

Compression Type Dehumidifiers

Technowell Compression Type Dehumidifiers offer ideal solutions to prevent the problems that high relative humidity can cause in commercial and industrial areas. Powerful commercial dehumidifiers are most effective at temperatures above 15 °C to reduce air humidity in large areas.

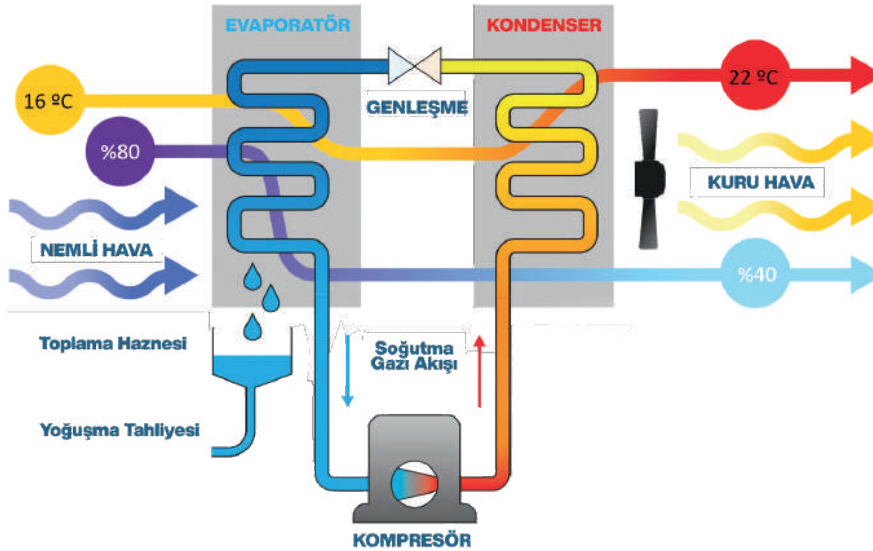
Compression type dehumidifiers provide reliable and clean dehumidification. They guard against moisture, mold, rust, and harmful bacteria. They play an important role in protecting machinery from corrosion, storing strategic products that need to be stored in a specific humidity range, protecting structures from moisture, and ensuring properly conditioned air for people.



How Does a Compression Type Dehumidifier Work?

It is accepted that the environment is indoor, according to the basic concept of dehumidification systems. Very small amounts of air can be allowed to enter the room. Thus, the ambient air is continuously passed through the dehumidifier and the condensed water is collected in a water tank. The dehumidifier is a device that works with a cooling cycle. When air comes into contact with a cooled surface, it leaves excess water on the surface due to its thermodynamic and physical properties.

In general, the fan absorbs high-relative-humidity ambient air, and some water is condensed by passing it through an evaporator with a cold surface. Because of the cooling, the absolute humidity of the air that releases moisture inside decreases, but the relative humidity remains high. The temperature of the air flowing over the condenser rises later, the relative humidity rate drops, and the air is released into the environment.



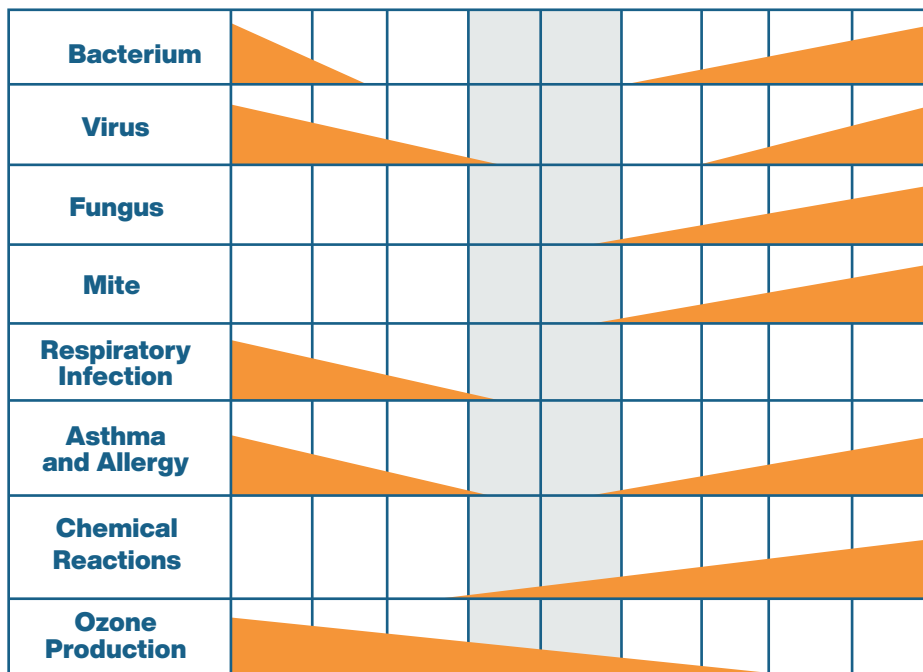
How Is Condensed Water Drained?

