

**CONDITION  
CONTROL**

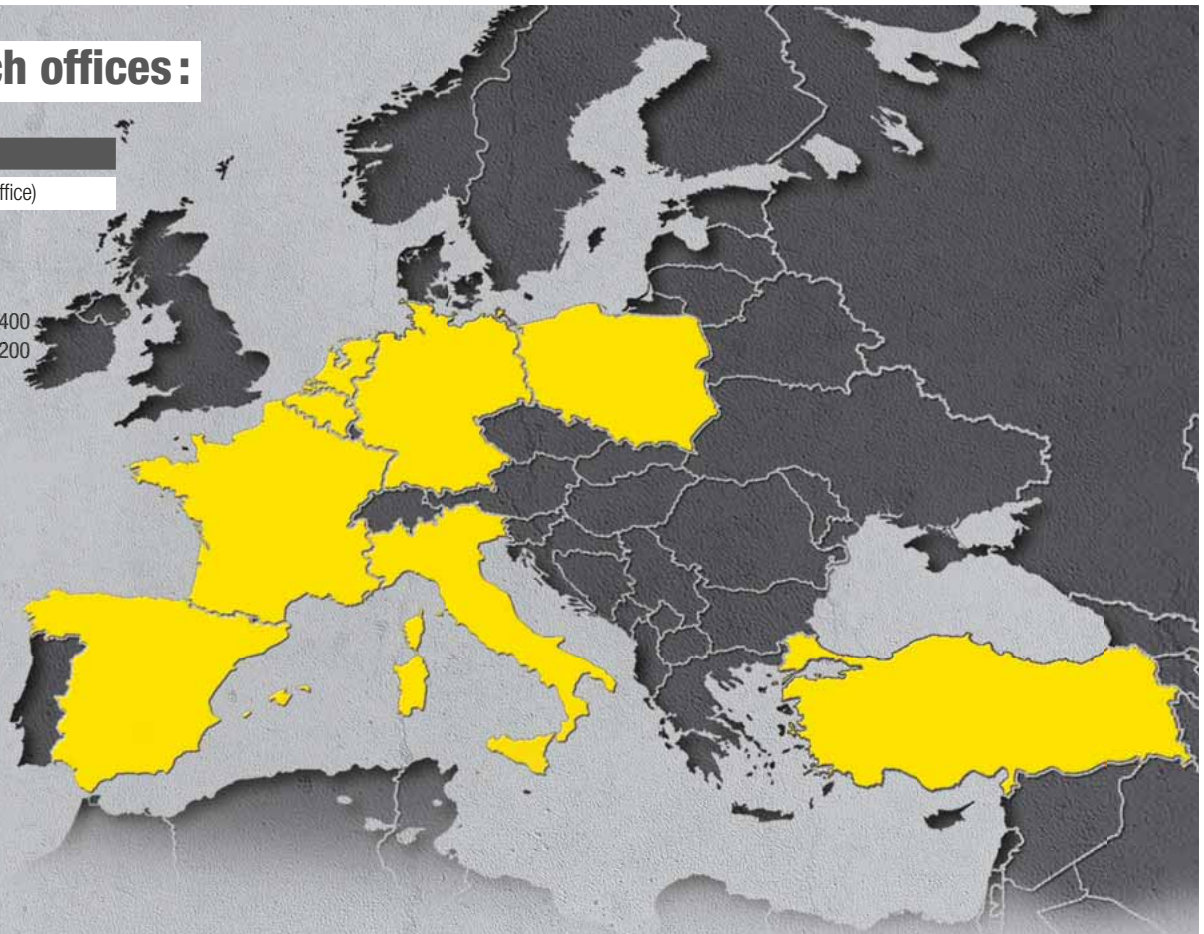
AIR HANDLING  
SOLUTIONS

## Our branch offices:

### GERMANY

#### Heinsberg (Our head office)

Trotec GmbH  
 Grebbener Straße 7  
 52525 Heinsberg  
 Phone +49 2452 962-400  
 Fax +49 2452 962-200  
 info@trotec.de  
 www.trotec.de



### GERMANY

#### Schwerin

Trotec GmbH  
 Werkstraße 721/7  
 19061 Schwerin  
 Phone +49 385 773350-80  
 Fax +49 385 773350-83

### NETHERLANDS

#### Rotterdam

Trotec C.V.  
 Kreekweg 22  
 3133 AZ Vlaardingen  
 Phone +31 103 135250  
 Fax +31 103 135251

### BELGIUM

#### Overpelt

Trotec C.V.  
 Klein Siberiëstraat 1C  
 3900 Overpelt  
 Phone +32 78 482807  
 Fax +32 78 482812

### FRANCE

#### Strasbourg

Trotec GmbH  
 Rue du Dépôt  
 10 Les Parcs de l'Europe  
 67207 Niederhausbergen  
 Phone +33 390 2948-18  
 Fax +33 390 2948-19

### ITALY

#### Verona

Trotec International GmbH & C.S.a.s.  
 Via Marconi, 27  
 37010 Affi  
 Phone +39 045 6200-905  
 Phone +39 045 6201-668  
 Fax +39 045 6200-895

### POLAND

#### Warsaw

Trotec Sp. z o.o. Sp. k  
 Ul. Olszynowa 9  
 Podolszyn Nowy, 05-090 Raszyn  
 Phone +48 22 30753-60  
 Fax +48 22 30753-61

### CHILE

#### Santiago

Trotec CHILE SA  
 AV Andrés Bello 2777,  
 Of 904. Las Condes,  
 Santiago  
 Phone +56 222 4120791

### SPAIN

#### Madrid

Trotec Comercio SL S.COM.  
 Avenida de la Industria, 85  
 Polígono Industrial el Lomo  
 28970 Humanes de Madrid  
 Phone +34 91 187 349-0  
 Fax +34 91 187 349-1

### TURKEY

#### Istanbul

Trotec End.Ürn.Tic.Ltd.Şti.  
 Oruçreis Mh. Giyimkent Cd.  
 14. Sok. No. 61  
 Giyimkent Sitesi  
 34235 Esenler - Istanbul  
 Phone +90 212 4385655  
 Fax +90 212 4385651



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# Trotec: Innovations made in Germany. We establish best conditions for your success.



## Success has a story. And trust has a name. Trotec.

We have been an owner-managed company from the time we started. We work efficiently thanks to short decision-making paths. Our roots are deeply anchored in the craft sector and on the construction site where our company history began almost three decades ago. In the craft sector and on the construction site, solidity and reliability are just as important as speed and endurance. The practical experience we have gained there taught us that a project will only be perfectly successful if good team players are on board. Coordinating all trades and seeing which machines, which materials, which climatic conditions lead to which result is something Trotec has in its DNA. We simply know what works because our knowledge is based on experience from real life.

## Experience and competence “at work”

We place great emphasis on experience-based product development. Our experience is based on life practice, and we know that every product has to solve a problem that has been an obstacle for a smooth workflow. Innovative technology with real relevance for everyday life that has to prove successful again and again – under the toughest conditions and in very different situations. Only when we get positive feedback from the working world that everything is alright, we are sure that we have kept our Trotec promise: Selling solutions, not just products.

## International, German quality and technology.

Nowadays, Trotec and its subsidiaries on different continents supply industry, tradesmen and craft enterprises worldwide with professional product solutions for climate conditioning. The assortment of innovative solutions we offer ranges from machines for climate conditioning and measuring devices to special work tents and screen fences.

In the past decades our leitmotif of offering innovative technology at the best possible rates has not only made us one of the leading industrial equipment suppliers but by now also a successful provider of corresponding product solutions for private usage.

## Our constant incentive? Being measurably better.

In the fields of portable measuring equipment, too, we are one of the global prime addresses. Trotec develops, produces and distributes innovative measuring devices for climate, building technology, quality and emission control, industrial maintenance as well as detection and localisation.

## Trotec turn money into ideas: 10 % for research

We have become big as high-quality supplier – and would like to keep it that way. Therefore, we rely on qualified and motivated employees and invest in a

future-proof development. 10 % of our turnover is principally reinvested in research and development. Employing this strategy, Trotec ensures its customers a brisk pace of product innovation as well as future-proof technology of tomorrow’s problem solvers.

## More than 90 % in-house production – and always 100 % problem solving

As long as there are problems without solutions, we will continue to develop new products. Each of them must be uncompromisingly easy to use and always deliver consistent performance while withstanding a wide range of conditions. This is the Trotec standard: precision and effectiveness. That is why our focus is on the continuously growing number of products we develop and manufacture in-house – everything from a single source. Upon opening our Heinsberg production facility in 2013, 70 % of the machines of the professional range had already been developed and produced along the lines of “made in Germany”. Today’s rate is more than 90 %.

## We like to share what we know

Our experts are not only here to advise you; as part of the Trotec Academy, they also offer you active knowledge transfer for many tasks: In our training courses and seminars we convey theoretical and practical expertise.



# Because we are working hand in hand, your advantages with Trotec are not far to seek and can be counted on the fingers of two hands ...

## 1 Field-tested engineering

Heinsberg accommodates the R&D department, prototype construction and state-of-the-art test rooms on 1,500 m<sup>2</sup> where more than 20 employees develop new products whilst closely working together with users and specialised suppliers. This allows us to offer you solutions that are field-tested to 100 %.

## 3 Manufactured in Germany

Think globally – act locally! In case of many measuring devices, too, we have deliberately decided in favour of manufacturing in Germany, because here we can rely on outstandingly qualified employees and a well-organised workflow. And only these factors guarantee the development of high-quality products!

## 5 Everything directly from the manufacturer

Because all of our devices, components and accessories are coming from a single source Trotec solutions are highly functional: They are exceedingly well-matched in terms of appearance and technology. These sophisticated products make an impression – on our users and also on your clients.

## 7 Independent repair and maintenance service

You can rely on qualified service staff – no matter where you are. Trotec has their own service vehicle fleet and specialist workshops in Germany, the Netherlands, Belgium, Poland, France, Italy, Spain and Turkey.

## 9 Optimum value-for-money ratio

For nearly 30 years now our customers have bought our products, which are giving a good return. What is more: Trotec also offers fiscal solutions when purchasing, renting or leasing. Benefit from solely Trotec financing – without involvement of a bank.

## Solutions at the click of a mouse – twenty-four-seven ...

Via our online portals ([www.trotec.com](http://www.trotec.com)) you can benefit from our various offers 24/7.

Make use of the convenient shopping opportunity in the Trotec shop: Here industrial customers, craftsmen and private users equally get their money's worth, for in the Trotec shops you'll find new equipment for all needs with an optimum value-for-money ratio, promotional offers at particularly favourable budget prices, attractive package combinations and inexpensive samples or remaining stock. Always worth a visit:

[www.trotec.com](http://www.trotec.com)

## 2 10 % for research – 100 % for you

With Trotec you have always cutting-edge technology, since 10 % of our turnover goes into research and development. Which means that every year you can benefit from clearly more product innovations than many a competitor has launched throughout his entire company history.

## 4 German industrial design

Trotec solutions are impressive in every respect: They stand out from the crowd by the visually appealing clarity, practicality and functionality of German industrial designs and impress with technical superiority and outstanding quality.

## 6 Permanent availability

It is normal for us to ship 15,000 parcels a day. That's why we basically have everything in stock all the time. Whatever you need from the Trotec range, quick delivery is no problem for us: 250,000 machines and measuring devices are permanently available for you.

## 8 Long-term availability of spare parts

We guarantee the value retention of your investments. Trotec can supply you now and in future with spare parts for all requirements. We have more than 100,000 spare parts constantly in stock. Count on it!

## 10 Comprehensive services

Along with our products you obtain important services, which ensure the functionality of your devices: Training, testers, trial operation, consultancy service and more. Furthermore available for you is the on-site service in all Trotec subsidiaries.



**A FEW PRACTICAL BENEFITS:**

Professional quality  
"made in Germany" –  
originally produced by Trotec

Configurable air direction reversal  
for all models

Equipped with manifold functions and  
extensive features as standard

High economic efficiency due to  
modular assembly design

Can be configured individually for any  
application due to a wide range of  
equipment options

# TTR industrial desiccant dehumidifiers

Durable, low-maintenance, extremely flexible and modularly configurable with high dehumidification performance even at low dew points



**Online Capacity Calculation**



Which dehumidifier optimally fits your room moisture? Simply use our professional online capacity calculator for exact calculations!

With our robust high-performance dehumidifiers you constantly benefit from a perfect solution with regard to drying applications. The TTR units ensure efficient and permanent dehumidification with a high capacity, even at low dew points.

The application possibilities for these industrial desiccant dehumidifiers are as versatile as their comprehensive standard equipment and the numerous additional equipment options facilitate a virtually custom-tailored adaptation of these devices to meet any requirement.



**All industrial dehumidifiers of the TTR series are developed and manufactured in Germany according to the highest quality standards. They exclusively consist of efficient branded components of the latest generation of technology supplied by leading component manufacturers.**

Thanks to the internal heat recycling process as well as the high level of resilience and performance of their special sorption rotors, the desiccant dehumidifiers of the TTR series are among the most economical dehumidifiers of their kind!



**Standard equipment features of the TTR industrial desiccant dehumidifiers**

	TTR 800	TTR 1400	TTR 2000	TTR 2800	TTR 3700	TTR 5200	TTR 6600	TTR 8200	TTR 10000	TTR 12000	TTR 13500
Stainless steel housing	■	■	■	■	■	□	□	□	□	□	□
Steel housing, galvanized and painted	-	-	-	-	-	■	■	■	■	■	■
Wide-range voltage	■	■	■	■	■	■	■	■	■	■	■
Rotor rotation control (rotor and drive)	■	■	■	■	■	■	■	■	■	■	■
Overtemperature protection system with restart lock (regeneration air)	■	■	■	■	■	■	■	■	■	■	■
Operating temperature management (regeneration air)	■	■	■	■	■	■	■	■	■	■	■
Filter monitoring (per air current and collective warning light)	■	■	■	■	■	■	■	■	■	■	■
Duoventic control <sup>1</sup>	■	■	■	■	■	■	■	■	■	■	■
PLC control module Millenium	□	□	□	□	□	■	■	■	■	■	■
FlowMatic volumetric flow control	□	□	□	□	□	■	■	■	■	■	■
Configurable air direction reversal	■	■	■	■	■	■	■	■	■	■	■
Terminals external On/Off	■	■	■	■	■	■	■	■	■	■	■
Terminals hygrostat	■	■	■	■	■	■	■	■	■	■	■
Potential-free contacts (operation, fault, filter)	■	■	■	■	■	■	■	■	■	■	■

<sup>1</sup> Duoventic allows the independent adjustment of each fan's performance via a potentiometer without the need for customer-provided throttle units;  
 ■ standard equipment; □ optional equipment

**As standard, all TTR units are equipped with numerous functions and features guaranteeing reliable operation, easy handling and long lifetime with low maintenance effort.**

Both air volume and the degree of humidity can also be adjusted independently for all devices as required by means of the integrated Duoventic control.



All TTR units operate according to the TTR Trisorp Dual principle with dual air circulation for pressure-neutral recirculation operation. Each of these air circuits has a separate fan that can be adjusted independently via an infinitely variable electronic regulation.

This enables the fine adjustment of moisture content and volumetric flow of the dry air required without the need to e.g. install energy-wasting throttle valves to regulate the air volume as has often been customary so far.

Due to Duoventic you can configure the device to meet any requirement quickly and in line with demand without the need for conversions: Extremely dry air with a low air flow rate, larger volumes of dry air or maximum circulating air performance with a moderate ratio of dry air.

Further available to optimally adjust the devices to your specific application requirements is a comprehensive range of additional equipment options.

**An overview of all options is listed in tabular form on the catalogue pages 10 and 11.**



The TTR platform strategy consisting of four construction modules with altogether eleven devices of different performance classes ensures a maximum of quality and cost-effectiveness.



**On request, we also readily provide custom-tailored special solutions:**

- TTR industrial desiccant dehumidifiers with hygienic design
- TTR industrial desiccant dehumidifiers for PWIS-free dry air
- TTR industrial desiccant dehumidifiers for extremely low dew points

You can find more information at [www.trotec.com/ttr-special-models](http://www.trotec.com/ttr-special-models) or via the QR code on the right.





← Industrial desiccant dehumidifiers – further information ...



Technical data	TTR 800	TTR 1400	TTR 2000	TTR 2800	TTR 3700	
Article number	1.110.000.150	1.110.000.160	1.110.000.171	1.110.000.175	1.110.000.177	
Dry air	Dehumidification performance <sup>1</sup> [kg/h]	3.6	7.4	10.8	15.7	20.5
	Air volume free-blowing [m³/h]	950	1,750	2,350	3,150	4,300
	Air volume nominal [m³/h]	750	1,450	2,000	2,800	3,700
	Compression [Pa]	300	300	300	300	400
Regeneration air	Air volume [m³/h]	130	270	380	570	740
	Compression [Pa]	300	300	250	300	200

Principle of operation (see page 14)

TTR Trisorp Dual

Operation range [°C/% RH]	-20 °C to +40 °C / 0 to 100 % RH (other operating ranges upon request)					
Heating [kW]	4.1	9.0	12.5	18.9	24.5	
Electrical values	Power input [kW]	4.9	9.8	15	21.6	28.8
	Voltage [V, Hz]	3 x 380 ... 480, 50/60 + PE		3 x 380 ... 480, 50/60 + PE		
	Current consumption (@ 3 x 400 V) [A]	7.5	15.0	23.0	31.7	42.8
	Electrical connection [A]	16	16	32	32	63
Length [mm]		734	734	1,348	1,348	1,348
Width [mm]		649	649	769	769	769
Height [mm]		942	942	1,323	1,323	1,323
Weight [kg]		85	100	230	250	270
Connections dry air input/output ø [mm]		250 / 250	250 / 250	315 / 315	315 / 315	315 / 315
Connections regeneration air input/output ø [mm]		160 / 160	160 / 160	200 / 200	200 / 200	200 / 200
<b>Available accessories</b>	<b>TTR 800</b>	<b>TTR 1400</b>	<b>TTR 2000</b>	<b>TTR 2800</b>	<b>TTR 3700</b>	
G4 Z-line filter	Process air	2 x Art. no. 7.160.000.404	2 x Art. no. 7.160.000.404	1 x Art. no. 7.160.000.428	1 x Art. no. 7.160.000.428	1 x Art. no. 7.160.000.428
	Regeneration air	1 x Art. no. 7.160.000.404	1 x Art. no. 7.160.000.404	1 x Art. no. 7.160.000.404	1 x Art. no. 7.160.000.404	1 x Art. no. 7.160.000.404
F7 pleated filter cartridge	Process air	2 x Art. no. 7.160.000.409	2 x Art. no. 7.160.000.409	1 x Art. no. 7.160.000.429	1 x Art. no. 7.160.000.429	1 x Art. no. 7.160.000.429
	Regeneration air	1 x Art. no. 7.160.000.409	1 x Art. no. 7.160.000.409	1 x Art. no. 7.160.000.409	1 x Art. no. 7.160.000.409	1 x Art. no. 7.160.000.409
Air transport hoses	For suitable air transport hoses, please refer to the connectivity schedule on page 178					
<b>Optional additional equipment</b>	We have compiled an overview of all equipment options for you on pages 10/11					

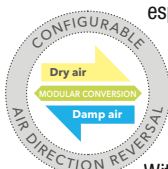
<sup>1</sup> Nominal data at 20 °C/60 % RH

**Configurable air direction reversal**

Another practical detail for stationary industrial applications, especially with pipe connections, is the configurable air direction reversal of the TTR units, for especially in those cases it must be possible to integrate new or additional devices flexibly into existing process sequences.

With the operator side always facing the user, the air flow direction can easily be adjusted to your individual procedures as needed by means of a modular conversion. Blowing out dry air to the right and discharging humid air to the left – or the other way round – not a problem thanks to the air direction reversal.

All models are optionally also available with a stackable transport frame – up to and including the TTR 3700 also with castors. Optionally, wheels can be supplied for the larger models and, on demand, every TTR unit can also be delivered in a special weather-proof design. An overview of all equipment options is provided on the following catalogue pages.







