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POOL HEATING

Heat Pump Pool Heaters

Eco | Elite | Eclipse | Max

ABOUT MADIMACK **Australia's authority in Heat Pump technology.**

Madimack is Australia's authority in Heat Pump technology, specialising in the delivery of premium, sustainable, electrical solutions to market. We believe in innovation without compromise, with a focus on engineering products that increase industry standards, drive technology, increase efficiencies and reduce Australia's carbon foot-print.

Fully Australian owned and operated, Madimack was founded on 50 years of industry expertise and a rigorous commitment to ongoing research and development in technology and renewable energy. Today, via an integral combination of key national distributors and expert international partners, Madimack has both the access and insight to drive advancements in residential and commercial energy solutions for all Australians.

Madimack represents premium design, efficiency and smart-feature integration.
Our products are supported by market leading warranties and unrivalled customer service, which, along with a singleminded focus on 'driving innovation without compromise', guarantees our clients the very best in energy solutions.

WHAT ARE HEAT PUMPS?

Leading global renewable resource based on efficiencies and performance.

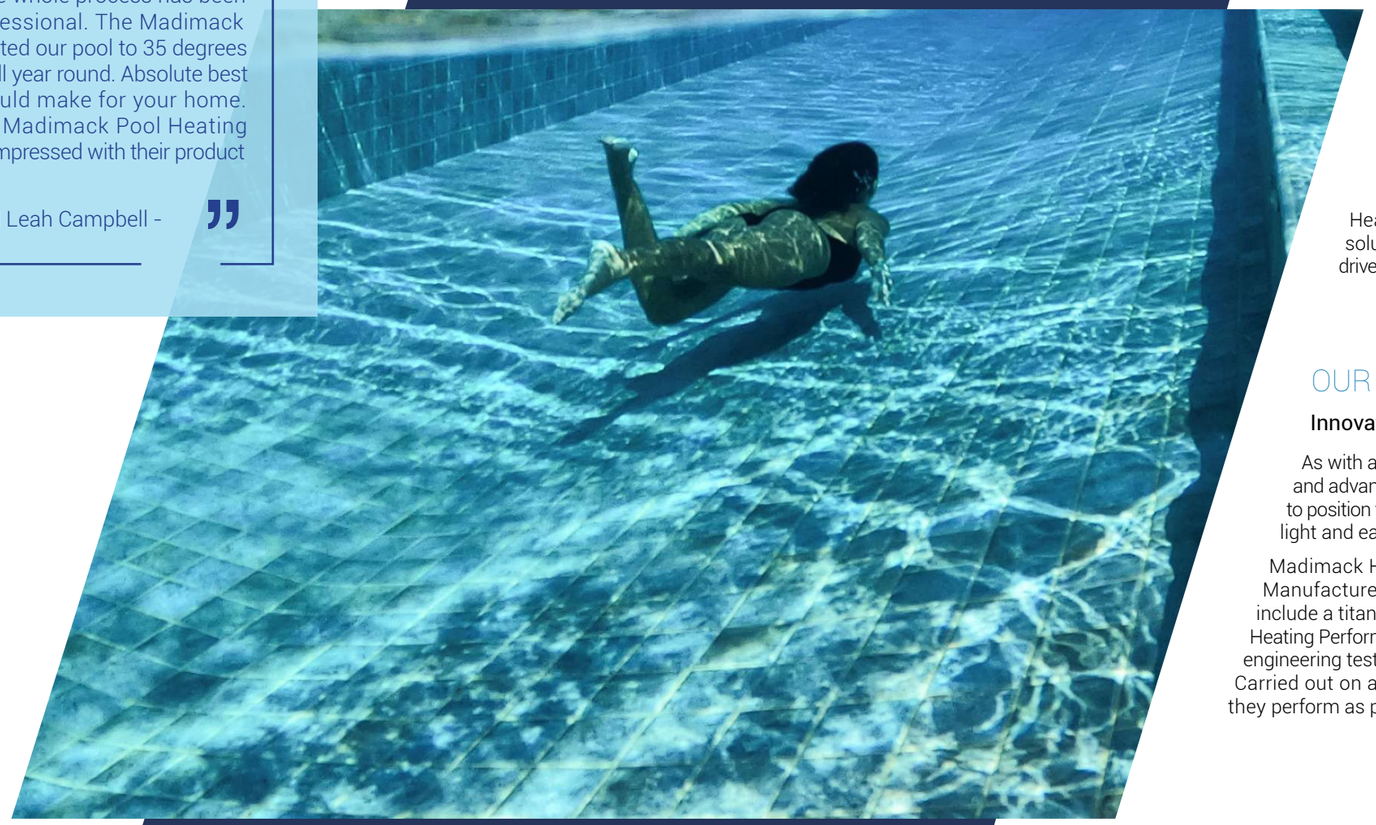
Heat pumps work by transferring the heat from the air outside a heating unit to the water stored inside a heating unit via a 'heat exchange system' and then pump that heated water into your pool. Heat pumps are the most energy efficient way to heat your pool, using approximately one third of the energy used by alternative pool heating systems.

