Carrier

United Technologies

PRODUCT SELECTION DATA

- A packaged system, all in one
- Superior reliability
- Save energy and money
- Easy maintenance

Packaged Rooftop Cooling Only Units, Heat Pumps and Gas Heating Units

48/50 UA/UH

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

CARRIER participates in the ECP programme for RT
Check ongoing validity of certificate:
www.eurovent-certification.com
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Certiflash

48/50 UA/UH

Nominal cooling capacity 44 to 115 kW
Nominal heating capacity 44 to 121 kW

The packaged rooftop units are flexible and efficient air conditioners, designed for outdoor installations. The units are self-contained and can be installed in commercial and industrial applications.

- 50UA/UH units are packagd rooftop cooling units/reversible heat pumps, available with additional heating options (hot-water coil or electric heaters).
- 48UA/UH units are packagd rooftop cooling units/ reversible heat pumps, factory fitted with a multi-stage gas heater.

Environmentally sound refrigerant choice

- R410A refrigerant is
  - a chlorine-free refrigerant of the HFC group with a zero ozone depletion potential,
  - a high-density refrigerant, therefore less refrigerant is required,
  - very efficient: it gives an increased energy efficiency ratio (EER, COP and part load efficiencies).

Features

These new rooftop units integrate the latest technological innovations:
- state-of-the-art scroll compressor technology,
- low-noise fans made of composite material,
- auto-adaptive Pro-Dialog+ microprocessor control
- Variable air volume supply fan optimizing energy consumption at full load and part load

Superior reliability, efficiency and safety

- State-of-the-art concept
  - Reduced size and weight make these units ideal for today's lightweight building structures.
  - Rugged design of critical components. e.g. motor supports, suction/discharge piping etc.
  - Powder-painted sheet metal, especially suitable for outdoor use (light-grey colour RAL 7035).
- Exceptional endurance tests
  - Corrosion resistance tests for polyester powder painted galvanized sheet metal parts in salt mist.
  - Accelerated ageing test on components that are submitted to continuous operation: compressor piping, fan supports.
  - Low vibration design.
  - Transport simulation tested in real conditions.
- Leak-tight refrigerant circuit
  Using the latest refrigerant circuit technology for Carrier Aquasnap chillers:
  - Brazed refrigerant connections for increased leak tightness.
  - Reduction of leaks due to reduced vibration levels and elimination of capillary tubes.
  - Access to pressure transducers and temperature sensors without losing refrigerant charge.
- Compressors
  - Excellent full and part-load efficiencies achieved with multiple scroll compressors and indoor coils with dual refrigerant circuits. The refrigerant circuits are both electrically and mechanically independent, to provide standby capability should one circuit require service. Totally enclosed outdoor fan motors are designed for many years of trouble-free operation.
  - Increased energy efficiency at part load, around 99% of the operating time. Only compressors that are absolutely necessary operate. At these conditions the compressors operating are more energy-efficient, as they use the total condenser and evaporator capacity.
  - Low-noise scroll compressors with low vibration levels.
  - The compressor assembly is installed on an independent chassis and supported by anti-vibration mountings.
  - Dynamic suction minimizing vibration transmission.
  - Crankcase heaters are standard for all units.

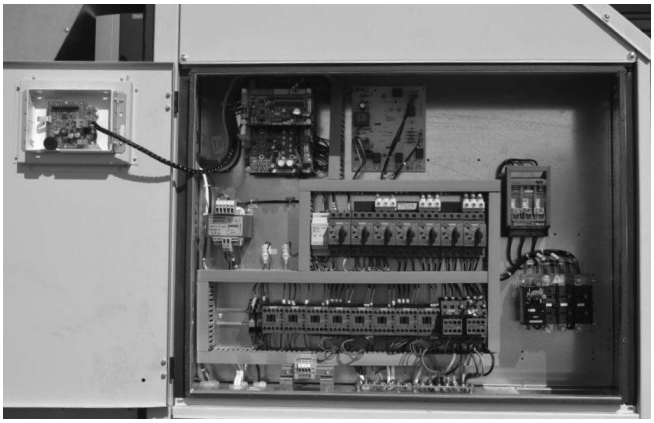
Compressor

- Outside condenser/evaporator coil section
  - Vertical outside coils made of high-quality staggered copper tubing, mechanically bonded in pre-coated corrugated aluminium fins, with high-level protection against corrosion and UV.
  - Latest generation low-noise Flying Bird IV fans, made of a composite material (Carrier patent) - now even quieter and generating intrusive low-frequency noise.
  - At part load or low outdoor temperatures the fan automatically switches to the low speed. The two-speed fan motor allows adjustment of the fan speed for optimized efficiency.
  - Defrost is optimized by the auto-adaptive algorithm. This and the new coil design reduce the defrost cycle duration by an average of 50%. For increased safety an electric heater prevents accumulation of ice on the air heat exchanger base.
  - All pipes and refrigeration components are welded. Pressure sensors are mounted directly on the pipes.
  - Double-inlet indoor fans have forward-curved blades.

Condenser/evaporator coils

- Simplified wiring
  - Electrical connections are simplified, and standard equipment includes a main disconnect switch and a single entry point of the three-phase without neutral power supply to the whole unit.
  - The units are fully wired in accordance with EN standards and include thermo-magnetic circuit breakers and a main disconnect switch.
  - Transformer for safe 24 V control circuit supply included.
  - Easy sensor connnections through seprate terminal
  - Special relay to check phase sequence
  - Easy and quick ProDialog + user interface into panel
  - Thermic magnetic relays for compressors.

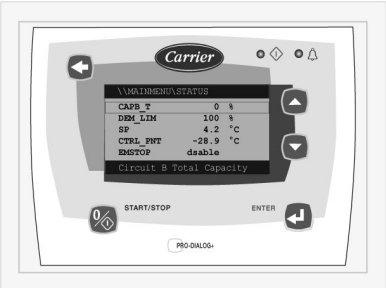
Simplified electrical connections



Pro-Dialog+ user interface

Pro-Dialog+ is an advanced numeric control system that combines complex intelligence with great operating simplicity. Pro-Dialog+ constantly monitors all machine parameters, optimizing the operation of compressors, fans and reversing valve for optimum energy efficiency.

Pro-Dialog+ interface



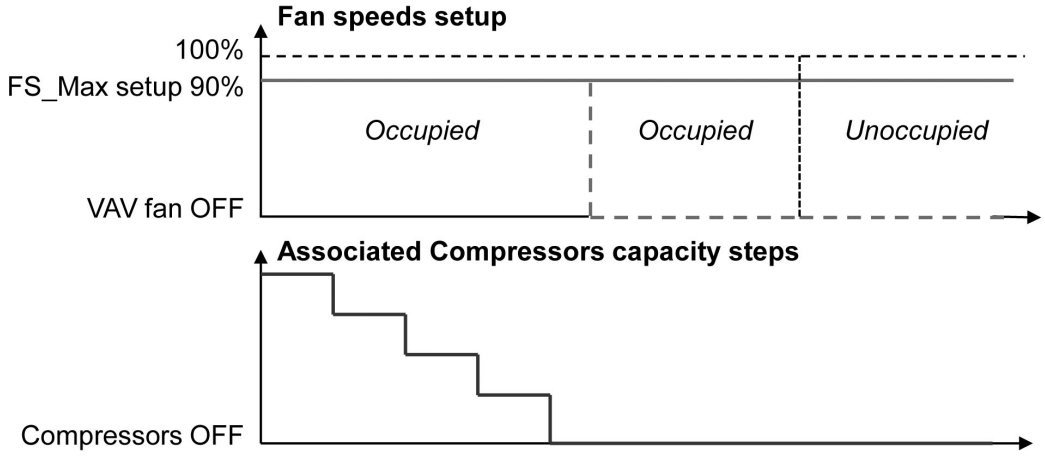
- A powerful control system
  - The Pro-Dialog+ control is auto-adaptive and guarantees total compressor protection. The system permanently checks the operating parameters and responds simultaneously to avoid excessive cycling and maintain the ideal operating range for the compressor (temperatures and pressures out of range, etc.). By taking corrective action before the fault occurs, the auto-adaptive control frequently prevents a shutdown due to a fault.
  - The Pro-Dialog+ control allows communication via JBus and LonWorks - if the necessary hardware is provided.
- Energy management
  - Internal seven-day time schedule clock permits unit on/off control.
  - To optimize power consumption, Pro-Dialog+ automatically resets the space temperature setpoint in accordance with the outdoor air temperature or uses a second setpoint (example: occupied/unoccupied mode).
  - Master/slave control of up to six units operating in parallel (a serial RS485 communication port) fault. The zone heat/cool state is determined by the master unit. If a slave unit is in a heat/cool mode which differs from the master then it is forced in fan only mode (accessory).
  - Automatic changeover based on the outside air temperature
- Integrated features
  - Night mode: capacity and fan speed limitation for reduced noise levels.
- Ease-of-use
  - The new backlit LCD interface includes a manual control potentiometer to ensure legibility under any lighting conditions.
  - The information is displayed clearly in English, French, German, Italian or Spanish (for other languages please contact Carrier).
  - The Pro-Dialog+ navigation uses intuitive tree-structure menus, similar to internet browsers. They are user-friendly and permit quick access to the main operating parameters: number of compressors operating, suction/discharge pressure, compressor operating hours, setpoint, air temperature.
- Carrier Comfort Network (CCN) operating mode
  - A simple two-wire communication bus between the RS485 port of the rooftop unit and the Carrier Comfort Network offers multiple remote control, monitoring and diagnostic possibilities. Carrier offers a vast choice of control products, specially designed to control, manage and supervise the operation of an air conditioning system. Please consult your Carrier representative for more information on these products.
- Remote operating mode with volt-free contacts (standard)
  - Start/stop: opening of this contact will shut down the unit.
  - Dual setpoint: closing of this contact activates a second setpoint (example: unoccupied mode).
  - Additional frost protection setpoint is available to protect the building at low temperature.
  - Alarm indication: this volt-free contact indicates and indentifies major faults that may lead to the shutdown of one or two refrigerant circuits.
  - Demand limit can be used to reduce the maximum unit capacity to pre-defined values, using volt-free contacts.
  - User safety: this contact can be used for any customer safety loop. Closing the contact generates a specific alarm.
- Remote interface (accessory)
  - This interface allows access to the same menus as the unit interface and can be installed up to 300 m away. This accessory includes a box that can be mounted inside the building. The power supply is provided via a 220 V/24 V transformer supplied.

Variable Air Volume supply fan option

An optional Variable Air Volume supply fan can be selected. This belt driven high static centrifugal fan is driven by a Variable Frequency Drive on motor.
The VAV supply fan option is specially designed to ensure economical operation during part load and occupied/ unoccupied periods to meet current and future requirements for high-energy efficiency buildings.

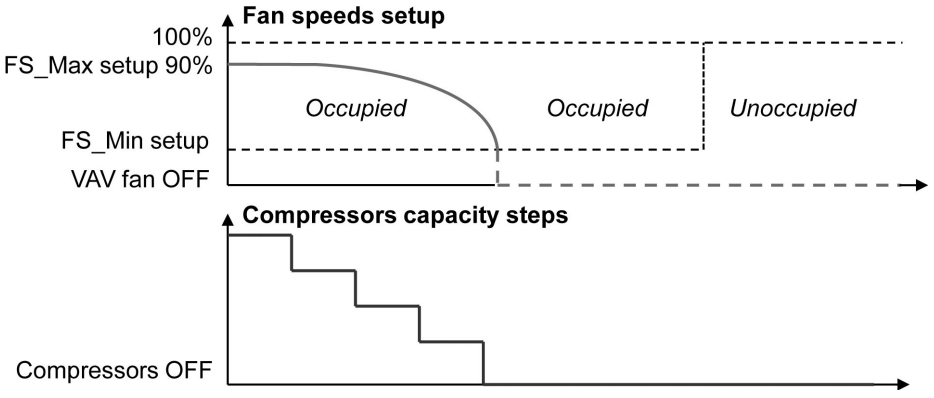
- Energy Savings solution
  VAV Supply fan option allows fan absorbed power large reduction, improving unit part load efficiencies in cooling and heating modes.

- Constant Volume Operating mode:
  - By choosing Constant Volume mode on ProDialog+ interface the user can optimize the supply fan speed (FS max) to adapt perfectly airflow rates (from 70-100% of unit nominal airflow rate) to airduct pressure drop, therefore reducing fan power consumption.
  - The indoor fan management function lets user cycling the supply fan during occupied or unoccupied periods, the supply fan is always On as default.

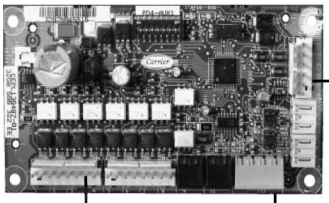


- The user can choose to stop the supply fan during occupied or unoccupied periods when the unit is standby mode (no compressor) optimizing the Energy savings (dotted lines).
- Constant Volume mode also offers pressure compensation feature: VAV option will compensate airflow drop when the filters get fouled up.

- Variable Air Volume Operating mode:
  - The unit will operate in the variable speed features in cooling & heat pump mode: the unit is automatically determining the minimum airflow needed to provide a satisfying room air temperature, and maximize energy efficiency.



Auxiliary # 1 board (already used for IAQ&ERM)



Len bus – Serial link

CH#3 -DO

CH#12 - AI

Return air temperature sensor

HVAC Drive
(same as ERM)

Belt driven High Static Fan drive with fixed motor pulleys

IAQ options and economizer

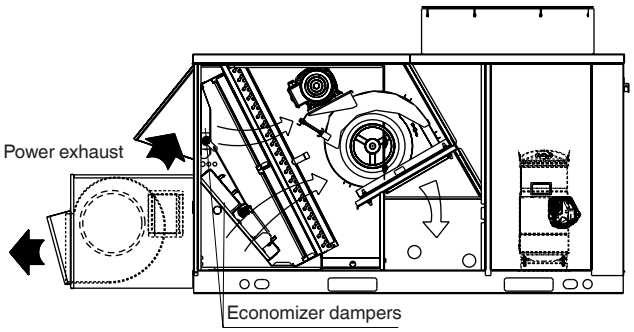
- Fresh air sliding panel
- Manual outdoor air damper
- Economizer
  - An optional integrated economizer permits cooling utilizing an outdoor air sensor.
  - The economizer operates in conjunction with mechanical cooling, when required, and is factory-installed for either vertical or horizontal operation. The factory-supplied and field-installed rain hood/filter assembly is designed to prevent moisture or objects from entering the unit.
  - Pro-Dialog+ control has been designed to support the requirements of indoor air quality control, using outside air. Units can be equipped with a fully modulating economizer. The control includes a logic for a minimum ventilation position.
  - The software controls the power exhaust stages based on the economizer position (percent open).

Economizer

- Thermostatic and enthalpy control with the economizer (option). Two types of control are available:
  - dry-bulb temperature differential,
  - enthalpy differential.

  Normally the units provided with an economizer are factory-fitted with an outdoor air and space temperature sensor. For outdoor enthalpy control the economizer is provided with an enthalpy controller and sensors for optimum temperature and humidity control.
- Fresh Air management with Economizer and VAV supply fan options: VAV option will guarantee minimum fresh air quantity setting (%) by opening the economizer damper accordingly to the calibration data, regardless the fan speed value.
  The calibration task will use the following formula to calculate the fresh air rate:
  % of fresh_air = (Return Air Temperature –Supply Air Temperature) / (Retrun Air Temperature – Outdoor Air Temperature)
- Power exhaust option
  This prevents space pressurization problems. When operating with outside air economizers, large amounts of air can be introduced into the building and a means for building pressure relief must be provided. The 48/50 UA/UH series control supports the following three building pressure control types:
  - Barometric relief damper: can be used on low return duct static applications.
  - Centrifugal exhaust fan for exhaust air, running when the fresh air inlet reaches 50% of the fresh air requirement (factory-fitted to the unit).
  - Minimized over-pressure in the building when fresh air is introduced, allows additional exhaust air pressure for medium return ductwork pressure drop.

Power exhaust option



- CO_2 sensors

  - The indoor air quality (IAQ) function provides a demand-based control for ventilation air quantity, by using a modulating outside air damper position that is proportional to the space CO_2 level. The ventilation damper position is varied between a minimum ventilation level (based on internal sources of contaminants and CO_2 levels other than the effect of people) and the maximum design ventilation level (determined at maximum occupancy of the building).

- Filtration solutions

  - The units can use either standard G4 filters or an optional two-stage pre-filter and G4 + F7 or M6 + F7 high-efficiency filters (all fire class M1). They can also have an optional filter pressure drop switch to warn if the filter is dirty.
  - Filter recommendations according to EN 13779: After the outdoor air quality has been determined, EN 13779 clearly specifies the filter class required to achieve the preferred indoor air quality. Filter classes are specified in accordance with EN 779-2002.

Standard filters

Optional two-stage pre-filter and filter

Outdoor air quality	IDA3 (better)	IDA4 (good)
ODA1 (good)	F7	F5
ODA2	F5/F7	F5/M6
ODA3	F5/F7	F5/M6
ODA4 (poor)	M6/F7	F4/M6

The outdoor air is categorized in four levels (ODA1 to ODA4) depending on air pollution through particles and gases.

The indoor air is categorized in four levels. For rooftop applications the most common ones are:
- IDA3 (commercial buildings, cinemas., theatres, restaurants, bars, sport halls)
- IDA4 (industrial buildings and warehouses).

If units are installed in an environment where filters need to be replaced more frequently, it is recommended to use two-stage particle filtration for hygiene reasons.

- Fire and smoke control option
  - The unit can be equipped with an optional return air smoke detector. The smoke detector is wired to stop the unit and send a message to a remote alarm system if a fault condition is detected. If the control expansion module is added, the control will support smoke control modes including evacuation, smoke purge, and pressurization.

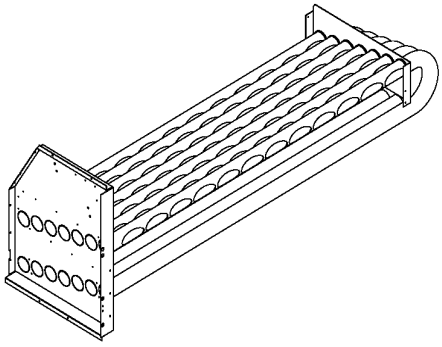
Gas heating solutions (48UA/UH only)

- Gas heating
  - The gas heating system is designed to be used as an environmentally friendly alternative to the hot-water coil or electric heating options. The 48UA/UH rooftop unit is available with three gas heating modules with multi-step heating for natural gas and liquid propane gas.

Gas heating solution

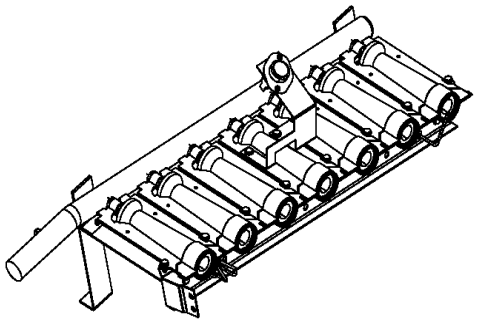
- Tubular, dimpled gas heat exchanger with Alumagard™
  - This heat exchanger optimizes the heat transfer for maximum efficiency. The tubular design permits hot gases to make multiple passes across the path of the supply air. The dimpled design creates a turbulent gas flow to maximize heating efficiency. The extra-thick Alumagard™ heat exchanger coating provides corrosion resistance and ensures long heat exchanger life.

Tubular dimpled gas heat exchanger



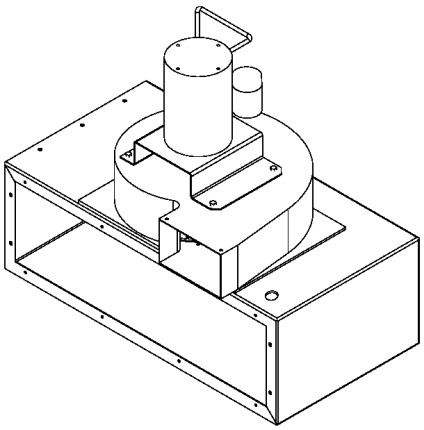
- Modular heater compartment
  - The heater assembly consists of a series of injectors. The gas-air mixture, prepared in the heaters, enables excellent combustion within the heat exchanger tubes. The direct-spark ignition system saves operating expense compared to pilot ignition systems. No crossover tube is required, therefore no sooting or pilot fouling problems can occur.

Modular heater compartment



- Induced draft combustion system
  - This system eliminates the unsightly appearance of flue stacks and minimizes the effects of wind on heating operations. The inducer fan draws hot combustion gas through the heat exchanger at the optimum rate for the most effective heat transfer. For improved efficiency the heat exchanger operates under negative pressure, to prevent flue gas leakage into the indoor supply air.

Induced draft combustion system



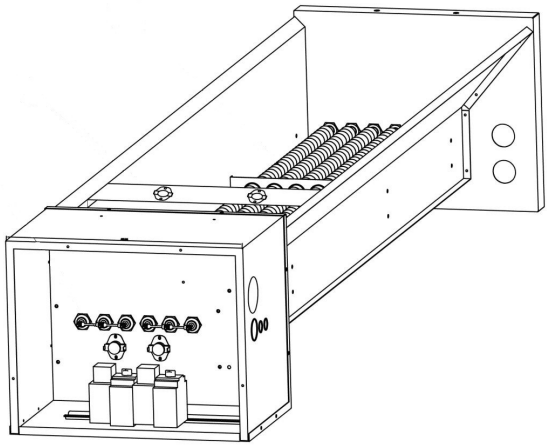
- Staged gas unit heating
  - Tempering of supply air is desirable when rooftop units are operating at low outdoor temperatures. In these conditions the tempering function adds incremental heat capacity steps to raise the mixed air temperature to levels suitable for direct admission into the occupied space or to levels consistent with the reheat capabilities of the space terminals.
  - The gas heating system uses multiple heating sections. Each section is equipped with a two-stage gas valve. The gas valves are sequenced by a factory-installed integrated gas controller (IGC) with CE mark, as required to maintain the user-specified room temperature. Up to three heating control stages are available, based on quantity and heating capacity of the individual heat exchanger sections provided in the base unit.
- Safety built-in

  The heating safety controls will shut down the unit if they detect a problem. Six safety levels are operating:
  - Temperature limit switch for indoor fan shutdown failure.
  - High-temperature limit switch for reduced air flow.
  - Air pressure switch to ensure sufficient combustion gas flow.
  - Rollout switch to avoid flame rollout.
  - Flame detection by ionization to quickly sense the heater flame. The controls are designed to shut down the unit during any flame outage or circuit failure. The flame sensor reacts quickly to these events. If a shutdown occurs, an error code is issued at the IGC board.
  - Gas pressure switch to avoid operation at low supply pressure (<10 mbar).
- Easy maintenance
  - If the gas valve is closed for safety reasons, diagnostic LEDs will indicate the failure mode (please refer to the IOM).

Electric heater option (50UA/UH only)

- The electric heater is located after the main thermodynamic coil and guarantees constant and comfortable supply air temperature in winter. This option also enhances comfort when the heat pump is operating in the defrost cycle.
- Each 50UA/UH rooftop unit can be fitted with a choice of three electric heater options offering two control stages.
- Shielded electric resistance heaters are fully factory-wired and tested. Each stage is protected against overloads by two thermal protectors. The low-limit protector with automatic reset is located above the resistance heaters while the high-limit protector with manual reset is located in the heater control box. This high-temperature limit control offers overload protection and is set to 90°C. It is located less than 150 mm after electric heaters.

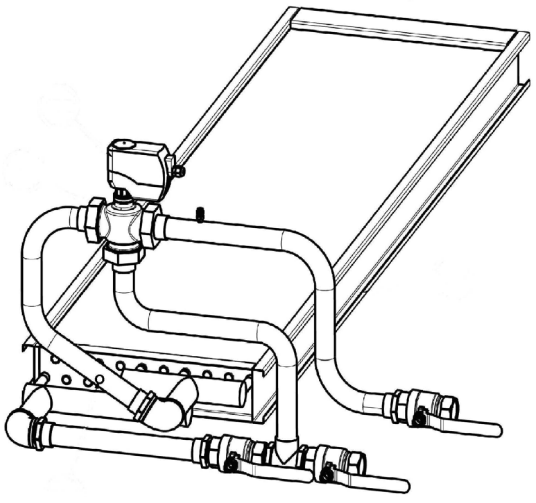
Electric heater



Hot-water coil with three-way valve option (50UA/UH only)

- The hot-water coil is located after the main thermodynamic coil and guarantees constant and comfortable supply air temperature in winter. It allows fully modulated heating capacity, using a three-way valve, protected by a frost protection sensor. This option allows high-capacity heating.
- The hot-water coils offer a fully modulating proportional three-way valve as standard, with supply air temperature-based control. They also include two isolating shut-off valves and are factory-fitted, wired and fully factory-tested. Frost protection is provided by a low-temperature sensor and the coils are equipped with a purge system.

Hot-water coil

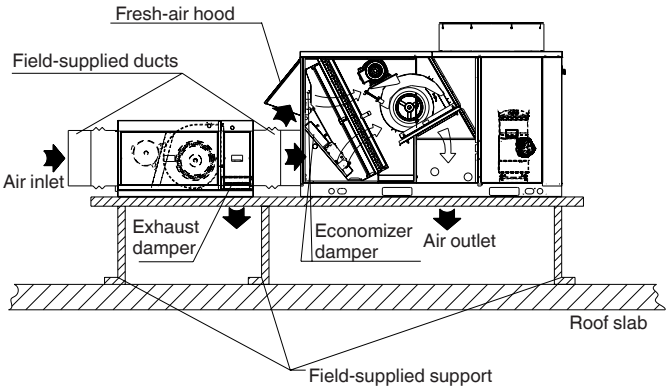


Return air fan option

- Allows additional return air pressure for the return air ductwork, minimizing overpressure in the building when fresh air is introduced. Also permits manual or automatic system air pressure balancing in the building.
- This option assists the supply fan to overcome the return-side pressure drop while running in series with the supply fan. It is fitted with a damper to exhaust excessive air due to fresh air usage. The exhaust air damper can be manually or automatically adjusted, based on the fresh air options. The return air fan is shipped loose, but separately functionally tested before leaving the factory.
- The associated supporting frames, ductwork, cables for mechanical and electrical connection needs to be field-supplied. The drive is factory-set in accordance with the return air fan performance tables. When indoor pressure and air flow requirements differ from the nominal ratings, the motor pulley can be adjusted for different available static pressure values.

Return air fan

Return air fan



Energy recovery module (ERM)

There are two types of ERMs per each rooftop size; Small & Large ERM. Small ERM permits fresh air up to 50% and Large ERM up to 100%. The ERM is an individual dual-flow unit, equipped with a high-efficiency Eurovent-certified air-to-air heat recovery wheel with 63% to 88% efficiency, an integrated variable-air-volume plug fan and a control system for plug-and-play installation. The modules are specially designed to ensure economical indoor air extraction and to take in fresh air to meet current and future requirements for high-energy-efficiency buildings.

- The unit cabinet is made of galvanized and powder-painted sheet metal, specially suitable for outdoor use, for double corrosion protection (light-grey colour RAL 7035).
- The ERM is fitted with G4 filters on the fresh-air side as standard to protect the heat recovery wheel against dust.
- Power and control wiring between the ERM and the rooftop unit is supplied by the factory.
- Small ERMs are directly connected to the rooftop unit without any duct, and Large ERMs are connected to the rooftop unit with the duct kit which is supplied by the factory(installed by the customer)

■ Energy savings
- The heat exchanger reclaims up to 88% of the heat from the extract air and transfers it to the supply air, considerably reducing the thermal load on the heating and air conditioning equipment.
- High-efficiency plug fans for exhaust air. The direct-drive fans do not suffer any belt and pulley drive losses. They are more energy-efficient and require less maintenance. The exhaust air fan speed is independently controlled by frequency inverters directly connected to the Pro-Dialog+ controller inside the rooftop unit.
- When outside conditions permit, the control system continuously adjusts the fan speed to minimize power consumption.

High-efficiency heat recovery wheel

■ Energy recovery benefits

Quick and easy plug-and-play installation:
- The ERM option is delivered as a single piece for fast installation, separate from the rooftop units. An insulated sheet metal kit and a wiring kit are provided for easy connection between rooftop and ERM unit.
- To facilitate installation, the ERM is factory-fitted with a terminal block for the power and control wiring for easy connection to the rooftop units (wiring to be supplied by the installer). The control box and the sensors are factory-installed and tested for fast and trouble-free start-up.

Control and safety devices
- An integrated motion detector ensures that the ERM control generates an alarm signal if the heat recovery wheel stops.
- The plug fan pressure differential sensor transmits an alarm signal if the fan stops.
- A barometric exhaust air damper prevents air and water infiltration when the exhaust fan is switched off.

■ VAV supply fan option & Energy Recovery Module:
- When the ERM status is Heat or Cool recovery modes, in order to maintain minimum fresh air requirement with variable air volume, mixed air temperature method is used for minimum fresh air quantity setting (%), using calibration task method.
- During 100% free cooling ERM mode, in order to balance with increased pressure drop of rotary wheel (reducing supply flow), VAV option mode will be automatically switched to Constant Volume mode during free cooling allowing pressure drop compensation.

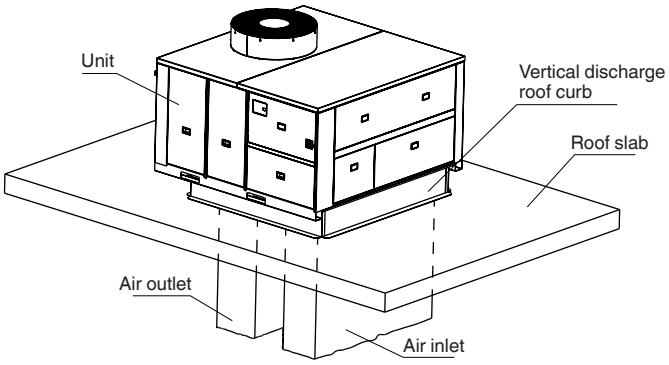
Control and safety device

- Installation, serviceability and fast commissioning
  - The 48/50 UA/UH unit design facilitates fast field-conversion. Single-point electrical connections are standard on all units. Service access to the electrical components can be through the roof curb or unit side.
  - Systematic factory run test before shipment
  - Quick-test function for step-by-step verification of instruments, electrical components and motors.
  - All units are equipped with the Pro-Dialog+ control system as standard, with information displayed clearly in English, French, German, Italian and Spanish. Pro-Dialog+ navigation uses intuitive tree-structure menus, similar to Internet browsers. They are user-friendly and permit quick access to the principal operating parameters: number of compressors operating, suction/discharge pressure, compressor operating hours, setpoint, air temperature.
  - The controls are compatible with either a room sensor or a conventional thermostat with no need to install an accessory interface. No special tools are required to run the unit through its operational steps.
  - The unit can be run-tested before an installation is complete to ensure smooth start-up. Hinged access panels offer easy maintenance access to all standard serviceable components. No fasteners need to be removed; this reduces service time and helps prevent roof leaks caused by discarded screws. Colour-coded wiring permits easy tracing and diagnostics.

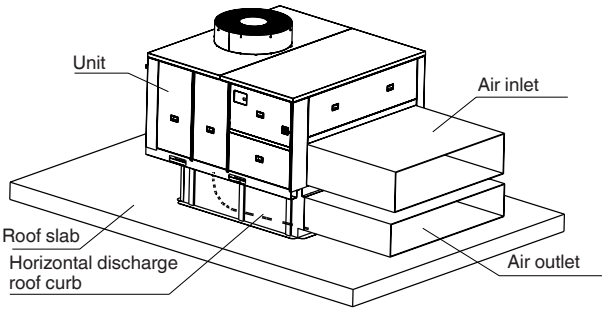
Roof curbs

Fixed chassis roof curbs are available for both vertical and horizontal air discharge. The unit is easily converted to front return discharge on-site, by simply changing the panels. The 48/50 UA/UH units leave the factory with the air discharge and return in the lower unit section. The front discharge roof curb accessory changes the discharge and return to the front section.

Fixed vertical roof curb

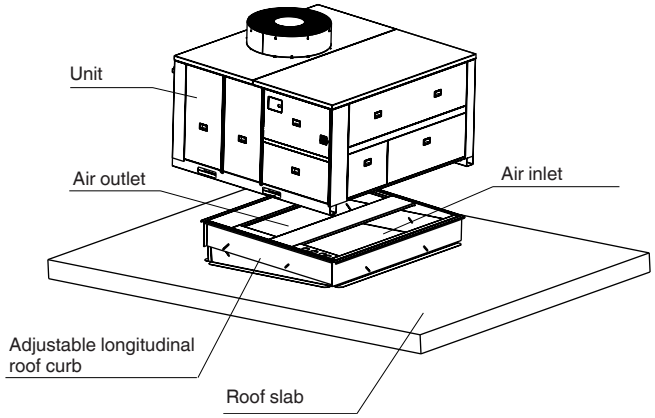


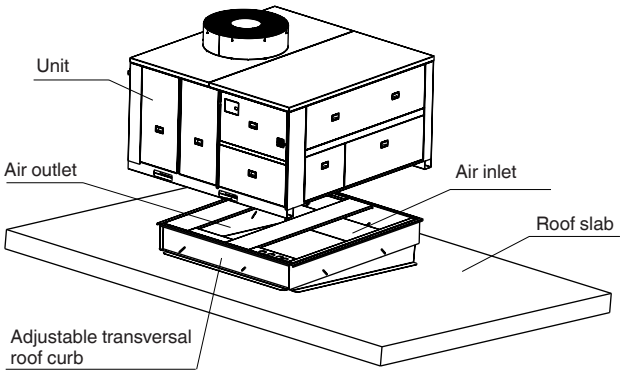
Fixed horizontal roof curb



Tilting chassis with longitudinal or transverse slope control up to 5°.

Tilting vertical roof curb





Options

Options	N°	Description	Advantages	Use and sizes							
				Units	045	055	065	075	085	100	120
Electric Heaters											
Electric Heater 9+9 kW	83	Electric heater coil is an auxiliary heating solution on cooling only and reversible units for low mixed air temperature (high fresh air rate in winter).	Electric heater located after the main thermodynamic coil and guarantees constant and comfortable supply air temperature in winter. This option is improving comfort while heat pump is operating defrost cycle.	50 UA-UH	X	X					
Electric Heater 18+9 kW	84				X	X	X	X			
Electric Heater 18+18 kW	85				X	X	X	X	X	X	X
Electric Heater 27+27 kW	86						X	X	X	X	X
Electric Heater 36+36 kW	87								X	X	X
Hot Water coils											
Hot water coil 60 kW with 3 way valve	37	Hot water coil is an auxiliary heating solution on cooling only and reversible units for low mixed air temperature (high fresh air rate in winter).	Hot water coil located after the main thermodynamic coil and guarantees constant and comfortable supply air temperature in winter. It allows full modulating heating capacity through the use of 3 way valve, secured by frost protection sensor.This option allows high capacity heating solution.	50 UA-UH	X	X	X	X			
Hot water coil 100 kW with 3 way valve	38						X	X			
Hot water coil 130 kW with 3 way valve	39								X	X	X
Gas modules											
Natural Gas 46.8 kW – 2 stages	90	Gas burner is heating solution on cooling only and reversible units for low mixed air temperature (high fresh air rate in winter). Multi-stage allow heating capacities management. Available with Natural gas or Liquified Propane gas.	Gas burners are located after the main thermodynamic coil and guarantees constant and comfortable supply air temperature in winter. This option allows high capacity heating solution.	48 UA-UH	X	X					
Natural Gas 61.8 kW – 2 stages	91				X	X	X	X			
Natural Gas 72.9 kW – 2 stages	92						X	X			
Natural Gas 93.6 kW – 3 stages	93								X	X	
Natural Gas 125 kW – 3 stages	94								X	X	X
Natural Gas 147.4 kW – 3 stages	95										X
Propane Gas 53.2 kW	100				X	X					
Propane Gas 63.9 kW	101				X	X	X	X			
Propane Gas 74.5 kW	102						X	X			
Propane Gas 105.2 kW – 2 stages	103								X	X	
Propane Gas 127.8 kW – 2 stages	104								X	X	X
Propane Gas 150.7 kW – 2 stages	105										X
Coil protection options											
Outdoor Pre-Coated / Indoor Standard	154	Coils fins made of UV resistant polyurethane protection pre-treated aluminium.	Improved corrosion resistance. extending the coil life time.	ALL	X	X	X	X	X	X	X
Outdoor Pre-Coated / Indoor Pre-Coated	153				X	X	X	X	X	X	X
Fresh Air & Economizer Outdoor air options											
Fresh air sliding panel	118	Manual adjustment setting of permanent amount of fresh air up to 25%. Fresh air hood also supplied.	Fresh air supply in the building with constant adjustable rate.	ALL	X	X	X	X	X	X	X
Manual outdoor air damper	40	Manual adjustable setting of permanent amount of fresh air up to 40%. Fresh air hood also supplied.	Fresh air supply in the building with constant adjustable rate.		X	X	X	X	X	X	X
Economizer, thermostatic control	35	Direct link driven low leakage blades to control fresh air percentage up to 100 % vs return air. Indoor & Outdoor air temperature sensors are supplied. Fresh air hood also supplied.	Fresh air supply in the building with variable rate, depending on outside air temperature temperature. Allow free cooling operation for energy saving based on temperature differential control.		X	X	X	X	X	X	X
Economizer, enthalpy control	36	Direct link driven low leakage blades to control fresh air percentage up to 100 % vs return air. Indoor & Outdoor Air enthalpy sensors are supplied. Fresh air hood also supplied	Fresh air supply in the building with variable rate, depending on outside air entlalpy (temperature & humidity level). Allow intelligent free cooling operation for energy saving based on enthalpy differential control.		X	X	X	X	X	X	X
Economizer. thermostatic + CO_2 sensor control	156	Direct link driven low leakage blades to control fresh air up to 100 % Vs return air. Indoor & Outdoor air temperature sensor supplied. Indoor Air Quality CO_2 sensor supplied. Fresh air hood also supplied.	Fresh air supply in the building with variable rate, depending on outside air temperature temperature. Allow free cooling operation for energy saving based on temperature differential control. Manage CO_2 concentration levels in the building.		X	X	X	X	X	X	X
Economizer. enthalpy + CO_2 sensor control	157	Direct link driven low leakage blades to control fresh air percentage Vs return air. Indoor & Outdoor Air Temperature & Humidity sensors supplied. IAQ CO_2 sensor supplied. Fresh air hood also supplied.	Fresh air supply in the building with variable rate, depending on outside air temperature temperature & humidity level. Allow intelligent free cooling operation for energy saving based on enthalpy differential control.Manage CO_2 concentration levels in the building.		X	X	X	X	X	X	X
Supply fan options											
High static pressure 1 (Constant Air Volume)	150	Fan and motor assembly kits with constant air volume On/Off, without softstarter	Various fan motor kits allow large choice of airflow rates & External static pressures running points.	ALL	X	X	X	X	X	X	X
High static pressure 2 (Constant Air Volume)	151				X	X	X	X	X	X	X
High static pressure 3 (Constant Air Volume)	152				X	X	X	X	X	X	X
Standard with soft starter (Constant Air Volume)	165	Fan and motor assembly kits with constant air volume On/Off, with softstarter	Electronic fan motor starter offering reduced start-up current		X	X	X	X	X	X	X

Options (cont'd)

Options	N°	Description	Advantages	Use and sizes							
				Units	045	055	065	075	085	100	120
Supply fan options (cont'd)											
High static pressure 1 with soft starter (Constant Air Volume)	166	Fan and motor assembly kits with constant air volume On/Off, with softstarter	Electronic fan motor starter offering reduced start-up current	ALL	X	X	X	X	X	X	X
High static pressure 2 with soft starter (Constant Air Volume)	167				X	X	X	X	X	X	X
High static pressure 3 with soft starter (Constant Air Volume)	168				X	X	X	X	X	X	X
Variable Air Volume with VFD drive (VAV)	169	Fan and motor assembly with Variable Frequency Drive offering Variable Air Volume management.	VFD fan motor offers energy saving in part load operations with variable airflow rates, External Static Pressures adjustment and multiple operating modes.		X	X	X	X	X	X	X
Filter options											
Standard G4 filter (not classified)		G4 filters synthetic media 50mm metallic frame with 90% gravimetric efficiency and high filtration area.	High efficiency filtration for return air and fresh air with low pressure drop. No fire classification.	ALL	X	X	X	X	X	X	X
G4 filter M1 fire class	145	G4 filters synthetic media 50mm metallic frame with 90% gravimetric efficiency and high filtration area.	High efficiency filtration for return air and fresh air with low pressure drop with fire classification M1.		X	X	X	X	X	X	X
F7 filter M1 fire class	147	F7 filters synthetic media 50mm metallic frame with 90% opacimetric efficiency and high filtration area.	High efficiency filtration for return air and fresh air with low pressure drop with fire classification M1.		X	X	X	X	X	X	X
G4 + F7 filter M1 fire class	158	Two-stage particle filtration G4 & F7	Two stage high efficiency filtration for return air and fresh air with medium pressure drop with fire classification M1. Replacable media G4.		X	X	X	X	X	X	X
M6 + F7 filter M1 fire class	159	Two-stage particle filtration M6 & F7	Two stage very high efficiency filtration for return air and fresh air with medium pressure drop with fire classification M1. Replacable media M6.		X	X	X	X	X	X	X
Drain pan options											
Standard		Galvanized steel drain pan with connection to a drain pipe.	Standard easy draining of condensation water.	ALL	X	X	X	X	X	X	X
Stainless steel pan	72	Stainlees steel drain pan with connection to a drain pipe.	Easy cleaning drain pan for hygienic purpose & easy draining of condensation water.		X	X	X	X	X	X	X
Energy Recovery options											
Energy recovery module-Large (supplied separately)	160	The large ERM that permits fresh air upto 100%, is an individual dual-flow unit with a high-efficiency Eurovent-certified air-to-air condensation heat recovery wheel with 63% to 88% efficiency, an integrated variable exhaust air volume plug fan and a control system for a plug-and-play installation and connection to the rooftop control box.	Energy-saving solution when the unit operates with fresh air rate in extreme outdoor temperatures (winter or summer) allowing energy recovery from exhaust air and transfer to fresh-air side. Reduced installed unit cooling or heating capacity. Allows 100% free cooling.	ALL	X	X	X	X	X	X	X
Energy recovery module-Small (supplied separately)	173	The small ERM that permits fresh air upto 50%, is an individual dual-flow unit with a high-efficiency Eurovent-certified air-to-air condensation heat recovery wheel with 63% to 88% efficiency, an integrated variable exhaust air volume plug fan and a control system for a plug-and-play installation and connection to the rooftop control box.	Energy-saving solution when the unit operates with fresh air rate in extreme outdoor temperatures (winter or summer) allowing energy recovery from exhaust air and transfer to fresh-air side. Reduced installed unit cooling or heating capacity. Allows 50% free cooling.	ALL	X	X	X	X	X	X	X
Return/exhaust air options											
Barometric exhaust	71	Aluminium blades closing by gravity protecting exhaust from rain.	Allow pressure relief when fresh air is introduced in a building with good airtightess.	ALL	X	X	X	X	X	X	X
Power exhaust 1.5 HP, air flow 8000 m³/h. 80 Pa	66	Exhaust centrifugal fan to provide medium exhaust air pressure. runing while fresh air inlet higher than 50% open. Fixed air flow. Including Barometric exhaust option 71.	Minimized overpressure in the building when fresh air is introduced and allows additional exhaust air pressure for return ductwork medium pressure drop.	ALL	X	X	X	X			
Power exhaust 4.0 HP, airflow 10000 m³/h. 150 Pa	67								X	X	X
Return fan with manual exhaust damper 4.0 HP, 10000 m³/h (shipped loose)	68	Return centrifugal fan to provide high return air pressure. adjustable air flow rate with variable pulley.	Allows additional return air pressure for return ductwork. Minimized overpressure in the building when fresh air is introduced.		X	X	X	X			
Return fan with manual exhaust damper 5.5 HP, 13000 m³/h (shipped loose)	69	Adjustable exhaust damper with low leakage blades to adjust exhaust air flow rate. Available only with Options 40 or 118.	Allow manual system air pressure balacing in the building.		X	X	X	X			
Return fan with manual exhaust damper 7.5 HP, 16000 m³/h (shipped loose)	70								X	X	X
Return fan with motorized exhaust damper 4.0 HP, 10000 m³/h (shipped loose)	142	Exhaust centrifugal fan to provide high exhaust air pressure, runing while fresh air inlet higher than 50% open.	Allows additional return air pressure for return ductwork. Minimized overpressure in the building when fresh air is introduced.		X	X	X	X			
Return fan with motorized exhaust damper 5.5 HP, 13000 m³/h (shipped loose)	143	Motorized exhaust damper with low leakage blades for automatic pressure balancing.	Allow automatic system air pressure balacing in the building.		X	X	X	X			
Return fan with motorized exhaust damper 7.5 HP, 16000 m³/h (shipped loose)	144								X	X	X
Temperature sensor options											
Standard. space sensor T55		T55 sensor will monitor room temperature.	Supply air temperature control based on Room temperature.	ALL	X	X	X	X	X	X	X
Space sensor with override & set point adjustment T56	19	T56 sensor will monitor room temperature and provide a temperature offset of 3°C maximum.	Room temperature control with override and set point adjustment.		X	X	X	X	X	X	X
Space sensor with display, override. On/Off & set point adjustment. T59	24	Sensor will monitor room temperature with occupied period extension time (up to 4 hours). set point adjustment and On-Off functions.	Room temperature control with override, set point adjustment and display.		X	X	X	X	X	X	X
Two space sensor T55 + T56	57	Twin sensors T55 & T56 supplied			X	X	X	X	X	X	X
Two space sensor T55 + T59	59	Twin sensors T55 & T59 supplied			X	X	X	X	X	X	X
Duct sensor	18	Duct sensor will monitor air return temperature.	Allows temperature control directly on air return air duct.		X	X	X	X	X	X	X

Options (cont'd)

Options	N°	Description	Advantages	Use and sizes							
				Units	045	055	065	075	085	100	120
Communication options											
CCN/Jbus Gateway	26	Two-directional communications board. complies with Jbus communication protocol.	Easy connection by communication bus to a Building Management System.	ALL	X	X	X	X	X	X	X
CCN/Lon Gateway	27	Two-directional communications board. complies with LonTalk communication protocol.	Easy connection by communication bus to a Building Management System.		X	X	X	X	X	X	X
CCN/BACnet Gateway	161	Two-directional communications board. complies with BACnet communication protocol.	Easy connection by communication bus to a Building Management System.		X	X	X	X	X	X	X
Airflow safeties											
Dirty filter detection (pressure switch)	96	Alarm reported by needle pressure gauge to read the filters pressure drop.	Easy maintenance of filters by checking the filter pollution level.	ALL	X	X	X	X	X	X	X
Air flow detection (pressure switch)	99	Alarm reported by needle pressure gauge to read the pressure.	checking the fan is "On".		X	X	X	X	X	X	X
Dirty filter alarm + airflow detection	162	Alarm reported by needle pressure gauge to read the pressure.	checking the filter pollution level & fan is "On".		X	X	X	X	X	X	X
Smoke detection											
Smoke detector	97	Generate general unit default of the unit when smoke is detected. economizer return air damper is closed. supply fan is stopped, electric heaters are switched off. This option provides post ventilation of 30 seconds.	Building fire security based on smoke detection.	ALL	X	X	X	X	X	X	X
Smoke detector + DAD (French ERP regulation)	110	Generate general unit default of the unit when smoke is detected. economizer return air damper is closed, supply fan is stopped. electric heaters/hot water/gas burners are switched off. DAD additional functions. Only available with Economizer options.	Building fire security based on smoke detection DAD security device.		X	X	X	X	X	X	X
Fire thermostat	121	Generate general default of the unit when thermostats detect return air temperature above adjustable temperature. Manual reset thermostat placed in return air duct.	Building fire security based on temperature rise detection.		X	X	X	X	X	X	X
Duct connection											
Fixation frame	163	Metallic rigid frame on air return & supply sides.	Easy air duct installation.	ALL	X	X	X	X	X	X	X
Packaging											
Standard (plastic wrap)				ALL	X	X	X	X	X	X	X
Pallet + coil protection + plastic wrap	128	Packaging with pallet + coil protection + plastic wrap.	Unit protection for transport		X	X	X	X	X	X	X
70% open crate + coil prot. + plastic wrap	127	Packaging with 70% open crate + coil protection + plastic wrap.	Unit protection for long distance transport		X	X	X	X	X	X	X

