Air Handling Units for Pools

First choice for pools – compact to customised

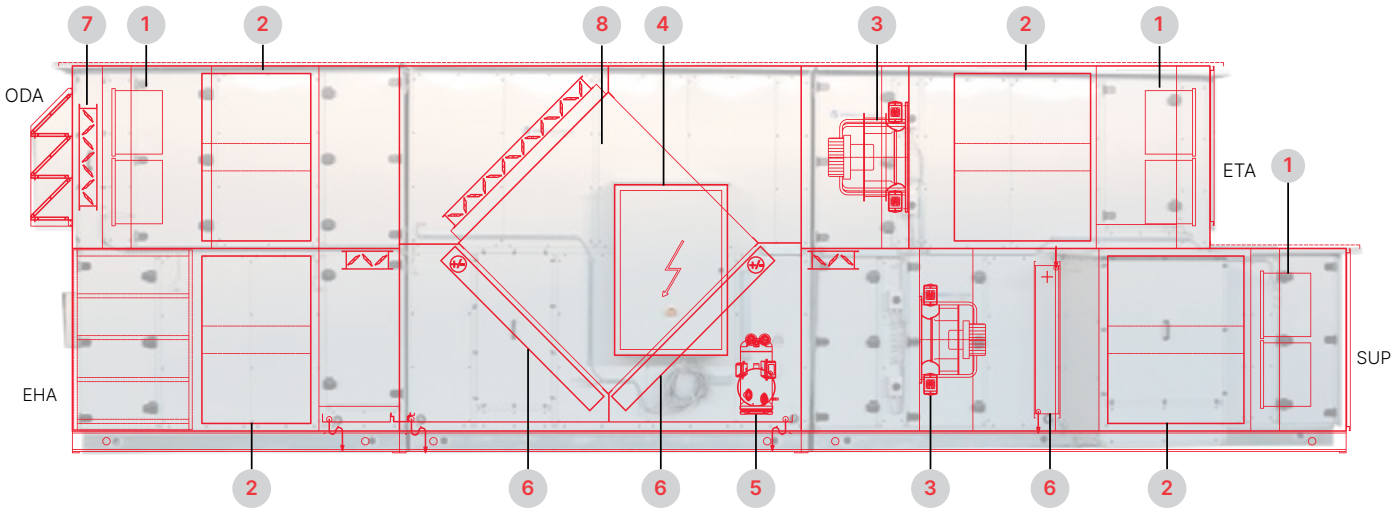
Dehumidification for pros – custom pool equipment

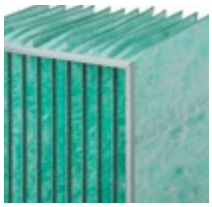
Multifunctional individual pool air handling units from WOLF. Available in 18 standard sizes for indoor and outdoor installation with an air flow rate of 2,000 to 35,000 m^3/h. Numerous options and configuration versions available on request. In addition to the 18 standard sizes, units can also be constructed to meet specific requirements for renovation, restoration and other demanding projects.

- Equipped with cutting edge cooling technology
- Integrated control with interactive interface for the best possible operation of the WOLF pool unit
- Resistant to corrosion: fully coated
- Optional pool water condenser for additional pool water heating
- High quality components with maximum corrosion protection
- Optional reversible heat pump technology for year-round control of pool microclimate

Physical housing properties in accordance with DIN EN 1886

Thermal insulation:	T2
Thermal bridge factor:	TB2
Leakage:	L1
Deflection:	D1
Filter bypass leakage:	F9





1 Bag filter
(optional panel filter also available)

5 Highly efficient inverter-controlled heat pump for switching between heating and cooling

2 Silencers which do not absorb or store moisture

6 Copper condensers and evaporators for maximum corrosion resistance

3 Fans with EC motor and integrated flow rate detection system

7 Dampers made from anodised aluminium

4 Full cabling, including control panel and controller specifically designed for the unit

8 Highly efficient heat recovery system

Plug & play for pools – CKL Pool

The new CKL Pool was specially designed for intelligent conditioning of small indoor swimming pools. It reduces high humidity levels and supplies a flow of dry air. Full integration of the refrigerant circuit and control system makes selection, installation and commissioning incredibly easy.