The benefits of Heat Pumps are various and include;

- Source of renewable energy
- Effective in low temperatures
- All round superior efficiencies
- Convenient - no roof space or panels required
- Ease of installation (uses existing connections)
- High grade production and engineering means extended life spans & less maintenance
- Safe (no combustion)
- Supported by ongoing development and innovation (international growth industry)

Heat pump technology is quickly becoming a leading global industry, heavily weighted as a solution for 'net-zero' targets. Developments are burgeoning domestically and internationally, driven predominantly by governmental policy and consumer demand for "net-zero" initiatives.

> ★★★★★
>
> Productreview.com.au 5 star rating
>
> We cannot recommend it more! From our first point of contact, the whole process has been seamless and professional. The Madimack Heat Pump has heated our pool to 35 degrees and now we swim all year round. Absolute best investment you could make for your home. Can't recommend Madimack Pool Heating enough, you will be impressed with their product from start to finish.
>
> - David and Leah Campbell -



OUR HEAT PUMP TECHNOLOGY

Innovation without compromise.

As with all industry, leaders are identified by their ability to provide market extensions, drive innovation and advance technology. In that vein, Madimack's commitment to research and development continues to position them as the Australian authority in Heat Pump technology. Our Heat Pumps are tech-advanced, light and easy to install, making them ideal for backyards and commercial premises.

Madimack Heat Pumps are supported by advanced technologies and market leading warranties. Manufactured from the highest quality components and tested above industry requirements, they include a titanium heat exchanger combined with a corrosion resistant evaporator coil and come with a Heating Performance Guarantee. Madimack Heat Pumps are TuV certified. TuV Rheinland is an international engineering testing body that is used to satisfy performance and quality metrics to international standards. Carried out on a voluntary basis in Australia, the program tests units in random conditions to confirm they perform as promoted.

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WHAT SETS US APART

- 10 year warranty on compressor
- TüV Rheinland tested
- Highest efficiency
- WIFI included across the range
- Patented quietest unit
- Full inverter technology
- Touchscreen easy to use controller
- Night Mode
- Built in flow switch
- Dual defrost system
- Titanium heat exchanger
- Reverse fan for quieter operation
- Compatible with Solar PV
- R32 Eco friendly refrigerant
- Latest electronic expansion valve

SERVICES

- Free to use online calculator
- Online warranty portal with 24-hour response
- In depth installation and user manuals
- Contractor installation, training and advice
- Commercial energy modelling

INVERTER TECHNOLOGY

- Longer unit lifetime by up to five years
- Higher efficiency than on/off units
- Night mode and quite mode built in
- Soft start operation

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Eco

EFFICIENT HEAT PUMP SERIES

Built with efficiency and simplicity in mind, the quiet, long lasting and easy to use Eco is perfect for energy conscious minds. Encased in 'state of the art' anti-corrosion ABS casing, the Eco will keep your pool warm season after season. Madimack units include WiFi as a standard function, providing the convenience of being able to change your pool's temperature and timers from wherever your day takes you. Additional benefits include 'low energy' and 'night time' modes, enabling heating efficiency to increase by up to 20%. Madimack's Eco pool heating system provides everything your family needs for an extended season of pool-time fun.

