

HeatPumps  
4Pools



 calorex



PRODUCT RANGE

## **POOL DEHUMIDIFIERS**

Swimming pool and spa dehumidification



## THE CHALLENGE

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

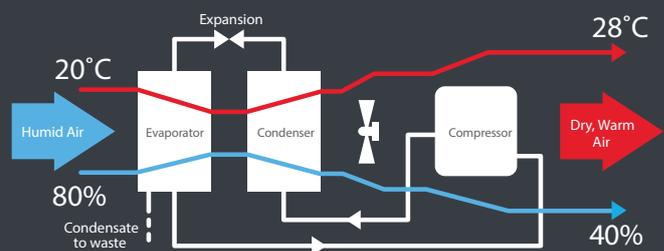
### Why dehumidify?

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.

### How a Calorex dehumidifier works



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.

### Problems

The problems caused by excess moisture include corrosion, building deterioration, uncomfortable environment, condensation, damp, mould and mildew and misting.



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

## 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.

### Our products

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.\*

### 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 sound insulation. The Calorex dehumidifier range includes wall mounted and floor standing units.

### 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.

### Benefits

- Installation on use
- Energy efficient
- Low temperature operation
- Available with air heating option
- Automatic operation
- Quality construction
- Optional features
- Simple installation
- Heat recovery to air

\* Only on DH 33/55 models

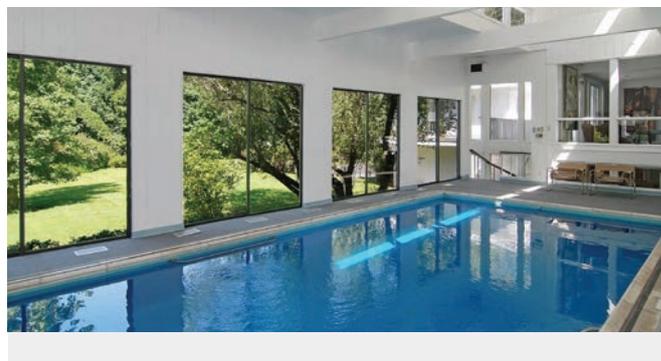


# POOL DEHUMIDIFIERS

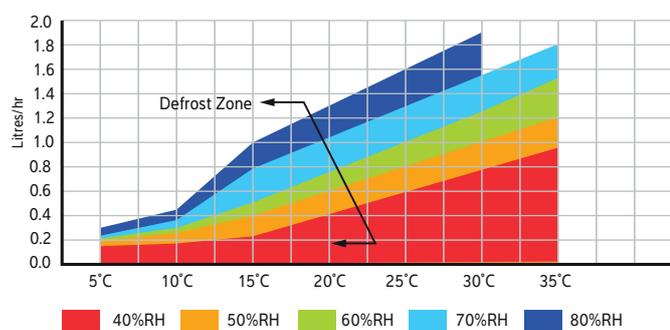
## WALL MOUNTED



**DH 33**



### Performance data



### Options

- Through the wall version
- LPHW air heater
- Air filter
- Floor stand kit

### Features

- High moisture extraction for low power consumption
- Zero ozone depleting refrigerant
- Low internal operating pressures = long useful life
- Fan cycle or continuous mode
- Air outlet adjustable to horizontal or vertical
- Hot gas defrost (allows operation to 5°C air temperature)
- Many options for flexible installation
- Remote humidistat and on/off function

### Applications

- Indoor pools
- Therapy pools
- Health clubs and wellness centres
- Hotels and spa pools
- Holiday parks and campsites



Specifications	Units	DH 33
Operating temperature range	°C	5-35
Dehumidification @ 30°C/60% RH	l/h	1.25
Heat recovered to air @ 30°C/60% RH	kW	1.9
Air flow	m <sup>3</sup> /h	440
External static pressure	Pa	0
Sound pressure level @ 3m	dB(A)	48
Refrigerant		R407c
Power supply	V/Hz	230/1ph/50
Nominal power consumption	kW	0.75
FLA	A	4.4
Maximum supply fuse	A	10
LRA (compressor start)	A	15
Heater type		Optional LPHW
Heat output @ 80°C flow	kW	3
Flow rate	l/min	5
Product size (w x d x h)	mm	780 x 255 x 653
Weight	kg	37
Condensate drain size (flexible plastic hose)	mm	16

