

# III<sup>®</sup> MULTISTACK<sup>®</sup>

Originators. Innovators. Never the Imitators.<sup>sm</sup>

## Virtual Movable End Cap™ II

### *Simultaneous Heating and Cooling Solution for Heat Recovery Applications*

Multistack DHRC units now offer another amazing feature and benefit: the all-new Virtual Moveable End Cap™ II. With this technology a design engineer can specify a system that will provide variable simultaneous heating and cooling as a central station while eliminating the need for separate cooling and heating systems or a distributed water source heat pump system. This can save significant installation costs, dramatically reduce a building's carbon footprint by reducing or even eliminating natural gas use, and lowering energy bills. The VME II operating algorithm automatically matches the heating and cooling load requirements of the building by closing and/or opening the appropriate VME valves and optimizing operation for maximum efficiency.

Multistack DHRC units with VME provide system expandability and redundancy at little added cost. DHRC units offer outstanding energy efficiency, minimal refrigerant charges and easy installation. With multiple small compressors, units can be cycled to match heating and cooling loads at any level. With two compressors per module, a Multistack DHRC array achieves N+1 redundancy by adding just one module, as opposed to requiring another separate system. The compact size of DHRC units allows units up to Size 085X into a building through a standard-width door and can be moved into a mechanical room via passenger elevator. Units Size 085X and larger will fit through standard double-width doors and into freight elevators, depending upon elevator lifting capacity. No cranes, no demolition, no big expenses.

An array of Multistack DHRC chillers provide huge benefit in both space and installation costs through use of single-point water and electrical connections—simplifying mechanical room design and allowing easy future expansion while reducing maintenance costs.

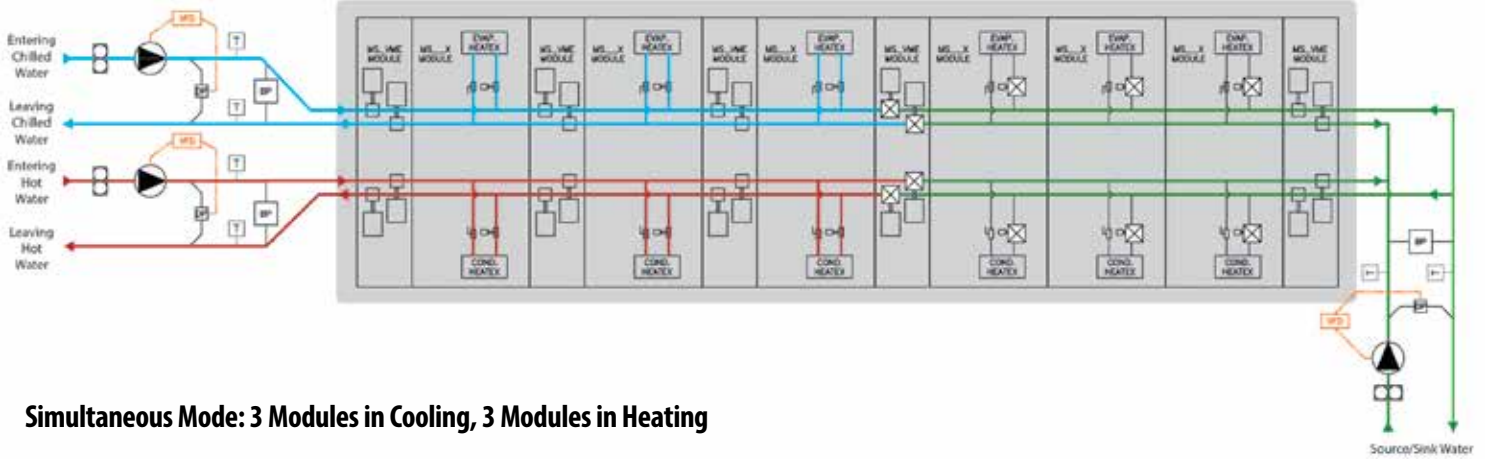
### Features & Benefits

- No reversing valves for maximum reliability, efficiency
- Integrates simultaneous heating and cooling without need for geothermal water as an energy transfer buffer
- Forty percent efficiency gain for simultaneous loads
- Five to nine percent efficiency gain for normal loads
- Typically allows a module per machine to be eliminated versus VME I, reducing footprint and electrical load
- Offers compressor run time equalization
- Offers pump energy savings

