Carrier

Plug & Play Air Handling Units
with Energy Recovery

PRO-DIALOG

TÜV NORD
TÜV Nederland QA B.V.
ISO 9001

AIROSTAR Heat Recovery

39SQC/R/P 0405-1212

Air flow range 0.2-5 m³/s (700-18 000 m³/h)

The 39SQ Airostar units are dual-flow air handling units, equipped with a high-efficiency air-to-air heat exchanger and a control system for a plug & play installation. The units are especially designed to ensure economical extraction of indoor air and taking in fresh air to meet current and future requirements for high energy-efficiency buildings.

The Airostar units are available in two versions:
- high-efficiency 39SQC units with counter-flow plate heat exchanger and high-efficiency 39SQR units with rotary heat exchanger
- standard-efficiency 39SQP units with cross-flow plate heat exchanger to ensure perfect leak-tightness between the extract air flow and the supply air flow.

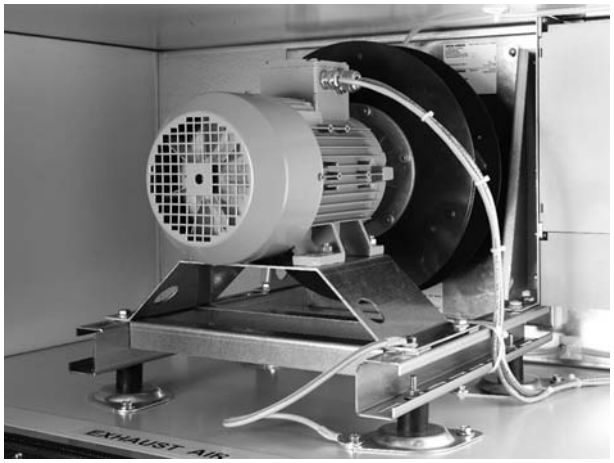
Features

- Energy savings
  - The heat exchanger reclaims up to 90% 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 extract and supply air. The direct-drive fans do not suffer any belt and pulley drive losses. They are more energy-efficient and require less maintenance. The extract and supply air fan speed is independently controlled by frequency inverters.
  - The control system permanently adjusts the fan speed based on the supply duct pressure or on a CO_2 rate sensor to take in the correct fresh air quantity required in the building and to minimise power consumption.
  - If the outside air temperature is below the room temperature during the night - outside the heating periods, the Airostar is automatically restarted in the free-cooling mode to ensure pre-cooling of the building and limit the cooling requirements during the day.

High-efficiency counter-flow heat exchanger

High-efficiency rotary heat exchanger

Plug fan



- Quick and easy plug and play installation
  - Airostar units are delivered as a single piece for fast installation (except 39SQR 1212). To facilitate handling in restricted locations the larger 39SQ units can easily be separated into two sections on site, using the disassembly flanges (see dimensional drawings) and the quick power connectors.
  - The heating and cooling coil options are integrated in the unit.
  - The control, the sensors and the actuators are factory-installed and tested for fast and trouble-free start-up.
- Complete design flexibility
  - The Airostar units can be installed inside or outside the building. The air handling units for outside installation are equipped with a watertight roof and as an option with a rain hood at the air entering and leaving openings.
  - The fresh air supply duct connection can be either on the upper or lower part of the unit (except 39SQC).
  - Access to the maintenance doors can be selected on the right or left-hand side.
- Quality of the unit casing
  - The casing consists of a rigid 62 mm high base frame that supports a peripheral frame and of double-skin panels.
  - The frame uses a galvanised steel hollow closed profile that ensures the thermal bridging factor as well as good hygiene in the casing. The profile is assembled with ABS corner pieces to guarantee complete air tightness.
  - The double-skin galvanised sheet metal panels with 60 mm rock wool insulation limit heat losses. All panels are fixed from the outside for easy maintenance.
  - Light grey paint finish (RAL 7035) as standard for units installed outside and as an option for units installed inside.
  - Technical data in accordance with standard EN 1886:

Air leakage class	L2
Filter bypass leakage	F8
Thermal transmission	T2
Thermal bridges	TB3

Casing assembly

- Air quality
  - The 39SQ Airostar is equipped with side-withdraw air filters with filtration efficiency F7. The filter racks are equipped with a cam lever to eliminate air bypass and guarantee perfect filtration.
  - A pressure differential switch signals when the filters need to be replaced.
  - To facilitate maintenance operations the same filters are used for fresh air and extract air.
  - Smooth walls and base allow efficient cleaning of the casing.
  - As an option, the inspection door located between the cooling and heating coils further facilitates cleaning.
- Outdoor air pre-heating coil (option)
  - At very low outside temperatures the optional hot water or electric pre-heating coil prevents ice formation on the air-to-air heat exchanger and permits the use of 100% of its capacity. Use of the pre-heating coil is recommended below -15°C for 39SQR units, -10°C for 39SQP units and -5°C for 39SQC units.
  - The electric heater coil is controlled by an electronic relay that ensures continuous variation of the heating capacity from 0 to 100%.
- Air treatment module (option)
  - The hot water or electric reheating coil stabilises the supply temperature in winter whatever the outside conditions. The hot-water coil is equipped with a frost protection thermostat. The electric heater coil is controlled by an electronic relay that ensures a continuous variation of the heating capacity from 0 to 100%.
  - The cooling coil dehumidifies and cools the air in summer. It is available in two versions: chilled-water coil only, chilled/hot-water coil with change-over for use with a reversible heat pump.

