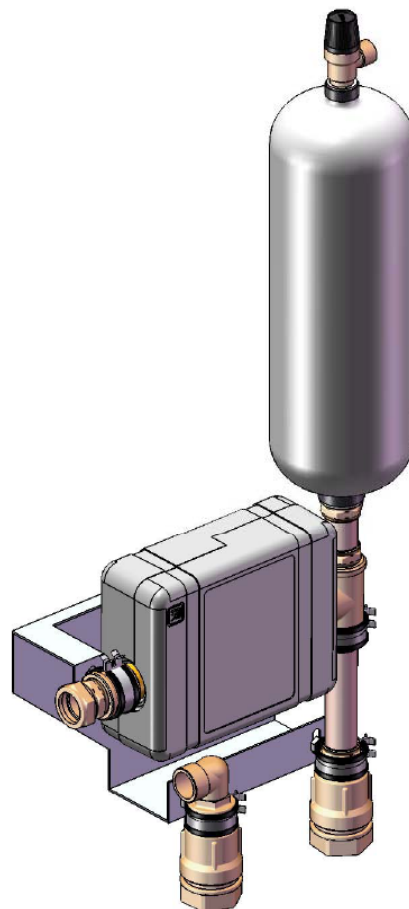


GEBWELL

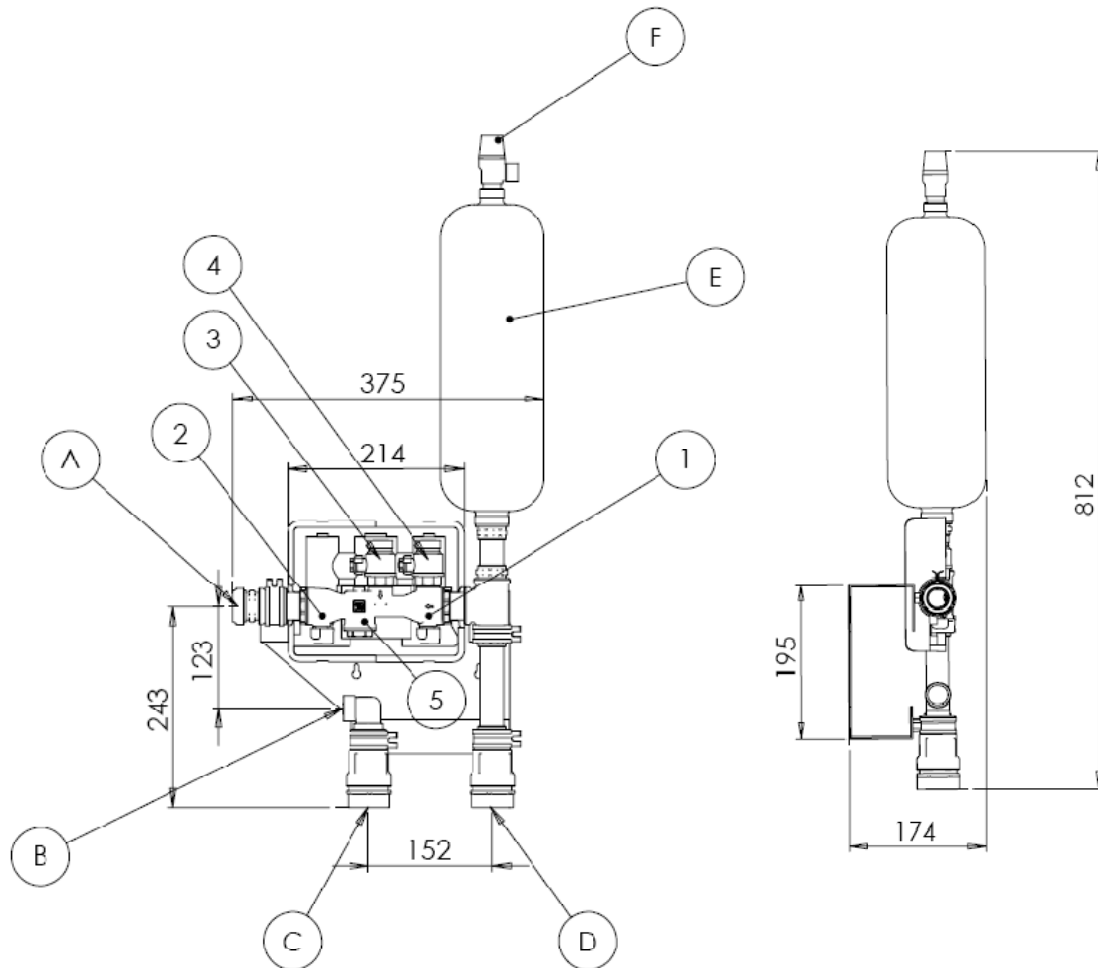
L Ä M M I T Y S R A T K A I S U T

Ground loop valve group

- Gebwell ground loop valve group unit is meant to be with all Gebwell ground source heat pumps equipment. The ground loop valve group's first purpose is to help ground loops airing, second is that you can easily increase more antifreeze solution and the third is that the mud filter helps you remove impurities in the loop/loops. The last but not least you can also fill the loop/loops through the ground loop valve group.
- Gebwell ground loop valve group will produced 1- and 2- circuits.
- Heat collection loop is insulated to disable condense waters to be formed.

