

# **QAHV Heat Pump Water Heater**

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METUS

# QAHV – Heat Pump Water Heater

- Utilizes Natural refrigerant - CO2 (GWP of 1)
- High efficiency
- Supplies High Temp Hot water (up to 175°F)
- Operable at low outdoor temp (-13°F)
- Maintains 100% heating capacity to 26°F
- BMS connectivity (BACnet)

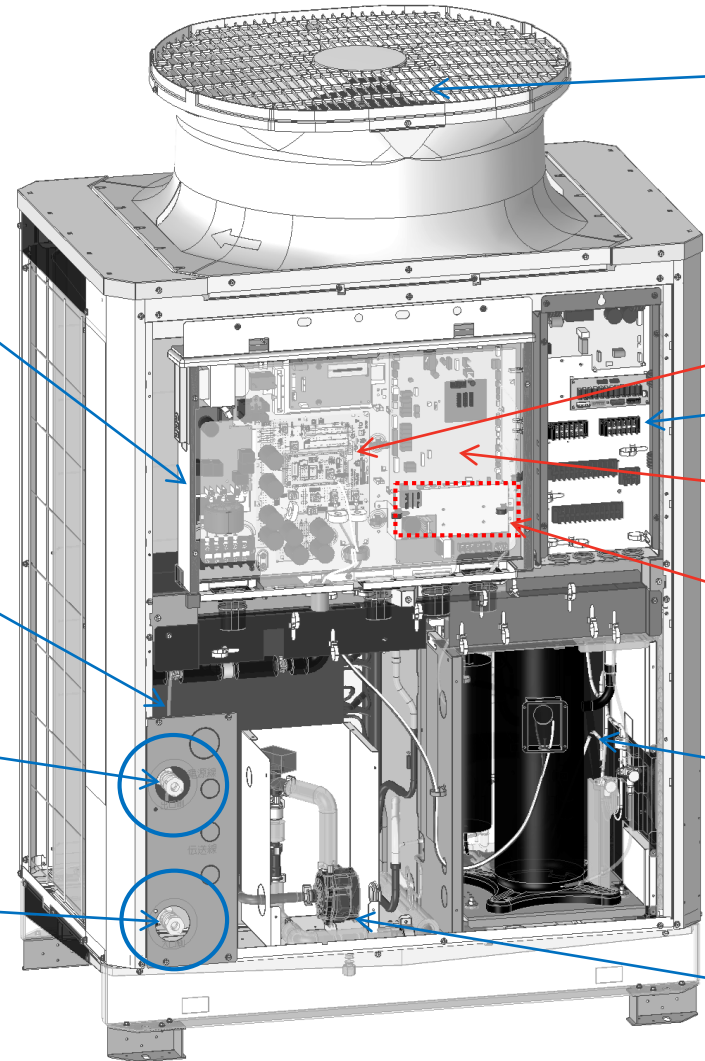


**Nominal Capacity 40kw  
(136,485 BTU/hr.)**

# Optimized Multiple Unit Cascade

- Built in cascade controller
- Up to 16 units can be connected together
- 2,183,770 BTU/Hr. (640kW) total system capacity
- Modulation allows steps of 1706 BTU/Hr. (0.5kW)
- Built in optimization to ensure the most efficient operation

# QAHV Unit Structure



Fan motor

INV Board

Control box (main)

Control box (sub)

