

INSTALLING DOORS AND GATES IN EXTREME

Are you and your employees prepared?

By Vicki Jones, Editor

Installing doors and gates in extreme weather conditions is becoming a more prevalent issue for business owners and technicians. Whether it's record-breaking heat and humidity or below freezing temperatures, it is critical for installers to wear the proper gear and be aware of the signs of serious weather-related illnesses.

Many jobs in the door and gate installation industry require technicians to work outside. Extremely hot and cold temperatures can be legitimately dangerous, especially if a person is not acclimated or prepared.



Smokey's Garage Doors tech installing (and still smiling) in 114F-degree Phoenix temperatures.

It's hot out there!

The Washington Post story "Summer in America is becoming hotter, longer, and more dangerous" sums it up perfectly. Scientists with the NOAA (National Oceanic and Atmospheric Administration) and NASA (National Aeronautics and Space Administration) recently confirmed that July 2023 was the hottest month ever recorded on Earth.

So how are door and access technicians being affected by the heat? Kevin Pettiette, owner of Smokey's Garage Doors in Phoenix, knows all too well about extremely hot conditions.

He said, "July hit, and we had temperatures over 110 degrees for 31 days in a row ... One day in August the temperature dropped to 108 degrees in that area, but since, they have

stayed consistently over 110 degrees ... It's been a really bad summer. Guys have complained more than ever before, but it's justified."

According to OSHA, "Every year, thousands become sick from occupational heat exposure, and some cases are fatal." Most of these cases are preventable. Knowing

what temperatures are too dangerous to work in and how to properly build up a tolerance to extremely warm or hot environments is essential to avoiding heat-related illnesses.

The OSHA Heat Index labels the elevated temperatures in the following categories:

- **Caution** (80°F – 90°F)
- **Extreme Caution** (91°F – 103°F)
- **Danger** (103°F – 124°F)
- **Extreme Danger** (125°F or higher)

The index provides a general outline, but door and access installers need to consider more than just the temperature outside. Humidity levels, a person's health, and previous exposure to heat exhaustion can add to the risk of working in extremely hot conditions. Plus, a tolerable temperature for one person may be dangerous for another.

Heat-related illnesses

Healthline.com reports that there are three stages to heat illnesses: heat cramps, heat exhaustion, and heatstroke. Heat cramps usually happen when you've been physically active, and they are more common in elderly and overweight people. "Heat exhaustion is related to dehydration and a cardiovascular system struggling to pump blood through the body; heatstroke occurs when a person's body temperature gets so dangerously high that it begins overheating their tissues and organs."

The body relies on its ability to get rid of excess heat in order to maintain a healthy internal body temperature. Therefore, it's critical for technicians to sweat out excess body heat. "If heat dissipation does not happen quickly enough, the internal body temperature keeps rising and the



Every house has a hose, so use that to cool off.



worker may experience symptoms that include thirst, irritability, a rash, cramping, heat exhaustion, or heat stroke."

Heatstroke is the most severe heat-related

WEATHER

illness. Workers suffering from heatstroke can experience unconsciousness, confusion, disorientation, and/or slurred speech. Cool these workers immediately and call 911!

Protect your technicians from the heat

Employers need to educate their teams about the signs and symptoms of heat illnesses by providing relevant training and taking extra precautions to ensure their safety.

Pettiette said, "In 41 years, we've never had an employee experience heat exhaustion. We try and remind them of what to look out for, and we give them the green light to take a break if needed." Periodically sitting in an air-conditioned car is an excellent way to keep internal body temperatures from rising to dangerous levels.

Pettiette said that 95% of homeowners (at least in Arizona) understand if a tech needs to take a break. "I also remind our techs to use the tools that are available to them. Every house has a hose, so use that to cool off." Battery-powered fans, cooling towels for the neck and head, and liquid IV to prevent dehydration are additional recommendations.

Scheduling jobs at cooler times of the day and offering shorter shifts during the summer months are also helpful strategies. "Standard protocol for my company is that any day we know it is going to be over 100 degrees, we limit the number of jobs we book," said Pettiette. "We get an earlier start and complete a 75% workload."

A lighter workload for a couple of months is better than the alternative. "Heat illness can contribute to decreased performance, lost productivity due to illness and hospitalization, and possibly death," OSHA reports.

