



HygroMATIK®

member of CAREL group

CAREL

FlexLine

Steam humidifiers



High flexibility in award-winning quality

- A series of units with a wide performance range for every area of application
- Individual configuration
- Easy operation
- Highest quality
- Environmentally friendly, incorporating reusable components



Air humidification
for industry, commerce, culture and leisure

High flexibility in award-winning quality

The HygroMatik FlexLine as a modular system

Flexibility pays dividends

The HygroMatik FlexLine represents a modern generation of steam humidifiers which consists of a basic model that can be expanded to create an individual humidification solution suitable for all requirements.

Advantages:

- Ease of installation by means of individual pre-configuration ex factory
- Expansion options for retrofitting
- You only invest in the functions you really need

In order to make this flexibility available to you quickly, we have developed a modular system. This was awarded in three categories and the FlexLine received the **Plus X Award**.

Custom-made for every area of application

The basic FlexLine model is the basis for all other configuration options. Thanks to its individual extension capability the FlexLine can be adapted to the requirements of different areas of application:

- Optimization of the indoor climate in industrial, commercial, cultural and leisure facilities
- Autonomous control and stabilization of air humidity in ventilation systems for industry and processes



Shopping centers and department stores

Automotive industry

Museums and galleries

Optimum humidification using the best methods

FlexLine is available as an electrode as well as a heater element humidifier – depending on your water quality and the required degree of control accuracy.



Replaceable stainless steel large area electrodes for different conductivities



Resistor type heater elements in highly corrosion-resistant alloy



Always the correct humidification performance

Equip HygroMatik FlexLine with the power you need for optimum humidification. Performance classes with steam output from 10 lbs/h to 300 lbs/h are selectable in 6 housing sizes. In addition, individual performance adjustments can be programmed both at the factory and on site.

Manifold options for a humidification solution that fits perfectly

Every installation is different, and so every project places unique requirements on the humidification solution. The FlexLine can be equipped with a wide range of options to optimally meet your project requirements. In addition, various protection and security functions can be installed and activated, e.g.

- HyFlush (cylinder flushing device)
- HyCool (integrated waste water cooling)
- Stub line flushing

This means that your system is optimally protected around the clock and you have less maintenance work. If needed, all options can be retrofitted. We are always pleased to provide advice.



Benefit from extensive functions

Powerful, smart and efficient

Excellent ease of operation



All HygroMatik FlexLine units are equipped with a capacitive 3.5" touch display. Operation and programming are selected via a flat and intuitive menu structure analogous to modern smartphone logic. In addition to this, subsequent software updates are quickly and easily possible via USB flash drive.

- At a glance comprehensible pictographs provide information on the operating condition
- Simple and fast navigation
- Information and system messages displayed as plain text
- Readout of service messages with date and time
- Integrated real-time clock



Smart control – powerful and quick response

The control and regulation technology of FlexLine units provides extensive possibilities that are simple and easy to operate.

- **Numerous control and reporting functions** can be assigned to up to 11 relays depending on the unit
- Freely programmable, overload-protected **digital input**
 - » Load shedding: power limitation in the event of network overload or emergency power operation
 - » Blow-down on external request for specific operating conditions
 - » Stand-by mode: pre-heating by remote activation for a quick response time
- **Integrated communication** protocol: Modbus RTU or BACnet



Optimized unit performance for efficient utilization

As with all our products, the HygroMatik FlexLine has been developed for an especially long lifespan. The units feature technologies that not only reduce the amount of maintenance required, but also the wear of components. FlexLine offers the highest degree of efficiency where energy and resources are concerned.

- **Adjustable power limitation** from 25 - 100%
- **Adjustable load shedding** to temporarily adapt operation to the respective load conditions
- **Long-term continuous operation:** A robust base material provides our reusable cylinders with high temperature resistance and dimensional stability
- The **split cylinder** is easy to open and can be cleaned without using chemicals
- **Extremely durable:** All FlexLine cabinets are manufactured in corrosion-resistant stainless steel; the powder coating of the housing increases the lifespan and offers optimum work safety
- **Robust blowdown pump** for removing scale deposits to ensure long operating life cycles and minimal maintenance
- **Highest safety standard** for electrode steam humidifiers due to integrated **mechanical circuit breaker and mechanical safety temperature limiter** for heater type steam humidifiers
- Heater type steam humidifier with **capacitive proportional water level sensor** without wearing parts



Comprehensive service functions



We have equipped the HygroMatik FlexLine with intelligent service functions for operational safety. These provide a high level of safety, reliability, control and comfort.

