

NEW

TEMPERZONE
55+ YEARS
OF EXPERTISE

Inverter 29.7kW Packaged Unit

Temperzone presents the very first Australasian designed and built Inverter Rooftop Packaged Unit. Designed to handle a wide range of ambient conditions as well as deal with a variety of requirements within a building the OPA 296 inverter unit is packed with the componentry that makes it one of the most efficient and flexible Packaged Rooftop Units on the market.



OPA 296RKTfH-P Inverter

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DC Inverter Compressor | EEV Valves | EC Motor Plug Fan

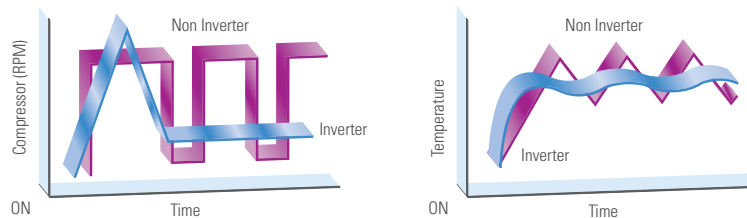


Efficient

- The unit utilises an Hitachi **inverter scroll compressor** which has a **very high power factor** and is **very efficient at part load**. Part load efficiency is further enhanced by indoor fan part load operation at low loads (1/2 the airflow equals 1/8 the fan power) using the fan laws.
- The unit's plug fan incorporates a **high efficiency electronically commutated (EC) motor** (up to 90% efficient; significantly better than belt drive centrifugal fans).
- The **heat exchange coils** have inner grooved (rifled) tubes for better heat transfer.

Performance

- Inverter technology allows a room to reach the required temperature more rapidly, offering up to **30% more efficiency** and also eliminates the stop-start operation used by constant speed systems. The inverter adjusts (increase/decrease) the compressor speed providing close comfort control of the room temperature.



- Boost capacity is available for **fast response** when well away from set point at start-up.
- The unit also uses a **backward curved plug fan for fine tuning** of the indoor unit to match higher static pressure supply air requirements. These EC motor fans have a fully integrated speed control that enables **soft starting**. Fan speed can be stepped to your own requirements or continuously variable using a 0–10V DC control signal.
- **Electronic expansion valves (EEV)** assist in optimising refrigerant flow.
- The unit has a **digital temperature sensing head pressure control** (via pressure transducers) enabling the system to compensate for outdoor ambient temperatures below 20°C on cooling cycle, and above 15°C on heating cycle.

Economy

- An economiser option is available to **lower operating cost during the cooling cycle**.
- The inverter compressor uses less energy than alternative types of compressor.

Quiet

- The **EC plug fan** can vary from zero to full speed. This allows **slow ramp up with no sudden noise change**. The motor can be controlled to have the best air flow for the ducting and requirements as well as used for de-humidifying the space.
- The unit has a larger than normal supply air spigot. This creates a lower than normal air velocity leaving the unit, which means less airstream noise generated inside the ductwork.
- When used in conjunction with the TZT 100 controller, a **Quiet Mode is available**. This slows down the condenser fans which is good for night time operation and will be of particular interest when used in built up areas.

Durable

- The cabinet is constructed from high grade galvanised steel - **polyester powder coated** for all weather protection.
- Indoor and outdoor air coil fins are **epoxy coated** for extra protection in corrosive environments, e.g. salt sea air.

Controls

- The OPA's Unit Controller (UC6) is **BMS, Modbus and BACnet compatible** with multi-unit control possible.
- For **Self Diagnostics**, the UC6 controller has a 7 segment LED display indicating faults and running conditions. Many operating status conditions (including history) can be determined, without gauges, simply by using the optional UC6 Service Interface graphical display.
- Available as an option is a built in temperature controller that has the facility to control the fan and compressor capacity and energy usage as well as enthalpy control of the economiser dampers and has time clock functionality.
- The OPA 296 inverter unit is **DRED:DRM1 compliant** with the Australian standard AS4755.3.1.

Soft Starting

- The EC fan motor and inverter drive compressor are soft starting therefore alleviating potential problems associated with high in-rush current.