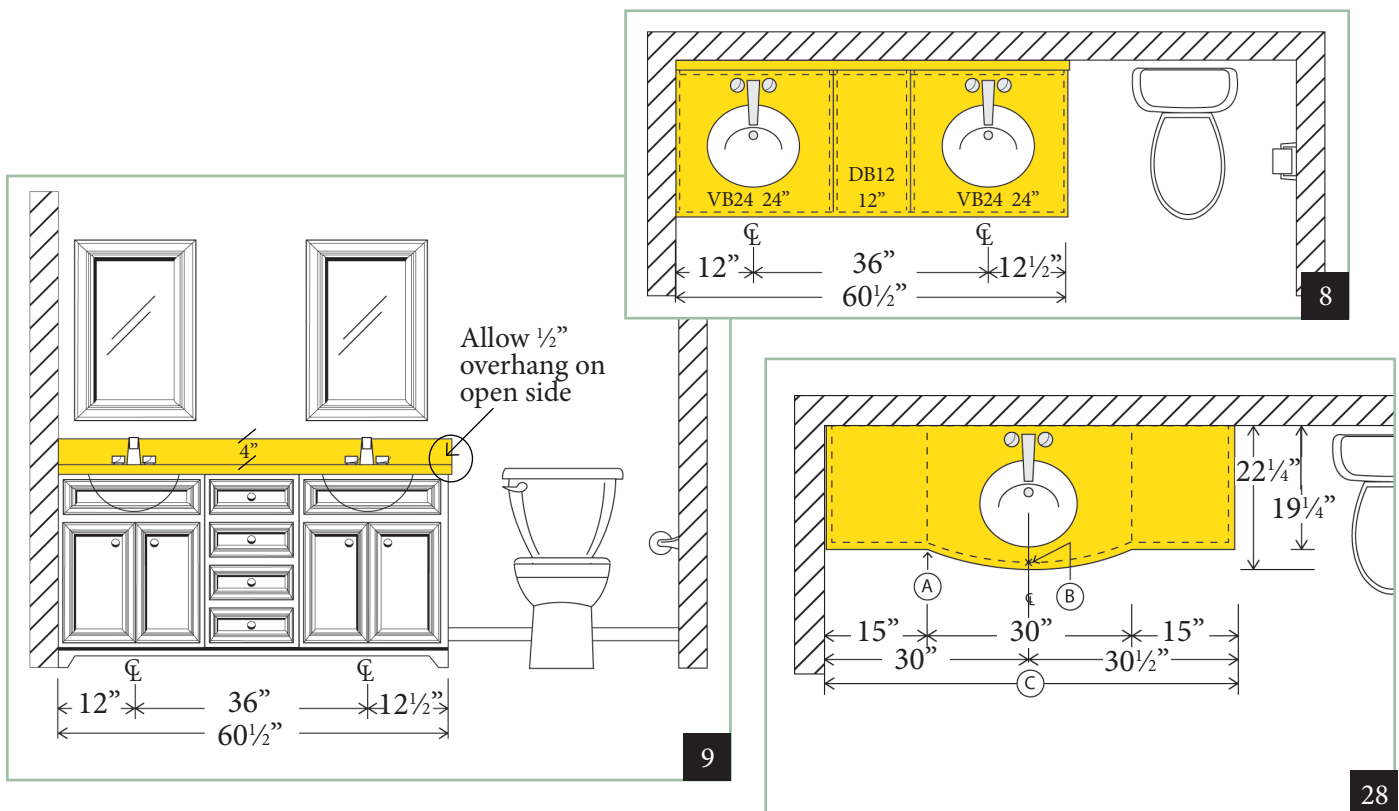


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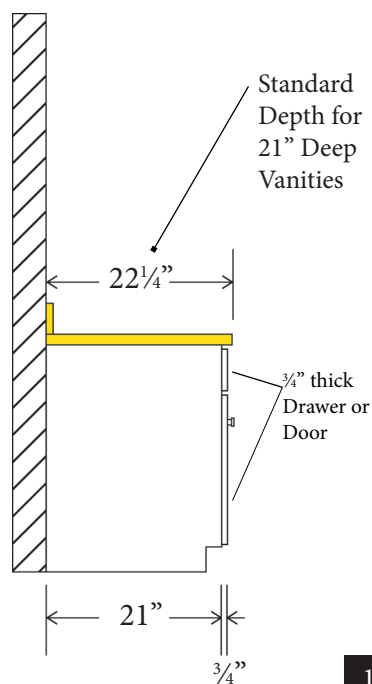
# How to Measure Your Vanity Top

## What are Standard Vanity Top DEPTHS

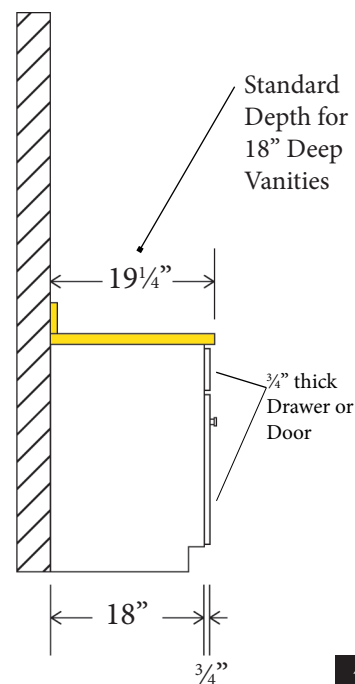
### Vanity Cabinet Sizes & Selecting the Proper Vanity Top Depth

In order to measure for a new vanity top it is helpful to know something about the sizes of vanities. Typically a vanity is made in an industry standard depth. Most vanities, especially "non furniture style" vanities are built to a depth of 21". However this depth refers to the actual depth of the vanity box and not the full depth of the vanity with the door. The typical depth of the vanity and the door and drawers increase the depth to 21-3/4". Thus the best depth for the vanity top is 22-1/4" for a 21" deep cabinet and 19-1/4" for a space saving 18" deep vanity cabinet.

### 21" Deep Vanity Cabinets use 22-1/4" Top Depth



### 18" Deep Vanity Cabinets use 19-1/4" Top Depth



## What are Standard Vanity Top LENGTHS

### Vanity Cabinet Sizes & Selecting the Proper Vanity Top Length

Most standard vanities are built in increments of 6" starting at 24" in width. The typical length of the vanity top allows for a 1/2" overhang on each end of the vanity that is not against a wall. Therefore a 30" length vanity typically uses a 31" length vanity top. A standard length will always be 1" longer than the standard cabinet overall length. Table 1 indicates typical standard lengths. Combining standard LENGTHS and standard DEPTHS will yield the most economical vanity tops.

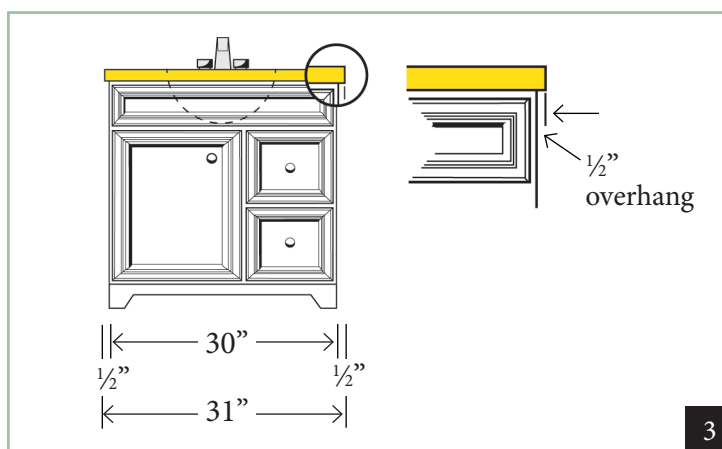


Table 1

Vanity Size	24"	30"	36"	42"	48"	60"	72"
Vanity Top Length Size	25"	31"	37"	43"	49"	61"	73"
Max. No. of Bowls	1	1	1	1	2	2	2

## Selecting a Vanity Top for Cabinets against the Wall

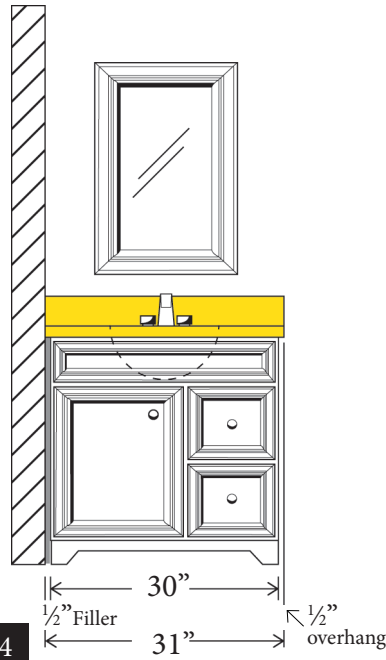
### Vanity Cabinet Installation against the wall

Many vanities are installed against at least one wall in a bathroom. A consumer has a choice:

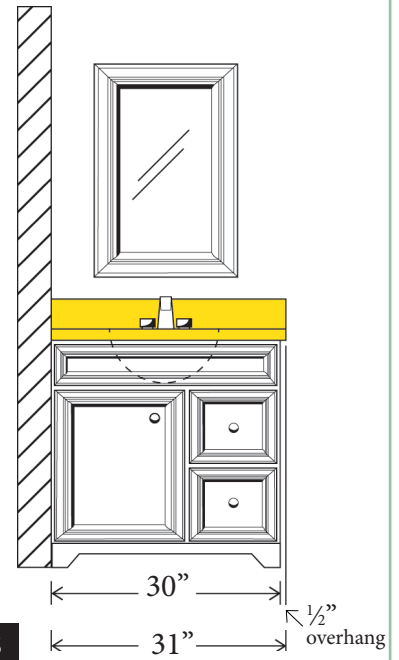
a) utilize a **standard** size vanity top which is typically more economical to use and add a small  $\frac{1}{2}$ " filler on the end of the vanity which is against the wall. This will fill the  $\frac{1}{2}$ " overhang gap of the standard vanity or

b) utilize a **custom** size vanity top where a vanity is installed directly against the wall. The top that is used will provide for a  $\frac{1}{2}$ " overhang only on the side of the vanity that is not against the wall.

