

CONTROL CONFIGURATIONS A – B – C – D

Cotes dehumidifiers are available with different control configurations, tailored to specific needs.

Control parameters are added for each step, from the basic Configuration A up to the full package with maximum control of all parameters Configuration D.

This scaling system allows you to choose a control setup for your dehumidifier that best matches your particular operating requirements.

A

Basic control

When purchase price matters more than energy consumption and ease of installation.

B

Added functionality

With touch display and added control features.

C

Advanced configurations

Specific programmes give you control over noise, energy consumption and more.

D

Maximum control

The full package gives you maximum control of all available parameters.

A

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MONITORING AND CONTROL SETUPS	A BASIC	B	C	D
HOUR COUNTER TO MONITOR RUNNING TIME	X	X	X	X
OVERHEATING ALARM	X	X	X	X
CONSTANT PROCESS FLOW	X	X	X	X
HUMIDITY CONTROLLER INCLUDING SENSOR (relative humidity and dew point)	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
3.5-INCH/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		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
POSSIBILITY FOR EXTRA HUMIDITY SENSOR			X	X
MONITORING AND CONTROL OF REGENERATION AND PROCESS 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



Basic control

When purchase price matters more than energy consumption and ease of installation.

In Configuration A, an external humidity sensor (DA20, DR10, DH24 or similar) can be connected to control the humidity in the room. This means the dehumidifier will be turned on/off depending on conditions (on when humidity is measured as being above the target setting, and off when below).

The fans always run at full speed, and air flows can be controlled by external dampers (not included). Configuration A is the most basic Cotes configuration, most suitable when a robust dehumidifier is needed, and when purchase price matters more than energy consumption and ease of installation.

CONFIGURATION A

MONITORING AND CONTROL SETUPS	
1	Hour counter to monitor running time
2	Overheating alarm
3	Humidity controller including sensor (relative humidity and dew point)
4	Constant Process flow

CONFIGURATION A – FEATURES

Electro-mechanical hour counter

To keep track of how much the dehumidifier has been operating.

Overheating alarm

For dehumidifier safety.

External humidity sensor

To control humidity.

Constant Process flow

This makes it possible to operate with a constant flow of air, regardless of humidity levels. If the humidity of the air rises above a certain level, the dehumidifier turns itself on automatically.

B

Added functionality

With touch display and added control features.

In Configuration B, the enclosed external humidity sensor (EE060) can be connected to control the humidity in the room. The dehumidifier can be operated using 2 programs (RH On/Off and Capacity Control).

Control of the regeneration air fan improves efficiency, and does away with any need for expenditure on a damper. Energy consumption for the fan is reduced.

The option for dew point control provides better protection against condensation. The programs and timer functions pave the way to optimised operation of the dehumidifier in any given setup.

Configuration B is a versatile dehumidifier control configuration that provides good control of the parameters most important for effective humidity management, including dew point, modulating heat, timer, datalogger control of regeneration fan, etc.

CONFIGURATION B

MONITORING AND CONTROL SETUPS	
1	Hour counter to monitor running time
2	Overheating alarm
3	Humidity controller including sensor (relative humidity and dew point)
4	Constant Process flow
5	Service indicator to monitor maintenance requirements
6	Datalogging for tracking conditions
7	Service alarm monitoring
8	3.5-inch/5.7-inch touch display
9	Filter and rotor service alarm
10	Control of regeneration air fan
11	Measurement and control after dew point
12	Timer, day/night timer and cycle timer
13	Network connectivity (optional)
14	Monitoring and control via smartphone app (optional)
15	Monitoring and control by Cotes service centre (optional)
16	Capacity control/modulating heat control

CONFIGURATION B – EXTRA FEATURES

Service indicator to monitor maintenance requirements

The service indicator keeps track of how much each component inside the dehumidifier (filter, rotor, gear, fans and electrical board) has been used. Based on the estimated service life of each, it indicates when parts need replacement in order to prevent unplanned downtime. The service menu provides data about the part number and which dealer to contact for replacement. In addition, the service indication can be reset when parts have been replaced.

Datalogging for tracking room conditions

Datalogging helps keep track of room conditions (temperature and relative humidity), presented in a graph.

Service alarm monitoring

Service alarm monitoring provides a clear indication about any faults in the system. In configuration B, only overheating is indicated.

Touch panels

A 3.5-inch (C35) or 5.7-inch (C65) touch panel gives easy control and feedback about the dehumidifier's performance.

Filter and rotor service alarm

An alarm is given if the rotor is not turning or if one of the filters is blocked (measured with sensors inside dehumidifier). This reduces the need for inspecting /servicing the dehumidifier.

Control of regeneration air fan

The speed of the regeneration air fan can be set (in %). This means there is no need for a damper for the regeneration air flow. This also reduces energy consumption, because no energy is lost in the damper.

Measurement and control based on dew point

With the dewpoint option, the dehumidifier can be set to maintain a certain relative humidity in the room, a certain dewpoint or a combination of these two operating parameters. This is ideal if the dehumidifier is to prevent condensation at a waterwork, brewery, etc.

Timer, day/night and cyclic

The day/night timer provides different conditions and /or programs at different periods during the day – for example focusing on energy consumption during the day and noise at night (useful in basements, etc.).

The cyclic timer provides cyclic change between conditions and/or programs – for example 1 hour of On/Off program and 2 minutes of Constant Fan. This is useful for ensuring air circulation in a room, even if dehumidification is not needed.

Network for connectivity (option)

The network option is ideal if remote access is required, such as when the dehumidifier is mounted where access is difficult, or needs to be integrated into a BMS system.

