OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE SILVER C RX/PX/CX/SD

The document was originally written in Swedish.

Contents

1. Safety Instructions

All staff concerned must acquaint themselves with these instructions before beginning any work on the unit. Any damages to the unit or parts of it due to improper handling or misuse by the purchaser or the fitter cannot be considered subject to guarantee if these instructions have not been followed correctly.

Warning

Only qualified electricians or service personnel shall be permitted to carry out any work on the electrical system or wire external functions in the air handling unit.

1.1 Risks

Warning

Before carrying out any work, make sure that the power supply to the air handling unit has been switched off.

Risk areas with moving parts

Moving parts are fan impellers, drive pulley for the rotary heat exchanger, if fitted, and by-pass/shut-off damper of the plate heat exchanger, if fitted.

The lockable inspection doors serve as protection from contact with the fans and protection for the heat exchanger. If the ducts are not firmly connected to the fan outlets, the outlets must be firmly fitted with a safety guard (wire mesh screen).

Warning

The inspection doors on the filter/fan sections must not be opened while the unit is operating.
Wait until the fans have stopped before opening the door.
Positive pressure inside the fan section will otherwise cause the door to fly open.
Keep the key at a safe spot separate from the air handling unit.

1.2 Glycol

Glycol is used in the SILVER C air handling units with coil heat exchangers.

Warning

Never pour glycol down a drain; collect it in a receptacle and leave it at a recycling centre, petrol station, etc. Glycol is highly dangerous to consume and can cause fatal poisoning or damage the kidneys. Contact a doctor! Avoid breathing glycol vapour in confined spaces. If you get glycol in your eyes, flush them thoroughly with water (for about 5 minutes). If glycol splashes on your skin, wash with soap and water.

2. General

2.1 Handling the air handling unit before commissioning

The air handling unit and its duct connections should be protected against wetness and condensation until the unit is commissioned.

2.2 Range of Application

The SILVER C units are designed for use in comfort ventilation applications. Depending on the variant selected, the SILVER C units can be utilised in buildings such as office buildings, schools, day nurseries, public buildings, shops, residential buildings, etc.
SILVER C units equipped with plate/coil heat exchangers (PX/CX) and separate supply air and extract air handling units (SD) can also be used for the ventilation of moderately humid buildings; however not where the humidity is continuously high, such as in indoor swimming baths.
The separate SILVER C supply air and extract air handling units (SD) are designed for applications in which the supply air and extract air flows need to be completely separated from one another or where, due to limited available space, separate units for supply air and extract air respectively are needed. They can also be used individually if only one of the variants is needed.
In order to fully obtain all the benefits the SILVER C system has to offer, it is important keep in mind the air handling unit's special characteristics in conjunction with designing the project, installation, commissioning and operating the system.
The air handling unit in its basic design should be installed indoors. The TBTA/TBTB accessory should be used if the air handling units are installed outdoors.
SILVER C is designed and tested for temperatures, in the surroundings and the air stream, from -40°C to +40°C. However, for SILVER C RX the temperature difference between the outdoor air and extract air must not exceed 70°C. On all SILVER C CX and SD with a pipework package from Swegon placed outdoors, the expansion vessel must be equipped with anti-freeze resistance and insulated when the design outdoor temperature is lower than -10 °C.
The fans are approved for continuous operation in temperatures of up to 40°C.
The fans are tested for, and can manage operation for one hour at 70°C.

Important!
Always read the safety instructions in Section 1 that explain the risks involved in running the unit and designate who shall be permitted to operate and service the unit, and carefully follow the installation instructions provided in each paragraph.

The product identification plates are located on the inspection side of the air handling unit and on a wall inside the fan section. Refer to the particulars on the product identification plate when you contact Swegon.

2.3 Mechanical Design

The SILVER C is available in 9 physical sizes and for 18 airflow ranges.
The outer sheet steel skin is painted in Swegon's grey metallic colour (closest RAL colour: 9007). The handles and decor strips and connection hood are black. Internal material: aluminium-zinc plated sheet steel and Magnelis. Environmental Class C4. Panel thickness of 52 mm with intervening insulation consisting of mineral wool.
Separate supply air handling and extract air handling units (SD) in size 04-12 in a common casing, and the SILVER C RX Top size 04-12 are equipped with pleated, class ePM10 60% (M5) or ePM1 50% (F7) filters. Other variants/sizes have supply air filters and extract air filters made of glass fibre in filter class ePM10 60% (M5) or ePM1 50% (F7).
The type RECOnomic rotary heat exchangers are variable speed of rotation controlled.
The plate heat exchangers are as standard equipped with bypass and shut-off dampers for variable and automatic control of the heat exchanger's efficiency on heat recovery.
Loose pipework packages are available for one-piece air handling units with coil heat exchangers (SILVER C CX) and separate supply and extract air handling units (SILVER C SD).
The supply air and extract air fans are of SILVER C Wing+ type, an axi-centrifugal fan with backward-curved blades. The fans are direct-driven and have a motor control system for variable speed control.

2.4 Environmental Documentation

For a complete Declaration of Construction Materials, see our home page at www.swegon.com (applicable to Sweden only).
The air handling unit is designed in such a way that it can be easily dismantled into its component parts. When the unit has ended its useful product life, the services of an accredited recycling company should be utilised for disposal. Approximately 94% of the parts in SILVER C air handling units are recyclable.
Swegon AB is associated with the REPA Register, No. 5560778465.
Contact Swegon AB, Phone: +46 (0)512-322 00, if you have any questions regarding the dismantling instructions or the air handling unit's impact on the environment.

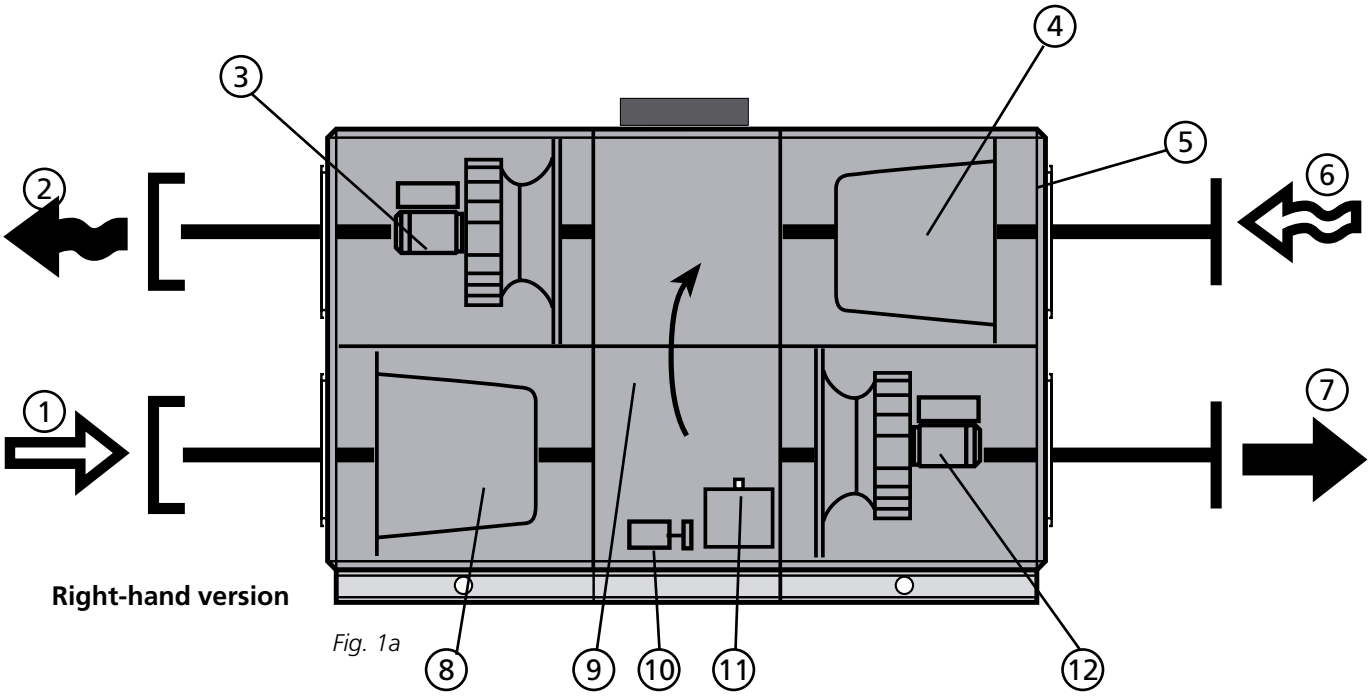
2.5 To run internal cables

The installation and wiring work must be carried out by a qualified electrician.
Cables from external sources can be run into the air handling unit through the rubber diaphragm on the rear side of the junction hood (RX 04-30) or on the inspection side of the unit (Other sizes). The unit is equipped with cable holders in the centre section and cable grommets and rubber diaphragm between the unit sections. The internal running of cables must be run in a safe manner and follow applicable rules and standards.

2.5 The Components of the Air Handling Units

2.5.1 SILVER C RX one-piece air handling units with rotary heat exchanger

The individual components are each specified below in a simplified and diagrammatical description.



Right-hand version

Fig. 1a

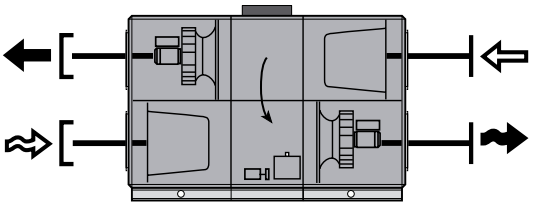


Fig. 1b

Left-hand version

SILVER C 04-120: The air handling units can be ordered in the right-hand version as shown in Fig. 1a or in the left-hand version as shown in Fig. 1b.

SILVER C 12-120: The air handling unit according to Fig. 1a shows Fan Arrangement1. The unit can also be ordered according to Fan Arrangement 2. The fans and filters are then vertically mirror-inverted.

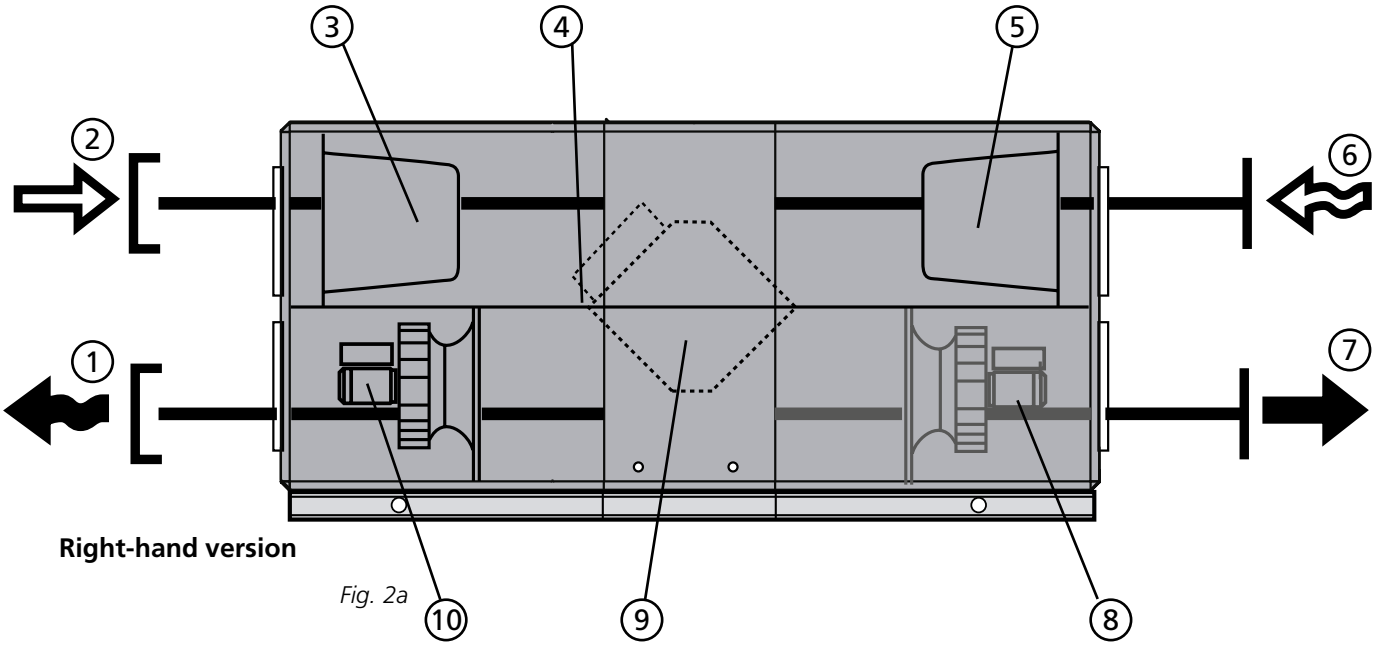
In the left-hand version (Fig. 1b), the components marked with an asterisk change function and designation (the components are named according to whether they are for supply air or extract air).

The arrangement of the components and their designations

1 OUTDOOR AIR* (In left-hand version: Extract air)
2 EXHAUST AIR* (In left-hand version: Supply air)
3 Extract air fan* with motor and motor control system
4 Extract air filter*
5 Commissioning plate (In left-hand unit version - by left-hand filter section)
6 EXTRACT AIR* (In left-hand version: Outdoor air)
7 SUPPLY AIR* (In left-hand version: Exhaust air)
8 Supply air filter*
9 Heat exchanger
10 Drive motor in heat exchanger
11 Motor control system, heat exchanger with integrated rotation monitoring
12 Supply air fan* with motor and motor control system

2.5.2 SILVER C PX one-piece air handling units with plate heat exchanger

The individual components are each specified below in a simplified and diagrammatical description.



Right-hand version

Fig. 2a

Outdoor air Supply air Extract air Exhaust air

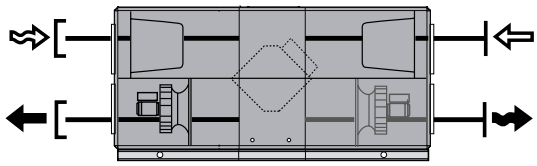


Fig. 2b

Left-hand version

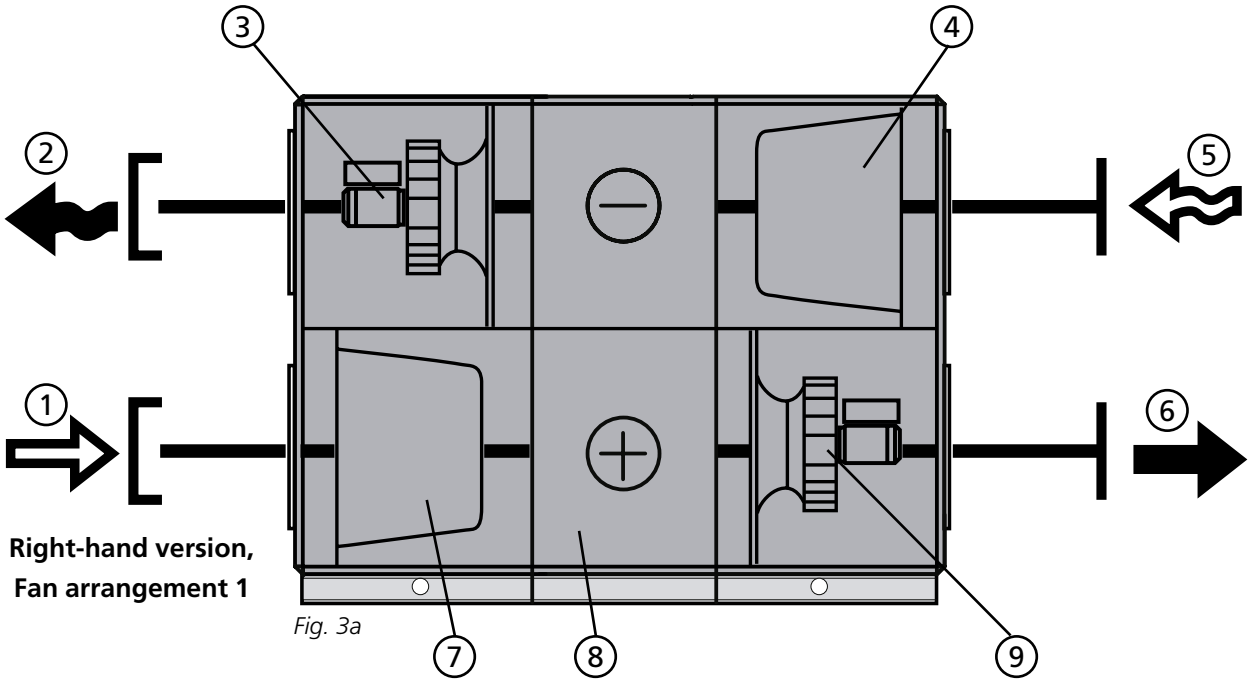
The air handling units are supplied in the right-hand or left-hand version as shown in Fig. 2a and 2b. In the left-hand version (Fig. 2b), the components marked with an asterisk change function and designation (the components are named according to whether the function is for supply air or extract air.).

The arrangement of the components and their designations

1 EXHAUST AIR* (In left-hand version: Supply air)
2 OUTDOOR AIR* (In left-hand version: Extract air)
3 Supply air filter*
4 Damper actuators, shut-off and bypass dampers
5 Extract air filter*
6 EXTRACT AIR* (In left-hand version: Outdoor air)
7 SUPPLY AIR* (In left-hand version: Exhaust air)
8 Supply air fan* with motor and motor control system
9 Plate heat exchanger with bypass and shut-off damper
10 Extract air fan* with motor and motor control system

2.5.3 SILVER C CX one-piece air handling units with coil heat exchangers

The individual components are each specified below in a simplified and diagrammatical description.



Right-hand version,
Fan arrangement 1

Fig. 3a

Outdoor air Supply air Extract air Exhaust air

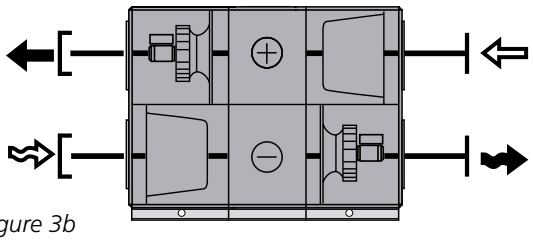


Figure 3b

Left-hand version
Fan arrangement 1

The air handling units can be ordered in the right-hand version as shown in Fig. 3a or in the left-hand version as shown in Fig. 3b.

The air handling unit according to Fig. 3a shows Fan Arrangement1. The unit can also be ordered according to Fan Arrangement 2. The fans and filters are then vertically mirror-inverted.

In the left-hand version (Fig. 3b), the components marked with an asterisk change function and designation (the components are named according to whether the function is for supply air or extract air).

The arrangement of the components and their designations

1 OUTDOOR AIR* (In left-hand version: Extract air)
2 EXHAUST AIR* (In left-hand version: Supply air)
3 Extract air fan* with motor and motor control system
4 Extract air filter*
5 EXTRACT AIR* (In left-hand version: Outdoor air)
6 SUPPLY AIR* (In left-hand version: Exhaust air)
7 Supply air filter*
8 Coil heat exchanger
9 Supply air fan* with motor and motor control system

The pipework package can be supplied in unmounted condition for floor or wall mounting (accessories).

2.5.4 SILVER C SD separate supply air and extract air handling units, sizes 04-12, with coil heat exchangers, common casing.

The individual components are each specified below in a simplified and diagrammatical description.

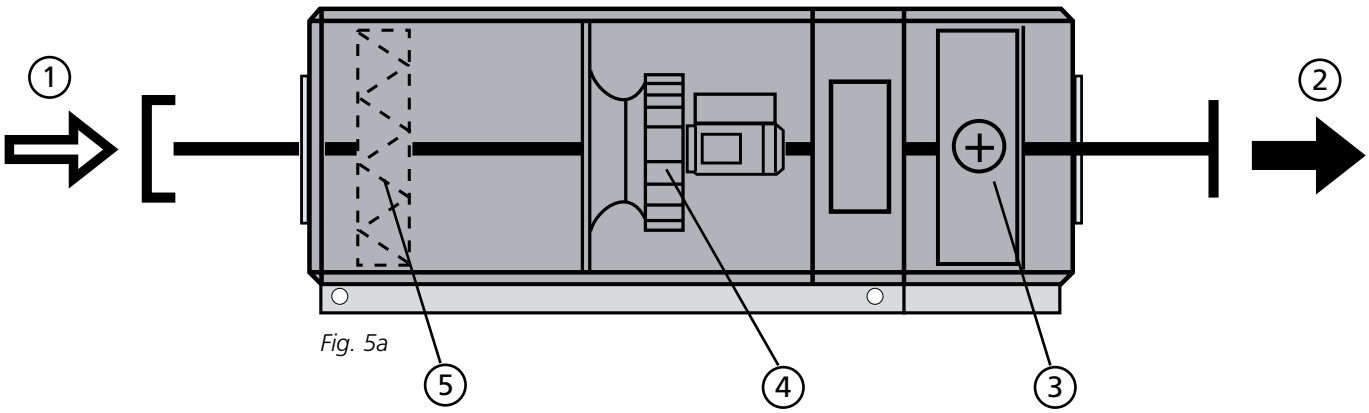


Fig. 5a

Outdoor air Supply air

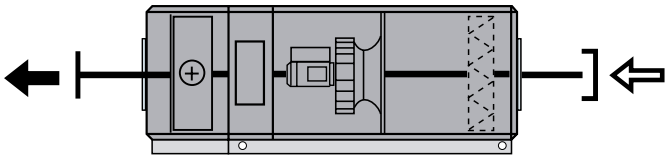


Fig. 5b

The air handling units can be ordered in the right-hand version as shown in Fig. 5a or the left-hand version as shown in Fig. 5b. The air handling units can also consist of filter and fan only or fan only.

