Filter By-pass

** Not available w/-TFB

Architectural/Engineering Approval

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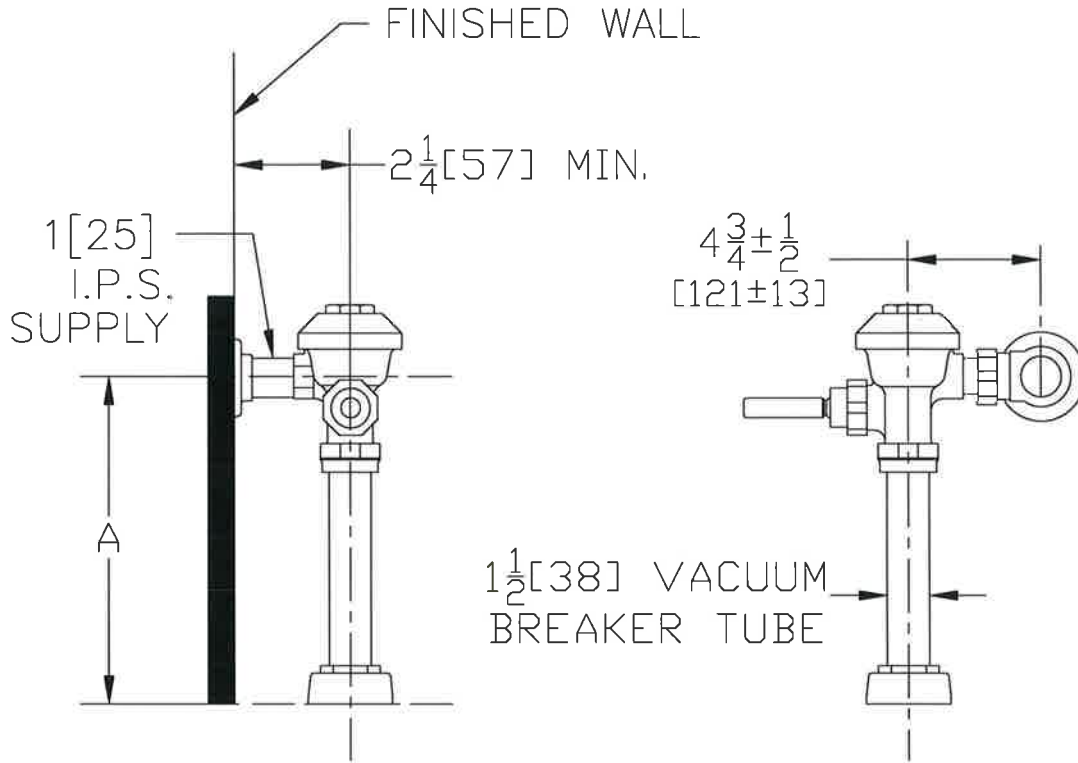


Z6000

Exposed Flush Valve for Water Closets

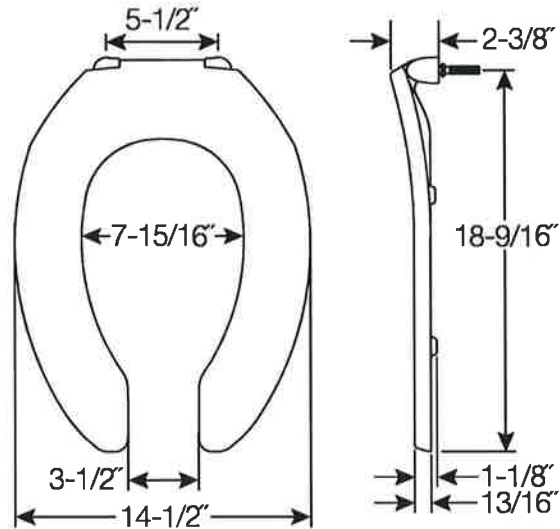
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Rough-in/Overview dimensions



295CT / 295SSCT

COMMERCIAL HEAVY-DUTY
PLASTIC TOILET SEAT



FEATURES:

- **STA-TITE® Commercial Fastening System™**
Eliminates callbacks for loosened seats

SPECIFICATIONS:

Size: Elongated

Material: Plastic

Style: Open Front less Cover

Ring Bumpers: Four

Hinges: Plastic Non Self-Sustaining Check Hinges (295CT) or Self-Sustaining Check Hinges (295SSCT) with Non-Corroding 300 Series Stainless Steel Posts and Pintles

Hardware: STA-TITE® Commercial Fastening System™

Codes & Standards:



Complies with
IAPMO/ANSI Z124.5
Performance Standards
Heavy-Duty Commercial



Proudly Made in the USA

Eco-Friendly



U-1,U-2

**Washbrook® FloWise®
Universal Urinal**

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

- **6590.001** Universal Top spud
 ~~6515.001~~ Universal Back spud

Nominal Dimensions:

360 x 480 x 664mm
(14-1/8" x 18-7/8" x 26-1/8")

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

Compliance Certifications -

Meets or Exceeds the Following Specifications:

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



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

To Be Specified:

- Color: White
 Flush Valve:

1.0 gpf Flush Valve: Sensor-Operated:

- American Standard Selectronic® #6063.101.002 DC Power (Top Spud)
- American Standard Selectronic® #6062.101.002 AC Power (Back Spud)

1.0 gpf Flush Valve: Manual-Operated:

- American Standard # 6045.101.002

0.5 gpf Flush Valve: Sensor-Operated:

- American Standard Selectronic® #6063.051.002 DC Power (Top Spud)
- American Standard Selectronic® #6062.051.002 AC Power (Back Spud)

0.5 gpf Flush Valve: Manual-Operated:

- American Standard #6045.051.002

0.125 gpf Flush Valve: Sensor-Operated:

- American Standard Selectronic® #6063.013.002 DC Power (Top Spud)
- American Standard Selectronic® #6062.013.002 AC Power (Back Spud)

0.125 gpf Flush Valve: Manual-Operated:

- American Standard #6045.013.002



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

- When installed so top of rim is 432mm (17") MAXIMUM from finished floor.

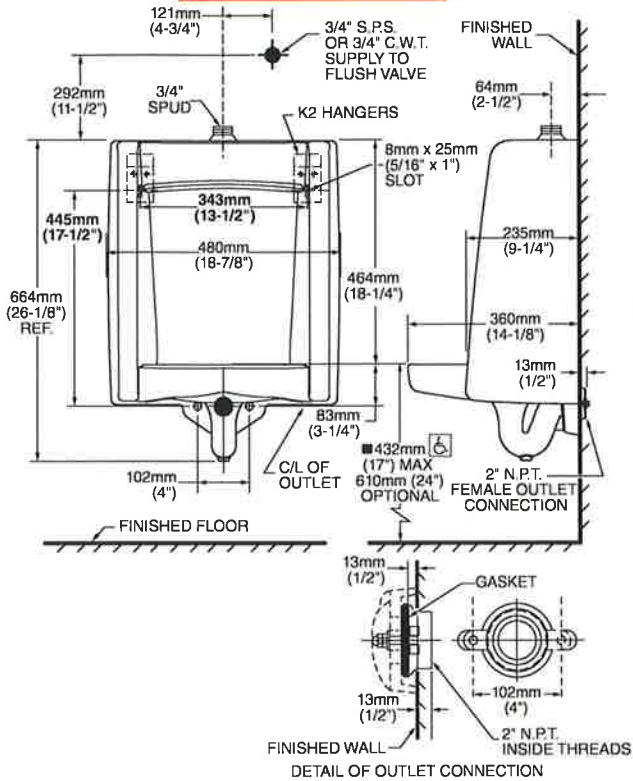


When used with
0.125 gpf
urinal flush valve

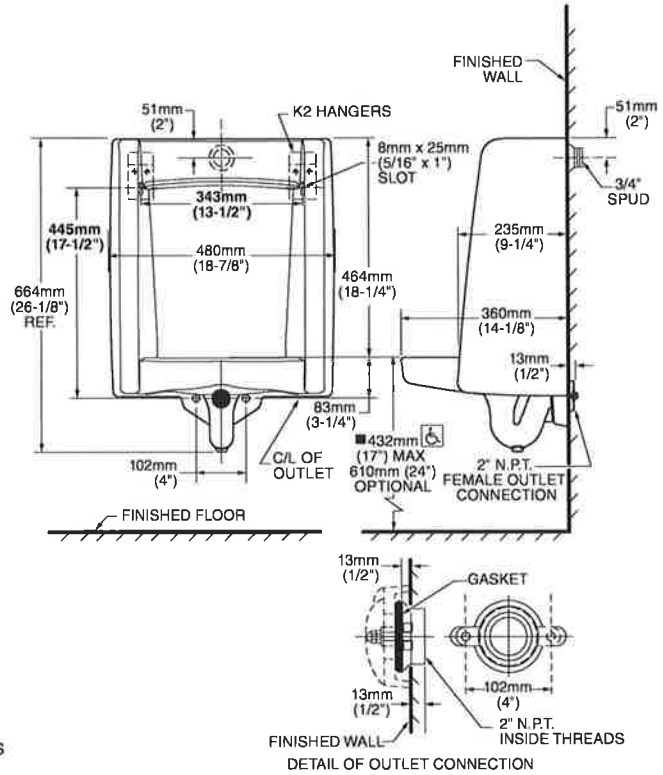
When used with
0.125 or 0.5 gpf
urinal flush valve

ADA
COMPLIANT

6590.001 TOP SPUD



6515.001 BACK SPUD



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

• When installed so top of rim is 432mm (17") MAXIMUM from finished floor.

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

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



Z6003

Exposed Flush Valve for Urinals

TAG U-1,U-2

Architectural/Engineering Specification:

Exposed, quiet diaphragm-type, chrome plated flushometer valve with a polished exterior. Complete with a chloramine resistant, dual seal diaphragm with a clog resistant by-pass. The valve is ADA compliant with a non-hold open and no leak handle feature. Internal seals are made of chloramine resistant materials.

Product Features:

- Control Stop has internal siphon-guard protection, sweat solder kit, wall flange with set screw.
- High back pressure vacuum breaker with one piece hex coupling nut
- Chloramine resistant Internal seals
- Adjustable tailpiece
- Spud coupling and flange for top spud connection

Valve Height Options:

	Product No.	A
<input checked="" type="checkbox"/>	Z6003	11 1/2" [292]
<input type="checkbox"/>	Z6003-1	16" [406]
<input type="checkbox"/>	Z6003-2	24" [610]
<input type="checkbox"/>	Z6003-3	27" [686]

Compliance and Certification:

- ADA Compliant



*This product should be used with a WaterSense labeled counterpart with a compatible flow volume to ensure that the entire system meets the requirements for water efficiency and performance.



Flow Options:

	Flush Volume	WaterSense* Labeled
<input type="checkbox"/> -ULF**	0.125 gpf	✓
<input type="checkbox"/> EWS**	0.5 gpf	✓
<input checked="" type="checkbox"/> -WS1	1.0 gpf	

Suffix Options:

- BG BioCare Handle
- L 1" [25] Metal Push Button
- VC Vandal Resistant Stop Cover
- YB Sweat Solder Kit
- YC Cast Wall Flange
- YJ Split Ring Pipe Support
- YK Solid Ring Pipe Support

Upgrade Options:

- PL **Aquaflush Plus** - includes Vandal Resistant Stop Cover and Proprietary Dezincification resistant low lead brass alloy body.
- TFB Triple Filter By-pass

** Not available w/-TFB

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

Rev. B | Date: 11/08/22 | C.N. No. 144844 | Prod./Dwg. No. SS Z6003

Patent zurn.com/patents

US 1.855.ONE.ZURN CANADA 1.877.892.5216

ZURN.COM

by ZURN ELKAY Water Solutions

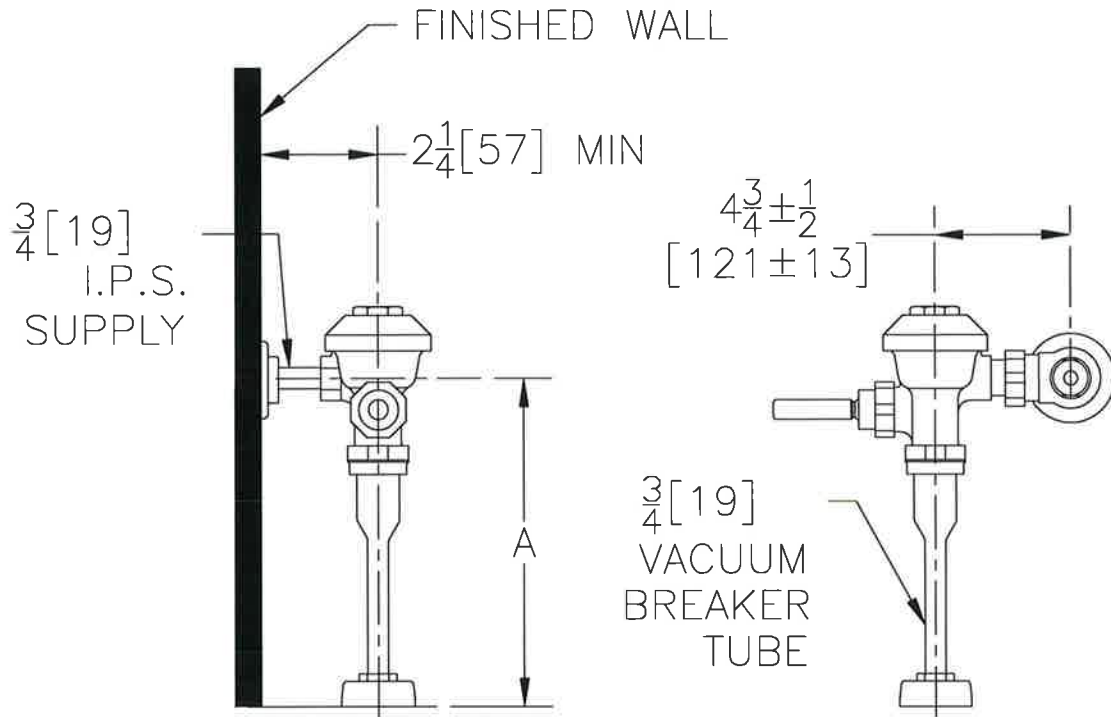


Z6003

Exposed Flush Valve for Urinals

TAG _____

Rough-in/Overview dimensions



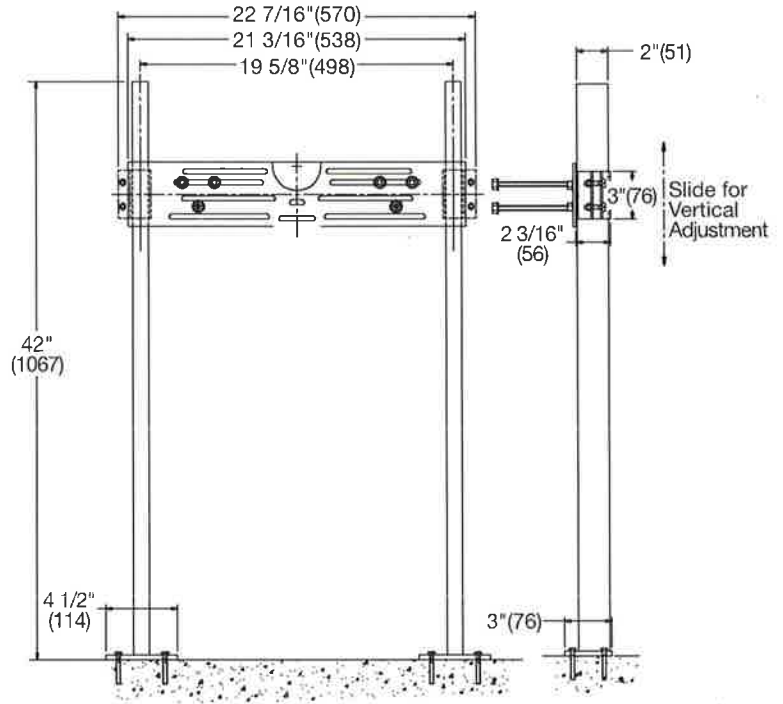
Engineering Specification

Job Name **AMS Charter School**
 Job Location **LR**
 Engineer **Ragsdale**
 Approval _____
 Tag **U-1,U-2**

Contractor **Comfort Systems USA**
 Approval _____
 Contractor's P.O. No. _____
 Representative **Sanders Supply**

CA-311 Floor Mounted Urinal Carrier Specification

Watts CA-311 epoxy coated floor mounted urinal carrier with heavy gauge steel offset uprights with welded feet, universal steel hanger support plate with integral mounting brackets and plated hardware.



Note: Anchor legs to concrete floor with minimum 1/2"(13) anchor bolts (by others).

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

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.



L-1, L-2

Lucerne™ Wall-Hung Lavatory

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

Faucet holes on 203 mm (8") centers:

- 0356.028** For exposed bracket support (by others)
- 0356.015** For wall hanger (included) or concealed arms support (by others)
- 0356.915** For wall hanger (included) or concealed arms support (by others) less overflow
- 0356.037** For wall hanger (included) or concealed arms support (by others) with extra 35 mm (1-3/8") hole for soap/lotion dispenser (by others) on right-hand side

Faucet holes on 102 mm (4") centers:

- 0355.027** For exposed bracket support (by others)
- 0355.012** For wall hanger (included) or concealed arms support (by others)
- 0355.912** For wall hanger (included) or concealed arms support (by others) less overflow
- 0355.056** For wall hanger (included) or concealed arms support (by others) with extra 35 mm (1-3/8") hole for soap/lotion dispenser (by others) on left-hand side
- 0355.034** For wall hanger (included) or concealed arms support (by others) with extra 35 mm (1-3/8") hole for soap/lotion dispenser (by others) on right-hand side
- 0355.041** With two holes spaced 343 mm (13-1/2") in back splash for 10 mm (3/8") bolts (by others)

Single center faucet hole:

- 0356.041** For exposed bracket support (by others)
- 0356.421** For wall hanger (included) or concealed arms support (by others)
- 0356.921** For wall hanger (included) or concealed arms support (by others) less overflow
- 0356.439** For wall hanger (included) or concealed arms support (by others) with single faucet hole on right
- 0356.066** For exposed bracket support (by others) with single faucet hole on right
- 0356.115** For wall hanger (included) or concealed arms support (by others) with extra 35 mm (1-3/8") hole for soap/lotion dispenser (by others) on left-hand side
- 0356.137** For wall hanger (included) or concealed arms support (by others) with extra 35 mm (1-3/8") hole for soap/lotion dispenser (by others) on right-hand side



0355.012



0356.041

SEE FOLLOWING PAGES FOR ROUGHING-IN DIMENSIONS

Compliance Certifications -

Meets or Exceeds the Following Specifications:

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

Nominal Dimensions:

540 x 464 mm
(21-1/4" x 18-1/4")

Bowl sizes:

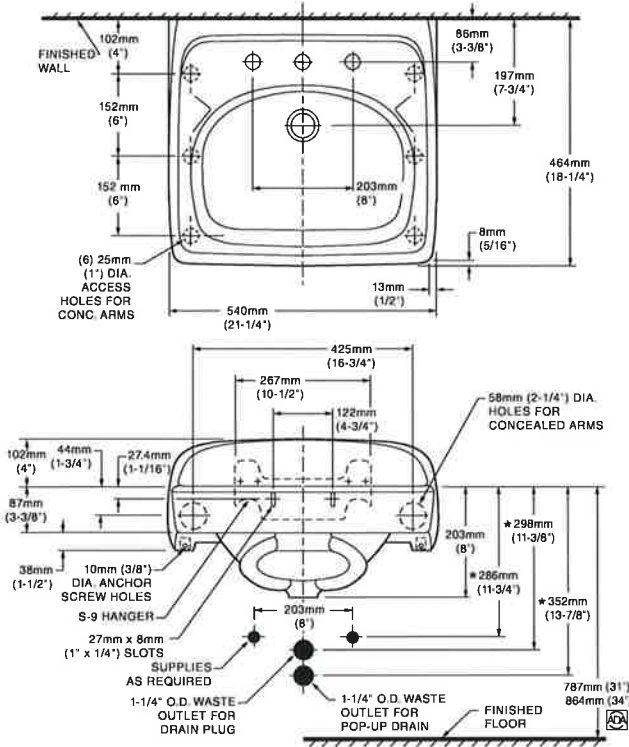
379 mm (14-7/8") wide
254 mm (10") front to back
165 mm (6-1/2") deep

To Be Specified:

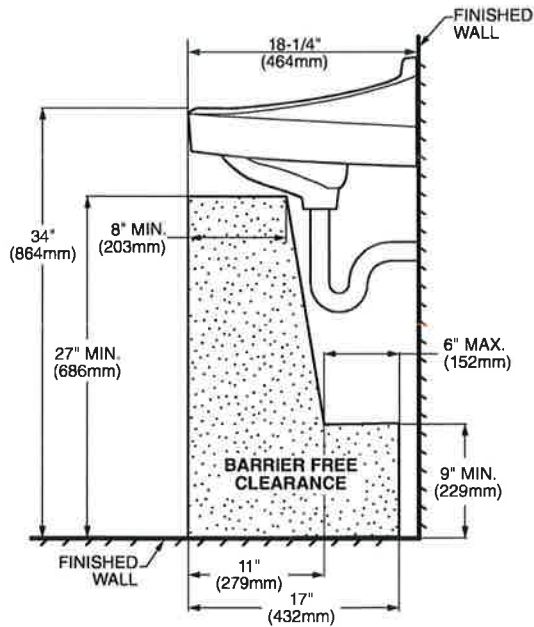
- Color: White
- Faucet:
- Faucet Finish:
- Supplies:
- 1-1/4" Trap:
- Bracket Support (by others):
- Concealed Arms Support (by others):

8" CENTER CONFIGURATIONS

All Wall Hanger (included) or Concealed Arm Configurations

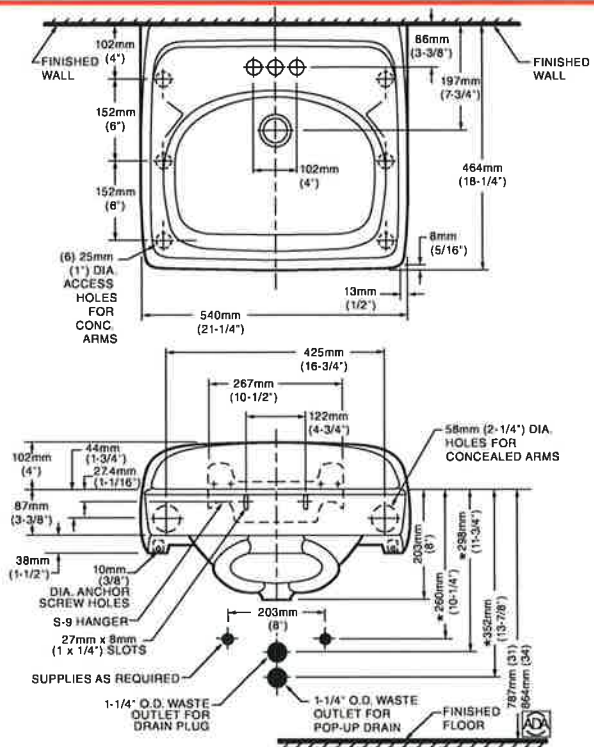


SIDE VIEW - ALL CONFIGURATIONS



4" CENTER CONFIGURATIONS

All Wall Hanger (included) or Concealed Arm Configurations



NOTES:

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

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



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



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-2711

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant

This Space for Architect/Engineer Approval

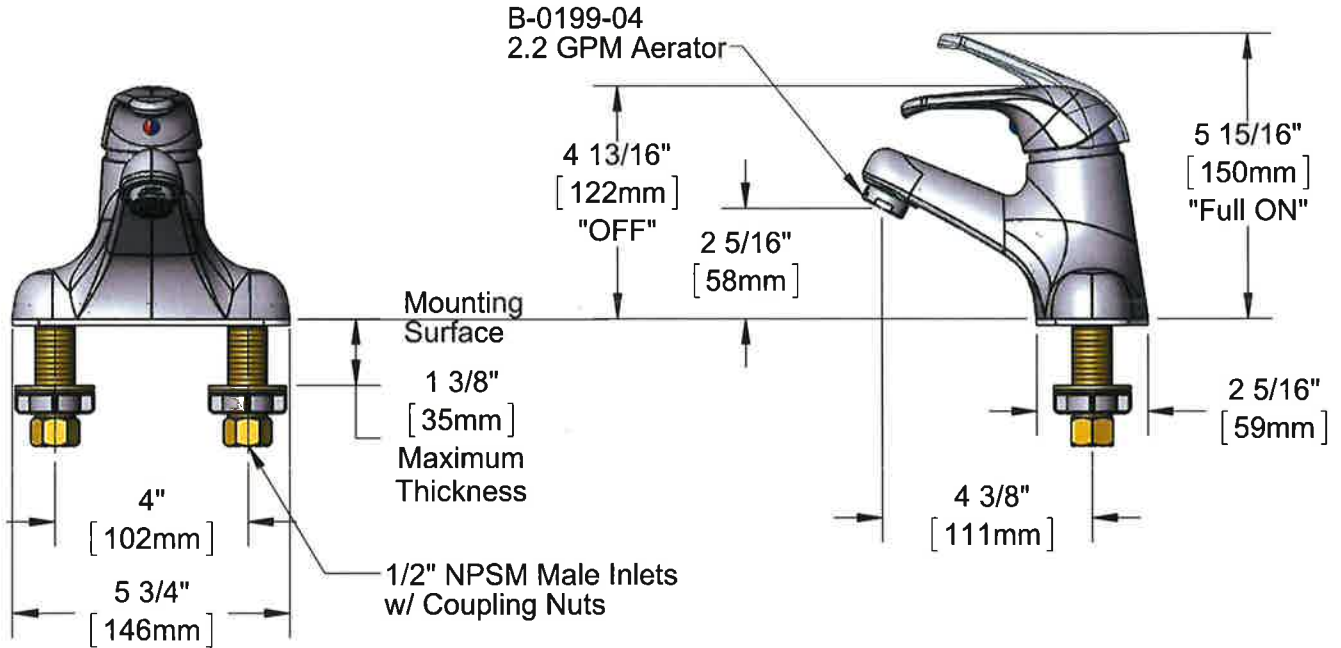
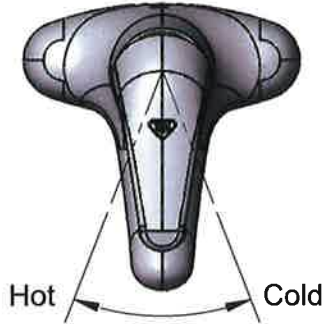
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____



Rough-In Requirement:
(2) \varnothing 1" [25mm] Mounting Holes

Product Specifications:
4" Deck Mount Single Lever Faucet, Temperature Limit Stop, Ceramic Cartridge, 2.2 GPM Aerator & 1/2" NPSM Male Inlets

Product Compliance:
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

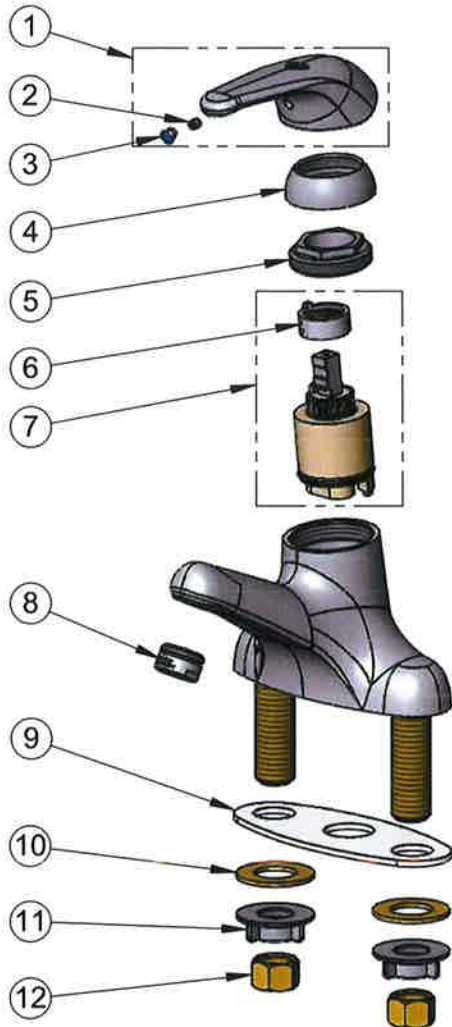
Model No.

B-2711

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

ITEM NO.	SALES NO.	DESCRIPTION
1	013113-45	Single Lever Short Handle
2	016675-45	Set Screw
3	014173-45	Index, Temperature
4	016661-45	Trim Ring
5	016663-45	Locking Nut
6	015400-45	Temperature Limit Stop
7	013111-45	Single Lever Ceramic Cartridge
8	B-0199-04	2.2 GPM Aerator, 15/16-27 Male
9	014167-45	Deck Gasket
10	000999-45	Brass Lock Washer
11	016673-45	Shank Nut
12	000958-20	Coupling Nut



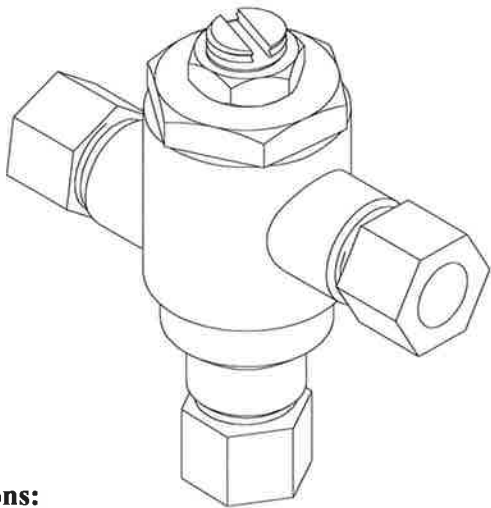
Product Specifications:

4" Deck Mount Single Lever Faucet, Temperature Limit Stop, Ceramic Cartridge, 2.2 GPM Aerator & 1/2" NPSM Male Inlets

Product Compliance:

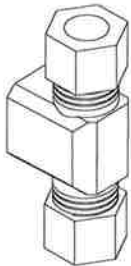
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

170A-LF

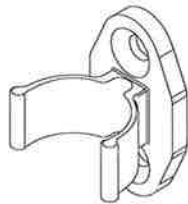


Options:

- STSTL REC- Stainless steel cabinet, #4 finish, recessed
- STSTL EXP- Stainless steel cabinet, #4 finish, exposed
- BWE REC- Steel cabinet, baked white, recessed
- BWE EXP- Steel cabinet, baked white, exposed
- BP- Cold water By-Pass (shipped loose)
- BRKT- mounting bracket (shipped loose)
- CP- Chrome plated finish



BP option



BRKT option



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.cdph.ca.gov/Programs/CID/DCDC/Pages/Lead.aspx

* This product is certified to meet Low Lead requirements of wetted surface area containing less than 0.25% lead by weight

Engineer's Approval	Job # _____
	Arch/Eng. _____
	Contractor _____

Application:

April, 2020

The Model 170A-LF is a high performance thermostatic temperature limiting device used to supply single outlets. Can be used to supply one sensor faucet or one two handle manual faucet.

Features:

- Certified to ASSE 1070 to control down to 0.25 GPM
- Eco-Mix Certified Lead-Free* construction
- Integral inlet checks and stainless steel screens
- Vandal resistant locknut to prevent accidental adjustment
- Easy 3/8" tubing or flex hose installation

Specifications:

- Minimum flow: 0.25 GPM (0.95 l/Min) Certified to ASSE
- Maximum flow: 4 GPM
- Maximum pressure: 125 PSI (8.6 BAR)
- Maximum hot water temperature: 180°F (82°C)
- Hot water inlet temperature range: 120-180°F (49-82°C)
- Cold water inlet temperature range: 33-80°F (1-27°C)
- Temperature adjustment range: 95-120°F (35-49°C)

Certifications:

ASSE 1070-2015

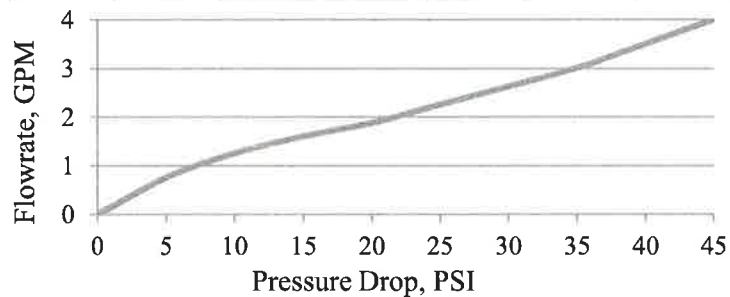


CSA B125.70-15

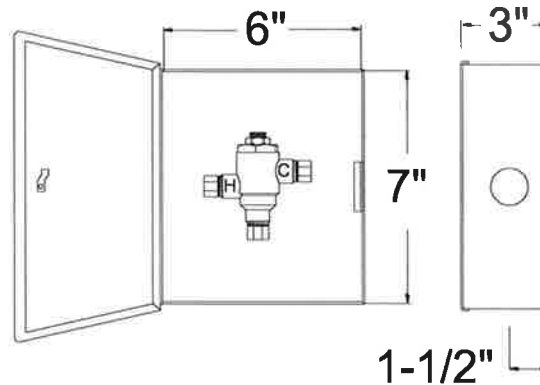
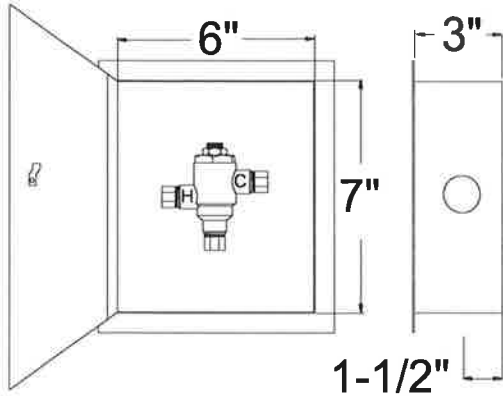
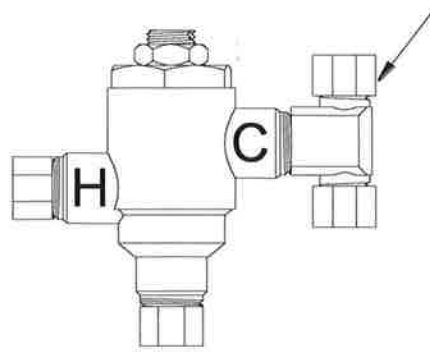
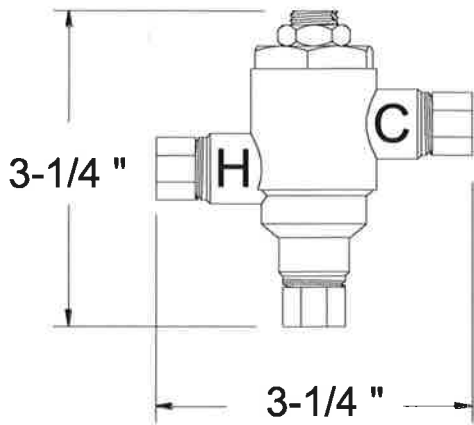


Certified to NSF61 thru the ASSE 1070 testing process

PRESSURE DROP							
5	10	15	20	30	45	PSI	
.35	.70	1.05	1.4	2.1	3.1	BAR	
0.75	1.25	1.6	1.88	2.63	4	GPM	
2.84	4.73	6.06	7.1	10	15	L/MIN	

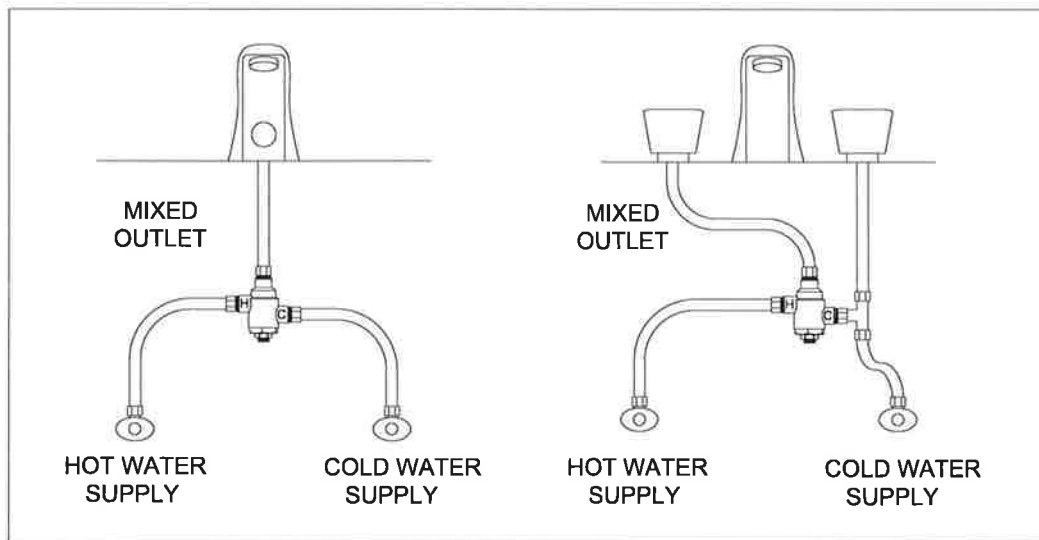


1360 Elmwood Avenue, Cranston, RI 02910 USA
 Phone: 401.461.1200 Fax: 401.941.5310
 Email: info@leonardvalve.com
 Web Site: <http://www.leonardvalve.com>



170A-LF-REC

170A-LF-EXP



170A-LF

170A-LF-BP



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: info@leonardvalve.com

Web Site: <http://www.leonardvalve.com>

Note: Leonard Valve Company reserves the right of product, or design modifications without notice or obligation.

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Printed in USA



McGuire Manufacturing Co., Inc.

60 Grandview Court
P.O. Box 746 ♣ Cheshire, CT 06410
203-699-1801 ♣ Fax: 203-699-1813
www.mcguiremfg.com

PRODUCT SPECIFICATION

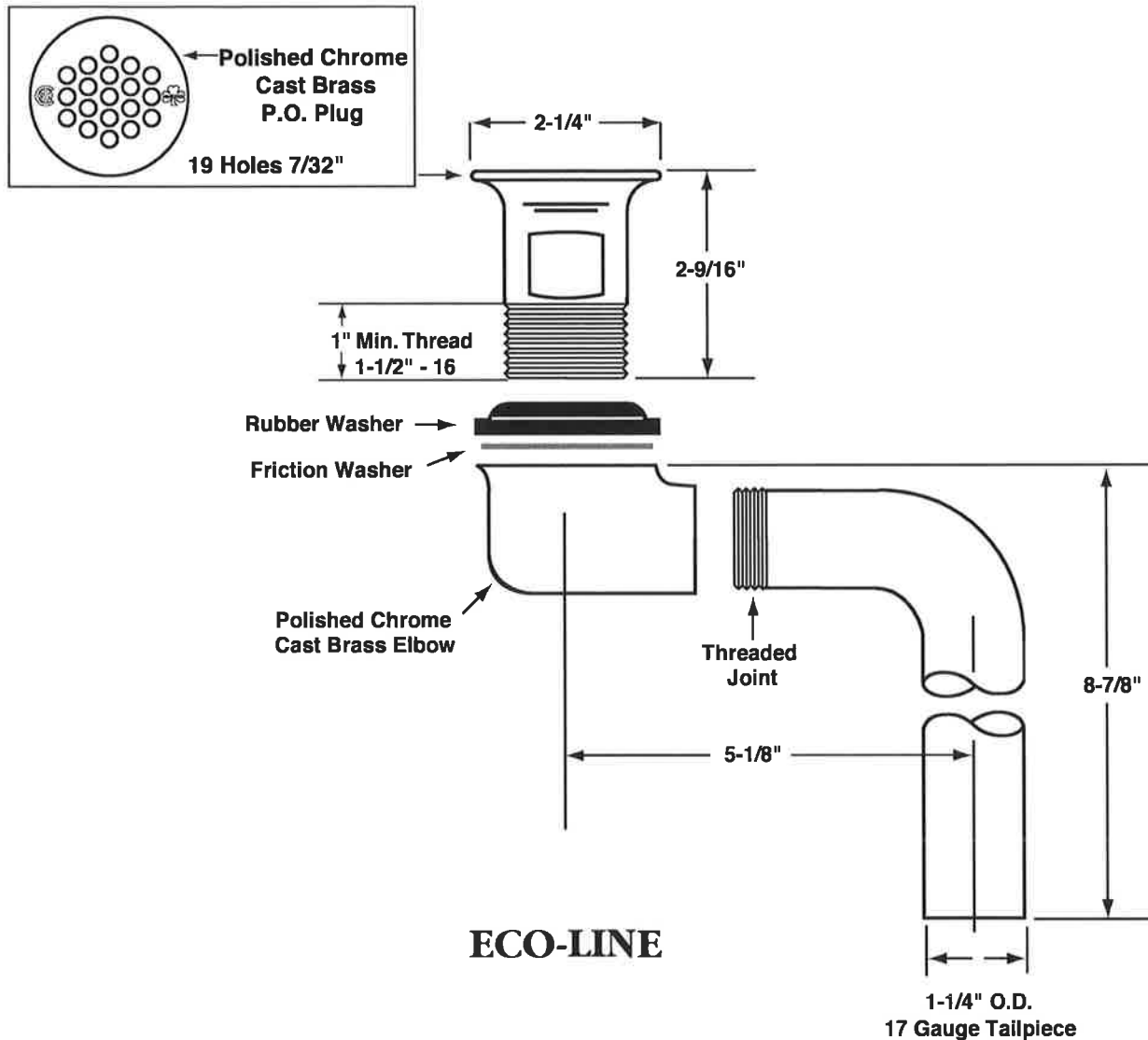
Part No.

155WCECO

**Offset Lavatory
Grid Strainer**

Job Name:

Submittal Number:



A.D.A.



SP® Certified

Specifications:

Cast Brass Chrome Plated Offset Wheelchair Strainer with polished chrome cast brass elbow, 17 gauge 1-1/4 inch seamless brass offset tailpiece, heavy rubber basin washer and fiber friction washer. Offset lavatory strainer shall be in compliance with CSA or other recognized testing authority and bear both manufacturer and testing mark.



McGuire Manufacturing Co., Inc.

60 Grandview Court
 Cheshire, Connecticut 06410
 (203) 699-1801 Fax (203) 699-1813
 customerservice@mcguiremfg.com mcguiremfg.com

PRODUCT SPECIFICATION

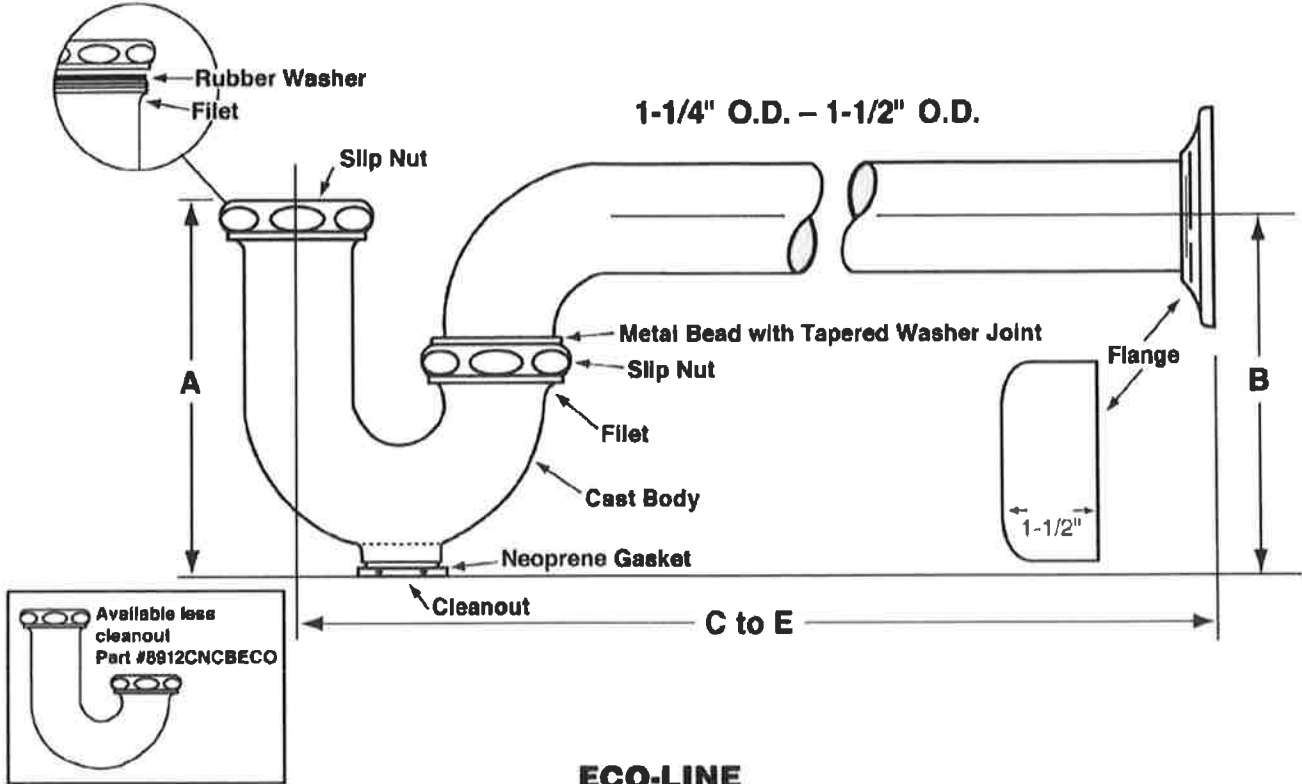
Part No.

C8872CECO

**Cast Body P-Trap With
 or Without Cleanout**

Job Name:

Submittal Number:



ECO-LINE

ROUGHING MEASUREMENTS							
MODEL NO.	TRAP DIMENSIONS		A	B	C to E	FLANGE	SLIP NUT
	INLET	OUTLET					
C8872CECO	1-1/4"	1-1/4"	4-1/2"	4-1/2"	10"	Shallow	Zinc

**FED SPEC W.W.P. 541
 CAST BRASS P-TRAP
 MINIMUM SEAL 2"**



ASME A112.18.2/CSA B125.2

Specifications:

Chrome plated P-Trap shall be cast brass body, with or without cleanout, with 17 gauge seamless tubular wall bend and flange.



WARNING:
 This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



McGuire Manufacturing Co., Inc.
 60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

PRODUCT SPECIFICATION

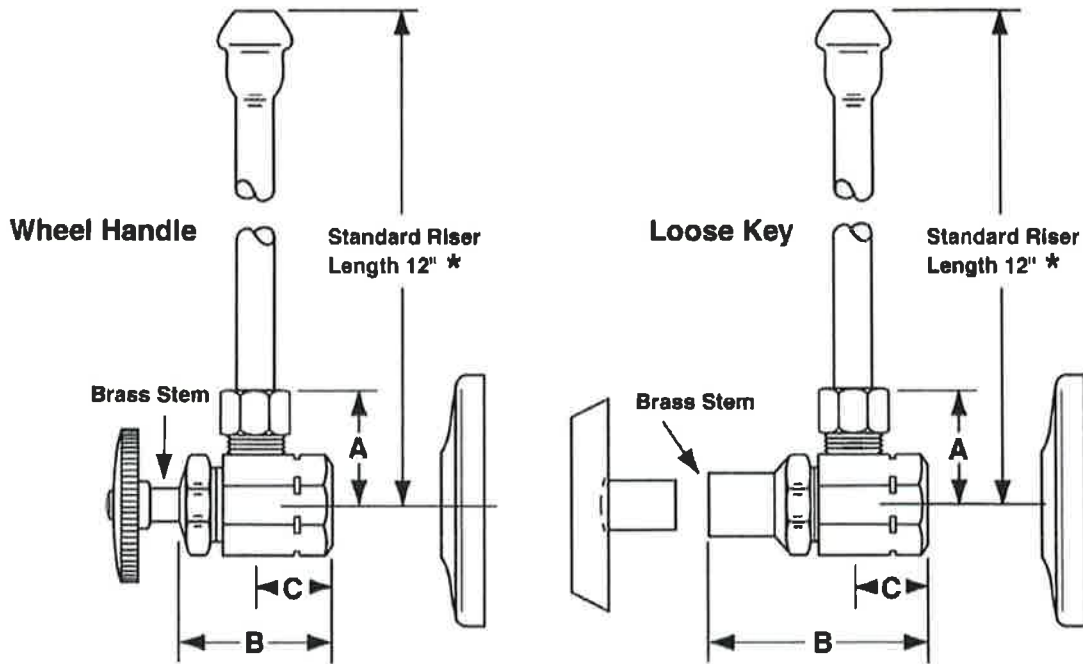
Part No.

LF2165, **LF2165LK**,
 LF2167, LF2167LK

Lavatory Supply
1/2" I.P.S. x O.D.

Job Name:

Submittal Number:



NO.	DESCRIPTION	ROUGHING MEASUREMENTS		
		A	B	C
LF2165	1/2" I.P.S. x 3/8" O.D.	1-3/16"	1-1/2"	3/4"
LF2165LK	1/2" I.P.S. x 3/8" O.D.	1-3/16"	2-1/4"	3/4"
LF2167	1/2" I.P.S. x 1/2" O.D.	1-3/16"	1-1/2"	3/4"
LF2167LK	1/2" I.P.S. x 1/2" O.D.	1-3/16"	2-1/4"	3/4"

LK designates Loose Key

* See options and accessories section for details on product variations.



Specifications:

Supply kit shall include low lead chrome plated brass supply stop valves with full turn brass stem, no plastic, (12, 15, 20) inch chrome plated risers and (shallow, deep, bell) (steel, brass) or (forged brass with set screw) flange. Inlet shall be (3/8, 1/2) inch (IPS, compression). Outlet shall be (3/8, 1/2) inch compression. Supply kit shall be McGuire _____. Supply kit shall be low lead certified by recognized authority and bear manufacturer and testing mark.



COMBINATION KIT: ONE TRAP, TWO SUPPLY STOP PROTECTORS, AND ONE OFFSET DRAIN PROTECTOR

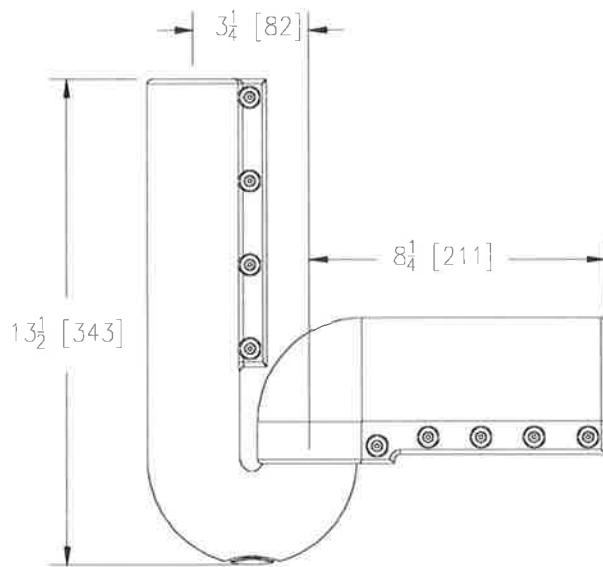
Z8946-3-NT

TAG L-1,L-2

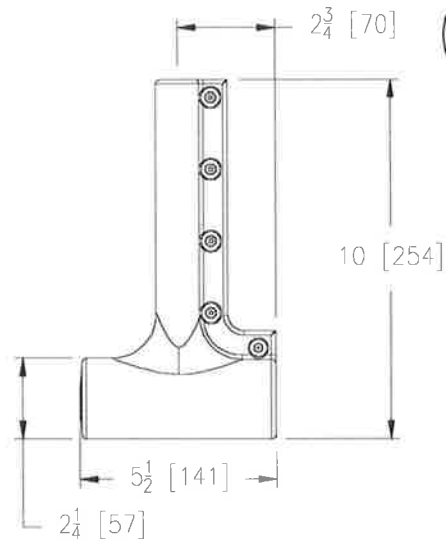


ENGINEERING SPECIFICATION: ZURN Z8946-3-NT Combination Kit: One trap protector, two supply stop protectors and one offset drain protector, satin white PVC resin. Antimicrobial, resists thermal transfer, and is ADA compliant. Trap protector fits both tubular and semi-cast P traps.

