

# Air treatment and distribution

Recirculation, filtration and dehumidification for the comfort ecosystem.

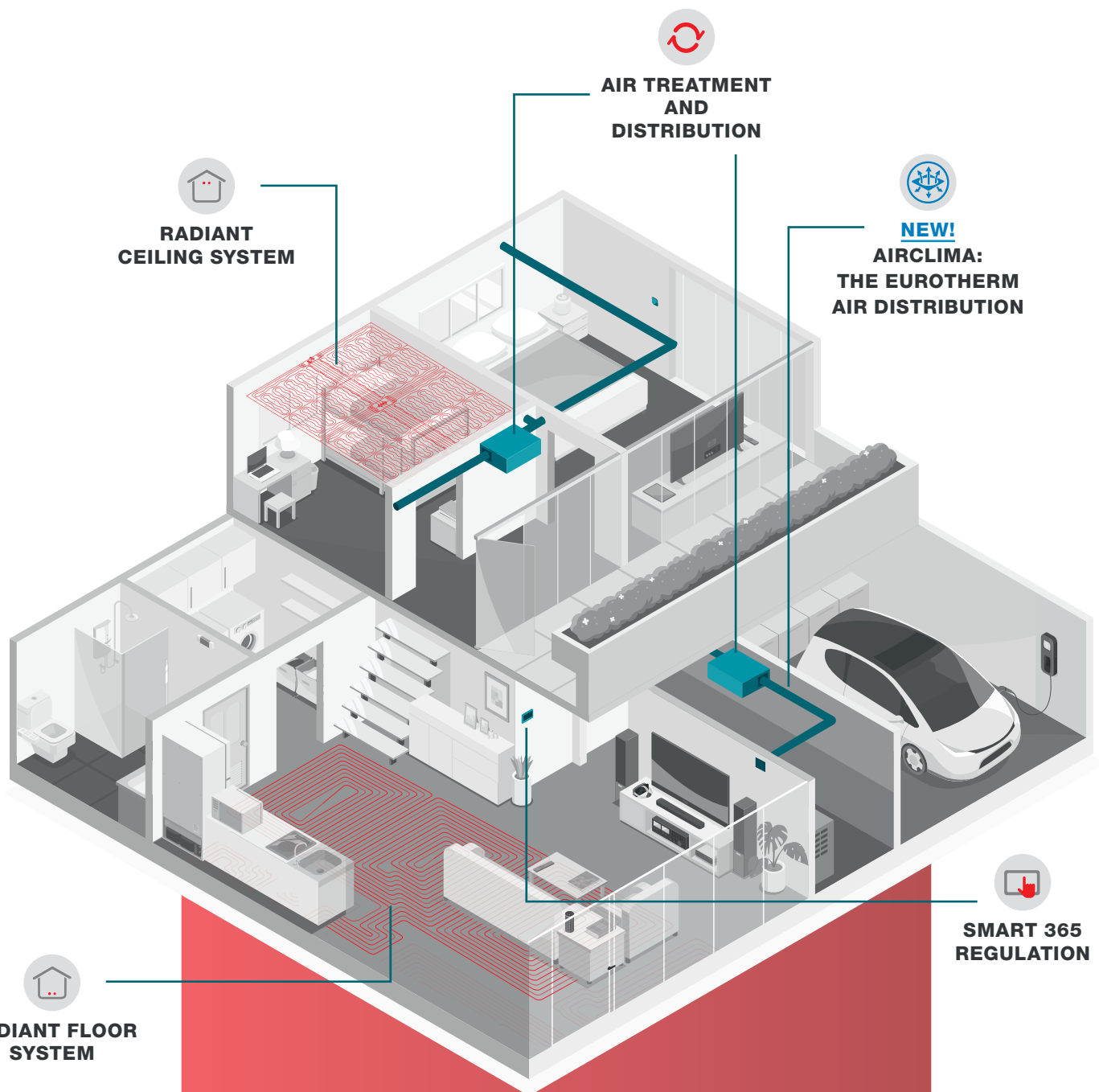


## Advanced air treatment and distribution solutions

Turning to Eurotherm is the ideal answer for those seeking a healthy and welcoming environment. Our air handling machines are designed to provide high levels of comfort and, in particular, to work in environments where radiant and air handling come together in the radiant smart experience. The use of Smart 365 regulation gathers the best from radiant systems and air handling units: algorithms developed and optimised over the years, in fact, allow the two parts of the system to work in synergy and offer our customers a unique experience.

Eurotherm air handling units offer different functionalities, ranging from mechanical ventilation for hygienic air exchange, summer dehumidification, integration in heating/cooling up to sanitisation. Our range includes machines of different types, with various sizes and modes of installation, both vertical and horizontal, so as to offer maximum flexibility in choosing the most suitable unit for the specific needs of each plant.

Starting in 2024, we will further expand our offering for the residential context. For machines that require an air distribution system, Eurotherm has a proposal that also includes ducting.



  
**RADIANT  
CEILING  
SYSTEM**

  
**AIR TREATMENT  
AND  
DISTRIBUTION**

  
**NEW!**  
**AIRCLIMA:  
THE EURO THERM  
AIR DISTRIBUTION**

  
**RADIANT FLOOR  
SYSTEM**

  
**SMART 365  
REGULATION**



## Breathing clean air, fresh and dehumidified

We generally spend about **90 percent of our lives indoors** subject to various sources of pollution from our daily activities, building and furnishing materials, household cleaning products, paints and printer toners. There are also a number of **biological contaminants** such as mold, bacteria, and pollen that can have harmful effects on health. In addition, modern buildings that are increasingly airtight do not allow for adequate air exchange. Sometimes these pollutants, being odourless, are not perceived by people and therefore are difficult to detect.

For reasons of **healthfulness, comfort and maintenance of property value**, it is necessary to introduce a certain amount of outside air into the rooms where we live. Opening windows alone is often insufficient: on the one hand, because of the energy waste that would result when it is very hot or very cold outside; on the other hand, because it is possible that there are various sources of pollution outside the building due to vehicular traffic or industrial processes, or such a concentration of pollen that it is inadvisable to let air in directly through the windows. Finally, the amount of air entering through windows and its penetration into spaces is difficult to control and depends on varying local conditions, such as the speed and direction of the wind and the temperature difference between indoors and outdoors.

## What is the purpose of the Eurotherm air treatment units?

To ensure adequate indoor air exchange and thus the removal and dilution of contaminants, Eurotherm air treatment machines not only perform heat recovery between the exhausted air and the injected air, minimising energy losses, but also perform **efficient filtration**.

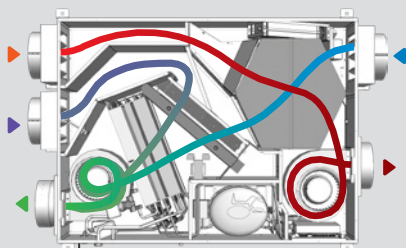
Not only that, Eurotherm air handling machines make it possible to maintain the relative humidity level within comfort parameters, especially in the summer period when mechanical ventilation alone is not sufficient.

Italy, and more generally the Mediterranean area, is in fact characterised by very hot and humid summers. The vapour produced by people inside their homes and their daily activities (such as cooking or washing dishes) must be disposed of by means of a suitable dehumidification system, found on Eurotherm air handling units. By adopting a Eurotherm air handling unit, it is possible to ensure excellent air exchange and to carry out real indoor air treatment (dehumidification and integration in cooling). The latter is extremely important and recommended especially in case you want to cool with a radiant system. Thus, seasonal operation of the machine can be distinguished.



### Summer operation

Flow of the operation of Deuclima-VMC 300 S in the mode **replacement + recirculation**.



**Filtered** and **healthy** air

**Heat recovery**

**Humidity control** in the room

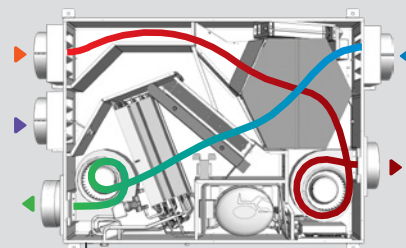
**Dehumidification** and integration

**Support** radiant system



### Winter operation

Flow of the operation of Deuclima-VMC 300 S in the mode **exchange only**.



**Filtered** air and **salubrious**

**Heat recovery**

**Prevents** the formation of **mold**

▶ Extracting dirty environments

◀ External air extraction

▶ Clean room extraction

▶ Expulsion of stale air

◀ Treated air intake

## Air quality according to UNI EN 16798-1

The air flow rates to be guaranteed inside buildings to ensure a healthy environment are indicated by the reference standard **UNI EN 16798-1**. In contrast to UNI 10339, the **UNI EN 16798-1** standard proposes different methods of calculating the air flow rate for ventilation by declining the results according to the indoor air quality achievable. The standard also places great emphasis on the air flow rates to be guaranteed to dilute contaminants released by building materials even in the absence of occupants.

Our dedicated residential Deuclima-VMC range has been developed for residential in different sizes and with the possibility of modulating the ventilation flow rate to **best handle each installation and occupancy condition**. For non-residential buildings, on the other hand, the units in the DCR line can meet the demand for higher ventilation flow rates.

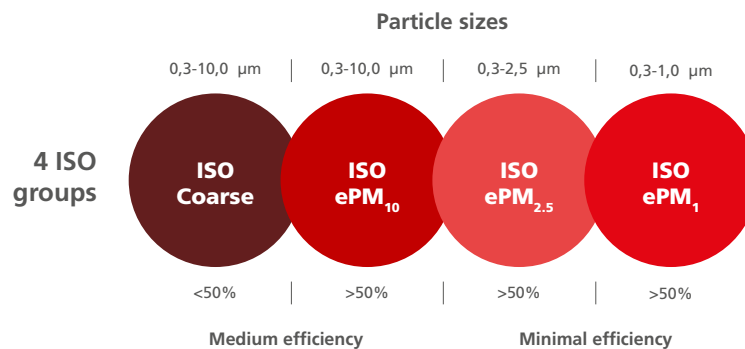
The table below shows the values of renewal flow rates for the different categories of UNI EN 16798-1 in a residential context and a typical non-residential context, such as tertiary offices.

Category	Residential		Offices	
	L/s/pers	m <sup>3</sup> /h/pers	L/s/pers	m <sup>3</sup> /h/pers
I	10	36	20	72
II	7	25.2	14	50.4
III	4	14.4	8	28.8
IV	-	-	5.4	19.8

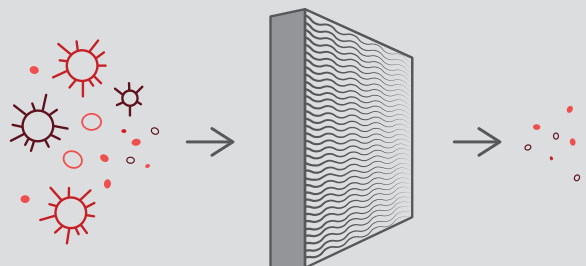
# Filtration

Eurotherm air handling systems ensure fresh, healthy air through the presence of on-board filters. Filters block and stop pollutants that are suspended in outdoor and indoor air. Indeed, their purpose is to protect people from exposure to pollutants but also to protect the air handling systems themselves, ensuring durable performance and machine efficiency. Since July 2018, a **new classification (UNI EN ISO 16890)** has been in effect, which defines the efficiency of filters according to the size of  $PM_{1}$ ,  $PM_{2,5}$  and  $PM_{10}$  particulate matter that is blocked. This new classification has the advantage of offering a single standard that is valid worldwide and enables comparison of filter performance with an unambiguous classification.

Eurotherm air handling machines are equipped with **ISO ePM<sub>10</sub> 50%** filters that correspond to M5 filters according to the outdated classification (EN 779).



Filtration of the most dangerous particles for human health, namely the finest  $PM_{1}$  and  $PM_{2,5}$ , is possible with a high-performance filter, ISO ePM<sub>1</sub> 55%. Depending on the air handling machine version, the filter can be contained in a specific filter box or housed directly inside the machine.

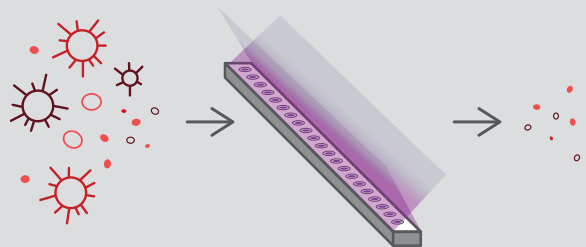


Want to find out how a filter wears out and how it traps particulate matter in the air? Scan the QR code with your smartphone and watch the video.

## Sanitisation

Sanitising indoor air means inhibiting pathogens such as viruses, fungi and bacteria in order to ensure healthy, quality air. To achieve this benefit, Eurotherm air-handling machines house an LED lamp inside them that is highly effective against mold, bacteria, germs, and viruses, and that acts on the air passing through the machine itself.

The lamp generates a **beam of ultraviolet light at a wavelength between 250-280 nm** that irradiates the passing air stream with **germicidal effect without the use of chemical agents**. When exposed to UV radiation, chemical oxidation-reduction reactions are triggered in micro-organisms that destroy molecular bonds, rendering them harmless and preventing their reproduction. LED technology allows for **low power consumption** and long service life. The position of the lamp also allows UV radiation to act on the condensate tray, a place where pathogens are most likely to form or collect. The lamp is activated as often as the machine is turned on. It is also possible, through the Eurotherm SmartComfort 365 control, to set **sanitising cycles**, which can be programmed by the user according to his or her needs.



Scan the QR code with your smartphone and watch as the UV lamp sanitises the air from mould, bacteria, germs and viruses.



# Maintenance and system cleaning






Periodic maintenance of air handling systems allows the proper operation of the plant while maintaining a high level of indoor air quality and energy efficiency. The frequency of filter change depends on the degree of local pollution as well as the operating conditions of the air handling units. The indicative time interval can be from 3 to 6 months. The Eurotherm SmartComfort 365 control system allows you to be updated on the number of hours remaining to filter change and "via a dedicated alarm" signals when it is time to replace the filters.

Where can you find replacement filters for your air handling machine? Easy! On the **Eurotherm e-shop**. Do you want to make sure that the filter change is done properly and you don't want to worry about filter disposal? Do you want to make sure that your air-handling machine is working properly and as efficiently as possible? Also on our e-shop you will find **two specific services** to meet these needs.

1

## Service and installation

With the service and installation service, a specialised technician will take care of your machine in **one operation**:

-  Replacing filters
-  Restoring filter alarm hours
-  Disposal of filters
-  Checking the correct machine operation
-  Condensate drain check and siphon filling

2

## PLUS service and installation

With the PLUS service, you secure **3 interventions within a 24-month period**. With the PLUS service, the specialised technician will take care of:

-  Replacing filters
-  Restoring filter alarm hours
-  Disposal of filters
-  Checking the correct machine operation
-  Condensate drain check and siphon filling
-  Checking and cleaning of heat recovery unit
-  Checking and cleaning of the machine fans



### DISCOVER OUR EUROTHERM E-SHOP

Scan the QR code with your smartphone and visit our e-shop to purchase replacement filters or for service.

[eurotherm.info/it/e-shop](https://eurotherm.info/it/e-shop)



## The smart regulation of the air treatment system

The radiant smart is an intelligent and complete system that consists of the integration of air treatment machines with a single regulation that manages the two systems in a smart way.

The Eurotherm air treatment machines are therefore prepared to be managed by means of the SmartComfort 365 regulation perfect integration with the machines, in the cooling function, it maintains the controlled humidity threshold functional to the proper operation of the radiant system and at the same time allows a proper exchange of air in the room.

