APPLICATION BULLETIN

REFACC-APG01-EN

TOPIC:
Use of solenoid valves in residential style split system cooling refrigeration systems.

PURPOSE:
The purpose of this document is to clarify when liquid line solenoid valves should be installed in residential style split systems manufactured in Tyler, TX.

HISTORY:
Solenoid valves, historically have been used for several reasons.
1. Refrigerant pump down cycle.
2. Refrigerant isolation in non pump down applications.

CURRENT USES:
Today, the use of solenoid valves still fulfill the above concerns. However, in a cooling only high rise application where the condensing unit is installed above the indoor refrigeration coil, placement of a liquid line solenoid valve within 10 feet of the expansion device increases reliability of both the system as well as the thermostatic expansion valve.

System reliability is increased due to preventing the refrigerant from seeking it's natural level in the cooling coil, the liquid line and suction line during the system's off cycle. By doing so, the system, upon startup will begin pumping vapor, rather than liquid refrigerant to the compressor's suction port.

In relation to the thermostatic expansion valve, which is recommended in all high rise applications, the valve seet is protected from the weight of the refrigerant column during the off cycle.

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