

Air Conditioning Solutions

How Air Conditioning Works

Air Conditioning works in a different way to which many may think. Most people believe that air conditioning units work by filling the room with cold air but the main way it cools you is by removing the hot air that is already in the room.

Explained simply - air conditioning includes both the cooling and heating of air. It also includes cleaning. The purpose of air conditioning is to make our homes / workplaces more comfortable and healthier places to be in.

The Very Basics

The principle of air conditioning always comes down to the same:

absorb energy in one place and release it in another place

The process requires an indoor unit, an outdoor unit and copper piping to connect both. Through the piping the refrigerant flows from one unit to another. It is the refrigerant that absorbs the energy in one unit and releases it in the other.

Cooling Mode

1. Indoor unit

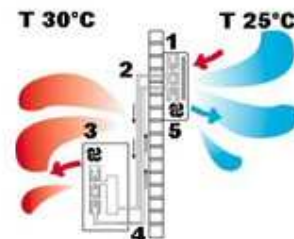
A fan blows the hot indoor air over a heat exchanging coil through which cold refrigerant flows. The cold refrigerant absorbs the heat from the air and cooled air is blown into the room.

2. Copper piping

The refrigerant circulates through the units and the piping and takes the heat from the indoor unit to the outdoor unit.

3. Outdoor unit

Through compression, the refrigerant gas is heated and its boiling point increases. In the outdoor unit the obtained heat through compression is released to the outdoor air by means of a fan which blows the outdoor air over a heat exchanging coil.



Comfort Cooling Solutions

This is a term generally used for air conditioning solutions (heating and cooling) within office areas even though this can extend to warehouse and other working environments. Comfort cooling parameters are generally designed around 23-24°C with no real attention paid to the relative humidity (RH) of the space served.

We also install systems to meet specialist demands; examples would include systems for computer rooms or data centres which have seen a growth explosion in recent years or those which require close control.