SCHAKO
KLIMA-LUFT

Installation, Mounting and Maintenance

Aquaris Silent

Ferdinand Schad KG
Steigstraße 25-27
D-78600 Kolbingen
Telephone +49 (0) 74 63 - 980 - 0
Fax +49 (0) 74 63 - 980 - 200
info@schako.de
www.schako.de

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Contents

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Safety instructions

Prior to installation and commissioning of this device, please read completely through this manual. Please observe in particular the regulations and operating instructions containing the hazard symbols and safety signs. Their non-observance may result not only in damage to the device but also in light and serious personal injury.
If, after reading through the manual, you have further questions, please contact the manufacturer or the local sales office.

General information

- The inspection, installation, connection and commissioning of the device must be carried out by qualified skilled personnel only in compliance with the current regulations.
- Do not spray the device with liquids.
- Do not operate the device with wet or moist hands.
- Establishing the electric and hydraulic connections and ensuring their correct functioning is the responsibility of the installer.
- Do not change any control or safety elements without prior approval by the manufacturer or the local sales office.

SCHAKO cannot be held liable for damage resulting from:

- Improper installation caused by ignoring the instructions given in this manual
- Non-observance of the operating conditions of the device.
- Installation and maintenance by personnel without proper qualification.
- Improper use of the device or operation under conditions not conforming to the manual.
- Use of spare parts that are not original spare parts.

Warranty

The device warranty will be for two years starting from the handover date and shall apply to all production faults. Electric components are excluded from the device warranty. However, they are covered by the corresponding warranty of the relevant manufacturer.
Also excluded from the warranty is damage to the device unit caused by components that are not part of the device itself.
The warranty only covers the return and replacement of defective materials.

Recycling

It is recommended recycling the device components at the end of their service life as much as possible or reuse them.
Components that cannot be recycled must be properly disposed of by an authorised disposal company in accordance with current legal regulations.


Hazard warning


Important information


Caution, electric power


Safety information


Recycling


It is recommended keeping this manual at a safe location after installation, as it may be useful for future maintenance activities.

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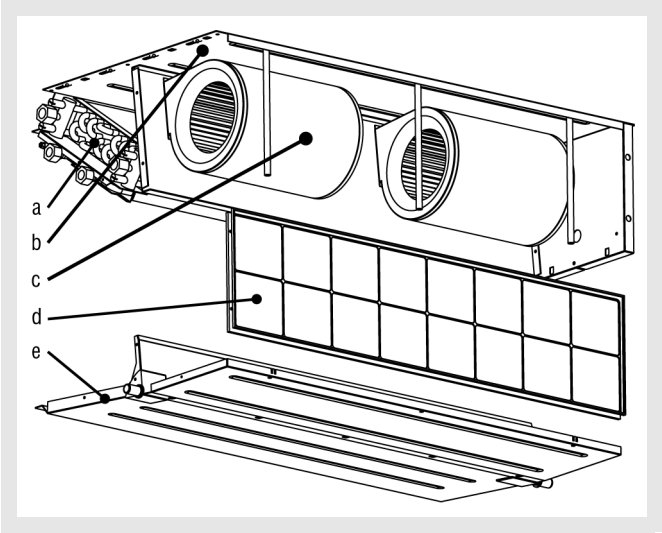
General information

Identification of the delivered model

The Aquaris Silent fan coil series consists of two extensive series: The **SC series** (fan housing made of galvanised sheet steel and aluminium rotor) and the **SP series** (fan housing and rotor made of synthetic material). The entire fan coil series is manufactured in different models, ranging from devices for installation in false ceilings and floors (horizontal model) to devices with a device enclosure for installation in open space (horizontal and vertical models).



Register group (a): It consists either of a single register for cooling or heating (connection to two pipelines) or of 2 registers of 3 + 1 rows (connection to 4 pipelines). The registers contain copper pipes, aluminium ribs, a draining or ventilation system and a galvanised steel frame. The water connections are located on the right-hand or left-hand register side. Installing an electric register is available as an option.
Housing (b): Galvanised sheet steel 1 mm in thickness and heat or sound insulation 12 mm in thickness.
Motorised fan (c): 1, 2 or 3 dynamically balanced, double-sided intake-operated centrifugal blowers with forward directed blades, single-phase capacitor motors 230 V, 50/60 Hz, insulation of class B and protection class IP32 (for model SC) and IP21 (for model SP). Thanks to a step transformer, the blower has 6 speeds, 3 of which are set ex works.
Filters (d): Their efficiency class is G2 and they consist of synthetic fabric on a plastic frame.
Condensate pan (e): It is manufactured from galvanised sheet steel and provided with polyethylene heat insulation (thickness: 3 mm).

	Volumetric flow (m^3/h)					
Speed	**1**	**2**	**3**	**4**	**5**	**6**
SC003-...T2...	310	285	240	205	165	150
SC013-...T2...	405	380	330	285	245	230
SC103-...T2...	385	350	300	270	230	140
SC113-...T2...	520	465	405	360	310	235
SC203-...T2...	675	600	475	445	380	355
SC213-...T2...	825	740	580	450	365	340
SC303-...T2...	830	655	580	470	360	270
SC313-...T2...	1005	860	725	615	475	370
SC403-...T2...	1245	970	815	695	590	430
SC413-...T2...	1485	1280	1115	970	835	690
SC503-...T2...	1385	1160	950	775	660	545
SC513-...T2...	1680	1475	1265	1090	940	825
SC004-...T4...	310	285	240	205	165	150
SC014-...T4...	405	380	330	285	245	230
SC104-...T4...	385	350	300	270	230	140
SC114-...T4...	520	465	405	360	310	235
SC204-...T4...	675	600	475	445	380	355
SC214-...T4...	825	740	580	450	365	340
SC304-...T4...	830	655	580	470	360	270
SC314-...T4...	1005	860	725	615	475	370
SC404-...T4...	1245	970	815	695	590	430
SC414-...T4...	1485	1280	1115	970	835	690
SC504-...T4...	1385	1160	950	775	660	545
SC514-...T4...	1680	1475	1265	1090	940	825
SP103-...T2...	385	315	270	225	160	140
SP113-...T2...	530	445	385	325	235	205
SP203-...T2...	750	595	485	415	305	265
SP213-...T2...	835	680	570	485	355	320
SP303-...T2...	1030	960	850	640	495	410
SP313-...T2...	1135	1070	970	750	575	475
SP403-...T2...	1435	1245	1040	925	680	353
SP413-...T2...	1620	1455	1275	1095	940	805
SP503-...T2...	1670	1310	1145	950	775	625
SP513-...T2...	1825	1530	1350	1185	1020	865
SP104-...T4...	380	310	265	220	160	135
SP114-...T4...	520	435	380	325	235	205
SP204-...T4...	730	585	480	405	300	260
SP214-...T4...	810	665	555	475	345	310
SP304-...T4...	1010	940	840	630	485	400
SP314-...T4...	1110	1045	955	740	565	465
SP404-...T4...	1395	1215	1020	825	670	530
SP414-...T4...	1560	1410	1245	1070	925	790
SP504-...T4...	1625	1285	1125	935	770	620
SP514-...T4...	1770	1490	1325	1165	1005	855

