



---

# The New Paradigm

## The PLASMA UNIT



When electronically charged, the transformer that is integrated into the device applies a high voltage to the electrode plates, thereby generating plasma.

The plasmaNorm® module containing the Plasma Reactor when electronically charged, removes odours caused by cooking in a domestic kitchen.

---

# The Breakthrough for Residential Applications

ORIGINATING from the Space and Military Industry, the plasmaNorm® technology was further developed for the elimination of odours in restaurant and food processing industries.

In many European cities it is necessary to install plasma units in restaurants and food establishments that will handle up to 60,000 cubic metres per hour so the residents are not subjected to unhealthy odours and pollutants.

## Plasma Reactor

Directly situated above the fan are the electrode plates. The transformer intergrated into the device applies a high voltage to the electrode plates thereby generating plasma. The plasma occurs as a result of the extended supply of energy to the gaseous air. When contaminated air passes through an electromagnetic field created by plasmaNorm®, the micro or non-thermal reaction causes oxidation of odour molecules changing them into oxygen, water and carbon dioxide.



In kitchens that cannot be vented to the outside atmosphere in apartment buildings, or when the kitchen is in the centre of the house, a rangehood with a plasma unit in it will clear the air of all the by-products of cooking so all of those offensive odours are removed from the atmosphere.





## plasmaNorm® plasma air purification technology

Rangecraft uses the revolutionary plasmaNorm® plasma air purification technology to effectively and permanently remove the by-products of cooking. Originating from the need for clean air in space travel, the plasmaNorm® technology was developed for the effective elimination of odours.

### How does it work?

There are three basic forms of matter:

- gas
- liquid
- solid.

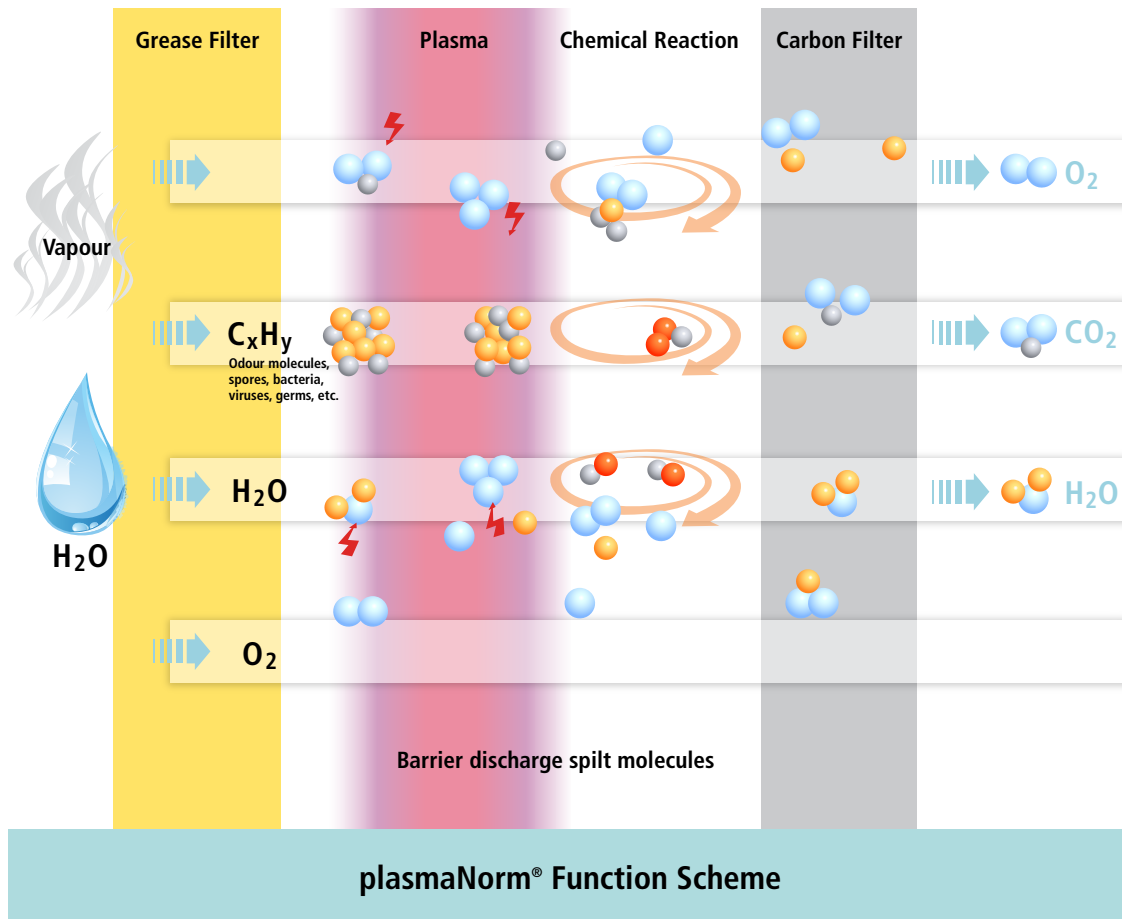
The fourth form of matter – Plasma

- can only be achieved by adding energy
- a plasma state of matter also generates free electrons and ionized atoms.