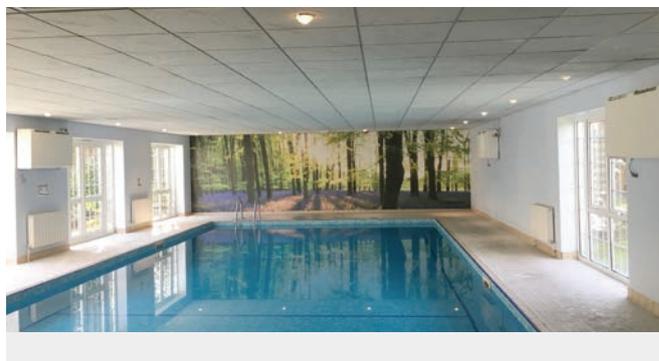


# POOL DEHUMIDIFIERS

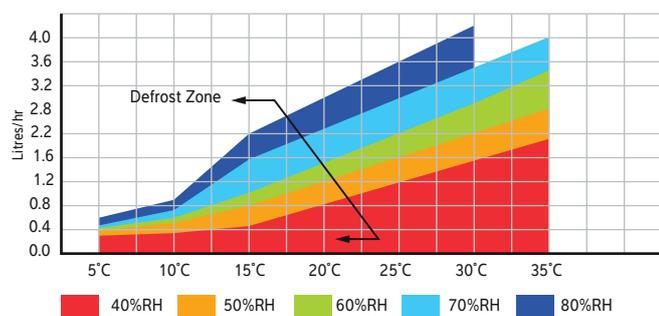
## WALL MOUNTED



**DH 55**



### Performance data



### Options

- Through the wall version
- LPHW air heater
- Air filter
- Floor stand kit

### Features

- High moisture extraction for low power consumption
- Zero ozone depleting refrigerant
- Low internal operating pressures = long useful life
- Fan cycle or continuous mode
- Air outlet adjustable to horizontal or vertical
- Hot gas defrost (allows operation to 5°C air temperature)
- Many options for flexible installation
- Remote humidistat and on/off function

### Applications

- Indoor pools
- Therapy pools
- Health clubs and wellness centres
- Hotels and spa pools
- Holiday parks and campsites



Specifications	Units	DH 55
Operating temperature range	°C	5-35
Dehumidification @ 30°C/60% RH	l/h	2.5
Heat recovered to air @ 30°C/60% RH	kW	3.5
Air flow	m <sup>3</sup> /h	740
External static pressure	Pa	0
Sound pressure level @ 3m	dB(A)	48
Refrigerant		R407c
Power supply	V/Hz	230/1ph/50
Nominal power consumption	kW	1.2
FLA	A	7.5
Maximum supply fuse	A	13
LRA (compressor start)	A	30
Heater type		Optional LPHW
Heat output @ 80°C flow	kW	5
Flow rate	l/min	5
Product size (w x d x h)	mm	1245 x 255 x 653
Weight	kg	58
Condensate drain size (flexible plastic hose)	mm	16

# POOL DEHUMIDIFIERS

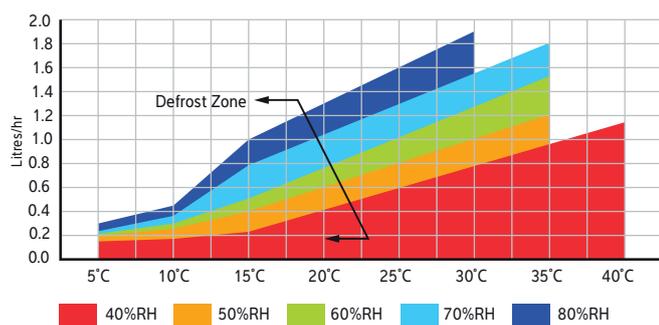
## FLOOR STANDING



**DH 44**



### Performance data



### Options

- LPHW air heater complete with three way valve and 12V thermostat interlock

### Features

- High moisture extraction for low power consumption
- Corrosion free, easy to clean aluminium air grille with easy clean air filter
- Super quiet operation, scroll compressor
- Fresh air introduction point
- Low internal operating pressures = long useful life
- Air outlet adjustable to horizontal or vertical
- Fan cycle or continuous mode
- Hot gas defrost (allows operation to 5°C air temperature)
- Flexible mounting
- Remote humidistat and on/off function