With the SmartComfort 365 control, it is also possible to control, through programming:

- Machine speed (up to 3 levels)
- Room temperature (summer and winter integration)
- Outdoor air renewal (VMC) via weekly programming
- Activation of Sanitisation cycles

## Deuclima-VMC and VMC

PRODUCT	PAGE	RENEWAL WITH RECUPERATOR	FREE COOLING	SUMMER DEHUMIDIFICATION	SUMMER INTEGRATION	WINTER INTEGRATION	INSTALLATION	DIMENSIONS	NOMINAL AIR FLOW RATE	AIR FLOW RATE RENEWAL	ENERGY CLASS	SENSIBLE POWER IN COLD (WATER 15 °C)	WEIGHT	SOUND POWER LEVEL	SOUND POWER LEVEL IN RENEWAL	ELECTRICAL POWER MAXIMUM ABSORBED	ELECTRICAL POWER ABSORBED IN RENEWAL
								mm	m <sup>3</sup> /h	m <sup>3</sup> /h		W	kg	dB (A)	dB (A)	W	W
DEUCLIMA-VMC 300 S	12	●	●	●	●	●	ceiling	1205 x 798 x 244	300	75-200	A	620	61	44	39	360	190
DEUCLIMA-VMC 300 V	14	●	●	●	●	●	wall	1392 x 700 x 343	300	100-250	A	920	71	44	40	590	98
DEUCLIMA-VMC 500 S	16	●	●	●	●	●	ceiling	1255 x 811 x 294	500	100-250	A	1550	78	49	40	490	130
DEUCLIMA-VMC 500 V	18	●	●	●	●	●	wall	1697 x 700 x 421	500	100-350	A	1500	89	46	42	590	190
VMC 170 SV PRO	24	●	●				ceiling wall	972 x 655 x 240	170	50-170	A		12		51	136	58
VMC 260 SV PRO	25	●	●				ceiling wall	972 x 655 x 300	260	100-260	A		17		55	172	95

## DCR solutions for the tertiary sector

PRODUCT	PAGE	RENEWAL WITH RECUPERATOR	FREE COOLING	SUMMER DEHUMIDIFIC.	SUMMER INTEGRATION	WINTER INTEGRATION	INSTALLATION	DIMENSIONS	NOMINAL AIR FLOW RATE	AIR FLOW RATE RENEWAL	SENSIBLE POWER IN COLD (WATER 15 °C)	MAXIMUM POWER ABSORBED CHILLER	WEIGHT	SOUND POWER LEVEL	SOUND PRESSURE LEVEL	MAXIMUM ELECTRICAL POWER ABSORBED	ELECTRICAL POWER ABSORBED IN RENEWAL
								mm	m <sup>3</sup> /h	m <sup>3</sup> /h	W	W	kg	dB (A)	dB (A)	W	W
DEUCLIMATISER DCR 1000	20	●	●	●	●	●	ceiling	DC 805 x 691 x 351	1000	500-1400	3000	5800	71	54	46	2500	1300
								REC 1097 x 723 x 351					75				
DEUCLIMATISER DCR 2000	22	●	●	●	●	●	ceiling	DC 951 x 886 x 482	2000	1000-2400	6500	15000	110	67	56	4600	2100
								REC 1442 x 942 x 482					115				

DC = Deuclimatiser / REC = active recuperator

## Dehumidifiers and Deuclimatiseurs

PRODUCT	PAGE	SUMMER DEHUMIDIFICATION	SUMMER INTEGRATION	WINTER INTEGRATION	INSTALLATION	DIMENSIONS	NOMINAL AIR FLOW RATE	SENSIBLE POWER IN COLD (WATER 15 °C)	CONDENSING HUMIDITY (26 °C – 65% – WATER 16 °C)	NOMINAL WATER FLOW RATE	WEIGHT	SOUND PRESSURE LEVEL Lps	ELECTRICAL POWER INPUT
						mm	m <sup>3</sup> /h	W	L/g	l/h	kg	dB (A)	W
AIRCLIMA COMPACT	27	●	●	●	ceiling	688 x 526 x 195	150	470	18	180	26	35	180
DEHUMIDIFIER 581 DC	28	●			ceiling	756 x 260 x 803	280		24	175	42	38	380
DEHUMIDIFIER 901 DC	29	●			ceiling	1106 x 309 x 858	560		48	360	62	40	780
DEHUMIDIFIER 320 DI	30	●			wall	402 x 622 x 203	120		8	75	27	33	230
DEHUMIDIFIER 581 DI	31	●			wall	730 x 732 x 203	300		24	180	34	34	380
DEUCLIMATISER 582 DCC	32	●	●		ceiling	756 x 260 x 803	280	650	27	260	47	38	560
DEUCLIMATISER 901 DCC	33	●	●		ceiling	1106 x 309 x 858	560	1900	48	520	68	42	780
DEUCLIMATISER 581 DCI	34	●	●		wall	730 x 732 x 203	300	960	24	260	34	34	380



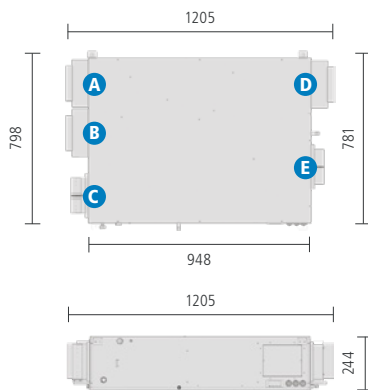
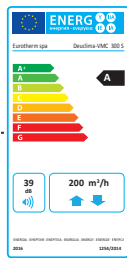
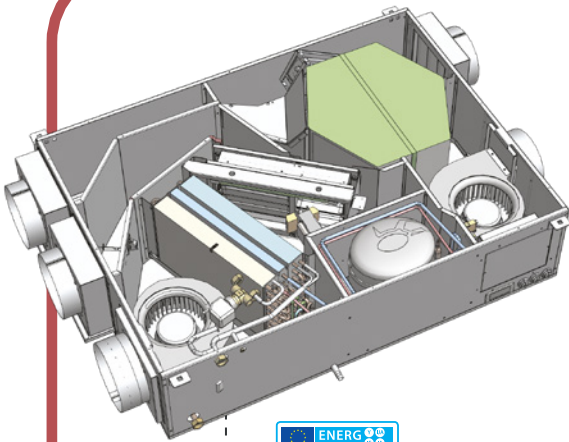
● dehumidification

● cooling

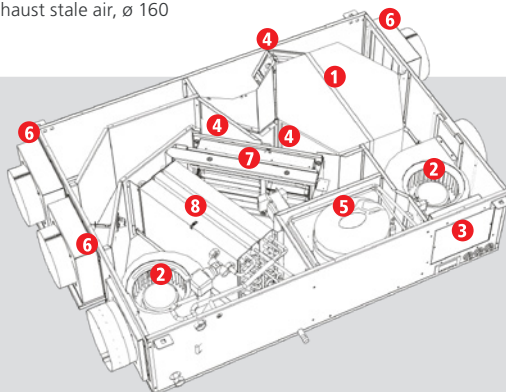
● air renewal

● heating

● free cooling



- A. Dirty room extraction,  $\varnothing$  160
- B. Clean room intake,  $\varnothing$  160
- C. Treated air intake,  $\varnothing$  160
- D. Outside air intake,  $\varnothing$  160
- E. Exhaust stale air,  $\varnothing$  160



- 1. Heat recovery
- 2. Fans
- 3. Electric box
- 4. Dampers
- 5. Compressor
- 6. Filters
- 7. UV lamp
- 8. Water coil, evaporator and condenser

## Deuclima-VMC 300 S

Art. 7410010103

- High-pressure, constant-flow EC fans and high-efficiency heat recovery unit. Energy class: A.
- Indoor air renewal and dehumidification. Possibility of winter or summer thermal integration.
- Unit capable of exchanging outdoor air and/or recirculating indoor air.
- 50% ePM<sub>10</sub> filters in intake, recirculation and extraction included. Sanitisation with UV lamp.

Five-way mechanical ventilation and air handling unit for indoor false ceiling applications capable of optimising comfort in rooms equipped with radiant systems. The unit can exchange air with the outside and/or recirculate indoor air to maximise the effectiveness of the following functions: renewal, dehumidification, integration in cooling or heating, and Sanitisation with automatic activation of "free heating/cooling" modes. The unit has a high-efficiency dual-flow recuperator, a motorised indoor damper system for airflow management, and two EC fans with high head and constant air flow rates. Dehumidification is via a dedicated refrigeration cycle with a high-efficiency compressor, a hydronic pre-treatment coil, and valves for water flow management. High surface area filters ePM<sub>10</sub> 50% allow for high levels of mechanical air filtration, and their installation is such that they can be easily inspected and removed for maintenance. The unit is equipped as standard with an ultraviolet germicidal lamp with high effectiveness against: mold, bacteria, germs and viruses. A CO<sub>2</sub> probe (optional) is available.



Apartments up to 110 m<sup>2</sup>

Condensation (recirculation) capacity: 26 L/g

Sensible power in cold: 620 W

Nominal treated air flow rate: 300 m<sup>3</sup>/h

Max 200 m<sup>3</sup>/h outside air



SANITISING  
UV LAMP  
AS STANDARD



3 FILTERS  
ePM<sub>10</sub> 50%

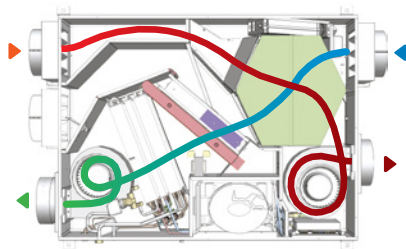


AIRCLIMA AIR DISTRIBUTION  
EUROTHERM AVAILABLE

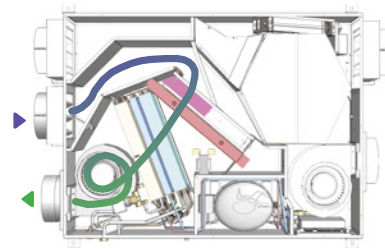
## Housing distribution and air flows of the system



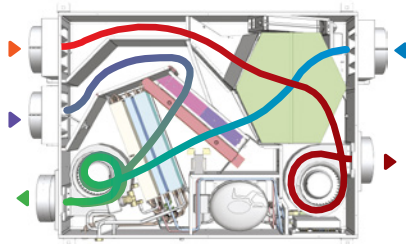
Air exchange flow



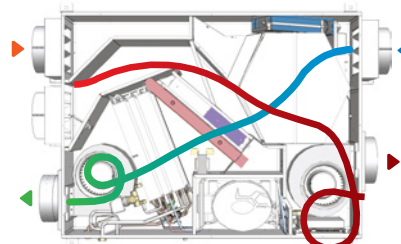
Recirculation flow and air treatment




Recirculation flow, exchange and air treatment



Flow free cooling



## Accessories and spare parts



**Siphon**  
Siphon for condensate drain\*

7910080907



**Probe**  
CO<sub>2</sub> probe

7910080906



**Filter box**  
ePM<sub>1</sub>, 55% + UV lamp

7910080960



**Silencer**  
Silencer, filter box + UV lamp

7910080980



**Filter set**  
Spare filter set ePM<sub>10</sub>, 50%

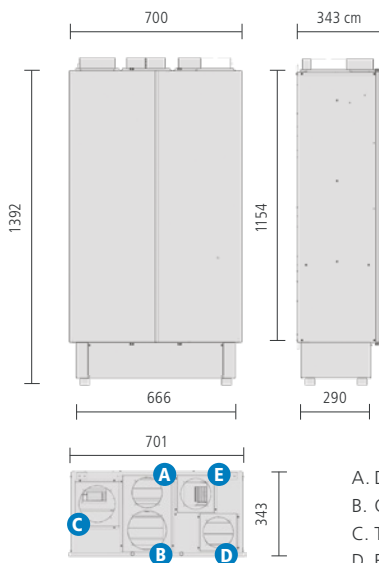
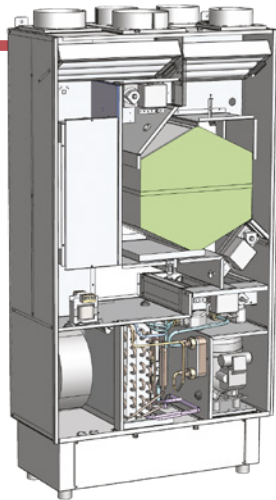
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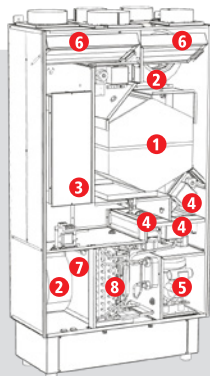
**Filter**  
Replacement filter box ePM<sub>1</sub>, 55%

7910080929

\* 2 siphons required



- A. Dirty room extraction,  $\varnothing$  125
- B. Clean room intake,  $\varnothing$  160
- C. Treated air intake,  $\varnothing$  160
- D. Fresh air intake,  $\varnothing$  125
- E. Exhaust stale air,  $\varnothing$  125



- 1. Heat recovery
- 2. Fans
- 3. Electric box
- 4. Dampers
- 5. Compressor
- 6. Filters
- 7. UV lamp
- 8. Water coil, evaporator and condenser

## Deuclima-VMC 300 V

Art. 7510010101

- High-pressure, constant-flow EC fans and high-efficiency heat recovery unit. Energy class: A.
- Indoor air renewal and dehumidification. Possibility of winter or summer thermal integration.
- Unit capable of exchanging outdoor air and/or recirculating indoor air.
- 50% ePM<sub>10</sub> filters in intake, recirculation and extraction included. Sanitisation with UV lamp.

Five-way mechanical ventilation and air handling unit for indoor wall-mounted applications that can optimise comfort in rooms equipped with radiant systems. The unit can exchange air with the outside and/or recirculate indoor air to maximise the effectiveness of the following functions: renewal, dehumidification, integration in cooling or heating, and Sanitisation with automatic activation of "free heating/cooling" modes. The unit has a high-efficiency dual-flow recuperator, a motorised indoor damper system for airflow management, and two EC fans with high head and constant air flow rates. Dehumidification is via a dedicated refrigeration cycle with a high-efficiency compressor, a hydronic pre-treatment coil, and valves for water flow management. High surface area filters ePM<sub>10</sub> 50% allow for high levels of mechanical air filtration, and their installation is such that they can be easily inspected and removed for maintenance. The unit is equipped as standard with an ultraviolet germicidal lamp with high effectiveness against: mold, bacteria, germs and viruses. A CO<sub>2</sub> probe (optional) is available.