Plasma is the state of matter similar to gas in which a certain portion of particles are ionized. The plasmaNorm® system induces the state in plasma cells by introducing an electromagnetic field to gas. Gas particles inside the system then become highly charged and react with the organic molecules created from cooking to convert them into **oxygen, water and carbon dioxide**.



## plasmaNorm® Process



### plasmaNorm® system three stages of extraction

1. **Filtration** – through the standard stainless steel grease filter.
2. **Plasma** – odour molecules undergo a cold combustion process by reacting with plasma. These molecules are oxidized and then decomposed into oxygen, carbon dioxide and water molecules.
3. **Activated Carbon** – resultant molecules then pass through activated carbon filtration. The plasma effect triggers a charcoal regenerating reaction resulting in a prolonged life cycle of the filter for up to 5 years.





## Ground breaking technology

plasmaNorm® is the only specialist provider of air solutions that guarantees to remove odours permanently. The revolutionary plasmaNorm® filter contains atmospheric, normal-pressure plasma. It clears the air of cooking odours, solvents and fine particles, with built-in air sterilization. As a filter of intake, ambient or exhaust air, plasmaNorm® has undergone long-term, real-life operational testing in the catering and food industries.

## How plasmaNorm® works

Particles and dust are pre-filtered; the pollutant gases subsequently oxidise through 'cold combustion' in atmospheric, normal-pressure plasma. Odour molecules are decomposed at the molecular level. Non-combusted compounds become caught in an activated carbon storage system. The activated carbon, located downstream, acts as a storage reactor that continually regenerates itself by means of plasma flow and, for example, converts ozone back into atmospheric oxygen.

## The benefits to everyone

Now for people living in apartments that cannot exhaust the kitchen odours effectively or have a recirculating rangehood that does not clear the air and are left with unpleasant odours, the plasma unit offers a positive solution. Residences that are classified by the national trust, state or local council regulations, can put an effective rangehood that will allow them to enjoy all the different cuisines offered today. Large apartments with difficult body corporates now can avoid the arguments and delays that most experience.



## Rangecraft specifications

### *Advice on usage and installation*

Fan is an AC centrifugal type forward curved, dual inlet with housing.

High speed 750 cubic metres per hour (210 litres per second).

Low speed 350 cubic metres per hour (100 litres per second).

Motor - 194 Watt.

Outlet - 150mm diameter.

Duct Size - 150mm diameter minimum.

Duct type must be rigid.

***Do not use flexible ducting as this can reduce airflow by up to 50%.***

***Ducting used must be non-flammable.***



***Plasma unit can be attached to the outlet of the motor in the rangehood or can be located away from the hood up to 6 metres. The connection from the hood to the plasma unit must be rigid ducting of 150mm diameter.***

***Air outlet from plasma unit must be at least 400 square centimetres through the top of the cupboards or the front of the cupboards. Return air must come back into the room with the hood in it. This is necessary to ensure all the residual odours are removed.***



## Plasma is the introduction to perfection

---



Rangecraft Rangehoods are the perfect solution for kitchens where the rangehood cannot be ducted to the outside atmosphere, and solves the problem in high rise apartments.

These hoods will clear the by-products of cooking, and there will be no odours from the return air into the kitchen. They will do a satisfactory job over all electric, gas and induction cookware available on the domestic market in Australia. The limitation is if the cookware exceeds 50 mega joule heat output so if any doubts check with a Condari P/L representative.

When finished cooking turn the rangehood onto low speed and any residual odours from food preparation will be cleared in about 30 minutes.

## Apartment living

**Now for people living in apartments that cannot exhaust the kitchen odours effectively or have a recirculating rangehood that does not clear the air and are left with unpleasant odours, the plasma unit offers a positive solution.**

**Condari P/L can manufacture a special Rangecraft Rangehood to fit into existing the cupboards and ensure the right result will be achieved.**

**In these cases, the plasma can be up to 6 metres from the rangehood and we also make the special ducting required which is solid Zinc Alume and non flammable.**