### Applications

- Indoor pools
- Therapy pools
- Health clubs and wellness centres
- Hotels and spa pools
- Holiday parks and campsites



Specifications	Units	DH 44
Operating temperature range	°C	5-35
Dehumidification @ 30°C/60% RH	l/h	1.25
Heat recovered to air @ 30°C/60% RH	kW	1.6
Air flow	m <sup>3</sup> /h	440
External static pressure	Pa	0
Sound pressure level @ 3m	dB(A)	42
Refrigerant		R407c
Power supply	V/Hz	230/1ph/50
Nominal power consumption	kW	0.51
FLA	A	3.5
Maximum supply fuse	A	10
LRA (compressor start)	A	12
Heater type		Optional LPHW
Heat output @ 80°C flow	kW	3.3
Flow rate	l/min	4.8
Product size (w x d x h)	mm	880 x 340 x 1000
Weight	kg	57
Condensate drain size (flexible plastic hose)	mm	16

# POOL DEHUMIDIFIERS

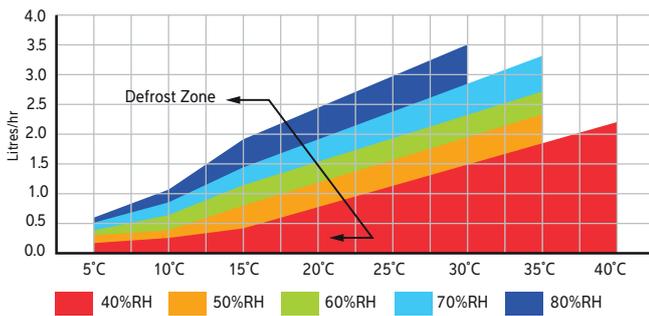
## FLOOR STANDING



**DH 66**



### Performance data



### Options

- LPHW air heater complete with three way valve and 12V thermostat interlock

### Features

- High moisture extraction for low power consumption
- Corrosion free, easy to clean aluminium air grille with easy clean air filter
- Super quiet operation, scroll compressor
- Fresh air introduction point
- Low internal operating pressures = long useful life
- Air outlet adjustable to horizontal or vertical
- Fan cycle or continuous mode
- Hot gas defrost (allows operation to 5°C air temperature)
- Flexible mounting
- Remote humidistat and on/off function

### Applications

- Indoor pools
- Therapy pools
- Health clubs and wellness centres
- Hotels and spa pools
- Holiday parks and campsites



Specifications	Units	DH 66
Operating temperature range	°C	5-35
Dehumidification @ 30°C/60% RH	l/h	2.41
Heat recovered to air @ 30°C/60% RH	kW	3.0
Air flow	m <sup>3</sup> /h	740
External static pressure	Pa	0
Sound pressure level @ 3m	dB(A)	44
Refrigerant		R407c
Power supply	V/Hz	230/1ph/50
Nominal power consumption	kW	1.2
FLA	A	6
Maximum supply fuse	A	13
LRA (compressor start)	A	26
Heater type		Optional LPHW
Heat output @ 80°C flow	kW	5.8
Flow rate	l/min	10.2
Product size (w x d x h)	mm	1345 x 340 x 1000
Weight	kg	74
Condensate drain size (flexible plastic hose)	mm	16



# HIGH CAPACITY POOL DEHUMIDIFIERS

## FLOOR STANDING



**DH 110**



### Features

- High moisture extraction for low power consumption
- Corrosion free, easy to clean aluminium air grille with easy clean air filter
- Zero ozone depleting refrigerant
- Low internal operating pressures = long useful life
- Adjustable air outlet
- Quiet centrifugal fans, two speeds
- Hot gas defrost (allows operation to 5°C air temperature)
- Remote humidistat and on/off function

