PRODUCT BROCHURE

Fan coil units Flex-Geko[®] – Comfort-Edition

Efficient and comfortable air conditioning solutions for every requirement





HEAT EXCHANGING

The Flex-Geko fan-coil units ensure a whisperquiet and comfortable feel-good climate at maximum energy efficiency and optimal room airtemperature distribution.

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Whoever treats air must master it

World-wide leaders in heat exchangers

As an internationally active technology corporation, DencoHappel concentrates on process technology and components for demanding production processes in diverse final markets. DencoHappel is a market and technology leader in all business sectors. DencoHappel bundles all activities in the area of heat exchangers and air treatment systems and probably has the world-wide largest product range in this field. What makes DencoHappel unique and a preferred partner, is a perfect fit, reliable and sustainable solutions as a sign of the times. DencoHappel fan convectors prove our quality and innovation capability.

Decentralized air treatment with high comfort and convincing unit efficiency

Where heating, cooling, cleaning, filtering, humidification and dehumidification of air is required, DencoHappel makes its contribution to progress. Customized climate control and air treatment, with the maximum-possible reduction of energy consumption over the entire life cycle of the facilities: this all pays out handsomely in euros and cents, in comfort, and in work productivity. Our climate control solutions reliably satisfy all international standards and current statutory guidelines.

Rapid and efficient heating, cooling and ventilation with one unit

Unlike radiators and classical flat radiators, fan-coil units not only can heat rooms, but can also cool and ventilate them.

DencoHappel fan-coil units offer all possibilities of a demand-controlled technology and can be employed everywhere, where comfortable warmth, cooling or air ventilation with a rapid adaptation is required. DencoHappel fan-coil units actively guide the air to be processed through the heat exchanger, whereby it is heated and cooled particularly effectively. They bring room air to the desired temperature faster, and operate with smaller heating or cooling surfaces. Their enhanced heat transfer enables lower feed temperatures during heating, and higher feed temperatures during cooling. This minimizes losses and saves energy between the boiler or the chiller and the final unit.

Your partner for air treatment

- More than 40 years of experience
- Customized air quality and a healthy, comfortable indoor climate with extremely low-noise operation and maximum energy efficiency
- With state-of-the-art technology while compliant with current legal directives
- Certified quality
- Simple system integration
- Low maintenance costs

- Comfortable air conditioning solution
- Energy-efficient operation
- Diverse application options
- Homogeneous room air temperature distribution
- Low-noise comfort
- Intelligent control system
- Flexible mounting options

GREAT PLANNING FREEDOM AND SECURITY



Flex-Geko satisfies practically all wishes

Flex-Geko[®] is suited for every use

Because of their modular concept, Flex-Geko (Geko is a designation for fan convectors) can be employed for the most diverse applications. They heat, cool and ventilate offices, salesrooms and public facilities. Leading hotel chains gladly employ Flex-Geko because of their reliable and quiet operation. With economical operation and flexible usage options, these fan-coil units set the standard for modern and energy-efficient climate solutions.

Flex-Geko are suitable both for wall as well as for ceiling mounting. They function highly satisfactorily on a stand-alone basis with casing, or can be mounted virtually invisibly as base units with the required air outlets behind a wall or above a suspended ceiling.

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The MATRIX control, which can be integrated upon request, adapts to the desired functionality. The operator control units – with or without integrated timer switches – provide the interface to the user. The control units can be installed in the units themselves, or externally.

With 2-liter units, seasonal switch-over from heating to cooling operations is possible, and vice-versa (by reversing the medium supply). The 4-liter units additionally offer connections for heating and cooling circulation systems, and therefore allow spontaneous change-over between modes of operation. The Flex-Geko with a primary air connection can easily be combined with central air handling. The control interfaces likewise allow uncomplicated integration into the building-services management system.

With flexible selection levels or continuously variable fans as well as valves for influencing the mass flow, the performance of the units can be optimally controlled. Adjustable air discharge grilles furthermore ensure a uniform distribution of the temperature-controlled air in the room.

- Flexible installation and installation versions
- Building integration behind wallor in suspended ceiling
- The flexible MATRIX control system adapted to the required functionality
- Connecting into the building management system with diverse interfaces
- Combination with other Geko or DencoHappel products is possible



and model sizes

The basic variant of the Flex-Geko already offers solid technology for many applications. The entry-level unit is suitable for user-friendly heating and/or cooling in recirculating-air operation and can be combined with various accessories. For additional information on the Basic Edition, please consult our "Data & Facts".



Figure: Recirculating-air basic device without casing, ceiling model



Figure: Basic mixed-air unit without casing, wall model

THE CORRECT MODEL FOR EVERY REQUIREMENT **Performance diversity**

Many unit configurations with various system components are possible based on a common unit platform of the Flex-Geko. Diverse accessories and control components ensure that Flex-Geko can satisfy all demands. Already the basic variant contains high-quality technology. and depending on the model offers connections for warm and/or cold water, a three-speed fan, and an air filter. Different valve types permit harmonized and precise heating or cooling. With the Flex-Geko Comfort Edition, it is possible to air condition rooms in recirculating-air or mixed-air operation especially quietly and to clean the air with fine filters. They can be equipped with additional electrical heating, and with an integrated direct evaporator, allowing a combination with outdoor split-climate units. The casing is designed for various intake and discharge versions. Flow-optimized air routing is thus guaranteed for all applications. Especially for low-energy applications such as heat pumps, for example, the Flex-Geko also offers additional heat exchanger versions which

The Flex-Geko fan-coil units are available in eight different model sizes which with a casing height from 504 millimeters and a depth of 240 millimeters. Depending on the capacity, the width varies between 840 and 1,890 millimeters. The eight unit sizes permit an optimal selection of the required capacity. The heating and cooling capacities lie between 1 and 20 kilowatt *). The air volume flow harmonized to these ratings varies between 150 and 1,800 cubic meters per hour.

are optimized for low heating medium or high coolant temperature and small mass flows.

*) Heating PWW 70/50 °C, tL1 + 20 °C; cooling PCW 6/12 °C, tL1 + 27 °C, 46% r.h.