Accessories

Accessory	Part No.	Description	Advantage	Use	45	55	65	75	85	100	120
Roof curb											
Vertical Supply Roof curb	57070020010	Galvanized steel 2.5mm thick frame for vertical supply & vertical return air.	Provide an easy and cost effective weatherproof sealed rooftop installation and easy connection to the air duct.	ALL	X	X	X	X			
	57070021501								X	X	X
Vertical Supply Adjustable longitudinal roof curb	57070025510	"Galvanized steel 2.5mm thick frame for vertical supply & vertical return air. Adjustable longitudinal slope up to 5%."	"Provide an easy and cost effective weatherproof sealed rooftop installation and easy connection to the air duct. Compatible with all roof profiles."		X	X	X	X			
	57070027101								X	X	X
Vertical Supply Adjustable transversal roof curb	57070026310	"Galvanized steel 2mm thick frame for vertical supply & vertical return air. Adjustable transversal slope up to 5%."			X	X	X	X			
	57070027901								X	X	X
Horizontal Supply roof curb	57070022710	Galvanized steel 2mm thick frame for horizontal supply & horizontal return air.	Provide an easy and cost effective weatherproof sealed rooftop installation and easy connection to the horizontal supply air duct.		X	X	X	X			
	57070025210								X	X	X
Transition roof curb (French ERP)	57070034310	Thin galvanized steel frame for gas burner RTU in France only. Standard or adjustable roof curb is also required	Meet french regulation requirements with bas burners.		X	X	X	X			
	57070035410								X	X	X
Remote control											
Remote HMI Pro-Dialog+	57260042910	Remote user interface installation.	Remote control of several units up to 300 m.	ALL							
Room thermostats											
Programmable Room Thermostat	57260040001	Wall-mounted, low-voltage thermostat maintains room temperature by controlling the rooftop operation	User friendly remote control of rooftop units with schedule programming	ALL	X	X	X	X	X	X	X
Non-Programmable Room Thermostat	57260040002	Wall-mounted, low-voltage thermostat maintains room temperature by controlling the rooftop operation	User friendly remote control of rooftop units	ALL	X	X	X	X	X	X	X
Compressor insulation											
Compressor Blanket	57340010010	Compressor insulation	Avoid insufficient oil temperature at compressor sump due to the cold weather	ALL	X						
	57340010011					X	X	X			
	57340010012								X		
	57340010013									X	
	57340010014										X

Physical data

48/50UA		045	055	065	075	085	100	120
Eurovent performances at EN14511-2011								
Nominal cooling capacity*	kW	44.1	50.9	61.1	71.5	88.9	102.5	114.5
Nominal power input	kW	14.4	17.9	21.2	27.0	28.7	34.1	40.3
EER*	kW/kW	3.06	2.85	2.88	2.65	3.10	3.01	2.84
Eurovent energy class cooling		A	B	B	C	A	A	B
Eurovent performances at EN14511-2013								
Nominal cooling capacity*	kW	43.4	50.4	60.8	71.3	88.2	101.1	111.8
Nominal power input	kW	15.3	19.8	22.8	29.1	30.6	36.9	41.8
EER*	kW/kW	2.84	2.54	2.67	2.45	2.88	2.74	2.68
Eurovent energy class cooling		B	D	C	D	B	C	C

48/50UH		045	055	065	075	085	100	120
Eurovent performances at EN14511-2011								
Cooling								
Nominal cooling capacity*	kW	43.5	50.1	59.1	69.1	84.5	96.7	108.8
Nominal power input	kW	14.4	17.7	20.7	26.5	27.5	33.8	38.7
EER*	kW/kW	3.03	2.83	2.86	2.61	3.07	2.86	2.81
Eurovent energy class. cooling		A	B	B	C	A	B	B
Heating								
Nominal heating capacity**	kW	43.5	54.4	62.0	74.5	85.1	98.7	120.7
Nominal power input	kW	13.2	16.0	20.1	24.8	24.4	30.7	37.5
COP**	kW/kW	3.30	3.41	3.09	3.01	3.49	3.21	3.22
Eurovent energy class heating		B	A	C	C	A	B	B
Eurovent performances at EN14511-2013								
Cooling								
Nominal cooling capacity*	kW	43.2	49.2	58.2	67.4	82.9	95.3	105.8
Nominal power input	kW	15.3	19.5	22.3	28.0	29.5	36.0	40.5
EER*	kW/kW	2.83	2.53	2.61	2.41	2.81	2.64	2.61
Eurovent energy class. cooling		B	D	C	D	B	C	C
Heating								
Nominal heating capacity**	kW	45.1	57.4	64.5	77.5	89.3	102.1	125.9
Nominal power input	kW	14.0	17.3	21.4	27.2	26.8	33.6	39.8
COP**	kW/kW	3.21	3.33	3.01	2.85	3.33	3.04	3.16
Eurovent energy class heating		B	B	C	D	B	C	C

50UA-UH								
Electric Heaters								
Type		OPT 84	OPT 85	OPT 85	OPT 85	OPT 86	OPT 86	OPT 86
Heating capacity	kW	27	36	36	36	54	54	54
Capacity steps		18/9	18/18	18/18	18/18	27/54	27/54	27 - 54
Rated Amps		39	52	52	52	78	78	78

48UA-UH								
Gas Burners								
Natural gas heating type		OPT 91	OPT 91	OPT 92	OPT 92	OPT 94	OPT 94	OPT 95
Number of cells/injector		6	6	7	7	12	12	14
Net heat input (min/max)	kW	49/70	49/70	57/81	57/81	49/139	49/139	57/162
Heat output (min/max)	kW	42/62	42/62	50/73	50/73	43/125	43/125	51/147
Steady state efficiency	%	90	90	90	90	90	90	90%
Natural gas (G20) rate***	m^3/h	5.14/7.34	5.14/7.35	6.00/8.57	6.00/8.57	5.14/14.7	5.14/14.7	6.00 / 17.14
Natural gas (G25) rate***	m^3/h	5.98/8.54	5.98/8.55	6.98/9.97	6.98/9.97	5.98/17.08	5.98/17.08	6.97 / 19.94
Natural gas (G25.1) rate***	m^3/h	5.97/8.53	5.97/8.54	5.97/9.96	5.97/9.96	5.97/17.07	5.97/17.07	6.96 / 19.93
Number of stages		2	2	2	2	3	3	3
Propane gas heating type		OPT 101	OPT 101	OPT 102	OPT 102	OPT 104	OPT 104	OPT 105
Number of cells/injector		6	6	7	7	12	12	12
Net heat input (min/max)	kW	--/71	--/71	--/83	--/83	71/142	71/142	83/166
Heat output (min/max)	kW	--/64	--/64	--/75	--/75	64/128	64/128	75/151
Steady state efficiency	%	90	90	90	90	90	90	90
Propane gas (G31) rate***	kg/h	--/5.51	--/5.51	--/6.43	--/6.43	5.51/11.03	5.51/11.03	6.43/12.86
Number of stages		1	1	1	1	2	2	2
Weight**	kg	73	73	80	80	150	150	165
Power input 400 V - 3 ph - 50 Hz**	kW	0.22	0.22	0.22	0.22	0.44	0.44	0.44
Gas connection pipe size	in	Rp 3/4 F	Rp 3/4 F	Rp 3/4 F	Rp 3/4 F	Rp 3/4 F	Rp 3/4 F	Rp 3/4 F

48/50UA-UH								
Control		Pro-Dialog+						
Refrigeration System								
Type		Scroll						
Refrigerant		R-410a						
Nb of circuits - Nb of compressors		1/1	1/2	2/2	2/2	2/2	2/3	2 / 4
50/48UH charge circuit A - circuit B	kg	14/-	14/-	9/10	8.7/9.7	12/13	14.7/13	15 / 15.5
50/48UA charge circuit A - circuit B	kg	11 / -	11 / -	8 / 9	8 / 9	11 / 12	15.5 / 12	15.5 / 17
Oil circuit A - circuit B (POE 16052)	kg	3.6/-	6.6/-	3.3/3.3	3.3/3.3	3.3/3.6	6.6/3.6	6.6 / 6.6
Indoor Coil								
Material		Cu/Al						
Coil type		3/8" RTPF						
Nb of rows - FPI		3/14	3/14	4/14	4/14	4/15	4/15	4/ 16
Condensate drain connection size	mm	34	34	34	34	34	34	34
Outdoor Coil								
Material		Cu/Al						
Coil type		3/8" RTPF						
Nb of rows - FPI		3/15	3/15	3/15	3/15	4/15	4/15	4/ 15

* Nominal Eurovent conditions: outdoor air dry bulb temperature of 35°C. indoor air wet bulb emperature of 19°C.
** Nominal Eurovent conditions: outdoor air wet bulb temperature of 6°C. indoor air dry bulb temperature of 20°C.
*** Natural gas G20 net calorific value 34.02 MJ/m^3 at 15°C. 1013.25 mbar.
Natural gas G25 net calorific value 29.25 MJ/m^3 at 15°C. 1013.25 mbar.
Natural gas G25.1 net calorific value 29.3 MJ/m^3 at 15°C. 1013.25 mbar.
Propane gas G31 net calorific value 46.34 MJ/kg at 15°C. 1013.25 mbar.
Propane gas G31 net calorific value 88.0 MJ/m^3 at 15°C. 1013.25 mbar.
**** Weight and power input values are valid for the heating modules.

Physical data

48/50UA-UH		045	055	065	075	085	100	120
Outdoor fan / motor								
Type		Axial						
Motor drive type		Direct						
Quantity		1	2	2	2	2	2	2
Motor HP		1.4	0.53	1.4	1.4	1.4	1.4	1.4
RPM high/low		975/487	720/360	975/487	970/485	970/485	970/485	970 / 485
Nominal air flow per fan	m^3/h	19400	12050	18200	18550	18500	18500/19800	19800
	l/s	5417	3333	5069	5069	5139	5139/5500	5500
Fan diameter	mm	775	775	775	775	775	775	775
Sound levels								
Sound power level 10^{-12} W†	dB(A)	86.5	84.4	90.6	90.6	90.7	91.0	91.3
Sound pressure level at 10 m††	dB(A)	55	53	59	59	59	59	59
Indoor fan and motor								
Standard Static								
Motor quantity		1	1	1	1	1	1	1
Drive type		Variable pullley - belt						
Fan quantity		2	2	2	2	2	2	2
Type		Centrifugal						
Fan diameter	mm	305	305	305	305	457	457	457
Nominal air flow	m^3/h	9000	12500	12500	14200	20000	20000	20000
RPM range. min - max		792 - 993	985 - 1219	1046 - 1312	1046 - 1312	740 - 902	740 - 902	740 - 902
Motor frame size HP		2.2	4	5.5	5.5	7.5	7.5	7.5
Static pressure available*	Pa	150	140	225	120	225	225	225
Maximum static pressure available*	Pa	200	230	295	225	330	330	330
High Static 1								
Motor quantity		1	1	1	1	1	1	1
Drive type		Variable pullley - belt						
Fan quantity		2	2	2	2	2	2	2
Type		Centrifugal						
Fan diameter	mm	305	381	381	381	457	457	457
Nominal air flow	m^3/h	9000	12500	12500	14200	20000	20000	20000
RPM range. min - max		983 - 1232	955 - 1201	955 - 1201	990 - 1207	825 - 1002	825 - 1002	825 - 1002
Motor frame size HP		3	5.5	5.5	5.5	7.5	7.5	7.5
Static pressure available*	Pa	275	350	380	300	350	350	350
Maximum static pressure available*	Pa	350	450	460	420	455	455	455
High Static 2								
Motor quantity		1	1	1	1	2	2	2
Drive type		Variable pullley - belt						
Fan quantity		2	2	2	2	2	2	2
Type		Centrifugal						
Fan diameter	mm	305	381	381	381	457	457	457
Nominal air flow	m^3/h	9000	12500	12500	14200	20000	20000	20000
RPM range. min - max		1147/1305	1088/1238	1088/1238	1088/1238	830/971	830/971	830 - 971
Motor frame size HP		4	5.5	5.5	7.5	4	4	4
Static pressure available*	Pa	350	390	420	340	360	360	360
Maximum static pressure available*	Pa	475	540	540	460	535	535	535
High Static 3								
Motor quantity		1	1	1	1	2	2	2
Drive type		Variable pullley - belt						
Fan quantity		2	2	2	2	2	2	2
Type		Centrifugal						
Fan diameter	mm	305	381	381	381	457	457	457
Nominal air flow	m^3/h	9000	12500	12500	14200	20000	20000	20000
RPM range. min - max		1240/1450	1228/1377	1228/1377	1155/1314	923/1050	923/1050	923 - 1050
Motor frame size HP		5.5	7.5	7.5	7.5	5.5	5.5	5.5
Static pressure available*	Pa	435	560	580	420	500	500	500
Maximum static pressure available*	Pa	585	680	700	580	675	675	675
VAV								
Motor Qty / Drive type		1 / VFD Belt driven	1 / VFD Belt driven	1 / VFD Belt driven	1 / VFD Belt driven	2 / VFD Belt driven	2 / VFD Belt driven	2 / VFD Belt driven
Fan Qty / Type		2 / centrifugal	2 / centrifugal	2 / centrifugal	2 / centrifugal	2 / centrifugal	2 / centrifugal	2 / centrifugal
Fan Diameter	mm	305	381	381	381	457	457	457
Nominal Air flow	m^3/h	9100	12400	12500	14200	17730	18975	19980
RPM range min - max		522 - 1305	495 - 1238	495 - 1238	526 - 1314	291 - 971	291 - 971	315 - 1050
motor frame size	kW	4	5.5	5.5	7.5	4	4	5.5
Static pressure available*	Pa	50	50	50	50	50	50	50
Maximum Static pressure available*	Pa	500	600	620	660	535	535	640
Filters								
Quantity		6	6	6	6	9	9	9
Filter # / size	mm	595 x 495 x 50	595 x 495 x 50	595 x 495 x 50	595 x 495 x 50	595 x 495 x 50	595 x 495 x 50	595 x 495 x 50
Operating weight. without option								
50UH weight (without options)	kg	755	900	970	980	1430	1520	1610
48UH weight (without options)	kg	820	965	1043	1053	1565	1655	1775
50UA weight (without options)	kg	750	890	960	970	1420	1510	1600
48UA weight (without options)	kg	815	955	1033	1043	1555	1645	1755
General main dimensions								
Lenght	mm	2120	2120	2120	2120	3577	3577	3577
Width	mm	2189	2189	2189	2189	2193	2193	2193
Height	mm	1386	1431	1792	1792	1822	1822	1822

* For standard units at nominal air flow without options.
† In accordance with ISO 9614-1 and certified by Eurovent. The values have been rounded and are for information only.
†† For information. calculated from the sound power level Lw(A).

Electrical data

48/50UH†		045	055	065	075	085	100	120
Power circuit								
Nominal supply	V-ph-Hz	400-3-50						
Voltage range	V	360-440						
Control circuit supply		24V. via internal transformer						
Maximum start-up current*	A	206	173	183	204	246	261	226
Unit power factor at maximum capacity**		0.82	0.81	0.81	0.84	0.84	0.83	0.83
Maximum unit power input**	kW	21.68	27.41	33.52	40.50	44.58	52.98	59.38
Nominal unit current draw***	A	28.74	36.51	42.13	51.39	54.08	65.93	77.11
Maximum unit current draw****	A	38.20	49.10	60.10	69.80	77.00	92.20	103.10
Customer-side unit power reserve	kW	Customer reserve at the 24V control power circuit						
48/50UA†								
Power circuit								
Nominal supply	V-ph-Hz	400-3-50						
Voltage range	V	360-440						
Control circuit supply								
Maximum start-up current*	A	206	173	183	204	246	261	226
Unit power factor at maximum capacity**		0.82	0.81	0.81	0.84	0.84	0.83	0.83
Maximum unit power input**	kW	21.68	27.41	33.52	40.50	44.58	52.98	59.38
Nominal unit current draw***	A	28.73	36.76	43.00	52.12	55.97	66.55	77.79
Maximum unit current draw****	A	38.20	49.10	60.10	69.80	77.00	92.20	103.10
Customer-side unit power reserve	kW	Customer reserve at the 24 V control power circuit						

* Maximum instantaneous start-up current at operating limit values (maximum operating current of the smallest compressor(s) + fan current + locked rotor current of the largest compressor).
** Power input, compressors and fans, at the their operating limits and nominal voltage of 400 V (data given on the unit nameplate).
*** Standardized Eurovent conditions: indoor air wet bulb 19°C, outside air temperature 35°C with standard fan performance.
**** Maximum unit operating current at maximum unit power input and 400 V (values given on the unit nameplate).
† Standard unit (without any options and accessories)

Electrical data notes and operating conditions

- 48/50 UA/UH units have a single power connection point located at the main switch.
- **The control box includes the following standard features:**
  - a main disconnect switch,
  - starter and motor protection devices for each compressor, fans and electric heater option,
  - the control devices.
- **Field connections:**
  - All connections to the system and the electrical installations must be in full accordance with all applicable local codes.
  - The Carrier 48/50 UA/UH units are designed and built to ensure conformance with these codes.
    The recommendations of European standard EN 60204-1 (machine safety - electrical machine components. part 1: general regulations - corresponds to IEC 6020461) are specifically taken into account, when designing the electrical equipment.

Notes:
- Generally the recommendations of IEC 60364 are accepted as compliance with the requirements of the installation directives. Conformance with EN 60204 is the best means of ensuring compliance with the Machines Directive §1.5.1.
- Annex B of EN 60204-1 describes the electrical characteristics used for the operation of the machines.

1. The operating environment is specified below:

a) Environment* - Environment as classified in EN 60721 (corresponds to IEC 60721):
   - outdoor installation (IP43),
   - ambient temperature range: -10°C to +48°C,
   - altitude: ≤ 2000 m,

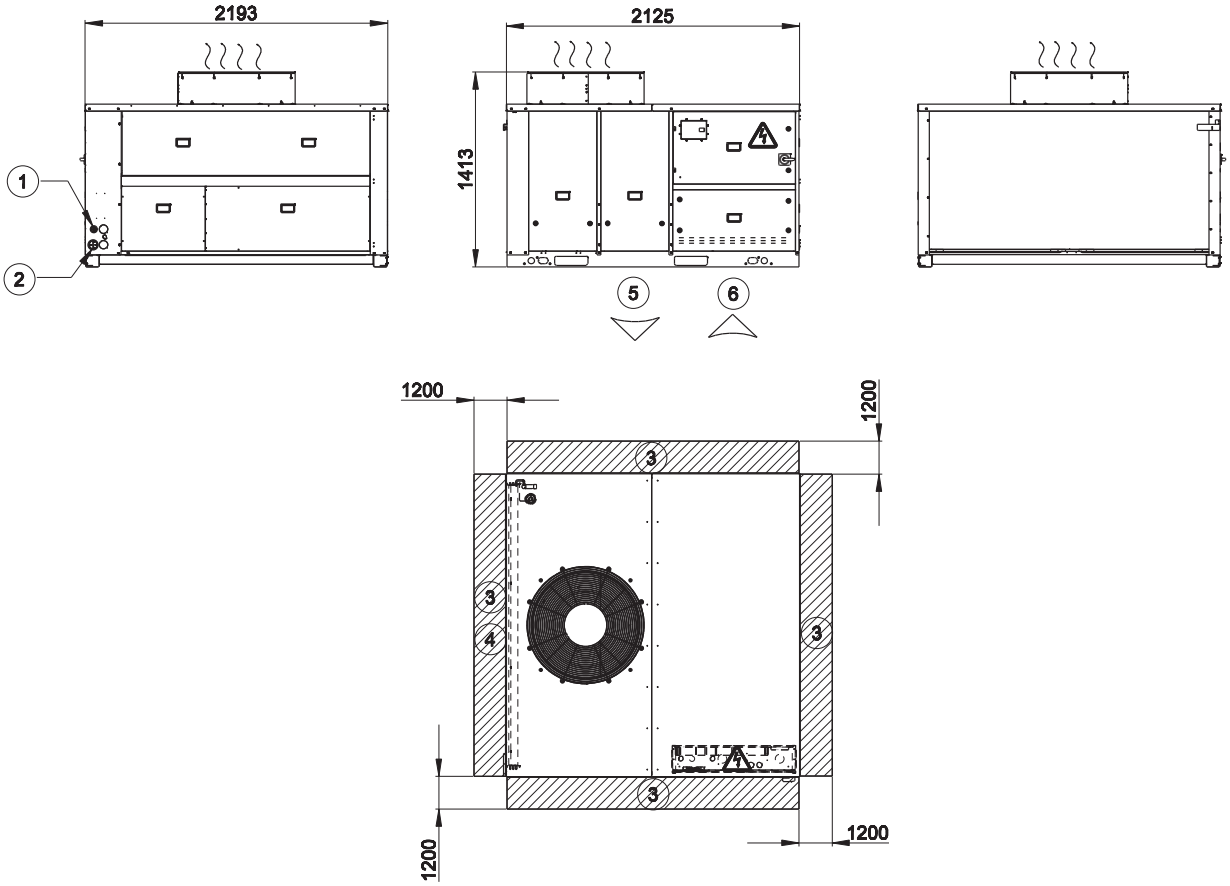
b) Competence of personnel. class BA4 (trained personnel - IEC 60364)

2. Power supply frequency variation: ± 2 Hz.
3. The neutral (N) conductor must not be connected directly to the unit (if necessary use a transformer).
4. Overcurrent protection of the power supply conductors is not provided with the unit.
5. The factory-installed disconnect switch(es)/circuit breaker(s) is(are) of a type suitable for power interruption in accordance with EN 60947.
6. The units are designed for connection to TN networks (IEC 60364). For IT networks the earth connection must not be at the network earth. Provide a local earth, consult competent local organisations to complete the electrical installation.

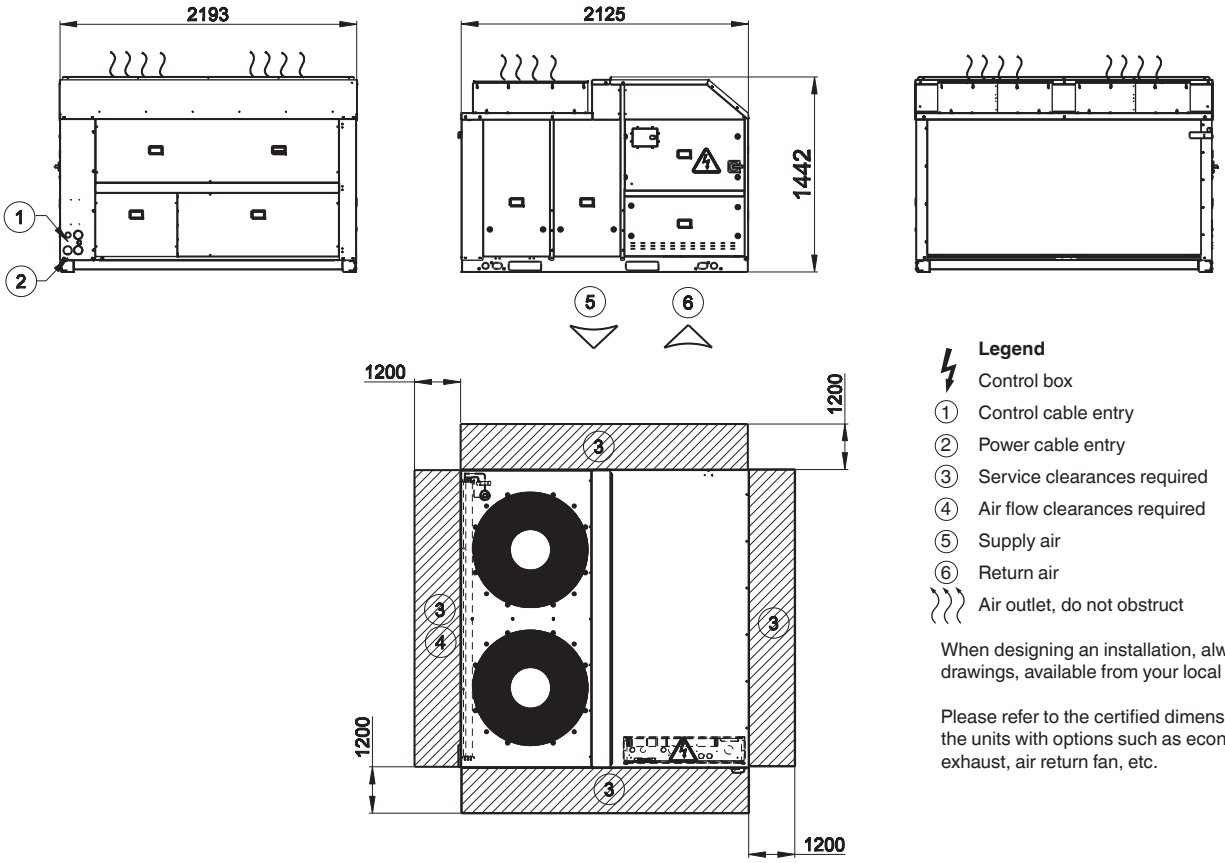
CAUTION:
If particular aspects of an actual installation do not conform to the conditions described above, or if there are other conditions which should be considered, always contact your local Carrier representative.

Dimensions, mm

50UA-UH 045



50UA-UH 055



Legend

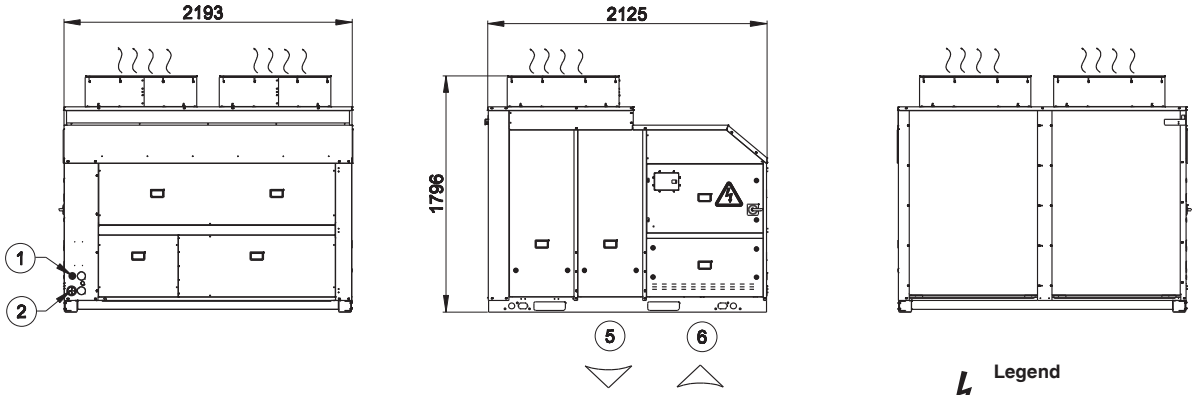
- Control box
- ① Control cable entry
- ② Power cable entry
- ③ Service clearances required
- ④ Air flow clearances required
- ⑤ Supply air
- ⑥ Return air
- Air outlet, do not obstruct

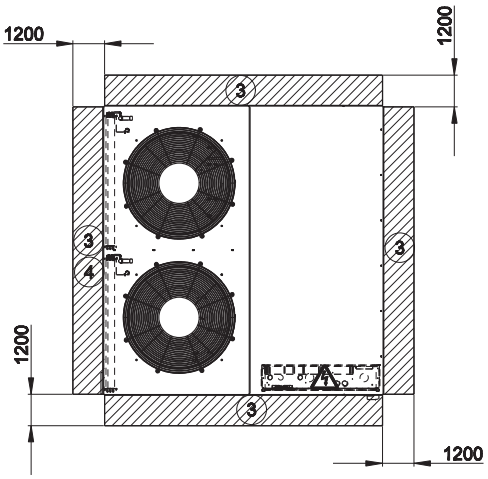
When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Please refer to the certified dimensional drawings for the units with options such as economizer, power exhaust, air return fan, etc.

Dimensions, mm (continued)

50UA-UH 065, 075





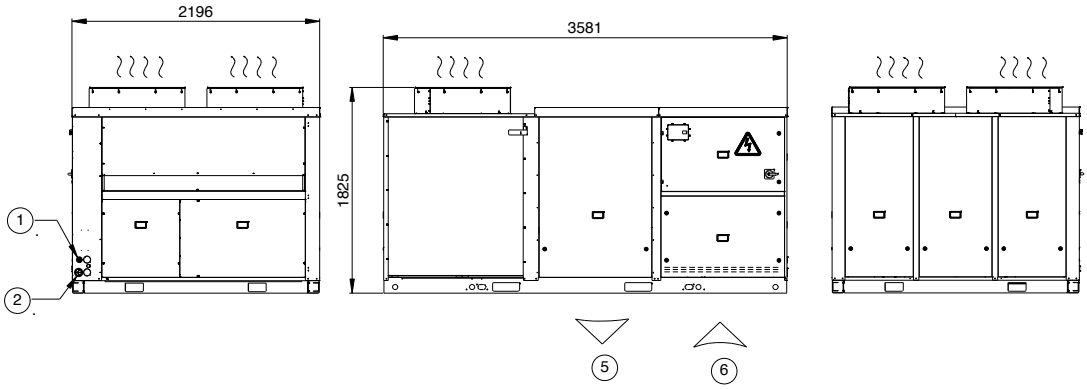
Legend

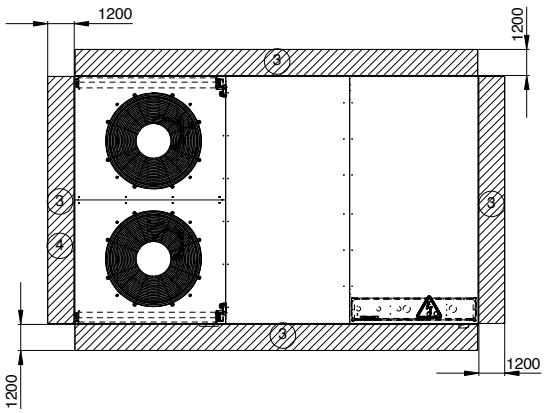
- Control box
- (1) Control cable entry
- (2) Power cable entry
- (3) Service clearances required
- (4) Air flow clearances required
- (5) Supply air
- (6) Return air
- Air outlet, do not obstruct

When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Please refer to the certified dimensional drawings for the units with options such as economizer, power exhaust, air return fan, etc.

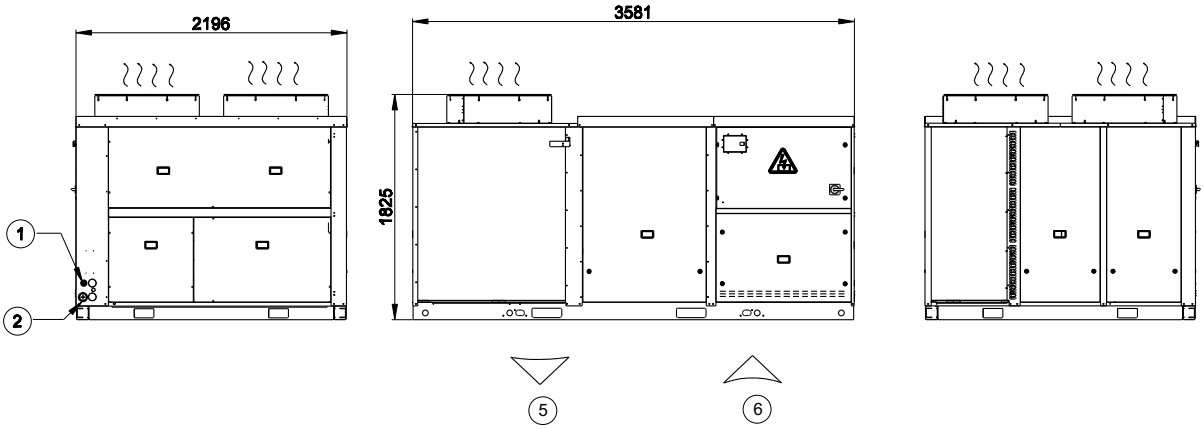
50UA-UH 085

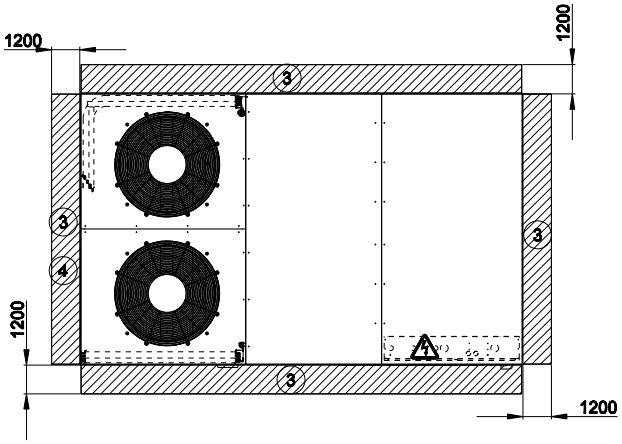




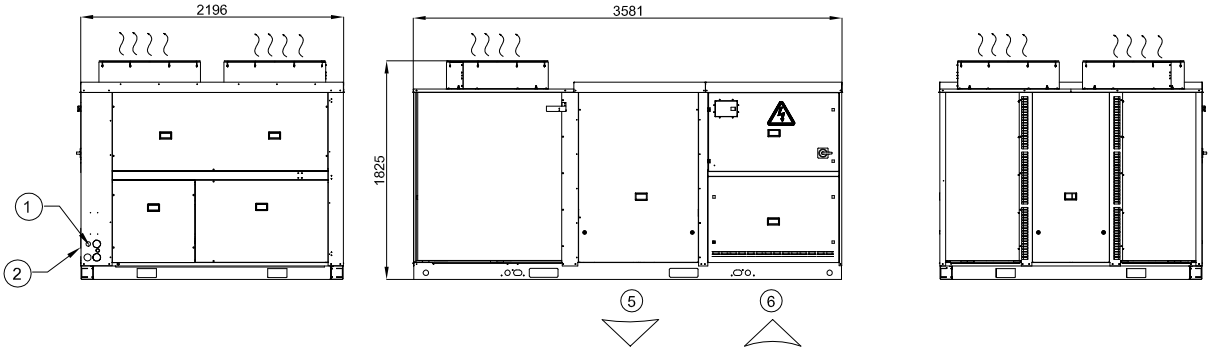
Dimensions, mm (continued)

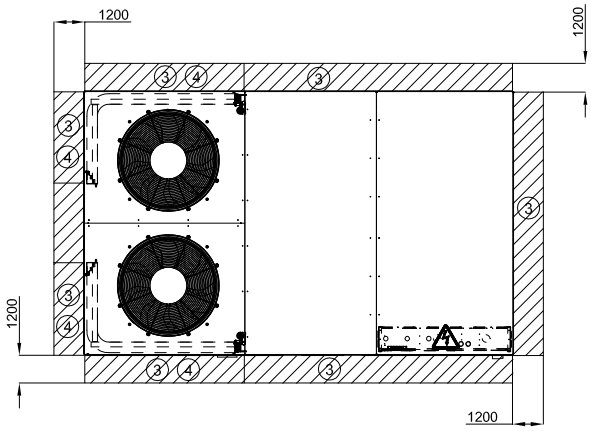
50UA-UH 100





50UA-UH 120





Legend

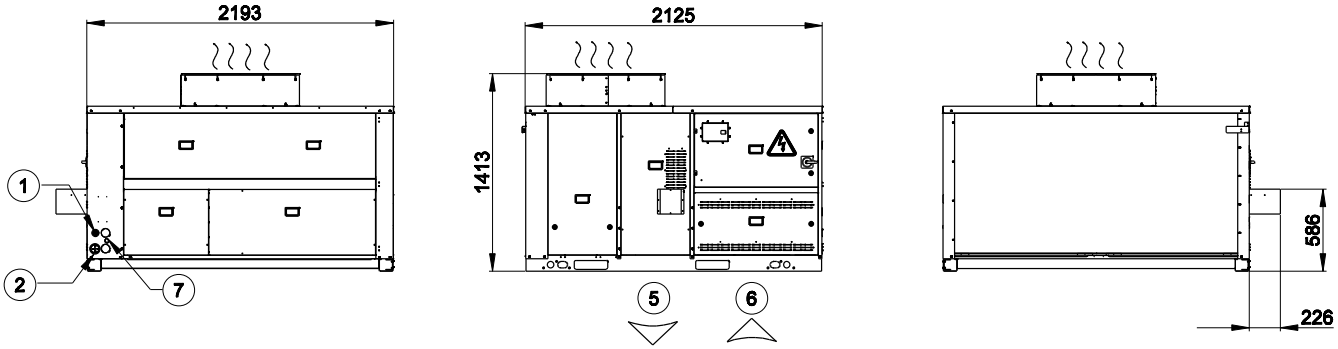
- Control box
- (1) Control cable entry
- (2) Power cable entry
- (3) Service clearances required
- (4) Air flow clearances required
- (5) Supply air
- (6) Return air
- Air outlet, do not obstruct

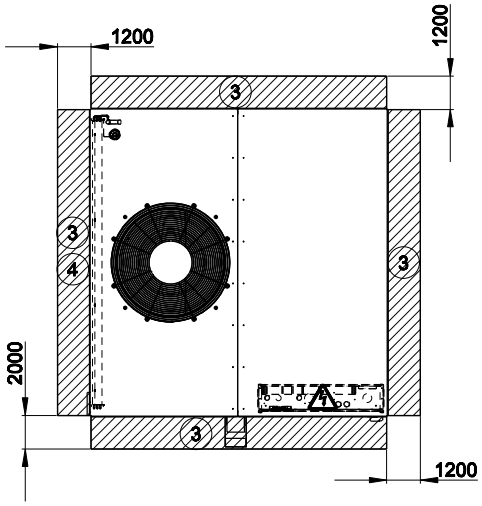
When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Please refer to the certified dimensional drawings for the units with options such as economizer, power exhaust, air return fan, etc.

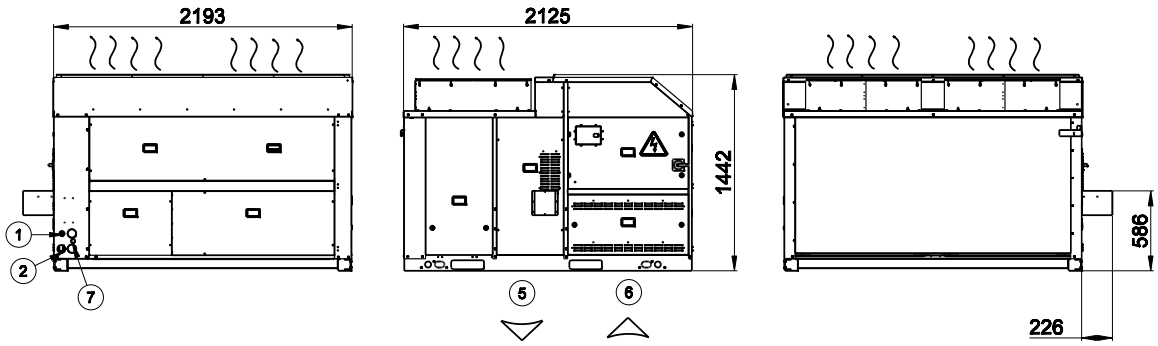
Dimensions, mm (continued)

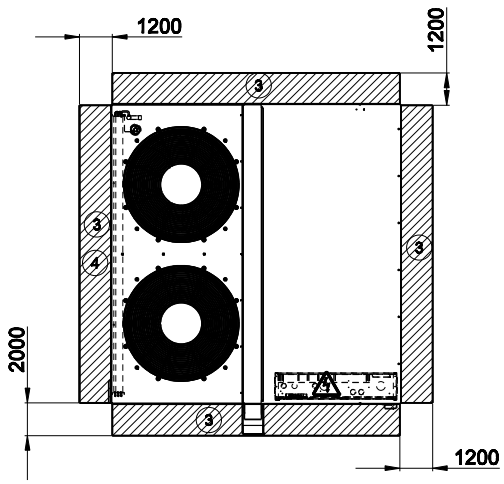
48UA-UH 045





48UA-UH 055





Legend

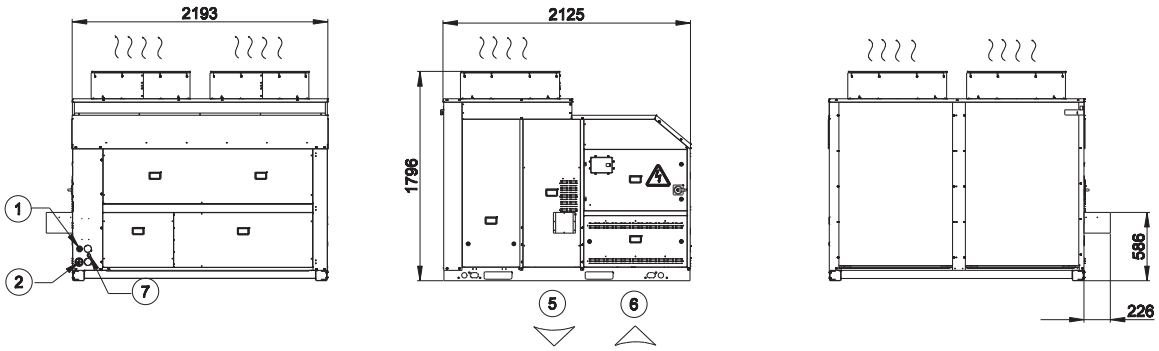
- Control box
- ① Control cable entry
- ② Power cable entry
- ③ Service clearances required
- ④ Air flow clearances required
- ⑤ Supply air
- ⑥ Return air
- 7 Gas inlet opening
- Air outlet, do not obstruct

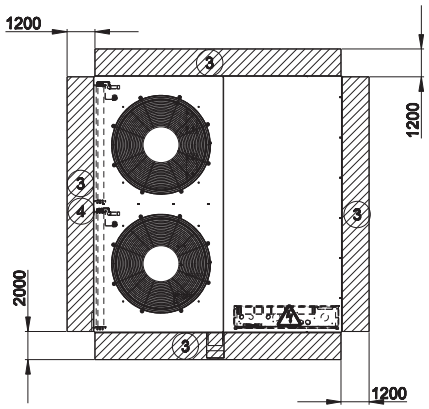
When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Please refer to the certified dimensional drawings for the units with options such as economizer, power exhaust, air return fan, etc.

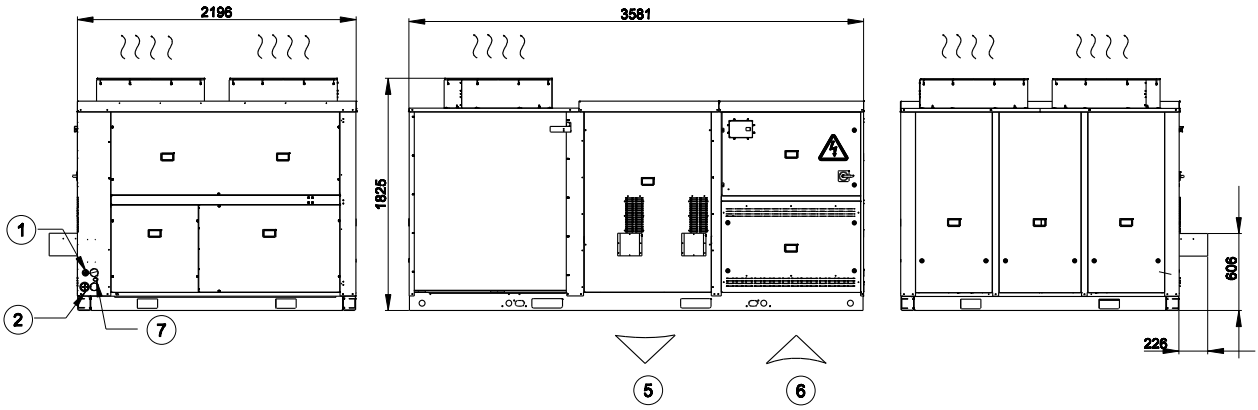
Dimensions, mm (continued)

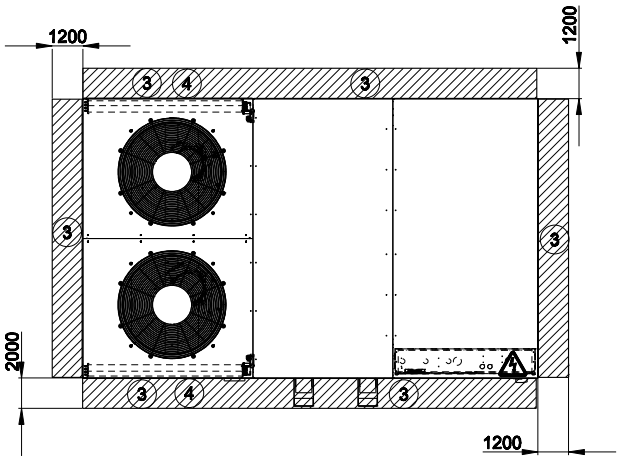
48UA-UH 065, 075





48UA-UH 085





Legend

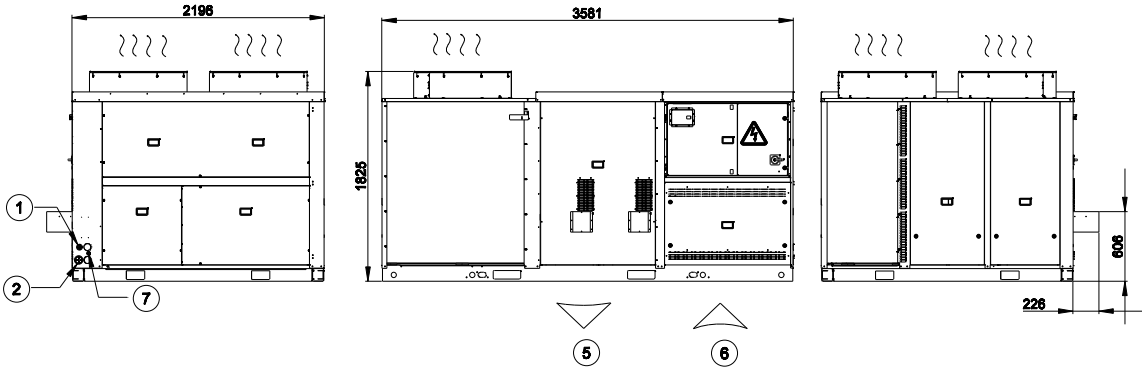
- Control box
- ① Control cable entry
- ② Power cable entry
- ③ Service clearances required
- ④ Air flow clearances required
- ⑤ Supply air
- ⑥ Return air
- 7 Gas inlet opening
- Air outlet, do not obstruct

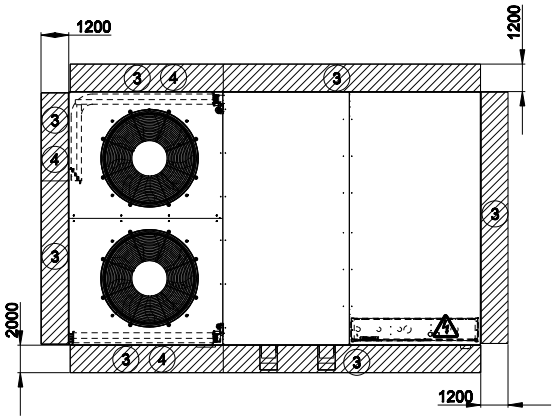
When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Please refer to the certified dimensional drawings for the units with options such as economizer, power exhaust, air return fan, etc.