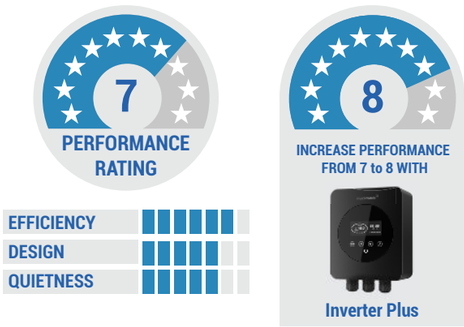
- Energy efficient with COP up to 11
- Full inverter compressor and inverter fan
- Five models up to 24 kW in single phase
- Quieter operation than on/off technology
- Anti-corrosion ABS casing
- Easy to use controller
- Slim design
- Wi-Fi as standard
- Titanium heat exchanger with 25-year warranty
- Front discharge air outlet
- Reverse cycle defrost
- Built-in flow switch and safety devices
- Latest most eco-friendly R32 Refrigerant
- TüV Rheinland certified
- Up to 40 degrees set point temperature

SPECIFICATIONS

Model	ECO90	ECO130	ECO160	ECO200	ECO240
PERFORMANCE CONDITION: Air 27°C/ Water 27°C/ Humid. 80%					
Heating capacity (kW)	9.0	13.0	16.1	20.4	24.4
COP Range	10.8~6.4	11.0~6.3	10.9~6.2	10.8~6.2	10.9~6.3
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/ Humid. 70%					
Heating capacity (kW)	6.5	9.0	11.0	14.0	16.0
COP Range	6.4~4.4	6.4~4.7	6.6~4.3	6.4~4.3	6.6~4.5
TECHNICAL SPECIFICATIONS					
Operating air temperature (°C)	-5°C~43°C				
Compressor	Full Stepless DC Compressor				
Casing	ABS Anti Corrosion Case				
Heat exchanger	Twisted Titanium Heat Exchanger				
Power supply	240V 1Ph				
Electrical connection	10A plug	15A plug	Hard wired	Hard wired	Hard wired
Rated input power (kW)	0.28~1.55	0.41~2.01	0.50~2.56	0.60~3.26	0.72~3.81
Rated input current (A)	1.21~6.73	1.76~8.70	2.17~11.12	2.61~14.16	3.13~16.56
Maximum input current (A)	8.0	12.5	17.0	19.5	20.0
Sound level at 1m dB(A)	41.6~53.5	43.9~54.0	46.2~57.3	46.3~58.1	46.9~58.7
Sound level at 10m dB(A)	21.6~33.5	23.9~34.0	26.2~37.3	26.3~38.1	26.9~38.7
Advised water flow (L/Min) ±20	50	75	90	120	150
Water connection (mm)	40	40	40	40	40
Net weight (kg)	46	49	60	68	68
Net dimension L x W x H (mm)	903x349x654	903x349x654	991x349x654	991x349x754	991x420x757

* The data above is only for reference. For specific data, please refer to the nameplate on the unit.

More information about ECO scan here



Elite V3

ADVANCED HEAT PUMP SERIES

The Elite V3 has been redesigned from the ground up to bring a revolutionised pool heating system to the Australian market. In conjunction with the newest inverter technology the unit delivers better airflow, higher efficiency, quieter operation and performance. The unit exclusively delivers market leading installation requirements of 100mm from the back and 300mm from the side, providing space saving options for Australian backyards. Engineered with durability in mind, the Elite V3 operates at optimal levels even in the most corrosive and erosive environments - Achieving a massive 31.8kW in a single phase. The Elite V3 sets the standard for all other heaters.

