

The Duct Man

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HVAC Contractor News You Can Use

To Our Valued Customers,

We at E.P. Homiek Sheet Metal & HVAC Supply would like to express our heartfelt gratitude for your business. Your continued trust and loyalty are truly the key to our success.

Ed Homiek and Staff



Accurate Refrigerant Line Sizing and Design are Critical for Proper A/C System Operation

As a New Jersey HVAC supplier for over 35 years, E.P. Homiek has sold countless refrigerant line sets to our contractors. We've also heard plenty of stories of compressor burnouts, poor system performance, and warranty disputes due to incorrect refrigerant line sizing and design.



Case in point: We recently heard about a warranty dispute that arose when many of the split systems installed in a new 8-story condominium, with condensers and compressors located on the roof and evaporators on each floor, began performing poorly and multiple compressors were

failing soon after tenants moved in. It turned out that the HVAC contractor had failed to consider distances between the rooftop condensers and lower-floor evaporators and installed identically-sized refrigerant line sets throughout the building. They also neglected to install refrigerant traps according to manufacturer directions. As a result, refrigerant lines for the lower floor units were undersized and some systems on the higher floors were overcharged, leading to numerous no-cooling complaints and compressor failures.

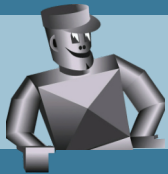
Proper refrigerant line design, layout and sizing are critical when selecting and connecting split systems, especially in situations like the one described here, and all HVAC technicians should understand how refrigerant and oil migrate through a system. Every equipment manufacturer has piping design guidelines, charts, and installation instructions that are readily available online. Many manufacturers can assist HVAC contractors with line set specifications or provide factory piping design information. Liquid lines and suction lines have specific criteria for size and distance, and capacity loss should be kept at 3% or less. This information can be found on charts showing approximate percentages of cooling capacity loss for different size systems and different line lengths.



Increase Sales With Customer Financing

Goodman offers a variety of residential and commercial financing programs that enable HVAC contractors to close more sales, get paid faster, and increase customer satisfaction. Goodman financing is not just for Goodman products. It can be used for **any improvement or equipment installation project**.

If you would like more information on Goodman's wide range of financing solutions, E.P. Homiek can help you get started. Contact Will Hans at 732-364-7644.



Understanding MERV Ratings and ASHRAE Filtration Standards

MERV Rating (Minimum Efficiency Reporting Value) is a standard set by ANSI/ASHRAE that is used to measure the overall efficiency of an air filter. MERV values range from 1-16, with 16 representing the highest MERV possible in filters that are not HEPA or ULPA. Higher MERV values capture a greater percentage of airborne contaminants, with ratings based on particle size and rates of arrestance. Filters with MERV ratings of 1 to 16 are capable of capturing particles ranging from 0.3 to 10 microns. HEPA and ULPA filters can trap particles smaller than 0.3 microns.

ASHRAE recommends using filters rated at a minimum of MERV 13 or higher in all applications, whether residential, commercial, industrial, healthcare, etc. Many HVAC systems, however, aren't designed to accommodate MERV 13 filters, in

which case the highest-possible MERV value should be used. Otherwise, using filters that are too restrictive for the HVAC system will decrease airflow, degrade system performance, and increase energy consumption. Home and building owners should consult with an experienced HVAC company to determine the appropriate MERV rating for their system if that information is lacking.

MERV Range	Average Arrestance	Particle Size (microns)	Typical Applications
1 - 4	60 - 80%	> 10.0	<ul style="list-style-type: none"> • Minimum residential • Minimum light commercial • Equipment protection
5 - 8	80 - 95%	3.0 to 10.0	<ul style="list-style-type: none"> • Better residential • Industrial workplaces • Typical commercial • Paint booths & finishing
9 - 12	> 90 - 98%	1.0 to 3.0	<ul style="list-style-type: none"> • Superior residential • Better industrial • Better commercial • Hospital laboratories
13 - 16	> 95 - 99%	0.30 to 1.0	<ul style="list-style-type: none"> • Superior commercial • Smoke removal • Hospital inpatient • General surgery

MERV 17+ = HEPA / ULPA



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Waiting days, or even weeks, for custom ductwork can result in costly job delays and disgruntled customers. We provide:

- ▶ 1-2 day turnaround on all residential & light commercial
- ▶ 1-2 hour emergency service
- ▶ Free delivery
- ▶ Competitive prices
- ▶ Guarantee on all work
- ▶ Two convenient one-stop locations for custom ductwork and HVAC supply