MICROWELL

WALL-MOUNTED SWIMMING POOL DEHUMIDIFIER

USER´S MANUAL

MODEL: DRY 300 & 500 PLASTIK

Thank you for your decision to purchase our device.
Please read this user manual carefully before switching on the device.
Please keep the instructions in this practical guide for your quick know-how.
We do not take responsibility or warranty in case of damage, loss or impairment caused by incorrect usage, or by usage for other purposes not described in this manual.

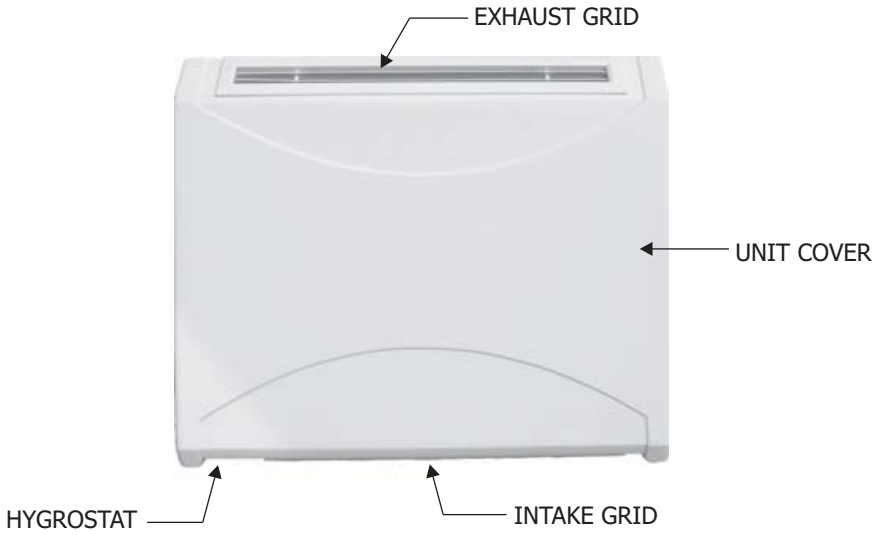
Contents: 1. Safety measures
2. Specifications for use
3. Instructions for use
4. Instructions for maintenance
5. Servicing the unit
6. Installation guide
7. Technical data

1. SAFETY MEASURES

- Do not manipulate with the device with wet hands.
- Do not spray any flammable substances into the equipment; this might lead to fire.
- Do not clean the device with water.
- Do not clean the equipment with aggressive cleaning agents, this might lead to damage or deformations.
- When cleaning plastic parts do not use any cleaning agents unsuitable for the cover of the dehumidifier (household cleaning agents, solvents, bleaching agents, benzene, diluents, rough cleaning powder, cresol, chemical agents). Instead, sweep the dehumidifier cover with a soft cloth or a sponge.
- Never throw or insert any objects into any hose or opening.
- The cover is made of plastic. Do not manipulate with lighted cigarette, cigarette ashes, or any other kind of fire in vicinity to this part.
- Use this device exclusively for the intended purpose, as described in the attached instruction manual. Do not use parts which are not recommended.
- Never block the air opening of the product. Protect the air openings from clogging by particles, hair etc.
- When the device is not running correctly (smoke, smell etc.), shut down the device by a circuit breaker in the switchboard.
- Repair and dislocation must be performed exclusively by a service technician.
- Before cleaning the device, switch off the circuit breaker in the switchboard.
- Do not place any objects onto the device.
- When you do not intend to use the device for a longer time, switch off the circuit breaker.

2. SPECIFICATIONS FOR USE

The units are designed especially for use in indoor swimming pools, spas and saunas. They can also be very useful in laundries, drying rooms and elsewhere.
The Microwell DRY 300 PLASTIK is designed for halls with a swimming pool surface area of up to 30 m^2. The Microwell DRY 500 PLASTIK is designed for halls with a swimming pool surface area of up to 60 m^2.
The condition for using the unit is maintaining the room temperature within the range between a minimum of 22°C and a maximum of 35°C. Ideally, the air in the room should be 2-3 °C warmer than the water in the swimming pool.



3. INSTRUCTIONS FOR USE

3.1. Humidity control by means of the built-in humidistat

The built-in humidistat is located at the bottom of the unit, on the left. The built-in hygrostat reads the humidity of the incoming air and, depending on the set value, does or does not switch the compressor on. In the central position of the regulator, the unit secures the average relative humidity of 60%. In indoor swimming pool halls, the correct air humidity should range from 55 to 65%. Decreasing the humidity under this range is not desirable either from the physiological viewpoint or from the viewpoint of protection of the building. Moreover, it increases the electricity consumption. The humidistat can be controlled by the user.

A view at the hygrostat scale

3.2. Humidity control by means of a remote humidistat (upon request)

The dehumidifier may be, upon request, equipped with a remote humidistat. In such case, the dehumidifier has two humidistats. One of them is built in the dehumidifier; the other one is remote, in a separate casing. The dehumidifier is primarily controlled by the remote humidistat, provided that the built-in humidistat in the dehumidifier is set for a higher value than the remote humidistat. If the built-in humidistat were set for a lower value than the remote humidistat, it would take over and the control of the dehumidifier would not react to the signals from the remote humidistat. Therefore, it is best to set the built-in humidistat to the value of 70 % RH or more. The built-in humidistat fulfils a back-up function, should the remote humidistat fail to function or should its battery go flat. It is best to set the remote humidistat to the value in the extent of 55 to 65 % RH. Decreasing the humidity under this range is not desirable either from the physiological viewpoint or from the viewpoint of protection of the building. Moreover, it increases the electricity consumption.

Left: Remote control receiver, which is built into the dehumidifier by means of distribution connectors
Right: External hygrostat with a built-in radio transmitter

Location:
The remote humidistat is to be located in the most humid area of the room - usually in a corner directly opposite the dehumidifier. This guarantees that the humidity of any area of the swimming pool hall will not exceed the humidity value set in the remote humidistat. The regulator must not be placed on a metal plate because the plate would disturb the high frequency signal and thus prevent the communication with the remote-controlled switch in the unit.

Automatic mode:
If the air in the room exceeds the desired humidity value, the regulator will switch the dehumidifier on.

Changing the battery:
The remote humidistat is charged by a 2 1.5V alkaline battery. Only alkaline batteries may be used, since non-alkaline batteries might leak and damage the whole appliance. The durability of a battery is approximately 12 months. The regulator automatically checks the level of its battery. If the battery voltage drops under the permitted value, battery sign on the display of the humidistat comes on. It is then necessary to change the battery as soon as possible. If the battery is not changed and goes flat the dehumidifier will be controlled by the built-in humidistat in the dehumidifier.

Automatic function during a power failure:
If the power supply of the dehumidifier is interrupted during the operation of the remote humidistat, then, once the power supply is renewed, the dehumidifier will automatically return to the latest setting. This recovery will occur within 15 minutes after the power supply return.