- Revolutionary design that redirects airflow to dramatically reduce spatial requirements
- Extremely energy efficient with a COP of up to 16.4
- Full inverter stepless compressor and fan
- Sleek design
- Six models up to 31.8kW in single phase
- Three phase 40kW model
- Patented slient design
- Marine grade anti-corrosion aluminium alloy casing
- Signature diamond touch screen and intuitive display
- WiFi with smart functions
- Marketing leading 10 year compressor warranty
- Newest most eco-friendly R32 Refrigerant
- Three coil evaporator for a more compact unit size
- TüV Rheinland certified
- Up to 40 degrees set point temperature
- Industry first centrifugal fan
- Advanced cold air performance
- Largest industry single phase unit

SPECIFICATIONS

Model	ESV3-110	ESV3-140	ESV3-170	ESV3-220	ESV3-270	ESV3-320	ESV3-400
PERFORMANCE CONDITION: Air 27°C/ Water 27°C/ Humid. 80%							
Max Heating capacity (kW)	11.0	13.8	17.0	22.0	26.5	31.5	40.5
COP Range	16.2-7.3	16.0-7.4	16.1-7.1	16.4-7.4	16.1-7.3	16.2-7.2	16.0-7.0
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/ Humid. 70%							
Max Heating capacity (kW)	7.3	9.2	11.5	15.0	18.0	21.8	29.0
COP Range	7.5~5.0	7.6~5.1	7.8~5.0	8.2~5.1	7.9~5.2	8.0~5.2	8.3~5.1
PERFORMANCE CONDITION: Air 35°C/ Water 26°C/ Humid. 70%							
Cooling capacity (kW)	4.1	5.6	6.5	8.1	10.2	12.2	15.0
TECHNICAL SPECIFICATIONS							
Operating air temperature (°C)	-15°C~43°C						
Compressor	Full Stepless DC Compressor						
Heat exchanger	Twisted Titanium Heat Exchanger						
Casing	Marine Grade Aluminium Alloy						
Power supply	240V 1Ph						415V 3Ph
Electrical connection	10A plug	15A plug	Hardwired	Hardwired	Hardwired	Hardwired	Hardwired
Rated input power (kW)	0.21-1.55	0.25~1.92	0.31~2.44	0.40~3.05	0.49~3.8	0.60~4.63	0.79~6.1
Rated input current (A)	0.91~6.74	1.09~8.34	1.35~10.60	1.74~13.26	2.13~16.52	2.60~20.13	1.14~8.84
Maximum input current (A)	9.0	11.0	13.0	16.0	18.0	23.0	12(3)
Sound level at 1m dB(A)	36.3~44.5	36.5~45.9	39.3~46.7	39.5~49.8	39.8~50.2	40.3~50.8	40.6~51.3
Sound level at 10m dB(A)	16.3~24.5	16.5~25.9	19.3~26.7	19.5~29.8	19.8~30.2	20.3~30.8	20.6~31.3
Advised water flow (L/Min) ±20%	65	80	100	125	150	180	230
Water connection (mm)	40						
Net weight (kg)	66	70	73	91	114	125	148
Net dimension L x W x H (mm)	817x530x656	817x530x656	868x530x656	1008x530x756	1156x540x756	1097x538x966	1297x538x971

* The data above is only for reference. For specific data, please refer to the nameplate on the unit.

More information about Elite V3 scan here

Eclipse

COOLING AND HEATING SERIES

Designed and engineered to meet the highest requirements for cooling and heating options, with full inverter compressor and top discharge fans for a streamlined efficient air flow; rest assured that you own the latest eco friendly technology.