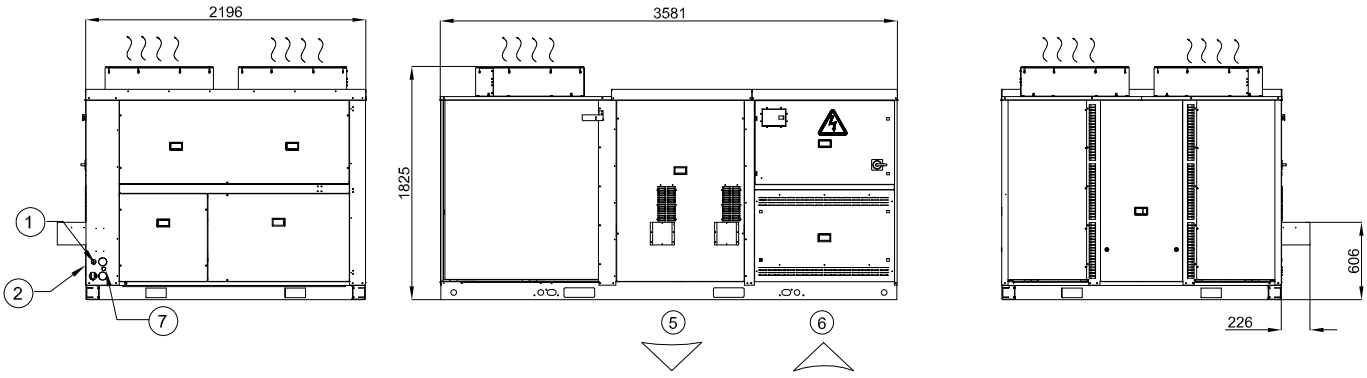
Dimensions, mm (continued)

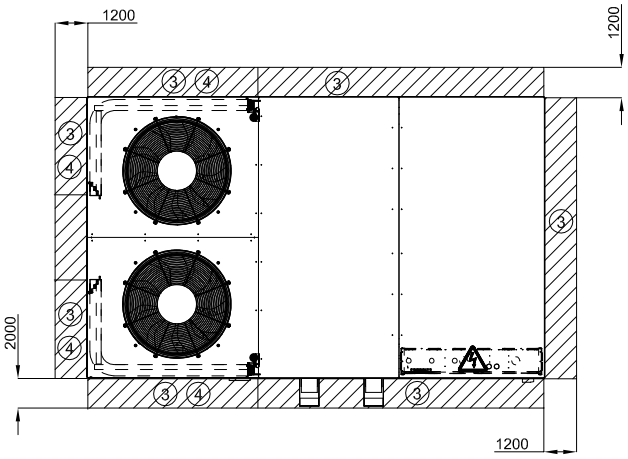
48UA-UH 100





48UA-UH 120





Legend

- Control box
- (1) Control cable entry
- (2) Power cable entry
- (3) Service clearances required
- (4) Air flow clearances required
- (5) Supply air
- (6) Return air
- 7 Gas inlet opening
- Air outlet, do not obstruct

When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Please refer to the certified dimensional drawings for the units with options such as economizer, power exhaust, air return fan, etc.

Cooling capacities

48/50UA 045 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		2022 (7300)						2275 (8200)						2528 (9100)						2781 (10000)						3034 (10900)					
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	59.43	55.96	52.67	49.49	46.56	45.54	60.39	56.93	53.62	50.39	48.05	47.20	61.21	57.74	54.41	51.17	49.44	48.64	61.88	58.42	55.06	51.95	50.81	49.92	62.45	59.00	55.63	52.58	52.00	51.05
	SC	26.71	31.38	35.97	40.52	44.20	45.54	27.67	32.75	37.80	42.69	46.28	47.20	28.58	34.08	39.54	44.69	47.59	48.64	29.46	35.34	41.23	46.65	48.59	49.92	30.26	36.56	42.85	48.48	49.34	51.05
	kW	9.87	9.55	9.25	8.96	8.70	8.62	9.96	9.64	9.34	9.05	8.84	8.77	10.04	9.72	9.41	9.12	8.97	8.91	10.11	9.79	9.48	9.20	9.10	9.03	10.17	9.85	9.53	9.26	9.21	9.13
15	TC	56.81	53.51	50.30	47.20	44.74	43.90	57.73	54.39	51.21	48.03	46.16	45.45	58.48	55.14	51.96	48.87	47.62	46.82	59.10	55.76	52.56	49.54	49.40	48.01	59.63	56.27	53.00	50.19	49.40	49.08
	SC	25.83	30.46	35.00	39.49	43.00	43.90	26.79	31.82	36.83	41.61	44.59	45.45	27.70	33.13	38.57	43.63	45.68	46.82	28.54	34.38	40.24	45.53	48.74	48.01	29.37	35.61	41.82	47.25	48.74	49.08
	kW	10.83	10.51	10.19	9.87	9.64	9.57	10.93	10.59	10.28	9.96	9.78	9.72	11.01	10.67	10.36	10.05	9.93	9.86	11.08	10.74	10.42	10.12	10.12	9.99	11.13	10.79	10.46	10.19	10.12	10.10
25	TC	51.30	48.28	45.38	42.54	41.02	40.43	52.06	49.02	46.10	43.40	42.02	41.78	52.66	49.62	46.68	44.01	43.02	42.96	53.11	50.11	47.13	44.72	43.98	44.00	53.52	50.51	47.46	45.51	44.91	44.92
	SC	24.02	28.52	33.02	37.29	39.65	40.43	24.93	29.88	34.82	39.40	41.57	41.78	25.80	31.17	36.55	41.18	42.83	42.96	26.63	32.41	38.17	42.85	43.98	44.00	27.43	33.62	39.68	44.02	44.91	44.92
	kW	12.96	12.60	12.26	11.93	11.76	11.70	13.05	12.69	12.35	12.04	11.89	11.87	13.13	12.77	12.43	12.12	12.02	12.01	13.18	12.83	12.48	12.21	12.14	12.14	13.23	12.89	12.52	12.30	12.25	12.25
30	TC	51.93	48.71	45.62	42.61	41.03	40.38	52.79	49.50	46.39	43.51	41.86	41.78	53.46	50.16	47.04	44.21	43.08	43.01	54.02	50.71	47.55	44.92	44.09	44.10	54.49	51.16	47.91	45.74	45.07	45.08
	SC	24.23	28.68	33.11	37.33	39.65	40.38	25.17	30.05	34.94	39.46	41.66	41.78	26.06	31.36	36.68	41.38	42.90	43.01	26.91	32.62	38.33	43.00	44.09	44.10	27.74	33.84	39.86	44.22	45.07	45.08
	kW	11.85	11.63	11.41	11.19	11.08	11.05	11.92	11.68	11.47	11.26	11.16	11.16	11.97	11.73	11.52	11.32	11.25	11.25	12.01	11.77	11.55	11.37	11.33	11.33	12.05	11.81	11.57	11.43	11.40	11.40
35	TC	48.99	45.94	43.01	40.27	39.25	38.54	49.71	46.65	43.70	41.02	39.88	39.85	50.30	47.21	44.26	41.74	40.97	40.98	50.79	47.69	44.67	42.56	41.98	41.99	51.20	48.06	45.07	43.42	42.88	42.88
	SC	23.25	27.68	32.09	36.22	37.71	38.54	24.16	29.02	33.89	38.25	39.75	39.85	25.04	30.32	35.61	39.97	40.97	40.98	25.89	31.57	37.19	41.26	41.98	41.99	26.71	32.78	38.70	42.11	42.88	42.88
	kW	12.99	12.77	12.55	12.34	12.26	12.22	13.05	12.83	12.60	12.40	12.33	12.33	13.10	12.87	12.65	12.46	12.42	12.42	13.14	12.91	12.68	12.53	12.50	12.50	13.17	12.94	12.71	12.60	12.57	12.57
40	TC	45.99	43.11	40.35	37.82	37.02	36.64	46.59	43.73	40.95	38.52	37.83	37.84	47.12	44.22	41.40	39.38	38.87	38.88	47.55	44.62	41.79	40.25	39.79	39.80	47.87	44.96	42.23	41.42	40.60	40.61
	SC	22.26	26.66	31.05	35.06	36.95	36.64	23.15	28.00	32.83	36.89	37.83	37.84	24.02	29.27	34.47	38.24	38.87	38.88	24.86	30.51	36.01	39.08	39.79	39.80	25.67	31.72	37.50	39.62	40.60	40.61
	kW	14.24	14.00	13.78	13.57	13.50	13.49	14.29	14.05	13.83	13.63	13.60	13.60	14.34	14.10	13.86	13.71	13.68	13.69	14.38	14.14	13.90	13.78	13.76	13.76	14.40	14.17	13.94	13.87	13.83	13.83
45	TC	42.83	40.15	37.60	35.32	34.66	34.66	43.37	40.68	38.06	36.20	35.74	35.75	43.82	41.11	38.48	37.09	36.69	36.70	44.19	41.46	38.95	37.65	37.53	37.54	44.49	41.77	39.30	38.48	38.26	38.27
	SC	21.22	25.58	29.96	33.76	34.66	34.66	22.12	26.91	31.67	35.18	35.74	35.75	22.98	28.19	33.25	36.05	36.69	36.70	23.82	29.43	34.80	37.28	37.53	37.54	24.62	30.65	36.24	37.98	38.26	38.27
	kW	15.52	15.30	15.08	14.88	14.85	14.85	15.57	15.34	15.11	14.97	14.95	14.95	15.61	15.38	15.15	15.05	15.03	15.03	15.65	15.42	15.20	15.11	15.11	15.11	15.68	15.44	15.24	15.18	15.17	15.17
48	TC	40.90	38.35	35.92	33.93	33.43	33.44	41.40	38.82	36.28	34.82	34.46	34.47	41.80	39.21	36.77	35.77	35.35	35.36	42.13	39.53	37.15	36.31	36.13	36.14	42.42	39.82	37.47	37.01	36.82	36.83
	SC	20.59	24.94	29.31	32.81	33.43	33.44	21.49	26.26	30.93	33.95	34.46	34.47	22.35	27.54	32.52	34.67	35.35	35.36	23.18	28.78	34.01	35.32	36.13	36.14	23.99	30.00	35.29	36.96	36.82	36.83
	kW	16.32	16.09	15.88	15.71	15.69	15.69	16.36	16.14	15.91	15.79	15.78	15.78	16.40	16.18	15.96	15.87	15.86	15.86	16.43	16.21	16.00	15.94	15.93	15.93	16.46	16.23	16.03	15.99	15.99	15.99

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UA 055 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		2755 (10000)						3100 (11200)						3444 (12400)						3788 (13600)						4133 (14900)					
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	70.27	66.12	62.17	58.31	55.56	54.38	71.33	67.18	63.23	59.36	57.25	56.23	72.24	68.08	64.11	60.28	57.85	57.83	72.99	68.80	64.77	61.19	60.53	59.24	73.64	69.45	65.34	61.76	61.54	60.49
	SC	31.75	37.54	43.25	48.86	52.98	54.38	32.90	39.19	45.46	51.40	54.76	56.23	34.02	40.80	47.58	53.73	57.72	57.83	35.05	42.30	49.57	55.98	57.10	59.24	36.07	43.81	51.51	57.84	57.81	60.49
	kW	12.09	11.73	11.40	11.06	10.83	10.74	12.19	11.83	11.49	11.15	10.98	10.91	12.27	11.91	11.57	11.24	11.05	11.05	12.34	11.98	11.63	11.33	11.27	11.17	12.40	12.04	11.68	11.38	11.37	11.29
15	TC	66.98	63.06	59.27	55.51	53.24	52.34	67.96	64.04	60.21	56.64	55.10	54.07	68.76	64.77	60.98	57.49	55.69	55.57	69.44	65.45	61.60	58.24	58.13	56.89	70.05	66.02	62.02	59.00	58.36	58.06
	SC	30.70	36.44	42.13	47.59	51.14	52.34	31.83	38.09	44.31	50.11	52.52	54.07	32.90	39.63	46.37	52.41	55.31	55.57	33.94	41.15	48.35	54.48	54.70	56.89	34.96	42.65	50.24	56.09	57.65	58.06
	kW	13.19	12.83	12.47	12.10	11.90	11.83	13.29	12.93	12.56	12.22	12.08	12.00	13.37	12.99	12.64	12.31	12.15	12.14	13.44	13.06	12.71	12.39	12.38	12.28	13.51	13.12	12.75	12.47	12.41	12.39
25	TC	60.34	56.81	53.39	50.11	49.08	48.17	61.13	57.56	54.14	51.04	49.80	49.67	61.76	58.21	54.67	51.89	50.82	50.96	62.23	58.73	55.07	52.83	52.06	52.08	62.71	59.18	55.64	53.03	53.07	53.08
	SC	28.59	34.25	39.88	45.04	46.73	48.17	29.69	35.85	42.05	47.42	49.37	49.67	30.74	37.40	44.02	49.34	50.82	50.96	31.70	38.88	45.89	50.78	52.06	52.08	32.72	40.37	47.68	53.03	53.07	53.08
	kW	15.69	15.29	14.90	14.54	14.42	14.34	15.79	15.38	15.00	14.65	14.53	14.52	15.86	15.46	15.06	14.75	14.66	14.67	15.91	15.53	15.11	14.87	14.80	14.80	15.97	15.59	15.18	14.92	14.92	14.92
30	TC	61.12	57.34	53.68	50.29	48.16	48.14	62.01	58.17	54.49	51.19	49.83	49.70	62.72	58.84	55.11	52.07	50.89	51.05	63.32	59.43	55.57	53.16	52.27	52.24	63.86	59.93	56.11	53.25	53.28	53.30
	SC	28.83	34.43	39.99	45.12	48.05	48.14	29.96	36.07	42.18	47.51	49.44	49.70	31.04	37.62	44.19	49.47	50.89	51.05	32.04	39.12	46.08	50.96	52.15	52.24	33.07	40.62	47.90	53.25	53.28	53.30
	kW	14.46	14.21	13.96	13.72	13.59	13.59	14.52	14.27	14.02	13.79	13.71	13.71	14.57	14.31	14.06	13.86	13.80	13.80	14.62	14.35	14.10	13.94	13.89	13.89	14.66	14.39	14.14	13.96	13.96	13.97
35	TC	57.66	54.05	50.63	47.48	46.04	45.97	58.38	54.80	51.34	48.36	47.32	47.41	59.01	55.41	51.82	49.40	48.64	48.65	59.54	55.93	52.34	50.38	49.73	49.73	59.99	56.38	52.79	50.68	50.69	50.70
	SC	27.73	33.29	38.84	43.79	45.79	45.97	28.82	34.88	40.98	45.93	47.32	47.41	29.87	36.46	42.91	47.51	48.64	48.65	30.89	37.97	44.74	48.62	49.73	49.73	31.89	39.46	46.49	50.68	50.69	50.70
	kW	15.83	15.57	15.31	15.08	14.99	14.99	15.88	15.63	15.37	15.15	15.09	15.10	15.93	15.68	15.40	15.23	15.19	15.20	15.97	15.72	15.45	15.31	15.28	15.28	16.01	15.75	15.49	15.36	15.36	15.36
40	TC	54.08	50.74	47.54	44.64	43.84	43.74	54.75	51.37	48.09	45.72	45.06	45.07	55.28	51.91	48.59	46.78	46.19	46.20	55.69	52.36	49.05	48.02	47.18	47.19	56.08	52.73	49.56	48.04	48.06	48.08
	SC	26.58	32.13	37.65	42.33	43.58	43.74	27.68	33.72	39.72	44.05	45.06	45.07	28.72	35.28	41.61	45.20	46.19	46.20	29.71	36.78	43.38	45.92	47.18	47.19	30.70	38.26	45.11	48.04	48.06	48.08
	kW	17.34	17.08	16.82	16.60	16.55	16.55	17.40	17.13	16.86	16.69	16.66	16.66	17.44	17.18	16.91	16.78	16.75	16.75	17.47	17.22	16.96	16.87	16.83	16.83	17.50	17.25	17.00	16.91	16.91	16.91
45	TC	50.44	47.39	44.35	42.10	41.48	41.48	51.02	47.93	44.89	43.19	42.68	42.69	51.48	48.37	45.41	44.57	43.69	43.70	51.86	48.75	45.86	45.25	44.58	44.59	52.18	49.07	46.22	45.37	45.37	45.38
	SC	25.44	30.97	36.43	40.57	41.48	41.48	26.52	32.56	38.42	41.80	42.68	42.69	27.55	34.10	40.27	42.49	43.69	43.70	28.55	35.60	42.00	43.31	44.58	44.59	29.53	37.07	43.54	45.26	45.37	45.38
	kW	18.93	18.68	18.43	18.26	18.24	18.24	18.98	18.73	18.47	18.35	18.33	18.34	19.02	18.77	18.53	18.45	18.42	18.42	19.05	18.80	18.57	18.52	18.50	18.50	19.08	18.83	18.61	18.56	18.56	18.56
48	TC	48.24	45.35	42.45	40.54	40.08	40.09	48.75	45.83	43.03	41.72	41.20	41.21	49.16	46.23	43.47	42.78	42.15	42.16	49.50	46.56	43.86	43.62	42.98	42.99	49.80	46.83	44.29	43.71	43.70	43.71
	SC	24.74	30.27	35.68	39.37	40.08	40.09	25.81	31.85	37.63	40.29	41.20	41.21	26.84	33.39	39.44	41.00	42.15	42.16	27.84	34.88	41.08	41.67	42.98	42.99	28.81	36.34	42.43	43.60	43.70	43.71
	kW	19.93	19.69	19.45	19.32	19.31	19.31	19.98	19.74	19.51	19.41	19.40	19.40	20.01	19.77	19.55	19.50	19.48	19.48	20.04	19.81	19.59	19.57	19.55	19.55	20.07	19.83	19.63	19.61	19.61	19.61

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UA 065 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		2778 (10000)						3124 (11250)						3472 (12500)						3819 (13750)						4166 (15000)			
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	83.19	78.20	73.49	69.00	65.52	64.21	84.54	79.58	74.83	70.46	67.59	66.49	85.72	80.74	75.93	71.62	69.21	68.47	86.69	81.68	76.76	72.72	70.79	70.22	87.52	82.51	77.52	73.68	71.80	71.78
	SC	37.85	44.47	51.01	57.31	62.70	64.21	39.23	46.46	53.65	60.50	65.35	66.49	40.57	48.41	56.22	63.46	67.74	68.47	41.83	50.28	58.62	66.16	69.12	70.22	43.09	52.12	60.93	68.69	71.67	71.78
	kW	12.22	11.90	11.59	11.30	11.09	11.01	12.32	11.99	11.68	11.40	11.22	11.16	12.40	12.07	11.75	11.48	11.33	11.29	12.47	12.14	11.81	11.56	11.44	11.41	12.53	12.19	11.86	11.62	11.52	11.52
15	TC	79.79	75.01	70.46	66.18	63.07	62.05	81.09	76.28	71.68	67.56	65.28	64.21	82.15	77.33	72.64	68.61	66.73	66.09	83.04	78.22	73.39	69.71	68.32	67.75	83.82	78.97	74.24	70.60	69.25	69.22
	SC	36.72	43.25	49.76	55.99	60.94	62.05	38.07	45.24	52.39	59.15	62.98	64.21	39.39	47.18	54.92	61.98	65.35	66.09	40.65	49.04	57.28	64.61	66.45	67.75	41.90	50.88	59.59	67.04	69.05	69.22
	kW	13.54	13.20	12.88	12.58	12.37	12.31	13.64	13.30	12.97	12.68	12.53	12.47	13.72	13.38	13.04	12.76	12.64	12.60	13.79	13.44	13.09	12.85	12.76	12.73	13.85	13.50	13.16	12.92	12.83	12.83
25	TC	72.45	68.16	64.02	60.26	58.59	57.46	73.51	69.20	64.92	61.38	59.90	59.38	74.38	70.06	65.77	62.42	61.20	61.03	75.10	70.76	66.56	63.40	62.48	62.47	75.69	71.35	67.25	64.51	63.74	63.76
	SC	34.24	40.72	47.17	53.23	56.18	57.46	35.57	42.68	49.71	56.12	58.61	59.38	36.86	44.59	52.14	58.80	60.69	61.03	38.10	46.43	54.48	61.08	62.40	62.47	39.31	48.24	56.77	62.67	63.74	63.76
	kW	16.50	16.14	15.79	15.48	15.36	15.28	16.60	16.23	15.87	15.58	15.48	15.44	16.68	16.31	15.94	15.68	15.59	15.58	16.74	16.37	16.02	15.77	15.71	15.71	16.80	16.43	16.08	15.87	15.82	15.82
30	TC	70.76	66.44	62.29	57.06	55.53	55.03	71.80	67.46	63.17	59.73	56.83	56.81	72.65	68.30	64.04	60.73	59.61	59.60	73.33	68.98	64.82	61.84	61.00	61.02	73.91	69.55	65.44	62.65	62.27	62.29
	SC	33.67	40.09	46.48	51.70	55.53	55.03	35.01	42.06	49.00	55.29	56.74	56.81	36.30	43.97	51.44	57.90	59.54	59.60	37.53	45.81	53.77	59.88	61.00	61.02	38.74	47.62	56.03	61.70	62.27	62.29
	kW	16.88	16.57	16.27	17.10	17.02	16.94	16.96	16.64	16.33	16.11	17.11	17.11	17.02	16.71	16.40	16.18	16.12	16.12	17.07	16.76	16.46	16.27	16.23	16.23	17.12	16.81	16.51	16.33	16.32	16.32
35	TC	68.55	64.27	60.19	56.51	54.98	54.49	69.53	65.25	61.02	57.75	56.33	56.31	70.34	66.00	61.90	58.74	57.88	57.89	70.99	66.64	62.65	60.01	59.25	59.26	71.56	67.19	63.18	61.02	60.48	60.49
	SC	32.93	39.29	45.64	51.42	53.88	54.49	34.26	41.27	48.13	54.28	56.23	56.31	35.55	43.16	50.56	56.67	57.88	57.89	36.79	44.99	52.90	58.36	59.25	59.26	38.00	46.81	55.12	59.81	60.48	60.49
	kW	17.39	17.14	16.90	16.70	16.63	16.61	17.45	17.20	16.95	16.78	16.71	16.71	17.51	17.25	17.01	16.84	16.81	16.81	17.55	17.29	17.06	16.91	16.89	16.89	17.58	17.33	17.09	16.98	16.96	16.96
40	TC	64.51	60.48	56.54	53.34	52.02	51.92	65.36	61.33	57.45	54.37	53.60	53.60	66.05	62.02	58.23	55.62	55.04	55.05	66.63	62.59	58.78	56.58	56.30	56.31	67.14	63.02	59.35	57.62	57.42	57.44
	SC	31.59	37.92	44.16	49.83	52.02	51.92	32.90	39.87	46.66	52.40	53.60	53.60	34.17	41.77	49.07	54.20	55.04	55.05	35.40	43.60	51.34	55.79	56.30	56.31	36.62	45.38	53.43	56.74	57.42	57.44
	kW	19.17	18.92	18.67	18.48	18.41	18.41	19.23	18.97	18.73	18.55	18.52	18.52	19.28	19.02	18.78	18.63	18.61	18.61	19.32	19.06	18.82	18.71	18.70	18.70	19.35	19.10	18.86	18.78	18.77	18.77
45	TC	60.24	56.52	52.91	50.05	49.23	49.24	61.00	57.24	53.73	51.23	50.76	50.77	61.63	57.83	54.35	52.08	52.07	52.08	62.14	58.32	54.91	53.40	53.21	53.23	62.58	58.63	55.48	54.57	54.24	54.24
	SC	30.18	36.49	42.66	48.05	49.23	49.24	31.49	38.42	45.15	50.01	50.76	50.77	32.77	40.31	47.50	52.03	52.07	52.08	33.99	42.13	49.64	52.68	53.21	53.23	35.20	43.88	51.63	53.03	54.24	54.24
	kW	21.06	20.81	20.56	20.39	20.35	20.35	21.12	20.87	20.63	20.47	20.46	20.46	21.16	20.91	20.68	20.55	20.55	20.55	21.20	20.95	20.72	20.64	20.63	20.63	21.23	20.96	20.76	20.72	20.70	20.71
48	TC	57.70	54.12	50.69	48.08	47.55	47.56	58.39	54.78	51.44	49.17	48.99	49.00	58.95	55.32	51.95	50.23	50.22	50.23	59.42	55.70	52.56	51.22	51.30	51.31	59.83	55.98	53.13	52.17	52.24	52.25
	SC	29.35	35.63	41.74	46.77	47.55	47.56	30.66	37.56	44.21	48.57	48.99	49.00	31.92	39.44	46.48	50.17	50.22	50.23	33.15	41.24	48.54	51.22	51.30	51.31	34.36	42.94	50.44	52.17	52.24	52.25
	kW	22.24	21.99	21.75	21.58	21.56	21.56	22.29	22.04	21.81	21.67	21.67	21.67	22.33	22.08	21.85	21.75	21.76	21.76	22.36	22.11	21.90	21.82	21.83	21.83	22.39	22.12	21.94	21.88	21.90	21.90

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UA 075 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		3155 (11400)						3550 (12800)						3944 (14200)						4388 (15800)						4733 (17000)			
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	96.08	90.60	85.36	80.32	76.38	74.62	97.63	92.19	86.92	82.00	78.48	77.12	98.91	93.46	88.19	83.33	80.69	79.38	99.98	94.53	89.12	84.57	81.37	81.36	100.79	95.43	89.97	85.75	83.13	83.12
	SC	43.50	51.16	58.68	65.90	72.26	74.62	45.09	53.41	61.67	69.49	75.55	77.12	46.57	55.58	64.56	72.87	77.82	79.38	48.00	57.72	67.31	75.95	81.24	81.36	49.39	59.80	69.91	78.81	82.98	83.12
	kW	15.55	15.13	14.73	14.36	14.08	13.97	15.68	15.26	14.85	14.49	14.24	14.16	15.78	15.36	14.95	14.59	14.41	14.33	15.87	15.45	15.03	14.69	14.48	14.48	15.94	15.53	15.10	14.79	14.61	14.61
15	TC	92.46	87.22	82.17	77.38	73.71	72.25	93.91	88.66	83.61	78.95	76.01	74.73	95.08	89.83	84.67	80.14	76.89	76.88	95.99	90.76	85.53	81.43	78.76	78.76	96.79	91.54	86.47	82.48	80.43	80.42
	SC	42.28	49.86	57.34	64.50	70.58	72.25	43.84	52.11	60.33	68.07	73.44	74.73	45.29	54.27	63.17	71.32	76.75	76.88	46.71	56.37	65.86	74.34	78.63	78.76	48.11	58.42	68.47	77.16	80.29	80.42
	kW	17.44	17.00	16.58	16.19	15.91	15.81	17.57	17.13	16.70	16.32	16.10	16.01	17.67	17.23	16.79	16.42	16.19	16.19	17.76	17.32	16.87	16.54	16.35	16.35	17.84	17.39	16.95	16.64	16.49	16.49
25	TC	84.45	79.66	75.09	70.94	68.20	67.29	85.54	80.78	76.09	72.16	70.13	69.48	86.46	81.71	77.00	73.42	71.37	71.36	87.28	82.50	77.90	74.38	73.01	73.00	87.96	83.16	78.68	75.47	74.46	74.44
	SC	39.58	47.03	54.46	61.48	66.20	67.29	41.05	49.21	57.32	64.79	68.71	69.48	42.48	51.34	60.04	67.89	71.26	71.36	43.91	53.44	62.69	70.67	72.87	73.00	45.30	55.50	65.28	72.79	74.33	74.44
	kW	21.60	21.12	20.67	20.27	20.02	19.95	21.72	21.24	20.77	20.39	20.22	20.17	21.82	21.35	20.86	20.53	20.36	20.36	21.91	21.43	20.97	20.63	20.53	20.53	21.98	21.50	21.06	20.75	20.67	20.67
30	TC	84.94	79.81	73.25	69.14	65.07	64.58	86.13	81.01	74.24	70.44	69.20	67.99	87.14	82.02	77.01	71.65	69.85	69.84	88.03	82.88	77.97	72.68	71.49	71.46	88.80	83.62	78.80	73.84	72.89	72.90
	SC	39.74	47.08	53.71	60.62	63.89	64.58	41.25	49.30	56.57	63.91	66.09	67.99	42.70	51.45	60.04	66.95	69.74	69.84	44.15	53.58	62.73	69.56	71.31	71.46	45.57	55.67	65.33	71.48	72.89	72.90
	kW	20.04	19.77	21.12	20.80	22.26	22.24	20.12	19.84	21.20	20.92	20.81	20.76	20.17	19.90	19.62	21.02	20.91	20.91	20.23	19.95	19.68	21.11	21.04	21.04	20.27	19.99	19.73	21.21	21.15	21.15
35	TC	80.48	75.65	71.09	67.02	65.25	64.15	81.62	76.79	72.04	68.37	66.93	66.26	82.58	77.71	73.00	69.51	68.09	68.07	83.39	78.50	73.88	70.65	69.67	69.64	84.09	79.17	74.67	71.71	71.05	71.06
	SC	38.26	45.54	52.83	59.61	63.04	64.15	39.77	47.77	55.67	62.86	65.47	66.26	41.23	49.92	58.38	65.83	67.97	68.07	42.67	52.05	61.06	68.22	69.56	69.64	44.08	54.14	63.66	69.83	71.05	71.06
	kW	22.29	22.00	21.73	21.49	21.39	21.36	22.36	22.07	21.78	21.58	21.51	21.48	22.42	22.13	21.85	21.65	21.59	21.59	22.47	22.18	21.91	21.72	21.69	21.69	22.51	22.23	21.96	21.80	21.77	21.77
40	TC	75.96	71.42	66.99	63.36	61.26	61.23	76.99	72.43	67.99	64.64	63.21	63.18	77.84	73.25	68.89	65.75	64.88	64.86	78.56	73.94	69.69	66.89	66.32	66.32	79.17	74.52	70.19	68.24	67.61	67.63
	SC	36.75	43.99	51.16	57.80	61.17	61.23	38.25	46.21	53.97	60.97	63.10	63.18	39.70	48.35	56.69	63.51	64.79	64.86	41.13	50.47	59.35	65.31	66.32	66.32	42.53	52.54	61.78	66.27	67.61	67.63
	kW	24.67	24.38	24.09	23.87	23.76	23.76	24.74	24.45	24.16	23.96	23.89	23.89	24.80	24.51	24.23	24.03	24.01	24.01	24.85	24.55	24.28	24.12	24.10	24.10	24.89	24.59	24.32	24.20	24.18	24.19
45	TC	71.23	66.97	62.81	59.57	58.17	58.15	72.15	67.85	63.78	60.71	59.92	59.94	72.88	68.56	64.58	62.07	61.46	61.47	73.51	69.17	65.14	63.36	62.80	62.81	74.04	69.54	65.78	64.62	63.97	63.99
	SC	35.19	42.38	49.43	55.85	58.08	58.15	36.68	44.58	52.24	58.67	59.92	59.94	38.11	46.72	54.93	60.58	61.46	61.47	39.54	48.83	57.46	61.56	62.80	62.81	40.93	50.83	59.69	62.56	63.97	63.99
	kW	27.15	26.87	26.58	26.38	26.31	26.31	27.21	26.93	26.66	26.46	26.43	26.43	27.26	26.98	26.72	26.56	26.54	26.54	27.31	27.03	26.76	26.64	26.64	26.64	27.35	27.05	26.81	26.73	26.72	26.72
48	TC	68.29	64.22	60.28	57.23	56.22	56.21	69.11	65.02	61.18	58.51	57.88	57.90	69.79	65.66	61.84	59.63	59.33	59.34	70.37	66.13	62.44	60.80	60.59	60.60	70.85	66.47	63.10	61.93	61.69	61.71
	SC	34.22	41.39	48.38	54.60	56.17	56.21	35.71	43.59	51.18	56.94	57.88	57.90	37.14	45.71	53.82	58.80	59.33	59.34	38.55	47.80	56.18	59.97	60.59	60.60	39.94	49.75	58.40	60.98	61.69	61.71
	kW	28.67	28.38	28.10	27.90	27.85	27.85	28.73	28.44	28.18	28.00	27.98	27.98	28.77	28.49	28.22	28.09	28.08	28.08	28.82	28.52	28.28	28.18	28.18	28.18	28.85	28.55	28.33	28.26	28.26	28.26

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UA 085 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		4440 (16000)						4995 (18000)						5550 (20000)						6105 (22000)						6660 (24000)					
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	120.66	113.78	107.16	101.30	97.14	96.48	122.30	115.43	108.61	103.10	99.66	99.64	123.65	116.73	110.03	104.87	102.38	102.36	124.74	117.79	111.33	106.38	104.78	104.72	125.70	118.72	112.38	107.79	107.14	106.81
	SC	56.73	67.51	78.24	88.50	95.73	96.48	58.93	70.76	82.43	93.42	99.51	99.64	61.04	73.89	86.51	97.95	102.21	102.36	63.09	76.95	90.44	102.04	104.49	104.72	65.14	79.99	94.25	104.81	107.14	106.81
	kW	17.87	17.32	16.80	16.35	16.04	15.99	18.02	17.46	16.92	16.50	16.25	16.25	18.14	17.58	17.05	16.65	16.47	16.47	18.24	17.68	17.16	16.78	16.67	16.66	18.33	17.76	17.26	16.90	16.86	16.84
15	TC	115.87	109.26	102.77	97.18	93.88	93.29	117.35	110.73	104.23	99.06	96.31	96.28	118.53	111.93	105.56	100.70	99.39	98.87	119.56	112.93	106.69	102.40	101.31	101.12	120.45	113.79	107.64	103.69	103.04	103.07
	SC	55.13	65.84	76.46	86.58	92.47	93.29	57.30	69.06	80.66	91.39	96.16	96.28	59.39	72.19	84.69	95.71	99.17	98.87	61.44	75.26	88.57	99.23	101.31	101.12	63.49	78.30	92.34	101.47	103.04	103.07
	kW	19.71	19.14	18.59	18.12	17.87	17.81	19.85	19.28	18.72	18.30	18.08	18.08	19.97	19.40	18.85	18.45	18.35	18.31	20.07	19.50	18.96	18.60	18.52	18.51	20.16	19.58	19.05	18.73	18.68	18.69
25	TC	105.26	99.28	93.37	88.73	86.43	86.41	106.54	100.50	94.72	90.37	89.07	89.04	107.56	101.50	95.86	92.23	91.27	91.29	108.41	102.29	96.73	93.78	93.22	93.24	109.14	102.86	97.55	94.90	94.91	94.93
	SC	51.60	62.19	72.63	82.37	86.31	86.41	53.77	65.41	76.78	86.75	88.92	89.04	55.87	68.54	80.74	89.94	91.27	91.29	57.91	71.58	84.52	92.02	93.22	93.24	59.94	74.53	87.99	94.90	94.91	94.93
	kW	23.71	23.12	22.53	22.09	21.89	21.89	23.85	23.25	22.68	22.27	22.16	22.16	23.97	23.36	22.81	22.47	22.39	22.39	24.06	23.45	22.91	22.63	22.59	22.60	24.14	23.52	23.01	22.77	22.77	22.77
30	TC	103.41	97.29	91.28	84.35	82.75	82.74	104.71	98.54	92.72	86.03	85.16	85.17	108.52	99.55	93.82	90.33	87.23	87.25	109.47	100.38	94.68	92.00	89.04	89.06	110.30	100.96	95.61	93.56	90.57	90.59
	SC	51.02	61.49	71.80	80.09	82.65	82.74	53.20	64.73	75.98	83.77	85.16	85.17	56.18	67.88	79.92	88.03	87.23	87.25	58.25	70.94	83.67	90.13	89.04	89.06	60.32	73.92	87.03	92.20	90.57	90.59
	kW	23.69	23.21	22.73	24.27	24.13	24.13	23.80	23.31	22.86	24.47	24.39	24.40	21.87	23.40	22.95	22.69	24.63	24.63	21.93	23.48	23.03	22.84	24.83	24.83	21.99	23.53	23.12	22.97	25.00	25.00
35	TC	100.29	94.15	88.29	83.79	82.17	82.18	101.53	95.38	89.67	85.61	84.71	84.72	102.56	96.34	90.66	86.94	86.89	86.89	103.39	97.04	91.52	88.76	88.79	88.81	104.10	97.73	92.51	90.42	90.45	90.46
	SC	49.97	60.36	70.56	79.80	82.17	82.18	52.16	63.61	74.74	83.44	84.71	84.72	54.29	66.76	78.64	86.71	86.89	86.89	56.35	69.78	82.26	88.76	88.79	88.81	58.40	72.76	85.58	90.42	90.45	90.46
	kW	23.90	23.53	23.17	22.91	22.83	22.83	23.99	23.61	23.26	23.03	22.99	22.99	24.05	23.67	23.33	23.13	23.13	23.13	24.11	23.72	23.39	23.25	23.25	23.25	24.16	23.77	23.46	23.35	23.35	23.36
40	TC	94.34	88.61	83.18	79.09	78.22	78.23	95.45	89.64	84.34	80.88	80.55	80.57	96.32	90.41	85.23	82.55	82.55	82.56	97.05	91.10	86.15	84.26	84.28	84.30	97.68	91.70	87.01	85.80	85.80	85.82
	SC	48.03	58.37	68.47	76.99	78.22	78.23	50.20	61.60	72.55	80.10	80.55	80.57	52.31	64.70	76.32	82.48	82.55	82.56	54.36	67.69	79.73	84.26	84.28	84.30	56.40	70.62	82.87	85.71	85.80	85.82
	kW	26.23	25.86	25.51	25.26	25.22	25.22	26.31	25.93	25.60	25.40	25.38	25.38	26.37	25.99	25.67	25.51	25.51	25.52	26.43	26.04	25.74	25.63	25.63	25.63	26.47	26.08	25.80	25.74	25.74	25.74
45	TC	88.12	82.76	77.81	74.20	74.05	74.07	89.06	83.60	78.74	76.51	76.16	76.18	89.83	84.29	79.70	77.98	77.98	77.99	90.45	84.90	80.57	79.53	79.53	79.54	90.97	85.46	81.42	80.88	80.90	80.91
	SC	46.02	56.31	66.29	73.66	74.05	74.07	48.18	59.51	70.23	75.49	76.16	76.18	50.27	62.56	73.77	77.91	77.98	77.99	52.32	65.52	76.97	79.44	79.53	79.54	54.35	68.38	79.52	80.88	80.90	80.91
	kW	28.69	28.33	28.00	27.78	27.77	27.77	28.76	28.39	28.07	27.94	27.92	27.92	28.82	28.44	28.15	28.05	28.05	28.05	28.87	28.49	28.22	28.16	28.16	28.16	28.91	28.54	28.28	28.26	28.26	28.26
48	TC	84.26	79.15	74.45	71.72	71.44	71.45	85.12	79.86	75.35	73.79	73.42	73.44	85.80	80.52	76.32	75.13	75.10	75.11	86.35	81.08	77.08	76.54	76.55	76.57	86.82	81.64	78.13	77.80	77.82	77.83
	SC	44.78	55.05	64.92	71.04	71.44	71.45	46.93	58.21	68.73	72.67	73.42	73.44	49.02	61.25	72.15	74.98	75.10	75.11	51.05	64.15	75.08	76.54	76.55	76.57	53.08	66.98	76.94	77.80	77.82	77.83
	kW	30.20	29.85	29.52	29.35	29.34	29.34	30.27	29.90	29.60	29.50	29.48	29.48	30.32	29.95	29.68	29.61	29.61	29.61	30.36	30.00	29.74	29.72	29.72	29.72	30.40	30.05	29.83	29.81	29.81	29.81

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UA100 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		4440 (16000)						4995 (18000)						5550 (20000)						6105 (22000)						6660 (24000)			
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	140.52	132.73	125.15	117.94	111.96	109.94	142.81	135.07	127.50	120.33	115.06	113.81	144.70	136.95	129.36	122.27	117.19	117.19	146.26	138.50	130.94	123.97	120.18	120.16	147.59	139.80	132.09	125.56	122.66	122.71
	SC	63.77	74.98	86.02	96.95	106.74	109.94	66.11	78.41	90.56	102.44	112.00	113.81	68.35	81.68	94.91	107.69	117.10	117.19	70.51	84.86	99.16	112.64	120.01	120.16	72.63	88.01	103.27	117.23	122.27	122.71
	kW	23.35	22.57	21.82	21.13	20.55	20.37	23.60	22.82	22.07	21.37	20.86	20.75	23.81	23.03	22.27	21.57	21.09	21.09	23.99	23.20	22.45	21.73	21.39	21.39	24.14	23.35	22.57	21.93	21.66	21.66
15	TC	133.87	126.50	119.35	112.44	107.00	105.59	135.94	128.58	121.40	114.57	110.22	109.22	137.64	130.30	123.10	116.46	112.39	112.37	139.05	131.66	124.47	118.03	115.83	115.13	140.26	132.88	125.53	119.37	117.62	117.56
	SC	61.37	72.44	83.40	94.14	103.47	105.59	63.65	75.78	87.81	99.48	107.24	109.22	65.83	79.02	92.10	104.62	112.24	112.37	67.96	82.16	96.29	109.32	113.55	115.13	70.05	85.25	100.28	113.57	117.32	117.56
	kW	25.47	24.67	23.91	23.19	22.63	22.49	25.71	24.91	24.15	23.44	22.98	22.88	25.91	25.11	24.34	23.64	23.23	23.23	26.08	25.28	24.51	23.79	23.61	23.53	26.23	25.43	24.63	23.98	23.81	23.80
25	TC	119.92	113.42	107.09	101.09	96.43	96.43	121.58	115.07	108.74	102.84	99.54	99.54	122.92	116.36	110.02	104.43	102.23	102.23	124.04	117.48	111.00	105.94	104.54	104.54	125.05	118.42	112.06	107.44	106.59	106.61
	SC	56.35	67.17	77.90	88.29	96.34	96.43	58.53	70.38	82.17	93.32	99.47	99.54	60.62	73.47	86.26	97.91	102.15	102.23	62.66	76.52	90.14	101.99	104.46	104.54	64.70	79.51	94.00	104.18	106.59	106.61
	kW	30.08	29.27	28.50	27.77	27.22	27.22	30.30	29.49	28.72	28.00	27.61	27.61	30.49	29.67	28.90	28.21	27.96	27.96	30.64	29.83	29.03	28.37	28.25	28.25	30.79	29.97	29.18	28.62	28.52	28.53
30	TC	122.26	115.09	103.70	95.20	92.08	91.65	124.18	116.95	105.29	96.82	94.48	94.49	125.72	118.41	106.52	98.22	96.92	96.92	127.01	119.70	112.57	102.61	99.02	99.04	128.22	120.78	113.73	104.12	103.35	103.38
	SC	57.24	67.92	76.21	85.20	90.75	91.65	59.52	71.22	80.40	89.96	94.45	94.49	61.67	74.37	84.42	94.25	96.85	96.92	63.76	77.50	91.03	99.31	99.02	99.04	65.88	80.56	94.97	101.35	103.35	103.38
	kW	27.14	26.64	29.05	30.28	29.89	29.83	27.29	26.78	29.24	30.51	30.21	30.22	27.41	26.89	29.38	30.71	30.55	30.55	27.51	26.99	26.49	28.94	30.84	30.85	27.61	27.08	26.58	29.18	29.11	29.11
35	TC	114.78	108.06	101.61	95.61	92.31	91.89	116.44	109.69	103.21	97.36	95.36	94.90	117.78	110.96	104.35	98.87	97.49	97.49	118.90	112.05	105.50	100.65	99.75	99.76	119.91	113.00	106.54	102.00	101.77	101.78
	SC	54.57	65.10	75.58	85.62	91.06	91.89	56.76	68.35	79.85	90.49	93.53	94.90	58.87	71.44	83.88	94.90	97.41	97.49	60.92	74.47	87.77	98.13	99.75	99.76	62.97	77.46	91.58	100.67	101.77	101.78
	kW	29.69	29.18	28.70	28.25	28.02	27.99	29.82	29.32	28.83	28.39	28.26	28.22	29.94	29.42	28.92	28.52	28.42	28.42	30.03	29.52	29.02	28.66	28.60	28.60	30.12	29.60	29.11	28.78	28.76	28.76
40	TC	107.05	100.82	94.85	89.41	86.80	86.80	108.48	102.18	96.14	91.01	89.52	89.52	109.62	103.33	97.27	92.59	91.84	91.86	110.62	104.26	98.31	94.42	93.87	93.90	111.46	105.07	99.09	95.86	95.67	95.69
	SC	51.82	62.22	72.58	82.23	86.73	86.80	53.96	65.37	76.68	86.77	89.45	89.52	56.01	68.42	80.59	90.33	91.84	91.86	58.03	71.37	84.38	92.76	93.87	93.90	60.02	74.30	87.99	94.69	95.67	95.69
	kW	32.41	31.91	31.43	31.00	30.80	30.80	32.54	32.03	31.55	31.14	31.03	31.03	32.64	32.14	31.65	31.28	31.23	31.23	32.73	32.23	31.74	31.43	31.40	31.40	32.81	32.30	31.82	31.56	31.55	31.55
45	TC	99.04	93.33	87.82	83.03	81.46	81.46	100.25	94.47	88.94	84.63	83.87	83.88	101.29	95.44	89.99	86.46	85.92	85.94	102.09	96.24	90.76	88.18	87.74	87.75	102.79	96.92	91.50	89.54	89.33	89.35
	SC	48.98	59.24	69.41	78.63	81.40	81.46	51.07	62.29	73.36	82.40	83.87	83.88	53.12	65.27	77.17	84.52	85.92	85.94	55.06	68.16	80.74	86.70	87.74	87.75	57.00	71.02	84.13	89.45	89.33	89.35
	kW	35.30	34.81	34.34	33.94	33.81	33.81	35.41	34.92	34.45	34.09	34.03	34.03	35.51	35.01	34.55	34.25	34.22	34.22	35.59	35.09	34.63	34.41	34.38	34.38	35.66	35.16	34.70	34.54	34.53	34.53
48	TC	94.16	88.72	83.50	79.16	78.12	78.12	95.24	89.79	84.60	80.64	80.36	80.38	96.15	90.66	85.53	83.00	82.29	82.31	96.89	91.37	86.25	84.12	83.94	83.96	97.51	91.97	87.01	85.42	85.41	85.43
	SC	47.27	57.40	67.43	76.20	78.06	78.12	49.32	60.43	71.31	79.74	80.36	80.38	51.32	63.36	75.01	80.58	82.29	82.31	53.25	66.21	78.44	84.04	83.94	83.96	55.16	69.03	81.62	85.34	85.41	85.43
	kW	37.08	36.61	36.15	35.77	35.68	35.68	37.19	36.72	36.26	35.92	35.89	35.89	37.28	36.80	36.36	36.12	36.08	36.08	37.35	36.88	36.43	36.24	36.23	36.23	37.42	36.94	36.51	36.37	36.37	36.38

