



Dehumidifiers

For indoor pools and spas

Humidity and condensation control the Calorex way

Full range of floor standing and wall mounted dehumidifiers

Heat recovery and space heating options

Save up to 75% on running costs and carbon emissions

THE CHALLENGE

Atmospheric air **contains moisture** which when left unchallenged can lead to mould or possible structural damage or collapse

Why dehumidify?

An indoor swimming pool is a wonderful leisure and exercise environment but the evaporation from the water surface poses real problems for the building structure. Prolonged exposure to high humidity causes walls, decorative finishes and roofs to deteriorate rapidly. Personal comfort is also of prime importance. High humidity causes personal discomfort and unless the environment is controlled, bathers will be prevented from enjoying the swimming pool. Bathers appreciate comfortable humidity in the range 55%-65%.

Condensation

Left unchallenged, it can be a major problem in indoor swimming pools and spas. Condensation, formed as water evaporating from the pool or spa surface, pushes up air humidity and can eventually lead to mould or even structural damage or collapse. In the past, the conventional approach to combating condensation came in the form of wasteful air extraction from the pool hall. Nowadays, the science of humidity control has moved into another realm. The advanced range of Calorex dehumidifiers provide an efficient and economical solution.

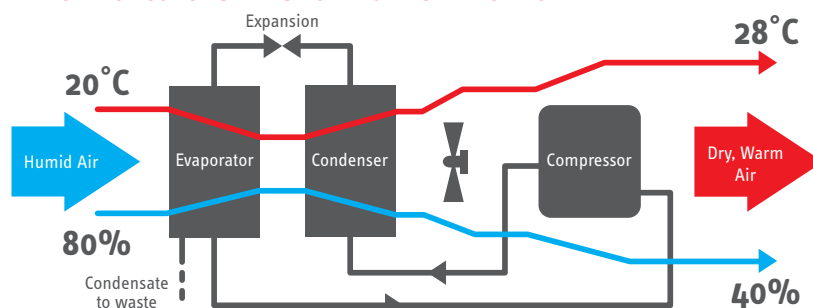


The problems caused by excess moisture:

- ❌ Corrosion
- ❌ Building deterioration
- ❌ Uncomfortable environment
- ❌ Condensation
- ❌ Damp
- ❌ Mould and mildew
- ❌ Misting

Enhanced energy conservation and efficiency

How a Calorex Dehumidifier Works



Principles of operation – air to air dehumidifier

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.

THE SOLUTION!

The answer to this problem is the Calorex range of purpose built, stylish **dehumidifiers** for humidity control and energy recovery in indoor swimming pools and spas

High-performance, low-cost Calorex

High-Performance low-cost Calorex dehumidifiers minimise the need for costly air extraction. Operating on the heat pump principle, these high-performance units recirculate pool air – removing the moisture content and delivering warm, dry air back to the pool hall. By working in this way, they maintain a comfortable humidity, minimise condensation and keep heating costs at the lowest possible level.

Rapid installation, flexible operation

Fully self-contained units, Calorex dehumidifiers require minimal installation. When it comes to operation, units offer quiet, reliable and safe performance. Flexibility is built-in. Each unit comes with a specially styled barrel type discharge that allows air to be directed in an 80° range between horizontal and vertical, thus allowing installation at high or low level.

Calorex dehumidifiers maintain a comfortable humidity, minimise condensation and keep heating costs at the lowest possible level

Energy saving

Removing humidity from the air enables the Calorex to absorb latent energy and return it to the pool air as useful air heating. Its heat pump technology converts 2.5kW to air heating for every 1kW of electricity consumed – a real bonus for running costs! So that the best choice can be made, a full range of units is available. Each is supplied with full installation kits, and noise isolation. The Calorex dehumidifier range includes wall mounted and floor mounted units.

All Calorex swimming pool dehumidifiers are manufactured in the UK at our Maldon factory which is accredited with ISO 9001

Key benefits of a Calorex dehumidifier:

- ✓ Flexible design for simple use and installation
- ✓ Energy efficient
- ✓ Low temperature operation
- ✓ Available with air heating option
- ✓ Automatic operation
- ✓ Quality construction
- ✓ Optional features
- ✓ Simple installation
- ✓ Heat recovery to air



Low temperature operation

Your pool hall still needs protection when you aren't using it, but economy dictates that you drop the air heating levels when you are away. The defrost versions operate down to temperatures just above freezing to ensure moisture control even in cold conditions.