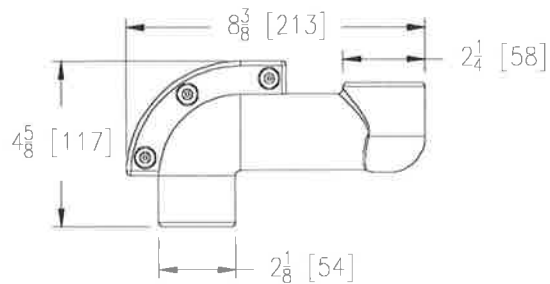
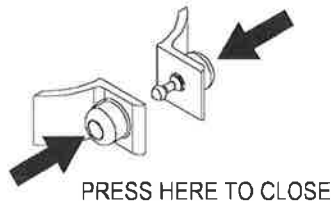
Patent Pending



TRAP PROTECTOR



SUPPLY STOP PROTECTOR



OFFSET DRAIN PROTECTOR

ZURN INDUSTRIES, LLC. ♦ COMMERCIAL BRASS OPERATION ♦ 5900 ELWIN BUCHANAN DRIVE ♦ SANFORD NC 27330

Phone: 1-800-997-3876 ♦ Fax: 919-775-3541 ♦ World Wide Web: www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905-405-8272 Fax: 905-405-1292

AquaSpec® is a registered trademark of Zurn Industries, LLC.

Rev. B
Dwg. No. 66245

Date: 3/4/2015
Product No. Z8946-3-NT

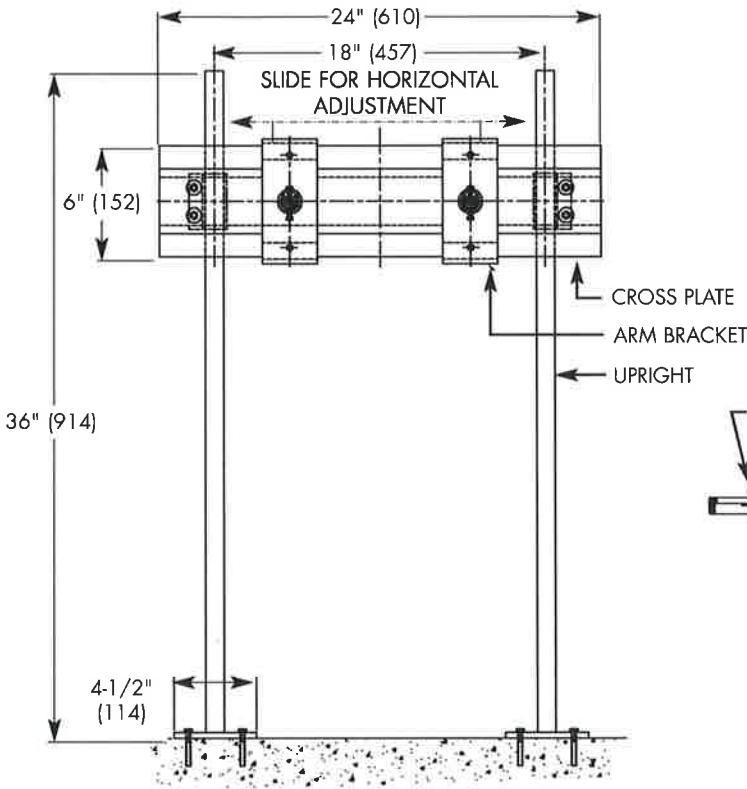


TCA-411

Tag: L-1,L-2

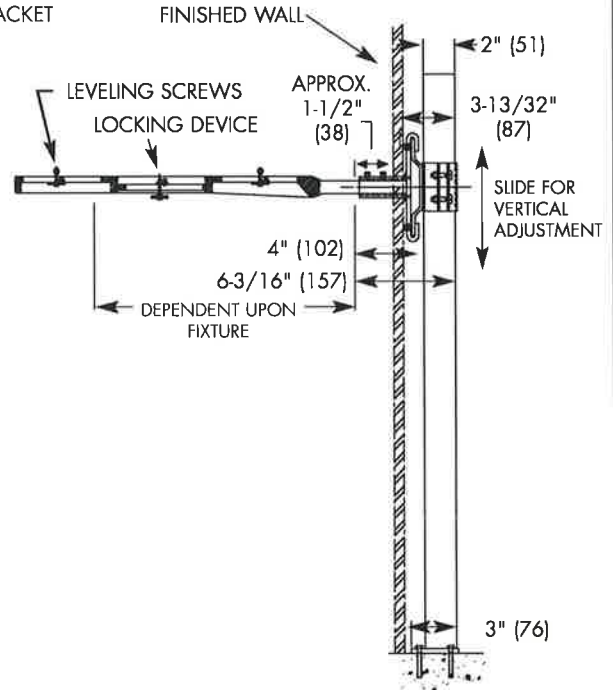
Floor Mounted Concealed Arm "Track" Lavatory Carrier

SPECIFICATION: Watts Drainage TCA-411 epoxy coated floor mounted concealed arm track lavatory carrier with heavy gauge steel offset uprights with welded feet, steel cross plate with integral mounting brackets, sliding adjustable arm brackets, and adjustable cast iron concealed arms with mounting clips, leveling screws, and basin locking device.



Options (Select One or More)	
Suffix	Description
-M42	42" Long Carrier Leg <input type="checkbox"/>
-M54	2" Chrome Plated Escutcheons, Single <input type="checkbox"/>
-M55	4" Chrome Plated Escutcheons, Single <input type="checkbox"/>
-M60	Knee Operated Valve Support Plate Single <input type="checkbox"/>

NOTE: ANCHOR LEGS TO CONCRETE FLOOR WITH MINIMUM 1/2" (13) ANCHOR BOLTS (BY OTHERS)



*Patent Pending

Job Name **AMS Charter School**

Contractor **Comfort Systems USA**

Job Location **LR**

Contractor's P.O. No. _____

Engineer **Ragsdale**

Representative **Sanders Supply**

WATTS Drainage reserves the right to modify or change product design or construction without prior notice and without incurring any obligation to make similar changes and modifications to products previously or subsequently sold. See your WATTS Drainage representative for any clarification. Dimensions are subject to manufacturing tolerances.



Specification Drainage Products

USA: 100 Watts Road, Spindale, NC, 28160-2298; TEL: 828-288-2179 TOLL-FREE: 1-800-338-2581 www.watts.com

L-3

Aqualyn® Countertop Sink

- Made from vitreous china
- Self-rimming with cutout template supplied
- Front overflow
- Faucet ledge

- 0475.020** Faucet holes on 8" (203mm) centers (illustrated)
- 0475.920** Faucet holes on 8" (203mm) centers
 - Less overflow
- 0476.028** Faucet holes on 4" (102mm) centers
- 0476.037** Faucet holes on 4" (102mm) centers
 - Extra right-hand hole
- 0475.035** Faucet holes on 4" (102mm) centers
 - Extra left-hand hole
- 0476.928** Faucet holes on 4" (102mm) centers
 - Less overflow
- 0475.047** Center hole only



SEE REVERSE FOR ADDITIONAL ROUGHING-IN DIMENSIONS

Nominal Dimensions:

518 x 441mm
(20-3/8" x 17-3/8")

Bowl sizes:

406mm (16") wide
254mm (10") front to back
143mm (5-5/8") deep

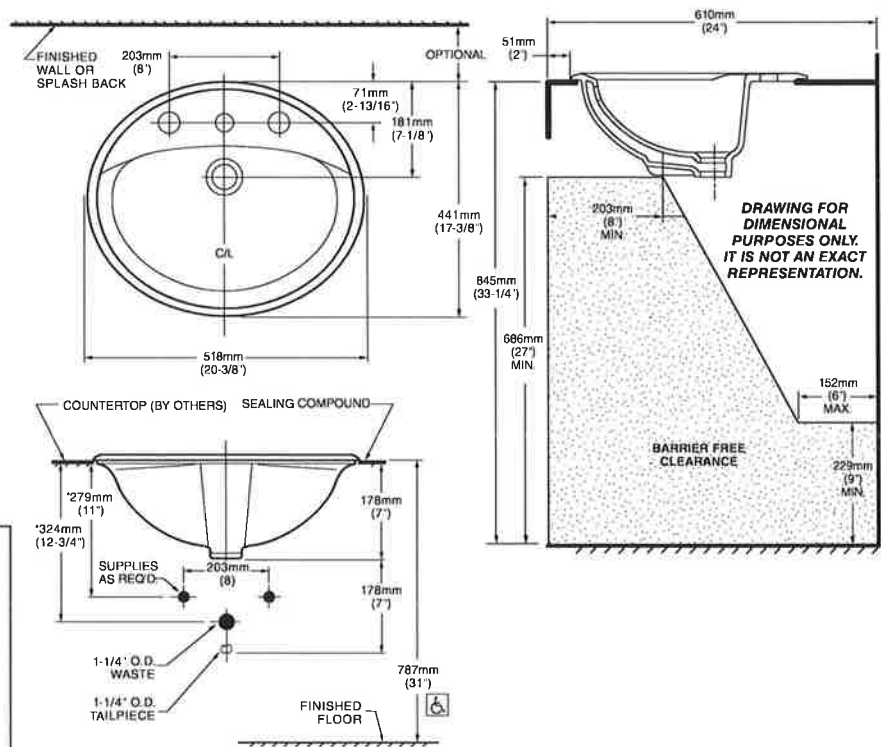
Compliance Certifications - Meets or Exceeds the Following Specifications:

- ASME A112.19.2M for Vitreous China Fixtures

To Be Specified:

- Color: White Bone
- Linen
- Faucet*:
- Faucet Finish:
- Supplies:
- 1-1/4" Trap:

* See faucet section for additional models available



NOTES:

* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED. FOR COUNTERTOP CUTOUT AND INSTALLATION INSTRUCTIONS USE TEMPLATE SUPPLIED WITH SINK. FITTINGS NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY. SEALING COMPOUND SUPPLIED BY OTHERS.



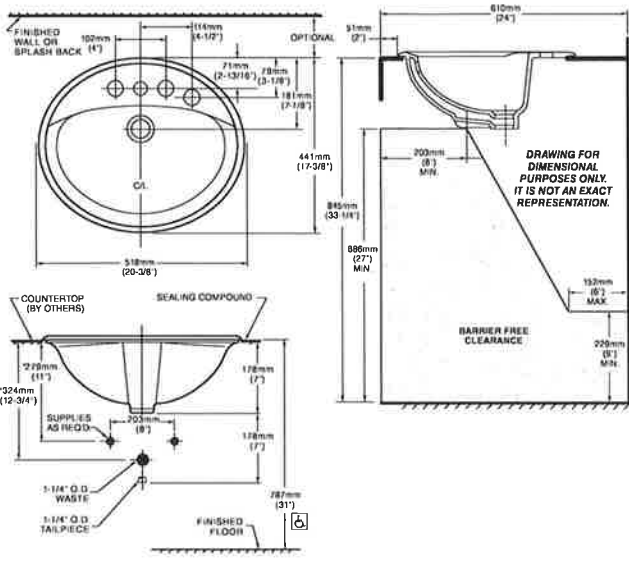
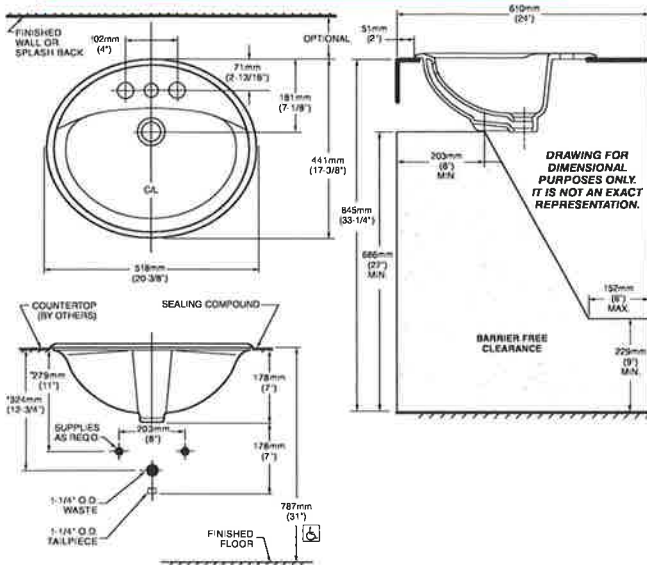
MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.

Install lavatory 864mm (34") from finished floor. Lavatory installed 51mm (2") minimum from front edge of countertop provides 686mm (27") knee clearance area.

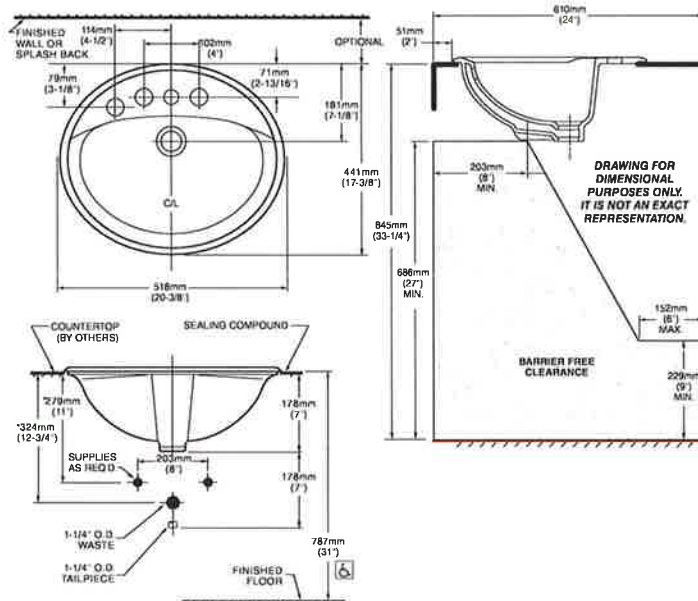
IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

0476.028 Faucet holes on 4" (102mm) centers

0476.037 Faucet holes on 4" (102mm) centers
• Extra right-hand hole



0475.035 Faucet holes on 4" (102mm) centers
• Extra left-hand hole



MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES. Install lavatory 864mm (34") from finished floor. Lavatory installed 51mm (2") minimum from front edge of countertop provides 686mm (27") knee clearance area.

NOTES:
* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.
FOR COUNTERTOP CUTOUT AND INSTALLATION INSTRUCTIONS USE TEMPLATE SUPPLIED WITH SINK.
FITTINGS NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY.
SEALING COMPOUND SUPPLIED BY OTHERS.

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



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-2711

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant

This Space for Architect/Engineer Approval

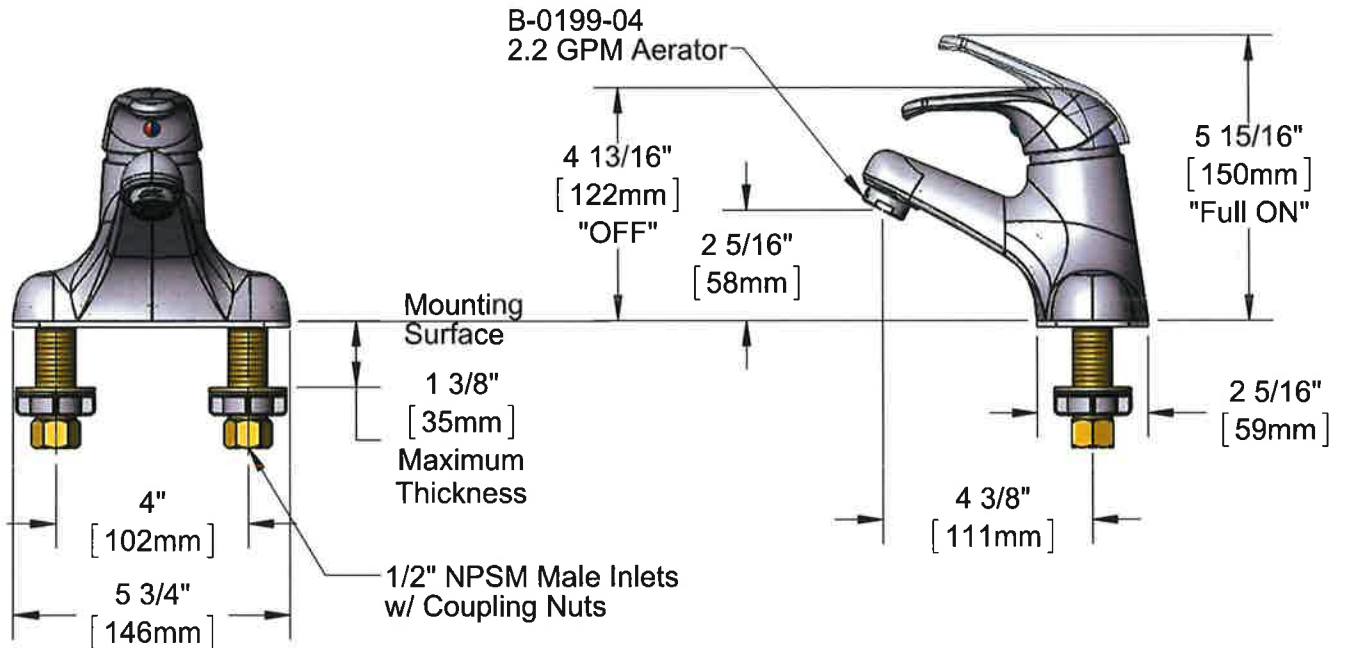
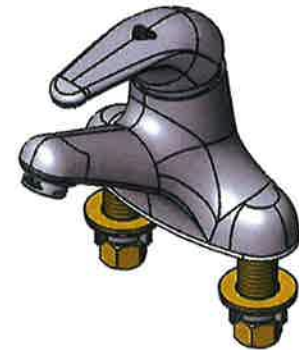
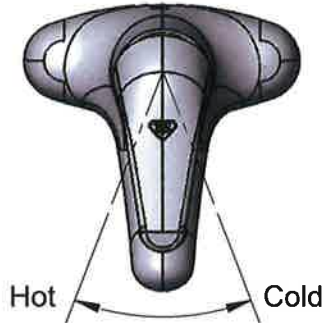
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____



Rough-In Requirement:
(2) \varnothing 1" [25mm] Mounting Holes

Product Specifications:
4" Deck Mount Single Lever Faucet, Temperature Limit Stop,
Ceramic Cartridge, 2.2 GPM Aerator & 1/2" NPSM Male Inlets

Product Compliance:
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

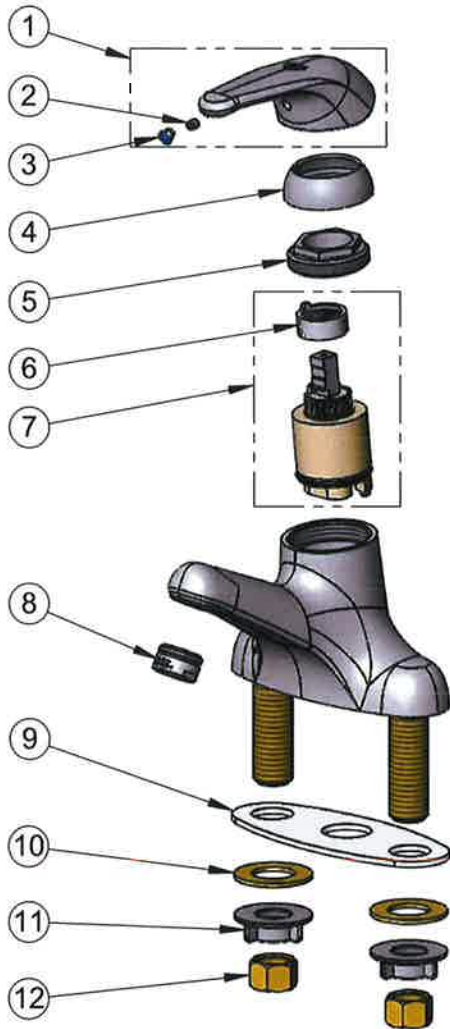
Model No.

B-2711

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

ITEM NO.	SALES NO.	DESCRIPTION
1	013113-45	Single Lever Short Handle
2	016675-45	Set Screw
3	014173-45	Index, Temperature
4	016661-45	Trim Ring
5	016663-45	Locking Nut
6	015400-45	Temperature Limit Stop
7	013111-45	Single Lever Ceramic Cartridge
8	B-0199-04	2.2 GPM Aerator, 15/16-27 Male
9	014167-45	Deck Gasket
10	000999-45	Brass Lock Washer
11	016673-45	Shank Nut
12	000958-20	Coupling Nut



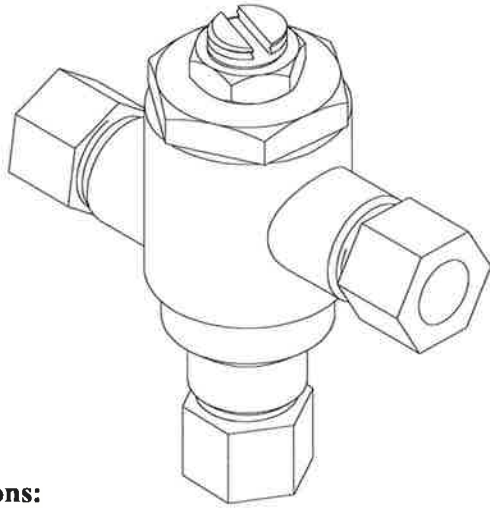
Product Specifications:

4" Deck Mount Single Lever Faucet, Temperature Limit Stop, Ceramic Cartridge, 2.2 GPM Aerator & 1/2" NPSM Male Inlets

Product Compliance:

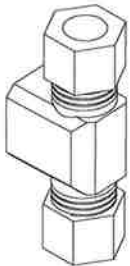
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

170A-LF

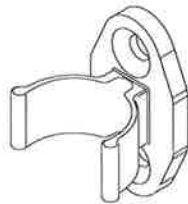


Options:

- STSTL REC- Stainless steel cabinet, #4 finish, recessed
- STSTL EXP- Stainless steel cabinet, #4 finish, exposed
- BWE REC- Steel cabinet, baked white, recessed
- BWE EXP- Steel cabinet, baked white, exposed
- BP- Cold water By-Pass (shipped loose)
- BRKT- mounting bracket (shipped loose)
- CP- Chrome plated finish



BP option



BRKT option



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

* This product is certified to meet Low Lead requirements of wetted surface area containing less than 0.25% lead by weight

Engineer's Approval	Job # _____
	Arch/Eng. _____
	Contractor _____

Application:

April, 2020

The Model 170A-LF is a high performance thermostatic temperature limiting device used to supply single outlets. Can be used to supply one sensor faucet or one two handle manual faucet.

Features:

- Certified to ASSE 1070 to control down to 0.25 GPM
- Eco-Mix Certified Lead-Free* construction
- Integral inlet checks and stainless steel screens
- Vandal resistant locknut to prevent accidental adjustment
- Easy 3/8" tubing or flex hose installation

Specifications:

- Minimum flow: 0.25 GPM (0.95 l/Min) Certified to ASSE
- Maximum flow: 4 GPM
- Maximum pressure: 125 PSI (8.6 BAR)
- Maximum hot water temperature: 180°F (82°C)
- Hot water inlet temperature range: 120-180°F (49-82°C)
- Cold water inlet temperature range: 33-80°F (1-27°C)
- Temperature adjustment range: 95-120°F (35-49°C)

Certifications:

ASSE 1070-2015

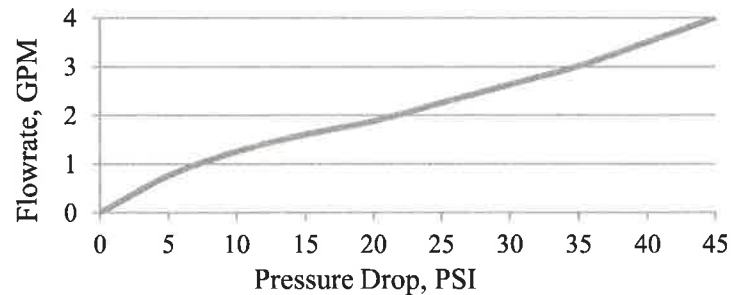


CSA B125.70-15

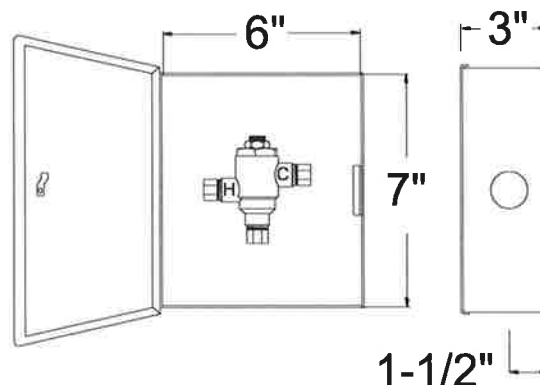
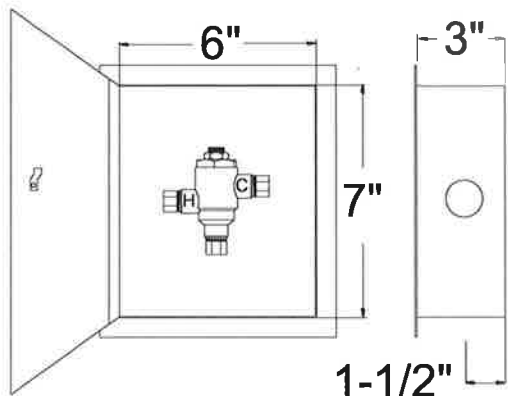
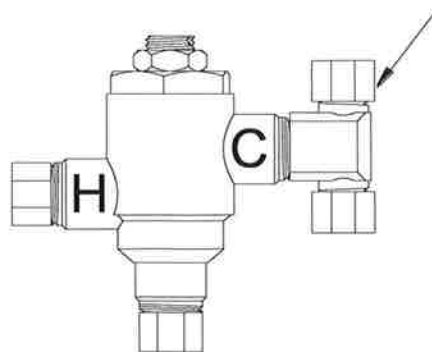
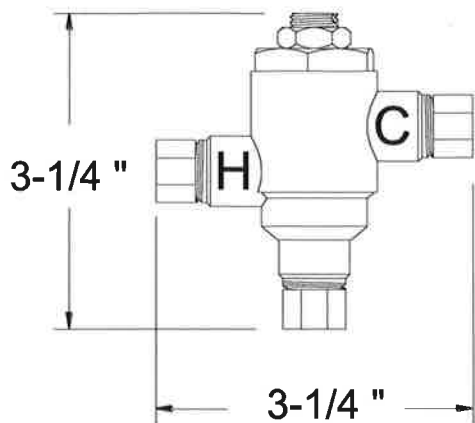


Certified to NSF61 thru the ASSE 1070 testing process

PRESSURE DROP						
5	10	15	20	30	45	PSI
.35	.70	1.05	1.4	2.1	3.1	BAR
0.75	1.25	1.6	1.88	2.63	4	GPM
2.84	4.73	6.06	7.1	10	15	L/MIN

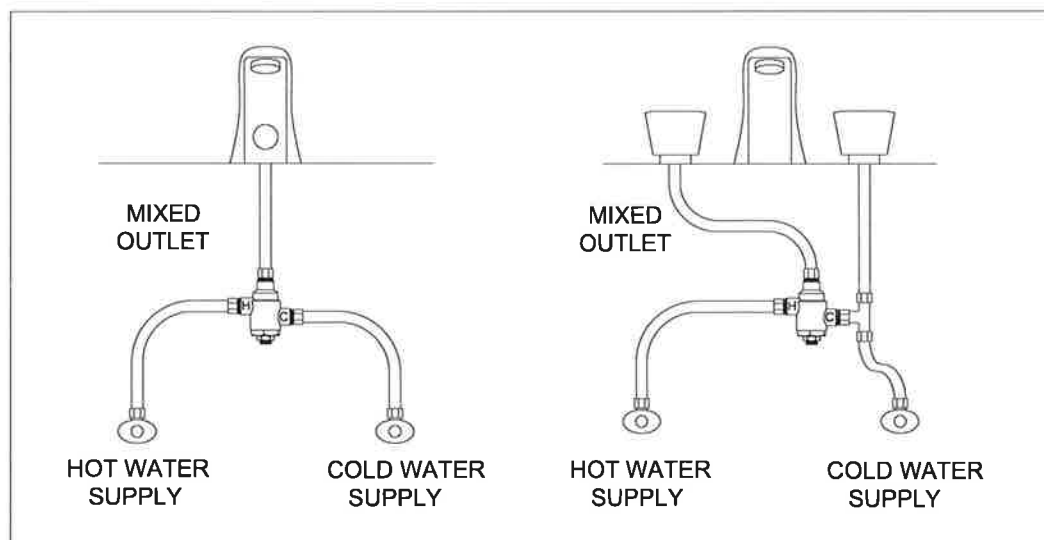


1360 Elmwood Avenue, Cranston, RI 02910 USA
 Phone: 401.461.1200 Fax: 401.941.5310
 Email: info@leonardvalve.com
 Web Site: <http://www.leonardvalve.com>



170A-LF-REC

170A-LF-EXP



170A-LF

170A-LF-BP



1360 Elmwood Avenue, Cranston, RI 02910 USA

Phone: 401.461.1200 Fax: 401.941.5310

Email: leonardvalve@leonardvalve.com

Web Site: <http://www.leonardvalve.com>

Note: Leonard Valve Company reserves the right of product, or design modifications without notice or obligation.

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Printed in USA



McGuire Manufacturing Co., Inc.

60 Grandview Court
P.O. Box 746 ♣ Cheshire, CT 06410
203-699-1801 ♣ Fax: 203-699-1813
www.mcguiremfg.com

PRODUCT SPECIFICATION

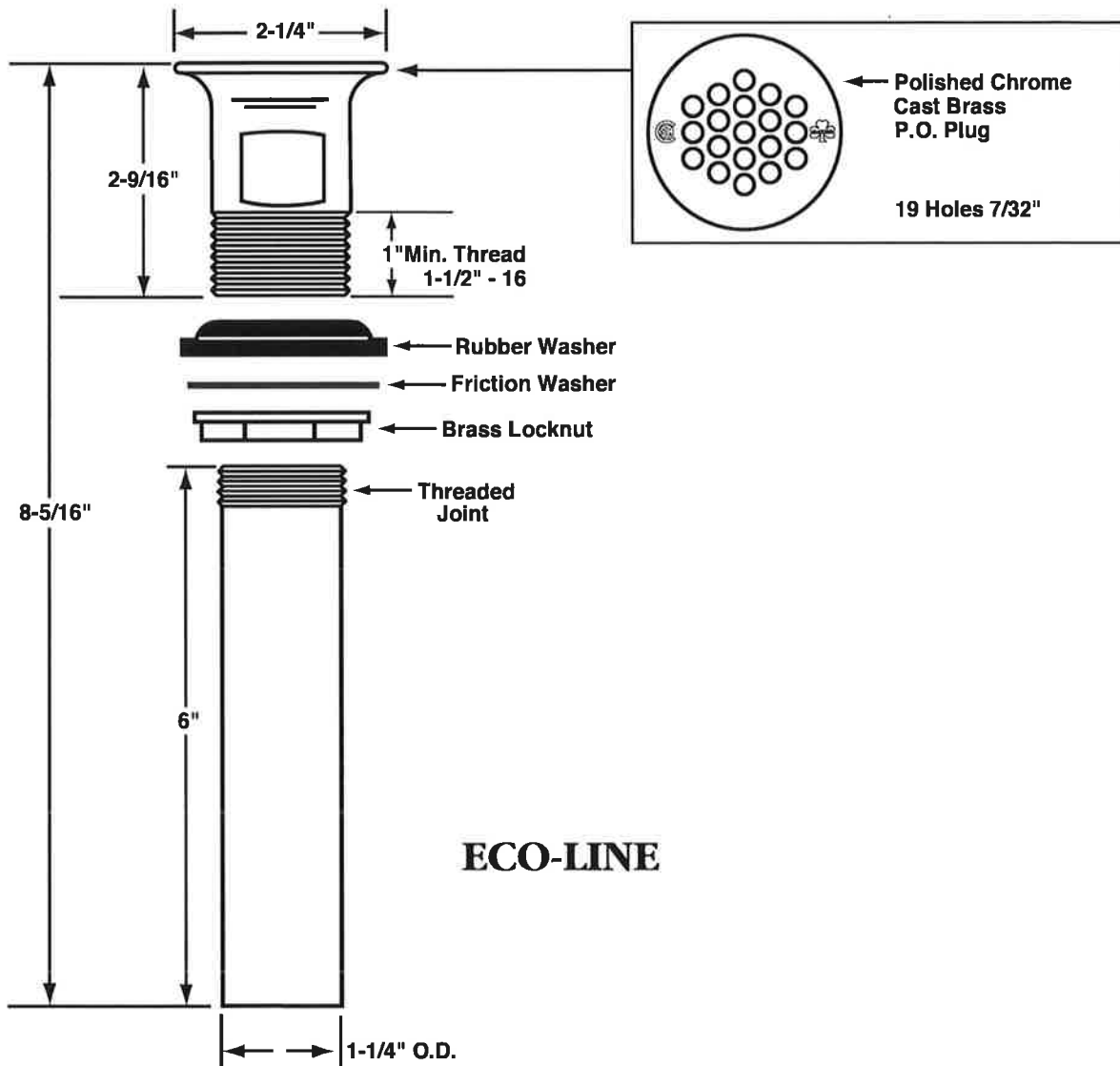
Part No.

155AECO

Open Grid P.O. Plug

Job Name:

Submittal Number:



Specifications:

Cast Brass Chrome Plated Open Grid P.O. Plug with 17 gauge 1-1/4" x 6" seamless brass tailpiece, brass locknut, heavy rubber basin washer and fiber friction washer. Drain shall be in compliance with CSA or other recognized testing authority and bear both manufacturer and testing mark.



McGuire Manufacturing Co., Inc.

60 Grandview Court
 Cheshire, Connecticut 06410
 (203) 699-1801 Fax (203) 699-1813
 customerservice@mcguiremfg.com mcguiremfg.com

Part No.

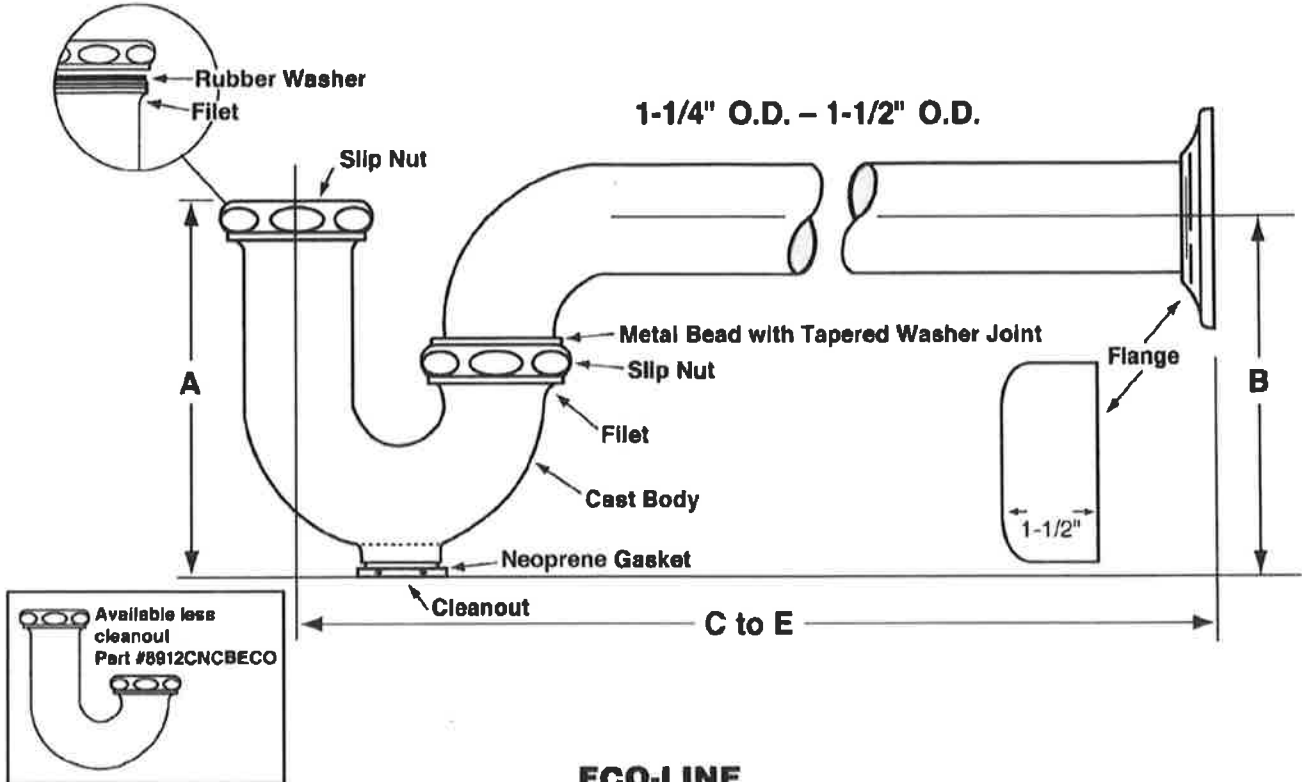
C8872CECO

**Cast Body P-Trap With
 or Without Cleanout**

PRODUCT SPECIFICATION

Job Name:

Submittal Number:



ECO-LINE

ROUGHING MEASUREMENTS							
MODEL NO.	TRAP DIMENSIONS		A	B	C to E	FLANGE	SLIP NUT
	INLET	OUTLET					
C8872CECO	1-1/4"	1-1/4"	4-1/2"	4-1/2"	10"	Shallow	Zinc

**FED SPEC W.W.P. 541
 CAST BRASS P-TRAP
 MINIMUM SEAL 2"**



ASME A112.18.2/CSA B125.2

Specifications:

Chrome plated P-Trap shall be cast brass body, with or without cleanout, with 17 gauge seamless tubular wall bend and flange.



WARNING:

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P85Warnings.ca.gov.



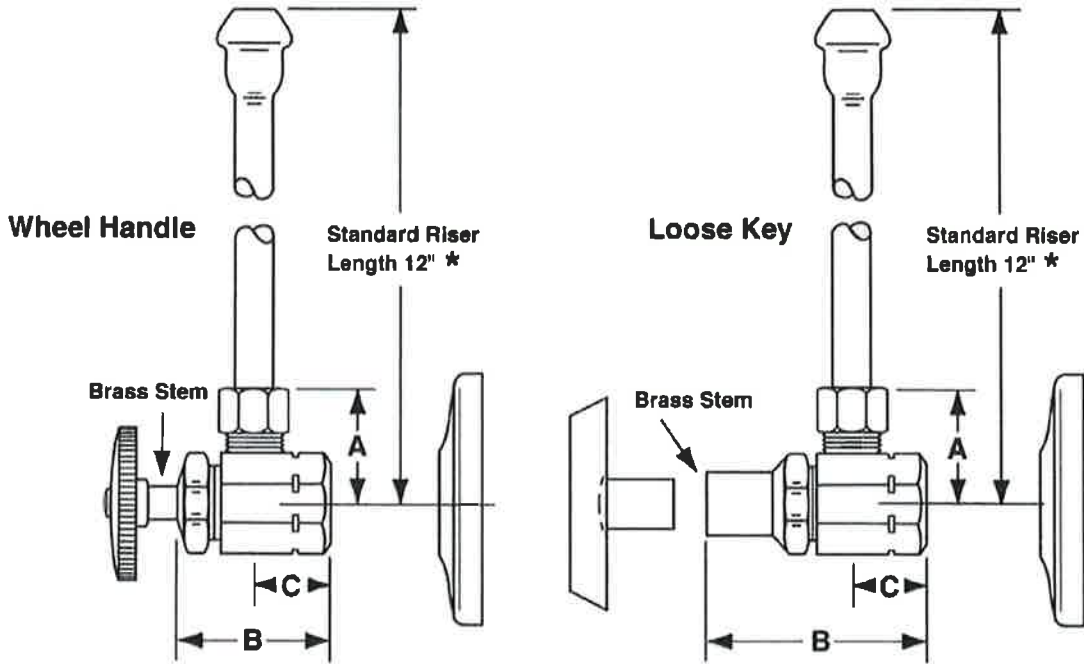
McGuire Manufacturing Co., Inc.
 60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

PRODUCT SPECIFICATION

Part No.
 LF2165, **LF2165LK**,
 LF2167, LF2167LK
Lavatory Supply
1/2" I.P.S. x O.D.

Job Name:

Submittal Number:



NO.	DESCRIPTION	ROUGHING MEASUREMENTS		
		A	B	C
LF2165	1/2" I.P.S. x 3/8" O.D.	1-3/16"	1-1/2"	3/4"
LF2165LK	1/2" I.P.S. x 3/8" O.D.	1-3/16"	2-1/4"	3/4"
LF2167	1/2" I.P.S. x 1/2" O.D.	1-3/16"	1-1/2"	3/4"
LF2167LK	1/2" I.P.S. x 1/2" O.D.	1-3/16"	2-1/4"	3/4"

LK designates Loose Key

* See options and accessories section for details on product variations.



Specifications:

Supply kit shall include low lead chrome plated brass supply stop valves with full turn brass stem, no plastic, (12, 15, 20) inch chrome plated risers and (shallow, deep, bell) (steel, brass) or (forged brass with set screw) flange. Inlet shall be (3/8, 1/2) inch (IPS, compression). Outlet shall be (3/8, 1/2) inch compression. Supply kit shall be McGuire _____ . Supply kit shall be low lead certified by recognized authority and bear manufacturer and testing mark.

SS-1

**TERRAZZO
12" MOP SERVICE BASIN**

- One piece, precast terrazzo made of black and white marble chips in gray portland cement to produce a compressive strength not less than 3000 P.S.I. seven days after casting.
- Terrazzo surface shall be ground and polished with all air holes or pits grouted and excess removed.
- Shoulders shall be not less than 12" high outside and 10" inside at lowest wall.
- Shoulder width not less than 2" on all sides with a 1/4" pitch towards the inside.
- Standard drain body is stainless steel cast integrally and provides for a caulked lead connection not less than 1" deep to a 3" pipe.
- Stainless steel strainer # 1453BB
- Made in the U.S.A.

Options:

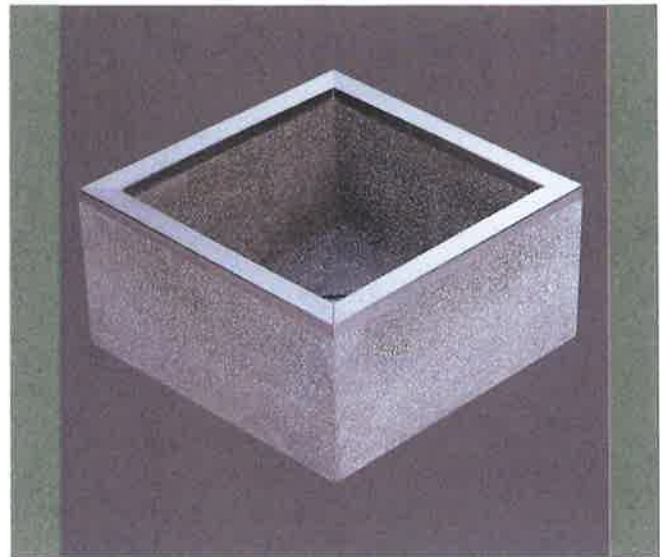
- QDC quick drain connectors
- Stainless steel tiling flanges available with up-charge. Must be custom order.
- Vandal proof drain. Must be custom order.

- TSB100, TSB300, TSB500, TSB700 Series** with stainless steel caps on all curbs
- TSB200, TSB400, TSB600, TSB800 Series** with plain curbs

Optional Components:

- 830AA** Mop Service Basin Fitting
- 832AA** Hose & Hose Bracket
- 889CC** Mop Hanger
- 1239BB** Aluminum Bumperguard with Vinyl Insert
- 833AA** Silicone Sealant

- MSG Wall Guards - Stainless Steel**
 - Wall Guards are manufactured of heavy gauge stainless steel and help protect walls adjacent to Mop Basin. Two panels are required for corner installations. Optional third panel is required for a recessed installation. (MSG2424; MSG2828; MSG3232; MSG3624; MSG3636)



Shown: TSB500

SEE REVERSE FOR ROUGHING-IN DIMENSIONS

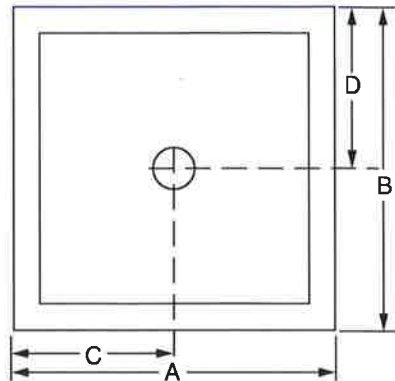
INSTALLATIONS: Terrazzo Mop Basins **must** be installed on a 1/2" layer of mortar in order that the mop basin be level and to prevent cracking. Failure to install terrazzo without a mortar bed will void the warranty. Installations require a 1/4" clearance between mop basin and wall.

IMPORTANT: Rough-in dimensions may vary 1/2" (13mm) and are subject to change or cancellation without prior notice.

CERTIFICATIONS:

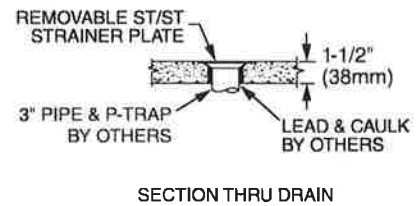
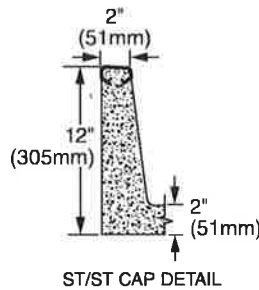
All models are UPC and CUPC Listed





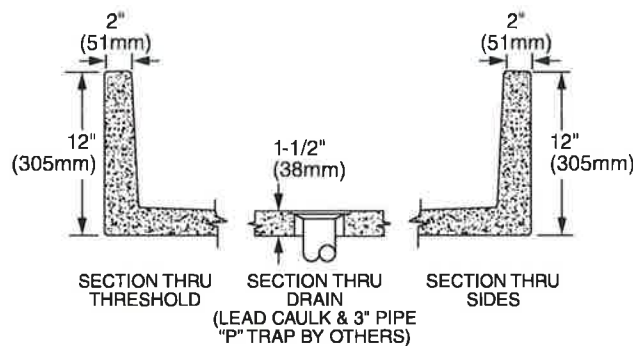
Series TSB100
With Stainless Steel Caps On All Curbs

MODEL	SIZE	A	B	C	D
TSB100	24" x 24" x 12"	24	24	12	12
TSB300	32" x 32" x 12"	32	32	16	16
TSB500	36" x 36" x 12"	36	36	18	18
TSB700	36" x 24" x 12"	36	24	18	12



Series TSB200
With Plain Curbs

MODEL	SIZE	A	B	C	D
TSB200	24" x 24" x 12"	24	24	12	12
TSB400	30" x 30" x 12"	30	30	16	16
TSB600	36" x 36" x 12"	36	36	18	18
TSB800	36" x 24" x 12"	36	24	18	12



IMPORTANT: Roughing in dimensions may vary 1/2" and are subject to change or cancellation without prior notice.



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-0665-BSTR

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant

This Space for Architect/Engineer Approval

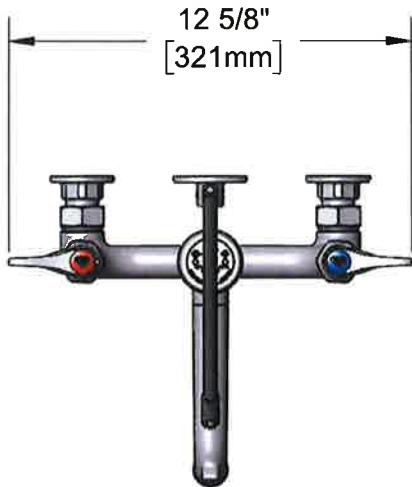
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____



Support Rod w/
Wall Bracket &
Mounting Screws

Mounting
Surface

Items Not Shown
For Clarity

B-0969
1/2" NPT Vacuum
Breaker

Quarter-Turn
Eterna Cartridges w/
Spring Checks &
Lever Handles w/
Color Coded Indexes

Garden Hose
Male Outlet

Ø 2" [51mm]
Flanges w/
1/2" NPT
Female Inlets

Built-In Service
Stops

14 5/16"
[364mm]

3 15/16"
[100mm]

8"
[203mm]
Adjustable From
7 3/4" to 8 1/4"
[197mm to 210mm]

2 11/16"
[68mm]

9 1/8"
[232mm]

Product Specifications:

8" Wall Mount Service Sink, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, Upper Support Rod, Garden Hose Male Outlet, Built-In Service Stops, Rough Chrome Finish, 1/2" NPT Vacuum Breaker & 1/2" NPT Female Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)
ASSE 1001 (VB)



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

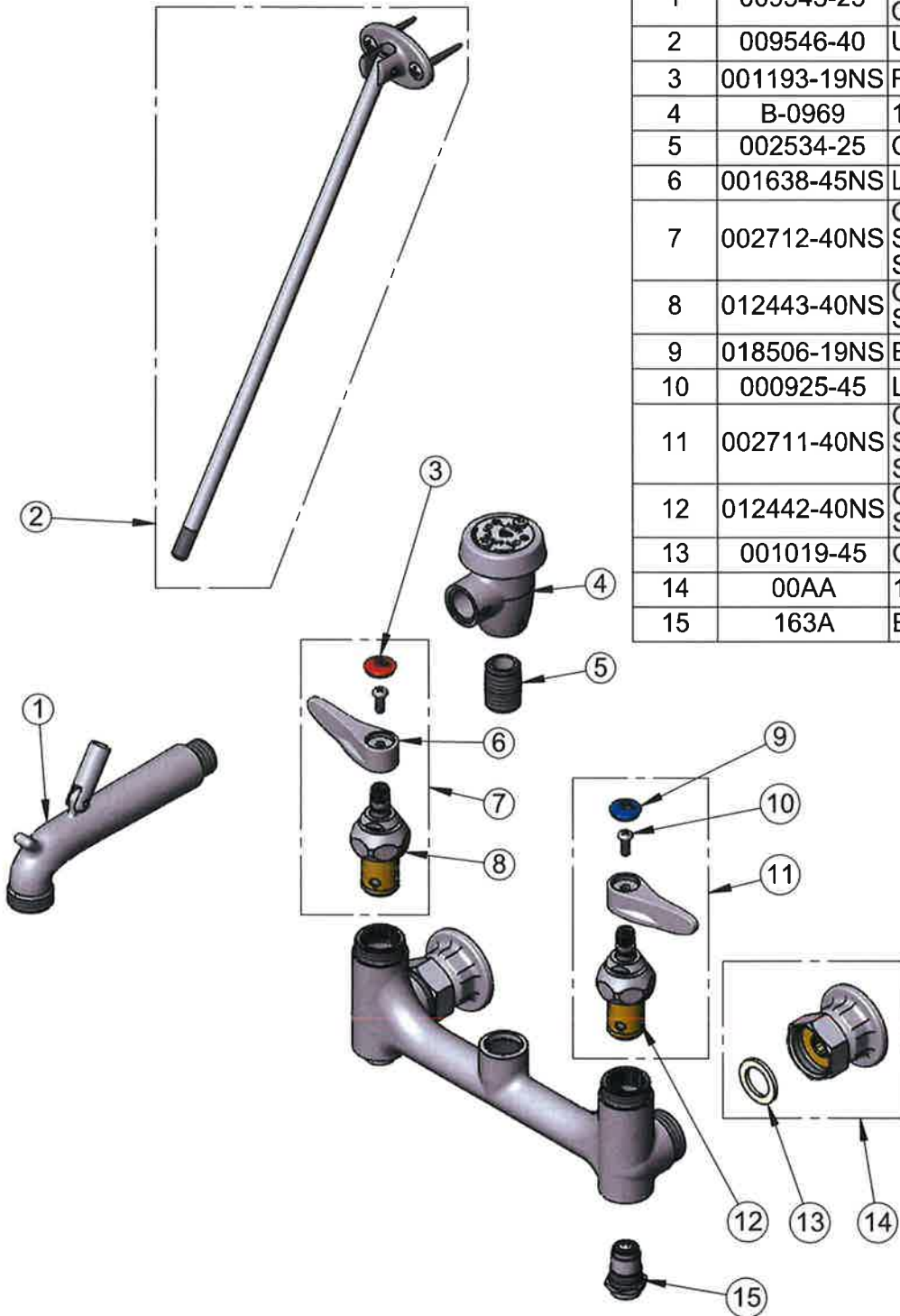
Model No.

