

Resistance Steam Humidifier



RTH Series

 **devatec**



WHO ARE WE?

Innovator in the research and manufacture of humidification systems for 40 years, Devatec is a major player in the humidification market on 5 continents and in more than 60 countries.

Our humidifiers and cooling systems are used worldwide to improve productivity and air quality in many areas of application: institutional, industrial, health and wellness.

Our environmentally conscious R&D team designs products to ensure maximum life expectancy, guaranteeing compatibility and availability of spare parts for many years.



RTH Series

PRODUCT PRESENTATION

The ElectroVap® RTH humidifier produces sterile steam and is available in a range from 3 kg/h to 104 kg/h.

The RTH-HC has a tiltable tank for quick and economical maintenance.

- **RTH-HC** : it is perfectly adapted for industrial or process applications requiring a large, precise and continuous production of steam.
- **RTH-LC** : this is a more compact version than the RTH-HC, equipped with a removable tank.



RTH-LC 3-30



RTH-HC 3-50



RTH-HC 60-100

CHARACTERISTICS

- Accepts conventional control signals and Modbus RTU and BACnet MSTP communication protocols
- Perfect solution for waters with very high or very low mineral content
- Cleanable stainless steel tank
- Incoloy® resistors
- Menus available in several languages
- Easy to install and use
- High control accuracy (+/- 2%)

OPTIONS

- Remote information transfer (steam production, defects, maintenance)
- Drain water cooling kit (integrated for RTH-LC)
- Accessory for air pressure compensation
- Off-shore version
- Leak detection
- Open door detection
- Differential circuit breaker

ACCESSORIES

- Stainless steel steam dispersion manifold and ExpressPack®
- Blower Pack diffusion box
- Steam and condensate hoses
- Water supply and drain connection kit
- Humidity sensor and hygostat
- Soft bag for collecting limescale
- Support chair for floor mounting
- Protection cabinet for outdoor installation IP55
- Water retention tank to collect waste water



ExpressPack®

RTH-HC



RTH-LC



FEATURES AND BENEFITS

Digital display with keypad: this screen displays all the functions of the humidifier, making it easier for the operator to use and maintain the unit.

Self-diagnosis: The unit continuously monitors its operation through self-diagnosis. If an anomaly is detected, the unit will first try to solve it. If the problem persists, it will display one of the error messages detailed in the documentation.

Solenoid valve for draining :

- **The RTH-LC** is equipped with a 3-way solenoid drain valve designed for our humidifiers, which allows the evacuation of a part of the limestone and its cleaning thanks to its integrated piston. Automatic cooling of the drain water as it passes through the 3-way valve.
- **The RTH-HC** is equipped with a large-aperture solenoid drain valve to prevent scale build-up.

Adjustable flow rate: the capacities of the RTH series are adjustable and allow the maximum flow rate to be adapted.

Preventive and easy maintenance: the frequency of maintenance is programmable to trigger preventive maintenance. The cleaning of the stainless steel boiler is very simple to reduce the downtime of the unit.

Cleanable stainless steel tank and removable lid: by cleaning and replacing internal components without changing the tank, operating costs are reduced.

Control mode: this series accepts conventional 0-10 V and 4-20 mA control signals from a BMS or directly from a humidity sensor.

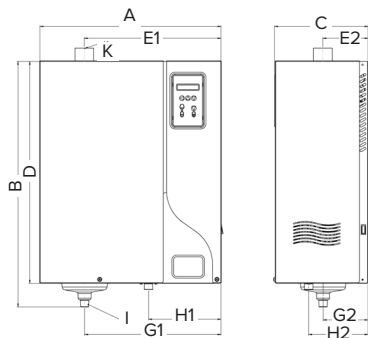
Communication modes: The RTH series incorporates Modbus RTU (RS485) and BACnet MSTP (slave) protocols that allow the user to communicate with the humidifier via the Building Management System (BMS). Everything that is accessible through the humidifier display will be visible on the BMS.

Reliable and durable design: our spare parts are compatible with previous generations of devices.

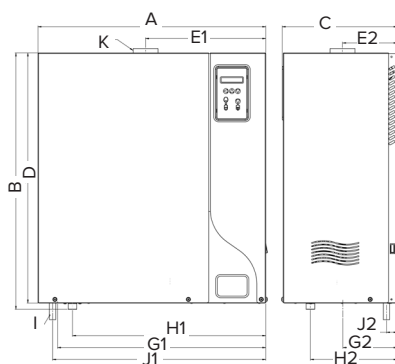
SPECIFICATION

1. Electrogalvanized and epoxy painted steel enclosure with secure and removable doors on 3 sides allowing easy access to components for maintenance and installation.
2. Stainless steel tank, with removable lid and hinged in intermediate position (only for RTH-HC) for easy removal of lime deposits.
3. Cooling cycle to reduce maintenance time.
4. Compatible with drinking water, softened water (subject to availability) and demineralized water.
5. The humidifier's water supply has a disconnection cup to prevent contamination of the drinking water system.
6. Compatible with ON/OFF, proportional control signals and Modbus RTU and BACnet MSTP communication protocols.
7. Modulation between 0 and 100% of the nominal flow rate with an accuracy of $\pm 2\%$. The flow rate can be limited to 50% of the nominal flow rate.
8. Automatic anti-foam draining, adjustable according to the quality of the water used to optimize energy consumption and maintenance frequency.
9. Self-cleaning Incoloy® heaters with integrated temperature control.
10. **RTH-HC:** large diameter solenoid drain valve for easy scale removal.
11. Limescale collection bag, water supply hose and drain hose.
12. **RTH-LC:** automatic drain water cooling as standard.