The air handling unit is shown here as a supply air handling unit. If the unit is used as an extract air handling unit, the components marked with an asterisk change function and designation (the components are named according to whether the function is for supply air or extract air).

The arrangement of the components and their designations

1 OUTDOOR AIR*
(In extract air handling units: Extract air)
2 SUPPLY AIR*
(In extract air handling units: Exhaust air)
3 Coil heat exchanger, if applicable, supply air*
(In extract air handling units: Coil heat exchanger, extract air)
4 Supply air fan* with motor and motor control system
(In extract air handling units: Extract air fan with motor and motor control system)
5 Supply air filter, if applicable*
(In extract air units: Extract air filter)

2.5.5 SILVER C SD separate supply air and extract air handling units, sizes 04-120, with coil heat exchangers, split version

The individual components are each specified below in a simplified and diagrammatical description.

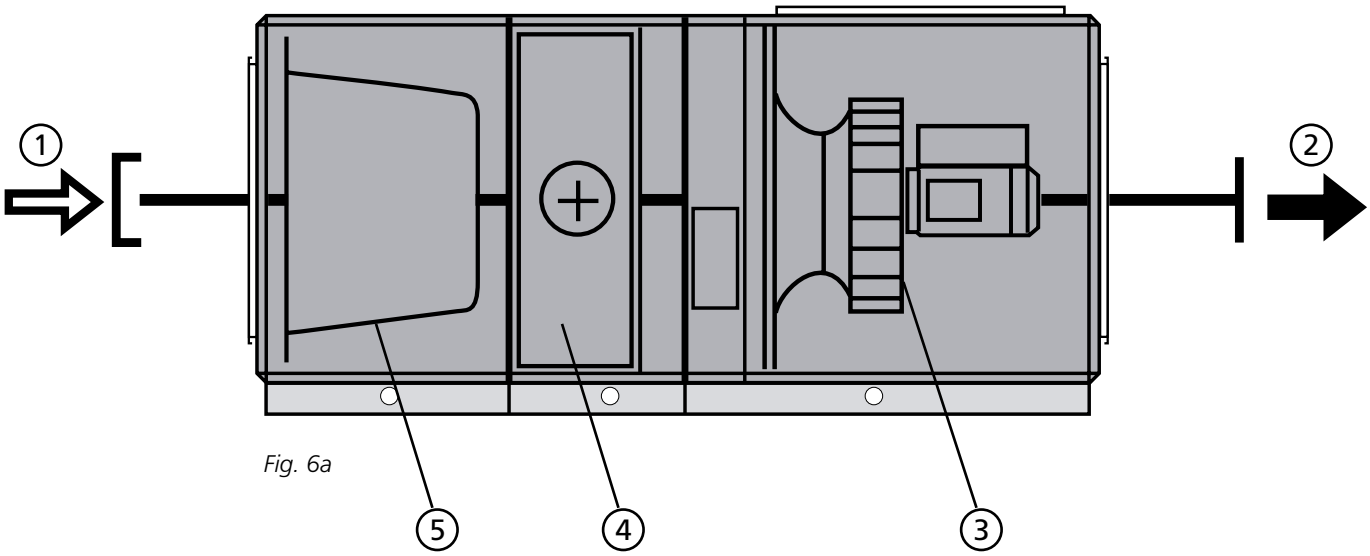


Fig. 6a

Outdoor air Supply air

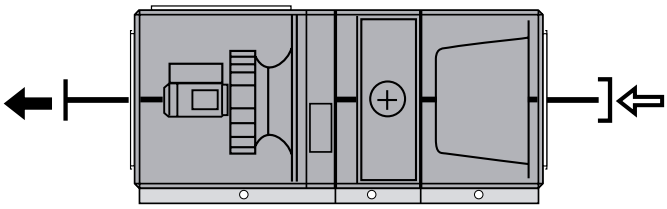


Fig. 6b

The air handling units can be ordered in the right-hand version as shown in Fig. 6a or the left-hand version as shown in Fig. 6b. The air handling units can also consist of filter and fan only or fan only.

The air handling unit is shown here as a supply air handling unit. If the unit is used as an extract air handling unit, the components marked with an asterisk change function and designation (the components are named according to whether the function is for supply air or extract air).

The arrangement of the components and their designations

1 OUTDOOR AIR*
(In extract air handling units: Extract air)
2 SUPPLY AIR*
(In extract air handling units: Exhaust air)
3 Supply air fan* with motor and motor control system
(In extract air handling units: Extract air fan with motor and motor control system)
4 Coil heat exchanger, if applicable, supply air*
(In extract air handling units: Coil heat exchanger, extract air)
5 Supply air filter, if applicable*
(In extract air units: Extract air filter)

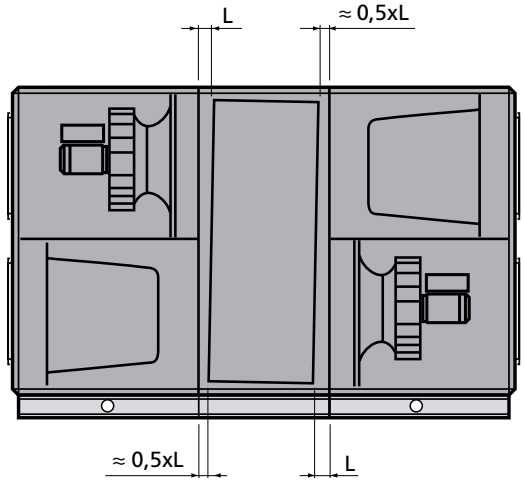
3. Commissioning

3.1 General

Commissioning sequence:

1. Check that there are no foreign objects inside the unit, duct system or functional sections.
2. Check that rotary heat exchanger rotor (SILVER C RX only) rotates easily. On sizes 50-120, the rotary heat exchanger must be angled slightly towards the filter, see drawing below.

   If the inclination needs adjusting, see special instructions for adjusting the inclination of the rotary heat exchanger (04-80) or the installation instructions for the SILVER C (120).



SILVER C RX, sizes 50-120: The illustration shows the factory-preset rotor inclination in a unit with Fan Arrangement 1. The inclination must always be towards the filter, which means that the inclination for Fan Arrangement 2 is in the other direction.

7. Check and adjust, if required, the pressure balance in the air handling unit as described in Section 3.3.

3.2 Adjusting the Duct System and air diffusers

In order to prevent the fans from consuming more power than necessary, it is important to keep the pressure drop in the system at the lowest possible level. It is also important that duct systems and air diffusers are correctly commissioned to provide the comfort expected.

When commissioning air diffusers and the duct systems for the SILVER C, it is appropriate to follow the proportionality method.

This means that the ratio between the airflows in branch ducts remains constant even if you change the airflow in the main ducts. The same ratio applies to the air diffusers in the installation.

3.2.1 Adjustment Sequence

The system should be adjusted in the following order:

1. Adjust of the air diffusers in each branch duct.
2. Adjust the branch ducts.
3. Adjust the main ducts.

3.2.2 Commissioning procedure

1. Set all the air diffusers and dampers to the fully open position.
2. Calculate the quotient between the airflow reading and the design airflow of all the air diffusers, branch ducts and main ducts. The air diffuser in every branch that has the lowest quotient should be fully open. Use this air diffuser as an INDEX AIR DIFFUSER. The same applies to branch dampers and main dampers.

   When you've finished commissioning, one air diffuser in every branch, one branch damper and one main damper should consequently be fully open.
3. Start adjusting the main duct that has the highest quotient and the branch duct in the main duct that has the highest quotient. Starting from this point enables you to then "press" the air in front of you toward the sections of the system that have the least air.
4. Adjust the last air diffuser on the duct branch so that it will have the same quotient as the index air diffuser. This air diffuser becomes the REFERENCE AIR DIFFUSER. The last air diffuser on the branch is often the one that has the lowest quotient and this air diffuser should be open. In this case, the index air diffuser and the reference air diffuser will be one and the same.
5. Throttle the other air diffusers in the branch to the same quotient as the reference device.

   NOTE! The quotient in the reference terminal will change every time another air diffuser is throttled, so in practice the quotient for the reference air diffuser can be set slightly higher. The reference device must be measured in between each air diffuser throttled.
6. Go to the branch that had the next highest quotient and adjust the air diffusers there, etc.

   NOTE! All branch dampers should be fully open until all air diffusers have been adjusted.
7. Throttle the branch damper that had the highest quotient to the same quotient as the branch that had the lowest quotient.

   NOTE! Keep in mind that the index damper changes quotient; proceed as described in item 5.
8. When all branches have been commissioned, throttle the main dampers in the same manner.

See also Adjustment example below.

Example on how to make an adjustment

– Start adjusting duct branch B, since this one has the highest quotient.

– The last air device, B3, has the lowest quotient and should be fully open.

Adjust the other air devices, B1 and B2, so that these will have the same quotientas air device B3 (see item 5 above).

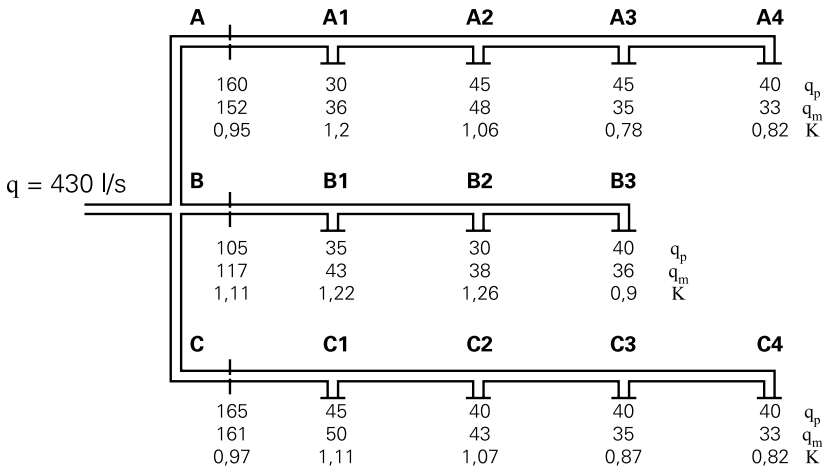
– Now adjust the air devices in branch duct C. Air device C4 should be fully open; throttle the others to the same quotient.

– Adjust the air devices in branch duct A. The index air device here is air device A3, which means that you first throttle air device A4 (the reference device) to device A3:s quotient. Then adjust the others to the same quotient as air device A4.

– Throttle branch damper B to the same quotient as branch damper A, throttle branch damper C to the same quotient as branch damper A.

Check that all dampers have the same quotient.

When commissioning has been completed, 3 air devices and one branch damper should stand fully open to obtain the lowest possible pressure in the system.



qp = design airflow (l/s)

qm = flow reading (l/s)

$$K\ (\text{Quotient}) = \frac{qm}{qp}$$

3.3 To Adjust the Pressure Balance

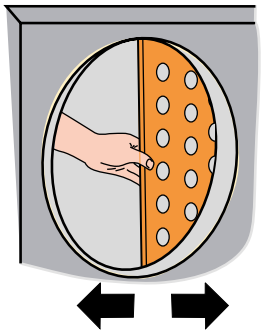
Applicable to air handling units with rotary heat exchanger only.

Commissioning plates

SILVER C RX

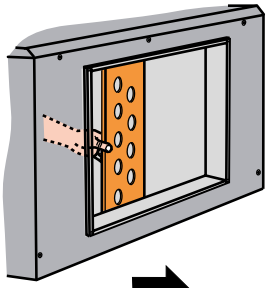
Air intake viewed from the side

Sizes 04 – 12, 1 – 2 plates



CLOSE OPEN

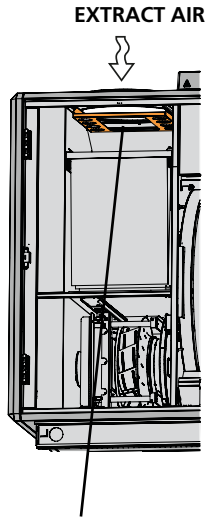
Sizes 14 – 120, 1 – 5 plates



CLOSE
(Insert one or more commissioning plates)

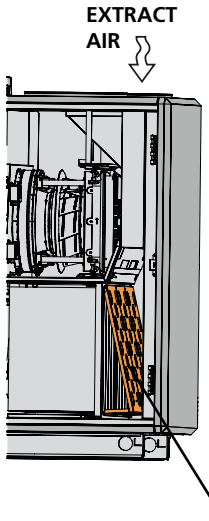
OPEN
(Remove commissioning plates)

SILVER C RX Top 004-008 Supply air fan lower plane, 1 plate



Commissioning plate

Supply air fan upper plane, 2 plates



Commissioning plate
Hook the commissioning plates on the upper filter guide, now press the commissioning plates downwards so that they hook into the lower guide.

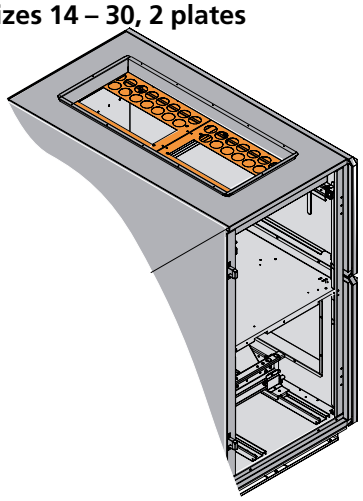
3.3.1 General

There should be a certain degree of negative pressure in the extract air section so that the direction of air leakage through the heat exchanger and the function of the purging sector will be correct. This ensures that extract air will not be transferred to the supply air.

The pressure balance in the unit should be adjusted when the ventilation system has been fully installed and the airflows discharged from all the air diffusers and registers have been adjusted, and when the supply air and extract airflows are as they should be while the air handling unit is operating normally.

Air intake viewed from above

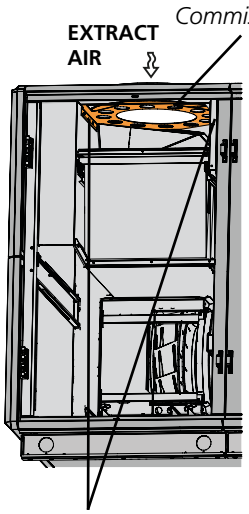
Sizes 14 – 30, 2 plates



Secure the commissioning plates to the ceiling with self-tapping screws from inside the AHU.

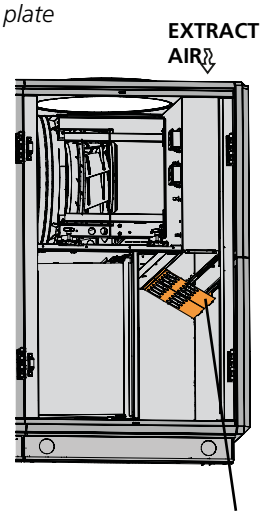
Adjust the pressure balance by blanking off the holes in the commissioning plate using the plastic plugs supplied with it (reach up and insert plastic plug through the rectangular hole in the commissioning plate).

SILVER C RX Top 011/012, Supply air fan, lower level, 1 plate



Mounting screws (3 in total)

011/012, Supply air fan, upper level, 1 plate



Commissioning plate
Hook the commissioning plate in the groove in the side against the filter. Raise the commissioning plate towards the AHU casing and hook in the groove.

Remove the mounting screw(s) where applicable and place the commissioning plate in the intended slots. Tighten the mounting screw(s). See the illustration above. Adjust the pressure balance by blanking off the holes in the commissioning plate using the supplied plastic plugs.
Supplied commissioning plate for SILVER C RX Top 004-012. If air directions are changed, another commissioning plate must be ordered.

3.3.2. Ensure correct direction of air leakage

The commissioning plates fitted in the extract air inlet are used for adjusting the pressure balance in the unit. The commissioning plates are supplied separately and should be installed by the fitter when the extract air duct is connected. See the illustrations on the following pages.

Connect a pressure gauge to the pressure measurement tappings of the air handling unit. The unit has four pressure measurement tappings. The two tappings closest to the extract air duct should be used. The blue pressure measurement tapping is used for measuring the negative pressure in the extract air section and the white pressure measurement tapping is used for measuring the negative pressure in the supply air section.

The pressure measurement tappings are located in the centre section inside the air handling unit. See illustration to the right.

Note that both pressure measurement tappings are used for measuring negative pressure.

MEASURED VALUES

The negative pressure in the extract air section should be higher or the same as the negative pressure in the supply air section.

If the negative pressure in the extract air section is the same or up to 20 Pa greater than the negative pressure in the supply air section, when you've finished this adjustment.

Deviations

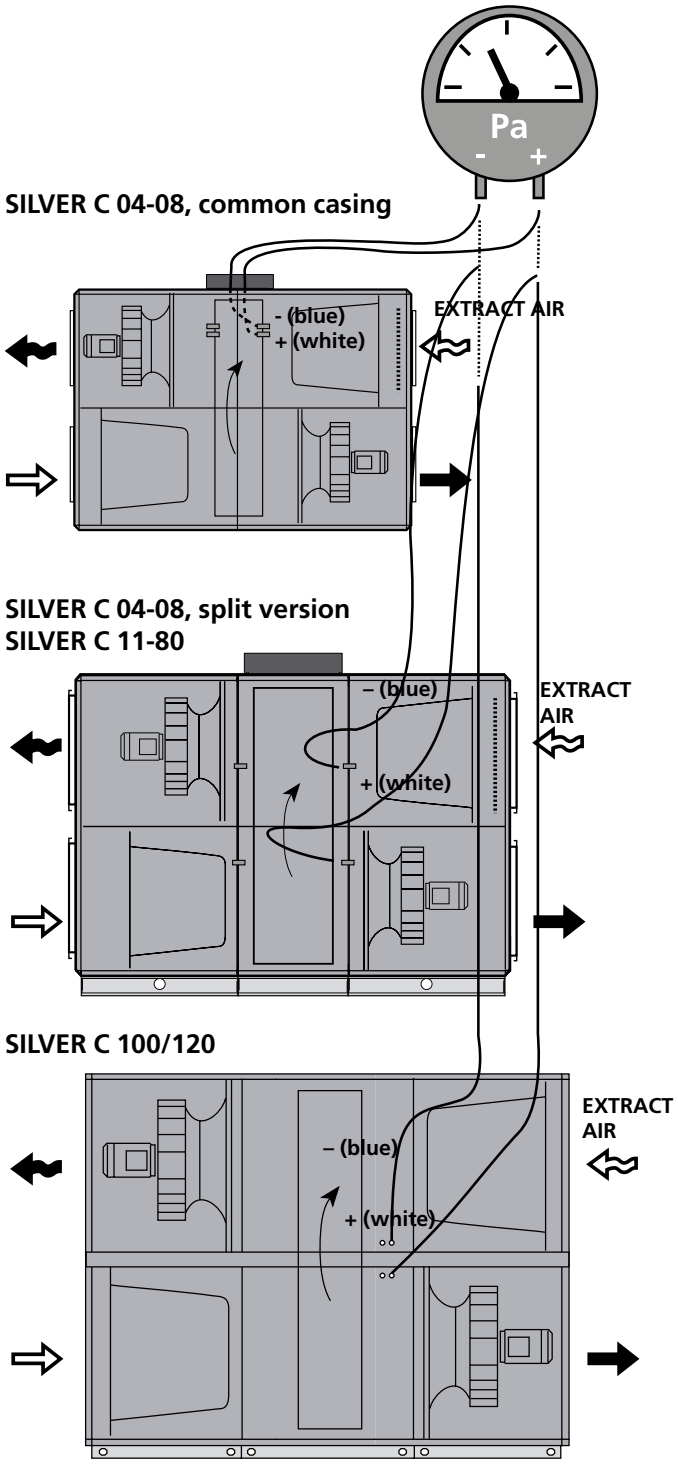
If the negative pressure in the extract air section is less than that in the supply air section, the damper setting must be adjusted as follows:

1. Stop the air handling unit, open the inspection door to access the extract air filter.
   SILVER C RX Top/SILVER C RX with air intake from above: Blank off the appropriate number of holes in the commissioning plate using the plastic plugs supplied.

   SILVER C RX with air intake from the side: Slightly push the commissioning plates forward (close them) in the extract air intake.
   For full face connection (duct accessory in insulated casing): If the commissioning plate(s) is/are completely closed and the sub-atmospheric pressure in the extract air section is still less than in the supply air section, blank off an appropriate number of holes in the commissioning plate using the plastic plugs supplied.
3. Close the inspection door and restart the unit.
4. Measure the pressures.

   Repeat this procedure until the negative pressure in the extract air section is just as high or up to 20 Pa higher than the negative pressure in the supply air section (0–20 Pa).

Pressure measurement tappings – leakage direction (Unit shown in the right-hand version)



5. If the negative pressure in the extract air section is higher than 20 Pa compared with the supply air section, although the commissioning plates are completely open, the leakage and purging air flow will be more than necessary, and this will cause the extract air fan to consume more power

4. Maintenance

Warning

Before carrying out any work, make sure that the power supply to the air handling unit has been switched off.

4.1 Filter change

Filters made of glass fibre should be replaced, and possible woven aluminium pre-filters should be washed. When this should take place can be calculated based on the initial pressure drop. See Section 4.1.3. Swegon recommends replacing/washing filters when the pressure drop across the filter exceeds the initial pressure drop + 100 Pa.

