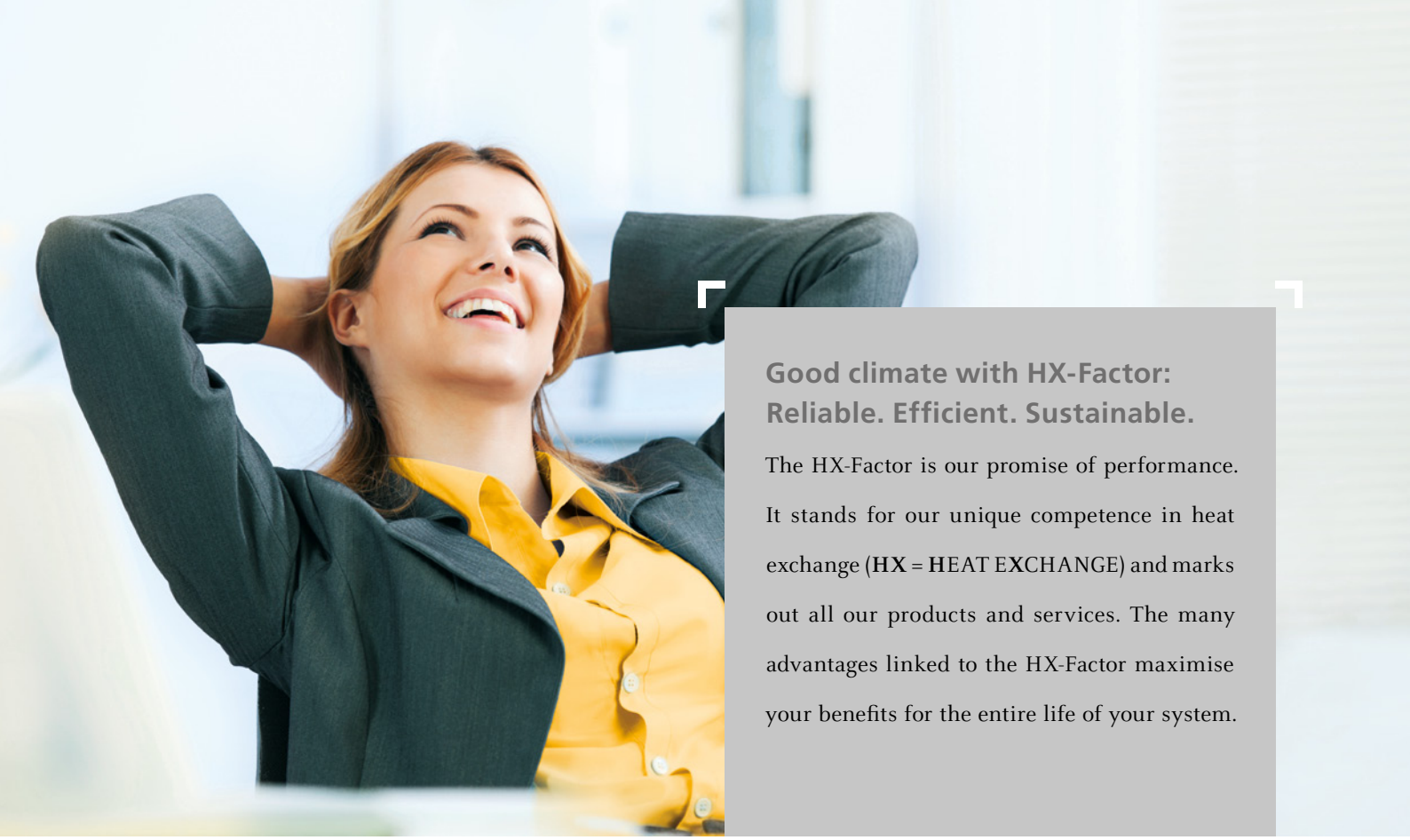
GEA Air Handling Units – Compact – With HX-Factor

HVAC solutions with energy recovery and unit automation
GEA COM4®*plus* – GEA COM4®*mini* – GEA COM4®*top*

Product Brochure



Good climate with HX-Factor: Reliable. Efficient. Sustainable.

The HX-Factor is our promise of performance. It stands for our unique competence in heat exchange (**HX** = **H**EAT E**X**CHANGE) and marks out all our products and services. The many advantages linked to the HX-Factor maximise your benefits for the entire life of your system.

Economy and ecology in focus

The signs of the times are unmistakable

Investors, plant engineers, planners, and architects no longer ask “whether” but “how” they can enhance the degree of sustainability of their plants and building management systems. Each building is unique. Its location, size, construction quality, and increasingly the building management system determine its value and profit. The energy state of a building has gained appreciably in significance here: it is a fact that buildings consume around 40 percent of the world’s energy, and produce 21 percent of global greenhouse-gas emissions. The proportion of the energy costs in the “second rent” for users and residents is constantly increasing.

Climate control and air treatment with HX-Factor meets you in all areas of life.

Where the heating, cooling, cleaning, purification, humidification and dehumidification of air are required, GEA makes its contribution to progress. Customised climate control and air treatment, with the maximum-possible reduction in energy consumption over the entire life cycle of the facilities: this all pays out handsomely in euros and cents, in comfort, and in staff productivity. Our solutions reliably comply with all international standards in highly sensitive areas such as hospitals and cleanroom applications – and they occupy a leading rank in the demanding classification of the Eurovent Compliance Committee for Air Handling Units. They likewise set new standards for sustainability and flawless system integration in advanced sports arenas, production facilities, airport buildings, and swimming pools – as well as in offices, museums, and hotels.

Summarised by the concept HX-Factor, this quality justifies our technological edge. The HX-Factor is more than a technology. It is an attitude which creates values for the future: enhanced quality of life for residents and users. Protection of energy resources and our climate. Security for investors and planners.

Technical Quality

The one who processes air must master it

It is due to the precision work that has gone into the development of the hardware and software that our air treatment can neither be seen nor be heard, provides pleasant experience and helps in avoiding wastage of energy and money.

Can a building with large glazed areas be heated during spring and autumn on its north side and cooled on its south side, with only one system and without having to switch on the central heating? Does a system used, e. g., for heating cooling, humidification and dehumidification in pharmaceutical or electronic industry also protect against dirt and bacteria? Can investors and building owners calculate the life cycle costs of a central plant air handling unit, determine the effect of an energy-saving equipment on the operating cost for this purpose and thus select the optimal efficiency class right in the configuration stage of the plant?

GEA has found answers to these and many other questions concerning air treatment and climate control – and has implemented them in solutions which reflect its experience gained in many and various successful applications. The core proposal consists of a broad spectrum of central and decentral air treatment plants, separators and filter plants up to complete clean-room systems. Their function, control and design can be fine tuned to their task, the condition and infrastructure of buildings, the operating cost calculations and the highest standards of energy efficiency and climate protection. State-of-the-art control technology developed in-house permits the individual control in individual rooms just as it permits the central handling in the context of building management system.

Control unit, which has interfaces to all usual systems of the building automation, provide for the trouble-free integration of the devices into the building management system. The fact that planners and users can implement their own desires at the design stage of the plant itself is the proof of the precision work involved in the air conditioning equipment.

You see, the HX-Factor has many facets. Its generations of experience are just as much a part of this as its customised engineering, worldwide customer proximity or its repeated demonstration of innovative strength. Every single employee in the Segment makes a contribution to energising the HX-Factor with positive attributes. Through an enthusiasm for a technology that shapes peoples' lives in a progressive way. Through particular care and precision. Through commitment at all levels. This quality is transferred directly onto the products and services. This makes the HX-Factor a tangible experience for you too. It ensures a wide range of product benefits for you. It rewards your trust with reliable, efficient and sustainable solutions. So you can count on the HX-Factor!

GEA stands for:

- Tailor-made air quality and a healthy, comfortable room climate with extremely noiseless operation
- Maximum energy efficiency and reduction in the CO_2 emission
- Precise central and decentral control and regulation
- High adaptability to most diverse functions and environments
- Easy system integration
- Durability and high degree of availability at low maintenance costs

Ingenuity is about presenting complex things in a simple way

With the COM4 series of air handling units GEA has successfully managed to accomplish this task. The ease of handling is not only manifested during the uncomplicated and fast design stage but in the trouble-free and time-saving installation as well. Compact and exactly-dimensioned components combined with highly-efficient energy recovery systems, continuously operating drives and application-tailored, pre-configured GEA MATRIX controls and automation system fulfill the tasks of delivering optimized, reliable and fully-equipped units to our customers straight from the factory and enabling highest comfort in unit operation and servicing.