Technical data		TTR 5200	TTR 6600	TTR 8200	TTR 10000	TTR 12000	TTR 13500
Article number		1.110.000.182	1.110.000.187	1.110.000.190	1.110.000.192	1.110.000.195	1.110.000.197
Dry air	Dehumidification performance <sup>1</sup> [kg/h]	29.1	37.2	46.2	55.1	66.5	74.6
	Air volume free-blowing [m³/h]	5,800	7,200	9,000	10,500	12,500	14,700
	Air volume nominal [m³/h]	5,200	6,600	8,200	9,800	11,800	13,300
	Compression [Pa]	400	400	400	300	300	400
Regeneration air	Air volume [m³/h]	1,050	1,330	1,660	1,970	2,380	2,670
	Compression [Pa]	300	300	300	300	300	200
Principle of operation (see page 14)		TTR Trisorp Dual					
Operation range [°C/% RH]		-20 °C to +40 °C / 0 to 100 % RH (other operating ranges upon request)					
Heating [kW]		36.0	45.0	57.0	66.0	81.0	90.0
Electrical values	Power input [kW]	40	50.5	64.5	74.0	89.0	103.0
	Voltage [V, Hz]	3 x 380 ... 480, 50/60 + PE			3 x 380 ... 480, 50/60 + PE		
	Current consumption (@ 3 x 400 V) [A]	60	73.5	93.5	108.0	129.0	150.0
	Electrical connection [A]	63	100	125	160	160	250
Length [mm]		1,919	1,919	1,919	2,032	2,032	2,032
Width [mm]		1,100	1,100	1,100	1,460	1,460	1,460
Height [mm]		1,680	1,680	1,680	1,802	1,802	1,802
Weight [kg]		680	720	750	900	1,000	1,100
Connections dry air input/output ø [mm]		500 / 500	500 / 500	500 / 500	Rectangular duct connection (optional 2 x 500 <sup>2</sup> )		
Connections regeneration air input/output ø [mm]		300 / 300	300 / 300	300 / 300	400 / 400	400 / 400	400 / 400
Available accessories		TTR 5200	TTR 6600	TTR 8200	TTR 10000	TTR 12000	TTR 13500
G4 Z-line filter	Process air	2 x Art. no. 7.160.000.448	2 x Art. no. 7.160.000.448	2 x Art. no. 7.160.000.448	2 x Art. no. 7.160.000.495	2 x Art. no. 7.160.000.495	2 x Art. no. 7.160.000.495
	Regeneration air	1 x Art. no. 7.160.000.448	1 x Art. no. 7.160.000.448	1 x Art. no. 7.160.000.448	1 x Art. no. 7.160.000.475	1 x Art. no. 7.160.000.475	1 x Art. no. 7.160.000.475
F7 pleated filter cartridge	Process air	2 x Art. no. 7.160.000.449	2 x Art. no. 7.160.000.449	2 x Art. no. 7.160.000.449	2 x Art. no. 7.160.000.496	2 x Art. no. 7.160.000.496	2 x Art. no. 7.160.000.496
	Regeneration air	1 x Art. no. 7.160.000.449	1 x Art. no. 7.160.000.449	1 x Art. no. 7.160.000.449	1 x Art. no. 7.160.000.476	1 x Art. no. 7.160.000.476	1 x Art. no. 7.160.000.476
Air transport hoses		For suitable air transport hoses, please refer to the connectivity schedule on page 178					
Optional additional equipment		We have compiled an overview of all equipment options for you on pages 10/11					

<sup>1</sup> Nominal data at 20 °C/60 % RH

<sup>2</sup> 2 x ø 500 mm with accessory hose adapter, see equipment options page 11



All TTR units comes equipped ex works with separate G4 air filters in Z-line design, both for process and regeneration air. A corresponding filter monitoring unit with warning light is also fitted as standard.



The service-friendly design of the TTR industrial desiccant dehumidifiers invariably accommodates efficient branded components of the latest generation of technology supplied by leading component manufacturers and leaves room for numerous extension options. We have compiled an overview of all additional equipment options for you on the following catalogue pages.

← Industrial desiccant dehumidifiers – further information ...

**Trotec's TTR industrial desiccant dehumidifiers allow for customer-tailored optional configurations**

**PLC control module Millenium (1)**

Microprocessor control with four-line plain text display for status or fault messages. Enables precise energy management as well as humidity and temperature control of the dry air (sensors optional).

**FlowMatic S (2)**

Registers and compensates sensor-supported automatic pressure losses and maintains a constant pressure / volume flow as per nominal value pre-set. Two fixed nominal values can be stored for this purpose. Starting with the TTR 2000, the volume flow and pressure regulation can be freely adjusted via the control signal (0 ... 10 V).

**Humidity (3) and temperature control (4)**

Extension modules for Millenium (1) for the signal conversion of connected humidity (3) and temperature sensors (4) including controller programming.

**Dew point sensor (5)**

Together with the Millenium control (1) and the humidity control unit (3) it allows to control the dry air depending on the dew point. Dew point +20 °C ... -80 °C, 4 - 20 mA.

**Pt100 temperature sensor (6)**

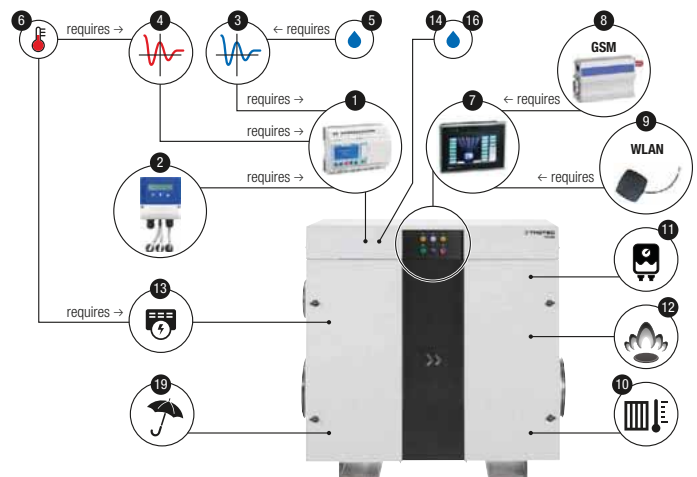
With transmitter 4 - 20 mA. Combined with recooling/reheating (13), Millenium control (1) and temperature control unit (4) this sensor permits the regulation of the dry air temperature.

**Touchscreen (7)**

Enables a convenient control of the entire unit via touchscreen instead of manual control.

**GSM remote connection (8)**

Enables the control of the TTR industrial desiccant dehumidifiers via GSM.



**WLAN remote connection (9)**

Enables the control of the TTR industrial desiccant dehumidifiers via WLAN.

**Heat exchanger module stainless steel (10)**

Integrated module for cooling or heating dry air by means of cold or hot water available on site; requires an indication of the media's temperature.

**Steam heater (11)**

For heating the regeneration air by means of saturated vapour.

**Gas heater (12)**

For heating the regeneration air by means of a gas burner.

**Electric reheater (13)**

For heating the dry air additionally.

Additional equipment options (Article number)		TTR 800	TTR 1400	TTR 2000	TTR 2800	TTR 3700
1	PLC control module Millenium	6.100.010.401	6.100.010.401	6.100.010.401	6.100.010.401	6.100.010.401
2	FlowMatic S (requires 1)	6.100.010.405	6.100.010.405	6.100.010.405	6.100.010.405	6.100.010.405
3	Humidity control (requires 1)	6.100.010.415	6.100.010.415	6.100.010.415	6.100.010.415	6.100.010.415
4	Temperature control (requires 1)	6.100.010.416	6.100.010.416	6.100.010.416	6.100.010.416	6.100.010.416
5	Dew point sensor, -80 °C ... +20 °C (requires 3)	6.100.010.455	6.100.010.455	6.100.010.455	6.100.010.455	6.100.010.455
6	Pt100 temperature sensor (requires 4 and 14)	6.100.010.460	6.100.010.460	6.100.010.461	6.100.010.461	6.100.010.461
7	Touchscreen for device operation (requires 1)	on request	on request	on request	on request	on request
8	GSM remote connection (requires 7)	on request	on request	on request	on request	on request
9	WLAN remote connection (requires 7)	on request	on request	on request	on request	on request
10	Integrated heat exchanger module stainless steel	–	–	6.100.010.437	6.100.010.437	6.100.010.437
11	Steam heater for regeneration air	–	–	6.100.010.440	6.100.010.440	6.100.010.440
12	Gas heater for regeneration air	–	–	6.100.010.445	6.100.010.445	6.100.010.445
13	Electric reheater for dry air	6.100.010.450	6.100.010.450	6.100.010.451	6.100.010.451	6.100.010.451
14	External hygrostat HG 120	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040
15	4-pin connector coupling for HG 120	6.100.002.039	6.100.002.039	6.100.002.039	6.100.002.039	6.100.002.039
16	External thermohygrostat HG 125, electronic	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042
17	7-pin connector coupling for HG 125	6.100.002.046	6.100.002.046	6.100.002.046	6.100.002.046	6.100.002.046
18	Wheels (4 swivel castors with brake)	6.100.010.510	6.100.010.510	6.100.010.511	6.100.010.511	6.100.010.511
19	Weather protection equipment	6.100.010.520	6.100.010.520	6.100.010.521	6.100.010.521	6.100.010.521
20	Protective and transport frame, stackable, without castors	–	–	–	–	–
21	Castors for transport frame	–	–	–	–	–
22	Transport frame, stackable, with castors	6.100.010.480	6.100.010.480	6.100.010.485	6.100.010.485	6.100.010.485
23	Filterbox (external) for HEPA air filtration	7.240.000.015	7.240.000.015	7.240.000.015	7.240.000.015	7.240.000.015

■ standard equipment; □ optional equipment; further equipment available upon request, e.g. frost-protected version for outdoor installation, cold room insulation and much more





**Electronic thermo-hygrostat HG 125**  
(7-pin connector coupling required)

The HG 125 has an external climate sensor with 5 m of cable.



**External hygrostat HG 120**  
(4-pin connector coupling required)

**Hygrostat control (14, 16)**

External hygrostat HG 120 (14) for humidity-dependent control of the TTR industrial desiccant dehumidifiers, optionally with or without permanent ventilation. A 4-pin coupling is required for connecting the HG 120 (15).

The electronic thermohygrostat HG 125 (16) is also available. It can be used starting at a temperature of -30 °C and is also suited for continuous control if combined with the Millenium control (1). A 7-pin coupling is required for connecting the HG 125 (17).

Both connector couplings (15, 17) come with cable and cable inlet for the connection to the terminal.

**Weather protection equipment (19)**

Weather protection grids at air inlets, additional seals, exhaust pipe arc for humid air, Plexiglas flap protecting the operating elements.

**TTR filter box 610 (23)**

For HEPA filtration of process or dry air. Can be combined with all TTR drying units. Max. Air flow 4,000 m³/h per filter box. A detailed description can be found on catalogue page 12.

**Hose adapter (24)**

Attachment plate with 2 x ø 500 mm connecting piece (A) from TTR 10000 upwards. Can be screwed on to the standard grille (B) on the dry air outlet and process air intake side.



TTR filter box 610



Additional equipment options (Article number)		TTR 5200	TTR 6600	TTR 8200	TTR 10000	TTR 12000	TTR 13500
1	PLC control module Millenium	■	■	■	■	■	■
2	FlowMatic S (requires 1)	■	■	■	■	■	■
3	Humidity control (requires 1)	6.100.010.415	6.100.010.415	6.100.010.415	6.100.010.415	6.100.010.415	6.100.010.415
4	Temperature control (requires 1)	6.100.010.416	6.100.010.416	6.100.010.416	6.100.010.416	6.100.010.416	6.100.010.416
5	Dew point sensor, -80 °C ... +20 °C (requires 3)	6.100.010.455	6.100.010.455	6.100.010.455	6.100.010.455	6.100.010.455	6.100.010.455
6	Pt100 temperature sensor (requires 4 and 14)	6.100.010.462	6.100.010.462	6.100.010.462	6.100.010.463	6.100.010.463	6.100.010.463
7	Touchscreen for device operation (requires 1)	on request	on request	on request	on request	on request	on request
8	GSM remote connection (requires 7)	on request	on request	on request	on request	on request	on request
9	WLAN remote connection (requires 7)	on request	on request	on request	on request	on request	on request
10	Integrated heat exchanger module stainless steel	6.100.010.438	6.100.010.438	6.100.010.438	6.100.010.439	6.100.010.439	6.100.010.439
11	Steam heater for regeneration air	6.100.010.441	6.100.010.441	6.100.010.441	6.100.010.442	6.100.010.442	6.100.010.442
12	Gas heater for regeneration air	6.100.010.445	6.100.010.445	6.100.010.445	6.100.010.445	6.100.010.445	6.100.010.445
13	Electric reheater for dry air	6.100.010.452	6.100.010.452	6.100.010.452	6.100.010.453	6.100.010.453	6.100.010.453
14	External hygrostat HG 120	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040
15	4-pin connector coupling for HG 120	6.100.002.039	6.100.002.039	6.100.002.039	6.100.002.039	6.100.002.039	6.100.002.039
16	External thermohygrostat HG 125, electronic	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042
17	7-pin connector coupling for HG 125	6.100.002.046	6.100.002.046	6.100.002.046	6.100.002.046	6.100.002.046	6.100.002.046
18	Wheels (4 swivel castors with brake)	6.100.010.512	6.100.010.512	6.100.010.512	6.100.010.513	6.100.010.513	6.100.010.513
19	Weather protection equipment	6.100.010.522	6.100.010.522	6.100.010.522	6.100.010.523	6.100.010.523	6.100.010.523
20	Protective and transport frame, stackable, without castors	6.100.010.490	6.100.010.490	6.100.010.490	6.100.010.495	6.100.010.495	6.100.010.495
21	Castors for transport frame	6.100.010.501	6.100.010.501	6.100.010.501	6.100.010.502	6.100.010.502	6.100.010.502
22	Transport frame, stackable, with castors	–	–	–	–	–	–
23	Filterbox (external) for HEPA air filtration	7.240.000.015	7.240.000.015	7.240.000.015	7.240.000.015	7.240.000.015	7.240.000.015
24	Hose adapter (2 x ø 500 mm)	–	–	–	6.100.010.524	6.100.010.524	6.100.010.524

Trotec

Dehumidification

Humidification

Heating

Ventilation

Air conditioning

Air cleaning

Disinfection and Odour neutralization

Accessories

**A FEW PRACTICAL BENEFITS:**

Professional quality  
"made in Germany" –  
originally produced by Trotec

Flexible and relocatable solution for  
HEPA filtration of process air

Trouble-free parallel operation of  
several filter boxes connected to one  
industrial desiccant dehumidifier with  
a higher air flow rate

HEPA filter level indication for  
external voltage supply

# TTR filter box 610

For HEPA filtration of process air –  
can be combined with TTR industrial desiccant  
dehumidifiers and other air treatment units



**The TTR filter box 610 is an ideal solution for all applications involving the emission of process air into environments with special air purity requirements.**



The filter box with its hygiene-friendly stainless steel design accommodates two filter compartments: an H13 HEPA filter and a pre-filter. Additionally, it is equipped with a HEPA filter level indication for external voltage supply.



The filter box was specially developed for use with industrial desiccant dehumidifiers of the TTR series. However, it can also be combined with other dry air generators as well as with all air treatment units the air of which is released into rooms with specific purity requirements.

Each TTR filter box is designed for a maximum air flow rate of 4,000 m<sup>3</sup>/h and can easily be complemented with additional TTR filter boxes installed in parallel to allow for operation with more powerful air treatment units.








Desiccant dehumidifiers – further information ... →



Device side with HEPA pre-filter



Device side with HEPA filter

Technical data		TTR filter box 610
Article number		7.240.000.015
Max. air flow rate [m³/h]		4,000
Air transport hose connector [ø mm]	Suction side	500
	Blow-out side	500
Dimensions L x W x H [mm]		605 x 655 x 730
Weight (without filters) [kg]		33
Filter elements (accessory consumables)		TTR filter box 610
G4 Z-line filter		Article number 7.160.000.454
F7 pleated filter cartridge		Article number 7.160.000.476
H13 high-efficiency particulate air filter		Article number 7.160.000.478
Available accessories		TTR filter box 610
Air transport hose Tronect SP-T <sup>1</sup> , length 7.6 m		Article number 6.100.001.216
Reducer from 500 mm to 300 mm		Article number 6.100.001.445

<sup>1</sup> These and other air transport hoses are described starting on catalogue page 176.



# Drybox



Weatherproof outdoor installation of the desiccant dehumidifiers TTR 400 D and TTR 500 D for drying indoor air through circulation



With the Drybox desiccant dehumidifiers can also be used out of doors, so as to enable an undisturbed dry keeping of accommodations or storage facilities via air circulation.

To avoid the formation of condensate and consequential problems, the air in accommodations and storage facilities needs to be permanently dehumidified to a level below dew point.

Powerful desiccant dehumidifiers such as Trotec's high-quality devices TTR 400 D or TTR 500 D with separate internal air flow ducts are the ideal solution for these requirements.

In many cases an indoor installation of the devices is not permitted, undesirable due to the noise, or impossible to realize for other reasons. In such cases, the Drybox, which was specially developed for the TTR 400 D and TTR 500 D, allows for the weatherproof outdoor installation of the dehumidifiers.

Via an air transport hose, the humid indoor air is sucked in, reliably dehumidified to below the interior dew point and then transported back into the room as dry air via a second connected hose in the recirculation air cycle.

**Drybox:** L 600 x W 590 x H 490 mm, 10 kg, EDP-coated sheet metal, Art. no. 6.100.010.350

### A FEW PRACTICAL BENEFITS:

Professional quality "made in Germany" – originally produced by Trotec

Especially developed for drying indoor air from outside by way of circulation using the desiccant dehumidifiers TTR 400 D and TTR 500 D

Weatherproof construction with lockable service flap



The Drybox has a lockable service flap for configuring the devices.



Optionally available for the connection to the dryer's humid air outlet is a flue pipe with rain cap which can be screwed to the Drybox (Art. no. 6.100.010.351).

**A FEW PRACTICAL BENEFITS:**

Professional quality  
"made in Germany" –  
originally produced by Trotec

Electronic regulation of air amount –  
infinitely adjustable

Duoventic principle:  
Separate, infinite adjustment of  
moisture content and volumetric flow  
of the required dry air (TTR-D models)

Two separate air circuits for a  
pressure-neutral circulatory air  
operation (TTR-D models)

Up to 30 % lighter than competitive  
models with the same performance

Maximum of performance with  
minimum of dimensions and weight

Extremely low in maintenance

Stackable to save space

Practice-optimized German industrial  
design – protected design patent

# Desiccant dehumidifiers of the TTR series



*All the desiccant dehumidifiers  
of the TTR series are devel-  
oped and manufactured  
according to the highest of  
quality standards in  
Germany.*



*Weatherproof Drybox for the interior  
convection drying with TTR 400 D and  
500 D TTR for when outdoor installa-  
tion required. All information about the  
Drybox on catalogue page 13...*

**Dry air on or off.  
Conventional desiccant dehumidifiers often have no other options on offer.  
However, the TTR series does – significantly more:**

Due to high-quality components and an innovative housing design our TTR dehumidifiers are the lightest devices of their performance class. The powder-coated steel sheet construction is extremely durable.

The combination of smart equipment features and remarkable performance data turns these devices into universal all-purpose desiccant dehumidifiers for industry and construction.

The TTR dehumidifiers achieve far lower dew points than refrigerator dryers and ensure a high dehumidification performance even at low air and component temperatures. Competitive machines cannot keep up with them when directly compared with regard to performance and weight.

The infinitely electronically adjustable air amount regulation allows the variable definition of the dehumidification performance and therefore, of the power consumption and noise emission.



**D marking: professional quality “made in Germany” with twice the flexibility due to Duoventic**

**Monoventic:**

The Duoventic principle of the TTR-D models allows the separate electronic regulation of both fans of the separate air circuits. This enables the fine adjustment of the moisture content (C1) and volume flow (C2) of the required dry air.