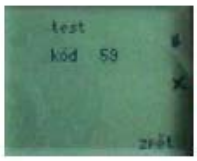
Setting:
In the setting mode the brightness of the LCD display can be set. By pressing + or buttons the LCD display' s brightness is added or reduced. This setting is for all displays.
Setting of code and test switching, relay for heating control and for dehumidification control. Data display about the manufacturer. Average temperature and humidity display for the last 32 hours. Hysteresis setting for 19% humidity range and 0.1-0.9°C temperature range.

Information about the manufacturer

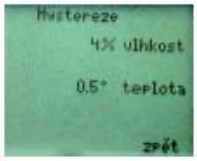
Statistics

Next
Confirmation
Back

Add brightness
Reduce brightness
Back



Heating switch on/off
Dehumididication switch on/off
Back



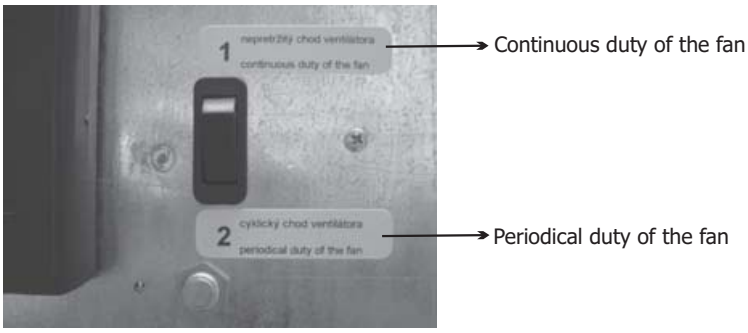
Humidity hysteresis
Temperature hysteresis
Back

Technical data:

	Control unit	Switch unit
Power supply	2 x 1,5 AA alkaline batteries	230 V/0,1 VA
Battery longevity	min. 1 year (according to battery type)	
Impact	from 20 up to 30 m in building (100 m in public place)	
Carrier frequence	433,92 Mhz	
Setting range of requested humidity	15 - 85% r.h.	
Setting range of requested temperature	5 - 39 °C	
Operating difference	5% r.h.	
Measurement precision	1,5% r.h.	
Measurement sensivity of humidity	1% r.h.	
Measurement sensivity of temperature	0,1% °C	
Adjustable range hysteresis of humidity switching	1 - 9% r.h.	
Adjustable range hysteresis of temperature switching	0,1 - 0,9 °C	
Enclose temperature	+20 - +40 °C	
Switching capacity		250V/8V
Contact		voltage, switching
Dimensions	71 x 71 x 26 mm	81 x 81 x 36 mm
Protection type		IP 54

3.3. Control of the fan

Under the inside cover of the unit, there is a two-position fan mode switch. In the first position, the fan runs even if the compressor of the appliance has stopped: continuous operation of the fan. In the second position, the fan only runs simultaneously with the compressor: periodical duty of the fan. The continuous operation mode of the fan is preferable, since the humidity reader built in the device continuously reads humidity, and therefore a greater accuracy is reached. At the same time, continuous operation of the fan results in better air circulation in the room. The installation work supplier selects the mode of the fan according to the request of the user.



Switch of the fan operation

3.4. Control of the compressor

Start-up of the compressor is, due to its protection, delayed by 3 minutes. Depending on the humidity of the environment, it may take even longer for compressor to start operating. Once the compressor stops operating, the operation is renewed automatically, at the earliest after three minutes. The user must not handle the setting element of the delay-action relay.

4. MAINTENANCE INSTRUCTIONS

It is necessary to make sure that the suction inlet and the exhaust outlet are not covered. It is forbidden to place towels or clothing items onto the exhaust outlets to dry them. The unit's cover can be cleaned with standard cleaning agents using a soft cloth or a sponge. If water dripping out of the unit, please check the condensed water drain and make sure the pipe is not obstructed.

5. SERVICING THE UNIT

At least once a year, it is necessary to have the unit checked and cleaned by a service specialist. This is inevitable to secure a long service life of the unit. We do not recommend the user to clean the interior elements of the unit, as this might cause a damage to the unit. The unit contains mobile elements and live elements, therefore the interior parts may only be cleaned by a certified electrician trained to service refrigerating appliances.

6. INSTALLATION GUIDE

The unit must be installed in compliance with the local installation and electrical installation regulations !

6.1. Location of the unit

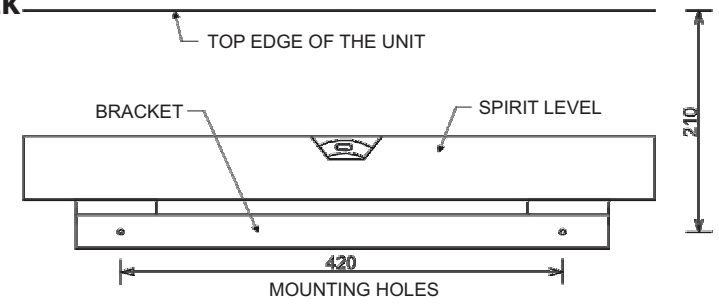
To ensure maximum efficiency, it is necessary to install the unit as high above the ground as possible. It is forbidden to install the unit onto the ground. It is essential to ensure good air circulation by allowing at least 150 mm of free space under the unit and at least 200 mm of free space above the unit. For the purposes of maintenance, it is further necessary to allow at least 200 mm of free space on both sides of the unit.

6.2. Mounting the unit

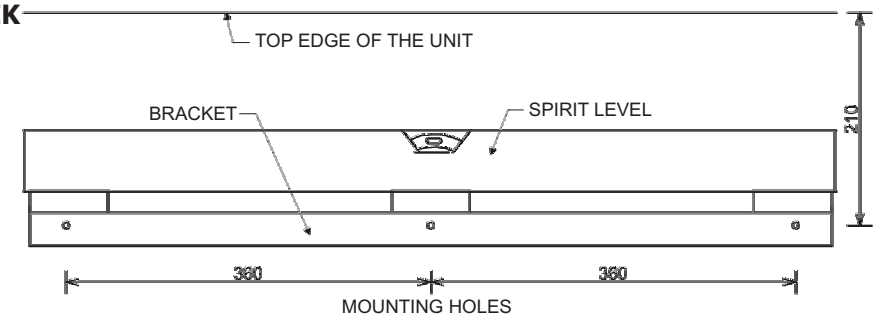
The units have a self-supporting structure and are remarkably easy to install.

A part of the unit accessories is also an installation bracket, which must be fixed onto the wall. The axis of the fixation openings is 210 mm lower than the top edge of the unit. The fixation openings are 420 mm apart (DRY 300 PLASTIK) or 360 mm apart (DRY 500 PLASTIK). Once the bracket is mounted to the wall, it is possible to mount the unit without disassembling its cover.

