



Durham & Sons, Inc.

Peace of Mind

Devices, & methods, for your family, home, and the benefit of the Air Conditioning and Heating System



1. **Line Voltage Surge Protector**

*Help protect your most expensive appliance from lightning and electrical surge up to 25,000 volts. This won't stop a direct lightning strike, but saves your circuit boards from derogatory and often daily surges you cannot see!
240 volt single phase*



2. **Easy Trap Safety Switch**

Attaches to the a/c condensate drain-line discharge. These Shut systems off in the event of a clogged condensate drain line, to prevent flooding, mold and mildew growth. This device doesn't encourage termites by allowing often hidden wet areas to continue unnoticed. This simple device saves you from countless gallons of moisture from damaging your structure and furnishings!



3. **Purge Device (3-N-1 Valve)**

For your condensate drain line at the air handler, allowing a prophylaxis treatment. Simply an area to add warm soapy water or mixed solution of bleach and water. This Provides easy access for you to keep drain line free and clear. Is directionally purge-able or also allows directional use of a shop vacuum rated for water removal. Avoid paying emergency calls by using this device regularly.



4. **Wet Switch**

Shuts off a/c system when it senses any moisture. Can be mounted in a variety of places. This functions like #2 above, but is a secondary and wise investment in case water gets past the 1st safety device.

5. **Discounted installation of Easy Trap Safety Switch, and Wet Switch; #2, #4.**

6. **Discounted Installation of Easy Trap Safety Switch, and Wet Switch, and Ez-clear 3-way clean out valve #2, #3. and #4.**



7. **"Honeywell" (U.V.) Ultra-violet Light. Coil Plus Irradiation Model**

Ultraviolet Air Treatment Systems zap airborne germs and prevent mold spore growth on air conditioning coils. These kill most germs before the re-circulate. This model kills up to 99.9% of surface mold that could otherwise thrive on your systems cooling coils. No dangerous ozone is produced by UV-C lamps.



8. [Return Air Filter Back Grills, “side wall” designation;](#)

Makes filter access easy for monthly services. Primary Filter at inlet to return plenum or air handler base, keeps return plenum cleaner. Secondary filter in air handler also keeps evaporator coil cleaner. Using 2-filters is allowable, if the proper combination of filters is used. Never use two pleated filters, never use 5” media type and a 1” pleated filter as this causes excessive static pressure in the air handler. Includes one filter with install. Remember grilles needed are always 160 Square inches per ton total. The cleaner your air returning to the air



handler, the less energy usage and stress on your a/c system!

12”x 12” or 14” x 14” Return Air Filter Back Grill

16”x 16” or 18” x 18” Return Air Filter Back Grill

20”x 20” Return Air Filter Back Grill

24”x 20” or 24” x 24” Return Air Filter Back Grill

30”x 20” Return Air Filter Back Grill



9. [Return Air Filter Back Grills, “ceiling” designation;](#)

Though accessed by ladder monthly, as it is ceiling mounted, this is a ceiling mounted return air filtered grille. As above, the Primary Filter is in the ceiling, it also keeps return plenum cleaner. The Secondary filter is still in air handler which also keeps evaporator coil cleaner. Double filtration allowable, if the proper type of filters is used. Never use two pleated filters, never use 5” media type and a 1” pleated filter as this causes excessive static pressure in the air handler. This method uses a duct run up to 25,’ includes a return air box where the filtered grille attaches to the drywall ceiling, includes all attachment and sealing needs. Includes one filter with install. Remember grilles needed are always 160 Square inches per ton total. The cleaner your air returning to the air handler, the less energy usage and stress on you’re a/c system! No more shortage of air-flow when the doors are closed!

12”x 12” or 14” x 14” Return Air Filter Back Grill, best for rooms where doors are closed frequently, such as offices, studies, hobby rooms and especially bedrooms

16”x 16” or 18” x 18” Return Air Filter Back Grill

16” x 16” Is the most common maximum size that fits between trusses

20”x 20” Return Air Filter Back Grill

24”x 20” or 24” x 24” Return Air Filter Back Grill

30”x 20” Return Air Filter Back Grill



10. [Supply Air Grills designed to cast the air 75% of the way across the room](#)

Many homes use stamped supply grilles, or dilapidated adjustable grilles without gaskets where the grille meets the ceiling or wall board. This causes poor casting of the conditioned air or worse yet infiltration from the hot or cold

attic air. Furthermore you are pulling every contaminant out of your attic and into your furnishings, cooling coils and duct system.



