

Condensation

Workshop 6

How might one differentiate between Condensation being the form of damp as opposed to others such as leaks, penetrating or rising ?

- *Tends to have a 'season' – September to March/ April;*
- *Can have a 'misty' surface;*
- *Stains or streaks of water running down – particularly in bathrooms and kitchens;*
- *Damp patches with no definitive edge;*
- *Mould growth – black pin mould;*
- *Found generally behind wardrobes, external walls where air circulation is restricted and on 'colder surfaces'*
- *No sign of efflorescence, hygroscopic salts*
- *Penetration, leaks will have pattern of occurrence – rain, use of appliance eg whbasin intermittent as opposed to service pipe - continuous etc*

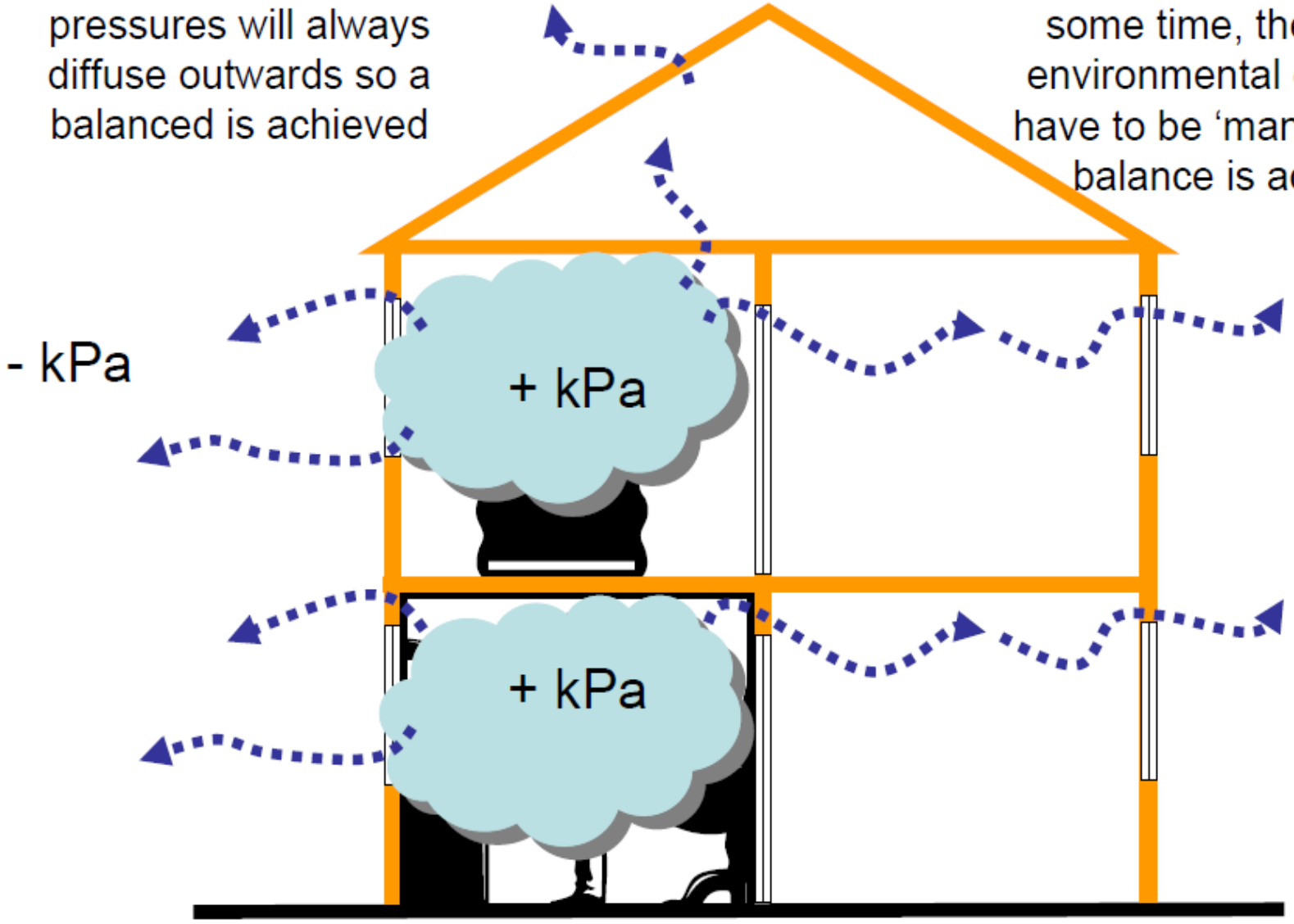
Condensation

- *Types of Condensation :-*

- *Surface Condensation*
- *Interstitial Condensation*

Higher internal vapour pressures will always diffuse outwards so a balanced is achieved

Because this may take some time, the internal environmental conditions have to be 'managed' so a balance is achieved

