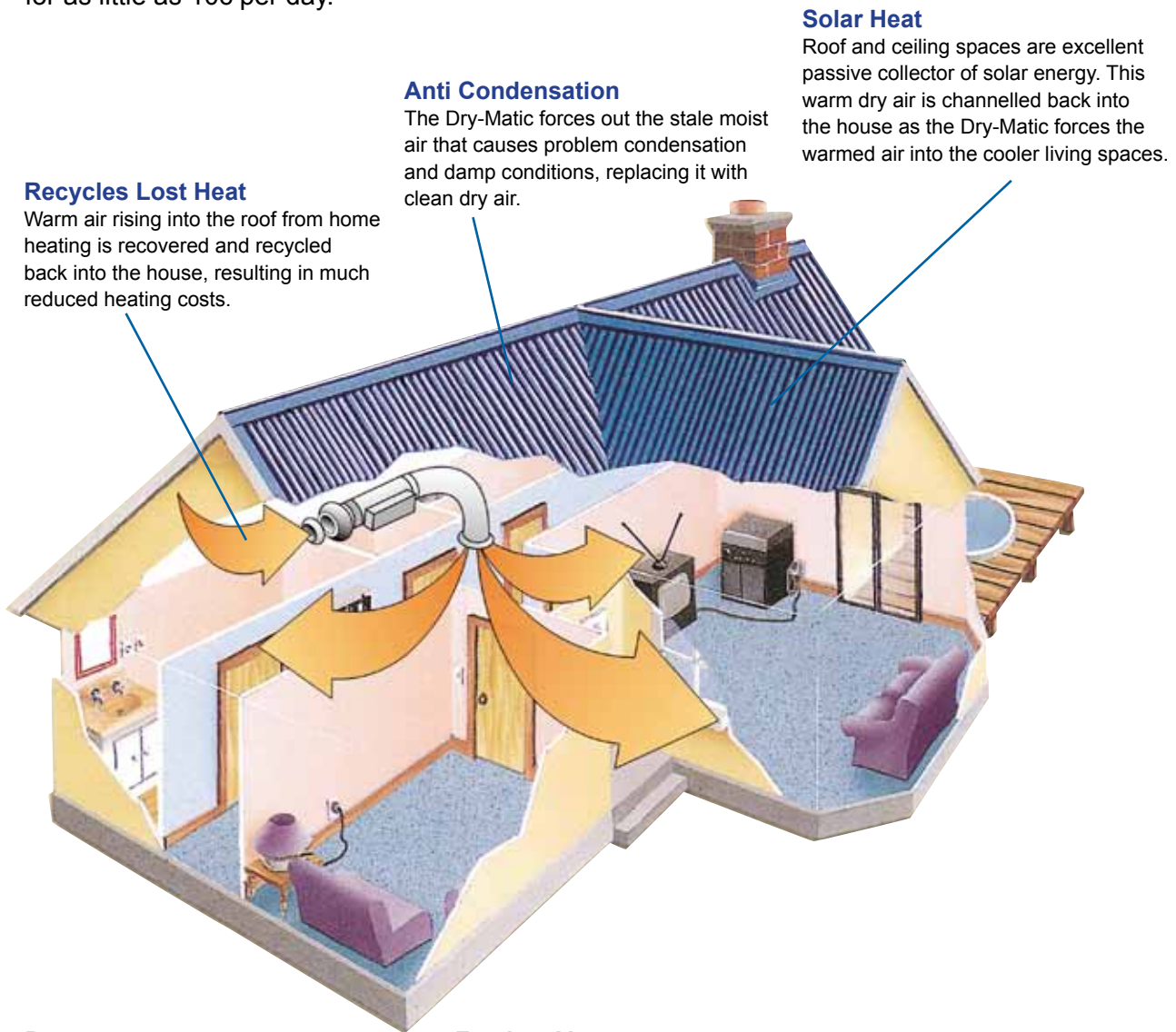


**Is Condensation Driving You Up the Wall?**

Create a dry healthy home with Dry-Matic, installed into your attic space to provide continuous, filtered fresh air to your whole house, for as little as 10c per day.\*



**Recycles Lost Heat**

Warm air rising into the roof from home heating is recovered and recycled back into the house, resulting in much reduced heating costs.