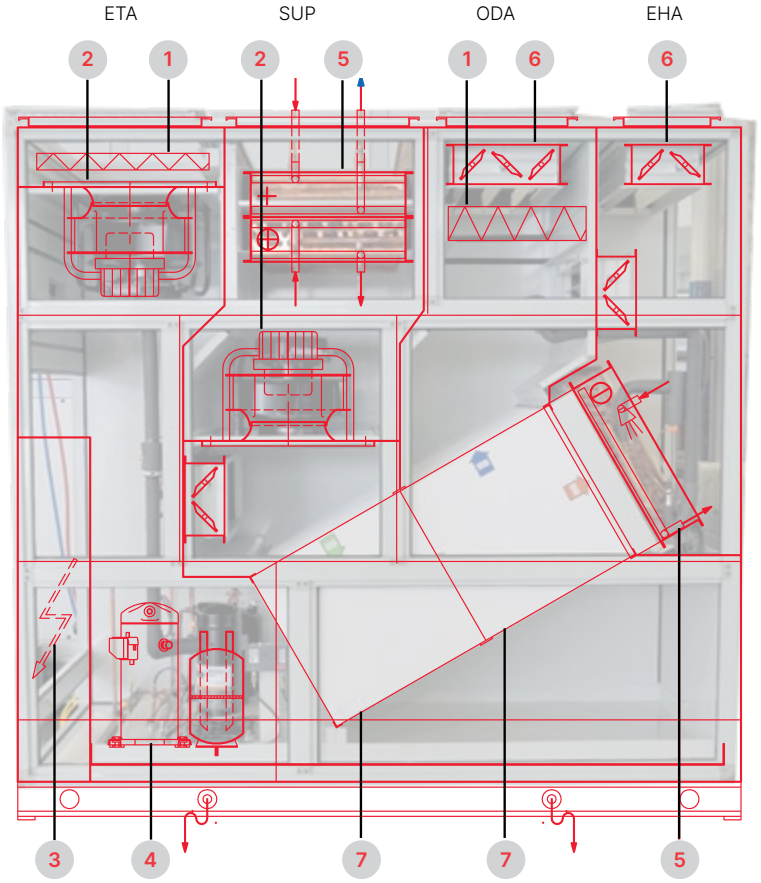
Physical housing properties in accordance with DIN EN 1886

Thermal insulation:	T2
Thermal bridge factor:	TB2
Leakage:	L1
Deflection:	D1
Filter bypass leakage:	F9

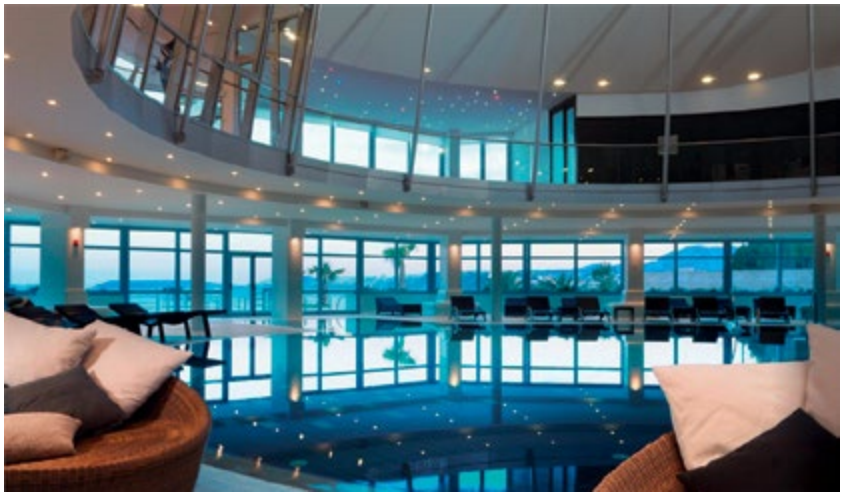
The new CKL Pool at a glance:

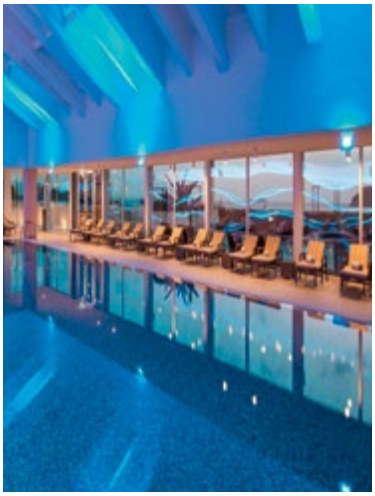
- Fully integrated heat pump and control unit as a single, complete system
- Coolant is prefilled
- Robust indoor unit, particularly easy to install and maintain
- Meets VDI 6022 and VDI 3803 requirements
- High efficiency thanks to heat recovery system and EC fans
- Two models are available, featuring compact dimensions and a nominal flow rate from 2,000 m^3/h to 3,000 m^3/h
- Resistant to corrosion: fully coated
- Compatible with the WOLF SmartSet system for easy connection to smartphones and browsers — locally or online
- Optional pool water condenser
- Unit is fully wired for fast, straightforward commissioning

Smartset



1. Panel filter
2. Fans with EC motor and integrated flow rate detection system
3. Full cabling, including control panel and controller specifically designed for the unit
4. Highly efficient heat pump with digital scroll compressor
5. Copper condensers and evaporators for maximum corrosion resistance
6. Dampers made from anodised aluminium
7. Efficient heat recovery system made of corrosion-resistant materials





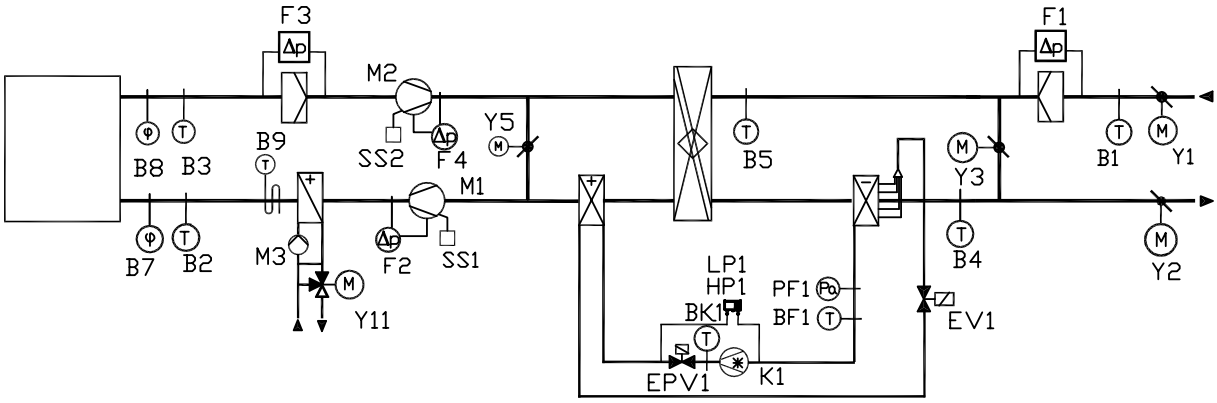
Everything in hand – with automatic controls

Connect & get going:

The factory-tested, fully cabled control panel, a DDC control unit and all necessary field devices come pre-installed. WOLF has developed software specifically for pool applications to ensure that these components work together perfectly.

The software was also tailored to meet specific dehumidification requirements in order to prevent condensation and keep the air within the limits required for an optimal microclimate. All of the relevant parameters can be adjusted to meet the requirements of your project.

Direct browser-based access allows you to control the unit remotely. This can be used to change operating modes, record data or make detailed changes.



VDC	Fire alarm signal
B1, B2, B3, B4, B5	Duct temperature sensor
B7, B8	Duct humidity sensor
B9	Frost stat
F1, F3	Differential pressure switches
F2, F4	Air volume sensor
Y1	Damper drive
Y2	Damper drive
Y3	Damper drive
Y5	Damper drive
Y11	Servomotor
SS1, SS2	Repair switch

M1, M2	Supply air / extract air fan
M1, M2	Supply air / extract air fan
M3	Heating circuit pump
K1	Compressor
HP1, LP1	High pressure/low pressure protection
EPV1	Electromagnetic valve
EV1	Electric expansion valve
PF1	Coolant pressure sensor
BF1	Coolant temperature sensor
BK1	Compressor temperature sensor

* This plan is an example. Actual plans will vary depending on the options which are selected.