B-0665-BSTR

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com

ITEM NO.	SALES NO.	DESCRIPTION
1	009545-25	Spout w/ Male GH Outlet & Upper Clevis - Rough Chrome
2	009546-40	Upper Support Rod
3	001193-19NS	Red Button Index, Press-in
4	B-0969	1/2" NPT Vacuum Breaker
5	002534-25	Close Nipple, 1/2" NPT
6	001638-45NS	Lever Handle (New Style)
7	002712-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, Handle, Red Index & Screw, RTC
8	012443-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
9	018506-19NS	Blue Button Index, Press-in
10	000925-45	Lab Handle Screw
11	002711-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, Handle, Blue Index & Screw, LTC
12	012442-40NS	Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
13	001019-45	Coupling Nut Washer
14	00AA	1/2" NPT Female Eccentric Flange
15	163A	Built-in Service Stop



Product Specifications:

8" Wall Mount Service Sink, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, Upper Support Rod, Garden Hose Male Outlet, Built-In Service Stops, Rough Chrome Finish, 1/2" NPT Vacuum Breaker & 1/2" NPT Female Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)
ASSE 1001 (VB)

S-1

PRODUCT SPECIFICATIONS

Elkay Lustertone Classic Stainless Steel 22" x 19-1/2" x 6-1/2" Single Bowl Drop-in ADA Sink. Sink is manufactured from 18 gauge 304 Stainless Steel with a Lustrous Satin finish, Rear Center drain placement, and Bottom only pads.

Installation Type:	Drop-in
Material:	304 Stainless Steel
Finish:	Lustrous Satin
Gauge:	18
Sound Deadening:	Bottom only pads
Number of Bowls:	1
Sink Dimensions:	22" x 19-1/2" x 6-1/2"
Bowl 1 Dimensions:	18" x 14" x 6-3/8"
Drain Size:	3-1/2" (89mm)
Drain Location:	Rear Center
Minimum Cabinet Size:	27"
Mounting Hardware:	Part # 64090012 included for countertops up to 3/4" (19mm) thick
Template Included:	No
Cutout Template #:	1000001255

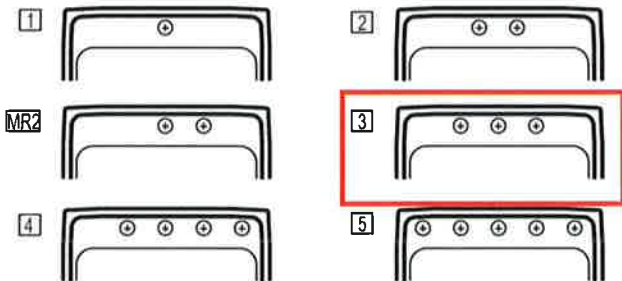
Template is available for download at elkay.com. CAD software will be required to open the template.

Cutout Dimensions for Drop-in Installation:

21-3/8" x 18-7/8" (543mm x 479mm) with 1-1/2" (38mm) corner radius

Hole Drilling Configurations:

1-1/2" (38mm) Diameter Faucet Holes on 4" (102mm) Centers



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Product Compliance: ADA & ICC A117.1
ASME A112.19.3/CSA B45.4



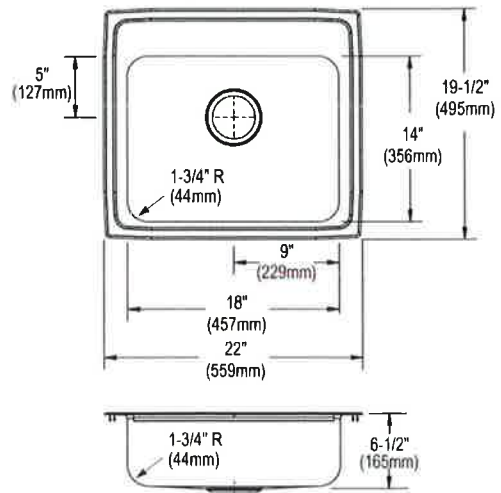
Sinks are listed by IAPMO® as meeting the applicable requirements of the Uniform Plumbing Code®, International Plumbing Code®, and National Plumbing Code of Canada.



Complies with ADA & ICC A117.1 accessibility requirements when installed according to the requirements outlined in these standards.

[Clean and Care Manual \(PDF\)](#)
[Installation Instructions \(PDF\) - 1000005236](#)
[Warranty \(PDF\)](#)

Similar models are available with: CuVerro antimicrobial copper, Quick-Clip Mounting System, additional ADA depths



PART: _____ QTY: _____
 PROJECT: _____
 CONTACT: _____
 DATE: _____
 NOTES: _____
 APPROVAL: _____

In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit elkay.com for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.



T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-1142-04

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant

This Space for Architect/Engineer Approval

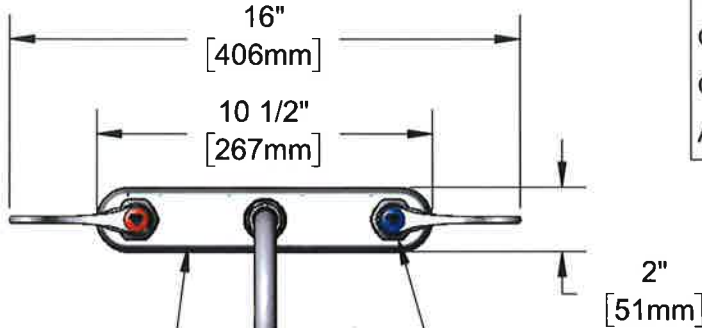
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

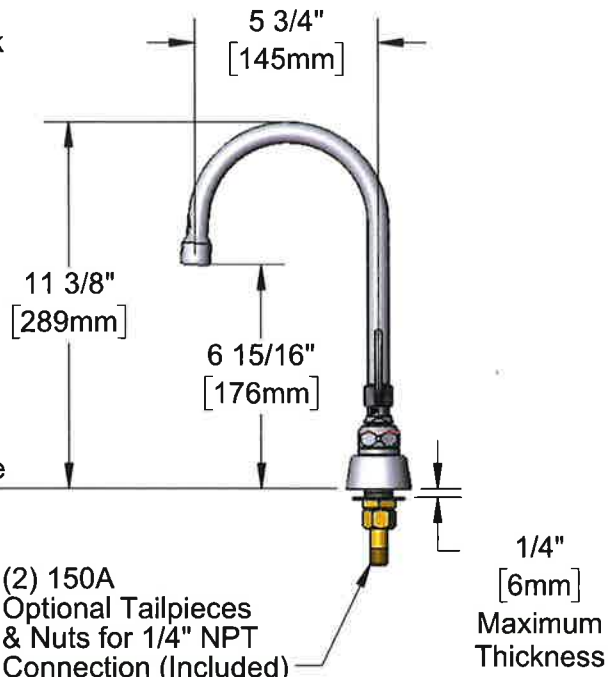
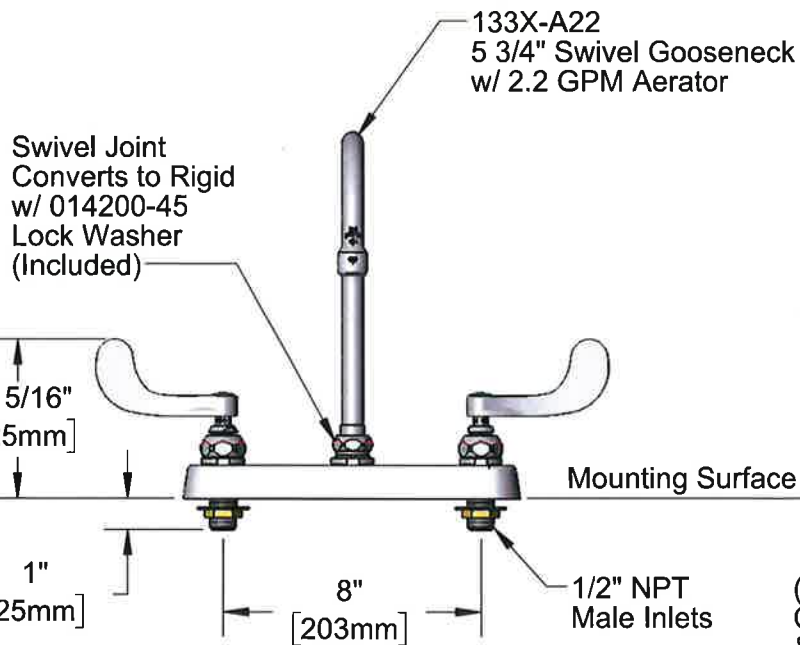
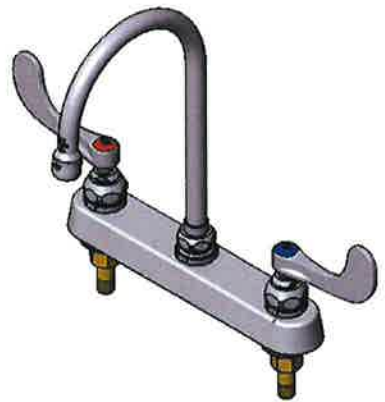
Contractor _____

Architect/Engineer _____



Polished Chrome Plated Escutcheon

Quarter-Turn Eterna Cartridges w/ Spring Checks & 4" Wrist Action Handles w/ Color Coded Indexes



Rough-In Requirement:
(2) \varnothing 1" [25mm] Mounting Holes

Product Specifications:
8" Deck Mount Workboard Faucet, Quarter-Turn Eterna Cartridges w/ Spring Checks, 4" Wrist Action Handles, 5 3/4" Swivel Gooseneck, 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

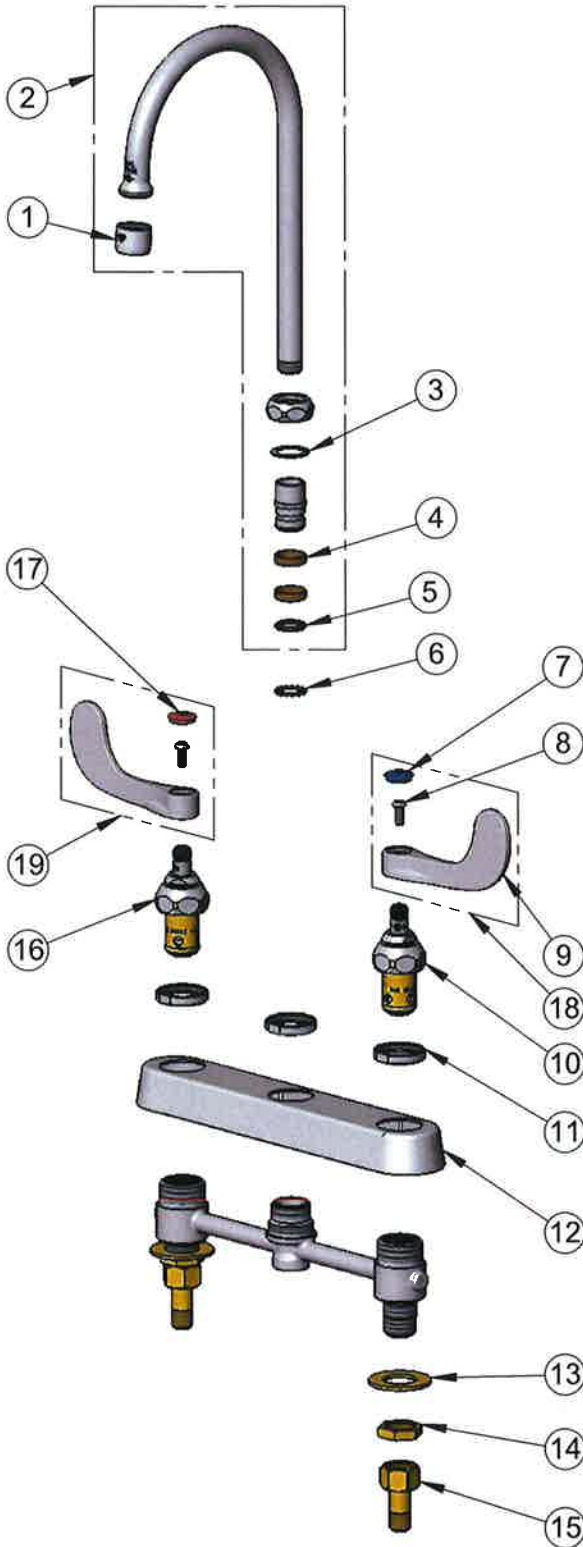
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-1142-04

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	B-0199-01	2.2 GPM Aerator, 55/64"-27 UN Female
2	133X-A22	5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator
3	009538-45	Swivel Washer
4	011429-45	Swivel Sleeves (2)
5	001074-45	O-Ring
6	014200-45	Star Washer, Anti-Rotation
7	018506-19NS	Blue Button Index, Press-in
8	000925-45	Lab Handle Screw
9	B-WH4-NS	Wrist Action Handle (New Style)
10	012442-40NS	Quarter-Turn New Style Eterna Cartridge w/ Spring Check, LTC
11	019376-40	Escutcheon Lock Nut
12	019375-40	B-1120 Eterna Workboard Escutcheon
13	000999-45	Brass Lock Washer
14	002954-45	Shank Lock Nut
15	150A	1/4" NPT Tailpiece & Nut
16	012443-40NS	Quarter-Turn New Style Eterna Cartridge w/ Spring Check, RTC
17	001193-19NS	Red Button Index, Press-in
18	B-WH4C-NS	Wrist Action Handle, Blue Index & Screw
19	B-WH4H-NS	Wrist Action Handle, Red Index & Screw

Product Specifications:

8" Deck Mount Workboard Faucet, Quarter-Turn Eterna Cartridges w/ Spring Checks, 4" Wrist Action Handles, 5 3/4" Swivel Gooseneck, 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

PRODUCT SPECIFICATIONS

Elkay 3-1/2" Drain Fitting" Stainless Steel Body Strainer Basket and Offset Tailpiece. Overall dimensions are 15-13/16" x 4-5/8" x 9-1/16". Made of Stainless Steel Body, Brass Tailpiece.

Material:	Stainless Steel Body, Brass Tailpiece
Finish:	Polished Stainless Steel
Dimensions:	15-13/16" x 4-5/8" x 9-1/16"
Shipping Weight:	2 lbs.

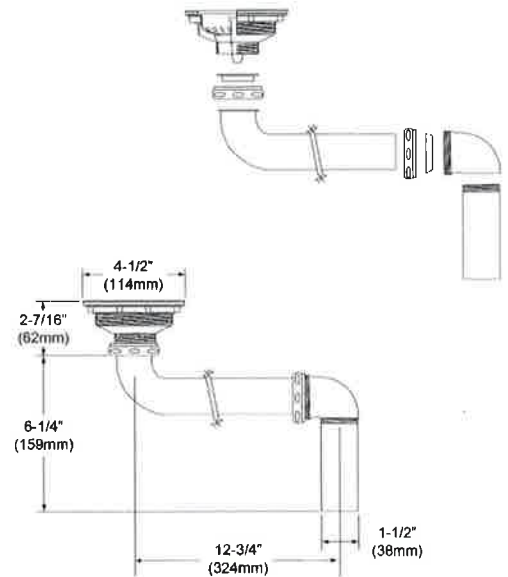
- LKADOS chrome-plated brass offset tailpiece.
- BASKET STRAINER AND STOPPER: Strainer catches food and waste from going down the drain. Use stopper to fill sink with water for washing and soaking.



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Product Compliance: ASME A112.18.2/CSA B125.2

[Clean and Care Manual \(PDF\)](#)
[Installation Instructions \(PDF\) - 900000106](#)



PART: _____ QTY: _____

PROJECT: _____

CONTACT: _____

DATE: _____

NOTES: _____

APPROVAL: _____

In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit elkay.com for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.



McGuire Manufacturing Co., Inc.

60 Grandview Court
 Cheshire, Connecticut 06410
 (203) 699-1801 Fax (203) 699-1813
 customerservice@mcguiremfg.com mcguiremfg.com

PRODUCT SPECIFICATION

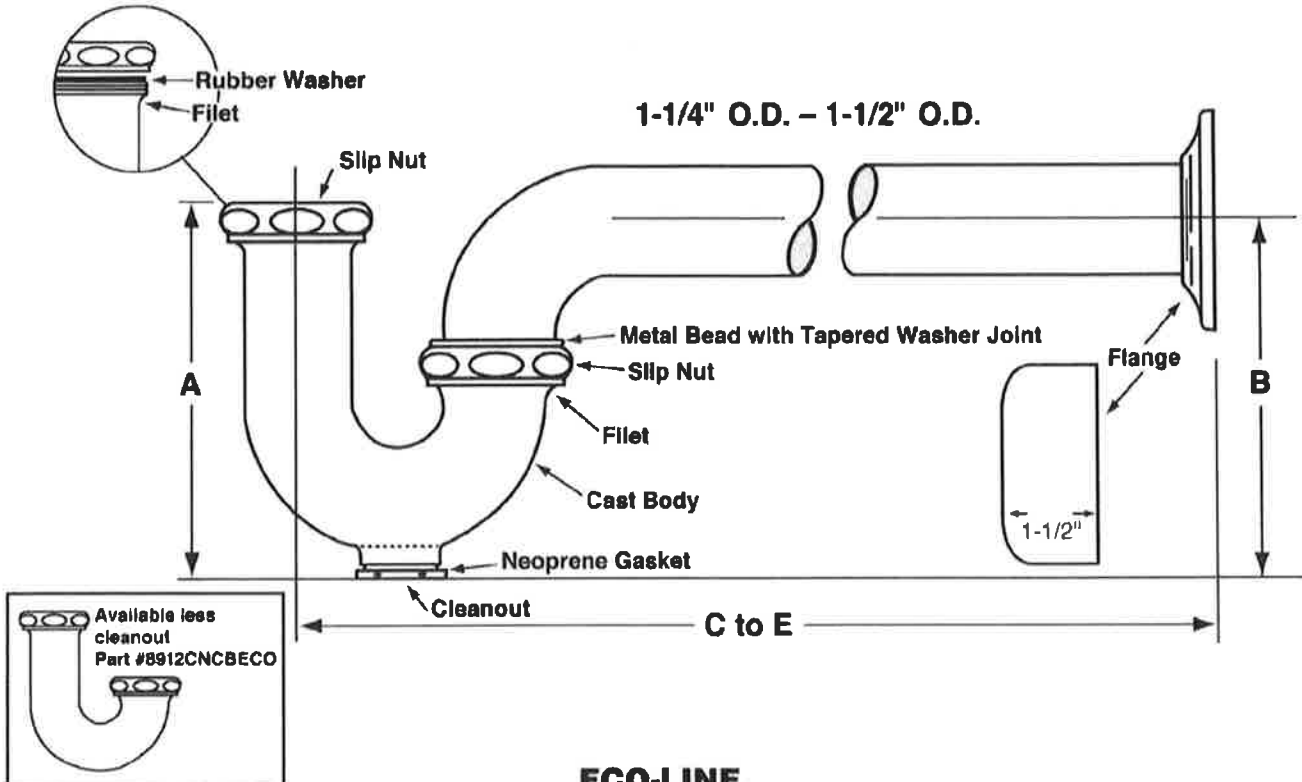
Part No.

C8912CECO

**Cast Body P-Trap With
 or Without Cleanout**

Job Name:

Submittal Number:



ECO-LINE

ROUGHING MEASUREMENTS

MODEL NO.	TRAP DIMENSIONS		A	B	C to E	FLANGE	SLIP NUT
	INLET	OUTLET					
C8912CECO	1-1/2", 1-1/4"	1-1/2"	5"	5"	10-1/2"	Shallow	Zinc

**FED SPEC W.W.P. 541
 CAST BRASS P-TRAP
 MINIMUM SEAL 2"**



ASME A112.18.2/CSA B125.2

Specifications:

Chrome plated P-Trap shall be cast brass body, with or without cleanout, with 17 gauge seamless tubular wall bend and flange.



WARNING:

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



McGuire Manufacturing Co., Inc.

60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

PRODUCT SPECIFICATION

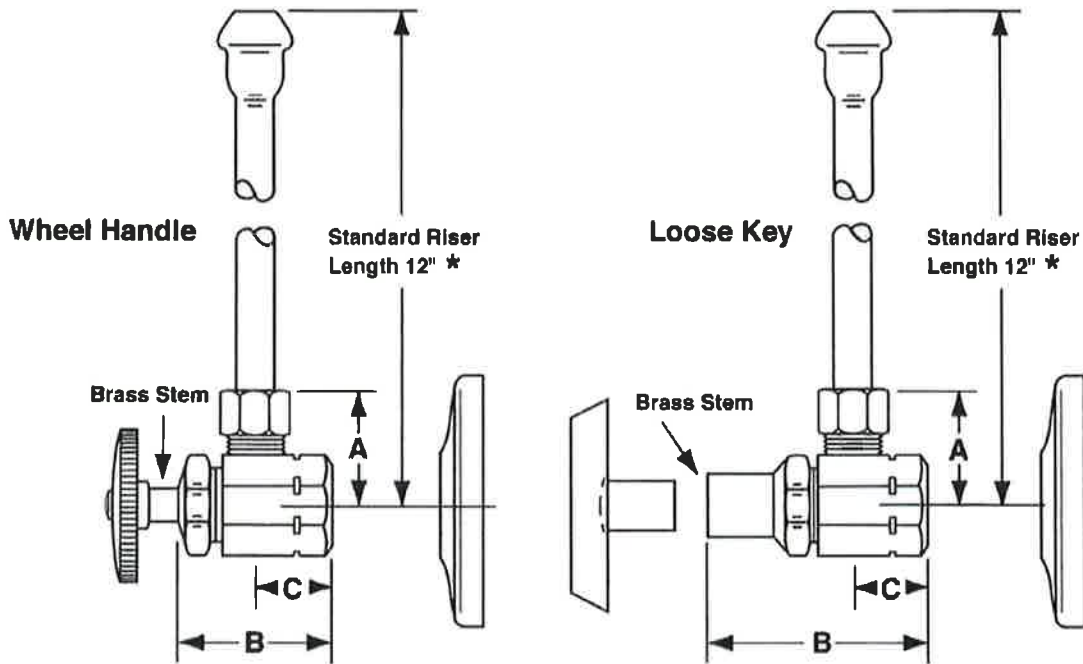
Part No.

LF2165, **LF2165LK**,
 LF2167, LF2167/LK

Lavatory Supply
 1/2" I.P.S. x O.D.

Job Name: _____

Submittal Number: _____



NO.	DESCRIPTION	ROUGHING MEASUREMENTS		
		A	B	C
LF2165	1/2" I.P.S. x 3/8" O.D.	1-3/16"	1-1/2"	3/4"
LF2165LK	1/2" I.P.S. x 3/8" O.D.	1-3/16"	2-1/4"	3/4"
LF2167	1/2" I.P.S. x 1/2" O.D.	1-3/16"	1-1/2"	3/4"
LF2167LK	1/2" I.P.S. x 1/2" O.D.	1-3/16"	2-1/4"	3/4"

LK designates Loose Key

* See options and accessories section for details on product variations.



Specifications:

Supply kit shall include low lead chrome plated brass supply stop valves with full turn brass stem, no plastic, (12, 15, 20) inch chrome plated risers and (shallow, deep, bell) (steel, brass) or (forged brass with set screw) flange. Inlet shall be (3/8, 1/2) inch (IPS, compression). Outlet shall be (3/8, 1/2) inch compression. Supply kit shall be McGuire _____. Supply kit shall be low lead certified by recognized authority and bear manufacturer and testing mark.

S-2, PT-1

PRODUCT SPECIFICATIONS

Elkay Lustertone Classic Stainless Steel 22" x 19-1/2" x 6-1/2" Single Bowl Drop-in ADA Sink. Sink is manufactured from 18 gauge 304 Stainless Steel with a Lustrous Satin finish, Rear Center drain placement, and Bottom only pads.

Installation Type:	Drop-in
Material:	304 Stainless Steel
Finish:	Lustrous Satin
Gauge:	18
Sound Deadening:	Bottom only pads
Number of Bowls:	1
Sink Dimensions:	22" x 19-1/2" x 6-1/2"
Bowl 1 Dimensions:	18" x 14" x 6-3/8"
Drain Size:	3-1/2" (89mm)
Drain Location:	Rear Center
Minimum Cabinet Size:	27"
Mounting Hardware:	Part # 64090012 included for countertops up to 3/4" (19mm) thick
Template Included:	No
Cutout Template #:	1000001255

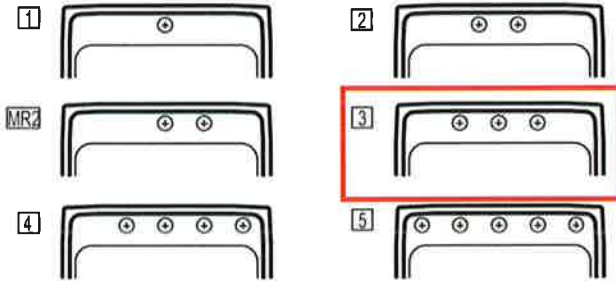
Template is available for download at [elkay.com](#). CAD software will be required to open the template.

Cutout Dimensions for Drop-in Installation:

21-3/8" x 18-7/8" (543mm x 479mm) with 1-1/2" (38mm) corner radius

Hole Drilling Configurations:

1-1/2" (38mm) Diameter Faucet Holes on 4" (102mm) Centers



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Product Compliance: ADA & ICC A117.1
ASME A112.19.3/CSA B45.4



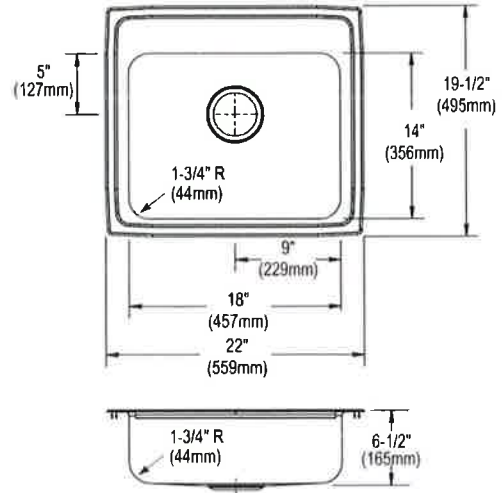
Sinks are listed by IAPMO® as meeting the applicable requirements of the Uniform Plumbing Code®, International Plumbing Code®, and National Plumbing Code of Canada.



Complies with ADA & ICC A117.1 accessibility requirements when installed according to the requirements outlined in these standards.

[Clean and Care Manual \(PDF\)](#)
[Installation Instructions \(PDF\) - 1000005236](#)
[Warranty \(PDF\)](#)

Similar models are available with: CuVerro antimicrobial copper, Quick-Clip Mounting System, additional ADA depths



PART: _____ QTY: _____
 PROJECT: _____
 CONTACT: _____
 DATE: _____
 NOTES: _____
 APPROVAL: _____

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T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-1142-04

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant

This Space for Architect/Engineer Approval

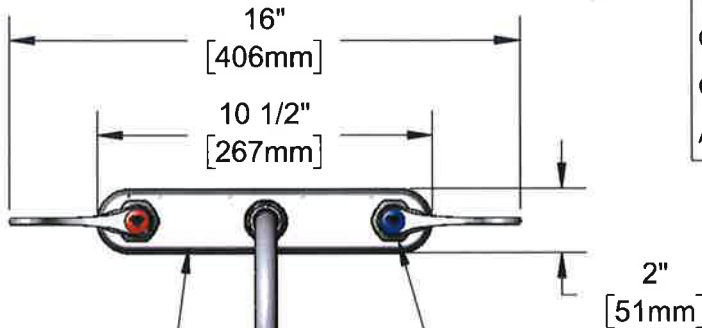
Job Name _____ Date _____

Model Specified _____ Quantity _____

Customer/Wholesaler _____

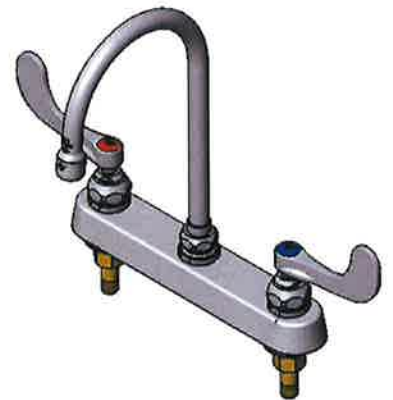
Contractor _____

Architect/Engineer _____



Polished Chrome Plated Escutcheon

Quarter-Turn Eterna Cartridges w/ Spring Checks & 4" Wrist Action Handles w/ Color Coded Indexes



Swivel Joint Converts to Rigid w/ 014200-45 Lock Washer (Included)

133X-A22
5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator

4 15/16" [125mm]

11 3/8" [289mm]

6 15/16" [176mm]

Mounting Surface

1" [25mm]

8" [203mm]

1/2" NPT Male Inlets

(2) 150A Optional Tailpieces & Nuts for 1/4" NPT Connection (Included)

1/4" [6mm] Maximum Thickness

Rough-In Requirement:
(2) \varnothing 1" [25mm] Mounting Holes

Product Specifications:

8" Deck Mount Workboard Faucet, Quarter-Turn Eterna Cartridges w/ Spring Checks, 4" Wrist Action Handles, 5 3/4" Swivel Gooseneck, 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

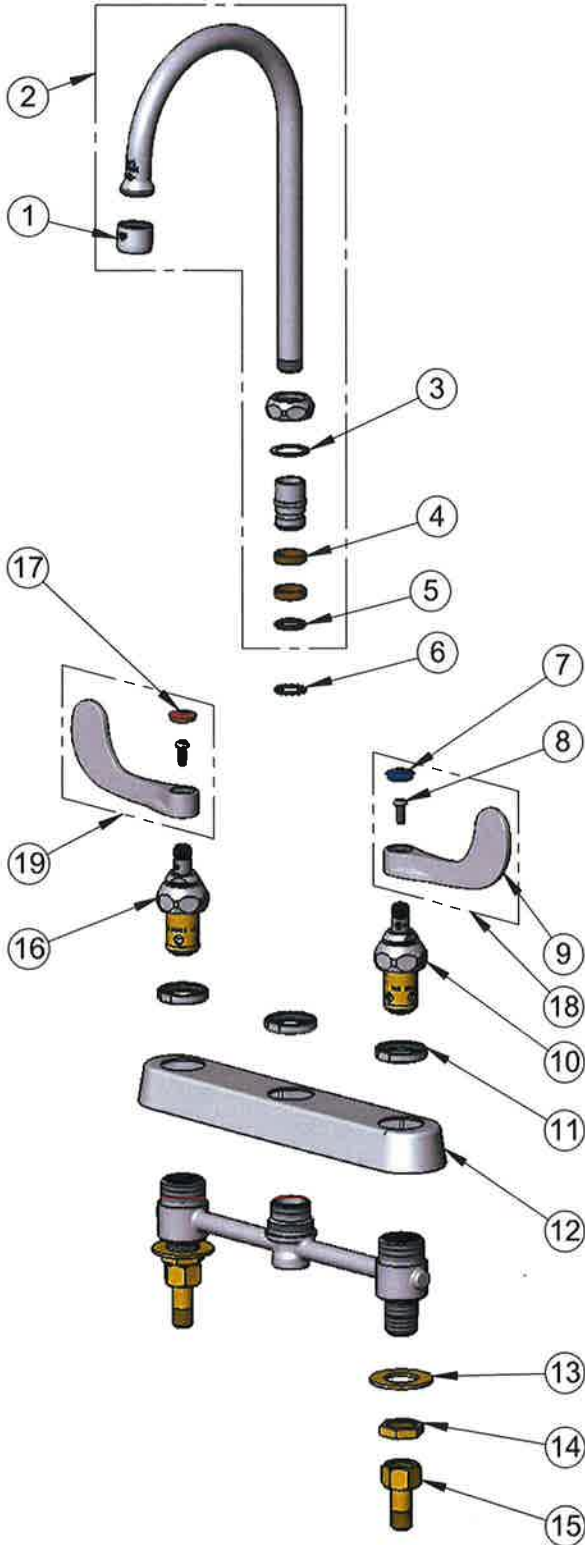
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-1142-04

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	B-0199-01	2.2 GPM Aerator, 55/64"-27 UN Female
2	133X-A22	5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator
3	009538-45	Swivel Washer
4	011429-45	Swivel Sleeves (2)
5	001074-45	O-Ring
6	014200-45	Star Washer, Anti-Rotation
7	018506-19NS	Blue Button Index, Press-in
8	000925-45	Lab Handle Screw
9	B-WH4-NS	Wrist Action Handle (New Style)
10	012442-40NS	Quarter-Turn New Style Eterna Cartridge w/ Spring Check, LTC
11	019376-40	Escutcheon Lock Nut
12	019375-40	B-1120 Eterna Workboard Escutcheon
13	000999-45	Brass Lock Washer
14	002954-45	Shank Lock Nut
15	150A	1/4" NPT Tailpiece & Nut
16	012443-40NS	Quarter-Turn New Style Eterna Cartridge w/ Spring Check, RTC
17	001193-19NS	Red Button Index, Press-in
18	B-WH4C-NS	Wrist Action Handle, Blue Index & Screw
19	B-WH4H-NS	Wrist Action Handle, Red Index & Screw

Product Specifications:

8" Deck Mount Workboard Faucet, Quarter-Turn Eterna Cartridges w/ Spring Checks, 4" Wrist Action Handles, 5 3/4" Swivel Gooseneck, 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)

PRODUCT SPECIFICATIONS

Elkay 3-1/2" Drain Fitting" Stainless Steel Body Strainer Basket and Offset Tailpiece. Overall dimensions are 15-13/16" x 4-5/8" x 9-1/16". Made of Stainless Steel Body, Brass Tailpiece.

Material:	Stainless Steel Body, Brass Tailpiece
Finish:	Polished Stainless Steel
Dimensions:	15-13/16" x 4-5/8" x 9-1/16"
Shipping Weight:	2 lbs.

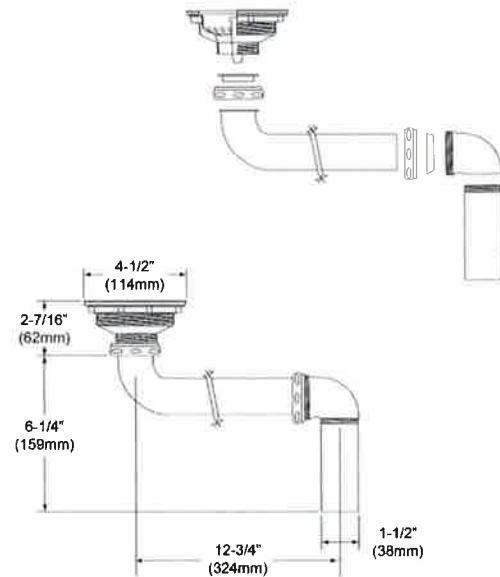
- LKADOS chrome-plated brass offset tailpiece.
- BASKET STRAINER AND STOPPER: Strainer catches food and waste from going down the drain. Use stopper to fill sink with water for washing and soaking.



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Product Compliance: ASME A112.18.2/CSA B125.2

[Clean and Care Manual \(PDF\)](#)
[Installation Instructions \(PDF\) - 900000106](#)



PART: _____ QTY: _____

PROJECT: _____

CONTACT: _____

DATE: _____

NOTES: _____

APPROVAL: _____

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Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____
 Tag S-2,PT-1

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

SI-742

Hair, Plaster & Sediment Interceptor

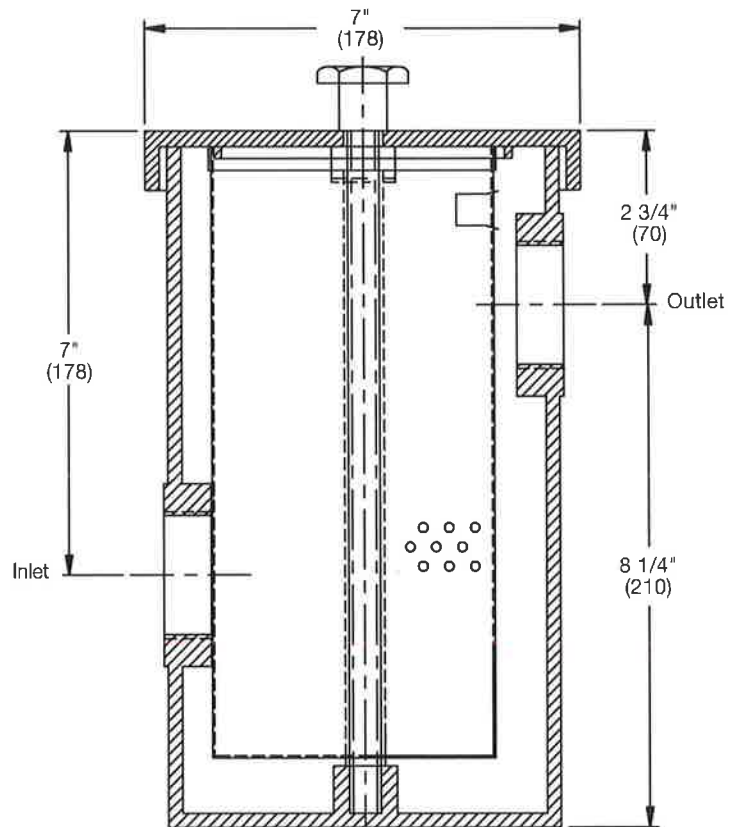
Specification

Watts SI-742 floor mounted epoxy coated cast aluminum sediment interceptor with removable stainless steel sediment basket, gasketed cover, and 2"(51) IPS threaded connections.

Note: 10"(254) clearance required above cover to remove sediment basket.



Options (Select One or More)	
Suffix	Description
-SS	Stainless Steel <input type="checkbox"/>



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



McGuire Manufacturing Co., Inc.

60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

PRODUCT SPECIFICATION

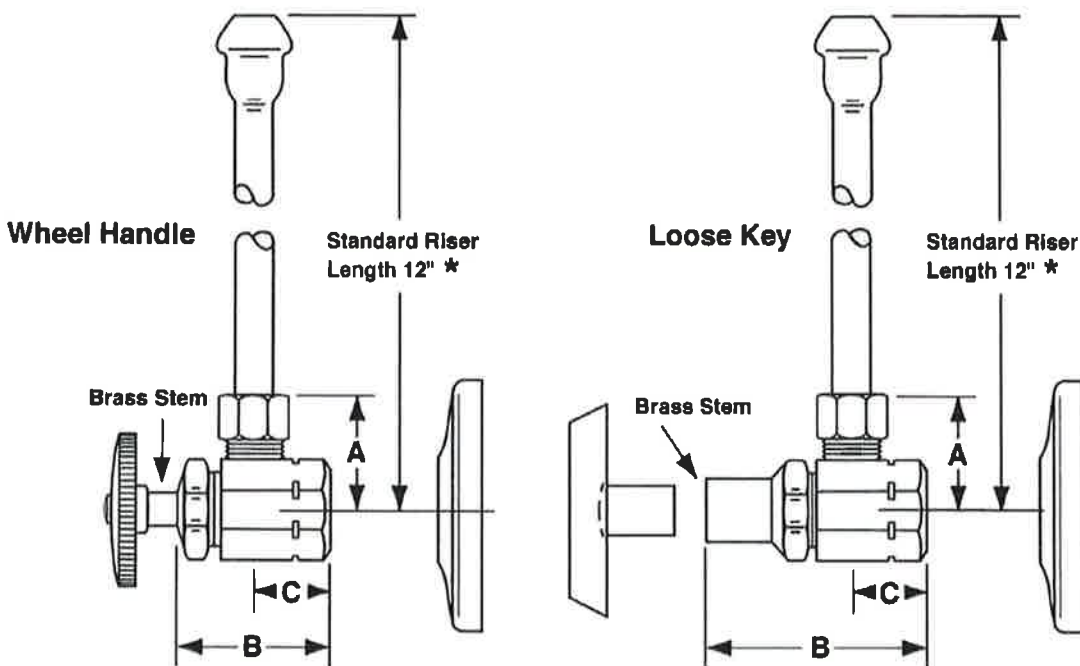
Part No.

LF2165, **LF2165LK**,
 LF2167, LF2167LK

Lavatory Supply
1/2" I.P.S. x O.D.

Job Name: _____

Submittal Number: _____



NO.	DESCRIPTION	ROUGHING MEASUREMENTS		
		A	B	C
LF2165	1/2" I.P.S. x 3/8" O.D.	1-3/16"	1-1/2"	3/4"
LF2165LK	1/2" I.P.S. x 3/8" O.D.	1-3/16"	2-1/4"	3/4"
LF2167	1/2" I.P.S. x 1/2" O.D.	1-3/16"	1-1/2"	3/4"
LF2167LK	1/2" I.P.S. x 1/2" O.D.	1-3/16"	2-1/4"	3/4"



LK designates Loose Key

* See options and accessories section for details on product variations.



Specifications:

Supply kit shall include low lead chrome plated brass supply stop valves with full turn brass stem, no plastic, (12, 15, 20) inch chrome plated risers and (shallow, deep, bell) (steel, brass) or (forged brass with set screw) flange. Inlet shall be (3/8, 1/2) inch (IPS, compression). Outlet shall be (3/8, 1/2) inch compression. Supply kit shall be McGuire _____. Supply kit shall be low lead certified by recognized authority and bear manufacturer and testing mark.

S-3, PT-1

PRODUCT SPECIFICATIONS

Elkay Lustertone® Classic Stainless Steel 22" x 19-1/2" x 10-1/8"
Single Bowl Drop-in Sink. Sink is manufactured from 18 gauge 304
Stainless Steel with a Lustrous Satin finish, Center drain placement,
and Sides and Bottom pads.

Installation Type:	Drop-in
Material:	304 Stainless Steel
Finish:	Lustrous Satin
Gauge:	18
Sound Deadening:	Sides and Bottom pads
Number of Bowls:	1
Sink Dimensions:	22" x 19-1/2" x 10-1/8"
Bowl 1 Dimensions:	18" x 14" x 10"
Drain Size:	3-1/2" (89mm)
Drain Location:	Center
Minimum Cabinet Size:	27"
Mounting Hardware:	Part # 64090012 included for countertops up to 3/4" (19mm) thick
Template Included:	No
Cutout Template #:	1000001255

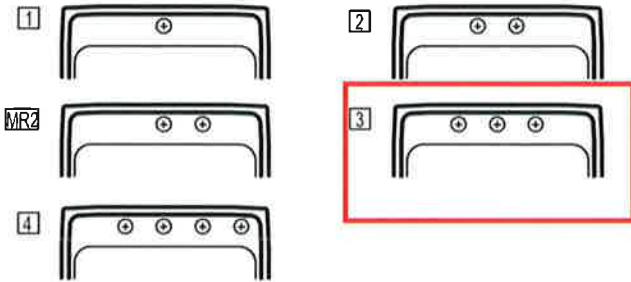
Template is available for download at elkay.com. CAD software will be required to open the template.

Cutout Dimensions for Drop-in Installation:

21-3/8" x 18-7/8" (543mm x 479mm) with 1-1/2" (38mm) corner radius

Hole Drilling Configurations:

1-1/2" (38mm) Diameter Faucet Holes on 4" (102mm) Centers



A Century of Tradition and Quality. For more than 100 years, Elkay has been making innovative products and providing exceptional customer care. We take pride in offering plumbing products that make life easier, inspire change and leave the world a better place.



Product Compliance: ASME A112.19.3/CSA B45.4



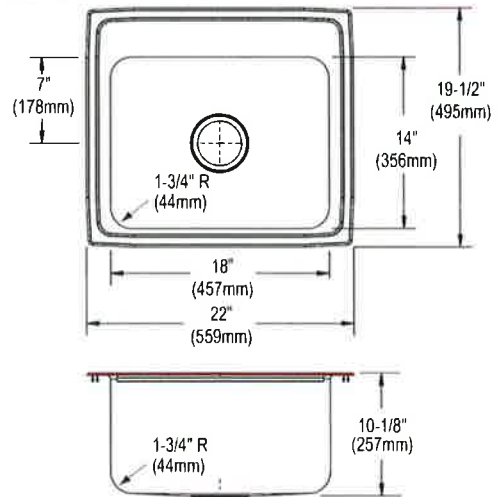
Sinks are listed by IAPMO® as meeting the applicable requirements of the Uniform Plumbing Code®, International Plumbing Code®, and National Plumbing Code of Canada.

[Clean and Care Manual \(PDF\)](#)

[Installation Instructions \(PDF\) - 1000005236](#)

[Warranty \(PDF\)](#)

Similar models are available with: Perfect Drain, Quick-Clip Mounting System, CuVerro antimicrobial copper



PART: _____ QTY: _____

PROJECT: _____

CONTACT: _____

DATE: _____

NOTES: _____

APPROVAL: _____

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T&S BRASS AND BRONZE WORKS, INC.

2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

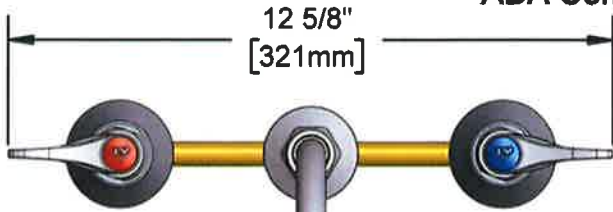
B-2850

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ADA Compliant



12 5/8"
[321mm]

This Space for Architect/Engineer Approval

Job Name _____ Date _____

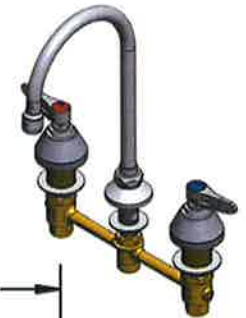
Model Specified _____ Quantity _____

Customer/Wholesaler _____

Contractor _____

Architect/Engineer _____

133X-A22
Swivel Gooseneck w/
2.2 GPM Aerator.
Rigid Conversion Requires
014200-45 Lock Washer
(Included)



5 3/4"
[145mm]

Quarter-Turn
Eterna Cartridges w/
Spring Checks &
Lever Handles w/
Color Coded Indexes

Ø2"
[51mm]
Swivel Deck
Flange

2 5/8"
[66mm]

6 1/4"
[158mm]

10 11/16"
[271mm]

Mounting
Surface

1 1/4"
[31mm]
Maximum
Thickness

Ø2 1/4"
[57mm]
Escutcheons

1/2" NPT
Male Inlets w/
Coupling Nuts

8"
[203mm]

Rough-In Requirement:
Center Shank: Ø1" [25mm] Mounting Hole
Hot/Cold Side: Ø1 1/2" [38mm] Mounting Holes

Product Specifications:
8" Concealed Widespread EasyInstall Mixing Faucet, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, 5 3/4" Swivel/Rigid Gooseneck, 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:
ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



T&S BRASS AND BRONZE WORKS, INC.

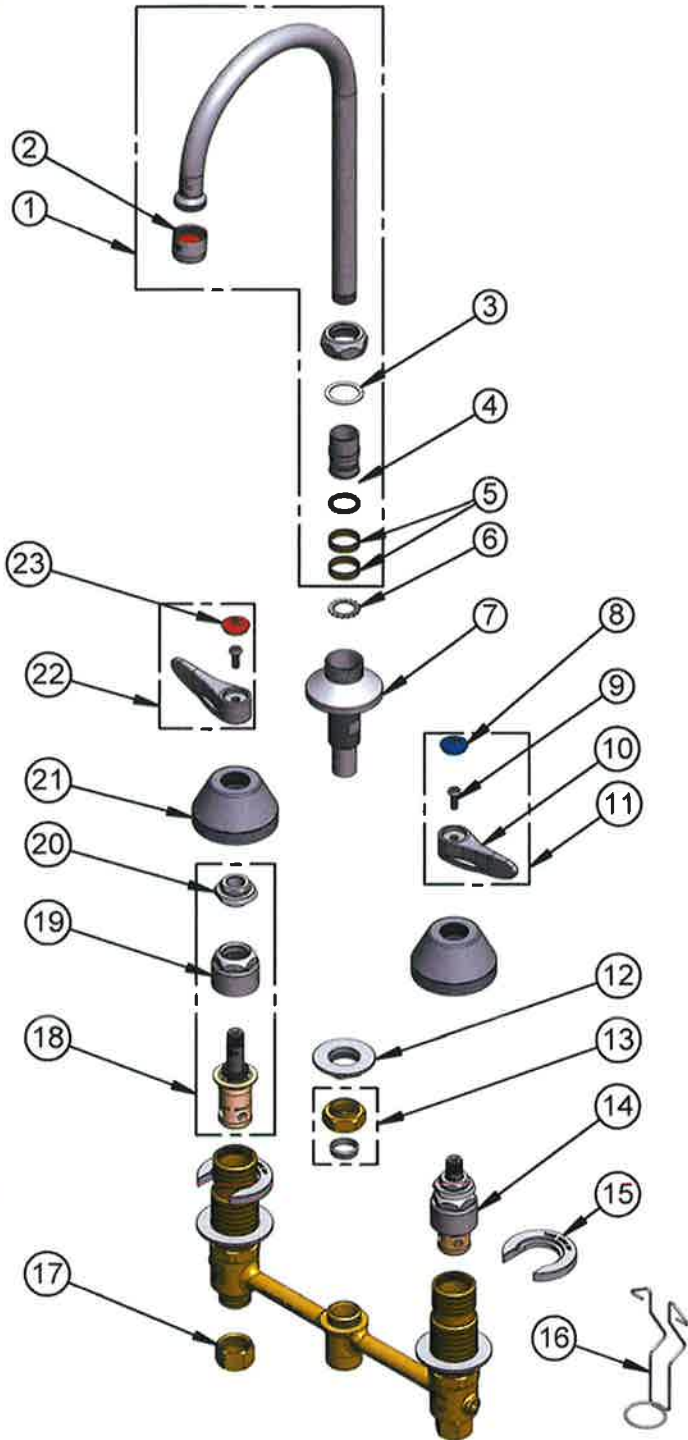
2 Saddleback Cove / P.O. Box 1088
Travelers Rest, SC 29690

Model No.

B-2850

Item No.

Travelers Rest, SC: 800-476-4103 • Simi Valley, CA: 800-423-0150 • Fax: 864-834-3518 • www.tsbrass.com



ITEM NO.	SALES NO.	DESCRIPTION
1	133X-A22	5 3/4" Swivel Gooseneck w/ 2.2 GPM Aerator
2	B-0199-01	2.2 GPM Aerator, 55/64-27 UN Female
3	009538-45	Swivel Washer
4	001074-45	O-Ring
5	011429-45	Swivel Sleeves (2)
6	014200-45	Star Washer, Anti-Rotation
7	016754-40NS	EasyInstall CWS Swivel Center Shank
8	018506-19NS	Blue Button Index, Press-in
9	000925-45	Lab Handle Screw
10	001638-45NS	Lever Handle (New Style)
11	001637-45NS	Lever Handle, Red Index & Screw
12	016742-45	Center Flange Nut
13	016745-45	Compression Nut & Fitting
14	016752-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, LTC
15	016749-45	Sidebody C-Washer
16	016777-45	CWS Hanger
17	000958-20	Coupling Nut
18	016753-40NS	EasyInstall, CWS Quarter-Turn Eterna Cartridge w/ Spring Check, RTC
19	016743-25	CWS Eterna Bonnet
20	009002-40NS	Packing Nut
21	001257-40NS	Bell Escutcheon
22	001636-45NS	Lever Handle, Blue Index & Screw
23	001193-19NS	Red Button Index, Press-in



017245-40
Installation Repair Kit
Includes #12, (2)#15, & #16

Product Specifications:

8" Concealed Widespread EasyInstall Mixing Faucet, Quarter-Turn Eterna Cartridges w/ Spring Checks, Lever Handles, 5 3/4" Swivel/Rigid Gooseneck, 2.2 GPM Aerator & 1/2" NPT Male Inlets

Product Compliance:

ASME A112.18.1 / CSA B125.1
NSF 61 - Section 9
NSF 372 (Low Lead Content)
ANSI A117.1 (ADA)



McGuire Manufacturing Co., Inc.

