

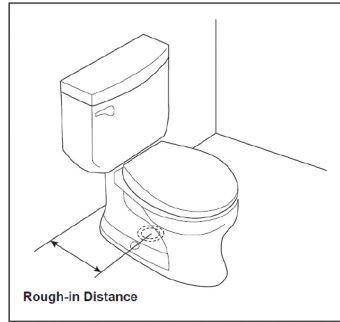
# Important Tips Before You Purchase a Toilet

Before you ever leave the house to shop for a toilet, get out your tape measure and gather the information you will need!



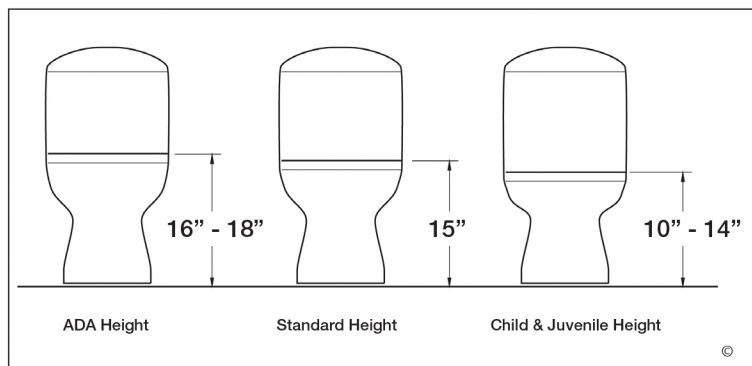
## 1 Rough-in

Know the rough-in dimension of your toilet installation. The distance from the flange bolts (that anchor your bowl to the floor, usually covered by small plastic caps) to the wall behind your toilet is known as the rough-in. In most North American homes that dimension is either 10, 12, or 14 inches, the most common in today's homes being 12 inches.



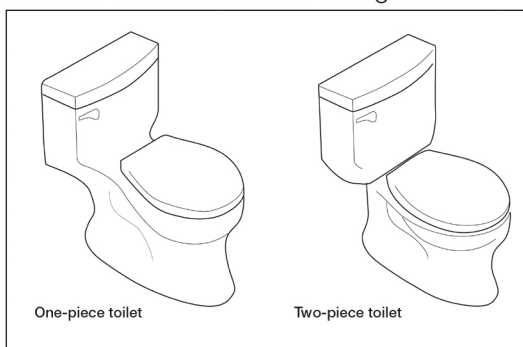
## 2 Bowl Height

The distance from the floor to the top rim of the bowl (not including the toilet seat). In North America, that distance has traditionally been about 14 to 15 inches. However, the trend for many families today is to install bowls with a height of 16 to 18 inches. Manufacturers use terms such as "Comfort Height", "Chair Height", "Easy Height", "Right Height", "Highboy", "Smart Height", "ADA Height", or some other similar description. The added height makes getting on and off the bowl easier, especially for the elderly or infirm, but many younger persons have also discovered the benefits. Decide whether or not you want a toilet with a taller bowl.



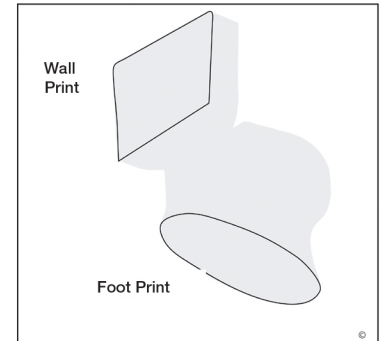
## 3 One-Piece vs. Two-Piece

Two-piece toilets are the most common design found in homes today. They are typically less expensive and usually have a taller tank than a typical one-piece toilet. One-piece toilets may be easier to clean and may provide a smoother or sleeker appearance. Decide on one-piece or two-piece.