**This is a special service provided by Condari P/L.**





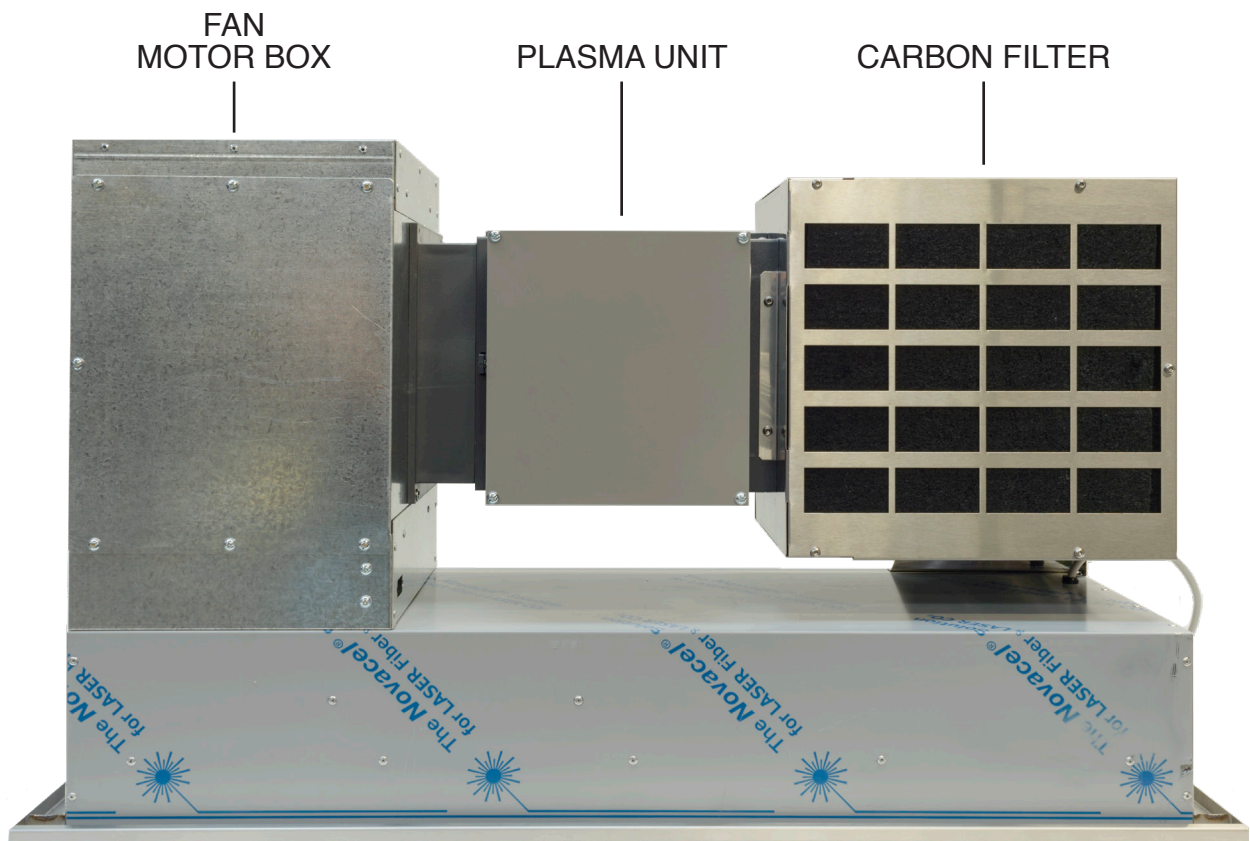


## Rangecraft leading the way for passive homes

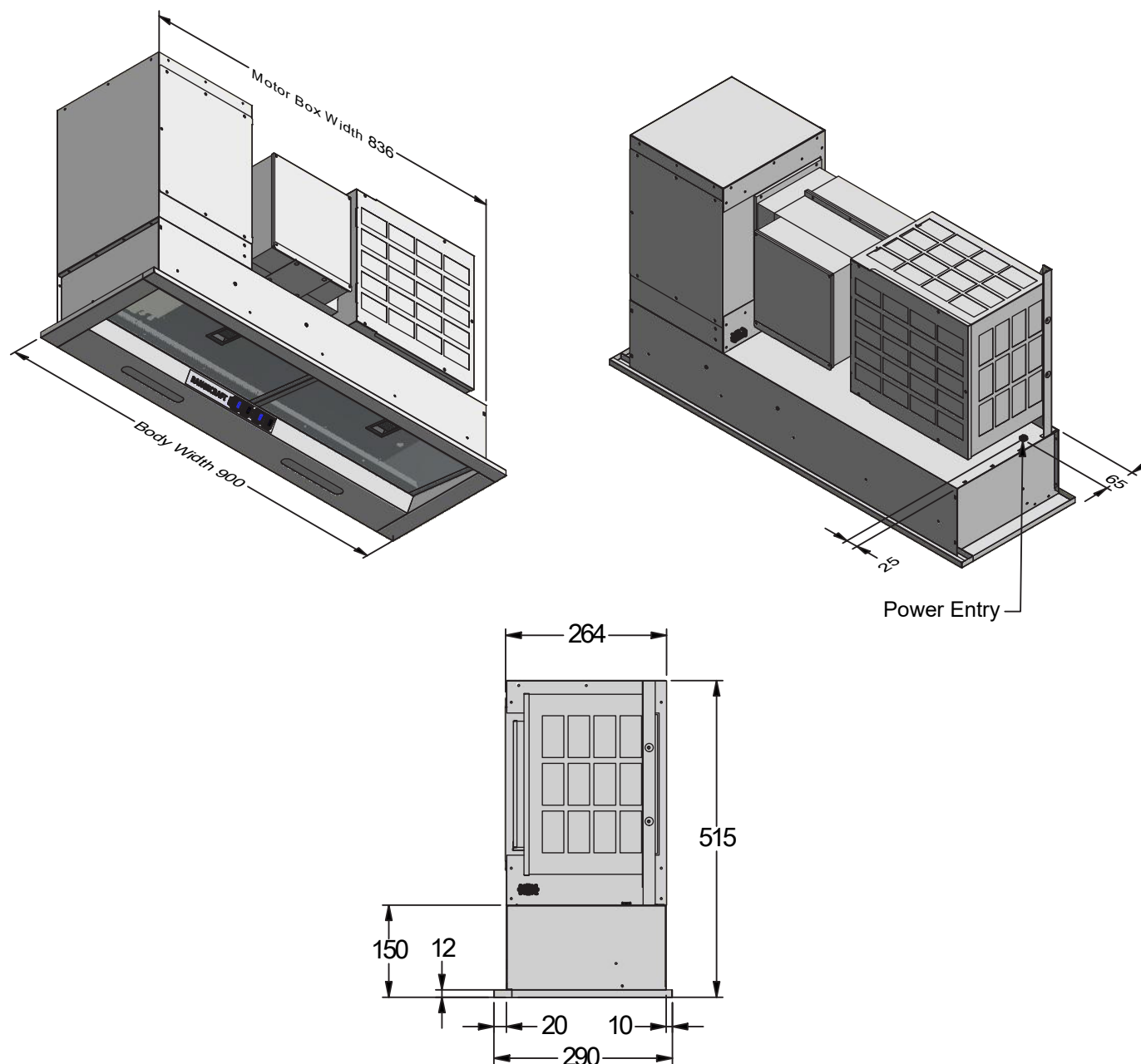
---

At Condari P/L we are excited to introduce a kitchen product that changes the way we think about