Low Life Cycle Costs

GEA compact air handling units spares your budget – and your nerves

Low costs over the entire life cycle means that GEA compact air handling units ensure maximum cost effectiveness.

Planners, architects, and developers can rest assured when they go to work with three air handling systems that are available for their selection. Fast, simple, and reliable system design with GEA L*plus* software (certified by Eurovent) – in addition to short delivery lead times – are priceless benefits during every project phase. In addition, the plug-and-play concept and the compact dimensions of the pre-configured system simplify installation and initial startup. In this phase as well, this means savings in time and money.

The later operators of the systems not only enjoy pleasant room air, but also low operating costs. Such benefits as optimal use of thermal and electrical energy are implemented thanks to integrated energy recovery systems using rotary or plate heat exchangers as well as intelligent GEA MATRIX control and regulation system.

Calculation of life cycle costs using GEA L***plus*** software

The lion's share of total costs of a central air handling system arises from operating and energy costs over the entire life cycle: 80%.This is far more than the acquisition price and maintenance of such systems: only 12% initial investment, and 8% maintenance and disposal. Complimentary GEA L*plus* design software enables you to calculate operating costs in advance. This software contains the annual temperature plots for all regions of Europe, as taken from the European climate database. The calculation model used by the software is based on Eurovent Standards EN 1886 and EN 13053, for determination of life cycle costs. These calculations not only take into account system-specific data, the average load situation, and energy prices – but also the effects of interest, price-increase rates, and location factors. This enables you to perform comprehensive calculations without having to resort to vague estimates.

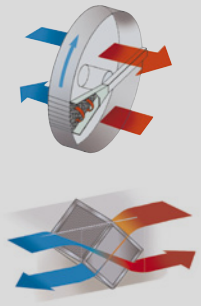
GEA compact systems

- Fast, simple product design
- Short delivery times
- Easy assembly and installation
- Easy, condition-related maintenance
- Cost transparency from the very beginning thanks to GEA L*plus* design software
- Low operating costs throughout entire service life

Fast System Selection

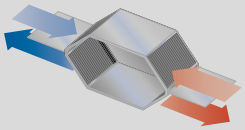
It doesn’t get any simpler or easier

With the GEA compact central-plant air handling units, there is no time-wasting search for a customised solution. The optimal solution is offered thanks to unit layout pre-configured by GEA. The all-inclusive principle eliminates the need for costly modular configuration. You need only to select the most appropriate out of three possible basic systems, decide on the capacity and which required options should be included. In all cases, your selection takes place fast, simply, and effectively.



GEA COM4®*plus* – the universal solution to comprise the widest possible application range

- 7 mode sizes with air flow rate up to 16,000 m³/h
- Horizontal double-deck model design for inside or outside installation
- Energy recovery using rotary heat exchanger ECOROT, efficiency factor h max. 89 %, plate heat exchanger ECOPLAT, efficiency factor h max. 81 %
- EC plug fans for continuous operation
- Re-heater/cooler installed as option in unit or supply air duct
- GEA MATRIX system controls is integrated in GEA COM4*plus* air handling unit



GEA COM4®*mini* – small but boasting highest efficiency

- 3 mode sizes with air flow rate up to 2,200 m³/h
- Horizontal double-deck model design for inside or outside installation
- Energy recovery using plate heat exchanger ECOPLAT, efficiency factor h max. 93 %
- EC plug fans for continuous operation.
- Re-heater/cooler installed as option in supply air duct
- GEA MATRIX system controls is integrated in GEA COM4*mini* air handling unit

GEA COM4®*top* – the upright unit, extremely compact

- 5 mode sizes with air flow rate up to 6,500 m³/h
- Upright side-by-side model design for indoor installation
- Energy recovery using double-plate heat exchanger ECOPLAT, efficiency factor h max. 85 %
- EC plug fans for continuous operation
- Re-heater/cooler installed as option in unit or supply air duct
- GEA MATRIX system controls is integrated in GEA COM4*top* air handling unit

GEA MATRIX® system controls – one for all units

- GEA MATRIX controls and regulation system is available for all central-plant air handling units and their functions
- Control panels with display for wall mounting are included in the packaged content.
- To support service and commissioning GEA MATRIX.PC can be used

The Control System: Efficient and Integrated

Just the right turn for the right room climate

Control and regulation system with numerous monitoring possibilities:

- Differential pressure monitoring for supply and extract air filter
- Measuring outside air temperature after PWW re-heater for regulating frost protection
- Anti-icing control for DX systems and ECOPLAT energy recovery
- Monitoring of the safety chain for external compressor-condenser unit
- Plausibility check for detection of sensor faults
- Monitoring of malfunction reports from circulation pumps, frequency inverters, and energy-recuperation systems

With GEA MATRIX Compact System Controls the user enjoys many functions for operation, control and maintenance of the GEA compact air handling units.

The user can optimally match the central-plant air handling units to the required functions: either by means of GEA MATRIX OP51 control panel, or by the GEA MATRIX. PC startup software. The system acquires a wide range of measured values and continuously monitors them, to assure safe and reliable operation. If one of the monitoring systems responds, this is displayed in plain text by the OP51 operator-control panel. In parallel, the signal is also communicated via the malfunction-report output and/or via the interface to the building-services management system.

Communicative and easily understood – the operator-control level

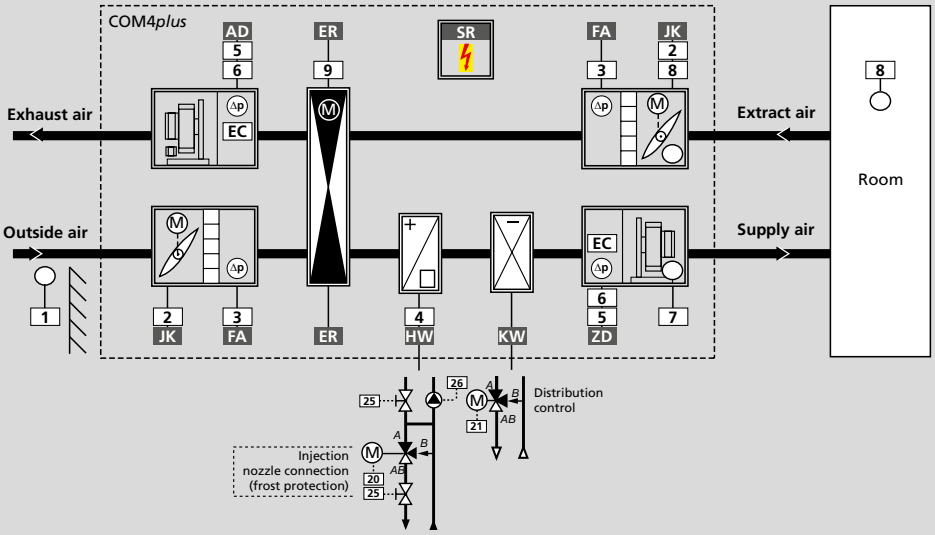
The GEA MATRIX OP51 operator-control unit has a graphics-capable display that is operated with a menu structure analogous to that of a mobile telephone. As a result, setpoint values and switching times can be very quickly and easily entered, and current actual values and instruction messages can be simply read off. Add. Connection to the available GEA MATRIX.Net bus system enables wide-range extensions of functions.

Fast initial startup

Before the GEA COM4 air handling units are delivered to the customer, these are pre-assembled, pre-wired and commissioned by the factory. The electrical connections are plugged for simple and fast assembly by others on site. Colour designations additionally help to prevent confusion. The remaining connections are provided by a clearly designated terminal strip.

GEA compact air handling units are equipped with the proven GEA MATRIX closed-loop control system. This allows the use of internal GEA service structures in the entire European operation area.