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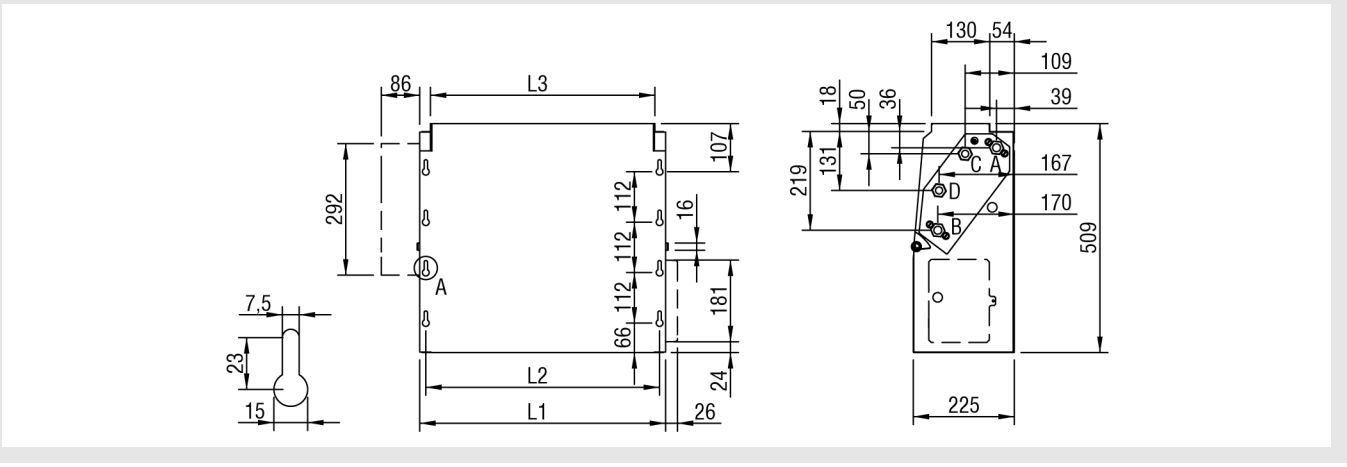
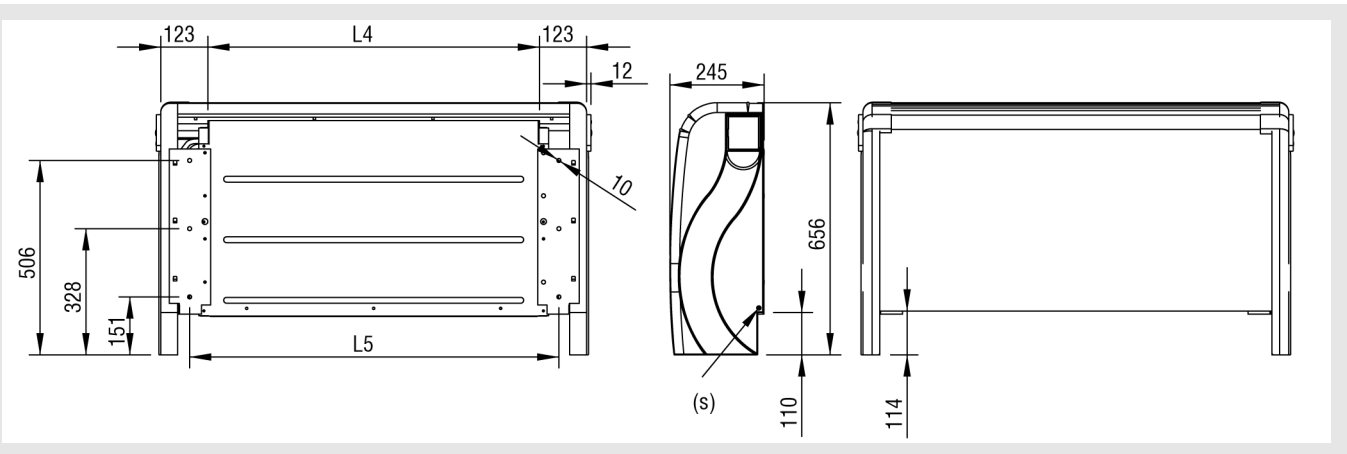
Model	Power cons. (W)	Current: cons. (A)
SC00…	39	0,19
SC01…	54	0,24
SC10…	44	0,21
SC11…	55	0,25
SC20…	75	0,36
SC21…	91	0,41
SC30…	105	0,47
SC31…	111	0,51
SC40…	165	0,76
SC41…	176	0,79
SC50…	175	0,81
SC51…	217	1,00

Model	Power cons. (W)	Current: cons. (A)
SP10…	60	0,26
SP11…	80	0,35
SP20…	86	0,39
SP21…	84	0,43
SP30…	130	0,58
SP31…	142	0,62
SP40…	191	0,85
SP41…	192	0,83
SP50…	221	0,99
SP51…	233	1,02

Water capacity of the registers (litres)		
Type	**Registers (3 rows)**	**Registers (1 row)**
SC0	0.9	0.2
SC1…/ SP1…	1.2	0.3
SC2…/ SP2…	1.6	0.4
SC3…/ SP3…	2,3	0.6
SC4…/ SP4…	2.5	0.7
SC5…/ SP5…	3.0	0.9





Size	L1	L2	L3	L4	L5	G1	G2
00 / 01 [1.]	547	520	495	499	605	11	16
10 / 11	697	670	654	649	755	14	20
20 / 21	912	885	860	864	970	20	28
30 / 31	1277	1220	1195	1199	1305	25	36
40 / 41	1352	1325	1300	1304	1410	32	46
50 / 51	1597	1570	1545	1549	1655	35	49

[1.] = only available for the SC series
G1 = weight of the base unit (kg)
G2 = weight of the base unit (kg) including device enclosure
A= cold water outlet 1/2"
B= cold water inlet 1/2"
C= hot water inlet 1/2"
D= hot water outlet 1/2"
NW = nominal width

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Installation and commissioning

Operating conditions

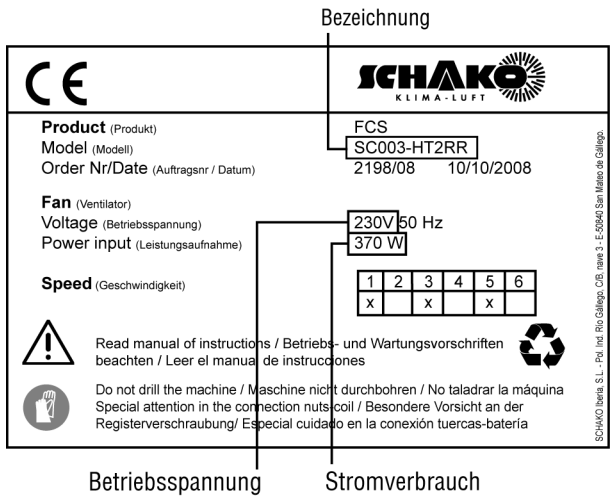
Prior to installation or commissioning of the device, the following operating conditions must be observed:

- Coolant or heating fluid: water or glycols (ethylene or propylene) at a concentration below 60%.
- Water inlet temperature: from 5 to 95°C.
- Air inlet temperature: from 2 to 45°C
- Maximum operating pressure: 8 bar / 95°C
- Operating voltage: 230 V ± 6%, 50/60 Hz.
- Protection class: Model SC: IP32, Model SP: IP21.

To avoid deposits or corrosion, the water quality for filling the registers must meet the requirements according to the regulations VDI 2035 and VDI 50930.

Reception of materials

Upon reception of the materials, the components must be carefully checked, in order to guarantee that no transport damage has taken place. Moreover, the dimensions, composition and number of the identification plate must be checked as to whether they are as ordered.
To prevent possible damage during transport, the devices will be delivered ex works on pallets (that correspond to the particular weight and dimensions). When several units are stacked on top of each other, boards are used. The entire delivery is then wrapped with transparent plastic film and secured with tape. It is recommended leaving this protection in place until the device is commissioned.



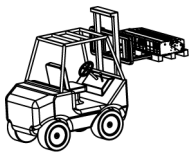
Should the device exhibit production-related damage, please contact your local sales office prior to installation.

Designation:

- Product FAN COIL SC (housing made of galvanised sheet steel and aluminium rotor)
- 00: FAN COIL size
- 3: Number of register pipes (heating and cooling-one register only-).
- H: Model of the unit (horizontal).
- T2: Type of installation (2-pipe installation).
- R: Connection side of the main register (water). Right.

Transport, lifting and handling

Transport and handling of the unit shall take place in the position in which the unit is to be built in later on, unless expressly stated otherwise on the unit. Transport, unloading and lifting of the unit shall take place with the necessary care and using tools that are appropriate for the weight and dimensions.



SCHAKO cannot be held liable for damage to the unit caused by improper handling or handling not mentioned here, loading or unloading.

The unit shall only be moved by holding on to the housing. When supporting the unit, the weight must never act on the condensate pan or (if available) the water connections.

Storage

If the device is not installed immediately after its reception, it must be stored according to the following instructions:

- The device must be stored at a dry, clean, safe location where no damage to the device can occur, i.e., apart from corrosive atmospheric influences.
- Leave the protections attached ex works (film, tapes, pallets, etc.) on the device, unless they have already been removed beforehand.
- Cover the device with tarpaulins, in order to protect it from dust, moisture and extreme temperatures.
- Rotate the fan rotor at regular intervals.
- Protect the electric components adequately. In case of storage over a prolonged period of time, remove the electric unit and store it at a dry location.
- Entries, openings and pipes must be hermetically sealed.

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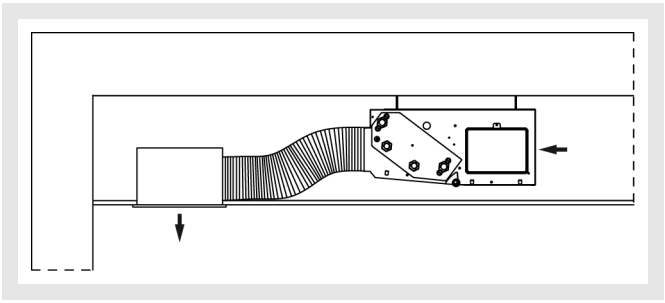
Installation site

The Aquaris Silent units are available as horizontal model (for installation of the device unit in false ceilings and floors or in open space with device enclosure) and as vertical model (for installation on a surrounding surface with or without device enclosure). The devices must not be installed in places with extreme moisture (e.g. laundries or swimming pools), with high dust formation, outdoors or in places subject to explosion hazards.
For correct installation, the following instructions must be followed:

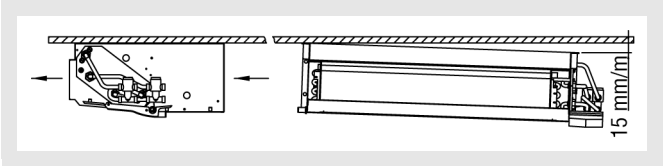
- Make sure that places that are intended as openings for air admission and air discharge are free of pipes, electric cables, crossbeams, stands, etc.
- Install the unit at a site that has good air quality.
- Make sure that wall and ceiling correspond to the weight of the device and also allow correct mounting of the fastening elements in the ceiling.
- Make sure that no obstacles are present on the outside of the wall that could impair optimum air circulation (plants, furniture, curtains, etc.). No objects must be placed on the vertical models of the device. Nor must they be used as seat.
- Install the device such that the air flow is not directed directly at persons staying there.
- The installation site must have sufficient space and the necessary resources for carrying out mounting and maintenance activities of all device components.