Example (a)  
30" Vanity using a **Standard**  
Vanity Top with a  $\frac{1}{2}$ " filler



Example (b)  
30" Vanity using a **Custom**  
Vanity Top without a filler



## Measuring a Single Bowl Vanity Top

### Measuring for your Single Bowl Top

In a typical vanity top, you need to measure or indicate the 1) Depth of the Top, 2) the overall Length of the Top and 3) the measurement to the Center of the Vanity Cabinet.

#### Depth

1) For Vanity Top Depth, measure the depth of the cabinet and doors combined and add approximately  $\frac{1}{2}$ ". Indicate a) Std.  $22\frac{1}{4}$ ", b) Space Saver  $19\frac{1}{4}$ " or c) Custom Depth.

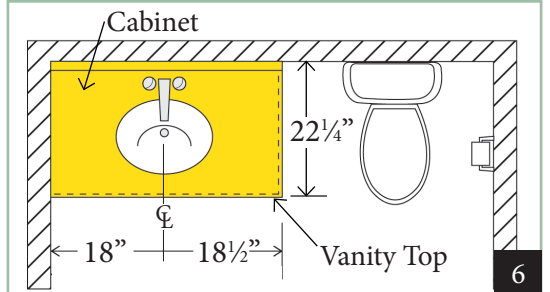
#### Length

2) For Vanity Top Length measure the overall length of the vanity cabinets and add approximately  $\frac{1}{2}$ ". Indicate either a standard dimension as indicated in Figure 1 or a custom length.

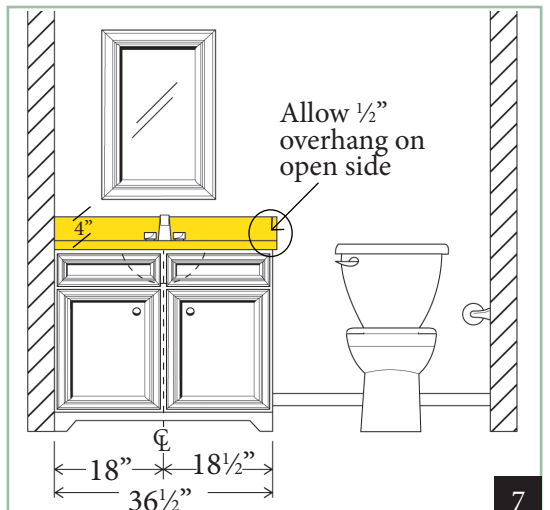
#### Bowl Position

3) Typically the bowl is centered in a vanity top. If so, simply indicate that the bowl is to be centered in the top. If you want the bowl to be positioned in a different location, mark the location of the center of the cabinet that you want the bowl centered into, then measure from the left hand side to your bowl center mark. Make sure you have a minimum of 12" from either side. In the drawing on the right, the bowl is centered 18" from the left hand side.

#### Top View



#### Front View



## Measuring a Double Bowl Vanity Top

### Measuring a Double Bowl Top

Measuring for a double bowl vanity top is quite similar to a single bowl other than adding the positions of the two bowls.

#### Minimum Position from the end of the Top

Keep in mind that the bowl must be a minimum of 12" from either end of the top.

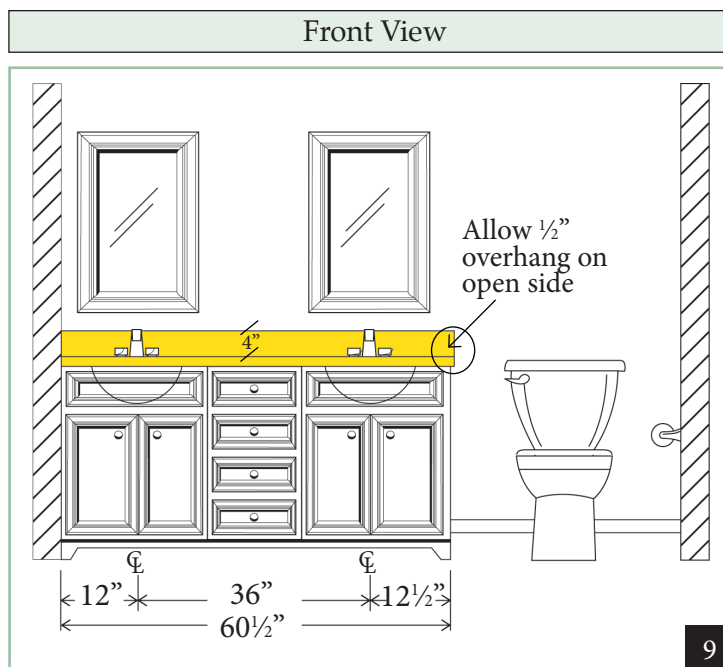
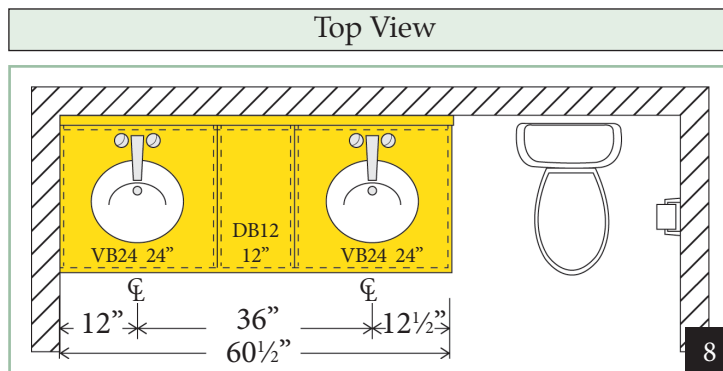
#### Depth and Length

Proceed with measuring the Depth and Length as in the previous example for a Single Bowl Top. Remember to add  $\frac{1}{2}$ " to the open end.

#### Bowl Position

Mark the center point of the cabinets that you would like to position your bowls. Measure from the left hand side to the center point that you have marked and record that dimension, then measure from the right hand side of the top to the center point of the right hand bowl. Remember to add a  $\frac{1}{2}$ " overhang to your cabinet dimension for any open ends.

In the example at the right, the bowls are centered in 24" vanity cabinets. Therefore the bowl on the left is centered 12" from the left and the bowl on the right is centered 12 $\frac{1}{2}$ " from the right. Note we added a  $\frac{1}{2}$ " for the open end.



## Why Use a Side Splash?

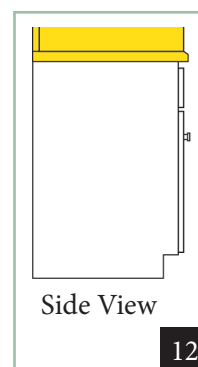
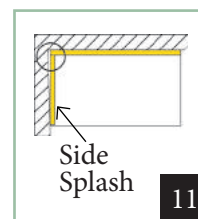
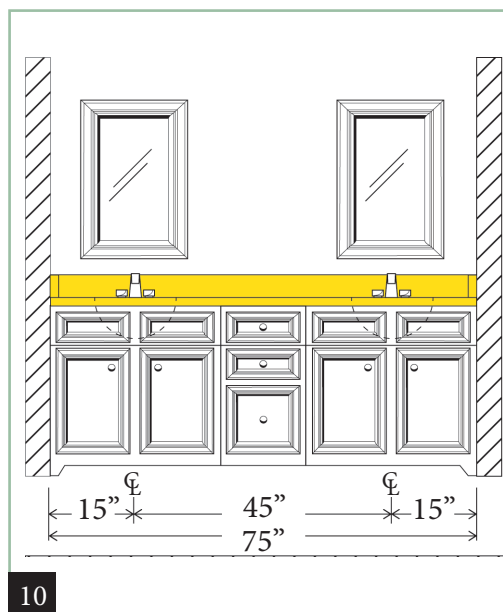
A side splash serves 2 purposes.

#### Hides out of square walls

1) In figure 11 at the right, an out of square wall condition exists. A side splash can act as a moulding that will cover out of square walls that are just under  $\frac{3}{4}$ " or less out of square.

#### Protects side walls from moisture

2) In figure 10 side splashes protect the side walls from moisture as well as damage from bumps and bruises.

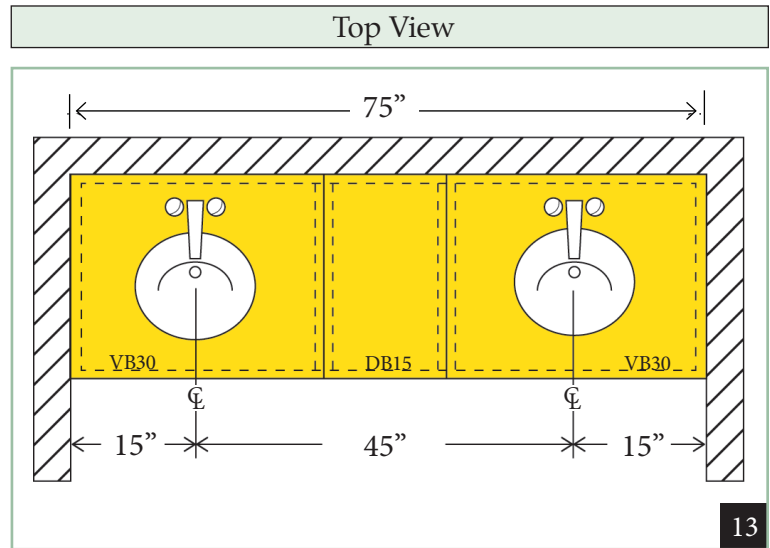


## Measuring between 2 Walls

### Measuring between 2 walls

When your top is going between 2 walls measure both the length of the top at the area against the wall as well as the length at the front of the cabinet. Select as your proper length the shortest of the two measurements. In most cases it is advisable to use 2 side splashes at each side wall to cover any out of square wall conditions.