Pro-Dialog AHU control

The Airostar units are equipped with a control box that is integrated into the unit and contains the electrical and control components. The Pro-Dialog AHU control combines intelligence with operating simplicity. The control constantly monitors all operating parameters and precisely manages the operation of the air-to-air heat exchanger, the fan speed and the opening of the coil control valves in order to optimise energy efficiency. With its integrated web server the Pro-Dialog AHU control is very easy to use.

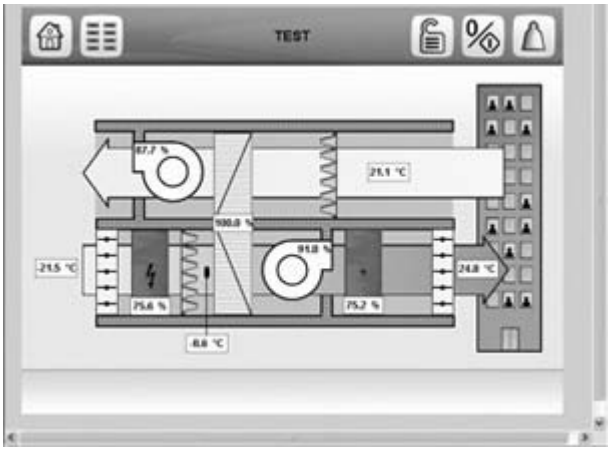
- Energy management
  - The internal clock (7-day time scheduling) manages the occupied/unoccupied modes. In the unoccupied mode the user has the possibility to restart the unit for a predefined time period. A second time schedule is available to control the operation of the fans at low speed.
  - Pro-Dialog AHU control intelligently manages night-time free-cooling operation. If the temperature conditions are favourable for free cooling of the building, the system is activated. Using an Airostar unit in an Aquasmart air conditioning system allows additional savings by further optimising free-cooling operation.
  - Pro-Dialog AHU control offers several air flow control possibilities: constant air flow, operation at low/high speed (time schedule or closing of a contact by the user), constant pressure in the discharge duct (requires installation of a pressure sensor in the duct) or demand ventilation based on the CO_2 concentration (requires installation of an air quality sensor in the room). To avoid pressure variations in the building, the extract air flow is controlled as a percentage of the supply air flow.
  - The air temperature is controlled by a PID loop based on the supply air temperature or the extract air temperature or on the room temperature (requires installation of a temperature sensor in the building). Set point reset, based on the outside temperature, reduces energy consumption (requires installation of a temperature sensor outside).
  - The Pro-Dialog AHU control uses a 0-10 V signal to control the pre-heating, reheating and cooling coil control valves (supplied by the customer) as well as the water circulation pumps (supplied by the customer).
- Safety functions
  - If an abnormally low or high indoor temperature is detected during an unoccupied period, the unit is restarted to protect the building against frost or overheating (if the indoor temperature sensor is installed).
  - Pro-Dialog AHU control manages all unit safety devices and limits the shut-down risk, if a system problem or fault occurs:
    - filter replacement,
    - low discharge temperature,
    - coil frosting risk,
    - overheating of electric resistance heaters,
    - ice formation on the air-to-air heat exchanger due to differential pressure sensor,
    - fan overload.

    Minor faults that do not stop the unit, result in the closing of the specific contact to program maintenance intervention. The user can access the list of active alarms as well as a detailed history of all incidents.

■ Remote operation
The RS 485 serial communication port allows use of the unit in a network together with other Carrier products and the Aquasmart system. Communication gateways are available to communicate with other monitoring systems (available during 2010).
A terminal block for remote unit control is also available:
- Occupied/unoccupied modes,
- Building fire safety: opening this contact results in the total shut-down of the unit or the shut-down of the supply air fan only or the extract air fan only (configuration at commissioning),
- Low/high-speed operation: closing this contact results in operation of the fans at low speed (speed configurable at commissioning),
- Signalling of a minor fault,
- Signalling of a major fault.

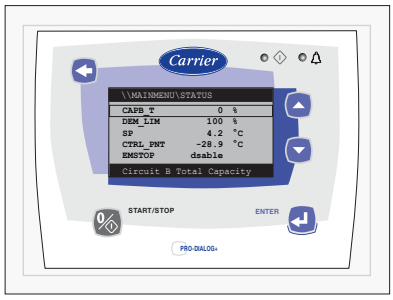
■ Ease-of-use
- Pro-Dialog AHU control includes a web server as standard that allows access to the configuration and operating parameters via simple internet navigation software. Icons accompanied by clear text messages intuitively guide the users. The system offers several consultation or parameter modification levels with password-protected access.

Web server



- The new backlighted Pro-Dialog+ user interface is equipped with a control potentiometer that guarantees legibility in all lighting conditions. The information is clearly displayed in several languages. Navigation is via menus, similar to those of a web server. The interface can be installed in the unit control box or remotely at up to 300 m distance. If the units are connected by a communication bus in a network, a single interface can be used for the complete site (available during 2010).

