



## SWIMMING POOL AND SPA

Dehumidification for swimming pools  
and steam humidification for spas

# Why dehumidification is important at swimming pools

A high degree of water evaporation in indoor pools and, especially in combination with the high ambient temperatures, leads to enormous humidities and an unpleasant feeling of being oppressively hot. For those using the swimming pool, these climatic conditions not only detract from personal well-being, but also pose a serious risk to the health of visitors and swimming pool staff in the form of circulatory problems. The damp air provides germs and bacteria with the perfect breeding ground. Given the bathing guests' light clothing, these can very quickly get into contact with human skin and, in the worst case, cause infections or diseases.

Alongside the potential health hazards, warm humid air also has an impact on the structural elements of the building. In so-called "cold spots" in particular, such as glass surfaces, metallic components, or exterior walls, the evaporated water condenses and can lead to the formation of mold and corrosion over longer periods. The resulting damage leads to shorter maintenance and repair cycles of the building's infrastructure, entailing operating interruptions and therefore, and above all, higher costs.

Operators of swimming pools should therefore insist on a contemporary dehumidification system being installed.

## Energy-efficient dehumidification is an expert field

The simplest version is supposed to be intuitive ventilation of the indoor swimming pool using windows and doors or by means of ventilation. However, it is just as expensive as intuitive ventilation of living spaces during a heating period (e.g., in the form of a permanently open window). The dilemma is that significant energy is expended to bring the air fed from the outside to the temperature required inside.

Condair's dehumidification systems, developed especially for use in swimming pools, by comparison, work significantly more efficiently and sustainably.

Available in a variety of capacities and comfort levels, our technology is based on a cooling circuit where a compressor compresses the cooling refrigerant and where the refrigerant is later expanded through a valve.

The advantage is that with this technology, dehumidification and tempering operations are carried out up to 60 percent more economically compared with conventional systems working with outdoor and exhaust air.

One central aspect of contemporary air conditioning equipment in indoor swimming pools is the energy recovered from the dehumidification process. All Condair's swimming pool dehumidifiers provide heat recovery by means on the principle of the heat pump.

**The principle is** that the humid air going out from the indoor swimming pool firstly flows through the evaporator. It is cooled down during this process and the humidity in the air is condensed out.

The dehumidified air then flows through the condenser. The arising heat is then added productively to the supply air. Swimming pool operators benefit from noticeable savings in energy expenditure thanks to this technology, as the heat is recovered within the heat pump circuit and again fed to the air in the indoor pool through the dry supply air.



A comfortable ambient atmosphere instead of unpleasant sticky heat



Secure, dry walking surfaces



Preventing mold, rust or damage to the building



# CONDAIR DP-W

## Wall-mounted dehumidifiers

Condair's DP-W swimming pool dehumidifiers are not just used as a retrofit into existing indoor pools—they are also hugely popular, as they are cheap and easy to install. Given their relatively low construction depth of between 260 and 310 mm, they do not take up much space and are therefore particularly easy to install and retrofit.

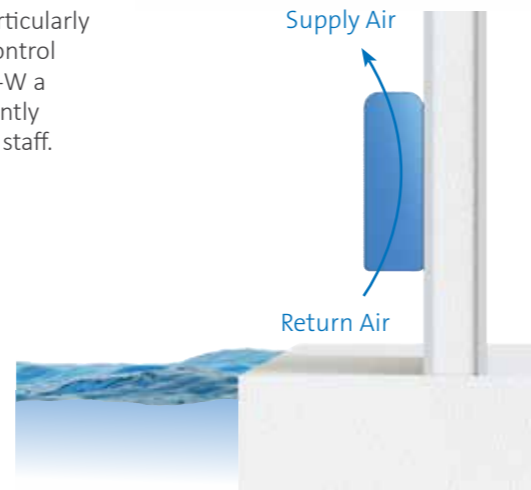
For use in smaller private swimming pools, as required, right up to medium-sized indoor pools, the Condair DP-W series is available in five different capacities 49 to 190 liters per day. The dehumidifier including its refrigeration circuit is fitted on the wall and only needs to be connected to the power supply and a condensation drain to be up and running straight away.

As a stand-alone solution, the Condair DP-W is ready for use in the shortest time. Its pleasantly quiet operation is impressive and fits seamlessly into the existing architecture of the room thanks to its reduced design with rounded, soft edges. Use of the refrigerant R410A and the integrated heat recovery means that the DP-W series works particularly efficiently. Extracting exhaust heat from the heat pump circuit, and feeding it back directly to the ambient air

very effectively, makes sparing use of resources and saves a great deal on energy costs.

To achieve this, the Condair DP-W can be extended to include a hot water coil or an electric heater, electronic or mechanical humidity sensors, supporting feet, and further accessories.

Depending on the requirement, it can be retrofitted to form a comprehensive air conditioning device that performs a variety of even more humidity control functions. Its tried-and-tested, internal control electronics result in a sustainable and economic operation. All parameters can be operated particularly conveniently. Its user-friendly control interface makes the Condair DP-W a lasting contribution to permanently easing the burden on operating staff.



Technical Data		DP 50-W	DP 75-W	DP 100-W	DP 150-W	DP 200-W
Dehumidification capacity at 30°C – 80%	l/24h	49	73	95	155	190
Dehumidification capacity at 30°C – 60%	l/24h	39	56.7	77.4	118.3	146.7
Dehumidification capacity at 28°C – 60%	l/24h	35.9	51.6	71.1	101.6	132.3
Dehumidification capacity at 26°C – 60%	l/24h	33.4	47.3	65.8	93.4	121.3
Air flow	m <sup>3</sup> /h	500	800	1000	1400	1650
Available external pressure (external pressure optional)	Pa	40				
Nominal power consumption <sup>(1)(6)</sup>	kW	0.9	1.2	1.6	1.9	2.5
Maximum power consumption <sup>(2)(6)</sup>	kW	1.2	1.5	2	2.3	3.1
Electrical heater (optional)	kW	3			6	
Maximum current consumption	A	3.9	5.6	8.4	10.5	13.2
Hot Water coil (optional) <sup>(4)</sup>	kW	3.5	7	7	11.5	11.8
Operating range (Humidity/Temperature)	% RH	50–99% RH / 20–36°C				
Power supply	V/Ph/Hz	230/1/50				
Sound pressure level <sup>(3)</sup>	dB(A)	47	50	50	52	54
Refrigerant/volume	Type / g	R410A / 470	R410A / 600	R410A / 700	R410A / 1200	
CO <sub>2</sub> equivalent <sup>(10)</sup>	t-CO <sub>2</sub> e	0.98	1.25	1.46	2.51	
Dimensions (H x W x D)	mm	750 x 835 x 260	750 x 1135 x 260		840 x 1384 x 310	
Weight	kg	50	64	68	99	102