60 Grandview Court
P.O. Box 746 ♣ Cheshire, CT 06410
203-699-1801 ♣ Fax: 203-699-1813
www.mcguiremfg.com

PRODUCT SPECIFICATION

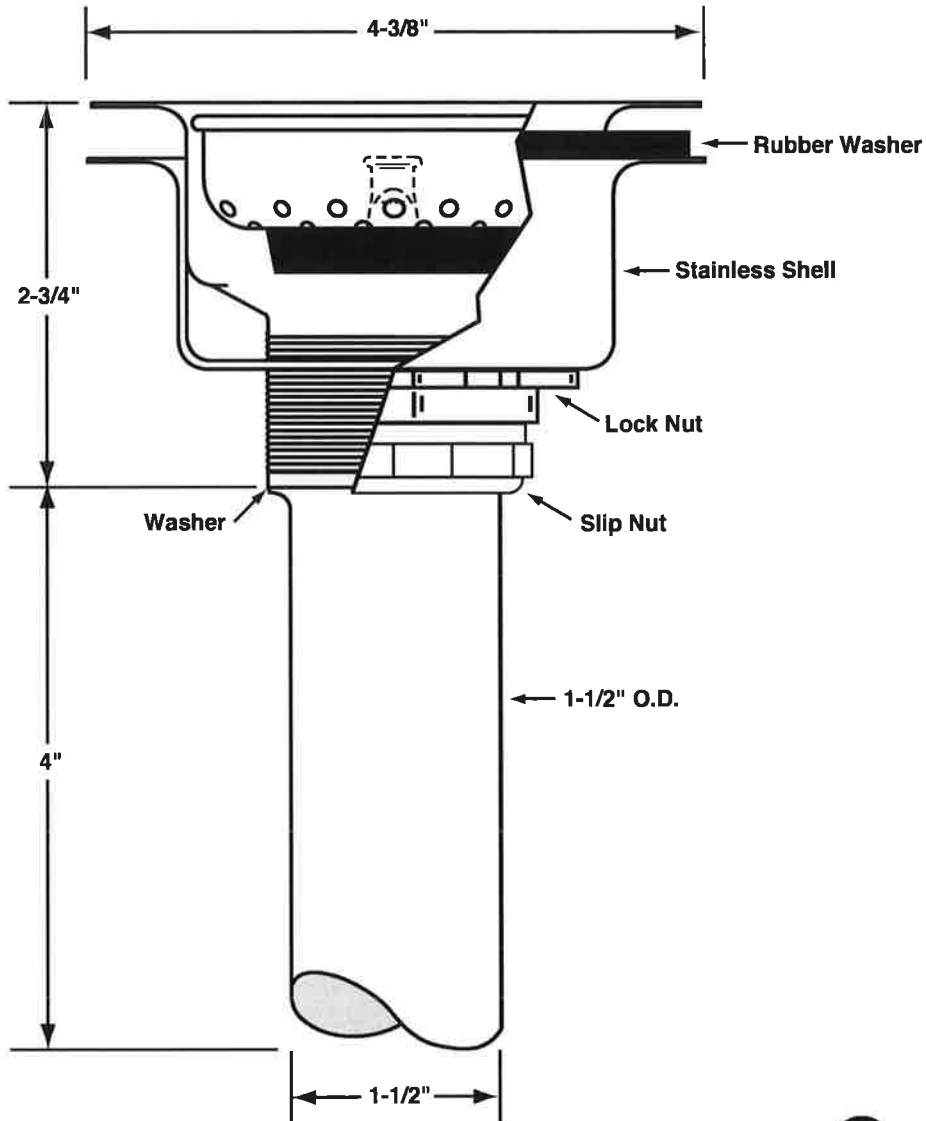
Part No.

151A

Stainless Steel
Basket Strainer

Job Name:

Submittal Number:



See options and accessories section for details on product variations.

Specifications:

Heavy Duty Forged Stainless Steel Basket Strainer with 1-1/2" x 4" seamless brass tailpiece, die cast slip and lock nuts. Basket Strainer shall be in compliance with CSA or other recognized testing authority and bear both manufacturer and testing mark.

Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____
 Tag S-3,PT-1

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

SI-742

Hair, Plaster & Sediment Interceptor

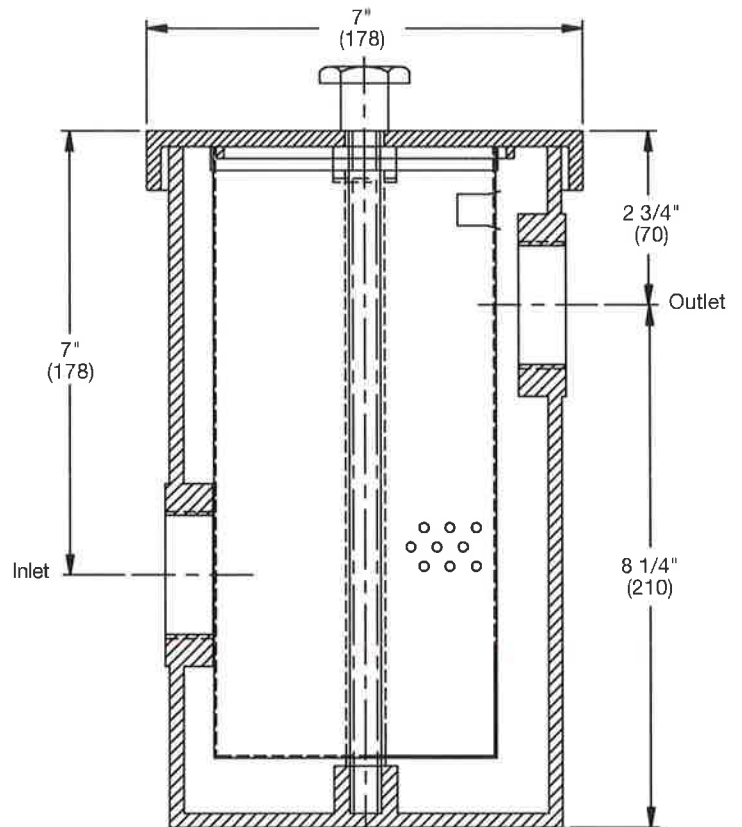
Specification

Watts SI-742 floor mounted epoxy coated cast aluminum sediment interceptor with removable stainless steel sediment basket, gasketed cover, and 2"(51) IPS threaded connections.

Note: 10"(254) clearance required above cover to remove sediment basket.



Options (Select One or More)	
Suffix	Description
-SS	Stainless Steel <input type="checkbox"/>



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



McGuire Manufacturing Co., Inc.
 60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

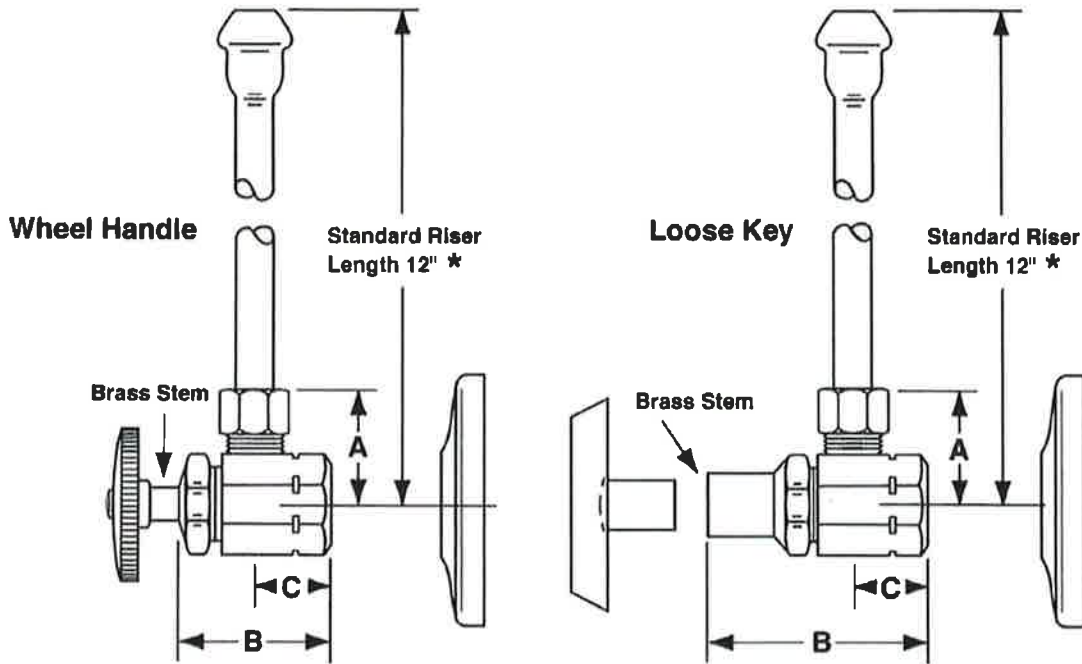
PRODUCT SPECIFICATION

Part No.
 LF2165, **LF2165LK**,
 LF2167, LF2167/LK

Lavatory Supply
1/2" I.P.S. x O.D.

Job Name: _____

Submittal Number: _____



NO.	DESCRIPTION	ROUGHING MEASUREMENTS		
		A	B	C
LF2165	1/2" I.P.S. x 3/8" O.D.	1-3/16"	1-1/2"	3/4"
LF2165LK	1/2" I.P.S. x 3/8" O.D.	1-3/16"	2-1/4"	3/4"
LF2167	1/2" I.P.S. x 1/2" O.D.	1-3/16"	1-1/2"	3/4"
LF2167LK	1/2" I.P.S. x 1/2" O.D.	1-3/16"	2-1/4"	3/4"



LK designates Loose Key

* See options and accessories section for details on product variations.



Specifications:

Supply kit shall include low lead chrome plated brass supply stop valves with full turn brass stem, no plastic, (12, 15, 20) inch chrome plated risers and (shallow, deep, bell) (steel, brass) or (forged brass with set screw) flange. Inlet shall be (3/8, 1/2) inch (IPS, compression). Outlet shall be (3/8, 1/2) inch compression. Supply kit shall be McGuire _____. Supply kit shall be low lead certified by recognized authority and bear manufacturer and testing mark.

FD-1

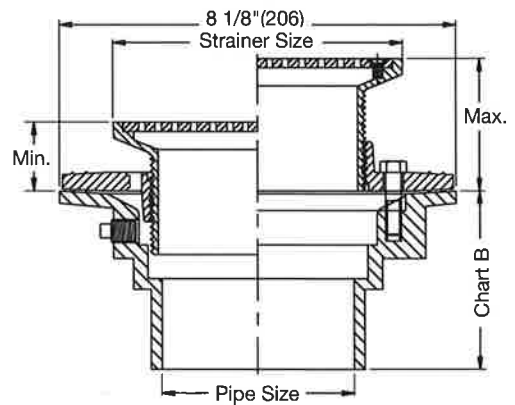
Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____
 Tag FD-1

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

FD-100-A Floor Drain with Round Strainer Specification

Watts FD-100-A epoxy coated cast iron floor drain with anchor flange, reversible clamping collar with primary and secondary weepholes, adjustable round heel proof nickel bronze 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"/>

Outlet Type	
Suffix	Description
NH	No Hub (M.D.) <input type="checkbox"/>
P	Push On <input checked="" type="checkbox"/>
I	Inthread Outlet <input type="checkbox"/>
X	Inside Caulk <input type="checkbox"/>

Strainer	
Suffix	Description
A5	5" (127) Dia., Nickel Bronze <input type="checkbox"/>
A6	6" (127) Dia., Nickel Bronze <input checked="" type="checkbox"/>
A7	7" (178) Dia., Nickel Bronze <input type="checkbox"/>
A8	8" (203) Dia., Nickel Bronze <input type="checkbox"/>
A10	10" (254) Dia., Nickel Bronze <input type="checkbox"/>

Options	
Suffix	Description
-5	Sediment Bucket <input type="checkbox"/>
-6	Vandal Proof <input type="checkbox"/>
-7	Trap Primer Tapping <input checked="" 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"/>
-F4-50	4" Round Cast Iron Funnel <input type="checkbox"/>
-F4-1	4" Round Nickel Bronze 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"/>
-S0	Side Outlet <input type="checkbox"/>

Optional Body Material	
Suffix	Description
-60	PVC Body w/Socket Outlet (2, 3, 4" Only) <input type="checkbox"/>
-61	ABS Body w/Socket Outlet (2, 3, 4" Only) <input type="checkbox"/>

Strainer Size				
Str. Dia.	Min.	Max.	Load Rating	Free Area Sq. In.
5" (127)	13/16" (21)	3 1/4" (83)	*MD	8
6" (152)	7/8" (22)	3 3/8" (86)	*MD	9
7" (178)	11/16" (17)	3 1/4" (83)	*MD	12
8" (203)	7/8" (22)	3 1/4" (83)	*MD	18
10" (254)	1 1/4" (32)	3 1/4" (83)	*MD	28

NOTICE

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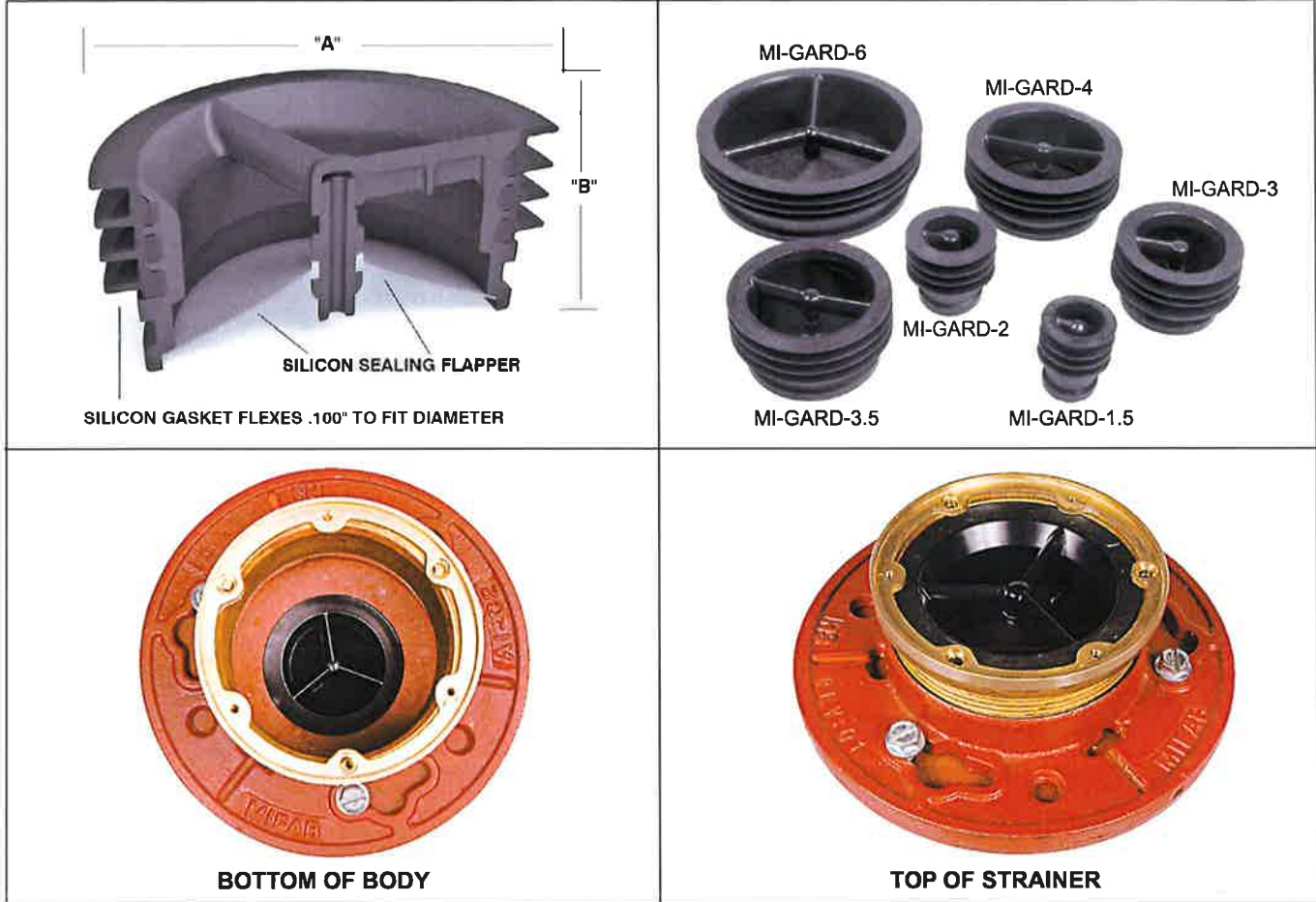
Chart B					
Pipe Size	Std. No Hub	P Push On	T Female Thread	X Inside Caulk	60/61 PVC/ABS
2" (52)	3 5/8" (92)	4 1/4" (108)	4 1/4" (108)	4 1/2" (114)	4" (102)
3" (76)	3 5/8" (92)	4 1/4" (108)	4 1/4" (108)	4 1/2" (114)	4" (102)
4" (102)	3 5/8" (92)	4 1/4" (108)	4 1/4" (108)	4 1/2" (114)	4" (102)
6" (152)	3 1/2" (89)				



USA: T: (800) 338-2581 • Watts.com
 Canada: T: (888) 208-8927 • Watts.ca
 Latin America: T: (52) 55-4122-0138 • Watts.com

Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.

Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
○ MI-GARD-1.5	1-1/2" (38)	2" (51)
○ MI-GARD-2	2" (51)	2" (51)
○ MI-GARD-3	3" (76)	2" (51)
○ MI-GARD-3.5	3 1/2" (89)	2" (51)
○ MI-GARD-4	4" (102)	2" (51)
○ MI-GARD-6	6" (152)	2" (51)

MI-GARD® prevents the following from entering through the top of floor drains:

- Odors and sewer gases
- Insects

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified. Note:

The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-1.5

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: AMS Charter School Page No: _____

Section No: _____ Contractor: Comfort Systems USA

Schedule No: _____ Purchase Order No: _____

FS-1

Engineering Specification

Job Name **AMS Charter School**
 Job Location **LR**
 Engineer **Ragsdale**
 Approval _____
 Tag **FS-1**

Contractor **Comfort Systems USA**
 Approval _____
 Contractor's P.O. No. _____
 Representative **Sanders Supply**

FS-710 8" Square x 6" Deep Sanitary Floor Sink



Specification

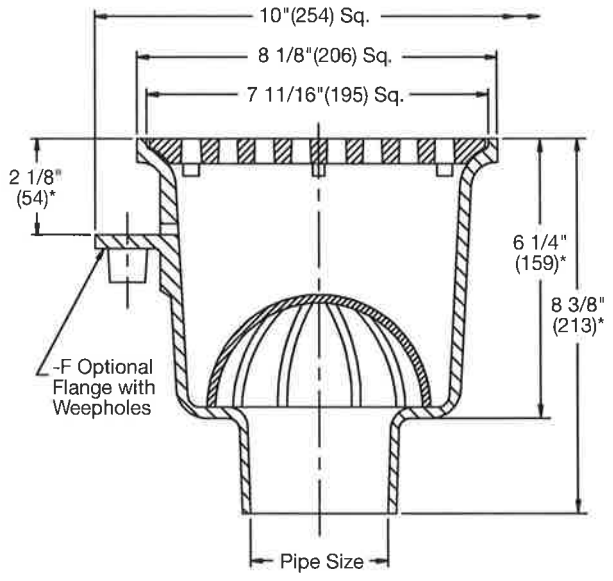
Watts FS-710 8"(203) square x 6"(152) deep sanitary floor sink with white acid resistant porcelain enamel coated interior, loose set porcelain enamel coated cast iron grate, polypropylene dome bottom strainer, and no hub (standard) outlet.

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 checked="" type="checkbox"/>

Options		
Suffix	Description	
-F	Flange with Weepholes	<input checked="" type="checkbox"/>
-FC	Flange w/Weepholes & Flashing Clamp	<input type="checkbox"/>
-1	Nickel Bronze Top	<input checked="" type="checkbox"/>
-3	Stainless Rim & Grate	<input type="checkbox"/>
-5	Sediment Bucket	<input type="checkbox"/>
-6	Vandal Proof (-1 Only)	<input type="checkbox"/>
-7	Trap Primer Tapping	<input type="checkbox"/>
-9	Hinged Grate (-1 Only)	<input checked="" type="checkbox"/>
-21	Secondary Strainer	<input type="checkbox"/>
-33	Less Grate	<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"/>

Free Area Sq. In.	
Standard Grate	With -1/-3 Grate
16	19



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

NOTICE

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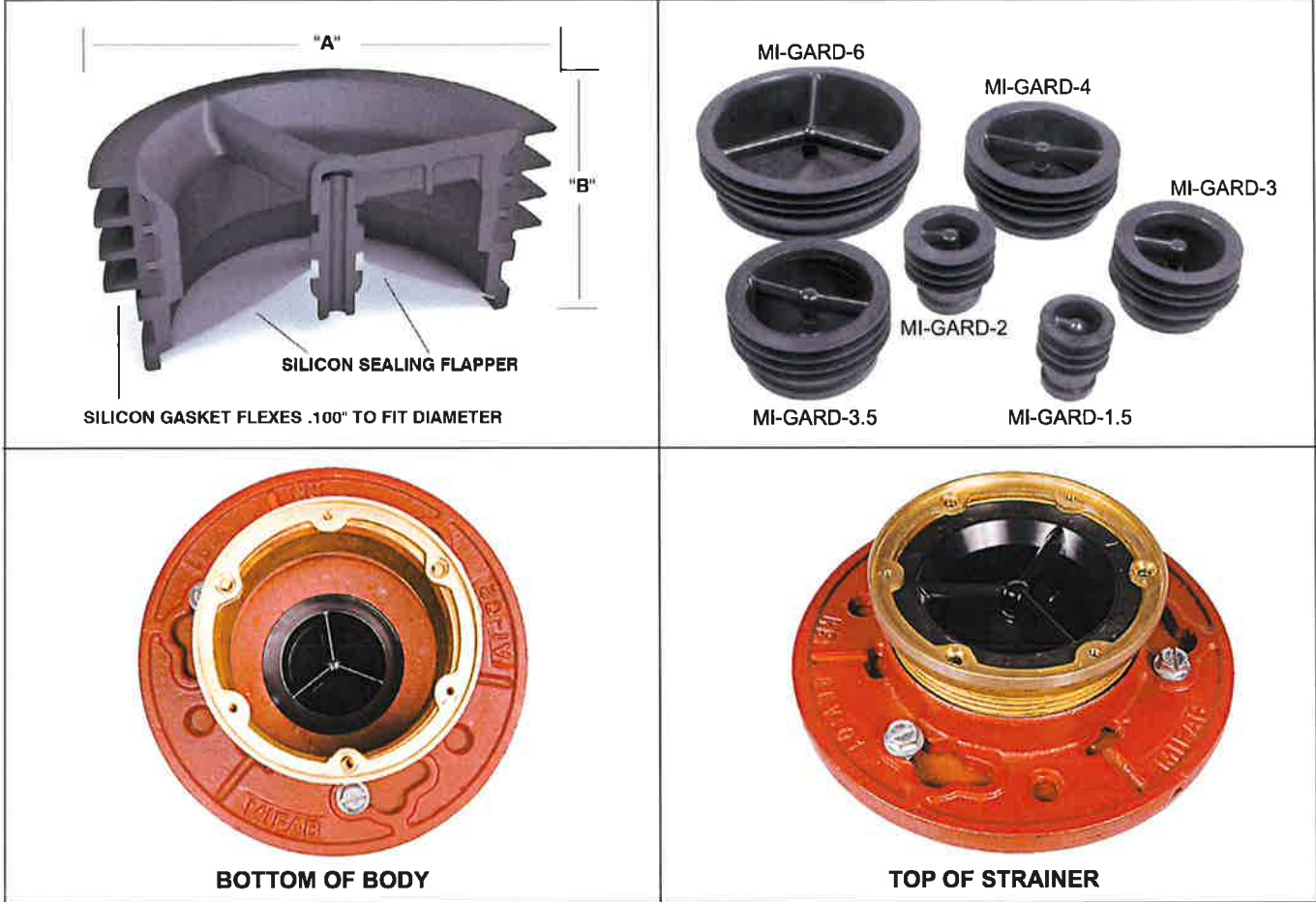
Please refer to watts.com for BAA information on specific models.

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Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.

Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
○ MI-GARD-1.5	1-1/2" (38)	2" (51)
○ MI-GARD-2	2" (51)	2" (51)
○ MI-GARD-3	3" (76)	2" (51)
○ MI-GARD-3.5	3 1/2" (89)	2" (51)
○ MI-GARD-4	4" (102)	2" (51)
○ MI-GARD-6	6" (152)	2" (51)

MI-GARD® prevents the following from entering through the top of floor drains:

- Odors and sewer gases
- Insects

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified. Note:

The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD

Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-1.5

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: AMS Charter School Page No: _____

Section No: _____ Contractor: Comfort Systems USA

Schedule No: _____ Purchase Order No: _____

FS-2

Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____
 Tag FS-2

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

FS-710 8" Square x 6" Deep Sanitary Floor Sink



Specification

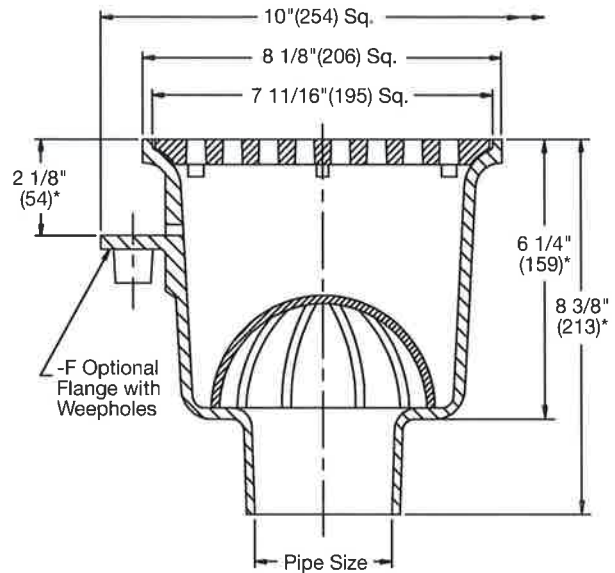
Watts FS-710 8"(203) square x 6"(152) deep sanitary floor sink with white acid resistant porcelain enamel coated interior, loose set porcelain enamel coated cast iron grate, polypropylene dome bottom strainer, and no hub (standard) outlet.

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 checked="" type="checkbox"/>

Options		
Suffix	Description	
-F	Flange with Weepholes	<input checked="" type="checkbox"/>
-FC	Flange w/Weepholes & Flashing Clamp	<input type="checkbox"/>
-1	Nickel Bronze Top	<input checked="" type="checkbox"/>
-3	Stainless Rim & Grate	<input type="checkbox"/>
-5	Sediment Bucket	<input type="checkbox"/>
-6	Vandal Proof (-1 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"/>
-150	1/2 Grate	<input type="checkbox"/>
-175	3/4 Grate	<input checked="" 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"/>

Free Area Sq. In.	
Standard Grate	With -1/-3 Grate
16	19



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

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.

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

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 Latin America: T: (52) 55-4122-0138 • Watts.com

Location: FS-2

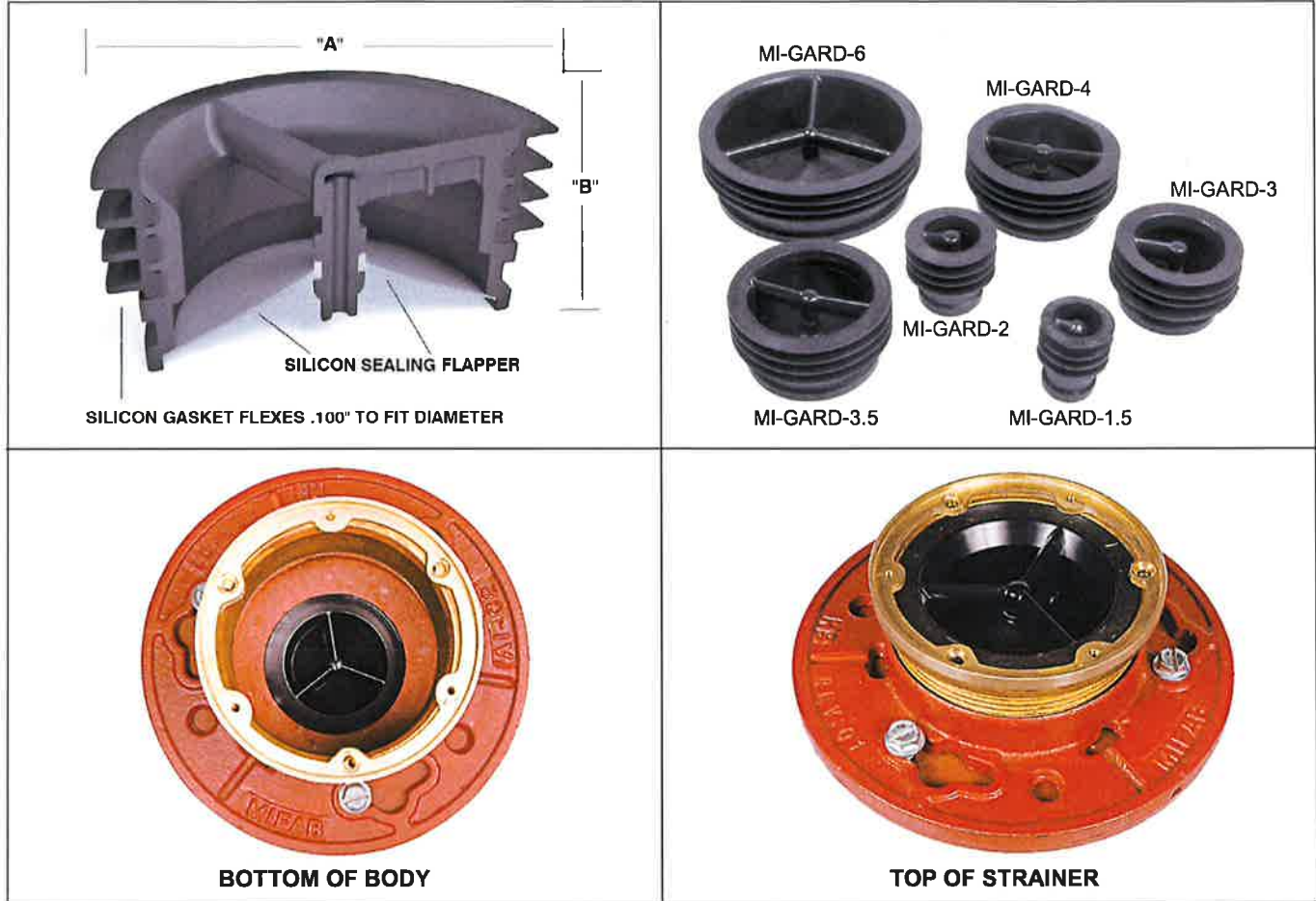


MI-GARD®

FLOOR DRAIN TRAP SEAL

Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.

Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
○ MI-GARD-1.5	1-1/2" (38)	2" (51)
○ MI-GARD-2	2" (51)	2" (51)
○ MI-GARD-3	3" (76)	2" (51)
○ MI-GARD-3.5	3 1/2" (89)	2" (51)
○ MI-GARD-4	4" (102)	2" (51)
○ MI-GARD-6	6" (152)	2" (51)

MI-GARD® prevents the following from entering through the top of floor drains:

- Odors and sewer gases
- Insects

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified. Note:

The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD

Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-1.5

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: AMS Charter School

Page No: _____

Section No: _____

Contractor: Comfort Systems USA

Schedule No: _____

Purchase Order No: _____

FS-3

Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

FS-740

12" Square x 8" Deep Sanitary Floor Sink

Specification

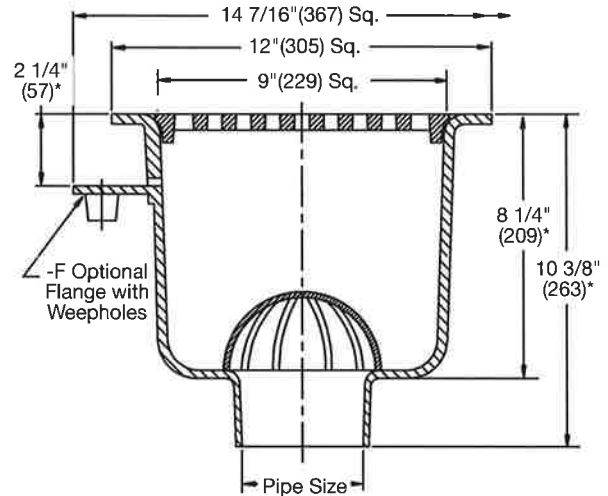
Watts FS-740 12" square x 8" deep sanitary floor sink with white acid resistant porcelain enamel coated interior, loose set porcelain enamel coated cast iron grate, polypropylene dome bottom strainer, and no hub (standard) outlet.



Call customer service at 1 (800) 338-2581 if you need assistance with technical details.

Pipe Sizing			Outlet Type		
Suffix	Description		Suffix	Description	
2	2" (51) Pipe Size	<input type="checkbox"/>	NH	No Hub (M.I.)	<input type="checkbox"/>
3	3" (76) Pipe Size	<input type="checkbox"/>	P	Push-On	<input checked="" type="checkbox"/>
4	4" (102) Pipe Size	<input type="checkbox"/>			

Options		
Suffix	Description	
-F	Flange with Weepholes	<input checked="" type="checkbox"/>
-FC	Flange w/Weepholes & Flashing Clamp	<input type="checkbox"/>
FS-DS-SS	Stainless Steel Dome Strainer	<input type="checkbox"/>
-1	Nickle Bronze Top	<input checked="" 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 checked="" 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	4 x 9" Oval Nickel Bronze Funnel	<input type="checkbox"/>



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

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

NOTICE

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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 • Watts.com
 Canada: T: (888) 208-8927 • Watts.ca
 Latin America: T: (52) 55-4122-0138 • Watts.com

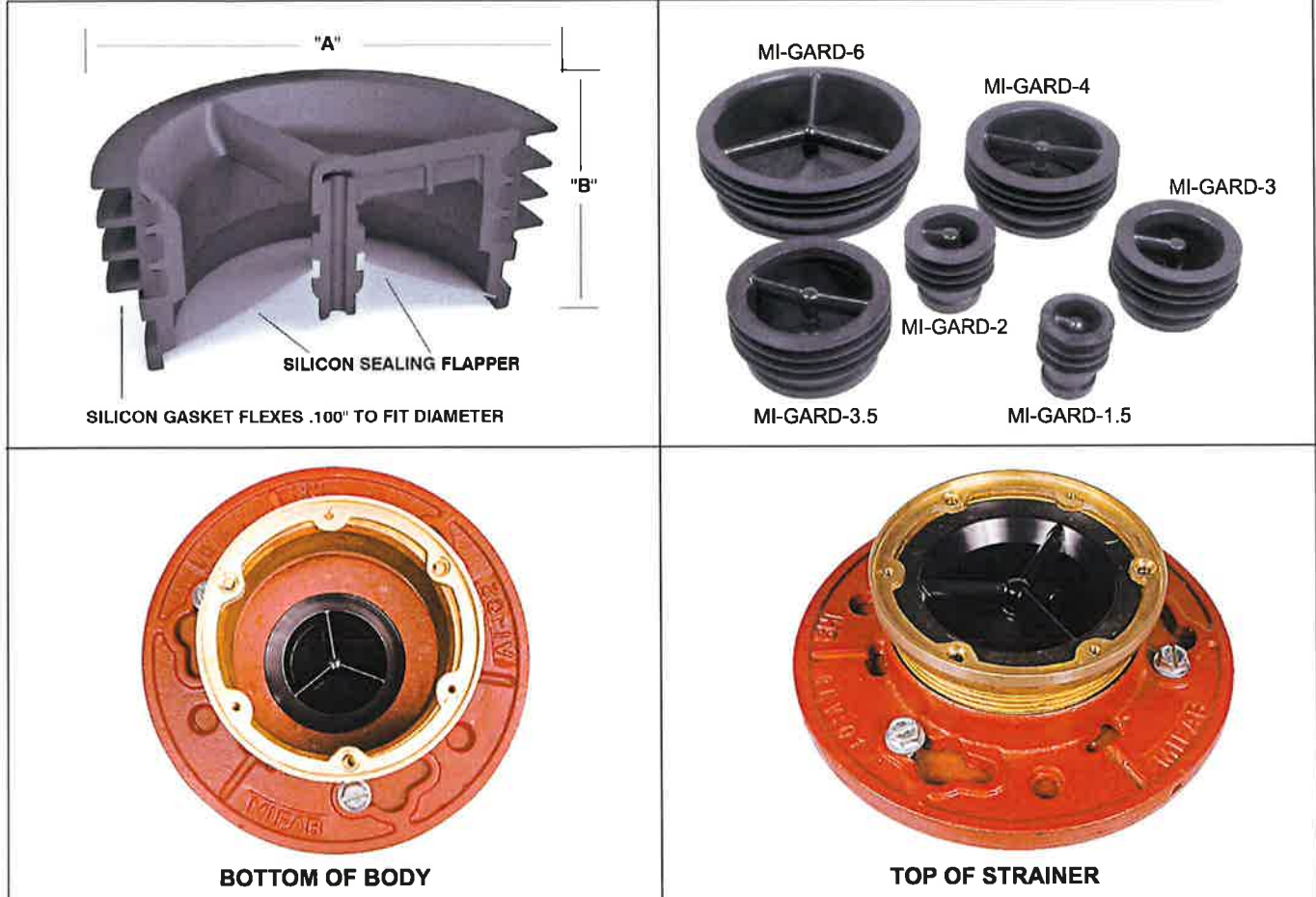


MI-GARD®

FLOOR DRAIN TRAP SEAL

Specification: MIFAB® MI-GARD® Series inline floor drain trap seal with UV resistant ABS plastic frame, silicon rubber sealing flapper and four flexible sealing ribs. Tested and certified to the ASSE 1072 Standard and listed with IAPMO and I.P.C. Specify connection size (1 1/2", 2", 3", 3 1/2", 4" or 6"). 10 year warranty is included.

Function: Used in the outlet connections of floor drain bodies, or the inside of floor drain strainers to seal the opening to prevent odors, sewer gases, and insects from entering up through the floor drain grate. The MI-GARD®'s four flexible silicone sealing ribs ensure easy installation into openings that have variations in size. The MI-GARD® will open to allow drainage and close when there is no water flow.



MODEL NO.	"A" (PIPE SIZE)	"B" (HEIGHT)
○ MI-GARD-1.5	1-1/2" (38)	2" (51)
○ MI-GARD-2	2" (51)	2" (51)
○ MI-GARD-3	3" (76)	2" (51)
○ MI-GARD-3.5	3 1/2" (89)	2" (51)
○ MI-GARD-4	4" (102)	2" (51)
○ MI-GARD-6	6" (152)	2" (51)

MI-GARD® prevents the following from entering through the top of floor drains:
 • Odors and sewer gases • Insects

Not intended to be used in lieu of a trap seal primer. 6" MI-GARD not IAPMO certified. Note:
 The MI-GARD-6 is designed in accordance with industry standards but is not listed. MI-GARD
 Floor Drain Trap Seals are in compliance with International Plumbing Code (I.P.C.)



MI-GARD-1.5

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: AMS Charter School Page No: _____
 Section No: _____ Contractor: Comfort Systems USA
 Schedule No: _____ Purchase Order No: _____

HB-1

Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____
 Tag HB-1

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

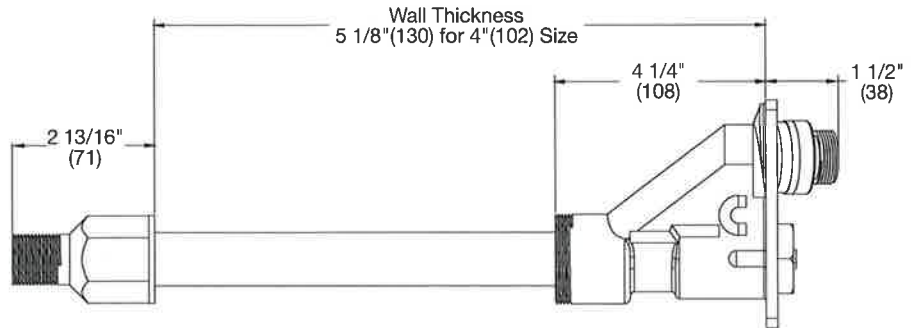
HY-420
Non-Freeze Wall Hydrant with
Chrome Face & Integral Vacuum
Breaker



Specification:

Watts HY-420 non-freeze key operated wall hydrant with chrome plated face, integral vacuum breaker, 3/4"(19) hose connection, 3/4"(19) female x 1"(25) male pipe connection, all bronze head, seat casting and internal working parts, bronze wall casing, and loose key. Complies with ASME B1.20.7, and ASSE 1019-2004, UPC/IAPMO listed. Maximum operating pressure 125 psi.

Suffix	Wall Thickness Description	
4	4"(102) Thick	<input type="checkbox"/>
6	6"(152) Thick	<input type="checkbox"/>
8	8"(203) Thick	<input type="checkbox"/>
10	10"(254) Thick	<input type="checkbox"/>
12	12"(305) Thick	<input checked="" type="checkbox"/>
14	14"(356) Thick	<input type="checkbox"/>
16	16"(406) Thick	<input type="checkbox"/>
18	18"(457) Thick	<input type="checkbox"/>
20	20"(508) Thick	<input type="checkbox"/>
22	22"(559) Thick	<input type="checkbox"/>
24	24"(610) Thick	<input type="checkbox"/>
Other	Specify _____	<input type="checkbox"/>



Suffix	Options Description	
-88	Wall Clamp	<input checked="" type="checkbox"/>
-CIA	Complete Internal Assembly (Repair Kit)	<input type="checkbox"/>

Recommended Wall Opening:
 2"(51) x 4"(102)

NOTICE

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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

HB-2

Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____
 Tag HB-2

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

HY-330
Moderate Climate Wall Hydrant with NB Box, Integral Vacuum Breaker

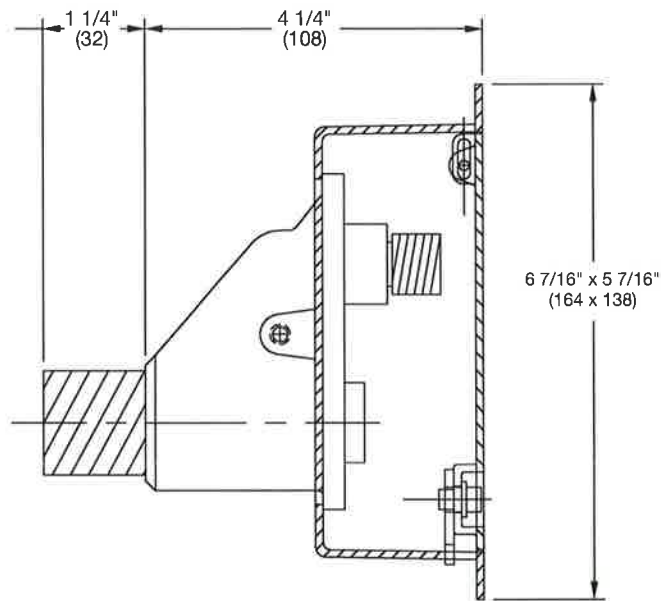


Specification:

Watts HY-330 concealed moderate climate key operated wall hydrant with nickel bronze box and door, chrome plated hydrant face, integral vacuum breaker, 3/4"(19) hose connection, 3/4"(19) female x 1"(25) male pipe connection, all bronze head, seat casting and internal working parts, and loose key. Complies with ASSE 1019-2004, UPC/IAMPO Listed. Max. operating pressure 125 psi.

Suffix	Depth of Bury Description	
-K	Cylinder Lock	<input type="checkbox"/>
-3	Stainless Steel Box	<input checked="" type="checkbox"/>
-CIA	Complete Internal Assembly (Repair Kit)	<input type="checkbox"/>
-R	Round Stainless Steel Box	<input type="checkbox"/>

Recommended Wall Opening:
 5-1/4" x 6-1/4" (133 x 158)



NOTICE

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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.



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Canada: T: (888) 208-8927 • F: (905) 461-2316 • Watts.ca

Latin America: T: (52) 55-4122-0138 • Watts.com

EWC-1



We Know Water.

**UNIVERSAL BARRIER-FREE VERSACOOLER® II
WITH HANDS-FREE VERSAFILLER**

- **PG8EBFSL**
- **PGEBFSL**

Suggested Specification

Model PG8EBFSL shall deliver 8.0 gph of 50°F water at 90°F ambient and 80°F inlet water per ASHRAE 18 testing. Model PGEBFSL is a non-refrigerated drinking fountain and delivers ambient water. Both shall include the VersaFiller sports bottle filler with hands-free activation; fountains shall have four push pads to activate the manual flow of water for the cooler. Hands-free VersaFiller components contain Freshield®, which utilizes a silver-based antimicrobial compound to protect the surfaces from discoloration, odors and degradation caused by the growth of micro-organisms and mildew. Basin shall be designed to eliminate splashing and standing water. Water saver bubbler to reduce waste water by 50% and shall have flexible guard and operate between 20 and 100 PSI. Cabinet finish shall be brushed stainless steel or greystone on galvanized steel. Shall use R-134a refrigerant. Shall comply with ANSI 117.1 and ADA. Shall be listed by Underwriters Laboratories to US and Canadian standards. Shall comply with NSF/ANSI 61 and NSF/ANSI 372.



Installation

- Prior to rough-in consult with local, state and federal codes for proper mounting height
- Shipped with complete instructions and wall mounting bracket
- Removable side and front panels provide easy access for installation.

Finishes

- Standard cabinet finish: Greystone powder coated paint on galvanized steel
- Optional finishes: Sandstone powder coated paint; Stainless steel (at additional cost)

Options

- One piece chrome plated brass bubbler (036700-001)
- VersaFilter

Limited 5-Year Warranty

(Continental limits of the United States and Canada) Five years on the sealed refrigeration system and most component parts. Detailed warranty certificate enclosed with each water cooler; sample available upon request.

Export Warranty

One year on components parts. Detailed warranty certificate enclosed with each drinking fountain; sample copy available upon request.

Certifications/Compliance

- Certified to UL 399 and CAN/CSA C22.2 No.120 (electric water coolers only)
- Product Certified to NSF/ANSI Standard 61-G & 372 and conforms with the lead content requirements for "Lead Free" plumbing as defined by California, Vermont, Maryland, and Louisiana state laws and the U.S. Safe Drinking Water Act
- These water coolers comply with the requirements of ADA (Americans with Disabilities Act) when properly installed

	PG8EBFSL	PGEBFSL
Features:	<ul style="list-style-type: none"> • Waterways are Lead-Free in materials & construction • Flexible one-piece water saver bubbler guard infused with silver based antimicrobial additive • Stainless steel top and heavy duty galvanized steel frame • High efficiency cooling system and refrigerant R-134a • Four push pads per fountain • External stream height adjustment on lower unit • Hands-free VersaFiller • Built in filter monitor and bottle counter 	
Filtration:	Option to add Versafilter Filtration System	
Power:	115 Volts, 60 Hz	
Activation By:	Contactless Sensor on Bottle Filler and Manual Activation on Fountains	
Mounting Type:	Wall Mounted	
Chilling Option:	8.0 gph	Non-Refrigerated
Installation Location:	Indoor	



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

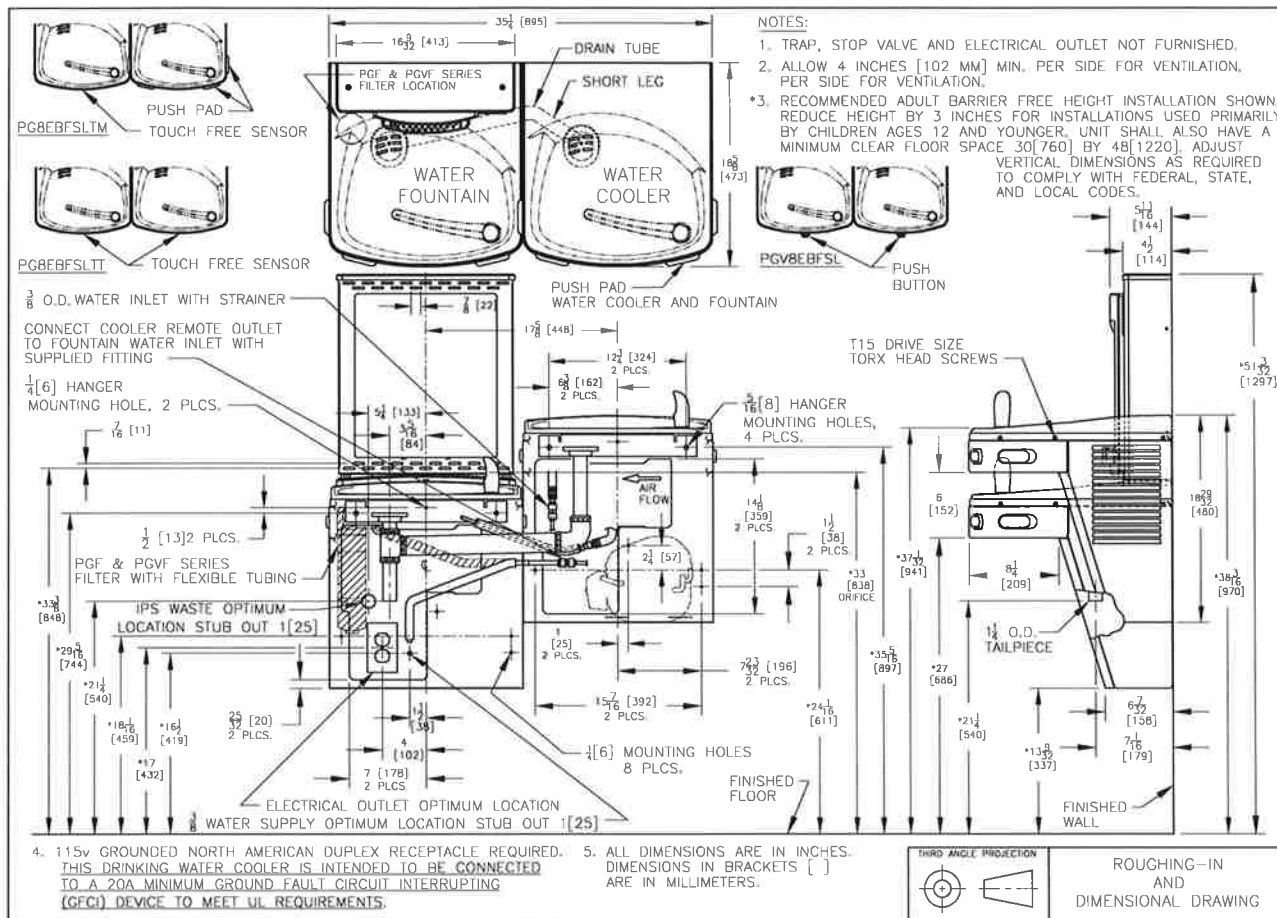
*Industry standard rating condition 80°F inlet water temperature



Specifications subject to change without notice

UNIVERSAL BARRIER-FREE VERSACOOLER® II WITH HANDS-FREE VERSAFILLER

OASIS® VERSACOOLER® II MODELS with VersFiller®
 PGE8BFSL, PGVE8BFSL, PGE8BFSLTM, PG8EBFSL, PGV8EBFSL, PG8EBFSLTM,
 PGFE8BFSL, PGFE8BFSLTM, PGVF8BFSL, PGF8EBFSL, PGF8EBFSLTM, PGVF8EBFSL





McGuire Manufacturing Co., Inc.