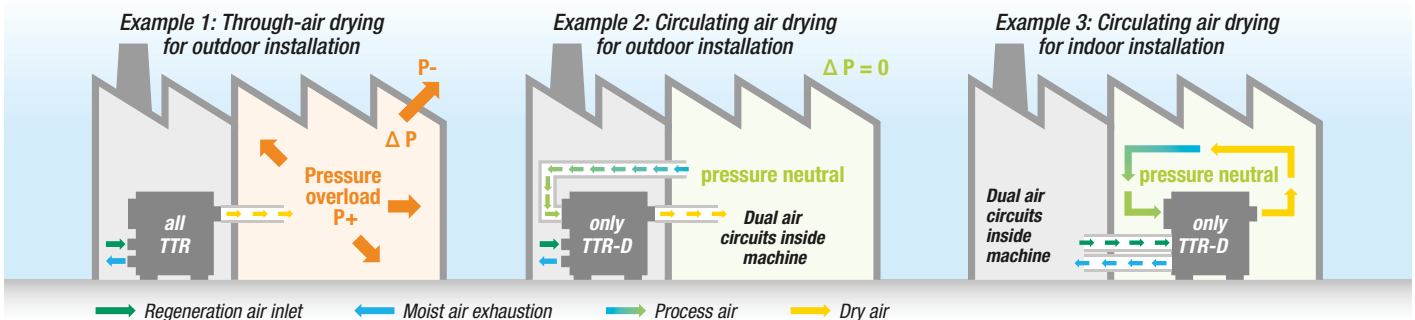
This is how you can configure any climate scenario in a fast and needs-oriented way. Extremely dry air with a low air flow rate, larger volumes of dry air or maximum circulating air performance with a moderate ratio of dry air.

**Duoventic:**



**The model differences at a glance:** On the left: a TTR 400 with Monoventic air volume regulation (A) and a common inlet for both air flows (B); on the right: a TTR 400 D with Duoventic regulation (C1, C2) and separate inlets for dry air (D) and regeneration air (E).

**Convincing process advantages through the TTR Trisorp Dual principle – application examples:**



Basically, conventional desiccant dehumidifiers are equipped with a common air inlet (mono) for dry and regeneration air, e.g. all Trotec devices operating according to the Trisorp-mono or Bisorp-mono principle.

These dehumidifiers are not suitable for through-air drying directly in the respective room as a process-related low pressure is generated and therefore drawing air from the outside is blown into the room, whose moisture content cannot be controlled.

An outdoor installation, e.g. in near rooms can be done with all TTR models (example 1). Due to the ventilation with drier fresh air, a pressure overload is generated, which leads moist air to the outside.

However, with this version the dehumidification rate always depends on the moisture content of the sucked “outdoor air”. With a nominal amount of dry air it achieves a reduction in the dew point temperature by approx. 5 to 10 °C (depending on the device).

**Power-saving dehumidification and higher drying rates thanks to circulatory air operation with dual air circuits**

The D models operate according to the TTR Trisorp Dual principle with two separate air flows and separate fans for each circuit.

This means that circulatory air operation is also possible with an outdoor installation supplied by a process air circuit that is separated from the “outdoor air” (example 2).

Even if the D models are installed indoor in a room that is to be treated with dry air, a pressure-neutral circulatory air operation is possible by streaming incoming regeneration air and outgoing moist air out of the room by means of a hose or pipe connection (example 3).

**Variable circulating air drying with TTR-D models have decisive advantages for users:**

If there is a nominal amount of dry air, up to 30 °C lower dew point temperatures can be achieved compared to the “outdoor air” that supplies the regeneration air, in contrast to conventional through-air operation.

Therefore, dew points far below 0 °C can be achieved, which results in considerably low drying stages and in a significantly energy-efficient operation!

**Smart equipment options – comprehensive system accessories**

As standard, all TTR desiccant dehumidifiers are on the suction side equipped with plug-on filter covers with a handy clip fastener for quick filter changes without having to open the device.

For a separate air supply a matching hose adapter is available as accessory for each filter cover. It can simply be attached to the filter cover.

A complete overview of all TTR system accessories incl. a schematic representation of all configuration options can be found on the subsequent catalogue pages 18 and 19.



Thanks to the clip fastener, the filter cover at the rear of the device with inserted filter mat can be removed quickly and without the need for tools.



On the left: a TTR 400 with standard filter cover at the rear and a connected hose for the discharge of humid air. On the right: a TTR 400 D with optional hose adapters for the separate process air and regeneration air supply.

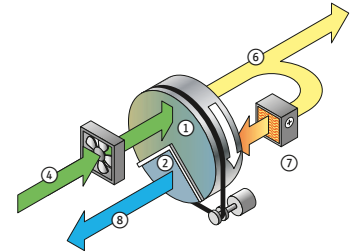
Also available as order option instead of the standard operating hours counter is an MID-compliant<sup>5)</sup> dual counter with additional recording of the energy consumption.



Optionally, all filter covers can be replaced by filter boxes with integrated pipe connection – also ideal for fixed installations. In addition, the filter boxes enable the flexible usage of different Z-line filters of class G4 or F7. For a filter change the filter box can be opened quickly and easily via the screw cap.

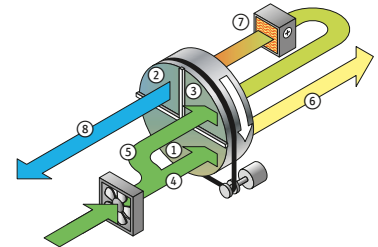
**Operation principles of the TTR desiccant dehumidifiers:**

**TTR Bisorp Mono**



A fan located in front of the rotor for process and regeneration air. For regeneration a partial flow of the dry air is used.

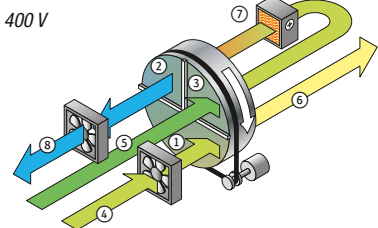
**TTR Trisorp Mono**



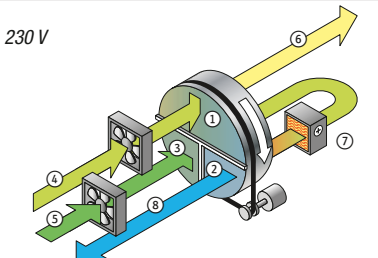
A fan located in front of the rotor for both air circuits. With purging sector for the heat recycling process for incoming regeneration air.

**TTR Trisorp Dual**

400 V



230 V



Separate air flows of process and regeneration air implemented by one fan each. With purging sector for the heat recycling process for incoming regeneration air.

**Key for operation principles:**

- 1. Dehumidification sector
- 2. Regeneration sector
- 3. Purging sector for heat recovery
- 4. Process air
- 5. Regeneration air
- 6. Dry air
- 7. Heating
- 8. Damp air







Technical data		TTR 200	TTR 300	TTR 400	TTR 400 D	TTR 500 D
Article number		1.110.000.010	1.110.000.015	1.110.000.020	1.110.000.021	1.110.000.025
Dry air	Dehumidification <sup>1</sup> [kg/h]	0.35	0.7	1.2	1.6	2.2
	Range [m³/h]	40 - 120	80 - 280	130 - 450	130 - 450	180 - 550
	Air volume <sup>2</sup> [m³/h]	80	200	350	350	480
	Ext. Compression [Pa]	50	100	150	200	150
Regeneration air	Air volume [m³/h]	15	30	50	65	80
	Ext. Compression [Pa]	30	50	80	80	80
Principle of operation (for details see page 16)		TTR Bisorp Mono		TTR Trisorp Mono	TTR Trisorp Dual	
Operating range	Temperature [°C]	-15 to +35	-15 to +35	-15 to +35	-15 to +35	-15 to +35
	Humidity [RH]	0 to 100	0 to 100	0 to 100	0 to 100	0 to 100
Connection voltage [V / Hz]		230 / 50/60	230 / 50/60	230 / 50/60	230 / 50/60	230 / 50/60
Power input	Total [kW]	0.45	0.9	1.5	2.2	3.0
	Heating [kW]	0.4	0.85	1.35	1.95	2.7
Sound level (distance 1 m) [dB(A)]		60	61	63	63	74
Length [mm]		305	355	400	400	443
Width [mm]		260	310	350	350	400
Height [mm]		285	355	405	405	452
Weight [kg]		9	12	17	20	25
Connection	Dry air outlet ø [mm]	80	100	125	125	125
	Humid air outlet ø [mm]	38 / 50	50	80	80	80
Equipment features		TTR 200	TTR 300	TTR 400	TTR 400 D	TTR 500 D
Powder-coated steel sheet housing		■	■	■	■	■
Stainless steel housing		□	□	□	□	□
Fan		1 x	1 x	1 x	2 x	2 x
Air volume regulation	Monoventic <sup>3</sup>	■	■	■	–	–
	Duoventic <sup>4</sup>	–	–	–	■	■
Operating hours counter		■	■	■	■	■
Dual counter (MID-compliant <sup>5</sup> ) [h/kWh]		–	□	□	□	□
Hose adapter	Process air	□	□	□	□	□
	Regeneration air	–	–	–	□	□
Filter box	Process air	□	□	□	□	□
	Regeneration air	–	–	–	□	□
Function monitoring		–	–	○	○	○
Ammeter		■	■	■	■	■
DIN socket for external switchings		4-pin	4-pin	4-pin	4-pin	4-pin
Hygrostat		□	□	□	□	□
Self-regulating PTC electric heating		■	■	■	■	■
Additional heating process air		–	–	□	□	□
Integrated heat recovery		■	■	■	■	■
Ex-proof version		–	–	–	–	–

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

<sup>1</sup> Nominal data at 20 °C/60 % RH; <sup>2</sup> nominal

<sup>3</sup> **Monoventic:** Advanced control electronics allow a precise and infinite adjustment of the dry air volume

<sup>4</sup> **Duoventic:** Both air flows can be infinitely electronically regulated, independently of each other. This enables a separate adjustment of the moisture content and volume flow of the required dry air.

<sup>5</sup> **What does MID-compliant mean?** In some areas, the Measuring Instruments Directive (MID) replaces the previous regulation of national authorization and subsequent calibration. As a result, all energy meters in Europe used for energy consumption-based billing have to be MID-compliant from now on.

← **Desiccant dehumidifiers – further information ...**

**1 Function monitoring**

Microprocessor control with multi-line plain text display for status or fault messages. With potential-free contacts for external indication. Available as configuration option at the time of order, not subsequently installable.

**2, 3 Hose adapter**

For assembly onto the standard filter cover; comes with a supply air hose connection.

**4, 5 Filter box**

Permits the usage of G4 / F7 filters and the connection of supply air hoses at the process air or regeneration air inlet. Also ideal for fixed installations with pipe connections.

**6, 7 Filter mat**

For filtering process or regeneration air (included in the scope of delivery).

**8 Z-line filter G4 process air**

**9 Z-line filter G4 regeneration air**

**10 Z-line filter F7 process air**

**11 Z-line filter F7 regeneration air**

**12 Dry air heating**

Heating system mountable to the dry air outlet for the additional heating of dry air. Adjustable between 30 and 90 °C. Integrated hose connection  $\varnothing$  125 mm.

**13 Quad distributor**

Connection for up to four 50 mm hoses that can be mounted to the dry air outlet using a reducer fitting (14), also with  $\varnothing$  38 mm. For a dry air supply specifically directed at different areas. Incl. sealing caps.

**14 Reducer fitting**

With screw thread so as to be screwed onto the quad distributor (13). Permits the connection of 38 mm hoses.

**15 Sealing caps 50 mm**

For sealing the air outlets of the quad distributor.

**16 Sealing caps 38 mm**

Air outlet seal for the mounted reducer fitting (14) in case no hose is connected.

**17 Hygrostat control**

External hygrostat HG 120 with 4-pin plug and 2 m connecting cable for the humidity-dependent two-point control of the devices. (Alternatively: external thermohygrostat HG 125, Art. number 6.100.002.042, with additional adapter transformer, Art. number 6.100.002.043)

**Air transport hoses:**

**18** For standard dry air exhaust.

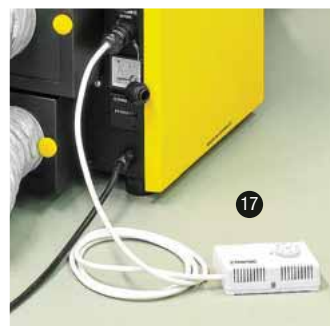
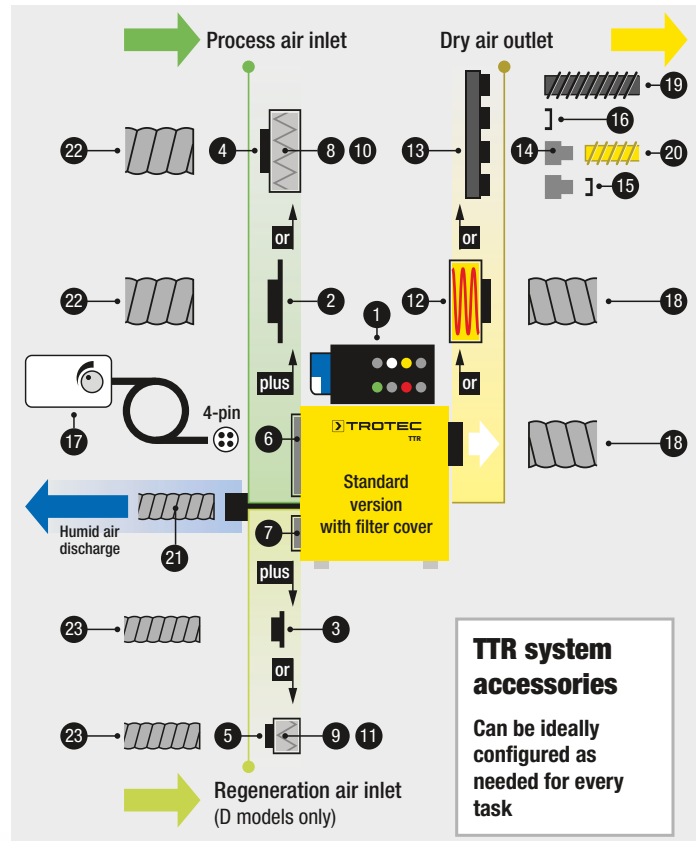
**19** For standard dry air exhaust with mounted quad distributor (13).

**20** For standard dry air exhaust with mounted quad distributor (13) and screwed-on reducer fitting (14).

**21** For humid air discharge.

**22** For process air intake.

**23** For regeneration air intake.



System accessories			TTR 200	TTR 300	TTR 400	TTR 400 D	TTR 500 D	
1	Function monitoring	Article number	–	–	6.100.010.346	6.100.010.346	6.100.010.346	Trotec
2	Hose adapter	Process air inlet ø [mm]	80	100	125	125	125	
		Article number	6.100.010.001	6.100.010.005	6.100.010.010	6.100.010.010	6.100.010.010	
3	Hose adapter	Regeneration air inlet ø [mm]	–	–	–	80	80	
		Article number	–	–	–	6.100.010.101	6.100.010.105	
4	Filter box	Process air inlet ø [mm]	80	100	125	125	125	Dehumidification
		Article number	6.100.010.201	6.100.010.205	6.100.010.210	6.100.010.210	6.100.010.210	
		Regeneration air inlet ø [mm]	–	–	–	80	80	
5	Filter box	Article number	–	–	–	6.100.010.301	6.100.010.305	
		Article number	–	–	–	6.100.010.301	6.100.010.305	
6	Process air filter mat	L x W x H [mm]	20 x 130 x 140	20 x 205 x 185	20 x 230 x 240	20 x 230 x 240	20 x 230 x 240	Humidification
		Article number	7.160.000.680	7.160.000.681	7.160.000.682	7.160.000.682	7.160.000.682	
7	Regeneration air filter mat	L x W x H [mm]	–	–	–	20 x 110 x 130	20 x 135 x 150	
		Article number	–	–	–	7.160.000.683	7.160.000.684	
8	Z-line filter G4 process air (requires 4)	L x W x H [mm]	48 x 125 x 135	48 x 205 x 180	48 x 200 x 225	48 x 200 x 225	48 x 200 x 225	Heating
		Article number	7.160.000.602	7.160.000.603	7.160.000.604	7.160.000.604	7.160.000.604	
9	Z-line filter G4 regeneration air (requires 5)	L x W x H [mm]	–	–	–	48 x 123 x 117	48 x 170 x 152	
		Article number	–	–	–	7.160.000.605	7.160.000.606	
10	Z-line filter F7 process air (requires 4)	L x W x H [mm]	48 x 125 x 135	48 x 205 x 180	48 x 200 x 225	48 x 200 x 225	48 x 200 x 225	
		Article number	7.160.000.630	7.160.000.631	7.160.000.632	7.160.000.632	7.160.000.632	
11	Z-line filter F7 regeneration air (requires 5)	L x W x H [mm]	–	–	–	48 x 123 x 117	48 x 170 x 152	
		Article number	–	–	–	7.160.000.633	7.160.000.634	
12	Dry air heating	Dry air outlet ø [mm]	–	–	125	125	125	Ventilation
		Article number	–	–	6.100.010.345	6.100.010.345	6.100.010.345	
Further accessories			TTR 200	TTR 300	TTR 400	TTR 400 D	TTR 500 D	
13	Quad distributor	Dry air outlet ø [mm]	–	4 x 50 (38)	4 x 50 (38)	4 x 50 (38)	4 x 50 (38)	Air conditioning
		Article number	–	6.100.010.340	6.100.010.340	6.100.010.340	6.100.010.340	
14	Reducer fitting from ø 50 to 38 mm for quad distributor		7.200.000.002	7.200.000.002	7.200.000.002	7.200.000.002	7.200.000.002	
15	Spare sealing caps for quad distributor	ø 38 mm	7.310.000.021	7.310.000.021	7.310.000.021	7.310.000.021	7.310.000.021	
16		ø 50 mm	7.310.000.101	7.310.000.101	7.310.000.101	7.310.000.101	7.310.000.101	
17	Hygrostat HG 120		6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040	
	Thermohygrostat HG 125		6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042	
	Adapter transformer for HG 125		6.100.002.043	6.100.002.043	6.100.002.043	6.100.002.043	6.100.002.043	
Recommended air transport hoses *			TTR 200	TTR 300	TTR 400	TTR 400 D	TTR 500 D	
18	Dry air outlet		Trotec TF-L (L 6 m) 6.100.001.110	Trotec TF-L (L 6 m) 6.100.001.115	Trotec TF-L (L 6 m) 6.100.001.120	Trotec TF-L (L 6 m) 6.100.001.120	Trotec TF-L (L 6 m) 6.100.001.120	Disinfection and Odour neutralization
19	Dry air outlet with quad distributor ø 50 mm		–	Trotec PV-A 51 (L 15 m) 6.100.001.020	Trotec PV-A 51 (L 15 m) 6.100.001.020	Trotec PV-A 51 (L 15 m) 6.100.001.020	Trotec PV-A 51 (L 15 m) 6.100.001.020	
20	Dry air outlet with quad distributor reduced to ø 38 mm		–	Trotec PV-A 38 (L 15 m) 6.100.001.010	Trotec PV-A 38 (L 15 m) 6.100.001.010	Trotec PV-A 38 (L 15 m) 6.100.001.010	Trotec PV-A 38 (L 15 m) 6.100.001.010	
21	Humid air outlet		Trotec PV-A 51 (L 15 m) 6.100.001.020	Trotec PV-A 51 (L 15 m) 6.100.001.020	Trotec TF-L (L 6 m) 6.100.001.110	Trotec TF-L (L 6 m) 6.100.001.110	Trotec TF-L (L 6 m) 6.100.001.110	Accessories
22	Process air inlet (requires 2 or 4)		Trotec TF-L (L 6 m) 6.100.001.110	Trotec TF-L (L 6 m) 6.100.001.115	Trotec TF-L (L 6 m) 6.100.001.120	Trotec TF-L (L 6 m) 6.100.001.120	Trotec TF-L (L 6 m) 6.100.001.120	
23	Regeneration air inlet (requires 3 or 5)		–	–	–	Trotec TF-L (L 6 m) 6.100.001.110	Trotec TF-L (L 6 m) 6.100.001.110	

\* The air transport hoses recommended as accessory and others, too, are described starting on catalogue page 176.