In figure 13 the back side length was 75" and the front dimension was 75 $\frac{1}{4}$ ". In this case order your top with a length of 75" and add (2) side splashes. This will cover the out of square wall condition and make a nice and neat installation.



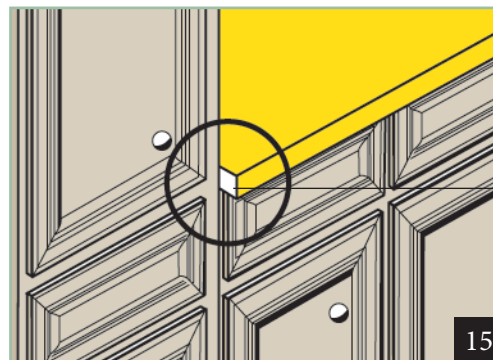
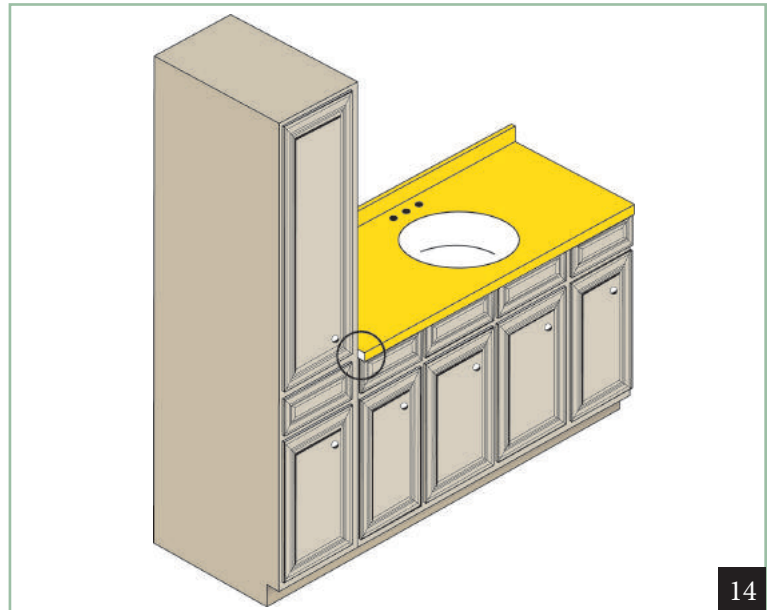
## Measuring a vanity top with a Linen Cabinet

### Measuring a Top with a Linen Cabinet

A common error occurs in ordering vanity tops next to a linen cabinet. The error is that a finished end is not specified on the side of the top along side the linen cabinet. (See figure 14.

A vanity top that is attached to a linen cabinet must be marked with the end to be finished because the vanity top projects slightly further than the linen cabinet itself.

In figure 15 you can see that the linen cabinet is in line with the vanity cabinetry. However the projection of the vanity top beyond the cabinet face requires a small finished portion of the top, in this case along the left hand side.



Projection of vanity top beyond linen cabinet.

## Measuring a Vessel Bowl Vanity Top

### Measuring for a Vessel Bowl

#### Surface Mounted Vessel Bowl

**Step 1:** Specify the location of the center of the *vessel bowl drain*. Both the distance from the left hand side of the top and from the back of the top. Remember to center the drain hole in the vanity bowl base.

#### Determine the Vessel Bowl Diameter

Measure the vessel bowl diameter.  $\frac{1}{2}$  of the diameter of the vessel will determine the drain center location.

Drain hole is cut to  $1\frac{3}{4}$ " diameter.

15" is the maximum depth or diameter for a vessel bowl to have a faucet behind the bowl in a standard  $22\frac{1}{4}$ " depth top.

A faucet mounted behind a vessel bowl requires a minimum from the back edge of the top to the vessel of 5". A  $2\frac{1}{4}$ " minimum from the front edge of the vessel to the front edge of the top is also required.

**Step 2:** Specify the location of the center of the *faucet hole*. Mark the distance from the left and the back of the top. Faucet hole is cut to  $1\frac{3}{8}$ " diameter.

#### Determine the spout reach

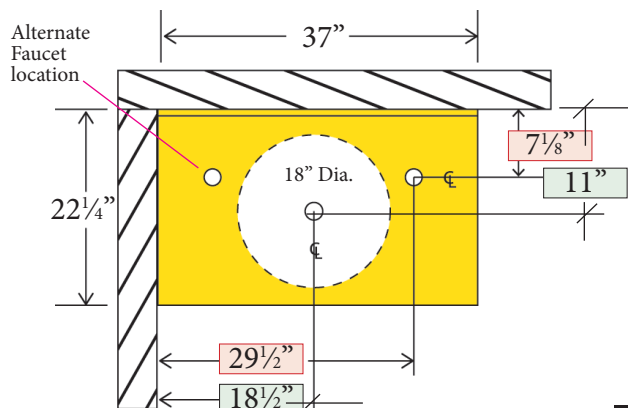
Measure from the center of the faucet hole cutout to the edge of the faucet spout outlet. Measure the diameter of the faucet spout. Using the guideline of a 2" space between the edge of the vessel bowl and the center of the faucet determine if you have enough spout reach to have the spout extend over the vessel bowl.

A vessel mounting ring adds  $\frac{1}{2}$ " to overall height. Some faucets have risers that can add to height. 8" or more in height typically works for vessel bowls that are generally 6" in height or less.

#### Recessed Vessel Bowl Installation

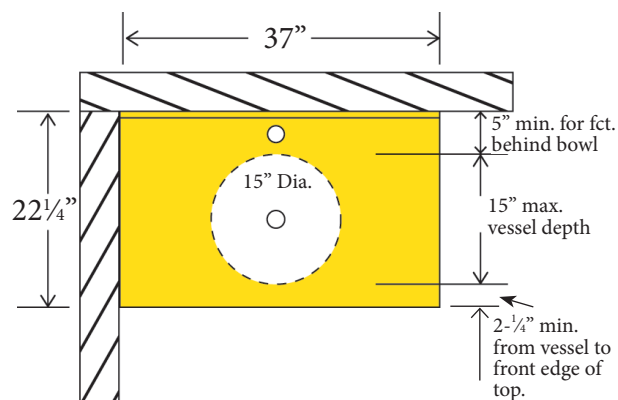
When a vessel bowl is to be partially recessed into a vanity top, identify the diameter of the recess in the top to be cut. Add an additional  $\frac{1}{8}$ " to the cutout for out of round circumferences.

Top View



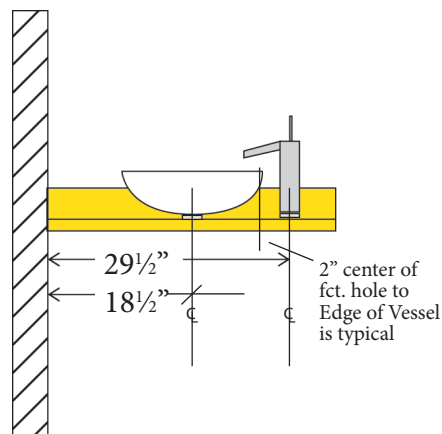
16

Critical dimensions for a faucet behind a vessel



17

Side View



18



## Measuring a Banjo Vanity Top

### Measuring for a Banjo Vanity Top

Measuring for a banjo top consists of combining the measurements of the vanity as well as the area over the toilet. First measure the vanity area. Consider whether the vanity is against the wall in considering the centerline for the bowl.

If the vanity is against the wall, measure to the center of the vanity cabinet in which the bowl is to be centered and indicate the centerline.

Example: Figure 18. the total area between the walls is 72". The vanity bowl base is 24" with a 12" side cabinet.

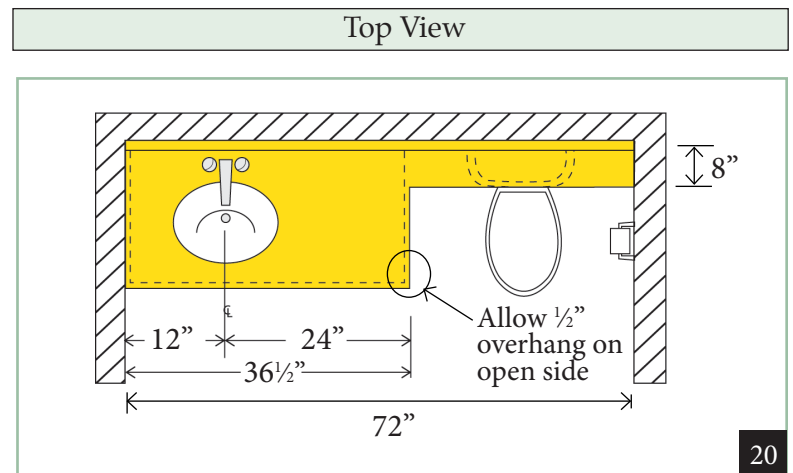
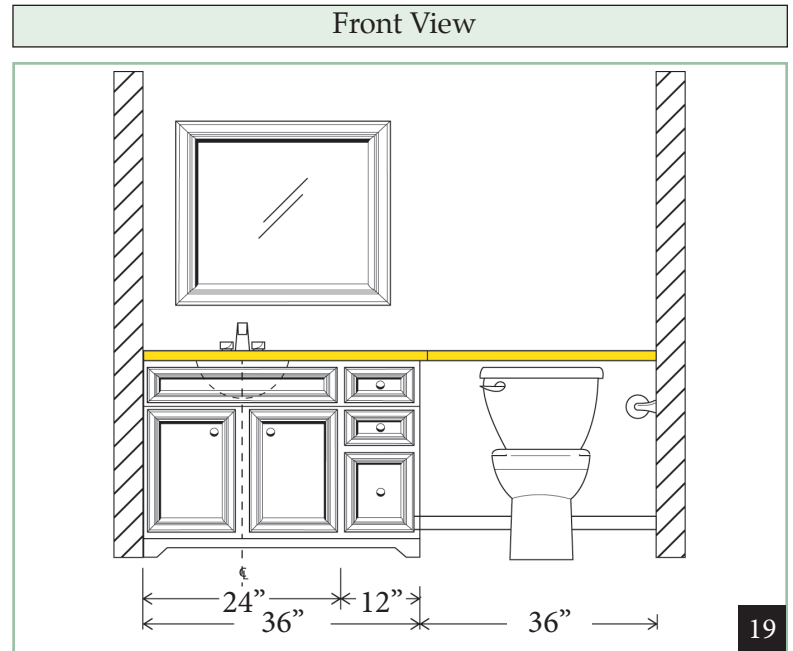
**Step 1.** Measure from the left hand side to the center of the 24" vanity bowl cabinet. In this case the centerline is 12" from the left side.