60 Grandview Court
 Cheshire, Connecticut 06410
 (203) 699-1801 Fax (203) 699-1813
 customerservice@mcguiremfg.com mcguiremfg.com

PRODUCT SPECIFICATION

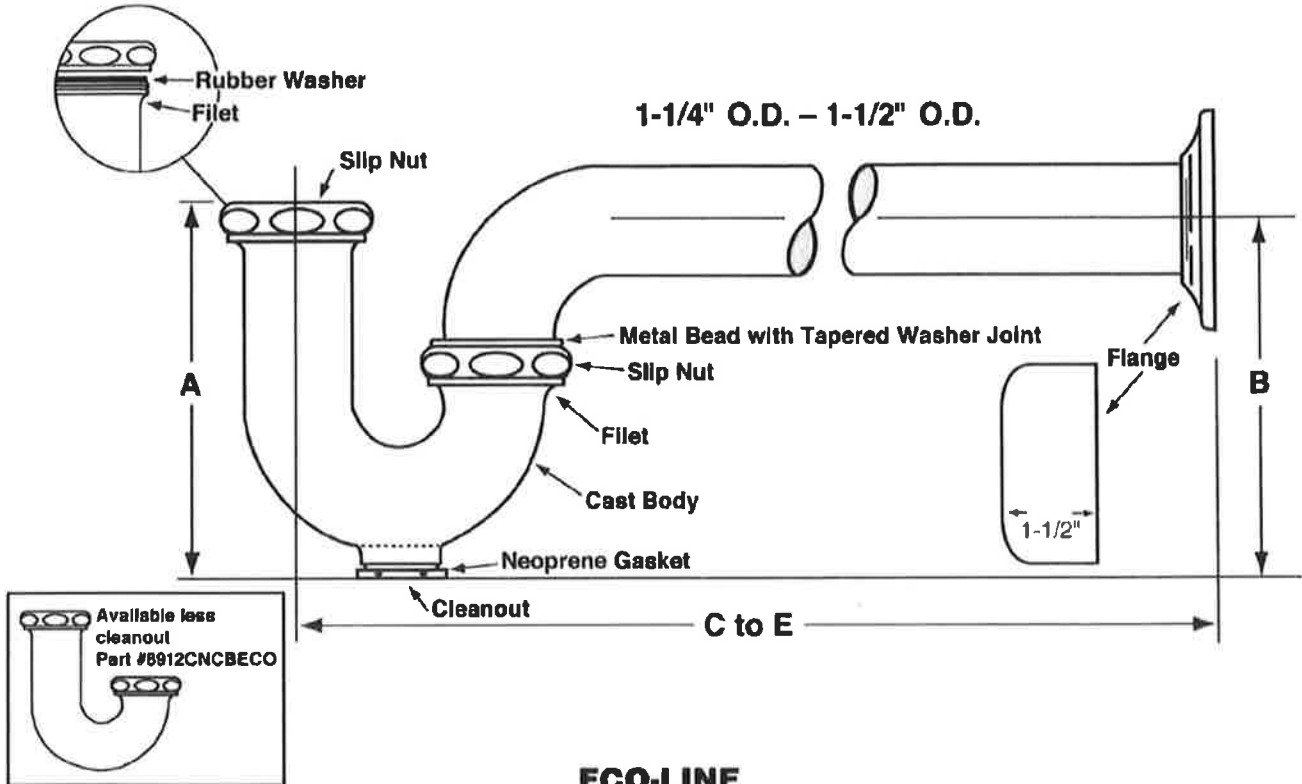
Part No.

C8872CECO

**Cast Body P-Trap With
 or Without Cleanout**

Job Name:

Submittal Number:



ECO-LINE

ROUGHING MEASUREMENTS							
MODEL NO.	TRAP DIMENSIONS		A	B	C to E	FLANGE	SLIP NUT
	INLET	OUTLET					
C8872CECO	1-1/4"	1-1/4"	4-1/2"	4-1/2"	10"	Shallow	Zinc

**FED SPEC W.W.P. 541
 CAST BRASS P-TRAP
 MINIMUM SEAL 2"**



ASME A112.18.2/CSA B125.2

Specifications:

Chrome plated P-Trap shall be cast brass body, with or without cleanout, with 17 gauge seamless tubular wall bend and flange.

WARNING:

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P85Warnings.ca.gov.



McGuire Manufacturing Co., Inc.
 60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

PRODUCT SPECIFICATION

Part No.

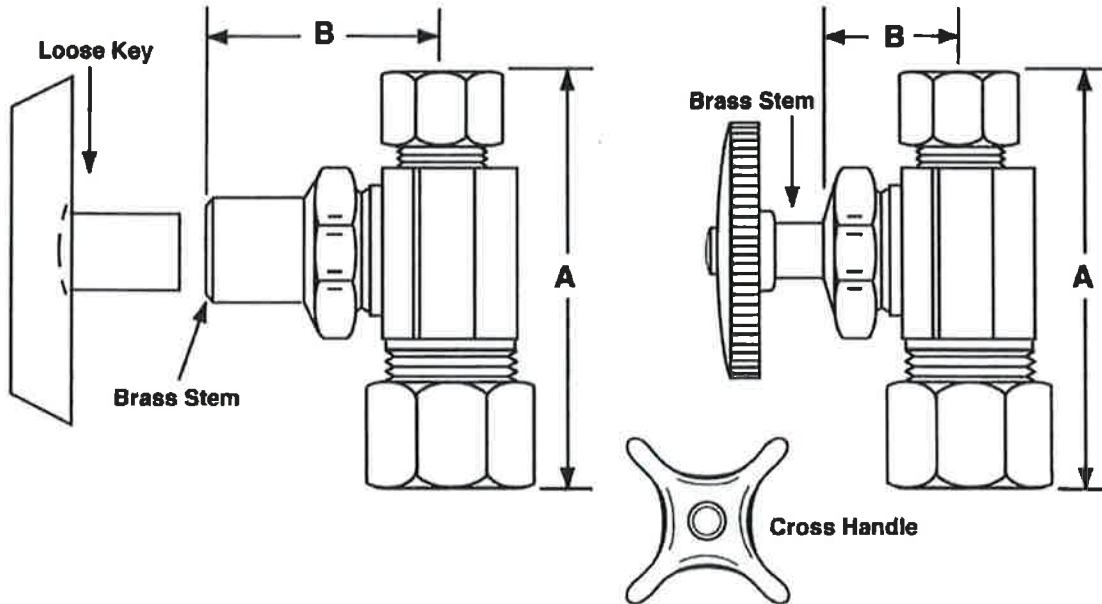
LFST17, **LFST17LK**, LFST17X,
 LFST18, LFST18LK, LFST18X

**Straight Supply Stop
 Nominal x O.D.**

Job Name:

Submittal Number:

Compression to Compression



NO.	DESCRIPTION	ROUGHING MEASUREMENTS	
		A	B
LFST17	1/2" Nominal x 3/8" O.D.	2-1/4"	7/8"
LFST17LK	1/2" Nominal x 3/8" O.D.	2-1/4"	1-5/8"
LFST17X	1/2" Nominal x 3/8" O.D.	2-1/4"	7/8"
LFST18	1/2" Nominal x 1/2" O.D.	2-1/4"	7/8"
LFST18LK	1/2" Nominal x 1/2" O.D.	2-1/4"	1-3/4"
LFST18X	1/2" Nominal x 1/2" O.D.	2-1/4"	7/8"

LK designates *Loose Key*

X designates *Heavy Brass Cross Handle*

See options and accessories section for details on product variations.

ASME A112.18.1-2011/CSA B125.1-11



Specifications:

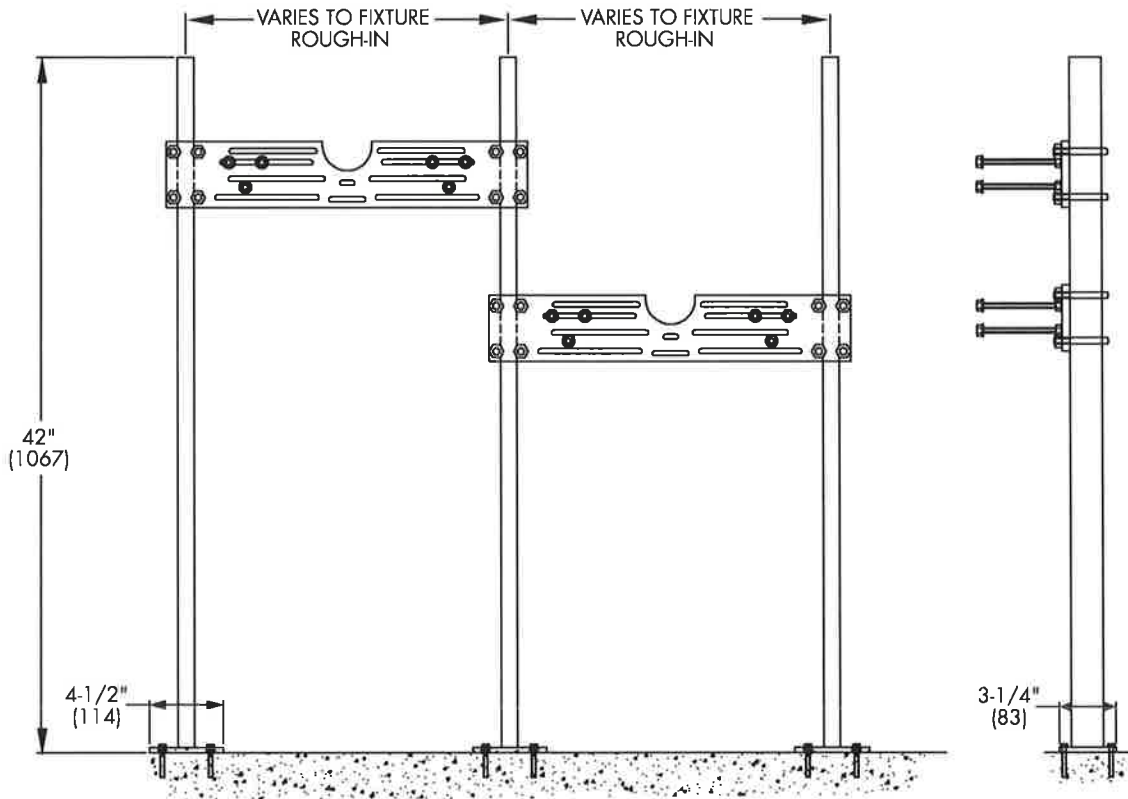
Chrome plated brass, supply stop valve with full turn brass stem. Inlet shall be (3/8, 1/2) inch (IPS, sweat, compression). Outlet shall be (3/8, 1/2) inch (IPS, compression). Supply stop valve shall be McGuire. Supply stop valve shall be certified by recognized testing authority and bear manufacturer and testing mark.



CA-431-1
 Tag: EWC-1

**Floor Mounted Plate Type
 Lavatory/Water Cooler Carrier**

SPECIFICATION: Watts Drainage CA-431-1 floor mounted bi-level water cooler carrier with heavy gauge steel uprights with integral welded feet, universal steel hanger support plate, and plated hardware.



Note: Anchor legs to concrete floor with minimum 1/2" (13) anchor bolts (by others).

Job Name AMS Charter School Contractor Comfort Systems USA
 Job Location LR Contractor's P.O. No. _____
 Engineer Ragsdale Representative Sanders Supply

WATTS Drainage reserves the right to modify or change product design or construction without prior notice and without incurring any obligation to make similar changes and modifications to products previously or subsequently sold. See your WATTS Drainage representative for any clarification. Dimensions are subject to manufacturing tolerances.



Specification Drainage Products

USA: 100 Watts Road, Spindale, NC, 28160-2298; TEL: 828-288-2179 TOLL-FREE: 1-800-338-2581 www.watts.com

RPZ-1



Model 375AST

Reduced Pressure Principle Assembly

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. The Model 375AST provides protection where a potential health hazard exists. Ideal for use where lead-free* valves are required.



Standards Compliance

- ASSE® Listed 1013
 - AWWA Compliant C511 (with gates only), and C550
 - FM® Approved
 - UL® Classified
 - C-UL® Classified
 - CSA® Certified B64.4
 - cUPC® Listed
 - Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
 - Meets the requirements of NSF/ANSI/CAN 61*
- *(0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

Materials

Main Valve Body 304L Stainless steel
 Access covers 304L Stainless steel
 Coatings FDA Approved electrostatic epoxy finish

Internals Stainless steel, 300 Series NORYL™
 Fasteners & Springs Stainless Steel, 300 Series
 Seal rings EPDM (FDA approved)
 O-rings Buna Nitrile (FDA approved)
 Sensing line Stainless Steel, braided hose

Features

Sizes: 2 1/2", 3", 4", 6", 8", 10"
 Maximum working water pressure 175 PSI
 Maximum working water temperature 140°F
 Hydrostatic test pressure 350 PSI
 End connections (Grooved for steel pipe) AWWA C606
 (Flanged bolt pattern) ASME B16.42
 Class 150

Options (Suffixes can be combined)

- with flanged end NRS gate valves (standard)
- FSC - with epoxy coated wye type strainer (flanged only)
- G - with grooved end NRS gate valves
- GF - with grooved inlet gate connection and flanged outlet gate connection
- FG - with flanged inlet gate connection and grooved outlet gate connection
- OSY - with flanged end OS&Y gate valves
- OSYG - with grooved end OS&Y gate valves
- BG - with grooved end butterfly valves with integral supervisory switches
- BF - with flanged end butterfly valves with integral supervisory switches

*New Connected Products. Search ZCSM-PF on Zurn.com for details.

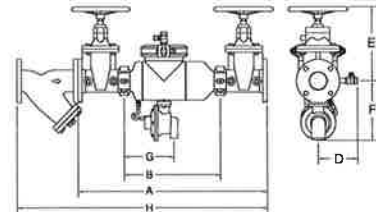
Accessories

- Connected Pressure Monitor (Model ZCSM-PF)*
- Connected Flow Meter Option (Model ZCSM-BTM must be ordered with Model ZCSM-PF)*
- Repair kit (rubber only)
- Thermal expansion tank (Model XT)
- OS & Y Gate valve tamper switch (OSY-40)
- Air gap (Model AG)
- QT SET Quick Test Fitting Set
- Wireless Monitor Retrofit Kit for conversion of existing model 375 (212-6-RFK-375W1, 8-10-RFK-375W1)

Dimensions & Weights (do not include pkg.)

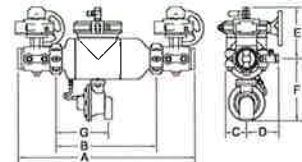
MODEL 375AST SIZE	WEIGHT															
	WITH-OUT GATES		WITH NRS GATES (GXF)		WITH OS&Y GATES (GXF)		WITH NRS GATES (GXG)		WITH OS&Y GATES (GXG)		WITH BUTTERFLY VALVES (GXG)		WITH BUTTERFLY VALVES (GXF)			
	in.	mm	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
2 1/2	65	41	19	102	46	120	54	92	42	110	50	87	39	97	44	
3	80	42	19	119	54	137	62	107	49	125	57	91	41	104	47	
4	100	43	20	176	80	212	96	156	71	192	87	95	43	117	53	
6	150	71	32	288	130	346	157	258	117	316	143	158	71	188	85	
8	200	177	80	579	263	661	300	539	244	607	275	361	164	407	185	
10	250	177	80	784	356	880	399	732	332	822	373	458	208	516	234	

MODEL 375AST with NRS & FSC option



MODEL 375AST with BG option

Relief Valve discharge port:
 2 1/2" - 6" - 2.75 sq. in.
 8" - 10" - 3.69 sq. in.



MODEL 375AST SIZE	DIMENSION (approximate)																											
	A		A WITH BUTTERFLY VALVES				B LESS GATE VALVES				C		D		E NRS GATE		E OS&Y OPEN		E OS&Y CLOSED		E WITH BUTTERFLY VALVES		F		G		H	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
2 1/2	65	31 7/8	810	28 3/4	730	16 5/8	422	4 1/2	114	7 1/4	184	11 1/2	292	17 3/4	451	15 3/8	391	8 1/4	210	9 3/4	248	8 5/8	219	42	1067			
3	80	32 7/8	835	29 3/8	746	16 5/8	422	4 1/2	114	7 1/4	184	12 3/4	324	20 1/4	514	17	432	8 1/4	210	9 3/4	248	8 5/8	219	43 1/2	1105			
4	100	34 7/8	886	30 1/4	768	16 5/8	422	4 1/2	114	8	203	14 1/2	368	22 1/2	572	18 1/4	464	9	229	9 3/4	248	8 5/8	219	50	1270			
6	150	43 1/2	1105	36 1/2	927	22 1/4	565	5 1/2	140	10	254	18	457	30 1/2	775	24 1/4	616	10 1/4	260	10 3/4	273	11 1/4	286	61 5/8	1565			
8	200	52 3/4	1340	45 3/4	1162	29 1/2	749	9 1/4	235	11	279	21 1/8	537	37	940	28 1/2	724	18 1/2	470	15 5/8	397	13 1/4	337	77 1/8	1959			
10	250	55 3/4	1416	49 3/4	1264	29 1/2	749	9 1/4	235	12	305	24 3/4	629	45 5/8	1159	34 3/4	883	18 1/2	470	15 5/8	397	13 1/2	343	85 3/8	2169			

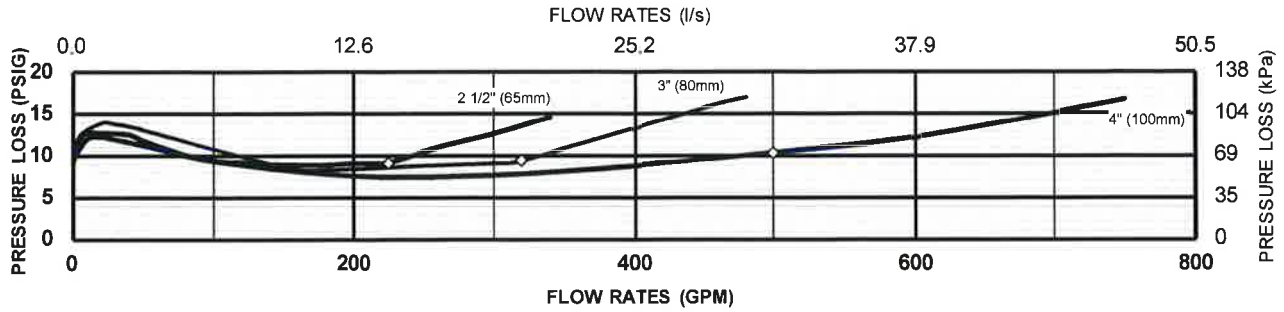
Zurn Industries, LLC | Wilkins
 1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766
 In Canada | Zurn Industries Limited
 7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-5216
www.zurn.com

Rev. N
 Date: 12/22
 Document No. BF-375AST
 Product No. Model 375AST
 Patent zurn.com/patents

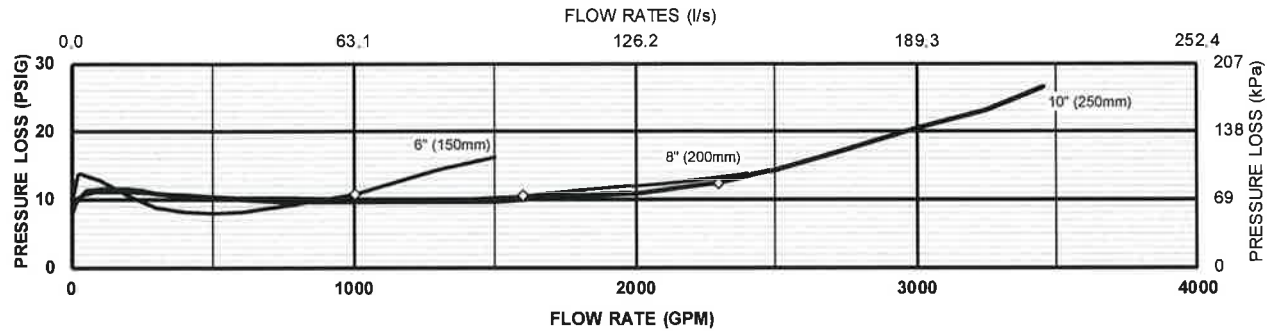
Flow Characteristics

◇ Rated Flow (established by approval agencies)

MODEL 375AST 2 1/2", 3" & 4" (STANDARD & METRIC)

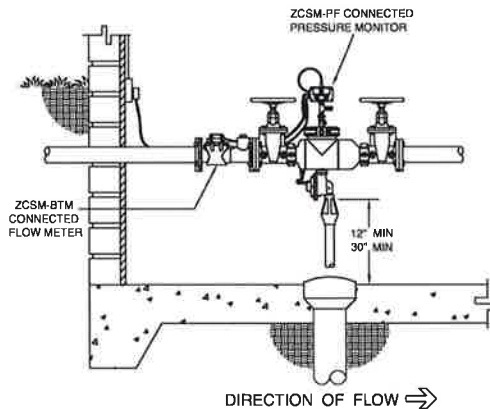


MODEL 375AST 6", 8" & 10" (STANDARD AND METRIC)

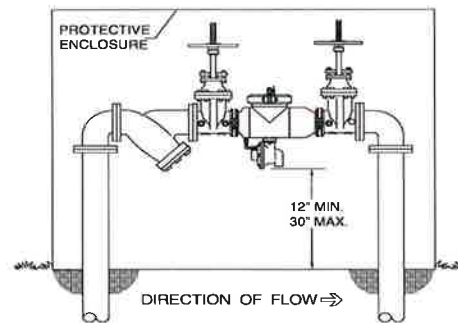


Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.



INDOOR INSTALLATION
(375AST with ZCSM-PF Connected Pressure Monitor and ZCSM-BTM Connected Flow Meter accessories)



ZURN WILKINS MODEL 375ASTOSYFSC
OUTDOOR HORIZONTAL INSTALLATION

Capacity thru Schedule 40 Pipe (GPM)				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
2 1/2"	75	112	149	224
3"	115	173	230	346
4"	198	298	397	595
6"	450	675	900	1351
8"	780	1169	1559	2339
10"	1229	1843	2458	3687
12"	1763	2644	3525	5288

Specifications

The Reduced Pressure Principle Backflow Prevention Assembly shall be certified to NSF/ANSI/CAN 61, ASSE® Listed 1013, and supplied with full port gate valves. The main body and access cover shall be 304L Stainless Steel, the seat ring and check valve shall be NORYL™, the stem shall be stainless steel (ASTM A 276) and the seat disc elastomers shall be EPDM. The checks and the relief valve shall be accessible for maintenance without removing the device from the line. The Reduced Pressure Principle Backflow Prevention Assembly shall be a ZURN WILKINS Model 375AST.



Model FSC Ductile Iron "Y" Type Strainer

Application

Zurn Wilkins model FSC is designed for installation on water lines to protect downstream equipment from malfunction or premature failure due to build-up of sediment or debris.

Standards Compliance

- MIL-S 16293F Type 2
- Meets the requirements of NSF/ANSI 372

Materials

Main valve body Ductile Iron ASTM A536
 Access cover Ductile Iron ASTM A536
 Coatings Fusion Epoxy Finish
 (Meets requirements of NSF/ANSI/CAN 61)
 Screens Perforated Stainless Steel, 300 Series

Features

Sizes: 2 1/2", 3", 4", 6", 8", 10", 12"

Pressure/temperature: 200 psi @ 150°F WOG
 125 psi @ 450°F Steam

End connections: ASME B16.42 Class 150

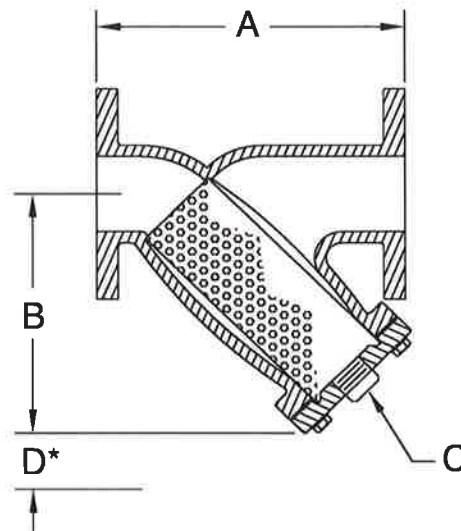


LEAD FREE



Screen

SIZE inch	OPENINGS (dia.)	MATERIAL THICKNESS	HOLES PER sq(in)	OPEN AREA
2 1/2	0.045	0.020 (26 Ga.)	225	36%
3	0.045	0.020 (26 Ga.)	225	36%
4	1/16	0.020 (26 Ga.)	98	30%
6	1/16	0.020 (26 Ga.)	98	30%
8	1/8	0.020 (26 Ga.)	29	36%
10	1/8	0.032 (22 Ga.)	29	36%
12	1/8	0.025 (24 Ga.)	35	43%

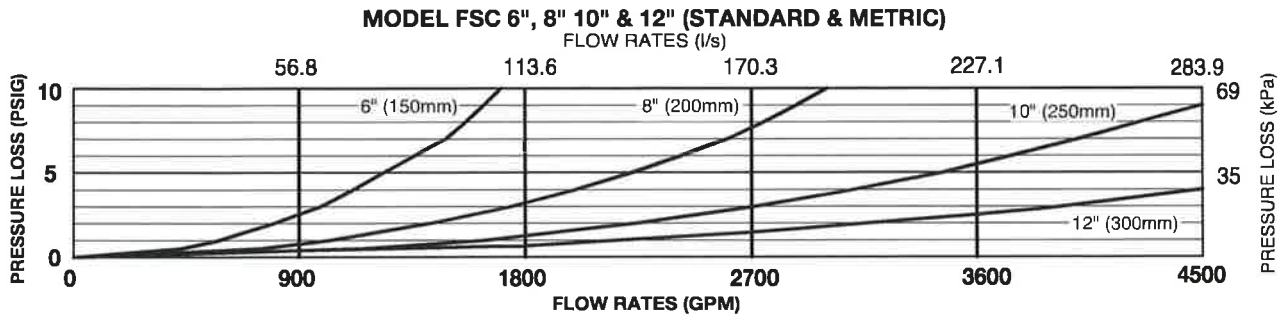
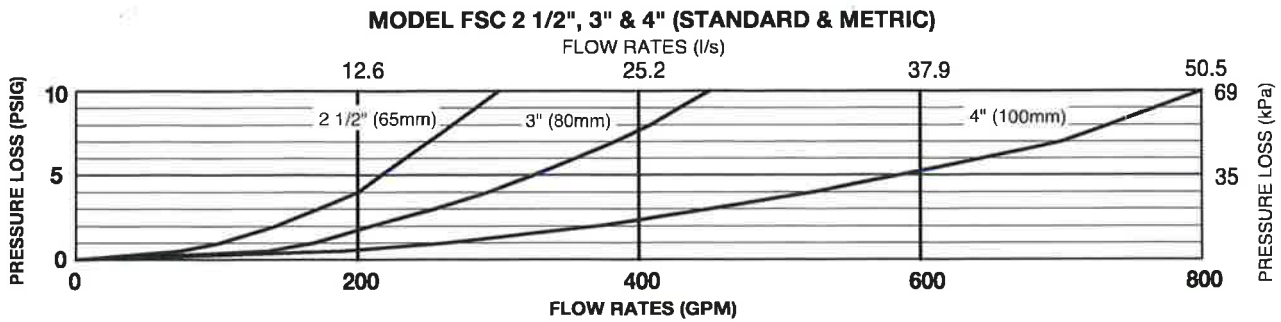


SIZE		DIMENSIONS (approximate)								WEIGHT	
		A		B		C	D*				
in	mm	in	mm	in	mm			in	mm	lbs.	kg.
2 1/2	65	10	254	8 1/4	210	1 1/4 NPT	6	152	35	16	
3	80	10 1/2	267	9 1/4	235	1 1/4 NPT	6	152	45	20.5	
4	100	15	381	12 1/2	318	2 NPT	9	229	61	27.5	
6	150	18	457	14	356	2 NPT	10	254	165	75	
8	200	24 1/4	616	17 3/4	451	2 NPT	11	279	239	108.5	
10	250	29 1/2	749	21 1/4	540	2 NPT	14	356	394	178.5	
12	300	29 7/8	759	21 5/16	541	2 NPT	17	432	489	222	

*Vertical clearance for screen removal

Flow Characteristics

◇ Rated Flow (established by approval agencies)

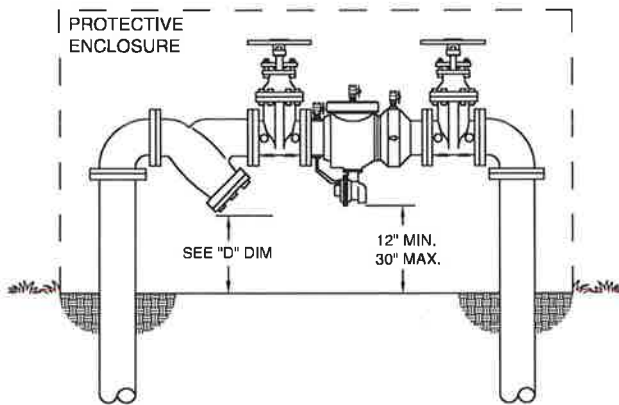


Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted with sufficient clearance for maintenance in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. The installation shall be made so that no part of the unit can be submerged. Horizontal installation with the strainer cap facing downward is the preferred installation orientation; however the strainer will provide protection in any orientation

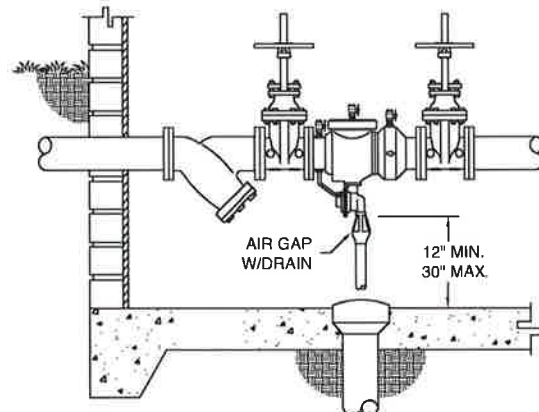


Capacity thru Schedule 40 Pipe (GPM)				
Pipe Size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
2 1/2"	75	112	149	224
3"	115	173	230	346
4"	198	298	397	595
6"	450	675	900	1351
8"	780	1169	1559	2339
10"	1229	1843	2458	3687
12"	1744	2617	3489	5233



DIRECTION OF FLOW →

Outdoor Installation



DIRECTION OF FLOW →

Indoor Installation

Specifications

The Ductile Iron "Y" type strainer shall meet the requirements of NSF/ANSI 372, and MIL-S-16293F Type 2. The main body and access cover shall be ductile iron ASTM A536 with an NSF/ANSI/CAN 61 certified Fusion Epoxy Finish coating inside and out. The integral strainer screen shall be accessible for cleaning without removing the device from the line. The Ductile Iron "Y" type strainer shall be a ZURN WILKINS Model FSC.



Model AG Air Gap Adaptor Fitting

Application

Designed for use with ZURN WILKINS Reduced Pressure Principle Backflow Preventers on horizontal or vertical installations. Device is necessary when installing a drain line and can be mounted to the body. (Drain line can be any standard piping material.)

Approvals

ANSI/ASME A 112.1.2

Materials

Body Cast grey iron, epoxy painted
 Body (AG-11, 12) Nylon
 Elbow Cast grey iron, epoxy painted
 Bolts Steel, zinc plated



AG-4 thru AG-8 AG-9 & AG-10 AG-11 & AG-12 AG-13 & AG-14

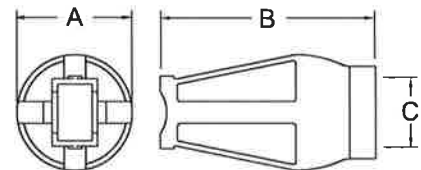
Sizes: 1/4" - 1/2", 3/4" - 1", 1-1/4" - 2", 2-1/2" - 6", 8" - 10"

Dimensions & Weights (do not include pkg.)

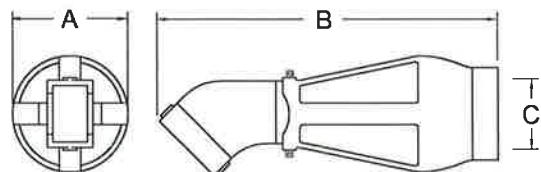
MODEL	DIMENSIONS (approximate)							WEIGHT	
	SIZES	FOR MODEL* SERIES	A		B		C	lbs.	kg
			in.	mm	in.	mm	OUTLET PIPE SIZE		
AG-8	1/4" - 1/2"	975XL, 975XL2	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-8	1/2" - 1"	975XL3	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-4	3/4" - 1"	975XL, 975XL2	3 1/4	83	5	127	1" NPT	2	0.9
AG-4	1 1/4" - 1 1/2"	975XL3	3 1/4	83	5	127	1" NPT	2	0.9
AG-5	1 1/4" - 2"	975XL, 975XL2	4 1/2	114	8	203	2" NPT	3	1.4
AG-5	2"	975XL3	4 1/2	114	8	203	2" NPT	3	1.4
AG-6	2 1/2" - 3"	475V	5 3/8	137	10	254	3" NPT	5	2.3
AG-6	2 1/2" - 6"	375, 475	5 3/8	137	10	254	3" NPT	5	2.3
AG-7	8" - 10"	375, 475	7	178	11	279	4" NPT	8	3.6
AG-9	4" - 6"	475V	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-10	8" - 10"	475V	7	178	16 1/2	413	4" NPT	11	5
AG-11	1/2" - 1"	375, 375XL	3 3/4	95	5 1/2	140	2" IPS Slip	1	0.5
AG-12	1 1/4" - 2"	375, 375XL	6 1/2	165	8	200	3" IPS Slip	1	0.5
AG-13	4" - 6"	475ST, 475STV	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-14	8" - 10"	475ST, 475STV	7	178	16 1/2	413	4" NPT	11	5

* Model:

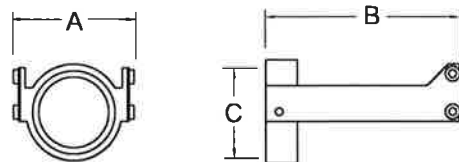
375, 375A, 375ADA, 375ADAR, 375AMS, 375AR, 375AST, 375ASTDA, 375ASTDAR, 375ASTDAST, 375ASTMS, 375ASTR, 375DA, 375MS, 375ST, 375XL, 475, 475DA, 475DAV, 475MS, 475VMS, 975XL, 975XL2, 975XL3, 475ST, 475STV, 475STDA, 475STDAV



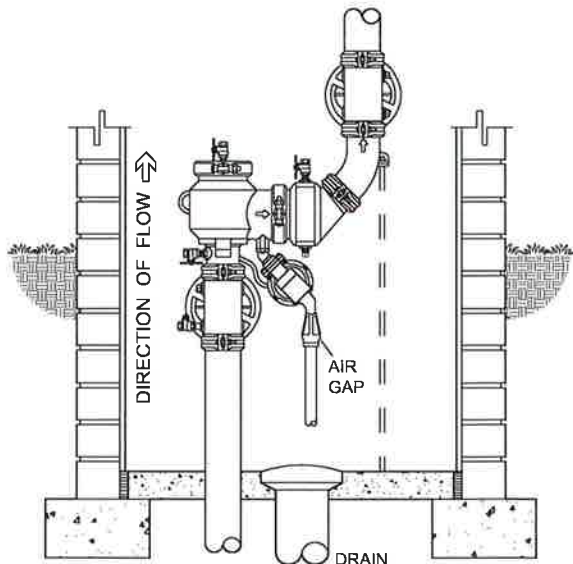
AG-4 THRU AG-8



AG-9 & AG-10



AG-11 & AG-12



Indoor Installation

Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code.

RPZ-2



Model 975XL2

Reduced Pressure Principle Assembly

Application

Ideal for use where Lead-Free* valves are required. Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Assembly shall provide protection where a potential health hazard exists. The assembly can be configured with a relief valve sensor that detects and signals excessive water discharge that, if left undetected, may cause property damage from flooding.

Standards Compliance

- ASSE® Listed 1013
 - cUPC® Listed
 - CSA® Certified B64.4
 - AWWA Compliant C511
 - Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
 - Meets the requirements of NSF/ANSI/CAN 61 and 372*
- * (LESS THAN 0.25% WEIGHTED AVERAGE LEAD CONTENT)
- UL® Classified (less shut-off valves or with OS&Y valves)
 - C-UL® Classified

Materials

Main valve body	Low Lead Cast Bronze ASTM B 584
Access covers	Low Lead Cast Bronze ASTM B 584
Fasteners	Stainless Steel, 300 Series
Elastomers	Silicone
	Buna Nitrile
Polymers	Noryl™
Springs	Stainless Steel, 300 series
Ball valve handles	Stainless Steel

Features

Sizes:	3/4", 1", 1-1/4", 1-1/2", 2"
Maximum working water pressure	175 PSI
Maximum working water temperature	180°F
Hydrostatic test pressure	350 PSI
End connections Threaded	ANSI B1.20.1

Relief Valve discharge port:

3/4" - 1"	-	0.63 sq. in.
1 1/4" - 2"	-	1.19 sq. in.



NSF/ANSI/CAN 61 & 372



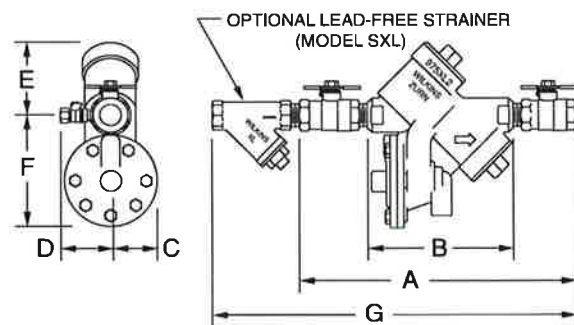
Options

(Suffixes can be combined)

- with full port QT ball valves (standard)
- MS - with relief valve excessive discharge sensor for flood detection and two-wire connection
- SE - with street elbows (3/4" & 1")
- U - with union ball valves
- TCU - with test cocks up
- FT - with integral male 45° flare SAE test fitting
- S - with bronze "Y" type strainer

Accessories

- Air gap (Model AG)
- Repair kits (rubber only)
- Thermal expansion tank (Mdl. XT)
- Soft seated check valve (Model 40XL2)
- Shock arrester (Model 1260XL)
- QT-SET Quick Test Fitting Set
- Relief Valve Monitoring Retrofit Kit (RFK-975XL2MS)



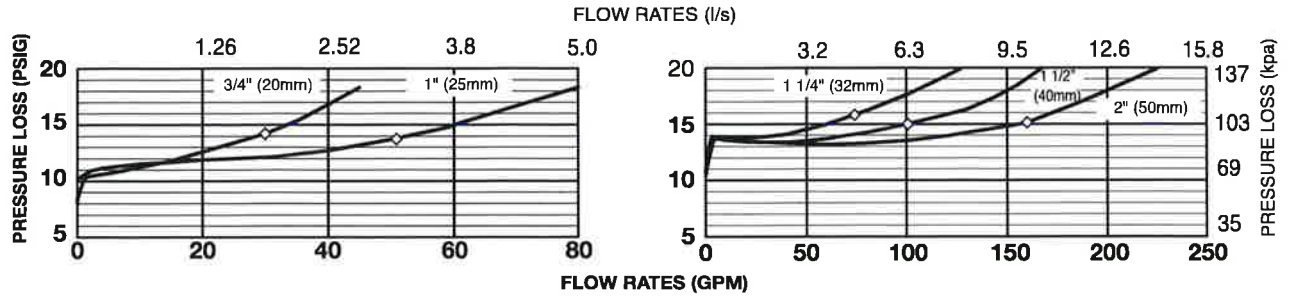
Dimensions & Weights (do not include pkg.)

MODEL SIZE		DIMENSIONS (approximate)														WITH BALL VALVES	
		A		B		C		D		E		F		G			
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg
3/4	20	12	305	7 3/4	197	2 1/8	54	3	76	3 1/2	89	5	127	16 1/8	410	12	5.5
1	25	13	330	7 3/4	197	2 1/8	54	3	76	3 1/2	89	5	127	17 3/8	441	14	6.4
1 1/4	32	17	432	10 15/16	278	2 3/4	70	3 1/2	89	5	127	6 3/4	171	22 9/16	573	28	12.7
1 1/2	40	17 3/8	441	10 15/16	278	2 3/4	70	3 1/2	89	5	127	6 3/4	171	24 1/16	611	28	12.7
2	50	18 1/2	470	10 15/16	278	2 3/4	70	3 1/2	89	5	127	6 3/4	171	26 1/2	673	34	15.4

Zurn Water, LLC | Wilkins
 1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766
 In Canada | Zurn Industries Limited
 7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-5216
www.zurn.com

Rev. M
 Date: 12/23
 Document No. BF-975XL2(LG)
 Product No. Model 975XL2(LG)
 Patent zurn.com/patents

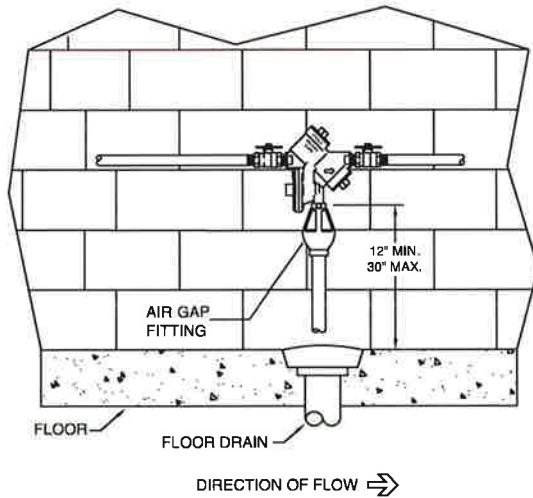
MODEL 975XL2 3/4", 1", 1 1/4", 1 1/2" & 2" (STANDARD & METRIC)



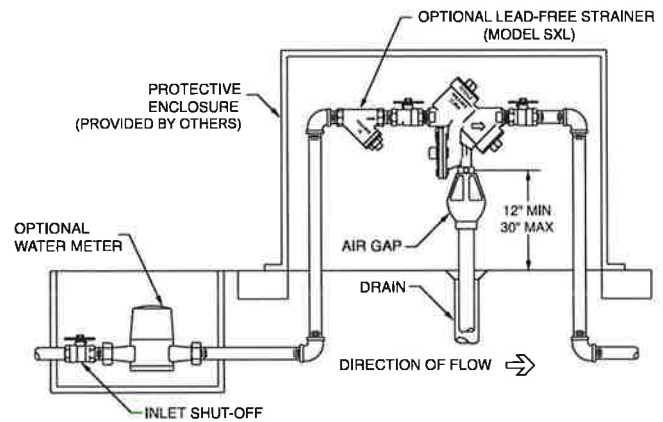
Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167



INDOOR INSTALLATION



OUTDOOR INSTALLATION

Specifications

The Reduced Pressure Principle Backflow Preventer shall be certified to NSF/ANSI/CAN 61 and 372, shall be ASSE® Listed 1013, rated to 180°F, and supplied with full port ball valves. The main body and access covers shall be low lead bronze (ASTM B 584), the seat ring and all internal polymers shall be Noryl™ and the seat disc elastomers shall be silicone. The first and second checks shall be accessible for maintenance without removing the relief valve or the entire device from the line. If installed indoors, the installation shall be supplied with an air gap adapter. The assembly shall be configurable to include a sensor to monitor excessive water discharge from the relief valve for flood detection. The Reduced Pressure Principle Backflow Preventer shall be a ZURN WILKINS Model 975XL2.



Model SXL

Cast Bronze "Y" Type Strainer

Application

Zurn Wilkins model SXL is recommended for a variety of potable water service lines including residential and commercial domestic water or irrigation. They are also designed to protect delicate equipment such as regulators and backflow preventers by filtering sediment which could cause premature failure.



LEAD FREE



NSF/ANSI/CAN 61

Standards Compliance

- Meets the requirements of NSF/ANSI/CAN 61

Materials

Main valve body Cast Bronze ASTM B 806
 Access cover and plug Cast Bronze ASTM B 806
 Screens 20 Mesh Stainless Steel, 300 Series
 O-ring Buna Nitrile

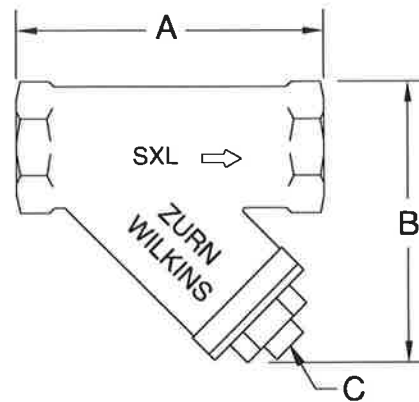
Options

- C - with copper sweat connections (3/4" & 1")

Features

Sizes: 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", **2"**, 2 1/2", 3"

Temperature/pressure rating 180°F
 300 psi WOG
 ANSI B1.20.1
 Threaded connections (FNPT)
 (Supplied with brass closure plug)



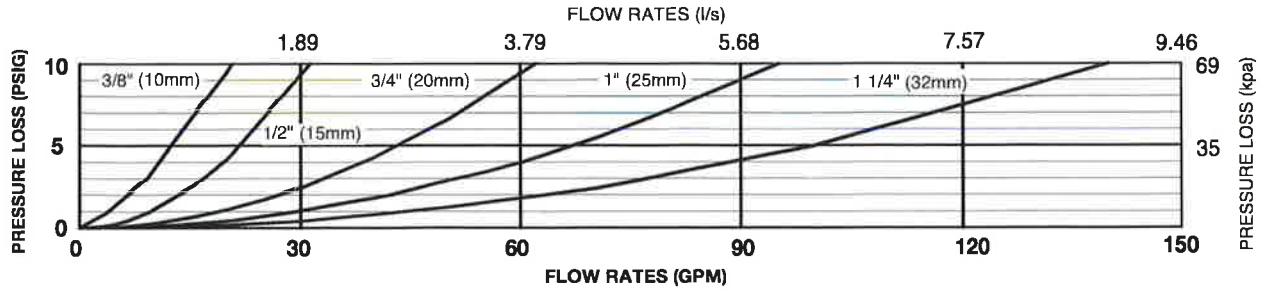
Dimensions & Weights (do not include pkg.)

MODEL SXL (NPT CONNECTION)									
SIZE		DIMENSIONS (approximate)						WEIGHT	
		A		B		C			
in.	mm	in.	mm	in.	mm	in.	lbs.	kg	
3/8	10	3 1/4	83	3	76	3/8 NPT	1	0.5	
1/2	15	3 1/4	83	3	76	3/8 NPT	1	0.5	
3/4	20	3 7/8	98	3 1/2	89	3/8 NPT	1 1/4	0.6	
1	25	4 1/2	114	4	102	1/2 NPT	1 3/4	0.8	
1 1/4	32	5 5/16	135	4 3/4	121	1/2 NPT	2 3/4	1.2	
1 1/2	40	6 5/16	160	5	127	1/2 NPT	3 1/2	1.6	
2	50	7 1/2	191	6	152	1/2 NPT	6	2.7	
2 1/2	65	9	229	7 1/2	191	1/2 NPT	9 1/4	4.2	
3	80	10	254	8 1/2	216	1/2 NPT	14	6.4	
MODEL SXL C (COPPER SWEAT CONNECTION)									
SIZE		DIMENSIONS (approximate)						WEIGHT	
		A		B		C			
in.	mm	in.	mm	in.	mm	in.	lbs.	kg	
3/4	20	3 15/16	100	3 5/16	84	3/8 NPT	1	0.5	
1	25	5	127	3 15/16	100	1/2 NPT	1.5	0.7	

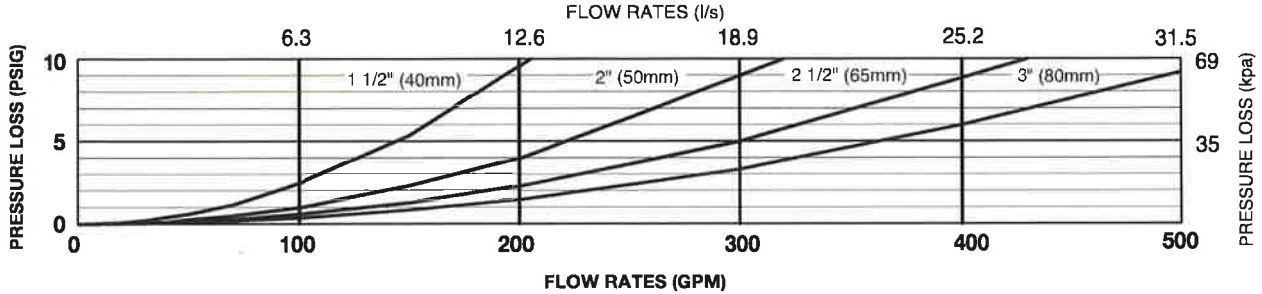


Flow Characteristics

MODEL SXL 1/2" thru 1 1/4" (STANDARD & METRIC)



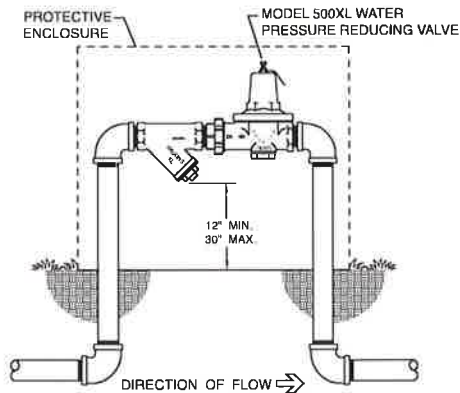
MODEL SXL 1 1/2" thru 3" (STANDARD & METRIC)



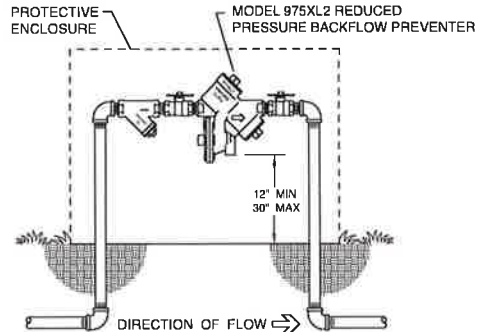
Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted in accordance with the latest edition of the Uniform Plumbing Code. If installed below grade, be certain adequate drainage is provided to prevent the device from being submerged. Horizontal installation with the strainer cap facing downward is the preferred installation orientation; however the strainer will provide protection in any orientation.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167



OUTDOOR INSTALLATION



OUTDOOR INSTALLATION

Specifications

The "Y" type strainer shall be a manufactured import certified to NSF/ANSI/CAN 61. The main body and cover shall be low lead cast bronze (ASTM B 806), the strainer screen shall be 20 mesh 300 series stainless steel and accessible for maintenance without removing the device from the line. The "Y" type strainer shall be a ZURN WILKINS Model SXL.



Model AG Air Gap Adaptor Fitting

Application

Designed for use with ZURN WILKINS Reduced Pressure Principle Backflow Preventers on horizontal or vertical installations. Device is necessary when installing a drain line and can be mounted to the body. (Drain line can be any standard piping material.)

Approvals

ANSI/ASME A 112.1.2

Materials

Body	Cast grey iron, epoxy painted
Body (AG-11, 12)	Nylon
Elbow	Cast grey iron, epoxy painted
Bolts	Steel, zinc plated



AG-4 thru AG-8 AG-9 & AG-10 AG-11 & AG-12 AG-13 & AG-14

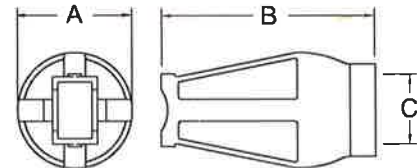
Sizes: 1/4" - 1/2", 3/4" - 1", 1-1/4" - 2", 2-1/2" - 6", 8" - 10"

Dimensions & Weights (do not include pkg.)

