

GEA Fan Coil Units – Powerful and invisible

The optimal solution for suspended ceilings
GEA MPower-Geko®

Product Brochure

GEA MPower Fan Coil Units

Heating, cooling, and ventilation – powerful and quiet



When high heating and cooling capacity is desired, in units with compact dimensions, GEA MPower fan coil units can put their benefits to optimal use. This quiet unit is ideal for connection to warm and cold-water networks, and is designed for installation out of sight above suspended ceilings. If required, primary air can be supplied via the intake module. With its high air-flow level, it quickly takes even larger rooms to their required temperatures, via a connected duct network with ceiling air outlets.

The principle of GEA MPower fan coil units has been proven thousands of times. Hotels, restaurants, and shops, for example, have learned to trust its solutions for heating and cooling based on equipment that operates inconspicuously above suspended ceilings. Its benefits are indeed obvious: ceiling and wall space remains free to offer area for storage, furniture, or simply spacious interior design.

Despite their desirable aesthetic room qualities, no user wants to skimp on climate-control capacity for large open spaces. Only with the required capacity can such rooms be quickly brought to the desired temperature to offer feel-good climate, whisper-quietly, after they have been cooled down or overheated. GEA MPower fan coil units flawlessly perform these two key functions. Their powerful fans with 5-speed motors can really rev up when maximum performance is required – and then quieten down to a virtually silent fan speed once the required temperature is reached. This is climate comfort at the top of its class: powerful, quiet, and reliable – MPower.

Inconspicuous and powerful:

- Heating and cooling possible with one unit
- Optically inconspicuous installation above a suspended ceiling
- Four model sizes and two capacity stages for selection
- Powerful 2-pipe or 4-pipe versions
- Five-speed fans for demand-driven ventilation
- Heating capacity up to approx. 23 kW, and cooling up to approx. 12 kW
- Available in especially space-saving, compact models
- Effective for connection to the on site air duct network



Designed for all suspended ceilings

Invisible and virtually silent

Room-climate comfort is not only a matter of room temperature. Spontaneous response behaviour, quiet operation, and no-draft temperature regulation are essential criteria for room comfort. The GEA MPower fan coil unit is accordingly designed not for maximum, but for optimal power performance.

The best compliment for a unit above a suspended ceiling is that it remains unnoticed. Only modest air outlets should disclose approximately where the fan coil unit is installed, and its operation should optimally be hardly audible. In order that these wishes become reality, designers at GEA Air Treatment have systematically developed the MPower fan coil unit to assure the quiet application of its power.

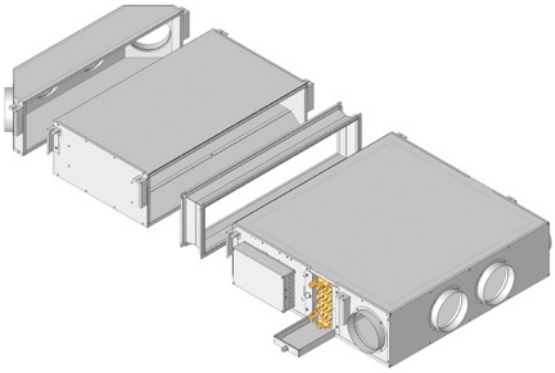
The measures implemented for noise reduction include a finely tiered 5-speed fan and sound insulation of glass fibre/mineral wool with abrasion-resistant silk lining – which also serve as high-benefit thermal insulation.

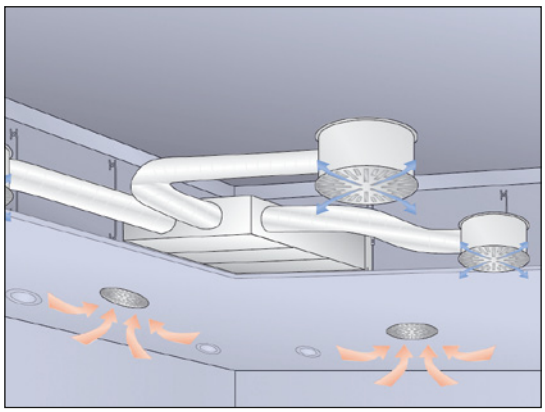
The acoustical and optical unobtrusiveness of the GEA MPower-Geko is accompanied by a broad line of accessories. They enable taking consideration of a range of different installation situations, and to inconspicuously locate air outlets, with great effectiveness from HVAC engineering standpoints. Air intake and discharge plenums, flexible connections, and sound attenuators are only a few of the accessories adapted to MPower-Geko. Suspension rails assure simple and reliable installation.