Pro-Dialog+ interface



Options and accessories

Options	Description	Advantages	Use
Reversed extract/supply air connections	Supply air connection at the top and extract air connection at the bottom	Easy air distribution system design	39SQ/P/R
Unit for outside installation	Equipped with watertight roof and casing painted (inside and outside paint finish RAL 7035)	Frees available space inside the building	39SQC/P/R
Unit with paint finish	Casing painted (inside and outside paint finish RAL 7035)	Enhanced aesthetics/improved corrosion resistance	39SQC/P/R
Left-hand servicing side	Water connections and access doors on the left-hand side (seen from above)	Easy integration in a plant room	39SQC/P/R
Air openings			
Extract air damper	Damper with airfoil blades and a drive mechanism outside the air flow, equipped with a 24 V actuator with spring return	Closing of air inlets/outlets at shut-down	39SQC/P/R
Fresh air damper	Damper with airfoil blades and a drive mechanism outside the air flow, equipped with a 24 V actuator with spring return	Closing of air inlets/outlets at shut-down	39SQC/P/R
Supply air damper	Damper with airfoil blades and a drive mechanism outside the air flow, equipped with a 24 V actuator with spring return	Closing of air inlets/outlets at shut-down	39SQC/P/R
Fresh air inlet rain hood	Rain hood equipped with a bird protection grille	Protection of units installed outside	39SQC/P/R
Extract air outlet rain hood	Rain hood equipped with a bird protection grille	Protection of units installed outside	39SQC/P/R
Flexible extract air connection sleeve	Sleeve with aluminium frame made of flexible material with M2 fire resistance	Prevents vibration transmission to the air distribution system	39SQC/P/R
Flexible supply air connection sleeve	Sleeve with aluminium frame made of flexible material with M2 fire resistance	Prevents vibration transmission to the air distribution system	39SQC/P/R
M1 flexible extract air connection sleeve	Sleeve with aluminium frame made of flexible material with M1 fire resistance	Prevents vibration transmission to the air distribution system	39SQC/P/R
M1 flexible supply air connection sleeve	Sleeve with aluminium frame made of flexible material with M1 fire resistance	Prevents vibration transmission to the air distribution system	39SQC/P/R
Pre-heating			
Hot-water pre-heating coil	Hot-water coil (1 or 2 rows) with a frost protection thermostat integrated in the unit	Prevents air-to-air heat exchanger defrost cycles and optimises reclaimed heat at low outside temperature	39SQC/P/R
Electric pre-heating coil	Electric heater (5 heating capacities) integrated into the unit. It is equipped with an electronic power relay (0-100%), safety devices and a main disconnect switch.	Prevents air-to-air heat exchanger defrost cycles and optimises reclaimed heat at low outside temperature	39SQC/P/R
Air treatment module			
Hot-water reheating coil	Hot-water coil (1 or 2 rows) with a frost protection thermostat integrated in the unit	Guarantees constant and comfortable supply air temperature in winter	39SQC/P/R
Electric reheating coil	Electric heater (5 heating capacities) integrated into the unit. It is equipped with an electronic power relay (0-100 %), safety devices and a main disconnect switch.	Guarantees constant and comfortable supply air temperature in winter	39SQC/P/R
Chilled-water cooling coil	Chilled-water coil (4 or 6 rows) integrated into the unit	Guarantees constant and comfortable supply air temperature in summer	39SQC/P/R
Cooling/reheating change-over coil	Water coil (4 or 6 rows) with a frost protection thermostat integrated in the unit	Use of reversible-cycle heat pump	39SQC/P/R
Inspection chamber	480 mm inspection chamber with access door between the reheating and the cooling coil	Access for coil cleaning	39SQC/P/R
Control and safety devices			
Outside temperature compensation	Temperature sensor for outside installation	Set point reset based on the outside temperature. Energy savings.	39SQC/P/R
Room temperature sensor	Room temperature sensor for installation in the building	Supply air temperature control based on the room temperature	39SQC/P/R
Constant supply air pressure	Pressure sensor for installation in the supply air duct	Permits the use of fresh air dampers in the rooms. Energy savings.	39SQC/P/R
Demand ventilation	Air quality sensor for installation in the building	Variable air flow based on occupancy. Energy savings and enhanced occupant comfort.	39SQC/P/R
Control hot-water water pump	Includes the contactor	Easy installation	39SQC/P/R
Control chilled-water pump	Includes the contactor	Easy installation	39SQC/P/R
Pressure gauges	Needle pressure gauges to read the pressure	Checking the filter pollution level	39SQC/P/R
Air-to-air heat exchanger frost protection	Differential pressure sensor	Manages defrost cycles of the air-to-air heat exchanger at low outside temperature (units not equipped with pre-heating)	39SQC/P/R
Fan door protection	Protection grille between the fan and the access door	Operator safety	39SQC/P/R
Pro-Dialog+ interface	User interface installed in the control box	Commissioning	39SQC/P/R

Accessories	Description	Advantages	Use
Lifting bars	Lifting bars to slide into the base profile	Handling safety	39SQC/P/R
Syphon	Syphon for positive or negative pressure		39SQC/P/R
Pro-Dialog+ interface	User interface with power supply transformer for remote installation	Remote control of several units up to 300 m	39SQC/P/R
PN water flanges	Flat PN flanges to be screwed onto the coil	Easy installation	39SQC/P/R
Frequency inverter interface	Mobile interface for connection in the control box	Frequency inverter parameter settings	39SQC/P/R