Water is usually thrown out of compression type dehumidifiers through a water tank or a drain hose. To prevent the water tank from overflowing, all appliances have an automatic shut-off and warning system.

Necessary Humidity Values for Ideal Comfort

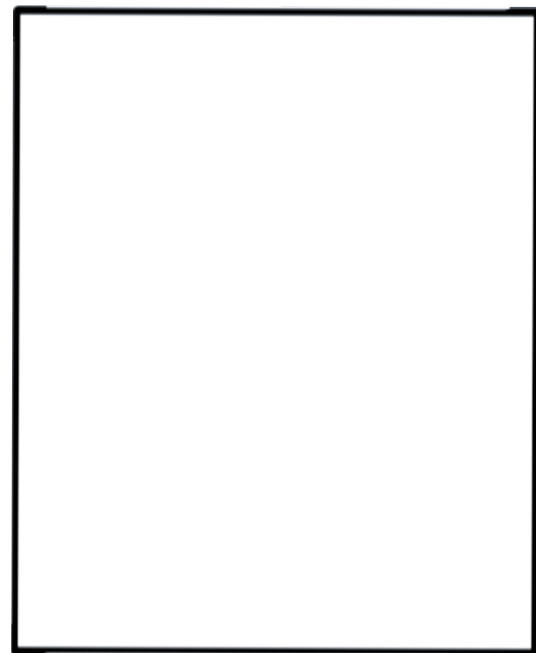
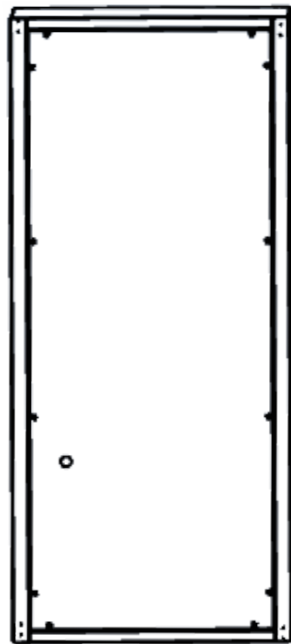
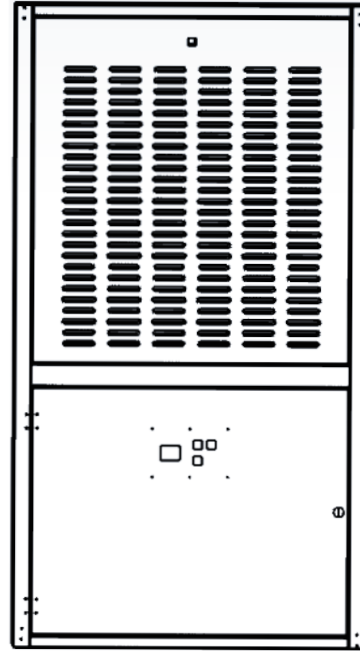
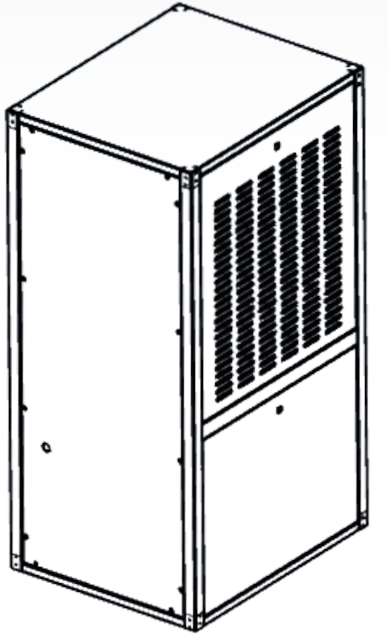
Some values, such as metabolic activity and airspeed, are taken into account when determining the optimum humidity values for ideal comfort and indoor air quality for people. Patients with asthma and heart disease, in particular, are affected far more quickly than healthy people from environments with poor-quality temperature and humidity. Furthermore, the optimal humidity and temperature levels required for most bacteria, viruses, and other microorganisms to multiply and reproduce have a negative impact on human life.