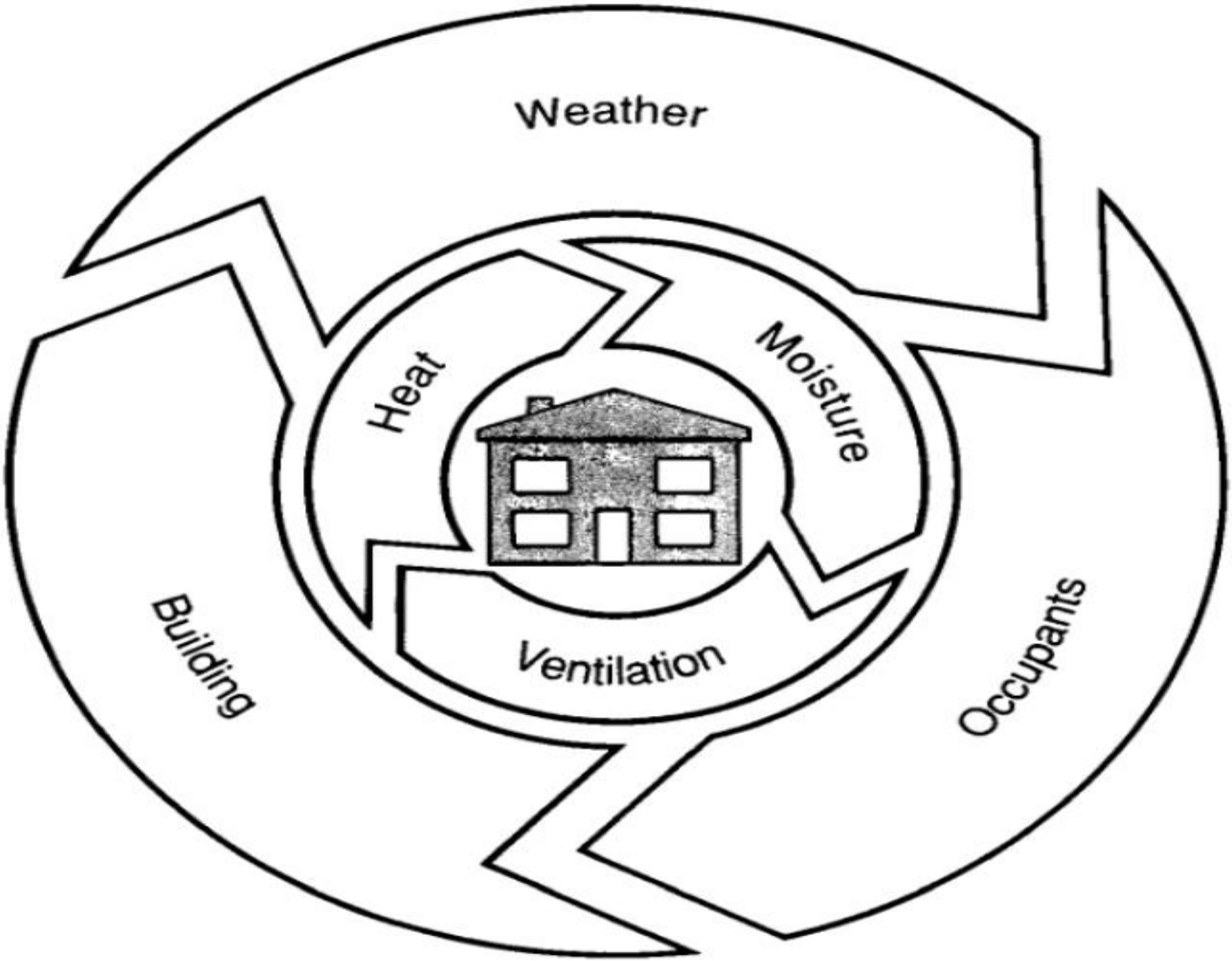


To do this effectively, the buildings have to be 'tolerant' so a range of different lifestyles can safely be accommodated

Workshop 7

Identify the factors needing to be considered when addressing the likelihood of condensation occurring in a property ?

- *The Residents – number, patterns of work, culture, lifestyle occupation, fuel poverty etc*
- *The Building*
- *Heating*
- *Insulation*
- *Ventilation*
- *Weather*
- *Orientation*
- *Moisture Movement and Absorption*


Weather
Heat
Moisture
Ventilation
Building
Occupants

SOURCES OF CONDENSATION

How much moisture is produced (in a day) by typical household activities?



Clothes washing — 1 pint



Bath and personal washing — 2 pints



Four people sleeping 8 hours — 3 pints



Parrafin heater for 5 hours — 3 pints



Two people active for 16 hours — 4 pints



Cooking by gas for 3 hours — 6 pints



Clothes drying in un-vented tumble dryer — 10 pints

Total 29 pints

Reduce the potential for condensation by producing less moisture

Hang your washing outside to dry if possible, or hang it in the bathroom with the door closed and a window slightly open or extractor fan on if one is fitted. Do not be tempted to put it on radiator or in front of a radiant fire.





- If you use a tumble dryer, make sure it is vented to the outside or that it is of the new condensing type.
- Always cook with pan lids on, and turn the heat down once the water has boiled. Only use the minimum amount of water for cooking vegetables.





- When filling your bath, run the cold water first then add the hot - it will reduce the steam by 90%, which leads to condensation.





- Try to avoid use of bottled gas heaters: they produce about 8 pints of moisture from an average-sized gas cylinder. (Your tenancy Agreement may not allow you to use this type of heater)
- Do not use your gas cooker to heat your kitchen as it produces moisture when burning gas. (You might notice your windows misting over).



How wet is Phil Parnham?

4 people asleep for 8 hours	= 1280g
4 people awake for 16 hrs	= 3520g
Cooking (gas)	= 3000g
Dish washing	= 400g
Bathing 200g x 4	= 800g
Washing clothes	= 400g
Drying clothes (on radiators)	= 6000g
Total	**= 15 400ls**

