

Select the required equipment.

Clifford Power Systems, Inc. representatives are fully trained on rental air condition and heating units and will work with you to determine the required equipment for your rental application. The chart below provides details about our equipment.

Air Conditioner / Heater Information				
Tonnes	12.5	25	30	50
Generator Requirements	70.0kVA	70.0kVA	70.0kVA	125.0kVA
Breaker Size	70A	125A	150A	175A
Voltage	208V/3 Phase	480V/3 Phase	480V/3 Phase	480V/3 Phase
Phase Rotation	ABC	ABC	ABC	ABC
BTU Net cooling Capacity	142,000	272,000	360,000	587,000
Heat kW	38.7	54	90	108
Heating BTU	131,967	186,959	311,598	373,583
Air Handler CFM	4500	8750	13,000	15,000
Air Filter Size	20 x 20 x 2	20 x 25 x 2	15.5 x 19.5 x 2	15.5 x 19.5 x 2
Air Filter Quantity	4	8	16	17
Qty/Feet Supply Ducts	N/A	2 - 25 ft ea	2 - 25 ft ea	3 - 25 ft ea
Qty/Feet Return Ducts	N/A	2 - 15 ft ea	2 - 15 ft ea	3 - 15 ft ea
Air Conditioner Start Amps	170A	60A	105A	110A
Air Conditioner Run Amps	55A	50A	95A	100A
Heater Start Amps	101A	95A	125A	145A
Heater Run Amps	76A	90A	120A	140A
Camloc Connections	4 Male	Bare Ends	4 Male Camloc	4 Male Camloc
Cable Requirements (min)	4/4 Cable	4/4 Cable	1/0 Cable	1/0 Cable
Trailer Dimensions	N/A	18' x 8' x 7'5"	25' x 8' x 9'2" h	30' x 8' x 9'2" h
Trailer Weight (Approx)	N/A	7,500lbs	8,500lbs	10,000lbs
Plenum Info	Attached	Needs Assy	Pre-built	Pre-built
Fuel Consumption A/C	3.0 gph	3.5 gph	3.5 gph	4.3 gph
Fuel Consumption Heater	3.6 gph	4.2 gph	4.2 gph	6.0 gph
Set-up requirements	None	2-People	2-People	2-People
	None	2 hours	2 hours	2 hours
Tear down requirements	None	1-Person	1-Person	1-Person
	None	1-hour	1-hour	1-hour

**Need help designing a system?
Contact your local Clifford Power Systems, Inc.®
specialist for assistance.**



Rent from the Experts:

Clifford Power Systems, Inc.® is a full service company that rents, sells air conditioners, heaters and generators. We will assure that you rent the correct size unit for your application and it is fully equipped to do the job.

Locations

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San Antonio, TX 78217
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Tulsa Mailing Address

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AIR CONDITIONER & HEATER RENTAL



View from inside the tent



Air Conditioner Considerations when working with Tents

Heating or Cooling Tents can present some unique challenges. Since tents are temporary structures and have little to no insulation qualities it is important to properly evaluate and make recommendations so the expected cooling or heating results are obtained.

Sizing a System

Tent air conditioners will be sized based on various factors. These include:

- Length, Width and Height of Tent Walls
- Roof Pitch
- Door Openings
- Window Openings
- The number of people expected to be cooled or heated
- Heat output from lighting
- Heat Output from Equipment

Once the above information is determined a recommended air conditioner or heater size can be determined.