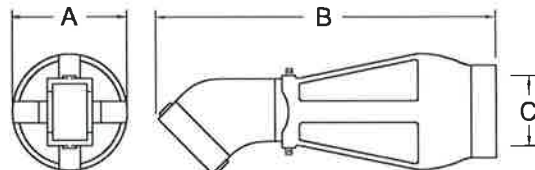
MODEL	DIMENSIONS (approximate)							WEIGHT	
	SIZES	FOR MODEL* SERIES	A		B		C	lbs.	kg
			in.	mm	in.	mm	OUTLETPipe SIZE		
AG-8	1/4" - 1/2"	975XL, 975XL2	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-8	1/2" - 1"	975XL3	2 1/2	64	3 1/2	89	1" NPT	2	0.9
AG-4	3/4" - 1"	975XL, 975XL2	3 1/4	83	5	127	1" NPT	2	0.9
AG-4	1 1/4" - 1 1/2"	975XL3	3 1/4	83	5	127	1" NPT	2	0.9
AG-5	1 1/4" - 2"	975XL, 975XL2	4 1/2	114	8	203	2" NPT	3	1.4
AG-5	2"	975XL3	4 1/2	114	8	203	2" NPT	3	1.4
AG-6	2 1/2" - 3"	475V	5 3/8	137	10	254	3" NPT	5	2.3
AG-6	2 1/2" - 6"	375, 475	5 3/8	137	10	254	3" NPT	5	2.3
AG-7	8" - 10"	375, 475	7	178	11	279	4" NPT	8	3.6
AG-9	4" - 6"	475V	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-10	8" - 10"	475V	7	178	16 1/2	413	4" NPT	11	5
AG-11	1/2" - 1"	375, 375XL	3 3/4	95	5 1/2	140	2" IPS Slip	1	0.5
AG-12	1 1/4" - 2"	375, 375XL	6 1/2	165	8	200	3" IPS Slip	1	0.5
AG-13	4" - 6"	475ST, 475STV	5 3/8	137	14 1/2	368	3" NPT	9	4
AG-14	8" - 10"	475ST, 475STV	7	178	16 1/2	413	4" NPT	11	5

* Model:

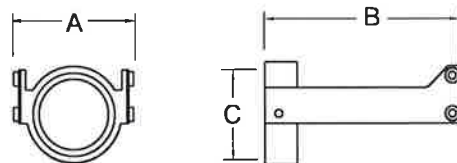
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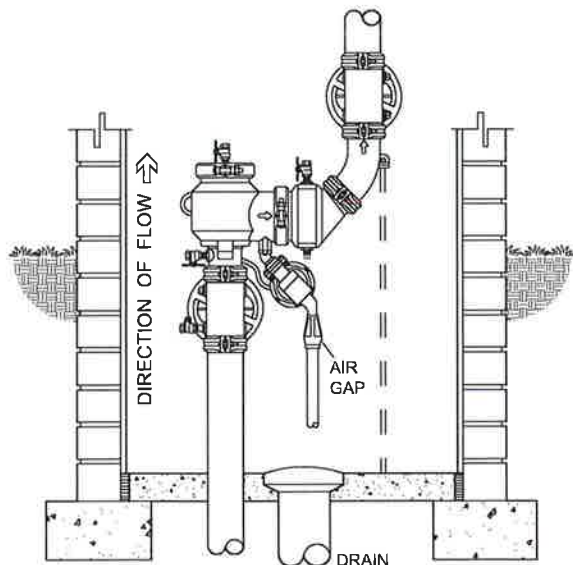
AG-4 THRU AG-8



AG-9 & AG-10



AG-11 & AG-12



Indoor Installation

Typical Installation

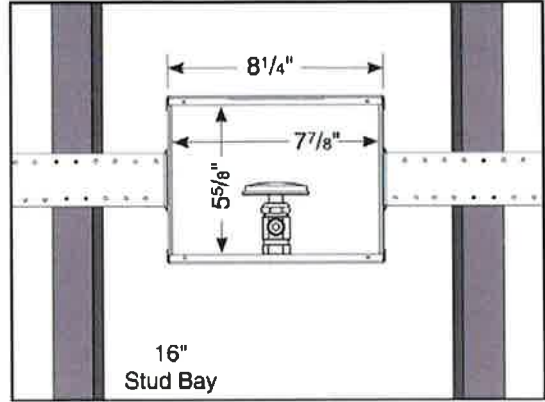
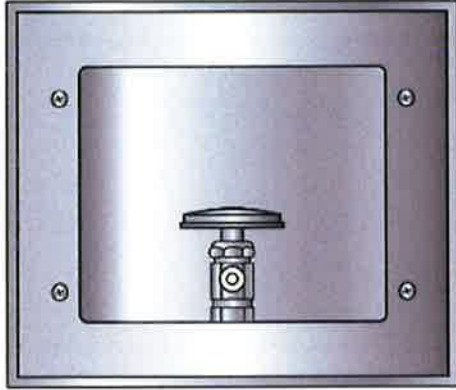
Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Uniform Plumbing Code.

IM-1

SPECIFICATION SUBMITTAL SHEET



GALVANIZED ICE MAKER OUTLET BOX with Lead Free Domestic Valve



Specifications:

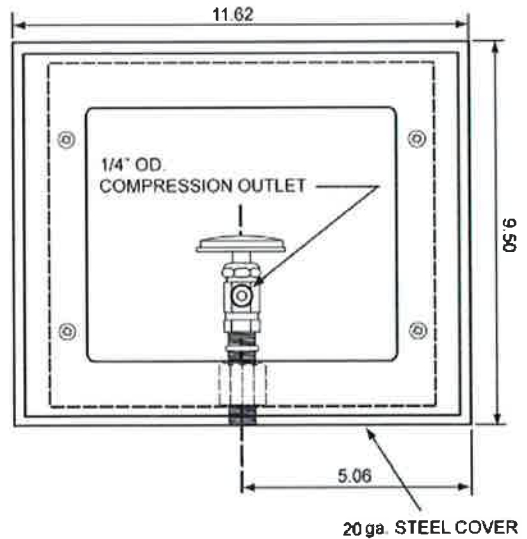
Furnish and install galvanized ice maker box. Unit shall be Guy Gray product code checked below as manufactured by IPS Corporation.

Box Material:

G90 Hot Dipped Galvanized Steel (unpainted)
20 gauge box with 20 gauge faceplate

Valve & Drain Options:

Lead free Domestic Valve with 1/2" MIP/Sweat, CPVC or PEX connection. Valves comply with ASME A112.18.1.



Valves comply with the requirements of NSF 61-G and the "Reduction of Lead in Drinking Water Act" (Federal Public Law 111-380)

Item #	Product Description	Model #	Quantity
88158	Lead Free Domestic Valve - 1/2" Sweat Conx.	BIM875AB	5
96997	Tamper resistant cover for Models B, BB, WB, FB, & BIM	BTRC	6



GWH-1

COMMERCIAL



SUPER-HIGH-EFFICIENCY (CONDENSING) TANKLESS WATER HEATER

Installation Type	Internal (Indoor) Commercial Applications	
Model Numbers	CU199i (REU-N3237FFC-US) CU160i (REU-N2530FFC-US)	
Approved Gas Types	Natural and Propane	
Efficiency	AHRI CERTIFIED	UEF up to 0.93
	Ratings not certified by AHRI	Thermal Efficiency: Up to 97% EF: 0.96 (CU199i) 0.95 (CU160i)
High Altitude Approved	Up to 10,200 ft (3,109 m)	
Water Flow Control	Water Flow Sensor, Electronic Water Control and Bypass Control	
Controller	Standard: Integrated Controller Optional: MC-91-2US	
Certifications	AHRI, ANSI Z21.10.3, CSA 4.3, and ENERGY STAR®	

Warranty

- Heat Exchanger: 8 years or 12,000 operation hours, whichever occurs first
- All Other Parts and Components: 5 Years
- Reasonable Labor: 1 Year

Safety Devices

Flame Failure - Flame Rod, Boiling Protection, Combustion Fan RPM Check, Over Current - Glass Fuse, Remaining Flame (OHS) and Automatic Frost Protection

Included with Purchase

Tankless Water Heater, Wall Mounting Bracket, Pressure Relief Valve and Adapter, Isolation Valve Kit, Vent Screens (x2), Vent Screen Screws (x2), and Self-Tapping Screws (x2)

Additional Features

- Complies with South Coast Air Quality Management District 14 ng/J or 20 ppm NOx Emission Levels
- Ultra Low NOx
- Tankless Rack System™ Compatible
- 1/2 in. (13 mm) Gas Line Compatible

FLEXIBLE VENTING OPTIONS

- Concentric or Schedule 40 PVC/CPVC
- Direct Vent (Concentric and Twin Pipe)
- Non-Direct Vent (Room Air)
- Common Vent (Direct Vent and Room Air)
Vent lengths up to 150 ft with eight Tankless Water Heater units.
- Maximum Equivalent Vent Lengths:

Twin Pipe

Vent Sizes	2 in. (51 mm)	3 in. (76 mm)
Vent Lengths	65 ft (20 m)	150 ft (46 m)

Concentric

Vent Sizes	2 in. X 4 in.	3 in. X 5 in.
Vent Lengths	65 ft (20 m)	150 ft (46 m)

EASE OF INSTALLATION AND SERVICEABILITY

- Compact Design to Save Space
- Wi-Fi Technology for Remote Monitoring and Management
- Sliding Mounting Bracket for Easy Installation
- Simple Gas Conversion

OPTIONAL ACCESSORIES

Room Air Screen, Condensate Neutralizer, ScaleCutter, Drain Down Kit, Additional Controllers, Recess Box, Recirculation Pump, DPS/MIS Switch, EZConnect™ Cables, Cascade Cables, control-r™ Wi-Fi Module, Wireless Accessories, and many more. Visit rinnai.us for a complete list of accessories.

COMMERCIAL APPLICATIONS

Commercial Tankless Rack Systems



Demand Duo™ Commercial Hybrid System



CERTIFIED TO ANSI Z21.10.3 – CSA 4.3

SENSEI™ TECHNICAL SPECIFICATIONS

SPECIFICATION	CU199i	CU160i
Dimensions - w, h, d	18.5 in. x 26.4 in. x 11.4 in. (470 mm x 670 mm x 290 mm)	
Minimum Gas Consumption Btu/h	15,000	
Maximum Gas Consumption Btu/h	199,000	160,000
Flow Rate ¹ (Min - Max)	0.26 - 9.8 GPM (1.0 - 37 L/min)	0.26 - 8.0 GPM (1.0 - 30 L/min)
Max Flow Rate with Parameter Adjustment	11 GPM (42 L/min)	9 GPM (34 L/min)
Weight	64 lb (29 kg)	62 lb (28 kg)
Sound Level	49 dB	48 dB
Electrical	Normal	84 W
	Standby	1.3 W
	Freeze Protection	148 W
	Max Current	4 Amps
	Fuse	10 Amps
Temperature	<ul style="list-style-type: none"> Minimum: 98° F (37° C) Default Maximum: 140° F (60° C) Default 185° F (85° C) With Parameter Adjustment 	
By-Pass Flow Control	Electronic	
Gas Supply Pressure ²	<ul style="list-style-type: none"> Natural: 3.5 in. w.c. - 10.5 in. w.c. Propane: 8.0 in. w.c. - 13.5 in. w.c. 	
Ignition System	Direct Electronic Ignition	
Electronic Connections	<ul style="list-style-type: none"> Appliance: AC 120 Volts, 60Hz. Temperature Controller: DC 12 Volts (Digital) 	
Water Supply Pressure	<ul style="list-style-type: none"> Minimum: 50 PSI (Recommended 60-80 PSI for max performance) Maximum: 150 PSI 	
Controller Cable	Non-Polarized Two Core Cable (Minimum 22 AWG)	
Service Connections	<ul style="list-style-type: none"> Gas Supply: 3/4 in. (19 mm) NPT Cold Water Inlet: 3/4 in. (19 mm) NPT Hot Water Outlet: 3/4 in. (19 mm) NPT Condensate Drain: 1/2 in. (13 mm) NPT 	
Clearances	<ul style="list-style-type: none"> Top: 2 in. (51 mm)* Bottom/Ground: 12 in. (305 mm) Front: 0 in.** Back: 0 in. Sides: 2 in. (51 mm)*** Vent: 0 in. 	

* 0 in. from vent components

** Clearance for servicing is 24 in. (610 mm) in front of water heater

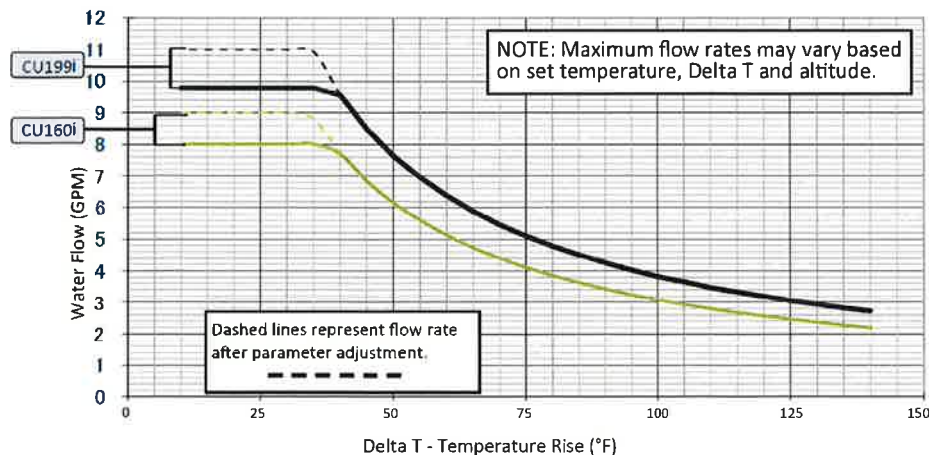
*** Add 0.25 in. (6.35 mm) for recess box

¹ Minimum flow may vary slightly depending on the temperature setting and the inlet water temperature. Minimum activation flow is 0.4 GPM (1.5 L/min).

² The maximum gas supply pressure must not exceed the value specified by the manufacturer.

SENSEI™ WATER FLOW CURVE

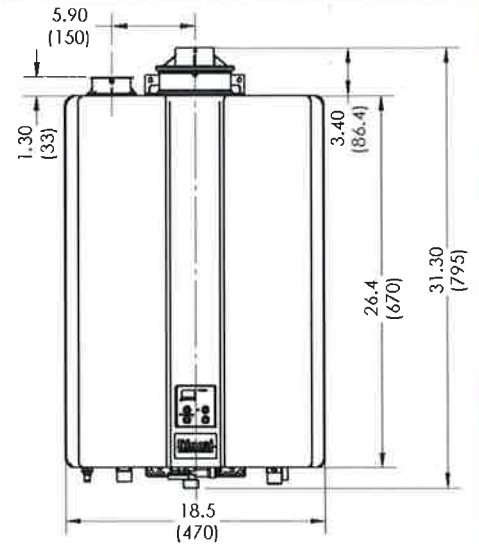
Flow curves apply only to incoming water temperatures of 70° F (21° C) or less. For incoming water temperatures greater than 70° F (21° C), please contact Rinnai.



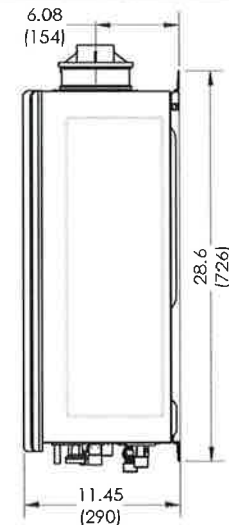
SENSEI™ DIMENSIONS

in. (mm)

FRONT



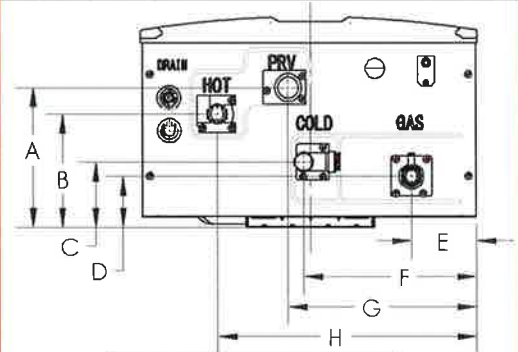
SIDE



Vent Connection:

2 in. (51 mm) nominal PVC/ Polypropylene or 3 in./5 in. Concentric.

BOTTOM



Connection		in.	mm
COLD	F	9.54	242
	C	3.56	90
HOT	H	14.27	362
	B	6.16	156
GAS	E	3.57	91
	D	2.78	71
PRV	G	10.39	264
	A	7.60	193

February 2011

Product

Concentric Vent

General

The Concentric Vent allows both the intake for combustion air and the exhaust vent to pass through a standard roof or sidewall. This is an alternative to the standard two pipe intake/vent shown in the basic furnace installation Instructions.

Two Concentric Vent products are available: CVENT-2 is for use with 2" intake/vent systems and CVENT-3 is for use with 3" intake/vent systems.

Refer to the furnace installation instructions for intake/vent pipe sizing information.

NOTE: The Concentric Vent reduces the allowable intake/vent piping length by 5 feet from that listed in the basic furnace installation instructions.

WARNING

Do not use the Concentric Vent kit for anything other than a Category IV furnace. Failure to follow this warning could result in fire, personal injury or death.

WARNING

Do not operate the furnace until the installation and assembly of the Concentric Vent and all piping are completed. Failure to follow this warning could result in product damage or improper operation, personal injury or death.

Each concentric vent kit contains the following items:

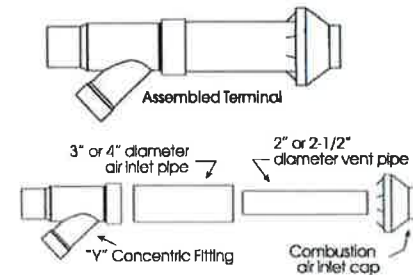
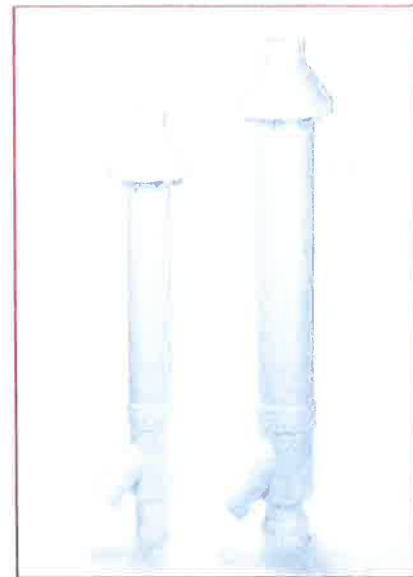
- (1) Combustion Air Inlet Cap
- (1) Air Inlet Pipe
- (1) Vent Pipe
- (1) Intake/Vent Concentric "Y"
- (1) Installation Instructions on box

Pipe and fittings are required to complete installation (user

MODEL	INTAKE/VENT NOM. PIPE SIZE	OVERALL ASSEM'D LENGTH1	INTAKE PIPE OUTSIDE DIAMETER	AIR INLET PIPE LENGTH2
CVENT-2	2"	36-3/4"	3-1/2"	27-1/4"
CVENT-3	3"	39-3/4"	4-1/2"	31-7/8"

supplied). The combustion air and vent pipe fittings must conform ANSI and ASTM standards D1785, F891, D2665, D2241, D2661, or F628. Pipe cement and primer must conform to ASTM standards D2564 or D2235.

In Canada, construct all combustion air and vent pipes for this unit of CSA or ULC certified Schedule 40 PVC, PVC-DWV, or ABS-DWV pipe and pipe cement.



EW-1,2

ElectriFLEX LD™ (Light Duty) Commercial Lowboy Electric Water Heater

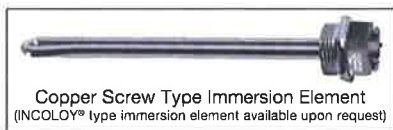


Photo is of
LE120L3-3

Bradford White ElectriFLEX LD™ Lowboy Electric Models Feature:

- **Applications**—Lowboy models are ideal for installations where space is minimal and are perfect for tight installations such as a closet or under a counter.
- **Fully Automatic Thermostat Controls**—Fast acting surface-mount thermostats with a maximum setpoint of 175°F (79°C) and a high limit energy cut-off (manual reset) for safety.
- **Direct Heat Transfer With Immersed Elements**—Transfers heat directly and efficiently to the water. Screw-in style.
- **Vitraglas® Lining with Microban®**—An exclusively engineered enamel formula that provides superior tank protection from the corrosive effects of water; and with Microban® antimicrobial product protection to help prevent the growth of bacteria, mold and mildew on the surface of the tank lining.
- **Hydrojet® Total Performance System**—Sediment build-up reducing device that also increases first hour rating of hot water while minimizing temperature build-up in tank.
- **Insulation System**—2" (51mm) Non-CFC foam insulation covers the sides and top of the tank, reducing heat loss. This results in less energy consumption, improved efficiencies, and jacket rigidity. LE120L models additionally use a supplied flexible fiberglass insulation blanket.
- **Water Connections**—3/4" (19mm) NPT factory-installed true dielectric fittings extend water heater life and simplify water line connections.
- **Factory-Installed Heat Traps**—Design incorporates a flexible disk that reduces heat loss in piping and eliminates the potential for noise generation.
- **Protective Anode Rod**—Provides added protection against corrosion for long-term, trouble-free service.
- **Steel Tank**—Heavy gauge steel automatically formed, rolled, and welded.
- **Field Convertible**—Units are shipped from factory standard Three Phase, Non-Simultaneous and can be converted to Single Phase and/or Simultaneous operation in the field.
- **Field Conversion Kits**—Change voltage and kW in the field (see options on following page).
- **T&P Relief Valve Installed**—Side T&P is standard. Optional top T&P location is available and must be specified when ordering.

FEATURING:



3 or 5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada, and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

Microban® antimicrobial product protection helps prevent the growth of bacteria, mold and mildew that may affect the product. The built-in antimicrobial properties do not protect users or others from disease-causing organisms. Microban® is a registered trademark of Microban Products Company.

Commercial Electric Water Heater

ElectriFLEX LD™ Lowboy Electric Models

Meet or exceed ASHRAE 90.1 (latest edition), C.E.C. Listed

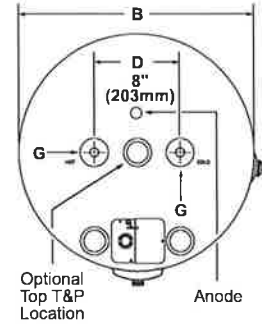
Model Number	Rated Nominal Capacity		DDE Rated Storage Volume Gal.	First Hour Rating Gal.	Uniform Energy Factor	Element Wattage (Watts)		A Floor to Top of Heater in.	B Jacket Dia. in.	C Floor to Water Conn. in.	D C/L of Water Conn. in.	E Floor to T&P Conn. †† in.	G Water Conn. NPT in.	Approx. Shipping Weight lbs.
	U.S. Gal.	Imp. Gal.				Minimum	Maximum							
LE120LN3-3**†	19	16	—	—	—	1500	6000	24 3/4	18	25 3/4	8	19 1/4 / 24 7/8	3/4	58
LE230LN3-3	28	23	26	41	0.92	1500	6000	29 9/16	23	31 5/16	8	23 9/16 / 31 5/16	3/4	102
LE240LN3-3	37	31	34	45	0.92	1500	6000	32 1/16	24 1/2	34 5/16	8	23 9/16 / 34 5/16	3/4	126
LE250LN3-3	47	39	43	61	0.92	4000	6000	33 5/16	26	36 1/16	8	24 5/16 / 36 1/16	3/4	173

Model Number	Rated Nominal Capacity		DDE Rated Storage Volume Liters	First Hour Rating Liters	Uniform Energy Factor	Element Wattage (Watts)		A Floor to Top of Heater mm.	B Jacket Dia. mm.	C Floor to Water Conn. mm.	D C/L of Water Conn. mm.	E Floor to T&P Conn. †† mm.	G Water Conn. NPT mm.	Approx. Shipping Weight kg.
	Liters	Liters				Minimum	Maximum							
LE120L3-3**†	72	—	—	—	—	1500	6000	629	457	654	203	489 / 632	19	26
LE230LN3-3	106	—	98	155	0.92	1500	6000	751	584	795	203	598 / 795	19	46
LE240LN3-3	140	—	129	171	0.92	1500	6000	814	622	872	203	598 / 872	19	57
LE250LN3-3	178	—	163	231	0.92	4000	6000	846	660	916	203	618 / 916	19	78

Specify wattage and voltage when ordering. Use chart below for maximum wattages at certain voltages. **Models include supplied insulation blanket (2" (51mm) thick). Dimensions in charts above do not include blanket thickness. For 5 year models, change suffix "3" to "5". NSF Kits available when ordering. †Exempt from ASHRAE 90.1b. Uniform Energy Factor and First Hour Rating is based on the latest AHRI directory listings. †† All models feature side or top T&P location and must specify when ordering. "E" dimension listed as side/top.

Wattage Limitations for Non-Simultaneous and Simultaneous Operation	Voltage								Recovery ▲ GPH Temperature Rise °F					Recovery ▲ LPH Temperature Rise °C					
	120V	208V	240V	277V	380V	415V	480V		60	80	90	100	120	34	45	50	56	67	
1500W / 1500W	yes	yes	yes	yes	yes	yes	yes	1500W	10	8	7	6	5	1500W	38	30	26	23	19
2000W / 2000W	no	yes	yes	yes	yes	yes	yes	2000W	14	10	9	8	7	2000W	53	38	34	30	26
2500W / 2500W	no	yes	yes	yes	yes	yes	yes	2500W	17	13	11	10	9	2500W	64	49	42	38	34
3000W / 3000W	no	yes	yes	yes	yes	yes	yes	3000W	21	15	14	12	10	3000W	79	57	53	45	38
3500W / 3500W	no	yes	yes	yes	yes	yes	yes	3500W	24	18	16	14	12	3500W	91	68	61	53	45
4000W / 4000W	no	yes	yes	no	yes	yes	no	4000W	28	21	18	16	14	4000W	106	79	68	61	53
4500W / 4500W	no	yes	yes	yes	yes	yes	yes	4500W	31	23	21	18	15	4500W	117	87	79	68	57
5000W / 5000W	no	yes	yes	yes	yes	yes	yes	5000W	34	26	23	21	17	5000W	129	98	87	79	64
5500W / 5500W	no	yes	yes	yes	yes	yes	yes	5500W	38	29	25	23	19	5500W	144	110	95	87	72
6000W / 6000W	no	no	yes	no	yes	yes	yes	6000W	41	31	28	25	21	6000W	155	117	106	95	79

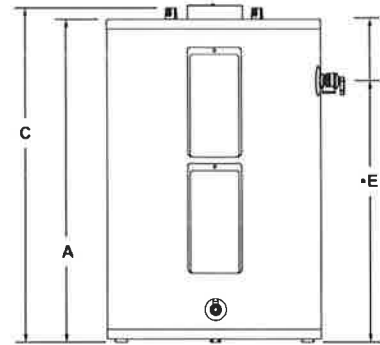
▲(GPH based on Non-Simultaneous operation, when Simultaneous operation the GPH/LPH will approximately double.)



Voltage and Wattage Conversion Kits
Refer to Element Wattage minimum & maximum in chart above

Simultaneous and Non-Simultaneous Wattage	Voltage						
	120V	208V	240V	277V	380V	415V	480V
1500W / 1500W	415-46409-01	415-46409-05	415-46409-13	415-46409-16	415-46409-24	415-46409-41	415-46409-32
2000W / 2000W	N/A	415-46409-06	415-46409-05	415-46409-17	415-46409-43	415-46409-24	415-46409-33
2500W / 2500W	N/A	415-46409-07	415-46409-06	415-46409-18	415-46409-25	415-46409-43	415-46409-34
3000W / 3000W	N/A	415-46409-08	415-46409-14	415-46409-19	415-46409-26	415-46409-25	415-46409-35
3500W / 3500W	N/A	415-46409-09	415-46409-07	N/A	415-46409-54	415-46409-26	N/A
4000W / 4000W	N/A	415-46409-49	415-46409-08	415-46409-20	415-46409-56	415-46409-54	415-46409-36
4500W / 4500W	N/A	415-46409-11	415-46409-09	415-46409-51	415-46409-57	415-46409-55	415-46409-59
5000W / 5000W	N/A	415-46409-50	415-46409-15	415-46409-52	415-46409-58	415-46409-56	415-46409-38
5500W / 5500W	N/A	415-46409-67	415-46409-49	415-46409-61**	415-46409-63	415-46409-57	415-46409-62**
6000W / 6000W	N/A	415-46409-66*	415-46409-68	415-46409-53	415-46409-64	415-46409-58	415-46409-60

Note: Each kit will include two replacement elements, two gaskets, a rating plate overlay and one set of instructions. For water heaters with only one element, please retain the extra element and gasket as a service part. *415-46409-66 contains only one element. **INCOLOY® element only.



•"E" dimension listed as side/top.

General:

All models comply with NAECA III requirements. All models UL® listed. These heaters are wired inter-locking (Non-Simultaneous, Three Phase) 240V with two 4500W elements, unless otherwise specified. All water connections are 3/4" NPT (19mm). All electrical connections are 3/4" (19mm). All models certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa.)

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

— BRADFORD WHITE IS —



Sales: 800-523-2931 ■ Fax 215-641-1612
24/7 Technical Support: 800-334-3393 ■ Email techserv@bradfordwhite.com

Products made by Bradford White are manufactured in the United States using the finest raw materials and components from around the world.

Built to be the Best

For Water Heater/Tank Applications

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Model LFN36-M1 Vacuum Relief Valve

Sizes: 1/2" – 3/4" Male NPT

Features

- Low profile
- All Lead Free* brass body
- Protective cap
- Suitable for low pressure steam and water service
- Tested and rated to ANSI Z21.22
- CSA certified
- The LFN36-M1 features Lead Free* construction to comply with Lead Free* installation requirements.

Applications

- Domestic water heaters and supply tanks
- Table top heaters
- Jacketed steam kettles
- Unit heaters
- Low pressure steam systems
- Steam coil heaters

Note: Vacuum relief valves are not designed or approved as backsiphonage backflow preventers. For protection against backsiphonage install Watts Series 288A vacuum breakers.

Standards

Tested and rated to ANSI Z21.22

CSA certified

Specifications

A Watts Model LFN36-M1 Vacuum Relief Valve shall be installed on domestic hot water supply tanks/ heaters/ unit heaters/ steam kettles as indicated on plans. The vacuum relief valve shall be ANSI Z21.22 rated and CSA certified. The vacuum relief valve shall have an all brass body and include a protective cap for automatic venting of a closed system to atmosphere when a vacuum is created. The Lead Free* Vacuum Relief Valve shall comply with state codes and standards, where applicable, requiring reduced lead content. The Watts LFN36-M1 Vacuum Relief Valve permits air to enter and prevent vacuum conditions that could siphon the water from the system, resulting in collapse of a tank or water heater or equipment burn out. The valve shall be a Watts Model LFN36-M1.



LFN36-M1

Design certified by



Tested and rated under "ANSI Z21.22
Relief Valves for Hot Water Supply Systems".

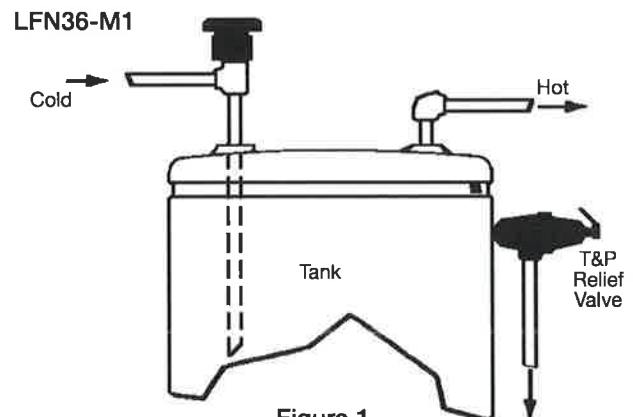


Figure 1

Domestic Hot Water Supply Tanks and Heaters
with Top Supply

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.

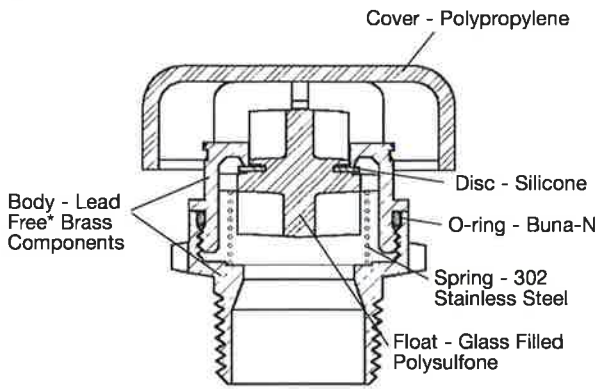
NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

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.

Materials

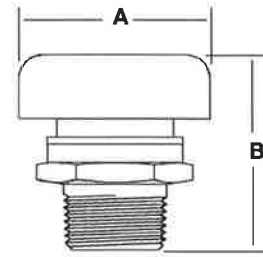


Pressure - Temperature

Maximum steam working pressure: 15 psi (1.03 bar)

Maximum temperature: 250°F (121°C)

Dimensions-Weights



SIZE		DIMENSIONS				WEIGHT	
		A		B			
<i>in.</i>	<i>in.</i>	<i>mm</i>	<i>in.</i>	<i>mm</i>	<i>oz.</i>	<i>gr</i>	
1/2	2	50	2	50	4	113	
3/4	2	50	2	50	4	113	

Capacity

SIZE		MODEL	VENTING CAPACITY	
<i>in.</i>			<i>CFM</i>	<i>LPM</i>
1/2		LFN36-M1	15	425
3/4		LFN36-M1	15	425

Typical Installations

Water Service

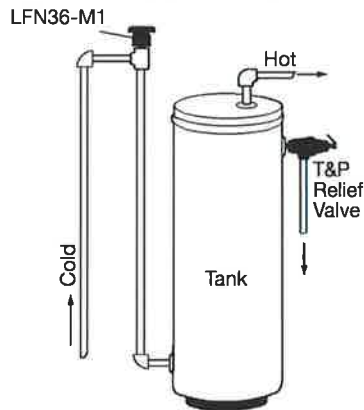


Figure 2

Domestic Hot Water Supply Tanks and Heaters with Bottom Feed

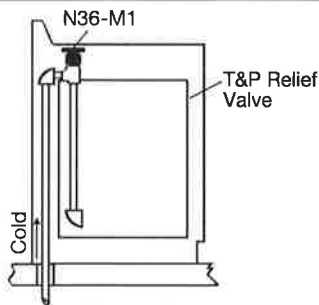


Figure 3

Table Top Heaters

Steam Service

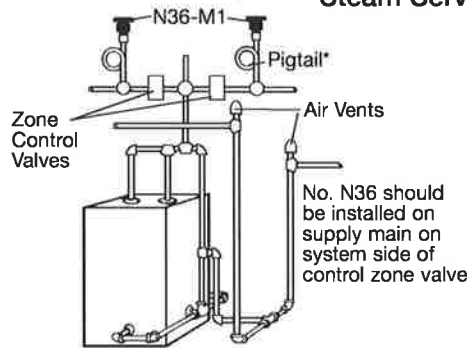


Figure 4

Low Pressure Steam Heating Systems

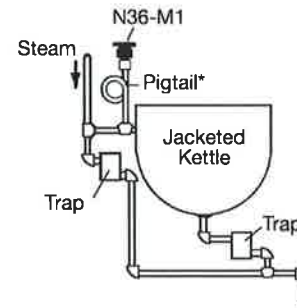


Figure 5

Jacketed Kettles

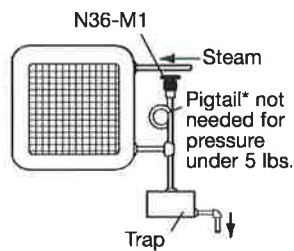


Figure 6

Unit Heaters

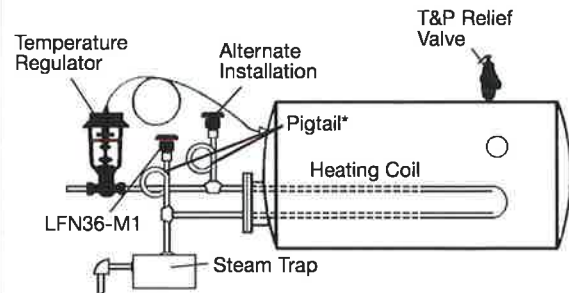


Figure 7

Steam Coil Heaters

*Note: When used for steam service, be sure to use pigtail to prevent live steam from damaging N36 valve.

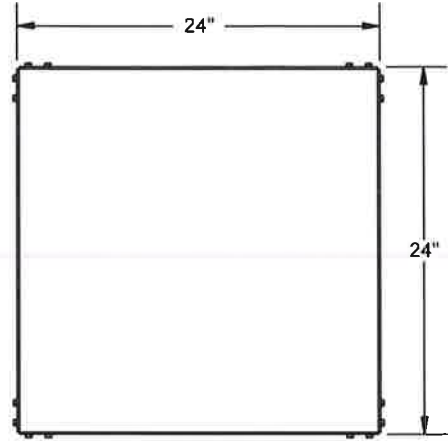
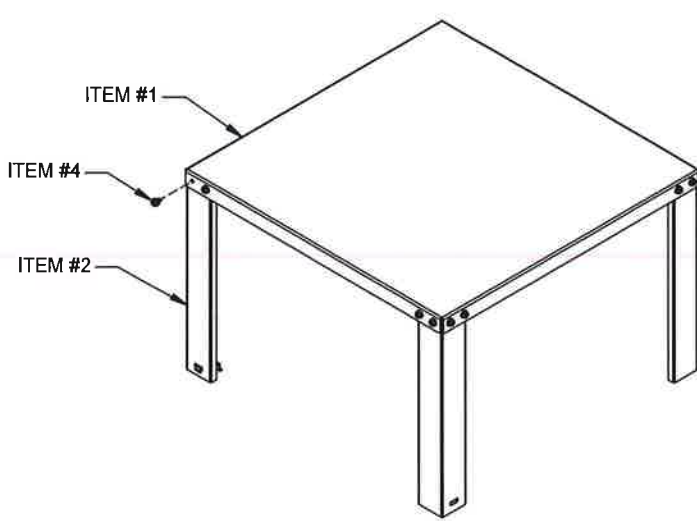


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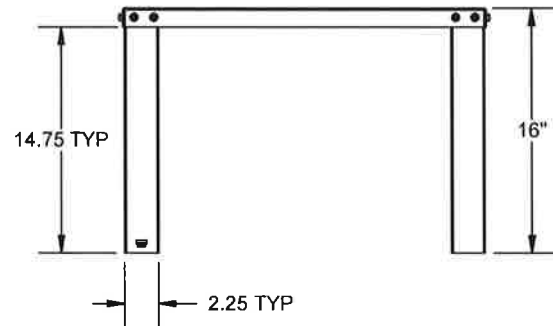
Canada: T: (905) 332-4090 • Watts.ca

Latin America: T: (52) 81-1001-8600 • Watts.com

PRODUCT SPECIFICATION DRAWING
QUICKSTAND™ 24" X 24" (Water Heater & Equipment Support)
#40-S-24-A (assembled) and #40-S-24-U (unassembled)



ALL DIMENSIONS IN INCHES



The QUICKSTAND™ **#40-S-24- (A or U)** stands safely elevates water heaters and other equipment above the floor (1,200 lbs rating).

Product Information:

- **Material:**
 Item #1: Top, 12 gage CRS, galvanized
 Item #2: Leg, 16 gage CRS, galvanized, 4 places
 Item #3: Safety Clip, 14 gage CRS, galvanized, 2 places
 Item #4: Screw, PH, Sems, #1/4 X 1/2"L (w / external starwasher), 16 places
 Item #5: Lag Bolt, #1/4 X 2-1/2"L, self-drilling, 2 places
 (items #3 and #5 included with product)
- Engineered and lab tested to meet Uniform Plumbing Code (UPC) and International Plumbing Code (IPC) requirements, including elevation of water heater's ignition source 18" above the floor
- Holds up to 1,200 pounds capacity (up to 100 U.S. gallon tanks)
- QUICKSTAND™ weight 25-1/2 pounds without packaging
- Available in assembled and unassembled configurations



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CONVERTING MAKESHIFT METHODS INTO ENGINEERED SOLUTIONSSM
 800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM
 spec_40-S-24_Rev1

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

EWH-3,4

ElectriFLEX LD™ (Light Duty) Commercial Lowboy Electric Water Heater

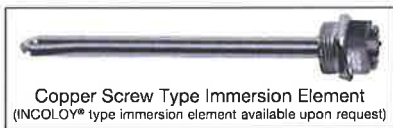


Photo is of
LE120L3-3

Bradford White ElectriFLEX LD™ Lowboy Electric Models Feature:

- **Applications**—Lowboy models are ideal for installations where space is minimal and are perfect for tight installations such as a closet or under a counter.
- **Fully Automatic Thermostat Controls**—Fast acting surface-mount thermostats with a maximum setpoint of 175°F (79°C) and a high limit energy cut-off (manual reset) for safety.
- **Direct Heat Transfer With Immersed Elements**—Transfers heat directly and efficiently to the water. Screw-in style.
- **Vitraglas® Lining with Microban®**—An exclusively engineered enamel formula that provides superior tank protection from the corrosive effects of water; and with Microban® antimicrobial product protection to help prevent the growth of bacteria, mold and mildew on the surface of the tank lining.
- **Hydrojet® Total Performance System**—Sediment build-up reducing device that also increases first hour rating of hot water while minimizing temperature build-up in tank.
- **Insulation System**—2" (51mm) Non-CFC foam insulation covers the sides and top of the tank, reducing heat loss. This results in less energy consumption, improved efficiencies, and jacket rigidity. LE120L models additionally use a supplied flexible fiberglass insulation blanket.
- **Water Connections**—3/4" (19mm) NPT factory-installed true dielectric fittings extend water heater life and simplify water line connections.
- **Factory-Installed Heat Traps**—Design incorporates a flexible disk that reduces heat loss in piping and eliminates the potential for noise generation.
- **Protective Anode Rod**—Provides added protection against corrosion for long-term, trouble-free service.
- **Steel Tank**—Heavy gauge steel automatically formed, rolled, and welded.
- **Field Convertible**—Units are shipped from factory standard Three Phase, Non-Simultaneous and can be converted to Single Phase and/or Simultaneous operation in the field.
- **Field Conversion Kits**—Change voltage and kW in the field (see options on following page).
- **T&P Relief Valve Installed**—Side T&P is standard. Optional top T&P location is available and must be specified when ordering.

FEATURING:



3 or 5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada, and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

Microban® antimicrobial product protection helps prevent the growth of bacteria, mold and mildew that may affect the product. The built-in antimicrobial properties do not protect users or others from disease-causing organisms. Microban® is a registered trademark of Microban Products Company.

Commercial Electric Water Heater

ElectriFLEX LD™ Lowboy Electric Models

Meet or exceed ASHRAE 90.1 (latest edition), C.E.C. Listed

Model Number	Rated Nominal Capacity		DOE Rated Storage Volume Gal.	First Hour Rating Gal.	Uniform Energy Factor	Element Wattage (Watts)		A Floor to Top of Heater in.	B Jacket Dia. in.	C Floor to Water Conn. in.	D C/L of Water Conn. in.	E Floor to T&P Conn. †† in.	G Water Conn. NPT in.	Approx. Shipping Weight lbs.
	U.S. Gal.	Imp. Gal.				Minimum	Maximum							
LE120L3-3**	19	16	—	—	—	1500	6000	24 3/4	18	25 3/4	8	19 1/4 / 24 7/8	3/4	58
LE230LN3-3	28	23	26	41	0.92	1500	6000	29 9/16	23	31 5/16	8	23 9/16 / 31 5/16	3/4	102
LE240LN3-3	37	31	34	45	0.92	1500	6000	32 1/16	24 1/2	34 5/16	8	23 9/16 / 34 5/16	3/4	126
LE250LN3-3	47	39	43	61	0.92	4000	6000	33 5/16	26	36 1/16	8	24 5/16 / 36 1/16	3/4	173

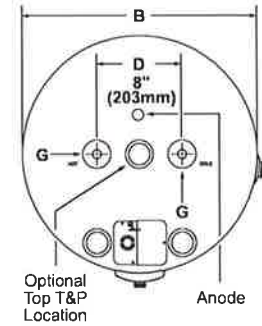
Model Number	Rated Nominal Capacity		DOE Rated Storage Volume Liters	First Hour Rating Liters	Uniform Energy Factor	Element Wattage (Watts)		A Floor to Top of Heater mm.	B Jacket Dia. mm.	C Floor to Water Conn. mm.	D C/L of Water Conn. mm.	E Floor to T&P Conn. †† mm.	G Water Conn. NPT mm.	Approx. Shipping Weight kg.
	Liters	Liters				Minimum	Maximum							
LE120L3-3**†	72	—	—	—	—	1500	6000	629	457	654	203	489 / 632	19	26
LE230LN3-3	106	98	98	155	0.92	1500	6000	751	584	795	203	598 / 795	19	46
LE240LN3-3	140	129	129	171	0.92	1500	6000	814	622	872	203	598 / 872	19	57
LE250LN3-3	178	163	163	231	0.92	4000	6000	846	660	916	203	618 / 916	19	78

Specify wattage and voltage when ordering. Use chart below for maximum wattages at certain voltages. **Models include supplied insulation blanket (2" (51mm) thick). Dimensions in charts above do not include blanket thickness. For 5 year models, change suffix "3" to "5". NSF Kits available when ordering. †Exempt from ASHRAE 90.1b. Uniform Energy Factor and First Hour Rating is based on the latest AHR! directory listings. †† All models feature side or top T&P location and must specify when ordering. "E" dimension listed as side/top.

Wattage Limitations for Non-Simultaneous and Simultaneous Operation	Voltage							
	120V	208V	240V	277V	380V	415V	480V	
1500W / 1500W	yes	yes	yes	yes	yes	yes	yes	yes
2000W / 2000W	no	yes	yes	yes	yes	yes	yes	yes
2500W / 2500W	no	yes	yes	yes	yes	yes	yes	yes
3000W / 3000W	no	yes	yes	yes	yes	yes	yes	yes
3500W / 3500W	no	yes	yes	no	yes	yes	no	
4000W / 4000W	no	yes	yes	yes	yes	yes	yes	
4500W / 4500W	no	yes	yes	yes	yes	yes	yes	
5000W / 5000W	no	yes	yes	yes	yes	yes	yes	
5500W / 5500W	no	yes	yes	no	yes	yes	no	
6000W / 6000W	no	no	yes	yes	yes	yes	yes	

Wattage	Recovery ▲ GPH Temperature Rise °F					Wattage	Recovery ▲ LPH Temperature Rise °C				
	60	80	90	100	120		34	45	50	56	67
1500W	10	8	7	6	5	1500W	38	30	26	23	19
2000W	14	10	9	8	7	2000W	53	38	34	30	26
2500W	17	13	11	10	9	2500W	64	49	42	38	34
3000W	21	15	14	12	10	3000W	79	57	53	45	38
3500W	24	18	16	14	12	3500W	91	68	61	53	45
4000W	28	21	18	16	14	4000W	106	79	68	61	53
4500W	31	23	21	18	15	4500W	117	87	79	68	57
5000W	34	26	23	21	17	5000W	129	98	87	79	64
5500W	38	29	25	23	19	5500W	144	110	95	87	72
6000W	41	31	28	25	21	6000W	155	117	106	95	79

▲(GPH based on Non-Simultaneous operation, when Simultaneous operation the GPH/LPH will approximately double.)

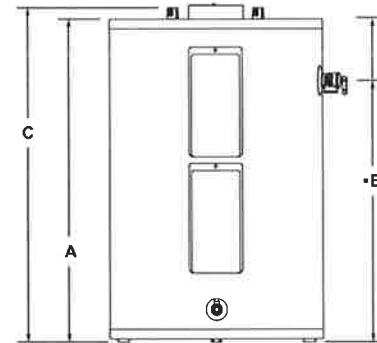


Voltage and Wattage Conversion Kits

Refer to Element Wattage minimum & maximum in chart above

Simultaneous and Non-Simultaneous Wattage	Voltage							
	120V	208V	240V	277V	380V	415V	480V	
1500W / 1500W	415-46409-01	415-46409-05	415-46409-13	415-46409-16	415-46409-24	415-46409-41	415-46409-32	
2000W / 2000W	N/A	415-46409-06	415-46409-05	415-46409-17	415-46409-43	415-46409-24	415-46409-33	
2500W / 2500W	N/A	415-46409-07	415-46409-06	415-46409-18	415-46409-25	415-46409-43	415-46409-34	
3000W / 3000W	N/A	415-46409-08	415-46409-14	415-46409-19	415-46409-26	415-46409-25	415-46409-35	
3500W / 3500W	N/A	415-46409-09	415-46409-07	N/A	415-46409-54	415-46409-26	N/A	
4000W / 4000W	N/A	415-46409-49	415-46409-08	415-46409-20	415-46409-56	415-46409-54	415-46409-36	
4500W / 4500W	N/A	415-46409-11	415-46409-09	415-46409-51	415-46409-57	415-46409-55	415-46409-59	
5000W / 5000W	N/A	415-46409-50	415-46409-15	415-46409-52	415-46409-58	415-46409-56	415-46409-38	
5500W / 5500W	N/A	415-46409-67	415-46409-49	415-46409-61**	415-46409-63	415-46409-57	415-46409-62**	
6000W / 6000W	N/A	415-46409-66*	415-46409-68	415-46409-53	415-46409-64	415-46409-58	415-46409-60	

Note: Each kit will include two replacement elements, two gaskets, a rating plate overlay and one set of instructions. For water heaters with only one element, please retain the extra element and gasket as a service part. *415-46409-66 contains only one element. **INCOLOY® element only.



*"E" dimension listed as side/top.

General:

All models comply with NAECA III requirements. All models UL® listed. These heaters are wired inter-locking (Non-Simultaneous, Three Phase) 240V with two 4500W elements, unless otherwise specified. All water connections are 3/4" NPT (19mm). All electrical connections are 3/4" (19mm). All models certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa.)

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

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For Water Heater/Tank Applications

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Model LFN36-M1 Vacuum Relief Valve

Sizes: 1/2" – 3/4" Male NPT

Features

- Low profile
- All Lead Free* brass body
- Protective cap
- Suitable for low pressure steam and water service
- Tested and rated to ANSI Z21.22
- CSA certified
- The LFN36-M1 features Lead Free* construction to comply with Lead Free* installation requirements.

Applications

- Domestic water heaters and supply tanks
- Table top heaters
- Jacketed steam kettles
- Unit heaters
- Low pressure steam systems
- Steam coil heaters

Note: Vacuum relief valves are not designed or approved as backsiphonage backflow preventers. For protection against backsiphonage install Watts Series 288A vacuum breakers.

Standards

Tested and rated to ANSI Z21.22

CSA certified

Specifications

A Watts Model LFN36-M1 Vacuum Relief Valve shall be installed on domestic hot water supply tanks/ heaters/ unit heaters/ steam kettles as indicated on plans. The vacuum relief valve shall be ANSI Z21.22 rated and CSA certified. The vacuum relief valve shall have an all brass body and include a protective cap for automatic venting of a closed system to atmosphere when a vacuum is created. The Lead Free* Vacuum Relief Valve shall comply with state codes and standards, where applicable, requiring reduced lead content. The Watts LFN36-M1 Vacuum Relief Valve permits air to enter and prevent vacuum conditions that could siphon the water from the system, resulting in collapse of a tank or water heater or equipment burn out. The valve shall be a Watts Model LFN36-M1.



LFN36-M1

Design certified by



Tested and rated under "ANSI Z21.22
Relief Valves for Hot Water Supply Systems".

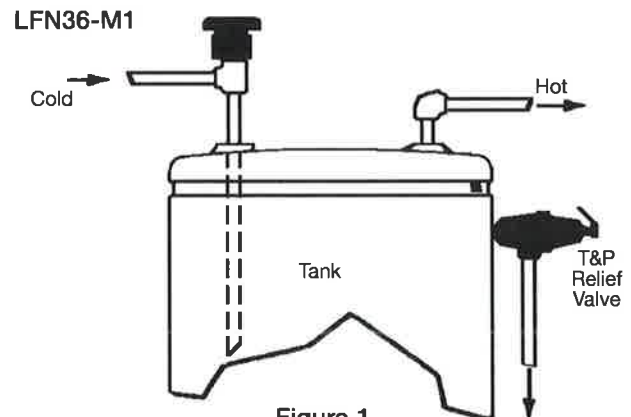


Figure 1

Domestic Hot Water Supply Tanks and Heaters
with Top Supply

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.