Enjoy new possibilities for pool heating and cooling with the space saving and slick design. Limited space is no longer a concern.

- Full inverter stepless compressor and fan
- Titanium heat exchanger with 25-year warranty
- Advanced cold air performance
- Built-inflow switch and safety devices
- Extremely energy efficient with COP up to 16
- Wi-Fi as standard
- Cooling and heating
- Top discharge air outlet
- Built-inflow switch and safety devices
- Newest most eco-friendly R32 Refrigerant
- Enables more options to fit in space
- Easy to use controller
- 3 models up to 26kW singlephase
- Marine Grade anti-corrosion aluminium alloy casing

SPECIFICATIONS

Model	ETD160	ETD210	ETD260
PERFORMANCE CONDITION: Air 27°C/ Water 27°C/ Humid. 80%			
Heating capacity (kW)	16.5	21.0	26.0
COP Range	15.6~7.2	16.0~7.0	15.8~6.9
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/ Humid. 70%			
Heating capacity (kW)	11.7	15.1	18.6
COP Range	7.2~5.1	7.8~5.0	7.5~4.8
PERFORMANCE CONDITION: Air 35°C/ Water 28°C/ Humid. 80%			
Cooling capacity (kW)	7.3	9.0	11.2
TECHNICAL SPECIFICATIONS			
Operating air temperature (°C)	-10°C~43°C	-10°C~43°C	-10°C~43°C
Compressor	Full Stepless DC Compressor	Full Stepless DC Compressor	Full Stepless DC Compressor
Heat exchanger	Twisted Titanium Heat Exchanger	Twisted Titanium Heat Exchanger	Twisted Titanium Heat Exchanger
Casing	Marine Grade Aluminum Alloy	Marine Grade Aluminum Alloy	Marine Grade Aluminum Alloy
Power supply	240V 1Ph	240V 1Ph	240V 1Ph
Rated input power (kW)	0.38~2.33	0.62~3.02	0.80~4.00
Rated input current (A)	1.66~10.1	2.69~13.13	3.5~17.4
Maximum input current (A)	13.5	17.5	20.0
Sound level at 1m dB(A)	41.2~54.9	42.8~54.7	41.5~55.2
Sound level at 10m dB(A)	21.2~34.9	32.8~34.7	31.5~35.2
Advised water flow (L/Min) ±20	100	125	150
Water connection (mm)	40	40	40
Net weight (kg)	70	77	88
Net dimension L x W x H (mm)	780x710x656	780x710x656	780x710x756

* The data above is only for reference. For specific data, please refer to the nameplate on the unit.

More information about Eclipse scan here

Elite Max

COMMERCIAL HEAT PUMP SERIES

These powerful commercial heaters have the capacity to cope with the demands of any aquatic facility. Built with cutting edge technology and climate adaptive features, the Madimack commercial range keeps up all year round while reducing energy bills significantly. Of particular note is Madimack's market leading ELITE MAX 60 –it is an industry stand out, leading in physical size and performance. Madimack's commercial units offer WIFI as standard.

MAIN BENEFITS

- Extremely energy efficient with C.O.P up to 16.1
- Full stepless inverter compressor and fan
- Dual Defrost
- Marine grade aluminium & stainless steel option
- RS485 connectivity ready
- Titanium heat exchanger with 25 year warranty
- Top discharge air outlet
- Reverse cycle defrost down to -15 °C
- Offsite monitoring with Madimack Care
- Industry leading physical size to performance ratio
- Up to 40 degrees set point temperature

COMMERCIAL RANGE SERVICES

- Bespoke system designs
- Energy modelling
- Full HVAC system
- Heat recovery
- Dehumidification
- Ventilation controls
- Integrated energy systems
- Servicing and maintenance
- Potable hot water generation
- Smart controls