**A FEW PRACTICAL BENEFITS:**

Professional quality  
"made in Germany" –  
originally produced by Trotec

Corrosion-resistant stainless  
steel housing

Space-saving and stackable



# Desiccant dehumidifiers made of stainless steel from the TTR series



TTR 160

TTR 250

## **Noble, steel and good: Low-maintenance compact items with high dehumidification performance also in low-temperature ranges**

These low-maintenance desiccant dehumidifiers are made of stainless steel and do not only guarantee high dehumidification values especially at low dew-points. Their housings are known for a high resistance to corrosion and good hygiene characteristics.

Therefore, these machines are perfectly suitable for operational environments where special hygienic standards apply or for extremely material-straining atmospheres.

This is why TTR stainless steel models are the perfect solution for numerous drying applications in the chemical, pharmaceutical, food and candy manufacturing industry. Furthermore, it can also be used

to prevent condensation and corrosion during painting and sandblasting works in ships' holds or tank facilities.

As a standard the dehumidifiers have an integrated heat recovery and a connecting socket with protective cap for external switchings (TTR 160 / 250) to which the optionally available hygrostat HG 120 TTR can be connected for moisture-dependent controlling.

The standard equipment includes also a self-regulating, electronic regeneration air heating consisting of thermistor elements (PTC) whose performance capacity depends on the air intake temperature and the regeneration air volume.

The advantage of this solution lies for one in an optimal performance matching and in the fact that overheating is not possible, making a safety thermostat superfluous.

**All stainless steel desiccant dehumidifiers in the TTR series are developed and manufactured according to the highest of quality standards in Germany.**



**Also suitable  
for application in  
ex-proof zones**

Ex protection: ATEX zone 22  
(Ex II 3D Ex c T240 °C)



Whether it's a new model you are looking for or a reconditioned one, whether you are thinking of buying or leasing –

**Trotec provides you the ideal solution for every demand:** Visit the **Trotec Shop** to find out more about great deals on our new products, our super special offers and our wide selection of demonstration, reconditioned and specially-priced products. For more information go to [www.trotec.com](http://www.trotec.com) or directly use the QR Code.



External hygrostat HG 120 TTR with 4-pin DIN socket for connection to TTR 160 and TTR 250, available as accessory.

Article number 6.100.002.040

**Model HP for use over long distances in combination with specially constructed hoses ...**



TTR 250 HP

The TTR 250 HP is not only standard-equipped with a radial fan but also with an additional extra-powerful fan motor which allows an especially high compression.

This makes this air dehumidifier especially well-suited for applications where air has to be transported over long distances or several levels, for example ships' rooms, cellars or bunkers.

The standard ex factory configuration of the TTR 250 HP is designed for the transportation of moist air. The dryer can be set by the customer to a different configuration, should the need arise for high-pressure dry air to be conducted away instead of moist.

**\* What does MID compliant mean?** The European Measuring Instruments Directive (MID) has replaced the existing rules of national approval and subsequent calibration in some areas. As a result, all power meters, which are used for energy consumption billing, must be MID compliant in the future.



Operation panel of the models TTR 160 and TTR 250 with standard ampere meter, operating hours counter and with a DIN socket with protective cap for external switchings.



Instead of the standard operating hours counter, a dual counter with additional MID-compliant \* acquisition of the current consumption is available as an option.

Technical data		TTR 160	TTR 250	TTR 250 Ex	TTR 250 HP <sup>3)</sup>
Article number		1.110.000.120	1.110.000.130	1.110.000.132	1.110.000.135
Dry air	Dehumidification <sup>1)</sup> [kg/h]	0.5	1.1	1.1	1.0
	Range [m <sup>3</sup> /h]	60 - 160	130 - 300	130 - 200	130 - 220 (80 - 140) <sup>3)</sup>
	Amount of air <sup>2)</sup> [m <sup>3</sup> /h]	155	250	180	200 (120) <sup>3)</sup>
	Ext. Compression [Pa]	50	100	400	200 (2,500) <sup>3)</sup>
Regeneration air	Amount of air [m <sup>3</sup> /h]	35	50	50	100 (50) <sup>3)</sup>
	Ext. Compression [Pa]	25	100	100	5,500 (100) <sup>3)</sup>
Principle of operation (for details see page 16)		TTR-Bisorp-Mono			
Operation range [°C / % RH]		-20 to +35 / 0 to 100			
Connection voltage [V / Hz]		230 / 50/60	230 / 50/60	230 / 50/60	230 / 50/60
Power input	Total [kW]	0.65	1.3	1.3	3.0 (2.1) <sup>3)</sup>
	Heating [kW]	0.6	1.2	1.2	2.0 (1.1) <sup>3)</sup>
Sound level (distance 1 m) [dB(A)]		56	57	57	62
Length [mm]		375	410	500	410
Width [mm]		300	350	350	350
Height [mm]		385	435	435	850
Weight [kg]		14	19	21	45
Connection dry air output ø [mm]		100	100	100	100 (50) <sup>3)</sup>
Connection moist air output ø [mm]		63	80	80	50 (100) <sup>3)</sup>
Filter mat (accessories consumable article)		TTR 160	TTR 250	TTR 250 Ex	TTR 250 HP
L x W x H [mm]		20 x 210 x 295	20 x 210 x 345	–	20 x 210 x 345
Article number		7.710.000.060	7.710.000.061	–	7.710.000.061
Recommended air transport hoses		TTR 160	TTR 250	TTR 250 Ex	TTR 250 HP
Dry air output		6.100.001.115 <sup>4)</sup>	6.100.001.115 <sup>4)</sup>	on request	6.100.001.115 <sup>4)</sup>
Moist air output		6.100.001.105 <sup>4)</sup>	6.100.001.110 <sup>4)</sup>	on request	6.100.001.020 <sup>5)</sup>

<sup>1)</sup> Nominal data at 20 °C/60 % r.H.; <sup>2)</sup> nominal;

<sup>3)</sup> The values in brackets comply with the alternative configuration for dry air transportation with high compression;

<sup>4)</sup> Article number for air transport hose Tronect TF-L (length 6 m); <sup>5)</sup> Article number for air transport hose Tronect PV-A 51 (length 15 m);

You can find the recommended as well as additional air transport hoses beginning on catalogue page 176 ...

Special Features		TTR 160	TTR 250	TTR 250 Ex	TTR 250 HP
Powder-coated steel sheet housing		–	–	–	–
Stainless steel housing		■	■	■	■
Fan		1 x	1 x	1 x	1 x
High-pressure fan		–	–	–	1 x
Air volume regulation	Monoventic	–	–	–	–
	Duoventic	–	–	–	–
Operating hours counter		■	■	■	■
Dual counter h/kWh (MID compliant*)		□	□	□	□
Hose adapter	Process air	–	–	–	–
	Regeneration air	–	–	–	–
Filter box	Process air	–	–	–	–
	Regeneration air	–	–	–	–
Ampere meter		■	■	■	■
DIN socket for external switchings		4-pin	4-pin	–	–
Hygrostat		□	□	–	–
Self-regulating PTC electric heating		■	■	■	■
Internal heat recycling process		■	■	■	■
Ex protection version		–	–	■	–

■ Standard equipment; □ Optional equipment; further versions upon request

Trotec

Dehumidification

Humidification

Heating

Ventilation

Air conditioning

Air cleaning

Disinfection and Odour neutralization

Accessories

**A FEW PRACTICAL BENEFITS:**

Development, Design, Production:  
100 % Trotec

Independent drying systems for  
recirculation operation

High dehumidification performance  
even at low temperatures

Robust, corrosion-protected  
construction

Fully automatic operation

Professional hot gas automatic  
defrosting

Can be used starting at -0.5 °C  
(depending on the model)

Subsequently installable

High level of efficiency with simulta-  
neously low energy consumption

Reduction of energy costs by means  
of process heat-assisted air heating

# Industrial Condenser Dryer of the DH Series

Professional drying systems for permanent stationary  
operation in industrial and utility companies



***Trotec's best solution for a perfect  
humidity control in the industrial sector***

**Strong drying performance, hardwearing exterior, long lifetime,  
low operating costs – and can be geared up for every possible challenge...**

Industrial dryers of the DH series are professional dehumidification systems with high-quality and especially resistant components for a continuous dehumidification application in aggressive, industrial surroundings. Due to the fact that they are working based on the principle of condensation, DH devices not only feature a high dehumidification performance, but are also particularly economical.

Combined with their large operating range, the practice-oriented equipment options and the optional integration in existing production and storage surroundings, the industrial dryers of the DH series are the first choice in solving all sorts of high-capacity problems caused by humidity.

***Always going strong –  
be it positioned on the floor or mounted to the wall***

In addition to the large pedestal devices DH 15, 30 and 60 can also be purchased as suspended models for wall mounting – professional industrial dryers “made in Germany” originally produced by Trotec.



TRI-KAL-DH-TR-MW-26-EN



## Protection against moisture at its best

The condenser dryers of the DH series unite great variance with high economic efficiency in reliable dehumidification solutions for industrial demands.



### The problem: Excessive, unrestricted humidity levels

Unless effectively controlled, humidity can lead to manifold problems for production processes, furniture and equipment, building structures or production machinery – even jeopardize the health of the persons present.

For not only rust, rot, material decomposition or a reduced quality in processing and storing goods can be the direct consequences of an excessively high humidity level; mould, too, thrives and prospers chiefly in humid surroundings.

### Consequences of uncontrolled humidity are:

- Corrosion
- Condensate formation
- Decline in product quality
- Biocontamination of food and lubricants (cooling lubricants)
- Quality problems during the storage and dry keeping of hygroscopic material
- Increased maintenance effort on machines and buildings
- Faster damaging of the building structure
- Higher heating costs caused by reduced insulation values of the structural shell
- Reduced employee productivity
- Unwelcome odours

### The solution: Flexible equipment options or retrofitting with DH drying systems

Be it as original equipment or to assist existing dehumidification systems, the industrial dryers of the DH series can be used either way without difficulty and are our best recommendation for the perfect humidity control in demanding, stationary continuous operation in commercial application environments.

Due to changed demands in terms of product quality, new manufacturing techniques and regulations or more complex logistic processes when storing and transporting, somewhat older existing installations quickly reach their limits under full load and therefore necessitate a moisture management adapted to current requirements.

With their autonomous recirculation operation and maintenance-friendly, robust design requiring only little floor space the stationary industrial dryers of the DH series can also be subsequently integrated into any working environment.

No further fresh air supply is required and they are placed directly in the rooms to be dehumidified or connected to existing ducted air systems. Many models already have a factory-provided wall installation preparation.

**Besides the available basic designs and optional extras we can easily realize individual special equipment for your specific tasks. Please contact us for a personal consultation!**

### Your benefits: The assets of our industrial dryers of the DH series

- These corrosion-protected drying systems can be installed immediately without a great deal of technical effort or additional construction work – for use in hygienic areas they are also available as stainless steel version
- Very high dehumidification performance for quick and cost-efficient dry keeping in fully automatic hygrostat-controlled operation
- Compression refrigeration drying for maximum profitability in temperature surroundings from 5 to 40 °C owing to a high efficiency level and simultaneously low energy consumption



On the exhaust side the larger standing units of the DH series come with a rectangular duct connection for the simply integration in existing ventilation systems. There fan hoses can be optionally connected and upon request we can also realize individual special constructions such as ventilation shrouds.

Trotec

Dehumidification

Humidification

Heating

Ventilation

Air conditioning

Air cleaning

Disinfection and Odour neutralization

Accessories

## Industrial dryers of the DH series for wall-mounted operation

Installing these dehumidifiers that are supplied prepared for wall mounting is as simple as their fully automatic operation for the permanent dry keeping of workspaces, storage facilities and productions halls. All three wall-mounted DH models are hygrostat-controlled and regulate the humidity to an ideal level at which corrosion, condensation and mould stand no chance.



**DH 30 H version also with heating function**

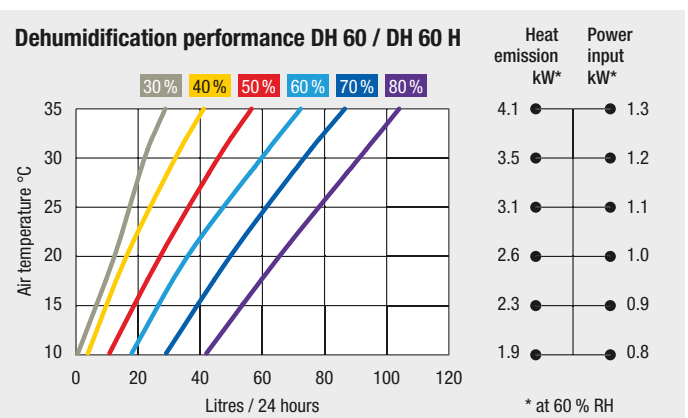
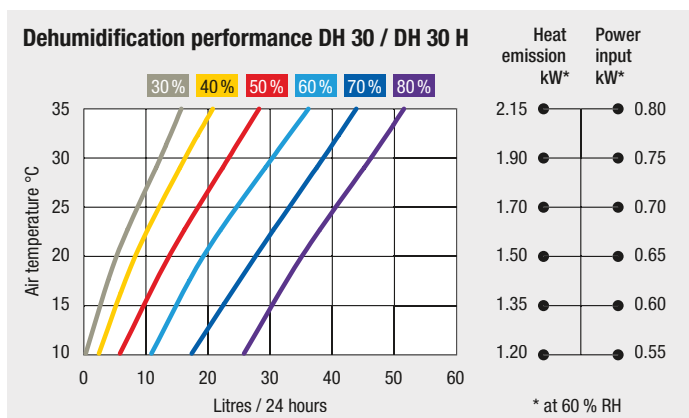
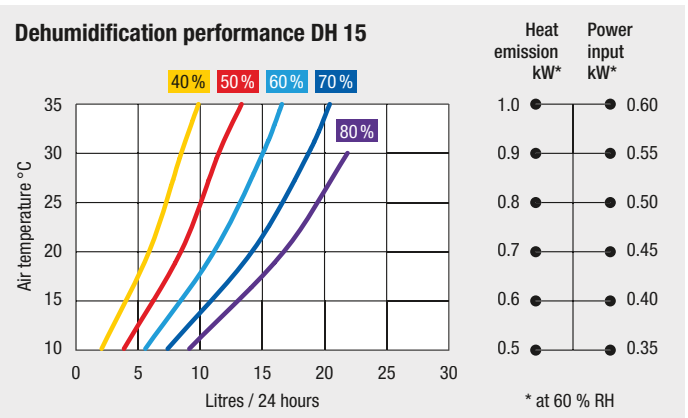
**DH 60 H version also with heating function**

The most compact DH version is a cost-effective solution for fully automatic humidity control in small and unheated business rooms by means of a hygrostat control. Owing to the characteristic design and the horizontally conducted recirculation air flow the ready-for-use DH 15 is particularly well suited for the assembly above doors.

Evaporator and condenser of the extremely hardwearing DH 30 have a separate CDC coating. Therefore, the device comes optimally prepared for use in unfavourable surrounding conditions with particularly reactive air mixtures. Moreover, this model accommodates an equally powerful and silent radial fan – perfect for the dehumidification of staff or production rooms.

Thanks to the additional CDC coating of evaporator and condenser even especially reactive air mixtures cannot harm the DH 60 in any way. For this reason, the powerful DH model can withstand even the harshest of surrounding conditions and with its especially powerful, yet silent radial fan it keeps even larger rooms reliably dry.

- Professional quality “made in Germany” – originally produced by Trotec
- High dehumidification performance even at low temperatures
- Corrosion-protected design
- Fully automatic operation
- Professional hot gas automatic defrosting
- Powerful air circulating radial fan (DH 30 and DH 60)
- Operating elements protected against unauthorized access
- Optionally available with condensate pump





## Industrial dryers of the DH series for stationary operation

The industrial dryers DH 160 and DH 310 that can also be supplied in a stainless steel housing are equally characterized by a high dehumidification capacity, reliable continuous operation properties and practice-oriented equipment options. Designed for the operation whilst positioned on the floor, the devices – given on-site preparation – can also easily be used when mounted to the wall or ceiling. Also they can be connected to existing ducted air systems.



The standing models DH 160 and DH 310 come with a smoothly running scroll compressor for constant, pulsation-free pressure to ensure an energy-efficient refrigeration. Combined with the self-regulating EC radial fan these robust industrial dryers allow for a constantly high dehumidification performance during continuous operation even at low temperatures.

- **Development, Design, Production: 100 % Trotec**
- **High dehumidification performance even at low temperatures**
- **Corrosion-protected design**
- **Fully automatic operation**
- **Professional hot gas automatic defrosting**
- **Optionally usable from -0.5 °C**
- **Steplessly self-regulating EC double-flow radial fan**
- **Integrated condensate pump**



### Ideal solutions for any application environment

Due to the galvanized, powder-coated steel construction even the standard version of DH 160 and DH 310 is highly resistant to corrosion and environmental influences. Furthermore, they can be adjusted for especially sensitive operating environments:

- **Stainless steel version**  
Ideal for the application in hygiene-sensitive areas.
- **Heat exchanger with CDC coating**  
Cathodic dip coating (CDC) resistant to solvents and corrosion as well as to acids and alkalis.



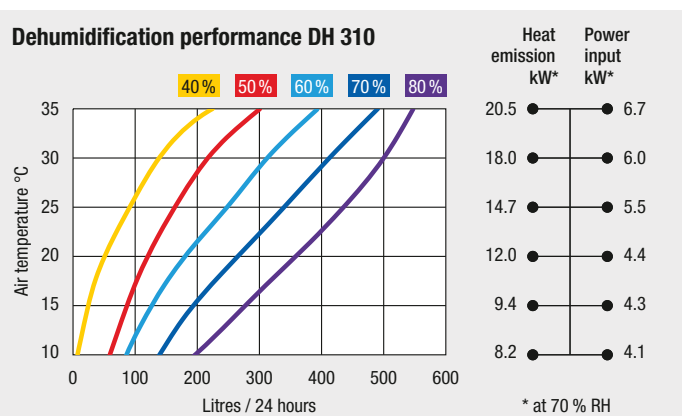
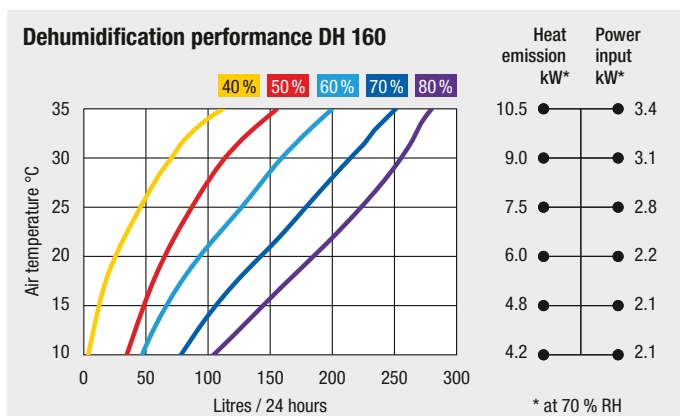
### Simply switch over to permanent dehumidification

When put into operation via the central control panel the compression refrigeration systems enable a reliable, hygrostat-controlled continuous operation for permanent dry keeping with a long service life.

The hot gas automatic defrosting based on the bypass procedure guarantees extremely brief defrost phases even in cold surroundings.



