

# WineRacks.com

Made in the USA



## *How to Build a Wine Cellar*

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## *Introduction*

This guide has been prepared as a general resource to help you build your own wine cellar. The information provided here has been gathered over the course of our more than 20 years in the wine storage business and is not meant to be the final authority on wine cellar construction. This guide is based on the process we recommend and have been using for more than 2 decades. WineRacks.com Inc. cannot be held liable for how the information in this guide is interpreted or applied.



## *Choosing a Wine Cellar Location*

The proper storage and aging of wine requires certain environmental conditions that are often best achieved by locating your cellar below grade (in a basement). The reason for this is that this is where cooler and more humid conditions already exist. A corner of a basement, with two exterior walls and free of windows, is ideal. Wine cellars built above grade simply require special attention and materials to properly insulate and seal the room thoroughly.

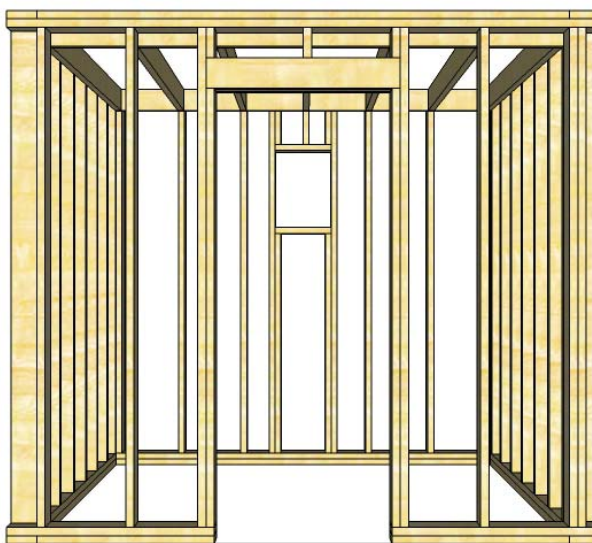
You will want to choose a location that has adequate ventilation and no direct exposure to sunlight. An environment with an average humidity level above 50% (with 60-70% being ideal) and average temperature of 55 degrees Fahrenheit is desired. These temperature and humidity conditions can be created with the proper cooling unit and possibly a humidification system.



## *Cellar Construction*

Unless local codes dictate otherwise, standard 2 x 4 framing is sufficient for R13 insulation, but ideally R19 should be used and that requires 2 x 6 framing. Electrical work should be completed to code prior to insulation and drywall.

Wine Cellar Framing should be 2" x 6" if possible to allow for R19 Insulation in walls and R30 in ceiling

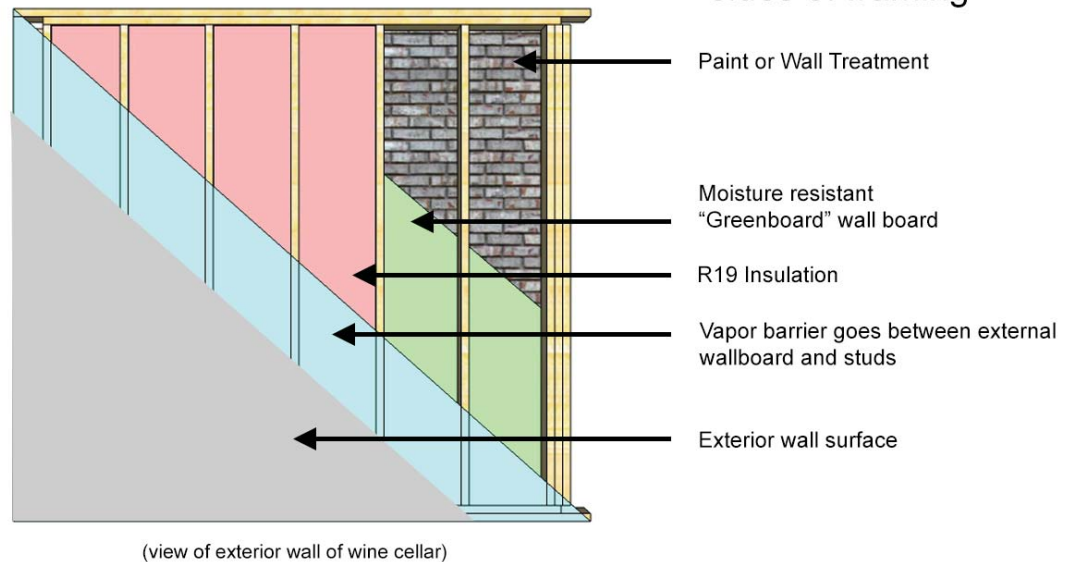


A Vapor Barrier is critical in controlling the humidity of your wine cellar. The ideal humidity of your wine cellar will be much greater than that of the rest of your home. A vapor barrier separates the two conditions and keeps the higher humidity from flowing out of the room. It also prevents warm and moist air from entering the room, eliminating excess condensation build-up from the cooling unit.