Hydraulic and electrical connections are located on the same side of the unit – which saves space and ensures installation friendliness. And if you really need more room above the ceiling, then the compact version with integrated air-outlet box offers comparable performance with even smaller dimensions.

Great diversity for installation:

- Choice between modular units and compact models
- Large spectrum of installation and function accessories
- Highly effective thermal and acoustic insulation
- Installation-friendly arrangement of water and electrical connections
- Selection of G2 or G3 filters



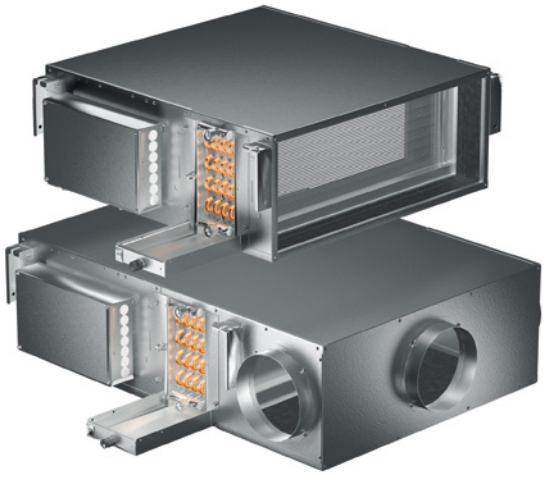


Systematically designed and maintenance-friendly

Long-lived and easy to service

Like all other fan coil units from GEA, the MPower-Geko is designed for a long service life. High-quality fans and sophisticated condensate drainage are only two of the features that extend life cycles. Just as important is good maintenance. In order to simplify maintenance and cleaning work, GEA developers have thought ahead.

During maintenance work, it becomes evident that well-thought-out unit design offers benefits extending well beyond installation. Separate, pivot-mounted, and sealed cover rails with quick-action clamps make access easy for filter maintenance. A single-part (and therefore perfectly sealing) condensate tray offers not only protection from dripping condensate: it is also easy to dismantle for cleaning. An enclosure design with integrated slope assures reliable drainage of the condensate occurring during cooling operation. And for the most demanding cases, a condensate pump can be installed to empty the drip pan by non-contact sensor technology.

