



**MULTI V™**  
**WATER II**

# VRF

Innovative VRF Technology for Sustainable Designs



- Geothermal Ready • AHRI 1230 Certified®
- Space Saver • Variable Water Flow

# MULTI V™ WATER II

## About LG VRF Technology

Variable Refrigerant Flow is a technology introduced as a system to minimize efficiency losses and provide sustainable energy benefits. LG VRF systems are engineered to save on the cost of ducts and distribution fans. This VRF water system can tie into existing building condenser water loops. VRF systems have a lower life cycle cost of any system on the market today.

## Why LG VRF?

The benefits are numerous; modern style, mirror units for interior designers, less piping for installers and energy efficiency for owners. LG has industry leading low sound levels, so units are quiet and can be installed anywhere inside. LG manufactured inverter scroll compressors optimize system energy efficiency and are certified using AHRI Standard 1230.

## Benefits

### 1 Geo Thermal Ready

This LG VRF water system is extremely flexible. LG Multi V Water II units can be applied to multiple applications - geothermal, boiler/cooling tower or a hybrid of both.

### 2 LG Inverter Scroll

The LG VRF water system precisely matches the load. This helps prevent constant cycling resulting in superior dehumidification and optimized system efficiency.

### 3 AHRI 1230 Certification

Multi V Water II is performance certified. This ensures that you are getting verified ratings.

### 4 Compact / Space Saver

When space or access is at a premium, VRF water systems can be installed anywhere inside a building. This equates to significant cost advantages for the owner.

### 5 Longer Piping Distances

Owners can reach extra zones further off the same VRF units. This eliminates the need to invest in extra systems and saves on installation.

### 6 Enhanced Energy Efficiency

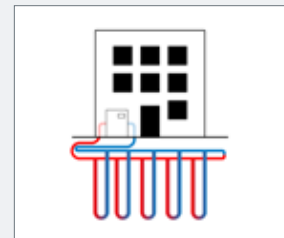
LG Multi V Water II units provide two forms of energy savings; water side heat recovery and refrigerant side heat recovery.

### 7 Reduced Pumping Costs

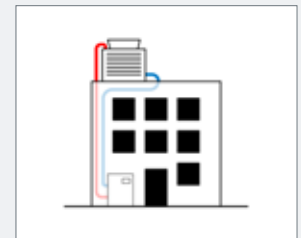
Additional energy savings can be achieved for the owner with LG's variable water flow control. Modulating water valve control gives the unit only what it needs thereby reducing pumping costs.



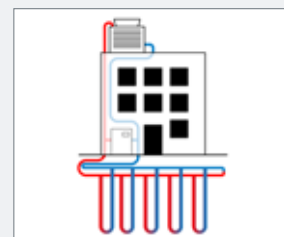
- ✓ Compact units allow installation in tight spaces.
- ✓ All piping and service is at the front allowing units to be installed on racks.
- ✓ LG Inverter scroll inside for efficiency and quiet operation.
- ✓ Adapts to geothermal, cooling tower/boiler or hybrid.



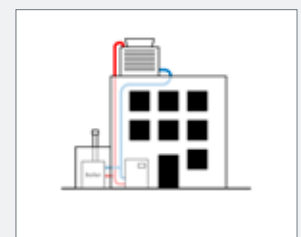
Geothermal application



Cooling tower application



Hybrid geothermal application



Cooling tower/boiler application



## Multi V Water II VRF Technology

This product line is LG's premiere VRF water system. Multi V water is designed to provide the owner the benefits of VRF - lower operational costs, minimal or no duct work to install, tenant comfort with individual zoning, efficiency compared to other technologies while maintaining architectural integrity. The benefit of zoning for heating or cooling provides a level of comfort for owners and tenants. Units are from 6 tons to 48 tons with the following benefits:



