Vertical Packaged Air Conditioner / Heat Pump
16.1kW

temperzone

Superior Performance
in Extreme conditions

FEATURING:

- **HIGH PERFORMANCE**
  Exceeding government MEPS rating
- **HIGH EFFICIENCY**
  Advanced Electronically Commutated (EC) motor
- **VERSATILITY**
  Unit airflow can be configured on site
- **CONTROL**
  40–100% variable cooling/ heating capacity
- **TOUGH AND DURABLE**
  Epoxy coated coils & full powdercoat finish
- **WIDE AMBIENT TEMPERATURE**
  Designed for -15°C (heating) to +52°C (cooling)
- **DEHUMIDIFIES**
  Moisture removal in Dry mode
- **INTELLIGENT DESIGN**
  Simplicity and enhanced technology
- **POWER PROTECTION**
  Phase failure, rotation, voltage and surge protection
- **ADVANCED FILTRATION**
  Rated G4/ F4 filters (AS1324.1)

VPA 160 - VERTICAL PACKAGED AIR CONDITIONER / HEAT PUMP

DESIGNED FOR EXTREMES

The Temperzone VPA unit is designed to survive in the high ambient temperatures of Australia as well as the extreme lows of New Zealand's South. It can be used in cooling or heating mode with optional automatic changeover; additional de-humidifying in the moist subtropics.

The VPA is particularly aimed at operating in the harsh environment of the mining communities of the Australian outback. Being tall and narrow, the unit can snugly fit alongside a house or commercial premises without interfering with gardens and pathways.

BUILT TO LAST

The steel cabinet is made of heavy duty galvanised sheet with a thick polyester powder coating both inside and outside. Additionally stainless steel screws are utilised in construction. The air coil has a bonded epoxy coating applied by the fin material manufacturer to combat corrosion of salt spray and other pollutants. The outdoor air coil fins can be easily washed down to ensure optimum performance. Through the implementation of a totally enclosed box section, the base is vermin resistant.

SAFETY

The access panels have rotational latches to open, thus giving security against accidental opening.

The VPA has a unit ON/OFF isolator fitted and internal electrical protection. A grille protects inquisitive small fingers from the outdoor fan.

QUIET OPERATION

Great attention has been invested in keeping noise levels to a minimum. The indoor fan supply and return air chambers of the unit are lined with the best acoustic insulation, which also has excellent thermal properties. This insulation, made specifically for Temperzone, is manufactured in Australia and NZ to the appropriate ANZ building codes and standards.

The composite plastic aerofoil indoor fan is designed for very low noise levels. The integral high efficiency Electronically Commutated (EC) motor can vary speed from 0 to 100%. This allows slow ramp up with no sudden noise change. The motor can be controlled to vary the airflow to suit the ducting requirements as well as to achieve de-humidification of the space.

The outdoor noise is a function of how hard the units need to work to meet the local conditions but by using the latest low noise sickle blade outdoor fan, it is kept to a minimum. In mid season when the VPA is not running at maximum capacity the outdoor fan speed and noise reduces.

REFRIGERANT R410A

Each system uses refrigerant R410A which is deemed to have zero ozone depletion potential.

DIGITAL SCROLL TECHNOLOGY

The cooling and heating performances are matched to the requirements by the variable capacity Digital Scroll compressor and smart programmed electronics.

Scroll compressors ensure high efficiency through a unique feature termed axial compliance. This allows the fixed scroll to move incrementally in the axial direction to ensure that fixed and orbiting scrolls are always loaded together with optimal force.

With 70% fewer moving parts, scroll compressors deliver enhanced performance with reliable and uncomplicated design.

VERSATILITY

The VPA has several unique features over other brands. The greatest point of difference is that the VPA is "ambidextrous." This means that the airflow direction (left to right or right to left) can be changed easily on site. Furthermore, the return air inlet to the VPA is quickly and easily changed from top to back to side. One of the entries could be used to introduce fresh air into the building. The supply air direction is changeable by simply moving a cover panel.

Multiple return air entries and supply air exits can be used at the same time. This allows the multiple supply air ducts to go to various spaces or rooms directly from the VPA.

There are a number of existing installations, particularly in Western Australia, that have similar units. The VPA 160 is designed as a direct replacement allowing quick and easy changeout.

SUPERIOR FILTRATION

The G4/F4 rated washable filter is 50mm deep in an extruded aluminium frame with a great dust holding capacity. The replaceable filter media is held in with a stainless steel wire clipped rack.

EC FAN MOTORS provide high efficiency performance while keeping sound levels to a minimum

CONVENIENT CONTROL

The TZT-100 controller supplied is integrated into the VPA electronics via a simple communications cable. It includes all necessary features which are essential to control the unit and create a comfortable living or working environment.

Part of the control strategy is to give the occupant control to satisfy the need for cooling or heating or additional de-humidification. The dual electronic expansion valves (EEV) enables great moisture removal during off peak duty conditions. These valves also, together with indoor fan speed regulation and compressor capacity modulation, ensure the VPA unit will keep working when the outdoor temperature is extremely high or very low.

ROOM TEMPERATURE CONTROL

The TZT-100 advanced controller is an attractive, unobtrusive and easy-to-use room temperature control system. Extensive research was undertaken prior to the production of the thermostat. Key criteria in its design are its clean lines, thin profile and an impressive "EL" backlit Liquid Crystal Display. Simple operation and logical button placement were also deeply researched to ensure the operation and control is as intuitive and impressive as its clean, modern styling.