**Step 2.** Measure the overall length of the total vanity cabinetry. Allow for a  $\frac{1}{2}$ " overhang on the open end of the vanity. In this case,  $36" + \frac{1}{2}"$  overhang.

**Step 3.** Next measure the overall length of the entire space where the banjo top is to be installed. In this case it is 72".

**Step 4.** Finally indicate the depth of the vanity and the banjo top area. The depth over the toilet area is typically 8"-10".

Once the measurements are completed, complete the diagram or order form and you are done. Naturally, you also have to indicate the standard elements such as deck material, bowl style and type, faucet drilling and backsplash and side splash style.



## Measuring an Angled Front Vanity Top

### Measuring for an Angled Front Vanity Top

As a general rule, most angled vanity fronts are designed at a 45° angle. Further, the typical angle spacing is a 3" width between the side cabinet and the sink base and a 3" change in depth, thus creating a 45° angle (figure 22). The vanity sink base is typically designed with a depth of 3" more than the side cabinets (figure 23).

The result is the vanity sink base depth is 3" greater than the side cabinet depth. The angled front is created by inserting a filler to fill the gap creating a 45° angle (figure 24). This filler would have a length of approximately 4¼". The vanity top manufacturer will calculate the proper top overhang dimensions to accommodate the angled filler.

Measuring for an angled top consists of measuring the *vanity cabinetry only*. The vanity top manufacturer will account for all of the front angled overhangs.

To order an angled front vanity top first measure the vanity cabinets and the centerline of the bowl. Next indicate the depth of the side cabinets and the depth of the vanity sink base. The next step is the horizontal spacing of the filler. Again, this is generally a 3" depth change and a 3" horizontal space resulting in a true 45° angle.

Example: vanity cabinetry is 60" overall, centerline to bowl base 30" from LH side.

**Step 1.** Measure the length and depth of the side cabinets. This will mark where the angle starts. In this example it starts at 15" from the LH side and the vanity cabinet depth is 18".

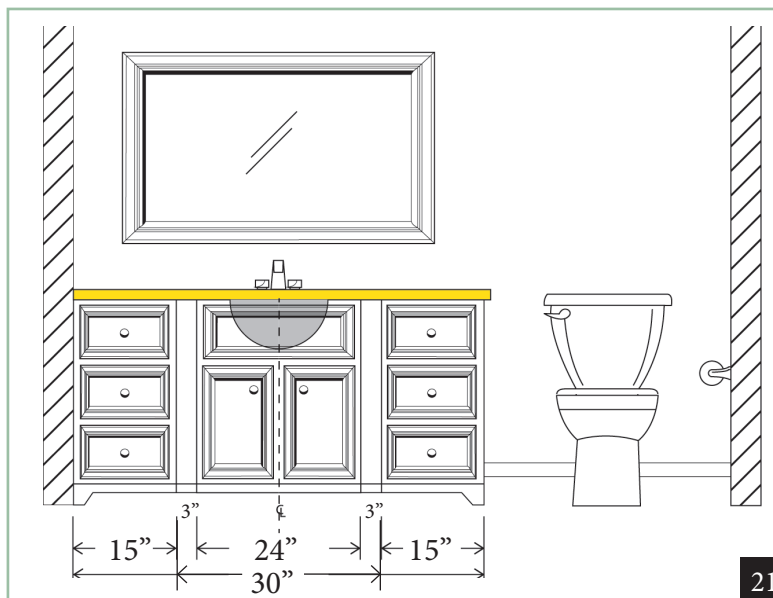
**Step 2.** Measure the width of the angled area as well as the change in depth. In this case the angled width is 3" and the change in depth is 3" (from 18" to 21").

**Step 3.** Measure the area in between the angle fillers. In this case 24".

**Step 4.** Finally measure the length of the right hand side cabinetry. In this case 15".

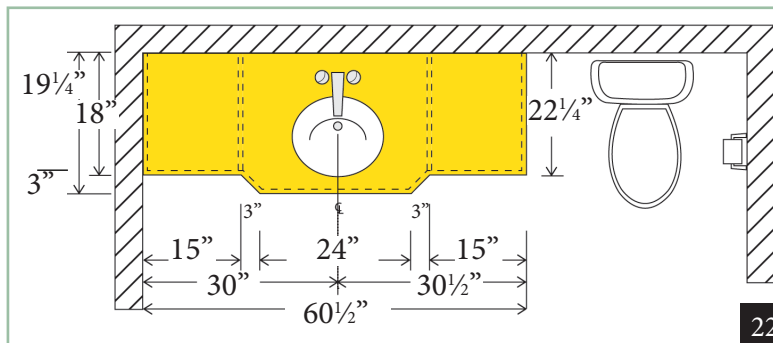
Indicate the standard elements such as deck material, bowl style and type, edge profile, faucet drilling and backsplash and side splash style.

Front View



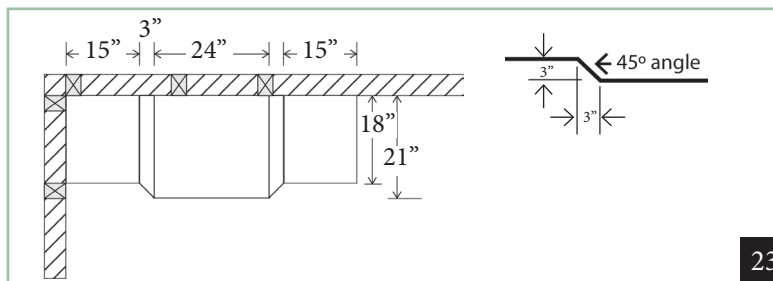
21

Top View



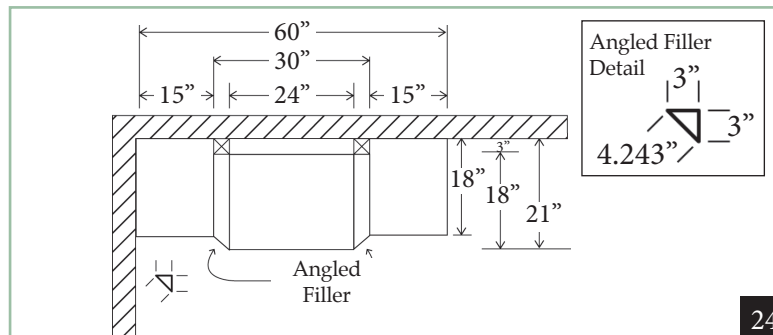
22

Layout with Cabinets that Change Depth



23

Layout with Cabinets with Same Depth



24



## Measuring a Break Front Vanity Top

### Measuring for an Break Front Vanity Top

#### Create a Break Front with 2 Different Depths of Cabinets

An offset or break front vanity top can be designed by utilizing a deeper vanity bowl base than the depth of the side cabinets. For example by ordering the vanity sink base as a 21" depth vanity and the side cabinets as 18" depth.

#### Create a Break Front by installing a Wood Spacer behind the Vanity Bowl Base.

This look can also be achieved by using the same depth cabinets in all of the cabinetry but then simply pulling the vanity sink base further away from the back wall then the side cabinets. This is done by installing a wood filler behind the bowl base vanity cabinet. This creates an offset or increase in the depth at the vanity bowl base cabinet, thus creating the break front. (See figure 2)

Measuring for a break front top consists of simply measuring the vanity cabinetry only, not the overall top. The manufacturer of the vanity tops will adjust the vanity top dimensions to fit the cabinetry measurements that you have provided. The critical dimensions are the measurements of WIDTH & DEPTH of the vanity cabinets for both the side cabinets as well as at the sink base.

**Step 1.** Measure the overall width and depth of the vanity bowl base and any wood spacer behind the bowl base and determine the centerline.

**Step 2.** Measure the overall width and depth of the side cabinets. This will give the manufacturer the point at which to start the offset.

**Step 3.** Indicate if the vanities are against the wall on either the LH, RH or between 2 walls. This will allow the top manufacturer to add the proper overhang, if any, to the top.

As a general rule, most break front vanity fronts are designed at a 3" offset. Typically the vanity sink base is purchased with a depth 3" greater than the side cabinets.