Condensation

- *Where would you expect to find Condensation ?*

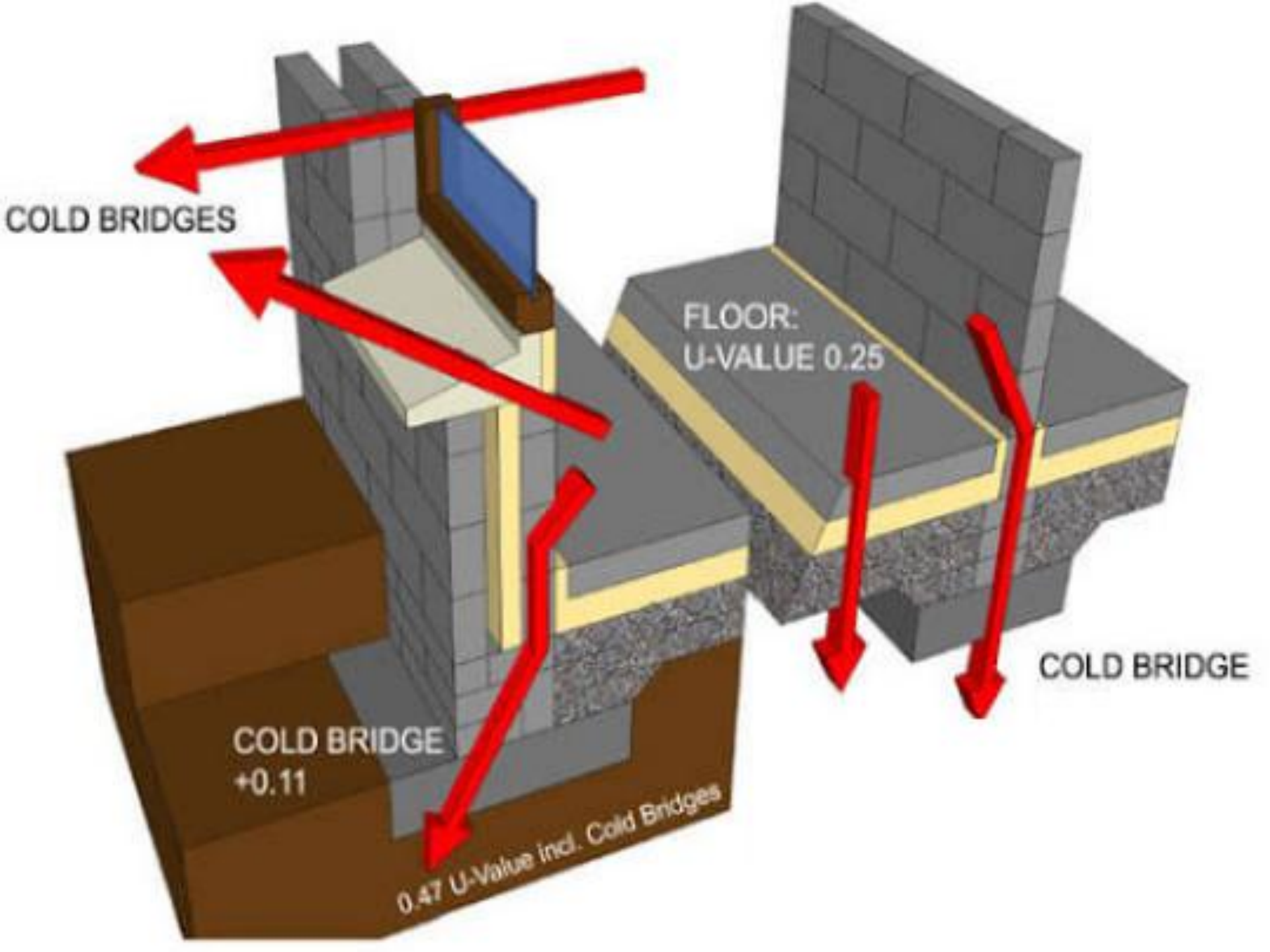


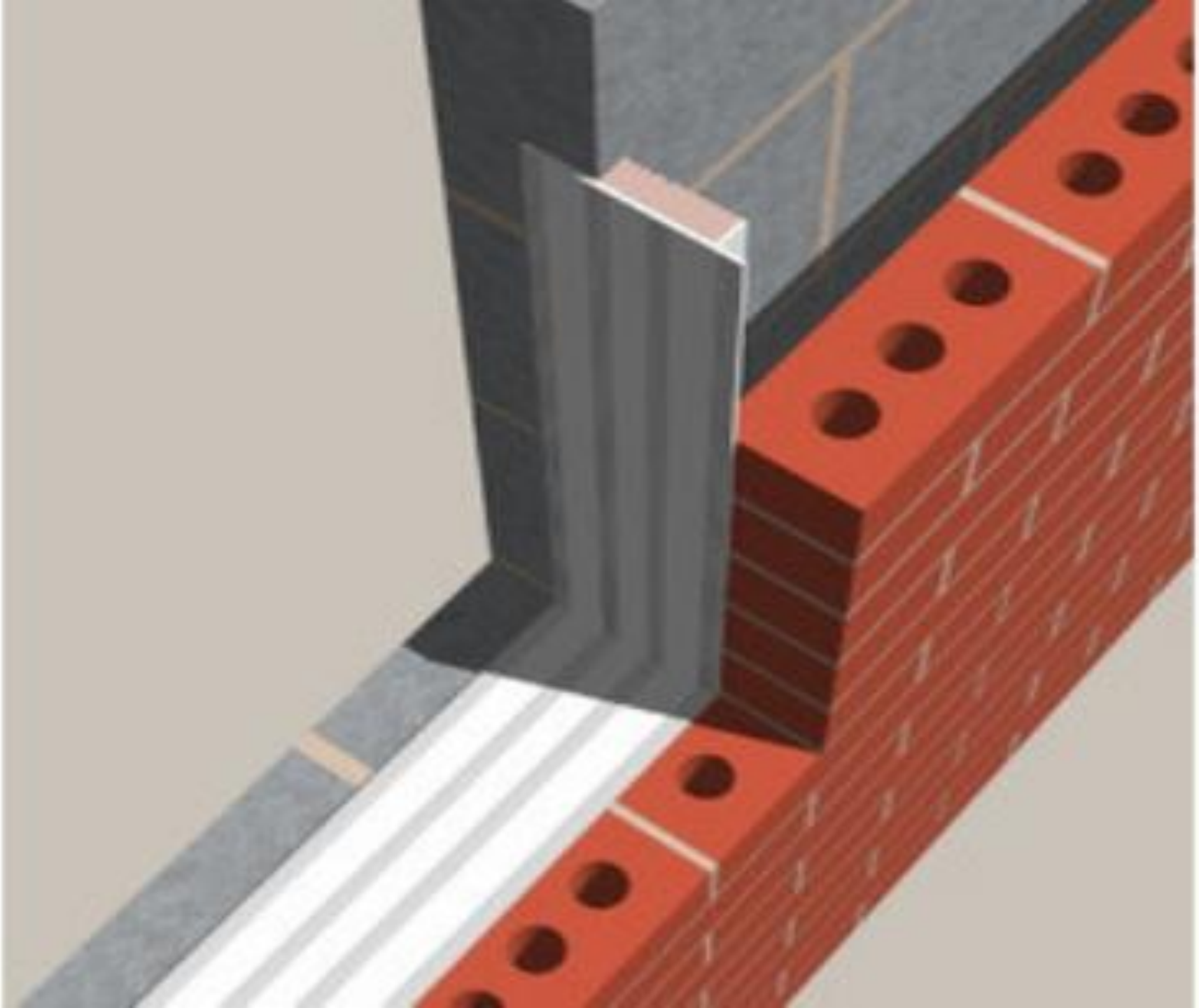
First steps against condensation

You will need to take proper steps to deal with condensation but there are some simple things you can do straight away.

- Dry your windows and windowsills every morning.
- Dry any surfaces in the kitchen or bathroom that have become wet.
- Wring out the cloth rather than drying it on a radiator.

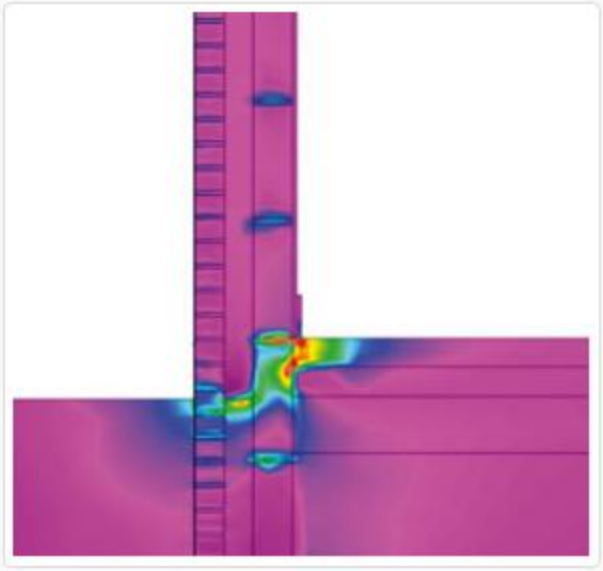



COLD BRIDGES
FLOOR:
U-VALUE 0.25
COLD BRIDGE
COLD BRIDGE
+0.11
0.47 U-Value incl. Cold Bridges