planning kitchens. For so long, new appliances have arrived on the market without the back up to solve the resultant by-products of the cooking appliances.

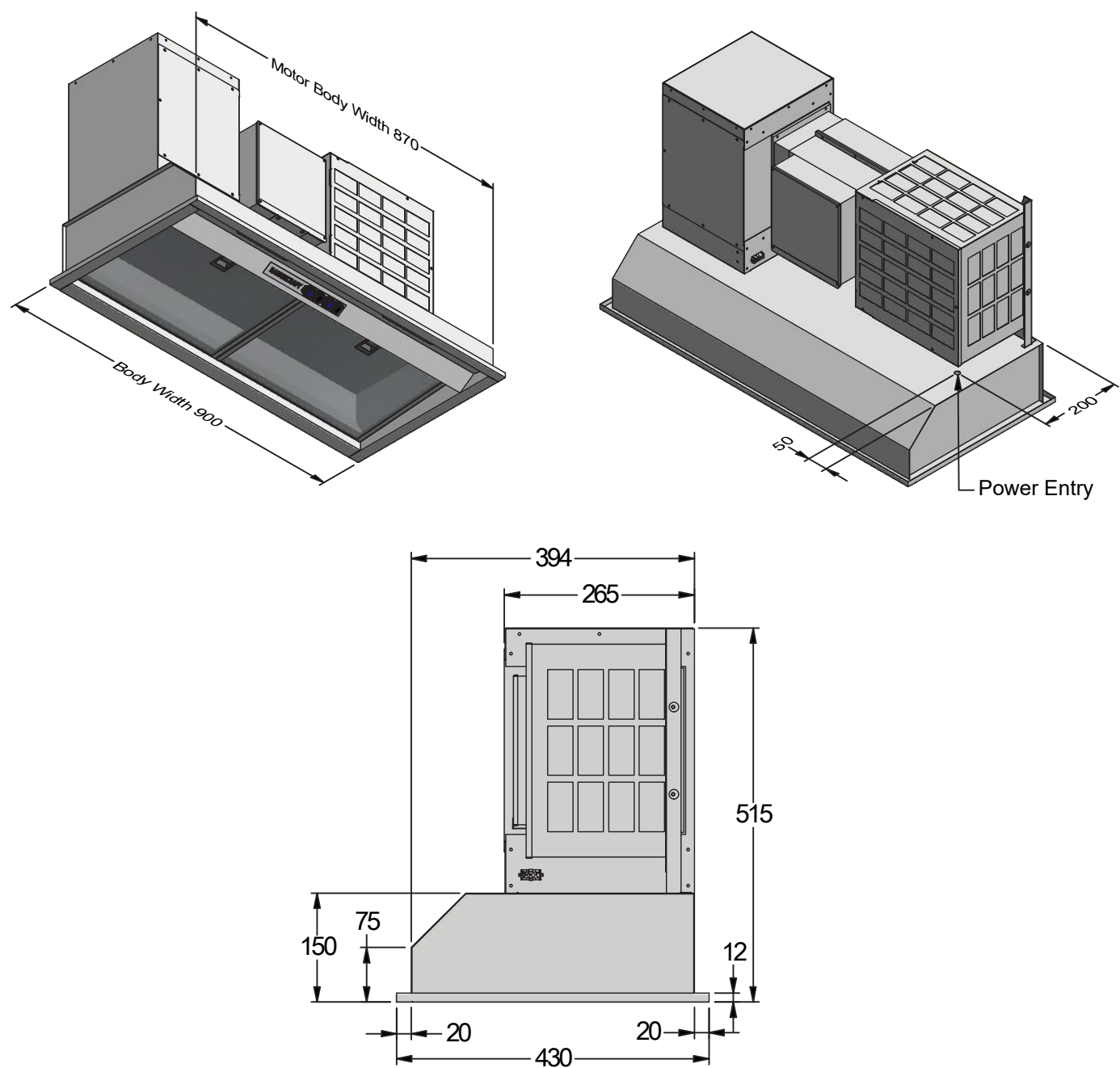
From Condari P/L the future is already here for high rise apartments and complex home kitchens.



