



By Appointment to H.M. the Queen, Building Material Manufacturers  
Sovereign Chemicals Limited, Barrow in Furness

making light work of condensation

autoconcure

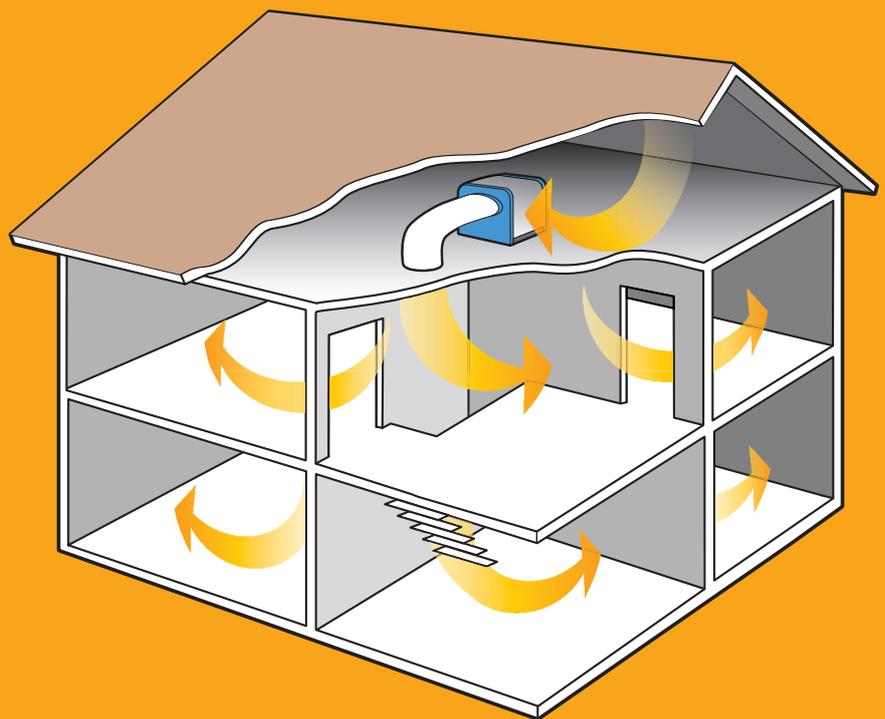
20/20



**SOVEREIGN**  
The Gold Standard in Building Products

# the piv concept

positive input ventilation (piv) is the simplest and most effective retrofit solution for the control of condensation and its associated problems in existing properties.



## condensation

The most common cause of damp issues in the home is the condensation formed when exposed surfaces become cold enough to drop to the 'Dew Point' temperature when moisture starts to condense out of the atmosphere onto walls, windows, woodwork and even furniture and carpets.

Condensation problems are further exacerbated by inadequate heating and ventilation and everyday activities like cooking, washing and drying clothes, which further increases humidity. Understandably, when condensation is most common in mid-Winter, householders avoid opening windows to help reduce the problem.

The results of condensation range from commonly seen ugly Black Mould, areas of spoiled paintwork, wall coverings, clothes and furnishings, to infestations of House Dust Mite. It can also lead to serious Wet and Dry rot attacks to timber; very expensive problems to resolve.

Further health issues can also arise for sufferers of asthma and allergies, resulting from inhaling mould and fungal spores.

## auto concure 20/20

Costing as little as three pence per day to operate, Sovereign's Auto ConCure 20/20 'Positive Input Ventilation' unit provides a constant stream of warm, fresh, filtered air that raises the Dew Point, ventilates the home and offers a highly effective solution to damp problems caused by condensation.

Quickly and easily fitted in the loft with some simple electrical work, the Auto ConCure 20/20 circulates naturally warm, filtered air from the loft space around the home, mixing up with the warm air near ceilings to raise the 'Dew Point', substantially reducing the risk of condensation.

In cold weather when the loft air temperature drops below 10°C the Auto ConCure 20/20 unit automatically uses a cost-effective pulse heating system to warm the incoming air. This avoids the necessity of some PIV units being turned off when most needed to avoid chilly draughts around the home.

