

PERMIT # NA

Operation Permit

SL1415

New Installation  Septic Tank  Nitrification Line  Repair  Expansion

PROPERTY LOCATION: 186 MAULE MEADOW LN. (MAULE CH. RD)

Name: (owner) KB HOMES RALEIGH-DURHAM SUBDIVISION MASON POINTE LOT # 57

System Installer: THOMPSONS CREW Registration # \_\_\_\_\_

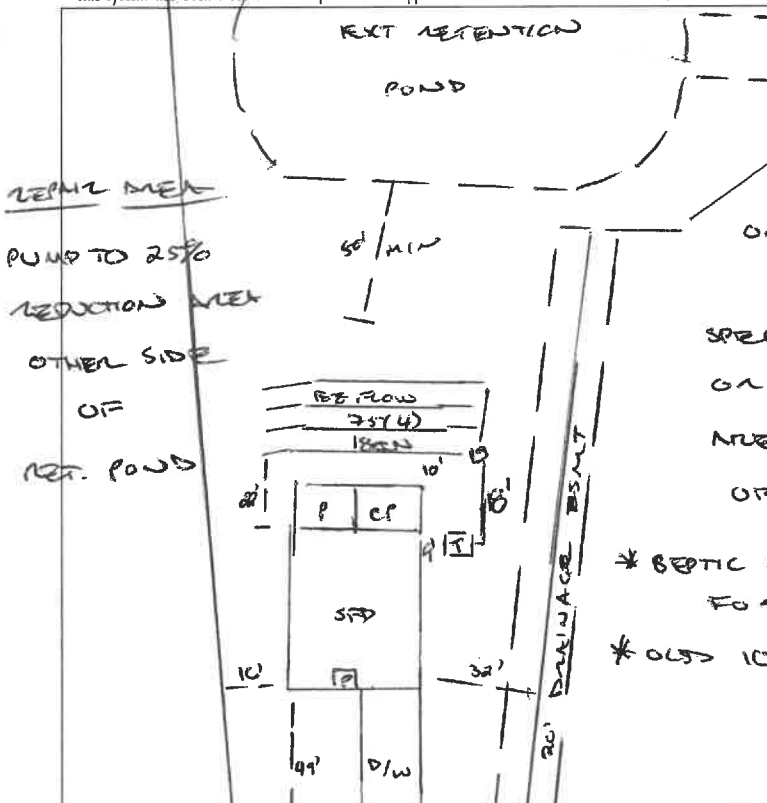
Basement with plumbing:  Garage  Number of Bedrooms 5 FLOW REDUCTION

Type of Water Supply:  Community  Public  Well Distance from well NA feet 480GPD ON 50A HOME

System Type: 25% REDUCTION SIS. IIIg Types V and VI Systems expire in 5 years.

(In accordance with Table V a) Owner must contact Health Department 6 months prior to expiration for permit renewal.

This system has been installed in compliance with applicable North Carolina General Statutes, Rules for Sewage Treatment and Disposal, and all conditions of the Improvement Permit and Construction Authorization.



SESSION LAW 2014-120 SECTION 53:  
 NEITHER THE STATE NOR ANY LOCAL HEALTH DEPARTMENT SHALL BE LIABLE FOR ANY DAMAGES CAUSED BY AN SYSTEM APPROVED OR PERMITTED PURSUANT TO THIS SECTION [DUE TO FLOW REDUCTION]  
 SPECIFIED LOW-FLOW FIXTURES, LOW FLOW TECHNOLOGIES, OR REPLACEMENT W/ EQUAL OR LESS FLOW RATES, ARE TO REMAIN IN USE FOR THE LIFE OF THE SEPTIC SYSTEM  
 \* SEPTIC PROPOSAL BY CENTRAL CAROLINA SOIL CONSULTING FOR KB HOMES RALEIGH-DURHAM  
 \* OLD 1000GAL TANK ABANDONED ON SITE PER INSTALL

PERMIT CONDITIONS:

- I. Performance: System shall perform in accordance with Rule .1961.
- II. Monitoring: As required by Rule .1961.
- III. Maintenance: As required by Rule .1961. Other: \_\_\_\_\_  
 Subsurface system operator required? Yes  No   
 If yes, see attached sheet for additional operation conditions, maintenance and reporting.

ORIGINAL INSTALL  
12/02/2019 - 6105 1905-0037

- IV. Operation: \_\_\_\_\_
- V. Other: \_\_\_\_\_

D-Box  Pump  Alarm  H2O Line  PWR Line

Following are the specifications for the sewage disposal system on the above captioned property.

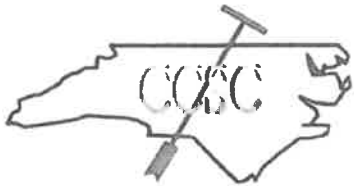
Type of system:  Conventional  Other 25% FLOW IIIg (EXT) Septic Tank: 1537 gallons Pump Tank: \_\_\_\_\_ gallons

Subsurface No. of exact length width of depth of  
 Drainage Field ditches 4 (EXT) of each ditch 75 (EXT) feet ditches 3 (EXT) feet ditches 18 (EXT) inches

French Drain Required: \_\_\_\_\_ Linear feet

Authorized State Agent \_\_\_\_\_ Date 11/19/2020





**Central Carolina Soil Consulting, PLLC**  
1900 South Main Street, Suite 110  
Wake Forest, NC 27587  
919-569-6704/fax 919-569-6703

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September 23, 2020

Harnett County Staff  
Harnett County Environmental Health Department  
900 S 9th St  
Lillington, NC

**RE: Flow Reduction Certification and As-built**  
Mason Pointe Lot 57  
186 Rawls Meadow Lane, Fuquay Varina, Harnett County, North Carolina  
Project #:2031

Dear Harnett County Staff:

Central Carolina Soil Consulting (CCSC) in conjunction with Bateman Civil Survey Company are proposing wastewater daily flow calculations for a single-family home located at Mason Pointe Lot 57 pursuant to session law 2014-120 and 2013-413. The home has 5 bedrooms and under the current flow calculations provided in the state rules would have a daily flow of **600** gallons per day. That would be based on 120 gallons per bedroom.