THE CORRECT OUTFIT FOR EVERY SITUATION

Combination versatility and flexibility

The many possible intake and discharge combinations and casing versions, the extremely quiet fans as well as the different installation options (wall, ceiling, suspended ceiling) makes Flex-Geko models something special. Flex-Geko is equipped for practically all existing spatial configurations and exceptional installation situations. The following directional designations refer to a wall installation:













- 1 Intake below discharge above: about 10 cm space is required on the intake side for recirculating-air operation for wall or ceiling mounting. Casing with adjustable plastic or rigid aluminum air-discharge grille. Without feet.
- Intake below discharge in front: for wall or ceiling mounting, about 10 cm space is required intake-side for recirculating-air operation. Casing with adjustable plastic air-discharge grille. Without feet.
- 3 Intake in front discharge above: for recirculating-air operation for wall, ceiling or floor assembly. For free installation in the room with optional back wall. Intake opening integrated with grille in casing Casing with adjustable plastic or rigid aluminum air-discharge grille. Without feet.
- 4 Intake in front blow out in front: for recirculated-air operation for wall, ceiling or floor assembly. Intake opening integrated with grille in casing Casing with adjustable plastic air-discharge grille. Without feet.
- 5 Intake below discharge above: for recirculating-air operation for wall, ceiling or floor assembly. Intake opening without grille Casing with adjustable plastic or rigid aluminum air-discharge grille. With unit leveling feet.
- Intake below blow out in front: for recirculating-air operation for wall, ceiling or floor assembly. Intake opening without grille Casing with adjustable plastic air-discharge grille.
 With unit leveling feet.
- 7 Intake in front discharge above: for recirculating-air and mixedair operation for wall, ceiling and floor assembly. Recirculating-air intake opening with grille integrated in the casing. Outside air-intake opening rear-side without grille. Casing with adjustable plastic or rigid aluminum air-discharge grille. With unit leveling feet.
- 8 Intake in front discharge in front: for recirculating-air and mixed-air operation for wall, ceiling and floor assembly. Recirculatingair intake opening with grille integrated in the casing. Outside air-intake opening rear-side without grille. Casing with adjustable plastic air-discharge grille. With unit leveling feet.



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AIR CONDITIONING EQUIPMENT DETAILS

Conceived for highest demands on energy efficiency and comfort

Your advantages at a glance

- Very high efficiency
- Up to 80% reduced electrical power consumption of the fan
- Whisper-quiet with continuously variable speed control
- Precise room temperature control
- Satisfies current ErP directives
- Tested and certified by EUROVENT
- Recirculating-air units according to VDI 6022, certified by Hygiene-Institut Hy des Ruhrgebiets





Sustainability is the keyword of our time. 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. Buildings are unique objects. Location, size, construction quality, and – increasingly, building engineering technology – determine values and returns. Energy matters substantially gain in significance since buildings absorb about 40% of the world energy consumption and produce 21% of world-wide greenhouse gas emissions. The proportion of the energy costs in the "second rent" for users and residents is constantly increasing.

The fact that our air treatment is neither seen nor heard, although one is agreeably aware of it, and that in the meantime it avoids energy and wasteful costs, is due to our precision air-treatment work in both hardware and software.

With Flex-Geko, we have succeeded in creating a model series which convinces both under the aspect of sustainability as well as comfort. The optimal energy efficiency of the units makes a significant contribution to the conservation of valuable resources and the preservation of the environment. Decreasing operating costs simultaneously promote cost effectiveness – an advantage which rapidly pays for itself even for the smallest rooms and plants.

EC technology: high-performance, sustainable, whisper-quiet

EC fans not only ensure demand-driven air delivery and individual control possibilities. Compared to conventional AC fans, the EC motors convince with a reduced electrical power consumption of up to 80%. It always works under optimal conditions, resulting in maximum torques and minimal losses. Fan-coil units with EC technology satisfy the current ErP guidelines (Energy Related Products Directive).

TESTED AND CERTIFIED

High production quality and reproducible data are standard for our Flex-Geko. As a member of EUROVENT and the German Association of HVAC Manufacturers (RLT), our production facilities, units, and their capacities are regularly tested and monitored by independent parties.

The continuously-variable speed control of the EC fans offers a number of additional advantages. Since fan speed changes are inaudible, they are whisper-quiet in operation, and satisfy the highest demands on acoustic comfort. In addition, the room temperature control is more precise, since it can react to temperature deviations with an appropriately adapted fan speed. This is supported by using hydraulic modulating control valves. The variable fan speed control furthermore compensates fluctuating heating and cooling medium conditions, e.g. seasonallycaused variations of inlet temperatures of the heat generator or fluctuating volume flow. The MATRIX control is continuously harmonized with the EC fans and is furnished with special features and controls, for instance the continuously variable automatic operation. A speed limitation (= automatic quiet function) can be switched on. The manual operation permits individual and demand-driven control of the operating points of the Geko.

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COMFORT CONTROL DRIVE

For maximum comfort and efficiency



Drive is an innovative, motor-controlled discharge profile for optimizing the air velocity and air throw in cooling operation. Depending on the speed of the fan and the supply and room temperatures, Drive ensures an improved room air flow and a more uniform room air temperature distribution. The favorable air-flow profile of the drive achieves an optimal leaving-air cross-section even at lowest fan speed. The highest degree of comfort and efficiency is achieved with EC fans and the control MATRIX.

Reduction of electrical energy with EC fans and Drive



Reduction of cooling energy with Drive



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Conference room Supply-air temperature Flex-Geko Volume flow Internal loads 30 m² 14 °C Model size 3 300 m³/h (35 %) 25 W/m²

CFD computational fluid dynamics

Because of the small cooling capacity required, low speeds of the unit's fan are automatically selected in partial-load range. But in order to achieve an optimal leaving-air velocity and roomair distribution without increasing the speed, the Drive Comfort Control now ensures a continuously-controlled reduction of the leaving-air cross-section. The velocity of the air jet is thus increased without increasing the speed, and the air jet moves smoothly along the wall and ceiling (Coanda effect). This leads to a considerably increased penetration depth into the room. The noticeable result is increased comfort with perfect temperature and velocity distribution in the occupied zone, as well as great acoustic comfort due to the low speeds of the fan.

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INTELLIGENT REGULATING TECHNOLOGY

Always the right idea for the right climate with the MATRIX



Your advantages at a glance

- Comprehensive control options
- Control functions in various expansion stages Plug-and-play functionality
- Energy-optimized operation of the units
- Ready-to-operate units and competent service
- Global add-on modules
- LON connection
- Service tool available
- and much more

If requested, the proven MATRIX control will already be integrated into the Flex-Geko at the factory. Completely tested units are thus available on the construction site. The MATRIX is available in the expansion stages 500, 2000, 3000 and 4000 – harmonized to diverse applications. For instance, a version for EC fans (M 3000/M 4000) and Drive (M 4000), a version for hotel applications, or also a basic version for small budgets are all available.

The standard versions of most of the MATRIX models provide a 2-conductor MATRIX. NET bus system that allows communication among all MATRIX units. This makes it very easy to implement day and night operation, control the pumps, and collect fault signals in one place. MATRIX can also be connected to higher-level bus systems.