Physical data for 39SQC/39SQR units

Model 39		SQC 0405	SQC 0506	SQC 0606	SQR 0606	SQR 0707	SQR 0808	SQR 0909	SQR 1010	SQR 1111	SQR 1212
Weight											
Unit without coils	kg	218	294	345	328	385	516	586	717	852	1043
Unit with reheating and cooling coils	kg	301	399	469	428	509	660	757	952	1121	1346
Unit air flow											
Maximum	m^3/s	0.43	0.72	0.88	1.25	1.70	2.22	2.81	3.47	4.20	5.00
	m^3/h	1565	2580	3150	4500	6125	8000	10125	12500	15125	18000
Minimum	m^3/s	0.20	0.34	0.43	0.43	0.62	0.91	1.25	1.48	1.91	2.18
	m^3/h	737	1225	1549	1549	2247	3265	4501	5328	6882	7847
Unit thermal efficiency*	%	94	94	94	77.5	78	78	79	79	79	79
Unit external static pressure											
At max. air flow (low static fan)	Pa	500	700	700	150	-	-	-	120	-	150
At max. air flow (high static fan)	Pa	1550	2000	1700	600	400	1200	500	950	800	1050
Specific unit fan power**	$kW/m^3/s$	2.4	2.1	2.5	2.3	2.3	2.1	2.1	1.9	2	1.7
Unit sound data***											
Sound power level, casing radiated	dB(A)	68	68	71	70	73	68	73	69	73	69
Sound power level, extract duct	dB(A)	74	74	77	76	79	75	79	76	79	76
Sound power level, supply duct	dB(A)	84	84	88	87	89	85	89	86	89	86
Heat reclaim heat exchanger		Counter-flow plate heat exchanger			Rotary heat exchanger						
Material		Aluminium			Aluminium						
Capacity control		Bypass damper			Variable speed drive						
Exhaust and supply fans		Plug fan (backward curved)									
Fan diameter	mm	225	280	280	280	315	400	400	500	500	630
Drive		Frequency inverter									
Rated motor power (low static)	kW	0.55	1.1	1.5	1.5	2.2	2.2	2.2	4	5.5	5.5
Rated motor power (high static)	kW	1.5	2.2	3	3	4	5.5	5.5	7.5	11	11
Exhaust and supply air filters		Bag filter 500 mm, filter efficiency F7									
Outside air pre-heating coil		Hot-water coil or electric heater (option)									
Supply air reheating coil		Hot-water coil or electric heater (option)									
Supply air cooling coil		Chilled-water coil (option)									
Control system		Digital control with web server									
Chassis paint colour		Colour code: RAL 7035									

* Thermal efficiency of supply air at 2 m/s with the effect of supply air fan, outside air -10°C, extract air 22°C/50%.
** Specific fan power with clean filters at 2 m/s and 200 Pa.
*** Sound power at 2 m/s and 200 Pa.

Data for standard unit without optional coils and dampers.

Physical data for 39SQP units

Model 39		SQP 0405	SQP 0506	SQP 0606	SQP 0707	SQP 0808	SQP 0909	SQP 1010
Weight								
Unit without coils	kg	210	275	324	395	536	578	688
Unit with reheating and cooling coils	kg	277	360	423	518	712	783	923
Unit air flow								
Maximum	m^3/s	0.68	1.04	1.25	1.70	2.22	2.81	3.47
	m^3/h	2450	3750	4500	6125	8000	10125	12500
Minimum	m^3/s	0.20	0.34	0.43	0.62	0.91	1.25	1.48
	m^3/h	737	1225	1549	2247	3265	4501	5328
Unit thermal efficiency*	%	62	63	63	64	64	63	62
Unit external static pressure								
At maximum air flow (low static fan)	Pa	400	-	0	-	50	-	150
At maximum air flow (high static fan)	Pa	650	800	650	450	1300	550	1000
Specific unit fan power**	$kW/m^3/s$	2.2	1.9	2.1	2	1.8	1.9	1.7
Unit sound data***								
Sound power level, casing radiated	dB(A)	67	66	69	73	67	73	69
Sound power level, extract duct	dB(A)	77	75	79	82	77	79	78
Sound power level, supply duct	dB(A)	84	82	86	88	84	89	86
Heat recovery exchanger		Cross-flow plate heat exchanger						
Material		Aluminium						
Capacity control		Bypass damper						
Exhaust and supply fans		Plug fan (backward curved)						
Fan diameter	mm	225	280	280	315	400	400	500
Drive		Frequency inverter						
Rated motor power (low static)	kW	1.1	1.1	1.5	2.2	2.2	2.2	4
Rated motor power (high static)	kW	1.5	2.2	3	4	5.5	5.5	7.5
Exhaust and supply air filters		Pleated filter 100 mm, filter efficiency F7						
Outside air pre-heating coil		Hot-water coil or electric heater (option)						
Supply air reheating coil		Hot-water coil or electric heater (option)						
Supply air cooling coil		Chilled-water coil (option)						
Control system		Digital control with web server						
Chassis paint colour		Colour code: RAL 7035						

* Thermal efficiency of supply air at 2 m/s with the effect of supply air fan, outside air -10°C, extract air 22°C/50%.
** Specific fan power with clean filters at 2 m/s and 200 Pa.
*** Sound power at 2 m/s and 200 Pa.

Data for standard unit without optional coils and dampers.

Electrical data for 39SQC/R/P units

Model 39		SQC 0405 SQP 0405	SQC 0506 SQP 0506	SQC 0606 SQP 0606	SQR 0606	SQR 0707 SQP 0707	SQR 0808 SQP 0808	SQR 0909 SQP 0909	SQR 1010 SQP 1010	SQR 1111	SQR 1212
Power circuit		Built-in main disconnect switch									
Nominal power supply	V-ph-Hz	400-3-50 neutral									
Voltage range	V	360-440									
Maximum unit power	kW	3.6	5.8	7.7	7.7	10.5	14.1	14.1	18.9	27.3	27.3
Maximum supply cable size	mm^2	2.5	4	4	4	6	6	6	10	16	16
Main switch	A	25	25	25	25	40	40	40	63	63	63
Short circuit unit capacity	kA	15	15	15	15	15	15	15	15	15	15
Recommended power line fuse protection	A	20	25	25	25	35	35	35	50	63	63
Control circuit power		Built-in 24 V control transformer									

