

**Robert J. Dole VA Medical Center  
Renovate and Modernize HVAC  
Systems, Building B6  
Wichita, KS**

## **Plumbing Cut Sheets**

**Prepared for:**

M+HFG  
Wichita, KS

**PEC Project No.:**

180248-000

**Date:**

July 26, 2018  
Final Construction Documents



PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2691 [www.pec1.com](http://www.pec1.com)



 BARRIER FREE

## MADERA™ FloWise® 16-1/2" HEIGHT ELONGATED FLUSHOMETER TOILET

VITREOUS CHINA LESS EVERCLEAN®

### 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 (1.28 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
- 100% factory flush tested

- 3043.001** Elongated bowl only, top spud
- 3248.001** Elongated bowl only, top spud with slotted rim for bedpan holding (White only)
- 3249.001** 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 419mm  
(28-1/4" x 14" x 16-1/2")

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



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

#### To Be Specified:

- Color:  White  Bone
- 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)



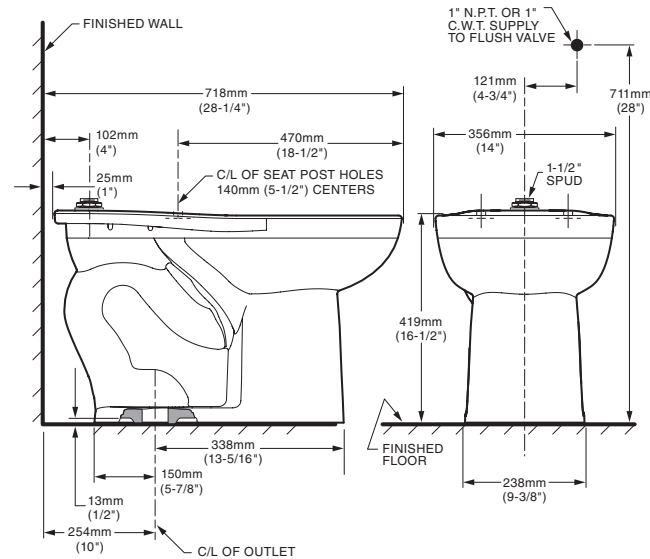
MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR ACCESSIBLE AND USABLE BUILDING FACILITIES - CHECK LOCAL CODES.



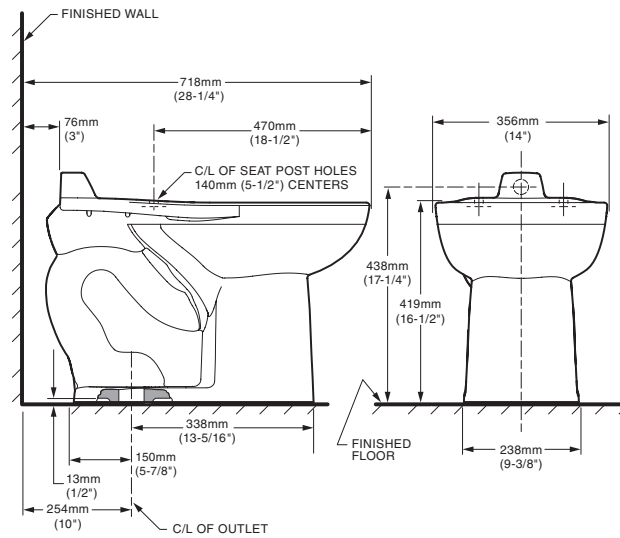
# MADERA™ FloWise® 16-1/2" HEIGHT ELONGATED FLUSHOMETER TOILET

VITREOUS CHINA LESS EVERCLEAN®

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.



### Manual Exposed Flushometer for Floor Mount or Wall Hung Water Closets, 11.5" Rough in



\*Compliances may change based on options selected.

#### Features

- Lift handle to initiate reduced, 1.1 gpf flush to eliminate liquid and paper waste, saving one-half gallon of water
- Push handle down for a regular 1.6 gpf flush to remove solid waste and paper
- Antimicrobial coating on handle lasts for the life of the product
- Green handle signifies UPPERCUT's water-saving features
- Comes with two metal wall plates that provide operational instructions
- Includes all the reliable, long-lasting features of the Royal® Flushometer
- PERMEX synthetic rubber diaphragm with Dual Filtered Fixed Bypass
- Valve body, Cover, Tailpiece and Control Stop shall be in compliance with ASTM Alloy Classification for Semi-Red Brass
- Valve shall be in compliance to the applicable sections of ASSE 1037.

#### Finishes

- Polished Chrome
- Brushed Stainless
- Polished Brass
- Brushed Nickel

#### Flush Volume

- 1.28 gpf for Toilet
- 1.6 gpf / 1.1 gpf for Toilet
- 1.6 gpf for Toilet

#### Variations

- TP - Trap Primer
- E - Straight Stop Variation
- K - Wheel Handle Stop Variation
- GJ - Ground Joint Stop
- YO - Angle Stop Bumper
- YG - Angle Stop Extended Bumper
- YH - Single Wall Bumper
- YI - Double Wall Bumper
- HL - 3" Push Button, Front of Valve
- J - Metal Osculating Handle
- L - 3" Push Button
- OR - Override Button
- YJ - Split Ring Pipe Support
- YK - Solid Ring Pipe Support
- YL - Split Ring with Seat Bumper Pipe Support
- XYV - Valve Less Vacuum Breaker
- O - Offset Vacuum Breaker
- 1" Flush Connection
- W - 3/4 inch Flush Connection
- AFD - Anti-Flood Device
- DFB - Dual Filtered Bypass Diaphragm
- H - Handle on front
- WWT - Whitworth Thread
- C - Inlet on Left Side of Valve

Sloan 10500 Seymour Ave, Franklin Park, IL 60131

Phone: 1-800-9-VALVE-9 or 1-847-671-4300 Fax: 1-800-447-8329 or 1-847-671-4380

<http://www.sloan.com>

**KOHLER®**

**Kingston™**  
Wall-Mount Bathroom Sink  
**K-2005**

**Features**

- With hanger.
- With overflow.
- 4" (102 mm) centers.
- 21-1/4" (540 mm) x 18-1/8" (460 mm).

**Material**

- Vitreous china.

**Installation**

- Wall-mount

**Recommended Accessories**

K-8998 P-Trap

**Components**

Additional included component/s: Hanger.



ADA

CSA B651





**Codes/Standards**

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

**KOHLER® One-Year Limited Warranty**

See website for detailed warranty information.