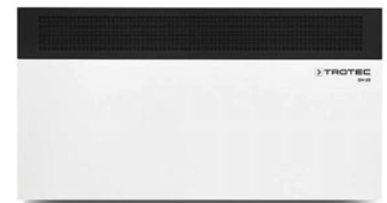
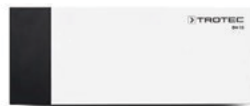
The integrated MID-compliant energy consumption meter comes equipped with and additional service menu providing information for maintenance.



← Stationary condenser dryers – further information...

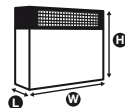
**In top form –  
manufactured in Germany**

With the models DH 15, DH 30 and DH 60 you also benefit from professional drying devices originally produced by Trotec – quality “made in Germany” in an exclusive Trotec design.



Ex works DH 15, DH 30 and DH 60 come prepared for wall mounting and the DH 15 is optionally also available for rear panel installation.

Technical data		DH 15	DH 30	DH 30 H	DH 60	DH 60 H
Article number		1.125.000.111	1.125.000.116	1.125.000.117	1.125.000.121	1.125.000.123
Dehumidification performance		see performance charts on page 24				
Heating capacity [kW]		–	–	2.8	–	2.8
Voltage [V/Hz]		220-240/50	220-240/50	220-240/50	220-240/50	220-240/50
Nominal current consumption [A]		3.7	4.2	4.4 + 12.2	7.5	7.5 + 12.2
Starting current [A]		18	15.8	15.8	30	30
Fuse [A]		10	16	2 x 16	16	2 x 16
Electrical connection (plug)		CEE 7/7	CEE 7/7	Clamp	CEE 7/7	Clamp
Power input [kW]		0.66	0.92	0.98 + 2.8	1.52	1.73 + 2.8
Heat emission <sup>1</sup> [kW]		0.9	1.9	–	3.5	–
Coefficient of performance (COP) <sup>1</sup>		1.6	2.5	–	2.9	–
Refrigerant <sup>3</sup>	Type	R-407C		R-407C		R-407C
	Amount [g]	480	500	–		800
GWP factor <sup>3</sup>		1,774	1,774	–		1,774
CO <sub>2</sub> -equivalent <sup>3</sup> [t]		0.85	0.89	–		1.42
Air volume freely blowing [m <sup>3</sup> /h]		225	635	–		1,165
Sound level (distance 3 m) [dB(A)]		49	52	–		54
Operating range temperature [°C]		5 to 40		–		5 to 40
Operation range max. RH [%]		90		–		90
Length [mm]		365	255	–		255
Width [mm]		840	790	–		1,253
Height [mm]		330	651	–		651
Weight [kg]		37	47	–		70
Condensate discharge connection [mm]		10	10	–		10



Standard equipment and options	DH 15	DH 30	DH 30 H	DH 60	DH 60 H
Compressor	reciprocating piston	reciprocating piston	reciprocating piston	reciprocating piston	reciprocating piston
Fan	AC axial fan	EC radial fan	EC radial fan	AC radial fan	AC radial fan
Automatic hot gas defrosting	■	■	■	■	■
Integrated hygrostat / thermostat	■ / –	■ / –	■ / ■	■ / –	■ / ■
Heat exchanger with CDC coating	–	■	■	■	■
Condensate pump <sup>5</sup>	pump height 10 m, Art. no. 6.100.000.015	pump height 10 m, Art. no. 6.100.000.020		pump height 15 m, Art. no. 6.100.000.025	

Design option	DH 15	DH 30	DH 30 H	DH 60	DH 60 H
Kit for rear panel installation	on request	–	–	–	–

■ Standard equipment

□ Optional equipment

<sup>1</sup> at 30 °C and 75 % RH

<sup>2</sup> at 30 °C and 70 % RH

<sup>3</sup> 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.

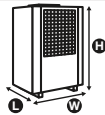
<sup>4</sup> **What does MID compliant mean?** The European Measuring Instruments Directive (MID) has replaced the existing rules of national approval and subsequent calibration in some areas. As a result, all power meters, which are used for energy consumption billing, must be MID compliant in the future.

<sup>5</sup> Equipment options to be stated at the time of order, not subsequently installable

<sup>6</sup> With hose adapter as accessory



Technical data		DH 160	DH 310
Article number		1.125.000.161	1.125.000.175
Dehumidification performance		see performance charts on page 25	
Voltage [V / Hz]		400 / 50	400 / 50
Nominal current consumption [A]		9.5	11
Starting current [A]		50	75
Fuse [A]		16	25
Electrical connection (plug)		CEE 16 A	CEE 32 A
Power input [kW]		3.5	6.9
Heat emission <sup>1</sup> [kW]		9	18
Coefficient of performance (COP) <sup>1</sup>		2.9	3
Refrigerant <sup>3</sup>	Type	R-407C	R-407C
	Amount [g]	2,250	3,200
GWP factor <sup>3</sup>		1,774	1,774
CO <sub>2</sub> -equivalent <sup>3</sup> [t]		3.99	5.68
Air volume freely blowing [m <sup>3</sup> /h]		2,200	4,600
Sound level (distance 3 m) [dB(A)]		59	60
Operating range temperature [°C]		1.5 to 42	1.5 to 42
Operation range max. RH [%]		95	95
Length [mm]		560	690
Width [mm]		700	1,080
Height [mm]		1,355	1,715
Weight [kg]		150	260
Condensate discharge connection [mm]		16	16
Dry air outlet connection ø [mm]		rectangular duct connection (optional 1 x ø 410 mm) <sup>6</sup>	rectangular duct connection (optional x ø 510 mm) <sup>6</sup>



Standard equipment and options	DH 160	DH 310
Compressor	scroll compressor	scroll compressor
Fan	EC double-flow radial fan	EC double-flow radial fan
Automatic hot gas defrosting	■	■
Integrated hygrostat	■	■
Condensate pump	■	■
Energy consumption meter, MID-compliant <sup>4</sup>	■	■
DIN socket for external switchings	4-pin	4-pin
Potential-free contact for remote switching	■	■
Enhanced temperature range <sup>5</sup> for an operating range between -0.5 °C and 42 °C	Art. no. 1.125.000.164	Art. no. 1.125.000.178
Electric reheater <sup>5</sup> for heating the dry air additionally	□	□
Static pressure increase <sup>5</sup> (200 Pa)	Art. no. 1.125.000.163	Art. no. 1.125.000.177
Heat exchanger with CDC coating <sup>4</sup>	□	□

Design option	DH 160	DH 310
Stainless steel AISI 316	Art. no. 1.125.000.162	Art. no. 1.125.000.176
Wheeled transport frame	Art. no. 6.100.003.120	–

Available accessories (detailed description on the right)		
External hygrostat HG 120	Art. no. 6.100.002.040	Art. no. 6.100.002.040
Hose adapter for outlet duct	Art. no. 7.299.000.008	Art. no. 7.299.000.021
Air filter (consumables)	Art. no. 7.710.000.397	Art. no. 7.710.000.398

**Available accessories**

**External hygrostat HG 120**

With 4-pin plug and 2 m connecting cable for the humidity-dependent two-point control of the devices.



Art. no. 6.100.002.040

**Hose adapter**

For the attachment to the rectangular duct connection of the dry air outlet.

Adapter for DH 160 ø 410 mm  
Art. no. 7.299.000.008

Adapter for DH 310 ø 510 mm  
Art. no. 7.299.000.021



**Air transport hose Tronect SP-T**

Length: 7.6 m; for a specifically directed admission of dry air via hose adapter.



For DH 160 ø 425 mm  
Art. no. 6.100.001.212

For DH 310 ø 525 mm  
Art. no. 6.100.001.216

These and other air transport hoses are described starting on catalogue page 176 ...



The DH 160 is optionally available as a transportable mobile version with a wheel-equipped transport frame.

**A FEW PRACTICAL BENEFITS:**

Reliable dryers with high dehumidification capacity

Particularly economical solution for typical dry keeping in production facilities and storerooms

Pressure gauge indicators\* for a maintenance-friendly early detection of faults

Modular refinement of electrical equipment and components containing water according to European standard – handmade in Germany

DH 25 S / DH 65 S with aluminum tube evaporator for an effective dehumidification performance also, when the humidity in the room is low

Excellent value for money

# Industrial condenser dryers of the DH-S series

Because the simplest solutions are often the best.



**Exclusively at Trotec!**

**The DH-S standard series allows you the cost-effective protection of stored goods, production facilities, building structure and inventory against moisture damage ...**

DH-S condenser dryers successfully combine global procurement management with local production refinement at the production location Germany. That is how they provide two decided advantages in one device:

The attractive value for money of an international standard solution for many traditional dry keeping applications and modular refinement of electrical systems and components containing water

according to European standard – all manually finished and quality-controlled at Trotec in Germany.

So with Trotec condenser dryers of the DH-S series you can benefit from reliable standard solutions for cost-effective dehumidification whenever you need it for protection against corrosion and condensation in production and storage areas for industry, logistics or supply.



Control panel DH 25 S, DH 65 S



Control panel DH 95 S, DH 105 S, DH 115 S



Control elements DH 145 SH



**With DH-S condenser dryers you have humidity under complete control – easily.**

The efficient humidity control allows the economical prevention of condensation, mould and corrosion damage, increased reliability of electrical systems, optimised process conditions for manufacture and production as well as stable climate conditions in storerooms and archives.

Not to forget about the fact that drier air can be heated more easily resulting in reduced heating costs.

With all condenser dryers of the DH-S series, humidity control can be humidity-dependent by means of target value specification at the internal hygrostat or humidity-independent in continuous operation. For flexible use at different locations, DH-S devices are provided with stable swivel casters\* and a residual water draining function\*.

The integrated hot gas automatic defrosting ensures efficient dry keeping without breaks for defrosting at certain intervals in which dehumidification pauses.

Condensate can be drained through the external outlet across stories because the standard condensate pump\* is designed for a pump head of four metres.



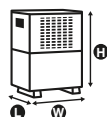
In the bigger products the pressure and the suction side of refrigerant pressure is measured separately for each compressor and is shown on an easy to read manometer\*. Thanks to that all potential disorders detected early and the maintenance intervals may be planned earlier.

Thanks to their sturdy frame construction the condenser dryer of the DH-S series are distinguished by their high casing stability.

\* Depending on the model, for more details see technical data



Technical data		DH 25 S	DH 65 S	DH 95 S	DH 105 S	DH 115 S	DH 145 SH
Article number		1.125.000.204	1.125.000.207	1.125.000.210	1.125.000.216	1.125.000.221	1.125.000.224
Dehumidification performance / 24 h [litres]	at 30 °C / 80 % RH	40	80	130	175	245	485
	at 20 °C / 60 % RH	16	30	35	70	97	193
Suitable for keeping dry rooms up to [m³]		600	1,200	1,600	2,500	3,200	4,500
Air volume [m³/h]		450	1,100	1,100	1,700	2,150	4,300
Hygrostat	electronic	■	■	■	■	■	–
	analog	–	–	–	–	–	■
Operation range [°C]		1 to 35	1 to 35	5 to 32	5 to 32	5 to 35	5 to 32
Input voltage [V/Hz]		230 / 50	230 / 50	230 / 50	380 / 50	380 / 50	400 / 50
Max. power input [kW]		0.7	1.48	2.77	3.0	4.9	9.8
Nominal capacity [kW]		0.57	1.05	1.7	3.3	4.2	9.4
Nominal current (Protection) [A]		3.1 (16)	7.6 (16)	13.2 (16)	5.2 (16)	8.5 (25)	16.6 (32)
Refrigerant <sup>1</sup> Type / Amount [g]		R-290/152	R-1234yf/750	R-410A/1,350	R-410A/1,400	R-410A/1,730	R-407C/3,200
GWP factor <sup>1</sup> / CO <sub>2</sub> equivalent <sup>1</sup> [t]		3 / 0.000456	4 / 0.003	2,088 / 2.82	2,088 / 2.92	2,088 / 3.61	1,774 / 5.68
Refrigerant pressure		–	–	■	■	■	■
Integrated condensate pump		–	–	■	■	■	■
Residual water emptying function		–	–	■	■	■	■
Tube evaporator / Fin evaporator		■ / –	■ / –	– / ■	– / ■	– / ■	– / ■
Sound level (Distance 3 m) [dB(A)]		51	56	53	56	56	56
Mobility [wheels / forklift truck]		■ / –	■ / ■	□ / ■	□ / ■	□ / ■	□ / ■
Length [mm]		580	662	465	470	470	460
Width [mm]		350	510	600	615	775	1,195
Height [mm]		455	525	910	1,635	1,635	1,730
Weight [kg]		32	53	65	124	150	235



■ Standard equipment □ Equipment options to be stated at the time of order

<sup>1</sup> 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.

Trotec  
Dehumidification  
Humidification  
Heating  
Ventilation  
Air conditioning  
Air cleaning  
Disinfection and Odour neutralization  
Accessories

**A FEW PRACTICAL BENEFITS:**

Unique in the world: Active climate management with a 4-in-1 protective function fighting moisture, odour, air pollutants and dust

Professional quality "made in Germany" – originally produced by Trotec

Especially designed to preserve the value of precious exhibits, objects and movables.

Ideal dehumidification performance even at low temperatures of about 5 °C

Two-component filter for dust and soot – especially for the application in garages

Air filters for dust and cleaning the air from pollen and allergens

High-quality industrial ionizer for an efficient odour elimination

Corrosion-protected design

Hygrostat-controlled automatic operation

Effective hot gas automatic defrost system

Integrated condensate pump

At request also available in every variation of material and colour

# DH dehumidifiers VPR+

Intelligent climate managers for the all-round protection of your valuables – ThinC!



DH 15 VPR+, faceplate of brushed stainless steel



DH 30 VPR+, faceplate of brushed stainless steel

With the latest DH-VPR generation Trotec developed a series of climate managers that leaves nothing to be desired both in terms of technology and aesthetics. More multifunctionality and individual designs – et voilà: a DH-VPR+ with intelligent ThinC! climate technology.

**This solution is unique in the world: Active climate management with a 4-in-1 protective function fighting moisture, odour, air pollutants and dust.**

### Conservation rather than loss of value

The ThinC! climate management guarantees consistency. In favour of values and valuables. Because every material comes with special properties and every room with different conditions. Our climate managers guarantee a constant room climate in all circumstances. And so efficiently maintain various articles of value in their top condition.

What laid the foundation for the innovative ThinC! climate managers were the DH dehumidifiers from our HighPerformance product range – ensuring a reliable protection against moisture even in unheated rooms and at low temperatures of about 5°C. They were expanded with effective air purification modules and filters complying with industrial standards.

This turns every room into a climate vault: the air conditioned and cleaned from irritants, the dust formation significantly reduced and annoying smells eliminated.

Even so, all ThinC! models are characterized by simple handling, intelligent humidity regulation and odour neutralisation. Room air to suit your individual needs, achieved fully automatically via hygrostat and intensity controller. Dust-free, soot-free, hygienic and energy-efficient – always at the right level.

With ThinC! design becomes a mission. The colour and material of the faceplates can optionally be selected variably to suit a special style or your personal preferences.

**Perfect room climate at its best. For everything of value.**



### Capacity calculation

Suitability for room volumes (max.)

min. ø temp. winter*	DH 15 VPR+	DH 30 VPR+	DH 60 VPR+
> 19 °C	160 m³	320 m³	650 m³
16 - 19 °C	120 m³	270 m³	550 m³
12 - 15 °C	80 m³	200 m³	400 m³
8 - 11 °C	50 m³	120 m³	250 m³
4 - 7 °C	–	80 m³	150 m³

\* When used in garages: Average daily period of opening the garage door: max. 15 minutes



## A perfect room climate is a fine art

### With DH-VPR+ you can protect your valuables



#### Masterpieces

They hang on the wall and please the owner. Works of art. Paintings. VPR+ helps to preserve these unique objects of value. To avoid that the paintings have to be cleaned extensively over and over again, to prevent frames from warping and colours from fading. After all, alternating humidity values cause the materials to expand and shrink and promote craquelure.

**DH-VPR+ preserves art and value ranging from van Gogh to Picasso.**



#### First editions

For the fervent reader and collector of books every page is precious. The climate concept for bibliophiles adjusts the room air to the required storage conditions for paper and filters out corrosive pollutants. Cracks, material tensions, ink corrosion, mould and musty smells can be avoided this way. And the precious contents are retained.

**DH-VPR+ preserves paper, knowledge and valuables.**



#### Rare wines

Premium wines are characterized by their bouquet and value. In order to maintain its quality, the wine requires an ideal climate management. Ideal, that means a constant humidity of 75 to 80 %. The DH-VPR+ prevents corks from drying out, oxygen from pressing into the bottles, mould from spreading on the bottles' labels and odours from affecting the bouquet.

**DH-VPR+ supports the storage of grand crus.**



#### Antiques

Old furniture and valuable instruments create a homey atmosphere. Wood interacts with excessive humidity levels and needs consistency. Shrinkage cracks, swelling veneer, discolouration and decomposition might be a consequence of problematic room air. Antique furniture is beautiful. But it should not reek of the stench imbibed over the past centuries.

**DH-VPR+ protects the values of the past for the future.**

## Protective climate for collectors' garages

### Conservation instead of restoration



Cold surroundings, soot and oil in the air, a fluctuating humidity level, unpleasant odours, mould potential, the risk of decomposition for materials of value.

**In all these conditions the ThinC! climate managers guarantee a perfect garage climate.**

What takes action within is not only a high-class industrial dehumidifier defrosted by use of hot gas for operating environments from 5 °C, but also a powerful NTP air purification unit.

So, on the one hand the humidity is maintained at an ideal level in order to reliably protect against corrosion, mould, porosity and decomposition.



#### ThinC! climate management – complete protection against all hazards lurking in a garage:

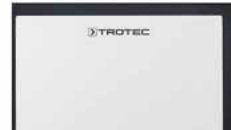
- **Rust**  
A constantly maintained ideal humidity level reliably prevents corrosion damage.
- **Dust**  
The ThinC! technology effectively reduces the formation of dust.
- **Soot**  
An integrated special filter reduces deposits and residues difficult to remove.
- **Bacteria**  
Bacteria are harmful to health. But they also damage valuable collectibles. The principle of oxidative air purification ensures a room climate uncondusive to decomposition.
- **Mould**  
Owing to an active room air management room and inventory stand no chance of going mouldy.

At the same time, the high-quality industrial ionizer creates an agreeably non-irritating environment, free from air-borne odours, pollutants and microorganisms that are corrosive to the material. The processes of air cleaning and dehumidifying may be performed independently.

In combination with the special two-component filter for dust and soot the dehumidifier DH VPR+ becomes a perfect climate manager and an active protector of values and valuables in collector garages.



Standard version faceplates



Technical data		DH 15 VPR+	DH 30 VPR+	DH 60 VPR+
Article number		1.125.000.410	1.125.000.415	1.125.000.420
Dehumidification performance		see performance chart	see performance chart	see performance chart
Voltage [V]		230	230	230
Current [A]		3.8	4.4	7.5
Starting current [A]		18	15.8	30
Fusing [A]		10	16	16
Electrical connection (plug)		CEE 7/7, length 3.5 m	CEE 7/7, length 3.5 m	CEE 7/7, length 3.5 m
Power input [kW]		0.43	0.75	1.2
Heat emission <sup>1</sup> [kW]		0.9	1.9	3.5
Refrigerant* Type / Amount [g]		R-407C / 340	R-407C / 500	R-407C / 800
GWP factor* / CO <sub>2</sub> equivalent* [t]		1,774 / 0.60	1,774 / 0.89	1,774 / 1.42
Air volume freely blowing [m <sup>3</sup> /h]	Step 1	250	502	745
	Step 2	–	745	1,065
Sound level (distance 3 m) [dB(A)]		50	52	54
Operating range temperature [°C]		5 to 40	5 to 40	5 to 40
Operation range max. RH [%]		90	90	90
Length [mm]		395	280	280
Width [mm]		829	787	1,255
Height [mm]		339	690	690
Weight [kg] <sup>2</sup>		47	57	90
Pump height condensate pump [m]		10	10	15
Hot gas automatic defrosting		■	■	■
Integrated hygrostat		■	■	■
Integrated NTP air purification unit		■	■	■
Condensate discharge connection [Ø outside mm]		8	8	8
Standard faceplate		Steel, white, powder-coated (RAL 9010)		

Consumable accessories	DH 15 VPR+	DH 30 VPR+	DH 60 VPR+
Combination filter dust/soot (pack of 5)	Art. no. 7.710.000.921	Art. no. 7.710.000.926	Art. no. 7.710.000.929
Standard air filter	Art. no. 7.710.000.920	Art. no. 7.710.000.925	Art. no. 7.710.000.930
Acoustic decoupling set	Art. no. 6.100.003.090	–	–

Optionally available equipment		DH 15 VPR+	DH 30 VPR+	DH 60 VPR+
Special designs faceplate	stainless steel, brushed	Art. no. 1.125.000.411	Art. no. 1.125.000.416	Art. no. 1.125.000.421
	special colour	finish in the colour of your choice available upon request		
	carbon	Art. no. 1.125.000.413	Art. no. 1.125.000.418	Art. no. 1.125.000.423
	individual	e.g. gold-plated faceplate and much else available upon request		

■ Standard equipment

<sup>1</sup> at 30 °C and 75 % RH

<sup>2</sup> weight incl. standard faceplate

\* 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.







