



PURE PERFORMANCE

Dehumidification and drying for industrial
and commercial companies

Why use a dehumidifier?

Particularly in the industrial and commercial sectors, swimming pool and warehousing industries, operators are often confronted with a pressing need to control the humidity of the air.

Ensuring product quality

Being able to precisely control air humidity throughout production processes is an essential factor in ensuring product quality remains consistently high. Using air dehumidifiers and dryers helps to ensure that these processes remain safe and stable.

Maintaining operations and preventing downtime

Dehumidifiers can protect pipework, installations, operating materials and technical appliances from moisture damage. This ensures a high level of operational readiness. High costs due to moisture-related remediation work and loss of production are avoided.

Protecting valuables in storage and archives

In the archive and warehouse sector, dehumidifiers help to protect valuable items from moisture damage, which can, in extreme cases, lead to total destruction.

Conservation of out of service machinery

Machines and equipment that are taken out of service periodically can be protected from corrosion damage with air dehumidifiers. This keeps them in peak condition to ensure that they can be put back into service more quickly when the time comes.

Protecting building structures

Air dehumidifiers can be used to prevent/minimize water vapor diffusion through building structures, and so protect them from deterioration over the long term. High follow-up costs for building renovation are thus prevented.

Operational safety and hygiene

Condensate formation on walkways can lead to an increased risk of accidents and encourage bacterial growth. Air dehumidifiers help to maintain safe and hygienic conditions.



Preventing condensation



Protection from rust and corrosion



Preventing mold and rot



Ensuring product quality



Preventing clumping

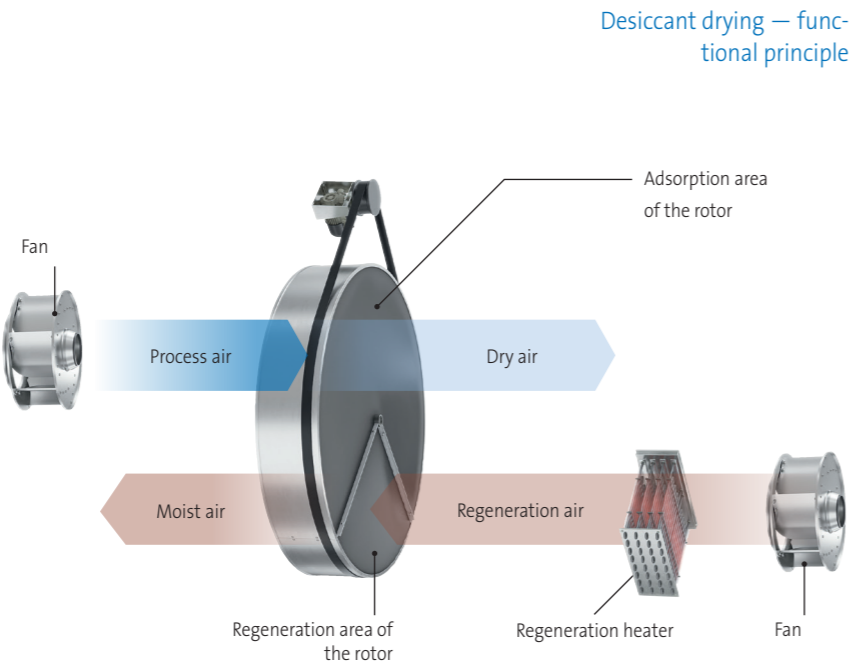
Condair DA series

Condair DA desiccant driers are designed to be used wherever extremely low humidity is needed, such as in industrial drying processes, or where there are very low temperatures to deal with.

The powerful sorption rotors enable the safe operation of the units down to temperatures of -30°C as well as bringing humidity values down to a minimum.

As well as standard designs with drying capacities of 0.6–182 kg/h, a wide range of specialized versions are also available.

Depending on their size, the units can be fitted with pre- and/or post-cooling batteries, heat exchangers or condensation modules prior to delivery. Post-cooling in particular is often necessary due to the heat given off by the dry air, and should be taken into account at an early stage of the planning process. As well as a range of different regeneration processes, you also have the option



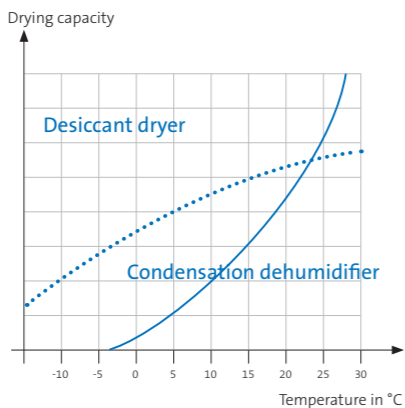
Desiccant drying — functional principle

to combine existing media of your own, such as steam or PWW systems, with the electrical regeneration heater.

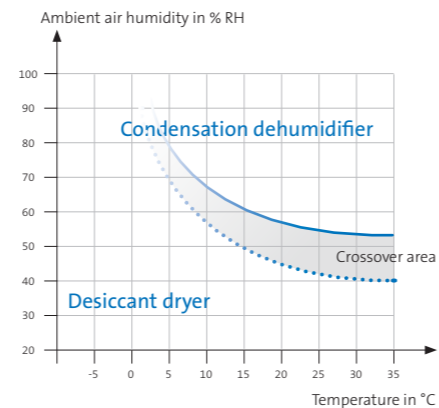
This saves a considerable amount of energy, particularly with larger systems, and can therefore help you achieve a substantial reduction in operating costs.

The sorption rotor used in Condair desiccant dryers is silicone-free. The drying agent is neither respirable nor flammable.