### Options

- Through the wall version
- LPHW air heater complete with 3 way valve and 12V thermostat interlock
- 400V-3ph option for DH 110

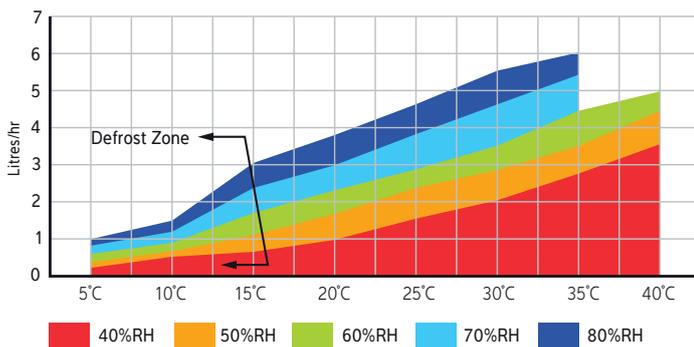
### Applications

- Indoor pools
- Therapy pools
- Health clubs and wellness centres
- Hotels and spa pools
- Holiday parks and campsites

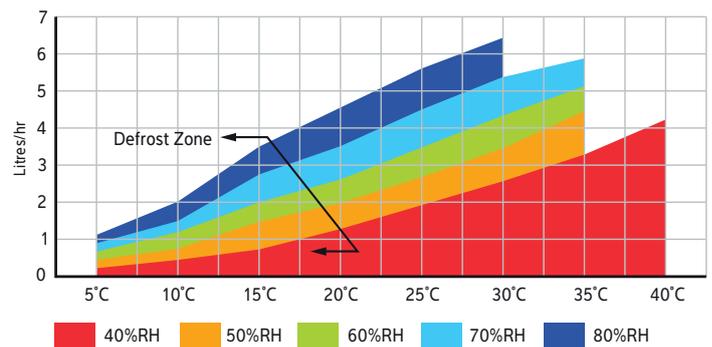


### Performance data

**DH 75**



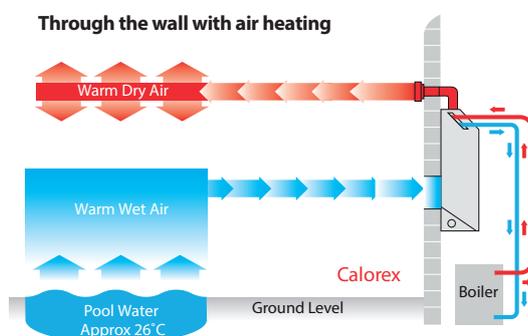
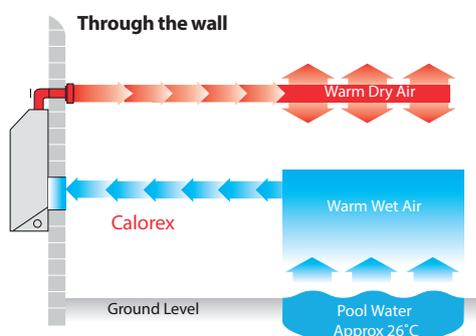
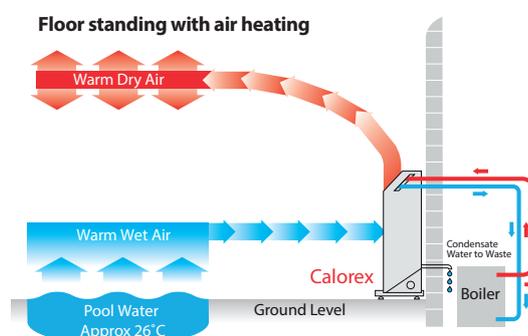
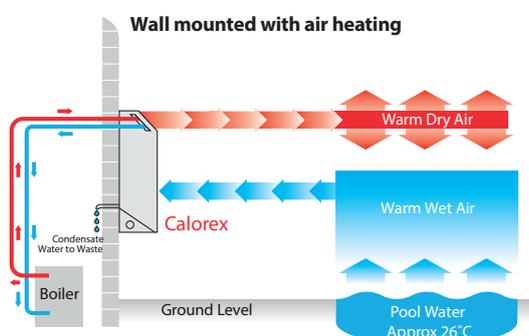
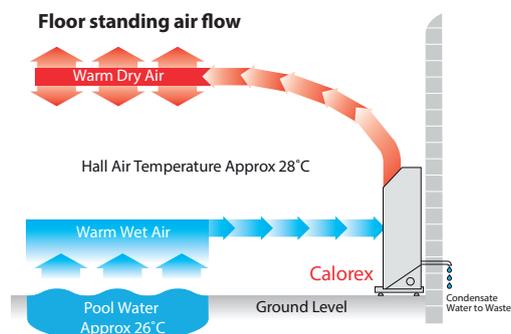
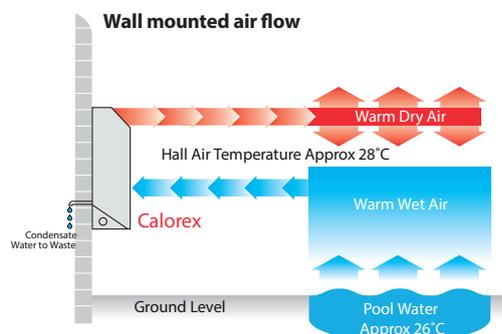
**DH 110**