**Anti Condensation**

The Dry-Matic forces out the stale moist air that causes problem condensation and damp conditions, replacing it with clean dry air.

**Solar Heat**

Roof and ceiling spaces are excellent passive collector of solar energy. This warm dry air is channelled back into the house as the Dry-Matic forces the warmed air into the cooler living spaces.

**Protects**

Protects valuable furnishings, ceilings, windows and household contents from costly damage and eliminates damp bedding.

**Simple**

The modular system is designed for easy installation into new or existing homes.

**Fully Automatic**

Super quiet operation for 24 hour control with minimal disturbance.

**Allergy Relief**

Dry-Matic greatly reduces the concentration of airborne dust mites and allergens which may provide real relief to Asthma sufferers.

**Fresher Air**

The positive pressure created by the Dry-Matic significantly reduces the concentrations of outgassing from new furniture and new house construction.

**Powerful**

One Dry-Matic unit ventilates homes to a maximum of 275sqm (3000 sq.ft) and provides even heat distribution from a single or multi vent supply.

**Secure**

Windows and exterior doors remain closed while the Dry-Matic circulates fresh, dry air around your whole house.

See also Price Catalogue pp69b-69c

\* Based on Model DM01D

Continued on next page

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**Dry-Matic Systems**

Dry-Matic Systems	
<i>Dry-Matic is available in a range of heated and unheated models.</i>	
Model #	Description
DM01B	Semi-Automatic Model "Landlords Special" Attic mounted controls. Fan Hi/Lo & Overtemp off Modes.
DM01D	Automatic Model c/w Digital Hall Controller "Suited to well heated homes" Heat Recover/Anti-con/Auto Off Modes. System Status display. Attic/Hall Temperature display.
DM07B	Semi-Automatic Heated (750W) Model. "Less sophisticated - set & forget" Attic mounted controls. Heater Stat & Overtemp off Modes.
DM07D	Automatic Heated (750W) Model c/w Digital Hall Controller "Most Popular Model" Heat Recovery/Anti-Con/Heat/Auto off Modes. System Status display. Attic/Hall Temperature display.
DM15D	Automatic Heated (1500W) Model c/w Digital Hall Controller "Heats & Dehumidifies" Heat Recovery/Anti-Con/Heat-Auto off Modes. System Status display. Attic/Hall Temperature display.



Digital controller

- All above systems include a single outlet diffuser (sufficient for houses up to 275sqm\*).  
\* Subject to environmental conditions and design of house - talk to us for advice.
- All units come with inlet pre-filter (+spare), centrifugal fan, extended surface carbon filter in filter box, attic control module, diffuser, mounting hooks, resilient suspension cords, flexible duct, duct tape, hex screws, guarantee form, installation instructions and operating instructions.

**Dry-Matic Accessories**

Replacement filter bags & carbon filters for Dry-Matics	
Code	Description
DMFS	Replacement Filter Bag (washable)
DMFC	Filter - Supply, Carbon box type (for new hinged filter box from 2010)
DMCF	Replacement Carbon Filter (for old style filter box)
DMFB	Replacement Filter Box

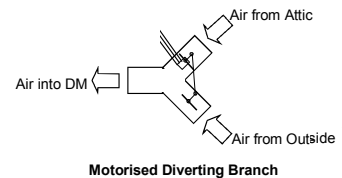


**Cleaning the filters**

Although the Dry-Matic is designed to run continuously for years, the filters do need cleaning every 8 months or so for optimal performance (clean at least yearly).  
When the digital hall controller display starts flashing - this indicates it is time to clean the filters.  
The white filter bag can be machine washed on gentle cycle or hand washed - vacuum first to remove excess dust. Alternatively replace with a new one.  
The carbon filter inside the filter box should be checked - if it is showing signs of dust and dirt, it can be vacuumed clean or replaced. It is recommended to clean or replace every second year.

**Dry-Matic Ventilation Kit**

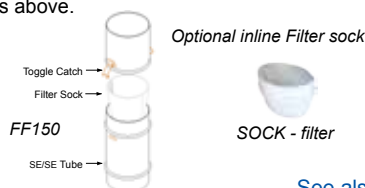
Dry-Matic Ventilation Kit (Optional Extra for Dry-Matics)	
Code	Description
DMVK	Diverting branch inlet from outside air (includes FESIT filter)



The Dry-Matic Summer Ventilation Kit is an optional add-on for Digital Dry-Matics. It can be added during installation or several years after installation. The digital hall controller can be commissioned to control the motorised diverting branch damper, directing air intake from the cooler outside air for summer months. Again, the air intake filter, and the FESIT inline 'Sock' will need cleaning as above.