The unit is ideal for second, or holiday homes, that are used infrequently. The constant stream of ventilation means there is no need to purge ventilate the property before visitors arrive, as the rooms will always be well aired and welcoming.

if not attended to condensation in the home frequently leads to growth of black mould and can even result in the development of wet and dry rot.



## auto concure 20/20

Using a unique system that assesses its output every hour, the Sovereign Auto ConCure 20/20 then automatically adjusts the output speed to suit current conditions, ensuring optimum performance all day, every day, year after year.

For an overall view of Positive Input Ventilation, including the features and explanation of its use, please refer to the Sovereign document 'Positive Input Ventilation - The Concept': [www.sovchem.co.uk/sovereign-concure-anti-condensation-unit.html](http://www.sovchem.co.uk/sovereign-concure-anti-condensation-unit.html)

## the heater

Manufactured in a solid tubular metal sheath, complete with a safety cutout, the 'black' heater automatically switches on when the incoming air temperature drops below 10°C, tempering the air and taking the chill off. It continues to operate until the input air temperature rises above 10°C.

## the fan

Sovereign use a forward curved EC Centrifugal Fan in the Auto ConCure 20/20. The ultra-low wattage technology can barely be heard, with no motor noise across the entire speed range. 'Phase noise' is also non-existent as a different operating principle is used.

## holiday and second homes

Sovereign's Auto ConCure 20/20 is also ideal for holiday homes and second homes. These properties often stand unoccupied for extended periods, making them especially susceptible to the build up of internal humidity and odours.

Installation of a Auto ConCure 20/20 unit will make a dramatic difference, returning the property to the freshness of a well aired home, whilst also preventing other problems associated with poorly ventilated buildings.

## electrical requirements

Auto ConCure 20/20 units require very little power and can be wired into the upstairs lighting circuit, provided that there is 2 Amps of spare power capacity on the circuit. The unit is supplied with two spur boxes; one box with a 3 Amp fuse fitted for the main power to the unit, and a switched box for the Heater Enabler.

The Heater Enabler Switch MUST NOT be wired to the mains and should ideally be positioned where it cannot be easily switched off by mistake. When the Heater Enabler Switch is off, the unit will NOT warm incoming air when required. This will seriously diminish the performance of the Auto ConCure 20/20. Sovereign STRONGLY recommend that the Heater Enabler is always left switched on.

**5**  
**YEAR**  
**GUARANTEE**

*Sovereign's Auto ConCure 20/20, which is manufactured in the UK, is supplied with a solid, no quibble FIVE year guarantee.*

*The total number of hours in operation is also recorded and displayed by LEDs, enabling verification that the system has been in continuous service since installation.*

## control and auto function

The Sovereign Electronic Controller manages the fan speed, heater, sensors and safety cutouts. The standard unit setup speed position is P1 for smaller properties, or P2 for medium to large homes. However the householders' lifestyles and property occupancy should be taken into consideration at this stage.

Unlike other units, once operational the Auto function automatically assesses the air flow rate being produced against the variable back pressure it generates within the property. It will re-assess this measurement every hour and adjust itself to optimise output and minimise power to maximise efficacy.

LEDs flash to indicate the automatic re-assessment is underway, with slight incremental adjustments made to speed and output up to a maximum of the next standard speed setting. This output is then fixed for an hour until the next re-assessment.

## speed settings and running costs

Sovereign's Auto ConCure 20/20 has six speed settings: P1,2,3 and 4 are selected for normal use, whilst high output speeds P5 and P6 are used when the demand is for drying or purge ventilation after decoration or flooding.

Using a 15 pence per kW/h unit as a guide, the average costs, without the heater, would be in the order of just 3 pence per day, increasing to 4 pence per day when used at speed P4.

If the incoming air temperature is below 10°C, then the unit's economical pulsed heating system automatically raises the output air temperature to an acceptable and more comfortable 10°C, until the temperature recovers.

For flexibility there is an option to disable the heater and a separate switch is provided for this. However, Sovereign recommend that the heater is left on as the system is effective, economic and will only be activated when necessary.

