



# 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:

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



Shopping centres 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 3 kg/h to 130 kg/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



## Optimised unit performance for efficient utilisation

As with all our products, the HygroMatik FlexLine has been developed for an especially long life. The units feature technologies that not only reduce the amount of maintenance required, but also the wear of components. In addition, they are highly efficient with energy and resources.

- **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 resource efficiency



## FlexLine electrodes technical data

A higher humidification performance is possible by connecting units together.

Type	FLE05	FLE10	FLE15	FLE20	FLE25	FLE30	FLE40	FLE50	FLE65	FLE80	FLE100	FLE130
Steam output [kg/h]	4.8-5.2	9.5-10.4	14.3-15.6	19.0-20.8	24.0-26.0	28.5-31.2	38.2-41.7	47.8-52.2	62.0-67.5	76.4-83.4	95.5-104.4	124.0-135.0
Electrical connection <sup>(1)</sup>	380-415V / 3Ph / N / 50-60Hz					380-415V / 3Ph / N / 50-60Hz						
Rated power [kW]	3.6-3.9	7.1-7.8	10.7-11.7	14.3-15.6	18.0-19.5	21.4-23.4	28.6-31.3	35.9-39.2	46.3-50.6	2 x 28.6-31.3	2 x 35.8-39.1	2 x 46.3-50.6
Nominal current [A]	5.4	10.8	16.2	21.7	27.1	32.5	43.3	54.1	70.4	2 x 43.3	2 x 54.1	2 x 70.4
Fuse [A] <sup>(2)</sup>	3 x 10	3 x 16	3 x 20	3 x 32		3 x 40	3 x 50	3 x 63	3 x 80	2 x 3 x 50	2 x 3 x 63	2 x 3 x 80
Number of steam cylinder	1					1				2		
Control	FlexLine mainboard with capacitive 3.5" touch colour display					FlexLine mainboard with capacitive 3.5" touch colour display						
Internal control voltage <sup>(3)</sup>	220-240V / N / 2.5A					220-240V / N / 2.5A						
Steam hose connection [mm]	1 x 25			1 x 40		1 x 40	2 x 40 <sup>(4)</sup>	2 x 40	4 x 40 <sup>(4)</sup>	4 x 40		
Max. filling capacity [l]	5	13			21		36	42	71			
Empty weight [kg]	16	22		23	26		34	66	75			
Operating weight [kg]	21	36		37	47		70	108	147			
Dimensions WxHxD [mm] <sup>(5)</sup>	460 x 535 x 320		540 x 695 x 320			580 x 750 x 355		640 x 785 x 420		1130 x 750 x 420	1170 x 785 x 420	
Water connection	Tap water of varying qualities, 1 to 10 bar, for 3/4" external thread					Tap water of varying qualities, 1 to 10 bar, for 3/4" external thread						
Drain water connection	Connection Ø 1 1/4"					Connection Ø 1 1/4"				2 x Connection Ø 1 1/4"		

### From our accessories range



Standard steam manifold

Multiple steam manifold



## FlexLine heaters technical data

A higher humidification performance is possible by connecting units together.

Type	FLH03	FLH06	FLH09	FLH15	FLH25	FLH30	FLH40	FLH50	FLH80	FLH100	
Steam output [kg/h]	2.7-3.3	5.5-6.5	8.2-9.8	13.7-16.4	22.7-27.1	27.4-32.7	36.5-43.5	45.5-54.3	73.0-87.0	91.0-108.6	
Electrical connection <sup>(1)</sup>	220-240V / 1Ph / N / 50-60Hz			380-415V / 3Ph / N / 50-60Hz							
Rated power [kW]	2.1-2.4	4.1-4.9	6.2-7.3	10.3-12.3	17.1-20.3	20.6-24.5	27.3-32.6	34.1-40.7	2 x 27.3-32.6	2 x 34.1-40.7	
Nominal current [A]	9.4-10.2	18.7-20.4	10.7-11.7	16.0-17.5	15.6-17.1	25.9-28.3	31.3-34.1	41.5-45.4	51.8-56.6	2 x 41.5-45.4	2 x 51.8-56.6
Fuse [A]	1 x 16	1 x 25	3 x 16	3 x 20		3 x 32	3 x 35	3 x 50	3 x 63	2 x 3 x 50	2 x 3 x 63
Number of steam cylinder	1								2		
Control	FlexLine mainboard with capacitive 3.5" touch colour display										
Internal control voltage <sup>(3)</sup>	220-240V / N / 2.5A										
Steam hose connection [mm]	1 x 25				1 x 40	1 x 40 <sup>(4)</sup>	2 x 40		4 x 40		
Max. filling capacity [l]	5			14		36		71			
Empty weight [kg]	18		25		37		80				
Operating weight [kg]	24			40		74		152			
Dimensions WxHxD [mm] <sup>(5)</sup>	460 x 535 x 320			540 x 695 x 320		640 x 785 x 420		1170 x 785 x 420			
Water connection	Fully demineralised water / cleaned condensate / partially softened water / tap water of varying qualities, 1 to 10 bar, for 3/4" external thread										
Drain water connection	Connection Ø 1 1/4"								2 x Connection Ø 1 1/4"		

### We reserve the right to make technical changes.

- (1) Other voltages upon request.
- (2) 13/28% above nominal power consumption after full blowdown. Observe actuation characteristics of automatic circuit-breakers. If necessary, select the next highest circuit-breaker level.
- (3) Separate control voltage upon request.
- (4) Incl. Y-piece DN40.
- (5) Outer dimensions of width and depth. Height incl. drain connection.



## Our service for 100% customer satisfaction

- Long availability of replacement parts
- Technical hotline +49 4193 895-293 or [hotline@hygromatik.com](mailto:hotline@hygromatik.com)
- HygroMatik distributes in more than 45 countries
- Operating manuals, planning data and information on workshop events available online at [hygromatik.com](http://hygromatik.com)
- Visit our digital showroom at [showroom.hygromatik.com](http://showroom.hygromatik.com)

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