Meet the world's **smallest** dehumidifiers

ROSAHL - solid polymer electrolytic dehumidifier

It goes where no other dehumidifier can:


Protecting telecommunication outstations


Protecting works of art


Protecting micro electronics


Protecting perishable valuable items

Amazingly small, ROSAHL's new electrolytic dehumidifier can be installed in the smallest of spaces

ROSAHL
dehumidifying range

Dehumidification on the **smallest of scales!**

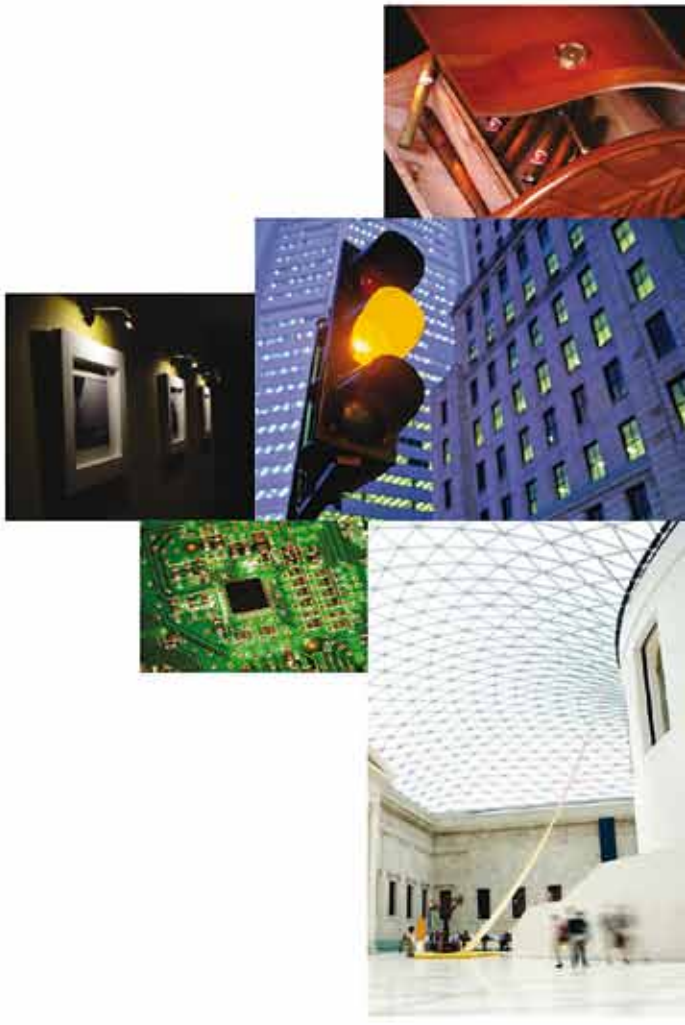
> Low power > No noise > No moving parts

> No maintenance costs > Low energy costs > Unique

> Environmentally friendly > Ultra reliable

Suitable for applications you have never thought possible!

The perfect solution for protecting valuables and moisture critical enclosures



A world first - developed by a leading global technology company

ROSAHL is a new technology that resolves all the problems associated with traditional dehumidification when applied to small volumes and specialist applications.

Implementing traditional dehumidifying solutions has many considerations, such as size, weight, disposal of condensed water, noise, high power consumption and limited life expectancy. Absorbent gels need renewing or replacement. With ROSAHL solid-state dehumidifiers these problems are removed.

Developed by one of Japan's leading technology companies, this unique product removes moisture from the air in electrical cabinets, display cabinet and other enclosure. ROSAHL is a permeable membrane that is fitted to the side of the enclosure. When a low voltage electrical source is applied, moisture moves through the membrane and is expelled to the outside: it acts like an ionic pump.

ROSAHL ionic membrane dehumidifiers are very small; light; require no maintenance; completely silent; use very little power and have no moving parts to wear out or be replaced. Powered from a 3V dc source, they are available in a range of sizes to suit enclosures up to 8m^3. The smallest version fits in M12 screw-in mount and is only 11mm deep.

