



Reversible air conditioning system

Another system where heating and cooling is integrated is the reversible air conditioning system. In this particular type of condenser cooling system there are separate small cooling units in each room of, for example, an office building. These chillers can be used as either chillers or heat pumps, depending on the season and the climate. They are all connected to a main pipe that carries water through the system. This pipe is connected both to the cooling

source and to the heat source of the building.

During summer, the heat source is cut off and the water will flow directly through the plate heat exchanger on the heat-source side. The water of the main pipe will cool the condensers of the room units and transport the excess energy to the cooling source via the heat exchanger on the cooling-source side.

During winter, the cooling source is cut off and the water will flow through the plate heat exchanger on the cooling-source side with no change of temperature. Instead the heat source will now be in operation, and the water will be heated when passing the plate heat exchanger on the heat-source side. The room units will now be reversed, so that the hot water will go into the evaporators and transfer the heat to the rooms. The room units are now heat pumps.

