Ideal for indoor swimming pools and whirlpools

Pool dehumidifiers of the DS series

A FEW PRACTICAL BENEFITS:

- Dehumidifiers especially developed for use in wet rooms
- High dehumidification performance with optimum heat recovery
- Low specific energy consumption – extremely high economic efficiency
- Corrosion-protected design – easy to clean
- Smoothly running radial fans
- Polyester-coated, corrosion-protected heat exchangers
- Infinitely adjustable hygrostat
- Optionally automatic or permanent operation
- Anti-icing thermostat
- Adjustable air discharge direction
- High and low pressure switch
- Many more equipment options and special designs available

The dehumidifiers of the DS series are also ideally suited for use in fitness areas.

TROTEC 100% MADE IN GERMANY

DS 30

DS 60

Reliable Trotec solutions for fully automatic dehumidification operation to achieve whirlpools and indoor swimming pools free of condensation

TRT-KAT-DSSE-WM-05-

Highly efficient moisture control and heat recovery in indoor swimming pools or whirlpools

Particularly in wet rooms such as private indoor swimming pools the humidity rises significantly due to the high degree of water evaporation.

Here the critical limit can easily be exceeded resulting in rot, corrosion or mould formation, thus causing severe problems for the building structure and the well-being of its users.

Ventilation alone cannot provide the remedy, for this not only squanders precious energy, which would have had to be spent for heating first.

When introducing cold air, it can also absorb less moisture, causing the dew point temperature to drop to a critical level.

Mostly, when considering the prevailing temperatures, the ambient air is already saturated to a degree, that sufficient moisture transport simply cannot be ensured.

The solution: Pool dehumidifiers of the DS series

These devices specifically developed for this purpose ensure an equally powerful and economical dehumidification of indoor swimming pools.

They are easily installed, work fully automatically and can extract large amounts of humidity from the room air. During this process, they absorb the potential energy and in accordance with the heat pump principle give up to 2.7 kW of useful heat for each kilowatt spent by the DS dehumidifier off to the air in the indoor swimming pool.

This way, heating costs can be reduced along with the pool air dehumidification!

Efficient and economical way of working

Integrated within the DS pool dehumidifiers are special radial fans which, despite their particularly quiet running properties, can suck in large amounts of humidity from the ambient air.

The damp air is fed through an evaporator, there cooled below dew point and condensed. The condensate is discharged and the cold, dry air led past the cooling block's heating element where it is warmed by the released process energy and then fed back to the room air.

Pool dehumidifiers of the DS series – the ideal device for every demand:

All models are as standard equipped with an infinitely adjustable hygrostat.

DS 30 and DS 60

- Professional quality "Made in Germany" – Originally produced by Trotec
- Corrosion-protected construction made of fibreglass-reinforced plastic – easy to clean
- Powerful air circulating radial fan
- Polyester-coated, corrosion-protected heat exchangers
- Infinitely adjustable hygrostat
- Fully automatic operation
- High and low pressure switch
- Prepared for wall mounting
- Optionally available with condensate pump
- Many more equipment options and special designs available

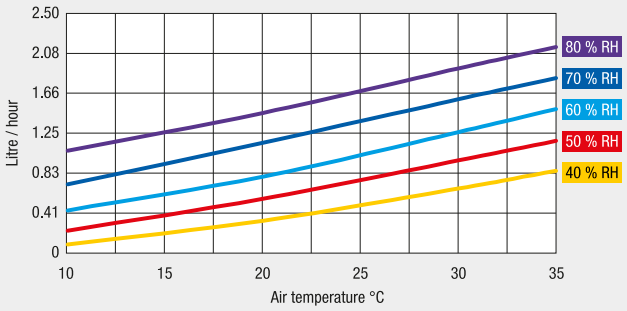
DS 31 and DS 51

- Corrosion-protected aluminium construction – easy to clean
- Silent radial fan
- Integrated air filter
- Extremely silent scroll compressor
- Polyester-coated, corrosion-protected heat exchangers
- Infinitely adjustable hygrostat
- Optionally automatic or permanent operation
- Suited for wall mounting or floor installation
- Anti-icing thermostat
- Adjustable air discharge direction
- High and low pressure switch
- Many more equipment options and special designs available