# CONDAIR DP-R

## Dehumidifiers for near-wall installation

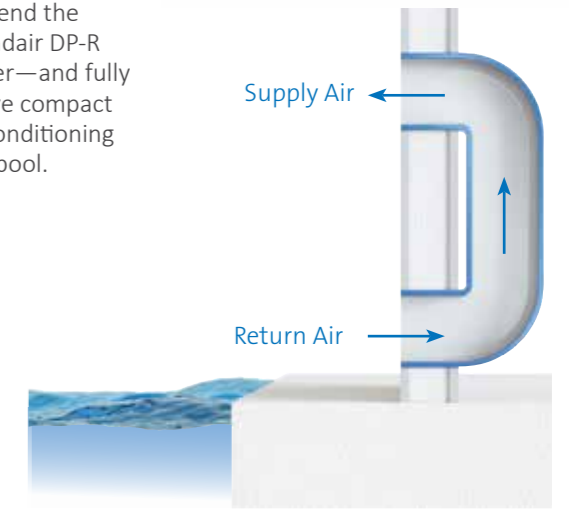
Condair's DP-R model offers highly effective solutions for efficient dehumidification, especially for concealed installations. Taking into account the structural design of indoor swimming pools, Condair DP-R dehumidifiers were specially developed as rear wall units. They save space internally as a result, have no adverse effect upon the pool's spatial and conceptual design, while offering a particularly high degree of comfort for its users.

As the entire technical structure of the dehumidifier is accommodated on the wall of a neighboring room or in a separate utility room, all operating noises caused by sound-emitting components, such as compressor or fan, are nearly completely eliminated from the swimming hall. Similar to the range of Condair's wall mounted units, Condair DP-R pool dehumidifiers are available in five different sizes and maximum dehumidifying capacities of 49 to 190 L/day.

The dehumidifier can be installed easily onto the rear wall of the indoor pool and can be connected to the inside of the pool area via two wall openings using Condair's optional ventilation duct.

Less space is therefore required inside the pool area, and with little extra effort. The use of Condair's DP-R dehumidification systems is only visible in the form of unobtrusive returns and supply air grilles.

It goes without saying that Condair's approved-and-tested heat recovery system, based on a heat pump circuit, also guarantees the lowest possible heat losses in the DP-R series, meaning sustainable dehumidification, even in continuous operation. Hot water coils and electric heaters, electronic or mechanical humidity sensors, and further accessories extend the functional scope of the Condair DP-R swimming pool dehumidifier—and fully in line with a comprehensive compact solution for the entire air conditioning technology of a swimming pool.



Technical Data		DP 50-R	DP 75-R	DP 100-R	DP 150-R	DP 200-R
Dehumidification capacity at 30°C – 80%	l/24h	49	73	95	155	190
Dehumidification capacity at 30°C – 60%	l/24h	39	56.7	77.4	118.3	146.7
Dehumidification capacity at 28°C – 60%	l/24h	35.9	51.6	71.1	101.6	132.3
Dehumidification capacity at 26°C – 60%	l/24h	33.4	47.3	65.8	93.4	121.3
Air flow	m <sup>3</sup> /h	500	800	1000	1400	1650
Available external pressure (external pressure optional)	Pa	40				
Nominal power consumption <sup>(1)(6)</sup>	kW	0.9	1.2	1.6	1.9	2.5
Maximum power consumption <sup>(2)(6)</sup>	kW	1.2	1.5	2	2.3	3.1
Electrical heater (optional)	kW	3			6	
Maximum current consumption	A	3.9	5.6	8.4	10.5	13.2
Hot Water coil (optional) <sup>(4)</sup>	kW	3.5	7	7	11.5	11.8
Operating range (Humidity/Temperature)	% RH	50–99% RH / 20–36°C				
Power supply	V/Ph/Hz	230/1/50				
Sound pressure level <sup>(3)</sup>	dB(A)	47	50	50	52	54
Refrigerant/volume	Type / g	R410A / 470	R410A / 600	R410A / 700	R410A / 1200	
CO <sub>2</sub> equivalent <sup>(10)</sup>	t-CO <sub>2</sub> e	0.98	1.25	1.46	2.51	
Dimensions (H x W x D)	mm	680 x 706 x 250	680 x 1006 x 250		770 x 1255 x 300	
Weight	kg	41	57	61	82	87



## CONDAIR DP-C

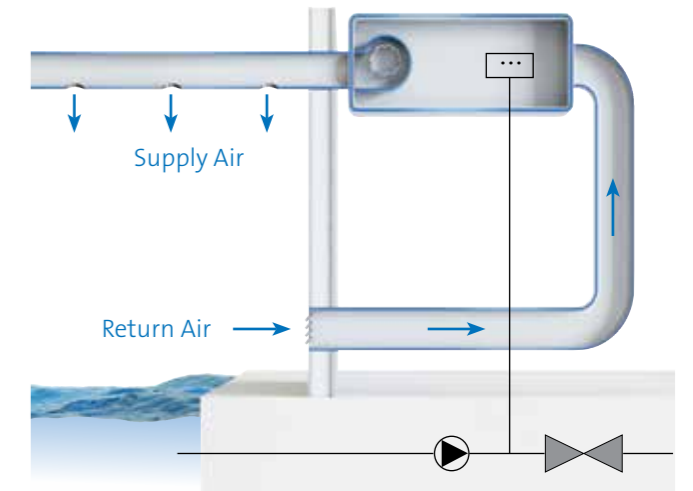
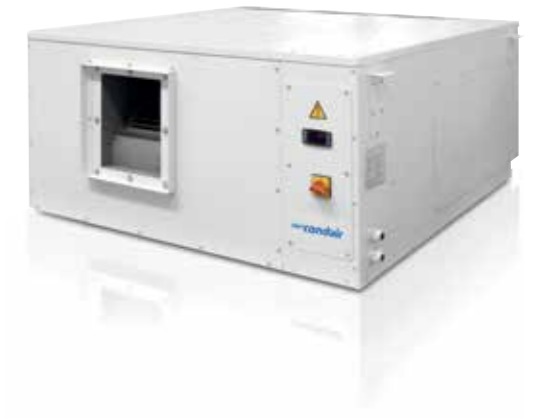
### Ceiling-Mounted Dehumidifiers