BMS

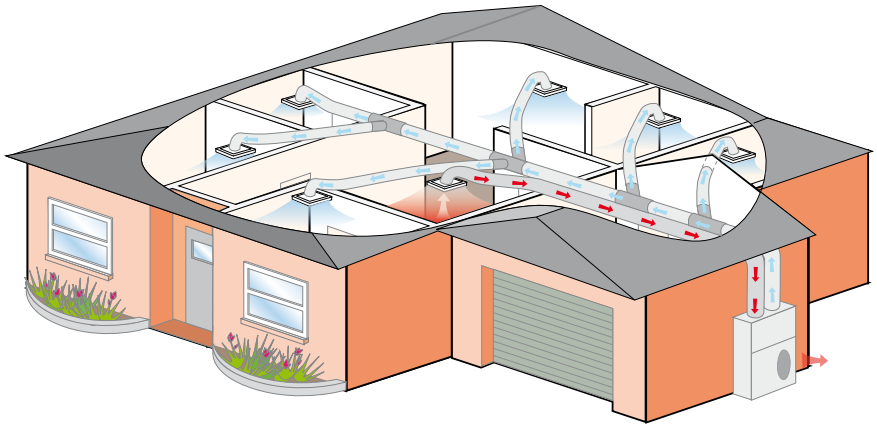
The VPA electronics can accept communication from a Building Management System (Modbus over RS425) to control or override the room thermostat. This, for example will give ultimate control of the air conditioning units in hotels, motels and schools where occupancy levels vary.

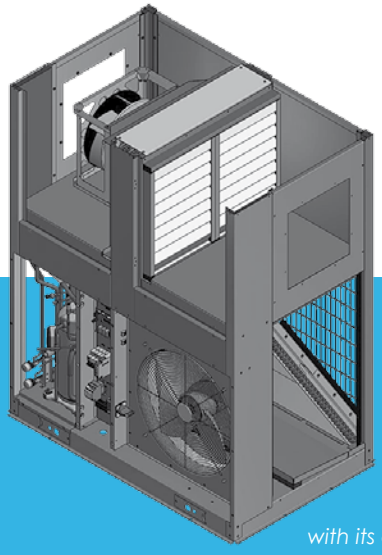
CUSTOMISATION

Individual requirements can be met by the Temperzone team in Australia and NZ to Custom build a VPA special unit. This could be particular colours, filters or a single phase power supply.

EXPERIENCE YOU CAN TRUST

The manufacturer has over 60 years of air conditioning experience and more than 20 year of experience in the electronic control of the air conditioning refrigeration cycle. This ensures all aspects of the VPA working conditions are accounted for to ensure efficient, safe, trouble free and durable operation.





HIGHLY ADAPTABLE with its compartmentalised design, the VPA allows for multiple options of airflow direction, entries and exits.

VPA TECHNICAL SUMMARY

Model			VPA 160RKTGV
Cooling Capacity *1		kW	6.9 ~16.1
Sensible Cooling Capacity		kW	12.9
EER / AEER (cooling)			3.18 / 3.16
Heating Capacity *2		kW	6.3 ~ 15.8
COP / ACOP (heating)		kW	3.62 / 3.60
Supply Air Flow (nominal) *3		l/s	825
Specific Fan Power *4			SFP 2
Indoor Airflow Range (min. – max.)		l/s	0 – 1400
Sound Power Level (SWL)		dB(A)	74
Sound Pressure Level (SPL) at 3 m		dB(A)	58
Power Supply ac 3 Phase 50 Hz *5		V	400
Running Amps (Total System)		A/ph.	7.5 / 8 / 9
Max. Running Amps (Total System)		A/ph.	11 / 11.5 / 12
Dimensions :	Width	mm	1400
	Depth	mm	880
	Height	mm	1730
Nett Weight		kg	230
Shipping Weight		kg	260
Finish			grey polyester powder coat
Refrigerant			R410A

*1 Nominal Cooling Capacity at AS/NZS 3823 conditions: Indoor Entering Air Temperature 27°C D.B., 19°C W.B.; Outdoor Entering Air Temperature 35°C D.B.

Subtract Indoor fan power to calculate Net Capacity.

*2 Nominal Heating Capacity at AS/NZS 3823 conditions: Indoor Entering Air Temperature 20°C D.B.; Outdoor Entering Air Temperature 7°C D.B., 6°C W.B.

*3 Supply air flow at Nominal Cooling Capacity conditions stated above.

*4 Specific Fan Power to DIN EN 13779.
SFP1 ≤ 500 W / (m³/s)
SFP2 ≤ 750 W / (m³/s)
SFP3 ≤ 1250 W / (m³/s)

*5 Voltage fluctuation limits: 342 – 436 V.

NOTE: The manufacturer reserves the right to change specifications at any time without notice or obligation.

Available from

manufactured and distributed by:
temperzone limited
Head Office, Auckland : 38 Tidal Rd, Mangere, N.Z.
Private Bag 93303, Otahuhu, NEW ZEALAND.
Email sales@temperzone.co.nz Website: www.temperzone.co.nz

temperzone australia pty ltd
Head Office, Sydney : 14 Carnagie Pl.
PO Box 6448, Delivery Centre, Blacktown, NSW 2148,
AUSTRALIA.
Email sales@temperzone.com.au Website: www.temperzone.com.au

02/19 Pamphlet No. 3653