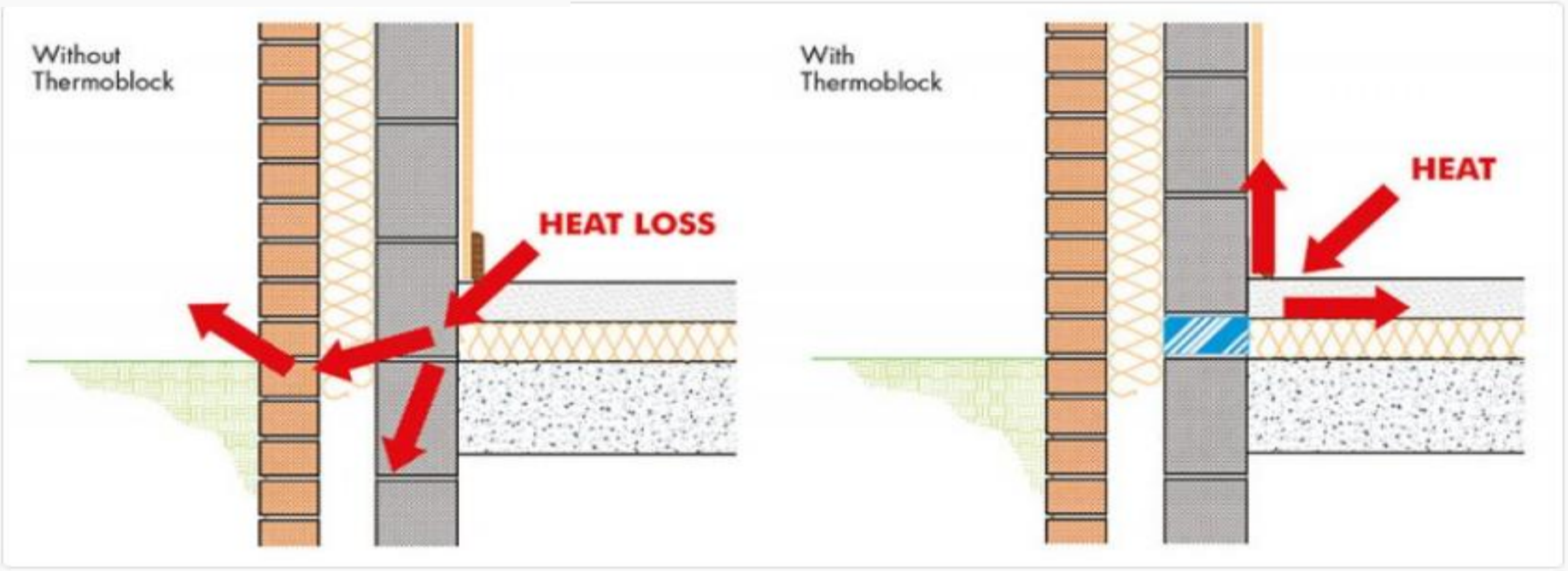



12:13 20 FEB 2017





30% potential heat loss



Marmox Thermoblock is used in masonry AND timber-framed AND steel-framed walls.

Does the patch look like any of these?







If so, the good news is that you can do something about this with a few simple steps.

This is condensation – It's caused by water in the air clinging to cold surfaces. It's the same as steamed up bus windows or your bathroom mirror after a shower or bath.

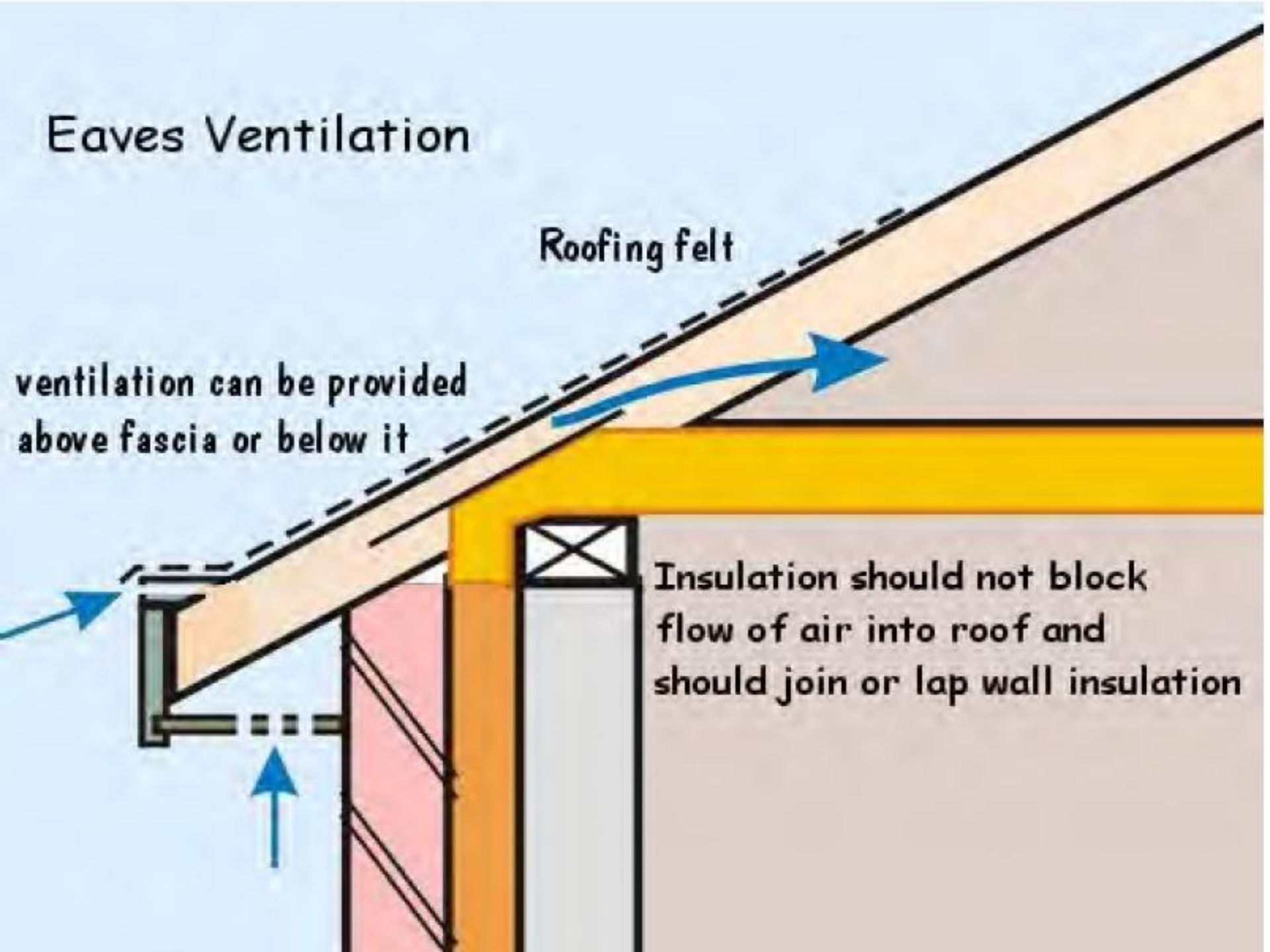
Condensation and mould growth in your home are visible signs that the air in your home is too wet.

Windows, walls, furniture and clothes are all affected.



Condensation behind a dressing table




Eaves Ventilation
Roofing felt
ventilation can be provided
above fascia or below it
Insulation should not block
flow of air into roof and
should join or lap wall insulation

We can't bring our baby home as mould could KILL him, say Gwynedd family

Osian Jones has leukaemia but is unable to come home from hospital in case he catches an infection at the house in Bangor



Workshop 9

Identify the forms of ventilation that can help prevent the likelihood of condensation forming in a dwelling ?