1. Safe and optimal operation

a. Temperature and moisture control with minimum and maximum thresholds for supply air
b. Energy-efficient integrated heat pump control for dehumidification
c. Mixer valve control on heater for optimal supply air
d. Heat recovery system with “Maximum Economy Changeover” (with optional bypass)
e. Control of supply and extract air fans by means of differential pressure sensors or by measuring the external pressure drop
g. Fan imbalance control
h. Heat pump activation at low outside temperatures

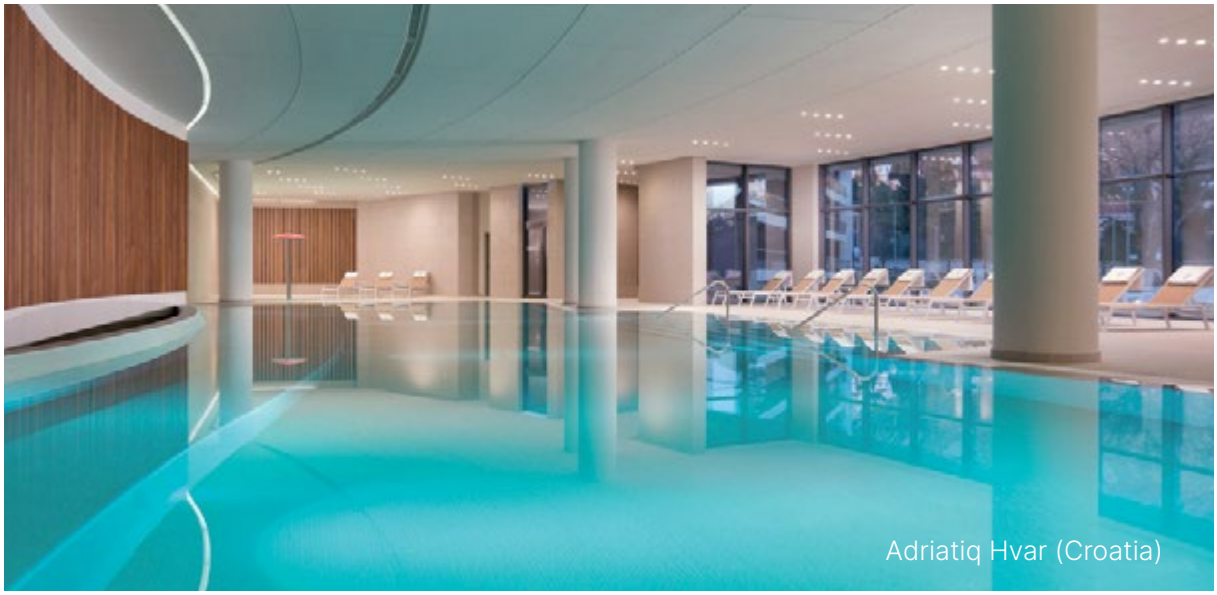
Smartset

2. Various modes and programs available

a. 7-day program with holiday and special day programs
b. Day/night setting
c. Boost damper to quickly heat supply air before bathing
d. Dehumidification using outside air for free cooling
e. Optional control of pool water condenser and pool water heating functions

