

PRODUCT RANGE

# **DEHUMIDIFIERS**

For drying rooms in offices and modular buildings



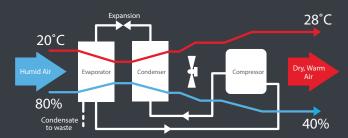
## THE CHALLENGE

With increasing numbers of people cycling to work it is essential that offices can provide adequate facilities for staff to dry their wet clothing. Having a drying room in the building creates a dedicated space for this instead of hanging up wet gear in the office area.

#### The solution

The high-performance dehumidifiers recirculate the air and physically remove moisture from it. This alleviates the need to continuously reheat incoming air. Not only that, the units convert energy taken out of the room as moisture to provide useful heat to warm the room, accelerating the drying process.

### How a Calorex dehumidifier work



The process of dehumidification involves moisture-laden air being drawn into a dehumidifier where the air passes across a refrigerated coil. The air is rapidly cooled below its dew point, condensing the water vapour and recovering its latent heat energy for re-use. The cooled air is then passed across the condenser where it is reheated and returned to the served area at the required lower relative humidity.

#### **Cost savings**

Calorex dehumidifiers provide an efficient and cost effective alternative to drying using heat alone. The potential energy savings are huge as every unit of energy that a Calorex dehumidifier consumes, it will convert 2.5 times this amount to usable heat. In fact, compared to traditional heat and ventilation energy, cost savings of 75% are not unusual.

## Installation

You can turn any room into a drying room just by using a Calorex dehumidifier. Installations can be straightforward, as it only requires positioning, connecting a power supply and drain. The units have combined heating and drying so there is no need for separate heaters, fans and extraction systems.

### Our sales team can

- Provide sizing guidelines
- Provide dehumidifiers suitable for every size of drying room
- Provide measuring equipment



## **DRYING ROOM SIZING GUIDE**

Our sizing guide is based on tests performed in conjunction with the London Fire Brigade.

## Typical unit selections for a fire station drying room

### Heavy duty clothing

| Dehumidifier model | Number of people using drying room |
|--------------------|------------------------------------|
| DH 15              | Approx. 6-7 sets of clothing       |
| DH 30              | Approx. 12-15 sets of clothing     |
| DH 60              | Approx. 25-30 sets of clothing     |
| DH 150             | Approx. 70-75 sets of clothing     |

## **Normal duty clothing**

| Dehumidifier model | Number of people using drying room |
|--------------------|------------------------------------|
| DH 15              | Approx. 9-10 sets of clothing      |
| DH 30              | Approx. 18-22 sets of clothing     |
| DH 60              | Approx. 37-45 sets of clothing     |
| DH 150             | Approx. 100-115 sets of clothing   |

Larger units are available

## These unit selections are based on the following assumptions:

- Drying time overnight period of 12-16 hours
- Room temperature heated to a minimum of 18°C
- Ventilation no additional mechanical ventilation
- \* Small extract fan to be fitted for dilution of odours

### How we make the calculation

- The selection of a dehumidifier is related to the amount of wet clothing and equipment put into the drying room
- The amount of moisture to be removed needs be known to make an accurate selection
- The number of people using the room gives an indication whilst the volume of the room is of secondary importance

#### **Benefits**

- High performance level, even in unheated rooms
- Powerful centrifugal fan
- Professional hot gas automatic defrost
- Automatic hygrostat controlled dehumidification
  - Can connect to an external condensation drain or condensate pump
- Self contained

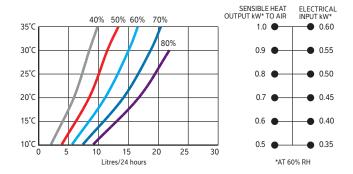
## **DEHUMIDIFIERS**

## **WALL MOUNTED**



**DH 15** 

### **Performance data**



## **Options**

• Through the wall version



### **Features**

- Self contained with fully automatic operation
- Integral humidistat
- Tamper proof controls
- Epoxy polyester painted zintec steel cabinet
- Hot gas defrost for low temperature operation
- Air filter