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UA120 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		4440 (16000)						4995 (18000)						5550 (20000)						6105 (22000)						6660 (24000)					
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	152.17	143.58	135.43	127.76	121.66	118.76	154.49	146.04	137.89	130.45	125.03	123.05	156.41	147.99	139.77	132.66	128.37	126.74	158.04	149.73	141.33	134.73	130.87	130.01	164.96	151.07	142.85	136.70	132.92	132.89
	SC	69.33	81.22	92.96	104.39	115.04	118.76	71.76	84.80	97.75	110.23	120.99	123.05	74.09	88.26	102.33	115.82	124.97	126.74	76.37	91.68	106.76	120.95	128.51	130.01	80.44	95.00	111.03	125.83	132.72	132.89
	kW	28.13	27.17	26.28	25.45	24.82	24.53	28.41	27.46	26.56	25.76	25.19	24.99	28.64	27.69	26.78	26.01	25.56	25.40	28.84	27.90	26.96	26.25	25.85	25.75	25.89	28.07	27.15	26.48	26.08	26.08
15	TC	145.94	137.80	130.02	122.71	116.90	114.94	148.07	140.06	132.24	125.24	120.56	118.98	149.84	141.88	133.95	127.23	124.13	122.52	151.36	143.39	135.44	129.32	126.43	125.58	158.36	144.67	136.93	131.13	128.31	128.24
	SC	67.16	78.95	90.64	101.97	112.15	114.94	69.56	82.52	95.39	107.78	117.36	118.98	71.87	85.97	99.94	113.21	120.38	122.52	74.14	89.36	104.29	118.23	123.96	125.58	78.26	92.70	108.57	123.04	128.12	128.24
	kW	30.82	29.83	28.91	28.06	27.40	27.19	31.09	30.12	29.19	28.37	27.84	27.67	31.33	30.36	29.41	28.62	28.27	28.09	31.53	30.56	29.60	28.89	28.56	28.46	28.39	30.73	29.80	29.12	28.79	28.79
25	TC	132.66	125.49	118.52	112.13	107.88	106.71	134.48	127.31	120.18	114.12	111.27	110.28	135.96	128.81	121.72	116.12	114.22	113.34	137.19	130.01	123.13	117.76	115.95	115.97	144.01	131.03	124.34	119.50	118.26	118.29
	SC	62.55	74.20	85.79	96.94	105.40	106.71	64.92	77.72	90.41	102.47	108.37	110.28	67.21	81.16	94.83	107.55	111.67	113.34	69.45	84.51	99.16	112.30	115.95	115.97	73.55	87.83	103.39	115.95	118.26	118.29
	kW	36.66	35.66	34.70	33.83	33.26	33.12	36.93	35.93	34.94	34.12	33.74	33.62	37.16	36.16	35.17	34.42	34.17	34.05	37.35	36.35	35.39	34.67	34.43	34.43	33.91	36.51	35.58	34.93	34.77	34.77
30	TC	135.27	127.28	116.14	109.72	103.41	102.33	137.41	129.36	121.54	111.84	108.24	108.21	139.11	131.06	123.26	113.80	111.26	111.25	140.57	132.49	124.81	115.54	113.99	113.91	141.82	133.67	126.15	120.74	119.30	119.32
	SC	63.45	74.89	84.81	95.80	100.84	102.33	65.91	78.49	90.98	101.31	108.10	108.21	68.27	81.98	95.48	106.35	111.18	111.25	70.57	85.41	99.85	110.85	113.99	113.91	72.85	88.78	104.13	116.90	119.30	119.32
	kW	32.65	32.05	34.65	33.97	36.51	36.37	32.83	32.22	31.63	34.21	33.86	33.85	32.97	32.36	31.77	34.44	34.19	34.19	33.09	32.48	31.90	34.65	34.50	34.49	33.19	32.58	32.01	31.61	31.51	31.51
35	TC	128.08	120.56	113.34	106.93	103.49	102.36	129.96	122.43	115.01	109.14	105.92	105.89	131.52	123.91	116.67	111.06	108.89	108.90	132.78	125.15	118.09	112.76	111.52	111.54	133.87	126.23	119.24	114.91	113.86	113.88
	SC	60.97	72.33	83.64	94.48	100.91	102.36	63.39	75.92	88.25	99.94	105.78	105.89	65.74	79.38	92.73	104.94	108.89	108.90	68.01	82.79	97.09	109.23	111.52	111.54	70.27	86.15	101.30	112.26	113.86	113.88
	kW	35.80	35.19	34.61	34.10	33.83	33.75	35.96	35.35	34.75	34.29	34.04	34.04	36.10	35.48	34.90	34.46	34.29	34.29	36.21	35.59	35.03	34.61	34.51	34.51	36.31	35.69	35.13	34.79	34.71	34.71
40	TC	120.51	113.52	106.64	100.90	98.81	97.62	122.16	115.11	108.35	102.97	100.81	100.82	123.48	116.42	109.80	104.70	103.55	103.57	124.60	117.48	111.02	106.79	105.95	105.97	125.53	118.29	111.95	108.24	108.07	108.08
	SC	58.37	69.68	80.86	91.53	95.86	97.62	60.77	73.22	85.45	96.78	100.81	100.82	63.08	76.68	89.89	101.42	103.55	103.57	65.35	80.05	94.19	104.51	105.95	105.97	67.59	83.36	98.26	107.17	108.07	108.08
	kW	39.15	38.54	37.94	37.45	37.27	37.18	39.30	38.69	38.10	37.65	37.47	37.47	39.43	38.82	38.25	37.81	37.72	37.72	39.53	38.92	38.37	38.00	37.94	37.94	39.63	39.00	38.46	38.14	38.13	38.14
45	TC	112.54	106.06	99.76	94.71	92.48	92.49	113.96	107.43	101.30	96.46	95.37	95.39	115.08	108.52	102.56	98.63	97.86	97.88	116.00	109.32	103.49	100.41	100.02	100.04	116.79	109.98	104.55	102.43	101.90	101.92
	SC	55.67	66.91	77.97	88.41	92.48	92.49	58.03	70.43	82.53	93.35	95.37	95.39	60.33	73.86	86.92	96.66	97.86	97.88	62.57	77.18	91.05	99.16	100.02	100.04	64.80	80.39	94.82	100.95	101.90	101.92
	kW	42.66	42.07	41.49	41.04	40.84	40.84	42.80	42.21	41.65	41.21	41.12	41.12	42.92	42.32	41.78	41.43	41.36	41.36	43.01	42.41	41.88	41.60	41.57	41.58	43.10	42.48	42.00	41.80	41.76	41.76
48	TC	107.58	101.41	95.36	90.83	89.23	89.25	108.84	102.63	96.76	92.69	91.96	91.97	109.84	103.63	97.97	94.42	94.27	94.29	110.68	104.27	99.00	113.41	96.27	96.29	111.38	104.96	99.98	98.03	98.01	98.03
	SC	54.00	65.20	76.13	86.39	89.23	89.25	56.34	68.71	80.67	90.65	91.96	91.97	58.63	72.12	85.02	93.96	94.27	94.29	60.87	75.38	89.01	113.41	96.27	96.29	63.09	78.54	92.66	97.87	98.01	98.03
	kW	44.84	44.26	43.68	43.26	43.11	43.11	44.97	44.39	43.83	43.45	43.38	43.39	45.07	44.49	43.96	43.64	43.62	43.62	45.16	44.56	44.08	45.82	43.83	43.83	45.24	44.64	44.19	44.01	44.01	44.01

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UH 045 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		2022 (7300)						2275 (8200)						2528 (9100)						2781 (10000)						3034 (10900)					
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	58.67	55.24	51.99	48.85	45.96	44.96	59.62	56.20	52.93	49.74	47.43	46.59	60.43	57.00	53.71	50.51	48.81	48.02	61.08	57.67	54.36	51.28	50.15	49.28	61.65	58.24	54.92	51.90	51.33	50.40
	SC	26.36	30.98	35.51	40.00	43.64	44.96	27.31	32.33	37.32	42.14	45.68	46.59	28.22	33.64	39.03	44.12	46.98	48.02	29.08	34.89	40.70	46.05	47.97	49.28	29.87	36.09	42.30	47.86	48.70	50.40
	kW	9.84	9.52	9.23	8.94	8.68	8.60	9.93	9.61	9.31	9.02	8.81	8.75	10.02	9.69	9.39	9.09	8.94	8.88	10.08	9.76	9.45	9.17	9.07	9.00	10.14	9.82	9.51	9.23	9.18	9.11
15	TC	56.08	52.83	49.66	46.60	44.16	43.33	56.99	53.69	50.55	47.41	45.57	44.87	57.73	54.43	51.29	48.24	47.01	46.22	58.34	55.05	51.89	48.90	48.77	47.40	58.86	55.55	52.32	49.55	48.77	48.45
	SC	25.50	30.07	34.56	38.98	42.45	43.33	26.45	31.41	36.35	41.07	44.02	44.87	27.35	32.70	38.07	43.07	45.09	46.22	28.17	33.94	39.73	44.95	48.11	47.40	28.99	35.16	41.28	46.64	48.11	48.45
	kW	10.80	10.48	10.16	9.84	9.61	9.54	10.90	10.56	10.25	9.93	9.75	9.70	10.98	10.64	10.33	10.02	9.90	9.83	11.04	10.71	10.39	10.09	10.09	9.96	11.10	10.76	10.43	10.16	10.09	10.07
25	TC	50.64	47.66	44.80	41.99	40.50	39.91	51.39	48.39	45.51	42.84	41.48	41.25	51.99	48.98	46.09	43.45	42.47	42.41	52.43	49.47	46.53	44.15	43.42	43.43	52.83	49.86	46.85	44.92	44.33	44.34
	SC	23.72	28.15	32.60	36.81	39.14	39.91	24.61	29.50	34.37	38.89	41.04	41.25	25.47	30.77	36.08	40.66	42.28	42.41	26.29	32.00	37.68	42.30	43.42	43.43	27.08	33.19	39.18	43.46	44.33	44.34
	kW	12.92	12.57	12.23	11.89	11.72	11.67	13.01	12.66	12.32	12.00	11.85	11.83	13.09	12.73	12.39	12.08	11.98	11.98	13.14	12.80	12.44	12.17	12.10	12.10	13.19	12.85	12.49	12.27	12.21	12.22
30	TC	51.26	48.08	45.03	42.06	40.50	39.86	52.11	48.86	45.80	42.95	41.33	41.25	52.77	49.52	46.44	43.65	42.53	42.46	53.32	50.06	46.94	44.34	43.52	43.53	53.79	50.51	47.29	45.15	44.49	44.50
	SC	23.91	28.31	32.69	36.86	39.14	39.86	24.84	29.67	34.49	38.95	41.13	41.25	25.73	30.96	36.21	40.85	42.35	42.46	26.57	32.21	37.84	42.45	43.52	43.53	27.38	33.41	39.35	43.65	44.49	44.50
	kW	11.82	11.60	11.38	11.16	11.05	11.02	11.88	11.65	11.43	11.23	11.13	11.12	11.93	11.70	11.48	11.29	11.22	11.21	11.97	11.74	11.52	11.34	11.30	11.30	12.01	11.77	11.54	11.40	11.37	11.37
35	TC	48.36	45.35	42.46	39.76	38.75	38.05	49.07	46.05	43.14	40.49	39.37	39.33	49.65	46.61	43.69	41.20	40.45	40.45	50.14	47.08	44.09	42.01	41.44	41.45	50.54	47.45	44.49	42.86	42.33	42.33
	SC	22.95	27.32	31.68	35.76	37.22	38.05	23.85	28.65	33.45	37.76	39.24	39.33	24.72	29.93	35.16	39.46	40.45	40.45	25.56	31.16	36.71	40.73	41.44	41.45	26.36	32.36	38.20	41.57	42.33	42.33
	kW	12.96	12.73	12.51	12.30	12.22	12.18	13.01	12.79	12.57	12.36	12.29	12.29	13.06	12.84	12.61	12.42	12.38	12.38	13.10	12.88	12.64	12.49	12.46	12.46	13.14	12.90	12.68	12.56	12.53	12.53
40	TC	45.40	42.56	39.83	37.33	36.54	36.17	45.99	43.17	40.43	38.02	37.34	37.35	46.51	43.65	40.86	38.88	38.37	38.38	46.94	44.05	41.25	39.74	39.28	39.29	47.25	44.38	41.68	40.89	40.08	40.09
	SC	21.97	26.31	30.65	34.61	36.47	36.17	22.85	27.64	32.41	36.41	37.34	37.35	23.72	28.90	34.03	37.75	38.37	38.38	24.54	30.12	35.54	38.58	39.28	39.29	25.34	31.31	37.02	39.12	40.08	40.09
	kW	14.19	13.96	13.74	13.53	13.46	13.45	14.25	14.01	13.79	13.59	13.56	13.56	14.30	14.06	13.82	13.67	13.64	13.65	14.33	14.10	13.86	13.74	13.72	13.72	14.35	14.13	13.90	13.83	13.79	13.79
45	TC	42.28	39.63	37.12	34.87	34.21	34.22	42.81	40.16	37.57	35.73	35.29	35.30	43.26	40.58	37.99	36.62	36.22	36.23	43.62	40.93	38.45	37.16	37.05	37.05	43.92	41.23	38.80	37.99	37.77	37.78
	SC	20.95	25.25	29.58	33.33	34.21	34.22	21.83	26.57	31.26	34.73	35.29	35.30	22.69	27.83	32.83	35.59	36.22	36.23	23.51	29.05	34.36	36.80	37.05	37.05	24.31	30.25	35.77	37.50	37.77	37.78
	kW	15.48	15.25	15.04	14.84	14.81	14.81	15.53	15.30	15.07	14.92	14.90	14.91	15.57	15.34	15.11	15.00	14.99	14.99	15.60	15.37	15.15	15.07	15.06	15.06	15.63	15.40	15.19	15.13	15.13	15.13
48	TC	40.37	37.86	35.46	33.49	33.00	33.01	40.87	38.33	35.82	34.37	34.02	34.03	41.26	38.71	36.30	35.31	34.90	34.91	41.59	39.03	36.68	35.85	35.67	35.67	41.87	39.31	36.99	36.54	36.35	36.36
	SC	20.33	24.62	28.93	32.38	33.00	33.01	21.21	25.93	30.54	33.52	34.02	34.03	22.06	27.19	32.10	34.23	34.90	34.91	22.88	28.41	33.57	34.87	35.67	35.67	23.68	29.61	34.83	36.49	36.35	36.36
	kW	16.27	16.05	15.83	15.66	15.64	15.64	16.31	16.09	15.86	15.74	15.73	15.73	16.35	16.13	15.91	15.83	15.81	15.81	16.38	16.16	15.95	15.89	15.88	15.88	16.41	16.19	15.99	15.95	15.94	15.95

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UH 055 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		2755 (10000)						3100 (11200)						3444 (12400)						3788 (13600)						4133 (14900)					
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	69.28	65.18	61.29	57.49	54.77	53.61	70.32	66.23	62.33	58.52	56.44	55.43	71.22	67.12	63.21	59.43	57.04	57.01	71.96	67.83	63.86	60.33	59.67	58.40	72.60	68.47	64.42	60.89	60.68	59.64
	SC	31.30	37.01	42.65	48.17	52.23	53.61	32.43	38.64	44.81	50.67	53.98	55.43	33.54	40.22	46.91	52.97	56.91	57.01	34.56	41.71	48.87	55.19	56.29	58.40	35.57	43.19	50.78	57.02	56.99	59.64
	kW	11.97	11.62	11.29	10.95	10.73	10.64	12.07	11.71	11.38	11.05	10.88	10.80	12.15	11.79	11.46	11.13	10.94	10.94	12.22	11.86	11.52	11.22	11.16	11.07	12.29	11.92	11.57	11.28	11.26	11.18
15	TC	66.04	62.17	58.43	54.72	52.49	51.60	67.00	63.13	59.36	55.84	54.32	53.31	67.79	63.86	60.12	56.68	54.91	54.79	68.46	64.53	60.73	57.42	57.31	56.09	69.06	65.09	61.15	58.17	57.54	57.24
	SC	30.27	35.93	41.53	46.92	50.42	51.60	31.38	37.55	43.68	49.40	51.78	53.31	32.44	39.07	45.72	51.68	54.53	54.79	33.46	40.57	47.67	53.71	53.93	56.09	34.46	42.05	49.54	55.30	56.84	57.24
	kW	13.07	12.71	12.35	11.99	11.79	11.72	13.16	12.80	12.44	12.10	11.96	11.88	13.24	12.87	12.52	12.19	12.04	12.03	13.31	12.94	12.59	12.27	12.26	12.16	13.38	13.00	12.63	12.35	12.30	12.27
25	TC	59.49	56.01	52.63	49.41	48.38	47.49	60.27	56.75	53.38	50.32	49.10	48.97	60.89	57.39	53.90	51.15	50.10	50.24	61.36	57.91	54.29	52.09	51.33	51.35	61.82	58.34	54.86	52.28	52.32	52.33
	SC	28.19	33.76	39.32	44.41	46.07	47.49	29.27	35.35	41.46	46.75	48.67	48.97	30.30	36.88	43.40	48.64	50.10	50.24	31.25	38.33	45.24	50.06	51.33	51.35	32.26	39.80	47.01	52.28	52.32	52.33
	kW	15.54	15.14	14.76	14.40	14.29	14.20	15.64	15.24	14.85	14.51	14.39	14.38	15.71	15.32	14.92	14.61	14.52	14.53	15.76	15.38	14.96	14.73	14.66	14.66	15.82	15.44	15.04	14.77	14.78	14.78
30	TC	60.26	56.53	52.92	49.58	47.48	47.46	61.13	57.35	53.72	50.47	49.13	49.00	61.84	58.02	54.33	51.34	50.17	50.33	62.43	58.60	54.79	52.41	51.53	51.50	62.96	59.08	55.32	52.50	52.53	52.55
	SC	28.43	33.94	39.43	44.48	47.37	47.46	29.54	35.56	41.59	46.84	48.74	49.00	30.60	37.09	43.56	48.77	50.17	50.33	31.59	38.57	45.43	50.24	51.42	51.50	32.61	40.05	47.22	52.50	52.53	52.55
	kW	14.32	14.08	13.82	13.59	13.46	13.46	14.38	14.13	13.88	13.66	13.58	13.57	14.44	14.17	13.93	13.73	13.66	13.67	14.48	14.22	13.96	13.80	13.76	13.76	14.52	14.25	14.00	13.83	13.83	13.83
35	TC	56.85	53.29	49.92	46.81	45.39	45.32	57.55	54.03	50.62	47.68	46.65	46.75	58.18	54.63	51.09	48.70	47.96	47.96	58.70	55.14	51.60	49.67	49.03	49.03	59.15	55.59	52.05	49.97	49.97	49.99
	SC	27.33	32.82	38.29	43.17	45.14	45.32	28.41	34.39	40.40	45.29	46.65	46.75	29.45	35.94	42.31	46.84	47.96	47.96	30.46	37.43	44.11	47.94	49.03	49.03	31.44	38.90	45.83	49.97	49.97	49.99
	kW	15.68	15.42	15.17	14.94	14.85	14.84	15.73	15.48	15.22	15.01	14.95	14.96	15.78	15.53	15.26	15.09	15.05	15.05	15.82	15.57	15.30	15.17	15.13	15.14	15.86	15.60	15.34	15.21	15.21	15.21
40	TC	53.32	50.03	46.87	44.02	43.22	43.12	53.97	50.65	47.41	45.07	44.42	44.43	54.50	51.18	47.91	46.12	45.54	45.55	54.90	51.62	48.36	47.34	46.51	46.52	55.29	51.99	48.86	47.36	47.38	47.40
	SC	26.20	31.67	37.12	41.74	42.97	43.12	27.29	33.25	39.16	43.43	44.42	44.43	28.32	34.78	41.02	44.56	45.54	45.55	29.29	36.27	42.77	45.28	46.51	46.52	30.27	37.72	44.47	47.36	47.38	47.40
	kW	17.18	16.92	16.66	16.44	16.40	16.39	17.23	16.97	16.70	16.53	16.50	16.50	17.28	17.02	16.75	16.62	16.59	16.59	17.30	17.05	16.79	16.71	16.67	16.67	17.33	17.09	16.84	16.74	16.75	16.75
45	TC	49.73	46.72	43.73	41.51	40.90	40.90	50.30	47.25	44.25	42.58	42.08	42.09	50.75	47.69	44.76	43.94	43.08	43.09	51.13	48.06	45.21	44.62	43.95	43.96	51.45	48.38	45.57	44.73	44.73	44.74
	SC	25.08	30.53	35.92	40.00	40.90	40.90	26.14	32.10	37.87	41.21	42.08	42.09	27.16	33.62	39.70	41.89	43.08	43.09	28.15	35.09	41.41	42.70	43.95	43.96	29.11	36.55	42.93	44.62	44.73	44.74
	kW	18.75	18.50	18.25	18.09	18.06	18.06	18.80	18.55	18.30	18.18	18.16	18.16	18.84	18.59	18.35	18.28	18.24	18.25	18.87	18.62	18.39	18.34	18.32	18.32	18.90	18.65	18.43	18.39	18.39	18.39
48	TC	47.56	44.72	41.85	39.96	39.52	39.53	48.06	45.18	42.42	41.13	40.62	40.63	48.46	45.58	42.86	42.18	41.55	41.57	48.81	45.90	43.24	43.01	42.37	42.38	49.10	46.17	43.67	43.09	43.09	43.10
	SC	24.39	29.85	35.17	38.82	39.52	39.53	25.45	31.40	37.10	39.72	40.62	40.63	26.46	32.92	38.89	40.42	41.55	41.57	27.44	34.39	40.50	41.08	42.37	42.38	28.40	35.83	41.84	42.98	43.09	43.10
	kW	19.74	19.51	19.27	19.13	19.13	19.13	19.79	19.55	19.32	19.23	19.22	19.22	19.82	19.59	19.37	19.31	19.29	19.29	19.85	19.62	19.40	19.38	19.36	19.36	19.87	19.64	19.44	19.42	19.42	19.42

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UH 065 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		2778 (10000)						3124 (11250)						3472 (12500)						3819 (13750)						4166 (15000)			
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	80.45	75.63	71.08	66.73	63.37	62.10	81.76	76.97	72.37	68.15	65.37	64.30	82.90	78.08	73.43	69.26	66.93	66.22	83.84	79.00	74.24	70.32	68.47	67.92	84.64	79.79	74.98	71.26	69.44	69.42
	SC	36.61	43.01	49.34	55.43	60.64	62.10	37.94	44.93	51.88	58.51	63.20	64.30	39.23	46.81	54.37	61.38	65.51	66.22	40.46	48.63	56.69	63.98	66.85	67.92	41.67	50.41	58.93	66.43	69.31	69.42
	kW	11.84	11.52	11.23	10.94	10.74	10.67	11.93	11.61	11.31	11.04	10.87	10.81	12.01	11.69	11.38	11.12	10.98	10.94	12.07	11.75	11.44	11.19	11.08	11.05	12.13	11.81	11.49	11.26	11.15	11.15
15	TC	77.17	72.54	68.15	64.01	60.99	60.01	78.43	73.77	69.33	65.34	63.14	62.10	79.45	74.79	70.26	66.35	64.53	63.92	80.31	75.64	70.98	67.41	66.08	65.53	81.06	76.38	71.80	68.28	66.98	66.94
	SC	35.51	41.83	48.12	54.15	58.94	60.01	36.82	43.76	50.67	57.20	60.91	62.10	38.10	45.63	53.12	59.94	63.20	63.92	39.32	47.43	55.39	62.49	64.26	65.53	40.52	49.21	57.63	64.84	66.78	66.94
	kW	13.12	12.79	12.47	12.18	11.98	11.93	13.21	12.88	12.56	12.28	12.14	12.08	13.29	12.95	12.63	12.36	12.24	12.21	13.36	13.02	12.68	12.44	12.36	12.32	13.41	13.08	12.75	12.51	12.43	12.43
25	TC	70.07	65.92	61.91	58.28	56.67	55.57	71.10	66.92	62.79	59.36	57.93	57.42	71.93	67.76	63.60	60.37	59.19	59.03	72.63	68.44	64.37	61.32	60.43	60.42	73.20	69.00	65.04	62.39	61.65	61.66
	SC	33.11	39.38	45.62	51.48	54.34	55.57	34.40	41.28	48.08	54.27	56.68	57.42	35.65	43.13	50.43	56.87	58.69	59.03	36.84	44.91	52.69	59.07	60.35	60.42	38.01	46.66	54.90	60.61	61.65	61.66
	kW	15.98	15.63	15.30	15.00	14.87	14.80	16.08	15.72	15.37	15.09	14.99	14.96	16.15	15.80	15.44	15.19	15.10	15.09	16.22	15.86	15.51	15.27	15.21	15.21	16.27	15.91	15.58	15.37	15.32	15.32
30	TC	68.43	64.26	60.24	55.18	53.70	53.22	69.44	65.24	61.09	57.76	54.96	54.95	70.26	66.05	61.93	58.73	57.65	57.64	70.92	66.71	62.69	59.81	59.00	59.01	71.48	67.26	63.29	60.59	60.23	60.24
	SC	32.56	38.77	44.95	50.00	53.70	53.22	33.86	40.67	47.38	53.47	54.88	54.95	35.10	42.52	49.74	55.99	57.58	57.64	36.30	44.30	52.01	57.91	59.00	59.01	37.47	46.05	54.19	59.67	60.23	60.24
	kW	16.35	16.05	15.76	16.56	16.48	16.41	16.42	16.12	15.82	15.60	16.57	16.57	16.48	16.18	15.88	15.67	15.62	15.62	16.54	16.23	15.94	15.76	15.72	15.72	16.58	16.28	15.99	15.82	15.81	15.81
35	TC	66.29	62.16	58.21	54.65	53.17	52.69	67.24	63.10	59.02	55.85	54.47	54.45	68.02	63.83	59.86	56.80	55.98	55.98	68.66	64.45	60.59	58.03	57.31	57.31	69.21	64.98	61.10	59.01	58.49	58.50
	SC	31.85	38.00	44.14	49.73	52.10	52.69	33.14	39.91	46.54	52.50	54.38	54.45	34.38	41.74	48.90	54.80	55.98	55.98	35.58	43.52	51.16	56.44	57.31	57.31	36.75	45.27	53.31	57.85	58.49	58.50
	kW	16.85	16.60	16.37	16.17	16.10	16.08	16.91	16.66	16.42	16.25	16.19	16.19	16.95	16.71	16.47	16.31	16.28	16.28	17.00	16.75	16.52	16.38	16.36	16.36	17.03	16.78	16.55	16.45	16.43	16.43
40	TC	62.39	58.49	54.68	51.59	50.31	50.21	63.22	59.31	55.56	52.59	51.83	51.84	63.88	59.98	56.31	53.80	53.23	53.24	64.44	60.53	56.85	54.72	54.45	54.46	64.93	60.95	57.39	55.73	55.54	55.55
	SC	30.55	36.67	42.71	48.19	50.31	50.21	31.82	38.56	45.12	50.68	51.83	51.84	33.05	40.39	47.45	52.42	53.23	53.24	34.24	42.17	49.65	53.96	54.45	54.46	35.41	43.89	51.68	54.87	55.54	55.55
	kW	18.57	18.32	18.08	17.90	17.84	17.83	18.63	18.38	18.14	17.96	17.94	17.94	18.67	18.42	18.19	18.05	18.03	18.03	18.71	18.46	18.23	18.12	18.11	18.11	18.74	18.49	18.27	18.19	18.18	18.18
45	TC	58.26	54.66	51.17	48.40	47.61	47.62	59.00	55.36	51.97	49.55	49.09	49.10	59.60	55.93	52.56	50.36	50.36	50.37	60.10	56.40	53.10	51.64	51.46	51.48	60.52	56.70	53.66	52.78	52.45	52.46
	SC	29.19	35.29	41.26	46.47	47.61	47.62	30.46	37.16	43.66	48.37	49.09	49.10	31.69	38.98	45.94	50.32	50.36	50.37	32.88	40.75	48.01	50.95	51.46	51.48	34.05	42.43	49.93	51.29	52.45	52.46
	kW	20.40	20.16	19.92	19.74	19.71	19.71	20.45	20.21	19.98	19.83	19.81	19.82	20.49	20.25	20.03	19.90	19.90	19.91	20.53	20.29	20.06	19.99	19.98	19.98	20.56	20.30	20.11	20.07	20.05	20.05
48	TC	55.80	52.34	49.02	46.50	45.99	46.00	56.47	52.97	49.75	47.56	47.37	47.38	57.02	53.50	50.24	48.57	48.57	48.58	57.47	53.87	50.83	49.54	49.61	49.62	57.86	54.14	51.38	50.46	50.52	50.53
	SC	28.39	34.46	40.37	45.23	45.99	46.00	29.65	36.32	42.75	46.97	47.37	47.38	30.87	38.14	44.95	48.52	48.57	48.58	32.06	39.88	46.94	49.54	49.61	49.62	33.23	41.53	48.78	50.46	50.52	50.53
	kW	21.54	21.30	21.06	20.90	20.88	20.88	21.58	21.34	21.12	20.99	20.98	20.98	21.62	21.38	21.16	21.07	21.07	21.07	21.66	21.41	21.21	21.14	21.15	21.15	21.69	21.43	21.25	21.19	21.21	21.21

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UH 075 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		3155 (11400)						3550 (12800)						3944 (14200)						4388 (15800)						4733 (17000)					
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	92.84	87.54	82.48	77.61	73.80	72.10	94.33	89.07	83.98	79.23	75.83	74.52	95.56	90.30	85.21	80.51	77.96	76.69	96.60	91.33	86.10	81.71	78.62	78.61	97.38	92.20	86.93	82.85	80.31	80.31
	SC	42.03	49.43	56.69	63.67	69.81	72.10	43.56	51.60	59.59	67.14	73.00	74.52	44.99	53.70	62.38	70.41	75.19	76.69	46.38	55.77	65.03	73.39	78.49	78.61	47.72	57.78	67.55	76.15	80.18	80.31
	kW	15.22	14.81	14.42	14.05	13.78	13.67	15.35	14.93	14.54	14.18	13.94	13.86	15.45	15.03	14.64	14.28	14.10	14.02	15.54	15.12	14.71	14.38	14.17	14.17	15.61	15.20	14.78	14.48	14.30	14.30
15	TC	89.33	84.27	79.39	74.76	71.22	69.81	90.74	85.66	80.78	76.28	73.44	72.20	91.86	86.79	81.81	77.43	74.29	74.28	92.75	87.69	82.64	78.67	76.10	76.09	93.52	88.44	83.55	79.70	77.71	77.70
	SC	40.85	48.17	55.40	62.32	68.19	69.81	42.36	50.34	58.29	65.76	70.96	72.20	43.76	52.43	61.03	68.91	74.15	74.28	45.13	54.46	63.63	71.83	75.98	76.09	46.48	56.45	66.16	74.55	77.58	77.70
	kW	17.07	16.64	16.23	15.84	15.57	15.47	17.20	16.76	16.35	15.98	15.76	15.67	17.30	16.86	16.44	16.08	15.85	15.85	17.39	16.95	16.51	16.19	16.00	16.00	17.46	17.02	16.60	16.29	16.14	16.14
25	TC	81.60	76.97	72.55	68.54	65.89	65.01	82.65	78.05	73.52	69.72	67.76	67.13	83.54	78.95	74.40	70.94	68.96	68.94	84.33	79.71	75.26	71.86	70.54	70.53	84.99	80.35	76.02	72.92	71.94	71.93
	SC	38.24	45.44	52.62	59.40	63.96	65.01	39.67	47.55	55.38	62.60	66.39	67.13	41.04	49.60	58.01	65.59	68.85	68.94	42.42	51.64	60.57	68.28	70.41	70.53	43.77	53.63	63.07	70.33	71.81	71.93
	kW	21.14	20.68	20.23	19.84	19.59	19.53	21.26	20.79	20.33	19.96	19.79	19.74	21.36	20.89	20.42	20.09	19.93	19.93	21.44	20.98	20.52	20.20	20.10	20.09	21.52	21.05	20.61	20.31	20.24	20.24
30	TC	82.06	77.11	70.77	66.80	62.87	62.39	83.21	78.27	71.73	68.06	66.86	65.69	84.19	79.24	74.40	69.23	67.49	67.48	85.05	80.08	75.33	70.22	69.07	69.04	85.79	80.79	76.14	71.34	70.42	70.44
	SC	38.40	45.49	51.89	58.57	61.73	62.39	39.85	47.63	54.66	61.75	63.85	65.69	41.26	49.71	58.01	64.69	67.38	67.48	42.66	51.77	60.60	67.21	68.90	69.04	44.03	53.79	63.12	69.06	70.42	70.44
	kW	19.62	19.35	20.68	20.36	21.79	21.77	19.69	19.42	20.75	20.47	20.37	20.32	19.75	19.47	19.20	20.57	20.47	20.47	19.80	19.52	19.26	20.66	20.60	20.59	19.84	19.57	19.31	20.76	20.71	20.71
35	TC	77.76	73.09	68.68	64.75	63.04	61.98	78.86	74.20	69.60	66.06	64.67	64.01	79.79	75.08	70.53	67.16	65.79	65.77	80.57	75.85	71.38	68.26	67.31	67.29	81.25	76.50	72.14	69.29	68.65	68.66
	SC	36.96	44.00	51.04	57.59	60.91	61.98	38.42	46.16	53.78	60.74	63.26	64.01	39.83	48.23	56.41	63.61	65.67	65.77	41.23	50.29	58.99	65.91	67.20	67.29	42.59	52.31	61.51	67.47	68.65	68.66
	kW	21.82	21.54	21.27	21.03	20.94	20.90	21.88	21.61	21.32	21.12	21.05	21.03	21.94	21.66	21.39	21.19	21.14	21.14	21.99	21.71	21.45	21.27	21.23	21.23	22.04	21.76	21.49	21.34	21.31	21.31
40	TC	73.39	69.01	64.72	61.22	59.19	59.16	74.39	69.98	65.69	62.46	61.07	61.05	75.21	70.77	66.56	63.52	62.69	62.67	75.91	71.44	67.34	64.63	64.07	64.08	76.49	72.00	67.82	65.93	65.32	65.34
	SC	35.51	42.50	49.43	55.84	59.10	59.16	36.96	44.64	52.15	58.90	60.97	61.05	38.36	46.71	54.77	61.36	62.59	62.67	39.74	48.76	57.34	63.11	64.07	64.08	41.09	50.76	59.69	64.03	65.32	65.34
	kW	24.15	23.87	23.58	23.36	23.26	23.26	24.22	23.93	23.65	23.45	23.39	23.39	24.27	23.99	23.71	23.53	23.50	23.50	24.32	24.03	23.77	23.61	23.59	23.59	24.36	24.07	23.81	23.69	23.67	23.68
45	TC	68.82	64.71	60.68	57.56	56.21	56.19	69.71	65.56	61.63	58.66	57.90	57.91	70.41	66.24	62.39	59.97	59.38	59.39	71.02	66.83	62.94	61.21	60.68	60.68	71.54	67.19	63.56	62.43	61.81	61.82
	SC	34.00	40.95	47.76	53.96	56.12	56.19	35.44	43.08	50.47	56.69	57.90	57.91	36.82	45.14	53.07	58.53	59.38	59.39	38.20	47.18	55.51	59.48	60.68	60.68	39.55	49.11	57.67	60.45	61.81	61.82
	kW	26.58	26.30	26.02	25.82	25.75	25.75	26.64	26.36	26.09	25.90	25.87	25.87	26.69	26.41	26.15	26.00	25.98	25.98	26.73	26.45	26.19	26.08	26.07	26.07	26.77	26.48	26.24	26.16	26.15	26.15
48	TC	65.98	62.05	58.24	55.30	54.32	54.31	66.78	62.82	59.11	56.54	55.93	55.94	67.43	63.44	59.75	57.61	57.32	57.33	67.99	63.89	60.33	58.75	58.54	58.55	68.45	64.22	60.97	59.83	59.61	59.62
	SC	33.07	39.99	46.75	52.76	54.28	54.31	34.50	42.11	49.45	55.02	55.93	55.94	35.88	44.17	52.00	56.81	57.32	57.33	37.25	46.18	54.28	57.95	58.54	58.55	38.59	48.07	56.43	58.92	59.61	59.62
	kW	28.06	27.78	27.51	27.31	27.26	27.27	28.12	27.84	27.58	27.40	27.38	27.39	28.17	27.89	27.63	27.50	27.49	27.49	28.21	27.92	27.68	27.59	27.58	27.58	28.24	27.94	27.73	27.67	27.66	27.66

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UH 085 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		4440 (16000)						4995 (18000)						5550 (20000)						6105 (22000)						6660 (24000)			
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	114.8	108.3	102.0	96.42	92.45	91.82	116.4	109.9	103.4	98.13	94.85	94.83	117.7	111.1	104.7	99.81	97.44	97.42	118.7	112.1	106.0	101.2	99.72	99.67	119.6	113.0	107.0	102.6	102.0	101.7
	SC	53.99	64.25	74.46	84.23	91.11	91.82	56.08	67.34	78.46	88.91	94.71	94.83	58.10	70.33	82.33	93.23	97.28	97.42	60.05	73.24	86.08	97.12	99.44	99.67	62.00	76.13	89.70	99.75	102.0	101.7
	kW	17.01	16.48	15.98	15.55	15.27	15.21	17.15	16.62	16.10	15.70	15.46	15.46	17.26	16.73	16.22	15.84	15.67	15.67	17.36	16.82	16.33	15.97	15.86	15.86	17.44	16.90	16.42	16.09	16.04	16.02
15	TC	110.3	104.0	97.81	92.49	89.35	88.78	111.7	105.4	99.20	94.28	91.66	91.64	112.8	106.5	100.5	95.84	94.59	94.10	113.8	107.5	101.5	97.46	96.42	96.24	114.6	108.3	102.5	98.69	98.07	98.09
	SC	52.47	62.66	72.77	82.40	88.00	88.78	54.53	65.73	76.77	86.98	91.52	91.64	56.52	68.71	80.61	91.09	94.38	94.10	58.48	71.62	84.30	94.44	96.42	96.24	60.42	74.52	87.89	96.57	98.07	98.09
	kW	18.76	18.22	17.68	17.24	17.00	16.95	18.89	18.35	17.81	17.41	17.20	17.20	19.00	18.46	17.94	17.55	17.46	17.42	19.10	18.55	18.04	17.70	17.62	17.61	19.18	18.63	18.13	17.82	17.78	17.78
25	TC	100.2	94.49	88.86	84.45	82.26	82.24	101.4	95.65	90.15	86.01	84.77	84.74	102.4	96.60	91.23	87.78	86.86	86.88	103.2	97.35	92.06	89.25	88.73	88.74	103.9	97.90	92.84	90.32	90.33	90.35
	SC	49.11	59.19	69.13	78.39	82.14	82.24	51.18	62.25	73.07	82.56	84.62	84.74	53.17	65.23	76.84	85.60	86.86	86.88	55.11	68.13	80.44	87.58	88.73	88.74	57.05	70.94	83.74	90.32	90.33	90.35
	kW	22.57	22.00	21.44	21.02	20.83	20.83	22.70	22.13	21.58	21.19	21.08	21.08	22.80	22.23	21.71	21.38	21.30	21.31	22.90	22.32	21.80	21.54	21.50	21.50	22.98	22.38	21.89	21.67	21.67	21.67
30	TC	98.42	92.59	86.87	80.28	78.76	78.75	99.66	93.78	88.25	81.88	81.05	81.06	103.3	94.75	89.29	85.98	83.02	83.04	104.2	95.54	90.11	87.56	84.74	84.76	105.0	96.09	91.00	89.04	86.20	86.22
	SC	48.55	58.52	68.33	76.23	78.66	78.75	50.63	61.61	72.32	79.73	81.05	81.06	53.47	64.60	76.06	83.78	83.02	83.04	55.44	67.52	79.63	85.78	84.74	84.76	57.41	70.36	82.83	87.75	86.20	86.22
	kW	22.54	22.08	21.63	23.10	22.96	22.96	22.65	22.19	21.75	23.28	23.21	23.21	20.81	22.27	21.84	21.59	23.43	23.44	20.87	22.34	21.92	21.73	23.63	23.63	20.92	22.39	22.00	21.85	23.79	23.79
35	TC	95.45	89.61	84.03	79.75	78.20	78.21	96.64	90.77	85.34	81.48	80.62	80.63	97.61	91.69	86.28	82.75	82.69	82.70	98.40	92.35	87.10	84.48	84.50	84.52	99.08	93.02	88.05	86.06	86.09	86.10
	SC	47.56	57.44	67.15	75.95	78.20	78.21	49.65	60.54	71.13	79.41	80.62	80.63	51.67	63.54	74.84	82.53	82.69	82.70	53.63	66.41	78.29	84.48	84.50	84.52	55.58	69.25	81.45	86.06	86.09	86.10
	kW	22.75	22.39	22.05	21.80	21.72	21.72	22.82	22.47	22.13	21.91	21.88	21.88	22.89	22.53	22.20	22.01	22.01	22.01	22.94	22.57	22.26	22.12	22.12	22.12	22.99	22.62	22.33	22.22	22.22	22.22
40	TC	89.78	84.33	79.16	75.27	74.44	74.46	90.84	85.32	80.27	76.98	76.66	76.68	91.67	86.05	81.12	78.57	78.56	78.58	92.37	86.70	81.99	80.20	80.21	80.23	92.97	87.27	82.81	81.66	81.66	81.67
	SC	45.71	55.56	65.17	73.27	74.44	74.46	47.78	58.63	69.05	76.24	76.66	76.68	49.78	61.57	72.64	78.50	78.56	78.58	51.74	64.42	75.88	80.20	80.21	80.23	53.68	67.22	78.87	81.58	81.66	81.67
	kW	24.96	24.61	24.28	24.04	24.00	24.00	25.04	24.68	24.36	24.17	24.15	24.15	25.10	24.73	24.42	24.28	24.28	24.28	25.15	24.78	24.49	24.39	24.39	24.39	25.19	24.82	24.55	24.49	24.49	24.49
45	TC	83.87	78.77	74.06	70.62	70.48	70.49	84.76	79.57	74.94	72.82	72.49	72.50	85.49	80.23	75.86	74.22	74.21	74.23	86.09	80.80	76.69	75.69	75.69	75.71	86.58	81.34	77.49	76.98	77.00	77.01
	SC	43.80	53.60	63.09	70.11	70.48	70.49	45.85	56.64	66.84	71.85	72.49	72.50	47.85	59.55	70.21	74.15	74.21	74.23	49.79	62.36	73.25	75.61	75.69	75.71	51.73	65.08	75.68	76.98	77.00	77.01
	kW	27.30	26.96	26.64	26.43	26.42	26.42	27.37	27.01	26.71	26.58	26.56	26.57	27.42	27.06	26.78	26.69	26.69	26.69	27.47	27.11	26.85	26.79	26.80	26.80	27.51	27.16	26.91	26.89	26.89	26.89
48	TC	80.19	75.33	70.86	68.26	67.99	68.00	81.01	76.00	71.72	70.23	69.88	69.89	81.66	76.63	72.64	71.50	71.47	71.49	82.18	77.17	73.36	72.85	72.86	72.87	82.63	77.70	74.36	74.05	74.06	74.08
	SC	42.62	52.40	61.78	67.61	67.99	68.00	44.67	55.40	65.42	69.16	69.88	69.89	46.65	58.29	68.67	71.36	71.47	71.49	48.59	61.06	71.46	72.85	72.86	72.87	50.52	63.75	73.22	74.05	74.06	74.08
	kW	28.74	28.40	28.09	27.93	27.92	27.92	28.80	28.45	28.17	28.07	28.05	28.06	28.85	28.50	28.24	28.17	28.17	28.17	28.89	28.55	28.30	28.28	28.28	28.28	28.93	28.60	28.38	28.37	28.37	28.37

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UH 100 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		4440 (16000)						4995 (18000)						5550 (20000)						6105 (22000)						6660 (24000)			
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	132.7	125.4	118.2	111.4	105.7	103.8	134.9	127.6	120.4	113.6	108.7	107.5	136.7	129.3	122.2	115.5	110.7	110.7	138.1	130.8	123.7	117.1	113.5	113.5	139.4	132.0	124.7	118.6	115.8	115.9
	SC	60.22	70.81	81.24	91.56	100.8	103.8	62.43	74.05	85.52	96.74	105.8	107.5	64.55	77.13	89.63	101.7	110.6	110.7	66.59	80.14	93.65	106.4	113.3	113.5	68.59	83.12	97.53	110.7	115.5	115.9
	kW	23.01	22.24	21.50	20.81	20.25	20.07	23.26	22.48	21.74	21.05	20.55	20.44	23.46	22.69	21.94	21.26	20.78	20.78	23.64	22.86	22.11	21.40	21.08	21.08	23.79	23.00	22.24	21.60	21.34	21.34
15	TC	126.4	119.5	112.7	106.2	101.0	99.72	128.4	121.4	114.6	108.2	104.1	103.1	130.0	123.0	116.3	110.0	106.1	106.1	131.3	124.3	117.5	111.5	109.4	108.7	132.5	125.5	118.5	112.7	111.1	111.0
	SC	57.95	68.41	78.76	88.90	97.71	99.72	60.11	71.57	82.93	93.95	101.3	103.1	62.17	74.62	86.98	98.80	106.0	106.1	64.18	77.59	90.93	103.2	107.2	108.7	66.15	80.51	94.70	107.2	110.8	111.0
	kW	25.09	24.31	23.56	22.85	22.29	22.16	25.33	24.54	23.79	23.09	22.64	22.54	25.53	24.74	23.98	23.29	22.88	22.88	25.70	24.90	24.14	23.44	23.26	23.18	25.85	25.05	24.27	23.63	23.45	23.45
25	TC	113.3	107.1	101.1	95.47	91.06	91.06	114.8	108.7	102.7	97.12	94.00	94.01	116.1	109.9	103.9	98.62	96.54	96.54	117.1	110.9	104.8	100.0	98.73	98.73	118.1	111.8	105.8	101.5	100.7	100.7
	SC	53.21	63.43	73.57	83.38	90.99	91.06	55.28	66.46	77.60	88.13	93.94	94.01	57.25	69.38	81.46	92.47	96.47	96.54	59.18	72.26	85.13	96.31	98.65	98.73	61.11	75.09	88.77	98.38	100.7	100.7
	kW	29.63	28.84	28.08	27.36	26.82	26.82	29.85	29.06	28.30	27.59	27.20	27.21	30.04	29.24	28.47	27.80	27.54	27.54	30.19	29.39	28.60	27.95	27.84	27.84	30.34	29.53	28.75	28.20	28.10	28.10
30	TC	115.5	108.7	97.94	89.90	86.96	86.55	117.3	110.4	99.44	91.43	89.22	89.24	118.7	111.8	100.6	92.76	91.53	91.53	119.9	113.0	106.3	96.91	93.51	93.53	121.1	114.1	107.4	98.33	97.60	97.63
	SC	54.05	64.14	71.97	80.46	85.70	86.55	56.21	67.26	75.93	84.96	89.20	89.24	58.24	70.23	79.73	89.01	91.46	91.53	60.22	73.19	85.97	93.79	93.51	93.53	62.22	76.08	89.69	95.72	97.60	97.63
	kW	26.74	26.24	28.62	29.83	29.45	29.39	26.88	26.38	28.80	30.06	29.77	29.77	27.00	26.49	28.94	30.26	30.10	30.10	27.10	26.59	26.10	28.51	30.39	30.39	27.20	26.68	26.19	28.75	28.68	28.68
35	TC	108.4	102.0	95.95	90.29	87.17	86.78	110.0	103.6	97.47	91.94	90.06	89.62	111.2	104.8	98.54	93.37	92.07	92.06	112.3	105.8	99.63	95.05	94.20	94.21	113.2	106.7	100.6	96.33	96.11	96.12
	SC	51.54	61.48	71.38	80.86	85.99	86.78	53.60	64.54	75.41	85.46	88.33	89.62	55.60	67.47	79.22	89.62	92.00	92.06	57.53	70.32	82.89	92.67	94.20	94.21	59.47	73.15	86.49	95.07	96.11	96.12
	kW	29.25	28.75	28.27	27.84	27.60	27.58	29.38	28.88	28.40	27.97	27.84	27.81	29.49	28.99	28.50	28.10	28.00	28.00	29.59	29.08	28.59	28.24	28.18	28.18	29.67	29.16	28.68	28.35	28.34	28.34
40	TC	101.1	95.22	89.57	84.43	81.97	81.97	102.4	96.50	90.79	85.95	84.54	84.54	103.5	97.58	91.86	87.44	86.73	86.75	104.5	98.47	92.84	89.17	88.65	88.67	105.3	99.22	93.58	90.53	90.35	90.37
	SC	48.94	58.76	68.54	77.66	81.91	81.97	50.96	61.73	72.41	81.94	84.48	84.54	52.90	64.61	76.10	85.30	86.73	86.75	54.80	67.40	79.69	87.60	88.65	88.67	56.68	70.16	83.10	89.43	90.35	90.37
	kW	31.93	31.44	30.97	30.54	30.35	30.35	32.06	31.56	31.08	30.68	30.57	30.57	32.16	31.66	31.18	30.82	30.77	30.77	32.25	31.75	31.27	30.97	30.93	30.94	32.33	31.82	31.35	31.10	31.09	31.09
45	TC	93.53	88.13	82.93	78.41	76.93	76.93	94.67	89.21	83.99	79.92	79.20	79.22	95.66	90.13	84.98	81.65	81.15	81.16	96.41	90.88	85.71	83.27	82.86	82.87	97.07	91.53	86.41	84.56	84.36	84.38
	SC	46.26	55.94	65.55	74.25	76.87	76.93	48.23	58.83	69.28	77.82	79.20	79.22	50.16	61.64	72.87	79.82	81.15	81.16	51.99	64.37	76.25	81.88	82.86	82.87	53.83	67.07	79.45	84.48	84.36	84.38
	kW	34.77	34.29	33.83	33.44	33.31	33.31	34.89	34.40	33.94	33.58	33.53	33.53	34.99	34.50	34.04	33.75	33.71	33.71	35.06	34.57	34.12	33.90	33.87	33.87	35.13	34.64	34.19	34.03	34.02	34.02
48	TC	88.92	83.79	78.86	74.76	73.78	73.78	89.94	84.80	79.89	76.15	75.89	75.91	90.80	85.61	80.77	78.38	77.71	77.73	91.50	86.28	81.46	79.44	79.27	79.29	92.09	86.86	82.17	80.67	80.66	80.68
	SC	44.64	54.20	63.68	71.96	73.72	73.78	46.58	57.07	67.34	75.30	75.89	75.91	48.46	59.84	70.83	76.10	77.71	77.73	50.28	62.53	74.08	79.37	79.27	79.29	52.10	65.19	77.08	80.59	80.66	80.68
	kW	36.53	36.07	35.61	35.24	35.16	35.16	36.64	36.17	35.72	35.39	35.36	35.36	36.73	36.26	35.82	35.59	35.54	35.54	36.80	36.33	35.89	35.70	35.70	35.70	36.86	36.40	35.97	35.84	35.84	35.84