The Condair DP-C is a particularly compact solution for dehumidification. This model's flat design makes it ideal for mounting below the ceiling or in a suspended ceiling. This type of mounting is particularly suitable if there is no mechanical plant room or the existing room is too small to install a floor-mounted unit. Ventilation ducts must be installed for the insertion of the dehumidified air as well as the extraction of the moist exhaust air to/from the pool area. This work has to be provided by the customer. All sound-emitting components, such as compressor and fan, are located outside the swimming pool area. This keeps the noise emissions at a minimum and the operation easy.

The Condair DP-C pool dehumidifiers are available in five different sizes and maximum dehumidifying capacities of 49 to 190 l/day. As an alternative to the optionally available hot water coils or electric heater, electronic or mechanical sensors and a partial heat recovery is available to partially transfer the recovered heat from the dehumidifier directly into the water of the pool.

#### Features:

- Effective dehumidification
- Energy-efficient heat pump principle
- Refrigerant R410A
- Quiet fans
- Very compact, flat housing
- Opt. partial heat recovery is available to heat the water of the pool
- Numerous options



Technical Data		DP 50-C	DP 75-C	DP 100-C	DP 150-C	DP 200-C
Dehumidification capacity at 30°C – 80%	l/24h	49	73	95	155	190
Dehumidification capacity at 30°C – 60%	l/24h	39	56.7	77.4	118.3	146.7
Dehumidification capacity at 28°C – 60%	l/24h	36	51.6	71.1	101.6	132.3
Dehumidification capacity at 26°C – 60%	l/24h	33.5	47.3	65.8	93.4	121.3
Air flow	m <sup>3</sup> /h	500	800	1000	1400	1650
Available external pressure (external pressure optional)	Pa	50–150				
Nominal power consumption <sup>(1)(6)</sup>	kW	0.97	1.29	1.76	2.07	2.74
Maximum power consumption <sup>(2)(6)</sup>	kW	1.2	1.5	2	2.3	3.1
Electrical heater (optional)	kW		3		6	
Maximum current consumption	A	3.9	5.6	8.4	10.5	13.2
Hot Water coil (optional) <sup>(4)</sup>	kW	3.5	7.5	8.5	13	14
Operating range (Humidity/Temperature)	kW	--	1.1	1.7	2.3	3
Power supply	% RH	50–99% RH / 20–36°C				
Sound pressure level <sup>(3)</sup>	V/Ph/Hz	230/1/50				
Refrigerant/volume	dB(A)	50	52	54	59.5	61.5
CO <sub>2</sub> equivalent <sup>(10)</sup>	Type / g	R410A / 470	R410A / 600		R410A / 900	R410A / 1200
Dimensions (H x W x D)	t-CO <sub>2</sub> e	0.75	1.25		1.88	2.51
Weight	mm	360 x 710 x 700	460 x 900 x 980		560 x 1050 x 1160	
Weight	kg	63	95	122	131	140

# CONDAIR DP

## Dehumidifier for Installation in the Mechanical Plant Room

Particularly in hotels, wellness and therapy areas, in which a mechanical plant room is available, Condair DP dehumidifiers can be integrated into the utility room. Where ventilation ducts lead the air to their specific locations. The recirculated air process ensures a safe and energy-efficient dehumidification, regardless of the pool's operating hours.

The broad product mix with a total of ten air flow ranges and maximum dehumidification capacities of 73 to 940 l/day can cover a wide range of applications.

The integrated heat recovery ensures a significant reduction in heating costs, as a large volume of the heat recovered from the heat pump circuit is fed back into the indoor swimming pool and, in some cases, can completely replace heating for the space because of the equipment's high performance.

Around 20% of the generated heat energy can be used to heat the water in the pool via an optional partial heat recovery system. Installing a heat recovery system in order to heat the pool's water temperature is useful, particularly in the therapeutic area where high room temperatures usually prevail, as the system can prevent the room from overheating.

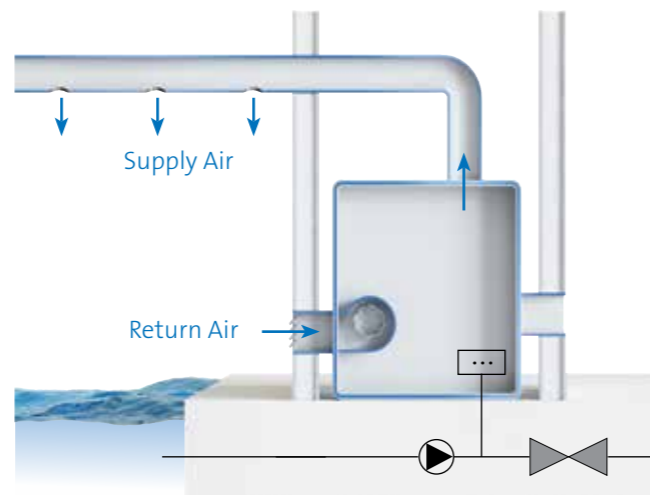
As an option, the units can be equipped with a hot water coil or an electric heater for quick heating of the indoor air or to support the existing room heating system.

It is also possible on site to mix the volume stream with up to 20% of outdoor air.

