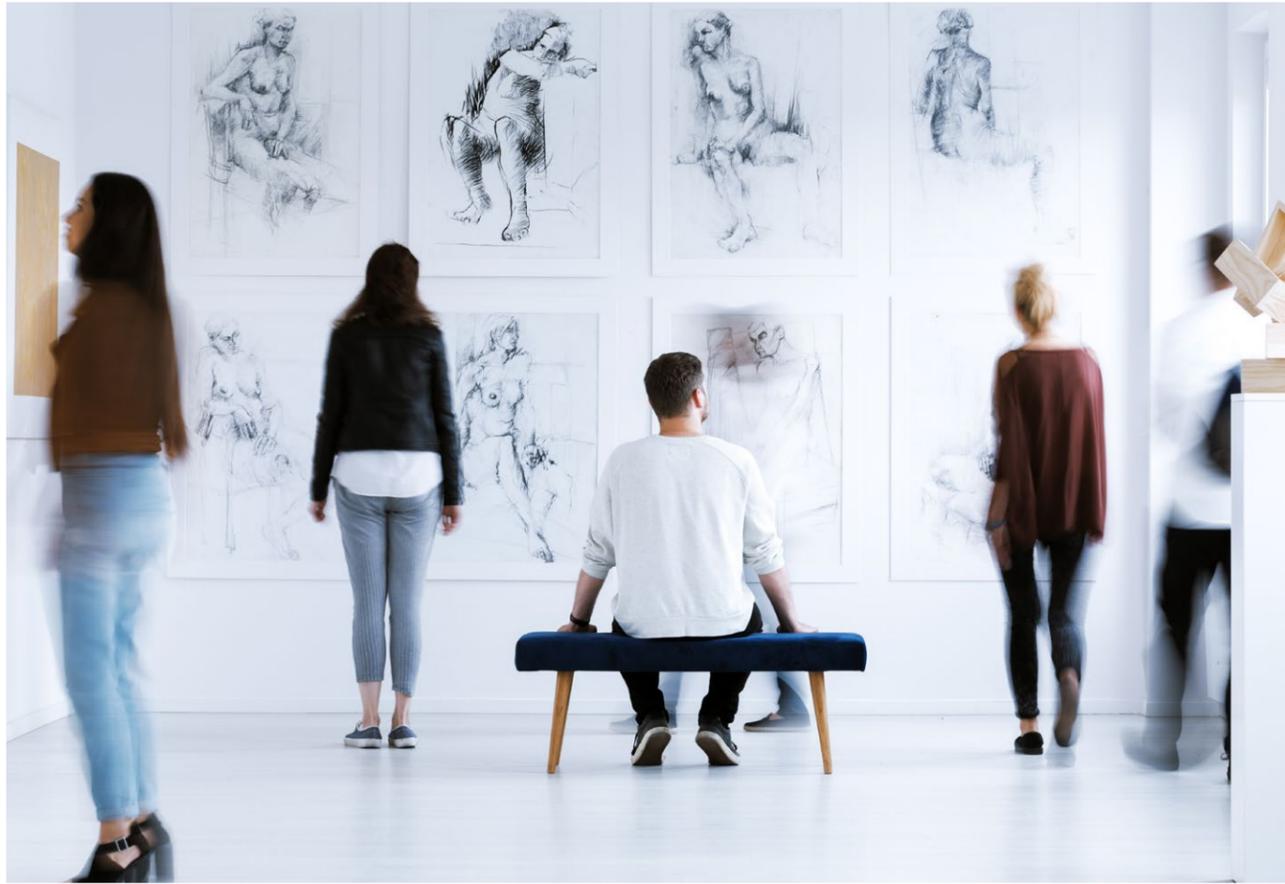


# FlexLine steam humidifier





## Flexibility pays dividends

Advantages:

- Ease of installation by means of individual pre-configuration ex factory
- Expansion options for retrofiting
- You only invest in the functions you really need
- In order to make this flexibility available to our customers quickly, we have developed a modular system.