**Faceplates**  
Brushed stainless steel  
design



**Faceplates**  
Carbon design



**Faceplates**  
Special colour design



**Faceplates**  
Individual design,  
for example gold-plated

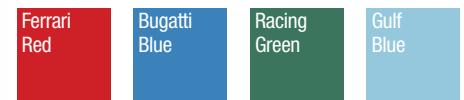


**With VPR+ every room becomes a climate vault – and design becomes a mission**

Whether a garage, wine cellar, museum or library, with VPR+ every room becomes a climate vault, for VPR+ conditions the air in four ways: the air is dehumidified and cleaned from irritants, while at the same time the dust formation is reduced and annoying smells are eliminated if required. Entirely individual, depending on your preferences.

With VPR+ design becomes a mission. In addition to the standard design, the faceplates can be supplied in almost every combination of colour and material upon request as shown on the left.

**Special colour examples:**



Other colours are available upon request.

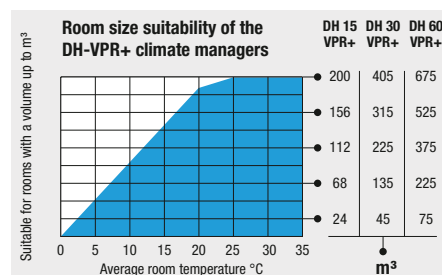
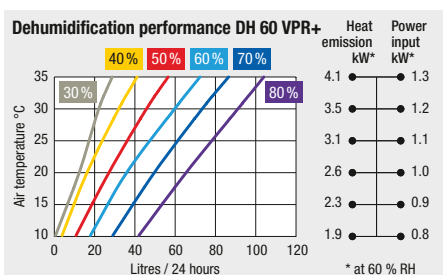
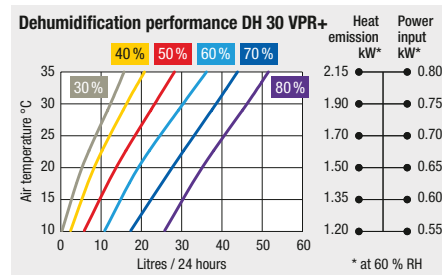
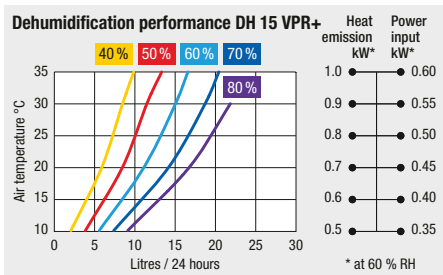
**Easy handling**

Chiefly developed for the operation of climate managers in garages with sooty surroundings, a special two-component combination filter for an efficient filtration of dust and soot is also available.

When applied outside garages, the standard filter may be used for air purification.



The devices' filter compartment is easily accessible and equipped with user-friendly spring locks so that the filter can be exchanged quickly and without the need for tools. The hygrostat and ionizer can also be accessed conveniently via this compartment.



**A FEW PRACTICAL BENEFITS:**

Development, design, production:  
100 % Trotec

High dehumidification capacity –  
optimized for low temperatures of less  
than 15 °C during construction drying

Powerful rotation compressor

Professional automatic hot gas defrost  
system based on bypass procedure

Innovative central chassis, easy to re-  
move for fast cleaning and inspections

Particularly maintenance-friendly:  
Plug-in electronics modules,  
easy to replace without tools

Stackable to save space

Robust and highly mobile with large  
wheels – transportable both in vertical  
and horizontal position

Connection for external hygrostat

Adjustable push handle

**ADDITIONAL BENEFITS TTK 900 MP:**

VarioDry technology – unique in the  
world: The optimal setup for maximum  
drying performance in any operating  
environment

Two-point hot gas defrosting for ex-  
tremely shortened defrosting times  
and thus considerably longer drying  
cycles

# Construction dryers of the TTK professional series

Professional TTK type construction dryer –  
synonym for pioneering drying technology,  
proven for decades



**100 % construction dryer:  
the name says it all**

It's not just a name that turns a  
commercial dehumidifier into a  
true construction dryer. The name  
is an obligation: the device must  
be able to dry large amounts of air  
in continuous operation, on the  
construction site, in cool environments.

This is why the construction dryers  
TTK 500 and TTK 900 MP have  
been consistently designed for a  
long lifetime and an extremely  
high dehumidification perfor-  
mance at low temperatures.

The air flow rate of both devices is  
optimally adapted to the dehumidi-  
fication requirements of construc-  
tion drying. On top of that, both de-  
vices are characterized by the  
lowest energy factor per litre in  
their class!

## Trotec's standard for professional construction dryers

Durability, robustness, reliability, high dehumidifi-  
cation performance and value retention, these  
characteristics define the coordinate system of  
an outstanding construction dryer – and our  
current TTK pro series follows this concept  
more uncompromisingly than ever before!

**The construction dryers TTK 500 and  
TTK 900 MP have everything a pro's heart de-  
sires – and nothing you don't really need!**

No superfluous "bells and whistles" to increase  
costs, reduce reliability or complicate mainte-  
nance or cleaning. Instead we focus on the essen-

tials: robust technology that is equally character-  
ized by high reliability, mobility and dehumidifica-  
tion capacity, especially in cool environments.

No plastics, but an almost indestructible steel  
sheet construction for tough everyday use with  
optimum handling characteristics and an innova-  
tive central chassis for easy disassembly – and  
with plug-in electronics modules that can easily  
be replaced on site.

**All contributing to maximum operating  
times and minimized service times!**

**Refrigerant R-454C – less GWP, more efficiency and safety**



The non-toxic R-454C is ideally suited for the hermetically sealed refrigeration sys-  
tems of the TTK construction dryers, is only flammable with high ignition energy  
and is not only characterized by a high COP (coefficient of performance), but also by  
a very low GWP (global warming potential) of less than 150 and an ODP (ozone de-  
pletion potential) of 0. This means that R-454C contributes at least 10 times less to the  
greenhouse effect than commonly used refrigerants.



## Construction dryer TTK 500

Powerful even at low temperatures – high-performance professional condenser dryer in robust carriage design



The TTK 500 has been consistently designed to provide maximum mobility for ever-changing sites of operation and to withstand rough working conditions. This is why this construction dryer features not only a carriage with adjustable push handle, but also large wheels with non-marking rubber tyres – all combined in a robust metal housing.

### Universal construction dryer – newly defined

For storage or transport, the design of the TTK 500 allows the devices to be positioned closely together, so that many construction dryers can be transported to the site of operation with only one trip. In the warehouse, up to three devices can be stacked on top of one another, thus requiring even less floor space.

### Effective process for high dehumidification performance of up to max. 70 l/h

For an effective dehumidification, the TTK 500 comes equipped with a powerful automatic hot gas defrost system based on the bypass procedure. This system only requires very short defrost phases, which increases the performance level and makes the device ide-



The push handle of the TTK 500 can be locked in the horizontal or vertical position as required. This feature guarantees an ideal transport position at all times, for example for transport over larger distances or in staircases.



ally suited for an effective dehumidification in low-temperature surroundings such as unheated rooms.

The combination of a high dehumidification performance together with a minimized energy demand and a great mobility with a low floor space requirement makes the TTK 500 the ideal dehumidification solution even at low temperatures – for continuous operations also optionally available with a hygrostat and condensate pump.

### Innovative central chassis – low-maintenance modular design

The TTK 500 has an innovative central chassis from which the robust metal housing can be quickly and easily removed. Ideal for service, maintenance and cleaning tasks.

And the entire electronic equipment is not only specially enclosed and thus reliably protected against harmful deposits – it is also designed in a modular fashion and all individual electronics modules are provided with maintenance-friendly plug connections. The replacement of individual modules is therefore quick and easy, even on site: unplug, replace module, plug back in – done.

**Maintenance-related periods of non-use can thus be reduced to a minimum.**



### Also available as stainless steel version TTK 500 ES



For dehumidification or permanent dry keeping applications in areas with special hygienic requirements or particularly reactive air environments the TTK 500 is also available as stainless steel version TTK 500 ES.

The stainless steel material features a very high corrosion resistance, is easy to clean and particularly resistant to various chemical solutions.

Just like the basic model, the TTK 500 ES, too, can optionally be equipped with an MID-compliant dual counter and controlled via an external hygrostat if required.



Trotec

Dehumidification

Humidification

Heating

Ventilation

Air conditioning

Air cleaning

Disinfection and Odour neutralization

Accessories

← Construction dryers – further information ...



## Construction dryer TTK 900 MP

Easy to transport, hard to beat –  
but ultimate condenser dryer for professional drying applications

Owing to a perfect combination of an especially powerful and efficient rotation compressor, an utterly robust high-pressure radial fan as well as high-quality electronic and mechanical components, the TTK 900 MP can impress with an excellent dehumidification capacity, especially at low ambient temperatures.

let sides without dynamic pressure and can flow evenly through the room – an enormous practical advantage for the fast drying of large rooms!



At the same time, the TTK 900 MP has been consistently designed to provide maximum mobility for ever-changing sites of operation and to withstand rough working conditions. This is why the TTK 900 MP features not only a carriage with ad-



justable push handle, but also large wheels with non-marking rubber tyres – all combined in a robust metal housing.

For an effective dehumidification, the TTK 900 MP comes equipped with a powerful automatic hot gas defrost system based on the bypass procedure. This system only requires very short defrost phases, which increases the performance level and makes the device ideally suited for an effective dehumidification in low-temperature surroundings such as unheated rooms.

### Powerful air-circulating radial fan with dry air outlet on both sides

In order to quickly distribute the dry, dehumidified air in the entire room, the TTK 900 MP is fitted with a dry air outlet on both sides. This way, the dry air is blown out at a high volume by the high-pressure radial fan via two air out-



The push handle of the TTK 900 MP can be locked in the horizontal or vertical position as required. This feature guarantees an ideal transport position at all times, for example for transport over larger distances or in staircases.

Designed as reference class of professional construction dryers the TTK 900 MP practically leaves nothing to be desired. Its tough design and robust components ensure a permanently maximum dehumidification performance and value retention.

### TTK 900 MP with VarioDry technology – unique in the world!

The unique combination of an innovative heat exchanger design with optimised evaporator circuit and highly efficient EC radial fan makes it possible:

The TTK 900 MP can be easily adjusted to the desired operating environment and obtains the optimum setup for the respective type of application by means of just one switch setting. Both high relative humidity levels and lower temperatures (e.g. when drying new buildings) or lower relative humidity levels in warmer environments for water damage restorations are perfectly suitable for the device.



Simply select the construction drying or water damage restoration mode via the VarioDry function switch, and the TTK 900 MP automatically adjusts its device setup to the maximum drying performance in this operating mode!

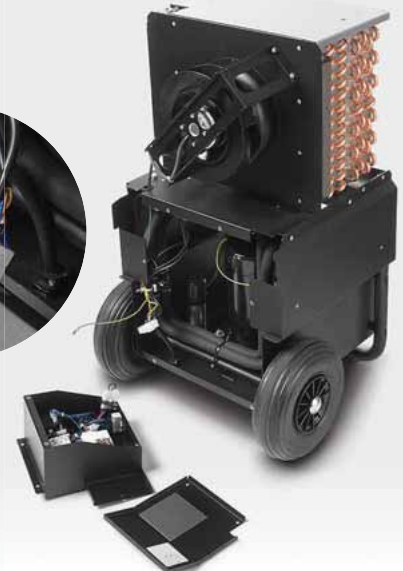
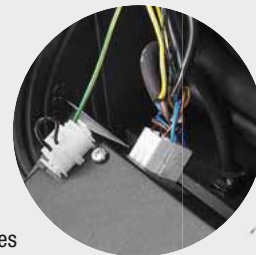
### Benefit now from 20 % more efficiency than before

The TTK 900 MP impresses with 10 % more performance at 10 % less energy consumption compared to the predecessor model TTK 800. Thus, it can boast the best energy coefficient in its class as a result of an elaborately balanced energy management system! In plain words: **No other dryer in this area achieves a higher kW output in litres than the TTK 900 MP – across all fields of application, water damage restoration and drying new buildings.**

### Innovative central chassis – low-maintenance modular design

The TTK 900 MP has an innovative central chassis from which the robust metal housing can be quickly and easily removed. Ideal for service, maintenance and cleaning tasks.

And the entire electronic equipment is not only specially enclosed and thus reliably protected against harmful deposits – it is also designed in a modular fashion and all individual electronics modules are provided with maintenance-friendly plug connections. The replacement of individual modules is therefore quick and easy, even on site: unplug, replace module, plug back in – done. **Maintenance-related periods of non-use can thus be reduced to a minimum.**



**Practical tip for quicker construction drying**



**You can halve drying time by combining fans and construction dryers:**

Each dryer is supplemented with a fan, which has a significant influence on the drying performance and therefore also the duration of the drying process.

The increased air circulation causes a quicker evaporation, for the higher the flow rate at the material surface, the sooner will the drying process be completed.

*Combinable axial fans can be found starting on page 96 ...*



**You need even more mobile construction drying power?**

If so, we recommend the version of the DH 160 with a wheeled transport frame.

Whilst featuring an otherwise identical design this industrial dryer is additionally equipped with a wheeled frame construction permitting quick site changes. The mobile model is optionally also available as stainless steel version.

*More information about the industrial condenser dryer DH 160 can be found starting on catalogue page 22 ...*

**Power consumption billing?**

For commercial billing the electricity consumption must be determined by means of an MID meter. Device without an MID meter? Then the socket outlet meter BX50 MID provides the optimum solution – further information can be found on page 167 ...



Technical data		TTK 500	TTK 900 MP
Article number		1.120.000.410	1.120.000.802
Dehumidification performance / 24 h [litres]	At 20 °C / 60 % RH	30	49
	At 30 °C / 80 % RH	64	96
	Max.	76	110
Air volume [m³/h]		400	660 to 850 <sup>1</sup>
Suitable for room sizes of up to [m³]	Construction drying	470	800
	Dry keeping	940	1,600
Operating range Temperature [°C] / Humidity [% RH]		5 to 35 / 35 to 90	3 to 40 / 25 to 90
Input voltage [V/Hz]		220 - 240 / 50	220 - 240 / 50
Power input [kW]		1.6	2.1
Nominal current consumption [A]		7.3	9.8
Refrigerant <sup>2</sup> Type / Amount [g]		R-454C / 650	R-454C / 900
GWP factor <sup>2</sup> / CO <sub>2</sub> equivalent <sup>2</sup> [t]		146 / 0.095	146 / 0.13
Sound level (distance 3 m) [dB(A)]		58	59
Length [mm]		438	500
Width [mm]		470	565
Height [mm]		870	960
Weight [kg]		52	69
<b>Standard equipment (extract) and options</b>		<b>TTK 500</b>	<b>TTK 900 MP</b>
Compressor		Rotating piston	Rotating piston
Fan		Axial fan	Radial fan
Automatic hot gas defrosting		■	■
Two-point hot gas defrosting		–	■
VarioDry technology		–	■
Hygrostat		□	□
Condensate pump		□	□
Operating hours counter		■	■
Energy consumption meter, MID-compliant <sup>3</sup>		Art. no. 7.140.000.903	–
Plug connection for external switching		■	■
Cable holder		■	■
Low-maintenance modular design		■	■
Adjustable push handle		■	■
Carriage design		■	■
Stackable construction		■	■
<b>Design option</b>		<b>TTK 500</b>	<b>TTK 900 MP</b>
Stainless steel AISI 316		Art. no. 1.120.000.414	–
<b>Available system accessories / recommended accessories</b>		<b>TTK 500</b>	<b>TTK 900 MP</b>
Air filter (consumables)		Art. no. 7.160.000.008	Art. no. 7.160.000.013
Condensate pump with automatic switch-off function, max. pump height 4.3 m		Art. no. 6.100.003.030	Art. no. 6.100.003.030
External hygrostat HG 110		Art. no. 6.100.002.044	Art. no. 6.100.002.044
Professional extension cable (230 V, 16 A)		Art. no. 7.333.000.376	Art. no. 7.333.000.376
Cable drum PVD2 Further cable drums and power distributors starting on page 172 ...		Art. no. 7.333.000.367	Art. no. 7.333.000.367

■ Standard equipment; □ Optionally available equipment; <sup>1</sup> depending on the preselected VarioDry operating mode; <sup>2</sup> 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. <sup>3</sup> **What does MID-compliant mean?** In some areas, the Measuring Instruments Directive (MID) replaces the previous regulation of national authorization and subsequent calibration. As a result, all energy meters in Europe used for energy consumption-based billing have to be MID-compliant from now on.

Trotec  
Dehumidification  
Humidification  
Heating  
Ventilation  
Air conditioning  
Air cleaning  
Disinfection and Odour neutralization  
Accessories

**A FEW PRACTICAL BENEFITS:**

Development, Design, Production:  
100 % Trotec

High dehumidification performance  
even at low temperatures

Maximum dust and dampness protec-  
tion for all electrical components

Compressor overheating protection  
with automatic switch-off function

Very easy to maintain construction

Portable and easily stored anywhere  
thanks to its rotary compressor

Practical stacking groove for stable,  
space-saving storage and transport

Stackable with equally dimensioned  
models

MID-compliant\* dual counter for  
operating and kilowatt hours  
optionally available

Practice-optimized German industrial  
design – protected design patent

# Commercial dehumidifiers of the TTK-S series

## The standard class – top of the class



**Whether for use in a workshop, in construction, in storage or in a laboratory – the portable, commercial dehumidifiers of the TTK-S series are the perfect industrial condenser dryers for changing applications, even in rough conditions.**

- Robust metal housings
- Powerful rotary compressors
- Low-maintenance construction
- High air flow rate and dehumidification performance
- Large operating range
- Integrated compressor heating protection with automatic switch-off function

TTRT-K01-TTKS-WM-22-EN





## TTK-S – the standard for modern, mobile commercial dehumidifiers used in rough operating environments

With the pioneering TTK-S commercial dehumidifiers, you can benefit from a variety of detailed solutions which save you time, enhance your performance and secure value retention – attractively combined in the practice-optimized German industrial design – protected design patent.

Also protected – from dust and dampness, that is – are all electrical components of the devices.

A special enclosure improves the protection of the electronic equipment from anything dangerous which may enter and impair the functionality and durability. This enclosure makes the commercial dehumidifier predestined for use in harsh conditions.

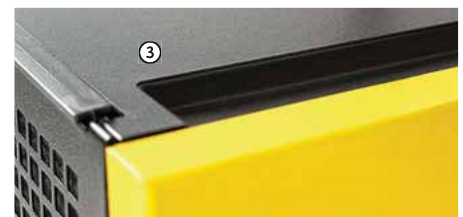
Due to its extremely low-maintenance construction, this advanced dehumidifier generation is easier to clean than ever before and due to its favourable power to weight ratio and its clever mobility features, it is easy to transport.

