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From : United Refrigeration & A/C Inc.
517 Recker Hwy.
Auburndale Fl. 33823

Comparative duct system report

This report supplies before and after data regarding system air flow comparing a conventional flex duct system to an AK Duct system.

The unit tested is an ICP straight cool mobile home package system with a 9.8kw electric heater. In both cases, the return is a single duct from a floor mounted return to the cooling unit. The supply duct splits into two supply trunks that feed chase mounted pipe supplies to the ceiling supply trunks and registers.

- A. Original system: The original system consisted of a single 14" return duct. The duct was conventional mobile home flex. The supply duct system was a 12" main supply that ran to a 12 x 10 x 10 Wye, with two 10" ducts going to the existing 10" chase mounted supply pipes.

Data

Airflow checked by temperature rise method indicated a CFM measurement of 757 CFM. The indoor cooling split was checked at 27 degrees F. Entering @ 75, leaving at 48 degrees. The duct static was measured with a magnehelic gauge. Return static was .95 in.wc Supply was .15 in.wc.

- B. Modified system: The original flex duct was removed and replaced with the AK Duct system. The configuration is a single 12" duct from return to unit. The supply comes out of the unit and is feed into two supply ducts that attach to the existing chase mounted supply piping.

Data

Following modification, the airflow was tested by the temperature rise method. The indicated CFM measurement was found to have improved to 1,364 CFM. The indoor cooling split was checked at 18 degrees F. Entering @ 76, leaving at 58 degrees. The duct static was measured with a magnehelic gauge. Return static was improved to .55 in. wc Supply was improved to .38 in. wc.

The customer reports that in the period of time since the system modification, the building comfort has greatly improved. The system is reported to cycle normally as opposed to continuous operation. The customer also reports a reduction in the power bill by 40 dollars per month.

Sincerely,


Steve Loveless, CSR/URAC