- *General Vents – Air Bricks/ Grilles/ Spinners*
- *Opening Window – Secure Locks*
- *Trickle Vents*
- *Extractor Fans – Pull Cord/ Timed*
- *Humidistat Fans*
- *Heat Recovery Extractor Fans*
- *Continuous Running – Background Fans*
- *Whole House Ventilation – Ducting, Sensor and Fans*
- *Positive Input Ventilation Units – PVI's – Envirovent, Flatmasters*

Trickle vents

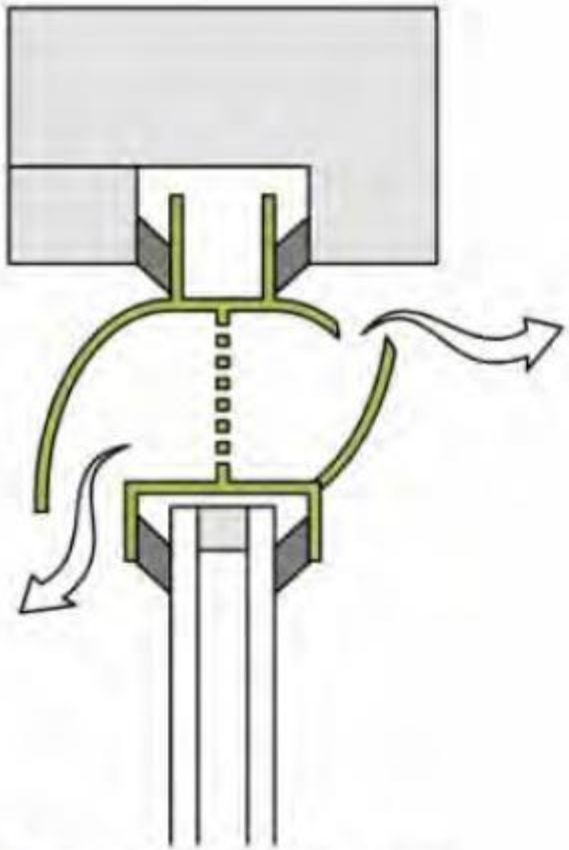
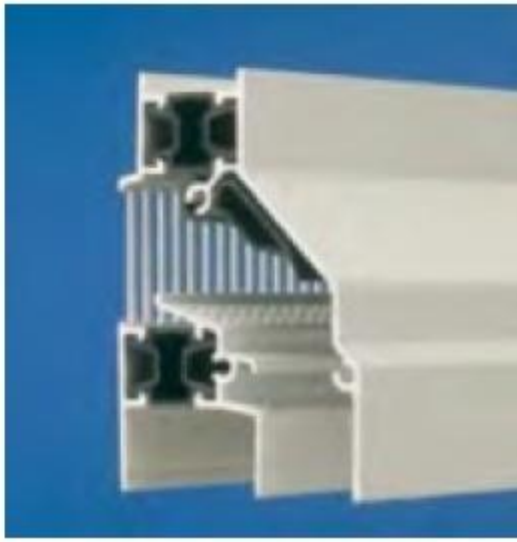


Figure 2 Glazed-in ventilator

10 000m2 per linear metre







fumiture against intemal walls, i.e. walls which have a room on both sides, rather than against outside walls.

Do not cover airbricks or other permanent ventilators. These are often strategically placed to ventilate vulnerable areas. Some ventilators may be providing vital combustion air for gas appliances. Covering these can cause the gas appliance to give off Carbon Monoxide, which is toxic and can be lethal.

Do not block permanent ventilators.

Do not draught-proof rooms where there is a fuel burning heater (e.g. gas fire) or cooker. Do not draught-proof windows in the bathroom or kitchen.

Increasing air flow with new UPVC windows



To allow ventilation without compromising security you can lock the opening part of the window on the first slot to allow ventilation of the room. Alternatively, open the trickle vents if they are installed on your windows.



envirovent

Filterless Extract Fan

WC, Bathroom + Kitchen

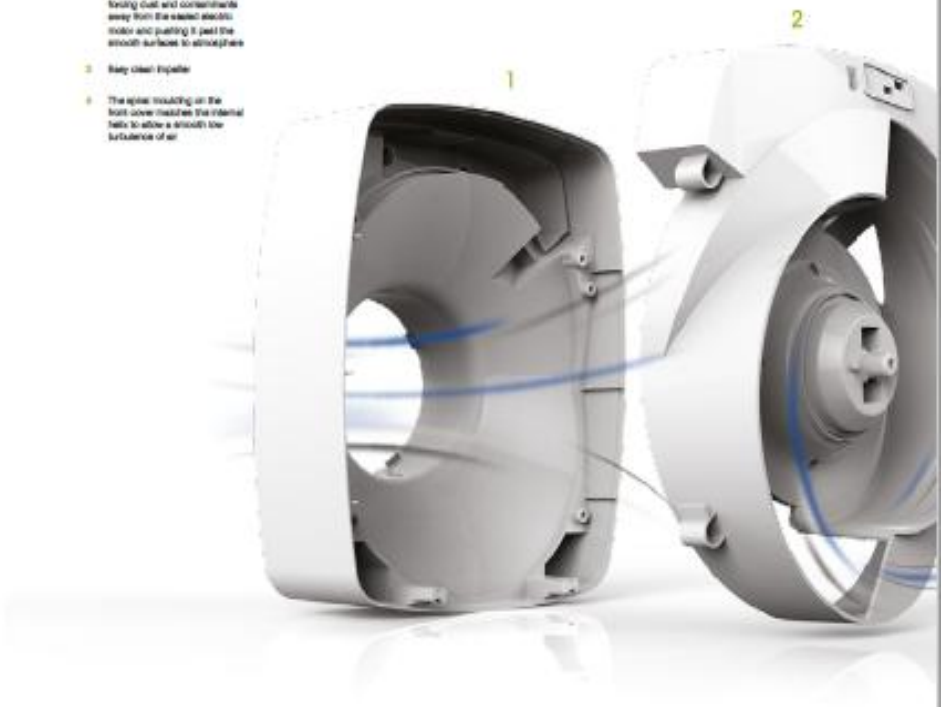
Lifetime Range*



Cyclone Separation Technology

The patented technology behind the Filterless Extract Fan

1. Basic canisters remains in-situ for the lifetime of the building
2. The unique patented helical expansion chamber enables cyclone separation to occur, forcing dust and contaminants away from the sealed electric motor and pushing it past the smooth surfaces to atmosphere
3. Easy clean impeller
4. The spiral moulding on the front cover matches the internal helix to allow a smooth low turbulence of air



Simply put, if a fan hasn't got cyclone separation then it isn't truly filterless.