# POOL DEHUMIDIFIERS

## AIR FLOW – HOW IT WORKS

Each Calorex unit 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.



Specifications	Units	DH 75AX	DH 110AX
Operating temperature range	°C	5-40	5-35
Dehumidification @ 30°C/60% RH	l/h	3.6	4.5
Heat recovered to air @ 30°C/60% RH	kW	4.0	5.2
Air flow	m³/h	1180	1180
External static pressure	Pa	0	0
Sound pressure level @ 3m	dB(A)	53	53
Refrigerant		R407c	R407c
Power supply	V/Hz	230/1ph/50	230/1ph/50
Nominal power consumption	kW	1.5	2.1
FLA	A	9.5	12
Maximum supply fuse	A	13	20
LRA (compressor start)	A	55	66
Heater type		Optional LPHW	Optional LPHW
Heat output @ 80°C flow	kW	8.9	8.9
Flow rate	l/min	9.6	9.6
Product size (w x d x h)	mm	1520 x 385 x 796	1520 x 385 x 796
Weight	kg	143	144
Condensate drain size (brass compression)	mm	15	15

# HIGH CAPACITY POOL DEHUMIDIFIERS

## DUCTED



**AA 300**  
**AA 500**



### Features

All models:

- Pool hall dehumidification
- Dynamic heat pump heat recovery
- Constant flow fan with two speed settings
- Remote control panel (12V) with 1.8m lead (10m cable optional)

LPHW Air models add:

- Integral LPHW heat exchanger for air heating

LPHW Air+Water models add:

- Integral LPHW heat exchangers for pool and air



**FLANGE KIT**

### Options

- Flexible flange kit to reduce vibration

### Applications



- Indoor pools
- Private pools
- Therapy pools
- Health clubs and wellness centres
- Hotels and spa pools

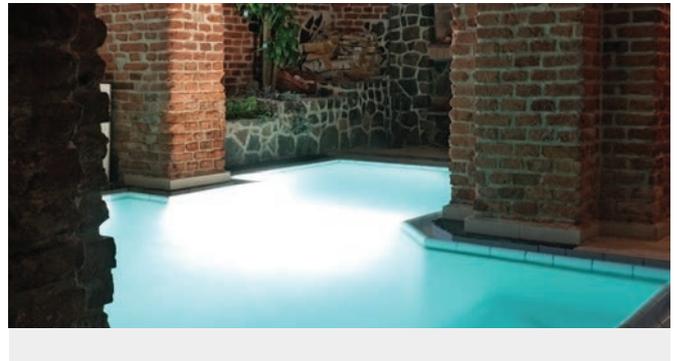
Specifications	Units	AA 300	AA 500
Air flow	m <sup>3</sup> /h	1300 ± 10%	1800 ± 10%
External available static pressure	Pa	250	250
Dehumidification @ 30°C/60% RH	l/h	3.6	4.5
<b>Heat to air</b>			
Via heat pump	kW	4.4	6.1
Via LPHW (LPHW Air models)	kW	7.3	7.5
Total (heat pump + LPHW)	kW	9.8	11.7
<b>Heat to water</b>			
Via LPHW (LPHW Air + Water models)	kW	9.5	9.5
Product size (h x w x d)	mm	850 x 1027 x 730	850 x 1027 x 730
Weight	kg	111	111

