

ETA POOL

Indoor swimming pool dehumidifier



euroclima®
We care for better air



WE CARE FOR
BETTER AIR

THE COMPANY

Since 1963 Euroclima has been the market leader in custom-made climate control and air-conditioning units.

We develop, produce and market **high quality climate control and ventilation products** for all areas. From simple, convenient applications to solutions in hygiene and air processing plants. Euroclima is an international industrial business working across **6 production sites in Italy, Austria, India, the United Arab Emirates and Russia and with over 40,000m² of production sites**. Our core competencies are the production and the worldwide distribution of high-end, fully-developed climate control units and fan convectors.

We strive to exceed our clients' expectations through innovation, quality and a comprehensive service. Euroclima currently employs **over 450 members of staff** in addition to a widespread **distribution network** with sales and service branches in the whole of **Europe, Asia, the Middle East, North Africa and Australia**. Cooperation with partners in various countries enables us to cover an extensive market whilst providing optimal customer service.



GRAND HOTEL SAVOIA | CORTINA D'AMPEZZO



KRUMMERS HOTEL POST | SEEFELD



SPORTS COMPLEX | DUBAI



HOTEL GRÜNER BAUM | BRIXEN



THERASIA RESORT | VULCANO



HOTEL MADONNA DELLE NEVI | FOLGARIDA



HOTEL POST ALPINA | INNICHEN



HALLENBAD | BIBERACH

AIR TREATMENT FOR **INDOOR POOLS**

WE CARE FOR BETTER AIR

Hygienically perfect air quality in the indoor pool ensures an additional feel-good factor and longer stay for guests.

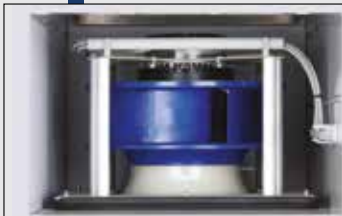
Indoor swimming pools are the buildings with the highest energy density. Optimal energy management helps to keep costs low and ensure the health of guests.

Air conditioning systems in indoor pools not only create an ideal feel-good climate for the guests by creating a **constant, pleasant and healthy indoor climate**, but they also prevent in particular the development of structural damage (due to penetrating condensate in ceilings and walls).

Our swimming pool range is divided into 2 product lines: **ETA POOL SPA** for smaller indoor pools (private houses, hotels...) **up to approx. 1,800 m³/h** and **ETA POOL OLYMPIC** for medium and large indoor pools **up to 37,000 m³/h**. Even larger air volumes can be realized on request. With the ETA POOL series, we combine our many years of experience with swimming pool equipment and the best technologies available on the market.



ETA POOL SPA



ETA POOL OLYMPIC



ETA POOL SECTIONS

KNOW HOW

For more than 15 years Euroclima has developed advanced solutions for indoor swimming pools.

The **most important features** of the Euroclima swimming pool unit:

- » Reduction of humidity inside the room
- » Removal of air pollution particles
- » Ecological refrigerant R407C or R410A
- » Very low energy consumption thanks to intelligent control strategy
- » Free cooling and efficient fresh air management with filters M5 and F7 (EN 779)
- » Compact and plug and play solution
- » High dehumidification efficiency as per VDI 2089
- » Pre programmed, easy to use Siemens DDC controller
- » Highly efficient direct-drive fans with AC or EC motors
- » Double plate heat exchanger with up to 90% efficiency
- » All internal parts corrosion protected
- » Unit available compliant to VDI 6022
- » 50 mm double skin panels
- » Casing features: D1/F9/L1/T2/TB2 as per EN 1886
- » Easy installation and maintenance
- » Low sound levels
- » High efficiency integrated heat pump with scroll compressor
- » Optional pool water condensor
- » Optimized operation depending on out-side air conditions
- » Two-stage heat recovery