## 4 Footprint

If you are replacing an existing toilet that has a large footprint (i.e., the base covers a large floor area), consider the patching and repair to the floor that might be required if a bowl with a smaller footprint is chosen. This is especially an issue where ceramic tile covers the floor around the toilet. Will additional matching tile be required and will the appearance be satisfactory? Footprint dimensions of most new toilets may be found on the manufacturers' websites.

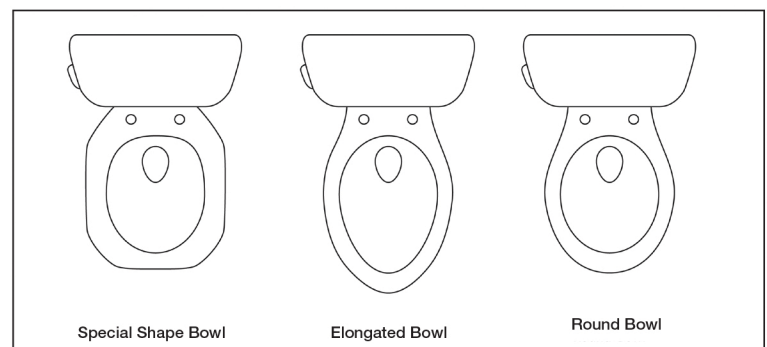


## 5 Wall-print

Again, if you are replacing an older toilet that has a large tank AND the wall area that is hidden behind that tank is unfinished or unpainted, consider that the installation of a smaller tank (typical of many of today's toilet models) may leave those unpainted areas visible. As such, you may be required to repaint a portion of the wall or even the entire bathroom.

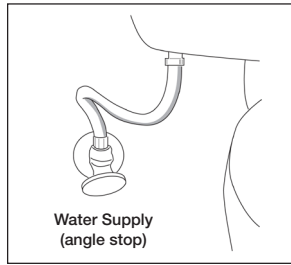
## 6 Bowl Shape

Choosing the bowl design is another important factor. Bowls are typically designed as either a smaller, round-front bowl or a longer, elongated-front bowl. The round-front bowl is ideal for compact bathroom spaces. Elongated bowls have a longer rim dimension (as much as 2 inches longer). They are more comfortable for adult use and they help improve hygiene. Be sure to measure the dimensions of your existing bowl and consider the size of the toilet space in your bathroom before replacing a round-front model with an elongated model. There have been cases where doors and drawers could not be opened when the old round front bowl was replaced with an elongated model! Check manufacturer websites for the dimensions of bowls and tanks. Decide on the bowl shape.



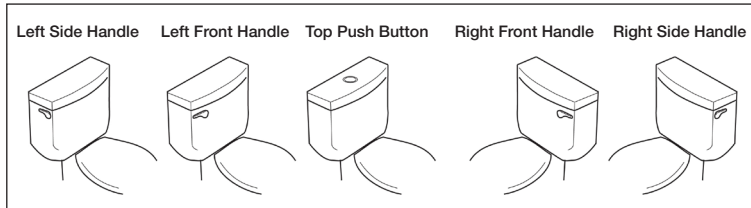
## 7 Water Shutoff Valve and Hose

Check the condition of your existing shut-off valve (called the 'angle stop') that supplies water to the toilet and the supply hose connecting that valve with your toilet tank. If you need to replace the supply hose, consider one encased in stainless steel mesh for long-term durability. If the shut-off valve needs replacing, it may be necessary to call your plumber.



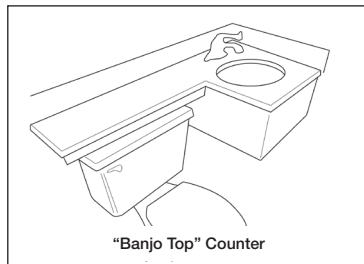
## 8 Flush Handle Location

Manufacturers place flush handles at various locations on the tank: right side, right front, left side, left front, and at the top-center of the tank lid. You should determine if the handle's location is important.