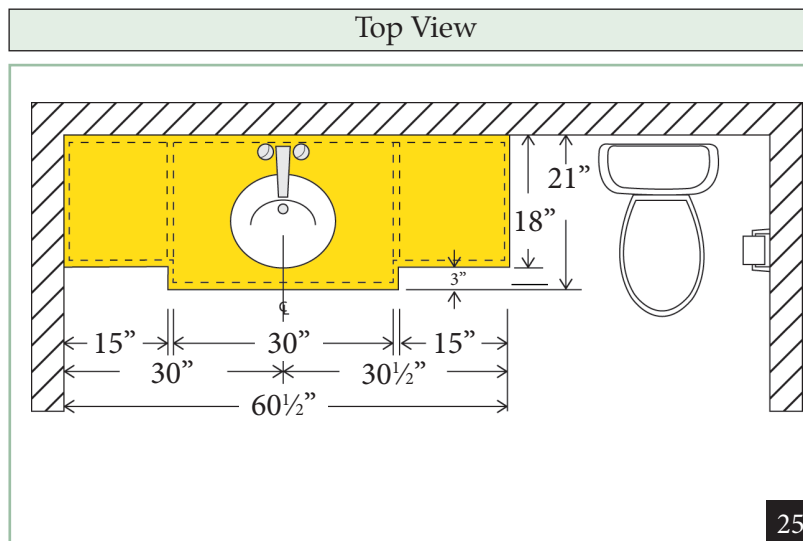
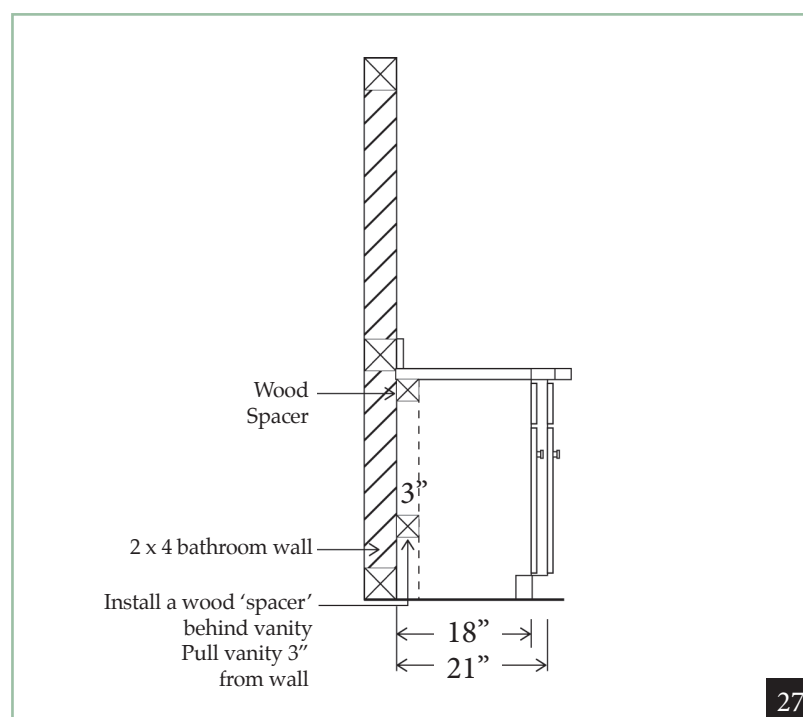
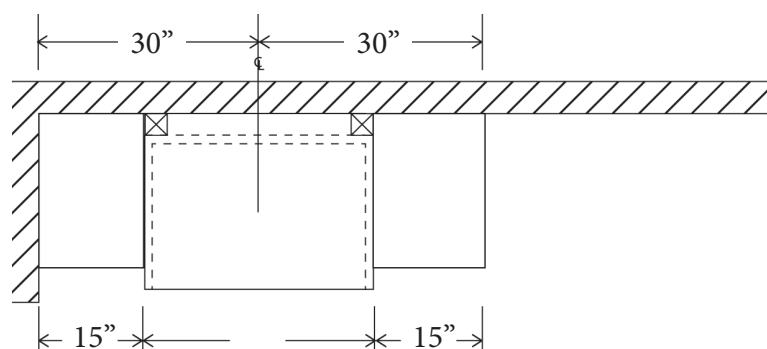


Figure 2



## Measuring a Bow Front Vanity Top

### Measuring for an Bow Front Vanity Top

A bow front vanity top has a curved front where the depth is greater at the center than at the side. The vanity top manufacturer needs to know the depth change of this offset and the points at which this depth change occurs to determine the proper curved arc. Generally the vanity sink base cabinet is curved and the side cabinets are straight. The curve is created by designing a large radius within the vanity sink base.

Measuring for a bow front top consists of measuring **vanity cabinetry** not the overall top. The manufacturer of the vanity tops will adjust the vanity top dimensions to fit the cabinetry measurements that you have provided. The critical dimensions are the width of the bow front vanity bowl base and the DEPTH at the both the ends of the bowl base (point A) and at the centerline of the vanity sink base. (point B) These dimensions will give the manufacturer the change in depth and the width dimension which will determine the bow front radius.

As a general rule, most bow front vanity fronts are designed as a radius with a 3" offset at the apex (point B) of the curve compared to the baseline. (figure 28) depth is 3" greater than the side cabinet depth.

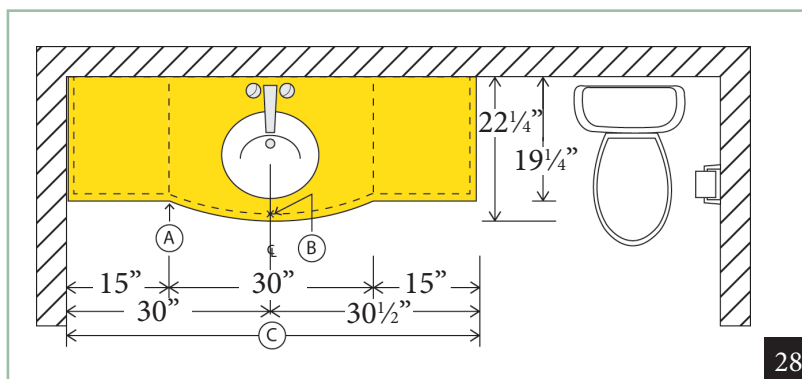
**Step 1.** Measure the overall width of the vanity sink base. In this example 30" and the centerline of the sink base which is 15" as well as the DEPTH of the sink base at the centerline, in this case 21".

**Step 2.** Measure the left hand side cabinets both width and depth. In this case the width is 15" and the depth is 18". This will give the manufacturer the point at which to start the offset.

**Step 3.** Measure the overall width of the vanity cabinets. In this case 60".

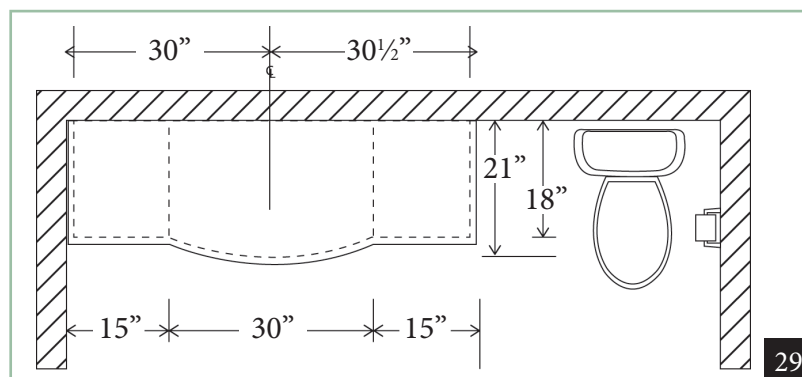
**Step 4.** Indicate whether the vanity is against a wall or between 2 walls.

Top View



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Measure Depth at (A) edge of vanity base  
and Depth at (B) center of vanity base  
and overall Width of vanity base (C)



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## Vanity Top Materials

### Marble

The term marble comes from the Greek *marmaron* or “crystalline rock” or shining stone. Marble is a rock resulting from metamorphism of sedimentary carbon rocks more commonly known as limestone or dolomite rock. Metamorphism causes recrystallization of the original carbonate mineral grains. The resulting marble rock is typically composed of an interlocking mosaic of carbonate crystals.

Pure white marble is the result of metamorphism of a very pure (silicate-poor) limestone or dolomite. The characteristic swirls and veins of many colored marble varieties are usually due to various mineral impurities such as clay, silt, sand, and iron oxides which were originally present as grains or layers in the limestone. Green coloration is often due to serpentine resulting from originally high magnesium limestone or dolostone with silica impurities.

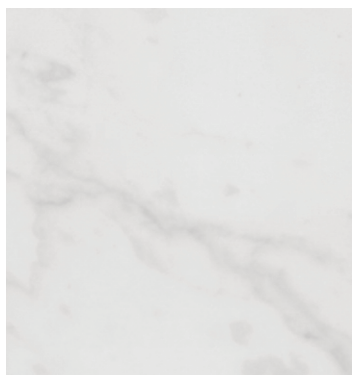
Marble is mined throughout the world, but notable locations include Italy, Brazil, India, Turkey, and Greece. Though marble is virtually unrivaled for its beauty, this classic material has several inherent issues which can cause havoc for a vanity top.

Marble as a result of its base structure as limestone is a relatively soft material. Although not as soft as some top materials, namely cultured marble, it can scratch, thus care in handling must be taken with this material. Further, its soft structure makes it susceptible to open pores. Proper sealing of marble can make a difference in its stain fighting properties. Finally marble’s structure typically contains far more cracks, fissures and stress points that can make it difficult to machine for vanity tops.

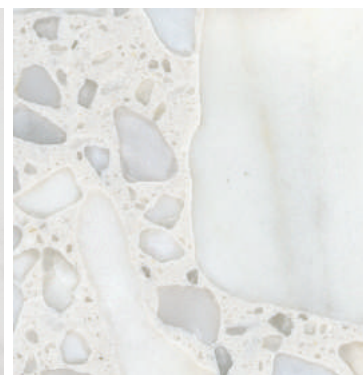
A solution to some of the difficulty in fabricating marble is the development of **marble composites**. These agglomerate marble stones consist of marble chips combined with a small amount of resin bonding. These newer materials have the benefit of the beauty of marble with the added bonus of being very easy to machine. However, one still has to be cautious in proper sealing, the use of acids as well as being cautious with hard metals as this material is still susceptible to scratching.