This provides the most economic answer to cold draughts, whereas households with unheated PIV systems may find they have to switch the unit off because it's making their home feel cold just when use of a PIV against condensation is most important. This sporadic use of pulsed heating is the most effective and economic method of achieving this.

If the loft air temperature rises above 20°C then the fan's sensor increases speed to take advantage of the 'Solar Gain'. If the temperature becomes excessive, the process stops until the air has cooled down to comfortable levels.



sovereign's concure costs  
as little as three pence per  
day to operate

## matching your lifestyle

Ordinary PIV units have a set speed that will hit the standard airflow 'goal' for a property under a fixed set of conditions. However, variations in the lifestyle of the property's occupiers will inevitably move the airflow goalposts; reducing or increasing the demand for air movement around the home day-to-day, reflecting variations in humidity caused by factors like washing and bathing.

This changing demand reduces the efficacy of ordinary PIV units which, because they operate at fixed rates regardless of actual requirement at a given time, will usually either be outputting too much or too little air.

The advanced sampling technology of Sovereign's Auto ConCure 20/20 overcomes this common problem by assessing the ACTUAL requirement for air circulation every hour.

The unit then automatically adjusts the output speed up or down to match exact requirements, ensuring that ventilation is maintained at optimum levels of efficiency and balance within the home.

## fitting

Comprehensive Fitting Instructions are supplied with the unit, supported by friendly, helpful technical advice available free of charge from the Sovereign Technical Team on 01229 870 800.

The unit is normally fitted in the roof void or loft space, across the ceiling joists and directly above the landing in a property with stairs, or in the central hallway of the home in a bungalow.

The discrete 200mm diffuser should be located centrally; its external bezel fascia enables it to be fitted without any visible disturbance to the decoration.

Where space is restricted internal baffles can also be used to direct the airflow to the desired location.

## radon dispersion

Radon is a naturally occurring gas found in many regions of the UK and is the second highest cause of lung cancer after smoking.

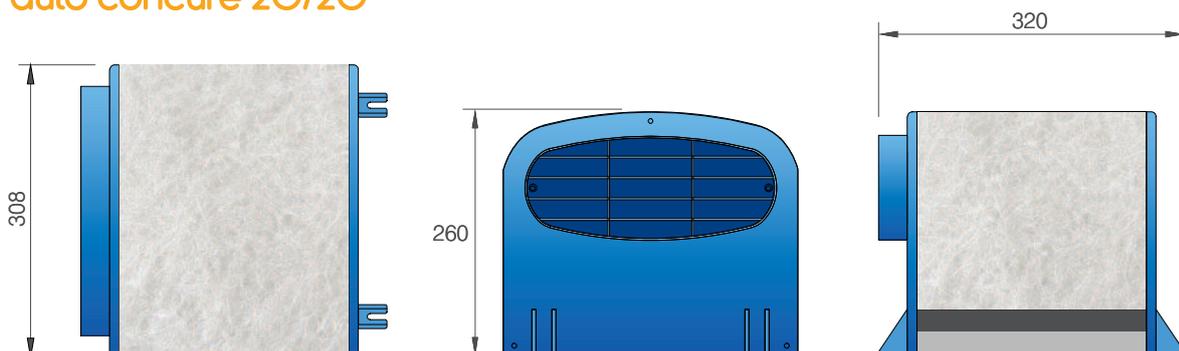
The action level for dispersing radon is presently 200 Bq/m<sup>3</sup> and Positive Input Ventilation (PIV) is an acknowledged method of successfully dispersing natural background levels of Radon of up to 700 Bq/m<sup>3</sup>, reducing the requirement for other, much more extensive and expensive solutions. Additional Auto ConCure 20/20 units can be used where this level is exceeded.

Sovereign also manufacture Radon Barriercoat; a brush-applied liquid Radon and damp proof membrane, that has been independently assessed by the British Board of Agrément and has been awarded full certification. Certificate No 08/4534.

For further information contact the Sovereign Technical Department on 01229 870 800.



