SILVER

High performance air handling units without integrated control system



The new SILVER-family

Compact Air Handling Unit SILVER C

Compact air handling unit SILVER C is an air handling unit where the vital functional components (fans, filters, heat exchangers) are integrated on site in the same casing. This provides quick and simple installation.

Flexibility is still achieved through the selection of fan placement as well as air directions. Even the type of heat exchanger can be selected. If additional functional sections such as dampers and air heaters are required, these must be installed in the ductwork or docked to the air handling unit.

The direct-driven fans with EC motors and heat exchangers belong to the industry's most energy efficient components.

SILVER C supplied without control equipment. However, fan motor control, motor control for rotary heat exchangers and damper actuator for plate heat exchangers are included.



Pages 3-9: More information about SILVER C

Modular Air Handling Unit SILVER M

The modular air handling unit SILVER M is an immensely flexible air handling unit and includes a large range of components, which offer potential for meeting specific demands and requirements for each individual ventilation system. SILVER M has several unique solutions that above all provide a high degree of thermal insulation and excellent hygienic properties.

The air handling unit is made up of optional modules with functional parts. They are supplied individually, or in suitable blocks, and assembled on site together into a complete air handling unit.

High quality and mechanical stability together with high technical performance guarantee energy-efficient operation for many years to come.



Pages 10-15: More information about SILVER M



Compact Air Handling Unit SILVER C



General

The SILVER C is a complete, one-piece air handling unit with direct-driven supply air and extract air fans, supply air and extract air filters in filter class F7 and heat exchanger. The heat exchanger is either of rotary type (RX), plate type (PX) or consists of two coils (CX).

If supplementary functional sections such as dampers and air coolers are required, these must be installed in the ductwork or docked to the air handling unit.

The SILVER C SD supply air and extract air units are air handling units equipped with direct-driven supply air or extract air fans and where filters and coil heat exchangers are available as options.

Application area

SILVER C unit are designed for use in comfort ventilation applications. Depending on the variant selected, the air handling unit can be utilised in buildings such as office buildings, schools, day nurseries, public buildings, shops, residential buildings, etc.

SILVER C unit equipped with plate/coil heat exchanger (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 swiming baths.

Energy efficiency Air handling unit

- 18 standard sizes with airflows up to 14 m³/s (50,400 m³/h)
- Great flexibility to choose air directions and fan placement
- Large selection of supplementary functional parts
- Energy efficient fans with EC motors
- Energy efficient heat exchanger
- Can be placed outdoors
- Supplied with integrated motor control of fan motors and control of the rotary heat exchanger, otherwise without control equipment



Technical description SILVER C

Unit casing

The SILVER C casing is made up of aluzinc coated sheet steel cover panels and inspection doors both internally and externally. Environmental Class C4. Intervening insulation: 50 mm thick mineral wool.

The inspection doors are hung on hinges and are fitted with flush-mounted door handles. The door handles must be opened in two steps to equalise the pressure before the door can be opened completely.

The air handling unit can be selected with or without end connection panels for each air direction.

Leakage class L2(M) according to EN 1886:2007.

Filters

The air handling unit is supplied with polyester bag filters, Filter class F7. On the air intake on the top, the bag filter is replaced with a pleated filter in filter class F7.

Fans

The air handling unit features direct-driven fans with EC motors. Motor control 0-10 Volt included. A hand terminal for fan motor parameters is available as an accessory.

Heat exchanger

RX, rotary heat exchanger, all sizes

The RECOnomic rotary heat exchanger has a temperature efficiency of up to 85%. Motor control 0-10 V, purging sector, commissioning plates and pressure measurement tappings included as standard.

Also available in an sorption version for moisture recovery.

PX, cross-flow plate heat exchanger, size 04-30

The plate heat exchanger is as standard equipped with bypass damper, either as interlinked damper or in sections, in both cases with mounted damper actuator.

CX, coil heat exchangers, size 35-120

The coil heat exchanger is supplied in empty condition from the factory. Pipe coupling unit for installation on site available as an accessory.

Accessories

There is a large selection of supplementary function sections, for example, dampers, mixing parts, air heaters, air coolers and sound attenuators. These are positioned in the duct or docked to the air handling unit.

A roof, outdoor air and exhaust air hoods are available as accessories for outdoor placement. These are supplied unassembled.

Control equipment

Apart from the fan motor control, motor control for rotary heat exchangers and damper actuator for plate heat exchangers, the air handling unit is supplied without control equipment.

Certification

Swegon AB has a certified Quality Assurance System that conforms to ISO 9001 Standard and a certified Environmental Management System to ISO 14001. The SILVER C air handling system is also certificated by Eurovent.









