WHAT IS CLAIMED IS:

1. A temperature adjusting device, comprising:

an evaporative cooling device, comprising:

a heat exchange core, for exchanging heat between indoor air and outdoor air, wherein the heat exchange core comprises an indoor air supply port and an outdoor air outlet; and

a compressor device, comprising:

a compressor, comprising an air discharge port and air suction port;

a first heat exchanger, provided at one side of the indoor air supply port and connected to the air suction port of the compressor;

a first throttling component with a first end connected to the first heat exchanger;

a second heat exchanger, provided at one side of the outdoor air outlet;

a second throttling component with a first end connected to the second heat exchanger;

a reversing valve, comprising a first port, a second port, and a third port, wherein the first port is connected to the air discharge port of the compressor, the second port is connected to the second heat exchanger, and the third port is connected to the air suction port of the compressor; and

a third heat exchanger with a first end connected to the air discharge port of the compressor, a second end connected to the second end of the first throttling component, and further connected to the second end of the second throttling component, and the third heat exchanger being configured to exchange heat with a heat exchange medium, wherein the air discharge port of the compressor is connected to the first port of the reversing valve via a first path and the discharge port of the compressor is connected to the third heat exchanger via a second path.

2. The temperature adjusting device according to claim 1, wherein,

the opening of the first throttling component and/or the second throttling component is adjustable.

3. The temperature adjusting device according to claim 2, wherein, the compressor device further comprises:

a controller electrically connected to the first throttling component and/or the second throttling component, and configured to control the opening of the first throttling component and/or the second throttling component.

4. The temperature adjusting device according to claim 3, wherein, the compressor device further comprises:

a first temperature sensor for obtaining an outdoor air inlet temperature, wherein the first temperature sensor is electrically connected to the controller; and

the controller is further configured to control the operation mode of the temperature adjusting device based on the outdoor air inlet temperature and the user’s heat demand.

5. The temperature adjusting device according to claim 4, wherein, the compressor device further comprises:

a second temperature sensor for obtaining the temperature of the heat exchange medium of the inlet end of the third heat exchanger, wherein the second temperature sensor is electrically connected to the controller; and

the controller is further configured to control the operation mode of the temperature adjusting device according to the outdoor air inlet temperature and the temperature of the heat exchange medium of the inlet end of the third heat exchanger.

6. The temperature adjusting device according to any one of claims 1 to 5, wherein, the compressor device further comprises:

a third throttling component, wherein the second end of the third throttling component is connected to the second end of the first throttling component, the second end of the third throttling component is further connected to the second end of the second throttling component, and the first end of the third throttling component is connected to the second end of the third heat exchanger.

7. The temperature adjusting device according to any one of claims 1 to 5, wherein, the compressor device further comprises:

a first draught fan, provided at the side of the first heat exchanger near the indoor air supply port; and/or

a second draught fan, provided at the side of the second heat exchanger near the outdoor air outlet.

8. The temperature adjusting device according to any one of claims 1 to 5, wherein, the compressor device further comprises:

a capillary, one end of which is connected to the air suction port of the compressor; and

the reversing valve further comprises a fourth port, which is connected to the other end of the capillary.

9. The temperature adjusting device according to any one of claims 1 to 5, wherein,

the third heat exchanger comprises: a refrigerant pipeline, used as the flow path for refrigerant.

10. The temperature adjusting device according to claim 9, wherein, the third heat exchanger further comprises:

a water path, used as a water flow path, and the refrigerant in the refrigerant pipeline exchanges heat with the water in the water path.

11. The temperature adjusting device according to any one of claims 1 to 5, wherein, the heat exchange core comprises:

a first flow channel, comprising an indoor return air inlet and an indoor air supply port which are connected to each other, wherein the first flow channel is used as the flow channel of indoor air; and

a second flow channel, comprising an outdoor air inlet and an outdoor air outlet which are connected to each other, wherein, the second flow channel is used as the flow channel of outdoor air.

12. The temperature adjusting device according to claim 11, wherein, the evaporative cooling device further comprises:

a spraying nozzle for spraying water into the second flow channel;

a water collection pan for collecting water flowing from the second flow channel;

a water pipe, one end of which is connected to the spraying nozzle, and the other end of the water pipe is connected to the water collection pan; and

a water pump, provided on the water pipe, for driving the water in the water collection pan to flow towards the spraying nozzle.

