

RD5

Automatic control system

for kitchen facilities



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FUNCTIONS AND ADVANTAGES

The system of automatic kitchen ventilation control is an optional accessory available for ATREA's cooker hoods and ventilation and air-conditioning ceilings. This digital control system ensures economical ventilation to prevent the wasting of power at times when there is no cooking going on or when there are reduced heat loads. The automatic control system is fundamentally based on temperature detection above appliances and in the kitchen. If there is no temperature difference, fans are running at a minimum required speed for ensuring a basic rate of air change, with only gas appliances allowed to run. If the temperature difference between the sensors increases, the extraction and supply fans automatically switch to a higher performance level. If the difference continues to increase, the speed of both fans smoothly rises until it reaches the maximum level of performance. When the temperature difference drops, the fan power is automatically lowered or even switches to basic minimum air change mode.

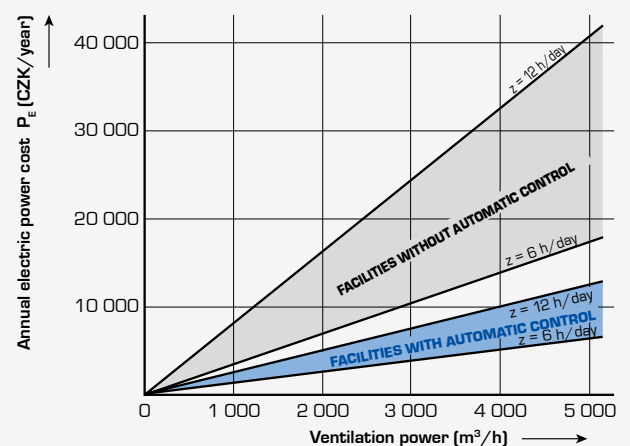
Advantages

- Energy-saving operation
- Ensures perfect hygienic conditions in kitchens
- External signal from convection ovens for maximum performance
- Continuous ventilation power control (0–10 V)
- Optional fully automatic ventilation power control depending on immediate loads from the kitchen
- Temperature- and humidity-based control
- Zone ventilation of facilities and cooking sections
- Remote access
- A weekly programming option
- Holiday mode (for use for instance on bank holiday days)
- An option to set several operation segments for a single day
- Heating and non-heating season control

Operational economy

The primary goal of a properly designed automatic control system is to eliminate the human factor in order to lower the energy intensity of fan operation and ventilation air re-heating.

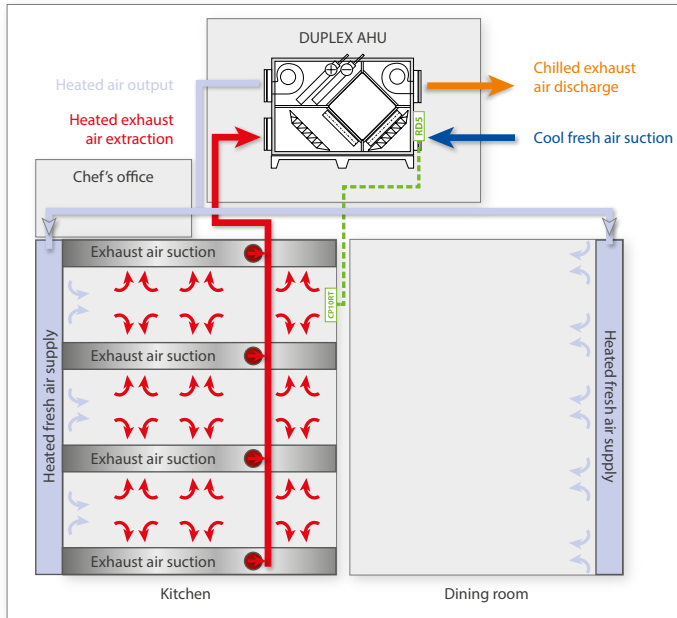
The graph compares the annual cost of fan operation with respect to ventilation power and daily operation (with a rate of 3.50 CZK/kWh of electric power). The graph does not include energy saving on air re-heating.