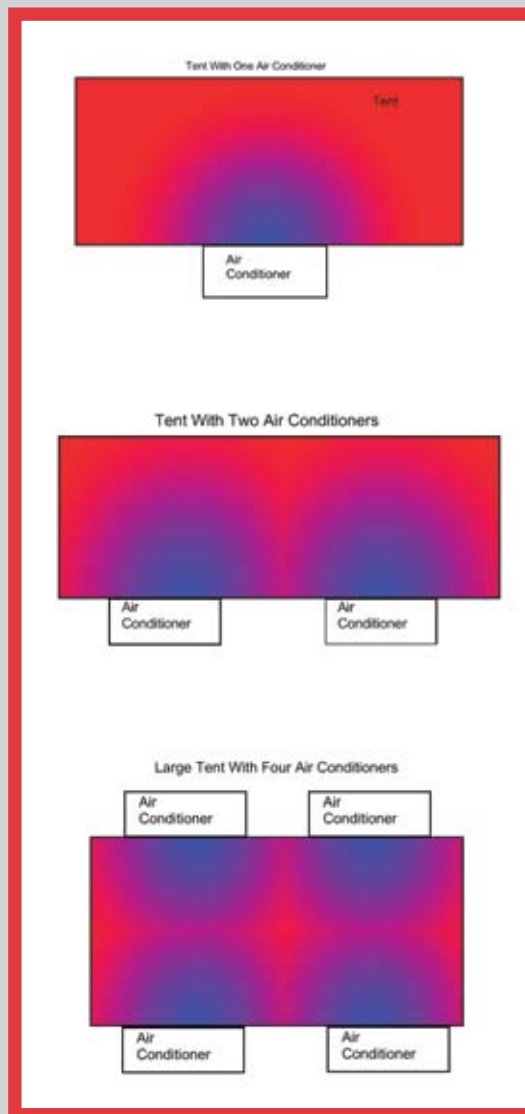
How Many Units?

In most cases a rental air conditioner or heater will come with a single plenum for drawing air from the room and then returning it to the room after it has been cooled or heated. If a sizing calculation determines that a 50 ton air conditioner is required to cool a space a choice can be made to supply:

- A single 50 Ton Air Conditioner, or
- Two 25 Ton Air Conditioners, or
- Four 12.5 Ton Air Conditioners

If a space is very large and even cooling throughout the space is required, multiple air conditioners or heaters may be desired. Cost is another consideration. Individual equipment rental rates, power requirements, setup and transportation all contribute to the cost of a project. Typically a single larger unit will cost the customer less than multiple smaller units to heat or cool a project.

This is a representation of the cooling effects on a space using a single unit vs. two units vs. four units:



Please note that the blue represents cool air, the red represents warm air. Also the variation is probably exaggerated to show overall effect.

Additional Considerations:

For the best overall efficiency of the system the following items should be considered:

Just like your home an opening or open door in a tent will significantly reduce the cooling or heating ability of a system.

All openings into the tent should be closed.

Whenever possible a door should be included with the tent to retain cooled or heated air.

Windows or skylights that allow sunlight into a tent will contribute significantly to the heat load.

Large openings in the tent will not allow expected cooling or heating. These should be closed up.

Prior to the start of an event a heating or cooling system should begin operation. All openings in the tent should be closed. The system should be operated for approximately two hours prior to the event. On extremely hot and humid days the system should be operated up to three hours prior to the event.

Tents made of Light Colored or White fabrics will work best for air conditioning. Dark materials will absorb heat from sunlight, white materials will reflect sunlight significantly.

Tents that have opaque or alternating dark colored roofs will require doubling the calculated cooling tons required.

Plenums should be located closest to where the desired maximum cooling or heating is desired.

Cooled or heated air should be re-circulated from within the space to be cooled or heated. Never draw cold or hot air from the outside as the air return for the system.

Make sure that all return air vents and ducts are clear and have not been blocked.

Make sure that the supply air vents and ducts are clear.

Try to keep all flexible air duct runs as short as possible.

Placing a tent on a concrete or asphalt surface will complicate the heating or cooling characteristics of the system. These surfaces will act as a heat sink and can significantly affect the performance of a system. When a tent is installed on asphalt or concrete it would be best to erect the tent a day earlier than required so direct sunlight will not create higher than expected ground temperatures. Also, the calculated tons of an air conditioning system should be increased by 25%.