

Instructions for the BASIC BCVD Coil heat exchanger, Sizes 080–120

1. General

The BCVD is a finned-tube coil heat exchanger. Water usually mixed with glycol, is used as the heating medium. Important! If glycol is used, it must be of the type used in brine systems; not the type used in motor vehicles.

The BCVD consists of copper tubes with aluminium fins. The headers and liquid connections are made of steel.

The temperature efficiency of the coils is up to 60%.

The coils offer completely separate the supply air and exhaust air flows, making them especially suitable for use in processing plants with polluted air.

1.1 Specification

The version, size, etc. are specified in the delivery documents.

2. Installation

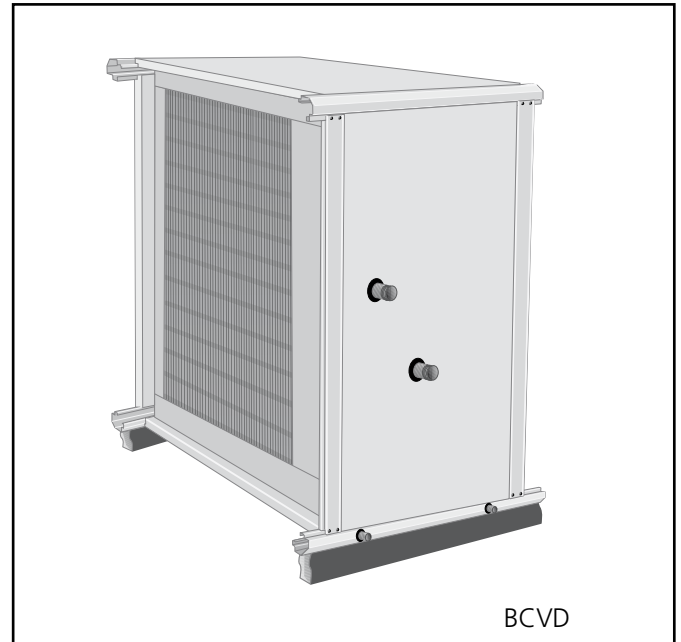
Connect the BCVD for counter-flow circulation as indicated by the arrows on the liquid connections. When installing, make sure that the shunt unit and the pipework do not obstruct inspection of the other functional sections.

2.1 Connection to the pipework

Connect the exhaust air and supply air BCVD coils across a common pipework package which should be arranged according to the diagram below (= BCVZ-1-aaa-81-b pre-fabricated pipework package).

Check that the deadweight and expansion forces of the piping are not applied to the liquid connections.

Suitable sealing tape or compound should be applied to the thread of the coil connections.

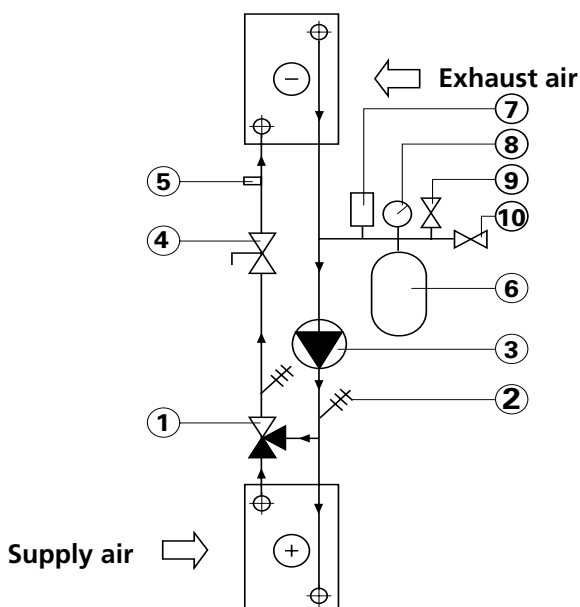


BCVD

2.2 Droplet eliminator

The heat exchanger on the exhaust air side can be equipped with a droplet eliminator that prevents condensate entrainment at air velocities in excess of 3 m/s. The pressure drop across the droplet eliminator is low.

The exhaust air coil is equipped with a sloping, stainless steel drip tray for collecting condensate. The drain connections are on the inspection side, and if they are open, they must be fitted with a BCXZ-1-71-1 water trap (See next page).