Apartments up to 110 m<sup>2</sup>

Condensation (recirculation) capacity: 36 L/g

Sensible power in cold: 920 W

Nominal treated air flow rate: 300 m<sup>3</sup>/h

Max 250 m<sup>3</sup>/h outside air



SANITISING  
UV LAMP  
AS STANDARD

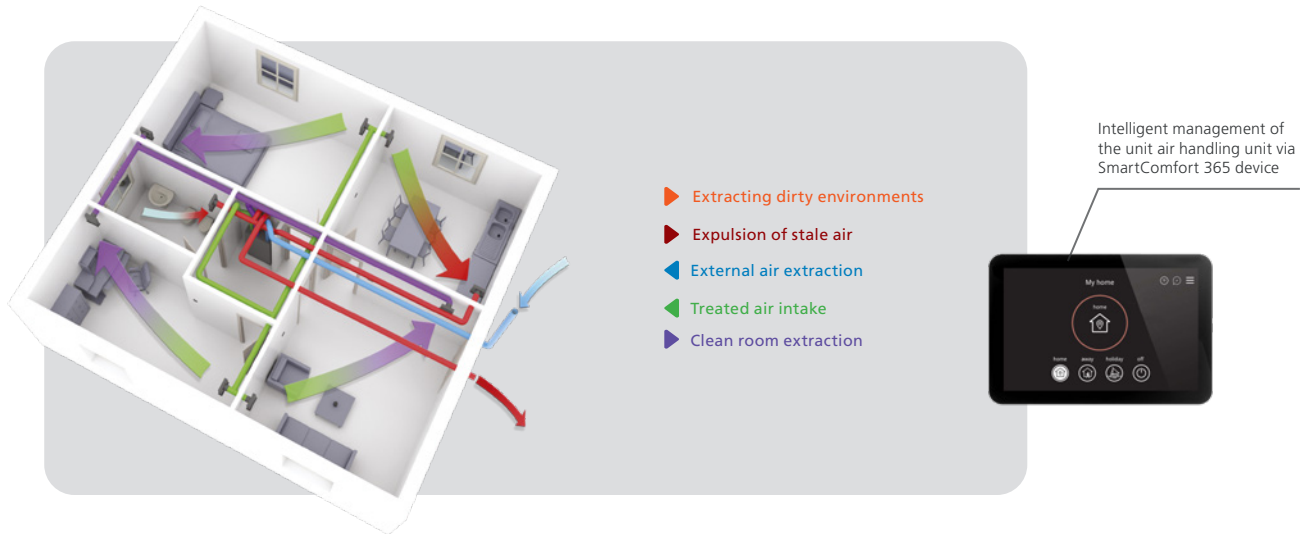


3 FILTERS  
ePM<sub>10</sub> 50%

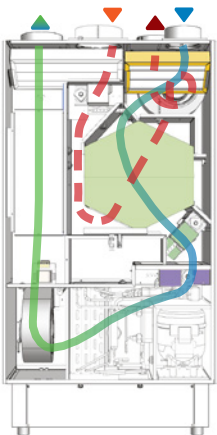


AIRCLIMA AIR DISTRIBUTION  
EUROTHERM AVAILABLE

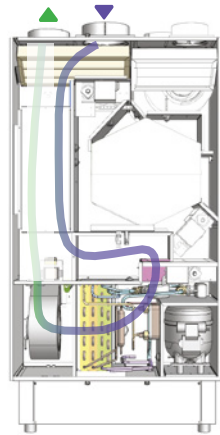
## Housing distribution and air flows of the system



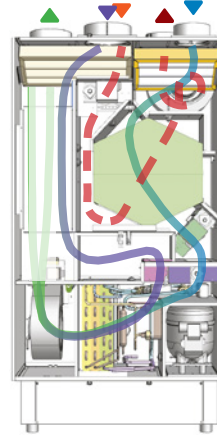
Replacement flow of air



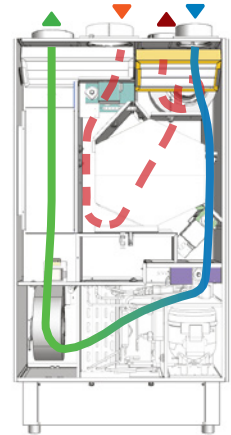
Recirculation flow and air treatment



Recirculation flow, exchange and air treatment



Flow free cooling




## Accessories and spare parts



**Siphon**  
Siphon for condensate drainage

7910080907



**Probe**  
CO<sub>2</sub> probe

7910080906



**Filter box**  
ePM<sub>1</sub> 55% + UV lamp

7910080960



**Silencer**  
Silencer, filter box + UV lamp

7910080980



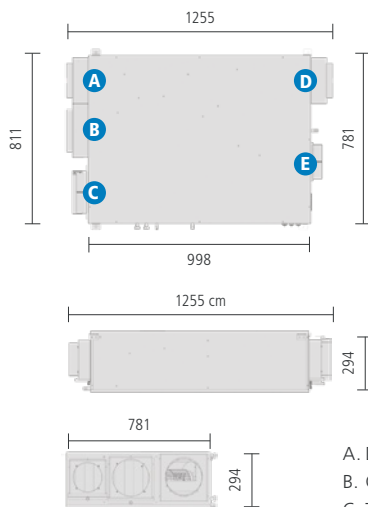
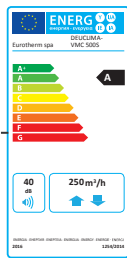
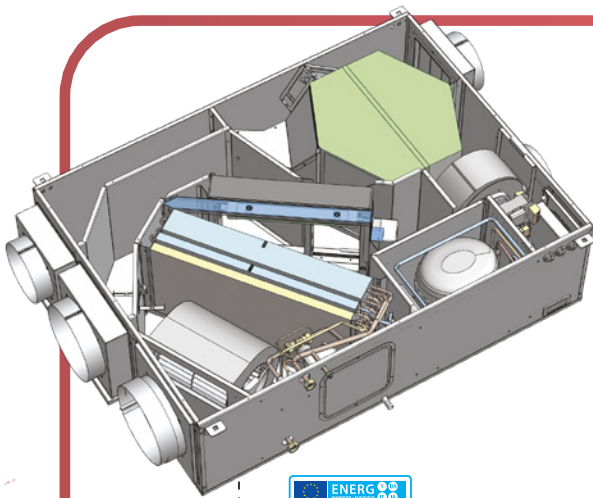
**Filter set**  
Spare filter set ePM<sub>10</sub> 50%

7910081935

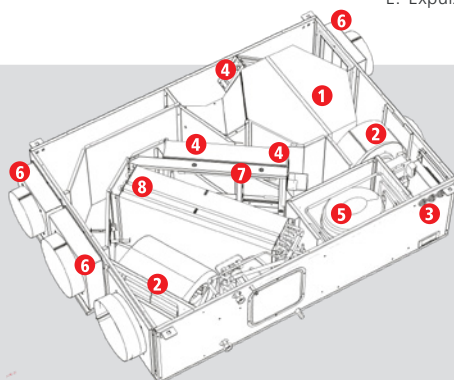


**Filter**  
Replacement filter box ePM<sub>1</sub> 55%

7910080929



- A. Dirty room extraction,  $\varnothing$  160
- B. Clean room extraction,  $\varnothing$  200
- C. Treated air intake,  $\varnothing$  200
- D. External air extraction,  $\varnothing$  160
- E. Expulsion of stale air,  $\varnothing$  160



- 1. Heat recovery
- 2. Fans
- 3. Electric box
- 4. Dampers
- 5. Compressor
- 6. Filters
- 7. UV lamp
- 8. Water coil, evaporator and condenser

## Deuclima-VMC 500 S

Art. 7410010105

- High-pressure, constant-flow EC fans and high-efficiency heat recovery unit. Energy class: A.
- Indoor air renewal and dehumidification. Possibility of winter or summer thermal integration.
- Unit capable of exchanging outdoor air and/or recirculating indoor air.
- 50% ePM<sub>10</sub> filters in intake, recirculation and extraction included. Sanitisation with UV lamp.

Five-way mechanical ventilation and air handling unit for indoor false ceiling applications capable of optimising comfort in rooms equipped with radiant systems. The unit can exchange air with the outside and/or recirculate indoor air to maximise the effectiveness of the following functions: renewal, dehumidification, integration in cooling or heating, and Sanitisation with automatic activation of "free heating/cooling" modes. The unit has a high-efficiency dual-flow recuperator, a motorised indoor damper system for airflow management, and two EC fans with high head and constant air flow rates. Dehumidification is via a dedicated refrigeration cycle with a high-efficiency compressor, a hydronic pre-treatment coil, and valves for water flow management. High surface area filters ePM<sub>10</sub> 50% enable high levels of mechanical air filtration, and their installation is such that they can be easily inspected and extracted for maintenance. The unit is equipped as standard with an ultraviolet germicidal lamp with high effectiveness against: mold, bacteria, germs and viruses. A CO<sub>2</sub> probe (optional) is available.



Apartments up to 190 m<sup>2</sup>

Condensation (recirculation) capacity: 48 L/g

Sensible power in cold: 1550 W

Nominal treated air flow rate: 500 m<sup>3</sup>/h

Max 250 m<sup>3</sup>/h outside air



SANITISING  
UV LAMP  
AS STANDARD



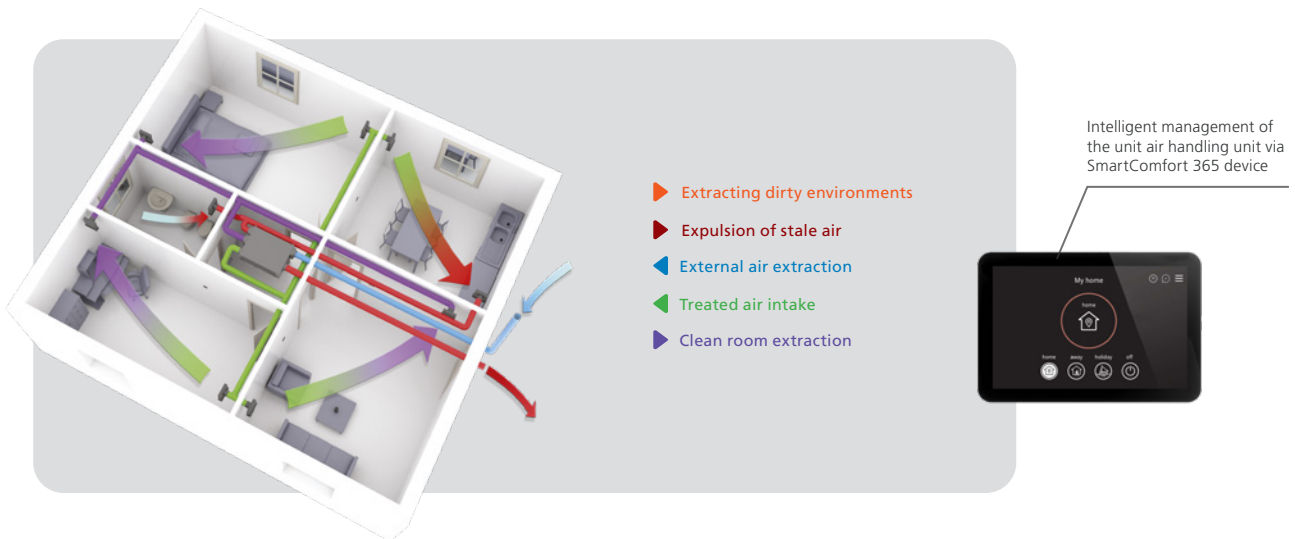
3 FILTERS  
ePM<sub>10</sub> 50%



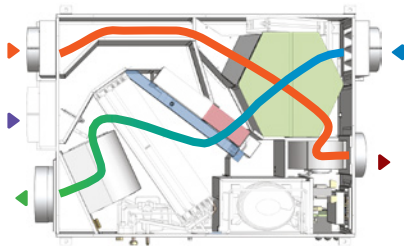
AIRCLIMA AIR DISTRIBUTION  
EUROTHERM AVAILABLE



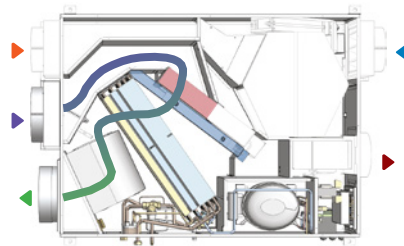
## Housing distribution and air flows of the system



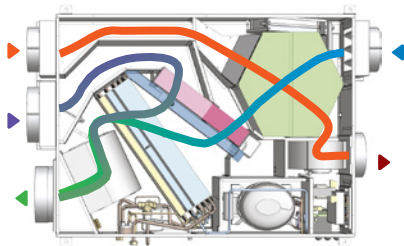
Air exchange flow



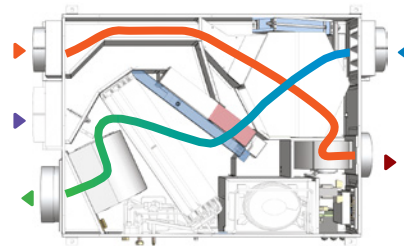
Recirculation flow and air treatment




Recirculation flow, exchange and air treatment



Flow free cooling



## Accessories and spare parts



**Siphon**  
Siphon for condensate drain\*

7910080907



**Probe**  
CO<sub>2</sub> probe

7910080906



**Filter box**  
ePM, 55% + UV lamp

7910080970



**Silencer**  
Silencer, filter box + UV lamp

7910080980



**Filter set**  
Spare filter set ePM<sub>10</sub> 50%

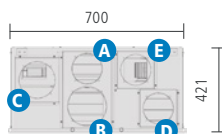
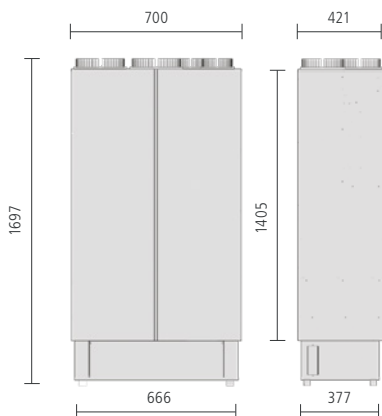
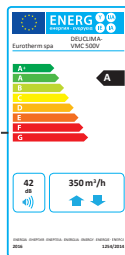
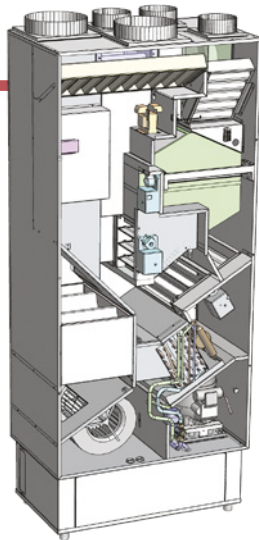
7910081939



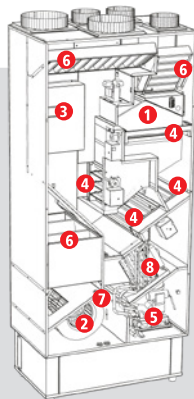
**Filter**  
Replacement filter box ePM, 55%

7910080929

\* 2 siphons required



- A. Dirty room extraction,  $\varnothing$  125
- B. Clean room extraction,  $\varnothing$  200
- C. Treated air intake,  $\varnothing$  200
- D. External air extraction,  $\varnothing$  160
- E. Expulsion of stale air,  $\varnothing$  160



- 1. Heat recovery
- 2. Fans
- 3. Electric box
- 4. Dampers
- 5. Compressor
- 6. Filters
- 7. UV lamp
- 8. Water coil, evaporator and condenser

## Deuclima-VMC 500 V

Art. 7510010102

- High-pressure, constant-flow EC fans and high-efficiency heat recovery unit. Energy class: A.
- Indoor air renewal and dehumidification. Possibility of winter or summer thermal integration.
- Unit capable of exchanging outdoor air and/or recirculating indoor air.
- 50% ePM<sub>10</sub> filters in intake, recirculation and extraction included. Sanitisation with UV lamp

Five-way mechanical ventilation and air handling unit for indoor wall-mounted applications that can optimise comfort in rooms equipped with radiant systems. The unit can exchange air with the outside and/or recirculate indoor air to maximise the effectiveness of the following functions: renewal, dehumidification, integration in cooling or heating, and Sanitisation with automatic activation of "free heating/cooling" modes. The unit has a high-efficiency dual-flow recuperator, a motorised indoor damper system for airflow management, and two EC fans with high head and constant air flow rates. Dehumidification is via a dedicated refrigeration cycle with a high-efficiency compressor, a hydronic pre-treatment coil, and valves for water flow management. High surface area filters ePM<sub>10</sub> 50% enable high levels of mechanical air filtration, and their installation is such that they can be easily inspected and extracted for maintenance. The unit is equipped as standard with an ultraviolet germicidal lamp with high effectiveness against: mold, bacteria, germs and viruses. A CO<sub>2</sub> probe (optional) is available.