Model DRY 300 PLASTIK



Model DRY 500 PLASTIK

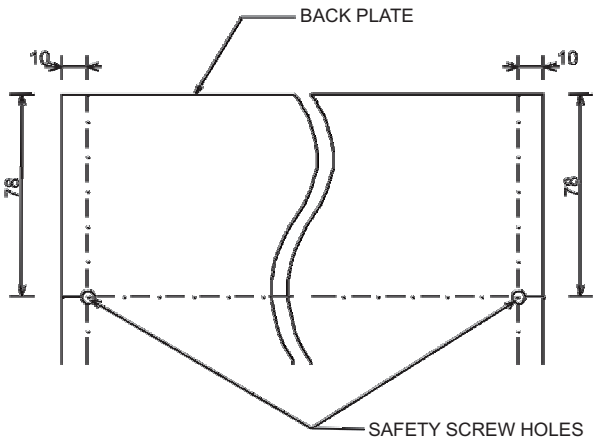


6.3. Dismounting and mounting the cover

The cover can be dismounted after releasing two screws (DRY 300) or three screws (DRY 500) at the bottom of the unit. Release the screws, pull the bottom part of the cover toward yourself and then, by lifting it shortly, rake down the cover from the rear plate. To mount the cover, carry the procedure out in reverse order.

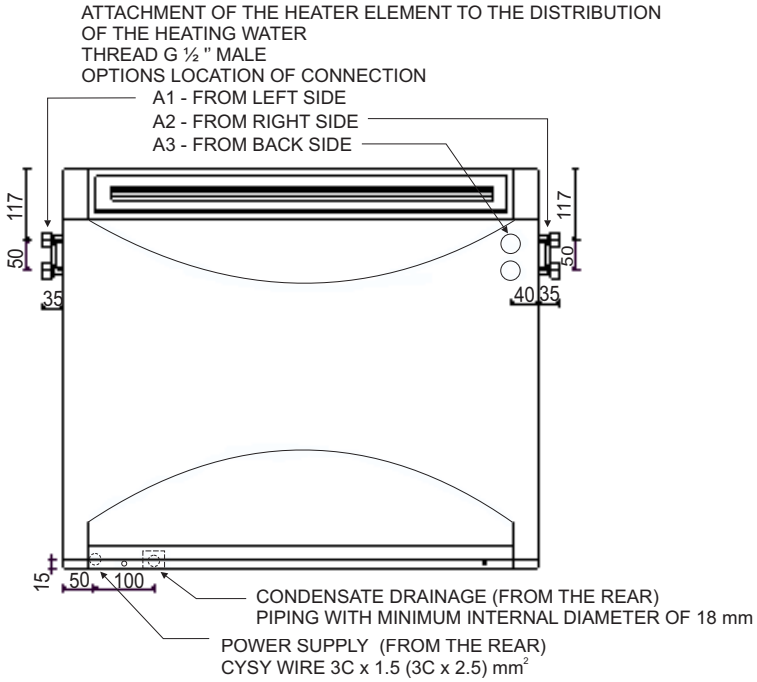
6.4. Securing the position of the unit

The unit is designed in such a way that it can be securely mounted and will hold in its place even if lifted accidentally. In the top edges of the back plate, there are screw holes for safety screws, which are accessible after dismounting the front fibreglass cover. Arrows indicate the safety screw holes in the back plate. A safety screw is fastened through a screw hole in the back plate into a wall plug in the wall. This will prevent the unit from being accidentally pulled out and falling off the mounting bracket. At the same time, it will secure the perpendicular position of the unit and align the unit with the wall.



6.5. Drainage of condensate

Condensed water is drained from the unit by the force of gravity. It is necessary to situate the unit in such a way that there is sufficient declivity for the drainage of condensed water. The condensation product must be drained through a siphon into a sewer or into the outside environment. It is strictly forbidden to drain the condensed water back into the swimming pool, as it may be polluted by bacteria. A pipe for condensate drainage is led out at the bottom of the unit, on the left. This pipe is to be inserted into a sewerage pipe with the inside diameter of at least 18 mm.



CONNECTIONS ARE VALID FOR MODELS DRY 300 PLASTIK AS WELL DRY 500 PLASTIK - FRONT VIEW

6.6 Connection of the unit onto the mains

Connection of the unit onto the mains must conform to relevant safety standards. Connection requirements: Power supply: 220-240V / 50Hz. Protection: 10A (DRY 300 PLASTIK) or 16A (DRY 500 PLASTIK) by a protective switch with nominal differential drop-out current not exceeding 30 mA. The unit's terminal board for connection onto the electric mains is situated on the left hand-side of the unit. The main switch of the unit must be situated outside of the swimming pool hall. The main switch of the unit must be bipolar, with switch-out breaking of conductors L and N. An appliance for disconnecting the unit from the mains must be embedded into a firm surface. The distance of contacts, when swithched off, must be at least 3 mm for all poles. The connection of the appliance to the electric mains must be carried out by a certified electrician.

An example of preparation of electric power supply, condensate drainage and mounting of the bracket

LOCATION OF THE EQUIPMENT

The location must be in compliance with the HD 384.7.702 S1, IEC 60364-7-702 standard.
It is recommended to situate the unit outside zones 0, 1 and 2.
In case the unit is situated into zones 2 or 1, it must be adhered to the HD, IEC standard.

ZONE 1, IPX4

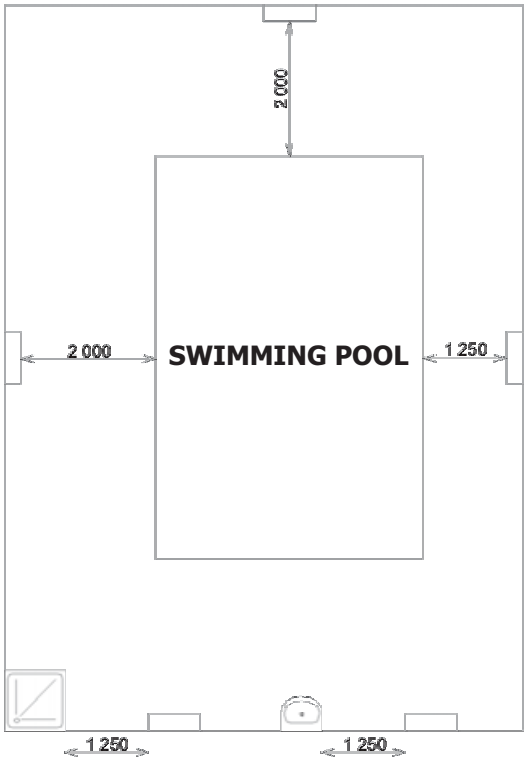
Swimming pools which are not cleaned by jet water

in the distance of 1250 to 2000 mm from the swimming pool edge, the unit must adhere to the HD, IEC standard and in the height of at least 300 mm from the floor

ZONE 2, IPX2

Swimming pools which are not cleaned by jet water

In the distance of 2000 to 3500 mm from the swimming pool edge, the unit must adhere to the HD, IEC standard and a minimum 150 mm elevation above the ground is required for sufficient air flow. Installing the unit on the floor is prohibited.