- **Reliable:** Preventive maintenance through permanent monitoring and intelligent evaluation of operating parameters can avoid unplanned downtimes
- **Convenient:** Detailed messages enable deviations to be identified and rectified more quickly
- **Simple:** The diagnostic mode can be started directly via the touch display without commissioning the unit completely
- **Flexible:** Service intervals can be calculated by the unit according to time as well as the amount of steam produced



All in the green zone

Robust and durable cabinet

Reusable steam cylinders

Long and flexible service intervals

High energy and resource efficiency



FlexLine electrodes technical data

A higher humidification performance is possible by connecting units together.

Electrical supply ⁽¹⁾	Type	FLE05	FLE10	FLE15	FLE20	FLE25	FLE30	FLE40	FLE50	FLE65	FLE80	FLE100	FLE130
208-240 VAC / 1 / N / 50-60Hz	Steam output [kg/h]	4.2-4.8		7.8-9.0		16.6-19.2							
	Steam output [lbs/h]	9.2-10.6		17.2-19.8		36.5-42.3							
	Rated power [kW]	3.1-3.6		5.9-6.8		12.5-14.4							
	Rated current [A] ⁽²⁾	15		28.2		60							
208-240 VAC / 3 / 50-60Hz	Steam output [kg/h]	4.5-5.2	7.2-8.3	13.5-15.6		23.1-26.6	28.0-32.3	28.8-33.3	38.4-44.3		57.6-66.5	76.9-88.7	
	Steam output [lbs/h]	9.9-11.5	15.8-18.3	29.7-34.3		50.8-58.5	61.6-71.1	63.4-73.3	84.5-97.5		126.7-146.3	169.2-195.1	
	Rated power [kW]	3.4-3.9	5.4-6.2	10.2-11.7		17.3-20.0	21.0-24.2	21.6-24.9	28.8-33.3		2 x 21.6-24.9	2 x 28.8-33.3	
	Rated current [A] ⁽²⁾	9.4	15.0	28.2		48.0	58.2	60.0	80.0		2 x 60.0	2 x 80.0	
440-480 VAC / 3 / 50-60Hz	Steam output [kg/h]	4.8-5.2	9.6-10.4	14.3-15.6	19.1-20.8	23.9-26.1	28.7-31.3	38.3-41.8	47.9-52.2	62.2-67.8	76.5-83.3	95.7-104.0	124.0-135.0
	Steam output [lbs/h]	10.6-11.4	21.2-22.9	31.5-34.3	42.0-45.8	52.6-57.4	63.1-68.9	84.3-92.0	105.4-114.8	136.8-149.2	168.3-183.7	210.5-228.8	272.8-297.0
	Rated power [kW]	3.6-3.9	7.2-7.8	10.7-11.7	14.3-15.6	17.9-19.5	21.5-23.4	28.7-31.3	35.9-39.2	46.6-50.9	2 x 28.7 x 31.3	2 x 35.9-39.2	2 x 46.6-50.8
	Rated current [A] ⁽²⁾	4.7	9.4	14.1	18.8	23.5	28.2	37.7	47.1	61.2	2 x 37.7	2 x 47.1	2 x 61.2
575-600 VAC / 3 / 50-60Hz	Steam output [kg/h]	4.9-5.1	9.8-10.3	14.6-15.0	19.5-20.4	24.4-25.5	29.3-30.6	39.2-40.9	48.9-51.0	63.6-66.4	78.3-81.8	95.9-100.0	127.0-132.0
	Steam output [lbs/h]	10.8-11.2	21.6-22.5	32.1-33.0	42.9-44.9	53.7-56.1	64.5-67.3	86.2-90.0	107.6-112.2	139.9-146.1	172.3-180.0	211.0-220.0	279.4-292.6
	Rated power [kW]	3.7-3.8	7.4-7.7	11.0-11.4	14.7-15.3	18.3-19.1	22.0-23.0	29.4-30.7	36.7-38.2	47.7-49.8	2 x 29.4-31.7	2 x 36.0-37.5	2 x 47.7-49.8
	Rated current [A] ⁽²⁾	3.7	7.4	11.0	14.7	18.4	22.1	29.5	36.8	47.9	2 x 29.5	2 x 36.1	2 x 47.9
Number of cylinders	1						2						
Control type	FlexLine mainboard with capacitive 3.5" touch color display												
Internal control voltage	208-240V / 50-60Hz												
Steam hose connection [mm]	1 x DN 25 ID		1 x DN 40 ID		1 x DN 40 ID ⁽⁴⁾	2 x DN 40 ID		2 x DN 40 ID ⁽⁴⁾	4 x DN 40 ID				
Steam hose connection [in]	1 x 1 ID		1 x 1.6 ID		1 x 1.6 ID ⁽⁴⁾	2 x 1.6 ID		2 x 1.6 ID ⁽⁴⁾	4 x 1.6 ID				
Dimensions ⁽³⁾													
Height [mm/in]	535/21.1		695/27.4		750/29.5		785/30.9		750/29.5		785/30.9		
Width [mm/in]	460/18.1		540/21.3		580/22.8		640/25.2		1130/44.5		1170/46.1		
Depth [mm/in]	320/12.6		320/12.6		355/14.0		420/16.5		420/16.5		420/16.5		
Water installation	Tap water of varying qualities 1 to 10 bar / 14.5 - 145 PSI, with 3/4" external thread												