- 1 Control valve
- 2 Thermometer
- 3 Circulation pump
- 4 Throttling valve
- 5 Pipe connection for immersion sensor
- 6 Expansion vessel
- 7 Safety vent
- 8 Manometer
- 9 Purging valve
- 10 Charging valve

2.3 To install the water trap

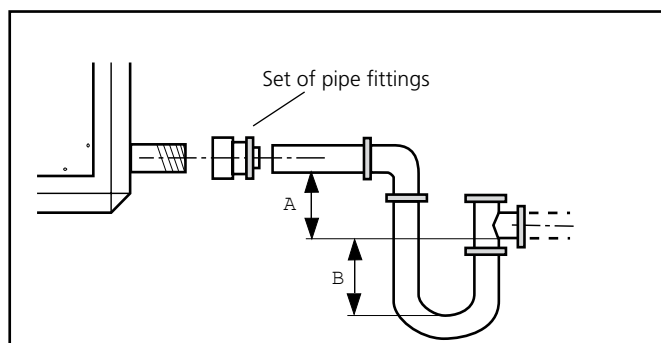
The water trap must be filled with water before the unit is started. The discharge pipe of the water trap should be run so as not to damage adjacent unit sections or building elements. If it is run through a cold space, it must be insulated to prevent freezing. A heating cable may be needed.

As the fans are usually last in the chain of air handling functions, they generate sub-atmospheric pressure in the unit. It is therefore very important to correctly fit the water trap.

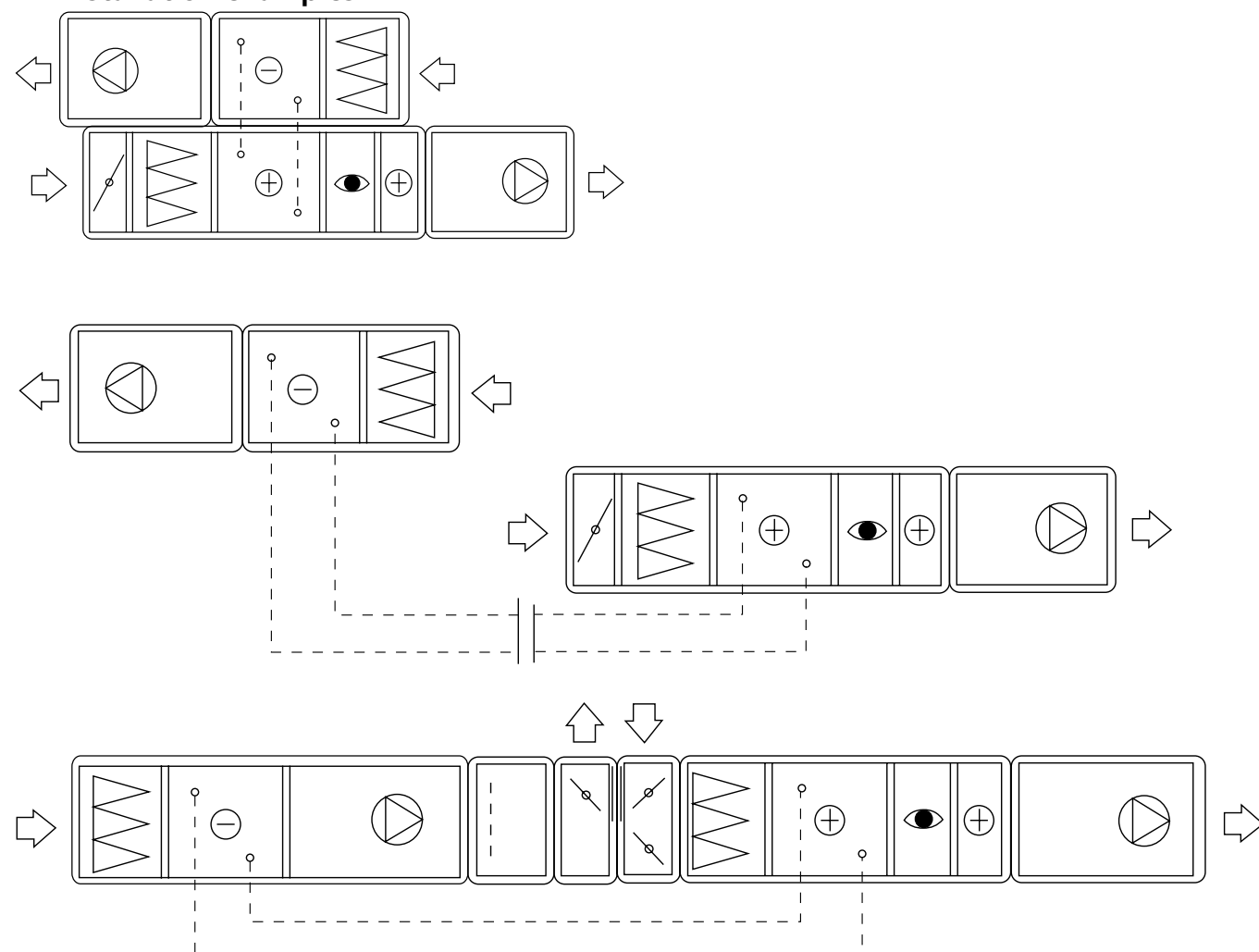
Height A (distance between the runoff level of the unit and the runoff level of the water trap) must be at least equivalent in mm to the negative pressure in the unit in mm w. g.