MATRIX furthermore ensures an energy-optimized operation of the Flex-Geko. A coordinated switchover function, for example, prevents heating and cooling circulation systems from working against each other. With summer compensation, MATRIX takes the outside temperature influence into consideration and thereby prevents an energy-intensive climate control. Hardware and software are developed entirely at DencoHappel. By close collaboration within the company, the engineers can specifically harmonize the controls with every component, and thus optimally exploit the possibilities of the units. Service and support also benefit from this arrangement, and can rapidly and competently react whenever questions arise.

Numerous additional global modules are available for the functional enhancement of the available standard local connections of the MATRIX control system: whether intra-group control panels or timer modules, modules for the control of exhaust air fans or chillers, the extension of analog or digital input and output signals, outputs from 0 to 10 volt for valves, or the connection of a LON bus system according to the LonWorks standard.

Starting with the MATRIX 2000, all modules can be easily integrated with the MATRIX. Net bus system. Furthermore, the service tool MATRIX.PC can be deployed for the parameterization, commissioning, maintenance and data recording of the MATRIX control system.



CONTROL PANEL

for MATRIX 500, MATRIX 2000, MATRIX 3000 *and* MATRIX 4000



MATRIX OP 5

- Casing without display, pure white
- Recirculated-air operation, IP 20 enclosure class
- Setpoint temperature setting
- Speed selector switch for continuous operation
- Economy mode button
- LED display operation/fault/ext. influence
- Integrated room temperature sensor



MATRIX OP 21

As for OP 5 control panel, however with

- Speed-selection switch Continuous/ automatic operation
- MATRIX.Net data bus: Network connection for MATRIX add-on modules with OP 21control panel



MATRIX OP 30 without key MATRIX OP 31 with economy mode key

- Casing without display, pure white
- Recirculated-air operation, IP 20 enclosure class
- Setpoint temperature setting
- Speed switch for continuous/automatic operation
- LED display operation/fault/ext. influence
- Integrated room temperature sensor





MATRIX OP 44

As for the OP31 control panel, but with

- Changeover between heating/cooling/ automatic operation
- Changeover between recirculating-air/ mixed-air operation

All control panels without display and optionally with protective cover

MATRIX OP 50 without clock MATRIX OP 51 with clock

- Casing with display, pure white
- Recirculating air/mixed-air operation
- Protection class IP 20
- Operation with rotary navigator
- LCD display with plain-text display
- Status report by pictograms
- Integrated room-temperature sensor

infrared remote control unit MATRIX.IR

• Functions like OP 44 control panel, however

without operational/error messages without messages on ext. influence without integrated room sensor

- Black casing, similar to RAL 9004
- LCD display 45 x 30 mm
- Transmission range about 20 m

2-pipe system – chilled water/warm water

size		v rate		y capacity	: heating		Sound pre	1	Max. dir and weig out unit c withou	nensions hts with- asing and ut foot			
odel	eed	r flov	Ň	ating VW	ectric	-						Height	Depth
ž	Sp	Ā	<u> </u>	P He	Ξ				471 mm	228 mm			
18	15	m³/h	kW	kW	-	AC motor EC motor						Width	Weight
1	min. max.	150 530	1.0 3.0	1.7 5.5	-	21 dB(A) 50 dB(A)	14 W 63 W	0.14 A 0.28 A	20 dB(A) 50 dB(A)	4 W 37 W	0.05 A 0.31 A	761 mm	17 kg
2	min. max.	160 540	1.2 3.4	2.0 6.2	-	20 dB(A) 49 dB(A)	13 W 65 W	0.14 A 0.29 A	20 dB(A) 49 dB(A)	3 W 32 W	0.05 A 0.28 A	911 mm	20 kg
3	min. max.	280 890	1.7 5.3	3.2 9.6	-	21 dB(A) 51 dB(A)	11 W 80 W	0.13 A 0.35 A	22 dB(A) 50 dB(A)	4 W 61 W	0.06 A 0.48 A	1,061 mm	25 kg
4	min. max.	290 990	2.0 6.2	3.5 11.1	-	20 dB(A) 50 dB(A)	11 W 84 W	0.16 A 0.36 A	20 dB(A) 50 dB(A)	4 W 56 W	0.05 A 0.45 A	1,211 mm	29 kg
5	min. max.	300 1,010	2.1 6.7	3.7 12.0	-	20 dB(A) 51 dB(A)	12 W 87 W	0.14 A 0.38 A	20 dB(A) 51 dB(A)	3 W 61 W	0.05 A 0.50 A	1,361 mm	32 kg
6	min. max.	430 1,310	2.6 7.6	4.9 14.2	-	24 dB(A) 54 dB(A)	25 W 134 W	0.28 A 0.58 A	24 dB(A) 53 dB(A)	8 W 68 W	0.10 A 0.58 A	1,511 mm	38 kg
7	min. max.	460 1,420	2.9 8.7	5.4 15.9	-	24 dB(A) 53 dB(A)	25 W 141 W	0.27 A 0.61 A	24 dB(A) 54 dB(A)	8 W 80 W	0.10 A 0.64 A	1,661 mm	42 kg
8	min. max.	590 1,820	3.7 10.8	6.8 19.6	-	25 dB(A) 53 dB(A)	22 W 166 W	0.28 A 0.73 A	26 dB(A) 53 dB(A)	9 W 121 W	0.11 A 0.91 A	1,881 mm	47 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacity at room temperature 27 °C/46 % r.h., medium PCW 6/12 °C • heating capacity at room temperature 20 °C, medium PWW 70/50 °C A special heat exchanger is available upon request for low heating medium temperatures or high refrigerant temperatures.