Apartments up to 190 m<sup>2</sup>  
 Condensation (recirculation) capacity: 48 L/g  
 Sensible power in cold: 1500 W  
 Max 300 m<sup>3</sup>/h outside air  
 Nominal treated air flow rate: 500 m<sup>3</sup>/h



**SANITISING  
 UV LAMP  
 AS STANDARD**



**3 FILTERS  
 ePM<sub>10</sub> 50%**

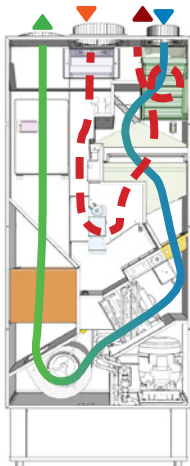


**AIRCLIMA AIR DISTRIBUTION  
 EURO THERM AVAILABLE**

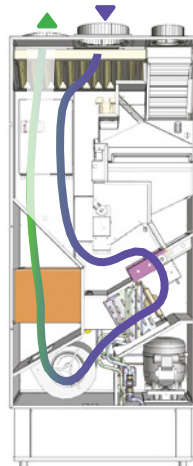
## Housing distribution and air flows of the system



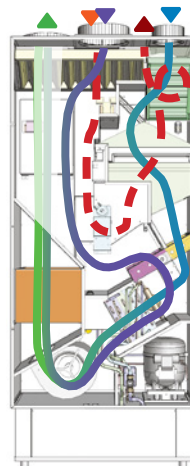
Replacement flow of air



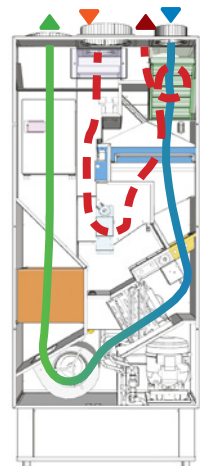
Recirculation flow and air treatment




Recirculation flow, exchange and air treatment



Flow free cooling




## Accessories and spare parts



**Siphon**  
Siphon for condensate drain\*

7910080907



**Probe**  
CO<sub>2</sub> probe

7910080906



**Silencer**  
Silencer, filter box + UV lamp

7910080980



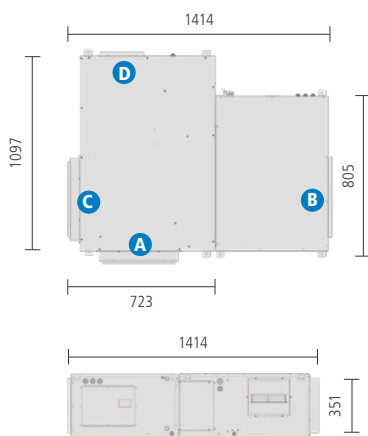
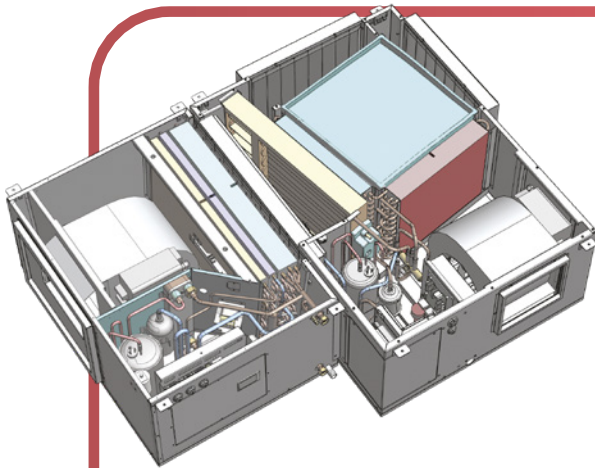
**Filter set**  
Spare filter set ePM<sub>10</sub> 50%

7910081922



**Filter**  
Replacement filter box ePM<sub>1</sub> 55%

7910080929



- A. Clean room extraction
- B. Treated air intake
- C. External air extraction
- D. Expulsion of stale air

## Deuclimatiser DCR 1000

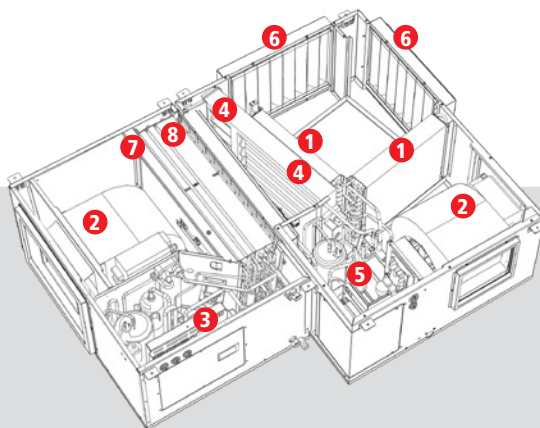
Art. 7110011001

- Passive heat recovery unit and active heat pump heat recovery unit for high performance.
- Indoor air renewal and dehumidification. Possibility of winter or summer thermal integration.
- Unit capable of exchanging outdoor air and/or recirculating indoor air.
- 50%ePM<sub>10</sub> filters in outdoor and indoor air intake included. Sanitisation by UV lamp.

Mechanical ventilation and air handling unit for indoor false ceiling applications capable of optimising comfort in tertiary environments equipped with radiant systems. The unit consists of the combination of a heat pump recuperator module (REC) and a dehumidification module (DC) that in combination manage the following modes of operation: renewal, dehumidification, integration in cooling or heating, and Sanitisation with automatic activation of "free heating / cooling" modes. The unit is able to exchange air with the outside and/or recirculate indoor air thanks to a system of motorised internal dampers and two EC fans with high head and constant flow rate.

The presence of a passive cross-flow recuperator and an active heat pump recuperator allows for excellent heat recovery performance.

Dehumidification is via a dedicated refrigeration cycle with a high-efficiency compressor, a hydronic pre-treatment coil, and valves for water flow management. High surface area filters ePM<sub>10</sub> 50% enable high levels of mechanical air filtration, and their installation is such that they can be easily inspected and extracted for maintenance. The unit comes standard with an ultraviolet germicidal lamp with high effectiveness against: mold, bacteria, germs and viruses.



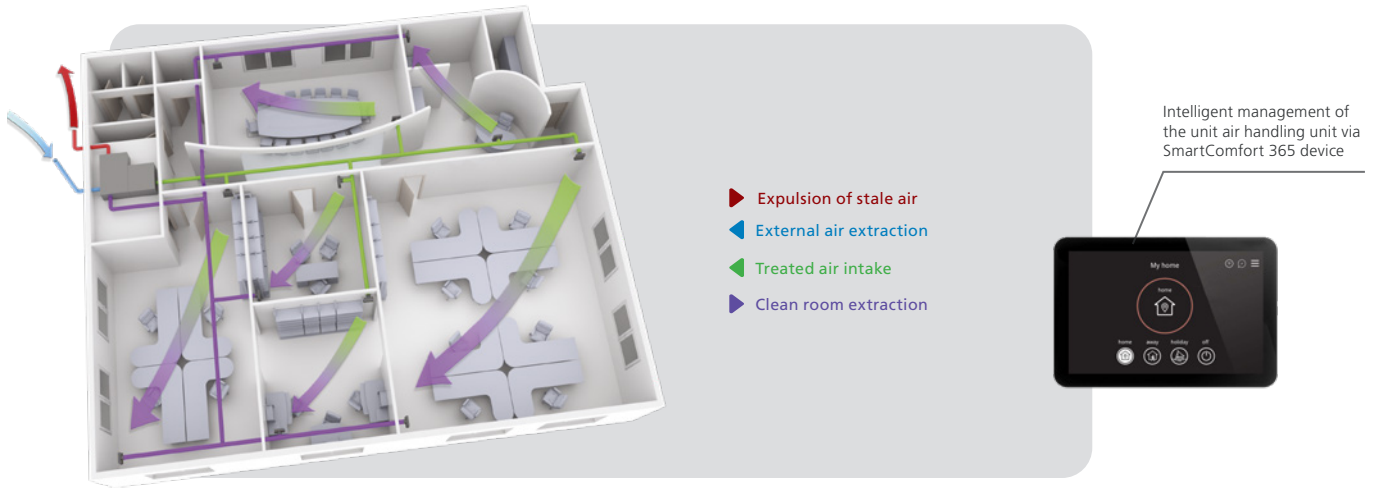
- |                  |                 |   |
|------------------|-----------------|---|
| 1. Heat recovery | 3. Electric box | 6. Filters                              |
| 2. Fans          | 4. Dampers      | 7. UV lamp                              |
|                  | 5. Compressor   | 8. Water coil, evaporator and condenser |



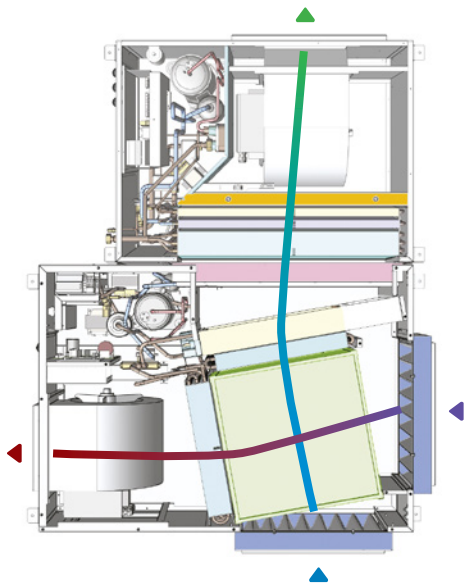
Nominal air flow rate: 1.000 m<sup>3</sup>/h  
 External air flow rate: 500-1.400 m<sup>3</sup>/h  
 Condensation (recirculation) capacity: 122 L/g  
 Water inlet range: 12 °C – 18 °C  
 Sensible power in cold: 3.000 W



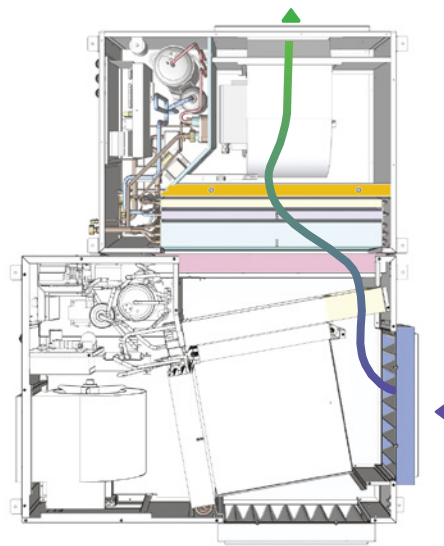
## Housing distribution and air flows of the system




Recirculation flow, exchange and air treatment



Recirculation flow and air treatment




## Accessories and spare parts



**Siphon**  
Siphon for condensate drain\*

7910080907



**Silencer**  
Silencer

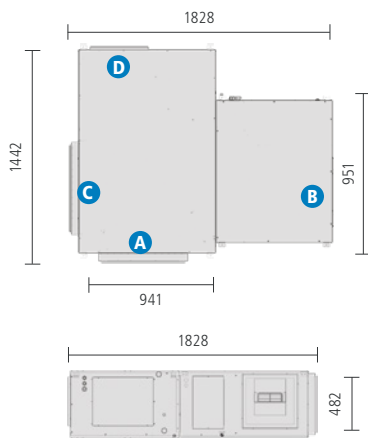
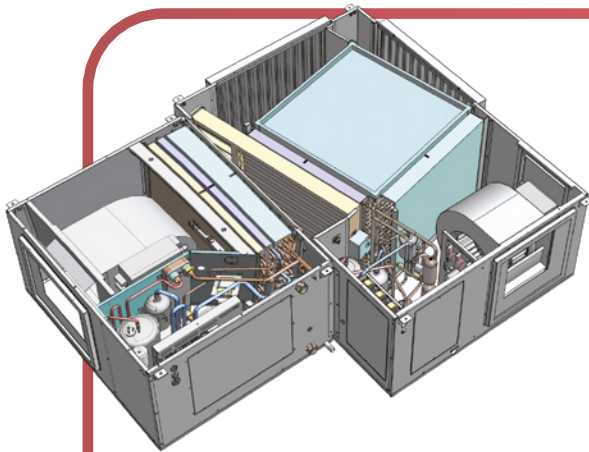
7910090901



**Filter set**  
Spare filter set ePM<sub>10</sub> 50%

7910081931

\* 2 siphons required



- A. Clean room extraction
- B. Treated air intake
- C. External air extraction
- D. Expulsion of stale air

## Deuclimatiser DCR 2000

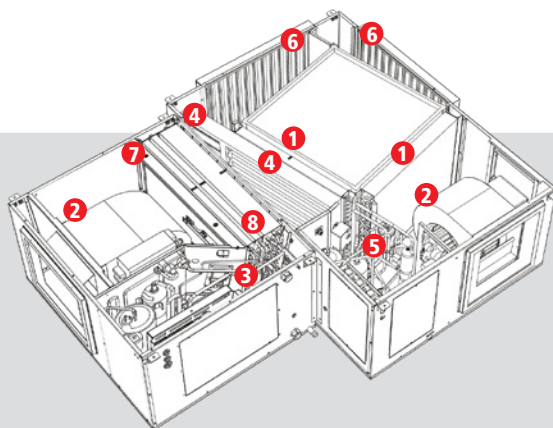
Art. 7110011002

- Passive heat recovery unit and active heat pump heat recovery unit for high performance.
- Indoor air renewal and dehumidification. Possibility of winter or summer thermal integration.
- Unit capable of exchanging outdoor air and/or recirculating indoor air.
- 50% ePM<sub>10</sub> filters in outdoor and indoor air intake included. Sanitisation by UV lamp.

Mechanical ventilation and air handling unit for indoor false ceiling applications capable of optimising comfort in tertiary environments equipped with radiant systems. The unit consists of the combination of a heat pump recuperator module (REC) and a dehumidification module (DC) that in combination manage the following modes of operation: renewal, dehumidification, integration in cooling or heating, and Sanitisation with automatic activation of "free heating / cooling" modes. The unit is able to exchange air with the outside and/or recirculate indoor air thanks to a system of motorised internal dampers and two EC fans with high head and constant flow rate.

The presence of a passive cross-flow recuperator and an active heat pump recuperator allows for excellent heat recovery performance.

Dehumidification is via a dedicated refrigeration cycle with a high-efficiency compressor, a hydronic pre-treatment coil, and valves for water flow management. High surface area filters ePM<sub>10</sub> 50% enable high levels of mechanical air filtration, and their installation is such that they can be easily inspected and extracted for maintenance. The unit comes standard with an ultraviolet germicidal lamp with high effectiveness against: mold, bacteria, germs and viruses.



