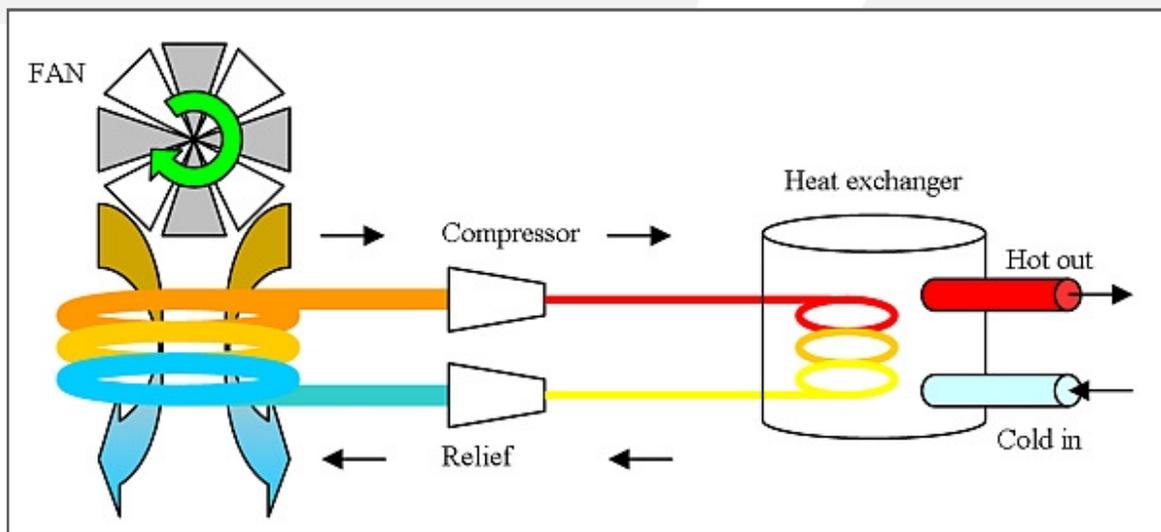


## HOW DOES A HEAT PUMP WORK?

### HEAT PUMP WATER HEATING SYSTEM

A hot water heat pump is a very efficient electrical water heater. Heat pumps have been around for decades (some of the hostels at Stellenbosch University for example have used heat pumps for hot water for more than 25 years) and is very widely used in Europe for central heating systems. Their popularity has however increased drastically due to the increase in the price of electricity in the recent years and this increase in demand has brought down the price considerably.

A heat pump works like an air conditioning unit in reverse. It extracts heat from the ambient air surrounding it, enabling it to heat the refrigerant which is then compressed causing it to get even hotter. This is then run through a heat exchanger where this thermal energy is drawn off to heat the water and then the refrigerant is allowed to expand again, thus cooling it down and enabling it again to absorb heat from the surrounding air. So electricity is only used to run a fan and compressor and the heat energy is provided indirectly by the sun.



A hot water heat pump typically produces up to 4 times more heat energy than the electrical energy it consumes. So by connecting an ITS heat pump to your existing hot water cylinder you can divide your hot water electrical consumption by 4. Unlike solar a heat pump is not directly dependant on the sun and therefore it can operate day and night, winter and summer ensuring you the highest possible saving and piping hot water 24/7.

For more information on ITS heat pump products please download our heat pump data sheets.

THANK YOU FOR YOUR INTEREST IN OUR HEAT PUMP PRODUCTS!

South Africa's leading **heat pump** supplier

Tel: 021 854 5290 | Fax: 086 505 0707 | Email: [info@itssolar.co.za](mailto:info@itssolar.co.za) | Web: [www.itsheatpump.co.za](http://www.itsheatpump.co.za)