



MAGNUS

Heat Pump Water Heaters

Unit Selection

MWP Series - Pool Heating models



Heating Capacity
26kW – 80kW

MWP Unit Selection

There are many factors that need to be taken into account when sizing a Pool Water Heater. The minimum information you require to use this Selection Guide are:

- i. Your pool surface area,
- ii. A prediction of the usage of your pool, and
- iii. Location.

The following selection procedure is for OUTDOOR pools. For INDOOR pools, contact Temperzone for a list of additional information required to make a more accurate unit selection.

STEP 1. Identify the Heating Profile that suits Your Intended Use & Location in Table 1 (profiles A to N)

If your city is not listed, use the nearest one, or contact Temperzone Sales.

STEP 2. Determine Required Heating Capacity of MWP unit

by reading from your Pool Surface Area up to your Heating Profile, then go left to the Required Capacity (Graph 1).

STEP 3. Determine which MWP unit meets the capacity requirement

move from Required Heating Output across to the model peak capacity line (Graph 2).

STEP 4. Check other factors that may alter this recommendation up-or-down a model size

refer Notes below and exposure allowances on next page.

Table 1. Outdoor Pool Heating Profiles by Location

Usage:	Extended Season (October – April)								All Year (Peak in July)							
Operation:	8am – 6pm (10 hours/day)								8am – 6pm				24 hours			
Pool Cover:	4pm – 9am			MIN AVG operating ambient	No cover used			MIN AVG operating ambient	4pm – 9am			MIN AVG operating ambient	4pm – 9am			MIN AVG operating ambient
Pool temp.:	25°C	28°C	32°C		25°C	28°C	32°C		25°C	28°C	32°C		25°C	28°C	32°C	
Australia																
Adelaide	M	L	J	17	H	G	E	17	J	H	G	11	L	L	K	10
Brisbane	N	M	K	18	J	H	F	18	L	J	H	14	M	L	L	13
Cairns	n/a	n/a	M	26	N	L	H	26	N	M	K	22	N	N	M	20
Canberra	M	L	J	15	H	G	E	15	J	H	G	7	L	L	K	5
Darwin	n/a	n/a	n/a	28	n/a	N	L	28	n/a	N	M	27	n/a	N	N	24
Hobart	K	J	H	14	H	F	E	14	J	H	G	8	L	L	K	7
Melbourne	M	L	J	15	H	G	E	15	J	H	G	10	L	L	K	9
Perth	N	M	K	18	J	H	F	18	L	J	H	14	M	L	L	13
Sydney	N	L	K	17	J	H	F	17	K	J	H	13	M	L	K	11
New Zealand																
Auckland	L	K	H	16	H	F	E	16	J	H	G	12	L	L	K	11
Hamilton	H	F	D	13	D	B	A	13	E	D	C	7	H	E	D	5
Taupo	H	F	D	13	D	B	A	13	E	D	C	7	H	E	D	5
Wellington	L	K	H	16	H	F	E	16	J	H	G	12	L	L	K	11
Christchurch	H	F	D	13	D	B	A	13	E	D	C	7	H	E	D	5
Dunedin	H	F	D	13	D	B	A	13	E	D	C	7	H	E	D	5

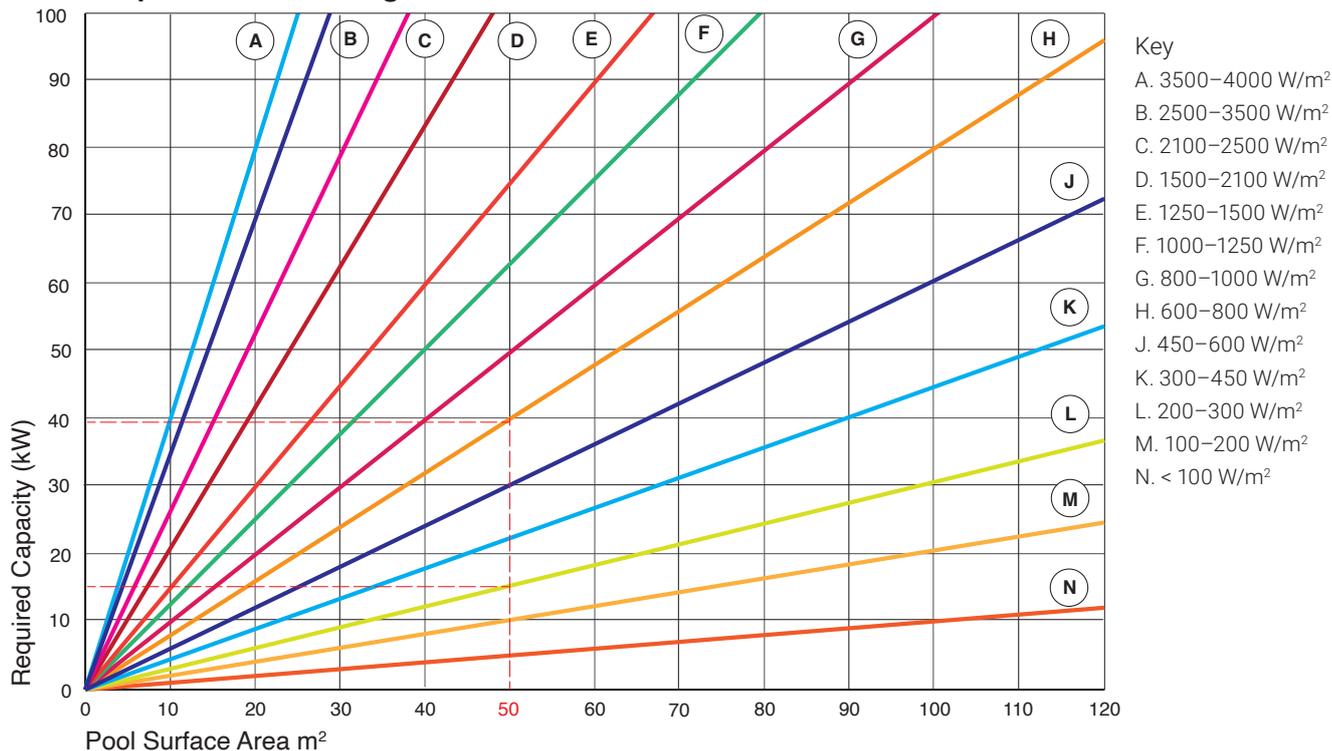
For other locations, contact your nearest Temperzone Sales office.