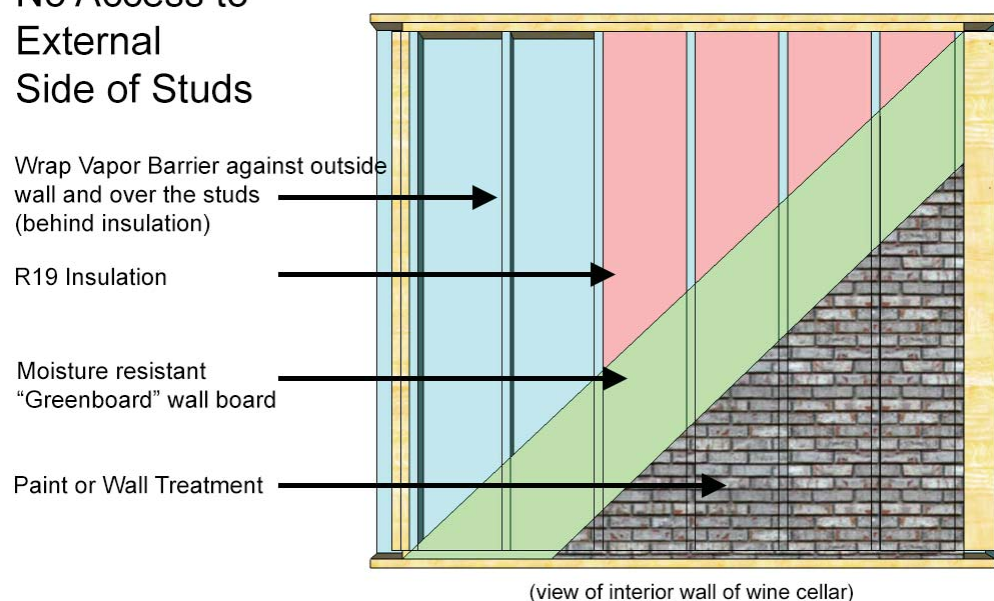
Depending on your access to the framing, the vapor barrier may be applied differently. (See images below). A 6 mil. poly/plastic vapor barrier should be used. If you choose to use closed-cell spray foam insulation, you can do without the vapor barrier. Walls, floor and ceiling should all be insulated in a similar manner.

It is recommended that you use moisture resistant “green board” instead of drywall for the interior walls of your cellar. Finish with your wall treatment of choice and skip the toe molding as you’ll want the racks to go flush against the walls at the bottom.

### Have access to both sides of framing



### No Access to External Side of Studs



## *Flooring*

Flooring for your wine cellar should be a hard surface that can handle the high humidity and the occasional wine spill. Tile, stone, sealed brick, concrete or hardwood are all good choices. Avoid carpet as mold and mildew will grow very quickly.



## *Wine Cellar Doors*

In selecting a door for your wine cellar, please choose a solid core, exterior grade door. Standard interior doors do not provide the insulation required to keep your cellar at the proper temperature and humidity. All doors should be weather stripped and completely sealed to prevent loss of cooling and/or infiltration of warm air that will cause condensation. If you select a decorative glass door, be certain that glass is thermopane and tinted. The same goes for windows whether they will be inside your home or an exterior wall.



## *Wine Cellar Lighting*

Other factors to be considered in the construction of your wine cellar include locations of electrical switches (in order to not be covered by racking) and locations of plumbing and lighting. Proper lighting should be low heat (if lighting will be left on) and properly insulated and installed. Below-ceiling lighting is preferred. If your wine racking is single depth, your lighting should be a minimum of 16 inches from the wall (28 inches from the wall if double depth racking is used)

WineRacks.com offers a line of easy-to-install LED lighting that can be installed within your racking to highlight display rows or tasting nooks. Our LED lighting solutions are custom made to be integrated into our wine cellar designs to complement the quality and functionality of each unique racking system with a wine-save, professionally lit finish.

