



KEEPING YOUR COOL

PTAC Installation and Care Guide

Vol. 2, Issue 1.2

Tips, Tools & Best Practices for You and Your Team

How to Install and Care for your PTAC

TAKE NOTE

All work on PTAC units should be conducted by an experienced PTAC technician only. Failure to do so can result in damage to the unit as well as the guest room.

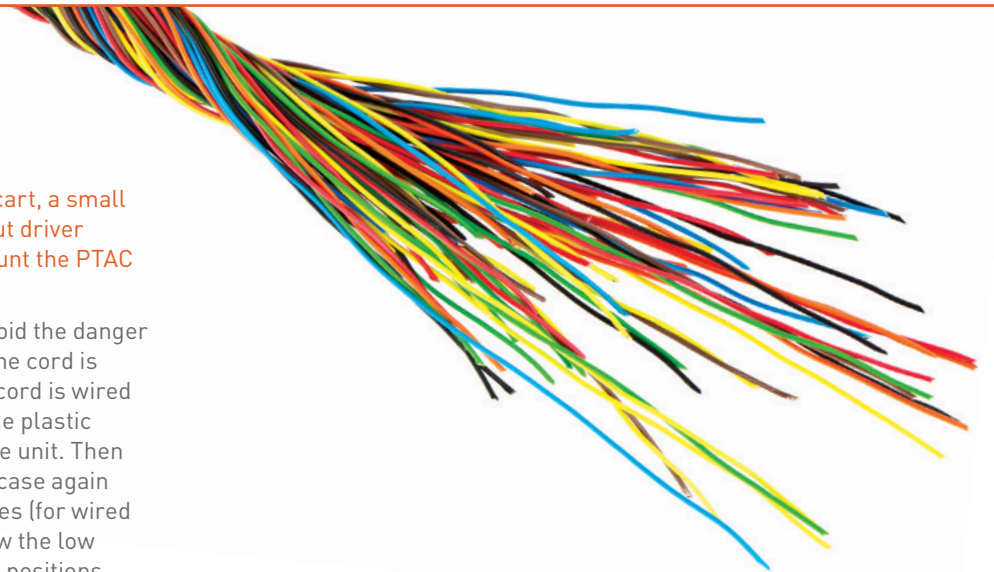
1. GETTING STARTED

Working with PTAC units requires: A low 4-wheel cart, a small wet/dry vacuum, a small level (less than 12"), and a 5/16" nut driver (typically) to remove the 4 sheet metal type screws that mount the PTAC to the sleeve.

The first step is to disconnect power to the PTAC unit. To avoid the danger of electrocution, we recommend turning off the breaker if the cord is wet or hard to reach, and it must be turned off if the power cord is wired directly into a junction box. After the power is off, remove the plastic case by lifting it up on the bottom left and bottom right of the unit. Then rotate the bottom of the case towards the room and lift the case again until it releases. Disconnect the low voltage thermostat wires (for wired thermostats) or the thermostat relay. Make sure to note how the low voltage plug is connected or write down the wire colors and positions if the unit has individual wire terminals. **It is important to know which wires go where.**

Remove the four sheet metal screws securing the PTAC chassis to the building sleeve then slide the unit out far enough to vacuum out the water in the PTAC unit.

These units are easily damaged so having a low 4-wheel cart with a handle will protect your back as well as the PTAC.



TYPICAL THERMOSTAT WIRE COLOR CODING

RED	24 volt power
GREEN	Fan control
YELLOW	Compressor control
WHITE	Heat strips control (1st stage heat on straight A/C or 2nd stage heat on heat pump)
BLUE/ORANGE	Reversing valve control (on heat pump type units)
BLACK	Common (usually not used on a straight A/C with strip heat)

How to Install and Care for your PTAC

COOL TIPS

Spend a little time adjusting the mounting screws to reduce any noise.



2. KEEPING IT DRY

The wet/dry vacuum is needed to vacuum up the condensate water that builds up in the base pan of the PTAC unit and in the wall sleeve. **This water is usually dirty and will spill on the carpet in the room if you just slide the old PTAC out onto the floor.** In addition to the water, vacuum out any mud, dirt or debris in the both the PTAC pan and wall sleeve as it might block the proper flow of water and cause an overflow. Use a small level to ensure that the wall sleeve is sloped down towards the outside so that water will flow to the drain (if provided) or away from the room.



3. UNPACKING YOUR UNIT

When unpacking a new PTAC make sure to remove all the tape and the packing screws holding the fresh air door closed. The fresh air door can be opened to provide make-up air for the air being drawn out of the building by the bathroom exhaust vents.