A wide range of options is available for the Condair DP series of swimming pool dehumidifiers. All can be adapted to meet the specific requirements of the indoor pool.

### Features of the Condair DP dehumidifier

- Effective dehumidification
- Powerful heat pump circuit
- Partial heat recovery to heat pool water
- Hot water or electric heater
- Custom-made designs upon request



Technical Data		DP 75	DP 100	DP 150	DP 200
Dehumidification capacity at 30°C – 80%	l/24h	73	95.2	157.1	194.3
Dehumidification capacity at 30°C – 60%	l/24h	56.6	76.5	111	145.3
Dehumidification capacity at 28°C – 60%	l/24h	51.6	71.1	103	133.5
Dehumidification capacity at 26°C – 60%	l/24h	47.3	65.8	92.6	123.3
Air flow	m³/h	800	1000	1500	1800
Available external pressure (external pressure optional)	Pa	50–150			
Nominal power consumption <sup>(1)(6)</sup>	kW	1.4	1.82	2.27	2.9
Maximum power consumption <sup>(2)(6)</sup>	kW	1.59	2.05	2.68	3.44
Electrical heater (optional)	kW	3		6	
Maximum current consumption	A	7.8	9.1	12.4	15.7
Hot Water coil (optional) <sup>(4)</sup>	kW	7.5	8.5	13.9	15.2
Partial heat recovery unit <sup>(5)</sup>	kW	1.1	1.7	2.3	3
Humidity/temp. operating range	% RH	50–99% RH / 20–36°C			
Power supply	V/Ph/Hz	230/1/50			
Sound pressure level <sup>(3)</sup>	dB(A)	52	54	60	62
Refrigerant/volume	Type / g	R410A / 550		R410A / 1100	
CO <sub>2</sub> equivalent <sup>(10)</sup>	t-CO <sub>2</sub> e	1.15		2.3	
Dimensions (H x W x D)	mm	800 x 800 x 400		1000 x 1060 x 550	
Weight	kg	85	90	130	135

Technical Data		DP 270	DP 350	DP 450	DP 550	DP 750	DP 950
Dehumidification capacity at 30°C – 80%	l/24h	263.1	340.2	418.8	566.8	751.1	939.3
Dehumidification capacity at 30°C – 60%	l/24h	185.1	262.3	336.3	425	596.4	759.7
Dehumidification capacity at 28°C – 60%	l/24h	168.9	242.9	313.5	392.6	554.7	706.7
Dehumidification capacity at 26°C – 60%	l/24h	153.4	223.9	290.8	359.6	513.5	654.6
Air flow	m³/h	3500	4200		5500	7000	8500
Compression available (higher compression optional)	Pa	50–150					
Nominal power consumption <sup>(1)(6)</sup>	kW	5.18	6.49	9.42	10.1	12.88	19.6
Maximum power consumption <sup>(2)(6)</sup>	kW	6.6	7.99	9.85	13	16	21
Electrical heater (optional)	kW	9			9/18		
Maximum current consumption	A	12	14.2	17.9	22	27	39
Hot Water coil (optional) <sup>(4)</sup>	kW	22.8	24	24	42	49	56
Partial heat recovery unit <sup>(5)</sup>	kW	1.8	2.2	2.7	3.5	-	-
Humidity/temp. operating range	% RH	50–99% RH / 20–36°C					
Power supply	V/Ph/Hz	400/3/50					
Sound pressure level <sup>(3)</sup>	dB(A)	63	64		66		
Refrigerant/volume	Type / g	R410A / 3000	R410A / 2500		R410A / 9000	R410A / 8000	
CO <sub>2</sub> equivalent <sup>(10)</sup>	t-CO <sub>2</sub> e	6.26	5.22		18.79	16.7	
Dimensions (H x W x D)	mm	1378 x 1154 x 704			1750 x 1504 x 854		
Weight	kg	207	211	215	415	423	430

(1) at t<sub>a</sub> = 30°C; relative humidity = 80% r.H.  
 (2) at t<sub>a</sub> = 35°C; relative humidity = 75% r.H.  
 (3) Laboratory values in 1 m in the open air in accordance with ISO 9614, actual values may vary

(4) at t<sub>a</sub> = 30°C; water temperature 80/70°C, compressor in standby  
 (5) at t<sub>a</sub> = 30°C; relative humidity = 80%; water temperature 27/32°C  
 (6) without electrical heater  
 (7) sound power level compliant with ISO 9614

(8) without outdoor air supply  
 (9) incl. 30% outdoor air supply (-5°C, 80% r.H.)  
 (10) R410A global warming potential (GWP) = 2088 CO<sub>2</sub>e



# CONDAIR DP-HE

## High-Efficiency Dehumidifier

In large swimming pools, indoor aqua parks, saunas, and in hotels, sport and wellness facilities, the highly efficient dehumidifiers from the Condair DP-HE guarantee reliable temperature and humidity control, even under extreme climatic conditions. In addition to Condair's approved-and-tested heat recovery principle via the refrigerant circuit, an additional plate heat exchanger is fitted into the DP-HE to keep the energy required to maintain the desired internal temperature as low as possible in indoor pools.

Condair's DP-HE series is available in seven different models and achieves significant performance values with maximum dehumidification capacities of 133 L/day up to 565 L/day in the pure recirculation mode. The series's performance capacity in outdoor air operation is even more impressive. Condair's high-efficiency dehumidifiers dry up to 1054 L/day in continuous operation and therefore ensure sophisticated humidity regulation in highly frequented indoor pools.

Equipped with an automatic external air mixing function, which regulates automatically, depending on the operating mode selected, Condair DP-HE is used primarily by operators of larger swimming pools and wellness facilities, who place equal value on maximum ease of operation and highest possible operational reliability and comfort.

### Functional principle

The supply air flow is drawing warm and humid air through an air filter and a cross-flow heat exchanger. At the heat exchanger a part of the enthalpy is transferred to the supply air, afterwards up to 30% of the air flow can be extracted via the built-in exhaust fan. The remaining air volume passes through the evaporator coil and gets dehumidified to its required value. After dehumidifying 30% fresh air can be mixed into the total air flow again. The entire air flow is then passing through the second inlet of the cross-flow heat exchanger, where the heat is recovered from the air coming out of the pool area.