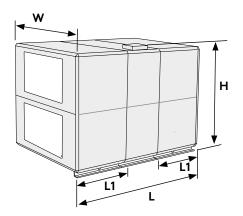




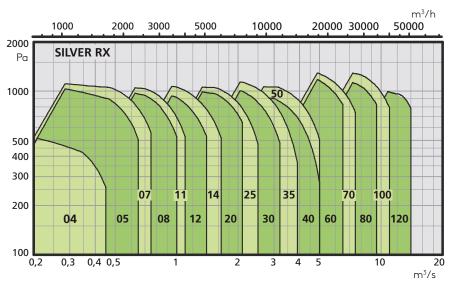
www.eurovent-certification.com www.certiflash.com



Technical data SILVER C, RX





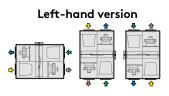


| SILVER C | L | | L1 | | w | н | н | | Min. | | .0/200 Pa | Max. | | Max. Ecodesign | |
|----------|------|-----------|------|---------|------|------|-----------|------|------|-------|-----------|-------|-------|----------------|-------|
| RX | mm | kg | mm | kg | mm | mm | mm | m³/s | m³/h | m³/s | m³/h | m³/s | m³/h | m³/s | m³/h |
| 04 | 1500 | 214-243 | - | - | 825 | 1028 | Ø 315 | 0.08 | 290 | 0.42 | 1510 | 0.45 | 1620 | 0.45 | 1620 |
| 05 | 1500 | 214-243 | - | - | 825 | 1028 | Ø 315 | 0.08 | 290 | 0.42 | 1510 | 0.65 | 2340 | 0.65 | 2340 |
| 07 | 1600 | 262-301 | - | - | 995 | 1193 | Ø 400 | 0.08 | 290 | 0.69 | 2480 | 0.75 | 2700 | 0.75 | 2700 |
| 08 | 1600 | 270-309 | - | - | 995 | 1193 | Ø 400 | 0.20 | 720 | 0.77 | 2770 | 1.00 | 3600 | 1.00 | 3600 |
| 11 | 1860 | 444-496 | 655 | 141-167 | 1199 | 1503 | Ø 500 | 0.20 | 720 | 1.00 | 3600 | 1.10 | 3960 | 1.10 | 3960 |
| 12 | 1860 | 466-518 | 655 | 178 | 1199 | 1503 | Ø 500 | 0.20 | 720 | 1.14 | 4100 | 1.40 | 5040 | 1.40 | 5040 |
| 14 | 2080 | 521-589 | 765 | 175-209 | 1400 | 1603 | 1000x400 | 0.20 | 720 | 1.65 | 5940 | 1.65 | 5940 | 1.65 | 5940 |
| 20 | 2080 | 557-625 | 765 | 193-227 | 1400 | 1603 | 1000x400 | 0.30 | 1080 | 1.80 | 6480 | 2.10 | 7560 | 2.10 | 7560 |
| 25 | 2220 | 666-746 | 835 | 225-265 | 1600 | 1803 | 1200x500 | 0.30 | 1080 | 2.25 | 8100 | 2.50 | 9000 | 2.50 | 9000 |
| 30 | 2220 | 706-786 | 835 | 245-285 | 1600 | 1803 | 1200x500 | 0.50 | 1800 | 2.35 | 8460 | 3.20 | 11520 | 2.81 | 10120 |
| 35 | 2446 | 956-1070 | 948 | 322-379 | 1990 | 2085 | 1400x600 | 0.50 | 1800 | 3.50 | 12600 | 3.90 | 14040 | 3.90 | 14040 |
| 40 | 2446 | 1006-1120 | 948 | 347-404 | 1990 | 2085 | 1400x600 | 0.75 | 2700 | 3.80 | 13680 | 3.90 | 14040 | 3.90 | 14040 |
| 50 | 2670 | 1294-1418 | 1050 | 440-502 | 2318 | 2353 | 1600x800 | 0.60 | 2160 | 4.75 | 17100 | 5.00 | 18000 | 5.00 | 18000 |
| 60 | 2670 | 1374-1498 | 1050 | 480-542 | 2318 | 2353 | 1600x800 | 1.00 | 3600 | 5.00 | 18000 | 6.50 | 23400 | 6.00 | 21600 |
| 70 | 3120 | 2059-2211 | 1275 | 740-816 | 2637 | 2740 | 1800x1000 | 1.00 | 3600 | 6.60 | 23760 | 7.50 | 27000 | 7.50 | 27000 |
| 80 | 3120 | 2159-2435 | 1275 | 790-928 | 2637 | 2740 | 1800x1000 | 1.50 | 5400 | 6.85 | 24660 | 9.50 | 34200 | 8.31 | 29920 |
| 100 | 3322 | 3540-3900 | 1126 | 834+529 | 3340 | 3440 | 2400x1200 | 1.50 | 5400 | 10.00 | 36000 | 11.00 | 39600 | 11.00 | 39600 |
| 120 | 3322 | 3746-4168 | 1126 | 968+529 | 3340 | 3440 | 2400x1200 | 2.50 | 9000 | 10.30 | 37080 | 14.00 | 50400 | 13.04 | 46940 |