Height B (distance between the runoff level of the water trap and the upper point in the pipe bend) must be at least equivalent in mm to *half* the negative pressure in the unit in mm w. g.

If the water trap is ordered from Swegon, a set of pipe fittings that fit the condensate connection, is also included.



2.4 Installation examples



3. Maintenance

The coil should be checked every six months and cleaned if necessary. Also check whether it is properly vented.

The coil may be cleaned in the following way only:

Dry cleaning may be carried out by carefully blowing with compressed air in a direction parallel with the fins and against the ordinary direction of air flow or by vacuum-cleaning from the side of the coil facing the direction of air flow using a soft nozzle.

Wet cleaning can be carried out by hosing with water. If a solvent is used, it must not contain ingredients that will

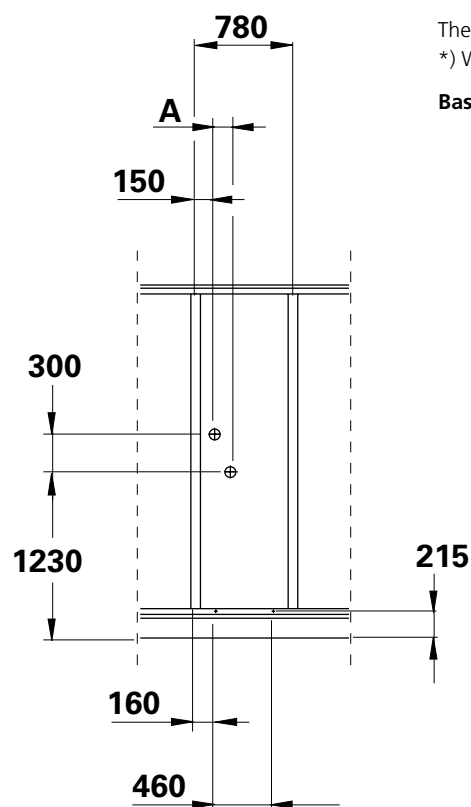
corrode aluminium or copper. Adjacent unit sections should be protected before cleaning is begun. After cleaning, the surfaces should be blown dry with compressed air to remove every trace of solvent or cleaning compound. Swegon cleaning compound is recommended. This cleaning compound is sold by Swegon representatives and Swegon Service.

While cleaning, check that there is no air in the coil, the glycol content and the tightness of the coil. Also make sure that the drain is not clogged.

4. Technical data

4.1 Dimensions

BCVD	B	6 tube rows			8 tube rows			10 tube rows			12 tube rows		
		A	Volume	Wgt.*	A	Volume	Wgt.*	A	Volume	Wgt.*	A	Volume	Wgt.*
080	2680	120	235	775	180	306	950	240	377	1120	300	448	1290
100	3390	120	298	965	180	389	1185	240	481	1410	300	573	1630
120	3940	120	346	1105	180	452	1360	240	560	1625	300	666	1880



The drain connection is on the exhaust air heat exchanger only.

*) Weight excl. water

Base beams: Standard