Max. dimensions and weights of the Comfort unit casing												
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)							
1	840 mm	504 mm 629 mm **	240 mm	8 kg	1							
2	990 mm	504 mm 629 mm **	240 mm	9 kg								
3	1,140 mm	504 mm 629 mm **	240 mm	10 kg	504							
4	1,290 mm	504 mm 629 mm **	240 mm	11 kg	Without unit foot casing							
5	1,440 mm	504 mm 629 mm **	240 mm	12 kg	5							
6	1,590 mm	504 mm 629 mm **	240 mm	13 kg	504							
7	1,740 mm	504 mm 629 mm **	240 mm	14 kg	629							
8	1,890 mm	504 mm 629 mm **	240 mm	15 kg	۲ ** With unit foot casing							

RECIRCULATING AIR COOLING AND HEATING

2-pipe system – chilled water /warm water Electric heating 1 ~ 230 V, 50 Hz

size		w rate	g capacity	g capacity	c heating		Sound pre	,	Max. din and weig out unit c withou	nensions hts with- asing and ut foot			
lodel	beed	ir flo	oolin CW	eatin WW	ectri	-			Height	Depth			
Σ	S.	Ā	ŬĂ	ΞĞ	Ξ				471 mm	228 mm			
18	25	m³/h	kW	kW	kW		AC motor EC motor						Weight
1	min. max.	220 530	1.2 3.0	2.3 5.5	0.87 1.74	28 dB(A) 50 dB(A)	21 W 63 W	0.17 A 0.28 A	28 dB(A) 50 dB(A)	5 W 37 W	0.06 A 0.31 A	761 mm	17 kg
2	min. max.	230 540	1.5 3.4	2.6 6.2	1.27 2.54	26 dB(A) 49 dB(A)	21 W 65 W	0.18 A 0.29 A	27 dB(A) 49 dB(A)	5 W 32 W	0.06 A 0.28 A	911 mm	20 kg
3	min. max.	350 890	2.0 5.3	3.7 9.6	1.67 3.34	27 dB(A) 51 dB(A)	15 W 80 W	0.15 A 0.35 A	27 dB(A) 50 dB(A)	6 W 61 W	0.07 A 0.48 A	1,061 mm	25 kg
4	min. max.	360 990	2.3 6.2	4.1 11.1	1.95 3.90	26 dB(A) 50 dB(A)	15 W 84 W	0.17 A 0.36 A	25 dB(A) 50 dB(A)	5 W 56 W	0.06 A 0.45 A	1,211 mm	29 kg
5	min. max.	370 1,010	2.5 6.7	4.4 12.0	2.03 4.06	25 dB(A) 51 dB(A)	15 W 87 W	0.17 A 0.38 A	24 dB(A) 51 dB(A)	5 W 61 W	0.06 A 0.50 A	1,361 mm	32 kg
6	min. max.	560 1,310	3.1 7.6	5.9 14.2	2.07 4.14	31 dB(A) 54 dB(A)	37 W 134 W	0.33 A 0.58 A	31 dB(A) 53 dB(A)	10 W 68 W	0.11 A 0.58 A	1,511 mm	38 kg
7	min. max.	580 1,420	3.5 8.7	6.4 15.9	2.07 4.14	30 dB(A) 53 dB(A)	37 W 141 W	0.33 A 0.61 A	30 dB(A) 54 dB(A)	10 W 80 W	0.12 A 0.64 A	1,661 mm	42 kg
8	min. max.	690 1,820	4.2 10.8	7.6 19.6	2.07 4.14	29 dB(A) 53 dB(A)	30 W 166 W	0.33 A 0.73 A	29 dB(A) 53 dB(A)	11 W 121 W	0.13 A 0.91 A	1,881 mm	47 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacity at room temperature 27 °C/46 % r.h., medium PCW 6/12 °C • Heating capacity at room temperature 20 °C, medium PWW 70/50 °C and 1 ~ 230 V, 50 Hz

Max. dimensions and weights of the Comfort unit casing												
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)							
1	840 mm	504 mm 629 mm **	240 mm	8 kg	1							
2	990 mm	504 mm 629 mm **	240 mm	9 kg								
3	1,140 mm	504 mm 629 mm **	240 mm	10 kg								
4	1,290 mm	504 mm 629 mm **	240 mm	11 kg	Without unit foot casing							
5	1,440 mm	504 mm 629 mm **	240 mm	12 kg	5							
6	1,590 mm	504 mm 629 mm **	240 mm	13 kg	504							
7	1,740 mm	504 mm 629 mm **	240 mm	14 kg								
8	1,890 mm	504 mm 629 mm **	240 mm	15 kg	۲ ** With unit foot casing							

4-pipe system – chilled water/warm water

size		v rate	J capacity	g capacity	: heating		Sound pre	ı	Max. dir and weig out unit c withou	nensions hts with- asing and ut foot			
odel	eed	r flov	oling W	ating VW	ectric							Height	Depth
ž	Sp	A i	S S	₽₹	<u> </u>				471 mm	228 mm			
18	1 5	m³/h	kW	kW	-	AC motor EC motor						Width	Weight
1	min. max.	145 525	0.9 2.3	0.6 1.7	-	21 dB(A) 50 dB(A)	14 W 63 W	0.14 A 0.28 A	20 dB(A) 50 dB(A)	4 W 37 W	0.05 A 0.31 A	761 mm	17 kg
2	min. max.	155 535	1.0 3.0	1.0 2.2	-	20 dB(A) 49 dB(A)	13 W 65 W	0.14 A 0.29 A	20 dB(A) 49 dB(A)	3 W 32 W	0.05 A 0.28 A	911 mm	20 kg
3	min. max.	275 880	1.8 4.3	1.7 3.3	-	21 dB(A) 51 dB(A)	11 W 80 W	0.13 A 0.35 A	22 dB(A) 50 dB(A)	4 W 61 W	0.06 A 0.48 A	1,061 mm	25 kg
4	min. max.	285 980	2.0 5.2	1.2 4.0	-	20 dB(A) 50 dB(A)	11 W 84 W	0.16 A 0.36 A	20 dB(A) 50 dB(A)	4 W 56 W	0.05 A 0.45 A	1,211 mm	29 kg
5	min. max.	295 1,000	2.0 5.8	2.1 4.5	-	20 dB(A) 51 dB(A)	12 W 87 W	0.14 A 0.38 A	20 dB(A) 51 dB(A)	3 W 61 W	0.05 A 0.50 A	1,361 mm	32 kg
6	min. max.	425 1,295	2.8 6.4	2.9 5.1	-	24 dB(A) 54 dB(A)	25 W 134 W	0.28 A 0.58 A	24 dB(A) 53 dB(A)	8 W 68 W	0.10 A 0.58 A	1,511 mm	38 kg
7	min. max.	455 1,405	3.2 7.4	3.2 5.8	-	24 dB(A) 53 dB(A)	25 W 141 W	0.27 A 0.61 A	24 dB(A) 54 dB(A)	8 W 80 W	0.10 A 0.64 A	1,661 mm	42 kg
8	min. max.	575 1,800	3.9 9.1	3.9 7.0	-	25 dB(A) 53 dB(A)	22 W 166 W	0.28 A 0.73 A	25 dB(A) 53 dB(A)	9 W 121 W	0.11 A 0.91 A	1,881 mm	47 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacity at room temperature 27 °C/46 % r.h., medium PCW 6/12 °C • heating capacity at room temperature 20 °C, medium PWW 70 / 50 °C A special heat exchanger is available upon request for low heating medium temperatures or high refrigerant temperatures.

