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Seasonal Space Heating
Energy Efficiency (η_s)



Key features and benefits:

Band A⁺⁺ Patent pending heat exchanger technology resulting in class leading efficiency.

Designed as a heat pump many other competitor products started out life as an air conditioner and not a heat pump, so their designs are a compromise and not fully optimised to be as efficient as possible in extracting heat from the air. The key area for performance in the Irish climate is from +3 to -3 °C. The high humidity in our climate makes defrost performance critical to a successful heat pump implementation. Our heat pumps have been designed and optimised to operate in these conditions.

Operate at flow temperatures up 65 °C and external temperatures down to -20 °C. This is possible with RED's innovative technology which injects refrigerant vapour to cool the compressor at high water flow temperatures and a secondary heat exchanger which maintains capacity at low outdoor temperatures.

Capacity of 1.5-10kW & 3-15kW, the two model outputs are achieved by utilising high efficiency Copeland variable speed inverter controlled compressors powered with a single phase electrical supply. This wide modulation range gives improved efficiency as the heat pump runs longer without cycling with the added bonus of no buffer.

Indoor Unit is a convenient wiring and control centre it is fitted with a high resolution (800x480) 5" colour touch screen interface to allow easy and intuitive setup and operation of the heat pump

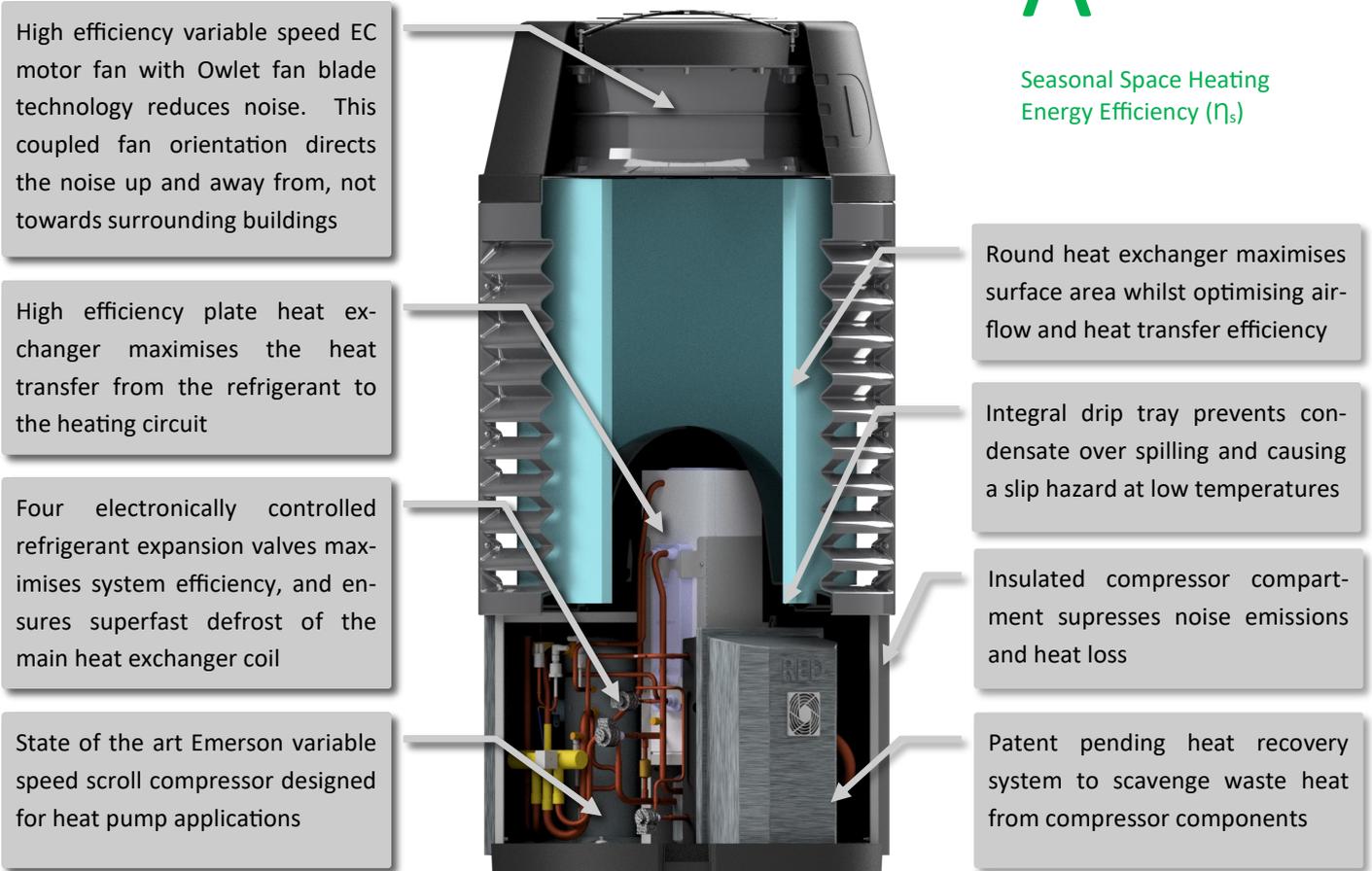
Designed in the digital age RED has included a high level of data collection, monitoring and adjustment via an internet connection over Wi-Fi. Temperatures, performance and a measured COP can be viewed and reported throughout the life of the heat pump. Plans are in place to offer a monitoring and optimisation service to enable homeowners to enjoy the maximum return on their investment. Our sophisticated data monitoring is also aimed at helping the installer in the retrofit market. Existing heating circuit design can lead to flow rates to the heat pump being compromised. The inbuilt flow meter allows this be detected and the necessary changes made quickly and efficiently.

Variable control to match our variable climate... control algorithms monitor and optimise the speed of the compressor, heat exchanger fan, circulation pump, and the refrigerant expansion valves, depending upon external temperature and heating demand on RED's bespoke PCB hardware and custom software.

The inside view of RED's ultra efficient air source heat pump

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The RED heat pump is a self contained Monobloc with a footprint of diameter 780mm, pipework connections along with the power supply and data cable to indoor controller can be mounted through the side of the casing or enter from underneath for a discreet and uncluttered installation. The indoor controller, not only controls the outdoor Monobloc unit but can also act as a heating system controller for to 4 zones. Other functions such as on/off scheduler, controller for hot water tank, backup boiler, weather compensation are all easily controlled from the colour touch screen interface. Options include up to a 4 zone pre plumbed combined low loss header & manifold and a hot water storage tank in 200l or 250l capacities enabling the heat pump to heat the tank to 60 °C with out need of a back up immersion.

Commissioning is made easy as there are multiple preconfigured plumbing configurations, simply select the correct configuration that corresponds to the plumbing layout and wire up. The heat pump can then be configured to use weather compensation, fixed flow temp or time clock as associated with a traditional boiler. The RED heat pump will then adapt to the outside weather conditions and deliver heat at optimum levels of efficiency.

The RED heat pump was designed to make installation, wiring and commissioning as simple as possible. Don't take our word for it try one yourself.