Nevertheless, in terms of dehumidification capacity, these dryers are no lightweight:

The entire heat exchange system from high-quality components was designed to work in harmony and guarantees the maximum drying efficiency of the devices in all temperature ranges – for example, even under 15 °C in unheated rooms.

As well as this, compared with other defrost systems, the high-quality hot gas automatic defrost guarantees a much more efficient dehumidification performance without defrost pauses on a time interval during which no defrosting occurs!

Even in storage, these commercial dehumidifiers make a good impression – while taking up surprisingly little space. Because they are equipped with two practical stacking grooves on their tops, equally sized TTK-S devices can be safely stacked to save space during transport and storage.



③ Two stacking grooves make it possible to stack equally sized TTK-S devices stably to save space.



① A special enclosure protects the dehumidifier electronics from anything dangerous which may enter.

② The height of the transport bar handle can be flexibly adjusted.



← Commercial dehumidifiers of the TTK-S series – further information...



**Well-arranged operating panel:**

- ① Bars protecting the operating elements
- ② Operating hours counter integrated as standard
- ③ Optionally also available as dual counter for operating hours and energy consumption (MID-compliant<sup>4</sup>)
- ④ Dehumidification performance selection switch
- ⑤ Compressor overheating protection indicator
- ⑥ Filling level warning light (except TTK 655 S)



**Active value retention thanks to integrated compressor heating protection with automatic switch-off function**

In drying applications with extremely high humidity levels and simultaneously high temperatures – for instance during water damage restoration – refrigerant dryers are quickly brought to the limits of their capacity (red range). This is where the catchy “rule of 35” applies: drying water damages with more than 35 degrees reduces the lifetime of the dryer to less than 35 %!

All the same, there is no way around the application of a condenser dryer for such drying tasks – desiccant dehumidifiers need considerably more energy to achieve the same level of drying performance and are therefore not a viable alternative, especially in terms of economics.

**This is why the commercial dehumidifiers of the TTK-S series have an integrated compressor heating protection ensuring active value retention of your devices:**

This is however not a question of component quality, but pure physics, which applies to all refrigerant dryers on the market regardless of the manufacturer.

Sensors permanently monitor the thermal load of the compressor. If the temperature is within the defined operating range, the integrated heating protection indicator emits long pulses to indicate that the dehumidifier is operating ideally.

Whilst at a moderate humidity level of about 70 % RH most professional condenser dryers can operate in temperatures of up to 35 °C without difficulty, very high humidity values at a simultaneously high room temperature cause considerably more energy to be fed to the humid room air, which then also has to be “worked off” by the refrigerant.

As soon as the temperature exceed the critical threshold of 35 °C, the automatic function



switches the compressor off in order to protect it while the fan keeps on running. The compressor is automatically activated again once the temperature falls below the 35 °C threshold.

Consequently, the refrigerant pressure in the system is increased enormously leading to destructive load on the compressor.

This protection not only significantly extends the lifetime of your dehumidifiers, it also prevents thermal damages to materials located in the room and the building structure.

To be sure, the dehumidifiers will at first continue to operate, but noticeably above their limit “deep in the dark red range”, resulting in an extremely shortened remaining lifetime.

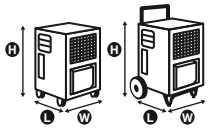




Their compact construction that is both easy-to-transport and robust as well as their high dehumidification performance turn the commercial dehumidifiers of the TTK-S series into the universal standard solution for virtually all commercial drying applications.

And in between two applications, the suitable protective covers available as practical accessories prevent soiling of the devices during storage.





Technical data		TTK 125 S	TTK 175 S	TTK 355 S	TTK 655 S
Article number		1.120.000.124	1.120.000.157	1.120.000.163	1.120.000.174
Dehumidification performance / 24 h [litres]	At 30 °C / 80 % RH	28	40	55	91
	Max.	32	50	70	150
Air volume [m <sup>3</sup> /h]		250	580	1,000	1,000
Operating range	Temperature [°C]	5 to 32	5 to 32	5 to 32	5 to 32
	Humidity [% RH]	50 to 90	50 to 90	50 to 90	50 to 90
Input voltage [V/Hz]		220-240 / 50	220-240 / 50	220-240 / 50	220-240 / 50
Max. power input [kW]		0.5	0.6	1.4	1.9
Refrigerant* Type / Amount [g]		R-290 / 150	R-290 / 150	R-454C / 650	R-454C / 1,050
GWP factor* / CO <sub>2</sub> equivalent* [t]		3 / 0.00045	3 / 0.00045	146 / 0.09490	146 / 0.15
Water tank [litres]		6 <sup>1</sup>	6 <sup>1</sup>	6 <sup>1</sup>	–
Sound level [dB(A)]		52	52	54	56
Length [mm]		375	390	390	620
Width [mm]		345	380	380	515
Height [mm]		603	643	725	858
Weight [kg]		26	35	39	55
					
Equipment and functions		TTK 125 S	TTK 175 S	TTK 355 S	TTK 655 S
Hot gas automatic defrosting		■	■	■	■
Automatic dehumidification	Adjustable analogue hygrostat	■	■	■	■
	Electronic hygrostat with digital display	–	–	–	EH <sup>2</sup>
Filling level warning light to indicate a full water tank		■	■	■	–
Overflow protection with automatic switch-off		■	■	■	–
Washable air filter		■	■	■	■
Operating hours counter		■	■	■	■
Dual counter for operating and kilowatt hours <sup>3</sup> (MID-compliant <sup>4</sup> )		7.140.000.903	7.140.000.903	7.140.000.903	7.140.000.903
Compressor overheating protection with automatic switch-off function		■	■	■	■
Protective bars for the control panel		■	■	■	■
Carry / transport handle(s)		■	■	■	■
Non-marking full-rubber wheels		■	■	■	■
Swivel casters with wheel lock		■	–	–	–
Carriage design		–	■	■	■
Vertically adjustable transport handle		–	■	■	■
Stackable		■	■	■	■
Connection for external condensate drain		■	■	■	■
Accessories (consumables)		TTK 125 S	TTK 175 S	TTK 355 S	TTK 655 S
Air filter (article number)		7.160.000.006	7.160.000.007	7.160.000.008	7.160.000.009
Available accessories		TTK 125 S	TTK 175 S	TTK 355 S	TTK 655 S
Condensate pump with automatic switch-off function, max. pump height 4.3 m		Art. no. 6.100.003.030	Art. no. 6.100.003.030	Art. no. 6.100.003.030	Art. no. 6.100.003.030
		Art. no. 6.100.003.101	Art. no. 6.100.003.105	Art. no. 6.100.003.110	Art. no. 6.100.003.115
Protective cover with Velcro® side compartment for easy access to recessed handles		Art. no. 6.100.003.101	Art. no. 6.100.003.105	Art. no. 6.100.003.110	Art. no. 6.100.003.115

■ Standard equipment

<sup>1</sup> This is the "switch-off value", generally the containers hold approx. 7 to 8 litres of water to avoid spilling when transporting a full tank.

<sup>2</sup> Available as the model TTK 655 S EH, Art. no. 1.120.000.175

<sup>3</sup> Optional accessories

<sup>4</sup> What does MID compliant mean? The European Measuring Instruments Directive (MID) has replaced the existing rules of national approval and subsequent calibration in some areas. As a result, all power meters, which are used for energy consumption billing, must be MID compliant in the future.

\* 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.

**A FEW PRACTICAL BENEFITS:**

Development, design, production:  
100 % Trotec

High dehumidification performance  
even at low temperatures

Professional condenser dryer with  
powerful rotation compressor

No "china product" –  
professional quality made in EU

Comfort function for quiet  
dehumidification operation

Maximum protection against dust and  
moisture for all electrical components

Compressor overheating protection  
with automatic switch-off function

Super-compact construction,  
easy to carry, simple to stack

Integrated condensate pump with a  
delivery head of max. 10 m

Extremely maintenance-friendly  
design

MID-compliant dual counter for  
operating and kilowatt hours

# Compact commercial dehumidifier TTK Qube

Low-noise "power cube" from EU manufacturing for professional drying applications – ultra-compact, efficient, quiet



## The TTK Qube combines all performance requirements of a professional living space dryer – condensed in an ultra-compact design

Particularly in the case of water damage restoration, the aim is to remove moisture from the highly humid air in the shortest possible time. What restoration companies need for this purpose are professional condenser dryers for continuous use with a high dehumidification performance, lifetime and reliability.

What restoration companies no longer need are large, heavy devices that can only be manoeuvred across storeys with great effort and also take up a lot of space in the service vehicle, which sometimes requires driving to the site of operation several times.

### TTK Qube – reduction to the maximum

The TTK Qube does not make water damage drying itself any easier – but much easier to handle. The TTK Qube is a high-quality, powerful condenser dryer whose development has been based on three priorities: Maximum dehumidification performance and easy maintenance, minimum dimensions and weight, lowest possible noise emission for use in inhabited surroundings.

**All these requirements are met by the TTK Qube with flying colours!**



Multi-stackable construction with four recesses on the upper side of the housing to accommodate the feet





## TTK Qube – professional compact condenser dryer – newly defined

The TTK Qube's high-quality rotation compressor is able to offer higher performance at a comparatively lower power consumption – while also having reserves for high dehumidification performance, even in unheated rooms. Additionally supported by a comfort function for extra-quiet dehumidification operation – ideal for water damage restoration in inhabited surroundings.

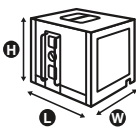
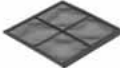


Moreover, the professional automatic hot gas defrost system of the TTK Qube guarantees a much more efficient dehumidification performance compared to other defrost systems as there are no defrost pauses at regular intervals during which no dehumidification takes place.

The condensate can be drained through the external outlet even across storeys because the standard condensate pump is designed for a delivery head of up to 10 metres.

A special enclosure of the electronic components improves the protection against harmful deposits which may enter and impair the functionality and durability. This enclosure makes the compact condenser dryer predestined for use in harsh conditions.

It goes without saying that the TTK Qube is supplied ex works with an MID-compliant combined counter for power consumption and operating hours so that billing can be carried out according to the regulations.



Technical data		TTK Qube
Article number		1.120.000.117
Dehumidification performance / 24 h [litres]	At 30 °C / 80 % RH	16
	Max.	20
Air volume [m³/h]		283
Operating range	Temperature [°C]	5 to 35
	Humidity [% RH]	40 to 90
Input voltage [V/Hz]		220 - 240 / 50
Power input [kW]		0.362
Nominal current consumption [A]		1.6
Refrigerant <sup>1</sup> Type / Amount [g]		R-1234yf / 140
GWP factor <sup>1</sup> / CO <sub>2</sub> equivalent <sup>1</sup> [t]		4 / 0.001
Sound level (distance 1 m) [dB(A)] standard / comfort mode		53 / 50
Length [mm]		315
Width [mm]		367
Height [mm]		340
Weight [kg]		16
		
Standard equipment (extract) and options		TTK Qube
Automatic hot gas defrosting		■
Hygrostat		■
Comfort function for quiet dehumidification operation		■
Integrated condensate pump		■
MID <sup>2</sup> -compliant dual counter for operating and kilowatt hours		■
Compressor overheating protection with automatic switch-off function		■
Protective bars for the control panel		■
Cable holder		■
Stackable construction		■
Available system accessories / recommended accessories		TTK Qube
Air filter (consumables)		Art. no. 7.160.000.014
Professional extension cable (230 V, 16 A)		Art. no. 7.333.000.376
Cable drum PVD2 Further cable drums and power distributors from page 172 ...		Art. no. 7.333.000.367

- Standard equipment
- Optionally available equipment

<sup>1</sup> 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.

<sup>2</sup> **What does MID-compliant mean?** In some areas, the Measuring Instruments Directive (MID) replaces the previous regulation of national authorization and subsequent calibration. As a result, all energy meters in Europe used for energy consumption-based billing have to be MID-compliant from now on.

**A FEW PRACTICAL BENEFITS :**

Development, Design, Production:  
100 % Trotec

Quality hot gas automatic defrosting\*

High dehumidification performance  
even at low temperatures

Robust plastic-coated metal housing

Portable and easily stored anywhere  
thanks to its rotary compressor

Automatic hygrostat controlled  
dehumidification

MID compliant dual counter<sup>4</sup>  
for active hours and kilowatt hours  
available as an option\*

\*except TTK 105 S

# Commercial dehumidifiers TTK-S standard series white



**Power consumption billing?**

For commercial billing the electricity consumption must be determined by means of an MID meter. Device without an MID meter? The BX50 MID provides the solution – further information can be found on page 167...



**Simple. Good. Robust and reliable.  
That is what you get from us in black and white.**

The dehumidifiers of our “white fleet” are going equally strong in both price and performance. Therefore, with this series you can benefit from prices on a Far Eastern level without having to cut back on workmanship and reliability.

TTK 140 S, comes with steerable, rubber-tyred steel wheels as well as with practical recessed handles and can therefore be easily transported from one operating site to another.

For the quality of these dehumidifiers is no accident – but traditional EU manufacturing.

**The TTK 105 S is a high-quality device of German manufacturing originally produced by Trotec.**

The hard-wearing power pack is provided with a stackable aluminium housing making this commercial dehumidifier light and robust in equal measure.



All devices are designed to be robust and durable – the plastic-coated metal housing is hardwearing, ideal for rough everyday usage. A professional hot gas automatic defrost system ensures effective dehumidification results even at low temperatures. Frequently changing sites are not a problem either:

Owing to its low weight and the ultra-compact design the TTK 105 S equipped with carry handle can be carried comfortably. The model next in size, the



Tried and tested robust technology that runs and runs. Easy-care, low-maintenance, reasonably priced. This is what defines our TTK-S commercial dehumidifiers of the white series.



Technical data		TTK 105 S	TTK 140 S	TTK 170 S	TTK 350 S	TTK 650 S
Article number		1.120.000.109	1.120.000.141	1.120.000.155	1.120.000.160	1.120.000.171
Dehumidification performance / 24 h [litres]	at 30 °C / 80 % RH	28	35	40	55	91
	max.	30	40	50	70	150
Air volume [m³/h]		240	580	580	1,000	1,000
Operating range	Temperature [°C]	5 to 35	5 to 32	5 to 32	5 to 32	5 to 32
	Humidity [% RH]	30 to 100	50 to 90	50 to 90	50 to 90	50 to 90
Input voltage [V/Hz]		230 / 50	220-240 / 50	220-240 / 50	220-240 / 50	220-240 / 50
Max. power input [kW]		0.52	0.6	0.6	1.4	2.1
Refrigerant**	Type	R-290	R-290	R-290	R-454C	R-454C
	Amount [g]	125	150	150	650	1,050
GWP factor**		3	3	3	146	146
CO <sub>2</sub> equivalent*** [t]		0.00038	0.00045	0.00045	0.09490	0.15
Water tank [litres]		5.2	6 <sup>1</sup>	6 <sup>1</sup>	6 <sup>1</sup>	–
Sound level (distance 1 m) [dB(A)]		55	52	52	54	56
Length [mm]		250	400	540	530	616
Width [mm]		342	400	490	500	511
Height [mm]		517	605	963	965	1,022
Weight [kg]		14.5	29	32	39	52
Equipment and functions		TTK 105 S	TTK 140 S	TTK 170 S	TTK 350 S	TTK 650 S
Automatic defrosting	Hot gas	–	■	■	■	■
	Air circulation / electronic	■	–	–	–	–
Automatic dehumidification	Adjustable analogue hygostat	–	■	■	■	■
	Electronic hygostat with digital display	■	–	–	–	–
Filling level warning light indicating that the water tank is full		■	■	■	■	–
Overflow protection with automatic switch-off		■	■	■	■	–
Washable air filter		■	■	■	■	■
Operating hours counter <sup>3</sup>		7.140.000.899	7.140.000.313	7.140.000.313	7.140.000.313	7.140.000.313
Dual counter for operating and kilowatt hours <sup>3</sup> (MID compliant <sup>4</sup> )		–	7.140.000.903	7.140.000.903	7.140.000.903	7.140.000.903
Protective bars for the control panel / control panel recessed for protection		– / ■	– / –	– / –	– / –	– / –
Transport handle(s)		■	■	■	■	■
Non-marking full-rubber wheels		–	■	■	■	■
Swivel castors with wheel lock		–	■	–	–	–
Carriage design		–	–	■	■	■
Stackable		■	–	–	–	–
Connection for external condensation draining		■	■	■	■	■
Optional condensate pump assembly		–	□	□	□	□
Accessories (consumables)		TTK 105 S	TTK 140 S	TTK 170 S	TTK 350 S	TTK 650 S
Air filter (filter fleece)		7.160.000.006	7.710.000.332	7.710.000.332	7.710.000.334	7.710.000.335
Available accessories		TTK 105 S	TTK 140 S	TTK 170 S	TTK 350 S	TTK 650 S
External condensate pump <sup>2</sup>		6.100.003.020	6.100.003.020	6.100.003.020	6.100.003.020	6.100.003.020

<sup>1</sup> This is the "switch-off value", generally the containers hold approx. 7 to 8 litres of water to avoid spilling when transporting a full tank.

<sup>2</sup> Without auto switch-off of the dehumidifier

<sup>3</sup> Equipment options to be stated at the time of order, not subsequently installable

■ Standard equipment □ Optional equipment

<sup>4</sup> **What does MID compliant mean?** The European Measuring Instruments Directive (MID) has replaced the existing rules of national approval and subsequent calibration in some areas. As a result, all power meters, which are used for energy consumption billing, must be MID compliant in the future.



From the TTK 140 S upwards integrated recessed handles make it easier for you to transport and position your devices. The larger models starting from the TTK 170 S and bigger are further delivered in a carriage design with additional bar handle and large wheels.



Thanks to the standard external condensate drain all dehumidifiers are also suited for longer unattended continuous drying applications.



Operating switch and filling level warning light (except TTK 105/650 S) are protected from dust and spray water by a protective cap, and a slotted hygostat rotary switch protects against inadvertent misadjustment of the switch position.

All models are available with an optional hours counter – from TTK 140 S upwards with MID compliant<sup>4</sup> dual counter for active hours and kilowatt hours ①.



In case of the TTK 105 S the desired humidity value can be entered directly via the digital display. Furthermore, the current temperature and humidity values of the room air can be read at any time. A time-controlled application is also possible using the timer function.

\*\*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.

**A FEW PRACTICAL BENEFITS:**

Particularly economical solution for typical dehumidification applications in the commercial sector

High dehumidification performance even at low temperatures

Robust steel construction

Portable and easily stored anywhere thanks to its rotary compressor

Hot gas automatic defrosting (TTK 75/170/380/570 ECO)

# Commercial dehumidifiers of the TTK-ECO series

## Economy-priced dehumidification and dry keeping



**Power consumption billing?**

For commercial billing the electricity consumption must be determined by means of an MID meter. Device without an MID meter? The BX50 MID provides the solution – further information can be found on page 167 ...



**Efficient, reliable, economical – TTK-ECO dehumidifiers are the reliable budget solution for typical dehumidification applications in craft and trade**

The TTK-ECO is our pragmatic solution when an equally low-cost and high-quality construction dryer is required. All TTK-ECO dehumidifiers come with a solid steel construction, which cannot be harmed by the rough operating environment on construction sites.

For an efficient dehumidification even at low ambient temperatures the models TTK 75, 170, 380 and 570 ECO are further equipped with a hot gas automatic defrost system integrated as standard.

With the ECO dehumidifiers a quick change of location from one building site to another is no problem at all. For transport safety all devices are not only equipped with a cable holder, the larger models are also delivered in carriage design with large wheels at no extra charge. With these longer distances and also stairs can be overcome without difficulty.

Thanks to the efficient rotary piston compressor the maintenance-friendly devices can be transported and stored in any position.



## Highly efficient. Extremely robust. Incredibly low-priced. Simply ECO.

Excepting the easily portable TTK 75 ECO all TTK-ECO models are supplied in a carriage design ideal for use on construction sites.

As a result frequent site changes or the application in rough surroundings or on difficult terrain does not pose a problem for these condenser dryers:

The robust steel construction in carriage design with transport handle and big wheels can withstand a fair bit and can easily be transported to any operating site.

