

Don't Be Afraid To Ask "Why?"

With all the different technologies in our industry, it is truly difficult for us to be well versed in all aspects of this trade. Occasionally we all have questions about how a system operates or how a system component functions. There are several ways we can get answers to our questions. The easiest way is to just ask someone who has more experience with the system or component. Calling the manufacturer is also an excellent way of getting your questions answered. If that option is not available, you can call your local wholesaler or distributor who sells the product. If that does not work, call on a friend.

Unfortunately, sometimes the answer we get may not be clear or accurate. If an answer does not make sense or is unclear, we should not just simply accept it as fact but should ask it again or ask "why". Sometimes this may be difficult. We may be embarrassed by the fact that we do not understand the answer, or we do not believe the person answering the question. If possible, ask for clarity. If that is not possible, don't give up, but ask the same question to a different person. Hopefully that person will be able to answer the question in a clearer manner or provide an answer that makes sense.

When asking a second person the same question, occasionally you may get a totally different answer. This can be quite frustrating. Now you're faced with small dilemma: who is right? The best way to handle this situation is to ask a third person; hopefully that person's answer will match one of the first two. If the third answer is totally different, don't give up; keep going until you have an answer that is clear and makes sense. Sometimes you may run into a roadblock and will not be able to get your question answered in this manner. When this occurs, you do have some options: you can research the question yourself either online or through textbooks. This is a longer process but sometimes the answer will be in black and white and written in a manner that is clear and makes sense.

Recently a technician told me of an encounter he had with a question concerning a refrigeration compressor. He did not know what the RLA rating on the compressor stood for, so he asked around and was given two different answers. One person told him it meant the "running load amperage" and another told him it was the "rated load amperage" of the compressor and really did not represent the actual amperage draw of the compressor. After thinking about the two answers, he realized that the first answer could not be accurate. He remembered the amperage draw of a compressor is based on the suction pressure, discharge pressure and applied voltage, so how could a compressor manufacturer stamp on the compressor the running load amperage when it varies? After some additional investigation, he discovered that RLA did stand for the "rated load amperage" and is a mathematical calculation required to meet Underwriters Laboratories Inc. (UL) approval. The compressor manufacturer must run a series of tests to determine the Maximum Continuous Amps before the overload trips. Once that has been determined, UL says divide the MCC by 1.56 to determine the RLA.



Some compressor manufacturers, such as Copeland and Carlyle, use a different factor. They divide the MCC by 1.44. If the RLA has any value it is to determine at what amperage draw the compressor overload will trip and to determine the fuse/circuit breaker size and the wire size.

The next time you have a question, don't be afraid to ask "why," but be prepared for different answers to the same question.