Symptoms of heat exhaustion include:

- ✧ muscle cramps
- ✧ dizziness
- ✧ mild confusion
- ✧ fast heart rate or breathing
- ✧ headache
- ✧ irritability
- ✧ extreme thirst
- ✧ nausea or vomiting
- ✧ pale skin
- ✧ heavy sweating
- ✧ fainting

Symptoms of heatstroke may include all the symptoms of heat exhaustion plus:

- ✧ body temperature over 104°F
- ✧ irrational behavior or hallucinations
- ✧ confusion
- ✧ rapid, shallow breathing
- ✧ rapid, weak pulse
- ✧ seizures
- ✧ loss of consciousness
- ✧ dry skin *[sweating may be present or a person who is experiencing heatstroke might have very dry skin from dehydration]*

Things employees and employers can do to avoid heat-related illnesses:

- ✧ Consume adequate fluids (water and sport drinks)
- ✧ Work shorter shifts
- ✧ Schedule early morning shifts
- ✧ Sit in an air-conditioned vehicle
- ✧ Utilize battery-operated fans
- ✧ Take frequent breaks
- ✧ Quickly identify any heat illness symptoms

Physical activity increases risk

OSHA warns that workers can experience a combination of two kinds of heat-related illnesses: environmental heat illness and/or exertional heat illness. While environmental heat illness is attributed primarily to ambient conditions like sunlight, other heat sources, and/or humidity, "exertional heat illness" (as the name implies) results primarily from exertion.

Technicians lifting heavy doors or gates need to be extra mindful when working in extremely hot conditions because physical activity increases a person's internal body temperature.

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How cold is too cold?

For Jason Slater of Door Systems of Alaska and his team, cold weather is commonplace. Slater's company is in Chugiak, Alaska, and they have been servicing and installing doors throughout Alaska since 2004.



We have to be prepared for anything, like a moose running out in front of a truck and possibly getting stranded somewhere.



Growing up in Florida, Slater moved to Alaska at 17 and acclimated to the polar opposite weather conditions relatively quickly. In the coldest months (December and January), he and his team regularly install doors in an average temperature of 10 to 25 below freezing. On rare occasions, temperatures can get significantly worse. "Installing doors in -70°F with the windchill in Prudhoe Bay isn't glorious work, but we've done it," said Slater.

The show must go on

Even with the best of intentions, there are times when it's impossible to reschedule or postpone a job due to weather. Even if the job may take longer to complete in the cold, in some cases, it has to get done regardless of the temperature.

"We try to schedule new installs during above zero temperatures if we can," said Slater. "But sometimes we have general contractors pushing us to get openings closed on their schedule, and they don't care how cold it is."

For service calls, there is no "cutoff" temperature. "When a door is stuck open, the more urgent it is to get that door closed and to keep the pipes from freezing inside. That will cause even more issues," said Slater. "When it comes to service, we have to help the customer no matter how cold it is."



Jason Slater of Door Systems of Alaska working in -17°F temperatures for a job.

Installing in cold and rural conditions

When a job involves extremely cold temperatures and takes place in a remote location, technicians are faced with even more obstacles. "We all carry cold-weather gear in our trucks because we drive rural roads and sometimes have no cell service," said Slater. "We have to be prepared for anything, like a moose running out in front of a truck and possibly getting stranded somewhere."

When Orange County Overhead Door Lead Engineer Levi Walstead was hired to do an emergency repair job in Antarctica, he had to be prepared for unpredictable weather conditions in one of the most remote places in the world.

"We were told that we may not be able to leave for months and should pack accordingly, so we brought two full of bags of 'survival gear' and prepared for severely cold temperatures."

Cold stress

What is cold stress and how can you prevent it from happening to you? According to OSHA, no matter how acclimated a person is to the cold environment they're working in, they may still be at risk of cold stress.

"A cold environment forces the body to work harder to maintain its temperature. Whenever temperatures drop below normal and wind speed increases, heat can leave your body more rapidly." When the skin temperature and the core body temperature drops, cold stress can occur. "This may lead to serious health problems, and may cause tissue damage, and possibly death."

Necessary gear

Door and access owners should be aware of the risk factors that contribute to cold stress and educate their technicians on how to prevent it. If an installer is wet or damp and working in extremely cold conditions, then they are at risk. Having the proper gear is imperative. For example, the type of fabric a tech wears makes a big difference.

The OSHA website states that workers should avoid cotton because it loses its insulation value when it becomes wet. "Wool, silk, and most synthetics, on the other hand, retain their insulation even when wet."

It is also important to avoid tight-fitting clothing. In cold conditions, it can constrict the body and reduce blood circulation. Instead, OSHA recommends wearing three loose-fitting layers of clothing:

1. An inner layer of wool, silk, or synthetic fiber to keep moisture away from the body.
2. A middle layer of wool, fleece, or synthetic fiber to provide insulation even when wet.
3. An outer wind and rain protection layer that allows some ventilation to prevent overheating.

Hats, knit masks, thermals, waterproof boots, sweatpants with Carhart pants over them, flannel shirts, and windbreaking coats are additional suggestions.

Glove talk

By far the most essential gear for cold temperatures is quality gloves. "Cold weather is hardest on your hands," said Slater. The key is to stop and take breaks and to wear gloves. "Although sometimes it's difficult to handle the nuts on bolts with gloves on."