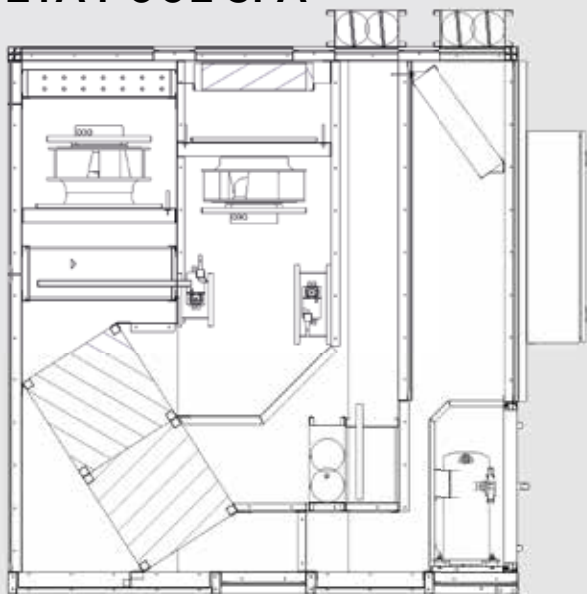


OUR PRODUCT LINES

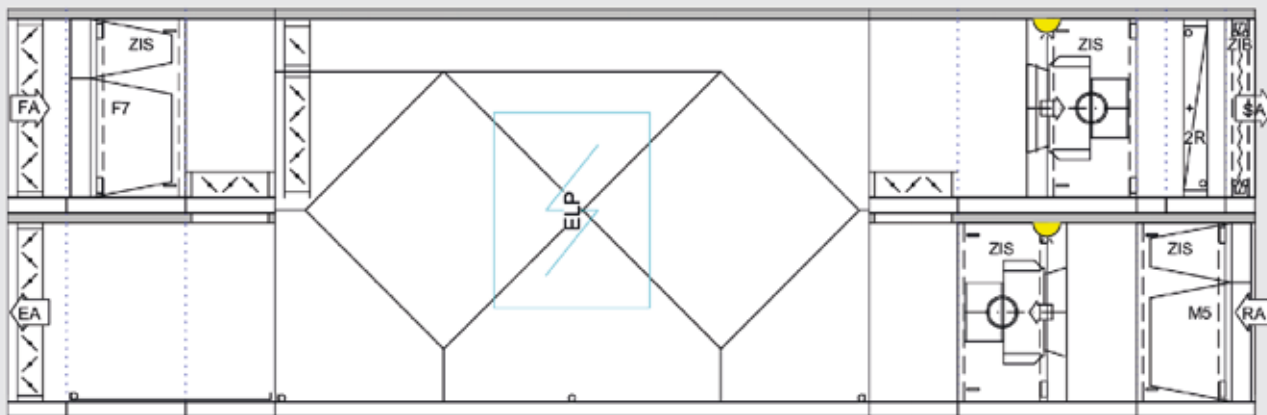


Euroclima participates in the EPC programme for Air Handling Units (AHU) and Fan Coil Units (FCU); Check ongoing validity of certificate: www.eurovent-certification.com

ETA POOL SPA



ETA POOL OLYMPIC



ETA POOL UNIT TYPES

UP TO ALL REQUIREMENTS

Our two product lines are available in different unit types.

Type BASIC product line SPA & OLYMPIC

The essential feature of this air handling unit type is that **the dry outside air is used to dehumidify the indoor swimming pool**, and with the necessary exchange of air reached a comfortable climate. The core component of the BASIC version is a high efficient double-plate heat exchanger with an efficiency of > 90 %. If necessary, a post-heating-coil will reheat the air to the required supply air temperature. Plug fans of the latest generation with EC motor are providing the required air movement. The BASIC version can be used, when no additional cooling machine for dehumidification is required.

