WOOD FLOORING INSTALLATION
WHAT TO EXPECT



WAGNER METERS
Unleash Your Expertise

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CONGRATULATIONS on your decision to have hardwood flooring installed! You're undoubtedly excited about the fact that you'll soon be the proud owner of a gorgeous new hardwood floor. However, you may also be feeling a bit stressed because you're not sure what to expect before, during, and after the installation process. That's what this guide is for. ■



10 QUESTIONS TO ASK
YOUR HARDWOOD FLOORING INSTALLER

DO YOU USE SUBCONTRACTORS?

When a flooring contractor uses subcontractors, it can be difficult to verify qualifications.

WHAT KIND OF WARRANTY DO YOU OFFER?

Because a hardwood floor is a big investment, you'll need to read the fine print. What's the length of the warranty? What's included? Is there anything that voids the warranty?

DO YOU HAVE A CONTRACTOR'S LICENSE AND CARRY LIABILITY INSURANCE?

All professional flooring contractors will have a contractor's license and carry liability insurance. Ask your contractor how much they're carrying and if you can see a copy of the policy.

ARE YOU A MEMBER OF THE NATIONAL WOOD FLOORING ASSOCIATION OR ANOTHER INDUSTRY ASSOCIATION?

What type of certifications does the installer have?

WILL YOU ALSO HELP ME CARE FOR MY FLOOR?

Some contractors just do flooring installs. However, others also help you care for your floor by offering cleaning, refinishing, etc.

WHERE DO YOU GET YOUR FLOORING MATERIALS FROM?

Flooring materials need to be acclimated to your region before the install. Therefore, ask the contractor about the origin of the flooring materials and how they'll be acclimated to your environment before the installation starts.





HOW WILL YOU MINIMIZE DUST EXPOSURE IN MY HOME DURING THE INSTALLATION?

A flooring installation is a construction project and as such it will produce a significant amount of dust. Make sure you know ahead of time how it will be cleaned up.

WHAT'S INCLUDED IN THE PRICE?

Make sure you know exactly what you'll be getting for the price.

CAN I CHECK YOUR REFERENCES?

It goes without saying that you should ask for references and read reviews. Does the contractor have a good track record? A professional contractor should be happy to give you this information. They'll want you to contact their references because they know they do good work.

HOW WILL RELATIVE HUMIDITY AND TEMPERATURE BE MONITORED?

It's also important for the flooring contractor to know if there are any changes to the ambient environment during the installation. If either the temperature or the relative humidity fall outside the desired range during the installation, you could end up with a flooring failure.

HOW LONG WILL THE INSTALLATION PROCESS TAKE AND

WHEN CAN I WALK ON MY NEW FLOOR?



The scope and size of your project will determine how long your wood flooring installation will take. Your professional contractor will be able to provide you with an approximate completion date. It usually takes anywhere from 2-7 days to complete an average-sized job.

Typically - for on-site finished floors - you should wait at least 48 hours before introducing furniture or pets to your new floor, and 1-2 weeks before placing rugs or carpets down.

HOW TO PREPARE
BEFORE INSTALLATION BEGINS



You'll need to remove carpeting, furniture, appliances, and other objects from the area before the installation crew arrives. Talk to your installer beforehand so that you know exactly what needs to be moved and who is going to move it. If the installer is going to do this preparation work, make sure you've agreed upon a price for it.

Also, because the installation of a hardwood floor is a construction process, things are going to be both messy and dusty. If you're a neat freak, talk to the installer about ways to keep the mess to a minimum. Keep in mind that this may cost you extra though.

MANAGING AND CONTROLLING CLIMATE

BEFORE DELIVERY OF WOOD FLOORING



Wood is a natural, dynamic material that shrinks or expands as temperature and humidity levels fluctuate. Because of this, the ambient conditions where the floor will be installed need to be just right. For example, if hardwood flooring is delivered to a new environment that's significantly more humid than the environment where the flooring was stored, it will start to swell and expand as it gradually absorbs moisture from the room. So, if you install flooring before it has had a chance to acclimate to the new, more humid environment you're going to have problems. Your brand new hardwood floor will absorb moisture from the new environment and as it does, it will expand. This is definitely something you don't want to happen.

Factors that increase a room's relative humidity and delay the installation process include fresh paint, fresh drywall texture that hasn't fully dried, new concrete, and a room that isn't enclosed.

