



## USCS Split Systems vs. Ductless Mini Split Systems

### Ductless "Mini Split"

Examples: Wine Zone, Vigilant, Cellar Mate

#### Advantages

- Sleek evaporator design

#### Disadvantages

- Cannot be covered to match décor
- Must be wired to the condensing unit which is the only power supply option
- Nearly all manufacturers are 230V with no other option
- Most operate on R22 refrigerant. It is not ideal to use at these temperatures for performance or efficiency. It is likely to be phased out soon like dozens of other refrigerants have been. When it is no longer available the entire system will need to be replaced.
- More difficult to install
  - Explanation: Ductless Mini Split Systems use a fan coil originally designed for air conditioning. LG, Sanyo, Mitsubishi, Fujitsu, Trane and many other companies make great equipment for air conditioning. These systems are designed to operate in the 68° f to 78° f range efficiently and assist in removing humidity from the air for a more comfortable living space. To modify these units to the much colder temperatures needed for wine storage a crankcase pressure regulator is added. These systems are then forced to run at pressures and temperatures they are not actually designed for. If there is any variance of pressure in that valve it can cause the following issues
    - Overload the compressor causing drastically shorter life or catastrophic failure
    - Ice up the fan coil causing severe spikes and drops in room temperature or catastrophic failure

### USCS Split Systems

#### Advantages

- Several coil sizes, shapes, and mounting possibilities available
- Condensers can be installed indoors or outdoors without temperature differential concerns
- Water Cooled Condensers available for locations with a water source or Geo-thermal technology
- NO connecting wiring between fan coil and condensing unit is required
- AXV adjustments provide range of operation that can be fully adjusted to the variables of each cellar
- Entire system can be serviced and repaired in place by most any HVAC technician
- Requires less and simpler service
- Many replacement components available locally nationwide
- Air temperature probe used with remote mounted programmable thermostat is more responsive to changing conditions
- Unlimited technical assistance readily available direct from US Cellar Systems

#### Disadvantages

- More industrial appearance