FlexLine heaters technical data

A higher humidification performance is possible by connecting units together.

FLH03	FLH06	FLH09	FLH15	FLH25	FLH30	FLH40	FLH50	FLH80	FLH100
2.5-3.3	4.9-6.5								
5.5-7.3	10.8-14.3								
1.8-2.4	3.7-4.9								
8.8-10.2	17.7-20.4								
2.5-3.3	4.9-6.5		12.2-16.6						
5.5-7.3	10.8-14.3		26.8-36.5						
1.8-2.4	3.7-4.9		9.3-12.4						
8.8-10.2	17.7-20.4		25.9-29.9						
	5.5-6.5	8.2-9.8	13.9-16.6	23.1-27.4	27.8-33.1	37.0-44.0	43.7-52.0	73.9-88.0	87.4-104.0
	12.1-14.3	18.1-21.6	30.6-36.5	50.8-60.3	61.2-72.8	81.4-96.8	96.1-114.4	162.6-193.6	192.3-228.8
	4.1-4.9	6.2-7.3	10.4-12.4	17.3-20.6	20.9-24.8	27.7-33.0	32.8-39.0	2 x 27.7-33.0	2 x 32.8-39.0
	9.4-10.2	14.0-15.3	13.7-14.9	22.7-24.8	27.4-29.9	36.4-39.7	43.0-46.9	2 x 36.4-39.7	2 x 43.0-46.9
	4.6-5.0	6.8-7.4	11.5-12.6	19.1-20.8	23.1-25.1	30.7-33.4	38.3-41.7	61.3-66.8	76.5-83.3
	10.1-11.0	15.0-16.3	25.3-27.7	42.0-45.8	50.8-55.2	67.5-73.5	84.3-91.7	134.9-147.0	174.2-189.6
	3.4-3.7	5.1-5.6	8.7-9.4	14.3-15.6	17.3-18.8	23.0-25.0	28.7-31.2	2 x 23.0-25.0	2 x 28.7-31.2
	5.9-6.2	8.9-9.3	8.7-9.1	14.4-15.0	17.4-18.1	23.1-24.1	29.7-30.1	2 x 23.1-24.1	2 x 29.7-31.0
1							2		
FlexLine mainboard with capacitive 3.5" touch color display									
208-240V / 50-60Hz									
1 x DN 25 ID			1 x DN 40 ID	1 x DN 40 ID ⁽⁴⁾	2 x DN 40 ID		4 x DN 40 ID		
1 x 1 ID			1 x 1.6 ID	1 x 1.6 ID ⁽⁴⁾	2 x 1.6 ID		4 x 1.6 ID		
Dimensions ⁽³⁾									
535/21.1			695/27.4		785/30.9		785/30.9		
460/18.1			540/21.3		640/25.2		1170/46.1		
320/12.6			320/12.6		420/16.5		420/16.5		
Fully demineralized water / cleaned condensate / partially softened water / tap water of varying qualities, 1 to 10 bar / 14.5 to 145 PSI, with 3/4" external thread									

We reserve the right to make technical changes.

⁽¹⁾ Other voltages upon request.

⁽²⁾ FlexLine electrodes: 1.1-fold power consumption after full blowdown. Observe actuation characteristics of automatic circuit-breakers. If necessary, select the next higher circuit-breaker level.

⁽³⁾ External width and depth dimensions. Height including drainage nozzles.

⁽⁴⁾ Incl. Y-piece DN 40.



Our service for 100% customer satisfaction

- Simple ordering process and short delivery times
- Long availability of replacement parts
- Technical hotline +49 4193 895-293 or hotline@hygromatik.com
- HygroMatik distributes in more than 45 countries
- Operating manuals, planning data and information on workshop events available online at hygromatik.com
- Visit our digital showroom at showroom.hygromatik.com

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