

# •Refrigeration •Air-conditioning



Air-conditioner installation process

## INTRODUCTION

There is no such thing as a maintenance free air-conditioner. Let's just get it straight, so that when you buy your new air-conditioner, and the sales person tells you that it is "maintenance free", that you know there is some hog-wash in what you are being told.

Whilst some activities can, and indeed should be carried out by the owner, other maintenance activities are outside his / her scope and should only be performed by professionals.

## QUOTATION

It is with this very first step that the relationship between you and the supplier / installer starts. The lowest price is not always the best price for your pocket. Poor installation, failure to comply to best technical standards and principles of the trade can cost you more on the long run, than your initial "savings" on the installation costs – possibly even more than what you would like to be spending at the time things go wrong.

A proper quote can only be done by means of a physical visit to the installation site. This is an important step which will ensure that the capacity of the unit is aligned with the size of the area to be covered, to ensure the availability of electricity points, determine the length of the copper pipes to be used, the length and route of the condensation drain pipe, *et cetera*. Should you insist on a quote without a site visit, you need to be aware that it will be a vague estimate only, and the actual cost could vary, up or down, quite substantially. Such an estimate will also not be binding at all. Rather get a firm quote through a site visit and not invite nasty financial surprises.

Should you also require the supply of the air-conditioner unit, the cost of such will be indicated on the quote.

## INSTALLATION

Once you have studied and accepted the quotation (which is valid for a limited period only), and an installation date was confirmed, the following will take place:

1. We arrive on-site, and will truly appreciate that your guard dogs do not attack us in the process!

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2. We start by preparing the inside and outside location of the respective units, as agreed upon during the site visit and quotation by:
  - a. Attaching the internal unit's mounting bracket to the wall
  - b. Performing the core-drill to the outside unit (to allow pipes and cabling to pass through the wall)
  - c. Install the mounting brackets for the external unit
  - d. Prepare and install the power reticulation to the inside unit
    - i. Units of larger capacity than 24,000 BTU are wired to the Mains DB directly (does not run off a three point wall socket), and is fed by it's own trip switch. Also, an isolator switch is mounted within arm's reach of the internal unit.
    - ii. 2.d.i. above can also be applied to smaller units, although these can be safely, and legally run off a three-point wall socket.
3. We prepare the pipework of the internal unit by removing the flare-nut couplings, and brazing the pipes instead.
  - a. This ensures that the opportunities of leakage of refrigerant is minimised, resulting in a better quality of experience for you as the customer.
4. The wiring connecting the internal and external unit is now installed, together with the pipework and the drainpipe for the condensate. During this process the internal unit is mounted onto it's bracket.
5. The external unit is now mounted and the pipework prepared for final connection.
6. The core drill is filled with an expansion foam to seal the hole.
7. The pipes are connected to the external unit, after applying a sealing compound which further reduces the chance of a refrigerant leak. At this stage we also draw a deep vacuum, and then charge the correct amount of refrigerant ("gas") into the system.
8. We check the pressure of the system, turn it on, and continue to monitor the pressure levels for a further 15 minutes, or so.
9. We do a number of tests to ensure correct unit functionality, and to ensure safety, which always comes first:
  - a. We check that the unit's refrigerant is at the correct pressure levels.
  - b. We check that the current drawn by the compressor is according to manufacturer's specifications
  - c. We check that there are no refrigerant leaks
  - d. We double check all electrical connections.
  - e. Check that both the internal and external fans work correctly
  - f. We check the remote control is fully functional

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10. Should your air-conditioner be the “heat-pump” type that can cool as well as heat, we check both states of operation.
11. Should you be available after the installation, we would like to take the time to explain the operation of your new asset and it’s remote control to you.
12. Immediately after installation, all outstanding amounts need to be deposited into our business account without delay.
13. At this stage we would like to book the first service date with you. The service costs are payable only once the service has been performed.
  - a. Installation faults picked up during the first service is repaired without cost to you. The standard costs of the service remains payable.

Please be aware that we can not final-fix all walls, holes, etc. which had to be modified, cut into by finishing it up to your exact colours of paint, etc. In all likelihood we will not have the exact colour in any case. We will ensure that the surfaces are made good, though.

Finally, please remain reminded that we do NOT issue electrical compliance certificates. Since all of our work are done in accordance to SABS standards, we would gladly refer a reputable certified and qualified electrician that will issue your wiring compliance certificate at the normal going rates.

Safety first

Quality close on it’s heels

Poor workmanship – not an option!