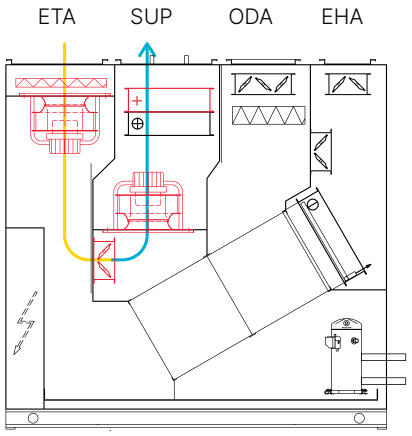
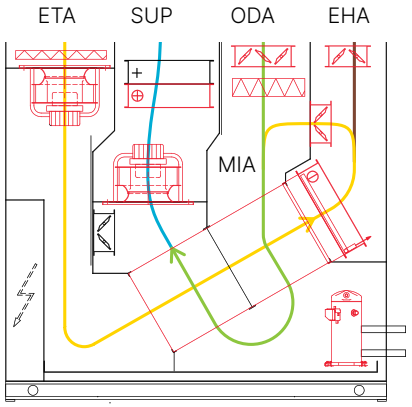
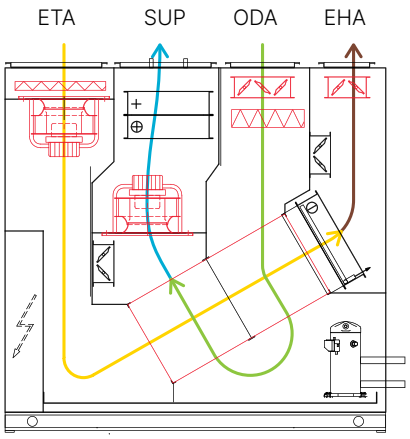
3. Interfaces

a. Connection to building management systems possible (using MODBUS for communication)
b. Optional interfaces: BACNet, BACNet / IP, LON, Web Module
c. Easy access via web browser
d. Optional remote control for wall mounting
e. CKL Pool: Compatible with WOLF Link Pro in conjunction with a MODBUS interface



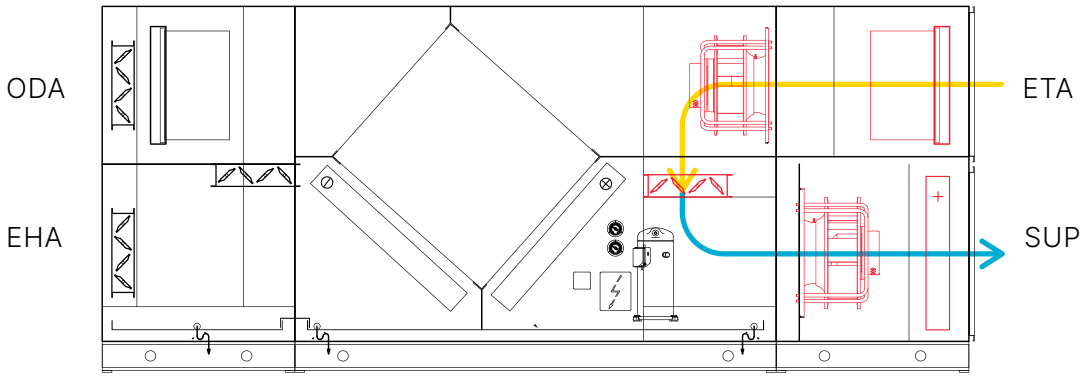
Adriatiq Hvar (Croatia)

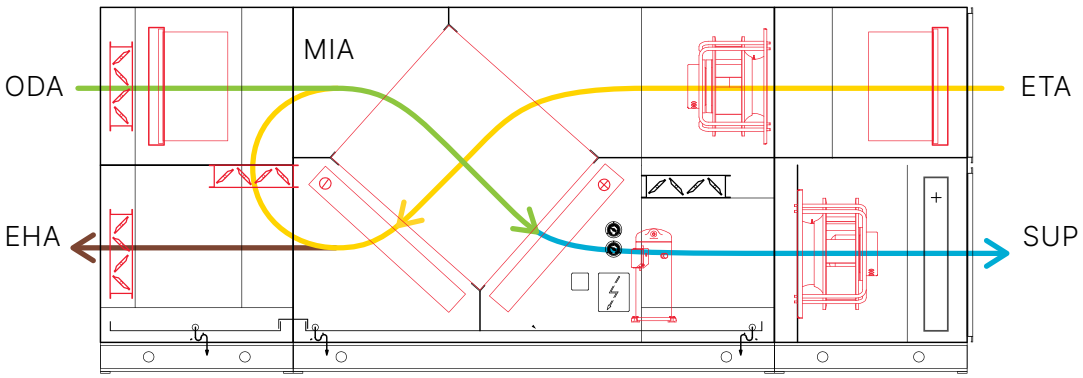
Equipped for every application: Operating modes for every season.