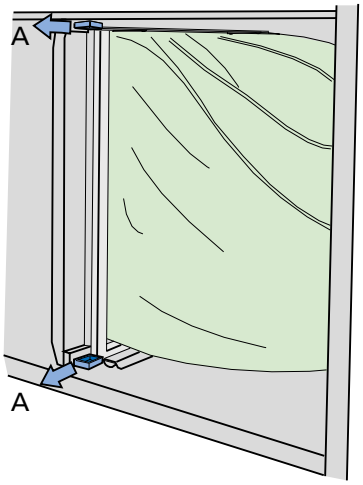
Order new filters from Swegon or your nearest Swegon representative. Specify the size of the SILVER C unit, whether the replacement concerns one or two directions of airflow and if you are replacing standard filters or possibly pre-filters.

4.1.1 Dismantling the filters

It is advisable to clean inside the filter space while the filters are removed.

Standard filters:
Pull out the handles (A) to free the filters from the filter holder. Withdraw the filters.

Pre-filters, if required, in the AHU:
Withdraw the filters.



4.1.2 Installing new filters

Standard filters:
Insert the filters into the filter holder At the same time, stretch the filter bags, so that they will not become caught, damaged or folded.

Insert the filters as far as possible into the unit and press them lightly against the filter frames, so that they fit tightly.

Push in the handles (A) to clamp the filters in position in the filter holder.

Close the inspection doors.

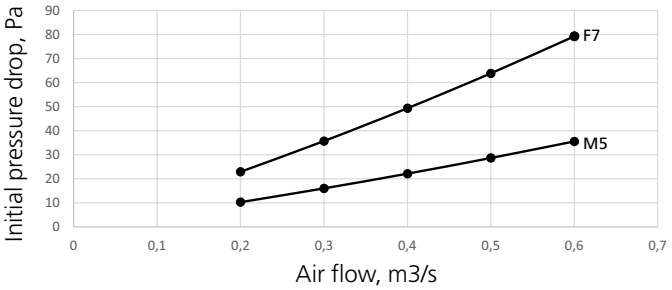
Pre-filters, if required, in the AHU:
Insert the filters as far as possible into the unit and press them lightly against the filter frames, so that they fit tightly

4.1.3 Initial pressure drop, filters

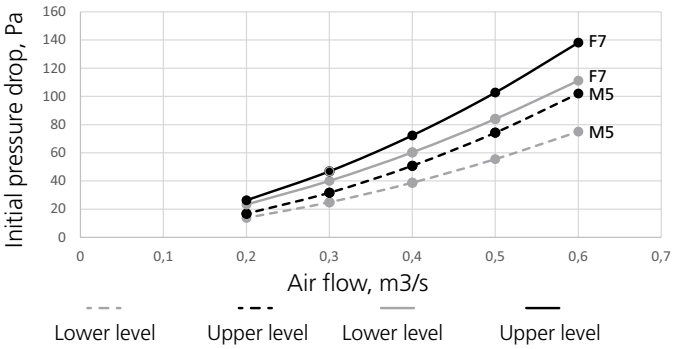
Size 04/05

Standard filter

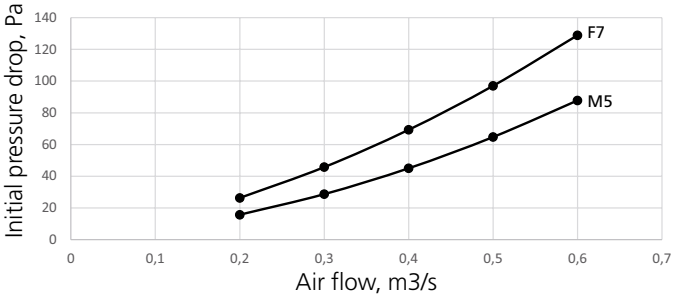
SILVER C RX/PX



SILVER C RX Top

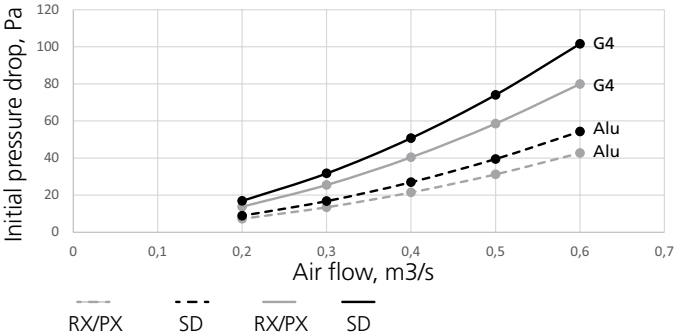


SILVER C SD



Pre-filters

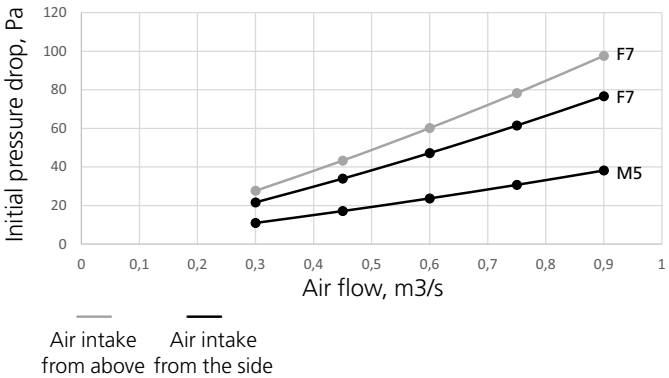
SILVER C RX/PX/SD



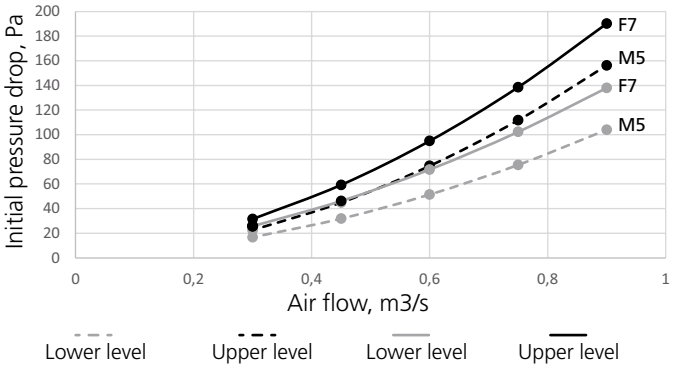
Size 07/08

Standard filter

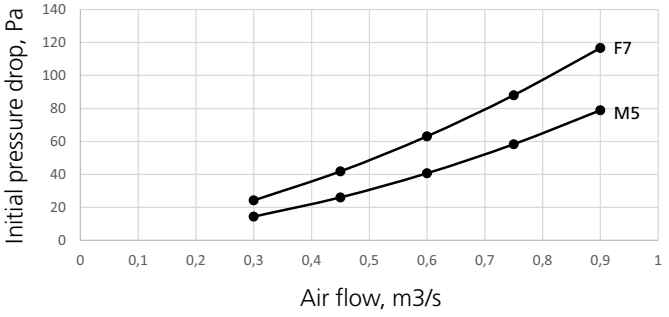
SILVER C RX/PX



SILVER C RX Top

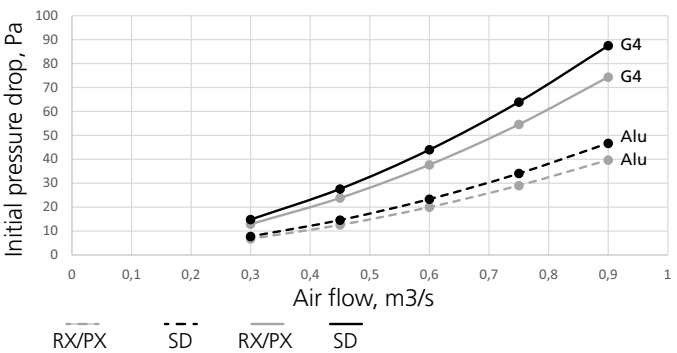


SILVER C SD



Pre-filters

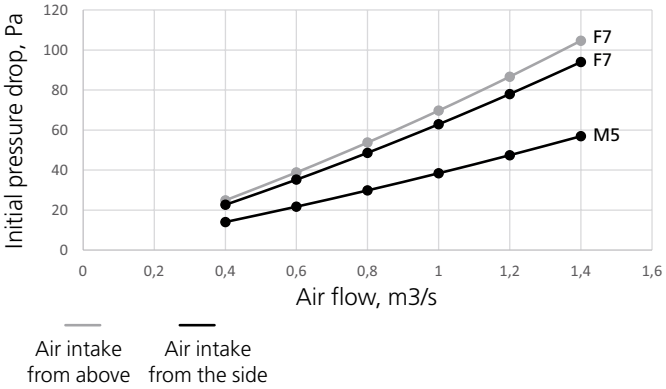
SILVER C RX/PX/SD



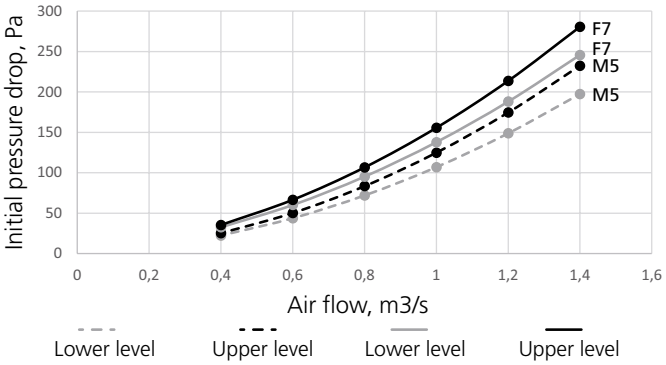
Size 11/12

Standard filter

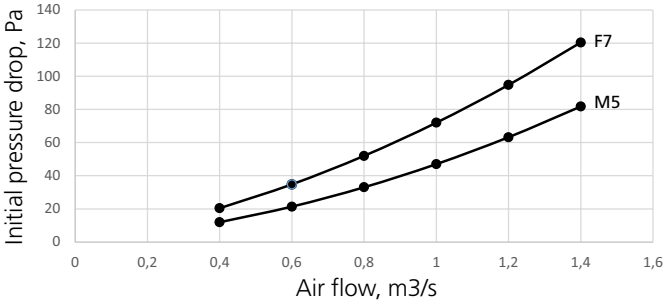
SILVER C RX/PX



SILVER C RX Top

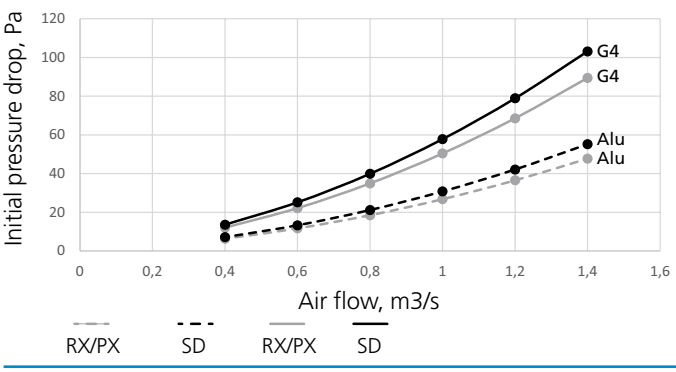


SILVER C SD



Pre-filters

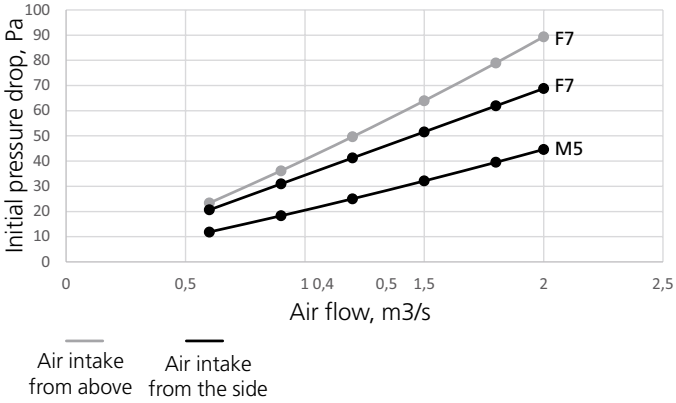
SILVER C RX/PX/SD



Size 14/20

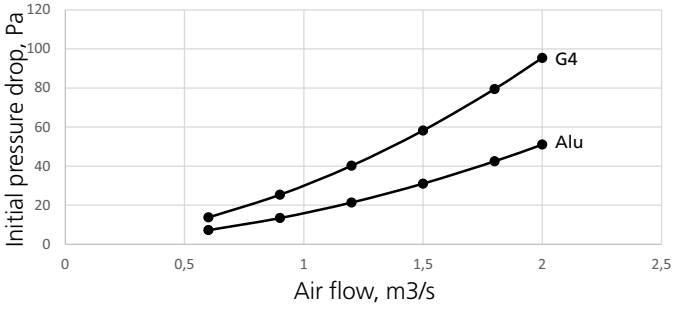
Standard filter

SILVER C RX/PX/SD



Pre-filters

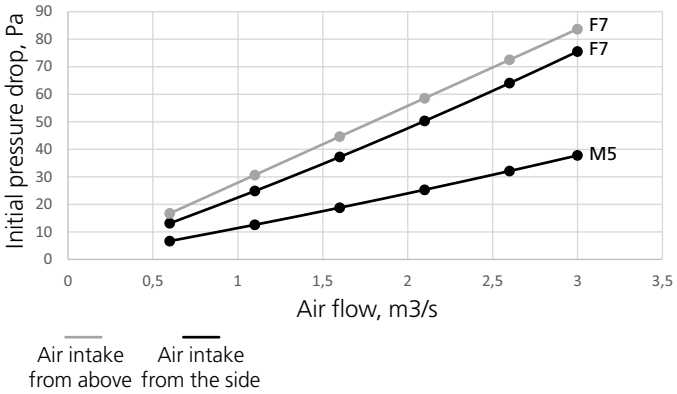
SILVER C RX/PX/SD



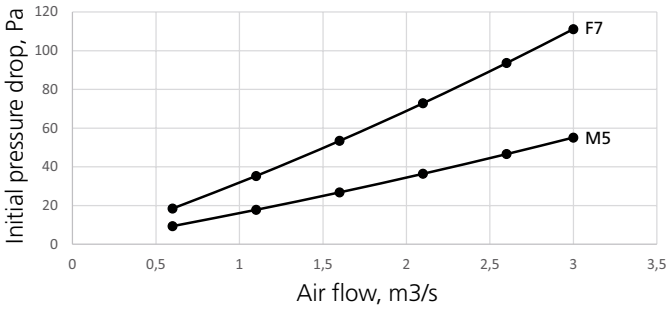
Size 25/30

Standard filter

SILVER C RX/PX

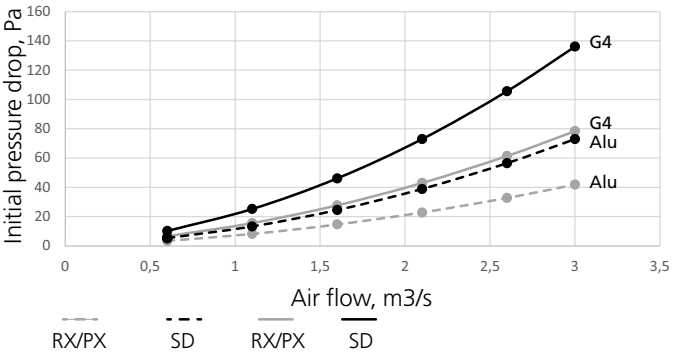


SILVER C SD



Pre-filters

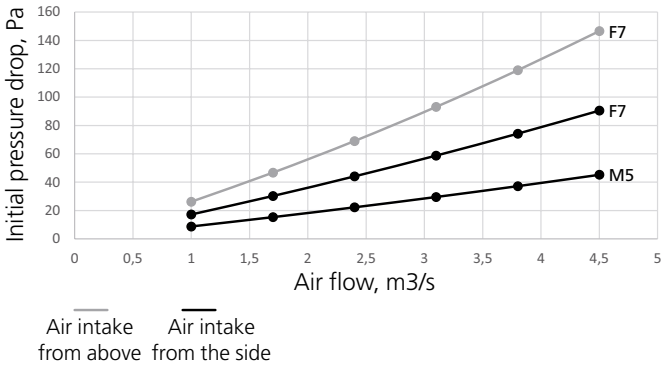
SILVER C RX/PX/SD



Size 35/40

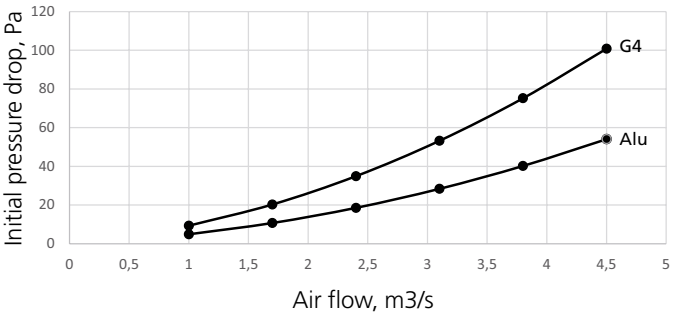
Standard filter

SILVER C RX/PX/PX+/CX/SD



Pre-filters

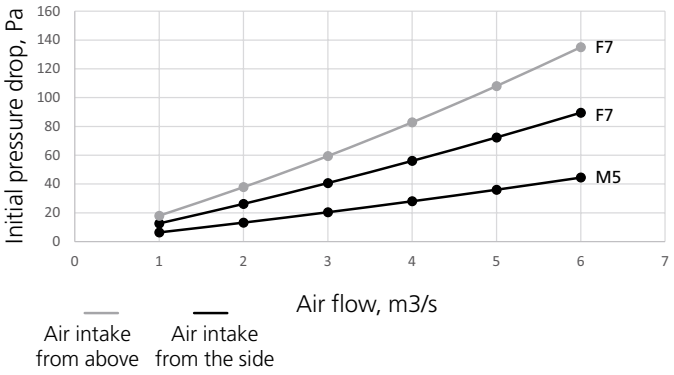
SILVER C RX/PX/PX+/CX/SD



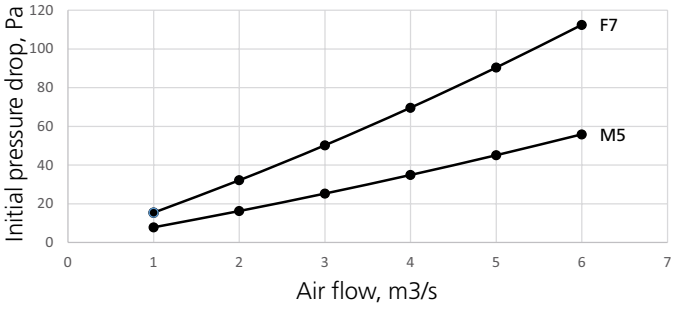
Size 50/60

Standard filter

SILVER C RX/PX+/CX

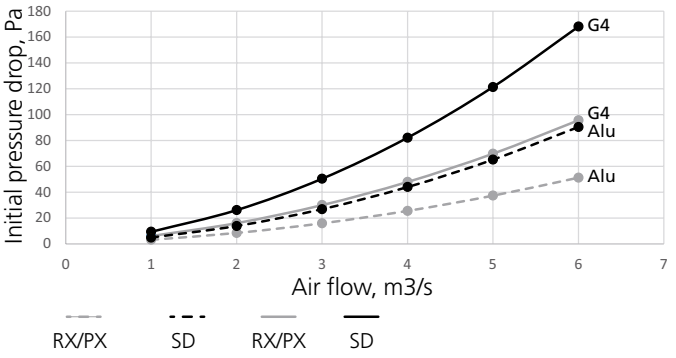


SILVER C SD



Pre-filters

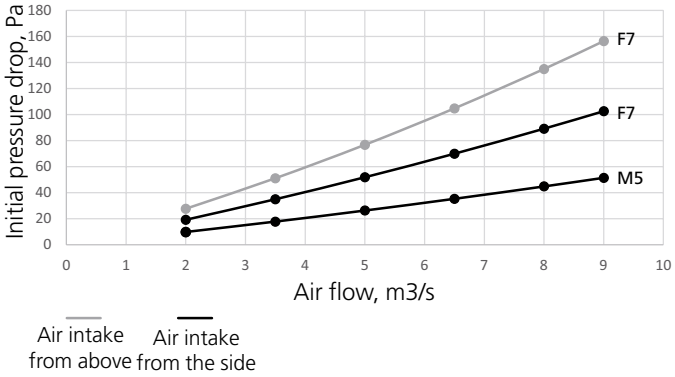
SILVER C RX/PX+/CX/SD



Size 70/80

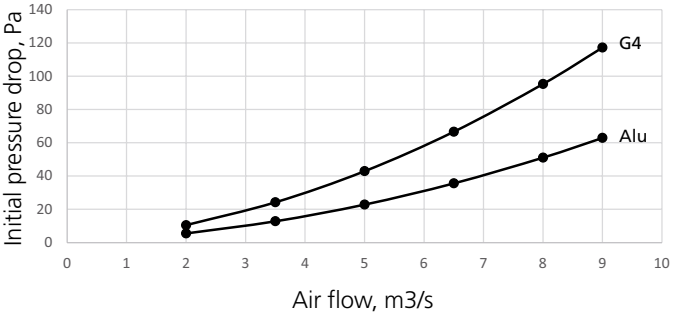
Standard filter

SILVER C RX/RX+/PX/CX/SD



Pre-filters

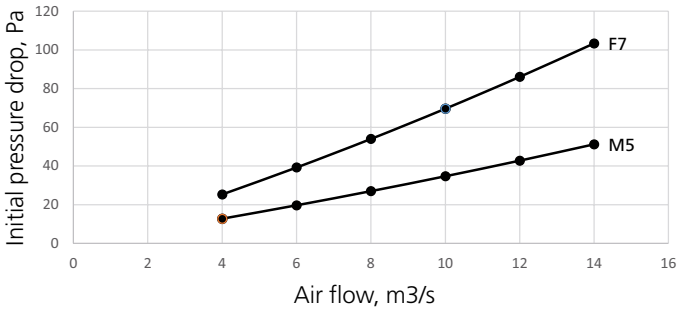
SILVER C RX/RX+/PX/CX/SD



Size 100/120

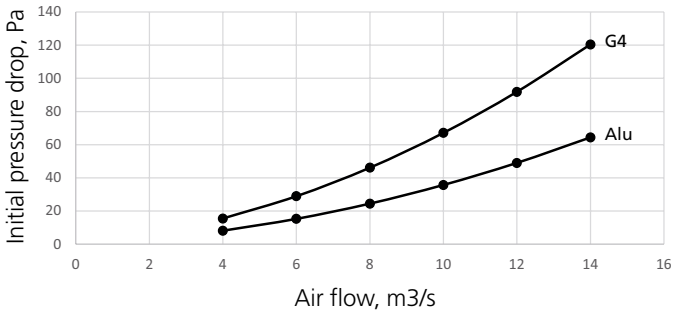
Standard filter

SILVER C RX/CX/SD



Pre-filters

SILVER C RX/CX/SD



4.2 Cleaning and Inspection

4.2.1 General

Access for cleaning must be ensured when planning and during the installation of the air handling unit. This can, for example, include the set-up of the unit, and pipe and cable routing.