Horizontal installation

When installed in a false ceiling, the device is suspended from anchoring elements (e.g. set screws), which are then fastened to the holding devices at the unit by means of nuts.

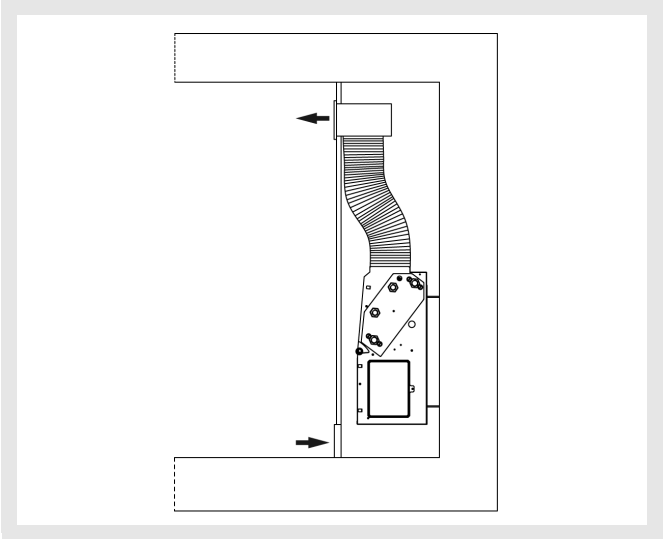


To reduce the noise generated by the fan coil, it is recommended fastening the device and the connections of the pipelines by means of sound-insulating elements or vibration dampers.
When the device is installed in false ceilings, the device unit is attached using the anchoring elements of the fan coil. When installed in open space, the device is suspended using additional brackets enclosed with the device housing. This is followed by inserting the device enclosure, which is supported by the housing.
In any form of horizontal installation, the device is mounted at an inclination of 15 mm per metre of device width, to ensure draining of the water of condensation.

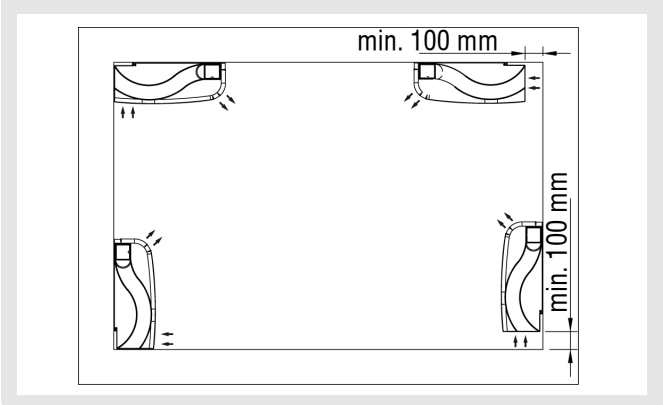


Vertical installation

The fan coil is mounted to the wall by means of the laterally attached sheet metal mounting frame. If the device has a device enclosure, the latter is fastened to the sheet metal frame of the fan coil by means of the fishplates.



To ensure correct air flow, all devices with device enclosure must be installed at a minimum distance of 100 mm from the wall (horizontal installation) or from the floor (vertical installation).



To avoid damage to the device enclosure, it is recommended first installing only the device unit and to insert the device enclosure not until these activities have been completed.

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Before making electric or hydraulic connections, the power supply must be disconnected.

Non-observance of the device inclination may result in serious damage to the device and cause water to enter the air ducts.

For the installation of the device, use adequate tools, devices and materials and observe the safety regulations and other current regulations.

SCHAKO cannot be held liable for damage resulting from faulty installation or the use of unsuitable fastening devices.

Mounting and connections

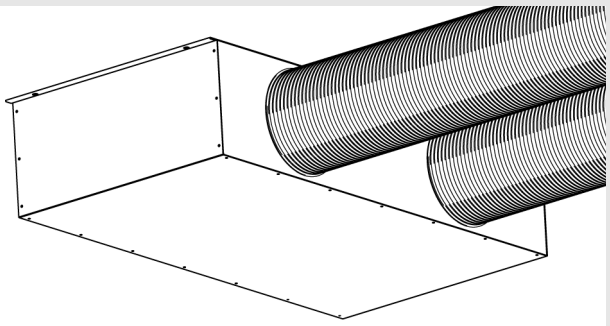
The work or support surface used for assembling the device must be smooth and level, to ensure that damaging tensions are avoided when the sub-assemblies are attached.

Connecting the sub-assemblies

The fan coil base unit (register, filter and motorised fan) is delivered completely mounted ex works. The only connecting work to be done by the installer is attaching the fan coil to the available air ducts or fastening the plenum boxes to the main unit.

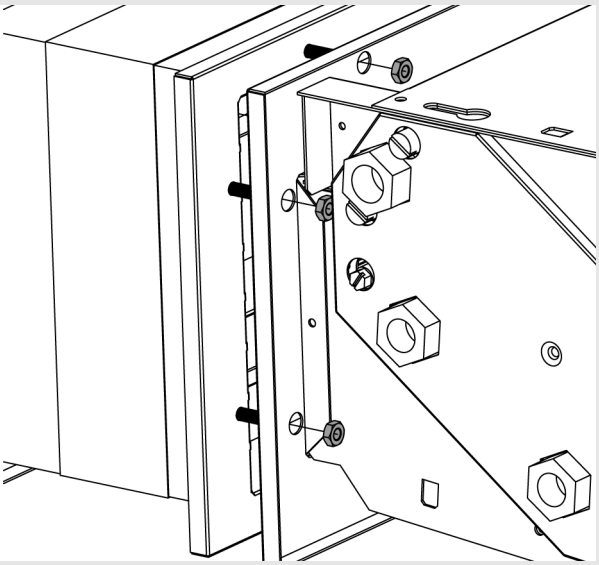
Connecting the air ducts

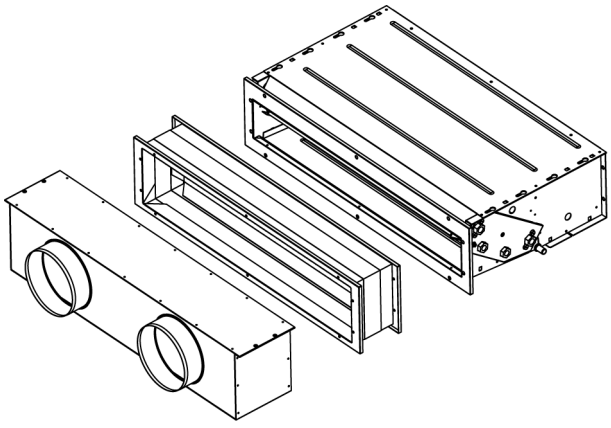
On the supply air side, the fan coil is equipped (if specified in the order) with a mounting frame for attaching the air duct. For the return air, the fan coil unit has openings in the return air connection piece, which can be screwed to the air duct. For plenum boxes with connection pipe, the air ducts are attached by means of clamps, fishplates or the like.



Plenum boxes

The plenum boxes for supply and return air are attached to the main unit by means of flexible connection hoses enclosed with the unit.

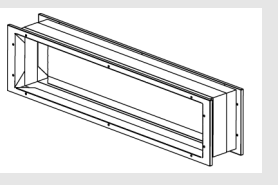




Before connecting the plenum boxes, make sure that the insulation at the plenum box frame is in good condition.

Flexible connections

Flexible connections that prevent a transmission of vibrations to the system can be additionally delivered as an option.



They are assembled by screwing the frames of the connecting hoses to the device unit.

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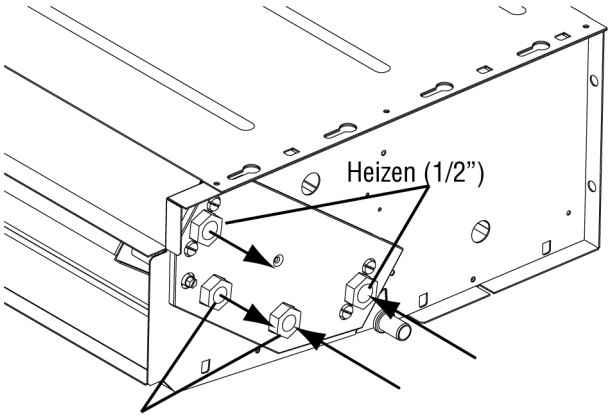
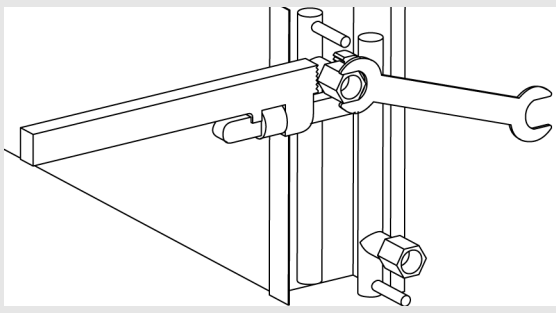
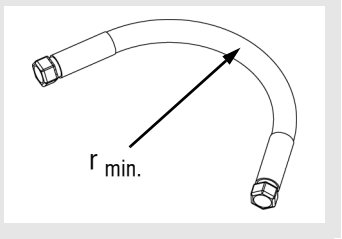
Hydraulic connections

Upon customer request, the water connection to the registers can be established either on the left-hand or right-hand side of the unit. The pipe for the supply of liquids is attached below the collector, and the return flow above the same. The registers are equipped ex works with a manual bleed valve. Any further devices for ventilation must be provided on-site.
If the unit is to be installed at a location having temperatures below zero degrees, glycol must be admixed to the coolant in a suitable ratio, to ensure that the freezing point of this liquid always stays below the minimum temperature of the operating site. Please note that the use of an antifreeze necessarily results in a loss in efficiency of the register.