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Cooling capacities (continued)

48/50UH120 - Standard unit - cooling mode

OAT, °C		Evaporator air volume - l/s (m³/h)																											
		4440 (16000)						4995 (18000)						5550 (20000)						6105 (22000)						6660 (24000)			
		Indoor entering air wet bulb temperature, evaporator, °C																											
		23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13	23	21	19	17	15	13
10	TC	144.70	136.53	128.79	121.49	115.69	112.93	146.90	138.87	131.12	124.05	118.89	117.01	148.74	140.73	132.90	126.14	122.07	120.52	150.28	142.38	134.39	128.11	124.44	123.62	156.86	143.65	135.84	129.99	126.40	126.37
	SC	65.92	77.24	88.40	99.26	109.39	112.93	68.24	80.64	92.95	104.81	115.05	117.01	70.46	83.92	97.30	110.13	118.84	120.52	72.62	87.17	101.51	115.01	122.20	123.62	76.49	90.34	105.58	119.65	126.21	126.37
	kW	26.94	26.02	25.17	24.38	23.77	23.49	27.21	26.30	25.44	24.67	24.12	23.93	27.43	26.52	25.65	24.91	24.48	24.32	27.63	26.72	25.83	25.14	24.75	24.67	24.80	26.88	26.00	25.37	24.98	24.98
15	TC	138.78	131.03	123.64	116.68	111.16	109.30	140.80	133.19	125.75	119.09	114.64	113.14	142.48	134.91	127.37	120.99	118.03	116.50	143.93	136.35	128.79	122.97	120.23	119.41	150.59	137.57	130.21	124.70	122.01	121.94
	SC	63.86	75.08	86.19	96.96	106.64	109.30	66.14	78.47	90.71	102.49	111.60	113.14	68.34	81.75	95.04	107.65	114.47	116.50	70.50	84.97	99.17	112.43	117.87	119.41	74.42	88.15	103.24	117.00	121.83	121.94
	kW	29.52	28.58	27.69	26.88	26.25	26.04	29.78	28.85	27.96	27.17	26.66	26.50	30.00	29.08	28.16	27.41	27.07	26.90	30.20	29.27	28.35	27.67	27.35	27.26	27.19	29.43	28.54	27.89	27.58	27.57
25	TC	126.15	119.33	112.70	106.62	102.58	101.47	127.88	121.06	114.28	108.52	105.81	104.86	129.28	122.48	115.75	110.42	108.61	107.78	130.46	123.62	117.08	111.98	110.26	110.28	136.94	124.60	118.24	113.64	112.45	112.48
	SC	59.48	70.56	81.58	92.18	100.22	101.47	61.73	73.91	85.97	97.44	103.05	104.86	63.91	77.17	90.18	102.27	106.19	107.78	66.04	80.36	94.29	106.79	110.26	110.28	69.94	83.52	98.31	110.26	112.45	112.48
	kW	35.11	34.15	33.23	32.40	31.86	31.72	35.37	34.41	33.47	32.68	32.31	32.20	35.59	34.63	33.69	32.96	32.72	32.61	35.78	34.81	33.90	33.20	32.97	32.98	32.47	34.97	34.08	33.45	33.30	33.30
30	TC	128.63	121.03	110.44	104.33	98.33	97.31	130.66	123.01	115.58	106.35	102.93	102.90	132.28	124.62	117.21	108.21	105.80	105.79	133.67	125.98	118.68	109.87	108.40	108.32	134.86	127.11	119.96	114.82	113.44	113.46
	SC	60.34	71.21	80.64	91.09	95.89	97.31	62.68	74.64	86.51	96.34	102.79	102.90	64.91	77.96	90.79	101.13	105.72	105.79	67.10	81.21	94.95	105.40	108.40	108.32	69.27	84.42	99.02	111.16	113.44	113.46
	kW	31.28	30.70	33.19	32.53	34.97	34.84	31.44	30.86	30.29	32.77	32.43	32.42	31.58	30.99	30.43	32.99	32.75	32.75	31.69	31.11	30.55	33.19	33.04	33.04	31.79	31.20	30.66	30.28	30.18	30.18
35	TC	121.80	114.64	107.77	101.68	98.41	97.34	123.58	116.42	109.36	103.79	100.72	100.69	125.06	117.83	110.94	105.61	103.54	103.55	126.26	119.01	112.29	107.22	106.05	106.06	127.29	120.03	113.39	109.27	108.27	108.28
	SC	57.98	68.78	79.53	89.84	95.96	97.34	60.28	72.19	83.91	95.03	100.59	100.69	62.51	75.49	88.17	99.79	103.54	103.55	64.67	78.72	92.33	103.87	106.05	106.06	66.82	81.92	96.33	106.75	108.27	108.28
	kW	34.28	33.70	33.15	32.66	32.40	32.32	34.44	33.86	33.29	32.84	32.60	32.60	34.57	33.98	33.43	33.00	32.84	32.84	34.68	34.09	33.55	33.15	33.05	33.06	34.78	34.18	33.65	33.32	33.25	33.25
40	TC	114.60	107.95	101.41	95.94	93.96	92.83	116.16	109.46	103.03	97.91	95.86	95.87	117.42	110.71	104.41	99.56	98.46	98.48	118.48	111.71	105.57	101.55	100.75	100.77	119.36	112.48	106.45	102.92	102.76	102.78
	SC	55.51	66.26	76.89	87.04	91.16	92.83	57.78	69.63	81.26	92.03	95.86	95.87	59.98	72.91	85.47	96.44	98.46	98.48	62.14	76.12	89.57	99.38	100.75	100.77	64.27	79.27	93.43	101.91	102.76	102.78
	kW	37.49	36.92	36.34	35.87	35.70	35.61	37.64	37.06	36.50	36.06	35.88	35.89	37.76	37.18	36.63	36.21	36.12	36.13	37.87	37.28	36.75	36.40	36.34	36.34	37.95	37.36	36.84	36.53	36.52	36.53
45	TC	107.02	100.85	94.86	90.06	87.94	87.95	108.36	102.16	96.32	91.72	90.69	90.71	109.43	103.19	97.53	93.79	93.06	93.07	110.30	103.95	98.41	95.48	95.11	95.13	111.06	104.58	99.42	97.40	96.90	96.91
	SC	52.93	63.62	74.14	84.07	87.94	87.95	55.18	66.97	78.48	88.77	90.69	90.71	57.37	70.23	82.65	91.92	93.06	93.07	59.50	73.39	86.58	94.30	95.11	95.13	61.62	76.44	90.17	96.00	96.90	96.91
	kW	40.86	40.30	39.74	39.31	39.12	39.12	41.00	40.43	39.89	39.47	39.38	39.39	41.11	40.54	40.02	39.68	39.62	39.62	41.20	40.62	40.11	39.85	39.82	39.82	41.28	40.69	40.22	40.04	40.00	40.00
48	TC	102.30	96.43	90.68	86.37	84.85	84.87	103.49	97.60	92.01	88.14	87.44	87.45	104.45	98.54	93.16	89.79	89.65	89.66	105.24	99.15	94.14	107.84	91.54	91.56	105.91	99.81	95.07	93.22	93.20	93.21
	SC	51.35	62.00	72.39	82.15	84.85	84.87	53.58	65.33	76.71	86.20	87.44	87.45	55.75	68.58	80.84	89.35	89.65	89.66	57.88	71.68	84.64	107.84	91.54	91.56	59.99	74.68	88.11	93.06	93.20	93.21
	kW	42.94	42.39	41.83	41.43	41.29	41.29	43.07	42.51	41.98	41.62	41.55	41.55	43.17	42.61	42.11	41.79	41.78	41.78	43.26	42.68	42.22	43.88	41.98	41.98	43.33	42.76	42.32	42.15	42.15	42.15

Legend
OAT Outdoor entering air temperature, condenser, °C
TC Total gross cooling capacity, kW
SC Sensible gross cooling capacity, kW
kW Compressor power input, kW

Heating capacities

48/50UH 045

48/50UH 045 - Standard unit - heating mode

Return air, °C db	Air flow l/s	Air flow m³/h		Outdoor coil entering air temperature, °C wb -11	-6	-3	0	3	6	9	13	18
10	2022	7300	CAP	27.88	32.58	35.69	38.99	42.28	46.05	50.02	55.78	63.46
			IC	23.28	26.40	28.46	31.09	37.45	46.05	50.02	55.78	63.46
			kW	7.88	8.42	8.77	9.15	9.54	9.98	10.44	11.16	12.16
	2528	9100	CAP	27.70	32.39	35.49	38.80	42.10	45.90	49.89	55.76	63.62
			IC	23.29	26.46	28.56	31.21	37.52	45.90	49.89	55.76	63.62
			kW	7.44	7.88	8.18	8.49	8.82	9.17	9.55	10.13	10.93
	3034	10900	CAP	27.59	32.27	35.37	38.67	41.98	45.80	49.81	55.75	63.72
			IC	23.30	26.50	28.62	31.29	37.57	45.80	49.81	55.75	63.72
			kW	7.15	7.54	7.79	8.07	8.36	8.66	8.99	9.49	10.17
20	2022	7300	CAP	26.70	31.09	34.00	37.08	40.12	43.64	47.39	52.76	59.88
			IC	21.68	24.49	26.35	28.81	34.94	43.64	47.39	52.76	59.88
			kW	9.82	10.41	10.80	11.22	11.63	12.09	12.60	13.38	14.40
	2528	9100	CAP	26.48	30.84	33.75	36.82	39.86	43.40	47.18	52.60	59.95
			IC	21.65	24.49	26.39	28.86	34.94	43.40	47.18	52.60	59.95
			kW	9.29	9.79	10.11	10.46	10.81	11.18	11.60	12.20	13.06
	3034	10900	CAP	26.33	30.67	33.58	36.65	39.69	43.24	47.05	52.52	59.99
			IC	21.62	24.49	26.41	28.90	34.93	43.24	47.05	52.52	59.99
			kW	8.95	9.38	9.67	9.97	10.27	10.60	10.96	11.48	12.20
27	2022	7300	CAP	25.94	30.08	32.85	35.75	38.65	42.00	45.52	50.58	57.29
			IC	20.65	23.23	24.94	27.27	33.27	42.00	45.52	50.58	57.29
			kW	11.39	12.04	12.44	12.88	13.30	13.79	14.30	15.03	16.02
	2528	9100	CAP	25.70	29.79	32.55	35.45	38.34	41.71	45.25	50.41	57.29
			IC	20.59	23.19	24.93	27.28	33.21	41.71	45.25	50.41	57.29
			kW	10.81	11.35	11.69	12.05	12.41	12.80	13.22	13.86	14.68
	3034	10900	CAP	25.53	29.61	32.35	35.24	38.14	41.51	45.08	50.28	57.28
			IC	20.55	23.16	24.92	27.28	33.16	41.51	45.08	50.28	57.28
			kW	10.43	10.90	11.20	11.52	11.83	12.17	12.54	13.07	13.81

Legend
db Dry bulb temperature
wb Wet bulb temperature
CAP Gross instantaneous heating capacity, kW
IC Gross integrated heating capacity, kW
kW Compressor power input, kW

48/50UH 055

48/50UH 055 - Standard unit - heating mode

Return air, °C db	Air flow l/s	Air flow m³/h		Outdoor coil entering air temperature, °C wb -11	-6	-3	0	3	6	9	13	18
10	2755	10000	CAP	33.78	39.60	43.32	47.32	51.37	55.94	60.75	67.64	76.63
			IC	28.31	32.23	34.71	37.91	45.65	55.94	60.75	67.64	76.63
			kW	9.40	9.97	10.35	10.75	11.16	11.62	12.11	12.83	13.82
	3444	12400	CAP	33.65	39.50	43.17	47.21	51.29	55.91	60.79	67.82	77.03
			IC	28.37	32.38	34.86	38.12	45.84	55.91	60.79	67.82	77.03
			kW	9.01	9.50	9.82	10.17	10.51	10.89	11.31	11.91	12.72
	4133	14900	CAP	33.57	39.43	43.09	47.16	51.26	55.92	60.83	67.97	77.26
			IC	28.41	32.47	34.98	38.28	45.98	55.92	60.83	67.97	77.26
			kW	8.76	9.20	9.48	9.79	10.10	10.44	10.81	11.33	12.02
20	2755	10000	CAP	32.91	38.35	41.95	45.75	49.48	53.76	58.27	64.77	73.30
			IC	26.81	30.33	32.64	35.69	43.22	53.76	58.27	64.77	73.30
			kW	11.62	12.28	12.71	13.17	13.61	14.11	14.66	15.46	16.54
	3444	12400	CAP	32.65	38.07	41.66	45.45	49.20	53.51	58.08	64.72	73.46
			IC	26.76	30.33	32.68	35.74	43.22	53.51	58.08	64.72	73.46
			kW	11.12	11.68	12.05	12.43	12.80	13.23	13.68	14.34	15.22
	4133	14900	CAP	32.49	37.90	41.48	45.27	49.04	53.38	58.00	64.74	73.67
			IC	26.73	30.33	32.71	35.79	43.24	53.38	58.00	64.74	73.67
			kW	10.80	11.29	11.62	11.97	12.29	12.67	13.07	13.64	14.41
27	2755	10000	CAP	32.59	37.84	41.30	44.93	48.53	52.60	56.95	63.07	71.07
			IC	26.01	29.30	31.46	34.39	41.87	52.60	56.95	63.07	71.07
			kW	13.55	14.28	14.75	15.25	15.75	16.25	16.84	17.66	18.74
	3444	12400	CAP	32.24	37.43	40.87	44.48	48.06	52.15	56.52	62.78	71.07
			IC	25.89	29.20	31.39	34.32	41.70	52.15	56.52	62.78	71.07
			kW	12.95	13.57	13.96	14.37	14.77	15.19	15.67	16.36	17.29
	4133	14900	CAP	32.02	37.18	40.60	44.22	47.80	51.91	56.29	62.62	71.11
			IC	25.81	29.14	31.35	34.29	41.63	51.91	56.29	62.62	71.11
			kW	12.57	13.11	13.46	13.82	14.18	14.55	14.96	15.56	16.37

Legend
db Dry bulb temperature
wb Wet bulb temperature
CAP Gross instantaneous heating capacity, kW
IC Gross integrated heating capacity, kW
kW Compressor power input, kW

Heating capacities (continued)

48/50UH 065

48/50UH 065 - Standard unit - heating mode

Return air, °C db	Air flow l/s	Air flow m³/h		Outdoor coil entering air temperature, °C wb -11	-6	-3	0	3	6	9	13	18
10	2778	10000	CAP	37.72	44.38	48.77	53.45	58.14	63.35	68.92	76.86	87.21
			IC	31.51	35.97	38.90	42.62	51.49	63.35	68.92	76.86	87.21
			kW	10.66	11.38	11.84	12.34	12.84	13.40	14.01	14.90	16.13
	3472	12500	CAP	37.59	44.23	48.62	53.32	58.03	63.28	68.91	77.00	87.56
			IC	31.61	36.14	39.12	42.89	51.72	63.28	68.91	77.00	87.56
			kW	10.09	10.69	11.06	11.47	11.87	12.31	12.80	13.48	14.41
	4166	15000	CAP	37.49	44.13	48.53	53.23	57.96	63.23	68.91	77.07	87.90
			IC	31.67	36.25	39.28	43.07	51.87	63.23	68.91	77.07	87.90
			kW	9.72	10.24	10.56	10.91	11.25	11.63	12.03	12.59	13.39
20	2778	10000	CAP	36.81	43.19	47.43	51.90	56.39	61.45	66.82	74.48	84.50
			IC	29.90	34.01	36.74	40.30	49.09	61.45	66.82	74.48	84.50
			kW	13.32	14.15	14.71	15.28	15.84	16.49	17.18	18.16	19.52
	3472	12500	CAP	36.62	42.96	47.20	51.67	56.17	61.26	66.70	74.52	84.85
			IC	29.93	34.10	36.88	40.47	49.20	61.26	66.70	74.52	84.85
			kW	12.67	13.36	13.81	14.28	14.72	15.25	15.80	16.57	17.64
	4166	15000	CAP	36.48	42.81	47.04	51.51	56.02	61.12	66.59	74.52	85.07
			IC	29.95	34.16	36.97	40.58	49.28	61.12	66.59	74.52	85.07
			kW	12.24	12.84	13.23	13.63	14.01	14.46	14.91	15.56	16.46
27	2778	10000	CAP	36.28	42.46	46.56	50.88	55.24	60.14	65.34	72.75	82.31
			IC	28.87	32.75	35.31	38.75	47.49	60.14	65.34	72.75	82.31
			kW	15.45	16.37	16.97	17.59	18.21	18.89	19.60	20.64	21.96
	3472	12500	CAP	36.04	42.17	46.26	50.57	54.93	59.86	65.12	72.69	82.66
			IC	28.87	32.79	35.39	38.86	47.53	59.86	65.12	72.69	82.66
			kW	14.75	15.50	16.00	16.50	17.00	17.55	18.13	18.98	20.09
	4166	15000	CAP	35.88	41.99	46.06	50.36	54.73	59.67	64.95	72.60	82.82
			IC	28.87	32.82	35.45	38.93	47.54	59.67	64.95	72.60	82.82
			kW	14.28	14.94	15.37	15.80	16.22	16.69	17.17	17.87	18.84

Legend

db	Dry bulb temperature
wb	Wet bulb temperature
CAP	Gross instantaneous heating capacity, kW
IC	Gross integrated heating capacity, kW
kW	Compressor power input, kW

48/50UH 075

48/50UH 075 - Standard unit - heating mode

Return air, °C db	Air flow l/s	Air flow m³/h		Outdoor coil entering air temperature, °C wb -11	-6	-3	0	3	6	9	13	18
10	3155	11400	CAP	46.14	53.86	58.92	64.37	69.81	75.70	82.17	91.52	103.64
			IC	38.45	43.54	46.86	51.19	61.71	75.70	82.17	91.52	103.64
			kW	13.93	14.83	15.41	16.04	16.66	17.35	18.11	19.26	20.84
	3944	14200	CAP	45.75	53.42	58.46	63.89	69.33	75.22	81.75	91.20	103.56
			IC	38.40	43.56	46.94	51.30	61.71	75.22	81.75	91.20	103.56
			kW	13.04	13.75	14.21	14.70	15.19	15.70	16.28	17.12	18.29
	4733	17000	CAP	45.48	53.09	58.14	63.56	68.99	74.88	81.44	90.96	103.42
			IC	38.36	43.54	46.98	51.36	61.68	74.88	81.44	90.96	103.42
			kW	12.45	13.05	13.44	13.84	14.23	14.66	15.13	15.79	16.68
20	3155	11400	CAP	45.59	52.94	57.80	62.96	68.12	73.86	80.10	88.00	100.60
			IC	36.92	41.56	44.62	48.74	59.17	73.86	80.10	88.00	100.60
			kW	17.40	18.39	19.04	19.72	20.39	21.17	22.02	23.06	24.89
	3944	14200	CAP	45.15	52.46	57.29	62.44	67.61	73.37	79.65	88.24	100.72
			IC	36.83	41.55	44.66	48.80	59.13	73.37	79.65	88.24	100.72
			kW	16.41	17.21	17.72	18.26	18.80	19.41	20.04	20.92	22.30
	4733	17000	CAP	44.85	52.13	56.93	62.08	67.25	72.99	79.31	88.27	100.70
			IC	36.76	41.52	44.66	48.83	59.08	72.99	79.31	88.27	100.70
			kW	15.75	16.43	16.87	17.32	17.75	18.26	18.78	19.52	20.59
27	3155	11400	CAP	45.21	52.22	56.89	61.84	66.79	72.36	78.33	86.87	97.81
			IC	35.86	40.14	42.99	46.96	57.31	72.36	78.33	86.87	97.81
			kW	20.08	21.06	21.71	22.42	23.12	23.91	24.74	25.96	27.48
	3944	14200	CAP	44.75	51.71	56.36	61.32	66.26	71.87	77.93	86.51	98.11
			IC	35.76	40.11	43.02	47.01	57.25	71.87	77.93	86.51	98.11
			kW	19.03	19.82	20.36	20.93	21.48	22.12	22.80	23.76	25.04
	4733	17000	CAP	44.44	51.36	56.00	60.95	65.89	71.48	77.58	86.33	98.16
			IC	35.69	40.07	43.01	47.02	57.17	71.48	77.58	86.33	98.16
			kW	18.34	19.00	19.46	19.94	20.40	20.93	21.49	22.30	23.39

Legend

db	Dry bulb temperature
wb	Wet bulb temperature
CAP	Gross instantaneous heating capacity, kW
IC	Gross integrated heating capacity, kW
kW	Compressor power input, kW

Heating capacities (continued)

48/50UH 085

48/50UH 085 - Standard unit - heating mode

Return air,	Air flow			Outdoor coil entering air temperature, °C wb								
°C db	l/s	m³/h		-11	-6	-3	0	3	6	9	13	18
10	4440	16000	CAP	52.30	61.30	67.13	73.37	79.58	86.65	94.19	105.00	119.29
			IC	43.88	49.96	53.86	58.87	70.80	86.65	94.19	105.00	119.29
			kW	13.49	14.25	14.76	15.31	15.87	16.51	17.21	18.24	19.67
	5550	20000	CAP	52.07	61.03	66.85	73.10	79.33	86.43	94.02	104.99	119.55
			IC	43.94	50.08	54.05	59.10	70.95	86.43	94.02	104.99	119.55
			kW	12.86	13.49	13.91	14.36	14.82	15.33	15.90	16.73	17.87
	6660	24000	CAP	51.90	60.87	66.67	72.92	79.16	86.27	93.91	104.97	119.69
			IC	43.96	50.18	54.17	59.25	71.05	86.27	93.91	104.97	119.69
			kW	12.45	12.99	13.36	13.75	14.15	14.59	15.07	15.78	16.75
20	4440	16000	CAP	51.24	59.76	65.37	71.33	77.16	84.08	91.27	101.65	115.36
			IC	41.79	47.31	50.93	55.72	67.46	84.08	91.27	101.65	115.36
			kW	16.70	17.55	18.12	18.73	19.35	20.06	20.81	21.92	23.45
	5550	20000	CAP	50.93	59.42	65.01	70.96	76.81	83.76	91.01	101.56	115.64
			IC	41.77	47.37	51.05	55.86	67.52	83.76	91.01	101.56	115.64
			kW	15.98	16.69	17.15	17.65	18.15	18.73	19.33	20.24	21.48
	6660	24000	CAP	50.73	59.19	64.77	70.71	76.58	83.53	90.82	101.46	115.78
			IC	41.77	47.40	51.11	55.94	67.56	83.53	90.82	101.46	115.78
			kW	15.51	16.12	16.52	16.95	17.38	17.87	18.39	19.16	20.22
27	4440	16000	CAP	50.53	58.71	64.12	69.84	75.43	82.12	89.08	99.04	112.16
			IC	40.37	45.52	48.92	53.52	65.14	82.12	89.08	99.04	112.16
			kW	19.21	20.11	20.71	21.36	21.99	22.73	23.53	24.66	26.22
	5550	20000	CAP	50.17	58.32	63.71	69.42	75.02	81.74	88.76	98.88	112.39
			IC	40.32	45.54	48.98	53.61	65.14	81.74	88.76	98.88	112.39
			kW	18.43	19.18	19.68	20.20	20.73	21.33	21.97	22.90	24.17
	6660	24000	CAP	49.93	58.06	63.44	69.14	74.74	81.47	88.52	98.74	112.49
			IC	40.29	45.53	49.02	53.66	65.12	81.47	88.52	98.74	112.49
			kW	17.93	18.58	19.01	19.45	19.91	20.42	20.97	21.76	22.85

Legend

db	Dry bulb temperature
wb	Wet bulb temperature
CAP	Gross instantaneous heating capacity, kW
IC	Gross integrated heating capacity, kW
kW	Compressor power input, kW

48/50UH 100

48/50UH 100 - Standard unit - heating mode

Return air,	Air flow			Outdoor coil entering air temperature, °C wb								
°C db	l/s	m³/h		-11	-6	-3	0	3	6	9	13	18
10	4440	16000	CAP	61.64	71.70	78.20	85.13	91.97	99.69	107.92	119.88	135.75
			IC	51.46	58.10	62.36	67.89	81.47	99.69	107.92	119.88	135.75
			kW	17.99	19.11	19.84	20.61	21.33	22.20	23.13	24.46	26.25
	5550	20000	CAP	61.64	71.81	78.40	85.44	92.48	100.38	108.84	121.29	137.95
			IC	51.80	58.65	63.06	68.73	82.43	100.38	108.84	121.29	137.95
			kW	16.98	17.89	18.48	19.08	19.69	20.40	21.14	22.19	23.60
	6660	24000	CAP	61.64	71.91	78.55	85.68	92.86	100.82	109.48	122.24	139.42
			IC	52.03	59.04	63.55	69.32	83.10	100.82	109.48	122.24	139.42
			kW	16.33	17.11	17.62	18.14	18.68	19.27	19.90	20.78	21.97
20	4440	16000	CAP	60.87	70.39	76.61	83.15	89.56	96.93	104.66	115.75	130.47
			IC	49.38	55.39	59.31	64.55	77.97	96.93	104.66	115.75	130.47
			kW	22.86	24.14	24.99	25.88	26.77	27.72	28.73	30.10	32.02
	5550	20000	CAP	60.71	70.34	76.63	83.26	89.81	97.33	105.31	116.91	132.57
			IC	49.58	55.80	59.85	65.20	78.67	97.33	105.31	116.91	132.57
			kW	21.49	22.57	23.26	23.96	24.65	25.40	26.16	27.31	28.83
	6660	24000	CAP	60.64	70.33	76.66	83.37	90.05	97.65	105.82	117.76	134.00
			IC	49.75	56.09	60.22	65.67	79.19	97.65	105.82	117.76	134.00
			kW	20.67	21.60	22.17	22.77	23.35	23.97	24.65	25.62	26.89
27	4440	16000	CAP	60.75	69.99	75.97	82.21	88.29	95.38	102.69	112.90	126.56
			IC	48.26	53.91	57.55	62.58	75.91	95.38	102.69	112.90	126.56
			kW	27.32	28.76	29.64	30.60	31.54	32.44	33.39	34.97	36.94
	5550	20000	CAP	60.41	69.69	75.73	82.05	88.24	95.51	103.12	114.08	128.70
			IC	48.33	54.12	57.89	63.02	76.33	95.51	103.12	114.08	128.70
			kW	25.55	26.68	27.40	28.12	28.88	29.66	30.51	31.66	33.11
	6660	24000	CAP	60.20	69.54	75.60	82.02	88.31	95.70	103.44	114.72	130.04
			IC	48.39	54.31	58.14	63.37	76.71	95.70	103.44	114.72	130.04
			kW	24.50	25.46	26.02	26.67	27.31	27.97	28.67	29.61	30.94

Legend

db	Dry bulb temperature
wb	Wet bulb temperature
CAP	Gross instantaneous heating capacity, kW
IC	Gross integrated heating capacity, kW
kW	Compressor power input, kW

Heating capacities (continued)

48/50UH 120

48/50UH 120 - Standard unit - heating mode

Return air, °C db	Air flow l/s	Air flow m³/h		Outdoor coil entering air temperature, °C wb -11	-6	-3	0	3	6	9	13	18
10	4440	16000	CAP	75.51	88.49	96.86	105.85	114.94	124.52	134.85	149.35	167.68
			IC	63.04	71.70	77.24	84.41	101.82	124.52	134.85	149.35	167.68
			kW	22.63	24.21	25.26	26.37	27.52	28.81	30.18	32.19	35.01
	5550	20000	CAP	75.03	87.95	96.29	105.28	114.46	124.03	134.53	149.45	168.66
			IC	63.05	71.83	77.45	84.69	102.01	124.03	134.53	149.45	168.66
			kW	21.29	22.55	23.39	24.25	25.15	26.14	27.19	28.76	31.03
	6660	24000	CAP	74.69	87.54	95.91	104.91	114.14	123.71	134.31	149.55	169.24
			IC	63.04	71.87	77.59	84.87	102.14	123.71	134.31	149.55	169.24
			kW	20.41	21.49	22.20	22.92	23.66	24.46	25.32	26.66	28.54
20	4440	16000	CAP	73.19	85.47	93.45	101.96	110.44	119.79	129.73	143.63	160.97
			IC	59.37	67.26	72.34	79.15	96.15	119.79	129.73	143.63	160.97
			kW	28.17	29.99	31.15	32.41	33.68	35.08	36.64	38.85	41.72
	5550	20000	CAP	72.52	84.76	92.71	101.20	109.74	119.11	129.19	143.42	161.44
			IC	59.22	67.24	72.41	79.25	96.12	119.11	129.19	143.42	161.44
			kW	26.65	28.11	29.04	30.04	31.05	32.14	33.34	35.07	37.37
	6660	24000	CAP	72.12	84.30	92.21	100.70	109.27	118.66	128.84	143.31	161.71
			IC	59.16	67.22	72.44	79.32	96.10	118.66	128.84	143.31	161.71
			kW	25.65	26.89	27.68	28.52	29.36	30.27	31.26	32.69	34.59
27	4440	16000	CAP	71.83	83.55	91.22	99.35	107.26	116.54	126.01	139.22	155.59
			IC	57.07	64.36	69.11	75.63	92.22	116.54	126.01	139.22	155.59
			kW	32.65	34.57	35.86	37.18	38.55	40.00	41.55	43.69	46.50
	5550	20000	CAP	71.07	82.73	90.35	98.45	106.40	115.70	125.30	139.01	156.16
			IC	56.86	64.25	69.07	75.62	92.05	115.70	125.30	139.01	156.16
			kW	30.99	32.55	33.59	34.63	35.71	36.86	38.10	39.93	42.19
	6660	24000	CAP	70.60	82.18	89.76	97.86	105.83	115.12	124.81	138.75	156.47
			IC	56.74	64.18	69.03	75.61	91.92	115.12	124.81	138.75	156.47
			kW	29.89	31.23	32.12	32.99	33.89	34.85	35.88	37.43	39.40

Legend

db Dry bulb temperature
wb Wet bulb temperature
CAP Gross instantaneous heating capacity, kW
IC Gross integrated heating capacity, kW
kW Compressor power input, kW

Fan performances

48/50 UA/UH 045

48/50 UA/UH 045 - unit with standard static pressure

Air flow		External static pressure, Pa																	
		50		75		100		125		150		175		200		225		250		275	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2000	7200	-	-	-	-	674	0.758	726	0.851	776	0.948	824	1.050	871	1.155	916	1.262	960	1.372	1002	1.485
2100	7560	-	-	642	0.755	693	0.848	742	0.944	791	1.045	838	1.149	884	1.256	928	1.368	970	1.481	1012	1.597
2200	7920	-	-	663	0.849	712	0.944	760	1.044	806	1.148	852	1.255	896	1.366	939	1.480	981	1.596	1022	1.715
2300	8280	636	0.856	683	0.949	730	1.048	777	1.151	822	1.258	866	1.369	909	1.482	951	1.599	992	1.719	1032	1.841
2400	8640	660	0.963	706	1.062	751	1.164	796	1.269	839	1.379	882	1.493	924	1.610	965	1.730	1005	1.853	1044	1.978
2500	9000	684	1.081	728	1.182	772	1.287	815	1.396	857	1.510	898	1.627	939	1.746	979	1.870	1018	1.995	1056	2.124
2600	9360	710	1.210	752	1.315	794	1.424	835	1.536	876	1.652	916	1.773	956	1.896	995	2.021	1033	2.150	1070	2.283
2700	9720	733	1.344	774	1.451	814	1.564	854	1.680	894	1.799	933	1.922	971	2.047	1009	2.178	1046	2.309	1082	2.445
2800	10080	758	1.489	797	1.602	836	1.718	875	1.836	913	1.959	951	2.086	988	2.215	1025	2.348	1061	2.483	1096	2.620
2900	10440	782	1.646	820	1.761	858	1.880	895	2.002	932	2.129	969	2.258	1005	2.391	1041	2.526	1076	2.665	1111	2.806
3000	10800	808	1.816	844	1.935	881	2.057	917	2.184	953	2.313	989	2.446	1024	2.581	1059	2.720	1093	2.862	1127	3.005
3100	11160	833	1.996	868	2.119	904	2.245	939	2.374	974	2.507	1008	2.643	1042	2.782	1076	2.924	1110	3.069	1143	3.216

48/50 UA/UH 045 - unit with high static pressure H1

Air flow		External static pressure, Pa																	
		175		200		225		250		275		300		325		350		375		400	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2000	7200	824	1.042	871	1.147	916	1.253	960	1.363	1002	1.474	1043	1.589	1082	1.706	1120	1.826	1157	1.947	1192	2.069
2100	7560	838	1.141	884	1.247	928	1.358	970	1.471	1012	1.586	1052	1.703	1090	1.823	1128	1.945	1164	2.070	1200	2.197
2200	7920	852	1.246	896	1.357	939	1.469	981	1.585	1022	1.703	1061	1.824	1099	1.948	1136	2.072	1172	2.201	1207	2.330
2300	8280	866	1.359	909	1.472	951	1.588	992	1.707	1032	1.828	1070	1.951	1108	2.078	1145	2.207	1180	2.337	1215	2.470
2400	8640	882	1.483	924	1.599	965	1.718	1005	1.840	1044	1.964	1082	2.091	1119	2.221	1155	2.353	1190	2.487	1224	2.623
2500	9000	898	1.615	939	1.734	979	1.856	1018	1.981	1056	2.109	1093	2.240	1129	2.372	1165	2.507	1199	2.643	1233	2.783
2600	9360	916	1.760	956	1.883	995	2.007	1033	2.135	1070	2.267	1106	2.400	1142	2.535	1176	2.674	1210	2.814	1244	2.957
2700	9720	933	1.909	971	2.033	1009	2.163	1046	2.293	1082	2.427	1118	2.564	1153	2.703	1187	2.844	1220	2.988	1253	3.132
2800	10080	951	2.071	988	2.199	1025	2.331	1061	2.465	1096	2.602	1131	2.742	1165	2.883	1199	3.028	1232	3.174	1264	3.322
2900	10440	969	2.242	1005	2.374	1041	2.508	1076	2.646	1111	2.786	1145	2.928	1178	3.073	1211	3.220	1244	3.370	1275	3.522
3000	10800	989	2.429	1024	2.563	1059	2.700	1093	2.842	1127	2.984	1160	3.130	1193	3.278	1225	3.429	1257	3.581	1288	3.737
3100	11160	1008	2.624	1042	2.762	1076	2.903	1110	3.047	1143	3.193	1175	3.341	1207	3.493	1239	3.646	1270	3.802	1301	3.961

48/50 UA/UH 045 - Unit with high static pressure H2

Air flow		External static pressure, Pa																			
		275		300		325		350		375		400		425		450		475		500	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2000	7200	987	1.515	1023	1.609	1058	1.704	1092	1.802	1126	1.901	1158	2.002	1191	2.103	1222	2.205	1253	2.310	1284	2.415
2100	7560	1001	1.653	1036	1.751	1070	1.849	1104	1.949	1136	2.050	1169	2.154	1200	2.259	1231	2.365	1262	2.472	1291	2.581
2200	7920	1016	1.802	1050	1.901	1083	2.003	1116	2.106	1148	2.211	1179	2.317	1210	2.424	1240	2.533	1270	2.644	1300	2.754
2300	8280	1032	1.961	1065	2.063	1097	2.168	1128	2.273	1160	2.381	1190	2.490	1221	2.600	1250	2.712	1280	2.825	1309	2.939
2400	8640	1049	2.134	1081	2.239	1112	2.346	1143	2.456	1173	2.565	1203	2.677	1233	2.791	1262	2.906	1291	3.021	1319	3.139
2500	9000	1067	2.320	1098	2.428	1128	2.537	1158	2.649	1188	2.762	1217	2.877	1246	2.993	1274	3.111	1303	3.230	1330	3.350
2600	9360	1086	2.520	1116	2.632	1146	2.745	1175	2.859	1204	2.976	1232	3.092	1260	3.212	1288	3.332	1316	3.453	1343	3.577
2700	9720	1105	2.729	1134	2.843	1162	2.959	1191	3.077	1219	3.196	1247	3.316	1274	3.437	1302	3.560	1328	3.685	1355	3.811
2800	10080	1125	2.955	1153	3.072	1181	3.191	1208	3.311	1236	3.433	1263	3.556	1290	3.680	1316	3.807	1343	3.934	1369	4.063
2900	10440	1145	3.195	1172	3.315	1199	3.436	1226	3.559	1253	3.684	1280	3.810	1306	3.938	1332	4.066	1357	4.197	1383	4.328
3000	10800	1167	3.452	1193	3.574	1220	3.699	1246	3.826	1272	3.953	1297	4.082	1323	4.213	1348	4.344	1373	4.477	1393	4.612
3100	11160	1188	3.724	1214	3.849	1240	3.977	1265	4.107	1291	4.237	1316	4.369	1341	4.502	1365	4.637	1390	4.773	1414	4.911

48/50 UA/UH 045 - Unit with high static pressure H3

Air flow		External static pressure, Pa																			
		375		405		435		465		495		525		555		585		615		645	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2000	7200	1126	1.901	1165	2.021	1203	2.144	1241	2.268	1278	2.394	1313	2.522	1349	2.652	1383	2.783	1417	2.916	1449	3.050
2100	7560	1136	2.050	1175	2.175	1213	2.301	1249	2.429	1286	2.558	1321	2.690	1355	2.823	1389	2.958	1423	3.094	1455	3.232
2200	7920	1148	2.211	1185	2.338	1222	2.468	1259	2.599	1294	2.732	1329	2.867	1363	3.004	1396	3.142	1429	3.282	1461	3.424
2300	8280	1160	2.381	1196	2.512	1233	2.645	1268	2.780	1303	2.916	1337	3.055	1371	3.195	1404	3.337	1436	3.480	1468	3.626
2400	8640	1173	2.565	1209	2.701	1245	2.837	1279	2.974	1314	3.115	1347	3.257	1380	3.401	1413	3.546	1445	3.693	1476	3.842
2500	9000	1188	2.762	1223	2.900	1257	3.040	1291	3.182	1325	3.325	1358	3.471	1390	3.617	1422	3.767	1453	3.917	1484	4.070
2600	9360	1204	2.976	1238	3.117	1272	3.260	1305	3.404	1338	3.552	1370	3.700	1402	3.852	1433	4.004	1464	4.158	1494	4.314
2700	9720	1219	3.196	1252	3.340	1285	3.487	1318	3.635	1350	3.785	1381	3.938	1413	4.092	1443	4.248	1474	4.405	1504	4.565
2800	10080	1236	3.433	1268	3.581	1300	3.730	1332	3.883	1364	4.037	1394	4.193	1425	4.350	1455	4.510	1485	4.671	1514	4.834
2900	10440	1253	3.684	1285	3.835	1316	3.989	1347	4.144	1378	4.301	1408	4.461	1438	4.622	1468	4.785	1497	4.949	1526	5.115
3000	10800	1272	3.953	1303	4.108	1333	4.265	1363	4.424	1393	4.584	1423	4.748	1452	4.912	1481	5.078	1510	5.246	1538	5.416
3100	11160	1291	4.237	1321	4.396	1351	4.555	1380	4.718	1409	4.883	1438	5.049	1467	5.217	1496	5.386	1524	5.557	1552	5.731

Undersized drive

Oversized drive

Fan performances (continued)

48/50 UA/UH 055

48/50 UA/UH 055 - Unit with standard static pressure

Air flow		External static pressure, Pa																	
		50		80		110		140		170		200		230		260		290		320	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	733	1.310	782	1.437	830	1.569	878	1.707	925	1.849	971	1.996	1016	2.147	1060	2.303	1104	2.463	1146	2.625
2850	10260	770	1.527	816	1.660	862	1.799	908	1.942	953	2.090	997	2.243	1040	2.400	1083	2.561	1124	2.725	1165	2.894
3000	10800	808	1.770	852	1.910	895	2.054	939	2.203	982	2.357	1024	2.515	1065	2.678	1106	2.845	1147	3.015	1186	3.189
3150	11340	844	2.034	886	2.181	928	2.331	970	2.486	1010	2.646	1051	2.810	1091	2.978	1130	3.149	1169	3.325	1208	3.504
3300	11880	882	2.327	922	2.479	962	2.637	1001	2.797	1041	2.963	1080	3.132	1118	3.305	1156	3.484	1194	3.664	1230	3.848
3450	12420	919	2.644	957	2.802	995	2.965	1033	3.132	1071	3.303	1108	3.479	1145	3.657	1182	3.840	1218	4.026	1254	4.216
3600	12960	956	2.991	993	3.155	1029	3.324	1066	3.497	1102	3.675	1138	3.855	1174	4.039	1209	4.228	1244	4.420	1278	4.616
3750	13500	993	3.362	1028	3.534	1063	3.708	1098	3.888	1133	4.071	1168	4.257	1202	4.448	1236	4.642	1270	4.840	1303	5.040
3900	14040	1029	3.762	1063	3.939	1096	4.121	1130	4.306	1164	4.495	1197	4.687	1230	4.883	1263	5.082	1296	5.285	1328	5.491
4050	14580	1065	4.195	1098	4.379	1131	4.566	1163	4.757	1196	4.951	1228	5.150	1260	5.351	1292	5.556	1323	5.765	1355	5.977
4200	15120	1101	4.658	1133	4.847	1164	5.040	1196	5.237	1227	5.438	1258	5.642	1289	5.850	1320	6.059	1351	6.274	1381	6.491
4350	15660	1138	5.155	1169	5.351	1199	5.551	1229	5.754	1260	5.960	1290	6.170	1320	6.383	1350	6.600	1379	6.819	1409	7.043

48/50 UA/UH 055 - Unit with high static pressure H1

Air flow		External static pressure, Pa																	
		100		150		200		250		300		350		400		450		500		550	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	660	1.327	729	1.552	795	1.787	857	2.032	917	2.284	973	2.542	1027	2.807	1079	3.077	1128	3.353	1175	3.633
2850	10260	686	1.522	752	1.756	815	2.000	876	2.256	933	2.517	988	2.786	1041	3.061	1092	3.341	1140	3.627	1187	3.917
3000	10800	713	1.737	776	1.982	836	2.237	895	2.500	951	2.773	1005	3.051	1056	3.337	1106	3.627	1154	3.923	1200	4.223
3150	11340	739	1.971	799	2.225	858	2.490	914	2.764	969	3.045	1021	3.334	1072	3.629	1120	3.930	1167	4.235	1212	4.546
3300	11880	766	2.229	824	2.492	880	2.767	935	3.050	988	3.343	1039	3.641	1088	3.946	1136	4.256	1182	4.573	1126	4.893
3450	12420	793	2.506	848	2.780	902	3.063	955	3.357	1006	3.658	1056	3.966	1104	4.282	1151	4.602	1196	4.928	1240	5.259
3600	12960	820	2.809	873	3.092	926	3.386	977	3.689	1026	4.000	1075	4.318	1122	4.643	1168	4.974	1212	5.309	1255	5.651
3750	13500	847	3.134	898	3.426	949	3.730	998	4.043	1047	4.363	1094	4.691	1139	5.025	1184	5.366	1228	5.712	1270	6.063
3900	14040	874	3.480	923	3.899	972	4.095	1020	4.418	1067	4.748	1112	5.085	1157	5.429	1201	5.779	1243	6.135	1285	6.496
4050	14580	901	3.855	949	4.167	996	4.490	1042	4.821	1088	5.161	1132	5.508	1176	5.861	1219	6.221	1260	6.587	1301	6.958
4200	15120	928	4.255	974	4.576	1020	4.908	1065	5.250	1109	5.598	1152	5.955	1195	6.318	1236	6.687	1277	7.063	1317	7.444
4350	15660	955	4.685	1000	5.016	1044	5.358	1088	5.708	1131	6.066	1173	6.432	1214	6.805	1255	7.185	1295	7.569	1334	7.960

48/50 UA/UH 055 - Unit with high static pressure H2

Air flow		External static pressure, Pa																	
		330		360		390		420		450		480		510		540		570		600	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	951	2.437	984	2.595	1017	2.753	1048	2.914	1079	3.077	1108	3.241	1137	3.408	1166	3.577	1193	3.747	1220	3.918
2850	10260	967	2.677	939	2.840	1031	3.005	1062	3.172	1092	3.341	1121	3.511	1150	3.684	1178	3.859	1205	4.035	1232	4.213
3000	10800	983	2.939	1015	3.107	1046	3.278	1076	3.452	1106	3.627	1135	3.804	1163	3.982	1191	4.163	1218	4.344	1244	4.529
3150	11340	1000	3.218	1031	3.393	1062	3.570	1091	3.748	1120	3.930	1149	4.113	1176	4.297	1204	4.484	1230	4.672	1256	4.862
3300	11880	1018	3.521	1049	3.701	1078	3.884	1107	4.070	1136	4.256	1163	4.446	1191	4.636	1217	4.829	1244	5.024	1269	5.219
3450	12420	1036	3.842	1066	4.029	1095	4.217	1123	4.409	1151	4.602	1178	4.797	1205	4.993	1231	5.193	1257	5.393	1283	5.595
3600	12960	1056	4.190	1084	4.383	1113	4.577	1140	4.774	1168	4.974	1194	5.174	1221	5.378	1246	5.582	1272	5.789	1297	5.997
3750	13500	1075	4.559	1103	4.757	1130	4.957	1157	5.161	1184	5.366	1210	5.572	1236	5.781	1262	5.992	1287	6.205	1311	6.418
3900	14040	1094	4.949	1121	5.153	1148	5.359	1175	5.568	1201	5.779	1227	5.992	1252	6.206	1277	6.423	1301	6.642	1326	6.862
4050	14580	1115	5.369	1141	5.578	1167	5.790	1193	6.005	1219	6.221	1244	6.440	1268	6.661	1293	6.883	1317	7.108	1341	7.334
4200	15120	1135	5.811	1161	6.027	1186	6.245	1211	6.465	1236	6.687	1261	6.912	1285	7.138	1309	7.367	1333	7.597	1356	7.829
4350	15660	1156	6.285	1181	6.507	1206	6.731	1231	6.957	1255	7.185	1279	7.414	1303	7.647	1326	7.882	1350	8.117	1373	8.355