## 9 "Banjo Top" Issues

Do you have a shelf installed directly above your toilet, such as the type occasionally found in older homes? If so, be sure to measure the distance from the floor to that shelf. Then consider that distance to be a limit upon the overall height of the combined bowl and tank you plan to purchase. It is important to leave sufficient room between the tank lid and the shelf such that the lid can be removed and the parts inside the tank can be accessed when required.



## 10 Insulated Tank

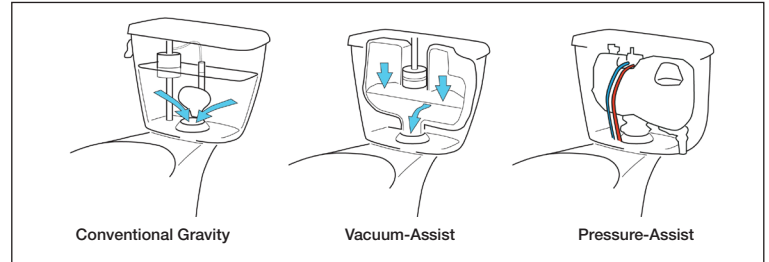
In humid climates (especially in buildings without air conditioning), sweating toilet tanks can be a problem. As cold water refills the tank after a flush, condensation can form on the outside of the tank and drip on the floor. This problem is less common with new efficient toilet models because there is less cold water needed to refill the tank. If you have issues with condensation, one solution is to install a model with an insulated toilet tank. The insulation acts as a barrier between the cold water and the sides of the tank.

## 11 MaP Score

Of course, if you want a toilet with the best flush performance, you **MUST** check the **MaP scores!** Research and compare toilets at: **[www.map-testing.com](http://www.map-testing.com)** to find just the right toilet. **Toilets with scores of 600 or better will provide you with excellent performance.**

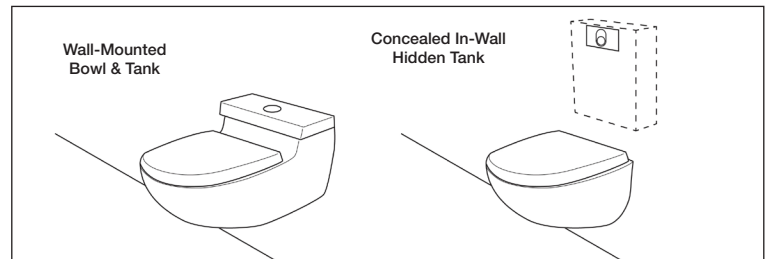
## 12 Flush Type

**Gravity Fed:** Fixtures that only use gravity (weight of the water in the tank) as the source of energy for flushing.  
**Pressure Assist:** Fixtures that use the potential energy in the building's pressurized water line to compress air within a containment vessel inside the toilet tank. Compressed air behind the water provides the flushing action.  
**Vacuum Assist:** Fixtures that create a low level of vacuum (negative air pressure) to assist with the flushing action.



## 13 Wall-Mounted Toilets

**Wall Mounted:** Entire fixture is affixed to the wall and the entire weight of the bowl and tank are born by a carrier structure in the wall.



## 14 Color

We all know that fashion is fickle, so be careful when choosing a "trendy" or "popular" color for your toilet. We recommend sticking with white or off-white (sometimes referred to as biscuit or beige or bone), all of which are commonly found in homes today.

## 15 Cost

Choose your new toilet based primarily on performance and style vs. cost. After all, you may be using this toilet every day for the next 20 years. Also note that some of the best performing models are the least expensive; and some expensive models offer only marginal performance.



### MaP Testing

**John Koeller, P.E.**

Principal | Koeller & Company  
[jkoeller@map-testing.com](mailto:jkoeller@map-testing.com)

**Bill Gauley, P.E.**

Principal | Gauley Associates, Ltd.  
[bill@gauley.ca](mailto:bill@gauley.ca)