

PAC Overview



There's nothing better than air conditioning on a hot day and a Portable Air Conditioner (PAC) is just the ticket for people living in places where central air conditioning is not available and conventional window air conditioners cannot be used.

But everything has a down side, and PACs are no exception.

Three common complaints are;

- **TOO NOISY**
- **NOT COLD ENOUGH**
- **HARD TO DRAIN THE WATER**



The purpose of this project is to provide suggestions and DIY solutions for solving these problems.

PAC Overview

NOT COLD ENOUGH



Many PAC owners complain that they purchased a PAC with more than enough BTUs to cool their room (based on BTU/sq foot), but it's not doing the job.

The two most important things to remember when selecting a PAC are;

1) Make sure the PAC cooling capacity is matched to the size of the room. The wrong size PAC, either too big or too small, may not always give you a cool and comfortable feeling. Check out [SlideDeck 1F](#) for detailed information on matching BTUs to room size.

2) If outside temperatures are expected to exceed 90° F, select a PAC with 2 hoses for transferring air between the window and PAC (one hose is used for intake, the other for exhaust). PACs that use only 1 hose cannot operate as efficiently as a 2 hose system, causing a decrease in cooling capacity at high temperatures.

Check out [SlideDeck 1E](#) for PAC reviews and buy recommendations.

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TOO NOISY



All PACs generate a considerable amount of noise, with sound levels ranging anywhere from 40-70 dBA. This might be just an annoyance for the owner, but it could be a major issue for the neighbor living below that has to listen to PAC noise reverberating through the floor boards.

The PAC Platform can be used to help reduce noise, both above and below the floor. It has built-in anti vibration pads that absorb noise and vibration emitted from the PAC.

The PAC Platform can be built as a DIY project and used with your existing or new PAC unit. Check out [SlideDeck 1B](#) for instructions on how to build and use the PAC Platform.



Inside View



Back View



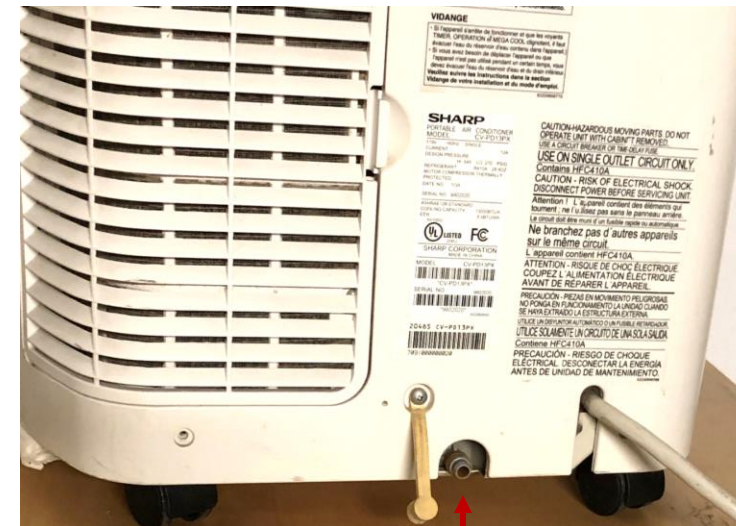
Front View

PAC Overview

HARD TO DRAIN THE WATER

All PACs produce water from condensation as a part of the cooling process. Some of this water is expelled through the air exhaust hose and the remainder is collected within an internal water tank. When the internal tank fills up, the water needs to be drained out or the PAC will automatically shut down. In many cases, the PAC drain plug is located at the bottom of the unit, making it very difficult to drain the water into a pan.

Some PAC manufacturers suggest moving the PAC to a drain to dispose of water or use a very thin pan (e.g. cookie sheet) to collect the water. These are not practical solutions for most users. Monitoring, collecting and disposing of PAC water can become an ongoing and frustrating job, especially on hot & humid days.



PAC drain plug

PAC Overview

HARD TO DRAIN THE WATER



The PAC Platform provides a raised platform for portable air conditioners.

It contains an internal compartment below to hold a container for collecting drain water.

When the container is full, the container can be easily removed and emptied.

[SlideDeck 1B](#) shows how to build and use a PAC Platform.



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HARD TO DRAIN THE WATER



If you live in a humid environment and dumping water becomes an annoying chore, you can add a Water Pump.

The Water Pump will automatically pump PAC water out to a suitable drain location (e.g. bath tub, window, floor drain, yard).

Refer to [Slidedeck 1C](#) for information on buying and installing a Water Pump.

Pump output hose can be as long as necessary and positioned up to 22 feet above the pump.



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HARD TO DRAIN THE WATER

By using the Water Tank as a home for the Water Pump, you can easily capture small amounts of water spill or condensation expected during normal operation.

However, if something goes wrong (e.g. clogged drain, kinked hose, loss of power) the Water Pump and Water Tank could overflow from an ongoing stream of water coming out of the PAC.

The recommended Water Pump has a built-in overflow detector that can be connected to the PAC to shut off its internal drain valve. If your PAC does not provide connections for this, you can build and install your own Emergency Shutoff Valve (ESV) to automatically plug the PAC output drain if the Water Pump detects an overflow condition (refer to [Slidedeck 1D](#)).