**Available Color/Finishes***Color tiles intended for reference only.*

Color	Code	Description
	0	White
	96	Biscuit
	47	Almond
	7	Black Black™

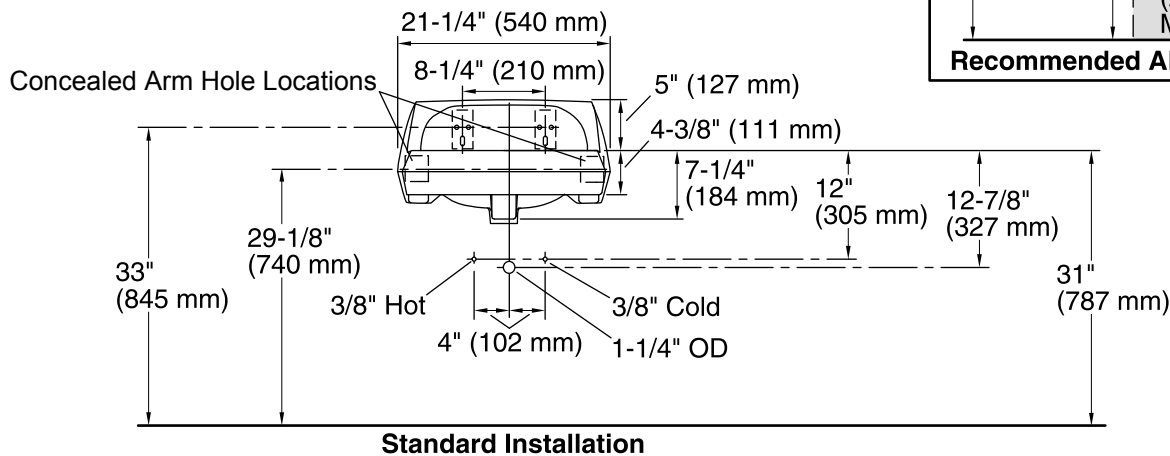
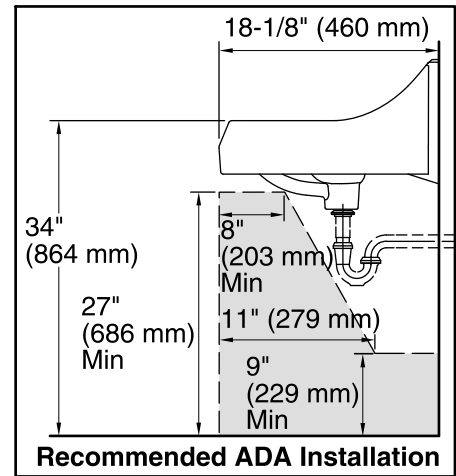
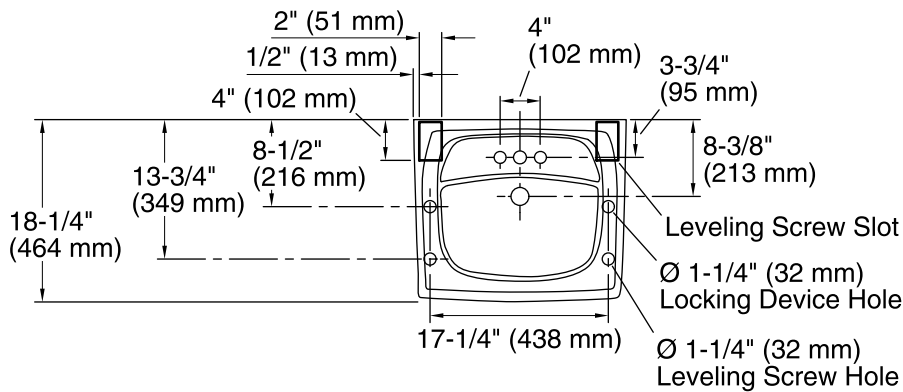
USA/Canada: 1-800-4KOHLER (1-800-456-4537)

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

For the most current Specification Sheet, go to [www.kohler.com](http://www.kohler.com).

2-12-2018 03:51

THE BOLD LOOK  
OF **KOHLER®**



### Technical Information

All product dimensions are nominal.

Bowl configuration: Single  
 Installation: Wall-mount  
 Bowl area (Only): Length: 16" (406 mm)  
 Width: 10" (254 mm)  
 With overflow: Yes  
 Water depth: 3-1/8" (79 mm)

Number of deck holes: 3  
 Soap/Lotion hole: 1-1/4" (32 mm)  
 Drain hole: 1-3/4" (44 mm)

### Notes

Install this product according to the installation instructions.

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

# MECHANICAL FAUCETS

## 895-317GN2AE72XKAB

### Manual Sink Faucets



#### Product Type

Deck Mounted 4" Fixed Centers Hot and Cold Water Sink Faucet

#### Features & Specifications

- 4" Fixed Centers
- 0.5 GPM (1.9 L/min) Non-Aerating Laminar Outlet
- 4" Vandal Proof Wristblade
- Ceramic
- 1/2" NPSM Supply Inlets and Coupling Nut for 3/8" or 1/2" Flexible Riser
- ECAST® design provides durable construction with total lead content equal to or less than 0.25% by weighted average

#### Performance Specification

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

#### Warranty

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

#### Codes & Standards

- ASME A112.18.1/CSA B125.1
- Certified to NSF/ANSI 61, Section 9 by CSA
- ADA ANSI/ICC A117.1

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

Item Number \_\_\_\_\_

Section/Tag \_\_\_\_\_

Model Specified \_\_\_\_\_

Architect \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor \_\_\_\_\_

Submitted as Shown       Submitted with Variations

Date \_\_\_\_\_



#### ECAST

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

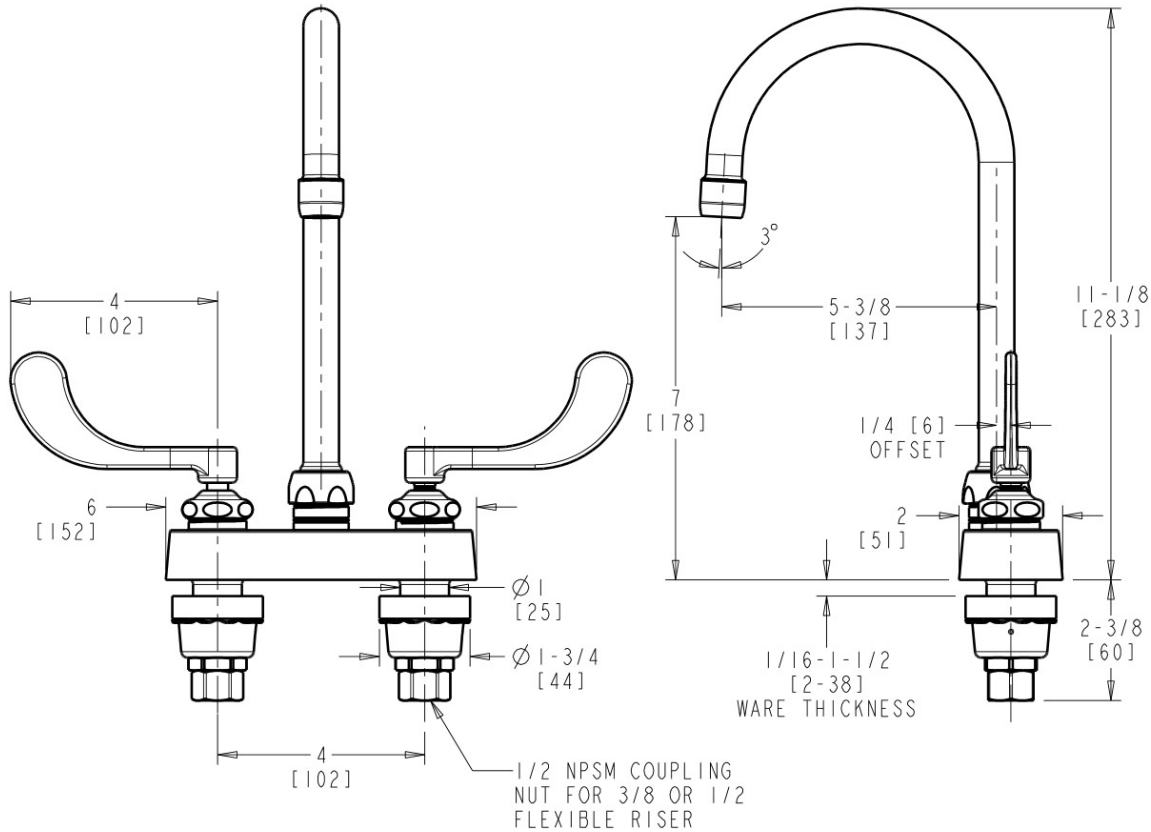


2100 South Clearwater Drive  
Des Plaines, IL  
P: 847/803-5000  
F: 847/803-5454  
Technical: 800/TEC-TRUE  
www.chicagofaucets.com

## Manual Sink Faucets

### Architect/Engineer Specification

Chicago Faucets No. 895-317GN2AE72XKAB, Sink Faucet for hot and cold water, deck-mounted with 4" fixed centers, chrome plated. Rigid/swing gooseneck spout, 5-1/4" center-to-center. 0.5 GPM (1.9 L/min) non-aerating laminar outlet. 4" metal, vandal-proof, wristblade handles with sixteen-point, tapered broach and secured blue and red index buttons. Ceramic quarter-turn cartridge, features square, tapered stem. 1/2" NPSM supply inlets and coupling nut for 3/8" or 1/2" flexible riser. ECAST™ construction with less than 0.25% lead content by weighted average. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9 by CSA, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, and NSF/ANSI 372 Low Lead Content.



