

19 Te Maire Street
Mount Maunganui



07 312 3382

www.apricus.co.nz

info@apricus.co.nz

Specification Guide for Solar Hot Water

Use this guide to size, specify and estimate the cost of solar hot water systems for [individual house projects](#). For multiple residential and commercial buildings use the [Quick Solar Toolkit](#) or [contact Apricus](#) for specific design advice.

[Apricus](#) are one of the leading solar hot water manufacturers in New Zealand, Australia and worldwide. The systems are used in individual homes, multiple residential & commercial buildings, and industry.

Sizing Guide for Residential Solar Hot Water Systems

House & Family Size	Solar Collector	Cylinder	Notes
1 – 2 bedrooms (1 – 3 people)*	Apricus 20 tube	180L	Use up to 250L HWC in Northland Use 30 tubes in Southland
3 – 4 bedrooms (3 – 5 people)*	Apricus 30 tube	300L	40 tubes in Southland
5+ bedrooms (6+ people or high hot water use)*	Apricus 2 x 20 tube or Apricus 2 x 30 tube	400L 2 x 300L	Single large system or multiple systems at different ends of house

* Note: Apricus solar hot water systems will last at least fifteen to twenty years so please consider bedroom numbers & future changes in occupancy when specifying.

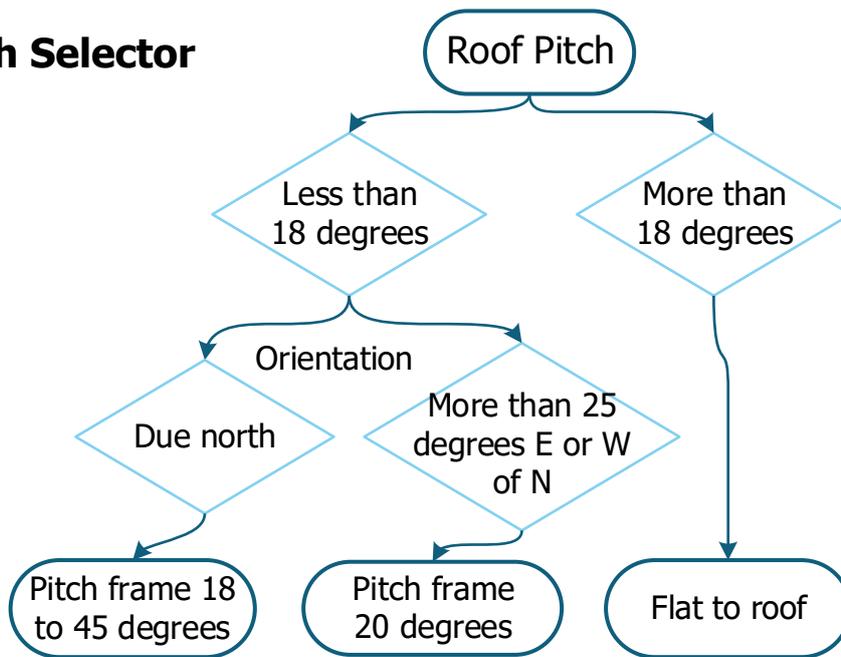
[Water heating](#) is often the biggest energy demand in residential buildings. Solar thermal systems minimise this cost and environmental impact.

Apricus solar hot water systems will reduce the energy used for domestic hot water in a single house by at least [75% every year](#), for many years to come.



