# **Electronic Electronic DNDENSATE REMOVAL SYSTEM**



Single-ended pump unit for small footprint

Low profile for ease of mounting

Quiet! Electronic control with alarm circuit!

Thermal protection Tiny reservoir/sensing unit!

Mounts vertically or horizontally No float to stick!

Fits all wall-mount splits

So versatile it's the only pump you'll need to carry!



The Pacific Electronic is so quiet you really won't know that it's there unless you installed it yourself! Fitted neatly inside even the smallest high wall split air conditioner, it efficiently and quietly pumps all the condensate water up to 6 metres (20 ft) high and 30 metres (100 ft) across the roof. It is so easy to fit, that the job's done in minutes. This reservoir is so small that it will fit under the condensate drip tray, while the low-profile single-ended pump has the smallest footprint ever — and it contains all the control electronics, as well as the alarm circuit!

The Pacific Electronic Reservoir/Sensing Unit eliminates all worries about positioning. This versatile little unit is so easy-going that you're spoilt for choice! And there's no need to waste time checking that it's dead level, because this unit incorporates an electronic sensor instead of forcing you to live with the limitations of a float switch! You can even tip it up at 70° — and it still works!

#### **Mounting Options**

You can mount the Reservoir under the tray with its inlet (roughly) horizontal, or it can be mounted with its inlet vertical, or at any angle in between! The Pump housing is only 30 mm (1.2") high, and can be mounted on any of its sides. Because its suction and discharge tubes are at the same end, with the power cable, it can also be simply mounted on the other end if you wish, taking up only 13.5 cm<sup>2</sup> (2.1 in<sup>2</sup>). The motor itself is one of the quietest ever. Add to this its special rubber mountings and internal expansion tubing and the unit is almost totally silent. You can feel comfortable about fitting it inside the air conditioner.

At the heart of the Pacific Electronic is its solid



state electronic control system, that 'knows' when the pump should run, when to stop, and even if there is a problem anywhere in the waterdisposal system. Because it is electronic, it cannot stick (like a float would) if the reservoir is tilted over, even up to 70° from the horizontal. This makes for easier positioning inside ever-smaller air conditioners, and greater long-term reliability. The Pacific Electronic comes complete with tubing to plug between the Reservoir and Pump, all the fixings you need — with no need for separate check valves. It also comes complete with a full 2 year warranty — if you should ever need it!

#### **Dimensions**





electronic condensate removal system

## Now with

built in Thermal Cut Out Protector!

Reliable high capacity unit

System

Condensate Removal

Waterway

Master

'Whisper' switch mode allows selection of full pumping capacity or 'whisper' setting

Easy to fit and Fully guaranteed

Big Capacity — handling up to 75 litres/hr

Huge 9 metre head — delivers a total lift in excess of 30 ft

Powerful pump — self priming, lifting a full 3 metres even in 'whisper' mode

Built-in 'Whisper' Switch

Low profile sensor and High water level cut out

Low noise level



The Waterway Masterpump is engineered to a high standard, giving the air conditioning industry a reliable, fast to fit unit, packed with features unavailable elsewhere. The Masterpump boasts 'Whisper' switch control, allowing the installer to select full pumping capacity or switch to 'Whisper' mode giving a very low noise level where maximum duty is not required. Even in low-power 'Whisper' mode the Masterpump moves more water than many of its competitors.

This powerful pump is self priming and can move up to 65 litres/hr. It will lift water from a distance of 3 metres below its suction inlet and can give a total lift in excess of 9 metres (30 ft) if required. A dual element non-return valve ensures positive sealing and elimination of water run-back, when the pump is switched off. Enhancing both safety and reliability, the electronics are totally isolated from pump and water circuits. The Masterpump is a stylish unit, and does not look out of place sited externally to the air conditioner. The unit has a rubber base plate which absorbs vibration, and facilitates mounting on to almost any surface. The unique 'Whisper' switch' control enables the installer to select between pumping capacity or sound level, dependent on the environment. In 'Whisper' mode the Masterpump will lift water a full 3 metres. So if necessary it can be mounted in the

ceiling void above a low-wall mounted air conditioner, for example. The low profile sensor head contains the suction pipe stub, and for extra protection a long-life filter mat which helps protect the four corrosion resistant probes from build-up of foreign matter. The sensor probes are easily accessible for cleaning by removing the clip-on base. The sensor head has an alarm level probe that can switch off the air conditioner if the water exceeds the normal level in the condensate tray, and also switch on an optional Waterway Master Alarm module. The sensor head is small and can clip easily into most condensate trays. The 1.5 metre inter-connecting cable simply plugs in to the pump housing making installation simplicity itself. Both sensor and power cable are supplied with plug-in connectors for easy assembly. Sensor extension cables and 6 mm plastic tubing are readily available on request