### Operation and Maintenance

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

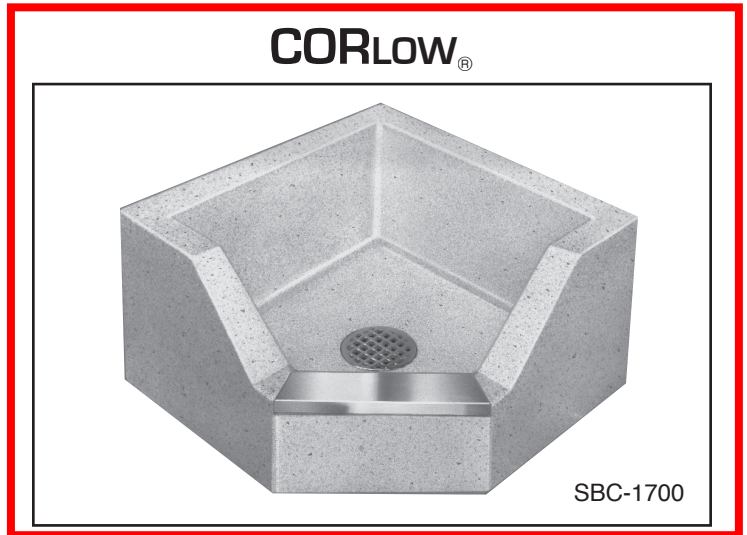
Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option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







**STERN**  
**WILLIAMS**  
**HiLow<sup>®</sup> CORLow<sup>®</sup>**  
 MOP SERVICE BASINS  
**ARCHITECTURAL SPECIFICATIONS**



**6" FRONT DROP WITH STAINLESS STEEL CAP**

MODEL	SIZE
HL-1800	24"x24"x12"
HL-1900	32"x32"x12"
HL-2000	36"x36"x12"
HL-2100	36"x24"x12"

**6" FRONT DROP WITH STAINLESS STEEL CAP ALL SIDES**

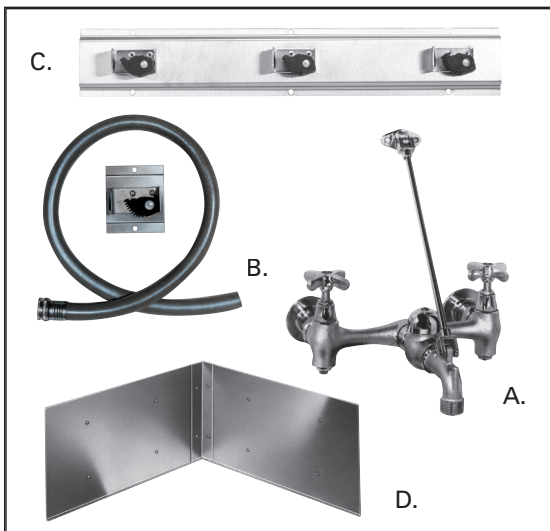
MODEL	SIZE
HL-1810	24"x24"x12"
HL-1910	32"x32"x12"
HL-2010	36"x36"x12"
HL-2110	36"x24"x12"

**6" FRONT DROP WITH STAINLESS STEEL CAP**

MODEL	SIZE
SBC-1700	24"x24"x12"
SBC-1702*	24"x24"x12"
SBC-1725	32"x32"x12"
SBC-1750	36"x36"x12"

\*NOTE: 2 tiling flanges extending 1" above shoulder on 2 sides.

Model No. ( ) Size ( ), as manufactured by Stern-Williams Co., Inc. Shoulders shall not be less than 9-3/4" high inside measurement, and not less than 1-1/4" wide. All models have 6" drop at threshold. Drain shall be cast brass with stainless steel strainer cast integral and shall provide for a caulked lead connection not less than 1" deep to a 3" pipe. Receptor composed of pearl gray marble chips and white Portland cement ground smooth, grouted and sealed to resist stains. Stainless steel cap of one piece 20 ga. 302 stainless steel cast integral on threshold.



**QUALITY OPTIONAL FITTINGS**

- A. **T-10-VB** Mop-Service sink fitting with vacuum breaker, adjustable top brace, 3/4" hose thread on spout with bucket hook inlets 8" on center, chrome finish.  
**T-15 VB** same as above with polished chrome finish.
- B. **T-35** Hose and wall hook. Hose 36" long, with 3/4" chrome couplings. Wall bracket of stainless steel.
- C. **T-40** Stainless Steel Mop Hanger of stainless steel with #4 finish. . . 24" long, with 3 rubber spring loaded grips.
- D. **BP** Splash Catcher Panels of 20 ga. type 304 stainless steel.

