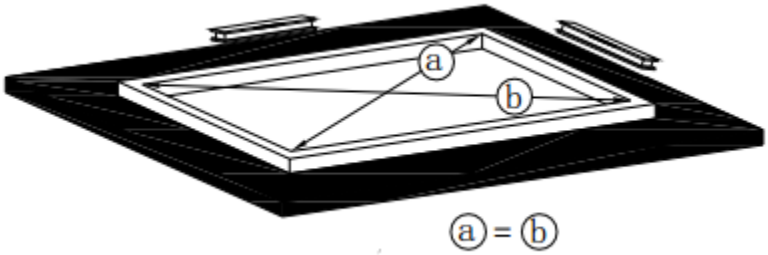
FORM: D2500

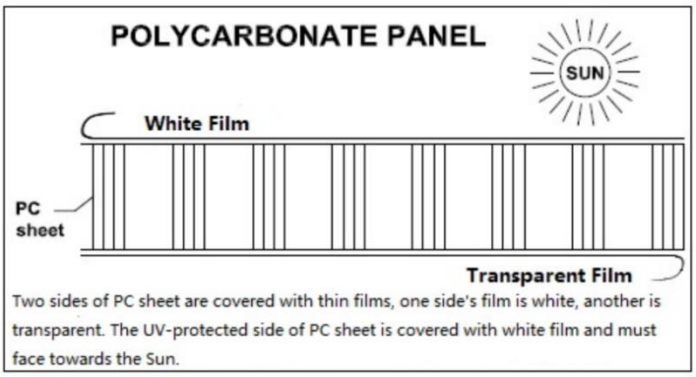
Greenhouse Construction and Operation Tips

Anchor the greenhouse and foundation securely.
Greenhouses are lightweight structures that can easily be lifted and rolled by high winds if not anchored properly. Usually the greenhouse instructions discuss anchoring. We provide additional information at http://www.acfgreenhouses.com/Shared/files/D2565-Earth-Anchor-Ins.pdf .

Make sure the greenhouse base is square.
An out-of-square base can cause parts to not fit correctly especially towards the final steps of installation when it is difficult to correct. Measure the base diagonally as shown. The length must be the same for both diagonal measurements. This ensures that the base is square.



Install polycarbonate panels with the correct side facing the sun.
These panels come wrapped with a protective layer to keep them from getting scratched during the shipping process. This layer also indicates which side has the UV protective coating on it (usually indicated with a color or writing). It is easy to forget which side goes toward the sun when the protective plastic is removed. Mark the UV protected side in a corner with a permanent marker after removing the plastic. This way you can always check the panel orientation, and the mark will not be noticed after installation. Installing panels incorrectly will greatly reduce their life.

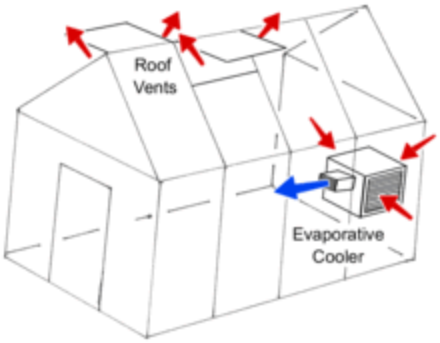


NOTE: Some panels may have white film on both sides. These are UV treated on both sides and can be installed either way.

Close all openings on the greenhouse when a storm and/or high winds are expected.
Just as important as anchoring your greenhouse properly is making sure any open vents and doors are closed securely when high winds are expected. Greenhouses are designed to repel winds from the outside. Having an open vent or door causes air pressure to increase inside the greenhouse and can blow out panels or even roll the greenhouse.

Provide proper ventilation for the greenhouse.
Plants need ventilation to keep the greenhouse temperature from getting too hot and to provide fresh air. Most kit greenhouses include roof vents for this. These do a fine job in most seasons if used with automatic openers (shown at right). They open the vents when greenhouse temperatures get too hot and close them when it cools down. Another added benefit is they are spring loaded to hold the vents shut better than most manual openers.

If additional cooling is needed, an evaporative cooler is recommended. It complements the existing vents by pushing hot air out of them at a higher rate while cooling the incoming air. Coolers can be automated with a thermostat so that they only come on if the roof vent system is not able to control greenhouse temperature by itself.



Exhaust fan systems are a popular venting option if your greenhouse does not have roof vents. A fan size calculator is available at http://www.acfgreenhouses.com/greenhouse-fan-calculator.aspx to help you select the proper system for your structure. It is not recommended to use both roof vents and an exhaust fan at the same time as the effectiveness of both systems is reduced.

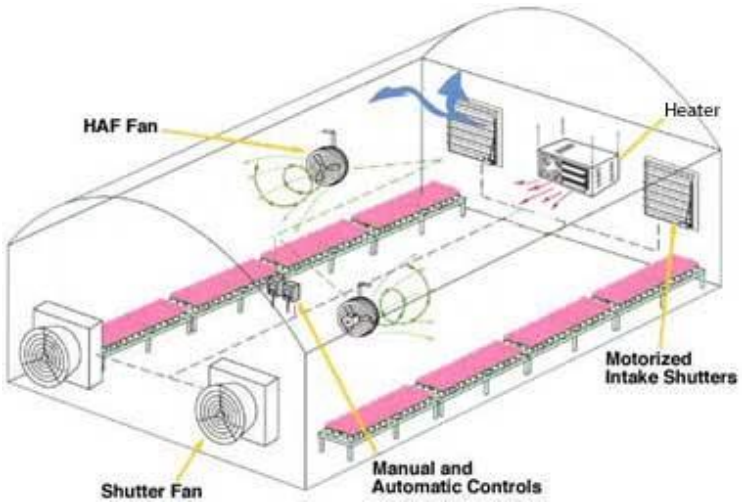
Determine your heating needs.

Much of a greenhouse's daily heat requirement may come from the sun, but if you want your greenhouse to be more than a few degrees above the outside temperature at night, you will need to provide it with a heat source. There are many heating options. We offer a heater size calculator at http://www.acfgreenhouses.com/greenhouse-heater-size-calculator.aspx to help you determine how much heat your greenhouse will need and the expected cost to heat it.

Prevent excess moisture in the greenhouse when it is cold outside.

Moisture is an ongoing problem in most greenhouses during the winter months. Extra moisture causes high humidity, which is a significant factor in plant disease. The most visible effect of high humidity is condensation on the greenhouse covering and the resulting drip, which erodes seedlings from tray cells and causes disease problems. This can be reduced with an HAF circulation fan. Forced air circulation inside the greenhouse is essential to provide a more uniform environment for improved plant growth. If condensation persists, ventilating the greenhouse or using a dehumidifier is recommended. It is also best to water the soil of plants directly to further reduce the possibility of disease.

Typical Equipment Placement in a Greenhouse



Know what is happening in your greenhouse when you are not there.

You are operating in the blind if you do not have a min/max thermometer to show you what temperatures your plants are experiencing in the greenhouse when you are not there. A min/max thermometer records daily high and low temperatures in the greenhouse. This is vital information that can tell you if your heating and/or cooling equipment is sized correctly and working properly in your greenhouse. Some thermometers also record highs and lows for humidity as well. This is a helpful feature for plants that require specific humidity levels like orchids.

Following these tips should eliminate the most common headaches and have you well on your way to enjoying your greenhouse for years to come! We offer a full line of ventilation, circulation, and heating equipment and much more at http://www.acfgreenhouses.com . Feel free to contact us if you have any questions.

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