



LEADING TECHNOLOGY PROVIDER FOR THE

Water Damage Restoration Industry



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Why Using a Moisture Meter Is Essential for Every Water Damage Restoration Project

Water damage can strike at any time. A burst water pipe, a leaking roof, or a change of weather during a construction project can all lead to damage within a building. Storms are commonplace as well, leading to more large-scale work for companies in water damage restoration.

Water-damaged buildings are at risk of structural damage as well as aesthetic problems, plus they can cause a range of health and safety issues, as we'll touch on in this article. That's why it's never been more important to have an effective moisture meter on hand when dealing with water damage issues. But why are moisture meters so critical to effective water damage restoration? Here are several reasons why restoration specialists should consider a high-quality moisture meter as a key tool for dealing with water damage.

MOISTURE METERS REDUCE THE RISK OF HEALTH HAZARDS

Water damage causes many issues, but one major health hazard is the risk of mold and bacteria. Mold can grow on many surfaces if they become damp enough, and this can trigger a range of health issues including allergies, asthma, and even skin conditions. Plus, when mold establishes itself, it can leave nasty stains that are very difficult to get rid of. Preventing mold, fungus, and bacteria from taking hold is much easier than getting rid of it once it has.

Effective moisture meters allow restoration experts to be 100% sure that there is not enough moisture to allow mold or fungus to become established, helping keep the occupants of the building safe and healthy. A moisture meter can also warn them of potential sites where mold could grow, perhaps during drying out time, which could prompt the restoration specialist to investigate further.

MOISTURE METERS HELP SPECIALISTS WORK WITH DIFFERENT MATERIALS

Water damage restoration professionals often have to deal with a wide variety of materials during a single project. A versatile moisture meter like one from the Navigator™ range supports up to 37 included materials, allowing for continuous and efficient moisture content measurements with a single device.

The other bonus for restoration specialists is that Navigator™ moisture meters connect via Bluetooth to a handy app called EDGE™. This app helps record unlimited moisture readings and exports them for seamless reporting. This is especially useful when waiting for areas of a building to dry out because it makes it easier to monitor the progress and report it back to invested parties.

MOISTURE METERS COPE WITH DIFFERENT SIZED AREAS OF WATER DAMAGE

Some areas of water damage might be very localized, such as from a leaky pipe or a crack in a roof lining. But, of course, some water damage is more significant. Storms can cause widespread damage to walls, floors, and even foundations. A burst pipe could wreck a whole room but leave the rest of a building relatively untouched. Moisture meters allow you to deal with all scales of water damage, especially if you understand how to choose the right moisture meter for the job at hand.

Pinless moisture meters use a flat sensor to quickly scan the surface, allowing frequent average readings to be taken over a large area. They can also be used to check for moisture hotspots and where to carry out more specific testing with a pin meter. Pin moisture meters insert two electrodes into materials and can give very accurate moisture content readings for very small areas. This makes them ideal moisture meters for water damage restoration projects, both large and small.

MOISTURE METERS ASSIST IN CHOOSING THE RIGHT MATERIALS

Some buildings simply have higher natural levels of moisture than others due to the environment. Use of poorly chosen materials can lead to water damage because the materials aren't designed to deal with high levels of moisture. Examples of this include drywall, which is particularly susceptible to moisture. However, there are drywall-based products that can be used in higher moisture areas, if required. Being able to accurately and easily establish the current moisture levels within walls and other areas helps restoration professionals understand exactly what renovation materials they require.

Wood reacts to seasonal changes in humidity, so there's a range of factors to consider when dealing with wood. Understanding the equilibrium moisture content (EMC) can help renovators or restoration specialists plan for shrinking or expanding wood as temperatures and humidity levels change throughout the year.

Delmhorst Instrument Co. is the leading moisture meter provider for the water damage restoration industry. Contact us for more help, support, and the right moisture meters for your water damage restoration project.





Choosing the Best Moisture Meter for Your Water Damage Restoration Project

Restoration professionals know that water damage is a difficult and often expensive problem to deal with. Sometimes it can be insidious, such as a hidden leak that has caused critical damage to an external or internal wall over many months. Other times, it may be more obvious, such as a burst pipe or a wind-damaged roof that's letting rain or snow in. Whatever the cause of the water damage, one of the most important tools in a restoration professional's arsenal is an effective moisture meter. Understanding how to choose the right moisture meter for the job at hand can help make your water damage restoration project go faster, be more effective, and possibly even cost less to complete.

Here are several factors to take into consideration when choosing the right moisture meter for the job.

TYPE OF MATERIAL

When dealing with water damage restoration, it's important to know what types of materials have become damp or wet. These might be different types of wood, drywall, concrete, or other materials. Choosing the right moisture meter means picking one that covers the materials you'll be working on or, in some cases, buying multiple meters.

Thankfully, there are now moisture meters that come with a variety of materials and species of wood pre-programmed. The Navigator™ range of moisture meters provides the option to download up to 37 different materials so you can understand the range of moisture content levels for each material. This allows restoration experts to work through a whole building with one device for better efficiency and cost-effectiveness.