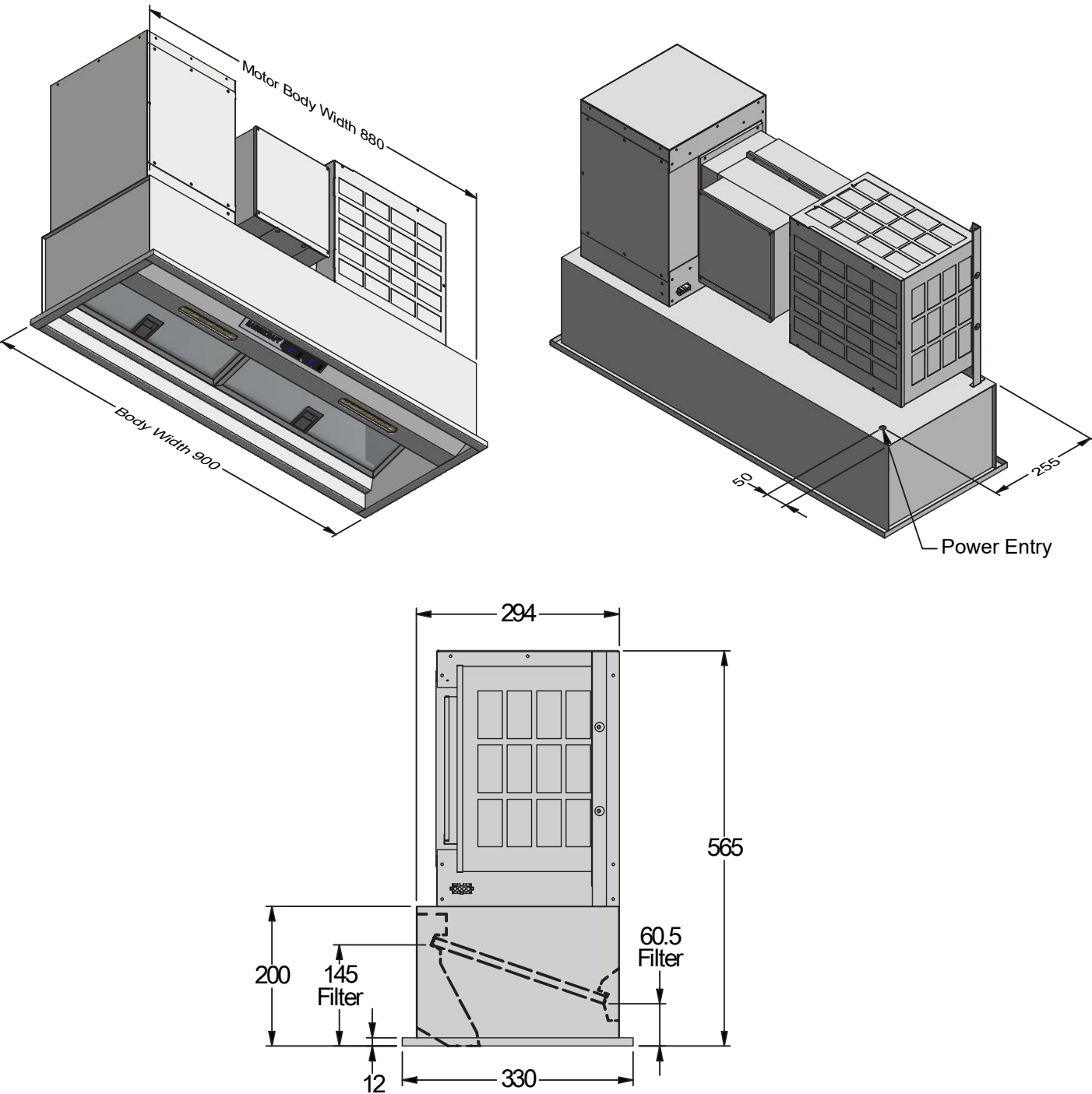




Model	RPN 90L-1	Model	RPN 90L-1
Body Width	900mm	Filter Size	407mm x 177mm
Motor Box / Flue Width	836	Conversion Top/Back Back/Top	No
Motor Qty	1	Electrical Connection	10 Amp Lead
LED Light	Cool	Minimum Height	N/A
Nightlight	Yes	Maximum Height	N/A
Light Qty	2	Powderkote®	N/A
Light Centres	407mm	All-Thread Fixing Centres	N/A
Filter Qty	2	Corner Type	Square