Ensure that no air remains in the hydraulic circuit by providing venting devices.





When making the hydraulic connections, suitable tools must be used, to avoid a rotation or other movements of the collector and excessive tightening of the connections.

Avoid putting the register connections under stress as a result of the weight of the connection pipes.

If flexible hoses are to be used, observe the bend radius specified by the manufacturer.

Electric connections

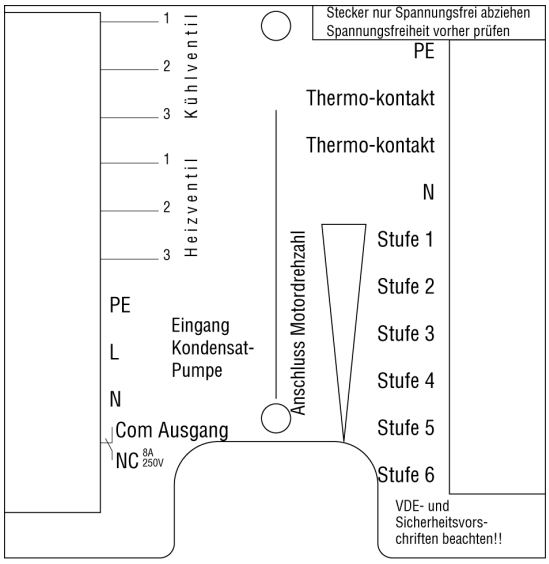
Prior to the electrical installation, you have to make sure that the rated mains voltage is 230 V, 50/60 Hz and is single-phase. The delivered motors have insulation of type B and protection class IP32 (model SC) and IP21 (model SP). The electric connections must be made by qualified electricians only, observing current regulations and the low-voltage directive.
SCHAKO recommends using exclusively copper cables, since the device connections have not been designed for accommodating other types of cables. If they are used nevertheless, galvanic corrosion or generation of heat could take place at the connection point.

Connect the fan coil unit via an earthing cable.

Interrupt the power supply, before carrying out any electrical connection work.

SCHAKO cannot be held liable for faulty electrical connections or if the power supply cable is replaced with a different cable having different characteristics.

Electric connection diagram



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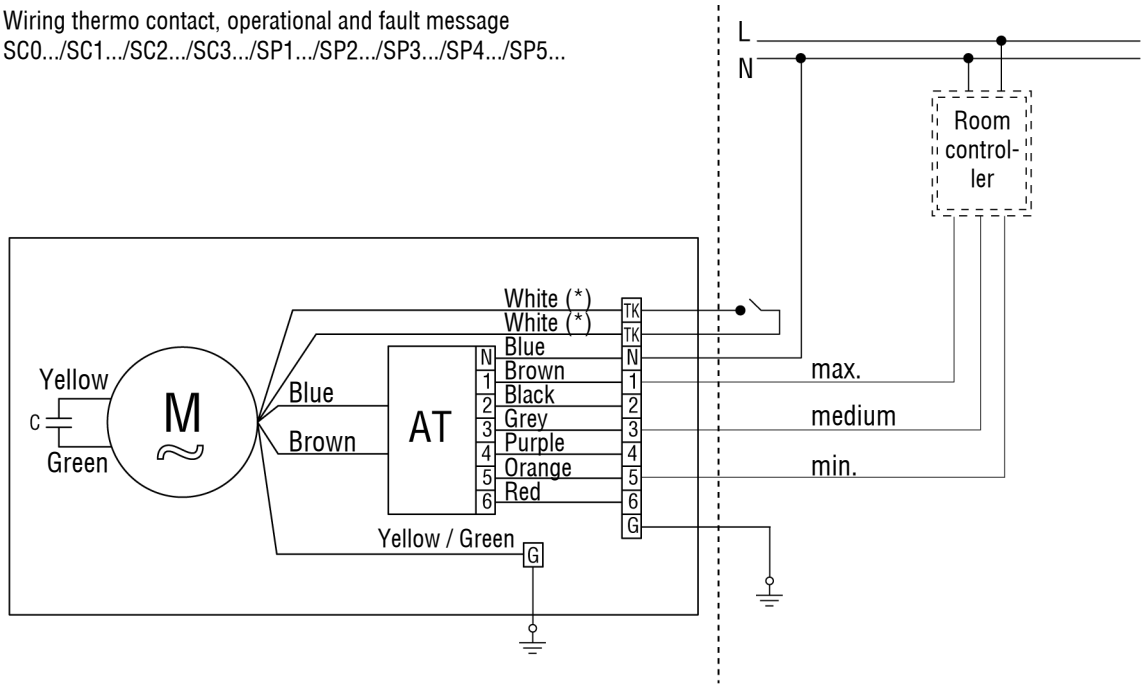
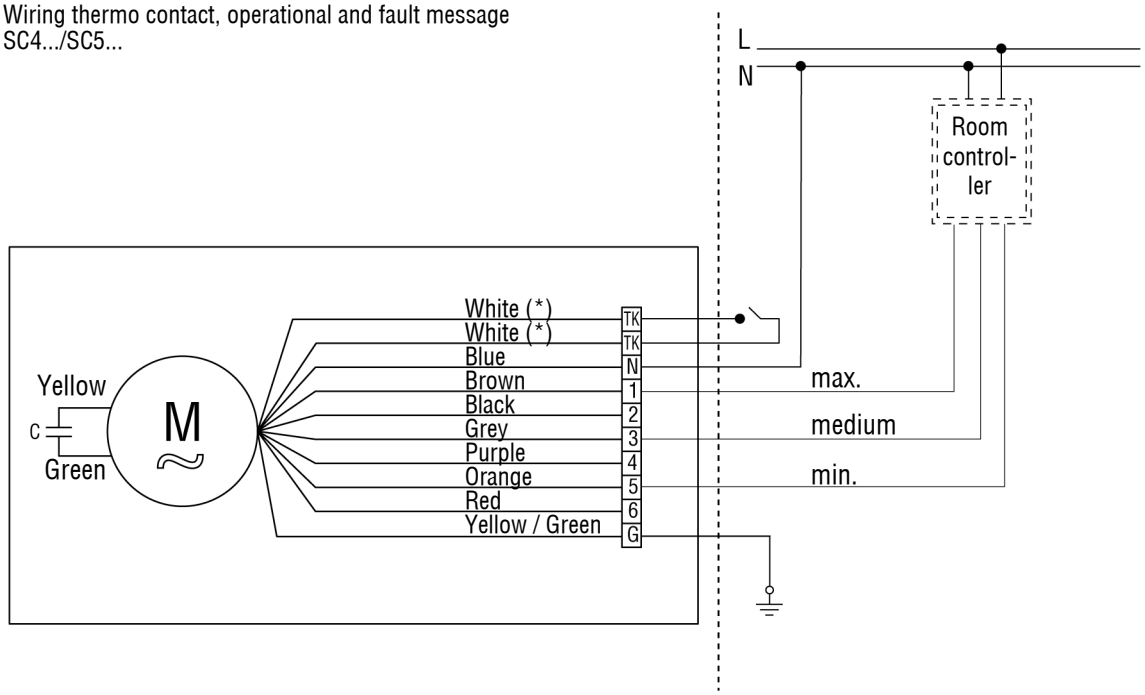
Wiring thermo contact, operational and fault message
SC0.../SC1.../SC2.../SC3.../SP1.../SP2.../SP3.../SP4.../SP5...



Wiring thermo contact, operational and fault message
SC4.../SC5...



