

**COTES ALL-ROUND  
THE C105 RANGE**



**EXPERTS IN HUMIDITY MANAGEMENT**

**COTES.COM**

# COTES ALL-ROUND THE C105-RANGE

## IDEAL FOR USE IN

- Pharmaceutical production
- Cold stores/freezer facilities
- Waterworks
- Virtually any kind of indoor space

## ADVANTAGES

- Accurate, software-driven monitoring and control
- Low energy consumption
- Low-noise operation
- Better monitoring of service intervals
- Standardised heating and cooling modules
- Exceptional build quality
- Sleek, ultra-modern appearance
- Complies with ErP Directive 2015

## BENEFITS

- More cost-effective management of air humidity
- Accurate control of humidity specifications for ingoing and outgoing air
- Low operating costs
- Low maintenance/repair costs and long service life
- Easy, rapid servicing
- Easy to clean and keep clean
- Can be placed even where highly visible

## OPTIONAL EQUIPMENT

- Additional temperature and humidity sensors
- Extra insulation of the cabinet
- Additional ways to heat the regeneration air, including steam, gas burner, etc.

## MODULES

(under development)

- Post-heating
- Pre-cooling and post-cooling
- Heat recovery

## ANCILLARY EQUIPMENT

- Different filter configurations, as required
- Rectangular or circular air duct connection kits, depending on customer specifications



# FLEXIBILITY AND ENERGY EFFICIENCY

## **Cotes All-Round – the C105 range**

Cotes All-Round C105 is an innovative range of large, elegant, versatile dehumidifiers, with moisture removal capacities of 25.7–50.7 kg per hour, and able to provide approx. 4000–8800 m<sup>3</sup> of dry air per hour.

The All-Round C105 is the most recent and largest model in the standard ranges of Cotes dehumidifiers, expanding the volumes of air in which you can control humidity, and at reasonable cost.

These dehumidifiers are designed for maximum reliability, low operating costs and easy servicing. This makes an All-Round C105 an inexpensive long-service solution to your mainstream humidity management challenges.

## **Modern, modular design**

The sleek stainless-steel cabinet, featuring the best of contemporary industrial design, makes Cotes All-Round dehumidifiers ideal for installation even in places where they are highly visible.

Standardised, modular configurations are available, so you can easily integrate any heating units, cooling systems, heat recovery systems, fans, filters, sensors, control setups, etc. that you need for tackling specific operating requirements. Cotes All-Round units also feature built-in electronic monitoring and control capabilities that make it easy to customise how and when the dehumidifier runs, in order to comply with your exact operating requirements and priorities, as these change and vary over time.

## **Where they're used**

The high moisture removal capabilities and the large volumes of air that can be dried make the All-Round C105 range well-suited for many industrial applications. These units are ideal for controlling air conditions where temperature, air flow or relative humidity are critical parameters.

## **Choice of dehumidification priorities**

Cotes All-Round C105 dehumidifiers are designed for two main types of use.

**C105D** units are configured with a specific focus on high  $\Delta X$  values (the driest air possible) in industrial processes where it is essential to keep the levels of moisture in the air under stringent control.

**C105E** units are specially configured for effective humidity management in enclosed spaces, and where the main focus is on keeping energy consumption to the minimum.

## **Want to know more?**

Contact Cotes experts at

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or [sales@cotes.com](mailto:sales@cotes.com)

# COTES ALL-ROUND THE C105 RANGE

## **Maximum flexibility**

Cotes All-Round dehumidifiers provide users with an exceptional degree of control over airflow humidity and temperature specifications, via factory-installed control settings.

Standardised, modular configurations are also available for easy integration of a range of heating units, cooling systems, fans, filters, sensors, control setups, etc.

## **Choice of control configurations**

Four different levels of electronic control configurations are available for Cotes All-Round units, so you can set up the dehumidifier to your specific practical requirements and operating priorities.

With control configurations B, C and D, an easy-to-read 5.7-inch touch panel is fitted as standard to give you easy access to your chosen level of performance data, operating alarms and service interval monitoring.

You can choose to activate completely standardised settings – where you just turn the unit on and forget about it – or to opt for varying degrees of control over air flow specifications. You decide on the level of control access you need or want, via smartphones, web-based remote control, etc.

## **Heat recovery (under development)**

You can order your All-Round C105 dehumidifier with a highly efficient aluminium cross-flow air-to-air heat exchanger to recover heat from the regeneration air leaving the unit. This thermal energy can then be reused to preheat the incoming regeneration air.