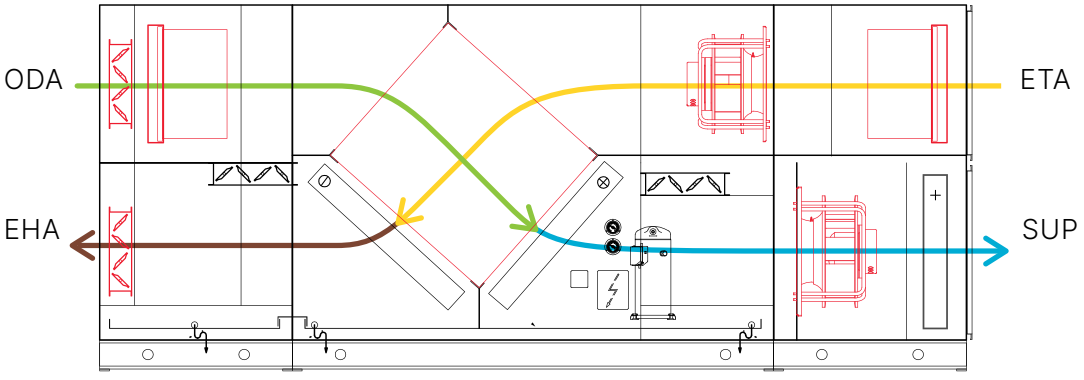
Operating mode	CKL Pool
Standby mode without dehumidification (Winter) • Heat pump inactive • Heat recovery inactive • Reheating coil active • Boost damper open	
Bathing with dehumidification (winter) • Heat pump active • Heat recovery active • Reheating coil active if necessary • Damper for mixed air active	
Bathing with dehumidification (summer) • Heat pump inactive • Heat recovery active	

Air types classified in accordance with DIN EN 16798:
ODA = outdoor air, SUP = supply air, ETA = extract air,
EHA = exhaust air, MIA = mixed air