Clean the interior of the air handling unit if needed. Inspection of the air handling unit should be performed when you change filters or at least twice a year.

4.2.2 Filter spaces

The most appropriate time to clean the unit is when you change the filters.

4.2.3 Heat exchangers

Check at least twice a year whether cleaning is necessary. Cleaning can be done from the filter space.

Rotary heat exchanger
The heat exchanger should above all be cleaned by vacuum cleaning with a soft nozzle to prevent damage to the air passages in the rotor.

Turn the rotor by hand to reach all surfaces. If the heat exchanger is substantially fouled, its surfaces can be blown clean with compressed air.

If needed, the heat exchanger can be withdrawn from the unit casing and washed with degreasing solvent. Only service personnel trained by Swegon shall be permitted to wash it in this way.

Vinyl-coated fabric seal

Lift up the fabric seal and inspect its underside. Clean if needed by brushing or vacuum cleaning.

If the vinyl-coated fabric seal is worn or substantially fouled, it should be replaced. Do not lubricate it!

Drive belt tension

Replace the drive belt if it feels loose or worn and slightly slips if it meets resistance. Contact service personnel trained by Swegon.

Plate heat exchanger
Always clean against the regular direction of airflow.

Cleaning must only be done by blowing with compressed air, vacuum cleaning with a soft nozzle or wet cleaning with water and/or solvent. Before you begin cleaning, cover adjacent functional sections to protect them.

If cleaning solvent is used, do not use solvent that will corrode aluminium or copper. Swegon's cleaning agent is recommended. This cleaning agent is sold by Swegon Service.

Inspect the drain to make sure that it isn't clogged. The by-pass and shut-off dampers do not require maintenance.

Coil heat exchangers
Make sure that the coils are purged of air. If a droplet eliminator is fitted, remove it and flush it clean with water.

Always clean against the regular direction of airflow.

Cleaning must only be done by blowing with compressed air, vacuum cleaning with a soft nozzle or wet cleaning with water and/or solvent. Before you begin cleaning, cover adjacent functional sections to protect them.

If cleaning solvent is used, do not use solvent that will corrode aluminium or copper. Swegon's cleaning agent is recommended. This cleaning agent is sold by Swegon Service.

While cleaning, check whether venting is necessary, check the content of glycol in the water and the condition of the coil for leakage. Also check that the drain is not clogged.

4.2.4 Fans and fan spaces

Inspect and, if needed, clean the fan impellers to remove dirt deposits.

Check the impeller to make sure that it is not out of balance.

Vacuum clean the fan motor or brush its surfaces. It can also be cleaned by carefully wiping it with a damp cloth and dishwashing detergent.

Clean the fan space, if needed.

4.3 General inspection

A general inspection should be performed whenever you change filters or at least once a year.

Parts subject to wear such as fan bearings, seals, drive belts, etc. should be checked and be replaced if necessary.

5. Measurement of the airflow

5.1 To connect manometers

If a U-tube manometer or a Magnehelic manometer has been supplied by Swegon, see separate instructions.

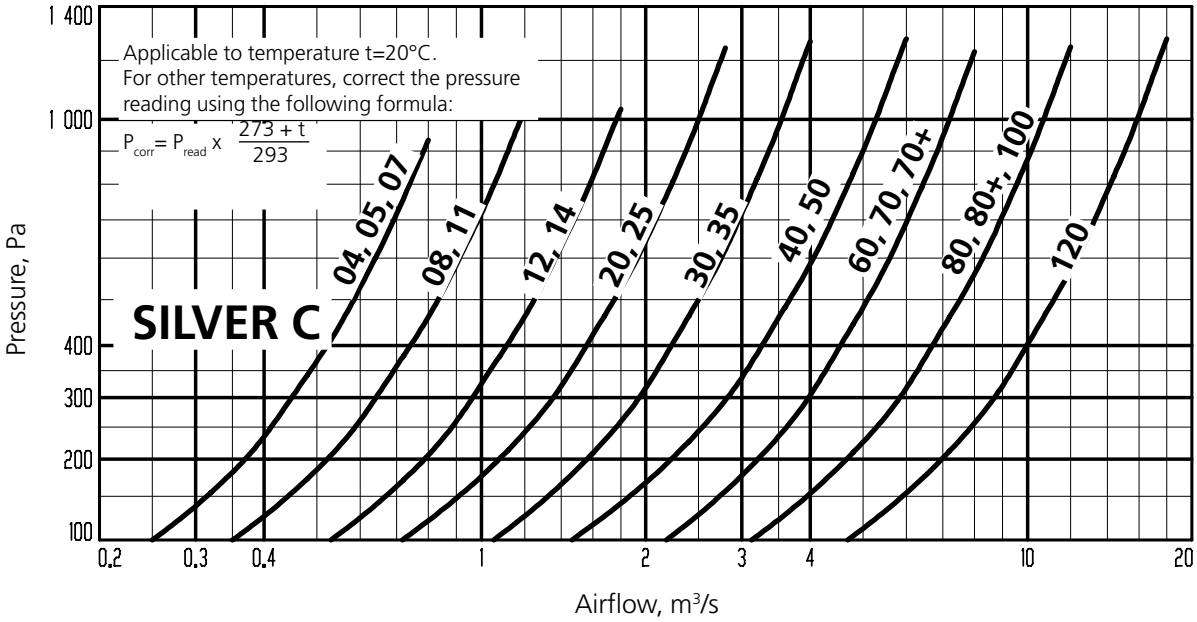
If no manometer has been supplied by Swegon:

The hoses supplied (blue (-) and white (+) lying inside the fan space) are, from the factory, connected to the measurement points of the fan. The installation of nipples (measurement tappings) on the inspection door of the air handling unit and the further running of hoses to a manometer must be done at site (not Swegon).

5.2 Auxiliary diagram for measuring airflows

The pressure reading on the manometer corresponds to the airflow according to the diagram below.

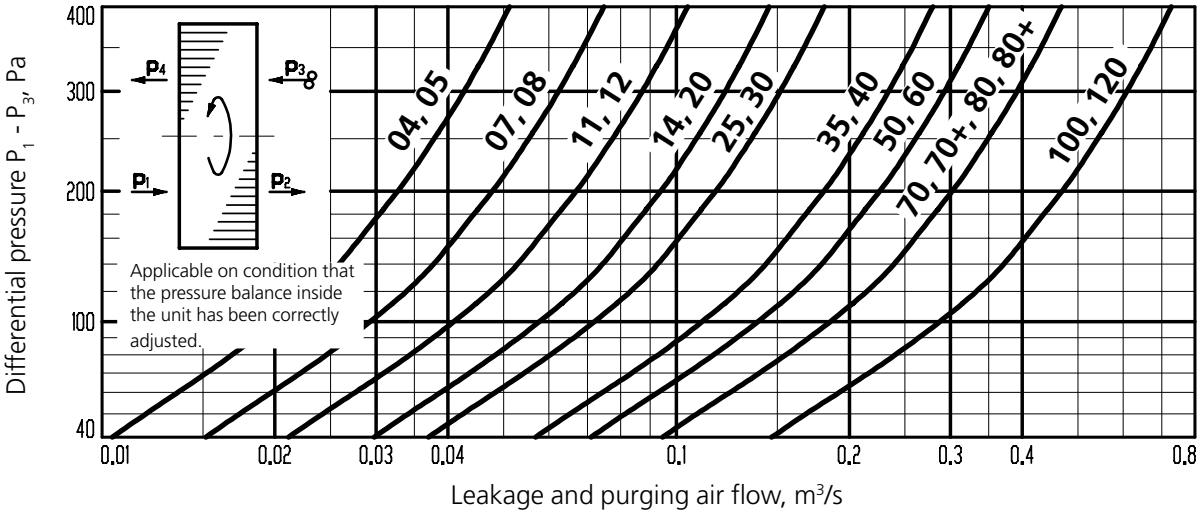
For rotary heat exchangers, the airflow should also be corrected according to the correction diagram.



Correction diagram for rotary heat exchangers

If a rotary heat exchanger is located between the fan that has generated the airflow according to the above, and the point at which it is desirable to calculate the airflow, then the flow must be corrected according to diagram below.

The leakage and purging airflow go from higher to lower pressure. The pressure on the supply air side is normally higher, which means that the outdoor airflow is the supply air fan's airflow plus the leakage and purging airflow, and the extract airflow is the extract air fan's airflow minus the leakage and purging airflow.



5.2.1 Calculation of temperature-compensated airflows

$$\Delta p_c = \Delta p \times \frac{273 + t_a}{293}$$

Δp_c = corrected flow measurement pressure in Pa
Δp = measured flow measurement pressure in Pa
t_a = the air temperature at the fan inlet in °C

$$q = \sqrt{\frac{\Delta p_c}{c_1} + c_2} - \sqrt{c_2}$$

q = the calculated airflow, [m^3/s]
c_1, c_2 = constants that depend on fan size, see table below.

5.2.2 Calculation of flow measurement pressure

$$\Delta p = (c_1 \times q + c_3) \times q$$

Δp = calculated flow measurement pressure in Pa
q = airflow at fan inlet in m^3/s
c_1, c_3 = constants that depend on fan size, see table below.

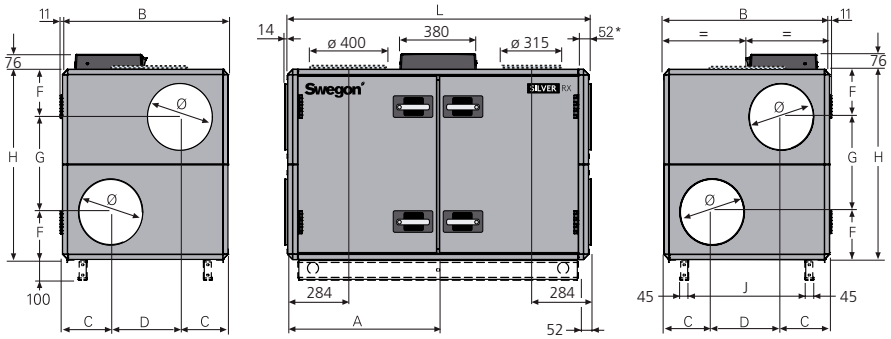
Size	Min. air flow, m^3/s	SILVER C RX/PX/CX		SILVER C SD		c1	c2	c3
		Max. airflow, m^3/s	Max. pressure reading, Pa	Max. airflow, m^3/s	Max. pressure reading, Pa			
04	0,08	0,45	301	0,6	529	1421,9	0,0001	28,4
05	0,08	0,65	619	0,8	933	1421,9	0,0001	28,4
07	0,08	0,75	821	0,8	933	1421,9	0,0001	28,4
08	0,20	1,0	719	1,2	1028	690	0,00043	28,74
11	0,20	1,1	867	1,2	1028	690	0,00043	28,74
12	0,20	1,4	630	1,8	1034	311,75	0,00045	13,21
14	0,20	1,65	871	1,8	1034	311,75	0,00045	13,21
20	0,30	2,1	712	2,8	1245	151	0,00525	21,89
25	0,30	2,5	998	2,8	1245	151	0,00525	21,89
30	0,50	3,2	816	4	1269	77,688	0,00174	6,48
35	0,50	3,9	1207	4	1269	77,688	0,00174	6,48
40/50	0,75	5,0	901	6	1279	32,942	0,05509	15,464
60	1,00	6,5	814	8	1232	19,11	0,00078	1,07
70, 70+	1,00	7,5	1083	8	1232	19,11	0,00078	1,07
80, 80+	1,50	9,5	790	12	1250	8,378	0,04642	3,61
100	1.5	11	1053	12	1250	8,378	0,04642	3,61
120	2.5	14	779	18	1279	3,848	0,05349	1,78

6. Technical data

6.1 Dimensions, SILVER C RX one-piece air handling units with rotary heat exchanger

6.1.1 SILVER C RX (not Top)

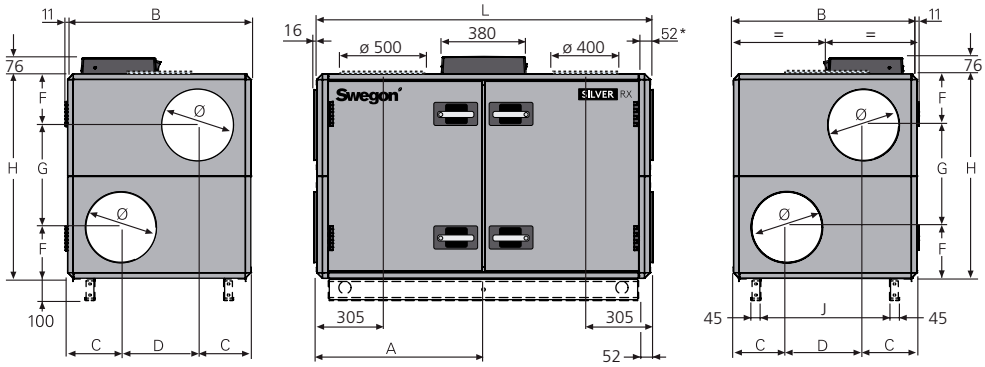
SILVER C 04/05, common casing



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Base beams are optional.

SILVER C 07/08, common casing

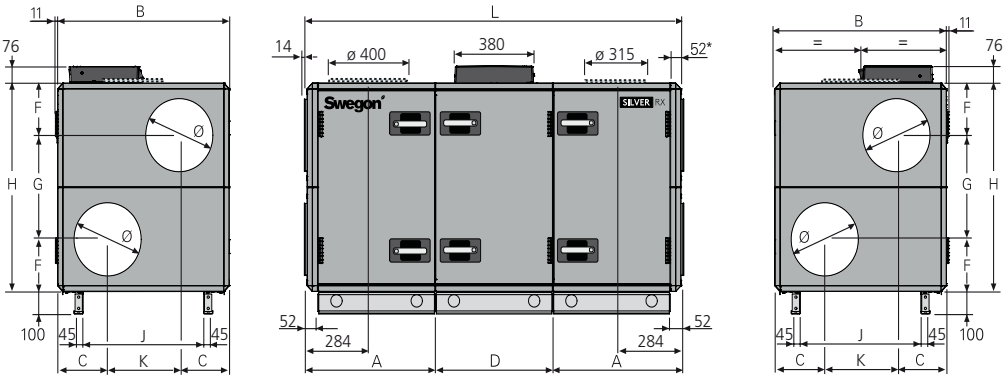


** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Base beams are optional.

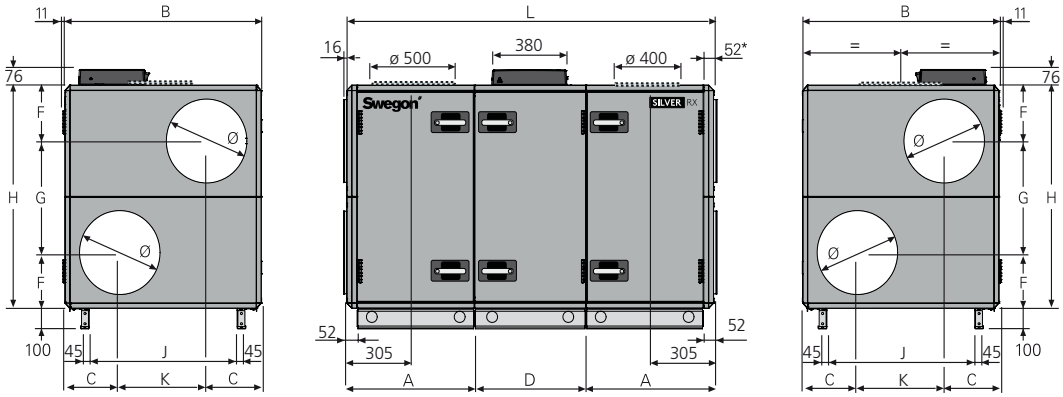
Size	A	B	C	D	F	G	H	J	L	Ø	Weight, kg
04/05	743	825	240	345	230	460	920	579	1499	315	234-278
07	805	995	277,5	440	271	543	1085	749	1619	400	281-355
08	805	995	277,5	440	271	543	1085	749	1619	400	295-363

SILVER C 04/05, split version



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

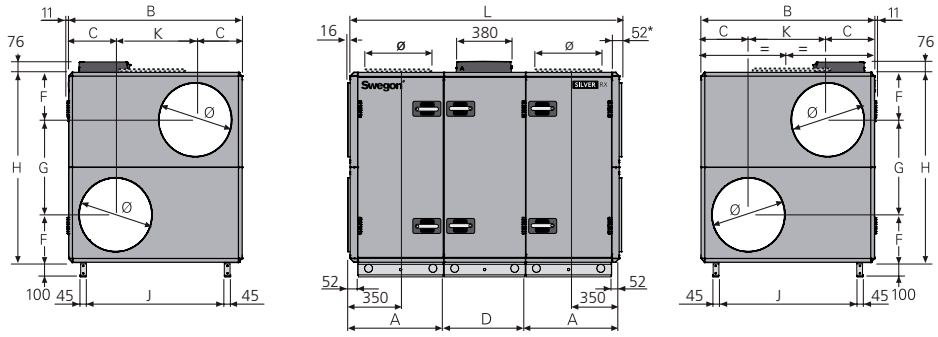
SILVER C 07/08, split version



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B	C	D	F	G	H	J	K	L	Ø	Weight, kg
004/005	617	825	240	565	230	460	920	579	345	1799	315	278-335
007	647,5	995	277,5	565	271	543	1085	749	440	1860	400	327-412
008	647,5	995	277,5	565	271	543	1085	749	440	1860	400	341-420

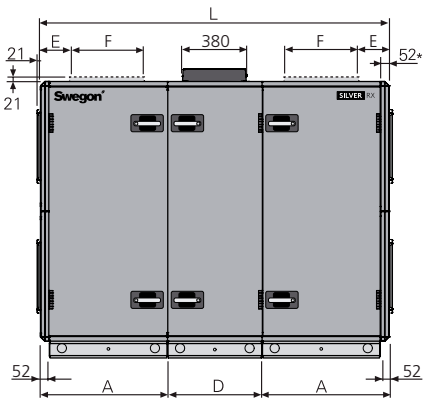
SILVER C 11/12

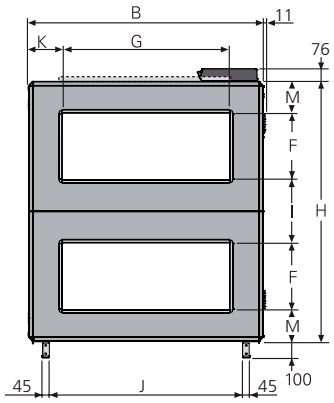


** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B	C	D	F	G	H	J	K	L	Ø	Weight, kg
11	647	1199	324	565	324	647	1295	953	551	1859	500	427-527
12	647	1199	324	565	324	647	1295	953	551	1859	500	450-554