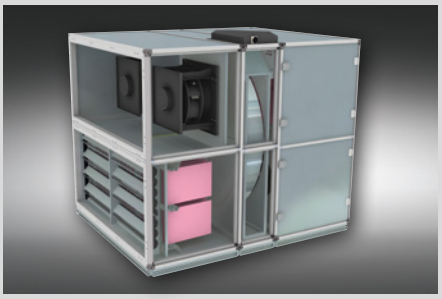
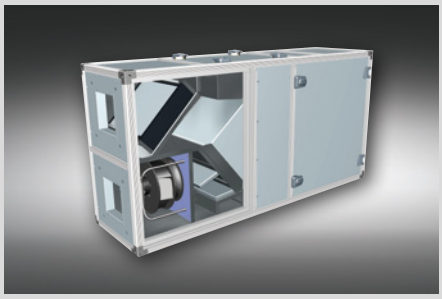
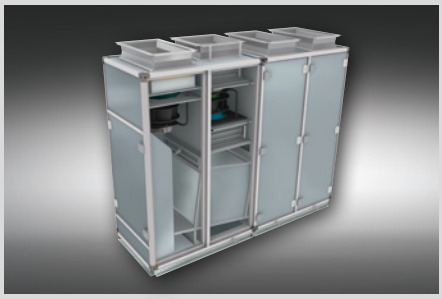
Sample
GEA COM4®*plus*
Compact
System Control

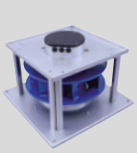


Components and functions		Packaged content or GEA controls	
ZD	Supply fan with EC motor	mounted	Direct driven 3 phases 400 Volt / 50 Hz
AD	Extract fan with EC motor	mounted	Direct driven 3 phases 400 Volt / 50 Hz
JK	Damper blades for outside air/extract air	mounted	Dampers working in opposite direction with gear drive
FA	Filter for outside air/extract air	mounted	Outside air F7 / extract air F5
ER	Energy recovery	ECOROT	GEA rotary heat exchanger
HW	Heating PWW	**Without steam**	Heating with steam on request
CW	Cooling PCW	Without refrigerant	DX cooling on request
SR	Compact control and automation unit	mounted	pre-wired and ready-to-operate
1	External sensor	loose	GEA NTC sensor in IP54 enclosure
2	Actuators for damper blades outside air/extract air	mounted	GEA actuator 230 Volt
3	Differ. pressure switch for outside air sensor/extract air filter	mounted	Lower response sensitivity 40 Pa
4	Frost protection thermostat	mounted	GEA thermostat with change-over contact
5	Pressure sensors for air flow control	mounted	Volume or pressure or signal is external 0 ... 10 Volt
6	EC electronics for supply/extract air	mounted	For RPM speed control of fan motor
7	Supply air minimum limitation sensor	mounted	GEA NTC sensor for installation
8	Mounted extract air sensor and/or loose room sensor	mounted/loose	GEA NTC sensor for installation or with IP21 enclosure
9	Drive motor for rotary heat exchanger	mounted	For RPM speed control of rotor
20	Actuator 3-way mixing valve for heating with PWW	loose	GEA actuator 230 Volt
21	Actuator 3-way diverting valve for cooling with PCW	loose	GEA actuator 230 Volt
	3-way valves	**Hydraulics**	
A	Return line from heat exchanger	Part-medium volume	Water or brine as medium
B	Bypass of inlet line	Part-medium volume	Water or brine as medium
AB	Return line to energy generator	Total-medium volume	Water or brine as medium
25	Mechanical throttle valves	by others	For on-site hydraulic balancing
26	Secondary pump for heating circuit	by others	GEA controls on/off

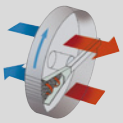
Overview of Units

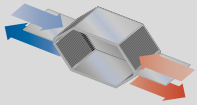
GEA COM4®*plus* – GEA COM4®*mini* – GEA COM4®*top*







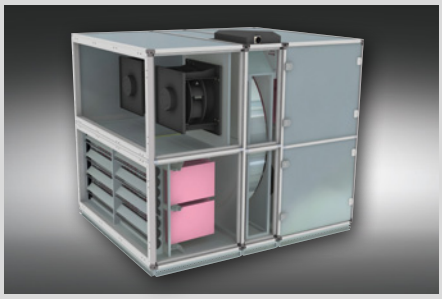

GEA COM4®*plus* 7 model sizes Installation site Inside or outside Series CL
Fans / drives
Direct driven plug fans EC motors, continuous electronically commutated
Energy recovery
Rotation heat exchanger ECOROT or Plate heat exchanger ECOPLAT
Re-heater / Re-cooler
Integrated in CL unit or can be integrated in supply air duct.
Recirculating-air function / damper blade
Optional, with disconnect function of extract fan
Bypass function / damper blade
Without ECOROT Integrated in ECOPLAT
Panel filter as of EN 779
Outside air Quality class F5 or F7 Extract air Quality class F5 or F7
GEA MATRIX System Control
Control unit is integrated in unit series CL

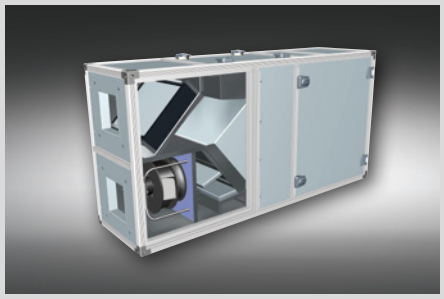
GEA COM4®*mini* 3 model sizes Installation site Inside or outside Series CL
Fans / drives
Direct driven plug fans EC motors, continuous electronically commutated
Energy recovery
Cross-counterflow plate heat exchanger ECOPLAT
Re-heater / Re-cooler
can be integrated in supply air duct
Recirculating-air function / damper blade
Optional, with disconnect function of extract fan
Bypass function / damper blade
Integrated in ECOPLAT
Panel filter as of EN 779
Outside air Quality class F7 or F8 Extract air Quality class F5 or F6
GEA MATRIX System Control
Control unit is integrated in unit series CC

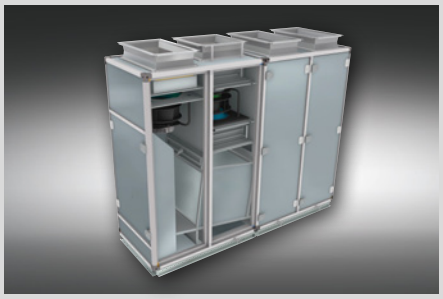
GEA COM4®*top* 5 model sizes Installation site Inside Series CQ
Fans / drives
Direct driven plug fans EC motors, continuous electronically commutated
Energy recovery
Double plate heat exchanger ECOPLAT
Re-heater / Re-cooler
Integrated in CQ unit, or can be integrated in supply air duct.
Recirculating-air function / damper blade
Optional, operation with extract fan
Bypass function / damper blade
Integrated in ECOPLAT
Panel filter as of EN 779
Outside air Quality class F5 or F7 Extract air Quality class F5 or F7
GEA MATRIX System Control
Control unit is integrated in unit series CQ

Overview of Units

GEA COM4®*plus* – GEA COM4®*mini* – GEA COM4®*top*







GEA COM4®*plus* Installation site Series CL	7 model sizes Inside or outside Air velocity	
Model size CL 10	**1.0 m/s**	**2.0 m/s**
Air flow rate	1,700 m³/h	3,400 m³/h
*Heat recovery rate Φ		
ECOROT	0.88	0.82
ECOPLAT	0.64	0.62
Model size CL 20	**1.0 m/s**	**2.0 m/s**
Air flow rate	2,100 m³/h	4,200 m³/h
*Heat recovery rate Φ		
ECOROT	0.89	0.83
ECOPLAT	0.72	0.67
Model size CL 30	**1.0 m/s**	**2.0 m/s**
Air flow rate	2,900 m³/h	5,800 m³/h
*Heat recovery rate Φ		
ECOROT	0.89	0.83
ECOPLAT	0.80	0.74
Model size CL 40	**1.0 m/s**	**2.0 m/s**
Air flow rate	4,000 m³/h	8,000 m³/h
*Heat recovery rate		
ECOROT	0.89	0.83
ECOPLAT	0.81	0.77
Model size CL 50	**1.0 m/s**	**2.0 m/s**
Air flow rate	4,800 m³/h	9,600 m³/h
*Heat recovery rate Φ		
ECOROT	0.89	0.83
ECOPLAT	0.80	0.77
Model size CL 60	**1.0 m/s**	**2.0 m/s**
Air flow rate	6,600 m³/h	13,200 m³/h
*Heat recovery rate Φ		
ECOROT	0.89	0.82
ECOPLAT	0.76	0.74
Model size CL 70	**1.0 m/s**	**2.0 m/s**
Air flow rate	8,100 m³/h	16,200 m³/h
*Heat recovery rate Φ		
ECOROT	0.89	0.83

