Electrode Steam Humidifier





ElectroVap® ELMC



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.



ElectroVap® ELMC

PRODUCT PRESENTATION

The ElectroVap® ELMC humidifier produces sterile steam and is available in a range from 5 kg/h to 99 kg/h.
This easy-to-use device is perfectly suited for humidification in ventilation systems or ambience.
Stainless steel electrodes are immersed in water and energized.
The electric current is established between the electrodes through water thanks to the minerals it contains, heating it to boiling point.
As the power consumption is proportional to the immersed surface of the electrodes, the flow of steam produced is regulated by controlling the water level inside the cylinder.



CHARACTERISTICS

- Accepts conventional control signals, Modbus RTU and BACnet MSTP communication protocols
- Works with drinking or softened water
- Fully cleanable glass fiber reinforced polypropylene cylinder
- Solid stainless steel electrodes
- Menus available in several languages
- Easy to install and use



OPTIONS

- Remote information transfer (steam production, defects, maintenance)
- Drain water cooling kit (integrated or external)
- Anti-legionella system (temperature maintenance)
- Filling cup extension
- Off-shore version
- Leak detection
- Differential circuit breaker

ACCESSORIES

- Stainless steel steam dispersion manifold and ExpressPack®.
- BlowerPack fan unit
- Steam and condensate hoses
- Water and drain connection kit
- Humidity sensor and hygrostat
- Support chair for floor mounting
- Protection cabinet for outdoor installation IP55
- Water retention tank to collect waste water



ExpressPack®

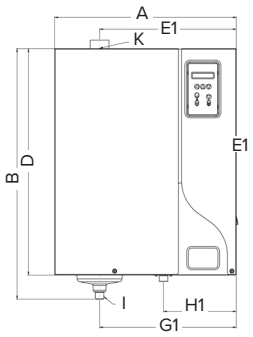
FEATURES AND BENEFITS

Digital keypad: this screen displays all the humidifier functions, making it easier for the operator to use and maintain the unit.
Self-diagnosis: the unit continuously monitors its operation through a 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 technical documentation.
3-way solenoid drain valve: specially designed for our humidifiers, it allows the evacuation of scale and its cleaning thanks to its integrated piston. Automatic cooling of the drain water as it passes through the 3-way drain valve.
Electrodes connection: fast and secure thanks to brass sockets plugged on their ends.
Adjustable flow rate: the ELMC series capacities are adjustable and allow the maximum flow rate to be adapted.
Easy and preventive maintenance: a maintenance period is programmable to trigger preventive maintenance. The removal and inspection of the cylinder is very simple in order to reduce the downtime of the unit.
Cleanable and recyclable cylinder: by cleaning and replacing internal components without changing the cylinder, 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 ELMC 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 robust design: our spare parts are compatible with previous generations of devices.

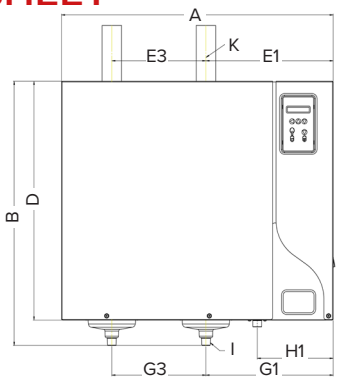
SPECIFICATION

1. Sterile steam production from 5 to 99 kg/h.
2. Electrogalvanized and epoxy painted steel enclosure with secure and removable doors on 3 sides, allowing easy access to each component for maintenance and installation.
3. Compatibility with drinking water, softened (conductivity between 250 µS/cm and 1000 µS/cm).
4. Deconcentration system and automatic anti-foam draining. The emptying settings can be adjusted manually according to water quality.
5. Compatibility with ON/OFF, proportional control signals and Modbus RTU and BACnet MSTP communication protocols.
6. Modulation between 20 and 100% of the nominal flow rate with an accuracy of ±5% and to limit the flow rate to 50% of the nominal flow rate.
7. Cleanable cylinder made of glass fiber reinforced polypropylene, equipped with a water level sensor, a spacer and a strainer.
8. The solid stainless steel electrodes without mesh guarantee a longer life.
9. The connections between the electrodes and the power cables are made of brass to guarantee a good electrical contact.
10. Special humidification drain valve with self-cleaning sequence for limescale removal and drain water cooling.
11. Automatic end-of-season emptying of the cylinder after a period of inactivity.