Many properties do not have a make-up air system, which supplies fresh air into the building to replace air lost to bathroom, and other exhaust systems so this is actually part of the design.

Therefore, do not ignore the damper door on the PTAC. Whether you want to open it slightly or not is up to your situation but remove the screws holding the damper door shut so someone does not ruin the cable by trying to open the damper when it is screwed closed. If you have concerns about the capacity of the unit with the door a quarter way open – test it out see if makes a big difference. Providing this fresh air will reduce odors in the guest room but leaving it wide open will allow unconditioned air to enter the building when the PTAC is not operating.

4. CHECK SOUND PROOFING

When sliding the unit into the sleeve make sure all 4 mounting screws will tighten properly. If they are left off or are over-tightened the unit may rattle. **Spend a little time adjusting them to reduce any noise** – so this means leave the cover off the PTAC until you test it. The rubber weather stripping around the mounting flange of the PTAC is meant to seal air out and to keep metal rubbing against metal that can cause rattling.

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COOL TIPS

Heat pump PTACs generally save money in energy use over the years vs. traditional A/C.

5. THERMOSTAT CONNECTIONS

Once the PTAC is in place but before plugging in or connecting the power cord, hook up the thermostat wires and verify the connections are correct. **Many times, internal fuses get burned out in the PTAC because the thermostat wires were hooked up after they had power.** Remember, any time the PTAC is plugged in the 24 volt transformer is energized and the low voltage terminals will be "hot" or powered up. Always hook up the thermostat wires first then plug in or connect the power cord.

6. CHECK THERMOSTAT FUNCTION



If it worked before it should work after the installation. If it did not work before find out why – check to see that the thermostat wiring to the PTAC

is correct then look for damaged thermostat wires under the PTAC and behind the thermostat. If you can, use an OHM meter to test for shorts in the wire. **Never use an OHM meter on wires with the power connected as this will burn out the OHM meter.** You can also test for 24 volts after the power is on between red and common you should have 24 volts AC (or 24 volts DC on some PTAC models).

7. PROPER THERMOSTAT CONTROL

The only way the thermostat will work is if you use a heat pump thermostat for a heat pump PTAC and a straight A/C thermostat for a standard A/C unit. With a heat pump PTAC, the Reversing Valve is energized either in cooling or in heating mode. Amana and GE are energized in heat mode so the "B" option or terminal is used. Friedrich uses the "O" option. **If you get it wrong, it will heat when it is supposed to be cooling** – so just switch to the other mode – this mode is changed on the thermostat not on the PTAC unit. Heat pump PTAC generally save money in energy use over the years so don't assume buying a cheaper standard A/C will save money in the long run. If you change from a heat pump PTAC to an A/C with heat strips (or vice-versa), you will have to change out the thermostat unless it is universal type thermostat which can be programmed for both heat pumps and standard A/C.

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Remember to always use an experienced PTAC technician for work on all PTAC units.

8. DOUBLE-CHECK EVERYTHING

Once the thermostat and wire connections have been verified, plug in or connect power to the PTAC and make sure the GFCI is not tripped on the cord (if it is, just firmly push the reset button on the cord). Turn the breaker back on if it was turned off. Before putting the cover on, check the operation of the PTAC – start by switching the configuration settings on the PTAC control panel for the wall thermostat.

Use the thermostat installation manual to determine the proper configuration settings. On most units, the control panel on the PTAC will go dark so the guest knows to use the wall thermostat but you should place the “unit controlled by wall thermostat” sign that came with the thermostat over the PTAC control panel. It is recommended not to stick the sign over the display of the control panel, as it will be difficult to control the unit should the thermostat stop functioning. Instead, try placing it inside of the lid of the PTAC cover.

9. FINAL THERMOSTAT TEST

Next, test the proper functioning of thermostat and PTAC – from the thermostat, switch the fan mode to “on” or “fan on”. The blower fan should turn on. Then switch the fan mode to “auto” and test the heating mode from the thermostat by turning the temperature control up above the current temperature of the room. The unit should turn on and after a few seconds, you should feel heat blowing out the top of the PTAC. Lastly, test the cooling mode by turning the temperature control down below the current temperature of the room (testing heating then cooling allows you to be able to leave the room in cooling mode for the guest). Wait until you hear the compressor start which may be delayed up to five minutes after the fan starts. **Listen for rattling or other unusual noises and try to fix them by adjusting the mounting screws (possibly even loosen them) and the PTAC in the sleeve.** Once satisfied, put the cover on the PTAC.

✓ ***Set the temperature on the thermostat and the installation is complete!***