GEA COM4®*mini* Installation site Series CC	3 model sizes Inside or outside Air velocity	
Model size CC20	**1.0 m/s**	**1.3 m/s**
Air flow rate	600 m³/h	750 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.93	0.92
Model size CC40	**1.0 m/s**	**1.5 m/s**
Air flow rate	900 m³/h	1,500 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.93	0.91
Model size CL 60	**1.0 m/s**	**1.5 m/s**
Air flow rate	1,400 m³/h	2,200 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.93	0.91

GEA COM®*top* Installation site Series CQ	5 model sizes Inside Air velocity	
Model size CQ15	**1.0 m/s**	**2.0 m/s**
Air flow rate	750 m³/h	1,500 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.91	0.84
Model size CQ25	**1.0 m/s**	**2.0 m/s**
Air flow rate	1,200 m³/h	2,500 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.90	0.86
Model size CQ35	**1.0 m/s**	**2.3 m/s**
Air flow rate	1,400 m³/h	3,500 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.88	0.85
Model size CQ50	**1.0 m/s**	**2.3 m/s**
Air flow rate	2,100 m³/h	5,000 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.90	0.85
Model size CQ65	**1.0 m/s**	**2.2 m/s**
Air flow rate	2,900 m³/h	6,500 m³/h
*Heat recovery rate Φ		
ECOPLAT	0.87	0.85

Overview of Capacity

GEA COM4®*plus* – with rotary heat exchanger ECOROT

GEA COM4®*plus* Z Supply A Extract air External pressure 300 Pa			C D ECOPLAT Energy recovery		PWW W 70 / 50 °C Re-heater		PCW K 6 / 12 °C Re-cooler		ELECTRIC E Re-heater	
Model size CL 10	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**1,700 m³/h**	**3,400 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.88**	**0.82**						
Air intake			–12 °C	–12 °C	18 °C	16 °C	28 °C / 50 % r.h.		18 °C	16 °C
Air discharge			18 °C	16 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**17 kW**	**32 kW**	**2 kW**	**7 kW**	**7 kW**	**14 kW**	On request	
Model size CL 20	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**2,100 m³/h**	**4,200 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.89**	**0.83**						
Air intake			–12 °C	–12 °C	18 °C	16 °C	28 °C / 50 % r.h.		18 °C	16 °C
Air discharge			18 °C	16 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**21 kW**	**40 kW**	**3 kW**	**8 kW**	**9 kW**	**18 kW**	On request	
Model size CL 30	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**2,900 m³/h**	**5,800 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.89**	**0.83**						
Air intake			–12 °C	–12 °C	18 °C	16 °C	28 °C / 50 % r.h.		18 °C	16 °C
Air discharge			18 °C	16 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**30 kW**	**55 kW**	**4 kW**	**11 kW**	**12 kW**	**24 kW**	On request	
Model size CL 40	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**
Air flow rate	**4,000 m³/h**	**8,000 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.89**	**0.83**						
Air intake			–12 °C	–12 °C	18 °C	16 °C	28 °C / 50 % r.h.		18 °C	16 °C
Air discharge			18 °C	16 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**41 kW**	**76 kW**	**5 kW**	**16 kW**	**17 kW**	**34 kW**	On request	
Model size CL 50	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**4,800 m³/h**	**9,600 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.89**	**0.83**						
Air intake			–12 °C	–12 °C	18 °C	16 °C	28 °C / 50 % r.h.		18 °C	16 °C
Air discharge			18 °C	16 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**49 kW**	**91 kW**	**6 kW**	**19 kW**	**20 kW**	**40 kW**	On request	
Model size CL 60	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**6,600 m³/h**	**13,200 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.89**	**0.82**						
Air intake			–12 °C	–12 °C	18 °C	16 °C	28 °C / 50 % r.h.		18 °C	16 °C
Air discharge			18 °C	16 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**67 kW**	**124 kW**	**8 kW**	**27 kW**	**28 kW**	**55 kW**	On request	
Model size CL 70	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**
Air flow rate	**8,100 m³/h**	**16,200 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.89**	**0.83**						
Air intake			–12 °C	–12 °C	18 °C	16 °C	28 °C / 50 % r.h.		18 °C	16 °C
Air discharge			18 °C	16 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**83 kW**	**154 kW**	**10 kW**	**32 kW**	**34 kW**	**68 kW**	On request	

Sound Level / Motors / SFPv

GEA COM4®*plus* – with rotary heat exchanger ECOROT

Sound power level			Z Supply air	A Extract air
Model size	**Air velocity approx.**		**1.0 m/s**	
CL10	Suction side	**1,700 m³/h**	68 dB(A)	68 dB(A)
	Pressure side		78 dB(A)	78 dB(A)
	Externally on fan casing		49 dB(A)	49 dB(A)
CL20	Suction side	**2,100 m³/h**	69 dB(A)	69 dB(A)
	Pressure side		80 dB(A)	80 dB(A)
	Externally on fan casing		51 dB(A)	51 dB(A)
CL30	Suction side	**2,900 m³/h**	71 dB(A)	70 dB(A)
	Pressure side		82 dB(A)	82 dB(A)
	Externally on fan casing		56 dB(A)	55 dB(A)
CL40	Suction side	**4,000 m³/h**	70 dB(A)	69 dB(A)
	Pressure side		80 dB(A)	79 dB(A)
	Externally on fan casing		55 dB(A)	54 dB(A)
CL50	Suction side	**4,800 m³/h**	70 dB(A)	70 dB(A)
	Pressure side		80 dB(A)	80 dB(A)
	Externally on fan casing		52 dB(A)	52 dB(A)
CL60	Suction side	**6,600 m³/h**	74 dB(A)	74 dB(A)
	Pressure side		86 dB(A)	85 dB(A)
	Externally on fan casing		59 dB(A)	58 dB(A)
CL70	Suction side	**8,100 m³/h**	73 dB(A)	72 dB(A)
	Pressure side		83 dB(A)	82 dB(A)
	Externally on fan casing		58 dB(A)	57 dB(A)

Sound power level			Z Supply	A Extract air
Model size	**Air velocity approx.**		**2.0 m/s**	
CL10	Suction side	**3,400 m³/h**	76 dB(A)	76 dB(A)
	Pressure side		88 dB(A)	88 dB(A)
	Externally on fan casing		58 dB(A)	58 dB(A)
CL20	Suction side	**4,200 m³/h**	81 dB(A)	81 dB(A)
	Pressure side		93 dB(A)	93 dB(A)
	Externally on fan casing		64 dB(A)	64 dB(A)
CL30	Suction side	**5,800 m³/h**	81 dB(A)	81 dB(A)
	Pressure side		93 dB(A)	93 dB(A)
	Externally on fan casing		65 dB(A)	64 dB(A)
CL40	Suction side	**8,000 m³/h**	79 dB(A)	78 dB(A)
	Pressure side		89 dB(A)	89 dB(A)
	Externally on fan casing		64 dB(A)	63 dB(A)
CL50	Suction side	**9,600 m³/h**	81 dB(A)	81 dB(A)
	Pressure side		92 dB(A)	92 dB(A)
	Externally on fan casing		63 dB(A)	63 dB(A)
CL60	Suction side	**13,200 m³/h**	87 dB(A)	87 dB(A)
	Pressure side		99 dB(A)	99 dB(A)
	Externally on fan casing		70 dB(A)	70 dB(A)
CL70	Suction side	**16,200 m³/h**	82 dB(A)	81 dB(A)
	Pressure side		92 dB(A)	92 dB(A)
	Externally on fan casing		66 dB(A)	66 dB(A)

Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size		**Motor rated capacity**		**SFPv**
CL10	**1,700 m³/h**	2.2 kW	2.2 kW	1.78 kW/m³/s
CL20	**2,100 m³/h**	2.2 kW	2.2 kW	1.68 kW/m³/s
CL30	**2,900 m³/h**	4.1 kW	4.1 kW	1.91 kW/m³/s
CL40	**4,000 m³/h**	3.8 kW	3.8 kW	1.69 kW/m³/s
CL50	**4,800 m³/h**	2 x 2.5 kW	2 x 2.5 kW	1.67 kW/m³/s
CL60	**6,600 m³/h**	2 x 4.1 kW	2 x 4.1 kW	1.81 kW/m³/s
CL70	**8,100 m³/h**	2 x 4.1 kW	2 x 4.1 kW	1.68 kW/m³/s

Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size		**Motor rated capacity**		**SFPv**
CL10	**3,400 m³/h**	2.2 kW	2.2 kW	2.37 kW/m³/s
CL20	**4,200 m³/h**	2.2 kW	2.2 kW	2.55 kW/m³/s
CL30	**5,800 m³/h**	4.1 kW	4.1 kW	2.60 kW/m³/s
CL40	**8,000 m³/h**	3.8 kW	3.8 kW	2.13 kW/m³/s
CL50	**9,600 m³/h**	2 x 2.5 kW	2 x 2.5 kW	2.39 kW/m³/s
CL60	**13,200 m³/h**	2 x 4.1 kW	2 x 4.1 kW	2.62 kW/m³/s
CL70	**16,200 m³/h**	2 x 4.1 kW	2 x 4.1 kW	2.11 kW/m³/s

Overview of Capacity

GEA COM4®*plus* – with plate-type heat exchanger ECOPLAT

GEA COM4®*plus* Z Supply air A Extract air External pressure 300 Pa			C ECOPLAT D Energy recovery		PWW W 70 / 50 °C Re-heater		PCW K 6 / 12 °C Re-cooler		ELECTRIC E Re-heater	
Model size CL 10	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**1,700 m³/h**	**3,400 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.64**	**0.62**						
Air intake			–12 °C	–12 °C	10 °C	9 °C	28 °C / 50 % r.h.		10 °C	9 °C
Air discharge			10 °C	9 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**12 kW**	**24 kW**	**7 kW**	**15 kW**	**7 kW**	**14 kW**	On request	
Model size CL 20	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**2,100 m³/h**	**4,200 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.72**	**0.67**						
Air intake			–12 °C	–12 °C	12 °C	11 °C	28 °C / 50 % r.h.		12 °C	11 °C
Air discharge			12 °C	11 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**17 kW**	**32 kW**	**7 kW**	**16 kW**	**9 kW**	**18 kW**	On request	
Model size CL 30	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**2,900 m³/h**	**5,800 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.80**	**0.74**						
Air intake			–12 °C	–12 °C	15 °C	13 °C	28 °C / 50 % r.h.		15 °C	13 °C
Air discharge			15 °C	13 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**27 kW**	**49 kW**	**7 kW**	**17 kW**	**12 kW**	**24 kW**	On request	
Model size CL 40	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**
Air flow rate	**4,000 m³/h**	**8,000 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.81**	**0.77**						
Air intake			–12 °C	–12 °C	16 °C	14 °C	28 °C / 50 % r.h.		16 °C	14 °C
Air discharge			16 °C	14 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**37 kW**	**71 kW**	**9 kW**	**21 kW**	**17 kW**	**34 kW**	On request	
Model size CL 50	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**4,800 m³/h**	**9,600 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.80**	**0.77**						
Air intake			–12 °C	–12 °C	15 °C	13 °C	28 °C / 50 % r.h.		15 °C	13 °C
Air discharge			15 °C	13 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**44 kW**	**81 kW**	**11 kW**	**29 kW**	**20 kW**	**40 kW**	On request	
Model size CL 60	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**
Air flow rate	**6,600 m³/h**	**13,200 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.76**	**0.74**						
Air intake			–12 °C	–12 °C	14 °C	13 °C	28 °C / 50 % r.h.		14 °C	13 °C
Air discharge			14 °C	13 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**58 kW**	**112 kW**	**18 kW**	**39 kW**	**28 kW**	**55 kW**	On request	

Sound Level / Motors / SFPv

GEA COM4®*plus* – with plate-type heat exchanger ECOPLAT

Sound power level			Z Supply	A Extract air
Model size	**Air velocity approx.**		**1.0 m/s**	
CL10	Suction side	**1,700 m³/h**	65 dB(A)	65 dB(A)
	Pressure side		78 dB(A)	78 dB(A)
	Externally on fan casing		49 dB(A)	49 dB(A)
CL20	Suction side	**2,100 m³/h**	66 dB(A)	66 dB(A)
	Pressure side		79 dB(A)	80 dB(A)
	Externally on fan casing		50 dB(A)	50 dB(A)
CL30	Suction side	**2,900 m³/h**	68 dB(A)	68 dB(A)
	Pressure side		82 dB(A)	81 dB(A)
	Externally on fan casing		55 dB(A)	54 dB(A)
CL40	Suction side	**4,000 m³/h**	68 dB(A)	68 dB(A)
	Pressure side		80 dB(A)	79 dB(A)
	Externally on fan casing		55 dB(A)	54 dB(A)
CL50	Suction side	**4,800 m³/h**	68 dB(A)	68 dB(A)
	Pressure side		81 dB(A)	81 dB(A)
	Externally on fan casing		53 dB(A)	53 dB(A)
CL60	Suction side	**6,600 m³/h**	71 dB(A)	71 dB(A)
	Pressure side		85 dB(A)	85 dB(A)
	Externally on fan casing		58 dB(A)	57 dB(A)

Sound power level			Z Supply	A Extract air
Model size	**Air velocity approx.**		**2.0 m/s**	
CL10	Suction side	**3,400 m³/h**	74 dB(A)	74 dB(A)
	Pressure side		88 dB(A)	88 dB(A)
	Externally on fan casing		59 dB(A)	59 dB(A)
CL20	Suction side	**4,200 m³/h**	79 dB(A)	79 dB(A)
	Pressure side		93 dB(A)	93 dB(A)
	Externally on fan casing		64 dB(A)	64 dB(A)
CL30	Suction side	**5,800 m³/h**	79 dB(A)	79 dB(A)
	Pressure side		93 dB(A)	93 dB(A)
	Externally on fan casing		64 dB(A)	64 dB(A)
CL40	Suction side	**8,000 m³/h**	76 dB(A)	76 dB(A)
	Pressure side		89 dB(A)	89 dB(A)
	Externally on fan casing		63 dB(A)	63 dB(A)
CL50	Suction side	**9,600 m³/h**	79 dB(A)	79 dB(A)
	Pressure side		92 dB(A)	92 dB(A)
	Externally on fan casing		63 dB(A)	63 dB(A)
CL60	Suction side	**13,200 m³/h**	85 dB(A)	85 dB(A)
	Pressure side		99 dB(A)	99 dB(A)
	Externally on fan casing		70 dB(A)	70 dB(A)

Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size		**Motor rated capacity**		**SFPv**
CL10	**1,700 m³/h**	2.2 kW	1.1 kW	1.91 kW/m³/s
CL20	**2,100 m³/h**	2.2 kW	1.1 kW	1.80 kW/m³/s
CL30	**2,900 m³/h**	4.1 kW	1.5 kW	1.56 kW/m³/s
CL40	**4,000 m³/h**	3.8 kW	2.2 kW	1.91 kW/m³/s
CL50	**4,800 m³/h**	2 x 2.5 kW	2.2 kW	1.78 kW/m³/s
CL60	**6,600 m³/h**	2 x 4.1 kW	2.2 kW	1.50 kW/m³/s

Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size		**Motor rated capacity**		**SFPv**
CL10	**3,400 m³/h**	2.2 kW	2.2 kW	2.49 kW/m³/s
CL20	**4,200 m³/h**	2.2 kW	2.2 kW	2.58 kW/m³/s
CL30	**5,800 m³/h**	4.1 kW	4.1 kW	2.58 kW/m³/s
CL40	**8,000 m³/h**	3.8 kW	3.8 kW	2.37 kW/m³/s
CL50	**9,600 m³/h**	2 x 2.5 kW	5.0 kW	2.90 kW/m³/s
CL60	**13,200 m³/h**	2 x 4.1 kW	8.2 kW	2.63 kW/m³/s

Overview of Capacity

GEA COM4®*mini* – cross-counterflow plate heat exchanger ECOPLAT

GEA COM4®*mini* Z Supply air A Extract air External pressure 100 Pa			C ECOPLAT D Energy Recovery		PWW W 70 / 50 °C Re-heater		PCW K 6 / 12 °C Re-cooler		ELECTRIC E Re-heater	
Model size CC20	**1.0 m/s**	**1.3 m/s**	**1.0 m/s**	**1.3 m/s**	**1.0 m/s**	**1.3 m/s**	**1.0 m/s**	**1.3 m/s**	**1.0 m/s**	**1.3 m/s**
Air flow rate	**600 m³/h**	**1,500 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.93**	**0.92**						
Air intake			–12 °C	–12 °C	20 °C	19 °C	28 °C / 50 % r.h.		20 °C	19 °C
Air discharge			20 °C	19 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**6.4 kW**	**7.9 kW**	**0.5 kW**	**0.7 kW**	**2.5 kW**	**3.1 kW**	On request	
Model size CC40	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**
Air flow rate	**900 m³/h**	**1,500 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.93**	**0.91**						
Air intake			–12 °C	–12 °C	20 °C	19 °C	28 °C / 50 % r.h.		20 °C	19 °C
Air discharge			20 °C	19 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**9.6 kW**	**15.6 kW**	**0.7 kW**	**1.5 kW**	**3.8 kW**	**6.3 kW**	On request	
Model size CC60	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**	**1.0 m/s**	**1.5 m/s**
Air flow rate	**1.400 m³/h**	**2.200 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.93**	**0.91**						
Air intake			–12 °C	–12 °C	20 °C	19 °C	28 °C / 50 % r.h.		20 °C	19 °C
Air discharge			20 °C	19 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**14.9 kW**	**23.0 kW**	**1.1 kW**	**2.3 kW**	**5.9 kW**	**9.2 kW**	On request	