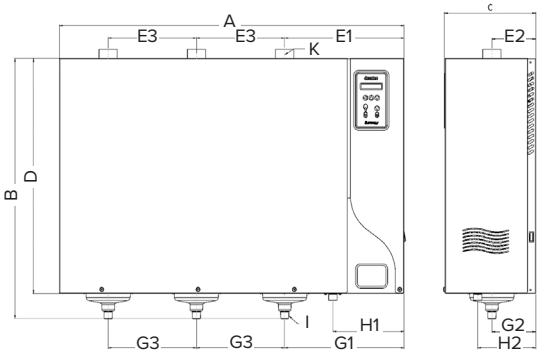
ELMC Series - DATA SHEET



ELMC 5-15 or 20-30
with cylinder



ELMC 40-60
with cylinders



ELMC 70-90
with cylinders

Dimensions

Description	ELMC	ELMC	ELMC	ELMC
	1 SC*	1 MC	2 MC	3 MC
Number of steam outlets	1	1	2	3
Cabinet material	Electrogalvanized steel			
Color	Epoxy paint - RAL 7035			
IP rating	21			
Dimensions		mm / [inches]		
A: Width	469 / [11,9]	554 / [14,1]	794 / [20,2]	1074 / [27,3]
B: Total height	610 / [15,5]	750 / [19,1]	750 / [19,1]	750 / [19,1]
C: Depth	225 / [5,7]	285 / [7,2]	285 / [7,2]]	285 / [7,2]]
D: Height	538 / [13,7]	678 / [17,2]	678 / [17,2]	678 / [17,2]
E1: Steam outlet position	350/ [8,9]	417/ [10,6]	372/ [9,4]	372/ [9,4]
E2: Steam outlet position	111/ [2,8]	137/ [3,5]	137/ [3,5]	137/ [3,5]
E3: Distance between steam outlet			275/ [7]	275/ [7]
G1: Water outlet position	350/ [8,9]	417/ [10,6]	372/ [9,4]	372/ [9,4]
G2: Drain position	111/ [2,8]	137/ [3,5]	137/ [3,5]	137/ [3,5]
G3: Distance between drain circuit			275/ [7]	275/ [7]
H: Water inlet position	3/4" FF	3/4" FF	3/4" FF	3/4" FF
H1: Water inlet position	222/ [5,6]	222/ [5,6]	222/ [5,6]	222/ [5,6]
H2: Water inlet position	141/ [3,6]	181/ [4,6]	181/ [4,6]	181/ [4,6]
I: Condensate outlet diameter	Ø 25	Ø 25	2 x Ø 25	3 x Ø 25
K: Steam outlet diameter	*Ø 25 or 40***	*Ø 40 or 25****	Ø 40	Ø 40
Weight		kg / [lbs]		
Operating weight	23 / [50,7]	37 / [81,6]	60 / [132,3]	90 / [198]
Gross weight	15 / [33]	22 / [48,5]	30 / [66,1]	45 / [99,2]

SELECTION OF THE STEAM DIFFUSION TUBES			
Length	Duct width		Diameter
	MIN	MAX	
110	120	289	Ø25 or Ø40 mm
290	300	599	
590	600	799	
790	800	1009	
1000	1010	1259	
1250	1260	1509	
1500	1510	1809	
1800	1810	2009	Ø40 mm
2000	2010	2290	

Cylinder sizes: SC = Small cylinder Ø25 mm / MC = Medium cylinder Ø40 mm (or Ø25 mm if marked)
** If the humidifier is equipped with a BlowerPack, SC Ø40 mm & MC Ø40 mm mandatory.
*** Ø25 mm for some voltages, refer to the technical data sheet on the following page.

