

# Aermec's NRP Unit Provides Simultaneous Heating / Cooling & Heat Recovery

## Application

The NRP is a multipurpose external unit with refrigerant R410A, designed for 2 or 4-pipe systems. With just one unit, simultaneous and independent request for hot and chilled water can be accommodated all year round.

## Innovation, Value, and Market Impact

Aermec's NRP is an air to water unit used for outdoor installation. It is a revolutionary unit that is characterized by its ability to operate with no refrigerant in the building while providing simultaneous heating and cooling through water.

In year 2020 in Europe and in year 2025 in North America, R401A will be discontinued for use in chillers. When an NRP is installed all that needs to be replaced is the outdoor unit if there is a catastrophic failure. The pipes do not need to be replaced as the indoor fan coils and piping can be used for another 25 or 30 years. Other systems on the market (VRF) will need to change all the piping as well as indoor infrastructure including indoor heads. This will be a very costly and inefficient venture for the owner of the building. The NRP provides a more efficient and cost effective solution compared to alternatives on the market.

The NRP is efficient as it can reduce CO2 emissions by 40%. The NRP features heat recovery, simultaneous heating and cooling, and low temperature operation. The unit is not restricted by the length of the pipes.

Total Efficiency Ratio: Up to 8 TER = energy output divided by energy input

E.g. 20 KW of electricity input 70 KW of cooling out and 84 KW of heating out = TER of 7.7  
some may call this a COP

The unit can provide energy for fan coil heating or cooling, ducted heating and cooling, radiant heating or cooling, domestic hot water, heat recovery, simultaneous heating and cooling, and more. With heating operation is down to 5°F and hot water up to 131°F along with cooling and heat recovery is it any wonder why these units are being called Net Zero Energy machines.

Learn more about the NRP unit at [www.aermec.us](http://www.aermec.us)

