HEAT PUMP SERVICES

How to Install a Heat Pump

Because we tailor the system to suit the unique requirements of your home and your family, the process starts with an on-site assessment. Our expert technicians visit your home and talk to you about your expectations and needs from the machine.

After a clear goal has been established, our team assesses your home for existing ductwork and heating systems and the insulation efficiency of the structure. They also calculate the precise heating and cooling load for your home. Based on this information, the technicians choose a system that fulfills all the requirements, and they give you a quote.

After the assessment process, your home is ready for the actual installation. In terms of time needed for heat pump installation Auckland homes need anywhere between 5 hours to 3 days, depending on the system and the existing temperature control components. However, the process typically involves these 7 steps:

Step 1



Locating the indoor and outdoor units

The technicians will choose the ideal location for the installation of the outdoor and indoor components. Because the location of the units has a direct bearing on the performance of the system, several factors are considered such as:

- Available space and clearance for both units.
- System pipe run that does not cross the maximum differential height and length recommended by the manufacturer.
- Structural integrity of the walls.
- Access to a power source.

Step 2



Preparation for mounting the indoor unit

At the chosen spot on the indoor wall, the technician will drill holes to secure a mounting plate. This is a steel plate that is sized and shaped almost like the indoor unit. It is used to hold the unit securely in place.

For framed walls, screw fix is used to secure the mounting plate while masonry walls calls require bolt fix. Next, the technician will drill a hole through the wall at the lower corner of the plate. This is done using a 3-inch hole saw, so there is no risk of impact related damage.

A sleeve is fitted into this hole, which will serve as the outlet for the electrical, drain and refrigerant lines. A connecting hole is drilled about a fraction of an inch below the level of this hole in the exterior wall.

Step 3



Installation of the indoor units

The technicians will then uncover the indoor unit and attach the condensate drain hose, control wire and the refrigerant lines to it. All three lines are then taped together, which makes it easy to insulate them and to feed them through the hole in the wall.

Next, as one technician hoists the unit up, the other technician will push the taped lines into the sleeve-fitted hole. Then, the unit is mounted on the steel plate. All of this is done without touching the fins which can get damaged easily.

Heavier units have to be placed on a concrete slab while smaller systems can be mounted on the side of your home. Depending on the size of the system, the installers will prep the mounting area by constructing a concrete pad and fixing rails on it or bolt fixing mounting brackets on the wall.

The unit will be placed on the mounting structure/ assembly, which will be above the ground and possible snow lines.

Step 4



Installation of the outdoor unit:

Step 5



Connecting the indoor and outdoor components

Trunking channels are installed to house the lines coming out from the indoor unit. The outdoor unit is first connected to the control wire coming out from the sleeved hole in the wall. This establishes the electrical connection between the two components. The power cable of the outdoor unit is then connected to a breaker panel. All wiring is insulated to protect it from the elements.

Next, the refrigerant lines are fastened to the outdoor unit using flare nuts. This creates a pathway for the refrigerant to flow through the system. Finally, the drain line that exits the access point in the wall is connected to an external drain line that will take the condensate out and away from your home.

Exposed lines and insulation lapses will greatly impact the performance of the heat pump and will lead to faster degradation of the components. So, after the indoor and outdoor units are connected, the technicians will seal open spaces around the access point sleeve.

They will check the condensate hose for free drainage and then install the capping on the trunking channels. So, those ungainly lines will be out of sight.

Step 6



Ensuring the integrity of the system

Step 7



Getting the system ready for use

Before the system is filled with refrigerant, the installers will flood it will oxygen free nitrogen and then connect it to a gauge manifold to ensure that there are no leaks. After this, the system is cleaned with a vacuum pump and then the right refrigerant is pumped into it.

Step 8



The finishing touches

Finally, the installers begin to add the finishing touches to the system and to the indoor units. This includes:

- Putting the cover on the indoor unit
- Installing sensors (if they are a part of the system)
- Syncing wireless remotes with internet connected devices.

But, that's not all! After we complete the heat pump installation Auckland home owners get expert advice from our technicians. These tips will help you to get optimal performance and maximum energy efficiency from the unit.