**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:

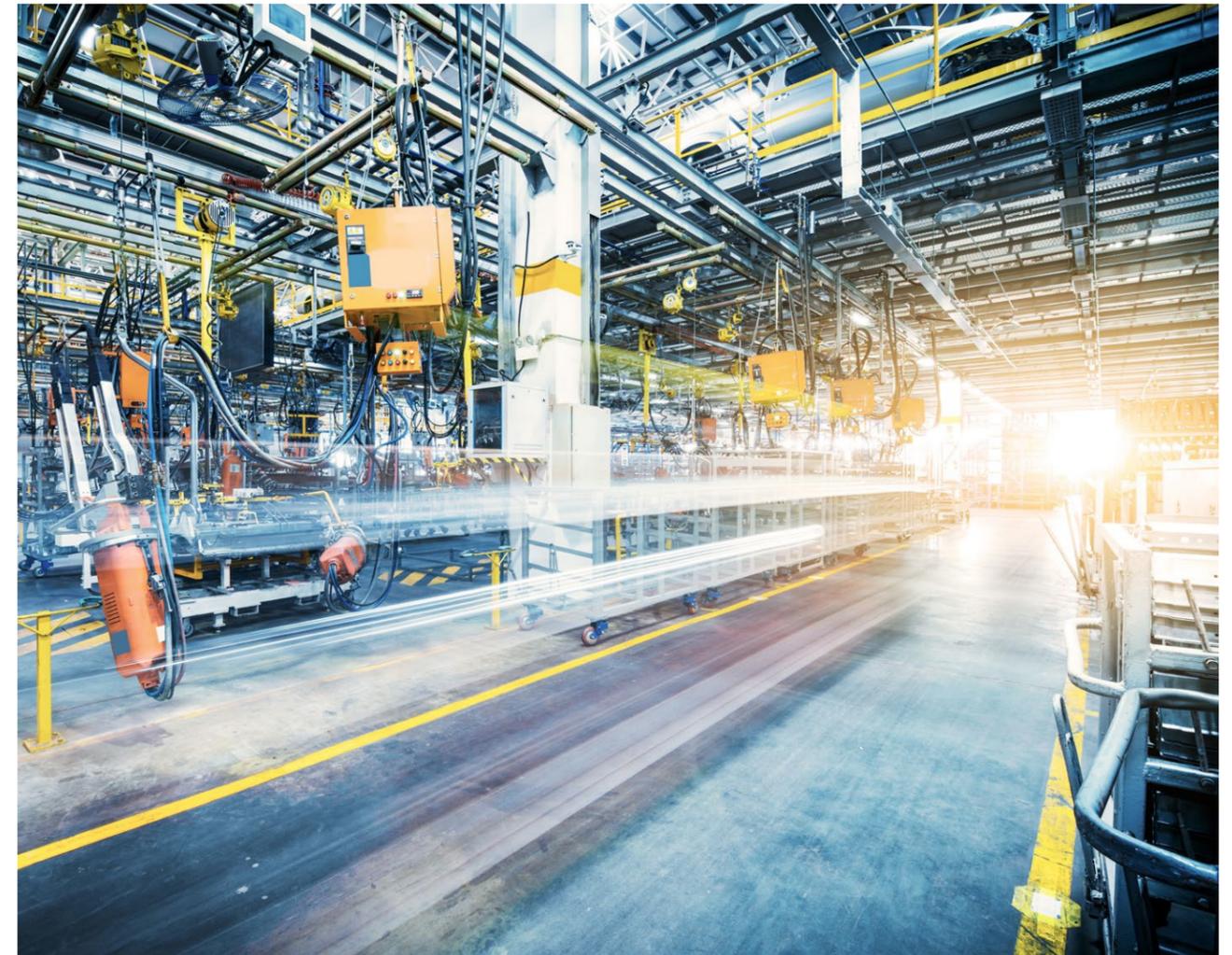
- Optimization of the indoor climate in industrial, commercial, cultural and leisure facilities
- Autonomous control and stabilisation of air humidity in ventilation systems for industry and processes

New flexibility in award-winning quality:

## The Munters FlexLine

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

- 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



# Designed for precision

## 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.

## Always the correct humidification performance

Equip Munters FlexLine with the power you need for optimum humidification. 15 performance classes with steam output from 3 kg/h to 130 kg/h selectable in 6 unit sizes. In addition, individual performance adjustments can be programmed both at the factory and on site.



Resistor type heater elements in highly corrosion-resistant alloy.

Replaceable stainless steel large area electrodes for different conductivities.

## Excellent ease of operation

All Munters 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.

- 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



## 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. Whether you choose HyCool (integrated waste water cooling) or the SuperFlush function (cylinder flushing device) depends entirely on your project. If needed, all options can be retrofitted. We are always pleased to provide advice.