Optimum Humidity Value for Ideal Comfort and Indoor Air



Optimum Relative Humidity %45 - %55

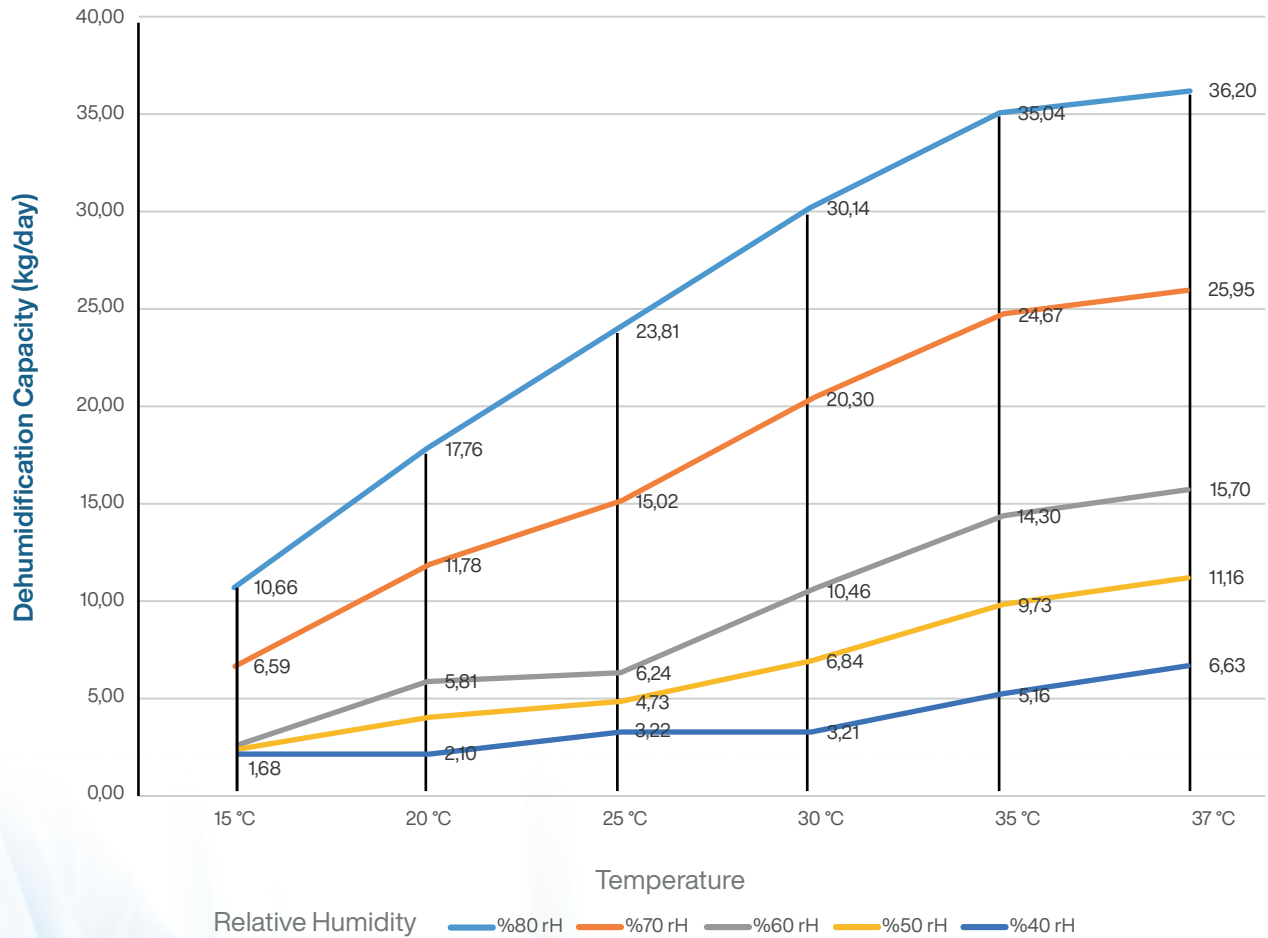
TECHNICAL FEATURES



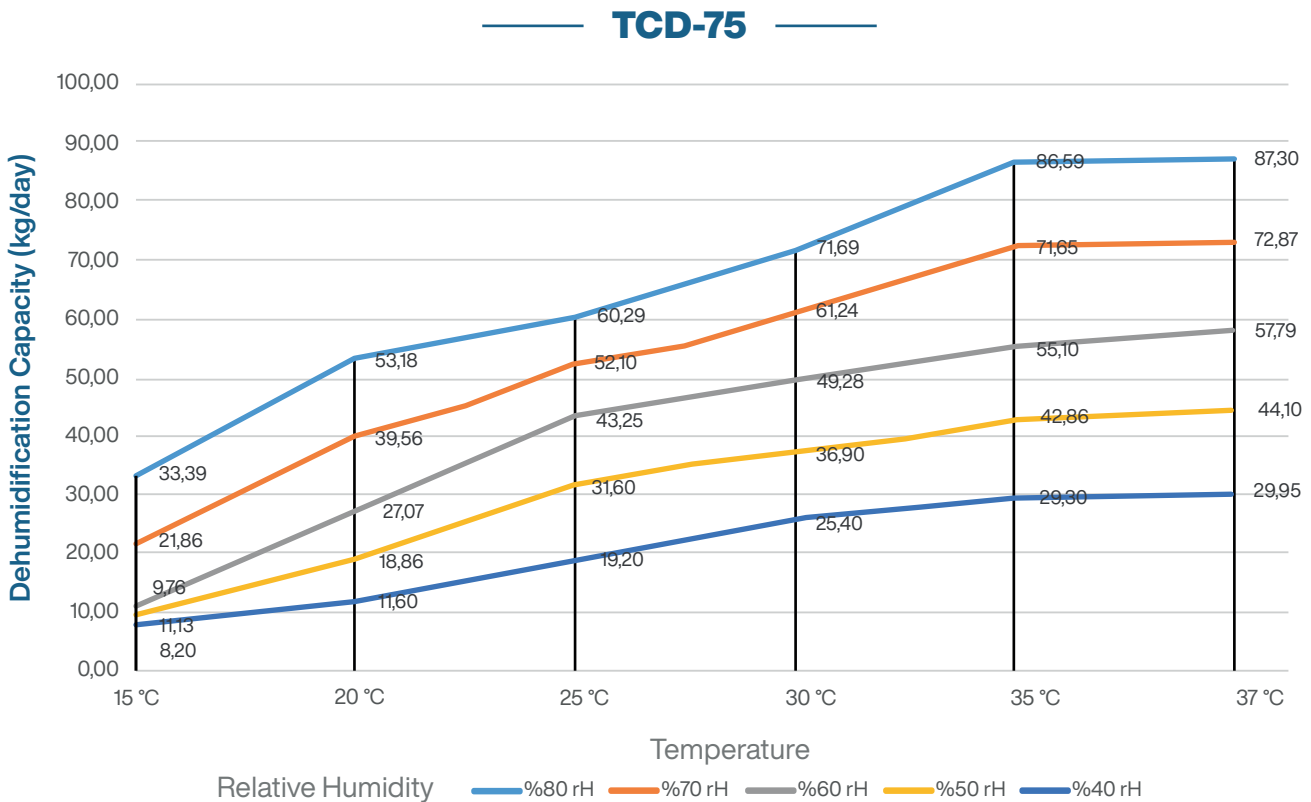
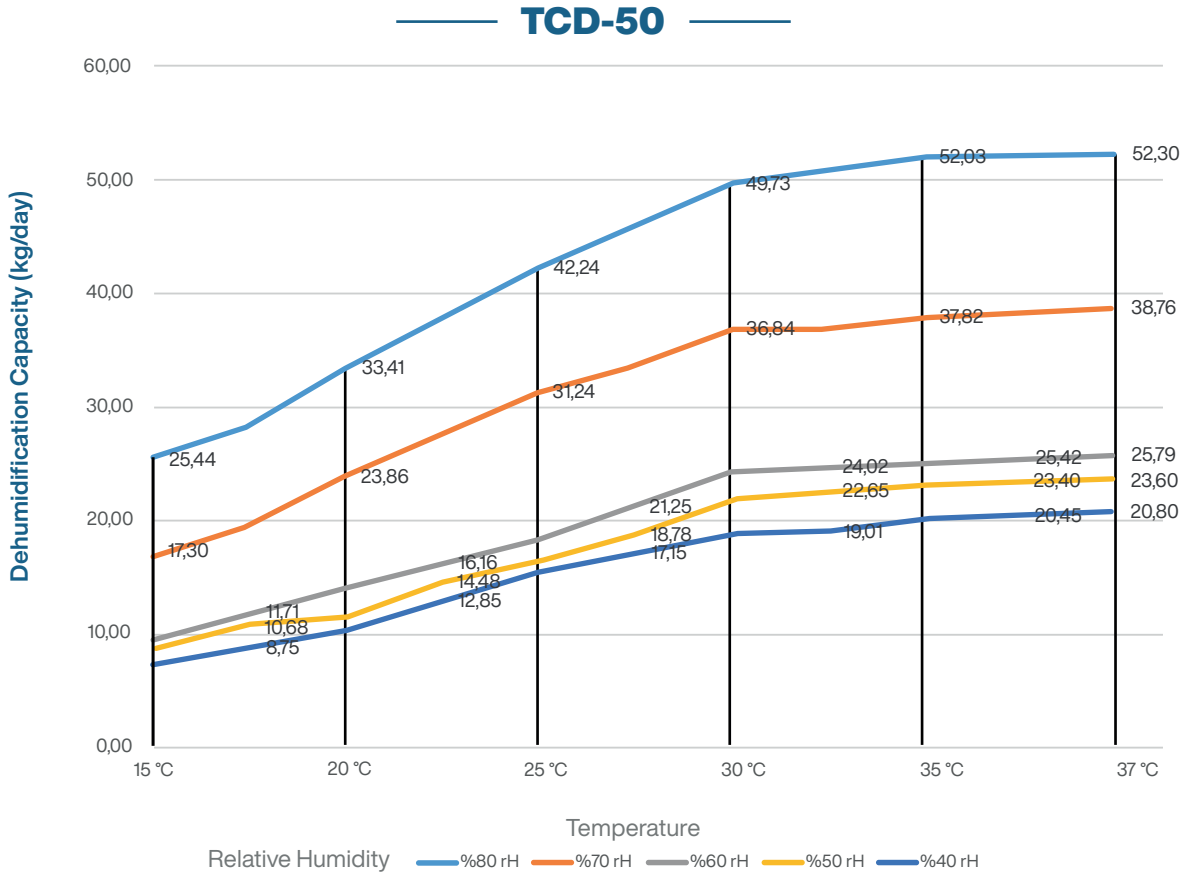
MODEL	TCD-30	TCD-50	TCD-75	TCD-125	TCD-165
DEHUMIDIFICATION CAPACITY (30°C DB- RH 80%)	30 kg/day	50 kg/day	75 kg/day	125 kg/day	165 kg/day
DEHUMIDIFICATION CAPACITY (20°C DB- RH 60%)	6 kg/day	14 kg/day	27 kg/day	43 kg/day	77 kg/day