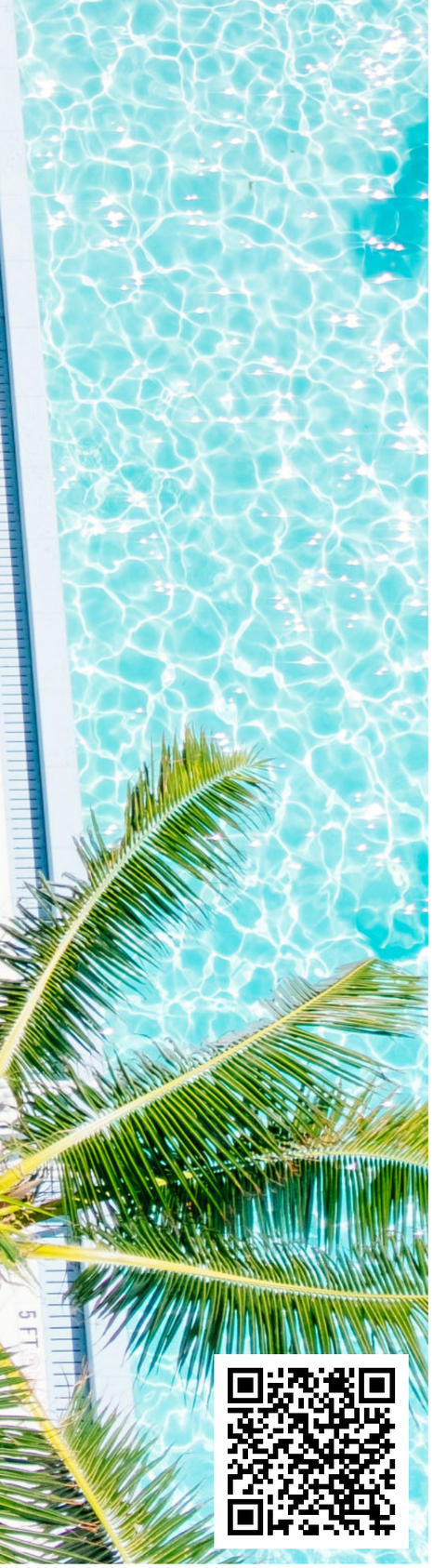
SPECIFICATIONS

Model	EM600	EM1200	EM3000
PERFORMANCE CONDITION: Air 27°C/ Water 27°C/ Humid. 80%			
Heating capacity (kW)	60.2	117	300
COP Range	6.6~16.1	6.5~16.1	6.6-16.1
PERFORMANCE CONDITION: Air 15°C/ Water 26°C/ Humid. 70%			
Heating capacity (kW)	40.1	80.8	210
COP Range	4.9~7.7	4.8~7.5	4.9-7.9
PERFORMANCE CONDITION: Air 35°C/ Water 28°C/ Humid. 80%			
Cooling capacity (kW)	26.8	53.5	140
TECHNICAL SPECIFICATIONS			
Operating air temperature (°C)	-15°C~43°C	-15°C~43°C	-15°C~43°C
Compressor	Full Stepless DC Compressor	Full Stepless DC Compressor	Full Stepless DC Compressor
Heat exchanger	Twisted Titanium Heat Exchanger	Twisted Titanium Heat Exchanger	Twisted Titanium Heat Exchanger
Casing	Marine Grade Aluminum Alloy	Marine Grade Aluminum Alloy	Stainless Steel
Fan direction	Vertical	Vertical	Vertical
Power supply	400V 3Ph/50Hz	400V 3Ph/50Hz	400V 3Ph/50Hz
Rated input power (kW)	2.10~8.18	4.25~17.0	12-47
Rated input current (A)	3.05~11.9	6.16~24.7	16-64
Maximum input current (A)	19	38	75
Sound level at 1m dB(A)	53.0~61.0	55.0~64.0	65-70
Sound level at 10m dB(A)	33.0~41.0	35.0~44.0	42-51
Advised water flow (L/Min) ±20	400	800	2000
Water connection (mm)	65	80	110
Net weight (kg)	400	800	1150
Net dimension L x W x H (mm)	1000x1110x1260	2100x1090x1280	2604x1055x2010

More information about MAX60 scan here

More information about MAX120 scan here

More information about MAX300 scan here



Heat Pump Sizes - Without Pool Cover

Estimated unit size for pools WITHOUT A COVER BEING USED and heated up to 28 degrees and max running times approximately 10 hours.