Performance characteristics



Recommended area of application according to temperature/humidity



Double-wall housing

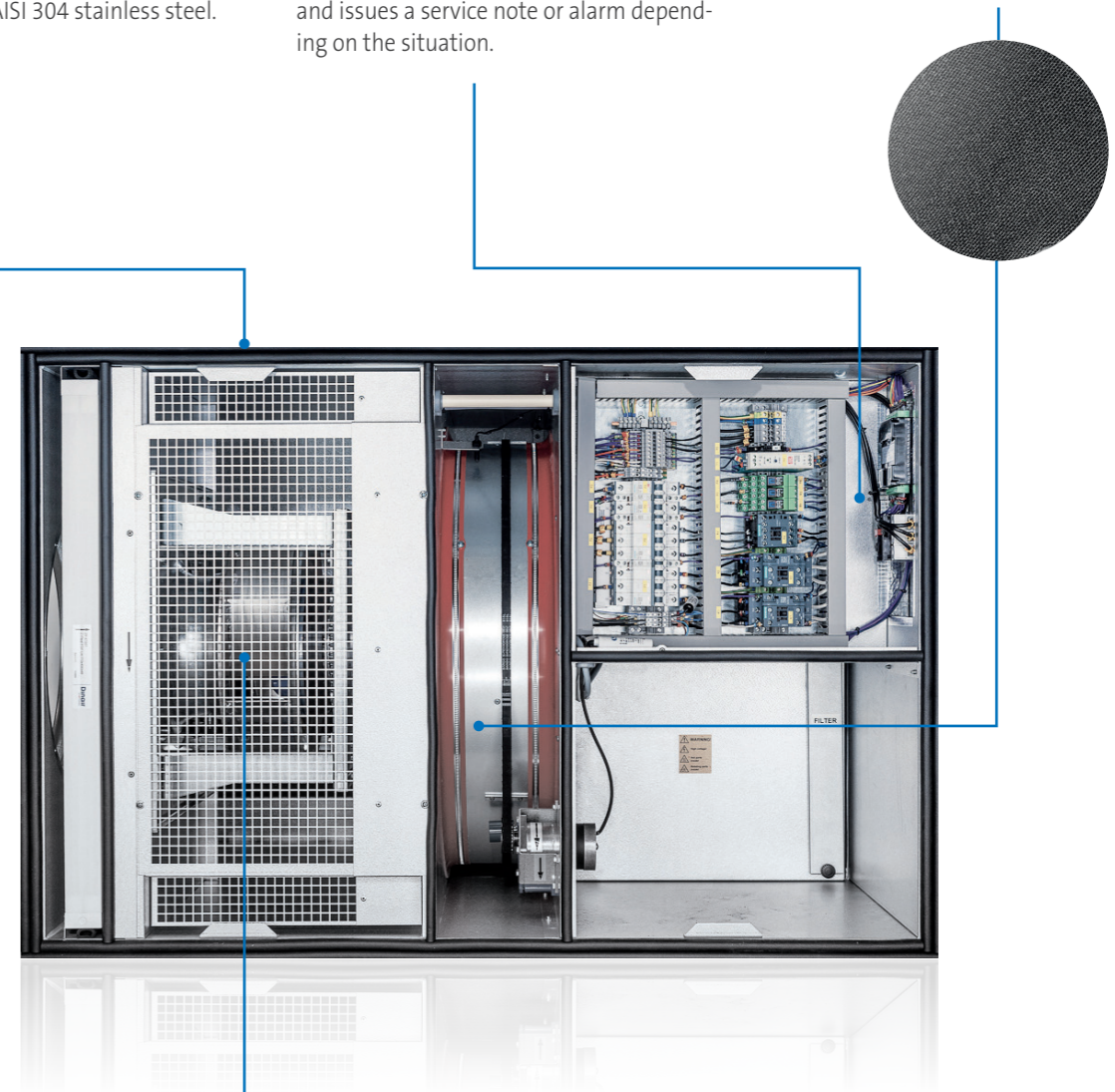
As of size DA 500, all units have a fully insulated double-wall housing made of corrosion-resistant Aluzinc® with powder coating as standard. The spaces between the housings are filled with at least 30 mm of mineral wool as an insulation material. This ensures safe and efficient operation even at very low temperatures as well as maximum hygiene. Optionally, the housing can also be manufactured in AISI 304 stainless steel.

Different control options

The Condair adsorption dryers can be equipped with different control variants depending on customer requirements. Depending on the application, the unit can be equipped with a PLC with touch screen, which allows the control of the humidity and optionally the temperature. In addition, the PLC increases operational reliability because it monitors the internal components and issues a service note or alarm depending on the situation.

Highly efficient desiccant rotor

The desiccant rotor consists of a glass fibre structure which is coated with an extremely hygroscopic silica gel. This honeycomb structure creates an enormous internal surface for efficient moisture transmission. The rotor material is hygienic, non-flammable and non-respirable, and the rotors are largely maintenance-free.



Efficient fans

Only high-quality, directly driven EC-brand fans are used. The fans are designed in push configuration. Here the air for the regeneration and process air is led over the rotor with positive pressure. This enables problem-free use even at very low humidity levels, because the regeneration fan does not come into contact with hot moist air.

Regenerative heat sources

All adsorption dryers up to and including size DA 4000 have electrical PTC heating elements for the regeneration process. The self-regulating properties of the PTC heating elements provide protection against fusing and thermostat interruptions. Alternatively, the adsorption dryer can also be equipped with a hot water or steam register or, for larger air volumes, with a gas burner.

Sophisticated construction

All of the components are designed to be easy to remove and maintain. The filter inserts can be replaced easily. Construction with a vertically arranged rotor enables a low overall height. The optimum load distribution of the installed components ensures a long service life and high operational reliability.

Technical Data

DA DESICCANT DRYER



DA 160



DA 400

| Technical Data | | DA 160 | DA 250 | DA 440 |
|--------------------------------------|-------------------|-----------------------|-----------------|--------|
| Drying capacity at 20°C – 60% RH | kg/h | 0.6 | 1.1 | 1.4 |
| Nominal process air volume | m ³ /h | 160 | 250 | 440 |
| Nominal regeneration air volume | m ³ /h | 40 | 50 | 100 |
| Electrical connected load | kW | 1 | 1.3 | 2.1 |
| Current consumption | A | 4.3 | 5.65 | 9.1 |
| Temperature/humidity operating range | °C / % RH | -30 to +40 / 0 to 100 | | |
| Voltage supply | V/Ph/Hz | 230/1/50 | | |
| Air intake area | mm | 145 x 155 | 145 x 255 | |
| Dry air connection diameter | mm | 100 | 125 | |
| Damp air connection diameter | mm | 63 | 80 | |
| Dimensions (H x W x D) | mm | 273 x 322 x 329 | 351 x 335 x 357 | |
| Sound pressure levels ¹⁾ | dB(A) | 53 | 52.9 | 69 |
| Weight | kg | 10.5 | 14 | 14 |