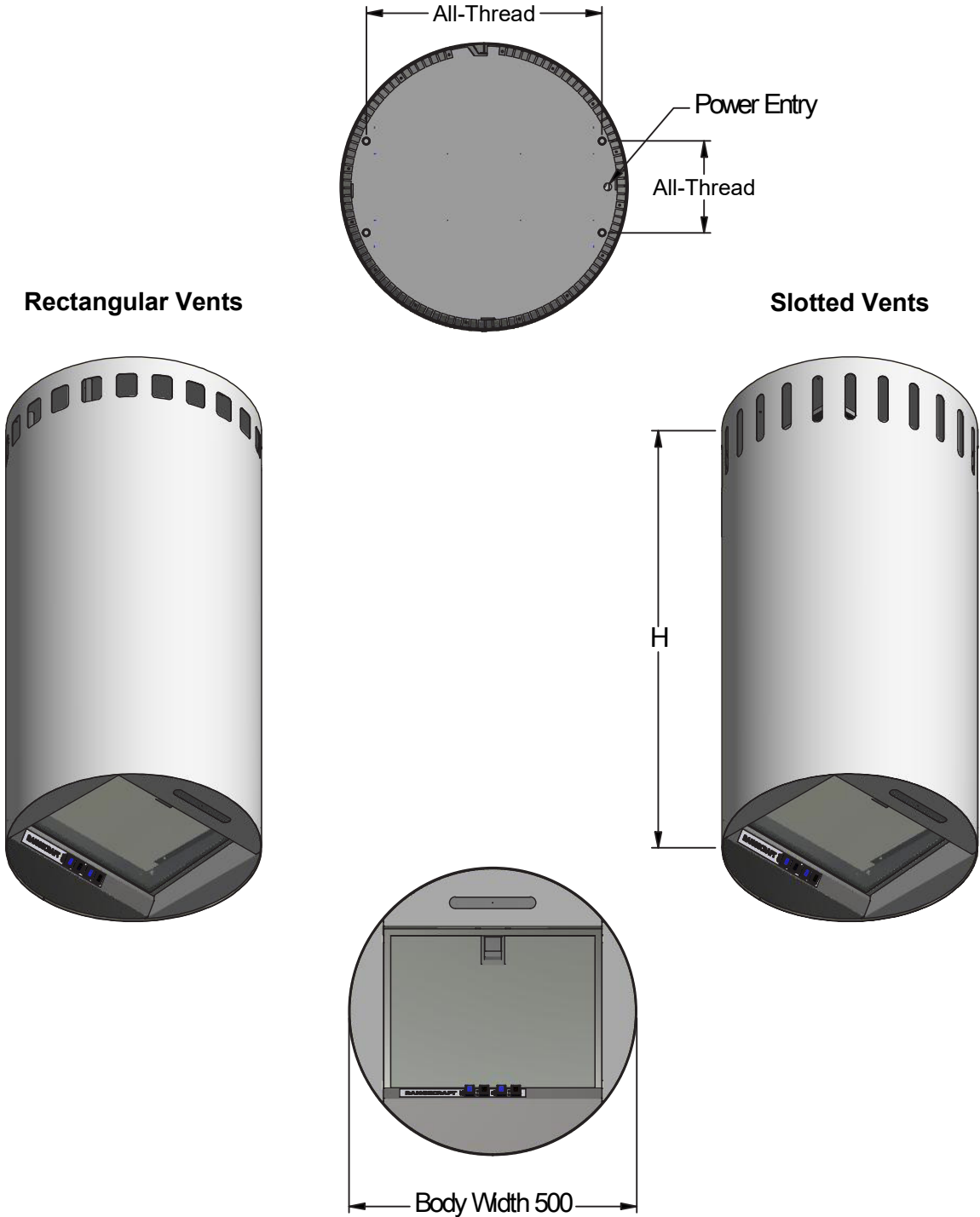


Model	RPL 90L-1	Model	RPL 90L-1
Body Width	900mm	Filter Size	422mm x 290mm
Motor Box / Flue Width	870mm	Conversion Top/Back Back/Top	No
Motor Qty	1	Electrical Connection	10 Amp Lead
LED Light	Cool	Minimum Height	N/A
Nightlight	Yes	Maximum Height	N/A
Light Qty	2	Powderkote®	N/A
Light Centres	424mm	All-Thread Fixing Centres	N/A
Filter Qty	2	Corner Type	Square