Volume / Season x1000 Ltrs		Brisbane	Sydney	Perth	Adelaide	Melbourne	Canberra
20	Nov-Mar	9kW	9kW	9kW	9kW	13kW	16kW
	Oct-April	9kW	13kW	13kW	13kW	20kW	22kW
	Sept-May	16kW	20kW	20kW	16kW	24kW	32kW
	All-year	20kW	24kW	24kW	27kW	32kW	40kW
30	Nov-Mar	9kW	13kW	9kW	13kW	20kW	22kW
	Oct-April	13kW	20kW	20kW	20kW	27kW	40kW
	Sept-May	22kW	27kW	32kW	22kW	40kW	48kW
	All-year	27kW	40kW	40kW	40kW	48kW	60kW
40	Nov-Mar	9kW	16kW	13kW	20kW	24kW	32kW
	Oct-April	20kW	27kW	24kW	24kW	40kW	48kW
	Sept-May	32kW	40kW	40kW	32kW	48kW	60kW
	All-year	40kW	48kW	48kW	60kW	60kW	72kW
50	Nov-Mar	9kW	20kW	14kW	22kW	32kW	40kW
	Oct-April	22kW	32kW	32kW	32kW	48kW	60kW
	Sept-May	40kW	48kW	48kW	40kW	60kW	72kW
	All-year	48kW	60kW	60kW	72kW	72kW	120kW
60	Nov-Mar	13kW	22kW	20kW	27kW	40kW	48kW
	Oct-April	27kW	40kW	40kW	40kW	60kW	72kW
	Sept-May	48kW	60kW	60kW	48kW	72kW	86kW

Heat Pump Sizes - With Pool Cover

Estimated unit size for pools WHEN A THERMAL COVER IS BEING USED and heated up to 28 degrees and max running times approximately 10 hours.

Volume / Season x1000 Ltrs		Brisbane	Sydney	Perth	Adelaide	Melbourne	Canberra
20	Nov-Mar	9kW	9kW	9kW	9kW	9kW	9kW
	Oct-April	9kW	9kW	9kW	9kW	9kW	13kW
	Sept-May	9kW	9kW	13kW	9kW	13kW	16kW
	All-year	9kW	13kW	13kW	13kW	14kW	20kW
30	Nov-Mar	9kW	9kW	9kW	9kW	9kW	13kW
	Oct-April	9kW	13kW	9kW	9kW	14kW	20kW
	Sept-May	13kW	14kW	14kW	13kW	20kW	22kW
	All-year	13kW	20kW	20kW	20kW	22kW	27kW
40	Nov-Mar	9kW	9kW	9kW	9kW	13kW	16kW
	Oct-April	9kW	13kW	13kW	13kW	20kW	22kW
	Sept-May	16kW	20kW	20kW	16kW	24kW	32kW
	All-year	20kW	24kW	24kW	27kW	32kW	40kW
50	Nov-Mar	9kW	9kW	9kW	13kW	16kW	20kW
	Oct-April	13kW	16kW	16kW	16kW	22kW	27kW
	Sept-May	20kW	24kW	24kW	20kW	32kW	40kW
	All-year	22kW	32kW	32kW	32kW	40kW	48kW
60	Nov-Mar	9kW	13kW	9kW	13kW	20kW	22kW
	Oct-April	13kW	20kW	20kW	20kW	27kW	40kW
	Sept-May	22kW	27kW	32kW	22kW	40kW	48kW
	All-year	27kW	40kW	40kW	40kW	48kW	60kW

