



"Perfect Temperature Everyday"

Commercial Pool Heaters





Commercial Pool Heaters

Raypak Commercial Pool & Spa Heaters are designed for the toughest of commercial pool and spa heating applications. Features of the Raypak commercial range include:

- **Exceptional Range of Sizes**
Heating capabilities from 120 kW to 960 kW from a single appliance.
- **Direct or Indirect Pool Water Heating**
Alternative designs enable either direct contact pool water heating or indirect heating through a third party heat exchanger.
- **All Cupronickel Heat Exchanger**
More durable than copper, particularly when exposed directly to pool water (direct heating appliances only).
- **Bronze Headers**
Super tough bronze headers designed to withstand the harshest water conditions.
- **Unique condensation protection system.**
Avoids premature corrosion and failure caused by condensation formation during start up.
- **Stainless Steel Burners.**
All stainless steel burner design exclusive to Raypak commercial heaters.
- **Flow Sensing Standard.**
Protects the heater from operating when there is no water flow.
- **Standard with High Wind Top**
Aiding performance in variable wind conditions (outdoor appliances only).
- **Made in Australian**
Enabling fast supply of parts and accessible product technical support.
- **Easy serviceability**
Designed to enable easy and simple on-site maintenance.
- **12 month Parts and Labour Warranty**
Extensive service network throughout Australia and New Zealand. (For a detailed warranty statement please contact Raypak Australia or refer to the owner's instruction manual)

POOL HEATER SELECTION

The required pool heater load is established by calculating the energy necessary to provide the desired pool heat setting in a chosen time.

For outdoor pools with large surface areas it is important to also consider **convective heat loss**, which will significantly affect the required energy demand. Where the average wind speed during heat is above 16 km/hr Raypak should assist with determining required energy input.

To calculate the required energy from the pool heater the following equations should be used:

Outdoor Installations

$$kW = \frac{(V \times \Delta T \times 1.16)}{t} + \frac{(A_s \times \Delta T \times W \times 0.06)}{2}$$

Indoor Installations

$$kW = \frac{(V \times \Delta T \times 1.16)}{t}$$

Where:

- V** Volume of pool in m³.
- ΔT** Required temperature rise in degrees C.
- A_s** Surface area of the body of water in m².
- t** Required heat up time from cold in hours. Recommended is 36 hours.
- W** Wind factor dependent on average wind speed.

W	Wind Speed – km/hr
1.00	<6
1.25	6 to 8
2.00	8 to 16

Once the required pool temperature is reached the pool heater energy demands will fall substantially and only maintenance heat will be required.

The ongoing energy requirements of your pool can be cut dramatically through the use of a pool cover. This is strongly recommended in areas where low overnight temperatures are experienced.



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CHOOSING A LOCATION

Raypak commercial pool heaters can be located either indoor or outdoor however this must be specified at the time of ordering and should be identified prior to calculating the required heating energy. Outdoor & Indoor heaters above 500MJ/hr input are supplied **standard** with a “High Wind Top” or “Indoor Draft Diverter” however is also able to be fitted with an “induced draft assisted fan” as an option to assist with special fluing requirements.

When determining a location for the heater consideration must be given to the following:

- Avoid areas of turbulent or high wind.
- Ensure clear and uninterrupted venting above the heater when installed outdoor.
- Ensure sufficient natural air for combustion and flueing is available.

- Ensure sufficient installation clearances to comply with both the Australian Standard AS5601 and general maintenance requirements. Minimum recommended clearances are:
 - **1,200mm** to any ceiling when indoor.
 - **1,200mm** from the front of the appliance.
 - **600mm** from sides and rear.
- Location of other equipment such as air conditioning that may affect heater air supply or venting.
- Impact of heater or flue visibility by client or pool users and affect on landscaping appearance.

GAS SUPPLY

Low, variable, or high gas supply pressures are often a cause of poor heater operation or failure. The gas supply must be properly regulated to the heater at the following levels for correct operation when using Natural Gas or Propane. Required supply pressures for other gas types is available on request.

Input	Natural Gas		Propane Gas	
	Min.	Max.	Min.	Max.
< 500 MJ/hr	1.1 kPa	3.5 kPa	3.0 kPa	3.5 kPa
> 500 MJ/hr	1.1 kPa	4.0 kPa	2.75 kPa	4.0 kPa

Refer to AS5601 for pipe sizing information.