Robust blowdown pump



## Smart control – powerful and quick response

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

- Multi-unit operation management caters for optimum allocation and capacity utilisation when operating multiple units and safeguards the humidity even when a unit is being serviced
- Numerous control and reporting functions can be assigned to up to 11 relays depending on the unit
- Freely programmable, overload-protected digital input
- Integrated communication protocol: Modbus RTU or BACnet

## Comprehensive service functions

We have equipped the Munters FlexLine with intelligent service functions and innovative features for operational safety. These provide a new level of safety, reliability, control and comfort.

- Innovative: 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

## Optimised unit performance for efficient utilisation

As with all our products, the Munters 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 load shedding between 25 and 100%, in order to adapt operation temporarily or permanently
- 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 in the market for electrode steam humidifiers due to integrated mechanical protection switch
- Heater element humidifier with electronic, proportional level control with no wear parts

## Our service for 100% customer satisfaction

- Installation support & assembly supervision
- Startup services & guaranteed performance
- Upgrades, reconditioning/repairs
- Spare parts

## All in the green zone

- Robust and durable cabinet
- Reusable steam cylinders
- Long and flexible service intervals
- High resource efficiency

# Technical data

## FlexLine electrodes

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 / 50-60Hz						380-415V / 3Ph / 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	16.3	21.7	27.2	32.5	43.5	54.5	70.4	2 x 43.5	2 x 54.5	2 x 70.4	
Fuse [A] <sup>(2)</sup>	3 x 10	3 x 16	3 x 20	3 x 32	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												
Separate 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	1 x 40 (4)	2 x 40		2 x 40 (4)		4 x 40	
Empty weight [kg]	16		22		23	26	27	33	34	66		75	
Max. filling capacity [ l ]	5		13			21		36		42		71	
Operating weight [kg]	21		36		37	47	48	69	70	108		147	
Dimensions WxHxD [mm] <sup>(5)</sup>	540 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												
Drain water connection	Connection Ø 1 1/4"						Connection Ø 1 1/4"			2 x Connection Ø 1 1/4"			

## FlexLine heaters

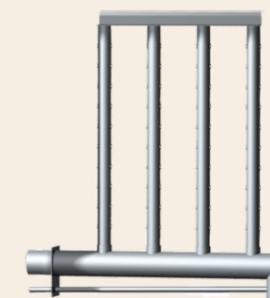
A higher humidification performance is possible by connecting units together.

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 / 50-60Hz					380-415V / 3Ph / 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											
Separate control voltage <sup>(3)</sup>	220-240V / N / 2.5A											
Steam hose connection [mm]	1 x 25				1 x 40	1 x 40 (4)	2 x 40			4 x 40		
Empty weight [kg]	18	19		25		36	37		75	80		
Max. filling capacity [ l ]	5			14		36			71			
Operating weight [kg]	23	24		40		72	74		147	152		
Dimensions WxHxD [mm] <sup>(5)</sup>	540 x 535 x 320				540 x 695 x 320		640 x 785 x 420			1170 x 785 x 420		
Water connection	Fully demineralized 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"			

### Accessories

We reserve the right to make technical changes.

- <sup>(1)</sup> Other voltages upon request.
- <sup>(2)</sup> 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.
- <sup>(3)</sup> Internal control voltage upon request.
- <sup>(4)</sup> Incl. Y-piece DN40.
- <sup>(5)</sup> Outer dimensions of width and depth. Height incl. drain connection.



Multiple steam manifold



Standards team manifold

# Climate solutions for the future

And for your mission-critical processes

Founded in Sweden in 1955, Munters today has 20 manufacturing facilities across the globe and sales offices in more than 30 countries. With approximately 4,000 employees worldwide, we have net sales approaching €1 billion EUR.

Munters is a global leader in climate solutions for mission-critical processes. We offer innovative, efficient, sustainable solutions for controlling humidity and temperature, recovering energy, treating emissions, and using evaporative cooling for comfort, manufacturing, and environmental protection.

Sustainability is an important aspect of our business strategy and value creation. Our solutions help customers use resources efficiently, reducing their climate and environmental impact, ultimately contributing to a better climate and reduced carbon emissions.



## Munters Service portfolio

At Munters, we are committed to offering a complete portfolio of service offerings to support you throughout the entire lifecycle of your Munters equipment.

### Commissioning support

Our trained service technicians make sure your equipment is operating as designed so your investment gets the best possible start. We offer everything from basic unit start-up to extensive turnkey installations.

### Maintenance

Keep your equipment running like new with on-site visits by factory-trained technicians and regular rotor performance checks.

### Retrofit and upgrade

Boost energy efficiency and capacity with our retrofit solutions for equipment already in operation.