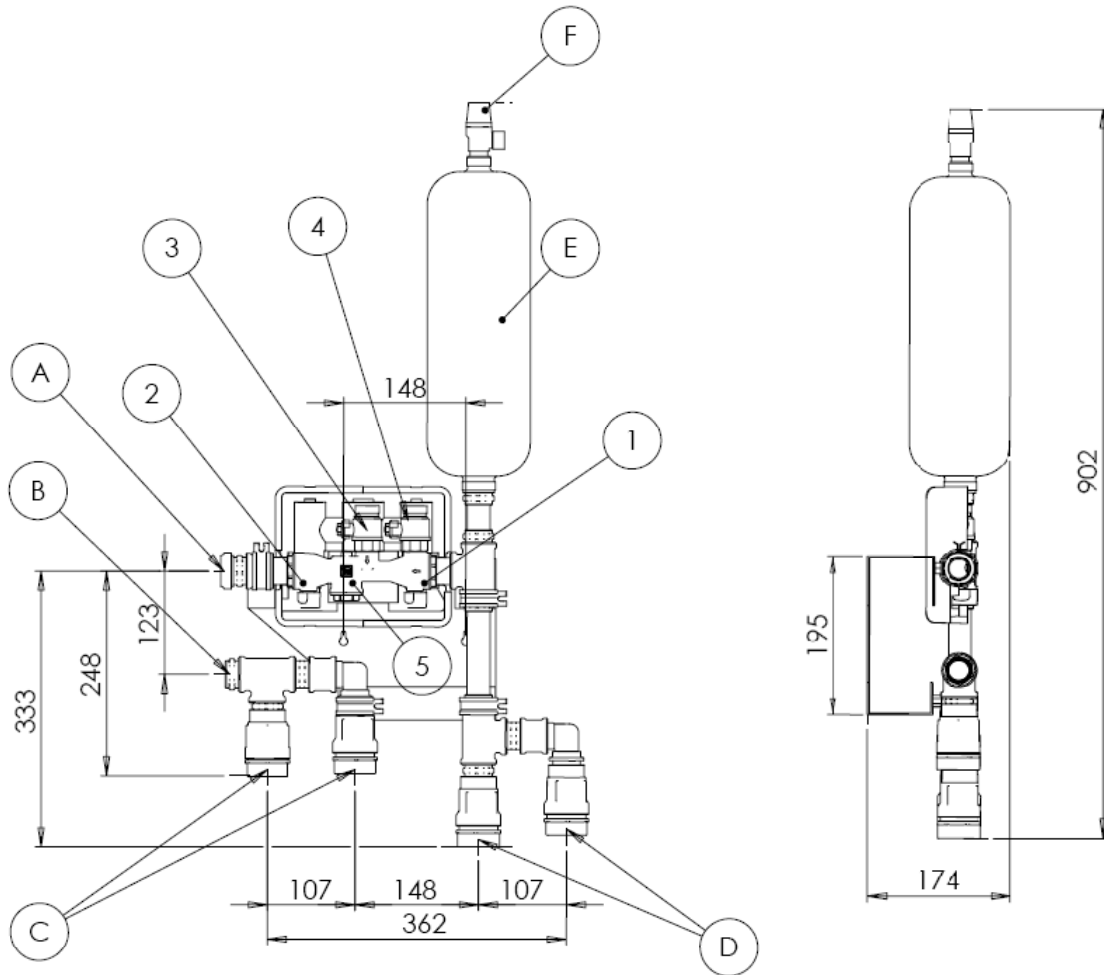


Ground loop valve group's measuring drawing and connection to 1- circuit



- A. Heat solution to ground source heat pump
- B. Heat solution from ground source heat pump
- C. Heat solution to heat source
- D. Heat solution from heat source
- E. Pressure vessel
- F. Safety valve 1,5 bar
- 1 and 2 Shut-off valves
- 3 and 4 Filling sets
- 5. Mud filter

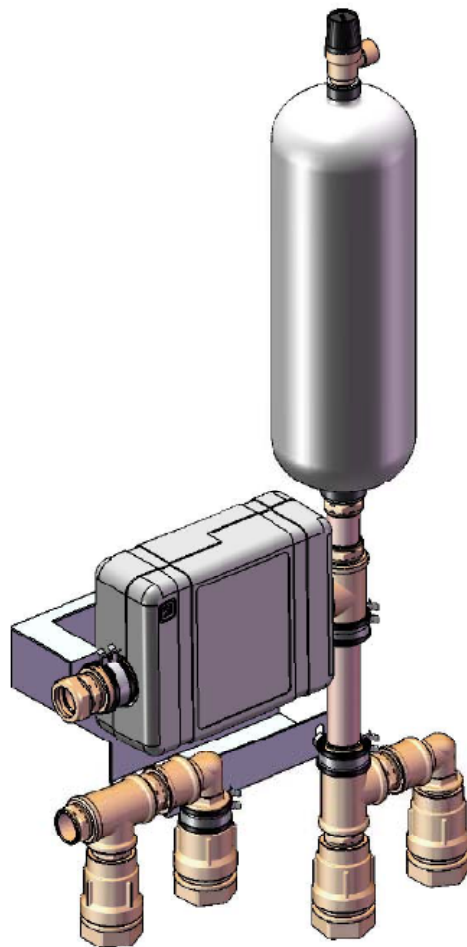
Ground loop valve group's measuring picture and connections to 2 circuit



- A. Heat solution to ground source heat pump
- B. Heat solution from ground source heat pump
- C. Heat solution to heat source
- D. Heat solution from heat source
- E. Pressure vessel
- F. Safety valve 1,5 bar
- 1 and 2 Shut-off valves
- 3 and 4 Filling sets
- 5. Mud filter