Individual pool units





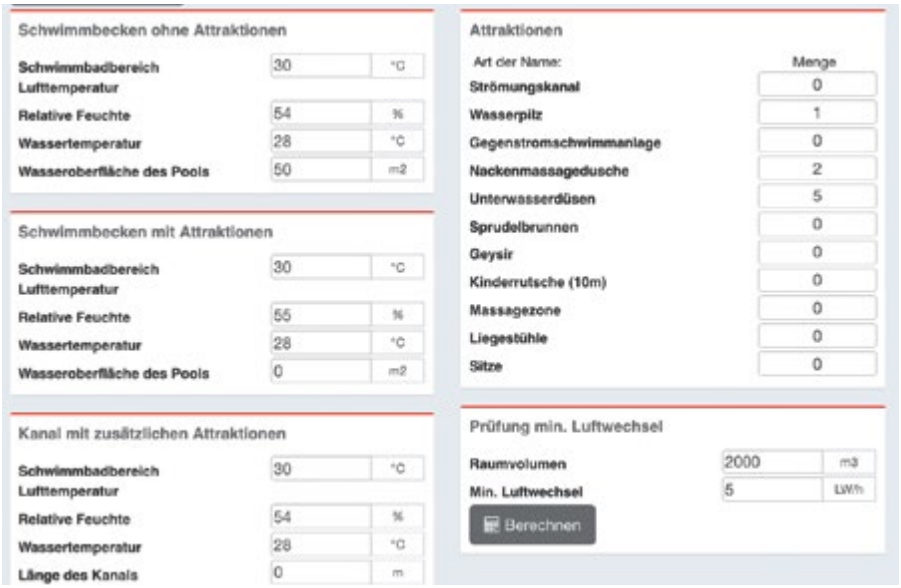


Calculations made easy.
VDI Pool web app

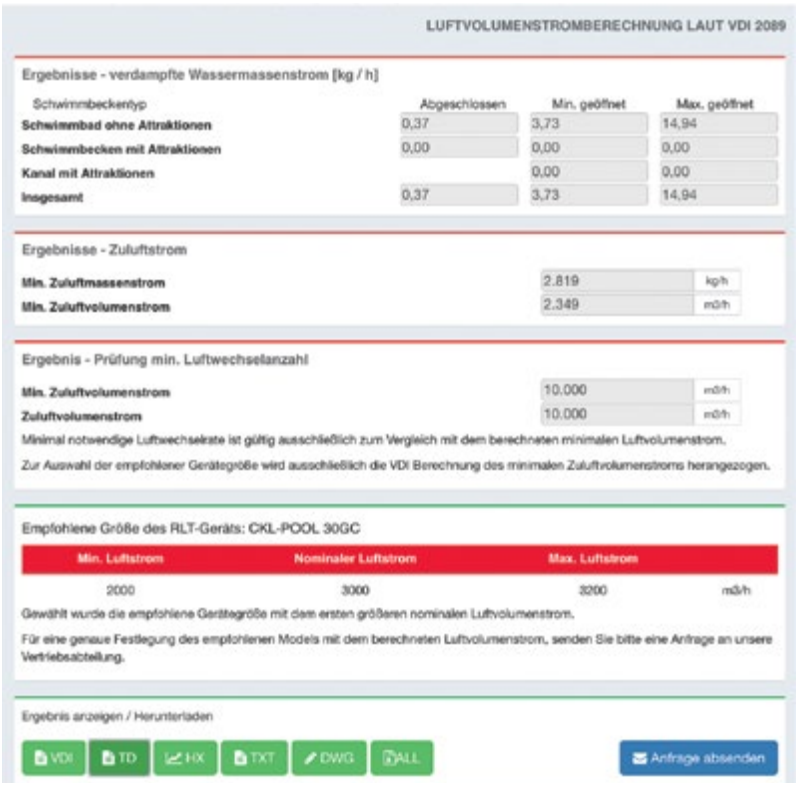
Seconds after entering your parameters, the VDI POOL WEB-APP will perform a detailed calculation of the air volume required for the specified pool area. This calculation is based on the VDI 2089-1:2010 guidelines and the information for the air handling units developed for the specified requirements.

A professional result in just **3 steps**:

/01 An easy way to enter the necessary parameters



02 The configurator suggests a unit based on your requirements



LUFTVOLUMENSTROMBERECHNUNG LAUT VDI 2089

Ergebnisse - verdampfte Wassermassenstrom [kg / h]

Schwimmbeckentyp	Abgeschlossen	Min. geöffnet	Max. geöffnet
Schwimmbad ohne Attraktionen	0,37	3,73	14,94
Schwimmbecken mit Attraktionen	0,00	0,00	0,00
Kanal mit Attraktionen		0,00	0,00
Insgesamt	0,37	3,73	14,94

Ergebnisse - Zuluftstrom

Min. Zuluftmassenstrom	2.819	kg/h
Min. Zuluftvolumenstrom	2.349	m3/h

Ergebnis - Prüfung min. Luftwechselanzahl

Min. Zuluftvolumenstrom	10.000	m3/h
Zuluftvolumenstrom	10.000	m3/h

Minimal notwendige Luftwechselrate ist gültig ausschließlich zum Vergleich mit dem berechneten minimalen Luftvolumenstrom.

Zur Auswahl der empfohlener Gerätegröße wird ausschließlich die VDI Berechnung des minimalen Zuluftvolumenstroms herangezogen.

Empfohlene Größe des RLT-Geräts: CKL-POOL 30GC

Min. Luftstrom	Nominaler Luftstrom	Max. Luftstrom	
2000	3000	3200	m3/h

Gewählt wurde die empfohlene Gerätegröße mit dem ersten größeren nominalen Luftvolumenstrom.

Für eine genaue Festlegung des empfohlenen Models mit dem berechneten Luftvolumenstrom, senden Sie bitte eine Anfrage an unsere Vertriebsabteilung.