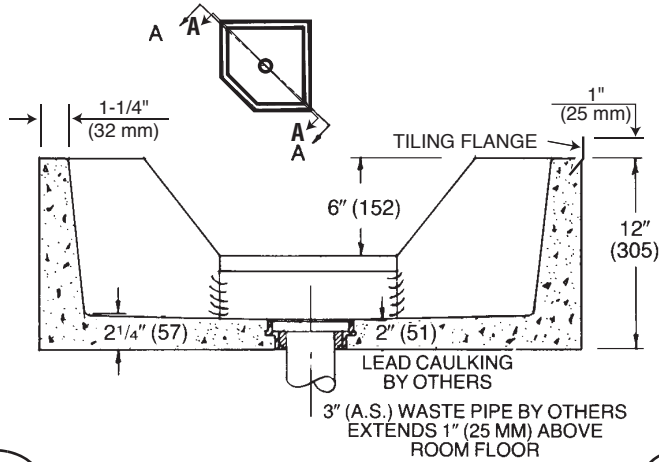
**JOB**

**ARCHITECT**

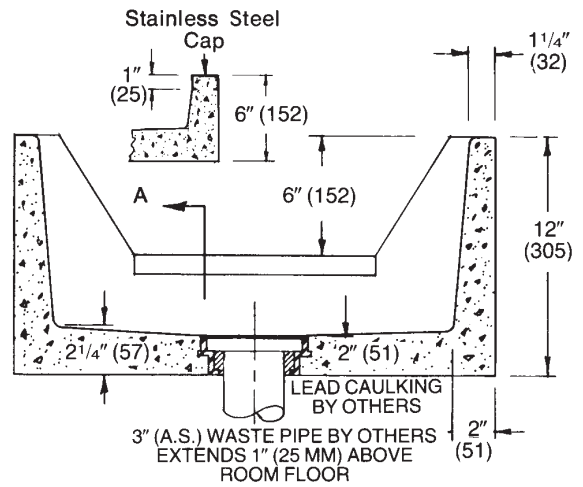
**LOCATION**

**ENGINEER**

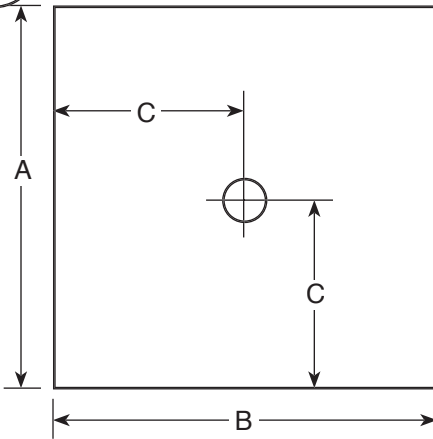
### CROSS SECTION SERIES 1700



### CROSS SECTION SERIES 1800, 1900, 2000, 2100



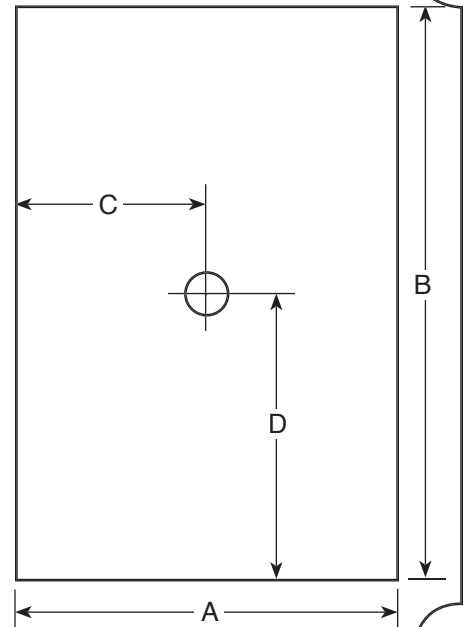
### ROUGH-IN SERIES 1800, 1900, 2000, 2100



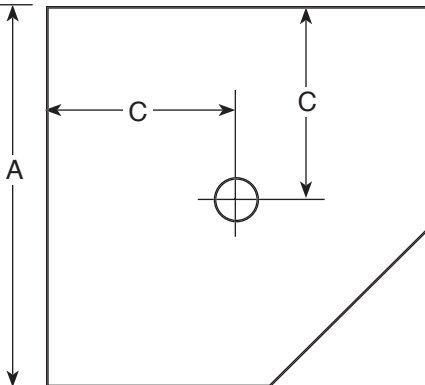
MODEL	A		B		C	
	IN	MM	IN	MM	IN	MM
1800	24	610	24	610	12	305
1900	32	813	32	813	16	406
2000	36	915	36	915	18	457

MODEL	A		B		C	
	IN	MM	IN	MM	IN	MM
1810	24	610	24	610	12	305
1910	32	813	32	813	16	406
2010	36	915	36	915	18	457

MODEL	A		B		C		D	
	IN	MM	IN	MM	IN	MM	IN	MM
2100	24	610	36	915	12	305	18	457
2110	24	610	36	915	12	305	18	457



### ROUGH-IN MODEL 1700 SERIES



MODEL	A		B		C	
	IN	MM	IN	MM	IN	MM
SBC-1700	24	610	24	610	12	305
SBC-1702	24	610	24	610	12	305
SBC-1725	32	813	32	813	12	305
SBC-1750	36	915	36	915	12	305

Note: All dimensions subject to manufacturing variance of plus or minus 1/4" (6 MM).

# MECHANICAL FAUCETS

## 540-LD897SWXF317CP

### Manual Sink Faucets

#### Product Type

Wall Mounted 8" Fixed Centers Hot and Cold Water Sink Faucet

#### Features & Specifications

- 8" Fixed Centers
- 4" Vandal Proof Wristblade
- Quatern
- Straight 2" Inlet Supply Arm with Wall Flange
- Atmospheric Vacuum Breaker, Not Intended for Continuous Pressure Applications
- Atmospheric Vacuum Breaker, Not Intended for Continuous Pressure Applications
- CFNow! Item Ships in 3 Days

#### Performance Specification

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

#### Warranty

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

#### Codes & Standards

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

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

Item Number \_\_\_\_\_

Section/Tag \_\_\_\_\_

Model Specified \_\_\_\_\_

Architect \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor \_\_\_\_\_

Submitted as Shown

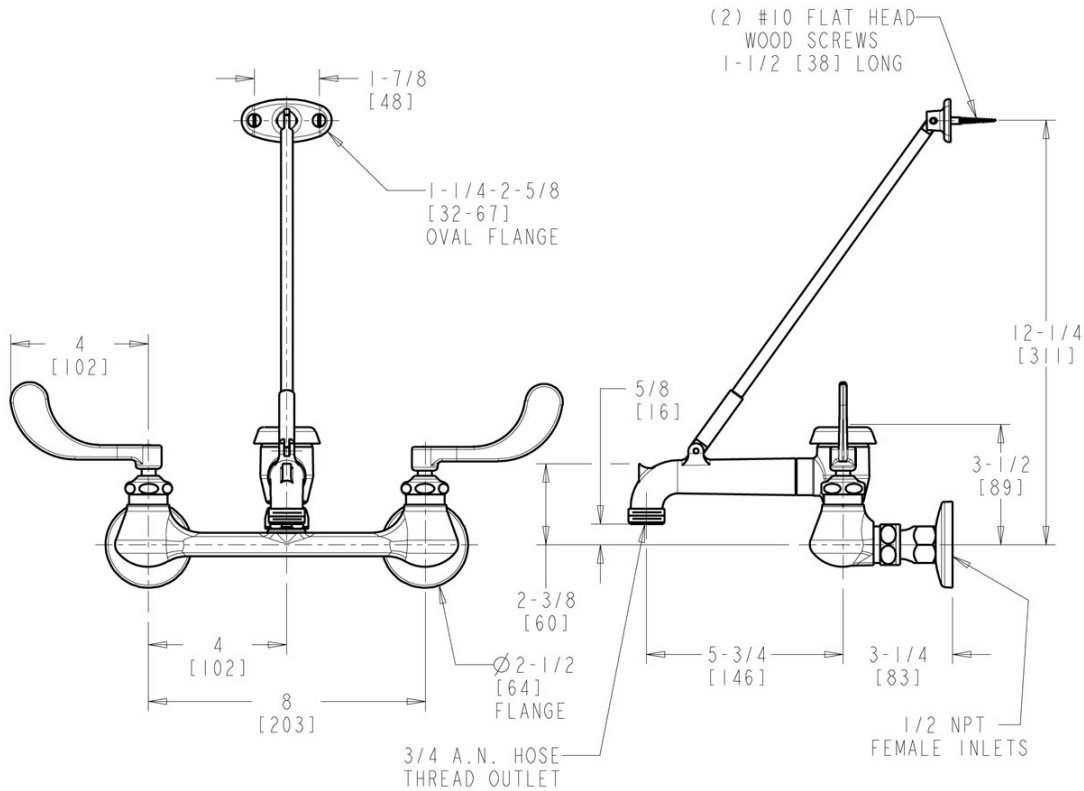
Submitted with Variations

Date \_\_\_\_\_



### Architect/Engineer Specification

Chicago Faucets No. 540-LD897SWXF317CP, Sink Faucet for hot and cold water, wall-mounted with 8" fixed centers, chrome plated. Rigid spout with vacuum breaker, 3/4" male hose thread, and pail hook, 5-3/4" center-to-center. 4" metal, vandal-proof, wristblade handles with sixteen-point, tapered broach and secured blue and red index buttons. Quaturn™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. Straight 2" inlet supply arm with 1/2" NPT female thread inlet and wall flange. NOTE: Atmospheric vacuum breaker is NOT intended for continuous pressure applications. ECAST® construction with less than 0.25% lead content by weighted average. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, and Certified to NSF/ANSI 61, Section 9 by CSA.