OUTSIDE THE ZONES

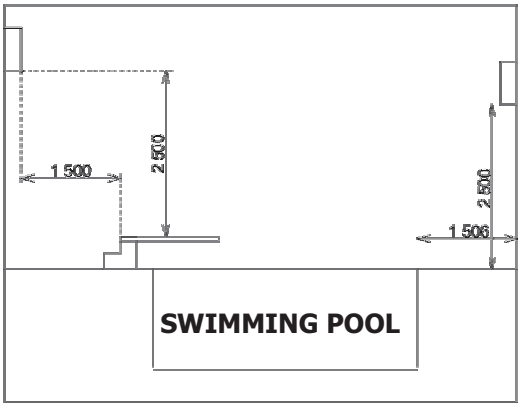
In the distance of 1250 mm or less from the swimming pool edge, the bottom edge of the unit must be in the height of 2500 mm from the swimming pool surface; if it is embedded under the floor, then 2500 mm from the floor.

At least 1250 mm (i.e. out of the reach of the hand) from the lateral edge of the shower cabinet. It cannot be placed above the shower cabinet.

At least 1250 mm (i.e. out of the reach of the hand) from the lateral edge of the wash basin, in the minimum height of 1200 mm above ground. It cannot be placed above the wash basin.

OUTSIDE THE ZONES

In the distance of at least 1500 mm from the vertical plane around the jumping platforms, diving boards and 2500 mm above the highest surface, where persons are likely to stay.



OUTSIDE THE ZONES

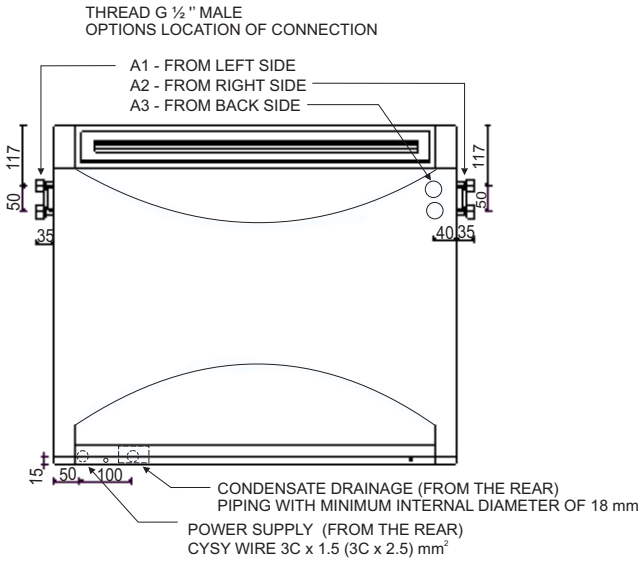
If the unit is in the distance of less or equal to 1250 mm horizontally from the edge of the swimming pool, then it must be raised up to the height of 2500 mm from the swimming pool surface; if the pool is embedded under the floor, then the unit must be raised up to the height of 2500 mm from the floor.

It is inevirable to locate the unit outside the zones, where cleaning by jet water is supposed. Connection of the unit to the mains and its protection must correspond with the applicable standards. Electrical supply of the unit must be carried out by a protective isolating transformer or it must be protected by a current protective switch with a nominal differential cut-off current not exceeding 30 mA.

6.7. LPHW heater element - to order

The LPHW heater elements are supplied only to order. Connection of the hot water heater element onto the LPHW plumbing is carried out similarly to the installation of radiators. On the feeder pipe, it is connected by a control valve and on the return pipe by a closing screw joint. The LPHW is not supplied with a control valve and a screw joint; these are supplied by the supplier of the heating.

Attachment threading of the hot water heating element



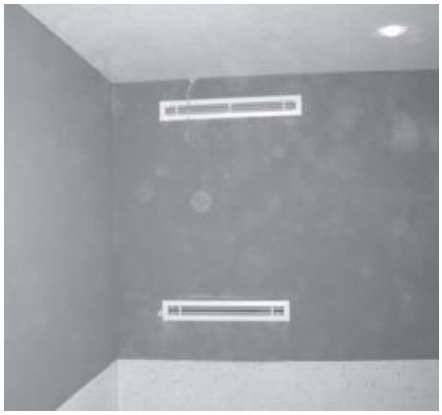
Attachment of the heater element to the distribution of the heating water

After installing the LPHW plumbing and leading the LPHW into the element under pressure, it is necessary to bleed the heater element. The bleeding valve is located on the feeder pipe of the LPHW heater element. To secure that the LPHW heater element works always at full heat output, blowing onto the unit by a fan must be provided even when no dehumidification is being performed. Therefore, when using the LPHW heater element, the switch of fan operation must be switched into the position of continuous operation.

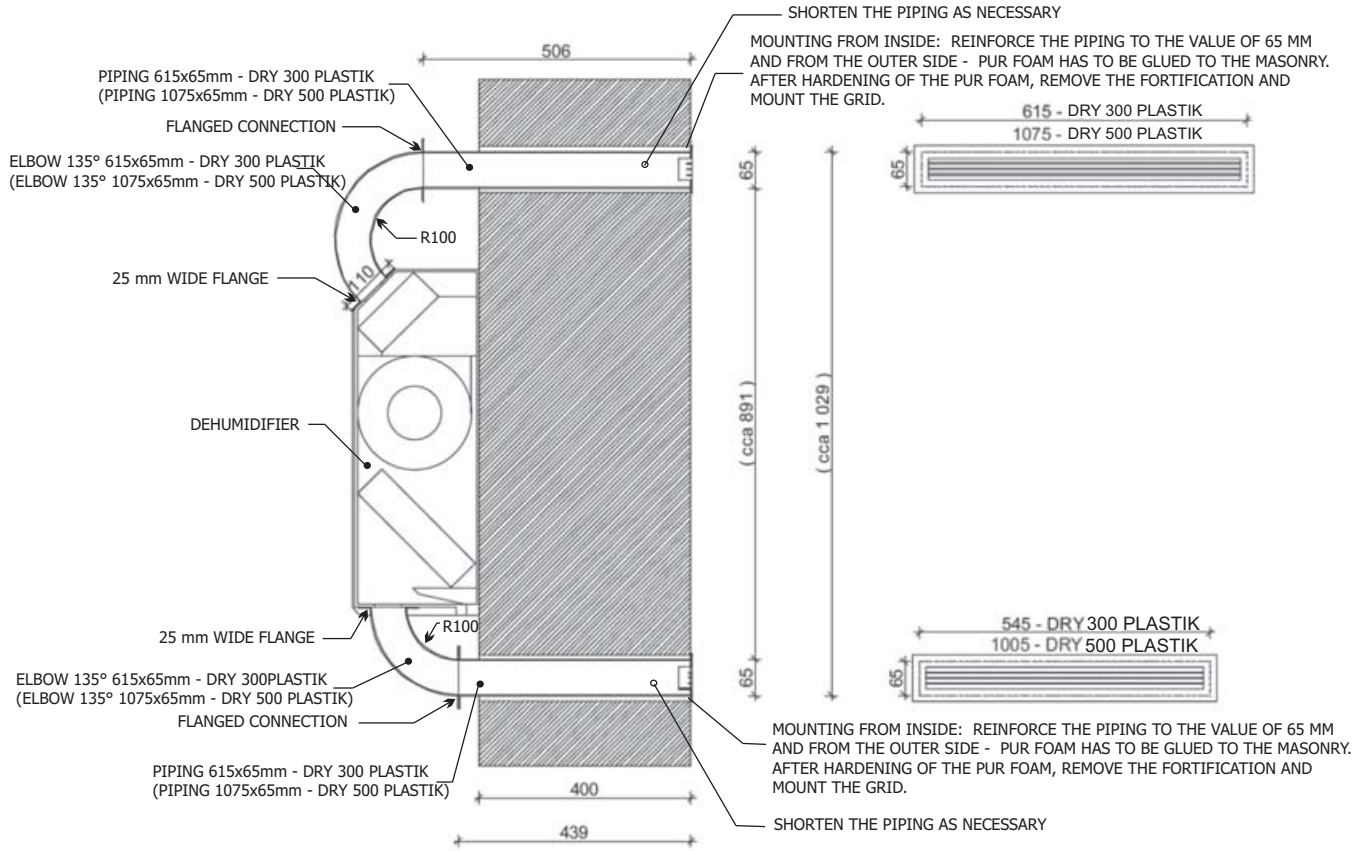
6.8. Mounting behind the wall - to order