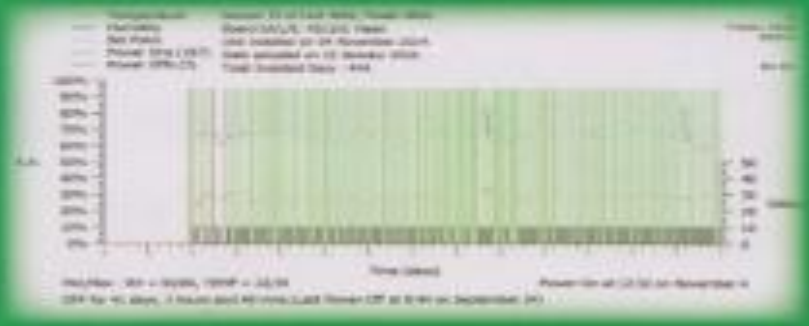


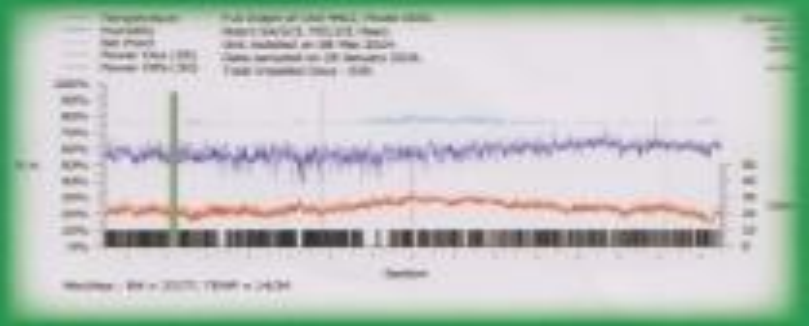
Time Elapse Meter available on Filterless Extract Fans. This records the number of hours the fan runs and thereby enables landlords to prove whether fans are being used or isolated.

DataFan *Putting You in Control*





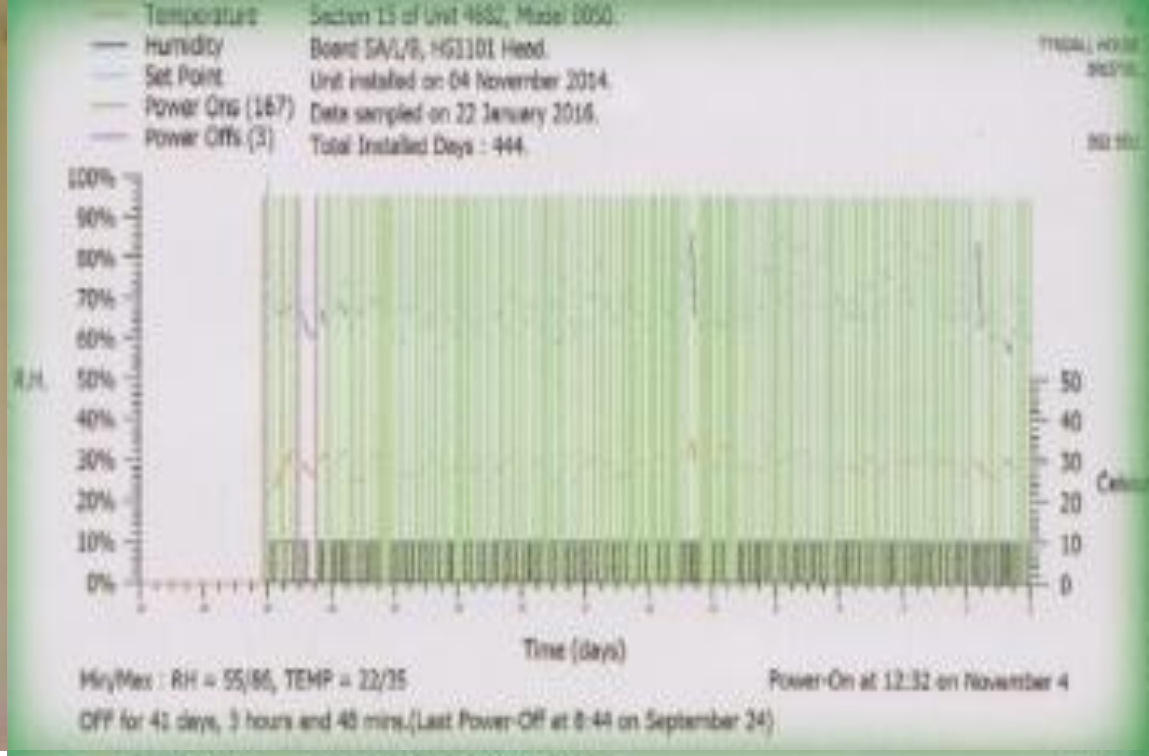


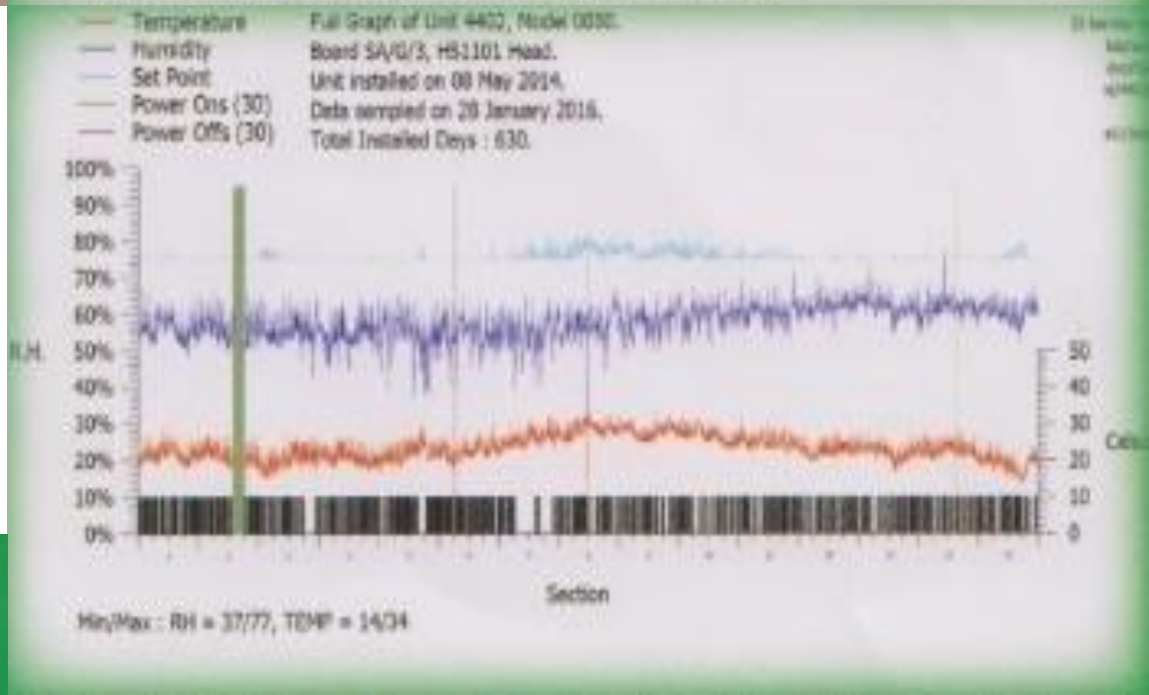


Vital for disrepair cases, high level complaints or ongoing mould and condensation issues.

For more information and details on how this fan can help you please fill in the form on the back.







Vital for disrepair cases, high level complaints or ongoing mould and condensation issues.