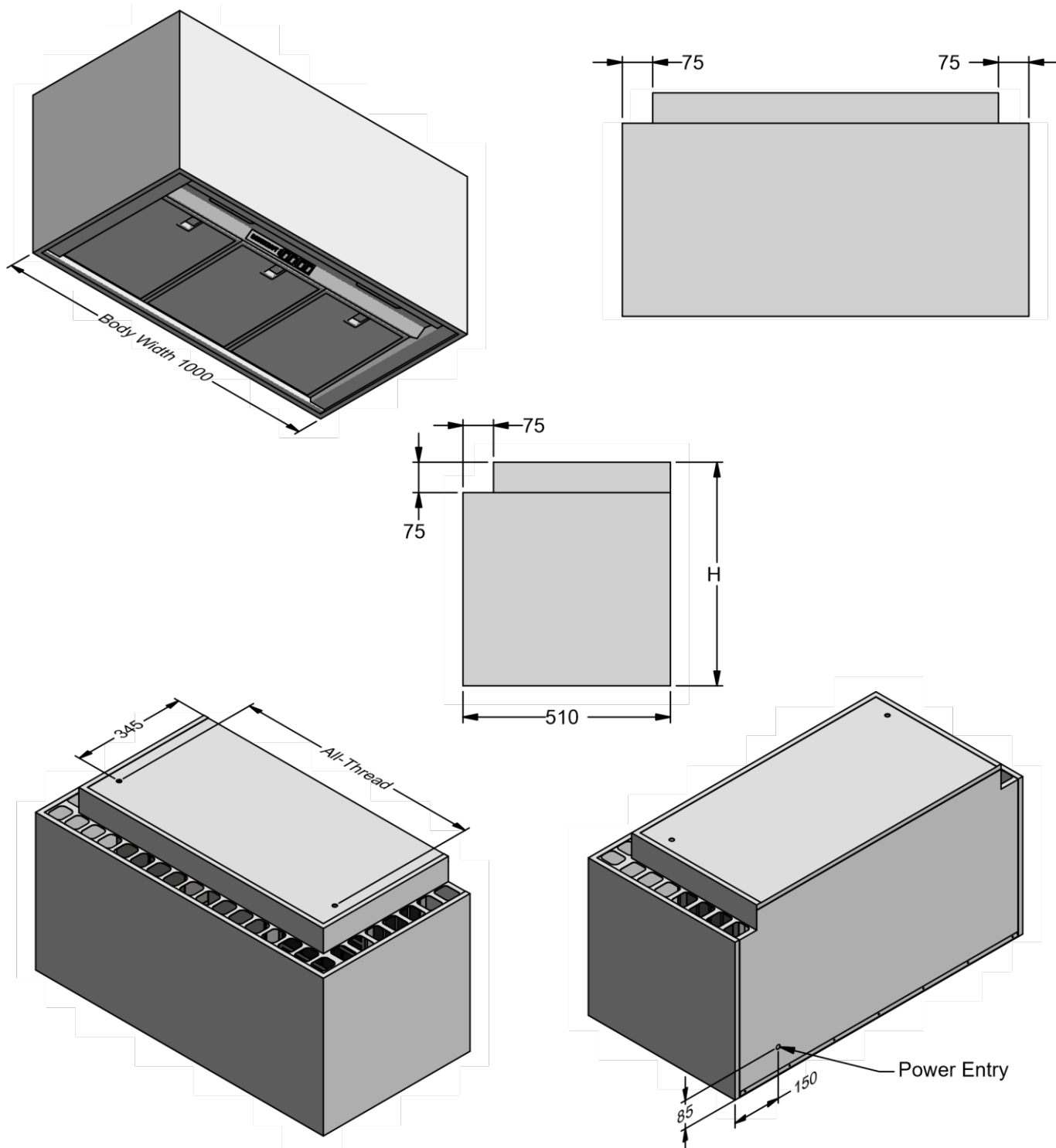


Model	RPW 90L-1	Model	RPW 90L-1
Body Width	900mm	Filter Size	429mm x 260mm
Motor Box / Flue Width	880mm	Conversion Top/Back Back/Top	No
Motor Qty	1	Electrical Connection	10 Amp Lead
LED Light	Cool	Minimum Height	N/A
Nightlight	Yes	Maximum Height	N/A
Light Qty	2	Powderkote®	N/A
Light Centres	430mm	All-Thread Fixing Centres	N/A
Filter Qty	2	Corner Type	Square





Model	RPD 50L-1	Model	RPD 50L-1
Body Width	500mm	Filter Size	379mm x 290mm
Motor Box / Flue Width	N/A	Conversion Top/Back Back/Top	No
Motor Qty	1	Electrical Connection	10 Amp Lead
LED Light	Cool	Minimum Height	1000
Nightlight	Yes	Maximum Height	1500
Light Qty	1	Powderkote®	Yes
Light Centres	Centre	All-Thread Fixing Centres	410mm x 160mm
Filter Qty	1	Corner Type	N/A

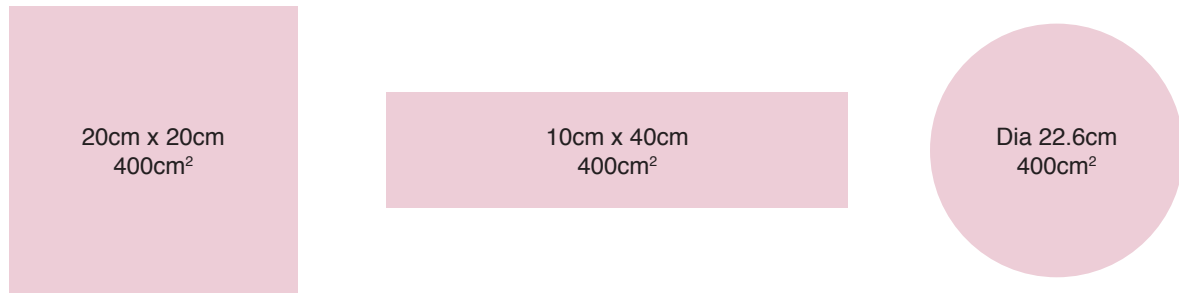


Model	RPB 100L-1	Model	RPB 100L-1
Body Width	1000mm	Filter Size	290mm x 355mm
Motor Box / Flue Width	N/A	Conversion Top/Back Back/Top	No
Motor Qty	1	Electrical Connection	Junction Box
LED Light	Cool	Minimum Height	550
Nightlight	Yes	Maximum Height	1450
Light Qty	2	Powderkote®	Yes
Light Centres	510mm	All-Thread Fixing Centres	750mm
Filter Qty	3	Corner Type	Square

## Rangecraft Rangehood Return Air Opening

---

The Cabinet/Bulkhead that houses the Plasma Unit of the Rangecraft Rangehood must have an opening in it to allow air to recirculate back into the room. This opening must have an unobstructed minimum area of 400cm<sup>2</sup>. For example, this opening may be 20cm x 20cm or 16cm x 25cm or 10cm x 40cm for each Plasma unit installed. This opening may be on the top, front or side of the cabinet, it may be orientated vertically or horizontally. The return air opening must be no more than 6m away from the Rangehood location and vent into the same room. The opening must not be made in the bottom of an overhead cabinet.