To make sure you are always aware of the respective usage duration the display-less versions in the TTK-ECO series are as standard provided with an operating hours counter.



Neat solution: As standard all ECO models are delivered with a washable air filter and have an integrated cable holder permitting the transportation without trip hazard.



### Timer and memory function

The models TTK 166 / 171 ECO are provided with a low-maintenance control panel with digital display of all functions. For hygrostat-controlled automatic operation the target value can be selected in percentage steps, this value will then be indicated along with the current actual value.

By means of the timer switch-on and switch-off time can be configured and owing to the integrated memory function the settings are saved even after a power interruption.



### TTK 171 ECO additionally with air hose connection for the selective admission of dry air

As the TTK 171 ECO is equipped with a special pressure fan, the device can also be used for the selective admission of dry air or for drying hollows. To do so, simply attach an air hose to the optionally available adapter connecting piece.



## Under the heading of hot gas defrosting and construction drying

### Why every construction dryer is a commercial dehumidifier, but not every commercial dehumidifier equals a proper construction dryer:

Both device classes withdraw moisture from the air by cooling it to dew point temperature and discharging the resulting condensate.

For intensive cooling a pressure-reduced refrigerant flows through the evaporator, which on the other hand would ice it up completely in next to no time without regular defrosting operations, thus reducing the dehumidification performance to zero.

Commercial dehumidifiers mostly defrost by way of circulating air: The compressor switches off while the fan keeps running and circulates the compressor's waste heat around the evaporator for defrosting.

In surroundings below 15 °C this technique increasingly reaches its limits owing to the lower dew point with more ice forming on the evaporator. Under these conditions a circulating air defrost device has to run

in defrost mode virtually non-stop, generating no dehumidification performance whatsoever.

### Professional construction dryers defrost more effectively by means of hot gas – that is what makes the difference:

With a hot gas defrosting system, hot refrigerant is briefly conducted to the evaporator via a bypass, it quickly defrosts the evaporator and then returns to the normal circuit for drying operation.

Unlike air circulation, the hot gas method allows for radically briefer defrost phases in cold surroundings below 10-12 °C – which is a mandatory requirement for the effective dehumidification of unheated rooms, especially during the cold season. After all, the actual dehumidification process only takes place when defrosting is not in progress!

**Conclusion: Without hot gas defrosting effective construction drying cannot take place at temperatures below 10 °C!**

← TTK-ECO series – further information ...

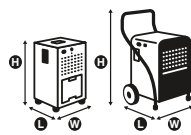


Technical data		TTK 75 ECO	TTK 165 ECO	TTK 166 ECO	TTK 170 ECO
Article number		1.120.001.110	1.120.001.115	1.120.001.116	1.120.001.120
Dehumidification performance / 24 h [litres]	At 30 °C / 80 % RH	20	50	50	50
	max.	21	52	52	52
Air volume [m³/h]		260	350	300	350
Operating range	Temperature [°C]	5 to 32	5 to 32	5 to 35	5 to 32
	Humidity [% RH]	30 to 90	30 to 90	10 to 95	30 to 90
Input voltage [V/Hz]		220-240/50	230/50	220-240/50	230/50
Max. power input [kW]		0.35	0.82	0.95	0.82
Nominal current / recommended fusing [A]		1.5/10	3.7/10	4/10	3.7/10
Refrigerant* Type / Amount [g]		R-290/100	R-290/230	R-290/200	R-290/230
GWP factor* / CO <sub>2</sub> equivalent* [t]		3/0.0003	3/0.00069	3/0.0006	3/0.00069
Water tank [litres]		4	5	7	5
Sound level (distance 1 m) [dB(A)]		46	56	56	56
Length [mm]		295	495	480	495
Width [mm]		305	455	450	455
Height [mm]		562	900	910	900
Weight [kg]		19	31	30	31
Equipment and functions		TTK 75 ECO	TTK 165 ECO	TTK 166 ECO	TTK 170 ECO
Automatic defrosting	Hot gas	■	–	–	■
	Air circulation/electronic	–	■	■	–
Automatic dehumidification	Adjustable analogue hygrostat	–	–	–	□
	Electronic hygrostat with digital display	–	–	■	–
Filling level warning light indicating that the water tank is full		■	■	■	■
Overflow protection with automatic switch-off		■	■	■	■
Washable air filter		■	■	■	■
Operating hours counter		■	–	–	■
Dual counter for operating and kilowatt hours		–	–	–	–
Timer function / Memory function		– / –	– / –	■ / ■	– / ■
Protective bars for the control panel		–	–	–	–
Cable holder		■	■	■	■
Carry / transport handle(s)		■	■	■	■
Rubber feet / Full-rubber wheels		■ / –	■ / ■	■ / ■	■ / ■
Swivel castors with wheel lock		–	–	–	–
Carriage design		–	■	■	■
Stackable		–	–	–	–
Connection for external condensation draining		■	■	■	■
Optional condensate pump assembly		□	□	□	□
Accessories (consumables)		TTK 75 ECO	TTK 165 ECO	TTK 166 ECO	TTK 170 ECO
Air filter (filter fleece)		Art. no. 7.710.000.825	Art. no. 7.710.000.827	Art. no. 7.710.000.850	Art. no. 7.710.000.827
Available accessories		TTK 75 ECO	TTK 165 ECO	TTK 166 ECO	TTK 170 ECO
Condensate pump <sup>1</sup> external		Art. no. 6.100.003.020	Art. no. 6.100.003.020	Art. no. 6.100.003.020	Art. no. 6.100.003.020
External hygrostat	detailed description on the right	–	–	integrated hygrostat	Art. no. 6.100.002.044
Hose adapter connecting piece		–	–	–	–
Air transport hose		–	–	–	–







Technical data		TTK 171 ECO	TTK 380 ECO	TTK 570 ECO
Article number		1.120.001.125	1.120.001.160	1.120.001.180
Dehumidification performance / 24 h [litres]	At 30 °C / 80 % RH	51	79	100
	max.	52	80	110
Air volume [m <sup>3</sup> /h]		450	950	1,000
Operating range	Temperature [°C]	5 to 30	5 to 32	5 to 32
	Humidity [% RH]	20 to 90	30 to 90	30 to 90
Input voltage [V/Hz]		220-240/50	220-240/50	220-240/50
Max. power input [kW]		0.7	0.95	1.95
Nominal current / recommended fusing [A]		3.6/16	4.2/10	8.1/16
Refrigerant* Type / Amount [g]		R-290/230	R-290/300	R-454C/1,000
GWP factor* / CO <sub>2</sub> equivalent* [t]		3/0.00069	3/0.00069	146/0.146
Water tank [litres]		5.5	9.5	–
Sound level (distance 1 m) [dB(A)]		52	65	67
Length [mm]		525	530	538
Width [mm]		450	575	698
Height [mm]		900	1,060	1,006
Weight [kg]		36.5	50	64
				
Equipment and functions		TTK 171 ECO	TTK 380 ECO	TTK 570 ECO
Automatic defrosting	Hot gas	–	■	■
	Air circulation/electronic	■	–	–
Automatic dehumidification	Adjustable analogue hygrostat	–	□	□
	Electronic hygrostat with digital display	■	–	–
Filling level warning light indicating that the water tank is full		■	■	–
Overflow protection with automatic switch-off		■	■	–
Washable air filter		■	■	■
Operating hours counter		–	■	■
Dual counter for operating and kilowatt hours		–	–	–
Timer function / Memory function		■ / ■	– / ■	– / –
Protective bars for the control panel		–	–	–
Cable holder		■	■	■
Carry / transport handle(s)		■	■	■
Rubber feet / Full-rubber wheels		■ / ■	■ / ■	■ / ■
Swivel castors with wheel lock		–	–	–
Carriage design		■	■	■
Stackable		–	–	–
Connection for external condensation draining		■	■	■
Optional condensate pump assembly		□	□	□
Accessories (consumables)		TTK 171 ECO	TTK 380 ECO	TTK 570 ECO
Air filter (filter fleece)		7.710.000.826	7.710.000.851	7.710.000.852
Available accessories		TTK 171 ECO	TTK 380 ECO	TTK 570 ECO
Condensate pump <sup>1</sup> external	detailed description on the right	6.100.003.020	6.100.003.020	6.100.003.020
External hygrostat		integrated hygrostat	6.100.002.044	6.100.002.044
Hose adapter connecting piece		7.331.001.160	–	–
Air transport hose		6.100.001.125	–	–

**Available accessories**

**Condensate pump**

Suitable for external connection to all dehumidifiers of the series TTK-ECO.



- Voltage: 220 V (50/60 Hz)
- Performance 58/55 watts
- Max. pumping height 5 m
- Internal control valve
- Max. outer ø of feed hose: 25 mm
- Inner ø of discharge hose: 5 mm

Art. no.: 6.100.003.020

**Room hygrostat HG 110**

Suitable for external connection to TTK 170 / 380 / 570 ECO.



- Measuring range 30 to 100 % RH
- Operating range 0 to 60 °C, 35 to 100 % RH
- Cable length 3 m

Art. no.: 6.100.002.044

**Hose connection for TTK 171 ECO**

Hose adapter connecting piece dry air outlet (ø 160 mm)



Art. no.: 7.331.001.160



Air transport hose Tronect T-FL, length 6 m, ø 160 mm

Art. no.: 6.100.001.125

- Standard equipment
- Optionally available equipment

<sup>1</sup> Without automatic dehumidifier switch-off

\* 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.

Trotec

Dehumidification

Humidification

Heating

Ventilation

Air conditioning

Air cleaning

Disinfection and Odour neutralization

Accessories

**A FEW PRACTICAL BENEFITS :**

Professional quality  
"made in Germany" –  
originally produced by Trotec

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 with  
maintenance-friendly housing

Powerful air circulating radial fan

Heat exchanger with  
corrosion-resistant CDC coating

Infinitely adjustable hygrostat

Fully automatic operation

High and low pressure switch

Prepared for wall mounting

Optionally available with  
external condensate pump

# Ideal for indoor swimming pools and whirlpools

## Pool dehumidifiers of the DS series



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



DS 60

DS 30

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



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



### Too much moisture in the wet room – a problem with serious consequences

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

The decisive factor for the amount of evaporated water is the pool size. Depending on the temperature of the room and the water typically 1.2 litres of water per square metre of the pool size evaporate each day.

For a pool sized 5 x 4 metres that means 24 litres emitted to the air every day and if the pool is highly frequented, this evaporation rate increases significantly.

Here the critical limit can quickly be exceeded resulting not only in circulatory problems affecting our well-being but also in rot, corrosion or mould formation, thus causing severe problems for the building structure.

#### So what to do with the excessive moisture in the air?

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 evacuation simply cannot be ensured.

### The solution: Pool dehumidifiers of the DS series

These dehumidifiers are developed and manufactured in Germany according to the highest quality standards and have been specifically designed for the dehumidification of wet rooms to ensure that they can permanently guarantee an equally economical and high-performance dehumidification of indoor swimming pools.

The dehumidifiers of the DS series are designed to be hard-wearing, to operate fully automatically and to withdraw large amounts of moisture from the room air in continuous operation. With their autonomous recirculation operation these wall-mounted devices, delivered ready-to-connect, can be immediately integrated into every working environment without difficulty or the need for any additional structural measures.

#### DS as in doubtlessly sturdy

The continuous operation in wet rooms requires excellent material quality to ensure a long, failure-free service life. Dehumidifiers of the DS series are optimally prepared since they were specifically designed for the unfavourable surrounding conditions in indoor swimming pools.

Their solid metal construction for wall mounting is integrated in a maintenance-friendly plastic casing that protects it against corrosion. And the aluminium surfaces of evaporator and condenser on the inside are additionally CDC-coated. This cathodic dip coating (CDC) is resistant to solvents and corrosion as well as to acids and alkalis rendering the heat exchanger extremely resistant even to particularly reactive air mixtures such as chloramines.

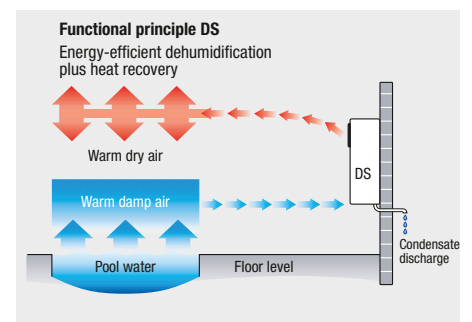
#### DS as in dependable strength

Dehumidifiers of the DS series are powerful compression refrigeration dryers with a high-quality automatic hot gas defrost system. In this process, the sucked-in humid 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 as warm, dry air. The professional hot gas defrost system allows for brief defrost phases and an uninterrupted continuous operation.

#### DS as in determined saver

Owing to their low energy consumption the dehumidifiers of the DS series permit a fully automatic operation that is also economical. With their closed refrigerant compression circuit the devices additionally have the effect of a heat pump:

Whilst the dehumidifiers withdraw large amounts of moisture from the room air, they absorb the potential energy and emit up to 1.9 kW (DS 30) or 3.5 kW (DS 60) of useful heat to the room air for each kilowatt previously spent for dehumidification. This way, heating costs can be reduced along with the pool air dehumidification!



In case of a higher heating demand the devices can optionally also be equipped with an additional electric heating.

#### DS as in divine silence

The fans of the DS series have been specifically designed for the use in occupied wet rooms:

On the one hand, these powerful air circulating radial fans can suck in large amounts of humidity from the ambient air with their aluminium fan wheel. On the other, they are characterized by particularly quiet running properties for a dehumidification operation in delightful tranquillity.

**Simple installation – immediately ready for use**

The pool dehumidifiers of the DS series are delivered completely ready-to-install. Before start-up you only have to assemble the supplied wall mount.



Technical data		DS 30	DS 60
Article number		1.125.000.319	1.125.000.335
Dehumidification performance		see performance charts	see performance charts
Suitable for tank sizes of up to [m <sup>2</sup> ] <sup>1</sup>		25	50
Air volume freely blowing [m <sup>3</sup> /h]		700	1,280
Input voltage [V/Hz]		230 / 50	230 / 50
Nominal current / Fuse [A]		4.4 / 16	7.5 / 16
Electrical connection (plug)		CEE 7/7	CEE 7/7
Power input [kW]		0.75	1.2
Heat emission <sup>2</sup> [kW]		1.9	3.5
Coefficient of performance (C.O.P.) <sup>2</sup>		2.5	2.9
Refrigerant <sup>3</sup> Type / Amount [g]		R-407C / 500	R-407C / 800
GWP factor <sup>3</sup> / CO <sub>2</sub> equivalent <sup>3</sup> [t]		1,774 / 0.89	1,774 / 1.42
Sound level (distance 3 m) [dB(A)]		50	52
Operating range	Temperature [°C]	0 to 40	0 to 40
	max. RH [%]	90	90
Length [mm]		265	265
Width [mm]		800	1,265
Height [mm]		665	665
Weight [kg]		46	70
Type of protection		IP45	IP45
Condensate discharge connection [mm]		10	10
Standard features		DS 30	DS 60
Automatic hot gas defrosting		■	■
Integrated hygrostat (infinitely variable)		■	■
Smoothly running radial fan		■	■
Corrosion-resistant plastic housing		■	■
Heat exchanger with CDC coating		■	■
Preparation for wall mounting		■	■
Optional accessories		DS 30	DS 60
External condensate pump		Article number 6.100.000.019	Article number 6.100.000.019
Heating capacity [kW]		2	4

■ Standard equipment

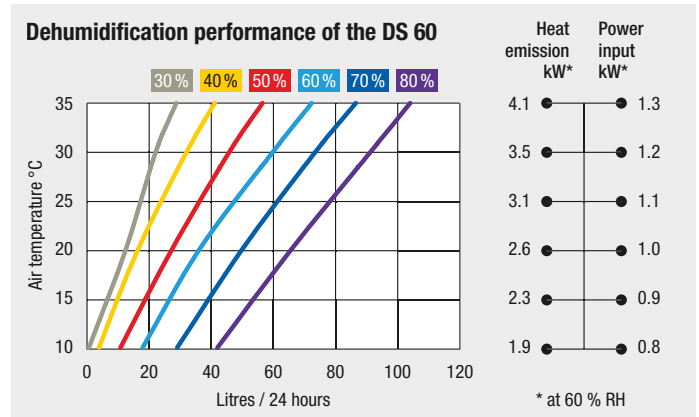
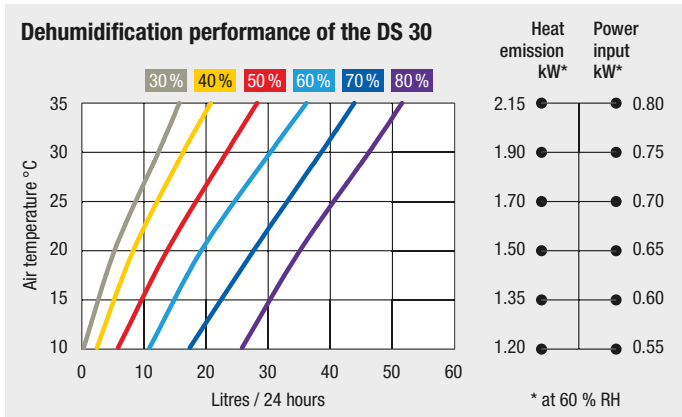
<sup>1</sup> for private indoor swimming pools; calculation basis: evaporation of 1.2 litres per square metre of pool per day (room temperature 30 °C, humidity 60 % RH, water temperature 27 °C). Changing parameters such as the frequency of use or the type of pool cover require an individual recalculation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

<sup>2</sup> 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)

<sup>3</sup> 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.



## Performance charts of the DS series



① operating control lamp, ② connector for direct supply, ③ service socket, ④ feed hose connection, ⑤ discharge hose connection

## External condensate pump

With its extremely robust and hard-wearing V4A housing this external condensate pump was designed specifically for the failure-free continuous operation in combination with pool dehumidifiers of the DS series, but can also be used with other dehumidifiers without a hitch.



The power for the dehumidifier can be supplied via the pump's service socket. Another option is the direct supply; provided for this purpose are a female connector and internal plug connections ready to install.

### Unique – adaptive operational control of the dehumidifier

For a failure-free continuous operation the pump comes equipped with a safety function for the automatic switch-off of the connected dehumidifier in case of overload. Should the condensate supply tem-

porarily exceed the pump's capacity, the pump automatically switches the dehumidifier off and back on once the load range is again reached.

Owing to the rubber feet at the bottom and the suspension slots at the rear the condensate pump can be flexibly applied both when mounted to the wall or positioned on the floor.

### Special features:

- ✓ Professional quality "made in Germany" – originally produced by Trotec
- ✓ Designed for continuous operation when used in combination with pool dehumidifiers
- ✓ Robust construction made of high-quality V4A stainless steel with additional protective coating
- ✓ Effective V4A corrosion protection – extremely resistant even to particularly reactive air mixtures such as chloramines
- ✓ Adaptive operational control of the connected dehumidifier
- ✓ Flexible application when mounted to the wall or positioned on the floor



Technical data of the external condensate pump		
Article number	6.100.000.019	
Hose connector [ø mm]	Feed	½ inch *
	Drain	12
Tank volume [l]	0.8	
Pump height [m]	4.3	
Feed rate [l/h]	160	
Input voltage [V/Hz]	230/50	
Type of protection	IP44	
Length [mm]	152	
Width [mm]	421	
Height [mm]	292	
Weight [kg]	8.45	

\* By means of the supplied adapter sleeve can be adjusted for ø between 9 and 20 mm

Trotec GmbH

Grebbener Straße 7  
52525 Heinsberg  
Germany

Phone +49 2452 962-400  
Fax +49 2452 962-200

info@trotec.com  
www.trotec.com



📍 Kompleks Green Ville Blok C No. 3A  
Jalan Mangga Raya, Kebun Jeruk  
Jakarta Barat 11510 - Indonesia

☎ +62 21 2119-4723

✉ halo@clarustech.id

🌐 clarustech.id



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