## **Applications**



- Drying rooms
- Public buildings
- Changing rooms
- Store rooms
- Modular buildings
- Stairwells, cellars and basements
- Museums and galleries
- Unheated premises
- Garages

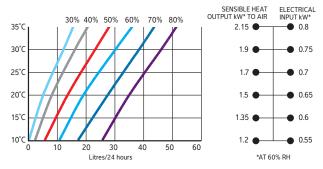
| Specifications                                | Units | DH 15AX         |
|---|-------|-----------------|
| Operating temperature range                   | °C    | 0-35            |
| Dehumidification @ 30°C/60% RH                | l/24h | 15              |
| Heat recovered to air @ 30°C/60% RH           | kW    | 0.9             |
| Air flow                                      | m³/h  | 225             |
| External static pressure                      | Pa    | 0               |
| Sound pressure level @ 3m                     | dB(A) | 53              |
| Refrigerant                                   |       | R407c           |
| Power supply                                  | V/Hz  | 230/1ph/50      |
| Nominal power consumption                     | kW    | 0.43            |
| FLA   | А     | 3.8             |
| Maximum supply fuse                           | А     | 10              |
| LRA (compressor start)                        | А     | 18              |
| Product size (w x d x h)                      | mm    | 825 x 363 x 320 |
| Weight  | kg    | 33              |
| Condensate drain size (flexible plastic hose) | mm ID | 10              |

## **DEHUMIDIFIERS**

## **WALL MOUNTED**



### **Performance data**



## **Options**

- Through the wall version
- Electric air heater
- LPHW air heater
- Remote humidistat
- Floor stand kit



### **Features**

- Self contained with fully automatic operation
- Integral humidistat
- Polyester coated evaporator and condenser
- Plastisol coated galvanised steel cabinet
- Hot gas defrost for low temperature operation
- Quiet centrifugal fans

## **Applications**



- Drying rooms
- Modular buildings
- Electrical sub-stations
- Libraries
- Sports clubs
- Changing rooms
- Warehousing and storage
- Museums and galleries
- Garages

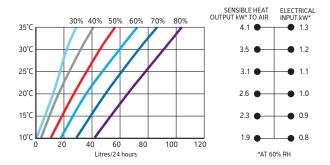
| Specifications                                | Units | DH 30AX         | DH 30AXP          |
|---|-------|-----------------|-------------------|
| Operating temperature range                   | °C    | 0-35            | 0-35              |
| Dehumidification @ 30°C/60% RH                | l/24h | 30              | 30                |
| Heat recovered to air @ 30°C/60% RH           | kW    | 1.9             | 1.9               |
| Air flow                                      | m³/h  | 700             | 700               |
| External static pressure                      | Pa    | 0               | 0                 |
| Sound pressure level @ 3m                     | dB(A) | 52              | 52                |
| Refrigerant                                   |       | R407c           | R407c             |
| Power supply                                  | V/Hz  | 230/1ph/50      | 230/1ph/50        |
| Dehumidifier power input                      | kW    | 0.75            | 0.75              |
| FLA   | Α     | 4.4             | 12.7              |
| Maximum supply fuse                           | Α     | 10              | 20                |
| LRA (compressor start)                        | Α     | 15.8            | 15.8              |
| Heater type                                   |       | Optional LPHW   | Standard Electric |
| Heat output                                   | kW    | 3.0             | 2.0               |
| Flow rate                                     | l/min | 5.0             | -                 |
| Product size (w x d x h)                      | mm    | 782 x 270 x 648 | 782 x 270 x 648   |
| Weight  | kg    | 40              | 40                |
| Condensate drain size (flexible plastic hose) | mm ID | 16              | 16                |

## **DEHUMIDIFIERS**

## **WALL MOUNTED**



#### Performance data



## **Options**

- Through the wall version
- Electric air heater
- LPHW air heater
- Remote humidistat
- Floor stand kit



### **Features**

- Self contained with fully automatic operation
- Integral humidistat
- Polyester coated evaporator and condenser
- Plastisol coated galvanised steel cabinet
- Hot gas defrost for low temperature operation
- Quiet centrifugal fans

