

Date: 04/06/2016

Subject: Toshiba Carrier VRF
Underground Piping

Dept: Ductless & VRF

Number:

Product Model Number(s):
MMY-MAP*4H/FT*UL

Toshiba Carrier VRF Underground Refrigerant Piping Guidelines

Following proper guidelines, main refrigerant pipes for Toshiba Carrier VRF systems may be installed underground in some applications. (This pertains to the main supply/return piping between the outdoor units and first branch section or branch box.) All standard Toshiba Carrier VRF installation procedures must be followed, including those provided in:

- Factory-Authorized Service Training
- Engineering and Installation Documentation
- Selection Tool Software

Additional measures must also be taken to ensure proper application of underground refrigerant piping:

- Detailed design of underground piping should be performed by a licensed mechanical engineering firm familiar with local codes and experienced with underground piping applications.
- The piping must be installed in waterproof conduit (such as Schedule 40 PVC).
- The conduit must be sealed on both ends to prevent infiltration of moisture.
- The conduit internal diameter should be large enough to accommodate main piping along with its insulation without any compression or deformation. Underground piping design should account for thermal expansion and contraction of the conduit and piping system.
- Maximum underground depth ("Drop") must be added to the dimension for *Height Between Outdoor and Indoor Units*, effectively increasing it. Total underground distance shall be accounted for in *Total* and *Farthest* piping length dimensions.