Note: Electric pre-heater and reheater have separate power supply

Electric pre-heating and reheating coils

Model 39		SQC 0405 SQP 0405	SQC 0506 SQP 0506	SQC 0606 SQP 0606	SQR 0606	SQR 0707 SQP 0707	SQR 0808 SQP 0808	SQR 0909 SQP 0909	SQR 1010 SQP 1010	SQR 1111	SQR 1212
Heating capacity											
Heater 1	kW	30	36	45	45	60	72	105	120	105	126
Heater 2	kW	19	30	36	36	48	60	75	90	75	90
Heater 3	kW	15	24	27	27	36	48	60	60	60	72
Heater 4	kW	11	18	18	18	24	36	45	45	45	54
Heater 5	kW	7.5	12	9	9	12	24	30	30	30	36
Capacity control		Electronic relay 0-100%									
Thermal protection											
Over-temperature		Thermostat set at 80°C with auto reset									
Fire		Thermostat set at 128°C with manual reset									
Power circuit		Built-in main disconnect switch									
Nominal power supply	V-ph-Hz	400-3-50									
Voltage range	V	360-400									
Maximum supply cable size	mm^2	8	9	10	10	11	13	14	15	14	17

Note: Electric heater requires a separate power connection.

Hot-water pre-heating and reheating coils

Model 39		SQC 0405 SQP 0405	SQC 0506 SQP 0506	SQC 0606 SQP 0606	SQR 0606	SQR 0707 SQP 0707	SQR 0808 SQP 0808	SQR 0909 SQP 0909	SQR 1010 SQP 1010	SQR 1111	SQR 1212
Heating coil 1, one row											
Heating capacity*	kW	7.7	12.0	15.0	15.0	20.8	28.3	40.2	45.2	54.6	66.5
Heating capacity**	kW	8.4	12.6	16.2	16.2	22.5	30.2	43.4	48.3	58.6	70.8
Tube/fin material		1/2 inch copper tubes/aluminium fins									
Fin spacing	mm	4	4	4	4	4	4	4	4	4	4
Water volume	l	0.6	1.0	1.2	1.2	1.8	2.4	3.3	4.0	5.5	6.5
Max. water-side operating pressure	kPa	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Water connections		Threaded gas connections									
Diameter	in	1/2	1/2	1/2	1/2	3/4	3/4	1	1	1-1/4	1-1/4
Outside pipe diameter	mm	21.3	21.3	21.3	21.3	26.9	26.9	33.7	33.7	42.4	42.4
Heating coil 2, two rows											
Heating capacity*	kW	27.1	41.3	53.8	53.8	73.8	102	129	163	196	237
Tube/fin material		1/2 inch copper tubes/aluminium fins									
Fin spacing	mm	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1
Water volume	l	1.1	1.9	2.3	2.3	3.4	4.8	6.7	8.7	10.4	12.3
Max. water-side operating pressure	kPa	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Water connections		Threaded gas connections									
Diameter	in	1/2	3/4	3/4	1	1	1	1-1/4	1-1/2	1-1/2	1-1/2
Outside tube diameter	mm	21.3	26.9	26.9	33.7	33.7	33.7	42.4	48.3	48.3	48.3

* Fresh water 80/60°C, maximum air flow, outside air -10°C
** Fresh water 82/71°C, maximum air flow, outside air -5°C

