

**CLAIMS**

1. A method for configuring a heating, ventilation, and air conditioning system, the system including at least one HVAC unit, each unit including a control circuit, the method comprising:  
receiving a return air temperature signal at the control circuit at the at least one HVAC  
5 unit;  
receiving a supply air temperature signal at the control circuit of the at least one HVAC  
unit;  
controlling a fan and a cooling value of the at least one HVAC unit based on the  
received return air temperature signal and the received supply air temperature signal.
- 10 2. The method of claim 1, further comprising:  
generating a cooling valve drive signal according to at least one of return air  
temperature signal and supply air temperature signal.
153. The method of claim 2, wherein the step of controlling comprises:  
controlling the cooling valve to increase the at least one cooling valve's water output  
based on the higher of a cooling valve drive signal between the return air temperature signal  
and the supply air temperature signal.
- 20 4. The method of claim 1, wherein the controlling step further comprises  
comparing the return air temperature signal with the supply air temperature signal;  
controlling the cooling valve based on the step of comparing the return air temperature  
and the supply air temperature.

5. The method of claim 4, wherein the controlling step further comprises:  
controlling the fan to operate at a minimum speed based on a capacity of the cooling valve.
- 5 6. The method of claim 4, wherein the controlling step further comprises:  
controlling the fan to increase a speed of the fan based the cooling valve operating at a maximum capacity.
7. The method of claim 6, wherein the step of controlling the fan to increase the speed  
10 occurring after a predetermined period of time.
8. The method of claim 1, wherein the controlling step further comprises controlling the cooling valve to operate at a minimum capacity based on the step of comparing the return air temperature signal with a cooling valve setpoint temperature.
- 15 9. The method of claim 1, wherein the HVAC system is configured to control the temperature of one or more computer systems.
10. The method of claim 1, wherein the HVAC system is configured to be used in a  
20 commercial area.
11. A heating, ventilation, and air conditioning system, the system comprising:  
at least one HVAC unit, each HVAC unit including:  
at least one fan;

controlling the cooling valve based on the comparing of the return air temperature and the supply air temperature.

15. The method of claim 14, wherein the controlling the fan and the cooling valve further  
5 comprises:

controlling the fan to operate at a minimum speed based on a capacity of the cooling valve.

16. The method of claim 14, the controlling the fan and the cooling valve further comprises:  
10 controlling the fan to increase a speed of the fan based the cooling valve operating at a maximum capacity.

17. The method of claim 16, wherein the controlling the fan to increase the speed occurring after a predetermined period of time.

18. The method of claim 11, the controlling the fan and the cooling valve further comprises  
15 controlling the cooling valve to operate at a minimum capacity based on the comparing of the return air temperature signal with a cooling valve setpoint temperature.

20 19. The method of claim 11, wherein the HVAC system is configured to control the temperature of one or more computer systems.

20. The method of claim 11, wherein the HVAC system is configured to be used in a commercial area.

at least one cooling valve

a processor, said processor coupled to least one fan and at least one cooling valve, said processor, said processor is adapted to execute instructions to perform the following:

- 5     receiving a return air temperature signal at the control circuit at the at least one HVAC unit;
- receiving a supply air temperature signal at the control circuit of the at least one HVAC unit;
- controlling a fan and a cooling valve of the at least one HVAC unit based on the received return air temperature signal and the received supply air temperature signal.

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12.    The system of claim 11, said processor is further adapted to execute instructions to perform the following:

      generating a cooling valve drive signal according to at least one of return air temperature signal and supply air temperature signal.

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13.    The system of claim 12, wherein controlling a fan and a cooling valve comprises:

      controlling the cooling valve to increase a cooling valve's water output based on the higher of the cooling valve drive signal between the return air temperature signal and the supply air temperature signal.