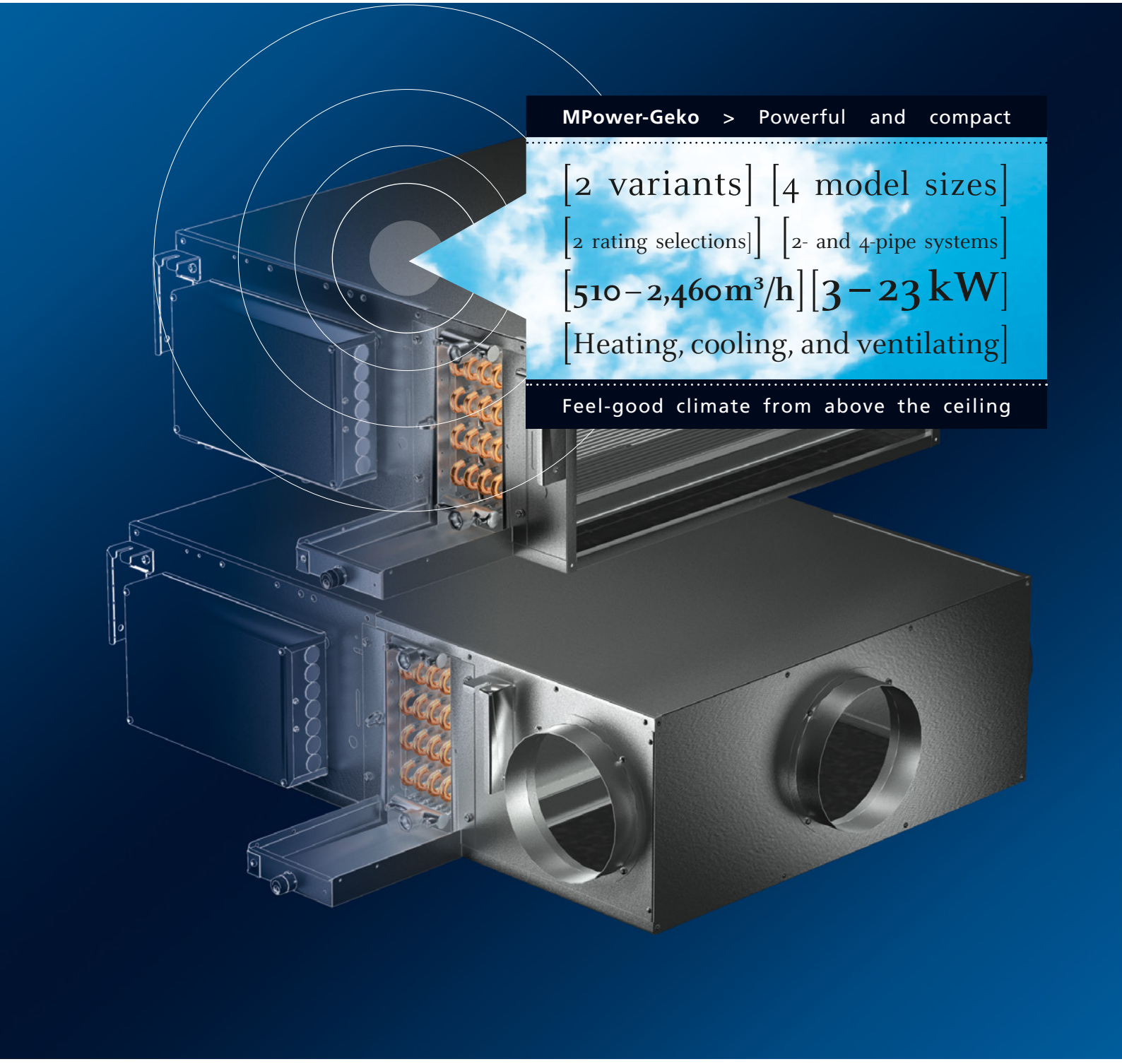


Reliable and easy to service

- Single-part condensate tray
- Optimal condensate pump controlled by sensors
- Simplified filter maintenance
- Motors with long service lives
- Good thermal insulation, and housings with integrated slope
- Simple installation of the valve complement and the medium connections



Whether for hotels, shops, or restaurants: the GEA MPower fan coil unit installed above the ceiling powerfully ensures the feel-good climate that we all want. Modular or compact models quickly and quietly bring rooms to the desired, comfortable conditions by means of 5-speed fans.



Just the right turn for the right room climate

If requested as option, the proven GEA MATRIX control unit will be integrated into GEA MPower fan coil units at the factory. Your benefit: only completely tested equipment will be supplied to your construction site.

Comprehensive closed-loop control possibilities:

- Control functions in various model capacity rating stages
- Bus interfaces to other equipment units
- Plug-and-play functionality
- Energy-optimised equipment operation
- Equipment ready to operate
- Highly competent service
- Global add-on modules
- LON interface
- Availability of effective service tools



The GEA MATRIX control unit is available in model capacity rating stages MATRIX 500, MATRIX 2000, MATRIX 3000, and MATRIX 4000, with matching to various applications. For example, one variant is provided for hotel applications, and another is supplied as a Basic model for cost-optimised budgets.