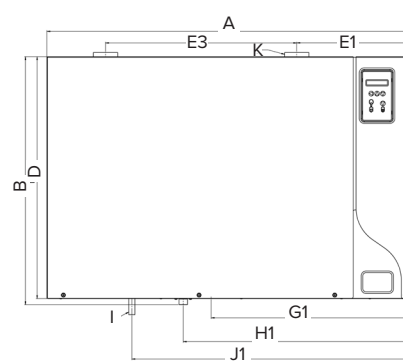
RTH Series - DATA SHEET



RTH-LC
3-30



RTH-HC
5-50



RTH-HC
60-100

Dimensions

Description	RTH-LC	RTH-HC 5-50	RTH-HC 60-100
Number of steam outlets	1	1	2
Type of tank	Removable cylinder	Tilttable tank	
Material of the tank	SS 304L	ASTM 441	
Material of the case	Electrogalvanized steel		
Color	Epoxy paint - RAL 7035		
IP Index	21		
Dimensions	mm / [in.]		
A: Width	554 / [21.81]	690 / [27.2]	1130 / [27.2]
B: Total height	750 / [29.53]	775 / [30.5]	775 / [30.5]
C: Depth	285 / [11.22]	350 / [13.8]	350 / [13.8]
D: Height	678 / [26.70]	755 / [29.7]	755 / [29.7]
E1: Steam outlet position	417 / [16.42]	362 / [14.25]	351 / [2]
E2: Steam outlet position	137 / [5.39]	165 / [6.5]	165 / [6.5]
E3: Distance between steam outlet	-	-	592 / [23.3]
G1: Drainage position	Ø 25 / [1]	Ø 40 / [1.5]	Ø 40 / [1.5]
G2: Drainage position	417 / [16.42]	627 / [24.7]	616 / [24.25]
G3: Distance between drain circuits	137 / [5.39]	164 / [6.5]	164 / [6.5]
H : Water inlet position	Ø19.05 / [3/4"] FF		
H1: Water inlet position	222 / [8.74]	582 / [22.9]	702 / [27.7]
H2: Water inlet position	181 / [7.13]	261 / [10.3]	261 / [10.3]
I: Condensate outlet diameter	-	12 / [0.48]	12 / [0.48]
J1: Overflow position	-	642 / [25.3]	861 / [33.9]
J2: Overflow position	-	32 / [1.26]	32 / [1.26]
K: Steam outlet diameter*	Ø 25[1] or 40[1.5]	Ø 60 / [2.36]	Ø 60 / [2.36]
Weight	kg / [lb.]		
Operating weight	35 / [77.16]	75 / [166]	140 / [309]
Gross weight	25 / [55.12]	45 / [100]	70 / [155]

*If the humidifier is connected to a BlowerPack, provide an adaptation in Ø 40 mm in case the steam outlet is of different Ø.