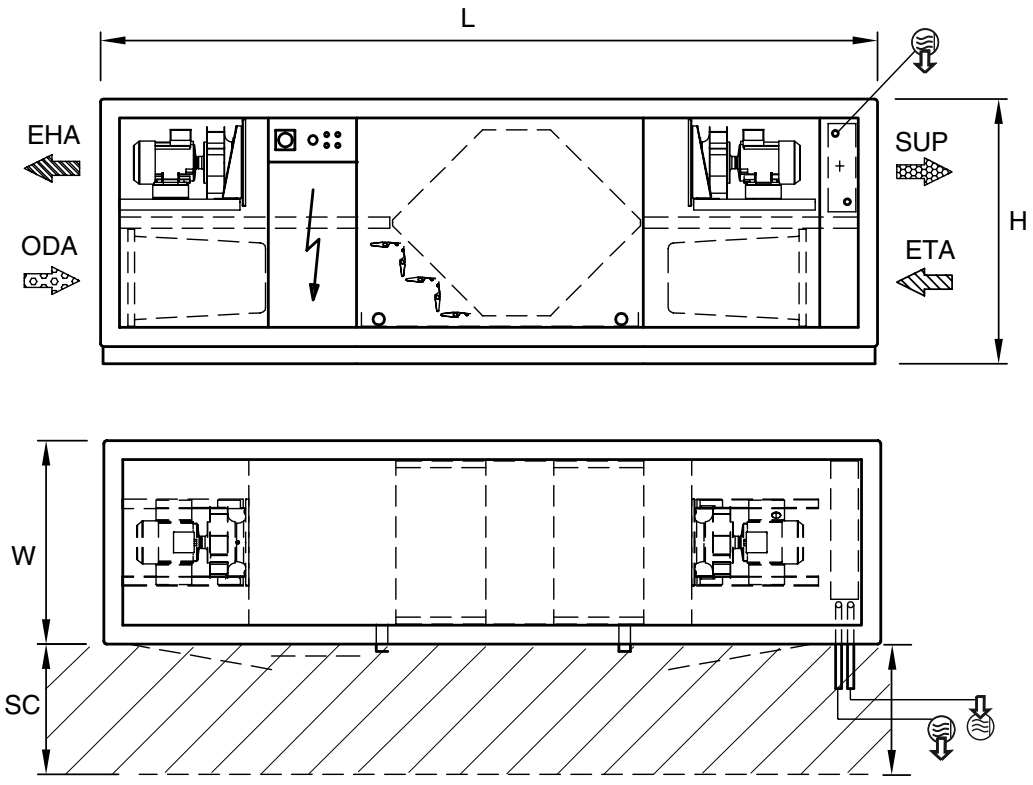
Chilled-water cooling coils

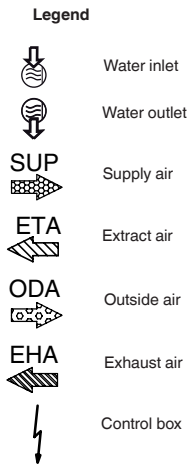
Model 39		SQC 0405 SQP 0405	SQC 0506 SQP 0506	SQC 0606 SQP 0606	SQR 0606	SQR 0707 SQP 0707	SQR 0808 SQP 0808	SQR 0909 SQP 0909	SQR 1010 SQP 1010	SQR 1111	SQR 1212
Cooling coil 1, four rows											
Cooling capacity*	kW	12.1	18.6	23.0	23.0	33.0	47.6	61.3	77.6	93.5	114.0
Tube/fin material		1/2 inch copper tubes/aluminium fins									
Fins spacing	mm	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Water volume	l	2.0	3.2	3.9	3.9	5.8	8.9	11.5	14.7	17.9	22.7
Max. water side pressure	kPa	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Water connections		Threaded gas connections									
Diameter	in	3/4	3/4	3/4	3/4	1	1-1/4	1-1/4	1-1/2	1-1/2	2
Outside tube diameter	mm	26.9	26.9	26.9	26.9	33.7	42.4	42.4	48.3	48.3	60.3
Cooling coil 2, six rows											
Cooling capacity *	kW	15.9	23.1	31.1	31.1	40.7	61.9	73.7	92.1	113.0	135.0
Tube/fin material		1/2 inch copper tubes/aluminium fins									
Fins spacing	mm	2.1	2.1	2.1	2.1	2.1	2.1	2.5	2.5	2.5	2.5
Water volume	l	2.9	4.8	5.8	5.8	8.8	13.1	16.9	22.1	26.9	34.4
Max water side pressure	kPa	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Water connections		Threaded gas connections									
Diameter	in	3/4	1	1	1	1-1/4	1-1/2	1-1/2	2	2	2-1/2
Outside tube diameter	mm	26.9	33.7	33.7	33.7	42.4	42.4	48.3	60.3	60.3	76.1
Droplet eliminator		Required, if coil velocity is > 2.5 m/s									
Material		Non-corrosive PPTV material									
Drain pan											
Material		Sloped aluminium									
Water connection	in	1-1/4 threaded connection									

* Fresh water 7/12°C, maximum air flow, outside air 30°C/50%

Dimensions/clearances

39SQC 0405-0606



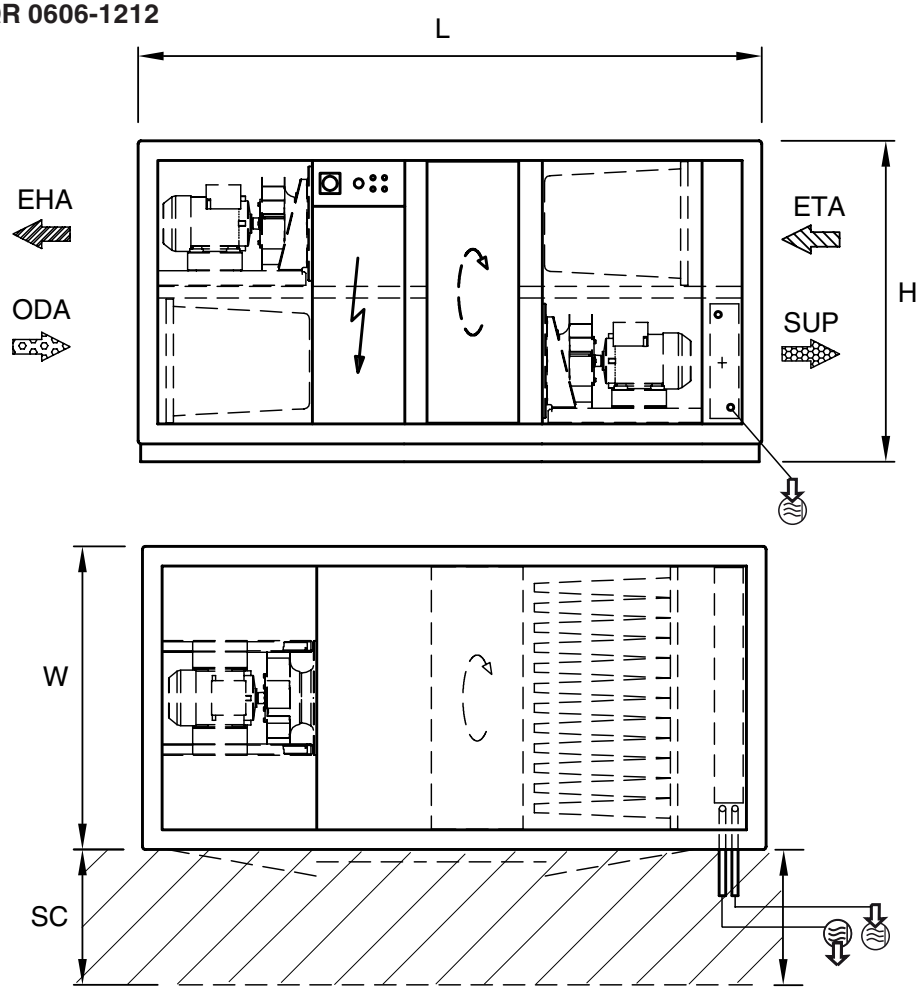


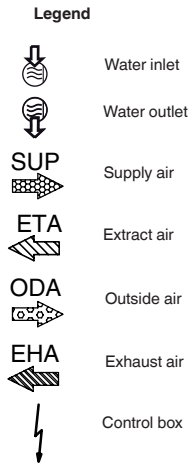
39SQC	Dimensions, mm					
	Height (H)	Width (W)	Length 1 (L) (unit without coil)	Length 2 (L) (unit with hot-water coil)	Length 3 (L) (unit with hot-water + chilled-water coils)	Clearance (SC)
0405	960	738	2558	2718	3118	600
0506	1120	898	2798	2958	3358	600
0606	1120	1058	2798	2958	3358	600

Notes:
1 Dimensions with hot-water reheating coil and 4-row cooling coil.
2 Unit with electric heating coils - refer to the dimensional drawings.
3 Unit with hot-water pre-heating coil: + 160 mm.
4 Unit with inspection chamber: + 480 mm.
5 6-row cooling coils: + 80 mm.
6 When designing an installation refer to the certified dimensional drawings, available on request.