| Technical Data | | DA 210 | DA 400 | DA 450 |
|--|-------------------|-----------------------|-------------------|--------|
| Drying capacity at 20°C – 60% RH | kg/h | 0.6 | 1.5 | 2.2 |
| Nominal process air volume | m ³ /h | 210 | 400 | 450 |
| Nominal regeneration air volume | m ³ /h | 40 | 120 | 120 |
| Electrical connected load | kW | 1.1 | 2.3 | 3.5 |
| Current consumption | A | 4.8 | 10 | 15.2 |
| Temperature/humidity operating range | °C / % RH | -30 to +40 / 0 to 100 | | |
| Voltage supply | V/Ph/Hz | 230/1/50 | | |
| Process air connection diameter | mm | 125 | 160 | |
| Dry air connection diameter | mm | 100 | 160 | |
| Humid / regeneration air connection diameter | mm | 63 | 80 | |
| Dimensions (H x W x D) | mm | 457 x 315 x 315 | 525.5 x 504 x 428 | |
| Sound pressure levels ¹⁾ | dB(A) | 53.3 | 62.2 | 63 |
| Weight | kg | 16.5 | 28 | 31 |

¹⁾ Laboratory values measured with connected ventilation ducts at a distance of 1 m from the instrument surface. Actual values may vary.

Technical Data

DA DESICCANT DRYER



DA 500

| Technical Data | | DA 500 | DA 700 | DA 1000 | DA 1400 | DA 2400 | DA 3400 | DA 4000 |
|---|-------------------|-----------------------|--------|---------|---------|---------|---------|---------|
| Drying capacity at 20°C – 60% RH | kg/h | 3.3 | 5.1 | 7.1 | 10 | 13.5 | 14.5 | 20 |
| Nominal process air volume | m ³ /h | 500 | 700 | 1,000 | 1,400 | 2,400 | 3,400 | 4,000 |
| Nominal regeneration air volume | m ³ /h | 150 | 220 | 350 | 400 | 500 | 550 | 850 |
| Ext. compression — process air | Pa | 300 | 200 | 300 | 200 | 300 | 300 | 200 |
| Ext. compression — regeneration air | Pa | 300 | 250 | 200 | 300 | 250 | 200 | 200 |
| Electrical connected load | kW | 4.5 | 7.5 | 11.0 | 13.6 | 19.0 | 20.6 | 28.7 |
| Electrical power of regeneration heating coil | kW | 4.0 | 7.0 | 10.2 | 13.0 | 17.5 | 18.0 | 26.0 |
| Temperature/humidity operating range | °C / % RH | -30 to +40 / 0 to 100 | | | | | | |
| Voltage supply | V/Ph/Hz | 400/3/50 | | | | | | |
| Process air connection diameter | mm | 400 | | | | | | |
| Dry air connection diameter | mm | 315 | | | | | | |
| Humid/regeneration air connection diameter | mm | 200 | | | | | | |
| Dimensions (H x W x D) | mm | 910 x 1,199 x 992 | | | | | | |
| Sound pressure levels ¹⁾ | dB(A) | 62 | 62 | 62 | 63 | 68 | 69 | 69 |
| Weight | kg | 185 | 190 | 190 | 195 | 200 | 200 | 205 |

| Technical Data | | DA 4400 | DA 6400 | DA 7400 | DA 9400 |
|---|-------------------|-----------------------|---------|---------|---------|
| Drying capacity at 20°C – 60% RH | kg/h | 28 | 36.5 | 45 | 54 |
| Nominal process air volume | m ³ /h | 4,400 | 6,400 | 7,400 | 9,400 |
| Nominal regeneration air volume | m ³ /h | 1,200 | 1,600 | 2,250 | 2,500 |
| Ext. compression — process air | Pa | ≥ 200 | | | |
| Ext. compression — regeneration air | Pa | ≥ 200 | | | |
| Electrical connected load | kW | 40.9 | 54.5 | 66.5 | 79.0 |
| Electrical power of regeneration heating coil | kW | 36.0 | 48.0 | 60.0 | 72.0 |
| Temperature/humidity operating range | °C / % RH | -30 to +40 / 0 to 100 | | | |
| Voltage supply | V/Ph/Hz | 400/3/50 | | | |
| Process air connection diameter | mm | 630 | | | |
| Dry air connection diameter | mm | 500 | | | |
| Regeneration air connection diameter | mm | 315 | | | |
| Damp air connection diameter | mm | 315 | | | |
| Dimensions (H x W x D) | mm | 1,311 x 2,194 x 1,280 | | | |
| Sound pressure levels ¹⁾ | dB(A) | 72-73 | | | |
| Weight | kg | 550 | 600 | 650 | 700 |

