

Technical Bulletin

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Vacuum testing of Python line set systems

January 18th, 2024

- After completing a successful positive-pressure leak-test with nitrogen, a deep vacuum (250micron / 250mTorr 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-tight, completely dry, and free from non-condensable gases and all potential contaminants.
- If a vacuum hold test is conducted on the Python system, please be aware that the holding delta of the vacuum will be greater than that of 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 rise rate will lower the longer a vacuum is pulled on the system and/or the more vacuum cycles are conducted on the system. However, the refrigerant loop remains dry and airtight as long as a successful positive-pressure leak-test with nitrogen is performed and a deep vacuum (250micron / 250mTorr or less) is achieved.

Note: This document replaces PL2023-03

