About Us

Thermal IQ Solutions is Australia's largest manufacturer of small capacity specialsied commercial HVAC equipment. The technical team at Thermal IQ have a combined 50 years in the Australian HVAC industry – no other company can offer this level of engineering support for our customers critical applications.

Rather than offer imported heat pumps, Thermal IQ has dedicated itself to providing locally specified and manufactured heat pumps which are supplied with components sourced from the industry's leading suppliers. With specifying heat pumps, experience counts, and no other company has the experience to offer the advice and solutions the market requires.

As the Australian market grows and diversifies, Thermal IQ can offer expert advice on chillers, heat pumps, variable speed high efficiency scroll chillers, air handling and more.

Thermal IQ is back by a nationwide team of service technicians who are trained in the operation and maintenance of Thermal IQ heat pumps.

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Heat Pump Applications

Heat pumps are designed to circulate water a produce hot water for a variety of application – capturing heat from the air they are an extremely efficient method of pricing hot water via a water pump.

Hotels

Food preparation

Medical Apps

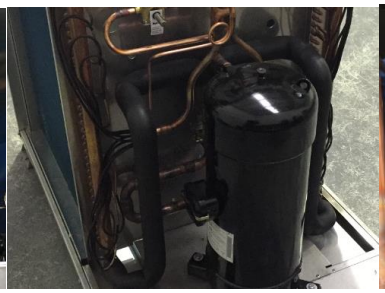
Swimming pools

Process heating

Features

The heat pumps are supplied with – as standard

- Suitable for indoor or outdoor installation
- Rugged stainless-steel construction
- Components sourced from the industry's leading suppliers
- R407c refrigerant
- Comprehensive 12 months warranty on all parts and labour
- Highly accurate electronic controller
- Comprehensive factory testing before dispatch
- Gold fin protection on the evaporator
- De-ice protection on the evaporator
- Titanium condensers



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Thermal IQ's range of heat pumps are designed and manufactured in Australia for both local and international markets. Thermal IQ's manufacturing resources have over 50 years of experience in manufacturing heat pumps and refrigeration products.

All Thermal IQ's heat pumps are manufactured from the highest quality components supplied from the industry's tier one suppliers and are designed for high efficiency and low maintenance.

Evaporator Coating

All Thermal IQ's evaporators are coated in ***Blygold PoluAl XT-MB*** which is a special corrosion protection coating for cooling coils and evaporators. The coating shields vulnerable metals from aggressive environments. The aluminum content in the coating provides the necessary heat conductivity to ensure the that coated heat exchangers have optimum heat transfer capacity.

Special additives ensure the applied coating film is bacterial and fungi resistant. After treating evaporators or cooling coils these articles should be considered "treated articles" and be marked as such.

- ✓ Corrosion resistant
- ✓ Microorganism resistant
- ✓ Heat conductive
- ✓ 11000 hours salt spray test
- ✓ Nano free
- ✓ Treated article

The coating is compliant to

- ✓ ASTM B117 – 11000 hours salt spray test
- ✓ ASTM G85 A1 – 4000+ hours acid salt spray test

Evaporator design

Thermal IQ heat pumps use leading edge evaporator technology on its air forced units. The advanced coil pattern has 7mm tube diameter which is the smallest in the market and the equilateral tube arrangement which creates equal distances between each tube and the six adjacent tubes.

These features result in more tubes per fin cross section and this means more primary surface area – the result is higher capacity and lower refrigerant charge

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Below is some general technical data on the heat pumps – Thermal IQ can produce units to 300kW if required.

When a unit is quoted, the quote will include specific technical data that meet the customers' requirements.

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GENERAL DATA – HEAT PUMP – R407c Refrigerant				
System type	HEAT PUMP	Heat rejection		Water
Model		**TH20A3-P**	**TH30A3-P**	**TH40A3-P**
Capacity – kW	TR	5.6	8.8	10.8
12 SST/ 35C water supply	kW – Ambient 30	20.5	28.4	42.0
Total power input	kW	3.3	4.5	7.0
Total running current	Amps	7.7	10.4	17.4
Unit COP	kW/kW	6.2	6.3	6.0
Capacity - kW	kW – Ambient 20	17.6	24.2	36.0
	kW – Ambient 10	16.0	22.0	32.6
COMPRESSOR	Scroll Hermetic			
CONDENSER				
Material	Titanium. PVC			
Inlet / outlet HW Temperature	°C	30/35		
Pressure drop	kPa	50	50	50
Hot water flow rate	l/s	1.0	1.5	2.0
Water connections	mm	2” PVC fitting		
EVAPORATOR FANS	External, axial fans, 4 poles			
Fan diameter	mm	450	450	500
No fans		2	2	2
EVAPORATOR	7mm tube and aluminum fin – 16 FPI			
De-ice control		Hot gas injection		
CONTROLLER	Standard electronic Carel controller – 0.1C accuracy			
Shipping weight - dry	Kg	110	140	165
Breaker size	Amps	20	40	40
BMS protocols	-	Compressor start		DOL
Capacity control	%	0-100%		
Power requirements	V/Hz/Ph	380-415/50/3		
Working temperature range	C	20-35		