Note:

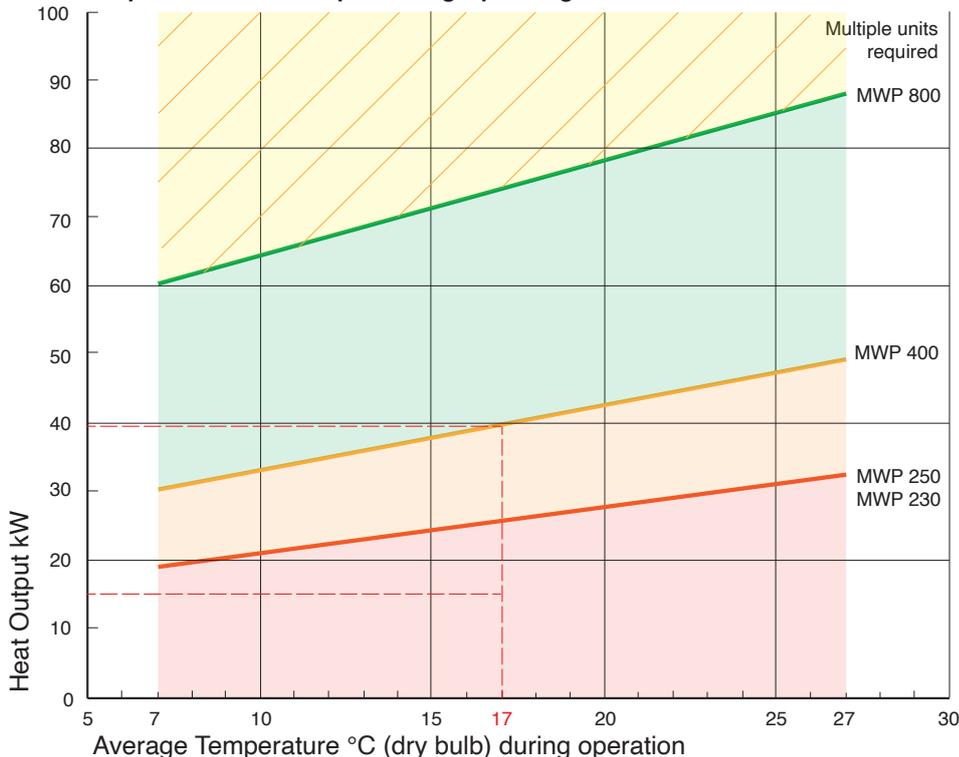
1. A thermal pool cover is highly recommended, if not mandatory in some Cities/States when using pool heating devices. Heating profiles for use **without a pool cover** is more for illustrative purposes to demonstrate heat losses without a cover, which are significant.
2. Longer daily operating hours of the heat pump will **reduce** the output capacity required to maintain pool temperature.
3. Nominal heating profiles based on the following operating parameters:
 - Hours of use (cover off) from 9 am to 4 pm, 7 hours.
 - Nominal Heat Pump operating hours are limited to between 7 am and 5 pm. These may be subject to filtration pump operating hours.
 - 24 hour operation of heat pump (IF PERMITTED) can halve the required heat pump output capacity, eg when a 10 hour operation of the Heat Pump appears marginal for duty, a couple extra hours operation may satisfy requirements.
4. Adjustment to heating profile requirements can be made for deviation to the tabled specifications, eg for cover off 4 hr/day, deduct 20% from required capacity; for cover off 10hr/day add 10% to required capacity.

MWP Unit Selection (continued)

Graph 1 - Pool Heating Profiles



Graph 2 - Nominal Output During Operating Hours



Disclaimer
 Temperzone Ltd takes no responsibility for the completeness, reliability and accuracy of this information. It is a guide only. Any action based on this information is strictly at your own risk. Consult a professional consultant for the most accurate selection for your application.

OUTDOOR POOL EXPOSURE (allowances made in above heating profiles)

- Minor shading up to 25% at peak of winter. For 50% shading, add 10% to required heat pump capacity.
- Moderate exposure to wind. For high wind areas add 25% to required heating capacity. For sheltered areas deduct 25%.
- No allowance for water features. For Infinity Edge, add equivalent area to pool surface area. For Waterfall, add 3 times area to pool surface area.
- Average depth 1.5m nominal in ground pool. Additional heat loss expected for walls exposed to air or ground water.
- Number of swimmers entering pool each day based on 1 per 6m² pool area, i.e. 10 swimmers per day entering a 60m² pool.

SELECTION EXAMPLE.

50m² pool, Sydney, 28°C extended season only, no cover gives Profile H; with cover Profile L.

Selection: Given average day temperature during operation of 17°C, with no cover, model MWP 400 falls marginally short, whereas with a cover a MWP 250 will maintain pool temperature comfortably, with less running hours.

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