Type DRY product line SPA & OLYMPIC

with an additional dehumidifying mode by refrigeration system

The system DRY builds on the BASIC version and has an **additional air circulation system, where a cooling machine provides the necessary dehumidification of indoor air**. Dehumidification will be achieved by leading the circulating air through a direct expansion coil. The refrigeration machine for dehumidification of indoor air uses the condensation coil heating to heat up the supply air – energetically therefore it can be called a heat pump.

Type COOLING product line OLYMPIC

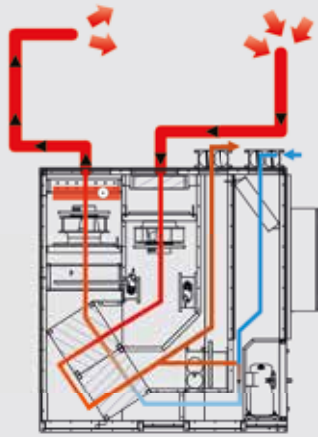
with additional dehumidifying mode by refrigeration system and summer cooling

In areas with very high outdoor air temperatures may be necessary that the fresh air must be cooled and/or dehumidified in the summer. To meet these requirements, the version COOLING has been developed. It includes in addition to the BASIC- and DRY-version a summer cooling. This is **achieved by a reversible refrigeration circuit** where the heat is removed by an additional condensing coil located in the exhaust air stream.

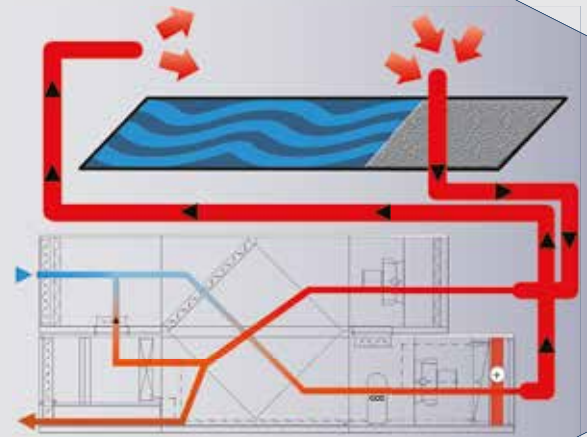
ETA POOL SPA

ETA POOL OLYMPIC

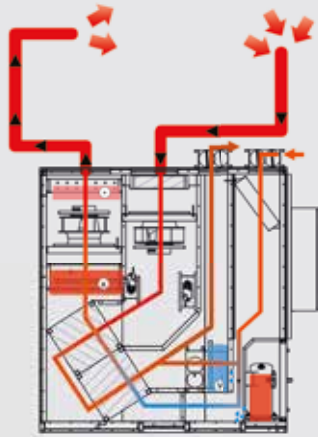
also available with double plat heat exchanger