#### Capacity





#### Dimensions







## Micropump II Condensate Pump



Up to 12 litres/hour (3.2 gal/hr) from Air Conditioners and Fan Coils Up to 15 metres (50 feet) Vertical Discharge Up to 100 metres (300 feet) Horizontal Discharge

Powerful and Compact
Electronic Noise Control<sup>®</sup> for Quiet Operation
AquaSensor<sup>®</sup> Electronic Water Sensing and Control
Technically Advanced Automatic Operation
High Water Alarm/Cut-out Switch
Built-In Easy-Clean Condensate Filter
Vertical or Horizontal Mounting

#### **Features**

The **Micropump II** Condensate Pump fills the continuing need for a small pump which will fit inside the tubing chase of a High-Wall-Mount Air Conditioner, and will quietly and efficiently pump all the condensate to a drain.

- AquaSensor<sup>®</sup> Water Sensor has no moving parts or mechanical floats, gives much more freedom in positioning the pump, and has been proven in the field to increase reliability.
- Electronic Noise Control<sup>®</sup> enhances the other sound-reduction methods used by the **Micropump II** to eliminate vibration and control the noise output, ensuring that the pump is extremely quiet.
- Transparent Filter Chamber allows any dirt build-up to be easily seen during servicing operations. With a simple <sup>1</sup>/<sub>4</sub> turn-twist the chamber can then be removed for the filter to be washed or replaced.
- Simple connections simply plug on to condensate drain and connect 6mm (1/4") tube to the discharge port to pump up to 15m (50 feet) vertically or 100m (300 feet) horizontally.
- Excess Water Alarm relay circuit included to connect to Building Management System or to shut down air conditioner if water level is too high for any reason.
- Electronic circuitry is completely encapsulated in hi-tech resin for complete safety and long-life protection.
- Can be operated either horizontally or vertically (see over).
- Soft Start with Electronic Power Control.





**Easy to fit, easy to maintain** - *the pump that is made for installers* Speed of fitting is assured with the **Micropump II**. A simple connection to the drain tube under the condensate tray, and it lies alongside the refrigerant pipes, with only the 6mm(1/4") plastic discharge tube to be brought outside the unit, following the pipes to the outside, and a drain. Completely automatic operation is enhanced by the Electronic Noise Control<sup>®</sup> circuitry to give quiet starting and stopping, as well as power control to regulate the amount of power needed to remove the condensate.

Maintenance will only require inspecting the filter through the transparent filter chamber, and washing it out if necessary.







#### Specification



Power Supply	• 208-240V 50/60Hz OR 110-120V 60Hz
Fuse Required	• 5 amp
Alarm Relay Rating	• 250V 5A max. Break on Fault
Max. Pumping Capacity	• 12 litres/hour (see Chart)
Max. Discharge Head	• 15 metres
Ambient Temperature Range	• 0° - +40°C Max.
Water Temperature	• 25°C Max.
Power Consumption (max.)	• 30W
Material	• Flame-Retardent
Discharge Tube Size	• 6mm (1/4") internal diameter
Dimensions	• 40(w) x 35(h) x 192(l)



# DRAIN PAN PUMP



Low-Cost Defrost Water Removal from Refrigerated Cases, Dehumidifiers, Fan Coils and Air Conditioners Simply Stand the Drain Pan Pump in the Water Collection Tray and Switch On

## **The Green Solution**



The DPP Drain Pan Pump contains proven electronic water detectors and a pump which turns on to remove the defrost water from a refrigeration cabinet, or condensate water from an air conditioner or condensate boiler.

When placed into a drain pan and connected to the power supply and a discharge tube, DPP operation is completely automatic and the pump will turn on only when water is present and will stop when the water has been pumped away. Its rubber feet and side bumpers mean the DPP floats quietly just above the floor of the drain pan.