Transolid® White Carrara Marble Vanity Top with Butterfly edge



Classic Marble



Marble Composite



Marble mining



Marble slab



### Granite

Granite is generally considered the most exclusive of natural stone countertop materials. It shrugs off most stains, especially if the granite is sealed when necessary. It is a material that is extremely hard, durable and very resistant to both heat and scratching. It is unaffected by wine, tea, citric acid, coffee or most other elements used in the kitchen or bath. Composed primarily of quartz, mica and feldspar, it also may contain Orthoclase, which is a form of feldspar which can form in plate-like layers, short prismatic crystals and tabular inclusions. This texture forms by slow cooling of magma deep underground in the plutonic environment.

Granites can be pink to gray in color, depending on their chemistry and mineralogy. Generally speaking granite colors vary in price as a result of their rarity in the earth rather than any physical quality differentiation. In other words, generally absolute black is more expensive than a grey, white and black speckled granite due to its purity and rarity in the mountain. Both stones have similar characteristics of heat, scratch and stain resistance.

By definition, granite is an igneous rock with at least 20% quartz by volume. Granite is usually found in the continental plates of the Earth's crust. Granite is nearly always massive (lacking internal structures), hard and tough, and therefore it has gained widespread use as a construction stone. The average density of granite is between 2.65 and 2.75 g/cm.

#### GRANITE REPAIR

Granite is an extremely durable product that can chip when struck with a severe impact, especially on an edge. It can be repaired with epoxy resins that are colored in a similar fashion as the stone color.

#### SEALING STONE TOPS

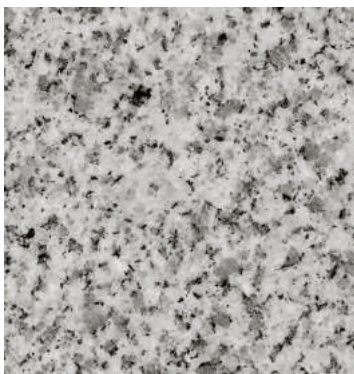
Granite care is relatively easy provided it has been factory sealed to prevent stains when necessary. Sealers for stone (also known as impregnators) are below-surface penetrating sealers, not topical hard shell sealers like those, for



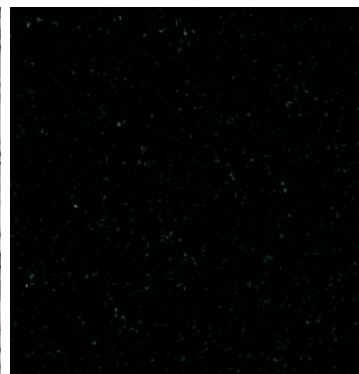
Transolid® Giallo Veneziano Granite Vanity Top with Beveled edge



Transolid® Blue Pearl Granite Vanity Top with Eased edge



Rosselin White



Absolute Black

## Vanity Top Materials

### Granite cont'd.

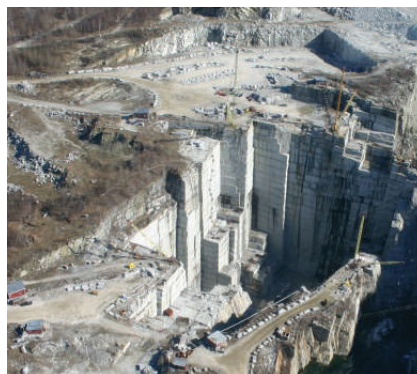
instance, that are applied onto wood floors or furniture. They are delivered inside the stone by natural absorption. Transolid tops are pre-sealed at the factory and do not require a sealer reapplication for many years.

Some stones absorb more than others. Granite sealer consists of a solid part, or resin, and a solvent or water carrier. The solid stays in the stone and clogs the pores of the stone to keep liquid stains out. The carrier brings the solid into the stone and then evaporates. The sealer resin is absorbed into the stones natural pores, however the impregnator cannot, and does not, offer any protection whatsoever to the surface of the stone - physical or chemical damage such as scratches or etching by acids.

You can test your stone to see if it needs sealer by putting a few drops of lemon juice (a mild acid) in an inconspicuous place. If the lemon juice doesn't absorb at all, the stone does not need to be sealed.

#### SOAP FILM on STONE TOPS

As part of our fabrication process we always degrease countertops and give them their final cleaning with denatured alcohol. Denatured alcohol, it turns out, it does wonders for cleaning granite and cutting through film buildup on your vanity tops. The result is the original shiny surface.



Granite Mining



Edge Profiling Equipment



Automatic CNC (Computer Numeric Control) Equipment



Tops are shipped in a vertical position, then crated to insure safe transit.



### Quartz (Engineered Stone)

Engineered stone is a composite material made of crushed stone bound together by a polymer resin. It is used primarily for kitchen or vanity countertops. The material is factory made in slabs, cut and polished by fabricators with professional stone cutting equipment, and in the case of kitchen tops or in some cases large bathroom vanity tops assembled at the worksite.

Engineered stone products are gaining in popularity. Research reported in Consumer Reports (2010) magazine reveals virtually no difference in performance between quartz products and sealed granite.

Engineered stone is also commonly referred to as agglomerate or 'quartz surface', though it is possible to create solid surface using fillers other than quartz. A mixture of 93% quartz and 7% polyester resin is pressed into slabs using a "vibrocompression vacuum process". This technique combines a vacuum process to remove the air pockets from the material so that it is homogenous with a compression process that imparts tremendous pressure and heat on the product. The result is a product that can be machined, has consistent color and density throughout and is relatively heat and stain resistant.

Quartz is the major filler, although other material like coloured glass, shells, metals, or mirrors can be added. Different types of resins are used by different manufacturers. Epoxy and polyester resin are the most common types. Chemicals such as UV absorbers and stabilizers are added. To aid curing, peroxide is added.

Engineered stone is typically worked in the same way as natural stone using a water jet cutter or a diamond blade. The material then is polished with stone polishing equipment to finish the exposed edges. This is in contrast with solid surface materials which can be cut with regular woodworking saws and finished utilizing conventional sanding equipment.



Transolid® Baltic Brown Quartz Vanity Top with Butterfly edge



Transolid® Milan White Quartz Vanity Top with Beveled edge



Transolid® Nano Crystal Quartz Vanity Top with Eased edge



## Vanity Top Materials

### Quartz cont'd.

The material can be produced in either 12 mm (1/2"), 20 mm (3/4") or 30 mm (1 1/4") thicknesses. The most common slab format is 3040 mm (120") x 1440 mm (56.5"). Engineered stone is typically less porous, more flexible, and harder than many natural stones, especially as compared to marble. Less porous varieties are more resistant to mould and mildew than traditional stone. Since it has a uniform internal structure, it does not have hidden cracks or flaws that may exist in natural stone. Its polyester resin binding agents allow some flexibility, preventing cracking under flexural pressure. But, the binding agents often continue to harden, leading to a loss of flexural strength over time. The polyester resins are not completely UV stable and engineered stone should not be used in outdoor applications. Continuous exposure to UV can cause discoloration of the stone, and breakdown of the resin binder.

The material is sometimes damaged by direct application of heat. Quartz engineered stone is less heat resistant than other stone surfaces including most granite, marble and limestone; but is not affected by temperatures lower than 150°C (300°F). Quartz engineered stone can be damaged by sudden temperature changes. Manufacturers recommend that hot pots and pans never be directly placed directly on the surface, and that a hot pad or trivet is used under portable cooking units.

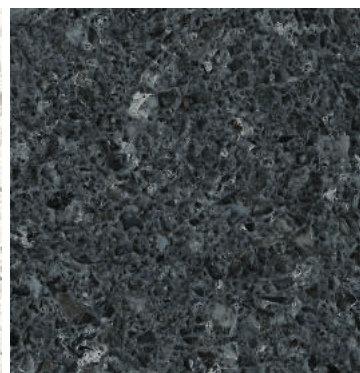
A variant of Quartz and Glass is a material known as Nano Crystal. This is a material made from pure silicone, sand, feldspar and quartz which is heated to intense temperatures in a furnace. The resulting liquid is cast into slab-width panels. The end result is a pure white glass-like material that is extremely hard, has high temperature resistance and is homogenous throughout so that it can be machined. It produces the purest, cleanest white crystalline vanity top in the land. Transolid® calls this material Nano Crystal.



Quartz is engineered stone



Milan White



Genoa Blue



### Solid Surface

#### Pure Acrylic Sheet Solid Surface

Solid surface countertops are a non-porous countertop material that offers a seamless look as well as exceptional durability. A scratch-resistant renewable surface, a solid surface allows repair of minor nicks and scratches with mild abrasive household cleaners. Solid surface countertops offer many of the advantages of stone with few of the drawbacks. Cast from an acrylic resin that sometimes include crushed stone—particularly quartz—solid-surface material demands little maintenance and is extremely durable. Intense heat and heavy falling objects (which shouldn't pose much of a threat in bathrooms) can cause damage, but scratches, abrasions, and even minor burns (if you leave a curling iron on the vanity top, for example) can be repaired with fine-grade sandpaper. The color palette includes numerous solids and patterns. The methods and tools needed for working with this material are similar to those required for woodworking.

#### SEAMLESS CONSTRUCTION

One of the best characteristics of solid surface is that it can be seamlessly put together to form a continuous sheet. This is especially helpful in the construction of a coved backsplash integral into a top. (Figure 1)

Likewise an undermount bowl can be seamlessly integrated into a vanity deck. This seamless construction provides a very sanitary environment.

#### WILL NOT SUPPORT BACTERIA GROWTH

Solid surface is an extremely dense material. As a result, it provides an environment that is very unfriendly to bacteria. It remains the number one material used in hospitals across the country as a result of its resistance to the growth of bacteria.