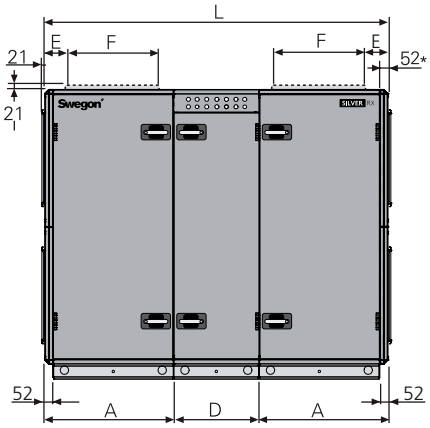
SILVER C 14/20

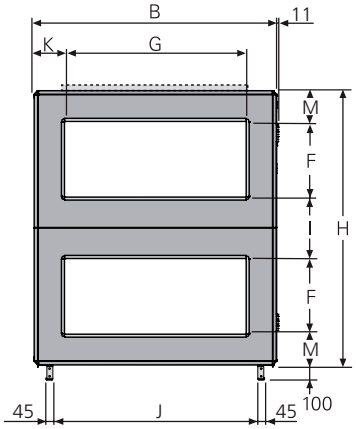




** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

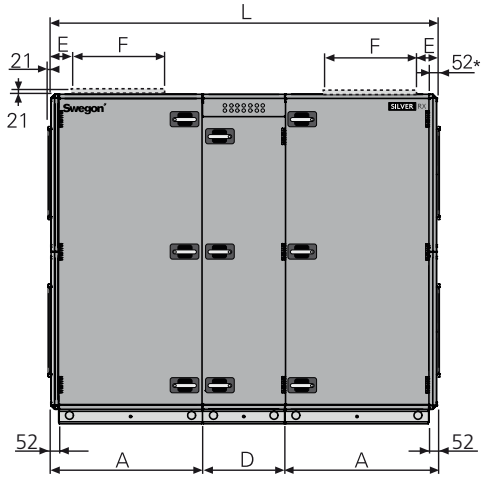
SILVER C 25/30

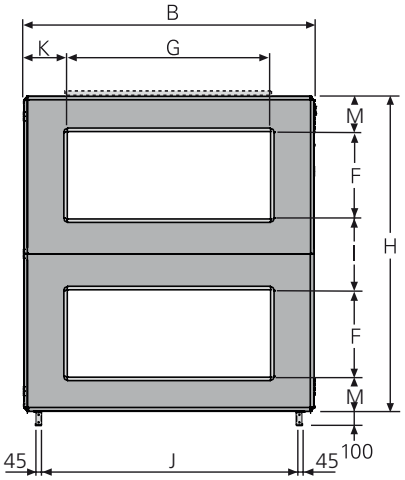




** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

SILVER C 35/40

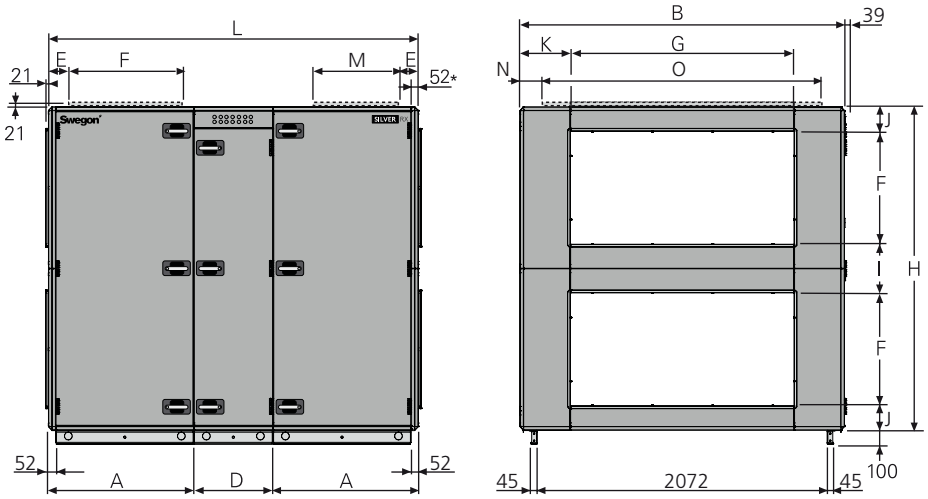




** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

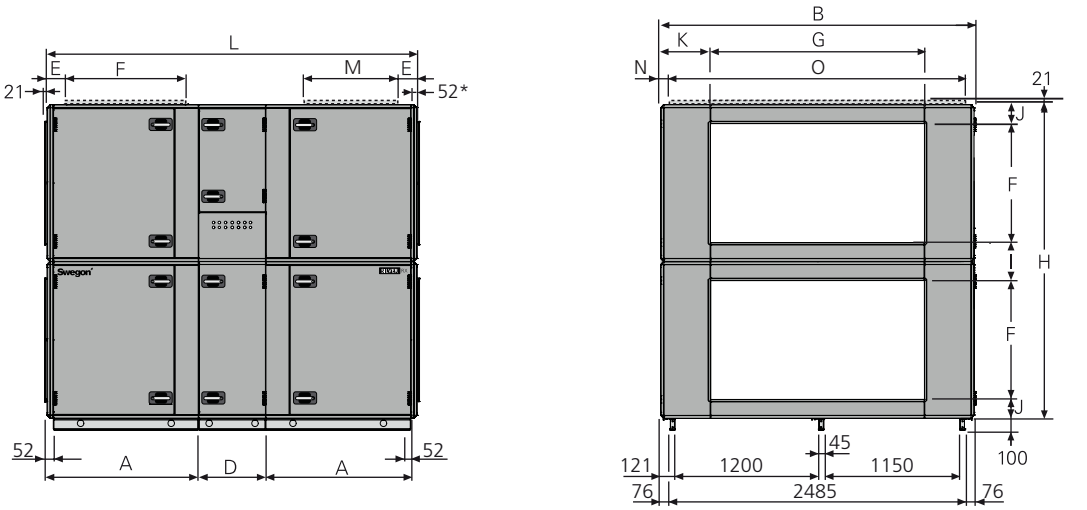
Size	A	B	D	E	F	G	H	I	J	K	L	M	Weight, kg
14/20	757,5	1400	565	205	400	1000	1551	375	1154	200	2080	188	572-746
25/30	848	1600	565	200	500	1200	1811	405	1354	200	2261	203	744-971
35/40	1038,5	1990	565	245	600	1400	2159	479	1744	295	2642	240	1096-1405

SILVER C 50/60



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

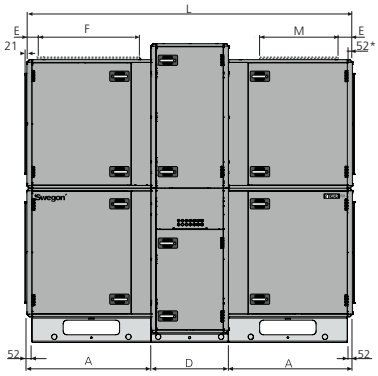
SILVER C 70/80

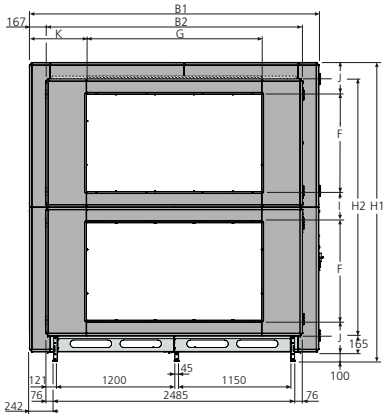


** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

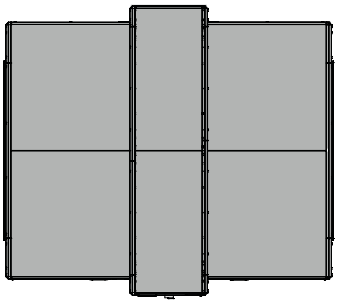
Size	A	B	D	E	F	G	H	I	J	K	L	M	N	O	Weight, kg
50/60	1038,5	2318	565	145	800	1600	2288	344	172	359	2642	600	159	2000	1298-1752
70/80	1273,5	2637	565	162	1000	1800	2640	320	160	418,5	3112	750	118,5	2400	2218-2649

SILVER C 70+/80+





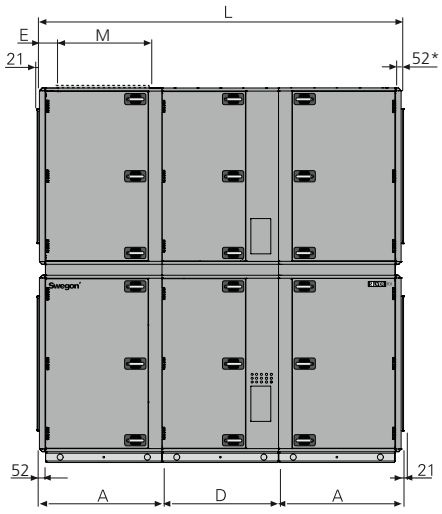
Top view

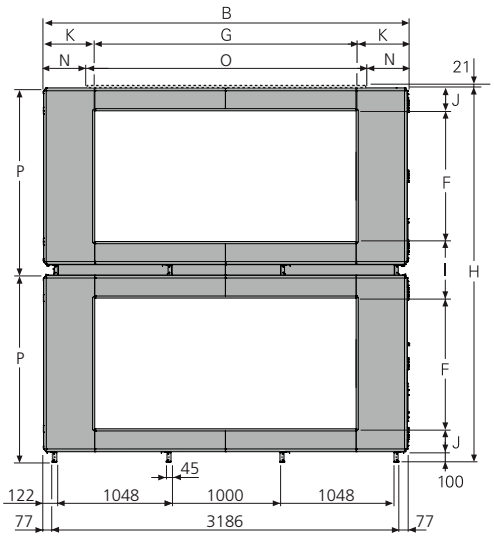


** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B1	B2	D	E	F	G	H1	H2	I	J	K	L	M	Weight, kg
070+/080+	1273,5	2970	2637	796	162	1000	1800	3070	2640	320	325	585	3343	750	2614-3335

SILVER C 100/120



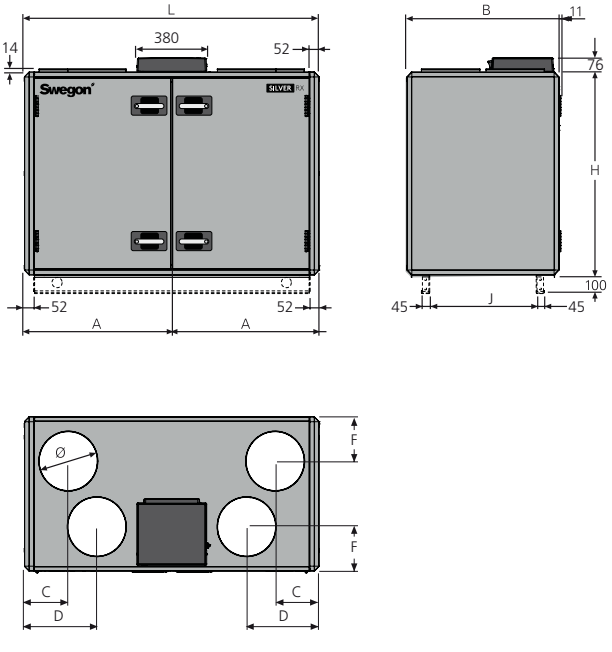


** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

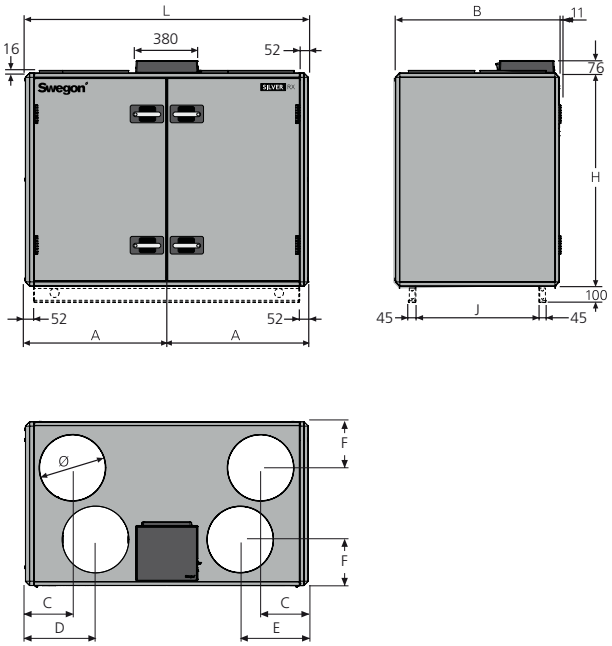
Size	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight, kg
100	1122	3340	1070	187	1200	2400	3440	520	210	470	3314	800	420	2500	1720	3324-3910
120	1122	3340	1070	187	1200	2400	3440	520	210	470	3314	800	420	2500	1720	3524-4128

6.1.2 SILVER C RX Top

SILVER C RX Top 004/005

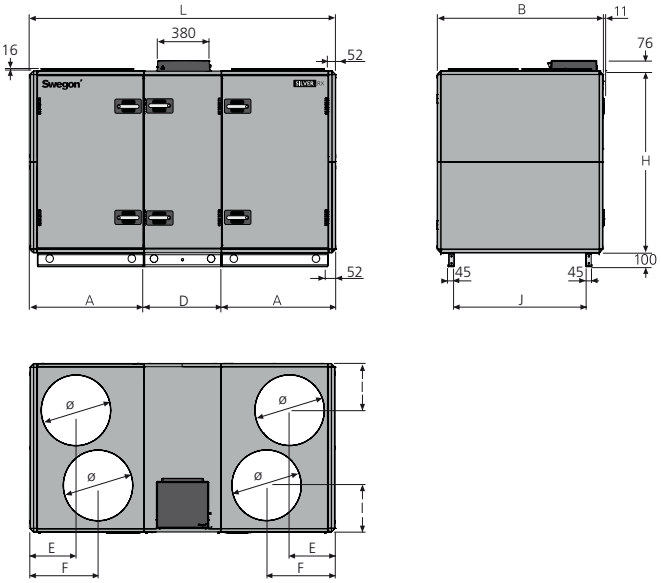


SILVER C RX Top 007/008



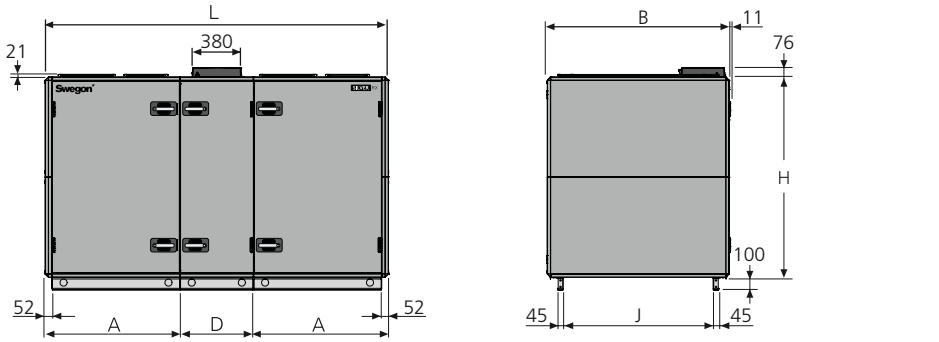
Size	A	B	C	D	E	F	H	J	L	Ø	Weight, kg
Top 004	800	825	238	393	–	237	1085	579	1600	315	295-302
Top 005	800	825	238	393	–	237	1085	579	1600	315	295-310
Top 007	860	995	286	426	406	280	1295	749	1720	400	351-376
Top 008	860	995	286	426	406	280	1295	749	1720	400	369-382

SILVER C RX Top 11/12



Size	A	B	C	D	E	F	G	H	I	J	K	L	Ø	Weight, kg
Top 011	827	1199	–	565	332	500	–	1295	332	953	–	2219	500	527-549
Top 012	827	1199	–	565	332	500	–	1295	332	953	–	2219	500	550-576

SILVER C RX Top 014/020

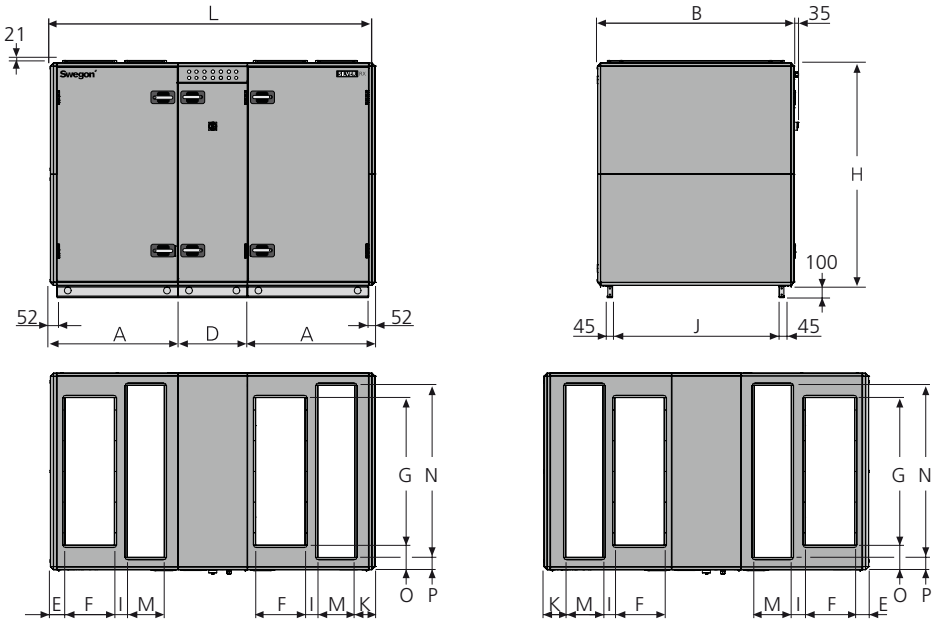


View from above. Shows the air handling unit's duct connections for supply air fan right up and left down

View from above. Shows the air handling unit's duct connections for supply air fan right down and left up

Size	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight, kg
014/020	1039	1400	565	120	400	1000	1551	106	1154	165	2643	300	1200	200	100	726-832

SILVER C RX Top 025/030



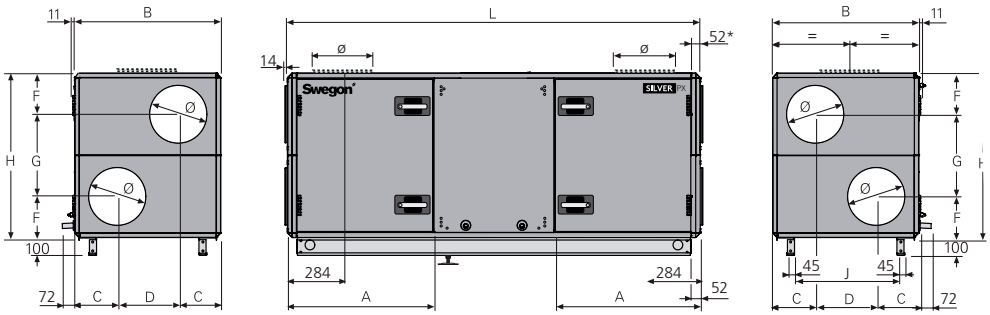
View from above. Shows the air handling unit's duct connections for supply air fan right up and left down

View from above. Shows the air handling unit's duct connections for supply air fan right down and left up

Size	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight, kg
025/030	1039	1600	565	120	400	1200	1811	106	1354	165	2643	300	1400	200	100	884-1033

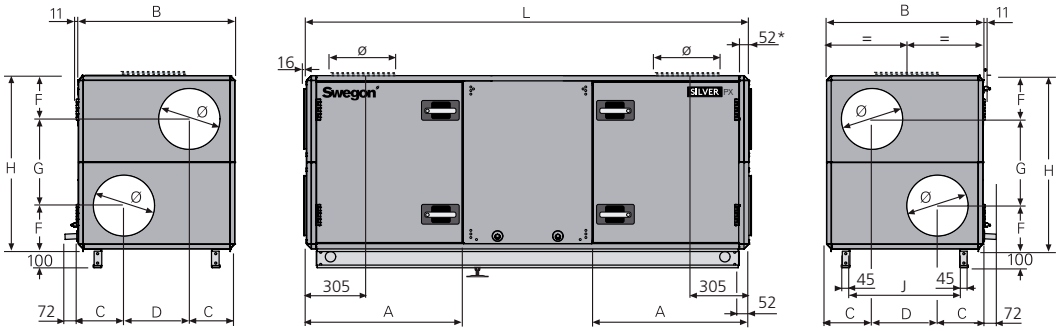
6.2 Dimensions, SILVER C PX one-piece air handling units with plate heat exchanger

SILVER C 04/05, common casing



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

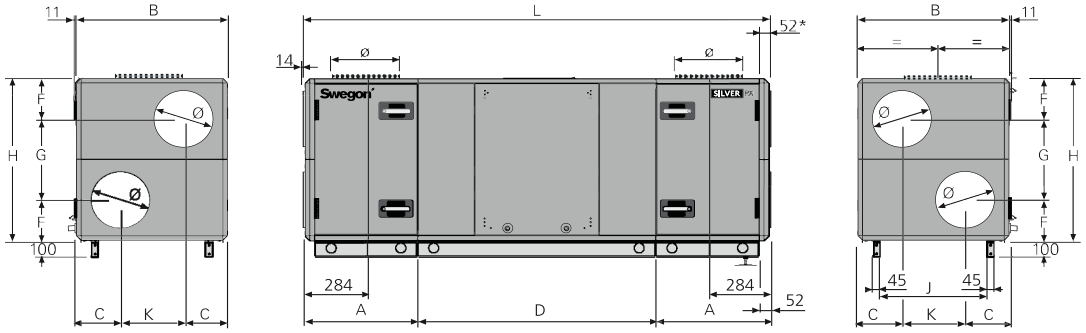
SILVER C 07/08, common casing



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

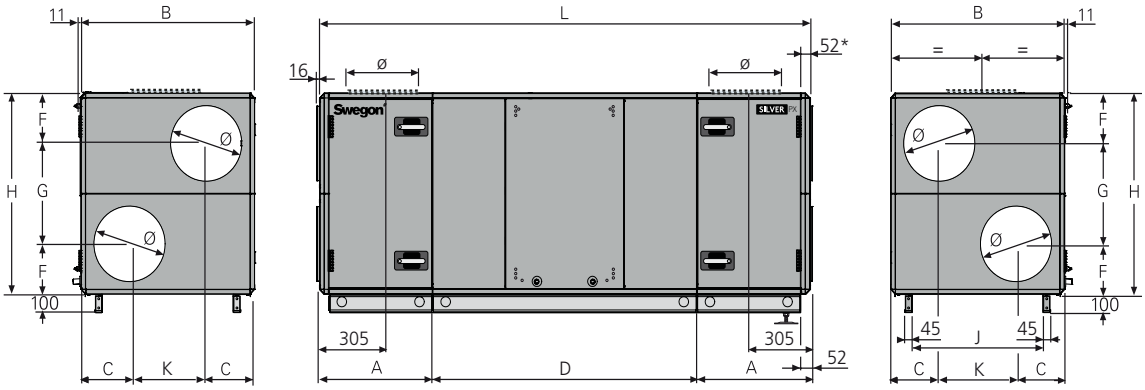
Size	A	B	C	D	F	G	H	J	L	Ø	Weight, kg
04/05	822	825	240	345	230	460	920	579	2333	315	349-387
07	911,5	995	277,5	440	271	543	1085	749	2503	400	435-492
08	911,5	995	277,5	440	271	543	1085	749	2503	400	449-506