Types

(±2% humidity, ±0.4ºC)



www.zeta-tec.co.uk/



w.grant.co.uk/

(±3% humidity, ±0.01ºC)



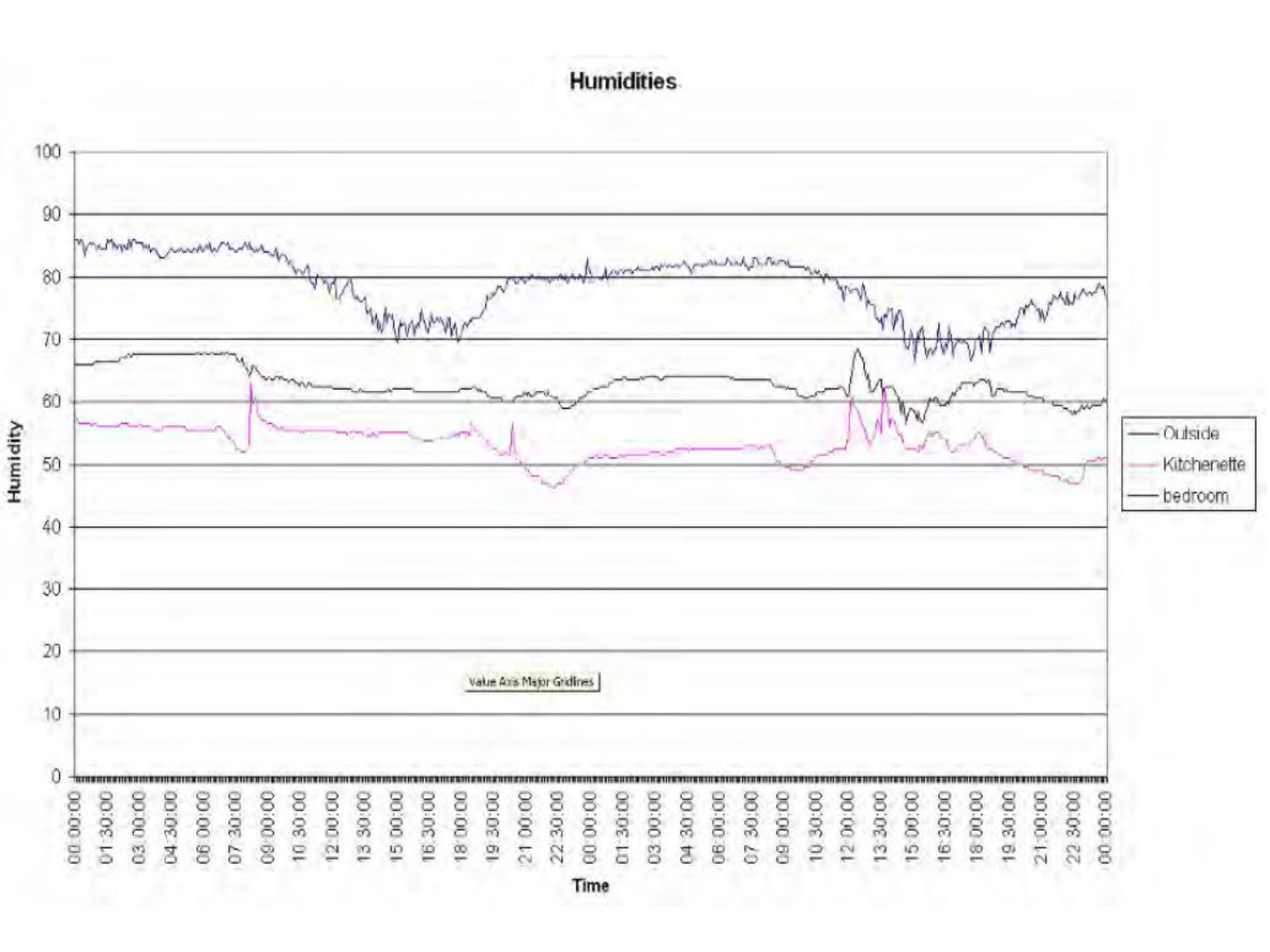
www.geminidataloggers.com



http://www.lascarelectronics.com/data-logger/



(±3% humidity, ±0.5ºC)


Humidities
Humidity
100
90
80
70
60
50
40
30
20
10
0
Value Axis Major Gridlines
00:00:00
01:30:00
03:00:00
04:30:00
06:00:00
07:30:00
09:00:00
10:30:00
12:00:00
13:30:00
15:00:00
16:30:00
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12:00:00
13:30:00
15:00:00
16:30:00
18:00:00
19:30:00
21:00:00
22:30:00
00:00:00
Time
Outside
Kitchenette
bedroom



Positive Input Ventilation (PIV)

Ventilation is the intentional introduction of outdoor air into a space and is mainly used to control indoor air quality by diluting and displacing indoor pollutants; it can also be used for purposes of thermal comfort or dehumidification. Positive Input Ventilation or PIV Systems work by encouraging the movement of air from inside to outside from a unit that is usually installed in a loft. These units reduce or eliminate surface condensation altogether by replacing humid stagnant air with fresh filtered air.

Positive Input Ventilation (PIV) also sometimes known as positive pressure ventilation work as a whole house ventilation system and create fresh and healthy living environments by supplying fresh, filtered air into a property at a continuous rate throughout.

PIV is required when:

✓ You don't want to do a full renovation.

✓ You require a whole house ventilation solution.

✓ You don't want to remove any walls or go back to brickwork.



Damp and Condensation

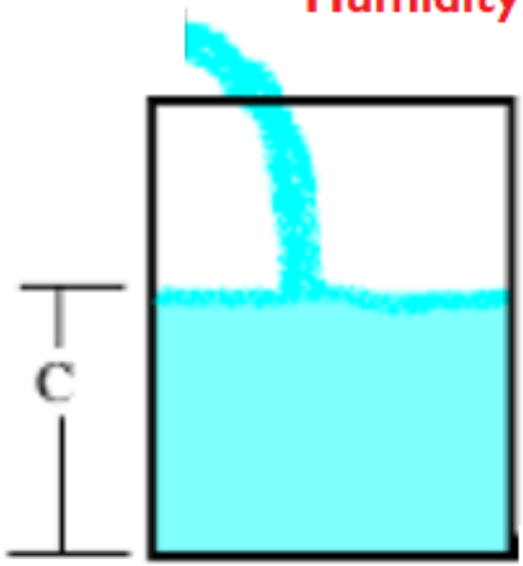
- Heating Implications

Workshop 10

What factors might one consider when looking at heating as the cause of condensation occurring in a property ?

