

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



Need to rent an desiccant dehumidifier and need one fast?

Use the quick and cost-effective rental solutions from Europe's leading renter for sub-rentals:

- unbeatable rental prices
- attractive transport costs
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www.tkl-rent.net

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!



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 or directly use the QR Code.

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 ¹	■	■	■	■	■	■	■	■	■	■	■
PLC control unit	□	□	□	□	□	■	■	■	■	■	■
Flowmatic volumetric flow control	□	□	□	□	□	■	■	■	■	■	■
Configurable air direction reversal	■	■	■	■	■	■	■	■	■	■	■
Terminals external On/Off	■	■	■	■	■	■	■	■	■	■	■
Terminals hygrostat	■	■	■	■	■	■	■	■	■	■	■
Potential-free contacts (operation, fault, filter)	■	■	■	■	■	■	■	■	■	■	■

¹ 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

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

TTR industrial desiccant dehumidifiers with hygienic design



Upon the request of the customer, we configure special industrial desiccant dehumidifiers for the pharmaceutical or food industry, which account for the high hygienic requirements and contain a maximum of bacteriostatic materials.

The entire process air conveying section is made exclusively of stainless steel and with its heat regeneration of over 120 °C a non-corrosive sorption rotor ensures an environment inimical to germs for maximum hygiene.

Special model XTR 2300 for example: Complete facility with air-cooled chilled water unit, combined condensation and desiccant dehumidification, Flowmatic flow rate control of dry air, moisture and temperature regulation, as well as post-tempering of dry air for conditioning a production hall in the food industry. To prevent condensation on the outer layer, the housing has also been thermally decoupled and insulated.

*You need an individual special solution as well?
 Just give us a call. We would be happy to advise you personally!*

TTR industrial desiccant dehumidifiers for PWIS-free dry air



For the application in the automotive industry, and especially in paint shops, we can provide PWIS-free special models of our TTR desiccant dehumidifiers at the request of the customer, which are equipped with a special rotor entirely made of silicone-free components. As is the case for all TTR units, this model's desiccant wheel is also washable and non-corrosive, it does not discharge any desiccant and resists air saturated with moisture.

Besides the dehumidification rotor, the seals, filter elements and other components of this special model also contain no silicone.

TTR industrial desiccant dehumidifiers for extremely low dew points



For application conditions in trace moisture areas, e.g. in semiconductor or lithium battery manufacturing, where the relative humidity in the production environment must be constantly kept below 1 %, we are able to configure particularly powerful industrial desiccant dehumidifiers at the customer's request, which will be equipped with a special, durable rotor guaranteeing an extremely low dew point of below -50 °C in continuous operation.



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.

Trotec

Dehumidification

Humidification

Heating

Ventilation

Air conditioning

Air cleaning

Odour control

Accessories

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 ¹ [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]		625	625	1,280	1,280	1,280
Width [mm]		650	650	760	760	760
Height [mm]		940	940	1,300	1,300	1,300
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
Available accessories		TTR 800	TTR 1400	TTR 2000	TTR 2800	TTR 3700
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 128				
Optional additional equipment		We have compiled an overview of all equipment options for you on pages 10/11				

¹ 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.



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 or directly use the QR Code.



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 ¹ [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)

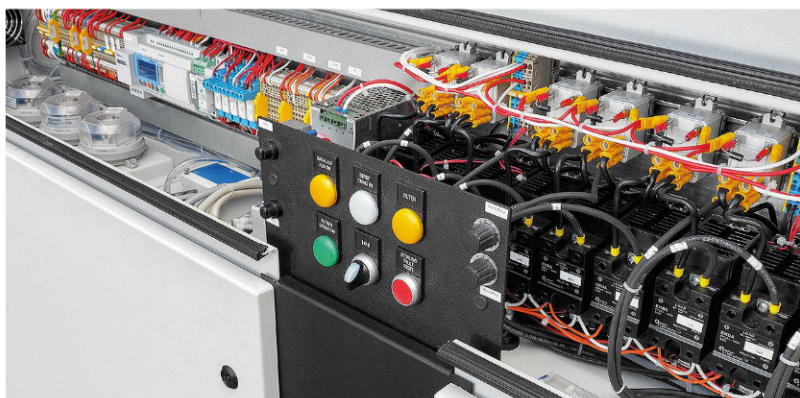
TTR Trisorp Dual

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]		1,750	1,750	1,750	2,100	2,100	2,100
Width [mm]		1,100	1,100	1,100	1,500	1,500	1,500
Height [mm]		1,700	1,700	1,700	2,100	2,100	2,100
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		
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 128					
Optional additional equipment		We have compiled an overview of all equipment options for you on pages 10/11					