The dehumidifiers are simply adapted also to installation behind the wall into the adjacent room. In such case, only two grids are visible in the swimming pool area. These are the same grids which are, in the basic configuration, installed on the dehumidifier's cover. In the configuration for installation behind the wall, conduit adapters are screwed onto the dehumidifier's cover. The adapters are delivered for passage through the wall of the length of 400 mm. In the place of installation, they are shortened from the side of the swimming pool as necessary.

View from the adjacent room



View from the swimming pool hall



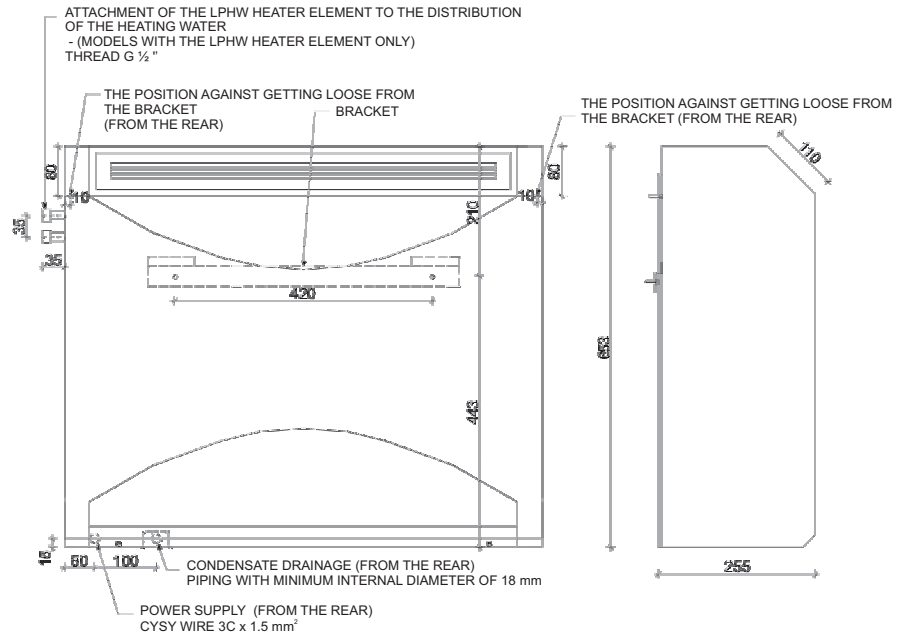
7. TECHNICAL DATA

TYPE	UNITS	DRY 300 PLASTIK	DRY 500 PLASTIK
For swimming pools with a maximum surface area	m^2	30	60
DEHUMIDIFICATION PERFORMANCE:			
at 30°C and 60% RH	l/24 h	33	66
at 30°C and 70% RH	l/24 h	42	82
at 30°C and 80% RH	l/24 h	47	101
Operating temperature range	°C	22-35	22-35
Operating humidity range	%	20-100	20-100
Air flow	m^3/h	440	740
Noisiness (in 1 m distance)	dB (A)	42	44
Heat output	W	1900	3500
Power consumption	W	700	1000
Voltage	V/Hz/f	230/50/1	230/50/1
Operating current / Starting current	A	4.4 / 15.8	7.5 / 30
Protection	A	10	16
Coverage	IP	44	44
Conductor	mm^2	CYSY 3C x 1.5	CYSY 3C x 2.5
Condensate drain - minimum inside diameter	mm	d 18	d 18
Dimensions (width x height x depth)	mm	780 x 653 x 255	1245 x 653 x 255
Dimensions of package (width x height x depth)	mm	850 x 735 x 345	1315 x 735 x 345
Weight - net / in package	kg	40/46	60/69
Refrigerant - R 410 A	kg	0.5	0.75
Max. pressures in the system HP/LP	bar	28.5/8.5	28.5/8.5
Dehumidifier efficiency rate	DER	2.4	2.7
OPTIONAL EXTRAS			
Remote control - wireless - with an adjustable dial	yes/no	yes	yes
LPHW heater element - heat output at water temp. 90/70°C	W	2000	4000
Connecting thread of the LPHW heater element	thread	male G 1/2”	male G 1/2”