Designed for high-spec low-cost installations, the DPP can replace drain pan heaters, or more expensive pumps, with major savings in running costs. With its electronics and all internal parts totally encapsulated, it is unaffected by being submerged by defrost water dumps and it will remove up to 14 litres/hour.

The water level in the drain pan is continuously measured by a sensitive electronic sensor, and this controls the operation of the pump via the fully-encapsulated circuitry within the rugged plastic housing. Water entry into the pump is from the sensor cell, which is protected from contamination by a large-surface-area grill, designed to keep out loose hairs and particles larger than 1mm.

With its small dimensions, low cost and very low energy use, this DPP pump is a beneficial alternative to drain pan heaters. Also, by pumping defrost water away to a drain, instead of evaporating it into the air, it gives further benefits in reduced frequency of defrosting, less temperature cycling, and increased energy efficiency.

In air conditioning installations, the DPP can be used to replace the larger tank pumps with their greater power usage and noisier operation.

#### **Specification**

Power Supply	: 208-240V 50/60Hz
	: 110-120V 50/60Hz
Power Consumption with Pump Running	: 30W
Power Consumption with Pump Off	: 0.33W
Maximum Water Temperature	: 40°C (100°F)
Maximum DIscharge Lift	: 6 metres
Discharge Tube Size	: 6 - 6.35mm/ (1/4") i.d.
Index of Protection	: IP67 - Fully Submersible
Dimensions	: 120 (long) x 40 (wide) x 32 (high)
Pumping Capacity - Zero Lift	: 336 litres/day / 76 gallons/day
Supply Cable Length	: 1.5 metres
Thermal Protection Fitted	
Material Flameproof to UL94V-0	

#### Capacity



#### Installation Simplicity

Simply place on the base of the condensate or defrost water drain pan, connect a 6mm (1/4") plastic tube from the discharge outlet to the drain, and connect the power cable to a suitable supply fused at 3A. When water fills the drain pan to a height of 6-8mm the pump will automatically switch on and pump the water level down to 3-4mm, then switch off. The DPP sits on rubber vibration absorbers, which also prevent vibration transmission from the sides of the pump to the drain pan.





Designed for Modern Wall Mounted Air Conditioners.

- Quick, Simple Trouble Free installation.
- **Easy access promotes fast, efficient servicing.**
- Aesthetic design blends naturally into its surroundings.
- **Built-in Non-return Valves.**
- **Electronic Noise Control.**
- AquaSensor electronic condensate sensing.
- Plug-In Power Connections.
- **Built-in Alarm Circuit.**
- Discharge head up to 15 metres (50ft).
- Diagnostic Indicator.

## **Simple Installation**

As Air Conditioners become more efficient they are becoming smaller and smaller. The Limpet Pump needs no space inside the air conditioner so it can be used with all Wall Mounted air conditioners.

### Servicing

Servicing is simple. Remove one screw to access pump and filter.

### Quiet unobtrusive pump noise control

The Limpet Pump incorporates Electronic Noise Control, a microprocessor control chip which delivers smooth unobtrusive pump operation. Powerful, pumps up to 15 metres vertically and 60 metres horizontally.

## Installation







## Limpet **Condensate Discharge Module**

Pump

2.5

5

(16ft)



Drain Hose

## **Specification**

#### Supply

Fuse (reg'd) Alarm Relay **Ambient Temperature Range** 

**Pumping Capacity Discharge Head** Horizontal distance **Tube Connection** 

Pump Capacity

**Dimensions Material** 

220-240V 50/60Hz 30W Alt: 110-120V60Hz 30W 3A max 250VAC 5A Break On Fault 0 - 40°C (32°F - 104°F)

12.0 L/hr max (3.125 US Gal/hr) 15 metres (50ft) 60 metres (200ft) 6.0mm, (1/4")

292 x 55 x 50mm (12" x 2<sup>1</sup>/<sub>4</sub>" x 2") Flame Retardant ABS

Bracket Lph (US Gal/hr) **Collection Tray & Filter** 15 (3.9)10 (2.6)5 (1.3) Discharge Head

10

(33ft)

12.5

15

(50ft)

Metres

7.5