### Operation and Maintenance

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

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



**PRODUCT SPECIFICATIONS**

Elkay Lustertone™ Stainless Steel 19" x 18" x 5-1/2", Single Bowl Top Mount ADA Sink. Sink is manufactured from 18 gauge 304 Stainless Steel with a Lustertone finish, Rear Center drain placement, and Bottom only pads.

<b>Installation Type:</b>	Top Mount
<b>Material:</b>	304 Stainless Steel
<b>Special Features:</b>	Quick-Clip Mounting System
<b>Finish:</b>	Lustertone
<b>Gauge:</b>	18
<b>Sound Deadening:</b>	Bottom only pads
<b>Number of Bowls:</b>	1
<b>Sink Dimensions:</b>	19" x 18" x 5-1/2"
<b>Bowl 1 Dimensions:</b>	16" x 11-1/2" x 5-3/8"
<b>Drain Size:</b>	3-1/2" (89mm)
<b>Drain Location:</b>	Rear Center
<b>Minimum Cabinet Size:</b>	24"
<b>Mounting Hardware:</b>	Included for 3/4" (19mm) countertop
<b>Cutout Template #:</b>	<a href="#">1000001260</a>

Template is available for download at [elkay.com](#)

**Cutout Dimensions for Top Mount Installation:**

18-3/8" x 17-3/8" (467mm x 441mm) with 1-1/2" (38mm) corner radius



**AMERICAN PRIDE. A LIFETIME TRADITION.**  
Like your family, the Elkay family has values and traditions that endure. For almost a century, Elkay has been a family-owned and operated company, providing thousands of jobs that support our families and communities.



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



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



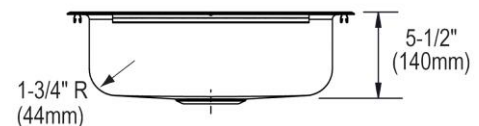
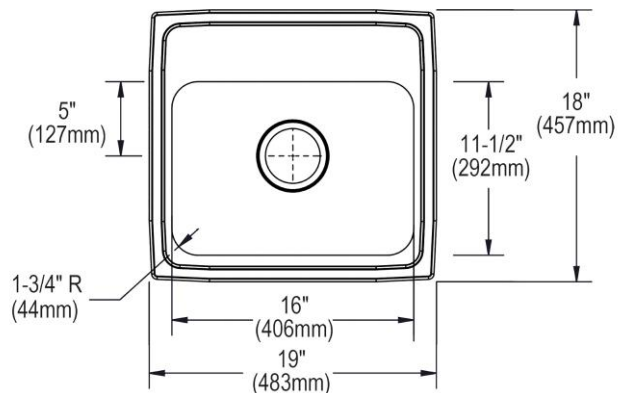
Complies with ADA & ICC A117.1 accessibility requirements when installed according to the requirements outlined in these standards.

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

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

[Limited Lifetime Warranty \(PDF\)](#)

**Similar models are available with:** additional ADA depths, U Channel mounting system



PART: \_\_\_\_\_ QTY: \_\_\_\_\_

PROJECT: \_\_\_\_\_

CONTACT: \_\_\_\_\_

DATE: \_\_\_\_\_

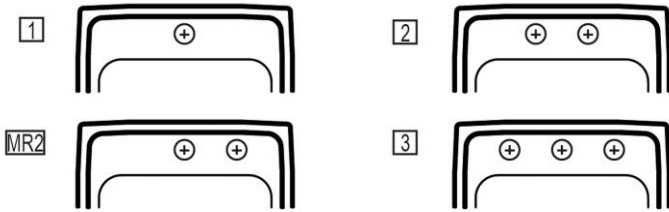
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APPROVAL: \_\_\_\_\_

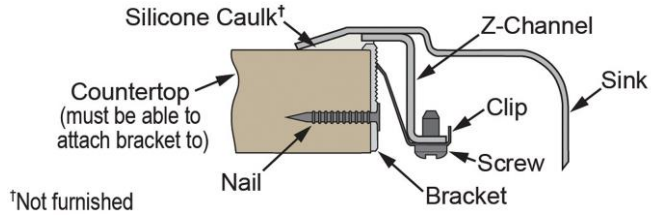
*In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit [elkay.com](#) for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality,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

**Hole Drilling Configurations:**

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



**Installation Profile:**



†Not furnished

**OPTIONAL ACCESSORIES**

<b>Drain:</b>	LK99, LKAD35
<b>Faucet:</b>	LKGT1041, LKGT2041
<b>Rinsing Basket:</b>	LKWRB1116SS
<b>Sinkmate:</b>	LKSMHSL
<b>Soap Dispenser:</b>	LKGT1054

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# MECHANICAL FAUCETS

## 786-GN8FCXKABCP

### Manual Sink Faucets

#### Product Type

Deck Mounted 8" Fixed Centers Concealed Hot and Cold Water Sink Faucet

#### Features & Specifications

- 8" Fixed Centers
- 4" Vandal Proof Wristblade
- Ceramic
- 1/2" NPSM Supply Inlets and Coupling Nut for 3/8" or 1/2" Flexible Riser
- 1.5 GPM (5.7 L/min) Laminar Flow Control Insert in Spout Inlet
- ECAST® design provides durable construction with total lead content equal to or less than 0.25% by weighted average
- CFNow! Item Ships in 3 Days

#### Performance Specification

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

#### Warranty

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

#### Codes & Standards

- ASME A112.18.1/CSA B125.1
- Certified to NSF/ANSI 61, Section 9 by CSA
- ADA ANSI/ICC A117.1