- |                  |                 |   |
|------------------|-----------------|---|
| 1. Heat recovery | 3. Electric box | 6. Filters                              |
| 2. Fans          | 4. Dampers      | 7. UV lamp                              |
|                  | 5. Compressor   | 8. Water coil, evaporator and condenser |



Nominal air flow rate: 2.000 m<sup>3</sup>/h

External air flow rate: 1000-2.400 m<sup>3</sup>/h

Condensation (recirculation) capacity: 261 L/g

Water inlet range: 12 °C – 18 °C

Sensible power in cold: 6.500 W

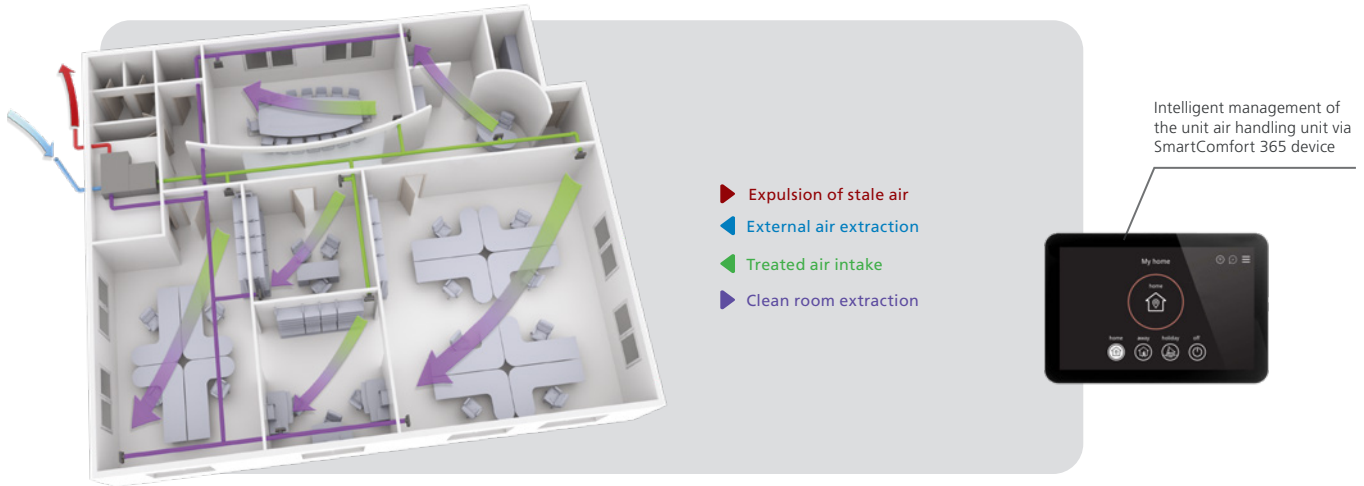


**SANITISING  
UV LAMP  
AS STANDARD**

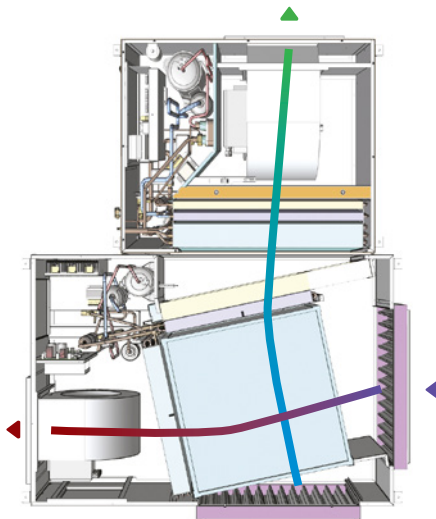


**2 FILTERS  
ePM<sub>10</sub> 50%**

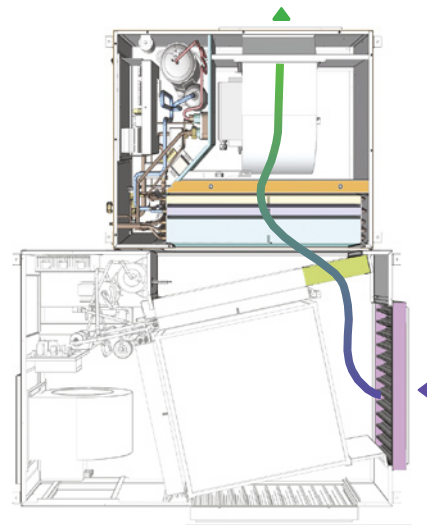
## Housing distribution and air flows of the system



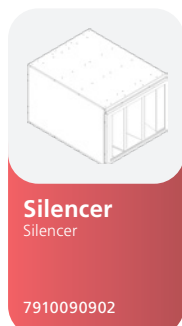
Recirculation flow, exchange and air treatment



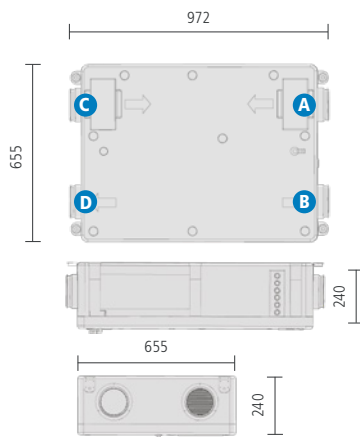
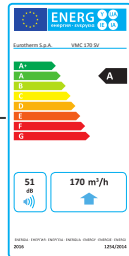
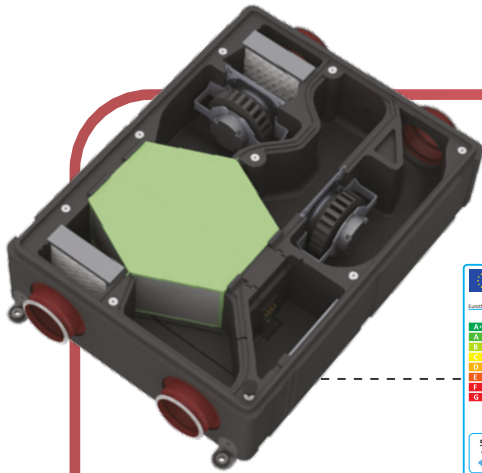
Recirculation flow and air treatment



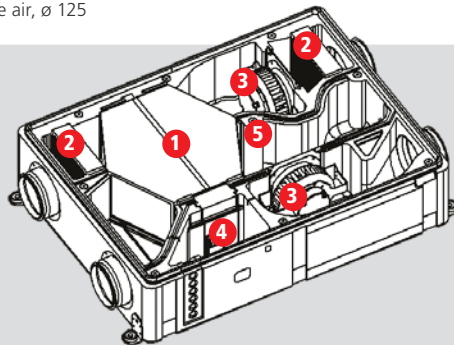
## Accessories and spare parts



\* 2 siphons required



- A. Dirty room extraction,  $\varnothing$  125
- B. Treated air intake,  $\varnothing$  125
- C. External air extraction,  $\varnothing$  125
- D. Expulsion of stale air,  $\varnothing$  125



- 1. Heat recovery
- 2. Filter
- 3. Fan
- 4. Electronic board
- 5. Bypass servo control

## VMC 170 SV PRO

Art. 7510010503

- Can be connected to SmartComfort 365 control or operated independently via PCUS display.
- Low power consumption and very high efficiency heat recovery. Energy class: A.
- Unit can be installed both vertically and horizontally.
- PCUS control system with included display for speed management and programmed ignition.
- Remarkably light and compact unit due to compact polypropylene casing.

Ductable air renewal unit for residential wall- or ceiling-mounted applications characterised by very high heat recovery efficiency, low power consumption and high aerodynamic performance. The expanded polypropylene casing ensures remarkable light weight and is shaped to optimise the aerodynamics of the air circuits inside the unit so as to minimise rustling and pressure drop. The ePM<sub>10</sub> 50% filters provide excellent air filtration and can be easily removed through dedicated flaps.

The unit is energy class A according to Reg. 1254/2014 and is capable of renewal with an outdoor air flow rate of up to 170 m<sup>3</sup>/h. 70% ePM<sub>1</sub> filters are available (optional).



Dimensions: 972 x 655 x 240 mm  
 External air flow rate: 50-170 m<sup>3</sup>/h  
 Apartments up to 120 m<sup>2</sup>  
 PCUS control system with LCD display  
 (connectable to SmartComfort 365 control)



2 FILTERS  
ePM<sub>10</sub> 50%



2 FILTERS (optional)  
ePM<sub>1</sub> 70%



AIRCLIMA AIR DISTRIBUTION  
EUROTHERM AVAILABLE

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

7910080907



### Filter set

Filter replacement set ePM<sub>10</sub> 50%

7910080305

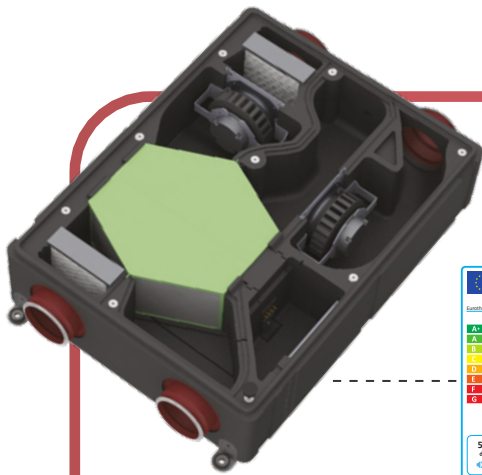


### Filter

Filter replacement optional ePM<sub>1</sub> 70%

7910080303

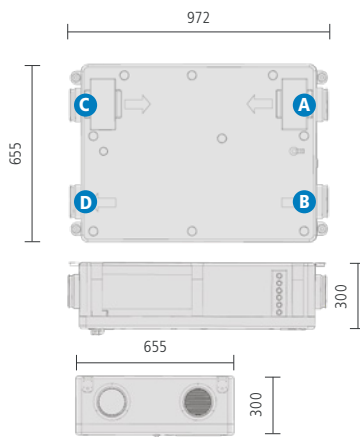
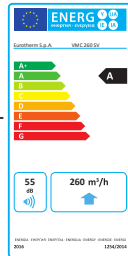




## VMC 260 SV PRO

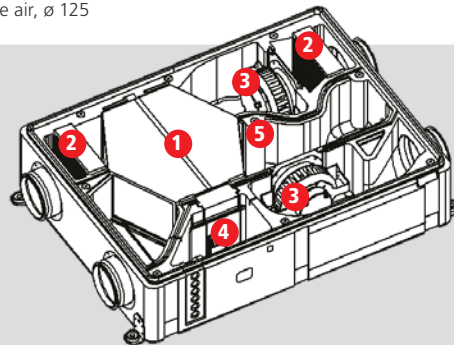
Art. 7510010504

- Can be connected to SmartComfort 365 control or operated independently via PCUS display.
- Low power consumption and very high efficiency heat recovery. Energy class: A.
- Unit can be installed both vertically and horizontally.
- PCUS control system with included display for speed management and programmed ignition.
- Remarkably light and compact unit due to compact polypropylene housing.



- A. Dirty room extraction,  $\varnothing$  125  
 B. Treated air intake,  $\varnothing$  125  
 C. External air extraction,  $\varnothing$  125  
 D. Expulsion of stale air,  $\varnothing$  125

Ductable air renewal unit for residential wall- or ceiling-mounted applications characterised by very high heat recovery efficiency, low power consumption and high aerodynamic performance. The expanded polypropylene casing ensures remarkable light weight and is shaped to optimise the aerodynamics of the air circuits inside the unit so as to minimise rustling and pressure drop. The ePM<sub>10</sub> 50% filters provide excellent air filtration and can be easily removed through dedicated flaps. The unit is energy class A according to Reg. 1254/2014 and is capable of renewal with an outdoor air flow rate of up to 260 m<sup>3</sup>/h. 70% ePM<sub>1</sub> filters are available (optional).



1. Heat recovery  
 2. Filter  
 3. Fan  
 4. Electronic board  
 5. Bypass servo control



Dimensions: 972 x 655 x 300 mm  
 External air flow rate: 100-260 m<sup>3</sup>/h  
 Apartments up to 200 m<sup>2</sup>

PCUS control system with LCD display (connectable to SmartComfort 365 control)

2 FILTERS  
 ePM<sub>10</sub> 50%

2 FILTERS (optional)  
 ePM<sub>1</sub> 70%

AIRCLIMA AIR DISTRIBUTION  
 EURO THERM AVAILABLE

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

7910080907



### Filter set

Filter replacement set ePM<sub>10</sub> 50%

7910080306



### Filter

Filter replacement optional ePM<sub>1</sub> 70%

7910080304

# AirClima Compact

## The new dimension of air

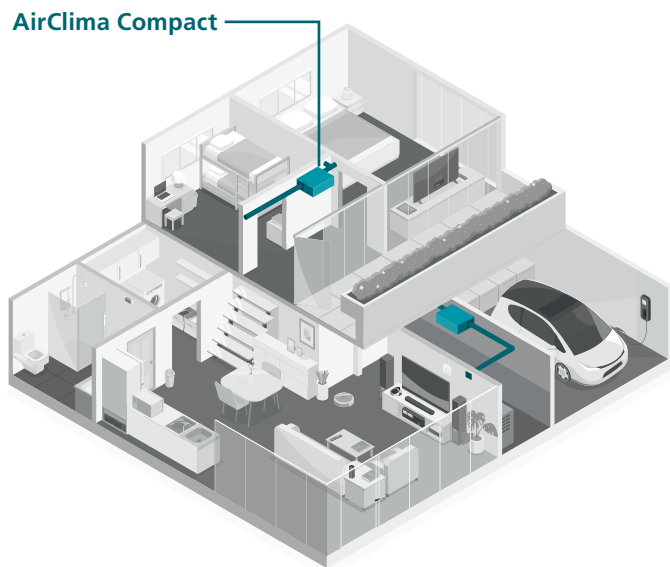
AirClima Compact is a ceiling-mounted air handling unit for indoor applications that can optimise comfort in rooms equipped with radiant systems.

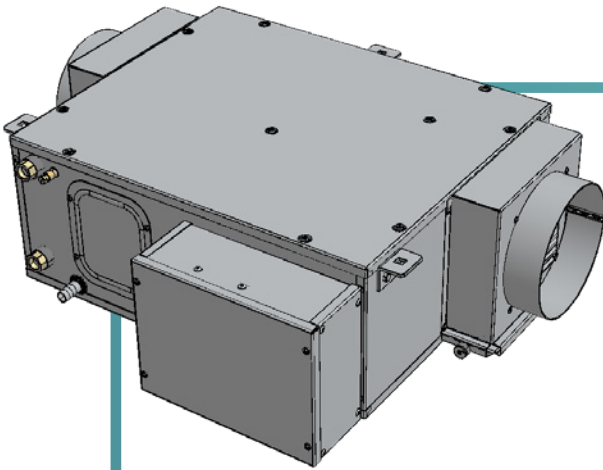
AirClima Compact was developed to be **incredibly compact and flexible**: its small size and thickness of less than 20 cm make it the right unit for **small apartments** and in any situation where space is a critical issue, such as in renovations. The innovative logic of modularity also makes it possible to **manage different floors or zones** of larger apartments separately, thus facilitating more timely control of different parts of the home.



Eurotherm SmartComfort 365 and SmartOne 365 controllers can be connected to the unit to directly manage dehumidification, cooling integration, heating integration and sanitisation.

AirClima Compact enables purification of supply air thanks to two stages of filtration ePM<sub>10</sub> 50% (with the possibility of installing an optional fine filter), and a UV lamp for Sanitisation included as standard.





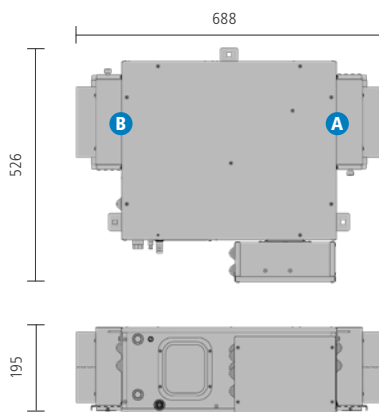
## AirClima Compact

Art. 7110030001

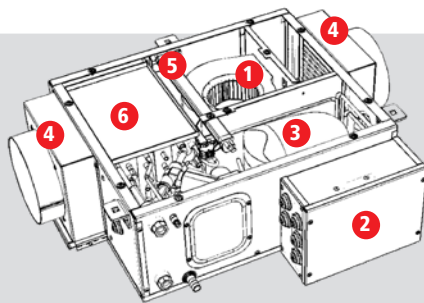
AirClima Compact is a ceiling-mounted air handling unit for indoor applications that can optimise comfort in rooms equipped with radiant systems. Industrial research and a careful choice of technological components have made it possible to develop a unit with exceptional compactness suitable for both new buildings and renovations, which often see a strong criticality in the lack of suitable installation space. The unit has an EC fan with high head and constant air flow rates for airflow management.