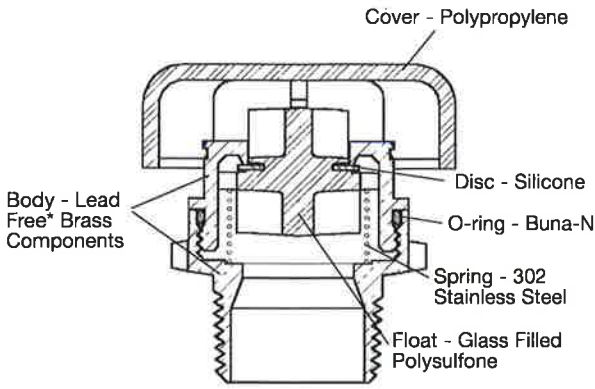
NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

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.

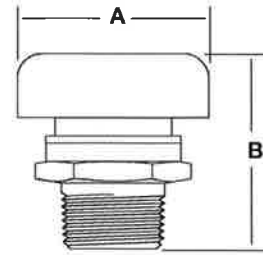
Materials



Pressure - Temperature

Maximum steam working pressure: 15 psi (1.03 bar)
 Maximum temperature: 250°F (121°C)

Dimensions-Weights



SIZE		DIMENSIONS				WEIGHT	
		A		B			
in.	mm	in.	mm	in.	mm	oz.	gr
1/2	50	2	50	2	50	4	113
3/4	50	2	50	2	50	4	113

Capacity

SIZE		MODEL	VENTING CAPACITY	
in.			CFM	LPM
1/2		LFN36-M1	15	425
3/4		LFN36-M1	15	425

Typical Installations

Water Service

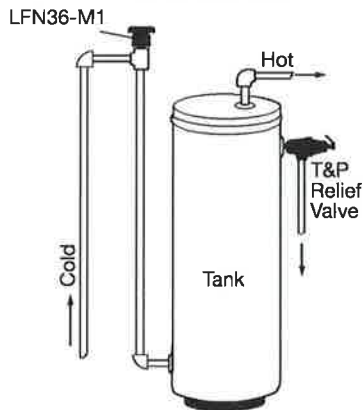


Figure 2

Domestic Hot Water Supply Tanks and Heaters with Bottom Feed

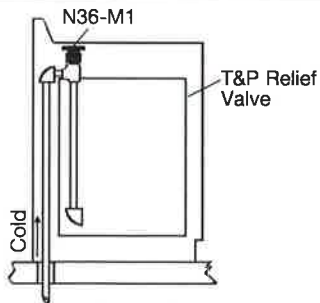


Figure 3

Table Top Heaters

Steam Service

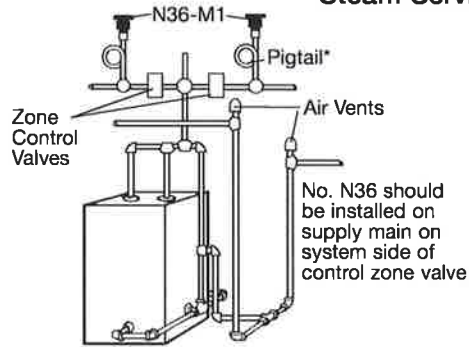


Figure 4

Low Pressure Steam Heating Systems

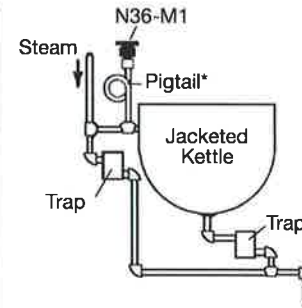


Figure 5

Jacketed Kettles

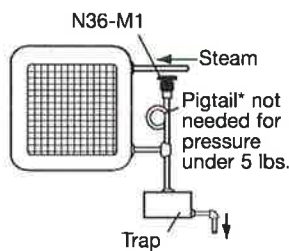


Figure 6

Unit Heaters

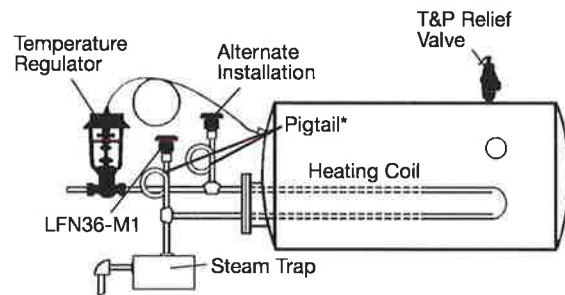


Figure 7

Steam Coil Heaters

*Note: When used for steam service, be sure to use pigtail to prevent live steam from damaging N36 valve.



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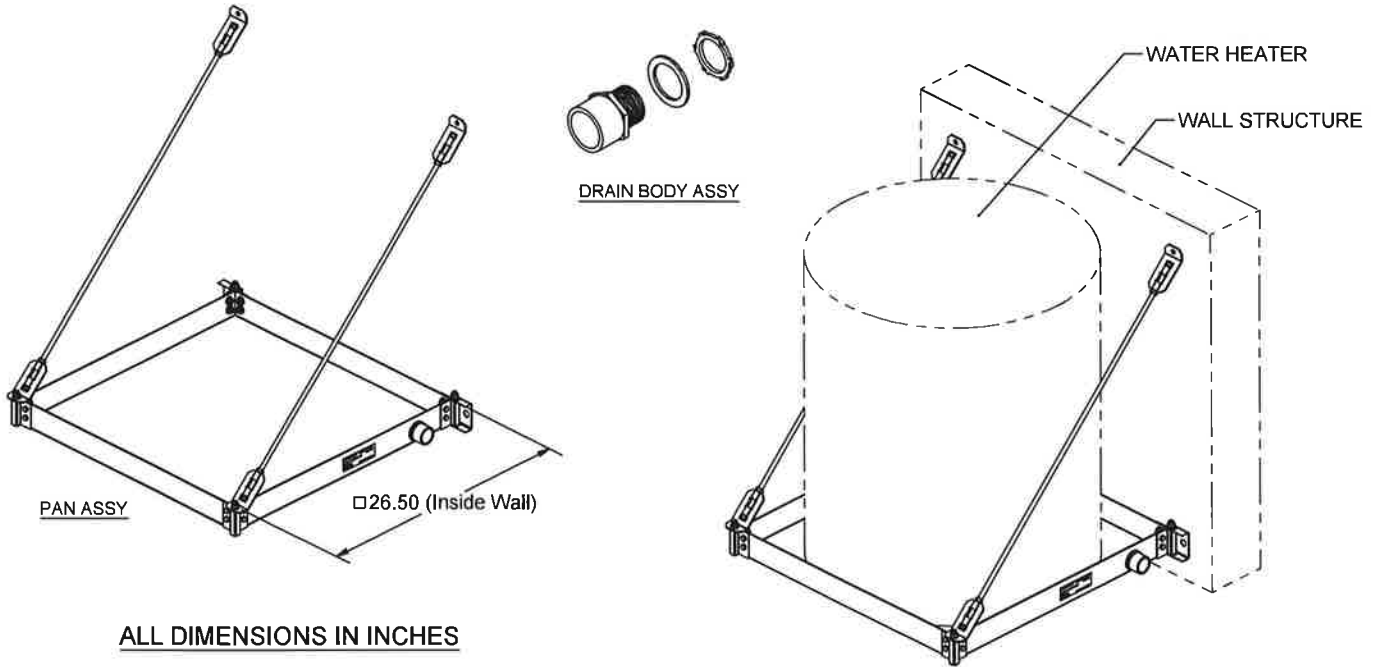
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PRODUCT SPECIFICATION DRAWING

QUICK STAND™ #50-SWHP-W

Wall Mounted Equipment Platform

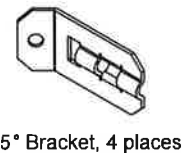
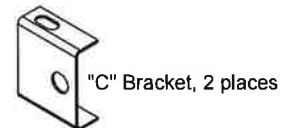


ALL DIMENSIONS IN INCHES

The Wall Mounted Equipment Platform is engineered to support water heaters up to 50 U.S. gallons (or other equipment up to 600 pounds total weight) mounted to a wall. This item also serves as a drain pan.

Product Information:

- **Material:**
 Pan: 12 gage CRS, galvanized
 Corner Brackets (4): 14 gage CRS, galvanized
 C-Brackets (2): 16 gage CRS, galvanized
 45° Brackets (4): 12 gage, CRS, galvanized
 Threaded Rod (2): Low carbon steel, zinc plated, 3/8" x 37.10" long
- Wide platform allows water heaters up to 26-1/2" diameter
- Watertight corners and drain fittings eliminate need for additional drain pan
- Static load rating 600 pounds with 2X safety factor (depending on structural anchorage)
- Professional Engineer stamped documentation available
- Includes PVC drain body 1" MIPT x 1" FS
- Galvanized steel construction
- Suspends with user supplied 3/8" hardware to mount to wall, 4 places
- Installation instructions for mounting to concrete or framed wall structure available
- Patent Pending



Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

.....HUBBARD ENTERPRISES.....
HOLDRITE®
 "Converting Makeshift Methods into Engineered Solutions"™

ET-1

Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Series PLT
Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks

Models

➤	PLT-5-M1	3/4" male connection, tank volume 2.1 gal.
	PLT-12-M1	3/4" male connection, tank volume 4.5 gal.
	PLT-20-M1	3/4" male connection, tank volume 8.5 gal.
	PLT-35-M1	1" female connection, tank volume 14.00 gal.

Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be Stainless Steel. Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model PLT.



Standards

Models PLT-5, PLT-12 and PLT-20
 are Listed by IAPMO.
 Certified to ANSI/NSF 61

Model PLT-35
 Certified to ANSI/NSF 61



Note: The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system.

In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

See chart on back

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.

NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

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.



Selection

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi (10.3 bar), and a maximum of 50°F temperature rise.

To select the correct model PLT series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

Materials

Diaphragm: Butyl rubber
Inlet Connection: Stainless Steel

Technical Information

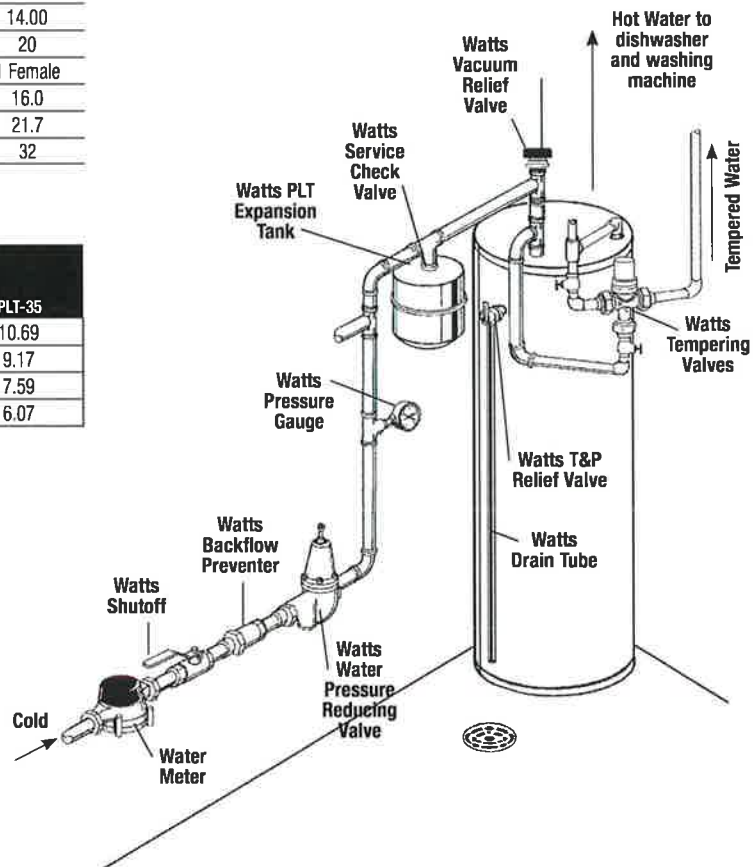
DESCRIPTION	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

AIR SIDE PRE-PRESSURE (PSI)	WATER SIDE VOLUME AT 150PSI (GALLONS)			
	PLT-5	PLT-12	PLT-20	PLT-35
20	1.48	3.42	7.102	10.69
40	1.26	2.88	5.882	9.17
60	1.0	2.49	4.705	7.59
80	.8	1.85	4.009	6.07

SUPPLY PRESSURE (PSIG)	WATER HEATER (GALLONS)						
	20	30	40	50	80	100	120
40							
50							
55							
60							
70							
80							
90							
100							
110							
120							

PLT-5
 PLT-12
 PLT-20
 PLT-35
 Multiple tanks required - consult factory



USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com
Canada: T: (888) 208-8927 • F: (905) 332-7068 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

RD-1

Engineering Specification

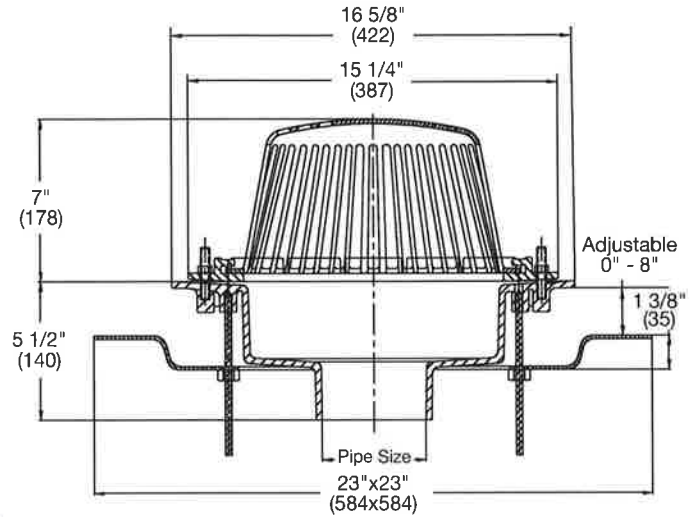
Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____
 Tag RD-1

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

RD-300-F Roof Drain with Deck Flange/ Adjustable Extension Specification

Watts RD-300-F epoxy coated cast iron roof drain with flashing clamp with integral gravel stop, heavy 10 ga. zinc plated steel deck flange and adjustable extension, self-locking polyethylene dome (standard), and no hub (standard) outlet.

Pipe Sizing		
Suffix	Description	
2	2"(51) Pipe Size (NH Only)	<input type="checkbox"/>
3	3"(76) Pipe Size	<input checked="" type="checkbox"/>
4	4"(102) Pipe Size	<input type="checkbox"/>
5	5"(127) Pipe Size (NH Only)	<input type="checkbox"/>
6	6"(152) Pipe Size	<input type="checkbox"/>
8	8"(203) Pipe Size	<input type="checkbox"/>
10	10"(254) Pipe Size (NH Only)	<input type="checkbox"/>



Outlet Type		
Suffix	Description	
NH	No Hub (MJ)	<input checked="" type="checkbox"/>
F	Push On	<input type="checkbox"/>
X	Inside Caulk	<input type="checkbox"/>

Options		
Suffix	Description	
-13	Galvanized Body & Clamp	<input type="checkbox"/>
-85	IRMA Perf. SS Extension	<input type="checkbox"/>
-AC	Compression Seal Extension	<input type="checkbox"/>
-AE	Threaded Extension	<input type="checkbox"/>
-D	Underdeck Clamp	<input checked="" type="checkbox"/>
-GSS	Stainless Steel Ballast Guard	<input type="checkbox"/>
-K	Ductile Iron Dome	<input checked="" type="checkbox"/>
-K13	Galvanized Dome	<input type="checkbox"/>
-K40	Ductile Iron Low Dome (4" High)	<input type="checkbox"/>
-K80	Aluminum Dome	<input type="checkbox"/>
-K81	Rough Bronze Dome	<input type="checkbox"/>
-K83	SS Mesh Covered Dome	<input type="checkbox"/>
-L	Vandal Proof Dome	<input type="checkbox"/>
-R	2" External Water Dam	<input type="checkbox"/>
-W	Adj. Internal Water Dam	<input type="checkbox"/>

Deck Opening 18 1/2"(470)

Free Area
 Sq. In.
 137

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

RH-1



Freezeless Sanitary Roof Hydrant No Drain Line Required!

Model SRH-MS


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

The Woodford, ASSE 1057 listed, SRH Sanitary 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

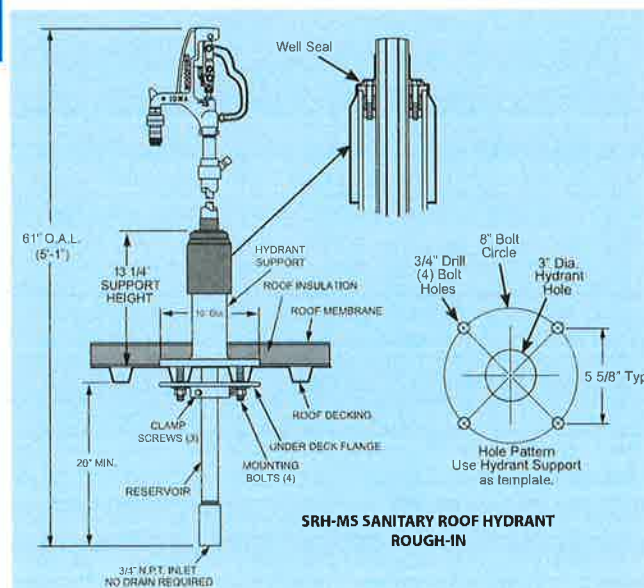
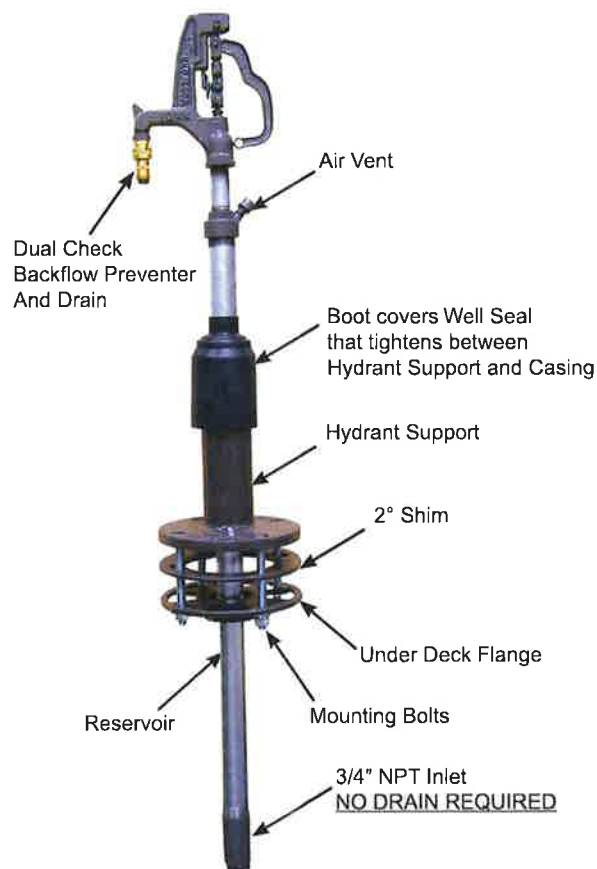
	Supply PSI	Run Time
After each use, run hydrant without a hose to ensure proper evacuation.	60	5 seconds
	25	15 seconds

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.

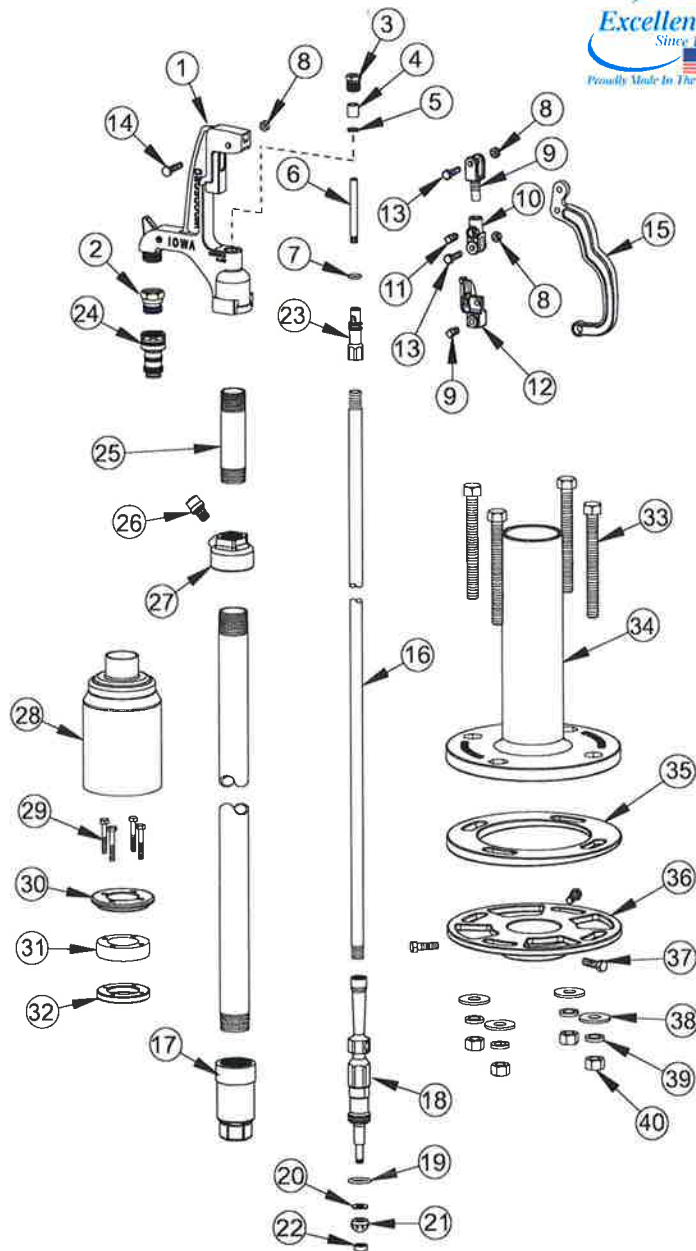
Patent Information: <https://www.woodfordmfg.com/patents/>

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



MODEL SRH-MS PARTS LIST

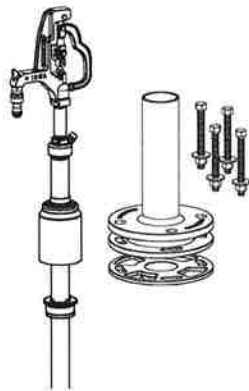
ITEM	PART#	DESCRIPTION
	15126	SRH Head Assembly (Includes Items 1-15, 23 & 24)
1	10632	SRH Head
2	10004	3/4" Brass Hose Nozzle
3	10100	Packing Nut
4	10101	Packing
5	10102	Packing Support Washer
6	15121	Brass Rod Stem
7	10117	O-Ring - 206
8	10206	Hex Nut (3)
9	10614	RH Upper Link
10	15242	RH Lower Link (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

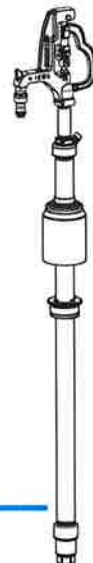


Part# RH-MS Carton contents consists of:
 Mounting System/ Rough-In Components (Parts 33-40 above)
 • Hydrant Support
 • 2" Shim,
 • Under Deck Flange
 • Mounting Bolts, Nuts, Washers.
 Shipped in 1 Carton.
 Shipping Wt. - 30 lbs



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

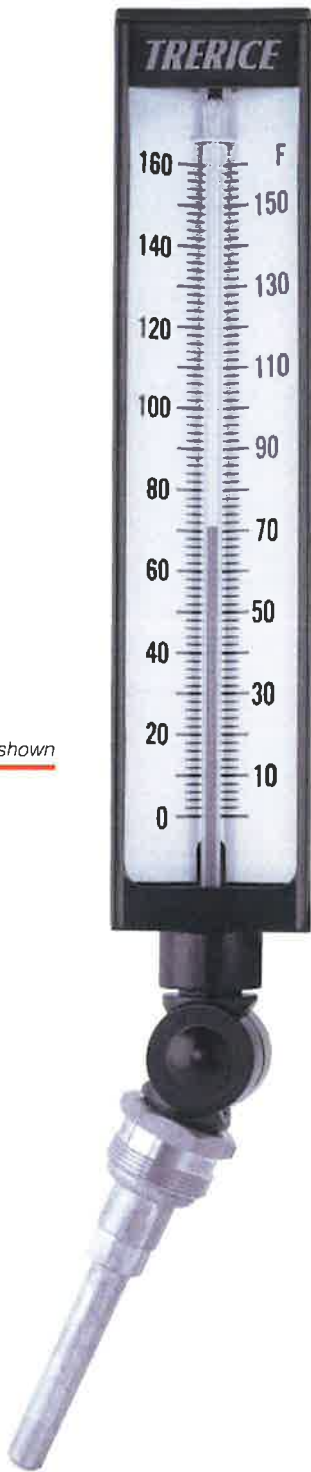
2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032
 To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

TH-1

Adjustable Angle

7" • 9" • 12" Scale Sizes

INDUSTRIAL THERMOMETERS



BX91403 shown

- ▶ 7", 9", 12" Scale
- ▶ ± 1 Scale Division Accuracy
- ▶ Cast Aluminum Case
- ▶ Adjustable Angle Stem

Recognized globally as the Trerice "BX" Industrial Thermometer, this is an instrument of extreme accuracy and rugged dependability. Available in scale sizes of 7" (AX9), 9" (BX9), & 12" (CX9), with a durable cast aluminum case, this universally adjustable, liquid-in-glass thermometer is the most widely specified instrument of its kind.

- Optional features available: Please consult the Options & Accessories Section for details.

Thermowell

- For applications where the process media may be corrosive or contained under pressure, the use of a thermowell is required to prevent damage to the thermometer and facilitate its removal from the process. (Refer to page 158)

Specifications

Models	Scale Sizes	
AX9	7"	Adjustable Angle
BX9	9"	
CX9	12"	
Fill Type	Spirit: Blue colored, organic	
Case	Cast Aluminum, blue epoxy finish	
Stem	Aluminum, brass, 304 stainless steel or air-duct style available	
Connection	Standard: 1 1/4"-18 UNEF-2A coupling nut Air-Duct: Reversible mounting flange with 3 bolt holes	
Window	Ultraviolet protective acrylic on ranges to 300° F Glass on ranges over 300° F	
Tube	Lens front, magnifying type	
Scale	Aluminum, white background with black graduations and markings	
Top Plate	ABS	
Accuracy	±1 scale division	
Approximate Shipping Weight	AX9: 1.5 lbs [0.68 kg] BX9: 1.6 lbs [0.73 kg] CX9: 2.0 lbs [0.91 kg]	

BX91403

HOW TO ORDER

Sample Order Number: **BX9 1 403 07**

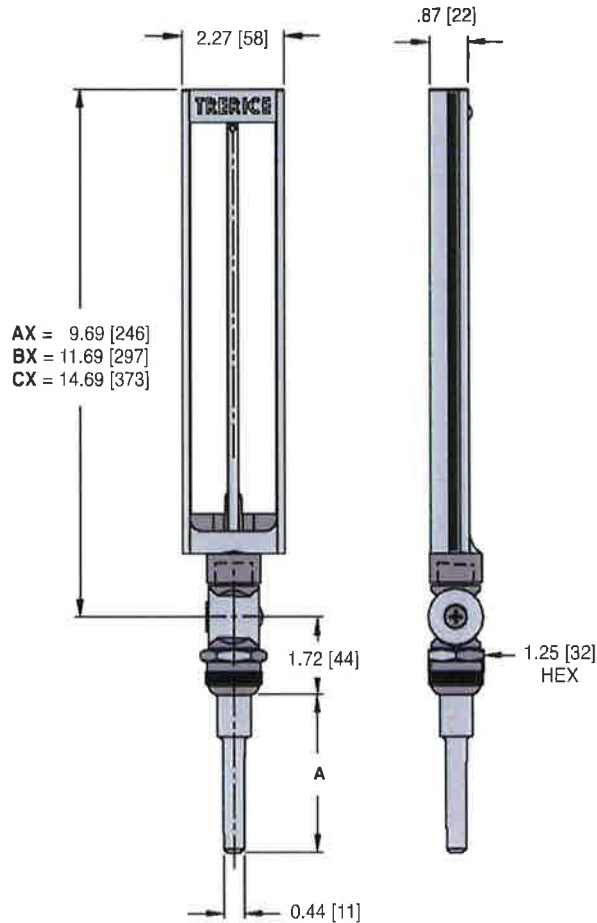
Model	Stem (Material)	Stem (Length)	Specific Range
AX9 7" Adjustable	1 Aluminum (standard)	403 3 1/2"	See Standard Ranges
BX9 9" Adjustable	2 Brass	406 6"	
CX9 12" Adjustable	3 304 SS	408 8"	
		512 12"	
	9 Air-Duct (Aluminum)*	006 6" Air-Duct	
		012 12" Air-Duct	

* Not for use with Thermowells

Adjustable Angle

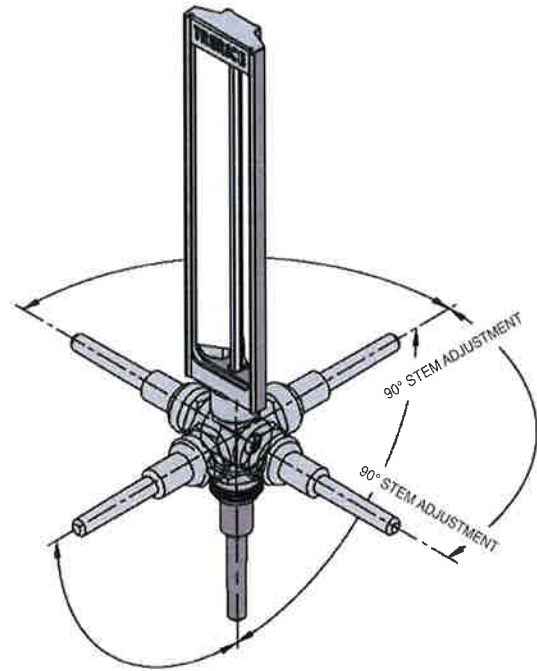
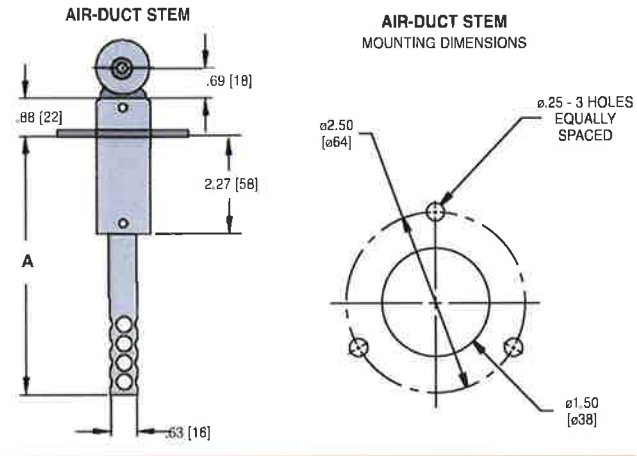
INDUSTRIAL THERMOMETERS

All dimensions are nominal.
Dimensions in [] are in millimeters.



AX = 9.69 [246]
BX = 11.69 [297]
CX = 14.69 [373]

(A) Stem Length	Dimension
3 1/2"	3.50 [88.9]
6"	6.00 [152.4]
8"	8.00 [203.2]
12"	12.00 [304.8]



Standard Ranges

Fahrenheit Scale		Celsius Scale		Dual Scale		Fahrenheit		Celsius	
Range Code	Range	Range Code	Range	Range Code	Range	Figure Intervals	Minor Divisions	Figure Intervals	Minor Divisions
01	-40° to 110°F	17	-40° to 40°C	41	-40° to 110°F & -40° to 40°C	10°	2°	5°	1°
02	0° to 100°F	24	-18° to 38°C	42	0° to 100°F & -18° to 38°C	5°	1°	5°	0.5°
03	30° to 130°F	25	0° to 55°C	43	30° to 130°F & 0° to 55°C	5°	1°	5°	1°
04	0° to 160°F	26	-18° to 70°C	44	0° to 160°F & -18° to 70°C	10°	2°	5°	1°
06	30° to 180°F	27	0° to 83°C	46	30° to 180°F & 0° to 83°C	10°	2°	5°	1°
07	30° to 240°F	19	0° to 115°C	47	30° to 240°F & 0° to 115°C	10°	2°	5°	1°
08	30° to 300°F	20	0° to 150°C	48	30° to 300°F & 0° to 150°C	10°	2°	10°	2°
09	50° to 400°F	28	10° to 205°C	49	50° to 400°F & 10° to 205°C	25°	5°	10°	2°
15	50° to 500°F	31	10° to 260°C	55	50° to 500°F & 10° to 260°C	25°	5°	10°	2°

Dual scale figure intervals may differ



WHA

Engineering Specification

Job Name AMS Charter School
 Job Location LR
 Engineer Ragsdale
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LF15M2-DR Series Water Hammer Arrestor

Specification

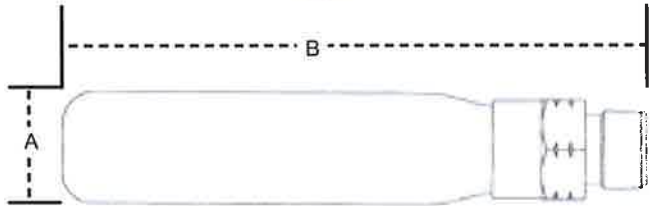
Watts LF15M2-DR Series lead free* pre-charged copper water hammer arrestor with polypropylene piston, EPDM o-ring seal, and brass NPT threaded connection.

Operating Pressure

Designed to operate on all domestic and commercial lines up to 150 psi (10.6 bar) working pressure.

Temperature Range

33°F to 180°F (0.5°C to 82°C)



Call customer service if you need assistance with technical details.

Size	Connection	Dimensions				PDI Size	Fixture Units
		A		B			
		Threaded	in.	mm	in.		
LF15M2-A-DR	1/2"	1 1/8	28.5	5 15/16	150.9	A	1-11
LF15M2-B-DR	3/4"	1 3/8	34.9	8 9/16	218.0	B	12-32
LF15M2-C-DR	1"	1 5/8	41.3	8 13/16	223.5	C	33-60
LF15M2-D-DR	1"	2 1/8	54.0	9 15/16	252.5	D	61-113
LF15M2-E-DR	1"	2 1/8	54.0	12 11/16	322.5	E	114-154
LF15M2-F-DR	1"	2 5/8	66.7	11 5/32	283.5	F	155-330

NOTICE

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 Canada: T: (888) 208-8927 • Watts.ca
 Latin America: T: (52) 55-4122-0138 • Watts.com

AAV



AIR ADMITTANCE VALVES TECHNICAL SPECIFICATION

Job Name	AMS Charter School	Item #	39016
Location	LR		
Engineer	Ragsdale	Contractor	Comfort Systems USA
PO #		Tag	AAV
Representative	Sanders Supply		

SPECIFICATIONS

The purpose of an Air Admittance Valve is to provide a method of allowing air to enter the plumbing drainage system without the use of a vent extended to open air and to prevent sewer gases from escaping into a building. An Air Admittance Valve is a one way valve designed to allow air to enter the plumbing drainage system when negative pressures develop in the piping system. The device shall close by gravity and seal the vent terminal at zero differential pressure (no flow conditions) and under positive internal pressures.

APPROVALS & LISTINGS

ASSE 1050 & 1051

ICC ESR-1664

NSF Standard 14

IAPMO – Classified Mark

ASTM D 2665/D 2661

International Plumbing Code (IPC) 2003

International Residential Code (IRC) 2003



FEATURES & MATERIALS

Tension Membrane	Silicone
Sweet Spot™	Sweet Spot™ technology opens at -0.01 psi and seals at 0 psi and above
Screening	Screening on air inlets to guard the seal
Grip	Protective sleeve provides grip for installation and keeps valve free from debris
Tested	100% functionally tested at 1/4" H ₂ O and 30" H ₂ O ensuring trouble free performance
Warranty	Limited Warranty



INSTALLATION

Read installation instructions prior to use of this product. Always consult local plumbing codes prior to installing an AAV. Individual, branch and circuit vents are permitted to terminate with a connection to a Sure-Vent® AAV. The Sure-Vent® AAV will only vent fixtures that are on the same floor and connect to a horizontal branch drain. The horizontal branch drain shall connect to the drainage stack a maximum of four branch intervals from the top of the stack. The Sure-Vent® AAV should be located within the maximum developed length permitted for the vent. The Sure-Vent® AAV must be located a minimum of 4 inches above the horizontal branch drain and 6 inches above any insulation material and within 15 degrees of vertical. Every structure in which plumbing is installed shall have at least one primary stack vent. The stack vent should run as directly as possible from the building drain through to the open air.

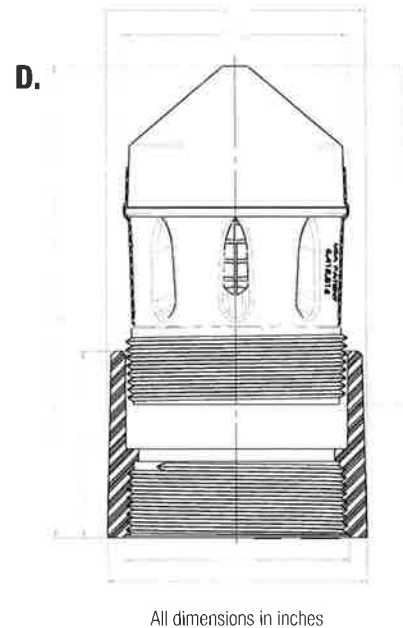
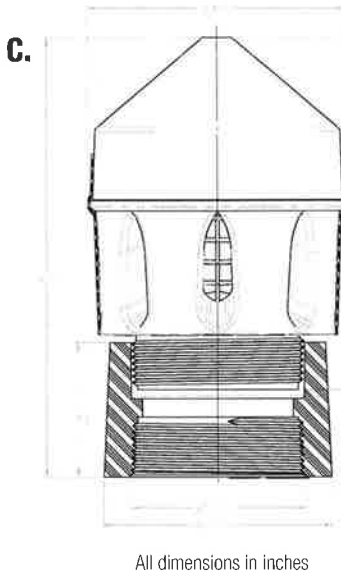
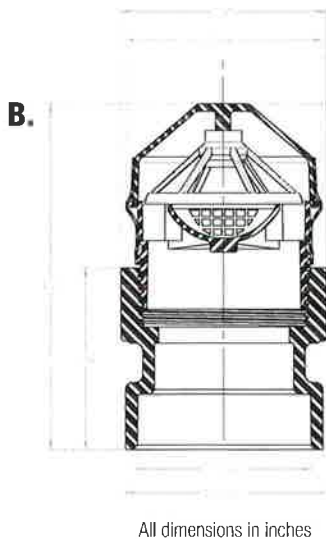
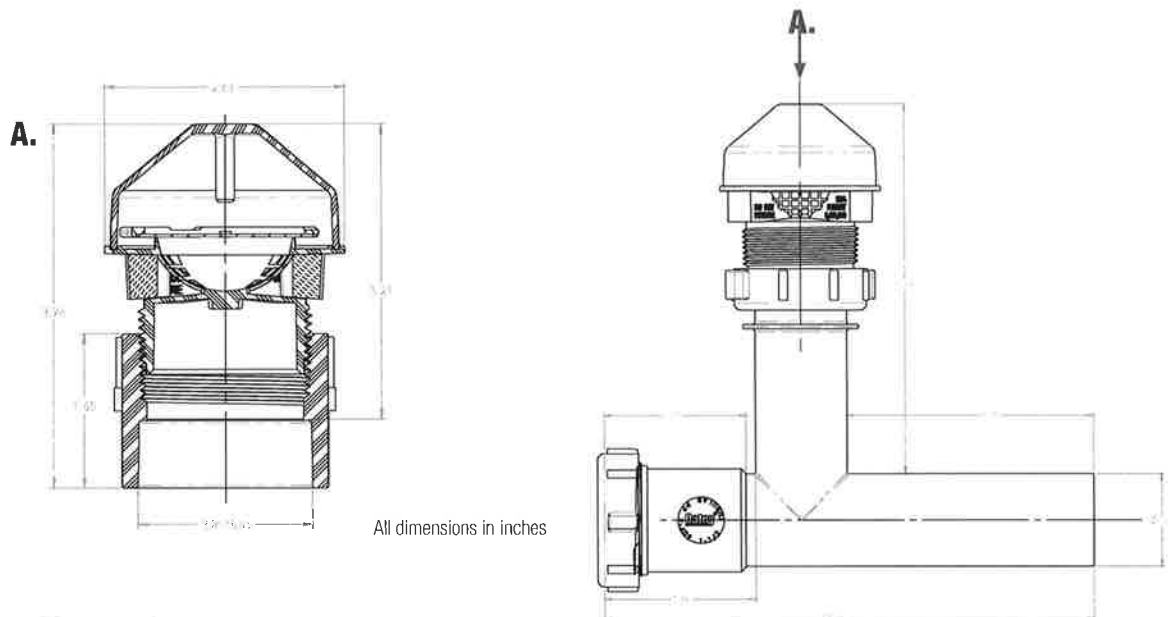
Apply approved pipe joint compound or thread seal tape to the male threads of the valve. Remove protective sleeve after installation.

Access BIM/Revit content through www.oatey.com



AIR ADMITTANCE VALVES TECHNICAL SPECIFICATION

	DFU Rating	Connection	Membrane	Adapter
A	20 Branch, 8 Stack	1.5" PVC NPT Threads	Silicone	1.5" PVC
B	160 Branch, 24 Stack	2" PVC NPT Threads	Silicone	1.5" x 2" PVC or ABS
C	160 Branch, 72 Stack	2" PVC NPT Threads	Silicone	2" x 3" PVC or ABS
D	160 Branch, 500 Stack	3" PVC NPT Threads	Silicone	3" x 4" PVC or ABS



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AIR ADMITTANCE VALVES TECHNICAL SPECIFICATION

PRODUCT SELECTOR

160 BRANCH, 24 STACK DFU SURE-VENT AIR ADMITTANCE VALVE WITH SCHEDULE 40 ADAPTER

✓	Product Number	Description	Pack
➔	39016	160 BRANCH, 24 STACK DFU SURE-VENT, 1.5 X 2 IN PVC SCHED 40 ADAPTER	6
	39018	160 BRANCH, 24 STACK DFU SURE-VENT, 1.5 X 2 IN ABS SCHED 40 ADAPTER	6
	39017	160 BRANCH, 24 STACK DFU SURE-VENT, 1.5 X 2 IN PVC SCHED 40 ADAPTER	50
	39019	160 BRANCH, 24 STACK DFU SURE-VENT, 1.5 X 2 IN ABS SCHED 40 ADAPTER	50
	39238	160 BRANCH, 24 STACK DFU SURE-VENT, 1.5 IN W/MECHANICAL ADAPTER	12
	39018C	160 BRANCH, 24 STACK DFU SURE-VENT, 1.5-2 IN ABS CANADA	6

160 BRANCH, 72 STACK DFU SURE-VENT AIR ADMITTANCE VALVE WITH SCHEDULE 40 ADAPTER

✓	Product Number	Description	Pack
	39220	160 BRANCH, 72 STACK DFU SURE-VENT, 2 X 3 IN PVC SCHED 40 ADAPTER	6
	39221	160 BRANCH, 72 STACK DFU SURE-VENT, 2 X 3 IN ABS SCHED 40 ADAPTER	6

160 BRANCH, 500 STACK DFU SURE-VENT AIR ADMITTANCE VALVE WITH SCHEDULE 40 ADAPTER

✓	Product Number	Description	Pack
	39223	160 BRANCH, 500 STACK DFU SURE-VENT, 3 X 4 IN PVC SCHED 40 ADAPTER	6
	39224	160 BRANCH, 500 STACK DFU SURE-VENT, 3 X 4 IN ABS SCHED 40 ADAPTER	6

Data is subject to manufacturing tolerances.

Access BIM/Revit content through www.oatey.com

PRV-1



Model 600XL

Water Pressure Reducing Valve with Integral By-pass Check Valve and Strainer

Application

Zurn Wilkins model 600XL is designed for installation on potable water lines to reduce high inlet pressure to a lower outlet pressure. The integral strainer makes this device most suitable for residential and commercial water systems requiring frequent cleaning because of sediment and debris. The direct acting integral by-pass design prevents buildup of excessive system pressure caused by thermal expansion. The balanced piston design enables the regulator to react in a smooth and responsive manner to changes in system flow demand, while at the same time, providing protection from inlet pressure changes.

Standards Compliance

- ASSE® Listed 1003
- IAPMO® Listed
- CSA® Certified
- City of Los Angeles Approved
- Meets the requirements of NSF/ANSI/CAN 61

Materials

Main valve body	Low Lead Cast Bronze	ASTM B 584
Access covers	Low Lead Cast Bronze	ASTM B 584
	Low Lead Brass	
Fasteners	Stainless Steel, 300 Series	
Stem & plunger	Low Lead Cast Bronze	ASTM B 584
	Low Lead Brass	
Elastomers	Buna Nitrile, (FDA Approved)	
	EPDM, (FDA Approved)	
Cap gaskets	Natural Vulcanized Fibre	
	Acetal (Delrin™)	
Strainer screen	Stainless Steel, 300 Series	Strainer
Seat	Stainless Steel, 300 Series	

Features

Sizes:	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Maximum working water pressure	300 psi
Maximum working water temperature	140°F
Reduced pressure range (standard)	25 psi to 75 psi
Factory preset	50 psi
Hydrostatic test pressure	300 psi
CPVC tailpiece: Max. hot water temp.	140°F @ 100 psi
	Cold water rated temp. 73.4°F @ 400 psi

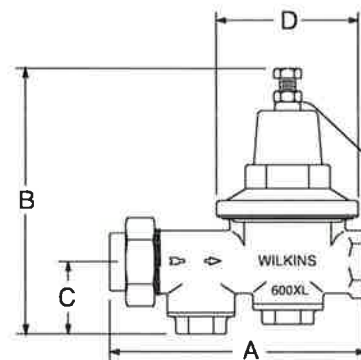
Dimensions & Weights (do not include pkg.)



Options

(Suffixes can be combined)

- standard with 20 mesh strainer screen, SU, FNPT
- HR - 75 psi to 125 psi spring range, factory set at 85 psi
- HLR - 10 psi to 125 psi spring range, factory set at 50 psi
- HTSTSC - 180°F maximum temp, stainless steel trim, spring, sealed cage
- C - copper sweat connection
- L - less integral by-pass check valve
- LU - less union assembly, female x female (3/4" & 1" only)
- LPV - 180°F maximum temp with 10 psi to 35 psi spring range, factory set at 20 psi
- SC - sealed cage bell housing and stainless steel adjustment screw
- 610XL - 400 psi inlet rating and 75 psi to 125 psi spring range, factory set at 85 psi
- CPVC - CPVC tailpiece connection (1/2" - 1")
- CH - Chrome stem & plunger
- P - tapped and plugged for gauge
- G - tapped and plugged with gauge



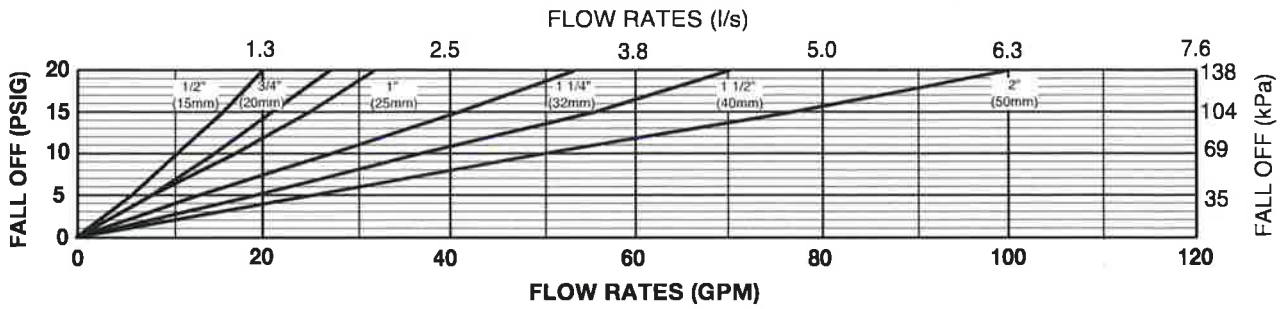
SIZE		CONNECTIONS	DIMENSIONS (approximate)								WEIGHT	
in.	mm		A		B		C		D		lbs.	kg.
1/2	15	SINGLE UNION	5 1/2	133	6 1/4	159	1 1/4	32	2 3/4	70	3	1.5
1/2	15	LESS UNION	4 1/2	114	6 1/4	159	1 1/4	32	2 3/4	70	3	1.5
3/4	20	SINGLE UNION	5 5/16	135	5 1/2	140	1 1/4	32	2 3/4	70	3	1.5
3/4	20	LESS UNION	4 7/8	121	5 1/2	140	1 1/4	32	2 3/4	70	3	1.5
1	25	SINGLE UNION	6 1/8	156	7 1/4	184	2	51	3 3/8	86	5	2.5
1	25	LESS UNION	5 3/4	146	7 1/4	184	2	51	3 3/8	86	5	2.5
1 1/4	32	SINGLE UNION	7 1/8	181	8	203	2	51	3 7/8	100	7	3.0
1 1/2	40	SINGLE UNION	9 1/8	232	10	254	2 1/2	64	5	127	13	6.0
2	50	SINGLE UNION	10 1/4	260	12	305	3	76	6 1/2	165	21	9.5



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Rev. J
Date: 05/22
Document No. REG-600XL
Product No. Model 600XL
Patent zurn.com/patents

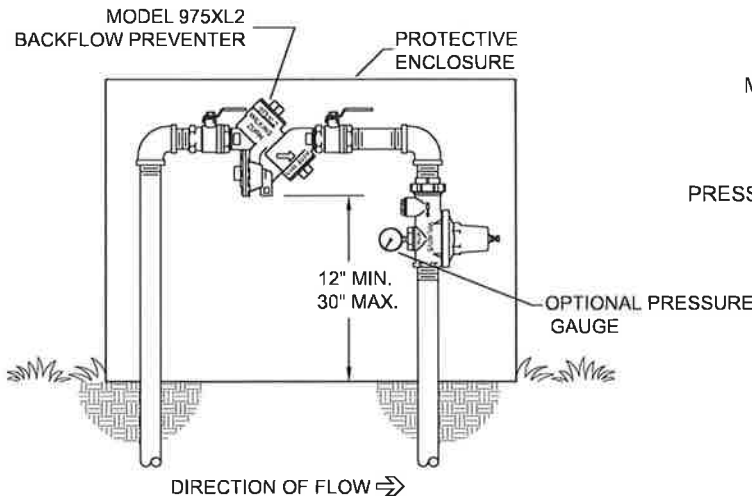
MODEL 600XL 1/2" THRU 2" (STANDARD & METRIC)



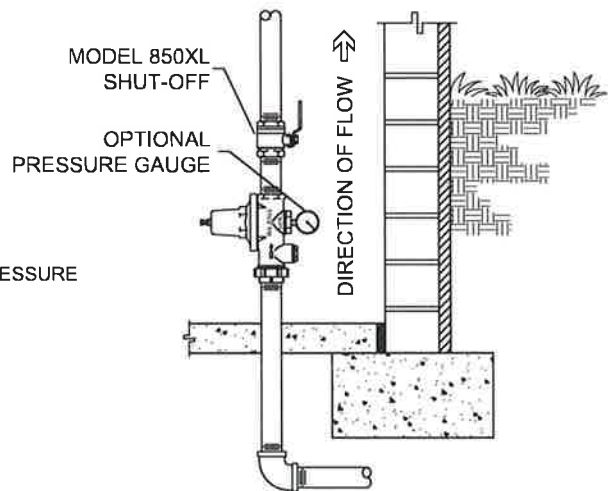
"Flow curves are based on a 50 psi pressure differential"

Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted in accordance with the latest edition of the Uniform Plumbing Code. The Model 600XL may be installed in any position. If installed in a pit, vault or inside application, specify the "SC" sealed cage option. Multiple installations are recommend for wide demand variations or where the desired pressure reduction is more than 4 to 1 (i.e.: 200 psi inlet reduced to 50 psi outlet). **CAUTION:** Anytime a reducing valve is adjusted, a pressure gauge must be used downstream to verify correct pressure setting. Do not bottom adjustment bolt on bell housing.