WALLMOUNTED DH33/55

The highest moisture extracting wall-mounted dehumidifier for lowest power consumption of its type

✓ High moisture extraction for low power consumption

✓ Corrosion free, easy to clean composite cover

✓ Zero ozone depletion refrigerant

✓ Low internal operating pressures long useful life

✓ Fan cycle or continuous mode

✓ Air outlet adjustable to horizontal or vertical

✓ Many options for flexible installation

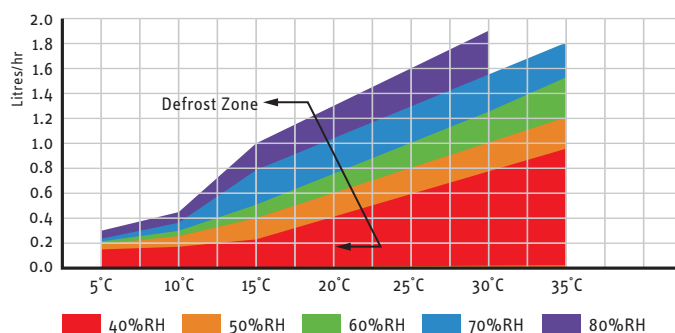
SPECIFICATIONS	units	DH33	DH55
Performance (standard unit)			
Operating temperature range	°C	15 - 35	15 - 35
Dehumidification @ 30°C/60% RH	l/hr	1.25	2.5
Heat recovered to air @ 30°C/60% RH	kW	1.9	3.5
Air flow	m³/h	440	740
External static pressure	Pa	0	0
Sound pressure level @ 3m	dB(A)	48	48
Refrigerant		R407c	R407c
Electrical data			
Supply	V/Hz	230/50	230/50
Nominal power consumption	kW	0.75	1.2
FLA	amps	4.4	7.5
Maximum supply fuse	amps	10	13
Maximum supply fuse electric heater	amps	20	32
LRA (compressor start)	amps	15	30
Heater			
Type	LPHW	Optional LPHW	Optional
Heat output @ 80°C flow	kW	3	5
Flow rate	l/min	5	5
Dimensions			
Width	mm	780	1245
Depth	mm	255	255
Height	mm	653	653
Weight	kg	37	58
Condensate drain size (Flexible plastic hose)	mm	10	10

Options

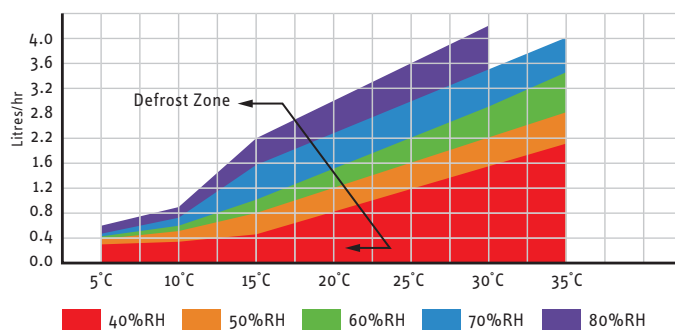
- Through the wall version
- LPHW air heater
- Remote humidistat/Combistat (12V)
- Electric resistance air heater (2kW and 4kW)
- Hot gas defrost (allows operation to 5°C air temperature)
- Air Filter