White (*) = potential-free thermo contact as overload protection for motor, to be provided on-site

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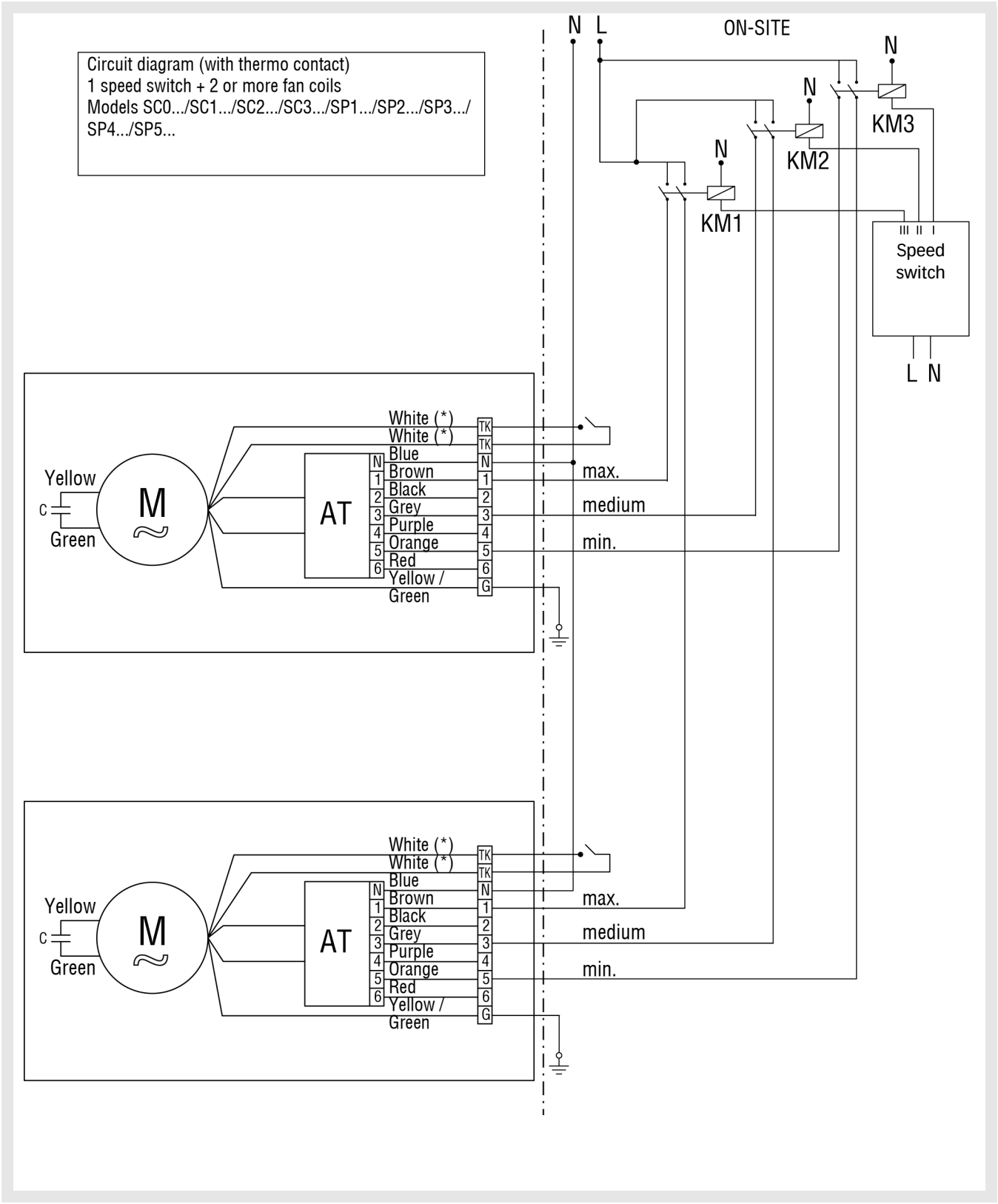

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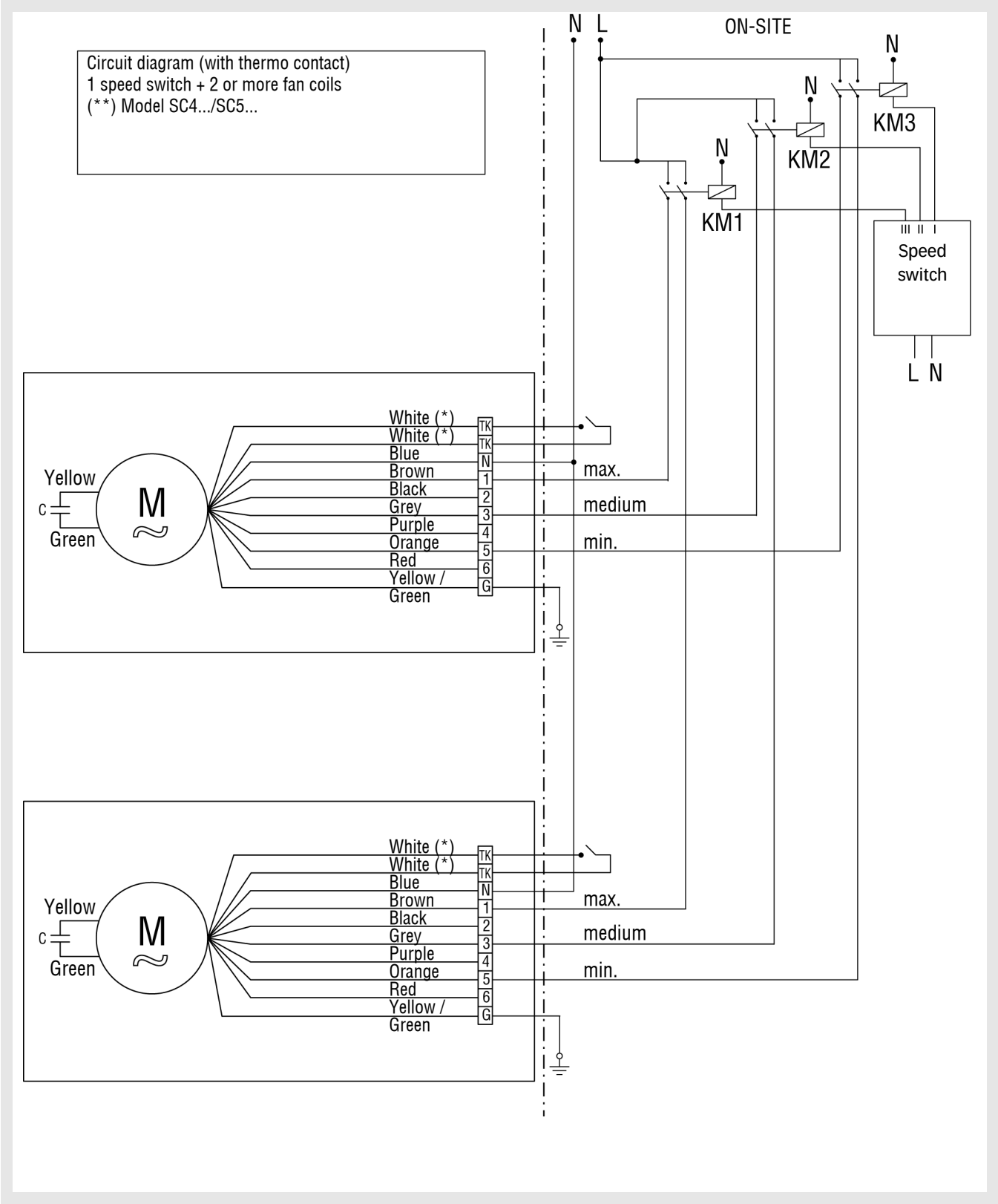

White (*) = potential-free thermo contact as overload protection for motor, to be provided on-site

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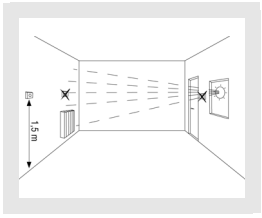
Mounting accessories

Temperature controls

The temperature controls are mounted in accordance with the selected model. This is why the instructions enclosed with each model must be followed. However, in order to achieve optimum measurement by the sensors, the following basic information should be observed:



- Do not mount the temperature control close to or above a heat source (direct sunlight, lamps, television sets, radiators, etc.), in places with draught air or directly opposite to an air outlet grille.
- Temperature controls must be mounted at least 1.5 metres above the floor.
- Mounting temperature controls on walls toward the outdoors should be avoided.

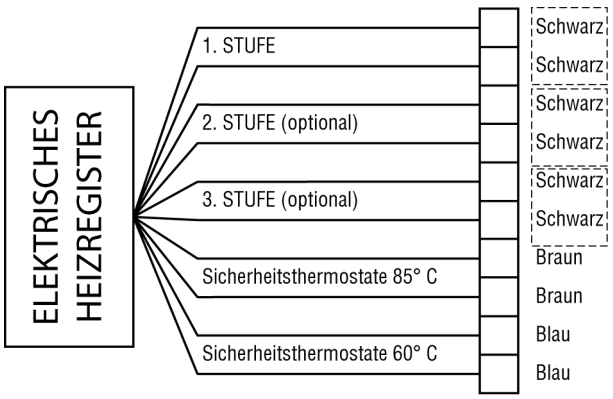
Before drilling, make sure that no power, water or gas lines are present where the temperature controls are to be mounted.

Actuators

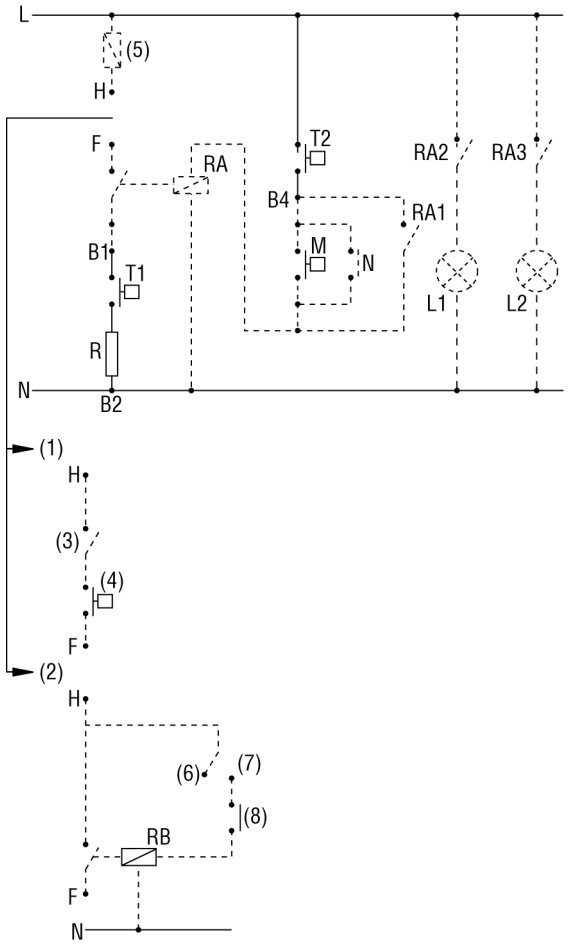
The installation of the actuators depends on the selected model. Please follow the instructions enclosed with each model.