# HIGH CAPACITY POOL DEHUMIDIFIERS

## DEHUMIDIFICATION WITH HEAT RECOVERY



**AW 1200**



### Features

- Pool hall dehumidification
- Dynamic heat pump heat recovery to pool and air
- Constant flow EC fan (models 600, 900, 1200)
- Speed controllable EC fan (model 1500)
- PLC control with 3.5" touchscreen user interface
- Remote monitoring/control

AA+LPHW models add:

- Integral LPHW heat exchanger for air heating

AW models add:

- Dynamic heat pump heat recovery to pool and air
- Integral LPHW heat exchangers for pool and air

### Options

- Fresh air module
- Upgraded LPHW heat exchanger for air
- Electric resistance air heaters (6/12/18kW)
- Air cooling with remote condenser
- Titanium pool condenser (AW models only)

### Electrical heater option notes

- In lieu of LPHW heat exchangers
- 6kW or 12kW is available for 600 and 900 models
- 12kW or 18kW is available for 1200 and 1500 models



**VARIHEAT TOUCHSCREEN**

### Applications

- Spa and therapy pools
- Hotel pools and wellness centres
- Holiday parks & campsites



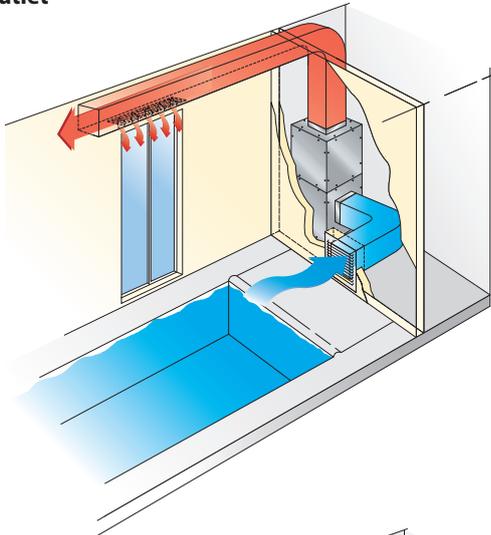


# HIGH CAPACITY POOL DEHUMIDIFIERS

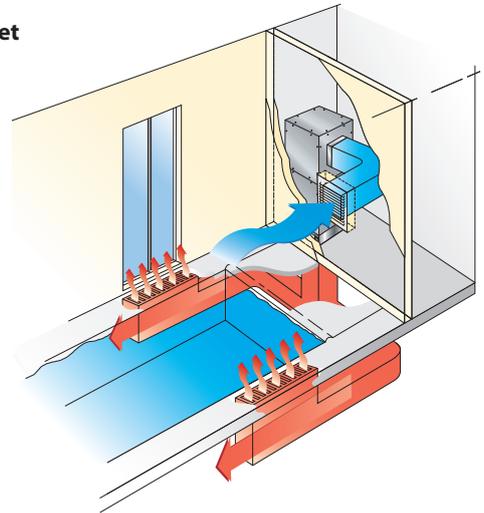
## DEHUMIDIFICATION WITH HEAT RECOVERY

### Installation options

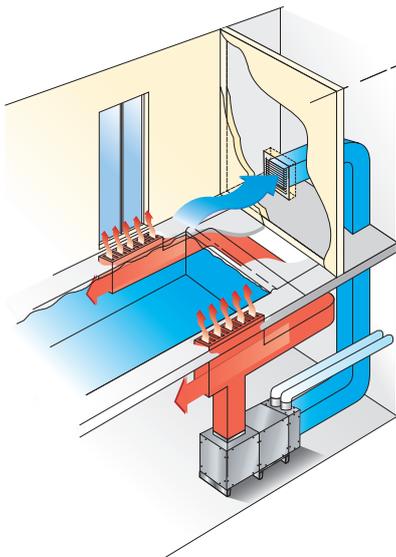
Top outlet



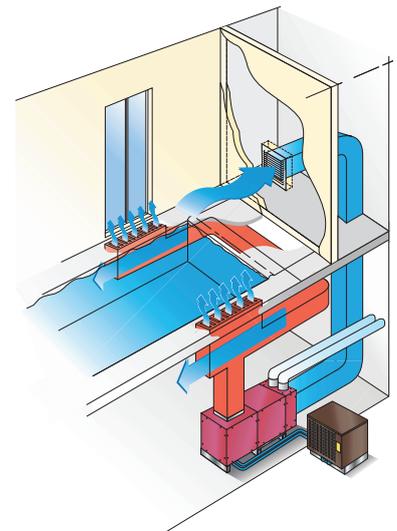
Bottom outlet



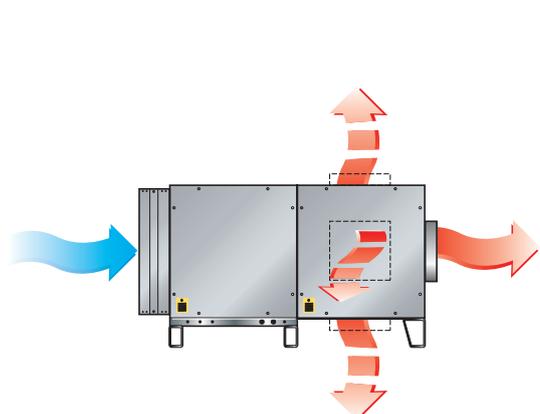
Basement outlet



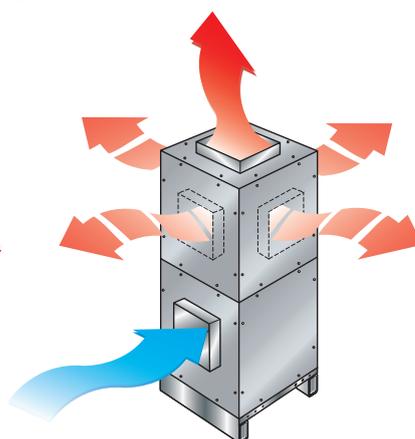
Remote condensing unit option



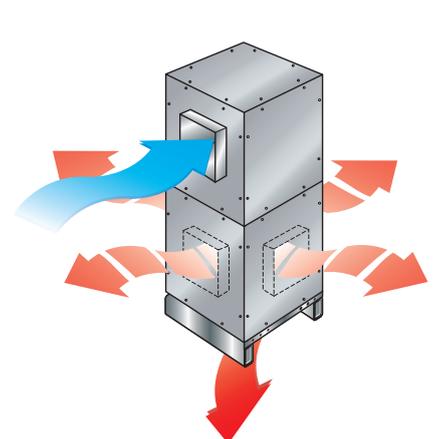
Horizontal outlet



Top outlet



Bottom outlet

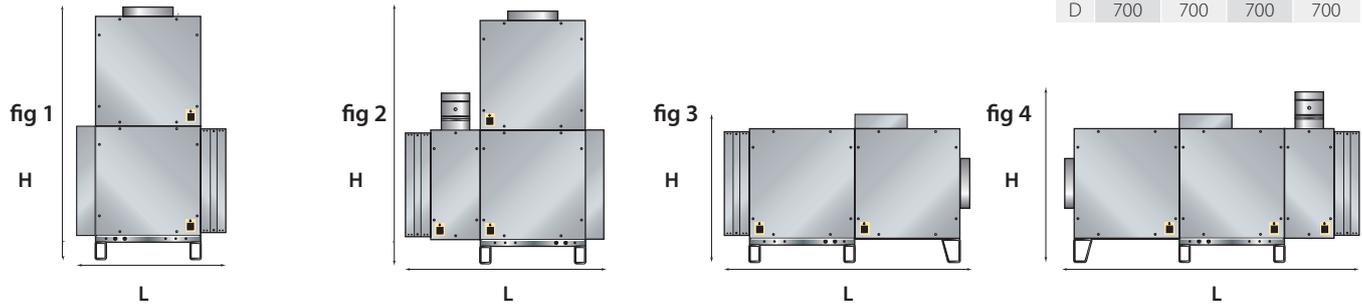


# HIGH CAPACITY POOL DEHUMIDIFIERS

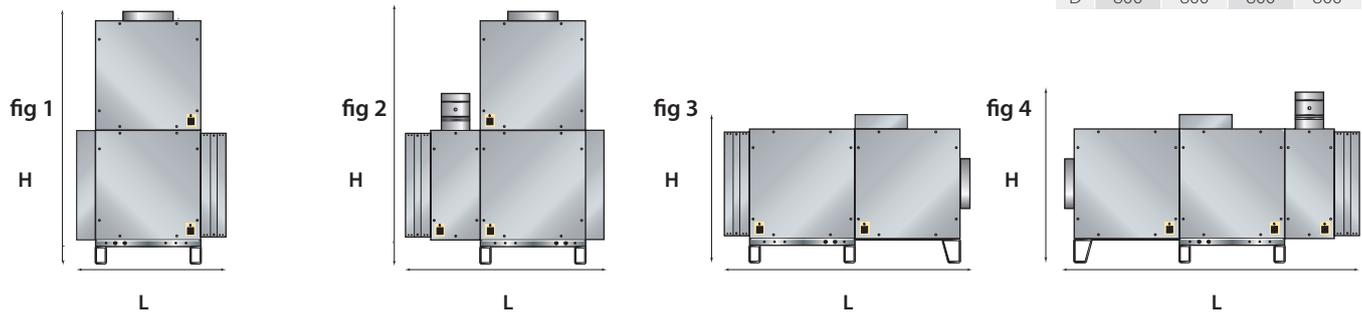
## DEHUMIDIFICATION WITH HEAT RECOVERY

### Configurations

#### Variheat 600/900



#### Variheat 1200/1500



Specifications	Units	AW 600	AA 600	AW 900	AA 900	AW 1200	AA 1200	AW 1500	AA 1500
Air flow	m <sup>3</sup> /h	2000	2000	2500	2500	3500	3500	4300	4300
External available static	Pa	330	330	220	220	290	290	350	350
Fresh air flow (option)	m <sup>3</sup> /h	0-900	0-900	0-900	0-900	0-900	0-900	0-900	0-900