Technical Data

DA DESICCANT DRYER

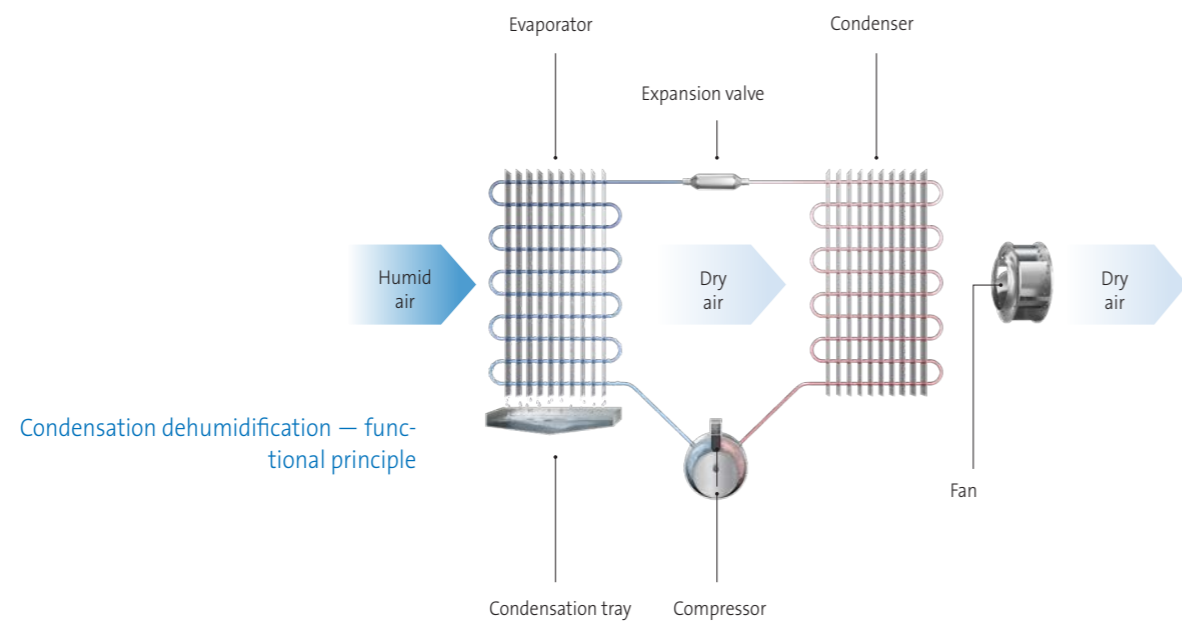


DA 27000 SP

| Technical Data | | DA 13000SP ¹⁾ | DA 19000SP ¹⁾ | DA 27000SP ¹⁾ |
|---|-------------------|--------------------------|--------------------------|--------------------------|
| Drying capacity at 20°C – 60% RH | kg/h | 86 | 120 | 182 |
| Nominal process air volume | m ³ /h | 13,000 | 19,000 | 27,900 |
| Nominal regeneration air volume | m ³ /h | 4,200 | 6,000 | 6,980 |
| Ext. compression — process air | Pa | 590 | 440 | 400 |
| Ext. compression — regeneration air | Pa | 200 | 450 | 250 |
| Total electrical connected load | kW | 143.5 | 207.5 | 309 |
| Electrical power of regeneration heating coil | kW | 132 | 192 | 288 |
| Temperature/humidity operating range | °C / % RH | -30 to +40 / 0 to 100 | | |
| Voltage supply | V/Ph/Hz | 400/3/50 | | |
| Process air connection diameter | mm | 800 | 1,000 | |
| Dry air connection diameter | mm | 800 | 1,000 | |
| Regeneration air connection diameter | mm | 500 | 630 | |
| Damp air connection diameter | mm | 500 | 630 | |
| Process air / regeneration air filter class | - | G4 | | |
| Dimensions (height) | mm | 2,300 | 2,500 | 2,500 |
| Dimensions (width) | mm | 2,250 | 2,400 | 2,900 |
| Dimensions (depth) | mm | 1,600 | 1,900 | 2,400 |
| Weight | kg | 1,350 | 1,700 | 2,400 |

1) All data refers to a standard unit with electrical regeneration.





Condair DC series

Condair industrial dehumidifiers have many different applications across the industrial, commercial and warehousing sectors. They are based around a cooling circuit system, and are generally used in areas which require a relative humidity as low as 45% rH. Condair industrial dehumidifiers can be configured in a variety of ways and to suit our customers' individual needs. So we always have the optimum unit for any application.

The standard units in the Condair DC series cover a broad range of applications. They have dehumidification capacities from 75 l / 24 h up to 930 l / 24 h. Due to their enormous air capacities up to 8,500 m³/h, even the humidity in very large buildings can be regulated with only one, or just a few, units. They can be free-standing or configured for mobile use, and can even be connected to the air duct network to ensure optimum distribution of the dehumidified air.

For temperature-sensitive areas, we offer special temperature-neutral versions. The condensation heat from the dehumidifier is drawn away via an external condenser so that the room temperature is not affected. Condair DC industrial dehumidifiers are equipped with hot gas defrosting as standard, which ensures safe and economical operation even at low room temperatures.

Durable housing

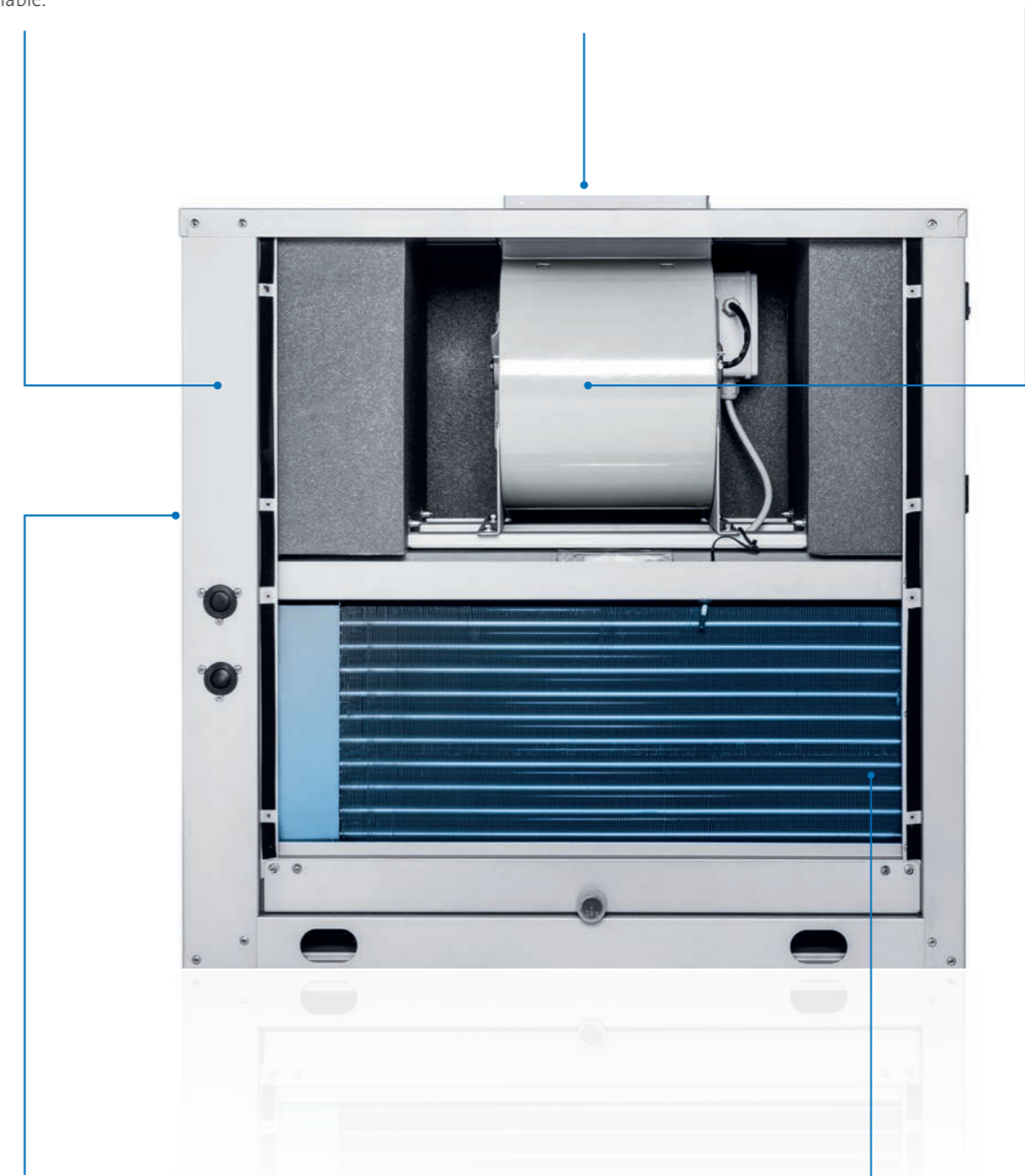
The robust, hot-dip galvanized RAL 9006 housing provides maximum protection against the aggressive environmental conditions often experienced in the industrial sector. The housing is easy to disassemble to ensure fast access to all of the relevant components. A stainless steel version is also available.