Electrical heating register

The electrical register is equipped with a protection mechanism against overheating. No further safety devices have to be mounted.



Example of a connection circuit diagram



SCHAKO scope of delivery:
B1/B2/B3/B4: Terminals (in the terminal box of the device)
T1: Temperature control for autom. restart
T2: Safety temperature control, recommended for manual restart
R: Electrical register
Not included in the SCHAKO scope of delivery:
M: Pushbutton for manual restart
N: Restart from the control unit
RA/RAB/RA1: Electrical transmitter for control, monitoring, switching on
RA2: "Operation" auxiliary contact L1
RA3: "Fault" auxiliary contact L2
L1: Operation LED
L2: Fault LED
(1): Connection option 1
(2): Connection option 2
(3): Switch
(4): Room control unit
(5): Fuse
(6): OFF
(7): Automatic operation
(8): ON / OFF

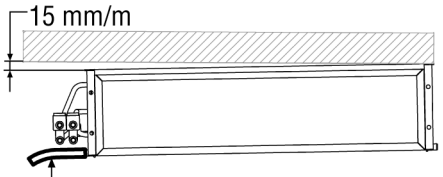
Installation, Mounting and Maintenance Aquaris Silent

Valves

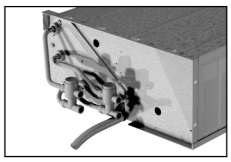
The valves are already mounted ex works, no further installation being required. Upon customer request, the device can also be delivered without valves, in which case the instructions of the valve manufacturer have to be followed.

Valve kit

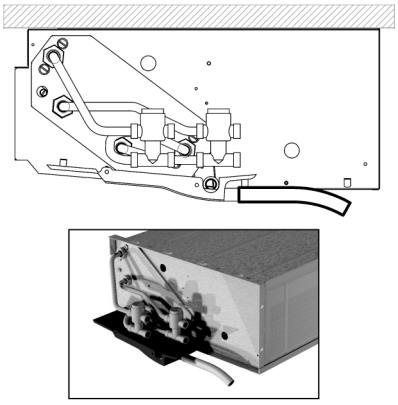
FAN-COIL



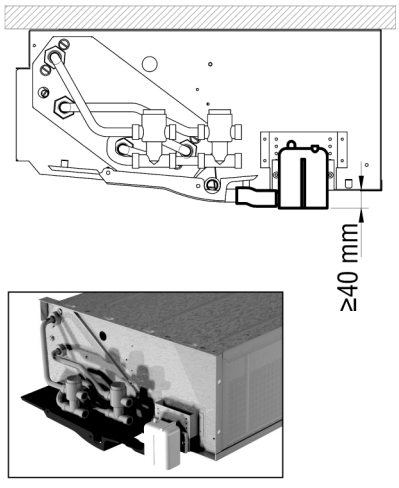
Kondensatablauf
Der Ablauf des Kondensatwasser soll unter dem niedrigem Fan Coil Niveau erfolgen.



FAN-COIL + WANNE



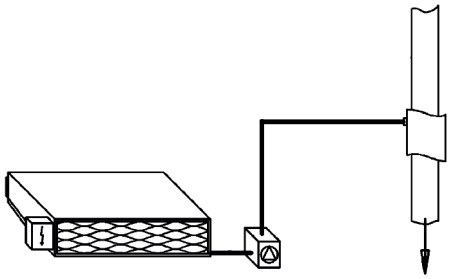
FAN-COIL + WANNE+ KONDENSATPUMPE



Wrong mounting of the sub-assemblies and of the device accessories can result in a considerable loss in power of the device.

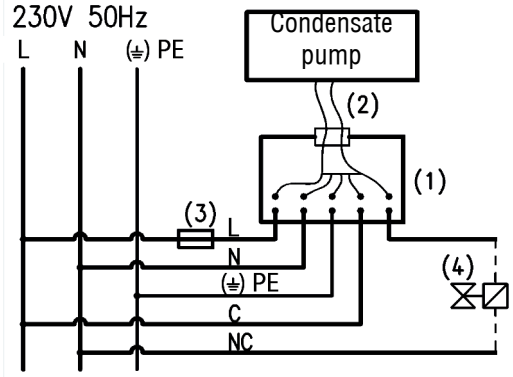
Condensate pump

Mounting a condensate pump allows the condensates produced by the Aquaris Silent to be removed, even if the water discharge is higher than the condensate discharge.
If the main water drain is above the level of the Aquaris Silent drain, such a pump does not have to be mounted. The condensate pump prevents a water overflow of the Aquaris Silent.



Optionally, the condensate pump delivered ex works can be ordered with a safety device. If water draining is not possible (clogging, too many condensates, pump failure, etc.), the operation of the Aquaris Silent will be interrupted by the safety device.

Electric connections of the condensate pump

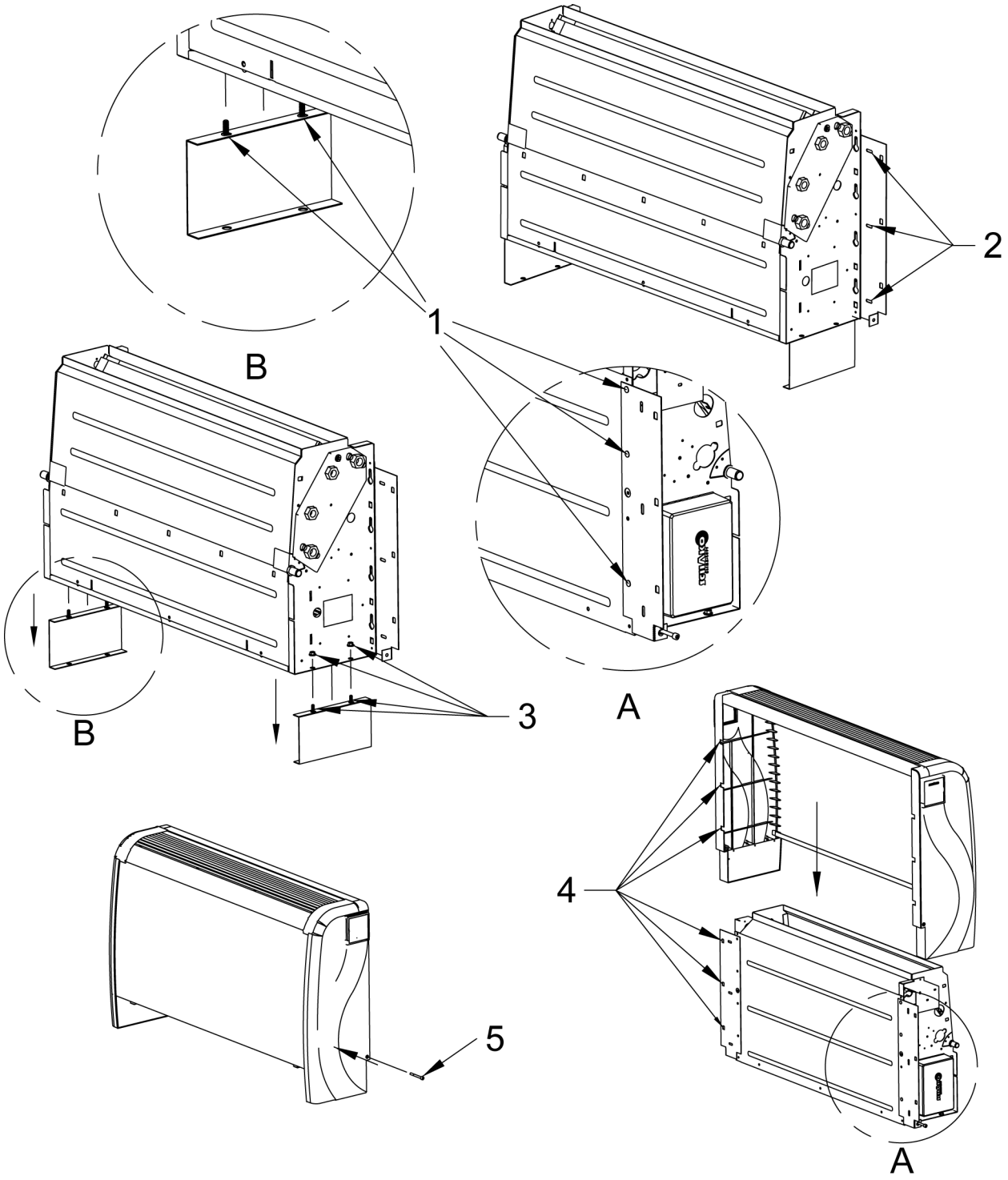


on-site:

(1) Electric connection switch	L	= red
(2) Cable	N	= blue
(3) 630 mA fuse	PE (ground)	= yellow/green
(4) Aquaris Silent	C	= black
	NC	= black

Installation, Mounting and Maintenance Aquaris Silent

Mounting the housing



1. Only if the unit is not delivered mounted: screw the mounting plates to the housing (1A) and tighten the nut of the mounting base (1B).
2. Fasten the Aquaris-Silent to the wall/ceiling.
3. Unscrew and remove the mounting base from the Aquaris-Silent.
4. Position the housing and fasten it by means of the fastening hooks.
5. Fasten the housing on both sides of the Aquaris Silent using M6x60 screws.