#### BEAUTY OF SOLID SURFACE

The latest solid surface materials do an excellent job of replicating natural stone. These

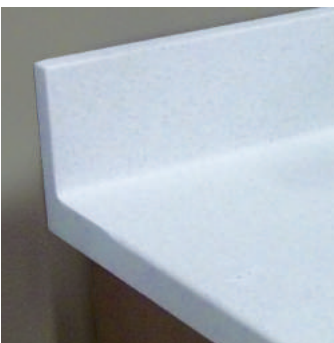


Transolid® Sandstone Classic Solid Surface Vanity Top with integral bowl and Bullnose edge

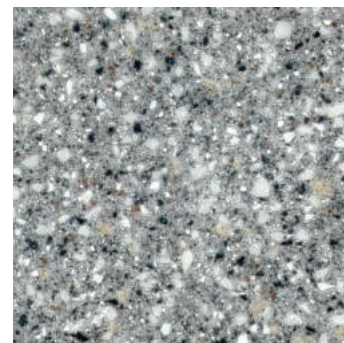


Transolid® Sand Mountain Natural Selections® Solid Surface Angled Front Vanity Top with integral bowl and Modified Ogee edge

Figure 1



Coved Backsplash



Classic Graphite

## Solid Surface cont'd.

surfaces are quite sophisticated and contain coloration throughout the material. Transolid® calls these colors, Natural Selections®. The advantage is that all these surfaces can be machined with attractive edge profiles, contoured around corners or can be repaired to a brand new finish. The sheet or shape of solid surface must be "homogeneous"--that is, the color or pattern must be absolutely consistent throughout every part. This makes it very unlike gel-coated products such as cultured marble, or laminated products such as plywood or plastic laminate. It also makes it a little bit like wood, but without knots or grain.

### SOLID SURFACE IS MACHINABLE.

Solid surfaces are machinable with woodworking tools. This might be what gives solid surface much of its magic. It is immediately tied into an ancient tradition --woodworking, cabinetry, joinery--that remains fresh and vital as ever. Most woodworkers love solid surface, because, they say, you can do so much with it. Craftmanship and the skill of the artisan remain an integral part of the solid surface picture. Part of being machinable is that it's repairable.

### IT IS A HARD SURFACE.

There is a range here, but it is not clearly defined. The tests on the Spec Data sheets that are supposed to clarify things (steel balls dropped from different heights, etc.) seem only to make things less clear. Suffice it to say: harder than wood, not as hard as steel.

### IT'S NON POROUS.

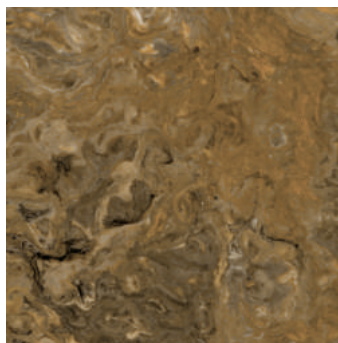
Speaking chemically and technically, nothing is 100% non-porous. But solid surface is very close. It is unaffected by water and changes in humidity.

### IT'S STAIN & CHEMICALLY RESISTANT.

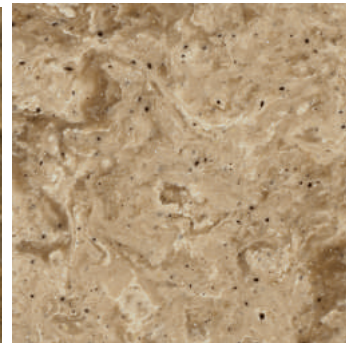
Most household staining agents and chemicals, and even some industrial chemicals, will not damage it.

### IT'S FIRE RETARDANT.

Most solid surfaces are fire-resistant or fire-retardant.



Natural Selections®  
Amber Waves



Natural Selections®  
Sand Mountain

### IT LASTS.

This is reflected by all these multi-year consumer warranties. Solid surface, unless damaged, should remain unchanged--for how long? Theoretically, based on what we know about the chemistry of the stuff, hundreds of years is not far-fetched.

### WHAT IS IN IT?

Most solid surface materials combine two main ingredients: a natural mineral (the "filler") and a resin (the "binder"), along with various additives. These are combined and then cast in a curing process that results in a sheet or a shape.

### ATH

The filler of choice in most solid surface is called alumina tri-hydrate, or "ATH." ATH has great physical properties. It has excellent chemical and stain resistance; excellent water-resistance; nice translucency; hard enough to give superb impact-resistance but "soft" enough to be machinable; and one last almost magical property: not only will it not burn, but because it has "water in hydration," when attacked by heat ATH actually releases steam. This makes it a natural fire-retardant..

### OTHER FILLERS

Other materials have been used as fillers for solid surface. Calcium carbonate was used in the first Corian sheets. Quartz is used to make some sinks, but yields a material too hard and brittle to be easily machinable. One brand uses glass fibers to add strength and impact-resistance to its product but at a cost of beauty and shine. Special fillers like glass beads have been tried and used to achieve specific effects.

*continued next page*



### *Solid Surface cont'd.*

#### RESINS

Two main “families” of resins are used to make solid surface: acrylic and polyester. A purely acrylic-based resin yields a sheet that is thermoformable—that is, it can be heated, bent to a new shape, and cooled without any loss of its performance characteristics. The other chief difference between acrylic and polyester resins is that acrylics are unaffected by the ultraviolet rays present in natural light. Polyester resins (including those which are “acrylic-modified,” that is, mixed with acrylic resins) are used in many high-strength demanding applications besides solid surfacing, including outdoor applications like boats and aircraft cowlings. Solid surface products made with these resins are generally not considered to be thermoformable, although some manufacturers as well as fabricators do in fact cite some thermoformability for their products. Both acrylic and polyester resins start life as petroleum, and thus their cost is tied at least indirectly to the price of oil. But other supply and demand factors enter in to make the chemical market extremely volatile (no pun intended) price-wise. At today’s prices, acrylic is two to three times the cost of polyester.

#### ADDITIVES

Every solid surface product contains numerous additives. These include pigments, but also a host of additives that improve or enhance chemical and performance properties, or even affect such mundane things as the “pot life” of the resin in transit and storage: UV absorbers, cross-linking agents, stabilizers, the list goes on. One important additive which all solid surfaces share is a catalyst. This is the chemical, usually a peroxide, which causes the mixture to harden, or cure.

#### USE OF SOLID SURFACE.

Solid surface can be used in household areas such as kitchens, bathrooms and also in commercial areas such as banks, airports, schools, restaurants, hospitals, bath centers and offices etc. Typical uses include: Kitchen countertops, bathroom countertops, reception counter, working counter, vanity tops, sinks, bathroom, wall surround, windowsills, skirting board, meeting tabletops and guardrails etc.



Transolid® Ash Leaves Natural Selections® Solid Surface Vanity Top with integral rectangular bowl and Ogee edge



Transolid® White Carrara Natural Selections® Solid Surface Remodel Series Shower Walls and Base



Transolid® Sand Mountain Natural Selections® Solid Surface Direct to Stud Series Shower Walls and Base

## Vanity Top Materials

### Laminate

At an economical installed price laminate offers good value and performance. As a result, it's a very common countertop material in bathrooms, just as it is in kitchens. Various manufacturers market laminates under different brand names, but they're all based on the same principle; a stack of thin plastic layers bonded together under heat and pressure. Laminate countertops clean easily and are resistant to water and stain. However, laminates can burn, wear thin, and dull over time. Hard blows can chip or dent the plastic, and there's no remedy short of replacement.

Available in many colors and patterns, laminate finishes range in texture from high-gloss smoothness to a mottled, leather-like look. Do-it-yourselfers can buy prefabricated laminate vanity tops or have them made to order with a hole for the sink cut where needed. Laminate tops are also available with a pre-installed kitchen sink by utilizing a solid surface frame around the sink area in order to prevent moisture from attacking the medium density fiberboard (MDF) substrate typically found underneath the laminate.





### Cultured Marble

Cultured Marble is a matrix that consists of polyester resin, an activator (catalyst), limestone filler and pigmented color. These elements are mixed together to achieve a consistent blend that is poured into a mold. A chemical reaction is initiated by the activator to cause the resin to polymerize and harden which bonds the entire composite matrix together in a hard mass. After several hours of chemical curing, the part is removed from the mold and ground, trimmed and polished.

Cultured Marble is a seamless constructed product and thus the bowls and the backsplashes are integral into the deck of the top.

Cultured Onyx is similar except that in lieu of the limestone filler, a mineral base filler that has a translucent quality is substituted.

Cultured Granite uses a crushed polymer filler to produce a granite like surface appearance.

Cultured Marble type products are poured into fiberglass, resin or stainless steel molds that have the mirror image of the finished product. Before the mixture is poured into the mold, it is carefully cleaned and then sprayed with a thin layer of a clear gel coat material that is 20-25 mills thick.

Cultured marble products have a protective layer of clear gel coat which provides the bright, shiny or matte surface of the vanity top. The gel coat surface acts similar as a veneer on a piece of furniture. If this veneer is kept in good condition, all is fine. However, as this gel coat veneer inevitably wears, the product will deteriorate. This surface is susceptible to scratches as well as a condition known as Thermo Shock.

Thermo Shock occurs when there is a consistent change in temperature to the product. As the gel coated surface expands and contracts at a slightly different rate than the substrate, a "crazing", the development of tiny hairline cracks, can occur around the drain. There are no repairs for this condition and the product must be replaced.



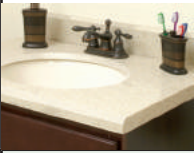





#### Film Based Cultured Marble

A newer phenomenon in the industry is the utilization of a plastic photographic film that is laid into the mold after the gel coat surface is applied. These films are typically photographs of various natural stones. The top layer is a clear gel coat layer followed by a thin piece of film that has the appearance of a natural marble or granite. This is then followed by the substrate mixture which is typically a limestone filler mixed with polyester resin. The film takes the place of the colored pigments in the mixture. Although the appearance can be quite nice, the inherent limitations with cultured marble such as heat limitations, burning, and the susceptibility of scratching remains the same.