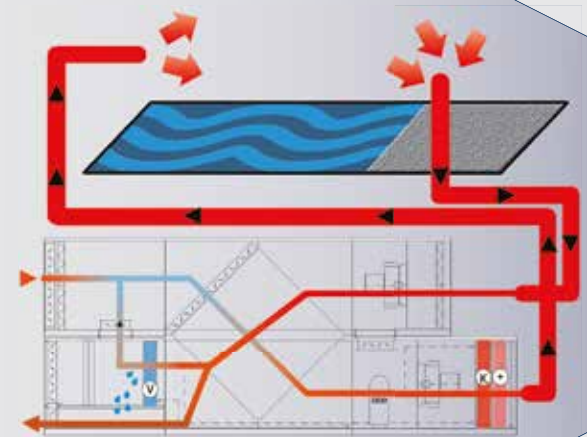
valid for type *BASIC+DRY*



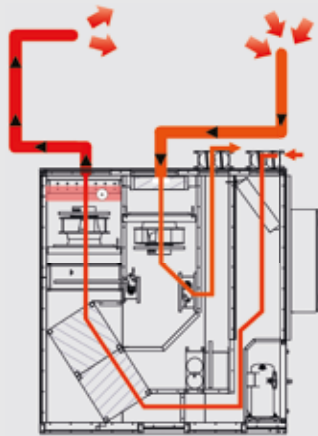
valid for type *BASIC+DRY+COOLING*



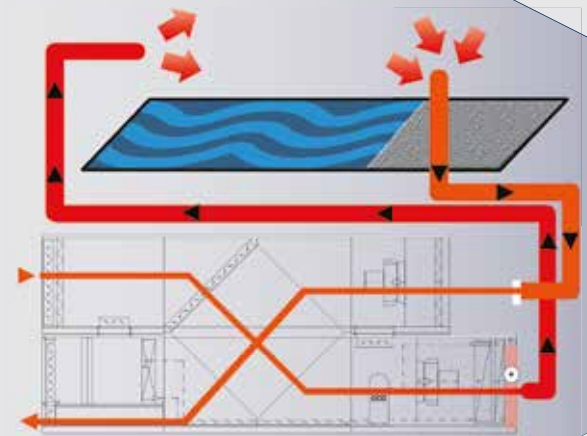
valid for type *DRY*



valid for type *DRY+COOLING*



valid for type *BASIC+DRY*



valid for type *BASIC+DRY+COOLING*

ETA POOL WORKING PRINCIPLES

Winter operation

In this mode the air handling unit operates in recirculation mode. Depending on the necessity the required proportion of dry outside air will be mixed in for dehumidification. The heat recovery happens due to the high efficient plate heat exchangers. By the PWW-heater the supply air will be warmed up to a variable SET value. The refrigeration system is not in operation in this operating state.

Summer mode with moderate outside air temperature

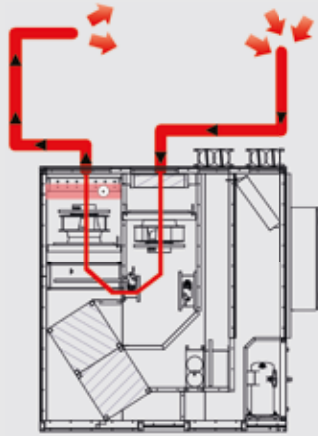
In this mode the indoor air is dehumidified by the refrigeration system and mixed with the necessary fresh air depending on outside conditions. There is a two-stage heat recovery with plate heat exchanger and the refrigeration system, which heats up the supply air through to the condensation heat passing by the condensing coil.

Summer mode with high outside air temperature

In this mode that amount of air that is blown out from the pool area will be replaced by 100 % fresh air. No recirculation air operation required. In addition, there is no heat recovery which will be bypassed by the bypass-damper. The lower moisture content of air in the fresh air dehumidifies the indoor swimming hall. If necessary, the supply air will be heated up to variable SET value post-PWW-heater.