EXTENT OF DAMAGE

Large-scale water damage occurs for many reasons, including flooding. According to the Federal Emergency Management Agency (FEMA), flood insurance claims average over \$3 billion per year, --even an inch of floodwater can cause up to \$25,000 worth of damage. However, not all water damage is a case of completely ruined homes or businesses. Some water damage is far more localized, such as from roof leaks, dripping taps or pipes, or faulty waste-water equipment (e.g., clogged gutters).

Understanding the extent of the damage can help you choose the right moisture meter for your water damage restoration project. If you're drying out a large area, the HT-4000 thermo-hygrometer helps you monitor the relative humidity of the area, ready for more specific monitoring once restoration starts.

LOCATION OF DAMAGE

Not all water damage happens to floors and walls, and not all of it is easily hidden under other materials such as carpets and wood panels. Some water damage will occur on a surface that you simply can't afford to have damaged further. A pinless moisture meter comes in handy when having to map out an area for the presence of moisture and also to pinpoint high moisture areas that may require further investigation.

A pinless moisture meter uses capacitance to measure moisture levels by emitting and receiving low-level electromagnetic signals. These types of meters usually have a sensor plate that rests on the surface, so any readings given are an average across the area of the plate. The user can simply move the meter across the material in question to check for higher or lower moisture content levels. Users must take into account the possibility of other materials under the surface being measured, such as studs in drywall. Most restoration experts will be aware of these potential discrepancies, making pinless meters like the TechScan model a useful and non-destructive way to keep track of moisture levels during water damage restoration.

SOURCE OF WATER INTRUSION

Finding out how the water is getting into the building is often the first step in figuring out how to begin effective restoration. In flooded buildings, the source of the water damage is often very obvious. However, if one building has become badly damaged in a flood where others in the same block or area have fared better, there could be another cause for the extensive water damage.

Effective moisture meters can pinpoint moisture hotspots, helping track down the exact source of water intrusion. This can help restoration professionals liaise with building owners and other professionals like plumbers to come up with a preventative, long-lasting solution, rather than just focusing on restoring the current damage.

Things to consider include porous materials, which lead to moisture movement in a capillary action, migrating upward into the home or business. Restoration professionals may also consider the airflow within a damp area – is it sufficient to prevent dampness continuing, even under normal conditions? A multi-function meter, like the combined pin and pinless moisture meter TechCheck PLUS, can allow professionals to assess an entire building and examine different materials. This helps them find out more about the moisture levels and create a much more thorough damage assessment.

If you're embarking on a water damage restoration project, the team here at Delmhorst Instrument Co. can give you the right advice and support to choose the moisture meter that's perfect for your needs. Call us or leave your details for one of our specialists, and we'll gladly get back in touch with more information.



Common Issues to Avoid When Choosing Your Moisture Meter for a Water Restoration Project

Water damage ranges from localized water intrusion to widespread flooding and can cause serious structural and aesthetic damage. Water damage restoration specialists have to assess the extent of the damage prior to beginning any work on the building itself. That's where moisture meters come in. An accurate, high-quality moisture meter can help restoration professionals understand exactly what the moisture content is in a particular area. These devices help users understand what needs to be dried out, what needs to be removed completely, and what is salvageable. Moisture meters can even pinpoint moisture "hotspots" and help track down leaks.

However, like any essential tool, choosing and using a moisture meter isn't without its difficulties. Here are three potential pitfalls that can trip even the most experienced water damage restoration specialist when it comes to moisture meters – and how to avoid them.

USING A SINGLE BASIC MOISTURE METER FOR EVERYTHING

Ensuring moisture levels have dropped to a suitable level before beginning renovation or construction is essential. Not only can dampness cause structural weaknesses, but it also encourages the growth of mold, bacteria, and fungus, which can all have serious health and safety implications. That's why it's typical for restoration specialists to use a moisture meter to monitor moisture content, particularly during the drying out process or to assess water damage. So, what's the problem with using a single moisture meter for everything?

Many standard moisture meters are calibrated for very few materials and possibly only one. That means that if your moisture meter is calibrated to measure the correct optimal moisture content level for drywall, it will be next to useless when you use it on hardwood or concrete.

Thankfully, more advanced moisture meters deal with this issue by providing the option to set them to various species of wood or different construction materials. This allows water damage restorers to take a single device with them onsite unless they need other specialized meters.

UNDERSTANDING THE DIFFERENCES BETWEEN MOISTURE METERS

Many suppliers provide moisture meters to users without really explaining the pros and cons of the various types of meters available. Pinless moisture meters are available, which allow you to quickly map out and identify the moisture levels of a material. This can be the perfect option for water-damaged furniture or other trimmings that simply can't be damaged further. Pinless moisture meters use electromagnetic signals to measure the moisture content of materials and in the case of wood, can usually be adjusted for specific gravity settings, which are determined by the wood species.