Heater sizes indicated above are selected from our wide range of heat pumps and some may require multiple units to match the KW required. Average pool dimensions used.
Pools with greater surface area will suffer greater heat loss and may require larger unit.
Average temperature, humidity and wind speed used for calculations, heat pump sizing in each location may vary on exact location.A thermal pool cover has been used for calculations in 'when a cover is used' table, other types may change requirement
At start-up from cold the heat pump will need to run for a longer period to reach the set temperature. Please see Madimack FAQ for more information.
This table is to be used as a guide, please consult your installer. Madimack accepts no responsibility for incorrect sizing based on this table.

To review the complete Pool Heating Sizing Chart scan the QR Code
https://www.madimack.com.au/

Inverter Plus

POOL PUMP SPEED CONTROLLER

The Madimack Inverter Plus turns a single speed pump into a variable speed pump – plug & play, no electrician required. This means that the cost to run a single speed pool pump can be dramatically reduced, saving up to 80% on operational costs annually. Additional benefits include; dramatic energy savings, reduced noise factor and onscreen smart display features.

SPECIFICATIONS

Model	INVPLUS1100	INVPLUS2200
TECHNICAL SPECIFICATIONS		
Input Power	1 Phase AC	1 Phase AC
Input Voltage (V)	220 - 240	220 - 240
Input Frequency (Hz)	50	50
Output Power (KW)	Max 1.1	Max 2.2
Output Voltage (V)	1 ph, 0-240	1 ph, 0-240
Pump Type	Single Phase	Single Phase
Max. Current (A)	Max 6	Max 12
Speed Range (rpm)	1,200 - 2,900	1,200 - 2,900
Cooling	Ventilation	Ventilation / Fan
Weight (kg)	3.0 / 2.7	3.0 / 2.7
Dimension L x W x H	110x155x187mm	110x155x187mm

More information about Inverter Plus scan here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POOL HEATING
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HEAT PUMP SIZING CHART

ECO			
With a Blanket	HEATING		
Pool Size	7 months	9 months	All Year
20,000	9kw	9kw	13kw
30,000	13kw	13kw	16kw
40,000	13kw	20kw	24kw
50,000	13kw	20kw	24kw
60,000	16kw	20kw	24kw
70,000	20kw	20kw	24kw
80,000	20kw	24kw	2 x 20kw
90,000	24kw	24kw	2 x 20kw
No Blanket	HEATING		
Pool Size	7 months	9 months	All Year
20,000	16kw	20kw	24kw
30,000	16kw	20kw	24kw
40,000	20kw	24kw	2x 16kw
50,000	24kw	24kw	2 x 20kw
60,000	24kw	2 x20kw	2 x 24kw
70,000	20kw	2 x 20kw	3 x 24kw
80,000	2 x 16kw	2 x 24kw	3 x 24kw
90,000	2 x 16kw	2 x 24kw	3 x 24kw

Elite V3			
With a Blanket	HEATING		
Pool Size	7 months	9 months	All Year
20,000	11kw	11kw	17kw
30,000	11kw	11kw	17kw
40,000	11kw	17kw	22kw
50,000	14kw	22kw	27kw
60,000	17kw	22kw	27kw
70,000	17kw	22kw	27kw
80,000	22kw	22kw	32kw
90,000	22kw	27kw	40kw
No Blanket	HEATING		
Pool Size	7 months	9 months	All Year
20,000	17kw	22kw	27kw
30,000	17kw	22kw	27kw
40,000	22kw	22kw	32kw
50,000	27kw	27kw	32kw
60,000	27kw	32kw	2 x 27kw
70,000	27kw	32kw	2 x 27kw
80,000	27kw	32kw	3 x 27kw
90,000	32kw	2 x27kw	3 x 27kw

Sizing calculated on heater running no more than 12 hours a day