48/50 UA/UH 055 - Unit with high static pressure H3

Air flow		External static pressure, Pa																	
		400		440		480		520		560		600		640		680		720		760	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	1027	2.730	1068	2.940	1108	3.153	1144	3.353	1184	3.589	1220	3.811	1256	4.036	1290	4.265	1323	4.495	1356	4.729
2850	10260	1041	2.977	1082	3.195	1121	3.416	1159	3.640	1196	3.867	1232	4.097	1267	4.331	1301	4.566	1334	4.804	1366	5.046
3000	10800	1056	3.245	1096	3.471	1135	3.700	1172	3.932	1209	4.167	1244	4.405	1279	4.646	1312	4.890	1345	5.137	1377	5.385
3150	11340	1072	3.530	1111	3.764	1149	4.001	1185	4.241	1221	4.484	1256	4.730	1290	4.978	1324	5.230	1356	5.484	1388	5.741
3300	11880	1088	3.839	1126	4.079	1163	4.324	1200	4.572	1235	4.824	1269	5.077	1303	5.334	1336	5.594	1368	5.855	1400	6.120
3450	12420	1104	4.165	1142	4.413	1178	4.666	1214	4.922	1249	5.181	1283	5.443	1316	5.707	1348	5.974	1380	6.244	1411	6.516
3600	12960	1122	4.517	1158	4.774	1194	5.033	1229	5.298	1263	5.564	1297	5.834	1330	6.106	1362	6.381	1393	6.659	1424	6.939
3750	13500	1139	4.888	1175	5.154	1210	5.421	1245	5.692	1278	5.967	1311	6.244	1343	6.524	1375	6.808	1406	7.093	1436	7.381
3900	14040	1157	5.282	1192	5.554	1227	5.829	1260	6.108	1293	6.391	1326	6.675	1357	6.963	1388	7.254	1419	7.548	1449	7.844
4050	14580	1176	5.702	1210	5.982	1244	6.266	1277	6.553	1309	6.842	1341	7.135	1372	7.430	1403	7.729	1433	8.031	1462	8.335
4200	15120	1195	6.147	1228	6.434	1261	6.724	1293	7.019	1325	7.316	1356	7.616	1387	7.920	1417	8.226	1447	8.535	1476	8.846
4350	15660	1214	6.621	1247	6.915	1279	7.214	1311	7.515	1342	7.820	1373	8.128	1403	8.439	1432	8.753	1462	9.071	1490	9.389

Undersized drive
Oversized drive

Fan performances (continued)

48/50 UA/UH 065

48/50 UA/UH 065 - Unit with standard static pressure

Air flow		External static pressure, Pa																	
		50		85		120		155		190		225		260		295		330		365	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	689	1.200	746	1.342	803	1.494	859	1.651	914	1.815	968	1.986	1021	2.164	1072	2.345	1122	2.533	1171	2.724
2850	10260	709	1.362	787	1.575	841	1.734	894	1.899	947	2.070	998	2.249	1049	2.431	1098	2.621	1146	2.815	1193	3.014
3000	10800	775	1.671	827	1.830	878	1.996	929	2.168	979	2.346	1028	2.532	1076	2.723	1124	2.918	1170	3.119	1216	3.324
3150	11340	819	1.949	868	2.117	917	2.290	965	2.471	1013	2.656	1060	2.849	1107	3.047	1153	3.248	1197	3.457	1241	3.669
3300	11880	862	2.253	909	2.428	955	2.610	1001	2.797	1047	2.991	1092	3.190	1137	3.394	1181	3.604	1224	3.818	1267	4.037
3450	12420	903	2.582	948	2.765	993	2.953	1037	3.149	1081	3.350	1124	3.556	1167	3.767	1210	3.983	1251	4.204	1293	4.430
3600	12960	944	2.936	987	3.127	1029	3.324	1072	3.527	1114	3.734	1156	3.947	1197	4.165	1238	4.388	1278	4.616	1318	4.848
3750	13500	984	3.324	1026	3.522	1067	3.727	1107	3.937	1148	4.151	1188	4.371	1228	4.596	1268	4.826	1307	5.061	1345	5.299
3900	14040	1024	3.739	1064	3.945	1103	4.157	1143	4.375	1182	4.596	1220	4.823	1259	5.055	1297	5.292	1335	5.533	1372	5.779
4050	14580	1062	4.177	1100	4.391	1138	4.610	1176	4.835	1214	5.063	1251	5.297	1289	5.536	1325	5.779	1362	6.027	1398	6.278
4200	15120	1100	4.651	1137	4.872	1174	5.099	1210	5.330	1247	5.567	1283	5.808	1319	6.052	1355	6.303	1390	6.557	1425	6.816
4350	15660	1138	5.155	1174	5.385	1209	5.619	1244	5.857	1280	6.100	1315	6.348	1322	6.397	1384	6.856	1419	7.117	1453	7.382

48/50 UA/UH 065 - Unit with high static pressure H1

Air flow		External static pressure, Pa																	
		180		220		260		300		340		380		420		460		500		540	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	733	1.566	786	1.753	837	1.947	885	2.146	932	2.350	977	2.557	1020	2.769	1061	2.985	1101	3.203	1140	3.425
2850	10260	760	1.785	810	1.981	859	2.183	906	2.391	951	2.603	995	2.818	1037	3.038	1078	3.262	1117	3.489	1155	3.719
3000	10800	785	2.021	834	2.226	881	2.436	927	2.652	971	2.872	1013	3.097	1054	3.325	1094	3.557	1133	3.792	1170	4.030
3150	11340	813	2.288	860	2.500	905	2.719	949	2.943	992	3.171	1033	3.404	1074	3.641	1113	3.881	1150	4.124	1187	4.371
3300	11880	841	2.574	886	2.795	929	3.022	972	3.254	1013	3.490	1054	3.732	1093	3.976	1131	4.224	1168	4.477	1204	4.732
3450	12420	868	2.881	911	3.110	953	3.345	994	3.585	1034	3.830	1074	4.079	1112	4.332	1149	4.589	1186	4.849	1221	5.112
3600	12960	894	3.209	936	3.446	977	3.689	1017	3.937	1056	4.190	1094	4.447	1131	4.708	1168	4.974	1203	5.242	1238	5.514
3750	13500	922	3.565	962	3.811	1001	4.061	1040	4.318	1078	4.579	1115	4.844	1151	5.113	1187	5.386	1222	5.663	1256	5.943
3900	14040	949	3.944	987	4.198	1025	4.456	1063	4.721	1100	4.990	1136	5.263	1171	5.540	1206	5.822	1240	6.106	1273	6.394
4050	14580	974	4.341	1012	4.602	1049	4.869	1085	5.140	1121	5.417	1156	5.698	1191	5.984	1224	6.273	1258	6.565	1290	6.861
4200	15120	1000	4.767	1037	5.037	1073	5.311	1108	5.591	1143	5.875	1177	6.164	1211	6.458	1244	6.755	1276	7.056	1308	7.358
4350	15660	1027	5.219	1062	5.497	1096	5.779	1131	6.066	1165	6.359	1198	6.656	1231	6.957	1263	7.261	1295	7.569	1326	7.882

48/50 UA/UH 065 - Unit with high static pressure H2

Air flow		External static pressure, Pa																	
		260		300		340		380		420		460		500		540		580		620	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	837	1.947	885	2.146	932	2.350	977	2.557	1020	2.769	1061	2.985	1101	3.203	1140	3.425	1178	3.650	1214	3.878
2850	10260	859	2.183	906	2.391	951	2.603	995	2.818	1037	3.038	1078	3.262	1117	3.489	1155	3.719	1192	3.952	1228	4.188
3000	10800	881	2.436	927	2.652	971	2.872	1013	3.097	1054	3.325	1094	3.557	1133	3.792	1170	4.030	1207	4.272	1242	4.517
3150	11340	905	2.719	949	2.943	992	3.171	1033	3.404	1074	3.641	1113	3.881	1150	4.124	1187	4.371	1223	4.622	1258	4.875
3300	11880	929	3.022	972	3.254	1013	3.490	1054	3.732	1093	3.976	1131	4.224	1068	4.477	1204	4.732	1239	4.991	1274	5.252
3450	12420	953	3.345	994	3.585	1034	3.830	1074	4.079	1112	4.332	1149	4.589	1186	4.849	1221	5.112	1256	5.379	1289	5.649
3600	12960	977	3.689	1017	3.937	1056	4.190	1094	4.447	1131	4.708	1168	4.974	1203	5.242	1238	5.514	1272	5.789	1305	6.066
3750	13500	1001	4.061	1040	4.318	1078	4.579	1115	4.844	1151	5.113	1187	5.386	1222	5.663	1256	5.943	1289	6.226	1322	6.513
3900	14040	1025	4.456	1063	4.721	1100	4.990	1136	5.263	1171	5.540	1206	5.822	1240	6.106	1273	6.394	1306	6.685	1338	6.980
4050	14580	1049	4.869	1085	5.140	1121	5.417	1156	5.698	1191	5.984	1224	6.273	1258	6.565	1290	6.861	1323	7.160	1354	7.462
4200	15120	1073	5.311	1108	5.591	1143	5.875	1177	6.164	1211	6.458	1244	6.755	1276	7.056	1308	7.358	1340	7.666	1371	7.976
4350	15660	1096	5.779	1131	6.066	1165	6.359	1198	6.656	1231	6.957	1263	7.261	1295	7.569	1326	7.882	1357	8.196	1388	8.514

48/50 UA/UH 065 - Unit with high static pressure H3

Air flow		External static pressure, Pa																	
		420		460		500		540		580		620		660		700		740		780	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	1020	2.694	1061	2.903	1101	3.115	1140	3.332	1178	3.551	1214	3.772	1250	3.996	1284	4.224	1317	4.454	1350	4.688
2850	10260	1037	2.955	1078	3.173	1117	3.393	1155	3.618	1192	3.844	1228	4.074	1263	4.307	1297	4.543	1330	4.781	1363	5.022
3000	10800	1054	3.234	1094	3.460	1133	3.688	1170	3.920	1207	4.155	1242	4.393	1277	4.634	1310	4.878	1343	5.124	1375	5.372
3150	11340	1074	3.542	1113	3.775	1150	4.012	1187	4.252	1223	4.496	1258	4.742	1292	4.990	1325	5.242	1358	5.497	1389	5.753
3300	11880	1093	3.868	1131	4.110	1168	4.356	1204	4.604	1239	4.854	1274	5.109	1307	5.366	1340	5.626	1372	5.888	1403	6.154
3450	12420	1112	4.214	1149	4.464	1186	4.717	1221	4.973	1256	5.233	1289	5.495	1322	5.760	1355	6.029	1386	6.299	1417	6.572
3600	12960	1131	4.580	1168	4.839	1203	5.099	1238	5.363	1272	5.631	1305	5.902	1338	6.175	1370	6.451	1401	6.729	1431	7.009
3750	13500	1151	4.975	1187	5.240	1222	5.509	1256	5.782	1289	6.057	1322	6.335	1354	6.616	1385	6.901	1416	7.186	1446	7.475
3900	14040	1171	5.389	1206	5.664	1240	5.940	1273	6.220	1306	6.504	1338	6.791	1370	7.080	1401	7.371	1431	7.666	1461	7.963
4050	14580	1191	5.821	1224	6.103	1258	6.387	1290	6.675	1323	6.966	1354	7.260	1385	7.557	1416	7.856	1445	8.159	1475	8.464
4200	15120	1211	6.283	1244	6.571	1276	6.863	1308	7.159	1340	7.458	1371	7.760	1401	8.065	1431	8.372	1461	8.683	1490	8.996
4350	15660	1231	6.767	1263	7.064	1295	7.364	1326	7.667	1357	7.974	1388	8.284	1418	8.595	1447	8.912	1476	9.229	1505	9.550

Undersized drive
Oversized drive

Fan performances (continued)

48/50 UA/UH 075

48/50 UA/UH 075 - Unit with standard static pressure

Air flow		External static pressure, Pa																	
		50		85		120		155		190		225		260		295		330		365	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3150	11340	819	1.949	868	2.117	917	2.290	965	2.471	1013	2.656	1060	2.849	1107	3.047	1153	3.248	1197	3.457	1241	3.669
3300	11880	862	2.253	909	2.428	955	2.610	1001	2.797	1047	2.991	1092	3.190	1137	3.394	1181	3.604	1224	3.818	1267	4.037
3450	12420	903	2.582	948	2.765	993	2.953	1037	3.149	1081	3.350	1124	3.556	1167	3.767	1210	3.983	1251	4.204	1293	4.430
3600	12960	944	2.936	987	3.127	1029	3.324	1072	3.527	1114	3.734	1156	3.947	1197	4.165	1238	4.388	1278	4.616	1318	4.848
3750	13500	984	3.324	1026	3.522	1067	3.727	1107	3.937	1148	4.151	1188	4.371	1228	4.596	1268	4.826	1307	5.061	1345	5.299
3900	14040	1024	3.739	1064	3.945	1103	4.157	1143	4.375	1182	4.596	1220	4.823	1259	5.055	1297	5.292	1335	5.533	1372	5.779
4050	14580	1062	4.177	1100	4.391	1138	4.610	1176	4.835	1214	5.063	1251	5.297	1289	5.536	1325	5.779	1362	6.027	1398	6.278
4200	15120	1100	4.651	1137	4.872	1174	5.099	1210	5.330	1247	5.567	1283	5.808	1319	6.052	1355	6.303	1390	6.557	1425	6.816
4350	15660	1138	5.155	1174	5.385	1209	5.619	1244	5.857	1280	6.100	1315	6.348	1350	6.600	1384	6.856	1419	7.117	1453	7.382
4500	16200	1174	5.684	1209	5.921	1243	6.162	1277	6.408	1311	6.657	1345	6.912	1379	7.171	1412	7.434	1446	7.701	1479	7.972
4650	16740	1210	6.246	1243	6.489	1276	6.738	1310	6.990	1343	7.247	1375	7.508	1408	7.773	1441	8.042	1473	8.316	1505	8.593
4800	17280	1244	6.832	1277	7.084	1309	7.338	1341	7.597	1373	7.861	1405	8.129	1437	8.400	1468	8.676	1500	8.956	1531	9.240

48/50 UA/UH 075 - Unit with high static pressure H1

Air flow		External static pressure, Pa																	
		180		220		260		300		340		380		420		460		500		540	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3150	11340	813	2.288	860	2.500	905	2.719	949	2.943	992	3.171	1033	3.404	1074	3.641	1113	3.881	1150	4.124	1187	4.371
3300	11880	841	2.574	886	2.795	929	3.022	972	3.254	1013	3.490	1054	3.732	1093	3.976	1131	4.224	1168	4.477	1204	4.732
3450	12420	868	2.881	911	3.110	953	3.345	994	3.585	1034	3.830	1074	4.079	1112	4.332	1149	4.589	1186	4.849	1221	5.112
3600	12960	894	3.209	936	3.446	977	3.689	1017	3.937	1056	4.190	1094	4.447	1131	4.708	1168	4.974	1203	5.242	1238	5.514
3750	13500	922	3.565	962	3.811	1001	4.061	1040	4.318	1078	4.579	1115	4.844	1151	5.113	1187	5.386	1222	5.663	1256	5.943
3900	14040	949	3.944	987	4.198	1025	4.456	1063	4.721	1100	4.990	1136	5.263	1171	5.540	1206	5.822	1240	6.106	1273	6.394
4050	14580	974	4.341	1012	4.602	1049	4.869	1085	5.140	1121	5.417	1156	5.698	1191	5.984	1224	6.273	1258	6.565	1290	6.861
4200	15120	1000	4.767	1037	5.037	1073	5.311	1108	5.591	1143	5.875	1177	6.164	1211	6.458	1244	6.755	1276	7.056	1308	7.358
4350	15660	1027	5.219	1062	5.497	1096	5.779	1131	6.066	1165	6.359	1198	6.656	1231	6.957	1263	7.261	1295	7.569	1326	7.882
4500	16200	1051	5.690	1086	5.974	1119	6.264	1153	6.560	1186	6.860	1218	7.164	1250	7.473	1282	7.785	1313	8.101	1344	8.420
4650	16740	1076	6.188	1109	6.479	1142	6.777	1174	7.079	1207	7.386	1238	7.698	1270	8.014	1301	8.334	1331	8.658	1361	8.985
4800	17280	1100	6.703	1132	7.002	1164	7.307	1196	7.617	1227	7.932	1258	8.251	1288	8.574	1319	8.901	1349	9.232	1378	9.566

48/50 UA/UH 075 - Unit with high static pressure H2

Air flow		External static pressure, Pa																	
		260		300		340		380		420		460		500		540		580		620	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3150	11340	905	2.645	949	2.863	992	3.085	1033	3.311	1074	3.542	1113	3.775	1150	4.012	1187	4.252	1223	4.496	1258	4.742
3300	11880	929	2.940	972	3.165	1013	3.395	1054	3.630	1093	3.868	1131	4.110	1168	4.356	1204	4.604	1239	4.854	1274	5.109
3450	12420	953	3.254	994	3.487	1034	3.725	1074	3.968	1112	4.214	1149	4.464	1186	4.717	1221	4.973	1256	5.233	1289	5.495
3600	12960	977	3.588	1017	3.830	1056	4.076	1094	4.326	1131	4.580	1168	4.839	1203	5.099	1238	5.363	1272	5.631	1305	5.902
3750	13500	1001	3.951	1040	4.200	1078	4.454	1115	4.713	1151	4.975	1187	5.240	1222	5.509	1256	5.782	1289	6.057	1322	6.335
3900	14040	1025	4.335	1063	4.593	1100	4.854	1136	5.120	1171	5.389	1206	5.664	1240	5.940	1273	6.220	1306	6.504	1338	6.791
4050	14580	1049	4.736	1085	5.001	1121	5.270	1156	5.544	1191	5.821	1224	6.103	1258	6.387	1290	6.675	1323	6.966	1354	7.260
4200	15120	1073	5.167	1108	5.439	1143	5.716	1177	5.997	1211	6.283	1244	6.571	1276	6.863	1308	7.159	1340	7.458	1371	7.760
4350	15660	1096	5.622	1131	5.902	1165	6.186	1198	6.474	1231	6.767	1263	7.064	1295	7.364	1326	7.667	1357	7.974	1388	8.284
4500	16200	1119	6.095	1153	6.381	1186	6.674	1218	6.970	1250	7.269	1282	7.573	1313	7.881	1344	8.192	1374	8.506	1404	8.823
4650	16740	1142	6.592	1174	6.887	1207	7.186	1238	7.489	1270	7.796	1301	8.108	1331	8.423	1361	8.741	1391	9.063	1420	9.387
4800	17280	1164	7.109	1196	7.411	1227	7.716	1258	8.026	1288	8.342	1319	8.660	1349	8.982	1378	9.307	1407	9.636	1436	9.968

48/50 UA/UH 075 - Unit with high static pressure H3

Air flow		External static pressure, Pa																	
		420		460		500		540		580		620		660		700		740		780	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3150	11340	1074	3.542	1113	3.775	1150	4.012	1187	4.252	1223	4.496	1258	4.742	1292	4.990	1325	5.242	1358	5.497	1389	5.753
3300	11880	1093	3.868	1131	4.110	1168	4.356	1204	4.604	1239	4.854	1274	5.109	1307	5.366	1340	5.626	1372	5.888	1403	6.154
3450	12420	1112	4.214	1149	4.464	1186	4.717	1221	4.973	1256	5.233	1289	5.495	1322	5.760	1355	6.029	1386	6.299	1417	6.572
3600	12960	1131	4.580	1168	4.839	1203	5.099	1238	5.363	1272	5.631	1305	5.902	1338	6.175	1370	6.451	1401	6.729	1431	7.009
3750	13500	1151	4.975	1187	5.240	1222	5.509	1256	5.782	1289	6.057	1322	6.335	1354	6.616	1385	6.901	1416	7.254	1446	7.475
3900	14040	1171	5.389	1206	5.664	1240	5.940	1273	6.220	1306	6.504	1338	6.791	1370	7.080	1401	7.371	1431	7.666	1461	7.963
4050	14580	1191	5.821	1224	6.103	1258	6.387	1290	6.675	1323	6.966	1354	7.260	1385	7.557	1416	7.856	1445	8.159	1475	8.464
4200	15120	1211	6.283	1244	6.571	1276	6.863	1308	7.159	1340	7.458	1371	7.760	1401	8.065	1431	8.372	1461	8.683	1490	8.996
4350	15660	1231	6.767	1263	7.064	1295	7.364	1326	7.667	1357	7.974	1388	8.284	1418	8.595	1447	8.912	1476	9.229	1505	9.550
4500	16200	1250	7.269	1282	7.573	1313	7.881	1344	8.192	1374	8.506	1404	8.823	1433	9.143	1462	9.466	1491	9.792	1519	10.120
4650	16740	1270	7.796	1301	8.108	1331	8.423	1361	8.741	1391	9.063	1420	9.387	1449	9.714	1478	10.045	1506	10.379	1533	10.714
4800	17280	1288	8.342	1319	8.660	1349	8.982	1378	9.307	1407	9.636	1436	9.968	1464	10.303	1492	10.641	1520	10.982	1547	11.325

Undersized drive
Oversized drive

Fan performances (continued)

48/50 UA/UH 085, 100,120

48/50 UA/UH 085, 100, 120 - Unit with standard static pressure

Air flow		External static pressure, Pa																	
		50		85		120		155		190		225		260		295		330		365	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
4250	15300	497	1.832	535	2.044	573	2.262	609	2.487	644	2.717	679	2.954	712	3.196	745	3.442	776	3.692	807	3.947
4500	16200	526	2.169	562	2.391	597	2.621	631	2.858	665	3.099	698	3.347	730	3.599	762	3.857	792	4.117	822	4.384
4750	17100	555	2.546	589	2.781	622	3.022	655	3.270	687	3.522	719	3.781	750	4.045	780	4.312	809	4.585	838	4.861
5000	18000	584	2.967	616	3.214	648	3.467	679	3.725	710	3.991	740	4.259	770	4.534	799	4.814	828	5.096	856	5.384
5250	18900	613	3.434	644	3.694	674	3.958	704	4.229	734	4.504	763	4.785	791	5.071	819	5.360	847	5.655	874	5.953
5500	19800	642	3.951	672	4.222	701	4.498	730	4.780	758	5.068	786	5.359	813	5.656	840	5.957	867	6.262	893	6.572
5750	20700	673	4.526	701	4.809	729	5.097	757	5.392	784	5.690	811	5.994	837	6.302	863	6.615	889	6.931	914	7.251
6000	21600	703	5.147	730	5.443	757	5.743	783	6.048	809	6.359	835	6.674	861	6.994	886	7.318	911	7.645	935	7.977
6250	22500	733	5.834	759	6.141	785	6.454	811	6.771	836	7.093	861	7.421	885	7.752	910	8.086	934	8.425	957	8.769
6500	23400	764	6.580	789	6.900	814	7.225	839	7.554	863	7.888	887	8.226	911	8.569	934	8.916	957	9.267	980	9.620
6750	24300	795	7.388	819	7.720	843	8.057	867	8.398	890	8.744	913	9.094	936	9.449	959	9.807	982	10.169	1004	10.535
7000	25200	826	8.260	849	8.605	872	8.954	895	9.307	918	9.666	940	10.027	962	10.393	984	10.763	1006	11.137	1028	11.515

48/50 UA/UH 085, 100, 120 - Unit with high static pressure H1

Air flow		External static pressure, Pa																	
		140		175		210		245		280		315		350		385		420		455	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
4250	15300	593	2.390	629	2.619	664	2.852	698	3.092	731	3.336	763	3.585	794	3.837	825	4.095	854	4.357	883	4.622
4500	16200	617	2.756	651	2.995	684	3.240	717	3.491	748	3.746	779	4.005	809	4.269	839	4.537	868	4.809	896	5.085
4750	17100	641	3.163	673	3.413	705	3.670	736	3.932	767	4.197	797	4.468	826	4.742	855	5.021	883	5.303	910	5.590
5000	18000	666	3.614	697	3.876	727	4.144	757	4.416	787	4.693	816	4.975	844	5.260	871	5.549	899	5.843	925	6.140
5250	18900	691	4.112	721	4.385	750	4.664	779	4.947	807	5.235	835	5.528	862	5.825	889	6.125	916	6.429	941	6.737
5500	19800	717	4.658	746	4.944	774	5.233	802	5.528	829	5.827	856	6.131	882	6.438	908	6.750	934	7.065	959	7.385
5750	20700	745	5.265	772	5.562	799	5.863	826	6.169	852	6.480	878	6.795	903	7.114	928	7.437	953	7.762	978	8.092
6000	21600	772	5.917	798	6.225	824	6.539	850	6.856	875	7.178	900	7.504	925	7.834	949	8.168	973	8.506	997	8.846
6250	22500	800	6.634	825	6.955	850	7.280	875	7.609	899	7.943	923	8.280	947	8.622	971	8.966	994	9.315	1017	9.667
6500	23400	828	7.412	852	7.744	877	8.081	900	8.422	924	8.767	947	9.116	970	9.468	993	9.824	1016	10.185	1038	10.548
6750	24300	857	8.252	880	8.595	903	8.944	926	9.296	949	9.653	972	10.014	994	10.378	1016	10.746	1038	11.117	1060	11.492
7000	25200	885	9.156	908	9.512	931	9.872	953	10.236	975	10.604	997	10.976	1019	11.353	1040	11.731	1061	12.114	1082	12.500

48/50 UA/UH 085, 100, 120 - Unit with high static pressure H2

Air flow		External static pressure, Pa																	
		220		255		290		325		360		395		430		465		500		535	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
4250	15300	642	2.796	674	3.027	705	3.262	735	3.502	765	3.744	793	3.991	822	4.243	849	4.497	876	4.756	902	5.017
4500	16200	660	3.171	691	3.411	721	3.656	750	3.905	779	4.159	807	4.418	834	4.679	861	4.942	887	5.212	913	5.483
4750	17100	680	3.584	710	3.835	739	4.092	767	4.350	795	4.616	822	4.884	848	5.154	874	5.429	900	5.709	925	5.988
5000	18000	701	4.040	729	4.301	757	4.569	784	4.840	811	5.112	837	5.392	863	5.674	888	5.958	913	6.247	937	6.538
5250	18900	723	4.541	750	4.814	777	5.091	803	5.371	829	5.655	854	5.944	879	6.238	904	6.531	928	6.832	951	7.132
5500	19800	745	5.089	771	5.371	797	5.660	822	5.951	847	6.247	872	6.545	896	6.848	920	7.153	943	7.463	966	7.776
5750	20700	768	5.695	794	5.988	818	6.287	843	6.590	867	6.895	891	7.205	914	7.517	938	7.834	960	8.153	983	8.477
6000	21600	792	6.343	816	6.648	840	6.958	864	7.270	887	7.587	910	7.906	933	8.230	956	8.558	978	8.887	1000	9.223
6250	22500	816	7.056	840	7.370	863	7.692	886	8.016	909	8.342	931	8.673	953	9.008	975	9.346	996	9.686	1018	10.031
6500	23400	841	7.824	864	8.151	886	8.482	909	8.817	930	9.155	952	9.498	974	9.842	995	10.192	1016	10.544	1036	10.898
6750	24300	867	8.652	889	8.992	910	9.332	932	9.679	953	10.029	974	10.381	995	10.737	1015	11.096	1036	11.459	1056	11.823
7000	25200	892	9.544	914	9.894	935	10.245	955	10.602	976	10.963	996	11.327	1017	11.692	1037	12.063	1056	12.436	1076	12.813

48/50 UA/UH 085, 100, 120 - Unit with high static pressure H3

Air flow		External static pressure, Pa																	
		395		430		465		500		535		570		605		640		675		710	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
4250	15300	793	3.991	822	4.243	849	4.497	876	4.756	902	5.017	928	5.282	953	5.550	977	5.821	1001	6.093	1025	6.371
4500	16200	807	4.418	834	4.679	861	4.942	887	5.212	913	5.483	938	5.758	962	6.035	986	6.317	1010	6.599	1033	6.885
4750	17100	822	4.884	848	5.154	874	5.429	900	5.709	925	5.988	949	6.275	973	6.562	997	6.853	1020	7.146	1042	7.442
5000	18000	837	5.392	863	5.674	888	5.958	913	6.247	937	6.538	961	6.834	985	7.132	1008	7.433	1031	7.736	1053	8.044
5250	18900	854	5.944	879	6.238	904	6.531	928	6.832	951	7.132	975	7.438	998	7.748	1020	8.058	1042	8.372	1064	8.689
5500	19800	872	6.545	896	6.848	920	7.153	943	7.463	966	7.776	989	8.090	1011	8.409	1034	8.731	1055	9.055	1077	9.383
5750	20700	891	7.205	914	7.517	938	7.834	960	8.153	983	8.477	1005	8.803	1027	9.132	1048	9.463	1070	9.798	1090	10.136
6000	21600	910	7.906	933	8.230	956	8.558	978	8.887	1000	9.223	1021	9.558	1042	9.898	1063	10.238	1084	10.586	1105	10.933
6250	22500	931	8.673	953	9.008	975	9.346	996	9.686	1018	10.031	1039	10.378	1059	10.728	1080	11.080	1100	11.436	1120	11.795
6500	23400	952	9.498	974	9.842	995	10.192	1016	10.544	1036	10.898	1057	11.254	1077	11.616	1097	11.979	1117	12.345	1136	12.713
6750	24300	974	10.381	995	10.737	1015	11.096	1036	11.459	1056	11.823	1076	12.191	1095	12.564	1115	12.937	1134	13.314	1153	13.694
7000	25200	996	11.327	1017	11.692	1037	12.063	1056	12.436	1076	12.813	1095	13.191	1115	13.573	1134	13.957	1152	14.346	1171	14.736

Undersized drive

Oversized drive

Fan performances (continued)

48/50 UA/UH with Variable Air Volume supply fan

48/50 UA/UH 045 VAV option

Air flow		External static pressure, Pa																	
		50		75		100		125		150		175		200		225		250	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2000	7200	633	0.783	675	0.860	717	0.939	757	1.022	798	1.106	837	1.193	876	1.282	913	1.373	951	1.467
2100	7560	662	0.897	702	0.978	741	1.236	780	1.146	819	1.234	856	1.324	894	1.416	930	1.511	966	1.607
2200	7920	689	1.023	728	1.106	766	1.390	803	1.282	840	1.372	876	1.465	912	1.560	947	1.657	982	1.757
2300	8280	717	1.158	754	1.246	790	1.556	826	1.427	861	1.521	896	1.617	931	1.715	965	1.815	999	1.885
2400	8640	746	1.308	781	1.399	816	1.739	850	1.549	884	1.685	918	1.784	951	1.885	984	1.988	1017	2.093
2500	9000	774	1.470	808	1.565	842	1.935	875	1.760	908	1.859	940	1.963	972	2.067	1004	2.173	1036	2.281
2600	9360	804	1.648	836	1.746	869	2.151	900	1.948	932	2.051	964	2.157	995	2.264	1026	2.373	1056	2.485
2700	9720	831	1.834	863	1.936	894	2.376	925	2.144	956	2.229	986	2.360	1016	2.471	1046	2.584	1075	2.698
2800	10080	860	2.038	891	2.143	921	2.621	951	2.358	980	2.468	1010	2.580	1039	2.694	1068	2.811	1096	2.927
2900	10440	889	2.256	918	2.364	947	2.883	976	2.586	1005	2.699	1033	2.814	1062	2.932	1090	3.051	1117	3.171
3000	10800	918	2.491	947	2.603	975	3.165	1003	2.832	1031	2.949	1058	3.068	1086	3.188	1113	3.309	1140	3.433
3100	11160	948	2.741	975	2.856	1002	3.465	1029	3.093	1056	3.213	1083	3.334	1110	3.458	1136	3.583	1162	3.710

Air flow		External static pressure, Pa																	
		275		300		325		350		375		400		425		450		475		500	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2000	7200	987	1.561	1023	1.659	1058	1.757	1092	1.858	1126	1.960	1158	2.063	1191	2.168	1222	2.274	1253	2.382	1284	2.490
2100	7560	1001	1.704	1036	1.805	1070	1.906	1104	2.009	1136	2.114	1169	2.221	1200	2.329	1231	2.438	1262	2.549	1291	2.660
2200	7920	1016	1.858	1050	1.960	1083	2.065	1116	2.172	1148	2.280	1179	2.389	1210	2.499	1240	2.611	1270	2.725	1300	2.839
2300	8280	1032	2.021	1065	2.127	1097	2.235	1128	2.343	1160	2.455	1190	2.567	1221	2.681	1250	2.796	1280	2.913	1309	3.030
2400	8640	1049	2.200	1081	2.308	1112	2.419	1143	2.532	1173	2.645	1203	2.760	1233	2.878	1262	2.996	1291	3.114	1319	3.236
2500	9000	1067	2.391	1098	2.503	1128	2.616	1158	2.731	1188	2.848	1217	2.965	1246	3.086	1274	3.207	1303	3.329	1330	3.453
2600	9360	1086	2.598	1116	2.713	1146	2.830	1175	2.947	1204	3.068	1232	3.188	1260	3.311	1288	3.435	1316	3.560	1343	3.687
2700	9720	1105	2.813	1134	2.931	1162	3.051	1191	3.172	1219	3.295	1247	3.418	1274	3.543	1302	3.671	1328	3.799	1355	3.929
2800	10080	1125	3.046	1153	3.167	1181	3.290	1208	3.413	1236	3.540	1263	3.666	1290	3.794	1316	3.925	1343	4.056	1369	4.188
2900	10440	1145	3.293	1172	3.417	1199	3.542	1226	3.669	1253	3.798	1280	3.928	1306	4.060	1332	4.192	1357	4.326	1383	4.462
3000	10800	1167	3.559	1193	3.685	1220	3.813	1246	3.944	1272	4.075	1297	4.209	1323	4.343	1348	4.479	1373	4.616	1393	4.755
3100	11160	1188	3.839	1214	3.968	1240	4.101	1265	4.234	1291	4.368	1316	4.504	1341	4.641	1365	4.780	1390	4.921	1414	5.063

48/50 UA/UH 055 VAV option

Air flow		External static pressure, Pa																	
		50		80		100		150		200		250		300		330		360	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	550	1.040	593	1.164	660	1.368	729	1.600	795	1.842	857	2.095	917	2.354	951	2.513	984	2.675
2850	10260	585	1.237	654	1.457	686	1.569	752	1.810	815	2.062	876	2.325	933	2.594	967	2.760	939	2.928
3000	10800	619	1.453	658	1.590	713	1.791	776	2.043	836	2.306	895	2.578	951	2.859	983	3.030	1015	3.203
3150	11340	655	1.698	692	1.842	739	2.032	799	2.294	858	2.567	914	2.849	969	3.140	1000	3.317	1031	3.498
3300	11880	689	1.965	725	2.115	766	2.298	824	2.569	880	2.853	935	3.144	988	3.446	1018	3.630	1049	3.816
3450	12420	723	2.252	757	2.409	793	2.584	848	2.866	902	3.158	955	3.460	1006	3.771	1036	3.961	1066	4.153
3600	12960	755	2.562	788	2.726	820	2.896	873	3.188	926	3.490	977	3.803	1026	4.123	1056	4.319	1084	4.518
3750	13500	788	2.902	819	3.072	847	3.231	898	3.532	949	3.846	998	4.168	1047	4.498	1075	4.700	1103	4.904
3900	14040	820	3.265	850	3.442	874	3.588	923	4.020	972	4.222	1020	4.555	1067	4.894	1094	5.102	1121	5.312
4050	14580	850	3.646	879	3.830	901	3.974	949	4.296	996	4.629	1042	4.970	1088	5.321	1115	5.535	1141	5.751
4200	15120	880	4.060	908	4.249	928	4.386	974	4.718	1020	5.060	1065	5.412	1109	5.771	1135	5.991	1161	6.213
4350	15660	910	4.498	937	4.695	955	4.830	1000	5.171	1044	5.524	1088	5.884	1131	6.254	1156	6.480	1181	6.708

Air flow		External static pressure, Pa															
		390		420		450		480		510		540		570		600	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	1017	2.838	1048	3.004	1079	3.172	1108	3.341	1137	3.513	1166	3.687	1193	3.863	1220	4.039
2850	10260	1031	3.098	1062	3.271	1092	3.445	1121	3.620	1150	3.798	1178	3.978	1205	4.159	1232	4.343
3000	10800	1046	3.380	1076	3.559	1106	3.739	1135	3.922	1163	4.105	1191	4.291	1218	4.479	1244	4.669
3150	11340	1062	3.680	1091	3.864	1120	4.051	1149	4.240	1176	4.430	1204	4.623	1230	4.816	1256	5.012
3300	11880	1078	4.004	1107	4.195	1136	4.388	1163	4.583	1191	4.779	1217	4.978	1244	5.179	1269	5.381
3450	12420	1095	4.348	1123	4.545	1151	4.744	1178	4.945	1205	5.148	1231	5.353	1257	5.560	1283	5.768
3600	12960	1113	4.719	1140	4.922	1168	5.127	1194	5.334	1221	5.544	1246	5.754	1272	5.968	1297	6.182
3750	13500	1130	5.111	1157	5.321	1184	5.532	1210	5.745	1236	5.960	1262	6.177	1287	6.397	1311	6.617
3900	14040	1148	5.525	1175	5.740	1201	5.957	1227	6.177	1252	6.398	1277	6.622	1301	6.847	1326	7.074
4050	14580	1167	5.969	1193	6.190	1219	6.414	1244	6.640	1268	6.867	1293	7.096	1317	7.328	1341	7.561
4200	15120	1186	6.438	1211	6.665	1236	6.894	1261	7.126	1285	7.359	1309	7.594	1333	7.832	1356	8.071
4350	15660	1206	6.939	1231	7.172	1255	7.407	1279	7.644	1303	7.884	1326	8.125	1350	8.368	1373	8.613

Undersized drive

Oversized drive

Fan performances (continued)

48/50 UA/UH with Variable Air Volume supply fan (continued)

48/50 UA/UH 065 VAV option

Air flow		External static pressure, Pa															
		50		85		120		155		180		220		260		300	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	550	1.040	600	1.184	650	1.337	699	1.497	733	1.614	786	1.808	837	2.007	885	2.212
2850	10260	585	1.237	633	1.390	681	1.549	727	1.716	760	1.840	810	2.042	859	2.251	906	2.465
3000	10800	619	1.453	665	1.613	710	1.781	754	1.955	785	2.084	834	2.295	881	2.511	927	2.734
3150	11340	655	1.698	698	1.866	741	2.043	784	2.224	813	2.359	860	2.578	905	2.803	949	3.034
3300	11880	689	1.965	731	2.140	772	2.324	832	2.609	841	2.653	886	2.881	929	3.116	972	3.355
3450	12420	723	2.252	762	2.437	802	2.628	840	2.825	868	2.970	911	3.206	953	3.448	994	3.696
3600	12960	755	2.562	793	2.755	831	2.953	868	3.159	894	3.308	936	3.553	977	3.803	1017	4.058
3750	13500	788	2.902	824	3.101	860	3.308	896	3.520	922	3.675	962	3.929	1001	4.187	1040	4.451
3900	14040	820	3.265	754	2.896	890	3.686	924	3.906	949	4.066	987	4.328	1025	4.594	1063	4.867
4050	14580	850	3.646	884	3.861	917	4.082	951	4.309	974	4.475	1012	4.744	1049	5.019	1085	5.299
4200	15120	880	4.060	913	4.282	945	4.511	978	4.745	1000	4.915	1037	5.192	1073	5.476	1108	5.764
4350	15660	910	4.498	942	4.729	973	4.964	1004	5.206	1027	5.381	1062	5.667	1096	5.957	1131	6.254

Air flow		External static pressure, Pa															
		340		380		420		460		500		540		580		620	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
2700	9720	932	2.423	977	2.636	1020	2.855	1061	3.077	1101	3.302	1140	3.531	1178	3.763	1214	3.998
2850	10260	951	2.683	995	2.905	1037	3.132	1078	3.363	1117	3.597	1155	3.834	1192	4.074	1228	4.318
3000	10800	971	2.961	1013	3.192	1054	3.428	1094	3.667	1133	3.910	1170	4.155	1207	4.404	1242	4.657
3150	11340	992	3.269	1033	3.510	1074	3.753	1113	4.001	1150	4.252	1187	4.506	1223	4.765	1258	5.025
3300	11880	1013	3.598	1054	3.847	1093	4.099	1131	4.355	1168	4.616	1204	4.879	1239	5.145	1274	5.414
3450	12420	1034	3.948	1074	4.205	1112	4.466	1149	4.731	1186	4.999	1221	5.270	1256	5.545	1289	5.824
3600	12960	1056	4.319	1094	4.585	1131	4.854	1168	5.127	1203	5.404	1238	5.685	1272	5.968	1305	6.254
3750	13500	1078	4.720	1115	4.994	1151	5.272	1187	5.553	1222	5.838	1256	6.127	1289	6.419	1322	6.714
3900	14040	1100	5.144	1136	5.425	1171	5.711	1206	6.002	1240	6.295	1273	6.592	1306	6.892	1338	7.196
4050	14580	1121	5.585	1156	5.875	1191	6.169	1224	6.467	1258	6.768	1290	7.073	1323	7.382	1354	7.693
4200	15120	1143	6.057	1177	6.355	1211	6.658	1244	6.964	1276	7.274	1308	7.586	1340	7.903	1371	8.223
4350	15660	1165	6.556	1198	6.862	1231	7.172	1263	7.485	1295	7.803	1326	8.125	1357	8.450	1388	8.778

48/50 UA/UH 075 VAV option

Air flow		External static pressure, Pa																	
		50		85		120		155		180		220		260		300		340	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3150	11340	655	1.653	698	1.816	784	2.164	784	2.164	813	2.295	860	2.508	905	2.727	949	2.951	992	3.180
3300	11880	689	1.912	731	2.083	772	2.261	812	2.446	841	2.582	886	2.804	929	3.031	972	3.263	1013	3.500
3450	12420	723	2.191	762	2.371	802	2.557	840	2.749	868	2.890	911	3.119	953	3.354	994	3.595	1034	3.840
3600	12960	755	2.493	793	2.681	831	2.874	868	3.074	894	3.219	936	3.457	977	3.699	1017	3.948	1056	4.202
3750	13500	788	2.824	824	3.018	860	3.219	896	3.426	922	3.576	962	3.823	1001	4.073	1040	4.330	1078	4.592
3900	14040	820	3.177	855	3.379	890	3.587	924	3.801	949	3.956	987	4.211	1025	4.469	1063	4.735	1100	5.005
4050	14580	859	3.607	884	3.757	917	3.973	951	4.193	974	4.355	1012	4.616	1049	4.883	1085	5.155	1121	5.433
4200	15120	880	3.950	913	4.167	945	4.390	978	4.618	1000	4.782	1037	5.052	1073	5.327	1108	5.608	1143	5.893
4350	15660	910	4.377	942	4.601	973	4.830	1004	5.065	1027	5.236	1062	5.514	1096	5.796	1131	6.084	1165	6.378
4500	16200	939	4.823	970	5.055	1000	5.292	1030	5.533	1051	5.708	1086	5.993	1119	6.283	1153	6.579	1186	6.880
4650	16740	967	5.297	997	5.535	1026	5.778	1055	6.026	1076	6.207	1109	6.499	1142	6.796	1174	7.100	1207	7.409
4800	17280	994	5.790	1023	6.034	1051	6.284	1080	6.539	1100	6.724	1132	7.024	1164	7.329	1196	7.640	1227	7.954

Air flow		External static pressure, Pa															
		380		420		460		500		540		580		620		660	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3150	11340	1033	3.414	1074	3.651	1113	3.892	1150	4.136	1187	4.384	1223	4.635	1258	4.889	1292	5.145
3300	11880	1054	3.742	1093	3.988	1131	4.237	1168	4.490	1204	4.746	1239	5.005	1274	5.267	1307	5.532
3450	12420	1074	4.091	1112	4.344	1149	4.602	1186	4.863	1221	5.127	1256	5.395	1289	5.665	1322	5.938
3600	12960	1094	4.460	1131	4.722	1168	4.988	1203	5.257	1238	5.529	1272	5.805	1305	6.084	1338	6.366
3750	13500	1115	4.858	1151	5.128	1187	5.402	1222	5.679	1256	5.961	1289	6.245	1322	6.531	1354	6.821
3900	14040	1136	5.278	1171	5.556	1206	5.839	1240	6.124	1273	6.413	1306	6.705	1338	7.001	1370	7.299
4050	14580	1156	5.715	1191	6.001	1224	6.291	1258	6.585	1290	6.882	1323	7.182	1354	7.485	1385	7.791
4200	15120	1177	6.183	1211	6.477	1244	6.774	1276	7.076	1308	7.381	1340	7.689	1371	8.000	1401	8.314
4350	15660	1198	6.675	1231	6.976	1263	7.282	1295	7.592	1326	7.904	1357	8.221	1388	8.540	1418	8.861
4500	16200	1218	7.185	1250	7.494	1282	7.807	1313	8.125	1344	8.445	1374	8.769	1404	9.096	1433	9.426
4650	16740	1238	7.721	1270	8.037	1301	8.359	1331	8.684	1361	9.011	1391	9.343	1420	9.677	1449	10.015
4800	17280	1258	8.275	1288	8.600	1319	8.928	1349	9.260	1378	9.595	1407	9.934	1436	10.277	1464	10.621

Undersized drive

Oversized drive

Fan performances (continued)

48/50 UA/UH with Variable Air Volume supply fan (continued)

48/50 UA/UH 085-100 VAV option

Air flow		External static pressure, Pa															
		50		85		120		155		190		220		255		290	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3750	13500	442	1.349	485	1.548	526	1.756	567	1.971	606	2.193	638	2.388	674	2.620	710	2.857
4000	14400	469	1.626	510	1.837	549	2.057	587	2.283	624	2.516	655	2.721	690	2.965	724	3.214
4250	15300	501	1.999	536	2.169	572	2.402	609	2.639	644	2.884	674	3.099	708	3.354	740	3.615
4500	16200	526	2.301	562	2.538	597	2.781	631	3.032	665	3.290	693	3.515	726	3.781	757	4.052
4750	17100	542	2.611	589	2.952	622	3.207	655	3.468	687	3.737	714	3.972	746	4.251	776	4.535
5000	18000	584	3.148	616	3.409	648	3.677	679	3.954	710	4.232	736	4.478	765	4.767	795	5.064
5250	18900	613	3.644	644	3.917	674	4.199	705	4.486	734	4.777	759	5.033	788	5.335	816	5.642
5500	19800	643	4.191	672	4.478	701	4.770	730	5.069	758	5.374	782	5.640	810	5.952	837	6.272
5750	20700	673	4.801	701	5.100	729	5.407	757	5.717	783	6.035	806	6.311	834	6.637	859	6.967
6000	21600	702	5.459	730	5.772	757	6.092	783	6.415	810	6.742	832	7.029	857	7.367	882	7.711
6250	22500	734	6.187	759	6.513	785	6.843	811	7.181	836	7.522	857	7.819	882	8.168	906	8.524
6500	23400	764	6.977	790	7.316	814	7.659	839	8.010	863	8.364	883	8.671	907	9.033	930	9.400
6750	24300	795	7.832	819	8.186	843	8.542	866	8.904	890	9.271	910	9.588	933	9.965	956	10.342
7000	25200	826	8.757	849	9.123	873	9.493	895	9.867	918	10.247	937	10.577	960	10.965	982	11.355