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6	1,590 mm	504 mm 629 mm **	240 mm	13 kg	504							
7	1,740 mm	504 mm 629 mm **	240 mm	14 kg	629							
8	1,890 mm	504 mm 629 mm **	240 mm	15 kg	۲ ** With unit foot casing							

Direct expansion coil/warm water

del size	ed	flow rate	oling capacity DV	ating capacity W	rigerant R410A		Sound pre	1	Max. dir and weig out unit c withou Height	nensions hts with- asing and ut foot Depth			
Mo	Spe	Air	Š	PVV PVV	Ref				471 mm	228 mm			
18	35	m³/h	kW	kW	t _o	AC motor EC motor					Width	Weight	
1	min. max.	270 525	1.0 1.3	1.0 1.4	10°C	34 dB(A) 51 dB(A)	50 W 63 W	0.23 A 0.28 A	32 dB(A) 49 dB(A)	8 W 37 W	0.08 A 0.31 A	761 mm	17 kg
2	min. max.	280 535	1.1 1.6	1.4 2.0	10°C	34 dB(A) 51 dB(A)	52 W 65 W	0.24 A 0.29 A	32 dB(A) 48 dB(A)	7 W 32 W	0.07 A 0.28 A	911 mm	20 kg
3	min. max.	465 880	1.8 2.6	2.2 3.1	10°C	34 dB(A) 51 dB(A)	47 W 80 W	0.22 A 0.35 A	34 dB(A) 50 dB(A)	11 W 61 W	0.10 A 0.48 A	1,061 mm	25 kg
4	min. max.	485 980	1.9 2.7	2.6 3.7	10°C	32 dB(A) 50 dB(A)	47 W 84 W	0.25 A 0.36 A	32 dB(A) 50 dB(A)	8 W 56 W	0.09 A 0.45 A	1,211 mm	29 kg
5	min. max.	515 1,000	2.1 3.0	3.0 4.2	10°C	33 dB(A) 51 dB(A)	53 W 87 W	0.24 A 0.38 A	32 dB(A) 50 dB(A)	9 W 61 W	0.09 A 0.50 A	1,361 mm	32 kg
6	min. max.	745 1,295	2.8 3.9	4.0 5.3	10°C	38 dB(A) 54 dB(A)	99 W 134 W	0.48 A 0.58 A	37 dB(A) 52 dB(A)	16 W 68 W	0.17 A 0.58 A	1,511 mm	38 kg
7	min. max.	765 1,405	3.1 4.6	4.3 5.9	10 °C	39 dB(A) 53 dB(A)	100 W 141 W	0.46 A 0.61 A	36 dB(A) 53 dB(A)	17 W 80 W	0.17 A 0.64 A	1,661 mm	42 kg
8	min. max.	955 1,800	3.5 4.9	5.2 7.2	10°C	39 dB(A) 53 dB(A)	99 W 166 W	0.46 A 0.73 A	37 dB(A) 52 dB(A)	21 W 121 W	0.21 A 0.91 A	1,881 mm	47 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacities at room temperature 27 °C/46 % r.h. medium refrigerant R410A – $t_0 = 10$ °C • heating capacity at room temperature 20 °C, medium PWW 70/50 °C

Max. dimensions and weights of the Comfort unit casing												
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)							
1	840 mm	504 mm 629 mm **	240 mm	8 kg	1							
2	990 mm	504 mm 629 mm **	240 mm	9 kg								
3	1,140 mm	504 mm 629 mm **	240 mm	10 kg	504							
4	1,290 mm	504 mm 629 mm **	240 mm	11 kg	Without unit foot casing							
5	1,440 mm	504 mm 629 mm **	240 mm	12 kg	5							
6	1,590 mm	504 mm 629 mm **	240 mm	13 kg	504							
7	1,740 mm	504 mm 629 mm **	240 mm	14 kg	629							
8	1,890 mm	504 mm 629 mm **	240 mm	15 kg	۲ ** With unit foot casing							

Direct evaporator

size		w rate	g capacity DV	g capacity	erant R410A		Sound pre	,	Max. din and weig out unit c withou	nensions hts with- asing and ut foot			
odel	beed	r flov	ooling	eatin NW	efrige	-			Height	Depth			
Σ	ς	Ai	Ŭ	тб	ž				471 mm	228 mm			
18	35	m³/h	kW	-	t _o	t _o AC motor EC motor					Width	Weight	
1	min. max.	270 530	1.2 1.7	-	10°C	33 dB(A) 50 dB(A)	50 W 63 W	0.23 A 0.28 A	33 dB(A) 50 dB(A)	8 W 37 W	0.08 A 0.31 A	761 mm	17 kg
2	min. max.	280 540	1.4 2.3	-	10°C	33 dB(A) 49 dB(A)	52 W 65 W	0.24 A 0.29 A	32 dB(A) 49 dB(A)	7 W 32 W	0.07 A 0.28 A	911 mm	20 kg
3	min. max.	470 890	2.5 3.7	-	10°C	34 dB(A) 51 dB(A)	47 W 80 W	0.22 A 0.35 A	34 dB(A) 50 dB(A)	11 W 61 W	0.10 A 0.48 A	1,061 mm	25 kg
4	min. max.	490 990	2.4 3.6	-	10°C	32 dB(A) 50 dB(A)	47 W 84 W	0.25 A 0.36 A	33 dB(A) 50 dB(A)	8 W 56 W	0.09 A 0.45 A	1,211 mm	29 kg
5	min. max.	520 1,010	2.6 4.2	-	10°C	34 dB(A) 51 dB(A)	53 W 87 W	0.24 A 0.38 A	33 dB(A) 51 dB(A)	9 W 61 W	0.09 A 0.50 A	1,361 mm	32 kg
6	min. max.	750 1,310	3.8 5.6	-	10°C	38 dB(A) 54 dB(A)	99 W 134 W	0.48 A 0.58 A	38 dB(A) 53 dB(A)	16 W 68 W	0.17 A 0.58 A	1,511 mm	38 kg
7	min. max.	770 1,420	4.2 6.4	-	10°C	38 dB(A) 53 dB(A)	100 W 141 W	0.46 A 0.61 A	37 dB(A) 54 dB(A)	17 W 80 W	0.17 A 0.64 A	1,661 mm	42 kg
8	min. max.	970 1,820	4.6 7.1	-	10°C	37 dB(A) 53 dB(A)	99 W 166 W	0.46 A 0.73 A	37 dB(A) 53 dB(A)	21 W 121 W	0.21 A 0.91 A	1,881 mm	47 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacities at room temperature 27 °C/46 % r.h. medium refrigerant R410A – $t_0 = 10$ °C • heating capacity at room temperature 20 °C, medium PWW 70/50 °C