The installer is responsible for the correct mounting. The M6x60 screws are not delivered by Schako.

Installation, Mounting and Maintenance Aquaris Silent

Checks

Prior to commissioning, the following items must be checked or guaranteed:

- The air flow through the filters is not impaired by foreign material (paper, packaging residues, etc.).
- The current consumption of the device is not higher than the power of the electric circuit it is connected to.
- The electrical properties of the device correspond to those of the electrical connection circuit.
- Hydraulic connections were tightened properly and exhibit no leaks.
- Electrical connections were made correctly.
- Connecting and fastening elements have been sufficiently tightened.
- The drain pipe of the condensate pan is not clogged.
- There is a sufficient gradient for the condensate pan to be emptied correctly. (Check whether it is completely emptied by partly filling it.)
- The insulation kit was attached correctly to the pipes of the condensate pan.
- Adequate access for carrying out the maintenance activities has been provided.

After carrying out the activities described above, the correct installation of the unit must be checked.

During commissioning itself, the following items must be guaranteed:

- The motorised fan does not exhibit any vibrations or excessive noise.
- The connecting and fastening elements have been sufficiently tightened.
- The condensate pan is emptied correctly.
- In heating mode, the temperature of the discharged supply air is not above 40°C.

Maintenance

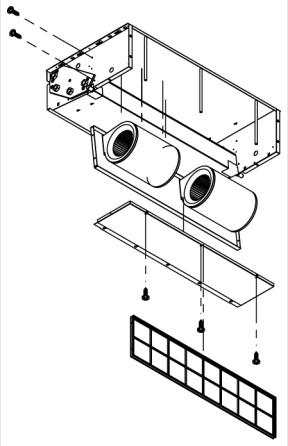
For reasons of safety, the power supply and hydraulic circuit must be disconnected prior to any maintenance activity.
If the unit was operated in heating mode, you have to wait until the register has cooled down.

When performing maintenance activities, it is recommended wearing personal protective equipment, in order to avoid cuts and other injuries produced by sharp and pointed parts.

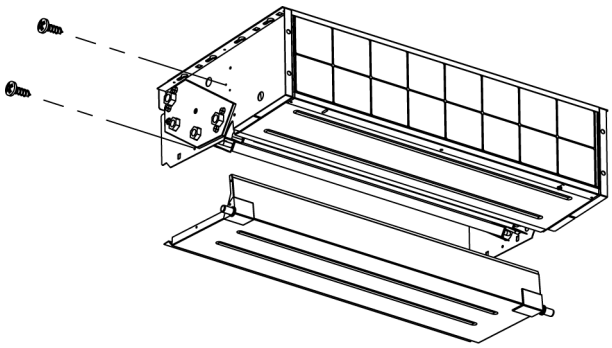
Disassembling the units

Access to the device for carrying out maintenance activities is made available by unscrewing and taking off the appropriate metal sheets. In doing so, the following instructions must be followed:

- Take out the filter by folding it downward
- Unscrew the lateral screws (2) and the other screws, depending on the kind of struts used
- Removing the metal sheet
- Disconnect the electrical connections (boxes) and unscrew the screws (4) of the fan group



Dismounting the condensate drain pan



When the metal sheets are removed, the unit must not be in operation.

Motorised fan

The motorised fan does not require any special maintenance, as it is equipped with self-lubricating bearings. However, the blades and the rotor of the motor must be checked at regular intervals whether they are free of dirt.
If required, it is cleaned with compressed air or by carefully brushing the motor surface or the housing.

If you want to change the operating conditions of the fan (speed, pressure, temperature, etc.), first contact your local SCHAKO sales partner, in order to find out whether the unit can be safely operated under the changed conditions.

Installation, Mounting and Maintenance Aquaris Silent

Registers

To guarantee the technical characteristics of the device, the registers and heat exchangers must be kept in good clean condition. To ensure this, the following maintenance activities muste be carried out:

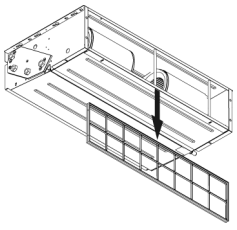
- Check the condition of the register at least each time the filter is changed.
- Should the register be soiled, clean it by spraying it with water or with compressed air or by suction.
- If there are larger differences in distance between the ribs, they must be "combed".
- Once a year, the condensate pan must be checked for formation of algae, to prevent possible clogging of the drain pipe. Check whether the pan is completely emptied by partly filling it.
- Ventilate the hydraulic circuits of the register. In doing so, watch out for possible leaks of the hydraulic system.

When decommissioning the unit or shutting it down for a longer period in winter, the water must be drained from the unit, in order to avoid damage to the register due to the formation of ice. If you want to use antifreezes, you must first determine the freezing point.

The maintenance activities on the register must be carried out according to current standards, for ex-

Filter

Filter maintenance is limited to cleaning or replacing it as soon as a certain pressure drop value is reached. The service life of the filter depends on its efficiency and on the degree of soiling of the air arriving there. This is why it is recommended to check it once every three months. In the absence of a recommendation on the part of the manufacturer, the maximum pressure drop value must conform to current regulations (see UNE EN 779).

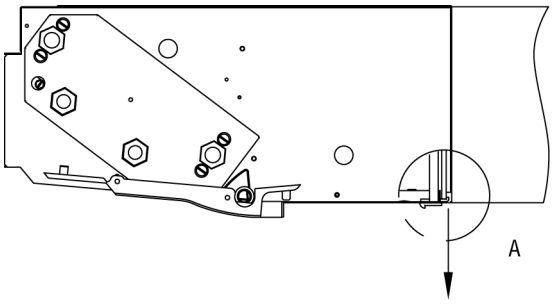


To clean the filter or replace it, it must be removed from the main unit from the rear side. This is done by carefully folding it downward. In doing so, make sure that the dust is not distributed in the surroundings.

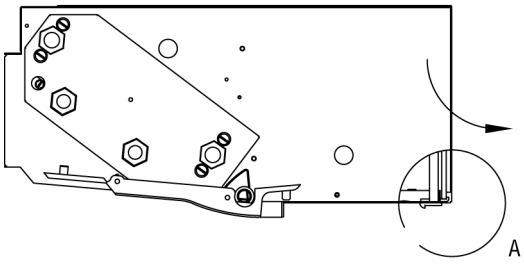
The filter is cleaned with compressed air or by washing it with warm water and a mild detergent. Before mounting it again, the filter must be dried completely.

