

Lancio Nuovo Prodotto
New Product Launch

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B.U. Climate

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Water Treatment System *compact* [12 ÷ 40 l/h]

1. What we have developed

CAREL reverse osmosis water treatment system has been developed for **humiSonic** and **heaterSteam** humidifiers.

It is supplied with tap water, then it gives back demineralized water, with the right chemical and physical characteristics, at the desired pressure and flow rate, in order to satisfy as best as possible the humidifier's needing.

Strenght points of this product are:

- **Reliability**, unlike many systems in the market that work with direct current pump, WTS *compact* is provided with an alternate current pump. This solution let the pump answer continuously the demand avoiding overheating.
- **Quality and Usability**, all WTS *compact* are pre-setted and tested! Water storage tank and hydraulic connections are included.
- **Simple maintenance**, the only ordinary maintenance required is the replacement of the filters!

WTS *compact* is available:

- without pump ($p_{\text{INLET WATER}} > 4.0 \text{ bar}$)
- with pump ($p_{\text{INLET WATER}} > 1.5 \text{ bar}$)

The system consists of:

- Safety micrometric pre-filtration (to remove the water impurity)
- Dechlorination system with activated carbon (to protect the membrane)
- Control electric panel (with manual switch)
- Reverse osmosis membrane TFC (Thin Film Composite)
- UV sanification system (optional)



CERTIFICATIONS:

WTS *compact* is compliant to the following directives:

- Machine Directive 2006/42/CE
- Low Voltage Directive 2006/95/CE
- EMC Electromagnetic Compatibility Directive 2004/108/CE

HOW IT WORKS:

At the first functioning WTS *compact* produces demineralized water up to fill the water storage tank (included). The expansion vessel maintains the circuit pressure at 2.5 - 3 bar.

The humidifier's water demand is fulfilled by the expansion vessel.

The consequent pressure drop in the circuit is detected by a pressure switch, so the pump starts a new production cycle when required.

WASHING CYCLES humiSonic:

In order to obtain the best working conditions of WTS *compact* when coupled to one or more humiSonic, it's necessary to change some parameters of humiSonic about flushing cycles:

b1=60	Time between two washing cycles
b3=1	Washing Time (Fill + Drain)
bb=30	Water refill time in production

To make these configuration changing, it's necessary to have at least one auxiliary card UUKAX00000 and one display UUKDI00000.

Our zonal service can make this operation on the parameters at the startup of the system.



2. Technical features



ROC0120000 Production 12 l/h WITHOUT PUMP



ROC0200000 Production 20 l/h WITHOUT PUMP



ROC0255000 Production 25 l/h WITH PUMP



ROC0405000 Production 40 l/h WITH PUMP



SUPPLY WATER:

Supply water conditions are very important to obtain an effective water treatment. The following table reports the supply water limit conditions to allow the treatment:

Hardness	≤ 30 °f
Inlet free chlorine	≤ 0,2 mg/l
Bacterial Charge	Absent
TDS (Total Dissolved Solids)	≤ 750 ppm
SDI (Silt Density Index)	≤ 3
Turbidity	1 NTU max

	ROC0120000	ROC0200000	ROC0255000	ROC0405000
Supply water pressure	3,5...8 bar	3,5...8 bar	1,5...4 bar	1,5...4 bar
Supply water temperature	5...30 °C	5...30 °C	5...30 °C	5...30 °C
Minimal supply water flow	100 l/h	100 l/h	150 l/h	150 l/h
Room temperature	5...40 °C	5...40 °C	5...40 °C	5...40 °C
Working pressure	≤ 8 bar	≤ 8 bar	≤ 8 bar	≤ 8 bar
Production ± 10% (T=16°C - TDS 250ppm)	12 l/h	20 l/h	25 l/h	40 l/h

If the water condition values are out of the suggested ranges, contact Carel to receive further information about the pre-treatment system to use.

The use of WTS *compact* out of the suggested ranges could reduce system performances, it could shorten system life, and it could be even harmful for the system itself.

HYDRAULIC AND ELECTRIC CONNECTIONS:

	ROC0120000	ROC0200000	ROC0255000	ROC0405000
Total power installed	-	-	245 W	245 W
Monophasic Electrical Supply	-	-	230 V /50 Hz	230 V /50 Hz
Inlet connection	G ½" F	G ½" F	G ½" F	G ½" F
Outlet connection	Ø 10 / 8 mm	Ø 10 / 8 mm	Ø 10 / 8 mm	Ø 10 / 8 mm

SIZE AND WEIGHT:

	ROC0120000	ROC0200000	ROC0255000	ROC0405000
Dimensions (mm)	370 x 120 x 420	370 x 120 x 420	420 x 200 x 500	420 x 200 x 500
Packaging size (mm)	440 x 570 x 330	440 x 570 x 330	450 x 590 x 510	450 x 590 x 510
Packaging total weight (kg)	7	8	20	21



HOW TO COUPLE WTS *compact* TO HUMIDIFIERS:

WTS *compact* can be coupled to a maximum number of humiSonic for Fan-Coil or to heaterSteam as follows:

humiSonic

CODICE	UU01FD****
ROC0120000	5
ROC0200000	7
ROC0255000	8
ROC0405000	9

CODICE	UU01FD****
ROC0255000 + ROKC00KTVE	10*
ROC0405000 + ROKC00KTVE	16*

One expansion vessel is always provided to optimize the hydraulic circuit according to the instant demand.

* When WTS *compact* is provided with pump, it's possible to install a second expansion vessel ROKC00KTVE to feed up to 16 humiSonic.

HeaterSteam

CODICE	UR002*****	UR004*****	UR006*****	UR010*****
ROC0255000 + ROKC00KTVE	1	1	1	1

MAXIMUM LENGTH BETWEEN WTS *compact* AND HUMIDIFIER:

The maximum distance between WTS *compact* e and humidifier is 40 meters.
We suggest to place the expansion vessel close to the humidifier.