Max. dimensions and weights of the Comfort unit casing												
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)							
1	840 mm	504 mm 629 mm **	240 mm	8 kg	1							
2	990 mm	504 mm 629 mm **	240 mm	9 kg								
3	1,140 mm	504 mm 629 mm **	240 mm	10 kg								
4	1,290 mm	504 mm 629 mm **	240 mm	11 kg	Without unit foot casing							
5	1,440 mm	504 mm 629 mm **	240 mm	12 kg	5							
6	1,590 mm	504 mm 629 mm **	240 mm	13 kg	504							
7	1,740 mm	504 mm 629 mm **	240 mm	14 kg								
8	1,890 mm	504 mm 629 mm **	240 mm	15 kg	** With unit foot casing							

Electric full heating system 3 ~ 400 V, 50 Hz

! size	-	ow rate	ng capacity	ng capacity	ic heating		Sound pre	I	Max. dir and weig out unit c withou	mensions Jhts with- casing and ut foot			
lode	peed	ir fle	oolii CV	leati WW	lectr	-			Height	Depth			
2	2 E	< m³/b		Τđ									228 mm
10	55	111 711	_	_	KVV		AC IIIOIOI			EC IIIOIOI		width	weight
1	min. max.	270 530	-	-	2.07 4.14	33 dB(A) 50 dB(A)	50 W 63 W	0.23 A 0.28 A	-	-	-	761 mm	17 kg
2	min.	280 540	-	-	2.52	33 dB(A)	52 W	0.24 A	-	-	-	911 mm	20 kg
	iiidx.	340			3.04	49 UD(A)	47.14/	0.29A					
3	min. max.	470 890	-	-	3.69 7.38	34 dB(A) 51 dB(A)	47 W 80 W	0.22 A 0.35 A	-	-	-	1,061 mm	25 kg
4	min. max.	490 990	-	-	4.20 8.40	32 dB(A) 50 dB(A)	47 W 84 W	0.25 A 0.36 A	-	-	-	1,211 mm	29 kg
5	min. max.	520 1,010	-	-	4.89 9.78	34 dB(A) 51 dB(A)	53 W 87 W	0.24 A 0.38 A	-	-	-	1,361 mm	32 kg
6	min. max.	750 1,310	-	-	4.98 9.96	38 dB(A) 54 dB(A)	99 W 134 W	0.48 A 0.58 A	-	-	-	1,511 mm	38 kg
7	min. max.	770 1,420	-	-	6.18 12.36	38 dB(A) 53 dB(A)	100 W 141 W	0.46 A 0.61 A	-	_	_	1,661 mm	42 kg
8	min. max.	970 1,820	-	-	6.18 12.36	37 dB(A) 53 dB(A)	99 W 166 W	0.46 A 0.73 A	-	-	-	1,881 mm	47 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Heating capacity at room temperature 20 °C, medium 3 ~ 400 V, 50 Hz

Max. dimensions and weights of the Comfort unit casing												
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)							
1	840 mm	504 mm 629 mm **	240 mm	8 kg	1							
2	990 mm	504 mm 629 mm **	240 mm	9 kg								
3	1,140 mm	504 mm 629 mm **	240 mm	10 kg	504							
4	1,290 mm	504 mm 629 mm **	240 mm	11 kg	Without unit foot casing							
5	1,440 mm	504 mm 629 mm **	240 mm	12 kg	5							
6	1,590 mm	504 mm 629 mm **	240 mm	13 kg	504							
7	1,740 mm	504 mm 629 mm **	240 mm	14 kg	629							
8	1,890 mm	504 mm 629 mm **	240 mm	15 kg	۲ ** With unit foot casing							

2-pipe system – chilled water/warm water

size		v rate	J capacity	g capacity	: heating		Sound pre	Max. dimensions and weights with- out unit casing and without foot					
odel	eed	r flov	oling W	ating VW	ectric	-						Height	Depth
ž	Sp	Ai	S S	₽₽	<u> </u>							596 mm	228 mm
18	15	m³/h	kW	kW	-		AC motor			EC motor		Width	Weight
1	min. max.	145 495	0.9 2.8	2.1 6.6	-	21 dB(A) 50 dB(A)	14 W 63 W	0.14 A 0.28 A	21 dB(A) 50 dB(A)	4 W 37 W	0.05 A 0.31 A	761 mm	18 kg
2	min. max.	150 520	1.1 3.3	2.4 7.6	-	20 dB(A) 49 dB(A)	13 W 65 W	0.14 A 0.29 A	20 dB(A) 49 dB(A)	3 W 32 W	0.05 A 0.28 A	911 mm	22 kg
3	min. max.	255 805	1.6 5.0	3.7 11.3	-	21 dB(A) 51 dB(A)	11 W 80 W	0.13 A 0.35 A	22 dB(A) 50 dB(A)	4 W 61 W	0.06 A 0.48 A	1,061 mm	27 kg
4	min. max.	270 915	1.9 5.9	4.1 13.2	-	20 dB(A) 50 dB(A)	11 W 84 W	0.16 A 0.36 A	22 dB(A) 50 dB(A)	4 W 56 W	0.05 A 0.45 A	1,211 mm	32 kg
5	min. max.	280 950	2.1 6.5	4.5 14.3	-	20 dB(A) 51 dB(A)	12 W 87 W	0.14 A 0.38 A	20 dB(A) 51 dB(A)	3 W 61 W	0.05 A 0.50 A	1,361 mm	36 kg
6	min. max.	410 1,210	2.5 7.2	6.0 17.0	-	24 dB(A) 54 dB(A)	25 W 134 W	0.28 A 0.58 A	26 dB(A) 54 dB(A)	8 W 68 W	0.10 A 0.58 A	1,511 mm	42 kg
7	min. max.	435 1,320	2.8 8.3	6.5 19.1	-	24 dB(A) 25 W 0.27 A 26 dB(A) 8 W 0.10 A 53 dB(A) 141 W 0.61 A 54 dB(A) 80 W 0.64 A					1,661 mm	46 kg	
8	min. max.	530 1,640	3.5 10.2	7.9 23.0	-	25 dB(A) 53 dB(A)	22 W 166 W	0.28 A 0.73 A	25 dB(A) 53 dB(A)	9 W 121 W	0.11 A 0.91 A	1,881 mm	52 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacity at room temperature 27 °C/46% r.h., medium PCW 6/12 °C • thermal output at air intake temperature 10 °C, medium PWW 70/50 °C A special heat exchanger is available upon request for low heating medium temperatures or high refrigerant temperatures.