Dimensions/clearances (cont.)

39SQR 0606-1212



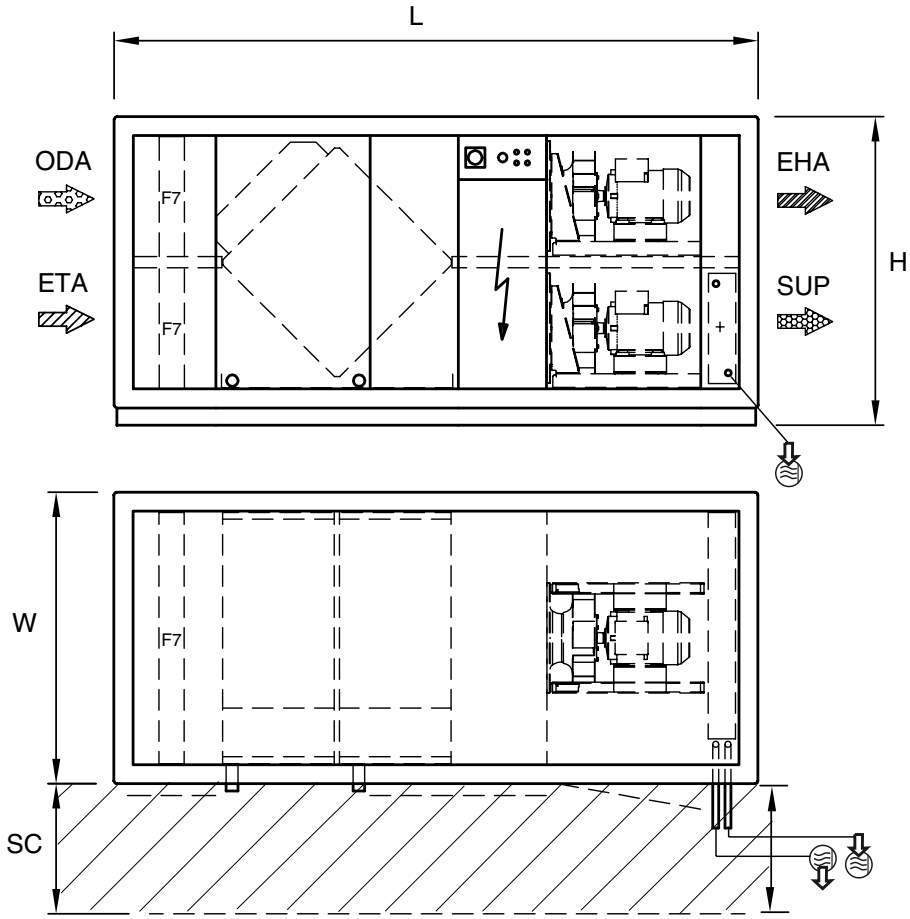


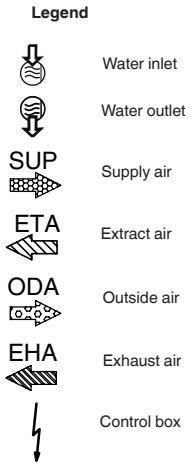
39SQR	Dimensions, mm					
	Height (H)	Width (W)	Length 1 (L) (unit without coil)	Length 2 (L) (unit with hot-water coil)	Length 3 (L) (unit with hot-water + chilled-water coils)	Clearance (SC)
0606	1120	1058	2018	2178	2578	600
0707	1280	1218	2178	2338	2738	700
0808	1440	1378	2498	2658	3058	700
0909	1600	1538	2498	2658	3058	700
1010	1760	1698	2578	2738	3138	700
1111	1920	1858	2898	3058	3458	700
1212	2080	2018	3138	3298	3698	700

Notes:
1 Dimensions with hot-water reheating coil and 4-row cooling coil.
2 Unit with electric heating coils - refer to the dimensional drawings.
3 Unit with hot-water pre-heating coil: + 160 mm.
4 Unit with inspection chamber: + 480 mm.
5 6-row cooling coils: + 80 mm.
6 When designing an installation refer to the certified dimensional drawings, available on request.

Dimensions/clearances (cont.)

