

# Multi aqua™

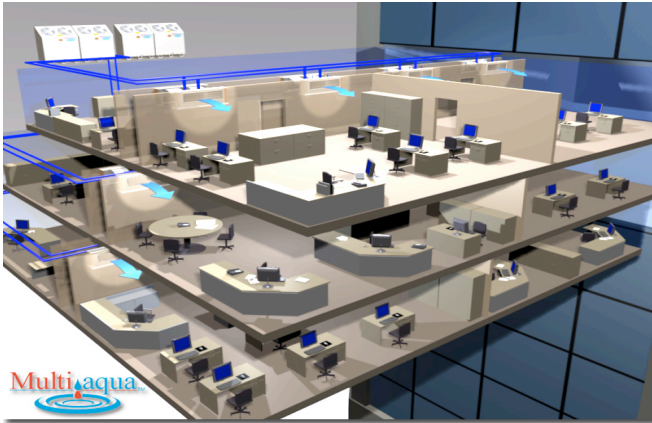


*Quality Indoor Air™*



**THINK WATER!™**  
**CHILLED WATER AND DX**  
**AIR CONDITIONING SYSTEMS**

## COMMERCIAL and RESIDENTIAL VARIABLE WATER VOLUME AC and HEATING SYSTEMS



### VRF/VRV

1. **Cost**-Extremely high first & installation costs.
2. **Installation**-Factory trained personnel required to install VRV/VRF systems.
  - a. Must utilize copper tube line sets.
  - b. Copper is far more costly than PEX or PVC.
3. **Service**-Only factory trained technicians can service this type of equipment.
  - a. Specialized diagnostic equipment required.
  - b. No local availability of components.
  - c. Very difficult to work on.
4. **Safety**-There are hundreds of solder joints under insulation.
  - a. Refrigerant leak detection is extremely difficult.
  - b. ASHRAE 15 mechanical code safety concerns.
  - c. Massive amounts of refrigerant indoors.
5. **Heating**-Heat Pump is the only heating option.
  - a. Low ambient leads to inadequate heating.
  - b. High electrical consumption in heating mode to compensate for low ambient (decreased COP).
6. **Expandability**-No possibility for system expansion after installation.
  - a. Newer production fan coils are not compatible with previous system versions. The entire system must be changed.
7. **Line Length Limitations**-The only way to deal with end of run capacity problems is by over sizing fan coils which leads to humidity problems.



### VWV

1. **Cost**-Substantially lower first & installation costs.
2. **Installation**-Most HVAC technicians can install Multiaqua equipment.
  - a. Pex and PVC tubing can be used instead of copper.
  - b. Pex is considerably less expensive and flexible.
3. **Service**-Most HVAC technicians can service Multiaqua equipment.
  - a. Standard off the shelf components.
  - b. Replacement parts are very common.
  - c. Simple design and easy to work on.
4. **Safety**-No solder joints under insulation.
  - a. Water leaks are much easier to find.
  - b. Does not violate ASHRAE 15 standard.
  - c. All refrigerant is contained outside the building in the chiller only.
5. **Heating**-Boiler or electric heating options.
  - a. Low ambient is not a factor.
  - b. Heating with less costly Natural Gas is an option.
6. **Expandability**-Easy to expand both indoor and outdoor equipment.
  - a. Any hydronic fan coils can be added at any time.
7. **Line Length Limitations**-There is no line length limitations.
  - a. Fan coil over sizing is unnecessary.



## **Multi aqua is Proud to Introduce Our New MAC-120HE!**



**MAC-120HE**  
**10 Nominal Ton Chiller**  
**\*EER = 10.1**  
**\*IPLV = 12.5**

\*Rated in accordance with ARI Standard 550/590-2011 at standard rating conditions.

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## **How Can The Multi aqua System Save You Money?**

### **Life Cycle Cost Comparison - Hydronic Chiller/Boiler System vs. VRF Heat Pump**

According to ASHRAE's technical document (Building and Operations Management Chapter 35), the estimated service life of residential or commercial air-to-air heat pumps is 15 years. The estimated service life of residential or commercial air-to-water chiller/boiler system is 23 years.

<u>System Type</u>	<u>Estimated Service Life (Yrs)</u>
VRF/Heat Pump	15
VWV/Chiller with Boiler	23

- A. Based on ASHRAE's estimated service life of these two system types, the chiller/boiler system will last 53%, or 8 years longer than the VRF/VRV heat pump system.
- B. Therefore, the purchase price of a Heat Pump VRF system will cost a building owner over twice as much as the Chiller/Boiler System over a 23 year period.