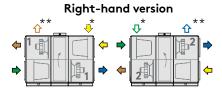
SILVER C RX 04-08

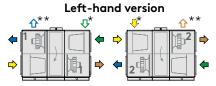
Right-hand version





SILVER C RX 11-120



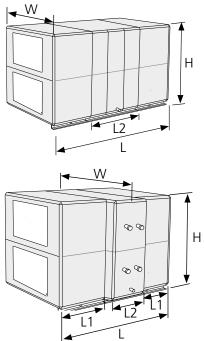


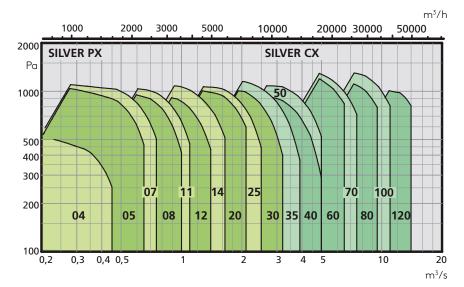


*) Inlet on the top side possible for sizes 14-30 **) Outlet on the top side possible for sizes 14-120 1.2) Possible fan placement



Technical data SILVER C, PX/CX





Division can occur on site to facilitate transporting into the installation area. Maximum dimensions and weights for division = L1&L2

| SILVER C | C L L2 | | W | н | \emptyset | Min. | | ≤ SFP _v 2.0 | 0/200 Pa | Max. | | Max. Ecodesign | | | |
|----------|--------|----------|------|---------|-------------|------|----------|------------------------|----------|------|------|----------------|-------|------|-------|
| PX | mm | kg | mm | kg | mm | mm | mm | m³/s | m³/h | m³/s | m³/h | m³/s | m³/h | m³/s | m³/h |
| 04 | 2000 | 291-337 | - | - | 825 | 1100 | Ø 315 | 0.08 | 290 | 0.45 | 1620 | 0.45 | 1620 | 0.45 | 1620 |
| 05 | 2000 | 291-337 | - | - | 825 | 1100 | Ø 315 | 0.08 | 290 | 0.47 | 1690 | 0.65 | 2340 | 0.53 | 1910 |
| 07 | 2230 | 360-419 | - | - | 995 | 1265 | Ø 400 | 0.08 | 290 | 0.71 | 2560 | 0.75 | 2700 | 0.75 | 2700 |
| 08 | 2230 | 369-428 | - | - | 995 | 1265 | Ø 400 | 0.20 | 720 | 0.79 | 2840 | 1.00 | 3600 | 0.83 | 2930 |
| 11 | 2510 | 552-646 | 1219 | 270-312 | 1199 | 1395 | Ø 500 | 0.20 | 720 | 1.01 | 3640 | 1.10 | 3960 | 1.05 | 3780 |
| 12 | 2510 | 574-668 | 1219 | 270-312 | 1199 | 1395 | Ø 500 | 0.20 | 720 | 1.14 | 4100 | 1.40 | 5040 | 1.20 | 4320 |
| 14 | 2830 | 667-773 | 1319 | 317-355 | 1400 | 1495 | 1000x400 | 0.20 | 720 | 1.65 | 5940 | 1.65 | 5940 | 1.65 | 5940 |
| 20 | 2830 | 703-809 | 1319 | 317-355 | 1400 | 1495 | 1000x400 | 0.30 | 1080 | 2.00 | 7200 | 2.10 | 7560 | 1.85 | 6660 |
| 25 | 3170 | 905-1058 | 1569 | 455-528 | 1600 | 1695 | 1200x500 | 0.30 | 1080 | 2.45 | 8820 | 2.50 | 9000 | 2.40 | 8640 |
| 30 | 3170 | 945-1098 | 1569 | 455-528 | 1600 | 1695 | 1200x500 | 0.50 | 1800 | 2.55 | 9180 | 3.20 | 11520 | 2.32 | 11520 |