The preheated airflow passes through the condenser and is entering the pool area as supply air. At very low external air temperatures or operation with a mixture of fresh air, it can occur that the necessary temperature level is not reached. In this case, a hot water heating coil is fitted inside that heats up the air to the required temperature.

As up to 30% of fresh air can be added, it significantly improves the air quality. The fresh air also has a positive effect on dehumidification performance, as this generally has a lower humidity level than the air in the indoor pool. Less energy is therefore required for the dehumidification process via the refrigerant circuit.

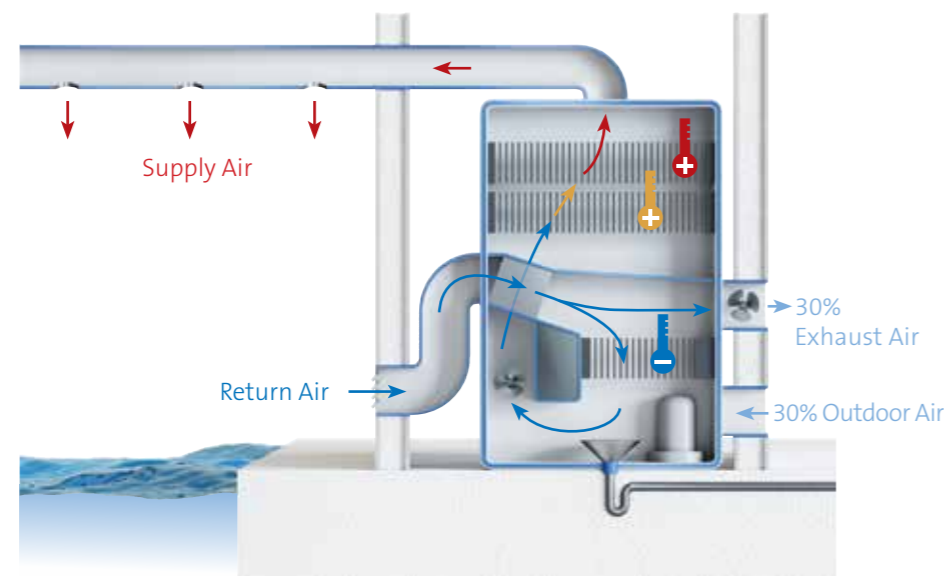


Compared with the usual dehumidifier models on the market, they have up to 30 percent greater dehumidifying capacity thanks to the dual-use cross-flow heat exchanger with a total lower power consumption.

The energy efficiency can be further optimized by using the separately available energy saving setback system which can be utilized while the pool is not in use. The flexible options allow that the maximum efficiency can be achieved at any given utilization rate during the day.

### Features:

- Automatically adding up to 30% fresh air
- Twice-use of the cross-flow heat exchanger
- Optional partial heat recovery for heating the pool water
- Hot water heater is included standard
- Electronic controller



Technical Data		DP 1500-HE	DP 2000-HE	DP 2800-HE	DP 3500-HE
Dehumidification capacity at 30°C–60% <sup>(8)</sup>	l/24h	132.7	162.3	248.9	310.7
Dehumidification capacity at 30°C–60% <sup>(9)</sup>	l/24h	223	290.9	444.8	552.2
Dehumidification capacity at 28°C–60% <sup>(8)</sup>	l/24h	123.4	152	232.2	290
Dehumidification capacity at 28°C–60% <sup>(9)</sup>	l/24h	236.3	309.8	472.9	575.7
Dehumidification capacity at 26°C–60% <sup>(8)</sup>	l/24h	114.4	140.8	218.3	270.2
Dehumidification capacity at 26°C–60% <sup>(9)</sup>	l/24h	212.1	276.9	423.2	525.4
Air flow	m³/h	1500	2000	2800	3500
Available external pressure	Pa	200			
Fresh air available max.	m³/h	450	600	845	1050
Nominal power consumption <sup>(1)</sup>	kW	1.97	2.54	3.44	5.27
Maximum current consumption	A	6.8	9.4	12.7	17.7
Hot Water coil (optional) <sup>(4)</sup>	kW	18	23	28	33
Power supply	V/Ph/Hz	400/3/50			
Sound pressure level <sup>(3)</sup>	dB(A)	63	63	66	66
Refrigerant/volume	Type / g	R410A / 1600		R410A / 2500	R410A / 3000
CO <sub>2</sub> equivalent <sup>(10)</sup>	t-CO <sub>2</sub> e	3.34	3.34	5.22	6.26
Dimensions (H x W x D)	mm	1770 x 1000 x 640		1850 x 1500 x 750	
Weight	kg	290	305	400	420

Technical Data		DP 4200-HE	DP 5200-HE	DP 6000-HE
Dehumidification capacity at 30°C–60% <sup>(8)</sup>	l/24h	376	464.4	565.2
Dehumidification capacity at 30°C–60% <sup>(9)</sup>	l/24h	587.5	746.4	907.5
Dehumidification capacity at 28°C–60% <sup>(8)</sup>	l/24h	350.4	434.1	527.2
Dehumidification capacity at 28°C–60% <sup>(9)</sup>	l/24h	618.9	766.5	930.2
Dehumidification capacity at 26°C–60% <sup>(8)</sup>	l/24h	325.8	407.8	492.4
Dehumidification capacity at 26°C–60% <sup>(9)</sup>	l/24h	545.8	681	822.2
Air flow	m³/h	4200	5200	6000
Available external pressure	Pa	200		
Fresh air available max.	m³/h	1260	1560	1800
Nominal power consumption <sup>(1)</sup>	kW	5.86	7.74	9.94
Maximum current consumption	A	18.5	20.9	25.8
Hot Water coil (optional) <sup>(4)</sup>	kW	53	64	70
Power supply	V/Ph/Hz	400/3/50		
Sound pressure level <sup>(3)</sup>	dB(A)	68	69	
Refrigerant/volume	Type / g	R410A / 5000		
CO <sub>2</sub> equivalent <sup>(10)</sup>	t-CO <sub>2</sub> e	10.44		
Dimensions (H x W x D)	mm	1950 x 1950 x 1250		
Weight	kg	570	590	620

(1) at t<sub>a</sub> = 30°C; relative humidity = 80% r.H.