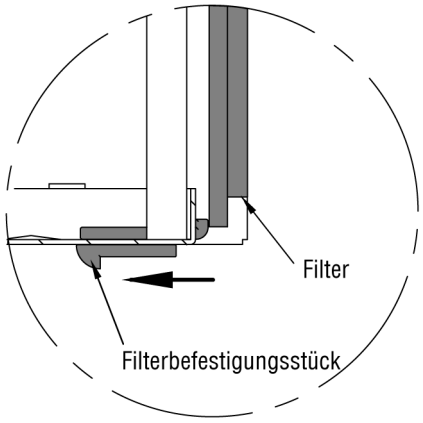
Removing the filters

Conducted return air



Free return air





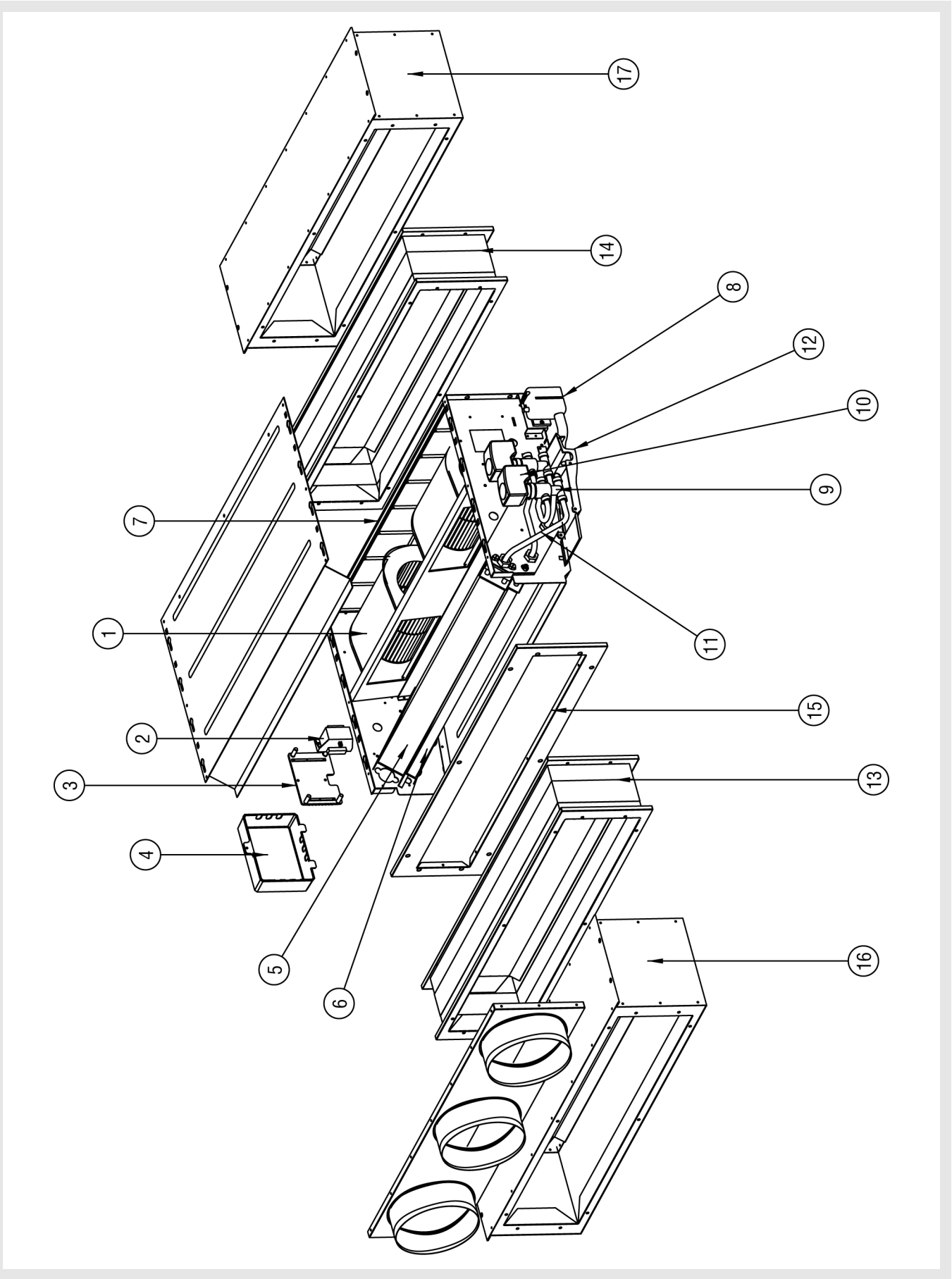
EINZELHEIT A

To precisely monitoring the pressure loss of the filter, it is recommended using differential manometers or pressure monitors.

If there are any devices in the surroundings that exhibit high dust formation, a monthly check and cleaning must be carried out (smoking rooms, kitchens, etc.).

Installation, Mounting and Maintenance Aquaris Silent

Spare parts list



Installation, Mounting and Maintenance Aquaris Silent

Nº		Article	Model	Ref.
1	1.1	Motorised fan	SC 00/01	101967
			SC 10/11	101957
			SC 20	101959
			SC 21	101960
			SC 30/31	101961
			SC 40	101963
			SC 41	101964
			SC 50	101965
			SC 51	101966
			SP 10/11	101969
			SP 20/21	101971
			SP 30/31	101973
			SP 40/41	101975
			SP 50/51	101977
	1.2	Capacitor	SP 10	102110
			SP 20/40 SC 00/10	102112
			SP 11/21/50 SC 50	102113
			SP 30/41 SC 01/11/30	102114
			SP 31/51	102115
			SC 20/21 SC 40/41/51	102456
			SC 31	102783
2		Transformer	SP 10/11	102327
			SP 20/21/30/31 SP 40/41/50/51	102328
			SC 00/01	104454
			SC 10/11	104455
			SC 20	104456
			SC 21	104457
			SC 30/31	104458
3		El. connecting plate	(all)	104629
4		El. terminal box	(all)	104630
5		Cooling register	00/01	101979
			10/11	101980
			20/21	101981
			30/31	101982
			40/41	101983
			50/51	101984
6	6.1	Heating register	00/01	101985
			10/11	101986
			20/21	101987
			30/31	101988
			40/41	101989
			50/51	101990
	6.2	Electric register	00/01	103645
			10/11	103646
			20/21	103647
			30/31	103648
			40/41	103649
			50/51	103650

Nº		Article	Model	Ref.
6	6.3	El. register with blades	00/01	103939
			10/11	103940
			20/21	103941
			30/31	103942
			40/41	103943
			50/51	103944
7		Filter	00/01	103282
			10/11	103283
			20/21	103284
			30/31	501637
			40/41	501638
			50/51	501639
8	8.1	Condensate pump	(all)	102116
	8.2	Pump support		102117
	8.3	90° angle		103893
	8.4	Hose		103894
9		Valve	(all)	(enquire)
10		Drive	(all)	(enquire)
11		Copper	(all)	102634
		Copper pipe B/right		102635
		Copper pipe C/right		102636
		Copper pipe D/right		102637
		Copper pipe A/left		102638
		Copper pipe B/left		102639
		Copper pipe C/left		102640
		Copper pipe D/left		102641
12		Plastic pan	(all)	104061
13		Flexible hose for supply air	00/01	FAN_0830
			10/11	FAN_0789
			20/21	FAN_0783
			30/31	FAN_0820
			40/41	FAN_0822
			50/51	FAN_0824
14		Flexible hose for return air	00/01	FAN_0849
			10/11	FAN_0850
			20/21	FAN_0851
			30/31	FAN_0821
			40/41	FAN_0823
			50/51	FAN_0825
15		Flange	00/01	8862_0541
			10/11	8862_0318
			20/21	8862_0363
			30/31	8862_0306
			40/41	8862_0307
			50/51	8862_0340
16		Supply air box	(all)	(enquire)
17		Return air box	(all)	(enquire)

Installation, Mounting and Maintenance Aquaris Silent

TROUBLESHOOTING

Problem	Possible cause	Solution
The unit is not working	Power supply missing	Establish power supply
	Residual current device switch was tripped	Please inform the customer service
	Motorised fan clogged by foreign material	Remove the foreign material
	Motorised fan is not working	Please inform the installer
The unit does not cool or heat sufficiently	Air filter dirty or clogged	Please clean or replace the air filter
	Motorised fan is not working	Please inform the installer
	Air inlet and outlet of the inner unit clogged	Remove foreign material and clean the unit
	Air in the interior of the register	Ventilate the register Please inform the installer
	Temperature control or measuring device attached to an unfavourable location or defect of same	Check or reattach
	Air or volumetric flow insufficient	Select a higher speed
Insufficient volumetric flow	Filter dirty or clogged	Clean or replace filter
	Accidental clogging in the interior of the unit or at the air inlet	Remove foreign material and clean the interior of the unit
The unit is losing water	Condensate pan flows over	Check whether the drain is clogged
	The unit has not been installed with the correct inclination	Inclination should be corrected. Please inform the installer
	Water is draining from the condensate pan	Please inform the installer
	The water circuit of the register is leaking	
	Register damaged	
	Incorrect hydraulic connection or incorrect mounting of the valve kit	
Control unit effects continuous starts and stops	Temperature control or measuring devices attached to an unfavourable location	Check or reattach
	Temperature deviations of the coolant or heating fluid	Please inform the installer
	There are different units with local control elements that use coolant or heating fluid of the same circuit	
	The control is connected incorrectly	Interrupt the power supply of the unit and inform the installer
The unit is working with too much noise	The air intake or supply air openings or lines are clogged	Remove foreign material and clean the unit
	Loose screws and fastening elements	Tighten screws
	Filter dirty or clogged	Clean or replace filter
	Loose connecting cables	Reconnect
	Foreign material or dirt on register surface	Remove foreign material by careful brushing

EC DECLARATION OF CONFORMITY

[FOR CE MARKING]

SCHAKO IBERIA, S.L. WITH HEADQUARTERS IN
THE INDUSTRIAL AREA OF "RÍO GÁLLEGO"
C/ B, HALL 3
50.840 SAN MATEO DE GÁLLEGO
SARAGOSSE (SPAIN)

HEREBY DECLARES THAT THE DESIGN AND CONSTRUCTION OF THE AQUARIS SILENT:

Model:	SC / SP
Type:	00-51
Register type:	3 - 4
Position:	HT - VT
Model:	RR - LL
Year of manufacture:	2010

COMPLY WITH THE FOLLOWING REGULATIONS:

- Machinery Directive (2006/42 EC)
- Low Voltage Directive: 2006/65/EC
- Directive on Electromagnetic Compatibility: 2004/108/EC
- Directive on General Product Safety: 2001/95/EC

APPLICABLE HARMONISED REGULATIONS

- **DIN-EN-ISO 12100 SAFETY OF MACHINERY** - Safety of Machinery - Basic terms, general principles of design - Part 1: Basic terminology, methodology
- **DIN-EN-ISO 12100 SAFETY OF MACHINERY** - Safety of Machinery - Basic terms, general principles of design - Part 2: Technical guiding principles
- **DIN-EN 294 SAFETY OF MACHINERY** - Safety distances against reaching danger zones with the upper limbs
- **EN 60204-1 SAFETY OF MACHINERY** - Electrical Equipment of Machines - Part 1: Specifications for General Requirements
- **DIN-EN 1050 SAFETY OF MACHINERY** - Guiding principles for risk assessment
- **DIN-EN 1886 VENTILATION FOR BUILDINGS** - Ventilation for buildings - Air handling units - Mechanical performance, testing

Signed:

J. Quirós Fernández
San Mateo de Gállego, 2010