Flexible connection options

Condair DC dehumidifiers can be operated independently or connected to a ventilation duct network. Separate connection networks and specialist applications, we offer more powerful EC fans with higher compression levels.

Fan

High-quality, directly controlled AC or EC fan. The fan is very energy-efficient and quiet to run. A variety of external compressors can be installed on the unit. The fan housing is soundproof and completely separate from the cooling circuit.



Controller

The dehumidifier is controlled fully electronically via a microprocessor. Operation and error notifications are displayed on the integrated screen, which can also show operating hours. The microprocessor controls important functions such as defrosting and compressor operation. A volt-free contact is provided for issuing fault messages.

Cooling circuit

Highly efficient R410A cooling circuit. We only use well-known branded components in our cooling circuits. The pressure is equalized by thermostatic expansion valves. All components are easily accessible after disassembly of the corresponding cladding parts. Specialized versions, e.g. for operation at higher temperatures, are available on request.

Heat exchangers

In all versions of the unit, the heat exchangers feature a special coating to protect them from aggressive environmental conditions as standard. Special varnishes and coatings are available if the unit is to be operated under particularly aggressive conditions.

Technical Data

Condensation dehumidifier DC



DC 200

| Technical Data | | DC 75 | DC 100 | DC 150 | DC 200 |
|---|---------------------|-----------------|--------|-------------------|--------|
| Dehumidification capacity at 30°C – 80% RH | l/24h | 73.0 | 95.2 | 157.1 | 194.3 |
| Dehumidification capacity at 20°C – 60% RH | l/24h | 34.5 | 50.2 | 66.0 | 90.6 |
| Dehumidification capacity at 10°C – 70% RH | l/24h | 26.6 | 33.7 | 43.9 | 60.7 |
| Air circulation | m ³ /h | 800 | 1,000 | 1,500 | 1,800 |
| Nominal power consumption ¹⁾ | kW | 1.59 | 1.83 | 2.22 | 2.84 |
| Maximum current consumption ²⁾ | A | 7.1 | 8.1 | 12.6 | 15.5 |
| Compression available (higher compression optional) | Pa | 50–150 | | | |
| Operating range – humidity | % RH | 40–99 | | | |
| Operating range – temperature | °C | 5–36 | | | |
| Voltage supply | V/Ph/Hz | 230/1/50 | | | |
| Sound pressure levels ³⁾ | dB(A) | 52 | 54 | 60 | 62 |
| Refrigerant / fill volume | Type/g | R410A / 550 | | R410A / 1100 | |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 1.15 | 1.15 | 2.30 | 2.30 |
| Dimensions (H x W x D) | mm | 800 x 819 x 400 | | 981 x 1,055 x 554 | |
| Weight | kg | 85 | 90 | 130 | 135 |

| Technical Data | | DC 270 | DC 350 | DC 450 | DC 550 | DC 750 | DC 950 |
|---|---------------------|---------------------|-------------|--------|---------------------|-------------|-------------|
| Dehumidification capacity at 30°C – 80% RH | l/24h | 263.1 | 340.2 | 418.8 | 566.8 | 751.1 | 939.3 |
| Dehumidification capacity at 20°C – 60% RH | l/24h | 111.4 | 168.5 | 223.9 | 267.1 | 391.0 | 501.0 |
| Dehumidification capacity at 10°C – 70% RH | l/24h | 75.7 | 118.3 | 160.9 | 180.2 | 269.8 | 349.6 |
| Air circulation | m ³ /h | 3,500 | 4,200 | | 5,500 | 7,000 | 8,500 |
| Nominal power consumption ¹⁾ | kW | 4.09 | 5.40 | 8.33 | 9.38 | 13.90 | 18.39 |
| Maximum current consumption ²⁾ | A | 10.4 | 12.8 | 17.0 | 19.4 | 28.2 | 34.8 |
| Compression available (higher compression optional) | Pa | 50–150 | | | | | |
| Operating range – humidity | % RH | 40–99 | | | | | |
| Operational range – temperature | °C | 5–36 | | | | | |
| Voltage supply | V/Ph/Hz | 400/3/50 | | | | | |
| Sound pressure levels ³⁾ | dB(A) | 63 | 64 | 64 | 66 | 66 | 66 |
| Refrigerant / fill volume | Type/g | R410A/3,000 | R410A/2,500 | | R410A/6,300 | R410A/6,600 | R410A/7,000 |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 6.26 | 5.22 | 5.22 | 13.16 | 13.78 | 14.62 |
| Internal unit dimensions (H x W x D) | mm | 1,378 x 1,154 x 704 | | | 1,750 x 1,504 x 854 | | |
| Weight | kg | 207 | 211 | 215 | 415 | 423 | 430 |

1) at t_a = 30°C; humidity = 80% RH 2) full load current; FLA = full load amperage 3) laboratory values in 1 m free field according to ISO 9614, actual values may differ
4) R410A global warming potential (GWP) = 2,088 CO₂e