Air flow		External static pressure, Pa													
		325		360		395		430		465		500		535	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
3750	13500	744	3.100	777	3.474	809	3.598	840	3.854	870	4.113	900	4.378	928	4.644
4000	14400	757	3.467	789	3.725	820	4.021	851	4.255	880	4.525	909	4.800	937	5.079
4250	15300	772	3.881	803	4.150	833	4.424	863	4.702	891	4.984	920	5.271	947	5.560
4500	16200	788	4.328	818	4.609	847	4.896	876	5.185	904	5.477	931	5.777	959	6.076
4750	17100	805	4.821	835	5.116	863	5.413	890	5.712	918	6.017	945	6.327	971	6.637
5000	18000	823	5.364	852	5.666	879	5.976	906	6.288	932	6.603	959	6.923	984	7.246
5250	18900	843	5.952	870	6.267	897	6.588	923	6.913	949	7.238	974	7.571	999	7.905
5500	19800	863	6.595	889	6.923	916	7.254	941	7.589	966	7.928	990	8.271	1014	8.617
5750	20700	885	7.303	910	7.641	936	7.985	960	8.331	985	8.682	1008	9.036	1032	9.395
6000	21600	907	8.057	931	8.408	956	8.762	980	9.121	1004	9.485	1027	9.849	1050	10.221
6250	22500	930	8.883	954	9.245	978	9.611	1001	9.983	1024	10.358	1046	10.735	1069	11.117
6500	23400	954	9.772	977	10.146	1000	10.526	1023	10.908	1045	11.295	1067	11.685	1088	12.078
6750	24300	979	10.727	1001	11.114	1023	11.504	1045	11.899	1066	12.297	1088	12.700	1109	13.103
7000	25200	1003	11.750	1025	12.150	1046	12.553	1068	12.958	1089	13.369	1109	13.782	1130	14.200

48/50 UA/UH 120 VAV option

Air flow		External static pressure, Pa																
		50		85		120		155		190		220		255		290		325
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
4250	15300	501	1.999	536	2.169	572	2.402	609	2.639	644	2.884	674	3.099	708	3.354	740	3.615	772	3.881
4500	16200	526	2.301	562	2.538	597	2.781	631	3.032	665	3.290	693	3.515	726	3.781	757	4.052	788	4.328
4750	17100	542	2.611	589	2.952	622	3.207	655	3.468	687	3.737	714	3.972	746	4.251	776	4.535	805	4.821
5000	18000	584	3.148	616	3.409	648	3.677	679	3.954	710	4.232	736	4.478	765	4.767	795	5.064	823	5.364
5250	18900	613	3.644	644	3.917	674	4.199	705	4.486	734	4.777	759	5.033	788	5.335	816	5.642	843	5.952
5500	19800	643	4.191	672	4.478	701	4.770	730	5.069	758	5.374	782	5.640	810	5.952	837	6.272	863	6.595
5750	20700	673	4.801	701	5.100	729	5.407	757	5.717	783	6.035	806	6.311	834	6.637	859	6.967	885	7.303
6000	21600	702	5.459	730	5.772	757	6.092	783	6.415	810	6.742	832	7.029	857	7.367	882	7.711	907	8.057
6250	22500	734	6.187	759	6.513	785	6.843	811	7.181	836	7.522	857	7.819	882	8.168	906	8.524	930	8.883
6500	23400	764	6.977	790	7.316	814	7.659	839	8.010	863	8.364	883	8.671	907	9.033	930	9.400	954	9.772
6750	24300	795	7.832	819	8.186	843	8.542	866	8.904	890	9.271	910	9.588	933	9.965	956	10.342	979	10.727
7000	25200	826	8.757	849	9.123	873	9.493	895	9.867	918	10.247	937	10.577	960	10.965	982	11.355	1003	11.750

Air flow		External static pressure, Pa																	
		360		395		430		465		500		535		570		605		640	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
4250	15300	803	4.150	833	4.424	863	4.702	891	4.984	920	5.271	947	5.560	974	5.854	1001	6.151	1026	6.451
4500	16200	818	4.609	847	4.896	876	5.185	904	5.477	931	5.777	959	6.076	985	6.381	1010	6.688	1035	7.001
4750	17100	835	5.116	863	5.413	890	5.712	918	6.017	945	6.327	971	6.637	996	6.954	1022	7.272	1047	7.595
5000	18000	852	5.666	879	5.976	906	6.288	932	6.603	959	6.923	984	7.246	1009	7.574	1034	7.905	1058	8.238
5250	18900	870	6.267	897	6.588	923	6.913	949	7.238	974	7.571	999	7.905	1024	8.243	1048	8.586	1071	8.930
5500	19800	889	6.923	916	7.254	941	7.589	966	7.928	990	8.271	1014	8.617	1038	8.966	1062	9.320	1086	9.676
5750	20700	910	7.641	936	7.985	960	8.331	985	8.682	1008	9.036	1032	9.395	1055	9.756	1078	10.120	1100	10.487
6000	21600	931	8.408	956	8.762	980	9.121	1004	9.485	1027	9.849	1050	10.221	1072	10.593	1094	10.970	1116	11.347
6250	22500	954	9.245	978	9.611	1001	9.983	1024	10.358	1046	10.735	1069	11.117	1091	11.502	1112	11.889	1134	12.279
6500	23400	977	10.146	1000	10.526	1023	10.908	1045	11.295	1067	11.685	1088	12.078	1110	12.473	1131	12.873	1152	13.276
6750	24300	1001	11.114	1023	11.504	1045	11.899	1066	12.297	1088	12.700	1109	13.103	1130	13.511	1150	13.924	1171	14.337
7000	25200	1025	12.150	1046	12.553	1068	12.958	1089	13.369	1109	13.782	1130	14.200	1150	14.619	1171	15.042	1191	15.468

Undersized drive
Oversized drive

Return air fan performances

Return fan 4 HP

Air flow		External static pressure, Pa																	
		175		195		215		235		255		275		295		315		335		355	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
300	1,080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	7,200	-	-	-	-	-	-	674	0.753	736	0.864	796	0.982	853	1.104	908	1.231	960	1.363	1010	1.497
2250	8,100	-	-	-	-	634	0.818	692	0.931	746	1.048	805	1.173	859	1.302	911	1.436	962	1.574	1011	1.716
2500	9,000	-	-	-	-	663	1.027	716	1.145	768	1.270	820	1.401	870	1.536	920	1.676	968	1.822	1015	1.972
2750	9,900	-	-	647	1.155	696	1.275	744	1.401	792	1.532	840	1.670	887	1.811	933	1.958	978	2.110	1023	2.266
3000	10,800	641	1.315	686	1.440	731	1.569	775	1.702	819	1.841	863	1.985	907	2.133	950	2.286	993	2.444	1035	2.607
3250	11,700	685	1.639	727	1.773	768	1.910	809	2.051	850	2.197	891	2.348	931	2.503	972	2.664	1012	2.829	1051	2.997
3500	12,600	730	2.014	768	2.158	807	2.304	845	2.453	883	2.607	921	2.766	959	2.928	997	3.094	1034	3.265	1071	3.441
3750	13,500	774	2.445	811	2.598	847	2.753	882	2.912	918	3.073	954	3.239	989	3.409	1024	3.689	1060	3.760	1095	3.943
4000	14,400	820	2.937	854	3.098	888	3.262	921	3.429	955	3.599	988	3.773	1021	3.950	1055	4.132	1088	4.317	1121	4.506
4250	15,300	866	3.490	898	3.662	929	3.835	961	4.011	993	4.190	1024	4.372	1056	4.557	1087	4.747	1118	4.939	1149	5.135

Return fan 5.5 HP

Air flow		External static pressure, Pa																	
		250		275		300		325		350		375		400		425		450		475	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
400	1,440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2500	9,000	786	1.289	837	1.418	887	1.553	936	1.693	984	1.836	1030	1.984	1075	2.137	1119	2.292	1162	2.450	1203	2.611
2750	9,900	808	1.548	855	1.685	902	1.826	948	1.971	993	2.122	1037	2.277	1081	2.435	1123	2.597	1164	2.762	1205	2.931
3000	10,800	834	1.854	878	1.996	921	2.144	965	2.295	1007	2.452	1049	2.613	1090	2.777	1131	2.946	1170	3.119	1209	3.294
3250	11,700	864	2.205	904	2.356	945	2.510	985	2.668	1025	2.831	1064	2.998	1103	3.169	1142	3.344	1180	3.523	1217	3.705
3500	12,600	896	2.610	934	2.767	971	2.928	1009	3.093	1046	3.262	1084	3.436	1121	3.613	1157	3.795	1193	3.979	1229	4.167
3750	13,500	930	3.070	965	3.234	1001	3.402	1036	3.574	1071	3.750	1106	3.930	1141	4.114	1176	4.301	1210	4.492	1244	4.688
4000	14,400	966	3.590	999	3.761	1032	3.937	1066	4.116	1099	4.299	1132	4.485	1165	4.675	1197	4.870	1230	5.067	1262	5.268
4250	15,300	1003	4.172	1035	4.351	1066	4.534	1097	4.721	1129	4.911	1160	5.105	1191	5.302	1222	5.503	1253	5.706	1283	5.914
4500	16,200	1042	4.820	1071	5.009	1101	5.200	1131	5.394	1160	5.591	1190	5.793	1219	5.997	1249	6.204	1278	6.415	1307	6.629
4750	17,100	1081	5.540	1110	5.737	1138	5.936	1166	6.137	1194	6.343	1222	6.551	1250	6.763	1278	6.978	1306	7.195	1334	7.416

Return fan 7.5 HP

Air flow		External static pressure, Pa																	
		25		50		75		100		125		150		175		200		225		250	
l/s	m³/h	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
500	1,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3250	11,700	-	-	-	-	527	1.102	573	1.247	619	1.399	663	1.561	706	1.731	748	1.910	789	2.094	829	2.285
3500	12,600	-	-	-	-	549	1.312	593	1.462	635	1.622	677	1.790	718	1.965	758	2.148	797	2.338	835	2.535
3750	13,500	-	-	531	1.400	573	1.551	613	1.708	653	1.873	692	2.047	731	2.228	769	2.417	807	2.613	844	2.816
4000	14,400	-	-	558	1.663	597	1.820	635	1.984	673	2.157	710	2.336	747	2.524	783	2.718	819	2.920	854	3.127
4250	15,300	547	1.798	585	1.958	622	2.123	658	2.295	693	2.473	729	2.660	764	2.853	798	3.052	832	3.260	866	3.474
4500	16,200	577	2.119	612	2.288	647	2.462	681	2.641	715	2.826	749	3.019	782	3.218	815	3.424	847	3.637	880	3.856
4750	17,100	606	2.478	640	2.655	673	2.837	706	3.024	738	3.217	770	3.416	801	3.622	833	3.834	864	4.053	895	4.278
5000	18,000	636	2.875	668	3.062	699	3.252	730	3.446	761	3.647	792	3.854	822	4.066	852	4.285	882	4.509	911	4.741
5250	18,900	665	3.315	696	3.509	726	3.707	756	3.911	785	4.118	814	4.333	843	4.552	872	4.777	901	5.007	929	5.245
5500	19,800	695	3.796	724	4.000	753	4.207	782	4.418	810	4.633	838	4.855	866	5.082	893	5.314	921	5.551	948	5.794

Undersized drive

Oversized drive

Pressure drop options, Pa

Chassis 1 (48/50UA-UH 045 and 055)

		Factory-installed options/accessory static pressure correction factor to be added, Pa									
Rooftop air flow rate	**l/s**	**2000**	**2250**	**2500**	**2750**	**3000**	**3250**	**3500**	**3750**	**4000**	**4250**
	m³/h	**7200**	**8100**	**9000**	**9900**	**10800**	**11700**	**12600**	**13500**	**14400**	**15300**
Option 83 - Electric heater		16	19	23	27	32	36	41	46	51	56
Option 84 - Electric heater		16	19	23	27	32	36	41	46	51	56
Option 85 - Electric heater		16	19	23	27	32	36	41	46	51	56
Option 155 - Hot-water coil		58	71	85	100	115	132	150	168	188	208
Option 37 - Hot-water coil		58	71	85	100	115	132	150	168	188	208
Option 90 - Natural gas		22	33	44	55	65	76	87	98	109	120
Option 91 - Natural gas		23	35	47	59	71	83	95	107	119	131
Option 100 - Propane gas		22	33	44	55	65	76	87	98	109	120
Option 101 - Propane gas		23	35	47	59	71	83	95	107	119	131
Option 118 - Fresh-air panel		8	10	13	16	19	22	26	31	35	40
Option 40 - Manual damper		8	10	13	16	19	22	26	31	35	40
Option 35, 36, 156,157 - Economizer		8	10	13	16	19	22	26	31	35	40
Option 145 - G4 filter M1		0	0	0	0	0	0	0	0	0	0
Option 147 - F7 filter M1		27	32	36	41	46	51	56	62	67	73
Option 158 - G4 + F7 filter M1		59	69	80	91	103	115	127	140	153	166
Option 159 - M6 + F7 filter M1		71	84	98	113	128	144	160	177	194	212
ERM fresh air flow rate	**l/s**	**800**	**1100**	**1400**	**1700**	**2000**	**2300**	**2600**	**2900**	**3200**	**3500**
	m³/h	**2880**	**3960**	**5040**	**6120**	**7200**	**8280**	**9360**	**10440**	**11520**	**12600**
Option 173 Fresh air filter in ERM7		28	41	56	75	-	-	-	-	-	-
Option 160 Fresh air filter in ERM9		23	33	45	58	73	91	112	-	-	-
Option 160 Fresh air filter in ERM13		13	18	24	30	36	43	51	59	68	78
Option 173 Heat wheel in ERM7		74	105	137	170	-	-	-	-	-	-
Option 160 Heat wheel in ERM9		43	61	78	97	115	135	155	-	-	-
Option 160 Heat wheel in ERM13		34	47	61	75	89	104	119	134	150	166
Total Option 173 - ERM7		102	146	193	245	-	-	-	-	-	-
Total Option 160 ERM9		66	94	123	155	188	226	267	-	-	-
Total Option 160 - ERM13		47	65	85	105	125	147	170	193	218	244

Chassis 2 - 48/50UA-UH 065 and 075

		Factory-installed options/accessory static pressure correction factor to be added, Pa									
Rooftop air flow rate	**l/s**	**2750**	**3000**	**3250**	**3500**	**3750**	**4000**	**4250**	**4500**	**4750**	**5000**
	m³/h	**9900**	**10800**	**11700**	**12600**	**13500**	**14400**	**15300**	**16200**	**17100**	**18000**
Option 84 - Electric heater		27	32	36	41	46	51	56	62	68	74
Option 85 - Electric heater		27	32	36	41	46	51	56	62	68	74
Option 86 - Electric heater		27	32	36	41	46	51	56	62	68	74
Option 37 - Hot water coil		100	115	132	150	168	188	208	229	251	273
Option 38 - Hot water coil		100	115	132	150	168	188	208	229	251	273
Option 91 - Natural gas		59	71	83	95	107	119	131	143	155	167
Option 92 - Natural gas		63	77	90	103	116	129	142	155	168	181
Option 101 - Propane gas		59	71	83	95	107	119	131	143	155	167
Option 102 - Propane gas		63	77	90	103	116	129	142	155	168	181
Option 118 - Fresh air panel		16	19	22	26	31	35	40	45	50	56
Option 40 - Manual damper		16	19	22	26	31	35	40	45	50	56
Option 35, 36, 156, 157 - Economizer		16	19	22	26	31	35	40	45	50	56
Option 145 - G4 filter M1		0	0	0	0	0	0	0	0	0	0
Option 147 - F7 filter M1		41	46	51	56	62	67	73	78	84	90
Option 158 - G4 + F7 filter M1		91	103	115	127	140	153	166	180	194	208
Option 159 - M6 + F7 filter M1		113	128	144	160	177	194	212	230	249	268
ERM fresh air flow rate	**l/s**	**800**	**1100**	**1400**	**1700**	**2000**	**2300**	**2600**	**2900**	**3200**	**3500**
	m³/h	**2880**	**3960**	**5040**	**6120**	**7200**	**8280**	**9360**	**10440**	**11520**	**12600**
Option 173 Fresh air filter in ERM7		28	41	56	75	-	-	-	-	-	-
Option 160 Fresh air filter in ERM13		13	18	24	30	36	43	51	59	68	78
Option 173 Heat wheel in ERM7		74	105	137	170	-	-	-	-	-	-
Option 160 Heat wheel in ERM13		34	47	61	75	89	104	119	134	150	166
Total Option 173 - ERM7		102	146	193	245	-	-	-	-	-	-
Total Option 160 - ERM13		47	65	85	105	125	147	170	193	218	244

Pressure drop options, Pa (continued)

Chassis 3 - 48/50UA-UH 085, 100 and 120

		Factory-installed options/accessory static pressure correction factor to be added, Pa									
Rooftop air flow rate	**l/s**	**4300**	**4600**	**4900**	**5200**	**5500**	**5800**	**6100**	**6400**	**6700**	**7000**
	m³/h	**15480**	**16560**	**17640**	**18720**	**19800**	**20880**	**21960**	**23040**	**24120**	**25200**
Option 85 - Electric heater		59	64	68	72	76	81	85	89	94	98
Option 86 - Electric heater		59	64	68	72	76	81	85	89	94	98
Option 87 - Electric heater		59	64	68	72	76	81	85	89	94	98
Option 38 - Hot water coil		66	74	82	91	100	109	119	129	139	150
Option 39 - Hot water coil		66	74	82	91	100	109	119	129	139	150
Option 93 - Natural gas		59	72	85	97	110	123	135	148	161	174
Option 94 - Natural gas		62	76	90	104	118	132	146	160	174	188
Option 95 - Natural gas		65	81	96	112	127	143	158	174	190	205
Option 103 - Propane gas		59	72	85	97	110	123	135	148	161	174
Option 104 - Propane gas		62	76	90	104	118	132	146	160	174	188
Option 105 - Propane gas		65	81	96	112	127	143	158	174	190	205
Option 118 - Fresh air panel		34	40	46	54	62	71	80	90	101	113
Option 40 - Manual damper		34	40	46	54	62	71	80	90	101	113
Option 35, 36, 156, 157 - Economizer		34	40	46	54	62	71	80	90	101	113
Option 145 - G4 filter M1		0	0	0	0	0	0	0	0	0	0
Option 147 - F7 filter M1		44	48	52	56	60	65	69	73	78	82
Option 158 - G4 + F7 filter M1		98	106	115	125	134	143	153	163	173	183
Option 159 - M6 + F7 filter M1		119	132	144	158	171	185	199	213	228	243
ERM fresh air flow rate	**l/s**	**500**	**1000**	**1500**	**2000**	**2500**	**3000**	**3500**	**4000**	**4500**	**5000**
	m³/h	**1800**	**3600**	**5400**	**7200**	**9000**	**10800**	**12600**	**14400**	**16200**	**18000**
Option 173 Fresh air filter in ERM9		13	29	49	73	105	-	-	-	-	-
Option 160 Fresh air filter in ERM18		6	13	21	29	39	49	61	73	88	105
Option 173 Heat wheel in ERM9		27	55	84	115	148	-	-	-	-	-
Option 160 Heat wheel in ERM18		14	29	44	60	76	92	109	127	144	162
Total Option 173 - ERM9		40	84	133	188	253	-	-	-	-	-
Total Option 160 - ERM18		20	42	65	89	115	141	170	200	232	267

Gas heaters

48UA/UH 045-120

48UA/UH	Gas heater	Gas type	Net heat input (min./max.), kW	Output (min./max.), kW	No. of steps
045	Option 90	Natural gas	35.4/52.6	30.8/46.8	2
	Option 91	Natural gas	48.6/69.4	41.8/61.8	2
	Option 100	Propane gas	59.1	53.2	1
	Option 101	Propane gas	71.0	63.9	1
055	Option 90	Natural gas	35.4/52.6	30.8/46.8	2
	Option 91	Natural gas	48.6/69.4	41.8/61.8	2
	Option 100	Propane gas	59.1	53.2	1
	Option 101	Propane gas	71.0	63.9	1
065	Option 91	Natural gas	48.6/69.4	41.8/61.8	2
	Option 92	Natural gas	56.7/81.0	49.9/72.9	2
	Option 101	Propane gas	71.0	63.9	1
	Option 102	Propane gas	82.8	74.5	1
075	Option 91	Natural gas	48.6/69.4	41.8/61.8	2
	Option 92	Natural gas	56.7/81.0	49.9/72.9	2
	Option 101	Propane gas	71.0	63.9	1
	Option 102	Propane gas	82.8	74.5	1
085	Option 93	Natural gas	35.4/68.4/105.2	30.8/59.5/93.6	3
	Option 94	Natural gas	48.6/97.2/138.8	42.8/85.5/125.0	3
	Option 103	Propane gas	59.1/118.2	52.6/105.2	2
	Option 104	Propane gas	71.0/142.0	63.9/127.8	2
100	Option 93	Natural gas	35.4/68.4/105.2	30.8/59.5/93.6	3
	Option 94	Natural gas	48.6/97.2/138.8	42.8/85.5/125.0	3
	Option 103	Propane gas	59.1/118.2	52.6/105.2	2
	Option 104	Propane gas	71.0/142.0	63.9/127.8	2
120	Option 94	Natural gas	48.6/97.2/138.8	42.8/85.5/125.0	3
	Option 95	Natural gas	56.7/113.4/162.0	50.5/99.8/147.4	3
	Option 104	Propane gas	71.0/142.0	63.9/127.8	2
	Option 105	Propane gas	82.8/165.6	75.3/150.7	2

Gas heaters (continued)

Heating modules		5 cells	6 cells	7 cells	5+5 cells	6+6 cells	7+7 cells
Natural gas heating		**Option 90**	**Option 91**	**Option 92**	**Option 93**	**Option 94**	**Option 95**
Net heat input (min./max.)	kW	35.4/52.6	48.6/69.4	56.7/81.0	35.4/105.2	48.6/138.8	56.7/162.0
Heat output (min./max.)	kW	30.8/46.8	41.8/61.8	49.9/72.9	30.8/93.6	42.8/125.0	50.5/147.4
Natural gas (G20) rate*	l/s	1.04/1.55	1.43/2.04	1.67/2.38	1.04/3.09	1.43/4.08	1.67/4.76
	m^3/h	3.74/5.57	5.14/7.34	6.00/8.57	3.74/11.13	5.14/14.7	6.00/17.14
Natural gas (G25) rate*	l/s	1.21/1.80	1.66/2.37	1.94/2.77	1.21/3.60	1.66/4.74	1.94/5.54
	m^3/h	4.36/6.47	5.98/8.54	6.98/9.97	4.36/12.95	5.98/17.08	6.97/19.94
Natural gas (G25.1) rate*	l/s	1.21/1.79	1.66/2.37	1.94/2.77	1.21/3.59	1.66/4.74	1.93/5.54
	m^3/h	4.34/6.46	5.97/8.53	5.97/9.96	4.34/12.94	5.97/17.07	6.96/19.93
Injectors							
Quantity		5	6	7	10	12	14
Size	mm	3.26	3.45	3.45	3.26	3.45	3.45
Propane gas heating		**Option 100**	**Option 101**	**Option 102**	**Option 103**	**Option 104**	**Option 105**
Net heat input (min./max.)	kW	-/59.1	-/71.0	-/82.8	59.1 /118.2	71.0/142.0	82.8/165.6
Heat output (min./max.)	kW	-/53.2	-/63.9	-/74.5	52.6/105.2	63.9/127.8	75.3/150.7
Propane gas (G31) rate*	kg/h	-/4.59	-/5.51	-/6.43	4,59/9.18	5.51/11.03	6,43/12.86
	l/s	-/0.67	-/0.81	-/0.94	0.67/1.34	0.81/1.61	0.94/1.88
	m^3/h	-/2.42	-/2.90	-/3.39	2.42/4.83	2.90/5.81	3.39/6.77
Injectors							
Quantity		5	6	7	10	12	14
Size	mm	1.9	1.9	1.9	1.9	1.9	1.9
Weight	kg	65	73	80	135	150	165
Power consumption (400 V-3 ph-50 Hz)	kW	0.22	0.22	0.22	0.44	0.44	0.44
Gas connection (female)	in	Rp 3/4	Rp 3/4	Rp 3/4	Rp 3/4	Rp 3/4	Rp 3/4

* Natural gas G20 net calorific value 34.02 MJ/m^3 at 15°C, 1013.25 mbar
Natural gas G25 net calorific value 29.25 MJ/m^3 at 15°C, 1013.25 mbar
Natural gas G25.1 net calorific value 29.3 MJ/m^3 at 15°C, 1013.25 mbar
Propane gas G31 net calorific value 46.34 MJ/kg at 15°C, 1013.25 mbar
Propane gas G31 net calorific value 88.0 MJ/m^3 at15°C, 1013.25 mbar

Electric heaters, 50UA/UH

50UA/UH	Nominal power supply, V-ph-Hz	Electric heater	Nominal heat output, kW	Minimum/maximum heat output, kW	Rated current, A	No. of steps
045 (1 stage heating)	400-3-50	Option 83	18.0	9.0/18.0	26.0	2
		Option 84	27.0	18.0/27.0	39.0	2
		Option 85	36.0	18.0/36.0	52.0	2
055 (2 stages heating)	400-3-50	Option 83	18.0	9.0/18.0	26.0	2
		Option 84	27.0	18.0/27.0	39.0	2
		Option 85	36.0	18.0/36.0	52.0	2
065 (2 stages heating)	400-3-50	Option 84	27.0	18.0/27.0	39.0	2
		Option 85	36.0	18.0/36.0	52.0	2
		Option 86	54.0	27.0/54.0	77.9	2
075 (2 stages heating)	400-3-50	Option 84	27.0	18.0/27.0	39.0	2
		Option 85	36.0	18.0/36.0	52.0	2
		Option 86	54.0	27.0/54.0	77.9	2
085 (2 stages heating)	400-3-50	Option 85	36.0	18.0/36.0	52.0	2
		Option 86	54.0	27.0/54.0	77.9	2
		Option 87	72.0	36.0/72.0	103.9	2
100 (3 stages heating)	400-3-50	Option 85	36.0	18.0/36.0	52.0	2
		Option 86	54.0	27.0/54.0	77.9	2
		Option 87	72.0	36.0/72.0	103.9	2
120 (4 stages heating)	400-3-50	Option 85	36.0	18.0/36.0	52.0	2
		Option 86	54.0	27.0/54.0	77.9	2
		Option 87	72.0	36.0/72.0	103.9	2

Hot-water coil - capacity vs EWT and temperature rise

50UA/UH 045 and 055

60 kW coil

Air flow rate		Capacity	Leaving dry-bulb temp.	Air pressure drop	Water flow rate		Water pressure drop
l/s	m³/h	kW	°C	Pa	l/s	m³/h	kPa
2000	7 200	62.2	38.80	58	0.743	2.674	12
2120	7 632	63.1	37.71	64	0.754	2.713	12
2240	8 064	64.0	36.71	70	0.764	2.752	12
2360	8 496	64.9	35.81	77	0.775	2.789	13
2480	8 928	65.7	34.99	84	0.785	2.825	13
2600	9 360	66.5	34.23	91	0.794	2.860	13
2720	9 792	67.3	33.54	98	0.804	2.894	14
2840	10 224	68.0	32.89	105	0.813	2.926	14
2960	10 656	68.8	32.28	113	0.821	2.957	14
3080	11 088	69.5	31.72	121	0.830	2.987	14
3200	11 520	70.1	31.19	129	0.838	3.016	15
3320	11 952	70.8	30.69	137	0.845	3.043	15
3440	12 384	71.4	30.22	145	0.853	3.069	15
3560	12 816	72.0	29.78	154	0.859	3.094	15
3680	13 248	72.5	29.35	163	0.866	3.118	15
3800	13 680	73.0	28.95	172	0.872	3.140	16
3920	14 112	73.5	28.57	181	0.878	3.161	16
4040	14 544	74.0	28.20	191	0.884	3.181	16
4160	14 976	74.4	27.85	201	0.889	3.200	16

50UA/UH 065 and 075

60 kW coil

Air flow rate		Capacity	Leaving dry-bulb temp.	Air pressure drop	Water flow		Water pressure drop
l/s	m³/h	kW	°C	Pa	l/s	m³/h	kPa
2700	9 720	67.2	33.65	97	0.802	2.888	14
2820	10 152	67.9	32.99	104	0.811	2.921	14
2940	10 584	68.7	32.38	111	0.820	2.952	14
3060	11 016	69.4	31.81	119	0.828	2.982	14
3180	11 448	70.0	31.28	127	0.836	3.011	15
3300	11 880	70.7	30.77	135	0.844	3.039	15
3420	12 312	71.3	30.30	144	0.851	3.065	15
3540	12 744	71.9	29.85	152	0.858	3.090	15
3660	13 176	72.4	29.42	161	0.865	3.114	15
3780	13 608	72.9	29.02	170	0.871	3.137	16
3900	14 040	73.4	28.63	180	0.877	3.158	16
4020	14 472	73.9	28.26	189	0.883	3.178	16
4140	14 904	74.3	27.91	199	0.888	3.197	16
4260	15 336	74.8	27.57	209	0.893	3.215	16
4380	15 768	75.1	27.24	219	0.898	3.231	16
4500	16 200	75.5	26.93	229	0.902	3.246	16
4620	16 632	75.8	26.62	240	0.906	3.260	17
4740	17 064	76.1	26.33	251	0.909	3.273	17
4860	17 496	76.4	26.05	262	0.912	3.285	17

50UA/UH 065 and 075

100 kW coil

Air flow rate		Capacity	Leaving dry-bulb temp.	Air pressure drop	Water flow		Water pressure drop
l/s	m³/h	kW	°C	Pa	l/s	m³/h	kPa
2700	9 720	96.7	42.73	97	1.155	4.158	18
2820	10 152	98.7	42.06	104	1.179	4.245	19
2940	10 584	100.7	41.42	111	1.202	4.328	19
3060	11 016	102.5	40.79	119	1.224	4.406	20
3180	11 448	104.2	40.19	127	1.244	4.480	21
3300	11 880	105.8	39.61	135	1.264	4.549	21
3420	12 312	107.3	39.04	144	1.282	4.614	22
3540	12 744	108.7	38.49	152	1.298	4.674	22
3660	13 176	110.0	37.95	161	1.314	4.730	23
3780	13 608	111.2	37.42	170	1.328	4.782	23
3900	14 040	112.3	36.90	180	1.341	4.829	23
4020	14 472	113.3	36.39	189	1.353	4.871	24
4140	14 904	114.2	35.89	199	1.364	4.909	24
4260	15 336	115.0	35.40	209	1.373	4.943	24
4380	15 768	115.6	34.91	219	1.381	4.972	25
4500	16 200	116.2	34.43	229	1.388	4.997	25
4620	16 632	116.7	33.96	240	1.394	5.017	25
4740	17 064	117.0	33.50	251	1.398	5.033	25
4860	17 496	117.3	33.03	262	1.401	5.044	25

EWT Entering water temperature
Note: Based on 90°C entering water temperature, 20 K water temperature rise, 13°C entering air temperature

Hot-water coil - capacity vs EWT and temperature rise

50UA/UH 085, 100 and 120

130 kW coil

Air flow rate		Capacity	Leaving dry-bulb temp.	Air pressure drop	Water flow		Water pressure drop
l/s	m³/h	kW	°C	Pa	l/s	m³/h	kPa
4400	15 840	157.8	42.77	68	1.885	6.785	36
4530	16 308	159.8	42.27	72	1.908	6.870	37
4660	16 776	161.7	41.80	75	1.931	6.952	38
4790	17 244	163.5	41.34	79	1.953	7.032	38
4920	17 712	165.3	40.89	82	1.974	7.108	39
5050	18 180	167.0	40.45	86	1.995	7.181	40
5180	18 648	168.6	40.02	90	2.014	7.251	40
5310	19 116	170.2	39.60	94	2.033	7.319	41
5440	19 584	171.7	39.20	98	2.051	7.383	42
5570	20 052	173.1	38.80	102	2.068	7.444	42
5700	20 520	174.5	38.41	106	2.084	7.502	43
5830	20 988	175.8	38.02	110	2.099	7.558	43
5960	21 456	177.0	37.65	114	2.114	7.610	44
6090	21 924	178.1	37.28	118	2.128	7.659	45
6220	22 392	179.2	36.91	123	2.140	7.705	45
6350	22 860	180.2	36.55	127	2.152	7.749	45
6480	23 328	181.1	36.20	131	2.164	7.789	46
6610	23 796	182.0	35.85	136	2.174	7.826	46
6740	24 264	182.8	35.51	140	2.183	7.860	47

EWT Entering water temperature
Note: Based on 90°C entering water temperature, 20 K water temperature rise, 13°C entering air temperature

Correction factors

60 kW coil

Water temp. drop, (°C)	Entering water temperature,°C	Entering air temperature, °C						
		0	5	10	15	20	25	30
10	50	0.490	0.451	0.405	0.351	0.289	0.220	0.143
	60	0.861	0.785	0.699	0.603	0.498	0.382	0.256
	70	1.086	1.004	0.906	0.793	0.665	0.521	0.363
	80	1.167	1.108	1.025	0.920	0.791	0.639	0.465
	90	1.154	1.118	1.057	0.984	0.876	0.735	0.561
20	50	0.250	0.242	0.225	0.201	0.170	0.130	0.084
	60	0.694	0.633	0.563	0.485	0.399	0.303	0.200
	70	0.992	0.909	0.814	0.706	0.586	0.454	0.310
	80	1.145	1.070	0.977	0.864	0.733	0.583	0.415
	90	1.153	1.117	1.052	0.960	0.839	0.690	0.514

100 kW coil

Water temp. drop, (°C)	Entering water temperature,°C	Entering air temperature, °C						
		0	5	10	15	20	25	30
10	50	0.662	0.506	0.381	0.286	0.222	0.188	0.184
	60	0.843	0.724	0.616	0.518	0.429	0.351	0.283
	70	1.087	0.956	0.830	0.711	0.598	0.492	0.391
	80	1.394	1.200	1.024	0.867	0.729	0.610	0.510
	90	1.764	1.457	1.197	0.986	0.822	0.706	0.638
20	50	0.595	0.402	0.256	0.156	0.103	0.097	0.096
	60	0.745	0.614	0.501	0.407	0.330	0.272	0.232
	70	0.957	0.838	0.726	0.619	0.519	0.424	0.336
	80	1.233	1.076	0.930	0.794	0.669	0.554	0.449
	90	1.571	1.327	1.113	0.931	0.780	0.661	0.573

130 kW coil

Water temp. drop, (°C)	Entering water temperature,°C	Entering air temperature, °C						
		0	5	10	15	20	25	30
10	50	0.811	0.597	0.428	0.302	0.220	0.181	0.180
	60	0.864	0.738	0.624	0.521	0.430	0.350	0.281
	70	1.053	0.936	0.821	0.709	0.599	0.492	0.388
	80	1.378	1.189	1.018	0.864	0.727	0.608	0.507
	90	1.838	1.498	1.214	0.986	0.814	0.699	0.640
20	50	0.810	0.548	0.329	0.180	0.099	0.087	0.086
	60	0.820	0.661	0.526	0.416	0.330	0.269	0.232
	70	0.941	0.830	0.723	0.619	0.520	0.424	0.333
	80	1.198	1.055	0.919	0.790	0.668	0.554	0.446
	90	1.591	1.336	1.116	0.929	0.776	0.657	0.572

Ethylene glycol derating factors

Percentage	Capacity derating factor	WPD derating factor
10	0.990	1.019
20	0.978	1.039
30	0.962	1.061
35	0.952	1.073

Propylene glycol derating factors

Percentage	Capacity derating factor	WPD derating factor
10	0.980	1.032
20	0.954	1.070
30	0.924	1.112
35	0.908	1.134

WPD Water pressure drop

Operating limits

Cooling mode		
Zone	**Air temperature, °C**	
	Dry bulb	**Wet bulb**
Indoor		
Minimum	+18	+13
Maximum	+35	+23
Outdoor		
Minimum	+10	-
Maximum	+48	-

Heat pump mode		
Zone	**Air temperature, °C**	
	Dry bulb	**Wet bulb**
Indoor		
Minimum	+10	-
Maximum	+27	-
Outdoor		
Minimum	-10	-11
Maximum	+22	+18

Minimum and maximum air flow rates

50UH	Minimum		Maximum	
	l/s	m³/h	l/s	m³/h
045	2022	7 279	3033	10 919
055	2755	9 918	4132	14 875
065	2777	9 997	4166	14 998
075	3155	11 358	4732	17 035
085	4440	15 984	6660	23 976
100	4440	15 984	6660	23 976
120	4440	15 984	6660	23 976

No compressor running & Free Cooling mode.	Minimum outdoor air temperature	-20°C
No compressor running & electric heaters only mode.	Minimum outdoor air temperature	-20°C
No compressor running Hot water coil only mode.	Minimum outdoor air temperature	-20°C
No compressor running & gas burner only mode.	Minimum outdoor air temperature	-20°C
Storage		between -20°C and +48°C

Sound rating data

48/50 UA/UH	Outdoor sound power level at 50 Hz, dB						
	Global dB(A)	**125**	**250**	**500**	**1000**	**2000**	**4000**
045	86.5	89.3	89.5	81.3	81.9	77.0	72.1
055	84.4	87.1	88.9	79.5	77.7	74.7	70.3
065	90.6	92.3	94.5	86.3	85.2	80.0	75.0
075	90.6	92.3	94.5	86.3	85.4	80.1	74.6
085	90.7	92.3	94.5	86.3	85.4	80.5	75.1
100	91.0	92.3	94.5	86.4	85.9	81.1	76.3
120	91.3	92.3	94.5	86.4	86.5	81.8	77.0

48/50 UA/UH	Indoor sound power level, supply side at 50 Hz, dB						
	Global dB(A)	**125**	**250**	**500**	**1000**	**2000**	**4000**
045	80.9	78.9	77.1	74.2	75.7	75.2	72.1
055	85.6	81.6	82.6	78.2	79.7	80.2	77.5
065	86.0	81.6	83.2	78.6	80.0	80.6	78.0
075	87.7	82.8	84.9	80.2	81.4	82.5	79.9
085	87.7	87.2	82.5	83.0	81.5	81.5	79.9
100	87.7	87.2	82.5	83.0	81.5	81.5	79.9
120	88.1	87.4	84.2	83.0	82.2	81.7	80.6

48/50 UA/UH	Indoor sound power level, return side at 50 Hz, dB						
	Global dB(A)	**125**	**250**	**500**	**1000**	**2000**	**4000**
045	79.3	79.0	76.9	74.4	74.3	72.4	70.1
055	84.2	81.4	82.5	78.7	78.9	77.7	75.2
065	84.6	81.5	83.1	79.1	79.2	78.2	75.7
075	86.4	82.4	85.0	80.7	80.8	80.2	77.6
085	86.0	87.4	82.5	82.7	79.4	78.8	78.4
100	86.0	87.4	82.5	82.7	79.4	78.8	78.4
120	86.6	87.7	84.2	82.8	81.1	79.0	79.1

Physical data, energy recovery module (ERM)

ERM		ERM 7	ERM 9	ERM 13	ERM 18
Weight (ducted)	kg	305	395 (439)	430 (480)	580 (640)
Air flow					
Maximum	l/s - m³/h	1860 - 6696	2542 - 9150	3361 - 12100	4833 - 17400
Minimum	l/s - m³/h	562,5 - 2025	779 - 2805	1008 - 3630	1500 - 5400
Unit thermal efficiency**					
At maximum air flow	%	60.5	64.6	63.7	64
At minimum air flow	%	81.3	83.7	83.4	83.2
Unit external static pressure at max.air flow	Pa	150	150	150	150
Rooftop size compatibility					
45		Direct	Ducted (*)	-	-
55-65-75		Direct	-	Ducted (*)	-
85-100-120		-	Direct	-	Ducted (*)
Energy Recovery Heat Exchanger		Condensation heat recovery wheel, performance Eurovent certified			
Heat Exchanger Performance Certification	-	Eurovent Certified			
Wheel Diameter	mm	1000	1290	1450	1750
Speed	rpm	Constant		Constant	
Pressure loss, exhaust	Pa	190	154	159	162
IP level for motor	-	IP54	IP54	IP54	IP54
Motor Power	W	90	90	180	180
Exhaust Air Fan					
Fan diameter	mm	400	450	500	630
Drive		Frequency inverter			
Number of Fans	pieces	1	1	1	1
Motor Power	kW	1.5	2.2	3	4
Motor insulation class		F	F	F	F
Filters					
Filter Class (EN 779)	-	G4 F1			
Number of filters	pieces	2	2	4	4
Filter size (thickness x length x height)	mm x mm x mm	48x750x560	48x750x665	48x750x560	48x750x665
Control		**Prodialog Plus+**			
Operating limits					
Maximum outdoor temperature	°C	48			
Minimum outdoor temperature	°C	-20			
Dimensions					
width	mm	1644	1644	1644	1959
length (with fresh air hood)	mm	1108 (1347)	1306 (1653)	1306 (1653)	1521 (1947)
height	mm	1215	1527	1687	2021

(*) Ducted connection can be supplied from factory & mounted by customer or can be supplied & mounted by customer
(**) Thermal efficiency of supply air, outside air -10C, extract air 21C/50%.

Electrical data, energy recovery module (ERM)

Energy recovery module		7	9	13	18
Power circuit					
Nominal power supply	V-ph-Hz	400-3-50			
Voltage range	V	360-440			
Control circuit supply		24V, via internal transformer			
Maximum unit power input	kW	3.1	4.1	5.4	7.3
FLA	A	4.6	6.1	8.2	11
Maximum supply cable size	mm²	2.5	2.5	2.5	2.5
Main switch	A	Same as rooftop's main switch			
Recommended fuse protection , power circuit	A	10	10	16	16

Exhaust fan performances, energy recovery module (ERM)

ERM 7 exhaust fan - 045-075

l/s	m³/h	External Static Pressure at return(Pa)															
		50		100		150		200		250		300		350		450	
		rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
563	2025	847	0.18	956	0.23	1058	0.29	1151	0.35	1241	0.4	1327	0.46	1407	0.52	1554	0.62
972	3500	1233	0.40	1304	0.46	1374	0.51	1442	0.59	1508	0.6	1572	0.73	1635	0.81	1755	0.96
1389	5000	1650	0.73	1699	0.81	1748	0.89	1797	0.96	1848	1.0	1898	1.16	1948	1.27	1998	1.34
1875	6750	2158	1.34	2195	1.45	2232	1.50	-	-	-	-	-	-	-	-	-	-

ERM 9 exhaust fan - 045 / 085-120

l/s	m³/h	External Static Pressure at return(Pa)															
		50		100		150		200		250		300		350		450	
		rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
779	2805	747	0.24	838	0.31	924	0.38	1003	0.45	1075	0.5	1146	0.59	1219	0.67	1397	0.86
1389	5000	1157	0.58	1212	0.65	1266	0.74	1321	0.83	1378	0.9	1434	0.98	1488	1.06	1543	1.14
1944	7000	1576	0.99	1618	1.11	1656	1.21	1694	1.33	1731	1.4	1768	1.57	1805	1.70	1877	1.99
2542	9150	2003	1.94	2032	2.09	2061	2.15	-	-	-	-	-	-	-	-	-	-

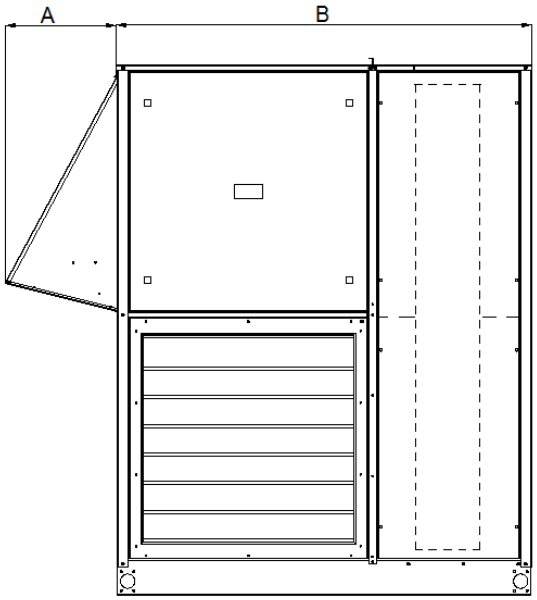
ERM 13 exhaust fan - 055-075

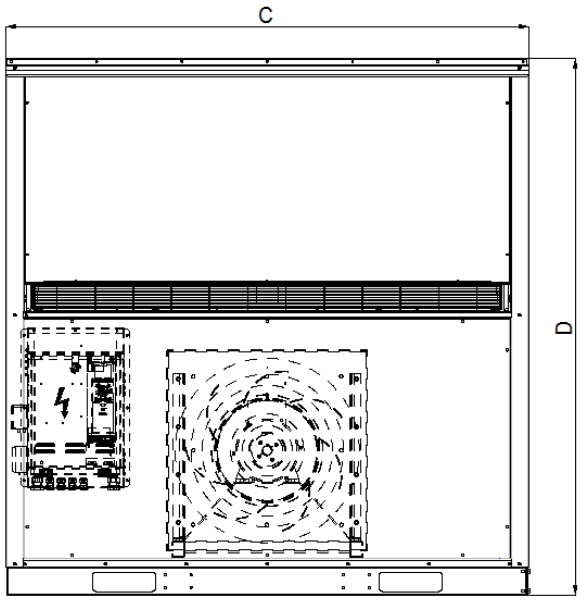
l/s	m³/h	External Static Pressure at return(Pa)															
		50		100		150		200		250		300		350		450	
		rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
1008	3630	678	0.23	761	0.31	836	0.40	905	0.49	972	0.58	1034	0.69	1094	0.79	1207	0.98
1378	4960	847	0.37	908	0.48	971	0.58	1030	0.70	1086	0.82	1140	0.93	1192	1.04	1293	1.25
2067	7440	1182	0.87	1223	0.98	1264	1.09	1306	1.22	1349	1.36	1391	1.49	1432	1.64	1473	1.73
2756	9920	1526	1.64	1556	1.78	1586	1.93	1617	2.09	1649	2.28	1682	2.46	1716	2.62	1783	2.94
3361	12100	1832	2.57	1852	2.70	1872	2.76	-	-	-	-	-	-	-	-	-	-

ERM 18 exhaust fan - 085-120

l/s	m³/h	External Static Pressure at return(Pa)															
		50		100		150		200		250		300		350		450	
		rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW	rpm	kW
1500	5400	536	0.34	602	0.44	663	0.57	723	0.71	777	0.86	829	1.00	877	1.15	969	1.47
2222	8000	706	0.64	753	0.81	801	0.93	847	1.12	891	1.29	933	1.47	975	1.68	1117	2.20
3333	12000	990	1.49	1020	1.72	1051	1.86	1083	2.08	1115	2.31	1148	2.57	1181	2.76	1246	3.26
4444	16000	1279	2.90	1302	3.11	1324	3.37	1347	3.62	1370	3.88	1394	4.15	1418	4.29	1442	4.44
4833	17400	1380	3.54	1402	3.81	1424	3.93	-	-	-	-	-	-	-	-	-	-

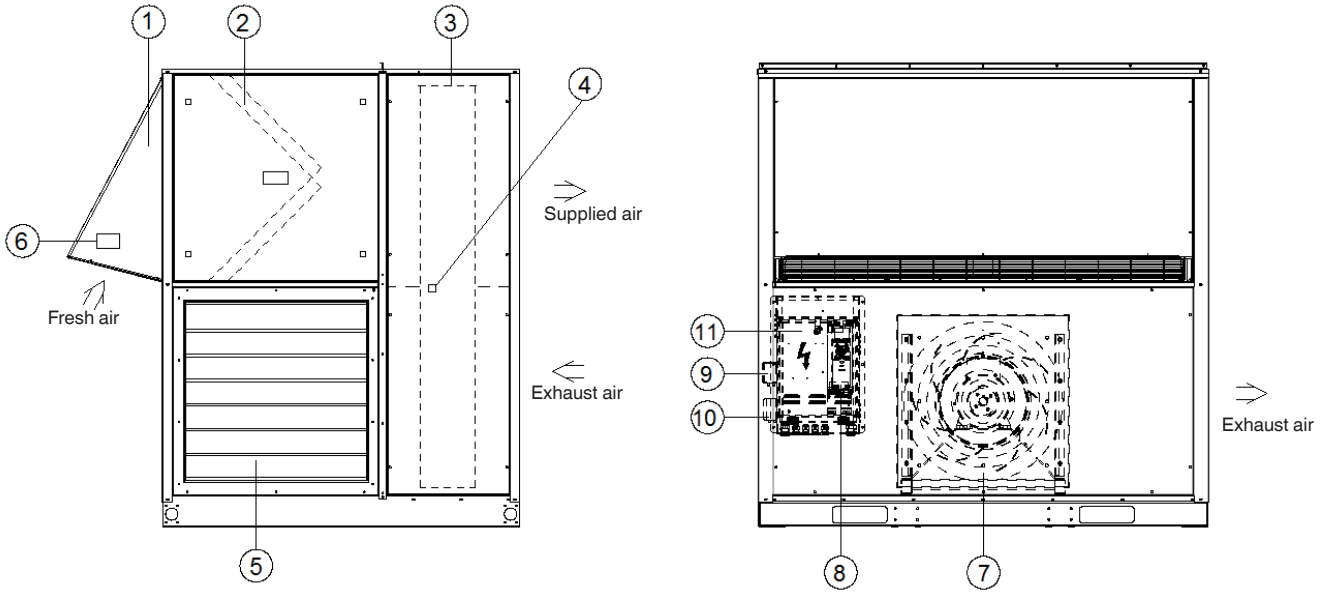
Dimensions, energy recovery module (ERM), mm