Gas Cooler/HEX

Main Control Board

Outlet

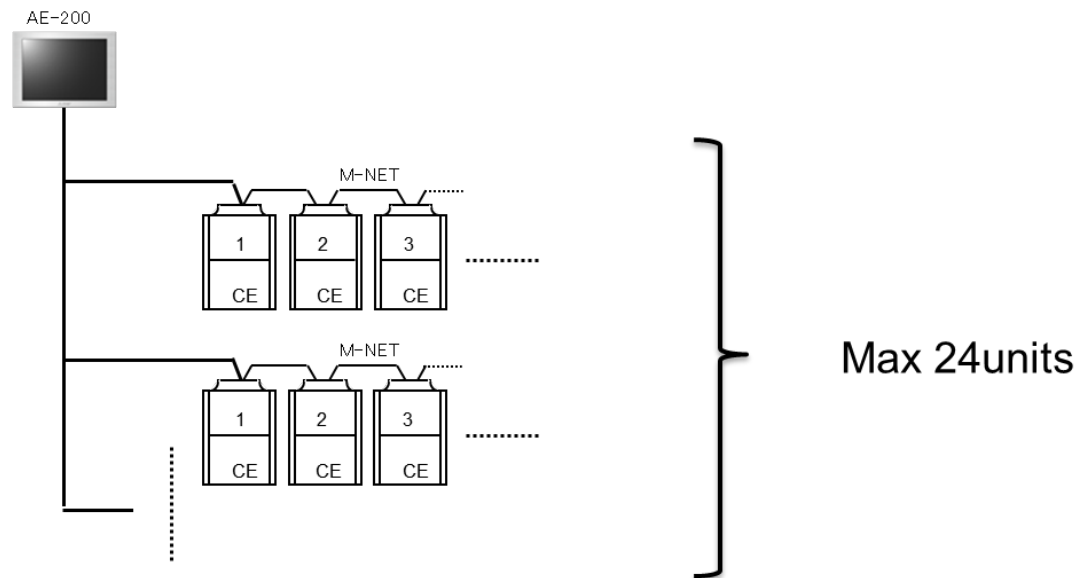
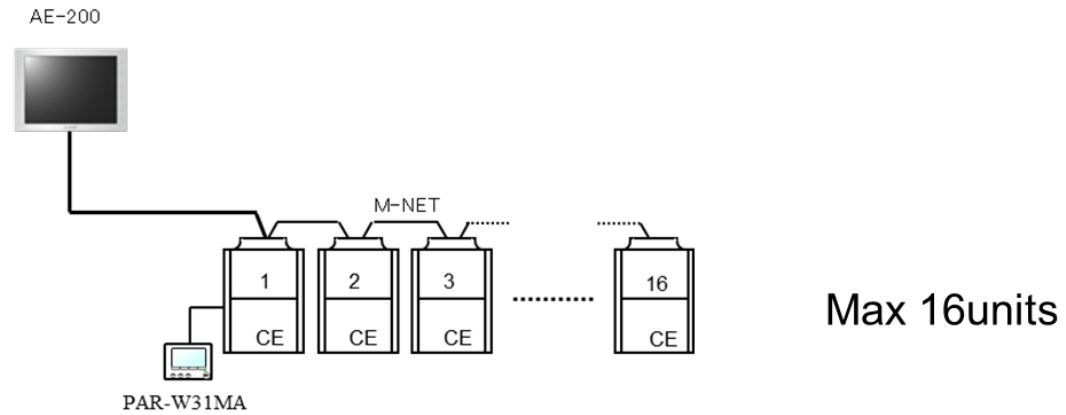
IT terminal