Monitor and control for smartphone app (option)

The app option provides monitoring and control via a smartphone app. Network for connectivity must be installed beforehand.

Monitor and control from Cotes service centre (option)

The service centre option provides remote monitoring and control by Cotes, so the user only has a minimum need for inspection. Network for connectivity must be installed beforehand.

Capacity control/modulating heat control

The modulating heat control is an alternative to On/Off. With modulating heat, the heat is adjusted to the particular need at any given time. This ensures more consistent conditions in the room or in the process. It also provides big savings on energy consumption.



Advanced configurations

Specific programs give you control over noise, energy consumption and more.

CONFIGURATION C

MONITORING AND CONTROL SETUPS	
1	Hour counter to monitor running time
2	Overheating alarm
3	Humidity controller including sensor (relative humidity and dew point)
4	Constant Process flow
5	Service indicator to monitor maintenance requirements
6	Datalogging for tracking conditions
7	Service alarm monitoring
8	3.5-inch/5.7-inch touch display
9	Filter and rotor service alarm
10	Control of regeneration air fan
11	Measurement and control after dew point
12	Timer, day/night timer and cycle timer
13	Network connectivity (optional)
14	Monitoring and control via smartphone app (optional)
15	Monitoring and control by Cotes service centre (optional)
16	Capacity control/modulating heat control
17	Possibility for extra humidity sensor
18	Monitoring and control of regeneration and process flows
19	Quiet program
20	Custom program
21	Energy saving program

In Configuration C, up to 2 external humidity sensors (EE060) can be connected to control the humidity. The dehumidifier can be operated using different programs (On/Off, Energy, Quiet and Custom).

All fans are 100% controllable, making installation fast and easy, and reducing noise levels as well as energy consumption to a minimum.

As for Configuration B, the timer function makes it easy to use different programs and different settings at different times.

Configuration C is the best choice when the focus is on ease of installation, low noise, low energy consumption and ease of use.

CONFIGURATION C – EXTRA FEATURES

Additional external humidity sensor

Adding an extra external humidity sensor makes it possible to control the dehumidifier on the basis of 2 measurements, taken in different places. This makes sense if humidity levels vary in different rooms/spots – if a door often opens /closes, for example. The dehumidifier can be controlled on the basis of either an average of the measurements, or in relation to the highest value.

Monitoring and control of air flows

Monitoring and control of the air flows (both process air and regeneration air) is a unique functionality only available from Cotes. The air flow is measured, and the fan speed can then be automatically adjusted to provide any given air flow, either in m³/hour or kg/hour.

Advantages include:

- Very easy installation (no adjustment of dampers, etc.)
- Continuous automatic adjustment of airflows. The dehumidifier will always deliver the desired air flows, regardless of changes in external pressure or other external conditions
- Lowest possible energy consumption for fans, because no energy is wasted on reducing flow with dampers
- Lowest possible noise level, because fan speed is reduced as much as possible.

Quiet program

The Quiet program is also a unique Cotes functionality. Here fan speed is reduced as much as possible, without compromising the required dehumidification capacity.

Custom program

The Custom program gives the user full control of all parameters in the dehumidification process.

Energy saving program

In the energy saving program, both heat and rotor turning speed are optimised in order to keep energy consumption to the absolute minimum. Energy savings of as much as 10% are possible.



Maximum control

The full package gives you maximum control of all available parameters.

CONFIGURATION D

MONITORING AND CONTROL SETUPS	
1	Hour counter to monitor running time
2	Overheating alarm
3	Humidity controller including sensor (relative humidity and dew point)
4	Constant Process flow
5	Service indicator to monitor maintenance requirements
6	Datalogging for tracking conditions
7	Service alarm monitoring
8	3.5-inch/5.7-inch touch display
9	Filter and rotor service alarm
10	Control of regeneration air fan
11	Measurement and control after dew point
12	Timer, day/night timer and cycle timer
13	Network connectivity (optional)
14	Monitoring and control via smartphone app (optional)
15	Monitoring and control by Cotes service centre (optional)
16	Capacity control/modulating heat control
17	Possibility for extra humidity sensor
18	Monitoring and control of regeneration and process flows
19	Quiet program
20	Custom program
21	Energy saving program
22	Energy+ saving program (for process applications)
23	Continuous measurement of moisture removal
24	Capacity alarm
25	Specific humidity program (g/kg)

In Configuration D, up to 2 external humidity sensors (EE060) can be connected to control the humidity. The dehumidifier can be operated using different programs (On/Off, Energy+, Quiet, Custom and Specific Humidity).

All fans are 100% controllable, making installation fast and easy, and reducing noise and energy consumption to a minimum.

As for Configuration B and C, the timer function makes it possible to use different programs and different settings at different times.

Configuration D is the best choice for process applications, such as industrial drying, where the dehumidifier can be set to deliver (for example) 750kg/hour of air, containing 3g/kg of moisture.

CONFIGURATION D – EXTRA FEATURES

Energy+ saving program

In the Energy saving program, high-precision sensors are used to optimise the overall energy-efficiency of the dehumidifier, including adjustments to regeneration air flow, heat levels and how fast the rotor turns. Energy savings of as much as 10% are possible.

Continuous measurement of moisture removal

Moisture removal specifications can be addressed by precision measurements of ingoing and outgoing humidity, in relation to the measured air flow.

Capacity alarm

Capacity Alarm indicates if the dehumidification capacity is below the expected level.

Specific humidity program

The Specific Humidity program is ideal for reducing variation in conditions in a drying process (for example). In this operating mode, the dehumidifier can simply be set to deliver (for example) 3g/kg, and the dehumidifier itself then takes care of the rest.