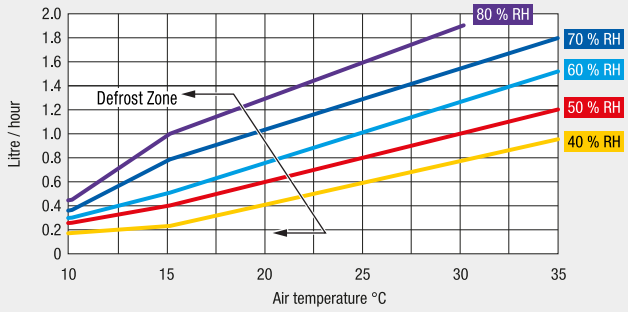
DS 31 and DS 51 come with an adjustable air outlet for directing the flow of warm dry air.

Overview of the DS series' performance charts

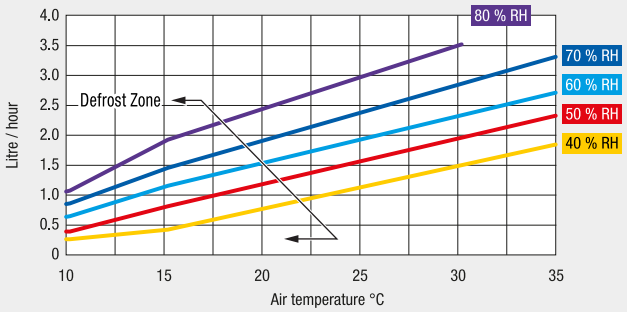
Dehumidification performance of the DS 30



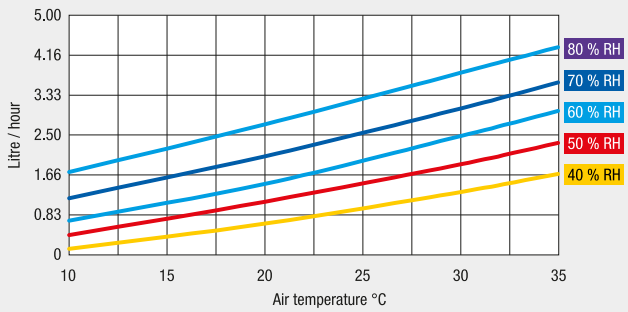
Dehumidification performance of the DS 31* * optional version with hot gas defrosting



Dehumidification performance of the DS 51* * optional version with hot gas defrosting



Dehumidification performance of the DS 60



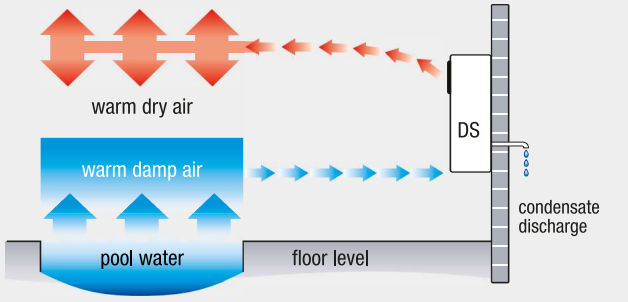
Installation and application possibilities

As standard all pool dehumidifiers come equipped with internal heat recovery, thus automatically utilizing the released process heat for low-cost heating of the room air.

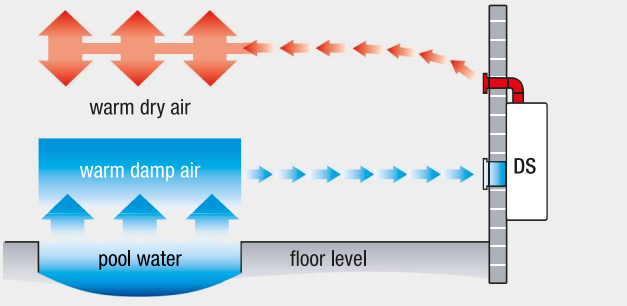
Furthermore, optionally also available in case of an increased heating demand for the room air is an additional pumped warm water damper register (PWW), which is then to be connected to the supply and return flow of the hot water heating. In this event the temperature will be controlled by an on-site room thermostat opening and closing an integrated control valve.

The models DS 30 and DS 60 can optionally also be equipped with an additional electric heating and are available for rear panel installation as well.