Max. dimensio	Max. dimensions and weights of the Comfort unit casing										
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)						
1	840 mm	629 mm	240 mm	9 kg	7						
2	990 mm	629 mm	240 mm	10 kg							
3	1,140 mm	629 mm	240 mm	11 kg							
4	1,290 mm	629 mm	240 mm	12 kg	Air outlet above						
5	1,440 mm	629 mm	240 mm	13 kg	8						
6	1,590 mm	629 mm	240 mm	14 kg							
7	1,740 mm	629 mm	240 mm	15 kg	629 125						
8	1,890 mm	629 mm	240 mm	16 kg	Air outlet in front						

4-pipe system – chilled water/warm water

odel size	eed	r flow rate	oling capacity W	ating capacity WV	sctric heating		Sound pre	Max. dir and weig out unit c withou Height	nensions hts with- asing and ut foot Depth				
Ĕ	Sp	Ai	S S	PV He	Ĕ				1			596 mm	228 mm
18	15	m³/h	kW	kW	-		AC motor		-	EC motor	1	Width	Weight
1	min. max.	145 490	0.9 2.2	1.0 2.1	-	21 dB(A) 50 dB(A)	14 W 63 W	0.14 A 0.28 A	21 dB(A) 50 dB(A)	4 W 37 W	0.05 A 0.31 A	761 mm	18 kg
2	min. max.	180 515	1.0 2.9	1.3 2.8	-	20 dB(A) 49 dB(A)	13 W 65 W	0.14 A 0.29 A	20 dB(A) 49 dB(A)	3 W 32 W	0.05 A 0.28 A	911 mm	22 kg
3	min. max.	250 800	1.7 4.1	2.1 4.1	-	21 dB(A) 51 dB(A)	11 W 80 W	0.13 A 0.35 A	22 dB(A) 50 dB(A)	4 W 61 W	0.06 A 0.48 A	1,061 mm	27 kg
4	min. max.	270 910	1.9 5.0	2.4 4.9	-	20 dB(A) 50 dB(A)	11 W 84 W	0.16 A 0.36 A	22 dB(A) 51 dB(A)	4 W 56 W	0.05 A 0.45 A	1,211 mm	32 kg
5	min. max.	280 945	1.9 5.6	2.7 5.6	-	20 dB(A) 51 dB(A)	12 W 87 W	0.14 A 0.38 A	21 dB(A) 51 dB(A)	3 W 61 W	0.05 A 0.50 A	1,361 mm	36 kg
6	min. max.	405 1,200	2.8 6.1	3.6 6.3	-	24 dB(A) 54 dB(A)	25 W 134 W	0.28 A 0.58 A	26 dB(A) 54 dB(A)	8 W 68 W	0.10 A 0.58 A	1,511 mm	42 kg
7	min. max.	430 1,310	3.0 7.1	4.0 7.2	-	24 dB(A) 25 W 0.27 A 26 dB(A) 8 W 0.10 A 53 dB(A) 141 W 0.61 A 55 dB(A) 80 W 0.64 A				1,661 mm	46 kg		
8	min. max.	525 1,625	3.7 8.6	4.7 8.5	-	25 dB(A) 53 dB(A)	22 W 166 W	0.28 A 0.73 A	26 dB(A) 53 dB(A)	9 W 121 W	0.11 A 0.91 A	1,881 mm	52 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacity at room temperature 27 °C/46% r.h., medium PCW 6/12 °C • thermal output at air intake temperature 10 °C, medium PWW 70/50 °C A special heat exchanger is available upon request for low heating medium temperatures or high refrigerant temperatures.

Max. dimensio	ons and weights	of the Comfort	unit casing		
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)
1	840 mm	629 mm	240 mm	9 kg	7
2	990 mm	629 mm	240 mm	10 kg	
3	1,140 mm	629 mm	240 mm	11 kg	
4	1,290 mm	629 mm	240 mm	12 kg	Air outlet above
5	1,440 mm	629 mm	240 mm	13 kg	8
6	1,590 mm	629 mm	240 mm	14 kg	
7	1,740 mm	629 mm	240 mm	15 kg	629 125
8	1,890 mm	629 mm	240 mm	16 kg	Air outlet in front

Direct expansion coil/warm water

Aodel size	peed	ir flow rate	ooling capacity DV	leating capacity WW	efrigerant R410A	-	Sound pre	Max. din and weig out unit c withou Height	nensions hts with- casing and ut foot Depth				
18	35	s m³/h	kW	kW	t _o		AC motor			EC motor		Width	Weight
1	min. max.	265 490	0.9 1.3	1.4 1.9	10°C	33 dB(A) 50 dB(A)	14 W 63 W	0.14 A 0.28 A	35 dB(A) 50 dB(A)	4 W 37 W	0.05 A 0.31 A	761 mm	18 kg
2	min. max.	275 515	1.1 1.5	1.9 2.6	10°C	33 dB(A) 49 dB(A)	13 W 65 W	0.14 A 0.29 A	34 dB(A) 50 dB(A)	3 W 32 W	0.05 A 0.28 A	911 mm	22 kg
3	min. max.	430 800	1.7 2.5	2.8 3.8	10°C	34 dB(A) 51 dB(A)	11 W 80 W	0.13 A 0.35 A	35 dB(A) 50 dB(A)	4 W 61 W	0.06 A 0.48 A	1,061 mm	27 kg
4	min. max.	460 910	1.9 2.6	3.3 4.7	10°C	32 dB(A) 50 dB(A)	11 W 84 W	0.16 A 0.36 A	34 dB(A) 51 dB(A)	4 W 56 W	0.05 A 0.45 A	1,211 mm	32 kg
5	min. max.	490 945	2.1 2.9	3.8 5.3	10°C	34 dB(A) 51 dB(A)	12 W 87 W	0.14 A 0.38 A	34 dB(A) 51 dB(A)	3 W 61 W	0.05 A 0.50 A	1,361 mm	36 kg
6	min. max.	715 1,200	2.7 3.7	5.0 6.5	10°C	38 dB(A) 54 dB(A)	25 W 134 W	0.28 A 0.58 A	40 dB(A) 54 dB(A)	8 W 68 W	0.10 A 0.58 A	1,511 mm	42 kg
7	min. max.	735 1,310	3.0 4.4	5.5 7.3	10°C	38 dB(A) 53 dB(A)	25 W 141 W	0.27 A 0.61 A	39 dB(A) 55 dB(A)	8 W 80 W	0.10 A 0.64 A	1,661 mm	46 kg
8	min. max.	880 1,625	3.4 4.7	6.4 7.7	10°C	37 dB(A) 53 dB(A)	22 W 166 W	0.28 A 0.73 A	38 dB(A) 53 dB(A)	9 W 121 W	0.11 A 0.91 A	1,881 mm	52 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Cooling capacity at room temperature 27 °C/46% r.h., medium refrigerant R410A – $t_0 = 10$ °C • heating capacity at air intake temperature 10 °C, medium PWW 70/50 °C A special heat exchanger is available upon request for low heating medium temperatures or high refrigerant temperatures.