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

Item Number \_\_\_\_\_

Section/Tag \_\_\_\_\_

Model Specified \_\_\_\_\_

Architect \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor \_\_\_\_\_

Submitted as Shown

Submitted with Variations

Date \_\_\_\_\_



#### ECAST

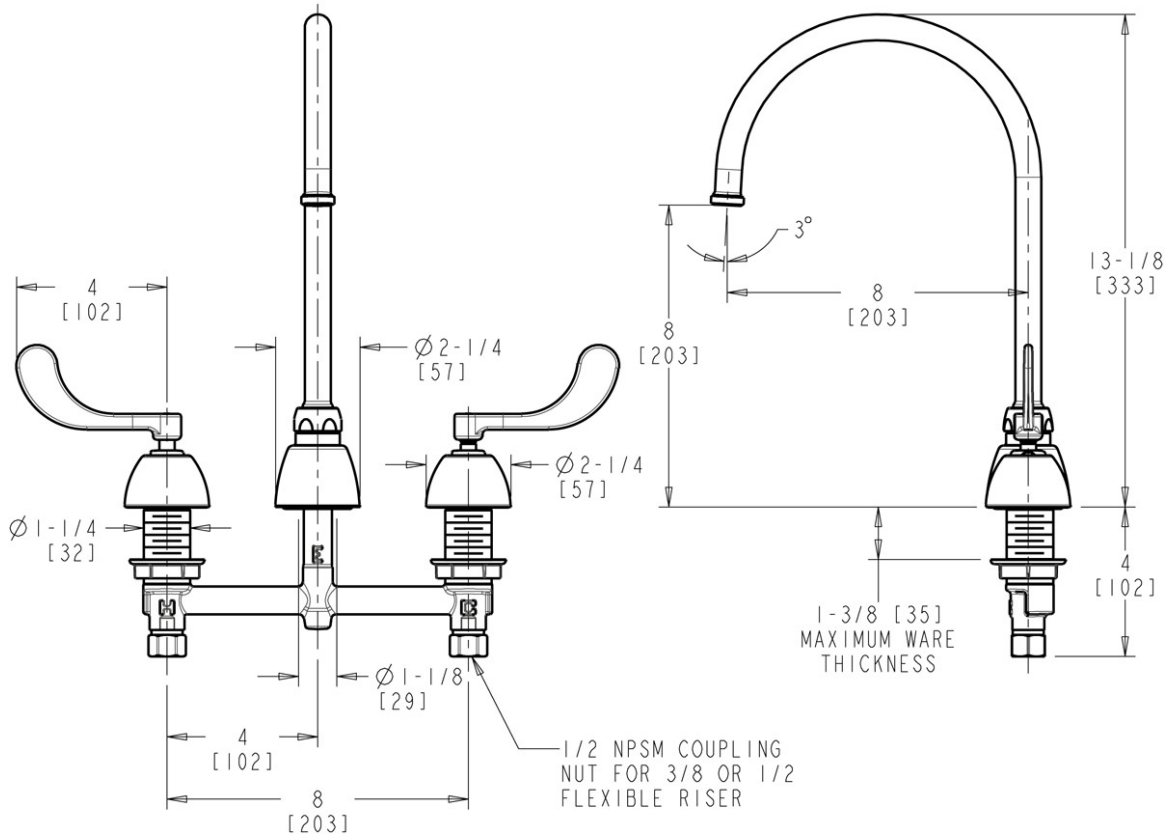
ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

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



### Architect/Engineer Specification

Chicago Faucets No. 786-GN8FCXKABCP, Sink Faucet for hot and cold water, concealed deck-mount with 8" fixed centers, chrome plated. Rigid/swing gooseneck spout with flow control, 8" center-to-center. 1.5 GPM (5.7 L/min) laminar flow control insert in spout inlet. 4" metal, vandal-proof, wristblade handles with sixteen-point, tapered broach and secured blue and red index buttons. Ceramic quarter-turn cartridge, features square, tapered stem. 1/2" NPSM supply inlets and coupling nut for 3/8" or 1/2" flexible riser. ECAST® construction with less than 0.25% lead content by weighted average. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, and Certified to NSF/ANSI 61, Section 9 by CSA.



### Operation and Maintenance

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

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





### DURA-POWER™

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

#### GLASSLINED TANK

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

#### ELEMENTS

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

#### STANDARD VOLTAGES

- 120, 277 single phase and 208, 240 and 480V unbalanced three-phase delta; easily converted to single-phase at terminal block (except 208V with 5500 watt elements). Single element heaters, single-phase only.

#### TERMINAL BLOCK

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

#### CONTROLS

- Temperature control (adjustable through a range of 110° to 170°F on single element and 120° to 181°F on dual element) and manual reset high temperature cutoff per element

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

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

#### ANODE ROD FOR MAXIMUM CORROSION PROTECTION

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

#### TOP INLET AND OUTLET OPENINGS

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

#### UL APPROVED FIELD CONVERSION PROGRAM

#### COMPLIANCE

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

#### LIMITED WARRANTY OUTLINE

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

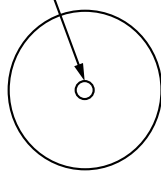


DEN-40

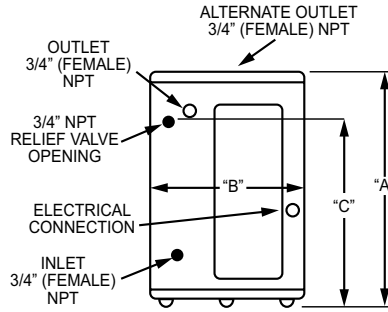
DEL-30



HOT WATER OUTLET DEL-6



TOP VIEW  
DEL 6/10/15/20



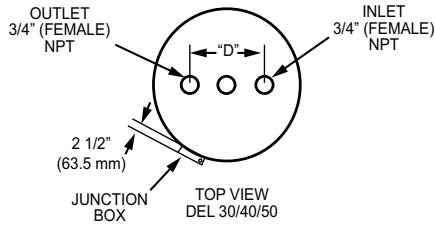
FRONT VIEW  
DEL 6/10/15/20

\*(NO SIDE OUTLET AVAILABLE FOR DEL-6 MODELS)

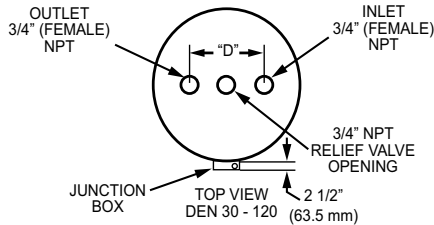
## ROUGH-IN DIMENSIONS

Model Number	No. of Elements	Tank Capacity		A		B		C		D		Shipping Weight	
		US Gals	Litres	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Lbs.	Kg.
DEL-6	1	6	23	15-1/2	394	14-1/4	362	11	279	N/A	N/A	35	15.9
DEL-10	1	10	38	18-1/4	464	18	457	12-1/2	318	N/A	N/A	54	24.5
DEL-15	1	15	57	26	660	18	457	20-1/2	521	N/A	N/A	58	26.3
DEL-20	1	20	76	22-1/4	565	21-3/4	552	15-3/8	391	N/A	N/A	73	33.1

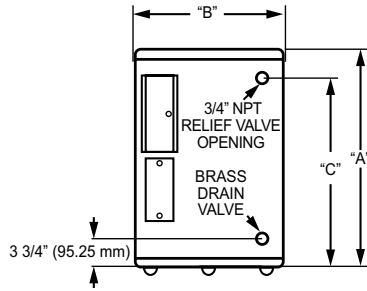
\* No side outlet available on DEL-6 Model



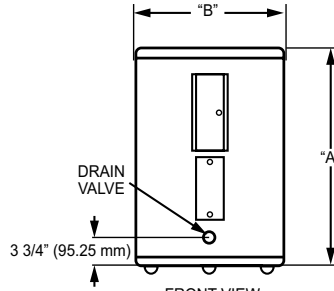
TOP VIEW  
DEL 30/40/50



TOP VIEW  
DEN 30 - 120



FRONT VIEW  
DEL 30/40/50



FRONT VIEW  
DEN 30-120

## ROUGH-IN DIMENSIONS

Model Number	No. of Elements	Tank Capacity		A		B		C		D		Shipping Weight	
		US Gals	Litres	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Lbs.	Kg.
DEL-30	2	30	114	30-7/8	784	21-3/4	552	24-1/8	613	8	203	100	45.4
DEL-40	2	40	151	32-1/4	819	24	610	25-9/16	649	8	203	125	56.7
DEL-50	2	50	189	32-1/4	819	26-1/2	673	25-1/8	638	8	203	166	75.3
DEN-30	2	30	114	34-1/2	876	20-1/2	521	21	533	8	203	98	44.5
DEN-40	2	40	151	45-1/8	1146	20-1/2	521	N/A	N/A	8	203	113	51.3
DEN-52	2	50	189	54-7/8	1394	20-1/2	521	N/A	N/A	8	203	131	59.4
DEN-66	2	66	250	60-3/4	1543	21-3/4	552	N/A	N/A	8	203	176	79.8
DEN-80	2	80	303	59-3/8	1508	24	610	N/A	N/A	8	203	211	95.7
DEN-120	2	119	450	62-7/16	1586	29-3/8	746	N/A	N/A	8	203	326	147.9



