

# • WhisperKOOL Quantum 9000

## 2 PROBLEMS:

1. Not understanding pump down systems.
2. Over charging the system.



## 2 SOLUTIONS:

1. WhisperKOOL split systems operate on a pump down cycle. Unlike traditional air conditioners, there is no wiring between the condensing unit and the evaporating unit. Instead, the system is controlled utilizing a solenoid valve in the evaporator and a low-pressure switch on the condenser.

The evaporator will need to be on to activate the solenoid. The thermostat activates (opens) the solenoid valve on the liquid line in the evaporator, starting the cooling cycle. Once the cellar is cooled to the desired temperature, the solenoid valve is closed, stopping refrigerant flow to the evaporator. Meanwhile, the compressor continues to operate until most of the system's refrigerant is pumped into the condenser coil and receiver. As the pressure in the line drops, the compressor is shut off by a low-pressure switch on the suction line, completing the cooling cycle.

2. WhisperKOOL has provided the approximate refrigerant charge amount for initial start up based on the line set size. Please see the chart below for the charge amount. The tech will still need to dial in the desired subcooling to achieve optimum performance.

REFRIGERANT CHARGE CHART		
LINE SET	→	TOTAL
10' Line Set	→	9.02 lbs
20' Line Set	→	9.43 lbs
30' Line Set	→	9.85 lbs
40' Line Set	→	10.26 lbs
50' Line Set	→	10.68 lbs
60' Line Set	→	11.09 lbs
70' Line Set	→	11.51 lbs
80' Line Set	→	11.93 lbs
90' Line Set	→	12.34 lbs
100' Line Set	→	12.76 lbs

**Refrigeration Lines:** A 3/8" OD copper liquid line is required.

MODEL	Line Set Length	<25ft			26-50ft			50-100ft		
	Vertical Rise	<3ft	3-10ft	>10ft	<3ft	3-10ft	>10ft	<3ft	3-10ft	>10ft
	Line Diameter	3/4"			3/4"			7/8"		

The refrigerant drier and the sight glass shall be installed (in that order) in the direction of the refrigerant flow in the liquid line between the condensing unit and the evaporator unit. Enclose the suction line with cellular Armaflex (or similar) insulation with a wall thickness of at least half an inch.