Supply (V)	ELMC	5	8	10	15	20	30	30HC	40	50	60	60HC	90	90HC
220V - 1 ph	I (A)	18,0		36,1										
	P (kW)	4,0		7,9										
	Prod. (kg/h)	5,0		10,0										
	Cylinder	1 x SC		1 x MC*										
230V - 1 ph	I (A)	17,3		34,6										
	P (kW)	4,0		8,0										
	Prod. (kg/h)	5,0		10,0										
	Cylinder	1 x SC		1 x MC*										
200V - 3ph	I (A)	11,5	18,4	22,9	34,4	45,8	69,7		91,6	114,6	137,3			
	P (kW)	4,0	6,4	8,0	12,0	15,9	24,2		31,9	39,9	47,8			
	Prod. (kg/h)	5,0	8,0	10,0	15,0	20,0	30,4		39,9	50,0	59,9			
	Cylinder	1 x SC	1 x SC	1 x SC	1 x MC*	1 x MC	2 x MC		2 x MC	3 x MC	3 x MC			
208V - 3ph	I (A)	11,0	17,5	21,8	32,7	43,7	66,3		87,3	109,5	131,0			
	P (kW)	4,0	6,4	8,0	12,0	16,0	24,2		31,9	40,0	47,9			
	Prod. (kg/h)	5,0	8,0	10,0	15,0	20,0	30,3		40,0	50,1	60,0			
	Cylinder	1 x SC	1 x SC	1 x SC	1 x MC*	1 x MC	2 x MC		2 x MC	3 x MC	3 x MC			
220V - 3ph	I (A)	10,6	16,7	20,8	30,8	41,6	69,7		84,4	104,5	126,6			
	P (kW)	4,0	6,4	8,0	11,8	15,9	26,7		32,3	40,0	48,5			
	Prod. (kg/h)	5,1	8,0	10,0	14,8	19,9	33,4		40,5	50,1	60,7			
	Cylinder	1 x SC	1 x SC	1 x SC	1 x MC*	1 x MC	2 x MC		2 x MC	3 x MC	3 x MC			
230V - 3ph	I (A)	10,1	16,2	20,2	30,2	40,3	66,3		80,6	100,7	120,9			
	P (kW)	4,1	6,5	8,1	12,1	16,1	26,5		32,3	40,3	48,4			
	Prod. (kg/h)	5,1	8,1	10,1	15,1	20,2	33,2		40,4	50,5	60,6			
	Cylinder	1 x SC	1 x SC	1 x SC	1 x MC*	1 x MC	2 x MC		2 x MC	3 x MC	3 x MC			
380V - 3ph	I (A)	6,3	9,6	12,0	18,0	24,0	36,1	38,2	48,1	60,4	72,6	76,4	110,8	114,6
	P (kW)	4,2	6,4	8,0	11,9	15,9	23,9	25,3	31,8	39,9	48,0	50,5	73,3	75,8
	Prod. (kg/h)	5,2	8,1	10,0	14,9	19,9	29,9	31,6	39,9	50,0	60,1	63,3	91,8	94,9
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
400V - 3ph	I (A)	5,8	9,3	11,6	17,4	23,2	34,8	37,6	46,4	57,9	69,7	75,1	104,5	112,7
	P (kW)	4,0	6,5	8,1	12,1	16,2	24,2	26,1	32,3	40,3	48,5	52,3	72,7	78,4
	Prod. (kg/h)	5,1	8,1	10,1	15,2	20,2	30,4	32,8	40,5	50,4	60,7	65,5	91,1	98,3
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
420V - 3ph	I (A)	5,6	9,0	11,2	16,8	22,4	33,6	36,3	44,7	56,2	67,1	72,6	100,7	108,9
	P (kW)	4,1	6,6	8,2	12,3	16,3	24,5	26,5	32,7	41,1	49,1	53,1	73,6	79,6
	Prod. (kg/h)	5,1	8,2	10,2	15,4	20,5	30,7	33,2	41,0	51,4	61,4	66,5	92,2	99,7
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
440V - 3ph	I (A)	5,3	8,5	10,6	15,8	21,1	31,7	34,0	42,2	52,8	63,3	68,0	95,0	102,0
	P (kW)	4,0	6,5	8,1	12,1	16,2	24,2	26,0	32,3	40,4	48,5	52,0	72,7	78,1
	Prod. (kg/h)	5,1	8,1	10,1	15,2	20,2	30,4	33,6	40,5	50,6	60,7	65,2	91,1	97,8
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
460V - 3ph	I (A)	5,1	8,0	10,1	15,1	20,2	30,4	32,7	40,3	50,7	60,8	65,4	91,2	98,2
	P (kW)	4,1	6,4	8,1	12,1	16,1	24,3	26,2	32,3	40,6	48,7	52,4	73,0	78,6
	Prod. (kg/h)	5,1	8,0	10,2	15,1	20,2	30,5	32,8	40,4	50,8	60,9	65,6	91,4	98,4
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
480V - 3ph	I (A)	4,9	7,7	9,7	14,5	19,3	29,1	31,5	38,6	48,6	57,9	62,9	87,4	94,4
	P (kW)	4,1	6,5	8,1	12,1	16,1	24,3	26,3	32,3	40,6	48,3	52,5	73,0	78,8
	Prod. (kg/h)	5,1	8,1	10,2	15,1	20,2	30,5	32,9	40,4	50,8	60,5	65,8	91,4	98,7
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
575V - 3ph	I (A)	4,0	6,5	8,0	12,1	16,2	24,3	26,4	32,3	40,2	48,6	52,8	72,9	79,2
	P (kW)	4,1	6,5	8,1	12,3	16,3	24,5	26,6	32,6	40,5	49,0	53,3	73,6	79,9
	Prod. (kg/h)	5,1	8,1	10,1	15,3	20,4	30,7	33,4	40,8	50,7	61,4	66,7	92,0	100,0
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
600V - 3ph	I (A)	3,9	6,3	7,7	11,6	15,5	23,2	25,4	31,0	38,5	46,5	50,7	69,7	76,1
	P (kW)	4,1	6,5	8,1	12,1	16,2	24,3	26,5	32,4	40,2	48,5	52,9	72,8	79,4
	Prod. (kg/h)	5,1	8,1	10,1	15,2	20,3	30,4	33,1	40,6	50,2	60,7	66,2	91,1	99,4
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC
690V - 3ph	I (A)	3,4	5,4	6,8	10,1	13,4	20,3	22,2	26,8	33,9	40,6	44,4	60,9	66,6
	P (kW)	4,1	6,5	8,1	12,2	16,1	24,4	26,6	32,2	40,6	48,7	53,3	73,1	79,9
	Prod. (kg/h)	5,1	8,1	10,2	15,2	20,2	30,5	33,3	40,3	50,8	60,9	66,7	91,4	100,0
	Cylinder	1 x SC	1 x SC	1 x SC	1 x SC	1 x MC	1 x MC	1 x MC	2 x MC	2 x MC	2 x MC	2 x MC	3 x MC	3 x MC

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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