DMVK Summer Vent Kit  
Can divert intake from attic to cooler outside air



Continued on next page

See also Price Catalogue pp69b-69c

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## Why the Need to Ventilate Your Home?

These days as we try to be more energy conscious we build for ourselves tighter, better insulated, and sometimes quite unbreathable homes.

Normal family life generates considerable moisture from such activities as cooking - 3 litres per day, showers and baths - 1.5 litres per day, body respiration and perspiration - 1-2 litres per day per person, etc. (BRANZ). With this level of moisture generation combined with current 'tight' home construction, relative humidity levels (airborne moisture) increase dramatically. This causes problem condensation and produces a home that ultimately becomes harder to heat and makes insulation less effective.

### The Facts

Condensation, mildew and dust mites thrive under moist conditions. In fact, one in seven New Zealand homes have damp wall linings caused by surface condensation, and in 46%, mildew occurs (BRANZ). To effectively remove moisture from the home an active ventilation method should be considered.

BRANZ research shows that moisture is best removed by continuous ventilation and that the interior air needs changing constantly at a controlled rate to prevent moisture build up. The benefits being dryer, fresher, healthier homes.

### Dry-Matic

To provide a cost effective solution to condensation problems, Smooth-Air have designed, developed and manufactured the Dry-Matic range in New Zealand for New Zealand conditions.

Dry-Matic Ventilation Systems are ideal for

- Existing Homes
- New Homes
- Rental Accommodation

### Dry-Matic Selection

This includes a free no obligation quote, which may include an on-site assessment of your home in order to customise the most appropriate Dry-Matic System available.

### Dry-Matic Installation

Installation by a fully trained installer typically takes 1-4 hours depending on property construction. A certificate of compliance will be provided.

### Dry-Matic Maintenance and Running Cost

The Dry-Matic is very inexpensive to run. Running costs can be as little as 10c a day based on Model DM01C (approximately \$36.50 a year depending on your electricity retailer). The special odour-reducing carbon filters, fitted as standard to each unit, will require replacement approximately every 12 months, depending on your home environment. The white filter bag can be washed on gentle cycle or hand washed.

### Payment, Finance and Warranty

Payment can be made by cash, cheque or credit card. Finance may be available please discuss with your Dry-Matic Dealer. Equipment is subject to a full 3 Year Warranty.

### Dry-Matic Automatic Controller

The automatic controller provides Heat Recovery, Anti-condensation and Auxiliary Heat Modes (for heated models) based on Attic and House temperatures relative to a comfort setpoint.



Ceiling Diffuser



Standard Unit DM01C



Dry-Matic Heated Unit DM07C

*Dry-Matic is available in a range of heated and unheated models. All come with acoustic duct, special ceiling diffuser, spare filter and full instructions.*



Digital controller

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next page

See also Price Catalogue pp69b-69c

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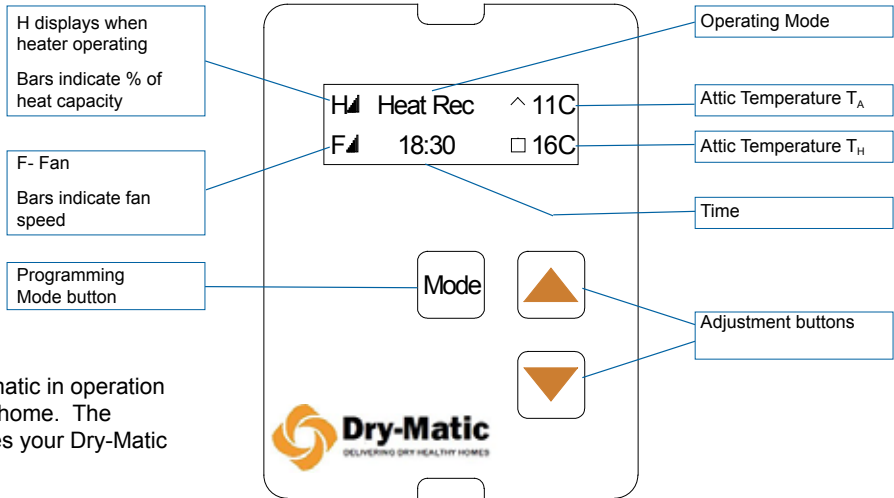
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## Dry-Matic Hall Controller Operating Instructions