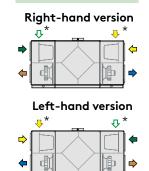
| SILVER | R L | | L1 | | L2 | | wн | | | Min. | | ≤ SFP _v 2.0/200 Pa | | Max. | | Max. Ecodesign | |
|---------|------|-----------|------|-----------|------|------|------|------|-----------|------|------|-------------------------------|-------|-------|-------|----------------|-------|
| с сх | mm | kg | mm | kg | mm | kg | mm | mm | mm | m³/s | m³/h | m³/s | m³/h | m³/s | m³/h | m³/s | m³/h |
| 35 | 2719 | 1410-1524 | 948 | - | - | 766 | 2190 | 2085 | 1400x600 | 0.50 | 1800 | 3.78 | 13608 | 3.90 | 14040 | 3.88 | 13970 |
| 40 | 2719 | 1460-1574 | 948 | - | - | 766 | 2190 | 2085 | 1400x600 | 0.75 | 2700 | 3.90 | 14040 | 3.90 | 14040 | 3.90 | 14040 |
| 50 | 2956 | 1887-2011 | 1050 | - | - | 1007 | 2518 | 2353 | 1600x800 | 1.00 | 3600 | 5.00 | 18000 | 5.00 | 18000 | 5.00 | 18000 |
| 60 | 2956 | 1967-2091 | 1050 | - | - | 1007 | 2518 | 2353 | 1600x800 | 1.00 | 3600 | 5.95 | 21420 | 6.50 | 23400 | 6.02 | 21670 |
| 70 | 3454 | 2797-2949 | 1275 | - | - | 1317 | 2837 | 2740 | 1800x1000 | 1.50 | 5400 | 7.30 | 26280 | 7.50 | 27000 | 7.48 | 26930 |
| 80 | 3454 | 2897-3173 | 1275 | - | - | 1317 | 2837 | 2740 | 1800x1000 | 1.50 | 5400 | 8.00 | 28800 | 9.50 | 34200 | 7.86 | 28300 |
| 100 | 3396 | 4374-4734 | - | 1183-1363 | 1144 | - | 3540 | 3440 | 2400x1200 | 1.50 | 5400 | 11.00 | 39600 | 11.00 | 39600 | 11.00 | 39600 |
| 120 | 3396 | 4580-5002 | - | 1286-1597 | 1144 | - | 3540 | 3440 | 2400x1200 | 2.50 | 9000 | 11.70 | 42120 | 14.00 | 50400 | 12.68 | 45650 |

SILVER C PX 04-08

Right-hand ver-

sion

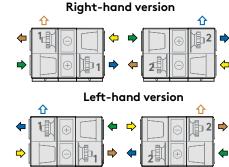
Left-hand version



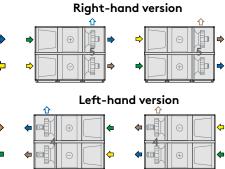
SILVER C PX 11-30

**) Inlet and outlet on the top side possible for sizes 14-30.

SILVER C CX 35-120



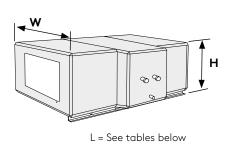
SILVER C CX 100-120



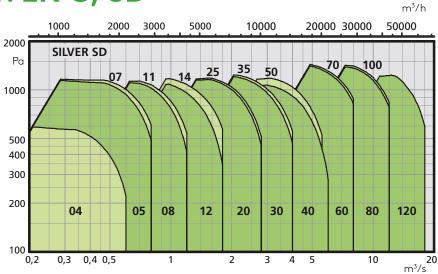
1.2) Possible fan placement. 4.5) Possible fan placement in addition to 1 and 2.



Technical data SILVER C, SD

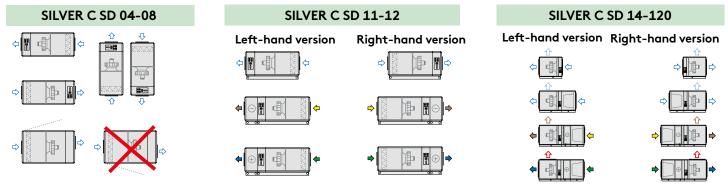


Division can occur on site to facilitate transporting into the installation area. Maximum dimensions and weights for division = L1