## Vanity Top Materials

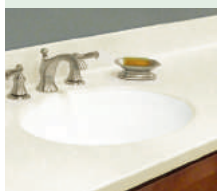
	Natural Marble	Natural Granite	Engineered Stone (Quartz)	Solid Surface	Cultured Marble	Laminate
Characteristics						
Hardness	7	9	8	6	4	7
Heat Resistance	9	9	7	6	4	4
Stain Resistance	4	8	8	8	5	5
Burn Temperature	9	9	7	6	4	4
Repairability	5	5	5	9	2	1
Machinability	9	9	9	9	0	0
Cost	4	6	3	6	8	8
Scratch Resistance	6	9	9	6	5	7
<b>Total Value</b>	<b>53</b>	<b>64</b>	<b>56</b>	<b>56</b>	<b>32</b>	<b>36</b>
<b>Avg. Value</b>	<b>6.625</b>	<b>8.0</b>	<b>7.0</b>	<b>7.0</b>	<b>4.0</b>	<b>4.5</b>

## Vanity Top Bowl Styles

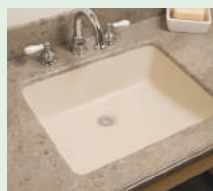
### for Solid Surface Tops

### for Hard Surface Tops

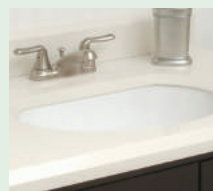
#### for 19" Depth Tops



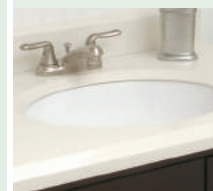
**Vitreous China**  
Oval  
13" x 10"



**Solid Surface**  
Integral Rectangle  
16" x 10"

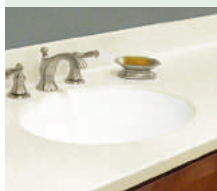


**Solid Surface**  
Integral D-Shape  
16" x 10"

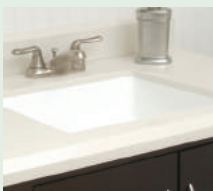


**Vitreous China**  
Oval  
13" x 10"

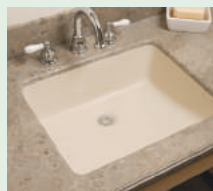
#### for 22" Depth Tops



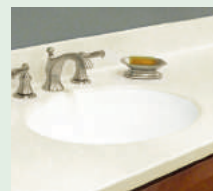
**Vitreous China**  
Oval  
17" x 14"



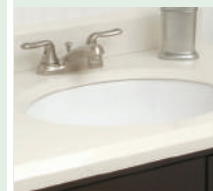
**Vitreous China**  
Rectangular  
18" x 13"



**Solid Surface**  
Integral Rectangle  
18" x 14"



**Solid Surface**  
Integral Oval  
16" x 12" (Std.)  
19" x 14"



**Vitreous China**  
Oval  
17" x 14"



**Vitreous China**  
Rectangular  
18" x 13"

#### for 22" Depth Tops

## Vanity Top Edge Profile Styles

### Hard Surfaces

#### Quick Ship



1 1/2"  
Beveled



1 1/2"  
Butterfly



1 1/4"  
Eased

#### Custom Edges



1 1/2"  
Beveled



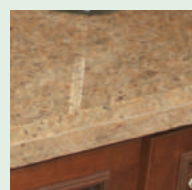
1 1/2"  
Butterfly



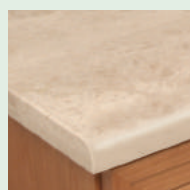
1 1/4"  
Eased



1 1/4"  
Double Eased



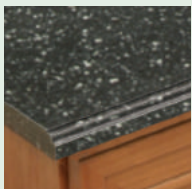
1 1/4"  
Chamfer



1 1/4"  
Roundover



1 1/4"  
Bullnose



1 1/4"  
Ogee



3"  
Bold

### Solid Surfaces

#### Quick Ship



Standard  
Eased Edge



Modified Ogee  
Edge

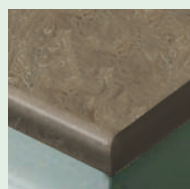
#### Custom Edges



Standard  
Eased



Chamfer



Roundover



Ogee



Modified  
Ogee



Bullnose



3"  
Bold

## Profiling the Edge

Edge Profiling means that the edge of a vanity top is shaped or machined with an Edge Profile. Typically the front edge is profiled with your choice of Edge Styles and the sides are polished but left flat. (Figure 1). This is appropriate for most applications. It works when the top is against a wall or when a top has an open end.

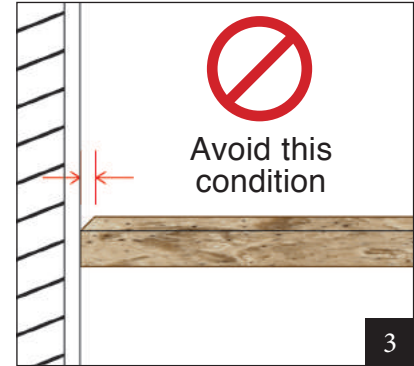
For a more decorative approach, a vanity top can be profiled or have the Edge Profile applied to the side of the vanity top as well. (Figure 2) This approach is typical on an “open end” of the vanity top, the side that is not against the wall. As a general rule one does not want to have an Edge Profile on the edge that is against a wall as this tends to trap a difficult to clean area. (Figure 3).



(Figure 1) Front Edge is Profiled and the two side edges are polished but Flat.



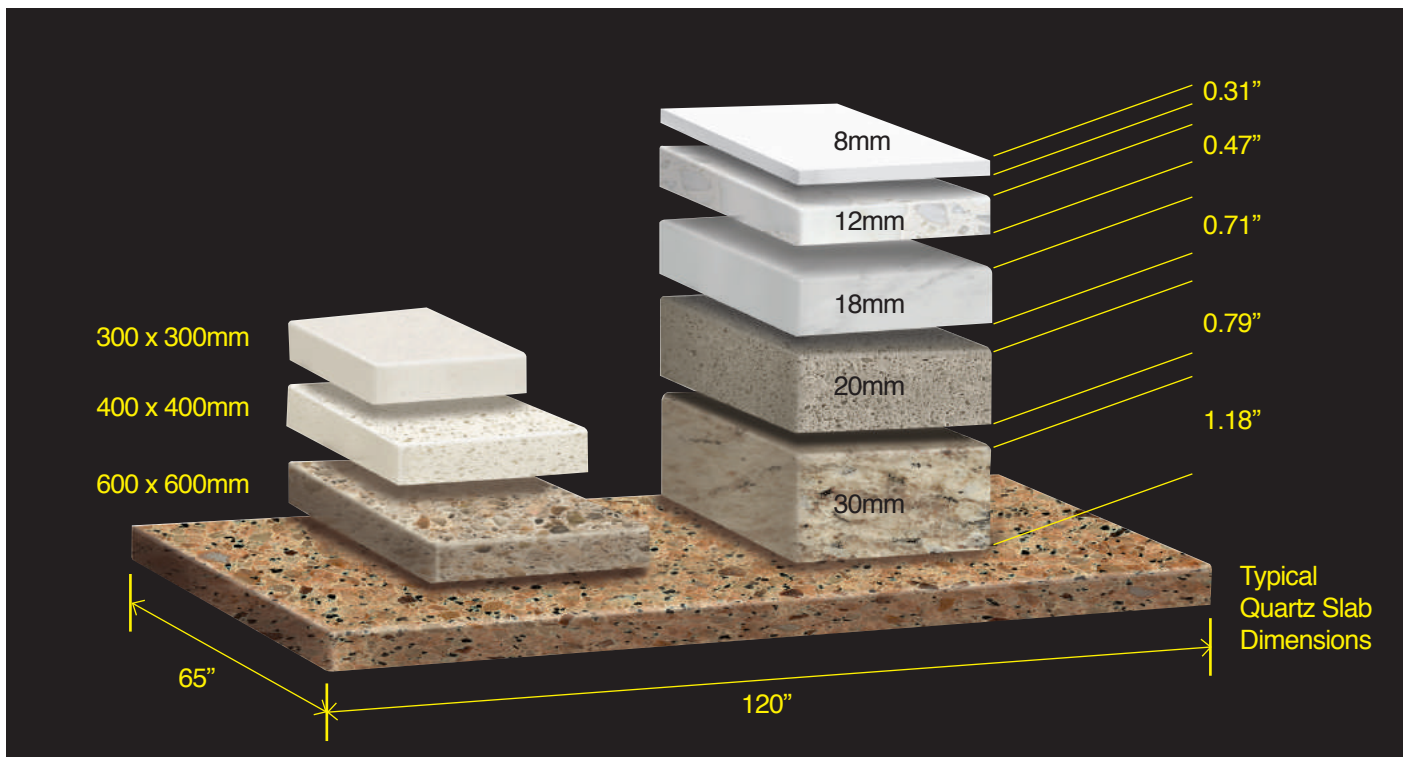
(Figure 2) Front Edge is Profiled and one edge is profiled with the edge along the wall remaining Flat



(Figure 3) Front Edge is Profiled along with one edge along the wall. This creates a “trapped” crevice that is difficult to clean.

## Vanity Top Material Sizing

Thickness of materials: Example 30mm (millimeters) = 3cm (centimeters) = 1.18 inches





## Vanity Tops Make the Bathroom



Match your shower with your vanity top for a custom look.

Above: Solid Surface 60" White Carrara Remodel Shower Wall Kit shown with shower base and optional vertical wall pocket and rectangular seat. Vanity top in a matching White Carrara natural marble with a white vitreous china bowl. White Carrara is also available as a solid surface top with integral bowl.

Right: Solid Surface 60" Sand Mountain DTS (Direct to Stud) shower wall kit shown with optional dome top and slim profile shower base. Matching Solid Surface vanity top in Sand Mountain with a white integral bowl.