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Standard ventilation system



EXAMPLES OF SYSTEMS

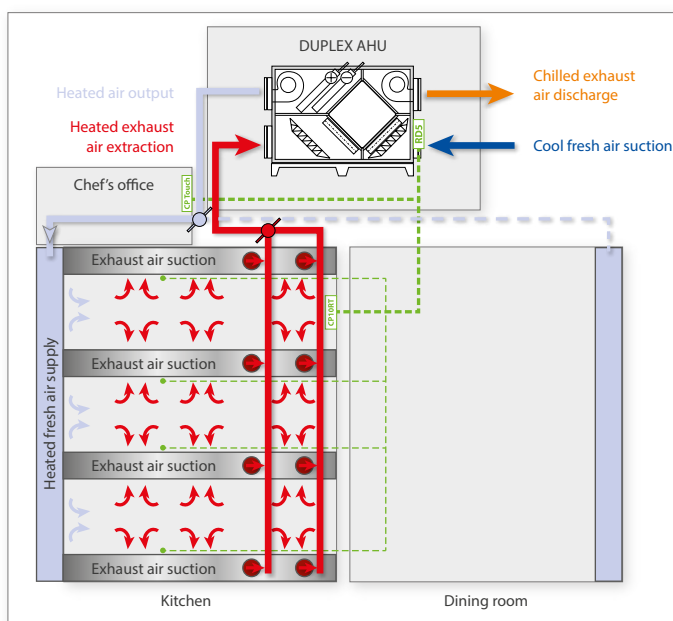


SELECTION SOFTWARE

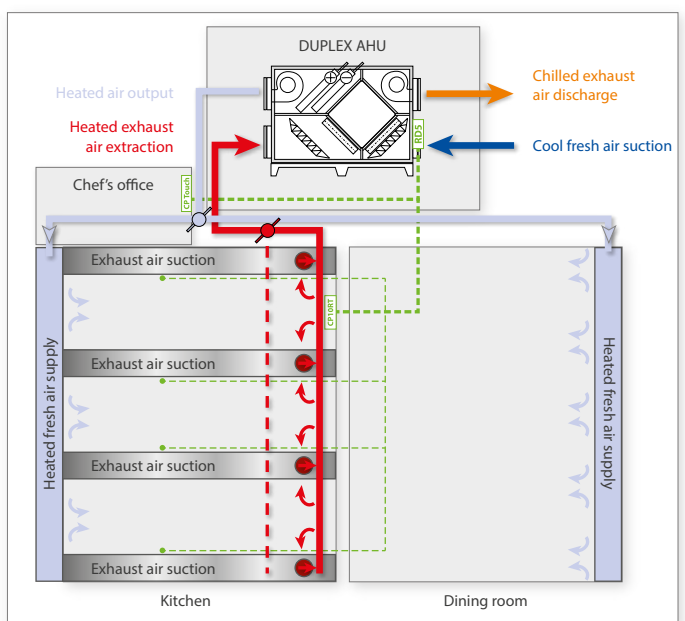
For the detailed design of ventilation ceilings, cooker hoods, accessories and control systems we recommend using our specialized selection software. You will find it on our website on www.atrea.eu.

Fully automated zone ventilation system

Cooking time



Serving time



Switchboard identification

RG5 – 230 V – C – 9,0 A / 400 V – C – 6,8 A + CP10RT

Switchboard code

Power supply voltage – supply fan

230 V – 1-phase 230 V, 50 Hz

400 V – 3-phase 400 V, 50 Hz

Control system type – supply fan

E, C (see the table)

Nominal current – supply fan in A

Power supply voltage – exhaust fan

230 V – 1-phase 230 V, 50 Hz

400 V – 3-phase 400 V, 50 Hz

Control system type – exhaust fan

E, C (see the table)

Nominal current – exhaust fan in A

Re-heating, cooling, accessories

(see the table and price lists)

Fan use

Automatic kitchen control systems use continuous speed control in order to operate economically.

RG5 – 230 V	1-phase motor fan control
	E A regular analogue 0–10V output for frequency convertor or EC fan control. *
	C Control via a frequency convertor
RG5 – 400 V	3-phase motor fan control
	E A regular analogue 0–10V output for frequency convertor or EC fan control. *
	C Control via a frequency convertor
Reheating, cooling	– Optional accessories; control of hot-water-based heater and direct or indirect chiller
	– The digital controller also provides for automatic by-pass damper control
Custom-type	– A customized version as required (eg. adjustment damper control in more than one cooker hood, cascade control, voltage-based control of AC fans etc.)

*) a frequency converter is not supplied with the RG5 system as standard.

CP control panels

CP 10 RT	Ventilation power and re-heating control.
CP Touch	Digital control with a touch-screen display for kitchen ventilation mode control (optional accessory).

Microprocessor-based modules for cooker hoods and ceilings

RD-K 24	A control module for use with DUPLEX ventilation units or fans.
RD-K (DiNER-T)	A control module for use with DiNER-T cooker hoods with fans .
2x RD-K	A pair of RD-K modules for large ATREA ventilation ceilings with 5 and more extraction ducts.

RD5 controllers



CP 10 RT controller



- Installed in the kitchen
- Simple and inexpensive version
- Easy temperature and ventilation power setting
- Easy to switch on / off
- Protection class IP43

CP Touch controller

- **Office installation**
- **Fully graphic touch-screen display**
- **Wall-mounted**
- **An interface similar to web-based control for easy navigation and comfortable handling**
- **An integrated temperature sensor for air temperature control**
- **Password-protected service access for increased security**
- **Reaches up to 50 metres**
- **Automatic screen saver**
- **Optional version**



Internet-based interface



A Web-based server (as standard with DUPLEX units)

A Web-based server integrated in the RD5 digital control system for remote control and monitoring of DUPLEX units via the Internet.

Its intuitive Web-based interface provides access to all user and service parameters, resulting in greatly simplified servicing as well as comfortable remote access for the user.



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