Household flow rates from the 15 NCAC 18A section of the state rules relied on fixture flow rates from 1982, and calculated the flows for common fixtures to established average flows for the purpose of calculating household daily flows and septic system based on those flows. The data for the historic fixture flows was taken from the EPA 2002 Onsite Wastewater Treatment Systems Manual.

The attached spreadsheet contains the flow reducing fixtures that KB Homes installed in the home. The table includes flow rates for the existing flow reducing fixtures as well as flow rates from the state rules and the percentage of water savings. On average the proposed fixtures provide a 39% savings.

We are requesting a reduction of **20%** for the use of low flow fixtures. This will provide an adjusted daily flow of 96 gallons per bedroom per day and a total flow of **480** gallons per day for the proposed 5-bedroom house. Central Carolina Soil Consulting, PLLC (CCSC) employees in conjunction with Bateman Civil Survey Company, reviewed fixture receipts from Thornton's Plumbing, Inc. that were installed in the house for KB Homes.

These fixtures or equivalent flow fixtures are required for the life of the home. Any change in fixtures that results in a change of the flow rates must be approved by an Engineer and Harnett County Environmental Health Services. In addition, the existing 1000-gallon septic tank shall be replaced with a 1250-gallon septic tank to comply with septic tank sizing for a 5-bedroom home.

With respect to increased effluent strength, we do not believe that the effluent strength will increase with the addition of a bedroom. The fixtures that are currently installed in the home are standard low flow fixtures that are installed in all of the homes built by KB Homes. These fixtures or fixtures with similar flow rates are used in houses all over the country and have been used for several decades. The additional bedroom will increase the volume of effluent, but will not change the strength of the effluent and should be consistent with levels required for residential waste in 15A NCAC 18A .1970 b, table 8.

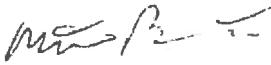
We have reviewed the design and installation of the system located at 186 Rawls Meadow Lane and are satisfied that the drain field is installed per the original design and are capable of handling the additional bedroom with the installation of the proposed 1250-gallon septic tank. When the new 1250 gallon septic tank is installed we will certify the installation separately.

Attached are email communications with the home owners and representatives from KB Homes indicating their knowledge of Session Law 2014-120 Section 53.

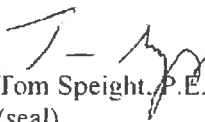
If you need further information or have any questions please contact Matt Burdette at (919) 422-2827 or Tom Speight at 919-577-1080 2524 Reliance Ave, Apex NC 27539

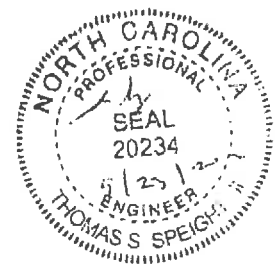
Sincerely,

Central Carolina Soil Consulting, PLLC

  
Matt Burdette  
Environmental Specialist

Bateman Civil Survey Company  
NCBELS# C-2378.

  
Tom Speight, P.E.  
(seal)



## **Matt Burdette**

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**From:** Cavalear, Rachel <rcavalear@kbhome.com>  
**Sent:** Wednesday, September 09, 2020 1:42 PM  
**To:** Matt Burdette  
**Subject:** FW: Mason Pointe Lot 57 - 186 Rawls Meadow Lane Fuquay Varina, NC 27526 - Septic Tank/Flow Reduction

Hi Matt –

See below from Lot 57 acknowledging the Flow Reduction

Thank you  
Rachel

**From:** Kagen Cole <kagencole@gmail.com>  
**Sent:** Wednesday, September 9, 2020 1:42 PM  
**To:** Customer Service - Raleigh <RalCustomerService@kbhome.com>  
**Subject:** Re: Mason Pointe Lot 57 - 186 Rawls Meadow Lane Fuquay Varina, NC 27526 - Septic Tank/Flow Reduction

**EXTERNAL EMAIL** - This email and any files transmitted with it are confidential and intended solely for the individual named. If you have received this email by mistake, please notify the system manager.

I can confirm that I have been made aware of this. Please proceed with the changes discussed.  
Thank you so much for your help and your close attention to this matter!  
Have a great day!  
-Kagen Cole  
919.285.8615

On Wed, Sep 9, 2020 at 11:06 AM Customer Service - Raleigh <RalCustomerService@kbhome.com> wrote:

Hello Kagen,

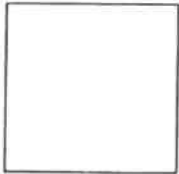
Per our earlier conversation please confirm I have made you aware of the following so that we can proceed with approval from the state for the flow reduction and septic tank size change.

This email is to confirm you have been made aware that KB Home is updating your septic permit from a 4 bedroom to a 5 bedroom to be consistent with how your home was built via a Flow Reduction submitted to the County and the State for review and approval. Per the state please acknowledge you have also been made aware of Session Law 2014-120 Section 53 which states "Neither the State nor any local health department shall be liable for any damages caused by a system approved or permitted pursuant to this section".

Once we receive your approval we can proceed with the process.

Let me know if you have any further questions or call 919.768.7995

Thank you  
Rachel Cavalear



888-KB-HOMES  
[kbhome.com](http://kbhome.com)

Consider the environment before printing this email.