Inlet

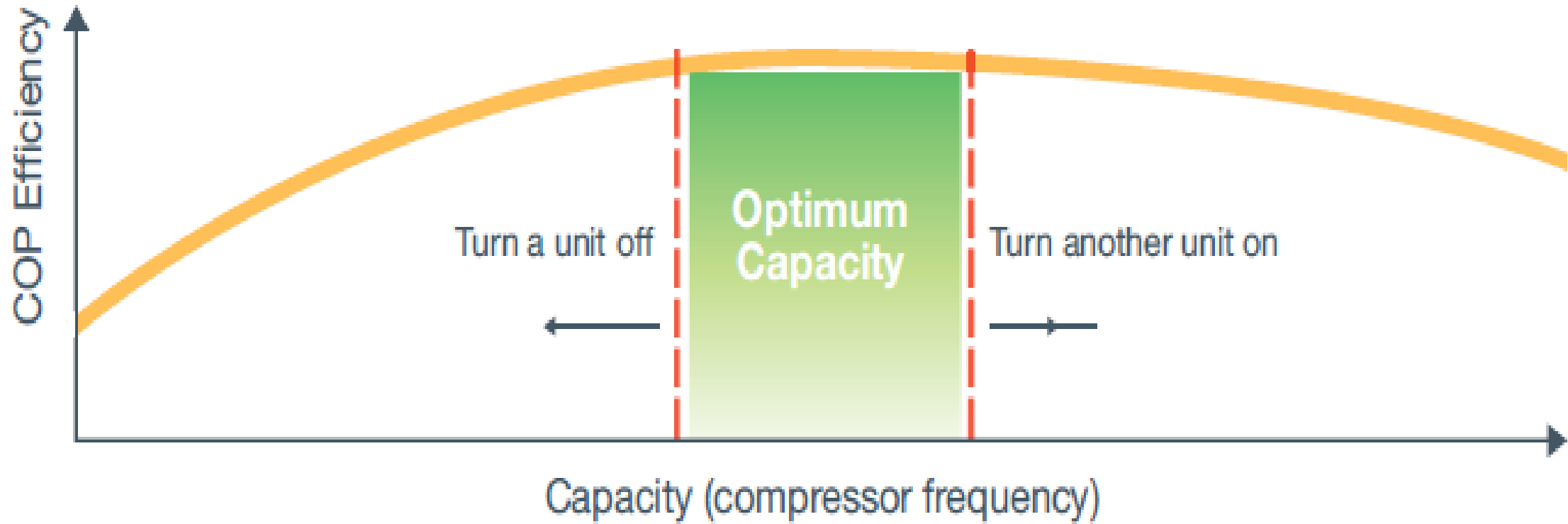
Compressor

Inverter Driven Water pump

# Mitsubishi Network M-NET



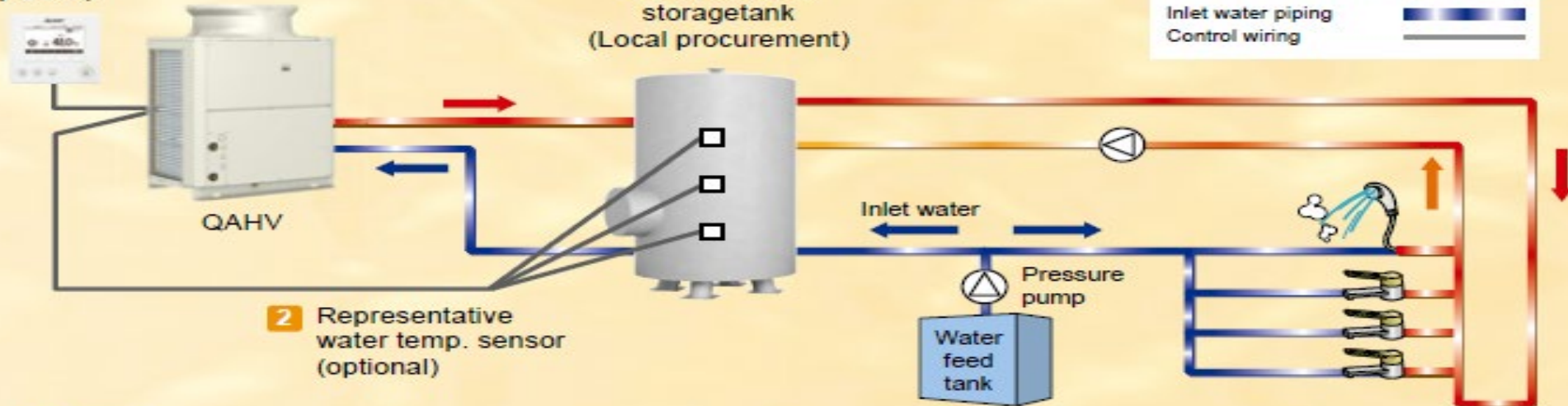
# Optimized Multiple Unit Cascade



# QAHV System Schematic

## ▶ QAHV System Schematic image

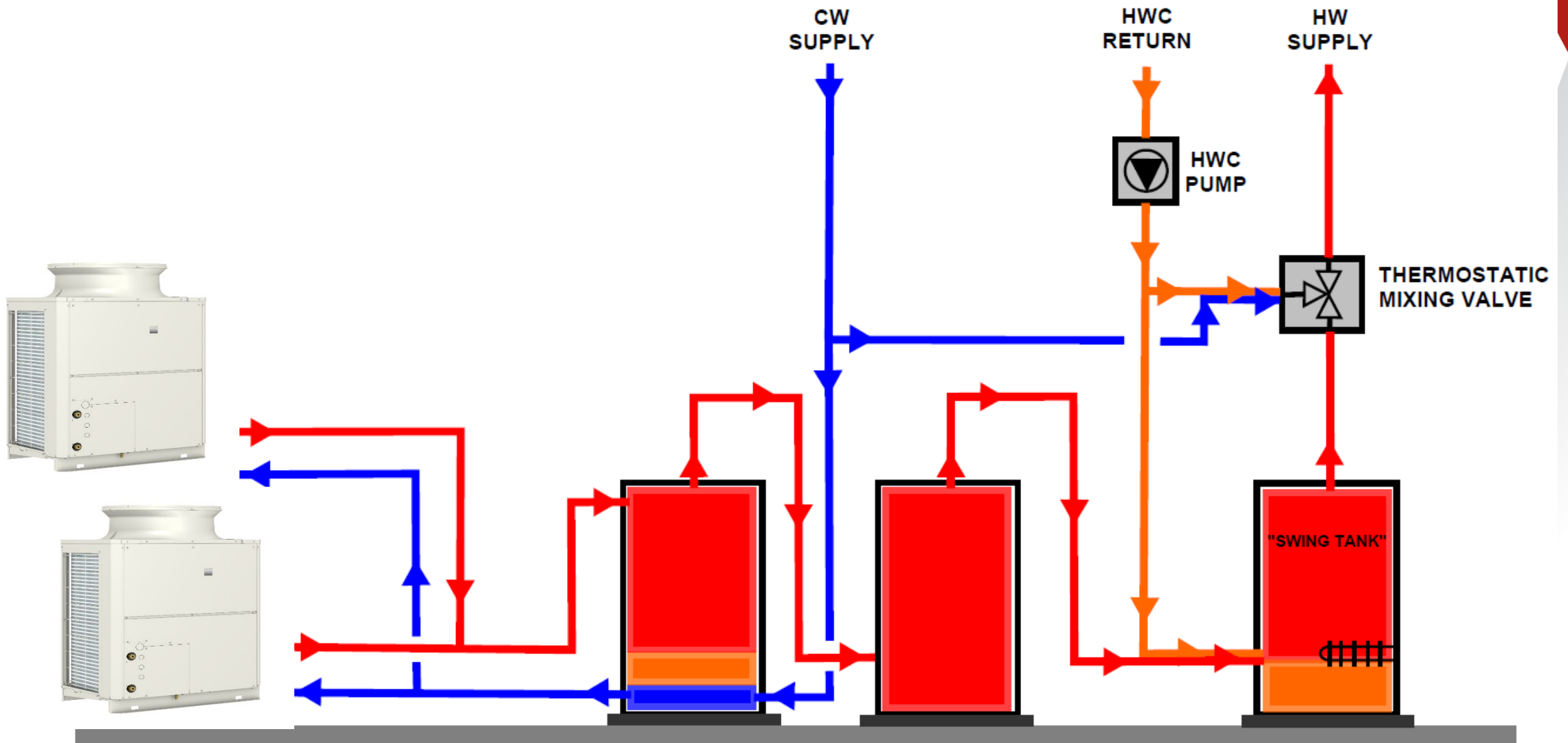
1 Remote controller (optional)



## ▶ Optional Parts

Description	Image	Model name	Remarks
1 Remote Controller		PAR-W31MAA-J	The unit remote controller for QAHV
2 Representative water temperature sensor		TW-TH16-E	The water temperature sensor for QAHV