RECOMMENDED ROOM AREA	40 m ²	70 m ²	100 m ²	150 m ²	250 m ²
HUMIDITY CONTROL RANGE	%30 - %80	%30 - %80	%30 - %80	%30 - %80	%30 - %80
RATED POWER	1,5 kW	2,2 kW	1,2 kW	2,04 kW	3,3 kW
OPERATION CURRENT	7,7 A	11,1 A	5,9 A	10,3 A	16 A
POWER SUPPLY	220 V - 50 Hz	220 V - 50 Hz	220 V - 50 Hz	220 V - 50 Hz	220 V - 50 Hz
REFRIGERANT	R134A	R134A	R410A	R410A	R410A
AMOUNT OF REFRIGERANT	1000 gr	1100 gr	950 gr	1600 gr	1800 gr
OPERATING TEMPERATURE RANGE	15 °C - 37 °C	15 °C - 37 °C	15 °C - 37 °C	15 °C - 37 °C	15 °C - 32 °C
SOUND LEVEL	≤54 dB(A)	≤47 dB(A)	≤47 dB(A)	≤49 dB(A)	≤49 dB(A)
AIR FLOW	350 m ³ /h	650 m ³ /h	650 m ³ /h	1100 m ³ /h	1100 m ³ /h
WATER TANK VOLUME	6 lt	Continuous drain	Continuous drain	Continuous drain	Continuous drain
DIMENSIONS AXBXC (mm)	442 x 812 x 524	487x802x412	542x1002x487	640x1173x520	640x1173x520