SILVER C 04/05, split version



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

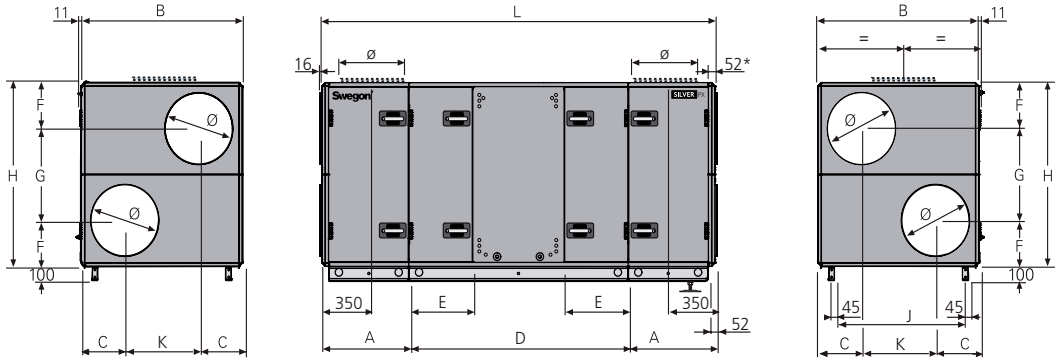
SILVER C 07/08, split version



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B	C	D	F	G	H	J	K	L	Ø	Weight, kg
004/005	617	825	240	1300	230	460	920	579	345	2534	315	438-490
007	647	995	277,5	1517	271	543	1085	749	440	2811	400	547-623
008	647	995	277,5	1517	271	543	1085	749	440	2811	400	561-631

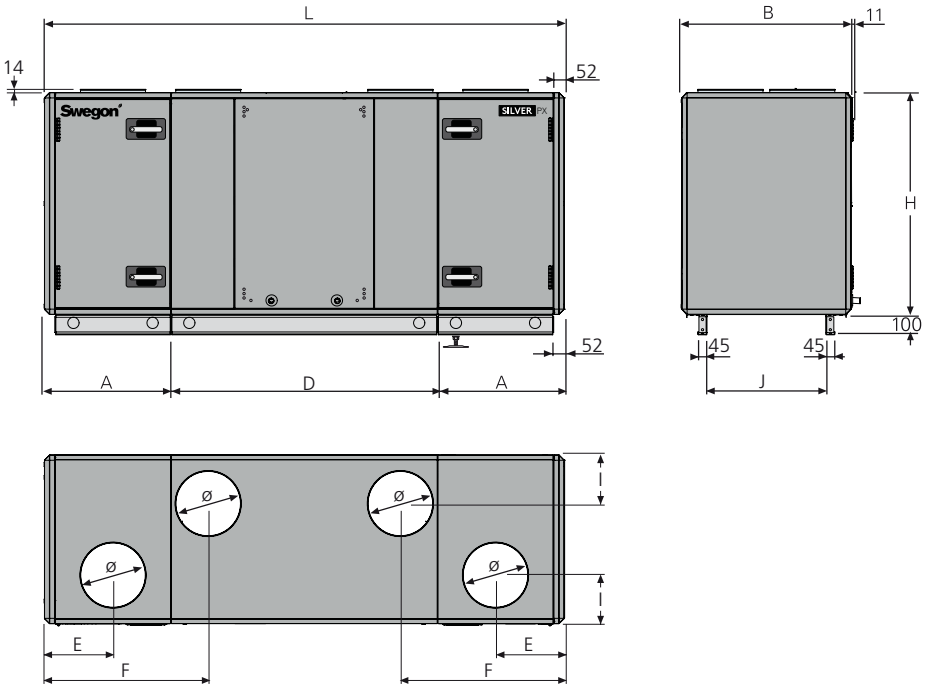
SILVER C 11/12



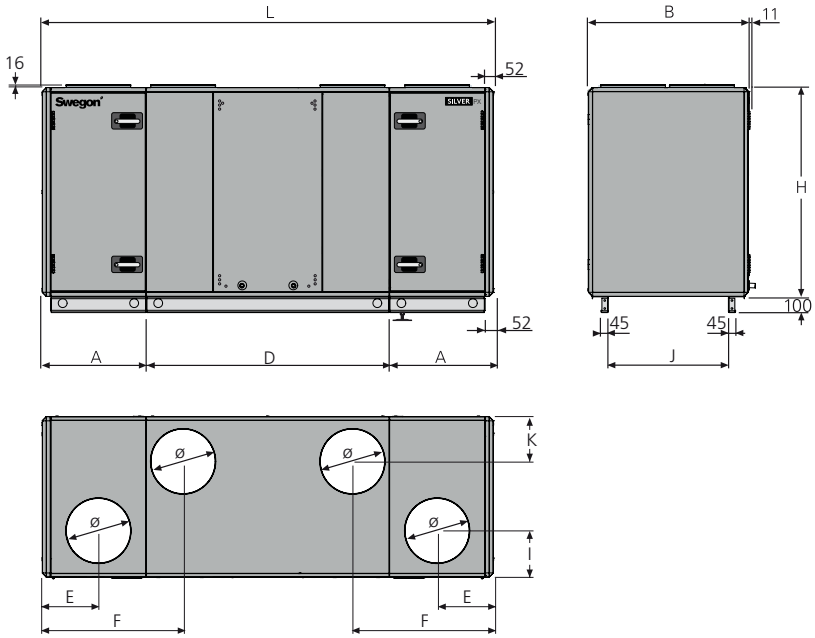
** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B	C	D	E	F	G	H	J	K	L	Ø	Weight, kg
11	647	1199	324	1631	471	324	647	1295	953	551	2925	500	714-804
12	647	1199	324	1631	471	324	647	1295	953	551	2925	500	736-832

SILVER C PX Top 004/005

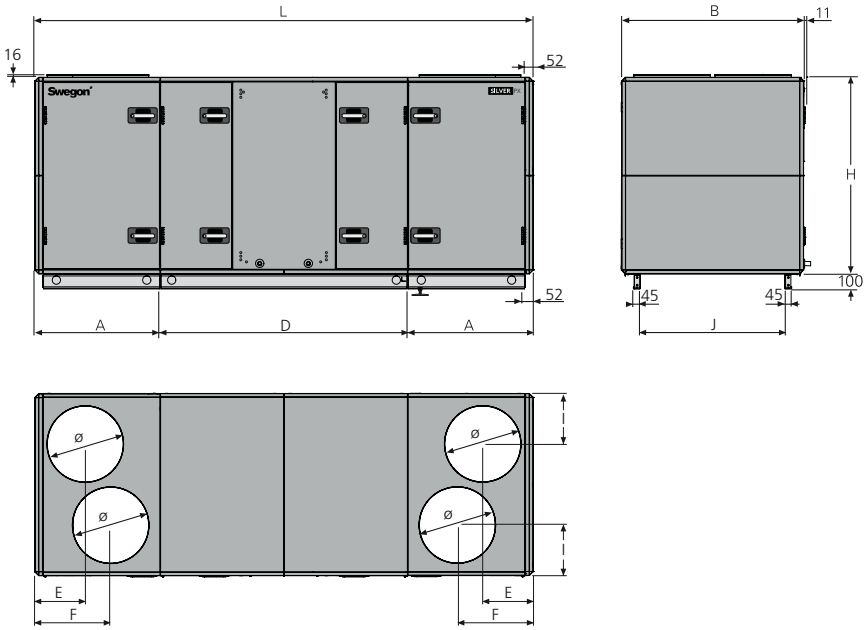


SILVER C PX Top 007/008



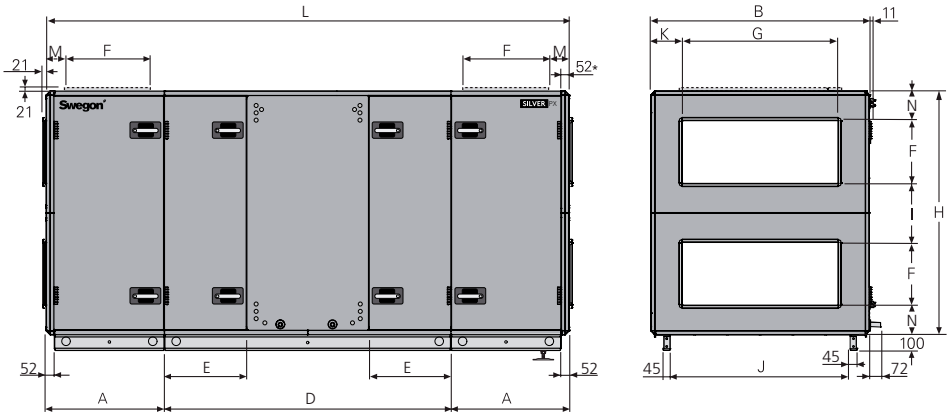
Size	A	B	D	E	F	H	I	J	K	L	Ø	Weight, kg
004	617	825	1300	334	798	1085	238	579	–	2534	315	480-484
005	617	825	1300	334	798	1085	238	579	–	2534	315	480-492
007	647	995	1517	350	878	1295	288	749	278	2811	400	599-613
008	647	995	1517	350	878	1295	288	749	278	2811	400	613-621

SILVER C PX Top 011/012



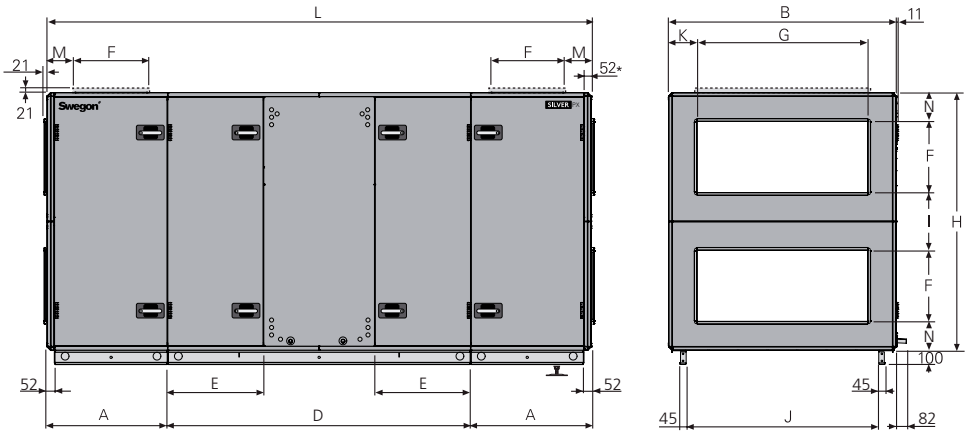
Size	A	B	D	E	F	H	I	J	L	Ø	Weight, kg
011	827	1199	1631	332	500	1295	332	953	3285	500	814-826
012	827	1199	1631	332	500	1295	332	953	3285	500	836-854

SILVER C 14/20



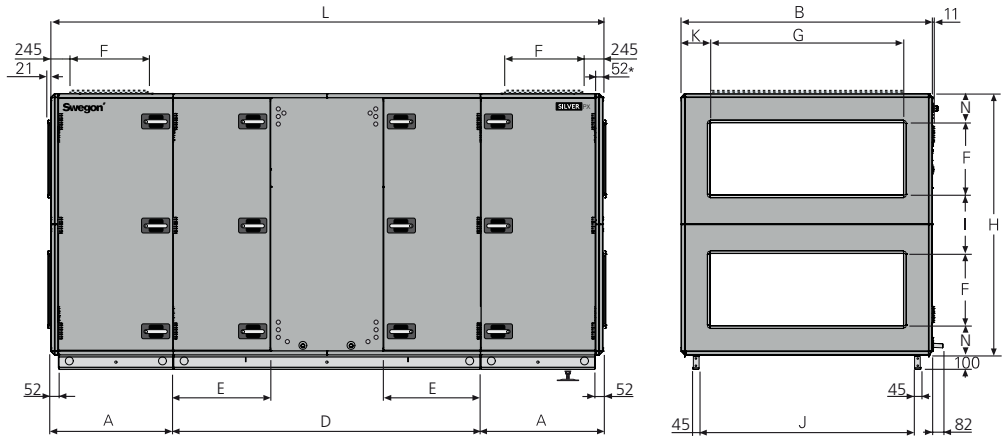
** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

SILVER C 25/30



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

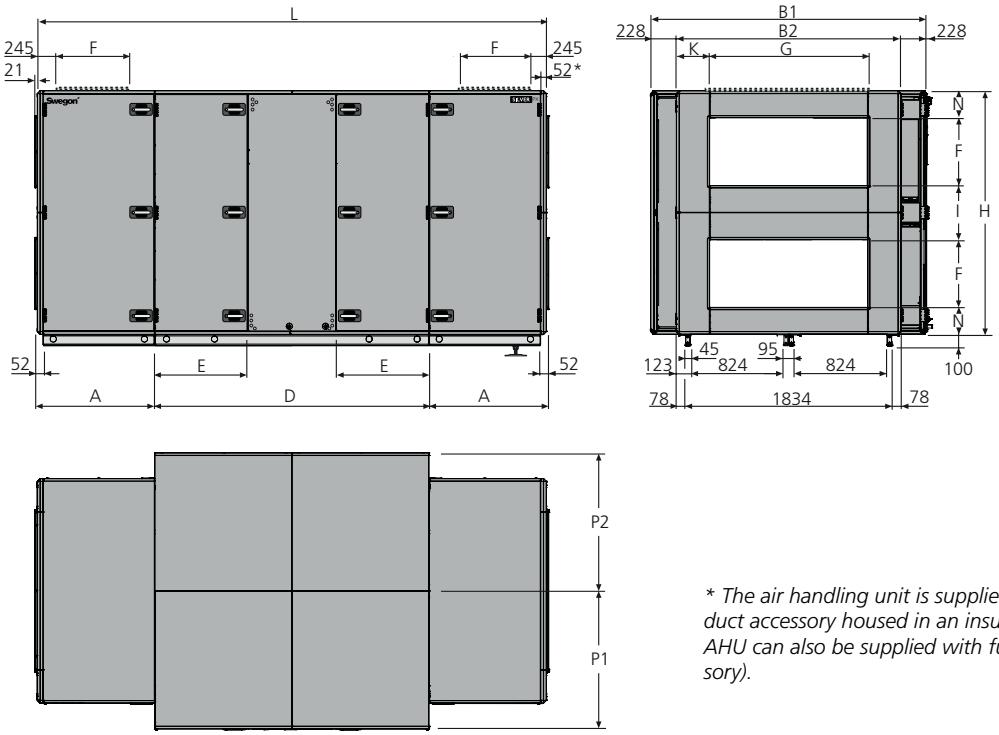
SILVER C 35/40



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B	D	E	F	G	H	I	J	K	L	M	N	Weight, kg
14/20	757,5	1400	1836	528	400	1000	1551	375	1154	200	3351	205	188	929-1089
25/30	847,5	1600	2130	675	500	1200	1811	405	1354	200	3825	200	203	1235-1451
35/40	1038,5	1990	2400	806	600	1400	2159	479	1744	295	4477	-	240	1792-2082

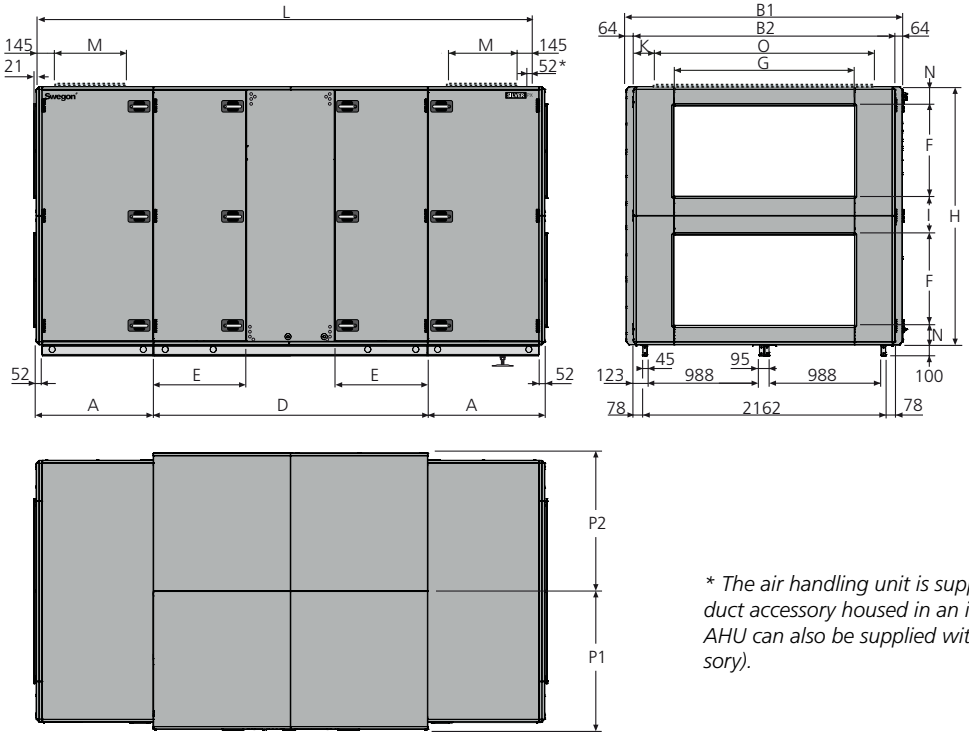
SILVER C 040+



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B1	B2	D	E	F	G	H	I	K	L	N	P1/P2	Weight, kg
040+	1038.5	2446	1990	2430	821	600	1400	2159	479	295	4507	240	1223	2180-2462

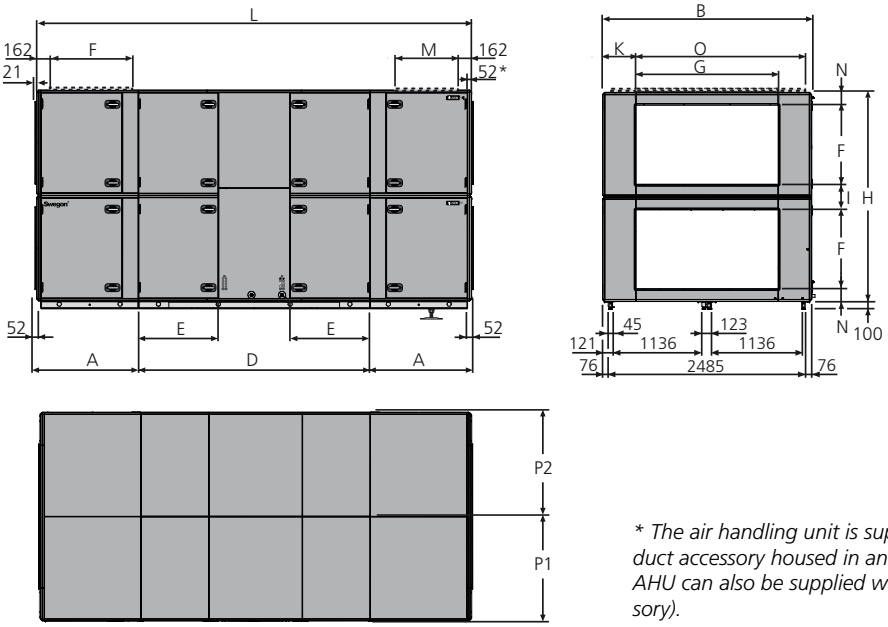
SILVER C 050+/060+



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B1	B2	D	E	F	G	H	I	K	L	M	N	O	P1/P2	Weight, kg
050+/060+	1038.5	2446	2318	2430	821	800	1600	2288	344	359	4507	600	172	2000	1223	2290-2690