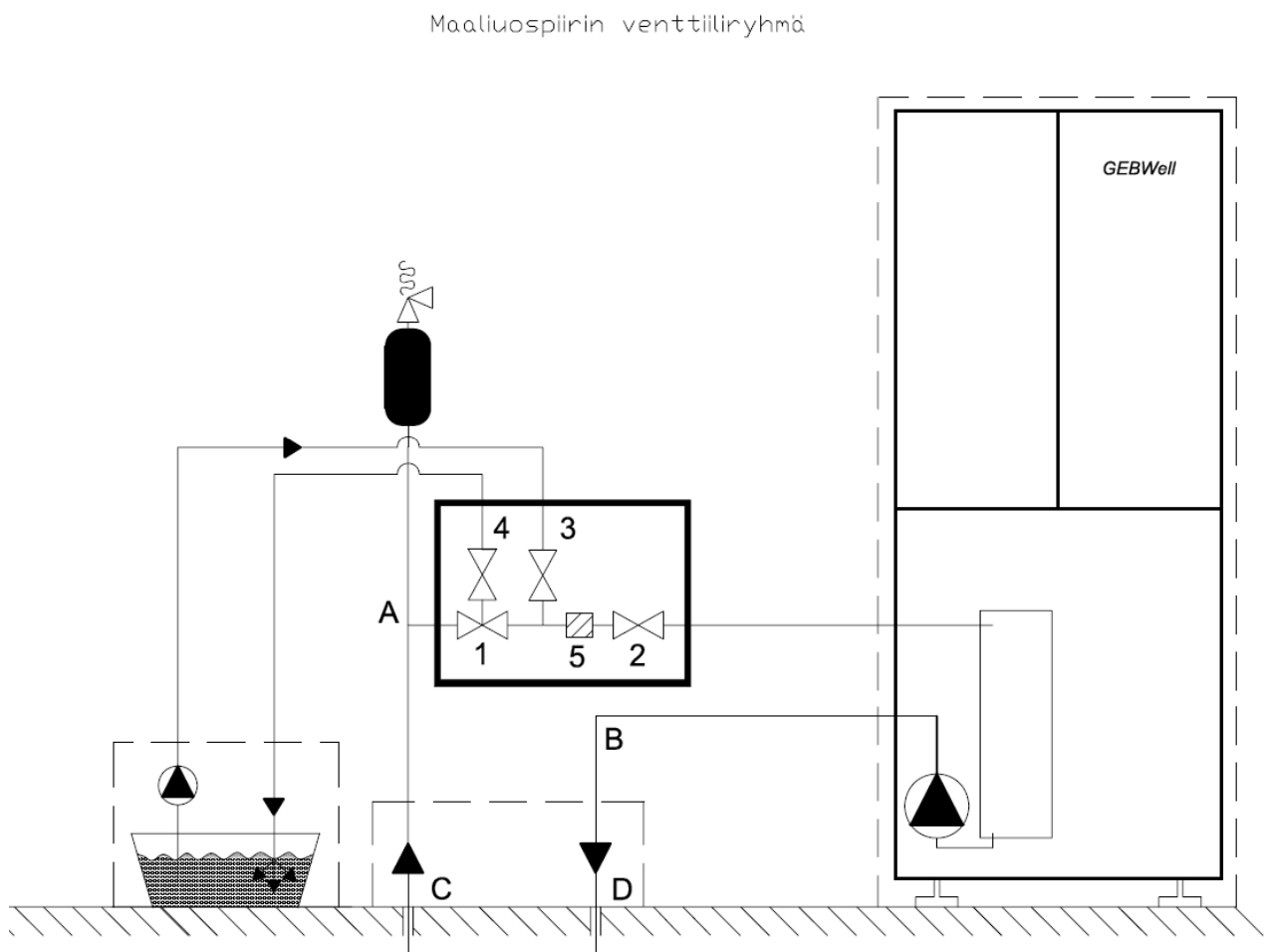
Installation of heat collection loop

- The heat collection pipes from ground or water system becomes direct to right distance to each other before casting to floor. (see measuring drawing)
- Ground loop valve group is to be installed to the wall beside ground source heat pump. (see different connection instruction)
- Pressure vessel can also placing a part from heat collection loop.
- The heat collection pipes from ground or water system will insulated and connected below the heat collection loop.
- The heat collection loop will connected ground source heat pump for example copper or plastic pipes. It's recommended that you insulate the pipes and when needed hold up the pipes with rubber insulated holders.
- If you don't know the length of the loops or the loops are different sizes, equip the pipes with balancing valves. (2 circuit's)