## auto concure 20/20



## concure 20/20 specifications

<b>Dimensions:</b>	320 x 308 x 260mm		
<b>Weight:</b>	3 kg		
<b>Construction:</b>	Control Cover: ABS plastic. Enclosure: High Grade Polypropylene, with a galvanised metal guard.	Filter Level: G4 Adjustable Diffuser: ABS plastic	
<b>Electrical Input:</b>	230V ~ 50Hz to EC technology		
<b>Motor:</b>	Infinite silent variable stepless speed control offering reduced power consumption and integrated intelligent electronic control. There is no requirement for any additional motor protection.		
<b>Compliance:</b>	Complies with the statutory Building Regulations for the UK and Ireland. ConCure 20/20 is CE marked.		
<b>Heater:</b>	The heater features an economic 500 watt pulsed heating element		

## output specifications

### Outputs for Air temperature below 20°C

Incoming Air temp	Fan Speed Setting	Airflow Litres/sec	Power Usage Watts	Specific Fan Power	Outlet noise dB(A)@3m
<20°C	P1	26	4.1	0.157	< 15
<20°C	P2	39	6.2	0.159	< 15
<20°C	P3	50	8.6	0.172	< 15
<20°C	P4	62	11.1	0.179	< 15

### Outputs for Air temperature above 20°C\* There will be some site-specific variations with installations.

Incoming Air temp	Fan Speed Setting	Airflow Litres/sec	Power Usage Watts	Specific Fan Power	Outlet noise dB(A)@3m
>20°C	P1	26.7	4.6	0.172	< 15
>20°C	P2	47	6.8	0.145	< 15
>20°C	P3	66	10.2	0.154	< 15
>20°C	P4	84	13.2	0.157	< 15

\* At incoming temperatures above 20°C the unit automatically speeds up into the 'heat distribution mode', and distributes the warm air into the property, but will automatically shut down if the temperature becomes too warm (above 25°C). It will automatically recommence when the temperature returns below 25°C.

### Recovery and Purge Modes Two additional manually selected Modes are available for increased ventilation during decoration etc.

Function	Fan Speed Setting	Airflow at less than 20°C Litres/sec	Airflow at more than 20°C Litres/sec
Recovery Manually selected for increased ventilation during decoration, or similar.	P5	80	128
Purge Manually selected for thorough Purging after flooding, or similar.	P6	100	145

### further information

Comprehensive FREE Technical Data sheets are available for both ConCure units upon request from 01229 870 800, alternatively visit [www.sovchem.co.uk](http://www.sovchem.co.uk)

For helpful, authoritative advice on the feasibility of PIV for your property or to place an order, simply call 01229 870 800, email [concrete@sovchem.co.uk](mailto:concrete@sovchem.co.uk) or visit [www.sovchem.co.uk](http://www.sovchem.co.uk)

### sovereign chemicals

Founded in 1965, Sovereign Chemicals Limited has long been recognised as a respected name in the manufacture and supply of products and equipment for the building and construction industry. The Company is the sector's acknowledged leader in the development and supply of specialist materials and systems for damp proofing, structural waterproofing and timber preservation.

Sovereign offers a comprehensive range of both remedial and general building products that combine unrivalled specifications and reliability with authoritative, helpful technical support. At Sovereign we pride ourselves on offering top quality products manufactured in Britain to exacting formulations at our own Barrow-in-Furness site in Cumbria.

We are committed to continually improving both our extensive product range and our already excellent levels of service; helping ensure we match the demands and requirements of every customer. The sheer quality of Sovereign products is reflected in our coveted Queen's Royal Warrant. It was awarded in 1987 in recognition of the great success with which our building products had been used at several Royal residences.

Our Royal seal of approval is complimented by our British Standards Institution Registered Firm status. This is one of the highest accolades that any company active in industry can hope to achieve. The Company satisfies the demanding requirements of BSEN ISO 9001/9002 for its manufacturing systems and product quality. Sovereign was the first Company in the damp proofing field to gain BSI approval for its whole range of products.



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