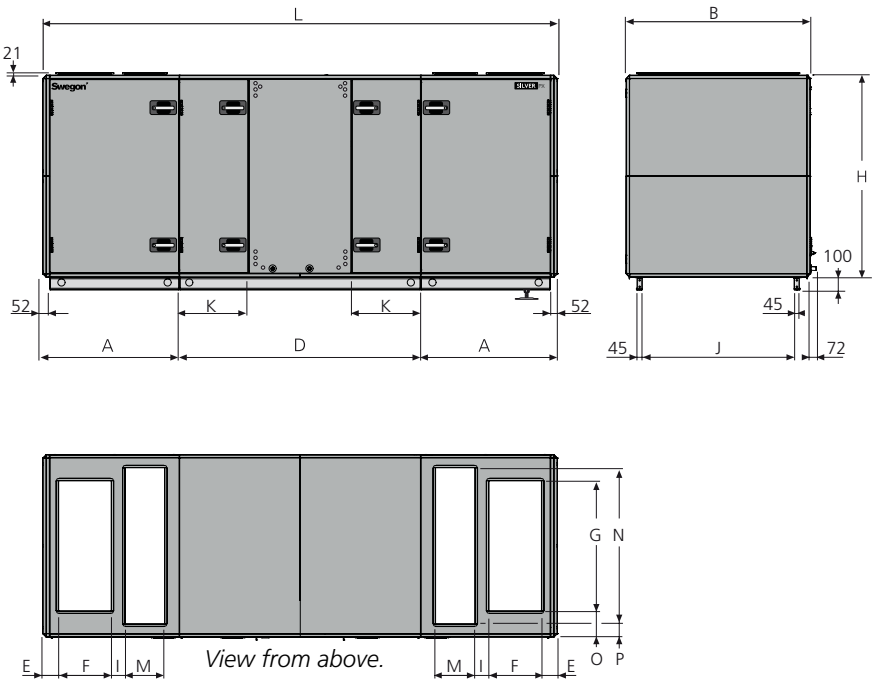
SILVER C PX 070/080



** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

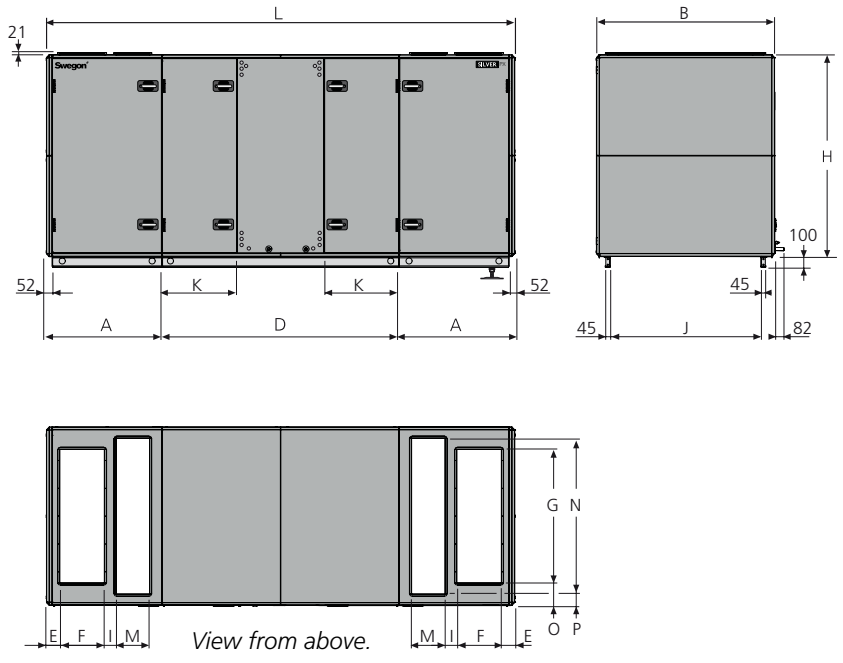
Size	A	B	D	E	F	G	H	I	K	L	M	N	O	P1/P2	Weight, kg
070/080	1273,5	2637	2896	999	1000	1800	2640	320	418,5	5443	750	160	2400	1318,5	3258-3750

SILVER C PX Top 014/020



Size	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight, kg
014/020	1039	1400	1836	120	400	1000	1551	106	1154	528	3914	300	1200	200	100	1083-1175

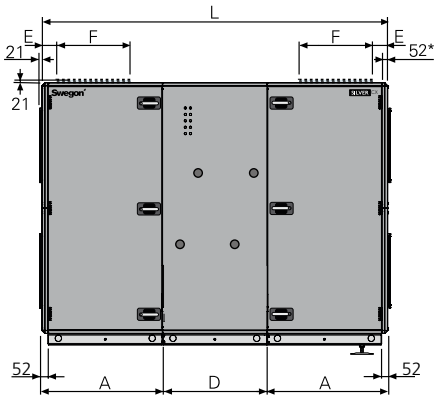
SILVER C PX Top 025/030

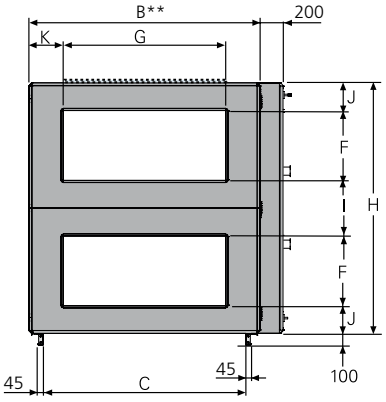


Size	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight, kg
025/030	1039	1600	2130	120	400	1200	1811	106	1354	675	4208	300	1400	200	100	1375-1513

6.3 Dimensions, SILVER C CX one-piece air handling units with coil heat exchangers

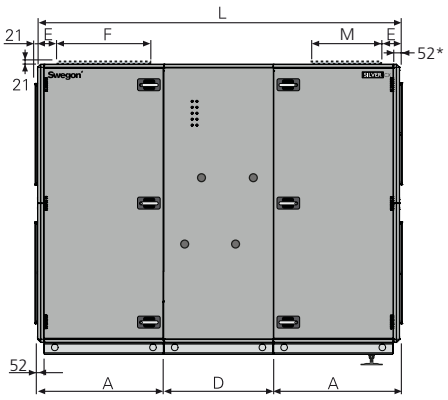
SILVER C 35/40

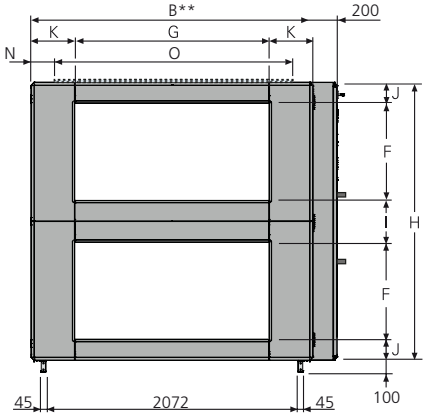




** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

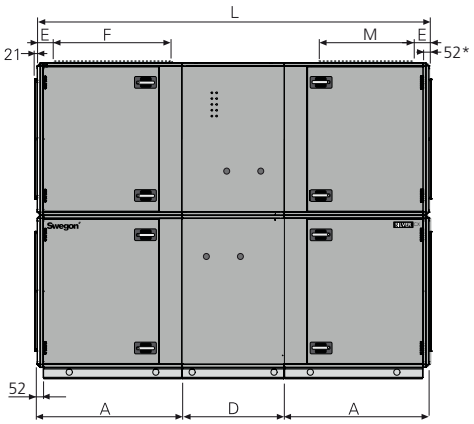
SILVER C 50/60

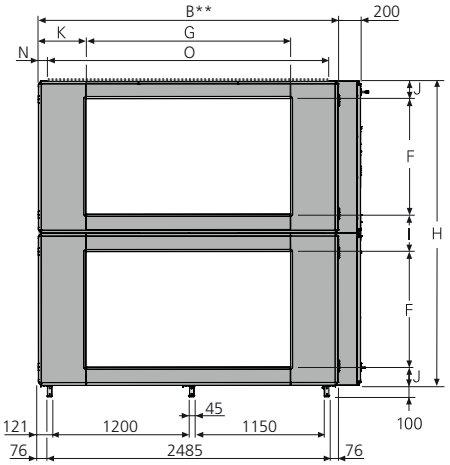




** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

SILVER C 70/80

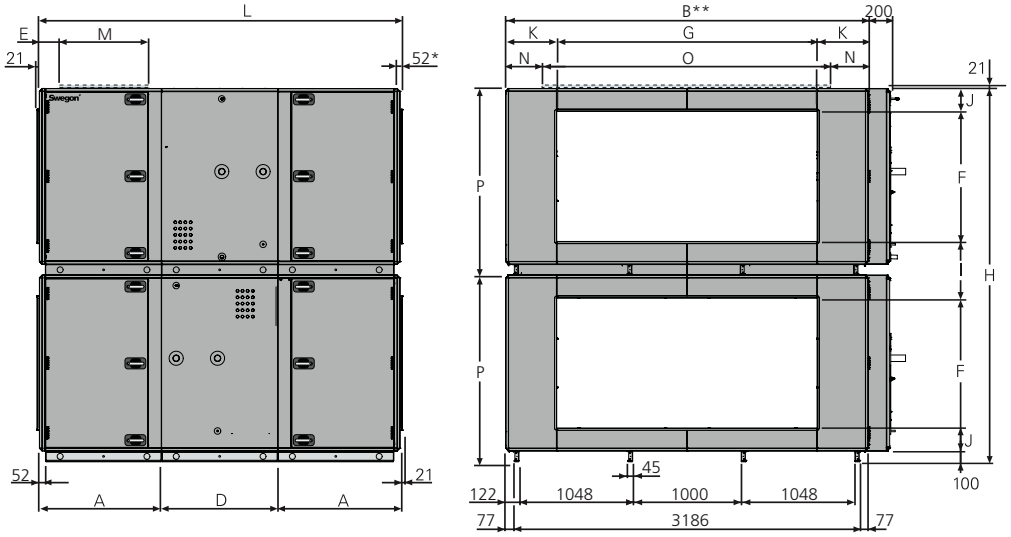




** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

Size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Weight, kg
35/40	1038,5	1990	1744	900	245	600	1400	2159	479	240	295	2977	-	-	-	1645-1899
50/60	1038,5	2318	-	900	145	800	1600	2288	344	172	359	2977	600	159	2000	1971-2343
70/80	1273,5	2637	-	900	162	1000	1800	2640	320	160	418,5	3447	750	118,5	2400	2989-3329

SILVER C 100/120

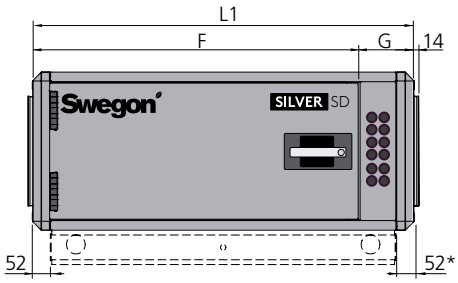


** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

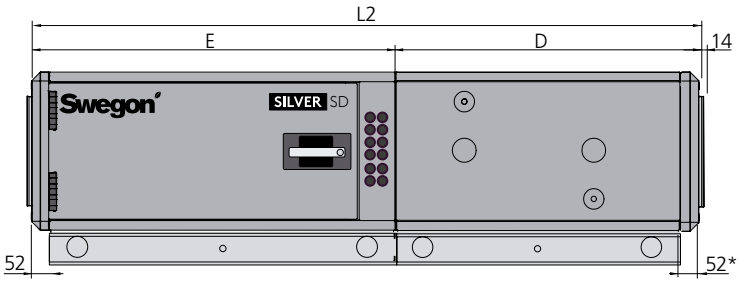
Size	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight, kg
100	1122	3340	1070	187	1200	2400	3440	520	210	470	3314	800	420	2500	1720	4294-4772
120	1122	3340	1070	187	1200	2400	3440	520	210	470	3314	800	420	2500	1720	4494-4990

6.4 Dimensions, separate SILVER C SD supply air and extract air handling units

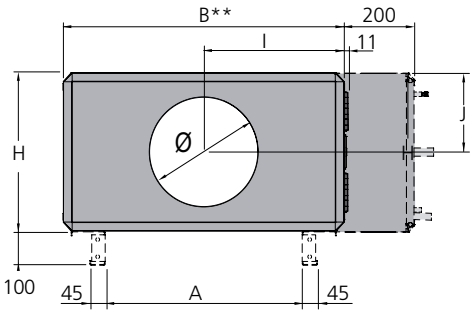
SILVER C 004-008, common casing



Fan



Fan + coil heat exchanger

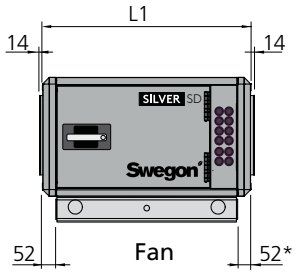


** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*
Base beams are optional for air handling units without coil heat exchangers.
Base beams are standard on air handling units with coil heat exchangers.

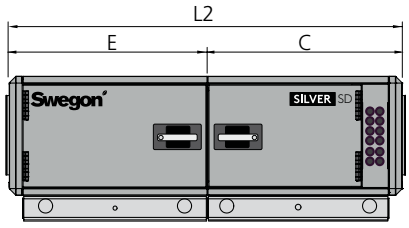
Size	Weight, kg fan+filter	Weight, kg fan + filter + coil
004/005	97-118	210-236
007	115-145	255-291
008	122-149	262-295

Size	L1	L2	B	H	A	D	E	F	G	I	J	Ø
004/005	1120	1955	825	460	579	887	1068	956	164	412.5	230	315
007/008	1214	2049	995	542.5	749	887	1162	1050	164	497.5	271	400

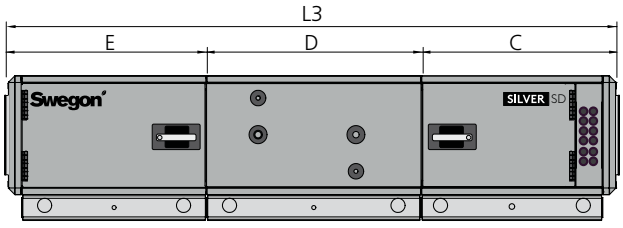
SILVER C 004-008, split version



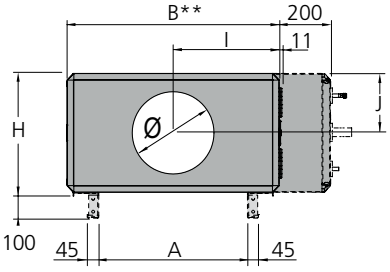
Fan



Fan + filter



Fan + filter + coil heat exchanger

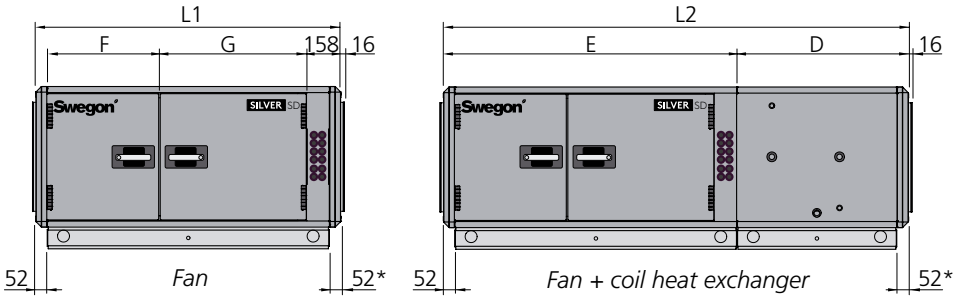


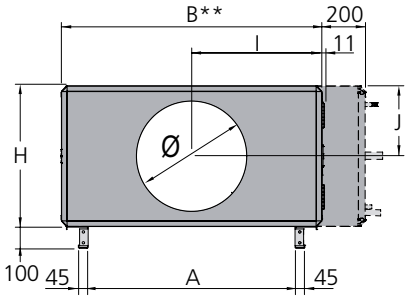
** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*

Size	Weight, kg fan	Weight, kg fan+filter	Weight, kg fan + filter + coil
004/005	68-85	119-140	232-258
007	79-100	138-164	278-310
008	86-107	145-171	285-317

Size	L1	L2	L3	B	H	A	C	D	E	I	J	Ø
004/005	809	1529	2364	825	460	579	757	835	772	412	230	315
007/008	809	1529	2364	995	542.5	749	757	835	772	497.5	271	400

SILVER C 011/012, common casing



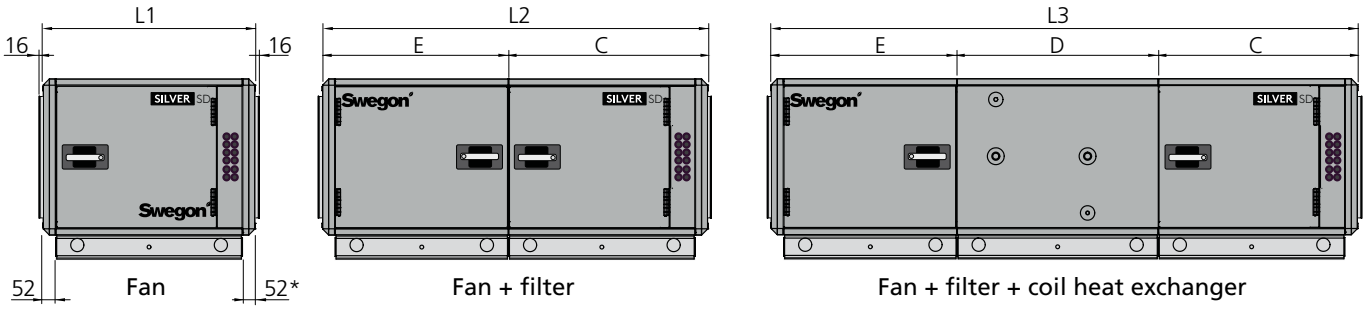


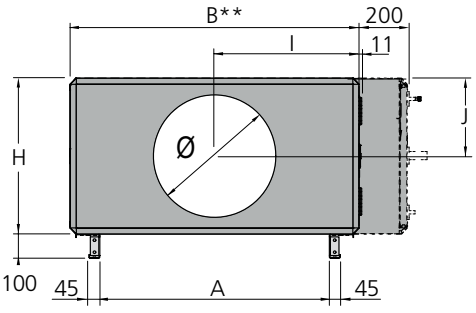
** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*

Size	Weight, kg fan+filter	Weight, kg fan + filter + coil
011	164-203	348-393
012	175-217	359-407

Size	L1	L2	B	H	A	D	E	F	G	I	J	Ø
011/012	1404	2239	1199	647.5	953	887	1352	513	681	599.5	324	500

SILVER C 011/012, split version





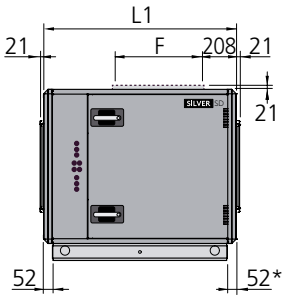
** The air handling unit is supplied without end connection panel if a duct accessory housed in an insulated casing will be connected. The AHU can also be supplied with full face end connection panel (accessory).*

*** Width of coil heat exchanger (if required) = B + 200 mm.*

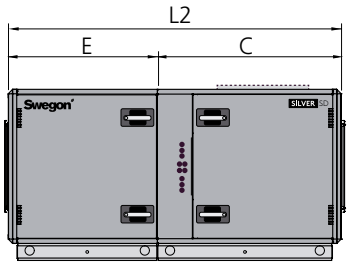
Size	Weight, kg fan	Weight, kg fan+filter	Weight, kg fan + filter + coil
011	109-138	184-222	368-412
012	120-149	195-233	379-423

Size	L1	L2	L3	B	H	A	C	D	E	I	J	Ø
011/012	878	1598	2433	1199	647.5	953	828	835	772	599.5	324	400

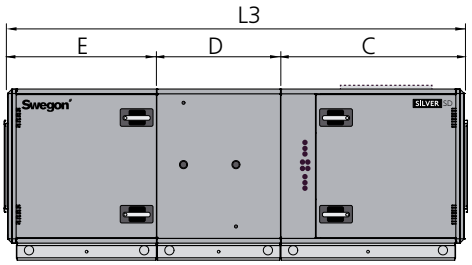
SILVER C 14/20



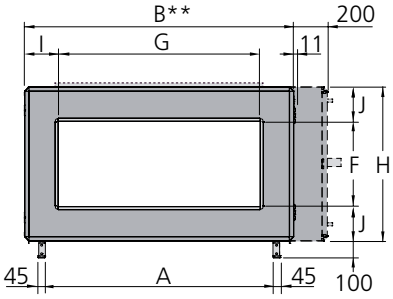
Fan



Fan + filter



Fan + filter + coil heat exchanger

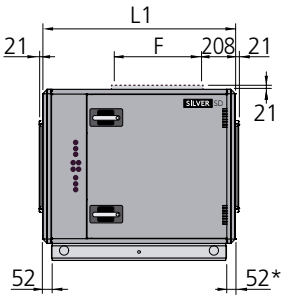


** If a duct accessory housed in an insulated casing will be connected, the air handling unit is supplied with an end connection panel designed for connection to the duct accessory. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*

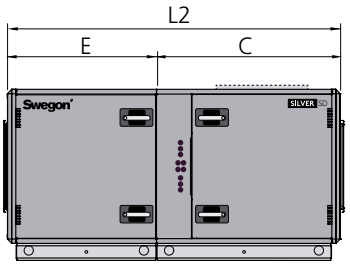
Size	Weight, kg fan	Weight, kg fan+filter	Weight, kg fan + filter + coil
14	148-191	250-304	506-567
20	158-211	260-324	516-587