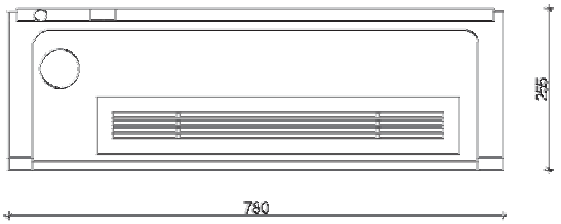
DIMENSIONS DRY 300 PLASTIK

FRONT VIEW

SIDE VIEW



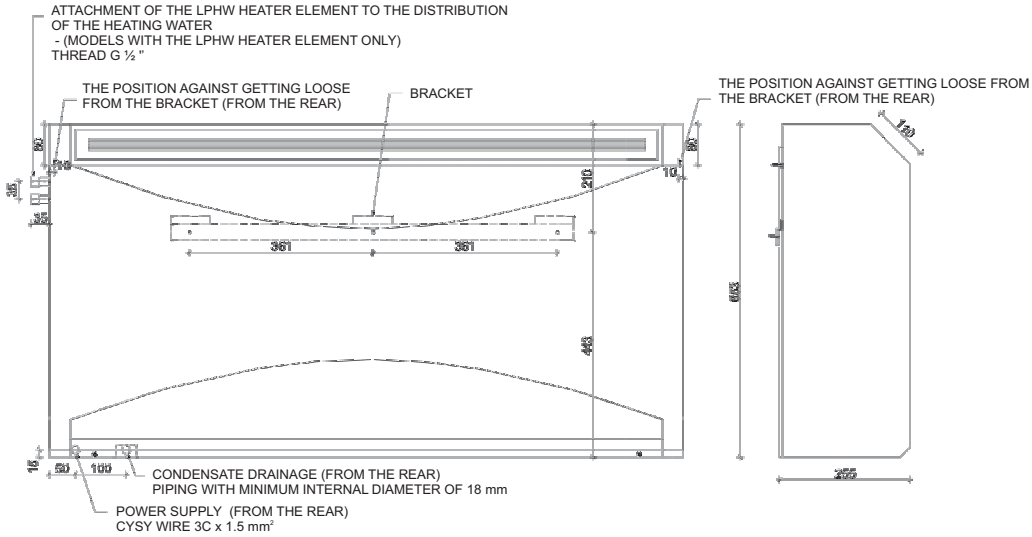
VIEW FROM BELOW



DIMENSIONS DRY 500 PLASTIK

FRONT VIEW

SIDE VIEW



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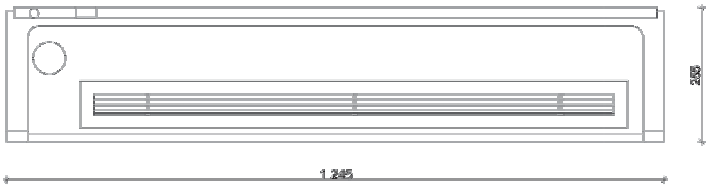
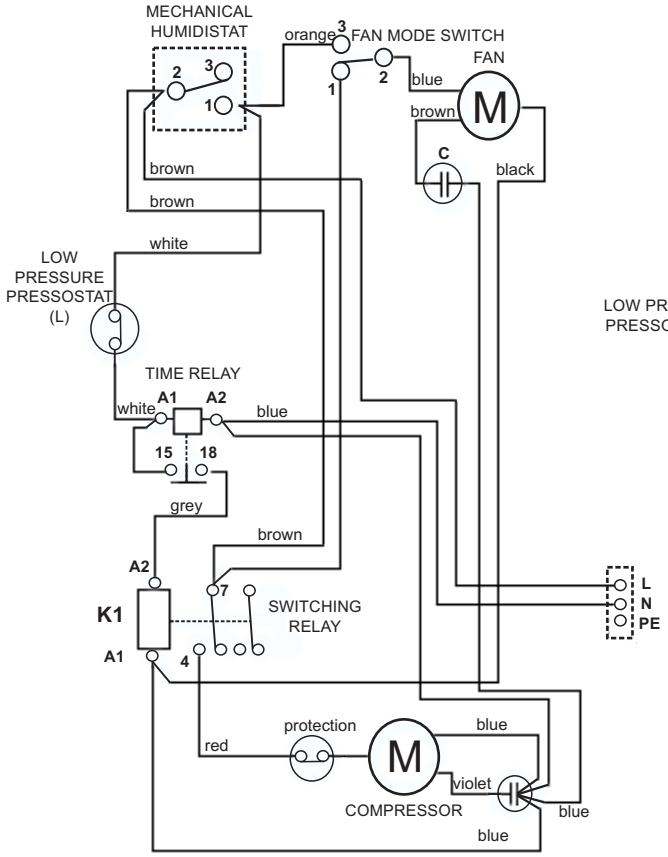
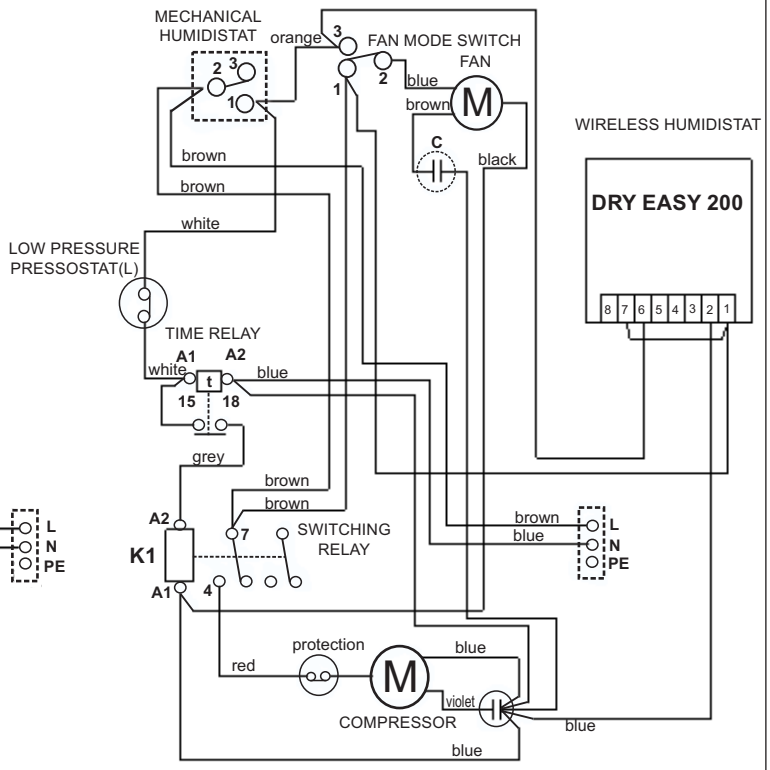