Heat collection loop's circuit diagram 1-circuit-loop

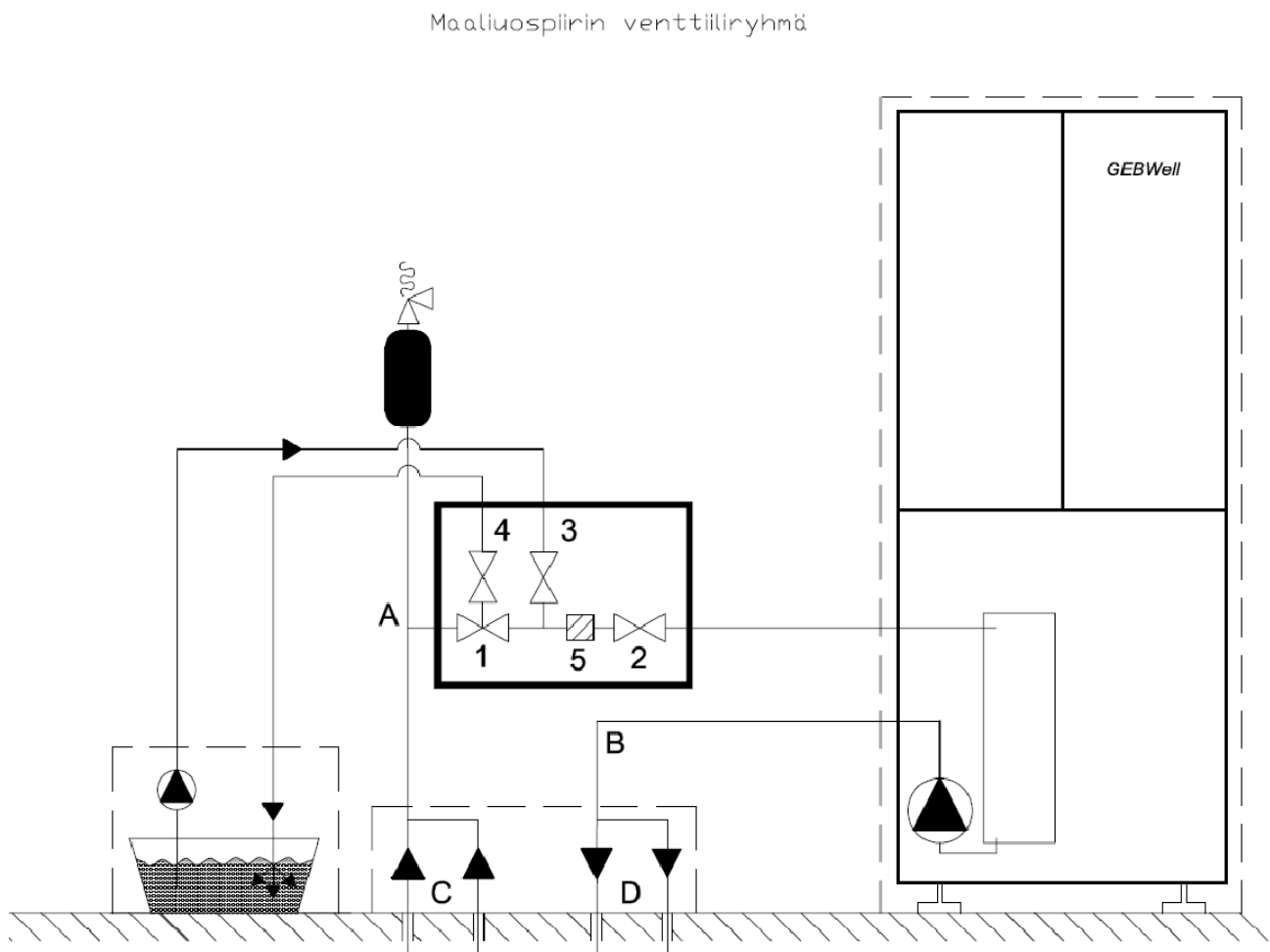
- Dashed line limited parts don't include the delivery



NOTE! You have the handle heating solution with the directions of the baggage.

Heat collection loop's circuit diagram 2- circuit-loop

- Dashed line limited part don't include the delivery



NOTE! You have the handle heating solution with the directions of the baggage.

The filling of the heat collection loop

- The arrow on the valve housing indicates the direction of flow.
- External thread is sealed in the usual way.
- On filling with heat solution, close valve 1.
- Connect the refrigerant fill to valve 3 according to the flow arrow.
- Connect the refrigerant return to valve 4.
- The first liters are impurity so that's why you should collect them in a different vessel.
- Earth heat pump and separated solution pump are used together until the valve 1's return pipe has no air bubbles any more.
- After filling, close the filling valves 3 and 4 and open valve 1.
- Fill the pressure vessel in 2/3 high and if there is an air in the system, the air will gather in to the pressure vessel.
- Ground solution pump will start module contactor K4 and then you observe to pressure vessels liquid surface when it goes steady.

NOTE! When you are refilling the system, the ground source heat pump must be running. You can refill the system through the safety valve's threaded hole. Fill the pressure vessel in 2/3 high. Then install the safety valve back.

- If there is an air in the system, the air will gather in to the pressure vessel, and that's why the solution surface gets lower. You can refill the system like above.

continue....

Usage

Cleaning of mud filter:

- Make sure that the earth heat pump will not start during the cleaning of mud filter. (shut the main current off)
- Take off the polystyrene cover.
- Close the valves 1 and 2, unscrew the filter cover 5, and clean the filter.
- When refitting, the tap below the filter holder should be fitted in the hole provided in the filter housing.
- To avoid condensate precipitation and possible icing, the combination valve should be insulated with suitable insulation (included).
- Next you can turn the earth heat pump on.