Size	L1	L2	L3	B	H	A	C	D	E	F	G	I	J
14/20	1040	1875	2710	1400	775,5	1154	988	835	887	400	1000	200	188

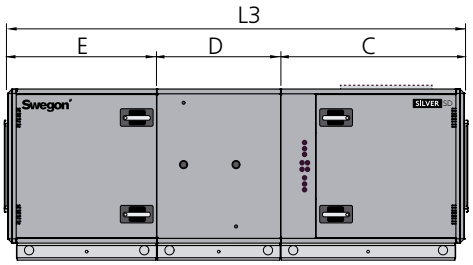
SILVER C 25/30, 35/40



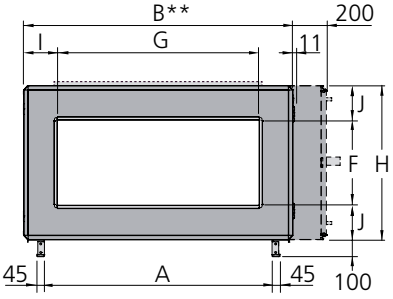
Fan



Fan + filter



Fan + filter + coil heat exchanger

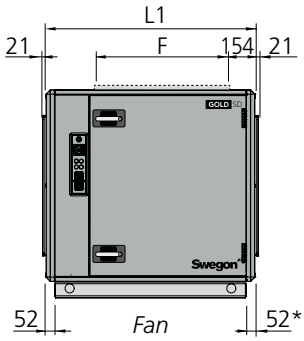


** If a duct accessory housed in an insulated casing will be connected, the air handling unit is supplied with an end connection panel designed for connection to the duct accessory. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*

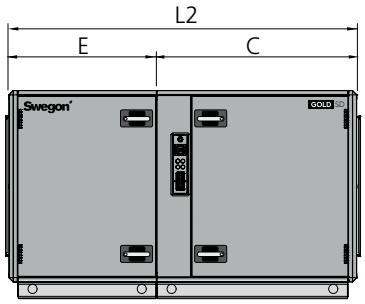
Size	Weight, kg fan	Weight, kg fan+filter	Weight, kg fan + filter + coil
25	190-252	308-382	616-699
30	216-264	351-411	659-728
35	263-332	413-513	853-966
40	288-366	438-547	878-1000

Size	L1	L2	L3	B	H	A	C	D	E	F	G	I	J
25/30	1144	1978	2813	1600	905,5	1354	1092	835	886	500	1200	200	203
35/40	1253	2088	2988	1990	1079,5	1744	1202	900	886	600	1400	295	239,5

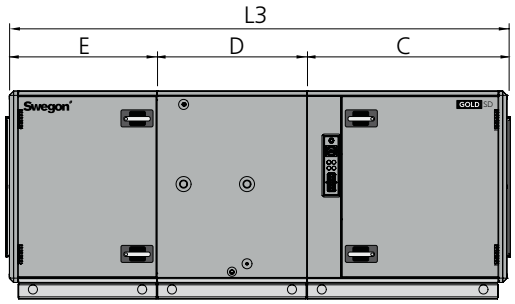
SILVER C 50/60



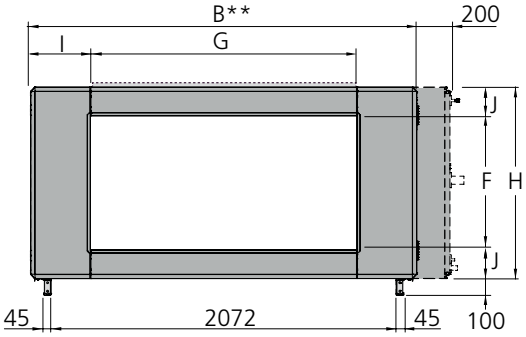
Fan



Fan + filter



Fan + filter + coil heat exchanger

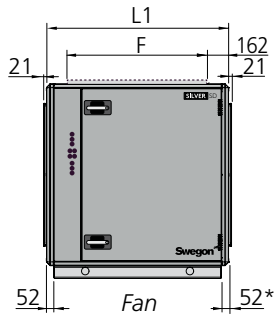


** If a duct accessory housed in an insulated casing will be connected, the air handling unit is supplied with an end connection panel designed for connection to the duct accessory. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*

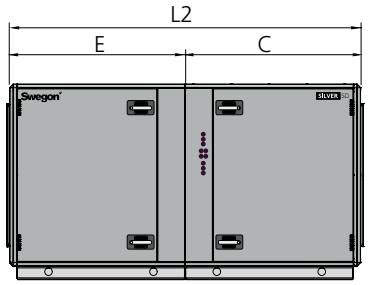
Size	Weight, kg fan	Weight, kg fan+filter	Weight, kg fan + filter + coil
50	331-410	516-634	1058-1190
60	404-474	589-698	1131-1254

Size	L1	L2	L3	B	H	C	D	E	F	G	I	J
50/60	1253	2088	2988	2318	1144	1202	900	886	800	1600	359	172

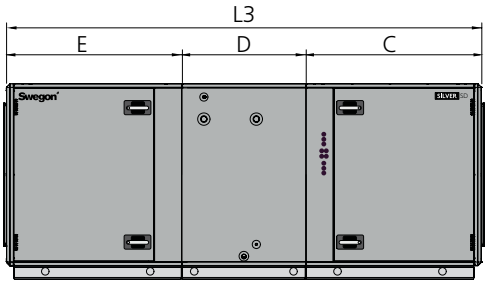
SILVER C 70/80



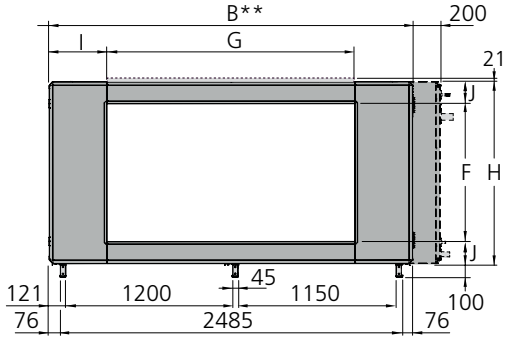
Fan



Fan + filter



Fan + filter + coil heat exchanger

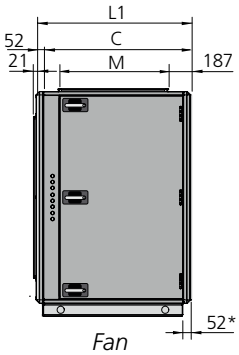


** If a duct accessory housed in an insulated casing will be connected, the air handling unit is supplied with an end connection panel designed for connection to the duct accessory. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*

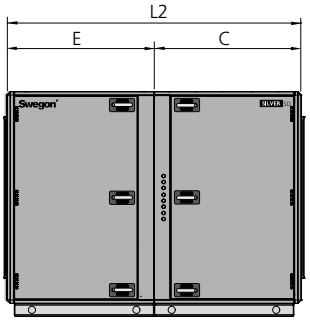
Size	Weight, kg fan	Weight, kg fan+filter	Weight, kg fan + filter + coil
70	496-578	791-918	1494-1633
80	523-623	818-963	1521-1678

Size	L1	L2	L3	B	H	C	D	E	F	G	I	J
70/80	1325	2547	3447	2637	1320	1273,5	900	1273,5	1000	1800	418,5	160

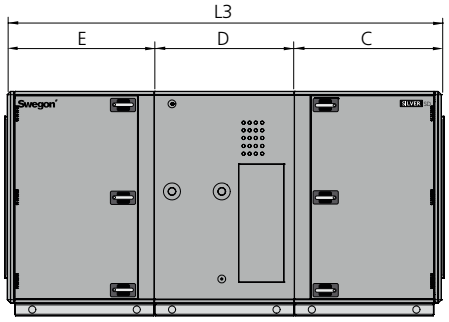
SILVER C 100/120



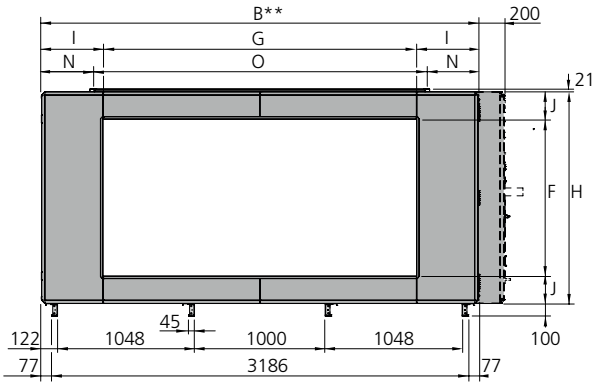
Fan



Fan + filter



Fan + filter + coil heat exchanger



** If a duct accessory housed in an insulated casing will be connected, the air handling unit is supplied with an end connection panel designed for connection to the duct accessory. The AHU can also be supplied with full face end connection panel (accessory).*
*** Width of coil heat exchanger (if required) = B + 200 mm.*

Size	Weight, kg fan	Weight, kg fan+filter	Weight, kg fan + filter + coil
100	644-720	1046-1260	2133-2372
120	744-829	1146-1369	2233-2481

Size	L1	L2	L3	B	H	C	D	E	F	G	I	J	M	N	O
100/120	1173	2244	3314	3340	1620	1122	1070	1122	1200	2400	470	210	800	420	2500

6.5 Electrical data

6.5.1 Fans

The respective size of SILVER C is available in two capacity variants (does not apply to size 04). The lower specified capacity on the respective size in the table below applies to capacity variant 1 and the higher capacity applies to capacity variant 2.

Specified voltage -10% – +15%.

RATED DATA PER FAN

SILVER C 04: Motor shaft power: 1.15 kW (0.41 kW)*, motor controller: 1 x 230 V, 50 Hz, rated 2.3 A

SILVER C 05: Motor shaft power: 1.15 kW (0.8 kW)*, motor controller: 1 x 230 V, 50 Hz, rated 4.3 A
alt. Motor shaft power: 1.15 kW, motor controller: 1 x 230 V, 50 Hz, rated 5.5 A

SILVER C 07: Motor shaft power: 1.15 kW (0.8 kW)*, motor controller: 1 x 230 V, 50 Hz, rated 4.3 A
alt. Motor shaft power: 1.15 kW, motor controller: 1 x 230 V, 50 Hz, rated 5.5 A

SILVER C 08: Motor shaft power: 1.15 kW, motor controller: 1 x 230 V, 50 Hz, rated 6,0 A
alt. Motor shaft power: 1.6 kW, motor controller: 3 x 400 V, 50 Hz, rated 2.8 A

SILVER C 11: Motor shaft power: 1.15 kW, motor controller: 1 x 230 V, 50 Hz, rated 6.0 A
alt. Motor shaft power: 1.6 kW, motor controller: 3 x 400 V, 50 Hz, rated 2.8 A

SILVER C 12: Motor shaft power: 2.4 kW (1.6 kW)*, motor controller: 3 x 400 V, 50 Hz, rated 2.8 A
alt. Motor shaft power: 2.4 kW, motor controller: 3 x 400 V, 50 Hz, rated 3.8 A

SILVER C 14/20: Motor shaft power: 2.4 kW (1.6 kW)*, motor controller: 3 x 400 V, 50 Hz, rated 2.8 A
alt. Motor shaft power: 2.4 kW, motor controller: 3 x 400 V, 50 Hz, rated 3.8 A
alt. Motor shaft power: 2.4 kW, motor controller: 3 x 400 V, 50 Hz, rated 4.2 A
alt. Motor shaft power: 3.4 kW, motor controller: 3 x 400 V, 50 Hz, rated 5.9 A

SILVER C 25/30: Motor shaft power: 2.4 kW, motor controller: 3 x 400 V, 50 Hz, rated 4.2 A
alt. Motor shaft power: 3.4 kW, motor controller: 3 x 400 V, 50 Hz, rated 5.9 A
alt. Motor shaft power: 4.0 kW, motor controller: 3 x 400 V, 50 Hz, rated 7.3 A
alt. Motor shaft power: 5.0 kW, motor controller: 3 x 400 V, 50 Hz, rated 8.9 A

SILVER C 35/40: Motor shaft power: 4.0 kW, motor controller: 3 x 400 V, 50 Hz, rated 7.3 A
alt. Motor shaft power: 5.0 kW, motor controller: 3 x 400 V, 50 Hz, rated 8.9 A
alt. Motor shaft power: 6.5 kW, motor controller: 3 x 400V, 50 Hz, rated 11.4 A
alt. Motor shaft power: 10 kW, motor controller: 3 x 400 V, 50 Hz, rated 16 A

SILVER C 50/60: Motor shaft power: 6.5 kW, motor controller: 3 x 400V, 50 Hz, rated 11.4 A
alt. Motor shaft power: 10 kW, motor controller: 3 x 400 V, 50 Hz, rated 16 A
alt. Motor shaft power: 2 x 4.0 kW, motor controller: 3 x 400 V, 50 Hz, rated 7.3 A
alt. Motor shaft power: 2 x 6.5 kW, motor controller: 3 x 400V, 50 Hz, rated 11.2 A

SILVER C 70/80: Motor shaft power: 2 x 4.0 kW, motor controller: 3 x 400 V, 50 Hz, rated 7.3 A
alt. Motor shaft power: 2 x 6.5 kW, motor controller: 3 x 400V, 50 Hz, rated 11.2 A
alt. Motor shaft power: 2 x 6.5 kW, motor controller: 3 x 400V, 50 Hz, rated 11.5 A
alt. Motor shaft power: 2 x 10 kW, motor controller: 3 x 400 V, 50 Hz, rated 16 A

SILVER C 100: Motor shaft power: 2 x 6.5 kW, motor controller: 3 x 400V, 50 Hz, rated 11.5 A
alt. Motor shaft power: 2 x 10 kW, motor controller: 3 x 400 V, 50 Hz, rated 16 A

SILVER C 120: Motor shaft power: 3 x 6.5 kW, motor controller: 3 x 400V, 50 Hz, rated 11.5 A
alt. Motor shaft power: 3 x 10 kW, motor controller: 3 x 400 V, 50 Hz, rated 16 A

**) The motor control system limits the output power to the value specified.*

6.5.2 Motor in rotary heat exchanger

6.5.2.1 Rotor standard

SILVER C RX 04-08: Step motor, 2 Nm.
55 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.
SILVER C RX 11-40: Step motor, 4 Nm.
110 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.
SILVER C RX 50-80: Step motor, 8 Nm.
220 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.
SILVER C RX 100-120: Step motor. 14 Nm.
790 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.

6.5.2.2 Rotor Recosorptic

SILVER C RX 04-08: Step motor, 2 Nm.
55 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.
SILVER C RX 11-30: Step motor, 4 Nm.
110 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.
SILVER C RX 35-70: Step motor, 8 Nm.
220 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.
SILVER C RX 80-120: Step motor. 14 Nm.
790 W, 1 x 230 V, 50 Hz. Max. fuse 10 A.

6.6 Volume of glycol/water CX/SD coil heat exchangers

Batteriernas sammanlagda volym (exkl. rörkopplingsenhet och rördragning):

SD, size 004/005	34 litres
SD, size 007/008	48 litres
SD, size 011/012	70 litres
SD, size 014/020	106 litres
SD, size 025/030	138 litres
SD, size 035/040	218 litres
SD, size 050/060	262 litres
SD, size 070/080	336 litres
SD, size 100/120	538 litres

7. Appendices

7.1 Declaration of Conformity

For Declaration of Conformity, see our home page at www.swegon.com.

7.2 Building Materials Declaration

For a complete Declaration of Construction Materials, see our home page at www.swegon.com.

7.3 Ecodesign data

The air handling unit complies with the directives 2009/125/EC and 2014/53/EU.

Data for directive 2014/53/EU is available for sizing in the product selection software AHU Design.

Data for directive 327/2011/EU according to below.

Air Handling Units, EU regulation 327/2011 all fan data

Datum: 2024-02-15

AHU data				Fan data				Data according to ErP directive in technical documentation and free access webpage											
Type	Size	Motor option	Number of fans	Impeller type	Impeller diameter	Motor manufacture	Motor power	Installation category	Efficiency category	Vaiable speed drive	Specific ratio	Overall efficiency ηe(s)		Efficiency grade N		Power input Ped	Air Flow qv	Pressure increase pfs	Speed n
					mm		kW					Actual	Req 2015	Actual	Req 2015	kW	m³/s	Pa	min⁻¹
SILVER C Version F RX incl. TOP PX incl. TOP CX SD	004	-	1	Aluminium	288	Domel ZKG	0,41	A	Static	Yes	1,01	65,9	48,0	79,9	62	0,463	0,514	534	2700
	005	1	1	Aluminium	288	Domel ZKG	0,8	A	Static	Yes	1,01	65,3	50,8	76,5	62	0,862	0,728	708	3380
	005	2	1	Aluminium	288	Domel ZKG	1,15	A	Static	Yes	1,01	65,2	52,0	75,1	62	1,126	0,806	840	3700
	007	1	1	Aluminium	288	Domel ZKG	0,8	A	Static	Yes	1,01	65,3	50,8	76,5	62	0,862	0,728	708	3380
	007	2	1	Aluminium	288	Domel ZKG	1,15	A	Static	Yes	1,01	65,2	52,0	75,1	62	1,126	0,806	840	3700
	008	1	1	Aluminium	348	Domel ZKG	1,15	A	Static	Yes	1,01	66,3	52,5	75,7	62	1,26	0,928	831	2780
	008	2	1	Aluminium	348	Domel ZKG	1,6	A	Static	Yes	1,01	68,9	53,6	77,3	62	1,60	1,02	1003	3050
	011	1	1	Aluminium	348	Domel ZKG	1,15	A	Static	Yes	1,01	66,3	52,5	75,7	62	1,26	0,928	831	2780
	011	2	1	Aluminium	348	Domel ZKG	1,6	A	Static	Yes	1,01	68,9	53,6	77,3	62	1,60	1,02	1003	3050
	012	1	1	Aluminium	422	Domel ZKG	1,6	A	Static	Yes	1,01	67,5	53,9	75,6	62	1,68	1,34	790	2250
	012	2	1	Aluminium	422	Domel ZKG	2,4	A	Static	Yes	1,01	67,3	55,3	74,0	62	2,30	1,48	982	2500
	014	1	1	Aluminium	422	Domel ZKG	1,6	A	Static	Yes	1,01	67,5	53,9	75,6	62	1,68	1,34	790	2250
	014	2	1	Aluminium	422	Domel ZKG	2,4	A	Static	Yes	1,01	67,3	55,3	74,0	62	2,30	1,48	982	2500
	020	1	1	Aluminium	510	Domel ZKG	2,4	A	Static	Yes	1,01	67,3	55,9	73,4	62	2,62	2,01	827	1890
	020	2	1	Aluminium	510	Domel ZKG	3,4	A	Static	Yes	1,01	67,0	57,3	71,7	62	3,56	2,25	1011	2100
	025	1	1	Aluminium	510	Domel ZKG	2,4	A	Static	Yes	1,01	67,3	55,9	73,4	62	2,62	2,01	827	1890
	025	2	1	Aluminium	510	Domel ZKG	3,4	A	Static	Yes	1,01	67,0	57,3	71,7	62	3,56	2,25	1011	2100
	030	1	1	Aluminium	616	Domel ZKG	4	A	Static	Yes	1,01	68,7	58,0	72,6	62	4,20	3,06	901	1635
	035	1	1	Aluminium	616	Domel ZKG	4	A	Static	Yes	1,01	68,7	58,0	72,6	62	4,20	3,06	901	1635
	060	1	2	Aluminium	616	Domel ZKG	4	A	Static	Yes	1,01	68,7	58,0	72,6	62	4,20	3,06	901	1635
	070	1	2	Aluminium	616	Domel ZKG	4	A	Static	Yes	1,01	68,7	58,0	72,6	62	4,20	3,06	901	1635
	030	2	1	Aluminium	616	Domel ZKG	5	A	Static	Yes	1,01	67,7	58,9	70,8	62	5,10	3,23	1028	1740
	035	2	1	Aluminium	616	Domel ZKG	5	A	Static	Yes	1,01	67,7	58,9	70,8	62	5,10	3,23	1028	1740
	060	2	2	Aluminium	616	Domel ZKG	6,5	A	Static	Yes	1,01	68,2	60,2	70,1	62	6,67	3,58	1220	1900
	070	2	2	Aluminium	616	Domel ZKG	6,5	A	Static	Yes	1,01	68,2	60,2	70,1	62	6,67	3,58	1220	1900
	040	1	1	Aluminium	744	Domel ZKG	6,5	A	Static	Yes	1,01	66,4	60,2	68,2	62	6,67	4,65	915	1380
	050	1	1	Aluminium	744	Domel ZKG	6,5	A	Static	Yes	1,01	66,4	60,2	68,2	62	6,67	4,65	915	1380
	080	1	2	Aluminium	744	Domel ZKG	6,5	A	Static	Yes	1,01	66,4	60,2	68,2	62	6,67	4,65	915	1380
	100	1	2	Aluminium	744	Domel ZKG	6,5	A	Static	Yes	1,01	66,4	60,2	68,2	62	6,67	4,65	915	1380
	120	1	3	Aluminium	744	Domel ZKG	6,5	A	Static	Yes	1,01	66,4	60,2	68,2	62	6,67	4,65	915	1380
	040	2	1	Aluminium	744	Domel ZKG	9	A	Static	Yes	1,01	66,8	61,9	66,9	62	9,71	5,30	1176	1560
	050	2	1	Aluminium	744	Domel ZKG	9	A	Static	Yes	1,01	66,8	61,9	66,9	62	9,71	5,30	1176	1560
	080	2	2	Aluminium	744	Domel ZKG	9	A	Static	Yes	1,01	66,8	61,9	66,9	62	9,71	5,30	1176	1560
	100	2	2	Aluminium	744	Domel ZKG	9	A	Static	Yes	1,01	66,8	61,9	66,9	62	9,71	5,30	1176	1560
	120	2	3	Aluminium	744	Domel ZKG	9	A	Static	Yes	1,01	66,8	61,9	66,9	62	9,71	5,30	1176	1560

All documentation is available in digital form and can be downloaded from www.swegon.com