**T<sub>A</sub>** - Attic temperature ( ^ shown in operating display)  
**T<sub>R</sub>** - Inside reference temperature  
**T<sub>H</sub>** - House temperature ( □ shown in operating display)



Your Dry-Matic is essentially fully automatic in operation once set up/commissioned to suit your home. The commissioning set up process fine tunes your Dry-Matic in all or some of the following Modes:

- **Anti Condensation Mode** - when the attic temperature is cooler than the house temperature, the Fan operates at trickle speed to provide background ventilation 24/7.
- **Heat Recovery Mode** - when attic temperature is warmer than house temperature and house temp is less than “Inside reference temperature” of 18°C\*, the fan speed increases to warm the house (speed increases incrementally as the temperature difference between house and attic increases to maximum fan speed at 3°C\*\* difference).
- **Heater Mode (heated models only)** - if the attic is cold, <12°C\*\* and the house temp is below the reference temp of 18°C\*, then the heater can operate to temper the incoming fresh air (heat is proportional to the temperature difference over 5°C\*\*). The heater mode has the following features:
  - **A heating time clock feature (heated models only)** accessible from the **User Menu**, that allows the heater to be turned off / run (as required by thermostat) for programmed hours\*\* (eg. 7pm to 7am), / or continuously, or off. This allows the user to operate the heater overnight, or all the time, or to shut heater down while away for holidays, thereby providing a control of energy usage.
  - To get to **User Menu**: press mode and up arrow together while “Entering Menu” appears, hold buttons until “User Setup” shows. Use the up arrow to change the options, Mode button to select.
    - Heater enabled Y/N - if N, Heater will not operate
    - Heater enabled Y/N - if Y, Options will show next:
      - Heater Continuous - if Y, Heater always enabled
      - Heater Continuous - if N, Heater enabled at night
    - NB. Night operating times can be changed in the ‘Commissioning Menu’ on pp83h-i
- **Cool Recovery Mode** \*\* (default: disabled) - when house is hot (above ref temp) and attic temp is less than 18°C\* , the fan speed increases (speed is proportional over the temperature difference to 3°C\*\*) to cool the house down. This will not operate if attic temp is below 12°C.
- **Auto Summer Shutdown** - when house is hot and attic is very hot >27°C\*\*, the system shuts down until the attic temp decreases again.
- **Auto Winter Shutdown** \*\* (default: disabled) - If attic temp is less than 2°C\*\*, the system shuts down until attic temp increases again.
- **Filter Timer** - This provides an alarm (flashing display) when fan has operated for 240 days\*\*, indicating that the filter should be cleaned and/or replaced (default: enabled). Can be reset in User Menu\*.
- **Summer Vent Mode (if ‘Vent Kit’ fitted)** - The fan can be operated at full speed and the duct diverting damper set to draw air from outside (cool side of the house) for 2, 4, 8, 12, 24hrs or ‘off’ by pressing the up arrow while controller is in normal operating mode (not in any menu) (default: not fitted\*\*).
- **Time-clock** - adjustment is accessed by pressing and holding the down arrow until ‘Set Clock’ appears, after a moment the time appears, which can be adjusted up or down using the up arrow to wind back and the down arrow to move forwards. Press the Mode button to ‘enter’ the new setting.

Press and hold Mode button and up arrow for 5 seconds until “User Setup” appears  
 Use up arrow to change options  
 Use Mode button to select option

Press and hold down arrow for 5 seconds until “Set Clock” appears

\* Reference Temperature (default 18°C) is set in the commissioning menu

\*\* Default Setting – can be adjusted in the commissioning menu.

Please note: the above modes need to be set by the installing contractor.

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## Dry-Matic Installation Instructions

It is recommended these units are installed by a preferred installer, please contact us for a list in your area. Installation instructions are a guide only.  
All electrical connections are subject to NZ law.

### Pre-Installation checks

Before starting the installation, check the site & establish the best position/s of the following components:

**Diffuser** For most small to medium sized homes a single diffuser is usually all that is necessary. It is recommended this be installed into a hallway that is common to most rooms in the home. Installation of the main diffuser into the living / dining area is not recommended.