PERFORMANCE CURVES

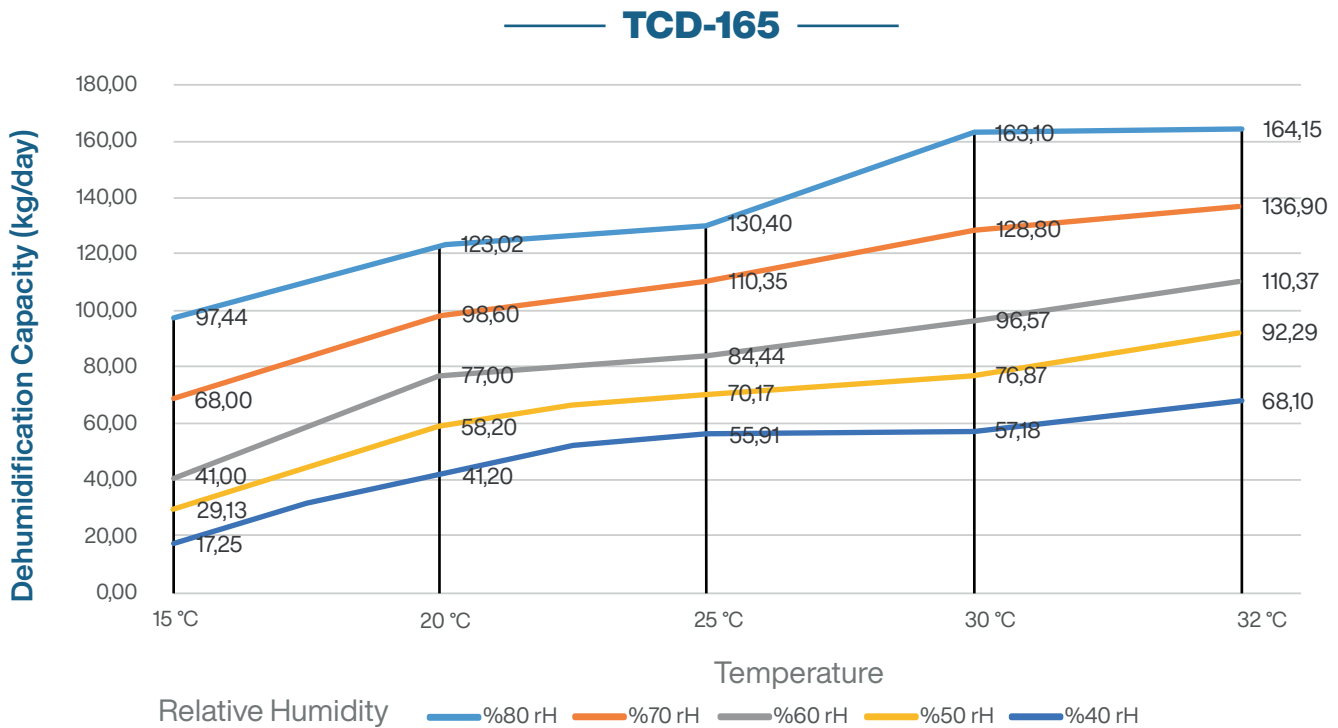