| SILVER C SD 04-08 | | L | | | | | Min. | | P _v 1.0 | /200 Pc | I M | ax. | Max. Ecodesign | | | |
|--------------------|------|-----------|---------|---------|---------|---------|---------|-----------------|--------------------|---------|--------------------------|-----------|----------------|-----------|----------------|-------|
| | mm | kg | W mm | H mm | Ø | m³/ | ′s m³∕h | m | ³ /s | m³/h | m³/s | m³/h | m³/s | m³/h | | |
| 04 | 1099 | 105-119 | 825 | 490 | Ø 315 | 0.08 | 3 290 | 0. | 60 | 2160 | 0.60 | 2160 | 0.60 | 2160 | | |
| 05 | 1099 | 105-119 | 825 | 490 | Ø 315 | 0.08 | 8 290 | 0. | 80 | 2880 | 0.80 | 2880 | 0.66 | 2380 | | |
| 07 | 1174 | 113-133 | 995 | 575 | Ø 400 | 0.08 | 8 290 | 0. | 80 | 2880 | 0.80 | 2880 | 0.80 | 2880 | | |
| 08 | 1174 | 117-137 | 995 | 575 | Ø 400 | 0.20 | 0 720 | 1. | 19 | 4280 | 1.20 | 4320 | 1.07 | 3850 | | |
| SILVER C SD 11-12 | | L | | L1 | | | | | M | lin. | ≤ SFP ₂ .0/20 | | 0/200 Pa | | Max. Ecodesign | |
| | mm | kg | mm | kg | W mm | H mm | Ø | | m³/s | m³/h | m³/s | m³/ | 'n m | ¹³∕s m³∕h | m³/s | m³/h |
| 11 | 2092 | 321-347 | 1404 | 150-176 | 1199* | 748 | Ø 500 | | 0.20 | 720 | 1.05 | 378 | 0 1 | .20 4320 | 1.20 | 4320 |
| 12 | 2092 | 332-358 | 1404 | 161-187 | 1199* | 748 | Ø 500 | ۶ 5 00 ک | | 720 | 1.20 | 432 | 0 1 | .80 6480 | 1.41 | 5080 |
| SILVER C SD 14-120 | L | | L1 | | | | | | М | in. | ≤ SFP _v 2 | .0/200 Po | 3 | Max. | Max. Ecodesign | |
| | mm | kg | mm | kg | W mm | H mm | mm | | m³/s | m³/h | m³/s | m³/h | m³/ | ′s m³/h | m³/s | m³∕h |
| 14 | 2615 | 450-518 | 1040 | 169-188 | 1400* | 906 | 1000x40 | 00 | 0.20 | 720 | 1.65 | 5940 | 1.8 | 0 6480 | 1.80 | 6480 |
| 20 | 2615 | 498-536 | 1040 | 187-206 | 1400* | 906 | 1000x40 | 00 | 0.30 | 1080 | 2.10 | 7560 | 2.8 | 0 10080 | 2.25 | 8100 |
| 25 | 2720 | 626-678 | 1145 | 241-267 | 1600* | 1126 | 1200x50 | 00 | 0.30 | 720 | 2.50 | 9000 | 2.8 | 0 10080 | 2.80 | 10080 |
| 30 | 2720 | 646-698 | 1145 | 261-287 | 1600* | 1126 | 1200x50 | 00 | 0.50 | 1800 | 3.19 | 11480 | 4.0 | 0 14400 | 3.47 | 12490 |
| 35 | 2720 | 793-861 | 1145 | 316-350 | 1990* | 1226 | 1400x60 | 00 | 0.50 | 1800 | 3.90 | 14040 | 4.0 | 0 14400 | 4.00 | 14400 |
| 40 | 2720 | 818-886 | 1145 | 341-375 | 1990* | 1226 | 1400x60 | 00 | 0.75 | 2700 | 4.00 | 14400 | 5.0 | 0 18000 | 4.92 | 17710 |
| 50 | 2687 | 1093-1155 | 1078 | 379-410 | 2318* | 1420 | 1600x80 | 0C | 0.60 | 2160 | 5.00 | 18000 | 5.6 | 0 20160 | 5.60 | 20160 |
| 60 | 2687 | 1133-1195 | 1078 | 419-450 | 2318* | 1420 | 1600x80 | 00 | 1.00 | 3600 | 6.50 | 23400 | 8.0 | 0 28800 | 6.99 | 25160 |
| 70 | 3452 | 1563-1639 | 1327 | 552-590 | 2637* | 1420 | 1800x10 | 00 | 1.00 | 3600 | 7.30 | 26280 | 8.0 | 0 28800 | 7.79 | 28040 |
| 80 | 3452 | 1613-1689 | 1327 | 602-640 | 2637* | 1420 | 1800x10 | 00 | 1.50 | 5400 | 8.00 | 28800 | 12.0 | 00 43200 | 7.86 | 28300 |
| 100 | 3396 | 2187-2367 | 1182 | 654-834 | 3340* | 1720 | 2400x12 | 00 | 1.50 | 5400 | 11.00 | 39600 | 12.0 | 00 43200 | 11.48 | 41330 |
| 120 | 3396 | 2290-2501 | 1182 | 757-968 | 3340* | 1720 | 2400x12 | 00 | 2.50 | 9000 | 11.70 | 42120 | 18.0 | 00 64800 | 12.69 | 45680 |

1) Width of a possible coil heat exchanger = W + 200 mm.