Mason Pointe Lot 57 AS BUILT

Item	Gal./min. or flush	Number of Fixtures	Base Flow From 1982	Percent Water Savings
Optional Bath				
Tub/Shower Trim	Moen T2133EP	1	5.5 gal/minute	67%
Lavatory Faucet	Moen 6410	1	3.0 gal/minute	50%
Master Bath				
Lavatory Faucet	Moen 6410	2	3.0 gal/minute	50%
Shower Trim	Moen T2132EP	1	5.5 gal/minute	67%
Kitchen				
Kitchen Sink Faucet	Moen 7594	1	3.0 gal/minute	50%
Bath 2				
Tub/Shower Trim	Moen T2133EP	1	5.5 gal/minute	67%
Lavatory Faucet	Moen 6410	1	3.0 gal/minute	50%
Laundry				
Laundry Sink Faucet	Proflo PFWSC1120 CP	1	3.0 gal/minute	60%
Toilets				
Optional, Master, Bath 2	Gerber WS-20-918	3	3.5 gal/minute	63%

FIXTURES	TOILET	FAUCET	SHOWER	CLOTHES WASHER	LEAK	BATH	OTHER	DISHWASHER	TOTALS
PERCENT OF HOUSE HOLD WATER USE	24%	20%	20%	16%	12%	3%	3%	2%	100%
GALLONS PER DAY (600 BASE)	144	120	120	96	72	18	18	12	600
PERCENT OF SAVINGS FROM WATER SAVING FIXTURES	63%	52% avg	67%	0	0%	0%	0%	0%	39%
ADJUSTED FLOW (GALLONS)	53	58	40	96	72	18	18	12	367



Buy it for looks. Buy it for life.®

There is more than 1 version of this model.  
Page down to identify the version you have.

**DESCRIPTION**

- Metal construction with various finishes identified by suffix
- 1/2" IPS connections
- Includes metal pop-up waste assembly

**OPERATION**

- Lever style handles
- Maximum handle(s) rotation angle is 90° to full on
- Rotate hot side counterclockwise to open (clockwise to close)
- Rotate cold side clockwise to open (counterclockwise to close)


**FLOW**

- Water usage is limited to these maximum flow rates as indicated by the corresponding product markings
  - 1.2 gpm max (4.5L/min) at 60 psi
  - 1.5 gpm max (5.7L/min) at 60 psi

**CARTRIDGE**

- 1234 cartridge design
- Nonmetallic and stainless steel material

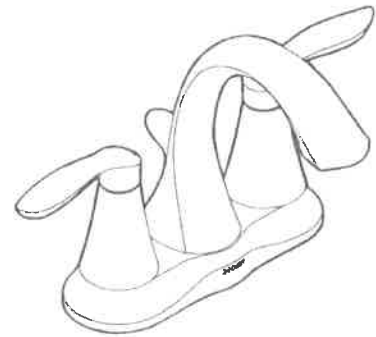
**STANDARDS**

- Third party certified to WaterSense®, ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- Certified to NSF 61/9 & 372
- Products marked with 1.2 gpm are compliant with California water efficiency regulations
- Complies with California Proposition 65 and with the Federal Safe Drinking Water Act
- **ADA**  for lever handles

**WARRANTY**

- Lifetime limited warranty against leaks, drips and finish defects to the original consumer purchaser
- 5 year warranty if used in commercial installations

# Specifications



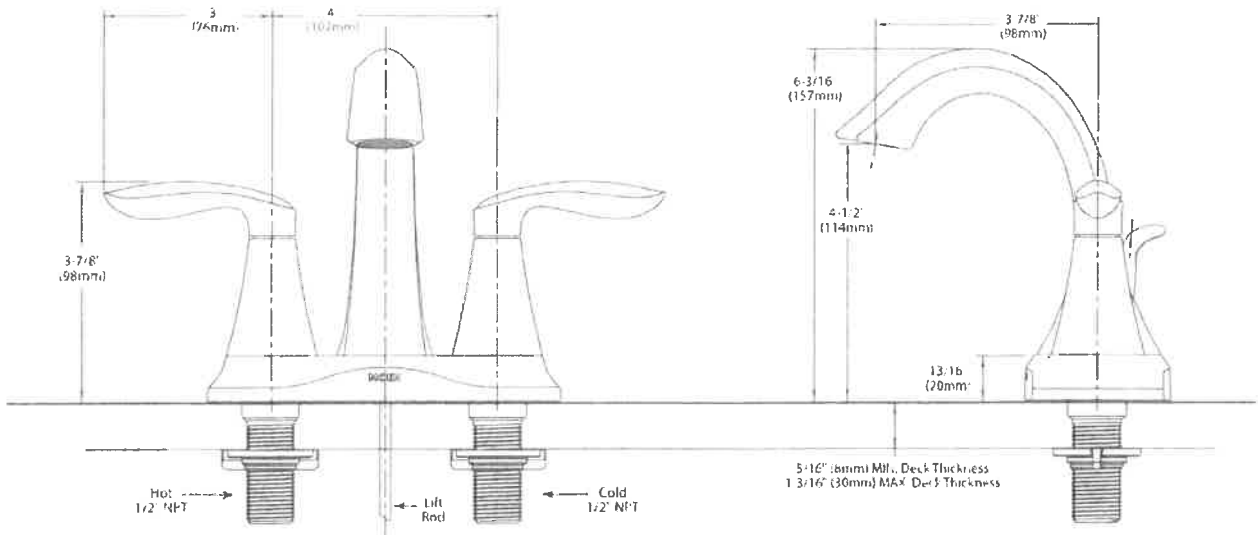
**EVA™**  
**4" Lavatory Faucet**  
**with Metal Waste Assembly**

**Models:** 6410 series

**Bulk Models:** 66410, 66411\*  
**(Bulk packed 6 per carton),**  
**50/50 waste assembly**

\*Includes hot (red) and cold (blue) indicators.