Most of the MATRIX models provide, in standard versions, a 2-conductor GEA MATRIX.NET bus system that allows communications among all GEA MATRIX units. In this way, coordinated switch-over between daytime and nighttime operations can be simply implemented – and pumps can be controlled and error messages collected at a central point. GEA MATRIX also can be connected to higher-level bus systems.

In addition, GEA MATRIX assures energy-optimized operation of GEA MPower Geko coil units. A coordinated switch-over function, for example, prevents heating and cooling circulation systems from conflicting with each other. With its summer compensation function, GEA MATRIX considers the outdoor-temperature influence and thus prevents energy-intensive air conditioning.

Hardware and software for GEA MATRIX are developed entirely at GEA. As a result of close collaboration within the company, GEA engineers can systematically adjust the control system to match every component – and in turn optimally exploit the possibilities of the fan coil units. GEA support staff also profit from this arrangement by being able to quickly and expertly react in case of any questions.

Numerous additional global modules are available as function expansions of the standard local connections for the MATRIX control system. Examples here are: intra-group GEA MATRIX control units, clock modules, modules for activation control of chillers, modules for expansion of analogue or digital input and output signals, and integration into a LON bus system in accordance with the LonWorks standard.

Beginning with the MATRIX 2000, all modules can be simply and easily integrated via the MATRIX.Net bus system. In addition, the service tools MATRIX.PDA and MATRIX.PC can be used for parameterisation, initial start-up, maintenance, and data recording from the MATRIX control system.

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Remote control for MATRIX 500

MATRIX OP5

– Enclosure without display, pure white
– **Recirculated-air operation,** IP 20 class
– Desired-temperature setting
– Fan-speed selection for permanent mode
– Button for temperature-reduction mode
– LED display: operation/malfunction/ext. influence
– Integrated room-temperature sensor



Remote control for MATRIX 2000

MATRIX OP21

Same as control unit OP5, but with:

– Fan-speed selection for permanent automatic mode

– MATRIX.Net data bus
Network connection for additional **MATRIX** module via **OP21** control unit



Remote control for MATRIX 3000 and MATRIX 4000

MATRIX OP30 without buttons
MATRIX OP31 with temp.-reduction button

– Enclosure without display, pure white
– **Recirculated-air operation,** IP 20 class
– Desired-temperature setting
– Fan-speed selection switch for permanent/ automatic operation
– LED display: operation/malfunction/ext. influence
– Integrated room-temperature sensor



MATRIX OP44

Same as the OP31 control unit, but with:

– Switching for heating / cooling / AUTO modes of operation

All control units are without display.
With protective cover as option.



MATRIX OP50 without clock
MATRIX OP51 with clock

– Enclosure with display, pure white
– **Recirculated-air** mode of operation
– IP 20 enclosure-protection class
– Operation by rotary navigator
– LCD display with plain text
– Status report by pictograms
– Integrated room-temperature sensor



MATRIX.IR infrared remote control unit

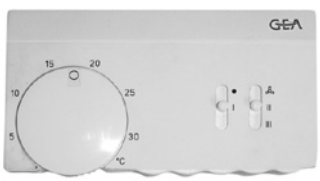
– Functions as for the OP44 control unit, but:
Without operational/malfunction reports
Without report of external influence
Without integrated room sensor
– Black enclosure, similar to RAL 9004
– LCD display, 45 x 30 mm
– Effective range = approx. 20 m



GEA thermostat / compact switch units

CMS / CMT / CET series: simple control units are also available for minimal control-function requirements.







MPower-Geko Fan speeds 1 - 2 - 3 - 4 - 5		Air Model sizes 1 ... 4	Heating volume flow m^3/h	Cooling capacity kW	capacity kW
Recirculated air	**Type**	**Capacity stage**	**min | max**	**min | max**	**min | max**
Heating with warm water	U0W	● ●	510 | 2,460	5.4 | 20.7	
Cooling with chilled water	UW0	● ●	510 | 2,460		3.0 | 12.7
Cooling with chilled water or heating with warm water (change-over)	UWC	● ●	510 | 2,460	5.4 | 20.7	3.0 | 12.7
Cooling with chilled water and heating with warm water (4-pipe system)	UWW	● ●	510 | 2,460	2.8 | 12.2	3.1 | 10.7

Heating with warm water: 70/50°C, tL1 +20°C; **cooling** with chilled water: 6/12°C, tL1 +27°C, 46% relative humidity.