WIRING DIAGRAM OF MODEL MICROWELL DRY 300 PLASTIK

without inbuilt wireless humidistat DRY EASY 200

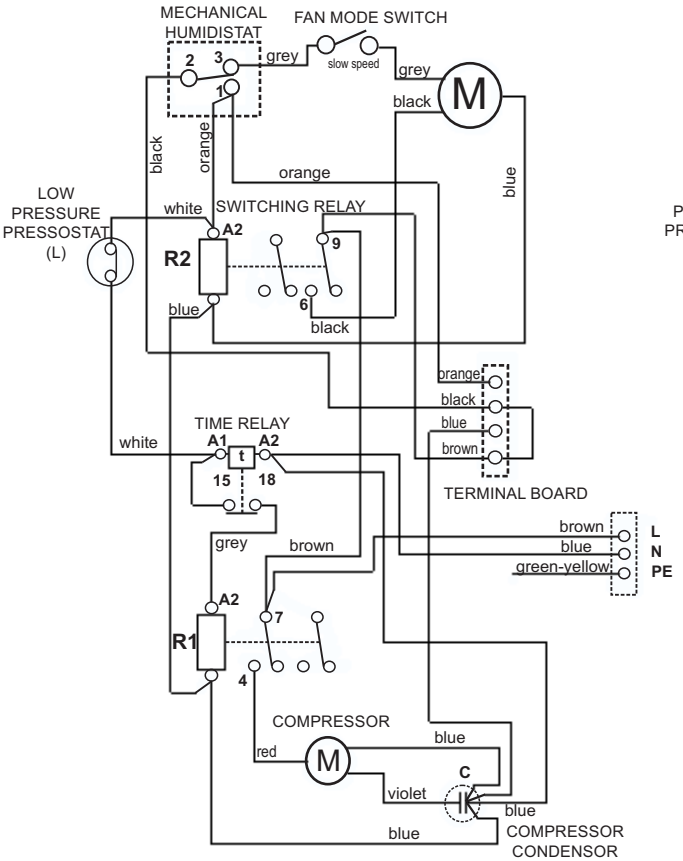


inbuilt wireless humidistat DRY EASY 200

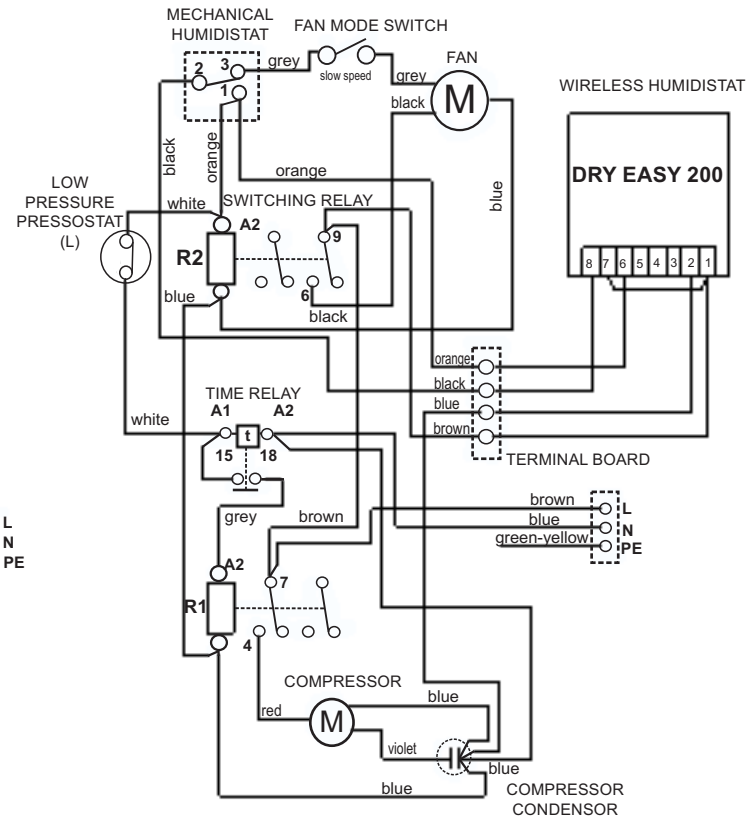


WIRING DIAGRAM OF MODEL MICROWELL DRY 500 PLASTIK

without inbuilt wireless humidistat DRY EASY 200

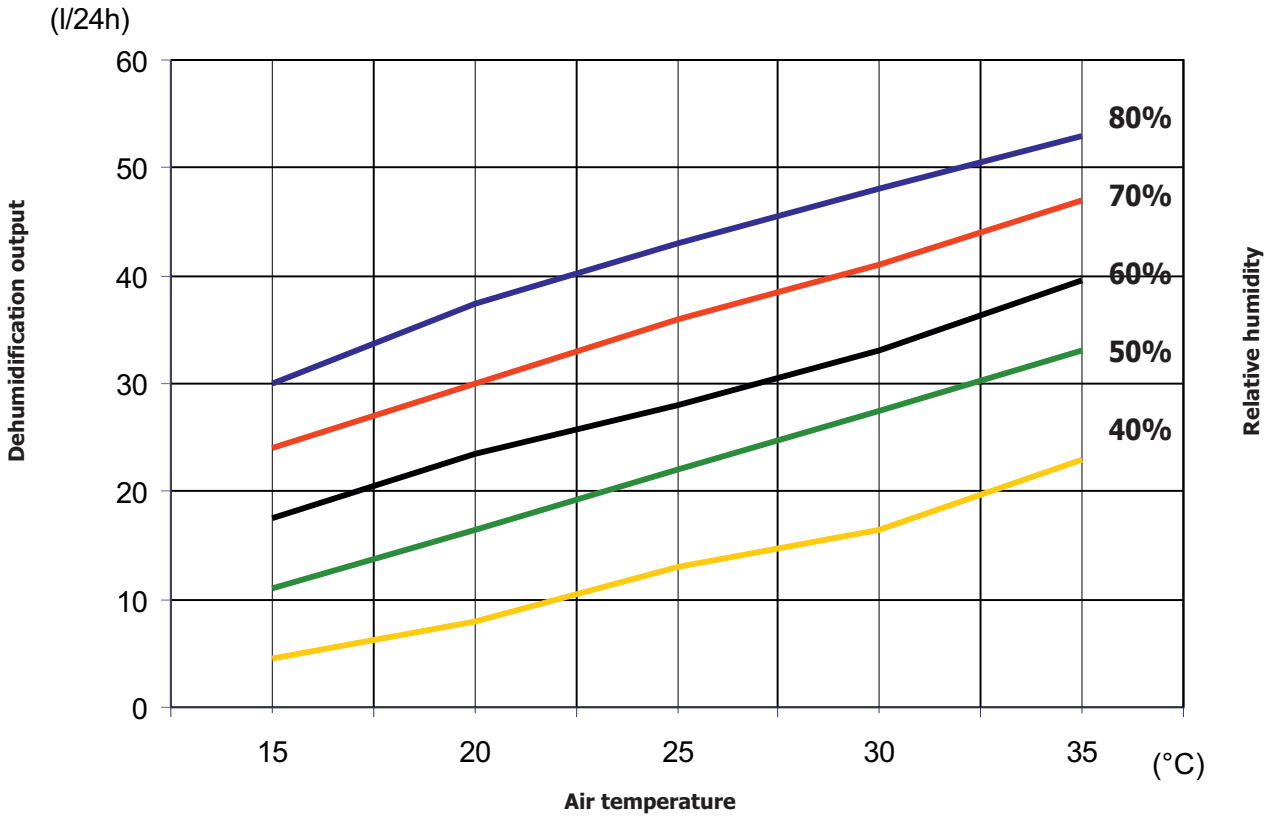


inbuilt wireless humidistat DRY EASY 200

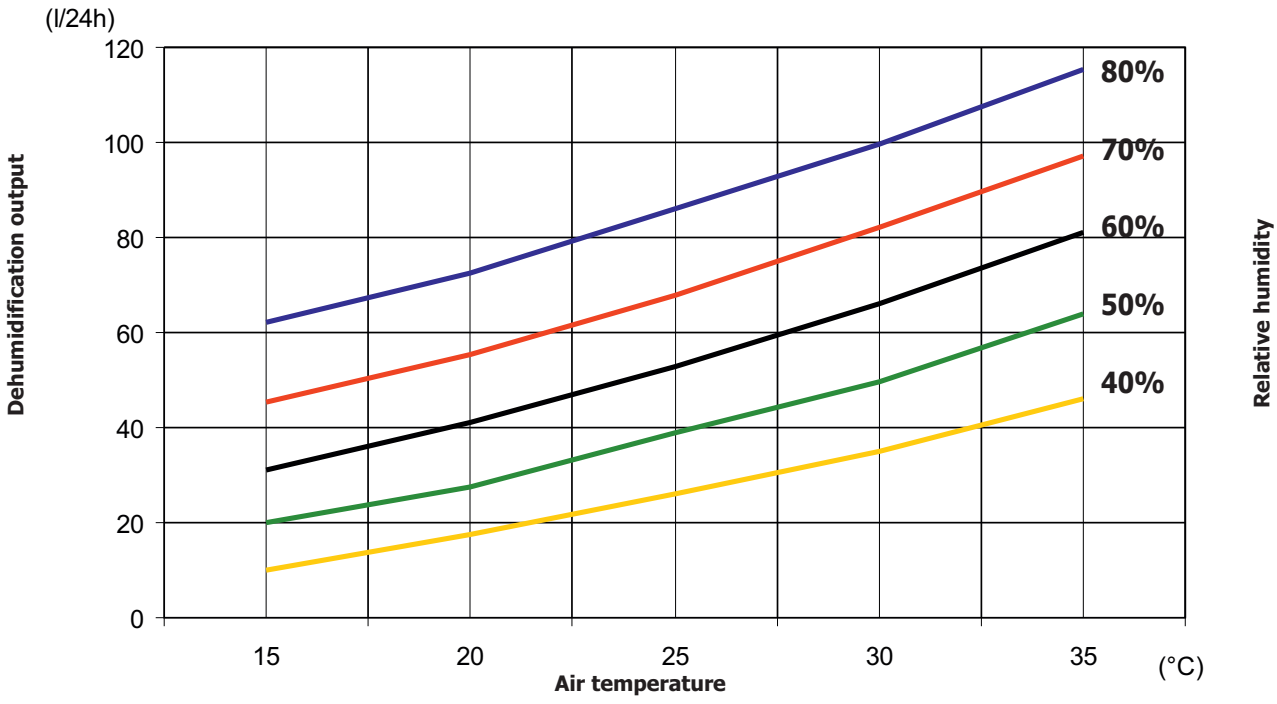


Note: Producer reserves right to make changes on wiring.

OUTPUT DIAGRAM OF DEHUMIDIFICATION (DRY 300 PLASTIK)



OUTPUT DIAGRAM OF DEHUMIDIFICATION (DRY 500 PLASTIK)



8. WARRANTY CONDITIONS

The following exceptions stated by Microwell, Ltd. apply within the warranty.
No claims will be accepted if:

1. The dehumidifier is used in an incorrect way, not as described in this manual.
2. The dehumidifier is installed in an incorrect way, not as described in this manual.
3. The dehumidifier was put to operation by an unauthorized person.
4. The air flow through the dehumidifier is out of the defined borders.
5. The water flow through the dehumidifier is out of the defined borders.
6. The water´s pH level and/or chemical condition is out of the defined borders:

Acidity / pH level:	pH	7,4 +/- 0,4
Total alkalinity, as CaCO3	ppm	80-120
Total hardness, as CaCo3	ppm	100-300
Total melted dry mass	ppm	max. 3000
Maximal saline content	wt/wt	6%
Free chlorine range	ppm	1,0-3,0
Superchlorination	ppm	max. 30 ppm/max. 24 hours
Bromine	ppm	2-3
Baquacil	ppm	25-50
Ozone	ppm	0,8-1,0
Maximum copper content	ppm	max. 2
Aquamatic single purifier	ppm	max. 2
Tarn clean purifier	ppm	max. 2
Sherwood purifier	ppm	max. 2

7. The dehumidifier suffered frost damage.
8. The electric tension source is insufficient or improper in any other way.

IN CASE OF ANY UNCERTAINTY YOU MAY HAVE, PLEASE FEEL FREE TO CONTACT US !

NOTE:
When applying applicable warranty, the registration card that ensures applicable warranties must be returned. In case you cannot find the registration card of your dehumidifier, please contact the Service department of Microwell, Ltd. - indicated your name, address and serial number of your dehumidifier. The registration card will be then sent to you for filling in. In case you have any service or technique related questions, please specify the model number and serial number of your dehumidifier. These information will help us in making proper diagnosing of your unit and the service can be performed with a minimum time delay.