# Dual QAHV with Swing Tank



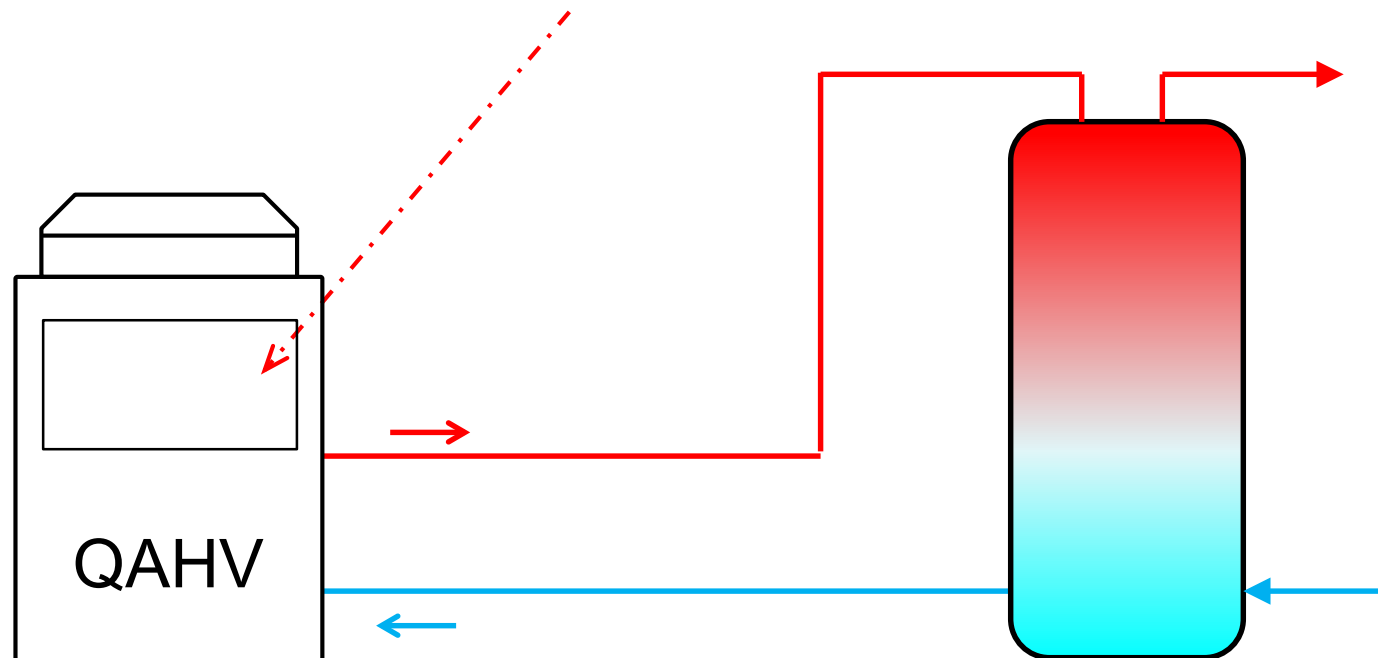


# Local Control

IT terminal input or volt free contact input

On signal : Start operation

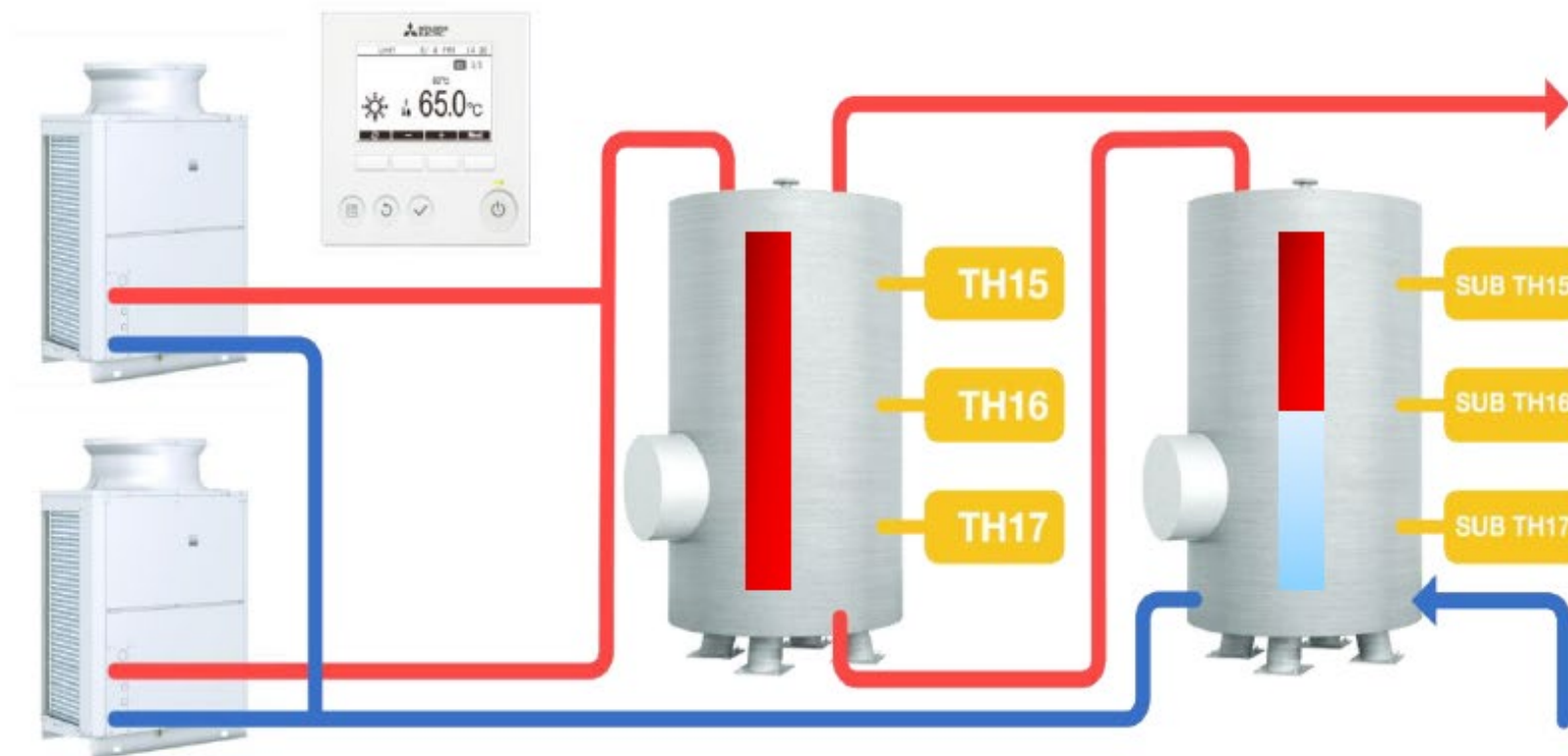
Off signal : Stop