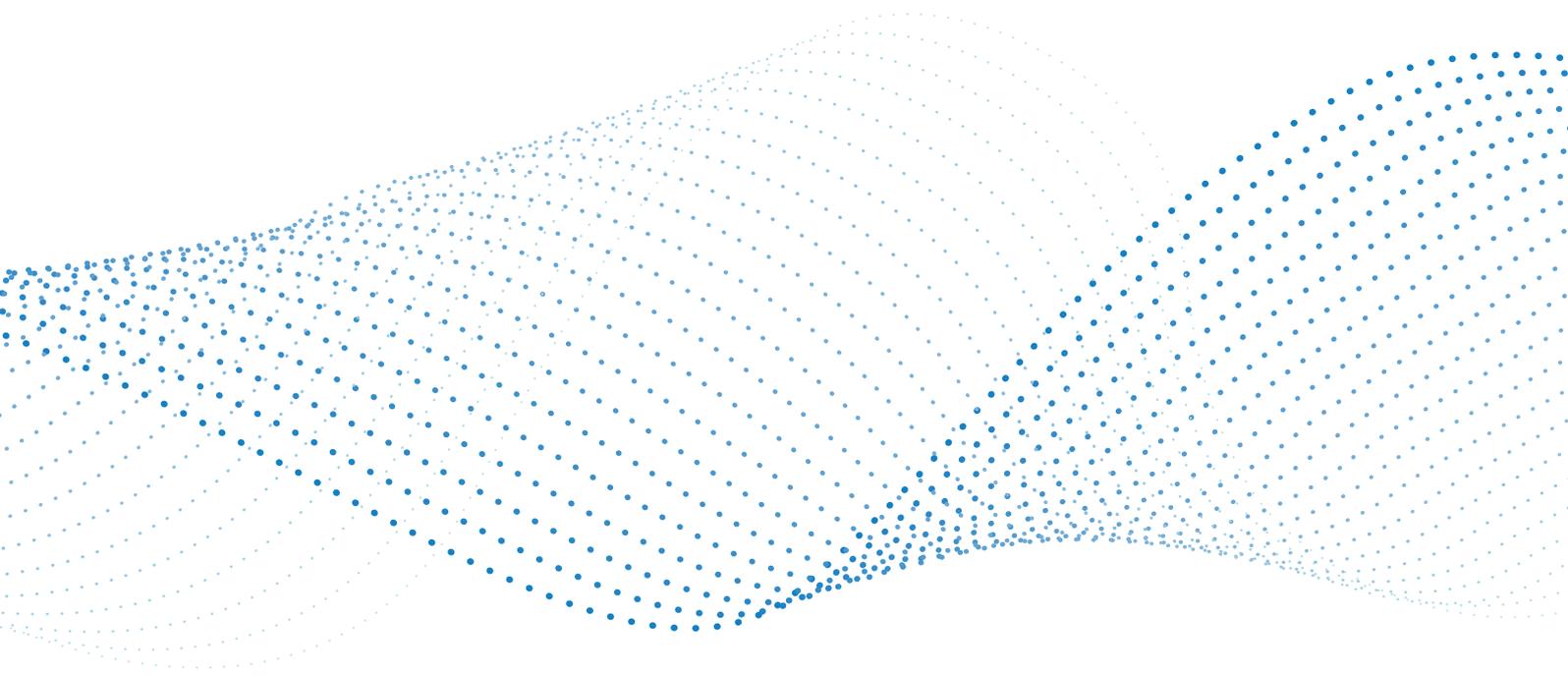
Upgrade controls, replace your rotor or upgrade your fan to maximize performance, save money and energy. Munters also custom fabricates zeolite blocks for replacement of all zeolite and carbon rotor systems.

### Munters Service Agreements

Ensure that your Munters equipment always performs according to specifications. Munters Service Agreements, tailored to your needs, offer industry-leading lifecycle care for your equipment – and peace of mind for yourself.

### Munters Genuine Parts

We use only Munters Genuine Parts, which are designed, tested, and verified to ensure that each part meets or exceeds specifications. Convenient service kits are made to make maintenance simple.



Munters is a global leader in energy-efficient air treatment and climate solutions. Using innovative technologies, Munters creates the perfect climate for customers in a wide range of industries.

Munters has been defining the future of air treatment since 1955. Today, around 4,000 employees carry out manufacturing and sales in more than 30 countries.

For more information, please visit [www.munters.com](http://www.munters.com)