# Commercial Electric Water Heaters

## ELEMENT AVAILABILITY CHART (LIGHT-DUTY COMMERCIAL ELECTRIC)

Models & Elements	Voltage	Wiring	kW Input Available									
6-Gallon Models Single-Element	120V	-	1.5	2	2.5	3						
	208V	-	1.5	2	2.5	3						
	240V	-	1.5	2	2.5	3						
	277V	-	1.5	2	2.5	3						
	480V	-		2	2.5	3						
10-Gallon through 20-Gallon Models Single-Element	120V	-	1.5	2	2.5	3						
	208V	-	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
	240V	-	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
	277V	-	1.5	2	2.5	3		4	4.5	5		6
	480V	-		2	2.5	3		4	4.5	5	5.5	6
30-Gallon through 120-Gallon Models Double-Element	120V	Interlock	1.5	2	2.5	3						
		Simultaneous	3	4	5	†						
	208V	Interlock	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
		Simultaneous	3	4	5	6	7	8	9	10**	11**	†
	240V	Interlock	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
		Simultaneous	3	4	5	6	7	8	9	10	11	12**
	277V*	Interlock	1.5	2	2.5	3		4	4.5	5		6
		Simultaneous	3	4	5	6		8	9	10		12
480V	Interlock		2	2.5	3		4	4.5	5	5.5	6	
	Simultaneous		4	5	6		8	9	10	11	12	

6 gallon model not available above 3kW  
 6/10/15/20 gallon models all A6 circuit (2 wire) only  
 † Exceeds maximum amp draw.  
 \*\* Simultaneous only in 3ph

## ELECTRIC CHARACTERISTICS

Electric Characteristics											
Non Simultaneous and Single Element Operation 6 - 120 Gallon				Simultaneous Dual Element Operation (Single Phase Connection) 30 - 120 Gallon				Simultaneous Dual Element Operation (Unbalanced Three Phase connection) 30 - 120 Gallon			
Element Wattage	Full Load Current in Amperes (Terminals - L1, L2)			Element Wattage	Full Load Current in Amperes (Terminals - L1, L2)			Element Wattage	Full Load Current in Amperes (Terminals - L2 / Terminal L1 & L3)		
Upper / Lower	208V	240V	480V	Upper / Lower	208V	240V	480V	Upper / Lower	208V	240V	480V
1500	7.2	6.3	3.2	1500/1500	14.4	12.5	6.3	1500/1500	12.4/7.2	10.8/6.3	5.4/3.2
2000	9.6	8.3	4.2	2000/2000	19.2	16.6	8.3	2000/2000	16.6/9.6	14.4/8.3	7.2/4.2
2500	12.0	10.4	5.2	2500/2500	24	20.8	10.4	2500/2500	20.8/12.0	18.0/10.4	9.0/5.2
3000/3000	14.4	12.5	6.3	3000/3000	28.8	25	12.5	3000/3000	25.0/14.4	21.6/12.5	10.8/6.3
4000/4000	19.2	16.7	8.3	4000/4000	38.4	33.3	16.6	4000/4000	33.3/19.2	28.8/16.7	14.4/8.3
4500/4500	21.6	18.8	9.4	4500/4500	43.2	37.5	18.75	4500/4500	37.4/21.6	32.4/18.8	16.2/9.4
5000/5000	24.0	20.8	10.4	5000/5000	NA	41.6	20.8	5000/5000	41.6/24.0	36.0/20.8	18.0/10.4
6000/6000	28.8	25.0	12.5	6000/6000	NA	NA	25	6000/6000	NA	43.3/25.0	21.6/12.5



# Commercial Electric Water Heaters

## RECOVERY CAPACITIES

Element Wattage (Upper/Lower)	Input	U. S. Gallons/Hr and Litres/Hr at Temperature Rise Indicated											
		F°	36	40	54	60	72	80	90	100	108	120	126
		kW	C°	20	22.2	30	33.3	40	44.4	50	55.5	60	66.6
<b>Non-Simultaneous Operation</b>													
/1500	1.5	GPH	17	15	11	10	8	8	7	6	6	5	5
		LPH	64	58	43	38	32	29	26	23	21	19	18
/2000	2	GPH	23	20	15	14	11	10	9	8	8	7	6
		LPH	85	77	57	51	43	38	34	31	28	26	24
/2500	2.5	GPH	28	25	19	17	14	13	11	10	9	8	8
		LPH	107	96	71	64	53	48	43	38	36	32	30
3000/3000	3	GPH	34	30	23	20	17	15	14	12	11	10	10
		LPH	128	115	85	77	64	58	51	46	43	38	37
4000/4000	4	GPH	45	41	30	27	23	20	18	16	15	14	13
		LPH	170	153	114	102	85	77	68	61	57	51	49
4500/4500	4.5	GPH	51	46	34	30	25	23	20	18	17	15	14
		LPH	192	173	128	115	96	86	77	69	64	58	55
5000/5000	5	GPH	56	51	38	34	28	25	23	20	19	17	16
		LPH	213	192	142	128	107	96	85	77	71	64	61
6000/6000	6	GPH	68	61	45	41	34	30	27	24	23	20	19
		LPH	256	230	170	153	128	115	102	92	85	77	73
<b>Simultaneous Operation</b>													
3000/3000	6	GPH	68	61	45	41	34	30	27	24	23	20	19
		LPH	256	230	170	153	128	115	102	92	85	77	73
4000/4000	8	GPH	90	81	60	54	45	41	36	32	30	27	26
		LPH	341	307	227	205	170	153	136	123	114	102	97
4500/4500	9	GPH	101	91	68	61	51	46	41	36	34	30	29
		LPH	384	345	256	230	192	173	153	138	128	115	110
5000/5000	10	GPH	113	101	75	68	56	51	45	41	38	34	32
		LPH	426	384	284	256	213	192	170	153	142	128	122
6000/6000	12	GPH	135	122	90	81	68	61	54	49	45	41	39
		LPH	511	460	341	307	256	230	205	184	170	153	146

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

## SPECIFICATION

The water heater(s) shall be Dura-Power™ Model(s) No. \_\_\_\_\_ as manufactured by A. O. SMITH or an approved equal. Heater(s) shall be rated at \_\_\_\_\_ kW, \_\_\_\_\_ volts, \_\_\_\_\_-phase, 60 cycle AC, and listed by Underwriters' Laboratories. Models shall meet the standby loss requirements of the U.S. Department of energy and current edition of ASHRAE/IES 90.1. Tank(s) shall be \_\_\_\_\_gallon capacity. Heater(s) shall have 150 psi working pressure and be equipped with extruded high density anode rod. All internal surfaces of the heater(s) exposed to water shall be glasslined with an alkaline borosilicate composition that has been fused-to-steel by firing at a temperature range of 1400°F to 1600°F. Electric heating elements shall be medium watt density with zinc plated copper sheath. Each element shall be controlled by an individually mounted thermostat and high temperature cutoff switch. The outer jacket shall be of backed enamel finish and shall enclose the tank with foam insulation. Electrical junction box with heavy duty terminal block shall be provided (except on 120V & 277V {no junction box on DEL-6 thru 20}). The drain valve shall be located in the front for ease of servicing. Heater tank shall have a three year limited warranty as outlined in the written warranty. Fully illustrated instruction manual to be included.