Pin moisture meters are more invasive but more common for use on floors, walls, structural lumber, and other areas where tiny pinholes won't matter. Two small pins are inserted into the material, and a low electric current is produced. Because water conducts electricity well, the lower the resistance, the more moisture is present. Other factors in measurements that might not be obvious at first are the differences in wood temperature, plus how the seasonal ambient temperature and airflow all affect the expected versus the actual moisture content level.

Whatever type of moisture meter you're using, it's best to take multiple readings and record them to get a clear and detailed picture of the extent of the water damage. Innovations like the Navigator™ range of moisture meters and the EDGE™ app allow unlimited readings to be stored. You can then export these readings as one file for simple and efficient reporting and record keeping. All you need apart from the moisture meter is a smartphone with Bluetooth capability.

An experienced moisture meter manufacturer will happily take you through the different options available to you as a restoration expert. They'll consider the types of materials you'll be working with, the size of the area you'll be restoring, and the location of water damage within the building.

BUYING FROM AN UNVERIFIED SUPPLIER

If you purchase your moisture meters for water damage restoration projects from a third-party supplier or a supplier that doesn't understand the products, you may be left without help if you come across any difficulties. It's tricky to get support from a company that's not invested in their products, and many third-party suppliers or suppliers that sell "cheap" moisture meters actually cost renovators more money as they have to seek professional help when things go wrong.

Purchasing a high-quality, industry-tested moisture meter from a reputable manufacturer and supplier like Delmhorst or one of its authorized resellers delivers more than peace of mind. Delmhorst provides a range of resources for users, including an eGuide dedicated to getting the best out of moisture meters for restoration projects. Plus, if you have any questions or concerns, you can simply pick up the phone and a Delmhorst specialist will be happy to help you.

Find out why Delmhorst Instrument Co. is trusted by a number of industries, including water restoration specialists, to provide the right moisture meter for the task at hand. Get in touch today for further information.





CLIENT PROFILE

Building-Wright is a company created by Peter Yost, a building scientist and expert with over 30 years of experience in building research and consultation. The name refers to the “Wrights” of days past, people who took immense pride in design and construction.

Building-Wright works with architects and builders to tune buildings to their climate or site. The company also uses building science to assess how to make existing buildings better, and it helps field-test new products and materials in the building trade. Yost is currently looking at the link between moisture in buildings and energy performance.

HELPING ARCHITECTS AND BUILDERS UNDERSTAND THE IMPACT OF MOISTURE

As a provider of teaching and training resources, Building-Wright was frustrated that architects and other members of the design process didn't seem to understand the importance of assessing and managing moisture levels. This was especially evident when assessing energy usage. Yost notes that:

“A big problem in our industry is that we keep very careful track of how energy moves through buildings, but we often treat that independently of how moisture moves through buildings.”

Yost states “The importance of the relationship between energy and moisture is we need to better understand and measure moisture in buildings and building materials because when we build more energy-efficiently, we reduce drying potential, we need to better track and manage moisture in more energy-efficient buildings.” Also, when he works with companies that test building materials, he needs the ability to transfer accurate information about how the materials perform in the field, and he needs to do it quickly.

SOLUTION: A CLOSE RELATIONSHIP WITH DELMHORST INSTRUMENT CO.

In terms of required equipment, Yost noted that there are two types of moisture meters used in the building trade – pin and pinless. The pin moisture meters have to be incredibly durable, as building professionals can be tough on equipment, plus the pins often require insertion into and removal from a wide variety of materials.

Yost's first moisture meter was a Delmhorst model, and he still has that to this day. Its reliability, accuracy, and durability have made it a long-lasting tool for his trade. Because of his trust in Delmhorst equipment, he approached Delmhorst Instrument Co. for more advice and found that the team provided a high level of technical support and understanding.

Thanks to developing a relationship with the technical team at Delmhorst Instrument, Yost could explore more options for moisture meters, including trying out different electrodes and eventually upgrading to a Navigator™ BDX-30. Yost states that the ability to log data and then export it via Bluetooth to an Excel file is “just huge.”

THE IMPACT FOR BUILDING-WRIGHT

Building-Wright states that Delmhorst Instrument provides the company with credibility and facilitates its reputation for using high-end and reliable equipment. Yost says he rarely promotes brands or particular manufacturers in his line of work, but that he's always happy to recommend Delmhorst moisture meters as a critical tool within the building design or assessment process.

Delmhorst moisture meters have allowed Building-Wright's teaching resources to expand to show the detail of how moisture affects all parts of building science. Being able to quickly and accurately display the moisture level in a particular area or piece of material gives physical credibility to the teaching resources or consultation process.

Building-Wright has used the Delmhorst equipment when dealing with expert witnesses to prove readings were accurate. And, thanks to the digital capabilities of the Navigator™ range, Yost can keep up with web-based innovations at the companies he works with as a field tester of various building materials.

If you want to know more about how moisture meters can improve your building design and construction projects, contact Delmhorst for more information.

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