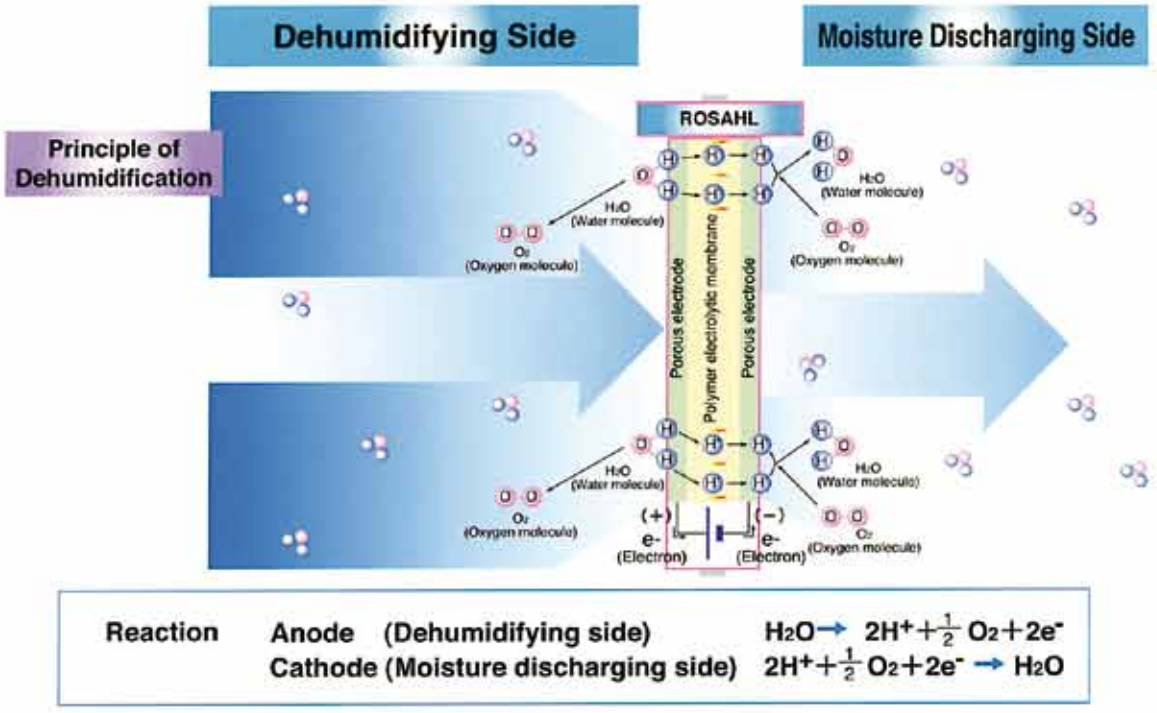
Removes moisture and turns it into fresh air!

How do ROSAHL dehumidifiers work?

The first dehumidifier to use a solid-state polymer electrolyte

The principle behind ROSAHL is very simple. The solid-state electrolytic polymer membrane has a porous inner side. When a 3V dc supply is attached to the terminals moisture is attracted and absorbed into the membrane.

Through a process of electrolysis the water passing through the membrane dissociates (breaks down) into hydrogen ions and oxygen which continue to pass through to the other side of the membrane where they recombine and are discharged into the air as water vapour. ~~Reversing the electrical polarity reverses the process and the membrane can be used as a humidifier.~~



What type of applications are ROSAHL products suited for?

The moisture extraction rate of ROSAHL products is up to 16 grams per day and which is adequate for removing moisture from steady-state environments such as cabinets up to 8m ^{3}, and where the ingress of further moisture has been prevented.

Since ROSAHL products use very little energy compared to other electrical dehumidifiers they can be operated 24/7 without incurring significant energy costs. Rosahl is also very efficient and will reduce relative humidity (RH) to 10% or lower. Including a humidistat has the advantage of controlling the RH levels and reducing power consumption further.

ROSAHL membranes are used in a wide variety of humidifying and dehumidification applications. These include: sterile cabinets; museum displays, CCTV installations, remote traffic and signalling stations, electrical cabinets and so on. For suitable capacity per product please see the specification charts on page 6.

Why dehumidify?

Having high relative humidity can affect many things such as electronic products, whose working characteristics can change dramatically with humidity. Corrosion of metals can occur mainly when humidity is over 50%. Reduce humidity to less than 50% and corrosion of metals is drastically reduced.