Dehumidification is accomplished through a dedicated refrigeration cycle that includes a high-efficiency compressor and two heat exchangers (evaporator and condenser) to treat the supply air. The hydraulic circuit consists of an air pre-treatment coil, a water-refrigerant exchanger to allow water condensation, and a hydronic valve to regulate the flow of water in that exchanger.

The machine comes standard with an ultraviolet germicidal lamp with high efficacy against mold, bacteria, germs and viruses, providing a safe way to sanitise the air without the use of chemicals and without harming the environment. The lamp has low power consumption and long life.



- A. Treated air intake,  $\varnothing$  160  
B. Clean room air intake,  $\varnothing$  160



1. Fan  
2. Electric box  
3. Compressor  
4. Filters  
5. UV lamp  
6. Water coil, evaporator and condenser



Nominal air flow rate: 150 m<sup>3</sup>/h

Condensation (recirculation) capacity: 18 L/g

Water inlet range: 12 °C – 18 °C

Sensible power in cold: 470 W



2 FILTERS  
ePM<sub>10</sub> 50%  
AS STANDARD



1 FILTER  
ePM<sub>10</sub> 60%  
OPTIONAL

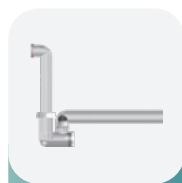


SANITISING  
UV LAMP  
AS STANDARD



AIRCLIMA AIR DISTRIBUTION  
EUROTHERM AVAILABLE

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

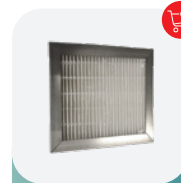
7910080907



### Filter

Replacement filter box ePM<sub>10</sub> 50%

7910090302



### Filter

Filter replacement optional ePM<sub>10</sub> 60%

7910090303



## Dehumidifier 581 DC

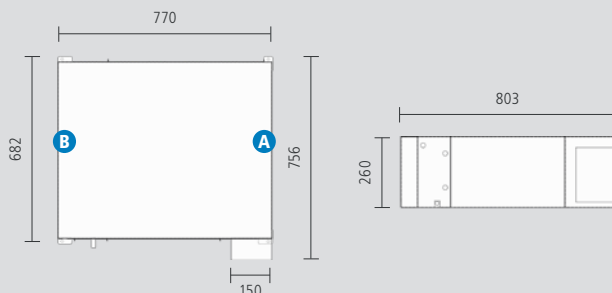
Art. 7110010301

- Ceiling-mounted unit for indoor air dehumidification.

Refrigeration cycle unit for summer dehumidification developed for indoor ceiling applications. The machine is capable of isothermal dehumidification, that is, it can dehumidify air and return it to the room at approximately the temperature at which it was taken. Dehumidification is based on the physical principle that when moist air comes into contact with a sufficiently cold surface, it forms condensation droplets, which is then removed through the dedicated drain. The unit contains the proper components of the refrigeration cycle, namely a hermetic compressor and the evaporator and condenser heat exchangers, as well as two water-based pre-/post-cooling coils and a low-speed fan for maximum quietness.

- A. Treated air intake, 2x  $\varnothing$  160\*  
 B. Clean room air intake, 2x  $\varnothing$  160\*

\*with accessory plenum



Dimensions: 756 x 260 x 803 mm  
 Nominal air flow rate: 280 m<sup>3</sup>/h  
 Condensing capacity: 24 L/g  
 Water inlet range: 12 °C – 18 °C  
 Supply and return air plenums excluded

 AIRCLIMA AIR DISTRIBUTION  
 EURO THERM AVAILABLE

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

7910080907



### Plenum

Supply air plenum

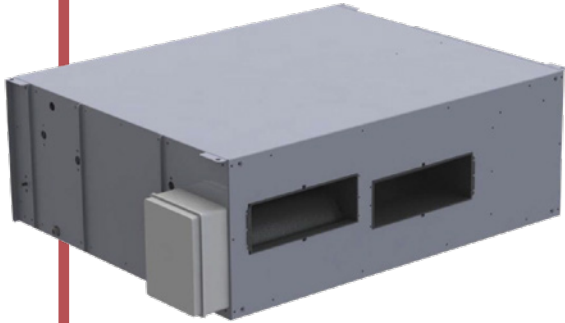
7510030203



### Plenum

Intake plenum

7510030104



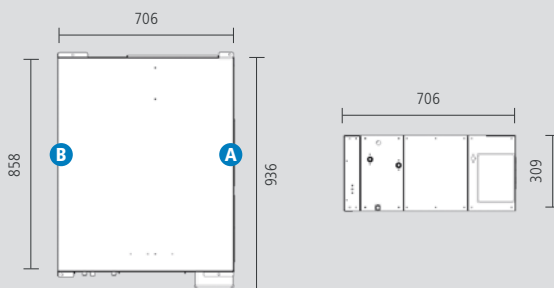
## Dehumidifier 901 DC

Art. 7110010601

- Ceiling-mounted unit for indoor air dehumidification.
- Complete with two acoustic plenums.

Refrigeration cycle unit for summer dehumidification developed for indoor ceiling applications. The machine is capable of isothermal dehumidification, that is, it can dehumidify air and return it to the room at approximately the temperature at which it was taken. Dehumidification is based on the physical principle that when moist air comes into contact with a sufficiently cold surface, it forms condensation droplets, which is then removed through the dedicated drain. The unit contains the proper components of the refrigeration cycle, namely a hermetic compressor and the evaporator and condenser heat exchangers, as well as two water-based pre-/post-cooling coils and a low-speed fan for maximum quietness.

- A. Treated air intake
- B. Clean room air intake



Dimensions: 706 x 309 x 858  
1106 x 309 x 858 (incl. acoustic plenums)

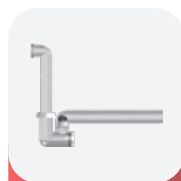
Nominal air flow rate: 560 m<sup>3</sup>/h

Condensing capacity: 48 L/g

Water inlet range: 12 °C – 18 °C

Complete with 2 acoustic plenums

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

7910080907

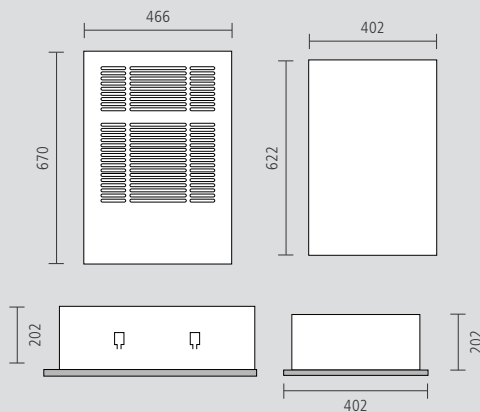


## Dehumidifier 320 DI

Art. 7110020101

- Recessed wall-mounted unit for indoor air dehumidification.
- Complete with on-board humidistat.

Refrigeration cycle unit for summer dehumidification developed for built-in indoor applications. The machine is capable of isothermal dehumidification, that is, it can dehumidify air and return it to the room at approximately the temperature at which it was taken. Dehumidification is based on the physical principle that when moist air comes into contact with a sufficiently cold surface, it forms condensation droplets, which is then removed through the dedicated drain. The unit contains the proper components of the refrigeration cycle, namely a hermetic compressor and the evaporator and condenser heat exchangers, as well as a water post-cooling coil and a low-speed fan for quiet operation. The unit is supplied with an on-board humidistat. Available wall-mounted frame and lacquered wood grid (optional).



Dimensions: 402 x 622 x 203 mm (integrated into frame)

Grid dimensions: 670 x 466 x 16 mm

Nominal air flow rate: 120 m<sup>3</sup>/h

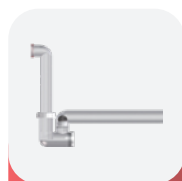
Condensing capacity: 8 L/g

Water inlet range: 14 °C – 18 °C

Complete with humidistat

Frame and grid excluded

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

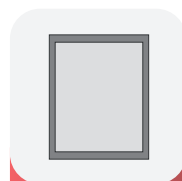
7910080907



### Grid

Lacquered wood grid

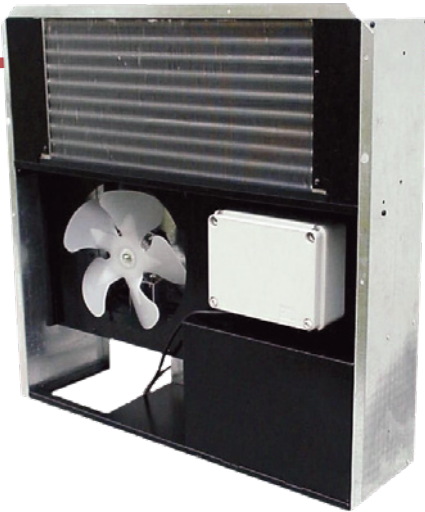
7910010101



### Frame

Lacquered wall frame

7910010201

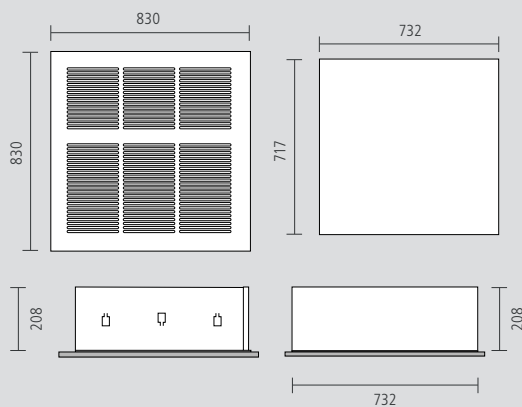


## Dehumidifier 581 DI

Art. 7110020301

- Ceiling-mounted unit for indoor air dehumidification. Possibility of summer thermal integration.
- Complete with on-board humidistat.

Refrigeration cycle unit for summer dehumidification developed for built-in indoor applications. The machine is capable of isothermal dehumidification, that is, it can dehumidify air and return it to the room at approximately the temperature at which it was taken. Dehumidification is based on the physical principle that when moist air comes into contact with a sufficiently cold surface, it forms condensation droplets, which is then removed through the dedicated drain. The unit contains the proper components of the refrigeration cycle, namely a hermetic compressor and the evaporator and condenser heat exchangers, as well as two pre-/post-cooling water coils and a low-speed fan for maximum quietness. The unit is supplied with an on-board humidistat. Available wall-mounted frame and lacquered wood grid (optional).



Dimensions: 730 x 732 x 203 mm

Grid dimensions: 830 x 830 x 18 mm

Nominal air flow rate: 300 m<sup>3</sup>/h

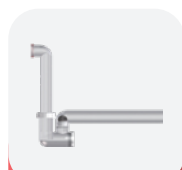
Condensing capacity: 24 L/g

Water inlet range: 12 °C – 18 °C

Complete with humidistat

Frame and grid excluded

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

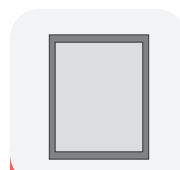
7910080907



### Grid

Lacquered wood grid

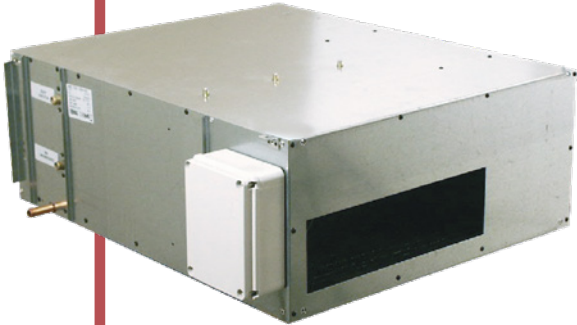
7910030101



### Frame

Lacquered wall frame

7910030201



If the unit is operated by the SmartComfort 365 system, SmartAir must be installed.

## Deuclimatiser 582 DCC

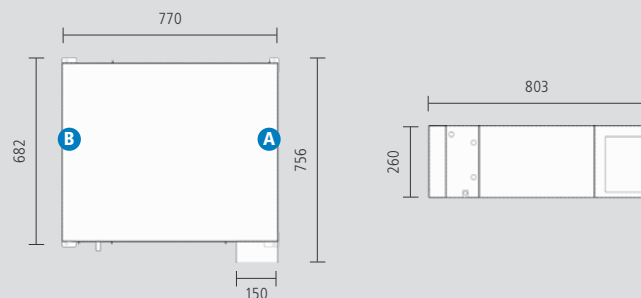
Art. 7210020701

- Ceiling-mounted unit for indoor air dehumidification. Possibility of summer thermal integration.

Refrigeration cycle unit for dehumidification and summer cooling developed for indoor false ceiling applications. The machine is capable of isothermal dehumidification, that is, it can dehumidify air and return it to the room at approximately the temperature at which it was taken. In addition, the unit can function as a Deuclimatiser (dehumidification and cooling): the air supplied is in this case both cooled and dehumidified, so as to ensure a sensible and latent cooling thermal contribution. In the unit there are the proper components of the refrigeration cycle, namely a hermetic compressor and the evaporator and condenser heat exchangers, as well as a plate heat exchanger, two pre-/post-water cooling coils, and a low-speed fan for maximum quietness.

- A. Treated air intake, 2x  $\varnothing$  160\*  
B. Clean room air intake, 2x  $\varnothing$  160\*

\*with accessory plenum



Dimensions: 756 x 260 x 803 mm  
Nominal air flow rate: 280 m<sup>3</sup>/h  
Condensing capacity: 27 L/g  
Water inlet range: 12 °C – 18 °C  
Supply and return air plenums excluded

 AIRCLIMA AIR DISTRIBUTION  
EUROTHERM AVAILABLE

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

7910080907



### Plenum

Supply air plenum

7510030203

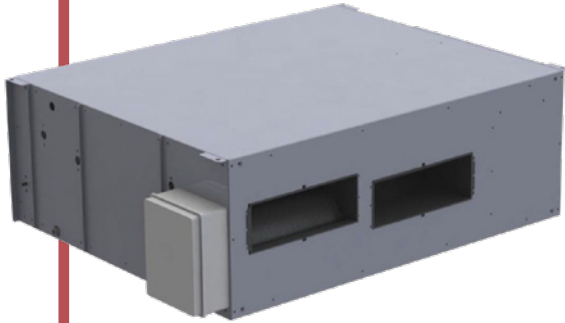


### Plenum

Intake plenum

7510030104





**If the unit is operated by the SmartComfort 365 system, SmartAir must be installed.**

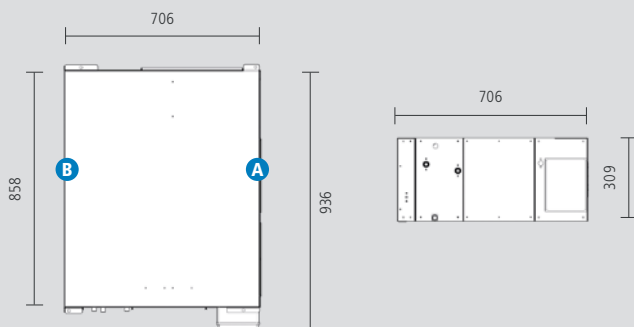
## Deuclimatiser 901 DCC

Art. 7210010602

- Ceiling-mounted unit for indoor air dehumidification. Possibility of summer thermal integration.
- Complete with two acoustic plenums.