INSTALLATION

All Raypak commercial pool heaters must be installed by a properly authorised gas installer. In Australia pool heaters above 500 MJ/hr input must be installed and commissioned by an authorised contractor and cannot be operated until the relevant local Gas Regulator is notified.

RHEEM WARRANTY

Raypak commercial pool heater products are warranted for 12 months* from the date of installation by Rheem and are supported by Rheem’s National Service network in all states of Australia. For service outside these areas please contact Rheem **131 031**

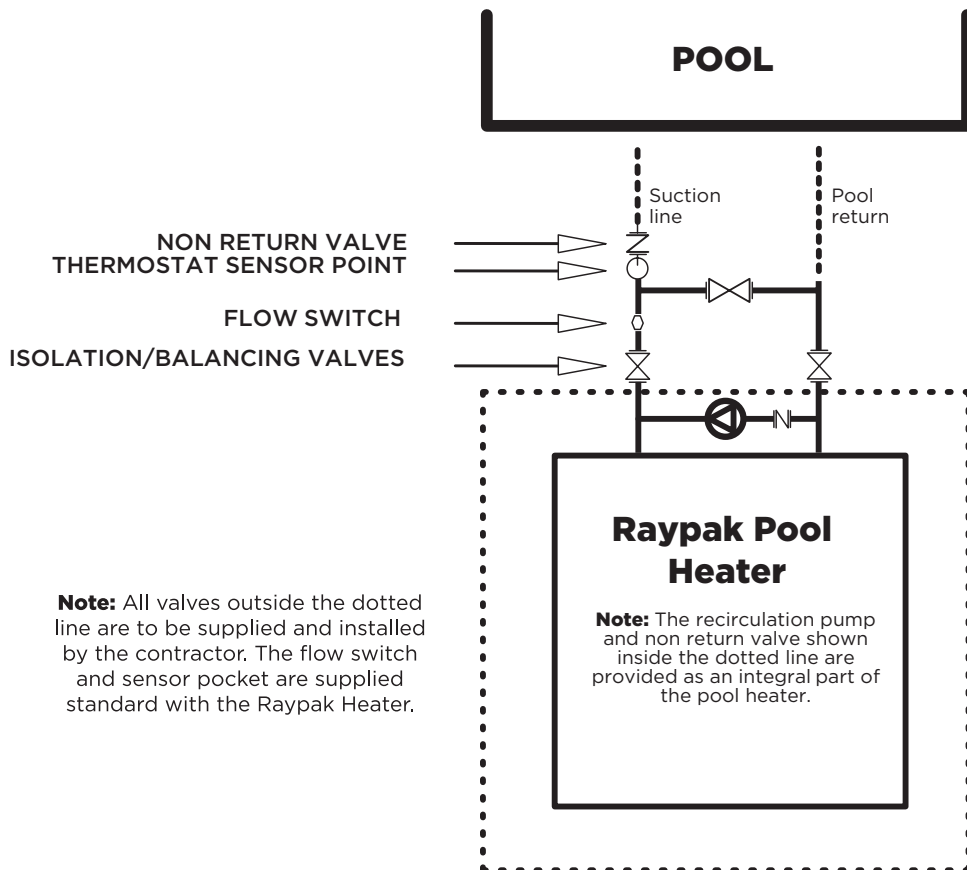
*Conditions apply. See the Rheem warranty set out in the Owner’s Guide & Installation Instructions supplied with the pool heater.



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Commercial Pool Heater installation and system layout

Note: Prior to installing any water pipe work, non return valve or isolation / balancing valves consideration should be given to the standard of material (E.g. Copper, ABS plastic, Class 12 plastic) used for this piping. When water leaves the outlet of the pool heater, it could be above 45 C°, before mixing down with the remaining water at the bypass, and returning to the pool. Should the class of product chosen not be capable of supporting these elevated temperatures, it is possible that distortion and/or water leaks may occur.



Note: All valves outside the dotted line are to be supplied and installed by the contractor. The flow switch and sensor pocket are supplied standard with the Raypak Heater.