The heat exchanger is placed in a matching stainless-steel case with inlets and outlets for the incoming and outgoing regeneration air.

These energy-saving heat recovery units can save as much as 20% on your energy bills, resulting in payback in as little as 24 months.

Cotes heat recovery modules are available factory-fitted as standard, or can be retrofitted to existing All-Round C105 dehumidifiers.

## **Post-heating (under development)**

All-Round C105 dehumidifiers can be fitted with a post-heating unit, as an optional accessory.

The post-heating unit will adjust the specifications of the process air after it has been dried in the adsorption rotor, to ensure 100% control of both relative humidity and temperature.

## **Pre-cooling and post-cooling (under development)**

All-Round C105 dehumidifiers can be fitted with a special cooling unit to reduce and/or control the temperature /humidity of the dry air entering and leaving the dehumidifier. A cooling unit fitted before the adsorption rotor is particularly beneficial if the incoming process air is hot and humid. In such cases, some of the moisture in the air will condense in the cooling unit, thus increasing the efficiency of the adsorption rotor.

A cooling unit fitted after the adsorption rotor is also available, making it possible to control process outlet temperature.

## **Choice of heating source (under development)**

With C105 dehumidifiers, you can use virtually any kind of thermal input – electricity, steam and gas – to heat the regeneration air.

## **Safety**

The All-Round C105 dehumidifier features rapid, easy-access servicing of the unit and its parts, helping to ensure a safe working environment.

## **Exceptional build quality**

Like all Cotes dehumidifiers, All-Round C105 units are built of robust, high-quality standardised components and materials that ensure maximum reliability, long service life and a rapid return on investment.