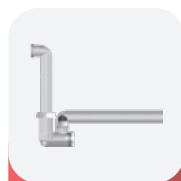
Refrigeration cycle unit for dehumidification and summer cooling developed for indoor false ceiling applications. The machine is capable of isothermal dehumidification, that is, it can dehumidify air and return it to the room at approximately the temperature at which it was taken. In addition, the unit can function as a Deuclimatiser (dehumidification and cooling): the air supplied is in this case both cooled and dehumidified, so as to ensure a sensible and latent cooling thermal contribution. In the unit there are the proper components of the refrigeration cycle, namely a hermetic compressor and the evaporator and condenser heat exchangers, as well as a plate heat exchanger, two pre-/post-water cooling coils, and a low-speed fan for maximum quietness.

- A. Treated air intake  
B. Clean room air intake



Dimensions: 1106 x 309 x 858 mm  
Nominal air flow rate: 560 m<sup>3</sup>/h  
Condensing capacity: 48 L/g  
Water inlet range: 12 °C – 18 °C  
Sensible power in cold: 1900 W  
Complete with 2 acoustic plenums

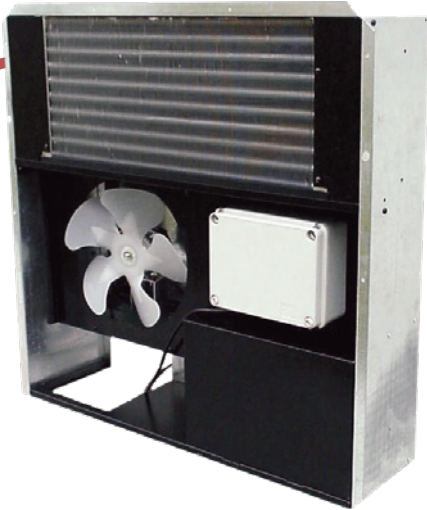
## Accessories and spare parts



### Siphon

Siphon for condensate drainage

7910080907



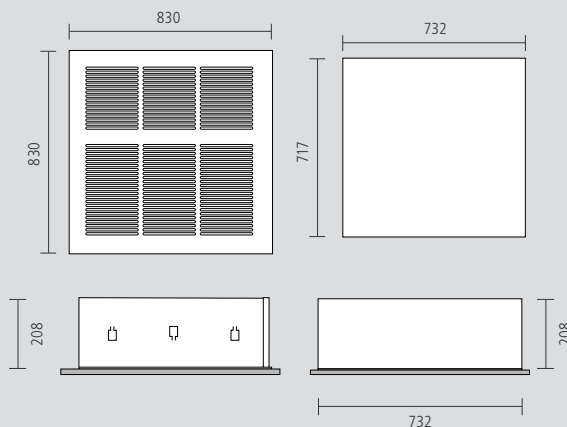
If the unit is operated by the SmartComfort 365 system, SmartAir must be installed.

## Deuclimatiser 581 DCI

Art. 7210020301

- Built-in wall-mounted unit for indoor air dehumidification. Possibility of summer thermal integration.
- Complete with on-board humidistat.

The Deuclimatiser is a refrigeration cycle dehumidifier that, in addition to carrying out isothermal dehumidification during the summer period, can also provide sensible integration; operation is based on the physical principle that air when it comes into contact with a cold surface wets it by yielding moisture in the form of condensation droplets. Basically, a refrigeration machine keeps cold a finned coil (heat exchanger called an evaporator) through which air is passed as it cools and dehumidifies. Subsequently passing through a hot heat exchanger (condenser) and the post cooling coil, the air returns to the room at approximately the initial temperature (isothermal dehumidification) system provides, in addition to the heat exchangers proper to the refrigeration cycle (evaporator and condenser), a hermetic compressor, pre and post cooling coils, low speed fan for maximum silence, air-water exchanger.



Dimensions: 730 x 732 x 203 mm

Grid dimensions: 830 x 830 x 18 mm

Nominal air flow rate: 300 m<sup>3</sup>/h

Condensing capacity: 24 L/g

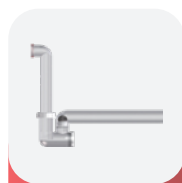
Water inlet range: 12 °C – 18 °C

Sensible power in cold: 960 W

Complete with humidistat

Frame and grid excluded

## Accessories and spare parts



### Siphon

Siphon for condensate drainage

7910080907



### Grid

Lacquered wood grid mod. 581

7910030101



### Frame

Frame to be walled mod. 581

7910030201



## **AirClima: the air distribution** by Eurotherm


Eurotherm recognises the importance of providing its customers with a comfortable and healthy environment through simple, intuitive and, above all, comprehensive solutions.

For the residential setting, Eurotherm has developed a line of products designed to transfer air from ducted units. What we wanted?

A high quality product range that was flexible to different project requirements and easy to explain and install. With Eurotherm, you can count on innovative and reliable solutions for air distribution within your home. We are committed to providing supportive service to our Customers through professional advice on products and their applications. With Eurotherm, transform your home into a comfortable and healthy environment where every breath is a pleasure.

The following table presents the Eurotherm machine range, including details of installation, air flow rate and functionality. The availability of a Eurotherm air distribution offer is also indicated, complementing that for the air handling unit.

## Residential units

ART.	PRODUCT	PAGE	INSTALLATION	AIR FLOW RATE m <sup>3</sup> /h	FEATURES					 AIR DISTRIBUTION AIRCLIMA EUROTHERM
					Renewal	Free cooling	Summer dehumidification	Summer integration	Winter integration	
7410010103	DEUCLIMA VMC 300 S	12	Ceiling	300	●	●	●	●	●	AVAILABLE
7510010101	DEUCLIMA VMC 300 V	14	Wall	300	●	●	●	●	●	AVAILABLE
7410010105	DEUCLIMA VMC 500 S	16	Ceiling	500	●	●	●	●	●	AVAILABLE
7510010102	DEUCLIMA VMC 500 V	18	Wall	500	●	●	●	●	●	AVAILABLE
7110030001	AIR CLIMA COMPACT	27	Ceiling	150			●	●	●	AVAILABLE
7510010503	VMC 170 SV PRO	24	Ceiling / Wall	170	●	●				AVAILABLE
7510010504	VMC 260 SV PRO	25	Ceiling / Wall	260	●	●				AVAILABLE
7110010301	DEHUMIDIFIER 581 DC	28	Ceiling	280			●			AVAILABLE
7210020701	DEUCLIMATISER 582 DCC	32	Ceiling	280			●	●		AVAILABLE
7110020101	DEHUMIDIFIER 320 DI	30	Built-in	120			●			NOT NECESSARY
7110020301	DEHUMIDIFIER 581 DI	31	Built-in	300			●			NOT NECESSARY
7210020301	DEUCLIMATISER 581 DCI	34	Built-in	300			●	●		NOT NECESSARY

## Units for the tertiary sector

7110011001	DEUCLIMATISER DCR 1000	20	Ceiling	1000	●	●	●	●	●	NOT AVAILABLE
7110011002	DEUCLIMATISER DCR 2000	22	Ceiling	2000	●	●	●	●	●	NOT AVAILABLE
7110010601	DEHUMIDIFIER 901 DC	29	Ceiling	560			●			NOT AVAILABLE
7210010602	DEUCLIMATISER 901 DCC	33	Ceiling	560			●	●		NOT AVAILABLE

● dehumidification    ● cooling    ● air renewal    ● heating    ● free cooling

# Ducted air handling units for residential

In the design, the air distribution network and the size of the components vary according to the type of unit. In the following, an overview of the main types of Eurotherm units and the connections that need to be considered in the design is presented.

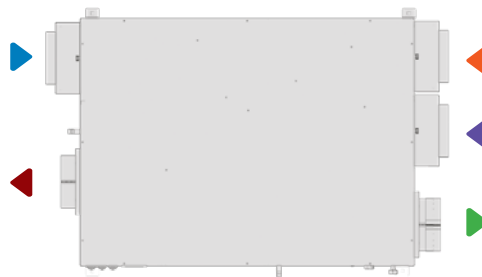
## Deuclima VMC – Five-way ducted units

These machines combine air exchange with summer and winter Dehumidification and sensitive heating air integration.

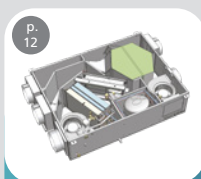
They allow the extraction and subsequent expulsion of air from kitchens and bathrooms and the supply of fresh, treated air into living rooms, studies or bedrooms. In addition, if required, indoor air can be recirculated from the living room, study or bedrooms via a room-by-room extraction (recommended) or via centralised recirculation.

For example, when designing the ducts for a DEUCLIMA VMC 300 S unit and an apartment of approx. 100 m<sup>2</sup> you can consider::

- Supply air to the interior: 300 m<sup>3</sup>/h
- Circulated air from inside: 300 m<sup>3</sup>/h
- Indoor return air: 150 m<sup>3</sup>/h
- Air inlet from outside: 150 m<sup>3</sup>/h
- Exhaust air to the outside: 150 m<sup>3</sup>/h



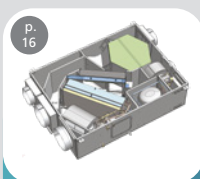
Extracting dirty environments    Expulsion of stale air    External air extraction    Treated air intake    Clean room extraction



p.  
12

**Deuclima-VMC  
300 S**

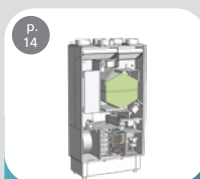
7410010103



p.  
16

**Deuclima VMC  
500 S**

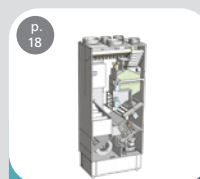
7410010105



p.  
14

**Deuclima VMC  
300 V**

7510010101



p.  
18

**Deuclima VMC  
500 V**

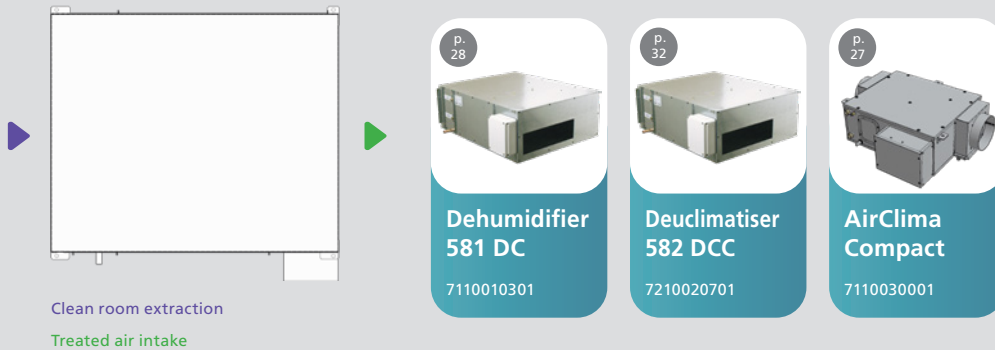
7510010102

## Dehumidifiers and dehumidifiers – Two-way ducted units

These machines recirculate indoor air and feed it back into the rooms after it has been treated (dehumidified and/or conditioned). There is a single flow of air, and in fact these units are equipped with a single fan. It is important to remember that these units should never be connected in either recirculation or supply to dirty rooms, such as bathrooms.

For example, when designing the ducts for a Deuclimatiser 582 DCC unit and an apartment of approx. 100 m<sup>2</sup> it will be possible to consider:

- Supply air to the interior: 280 m<sup>3</sup>/h
- Circulated air from inside: 280 m<sup>3</sup>/h

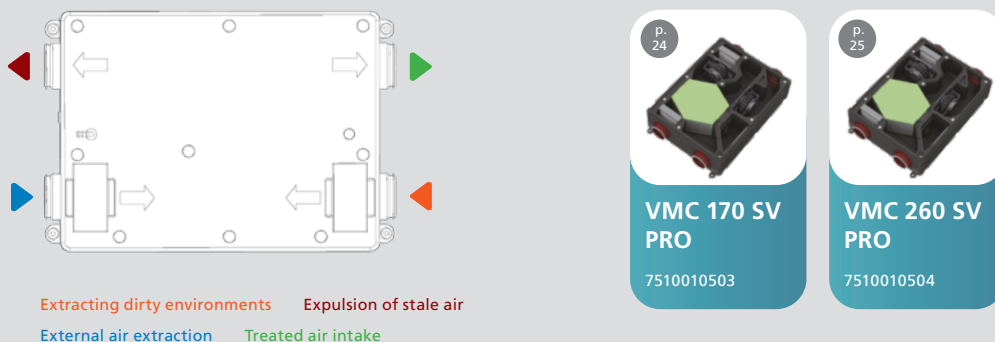


## Mechanical ventilation – Four-way ducted units

These machines perform air exchange and operate with two air flows with heat recovery. The air extracted from kitchens and bathrooms is exhausted, while the outside air is filtered and fed into the room, usually through diffusers placed in the living room, study or bedrooms.

For example, when designing the ducting for a VMC 170 SV PRO unit and a flat of approx. 100 m<sup>2</sup> you can consider:

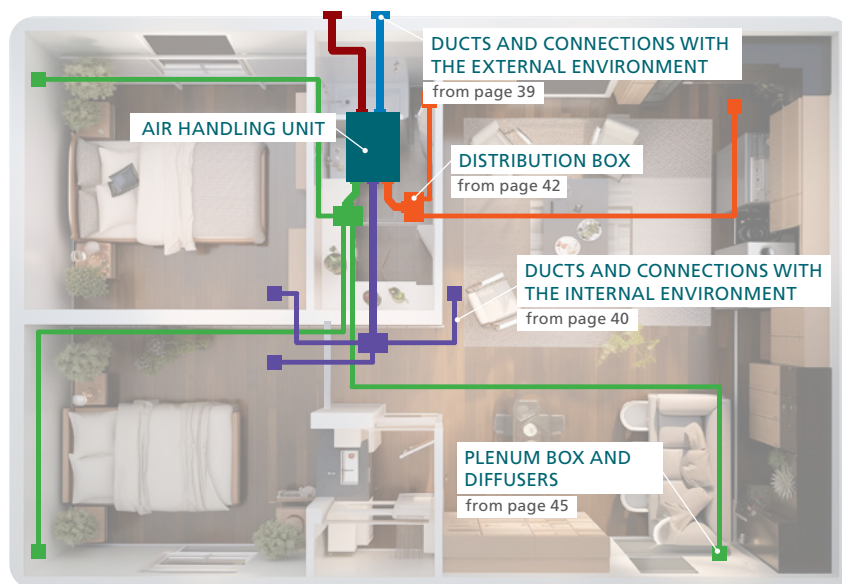
- Supply air to the interior: 150 m<sup>3</sup>/h
- Extract air from the interior: 150 m<sup>3</sup>/h
- Air inlet from outside: 150 m<sup>3</sup>/h
- Exhaust air to the outside: 150 m<sup>3</sup>/h



# Eurotherm distribution network components

With the Airclima range, Eurotherm offers air distribution components developed and optimised for its line of air handling units and Radiant systems. The components can be subdivided into:

- **Ducts and connections of the unit to the outside**, required if the unit performs hygienic exchange
- **Ducts and connections of the unit to the indoor environment**
- **Distribution boxes**, connecting primary and secondary ducts
- **Plenum box and diffusers**, which are the terminals of the distribution network



## Ducts and connections of the unit to the external environment

These connections consist of ducts and grids through which the fresh air drawn in by the supply fan and the expelled air pushed out by the return fan pass separately. The ducts are thermally insulated to improve the energy efficiency of the system and to avoid surface condensation, and with their flexibility they can be easily adapted to available spaces. The components are available in different diameters, to be selected according to the unit's connection dimensions and design air flow rate.