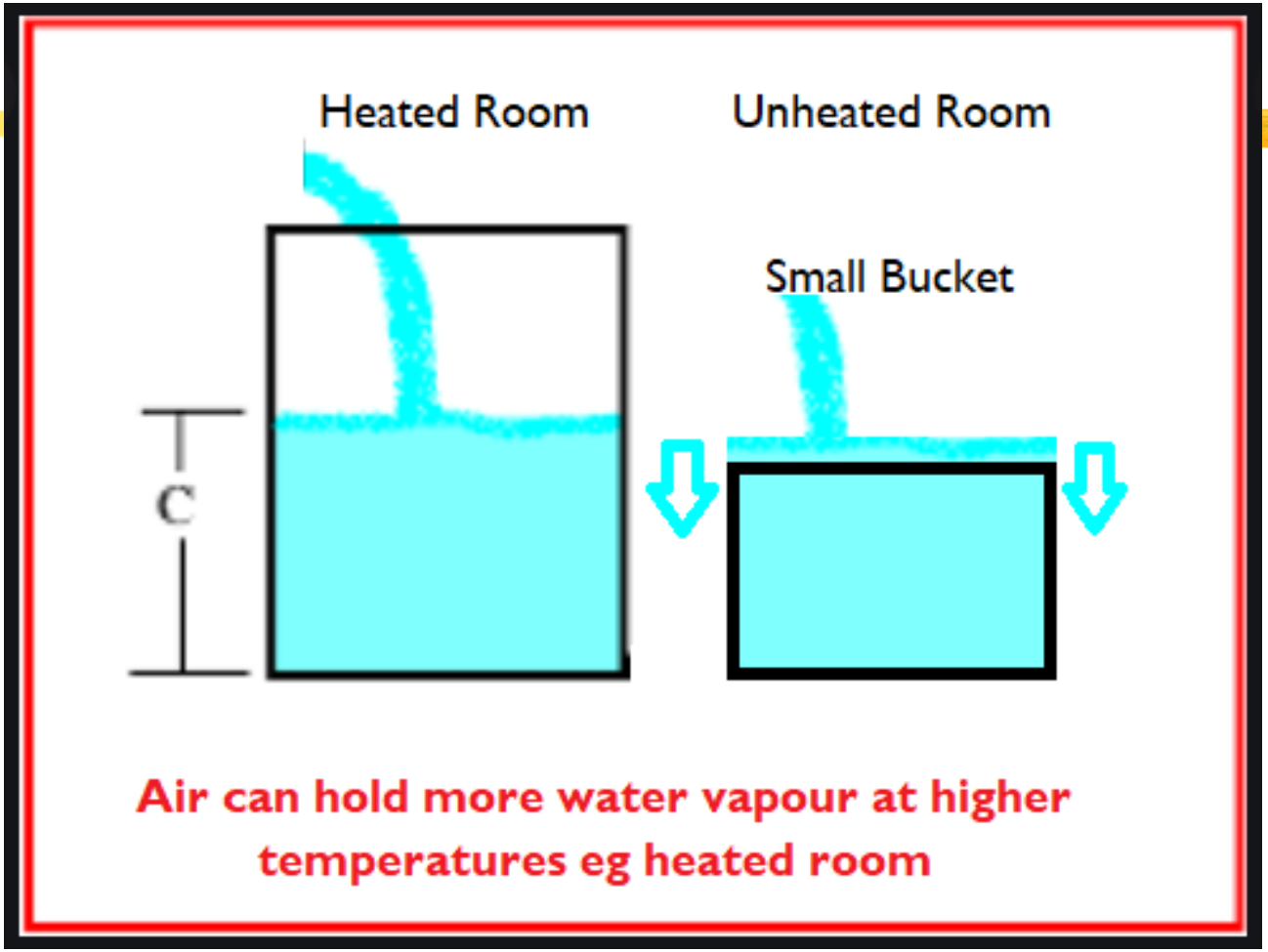
- *Form of Heating - combi, storage heater, communal*
- *Appropriate siting and sizing of radiators and the like*
- *Pattern of heating*
- *Fuel poverty*
- *Effective working of radiators, type of valves and controls*
- *Sensor type and positioning*

Humidity in a room



Big Bucket

Air can hold more water vapour at higher temperatures eg heated room



Air can hold more water vapour at higher temperatures eg heated room

Sempatap insulation

- Thermal insulation on ‘a roll’;
- Thickness 10mm;
- Does not improve U values by much (but could be enough!)
- After treatment, a solid brick wall would have a U value of 1.4.

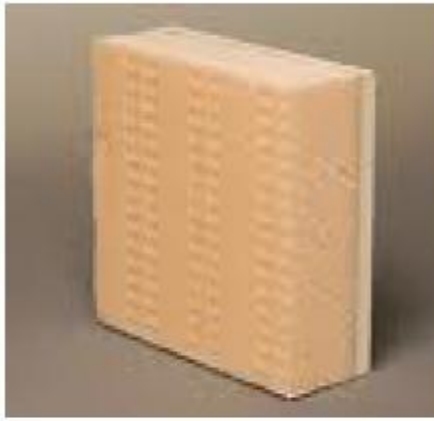




Gypsum Thermalboard

- Expanded polystyrene glued to the rear face of a wall board;
- Stuck onto inside face of the plastered wall;
- Makes more of a difference to the U value (0.7);
- However, it is disruptive and expensive







Workshop 11

Identify the remedial measures that could be used by a tenant to get rid of mould in a property be it on a property's surfaces or tenant's belongings ?

- *Shampoo carpets - do not vacuum same*
- *Dry clean clothes*
- *Use an anti-fungicidal wash on the walls – which contains bleach and biocides – from a DIY shop*
- *Use an anti-fungicidal paint if painting*
- *Use anti-fungicidal paste if wallpapering*

- *Also advise of the need to consider lifestyle, ventilation, heating etc as the potential cause*

www.condensationproducts.co.uk

Products



Anti Mould / Anti Fungicidal Paint Additive

Best Buy!

Paint additive to protect the paint film from the effects of damp & mould

read

£7.90 inc VAT
(£6.72 + VAT)

Buy



Anti Mould / Anti Fungicidal Paint Additive-3 PACK

A pack of 3 anti mould Paint additives to protect the paint film from the effects of damp & mould. A pack of 3 saves you 5% on the single bottle price

read

£22.52 inc VAT
(£19.17 + VAT)

Buy



Anti Mould & Anti fungicidal Paint Additive - PACK

Pack of 6 Anti fungicidal Paint additives to protect the paint film from the effects of damp & mould - A pack of 6 bottles is 10% cheaper than the standard price

read

£42.85 inc VAT
(£36.47 + VAT)

Buy

The 'active ingredient' for our additive is a derivitive of what we use to kill dry rot in buildings, ultimately Dry rot & the mould you want to treat are fungus's. We have a **proven track record** with the 'active ingredient' in our additive over many years of treating dry rot outbreaks very successfully.

Anti Mould & Anti Fungicidal Paint Additives

Anti mould & mould resistant additives for paint

Introduction

This excellent anti mould paint additive is specially formulated to resist mould and mildew growth.
Basically this additive turns the paint that you want to use into an anti mould paint without the need for paying silly prices for a 'specialist' anti mould paint!
Our paint additive comes in graded 100ml bottles (with a child proof cap) 1 x 100ml bottle will treat a FULL 5 litre tin of water or 10 litres of oil based paint (Yes that's not a misprint!).
Most of our competitors products are around the same price for only 50 ml bottles, ie your paying the same amount of money for only half the product.

You can add the anti mould additive to

- Water based 'contract' emulsion
- Oil based paint such as Gloss or Satin paints
- Wood primer & undercoat
- Wallpaper paste
- Tile adhesive
- Tile Grout
- PVA adhesive - Handy when you're overskimming walls



- *Specially formulated to prevent condensation damage to interior walls in areas of high humidity*