Dust accessories for SILVER C

In addition to the duct accessories presented below, pre-filters and carbon filters are also available for all SILVER C and mixing section for SILVER C SD.

| | | | | 04/05 | 07/08 | 11/12 | 14/20 | 25/30 | 35/40 | 50/60 | 70/80 | 100/120 |
|---|--------------|---|-----------|-------|-------|-------|-------------|-------------|-------------|-------|-------|---------|
| Damper TBSA | \checkmark | | L (mm) | 140 | 210 | 210 | 220 | 220 | 220 | 220 | 220 | 220 |
| Sound attenuator TBDA | | | L (mm) | 915 | 1200 | 1200 | 650 | 650 | 650 | 650 | 1250 | 1250 |
| Air heater TBLA, water | ⊕⊙ | 0 | L (mm) | 300 | 300 | 300 | 148- 300 | 148- 300 | 148- 300 | - | - | - |
| Air cooler TBKA, chilled water TBKC, direct expansion. | Θ | 0 | L (mm) | 500 | 500 | 500 | 500 | 500 | 500 | _ | _ | _ |
| Air recirculation section TCBRS | - | E | L (mm) | - | _ | 550 | 550 | 550 | 550 | 570 | 570 | 1070 |
| Air bypass section TCBPS | | E | L (mm) | _ | _ | 550 | 550 | 550 | 550 | _ | _ | _ |

Mechanical accessories for SILVER C

TBXZ Pipework package

The pipework package is used for the SILVER C CX and SD with coil heat exchanger.

Installation, pipe connection, filling and electrical connection are on site.

Droplet eliminator

To prevent condensate entrainment for SILVER C CX/SD sizes 14-120.

Water trap

Water trap for the drain branch of plate heat exchangers and coil heat exchangers.

Support foot

Adjustable support foot for taking up unevenness or sloping of the floor. The support foot should be mounted on the base beam of the air handling unit.

Support stand

For sizes 04–08.

Set of support legs For SILVER C PX.

Mounting

For SILVER C PX sizes 04-08.

Cover holder

Facilitates inspection and maintenance of vertical installations.

TCWP Component box

Component box TCWP is designed to provide protection against damage or weather, for example, valves and actuators.

Slip-clamp jointing flanges

Set of slip clamps in appropriate lengths for one joint.

Metu connection

Type METU connection frame with set of bolts, 30 mm wide flange.



Roof and hoods for SILVER C

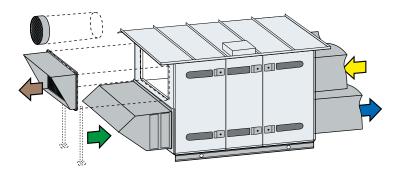
Outdoor installation

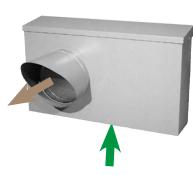
SILVER C units can be installed outdoors if fitted with the roof, air intake section and exhaust air hood accessories. However, the roof cannot be used on air handling units with the fan outlet/inlet positioned on the top of the unit.

The roof is supplied as an assembly kit.

Hoods

Hoods are available in different versions for up to unit size 40. Hoods for size 04-12 have circular duct connections equipped with a rubber seal ring and hoods for the size 14-40 have rectangular duct connections.





TBHE Exterior wall hood size 04-12



Hood

size 04-40

TBHB Exhaust Air Hood size 04-40



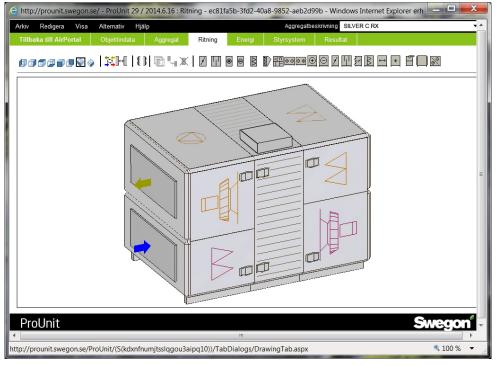
TBHC Dual-purpose Hood size 04-12

Sizing in ProUnit

ProUnit is Swegon's calculation software for the design of the air handling unit SILVER C. The software is always used to get the exact value and performance for the current item.

After entering basic data the software provides the following information:

- Size suggestions
- Dimensions
- Weight
- Selection of accessories
- Acoustic data
- Object-specific flowcharts
- Contractor demarcations
- Efficiency of the heat exchangers
- Energy calculation
- Links to CAD



Examples from the sizing software ProUnit.



Modular Air Handling Unit SILVER M



General

The SILVER M consists of several functional sections that are supplied to the building site separately or joined together in blocks. This gives great flexibility and the opportunity to adapt the air handling unit to the prevailing conditions.

Depending on the sizes and transport facilities, the units can be manufactured and delivered in one common casing.

The casing is made of panels and supporting frame members. Its design makes it simple to dismantle if modifications are required.

The interior surfaces of the unit are completely smooth and are free from sharp edges.

The configuration of the unit allows good access for maintenance of all the incorporated parts and components.

The patented thermal sealing strips between the panels and frame members in the unit casing prevent thermal bridges.

