

Solving Refrigerant Piping Expansion Dilemma

Palone Bros., a leading HVAC contractor, recently undertook a significant project in the heart of New York City. Their task, installing three 14-ton LG Variable Refrigerant Flow (VRF) condensing units on top of a 12-story building. The scope of work was extensive, involving intricate refrigerant piping, branch boxes, and multiple indoor units throughout the building.



Project Info

- Location: 5th Ave. New York, NY
- Building type: Commercial
- Project type: Existing building, retrofit
- VRF Manufacturer: LG
- Mechanical contractor: Palone Bros Air Conditioning Corp
- Master distributor in North America for LineBrace TKL: MarketAir

Challenge

The primary challenge faced by Palone Bros. during this project was the vertical riser piping. Extending 150 feet up through a shaftway, this piping was susceptible to expansion due to temperature fluctuations. The catch? There would be no future access to the shaftway for maintenance or repairs. Any refrigerant leaks in this inaccessible area could have catastrophic consequences, emphasizing the critical need for a reliable solution to mitigate expansion.

Solution

After thorough research and consultation, Steven Palone - Palone Bros. Vice President and Service manager identified an innovative solution that effectively addressed the pipe expansion concerns while streamlining the installation process. The team opted for LineBrace TKL pipe support which offered a cost-effective and intelligent approach to managing expansion without requiring additional brazing or complex installation procedures.

The LineBrace TKL brackets were strategically anchored to the building wall, providing sturdy support for the refrigerant piping. Each bracket featured a design that allowed it to securely clamp around the piping, eliminating the need for extensive modifications or adjustments. Additionally, the brackets came equipped with insulation molds, ensuring optimal thermal efficiency and protection against temperature fluctuations.

“We were happy to find a product that didn’t require any additional brazing and was able to help us separate the vertical riser piping into 75’ up and 75’ down, so the expansion can be dispersed on the horizontal sections of piping directly connected above and below the vertical riser”, said Steven. This innovative design minimized stress on the system and provided a practical solution to the challenges posed by vertical pipe expansion.



Learn more about
LineBrace TKL

Outcome

By using the LineBrace, Palone Bros. successfully mitigated the risks associated with refrigerant piping expansion in the vertical riser. The streamlined installation process, coupled with the intelligent design of the brackets, not only ensured optimal performance but also enhanced the long-term reliability of the system.



LineBrace being installed in the shaftway.



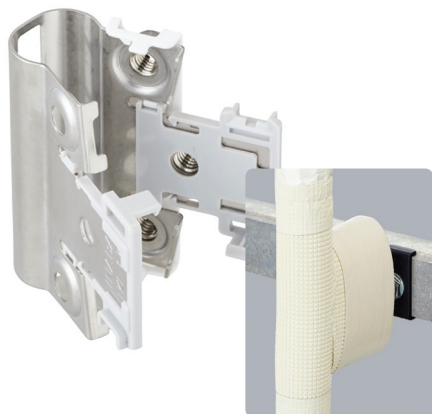
LineBrace installed and covered by the thermal sleeve.

About

Palone Bros. is a reputable HVAC firm based in Brooklyn, NY, with a rich legacy dating back to its establishment by the great-grandfather of the current owner, now in its fourth generation. With a commitment to integrity and excellence, Palone Bros. specializes in installations, service, and maintenance for both commercial and residential clients across the New York City area.

Marketair, was originally founded as a manufacturer's representative company by Gerry Spanger in April 1986, MarketAir, Inc. reinvented itself in January 2016 as an importer, exporter, manufacturer and distributor specializing in installation components and accessories for the HVACR industry. Amongst its products you can find Inaba Denko's LineBrace, RD, PD, MD and cover both ducted and ductless sectors.

Inaba Denko America, supplies HVAC accessories engineered by Inaba Denko of Japan and provides support for distributors and contractors throughout North America. Our brands represent quality, precision, and durability. Primary products include copper line sets, line set covers, drain hoses, and mounting systems, ideal for mini split, VRF, ducted, ductless and heat pump installations.



LineBrace TKL Benefits

- No "hot work" (brazing) required.
- Reduces weight load on vertical riser.
- Reduces thermal expansion by 50%.
- Easy to retrofit onto existing linesets.
- Molded insulation sleeve preserves thermal integrity.
- Available from 3/8" to 1 3/4", in 1/8" increments.

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