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Panasonic Heat Pump Defrost Cycle Operation:

All heat pumps are design to defrost during very cold outdoor conditions.

Defrost performance and frequency is critical to the efficient operation of a heat pump.

This function will usually occur in the early morning and evening when customers want their unit to continually produce heat.

When the green operational light is flashing under these conditions the unit will be doing a defrost cycle or pre-heat stage, this time will vary between 10-15mins. The ice on the outdoor coil will melt off and then the unit will heat up again for possibly the next 30-40mins. Depending on the outdoor conditions the coil and pipes may produce condensation which develops into moisture droplets onto the coil which will turn into ice again. Then unit will then have to do another defrost cycle determined by these conditions and parameters.

During the defrost cycle the indoor unit will be off and the outdoor will be heating the coil to melt the ice off.

Do not turn off the power supply isolator outside during the defrost cycle this will only cause more increase of ice build up on the outdoor unit coil and stop the unit's heating cycle.

This is why sometimes you may notice the unit switch off every 40-60mins in the mornings.

There are other variables that can affect the performance of defrost and heating.

Operating settings, care and maintenance, sizing application, location and installation.

Please see our information sheet on how to best operate your heat pump during winter under these conditions. This is readily available from Panasonic customer care centre.

Undersized units will continuously defrost at regular intervals in low ambient conditions when they are struggling to reach set point.

Correctly sized units will have shorter total compressor run times and lower frequency operation speeds. These conditions combine to reduce defrost frequency depending on the load requirements.

The best idea will be to size the unit for the average lowest outdoor ambient temp in your area during winter.

Other factors that can cause frequent defrosts are blocked coils and filters, there must be sufficient return air flow through the coil on both the indoor and outdoor units.

Ideally the outdoor unit should raised up above the ground level 100mm and the drain hole in the base pan must not be blocked but able to drain condensate water away safely.

Quality of installation can have an effect on defrost operation: - There should be no kinks in pipe work or loss of refrigerant through leaking connections or during the installation.