Sound level

Sound power level		Z Supply	A Extract air
Model size	**Air velocity approx.**	**1.0 m/s**	
CC20	Suction side 600 m³/h	67 dB(A)	68 dB(A)
	Pressure side	75 dB(A)	76 dB(A)
	Externally on fan casing	51 dB(A)	52 dB(A)
CC40	Suction side 900 m³/h	65 dB(A)	67 dB(A)
	Pressure side	75 dB(A)	76 dB(A)
	Externally on fan casing	50 dB(A)	52 dB(A)
CC60	Suction side 1,400 m³/h	68 dB(A)	69 dB(A)
	Pressure side	78 dB(A)	79 dB(A)
	Externally on fan casing	54 dB(A)	55 dB(A)

Sound power level		Z Supply	A Extract air
Model size	**Air velocity approx.**	**1.5 m/s**	
CC20	Suction side 750 m³/h	69 dB(A)	70 dB(A)
	Pressure side	77 dB(A)	78 dB(A)
	Externally on fan casing	53 dB(A)	54 dB(A)
CC40	Suction side 1,500 m³/h	65 dB(A)	67 dB(A)
	Pressure side	78 dB(A)	79 dB(A)
	Externally on fan casing	49 dB(A)	51 dB(A)
CC60	Suction side 2,200 m³/h	69 dB(A)	71 dB(A)
	Pressure side	78 dB(A)	80 dB(A)
	Externally on fan casing	53 dB(A)	55 dB(A)

Motors / SFPv

Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size		**Motor rated capacity**		**SFPv**
CC20	**600 m³/h**	0.45 kW	0.45 kW	1.35 kW/m³/s
CC40	**900 m³/h**	0.72 kW	0.72 kW	1.07 kW/m³/s
CC60	**1,400 m³/h**	2 x 0.72 kW	1.43 kW	1.28 kW/m³/s

Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size		**Motor rated capacity**		**SFPv**
CC20	**750 m³/h**	0.45 kW	0.45 kW	1.60 kW/m³/s
CC40	**1,500 m³/h**	0.72 kW	0.72 kW	1.62 kW/m³/s
CC60	**2,200 m³/h**	2 x 0.72 kW	1.43 kW	1.72 kW/m³/s

Overview of Capacity

GEA COM4®*top* – with double plate-type heat exchanger ECOPLAT

GEA COM4®*top* Z Supply air A Extract air External pressure 300 Pa			C ECOPLAT D Energy recovery		PWW W 70 / 50 °C Re-heater		PCW K 6 / 12 °C Re-cooler		ELECTRIC E Re-heater	
Model size CQ15	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**	**1.0 m/s**	**2.1 m/s**
Air flow rate	**750 m³/h**	**1,500 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.91**	**0.84**						
Air intake			–12 °C	–12 °C	19 °C	17 °C	28 °C / 50 % r.h.		19 °C	17 °C
Air discharge			19 °C	17 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**8 kW**	**14 kW**	**1 kW**	**3 kW**	**3 kW**	**6 kW**	On request	
Model size CQ25	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**1,200 m³/h**	**2,500 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.90**	**0.86**						
Air intake			–12 °C	–12 °C	19 °C	17 °C	28 °C / 50 % r.h.		19 °C	17 °C
Air discharge			19 °C	17 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**12 kW**	**25 kW**	**1 kW**	**4 kW**	**5 kW**	**10 kW**	On request	
Model size CQ35	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**1,400 m³/h**	**3,500 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.88**	**0.85**						
Air intake			–12 °C	–12 °C	18 °C	17 °C	28 °C / 50 % r.h.		18 °C	17 °C
Air discharge			18 °C	17 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**14 kW**	**34 kW**	**2 kW**	**6 kW**	**6 kW**	**15 kW**	On request	
Model size CQ50	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**2,100 m³/h**	**5,000 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.90**	**0.85**						
Air intake			–12 °C	–12 °C	19 °C	17 °C	28 °C / 50 % r.h.		19 °C	17 °C
Air discharge			19 °C	17 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**22 kW**	**49 kW**	**2 kW**	**9 kW**	**9 kW**	**21 kW**	On request	
Model size CQ65	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**	**1.0 m/s**	**2.0 m/s**
Air flow rate	**2,900 m³/h**	**6,500 m³/h**								
Heat recovery rate Φ max. in extract air	22 °C / 50 %		**0.87**	**0.85**						
Air intake			–12 °C	–12 °C	18 °C	17 °C	28 °C / 50 % r.h.		18 °C	17 °C
Air discharge			18 °C	17 °C	22 °C	22 °C	18 °C	18 °C	22 °C	22 °C
Capacity			**29 kW**	**63 kW**	**4 kW**	**11 kW**	**12 kW**	**27 kW**	On request	

Sound level

Sound power level		Z Supply	A Extract air
Model size	**Air velocity approx.**	**1.0 m/s**	
CQ15	Suction side **750 m³/h**	78 dB(A)	78 dB(A)
	Pressure side	84 dB(A)	84 dB(A)
	Externally on fan casing	58 dB(A)	58 dB(A)
CQ25	Suction side **1,200 m³/h**	79 dB(A)	79 dB(A)
	Pressure side	85 dB(A)	85 dB(A)
	Externally on fan casing	59 dB(A)	59 dB(A)
CQ35	Suction side **2,400 m³/h**	77 dB(A)	77 dB(A)
	Pressure side	83 dB(A)	83 dB(A)
	Externally on fan casing	57 dB(A)	57 dB(A)
CQ50	Suction side **2,100 m³/h**	79 dB(A)	79 dB(A)
	Pressure side	86 dB(A)	86 dB(A)
	Externally on fan casing	61 dB(A)	61 dB(A)
CQ65	Suction side **2,900 m³/h**	78 dB(A)	78 dB(A)
	Pressure side	84 dB(A)	84 dB(A)
	Externally on fan casing	57 dB(A)	57 dB(A)

Sound power level		Z Supply	A Extract air
Model size	**Air velocity approx.**	**2.0 m/s**	
CQ15	Suction side **1,500 m³/h**	77 dB(A)	77 dB(A)
	Pressure side	84 dB(A)	84 dB(A)
	Externally on fan casing	57 dB(A)	57 dB(A)
CQ25	Suction side **2,500 m³/h**	79 dB(A)	79 dB(A)
	Pressure side	86 dB(A)	86 dB(A)
	Externally on fan casing	57 dB(A)	57 dB(A)
CQ35	Suction side **3,500 m³/h**	82 dB(A)	82 dB(A)
	Pressure side	89 dB(A)	89 dB(A)
	Externally on fan casing	59 dB(A)	59 dB(A)
CQ50	Suction side **5,000 m³/h**	81 dB(A)	81 dB(A)
	Pressure side	88 dB(A)	88 dB(A)
	Externally on fan casing	59 dB(A)	59 dB(A)
CQ65	Suction side **6,500 m³/h**	85 dB(A)	85 dB(A)
	Pressure side	92 dB(A)	92 dB(A)
	Externally on fan casing	63 dB(A)	63 dB(A)

Motors / SFPv

Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size	**Motor rated capacity**			**SFPv**
CQ15	**750 m³/h**	1.00 kW	1.00 kW	2.69 kW/m³/s
CQ25	**1,200 m³/h**	1.65 kW	1.65 kW	2.79 kW/m³/s
CQ35	**1,400 m³/h**	1.65 kW	1.65 kW	2.39 kW/m³/s
CQ50	**2,100 m³/h**	3.0 kW	3.00 kW	2.21 kW/m³/s
CQ65	**2,900 m³/h**	3.0 kW	3.00 kW	1.97 kW/m³/s

