HVAC Contractor Checklist.

Choosing the contractor that is right for you.

Hiring the right contractor is one of the most important decisions you can make. The following checklist will assist you in evaluating the capabilities of different HVAC companies and the proposals they submit.

Questions to review	Contractor 1	Contractor 2	Contractor 3
1. Is the contractor referred by a friend or neighbor? *The best source of information about the quality of work, friendliness, and customer service is the experiences of friends or neighbors.*			
2. Does the company fleet assure you? *Contractors driving unmarked, beat up, dirty vehicles are likely to treat your home similarly. It is also required by the state of NJ that each contractor list their NJ License # on every vehicle in their fleet.*			
3. Does the company have a physical address? *While many contractors may operate out of a home office when starting out, they do have a physical address. "Fly-by-nights" and "moonlighters" operate from their cell phones. This makes it less likely that they'll stand behind the work performed or be easily reached should a problem arise.*			
4. How long has the Company been in business? *It's best to select a contractor who has been in business at least 5 years.*			
5. What equipment brands are carried? *Manufacturers of the better known equipment brands are selective about the contractors they allow to sell and install their equipment.*			
6. Does the company employ NATE certified technicians? *Contractors who employ NATE certified technicians are providing you with the highest level of recognized talent.*			
7. Is the company involved in other professional memberships? *Good contractors make a concerted effort to continue the learning process. They join professional associations, read professional journals, and enroll in industry-oriented training.*			
8. Will the contractor be obtaining the appropriate building permits? *You will protect the outcome and investment value of your construction project and guard against a lawsuit or injury by obtaining building permits.*			
9. Does the contractor fully insured? *If an employee of an uninsured contractor is hurt on your property, you can be held liable for medical expenses. Reputable contractors will provide copies of their general liability and workers compensation insurance. If the contractor uses subcontractors, ask for copies of their insurance as well.*			

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Questions to review continued	Contractor 1	Contractor 2	Contractor 3
10. Will the contractor provide a copy of the owner's manuals, manufacturer's warranty, and their warranty? *These documents provide valuable information for warranties, future maintenance, or repairs. You should know what the manufacturer and the installing company will do in the event of a problem.*			
11. Did the contractor review the load calculation for your home with you? *The install the right size unit, contractors need to know the home's heating and cooling requirements, based on a variety of factors (e.g. ventilation needs, size of the home, type of windows, insulation amounts, etc.) Determining heating/cooling loads based on the building's square footage is inaccurate and inadequate. Also, basing replacement equipment on the size of the original system could lead to problems since the original equipment size may have been incorrect.*			
12. Will the contractor provide references? *Contractors who enjoy a good reputation have worked very hard to earn it and keep it. Reference from friends, neighbors, and the Better Business Bureau are indicators that the contractor will say what he does, and does what he says. A list of references is a good sign. Call them!*			
13. Have you received a formal contract? *Make sure the contractor has provided you with a clearly written contract. The contract must list complete serial #'s and model #'s for the equipment being installed. Make sure to review the terms and conditions carefully.*			

3 Things to remember when choosing a contractor:

1. Choose Value, not the lowest price.
Be skeptical of extremely low bids. You may become the victim of untrained installers who actually put you at significant risk. Factor the quality of the company's insurance protection, service after the sale, and the company's longevity while making a final choice. Consider whether the company offers superior warranties, Energy Star products, or special offers which put higher quality within your reach just for a bit more.

2. Choose a company with a good track record
Every company has to start sometime. Yet, heating and air conditioning companies tend to fail frequently. In fact, one company in five closes annually. The best indicator that the company will survive long enough to honor its warranty obligations is that is has survived in the past. Try googling each contractor and reading other customers reviews.

3. Choose a contractor that gives you options and an at-home consultation.
Never use a company which quotes a price strictly over the phone. To ensure your comfort, and optimal energy efficiency, equipment must be properly sized to the square footage of the space to be heated/cooled. Ducts may need retrofit. Comfort complaints that you've experienced in the past should be addressed. Most contractors are able to offer a better- best scenario to meet your budget requirements and fulfill your efficiency requirements.

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KEY TERMS

Load Calculation: Building load calculations consider a variety of issues: location (Boston's weather is different than that of Los Angeles), orientation (southwest glass gets much more sun than north glass), construction materials (R-value of insulation, brick or siding, etc.), building size etc. Heating and cooling needs are expressed in British Thermal Units per hour or Btu/h/ A "block load" looks at the whole building's requirements as on large room. A "room-by-room" load calculation refines the calculation to determine individual room's or zone's requirements.

Ton (of air conditioning): A "ton" of air conditioning refers to capacity in relation to melting on ton of ice in 24 hours. The capacity is measured in British Thermal Units (Btu); 288,000 Btu are required to melt on ton of ice in 24- hours (or 12,000 Btu-hr). A 2-ton air conditioner has a nominal capacity of about 24,000 btu/h.

Manufacturer's performance data: This is information provided by the manufacturer to specify the capacity for a particular model. You may hear cooling terms like 2-ton or 3/5 -ton. These are nominal capacities at standard rating points. For heating systems, the Btu/h are expressed by how much heating capacity goes in the furnace (i.e., an 80% efficient, 80,000 Btu/h furnace receives enough fuel to create 64,000 Btu/h of output heat).

Equipment selection: Equipment is manufactured to meet standardized performance requirements. Manufacturers publish expanded performance data that details how the equipment performs at actual operating conditions. Applying the manufacturer's performance data to you home's load is essential to saving energy with the right unit.

Efficiency: Performance descriptors for cooling are Seasonal Energy Efficiency Ration (SEER) and Energy Efficiency Ration (EER). Heating application descriptors are Coefficient of Performance (COP) and Heating Seasonal Performance Factor (HSPF). These are determined under factory conditions.

Certified matched system: The Air Conditioning, Heating and Refrigeration Institute (AHRI; www.shrinet.org) puts heating and cooling equipment through rigorous certification processes to ensure systems deliver the promised performance at certain test conditions.

Combustion analysis: When fossil fuels are used to heat a home, furnaces and boilers should be adjusted to ensure that they are efficiently consuming fuel and that they have sufficient oxygen to properly combust the fuel. A combustion analysis test, with a properly calibrated meter, is an optimal approach to verify the combustion rate.

Vent system: When fossil fuels are used to heat a home they produce carbon monoxide (CO). Your contractor will verify that the vent piping is the correct size and properly installed. A CO test is supplemental to ensure tat the furnace or boiler is venting properly, exhausting all of the harmful gases away from the occupants.