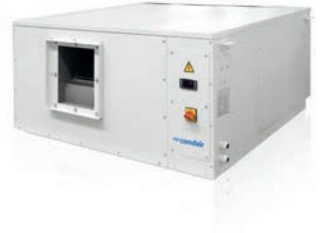


For wall mounting Condair DC-W



| Technical Data | | DC 50W | DC 75W | DC 100W | DC 150W | DC 200W |
|---|---------------------|--------------------|-------------------|-------------|-------------------|---------|
| Dehumidification capacity at 30°C – 80% | l/24h | 49.0 | 73.0 | 95.0 | 155.0 | 190.0 |
| Dehumidification capacity at 20°C – 60% | l/24h | 25.6 | 39.2 | 50.3 | 68.2 | 90.9 |
| Dehumidification capacity at 10°C – 70% | l/24h | 17.3 | 26.6 | 33.7 | 44.3 | 60.9 |
| Air circulation | m ³ /h | 500 | 800 | 1,000 | 1,400 | 1,650 |
| Compression available | Pa | 40 | | | | |
| Nominal power consumption ¹⁾ | kW | 0.9 | 1.2 | 1.6 | 1.9 | 2.5 |
| Maximum current consumption ²⁾ | A | 3.9 | 8.3 | 11.5 | 13.4 | 17.0 |
| Temperature/humidity operating range | C° / % RH | 5–36°C / 40–99% RH | | | | |
| Voltage supply | V/Ph/Hz | 230/1/50 | | | | |
| Sound pressure levels ³⁾ | dB(A) | 47 | 50 | 50 | 52 | 54 |
| Refrigerant / fill volume | Type/g | R410A / 470 | R410A / 600 | R410A / 700 | R410A / 1,200 | |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 0.98 | 1.25 | 1.46 | 2.51 | |
| Dimensions (H x W x D) | mm | 750 x 835 x 260 | 751 x 1,134 x 260 | | 840 x 1,384 x 310 | |
| Weight | kg | 50 | 71 | 75 | 99 | 102 |

For ceiling mounting Condair DC-C



| Technical Data | | DC 50C | DC 75-C | DC 100C | DC 150C | DC 200C |
|---|---------------------|--------------------|-----------------|---------|---------------------|---------------|
| Dehumidification capacity at 30°C – 80% | l/24h | 49.0 | 73.0 | 95.0 | 155.0 | 190.0 |
| Dehumidification capacity at 20°C – 60% | l/24h | 25.6 | 39.2 | 50.2 | 62.8 | 87.1 |
| Dehumidification capacity at 10°C – 70% | l/24h | 17.3 | 26.6 | 33.7 | 44.3 | 60.9 |
| Air circulation | m ³ /h | 500 | 800 | 1,000 | 1,400 | 1,650 |
| Compression available (higher compression optional) | Pa | 150 | | | | |
| Nominal power consumption ¹⁾ | kW | 0.97 | 1.29 | 1.76 | 2.07 | 2.74 |
| Maximum current consumption ²⁾ | A | 3.9 | 6.1 | 9.3 | 12.0 | 15.7 |
| Temperature/humidity operating range | C° / % RH | 5–36°C / 40–99% RH | | | | |
| Voltage supply | V/Ph/Hz | 230/1/50 | | | | |
| Sound pressure levels ³⁾ | dB(A) | 50 | 52 | 54 | 59.5 | 61.5 |
| Refrigerant / fill volume | Type/g | R410A / 360 | R410A / 600 | | R410A / 900 | R410A / 1,200 |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 0.75 | 1.25 | | 1.88 | 2.51 |
| Dimensions (H x W x D) | mm | 360 x 710 x 700 | 460 x 900 x 980 | | 530 x 1,050 x 1,160 | |
| Weight | kg | 63 | 95 | 122 | 131 | 140 |

For rear wall mounting Condair DC-R



| Technical Data | | DC 50R | DC 75R | DC 100R | DC 150R | DC 200R |
|---|---------------------|--------------------|-------------------|-------------|-------------------|---------|
| Dehumidification capacity at 30°C – 80% | l/24h | 49.0 | 73.0 | 95.0 | 155.0 | 190.0 |
| Dehumidification capacity at 20°C – 60% | l/24h | 25.6 | 39.2 | 50.3 | 68.2 | 90.9 |
| Dehumidification capacity at 10°C – 70% | l/24h | 17.3 | 26.6 | 33.7 | 44.3 | 60.9 |
| Air circulation | m ³ /h | 500 | 800 | 1,000 | 1,400 | 1,650 |
| Compression available | Pa | 40 | | | | |
| Nominal power consumption ¹⁾ | kW | 0.9 | 1.2 | 1.6 | 1.9 | 2.5 |
| Maximum current consumption ²⁾ | A | 3.9 | 8.3 | 11.5 | 13.4 | 17.0 |
| Temperature/humidity operating range | C° / % RH | 5–36°C / 40–99% RH | | | | |
| Voltage supply | V/Ph/Hz | 230/1/50 | | | | |
| Sound pressure levels ³⁾ | dB(A) | 47 | 50 | 50 | 52 | 54 |
| Refrigerant / fill volume | Type/g | R410A / 470 | R410A / 600 | R410A / 700 | R410A / 1,200 | |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 0.98 | 1.25 | 1.46 | 2.51 | |
| Dimensions (H x W x D) | mm | 680 x 695 x 252 | 681 x 1,006 x 253 | | 770 x 1,255 x 300 | |
| Weight | kg | 41 | 57 | 61 | 82 | 87 |

1) at t_a = 30°C; humidity = 80% RH 2) full load current; FLA = full load amperage 3) laboratory values in 1 m free field according to ISO 9614, actual values may differ
4) R410A global warming potential (GWP) = 2,088 CO₂e