**Unit** The Unit comprises of the Fan, Heater (if supplied) and Filter box. It is important to install the Unit so that it is as high as possible in the roof space, this is to maximize the benefit of any thermal gain. It also keeps the fan inlet air above dust which may come from the roof insulation. **IMPORTANT:** The unit must be installed in a perfectly horizontal position to ensure correct heater operation.

**Attic Controller** Is to be installed at the same level as the inlet to the fan, so as to best measure the inlet air condition (temperature) of the unit. The attic controller **must be installed vertically, with the pack glands downwards**. The attic controller can be fixed to the timber framing in the roof space.

**Hall Controller** Hall controller is to be installed in the house at least 3m from the diffuser but in the same area, approx. 1.5m above the floor. The hall controller should not be installed on an external wall, in a living / dining area or in the immediate vicinity of a heater or heat pump outlet. This is so that the Hall Controller's built in temperature sensor is not affected by outside air temperature or heating, and should best measure average house temperatures.

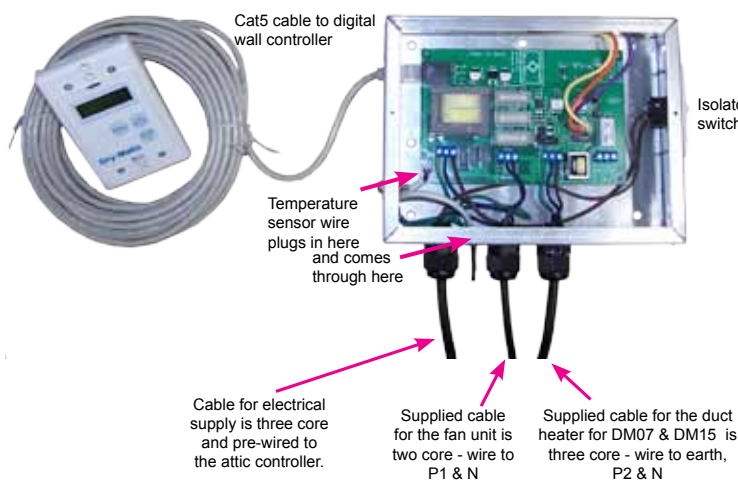
**Ducting** Installation of ducting should allow for a full stretch and a smooth sweep onto the rear of the diffuser. This will have a marked effect on the effective operation of the unit air flow & attenuation of fan noise.

### Installation Procedure

Based on the above criteria:

- 1. Fit Diffuser** Before cutting hole for diffuser, check that it will clear ceiling joists and roof structure. Use circle template to cut correct sized hole in the ceiling. Attach duct to grille, taping the centre duct sleeve to the grille spigot then separately taping the insulation/outer to the spigot. Feed ducting through the hole and clip diffuser in place using the spring clips. Ensure grille has a minimum gap of 16mm between inner disk and outer collar.
- 2. Assembly of Unit** It is suggested that this is done in a clear space on the floor.
  - FAN: Mount fan brackets to side of fan.
  - HEATER (on heated models): Fit to inlet of fan using 4 screws provided (note airflow direction for fan is shown by an arrow on the terminal cover). Ensure airflow direction arrow on heater is the same as direction on fan, ensure heater is mounted so marked top is installed upright.
  - FILTER BOX: Fit to heater (on heated models), or fit to the fan using the supplied collar, so that the hanging bracket is on the heater/fan inlet side. Ensure airflow direction arrow on filter is same as fan.
  - PRE FILTER: Fit white pre filter bag to inlet of filter box.
- 3. Pre Wiring** Using supplied flying leads, connect attic control unit to fan and heater (on heated models). Check wiring diagrams on components carefully.

For digital controller, mount attic box vertically with pack glands downwards



**4. Installing in Attic** Lift assembled unit into attic space. Fit supplied cup hooks (x2) to roof structure. Clip supplied bungies (x3) to the three mounting points on assembled unit. Lift unit into position and hook other end of bungy cords over cup hooks. Attach duct to fan outlet, taping core and insulation/outer as before. Adjust length of bungies so unit is level and tighten cable ties to lock unit into position.