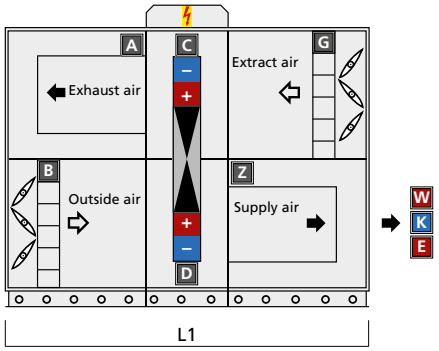
Motor capacity / SFPv		Z Supply	A Extract air	Total
Model size	**Motor rated capacity**			**SFPv**
CQ15	**1,500 m³/h**	1.0 kW	1.0 kW	2.52 kW/m³/s
CQ25	**2,500 m³/h**	1.7 kW	1.7 kW	2.82 kW/m³/s
CQ35	**3,500 m³/h**	1.7 kW	1.7 kW	2.79 kW/m³/s
CQ50	**5,000 m³/h**	3.0 kW	3.0 kW	2.57 kW/m³/s
CQ65	**6,500 m³/h**	3.0 kW	3.0 kW	2.72 kW/m³/s

Dimensions and Weight – 100 % Outside air

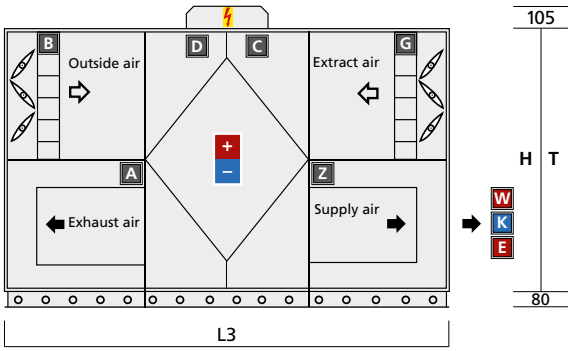
GEA COM4®*plus*

GEA COM4®*plus* with ECOROT operating mode: 100 % outside air					GEA COM4®*plus* with ECOPLAT operating mode: 100 % outside air				Height	Depth
Model size	**L1**		**L2**		**L3**		**L4**		**H**	**D**
CL10	1.760 mm	550 kg	2.400 mm	700 kg	2,320 mm	600 kg	2,960 mm	800 kg	1,080 mm	1,080 mm
CL20	2.080 mm	700 kg	2.720 mm	900 kg	2,760 mm	800 kg	3,400 mm	1,000 kg	1200 mm	1200 mm
CL30	2.160 mm	850 kg	2.800 mm	1.100 kg	2.960 mm	1.000 kg	3.600 mm	1.250 kg	1400 mm	1400 mm
CL40	2.400 mm	1.100 kg	3.040 mm	1.350 kg	3.360 mm	1.250 kg	4.000 mm	1.550 kg	1600 mm	1600 mm
CL50	2.640 mm	1.250 kg	3.280 mm	1.550 kg	3600 mm	1400 kg	4240 mm	1750 kg	1720 mm	1720 mm
CL60	2.720 mm	1.600 kg	3.360 mm	2.000 kg	3880 mm	1950 kg	4520 mm	2300 kg	2000 mm	2000 mm
CL70	3.040 mm	1.950 kg	3.680 mm	2.300 kg			–		2200 mm	2200 mm

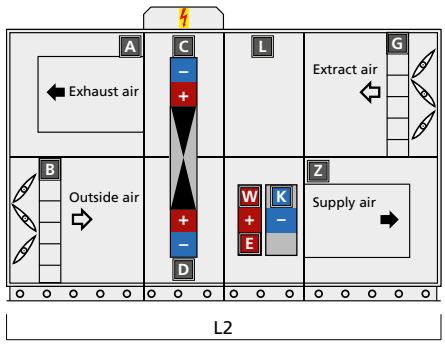
Re-heater/re-cooler can be integrated in field-provided supply duct



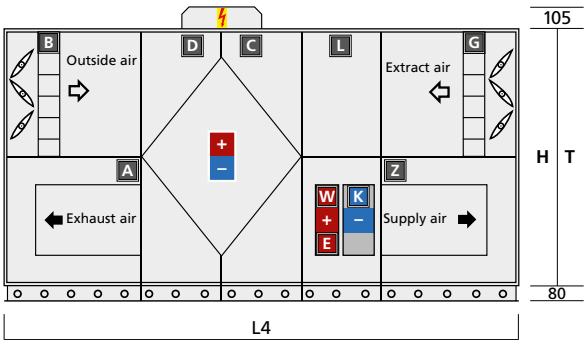
Re-heater/re-cooler can be integrated in field-provided supply duct



Reheater/re-cooler can be integrated in unit series CL



Reheater/re-cooler can be integrated in unit series CL



- A Extract fan
- B Outside air filter
- C Energy recovery from extract air
- D Energy recovery outside air
- Z Supply fan
- G Extract air filter
- L Empty section
- Without recirculating-air section
- W Re-heater
- K Re-cooler
- E Electric re-heater
- System control

Dimensions and Weight – 100 % Outside air

GEA COM4®*mini* / GEA COM4®*top*

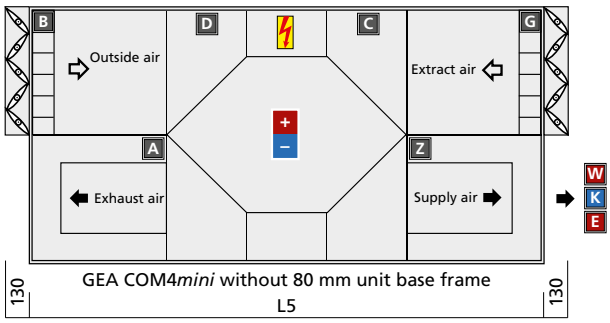
GEA COM4®*mini* with ECOPLAT
operating mode: 100 % outside air

Model size	L5	Height	Depth	Weight
CC20	1.870 mm	930 mm	530 mm	185 kg
CC40	1.870 mm	930 mm	760 mm	225 kg
CC60	1.870 mm	930 mm	1080 mm	285 kg

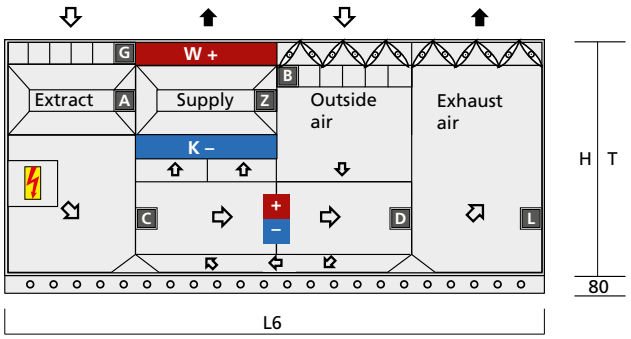
GEA COM4®*top* with ECOPLAT
operating mode: 100 % outside air

Model size	L6	Height	Depth	Weight
CQ15	1.640 mm	1.800 mm	760 mm	480 kg
CQ25	2.280 mm	1.800 mm	760 mm	650 kg
CQ35	2.760 mm	2.080 mm	760 mm	750 kg
CQ50	2,760 mm	2,080 mm	1,080 mm	820 kg
CQ65	2.760 mm	2.080 mm	1.400 mm	1.000kg

Re-heater/re-cooler can be integrated in field-provided supply duct



Reheater/re-cooler can be integrated in unit series CQ



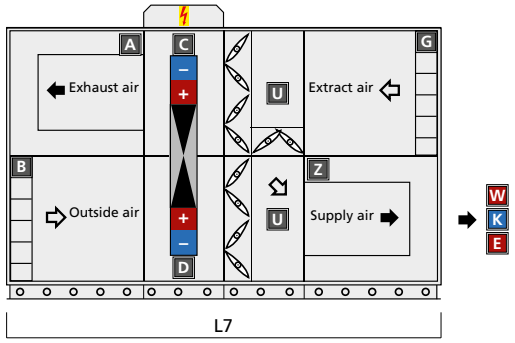
A Extract fan
B Outside air filter
C Energy recovery from extract air
D Energy recovery outside air
Z Supply fan
G Extract air filter
L Empty section
Without recirculating-air
W Re-heater
K Re-cooler
E Electric re-heater
System control