(2) at t<sub>a</sub> = 35°C; relative humidity = 75% r.H.

(3) Laboratory values in 1 m in the open air in accordance with ISO 9614, actual values may vary

(4) at t<sub>a</sub> = 30°C; water temperature 80/70°C, compressor in standby

(5) at t<sub>a</sub> = 30°C; relative humidity = 80%; water temperature 27/32°C

(6) without electrical heater

(7) sound power level compliant with ISO 9614

(8) without outdoor air supply

(9) incl. 30% outdoor air supply (-5°C, 80% r.H.)

(10) R410A global warming potential (GWP) = 2088 CO<sub>2</sub>e

## Providing steam humidification generators for spas and saunas

Many hotels and health clubs offer spa facilities for the wellbeing of their guests and members such as saunas and steam baths.

Taking a steam bath has a positive effect on our health. It eases rheumatic pains and tension, can provide immediate relief from respiratory problems, helps to make the skin softer, and activates the immune system.

Condair offers innovative steam humidification generators whose specifications and output can be adapted precisely to your needs. In addition, we supply a whole system of steam-generating components suitable for use in installations of all types, including full-scale spas. Condair markets the renowned and well-established NORDMANN brand.

### **User-friendly control of steam generation**

The steam generation can be started at the push of a button and the cabin will be heated. The steam can be seen and felt by means of fresh air circulating inside the room. The auto sensitive control system adjusts the temperature to the entered set value by increasing or decreasing the steam production accordingly without notice by the bather.

### **Aromatic stimulation**

The wellness effects can be intensified by aromatic fragrances and coloured lighting. The innovative Condair Spa Control Delta offers the possibility to operate both steam bath and sauna simultaneously as well as control the lighting and fragrancing from a single touch display.



# CONDAIR OMEGA

Compact steam generator with fast steam availability

The steam generator for steam showers, private and semi-professional steam baths.

### Compact construction form – reliable quality

The Omega is the guaranty of fast steam production regardless of the quality of the water. It comes in 2 extra compact dimensions and can produce from 2 to 20 kg of steam per hour. It produces steam in less than 4 minutes from ambient temperature and the keep warm feature enables instant steam production. Maintaining the Omega is reduced to the minimum and can be fully proceeded in less than 5 minutes Chrono.

### Device settings with integrated spa control

The control of further functionalities for steam bath or sauna such as light, fan, fragrance, bench and wall heating, or music can be conveniently adjusted via our new integrated spa control.

Thus, further applications such as Caldarium, Rasul, Bio- and Fin Sauna (8kg/h) and also the control of Du-al-Cabins are possible.

It is possible to control various accessories such as light, fragrance, fan, freely configurable relay. It enables managing a steam bath and a fin sauna simultaneously and independently of each other with the same display.

### Modular construction – for different demands

The 4.3 inch touchscreen display (option) enables numerous settings and programming such as timing sessions on daily and weekly basis, automatic on/off, instant steam.

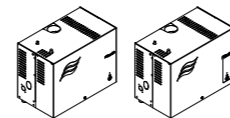
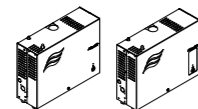
The Omega touchscreen even enables to troubleshoot the entire machine and solve any technical issue in a matter of seconds by simply following the instructions. Alternatively, for an extremely cost-efficient solution, the Omega is



available without display and all settings can be adjusted via a web interface. The generator can be switched on and off using the integrated button or a deport-ed button fitted on the steam cabin.

### Fill and drain sideway

Space is always an issue; therefore each model of the Omega can be ordered with the option where the filling and draining of the water are sideway of the Omega. Thus, the Omega can be installed e.g., beneath a bench. To secure a proper fitting of the unit we recommend the floor mounting kit. All these options can be added.



### Technical data

Condair Omega		2	4	6	8	12	16	20
Heating voltage		Maximum steam output in kg/h						
400 VAC / 3Ph / 50..60Hz	kg/h		-	6.0	8.0	12	16	20
230 VAC / 1Ph / 50..60Hz	kg/h	2.0	4.0	6.0	8.0	-	-	-
Nominal power	kW	2.0	3.5	4.5	6.5	9.5	12.5	15.5
Control voltage		230 VAC / 1 Ph / 50-60Hz						
Dimensions (WxHxD)	mm	470x350x150				470x350x270		
Operating weight	kg	12.9	12.9	12.9	19.6	19.6	19.6	19.6
Conformity		CE, VDE, DVGW						

# CONDAIR OMEGA PRO

Electric steam humidifier with patented scale management

The steam generator for tougher challenges. Ideal for any quality of water.

Condair Omega Pro steam humidifiers are optimized for use with demineralized water and drinking water. The design features employed ensure outstanding reliability in use, precise control, and simple operation.

### High capacity and unwavering dependability

Especially commercial and large steam bath installations require steam generators with sufficient capacity and dependable reliability. Condair designed the Omega Pro, which makes use of ohmic heating, specifically for such applications.

### Patented scale management

Separated scale particles are removed from the steam cylinder during operation and automatically led into the designated scale collection tank. Scale deposits are thus continuously removed from the steam cylinder.

The pieces of scale are collected in an external scale collection tank and can easily be emptied from there. Maintenance work is therefore significantly

reduced and operational reliability maximized. The patented scale management system ensures reduced maintenance times and long life of Omega Pro steam humidifiers.

### Simultaneous control of steam bath and sauna

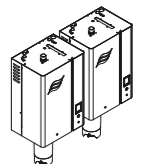
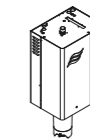
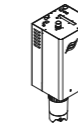
A steam bath and a fin sauna can be managed simultaneously and independently of each other with the same display. It is possible to control various accessories such as light, fragrance, fan and freely configurable relay.

### Touch Controller for precise control

The electronic control system allows the steam output to be varied continuously between 0 and 100%; this means accurate control and management of the steam supply rate. Thanks to an intuitive menu, the unit operates with ease, providing full-text fault messages for better interaction with the steam unit.