Wine safety is critical: LED lights use 80 percent less power, produce no UV radiation, generate almost no heat and offer a 50,000 hour lifetime that virtually eliminates the need for replacing lights.



## *Wine Cooling Units*

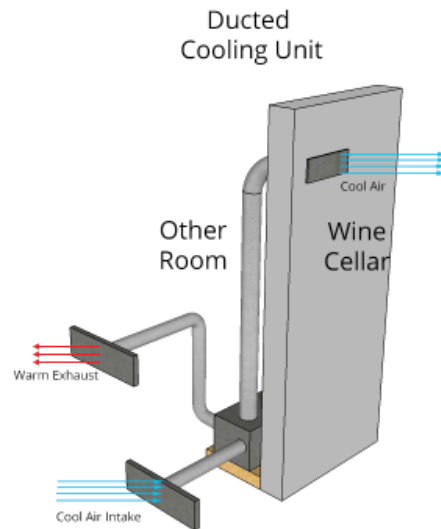
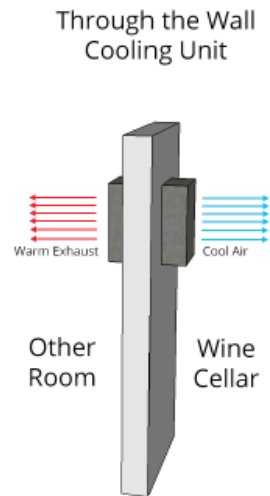
Besides the racking, your wine cooling unit is probably the most important item you will invest in for your cellar. Wine cooling units are available in several different configurations. You should choose the best one based on your cellar location and size.

Wine cooling units can be installed by a handy do-it-yourselfer with the exception of the split systems. In order to ensure the proper operation and effectiveness of your cooling unit, it is important to get the proper size unit for your space and make sure your space has the proper insulation and vapor barriers.

An improperly sized cooling unit or an under-insulated cellar can void the manufacturer's warranties on the cooling units, so it's important to purchase the right unit for your needs. Our cellar experts at WineRacks.com can assist you in determining what you will need for your wine cellar. (cont'd)

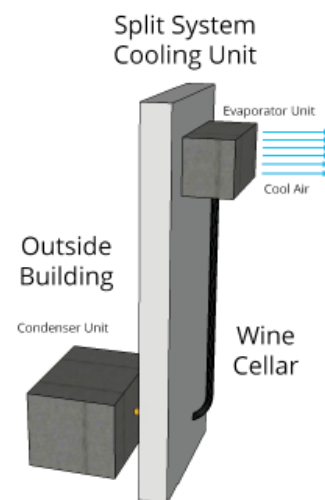
Wine cooling units are available in several different configurations. You should choose the best one based on your cellar location and size. Wine cooling units work similar to air conditioners in that they add cool air to the room and exhaust hot air.

**Through-the-Wall Cooling Unit** - is exactly as the name implies. The cooling unit is installed through a hole in a wall and exhausted into another room.



**Fully Ducted Cooling Unit** - a fully ducted cooling unit allows you to mount the cooling unit itself remotely (in a ceiling or utility room) and use ducting to both blow the cool air in and exhaust the warm air.

**Split System Cooling** - works like your home central air conditioning. Half of the unit is located inside the cellar and the other half is located outside of your home. These units usually require installation by a certified HVAC technician.



## Choosing Wine Racking

You now have a wine cellar room all ready for your wine, but first you need racking. Deciding on the right racking for your wine cellar is largely dependent on the number, size and types of bottles you will be storing.

Your favorite wines come in containers of all shapes and sizes. All of our wine racking is designed to comfortably store most standard 750ml bottles and we have created specialty racks for storing splits and magnum or larger Champagne bottles in our Premium Cellar Series collection as well as our Custom racking line. For storing the whole gambit of wine bottles, our cellar cubes and bin racks are always a great solution.



### Getting a Wine Cellar Design

Once your wine cellar area is prepared, it's time to plan for racking. If you choose to have a custom wine cellar, our designers will work closely with you in order to ensure we create the perfect design to fit your space. Before you contact us to create a design you will need to do a little preparation.

One of the first steps is to create a simple sketch of your room. It doesn't need to be a fancy architect's plan, just a simple line drawing with dimensions. On your drawing/sketch, please draw an overhead view of your room and label your walls, A, B, C, D, etc., indicating your door opening and the direction that the door opens.