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14.    The method of claim 11, wherein the controlling at least one fan and at least one cooling valve further comprises:

      comparing the return air temperature signal with the supply air temperature signal;

CLAIMS

1. A method for configuring a heating, ventilation, and air conditioning (HVAC) system, the system including at least one HVAC unit, each unit including a control circuit, the method comprising:
  - receiving a return air temperature signal at the control circuit of the at least one HVAC unit;
  - receiving a supply air temperature signal at the control circuit of the at least one HVAC unit;
  - generating a first cooling valve drive signal based on a comparing of the return temperature signal and a return setpoint temperature;
  - generating a second cooling valve drive signal based on a comparing of the supply temperature signal and a supply setpoint temperature;
  - controlling a fan and a cooling valve of the at least one HVAC unit based at least on the received return air temperature signal, the received supply air temperature signal, a return setpoint temperature, and a supply setpoint temperature, wherein controlling comprises controlling the cooling valve to increase the cooling valve's water output based on comparing the first cooling valve drive signal and the second cooling valve drive signal.
2. The method of claim 1, further comprising:
  - generating a cooling valve drive signal according to at least one of return air temperature signal and supply air temperature signal.
3. The method of claim 1, wherein the comparing of the first cooling valve drive signal and the second cooling valve drive signal comprises the step of comparing temperature differentials of the first cooling drive signal and temperature differentials of the second cooling drive signal.
4. The method of claim 1, wherein the controlling step further comprises:
  - controlling the fan to operate at a minimum speed based on a capacity of the cooling valve.
5. The method of claim 1, wherein the controlling step further comprises:
  - controlling a fan to operate above a minimum speed based on the cooling valve operating at a maximum capacity.
6. The method of claim 1, wherein the controlling step further comprises controlling the cooling valve to operate at a minimum capacity based on comparing the return air temperature signal with a

cooling valve setpoint temperature.

7. The method of claim 1, wherein the HVAC system is configured to control the temperature of one or more computer systems.

8. The method of claim 1, wherein the HVAC system is configured to be used in a commercial area.

9. A heating, ventilation, and air conditioning (HVAC) system, the system comprising:

at least one HVAC unit, each HVAC unit including:

at least one fan;

at least one cooling valve;

a processor, said processor coupled to the least one fan and the at least one cooling valve, said processor, said processor is adapted to execute instructions to perform the following:

receiving a return air temperature signal at the control circuit of the at least one HVAC unit;

receiving a supply air temperature signal at the control circuit of the at least one HVAC unit;

generating a first cooling valve drive signal based on a comparing of the return temperature signal and a return setpoint temperature;

generating a second cooling valve drive signal based on a comparing of the supply temperature signal and a supply setpoint temperature;

controlling the at least one fan and the at least one cooling valve of the at least one HVAC unit based at least on the received return air temperature signal, the received supply air temperature signal, a return setpoint temperature, and a supply setpoint temperature, wherein controlling comprises controlling the at least one cooling valve to increase the at least one cooling valve's water output based on comparing the first cooling valve drive signal and the second cooling valve drive signal.

10. The system of claim 9, said processor is further adapted to execute instructions to perform the following:

generating a cooling valve drive signal according to at least one of return air temperature signal and supply air temperature signal.

11. The system of claim 9, wherein the comparing of the first cooling valve drive signal and the second cooling valve drive signal comprises the step of comparing temperature differentials of the first cooling drive signal and temperature differentials of the second cooling drive signal.

12. The system of claim 9, wherein the processor's controlling of the at least one fan and the at least one cooling valve further comprises:

controlling the fan to operate at a minimum speed based on a capacity of the cooling valve.

13. The system of claim 9, wherein the processor's controlling of the at least one fan and the at least one cooling valve further comprises controlling a fan to operate above a minimum speed based on the cooling valve operating at a maximum capacity.

14. The system of claim 9, wherein the processor's controlling of the at least one fan and the at least one cooling valve further comprises controlling the cooling valve to operate at a minimum capacity based on comparing the return air temperature signal with a cooling valve setpoint temperature.

15. The system of claim 9, wherein the HVAC system is configured to control the temperature of one or more computer systems.

16. The system of claim 9, wherein the HVAC system is configured to be used in a commercial area.