One member of the Garage Door Techs (GDT) Facebook group voiced similar struggles, asking "What do you wear in sub-freezing

temperatures to keep your hands warm but still have the dexterity to manipulate nuts, bolts, screws, out of a tool belt?"

The recommendations varied, including Kinko's rubber-dipped gloves, high-end Mechanics gloves, Milwaukee demolition gloves with a tough-shell heated jacket, Harbor Freight disposable cotton gloves, winter hunting gloves, Grease Monkey gloves (black with blue writing), roping gloves, and latex gloves. One GDT member said, "Latex keeps the heat from your hands from getting out and the Mechanics glove is an added barrier of warmth."

Atlas gloves were also on the list. "They have the dexterity of a rubber glove but are much warmer," said one user. "They're the warmest glove that you can actually work in. I have no problem whatsoever starting a nut or getting fasteners out of the pouch."

Tricks of the trade

Having the right gloves is important, but these cold-weather tricks can also make a difference: Use hand warmers to quickly warm hands and use propane heaters to keep your work area warm. Consider also having multiple pairs of gloves on hand. "Heat the extra pairs with the windshield defroster," suggested one GDT member. Another said, "I wear sandals to the job site and then put boots on to keep my boots dry as long as possible."

Cold weather illnesses/injuries: Know the signs

Unfortunately, even the most prepared installer can be at risk. The key is recognizing the warning signs of certain illnesses or injuries to prevent them from getting worse. Wetness and exhaustion, as well as having predisposed health conditions such as hypertension, hypothyroidism, and diabetes, can be risk factors.

Four common cold-induced illnesses/injuries are hypothermia, frostbite, trench foot, and chilblains. OSHA reports that "Hypothermia occurs when ... the normal body temperature [98.6°F] drops to less than 95°F." That sort of situation is most common in very cold temperatures, but it can also occur if a person becomes chilled from rain, sweat, or submersion in cold water.



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Hypothermia

If you think you are experiencing hypothermia, call 911 immediately. While waiting for emergency medical services, take the following precautions:

- Move to a warm room or vehicle
- Remove wet clothes and replace with dry clothes
- Cover the body (including the head and neck) with layers of blankets and with a vapor barrier (e.g., tarp, garbage bag); do not cover the face
- If medical help is needed and more than 30 minutes away:
 - If they are alert, give the person warm sweetened drinks (no alcohol) to help increase the body temperature
 - Place warm bottles or hot packs in armpits, sides of chest, and groin

Frostbite

Frostbite is caused by the freezing of skin and underlying tissues. Feet and hands are the most common body parts affected. The lower the temperature, the quicker frostbite will occur. Symptoms include numbness

Frostbite dos and don'ts

If a technician experiences frostbite symptoms, OSHA recommends the following:

❄️ DOS

- Do cover and protect the area from contact
- Do give warm sweetened drinks (avoid alcoholic drinks)

❄️ DON'TS

- Don't rub or massage the frostbitten area; doing so may cause more damage
- Do not apply snow or water
- Do not break blisters
- Do not try to rewarm the frostbitten area before getting medical help; if a frostbitten area is rewarmed and gets frozen again then more tissue damage will occur

in the affected body part, tingling or stinging, aching, and bluish or pale waxy skin. Blisters may occur, and in severe cases amputation may be required.

Trench foot

Trench foot is caused by prolonged exposure to wet and cold temperatures. "Unlike frostbite, trench foot can occur without freezing temperatures. The feet can be affected in temperatures as high as 60°F, and the disease can develop in as little as 10 to 14 hours," according to the National Institute of Health.

For techs installing in seriously rainy or wet conditions, it is critical to keep your feet dry. Early symptoms of trench foot include tingling and itching and progress to numbness. Additional signs are redness of skin, leg cramps, swelling, and blisters.

Chilblains

A chilblain is a painful inflammation of small blood vessels in the skin caused by repeated exposure of the skin to temperatures ranging from just above freezing to 60°F. Symptoms include redness, itching, blistering, and inflammation. If you think you are suffering from chilblains, avoid scratching and slowly warm the skin.

Keep workers safe

Employers should properly train their employees about what to wear and what to do in extremely hot and cold conditions. They can provide radiant heaters or battery-operated fans and encourage breaks from the heat or cold.

Scheduling jobs when temperatures are the least dangerous is also a great way to minimize risk for installing techs. Additionally, owners can assign two workers to a job during extreme working conditions so that they can monitor each other for cold stress or heat exhaustion.

Employers may also want to consider implementing paid weather days for employees when temperatures are potentially dangerous. I recognize offering weather days isn't the most popular suggestion, but the alternative, like having an employee out for days while they recover from a weather-related illness or injury, could be worse.

The industry needs to shed the misconception that using protective gear or postponing a job (when applicable) due to extreme temperatures is a sign of weakness. Safety should always come first. ■

Editor's note: We want to hear from you. Email vicki@vjonesmedia.com and let us know what you think about the story.