We claim:

1. A cloud-based method, of monitoring and improving the efficiency of a heat exchange system having a compressor, a condenser, an evaporator, an expansion valve, a circulating refrigerant and an efficiency-enhancing device positioned between the condenser and the evaporator, wherein said efficiency enhancing device is a vessel having a refrigerant entrance and a refrigerant exit, a refrigerant delivery tube angled to produce rotational motion of incoming refrigerant; a first disk positioned at the entrance and within the delivery tube, said first disk comprising an orifice within a central ring configured to allow vaporization of a portion of the liquid refrigerant; wherein said central ring is supported by connectors connected to an outer ring to define apertures for the direct flow of refrigerant into the vessel; and a means associated with said vessel to create turbulent flow of refrigerant exiting said vessel, said method comprising the steps of:

receiving input data from a control box coupled to the expansion valve; wherein said input data includes temperature, pressure and power values obtained from sensors on the compressor, the condenser and the evaporator, and further includes ambient temperatures and humidity;

communicating the input data to a software program, wherein said software program analyzes said input data to determine the optimal parameters that maximize efficiency of the heat exchange system;

communicating said optimal parameters to the control box; and

storing said optimal parameters for various values of input data in the processor of the control box as well as in the cloud; and

wherein said control box is configured to adjust the expansion valve

so as to achieve the optimal parameters for a given set of input data during on-site operation of the heat exchange system.

2. The cloud-based method of claim 1, wherein said means for creating turbulence comprises a second disk located proximate said refrigerant exit, said second disk permitting the passage of exiting refrigerant; and one or more fixed angle blade formed in said disk, wherein said blade adds turbulence to the exiting refrigerant.

3. A computer implemented method, to improve the efficiency of a heat exchange system having a compressor, a condenser, an evaporator, an expansion valve a circulating refrigerant and an efficiency enhancing device positioned between the condenser and the evaporator, wherein said efficiency enhancing device is a vessel having a refrigerant entrance and a refrigerant exit, a refrigerant delivery tube angled to produce rotational motion of incoming refrigerant; a first disk positioned at the entrance and within the delivery tube, said first disk comprising an orifice within a central ring configured to allow vaporization of a portion of the liquid refrigerant; wherein said central ring is supported by connectors connected to an outer ring to define apertures for the direct flow of refrigerant into the vessel; and a means associated with said vessel to create turbulent flow of refrigerant exiting said vessel, said method comprising the steps of:

receiving input data in real time from the a control box coupled to the expansion valve; wherein said input data includes temperature, pressure and power values obtained from sensors on the condenser, evaporator and compressor and further includes ambient temperatures and humidity;

storing said input data in the processor of said control box as well as in a cloud system;

communicating the input data to a software program wherein said software program retrieves previously stored optimal parameters that correspond to the input data for obtaining maximum efficiency of the heat exchange system; and

communicating said optimal parameters to the control box; wherein said control box is configured to adjust the expansion valve to correspond to the optimal parameters.

4. The computer implemented method of claim 3, wherein said means for creating turbulence comprises a second disk located proximate said refrigerant exit, said second disk permitting the passage of exiting refrigerant; and one or more fixed angle blade formed in said disk, wherein said blade adds turbulence to the exiting refrigerant.

5. A heat exchange system, with improved efficiency having a compressor, a condenser, an evaporator, an expansion valve and a circulating refrigerant, said system comprising:

a) an efficiency enhancing apparatus positioned between the condenser and the evaporator, wherein said efficiency enhancing device is a vessel having a refrigerant entrance and a refrigerant exit, a refrigerant delivery tube angled to produce rotational motion of incoming refrigerant; a first disk positioned at the entrance and within the delivery tube, said first disk comprising an orifice within a central ring configured to allow vaporization of a portion of the liquid refrigerant; wherein said central ring is supported by connectors connected to an outer ring to define apertures

for the direct flow of refrigerant into the vessel; and a means associated with said vessel to create turbulent flow of refrigerant exiting said vessel;

b) a control box coupled to the expansion valve configured to receive input data from sensors positioned on the compressor, condenser and evaporator for various ambient conditions, wherein the input data includes temperature, pressure and power values obtained from the condenser and evaporator and further includes ambient temperatures and humidity; wherein said control box communicates by direct wiring, Bluetooth, Wi-Fi or cellular methods; and

c) a processor within the control box, comprising database of stored values of the optimal parameters for maximum efficiency of the heat exchange system, wherein the processor is further configured to adjust the expansion valve to correspond to the optimal parameters.

6. The heat exchange system of claim 5, wherein said means for creating turbulence comprises a second disk located proximate said refrigerant exit, said second disk permitting the passage of exiting refrigerant; and one or more fixed angle blades formed in said disk, wherein said blade adds turbulence to the exiting refrigerant.