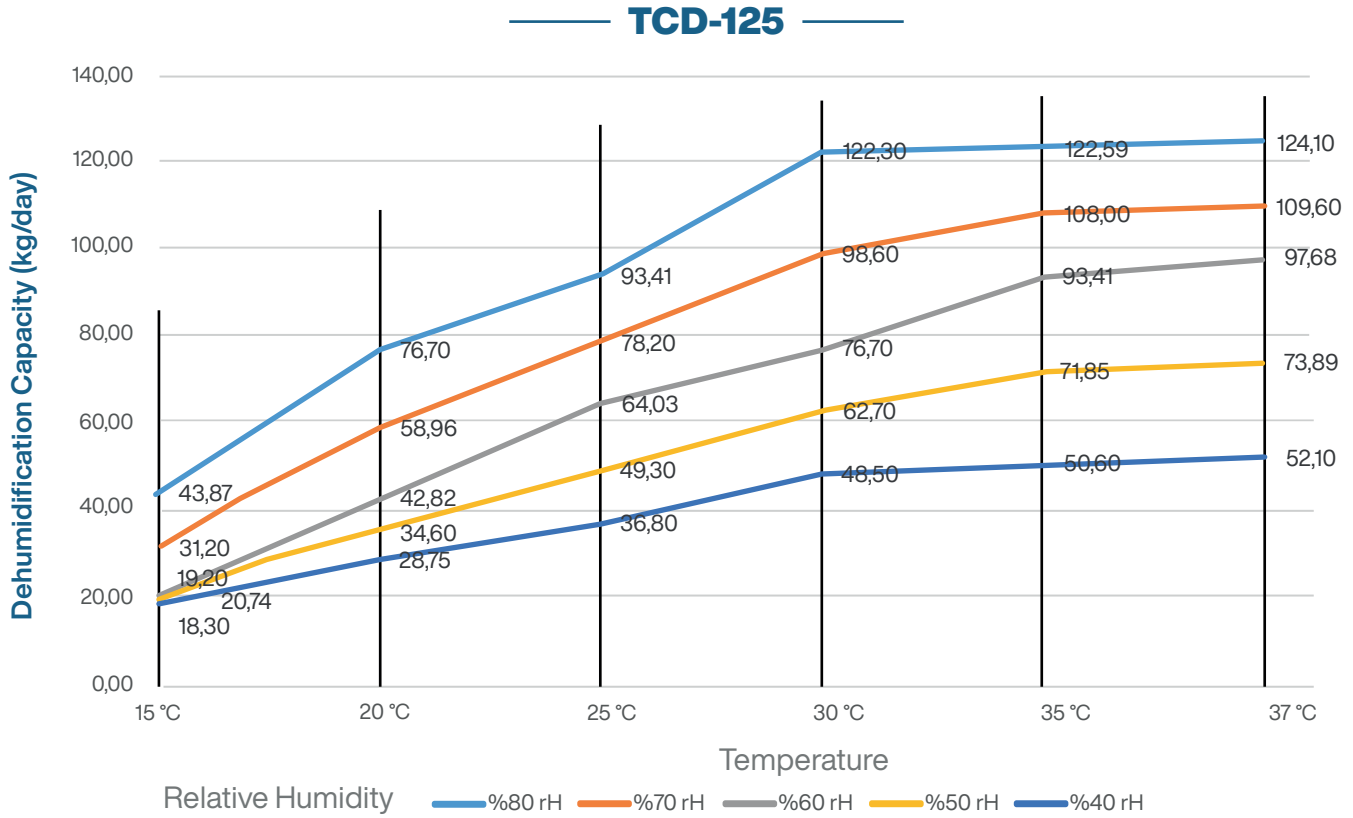
TCD-30