For technical information, call 800-527-1953. A. O. Smith Corporation reserves the right to make product changes or improvements without prior notice.



# THERM-X-TROL®

Thermal Expansion Tanks: Diaphragm ST-C Series ASME

**150 PSIG Working Pressure**

## Construction

Shell	Steel
Diaphragm	Heavy Duty Buty NSF/ANSI 61
Liner	Polypropylene
System Connection	Stainless Steel
Finish	Red Oxide Primer
Air Valve	Schrader Valve w/ EPDM Seat
Factory Precharge	55 PSIG (3.8 bar)

## Application

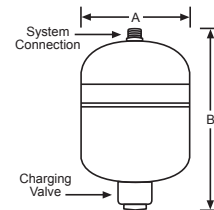
- For use in closed, potable water systems to control pressure build-up.
- Fixed diaphragm construction.
- Designed and constructed per ASME Code Section VIII, Division 1.
- All models available with optional sight glass.
- Seismic restraints available on stand models only.

## Performance

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

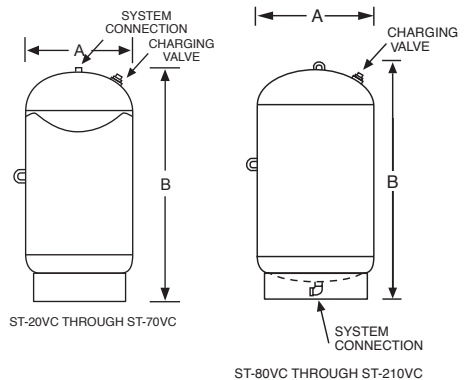
## In-Line Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Diameter		B Tank Height		System Conn. (NPTM)	Shipping Weight	
	Gal	Lit		In	mm	In	mm		Lbs	Kg
ST-5C	2.0	8	.45	8	203	14	356	3/4	10	5
ST-12C	6.4	24	.50	12	305	18	457	3/4	17	8



## Stand Models

Model Number	Tank Volume		Max. Accept. Factor	A Tank Diameter		B Tank Height		System Conn. (NPTF)	Shipping Weight	
	Gal	Lit		In	mm	In	mm		Lbs	Kg
ST-20VC	8	30	.40	12	305	19	483	3/4	41	19
ST-30VC	14	53	.64	16	406	19	483	3/4	59	27
ST-42VC	18	68	.61	16	406	24	610	3/4	71	32
ST-60VC	25	95	.44	16	406	32	813	3/4	85	39
ST-70VC	34	129	.32	16	406	45	1143	3/4	99	45
ST-80VC	53	201	.66	24	610	37	940	1 1/4	224	102
ST-120VC	68	257	.51	24	610	44	1118	1 1/4	266	121
ST-180VC	77	291	.45	24	610	49	1245	1 1/4	285	129
ST-210VC	90	341	.39	24	610	57	1448	1 1/4	319	145



All dimensions and weights are approximate.

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





# Submittal Data Information

101-028

## Model 006 Cartridge Circulator

Effective: March 20, 2017

Supersedes: April 4, 2013

Job: \_\_\_\_\_ Engineer: \_\_\_\_\_ Contractor: \_\_\_\_\_ Rep: \_\_\_\_\_

ITEM NO.	MODEL NO.	

### Features

- Standard high capacity output
- Compact design
- Quiet, efficient operation
- Direct drive - Low power consumption
- Unique replaceable cartridge design
- Field serviceable
- Self lubricating
- No mechanical seal
- Unmatched reliability
- Maintenance free
- Low-lead Bronze sweat or Stainless Steel with threaded or union connections

### Materials of Construction

Casing (Volute):.....Low-lead Bronze or Stainless Steel  
 Stator housing:.....Steel  
 Cartridge:.....Stainless Steel  
 Impeller: .....Non-metallic  
 Shaft:.....Ceramic  
 Bearings:.....Carbon  
 O-Ring & Gaskets: ....EPDM  
*Chlorine resistant*

### Model Nomenclature

- B - Bronze, 3/4" sweat
- BC - Bronze, 1/2" sweat, panel mount tapings
- ST - Stainless Steel, 3/4" NPT
- SC - Stainless Steel, union, panel mount tapings

### Performance Data

Flow Range: 0 - 11 GPM  
 Head Range: 0 - 9.5 Feet  
 Min. Fluid Temperature: 40°F (4°C)  
 Max. Fluid Temperature: 220°F (104°C)  
 Max. Working Pressure: 125 psi  
 Connection sizes:  
 1/2" swt, 3/4" swt, 3/4" NPT or union

### Certifications & Listings

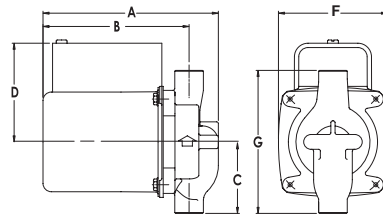


### Application

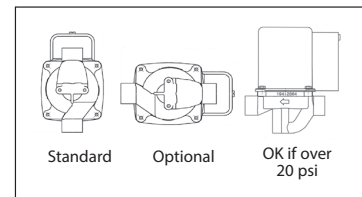
The Taco 006 is designed for circulating hot or chilled fresh water in open or closed loop applications. Typical uses include hydronic heating, domestic hot water recirculation, hydro-air heating/cooling, heat recovery units, water source heat pumps, drain down open loop Solar systems and potable water applications. The unique, replaceable cartridge contains all of the moving parts and allows for easy service instead of replacing the entire circulator. The compact, low power consumption design is ideal for high efficiency jobs.

### Pump Dimensions & Weights

Models	Conn.	A		B		C		D		F		G		Ship Wt.	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	Kg
006-BC4	1/2" Swt.	5-1/8	130	4-1/8	105	2-1/8	54	3-1/16	78	3-15/16	84	4-1/4	108	6.0	2.7
006-B4	3/4" Swt.	5-1/8	130	4-1/8	105	2-3/16	56	3-1/16	78	3-15/16	84	4-3/8	111	6.0	2.7
006-ST4	3/4" NPT	5-5/8	143	4-7/8	124	2	51	3-1/16	78	3-15/16	84	4	102	6.0	2.7
006-SC4-1	Union	5-5/32	131	4-11/32	110	2-31/32	76	3-1/16	78	3-15/16	84	5-15/16	151	6.0	2.7



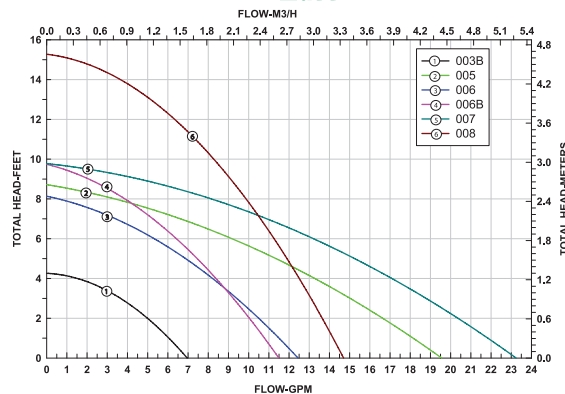
### Mounting Positions



### Electrical Data

Model	Volts	Hz	Ph	Amps	RPM	HP
All 006 Models	115	60	1	.52	3250	1/40
Motor Type	Permanent Split Capacitor Impedance Protected					
Motor Options	220/50/1, 220/60/1, 230/60/1, 100/110/50/60/1					

### Performance Field - 60Hz 006 CIRCULATORS





**Taco** 00 CIRCULATORS