### Integrates seamlessly

Condair Omega Pro comes with all the common ports to enable its easy integration into building management systems (BMS), including Modbus, BACnet, etc.



### Technical data

Condair Omega Pro		5	8	10	16	20	24	30	40	50	60	80	
Heating voltage		Maximum steam output in kg/h*											
400 VAC / 3Ph / 50-60Hz**	kg/h	5.1	8.1	9.9	16.1	19.8	24.2	29.8	40.0	49.6	59.0	80.0	
230 VAC / 1Ph / 50-60Hz	kg/h	5.0	8.0	9.8	-	-	-	-	-	-	-	-	
Nominal power	kW	3.8	6.0	7.4	12.0	14.9	18.0	22.5	30.0	37.5	44.6	60.0	
Control voltage		230 VAC / 1 Ph / 50-60Hz											
Dimensions (WxHxD)	mm	420 x 987 x 370				530 x 1097 x 406				2 x 530 x 1097 x 406			
Operating weight	kg	40	40	40	66	66	66	66	66	132	132	132	
Conformity		CE, VDE, DVGW											

\* up to 160 kg (Link-up System)

\*\* other heating voltages on request



# NORDMANN AT4D BY CONDAIR

## Electric steam humidifier with patented self-cleaning system

For high-end steam baths.

The Nordmann AT4D is a high-quality steam bath generator. Reliable, versatile and easy to operate. With integrated self-cleaning system.

### High performance

The Nordmann AT4D produces sterilized, hygienic steam. With auto-sensitive temperature control, innovative technology generating between 5 and 65 kg of steam per hour, and an extensive range of accessories, it meets all the specifications required for the safe operation of a high-quality steam bath.

### Split unit

Another very useful advantage the AT4D features is its ability to split water compartment from electrical compartment for an easy installation in confined spaces. This unique design makes the AT4D the choice when space is at a premium or for other individual applications.

### Easy to install

The separate electronic compartment, with its generous accessibility and the water and steam connections located outside the unit, guarantees an easy installation.

### Intelligent water management

The water management automatically adjusts to local water conditions, keeping water consumption to a minimum.

### Applications

The steam bath generator AT4D is also suitable for Caldarium applications. Therefore, a humidity control is standing next to an individually adjustable temperature control.

### The NORDMANN AT4D steam cylinder

The patented self-cleaning system prevents limescale produced during steam production from forming deposits on the electrodes and cylinder sides. It is simply removed using the drain pump. And for users that means maximum reliability and long service intervals.

### Easy to use

A three-inch graphic user interface provides easy access to important operating parameters such as temperature, lighting, cabin ventilation and fragrance injection.

### Remote control up to 1.2 km

In hotels, health clubs and spa complexes, you have simple control of the steam bath from reception or another remote site.



### Building technology

The AT4D can be integrated in existing building technology using the Modbus standard. If preferred, the steam generator may be networked via @Link to BACnet/IP and LonWorks.

### AT4D Spa Display

The NORDMANN AT4D Spa Display is extremely user-friendly enabling you to control and program all the features and options. Lights, fragrance, temperature, timing of sessions is now at the end of a finger touch.

### Technical data

Nordmann AT4D		5	8	15	23	32	45	65
Heating voltage		max. steam output in kg/h						
400 VAC / 3Ph / 50-60Hz*	Type	534	834	1534	2364	3264	4564	6564
400 VAC / 2Ph / 50-60Hz	Type	524	824					
230 VAC / 3Ph / 50-60Hz	Type	532	832	1532	2362	3262		
230 VAC / 1Ph / 50-60Hz	Type	522	822					
Unit size		small	small	medium	medium	large	large	large
Dimensions (W x H x D)	mm	428x575x255	428x575x255	508x620x345	508x620x345	563x640x354	563x640x354	563x640x354
Operation weight	kg	17	17	29	29	65	65	67
Conformity		CE, VDE, GOST, EAC						
Control voltage		230 VAC / 1 Ph / 50-60Hz						

\* other heating voltages on request



# CONDAIR SPA CONTROL DELTA

For simultaneous control of steam bath and sauna

The innovative spa control for simultaneous control of steam bath, caldarium, rasul and different sauna variants such as bio and fin sauna.

It is possible to control various accessories such as light, fragrance, fan, freely configurable relay. It enables managing a steam bath and a fin sauna simultaneously and independently of each other with the same display. Operation is via a modern touch display, which is available in various versions.

Customisable display, you can upload your logo to appear on the screen.

### Advantages:

- The controller can control a steam bath and a sauna simultaneously and independently of each other.
- Easy switch between steam bath and sauna on the display.
- Flexible number of displays, one for both cabins or one for each cabin.
- Integrated web server where device settings can be managed.
- Smart Home connection via optional KNX gateway, Modbus integrated as standard.
- Keep warm function saves energy.

### External touch display

Optionally a remote touch display can be connected to the Omega steam generator.

It is available as flush-mounted or wall-mounted version, with only 19-mm wall outstanding. You have the choice from three standard frames: brushed stainless steel, white or black glass. There are two different display layouts matching to the selected cover.

The cleverly designed magnetic frame construction, however, also allows steam bath builders to individualize the fitting with a material of the customer's liking.