Unit size		A	B	C	D
ERM 7	mm	239	1108	1644	1215
ERM 9	mm	347	1306	1644	1527
ERM 13	mm	347	1306	1644	1687
ERM 18	mm	426	1521	1959	2021

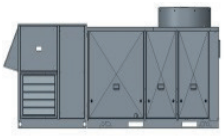
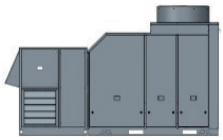
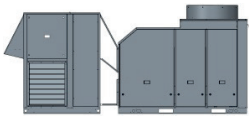
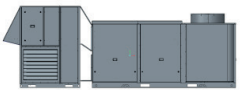
Schematic diagram, energy recovery module with control



Legend

1 Fresh air inlet hood
2 Filter
3 Heat recovery wheel
4 Motion sensor
5 Barometric exhaust
6 Enthalpy sensor (options 36 and 157)
7 Exhaust air fan
8 Inverter
9 Air pressure sensor
10 Dirty-filter switch (options 96 and 162)
11 Control box

Connection to Rooftop, energy recovery module (ERM)

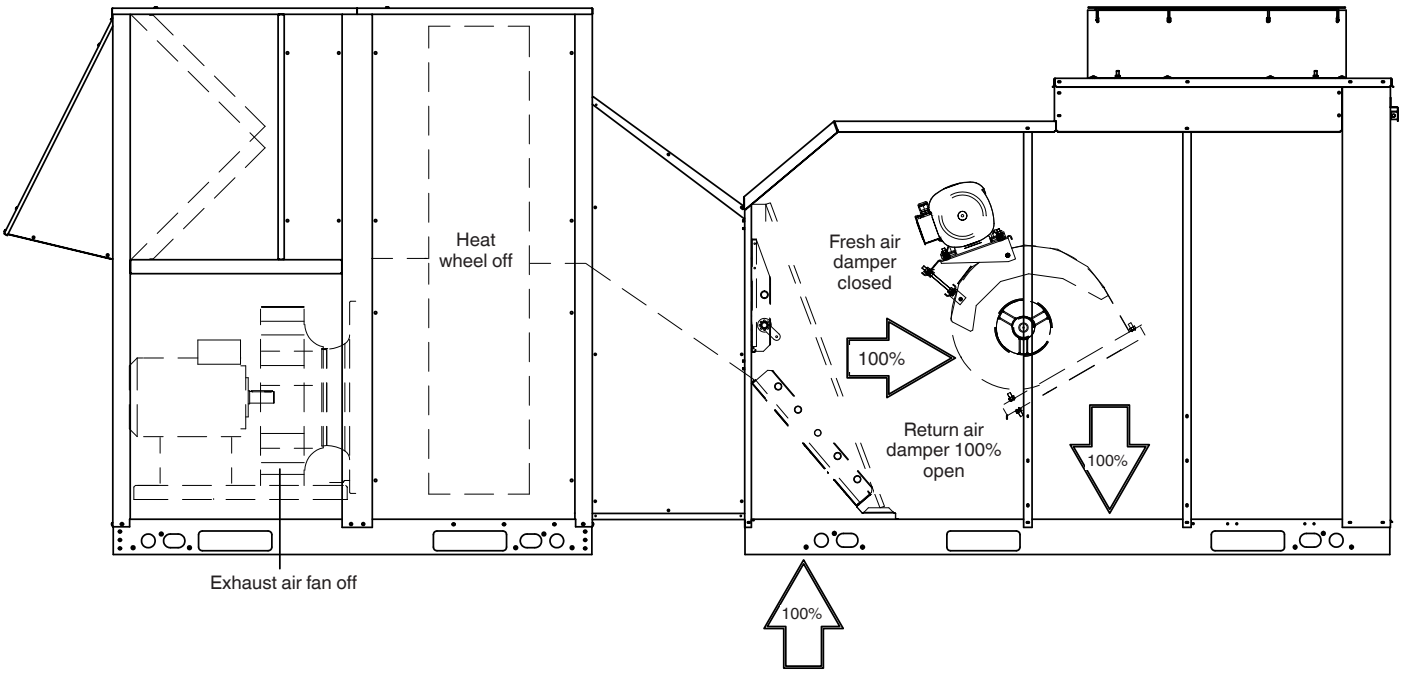
UH-UA Models	ERM 7	ERM 9	ERM 13	ERM 18
45	 OP173 Direct connection	 OP160 Ducted connection		
55 65 75	 OP173 Direct connection		 OP160 Ducted connection	
85 100 120		 OP173 Direct connection		 OP160 Ducted connection

Operating mode, energy recovery module (ERM)

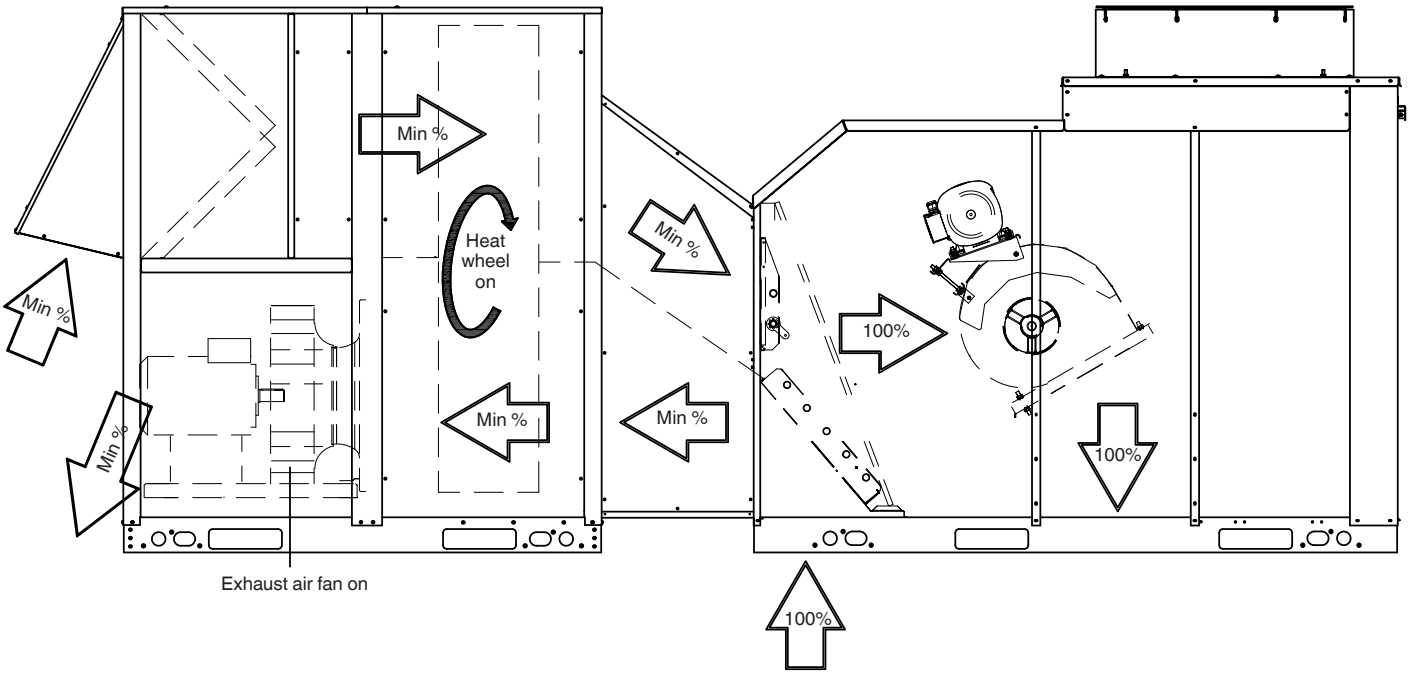
In the following table the component status is given according to the operating mode.

Mode	Rootop unit indoor fan	ERM exhaust fan	Heat recovery wheel	Economizer
1 - Recirculation	On	Off	Off	100% closed
2 - Recovery	On	On (min.)	On	Minimum
3 - Free cooling	On	On (max.)	Off	100% open

Step 1: recirculation mode

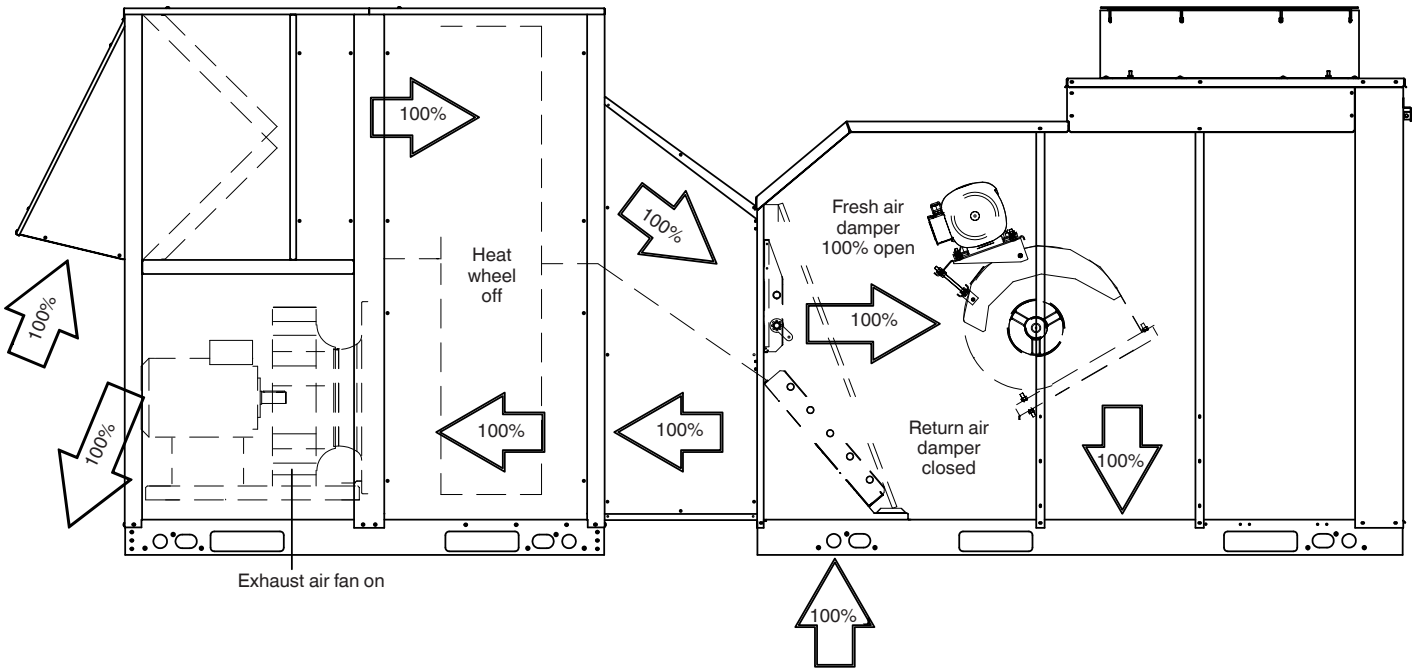


Step 2: Energy recovery mode



Operating mode, energy recovery module (ERM) (continued)

Step 3: Free-cooling mode



Cooling capacities

ERM 7	ODDB / ODRH	25/40				30/40				35/40				40/40				43/40				46/40			
Air flow (m³/h)	IDDB	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH
2025	18	81.7	3.91	19.3	56.7	81.6	6.71	20.2	71.7	81.6	9.58	21.1	89.6	73.7	12.83	23.8	95	68.9	15.29	25.8	95	65.4	18.38	27.7	95
	21	81.7	2.24	21.7	48.7	81.7	5.04	22.6	61.7	81.7	7.86	23.6	77.4	81.2	10.83	24.6	95	74.4	12.87	26.6	95	69.3	15.36	28.7	95
	24	81.9	0.56	24.2	42	81.8	3.36	25.1	53.3	81.8	6.18	26	66.9	81.7	9.01	26.9	83.1	81.6	10.85	27.5	93.9	75.2	12.91	29.5	95
	27	82	1.12	26.6	36.3	81.9	1.68	27.5	46.1	81.9	4.5	28.4	58	81.8	7.33	29.4	72.1	81.7	9.04	29.9	81.8	81.6	10.88	30.5	92.2
3500	18	73.4	6.07	19.9	54.7	73.4	10.43	21.2	67.5	73.4	14.88	22.5	82.3	71.4	19.95	24.3	95	66.7	23.76	26.3	95	63.2	28.56	28.3	95
	21	73.5	3.47	22.1	47.8	73.5	7.83	23.4	59	73.5	12.21	24.7	72.2	73.4	16.83	26.1	87.2	72.3	20.01	27.1	95	67.3	23.88	29.2	95
	24	73.6	0.87	24.3	41.8	73.6	5.23	25.6	51.8	73.6	9.61	26.9	63.4	73.5	14.02	28.2	77	73.5	16.88	29	85.8	73.4	20.07	29.9	95
	27	73.7	1.74	26.5	36.7	73.7	2.62	27.8	45.5	73.7	7	29.1	55.8	73.6	11.41	30.4	67.9	73.6	14.07	31.2	75.9	73.5	16.93	32	84.5
5000	18	67	7.91	20.3	53.2	67	13.6	22	64.4	67	19.42	23.6	77.1	67	26.03	25.3	90.6	65	31.02	26.7	95	61.6	37.28	28.8	95
	21	67.1	4.53	22.3	47	67.1	10.22	24	57	67.1	15.94	25.6	68.5	67.1	21.97	27.3	81.3	67	26.12	28.3	89.2	65.8	31.18	29.5	95
	24	67.2	1.13	24.3	41.6	67.2	6.82	26	50.6	67.2	12.54	27.6	60.9	67.2	18.3	29.3	72.6	67.1	22.04	30.2	80.1	67.1	26.21	31.2	87.8
	27	67.3	2.27	26.3	36.9	67.3	3.42	28	45	67.3	9.14	29.6	54.2	67.3	14.89	31.3	64.7	67.2	18.37	32.2	71.7	67.2	22.11	33.2	79
6750	18	61.1	9.75	20.7	51.8	61.1	16.76	22.7	61.7	61.2	23.93	24.6	72.6	61.1	32.08	26.6	84.1	61.1	38.21	27.7	90.7	60.1	45.94	29.2	95
	21	61.2	5.58	22.6	46.3	61.3	12.59	24.5	55.3	61.3	19.64	26.4	65.3	61.2	27.08	28.4	76.2	61.2	32.2	29.5	82.9	61.1	38.42	30.7	89.4
	24	61.3	1.4	24.4	41.5	61.4	8.41	26.3	49.6	61.4	15.46	28.2	58.7	61.3	22.56	30.2	68.8	61.3	27.17	31.4	75.2	61.3	32.31	32.5	81.7
	27	61.4	2.8	26.2	37.2	61.5	4.21	28.2	44.5	61.5	11.26	30.1	52.8	61.4	18.36	32	62	61.4	22.65	33.2	68	61.4	27.26	34.3	74.3

Heating capacities

ERM 7	ODDB	15				10				5				0				-5				-10			
Air flow (m³/h)	IDDB	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH
2025	18	81.6	1.67	17.4	34.2	81.6	4.44	16.5	26.1	81.5	7.36	15.6	20.5	81.4	12.48	14.7	29	81.3	17.89	13.7	41.6	81.3	21.53	12.8	46.2
	21	81.7	3.34	19.9	29.3	81.7	6.13	19	22.4	81.6	9.58	18.1	20.1	81.5	16.09	17.1	34.1	81.4	21.26	16.2	44.1	81.3	24.78	15.2	47.9
	24	81.8	5.02	22.4	25.2	81.8	7.93	21.4	19.7	81.7	12.52	20.5	22.1	81.6	19.91	19.6	38	81.5	24.86	18.6	46.1	81.5	28.31	17.7	49.4
	26	81.9	6.14	24	22.8	81.8	9.3	23.1	18.7	81.8	14.9	22.2	24.4	81.7	22.57	21.2	40	81.6	27.43	20.3	47.2	81.5	30.84	19.3	50.3
3500	18	73.3	2.59	17.2	34.8	73.2	6.89	15.9	27.3	73.1	11.4	14.5	21.9	73	19.33	13.1	30.3	72.9	27.7	11.8	43.6	72.8	33.31	10.4	49.3
	21	73.4	5.18	19.4	30.3	73.3	9.51	18.1	23.8	73.2	14.86	16.7	21.5	73.1	24.92	15.4	35.7	73	32.93	14	46.6	72.9	38.35	12.6	51.7
	24	73.5	7.79	21.6	26.4	73.4	12.31	20.3	21.1	73.3	19.42	18.9	23.6	73.2	30.85	17.6	40	73.1	38.51	16.2	49.1	73	43.82	14.8	53.9
	26	73.5	9.53	23.1	24.1	73.5	14.44	21.8	20.1	73.4	23.1	20.4	25.9	73.3	34.98	19.1	42.3	73.2	42.48	17.7	50.7	73.1	47.73	16.3	55.3
5000	18	66.9	3.37	17	35.2	66.8	8.98	15.3	28.2	66.7	14.86	13.7	23	66.6	25.17	12	31.4	66.4	36.06	10.3	45	66.3	43.35	8.6	51.6
	21	67	6.76	19	31	66.9	12.4	17.4	24.8	66.8	19.36	15.7	22.7	66.7	32.46	14	36.9	66.5	42.86	12.3	48.5	66.4	49.91	10.6	54.5
	24	67.1	10.16	21	27.4	67	16.04	19.4	22.3	66.9	25.31	17.7	24.7	66.8	40.18	16	41.4	66.7	50.13	14.3	51.4	66.5	57.02	12.6	57.3
	26	67.1	12.43	22.4	25.2	67	18.82	20.7	21.3	66.9	30.1	19.1	27.1	66.8	45.56	17.4	43.9	66.7	55.3	15.7	53.3	66.6	62.12	14	59.1
6750	18	61	4.16	16.8	35.6	60.9	11.05	14.9	29	60.8	18.28	12.9	24.2	60.7	30.97	10.9	32.4	60.5	44.34	8.9	46.2	60.4	53.29	6.9	53.6
	21	61.1	8.32	18.7	31.7	61	15.26	16.7	25.9	60.9	23.83	14.7	23.8	60.8	39.93	12.8	37.9	60.6	52.71	10.8	50	60.5	61.36	8.8	57
	24	61.2	12.51	20.5	28.3	61.1	19.75	18.6	23.4	61	31.15	16.6	25.8	60.9	49.43	14.6	42.6	60.7	61.65	12.6	53.4	60.6	70.1	10.6	60.4
	26	61.3	15.3	21.7	26.2	61.2	23.18	19.8	22.5	61.1	37.05	17.8	28.2	60.9	56.05	15.8	45.4	60.8	68.01	13.9	55.6	60.7	76.37	11.8	62.7

cc: Cooling Capacity (kW)
ht: Heating Capacity (kW)
eff: Energy recovery modul efficiency (%)
ODDB: Outdoor air dry bulp temperature (°C)
ODRH: Outdoor air relative humudity (%)
IDDB: Indoor air dry bulp temperature (°C)
Out DB: ERM outlet air dry-bulb temperature (°C) - before rooftop inlet -
Out RH: ERM outlet air relative humudity (°C) - before rooftop inlet -

Cooling capacities

ERM 9	ODDB / ODRH	25/40				30/40				35/40				40/40				43/40				46/40			
Air flow (m^3/h)	IDDB	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH
2805	18	84	5.57	19.1	57.2	84	9.56	19.9	73	83.9	13.64	20.7	91.8	74.3	18.28	23.7	95	69.5	21.78	25.6	95	66.1	26.17	27.5	95
	21	84.1	3.18	21.6	49	84.1	7.18	22.4	62.5	84	11.19	23.2	78.9	81.8	15.42	24.5	95	75	18.33	26.5	95	69.9	21.87	28.5	95
	24	84.2	0.8	24.2	42.1	84.2	4.79	25	53.7	84.1	8.8	25.7	67.9	84	12.84	26.6	84.9	83	15.46	27.2	95	75.7	18.38	29.3	95
	27	84.3	1.6	26.7	36.2	84.3	2.4	27.5	46.3	84.2	6.41	28.3	58.6	84.1	10.44	29.1	73.4	84	12.88	29.6	83.6	83.9	15.5	30.1	94.5
5000	18	75.9	8.96	19.7	55.3	75.9	15.4	20.9	68.7	75.8	21.98	22.1	84.4	72.1	29.46	24.1	95	67.4	35.1	26.2	95	63.9	42.19	28.1	95
	21	76	5.13	22	48	76	11.57	23.2	59.8	75.9	18.04	24.4	73.8	75.9	24.85	25.6	89.7	72.9	29.55	27	95	67.9	35.27	29	95
	24	76.1	1.28	17.2	76.1	76.1	7.72	25.4	52.2	76	14.19	26.6	64.5	76	20.7	27.8	78.8	75.9	24.92	28.6	88.2	73.9	29.65	29.7	95
	27	76.2	2.57	26.5	36.5	76.2	3.87	27.7	45.7	76.2	10.34	28.9	56.5	76.1	16.84	30.1	69.1	76	20.77	30.8	77.7	76	25	31.6	86.7
7000	18	70.2	11.6	20.1	53.9	70.2	19.94	21.6	65.9	70.2	28.47	23.1	79.6	70.1	38.15	24.6	94.4	65.8	45.47	26.5	95	62.4	54.65	28.5	95
	21	70.3	6.64	22.2	47.4	70.3	14.98	23.7	58	70.3	23.36	25.2	70.3	70.2	32.2	26.7	84.2	70.2	38.28	27.6	92.8	66.6	45.7	29.4	95
	24	70.4	1.66	24.3	41.7	70.4	10	25.8	51.2	70.4	18.39	27.3	62.1	70.3	26.82	28.7	74.8	70.3	32.3	29.6	82.9	70.2	38.41	30.6	91.3
	27	70.5	3.33	26.4	36.8	70.5	5.01	27.9	45.2	70.5	13.39	29.4	55	70.4	21.83	30.8	66.3	70.4	26.92	31.7	73.8	70.3	32.4	32.6	81.7
9150	18	65.2	14.09	20.4	52.8	65.2	24.22	22.2	63.5	65.2	34.58	23.9	75.7	65.2	46.35	25.7	88.5	64.5	55.23	26.9	95	61.1	66.38	28.9	95
	21	65.3	8.06	22.4	46.8	65.3	18.19	24.1	56.5	65.3	28.38	25.9	67.5	65.3	39.12	27.6	79.7	65.2	46.51	28.7	87.2	65.2	55.49	29.7	94.6
	24	65.4	2.02	24.3	41.6	65.4	12.15	26.1	50.3	65.4	22.33	27.8	60.2	65.4	32.59	29.5	71.4	65.3	39.25	30.6	78.6	65.3	46.68	31.6	85.9
	27	65.5	4.04	26.3	37	65.5	6.08	28	44.8	65.5	16.27	29.8	53.8	65.5	26.52	31.5	63.9	65.4	32.71	32.5	70.6	65.4	39.38	33.6	77.5

Heating capacities

ERM 9	ODDB	15				10				5				0				-5				-10			
Air flow (m^3/h)	IDDB	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH
2805	18	84	2.38	17.5	34.1	83.9	6.33	16.7	25.8	83.9	10.49	15.9	20.1	83.8	17.79	15.1	28.6	83.7	25.51	14.3	41	83.7	30.7	13.4	45.3
	21	84.1	4.76	20	29.1	84	8.74	19.2	22.1	84	13.66	18.4	19.7	83.9	22.93	17.6	33.6	83.8	30.32	16.8	43.4	83.7	35.34	16	46.9
	24	84.2	7.15	22.6	24.9	84.1	11.3	21.8	19.3	84.1	17.85	21	21.8	84	28.39	20.2	37.4	83.9	35.46	19.3	45.2	83.8	40.37	18.5	48.2
	26	84.2	8.75	24.3	22.5	84.2	13.26	23.5	18.3	84.1	21.23	22.7	24	84.1	32.19	21.9	39.4	84	39.11	21	46.2	83.9	43.98	20.2	49
5000	18	75.8	3.83	17.3	34.6	75.7	10.18	16.1	26.9	75.6	16.85	14.8	21.5	75.5	28.58	13.6	29.9	75.4	40.96	12.4	43	75.3	49.27	11.1	48.4
	21	75.9	7.66	19.6	30	75.8	14.05	18.3	23.4	75.7	21.97	17.1	21.1	75.6	36.84	15.9	35.2	75.5	48.68	14.6	45.9	75.4	56.72	13.4	50.5
	24	76	11.51	21.8	26	75.9	18.19	20.6	20.7	75.8	28.7	19.4	23.1	75.7	45.6	18.2	39.4	75.6	56.93	16.9	48.2	75.5	64.79	15.7	52.5
	26	76.1	14.08	23.4	23.7	76	21.34	22.2	19.7	75.9	34.14	20.9	25.5	75.8	51.71	19.7	41.6	75.7	62.8	18.5	49.6	75.6	70.58	17.2	53.8
7000	18	70	4.95	17.1	35	70	13.17	15.6	27.7	69.9	21.8	14.1	22.5	69.8	36.94	12.6	30.9	69.7	52.93	11	44.3	69.5	63.64	9.5	50.5
	21	70.1	9.91	19.2	30.6	70.1	18.18	17.7	24.3	70	28.41	16.2	22.1	69.9	47.63	14.7	36.3	69.8	62.91	13.1	47.6	69.6	73.27	11.6	53.1
	24	70.3	14.89	21.3	26.9	70.2	23.53	19.8	21.7	70.1	37.13	18.3	24.2	70	58.96	16.8	40.7	69.9	73.58	15.3	50.3	69.7	83.71	13.7	55.6
	26	70.3	18.22	22.7	24.7	70.2	27.61	21.2	20.7	70.2	44.16	19.7	26.5	70	66.86	18.2	43.1	69.9	81.16	16.7	52	69.8	91.19	15.1	57.2
9150	18	65	6.01	17	35.3	64.9	15.98	15.2	28.4	64.8	26.44	13.4	23.4	64.7	44.8	11.7	31.7	64.6	64.16	9.9	45.4	64.5	77.13	8.1	52.2
	21	65.1	12.03	18.9	31.2	65	22.07	17.2	25.2	64.9	34.47	15.4	23	64.8	57.77	13.6	37.2	64.7	76.27	11.8	48.9	64.6	88.81	10	55.3
	24	65.2	18.08	20.9	27.6	65.2	28.56	19.1	22.7	65.1	45.05	17.4	25.1	64.9	71.51	15.6	41.8	64.8	89.21	13.8	52.1	64.7	101.46	12	58.3
	26	65.3	22.12	22.2	25.5	65.2	33.51	20.4	21.7	65.1	53.58	18.7	27.4	65	81.09	16.9	44.4	64.9	98.41	15.1	54	64.8	110.53	13.3	60.2

cc: Cooling Capacity (kW)
ht: Heating Capacity (kW)
eff: Energy recovery modul efficiency (%)
ODDB: Outdoor air dry bulp temperature (°C)
ODRH: Outdoor air relative humudity (%)
IDDB: Indoor air dry bulp temperature (°C)
Out DB: ERM outlet air dry-bulb temperature (°C) - before rooftop inlet -
Out RH: ERM outlet air relative humudity (°C) - before rooftop inlet -

Cooling capacities

ERM 13	ODDB/ ODRH	25/40				30/40				35/40				40/40				43/40				46/40			
Air flow (m^3/h)	IDDB	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH
3630	18	83.7	7.18	19.1	57.2	83.7	12.33	20	72.8	83.6	17.6	20.8	91.5	74.2	23.58	23.7	95	69.5	28.09	25.6	95	66	33.76	27.5	95
	21	83.8	4.11	21.6	49	83.8	9.26	22.5	62.4	83.7	14.43	23.3	78.7	81.7	19.89	24.5	95	74.9	23.64	26.5	95	69.8	28.21	28.6	95
	24	83.9	1.03	24.2	42.1	83.9	6.18	25	53.7	83.8	11.35	25.8	67.8	83.7	16.56	26.6	84.7	82.9	19.94	27.2	95	75.7	23.71	29.4	95
	27	84	2.06	26.7	36.2	84	3.09	27.5	46.3	83.9	8.27	28.3	58.5	83.8	13.47	29.1	73.2	83.7	16.61	29.6	83.4	83.6	19.99	30.1	94.2
4960	18	79.5	9.3	19.4	56.1	79.5	16	20.5	70.6	79.5	22.9	21.5	87.6	73.1	30.6	23.9	95	68.3	36.5	25.9	95	64.9	43.9	27.8	95
	21	79.6	5.3	21.8	48.5	79.6	12	22.8	61	79.6	18.8	23.9	76	79.5	25.8	24.9	93.4	73.8	30.7	26.8	95	68.8	36.7	28.8	95
	24	79.7	1.3	24.2	42	79.7	8	25.2	52.9	79.7	14.8	26.2	66	79.6	21.5	27.3	81.5	79.5	25.9	27.9	91.8	74.7	30.8	29.6	95
	27	79.8	2.67	26.6	36.4	79.8	4	27.6	46	79.8	10.7	28.6	57.4	79.7	17.5	29.6	71	79.7	21.6	30.3	80.3	79.6	26	30.6	90.2
7440	18	73.2	12.9	19.9	54.6	73.2	22.1	21.2	67.4	73.2	31.6	22.6	82.1	71.3	42.3	24.3	95	66.6	50.4	26.3	95	63.2	60.6	28.3	95
	21	73.3	7.4	22.1	47.7	73.3	16.6	23.4	59	73.3	25.9	24.7	72.1	73.2	35.7	26.1	87	72.3	42.4	27.1	95	67.3	50.6	29.2	95
	24	73.4	1.8	24.3	41.8	73.4	11.1	25.6	51.7	73.4	20.4	26.9	63.4	73.3	29.7	28.3	76.9	73.3	35.8	29.1	85.6	73.2	42.6	29.9	94.8
	27	73.5	3.69	26.5	36.7	73.5	5.6	27.8	45.4	73.5	14.8	29.1	55.8	73.4	24.2	30.5	67.8	73.4	29.8	31.3	75.8	73.3	35.9	32.1	84.3
9920	18	68.1	16	20.2	53.4	68.1	27.4	21.8	64.9	68.1	39.2	23.4	77.9	68	52.5	25	91.9	65.3	62.5	26.7	95	61.8	75.1	28.7	95
	21	68.2	9.1	22.3	47.1	68.2	20.6	23.9	57.4	68.2	32.1	25.5	69.1	68.1	44.3	27.1	82.2	68.1	52.6	28	90.4	66.1	62.8	29.5	95
	24	68.3	2.3	24.3	41.7	68.3	13.8	25.9	50.8	68.3	25.3	27.5	61.3	68.2	36.9	29.1	73.3	68.2	44.4	30	81	68.1	52.8	31	89
	27	68.4	4.58	26.4	36.9	68.4	6.9	27.9	45	68.4	18.4	29.5	54.5	68.4	30	31.1	65.3	68.3	37	32.1	72.4	68.3	44.6	33	79.9
12100	18	64.3	18.38	20.5	52.5	64.3	31.59	22.3	63.1	64.3	45.11	24.1	75	64.3	60.46	25.9	87.5	64.2	72.02	26.9	94.9	60.9	86.6	29	95
	21	64.4	10.52	22.4	46.7	64.4	23.73	24.2	56.2	64.4	37.02	26	67	64.4	51.03	27.8	78.9	64.3	60.68	28.8	86.2	64.3	72.4	29.9	93.4
	24	64.5	2.63	24.4	41.6	64.5	15.85	26.1	50.1	64.5	29.14	27.9	59.9	64.5	42.52	29.7	70.8	64.5	51.2	30.8	77.8	64.4	60.9	31.8	85
	27	64.6	5.28	26.3	37	64.6	7.94	28.1	44.7	64.6	21.23	29.8	53.5	64.6	34.6	31.6	63.5	64.6	42.68	32.7	70	64.5	51.38	33.7	76.8

Heating capacities

ERM 13	ODDB	15				10				5				0				-5				-10			
Air flow (m^3/h)	IDDB	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH
3630	18	83.7	3.07	17.5	34.1	83.6	8.16	16.7	25.9	83.6	13.52	15.9	20.2	83.5	22.94	15	28.6	83.4	32.9	14.2	41.1	83.4	39.59	13.3	45.4
	21	83.8	6.14	20	29.1	83.7	11.27	19.2	22.1	83.7	17.62	18.4	19.7	83.6	29.57	17.6	33.7	83.5	39.1	16.7	43.5	83.4	45.58	15.9	47
	24	83.9	9.22	22.5	24.9	83.8	14.58	21.7	19.4	83.8	23.02	20.9	21.8	83.7	36.6	20.1	37.5	83.6	45.72	19.3	45.3	83.5	52.06	18.4	48.3
	26	83.9	11.28	24.2	22.5	83.9	17.1	23.4	18.4	83.8	27.38	22.6	24.1	83.8	41.5	21.8	39.4	83.7	50.43	20.9	46.3	83.6	56.71	20.1	49.1
4960	18	79.2	4	17.4	77.3	79.2	10.6	16.3	59.5	79.2	17.2	15.3	45.2	79.2	25.4	14.3	37.8	79.1	37.2	13.2	41.6	79	47.1	12.1	44.6
	21	79.3	8	19.8	66.6	79.3	14.6	18.7	51.2	79.3	21.4	17.7	39.3	79.3	32.1	16.6	37.8	79.2	44.8	15.6	43.2	79.1	54.4	14.5	45.9
	24	79.4	12	22.1	57.5	79.4	18.6	21.1	44.1	79.4	26.3	20.1	35.3	79.4	39.8	19	39	79.3	52.8	18	44.6	79.2	62.4	16.9	47.1
	26	79.5	14.7	23.7	52.2	79.5	21.4	22.7	40.2	79.5	30.2	21.7	33.8	79.4	45.5	20.7	40	79.4	58.6	19.6	45.5	79.3	68	18.5	47.9
7440	18	72.9	5.5	17.2	78.3	72.8	14.6	15.8	61.5	72.8	23.7	14.5	47.7	72.7	35	13.1	40.5	72.6	51.3	11.7	44.2	72.6	64.8	10.3	47.7
	21	73	11	19.4	68.2	72.9	20.1	18	53.5	72.9	29.6	16.7	41.9	72.8	44.2	15.3	40.4	72.7	61.7	13.9	46.1	72.7	74.9	12.5	49.4
	24	73.1	16.5	21.6	59.6	73	25.7	20.2	46.6	73	36.3	18.9	37.9	72.9	54.9	17.5	41.8	72.8	72.8	16.1	47.8	72.8	85.9	14.7	51
	26	73.1	20.2	23	54.5	73.1	29.5	21.7	42.7	73.1	41.7	20.3	36.4	73	62.7	19	42.9	72.9	80.7	17.6	48.8	72.8	93.7	16.2	52
9920	18	67.7	6.8	17	79	67.7	18.1	15.4	63.1	67.6	29.4	13.8	49.8	67.6	43.4	12.2	42.7	67.5	63.5	10.5	46.5	67.4	80.2	8.9	50.3
	21	67.8	13.6	19.1	69.5	67.8	25	17.5	55.4	67.7	36.6	15.8	44.1	67.7	54.7	14.2	42.7	67.6	76.4	12.6	48.5	67.5	92.8	10.9	52.3
	24	67.9	20.5	21.1	61.3	67.9	31.9	19.5	48.8	67.8	45	17.9	40.1	67.8	68	16.3	44.1	67.7	90.1	14.6	50.4	67.6	106.3	13	54.2
	26	68	25.1	22.5	56.4	68	36.6	20.9	44.9	67.9	51.7	19.3	38.6	67.8	77.7	17.6	45.3	67.8	99.9	16	51.6	67.6	116	14.4	55.5
12100	18	64.1	7.84	16.9	35.4	64.1	20.85	15.1	28.6	64	34.49	13.3	23.6	63.8	58.43	11.5	31.8	63.7	83.68	9.7	45.5	63.6	100.58	7.8	52.5
	21	64.2	15.7	18.9	31.3	64.2	28.78	17.1	25.3	64.1	44.96	15.2	23.2	63.9	75.34	13.4	37.3	63.8	99.47	11.6	49.2	63.7	115.81	9.7	55.7
	24	64.4	23.58	20.8	27.8	64.3	37.25	19	22.8	64.2	58.75	17.2	25.2	64.1	93.26	15.4	42	63.9	116.34	13.5	52.4	63.8	132.31	11.7	58.7
	26	64.4	28.86	22.1	25.7	64.3	43.71	20.3	21.8	64.2	69.89	18.5	27.6	64.1	105.75	16.7	44.6	64	128.33	14.8	54.4	63.9	144.14	13	60.8

cc: Cooling Capacity (kW)
ht: Heating Capacity (kW)
eff: Energy recovery modul efficiency (%)
ODDB: Outdoor air dry bulp temperature (°C)

ODRH: Outdoor air relative humudity (%)
IDDB: Indoor air dry bulp temperature (°C)
Out DB: ERM outlet air dry-bulb temperature (°C) - before rooftop inlet -
Out RH: ERM outlet air relative humudity (°C) - before rooftop inlet -

Cooling capacities

ERM 18	ODDB/ ODRH	25/40				30/40				35/40				40/40				43/40				46/40			
Air flow (m³/h)	IDDB	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH	eff %	cc kW	Out DB	Out RH
5400	18	83.4	10.65	19.2	57.1	83.4	18.29	20	72.7	83.4	26.1	20.8	91.3	74.2	34.97	23.7	95	69.4	41.65	25.7	95	65.9	50.06	27.5	95
	21	83.5	6.09	21.7	48.9	83.5	13.73	22.5	62.3	83.5	21.41	23.3	78.6	81.7	29.49	24.5	95	74.8	35.06	26.5	95	69.7	41.84	28.6	95
	24	83.6	1.52	24.2	42.1	83.6	9.16	25	53.6	83.6	16.84	25.8	67.7	83.5	24.56	26.6	84.5	82.9	29.57	27.3	95	75.6	35.16	29.4	95
	27	83.7	3.05	26.7	36.2	83.7	4.59	27.5	46.3	83.7	12.26	28.3	58.5	83.6	19.98	29.1	73.1	83.5	24.63	29.6	83.2	83.4	29.64	30.2	94
8000	18	78	14.8	19.5	55.8	78	25.3	20.6	69.8	78	36.2	21.7	86.3	72.7	48.5	24	95	67.9	57.8	26	95	64.5	69.4	28	95
	21	78.1	8.4	21.9	48.3	78.1	19	23	60.5	78.1	29.7	24.1	75.1	78	40.9	25.2	91.8	73.5	48.6	26.8	95	68.4	58	28.9	95
	24	78.2	2.1	24.2	41.9	78.2	12.7	25.3	52.6	78.2	23.3	26.4	65.4	78.1	34.1	27.5	80.4	78.1	41	28.2	90.3	74.4	48.8	29.6	95
	27	78.3	4.23	26.6	36.5	78.3	6.4	27.6	45.8	78.3	17	28.7	57	78.2	27.7	29.8	70.2	78.2	34.2	30.5	79.2	78.1	41.1	31.2	88.8
12000	18	71.4	20.2	20	54.2	71.4	34.8	21.4	66.5	71.4	49.7	22.9	80.6	70.8	66.6	24.4	95	66.2	79.3	26.5	95	62.7	95.4	28.4	95
	21	71.5	11.6	22.1	47.5	71.5	26.1	23.6	58.4	71.5	40.8	25	71.1	71.5	56.2	26.4	85.3	71.4	66.8	27.3	94.3	66.9	79.7	29.3	95
	24	71.6	2.9	24.3	41.7	71.6	17.5	25.7	51.4	71.6	32.1	27.1	62.7	71.6	46.8	28.5	75.6	71.5	56.4	29.4	84	71.5	67	30.3	92.7
	27	71.7	5.81	26.4	36.7	71.8	8.7	27.8	45.3	71.7	23.4	29.3	55.3	71.7	38.1	30.7	66.9	71.6	47	31.5	74.6	71.6	56.5	32.4	82.8
16000	18	66.1	25	20.4	53	66.2	43	22.1	64	66.2	61.4	23.8	76.4	66.1	82.3	25.5	89.7	64.8	98	26.8	95	61.4	117.8	28.8	95
	21	66.2	14.3	22.4	46.9	66.3	32.3	24	56.8	66.3	50.4	25.7	68	66.2	69.4	27.4	80.5	66.2	82.5	28.4	88.3	65.6	90.1	29.6	95
	24	66.4	3.6	24.3	41.6	66.4	21.6	26	50.4	66.4	39.6	27.7	60.6	66.3	57.8	29.4	72	66.3	69.6	30.4	79.4	66.2	82.8	31.4	86.9
	27	66.5	7.18	26.3	37	66.5	10.8	28	44.9	66.5	28.9	29.7	54	66.5	47.1	31.4	64.3	66.4	58.1	32.4	71.2	66.4	69.9	33.4	78.3
17400	18	64.5	26.53	20.5	52.6	64.6	45.6	22.3	63.2	64.6	65.12	24	75.2	64.5	87.28	25.8	87.8	64.4	104.01	26.9	95	60.9	125.01	28.9	95
	21	64.6	15.18	22.4	46.7	64.7	34.26	24.2	56.3	64.7	53.45	25.9	67.1	64.6	73.67	27.7	79.1	64.6	87.59	28.8	86.5	64.5	104.51	29.9	93.8
	24	64.7	3.8	24.4	41.6	64.8	22.88	26.1	50.2	64.8	42.06	27.9	59.9	64.7	61.38	29.6	71	64.7	73.91	30.7	78	64.6	87.91	31.8	85.2
	27	64.8	7.62	26.3	37	64.9	11.46	28.1	44.8	64.9	30.64	29.8	53.6	64.8	49.95	31.6	63.6	64.8	61.61	32.6	70.2	64.8	74.17	33.7	77

Heating capacities

ERM 18	ODDB	15				10				5				0				-5				-10			
Air flow (m³/h)	IDDB	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH	eff %	ht kW	Out DB	Out RH
5400	18	83.4	4.55	17.5	34.1	83.4	12.11	16.7	25.9	83.3	20.05	15.8	20.2	83.2	34.02	15	28.7	83.2	48.78	14.1	41.2	83.1	58.71	13.3	45.5
	21	83.5	9.1	20	29.2	83.5	16.71	19.2	22.2	83.4	26.13	18.3	19.8	83.3	43.85	17.5	33.8	83.3	57.98	16.6	43.6	83.2	67.58	15.8	47.1
	24	83.6	13.67	22.5	25	83.6	21.62	21.7	19.4	83.5	34.14	20.9	21.8	83.4	54.28	20	37.6	83.4	67.79	19.2	45.4	83.3	77.19	18.3	48.5
	26	83.7	16.73	24.2	22.6	83.6	25.36	23.4	18.4	83.6	40.61	22.5	24.1	83.5	61.54	21.7	39.5	83.5	78.42	21.7	46.9	83.4	84.09	20	49.3
8000	18	77.7	6.3	17.3	77.6	77.7	16.8	16.2	59.9	77.7	27.2	15.1	45.8	77.7	40.2	14	38.4	77.6	58.9	12.8	42.2	77.5	74.4	11.7	45.3
	21	77.8	12.6	19.7	67	77.8	23.1	18.6	51.7	77.8	33.9	17.4	39.9	77.7	50.7	16.3	38.4	77.7	70.8	15.2	43.9	77.6	86.1	14.1	46.7
	24	77.9	19	22	58	77.9	29.5	20.9	44.7	77.9	41.7	19.8	35.9	77.8	63	18.7	39.7	77.8	83.6	17.6	45.4	77.7	98.6	16.4	48
	26	78	23.2	23.6	52.7	78	33.9	22.5	40.8	78	47.9	21.4	34.4	77.9	72	20.3	40.7	77.9	92.7	19.1	46.2	77.8	107.6	18	78.9
12000	18	71.1	8.7	17.1	78.5	71.1	23	15.7	62	71	37.4	14.2	48.4	71	55.1	12.8	41.2	70.9	80.7	11.3	45	70.8	101.9	9.8	48.6
	21	71.2	17.3	19.3	68.7	71.2	31.7	17.8	54.1	71.1	46.5	16.4	42.6	71	69.5	14.9	41.2	71	97	13.5	46.9	70.9	117.9	12	50.4
	24	71.3	26	21.4	60.1	71.3	40.4	20	47.4	71.2	57.2	18.5	38.6	71.2	86.4	17.1	42.5	71.1	114.5	15.6	48.7	71	135.1	14.1	52.1
	26	71.4	31.8	22.9	55.1	71.3	46.5	21.4	43.5	71.3	65.6	20	37.1	71.2	98.7	18.5	43.7	71.1	127	17.1	49.8	71	147.4	15.6	53.2
16000	18	65.8	10.7	17	79.3	65.8	28.4	15.3	63.7	65.7	46.1	13.5	50.7	65.6	68	11.8	43.6	65.5	99.5	10.1	47.3	65.4	125.6	8.3	51.3
	21	65.9	21.4	19	70	65.9	39.1	17.2	56.1	65.8	57.4	15.5	45	65.7	85.7	13.8	43.6	65.6	119.6	12.1	49.5	65.5	145.3	10.3	53.4
	24	66	32.1	20.9	61.9	66	49.9	19.2	49.6	65.9	70.5	17.5	41	65.8	106.5	15.8	45	65.7	141.2	14.1	51.5	65.6	166.5	12.3	55.5
	26	66.1	39.3	22.3	57.1	66.1	57.4	20.6	45.8	66	81	18.9	39.5	65.9	121.7	17.1	46.2	65.8	156.6	15.4	52.7	65.7	181.7	13.7	56.9
17400	18	64.4	11.31	16.9	35.4	64.3	30.09	15.1	28.5	64.2	49.79	13.3	23.5	64.1	84.35	11.5	31.8	64	120.81	9.7	45.5	63.9	145.22	7.9	52.4
	21	64.5	22.66	18.9	31.3	64.4	41.55	17.1	25.3	64.3	64.9	15.3	23.1	64.2	108.77	13.5	37.3	64.1	143.61	11.7	49.1	64	167.2	9.8	55.6
	24	64.6	34.05	20.8	27.7	64.5	53.78	19	22.8	64.4	84.82	17.2	25.2	64.3	134.64	15.4	41.9	64.2	167.95	13.6	52.3	64.1	191.02	11.8	58.6
	26	64.7	41.66	22.1	25.6	64.6	63.1	20.3	21.8	64.5	100.9	18.5	27.6	64.4	152.68	16.7	44.5	64.3	185.28	14.9	54.3	64.1	208.09	13.1	60.6

cc: Cooling Capacity (kW)
ht: Heating Capacity (kW)
eff: Energy recovery modul efficiency (%)
ODDB: Outdoor air dry bulp temperature (°C)

ODRH: Outdoor air relative humudity (%)
IDDB: Indoor air dry bulp temperature (°C)
Out DB: ERM outlet air dry-bulb temperature (°C) - before rooftop inlet -
Out RH: ERM outlet air relative humudity (°C) - before rooftop inlet -

Carrier
United Technologies

Order No.: 14821-20. 04.2015. Supersedes order No.: 14821-20. 05.2014.

Manufactured by: Alarko-Carrier. Gebze. Turkey.
Printed in the European Union.