The worst part is that your family is breathing dust, debris, and any pesticides that were used in the attic, not to mention what is floating in the exterior of the home air supply. We install only quality grills with adjustable louvers for proper cast and air circulation in heating or cooling mode, which are also well sealed to the wall or ceiling, and are also gasketed. **Sure you can go to the hardware super-stores and buy them cheaper, but without effective sealing and gasketing you may as well do nothing!**

Supply Air Grills continued;

8" x 4" ceiling grille 1-way throw of conditioned air

10" x 6" ceiling grille 1-way throw of conditioned air

12" x 6" ceiling grille 1-way throw of conditioned air

12" x 8" ceiling grille 1-way throw of conditioned air

14" x 8" ceiling grille 1-way throw of conditioned air

8" x 4" sidewall grille multi throw positions of conditioned air

10" x 6" sidewall grille multi throw positions of conditioned air

12" x 8" sidewall grille multi throw positions of conditioned air

14" x 8" sidewall grille multi throw positions of conditioned air

11. **CO Detector** (oil or gas furnace)

A must to protect your family from carbon monoxide poisoning.



A leaking heat exchanger can easily spread carbon monoxide throughout your entire home, and you would not necessarily be aware of the presence of the poisonous gases. Don't take the chance, the above owner's did, and nearly lost their lives, and their families lives!



12. **Cooling Thermostat**

Digital and programmable, for precise comfort and energy efficiency. Pre-condition your home before you arrive, raise the temperature after you leave. It's your energy bill, take control of it! Stop making the utility company take your money when you not there to feel it!

White Rodgers brand Honeywell Brand Trane Brand 7-day



13. **Heat Pump Thermostat**

Digital and programmable, for precise comfort and energy efficiency. Pre-condition your home before you arrive, raise the temperature after you leave. It's your energy bill, take control of it! Stop making the utility company take your money when you not there to feel it! As above, stop excessive temperature swing, better condition your home when you want it.

White Rodgers Brand Honeywell Brand Trane Brand 7-day

14. **Dehumidistat**

Controls a/c by humidity instead of temperature while you are away. Temperature settings don't always represent humidity. Stats can cycle off, with excessive humidity still present. Older non-variable speed air handling systems or systems that don't dehumidify well, may reach appropriate temperature, with damaging humidity levels attacking your home clothing and furnishings. Protect your investments with this device

15. **Compressor Protector**

(Time Delay Break, 2 Wire, Fixed Time)

By simple and short delay of shutting the system off, this Protects the a/c system from typical power fluctuations and short cycling. Extends the compressor life and reliability.

16. **Compressor Hard Start Assembly** (Potential Relay with Start Cap).

This re-starts your compressor by overcoming typical resistance to start-up. In neighborhoods with frequent power fluctuation or loss, this can save your compressor. The device offers longer compressor life, reduced electrical consumption on start up, helps to overcome Brown-Out, power fluctuation and short cycling conditions.

17. **Preferred Customer Service Agreement**

You wouldn't run you vehicle with servicing it, you're a/c system should also be serviced, or it to can fail at the most unexpected and inconvenient time. For "Preferred Customers" We offer one cooling check & service and one heating check and service per year. No charge for service calls, and discount on parts and labor if a repair is needed.

See our Brochure available with further details.

Annual PCSA Agreement per system

Each additional system at same location

18. Indoor Air Quality/Air Handler Cleaning *Some homeowners would be shocked to see what is in the air stream they breathe. (Evaporator coils live in dark wet cold places,) perfect areas for bacteria, mold, and viruses.*



Most homeowners who ignore or overlook this task have frequent illness, as do their families.

We Clean the evaporator coils, pan, drain line, vacuum insulation, clean blower wheel, and install time release algacides in the pan. This is to sanitize what's been cultivating in there.

**Minimal Cleaning with easy access, clean in place.*

***Average Cleaning, easy access, , including recovering refrigerant and cut out evaporator to allow coil clean, we clean-in-place the blower wheel, then re-install the coil, add refrigerant filter dryer replacement, evacuation and recharge. A very basic remove evaporator coil and clean job*

****Extreme Cleaning, Moderate to Difficult access, including recovering refrigerant and cut out evaporator coil, clean, removal method of Blower-wheel cleaning, re-install, add refrigerant filter dryer replacement, evacuation and recharge.*



19. Condenser Coil Cleaning

Increase the efficiency of your split A/C or Heat pump “outside coil.” Sadly many homeowners dryer vent discharge, or roof, or other ground level conditions contaminate the condenser coil. This is an important area to properly transfer heat from your home, in the summer and with heat pumps in the winter. Without proper transfer from refrigerants to air, your system will be extremely inefficient, and cause energy waste and higher electricity consumption. We Clean coil with proper coil cleaner, wire brush, fin comb out any bent fins where possible, and flush with clean water.

This is a Minimum task depending on accessibility, and condition of coil. If badly corroded, coil cleaning is not recommended, replacement is suggested.