**NOTE:** THIS FAUCET IS DESIGNED TO BE  
INSTALLED THRU 3 HOLES, 1" MIN. DIA.



## CRITICAL DIMENSIONS

(DO NOT SCALE)





Buy it for looks. Buy it for life.®

# Specifications

## DESCRIPTION

- Metal construction with various finishes identified by suffix
- 1/2" IPS connections
- Includes metal pop-up waste assembly

## OPERATION

- Lever style handles
- Maximum handle(s) rotation angle is 90° to full on
- Rotate hot side counterclockwise to open (clockwise to close)
- Rotate cold side clockwise to open (counterclockwise to close)


## FLOW

- Flow is limited to 1.5 gpm max (5.7L/min) at 60 psi, for products made before October 2008 flow is limited to 2.2 gpm max (8.3 L/min)

## CARTRIDGE

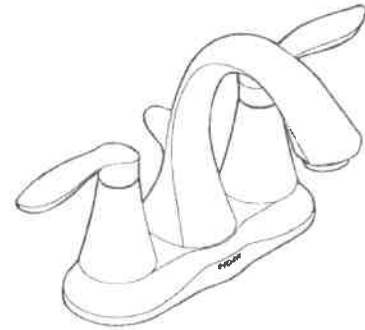
- 1224 cartridge design
- Nonmetallic and stainless steel material

## STANDARDS

- Third party certified to WaterSense®, ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- Certified to NSF 61/9 & 372
- Complies with California Proposition 65 and with the Federal Safe Drinking Water Act
- ADA  for lever handles

## WARRANTY

- Lifetime limited warranty against leaks, drips and finish defects to the original consumer purchaser
- 5 year warranty if used in commercial installations



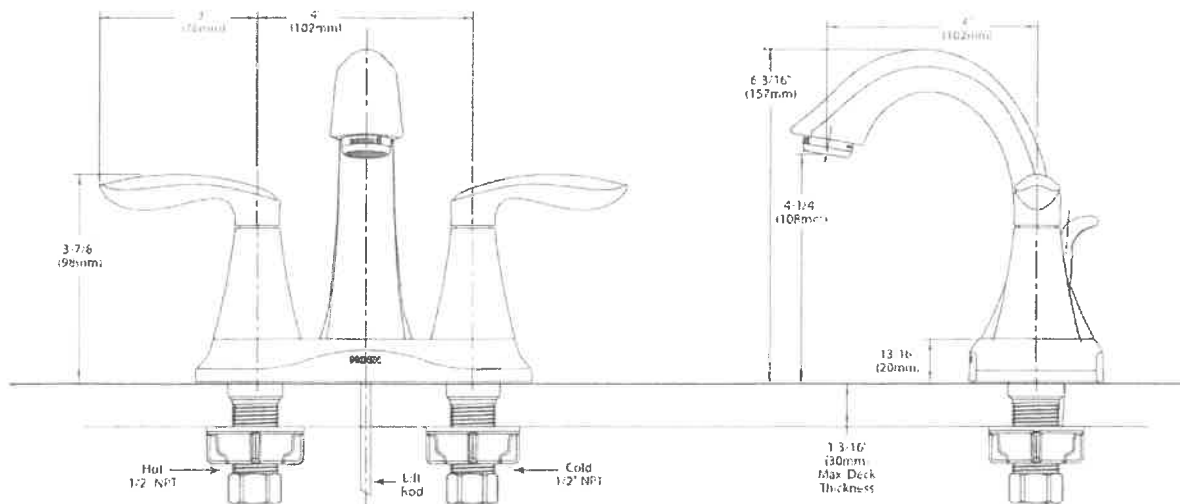
**EVA™**  
**4" Lavatory Faucet**  
**with Metal Waste Assembly**

**Models:** 6410 series

**Bulk Models:** 66410, 66411\*  
**(Bulk packed 6 per carton),**  
**50/50 waste assembly**

\*Includes hot (red) and cold (blue) indicators.

**NOTE:** THIS FAUCET IS DESIGNED TO BE INSTALLED THRU 3 HOLES, 1" MIN. DIA.



## CRITICAL DIMENSIONS

(DO NOT SCALE)



Buy it for looks. Buy it for life.®

# Specifications

## DESCRIPTION

- Metal construction with various finishes identified by suffix
- Includes showerhead, arm, flange and diverter spout

## OPERATION

- Handle operates counterclockwise through a 270° arc with off at 6 o'clock and maximum hot at the 9 o'clock position. Shut off in clockwise direction
- Adjustable temperature limit stop to control maximum hot water temperature
- Pressure balancing mechanism maintains selected discharge temperature to ± 3°

## FLOW

- Showerhead is limited to 2.5 gpm (9.5 L/min) at 80 psi
- EP suffix models are limited to 1.75 gpm (6.6 L/min) at 80 psi
- NH suffix models contain no showerhead

## CARTRIDGE

- 1222 cartridge design
- Nonmetallic/nonferrous and stainless steel materials
- Accommodates back to back installations

## STANDARDS

- Third party certified to meet ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- EP suffix models are third party certified to WaterSense®