# 3 Sensor Control Method

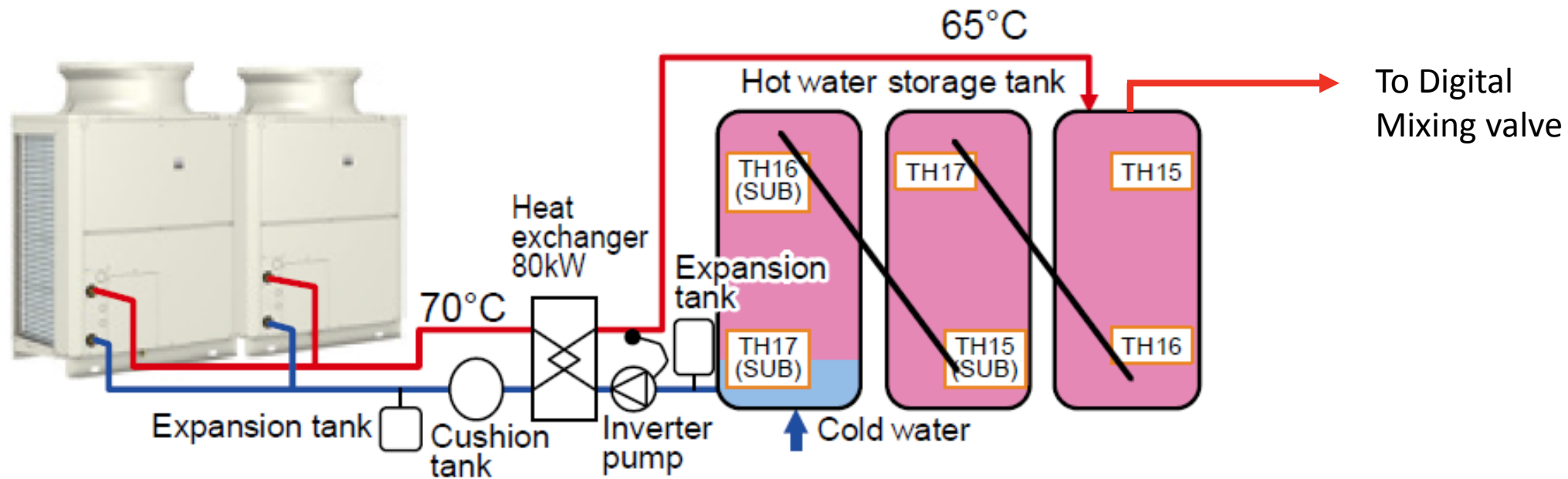


# 6 Sensor Control Method



- Requires min. 2 QAHV units
- Requires min. 2 tanks

# Schematic Example With Secondary Heat Exchanger



Thank You