Dimensions and Weight – 100 % Outside or Recirculating Air

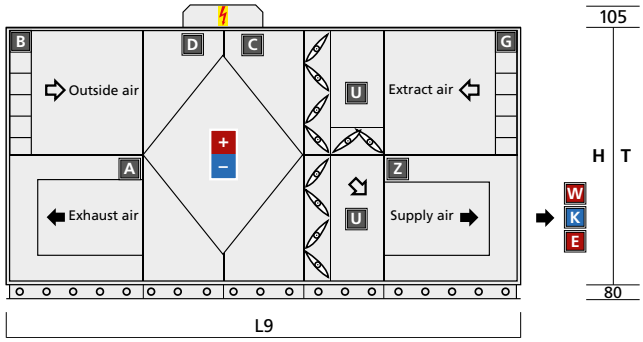
GEA COM4®*plus*

GEA COM4®*plus* with ECOROT operating mode: 100 % outside air or 100 % recirculating air					GEA COM4®*plus* with ECOPLAT, operating mode: 100 % outside air or 100 % recirculating air				Height	Depth
Model size	L7		L8		L9		L10		H	D
CL10	2,080 mm	600 kg	2,720 mm	750 kg	2,640 mm	650 kg	3,280 mm	850 kg	1,080 mm	1,080 mm
CL20	2,400 mm	750 kg	3,040 mm	950 kg	3,080 mm	850 kg	3,720 mm	1,050 kg	1,200 mm	1,200 mm
CL30	2,480 mm	900 kg	3,120 mm	1,150 kg	3,280 mm	1,050 kg	3,920 mm	1,300 kg	1,400 mm	1,400 mm
CL40	2,840 mm	1,150 kg	3,480 mm	1,450 kg	3,800 mm	1,350 kg	4,440 mm	1,600 kg	1,600 mm	1,600 mm
CL50	3,080 mm	1,350 kg	3,720 mm	1,650 kg	4,040 mm	1,550 kg	4,680 mm	1,850 kg	1,720 mm	1,720 mm
CL60	3,160 mm	1,700 kg	3,800 mm	2,050 kg	4,320 mm	2,050 kg	4,960 mm	2,400 kg	2,000 mm	2,000 mm
CL70	3,720 mm	2,100 kg	4,360 mm	2,500 kg			–		2,200 mm	2,200 mm

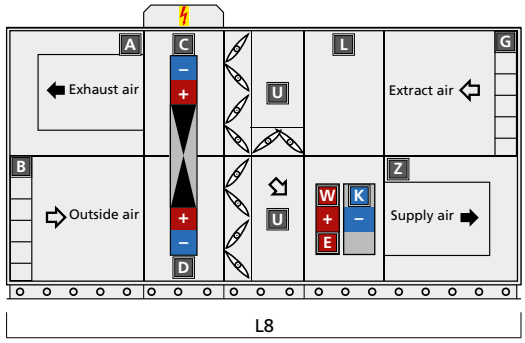
Re-heater/re-cooler can be integrated in field-provided supply duct



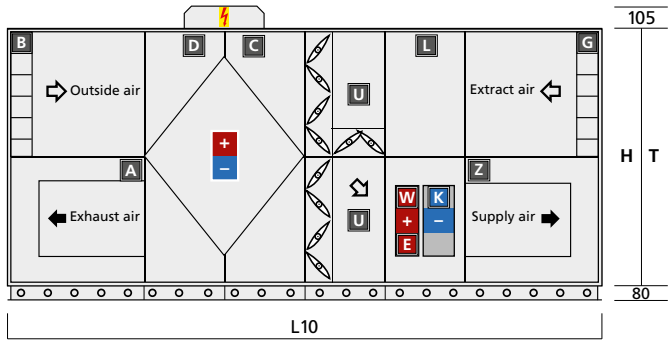
Re-heater/re-cooler can be integrated in field-provided supply duct



Reheater/re-cooler can be integrated in unit series CL



Reheater/re-cooler can be integrated in unit series CL



- A Extract fan
- B Outside air filter
- C Energy recovery from extract air
- D Energy recovery outside air
- Z Supply fan
- G Extract air filter
- L Empty section
- U Recirculating-air section
- W Re-heater
- K Re-cooler
- E Electric re-heater
- System control

Dimensions and Weight – 100 % Outside or Recirculating Air

GEA COM4®*mini* / GEA COM4®*top*

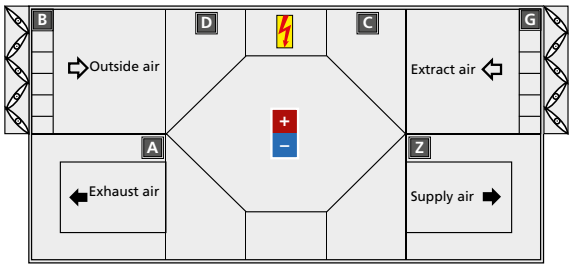
GEA COM4®*mini*
with recirculating-air function not included in product range

Because of high heat recovery rate > 0.90 over energy recovery - recirculating-air mode with compact GEA COM4*mini* air handling unit is usually not necessary.

GEA COM4®*top* with ECOPLAT
operating mode: 100 % outside or recirculating air

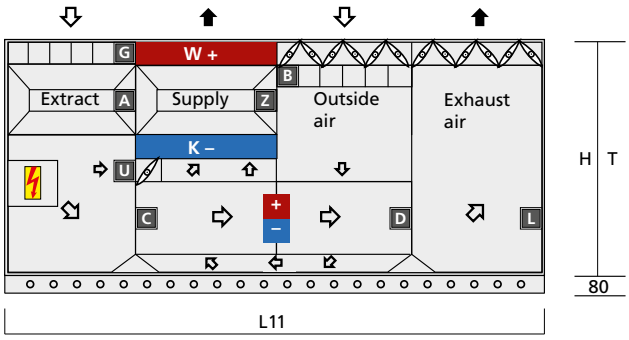
Model size	L11	Height	Depth	Weight
CQ15	1,640 mm	1,800 kg	760 mm	480 mm
CQ25	2,280 mm	1,800 mm	760 mm	650 kg
CQ35	2,760 mm	2,080 mm	760 mm	750 kg
CQ50	2,760 mm	2,080 mm	1,080 mm	820 kg
CQ65	2,760 mm	2,080 mm	1,400 mm	1,000 kg

GEA COM4*mini* only for operation with 100 % outside air – refer to page 15



GEA Campos without 80 mm unit base frame

Re-heater/re-cooler can be integrated in unit series CQ



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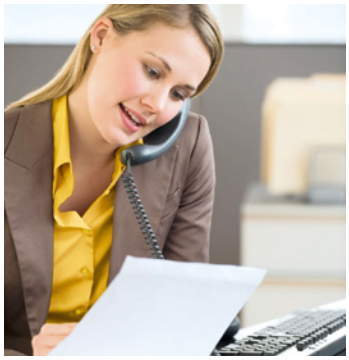
K Re-cooler
System control

First Service

Always at your side



Our services at a glance

- Own heat exchanger production
- Use of certified products and components
- Use of components from well-known component manufacturers
- Short delivery times for spare parts
- Commissioning of new facilities
- Periodic servicing
- Maintenance
- Factory trial run
- Upgrading and optimisation of old facilities
- Maintenance agreements

Economical from the beginning

The technical developments of GEA represent state-of-the-art swimming pool climate control. Our systems support diverse applications that optimally conform to current criteria of cost effectiveness, safety and sustainability. Our products and services go far beyond pure technology. They are integrated into a comprehensive and in every respect customised service package. This programme includes not only conventional services such as spare part delivery, maintenance, and repair. It unites the consulting and engineering of a technology leader with customised after-sales service and rapid response times. And this not only for installing new equipment. This service also applies for upgrading and optimising old equipment and provides you with perfect support in all project phases. The functionality of the system is secured over its entire service life.

International service und support in experienced hands

Wherever you need us, we will be there for you in the shortest time. All over Europe, our own customer service ensures that you are able to make optimal use of our units' advantages at all times. Many technicians are ready on-call in Germany alone for rapid deployment. All services are designed for absolute safety and reliability. For example, an on-site function check is a part of our delivery service, conducted by an experienced GEA technician together with the installer. This way we directly and personally pass on our functional know-how built up over many years. In this context we should also mention the training we offer in the technology of our climate control systems. Such training is a beneficial instrument for ensuring the lasting functionality and availability of the systems.

A decision for quality

A high quality standard is the basis and principle for all our services. All our service specialists are highly experienced and devote themselves to their work with great diligence. Technically and personally convincing: this is what you can expect from us.


Initial installation
Maintenance and servicing
Assembly services
Spare parts
Customer service
Consulting
Refurbishing
Training