Accessories

For modular units and compact units Air-intake side	
Air-intake plenum with round spigot, insulated	●
Flexible connection	●
Sound attenuator	●
Cover for round spigot, not insulated	●
Finger guard for free intake	●
Suspension rail: 950 x 1550 x 2150 mm	●
Spare filter set: G2 or G3 (5 each)	●

Accessories

Only for modular units Air-discharge side	
Air-discharge plenum with round fittings	●
Flexible connection	●
Sound attenuator	●
Cover for round spigot, not insulated	●
Suspension rail: 950 x 1550 x 2150 mm	●

Dimensions and weights

Dimensions		Model size 1	Model size 2	Model size 3	Model size 4
Width x height		**mm**	**mm**	**mm**	**mm**
Modular units, compact units		975 x 295	1,275 x 295	1,575 x 295	1,775 x 295
Flexible connections		720 x 295	1,020 x 295	1,320 x 295	1,520 x 295
Length		**mm**	**mm**	**mm**	**mm**
Modular units	Filter – fan – heat exchanger	751	751	751	751
Compact units	Additionally with integrated air-discharge plenum	1,000	1,000	1,000	1,000
Modular units	Air-intake plenum, air-discharge plenum	222	222	222	222
Modular units	Sound attenuator	600	600	600	600
Flexible connections	Maximum length	130	130	130	130

Weights		Model size 1	Model size 2	Model size 3	Model size 4
	kg		**kg**	**kg**	**kg**
Modular units	Filter – fan – heat exchanger	37	45	55	61
Compact units	Additionally with integrated air-discharge plenum	46	54	66	76
Modular units	Air-intake plenum, air-discharge plenum	6	8	10	11
Modular units	Sound attenuator	16	22	27	30
Flexible connections		3	4	5	6

Model size			1	2	3	4
At max. air flow	**Fan speed 1**	**m^3/h**	**515**	**685**	**815**	**1,000**
Air-discharge side		Lw*	41	45	38	43
Air-intake side		Lw*	40	42	38	40
Outside on the housing		Lw*	29	32	27	30
At max. air flow	**Fan speed 2**	**m^3/h**	**685**	**930**	**1,150**	**1,380**
Air-discharge side		Lw*	46	53	45	50
Air-intake side		Lw*	44	50	44	47
Outside on the housing		Lw*	34	40	33	37
At max. air flow	**Fan speed 3**	**m^3/h**	**915**	**1,115**	**1,380**	**1,730**
Air-discharge side		Lw*	54	58	49	55
Air-intake side		Lw*	52	54	48	52
Outside on the housing		Lw*	41	44	37	42
At max. air flow	**Fan speed 4**	**m^3/h**	**1,080**	**1,295**	**1,670**	**2,065**
Air-discharge side		Lw*	58	62	54	60
Air-intake side		Lw*	56	58	52	57
Outside on the housing		Lw*	45	48	42	47
At max. air flow	**Fan speed 5**	**m^3/h**	**1,215**	**1,555**	**2,020**	**2,460**
Air-discharge side		Lw*	62	67	60	64
Air-intake side		Lw*	58	63	57	62
Outside on the housing		Lw*	48	53	47	51

* Sound power level for modular units, capacity stage 1, filter class G2, without external pressure, without accessories.