## **Applications**



- Drying rooms
- Modular buildings
- Electrical sub-stations
- Libraries
- Sports clubs
- Changing rooms
- Warehousing and storage
- Museums and galleries
- Garages

| Specifications                                | Units | DH 60AX          | DH 60AXP          |
|---|-------|------------------|-------------------|
| Operating temperature range                   | °C    | 0-35             | 0-35              |
| Dehumidification @ 30°C/60% RH                | l/24h | 60               | 60                |
| Heat recovered to air @ 30°C/60% RH           | kW    | 3.5              | 3.5               |
| Air flow                                      | m³/h  | 1280             | 1280              |
| External static pressure                      | Pa    | 0                | 0                 |
| Sound pressure level @ 3m                     | dB(A) | 54               | 54                |
| Refrigerant                                   |       | R407c            | R407c             |
| Power supply                                  | V/Hz  | 230/1ph/50       | 230/1ph/50        |
| Dehumidifier power input                      | kW    | 1.2              | 1.2               |
| FLA   | Α     | 7.5              | 24.2              |
| Maximum supply fuse                           | Α     | 13               | 32                |
| LRA (compressor start)                        | Α     | 30               | 30                |
| Heater type                                   |       | Optional LPHW    | Standard Electric |
| Heat output                                   | kW    | 5.0              | 4.0               |
| Flow rate                                     | l/min | 5.0              | -                 |
| Product size ( $w \times d \times h$ )        | mm    | 1247 x 270 x 648 | 1247 x 270 x 648  |
| Weight  | kg    | 60               | 60                |
| Condensate drain size (flexible plastic hose) | mm ID | 16               | 16                |

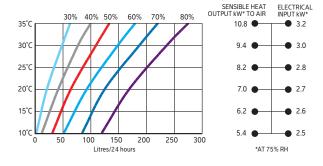
## HIGH CAPACITY DEHUMIDIFIER

## **FLOOR STANDING**



DH 150

### **Performance data**





### **Features**

- Self contained with fully automatic operation
- Integral humidistat
- High pressure fan, can be ducted
- Polyester coated evaporator and condenser
- Plastisol coated galvanised steel cabinet
- Hot gas defrost for low temperature operation

## **Options**

- Top or rear fan outlet
- Condensate pump
- Compressor soft start
- Top discharge box with heater options
- Remote humidistat

| Specifications                                | Units    | DH 150AX         | DH 150BX         |
|---|----------|------------------|------------------|
| Operating temperature range                   | °C       | 0-35             | 0-35             |
| Dehumidification @ 30°C/60% RH                | l/24h    | 150              | 150              |
| Heat recovered to air @ 30°C/60% RH           | kW       | 7.4              | 7.4              |
| Air flow                                      | m³/h     | 2500             | 2500             |
| External static pressure                      | Pa       | 0-200            | 0-200            |
| Sound pressure level @ 3m                     | dB(A)    | 58               | 58               |
| Refrigerant                                   |          | R407c            | R407c            |
| Power supply                                  | V/Hz     | 230/1ph/50       | 400/3ph/50       |
| Nominal power consumption                     | kW       | 2.5              | 2.5              |
| FLA (electrical)                              | Α        | 21               | 11               |
| Maximum supply fuse                           | Α        | 30               | 16               |
| LRA (compressor start)                        | Α        | 61               | 30               |
| LRA (compressor soft-start)                   | Α        | 28               | 13               |
| Heater type                                   | Optional | Top box electric | Top box electric |
| Heat output                                   | kW       | 9                | 9                |
| Power supply                                  | V/Hz     | 230/1ph/50       | 400/3ph/50       |
| FLA (heater)                                  | Α        | 36               | 12               |
| Maximum fuse size                             | Α        | 50               | 16               |
| Product size ( $w \times d \times h$ )        | mm       | 660 x 660 x 1313 | 660 x 660 x1313  |
| Weight  | kg       | 130              | 130              |
| Condensate drain size (flexible plastic hose) | BSPM     | 3/4              | 3/4              |



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