OUTDOOR INSTALLATION



VERTICAL INSTALLATION

Specifications

The Pressure Reducing Valve shall be certified to NSF/ANSI/CAN 61, consist of a low lead bronze body and bronze bell housing, shall have separate access covers for the plunger and strainer screen and shall have a bolt to adjust the downstream pressure. The Pressure Reducing Valve shall be of the balanced piston design and shall reduce pressure in both flow and no-flow conditions. The bronze bell housing and access caps shall be threaded to the body and shall not require the use of ferrous screws. The Pressure Reducing Valve shall be a ZURN WILKINS Model 600XL.



Model 600XL

Water Pressure Reducing Valve with Integral By-pass Check Valve and Strainer

Application

Zurn Wilkins model 600XL is designed for installation on potable water lines to reduce high inlet pressure to a lower outlet pressure. The integral strainer makes this device most suitable for residential and commercial water systems requiring frequent cleaning because of sediment and debris. The direct acting integral by-pass design prevents buildup of excessive system pressure caused by thermal expansion. The balanced piston design enables the regulator to react in a smooth and responsive manner to changes in system flow demand, while at the same time, providing protection from inlet pressure changes.

Standards Compliance

- ASSE® Listed 1003
- IAPMO® Listed
- CSA® Certified
- City of Los Angeles Approved
- Meets the requirements of NSF/ANSI/CAN 61

Materials

Main valve body	Low Lead Cast Bronze	ASTM B 584
Access covers	Low Lead Cast Bronze	ASTM B 584
	Low Lead Brass	
Fasteners	Stainless Steel, 300 Series	
Stem & plunger	Low Lead Cast Bronze	ASTM B 584
	Low Lead Brass	
Elastomers	Buna Nitrile, (FDA Approved)	
	EPDM, (FDA Approved)	
Cap gaskets	Natural Vulcanized Fibre	
	Acetal (Delrin™)	
Strainer screen	Stainless Steel, 300 Series	Strainer
Seat	Stainless Steel, 300 Series	

Features

Sizes:	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Maximum working water pressure	300 psi
Maximum working water temperature	140°F
Reduced pressure range (standard)	25 psi to 75 psi
Factory preset	50 psi
Hydrostatic test pressure	300 psi
CPVC tailpiece: Max. hot water temp.	140°F @ 100 psi
Cold water rated temp.	73.4°F @ 400 psi

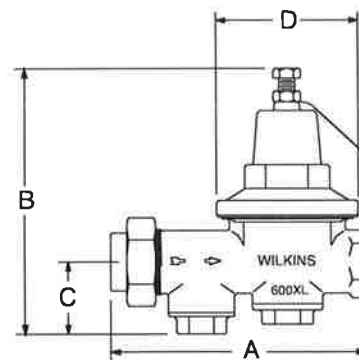
Dimensions & Weights (do not include pkg.)



Options

(Suffixes can be combined)

- standard with 20 mesh strainer screen, SU, FNPT
- HR - 75 psi to 125 psi spring range, factory set at 85 psi
- HLR - 10 psi to 125 psi spring range, factory set at 50 psi
- HTSTSC - 180°F maximum temp, stainless steel trim, spring, sealed cage
- C - copper sweat connection
- L - less integral by-pass check valve
- LU - less union assembly, female x female (3/4" & 1" only)
- LPV - 180°F maximum temp with 10 psi to 35 psi spring range, factory set at 20 psi
- SC - sealed cage bell housing and stainless steel adjustment screw
- 610XL - 400 psi inlet rating and 75 psi to 125 psi spring range, factory set at 85 psi
- CPVC - CPVC tailpiece connection (1/2" - 1")
- CH - Chrome stem & plunger
- P - tapped and plugged for gauge
- G - tapped and plugged with gauge

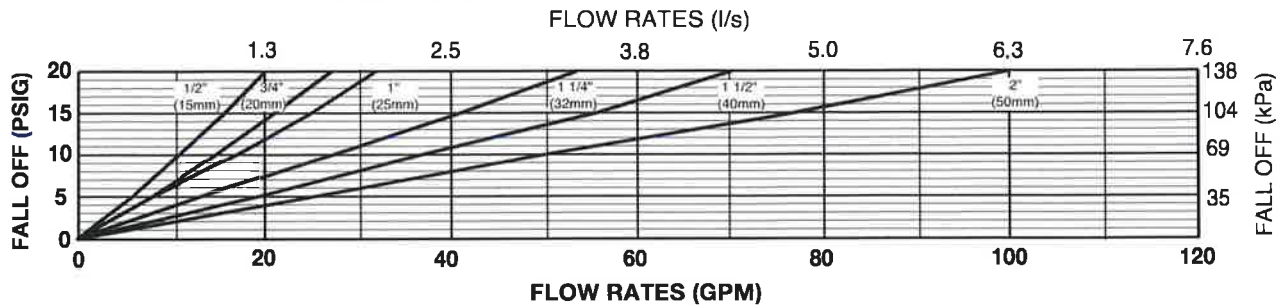


SIZE		CONNECTIONS	DIMENSIONS (approximate)								WEIGHT	
			A		B		C		D			
in.	mm		in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg.
1/2	15	SINGLE UNION	5 1/2	133	6 1/4	159	1 1/4	32	2 3/4	70	3	1.5
1/2	15	LESS UNION	4 1/2	114	6 1/4	159	1 1/4	32	2 3/4	70	3	1.5
3/4	20	SINGLE UNION	5 5/16	135	5 1/2	140	1 1/4	32	2 3/4	70	3	1.5
3/4	20	LESS UNION	4 7/8	121	5 1/2	140	1 1/4	32	2 3/4	70	3	1.5
1	25	SINGLE UNION	6 1/8	156	7 1/4	184	2	51	3 3/8	86	5	2.5
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1 1/4	32	SINGLE UNION	7 1/8	181	8	203	2	51	3 7/8	100	7	3.0
1 1/2	40	SINGLE UNION	9 1/8	232	10	254	2 1/2	64	5	127	13	6.0
2	50	SINGLE UNION	10 1/4	260	12	305	3	76	6 1/2	165	21	9.5

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Rev. J
Date: 05/22
Document No. REG-600XL
Product No. Model 600XL
Patent zurn.com/patents

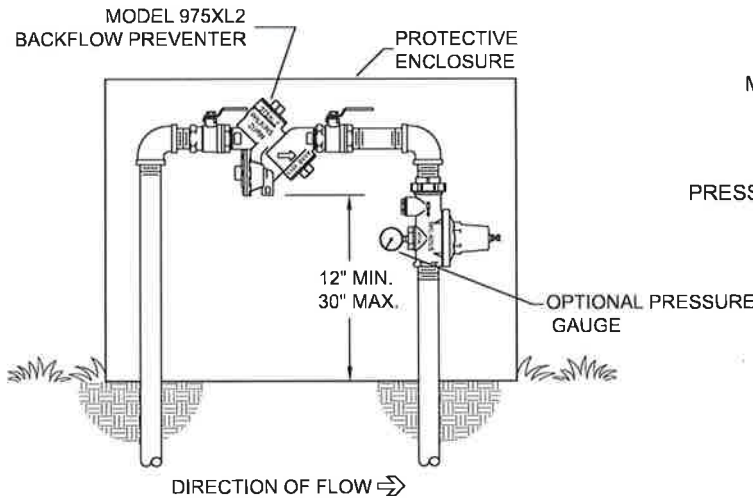
MODEL 600XL 1/2" THRU 2" (STANDARD & METRIC)



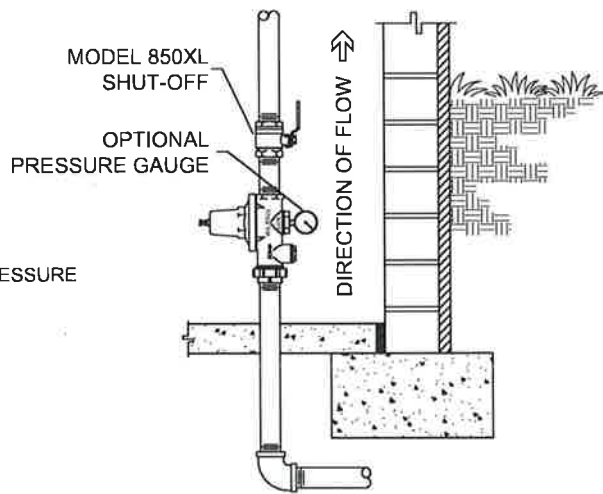
"Flow curves are based on a 50 psi pressure differential"

Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted in accordance with the latest edition of the Uniform Plumbing Code. The Model 600XL may be installed in any position. If installed in a pit, vault or inside application, specify the "SC" sealed cage option. Multiple installations are recommend for wide demand variations or where the desired pressure reduction is more than 4 to 1 (i.e.: 200 psi inlet reduced to 50 psi outlet). **CAUTION:** Anytime a reducing valve is adjusted, a pressure gauge must be used downstream to verify correct pressure setting. Do not bottom adjustment bolt on bell housing.



OUTDOOR INSTALLATION



VERTICAL INSTALLATION

Specifications

The Pressure Reducing Valve shall be certified to NSF/ANSI/CAN 61, consist of a low lead bronze body and bronze bell housing, shall have separate access covers for the plunger and strainer screen and shall have a bolt to adjust the downstream pressure. The Pressure Reducing Valve shall be of the balanced piston design and shall reduce pressure in both flow and no-flow conditions. The bronze bell housing and access caps shall be threaded to the body and shall not require the use of ferrous screws. The Pressure Reducing Valve shall be a ZURN WILKINS Model 600XL.



Model ZW209

Pressure Reducing Valve

Application

The Zurn Wilkins Model ZW209 Pilot Operated Pressure Reducing Valve is designed for many applications where the reduction of high inlet pressures to safe and stable outlet pressure is required. The pilot assembly reacts to changes in downstream pressure allowing the main valve to modulate between the closed and open position ensuring a constant downstream set pressure. Once the downstream pressure reaches the pilot setting, the main valve will seal shut preventing damage downstream. Pressure regulation is not dependent upon flow rate, resulting in minimal pressure loss through the valve. In addition the Model ZW209 comes standard with epoxy coating internally and externally for corrosion protection, as well as isolation valves and pressure gauges for quick and easy maintenance or repair.

Standards Compliance:

- ANSI/AWWA C530
- Meets the requirements of NSF/ANSI/CAN 61* (0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

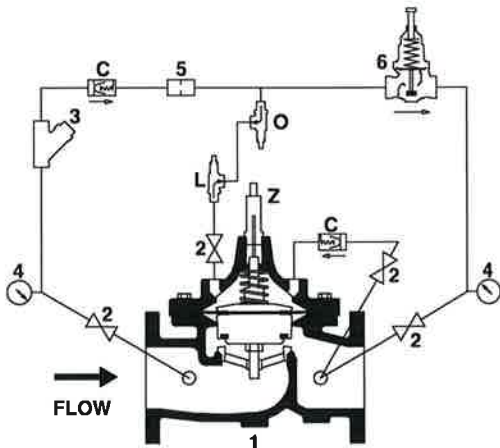
Materials

Main Valve Body	Ductile Iron ASTM A536
Main Valve Bonnet	Ductile Iron ASTM A536
Disc Guide	Stainless Steel
Seat	Stainless Steel
Disc	Buna-N Rubber
Diaphragm	Nylon Reinforced Buna-N
Stem	Stainless Steel
Spring	Stainless Steel

*The closing speed control (optional) on this valve should always be open at least three (3) turns off its seat.

Schematic Diagram

Item	Description of Standard Features
1	Main Valve
2	850XL Isolation Valve
3	SXL "Wye" Type Strainer
4	Pressure Gauge
5	Restriction Fitting
6	PRXL Pressure Reducing Control



BODY CONFIGURATIONS		GLOBE STYLE BODY		ANGLE STYLE BODY
END CONNECTION	PRESSURE RATING	FULL PORT	REDUCED PORT	
Threaded	400 psi max.	1 1/4"-3"	n/a	1 1/4"-3"
Flanged	ANSI Class 150, 250 psi max.	1 1/2"-16"	3"-10"	1 1/2"-10"
	ANSI Class 300, 400 psi max.			
Grooved	300 psi max.	1 1/2"-10"	n/a	1 1/2"-10"

MINIMUM INLET PRESSURE 10 PSI

TEMPERATURE RATING: Water 33°F to 140°F
 PILOT SPRING RANGE: 15-120 psi

Standard Features

- Epoxy Coated, FDA Approved
- Pilot Assembly
 - "Wye" Type Strainer
 - Opening Speed Control (sizes 1 1/4" - 4")
 - Isolation Valves
- Inlet and Outlet Pressure Gauges
- ANSI Class 150 Flanges
- Copper Tubing and Brass Fittings

Options (Add suffix letters to ZW209)

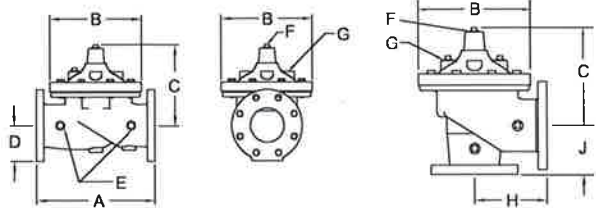
- Function
 - C - 40XL2 Hydraulic Check with Isolation Valve
 - L - SC1 Closing Speed Control*
 - O - SC1 Opening Speed Control (Standard 1 1/4" - 4")
- Body
 - A - Angle Style Body
 - R - Reduced Port Body
- Connections
 - G - IPS Grooved
 - TH - NPT Threaded
 - Y - ANSI Class 300 Flanges
- Main Valve Options
 - V - Viton Rubber Internals, rated 180°F (1-1/4"-6", only available with "LP" or "HP" Option)
 - Z - ZPI Visual Position Indicator
- Pilot System
 - LP - 5-25 psi Low Pressure Range PV-PRD Pilot (replaces PRXL)
 - HP - 30-300 psi High Pressure Range PV-PRD Pilot (replaces PRXL)
 - SP - All Stainless Steel Pilotry (replaces all brass fittings, pilot valve and copper tubing. "GL" Option included)
 - SH - Stainless Steel Braided Hoses (only replaces Copper Tubing)
 - RV - Pilot on Reverse Side
 - GL - Liquid Filled Gauge
 - SO - Limit Switch Open Trip
 - SC - Limit Switch Closed Trip
 - SD - Limit Switch Dual Trip

Globe and Angle Main Valve Dimensions

DIM	FULL PORT	VALVE SIZE INCHES (mm)											
		1 1/4 (32)	1 1/2 (38)	2 (50)	2 1/2 (65)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	14 (350)	16 (400)
A	Threaded	7 1/4	7 1/4	9 7/16	11	12 1/2							
	Class 150 Flange		8 1/2	9 3/8	11	12	15	20	25 3/8	29 3/4	34	39	41 3/8
	Class 300 Flange		9	10	11 5/8	13 1/4	15 5/8	21	26 7/16	31 1/8	35 1/2	40 1/2	43 1/2
	Grooved		8 1/2	9	11	12 1/2	15	20	25 3/8	29 3/4			
B	Diameter	5 5/8	5 5/8	6 3/4	8	9 3/16	11 11/16	15 3/4	20 1/8	23 11/16	27 1/2	31 3/4	34 1/2
C	Max.	5 3/4	5 3/4	6 3/16	7 3/8	8	10 3/16	12 5/16	15 9/16	17 5/8	20 3/16	22 13/16	25 7/8
D	Threaded/Grooved	1 3/8	1 3/8	1 3/4	2 1/8	2 9/16	3 7/16	5	5	5 13/16	6 3/4	8 7/8	8 13/16
	Class 150 Flange		2 1/2	3	3 1/2	3 3/4	4 1/2	5 1/2	6 3/4	8	9 1/2	10 1/2	11 3/4
	Class 300 Flange		3	3 1/4	3 3/4	4 1/8	5	6 1/4	7 1/2	8 3/4	10 1/4	11 1/2	12 3/4
E	NPT Body Tap	3/8	3/8	3/8	1/2	1/2	3/4	3/4	1	1	1	1	1
F	NPT Cvr. Plug Tap	1/2	1/2	1/2	1/2	1/2	3/4	3/4	1	1	1	1	1
G	NPT Cover Tap	3/8	3/8	3/8	1/2	1/2	3/4	3/4	1	1	1	1	1
H	Threaded	3 1/4	3 1/4	4 3/4	5 1/2	6 1/4							
	Class 150 Flange		4	4 3/4	5 1/2	6	7 1/2	10	12 11/16	14 7/8			
	Class 300 Flange		4 1/4	5	6	6 7/16	8	10 1/2	13 1/4	15 9/16			
	Grooved		4 7/16	4 3/4	5 1/2	6	7 1/2	10	12 11/16	14 7/8			
J	Threaded	1 15/16	1 15/16	3 1/4	4	4 1/2							
	Class 150 Flange		4	3 1/4	4	4	5	6	8	8 5/8			
	Class 300 Flange		4 1/4	3 1/2	4 5/16	4 7/16	5 5/16	6 1/2	8 1/2	9 5/16			
	Grooved		3 3/16	3 1/4	4	4 1/4	5	6	8	8 5/8			
Valve Stem Internal Thread		10-32	10-32	10-32	10-32	1/4-20	1/4-20	1/4-20	3/8-16	3/8-16	3/8-16	3/8-16	3/8-16
Stem Travel (in)		7/16	7/16	3/4	7/8	1	1 3/16	1 3/4	2 3/8	2 13/16	3 7/16	3 13/16	4 5/16
Approx. Wt. (lbs)		22	26	36	55	70	130	240	440	720	820	1200	1550

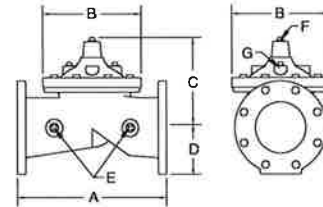
Reduced Port Main Valve Dimensions

DIM		VALVE SIZE INCHES (mm)				
		3" (80)	4" (100)	6" (150)	8" (200)	10" (250)
A	Class 150 Flange	10 1/4	14	17 3/4	21 7/16	26
	Class 300 Flange	11	14 1/2	18 11/16	22 7/16	27 7/16
B	Dia	6 3/4	9 3/16	11 11/16	15 3/4	20 1/8
C	Max	6 3/8	8 7/16	12 5/16	13 1/4	16 3/4
D	Class 150 Flange	3 3/4	4 1/2	5 1/2	6 3/4	8
	Class 300 Flange	4 1/8	5	6 1/4	7 1/2	8 3/4
E	NPT Body Tap	3/8	1/2	3/4	3/4	1
F	NPT Cvr. Plug Tap	3/8	1/2	3/4	3/4	1
G	NPT Cvr. Tap	3/8	1/2	3/4	3/4	1
Valve Stem Internal Thread		10-32	1/4-20	1/4-20	3/8-16	3/8-16
Stem Travel (in)		3/4	1	1 1/5	1 3/4	2 3/8
Approx. Wt. (Lbs)		35	80	140	275	480



Globe Style Body

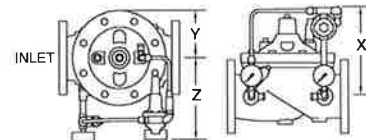
Angle Style Body



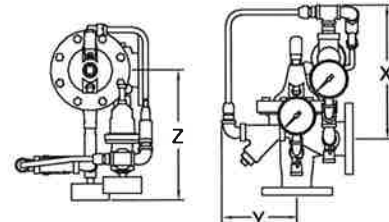
Reduced Port Body

Pilot System Dimensions

PILOT SYSTEM DIMENSIONS		VALVE SIZE INCHES (mm)											
DIM		1-1/4 (32)	1-1/2 (40)	2" (50)	2-1/2" (65)	3" (80)	4" (100)	6" (150)	8" (200)	10" (250)	12" (300)	14" (350)	16" (400)
Full Port Body	X	6 1/2	8 1/2	8 1/2	8 1/2	9 1/2	12	13	14	17 1/2	20	23	26
	Y	4	4	3 1/2	4	4 1/2	6	8	10	12	14	16	17 1/2
	Z	8 1/2	8 1/2	9	9	9 1/2	10	11 1/2	13	14 1/2	17	19	20 1/2
Reduced Port Body	X					8 1/2	9 1/2	12	13	14			
	Y					3 1/2	4 1/2	6	8	10			
	Z					9	9 1/2	10	11 1/2	13			
Angle Body	X	9	9	9	9	10	12 1/2	13 1/2	14 1/2	18			
	Y	5	5	5	5	5	6	8	10	12			
	Z	9	9	9 1/2	9 1/2	10	10 1/2	12	13 1/2	15			



Globe Pilot System Dimensions



Angle Pilot System Dimensions

Flow Characteristics



Full Port Globe and Angle Valve size	inches (mm)	1 1/4 (32)	1 1/2 (40)	2 (50)	2 1/2 (65)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)	12 (300)	14 (350)	16 (400)
Reduced Port Globe Valve Size	inches (mm)			3 (80)		4 (100)	6 (150)	8 (200)	10 (250)				
Suggested Flow (GPM)	Max. Continuous	93	125	210	300	460	800	1800	3100	4900	7000	8400	11000
	Max Intermittent	120	160	260	375	600	1000	2250	4000	6150	8700	10500	13800
	Min. Continuous	10	10	15	20	30	50	115	200	300	435	530	690
Suggested Flow (Liters/sec)	Max. Continuous	6	8	13	19	29	50	113	195	309	550	665	870
	Max. Intermittent	7.6	10	16.4	23	37	62	142	246	388	440	530	95
	Min. Continuous	.6	.6	0.9	1.3	1.9	3.2	7.2	13	19	28	33	43

Suggested flow calculations are based on flow through Schedule 40 Pipe. Maximum continuous flow is approx. 20 ft./sec (6.1 meters/sec) & maximum intermittent is approx. 25 ft./sec (7.6 meters/sec) and minimum continuous flow is approx. 1.25 ft./sec (0.4 meters/sec). Many factors should be considered in sizing pressure reducing valves including inlet pressure, outlet pressure and flow rates.

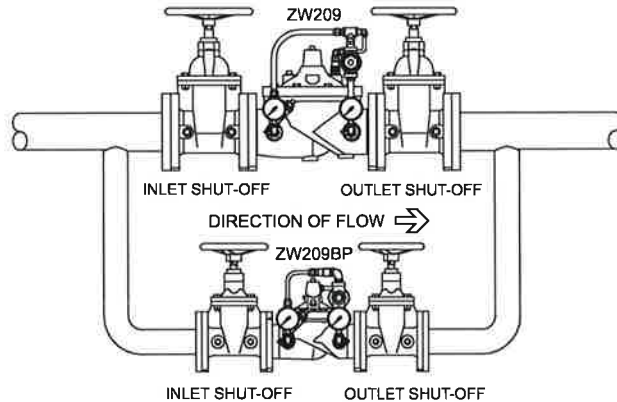
Notice:

In cases where design flow falls below the minimum continuous flow rate, a low flow by-pass shall be installed.

Operation

The Model ZW209 utilizes a pressure reducing pilot valve that installs on the discharge side of the control circuitry. The pilot is a direct acting, normally open, spring loaded, diaphragm actuated valve. The operation of the ZW209 begins with accurately sizing the valve, then fine tuning the control circuit by adjusting the pilot spring to the desired downstream pressure. Inlet pressure is piped to the inlet port of the pressure reducing pilot. A sensing line runs internally from the discharge side of the pilot to its lower control chamber under the diaphragm. Thus, downstream pressure exceeding the preset acts to close the pilot while the adjustable spring seeks to keep it open. The result is a modulating action in the pilot that is transmitted to the bonnet of the main valve. This creates a mirror modulation of the diaphragm assembly in the main valve. Downstream pressure is maintained within narrow limits regardless of changing flow rates or varying inlet pressures.

Typical Installation



Caution: The recommended installation orientation for ACVs is horizontal, with the valve cover up. 6" and larger valves should only be installed horizontally, with the valve cover up, due to the difficulty of properly bleeding air out of the cover and performing maintenance on valves installed in the vertical orientation.

Specifications

The Pressure Reducing Valve shall be a diaphragm actuated, pilot controlled valve. The main valve body shall be ductile iron ASTM A 536. The stem of the basic valve shall be guided top and bottom. The diaphragm shall not be used as a seating surface. All internal and external ferrous surfaces shall be coated with a high quality, fusion epoxy coating. The pilot control shall be field adjustable from 15 psi to 120 psi. The valve shall be certified to NSF/ANSI/CAN Standard 61. The Pressure Reducing Valve shall be a ZURN WILKINS Model ZW209.

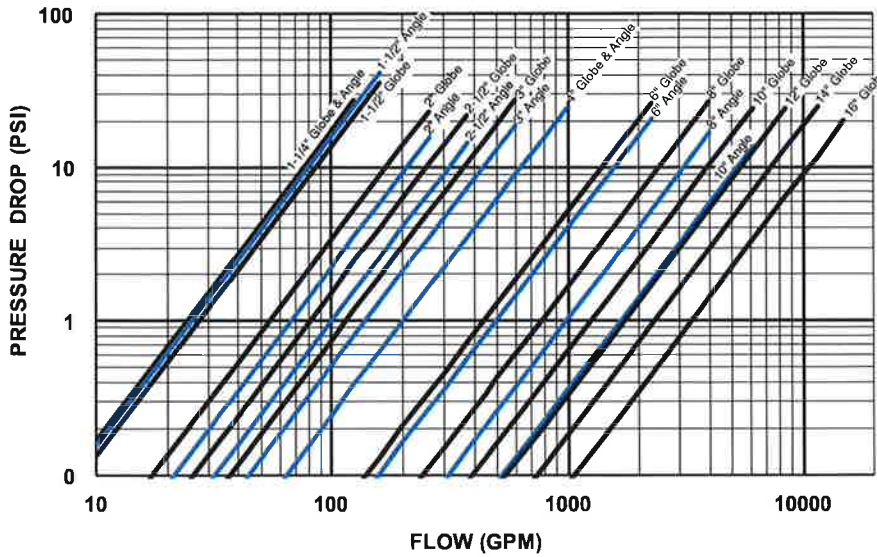
Job Name AMS Charter School

Contractor Comfort Systems USA

Job Location LR

Engineer Ragsdale

BODY MINIMUM FRICTION LOSS

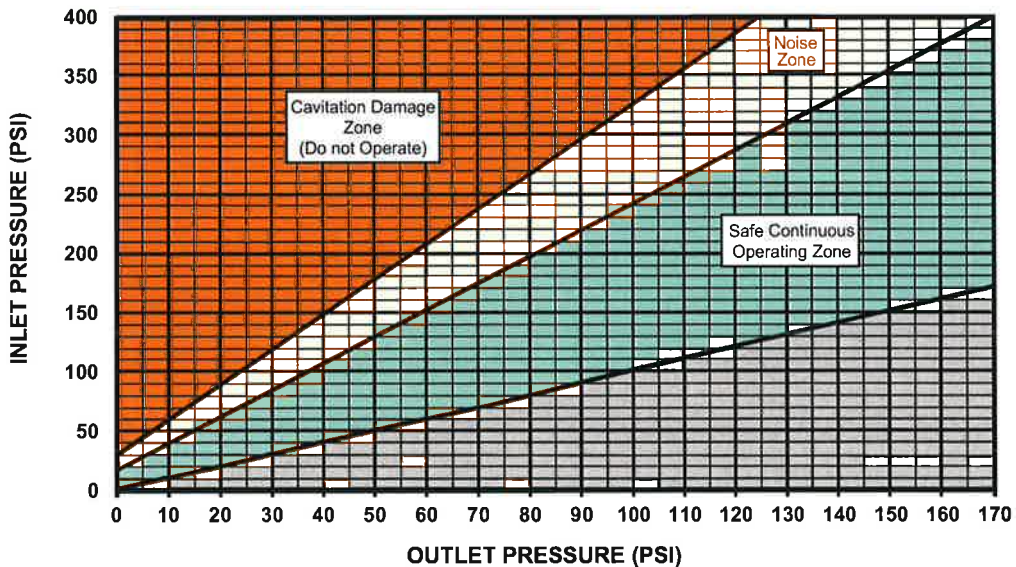


*** Notes for Body Minimum Friction Loss Chart:**

Minimum inlet pressure is 10 psi higher than set point or the additional body friction loss intended flow, whichever is higher. (friction loss may be important at flows above 20 ft/s)

Example: A 6" valve intended to flow 2000 GPM at 120 psi has a friction loss of 20 psi at 2000 GPM. The minimum inlet pressure would be $120 + 20 = 140$ psi. When inlet pressure is below set point, the outlet pressure will be the pressure at the inlet minus the friction loss.

WATERWORKS PRESSURE REDUCTION LIMIT CHART



Notes for Pressure Reduction Limit Chart: Determine if the outlet reduced flowing pressure is within the safe operating zone for your Zurn Automatic Control Valve. First, find the system inlet pressure on the left axis and draw a horizontal line from that point across the chart. Then find the outlet reduced flowing pressure on the bottom axis and draw a vertical line up to where it meets the first line. The point where the lines intersect should be in the green "Safe Continuous Operating Zone" below and to the right of the yellow "Noise Zone". If the operating point is in the area labeled "Noise Zone" or "Cavitation Damage Zone", the valve seal ring, plunger, or body may be damaged. The lifespan of the valve will be reduced. Damage from cavitation to internal components may cause high pressure downstream and/or external leaks. To move out of the cavitation or noise zone you will need to place two valves in series in order to safely reduce pressure. Use the chart to pick an intermediate pressure in the green zone that you will set the first valve in series to. The intermediate pressure you pick will then become the inlet pressure for the 2nd valve and you can verify it will be in the green zone using the chart.

COTG

Engineering Specification

Job Name **AMS Charter School**
 Job Location **LR**
 Engineer **Ragsdale**
 Approval _____
 Tag **COTG**

Contractor **Comfort Systems USA**
 Approval _____
 Contractor's P.O. No. _____
 Representative **Sanders Supply**

CO-200-RX-4

Floor Cleanout with Ductile Iron Top

Specification

Watts Drainage CO-200-RX-4 epoxy coated cast iron floor cleanout with 5"(127) round adjustable gasketed heavy duty ductile iron top, removable gas tight gasketed brass cleanout plug, 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 checked="" type="checkbox"/>
X	Inside Caulk	<input type="checkbox"/>

Options		
Suffix	Description	
-C	Membrane Clamp	<input type="checkbox"/>
-6	Vandal Proof	<input type="checkbox"/>
-13	Galvanized Body	<input type="checkbox"/>

Optional Body Material		
Suffix	Description	
-60	PVC Body w/Poly Plug	<input type="checkbox"/>
-61	ABS Body w/Poly Plug	<input type="checkbox"/>

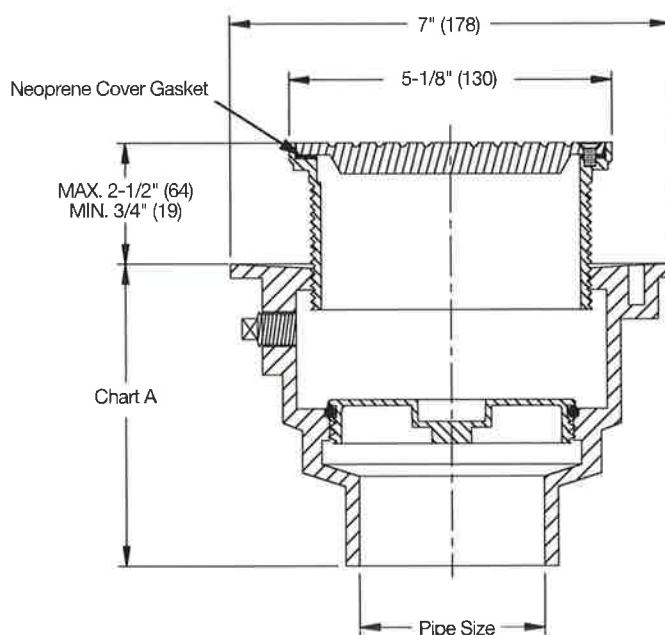


Chart A

Pipe Size	NH(MJ)	P	60/61
	No Hub	Push On	PVC/ABS
2"	4-1/2" (114)	5-1/2" (140)	4" (102)
3"	4-1/2" (114)	5-1/2" (140)	4" (102)
4"	4-3/4" (121)	5-1/2" (140)	4" (102)

Load Rating
*XHD

*The load classifications are in accordance with the American National Standards ASME A112.21.1M ASME Ratings are as follows:
 XHD - Safe Live Load 7500-10000 lbs.(3375-4500kg)
 The above 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.



WCO

Engineering Specification

Job Name **AMS Charter School**
 Job Location **LR**
 Engineer **Ragsdale**
 Approval _____
 Tag **WCO**

Contractor **Comfort Systems USA**
 Approval _____
 Contractor's P.O. No. _____
 Representative **Sanders Supply**

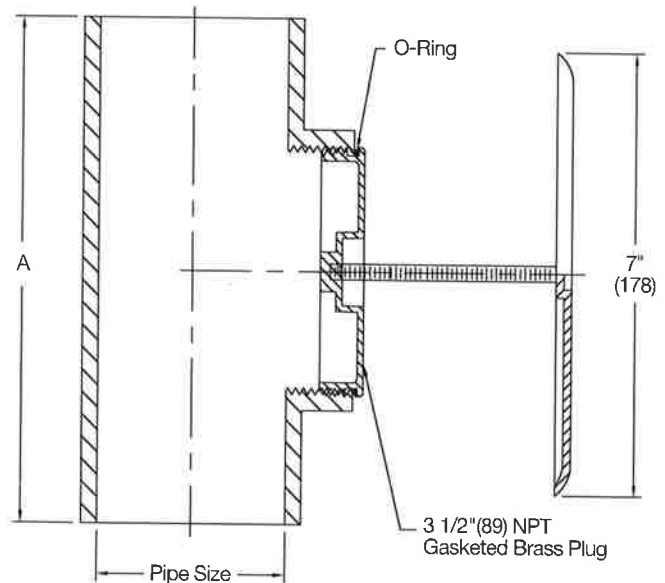
CO-460-RD Stack Cleanout with Brass Plug & Stainless Steel Cover

Specification

Watts CO-460-RD cast iron stack cleanout with gasketed brass countersunk plug, stainless steel access cover, vandal proof stainless steel screw, and no hub connections.



PIPE SIZE	"A" HEIGHT
2"(51)	6 1/4"(159)
3"(76)	7 3/4"(197)
4"(102)	9"(229)



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

NOTICE

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FCO

Engineering Specification

Job Name **AMS Charter School**
 Job Location **LR**
 Engineer **Ragsdale**
 Approval _____
 Tag **FCO**

Contractor **Comfort Systems USA**
 Approval _____
 Contractor's P.O. No. _____
 Representative **Sanders Supply**

CO-200-R Floor Cleanout with Round Top Specification

Watts CO-200-R epoxy coated cast iron floor cleanout with 5"(127) round adjustable gasketed nickel bronze top, removable gas tight gasketed brass cleanout plug, and no hub (standard) outlet.

Pipe Sizing (Select One)		
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 (Select One)		
Suffix	Description	
NH	No Hub (MJ)	<input type="checkbox"/>
P	Push On	<input checked="" type="checkbox"/>
X	Inside Caulk	<input type="checkbox"/>

Options (Select One)		
Suffix	Description	
-C	Membrane Clamp	<input type="checkbox"/>
-6	Vandal Proof	<input type="checkbox"/>
-13	Galvanized Body	<input type="checkbox"/>
-CF	Carpet Clamping Flange	<input type="checkbox"/>
-SO	Side Outlet	<input type="checkbox"/>

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

Load Rating
MD

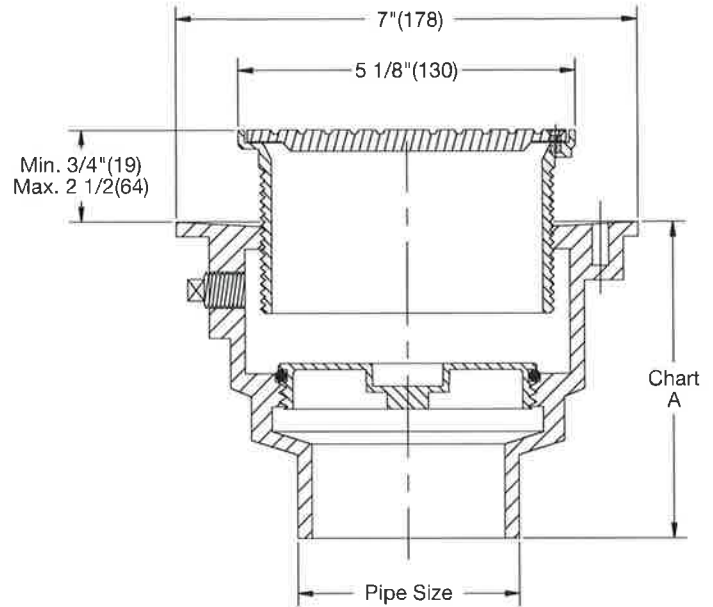


Chart A

Pipe Size	NH	Push-On	PVC/ABS
2"(51)	4 3/4"(121)	5 1/2"(140)	4"(102)
3"(76)	4 3/4"(121)	5 1/2"(140)	4"(102)
4"(102)	4 3/4"(121)	5 1/2"(140)	4"(102)

NOTICE

The load classifications are in accordance with the American National Standards ASME A112.36.2M-91(R2012) ASME Ratings are as follows:
 MD - Safe Live Load 2000-4999 lbs. (900-2250 kg)
 The above 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.

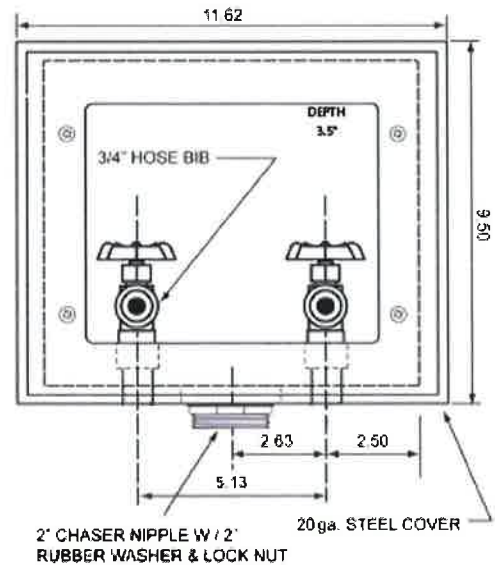
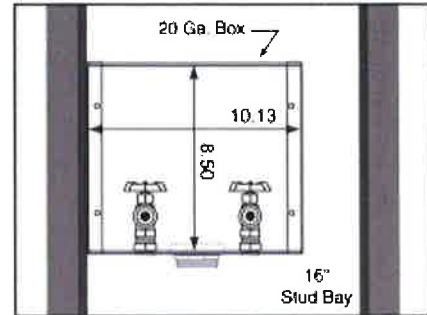


USA: T: (800) 338-2581 • F: (828) 248-3929 • Watts.com
 Canada: T: (888) 208-8927 • F: (905) 481-2316 • Watts.ca
 Latin America: T: (52) 55-4122-0138 • Watts.com

WB-1



Center Drain Galvanized WMOB
with Domestic Valves



Specifications:

Furnish and install galvanized center drain washing machine outlet box. Unit shall be Guy Gray product code as manufacture by IPS Corporation.

Box Material:

G90 Hot Dipped Galvanized Steel (unpainted)
20 gauge box with 20 gauge faceplate

Valve & Drain Options:

Domestic Valve with 1/2" MIP/Sweat, PEX or CPVC connection furnished. 1-1/2" or 2" Threaded Drain. Valves comply with ASME A112.18.1.

Product Code #	Product Description	Model Number	Units/Case
82026	Domestic Valve w/1/2" MIP/Sweat Conx. Valve, 1-1/2" Threaded Drain Fitting	B150	6
82032	Domestic Valve w/1/2" MIP/Sweat Conx. Valve, 2" Threaded Drain Fitting	B200	6
82036	Top Mount 1/2" MIP/Sweat Conx. Valves, 2" Threaded Drain Fitting	BB200TS	6
81974	Domestic Valve w/1/2" Pex Conx., 2" Threaded Drain	B200X	6
81975	Domestic Valve w/1/2" CPVC Conx., 2" Threaded Drain	B200C	6
81957	Outlet Box, less valves, valve holes already punched	B200LV	6
96997	Tamper resistant cover for Models B, BB, WB, FB & BIM	BTRC	6



K-08 Supplies



McGuire Manufacturing Co., Inc.

60 Grandview Court
 Cheshire, Connecticut 06410
 (203) 699-1801 Fax (203) 699-1813
 customerservice@mcguiremfg.com mcguiremfg.com

PRODUCT SPECIFICATION

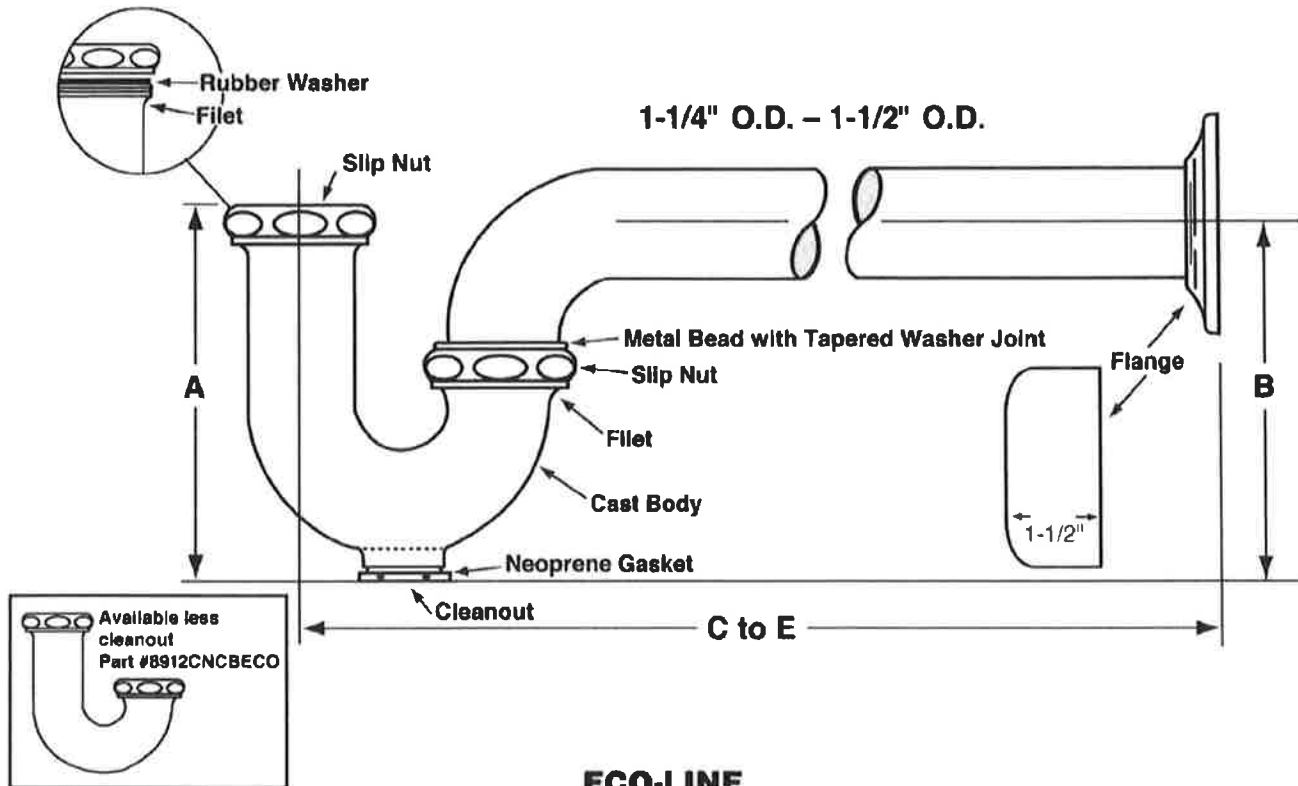
Part No.

C8912CECO

**Cast Body P-Trap With
 or Without Cleanout**

Job Name:

Submittal Number:



ECO-LINE

ROUGHING MEASUREMENTS							
MODEL NO.	TRAP DIMENSIONS		A	B	C to E	FLANGE	SLIP NUT
	INLET	OUTLET					
C8912CECO	1-1/2", 1-1/4"	1-1/2"	5"	5"	10-1/2"	Shallow	Zinc

**FED SPEC W.W.P. 541
 CAST BRASS P-TRAP
 MINIMUM SEAL 2"**



ASME A112.18.2/CSA B125.2

Specifications:

Chrome plated P-Trap shall be cast brass body, with or without cleanout, with 17 gauge seamless tubular wall bend and flange.



WARNING:

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



McGuire Manufacturing Co., Inc.
 60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

PRODUCT SPECIFICATION

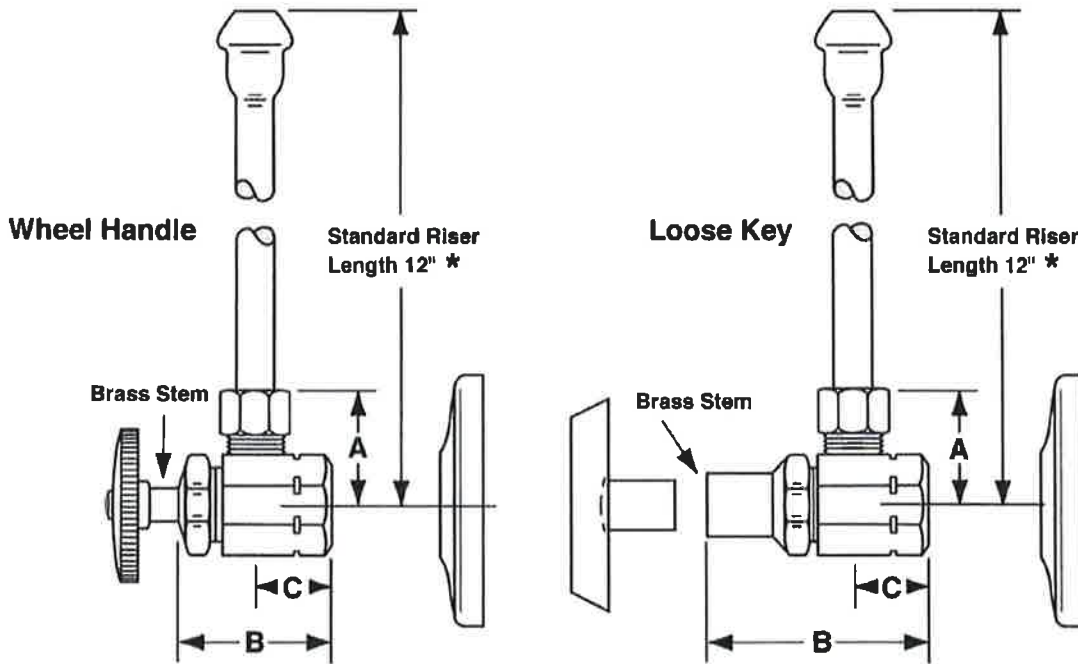
Part No.

LF2165, **LF2165LK**,
 LF2167, LF2167LK

Lavatory Supply
1/2" I.P.S. x O.D.

Job Name:

Submittal Number:



NO.	DESCRIPTION	ROUGHING MEASUREMENTS		
		A	B	C
LF2165	1/2" I.P.S. x 3/8" O.D.	1-3/16"	1-1/2"	3/4"
LF2165LK	1/2" I.P.S. x 3/8" O.D.	1-3/16"	2-1/4"	3/4"
LF2167	1/2" I.P.S. x 1/2" O.D.	1-3/16"	1-1/2"	3/4"
LF2167LK	1/2" I.P.S. x 1/2" O.D.	1-3/16"	2-1/4"	3/4"

LK designates Loose Key

* See options and accessories section for details on product variations.



Specifications:

Supply kit shall include low lead chrome plated brass supply stop valves with full turn brass stem, no plastic, (12, 15, 20) inch chrome plated risers and (shallow, deep, bell) (steel, brass) or (forged brass with set screw) flange. Inlet shall be (3/8, 1/2) inch (IPS, compression). Outlet shall be (3/8, 1/2) inch compression. Supply kit shall be McGuire _____. Supply kit shall be low lead certified by recognized authority and bear manufacturer and testing mark.

Supplies



McGuire Manufacturing Co., Inc.
 60 Grandview Court
 P.O. Box 746 • Cheshire, CT 06410
 203-699-1801 • Fax: 203-699-1813
 www.mcguiremfg.com

PRODUCT SPECIFICATION

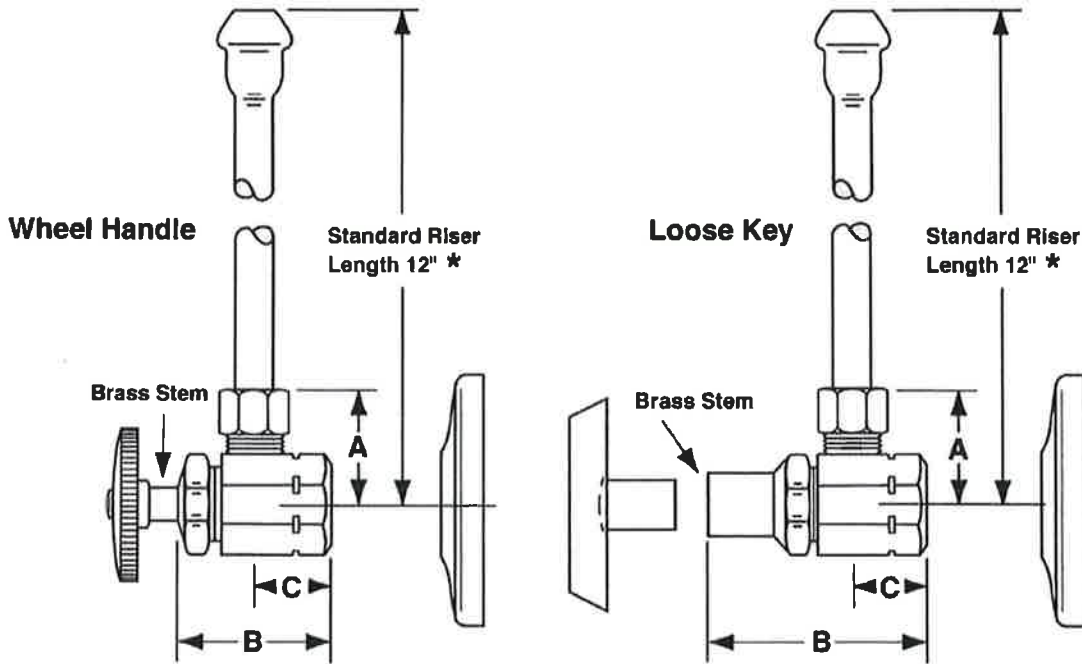
Part No.

LF2165, **LF2165LK**,
 LF2167, LF2167LK

Lavatory Supply
1/2" I.P.S. x O.D.

Job Name: _____

Submittal Number: _____



NO.	DESCRIPTION	ROUGHING MEASUREMENTS		
		A	B	C
LF2165	1/2" I.P.S. x 3/8" O.D.	1-3/16"	1-1/2"	3/4"
LF2165LK	1/2" I.P.S. x 3/8" O.D.	1-3/16"	2-1/4"	3/4"
LF2167	1/2" I.P.S. x 1/2" O.D.	1-3/16"	1-1/2"	3/4"
LF2167LK	1/2" I.P.S. x 1/2" O.D.	1-3/16"	2-1/4"	3/4"

LK designates Loose Key

* See options and accessories section for details on product variations.



Specifications:

Supply kit shall include low lead chrome plated brass supply stop valves with full turn brass stem, no plastic, (12, 15, 20) inch chrome plated risers and (shallow, deep, bell) (steel, brass) or (forged brass with set screw) flange. Inlet shall be (3/8, 1/2) inch (IPS, compression). Outlet shall be (3/8, 1/2) inch compression. Supply kit shall be McGuire _____. Supply kit shall be low lead certified by recognized authority and bear manufacturer and testing mark.