The following conditions must be met before wood flooring is delivered to your home or jobsite…

- All wet trades (i.e. painting, concrete, plaster, etc.) must be completed and fully dry.
- All windows and doors must remain closed 48 hours prior to installation.
- Climate control (i.e. heat or air conditioning) must be used 48 hours prior to installation. This is so proper moisture conditions in the room are achieved and maintained. ■

DELIVERY
OF WOOD FLOORING

Once ambient temperature and humidity conditions are right, the flooring can be delivered to your home or jobsite. After it's delivered, it will need to acclimate to the new ambient conditions.



HOW LONG DOES IT TAKE

FOR WOOD FLOORING TO ACCLIMATE TO THE AMBIENT CONDITIONS AT THE JOB SITE?



It really depends. Therefore, if we state a specific number of days, that could be misleading. We can say though that taking a moisture reading upon delivery helps the installer evaluate how much acclimation is necessary prior to installation.

Note that the moisture content of both the floor and the subfloor (the subfloor is the flat, stable surface that supports your floor) will need to be checked before the installation begins. If conditions aren't perfect, your contractor will return at a later date and test again. This means that your installation will be delayed until the recommended conditions are met.

HOW MOISTURE AFFECTS
HARDWOOD FLOORING



Hardwood flooring is *hygroscopic*.

This is just a fancy way of saying that hardwood flooring gains or loses moisture in response to changes in the ambient relative humidity.

If your hardwood floor has less moisture than the surrounding air, it will absorb moisture from the air. If your hardwood floor has more moisture than the surrounding air, it will release moisture back into the air.

This is important to understand because when your hardwood floor is absorbing and releasing moisture, its physical size is changing as well. In other words, your hardwood floor will ***physically shrink or expand*** as it loses or gains moisture.

As the relative humidity increases, your hardwood floor's moisture content increases, and because of that, its physical size increases. It expands. As the relative humidity goes down though, your hardwood floor's moisture content decreases, and its physical size decreases. It shrinks.

During the cold season when you have the heat on and the relative humidity is low, your hardwood floor can lose a certain amount of moisture content and shrink. When this happens, you might see small spaces appear between the floor's boards. This is caused by the significant reduction in relative humidity of the surrounding air.

When the weather starts warming up and you turn off the heat and open up the windows, your floor will start to absorb moisture from the air and start to expand again. The small spaces you saw between the floor's boards will typically disappear. While this seasonal change is not uncommon, many households make use of dehumidification or humidification during the appropriate time of year to reduce seasonal change and maintain comfortable humidity levels for the occupants. ■

WHAT IF THERE'S A MOISTURE IMBALANCE BETWEEN THE FLOOR AND THE AMBIENT ENVIRONMENT?

Moisture-related problems with hardwood floors happen for a variety of reasons, including spilled water that isn't promptly wiped up, plumbing leaks, and floods. When this happens, you could get cupping, crowning, or buckling.

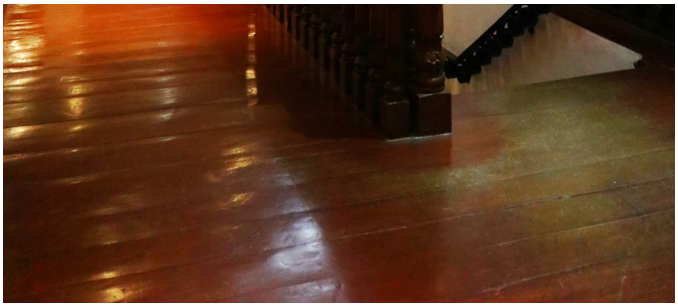
CUPPING happens when all that excess moisture causes the boards to swell. They then get pushed together and their edges rise.



It's important to note that very minor cupping is a normal reaction to fluctuating relative humidity levels and isn't a concern. However, if you see severe cupping, you'll need to identify the moisture source and get it under control. If you catch it early enough, you'll probably be able to reverse the cupping. However, when the floor dries out, it might need to be sanded and refinished.

CROWNING is the opposite of cupping. With crowning, the center of the boards is higher than the edges. Like cupping, this happens due to a moisture imbalance.

Sometimes, a cupped floor is sanded before it has been allowed to dry completely. If the floor is sanded while cupped, only the edges of the boards will be sanded. Later, when the floor dries, these sanded edges will be lower than the center of the boards and the floor will appear to have crowning.