**Insulated air duct, 10 m**

D125 – 7710002125  
D160 – 7710002160



**External air grid**

D125 – 7710001125  
D160 – 7710001160



**Junction sleeve**

D125 – 7720006125  
D160 – 7720006160



**Hose clamps**

7720005000

## Ducts and connections of the unit with the internal environment

Air handling units are connected to the rooms to be treated via a network of ducts in through which air circulates. These are divided into two types: main ducts that connect the machine to the distribution boxes and secondary ducts that connect the distribution boxes to the treated rooms.

**For main ducts**, Eurotherm offers flexible ducts of different diameters (D125, D160 and D200) made of PVC reinforced with a harmonic steel spiral. These ducts are available with a range of accessories, e.g. flexible silencers that enable noise reduction and improved acoustic performance.

Junction and branch sleeves, on the other hand, are useful components for extending or splitting ducts, and allow distribution lines to be designed with maximum flexibility. Hose clamps are indispensable for connecting flexible duct sections to the connections of machines, distribution boxes and accessories.



**Flexible PVC duct, 10 m**

D125 – 7720004125  
D160 – 7720004160  
D200 – 7720004200



**Flexible silencer**

D125 – 7720003125  
D160 – 7720003160  
D200 – 7720003200



**Y-drift without reduction**

D125 – 7720007001  
D160 – 7720007002  
D200 – 7720007003



**Y-drift with reduction**

D160-125 – 7720007004  
D200-160 – 7720007005



**Junction sleeve**

D125 – 7720006125  
D160 – 7720006160  
D200 – 7720006200



**Hose clamps**

7720005000



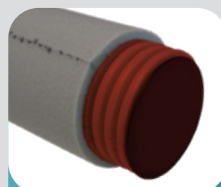
**For secondary ducts**, Eurotherm offers D90 diameter semi-rigid ducting, which is suitable for the air flow rates of Eurotherm units. For ease of construction and to ensure a quality installation, these ducts fit plug-and-play into the adapters provided in the distribution boxes and plenum boxes. The use of sealing gaskets (mandatory) and anti-slip rings (optional) ensures a tight and reliable installation.

The ducts are semi-rigid and as such are able to adapt to most routings without difficulty. Even if it is necessary to make particularly demanding bends, there will be no problem because Airlima makes the 90° bend accessory available. The accessory range for the D90 semi-rigid duct is completed by Pipe-to-pipe sleeves, Flow rate regulators and end caps.



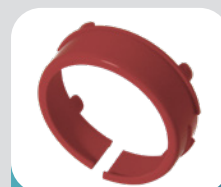
D90 duct, 50 m

7730008001



D90 insulated duct, 25 m

7730008002



Anti-slip rings, 10 pcs

7730008008



Seal gaskets, 10 pcs

7730008005



90° bend for duct D90

7730008004



End caps, 5 pcs

7730008007



Junction sleeve for D90 duct

7730008003



Soft-disc flow regulator, 5 pcs

7730008009

## Distribution boxes

Distribution boxes are components that connect a main duct of larger dimensions (e.g. D160) to several ducts of smaller dimensions. The boxes can be used:

- in a supply branch, i.e. the air from a main duct is divided into several D90 ducts
- in a return branch, i.e. the air from several D90 ducts is ducted into a main duct

Thanks to a successful design, Eurotherm is pleased to offer its customers a line of distribution boxes that can be used in dozens of configurations to ensure maximum flexibility for the most diverse design and installation requirements.

Eurotherm offers boxes in different sizes (small, medium and large), all with the same characteristics:



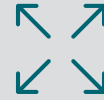
### Multi-attachment

The boxes can be connected to main ducts of various sizes by installing one of several available connection plates, each with a different diameter collar. The connection plates are supplied with a flat gasket and can be purchased separately from the box.



### Reversibility

The boxes allow the air distribution plate to be installed axially or laterally to the main duct, so that situations can be easily handled where a 90° bend is required. Performing this operation is simple and takes less than a minute.



### Extensibility

The boxes have side provisions that allow you to add D90 duct adapters and thus expand the air flow rate of the box. Even if the extension is not required, it will be possible to take advantage of these provisions to relocate the distribution plate adapters and simplify duct routing.

DISTRIBUTION BOX	BOX SIZE mm	MAXIMUM FLOW RATE m <sup>3</sup> /h		MAIN DUCT CONNECTION				D90 DUCT CONNECTIONS		GRID ACCESSORY	SILENCER ACCESSORY
		STANDARD	WITH EXTENSION	D125	D160	D200	2X D160	STANDARD	WITH EXTENSION		
Small	L 428 x L 220 x P 198	200	300	●	●			4x D90	6x D90	●	●
Medium	L 445 x L 366 x P 221	400	600	●	●	●	●	8x D90	12x D90		
Large	L 547 x L 366 x P 221	500	700	●	●	●	●	10x D90	14x D90		

## Small distribution box

Box usable up to a flow rate of 200 m<sup>3</sup>/h, compatible with D125 or D160 ducting via replaceable front plates and silencer accessory purchased separately.

The box can be used alternatively with the 4x D90 distribution plate to channel air into the ducts or with the grid accessory. In this case, direct intake/return of air can be done via an inspectable magnetic grid supplied with a sheet metal telescope and filter septum. The unique design of the modular box allows both the grid accessory and the 4xD90 plate to be installed axially or to the side in relation to the position of the main duct. In addition, the connectivity of the box can be extended by using the side arrangements for up to 2 additional D90 connections (see D90 adapter, 2 pcs – 7730008006).



**Small distribution box**

7740009006



**Front attachment plate**

D125 – 7740009009  
D160 – 7740009010



**Distributor plate 4x D90**

7740009008



**Grid with telescopic frame**

7740009011



**Silencer for small box**

7740009007



**D90 adapter, 2 pcs**

7730008006

**Here are two examples:**



Distribution box small with D160 connection, with accessory grid.

Small distribution box, art. 7740009006  
Front attachment plate D160, art. 7740009010  
Grid with telescopic frame, art. 7740009011



Small distribution box with D160 connection, silencer, 4x D90 plate and extension.

Small distribution box, art. 7740009006  
Front attachment plate D160, art. 7740009010  
Distributor plate 4x D90, art. 7740009008  
Silencer for small box, art. 7740009007  
Adapter D90 2 pcs, art. 7730008006 (x2)

## Medium distribution box

Box usable up to a flow rate of 400 m<sup>3</sup> /h, compatible with D125, D160, D200 or 2x D160 ducting via dedicated front plates. Connection to secondary ducts is managed by the distribution plate 8x D90 (included) with the possibility of extending the air flow rate by adding up to four D90 connections (see D90 adapter, 2 pcs – 7730008006). The connection to the D90 secondary ducts can be axial or lateral to the main duct.



Medium  
distribution box

7740009001



Front attach-  
ment plate

D125 – 7740009012  
D160 – 7740009004  
D200 – 7740009005  
2xD160 – 7740009003



D90 adapter, 2  
pcs

7730008006

## Large distribution box

Box usable up to a flow rate of 500 m<sup>3</sup> /h, compatible with D125, D160, D200 and 2x D160 ducts via dedicated front plates. Connection to secondary ducts is managed by the 10x D90 distribution plate (included) with the possibility of extending the air flow rate by adding up to four D90 connections (see D90 adapter, 2 pcs – 7730008006). The connection to the D90 secondary ducts can be axial or lateral to the main duct.



Large  
distribution box

7740009002



Front attach-  
ment plate

D125 – 7740009012  
D160 – 7740009004  
D200 – 7740009005  
2xD160 – 7740009003



D90 adapter, 2  
pcs

7730008006

## Plenum nozzle and room air diffusion

The point of contact between secondary ducts and the treated areas is made up of plenum boxes and diffusers, which can have different shapes and sizes to suit the design and aesthetic requirements of each situation. Eurotherm's experience has enabled four different models of plenum box to be identified: the round model, the rectangular model, the linear model, and finally the centralised recirculation model. Each nozzle plenum model will be compatible with one or more diffusers, as illustrated below.

**Round air outlet plenum model**, with inlet for 2x D90 ducts, available with basic round diffuser, in the design line (round or square) and in plasterboard (soon). The range includes the 30 cm extension accessories, the ring + filter kit for installation in the return air vents and the appropriate filter replacements (art. 7750010004) available from E-shop.



Plenum box  
round with 2x  
D90 adapters

7750010001



Extension 30 cm  
for plenum  
round nozzle

7750010002



Basic round  
diffuser for  
round plenum  
box

7750010005



Design round  
diffuser for  
round diffuser  
plenum box

7750010006



Design square  
diffuser for  
round diffuser  
plenum box

7750010007



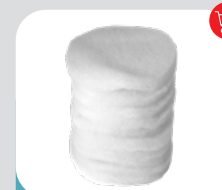
Round  
plasterboard  
plenum box  
diffuser

a breve



Ring + filter kit  
for round nozzle  
plenum

7750010003



Round  
plenum-nozzle  
filters, 10 pcs

7750010004

**Rectangular plenum box model**, with inlet for 2x D90 ducts, available with PVC louvre diffuser or flat aluminium diffuser. Also in this case, the range includes an extension, the mesh + filter kit and the appropriate filter replacement (art. 7760011008) available from E-shop.



Rectangular plenum box

7760011002



Slotted diffuser for rectangular plenum box

7760011010



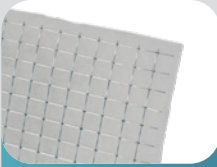
Flat diffuser for rectangular plenum box

7760011012



Extension for rectangular plenum box

7760011004



Filter + mesh kit for rectangular plenum box

7760011006



Fixing kit for rectangular plenum box

7760011013



Filters for rectangular plenum box, 10 pcs.

7760011008

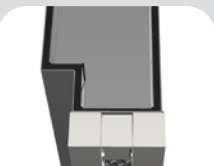
**Linear plenum box model**, available with diffuser in two types of material, i.e. PVC and plasterboard (shortly). The PVC model is available in two sizes 500 mm (shown) and 1000 mm. The plenum box is supplied with diffuser included.

**Plenum box model for recirculation**, which is required if room-to-room recirculation vents are not possible. The proposed component is a plenum for centralised recirculation that can handle up to 300 m<sup>3</sup> /h and is equipped as standard with a 500 x 300 mm magnetic inspectionable grid with washable honeycomb filter supplied.



Linear plenum box and PVC diffuser

L500 – 7770012050  
L1000 – 7770012100



Plenum box and plasterboard diffuser

a breve



Recirculation plenum with grid

7780014000



Front attachment plate

D125 – 7740009012  
D160 – 7740009004  
D200 – 7740009005  
2xD160 – 7740009003



## Lifetime Warranty

Eurotherm radiant systems are *lifelong* guaranteed by ITAS Assicurazioni. Eurotherm extends the guarantee to the entire lifetime of the radiant system against unintentional damage caused to third parties resulting from manufacturing, assembly and/or design defects.

**ITAS**  
ASSICURAZIONI

**eurotherm**  
radiant comfort systems



### CERTIFICATO DI GARANZIA EUROTHERM EUROTHERM WARRANTY CERTIFICATE EUROTHERM-GARANTIEZERTIFIKAT

Eurotherm, per garantire la sicurezza e la tranquillità dei propri Clienti si è dotata delle necessarie coperture assicurative al fine di tutelare l'interesse, affidandosi a ITAS Mutua. La garanzia prevede:

- Assicurazione della Responsabilità Civile del Produttore, **senza limite di tempo, su tutti i prodotti e per l'intera durata contrattuale assicurativa**, per difetti originari di produzione, assemblaggio e/o progettazione, istruzione, imballaggio, contro i danni involontariamente cagionati a Terzi.

I massimali assicurati sono i seguenti:  
per sinistro **€ 10.000.000,00**

- Assicurazione della responsabilità Civile dell'Attività, contro Terzi e su tutti i lavori di manutenzione e installazione effettuati da personale specializzato Eurotherm.

I massimali assicurati sono i seguenti:

per sinistro, limite per persona e limite per danni a cose **€ 10.000.000,00**

Copertura valida per segnalazione sinistro entro 24 mesi da messa in pressione con prova tenuta impianto.  
ITAS garantisce quindi contro i danni sopra descritti fino alla concorrenza dei massimali indicati nelle certificazioni assicurative allegate e nell'ambito delle rispettive condizioni contrattuali di assicurazione.  
La garanzia vale in tutto il mondo escluso USA/CAN/MEX.

To guarantee our Clients' safety and peacefulness, Eurotherm has entered into the proper insurance covers with ITAS Mutua in order to protect our clients' interest. The warranty includes:

- A product liability insurance, **without any temporal limitation, on all products and throughout the entire duration of the contract**, for flaws due to imperfect production, assembly and/or planning, instruction and packaging against damages accidentally caused to Third parties.

The covered limit of liability are:  
per accident **€ 10.000.000,00**

- A business liability insurance against Third parties and on all the maintenance and installation works fulfilled by Eurotherm expert staff.

The covered limit of liability are:

per accident, limit per person and limit per damage to goods **€ 10.000.000,00**

The coverage is valid whether the accident is alerted within 24 months from the pressurization with plant tightness test.

Hence, ITAS guarantees against the above-described damages within the limits laid down in the attached insurance certifications and within the consequent insurance's terms and conditions. The guarantee is valid worldwide excluding USA/CAN/MEX.

Um die Sicherheit und Zufriedenheit seiner Kunden zu garantieren, hat Eurotherm einen Versicherungsschutz für alle notwendigen Fälle mit ITAS Mutua abgeschlossen. Die Garantie umfasst wie folgt:

- Unbefristete Haftpflichtversicherung, für alle Produkte und für die gesamte Dauer des Versicherungsvertrages** für Fabrikationsfehler, Montage- und/oder Konstruktionsfehler, Fehler in der Anleitung oder Verpackungsfehler; Haftpflichtversicherung gegenüber Dritten.  
Die Obergrenzen sind wie folgt:  
**€ 10.000.000,00** pro Schadensfall

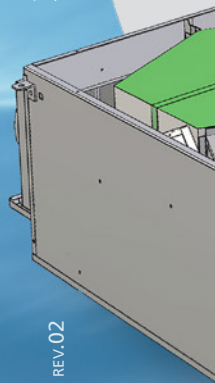
- Haftpflichtversicherung gegenüber Dritte und für Wartungs- und Installationsarbeiten, die von Spezialisten von Eurotherm ausgeführt werden.  
Obergrenzen sind wie folgt:  
**€ 10.000.000,00** pro Schadensfall. Höchstgrenze pro Person und für Sachschäden  
Versicherungsdeckung gültig bei Schadenseröffnung innerhalb von 24 Monaten nach Druckprüfung der Anlage.

ITAS garantiert daher gegen die oben genannten Schäden innerhalb der in den beigefügten Versicherungsbedingungen angegebenen Höchstgrenzen und im Rahmen der jeweiligen vertraglichen Versicherungsbedingungen. Die Garantie gilt weltweit, ausgenommen USA/CAN/MEX.



More quality for the indoor **climate**.  
 More value for **well-being**.

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Eurotherm SpA Benefit Company  
 Pillhof 91 – 39057 Bolzano – Italy  
 T +39 0471 63 55 00  
 mail@eurotherm.info



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eurotherm.info |   