The external display in three versions



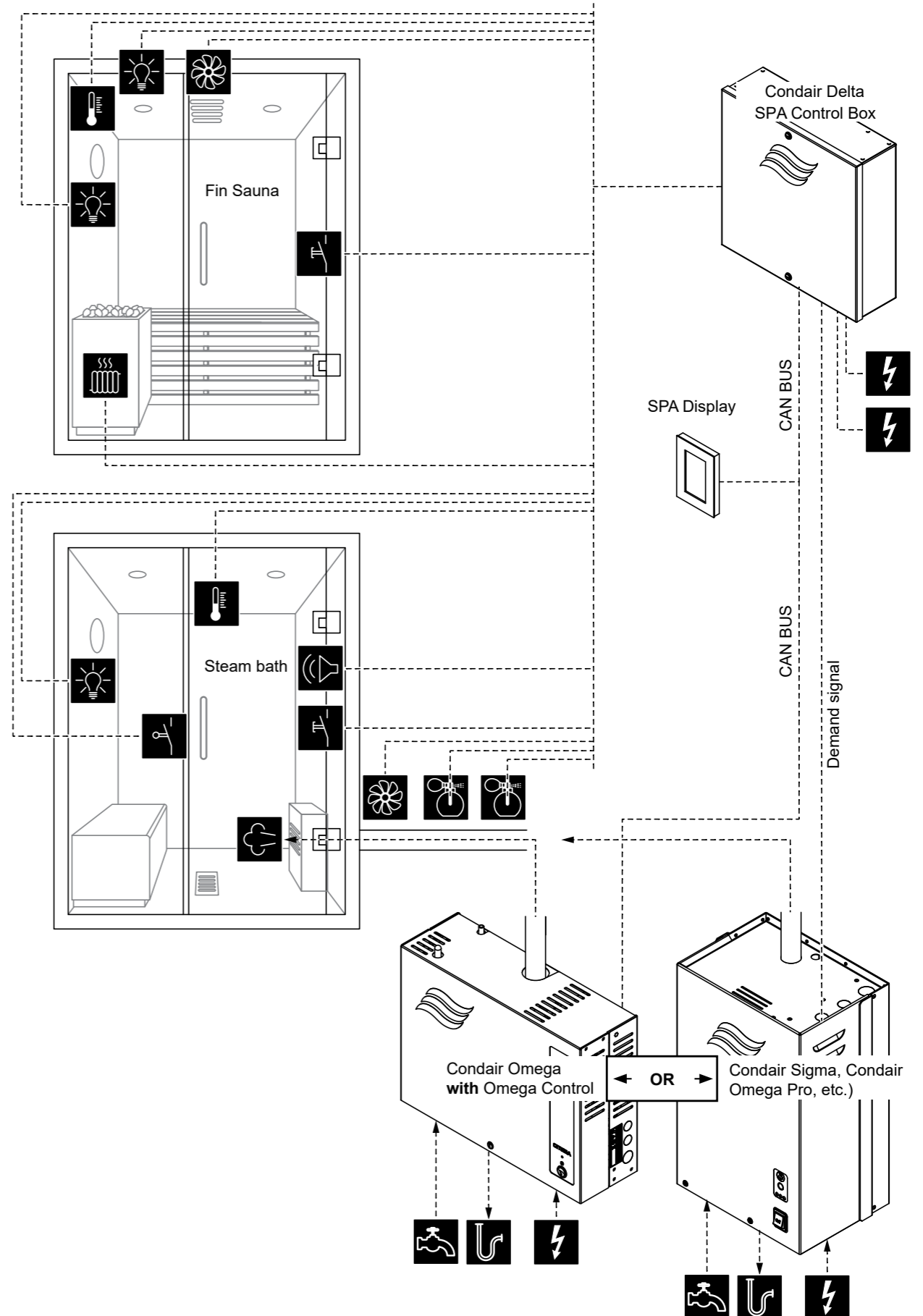
### Technical data

Condair Spa Control Delta Box		
Nominal power	Sauna	max. 9 kW
	Benchheating	1 kW
	Wallheating	1 kW
	Accessories	1 kW
Dimensions (W x H x D)	353 x 353 x 107 mm	
Net weight	5,5 kg	
Control voltage	230 V	
Heating voltage	400 V	
Type of protection	IPX4	

Application	Variant
Steambath	Standard
Steambath with benchheating	Benchheating
Caldarium	Bench and wallheating
Rasul	Bench and wallheating
Finnsauna	Finnsauna
Bio sauna for sauna heater with integrated steamer	Bio sauna (generator and Spa Control Delta)
Bio sauna for pure sauna heater, steam produced by ES4-2	Fin sauna
Dual cabin	Fin sauna

Manage the entire sauna and spa system from one control panel

Overview of how the Spa Control Delta connects everything from the steam unit, doors, lighting and fragrance into one system:



# ACCESSORIES

Suitable accessories for your wellness project

Conair offers a wide range of accessories to steam humidification generators:

- Steam hoses
- Hoseclamps
- Insulation hoses
- Fragrance pump
- Steam inlets
- Fans
- Regulator and temperature sensors
- Steam bath control and displays
- Mounting sleeves and spots
- LED controller
- Push-button plates
- Mounting material
- Water treatment

Only some of those accessories that are related to lighting are show here.

## Piezo push button



### Push button - in blue or red

Piezo push button with blue/red ring illumination 24VDC.  
Installed in holder/ cover screen inox.  
Chrome plated 60 mm outer diameter.  
7 m wire 5 x 0.25 mm<sup>2</sup> with connector.  
Connection wire JST.  
For installation in mounting sleeve.  
Ø42 mm.

## LED Controller for RGB and warm white spots



### Controller LED RGB

15 different light programs can be chosen by a code switch.  
Synchronous colour gradient.  
Dimmable via poti on housing.  
Output RGB-LED Spot 350 mA 1-10.  
Power supply 230 VAC with plug  
230 VAC 1 Ph 50Hz 50W.  
7 m cable to spot 1 JST + end plug.



### Controller LED warm white

For max. 1-12 pcs. 1W spots.  
1 x converter 350mA LCM-40 constant current.  
Incl. poti for dimming on housing.  
Power supply cable 2m white, 230V/AC- 1,1A.  
7 m cable to spot 1 JST + end plug.

## LED spots



### Controller LED RGB

15 different light programs can be chosen by a code switch.  
Synchronous colour gradient.  
Dimmable via poti on housing.  
Output RGB-LED Spot 350 mA 1-10.  
Power supply 230 VAC with plug  
230 VAC 1 Ph 50Hz 50W.  
7 m cable to spot 1 JST + end plug.



### LED spot warm white

Built-in lamp VA chromed.  
Type of protection: IP 65.  
LED warm white 1 Watt.  
Lens frosted.  
Cover Ø60 mm.  
Incl. connecting cable 20 cm.  
Plug type: JST.