For each wall, measure the width in three places, at the bottom, the center and the top and provide the smallest measurement. We ask for the smallest of the 3 measures because not all walls are perfectly square, so this will help insure the racking will fit even at the smallest point.

Measure the ceiling heights in all corners and the center of all walls. Provide us the minimum and maximum measurements. All walls that jut out or form in should be measured from corner bead to corner bead (outside the pocket) and wall to wall (inside pocket) in the same fashion as the wall width measuring instructions, providing us the smallest measurement. Indicate exact locations of obstructions such as light switches, plumbing, overhead beams, poles, soffits, access panels, air vents etc.

As a general rule, racking should end 3" from door casings, existing light switches that are to be used, thermostats and cooling units.

WineRacks.com can provide you with a custom wine cellar design to suit your space and budget. You can send us your completed questionnaire to - customerserv@wineracks.com or fax to 845-658-5309.

**Wine/Spirits Storage Questionnaire**

**First, please tell us about your project**

What type of storage solution are you looking for?

- Climate-controlled enclosed room   
  Bar/Entertainment area   
  Kitchen/Dining storage  
 Other (please describe) \_\_\_\_\_

What is the overall intent of your desired storage solution?

- Showcase   
  Practical Storage   
  A little of both

What is your timeline for completion? \_\_\_\_\_

How would you describe your budget?

- I'm looking for the best quality and design and price isn't the main deciding factor.  
 I'd like to be practical, but I'm willing to spend a little extra on the right design if necessary.  
 I'm on a tight budget and every dollar counts.

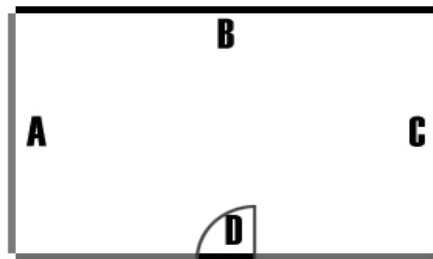
**Tell us about your wine cellar room**

Is this new construction or an existing room?

- New   
  Existing

What construction phase are you currently in?

- Raw space   
  Framed  
 Framed & Sheetrocked   
  Ready for racking



What are your wall measurements?

- Wall A   
  Ceiling Height  
 Wall B  
 Wall C  
 Wall D - left of door  
 Wall D - door opening  
 Wall D - right of door

Do you have any obstructions in the room?

(windows, soffits, pipes, electrical boxes etc.)

- Yes   
  No

I have an odd shaped room and will be including a layout of my space with this questionnaire.

Which walls would you like racking on?

- Wall A   
  Wall B   
  Wall C   
  Wall D   
  Rack all walls

**Environmental control preferences**

Will your wine cellar require an environmental control system?

- Yes   
  No   
  Not sure

What type of unit will best suit your needs?

- Through the wall   
  Split system  
 Ducted unit   
  Not sure

Please describe where the system will be located. \_\_\_\_\_

Will your cellar require a humidification system?

- Yes   
  No   
  Not Sure

**Racking Preferences**

What style of racking and wood species would you prefer?

**Custom Wood Racking**

Pine       Oak       Mahogany       Black Walnut

**Contemporary Racking Systems (wall mount metal, pins, floor-to-ceiling rails etc)**

Are there any specific features you would like included in your cellar?

Stemware Rack       Case Storage       Cigar Humidor  
 Display Area       Bulk Bin Storage       Wine Fridge  
 Tasting Area       Shelving for Spirits       Other

What percentage of these types of bottles will you be storing?

<input type="text"/>	750ml Std. Bordeaux	<input type="text"/>	Champagne
<input type="text"/>	1.5L Magnum	<input type="text"/>	Wood Cases
<input type="text"/>	375ml Split	<input type="text"/>	Liquor/Spirits
<input type="text"/>	Jeroboam & Larger	<input type="text"/>	Beer
<input type="text"/>	750ml Burgundy/Pinot	<input type="text"/>	Other

Do you have additional needs for your cellar?

Doors       Flooring       Wall Treatments       Lighting  
 Other (please describe)

Anything else we should know about your design project?

Client Name: \_\_\_\_\_

Shipping Address: \_\_\_\_\_

Email Address: \_\_\_\_\_

Daytime Phone Number: \_\_\_\_\_

Please fax the completed form along with any additional room layout information to 845-658-5309.  
You can also email your questionnaire to [customerserv@wineracks.com](mailto:customerserv@wineracks.com)