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GENERAL DATA – HEAT PUMP – R407c Refrigerant			
System type	HEAT PUMP	Heat rejection	Water
Model		**TH50A**	**TH60A**
Capacity - kW	TR	14.6	17.6
	kW – Ambient 30	48.9	63.3
Total power input	kW	7.74	9.8
Total running current	Amps	15.3	19.4
Unit COP	kW/kW	6.3	6.4
Capacity – kW	Ambient 20 C	42.0	53.5
	Ambient 10 C	38.1	48.3
COMPRESSOR		Scroll Hermetic	
Oil type	POE		
CONDENSER			
Material	Titanium/ PVC		
Inlet / outlet HW Temperature	°C	35/30	
Hot water flow rate	l/s	3.0	3.5
Water connections	mm	2” PVC fittings	
EVAPORATOR FANS	External, axial fans, 4 poles		
Fan diameter	mm	500	500
No fans		2	2
EVAPORATOR	7mm tube and aluminum fin – 16 FPI		
De-ice control		Hot gas injection	
CONTROLLER	Standard electronic Carel controller – 0.1C accuracy		
Shipping weight - dry	Kg	400	450
Breaker size	Amps	50	50
BMS protocols	-	Compressor start	DOL
Capacity control	%	0-100%	
Power requirements	V/Hz/Ph	380-415/50/3	
Working temperature range	C	20-35	



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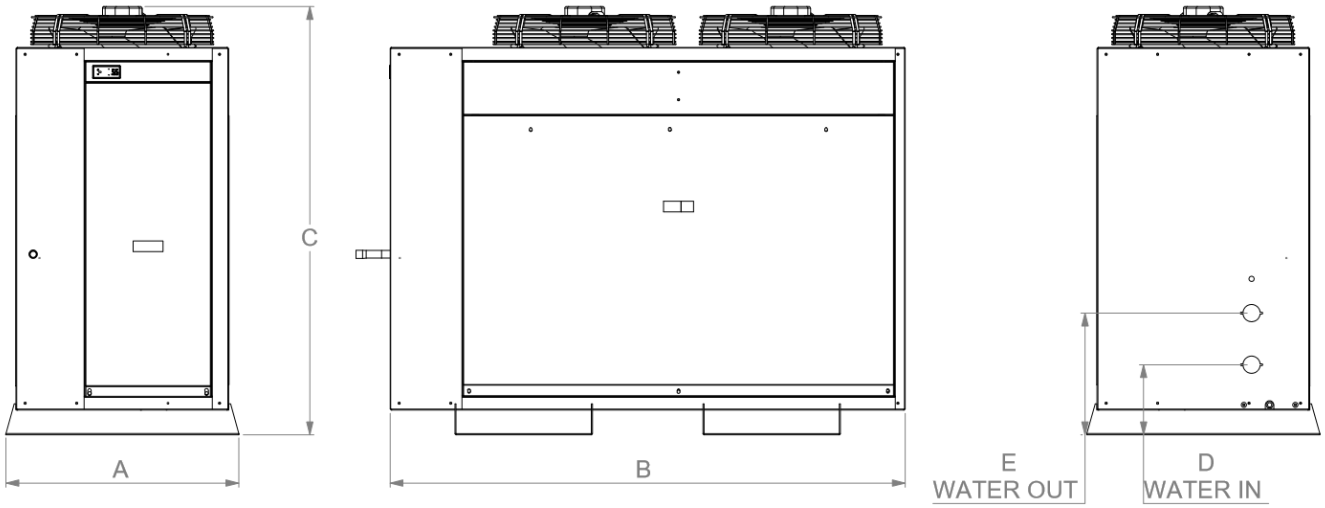
Dimensions



Model	A	B	C	D	E	Shipping weight	No. per container
TH20A	580	1060	1140	150	300	160	20
TH30A	680	1500	1250	204	354	170	8
TH40A	680	1500	1250	204	354	180	8
TH50A	810	1900	1400	225	375	250	7
TH60A	810	1900	1400	225	375	280	7

All operational heating capacity, power consumption and current draw data shown above is based on the heat pump operating at the limit of its design and is intended to be an indication only.

Each unit will be individually designed to customer requirements and a detailed product specification will be supplied at time of order including installation instructions and dimensions. The power consumed by the unit and the current it will draw vary depending on how the unit is constructed. The units performance may also vary slightly from the figures above again based on customer requirements.

THERMAL IQ's product range is subject to change without notice