K = Kondensator
V = Verdampfer

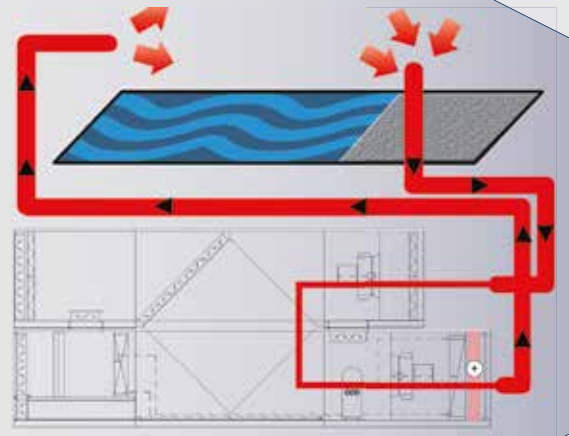
ETA POOL SPA



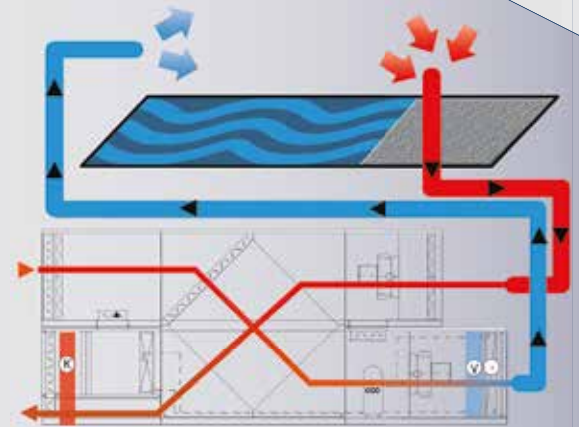
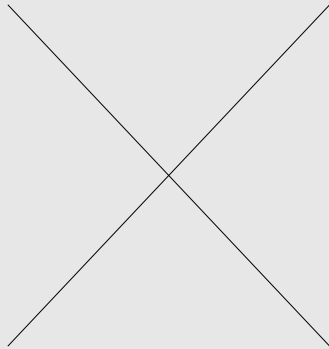
valid for type *BASIC+DRY*

ETA POOL OLYMPIC

also available with double plat heat exchanger



valid for type *BASIC+DRY+COOLING*



valid for type *COOLING*

ETA POOL WORKING PRINCIPLES

Air circulation in idle mode / warm up operations

In idle mode and in warm up operations, the **indoor pool air moving in complete circulation air operation, leading the air through a circulation air damper fitted upstream of the energy recovery system.** It is heated up by the PWW-heater to a variable SET value.

Summer cooling

In this mode the air handling unit works with **100 % outside air cooled down and dehumidified by a reversible refrigeration circuit.** The resultant heat is carried off through an additional condensing coil in the exhaust air flow.

K = condenser
V = evaporator

ETA POOL

TECHNICAL SPECIFICATION

Casing

The unit casing is based on the Eurovent certified ZHK design.

Self supporting modular panels with sections along the upper sides of the square unit; Inside and outside walls completely smooth. The construction of the inner and outer skin gives a 50 mm thick double skin panel. Insulation fixed between the panel skins for maximum acoustic and thermal insulation. Certified data of AHU casing conform to EN 1886 (MB INOVA):

Mechanical stiffness of AHU casing: class D1

Air tightness of casing at -400 Pa: class L1

Air tightness of casing at +400 Pa: class L1

Thermal conductivity of casing: class T2

Heat bridge factor of casing: class TB2

Panel execution

Inner skin: 1,0 mm galvanized sheet coated for corrosion protection. Outer skin: 0,7 mm galvanized sheet with surface coating in white plastic type A47SME for additional corrosion protection and optical design. The thickness of the coating is approx. 130 µm. Guides made of powder coated steel. Large dimensional access doors in same thickness and execution as panel, adjustable hinges, and door frame made of aluminium, special rubber seal with welded corners, with safety handles.

Damper

Damper for horizontal or vertical mounting with aerofoil blades made of aluminium with rubber seal. Frame with flange made of galvanized steel sheet. Seat of the blades and transmission gears made of plastic PP/PPS resistant to corrosion and temperature. Electric driven actuation of the damper.

Fans

Impeller optimized for operation without volute casing. The blades are designed to achieve a high efficiency coupled with a low noise level. Surface powder coating. Directly-driven radial fans with no energy losses and no maintenance. The motors are build in compliance of norm EN 55011 against radio frequency emissions.

Air filters

Air panel filters for supply and exhaust air.

Plate heat exchanger

Double plate heat exchanger designed as a cross-flow heat exchanger made of aluminium foils, plates separately formed and bonded cross-wise on top of each other forming an air-tight seal. Floor designed as condensate tray PVC coated. The section includes inspection apertures for any inspection and maintenance work.