**5. Mount Attic and Hall Controllers** Run supplied cat 5 patch lead to hall controller position (as illustrated), attach to hall controller and attic controller.

**6. Power Supply** Connect a power supply to attic controller isolating switch (by registered electrician).

### Commission the unit

**7. Set up the unit** using the hall controller, as per commissioning instructions pp83h-83i.

**8. Check Operation** check the unit is operating correctly, as for user operating instructions p83e.

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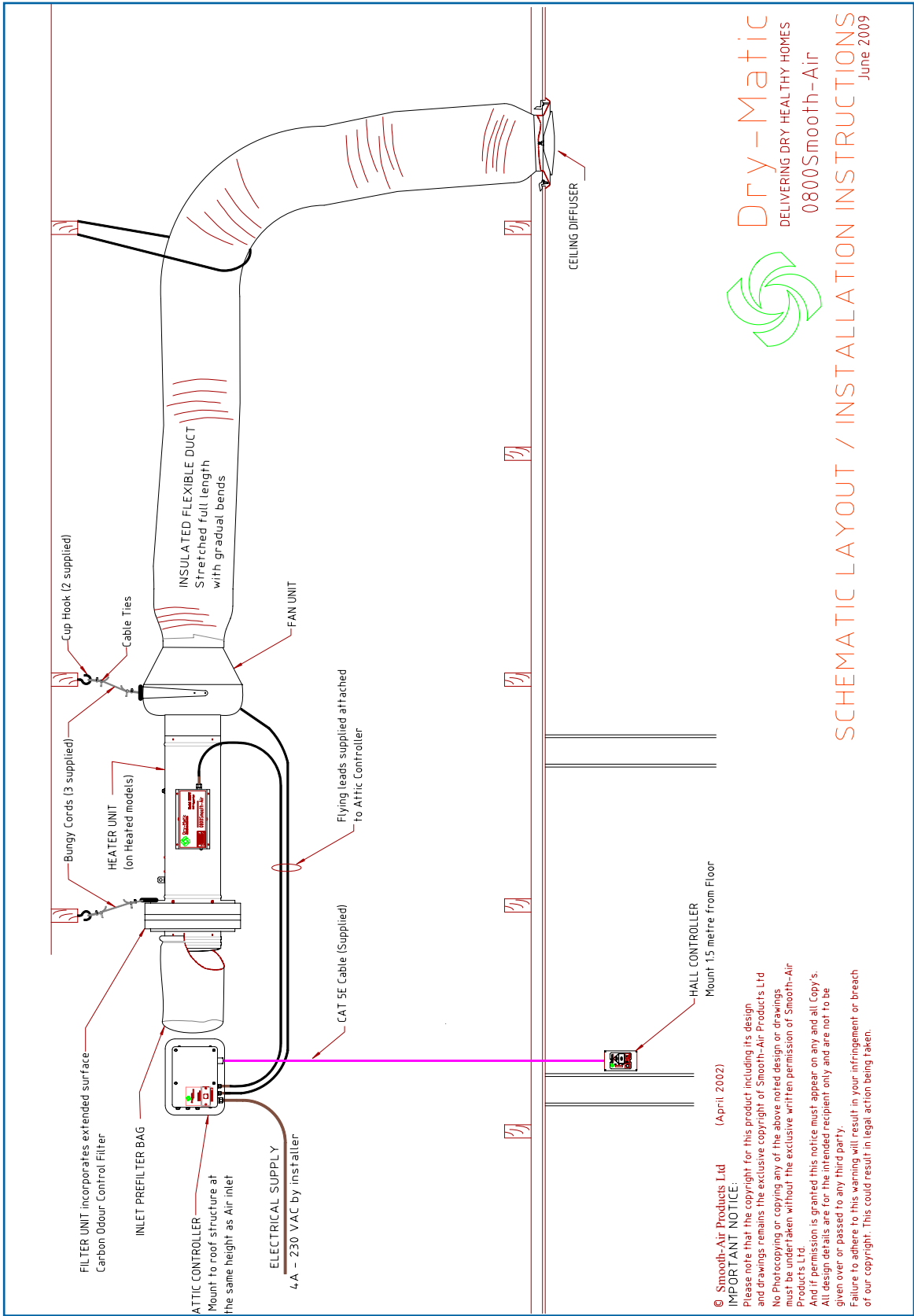
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Dry-Matic Installation Diagram



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