Bacteria (which causes smells and can damage goods) needs humidity over 50% to survive and multiply. Mould and funguses need a relative high humidity of over 70% to flourish; keep the relative humidity less than 50% for more than 95% of the time will help prevent any organic growth.

Typical examples of suitable applications are

> Traffic control and display cabinets > Outdoor multimedia screens and displays > Telecommunications such as mobile phone outstations > Precision equipment storage cabinets > Museum displays and exhibition cabinets > Reduction of mould in closed rooms > Odour reduction > Storage of hygroscopic materials > Semiconductor manufacturing

Rosahl Membrane Specifications

RD, RP and MDL Series

RP1 and RP3

RP1 - solder terminals
RP3 - push terminals

RD3 and RD4

RD3 internally mounted
RD4 externally mounted

MDL

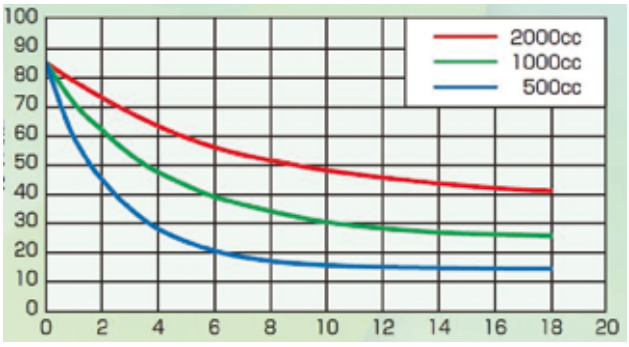
General specification					
	RD3, RD4	RP1, RP3	MDL-3	MDL-5	MDL-7
Dehumidifying capacity (mg/day)	84	84	4	8	16
Applicable volume (m^3)	<0.2	<0.2	<0.5	<1	<2
Supply voltage – see table below (V)	3V dc	3V dc		3V dc	
Average power consumption (mW)	80	80	2	3	4
Dimensions (mm)	24x30x5.5	∅17 x 11	96x63x23	96x88x23	116x108x23
Weight (g)	1.9	0.9	20	25	50
Active element area (mm)	∅6	∅6	55x30	55x55	75x75
Operating ambient temperature	-10 to +50°C				

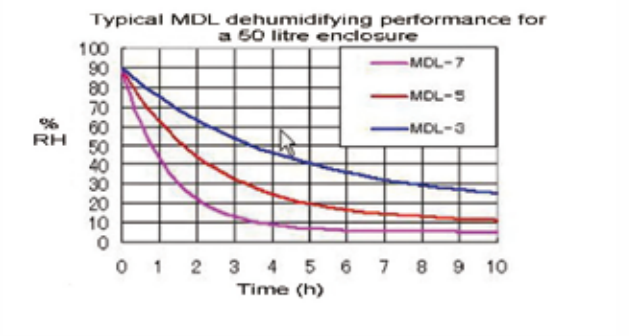
Recommended power supply (PSU) specification or RD and RP series*					
	RD3, RD4	RP1, RP3	MDL-3	MDL-5	MDL-7
Rated output voltage (all models)	3V dc				
Rated output current	500mA		2A	3A	5A
Overcurrent Protection	Required				
Overvoltage protection	Required				
Output voltage regulation (all models)	0.1V or less				
Ripple noise (all models)	0.2V or less				

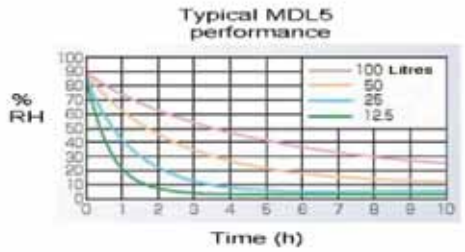
*Use PSU with constant current characteristics

Typical Drying curves

RD3, RD4, RP1, RP3







Quick conversionConversion table

m^3	Litres	ft^3
0.05	50	1.75
0.1	100	3.5
0.5	500	17.5
1.0	1000	35

For detailed dimension drawings refer to the download section of the Rosahl website at www.rosahl.co.uk/download

ROSAHL

Serious about dehumidification

Exclusively available from

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