# HOW IT WORKS

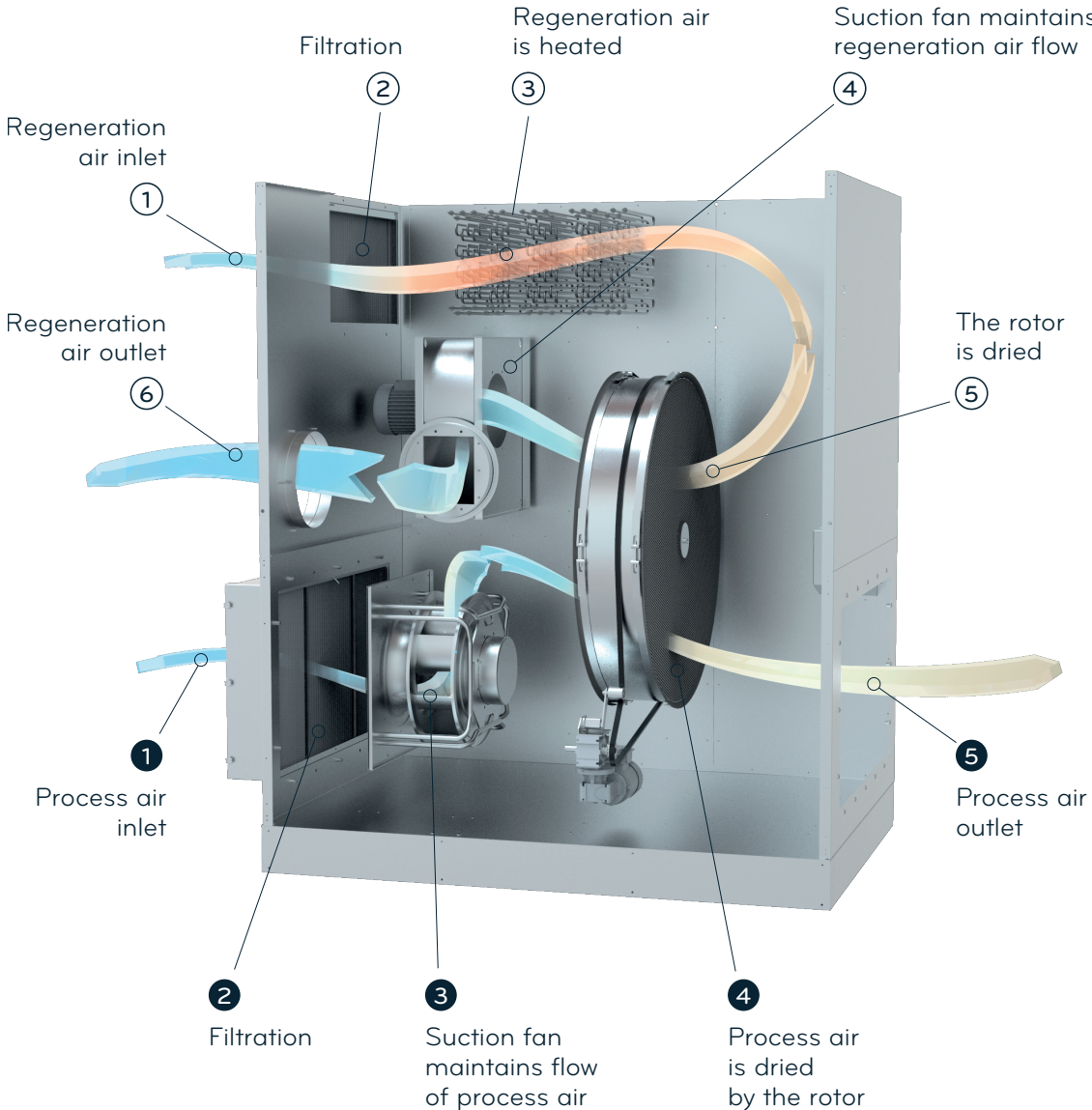
## Vertical rotor

The Cotes All-Round C105 dehumidifier is specifically designed to reduce the energy losses that take place when large-volume air flows are made to alter direction.

That's why the silica gel-coated rotor is mounted vertically so that the large volume of process air can flow through the dehumidifier unimpeded, entering through one side and leaving through the other.

The smaller flow of regeneration air enters and exits on the same side, so it's easy to fit a compact Cotes heat recovery unit.

- ① - ⑥ Regeneration air flow
- ① - ⑤ Process air flow





# CONTROL CONFIGURATIONS

Four software-based monitoring and control configurations are available.

| MONITORING AND CONTROL SETUPS  | A BASIC  | B | C | D |
|--|----------|---|---|---|
| HOURLY COUNTER TO MONITOR RUNNING TIME   | X        | X | X | X |
| OVERHEATING ALARM  | X        | X | X | X |
| ADJUSTABLE PROCESS FAN   | X        | X | X | X |
| EXTERNAL HUMIDITY SENSOR (relative humidity)   | OPTIONAL | X | X | X |
| SERVICE INDICATOR TO MONITOR MAINTENANCE REQUIREMENTS  |          | X | X | X |
| DATALOGGING FOR TRACKING CONDITIONS  |          | X | X | X |
| SERVICE ALARM MONITORING   |          | X | X | X |
| 5.7-INCH TOUCH DISPLAY   |          | X | X | X |
| FILTER AND ROTOR SERVICE ALARM   |          | X | X | X |
| CONTROL OF REGENERATION AIR FAN  |          | X | X | X |
| MEASUREMENT AND CONTROL AFTER DEW POINT (optional)   |          | X | X | X |
| TIMER, DAY/NIGHT TIMER AND CYCLE TIMER   |          | X | X | X |
| NETWORK CONNECTIVITY (optional)  |          | X | X | X |
| MONITORING AND CONTROL VIA SMARTPHONE APP (optional)   |          | X | X | X |
| MONITORING AND CONTROL BY COTES SERVICE CENTRE (optional)  |          | X | X | X |
| CAPACITY CONTROL / MODULATING HEAT CONTROL   |          | X | X | X |
| EXTRA EXTERNAL HUMIDITY SENSOR (relative humidity and dew point) Up to two external humidity sensors can be connected (single sensor included) |          |   | X | X |
| MONITORING AND CONTROL OF AIR FLOWS  |          |   | X | X |
| QUIET PROGRAM  |          |   | X | X |
| CUSTOM PROGRAM   |          |   | X | X |
| ENERGY SAVING PROGRAM  |          |   | X | X |
| ENERGY+ SAVING PROGRAM (for process applications)  |          |   |   | X |
| CONTINUOUS MEASUREMENT OF MOISTURE REMOVAL   |          |   |   | X |
| CAPACITY ALARM   |          |   |   | X |
| SPECIFIC HUMIDITY (G/KG) PROGRAM   |          |   |   | X |

## CLOSE TO YOU

We have a worldwide network of Cotes experts ready to provide you with solutions to virtually any humidity management requirement.



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TALK TO US ABOUT WHAT'S POSSIBLE

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