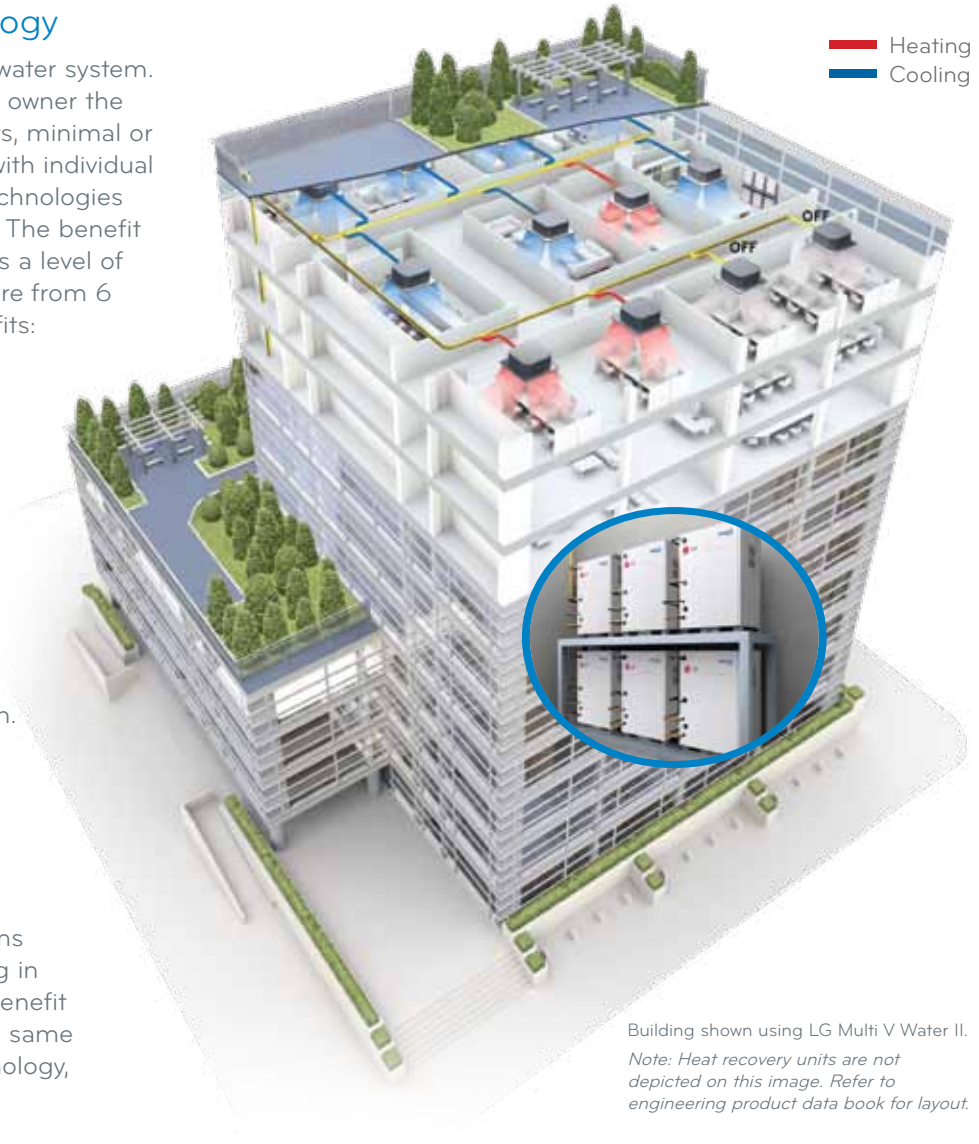
## Benefits of Heat Pump

LG Multi V Water II Heat Pump provide heating or cooling to individual zones. The benefits of VRF heat pump zoning are to provide a level of control for tenant comfort in their individual space. The owner saves on boiler size reduction.



## Benefits of Heat Recovery

LG Multi V Water II heat recovery systems permit synchronous cooling and heating in different zones at the same time. The benefit of zoning for heating and cooling at the same time provides the ultimate in VRF technology, moving heat from one zone to another, in addition to water side heat recovery.



— Heating  
— Cooling

Building shown using LG Multi V Water II.  
*Note: Heat recovery units are not depicted on this image. Refer to engineering product data book for layout.*

### Compact Design



### Contractor Friendly Front Piping



### Space Saver Advantage



# ENERGY EFFICIENT

## Operational Cost

This innovative VRF system technology delivers exceptional comfort while delivering value, to buildings with lower energy consumption.

# MULTI V Water II

## System Efficiency

An energy efficient system from LG Multi V Water II allows you to use only what you need, when you need it.

## BUILDING MODELING SOFTWARE

EnergyPro™ V.5 building energy simulation software provided by EnergySoft®, using the following accreditations:

- Uses DOE-2.1E simulation engine from U.S. Department of Energy
- Approved by the California Energy Commission
- Accepted by USGBC for use with LEED® certification
- Incorporates ASHRAE based load calculations

## DESIGN PARAMETERS

The utility rates used for the energy analysis were assigned based on regional data acquired from the U.S. DOE

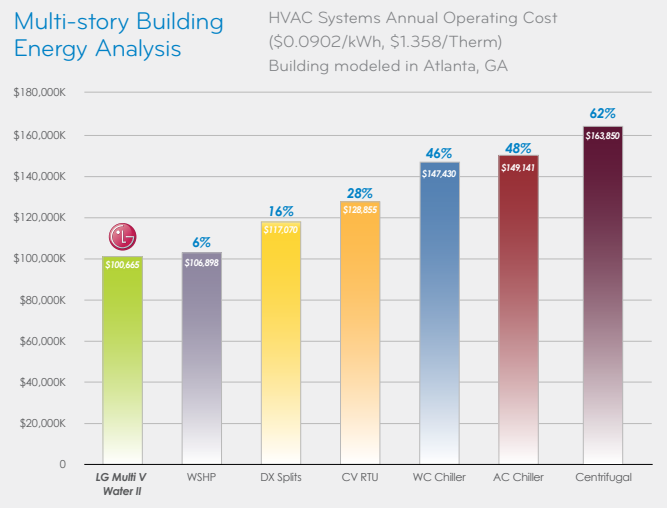
The building energy analysis was performed using ASHRAE design temperatures for Atlanta, GA

The city design conditions were used to model the performance of six different types of HVAC systems:

- LG Multi V Water II, Water Source Heat Pumps (WSHP), Duct Free Split (DFS) Systems, Constant Volume Rooftop Package Units and 4-pipe chilled water/hot water (CW/HW) central plants: one using air cooled chillers, one water cooled chillers, and one centrifugal chiller.

## BUILDING DESCRIPTION

- Total Area (Sq. Ft): 133,600
- Total levels: 6
- Basement level walk-out
- Zones: 145
- Infiltration (CFM): 0



Inverter



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Engineered for sustainable green buildings



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Potential energy savings may vary depending on your personal system settings, equipment maintenance, local climate, actual construction and installation of equipment, and duct system