Technical Tip

The Importance of Sizing

The APR Control® valve is ***NOT*** a "*one size fits all*" solution. Here at Rawal Devices, Inc., we manufacture a variety of different APR Controls for different types of refrigerants and unit sizes. We size the APR Control to provide the maximum amount of capacity modulation based on the minimum tonnage of refrigerant that could be flowing throughout the system (circuit or stage) at low load conditions.

With the wide variety of equipment being used out in the field, we need to take into consideration a number of factors in order to provide proper sizing:

- Total tonnage of the system
- Type of refrigerant being used
- If it is a Package or Split system
- If split – we need the suction line diameter
- How it is circuited and staged
- If staged – we need the tonnage of the lead stage (compressor)

Model Numbers

We will provide you with the appropriate model number of which APR Control® valve would be adequate for a particular system/application. Keep in mind that the model number of our APR Controls does not correlate to the tonnage of the system. For example, our R-410A Controls the model number represents the amount of modulation capacity that particular model valve can provide.

Why do we need the suction line diameter?

Since the APR Control is sending less refrigerant throughout the circuit, we need to ensure that we are maintaining enough refrigerant flow for proper oil entrainment up any suction riser to the compressor. We always stay conservative with our sizing to be sure that we do not over-modulate and cause any short or long-term system issues.

Our Technical and Sales team is here to provide proper sizing of the APR Control for your application. Give us a call at (800) 727-6447 or email us at sales@rawal.com.