39SQP 0405-1010



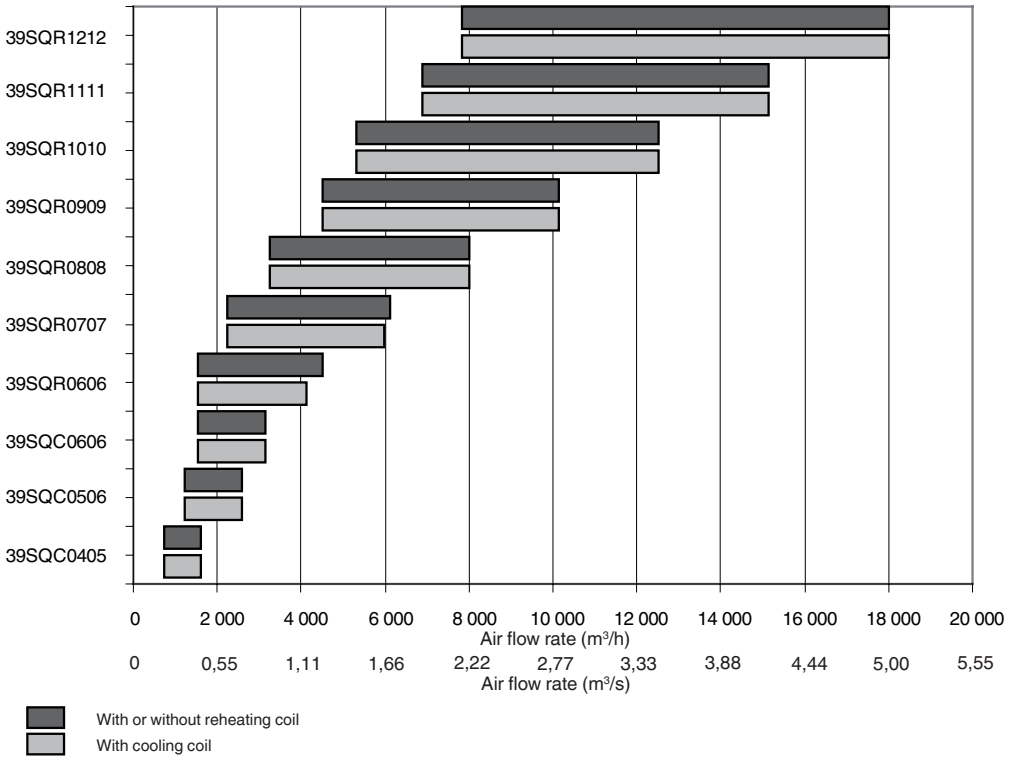


39SQP	Dimensions, mm					
	Height (H)	Width (W)	Length 1 (L) (unit without coil)	Length 2 (L) (unit with hot-water coil)	Length 3 (L) (unit with hot-water + chilled-water coils)	Clearance (SC)
0405	960	738	2018	2178	2578	500
0506	1120	898	2178	2338	2738	600
0606	1120	1058	2178	2338	2738	600
0707	1280	1218	2418	2578	2978	700
0808	1440	1378	2818	2978	3378	700
0909	1600	1538	2818	2978	3378	700
1010	1760	1698	2818	2978	3378	700

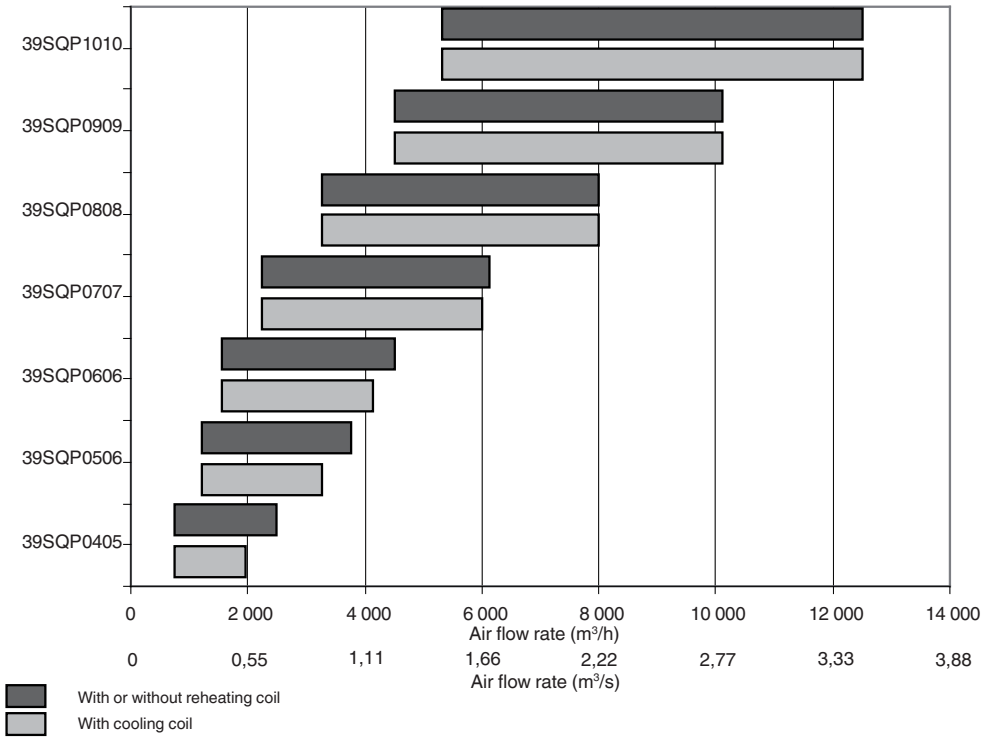
Notes:
1 Dimensions with hot-water reheating coil and 4-row cooling coil.
2 Unit with electric heating coils - refer to the dimensional drawings.
3 Unit with hot-water pre-heating coil: + 160 mm.
4 Unit with inspection chamber: + 480 mm.
5 6-row cooling coils: + 80 mm.
6 When designing an installation refer to the certified dimensional drawings, available on request.

Air flow quick selection diagrams

39SQC 0405-0606 and 39SQR 0606-1212



39SQP 0405-1010



Order No.: 13957-11.04.2010. Supersedes order No.: New.
Manufacturer reserves the right to change any product specifications without notice.
Manufactured by: Carrier Holland Heating, Waalwijk, Netherlands.
Printed in the Netherlands.