- ADA for lever handle

## WARRANTY

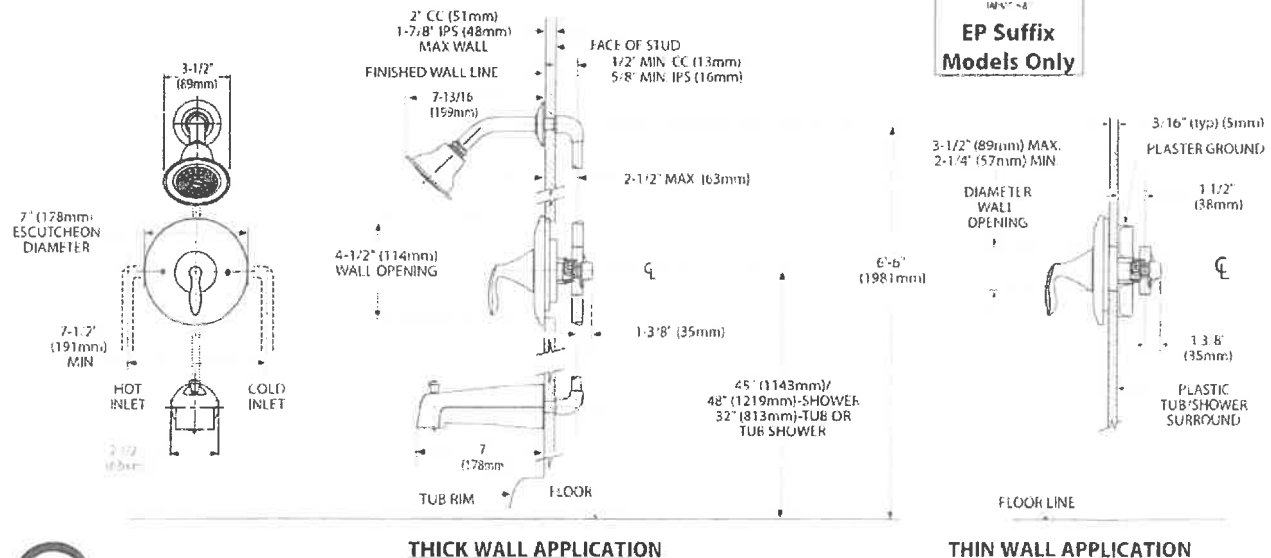
- Lifetime limited warranty against leaks, drips and finish defects to the original homeowner
  - 10 year limited warranty when used in a multifamily installation
  - 5 year limited warranty when used in a commercial installation
- Visit [www.moen.com/support](http://www.moen.com/support) for complete details and limitations



## EVA™ POSI-TEMP™ Single-Handle Tub/Shower Trim Kit

- Models:** T2131 series - valve trim only  
 T62131 (Bulk Packed 12 per carton)  
 T2132 series - shower trim only  
 T62132 (Bulk Packed 12 per carton)  
 T2133 series - tub/shower trim  
 T62133 (Bulk Packed 12 per carton)

- Valves:** 62300 series  
 2500 series



## CRITICAL DIMENSIONS (DO NOT SCALE)

# MOEN®

## Specifications

There is more than one version of this model.  
Page down to identify the version you have.

### FAUCET DESCRIPTION

- Reflex™ pulldown system offers smooth operation, easy movement and secure docking
- Metal construction with various finishes identified by suffix
- Duralock™ quick connect system
- Pullout spray with 68" braided hose
- Flexible supply lines with 3/8" compression fittings
- High arc spout provides height and reach to fill or clean large pots while pull out wand provides the maneuverability for cleaning or rinsing
- 360° rotating spout
- Power Boost™ Spray Technology

### OPERATION

- Lever style handle
- Temperature controlled by 100° arc of handle travel
- Operates with less than 5 lbs. of force
- Operates in stream or spray mode in the pullout or retracted position


### FLOW

- Flow is limited to 1.5 gpm (5.7 L/min) at 60 psi

### CARTRIDGE

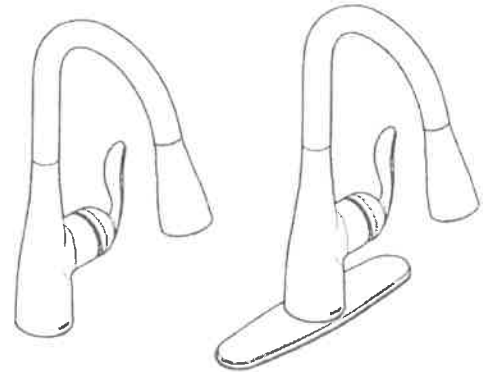
- 1255™ Duralast™ cartridge for Single-Handle Faucets

### STANDARDS

- Third party certified to IAPMO Green, ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- Certified to NSF 61/9 & 372
- Meets CalGreen and Georgia SB370 requirements
- Complies with California Proposition 65 and with the Federal Safe Drinking Water Act
- The backflow protection system in the device consists of two independently operating check valves, a primary and a secondary which prevent backflow
- ADA  for lever handle

### WARRANTY

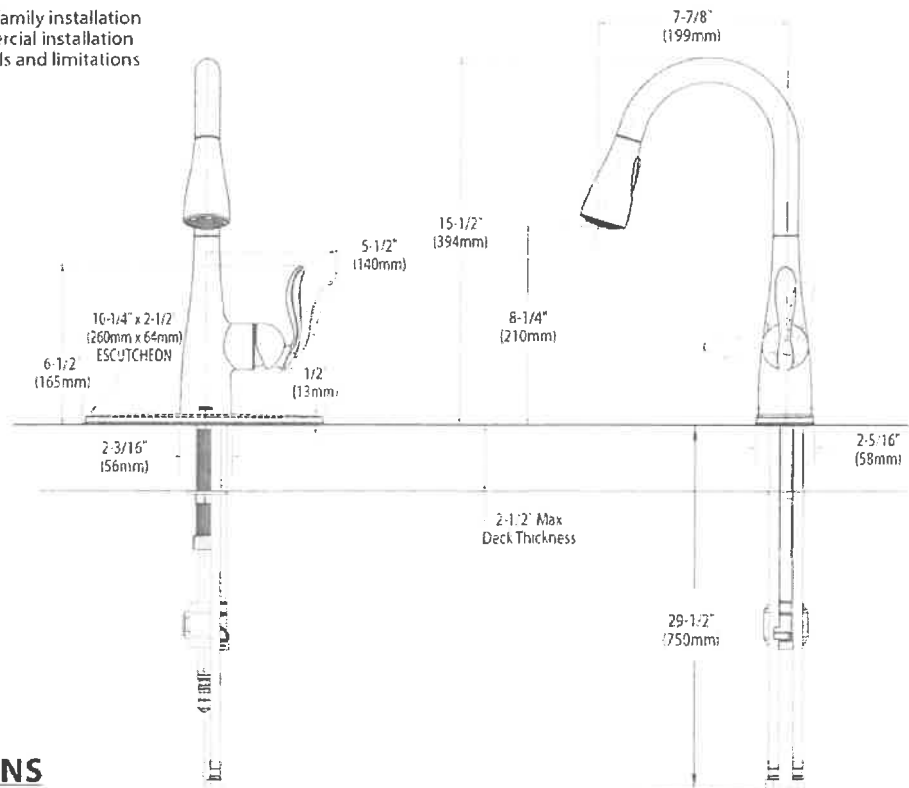
- Lifetime limited warranty against leaks, drips and finish defects to the original homeowner
  - 10 year limited warranty when used in a multifamily installation
  - 5 year limited warranty when used in a commercial installation
- Visit [www.moen.com/support](http://www.moen.com/support) for complete details and limitations