With external heat dissipation Condair **DC-N**



| Technical data / Dehumidifier | | DC 270N | DC 350N | DC 450N | DC 550N | DC 750N | DC 950N |
|---|---------------------|---------------------|---------|---------|---------------------|---------|---------|
| Dehumidification capacity at 30°C – 80% | l/24h | 263.1 | 340.2 | 418.8 | 566.8 | 751.1 | 939.3 |
| Dehumidification capacity at 20°C – 60% | l/24h | 111.4 | 168.5 | 223.9 | 267.1 | 391.0 | 501.0 |
| Dehumidification capacity at 10°C – 70% | l/24h | 75.7 | 118.3 | 160.9 | 180.2 | 269.8 | 349.6 |
| Air circulation | m ³ /h | 3,500 | 4,200 | 4,200 | 5,500 | 7,000 | 8,500 |
| Compression available (higher compression optional) | Pa | 50–150 | | | | | |
| Sensitive cooling capacity ¹⁾ (35°C outdoor air) | kW | 4.48 | 5.91 | 7.2 | 8.8 | 12.45 | 15.5 |
| Nominal power consumption ^{1) 5)} | kW | 4.38 | 5.69 | 9.04 | 10.09 | 15.52 | 20.01 |
| Maximum current consumption | A | 11.0 | 14.0 | 18.2 | 25.6 | 34.4 | 44.1 |
| Temperature/humidity operating range | C° / % RH | 5–36°C / 40–99% RH | | | | | |
| Voltage supply | V/Ph/Hz | 400/1/50 | | | 400/3/50 | | |
| Sound pressure levels ³⁾ | dB(A) | 63 | 64 | 64 | 66 | 66 | 66 |
| Coolant | Type | R410A | R410A | | R410A | R410A | R410A |
| Fill volume | g | 3,000 | 2,500 | | 9,000 | 8,000 | 8,000 |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 6.3 | 5.2 | 5.2 | 18.8 | 16.7 | 16.7 |
| Dimensions (H x W x D) | mm | 1,378 x 1,154 x 704 | | | 1,750 x 1,504 x 854 | | |
| Weight | kg | 207 | 211 | 215 | 415 | 423 | 430 |

| Technical data / Outdoor condenser | | DC 270N | DC 350N | DC 450N | DC 550N | DC 750N | DC 950N |
|---|-------------------|-------------------|---------|---------|-------------------|---------|-------------------|
| Voltage supply | V/Ph/Hz | 230/1/50 | | | | | |
| Number of fans | | 1 | | | 2 | | 3 |
| Air circulation | m ³ /h | 7,519 | 7,095 | 6,714 | 15,040 | 14,190 | 21,280 |
| Total power consumption of fan (nom.) | kW | 0.71 | | | 1.42 | | 2.13 |
| Total current consumption of fan (nom.) | A | 3.10 | | | 6.2 | | 9.3 |
| Inlet/outlet connection diameter | mm | 22/20 | | 35/28 | | 42/35 | |
| Operating range — temperature | °C | 10–40 | | | | | |
| Protection class | | IP 54 | | | | | |
| Sound pressure levels ³⁾ | dB(A) | 49 | | | 52 | | 54 |
| Dimensions (H x W x D) | mm | 828 x 1,115 x 520 | | | 828 x 2,015 x 520 | | 828 x 2,915 x 520 |
| Weight | kg | 46 | 51 | 57 | 87 | 96 | 141 |

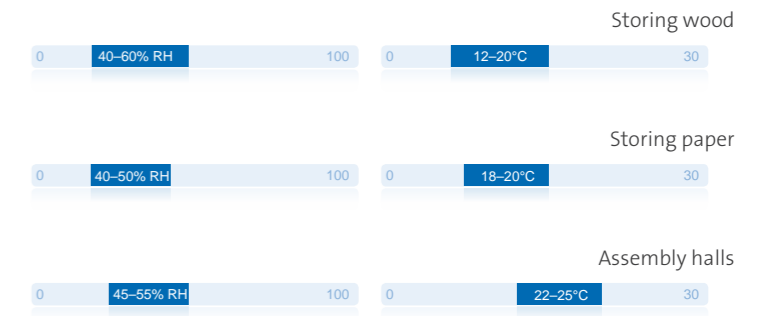
1) at t_a = 30°C; humidity = 80% RH 2) full load current; FLA = full load amperage 3) laboratory values in 1 m free field according to ISO 9614, actual values may differ
4) R410A global warming potential (GWP) = 2,088 CO₂e 5) incl. outdoor condenser

For low temperatures Condair **DC-LT**



| Technical Data | | DC 270LT | DC 350LT | DC 450LT |
|---|---------------------|---------------------|----------|----------|
| Dehumidification capacity at 30°C – 80% RH | l/24h | 263.1 | 340.2 | 418.8 |
| Dehumidification capacity at 20°C – 60% RH | l/24h | 111.4 | 168.5 | 223.9 |
| Dehumidification capacity at 10°C – 70% RH | l/24h | 75.6 | 11.3 | 160.9 |
| Dehumidification capacity at 5°C – 70% RH | l/24h | 46.7 | 80.2 | 112.2 |
| Air circulation | m ³ /h | 3,500 | 4,200 | 4,200 |
| Nominal power consumption ¹⁾ | kW | 4.09 | 5.4 | 8.33 |
| Maximum current consumption ²⁾ | A | 10.4 | 12.8 | 17.0 |
| Compression available (higher compression optional) | Pa | 50–150 | | |
| Temperature/humidity operating range | C° / % RH | 1–36°C / 40–99% | | |
| Voltage supply | V/PH/Hz | 400/3/50 | | |
| Sound pressure levels ³⁾ | dB(A) | 63 | 64 | 64 |
| Refrigerant / fill volume | Type/g | 6,000 | 5,000 | 5,000 |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 12.52 | 10.44 | 10.44 |
| Dimensions (H x W x D) | mm | 1,378 x 1,154 x 704 | | |
| Weight | kg | 227 | 231 | 235 |

| Technical Data | | DC 550LT | DC 750LT | DC 950LT |
|---|---------------------|---------------------|----------|----------|
| Dehumidification capacity at 30°C – 80% RH | l/24h | 566.8 | 751.1 | 939.3 |
| Dehumidification capacity at 20°C – 60% RH | l/24h | 267.1 | 391 | 501 |
| Dehumidification capacity at 10°C – 70% RH | l/24h | 180.2 | 269.8 | 349.6 |
| Dehumidification capacity at 5°C – 70% RH | l/24h | 121.9 | 87.3 | 246.1 |
| Air circulation | m ³ /h | 5,500 | 7,000 | 8,500 |
| Nominal power consumption ¹⁾ | kW | 9.38 | 13.90 | 18.39 |
| Maximum current consumption ²⁾ | A | 19.4 | 28.2 | 34.8 |
| Compression available (higher compression optional) | Pa | 50–150 | | |
| Temperature/humidity operating range | C° / % RH | 1–36°C / 40–99% | | |
| Voltage supply | V/PH/Hz | 400/3/50 | | |
| Sound pressure levels ³⁾ | dB(A) | 66 | 66 | 66 |
| Refrigerant / fill volume | Type/g | 13,500 | 14,000 | 15,500 |
| Total of CO ₂ equivalent ⁴⁾ | t-CO ₂ e | 28.18 | 29.23 | 32.36 |
| Dimensions (H x W x D) | mm | 1,750 x 1,504 x 854 | | |
| Weight | kg | 435 | 443 | 450 |