Modular units Fan speed 1	Capacity stage 1			Model size 1	Model size 2	Model size 3	Model size 4
2-pipe	**Type**	**Max. air volume flow**	**m³/h**	**515**	**685**	**815**	**1,000**
Heating	U0W / UWC		kW	5.5	7.6	8.8	10.8
Cooling	UW0 / UWC		kW	3.0	4.4	5.0	6.1
4-pipe	**Type**	**Max. air volume flow**	**m³/h**	**515**	**685**	**815**	**1,000**
Heating	UWW		kW	2.8	4.1	5.2	6.2
Cooling	UWW		kW	3.1	4.4	5.3	6.4

Modular units Fan speed 3	Capacity stage 1			Model size 1	Model size 2	Model size 3	Model size 4
2-pipe	**Type**	**Max. air volume flow**	**m³/h**	**915**	**1,115**	**1,380**	**1,730**
Heating	U0W / UWC		kW	8.2	10.9	13.2	16.2
Cooling	UW0 / UWC		kW	4.4	6.0	7.2	8.8
4-pipe	**Type**	**Max. air volume flow**	**m³/h**	**915**	**1,115**	**1,380**	**1,730**
Heating	UWW		kW	3.8	5.3	6.9	8.2*
Cooling	UWW		kW	4.4	5.6**	7.4**	8.5**

Modular units Fan speed 5	Capacity stage 1			Model size 1	Model size 2	Model size 3	Model size 4
2-pipe	**Type**	**Max. air volume flow**	**m³/h**	**1.215**	**1,555**	**2,020**	**2,460**
Heating	U0W / UWC		kW	10.0	13.6	17.2	20.7
Cooling	U0W / UWC		kW	5.2	7.3**	9.0	10.8
4-pipe	**Type**	**Max. air volume flow**	**m³/h**	**1,215**	**1,555**	**2,020**	**2,460**
Heating	UWW		kW	4.3	6.2	8.2*	9.2*
Cooling	UWW		kW	5.0**	6.4**	8.6**	9.7**

Heating with warm water: 70/50°C, tL1 +20°C
*Heating with warm water, inlet temp. 70°C, maximum permissible medium mass flow
Performance ratings given for filter class G2, without external pressure, without accessories

Cooling with chilled water: 6/12°C, tL1 +27°C, 46% relative humidity.
**Cooling with chilled water, inlet temp. 6°C, maximum permissible medium mass flow

Modular units Fan speed 1		Capacity stage 2		Model size 1	Model size 2	Model size 3	Model size 4
2-pipe	Type	Max. air volume flow	m^3/h	515	685	810	1,000
Heating	U0W / UWC		kW	5.9	8.2	9.5	11.8
Cooling	UW0 / UWC		kW	3.4	4.9	5.4	6.7
4-pipe	Type	Max. air volume flow	m^3/h	515	685	810	1,000
Heating	UWW		kW	3.7	5.2	6.2	7.5
Cooling	UWW		kW	3.0	4.4	4.9	6.1

Modular units Fan speed 3		Capacity stage 2		Model size 1	Model size 2	Model size 3	Model size 4
2-pipe	Type	Max. air volume flow	m^3/h	905	1,105	1,370	1,710
Heating	U0W / UWC		kW	9.3	12.0	14.7	18.1
Cooling	UW0 / UWC		kW	5.1	7.0	8.2	10.1
4-pipe	Type	Max. air volume flow	m^3/h	905	1,105	1,370	1,710
Heating	UWW		kW	5.1	6.9	8.5	10.3
Cooling	UWW		kW	4.3	6.0	7.1	8.7

Modular units Fan speed 5		Capacity stage 2		Model size 1	Model size 2	Model size 3	Model size 4
2-pipe	Type	Max. air volume flow	m^3/h	1,190	1,530	1,985	2,415
Heating	U0W / UWC		kW	11.2	15.5	19.5	23.4
Cooling	U0W / UWC		kW	6.1	8.7	10.5	12.7
4-pipe	Type	Max. air volume flow	m^3/h	1,190	1,530	1,985	2,415
Heating	UWW		kW	5.8	8.1*	10.4	12.2
Cooling	UWW		kW	5.1	7.3	8.9	10.7

Heating with warm water: 70/50°C, tL1 +20°C
*Heating with warm water, inlet temp. 70°C, maximum permissible medium mass flow
Performance ratings given for filter class G2, without external pressure, without accessories

Cooling with chilled water: 6/12°C, tL1 +27°C, 46% relative humidity.

We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.