### ARBOR™ Single Handle High Arc Pulldown Kitchen Faucet

Models: 7594 series

**NOTE:** THIS FAUCET IS DESIGNED TO BE INSTALLED THROUGH 1 OR 3 HOLES, 1-1/2" (38mm) MIN. DIA.



### CRITICAL DIMENSIONS

(DO NOT SCALE)

## FAUCET DESCRIPTION

- Reflex™ pulldown system offers smooth operation, easy movement and secure docking
- Metal construction with various finishes identified by suffix
- Quick connect system
- Pullout spray with 68" braided hose
- Flexible supply lines with 3/8" compression fittings
- High arc spout provides height and reach to fill or clean large pots while pull out wand provides the maneuverability for cleaning or rinsing
- 360° rotating spout
- Power clean spray

## OPERATION

- Lever style handle
- Temperature controlled by 100° arc of handle travel
- Operates with less than 5 lbs. of force
- Operates in stream or spray mode in the pullout or retracted position
- When filling a vessel outside the sink, the pause feature conveniently stops the flow of water as the wand passes over the counter top


## FLOW

- Flow is limited to 1.5 gpm (5.7 L/min) at 60 psi

## CARTRIDGE

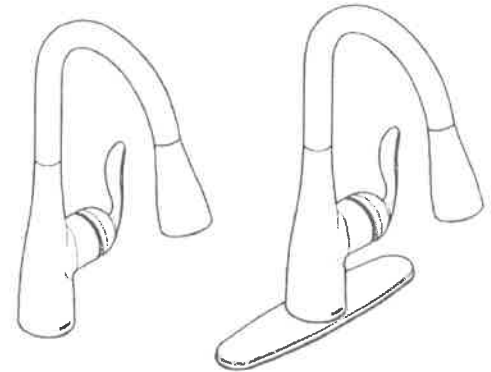
- 1255™ Duralast™ cartridge for Single-Handle Faucets

## STANDARDS

- Third party certified to IAPMO Green, ASME A112.18.1/CSA B125.1 and all applicable requirements referenced therein
- Certified to NSF 61/9 & 372
- Meets CalGreen and Georgia SB370 requirements
- Complies with California Proposition 65 and with the Federal Safe Drinking Water Act
- The backflow protection system in the device consists of two independently operating check valves, a primary and a secondary which prevent backflow
- ADA  for lever handle

## WARRANTY

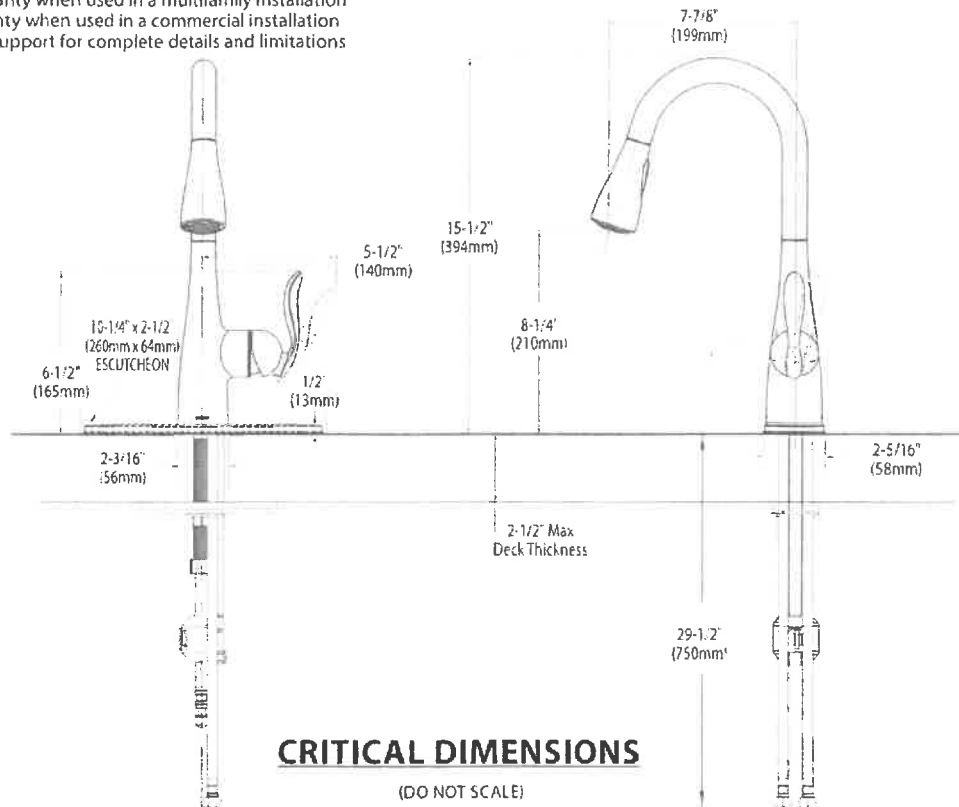
- Lifetime limited warranty against leaks, drips and finish defects to the original homeowner
  - 10 year limited warranty when used in a multifamily installation
  - 5 year limited warranty when used in a commercial installation
- Visit [www.moen.com/support](http://www.moen.com/support) for complete details and limitations