Max. dimensio	Max. dimensions and weights of the Comfort unit casing										
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)						
1	840 mm	629 mm	240 mm	9 kg	7						
2	990 mm	629 mm	240 mm	10 kg							
3	1,140 mm	629 mm	240 mm	11 kg							
4	1,290 mm	629 mm	240 mm	12 kg	Air outlet above						
5	1,440 mm	629 mm	240 mm	13 kg	8						
6	1,590 mm	629 mm	240 mm	14 kg							
7	1,740 mm	629 mm	240 mm	15 kg	629 125						
8	1,890 mm	629 mm	240 mm	16 kg	Air outlet in front						



Electric full heating system 3 ~ 400 V, 50 Hz

Aodel size	ipeed	Air flow rate	cooling capacity PCW	leating capacity www	lectric heating		Sound pre	Max. dir and weig out unit c withou Height	nensions offs with- casing and ut foot Depth				
18	35	m³/h	-	-	kW		AC motor			EC motor		Width	Weight
1	min. max.	265 495	-	-	2.07 4.14	33 dB(A) 50 dB(A)	14 W 63 W	0.14 A 0.28 A	-	-	-	761 mm	18 kg
2	min. max.	275 520	-	-	2.52 5.04	33 dB(A) 49 dB(A)	13 W 65 W	0.14 A 0.29 A	-	-	-	911 mm	22 kg
3	min. max.	435 805	-	_	3.69 7.38	34 dB(A) 51 dB(A)	11 W 80 W	0.13 A 0.35 A	-	_	-	1,061 mm	27 kg
4	min. max.	460 915	-	-	4.20 8.40	32 dB(A) 50 dB(A)	11 W 84 W	0.16 A 0.36 A	-	_	_	1,211 mm	32 kg
5	min. max.	475 950	-	_	4.89 9.78	34 dB(A) 51 dB(A)	12 W 87 W	0.14 A 0.38 A	-	_	_	1,361 mm	36 kg
6	min. max.	715 1,210	-	_	4.98 9.96	38 dB(A) 54 dB(A)	25 W 134 W	0.28 A 0.58 A	-	_	-	1,511 mm	42 kg
7	min. max.	735 1,320	-	-	6.18 12.36	38 dB(A) 53 dB(A)	38 dB(A) 25 W 0.27 A		_	1,661 mm	46 kg		
8	min. max.	885 1,640	-	-	6.18 12.36	37 dB(A) 53 dB(A)	22 W 166 W	0.28 A 0.73 A	-	-	-	1,881 mm	52 kg

* Sound pressure levels at quarter-spherical radiation (directional factor 4), spacing to the acoustic source 3 m, room size 100 m³, reverberation time 0.5 sec. Thermal output at air intake temperature 10 °C, medium 3 ~ 400 V, 50 Hz

Max. dimensio	Max. dimensions and weights of the Comfort unit casing										
Model size	Width	Height	Depth	Weight	Wall or ceiling mounting (see page 7)						
1	840 mm	629 mm	240 mm	9 kg	7						
2	990 mm	629 mm	240 mm	10 kg							
3	1,140 mm	629 mm	240 mm	11 kg							
4	1,290 mm	629 mm	240 mm	12 kg	Air outlet above						
5	1,440 mm	629 mm	240 mm	13 kg	8						
6	1,590 mm	629 mm	240 mm	14 kg							
7	1,740 mm	629 mm	240 mm	15 kg	629 125						
8	1,890 mm	629 mm	240 mm	16 kg	Air outlet in front						

CASINGS AND ACCESSORIES

Diverse models and feature options



ENCLOSURES WITHOUT UNIT LEVELING FEET

Intake/discharge models Wall and ceiling version		Recirculating air	Discharge grille Plastic	Disch. grille Aluminum
Comfort	Presentation see page 7		adjustable	not adjustable
Intake front face I discharge front face	1	٠	٠	•
Intake front face I discharge front side	2	٠	٠	
Intake front side I discharge front face	3	٠	•	•
Intake front side I discharge front side	4	٠	٠	
Intake front side I discharge front face I with cladding	3	٠	۲	٠
Intake front side I discharge front face I with back wall	3	•	٠	•

ENCLOSURES WITH UNIT LEVELING FEET

Intake/discharge models Wall and ceiling version		Mixed air	Recirculating air	Discharge grille Plastic	Disch. grille Aluminium
Comfort	Presentation see page 7			adjustable	not adjustable
Intake front side I Discharge front face I Without air intake grille	5		•	•	•
Intake front side I Discharge front side I Without air intake grille	6		•	•	
Intake front side I Discharge front face I With air intake grille	7	٠	٠	٠	٠
Intake front side I Discharge front side I With air intake grille	8	•	•	•	

ACCESSORIES

Suction side I wall and ceiling version	
Comfort	
Air intake plenum with primary air connection	•
Air intake plenum with round intake fitting	•
Seal cap DN 200 for round connector	•
Air intake bend	•
Intake flexible canvas connector	•
Transition piece for intake flexible connector	•
Intake telescope connector	•
Intake sound attenuator for recirculating-air units	•
Intake sound attenuator for mixed-air units	•
Wall-recessed frame for fresh-air connector	•
External weather-protection grille, painted RAL 9002	•
Wall-recessed frame for external protection grille	٠
G1 spare filter	
Spare filter G2, G3	•

ACCESSORIES

Pressure side I wall and ceiling version	
Comfort	
Discharge plenum with primary connector, not insulated	
Discharge plenum with primary air connector, insulated	
Discharge plenum, round discharge connector, not insulated	
Discharge plenum, round discharge connector, insulated	
Seal cap DN 200 for round connector	
Air-exhaust bend, not insulated	
Air-exhaust bend, insulated	
Flexible canvas discharge connector	
Telescope discharge connector	
Discharge sound attenuator connector	•

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 DencoHappel 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 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 DencoHappel 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

DencoHappel is a globally operating company with great expertise in air treatment, air conditioning and filtration technology.

Our nearest consulting and service teams will be glad to discuss ideas and develop creative and effective solutions with you.





www.dencohappel.com