Application area

Immense flexibility characterises the SILVER M. Thanks to its large selection of solutions, the unit can be used in ventilation systems designed for various purposes. The air handling units are therefore especially well-suited for special projects such as production facilities, hospitals, spray-painting facilities, indoor swiming baths, etc.

Versatile solutions

- 33 standard sizes with airflows up to 90 m³/s (315 000 m³/h)
- Scope for special dimensions beside standard
- Large selection of components, materials and accessories
- Unique engineering solutions offer the highest mechanical and thermal performance
- Meets high stipulated hygienic demands
- Versions for indoor and outdoor installation
- Available in special versions, e.g. explosion-proof or hygienic version



Technical description SILVER M

Unit casing

The SILVER M casing is manufactured of panels and frame members. The 50 mm thick panels of "sandwich type" are made of galvanised sheet steel, both inner and outer skins. The panels are filled with an intervening slab of mineral wool that provides effective thermal and acoustic insulation. The casing panels contain mineral wool insulation with a density of 50 kg/m³; the floor panels have insulation with a density of 90 kg/m³.

The casing panels are jointed together with corner pieces by means of screws driven in from outside. The screw holes are blanked off by plastic covers.

The inspection doors are produced in the same way as the wall panels. The inspection doors are hung on robust metal hinges and are equipped with handles with or without lock depending on the requirements of the user. The inspection doors can, as an option, be equipped with inspection windows.

The standard unit casing has an earth connection at each fan section as well as an extra connection on the unit end panel by the air outlet (if the fan section is not the outermost section inside the air handling unit.

Transport eye bolts are included in the supply as standard for lifting the air handling unit blocks.

The standard casing for SILVER M can, as an option, be equipped with several different accessories.

The casing comes in leakage class L1(M) according to EN 1886:2007.

Joint brackets

Special screwed connections are used for jointing adjacent functional sections or unit blocks together. The screwed connections are a unique solution that prevent lateral and vertical displacement as well as ensure an exact interconnection of the unit sections. The joint brackets are supplied together with the unit.

Base beams

The design of the air handling unit makes it so stable that no base beams are required for stabilising the unit. If it is necessary to give the unit extra height, base beams and/or support feet are available as accessories.

Version for outdoor installation

Each functional section or unit block of the air handling units for outdoor installation is supplied with a factory-fitted roof. Profiled brackets for jointing together the roof of one unit block to the next are included in the supply.

The units with roof can also be equipped with extra accessories, such as outdoor air intake and exhaust air hood.

Certification

Swegon AB has a certified Quality Assurance System that conforms to ISO 9001 Standard and a certified Environmental Management System to ISO 14001. The SILVER M air handling system is also certificated by Eurovent.











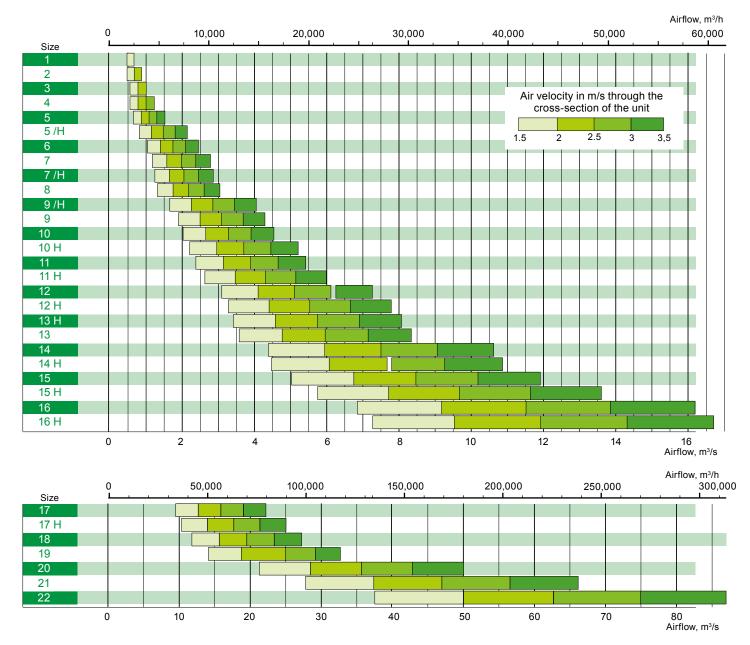




www.eurovent-certification.com www.certiflash.com



Capacity SILVER M



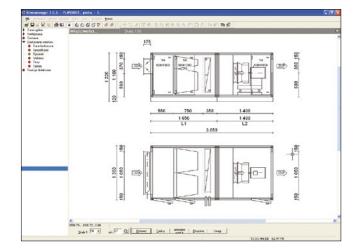
Sizing in Klimamanager

The SILVER M with all accessories is sized with precision in the Klimamanager unit sizing program.