BUCKLING is more extreme and happens when the hardwood floor actually pulls away from the subfloor. When this happens, the floor can lift up to several inches in one or more places. Buckling is usually caused by flooding after the floor has been submerged for some time, though it can also be caused by a large amount of moisture coming up from the subfloor or below.



In general, moisture imbalances can cause problems with wood. Therefore, if either your wood flooring materials or your subfloor - or both - are not dry enough at the time of installation, cupping or crowning could happen. So, relative humidity on the job site is important. It has to be just right. ■



WHAT SHOULD THE RELATIVE HUMIDITY BE INSIDE MY HOME?

The relative humidity inside your home should be somewhere between **30-50%**, while the temperature should be between **60-80˚F**. You can monitor this using an HVAC thermostat that displays both the ambient temperature and the relative humidity. You might also want to think about using a device that's able to record these conditions. If there's ever a performance issue with the floor, you'll then be able to review the historical data.

Certain types of flooring are more tolerant of moisture variations than others. Therefore, you should always consult with your flooring specialist to determine the ideal relative humidity range. This is important because if the contractor installs the flooring when conditions aren't suitable, it could both damage your floor and void your warranty. Engineered flooring tends to tolerate moisture fluctuations better than hardwood flooring.

While hardwood flooring is a thick layer of solid timber planks, engineered wood is a thin top layer of hardwood that has been bonded to layers of high-quality plywood. This is done to prevent the floor from physically shifting as humidity levels fluctuate.

Because of the way engineered wood is manufactured, it's more resistant to moisture than solid hardwood and won't warp as easily when it comes into contact with moisture. ■

HOW DO I PROPERLY MAINTAIN MY HARDWOOD FLOOR

TO ENSURE LASTING BEAUTY AND DURABILITY?

Hardwood floors last a very long time and because of that, they're a great investment. However, that doesn't mean that you can take a hands-off approach when it comes to taking care of them. If you want your floor to stay beautiful as it ages, you'll need to protect it.





KEEP YOUR HARDWOOD FLOOR CLEAN

Because dirt can scratch the surface of your hardwood floor and dull the finish, make sure you clean the floor regularly with a broom or vacuum.

KEEP SUNLIGHT EXPOSURE TO A MINIMUM

Hardwood floors can fade and discolor if they're exposed to too much sunlight. Therefore, limit your floor's exposure to direct sunlight by using rugs, curtains, or blinds.





CLEAN UP SPILLS RIGHT AWAY

If you spill anything on the floor that might stain it, be sure to clean it up right away using a cleaner designed for hardwood floors. Don't use a lot of water, because this could cause the boards to swell. Of course, it goes without saying that you should mop up water spills immediately as well.



PROTECT YOUR HARDWOOD FLOOR FROM FURNITURE

Using furniture on a hardwood floor can lead to scratches. Your local home improvement store sells small pieces of felt that attach to the bottom of furniture legs. They will provide some protection against scratches.

Even area rugs can scratch the surface of a hardwood floor if they move around a lot. So, always use non-skid pads under the rugs to protect the floor. ■

If you have additional questions about the floor installation process and how best to prevent moisture-related problems in wood, please contact Wagner Meters worldwide toll-free at (855) 404-1177 or visit www.wagnermeters.com.

MOISTURE MEASUREMENT WITH THE ORION METER



Wagner Meters produces a full line of Orion® meters that are known for their proven superior accuracy. They take simple, accurate readings but also include advanced functions like dual-depth measurement and EMC calculation. They even allow you to connect the meter to smart device apps and perform a quick, on-site calibration. ■

CONCRETE SUBFLOOR TESTING WITH THE RAPID RH AND C555



If you want a successful flooring project, you'll need to measure the moisture content below the surface of the concrete slab. Only the in situ relative humidity (RH) test has been scientifically proven to be both accurate and reliable. No other industry-approved test method is faster than Wagner's Rapid RH® Concrete Moisture Test.

Wagner's C555 Concrete Moisture Meter can help you easily determine where to place your Rapid RH L6 Smart Sensors.

HUMIDITY MEASUREMENT AND MONITORING WITH THE SMART LOGGER



Data loggers are great for monitoring humidity changes in the ambient environment. Place them in areas around your home and let them go to work.

The Wagner Meters Smart Logger™ is able to take up to 12,000 readings over 300 days of replaceable battery life. They're small enough so they can be placed discreetly and they connect to a smart device app that will allow you to download the data later.