# Multiqua Product Overview



## MAC120 Series Air Cooled Chillers

- 10 Ton Air Cooled Chiller
- R407c Refrigerant
- Copeland Scroll Compressors



## MAC120 HE Series Air Cooled Chillers

- 10 Ton Air Cooled Chiller
- EER = 10.1 / IPLV = 12.5
- R407c Refrigerant
- Copeland Scroll Compressors



## MHRC Series Air Cooled Chillers

- 5 and 10 Ton Heat Recovery Chiller
- R410a Refrigerant
- Copeland Variable Speed Compressor
- Simultaneous Heat and Cool Mode



## MAC Series Air Cooled Chillers

- 3, 4 and 5 Ton Air Cooled Chiller
- 5 Ton Heat Pump Air Cooled Chiller
- R407c Refrigerant
- Copeland Scroll Compressor
- Includes 1/2 HP Stainless Steel Pump



## MHWW & MHWX (Heat or Cool) Hi-Wall Fan Coil

- 9,000- 36,000 BTUH 208/230 and 115V
- Available in Water Type or R410a
- High Wall Mounting
- Ductless
- Cleanable Air Filter Provided
- Wireless Infrared Remote Included



## MHCCW, MHCCW & MHCCX (Concealed) Fan Coil

- 12,000- 36,000 BTUH (208/230/1 and 115V)
- Available in 2 & 4-Pipe / Water or R410a Refrigerant
- Available With or Without Electric Heat
- Ceiling Concealed Design for Clean Installation
- Removes Equipment from Conditioned Space
- Field Reversible Coil for L or R Hand Connection
- Powder Painted Galvanized Steel
- Discharge may be Ducted for Small Spaces



## CWA Hydronic Air Handler

- 18,000- 60,000 BTUH
- 2 or 4-Pipe Configuration
- Up Flow, Left or Right Hand Horizontal Installation
- 208/230/1 or 120/1 - 60 HZ
- 5 to 20kW Electric Heat is Available on 2-Pipe Models
- Accepts any 3-speed 24V Thermostat



## MHCFC4W Ductless Hydronic Cassette

- 12,000- 48,000 BTUH
- 2 or 4-Pipe Configuration
- 208/230-1-50/60
- Ductless (Up to 50% Outside Air)
- Equipped with Insulation
- Accepts any 3-speed 24V Thermostat



## CFFWA & FSFCA (Heat or Cool) Universal Fan Coil

- 12,000- 60,000 BTUH
- Available in Water Type (2 or 4-pipe) or R410a
- Floor, Low Wall, or Horizontal Ceiling Mounting
- Ductless (Up to 10% Outside Air)
- Accepts any 3-speed 24V Thermostat





## Accessories Overview



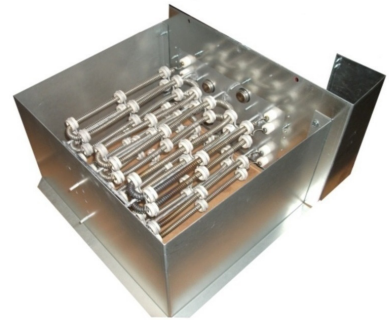
20 AND 42 GAL. BUFFER TANKS



2 GAL. EXPANSION TANK WITH AIR PURGE



3/4" AND 1 1/4" PRESSURE RELIEF BYPASS VALVES



5 TO 20KW ELECTRIC HEAT FOR CWA2 AIR HANDLERS



MINI CONDENSATE PUMP



WALL MOUNT PROGRAMMABLE THERMOSTAT WITH WIRELESS REMOTE



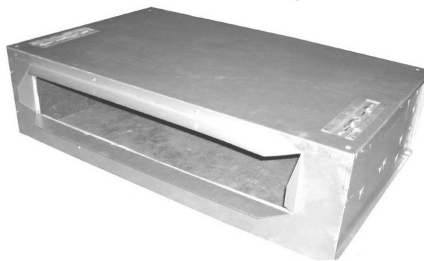
WALL MOUNT 3-SPEED THERMOSTAT



2-WAY ZONE VALVES



1/2 TO 2 HP CIRCULATING PUMPS



MPE SERIES INSULATED ENCLOSURES



MAP SERIES NON AND LOUVERED ACCESS PANELS



3-WAY ZONE VALVES



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