**ARBOR™**  
Single Handle High Arc  
Pulldown Kitchen Faucet

Models: 7594 series

**NOTE:** THIS FAUCET IS DESIGNED TO BE INSTALLED THROUGH 1 OR 3 HOLES, 1-1/2" (38mm) MIN. DIA.



## PFWSC1120 Series

# Two Handle Laundry Faucet

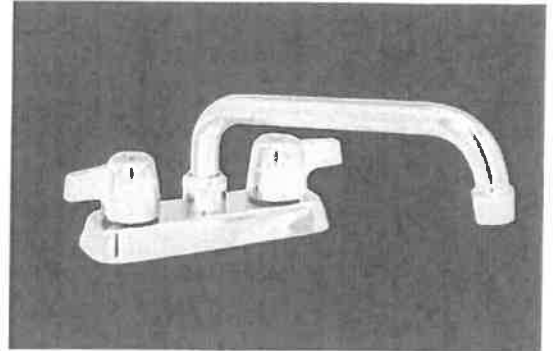


### Product Features

- Ceramic Cartridges
- Metal Lever Handles
- Flow Rate (with hose thread adapter): Min. 4.0 GPM
- Flow Rate (with optional aerator): Max. 1.2 GPM
- Meets ANSI: A112.18.1M
- ADA Compliant

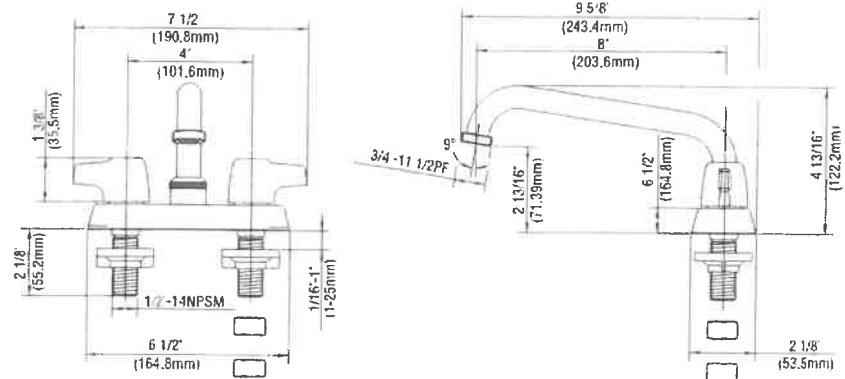
### Model Numbers

PFWSC1120CP Polished chrome



PFWSC1120CP

### Product Specifications



### Warranty and Codes

This product comes complete with installation, operating, care and maintenance instructions. This PROFLO faucet carries a limited lifetime warranty when installed in residential applications.

The warranty is five years in commercial applications.

This product meets ANSI: A112.18.1M.

Compliant with lead content requirements of California AB 1953.



\* All measurements are nominal. Please verify before actual installation.



VITREOUS CHINA

TOILET  
WS-20-918



# MAXWELL® 1.28 ErgoHeight™, Elongated Toilet

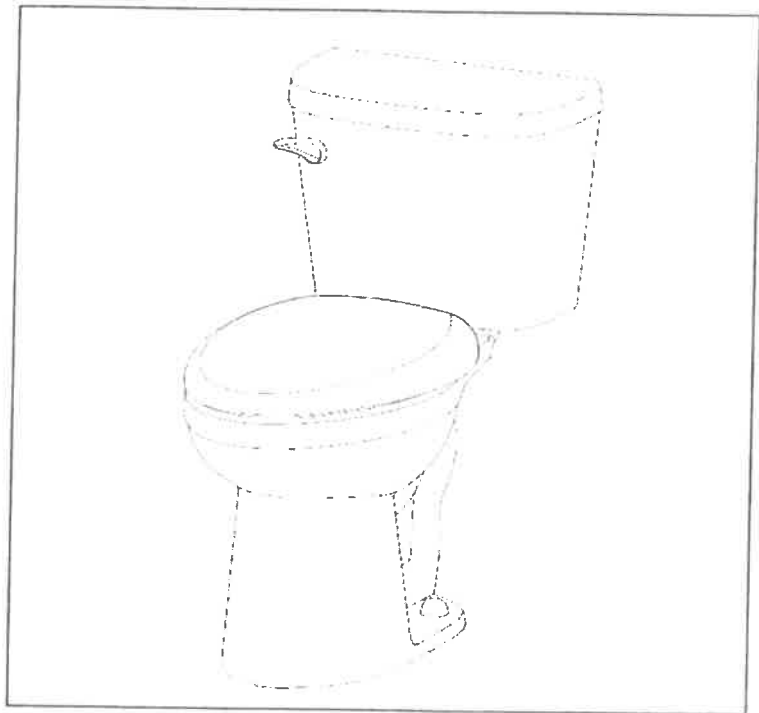
12" Rough-in

### Features:

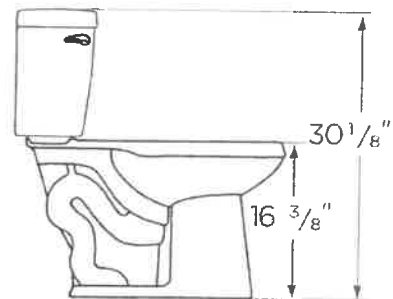
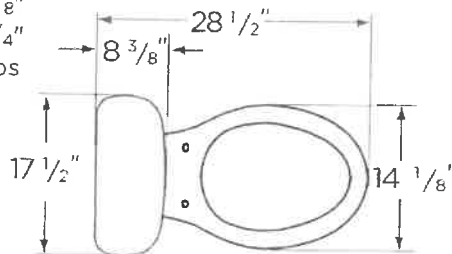
- 1.28 gpf/4.8 Lpf high efficiency two-piece toilet
- Elongated ErgoHeight™ bowl
- Dual-fed siphon jet
- Pilot fill valve
- 3" flush valve
- 2" glazed trapway
- Color matched front tank lever
- Optional insulated non-sweating tank (28-992)
- Optional right-handed trip lever (28-990-97)
- Available in White, Bone and Biscuit
- 2 bolt caps
- ADA Compliant
- Seat not included