Please note 400cm<sup>2</sup> is the minimum opening requirement, Condari advises that the return air opening should be as large as practically possible for the application, to reduce the possibility of air noise from the air returning to the kitchen. The return air opening must be placed in a location that does not allow end user access to the Plasma Unit or Rangehood.

## Maintaining your Plasma-Norm

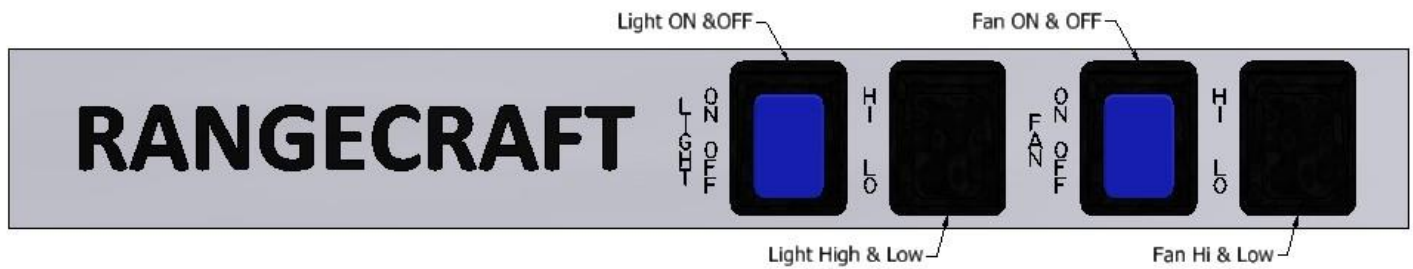


## Rangecraft servicing should only be carried out by qualified persons

The Carbon Filter should be replaced every 5 years. If you notice any lingering odours this could indicate that the Carbon filter needs replacing. Please contact our Service Team to organise a service call to replace the Carbon Filter.



## Operating Details



As part of the normal operation of the Plasma Filter in your Rangecraft Rangehood it is recommended to leave the Rangehood running for approximately 20 minutes after cooking to allow the reactivation of the carbon inside the Plasma Filter.

## Rangehood Cleaning

Condari Rangehoods are made from stainless steel, either Type 304 or Type 316.

\*Type 304 is classified as 18/8 stainless steel. This stainless steel gets its protective coating from the chromium oxidising in the air to form a protective surface of chromium oxide. This can be attacked by different substances, such as salt water or sea air. The stainless steel can start to show pit marks which are referred to in the industry as tea staining. The way to overcome this is to clean the stainless steel with warm soapy water and then polish it with a cloth so that the chromium will oxidise again.

Stainless steel oil can also be used to further protect the finish.

## Filter Cleaning

For the best results, please clean filters regularly. Condari recommends cleaning filters once per month, or immediately after heavy use.

You can do this by hand washing in warm soapy water, or by placing filters in the top rack of the dishwasher using a detergent of pH 8 or less.

Note: Washing the filters in the dishwasher may cause discolouration of the filters.

We recommend washing filters in the dishwasher without detergent.

Ensure the filters are completely dry before placing them back.

Do not operate the rangehood without the filters installed.

Condari does not recommend the use of corrosive, caustic or acidic products, particularly industrial or citric products.

Condari has experienced problems with many of the dishwashing detergents now on the market.

Particularly with the tablet type detergents as many come from overseas, which are made for a hard water environment. We have found that these detergents have a deleterious effect on the filters and the result is that the filters last for about 50 to 60 washes.

This is equivalent to about 5 to 6 years life.



Rangecraft  
Plasma shown  
inside a cupboard.







Head office VIC

T 03 9482 7088      F 03 9482 7011

Email: [sales@qasair.com.au](mailto:sales@qasair.com.au)

NSW / ACT

T 02 9316 4599      F 02 9316 9299

Email: [salesnsw@qasair.com.au](mailto:salesnsw@qasair.com.au)

QLD / NT

T 07 3423 3503      F 07 3282 9122

Email: [salesqld@qasair.com.au](mailto:salesqld@qasair.com.au)

SA

T 1300 360 563      F 03 9482 7011

Email: [salessa@qasair.com.au](mailto:salessa@qasair.com.au)

TAS

T 03 9482 7088      F 03 9482 7011

Email: [sales@qasair.com.au](mailto:sales@qasair.com.au)

WA

T 08 9242 5387      F 08 9201 0887

Email: [saleswa@qasair.com.au](mailto:saleswa@qasair.com.au)

New Zealand - Kouzina Appliances

T +64 9 377 7822      F +64 9 377 7824

Email: [sales@kouzina.co.nz](mailto:sales@kouzina.co.nz)

Singapore - Eldric Marketing

T +65 6339 1188      F +65 6743 0202

Email: [enquiry@eldric.sg](mailto:enquiry@eldric.sg)

CONDARI Rangehoods made in Ringwood 3134

CONDARI P/L Reserves the right to change specification without notice.

plasmaNorm® is a registered trade mark of Airtec Competence GmbH, Germany.