Performance Data

DH 33



DH 55



CALOREX DH 33 / DH 55



Calorex reserve the right to modify this specification at any time

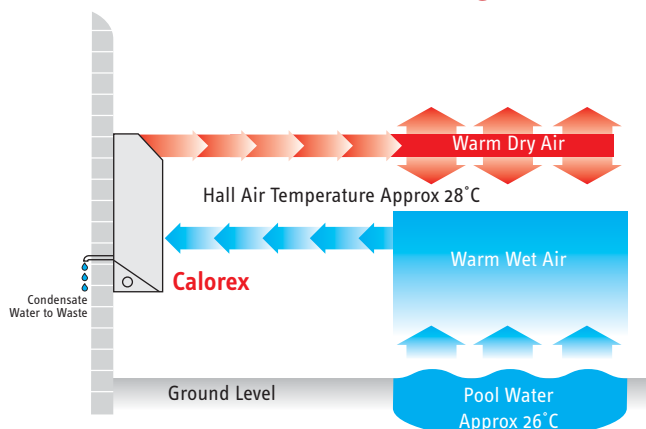
AIR FLOW

HOW IT WORKS

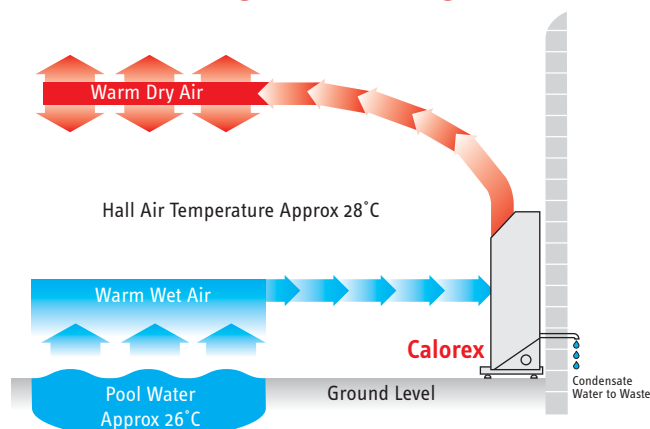
Modern reliable technology purpose designed for swimming pools

Each Calorex includes an adjustable humidistat controlling relative humidity (RH) in the ideal range of 55% – 65%. With RH under control, condensation can be minimised by selecting the most appropriate installation from the schematics shown below. Note: vulnerable areas such as windows, roof lights or other cold bridges may form condensation at low external air temperatures unless dry air is blown directly onto them.

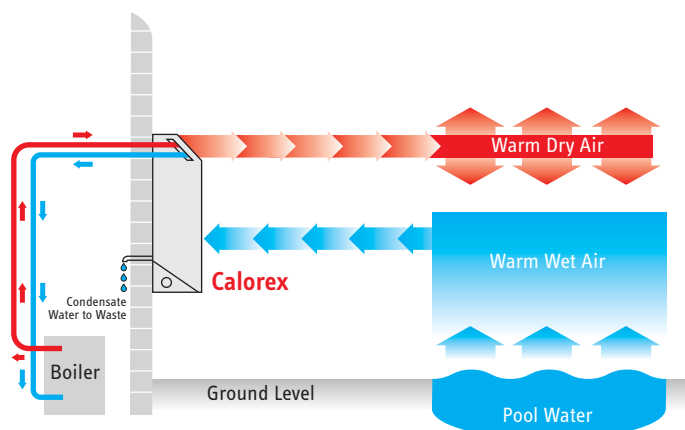
Wall Mounted Air Flow Diagram



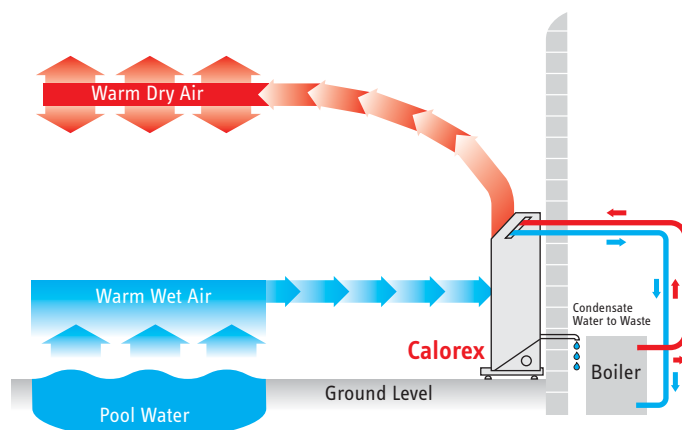
Floor Standing Air Flow Diagram



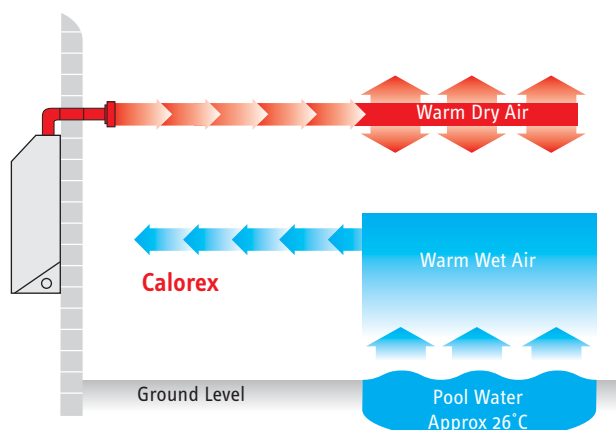
Wall Mounted with Air Heating



Floor Standing with Air Heating



Through the Wall



Through the Wall with Air Heating

