

# Technical Bulletin

TBPL2023-03

Vacuum testing of Python line set systems

July 19, 2023

- After completing a successful positive nitrogen leak test, a deep vacuum (250 microns or less) can then be pulled on the system. Once this level of vacuum is reached on the Python line set system, you ensure that the refrigerant loop is leak free, completely dry, and all potential contaminants have been removed.
- If a vacuum decay test is conducted on the Python system, please be aware that the holding delta of the vacuum will be greater than a traditional copper system. This is caused by the desorption or off gassing of the inner PE-RT layer of the pipe under vacuum. This off gassing rise scenario only occurs when the system is under vacuum and will not occur when the system is under a positive pressure. The decay rise rate will lower the longer a vacuum is pulled on the system and / or the more vacuum cycles are conducted on the system. Regardless of the decay rise rate, the refrigerant loop remains dry and airtight as long as a deep vacuum is achieved (less than 250 microns), and a successful positive nitrogen leak test is performed.