TRANSPORT INSTRUCTIONS:
The dehumidifiers must be transported only in the original packaging and in a vertical position. Make sure that the dehumidifier cannot turn over or fall down during transportation. Do never put the dehumidifier aside! It may lead to serious **compressor damage!** No claims are accepted in case of any damage caused by transportation. When receiving the product delivered to you, please check whether the package is not damaged. If any kind of objections occurs, please make a proper documentation of them.

Technický skúšobný ústav Piešťany, š.p.

Notifikovaný orgán: Identifikačné číslo 1299 — Notified Body: Identification No. 1299

Autorizovaný orgán: Reg. číslo SKTC 104 / SK03 — Authorised Body: Reg. No. SKTC 104 / SK03

CERTIFIKÁT ZHODY
CONFORMITY CERTIFICATE

Č./No.: 712990054

pre výrobcu alebo jeho autorizovaného zástupcu v Európskej únii
to the manufacturer or his authorised representative in the European Union

MICROWELL spol. s r.o.
SNP 2018/42
927 01 Šaľa, Slovak Republic

Výrobok a určenie typu / Product and designation of type

Odvlhčovač vzduchu MICROWELL
typ DRY 300 Plastik, DRY 500 Plastik,
DRY 300 Silver DRY 500 Silver,
DRY 300 Metal, DRY 500 Metal

Dehumidifier MICROWELL
type DRY 300 Plastik, DRY 500 Plastik,
DRY 300 Silver DRY 500 Silver,
DRY 300 Metal, DRY 500 Metal

Preskúšaná vzorka spĺňa základné požiadavky na bezpečnosť podľa nasledujúcich európskych smerníc Nového prístupu:

The sampletested meets the essential safety requirements of the following European New Approach Directives:

Smernica o EMC	**2004/108/EC**	**2004/108/EC**	**EMC Directive**
Smernica o nízkom napätí	**2006/95/EC**	**2006/95/EC**	**Low Voltage Directive**

Existujú pre to nasledujúce dokumenty:
záverečný protokol č.
750146/2007

For this the following documents exist:
Final Report No.
750146/2007

Dodržujúc všetky príslušné smernice ES a poskytujúc ES Vyhlásenie výrobcu o zhode, vyššie uvedený výrobok môže byť opatrený označením CE.

Observing all relevant EC New Approach Directives and providing the Manufacturer's EC Declaration of Conformity above mentioned product can be labelled with CE marking.

CE

TECHNICKÝ SKÚŠOBNÝ ÚSTAV PIEŠŤANY, š.p. TSU SK

Piešťany 26.09.2007
750146

Ing. Anna ONDRÁŠIKOVÁ
riaditeľka posudzovania zhody výrobkov
Product Conformity Assessment Director

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MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

SNAS
Reg. No. 009/P-018

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