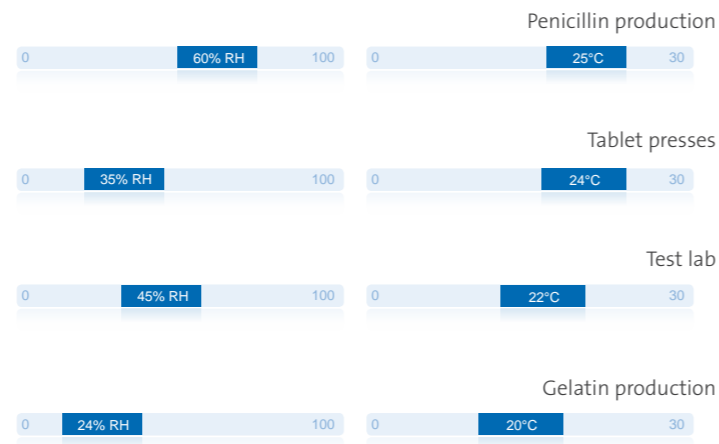
Storage and cooling

Excessively high humidity is a serious problem in many parts of the warehousing industry. The main causes of this are air infiltrating from outside and moisture evaporating from the products being stored themselves. There are a number of symptoms, including: moisture damage on packaging, clumping, mold and corrosion, that can all have a negative impact on product quality. Condensation can form on walkways, technical equipment, vertical blinds and other components, preventing you from ensuring that you have a safe and hygienic work environment.

The consequences of external air infiltrating cold storage facilities can be even more dramatic. Ice can form on goods, walls, floors, walkways and equipment, and fog can negatively affect the health of employees working

in the area. Condensation can damage or even contaminate the goods being stored, meaning that you have to make additional effort and incur additional costs to ensure that the necessary hygiene standards are met.

By using a suitable dehumidification system, you can guarantee the safe and efficient operation of your warehouses and cold storage facilities. Our systems ensure optimum product quality, and provide a safe and hygienic work environment.



Pharmaceutical industry

Many pharmaceutical products are made from hygroscopic raw materials in powdered or granulated form. High and uncontrolled humidity during the tableting and packaging process can cause a variety of problems that are often difficult to solve.

If powders or granulates come into contact with the water vapor in the air, this can have a serious effect on both the production process and product quality.

Powdered materials can clump together and block pneumatic transportation systems, which can in turn result in extensive cleaning work, and therefore downtime, being required. If this additional moisture causes irregularities in the dosing process, the effectiveness of the active chemicals may be limited and uncontrollable.

Variations in volume, weight, color and product characteristics, and a possible reduction in the shelf life of the product, can all have a negative effect on the perception of the corresponding company brand.

High humidity and high levels of condensation can also encourage bacteria and mold to grow. This in turn can result in long interruptions to the production process with devastating financial consequences.

Laboratories, too, need to precisely control their humidity to ensure that they produce accurate, reliable results. Dehumidification systems can keep humidity at the optimum level during the production and packaging process, and so ensure maximum production security and efficiency.

Condair offers a wide range of technologies and additional options to help you tailor a solution to your specific requirements.





Water suppliers

Condensation is one of the biggest challenges faced by companies operating and maintaining equipment at water supply facilities, particularly during the warmer months of the year. The infiltration of warm, humid air into cooler buildings can lead to condensation forming on the pipes and fittings that carry the water, and other colder components.

significantly reduce the amount of downtime required for maintenance by keeping equipment in peak condition. Plus, they keep the working environment safe and hygienic for staff.

This can cause considerable damage to technical systems and the building itself:

- Destruction of anti-corrosion coatings
- Corrosion of electrical contacts and damage to sensitive electronics
- Droplet and mold formation
- Mold build-up and microbe growth
- Clumping of chemicals and additives
- Wet surfaces representing a safety risk for staff

Powerful dehumidification systems can effectively and efficiently protect technical equipment in water supply facilities from all kinds of moisture-related damage. They can also help to





Food

When it comes to producing, processing and storing foods, it is incredibly important for companies to adhere to the strictest of hygiene standards. As well as moisture infiltration from warm, humid external air, people and the products themselves, the often regular and intensive cleaning measures necessary in this field can also cause an enormous additional build-up of moisture at production facilities. Dehumidifiers are the most effective and efficient solution to ensure you maintain the optimum conditions for uninterrupted, hygienic and safe operation.

Large quantities of water vapor can

be discharged in the shortest possible time, so that condensation and droplet formation can be avoided. Interruptions to operations after cleaning work are minimized. Transport systems, too, are available again quickly after cleaning.

Potential dangers for staff, such as those posed by wet walkways and fog are avoided, and mold cannot even begin to grow.

Efficiency

One traditional method of dehumidification that is still commonplace today is a simple ventilation and circulation system, whereby the damp air is sucked in via a ventilator and drier air streams in from outside. This external air must then be reheated, which takes a huge amount of energy. This method is therefore incredibly wasteful.

It is far more efficient to run dehumidifiers based on a closed cooling circuit system. All Condair industrial dehumidifiers work according to the heat pump principle, whereby all of the warmth given up in the heat pump circuit is used to heat the room. This considerably decreases operating costs. Compared to a simple ventilation system with supply and exhaust air streams, a dehumidifier can be up to 60% more efficient.

Desiccant driers can also be very economical if the fluids available on site, such as steam or PWW, are combined with the electrical regeneration heater.

Using a hybrid regeneration battery like this saves a considerable amount of energy, particularly with larger systems, and can therefore help you achieve a substantial reduction in operating costs.

Planning and service

We offer a wide and comprehensive range of dehumidification options. For this reason, we recommend that when it comes to selecting your system, you consult a specialist who can offer objective, expert advice for planners, installers and operators.

The experts at Condair GmbH are happy to help you plan, design and select the optimum dehumidification system for your needs.

And if you ever experience an issue, help is available fast for both industrial and commercial customers. Condair GmbH offers a nationwide customer service program which you can also use to source maintenance

and commissioning services for your dehumidifier as needed.

Condair GmbH offers the following product-applicable services:

- Planning support
- On-site consultation and sales with our specialists
- Software-supported design and calculations
- Nationwide after-sales service
- Replacement parts