¹ Nominal data at 20 °C/60 % RH

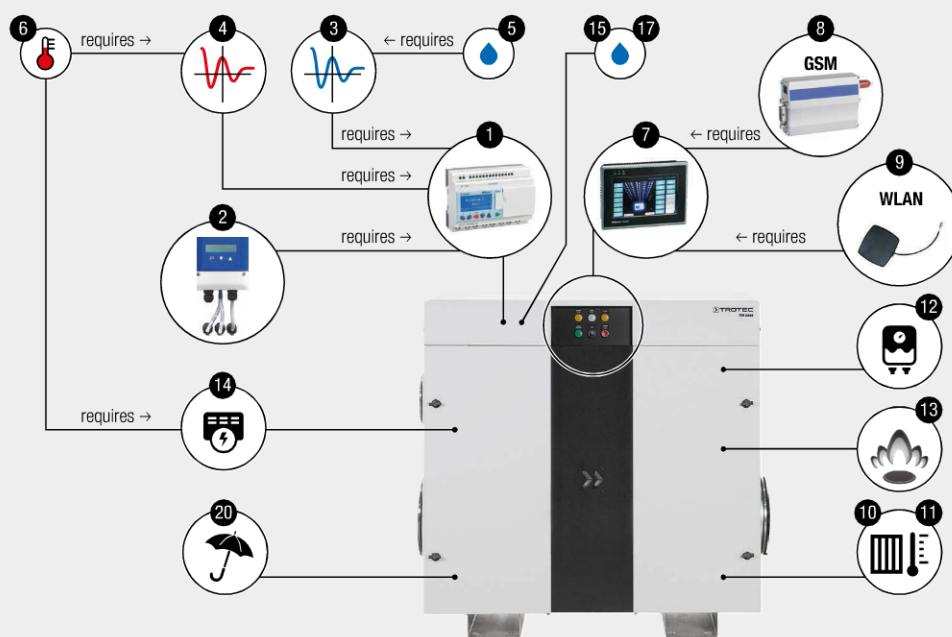


All TTR units comes equipped ex works with separate G4 air filters in Z-line design, both for process and regeneration air. A corresponding filter monitoring unit with warning light is also fitted as standard.



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.

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



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.

Additional equipment options (article number)		TTR 800	TTR 1400	TTR 2000	TTR 2800	TTR 3700
1	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)	6.100.010.410	6.100.010.410	6.100.010.410	6.100.010.410	6.100.010.410
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)	6.100.010.420	6.100.010.420	6.100.010.420	6.100.010.420	6.100.010.420
8	GSM remote connection (requires 7)	6.100.010.425	6.100.010.425	6.100.010.425	6.100.010.425	6.100.010.425
9	WLAN remote connection (requires 7)	6.100.010.430	6.100.010.430	6.100.010.430	6.100.010.430	6.100.010.430
10	Integrated heat exchanger module	Standard	–	6.100.010.434	6.100.010.434	6.100.010.434
11		Stainless steel version	–	6.100.010.437	6.100.010.437	6.100.010.437
12	Steam heater for regeneration air	–	–	6.100.010.440	6.100.010.440	6.100.010.440
13	Gas heater for regeneration air	–	–	6.100.010.445	6.100.010.445	6.100.010.445
14	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
15	External hygrostat HG 120	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040	6.100.002.040
16	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
17	External hygrostat HG 125, electronic	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042	6.100.002.042
18	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
19	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
20	Weather protection equipment	6.100.010.520	6.100.010.520	6.100.010.521	6.100.010.521	6.100.010.521
21	Transport frame, stackable, without castors	–	–	–	–	–
22	Castors for transport frame	–	–	–	–	–
23	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

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



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 recool/reheater (14), 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 (10, 11)

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. Also available as stainless steel version (11).

Steam heater (12)

For heating the regeneration air by means of saturated vapour.

Gas heater (13)

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

Electric reheater (14)

For heating the dry air additionally.

Hygrostat control (15, 17)

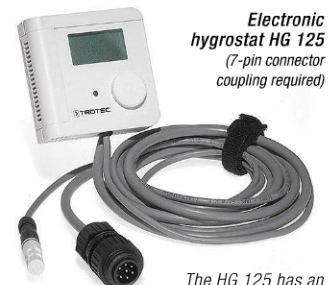
External hygrostat HG 120 (16) for humidity-dependent control of the TTR industrial desiccant dehumidifiers, optionally with or without permanent ventilation. A 4-pin coupling is required for connecting the HG 120 (16).

The electronic hygrostat HG 125 (17) 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 (18).

Both connector couplings (16, 18) come with cable and cable inlet for the connection to the terminal.

Weather protection equipment (20)

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



Electronic 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)

Additional equipment options (article number)			TTR 5200	TTR 6600	TTR 8200	TTR 10000	TTR 12000	TTR 13500
1	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)		6.100.010.420	6.100.010.420	6.100.010.420	6.100.010.420	6.100.010.420	6.100.010.420
8	GSM remote connection (requires 7)		6.100.010.425	6.100.010.425	6.100.010.425	6.100.010.425	6.100.010.425	6.100.010.425
9	WLAN remote connection (requires 7)		6.100.010.430	6.100.010.430	6.100.010.430	6.100.010.430	6.100.010.430	6.100.010.430
10	Integrated heat exchanger module	Standard	6.100.010.435	6.100.010.435	6.100.010.435	6.100.010.436	6.100.010.436	6.100.010.436
11		available in stainless	6.100.010.438	6.100.010.438	6.100.010.438	6.100.010.439	6.100.010.439	6.100.010.439
12	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
13	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
14	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
15	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
16	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
17	External hygrostat 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
18	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
19	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
20	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
21	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
22	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
23	Transport frame, stackable, with castors		—	—	—	—	—	—

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