The Klimamanager unit sizing program computes and presents all the necessary data for correct air handling unit selection, among others the following:

- Air temperatures and humidity
- Air resistance in each unit section
- Water flow resistance in the air heater and air cooler
- Air heater and air cooler capacities
- Efficiency of the heat exchangers
- Sound power level of the fans
- Attenuation capability of the silencers
- Energy consumption of the fan motors

Get in touch with Swegon for calculations in Klimamanager.



Examples from the Klimamanager unit sizing program.



Functional sections SILVER M

Damper section

The damper casing and the damper blades in the standard version are made of galvanised sheet steel. The damper blades are available with rubber seals to Ductwork leakage class 2 and 4 or without seals.

Mixing section

Available in several versions and consist of two or three dampers.





Can be obtained with bag filters, cassette filters, HEPA filters or carbon filters and in an appropriate filter class.

Rotary heat exchanger

The heat exchanger is also available in three versions:

Standard rotor – aluminium. Hygroscopic rotor – recovers both heat and moisture in the extract air.

Epoxy-coated rotor – recovers heat in chemically aggressive extract air.

Cross-flow plate heat exchanger

The heat exchanger section is equipped with a bypass damper and interlinked damper located in the outdoor air inlet of the heat exchanger. As standard the heat exchanger insert is made of aluminium, but can also be obtained epoxy treated for chemically aggressive extract air.

Coil heat exchangers

The coil consists of copper tubes and pressed-on aluminium fins. The headers of the coils are made of copper and the connection pipes are made of steel. As standard the heat exchanger insert is made of aluminium, but can also be obtained epoxy treated for chemically aggressive extract air.











Functional sections SILVER M

Fan section

Fans are available for direct drive or belt drive. The motors conform to the

protection class IP55 and efficiency class IE2.

As an option, the fan assemblies are available in a stainless or explosion-proof version.





Silencer section

The silencer in the air handling unit is composed of specially designed sound baffles that guarantee effective sound attenuation.

The sound baffles are filled with mineral wool and can be obtainable with coverage as follows:

- Fibre woven material

- Fibre woven material and perforated sheet

- Plastic foil and perforated sheet

- Fibre woven material and perforated sheet with resonator.

Inspection section

The inspection section is an empty section equipped with an inspection door. The inspection section can be one separate section or it can be included in a module with several functions.

Spacer section

The spacer section does not have any inspection door and can be one separate section or it can be included in a module with several functions.





Common accessories SILVER M

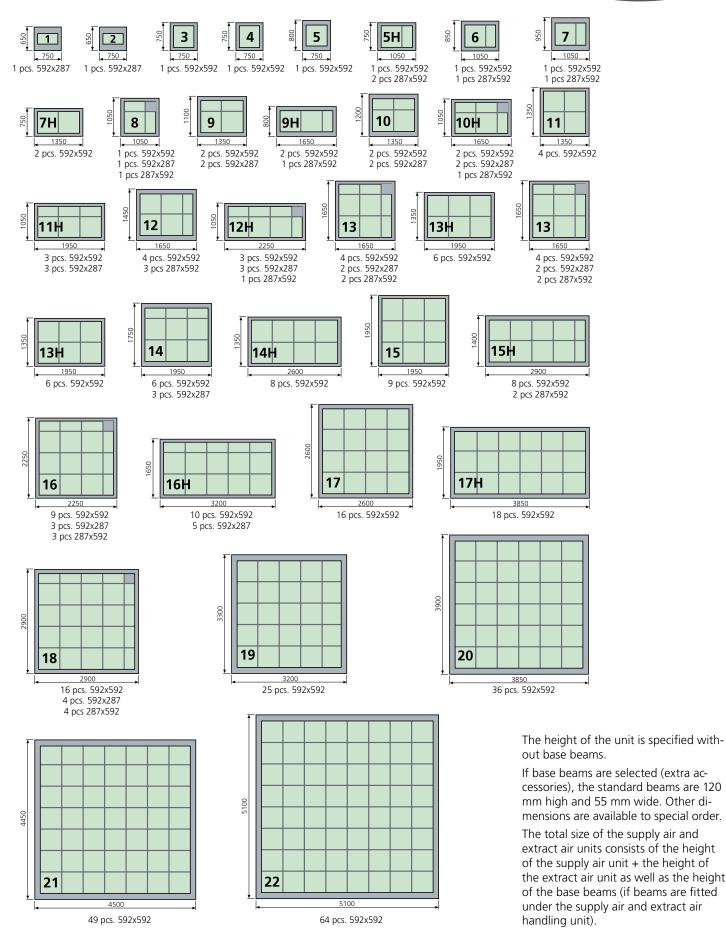




Dimensions SILVER M

The external dimensions of each unit size as well as the number and size of the filter cassettes in the filter section.

Besides the standard sizes, special dimensions are available!





We make every breath count.