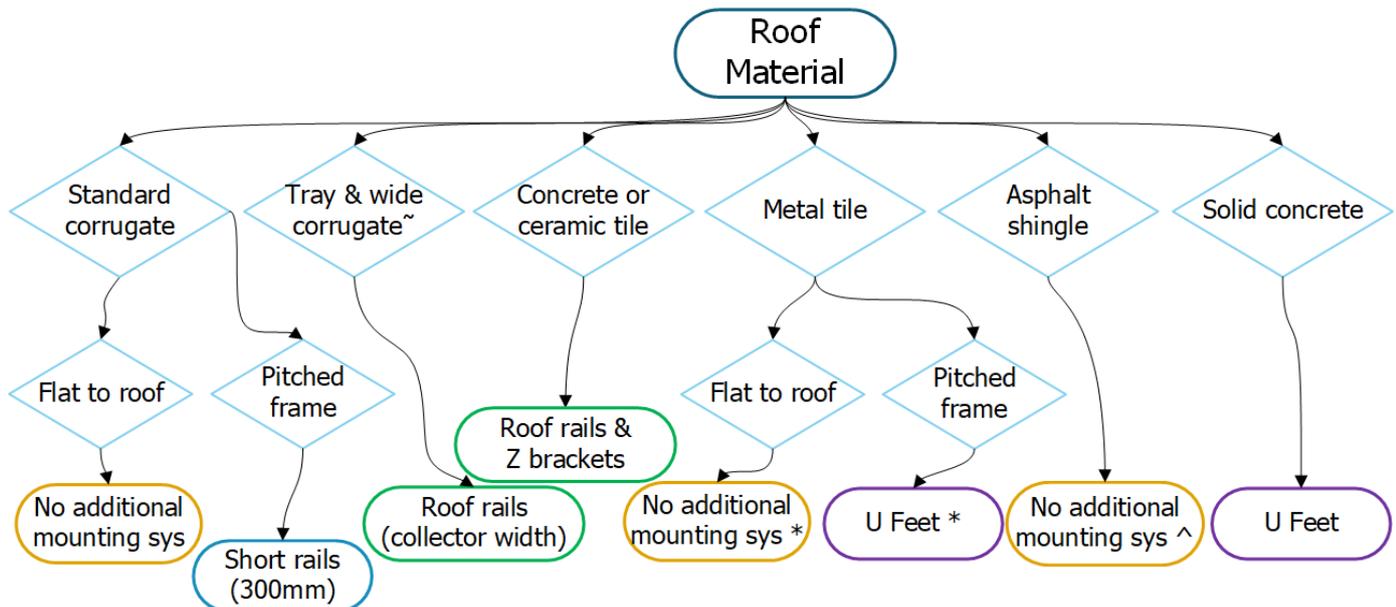
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Frame Pitch Selector



Note: Minimum collector angle is 18 degrees. Year-round performance will be slightly improved by pitching system to same angle as latitude of house location, but is not required. E.g. Auckland latitude is 37 degrees.

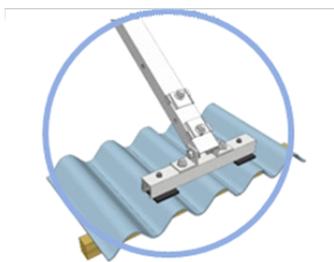
Mounting System Selector



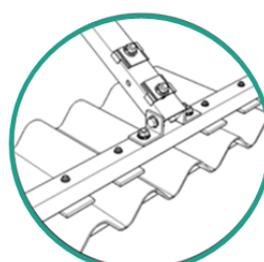
Unless noted below all frames or mounting systems are fixed with 14G Ø6.3mm tek screws

* Fix with lag bolts ^ Fix to extra noggs with tek screws & sealed with bituminous joint sealant, e.g. Holdfast BlackJac

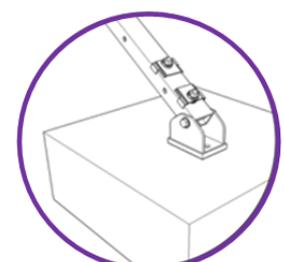
~ Clip roof systems use MonkeyToe or similar for mounting to vertical corrugates