Supply (V)	RTH	3	5	7	8	10	15	20	30	40	50	60	70	80	90	100
230V - 1 ph	kg/h	2.5	5.7	-	8.3	-	-	-	-	-	-	-	-	-	-	-
	kW (Pn)	1.9	4.3	-	6.2	-	-	-	-	-	-	-	-	-	-	-
	I (A)	8.3	18.7	-	27.1	-	-	-	-	-	-	-	-	-	-	-
208V - 3 ph	kg/h	-	-	-	6.2	-	-	-	-	-	-	-	-	-	-	-
	kW (Pn)	-	-	-	4.7	-	-	-	-	-	-	-	-	-	-	-
	I (A)	-	-	-	13.0	-	-	-	-	-	-	-	-	-	-	-
230V - 3 ph	kg/h	-	-	-	7.6	-	-	-	-	-	-	-	-	-	-	-
	kW (Pn)	-	-	-	5.7	-	-	-	-	-	-	-	-	-	-	-
	I (A)	-	-	-	14.4	-	-	-	-	-	-	-	-	-	-	-
380V - 3 ph	kg/h	-	4.7	6.9	-	10.8	15.6	21.5	26.4	38.1	46.8	52.6	62.5	76.3	85	93.7
	kW (Pn)	-	3.6	5.2	-	8.1	11.7	16.2	19.8	28.7	35.2	39.5	47.0	57.3	63.9	70.4
	I (A)	-	5.5	7.9	-	12.4	18	24.8	30.3	43.9	53.9	60.5	71.9	87.7	97.8	107.8
400V - 3 ph	kg/h	-	5.3	7.6	-	11.9	17.3	23.9	29.2	42.2	51.9	58.5	69.2	84.5	94.2	103.8
	kW (Pn)	-	4.0	5.7	-	9.0	13.0	17.9	22.0	31.8	39	44.0	52.0	63.5	70.8	78.1
	I (A)	-	5.8	8.4	-	13.0	18.9	26.1	31.9	46.2	56.7	63.9	75.6	92.3	102.9	113.4
415V - 3 ph	kg/h	-	5.7	8.2	-	12.8	18.6	25.7	31.5	45.5	55.9	62.9	74.5	91.0	101.3	111.7
	kW (Pn)	-	4.3	6.2	-	9.7	14.0	19.3	23.7	34.2	42.0	47.3	56.0	68.4	76.2	84.0
	I (A)	-	6.0	8.7	-	13.5	19.6	27.1	33.1	47.9	58.9	66.3	78.5	95.8	106.8	117.7
440V - 3 ph	kg/h	-	-	6.4	-	-	14.4	20.8	28.9	35.2	43.3	49.7	57.7	70.5	78.5	86.6
	kW (Pn)	-	-	4.8	-	-	10.9	15.6	21.7	26.5	32.6	37.4	43.4	53.0	59.1	65.1
	I (A)	-	-	6.3	-	-	14.3	20.7	28.7	35.0	43.0	49.4	57.4	70.0	78.0	86.0
460V - 3 ph	kg/h	-	-	7.0	-	-	15.8	22.7	31.6	38.5	47.3	54.3	63.1	77.0	85.9	94.7
	kW (Pn)	-	-	5.2	-	-	11.9	17.1	23.7	29	35.6	40.8	47.4	57.9	64.5	71.2
	I (A)	-	-	6.6	-	-	15.0	21.6	30.0	36.6	45.0	51.6	60.0	73.2	81.6	90.0
480V - 3 ph	kg/h	-	-	7.6	-	-	17.2	24.8	34.4	41.9	51.5	59.1	68.7	83.9	93.5	103.1
	kW (Pn)	-	-	5.7	-	-	12.9	18.6	25.8	31.5	38.7	44.5	51.7	63.1	70.3	77.5
	I (A)	-	-	6.9	-	-	15.6	22.6	31.3	38.2	46.9	53.8	62.6	76.4	85.1	93.9
575V - 3 ph	kg/h	-	-	7.0	-	-	15.8	22.8	31.6	38.6	47.4	54.4	63.2	77.1	86.0	94.8
	kW (Pn)	-	-	5.2	-	-	11.9	17.1	23.8	29.0	35.6	40.9	47.5	58.0	64.6	71.3
	I (A)	-	-	5.3	-	-	12.0	17.3	24.0	29.3	36.0	41.3	48.0	58.6	65.4	72.1
600V - 3 ph	kg/h	-	-	7.6	-	-	17.2	24.8	34.4	42.0	51.6	59.2	68.8	84.0	93.6	103.2
	kW (Pn)	-	-	5.7	-	-	12.9	18.6	25.9	31.6	38.8	44.5	51.7	63.2	70.4	77.6
	I (A)	-	-	5.5	-	-	12.5	18.1	25.1	30.6	37.6	43.1	50.1	61.2	68.2	75.2
Number of tanks	-	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
Steam outlet diameter RTH-HC	-	1xØ60	1xØ60	1xØ60	1xØ60	1xØ60	1xØ60	1xØ60	1xØ60	1xØ60	1xØ60	2xØ60	2xØ60	2xØ60	2xØ60	2xØ60
Steam outlet diameter RTH-LC	-	1xØ25	1xØ25	1xØ25	1xØ25	1xØ25	1xØ25	1xØ40	1xØ40	-	-	-	-	-	-	-

SELECTION OF STEAM DIFFUSION TUBES			
Length mm	Duct Width mm		Diameter mm
	MIN	MAX	
110	120	299	Ø25 or Ø40
290	300	599	Ø25 or Ø40 or Ø60
590	600	799	
790	800	1009	
1000	1010	1259	
1250	1260	1509	
1500	1510	1809	
1800	1810	2009	Ø40 or Ø60
2000	2010	2259	
2250	2260	2509	
2500	2510	2709	
2700	2710	3000	

EXPERTISE & SERVICES

OUR VALUES

SIMPLEST . QUALITY . INNOVATION
KNOWLEDGE SHARING . CUSTOMER-FOCUSED



DEVATEC

- 40 years of expertise in humidifiers manufacturing
- Part of Armstrong International group
- Global presence
- Proficient distributors network
- Modern production facility
- Learning center
- A committed eco-responsible policy



OUR MISSION

To support you on all your projects, with:

An experienced team of engineers

A responsive after sales team attentive to your needs

A R&D department designing efficient humidifiers from end to end



BOOST YOUR ENERGY SAVINGS WITH OUR HUMIDIFICATION AND ADIABATIC COOLING SYSTEMS



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