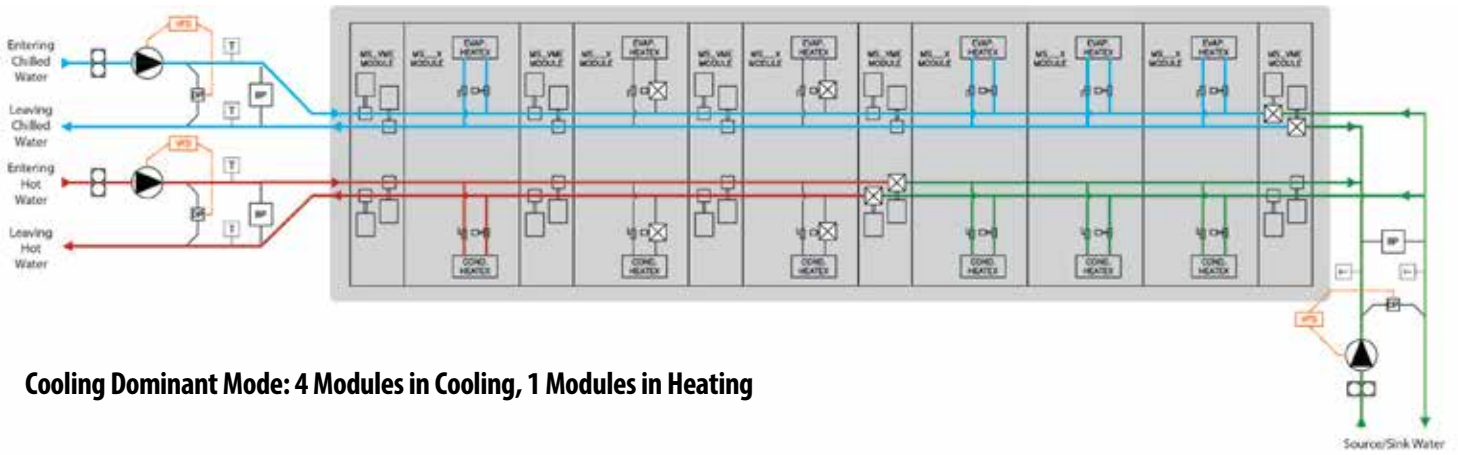


(See reverse side for piping diagrams)

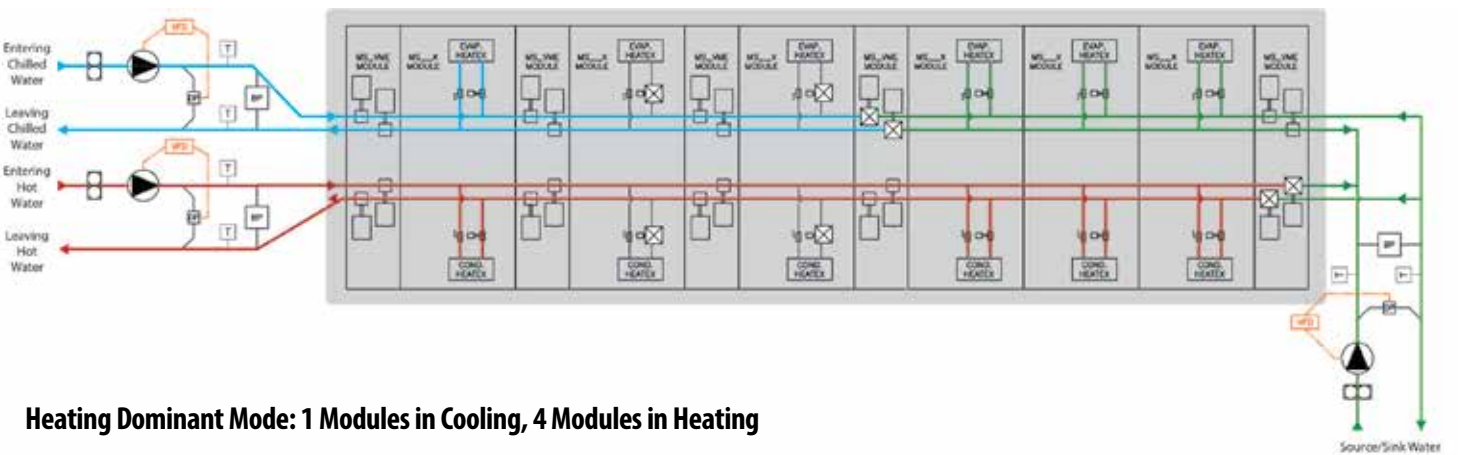
## VME II Piping Diagrams



**Simultaneous Mode: 3 Modules in Cooling, 3 Modules in Heating**



**Cooling Dominant Mode: 4 Modules in Cooling, 1 Modules in Heating**



**Heating Dominant Mode: 1 Modules in Cooling, 4 Modules in Heating**

**MULTISTACK®**

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