Short Rails x 4

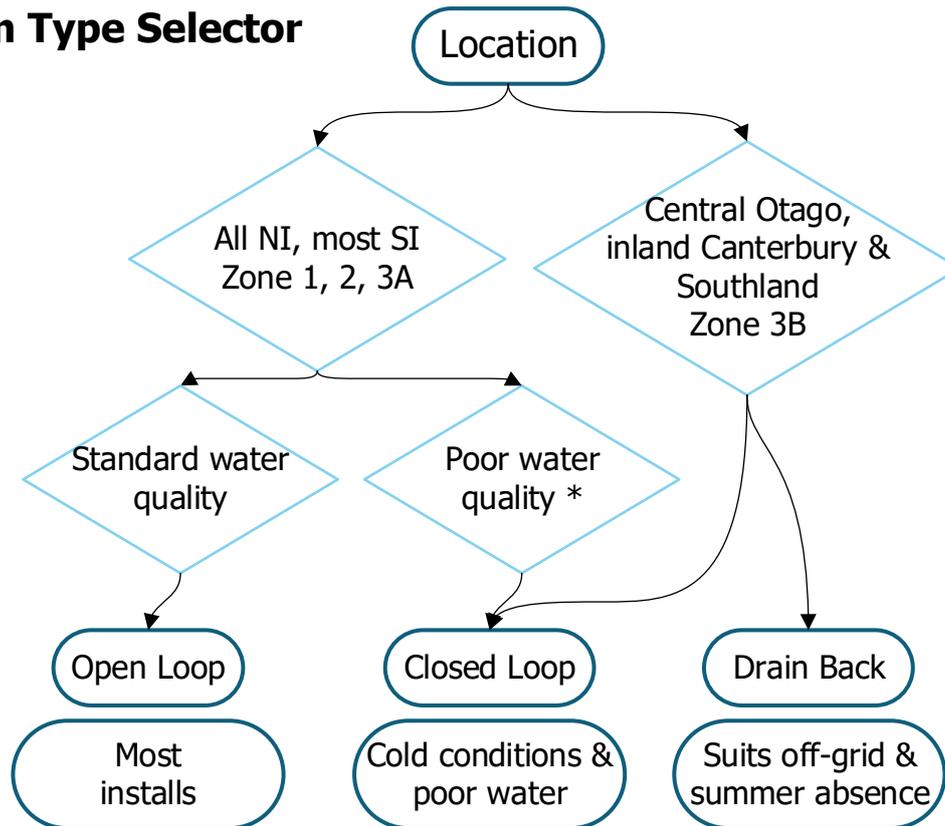


Roof Rails x 2



U Feet x 4

System Type Selector



* Poor quality water has high mineral content, found in bore water especially in Nelson & Marlborough. Contact Apricus for specific guidance if bore water does not meet NZ drinking water standards.

^ Drain back installations require continuous fall of pipework from collector to cylinder & angled panel install on roof. Therefore, drain back may not suit all house designs or panel locations, contact Apricus for specific guidance.

Cost Guide for Residential Solar Hot Water Systems

System Type	System Size	RRP inc GST
Open Loop	Apricus 20 tube	\$3,510
	Apricus 30 tube	\$4,360
	Apricus 40 tube	\$5,750
Closed Loop or Drain Back	Apricus 20 tube	\$4,720
	Apricus 30 tube	\$5,690
	Apricus 40 tube	\$6,800

All systems above assume flat to roof installation and include all standard installation materials (pump, controller, pipe, insulation, valves, etc). See below for additional options. RRP do not include additional costs, such as delivery, consumables and labour.

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All Apricus systems can include [live monitoring](#) to keep your client in touch with their system performance and savings, from any of their devices.

Cost Guide for Residential Solar Hot Water Systems		
Additional Items	Notes	RRP inc GST
Pitched frames	Various configurations, see Frame Pitch and Mounting System Selectors	\$205 - 300
Additional install materials	Used for two storey installs or more than 7m between collector & cylinder	\$240
Data logger	Enables connection to online, live monitoring & reporting. No hosting cost, requires internet connection	\$640
Gas boost	Materials for integration with inline gas booster (gas water heater not included)	\$215

Apricus collectors are designed to be high performing and long lasting, covered by a comprehensive warranty. Other system components are from leading global suppliers, such as Grundfos & Resol, and are specified for reliability and longevity. All components have been thoroughly field-tested and can be relied upon for long service in harsh New Zealand conditions.

Hot Water Cylinder Guide for Solar		
Solar System Type	Standard Cylinder Configuration	Additional Boosting Options
Open Loop	Solar ready with return port Twin elements for $\geq 250L$	Coil for wetback or boiler Coil/s for hot water heat pump
Closed Loop or Drain Back	Solar coil Twin elements for $\geq 250L$	Coil for wetback or boiler
Stainless steel hot water cylinders should be specified with solar hot water systems to allow water storage at higher temperatures, storing more solar energy. Twin elements allow for greater flexibility with electrical boosting.		

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