# PETchiller

Water Cooled Chiller Self adjustable and auto-adaptive to any processing condition

**PETChiller** is the new solution offered by Thermalcare to obtain the highest energy efficient performance for chilled water systems. It is developed for PET perform production lines and applicable to all those processes requiring high refrigeration capacities, high water flow and pressure.

### **Benefits:**

- Auto-adaptive functioning
- Highest energy efficiency EER values
- Inverter controlled compressors
- Stable process conditions
- Accurate Temperature control



The PETChiller works on the principle of variable compressor motor speed; an electrical signal is given to the compressor motor to adjust the screw speed according to the thermal load.

If the thermal load is high the com-

pressor runs faster developing a higher refrigerant flow rate and accordingly increasing the cooling power; on the contrary, the inverter reduces the refrigerant flow rate reducing the cooling power supplied consequently.



## Main features:

- Inverter controlled screw compressor: stable process conditions and optimised energy utilisation
- Inverter controlled process water pump: the quantity of water to supply to the utilities is automatically determined based on the temperature differential in/out
- Braised plate stainless steel heat exchangers
- Electronic expansion valve: modulation, control and regular gas expansion are key for a process that on top of being efficient must also be very accurate
- Accurate temperature control (accuracy of 0.1°C, versus temperature variations of 1°C and more of conventional chilled water systems).



## Ambient effect on EER and cooling power Thermalcare PETchiller Vs conventional unit

# Total annual energy consumption Thermalcare PETchiller Vs conventional system