Ergebnis anzeigen / Herunterladen

VDI | TD | HX | TXT | DWG | ALL | Anfrage absenden

03 Comprehensive support and documentation allow you to be confident about your plans

WOLF

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Berechnung der benötigten Luftmenge zur Lüftung von Innenpools — VDI 2089

Luftvolumenstromberechnung * 1

Schwimmbecken ohne Attraktionen	
Schwimmbadbereich Lufttemperatur [°C] *2,3	30
Relative Feuchte [%] *2,4	54
Wassertemperatur [°C] *3	28
Wasseroberfläche des Pools [m2]	50
Schwimmbecken mit Attraktionen	
Schwimmbadbereich Lufttemperatur [°C]	30
Relative Feuchte [%]	55
Wassertemperatur [°C]	28
Wasseroberfläche des Pools [m2]	0
Kanal mit Attraktionen * 5	
Schwimmbadbereich Lufttemperatur [°C]	30
Relative Feuchte [%]	54
Wassertemperatur [°C]	28
Länge des Kanals [m]	0
Durchschnittliche Breite des Kanals [m]	0,8

Attraktionen	
Art der Name:	**Menge**
Strömungskanal	0
Wasserpilz	0
Gegenstromschwimmanlage	0
Nackenmassagedusche	0
Unterwasserdüsen	0
Sprudelbrunnen	0
Geysir	0
Kindertrutsche (10m)	0
Massagezone	0
Liegestühle	0
Sitze	0

Ergebnisse - verdampfte Wassermassenstrom [kg / h]

Schwimmbeckentyp	Regime: Abgeschlossen	Min. geöffnet	Max. geöffnet
Schwimmbad ohne Attraktionen	0,37	3,73	14,94
Schwimmbecken mit Attraktionen	0,00	0,00	0,00
Kanal mit Attraktionen		0,00	0,00
Insgesamt	0,37	3,73	14,94

Ergebnisse - Zuluftstrom

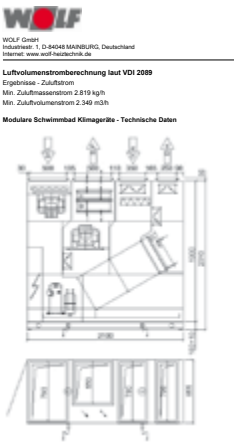
Min. Zuluftmassenstrom [kg/h]	2.819
Min. Zuluftvolumenstrom [m3/h]	2.349

*1 Gemäß auf VDI 2089 Teil 1, Ausgabe Januar 2010
Diese Richtlinien sind informativ und können als große Bewertung für die Budgetierung und Entscheidungen benutzt werden
Werte und Richtlinien beruhen auf der Erfahrung des Herstellers. Der Hersteller übernimmt keine Verantwortung für die Richtigkeit
*2 Wassertemperatur sollte 2-4 K über der Beckenwassertemperatur sein
*3 Innenlufttemperatur sollte 2-4 K über der Beckenwassertemperatur sein
*4 Die Berechnung zielt auf die Wunschwerte
*5 Relative Luftfeuchte bei 24 K (1 g/kg)
bei 0 bei 60 % rF, 30 C bei 54% rF, 32 C bei 48% rF
*6 Relevant sind nur Attraktionen die gleichzeitig im Betrieb sind

Empfohlene Größe des RLT-Geräts — CKL-POOL 30GC

Min. Luftstrom	Nominaler Luftstrom	Max. Luftstrom	
2000	3000	3200	m3/h

Gewählt wurde die empfohlene Gerätegröße mit dem ersten größeren nominalen Luftvolumenstrom.



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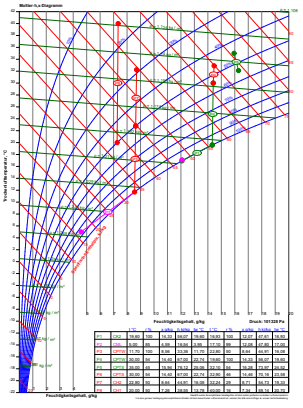
Luftvolumenstromberechnung laut VDI 2089
Ergebnisse - Zuluftstrom
Min. Zuluftmassenstrom 2.819 kg/h
Min. Zuluftvolumenstrom 2.349 m3/h

Modulare Schwimmbad Klimageräte - Technische Daten



The following documents are provided after performing the calculation based on the VDI guidelines:
Specifications of the unit, LV texts, CAD files and HX diagram

Our experienced advisors will be happy to support you:

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You have not found a contact person or would like to give us feedback? Please feel free to contact us at: int-sales@wolf.eu

We look forward to hearing from you.

Subject to technical modifications. Please note that only the WOLF product is shown in the images of the product. You will usually need incoming and outgoing lines which are connected to the WOLF product from the outside.

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Perfectly in tune with you.

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