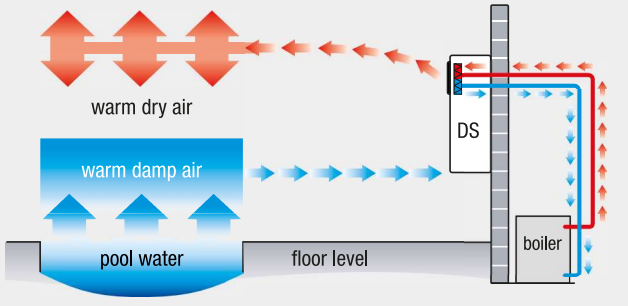
Standard model
(wall-mounted or positioned on the floor, depending on the model)



Special model for rear panel installation



Special model with pumped warm water damper register (PWW)



Simple installation – immediately ready for use

All pool dehumidifiers are delivered completely ready-to-install. Everything required for use when positioned on the floor is a condensate drain and an electric connection. In case of wall-mounted devices the supplied wall mount needs to be installed first.




Technical data		DS 30	DS 31	DS 51	DS 60
Article number		1.125.000.319	1.125.000.321	1.125.000.331	1.125.000.335
Dehumidification performance		see performance charts			
Suitable for tank sizes of up to [m²] [1]		25	25	48	50
Air volume freely blowing [m³/h]		700	440	740	1.280
Input voltage [V/Hz]		230 / 50	230 / 50	230 / 50	230 / 50
Nominal current / Fuse [A]		4.4 / 16	3.5 / 10	6 / 13	7.5 / 16
Electrical connection (plug)		CEE 7/7	CEE 7/7	CEE 7/7	CEE 7/7
Power input [kW]		0.75	0.51	0.98	1.2
Heat emission [2] [kW]		1.9	1.6	3.0	3.5
Coefficient of performance (C.O.P.) [2]		2.5	3.1	3.1	2.9
Cooling agent* Type / Amount [g]		R-407C / 500	R-407C / 1,100	R-407C / 1,700	R-407C / 800
GWP factor* / CO_2 equivalent* [t]		1,774 / 0.89	1,774 / 1.95	1,774 / 3.02	1,774 / 1.42
Sound level (distance 3 m) [dB(A)]		50	42	44	52
Operating range	temperature [°C]	0 to 40	15 to 35 (5 to 35 [3])	15 to 35 (5 to 35 [3])	0 to 40
	max. RH [%]	90	90	90	90
Length [mm]		265	340	340	265
Width [mm]		800	880	1,345	1,265
Height [mm]		665	1,000	1,000	665
Weight [kg]		46	57	74	70
Type of protection		IP45	IP45	IP45	IP45
Automatic hot gas defrosting		○	○	○	○
Integrated hygrostat (infinitely adjustable)		■	■	■	■
External room hygro-thermostat		□	○	○	○
Suited for wall mounting		■	■	■	■
Suited for floor installation		–	■	■	–
Condensate discharge connection [mm]		10	16	16	10
Air filter		–	■	■	–

Optional accessories	DS 30	DS 31	DS 51	DS 60
Condensate pump	Pump height 10 m, Article no. 6.100.000.020	–	–	Pump height 15 m, Article no. 6.100.000.025
Kit for rear panel installation	○	–	–	○
PWW damper register	○	○	○	○
Heating capacity (supply) 80 °C [kW]	3	3.3	5.8	5
Flow rate [l/min]	5	4.8	10.2	5
Electric damper register	○	–	–	○
Heating capacity [kW]	2	–	–	4
Heat recycling process (for hot water)	○	–	–	○
Heat emission to water max. [kW]	1.4	–	–	2.8

[1] for private indoor swimming pools; calculation basis: evaporation of 1.2 litres per square metre of pool per day (room temperature 30 °C, humidity 60 % RH, water temperature 27 °C). Changing parameters such as the frequency of use or the type of pool cover require an individual recalculation of capacity requirements.

[2] at 30 °C and 75 % RH (The energy efficiency ratio COP ["coefficient of performance"] indicates the ratio between the generated cooling performance and the electrical power input)

[3] extended operating range from 5 to 35 °C applicable for the optional version with automatic hot gas defrosting

■ standard equipment; □ optional equipment; ○ equipment option to be stated at the time of order, not subsequently installable; further versions upon request

* Functionally, this device contains a hermetic system with fluorinated greenhouse gas as a refrigerant in the specified specifications and with a greenhouse gas potential corresponding to the indicated GWP factor.