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DESCRIPTION	Nominal Rating				Location		Approximate Dimensions					Connections			Flow Rates		
	Natural Gas		Propane		(specify when placing order)		Height	Height	Front	Side	Weight	Gas		Water	Flue	Min.	Max.
	Input MJ/hr	Output kW	Input MJ/hr	Output kW	Outdoor	Indoor	Outdoor mm	Indoor mm	Width mm	Depth mm	Tare kg	Nat mm	LPG mm	Dia. mm	Dia. mm	l/s	l/s
SERIES 8																	
538 Pool Heater	539	120	505	115	✓	✓	2,130	1,460	1,130	750	195	25	25	65	255	4.5	7.5
658 Pool Heater	661	150	620	140	✓	✓	2,255	1,460	1,250	750	200	32	25	65	305	4.5	7.5
768 Pool Heater	765	170	720	160	✓	✓	2,255	1,460	1,360	750	250	32	25	65	305	4.5	7.5
868 Pool Heater	870	195	820	180	✓	✓	2,355	1,460	1,460	750	260	40	25	65	355	4.5	7.5
SERIES 2																	
972 Pool Heater - Outdoor	976	220	933	205	✓		2,500	##	1,650	850	360	50	25	65		4.5	7.5
992 Pool Heater - Indoor	992	225	933	205		✓	##	1,810	1,650	850	310	50	25	65	355	4.5	7.5
1142 Pool Heater - Outdoor	1,142	255	1,090	240	✓		2,395	##	1,850	850	385	50	25	65		4.5	7.5
1182 Pool Heater - Indoor	1,182	265	1,090	240		✓	##	1,915	1,850	850	330	50	25	65	405	4.5	7.5
1242 Pool Heater - Outdoor	1,242	275	1,186	265	✓		2,395	##	1,950	850	410	50	25	65		4.5	7.5
1292 Pool Heater - Indoor	1,292	285	1,186	265		✓	##	1,915	1,950	850	360	50	25	65	405	4.5	7.5
1362 Pool Heater - Outdoor	1,357	300	1,296	290	✓		2,570	##	2,050	850	440	50	25	65		1.9	3.2
1412 Pool Heater - Indoor	1,412	315	1,296	290		✓	##	1,990	2,050	850	390	50	25	65	455	1.9	3.2
1492 Pool Heater - Outdoor	1,491	330	1,423	315	✓		2,570	##	2,200	850	485	50	32	65		2.3	3.5
1552 Pool Heater - Indoor	1,574	345	1,423	315		✓	##	1,990	2,200	850	420	50	32	65	455	2.3	3.5
1662 Pool Heater - Outdoor	1,657	370	1,581	350	✓		2,640	##	2,400	850	510	50	32	65		2.6	4.1
1722 Pool Heater - Indoor	1,719	380	1,581	350		✓	##	2,060	2,400	850	440	50	32	65	455	2.8	4.1
1852 Pool Heater - Outdoor	1,854	410	1,772	395	✓		2,920	##	2,600	850	520	50	32	65		2.9	4.4
1922 Pool Heater - Indoor	1,926	430	1,772	395		✓	##	2,130	2,600	850	460	50	32	65	510	2.9	4.4
SERIES 4																	
2004 Pool Heater - Outdoor	2,004	445			✓		3,165	##	1,850	1,450	650	50	32	80		3.2	5.0
2214 Pool Heater - Indoor	2,215	505				✓	##	1,550	1,850	1,450	625	50	32	80	610	3.2	5.0
2404 Pool Heater - Outdoor	2,404	530			✓		3,210	##	2,100	1,450	730	65	40	80		3.8	5.9
2634 Pool Heater - Indoor	2,636	600				✓	##	1,780	2,100	1,450	700	65	40	80	660	3.8	5.9
2804 Pool Heater - Outdoor	2,804	625			✓		3,185	##	2,400	1,450	810	65	40	80		4.7	7.2
3164 Pool Heater - Indoor	3,165	720				✓	##	2,060	2,400	1,450	780	65	40	80	710	4.7	7.2
3304 Pool Heater - Outdoor	3,304	740			✓		2,965	##	2,650	1,450	890	65	50	80		5.6	8.4
3694 Pool Heater - Indoor	3,692	840				✓	##	2,350	2,650	1,450	860	80	50	80	760	5.6	8.4
3804 Pool Heater - Outdoor	3,804	845			✓		3,165	##	2,950	1,450	970	80	50	80		6.3	9.4
4224 Pool Heater - Indoor	4,224	960				✓	##	2,640	2,950	1,450	940	80	50	80	815	6.3	9.4

Special Note

Raypak External and Internal Direct Pool Heaters and Indirect Closed Loop Heaters from the 538 through to 4224 models are supplied with either a High Wind Top/s or Indoor Draft Diverter/s as **standard**. Consideration must be given to the location of the unit/s for the overall combined height of the unit and how this could affect your project.

***ALL RAYPAK MODELS LISTED ARE SUBJECT TO CHANGE, OR DELETION AT ANY TIME**

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