PERFORMANCE CURVES

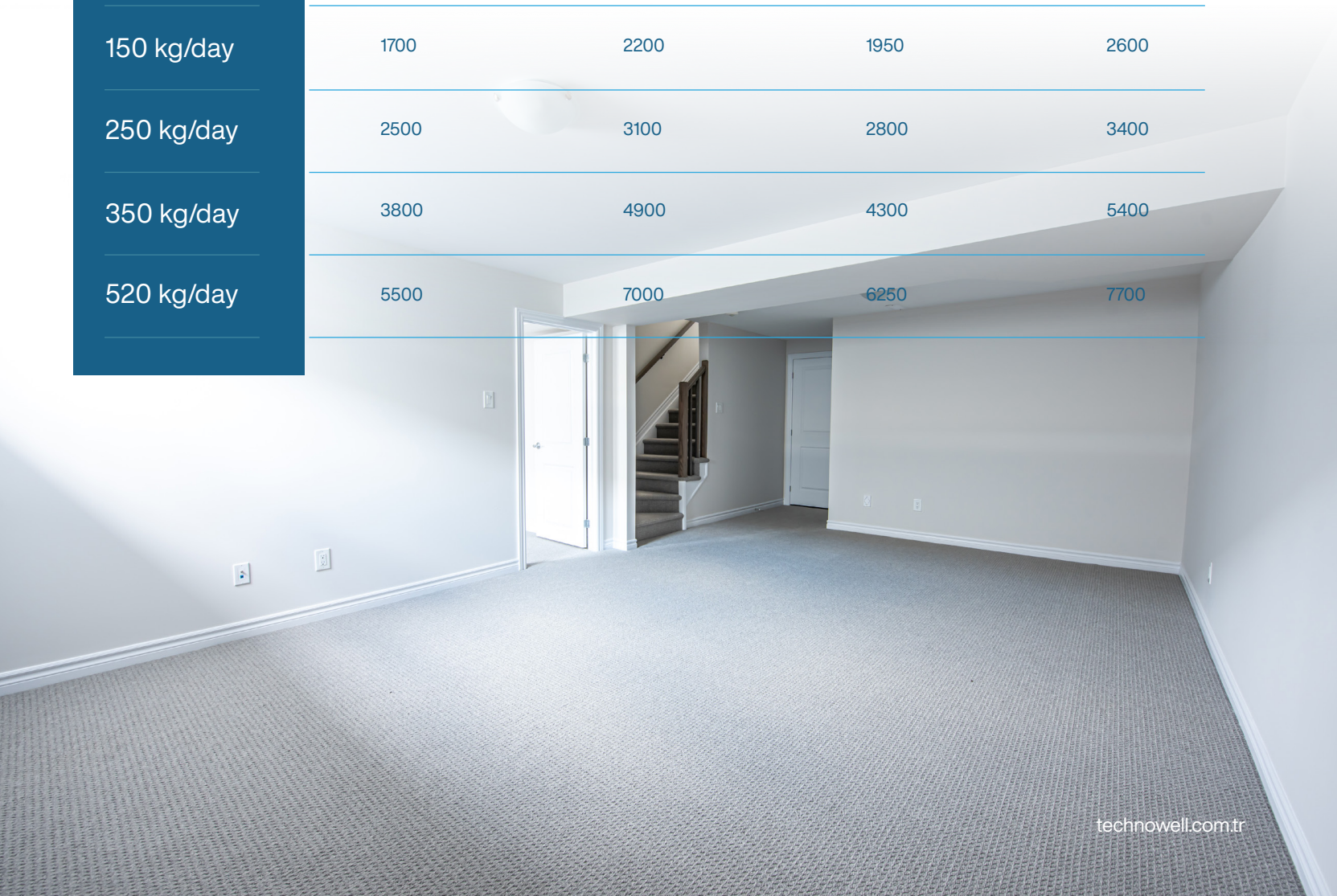


PERFORMANCE CURVES



Practical Spreadsheet For Basements

Capacity	Basement		Lower Basement	
	Damp Places (m ³)	Places with Low Damp (m ³)	Damp Places (m ³)	Places with Low Damp (m ³)
20 - 35 kg/day	350	450	400	500
40 - 45 kg/day	500	650	580	700
60 - 65 kg/day	650	850	750	950
90 - 100 kg/day	1000	1300	1150	1450
150 kg/day	1700	2200	1950	2600
250 kg/day	2500	3100	2800	3400
350 kg/day	3800	4900	4300	5400
520 kg/day	5500	7000	6250	7700



Practical Spreadsheet for Indoor Swimming Pools

The amount of water in kg evaporating from the pool surface per unit m² per hour

Room Temperature °C
20
22
24
26
28
30

%RH	Pool Water Temperature °C										
	24	26	27	28	29	30	31	32	33	34	38
50	0,14	0,15	0,18	0,18	0,20	0,22	0,24	0,26	0,28	0,31	0,38
60	0,12	0,13	0,15	0,16	0,18	0,20	0,23	0,24	0,27	0,29	0,37
50	0,12	0,13	0,15	0,17	0,19	0,20	0,23	0,25	0,27	0,29	0,37
60	0,11	0,12	0,14	0,16	0,18	0,19	0,21	0,23	0,25	0,28	0,35
50	0,11	0,13	0,14	0,16	0,17	0,194	0,21	0,26	0,28	0,31	0,38
60	0,08	0,10	0,12	0,13	0,15	0,17	0,19	0,24	0,27	0,29	0,37
50	0,14	0,15	0,18	0,18	0,20	0,22	0,24	0,21	0,26	0,28	0,36
60	0,12	0,13	0,15	0,16	0,18	0,20	0,23	0,24	0,23	0,25	0,32
50	0,08	0,10	0,12	0,13	0,15	0,17	0,19	0,21	0,23	0,25	0,33
60	0,06	0,07	0,09	0,11	0,12	0,14	0,16	0,18	0,20	0,23	0,31
50	0,07	0,08	0,10	0,12	0,14	0,16	0,17	0,19	0,22	0,24	0,32
60	0,03	0,05	0,06	0,08	0,10	0,12	0,14	0,16	0,18	0,20	0,28



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