### Dimensions:

- Height ..... 30 1/8"
- Width ..... 17 1/2"
- Depth ..... 28 1/2"
- Rough-in ..... 12"
- Water Surface from Rim ..... 6 1/2"
- Trapway ..... 2"
- Water Surface ..... 8 7/8" x 7 3/8"
- Water Seal ..... 2 1/4"
- Shipping Weight ..... 85.5 lbs



Specifications: Bowl—#MX-21-928 Front Bowl Tank—#28-990



THIS FIXTURE QUALIFIES ACCORDING TO ASME TEST PROCEDURES AS A HIGH EFFICIENCY WATER CLOSET WITH AN AVERAGE CONSUMPTION OF 1.28 gpf (4.8 l.p.f) OR LESS.



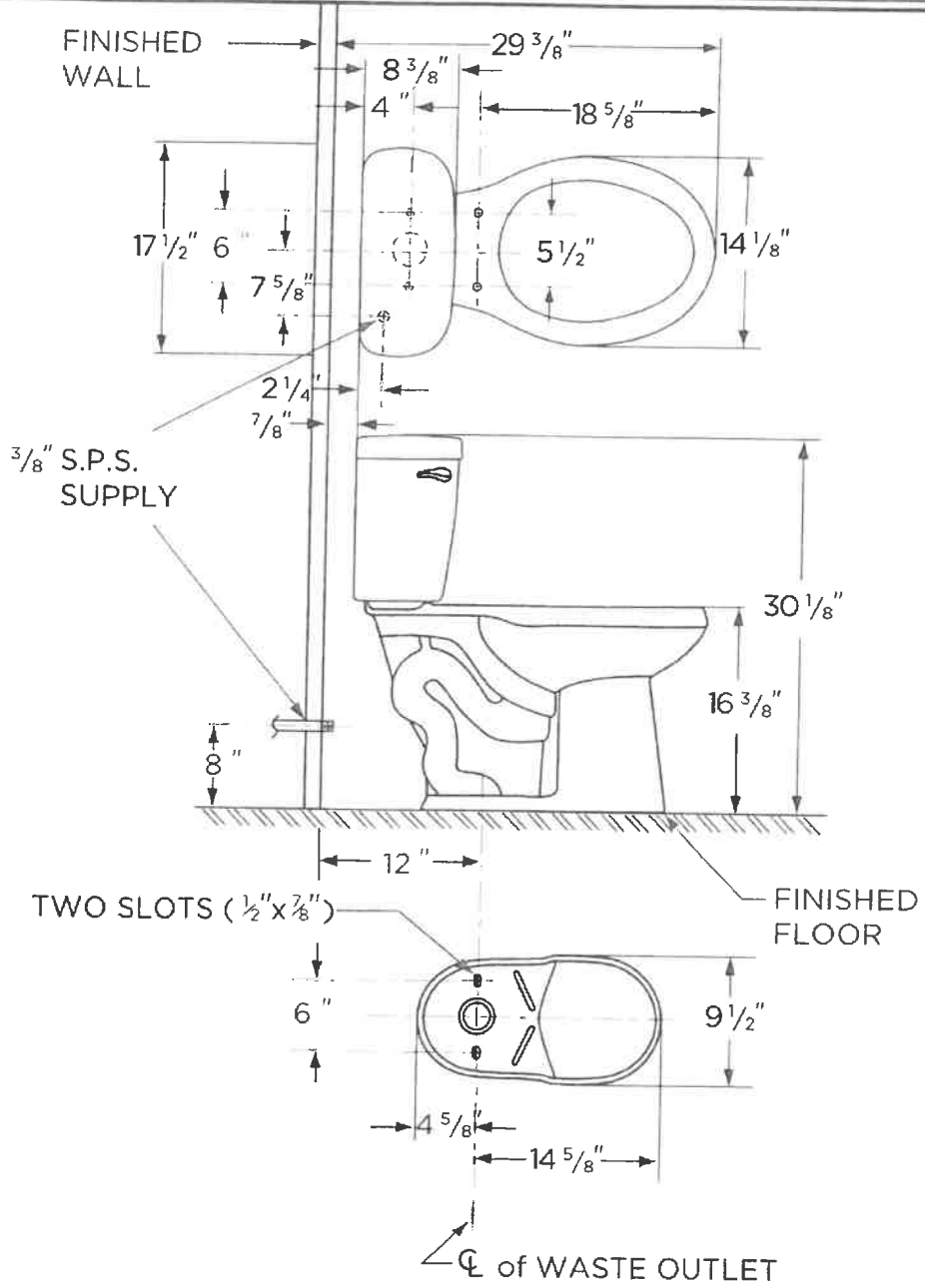
Job Name	
Date	
Model Specified	
Quantity	
Customer	
Contractor	
Architect/engineer	

www.gerberonline.com

TOILETS



1.28 gpf (4.8 Lpf) MAXWELL® 1.28 TOILET  
WS-20-918  
17" High Elongated, 12" Rough-in  
(Bowl MX-21-928 with Tank 28-990)



**NOTES:**  
All dimensions are in inches.  
  
Illustrations may not be drawn to scale.

**IMPORTANT:**  
Dimensions of fixtures are nominal and may vary within the range of tolerances established by ASME Standard A 112.19.2.  
  
THIS FIXTURE QUALIFIES ACCORDING TO ASME TEST PROCEDURES AS A HIGH EFFICIENCY WATER CLOSET WITH AN AVERAGE CONSUMPTION OF 1.28 gpf (4.8 Lpf) OR LESS.