External available static	Pa	100	100	100	100	100	100	100	100
Dehumidification @ 30°C/60% RH	l/h	4.6	4.6	6.5	6.5	8.5	8.5	10.5	10.1
Dehumidification @ 30°C/70% RH	l/h	5.5	5.5	7.8	7.8	10.8	10.8	13.2	13.2
<b>Heat to air</b>									
Net via heat pump (Mode B)	kW	5.1	5.1	7.1	7.1	10.0	10.0	14.0	14.0
Via standard LPHW @ 80°C	kW	11.0	11.0	13.5	13.5	24.0	24.0	28.0	28.0
Max. available (Mode B + standard LPHW)	kW	14.0	14.0	18.6	18.6	30.0	30.0	36.0	36.0
Via upgraded LPHW @ 55°C	kW	9.4	9.4	11.5	11.5	20.4	20.4	23.8	23.8
Max. available (Mode B + upgraded LPHW)	kW	12.7	12.7	16.9	16.9	27.0	27.0	36.8	36.8
<b>Heat to water</b>									
Net via heat pump (Mode A)	kW	5.5	0	7.4	0	10.0	0	12.5	0
Via LPHW @ 80°C	kW	18.0	0	30.0	0	30.0	0	40.0	0
Max. available (Mode A + LPHW)	kW	23.5	0	37.4	0	40.0	0	52.5	0
Nominal power consumed	kW	2.1	2.1	2.8	2.8	3.6	3.6	4.7	4.7

AW denotes heat recovery to air/water and LPHW heaters for air/water  
 AA denotes heat recovery to air and optional LPHW heater for air only