13. An air conditioning system, comprising:

the temperature adjusting device of any one of claims 1 to 12.

14. A control method for the temperature adjusting device of any one of claims 1 to 12, comprising:

obtaining an environment temperature and the user’s heat demand; and

determining the operation mode of the temperature adjusting device based on the environment temperature and the user’s heat demand.

15. The control method according to claim 14, wherein,

the operation mode comprises: a first operation mode, a second operation mode, a third operation mode and a fourth operation mode;

in the first operation mode, the temperature adjusting device performs evaporative cooling on a heat source and recovers waste heat;

in the second operation mode, the temperature adjusting device performs evaporative cooling on a heat source and recovers a portion of waste heat;

in the third operation mode, the temperature adjusting device performs evaporative cooling and compression refrigeration on a heat source and recovers waste heat; and

in the fourth operation mode, the temperature adjusting device performs evaporative cooling and compression refrigeration on a heat source and recovers a portion of waste heat.

16. The control method according to claim 15, wherein,

the environment temperature comprises an outdoor air inlet dry-bulb temperature and an outdoor air inlet wet-bulb temperature;

the user's heat demand is determined based on the size relationship between the temperature of the heat exchange medium of the inlet end of the third heat exchanger and a heat exchange medium critical temperature;

obtaining the environment temperature and the user's heat demand specifically comprises:

obtaining the outdoor air inlet dry-bulb temperature or the outdoor air inlet wet-bulb temperature and the temperature of the heat exchange medium of the inlet end of the third heat exchanger;

determining the operation mode of the temperature adjusting device based on the environment temperature and the user's heat demand specifically comprises:

if the outdoor air inlet dry-bulb temperature is lower than or equal to an outdoor air inlet critical dry-bulb temperature or the outdoor air inlet wet-bulb temperature is lower than or equal to an outdoor air inlet critical wet-bulb temperature, and the temperature of the heat exchange medium of the inlet end of the third heat exchanger is lower than or equal to the heat exchange medium critical temperature, the temperature adjusting device is determined to be in the first operation mode;

if the outdoor air inlet dry-bulb temperature is lower than or equal to the outdoor air inlet critical dry-bulb temperature or the outdoor air inlet wet-bulb temperature is lower than or equal to the outdoor air inlet critical wet-bulb temperature, and the temperature of the heat exchange medium of the inlet end of the third heat exchanger is greater than or equal to the heat exchange medium critical temperature, the temperature adjusting device is determined to be in the second operation mode;

if the outdoor air inlet wet-bulb temperature is greater than the outdoor air inlet critical wet-bulb temperature, and the temperature of the heat exchange medium of the inlet end

of the third heat exchanger is lower than or equal to the heat exchange medium critical temperature, the temperature adjusting device is determined to be in the third operation mode; and

if the outdoor air inlet wet-bulb temperature is greater than the outdoor air inlet critical wet-bulb temperature, and the temperature of the heat exchange medium of the inlet end of the third heat exchanger is greater than the heat exchange medium critical temperature, the temperature adjusting device is determined to be in the fourth operation mode.

17. The control method according to claim 15 or 16, wherein,

in the first operation mode or the second operation mode, the first throttling component is controlled to close, the second throttling component is controlled to open, and the second port and the third port of the reversing valve are connected;

the opening of the second throttling component in the second operation mode is smaller than that of the second throttling component in the first operation mode; and/or

the frequency of the compressor in the second operation mode is smaller than that of the compressor in the first operation mode.

18. The control method according to claim 15 or 16, wherein,

in the third operation mode, the first throttling component is controlled to open, the second throttling component is controlled to close, and the second port and the third port of the reversing valve are disconnected; or

in the third operation mode, the first throttling component and the second throttling component are controlled to open, and the second port and the third port of the reversing valve are connected.

19. The control method according to claim 15 or 16, wherein,

in the fourth operation mode, the first throttling component and the second throttling component are controlled to open, and the second port and the first port of the reversing valve are connected.

20. A temperature adjusting device, comprising:

a memory and a processor, wherein, the memory stores a program or instruction that can be executed on the processor, and the steps of the control method according to any one of claims 14 to 19 are implemented when processor executes the program or instruction.

21. A readable storage medium, in which a program or instruction is stored, wherein, the steps of the control method according to any one of claims 14 to 19 are implemented when processor executes the program or instruction.