Cooling section

Heat pump with scroll-compressor (digital scroll optional), air cooled condenser, direct evaporator with pre-coated aluminium fins. The refrigeration system uses refrigerant R407C or R410A. The system includes; compressor, refrigerant dryer, inspection glass, thermostatic expansion valve and refrigerant control. Antivibration mounting and flexible refrigerant piping are used to stop transmission vibration.

Heating section

Hot water heating coil made of copper tubes and aluminium fins, steel header and pipe connections on the service side. 3-way valve control will be fitted on site.

Control functions

- » Optimal operation mode selection due energetic aspects
- » Temperature and humidity control for swimming pool & SPA areas
- » Automatic fresh air admixing
- » Control of evaporator and condenser pressure
- » Day & week scheduler with exception program
- » External contacts for heating and cooling batteries
- » Filter control
- » Supply and control for primary heating water pump and mixing valve
- » Summer compensation
- » Failure visualisation

Control components

Complete automatic free programmable DDC-Control with external display for the whole control and monitoring of all operation conditions and components. All components which are required for control and protection are implemented inside the control panel: Main switch, circuit breakers, motor overload switches, control loop and all clamps for main supply and external components. All functions and operation modes are see- and choose able with the display. Different control strategies for air flow, temperature, humidity and air quality are available.

Optional equipment ETA POOL SPA & OLYMPIC

- » 3-way valve with electric servomotor for heating battery
- » External damper: control and supply (air flow damper, zone damper)
- » Flexible connection tube for supply, return, fresh and exhaust air
- » Air flow control with duct pressure
- » Room unit for remote control of the AHU
- » Communication modules for BMS: Modbus RTU, BAC Net IP, BAC Net MS/TP, LON and potential free hardware contacts
- » Commissioning with acceptance of the AHU
- » Maintenance: Annual Maintenance of the AHU corresponding to maintenance guide of the manufacturer
- » Digital scroll compressor

Optional equipment ETA POOL OLYMPIC

- » Basin water condensator: For preheating of basin water with an additional plate heat exchanger
- » Sanitary water condensator: see basin water condensator
- » Bag filter: Fine dust bag filter (M5 to F9) corresponding to DIN EN 779 for maximum hygienic requirements (DIN EN 13779)
- » Vibration sensor: Control of faultless fan operation
- » Filter sensor: Decrease in pressure in every operation mode viewable in the display
- » electrical heater for pre heating

Euroclima group factories

Euroclima AG | SpA
St. Lorenzner Str. | Via S. Lorenzo 36
39031 Bruneck | Brunico (BZ)
ITALY
Tel. +39 0474 570 900
info@euroclima.com
www.euroclima.com

Euroclima Apparatebau Ges.m.b.H.
Arnbach 88
9920 Sillian
AUSTRIA
Tel. +43 (0) 48 42 66 61 -0
info@euroclima.at
www.euroclima.com

Euroclima Middle East
P.O.Box: 119870
Dubai
UNITED ARAB EMIRATES
Tel. +9714 802 4000
eumeinfo@euroclima.com
www.euroclima.com

Euroclima India Pvt Ltd.
Gut No. 45, 65/1, Khaire Ambiwai, Kudus
Khaire Ambiwai Road, Taluka
421 303 Wada
INDIA
Tel. +91 22 4015 8934
info@euroclima.in
www.euroclima.com

Bini Clima S.r.l.
Via A. Prato, 4 / A
38068 Rovereto
ITALY
Tel. +39 0464 437 232
info@biniclimate.it
www.biniclimate.it

Euroclima RUS
129344, Moscow, Eniseyskaya str. 1
Business center Lira
RUSSIA
Tel. +7 926 100 80 26
euroclimarus@euroclima.com
www.euroclima.com

(work in progress)

Euroclima product catalogues



Euroclima November 2021
Due to its commitment of continuous product development and improvement, Euroclima reserves the right to change specifications without notice.



euroclima[®]
We care for better air